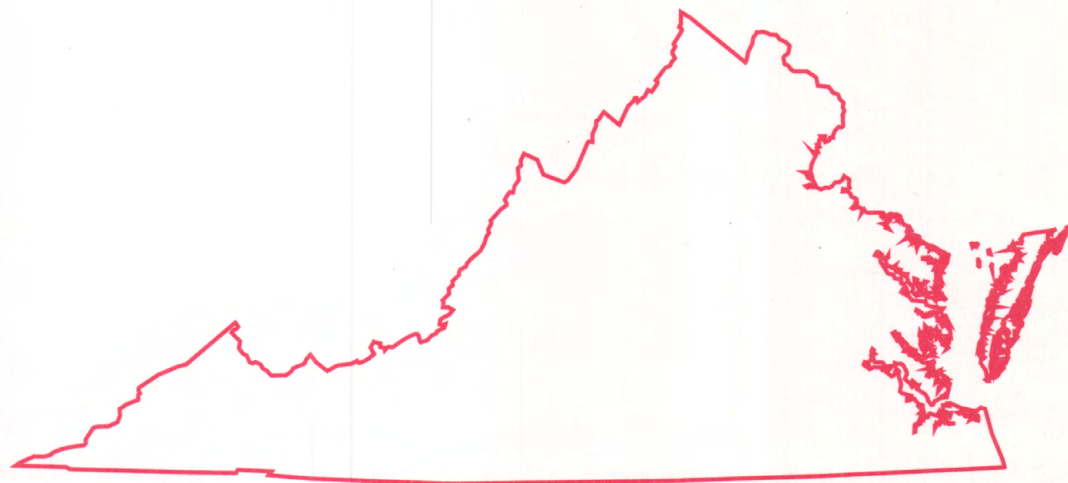
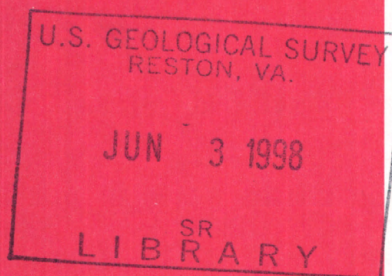


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Water Resources Data Virginia Water Year 1997

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



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT VA-97-2
Prepared in cooperation with the Virginia Department of Environmental
Quality and with other agencies



CALENDAR FOR WATER YEAR 1997

1996

OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
		1	2	3	4	5						1	2	1	2	3	4	5	6	7
6	7	8	9	10	11	12	3	4	5	6	7	8	9	8	9	10	11	12	13	14
13	14	15	16	17	18	19	10	11	12	13	14	15	16	15	16	17	18	19	20	21
20	21	22	23	24	25	26	17	18	19	20	21	22	23	22	23	24	25	26	27	28
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1997

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

APRIL							MAY							JUNE						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
		1	2	3	4	5					1	2	3	1	2	3	4	5	6	7
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27	28	29	30				25	26	27	28	29	30	31	29	30					

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Water Resources Data Virginia Water Year 1997

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

by Roger K. White and Eugene D. Powell



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT VA-97-2
Prepared in cooperation with the Virginia Department of Environmental
Quality and with other agencies

U.S. DEPARTMENT OF THE INTERIOR

BRUCE BABBITT, Secretary

U.S. GEOLOGICAL SURVEY

Mark Schaefer, Acting Director

For information on the water program in Virginia write to

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Water Resources Division
U.S. Geological Survey
3600 West Broad Street, Room 606
Richmond, Virginia 23230**

or

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

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:

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Clifton F. Bell
Donna L. Belval
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Stephen L. Wheeler
Roger K. White

This report was prepared in cooperation with the State of Virginia and with other agencies under the general supervision of Ward W. Staubitz, District Chief.

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WATER RESOURCES DATA - VIRGINIA, 1997

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 1997 series and includes records of water levels and water quality of ground-water wells. It contains records for water levels at 329 observation wells and water quality at 88 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.

WATER RESOURCES DATA - VIRGINIA, 1997

RECORDS COLLECTED BY THE STATE OF VIRGINIA

In addition to data collected by the U.S. Geological Survey, there are included herein records for 181 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

Water levels in the water-table aquifers across the State were above-average in October, the beginning of the 1997 water year, remained above-average for much of the water year, and generally fell to below or slightly below-average levels by September, the end of the water year (fig. 1). This summary of hydrologic conditions is based on monthly or continuous water-level measurements from a network of 13 observation wells. These "index" wells were selected to represent large areas of the State having similar physiographic, geologic, and climatological environments (fig. 4); however, water levels in any one of the many other observation wells listed in this report might differ from the general trends because of local conditions.

The index wells used for this summary were: in the counties of Buchanan (14E40), Buckingham (41H3), Clarke (46W175), Fairfax (52V2), Isle of Wight (55B16), James City (56H27), Loudoun (50W4C), Louisa (45N1), Montgomery (27F2), Rockingham (41Q1), and Westmoreland (55P9), and in the cities of Colonial Heights (51G1) and Suffolk (58B13). The wells in Isle of Wight (55B16) and James City (56H27) Counties are used to monitor water levels in the deep confined aquifers of the Coastal Plain effected by pumping. A more complete description of the index wells used for this summary can be found in the data tables and on figures 4, 5, 6, and 7.

At the beginning of the water year (October 1996), water levels were at or above average in all 11 index wells used to monitor current conditions in the water-table aquifers across the State. Water levels were at the October average in the central Piedmont in Buckingham County and above the October average elsewhere. Record-high water levels for the month were established in the Clarke, Loudoun, Westmoreland, and the Suffolk wells in 1996.

In November, water levels generally rose and water levels were above the November average in 10 of the 11 observation wells. The November level was equal to the average in the other well in Buckingham County. The highest water level for the year was measured in November for the Clarke County well. Record-high water levels for the month of November were recorded in the Buchanan, Clarke, Loudoun, Montgomery, and Westmoreland wells. The previous record for the Westmoreland County well was established in 1979.

In December, water levels continued to be above average in the same 10 observation wells and equal to the December average in the other. The highest water levels for the year were measured in the Buchanan and Montgomery County wells. Record-high water levels for the month were recorded in the Buchanan, Clarke, Fairfax, Loudoun, Colonial Heights, and Suffolk wells. The previous record for the Colonial Heights well was established in 1972.

In January, water levels were slightly above the monthly average in the central Piedmont, in the Buckingham County well, and above average elsewhere. Record-high water levels for the month of January were recorded in the Buchanan, Clarke, and Loudoun County wells. The previous records were established in 1995, 1993, and 1996, respectively. The highest water level for the water year was measured in the Westmoreland County well.

Water levels were above the monthly average for all of the 11 index wells during February. Record-high water levels for the month of February were recorded in the Clarke, Loudoun, and Rockingham County wells. The previous records were established in 1996, 1993, and 1984, respectively. The highest water level for the water year was measured at the Suffolk well during the month.

In March, water levels remained above the monthly average in 10 of the 11 index wells. The exception was the Suffolk well, where water levels were near but slightly below the average. A record-high March water level was established during the month at the Loudoun County well. The highest water levels for the year were measured in the Buckingham, Fairfax, Louisa, and Rockingham County wells.

Water levels were above the long-term monthly average for April in the 11 index wells. Water levels generally declined in most of the index wells because of seasonal increases in evapotranspiration. A record-high water level for the month (and the highest water level for the water year) was measured at the Leesburg well in Loudoun County.

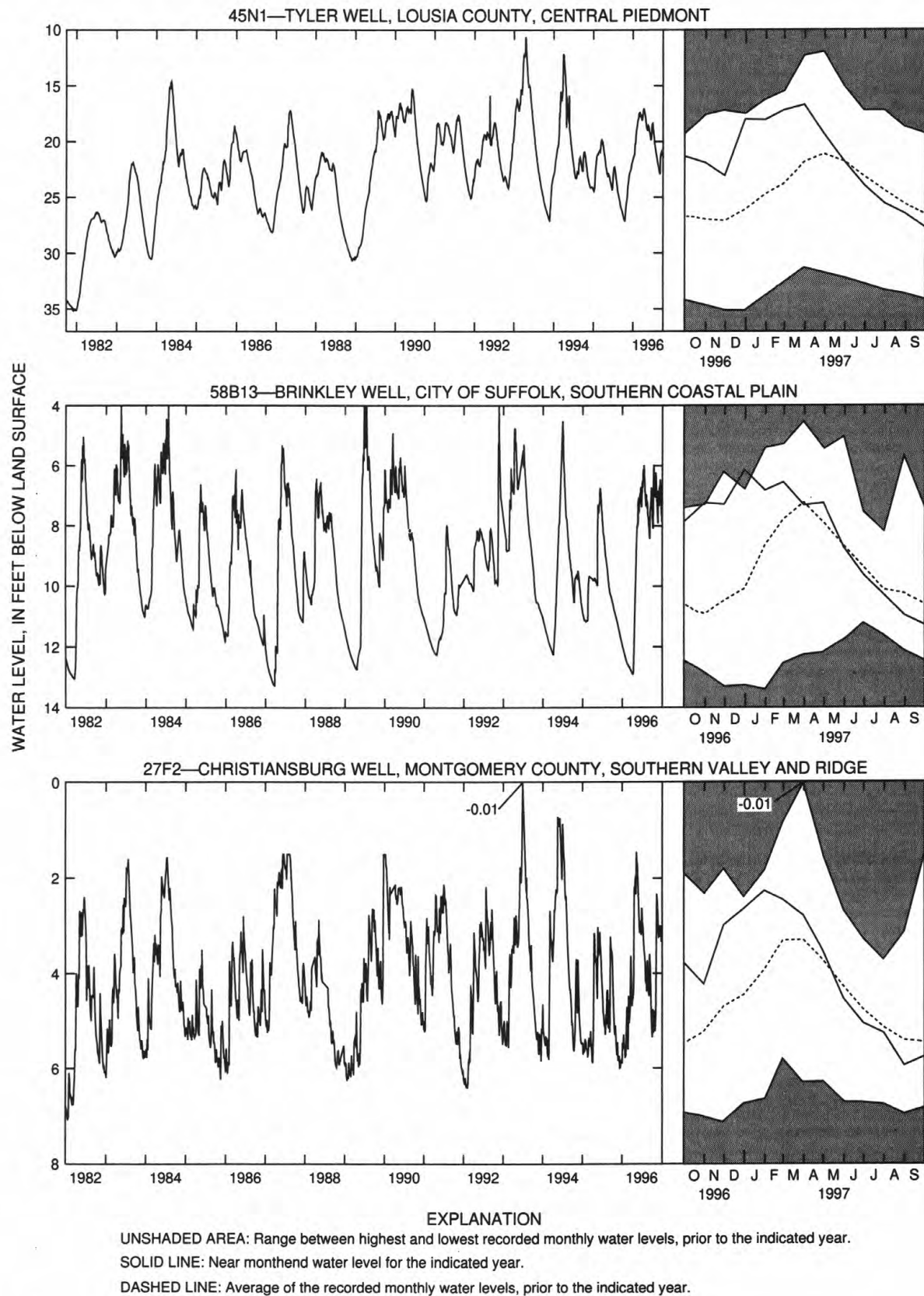


Figure 1. Monthly ground-water levels at key observation wells in water-table aquifers.

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In May, water levels remained above the long-term monthly average in the Buchanan, Clarke, and Loudoun County index wells. Water levels were below the long-term average for the month in the Westmoreland County well. No new record or annual extremes were established during the month.

Water levels were above the monthly average in June, for the Clarke, Loudoun, Rockingham, and Westmoreland County wells. Water levels were near the long-term monthly average at the remaining index wells, with the exception of the Buckingham County well which was below average. No new record or annual extremes were established during the month.

Water levels continued above the long-term monthly average in July at the Buchanan, Clarke, Loudoun, and Westmoreland County wells. Record-high water levels for the month were recorded in the northern part of the State--in Westmoreland County--and in the southwestern Virginia at the Buchanan County well. The previous records were established in 1989 and 1995, respectively.

In August, water levels remained above the long-term monthly average in Clarke, Loudoun, and Westmoreland County wells. Water levels were below average in the Buckingham, Louisa, Montgomery, and Suffolk wells. Record-high water levels for the month were recorded in the Loudoun and Westmoreland County wells. The lowest water level for the water year was recorded in August at the well in Buckingham County.

During September water levels generally fell and were below or slightly below the monthly average in 6 of the 11 index wells. Water levels continued to remain above the long-term monthly average in the Clarke, Loudoun, and Westmoreland County wells. No new record extremes were established during the month, although the lowest water levels for the year were measured at 10 of the 11 index wells. The exception being the Buckingham County well.

In summary, water levels in the shallow water-table aquifers across the State were above-average at the beginning of the 1997 water year, remained above-average for much of the water year, and generally fell to below or slightly below-average conditions by the end of the water year. Water levels were, however, above average for the entire water year in the northern part of the State--in Clarke and Loudoun Counties

The water level in the heavily pumped confined upper Potomac aquifer on the Coastal Plain at Toano in James City County fluctuated between 171.1 and 174.7 feet below land surface during the year. The measurement of 174.7 feet below land surface on September 29, 1997 represents the lowest water level measured in the well for the period of record. The cumulative decline in the upper Potomac aquifer at Toano from May 1985 to the end of September 1997 has been about 21 feet. Further south, near the center of a major pumping area in the middle Potomac aquifer near the City of Franklin in Isle of Wight County, the water level fluctuated between 194.6 and 207.4 feet below land surface during the year with no apparent seasonal or annual trend (fig. 2).

EXPLANATION OF THE RECORDS

The ground-water records published in this report are for the 1997 water year that began October 1, 1996, and ended September 30, 1997. A calendar of the water year is provided on the inside of the front cover. 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.

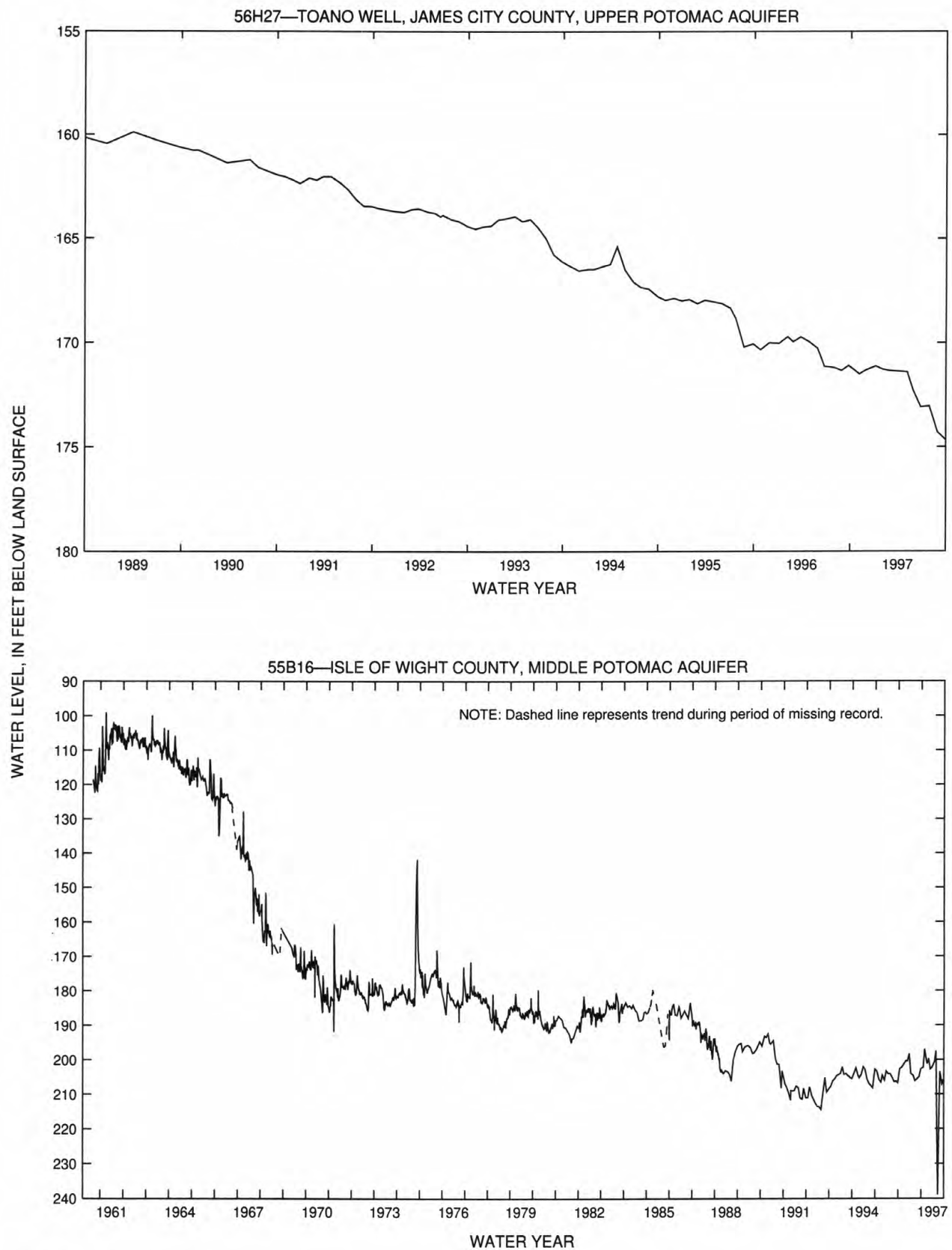


Figure 2. Ground-water levels in selected observation wells in confined Coastal Plain aquifers.

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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.

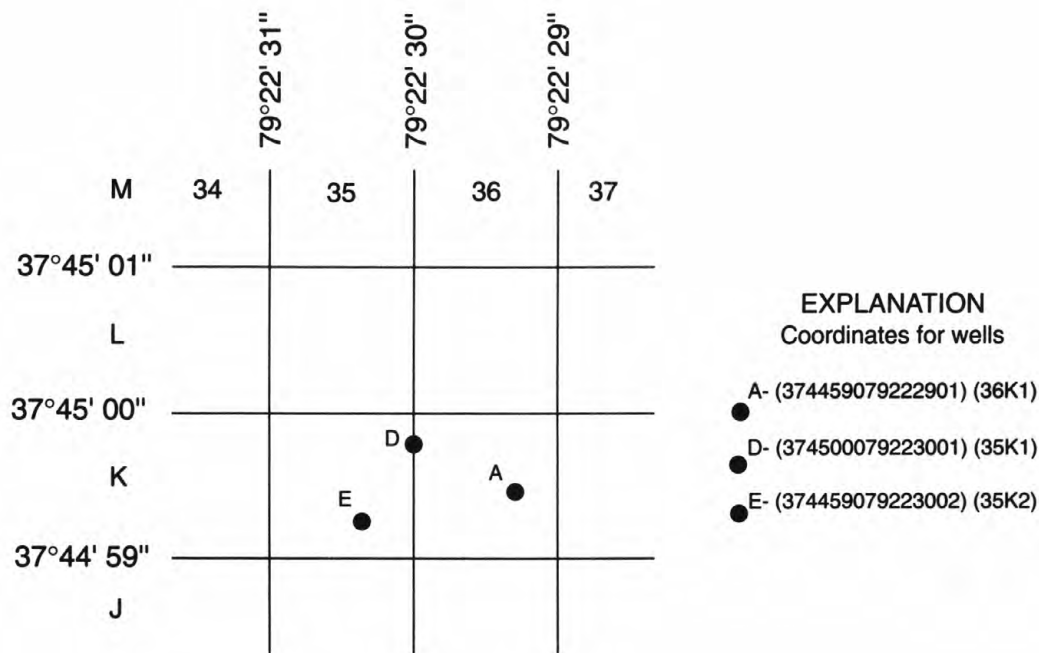


Figure 3. System for numbering wells.

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.

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.

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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.

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

ACCESS TO WATSTORE DATA

The U.S. Geological Survey is the principal Federal water-data agency and, as such, collects and disseminates about 70 percent of the water data currently being used by numerous State, local, private, and other Federal agencies to develop and manage our water resources. As part of the Geological Survey's program of releasing water data to the public, a large-scale computerized system has been developed for the storage and retrieval of water data collected through its activities. The National Water Data Storage and Retrieval System (WATSTORE) was established in 1972 to provide an effective and efficient means for the processing and maintenance of water data collected through the activities of the U.S. Geological Survey and to facilitate release of the data to the public. A variety of useful products, ranging from data tables to complex statistical analyses such as Log Pearson Type III, can be produced using WATSTORE. The system resides on the central computer facilities of the U.S. Geological Survey at its National Center in Reston, Virginia, and consists of related files and data bases.

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- * Station Header File - Contains descriptive information on more than 440,000 sites throughout the United States and its territories where the U.S. Geological Survey collects or has collected data.
- * Daily Values File - Contains more than 220 million daily values of stream flows, stages, reservoir contents, water temperatures, specific conductances, sediment concentrations, sediment discharges, and ground-water levels.
- * Water Quality File - Contains approximately 2 million analyses of water samples that describe the chemical, physical, biological, and radio-chemical characteristics of both surface and ground water.
- * Ground-Water Site Inventory Data Base - Contains inventory data for more than 900,000 wells, springs, and other sources of ground water. The data includes site location, geohydrologic characteristics, well-construction history, and one-time field measurements such as water temperature.

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

U.S. Geological Survey
National Water Data Exchange
421 USGS National Center
Reston, Virginia 20192

In addition to providing direct access to WATSTORE, data can be provided in various machine-readable formats on magnetic tape or 5-1/4 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's 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.

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 \pm 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 \pm 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 \pm 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.

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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.

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 ($\mu\text{g/g}$) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the element per unit mass (gram) of material analyzed.

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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.

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.

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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.

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.

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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.

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

Kingdom.....	Animal
Phylum.....	Arthropoda
Class.....	Insecta
Order.....	Ephemeroptera
Family.....	Ephemeridae
Genus.....	<u>Hexagenia</u>
Species.....	<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 programed text for self-instruction*, by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.
- 3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J. E. Reed: USGS--TWRI Book 3, Chapter B3. 1980. 106 pages.
- 3-B4. *Regression modeling of ground-water flow*, by R. L. Cooley and R. L. Naff: USGS--TWRI Book 3, Chapter B4. 1990. 232 pages.
- 3-B4. *Supplement 1. Regression modeling of ground-water flow - Modifications to the computer code for nonlinear regression solution of steady-state ground-water flow problems*, by R. L. Cooley: USGS--TWRI Book 3, Chapter B4. 1993. 8 pages.
- 3-B5. *Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems--An introduction*, by O. L. Franke, T. E. Reilly, and G. D. Bennett: USGS--TWRI Book 3, Chapter B5. 1987. 15 pages.
- 3-B6. *The principle of superposition and its application in ground-water hydraulics*, by T. E. Reilly, O. L. Franke, and G. D. Bennett: USGS--TWRI Book 3, Chapter B6. 1987. 28 pages.
- 3-B7. *Analytical solutions for one-, two-, and three-dimensional solute transport in ground-water systems with uniform flow*, by E. J. Wexler: USGS--TWRI Book 3, Chapter B7. 1992. 190 pages.
- 3-C1. *Fluvial sediment concepts*, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.

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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. Greeson, editors: USGS--TWRI Book 5, Chapter A4. 1989. 363 pages.
- 5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L.L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.
- 5-A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sediments*, by L. C. Friedman and D. E. Erdmann: USGS--TWRI Book 5, Chapter A6. 1982. 181 pages.
- 5-C1. *Laboratory theory and methods for sediment analysis*, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.
- 6-A1. *A modular three-dimensional finite-difference ground-water flow model*, by M. G. McDonald and A. W. Harbaugh: USGS--TWRI Book 6, Chapter A1. 1988. 586 pages.
- 6-A2. *Documentation of a computer program to simulate aquifer-system compaction using the modular finite-difference ground-water flow model*, by S. A. Leake and D. E. Prudic: USGS--TWRI Book 6, Chapter A2. 1991. 68 pages.
- 6-A3. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 1: Model Description and User's Manual*, by L. J. Torak: USGS--TWRI Book 6, Chapter A3. 1993. 136 pages.
- 6-A4. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 2: Derivation of finite-element equations and comparisons with analytical solutions*, by R. L. Cooley: USGS--TWRI Book 6, Chapter A4. 1992. 108 pages.
- 6-A5. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 3: Design philosophy and programming details*, by L. J. Torak: USGS--TWRI Book 6, Chapter A5, 1993. 243 pages.

WATER RESOURCES DATA - VIRGINIA, 1997

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS--Continued

- 6-A6. *A coupled surface-water and ground-water flow model (MODBRANCH) for simulation of stream-aquifer interaction*, by Eric D. Swain and Eliezer J. Wexler. 1995. 125 pages.
- 7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.
- 7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L. F. Konikow and J. D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 pages.
- 7-C3. *A model for simulation of flow in singular and interconnected channels*, by R. W. Schaffranek, R. A. Baltzer, and D. E. Goldberg: USGS--TWRI Book 7, Chapter C3. 1981. 110 pages.
- 8-A1. *Methods of measuring water levels in deep wells*, by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages.
- 8-A2. *Installation and service manual for U.S. Geological Survey manometers*, by J. D. Craig: USGS--TWRI Book 8, Chapter A2. 1983. 57 pages.
- 8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.
- 9-A7. *National Field Manual for the Collection of Water-Quality Data: Biological Indicators*, by D. N. Myers and F. D. Wilde: USGS--TWRI Book 9, Chapter A7. 1997. 49 pages.

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

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.

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.

Documentation of a multiple-technique computer program for plotting major-ion composition of natural waters, by L. I. Briel: U.S. Geological Survey Open-File Report 93-74. 1994.

Documentation of geographic-information-system coverages and data-input files used for analysis of the geohydrology of the Virginia Coastal Plain, by M. J. Focazio and T. B. Samsel, III: U.S. Geological Survey Water-Resources Investigations Report 93-4015. 1994. 53 pages.

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

Estimating net drawdown resulting from episodic withdrawals at six well fields in the Coastal Plain physiographic province of Virginia, by M. J. Focazio and G. K. Speiran: U.S. Geological Survey Water-Resources Investigations Report 93-4159. 1994. 21 pages.

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.

Geohydrology and the occurrence of volatile organic compounds in ground water, Culpeper basin of Prince William County, Virginia, by D. L. Nelms and D. L. Richardson: U.S. Geological Survey Water-Resources Investigations Report 90-4032. 1991. 94 pages.

Geohydrology of the shallow aquifer system, Naval Weapons Station Yorktown, Yorktown, Virginia, by A.R. Brockman, D.L. Nelms, G.E. Harlow, Jr., and J.J. Gildea: U.S. Geological Survey Water-Resources Investigations Report 97-4188. 61 pages.

Ground-water availability along the Blue Ridge Parkway, Virginia, by H. T. Hopkins: U.S. Geological Survey Water-Resources Investigations Report 84-4168. 1985. 154 pages.

Ground-water contamination and movement at the Defense General Supply Center, Richmond, Virginia, by J. D. Powell, W. G. Wright, D. L. Nelms, and R. J. Ahlin: U.S. Geological Survey Water-Resources Investigations Report 90-4113. 1991. 36 pages.

Ground-water concerns for the Eastern Shore, Virginia, by D. L. Richardson: U.S. Geological Survey Open-File Report 93-93. 1994. 4 pages (Water-Resources Notes).

Ground-water discharge from the Coastal Plain of Virginia, by D. L. Richardson: U.S. Geological Survey Water-Resources Investigations Report 93-4191. 1995.

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.

Ground-water use and levels in the southern Coastal Plain of Virginia, by J. D. Larson and R. J. Lacznik: U.S. Geological Survey Open-File Report 91-187. 1991. 165 pages.

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.

Guide to obtaining U.S. Geological Survey information, by K. Dodd, H. K. Fuller, and P. F. Clarke: U.S. Geological Survey Circular 900. 1985. 35 pages.

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

Hydrogeology and analysis of the ground-water-flow system in the Coastal Plain of southeastern Virginia, by P. A. Hamilton and J. D. Larson: U.S. Geological Survey Water-Resources Investigations Report 87-4240. 1988. 175 pages.

Hydrogeology and analysis of the ground-water-flow system of the Eastern Shore, Virginia, by D. L. Richardson: U.S. Geological Survey Water-Supply Paper 2401. 1994. 108 pages.

Hydrogeology and water quality of the shallow aquifer system at the Explosive Experimental Area, Naval Surface Warfare Center, Dahlgren Site, Dahlgren, Virginia, by C.F. Bell: U.S. Geological Survey Water Resources Investigations Report 96-4209. 1996. 37 pages.

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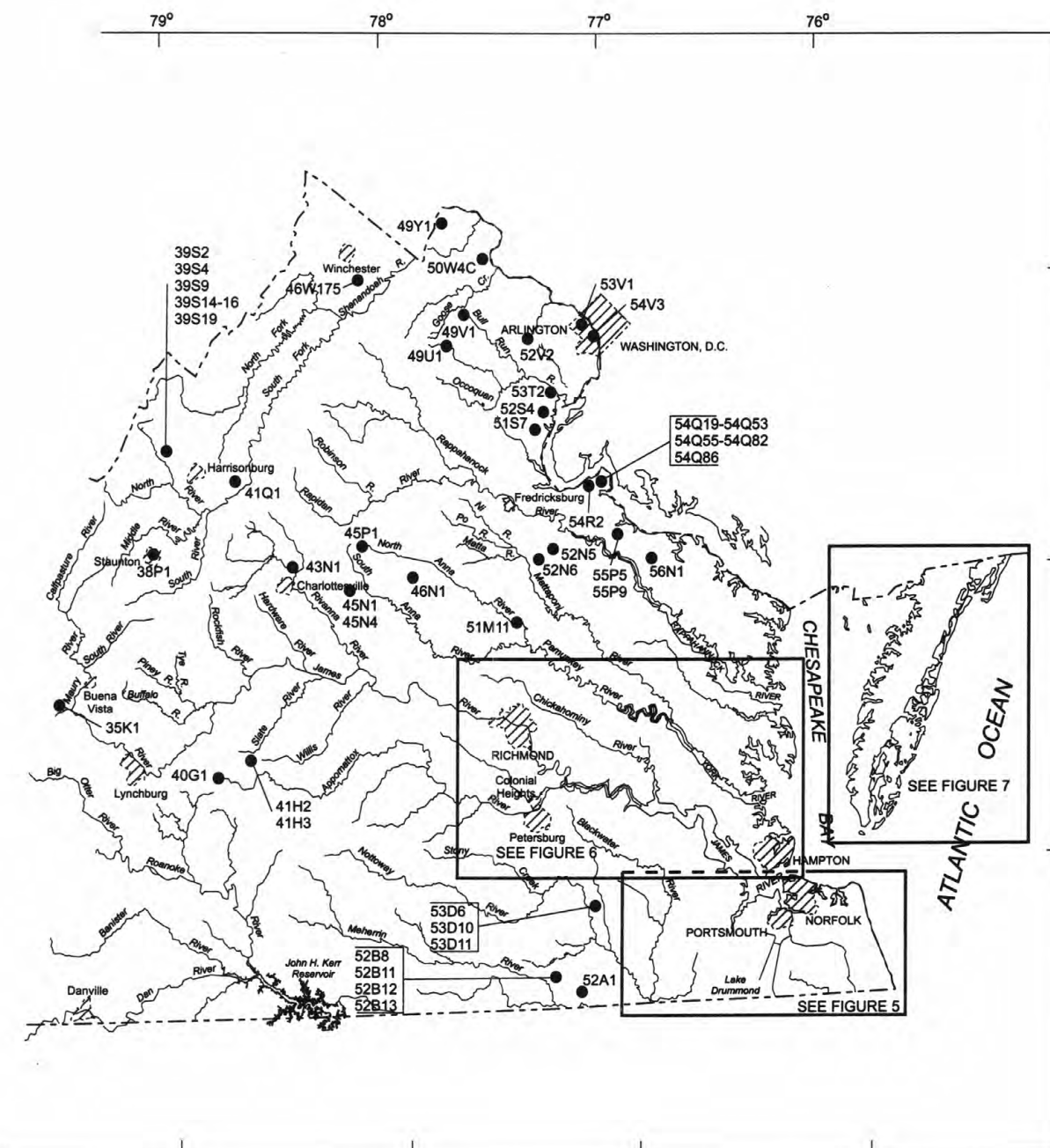
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WATER RESOURCES DATA - VIRGINIA, 1997



WATER RESOURCES DATA - VIRGINIA, 1997

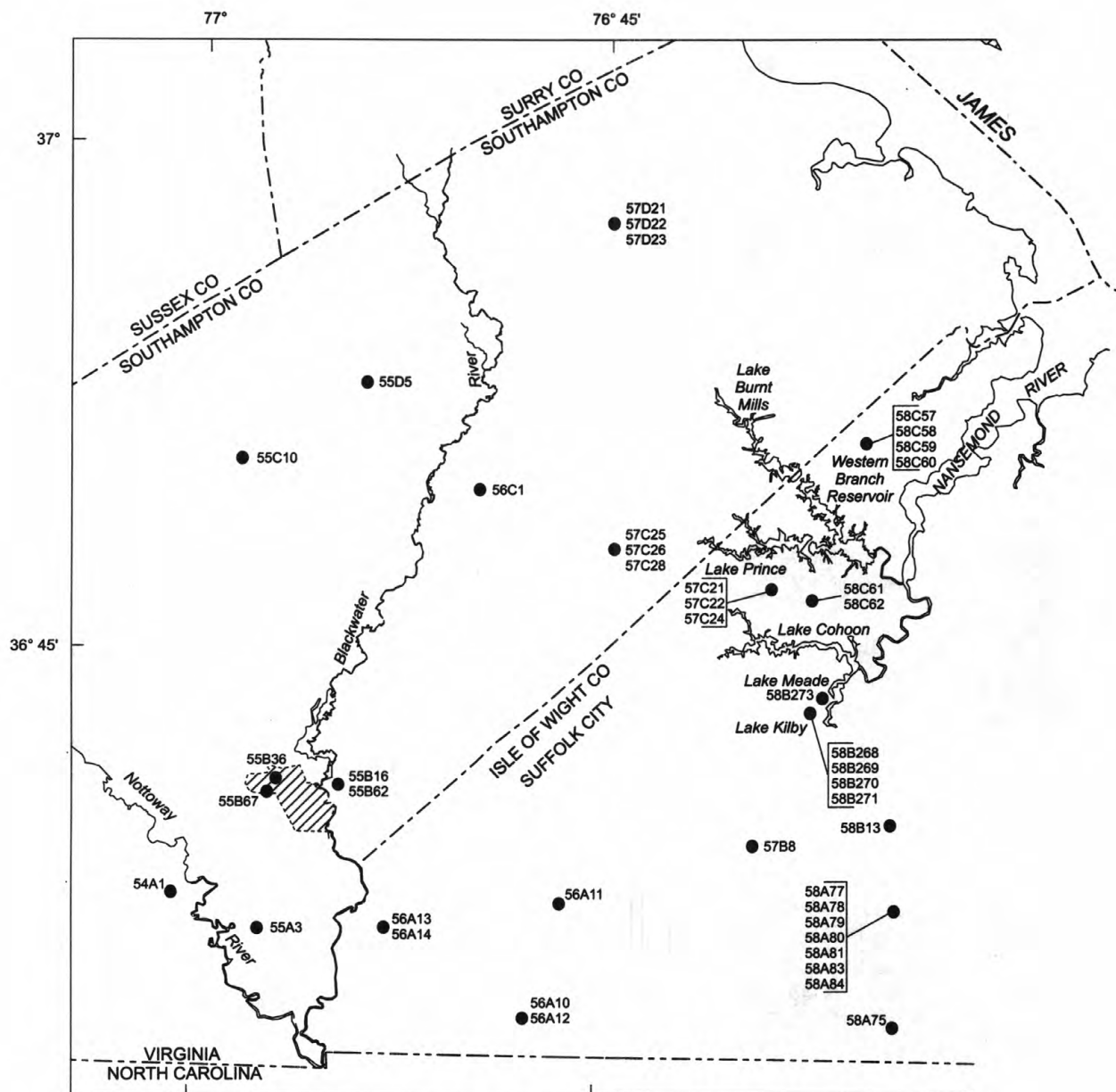
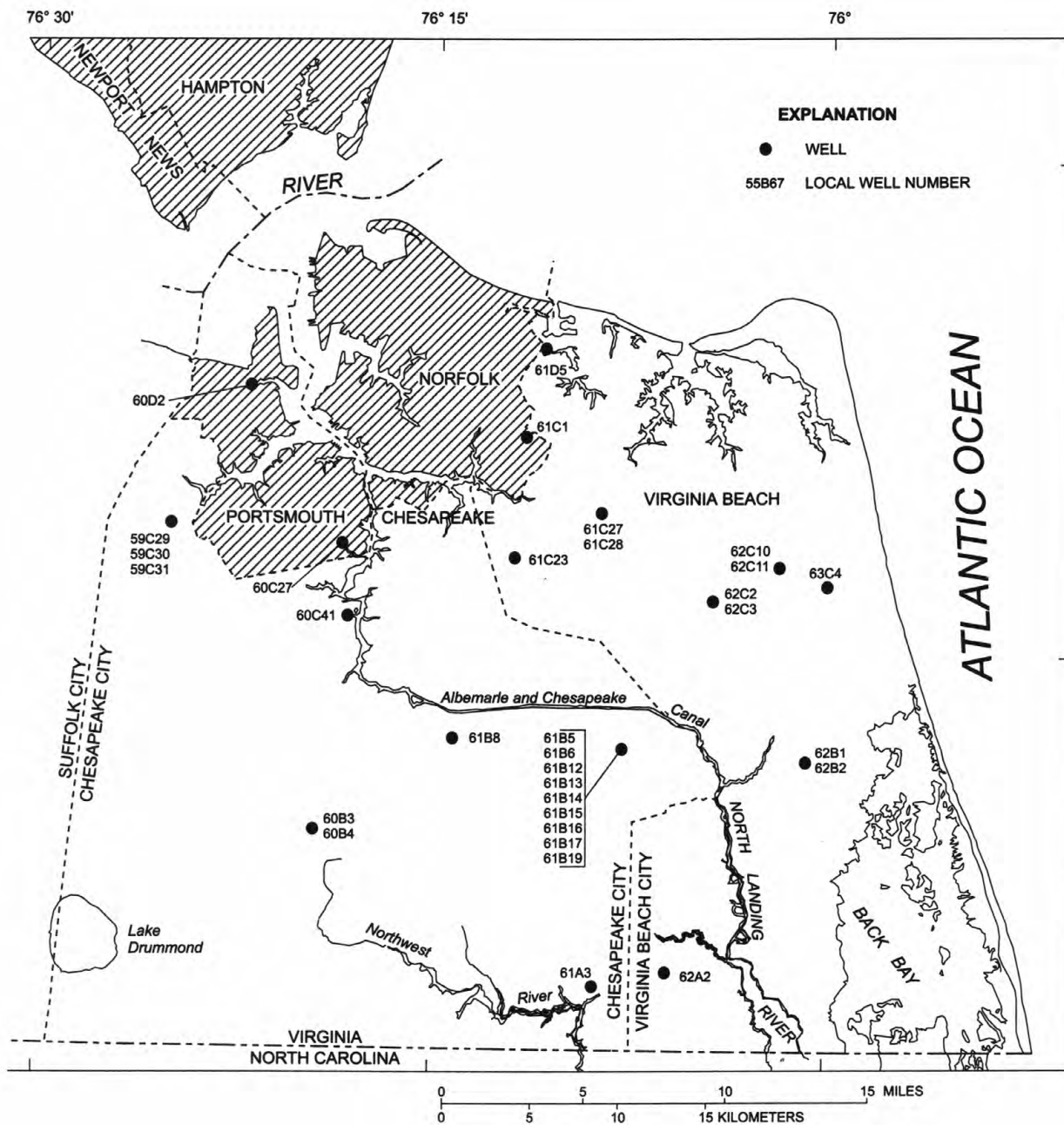


Figure 5. Location of ground-water observation wells in southeastern Virginia.

WATER RESOURCES DATA - VIRGINIA, 1995

25



WATER RESOURCES DATA - VIRGINIA, 1997

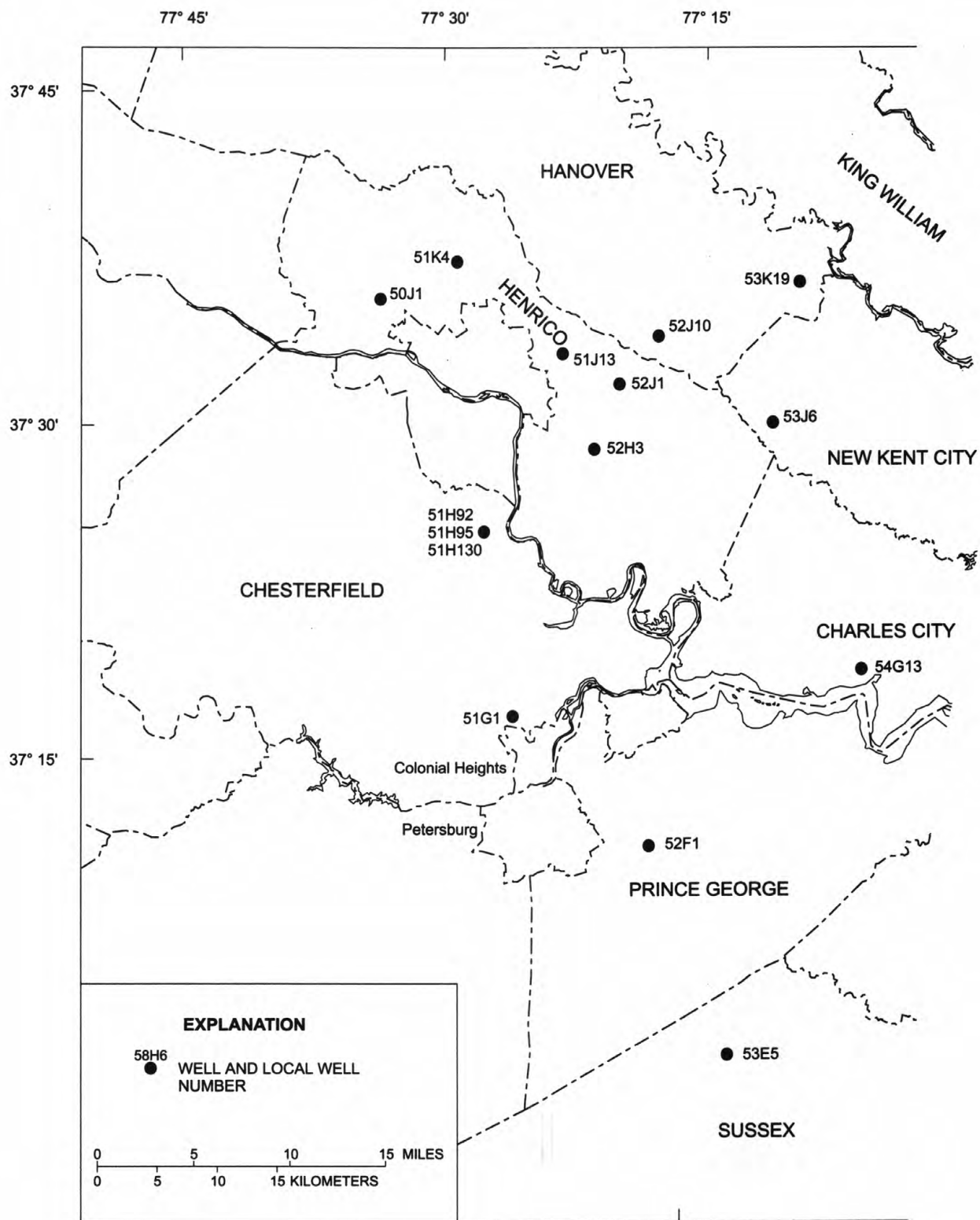
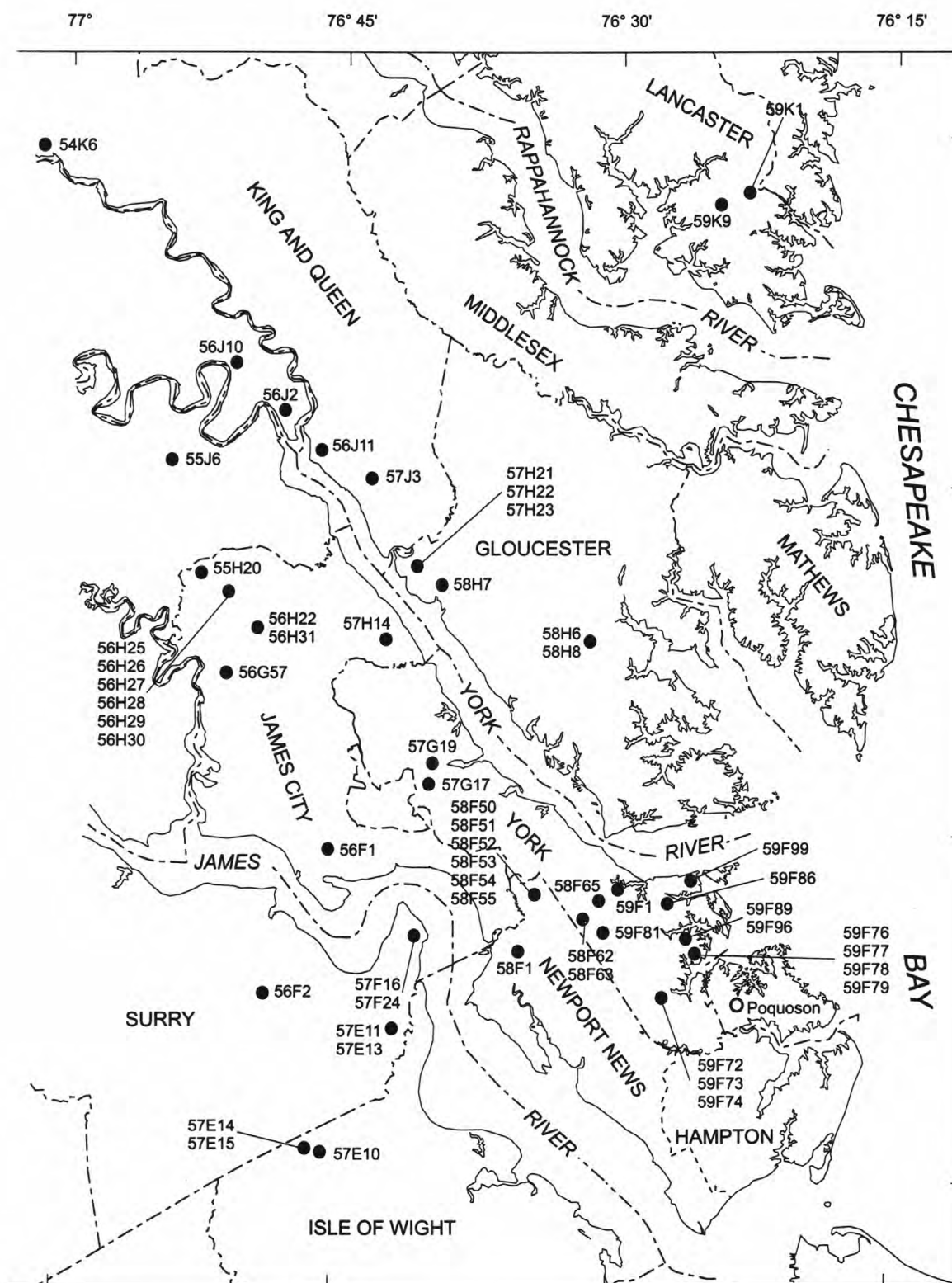


Figure 6. Location of ground-water observation wells on York-James peninsula and vicinity.



WATER RESOURCES DATA - VIRGINIA, 1997

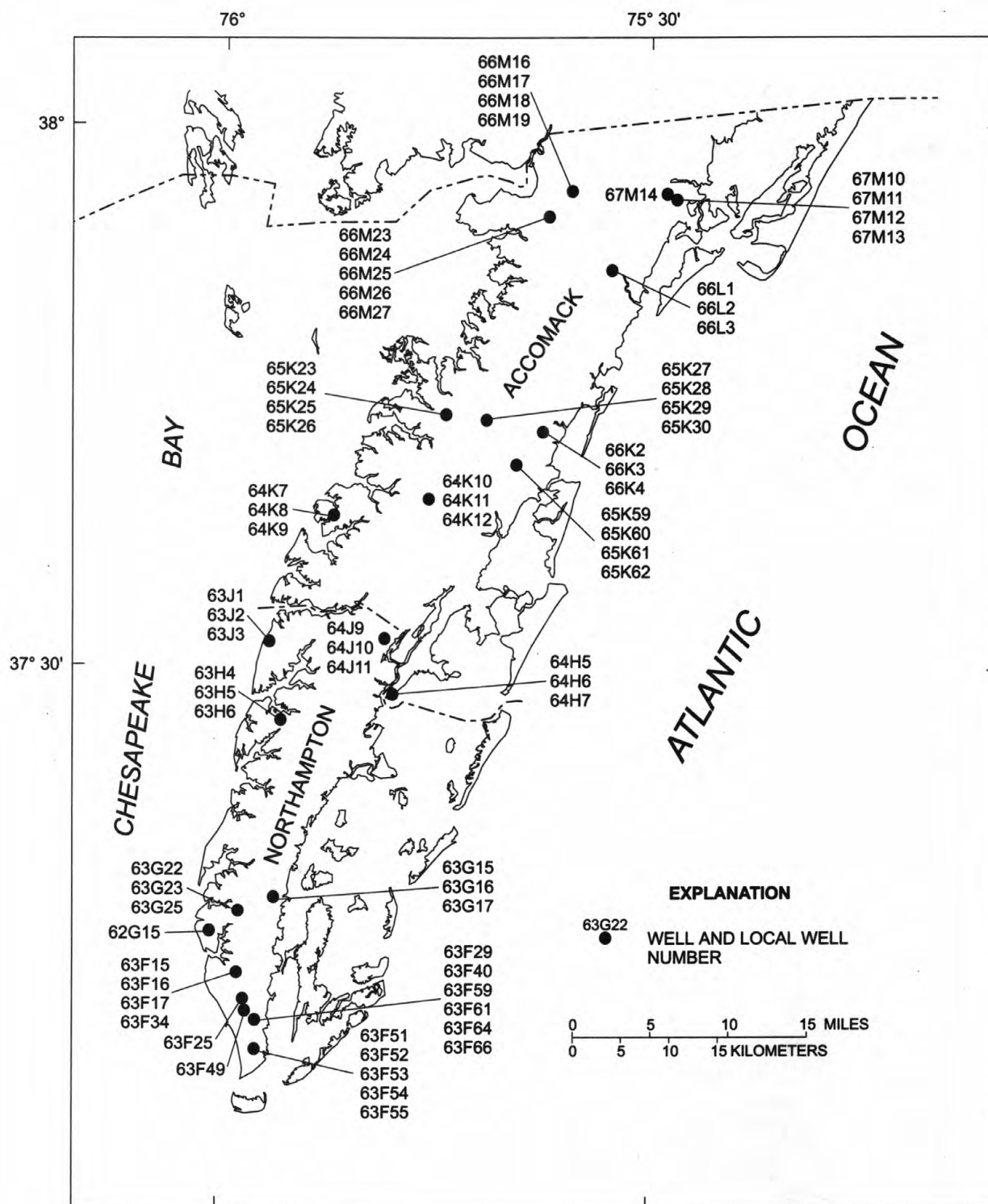


Figure 7. Location of ground-water observation wells on Delmarva peninsula.

GROUND-WATER-LEVEL RECORDS

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.

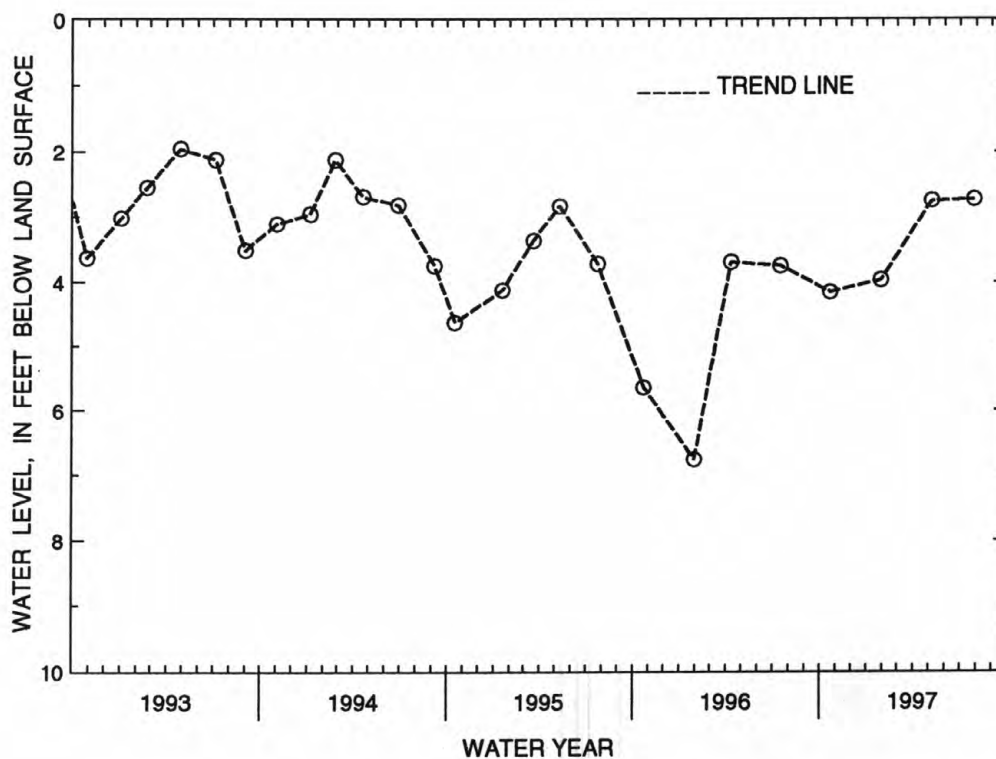
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	4.16	JAN 29	3.97	MAY 07	2.75	JUL 28	2.73
WATER YEAR 1997	HIGHEST	2.73	JUL 28, 1997				
	LOWEST	4.16	OCT 22, 1996				



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.

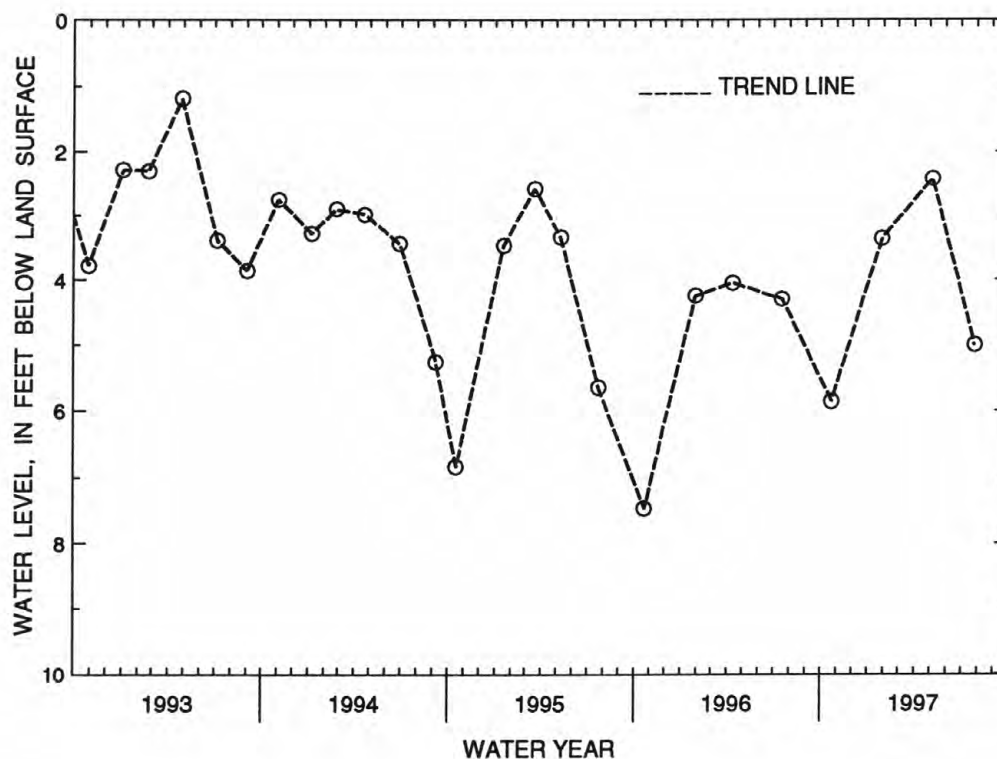
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	5.86	JAN 29	3.36	MAY 07	2.42	JUL 28	5.01
WATER YEAR 1997		HIGHEST	2.42	MAY 07, 1997			
		LOWEST	5.86	OCT 22, 1996			



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.

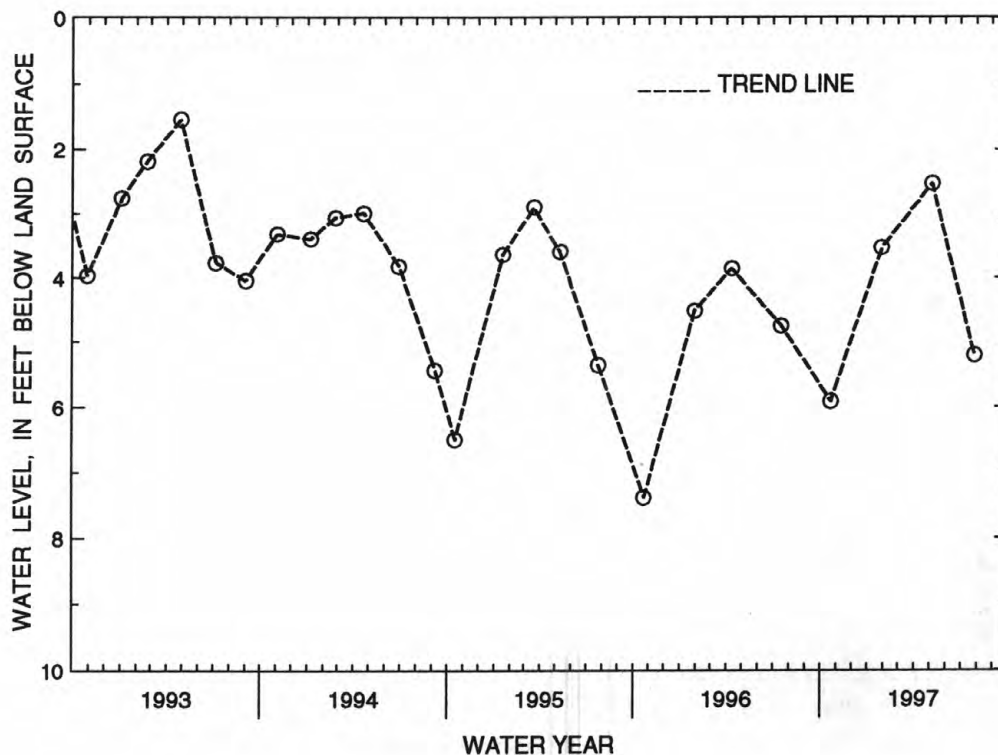
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	5.92	JAN 29	3.54	MAY 07	2.53	JUL 28	5.22
WATER YEAR 1997		HIGHEST	2.53	MAY 07, 1997			
		LOWEST	5.92	OCT 22, 1996			



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.

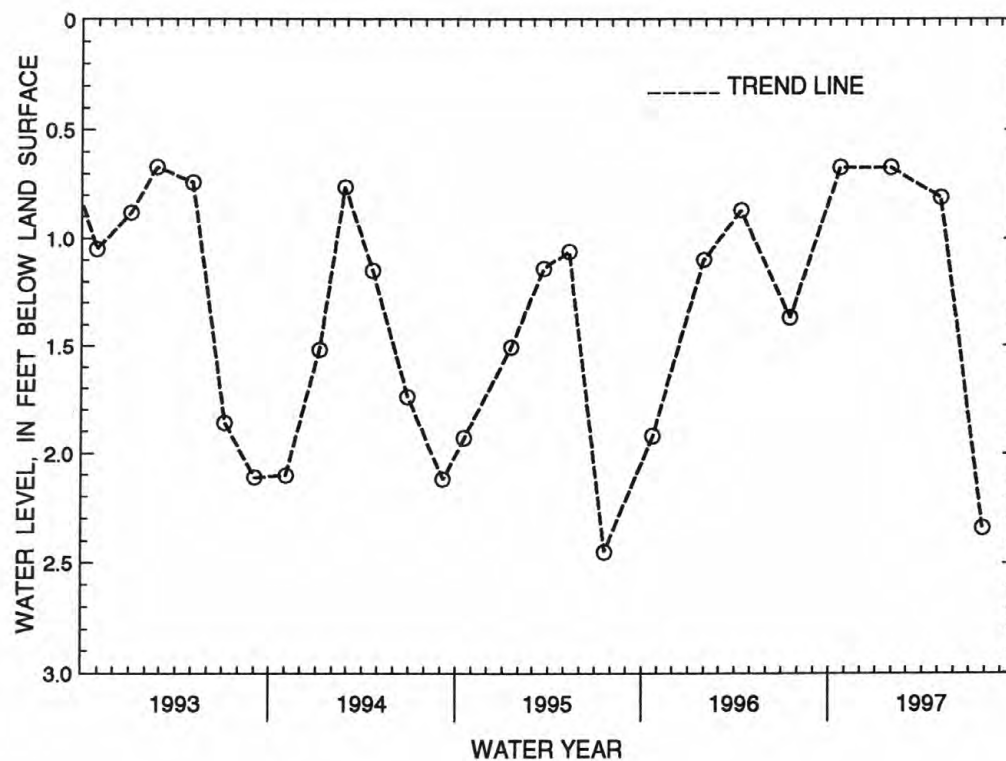
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	0.67	JAN 28	0.67	MAY 06	0.81	JUL 28	2.34
WATER YEAR 1997	HIGHEST	0.67	OCT 22, 1996, JAN 28, 1997				
	LOWEST	2.34	JUL 28, 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.

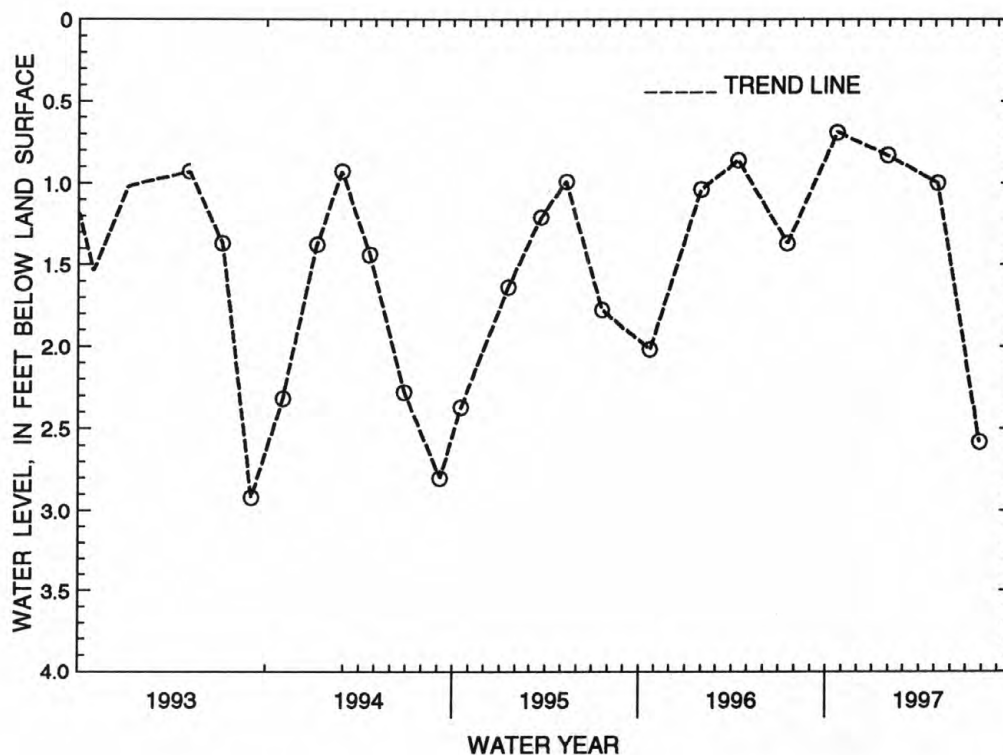
REMARKS.--Records provided by the Virginia Department of Environmental Quality. - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	0.69	JAN 28	0.83	MAY 06	1.00	JUL 28	2.58
WATER YEAR 1997		HIGHEST	0.69	OCT 22, 1996			
		LOWEST	2.58	JUL 28, 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.

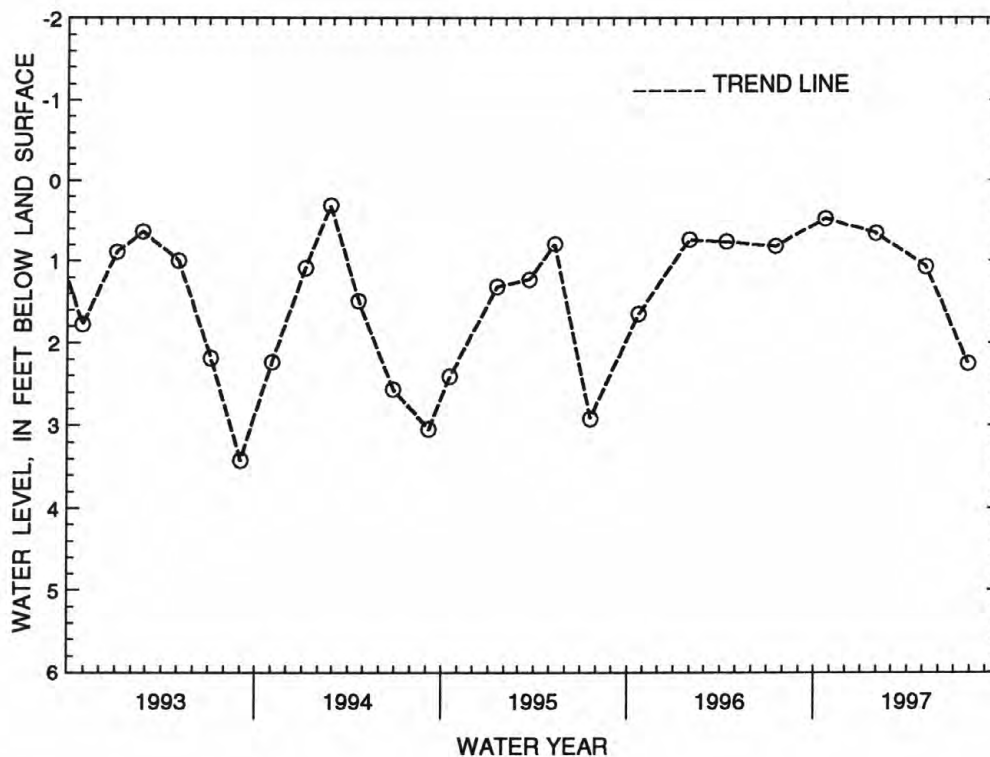
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	0.48	JAN 28	0.66	MAY 06	1.07	JUL 28	2.25
WATER YEAR 1997		HIGHEST	0.48	OCT 22, 1996			
		LOWEST	2.25	JUL 28, 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.

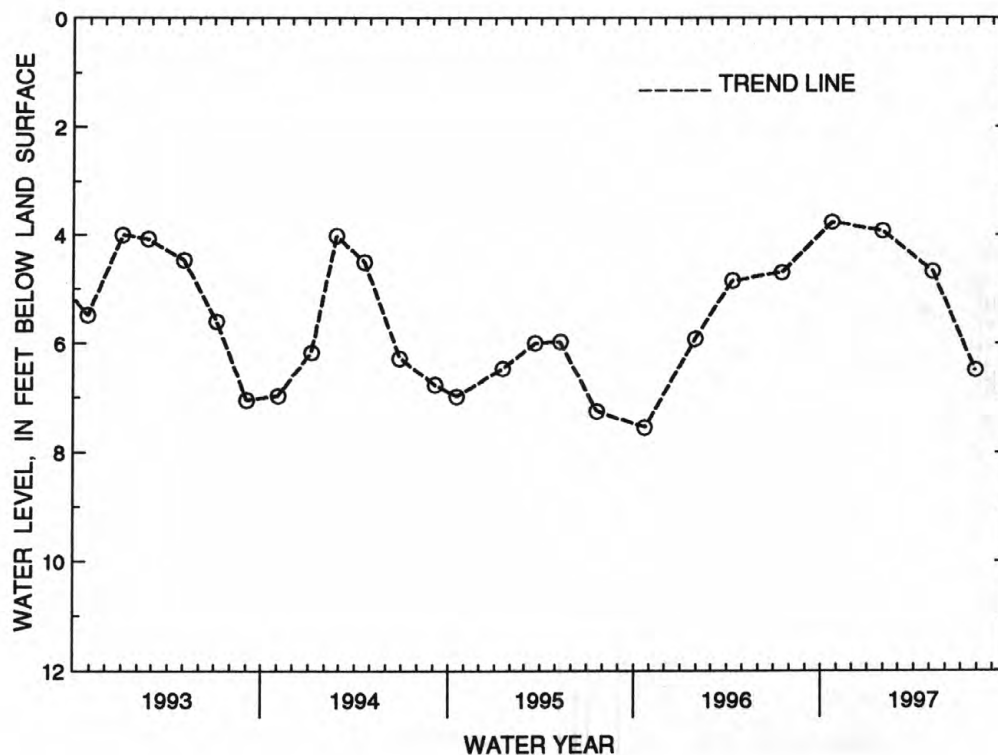
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	3.76	JAN 28	3.92	MAY 06	4.67	JUL 28	6.50
WATER YEAR 1997	HIGHEST	3.76	OCT 22, 1996				
	LOWEST	6.50	JUL 28, 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 south-east 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.

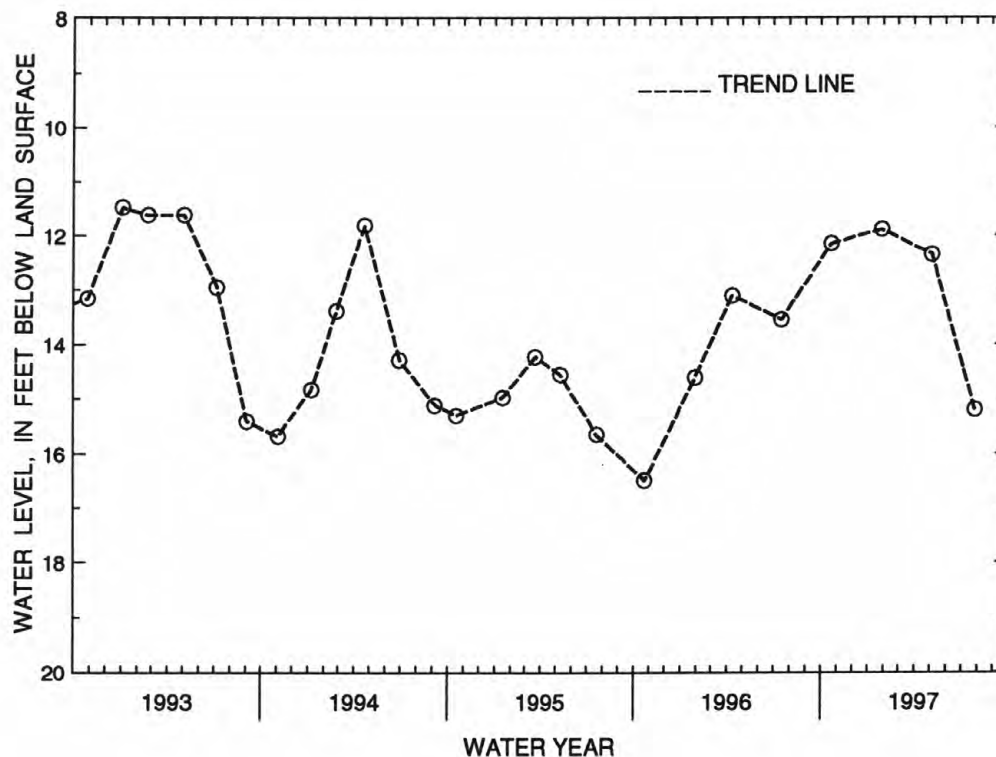
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	12.15	JAN 28	11.89	MAY 06	12.35	JUL 28	15.21
WATER YEAR 1997	HIGHEST	11.89	JAN 28, 1997				
	LOWEST	15.21	JUL 28, 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 south-east 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.

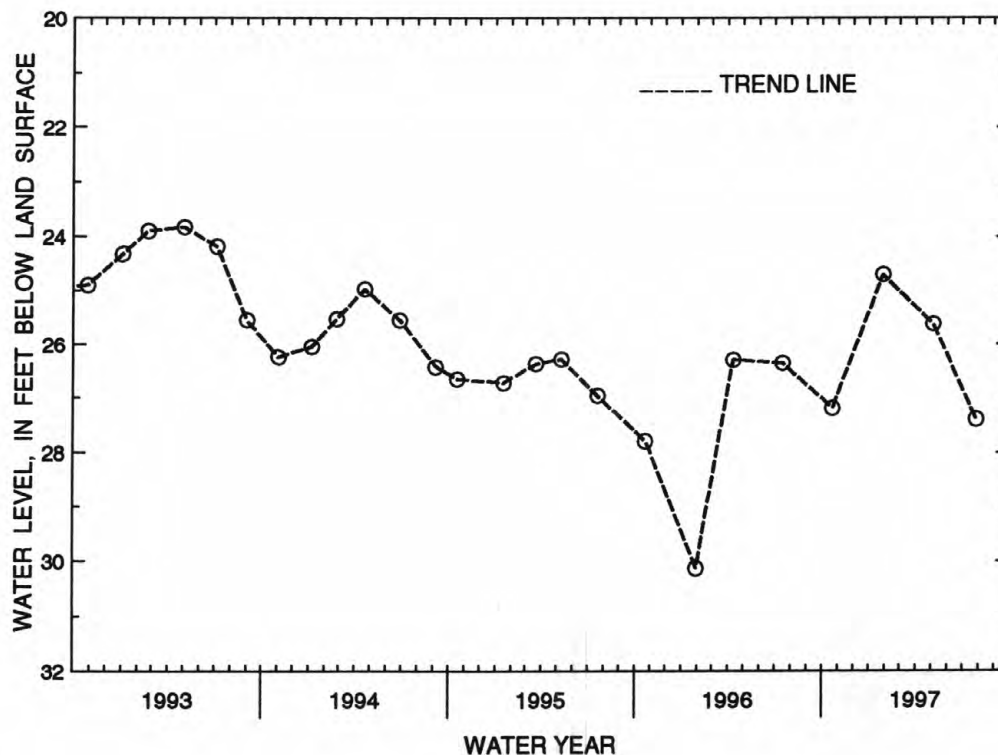
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level may be affected by local pumpage.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	27.19	JAN 28	24.70	MAY 06	25.62	JUL 28	27.40
WATER YEAR 1997		HIGHEST	24.70	JAN 28, 1997			
		LOWEST	27.40	JUL 28, 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.

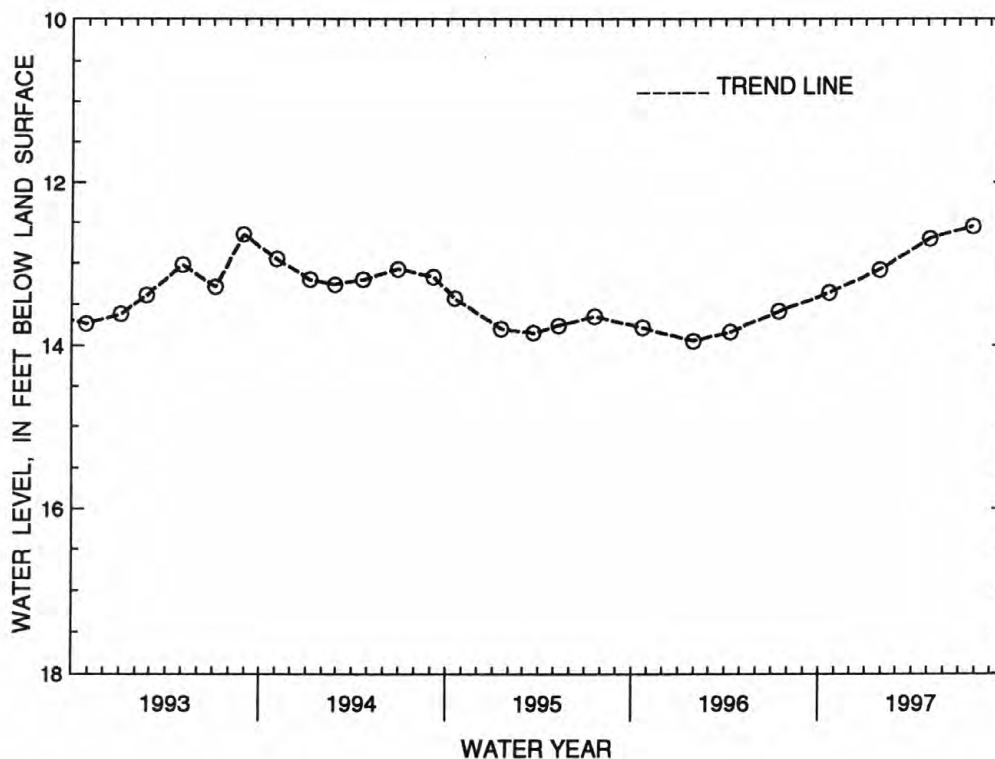
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level may be affected by local pumpage.

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 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	13.36	JAN 28	13.08	MAY 06	12.70	JUL 28	12.55
WATER YEAR 1997	HIGHEST	12.55	JUL 28, 1997				
	LOWEST	13.36	OCT 22, 1996				



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.

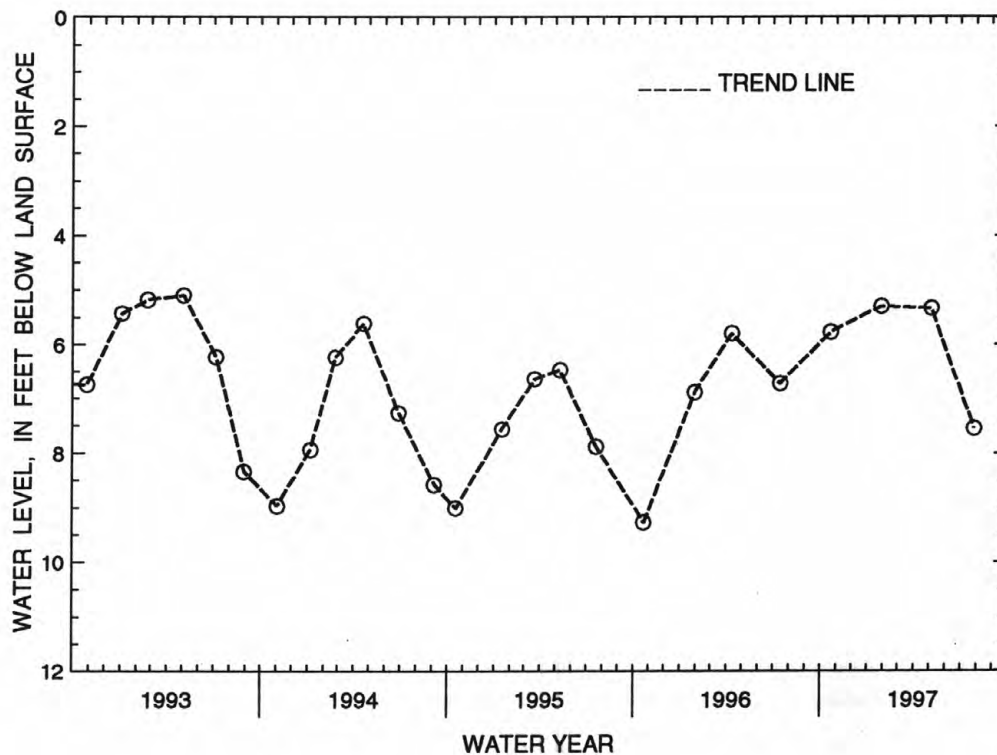
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	5.77	JAN 28	5.30	MAY 06	5.34	JUL 28	7.55
WATER YEAR 1997	HIGHEST	5.30	JAN 28, 1997				
	LOWEST	7.55	JUL 28, 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.

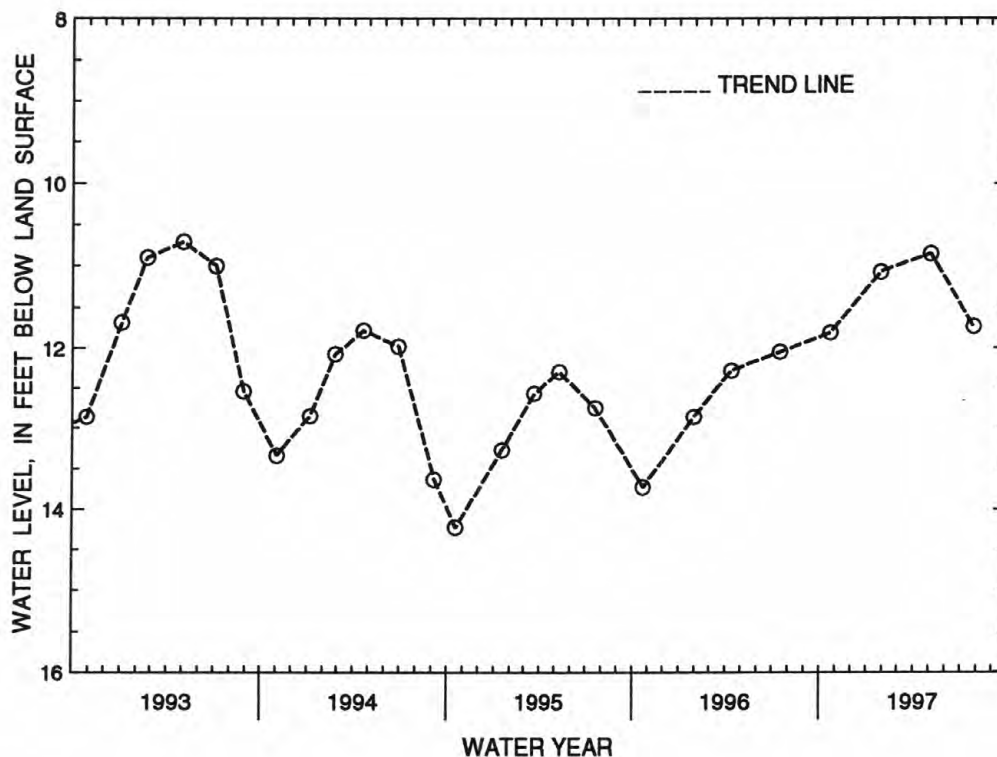
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level may be affected by local pumpage.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	11.81	JAN 28	11.07	MAY 06	10.85	JUL 28	11.74
WATER YEAR 1997	HIGHEST	10.85	MAY 06, 1997				
	LOWEST	11.81	OCT 22, 1996				



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.

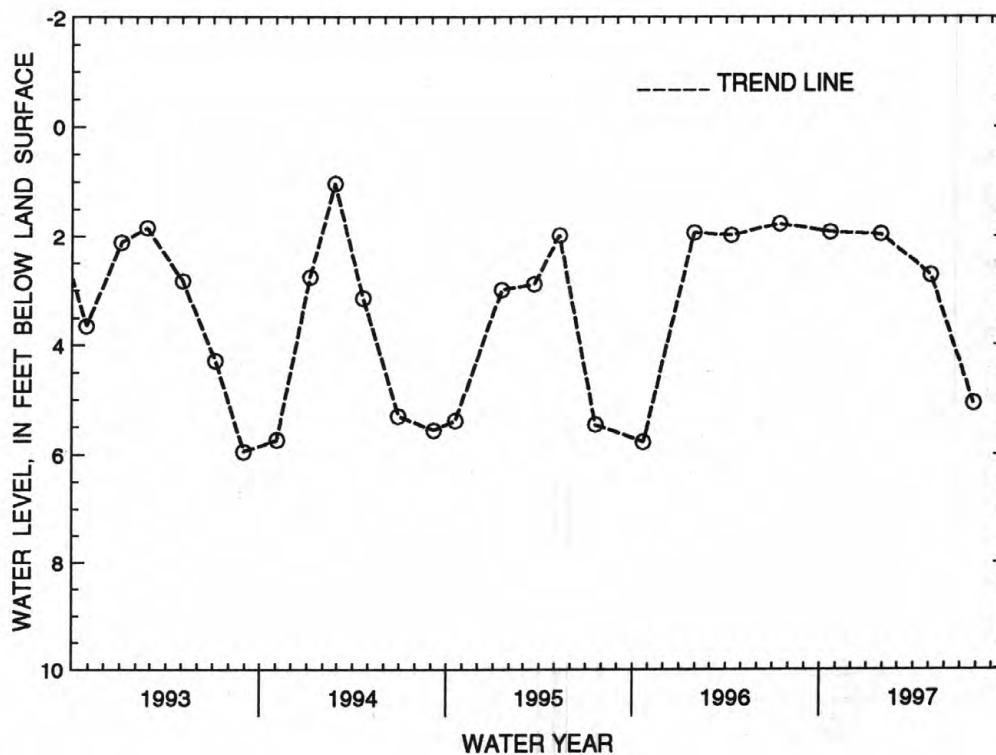
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	1.92	JAN 28	1.96	MAY 06	2.72	JUL 28	5.07
WATER YEAR 1997		HIGHEST	1.92	OCT 22, 1996			
		LOWEST	5.07	JUL 28, 1997			



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.

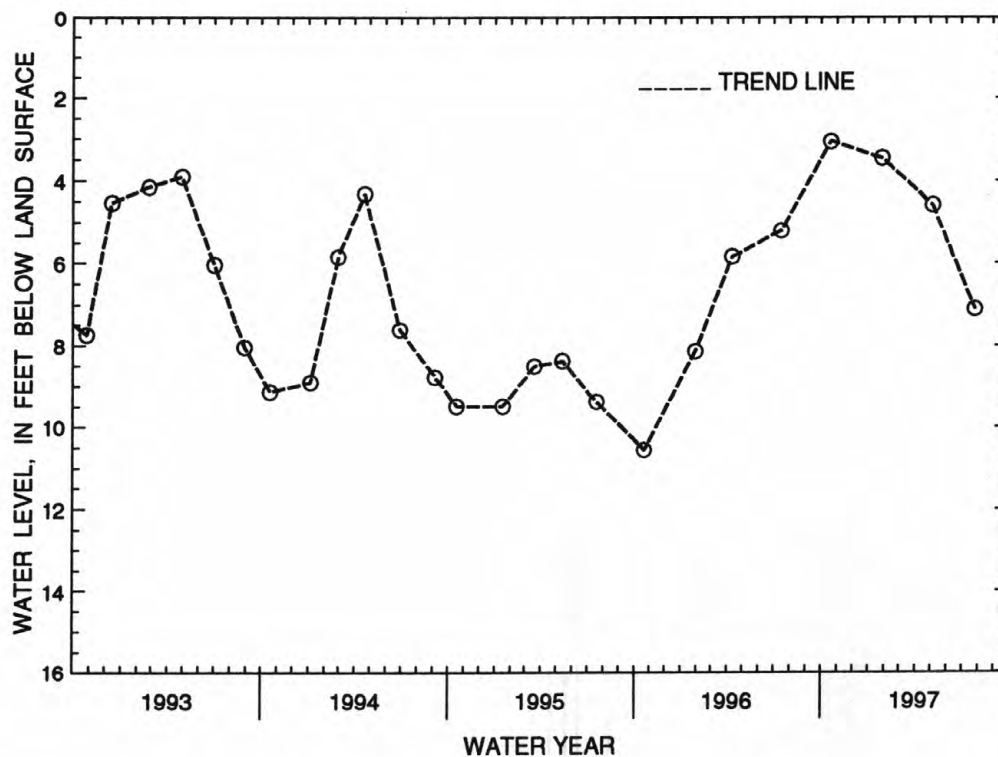
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	3.06	JAN 29	3.47	MAY 07	4.59	JUL 29	7.12
WATER YEAR 1997	HIGHEST	3.06	OCT 21, 1996				
	LOWEST	7.12	JUL 29, 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 1996 TO SEPTEMBER 1997

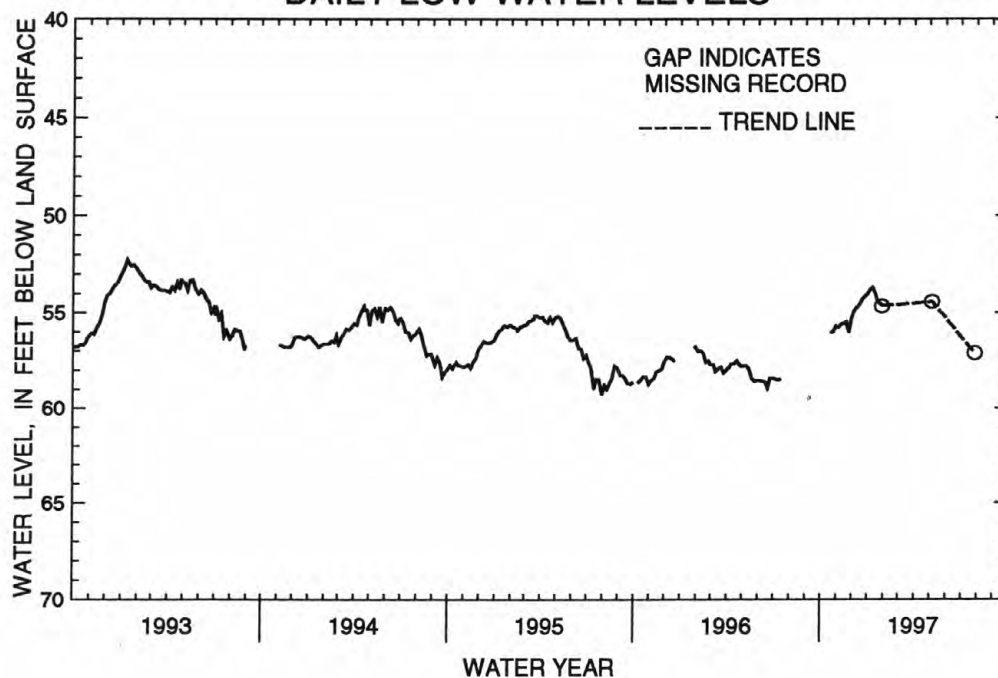
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 28	54.66	MAY 06	54.45	JUL 28	57.12

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	55.79	54.96	53.80	---	---	---	---	---	---	---	---
10	---	55.61	54.74	53.72	---	---	---	---	---	---	---	---
15	---	55.59	54.64	54.00	---	---	---	---	---	---	---	---
20	56.05	55.52	54.37	54.49	---	---	---	---	---	---	---	---
25	56.04	55.60	54.21	54.53	---	---	---	---	---	---	---	---
EOM	55.72	55.34	54.04	---	---	---	---	---	---	---	---	---

WATER YEAR 1997	HIGHEST INSTANTANEOUS	53.53	JAN 10, 1997
	LOWEST INSTANTANEOUS	57.12	JUL 28, 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.

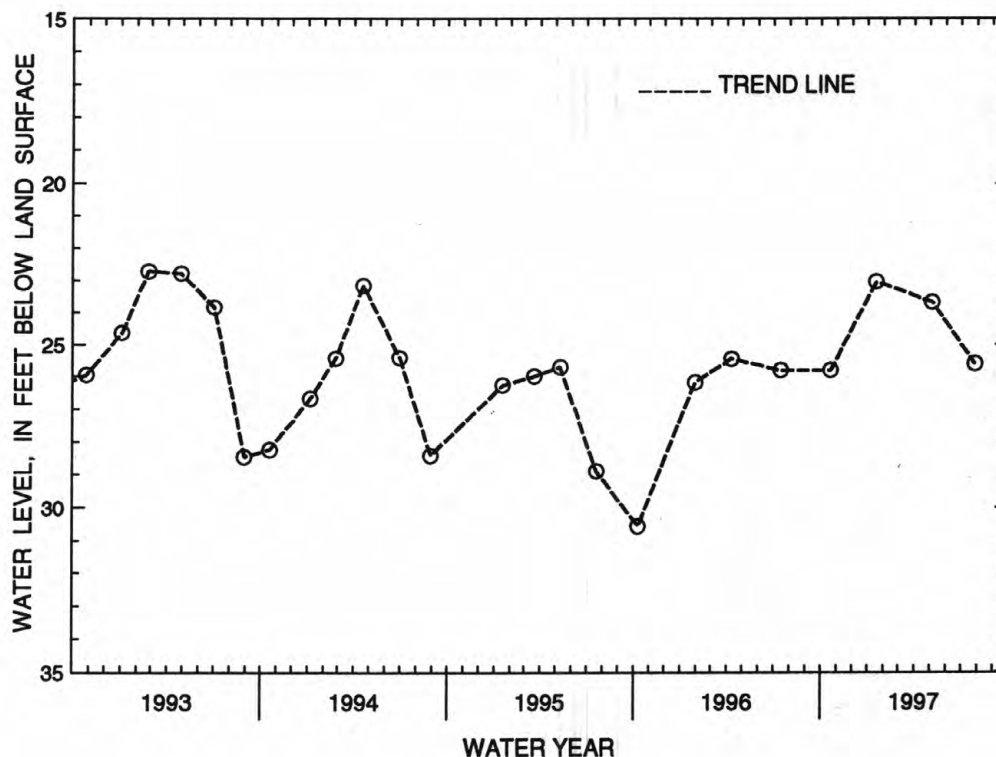
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level may be affected by local pumpage.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	25.75	JAN 28	23.04	MAY 06	23.67	JUL 28	25.61
WATER YEAR 1997	HIGHEST	23.04	JAN 28, 1997				
	LOWEST	25.75	OCT 21, 1996				



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 1996 TO SEPTEMBER 1997

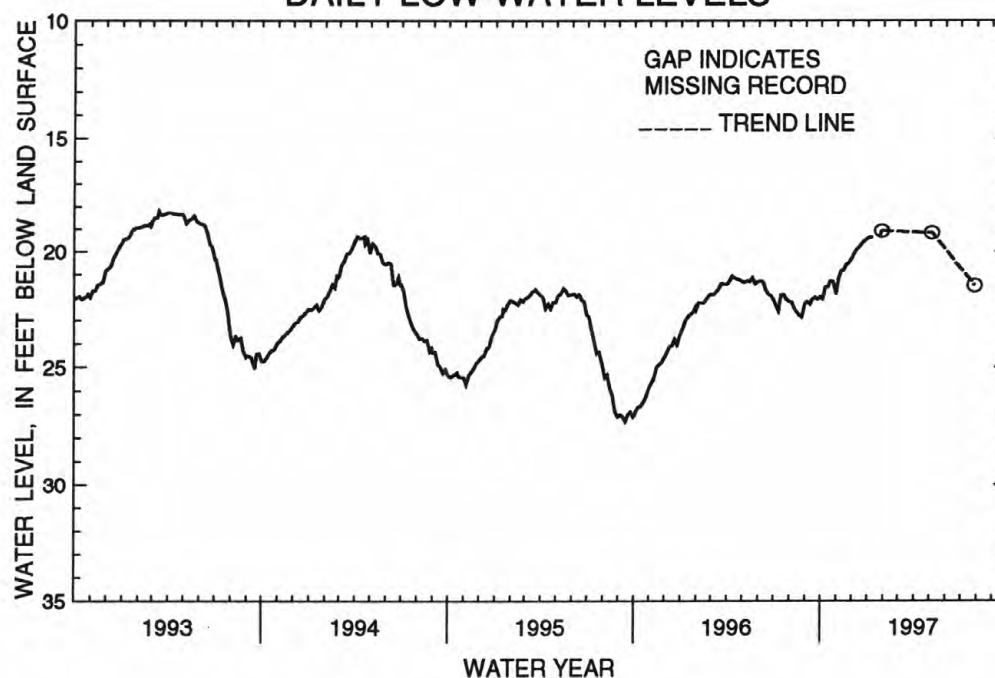
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 28	19.10	MAY 06	19.18	JUL 28	21.50

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	22.09	21.17	20.11	19.37	---	---	---	---	---	---	---	---
10	21.58	20.87	19.93	19.37	---	---	---	---	---	---	---	---
15	21.57	20.83	19.83	---	---	---	---	---	---	---	---	---
20	21.31	20.60	19.68	19.27	---	---	---	---	---	---	---	---
25	21.33	20.52	19.53	19.29	---	---	---	---	---	---	---	---
EOM	21.28	20.35	19.44	---	---	---	---	---	---	---	---	---

WATER YEAR 1997	HIGHEST INSTANTANEOUS	19.10	JAN 28, 1997
	LOWEST INSTANTANEOUS	22.09	OCT 4, 5, 1996

DAILY LOW-WATER LEVELS



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.

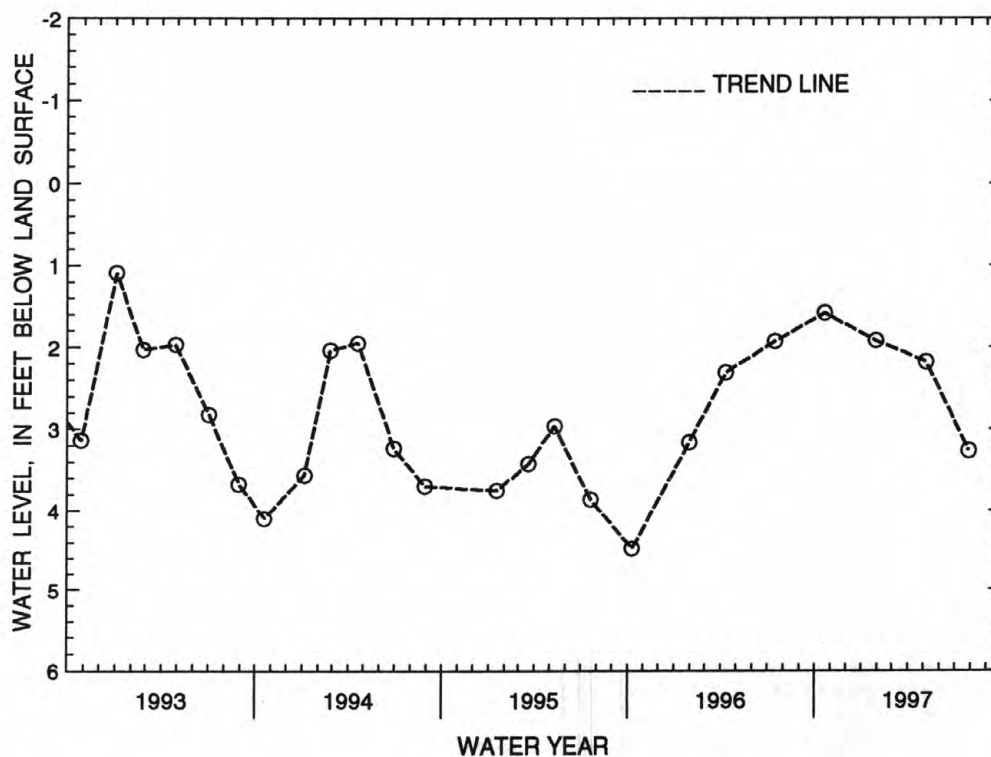
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	1.58	JAN 28	1.92	MAY 06	2.18	JUL 28	3.26
WATER YEAR 1997 HIGHEST		1.58	OCT 21, 1996				
LOWEST		3.26	JUL 28, 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.

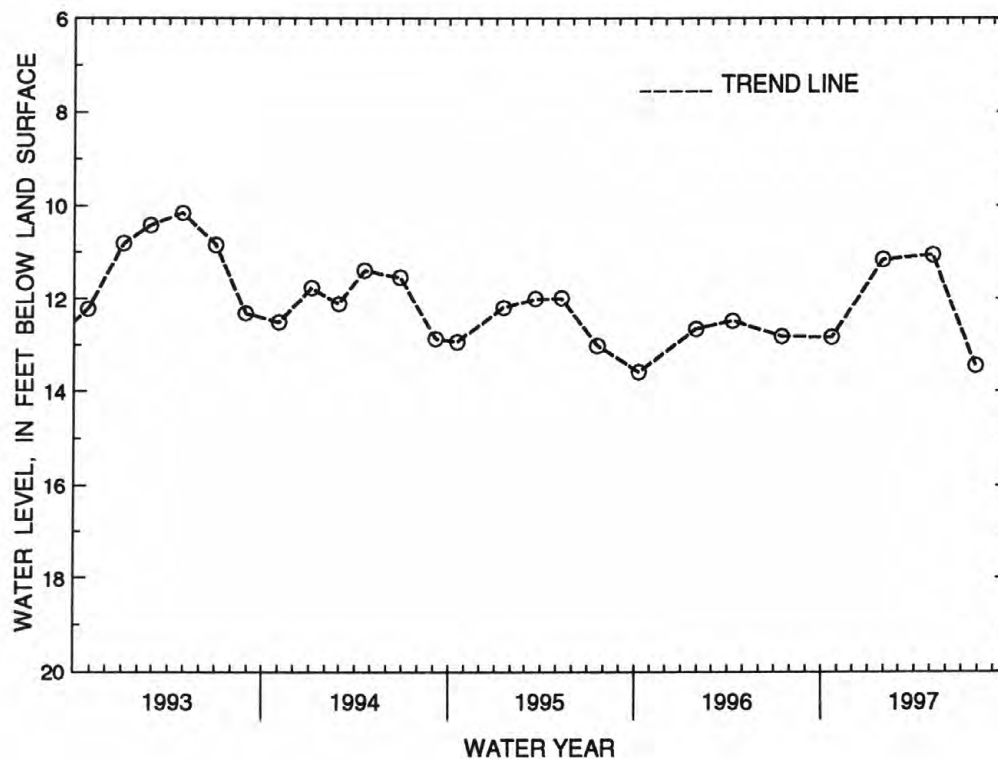
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	12.24	JAN 28	11.16	MAY 06	11.06	JUL 28	13.45
WATER YEAR 1997	HIGHEST	11.06	MAY 06, 1997				
	LOWEST	13.45	JUL 28, 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.

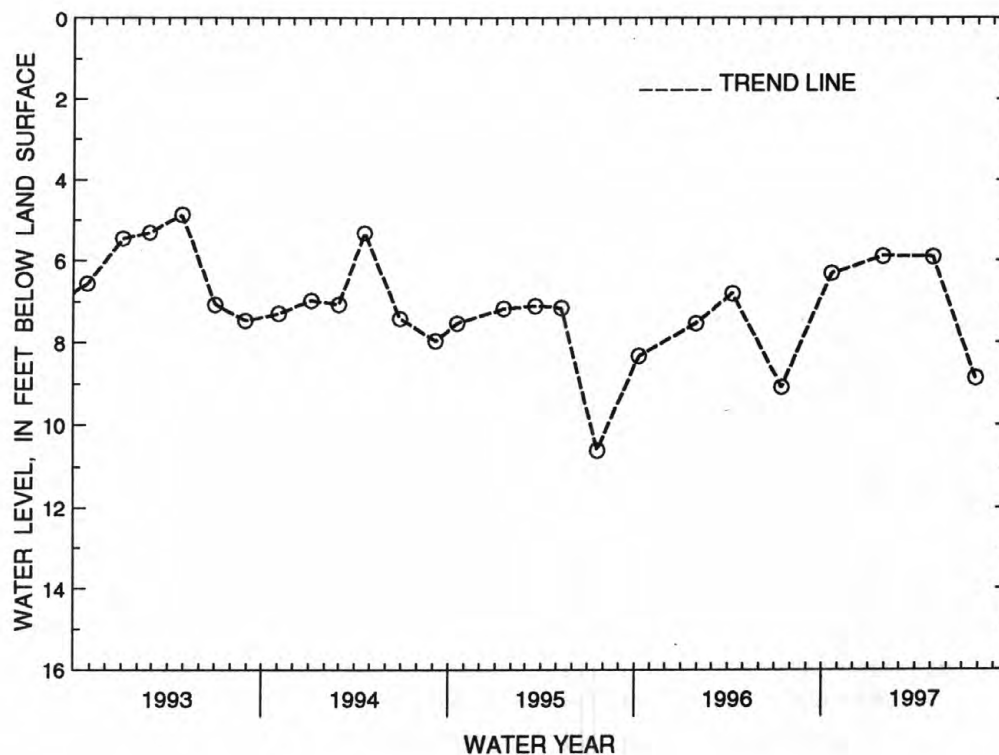
PERIOD OF RECORD.--June 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	6.31	JAN 28	5.89	MAY 06	5.91	JUL 28	8.87

WATER YEAR 1997	HIGHEST	5.89	JAN 28, 1997
	LOWEST	8.87	JUL 28, 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.

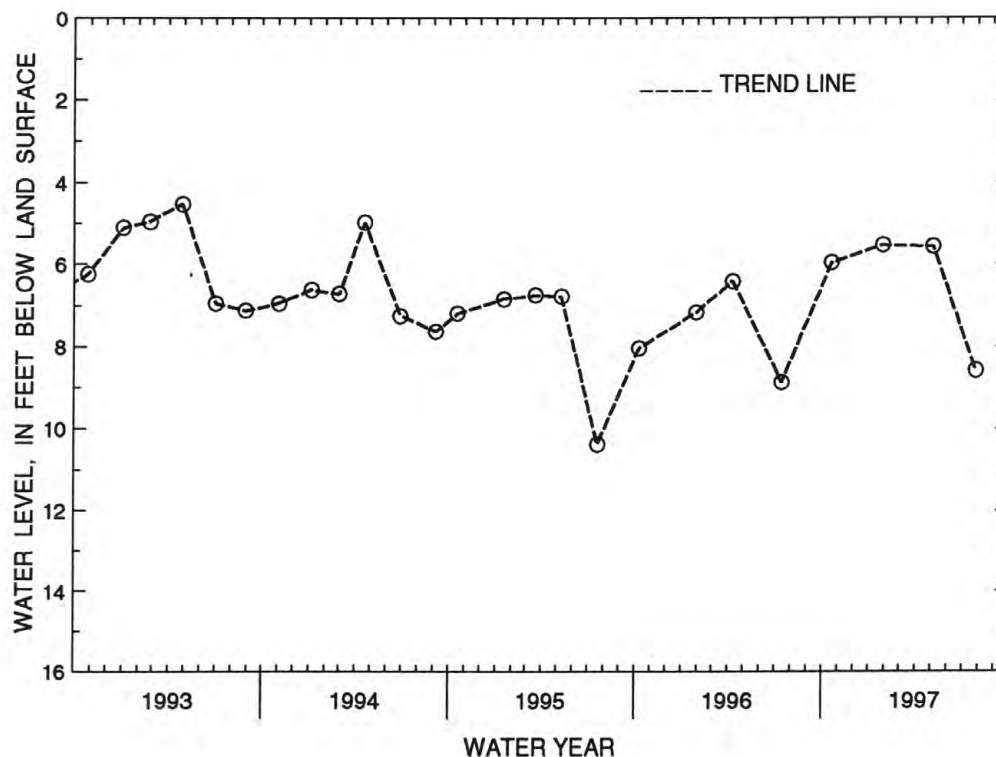
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	5.96	JAN 28	5.54	MAY 06	5.57	JUL 28	8.59
WATER YEAR 1997	HIGHEST	5.54	JAN 28, 1997				
	LOWEST	8.59	JUL 28, 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.

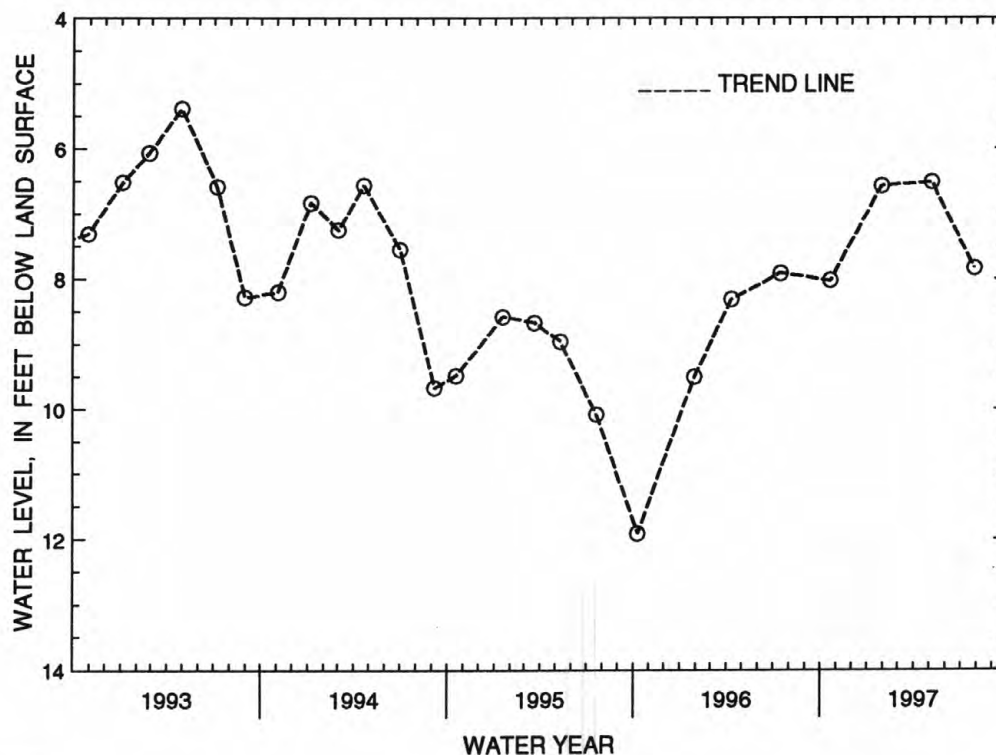
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	8.03	JAN 28	6.58	MAY 06	6.52	JUL 28	7.84
WATER YEAR 1997	HIGHEST	6.52	MAY 06, 1997				
	LOWEST	8.03	OCT 21, 1996				



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.

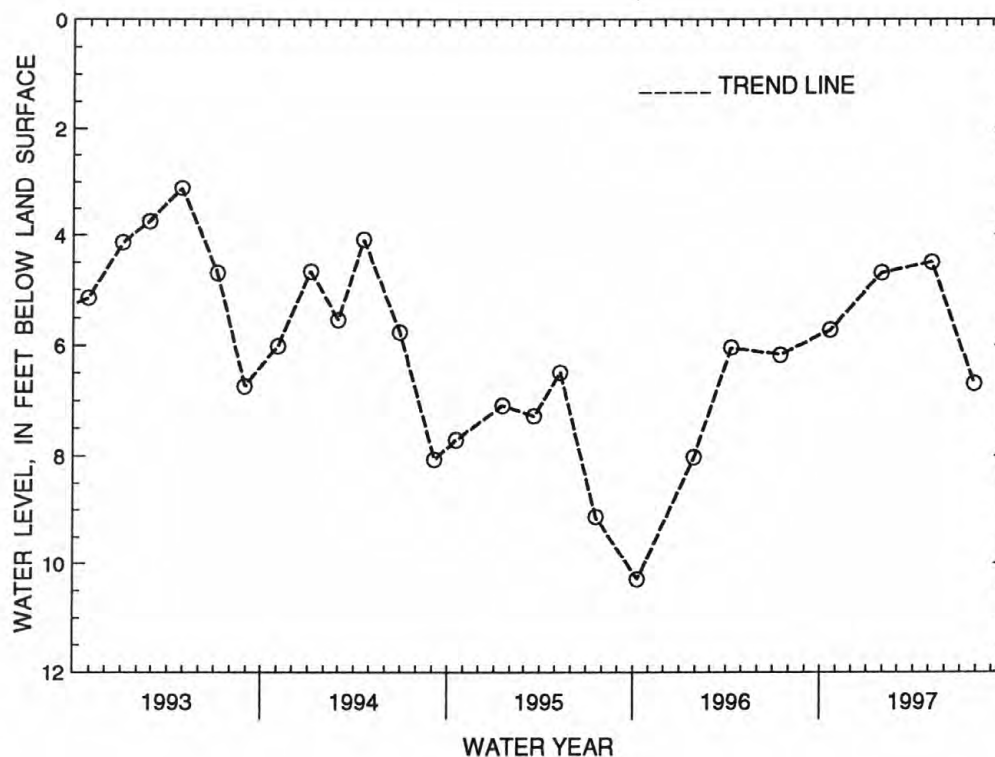
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	5.73	JAN 28	4.70	MAY 06	4.50	JUL 28	6.70
WATER YEAR 1997	HIGHEST	4.50	MAY 06, 1997				
	LOWEST	6.70	JUL 28, 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.

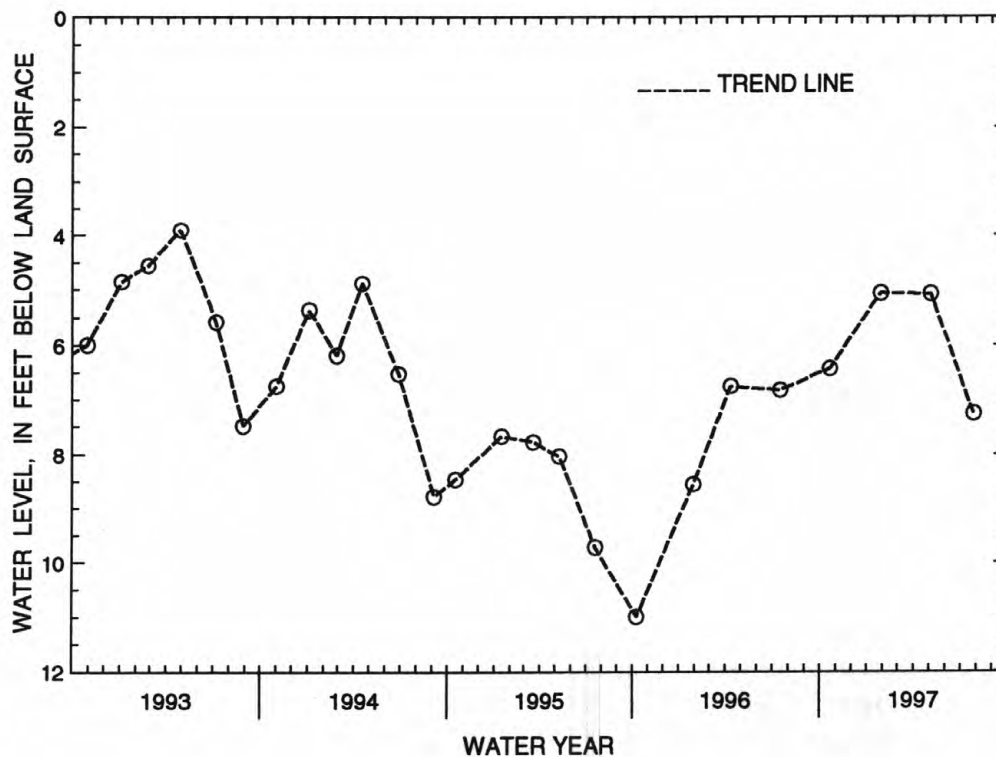
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	6.42	JAN 28	5.06	MAY 06	5.08	JUL 28	7.25
WATER YEAR 1997	HIGHEST	5.06	JAN 28, 1997				
	LOWEST	7.25	JUL 28, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

375723075344401. Local number, 66M 16 SOW 110A.

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 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 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; 0.65 ft Mar. 1, 1988, to Oct. 3, 1989; at land surface datum Oct. 4, 1989, to Jan. 3, 1990; 1.0 ft above land-surface datum Jan. 4, 1990, to Oct. 10, 1990; 0.70 ft thereafter.

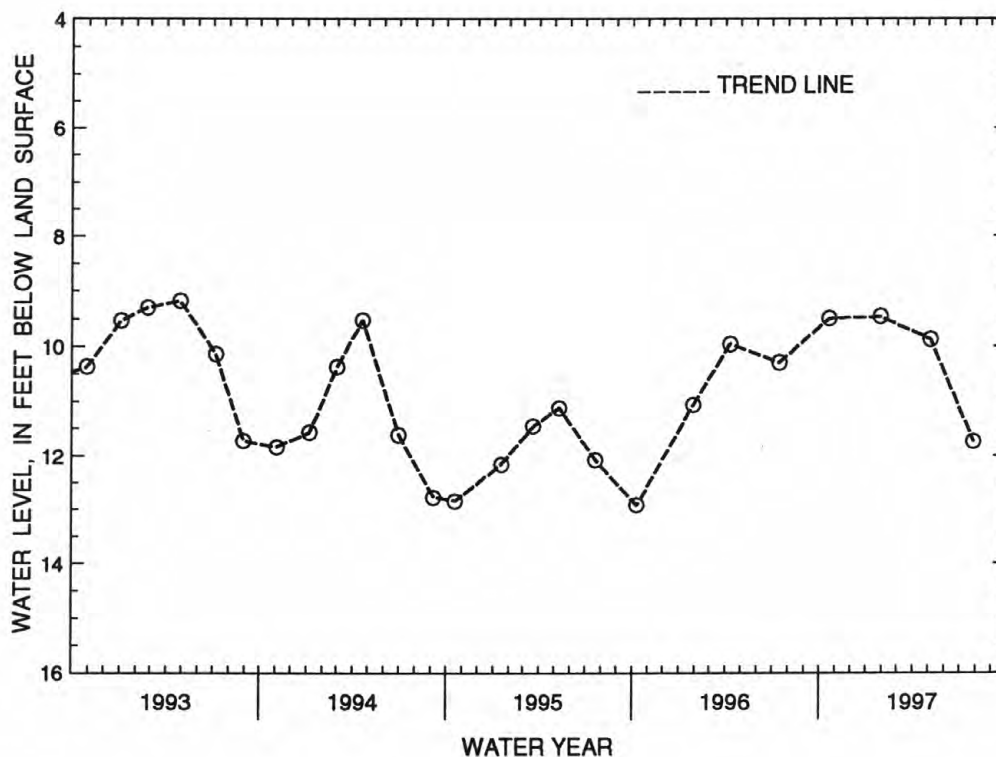
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

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, 8.28 ft below land-surface datum, Feb. 19, 1986; lowest measured, 12.93 ft below land-surface datum, Oct. 10, 1995.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	9.50	JAN 28	9.47	MAY 06	9.88	JUL 29	11.74
WATER YEAR 1997	HIGHEST	9.47	JAN 28, 1997				
	LOWEST	11.74	JUL 29, 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.

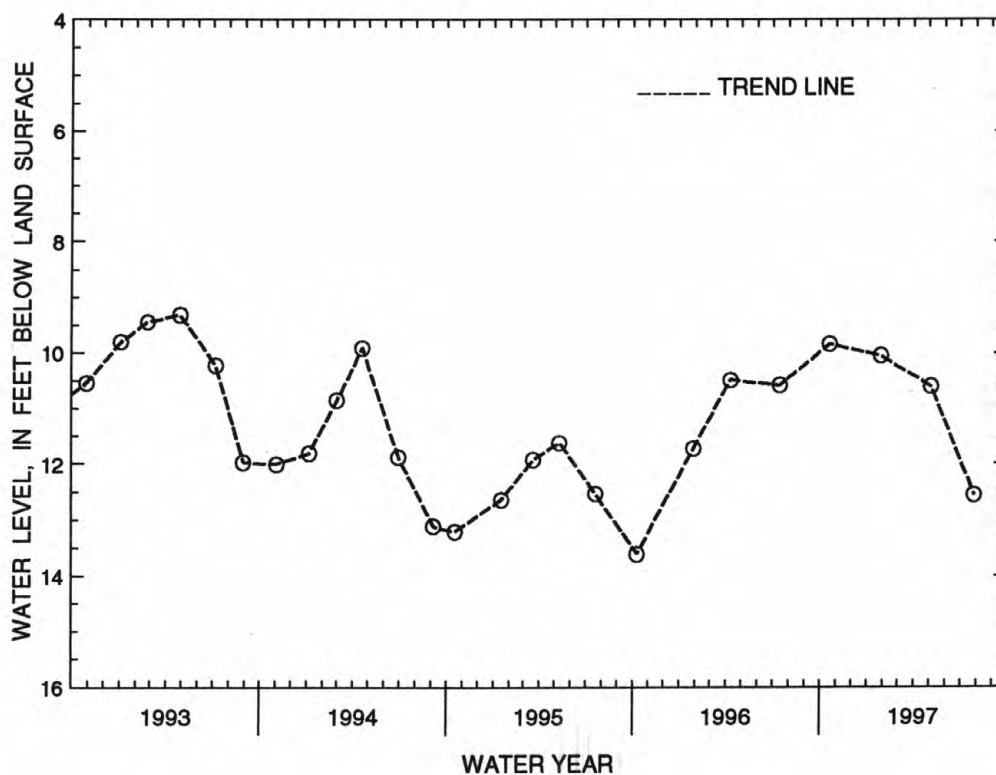
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	9.84	JAN 28	10.05	MAY 06	10.60	JUL 29	12.56
WATER YEAR 1997							
HIGHEST	9.84	OCT 21, 1996					
LOWEST	12.56	JUL 29, 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.

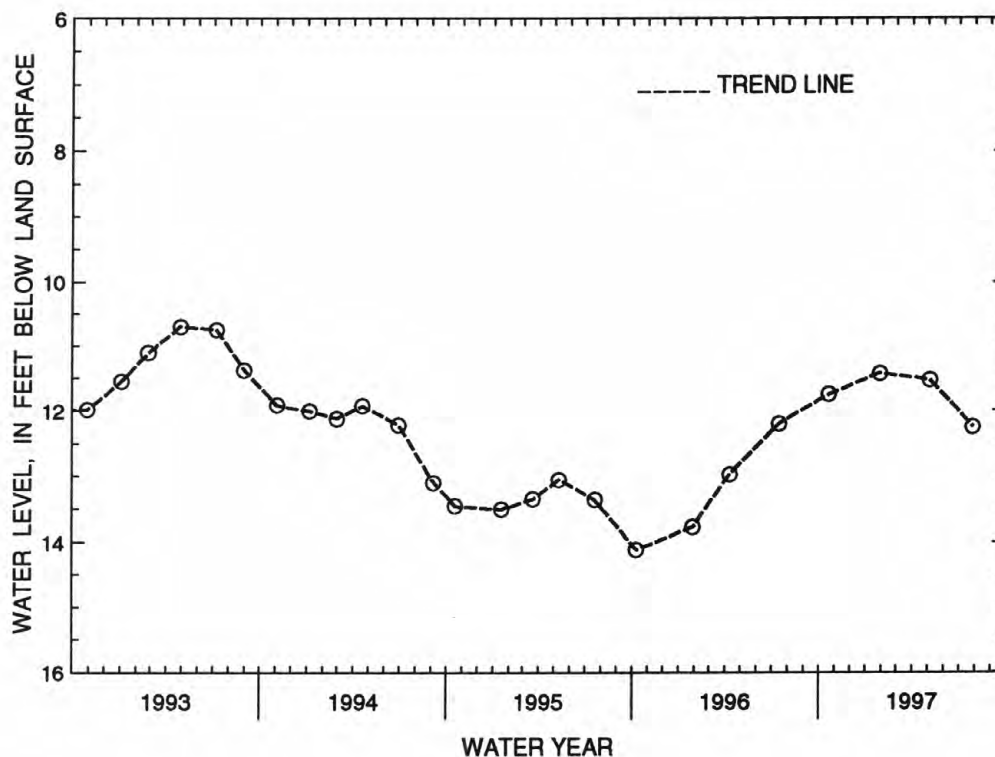
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	11.75	JAN 28	11.43	MAY 06	11.53	JUL 29	12.25
WATER YEAR 1997	HIGHEST	11.43	JAN 28, 1997				
	LOWEST	12.25	JUL 29, 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.

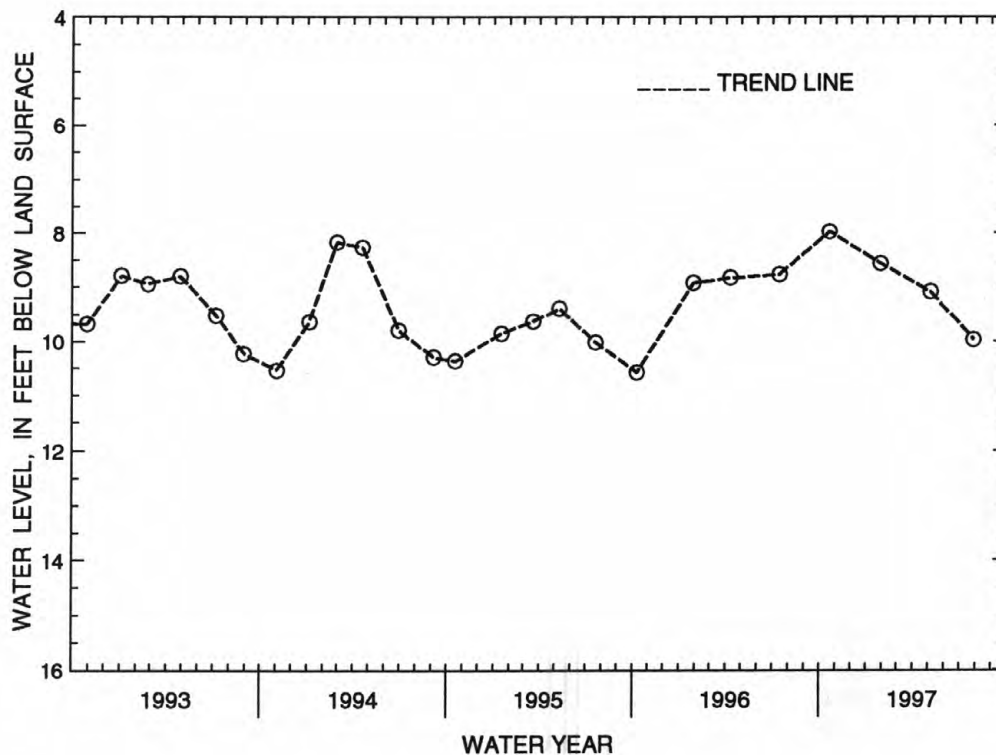
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	7.97	JAN 28	8.56	MAY 06	9.09	JUL 29	9.97
WATER YEAR 1997	HIGHEST	7.97	OCT 21, 1996				
	LOWEST	9.97	JUL 29, 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.

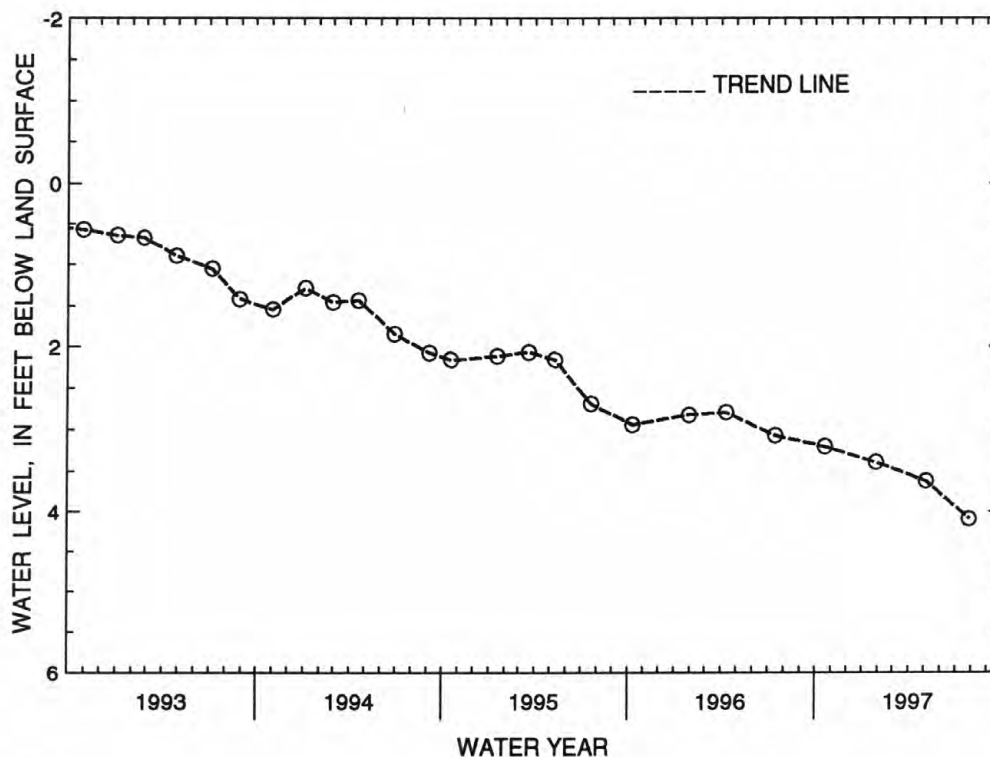
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional pumpage. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

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, 4.09 ft below land-surface datum, July 29, 1997.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	3.20	JAN 28	3.39	MAY 06	3.62	JUL 29	4.09
WATER YEAR 1997	HIGHEST LOWEST	3.20 4.09	OCT 21, 1996 JUL 29, 1997				



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. Mary-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.

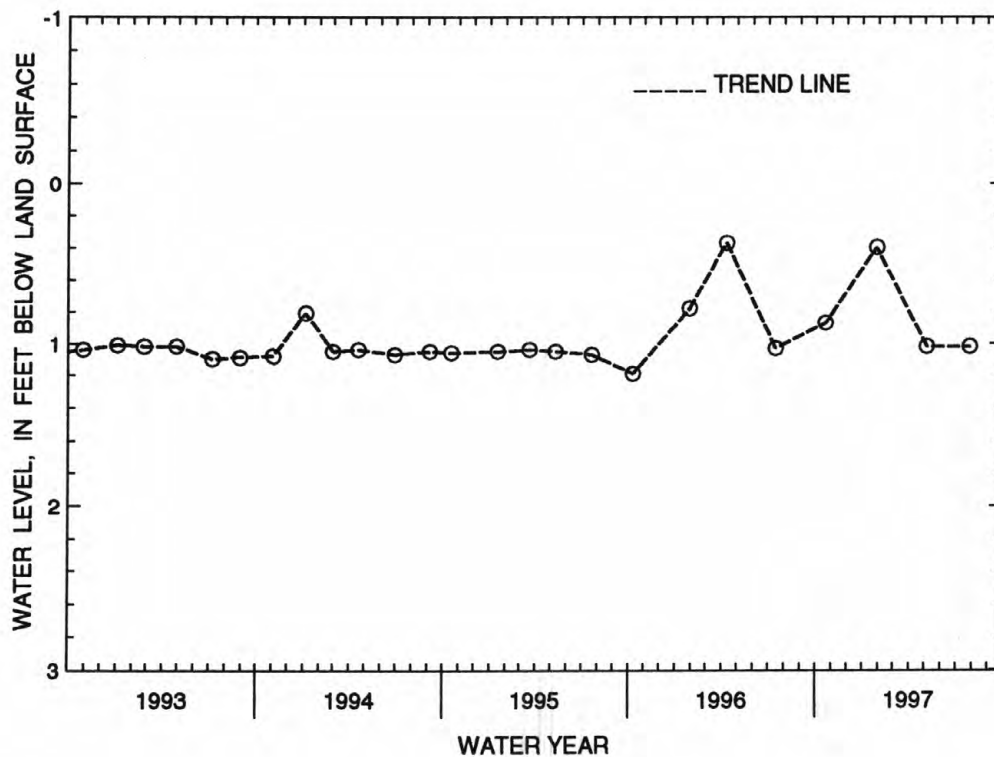
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	0.87	JAN 28	0.40	MAY 06	1.02	JUL 29	1.02
WATER YEAR 1997 HIGHEST		0.40	JAN 28, 1997				
LOWEST		1.02	MAY 06, JUL 29, 1997				



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.

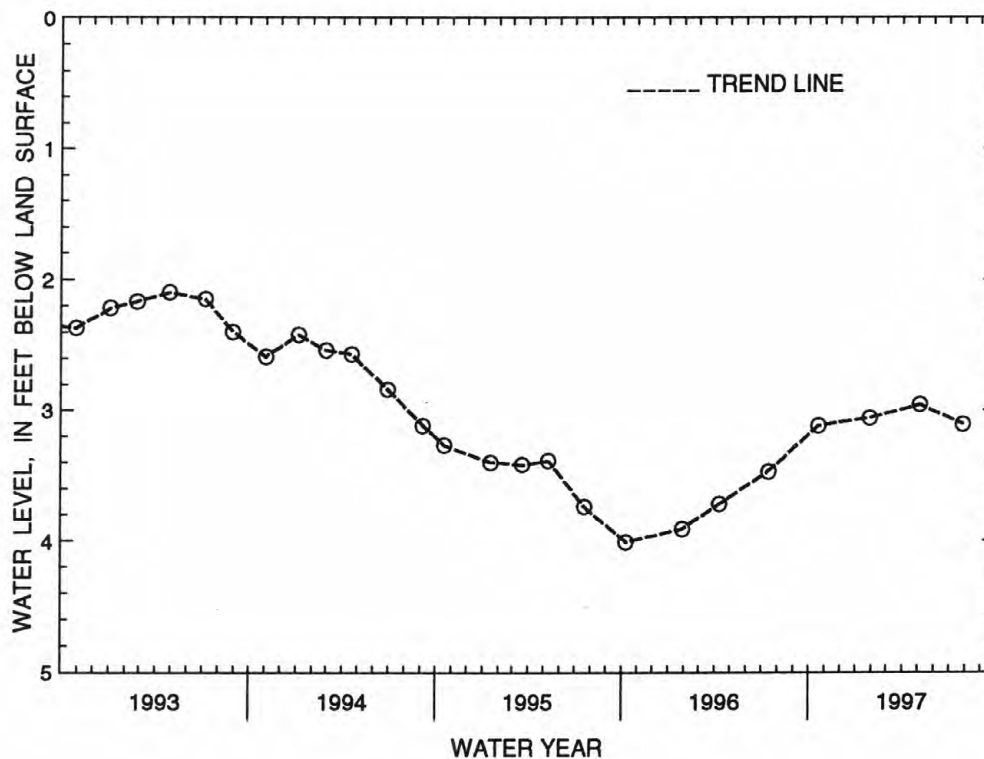
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	3.12	JAN 28	3.06	MAY 06	2.96	JUL 29	3.11
WATER YEAR 1997	HIGHEST	2.96	MAY 06, 1997				
	LOWEST	3.12	OCT 21, 1996				



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.

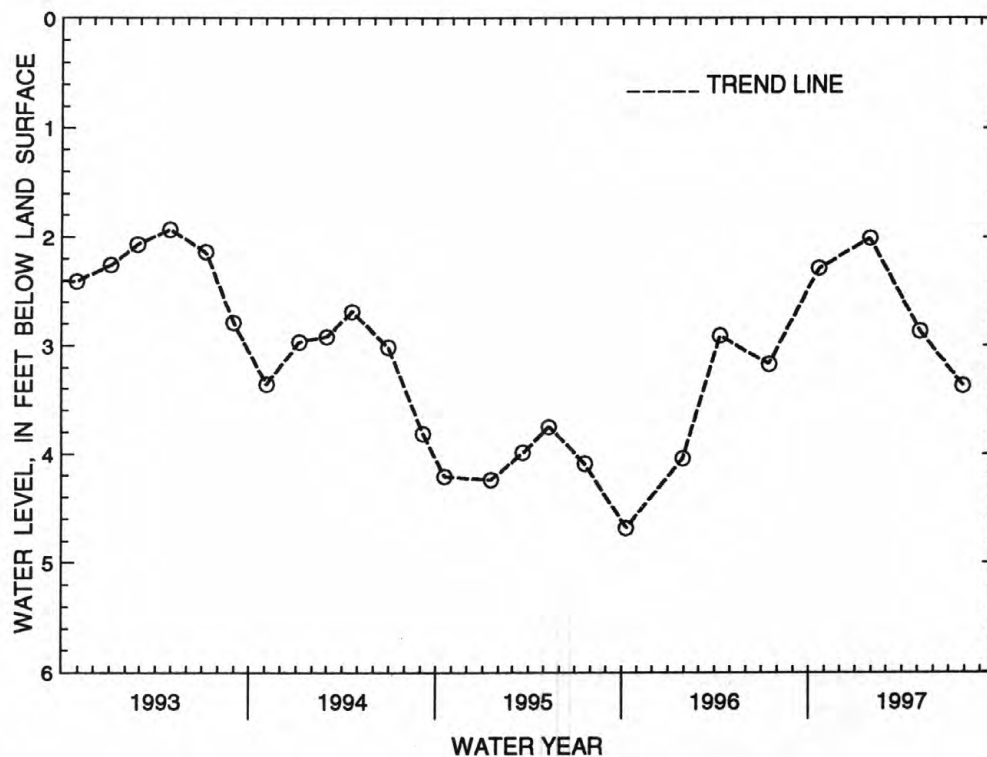
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

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, 4.68 ft below land-surface datum, Oct. 10, 1995.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	2.29	JAN 28	2.01	MAY 06	2.87	JUL 29	3.37
WATER YEAR 1997	HIGHEST	2.01	JAN 28, 1997				
	LOWEST	3.37	JUL 29, 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.

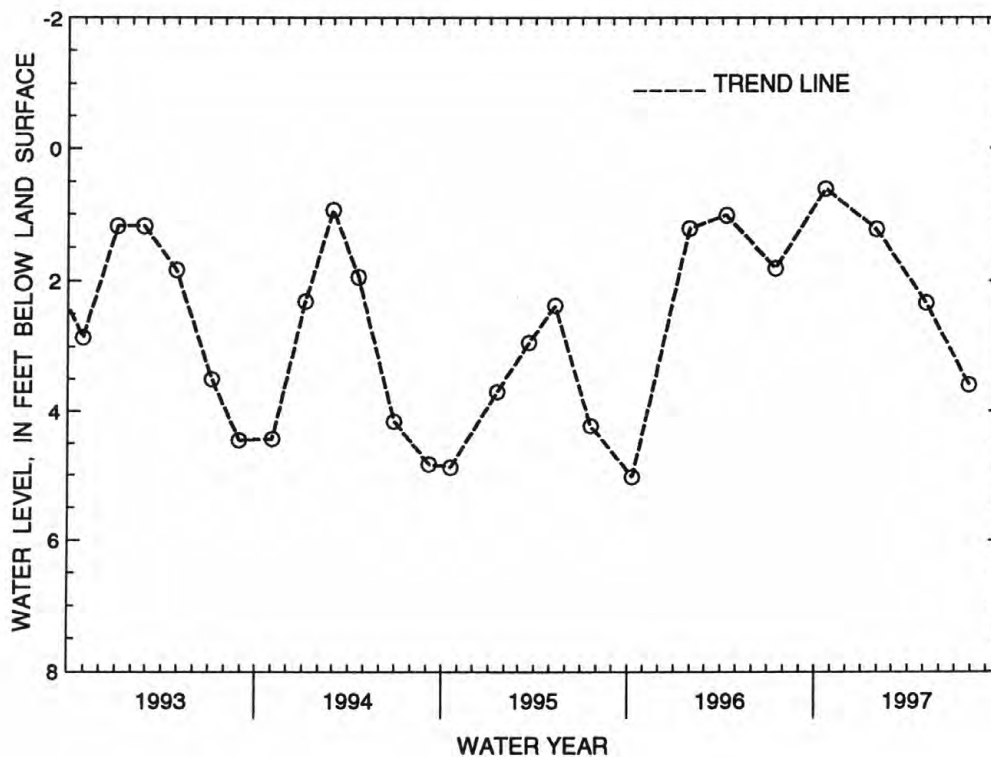
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	0.62	JAN 28	1.23	MAY 06	2.34	JUL 29	3.59
WATER YEAR 1997		HIGHEST	0.62	OCT 21, 1996			
		LOWEST	3.59	JUL 29, 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.

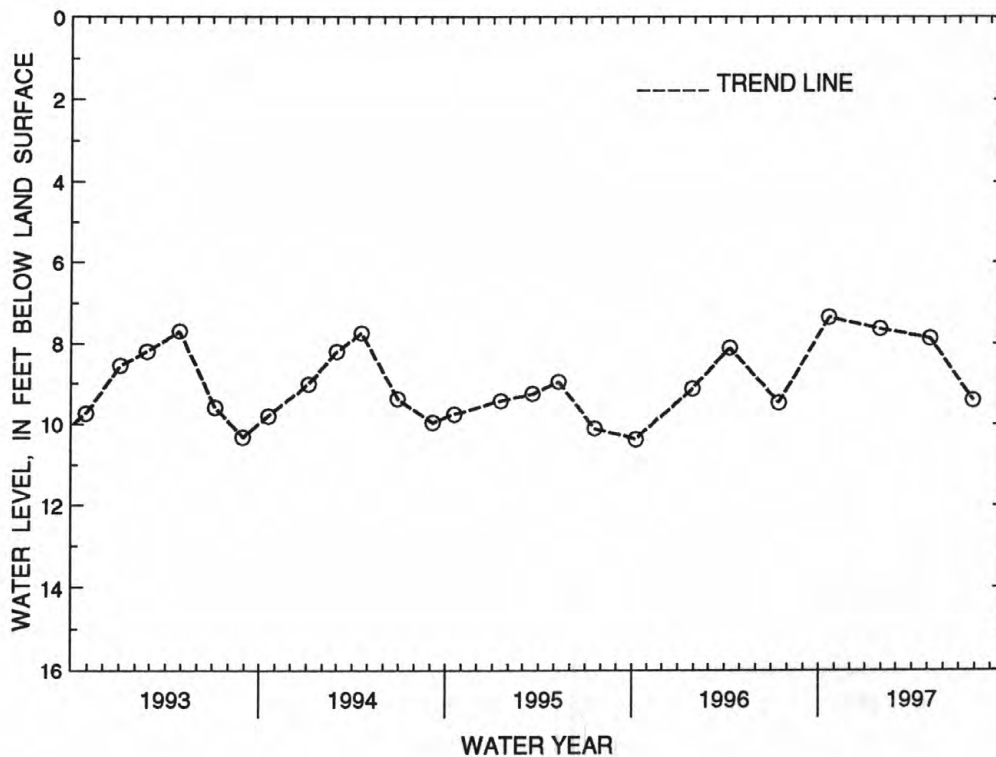
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	7.35	JAN 29	7.64	MAY 06	7.87	JUL 29	9.41
WATER YEAR 1997	HIGHEST	7.35	OCT 21, 1996				
	LOWEST	9.41	JUL 29, 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.

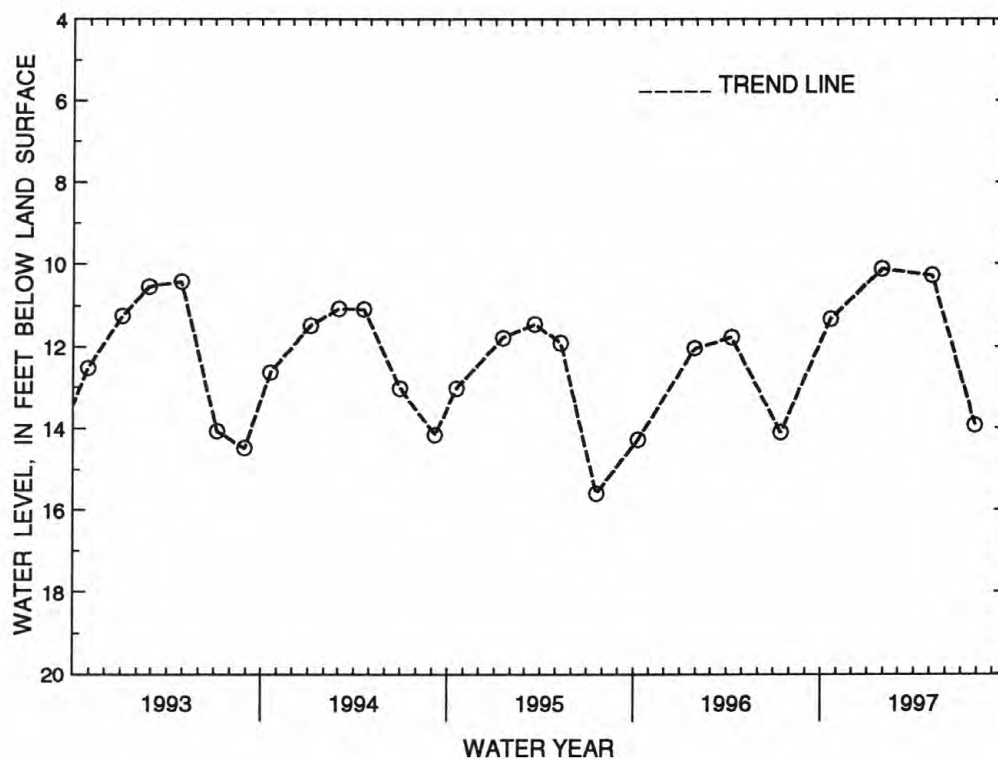
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	11.33	JAN 29	10.12	MAY 06	10.28	JUL 29	13.92
WATER YEAR 1997	HIGHEST	10.12	JAN 29, 1997				
	LOWEST	13.92	JUL 29, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

375635075271503. Local number, 67M 12 SOW 115C.

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 222 ft, screened 202 to 222 ft.

INSTRUMENTATION.--Continuous strip-chart recorder. Prior to Nov. 15, 1985, occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 13 ft above sea level, from topographic map. Measuring point: Top of recorder shelf, 2.35 ft above land-surface datum.

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

PERIOD OF RECORD.--March 1981 to current year. Well discontinued as of Jan. 29, 1997. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

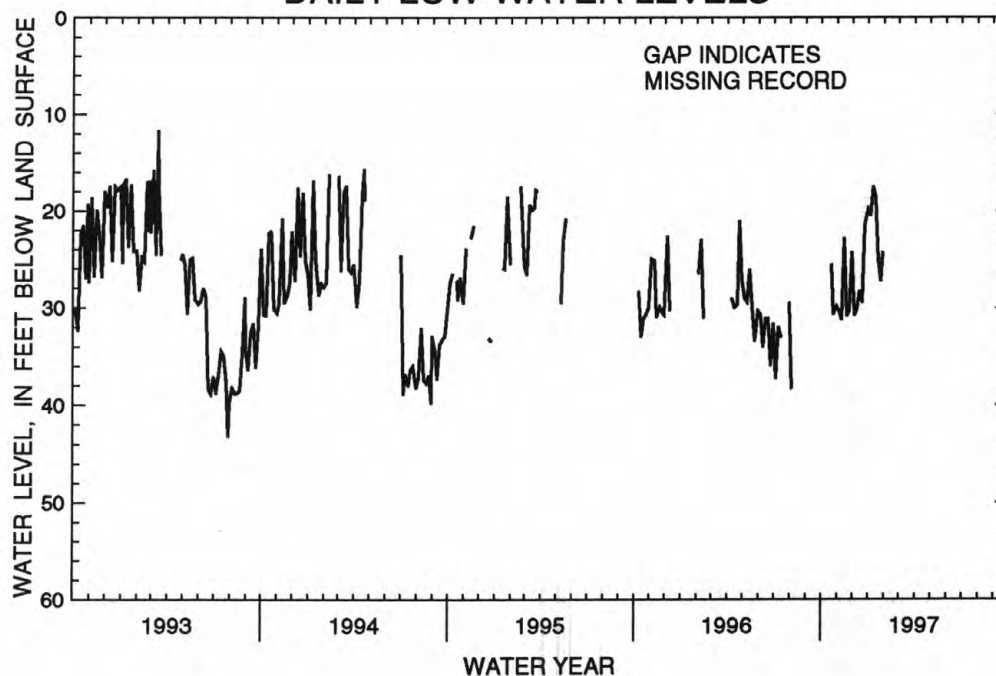
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 10.28 ft below land-surface datum, Apr. 2, 1990; lowest recorded, 51.40 ft below land-surface datum, Aug. 17, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	30.34	30.80	20.58	---	---	---	---	---	---	---	---
10	---	31.31	30.09	17.50	---	---	---	---	---	---	---	---
15	---	22.82	28.27	18.66	---	---	---	---	---	---	---	---
20	---	30.91	29.50	25.15	---	---	---	---	---	---	---	---
25	30.66	30.38	21.43	27.26	---	---	---	---	---	---	---	---
EOM	29.88	24.26	19.89	---	---	---	---	---	---	---	---	---

WATER YEAR 1997 HIGHEST INSTANTANEOUS 12.82 JAN 20, 1997
 LOWEST INSTANTANEOUS 33.14 NOV 08, 1996

DAILY LOW-WATER LEVELS



GROUND-WATER LEVELS

ACCOMACK COUNTY

375617075273701. Local number, 67M 14 SOW 115E.

LOCATION.--Lat 37°56'17", long 75°27'37", Hydrologic Unit 02060010, 100 ft west of State Highway 175, inside fence of NASA Wallops Flight Center, 2.1 mi northeast of intersection of State Highways 175 and 798, and 2.1 mi east of Wattsville. 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 260 to 280 ft.

INSTRUMENTATION.--Continuous strip-chart recorder. Prior to Oct. 5, 1985, occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 26 ft above sea level, from topographic map. Measuring point: Top of recorder shelf, 1.3 ft above land-surface datum prior to Aug. 8, 1989; 1.5 ft thereafter.

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

PERIOD OF RECORD.--February 1982 to current year. Well discontinued as of Jan. 29, 1997. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

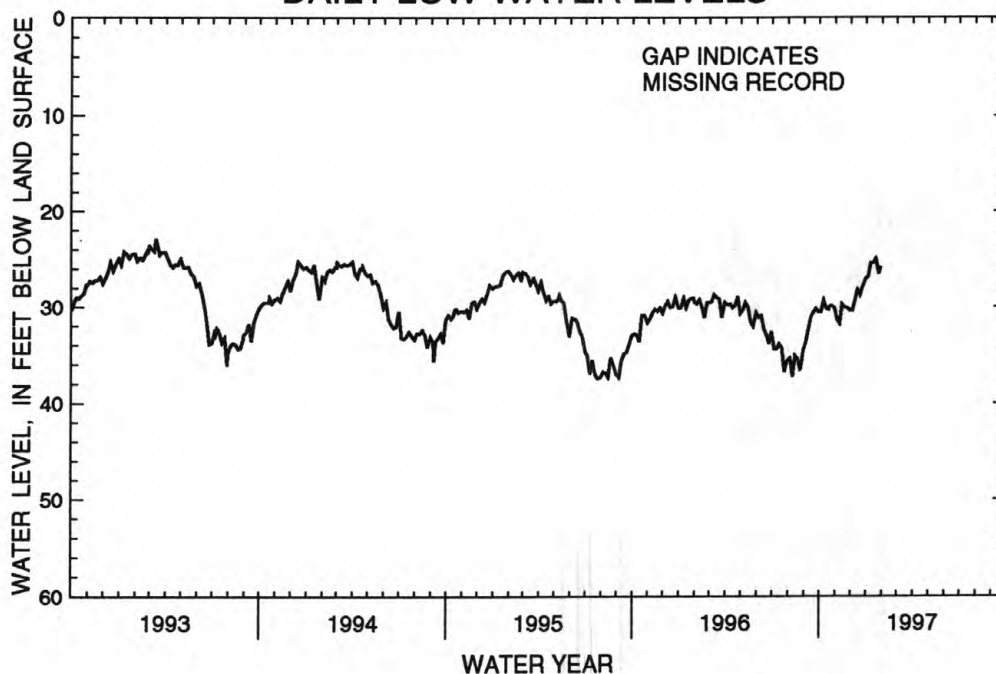
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.45 ft below land-surface datum, June 9, 1982; lowest recorded, 42.45 ft below land-surface datum, Aug. 17, 18, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	30.54	31.32	30.42	26.87	---	---	---	---	---	---	---	---
10	29.36	31.75	29.32	25.43	---	---	---	---	---	---	---	---
15	30.21	29.74	28.22	25.40	---	---	---	---	---	---	---	---
20	30.33	30.08	28.77	24.97	---	---	---	---	---	---	---	---
25	29.88	30.10	27.86	26.56	---	---	---	---	---	---	---	---
EOM	30.09	30.44	27.07	---	---	---	---	---	---	---	---	---

WATER YEAR 1996 HIGHEST INSTANTANEOUS 24.39 JAN 20, 1997
 LOWEST INSTANTANEOUS 32.06 NOV 21, 22, 1996

DAILY LOW-WATER LEVELS



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.

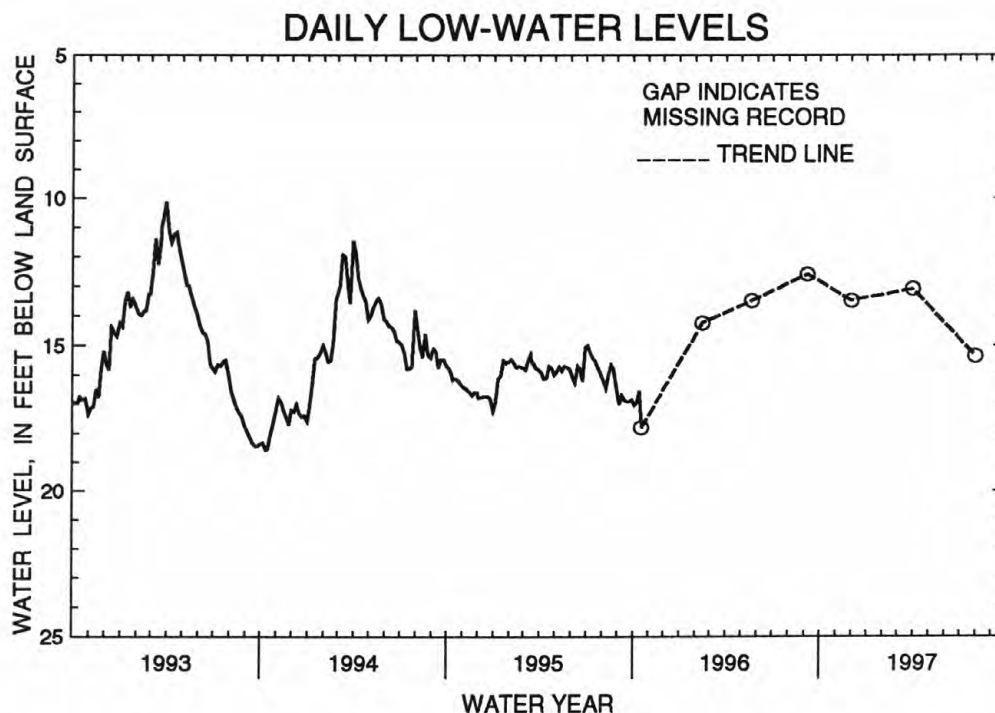
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
	DEC 03	13.50	APR 01	13.10	AUG 01	15.37
WATER YEAR 1997	HIGHEST	13.10	APR 01, 1997			
	LOWEST	15.37	AUG 01, 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.

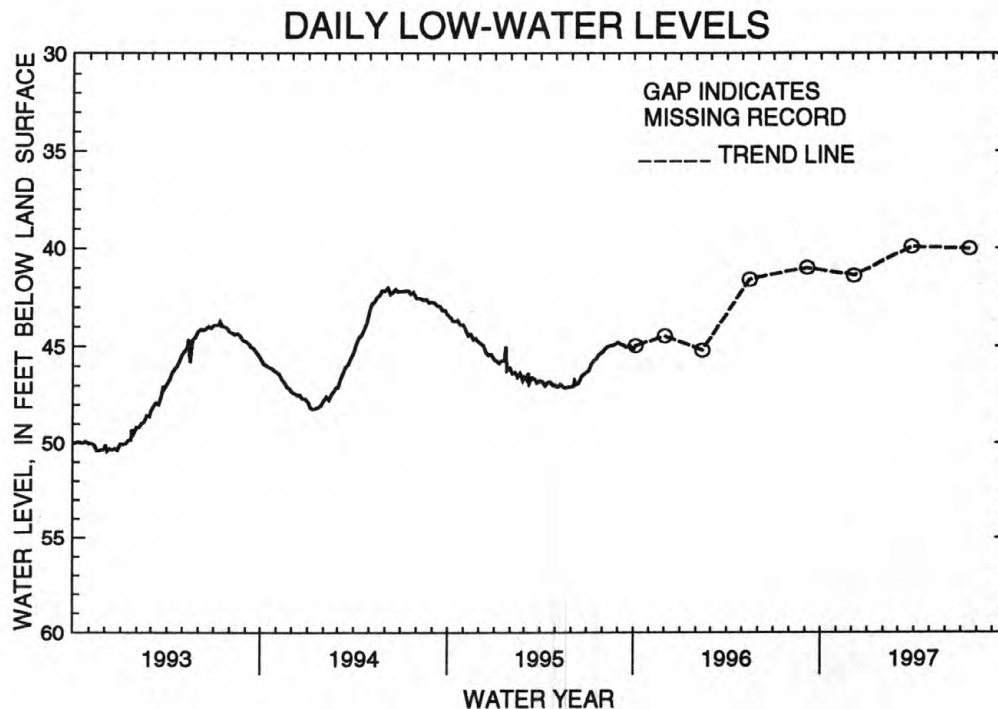
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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, 1981.

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

	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
	DEC 05	41.40	MAR 27	39.94	JUL 17	40.04
WATER YEAR 1997	HIGHEST	39.94	MAR 27, 1997			
	LOWEST	41.40	DEC 05, 1996			



GROUND-WATER LEVELS

APPOMATTOX COUNTY

372514078394301. Local number, 41H 2.

LOCATION.--Lat 37°25'14", long 78°39'43", Hydrologic Unit 02080207, 1.0 mi south of intersection of State Highway 636 on the east side of State Highway 640, 2.8 mi southeast of Sliders. Owner: U.S. Geological Survey.

AQUIFER.--Metagraywacke, quartzose schist, and melange of Cambrian age.

WELL CHARACTERISTICS.--Augered observation water well, diameter 3 in. to 68 ft, diameter 1.25 in. from 68 to 73 ft, depth 73 ft, screened 68 to 73 ft.

INSTRUMENTATION.--Bimonthly measurement with chalked tape by USGS personnel. August 1970 to October 1974, digital recorder--60-minute punch. Prior to August 1970, occasional measurement with chalked tape.

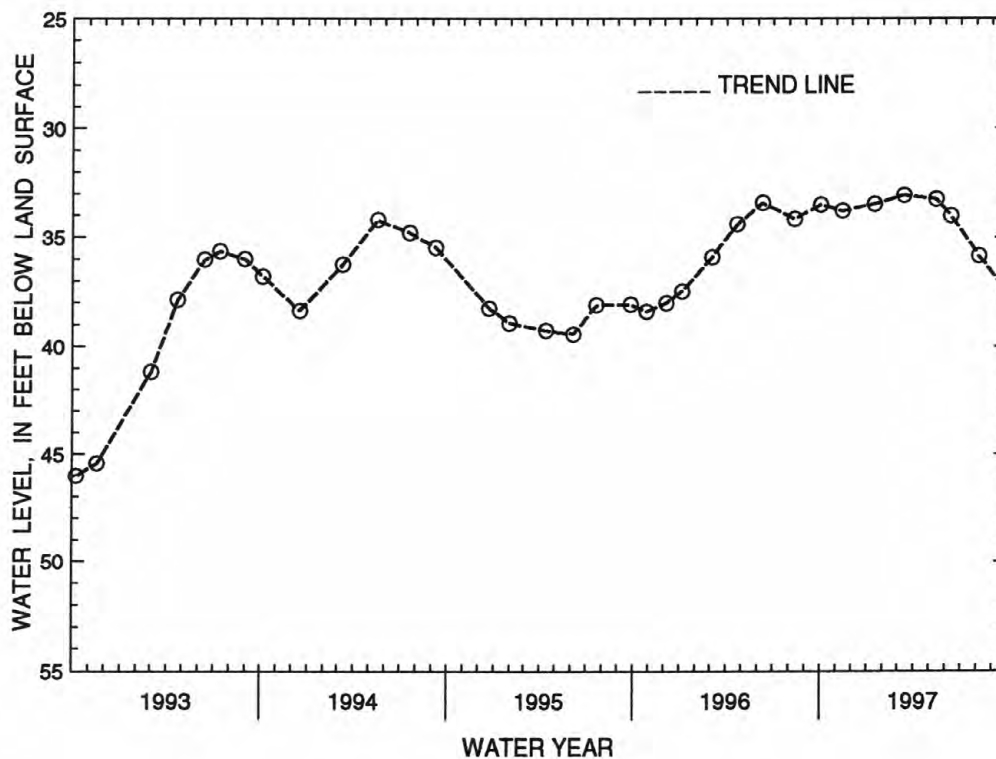
DATUM.--Elevation of land-surface datum is 640 ft above sea level, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.

PERIOD OF RECORD.--March 1970 to current year. Unpublished records available prior to October 1977 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 32.99 ft below land-surface datum, May 20, 1973; lowest measured, 49.41 ft below land-surface datum, Mar. 30, 1971.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02	33.50	JAN 15	33.47	MAY 15	33.24	AUG 06	35.84
NOV 13	33.79	MAR 13	33.07	JUN 12	34.00		
.							
WATER YEAR 1997	HIGHEST	33.07	MAR 13, 1997				
	LOWEST	35.84	AUG 06, 1997				



GROUND-WATER LEVELS

ARLINGTON COUNTY

385346077073701. Local number, 53V 1.

LOCATION.--Lat 38°53'46", long 77°07'37", Hydrologic Unit 02070010, at Langston School, 4854 Lee Highway in Arlington. Owner: Arlington County School Board.

AQUIFER.--Brandywine Formation of Pleistocene age and Bryn Mawr (?) Gravel of Pliocene (?) age, overlying the Sykesville Formation of Precambrian age.

WELL CHARACTERISTICS.--Dug unused water well, diameter 24 in., depth 35 ft, terracotta casing.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Oct. 1, 1989, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 410 ft above sea level, from topographic map. Measuring point: Inner flange of manhole, at land-surface datum.

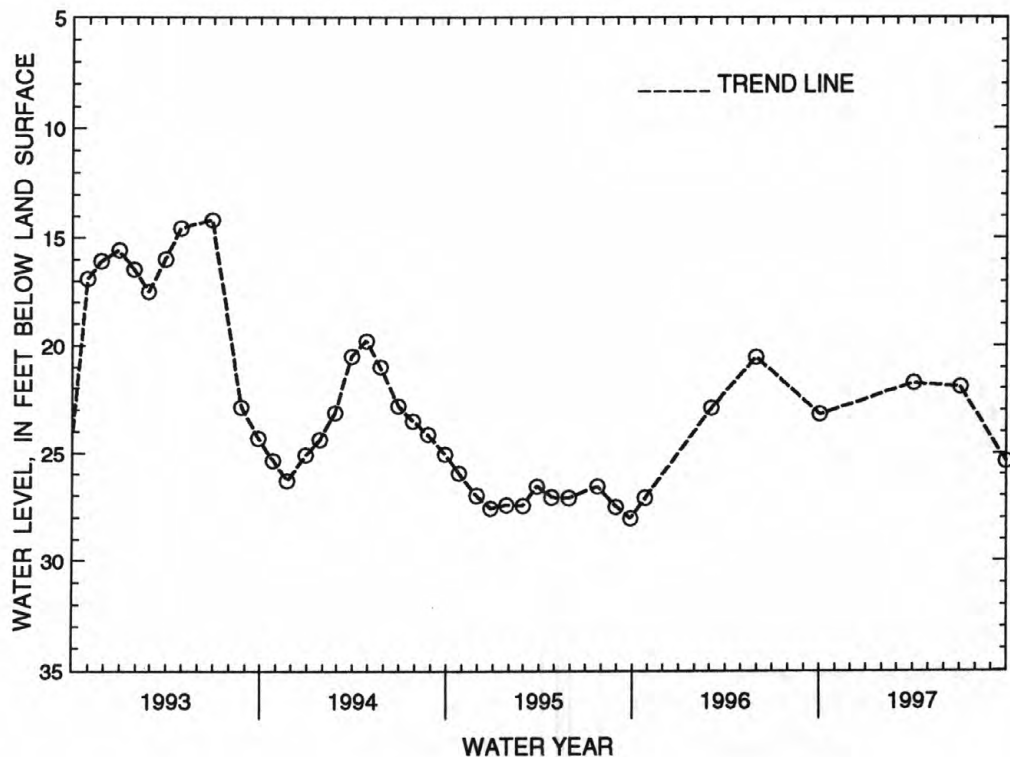
REMARKS.--Water levels affected by water running into well from broken water main October 1992 to August 1993.

PERIOD OF RECORD.--October 1931 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.19 ft (result of broken water main) below land-surface datum, June 28, 1993; lowest measured, 34.81 ft below land-surface datum, Dec. 5, 1931.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06	23.20	APR 03	21.75	JUL 03	21.92	SEP 30	25.39
WATER YEAR 1997	HIGHEST	21.75	APR 03, 1997				
	LOWEST	25.39	SEP 30, 1997				



GROUND-WATER LEVELS

ARLINGTON COUNTY

385253077042301. Local number, 54V 3.

LOCATION.--Lat 38°52'53", long 77°04'23", Hydrologic Unit 02070010, at Arlington National Cemetery in Arlington.
Owner: National Park Service, National Capitol Parks.

AQUIFER.--Terrace gravels of Holocene age and sand of Early Cretaceous age.

WELL CHARACTERISTICS.--Dug unused water well, diameter 48 in., depth 50 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Oct. 1, 1989, bimonthly measurement with chalked tape.

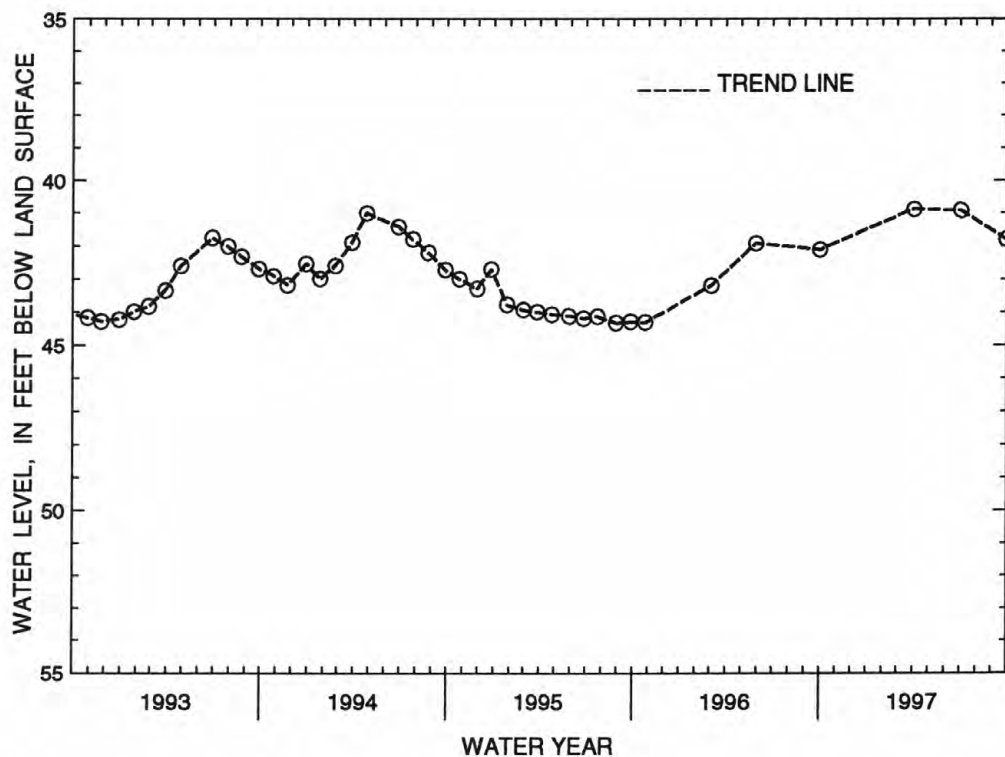
DATUM.--Elevation of land-surface datum is 205 ft above sea level, from topographic map. Measuring point: Top of brick and stone casing, 3.0 ft above land-surface datum.

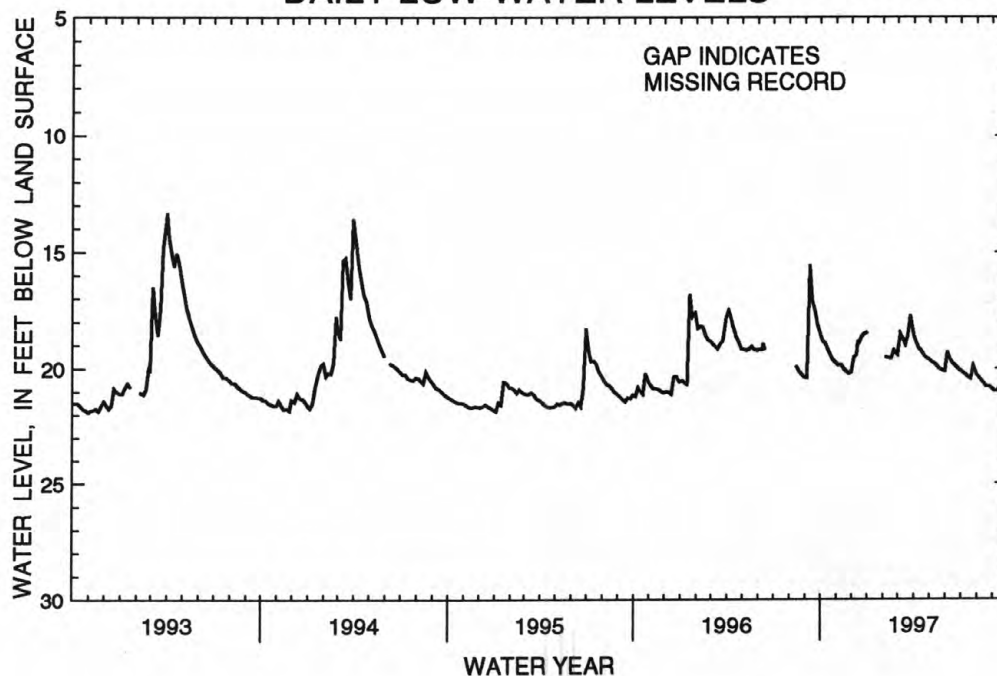
PERIOD OF RECORD.--January 1958 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 40.34 ft below land-surface datum, June 26, 1978;
lowest measured, 45.28 ft below land-surface datum, Nov. 28, 1988.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02	42.11	APR 03	40.88	JUL 03	40.92	SEP 30	41.80
WATER YEAR 1997	HIGHEST	40.88	APR 03, 1997				
	LOWEST	42.11	OCT 02, 1996				





GROUND-WATER LEVELS

BUCKINGHAM COUNTY

372608078404601. Local number, 41H 3.

LOCATION.--Lat 37°26'08", long 78°40'46", Hydrologic Unit 02080207, 0.85 mi west of Ranger Headquarters on south side of dirt road off State Highway 636, 1.5 mi south of Sliders. Owner: U.S. Geological Survey.

AQUIFER.--Metagraywacke, quartzose schist, and melange of Cambrian age.

WELL CHARACTERISTICS.--Augered observation water well, diameter 3 in. to 49 ft, diameter 1.25 in. from 49 to 54 ft, depth 54 ft, screened 49 to 54 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. August 1970 to October 1974, digital recorder--60-minute punch. Prior to August 1970, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 683.8 ft above sea level. Measuring point: Top of casing, 1.3 ft above land-surface datum.

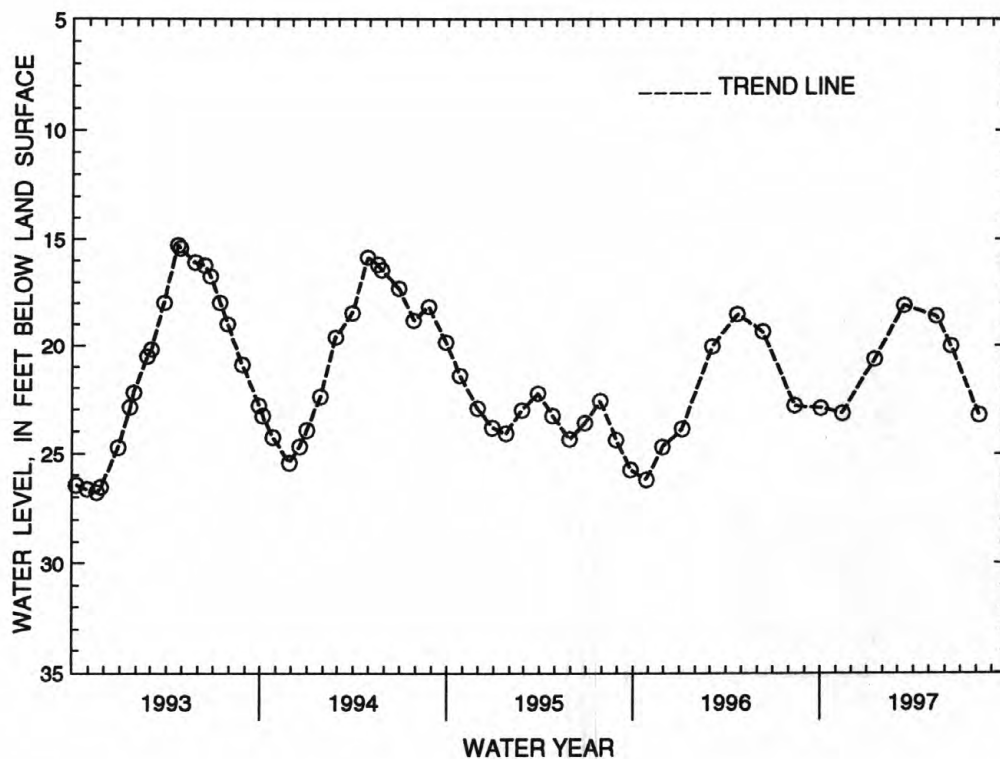
REMARKS.--Prior to Oct. 1, 1981, well was reported as being located in Appomattox County.

PERIOD OF RECORD.--March 1970 to current year. Unpublished records available prior to October 1977 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 7.31 ft below land-surface datum, Apr. 12, 1973; lowest measured, 28.30 ft below land-surface datum, Oct. 17, 1977.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02	22.92	JAN 15	20.65	MAY 15	18.60	AUG 06	23.25
NOV 13	23.16	MAR 13	18.09	JUN 12	20.03		
WATER YEAR 1997							
	HIGHEST	18.09	MAR 13, 1997				
	LOWEST	23.25	AUG 06, 1997				



GROUND-WATER LEVELS

CAROLINE COUNTY

380624077172801. Local number, 52N 5.

LOCATION.--Lat 38°06'24", long 77°17'28", Hydrologic Unit 02080104, in block pumphouse under water tank at Camp Wilcox at Fort A. P. Hill, 1.1 mi north of U.S. Highway 301, and near Bowling Green. Owner: U.S. Department of the Army.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6 in. to unknown depth, diameter 4 in. from unknown depth to 524 ft, depth 524 ft, screened 468 to 501 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 210 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

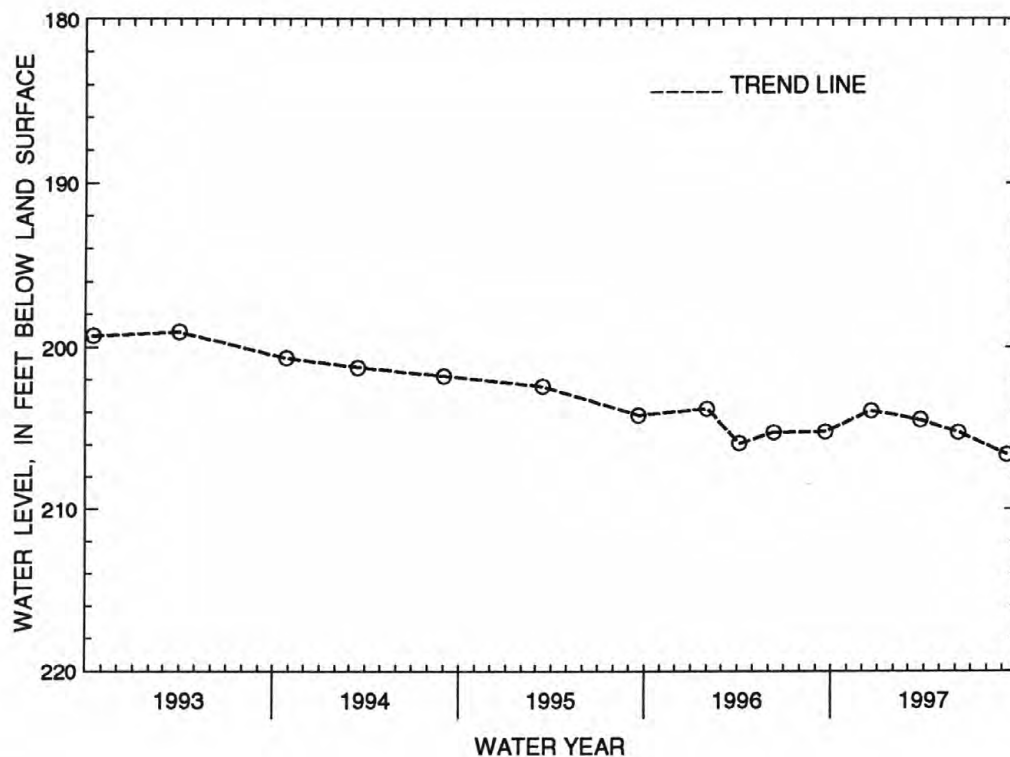
REMARKS.--Water level affected by regional drawdown.

PERIOD OF RECORD.--December 1971 to current year. Unpublished records available prior to October 1988 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 172.20 ft below land-surface datum, Dec. 16, 1971; lowest measured, 207.48 ft below land-surface datum, Mar. 19, 1985.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 18	203.90	MAR 24	204.47	JUN 06	205.24	SEP 09	206.61
WATER YEAR 1997	HIGHEST	203.90	DEC 18, 1996				
	LOWEST	206.61	SEP 09, 1997				



GROUND-WATER LEVELS

CAROLINE COUNTY

380415077194101. Local number, 52N 6.

LOCATION.--Lat 38°04'15", long 77°19'41", Hydrologic Unit 02080105, on the southwest corner of the intersection of Burke Street and Second Street in the headquarters area of Fort A. P. Hill near Bowling Green. Owner: U.S. Department of the Army.

AQUIFER.--Lower Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6 in. to 480 ft, diameter 3 in. from 446 to 500 ft, depth 500 ft, screened 488 to 498 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 214 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

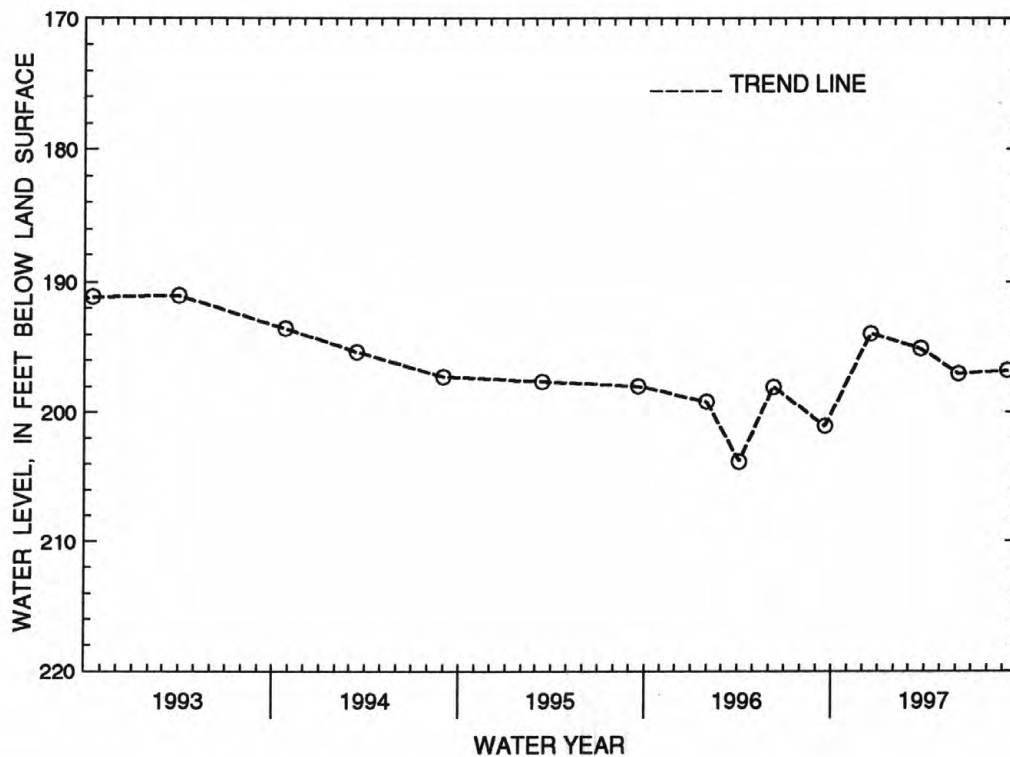
REMARKS.--Water level affected by regional drawdown.

PERIOD OF RECORD.--December 1971 to current year. Unpublished records available prior to October 1988 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 158.65 ft below land-surface datum, Feb. 10, 1982; lowest measured, 207.74 ft below land-surface datum, Mar. 19, 1986.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 17	193.95	MAR 24	195.09	JUN 06	197.03	SEP 09	196.78
WATER YEAR 1997		HIGHEST	193.95	DEC 17, 1996			
		LOWEST	197.03	JUN 06, 1997			



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 Bowens 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.

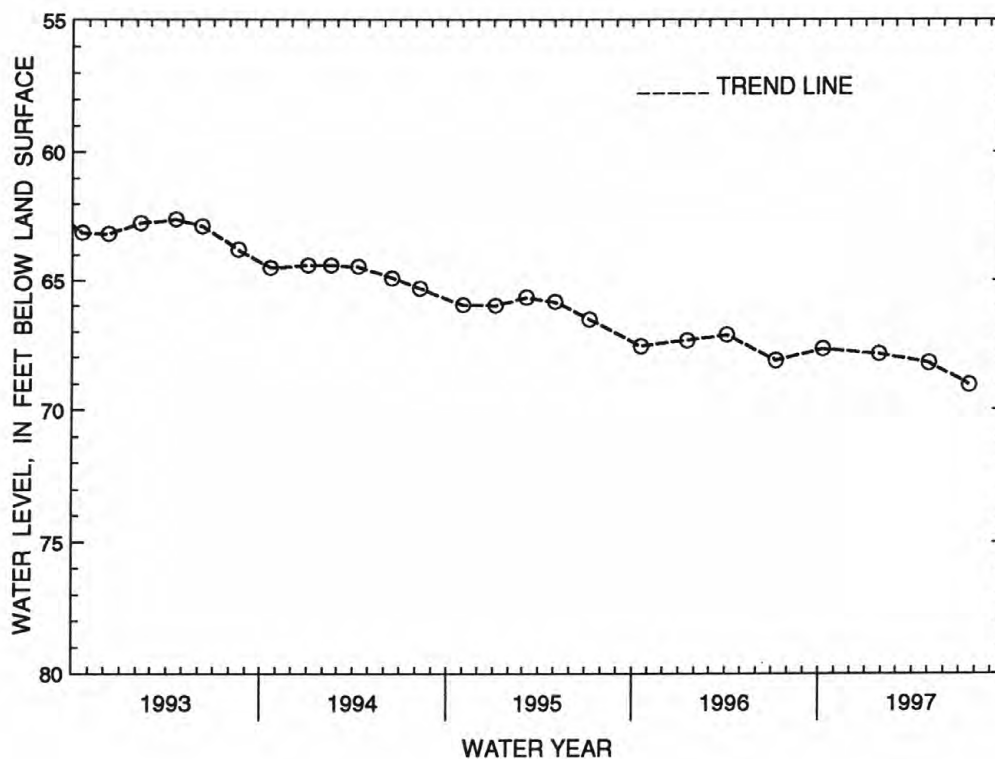
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

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, 69.04 ft below land-surface datum, July 22, 1997.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 09	67.68	JAN 27	67.87	MAY 05	68.22	JUL 22	69.04
WATER YEAR 1997	HIGHEST	67.68	OCT 09, 1996				
	LOWEST	69.04	JUL 22, 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 thereafter.

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

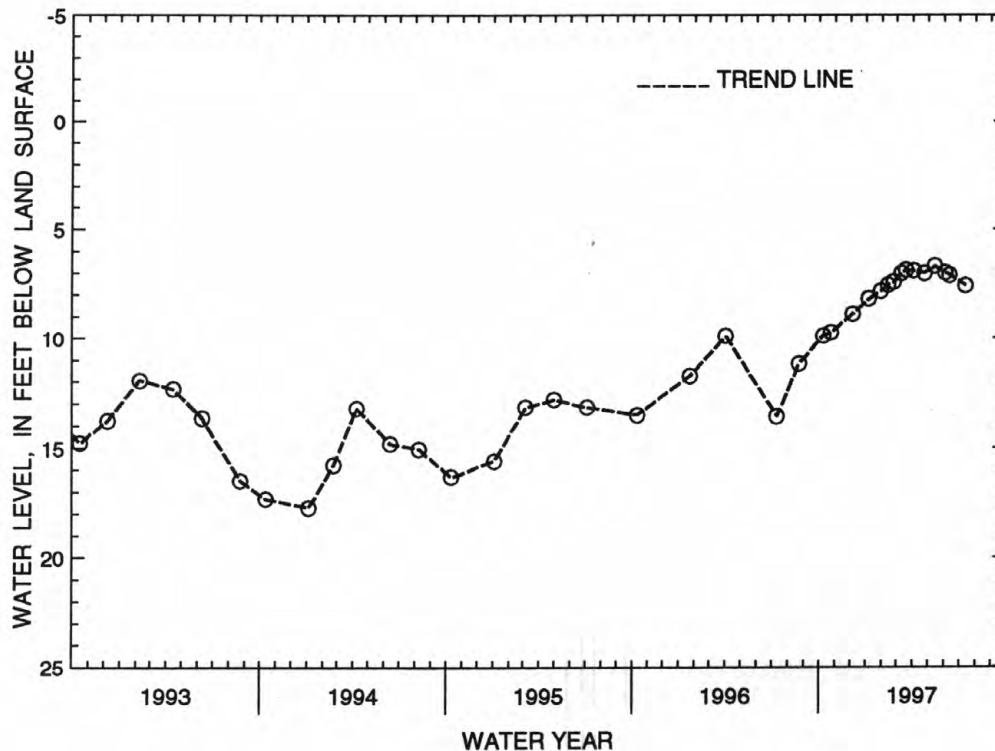
PERIOD OF RECORD.--November 1981 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 09	9.91	JAN 30	7.84	MAR 20	6.87	JUN 03	7.00	JUL 31	7.44	SEP 26	8.13
24	9.77	FEB 12	7.57	APR 03	6.91	13	7.11	AUG 15	7.67		
DEC 06	8.89	24	7.43	24	7.02	30	7.60	28	7.52		
JAN 06	8.20	MAR 11	7.02	MAY 15	6.72	JUL 14	7.59	SEP 11	7.89		

WATER YEAR 1997	HIGHEST	6.72	MAY 15, 1997
	LOWEST	9.91	OCT 09, 1996



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.

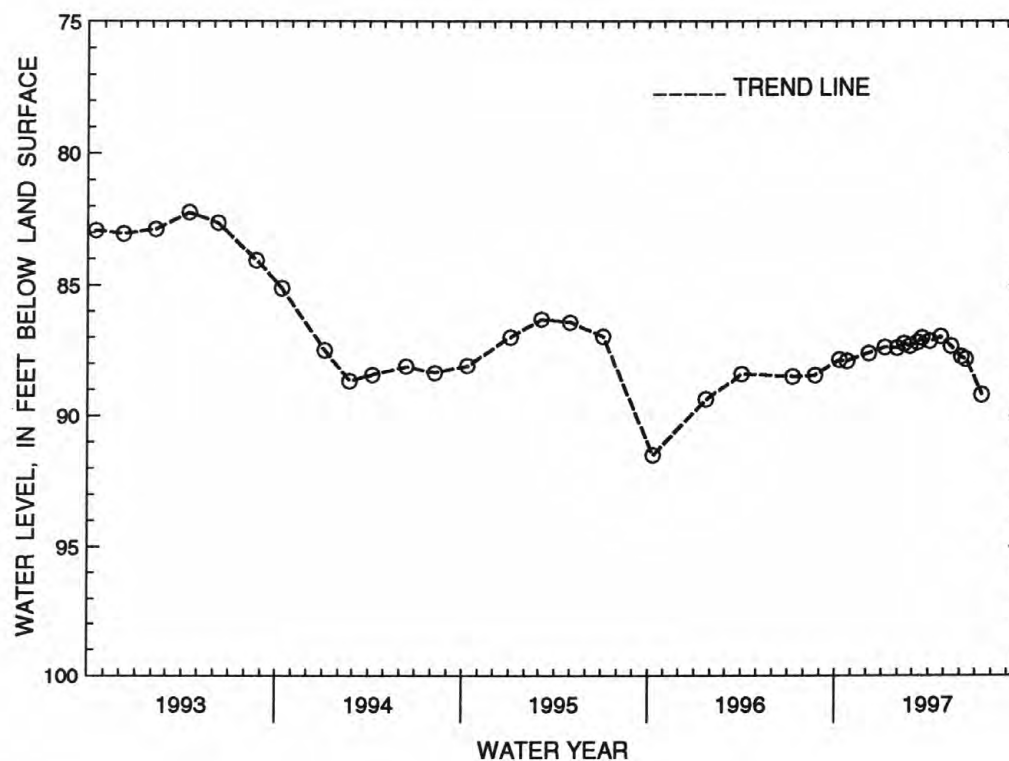
PERIOD OF RECORD.--November 1981 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 09	87.87	FEB 12	87.25	APR 24	86.98	JUL 14	89.21	SEP 26	89.87
24	87.91	24	87.34	MAY 15	87.36	31	89.43		
DEC 06	87.61	MAR 11	87.19	JUN 03	87.75	AUG 15	89.63		
JAN 06	87.39	20	87.02	13	87.85	28	89.65		
30	87.41	APR 03	87.16	30	88.71	SEP 11	89.73		

WATER YEAR 1997	HIGHEST	86.98	APR 24, 1997
	LOWEST	89.87	SEP 26, 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.

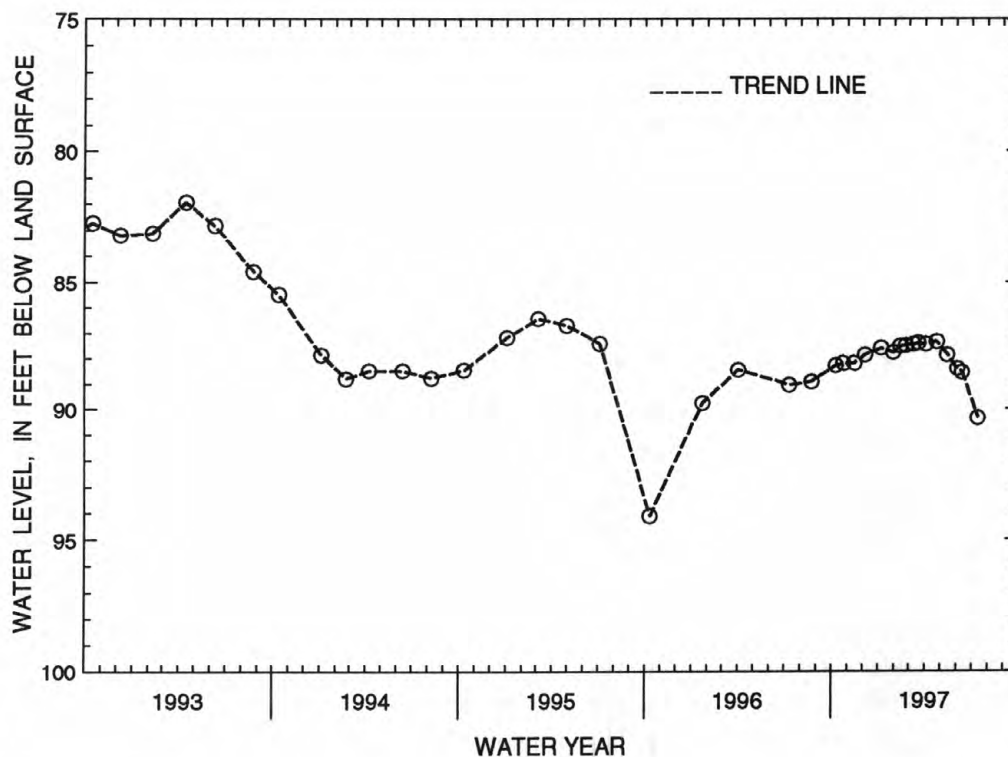
PERIOD OF RECORD.--November 1981 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 09	88.29	JAN 30	87.77	APR 03	87.45	JUL 14	90.35	SEP 26	90.86
24	88.20	FEB 12	87.53	24	87.34	31	90.64		
NOV 14	88.20	24	87.49	MAY 15	87.86	AUG 15	90.67		
DEC 06	87.86	MAR 11	87.45	JUN 03	88.42	28	90.77		
JAN 06	87.60	20	87.39	30	89.61	SEP 11	90.69		

WATER YEAR 1997	HIGHEST	87.34	APR 24, 1997
	LOWEST	90.86	SEP 26, 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.

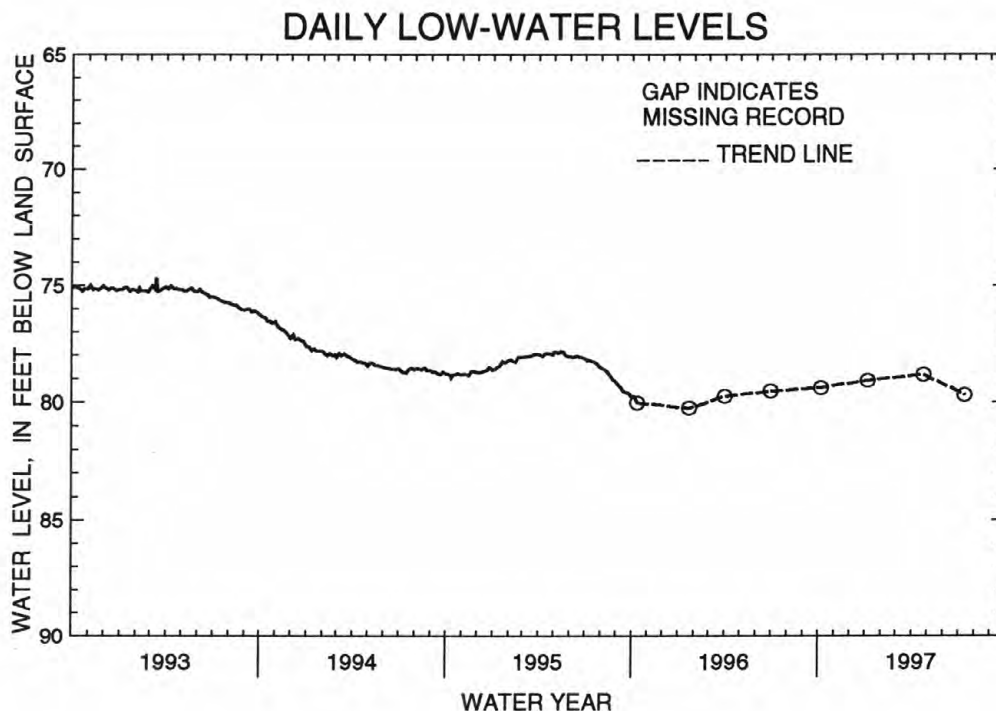
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07	79.39	JAN 06	79.09	APR 24	78.84	JUL 14	79.70
WATER YEAR 1997							
	HIGHEST	78.84	APR 24, 1997				
	LOWEST	79.70	JUL 14, 1997				



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.

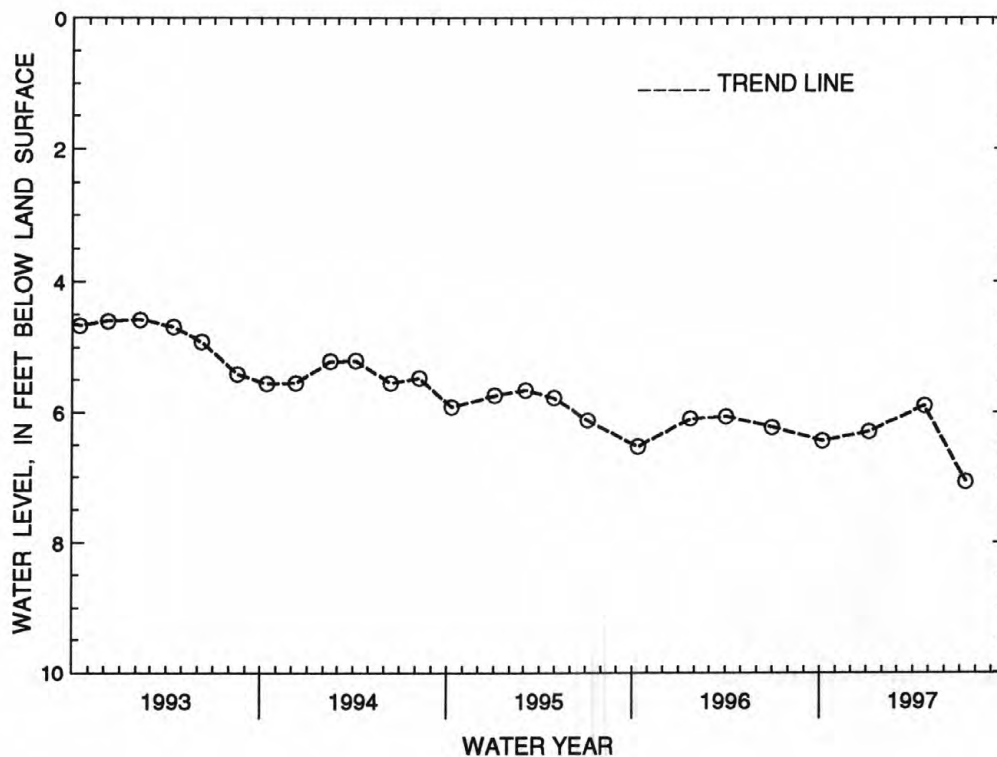
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

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, 7.07 ft below land-surface datum, July 14, 1997.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07	6.44	JAN 06	6.30	APR 24	5.90	JUL 14	7.07
WATER YEAR 1997		HIGHEST	5.90	APR 24, 1997			
		LOWEST	7.07	JUL 14, 1997			



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.

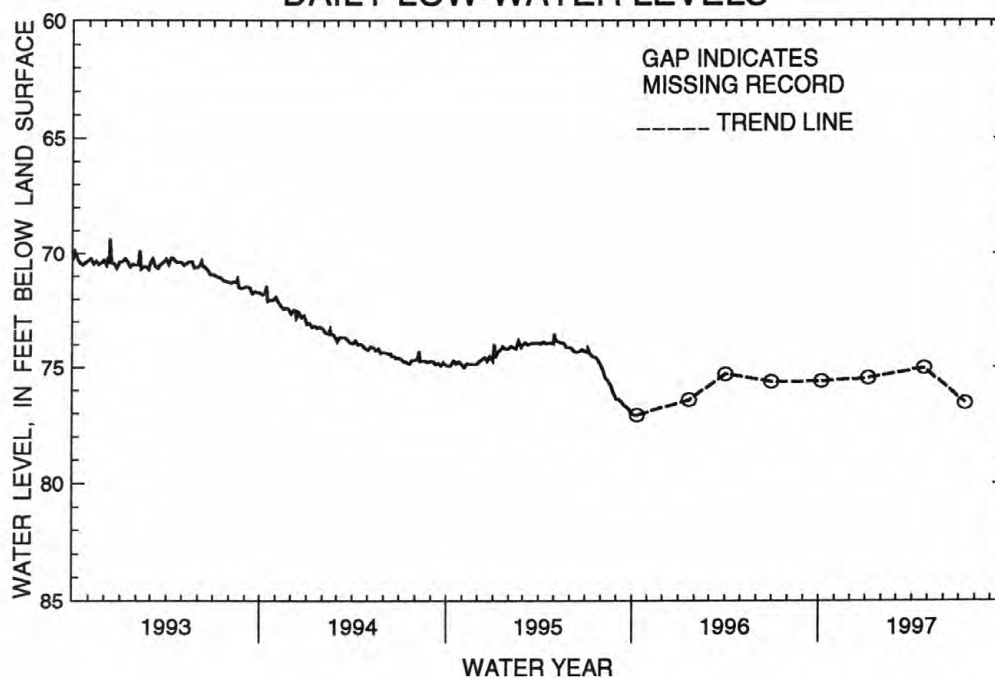
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 55.22 ft below land-surface datum, Mar. 15, 1983; lowest recorded, 77.09 ft below land-surface datum, Oct. 11, 1995.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07	75.63	JAN 06	75.48	APR 24	75.05	JUL 14	76.55

WATER YEAR 1997	HIGHEST	75.05	APR 24, 1997
	LOWEST	76.55	JUL 14, 1997

DAILY LOW-WATER LEVELS



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.

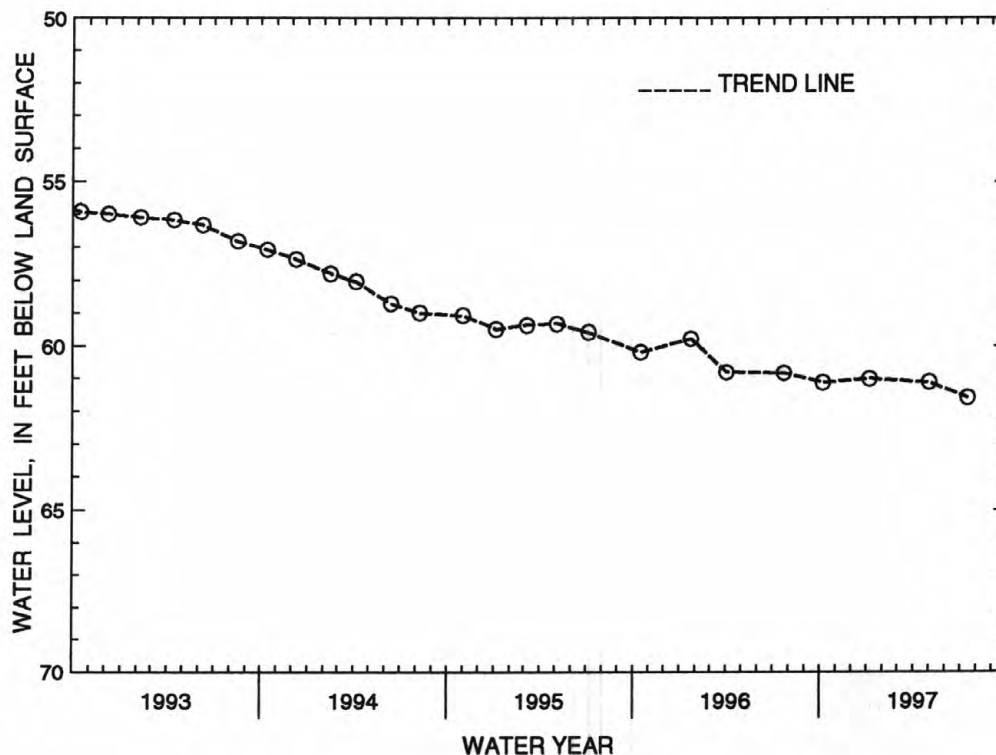
PERIOD OF RECORD.--June 1979 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 27.83 ft below land-surface datum, Aug. 28, 1980; lowest measured, 61.58 ft below land-surface datum, July 16, 1997.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07	61.12	JAN 06	61.00	MAY 02	61.11	JUL 16	61.58

WATER YEAR 1997	HIGHEST	61.00	MAY 02, 1997
	LOWEST	61.58	JUL 16, 1997



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.

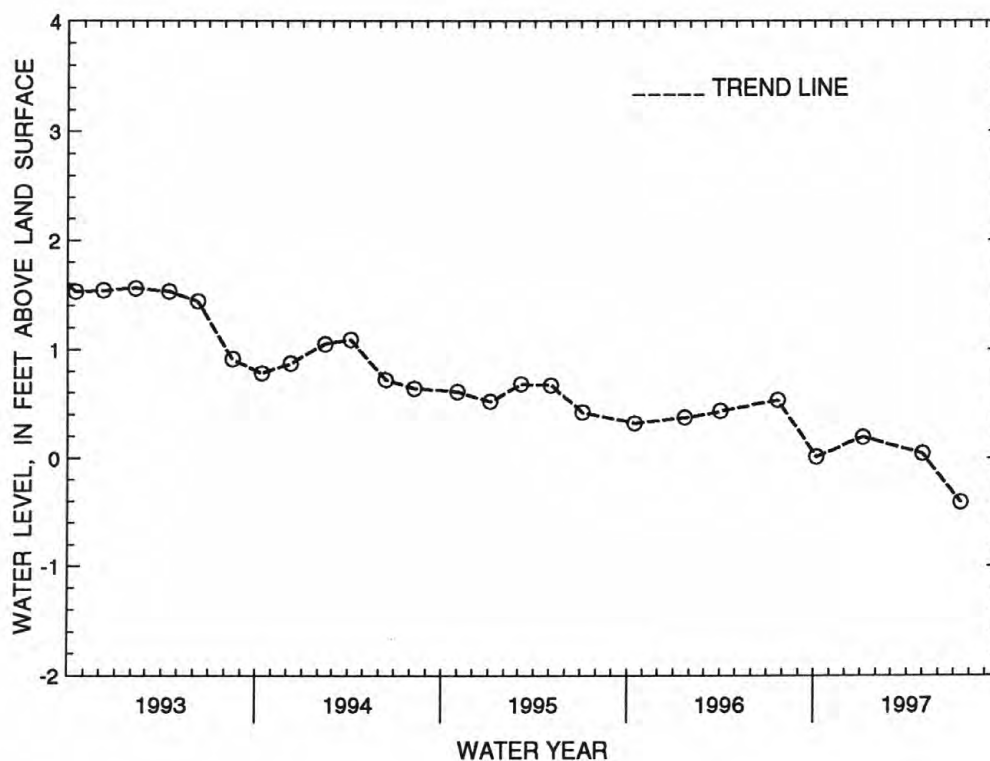
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.37 ft above land-surface datum, July 26, 1979; lowest measured, 0.41 ft below land-surface datum, July 16, 1997.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07	0.01	JAN 06	0.19	MAY 02	0.04	JUL 16	-0.41

WATER YEAR 1997	HIGHEST	0.19	JAN 06, 1997
	LOWEST	-0.41	JUL 16, 1997

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



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. Mary-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.

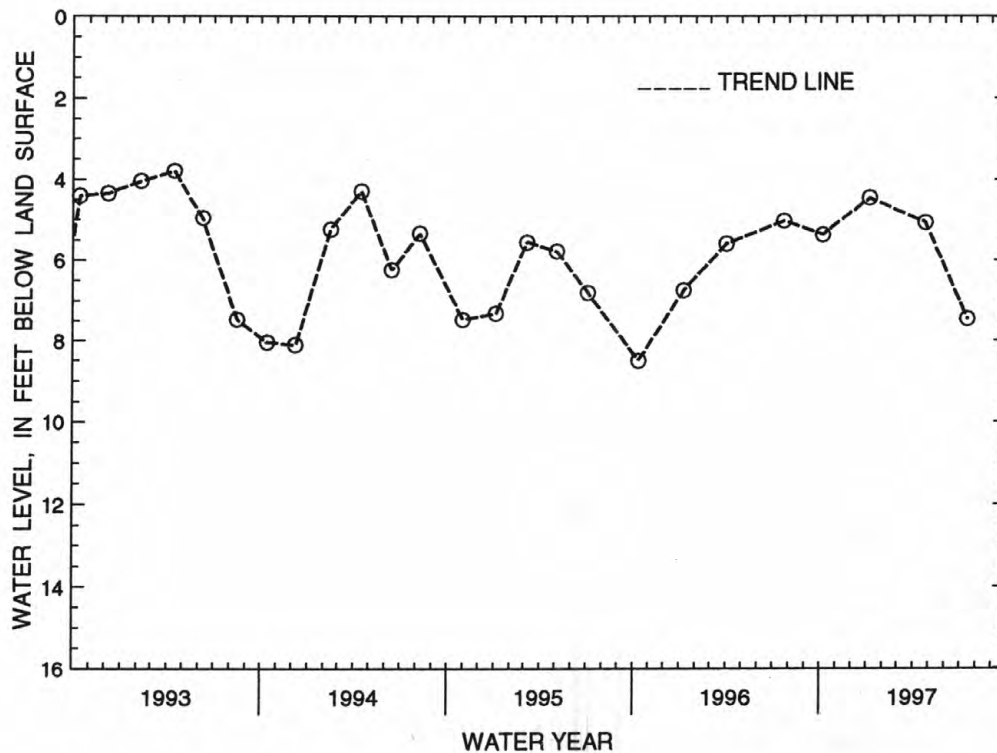
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07	5.37	JAN 06	4.46	APR 24	5.07	JUL 16	7.46
WATER YEAR 1997		HIGHEST	4.46	JAN 06, 1997			
		LOWEST	7.46	JUL 16, 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 subsequent to summer of 1993 was initially the result of pumping of the well. Cause of nonrecovery to pre-pumpage level is unknown but is under investigation.

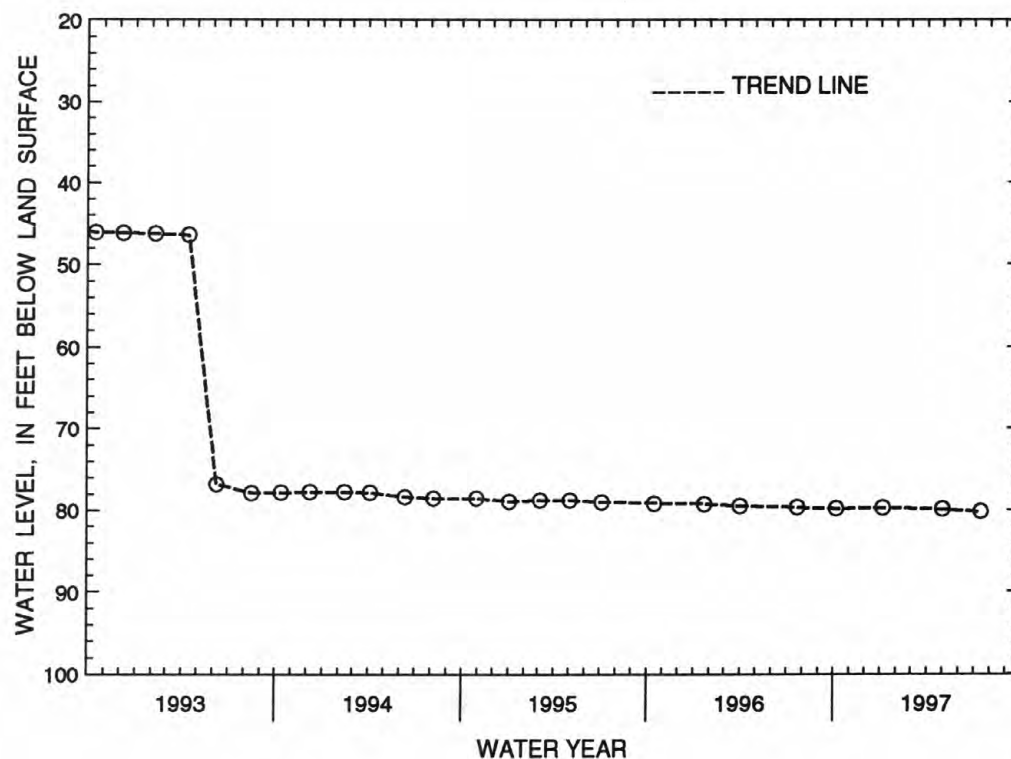
PERIOD OF RECORD.--March 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 41.50 ft below land-surface datum, June 21, 1989; lowest measured, 80.25 ft below land-surface datum, July 16, 1997.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07	79.83	JAN 06	79.75	MAY 02	79.91	JUL 16	80.25

WATER YEAR 1997	HIGHEST	79.75	JAN 06, 1997
	LOWEST	80.25	JUL 16, 1997



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, 64.60 ft below land-surface datum, Jan. 23, Apr. 02, July 23, 1996.

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

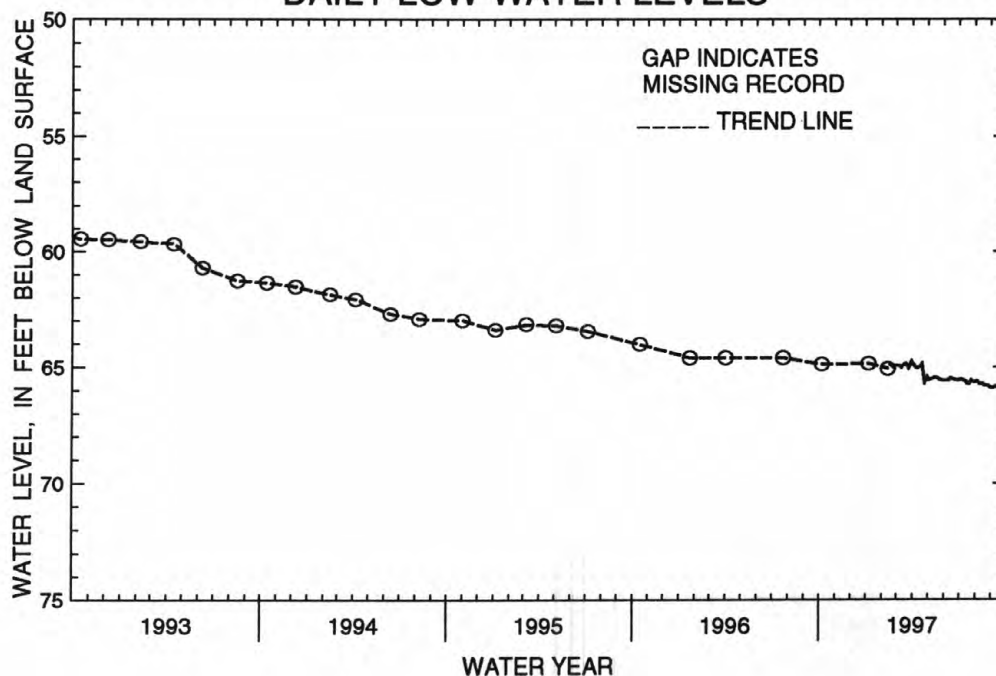
DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07	64.88	JAN 06	64.84

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	---	---	64.92	64.94	65.52	65.56	65.51	65.60	65.89
10	---	---	---	---	---	64.97	65.03	65.48	65.57	65.56	65.72	65.81
15	---	---	---	---	64.87	64.89	65.00	65.42	65.46	65.61	65.71	65.89
20	---	---	---	---	64.95	64.84	64.88	65.46	65.50	65.73	65.78	65.88
25	---	---	---	---	65.00	65.03	65.65	65.53	65.55	65.56	65.80	65.91
EOM	---	---	---	---	64.93	64.77	65.43	65.57	65.56	65.64	65.86	65.81

WATER YEAR 1997	HIGHEST	64.70	MAR 22, 1997
	LOWEST	65.98	SEP 22, 1997

DAILY LOW-WATER LEVELS



GROUND-WATER LEVELS

CITY OF CHESAPEAKE

364227076074708. Local number, 61B 14 SOW 091G.

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 Pentress. 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 987 ft, diameter 2 in. from 987 to 1,110 ft, depth 1,110 ft, screened 1,090 to 1,100 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, 0.9 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, 51.30 ft below land-surface datum, Mar. 22, 1989; lowest measured, 61.66 ft below land-surface datum, Sept. 22, 23, 1997.

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

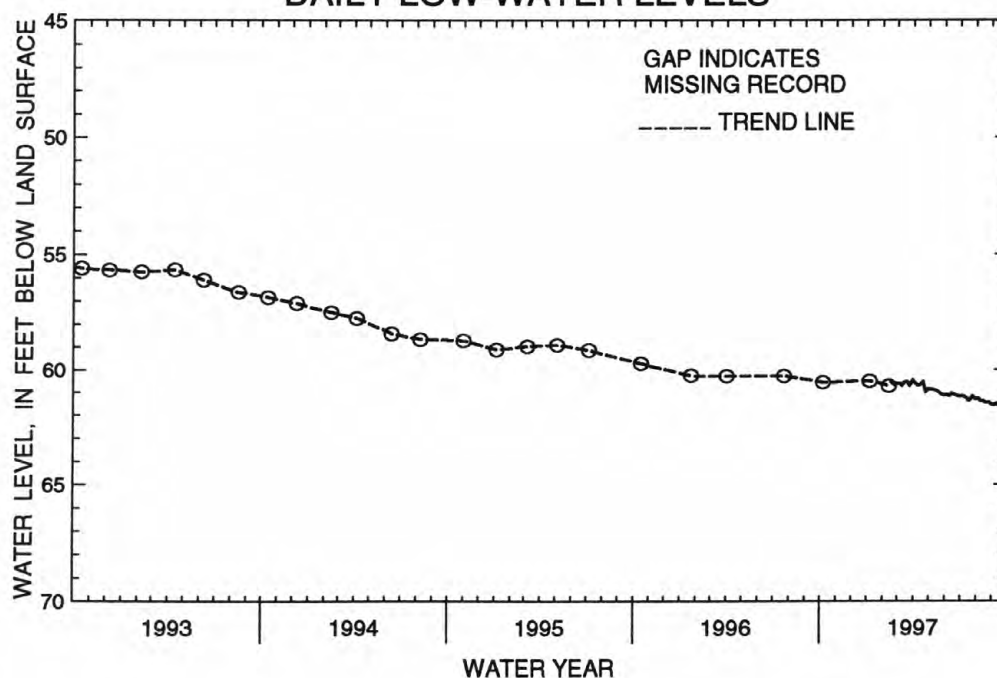
DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07	60.57	JAN 06	60.50

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	---	---	60.62	60.63	60.87	61.13	61.16	61.28	61.58
10	---	---	---	---	---	60.70	60.70	60.90	61.16	61.23	61.40	61.52
15	---	---	---	---	60.53	60.57	60.68	60.92	61.06	61.29	61.40	61.59
20	---	---	---	---	60.63	60.55	60.56	61.00	61.12	61.37	61.46	61.58
25	---	---	---	---	60.68	60.70	60.97	61.09	61.17	61.20	61.47	61.65
EOM	---	---	---	---	60.62	60.48	60.87	61.14	61.20	61.32	61.55	61.52

WATER YEAR 1997 HIGHEST 60.39 MAR 22, 1997
 LOWEST 61.66 SEP 22, 23, 1997

DAILY LOW-WATER LEVELS



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.

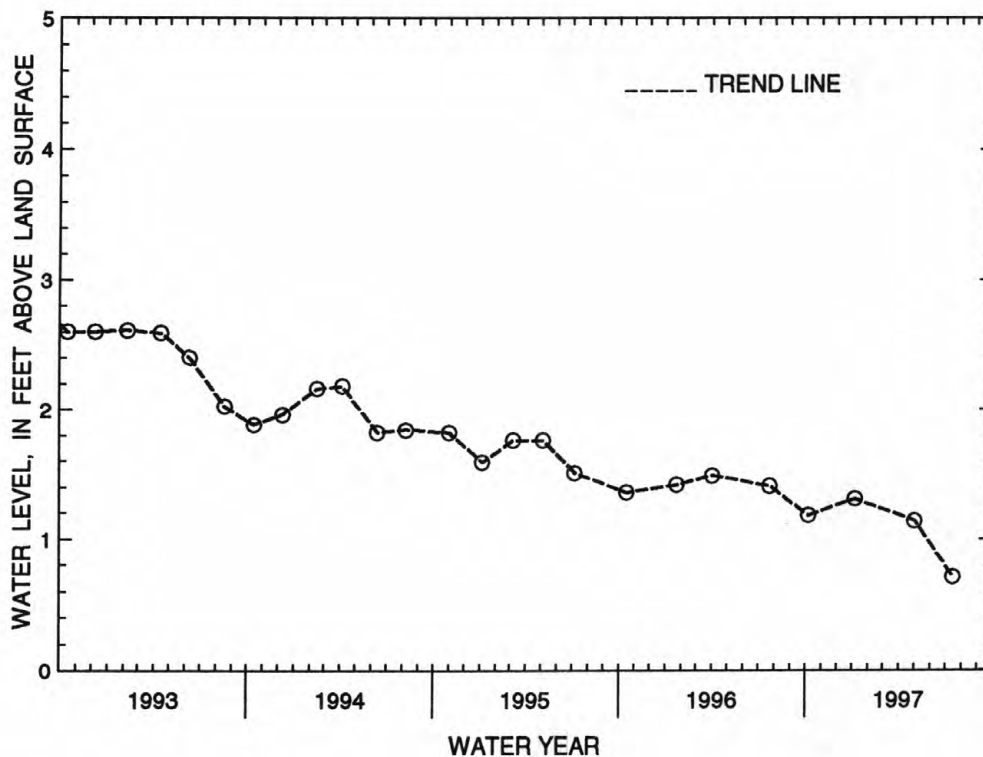
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.75 ft above land-surface datum, Apr. 20, 1989; lowest measured, 0.71 ft above land-surface datum, July 16, 1997.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07	1.18	JAN 06	1.31	MAY 02	1.14	JUL 16	0.71

WATER YEAR 1997	HIGHEST	1.31	JAN 06, 1997
	LOWEST	0.71	JUL 16, 1997

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.

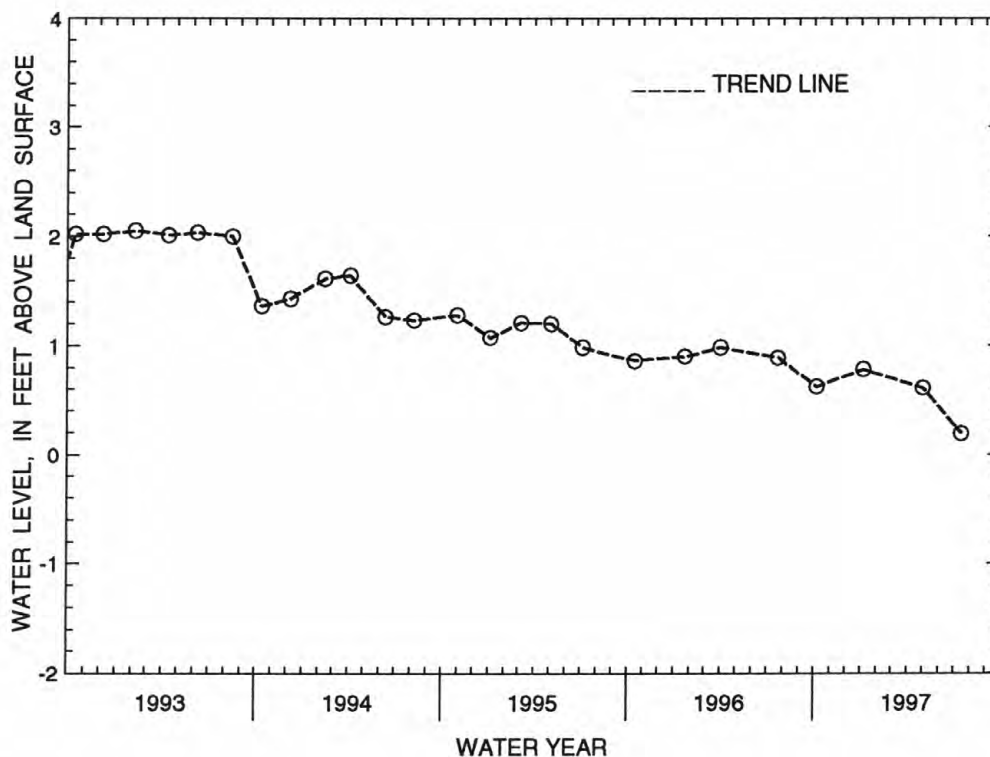
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.31 ft above land-surface datum, Mar. 13, 1989; lowest measured, 0.19 ft above land-surface datum, July 16, 1997.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07	0.62	JAN 06	0.78	MAY 02	0.61	JUL 16	0.19

WATER YEAR 1997	HIGHEST	0.78	JAN 06, 1997
	LOWEST	0.19	JUL 16, 1997

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.

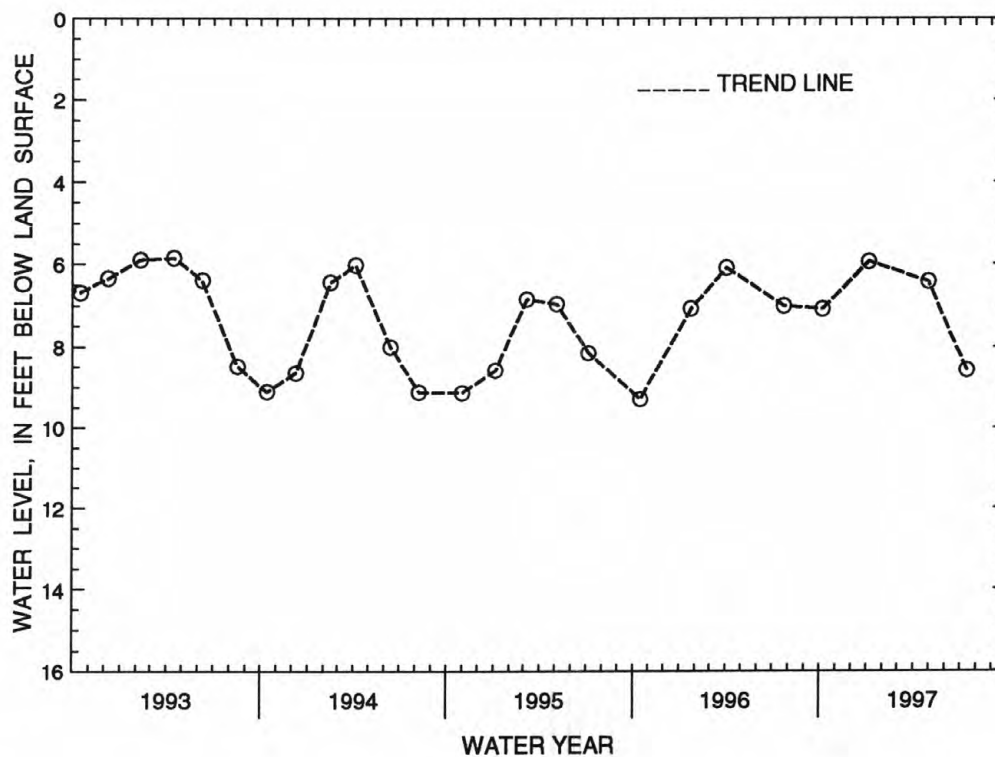
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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, 9.29 ft below land-surface datum, Oct. 16, 1995.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07	7.08	JAN 06	5.94	MAY 02	6.42	JUL 16	8.59
WATER YEAR 1997	HIGHEST	5.94	JAN 06, 1997				
	LOWEST	8.59	JUL 16, 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.

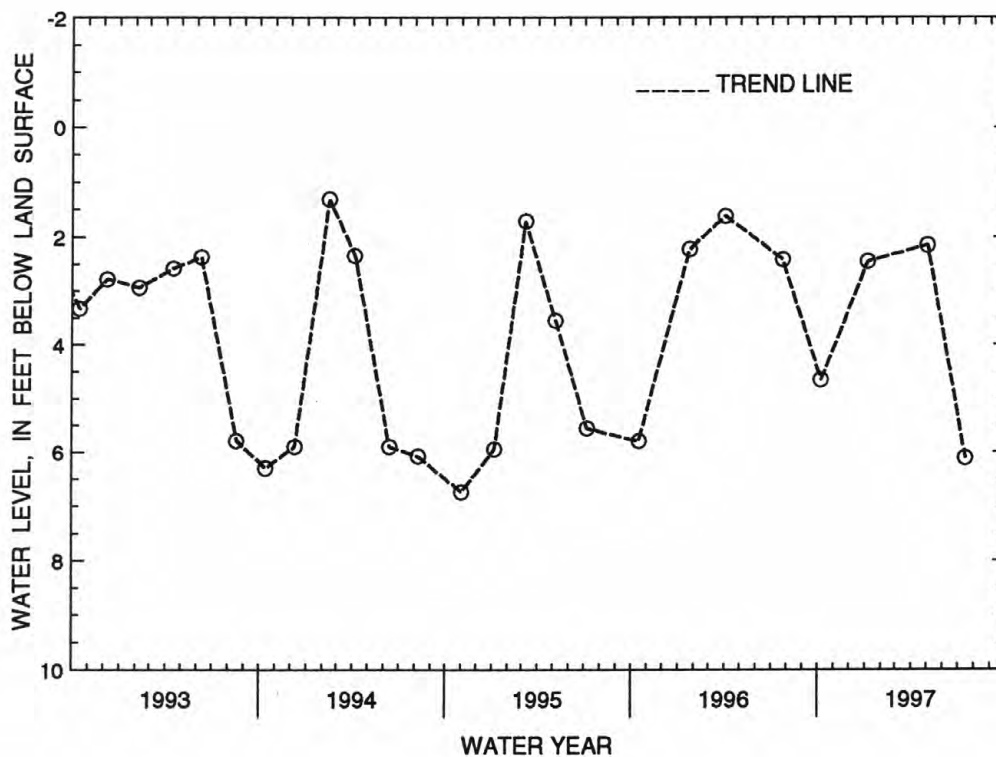
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07	4.66	JAN 06	2.45	MAY 02	2.15	JUL 16	6.12
WATER YEAR 1997	HIGHEST	2.15	MAY 02, 1997				
	LOWEST	6.12	JUL 16, 1997				



GROUND-WATER LEVELS

CHESTERFIELD COUNTY

372519077264701. Local number, 51H 92.

LOCATION.--Lat 37°25'19", long 77°26'47", Hydrologic Unit 02080206, 500 ft north of Alcott Road at Bensley, 0.3 mi southwest of the intersection of U.S. Highways 1 and 301 (Jefferson Davis Highway) and Alcott Road. Owner: U.S. Geological Survey.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 3 in., depth 53 ft, screened 51 to 53 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Oct. 1, 1985, to Jan. 23, 1991, digital recorder--60-minute punch. Prior to Oct. 1, 1985, monthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 102.31 ft above sea level. Measuring point: Top of casing, 1.5 ft above land-surface datum.

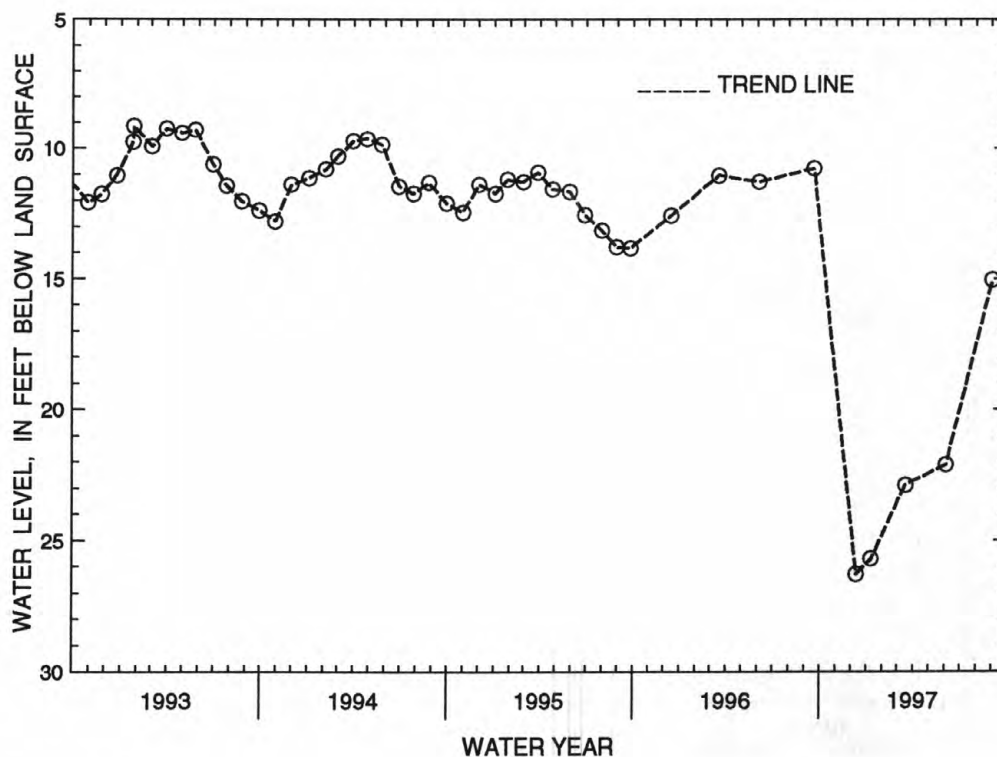
REMARKS.--Water level measurements after Sept. 20, 1996 affected by nearby pumpage.

PERIOD OF RECORD.--April 1985 to current year. Unpublished records available prior to October 1987 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 8.95 ft below land-surface datum, June 14, 1989; lowest measured, 26.32 ft below land-surface datum, Dec. 12, 1996, result of local pumpage.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 12	26.32	JAN 10	25.73	MAR 18	22.89	JUN 05	22.11	SEP 03	15.05
WATER YEAR 1997		HIGHEST	15.05	SEP 03, 1997					
		LOWEST	26.32	DEC 12, 1996					



GROUND-WATER LEVELS

CHESTERFIELD COUNTY

372519077264704. Local number, 51H 95.

LOCATION.--Lat 37°25'19", long 77°26'47", Hydrologic Unit 02080206, 500 ft north of Alcott Road at Bensley and 0.3 mi southwest of the intersection of U.S. Highways 1 and 301 (Jefferson Davis Highway) and Alcott Road. Owner: U.S. Geological Survey.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 3 in., depth 4.7 ft, screened 2.7 to 4.7 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Jan. 23, 1991, digital recorder--60-minute punch and monthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 102.23 ft above sea level. Measuring point: Top of casing, 1.9 ft above land-surface datum.

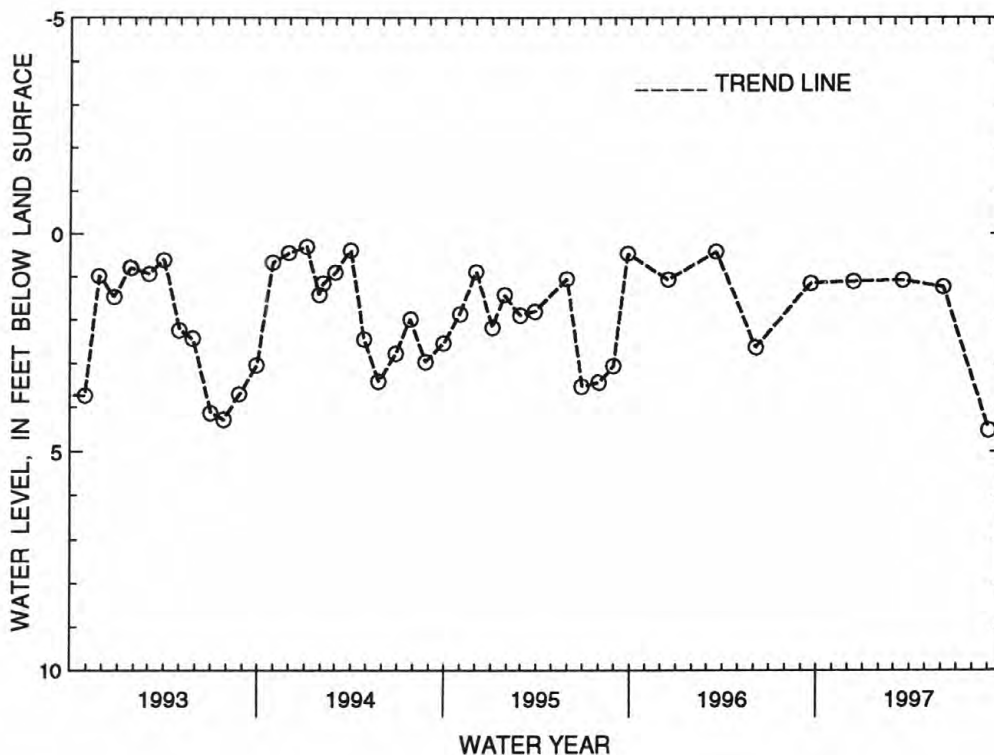
REMARKS.--Upper limit of recorded water-level data is limited by well construction. Water level affected by pumping and sampling at different times during the year.

PERIOD OF RECORD.--April 1985 to current year. Unpublished records available prior to October 1987 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.02 ft below land-surface datum, Jan. 11, 12, 1990; lowest recorded, 4.52 ft below land-surface datum, Sept. 3, 1997.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 12	1.12	MAR 18	1.09	JUN 05	1.25	SEP 03	4.52
WATER YEAR 1997	HIGHEST	1.09	MAR 18, 1997				
	LOWEST	4.52	SEP 03, 1997				



GROUND-WATER LEVELS

CHESTERFIELD COUNTY

372519077264605. Local number, 51H130.

LOCATION.--Lat 37°25'19", long 77°26'46", Hydrologic Unit 02080206, 500 ft north of Alcott Road at Bensley and 0.3 mi southwest of the intersection of U.S. Highway 1 and 301 (Jefferson Davis Highway) and Alcott Road. Owner: U.S. Geological Survey.

AQUIFER.--Petersburg Granite of Mississippian age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in., depth 96 ft, cased to 71 ft, open hole 71 to 96 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 102.17 ft above sea level. Measuring point: Top of casing, 1.64 ft above land-surface datum.

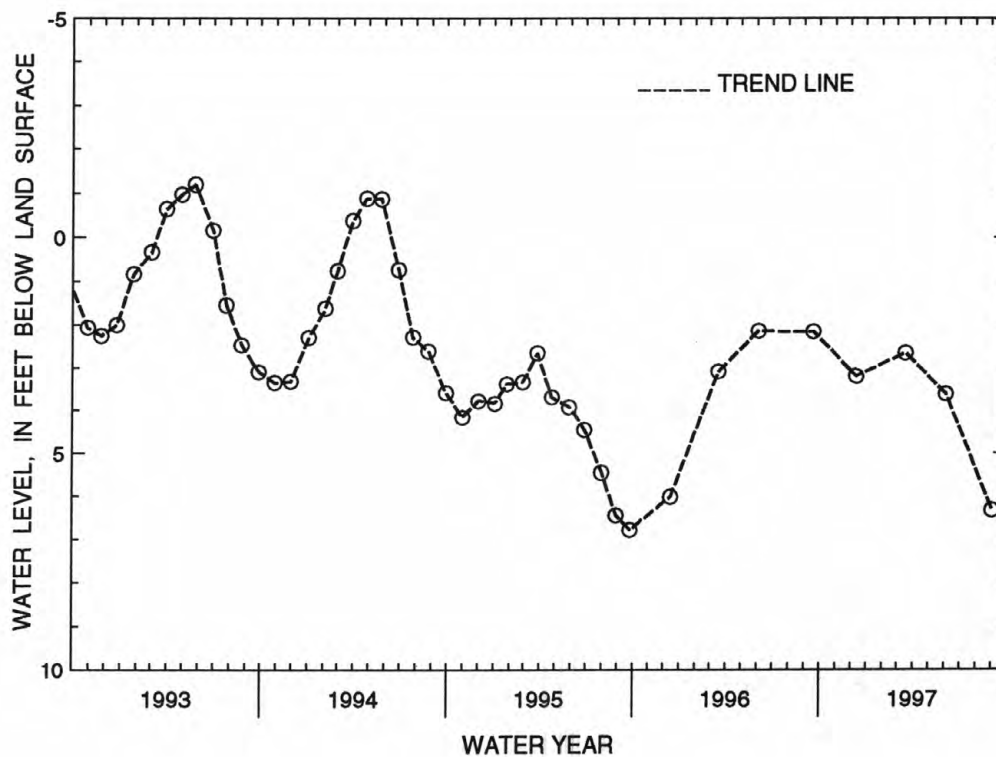
REMARKS.--Water level affected by pumping and sampling at different times during the year.

PERIOD OF RECORD.--May 1985 to current year. Unpublished records available prior to October 1988 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.64 ft above land-surface datum, June 1, 1989; lowest measured, 6.79 ft below land-surface datum, Sept. 26, 1995.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 12	3.20	MAR 18	2.66	JUN 05	3.62	SEP 03	6.34
WATER YEAR 1997 HIGHEST		2.66	MAR 18, 1997				
LOWEST		6.34	SEP 03, 1997				



GROUND-WATER LEVELS

CITY OF COLONIAL HEIGHTS

371644077244601. Local number, 51G 1.

LOCATION.--Lat 37°16'44", long 77°24'46", Hydrologic Unit 02080207, 200 ft west of U.S. Highways 1 and 301, 0.5 mi south of the intersection of State Highway 144 (Ashby Avenue) and U.S. Highways 1 and 301 (Boulevard) in Colonial Heights. Owner: Dean Whittington.

AQUIFER.--Petersburg Granite of Mississippian age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6 in., depth 100 ft, cased to 50 ft, open hole 50 to 100 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by USGS personnel.

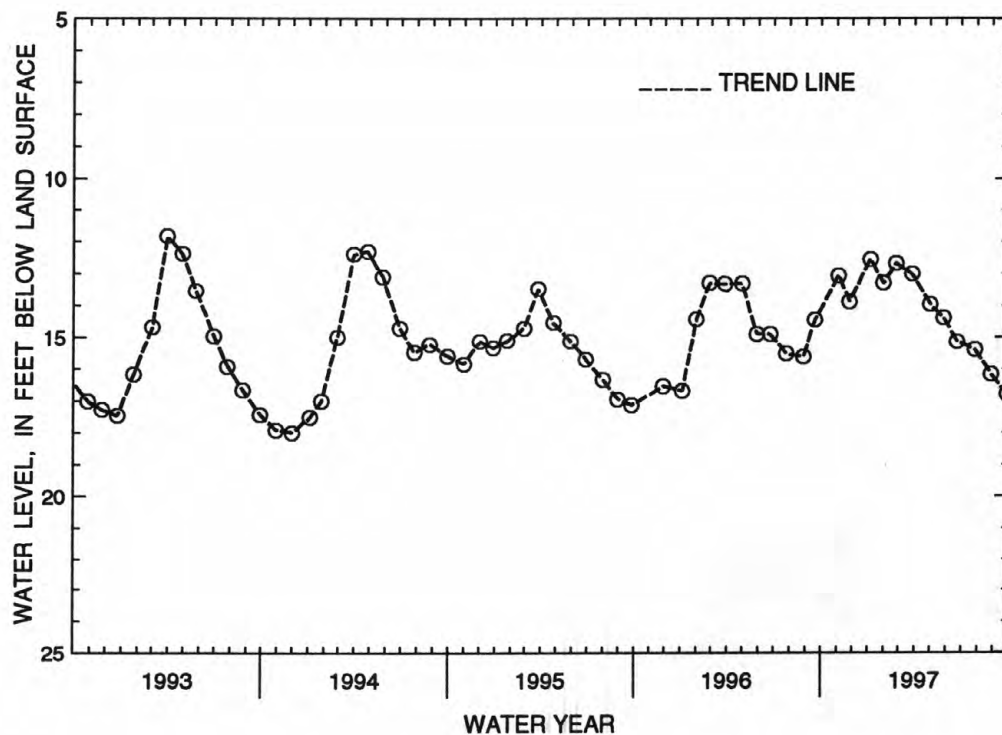
DATUM.--Elevation of land-surface datum is 57.30 ft above sea level. Measuring point: Top of casing, 1.0 ft above land-surface datum.

PERIOD OF RECORD.--October 1939 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.73 ft below land-surface datum, Jan. 26, 1978; lowest measured, 19.26 ft below land-surface datum, Dec. 3, 1963.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	13.06	JAN 06	12.55	FEB 25	12.68	MAY 02	13.96	JUN 24	15.14	AUG 29	16.17
26	13.88	31	13.30	MAR 28	13.01	28	14.40	JUL 28	15.39	SEP 29	16.78
WATER YEAR 1997		HIGHEST	12.55	JAN 06, 1997							
		LOWEST	16.78	SEP 29, 1997							



GROUND-WATER LEVELS

FAIRFAX COUNTY

385638077220101. Local number, 52V 2.

LOCATION.--Lat 38°56'58", long 77°22'01", Hydrologic Unit 02070008, at U.S. Geological Survey National Center in Reston. Owner: U.S. Geological Survey.

AQUIFER.--Manassas Sandstone of Triassic age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 8 in., depth 205 ft, cased to 35 ft, open hole 35 to 205 ft.

INSTRUMENTATION.--Electronic pressure transducer data logger--60-minute record interval. Prior to Sept. 1, 1996, continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 390 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

REMARKS.--Missing record due to recorder malfunction.

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

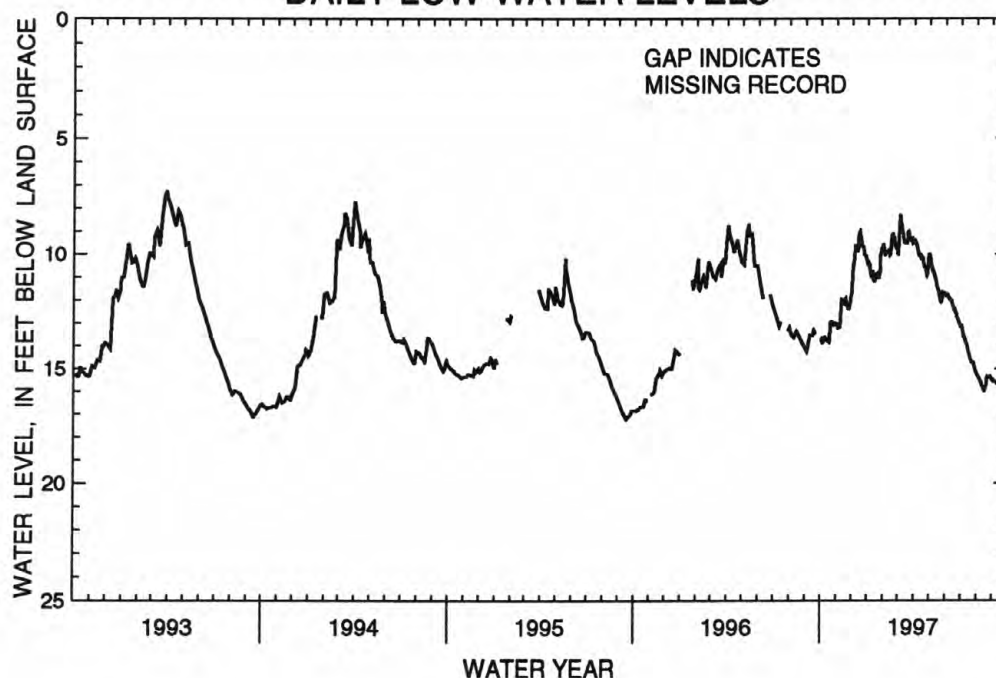
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 6.47 ft below land-surface datum, Mar. 30, 1984; lowest recorded, 18.19 ft below land-surface datum, Oct. 25, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.88	13.20	10.46	10.49	10.02	8.29	9.57	10.51	11.73	13.43	15.38	15.56
10	13.67	12.29	9.71	10.73	9.88	9.04	10.06	10.85	11.99	13.79	15.63	15.68
15	13.81	12.13	9.11	11.16	9.76	9.43	10.23	11.25	12.24	14.18	15.93	15.65
20	13.04	12.05	9.57	10.84	9.27	9.22	10.46	11.76	12.46	14.62	15.74	15.74
25	13.06	12.41	9.99	10.72	9.74	9.42	10.83	12.03	12.80	14.73	15.38	16.19
EOM	13.03	11.81	10.34	9.57	9.98	9.46	10.07	11.73	13.14	15.16	15.51	15.91

WATER YEAR 1997 HIGHEST INSTANTANEOUS 8.03 MAR 06, 1997
LOWEST INSTANTANEOUS 16.19 SEP 25, 1997

DAILY LOW-WATER LEVELS



GROUND-WATER LEVELS

CITY OF FRANKLIN

364033076562604. Local number, 55B 67 SOW 145D.

LOCATION.--Lat 36°40'33", long 76°56'26", Hydrologic Unit 03010202, at P. D. Camp Community College in Franklin.
Owner: Virginia Department of Environmental Quality.

AQUIFER.--Aquia aquifer of Paleocene 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 USGS personnel.

DATUM.--Elevation of land-surface datum is 34 ft above sea level, from topographic map. Measuring point: Top of casing, 1.15 ft above land-surface datum.

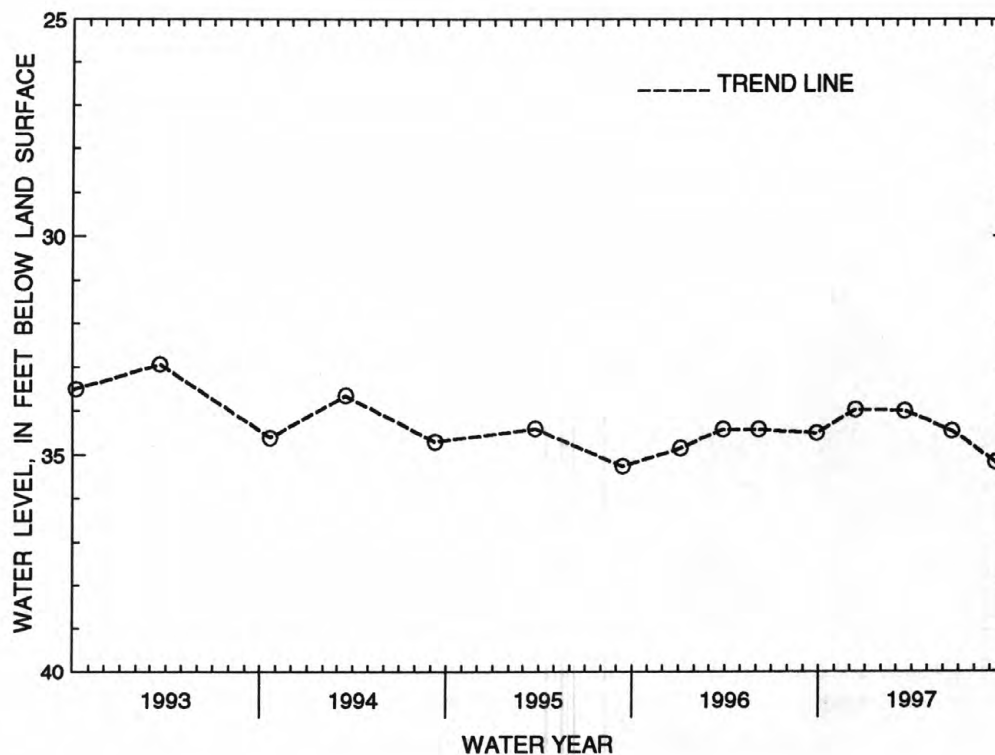
REMARKS.--Water level affected by regional drawdown.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 29.51 ft below land-surface datum, Mar. 19, 1985;
lowest measured, 35.27 ft below land-surface datum, Sept. 12, 1995.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 12	33.98	MAR 18	34.00	JUN 19	34.47	SEP 12	35.18
WATER YEAR 1997	HIGHEST	33.98	DEC 12, 1996				
	LOWEST	35.18	SEP 12, 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: Chesapeake Paper Products 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.

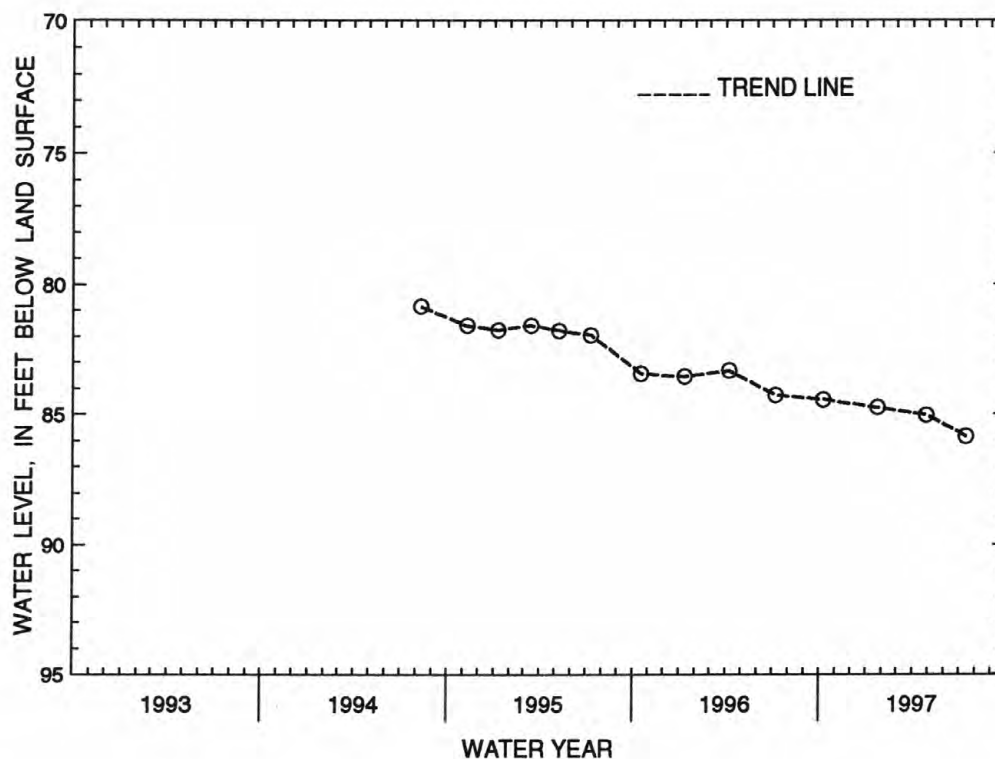
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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, 85.85 ft below land-surface datum, July 15, 1997.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	84.44	JAN 23	84.75	APR 28	85.03	JUL 15	85.85
WATER YEAR 1997	HIGHEST	84.44	OCT 10, 1996				
	LOWEST	85.85	JUL 15, 1997				



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: Chesapeake Paper Products 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 inter casing, 1.6 ft above land-surface datum.

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

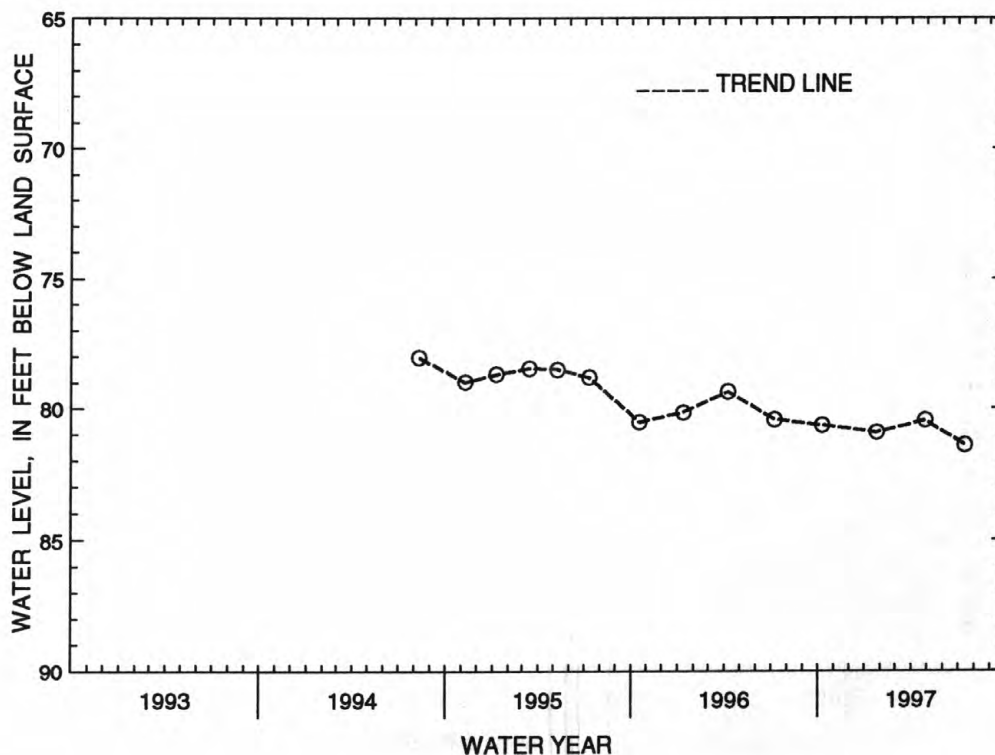
PERIOD OF RECORD.--June 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 77.63 ft below land-surface datum, June 24, 1994; lowest measured, 81.42 ft below land-surface datum, July 15, 1997.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	80.65	JAN 23	80.93	APR 28	80.47	JUL 15	81.42

WATER YEAR 1997	HIGHEST	80.47	APR 28, 1997
	LOWEST	81.42	JUL 15, 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: Chesapeake Paper Products 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 inter casing, 1.7 ft above land-surface datum.

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

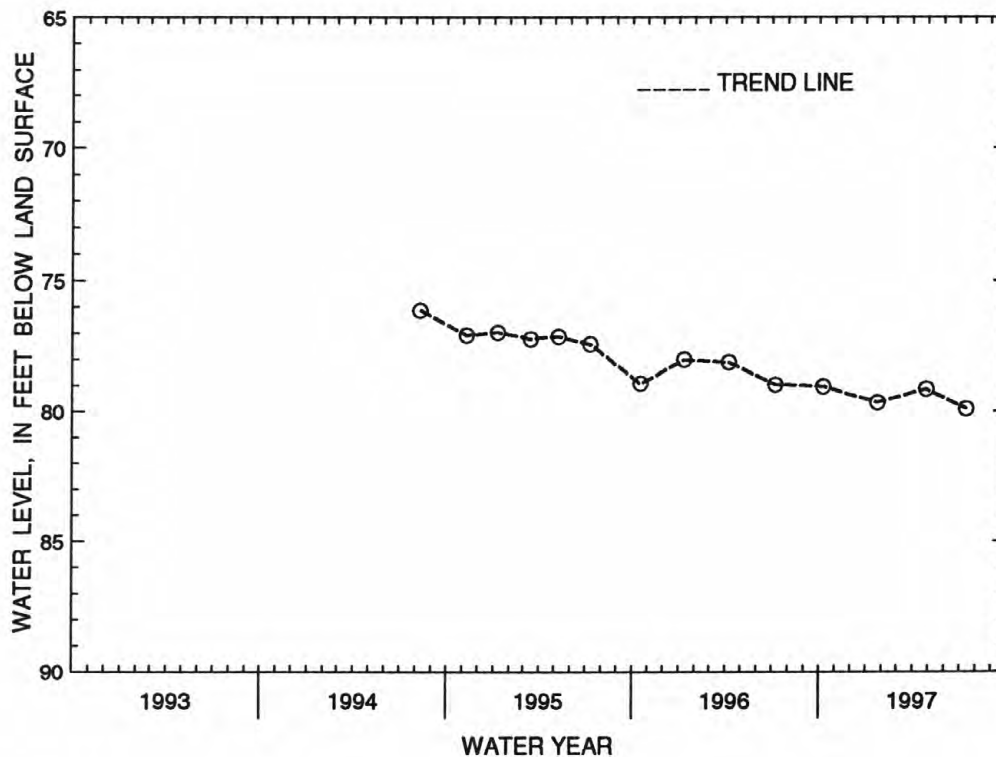
PERIOD OF RECORD.--June 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 75.78 ft below land-surface datum, June 24, 1994; lowest measured, 79.91 ft below land-surface datum, July 15, 1997.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	79.06	JAN 23	79.66	APR 28	79.16	JUL 15	79.91

WATER YEAR 1997	HIGHEST	79.06	OCT 10, 1996
	LOWEST	79.91	JUL 15, 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.

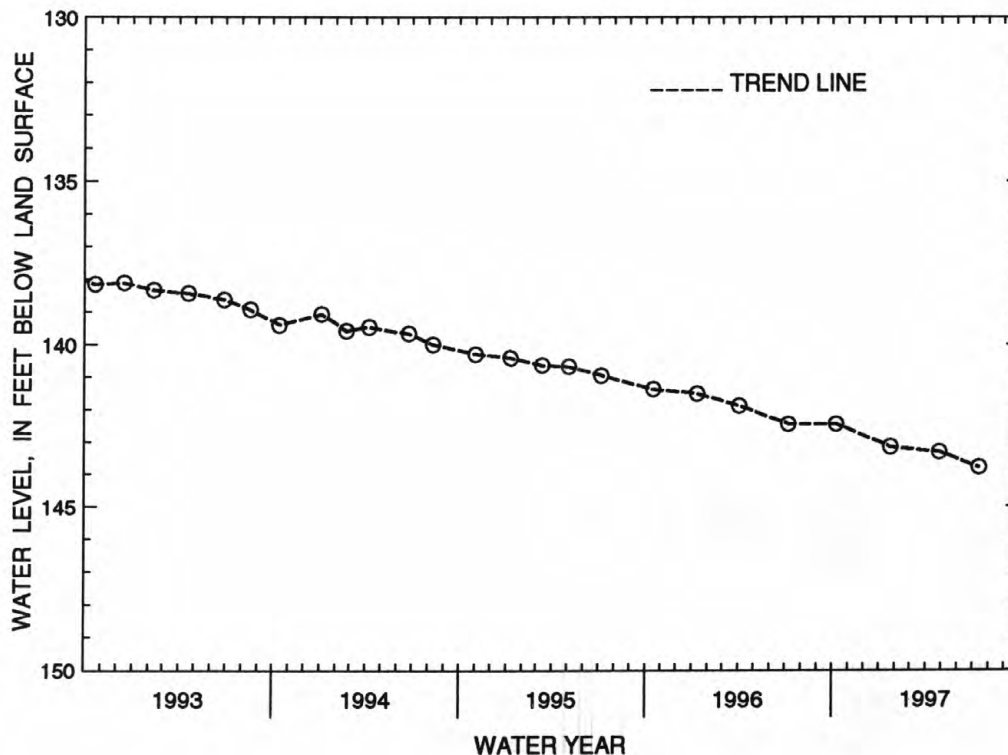
PERIOD OF RECORD.--August 1982 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 125.26 ft below land-surface datum, Feb. 14, 1983; lowest measured, 143.80 ft below land-surface datum, July 15, 1997.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	142.45	JAN 23	143.16	APR 28	143.31	JUL 15	143.80

WATER YEAR 1997	HIGHEST	142.45	OCT 10, 1996
	LOWEST	143.80	JUL 15, 1997



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.

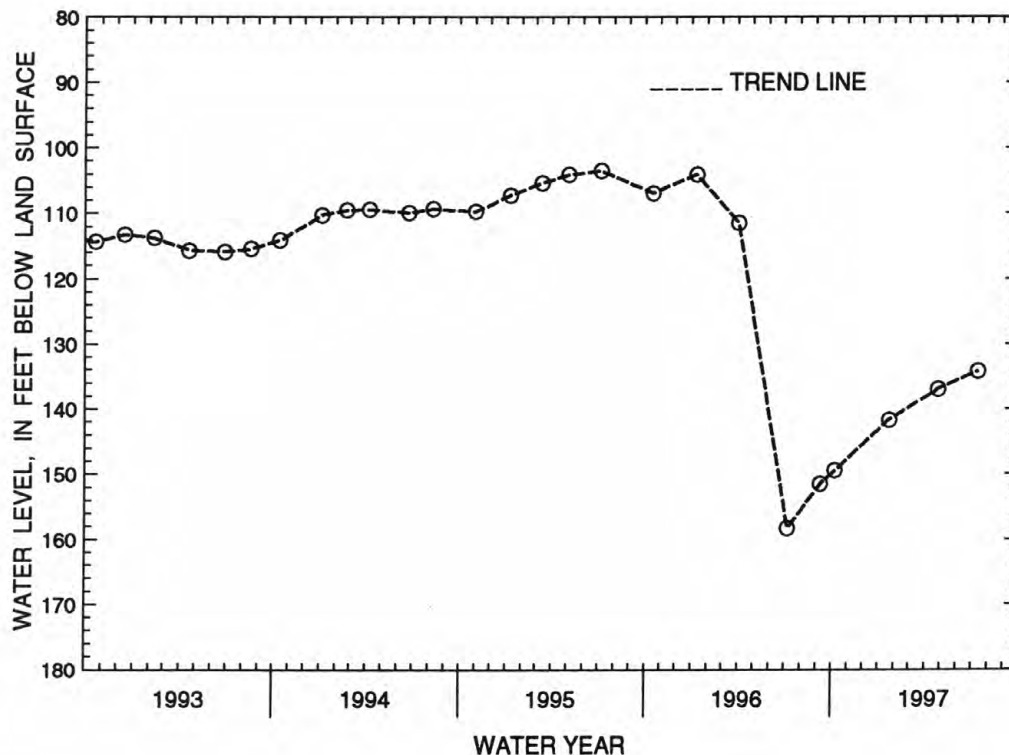
PERIOD OF RECORD.--June 1985 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	149.47	JAN 23	141.69	APR 28	136.98	JUL 15	134.21

WATER YEAR 1997	HIGHEST	134.21	JUL 15, 1997
	LOWEST	149.47	OCT 10, 1996



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.

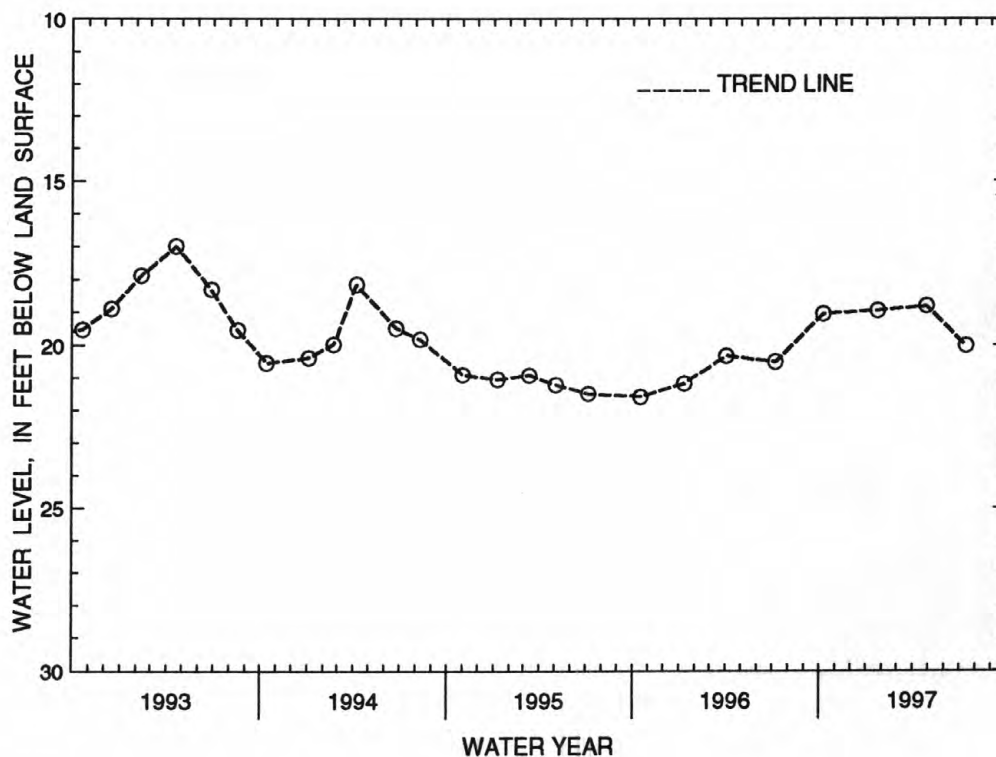
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	19.05	JAN 23	18.95	APR 28	18.82	JUL 15	20.02
WATER YEAR 1997		HIGHEST	18.82	APR 28, 1997			
		LOWEST	20.02	JUL 15, 1997			



GROUND-WATER LEVELS

HANOVER COUNTY

375316077274701. Local number, 51M 11.

LOCATION.--Lat 37°53'16", long 77°27'47", Hydrologic Unit 02080106, 900 ft east of U.S. Highway 1 on a private dirt road at the North Anna River and 9.9 mi north of Ashland on U.S. Highway 1. Owner: Weyerhaeuser Inc.

AQUIFER.--Newark Supergroup of late Triassic age.

WELL CHARACTERISTICS.--Drilled water well, diameter 6 in., depth 175 ft, cased to 20 ft, open hole 20 to 175 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

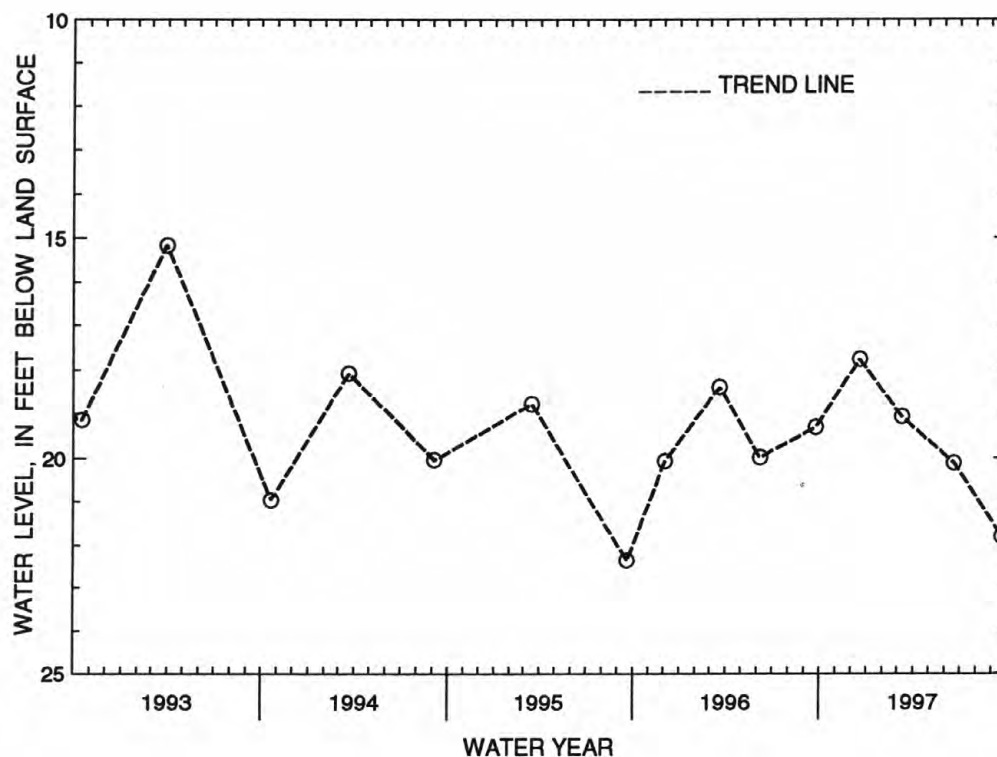
DATUM.--Elevation of land-surface datum is 70 ft above sea level, from topographic map. Measuring point: Top of casing, at land-surface datum.

PERIOD OF RECORD.--January 1984 to current year. Unpublished records available prior to October 1987 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.17 ft below land-surface datum, Mar. 30, 1993; lowest measured, 22.36 ft below land-surface datum, Sept. 20, 1995.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 18	17.77	MAR 10	19.07	JUN 20	20.12	SEP 22	21.81
WATER YEAR 1997	HIGHEST	17.77	DEC 18, 1996				
	LOWEST	21.81	SEP 22, 1997				



GROUND-WATER LEVELS

HANOVER COUNTY

373507077171201. Local number, 52J 10.

LOCATION.--Lat 37°35'07", long 77°17'12", Hydrologic Unit 02080206, 150 ft north of State Highway 156 at the Cold Harbor Visitor Center, 1.0 mi southwest of the intersection of State Highways 156 and 619, and 4.9 mi east of Mechanicsville. Owner: U.S. National Park Service.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled water well, diameter 6 in., depth 270 ft, screened 255 to 270 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 172 ft above sea level, from topographic map. Measuring point: Top of casing, 1.55 ft above land-surface datum.

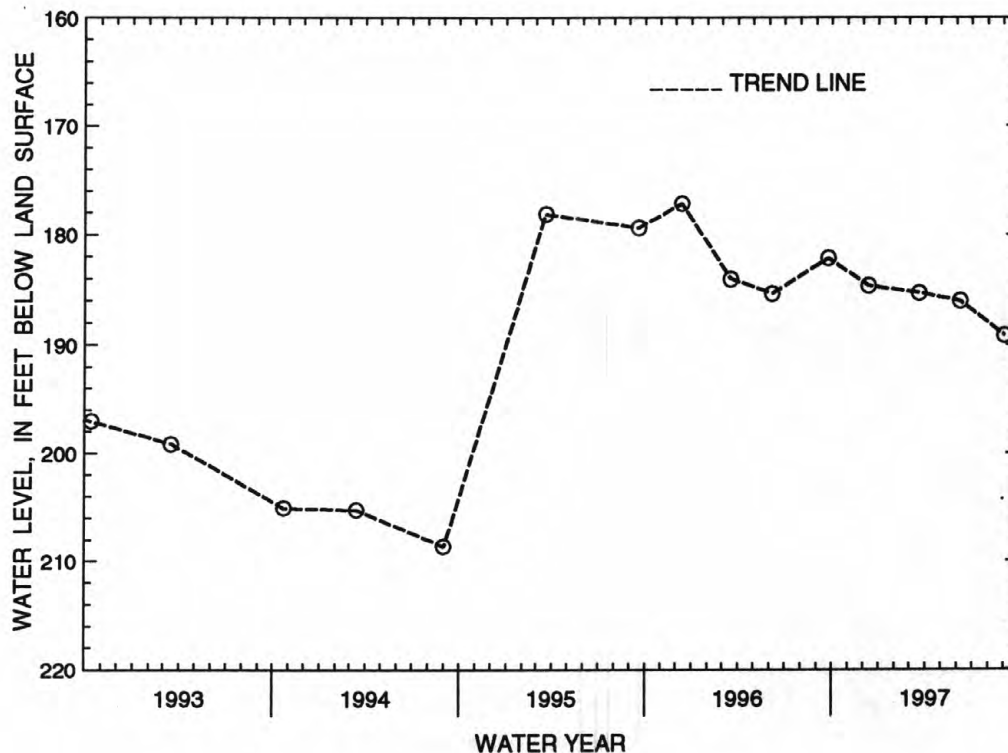
REMARKS.--Water level affected by regional drawdown.

PERIOD OF RECORD.--December 1972, October 1983 to current year. Unpublished records available prior to October 1987 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 165.75 ft below land-surface datum, Dec. 1, 1972; lowest measured, 208.66 ft below land-surface datum, Sept. 1, 1994.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 12	184.64	MAR 21	185.30	JUN 09	186.02	SEP 03	189.14
WATER YEAR 1997	HIGHEST	184.64	DEC 12, 1996				
	LOWEST	189.14	SEP 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.

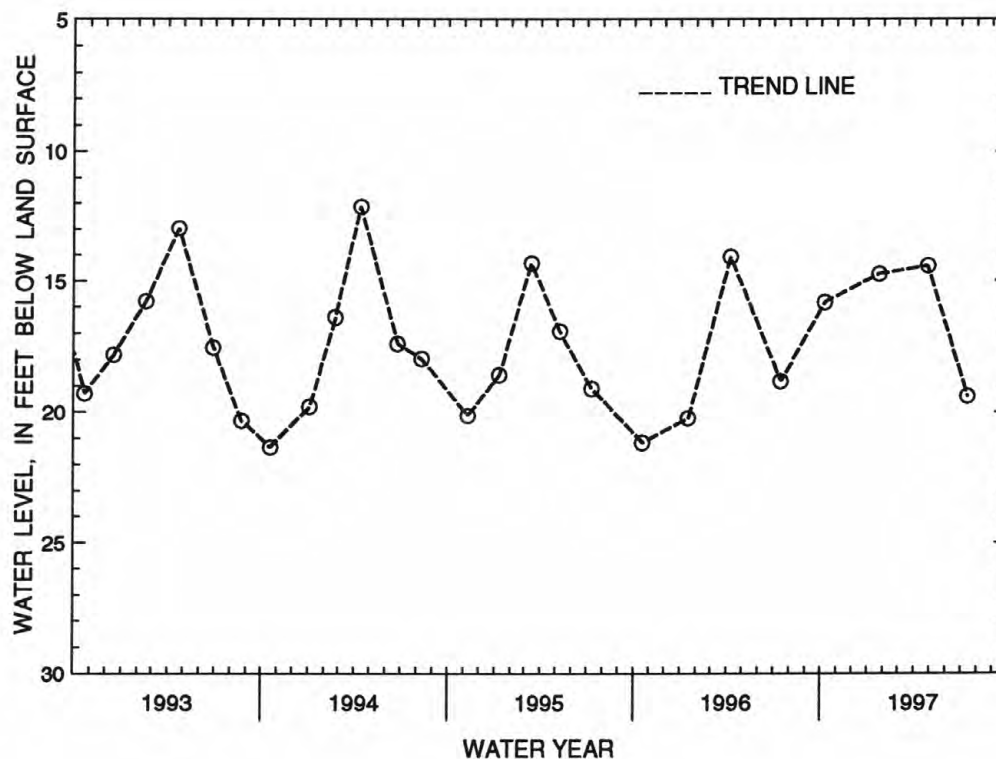
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	15.83	JAN 23	14.75	APR 28	14.44	JUL 15	19.40
WATER YEAR 1997		HIGHEST	14.44	APR 28, 1997			
		LOWEST	19.40	JUL 15, 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.

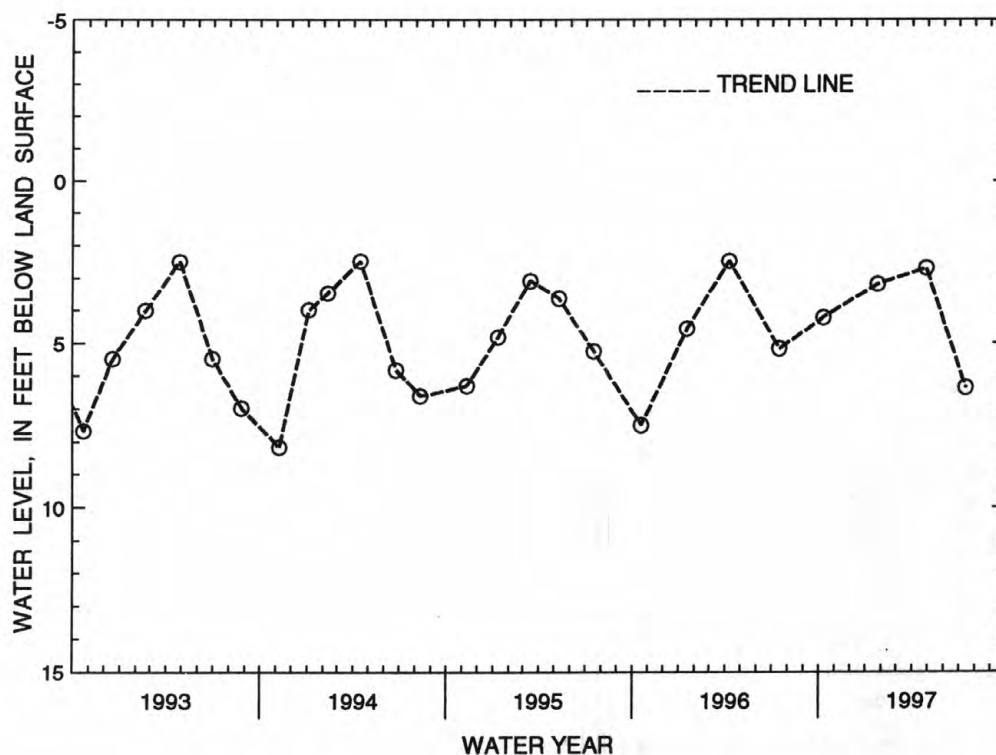
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	4.22	JAN 23	3.20	APR 28	2.71	JUL 15	6.37
WATER YEAR 1997	HIGHEST	2.71	APR 28, 1997				
	LOWEST	6.37	JUL 15, 1997				



GROUND-WATER LEVELS

HENRICO COUNTY

373428077233001. Local number, 51J 13.

LOCATION.--Lat 37°34'28", long 77°23'30", Hydrologic Unit 02080206, 1,600 ft east of the intersection of U.S. Highway 360 (Mechanicsville Turnpike) and Laburnum Avenue and 500 ft south of Laburnum Avenue at water tower. Owner: Henrico County.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 8 in. to 167 ft, diameter 6 in. from 167 to 275 ft, depth 275 ft, screened 167 to 186 ft, 213 to 226 ft, 248 to 258 ft.

INSTRUMENTATION.--Weekly measurements by Henrico County personnel and occasional measurements with chalked tape by USGS personnel. Prior to Apr. 2, 1992, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 168 ft above sea level, from topographic map. Measuring point: Top of casing, 1.7 ft above land-surface datum prior to Apr. 8, 1992; 0.2 ft thereafter.

REMARKS.--Water level affected by regional decline and local pumpage.

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

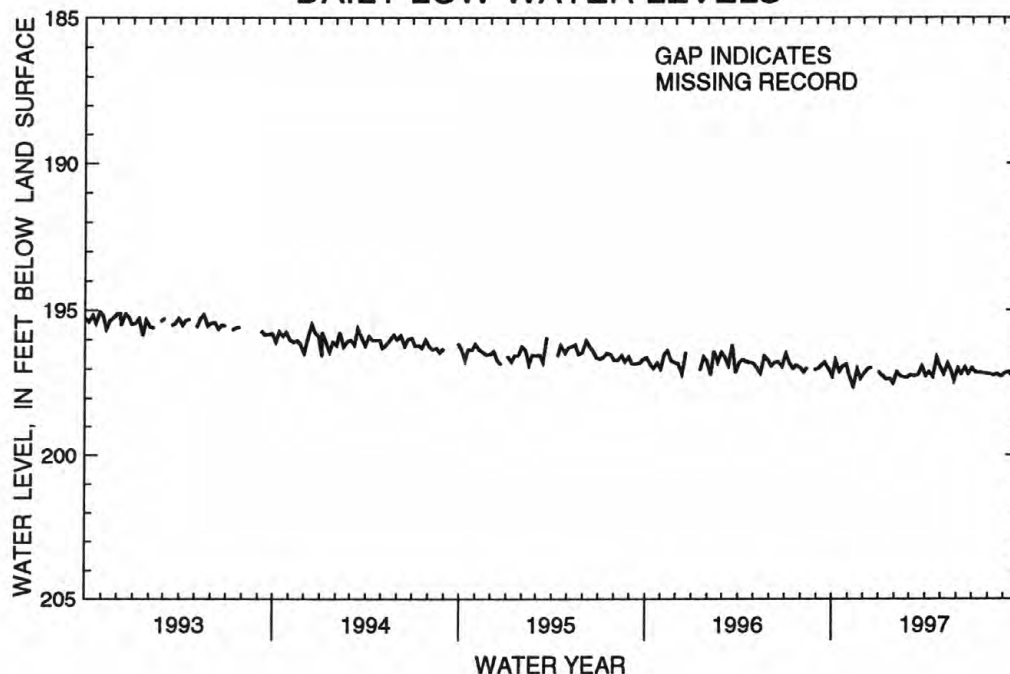
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 190.85 ft below land-surface datum, Apr. 7, 1988; lowest measured, 197.61 ft below land-surface datum, Nov. 13, 1996.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02	197.24	DEC 04	197.16	FEB 12	197.25	APR 16	197.27	JUN 18	196.96	AUG 27	197.28
09	196.72	11	196.98	19	197.30	24	196.64	24	197.18	SEP 03	197.17
16	197.09	18	196.96	26	197.29	30	196.93	JUN 02	196.98	10	197.11
23	196.93	31	197.11	MAR 05	197.20	MAY 07	197.18	09	197.13	17	197.23
30	196.85	JAN 08	197.23	12	197.25	15	196.84	16	197.14	24	197.35
NOV 06	197.34	15	197.36	19	197.21	21	197.04	23	197.17		
13	197.61	22	197.34	26	196.92	28	197.40	AUG 06	197.18		
20	197.00	29	197.49	APR 02	197.25	JUN 04	196.99	13	197.22		
27	197.33	FEB 05	197.11	09	197.12	11	197.19	20	197.18		

WATER YEAR 1997	HIGHEST	196.64	APR 24, 1997
	LOWEST	197.61	NOV 13, 1996

DAILY LOW-WATER LEVELS



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.

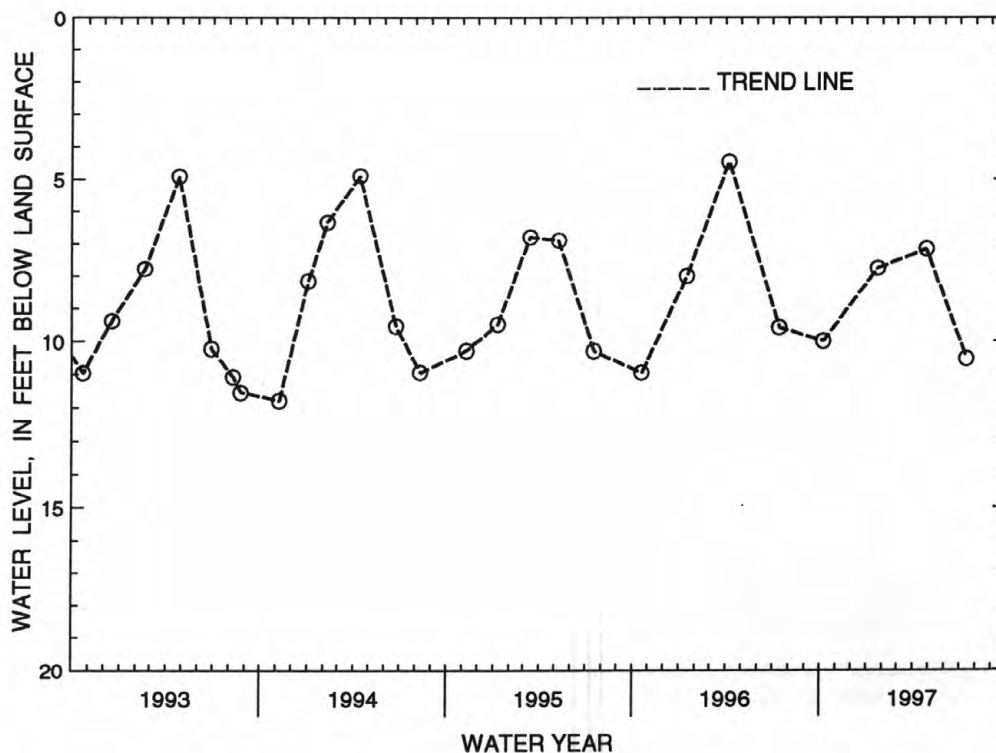
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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, 12.12 ft below land-surface datum, Oct. 6, 1981, Aug. 22, 1983.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	10.00	JAN 23	7.77	APR 28	7.18	JUL 15	10.52
WATER YEAR 1997		HIGHEST	7.18	APR 28, 1997			
		LOWEST	10.52	JUL 15, 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.

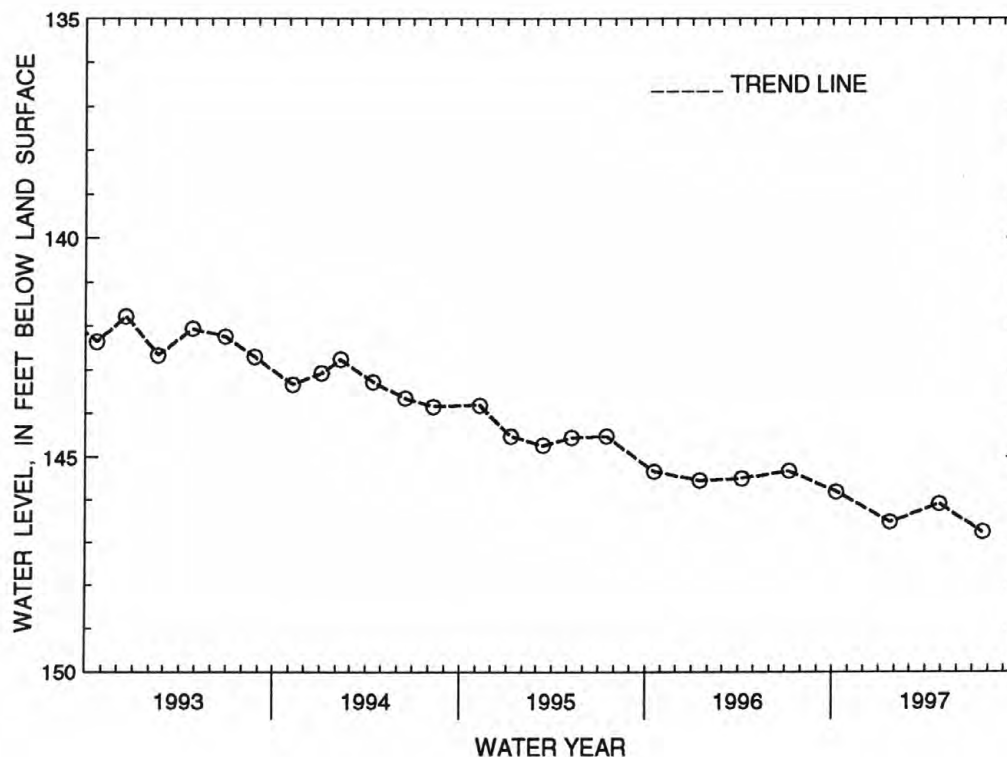
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

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, 146.77 ft below land-surface datum, July 22, 1997.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	145.81	JAN 22	146.53	APR 28	146.10	JUL 22	146.77
WATER YEAR 1997	HIGHEST	145.81	OCT 10, 1996				
	LOWEST	146.77	JUL 22, 1997				



GROUND-WATER LEVELS

HENRICO COUNTY

373301077194001. Local number, 52J 1.

LOCATION.--Lat 37°33'01", long 77°19'40", Hydrologic Unit 02080206, at the intersection of Daisy and Vine Streets, at water tower in Highland Springs. Owner: Henrico County.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 10 in. to 212 ft, diameter 6 in. from 212 to 306 ft, depth 306 ft, screened 212 to 306 ft.

INSTRUMENTATION.--Weekly measurements by Henrico County personnel and occasional measurements with chalked tape by USGS personnel. Prior to Apr. 2, 1992, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 172 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

REMARKS.--Water level affected by local pumpage and regional drawdown.

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

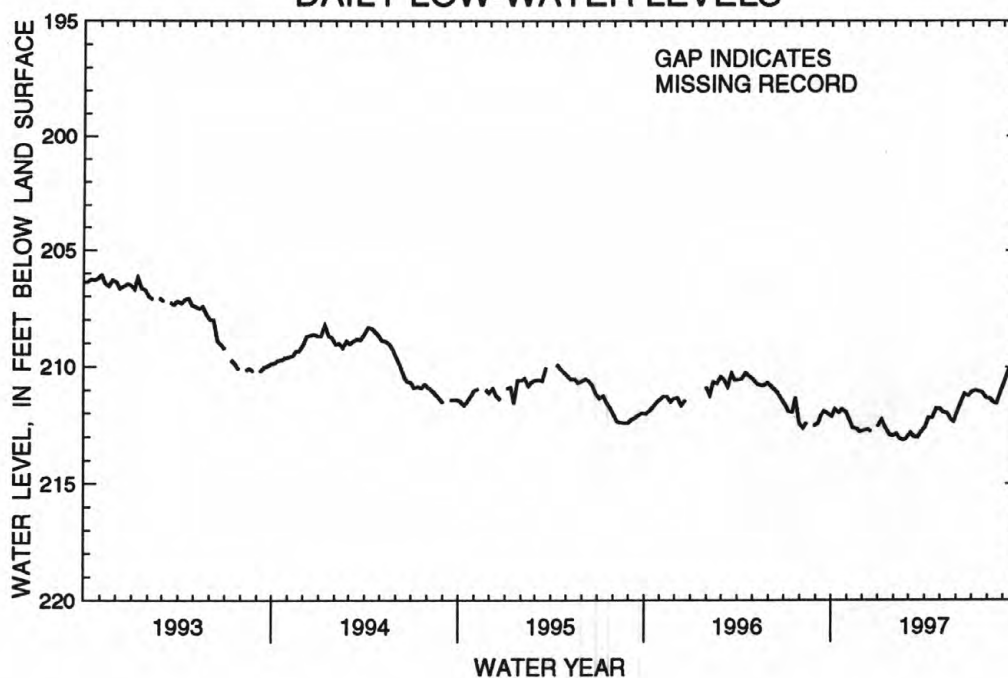
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 197.64 ft below land-surface datum, Jan. 25, 26, 1988; lowest measured, 213.11 ft below land-surface datum, Feb. 19, 1997.

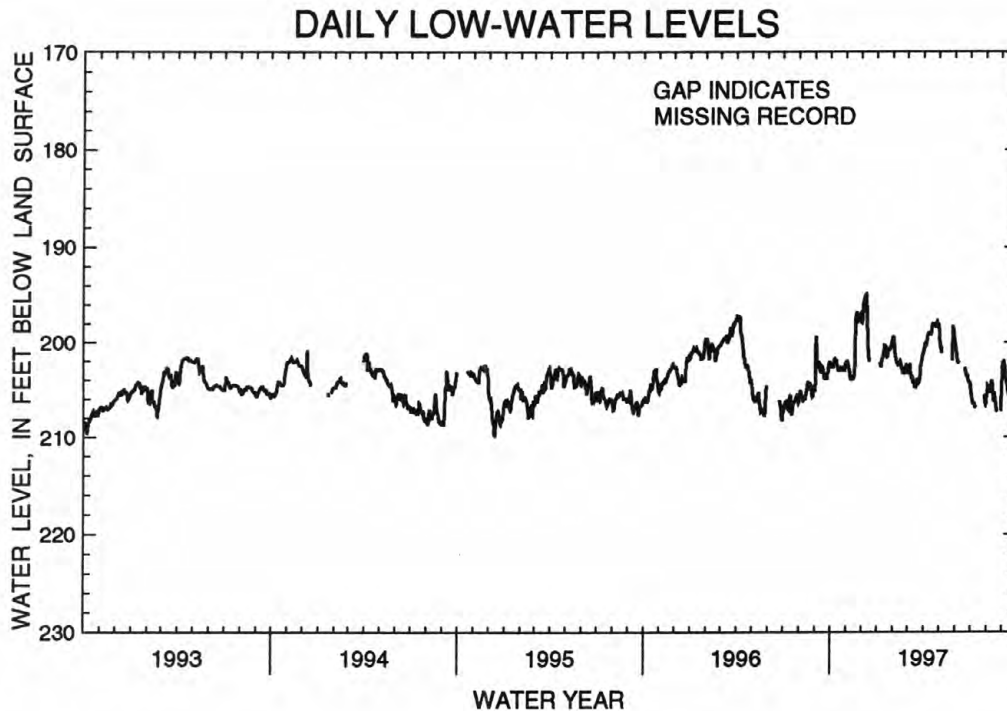
WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02	212.11	DEC 04	212.72	FEB 12	213.05	APR 16	212.17	JUN 18	211.15	AUG 20	211.57
09	211.82	11	212.69	19	213.11	24	211.80	25	211.24	27	211.05
16	211.94	18	212.76	26	213.04	30	211.80	JUL 02	211.05	SEP 03	210.65
23	211.82	31	212.55	MAR 05	212.84	MAY 07	211.94	09	211.00	10	210.17
30	211.93	JAN 08	212.25	12	212.99	15	211.98	16	211.03	17	209.93
NOV 06	212.29	15	212.62	19	213.00	21	212.22	23	211.10	24	209.72
13	212.62	22	212.91	26	212.80	28	212.33	30	211.33		
20	212.65	29	212.95	APR 02	212.56	JUN 04	211.89	AUG 06	211.33		
27	212.80	FEB 05	212.86	09	212.18	11	211.53	13	211.50		

WATER YEAR 1997	HIGHEST	209.72	SEP 24, 1997
	LOWEST	213.11	FEB 19, 1997

DAILY LOW-WATER LEVELS





GROUND-WATER LEVELS

ISLE OF WIGHT COUNTY

364125076544801. Local number, 55B 36.

LOCATION.--Lat 36°41'25", long 76°54'48", Hydrologic Unit 03010202, on Lynn Road, 0.45 mi north of intersection with U.S. Highways 258 and 58, and 0.7 mi northeast of Franklin. Owner: Union Camp Corporation.

AQUIFER.--Lower Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 860 ft, screened 720 to 725 ft, 800 to 805 ft, 855 to 860 ft.

INSTRUMENTATION.--Monthly measurements with chalked tape by USGS personnel. October 1986 to August 1993, continuous strip-chart recorder. September 1983 to October 1986, occasional measurement with chalked tape. October 1982 to September 1983, continuous strip-chart recorder. November 1972 to October 1982, occasional measurement with chalked tape. July 1969 to November 1972, continuous strip-chart recorder. Prior to July 1969, continuous strip-chart recorder and occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 37 ft above sea level, from topographic map. Measuring point: Top of casing, 4.56 ft above land-surface datum.

REMARKS.--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.

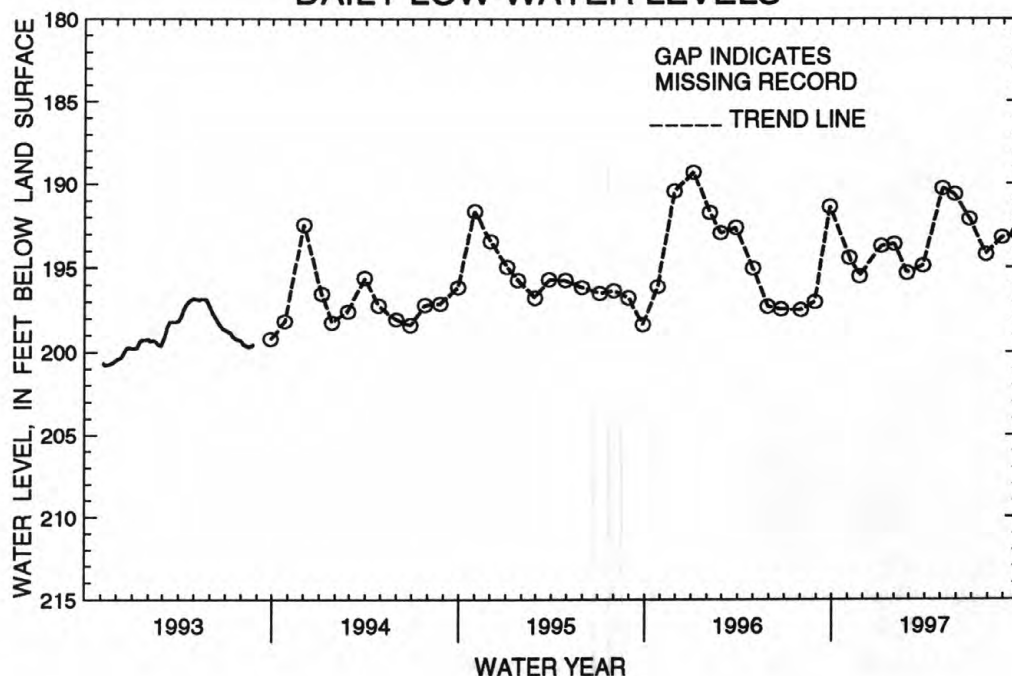
PERIOD OF RECORD.--March 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 156.65 ft below land-surface datum, Dec. 27, 1969; lowest measured, 219.29 ft below land-surface datum, May 18, 1978.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	194.41	JAN 06	193.69	FEB 25	195.28	MAY 05	190.28	JUN 26	192.10	AUG 29	193.20
25	195.48	31	193.59	MAR 28	194.88	28	190.62	JUL 28	194.19	SEP 29	192.99
WATER YEAR 1997		HIGHEST	190.28	MAY 05, 1997							
		LOWEST	195.48	NOV 25, 1996							

DAILY LOW-WATER LEVELS



GROUND-WATER LEVELS

ISLE OF WIGHT COUNTY

364101076544803. Local number, 55B 62 SOW 096B.

LOCATION.--Lat 36°41'01", long 76°54'48", Hydrologic Unit 03010202, 200 ft northwest of intersection of U.S. Highways 58 and 258 and Lynn Road, 0.3 mi east of Franklin. Owner: Virginia Department of Environmental Quality.

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

WELL CHARACTERISTICS.--Drilled observation water well, diameter 3 in., depth 30.77 ft, screened 25 to 30 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Oct. 26, 1995, digital recorder--60-minute punch. Prior to October 1987, occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 27 ft above sea level, from topographic map. Measuring point: Top of casing, 2.15 ft above land-surface datum.

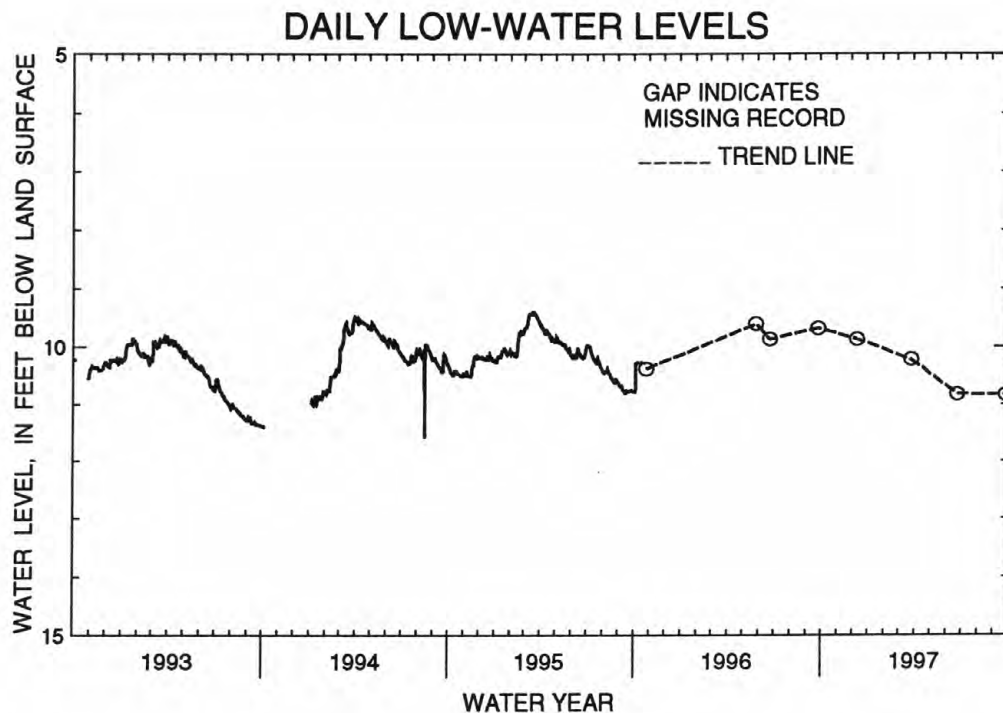
REMARKS.--Low-water level in August 1994 is the result of the well being pumped for water-quality sampling.

PERIOD OF RECORD.--May 1979, October 1980 to September 1981, October 1982 to September 1983, October 1984 to current year. Unpublished records available prior to October 1985 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 9.40 ft below land-surface datum, Mar. 21, 22, 1995; lowest measured, 15.38 ft below land-surface datum, Oct. 17, 1980.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 12	9.87	MAR 28	10.22	JUN 26	10.83	SEP 29	10.84
WATER YEAR 1997		HIGHEST	9.87	DEC 12, 1996			
		LOWEST	10.84	SEP 29, 1997			



GROUND-WATER LEVELS

ISLE OF WIGHT COUNTY

365305076380001. Local number, 56C 1.

LOCATION.--Lat 36°50'06", long 76°50'03", Hydrologic Unit 03010202, 0.13 mi west of State Highway 614, 2.2 mi south of Zuni. Owner: Zuni Presbyterian Training Center.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled water well, diameter 8 in., depth 434 ft, screened 418 to 434 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 75 ft above sea level, from topographic map. Measuring point: Top of pump base, 1.7 ft above land-surface datum.

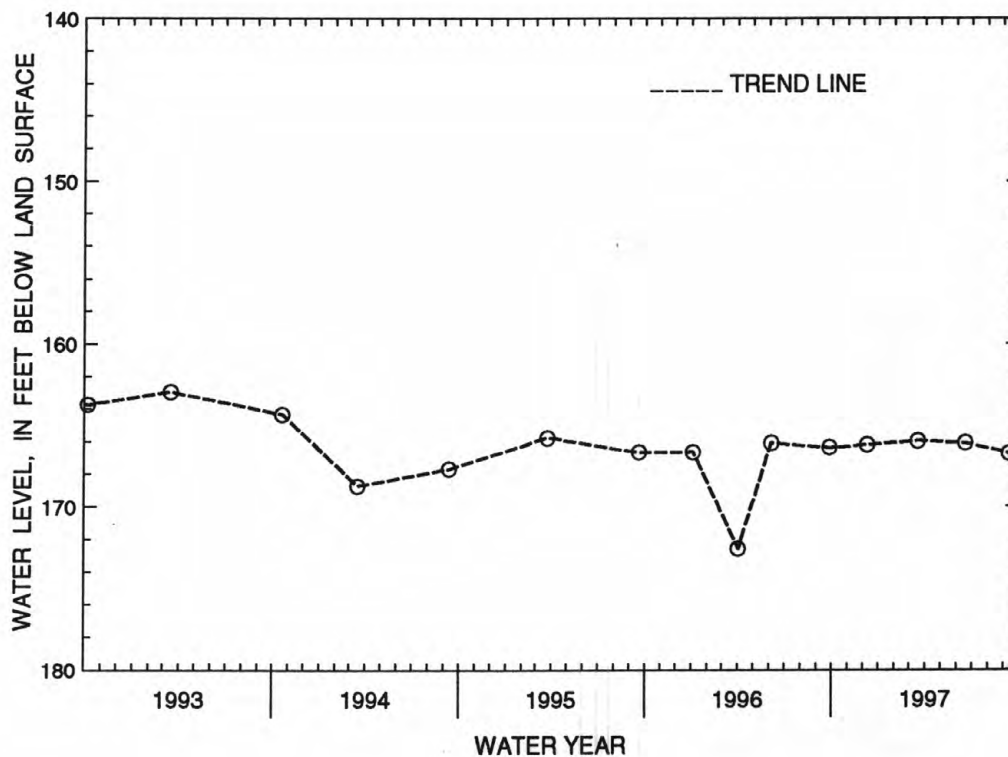
REMARKS.--Water level affected by pumpage.

PERIOD OF RECORD.--August 1970 to December 1975, January 1978 to current year. Unpublished records available prior to October 1985 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 125.02 ft below land-surface datum, Aug. 27, 1970; lowest measured, 172.59 ft below land-surface datum, Apr. 2, 1996 (may have been the result of pumpage).

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 10	166.22	MAR 18	165.99	JUN 19	166.13	SEP 12	166.75
WATER YEAR 1997	HIGHEST	165.99	MAR 18, 1997				
	LOWEST	166.75	SEP 12, 1997				



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.

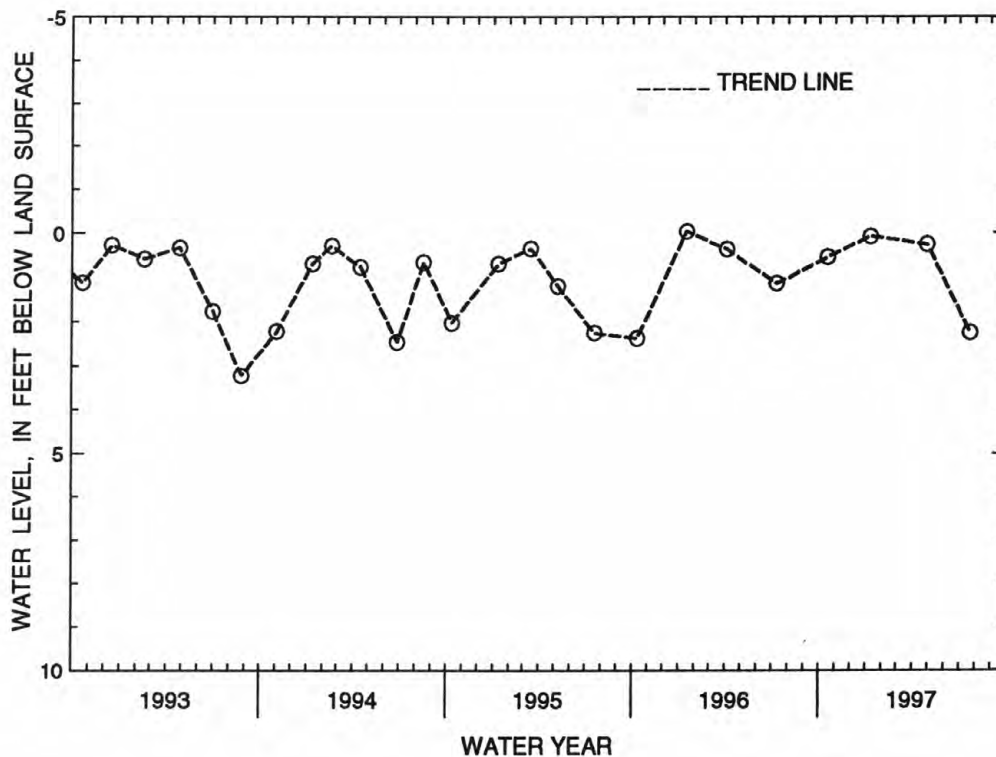
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	0.55	JAN 10	0.08	APR 30	0.26	JUL 23	2.25
WATER YEAR 1997	HIGHEST	0.08	JAN 10, 1997				
	LOWEST	2.25	JUL 23, 1997				



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.

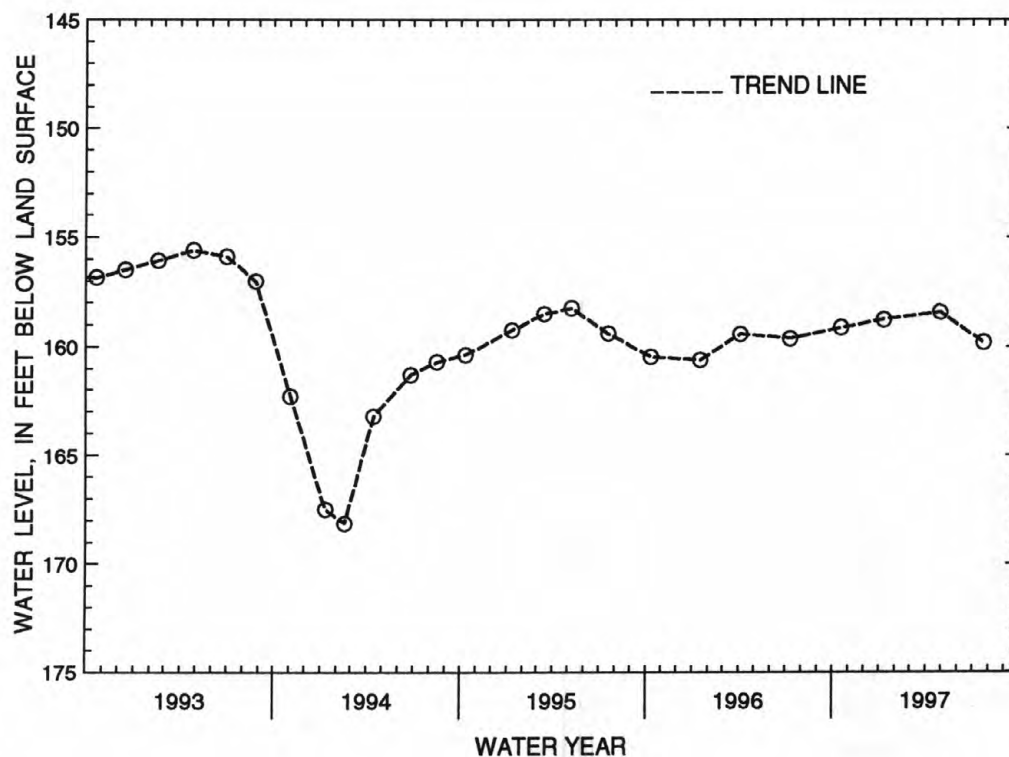
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	159.15	JAN 10	158.77	APR 30	158.44	JUL 23	159.82
WATER YEAR 1997	HIGHEST	158.44	APR 30, 1997				
	LOWEST	159.82	JUL 23, 1997				



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.

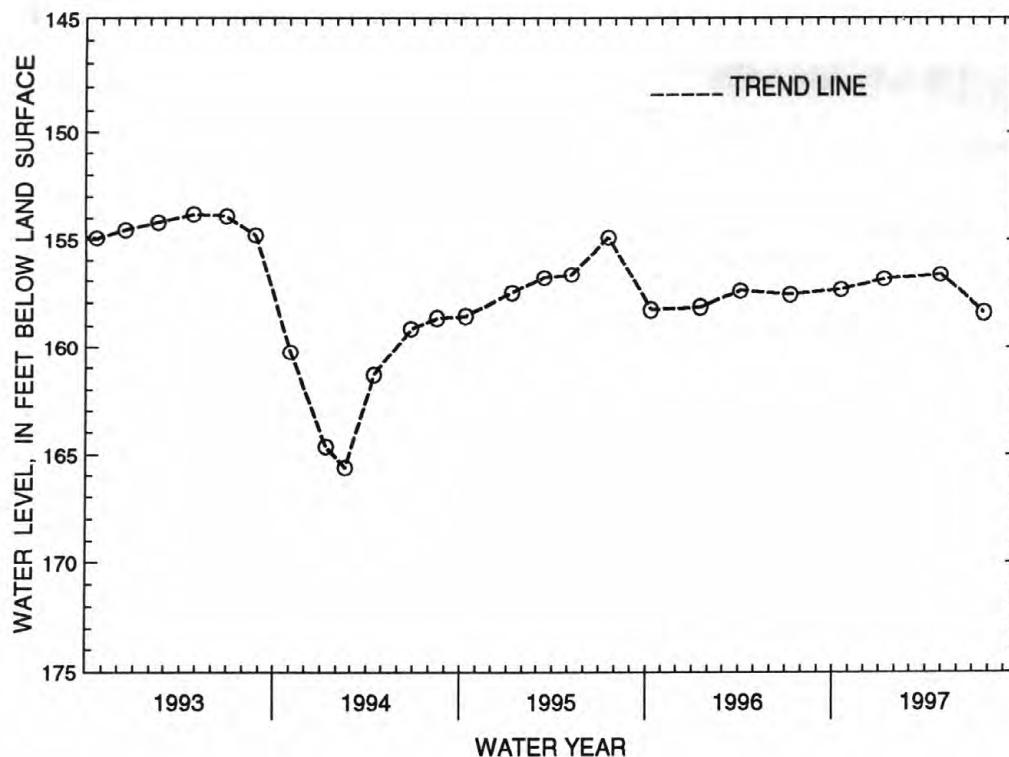
PERIOD OF RECORD.--March 1985 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	157.42	JAN 10	156.91	APR 30	156.70	JUL 23	158.45

WATER YEAR 1997	HIGHEST	156.70	APR 30, 1997
	LOWEST	158.45	JUL 23, 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.

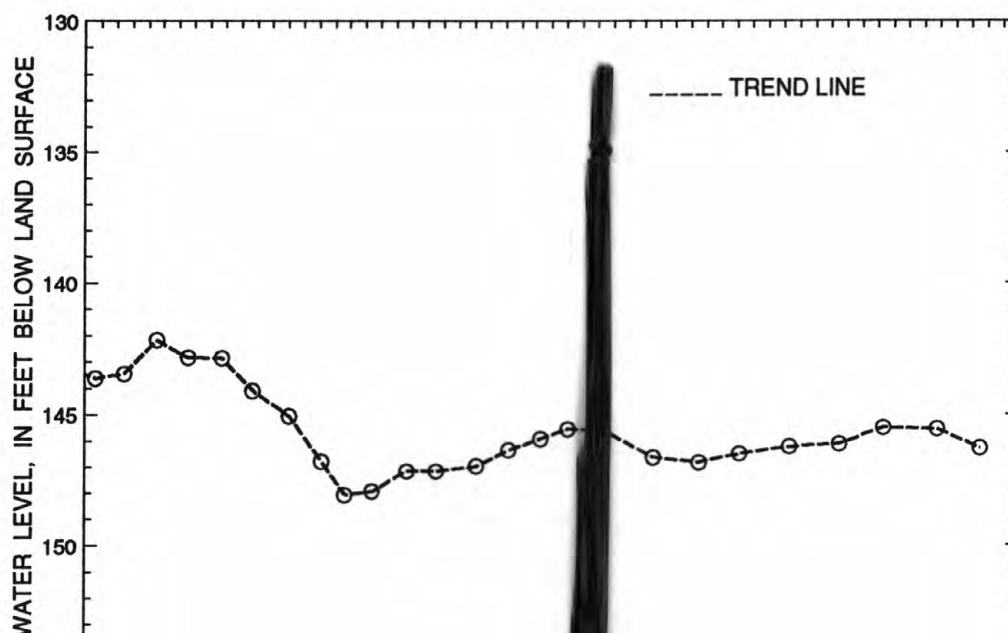
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	146.12	JAN 10	145.50	APR 24	145.56	JUL 17	146.29
WATER YEAR 1997	HIGHEST	145.50	JAN 10, 1997				
	LOWEST	146.29	JUL 17, 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.

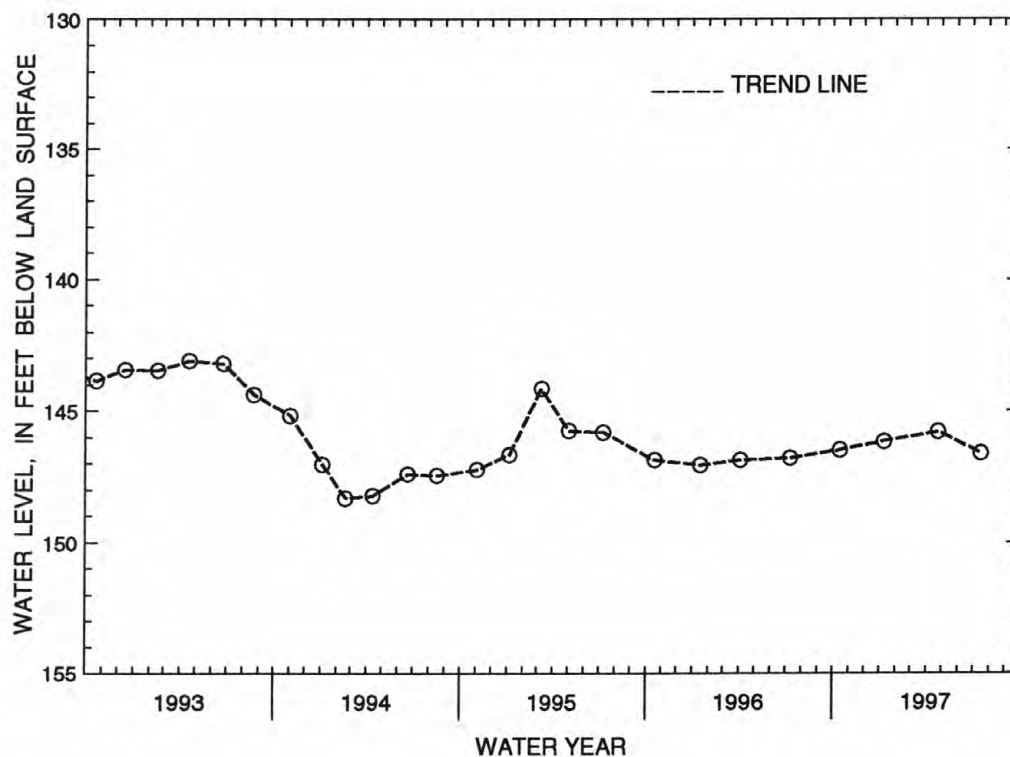
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

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, 148.32 ft below land-surface datum, Feb. 18, 1994.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	146.49	JAN 10	146.17	APR 24	145.81	JUL 17	146.61
WATER YEAR 1997	HIGHEST	145.81	APR 24, 1997				
	LOWEST	146.61	JUL 17, 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.

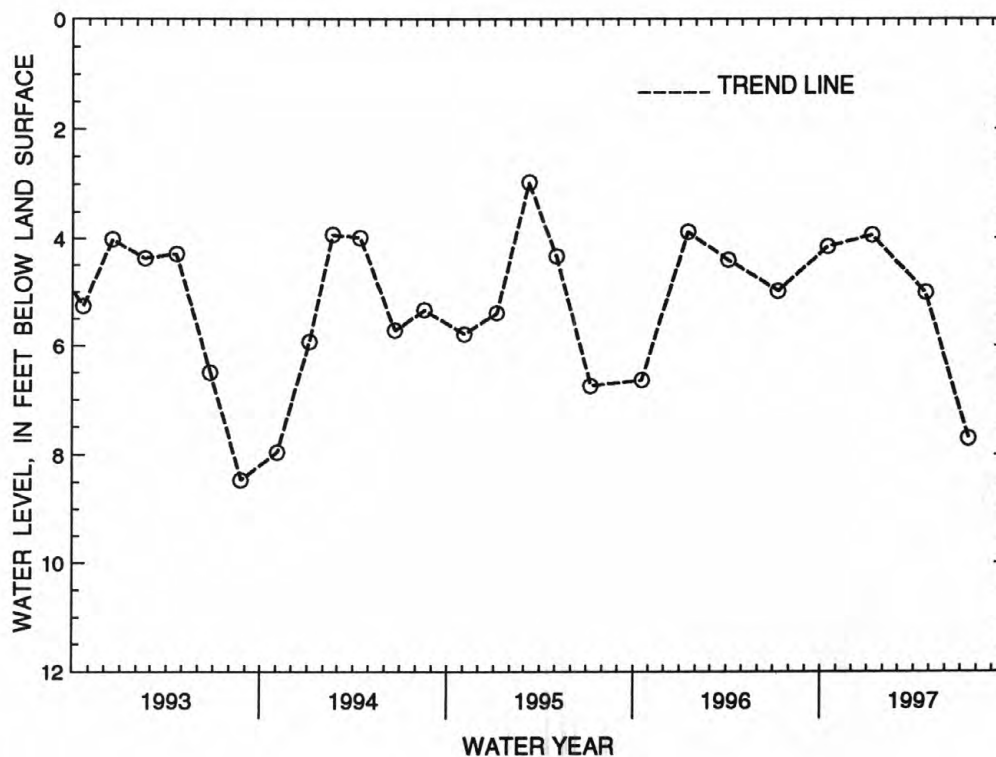
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	4.16	JAN 10	3.95	APR 24	5.02	JUL 17	7.70
WATER YEAR 1997	HIGHEST	3.95	JAN 10, 1997				
	LOWEST	7.70	JUL 17, 1997				



GROUND-WATER LEVELS

ISLE OF WIGHT COUNTY

370236076425901. Local number, 57E 10 SOW 144B.

LOCATION.--Lat 37°02'36", long 76°42'59", Hydrologic Unit 02080206, 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.--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 440 ft, screened 430 to 440 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 85 ft above sea level, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.

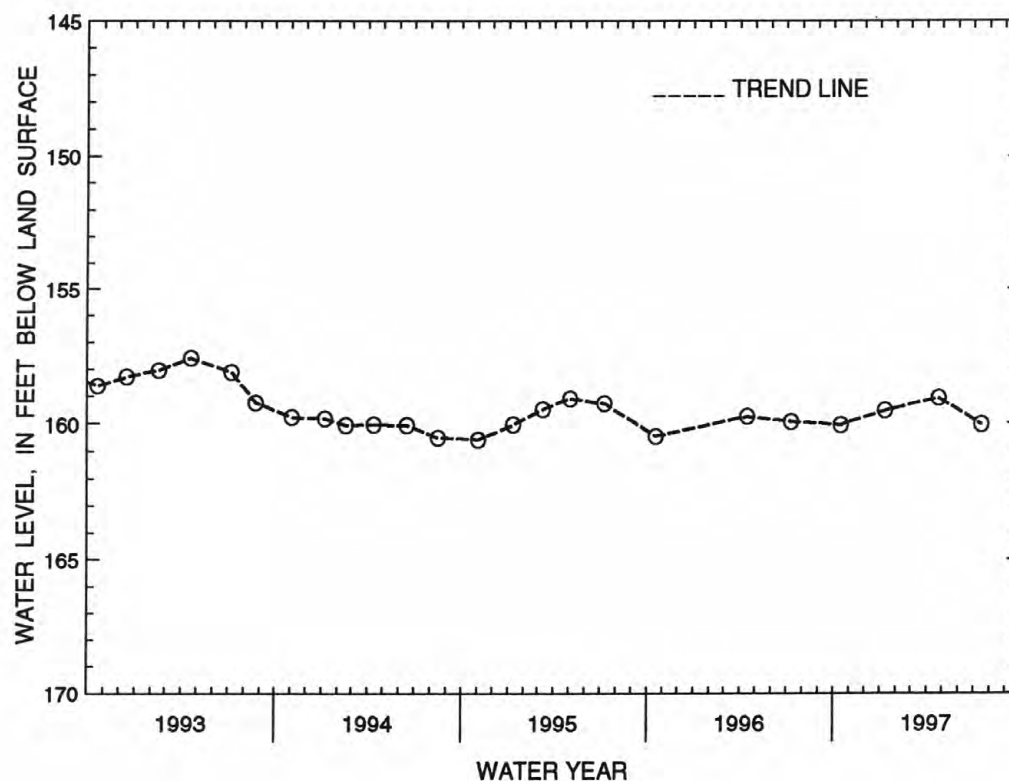
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

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, 139.90 ft below land-surface datum, Apr. 24, July 24, 1980; lowest measured, 160.59 ft below land-surface datum, Nov. 3, 1994.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	160.06	JAN 10	159.53	APR 24	159.07	JUL 17	160.04
WATER YEAR 1997	HIGHEST	159.07	APR 24, 1997				
	LOWEST	160.06	OCT 16, 1996				



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.

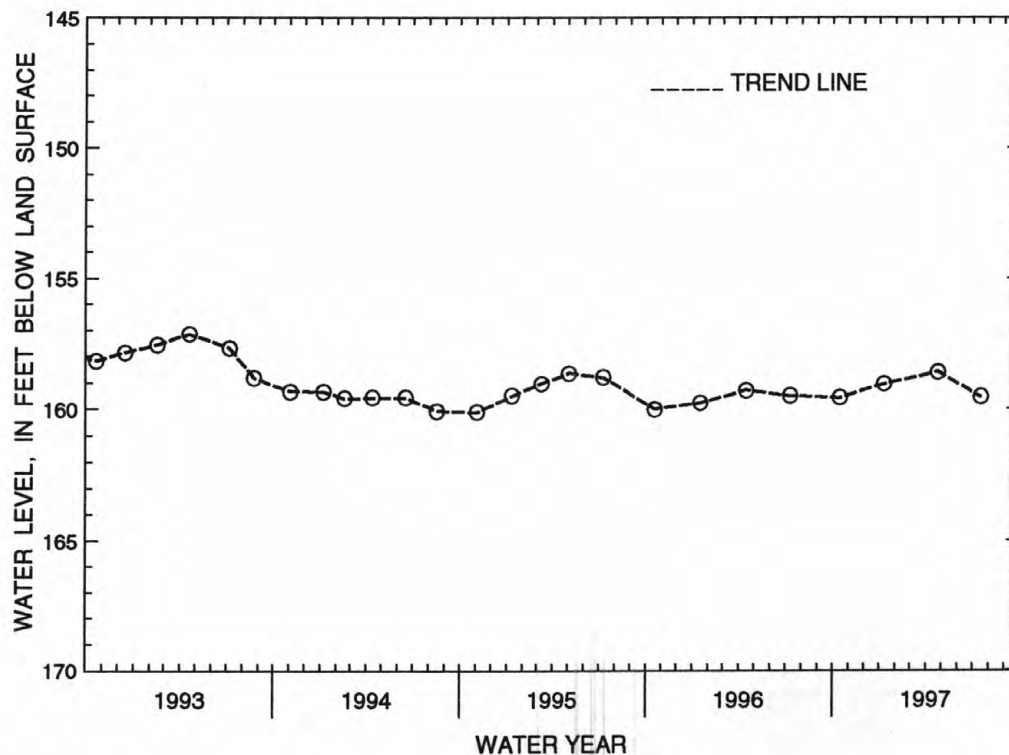
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

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, 160.12 ft below land-surface datum, Nov. 3, 1994.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	159.57	JAN 10	159.06	APR 24	158.60	JUL 17	159.55
WATER YEAR 1997	HIGHEST	158.60	APR 24, 1997				
	LOWEST	159.57	OCT 16, 1996				



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.

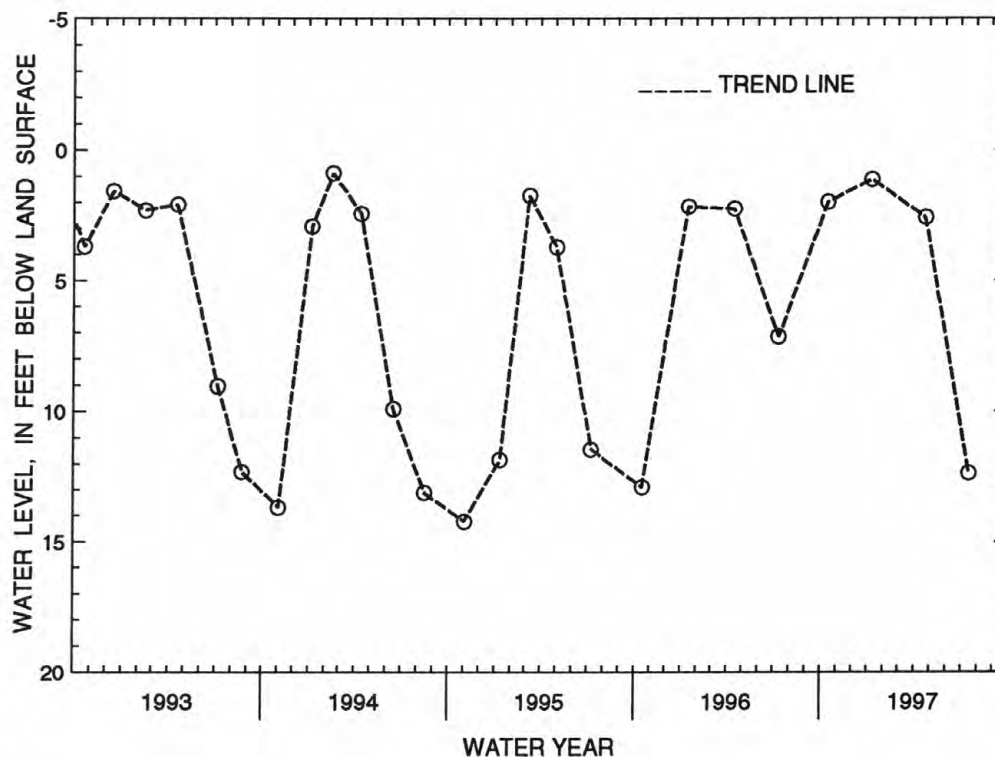
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

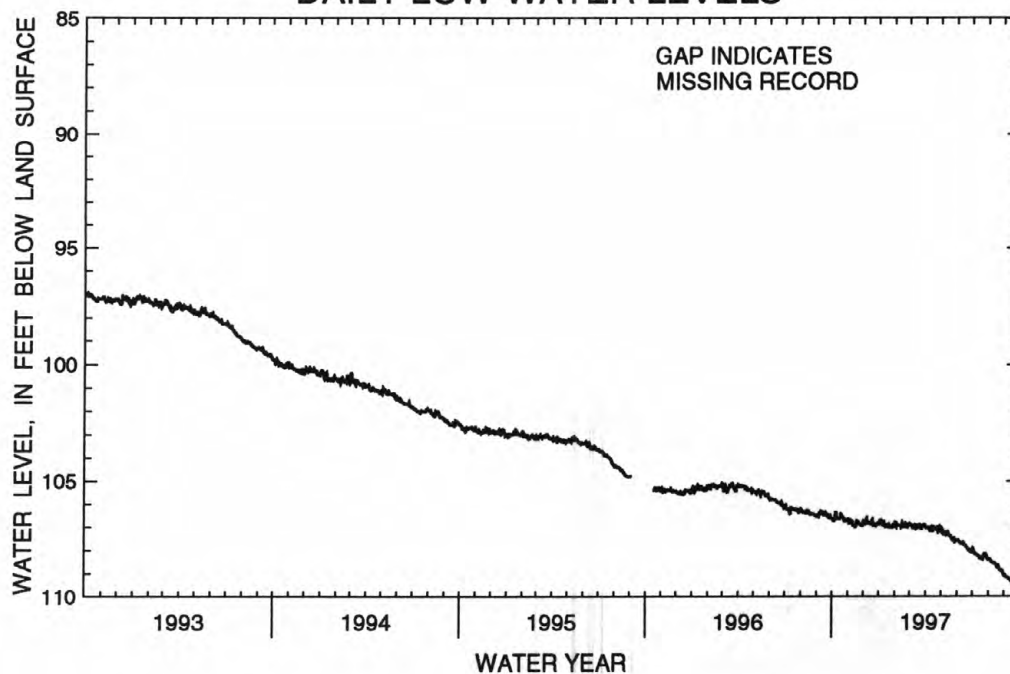
PERIOD OF RECORD.--April 1980 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	1.98	JAN 10	1.13	APR 24	2.59	JUL 17	12.36
WATER YEAR 1997							
	HIGHEST	1.13	JAN 10, 1997				
	LOWEST	12.36	JUL 17, 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.

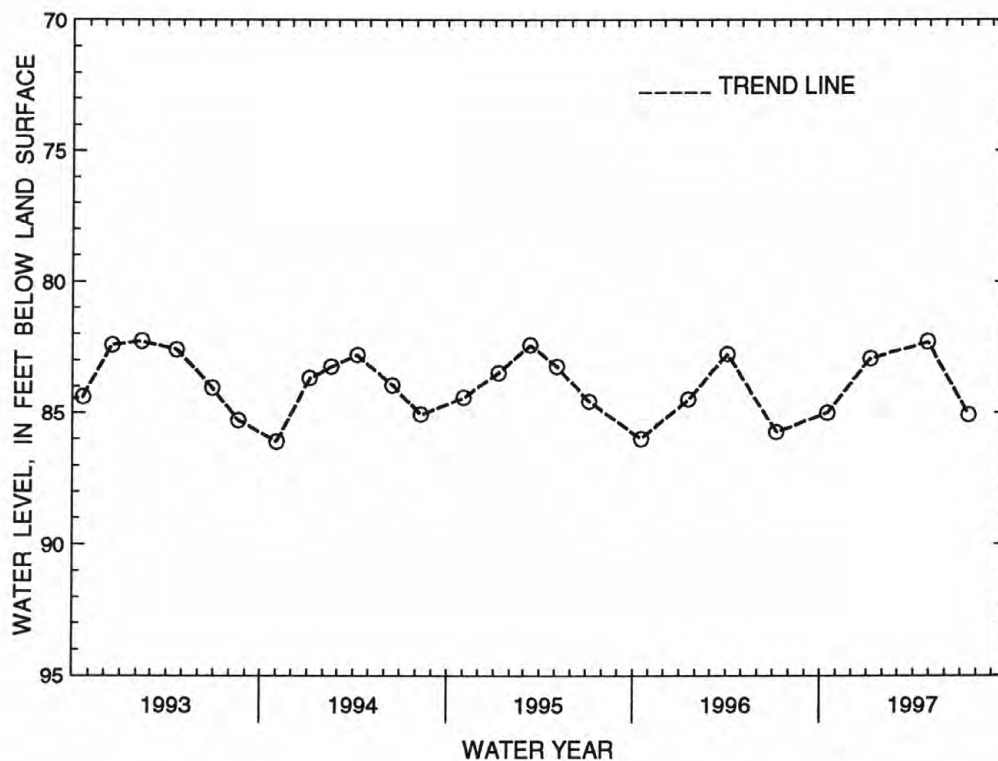
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	85.00	JAN 07	82.94	APR 29	82.31	JUL 17	85.08
WATER YEAR 1997	HIGHEST	82.31	APR 29, 1997				
	LOWEST	85.08	JUL 17, 1997				



GROUND-WATER LEVELS

JAMES CITY COUNTY

372145076493201. Local number, 56G 57.

LOCATION.--Lat 37°21'45", long 76°49'32", Hydrologic Unit 02080206, 1.75 mi south of the intersection of U.S. Highway 60 and State Highway 631 (Church Lane), off a dirt road at the end of State Highway 631, and 0.10 mi north of the pump station at Little Creek Reservoir. Owner: City of Newport News.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 12 in. to 300 ft, diameter 6 in. from 300 to 695 ft, depth 695 ft, screened 530 to 540 ft, 558 to 598 ft, 604 to 624 ft, 660 to 690 ft.

INSTRUMENTATION.--Digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 84 ft above sea level, from topographic map. Measuring point: Top of casing, 4.3 ft above land-surface datum.

REMARKS.--Water level affected by regional drawdown.

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

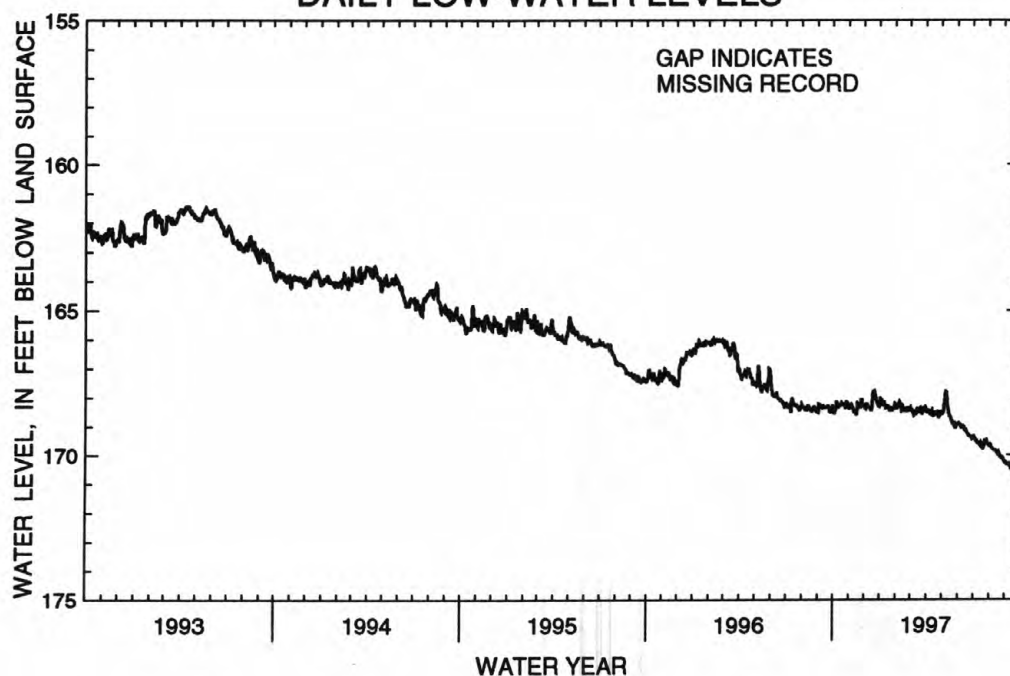
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 155.79 ft below land-surface datum, May 25, 1988; lowest recorded, 170.67 ft below land-surface datum, Sept. 22, 24, 27, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	168.54	168.36	168.39	168.08	168.32	168.44	168.51	168.52	168.92	169.42	169.65	170.33
10	168.20	168.37	168.35	168.14	168.22	168.54	168.60	167.80	169.06	169.55	169.81	170.33
15	168.28	168.48	168.43	168.37	168.31	168.43	168.64	168.45	169.12	169.64	169.85	170.52
20	168.22	168.26	167.80	168.37	168.41	168.41	168.62	168.70	169.24	169.77	169.97	170.55
25	168.24	168.34	168.07	168.34	168.47	168.55	168.64	168.88	169.36	169.51	170.09	170.64
EOM	168.23	168.28	168.30	168.22	168.44	168.34	168.51	168.97	169.45	169.66	170.21	170.60

WATER YEAR 1997 HIGHEST INSTANTANEOUS 167.66 DEC 23, 1996
 LOWEST INSTANTANEOUS 170.67 SEP 22, 24, 27, 1997

DAILY LOW-WATER LEVELS



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.

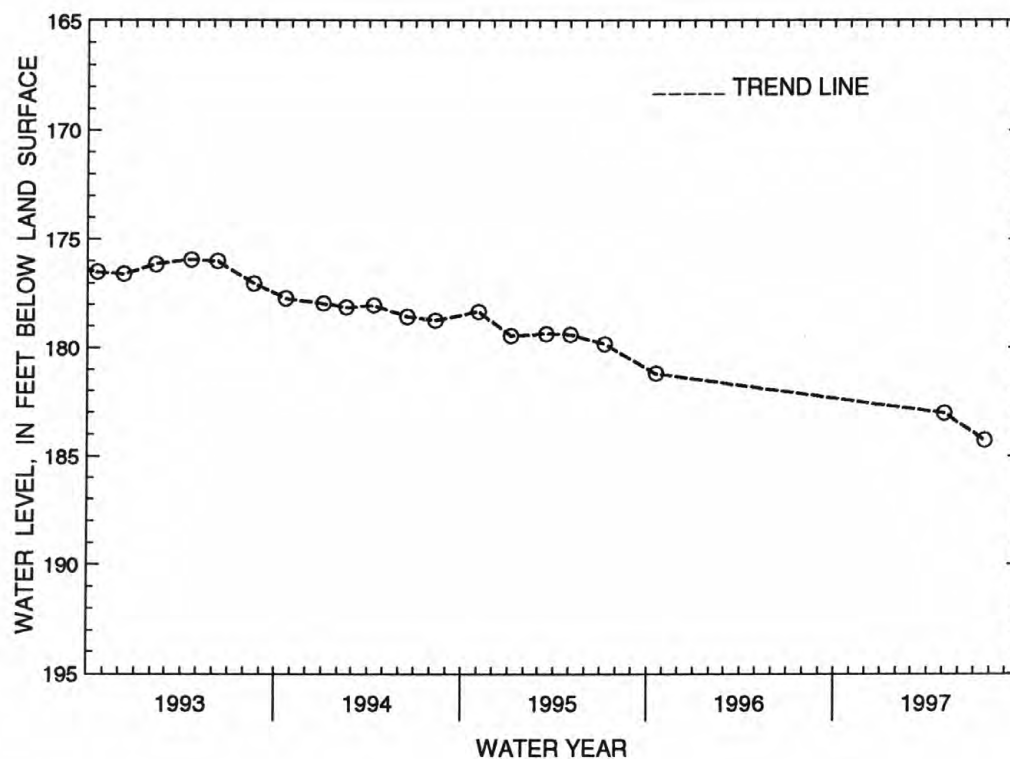
PERIOD OF RECORD.--March 1979 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 154.85 ft below land-surface datum, Apr. 5, 1979; lowest measured, 184.30 ft below land-surface datum, July 22, 1997.

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

DATE	WATER LEVEL	DATE	WATER LEVEL
MAY 05	183.05	JUL 22	184.30

WATER YEAR 1997	HIGHEST INSTANTANEOUS	183.05	MAY 05, 1997
	LOWEST INSTANTANEOUS	184.30	JUL 22, 1997



GROUND-WATER LEVELS

JAMES CITY COUNTY

372506076511701. Local number, 56H 25 SOW 177A.

LOCATION.--Lat 37°25'06", long 76°51'17", Hydrologic Unit 02080206, on the northwest side of State Highway 601 in James City County, 0.7 mi north of the intersection of State Highways 168 and 601, and 3.15 mi west of the intersection of U.S. Highway 60 and State Highway 168. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Lower Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 929 ft, screened 888 to 908 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Apr. 20, 1988, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 103 ft above sea level, from topographic map. Measuring point: Top of casing, 2.15 ft above land-surface datum.

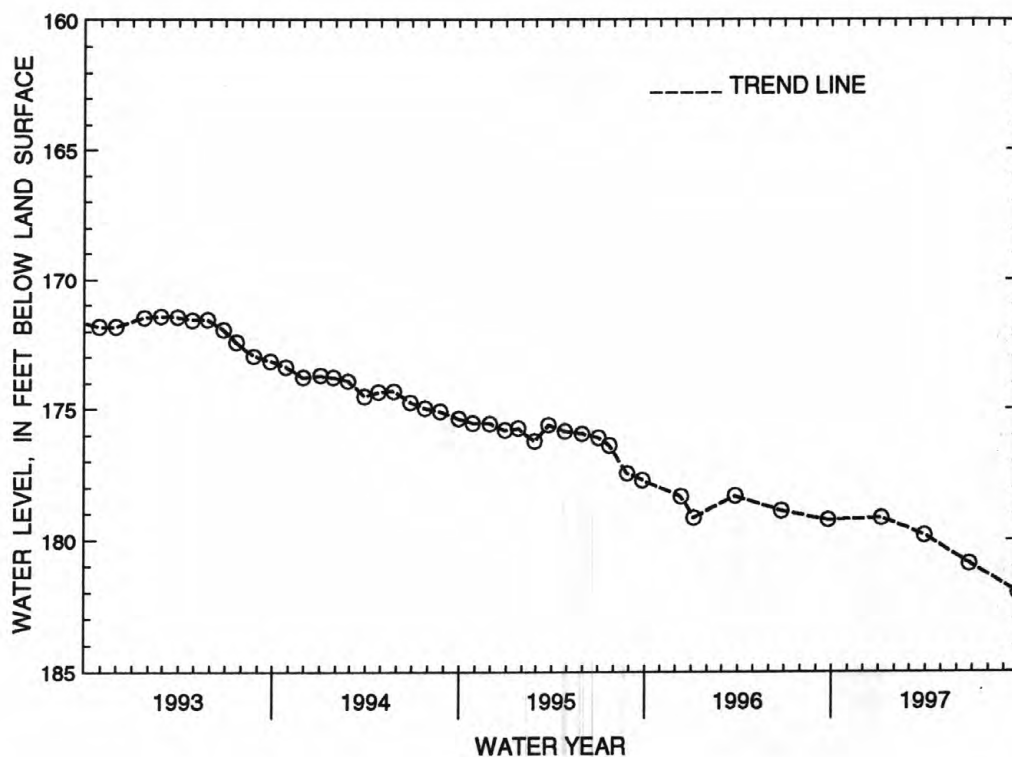
REMARKS.--Water level affected by regional drawdown. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

PERIOD OF RECORD.--April 1985 to current year. Unpublished records available prior to October 1986 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 158.21 ft below land-surface datum, Mar. 19, 20, 1986; lowest measured, 182.02 ft below land-surface datum, Sept. 29, 1997.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 06	179.15	MAR 31	179.82	JUN 26	180.91	SEP 29	182.02
WATER YEAR 1997		HIGHEST	179.15	JAN 06, 1997			
		LOWEST	182.02	SEP 29, 1997			



GROUND-WATER LEVELS

JAMES CITY COUNTY

372506076511702. Local number, 56H 26 SOW 177B.

LOCATION.--Lat 37°25'06", long 76°51'17", Hydrologic Unit 02080206, on the northwest side of State Highway 601 in James City County, 0.7 mi north of the intersection of State Highways 168 and 601, and 3.15 mi west of the intersection of U.S. Highway 60 and State Highway 168. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 581 ft, screened 550 to 560 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Oct. 1, 1988, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 103 ft above sea level, from topographic map. Measuring point: Top of casing, 2.15 ft above land-surface datum.

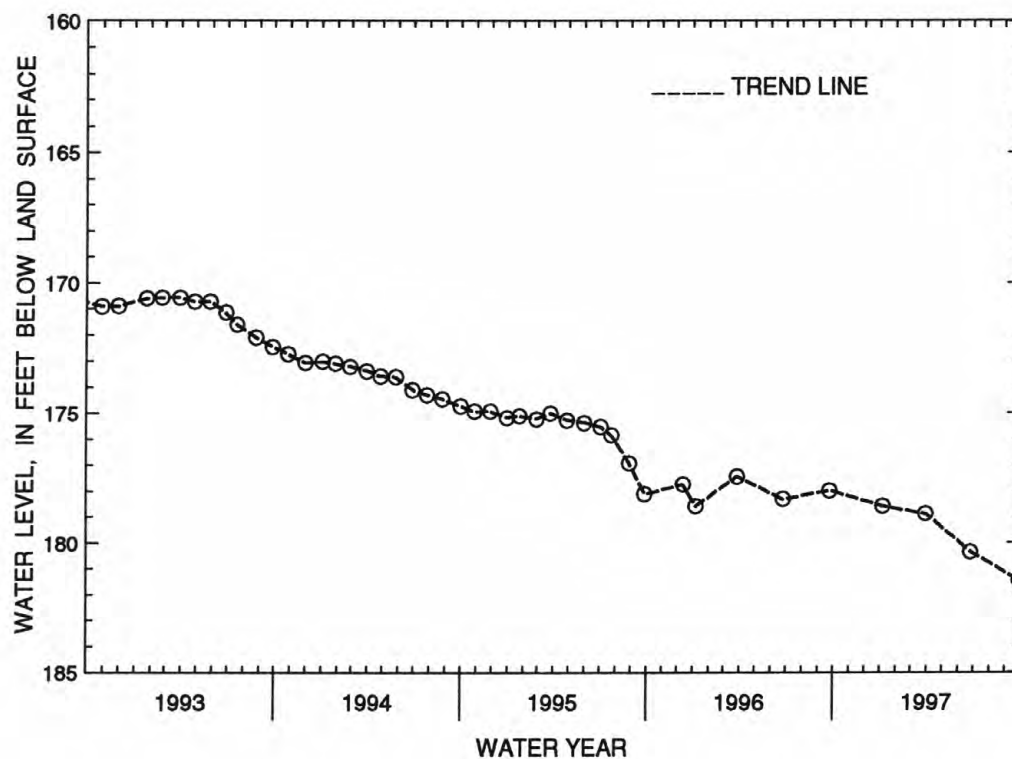
REMARKS.--Water level affected by regional drawdown.

PERIOD OF RECORD.--April 1985 to current year. Unpublished records prior to October 1986 and fragmentary periods of continuous record for water year 1989 available in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 157.61 ft below land-surface datum, June 1, 2, 1985; lowest measured, 181.47 ft below land-surface datum, Sept. 29, 1997.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 06	178.60	MAR 31	178.90	JUN 26	180.37	SEP 29	181.47
WATER YEAR 1997		HIGHEST	178.60	JAN 06, 1997			
		LOWEST	181.47	SEP 29, 1997			



GROUND-WATER LEVELS

JAMES CITY COUNTY

372506076511703. Local number, 56H 27 SOW 177C.

LOCATION.--Lat 37°25'06", long 76°51'17", Hydrologic Unit 02080206, on the northwest side of State Highway 601 in James City County, 0.7 mi north of the intersection of State Highways 168 and 601, and 3.15 mi west of the intersection of U.S. Highway 60 and State Highway 168. 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 401 ft, screened 370 to 380 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by USGS personnel. Prior to Aug. 26, 1993, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 103 ft above sea level, from topographic map. Measuring point: Top of casing, 2.95 ft above land-surface datum.

REMARKS.--Water level affected by regional drawdown.

PERIOD OF RECORD.--April 1985 to current year. Unpublished records available prior to October 1986 in files of the Geological Survey.

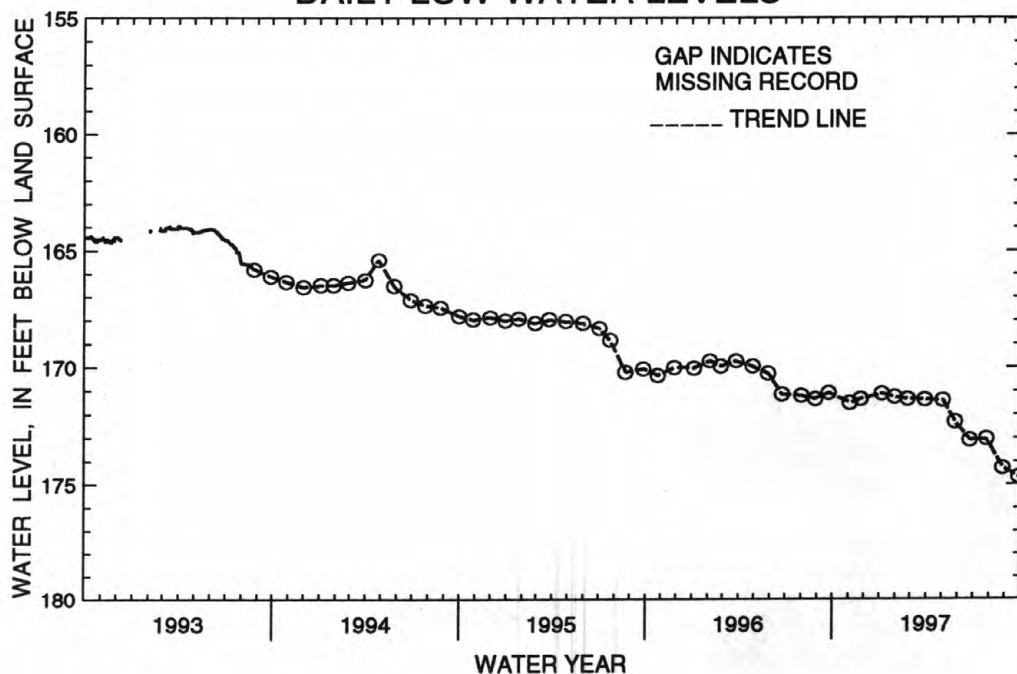
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 153.47 ft below land-surface datum, June 1, 2, 1985; lowest measured, 174.68 ft below land-surface datum, Sept. 29, 1997.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	171.50	JAN 06	171.12	FEB 25	171.34	MAY 05	171.40	JUN 26	173.09	AUG 29	174.30
26	171.34	31	171.27	MAR 31	171.37	28	172.31	JUL 28	173.05	SEP 29	174.68

WATER YEAR 1997	HIGHEST	171.12	JAN 06, 1997
	LOWEST	174.68	SEP 29, 1997

DAILY LOW-WATER LEVELS



GROUND-WATER LEVELS

JAMES CITY COUNTY

372506076511704. Local number, 56H 28 SOW 177D.

LOCATION.--Lat 37°25'06", long 76°51'17", Hydrologic Unit 02080206, 3.15 mi west of the intersection of U.S. Highway 60 and State Highway 168, 0.7 mi north of the intersection of State Highways 168 and 601, and on the northwest side of State Highway 601 in James City County. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Aquia aquifer of Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 321 ft, screened 290 to 300 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Sept. 16, 1989, digital recorder--60-minute punch.

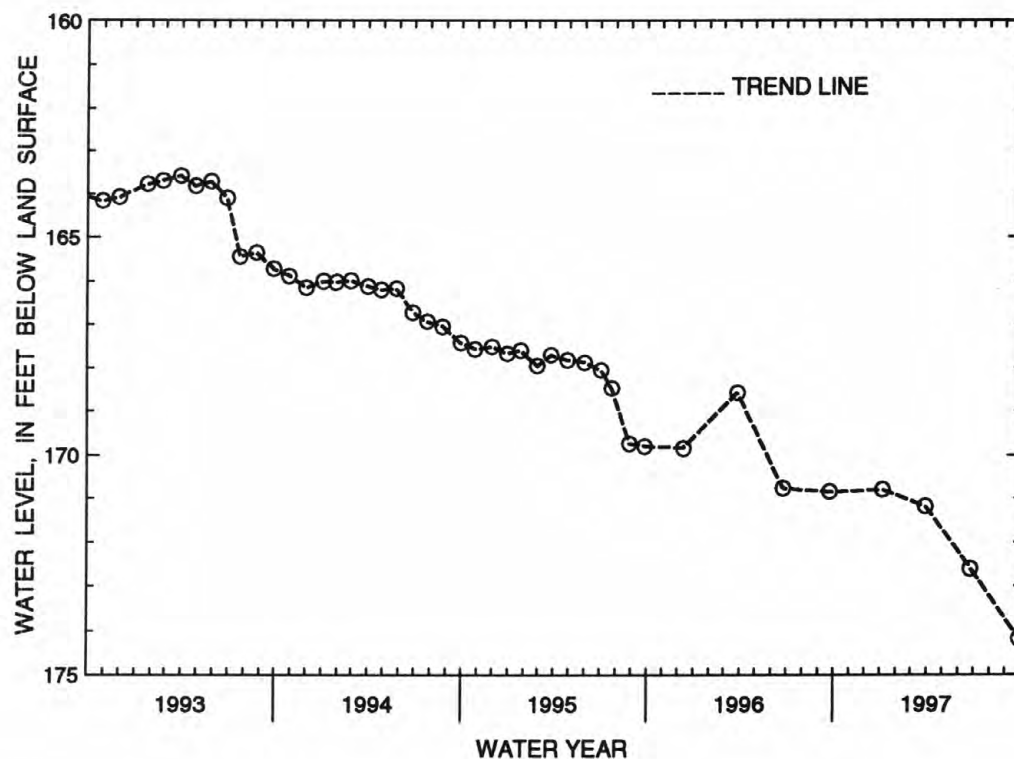
DATUM.--Elevation of land-surface datum is 103 ft above sea level, from topographic map. Measuring point: Top of casing, 2.9 ft above land-surface datum prior to Dec. 4, 1989; 0.9 ft thereafter.

PERIOD OF RECORD.--April 1985 to current year. Unpublished records available prior to October 1986 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 153.20 ft below land-surface datum, May 31, 1985; lowest measured, 174.20 ft below land-surface datum, Sept. 29, 1997.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 06	170.80	MAR 31	171.19	JUN 26	172.60	SEP 29	174.20
WATER YEAR 1997		HIGHEST	170.80	JAN 06, 1997			
		LOWEST	174.20	SEP 29, 1997			



GROUND-WATER LEVELS

JAMES CITY COUNTY

372506076511705. Local number, 56H 29 SOW 177E.

LOCATION.--Lat 37°25'06", long 76°51'17", Hydrologic Unit 02080206, on the northwest side of State Highway 601 in James City County, 0.7 mi north of the intersection of State Highways 168 and 601, and 3.15 mi west of the intersection of U.S. Highway 60 and State Highway 168. Owner: Virginia Department of Environmental Quality.

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

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 235 ft, screened 204 to 214 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Sept. 21, 1989, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 103 ft above sea level, from topographic map. Measuring point: Top of casing, 2.8 ft above land-surface datum prior to Dec. 4, 1989; 0.75 ft thereafter.

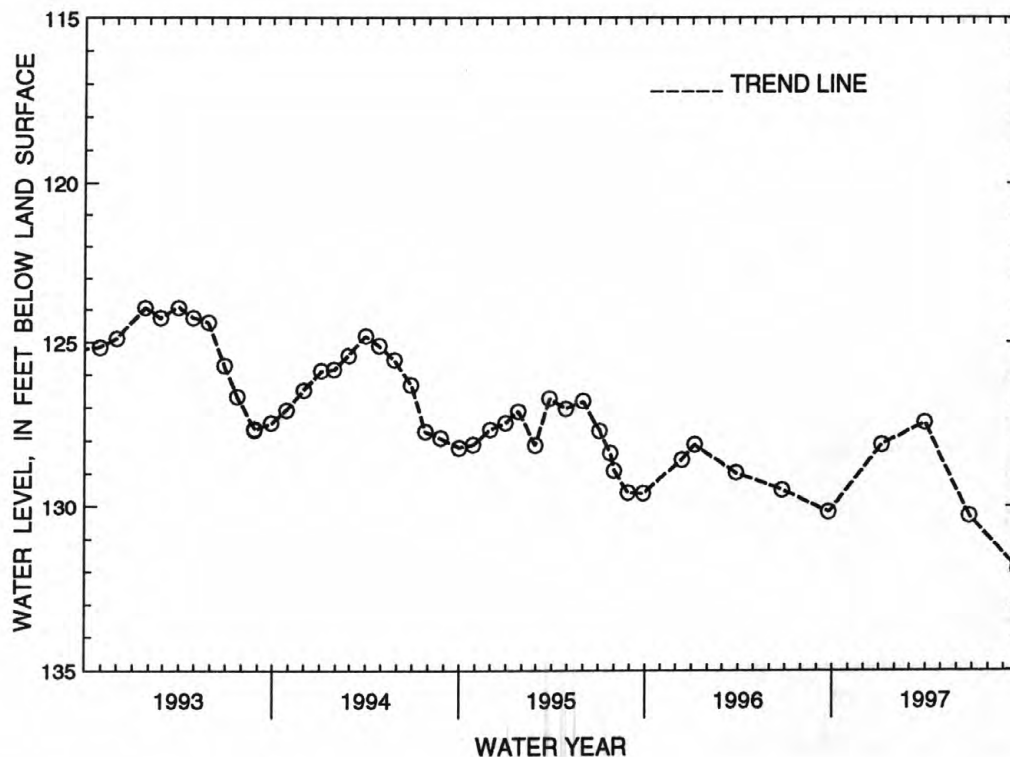
REMARKS.--Water level affected by regional drawdown.

PERIOD OF RECORD.--April 1985 to current year. Unpublished records available prior to October 1986 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 111.96 ft below land-surface datum, Feb. 27, 1986; lowest measured, 131.93 ft below land-surface datum, Sept. 29, 1997.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 06	128.12	MAR 31	127.45	JUN 26	130.30	SEP 29	131.93
WATER YEAR 1997		HIGHEST	127.45	MAR 31, 1997			
		LOWEST	131.93	SEP 29, 1997			



GROUND-WATER LEVELS

JAMES CITY COUNTY

372506076511706. Local number, 56H 30 SOW 177F.

LOCATION.--Lat 37°25'06", long 76°51'17", Hydrologic Unit 02080206, on the northwest side of State Highway 601 in James City County, 0.7 mi north of the intersection of State Highways 168 and 601, and 3.15 mi west of the intersection of U.S. Highway 60 and State Highway 168. Owner: Virginia Department of Environmental Quality.

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

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 60 ft, screened 50 to 60 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Sept. 20, 1989, digital recorder--60-minute punch.

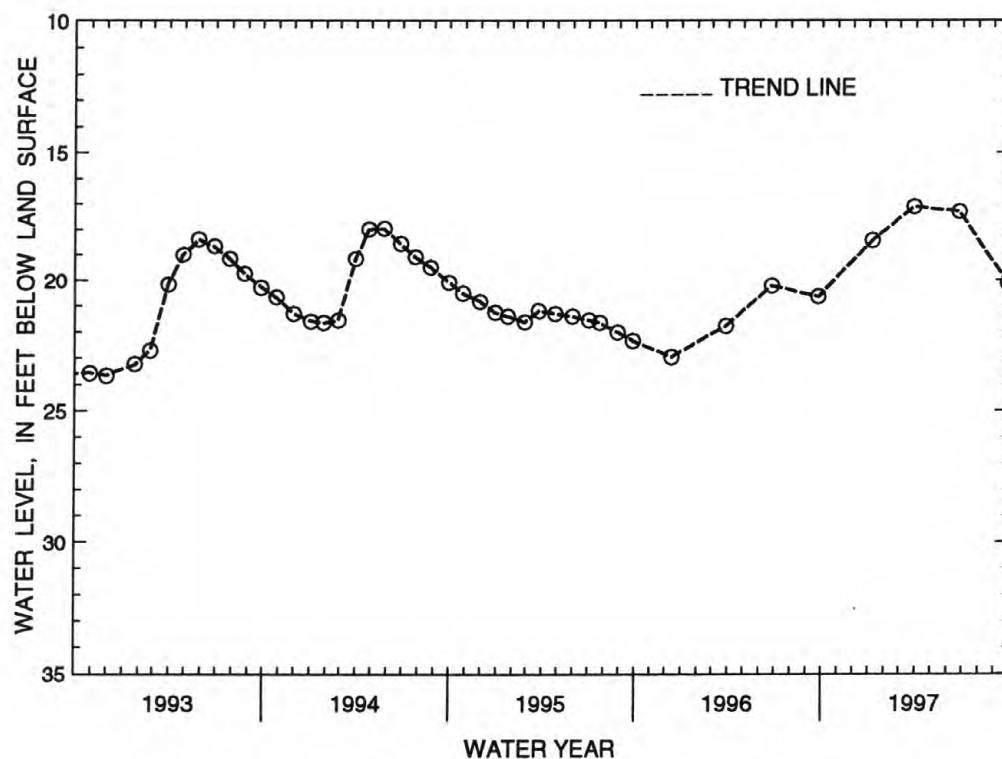
DATUM.--Elevation of land-surface datum is 103 ft above sea level, from topographic map. Measuring point: Top of casing, 2.9 ft above land-surface datum prior to Dec. 4, 1989; 1.1 ft thereafter.

PERIOD OF RECORD.--April 1985 to current year. Unpublished records available prior to October 1986 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 17.11 ft below land-surface datum, Mar. 31, 1997; lowest measured, 24.45 ft below land-surface datum, Feb. 28, 1992.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 09	18.44	MAR 31	17.11	JUN 26	17.31	SEP 29	20.16
WATER YEAR 1997		HIGHEST	17.11	MAR 31, 1997			
		LOWEST	20.16	SEP 29, 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.

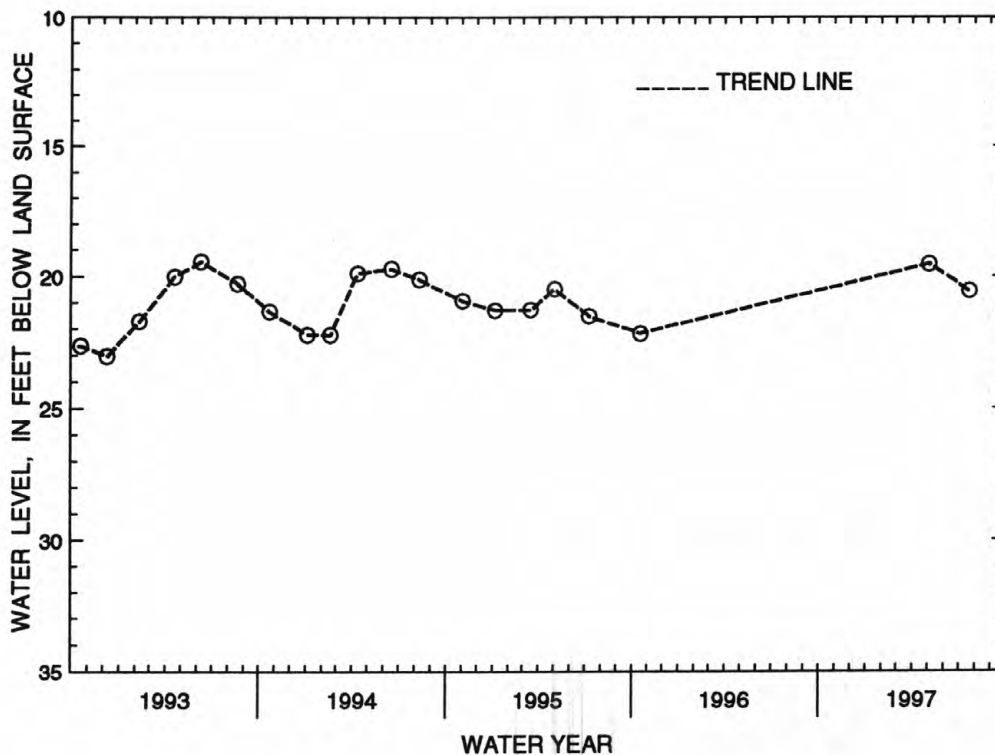
PERIOD OF RECORD.--August 1979 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL
MAY 05	19.55	JUL 22	20.57

WATER YEAR 1997	HIGHEST INSTANTANEOUS	19.55	MAY 05, 1997
	LOWEST INSTANTANEOUS	20.57	JUL 22, 1997



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.

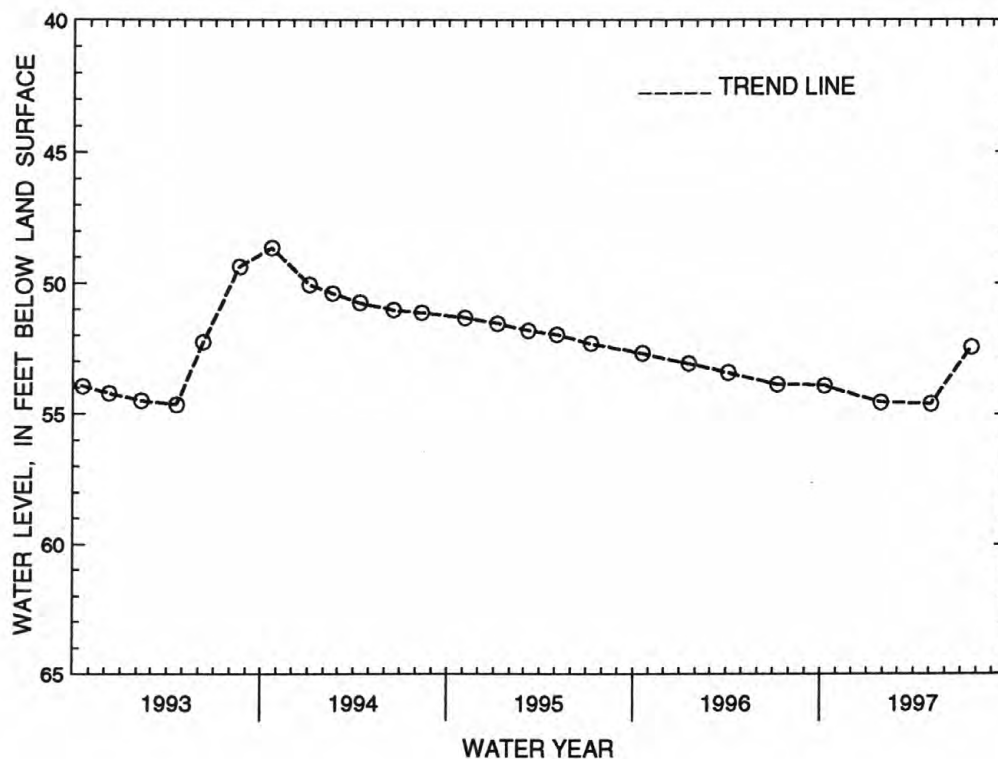
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 09	53.90	JAN 27	54.54	MAY 05	54.59	JUL 22	52.44
WATER YEAR 1997	HIGHEST	52.44	JUL 22, 1997				
	LOWEST	54.59	MAY 05, 1997				



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 south-east 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.

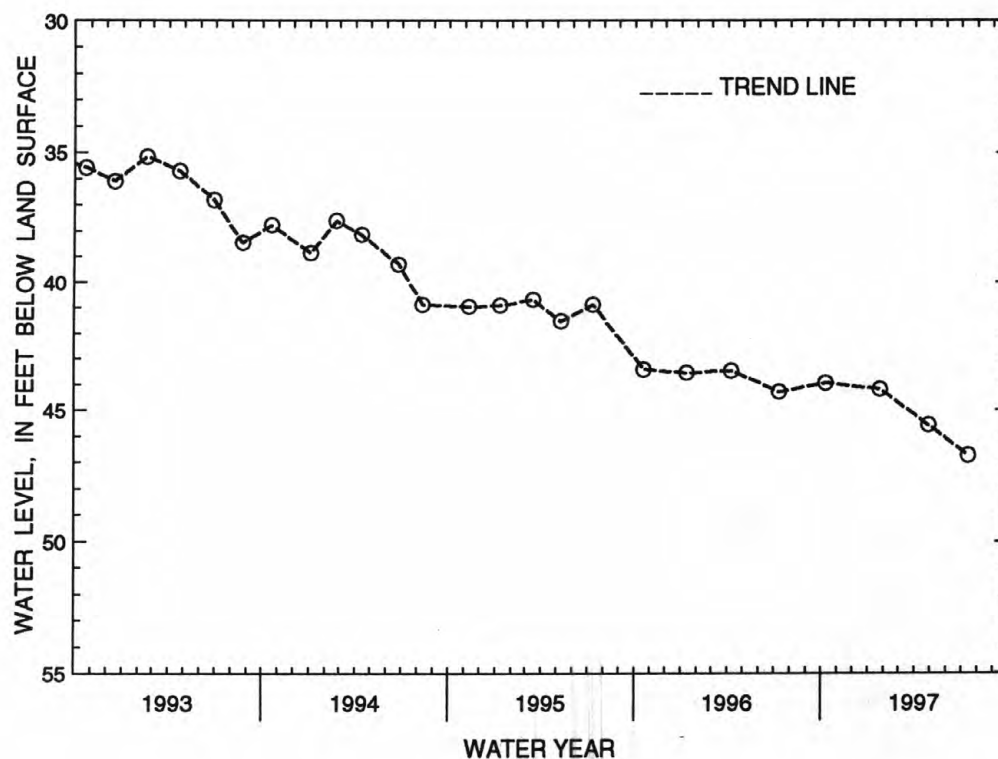
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage and regional drawdown.

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, 46.75 ft below land-surface datum, July 15, 1997.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	43.96	JAN 23	44.19	APR 28	45.59	JUL 15	46.75
WATER YEAR 1997	HIGHEST	43.96	OCT 10, 1996				
	LOWEST	46.75	JUL 15, 1997				



GROUND-WATER LEVELS

KING AND QUEEN COUNTY

373126076454101. Local number, 56J 11 SOW 073.

LOCATION.--Lat 37°31'26", long 76°45'41", Hydrologic Unit 02080105, at West Point Airport, 1.7 mi southeast of West Point. Owner: Chesapeake Corporation.

AQUIFER.--Lower Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6 in., depth 1,254 ft, screened 1,233 to 1,248 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 2.5 ft above land-surface datum; prior to Mar. 15, 1993, top of casing, 0.6 ft above land-surface datum.

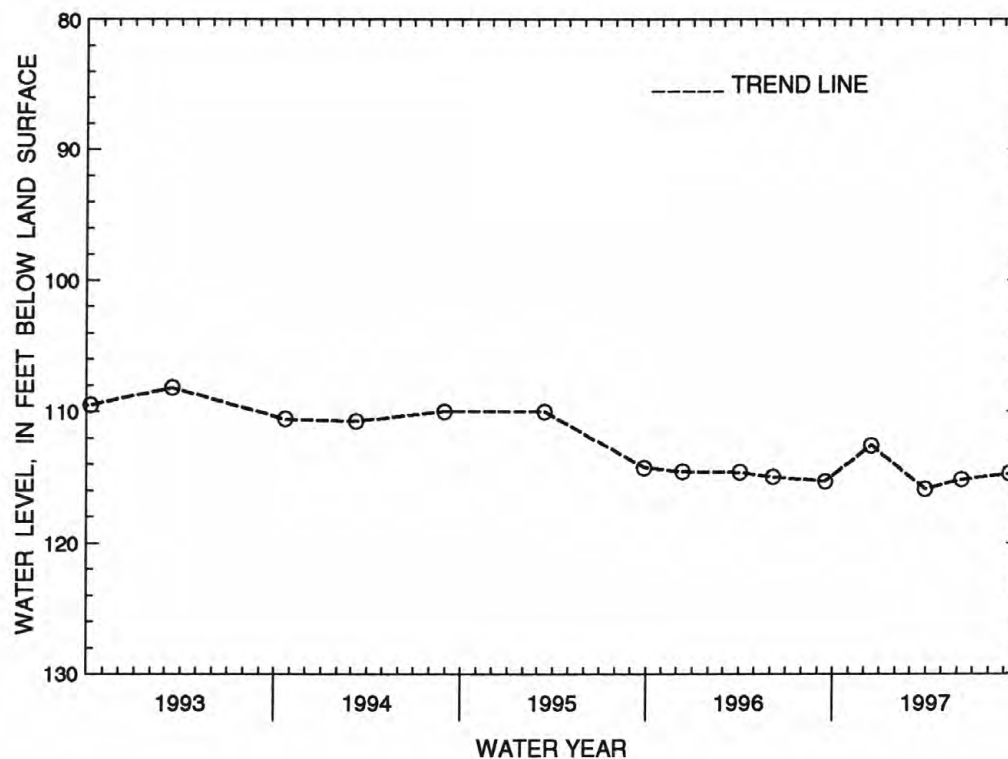
REMARKS.--Water level affected by regional drawdown. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

PERIOD OF RECORD.--November 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 73.08 ft below land-surface datum, Apr. 25, 1975; lowest measured, 115.89 ft below land-surface datum, Mar. 31, 1997.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 16	112.58	MAR 31	115.89	JUN 10	115.17	SEP 11	114.73
WATER YEAR 1997	HIGHEST	112.58	DEC 16, 1996				
	LOWEST	115.89	MAR 31, 1997				



GROUND-WATER LEVELS

KING AND QUEEN COUNTY

373008076425601. Local number, 57J 3 SOW 074.

LOCATION.--Lat 37°30'08", long 76°42'56", Hydrologic Unit 02080107, off State Highway 606, 0.4 mi northeast of intersection of State Highways 606 and 605, and 2.8 mi south of Shacklefords. Owner: Chesapeake Corporation.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6 in. to 200 ft, diameter 4 in. from 200 to 760 ft, depth 760 ft, screened 741 to 756 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 51 ft above sea level, from topographic map. Measuring point: Top of casing, 2.60 ft above land-surface datum; prior to Mar. 15, 1993, top of casing, 0.20 ft above land-surface datum.

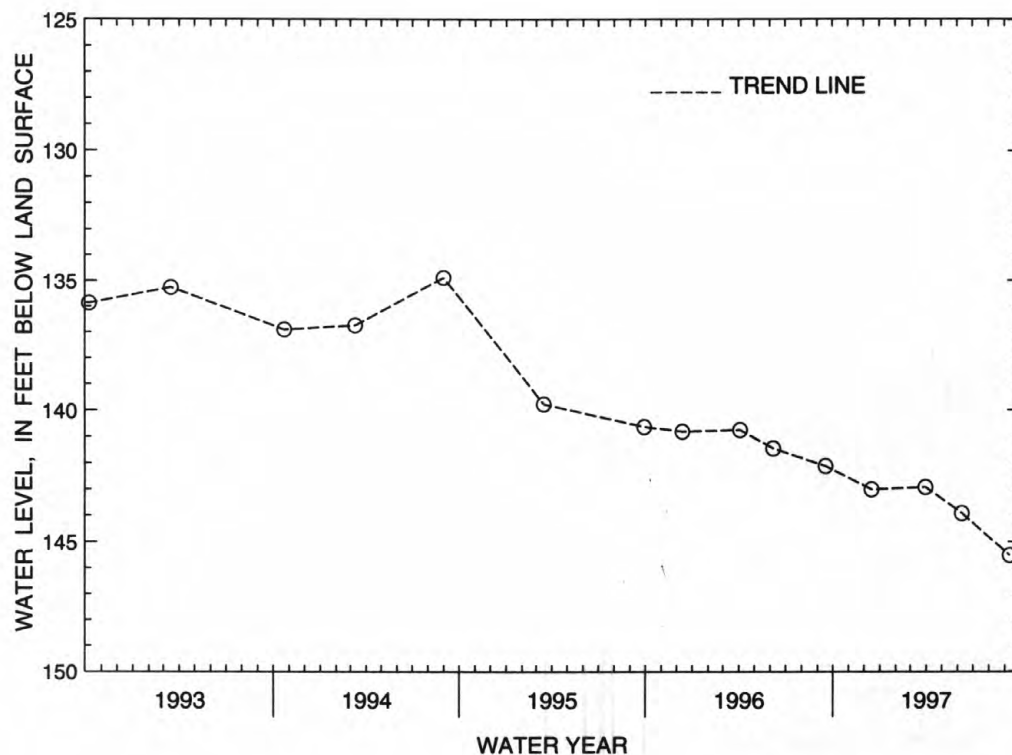
REMARKS.--Water level affected by regional drawdown.

PERIOD OF RECORD.--November 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 109.90 ft below land-surface datum, Jan. 26, 1975; lowest measured, 145.52 ft below land-surface datum, Sept. 11, 1997.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 16	143.01	MAR 31	142.92	JUN 10	143.92	SEP 11	145.52
WATER YEAR 1997	HIGHEST	142.92	MAR 31, 1997				
	LOWEST	145.52	SEP 11, 1997				



GROUND-WATER LEVELS

KING GEORGE COUNTY

382103077025401. Local number, 54Q 19.

LOCATION.--Lat 38°21'03", long 77°02'54", Hydrologic Unit 02070011, 100 ft southwest of intersection of Bennion Road and Perimeter Road, 100 ft east of Perimeter Road at edge of woods, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Aquia aquifer of Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 10 in. from 0 to 30 ft, diameter 4 in. from 0 to 180 ft, 200 to 202.25 ft, depth 202.25 ft, screened 180 to 200 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Oct. 26, 1994, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 21.6 ft above sea level. Measuring point: Top of recorder shelf, 2.5 ft above land-surface datum prior to Nov. 4, 1994; top of casing, 2.1 ft thereafter.

REMARKS.--Low-water levels in May 1993 are the result of the well being pumped for water-quality sampling. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

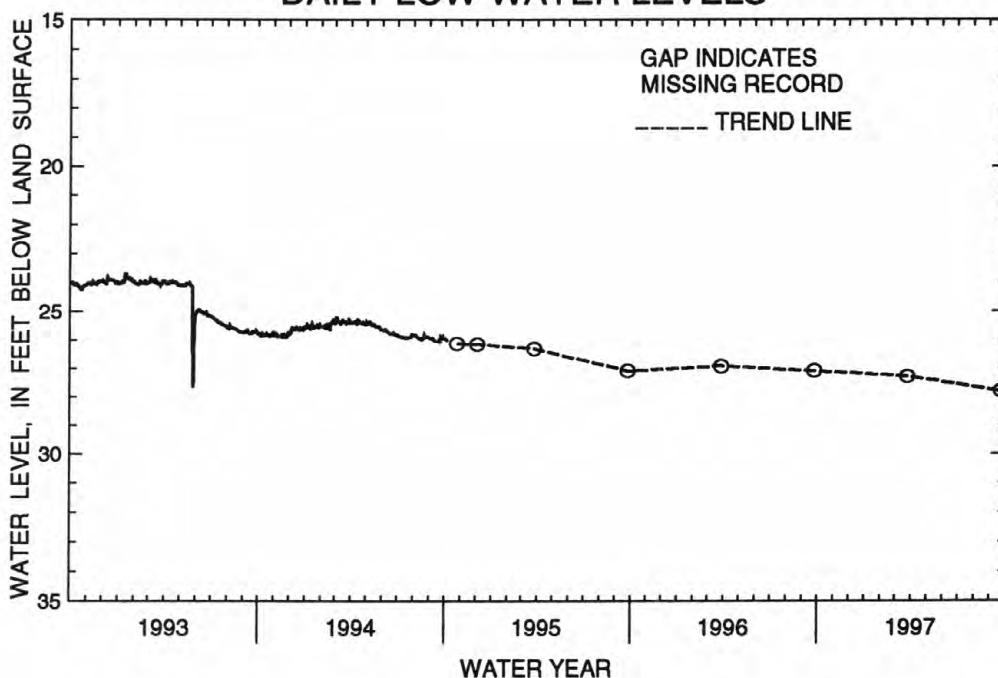
PERIOD OF RECORD.--September 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 23.67 ft below land-surface datum, Jan. 17, 1993; lowest measured, 27.81 ft below land-surface datum, Sept. 24, 1997.

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

	DATE	WATER LEVEL	DATE	WATER LEVEL
	MAR 25	27.29	SEP 24	27.81
WATER YEAR 1997	HIGHEST	27.29	MAR 25, 1997	
	LOWEST	27.81	SEP 24, 1997	

DAILY LOW-WATER LEVELS



GROUND-WATER LEVELS

KING GEORGE COUNTY

382103077025402. Local number, 54Q 20.

LOCATION.--Lat 38°21'03", long 77°02'54", Hydrologic Unit 02070011, 100 ft southwest of intersection of Bennion Road and Perimeter Road, 100 ft east of Perimeter Road at edge of woods, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Confined aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 10 in. from 0 to 30 ft, diameter 4 in. from 30 to 85 ft, 95 to 97.25 ft, depth 97.25 ft, screened 85 to 95 ft.

INSTRUMENTATION.--Digital recorder--60-minute punch. Prior to Dec. 18, 1996, occasional measurement with chalked tape by USGS personnel. Prior to Oct. 26, 1994, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 21.59 ft above sea level. Measuring point: Top of recorder shelf, 2.5 ft above land-surface datum prior to Nov. 4, 1994, and since Dec. 18, 1996; from Nov. 4, 1994 to Dec. 18, 1996, top of casing, 2.09 ft.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.52 ft below land-surface datum, Apr. 28, 29, 1997; lowest recorded, 17.15 ft below land-surface datum, Nov. 23, 24, 1993.

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

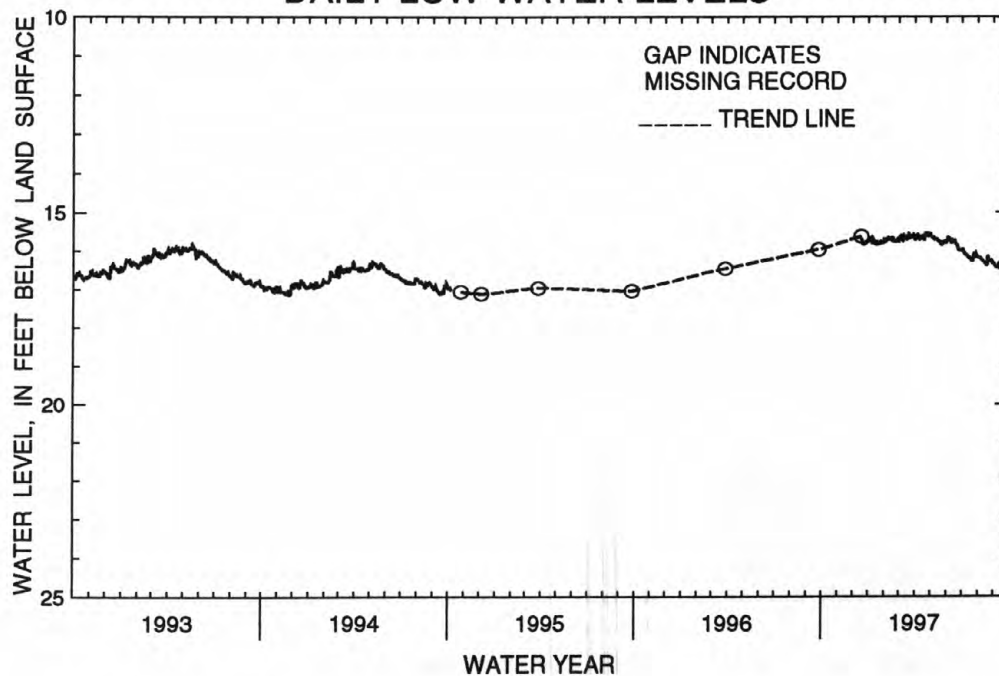
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 18	15.64	JAN 07	15.71	FEB 24	15.79	APR 30	15.59	JUN 25	15.98	AUG 26	16.30
19	15.68	29	15.80	MAR 25	15.67	JUN 02	15.79	JUL 29	16.08	SEP 24	16.56

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	15.72	15.70	15.64	15.63	15.67	15.67	16.05	16.18	16.41
10	---	---	---	15.71	15.69	15.72	15.72	15.70	15.77	16.11	16.25	16.41
15	---	---	---	15.83	15.65	15.67	15.69	15.72	15.79	16.18	16.30	16.49
20	---	---	15.80	15.84	15.77	15.63	15.72	15.78	15.84	16.25	16.36	---
25	---	---	15.81	15.78	15.78	15.67	15.55	15.83	15.99	16.10	16.26	16.57
EOM	---	---	15.77	15.79	15.78	15.63	15.57	15.80	16.01	16.14	16.32	16.55

WATER YEAR 1997	HIGHEST INSTANTANEOUS	15.52	APR 28, 29, 1997
	LOWEST INSTANTANEOUS	16.57	SEP 24, 25, 1997

DAILY LOW-WATER LEVELS



GROUND-WATER LEVELS

KING GEORGE COUNTY

382129077005801. Local number, 54Q 21.

LOCATION.--Lat 38°21'29", long 77°00'58", Hydrologic Unit 02070011, 200 ft west of the Potomac River, 400 ft south of U.S. Highway 301, 750 ft east of Blandy Boulevard, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Aquia aquifer of Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 10 in. from 0 to 25 ft, diameter 4 in. from 0 to 197 ft, 217 to 219.25 ft, depth 219.25 ft, screened 197 to 217 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Oct. 26, 1994, digital recorder--60-minute punch.

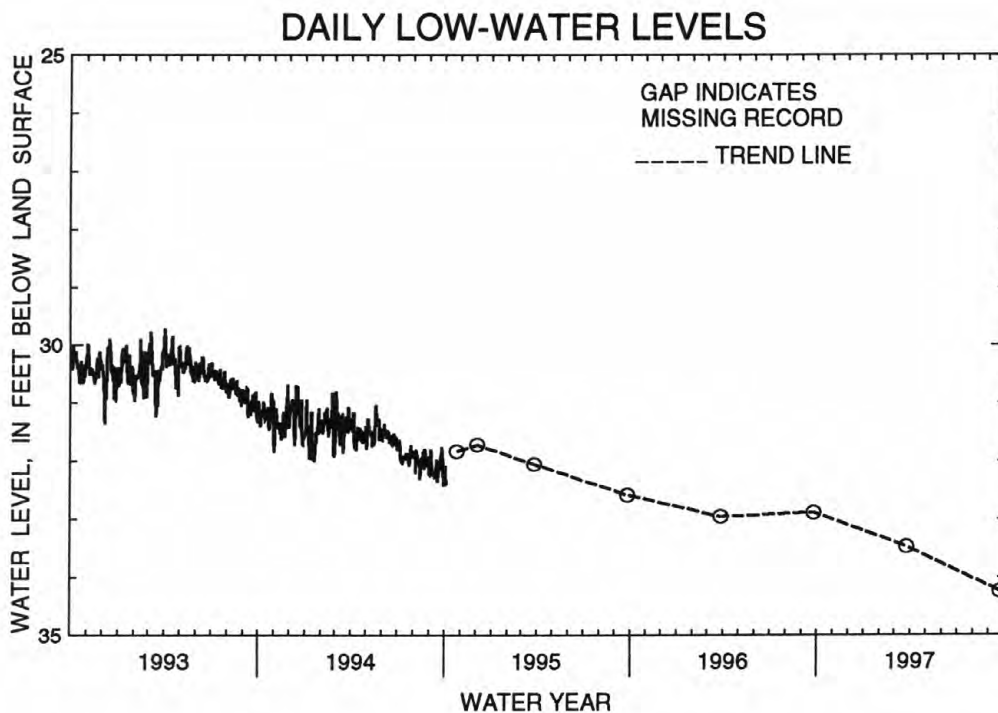
DATUM.--Elevation of land-surface datum is 20.46 ft above sea level. Measuring point: Top of recorder shelf, 2.65 ft above land-surface datum prior to Nov. 4, 1994; top of casing, 2.10 ft thereafter.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 29.00 ft below land-surface datum, Mar. 4, 1993; lowest measured, 34.25 ft below land-surface datum, Sept. 24, 1997.

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

		DATE	WATER LEVEL	DATE	WATER LEVEL
		MAR 25	33.47	SEP 24	34.25
WATER YEAR 1997	HIGHEST	33.47	MAR 25, 1997		
	LOWEST	34.25	SEP 24, 1997		



GROUND-WATER LEVELS

KING GEORGE COUNTY

382129077005802. Local number, 54Q 22.

LOCATION.--Lat 38°21'29", long 77°00'58", Hydrologic Unit 02070011, 200 ft west of the Potomac River, 400 ft south of U.S. Highway 301, 750 ft east of Blandy Boulevard, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Confined aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 10 in. from 0 to 20 ft, diameter 4 in. from 0 to 46 ft, 56 to 58.25 ft, depth 58.25 ft, screened 46 to 56 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Oct. 26, 1994, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 20.52 ft above sea level. Measuring point: Top of recorder shelf, 2.6 ft above land-surface datum prior to Nov. 4, 1994; top of casing, 1.98 ft thereafter.

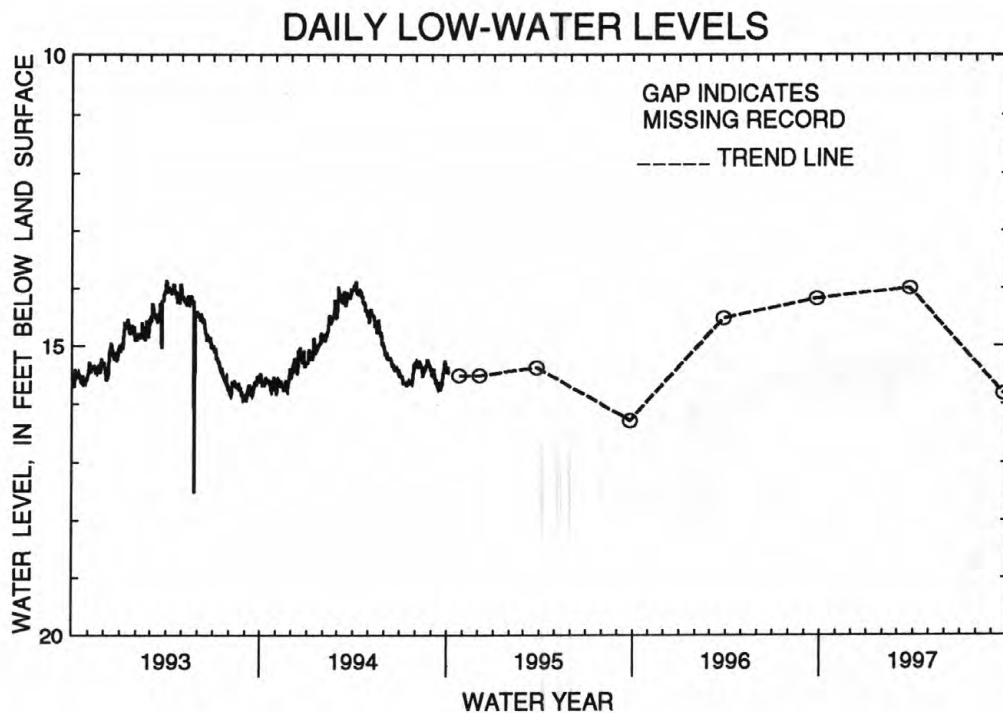
REMARKS.--Low-water levels in May 1993 are the result of the well being pumped for water-quality sampling. Low-water levels in March 1993 are a result of the well being bail-tested.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 13.71 ft below land-surface datum, Apr. 17, 1993; lowest measured from natural causes, 16.29 ft below land-surface datum, Sept. 26, 1995; lowest recorded, 17.52 ft below land-surface datum, May 26, 1993, result of pumpage.

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

	DATE	WATER LEVEL	DATE	WATER LEVEL
	MAR 25	14.00	SEP 24	15.83
WATER YEAR 1996	HIGHEST	14.00	MAR 25, 1997	
	LOWEST	15.83	SEP 24, 1997	



GROUND-WATER LEVELS

KING GEORGE COUNTY

381915077020301. Local number, 54Q 23.

LOCATION.--Lat 38°19'15", long 77°02'03", Hydrologic Unit 02070011, 100 ft south of Tisdale Road, 200 ft east of security gate at intersection of Tisdale Road and Welch Road, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Aquia aquifer of Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 10 in. from 0 to 30 ft, diameter 4 in. from 0 to 192.40 ft, 212.40 to 214.70 ft, depth 214.70 ft, screened 192.40 to 212.40 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Oct. 26, 1994, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 10.70 ft above sea level. Measuring point: Top of recorder shelf, 2.6 ft above land-surface datum prior to Nov. 4, 1994; top of casing, 2.17 ft thereafter.

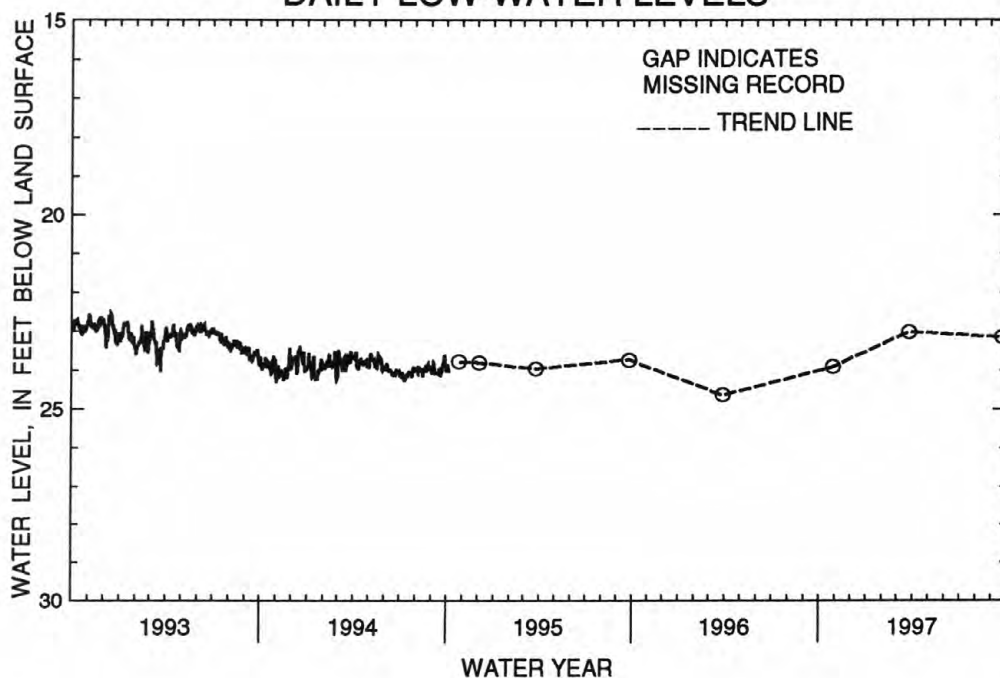
PERIOD OF RECORD.--September 1992 to current year.

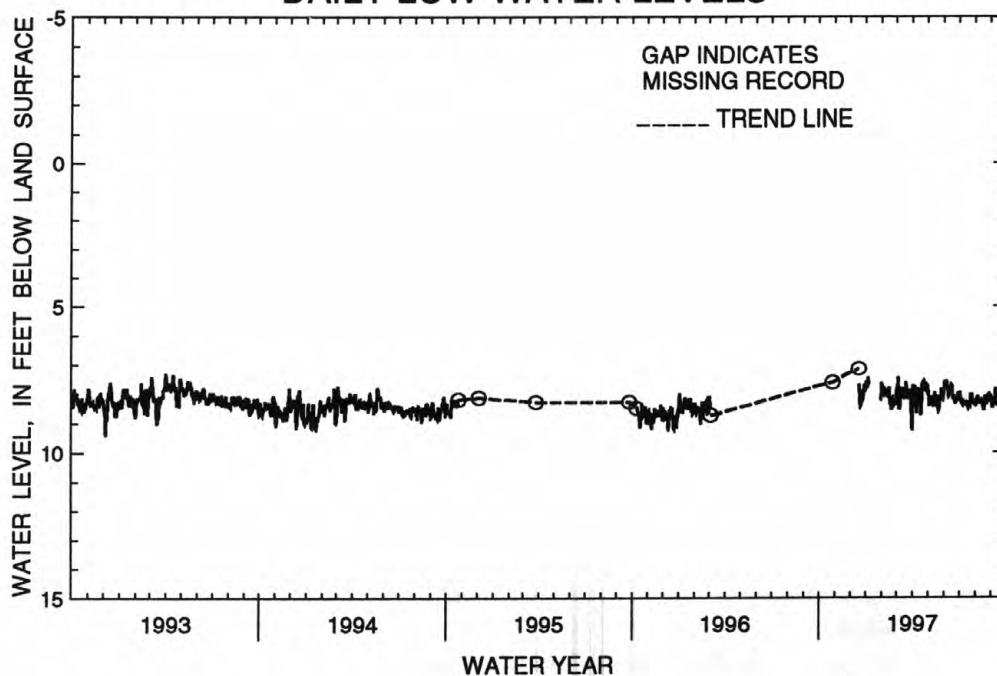
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 22.31 ft below land-surface datum, Dec. 11, 1992; lowest recorded, 24.63 ft below land-surface datum, Mar. 27, 1996.

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

	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
	OCT 28	23.91	MAR 25	23.02	SEP 24	23.16
WATER YEAR 1997	HIGHEST	23.02	MAR 25, 1997			
	LOWEST	23.91	OCT 28, 1996			

DAILY LOW-WATER LEVELS





GROUND-WATER LEVELS

KING GEORGE COUNTY

382031077030101. Local number, 54Q 26.

LOCATION.--Lat 38°20'31", long 77°03'01", Hydrologic Unit 02070011, 250 ft east of Perimeter Road on fire break, 0.7 mi from intersection of Bennion Road and Perimeter Road, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 5 ft, 15 to 17.5 ft, depth 17.5 ft, screened 5 to 15 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to October 1994, monthly measurement with chalked tape.

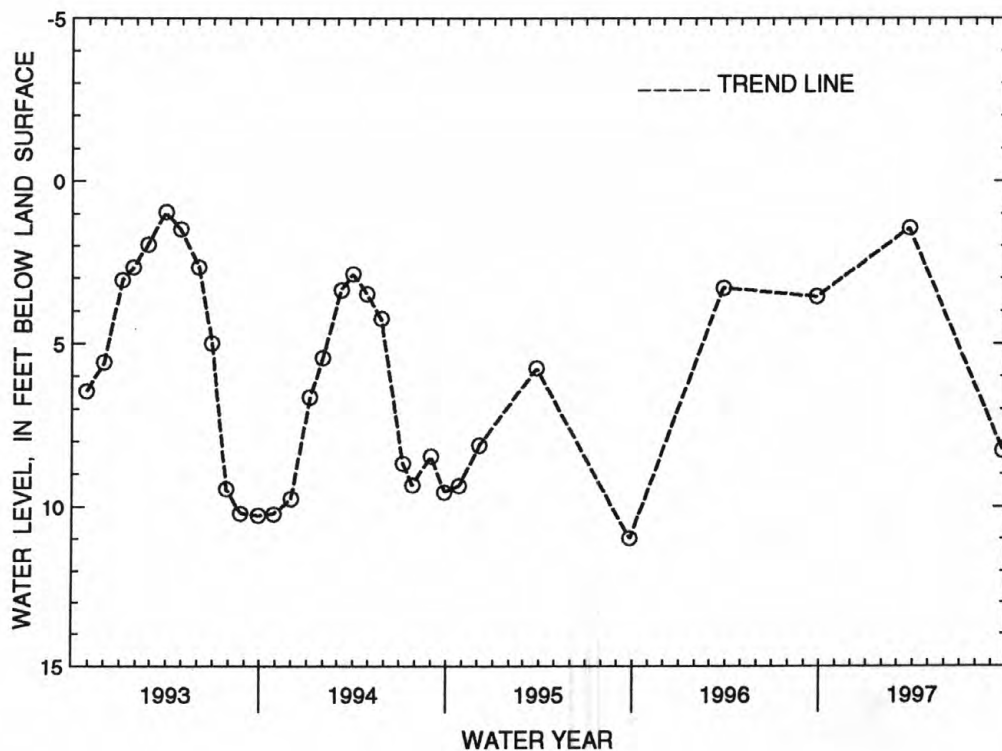
DATUM.--Elevation of land-surface datum is 21.05 ft above sea level. Measuring point: Top of casing, 2.2 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.97 ft below land-surface datum, Mar. 30, 1993; lowest measured, 11.00 ft below land-surface datum, Sept. 26, 1995.

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

	DATE	WATER LEVEL	DATE	WATER LEVEL
	MAR 25	1.46	SEP 24	8.27
WATER YEAR 1997	HIGHEST	1.46	MAR 25, 1997	
	LOWEST	8.27	SEP 24, 1997	



GROUND-WATER LEVELS

KING GEORGE COUNTY

382055077025901. Local number, 54Q 27.

LOCATION.--Lat 38°20'55", long 77°02'59", Hydrologic Unit 02070011, 100 ft east of Perimeter Road, 0.2 mi south of intersection of Bennion Road and Perimeter Road, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 9.5 ft, 19.5 to 22 ft, depth 22 ft, screened 9.5 to 19.5 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to October 1994, monthly measurement with chalked tape.

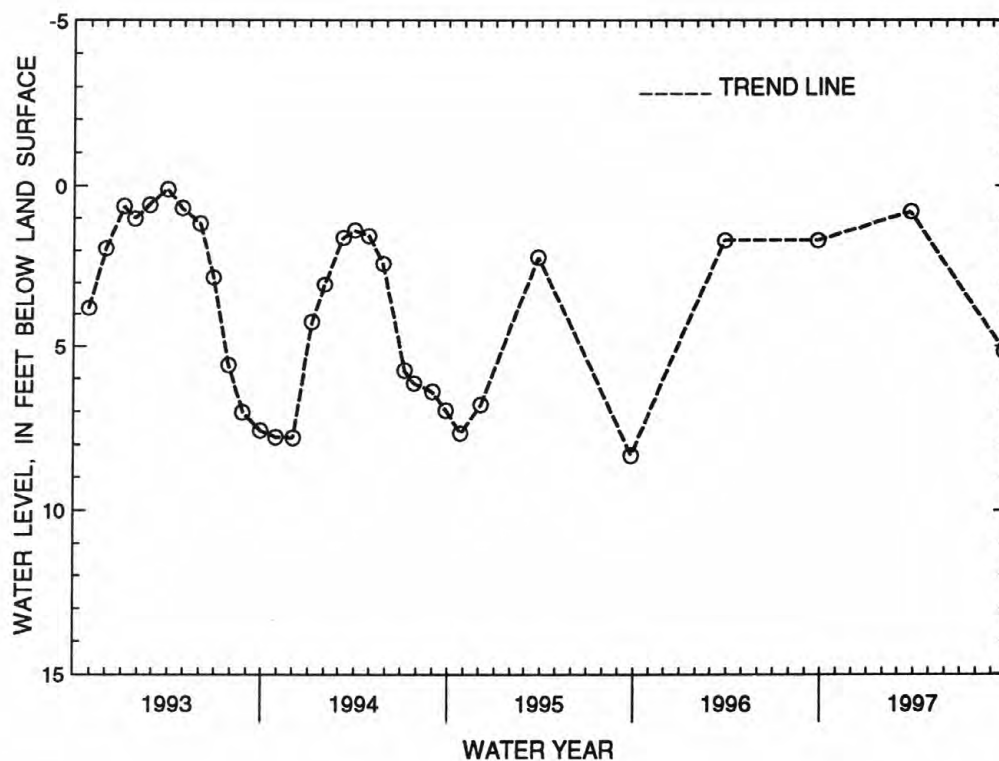
DATUM.--Elevation of land-surface datum is 22.15 ft above sea level. Measuring point: Top of casing, 2.3 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.11 ft below land-surface datum, Mar. 30, 1993; lowest measured, 8.33 ft below land-surface datum, Sept. 26, 1995.

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

		DATE	WATER LEVEL	DATE	WATER LEVEL
		MAR 25	0.79	SEP 24	5.18
WATER YEAR 1997	HIGHEST	0.79	MAR 25, 1997		
	LOWEST	5.18	SEP 24, 1997		



GROUND-WATER LEVELS

KING GEORGE COUNTY

382103077025403. Local number, 54Q 28.

LOCATION.--Lat 38°21'03", long 77°02'54", Hydrologic Unit 02070011, 100 ft southwest of intersection of Bennion Road and Perimeter Road, 100 ft east of Perimeter Road at edge of woods, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 9.7 ft, 19.7 to 21.95 ft, depth 21.95 ft, screened 9.7 to 19.7 ft.

INSTRUMENTATION.--Electronic pressure transducer data logger--60 minute-record interval. Prior to Feb. 24, 1997, occasional measurement with chalked tape by USGS personnel. Prior to Oct. 26, 1994, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 21.33 ft above sea level. Measuring point: Top of recorder shelf, 2.5 ft above land-surface datum prior to Nov. 4, 1994; top of casing, 1.96 ft thereafter.

REMARKS.--Missing record due to recorder malfunction.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.85 ft above land-surface datum, Mar. 13, 1993; lowest recorded, 8.41 ft below land-surface datum, Sept. 26, 1995.

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

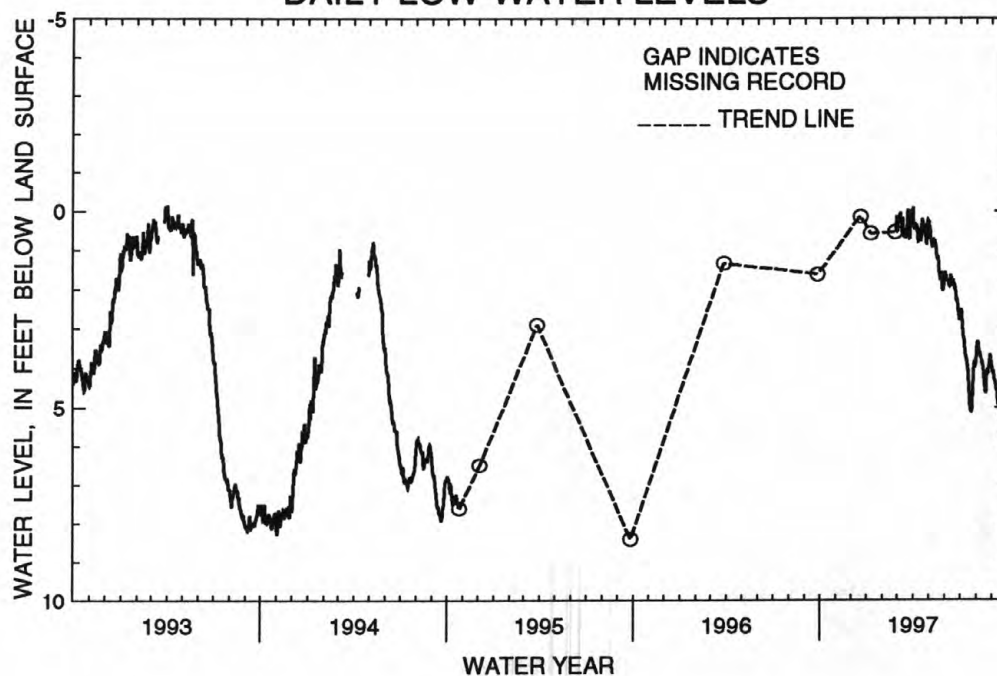
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 18	0.13	FEB 24	0.53	MAY 06	0.47	JUL 28	3.93	SEP 24	5.58
JAN 07	0.57	MAR 25	0.63	JUN 25	2.27	AUG 26	3.95		

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, OCTOBER 1996 TO SEPTEMBER 1997
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	---	---	.15	.50	.76	1.77	2.90	3.37	4.31
10	---	---	---	---	---	.18	.78	.83	1.92	3.58	3.76	4.58
15	---	---	---	---	---	.51	.77	.92	1.93	3.97	4.07	5.00
20	---	---	---	---	---	.12	.50	1.41	1.97	5.06	4.62	5.64
25	---	---	---	---	.52	.69	.76	1.56	2.28	4.62	4.01	5.41
EOM	---	---	---	---	.51	-.09	.27	1.71	2.80	3.88	3.98	5.41

WATER YEAR 1997
HIGHEST INSTANTANEOUS -0.47 MAR 22, 1997
LOWEST INSTANTANEOUS 5.85 SEP 21, 1997

DAILY LOW-WATER LEVELS



GROUND-WATER LEVELS

KING GEORGE COUNTY

382112077024401. Local number, 54Q 29.

LOCATION.--Lat 38°21'12", long 77°02'44", Hydrologic Unit 02070011, 25 ft southeast of Blandy Boulevard, 0.2 mi northeast of intersection of Bennion Road and Blandy Boulevard, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 8 ft, 18 to 20.5 ft, depth 20.5 ft, screened 8 to 18 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to October 1994, monthly measurement with chalked tape.

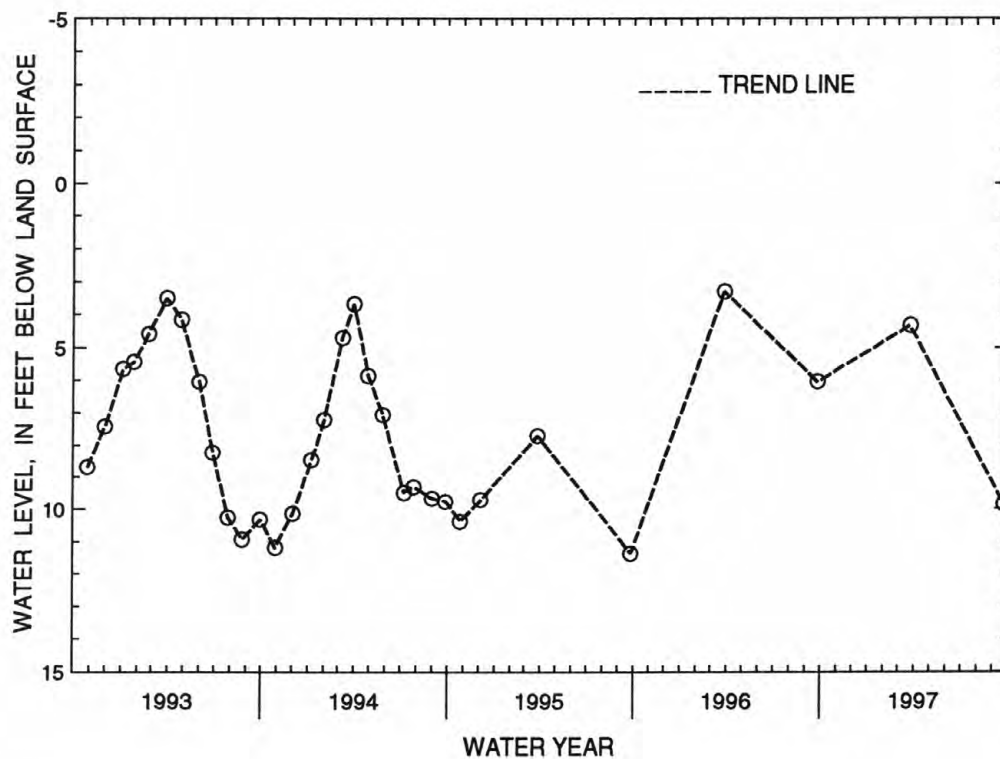
DATUM.--Elevation of land-surface datum is 19.92 ft above sea level. Measuring point: Top of casing, 2.0 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.30 ft below land-surface datum, Mar. 27, 1996; lowest measured, 11.37 ft below land-surface datum, Sept. 26, 1995.

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

		DATE	WATER LEVEL	DATE	WATER LEVEL
		MAR 25	4.33	SEP 24	9.86
WATER YEAR 1997	HIGHEST	4.33	MAR 25, 1997		
	LOWEST	9.86	SEP 24, 1997		



GROUND-WATER LEVELS

KING GEORGE COUNTY

382116077023501. Local number, 54Q 30.

LOCATION.--Lat 38°21'16", long 77°02'35", Hydrologic Unit 02070011, 25 ft southeast of Blandy Boulevard, 0.4 mi northeast of intersection of Bennion Road and Blandy Boulevard, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 4.9 ft, 9.9 to 12.4 ft, depth 12.4 ft, screened 4.9 to 9.9 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to October 1994, monthly measurement with chalked tape.

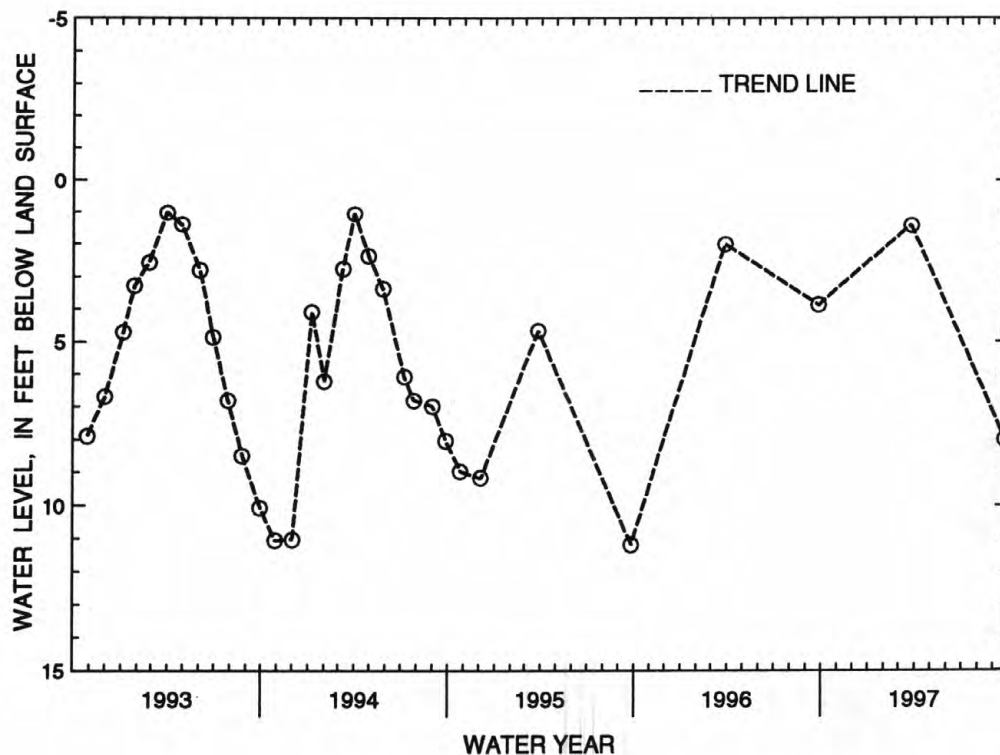
DATUM.--Elevation of land-surface datum is 17.61 ft above sea level. Measuring point: Top of casing, 2.0 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.02 ft below land-surface datum, Mar. 30, 1993; lowest measured, 11.19 ft (below bottom of screen; may not reflect true water-level elevation in the aquifer) below land-surface datum, Sept. 26, 1995.

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

	DATE	WATER LEVEL	DATE	WATER LEVEL
	MAR 25	1.43	SEP 24	8.00
WATER YEAR 1997	HIGHEST	1.43	MAR 25, 1997	
	LOWEST	8.00	SEP 24, 1997	



GROUND-WATER LEVELS

KING GEORGE COUNTY

382123077020501. Local number, 54Q 31.

LOCATION.--Lat 38°21'23", long 77°02'05", Hydrologic Unit 02070011, 50 ft south of Blandy Boulevard, 0.8 mi northeast of intersection of Bennion Road and Blandy Boulevard, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 4.7 ft, 14.7 to 17.2 ft, depth 17.2 ft, screened 4.7 to 14.7 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to October 1994, monthly measurement with chalked tape.

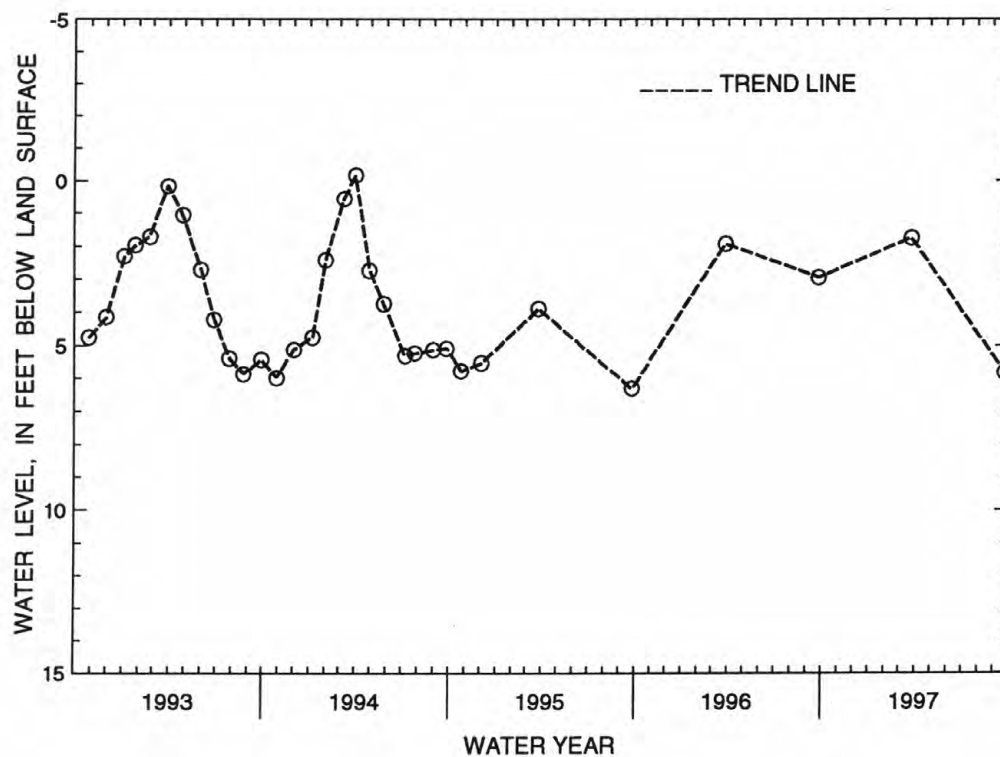
DATUM.--Elevation of land-surface datum is 19.81 ft above sea level. Measuring point: Top of casing, 2.17 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.15 ft above land-surface datum, Mar. 31, 1994; lowest measured, 6.31 ft below land-surface datum, Sept. 26, 1995.

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

		DATE	WATER LEVEL	DATE	WATER LEVEL
		MAR 25	1.75	SEP 24	5.83
WATER YEAR 1997	HIGHEST	1.75	MAR 25, 1997		
	LOWEST	5.83	SEP 24, 1997		



GROUND-WATER LEVELS

KING GEORGE COUNTY

382130077010801. Local number, 54Q 33.

LOCATION.--Lat 38°21'30", long 77°01'08", Hydrologic Unit 02070011, 1,100 ft west of the Potomac River along boundary fence, 1.7 mi northeast of intersection of Bennion Road and Blandy Boulevard, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 12.88 ft, 22.88 to 25.13 ft, depth 25.13 ft, screened 12.88 to 22.88 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to October 1994, monthly measurement with chalked tape.

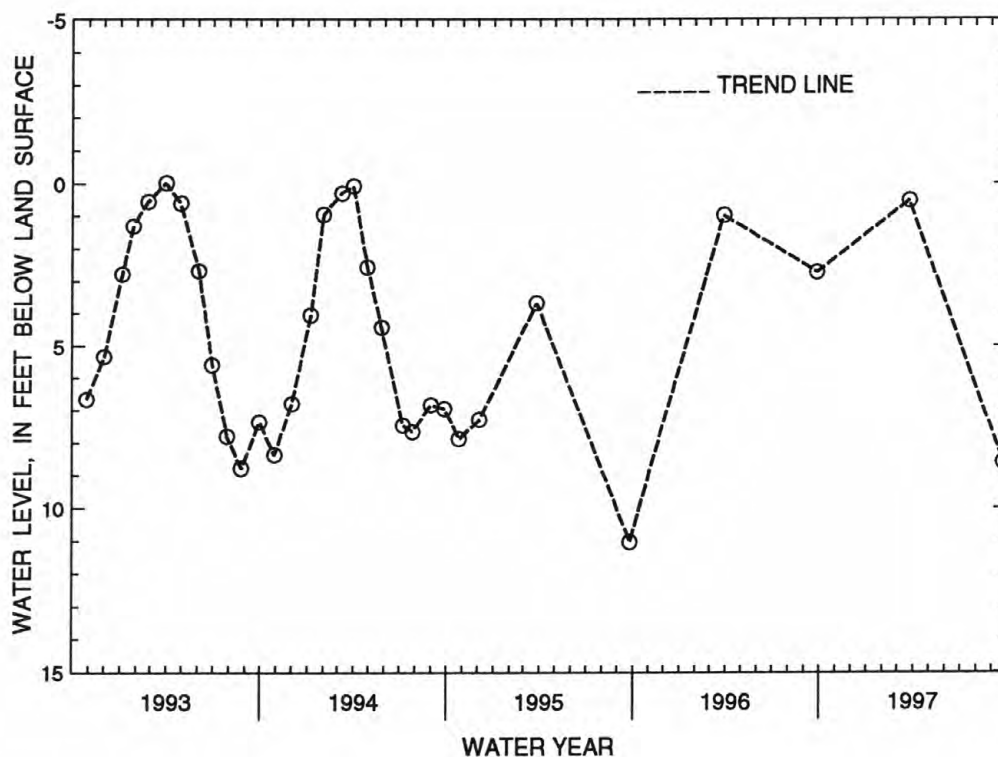
DATUM.--Elevation of land-surface datum is 21.20 ft above sea level. Measuring point: Top of casing, 2.3 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.02 ft above land-surface datum, Mar. 30, 1993; lowest measured, 11.04 ft below land-surface datum, Sept. 26, 1995.

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

		DATE	WATER LEVEL	DATE	WATER LEVEL
		MAR 25	0.53	SEP 24	8.61
WATER YEAR 1997	HIGHEST	0.53	MAR 25, 1997		
	LOWEST	8.61	SEP 24, 1997		



GROUND-WATER LEVELS

KING GEORGE COUNTY

382129077005803. Local number, 54Q 34.

LOCATION.--Lat 38°21'29", long 77°00'58", Hydrologic Unit 02070011, 200 ft west of the Potomac River, 400 ft south of U.S. Highway 301, 750 ft east of Blandy Boulevard, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 7.75 ft, 17.75 to 20 ft, depth 20 ft, screened 7.75 to 17.75 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Oct. 26, 1994, digital recorder--60-minute punch.

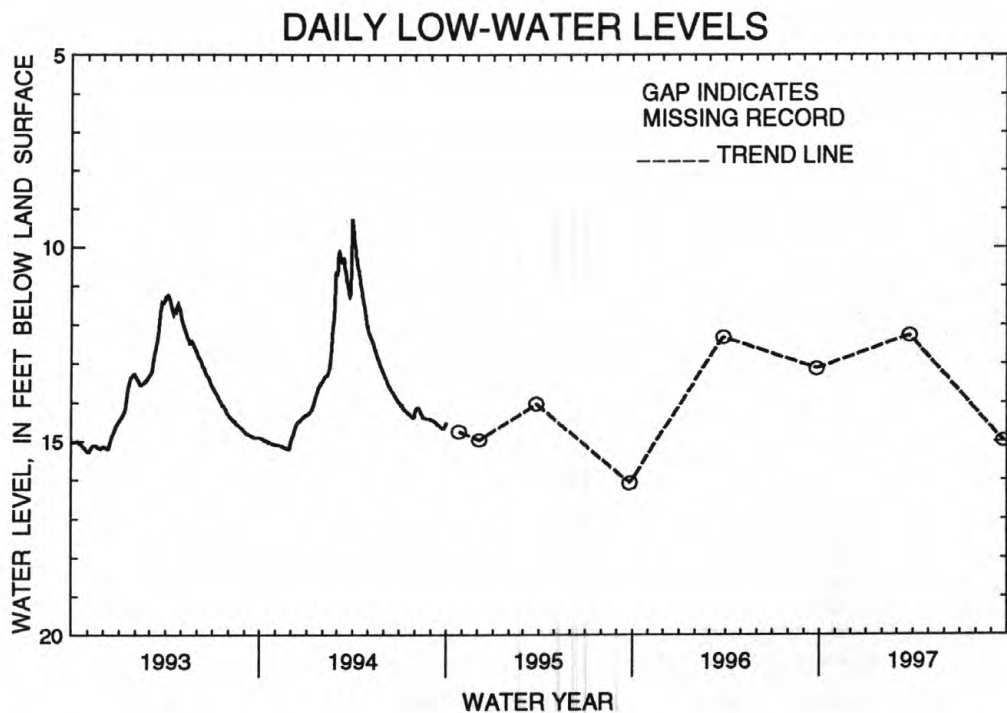
DATUM.--Elevation of land-surface datum is 20.44 ft above sea level. Measuring point: Top of recorder shelf, 2.7 ft above land-surface datum prior to Nov. 4, 1994; top of casing, 2.06 ft thereafter.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 9.12 ft below land-surface datum, Mar. 31, 1994; lowest recorded, 16.08 ft below land-surface datum, Sept. 26, 1995.

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

	DATE	WATER LEVEL	DATE	WATER LEVEL
	MAR 25	12.27	SEP 24	14.99
WATER YEAR 1997	HIGHEST	12.27	MAR 25, 1997	
	LOWEST	14.99	SEP 24, 1997	



GROUND-WATER LEVELS

KING GEORGE COUNTY

382131077005501. Local number, 54Q 35.

LOCATION.--Lat 38°21'31", long 77°00'55", Hydrologic Unit 02070011, 100 ft west of the Potomac River, 300 ft south of U.S. Highway 301, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren.
Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 7.0 ft, 12 to 14.25 ft, depth 14.25 ft, screened 7 to 12 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Oct. 26, 1994, digital recorder--60-minute punch.

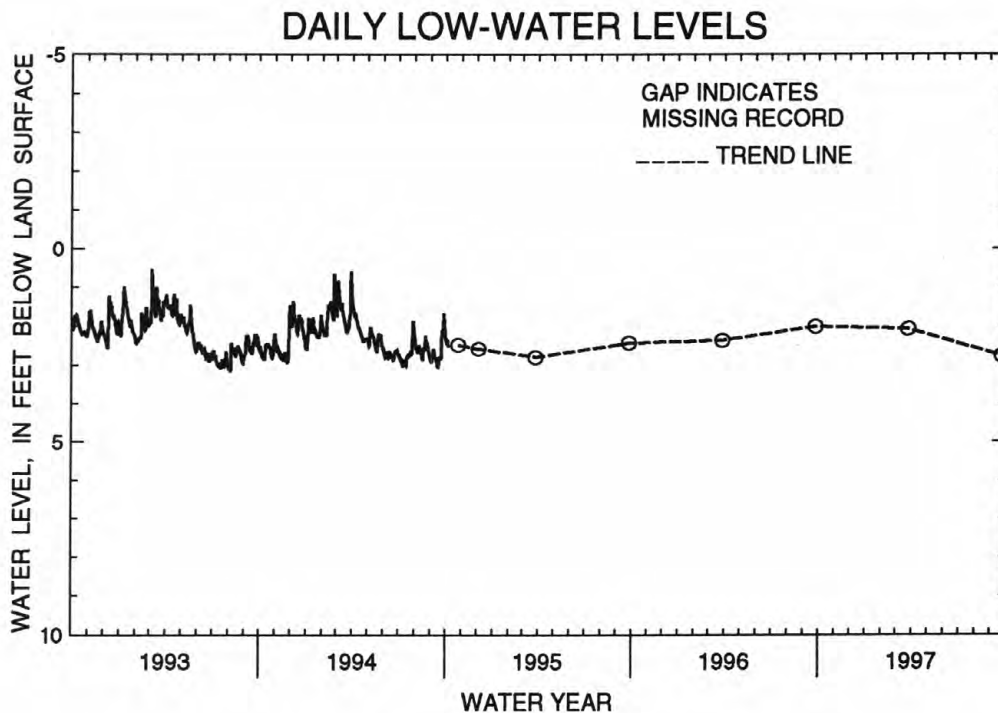
DATUM.--Elevation of land-surface datum is 4.4 ft above sea level. Measuring point: Top of recorder shelf, 2.65 ft above land-surface datum prior to Nov. 4, 1994; top of casing, 2.14 ft thereafter.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.07 ft above land-surface datum, Mar. 29, 1994; lowest recorded, 3.15 ft below land-surface datum, Aug. 5, 6, 1993.

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

		DATE	WATER LEVEL	DATE	WATER LEVEL
		MAR 25	2.08	SEP 24	2.77
WATER YEAR 1997	HIGHEST	2.08	MAR 25, 1997		
	LOWEST	2.77	SEP 24, 1997		



GROUND-WATER LEVELS

KING GEORGE COUNTY

382055077011301. Local number, 54Q 36.

LOCATION.--Lat 38°20'55", long 77°01'13", Hydrologic Unit 02070011, 400 ft west of Higley Road, 0.2 mi north of intersection of Higley Road and Tisdale Road, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 8 ft, 18 to 18.5 ft, depth 18.5 ft, screened 8 to 18 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to October 1994, monthly measurement with chalked tape.

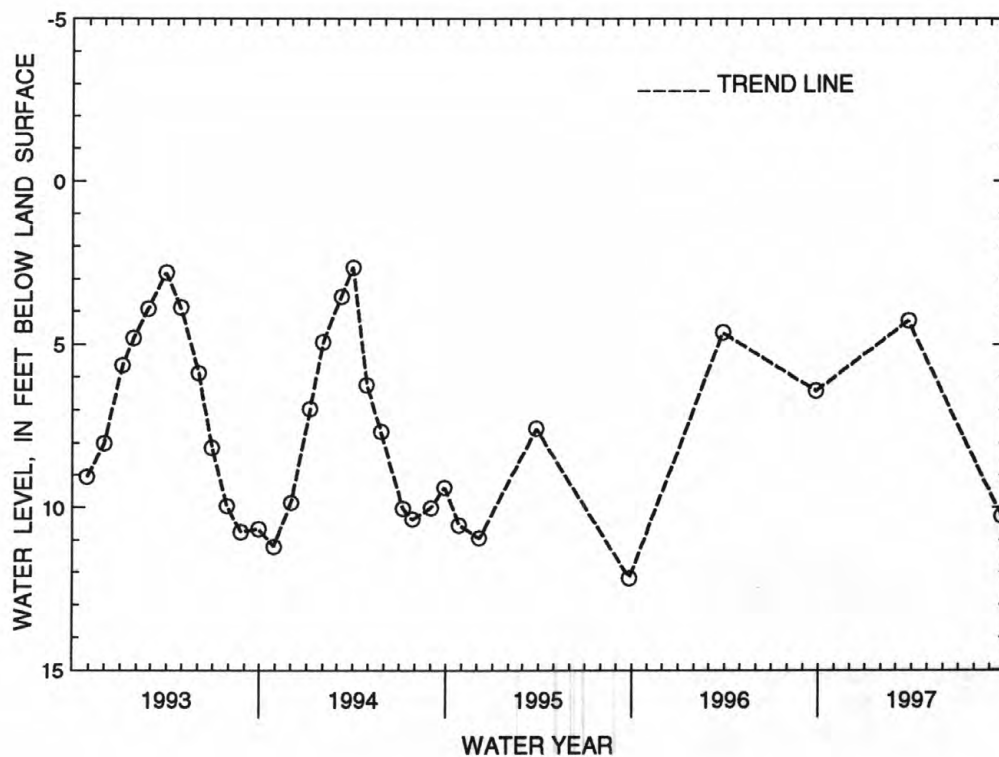
DATUM.--Elevation of land-surface datum is 20.24 ft above sea level. Measuring point: Top of casing, 1.8 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.66 ft below land-surface datum, Mar. 31, 1994; lowest measured, 12.18 ft below land-surface datum, Sept. 26, 1995.

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

	DATE	WATER LEVEL	DATE	WATER LEVEL
	MAR 25	4.29	SEP 24	10.28
WATER YEAR 1997	HIGHEST	4.29	MAR 25, 1997	
	LOWEST	10.28	SEP 24, 1997	



GROUND-WATER LEVELS

KING GEORGE COUNTY

382042077011901. Local number, 54Q 37.

LOCATION.--Lat 38°20'42", long 77°01'19", Hydrologic Unit 02070011, 75 ft southwest of unnamed road, 0.3 mi northwest of intersection of Tisdale Road and unnamed road, 0.3 mi west of the Potomac River, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 8 ft, 18 to 18.5 ft, depth 18.5 ft, screened 8 to 18 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to October 1994, monthly measurement with chalked tape.

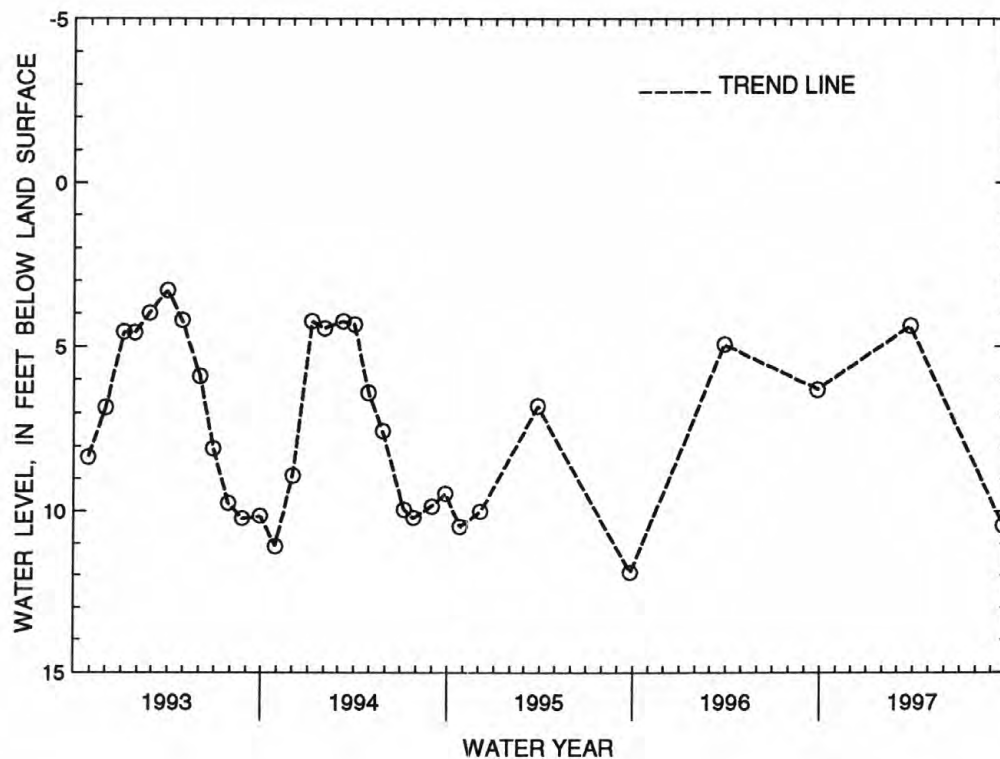
DATUM.--Elevation of land-surface datum is 15.81 ft above sea level. Measuring point: Top of casing, 1.65 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.30 ft below land-surface datum, Mar. 30, 1993; lowest measured, 11.91 ft below land-surface datum, Sept. 26, 1995.

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

		DATE	WATER LEVEL	DATE	WATER LEVEL
		MAR 25	4.39	SEP 24	10.44
WATER YEAR 1997	HIGHEST	4.39	MAR 25, 1997		
	LOWEST	10.44	SEP 24, 1997		



GROUND-WATER LEVELS

KING GEORGE COUNTY

382054077024201. Local number, 54Q 39.

LOCATION.--Lat 38°20'54", long 77°02'42", Hydrologic Unit 02070011, 50 ft southwest of Bennion Road, 0.3 mi southeast of intersection of Bennion Road and Blandy Boulevard, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 5 ft, 15 to 17.5 ft, depth 17.5 ft, screened 5 to 15 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to October 1994, monthly measurement with chalked tape.

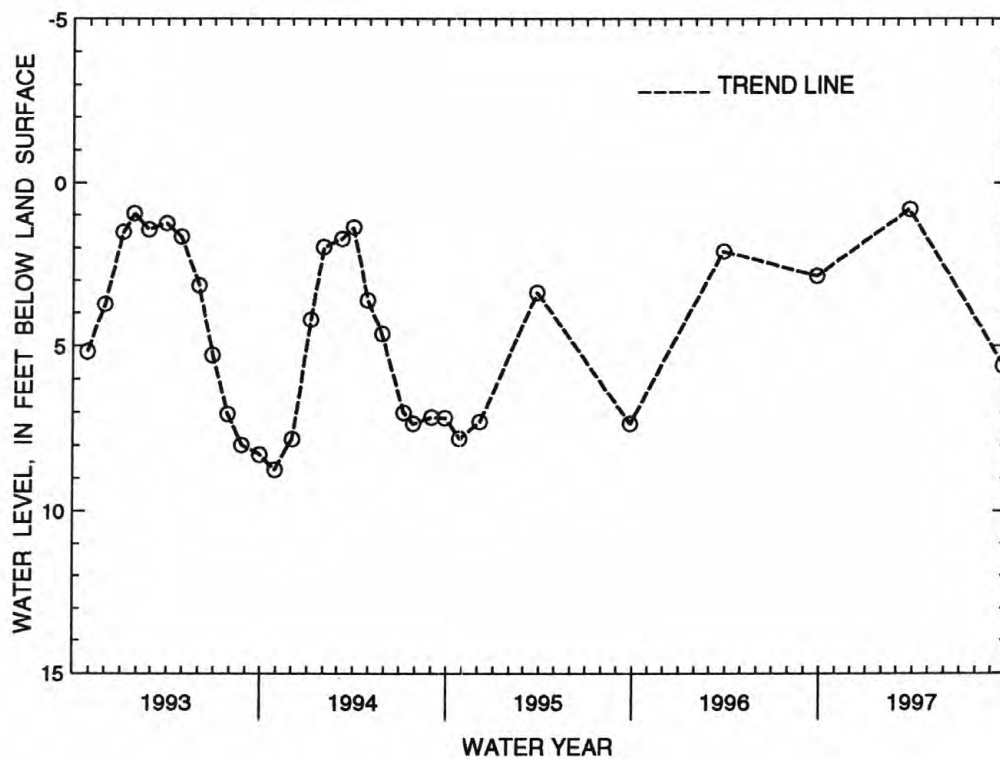
DATUM.--Elevation of land-surface datum is 23.43 ft above sea level. Measuring point: Top of casing, 1.85 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.81 ft below land-surface datum, Mar. 25, 1997; lowest measured, 8.75 ft below land-surface datum, Oct. 28, 1993.

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

		DATE	WATER LEVEL	DATE	WATER LEVEL
		MAR 25	0.81	SEP 24	5.58
WATER YEAR 1997	HIGHEST	0.81	MAR 25, 1997		
	LOWEST	5.58	SEP 24, 1997		



GROUND-WATER LEVELS

KING GEORGE COUNTY

382042077022401. Local number, 54Q 40.

LOCATION.--Lat 38°20'42", long 77°02'24", Hydrologic Unit 02070011, 50 ft southwest of Bennion Road, 0.6 mi southeast of intersection of Bennion Road and Blandy Boulevard, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 5 ft, 15 to 17.5 ft, depth 17.5 ft, screened 5 to 15 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to October 1994, monthly measurement with chalked tape.

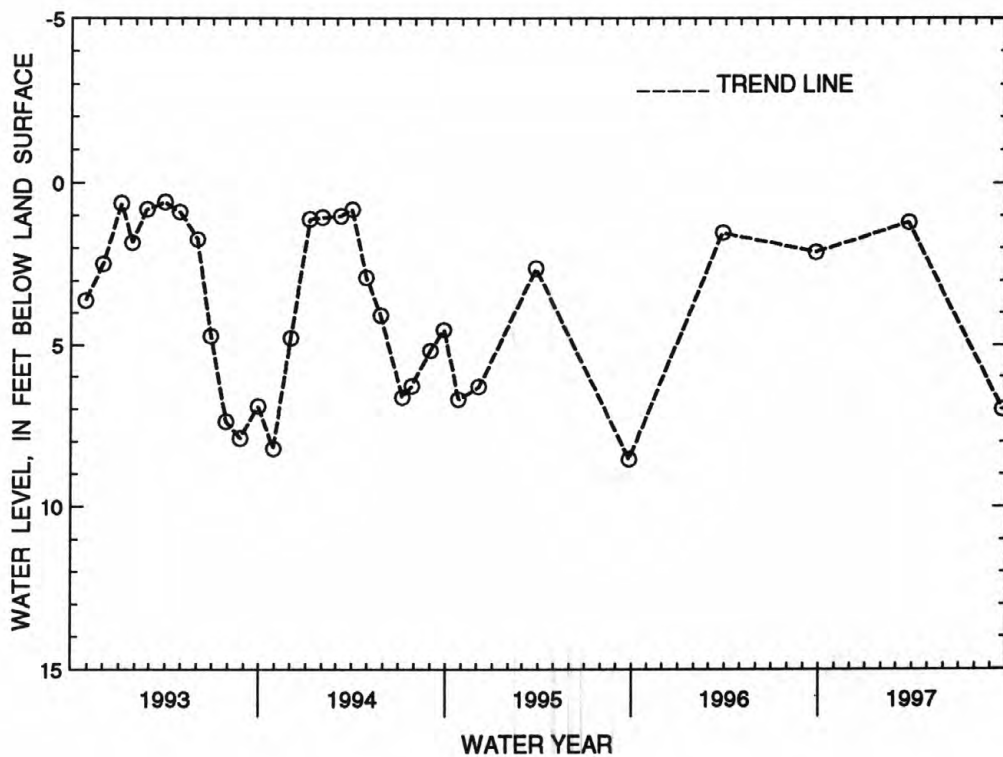
DATUM.--Elevation of land-surface datum is 21.83 ft above sea level. Measuring point: Top of casing, 1.89 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.59 ft below land-surface datum, Mar. 30, 1993; lowest measured, 8.56 ft below land-surface datum, Sept. 26, 1995.

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

		DATE	WATER LEVEL	DATE	WATER LEVEL
		MAR 25	1.20	SEP 24	7.01
WATER YEAR 1997	HIGHEST	1.20	MAR 25, 1997		
	LOWEST	7.01	SEP 24, 1997		



GROUND-WATER LEVELS

KING GEORGE COUNTY

382027077020201. Local number, 54Q 41.

LOCATION.--Lat 38°20'27", long 77°02'02", Hydrologic Unit 02070011, at intersection of Bennion Road and Caskey Road, 75 ft southwest of intersection, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 3 ft, 13 to 15.5 ft, depth 15.5 ft, screened 3 to 13 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to October 1994, monthly measurement with chalked tape.

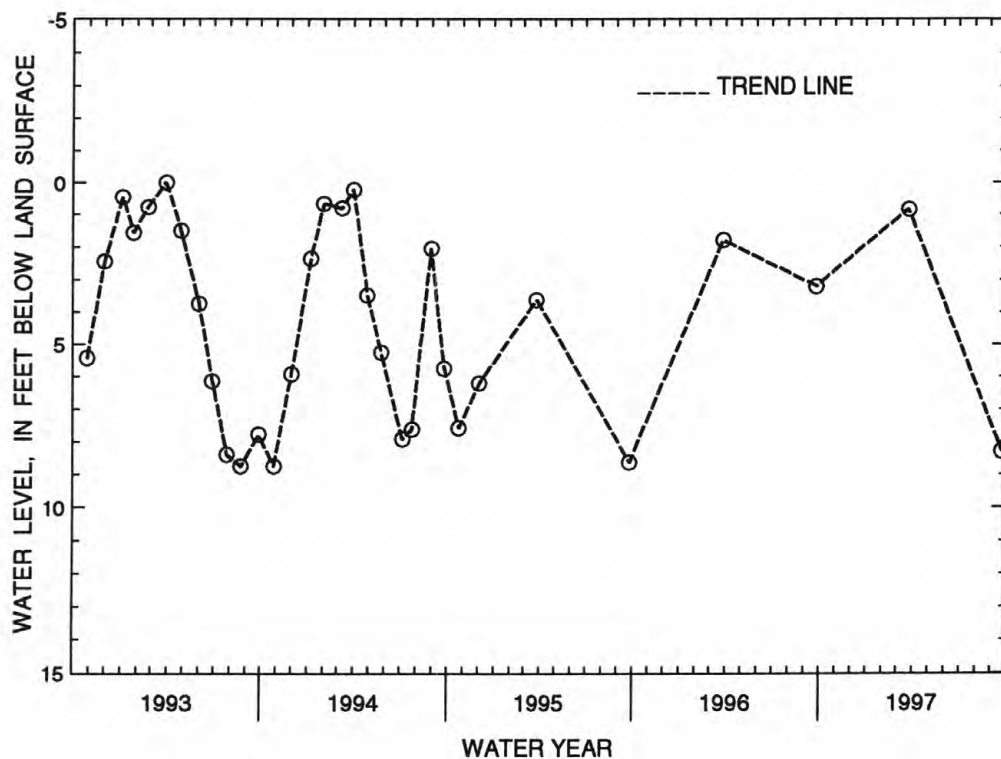
DATUM.--Elevation of land-surface datum is 13.68 ft above sea level. Measuring point: Top of casing, 1.93 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, at land-surface datum, Mar. 30, 1993; lowest measured, 8.75 ft below land-surface datum, Oct. 28, 1993.

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

		DATE	WATER LEVEL	DATE	WATER LEVEL
		MAR 25	0.84	SEP 24	8.30
WATER YEAR 1997	HIGHEST	0.84	MAR 25, 1997		
	LOWEST	8.30	SEP 24, 1997		



GROUND-WATER LEVELS

KING GEORGE COUNTY

382014077020101. Local number, 54Q 42.

LOCATION.--Lat 38°20'14", long 77°02'01", Hydrologic Unit 02070011, 50 ft west of Caskey Road, 0.2 mi south of intersection of Bennion Road and Caskey Road, 0.7 mi north of intersection of Caskey Road and Dahlgren Road, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 12.3 ft, 22.3 to 24.8 ft, depth 24.8 ft, screened 12.3 to 22.3 ft.

INSTRUMENTATION.--Digital recorder--60-minute punch. Prior to November 1994, monthly measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 14.5 ft above sea level. Measuring point: Top of casing, 2.65 ft above land-surface datum prior to Nov. 4, 1994; top of recorder shelf, 3.14 ft thereafter.

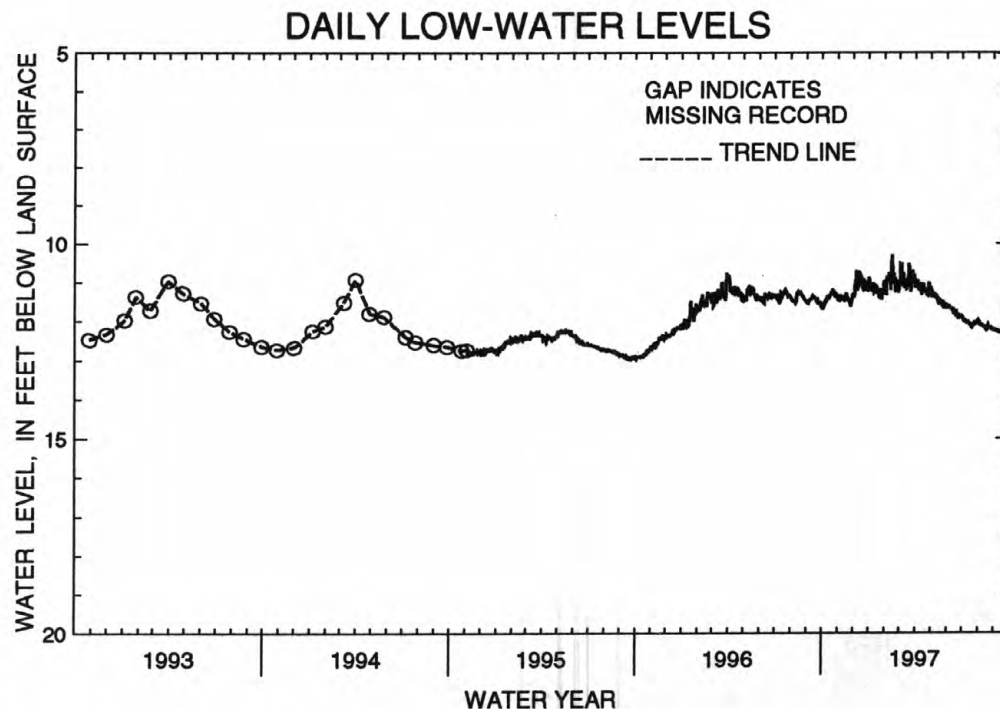
PERIOD OF RECORD.--October 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.03 ft below land-surface datum, Mar. 6, 1997; lowest measured, 12.98 ft below land-surface datum, Sept. 22, 23, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.64	11.42	11.29	11.05	10.90	10.59	11.07	11.31	11.65	12.00	12.09	12.26
10	11.45	11.42	11.18	11.03	10.77	10.76	11.18	11.39	11.68	12.04	12.13	12.26
15	11.45	11.46	10.85	11.11	10.32	11.16	11.23	11.46	11.82	12.07	12.17	12.30
20	11.27	11.41	11.16	11.20	11.06	10.53	11.26	11.56	11.80	12.16	12.17	12.41
25	11.33	11.45	11.22	11.25	11.09	11.08	11.33	11.49	11.85	12.06	12.17	12.34
EOM	11.39	11.40	11.22	10.97	11.26	10.81	11.13	11.59	11.91	12.03	12.23	12.44

WATER YEAR 1997 HIGHEST INSTANTANEOUS 10.03 MAR 06, 1997
 LOWEST INSTANTANEOUS 12.44 SEP 30, 1997



GROUND-WATER LEVELS

KING GEORGE COUNTY

382004077015701. Local number, 54Q 43.

LOCATION.--Lat 38°20'04", long 77°01'57", Hydrologic Unit 02070011, 100 ft east of Caskey Road, 0.4 mi south of intersection of Bennion Road and Caskey Road, 0.5 mi north of intersection of Caskey Road and Dahlgren Road, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 9.3 ft, 14.3 to 16.8 ft, depth 16.8 ft, screened 9.3 to 14.3 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. May 20, 1993, to Sept. 27, 1994, monthly measurement with chalked tape. Prior to May 20, 1993, digital recorder--60-minute punch. Measurement with chalked tape Sept. 30, 1992.

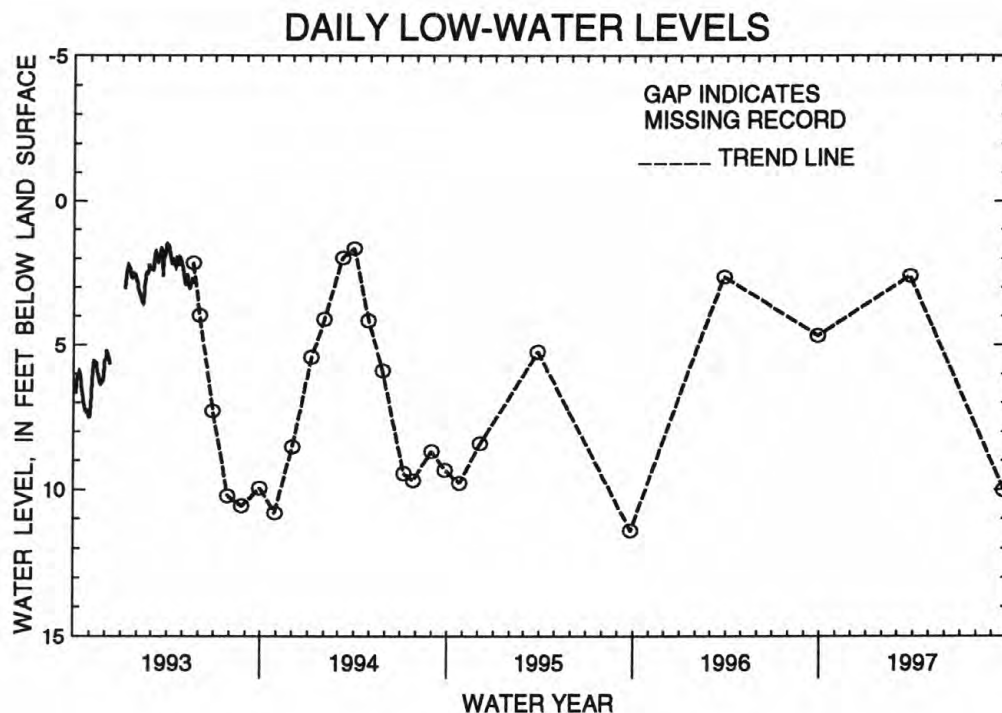
DATUM.--Elevation of land-surface datum is 13.89 ft above sea level. Measuring point: Top of casing, 2.58 ft above land-surface datum. Prior to May 28, 1993, measuring point was top of recorder shelf, 3.0 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 1.47 ft below land-surface datum, Mar. 30, 1993; lowest measured, 11.42 ft below land-surface datum, Sept. 26, 1995.

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

	DATE	WATER LEVEL	DATE	WATER LEVEL
	MAR 25	2.61	SEP 24	10.02
WATER YEAR 1997	HIGHEST	2.61	MAR 25, 1997	
	LOWEST	10.02	SEP 24, 1997	



GROUND-WATER LEVELS

KING GEORGE COUNTY

381946077015901. Local number, 54Q 44.

LOCATION.--Lat 38°19'46", long 77°01'59", Hydrologic Unit 02070011, 25 ft west of Caskey Road, 600 ft north of intersection of Dahlgren Road and Caskey Road, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 12 ft, 22 to 24.5 ft, depth 24.5 ft, screened 12 to 22 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to October 1994, monthly measurement with chalked tape.

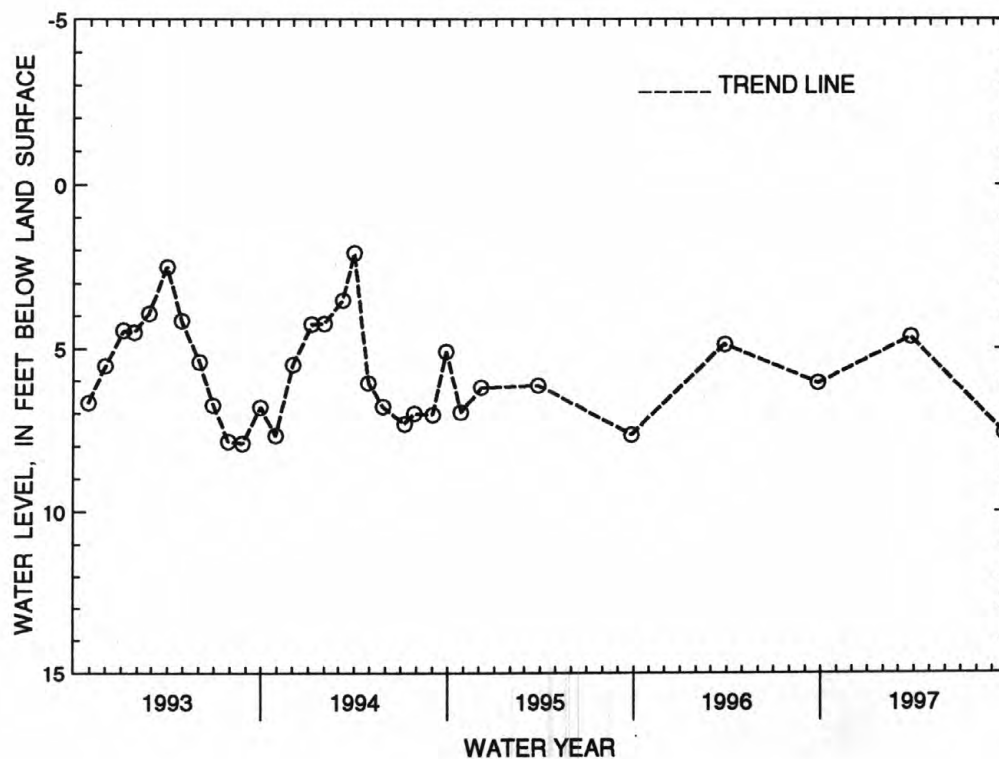
DATUM.--Elevation of land-surface datum is 16.44 ft above sea level. Measuring point: Top of casing, 0.35 ft below land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.08 ft below land-surface datum, Mar. 31, 1994; lowest measured, 7.93 ft below land-surface datum, Aug. 25, 1993.

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

		DATE	WATER LEVEL		DATE	WATER LEVEL
		MAR 25	4.65		SEP 24	7.61
WATER YEAR 1997	HIGHEST	4.65	MAR 25, 1997			
	LOWEST	7.61	SEP 24, 1997			



GROUND-WATER LEVELS

KING GEORGE COUNTY

381946077014201. Local number, 54Q 46.

LOCATION.--Lat 38°19'46", long 77°01'42", Hydrologic Unit 02070011, 200 ft west of Tisdale Road at edge of woods, 0.2 mi northeast of intersection of Dahlgren Road and Tisdale Road, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 4.5 ft, 14.5 to 17 ft, depth 17 ft, screened 4.5 to 14.5 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to October 1994, monthly measurement with chalked tape.

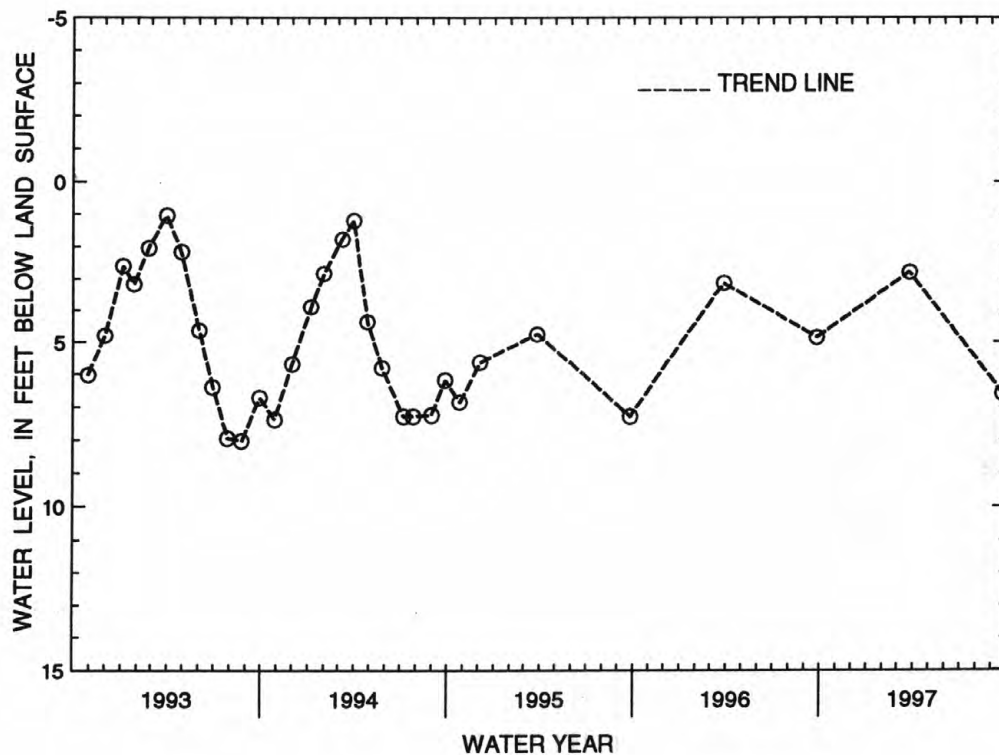
DATUM.--Elevation of land-surface datum is 14.61 ft above sea level. Measuring point: Top of casing, 2.3 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.05 ft below land-surface datum, Mar. 30, 1993; lowest measured, 8.04 ft below land-surface datum, Aug. 25, 1993.

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

		DATE	WATER LEVEL	DATE	WATER LEVEL
		MAR 25	2.80	SEP 24	6.60
WATER YEAR 1997	HIGHEST	2.80	MAR 25, 1997		
	LOWEST	6.60	SEP 24, 1997		



GROUND-WATER LEVELS

KING GEORGE COUNTY

382010077020001. Local number, 54Q 47.

LOCATION.--Lat 38°20'10", long 77°02'00", Hydrologic Unit 02070011, 50 ft west of Caskey Road, 0.3 mi south of intersection of Bennion Road and Caskey Road, 0.6 mi north of intersection of Dahlgren Road and Caskey Road, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 12 ft, 22 to 24.5 ft, depth 24.5 ft, screened 12 to 22 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to October 1994, monthly measurement with chalked tape.

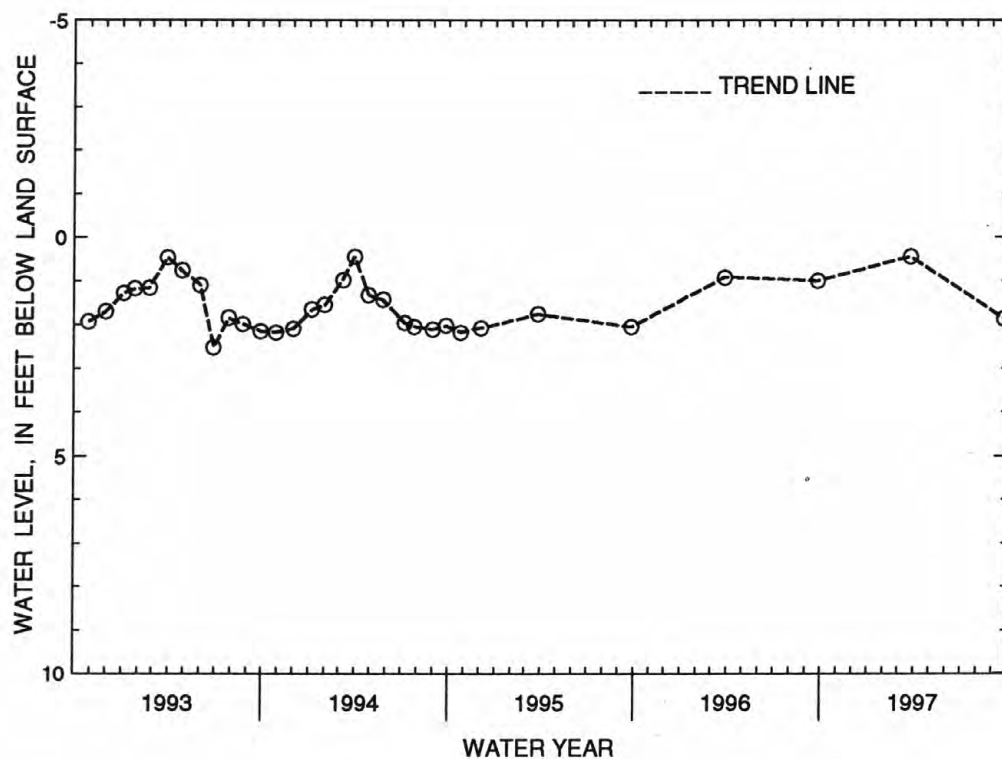
DATUM.--Elevation of land-surface datum is 3.91 ft above sea level. Measuring point: Top of casing, 2.7 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.45 ft below land-surface datum, Mar. 31, 1994, Mar. 25, 1997; lowest measured, 2.53 ft below land-surface datum, June 29, 1993.

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

		DATE	WATER LEVEL	DATE	WATER LEVEL
		MAR 25	0.45	SEP 24	1.87
WATER YEAR 1997	HIGHEST	0.45	MAR 25, 1997		
	LOWEST	1.87	SEP 24, 1997		



GROUND-WATER LEVELS

KING GEORGE COUNTY

381926077023201. Local number, 54Q 49.

LOCATION.--Lat 38°19'26", long 77°02'32", Hydrologic Unit 02070011, 300 ft west of Sampson Road in open field, 0.1 mi south of intersection of Sampson Road and Caffee Road, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 9.5 ft, 19.5 to 25 ft, depth 25 ft, screened 9.5 to 19.5 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to October 1994, monthly measurement with chalked tape.

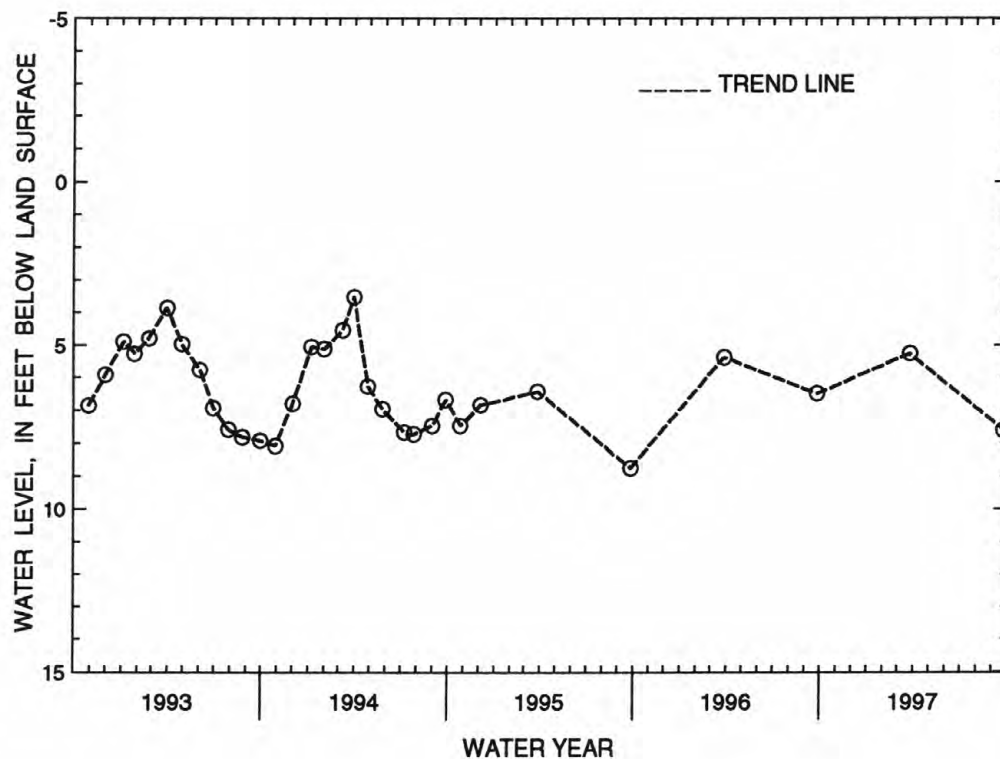
DATUM.--Elevation of land-surface datum is 10.62 ft above sea level. Measuring point: Top of casing, 2.5 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.53 ft below land-surface datum, Mar. 31, 1994; lowest measured, 8.75 ft below land-surface datum, Sept. 26, 1995.

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

		DATE	WATER LEVEL	DATE	WATER LEVEL
		MAR 25	5.26	SEP 24	7.60
WATER YEAR 1997	HIGHEST	5.26	MAR 25, 1997		
	LOWEST	7.60	SEP 24, 1997		



GROUND-WATER LEVELS

KING GEORGE COUNTY

381926077021701. Local number, 54Q 50.

LOCATION.--Lat 38°19'26", long 77°02'17", Hydrologic Unit 02070011, 325 ft southwest of Welch Road behind movie theatre at golf course, 0.3 mi north of intersection of Sampson Road and Welch Road, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 8 ft, 18 to 20.5 ft, depth 20.5 ft, screened 8 to 18 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to October 1994, monthly measurement with chalked tape.

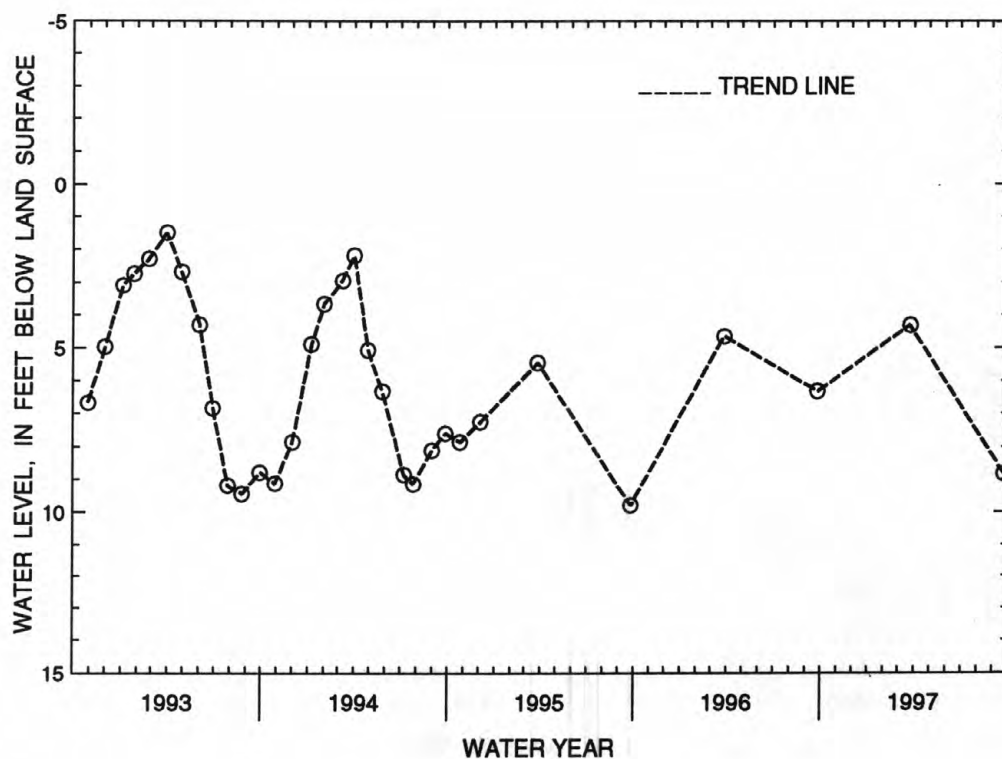
DATUM.--Elevation of land-surface datum is 10.80 ft above sea level. Measuring point: Top of casing, 1.85 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.48 ft below land-surface datum, Mar. 30, 1993; lowest measured, 9.80 ft below land-surface datum, Sept. 26, 1995.

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

		DATE	WATER LEVEL		DATE	WATER LEVEL
		MAR 25	4.32		SEP 24	8.83
WATER YEAR 1997	HIGHEST	4.32	MAR 25, 1997			
	LOWEST	8.83	SEP 24, 1997			



GROUND-WATER LEVELS

KING GEORGE COUNTY

381937077024801. Local number, 54Q 51.

LOCATION.--Lat 38°19'37", long 77°02'48", Hydrologic Unit 02070011, 75 ft west of Gilmore Road, 0.3 mi south of intersection of Dahlgren Road and Gilmore Road, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 5 ft, 15 to 15.5 ft, depth 15.5 ft, screened 5 to 15 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to October 1994, monthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 7.95 ft above sea level. Measuring point: Top of casing, 2.2 ft above land-surface datum.

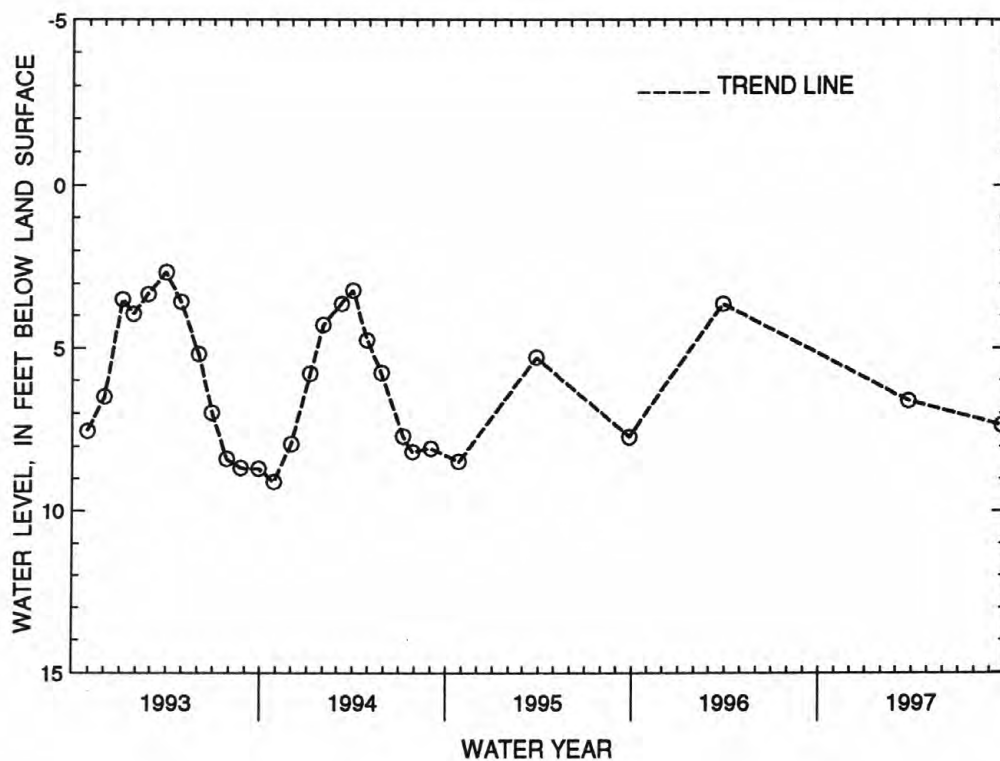
PERIOD OF RECORD.--October 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.66 ft below land-surface datum, Mar. 30, 1993; lowest measured, 9.10 ft below land-surface datum, Oct. 28, 1993.

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

DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 25	6.61	SEP 24	7.36

WATER YEAR 1997	HIGHEST	6.61	MAR 25, 1997
	LOWEST	7.36	SEP 24, 1997



GROUND-WATER LEVELS

KING GEORGE COUNTY

381954077024901. Local number, 54Q 52.

LOCATION.--Lat 38°19'54", long 77°02'49", Hydrologic Unit 02070011, 200 ft northeast of Dahlgren Road behind northwest corner of U.S. Post Office, 300 ft northwest of intersection of Dahlgren Road and Gilmore Road, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 7 ft, 12 to 14.5 ft, depth 14.5 ft, screened 7 to 12 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to October 1994, monthly measurement with chalked tape by USGS personnel.

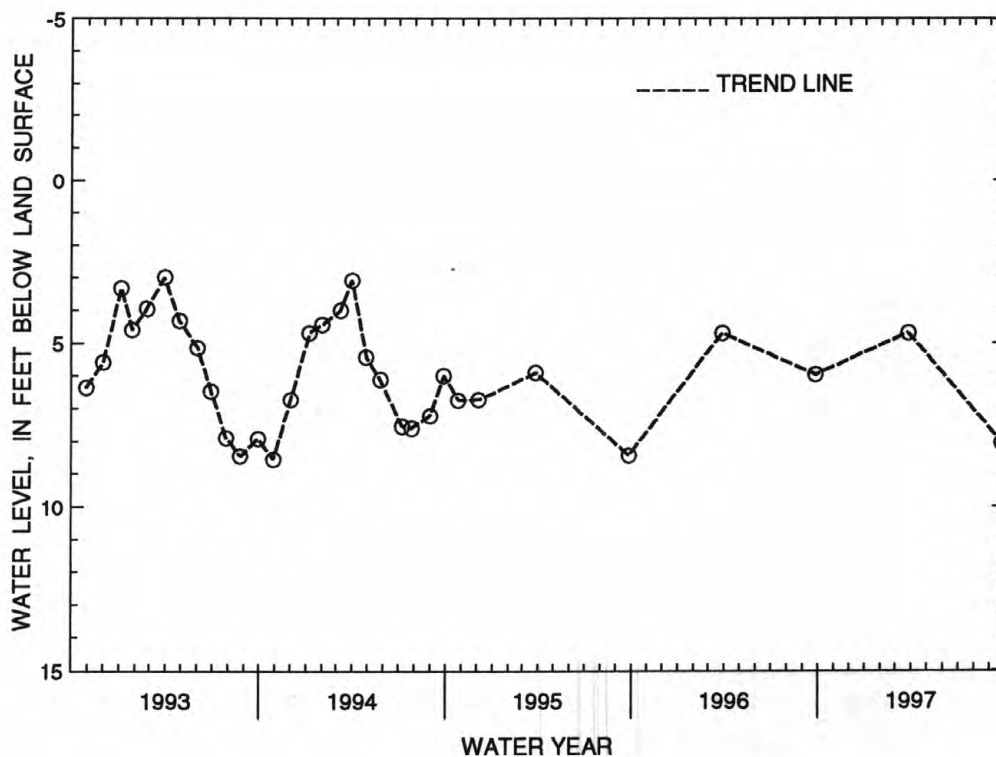
DATUM.--Elevation of land-surface datum is 18.48 ft above sea level. Measuring point: Top of casing, 2.4 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.01 ft below land-surface datum, Mar. 30, 1993; lowest measured, 8.55 ft below land-surface datum, Oct. 28, 1993.

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

		DATE	WATER LEVEL	DATE	WATER LEVEL
		MAR 25	4.69	SEP 24	8.05
WATER YEAR 1997	HIGHEST	4.69	MAR 25, 1997		
	LOWEST	8.05	SEP 24, 1997		



GROUND-WATER LEVELS

KING GEORGE COUNTY

382113077024101. Local number, 54Q 53.

LOCATION.--Lat 38°21'13", long 77°02'41", Hydrologic Unit 02070011, 300 ft southeast of U.S. Highway 301, 0.2 mi northeast of intersection of Bennion Road and Blandy Boulevard, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 12.5 ft, 17.5 to 20 ft, depth 20 ft, screened 12.5 to 17.5 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. May 28, 1993, to Sept. 25, 1994, digital recorder--60-minute punch. Prior to May 28, 1993, monthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 8.85 ft above sea level. Measuring point: Top of casing, 2.05 ft above land-surface datum. May 28, 1993, to Sept. 25, 1994, measuring point was top of recoder shelf, 2.51 ft above land-surface datum.

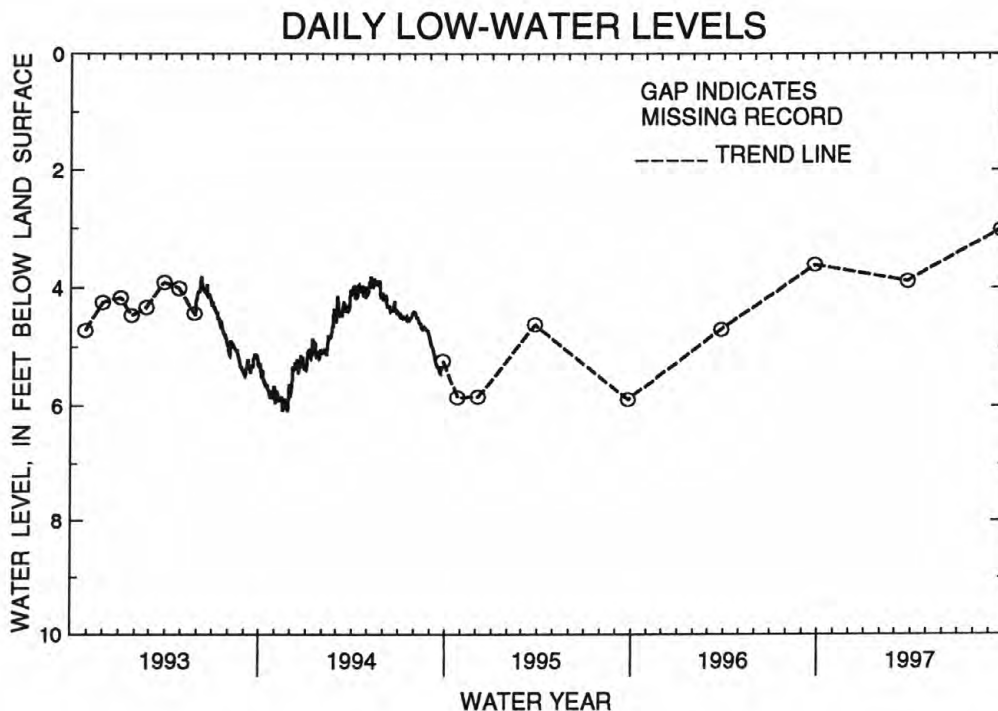
REMARKS--This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

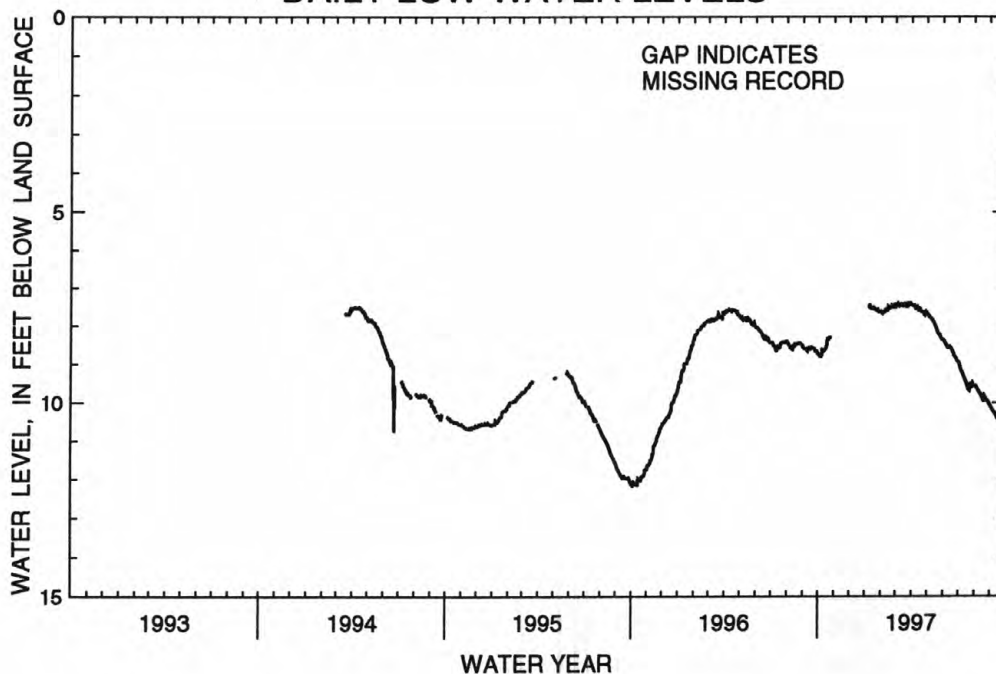
PERIOD OF RECORD.--October 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 3.02 ft below land-surface datum, Sept. 24, 1997; lowest recorded, 6.09 ft below land-surface datum, Nov. 16, 1993.

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

	DATE	WATER LEVEL	DATE	WATER LEVEL
	MAR 25	3.89	SEP 24	3.02
WATER YEAR 1997	HIGHEST	3.02	SEP 24, 1997	
	LOWEST	3.89	MAR 25, 1997	





GROUND-WATER LEVELS

KING GEORGE COUNTY

381737077024602. Local number, 54Q 56.

LOCATION.--Lat 38°17'37", long 77°02'46", Hydrologic Unit 02070011, 300 ft northeast of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 22.2 ft, 22.2 to 24.7 ft, depth 24.7 ft, screened 12.2 to 22.2 ft.

INSTRUMENTATION.--Digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 24.46 ft above sea level. Measuring point: Top of recorder shelf, 2.3 ft above land-surface datum.

REMARKS.--Missing record due to recorder malfunction.

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

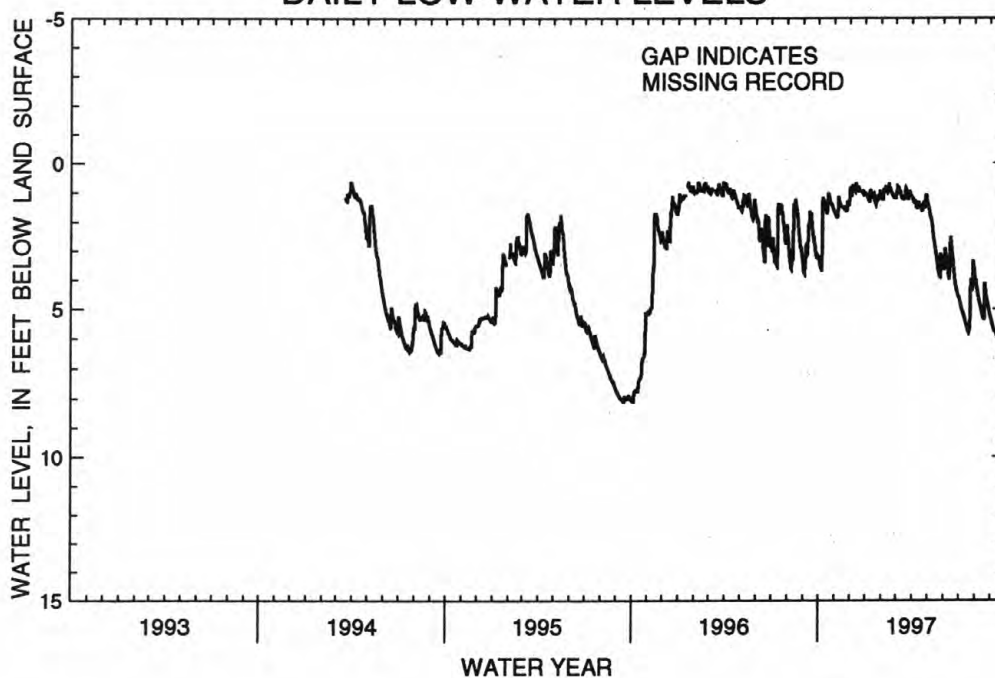
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.47 ft below land-surface datum, Jan. 20, 1996; lowest recorded, 8.09 ft below land-surface datum, Sept. 15-17, 1995, Oct. 3-5, 1995.

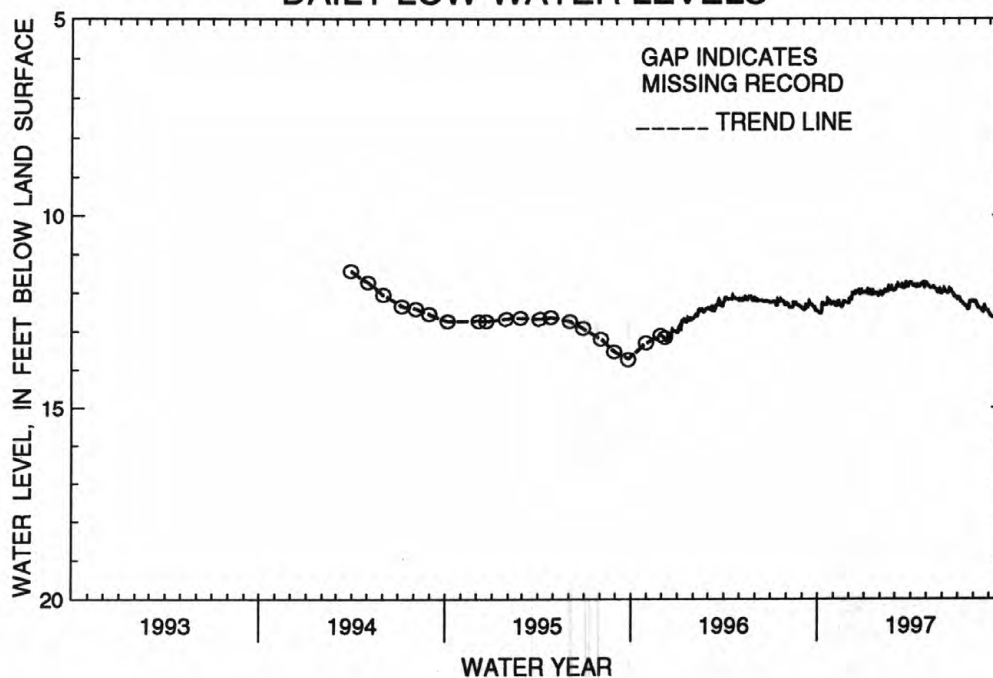
WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.56	1.84	1.09	1.16	.88	.83	1.36	1.62	2.96	4.86	4.22	5.56
10	1.18	1.25	.89	.92	.84	1.02	1.53	2.02	3.69	5.16	4.73	5.79
15	1.58	1.49	.80	1.20	.72	1.16	1.47	2.75	2.52	5.50	5.08	5.99
20	1.02	1.57	.91	1.36	1.02	.87	1.63	3.40	3.39	5.79	5.35	6.20
25	1.38	1.63	.96	1.14	1.19	1.23	1.44	3.90	4.23	3.97	4.69	6.12
EOM	1.62	1.40	1.03	1.04	1.21	1.12	1.16	3.61	4.56	3.60	5.21	6.26

WATER YEAR 1997 HIGHEST INSTANTANEOUS 0.60 DEC 12, 13, 1996
LOWEST INSTANTANEOUS 6.26 SEP 30, 1997

DAILY LOW-WATER LEVELS





GROUND-WATER LEVELS

KING GEORGE COUNTY

381759077011401. Local number, 54Q 59.

LOCATION.--Lat 38°17'59", long 77°01'14", Hydrologic Unit 02070011, 150 ft southwest of the Potomac River 1.5 mi northeast of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Confined aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 82.7 ft, 92.7 to 95.2 ft, depth 95.2 ft, screened 82.7 to 92.7 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personal. Prior to Dec. 6, 1995, digital recorder--60-minute punch.

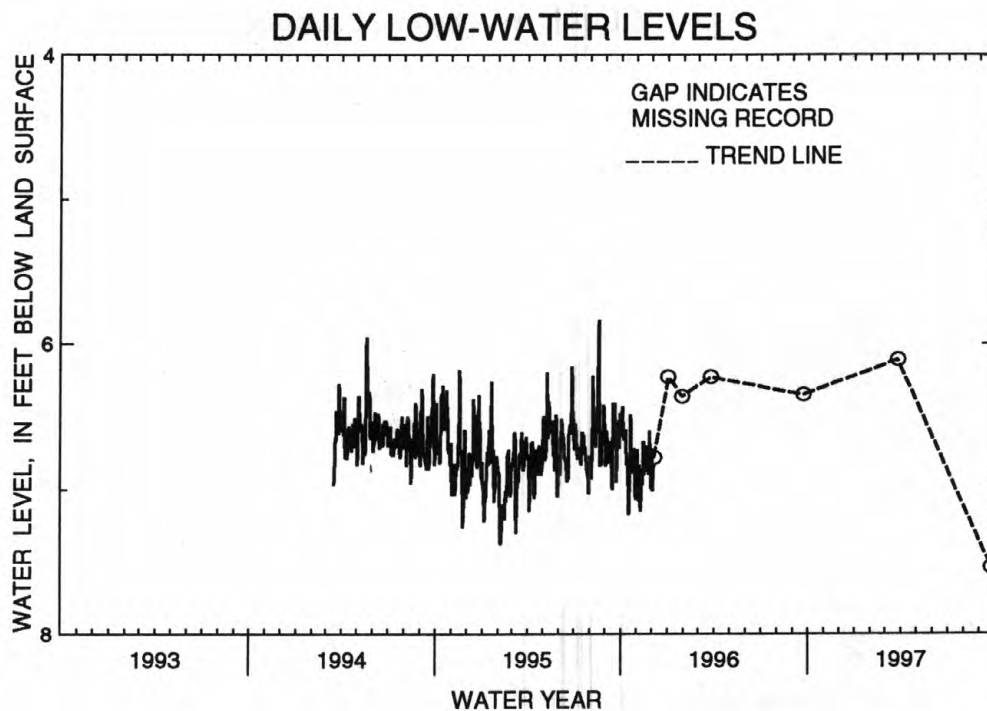
DATUM.--Elevation of land-surface datum is 8.16 ft above sea level. Measuring point: Top of casing, 2.16 ft above land-surface datum. Prior to Dec. 6, 1995, top of recorder shelf, 2.4 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 4.93 ft below land-surface datum, Aug. 19, 20, 1995; lowest measured, 7.54 ft below land-surface datum, Sept. 24, 1997.

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

		DATE	WATER LEVEL	DATE	WATER LEVEL
		MAR 25	6.11	SEP 24	7.54
WATER YEAR 1997	HIGHEST	6.11	MAR 25, 1997		
	LOWEST	7.54	SEP 24, 1997		



GROUND-WATER LEVELS

KING GEORGE COUNTY

381759077011402. Local number, 54Q 60.

LOCATION.--Lat 38°17'59", long 77°01'14", Hydrologic Unit 02070011, 150 ft southwest of the Potomac River, 1.5 mi northeast of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Confined aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 20.1 ft, 30.1 to 32.6 ft, depth 32.6 ft, screened 20.1 to 30.1 ft.

INSTRUMENTATION.--Occasional measurements with chalked tape by USGS personnel. Prior to Dec. 6, 1995, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 8.36 ft above sea level. Measuring point: Top of casing, 2.50 ft above land-surface datum. Prior to Dec. 6, 1995, top of recorder shelf, 2.9 ft above land-surface datum.

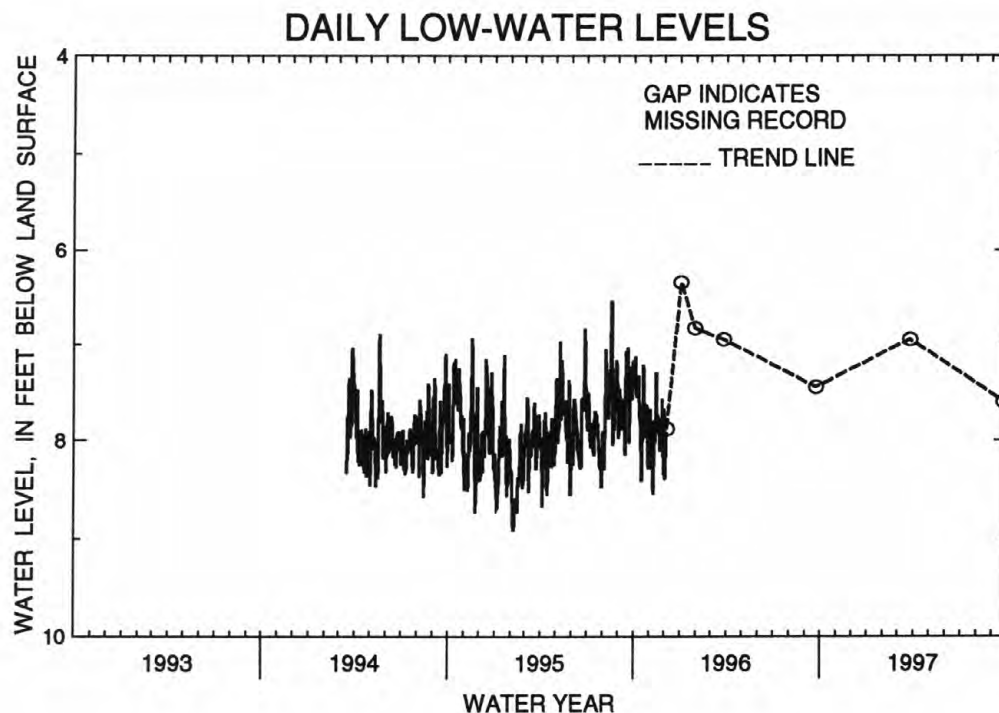
REMARKS--This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

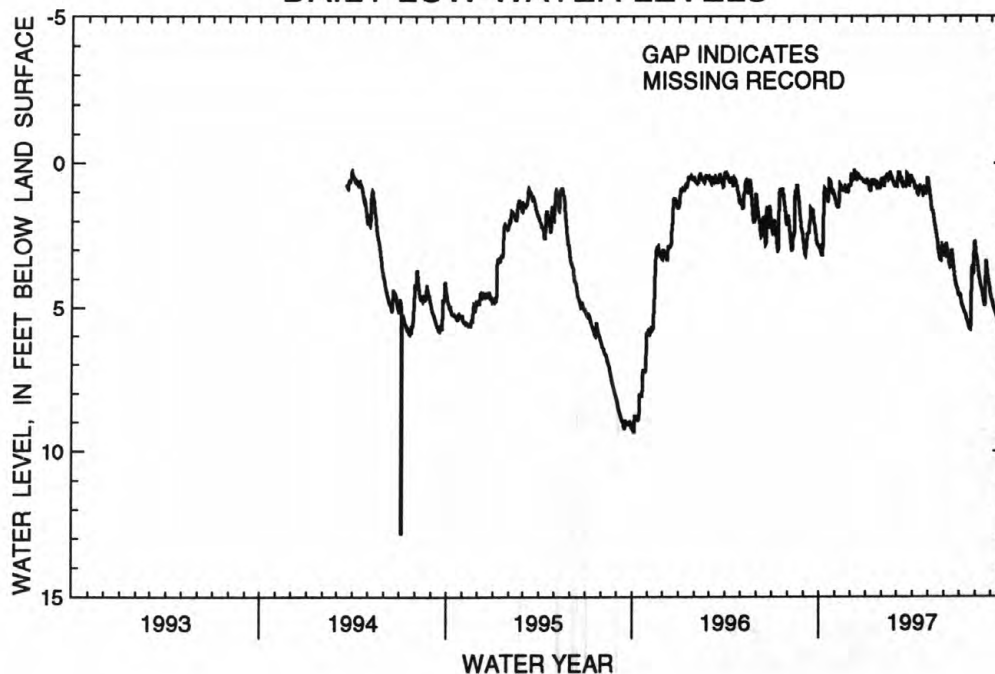
PERIOD OF RECORD.--March 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 5.28 ft below land-surface datum, Aug. 19, 1995; lowest recorded, 8.92 ft below land-surface datum, Feb. 2, 1995.

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

		DATE	WATER LEVEL	DATE	WATER LEVEL
		MAR 25	6.95	SEP 24	7.60
WATER YEAR 1997	HIGHEST	6.95	MAR 25, 1997		
	LOWEST	7.60	SEP 24, 1997		





GROUND-WATER LEVELS

KING GEORGE COUNTY

381814077030302. Local number, 54Q 62.

LOCATION.--Lat 38°18'14", long 77°03'03", Hydrologic Unit 02070011, 0.8 mi northwest of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 5.0 ft, 10.0 to 12.5 ft, depth 12.5 ft, screened 5.0 to 10.0 ft.

INSTRUMENTATION.--Digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 23.83 ft above sea level. Measuring point: Top of recorder shelf, 2.9 ft above land-surface datum.

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

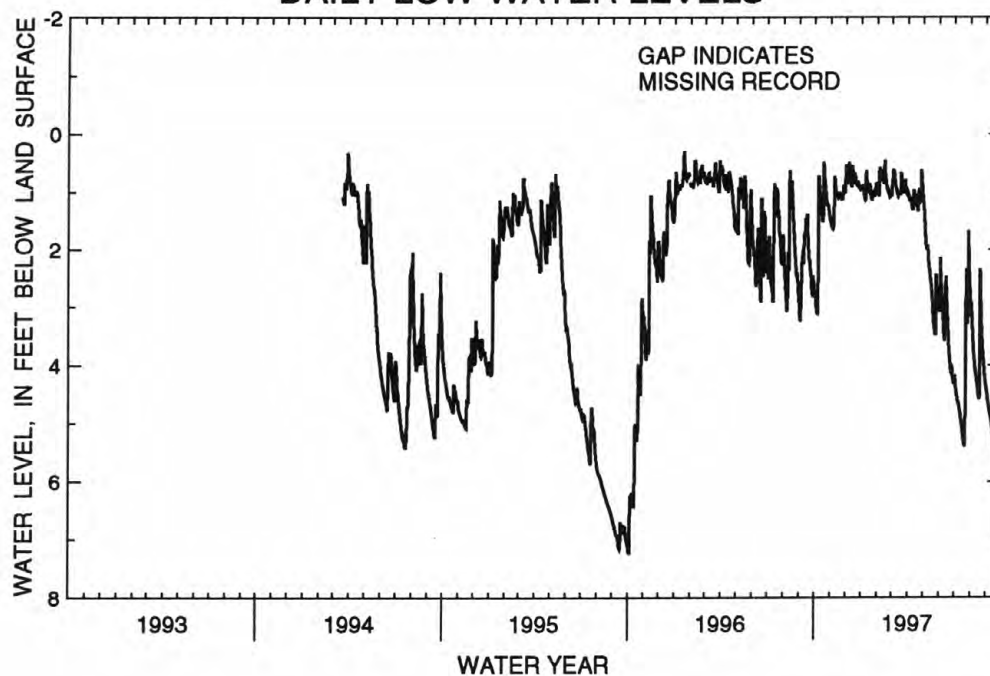
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.09 ft below land-surface datum, Jan. 19, 1996; lowest recorded, 7.23 ft below land-surface datum, Oct. 4, 5, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.08	1.64	.86	.99	.58	.67	1.15	1.57	2.46	4.42	3.11	4.59
10	.77	.83	.78	.63	.66	.95	1.30	1.93	3.30	4.64	3.94	4.87
15	1.38	1.09	.70	1.01	.45	1.00	1.10	2.40	2.48	4.94	4.29	5.14
20	.70	1.10	.78	1.08	.96	.73	1.33	2.98	3.52	5.30	4.57	5.42
25	1.19	1.13	.86	.99	1.09	1.02	1.06	3.47	4.10	2.34	3.62	5.11
EOM	1.46	.98	.96	.89	1.06	.98	.91	2.99	4.30	2.45	4.27	5.20

WATER YEAR 1997 HIGHEST INSTANTANEOUS 0.13 DEC 07, 12, 13, 1996
LOWEST INSTANTANEOUS 5.42 SEP 20, 1997

DAILY LOW-WATER LEVELS



GROUND-WATER LEVELS

KING GEORGE COUNTY

381758077023001. Local number, 54Q 63.

LOCATION.--Lat 38°17'58", long 77°02'30", Hydrologic Unit 02070011, 0.5 mi northeast of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Nanjemoy-Marlboro confining unit of Eocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 49.7 ft, 59.7 to 62.2 ft, depth 62.2 ft, screened 49.7 to 59.7 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

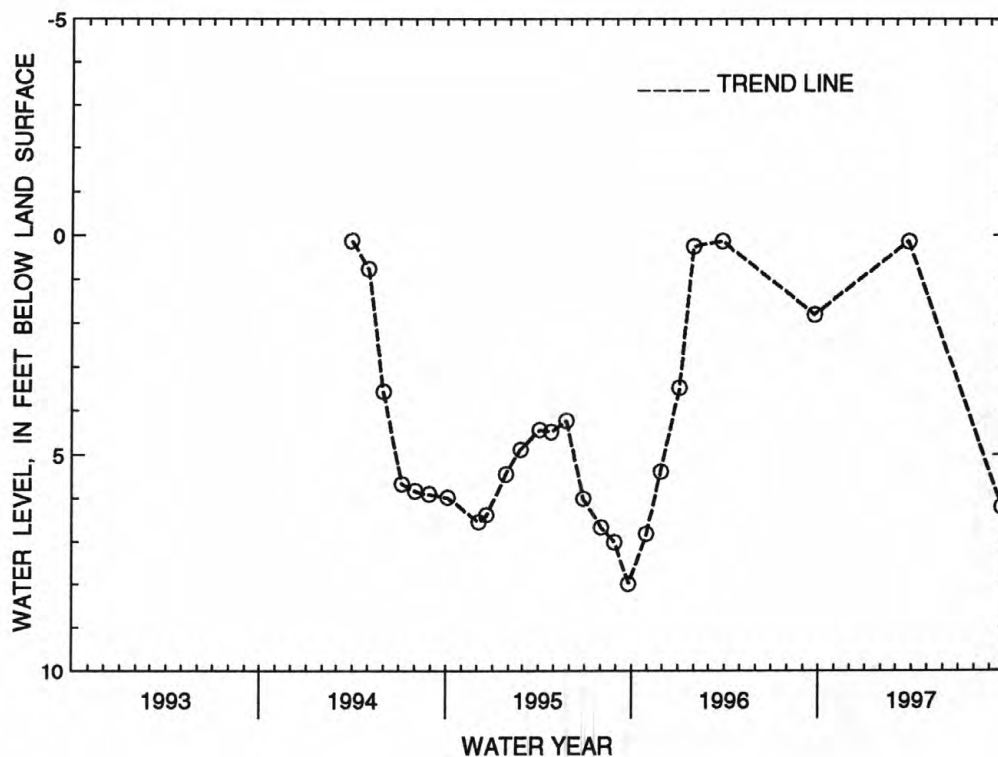
DATUM.--Elevation of land-surface datum is 22.42 ft above sea level. Measuring point: Top of casing, 0.05 ft below land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.12 ft below land-surface datum, Mar. 29, 1994; lowest measured, 7.99 ft below land-surface datum, Sept. 25, 1995.

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

		DATE	WATER LEVEL	DATE	WATER LEVEL
		MAR 25	0.14	SEP 24	6.20
WATER YEAR 1997	HIGHEST	0.14	MAR 25, 1997		
	LOWEST	6.20	SEP 24, 1997		



GROUND-WATER LEVELS

KING GEORGE COUNTY

381758077023002. Local number, 54Q 64.

LOCATION.--Lat 38°17'58", long 77°02'30", Hydrologic Unit 02070011, 0.5 mi northeast of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 2.8 ft, 12.8 to 13.3 ft, depth 13.3 ft, screened 2.8 to 12.8 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

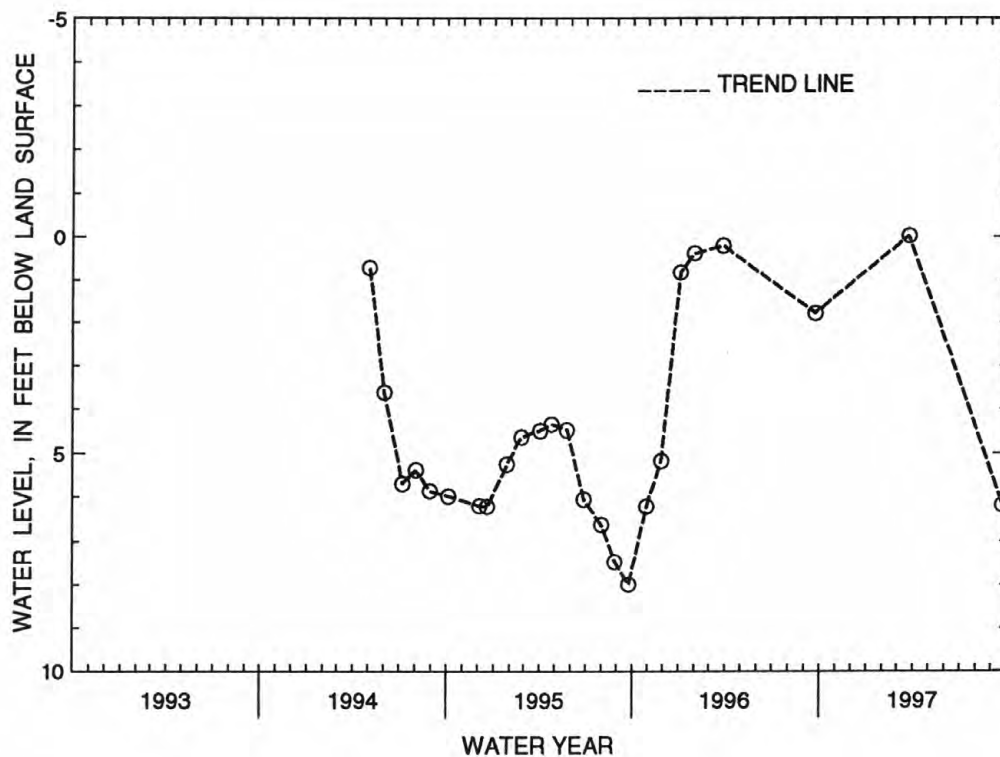
DATUM.--Elevation of land-surface datum is 22.2 ft above sea level. Measuring point: Top of casing, 0.16 ft below land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.02 ft above land-surface datum, Mar. 25, 1997; lowest measured, 8.00 ft below land-surface datum, Sept. 25, 1995.

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

	DATE	WATER LEVEL	DATE	WATER LEVEL
	MAR 25	-0.02	SEP 24	6.19
WATER YEAR 1997	HIGHEST	-0.02	MAR 25, 1997	
	LOWEST	6.19	SEP 24, 1997	



GROUND-WATER LEVELS

KING GEORGE COUNTY

381835077015601. Local number, 54Q 65.

LOCATION.--Lat 38°18'35", long 77°01'56", Hydrologic Unit 02070011, 0.2 mi southwest of Baber Point, 1.4 mi north-east of the main gage at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren.

Owner: U.S. Department of the Navy.

AQUIFER.--Confined aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 86.0 ft, 96.0 to 106.5 ft, depth 106.5 ft, screened 86.0 to 96.0 ft.

INSTRUMENTATION.--Digital recorder--60-minute punch. Prior to Dec. 18, 1996, occasional measurement with chalked tape by USGS personnel. Prior to Dec. 6, 1995, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 14.15 ft above sea level. Measuring point: Top of casing, 2.02 ft above land-surface datum. Prior to Dec. 6, 1995, and since Dec. 18, 1996, top of recorder shelf, 2.4 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 10.41 ft below land-surface datum, June 5, 1997; lowest recorded, 12.67 ft below land-surface datum, Feb. 6, 7, 1995.

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

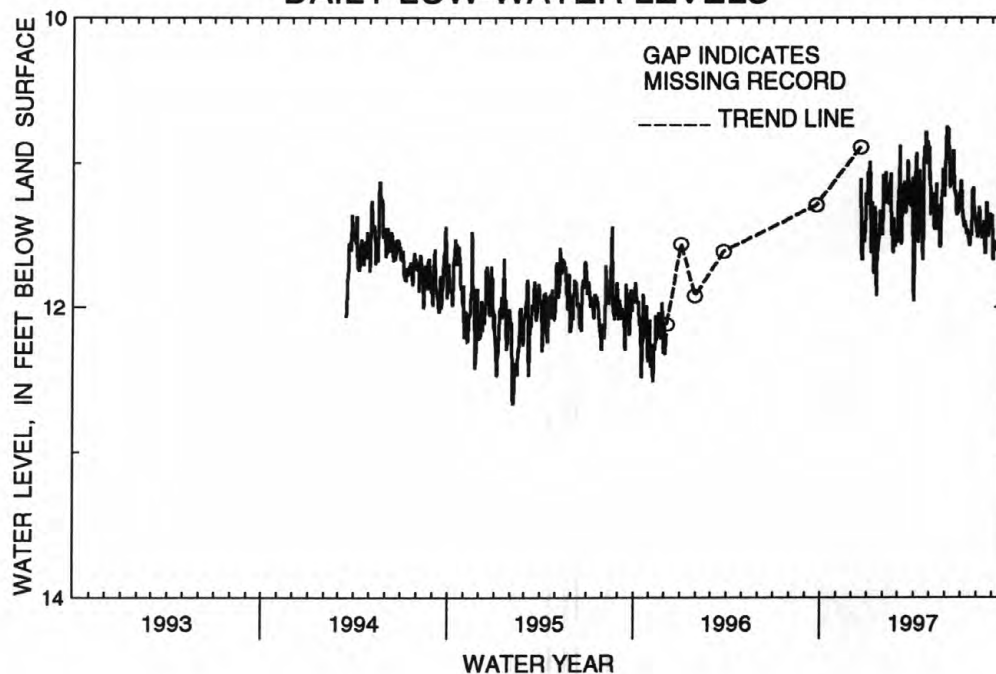
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 18	10.89	JAN 07	11.16	FEB 24	11.52	APR 30	10.80	JUN 25	11.16	AUG 26	11.37
19	10.90	29	11.36	MAR 25	11.12	JUN 02	11.06	JUN 29	11.25	SEP 24	11.71

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	10.99	11.06	10.88	11.08	11.29	10.76	11.37	11.41	11.54
10	---	---	---	11.27	11.14	11.26	11.55	11.39	11.05	11.40	11.46	---
15	---	---	---	11.67	11.07	11.20	11.33	11.14	11.08	11.46	11.45	---
20	---	---	11.50	11.55	11.62	10.98	11.38	11.36	11.20	11.55	11.51	---
25	---	---	11.54	11.33	11.54	11.15	10.79	11.29	11.33	11.25	11.49	11.66
EOM	---	---	11.29	11.37	11.55	11.71	10.96	11.23	11.20	11.41	11.36	11.66

WATER YEAR 1997
HIGHEST INSTANTANEOUS 10.41 JUN 05, 1997
LOWEST INSTANTANEOUS 11.96 APR 01, 1997

DAILY LOW-WATER LEVELS



GROUND-WATER LEVELS

KING GEORGE COUNTY

381835077015602. Local number, 54Q 66.

LOCATION.--Lat 38°18'35", long 77°01'56", Hydrologic Unit 02070011, 0.2 mi southwest of Baber Point, 1.4 mi north-east of the main gage at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren.

Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 12.2 ft, 17.2 to 19.7 ft, depth 19.7 ft, screened 12.2 to 17.2 ft.

INSTRUMENTATION.--Digital recorder--60-minute punch. Prior to Dec. 18, 1996, occasional measurement with chalked tape by USGS personnel. Prior to Dec. 6, 1995, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 14.05 ft above sea level. Measuring point: Top of casing, 2.03 ft above land-surface datum. Prior to Dec. 6, 1995, and since Dec. 18, 1996, top of recorder shelf, 2.5 ft above land-surface datum.

REMARKS.--Missing record due to recorder malfunction.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 2.76 ft below land-surface datum, Mar. 29, 1994; lowest recorded, 12.20 ft below land-surface datum, Sept. 21, 22, Oct. 4, 5, 1995.

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

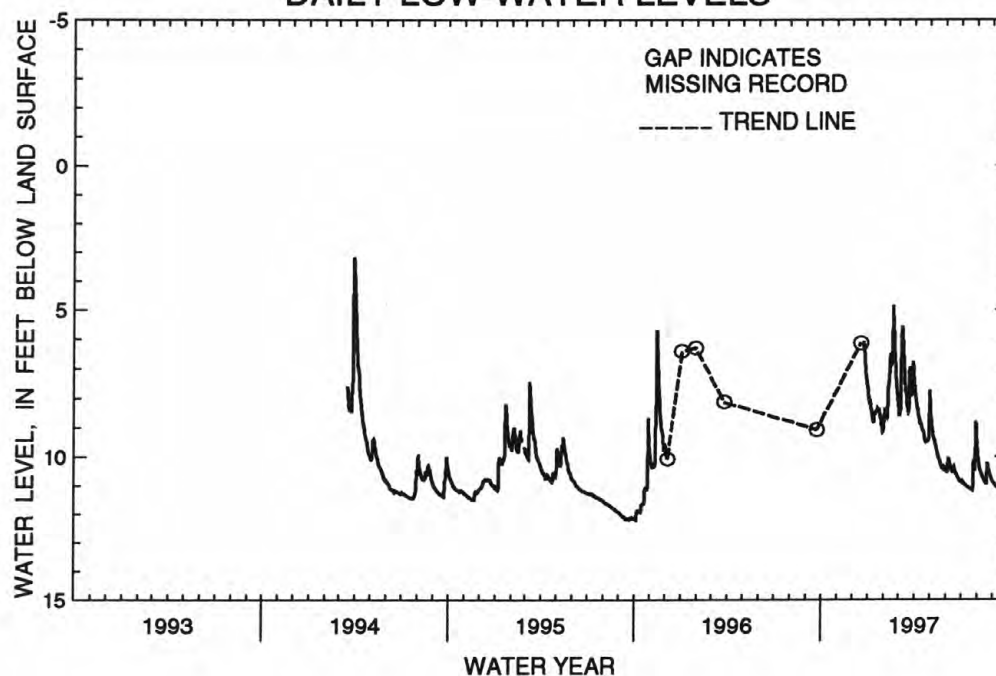
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 18	6.14	JAN 07	8.83	FEB 24	7.82	APR 30	8.02	JUL 29	6.90	SEP 24	11.42
19	6.13	29	8.81	MAR 25	7.95	JUN 02	10.66	AUG 26	10.78		

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	8.61	8.51	5.83	8.48	9.25	10.19	11.10	10.49	11.15
10	---	---	---	8.56	6.73	7.03	8.98	9.74	10.55	11.18	10.79	11.25
15	---	---	---	8.54	6.00	8.27	9.21	10.07	10.55	11.25	10.99	11.32
20	---	---	6.11	8.63	6.80	7.17	9.61	10.39	10.77	11.32	11.11	11.38
25	---	---	7.38	9.11	8.10	7.97	9.56	10.57	10.93	10.27	11.02	11.42
EOM	---	---	8.26	8.44	8.68	7.69	8.15	10.59	11.05	9.48	11.03	11.47

WATER YEAR 1997	HIGHEST INSTANTANEOUS	4.64	FEB 15, 16, 1997
	LOWEST INSTANTANEOUS	11.47	SEP 30, 1997

DAILY LOW-WATER LEVELS



GROUND-WATER LEVELS

KING GEORGE COUNTY

381829077040101. Local number, 54Q 67.

LOCATION.--Lat 38°18'29", long 77°04'01", Hydrologic Unit 02070011, 1.5 mi northwest of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Nanjemoy-Marlboro confining unit of Eocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 48.2 ft, 58.2 to 68.7 ft, depth 68.7 ft, screened 48.2 to 58.2 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Sept. 30, 1996, digital recorder--60-minute punch. Prior to Dec. 6, 1995, monthly measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 12.61 ft above sea level. Measuring point: Top of recorder shelf, 1.90 ft above land-surface datum. Prior to Dec. 6, 1995, and since Sept. 30, 1996, top of casing, 1.6 ft above land-surface datum.

REMARKS.--Water level affected by pumpage for water-quality sampling in July 1994. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

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

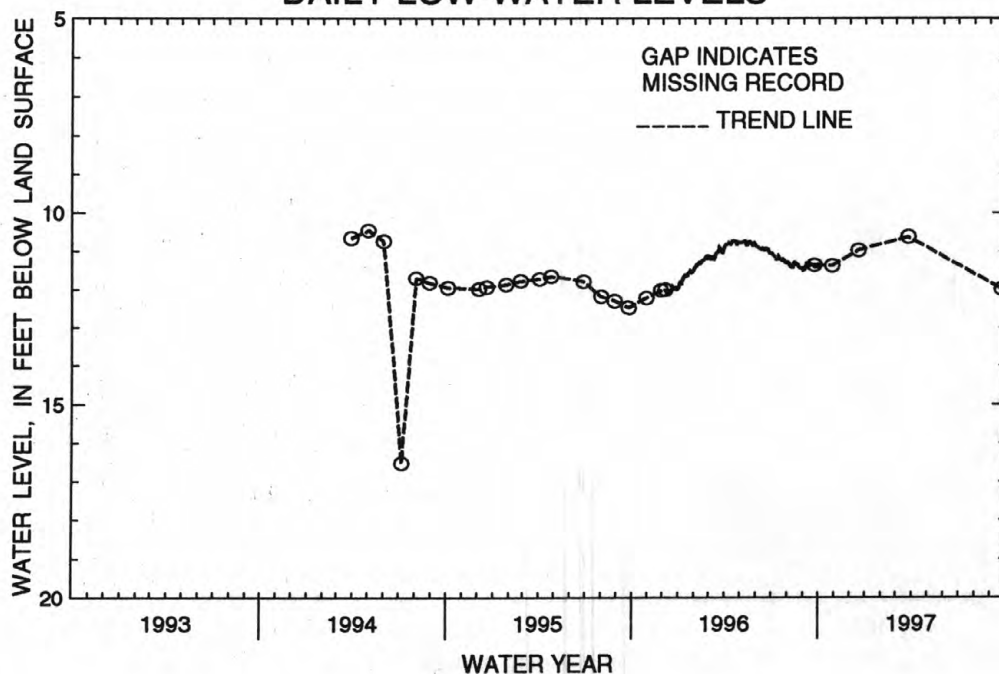
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.46 ft below land-surface datum, May 2, 1994; lowest measured from natural causes, 12.48 ft below land-surface datum, Sept. 25, 1995; lowest measured, 16.52 ft (caused by pumpage for water-quality sampling) below land-surface datum, July 6, 1994.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28	11.37	DEC 18	10.98	MAR 25	10.62	SEP 24	11.99

WATER YEAR 1997	HIGHEST	10.62	MAR 25, 1997
	LOWEST	11.99	SEP 24, 1997

DAILY LOW-WATER LEVELS



GROUND-WATER LEVELS

KING GEORGE COUNTY

381829077040102. Local number, 54Q 68.

LOCATION.--Lat 38°18'29", long 77°04'01", Hydrologic Unit 02070011, 1.5 mi northwest of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 9.7 ft, 19.7 to 20.2 ft, depth 20.2 ft, screened 9.7 to 19.7 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Sept. 30, 1996, digital recorder--60-minute punch. Prior to Dec. 6, 1995, monthly measurement with chalked tape by USGS personnel.

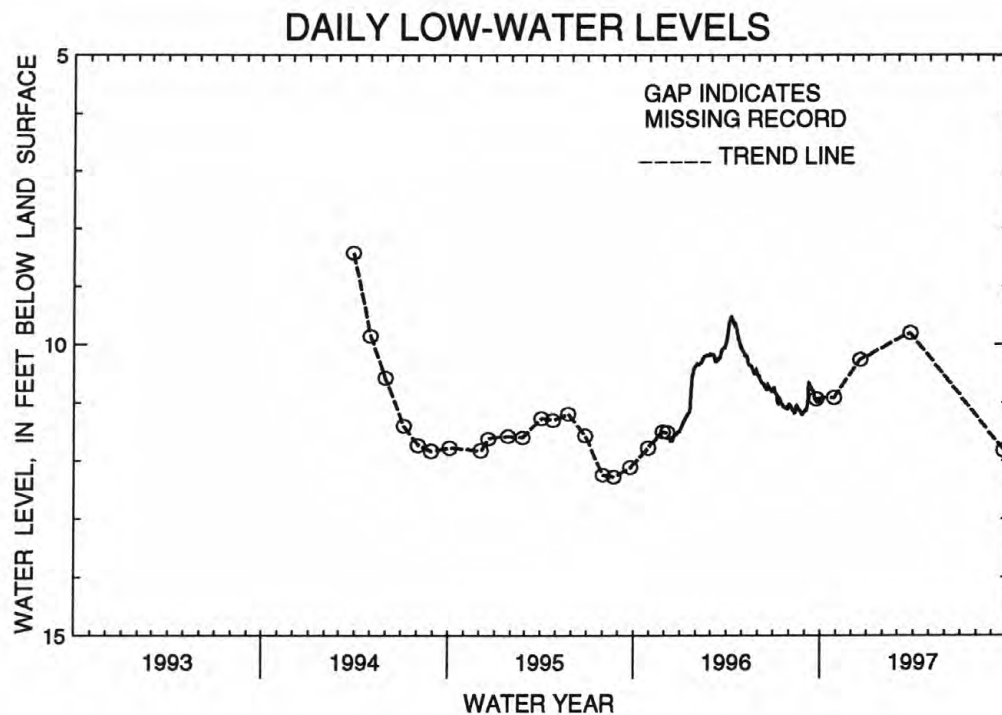
DATUM.--Elevation of land-surface datum is 12.45 ft above sea level. Measuring point: Top of recorder shelf, 1.99 ft above land surface datum. Prior to Dec. 6, 1995, and since Sept. 30, 1996, top of casing, 1.6 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.43 ft below land-surface datum, Mar. 29, 1994; lowest measured, 12.28 ft below land-surface datum, Aug. 24, 1995.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28	10.91	DEC 18	10.26	MAR 25	9.80	SEP 24	11.83
WATER YEAR 1997	HIGHEST	9.80	MAR 25, 1997				
	LOWEST	11.83	SEP 24, 1997				



GROUND-WATER LEVELS

KING GEORGE COUNTY

381857077032701. Local number, 54Q 69.

LOCATION.--Lat 38°18'57", long 77°03'27", Hydrologic Unit 02070011, 400 ft southwest of Howland Point, 1.7 mi northwest of the main gage at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Confined aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 68.6 ft, 78.6 to 84.1 ft, depth 84.1 ft, screened 68.6 to 78.2 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Sept. 30, 1996, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 16.21 ft above sea level. Measuring point: Top of recorder shelf, 2.7 ft above land-surface datum. Top of casing, 2.35 ft above land-surface datum, since Oct. 1, 1996.

REMARKS.--Missing record due to recorder malfunction.

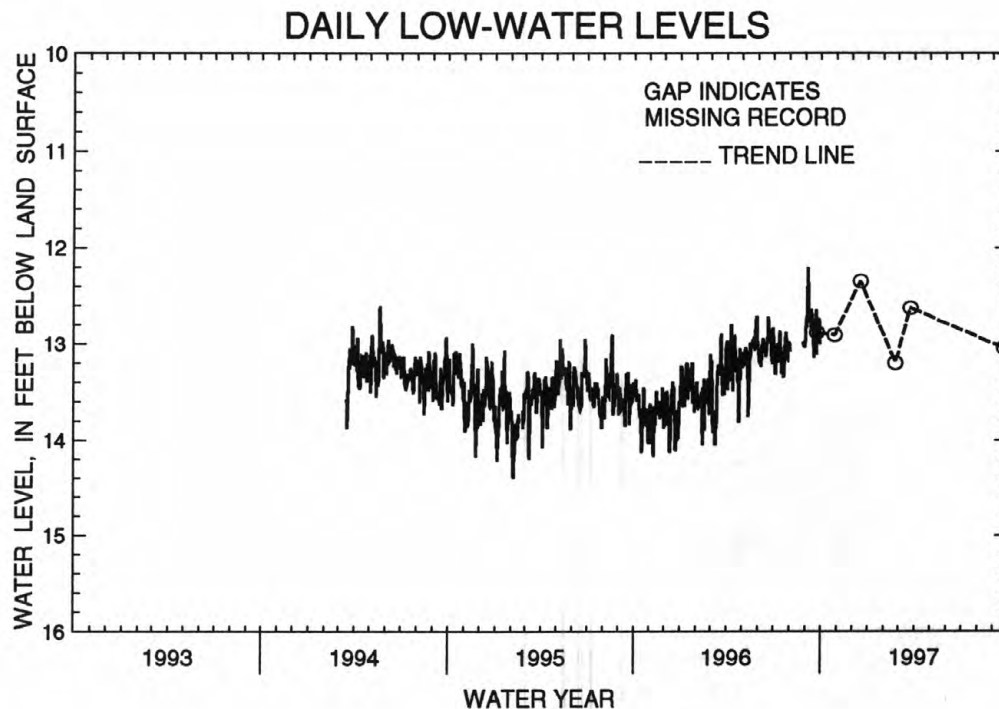
PERIOD OF RECORD.--March 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 10.73 ft below land-surface datum, Sept. 6, 1996; lowest recorded, 14.40 ft below land-surface datum, Feb. 6, 1995.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28	12.91	DEC 18	12.35	FEB 24	13.20	MAR 25	12.63	SEP 24	13.05

WATER YEAR 1997	HIGHEST	12.35	DEC 18, 1996
	LOWEST	13.20	FEB 24, 1997



GROUND-WATER LEVELS

KING GEORGE COUNTY

381830077031801. Local number, 54Q 71.

LOCATION.--Lat 38°18'30", long 77°03'18", Hydrologic Unit 02070011, 0.6 mi south of Howland Point, 1.2 mi northwest of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 9.7 ft, 19.7 to 20.2 ft, depth 20.2 ft, screened 9.7 to 19.7 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

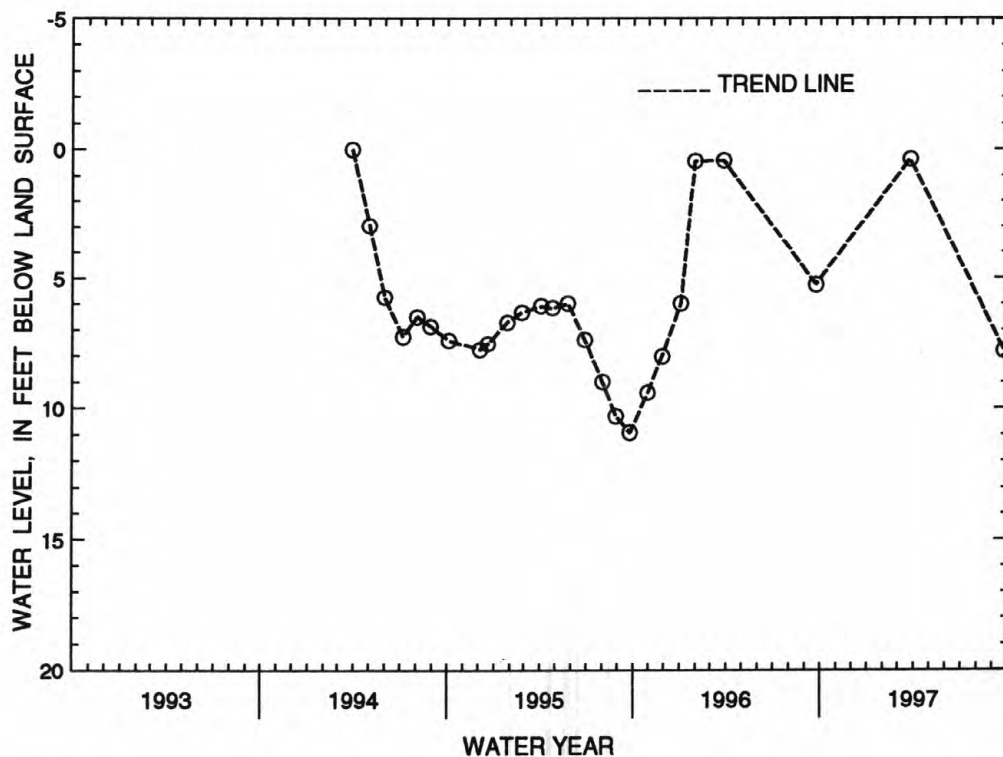
DATUM.--Elevation of land-surface datum is 21.24 ft above sea level. Measuring point: Top of casing, 2.06 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, at land-surface datum, Mar. 29, 1994; lowest measured, 10.93 ft below land-surface datum, Sept. 25, 1995.

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

	DATE	WATER LEVEL	DATE	WATER LEVEL
	MAR 25	0.38	SEP 24	7.81
WATER YEAR 1997	HIGHEST	0.38	MAR 25, 1997	
	LOWEST	7.81	SEP 24, 1997	



GROUND-WATER LEVELS

KING GEORGE COUNTY

381759077025701. Local number, 54Q 72.

LOCATION.--Lat 38°17'59", long 77°02'57", Hydrologic Unit 02070011, 0.5 mi northwest of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 8.1 ft, 13.1 to 15.6 ft, depth 15.6 ft, screened 8.1 to 13.1 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

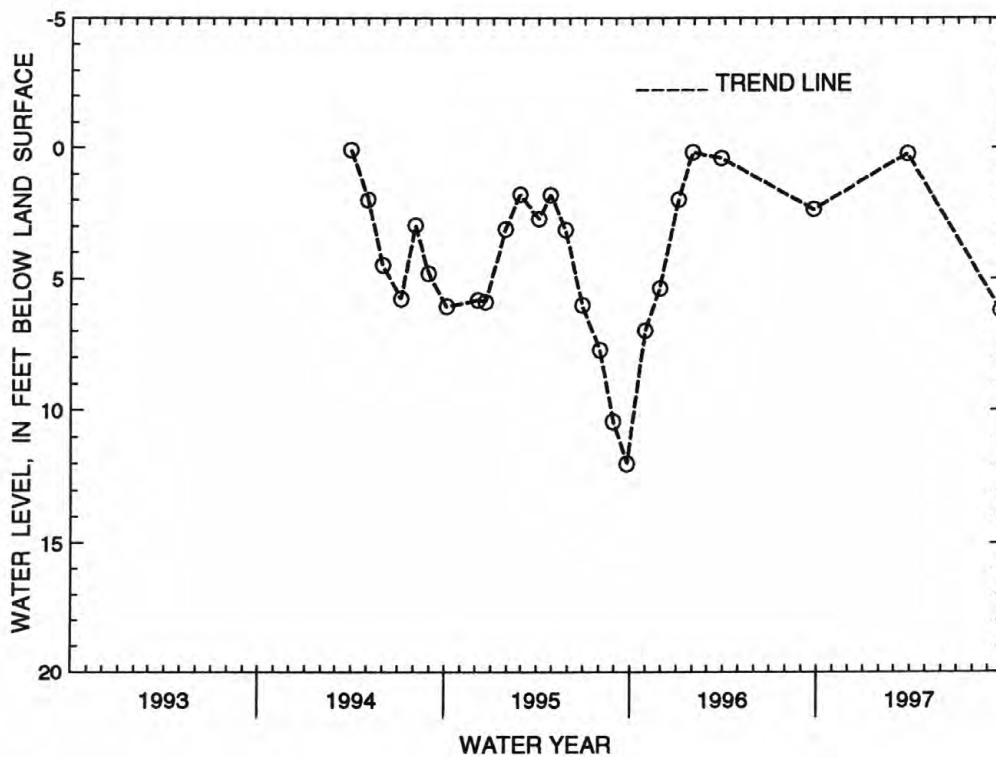
DATUM.--Elevation of land-surface datum is 24.76 ft above sea level. Measuring point: Top of casing, 1.87 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.09 ft below land-surface datum, Mar. 29, 1994; lowest measured, 12.01 ft below land-surface datum, Sept. 25, 1995.

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

		DATE	WATER LEVEL	DATE	WATER LEVEL
		MAR 25	0.23	SEP 24	6.24
WATER YEAR 1997	HIGHEST	0.23	MAR 25, 1997		
	LOWEST	6.24	SEP 24, 1997		



GROUND-WATER LEVELS

KING GEORGE COUNTY

381725077024501. Local number, 54Q 73.

LOCATION.--Lat 38°17'25", long 77°02'45", Hydrologic Unit 02070011, 0.2 mi south of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 18.8 ft, 28.8 to 31.3 ft, depth 31.3 ft, screened 18.8 to 28.8 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

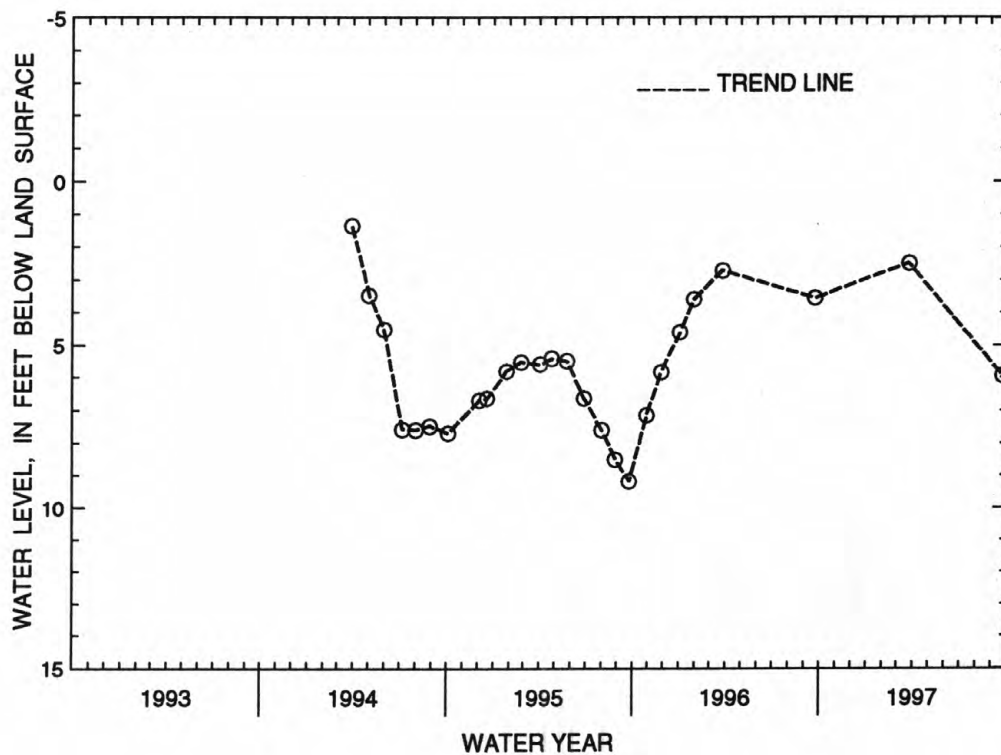
DATUM.--Elevation of land-surface datum is 25.14 ft above sea level. Measuring point: Top of casing, 2.25 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.34 ft below land-surface datum, Mar. 29, 1994; lowest measured, 9.18 ft below land-surface datum, Sept. 25, 1995.

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

		DATE	WATER LEVEL	DATE	WATER LEVEL
		MAR 25	2.50	SEP 24	5.95
WATER YEAR 1997	HIGHEST	2.50	MAR 25, 1997		
	LOWEST	5.95	SEP 24, 1997		



GROUND-WATER LEVELS

KING GEORGE COUNTY

381732077021201. Local number, 54Q 74.

LOCATION.--Lat 38°17'32", long 77°02'12", Hydrologic Unit 02070011, 0.5 mi east of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 9.0 ft, 19.0 to 19.5 ft, depth 19.5 ft, screened 9.0 to 19.0 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

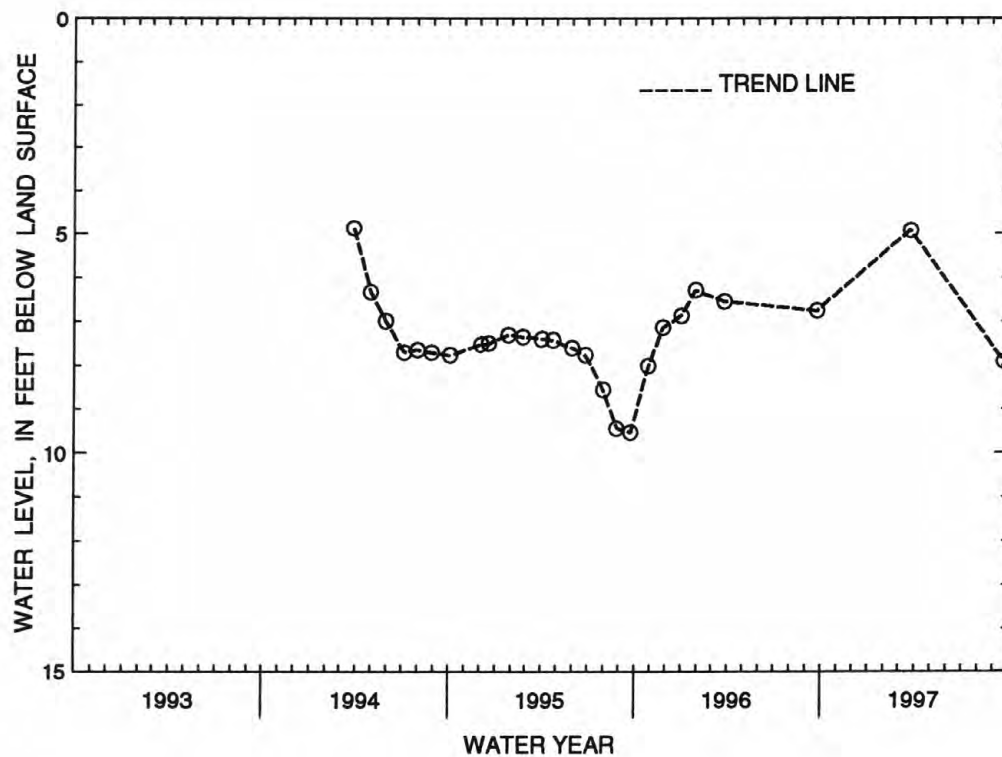
DATUM.--Elevation of land-surface datum is 12.70 ft above sea level. Measuring point: Top of casing, 2.35 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.88 ft below land-surface datum, Mar. 29, 1994; lowest measured, 9.54 ft below land-surface datum, Sept. 25, 1995.

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

		DATE	WATER LEVEL	DATE	WATER LEVEL
		MAR 25	4.93	SEP 24	7.92
WATER YEAR 1997	HIGHEST	4.93	MAR 25, 1997		
	LOWEST	7.92	SEP 24, 1997		



GROUND-WATER LEVELS

KING GEORGE COUNTY

381729077021001. Local number, 54Q 75.

LOCATION.--Lat 38°17'29", long 77°02'10", Hydrologic Unit 02070011, along fence line 0.6 mi southeast of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 20.7 ft, 30.7 to 33.2 ft, depth 33.2 ft, screened 20.7 to 30.7 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

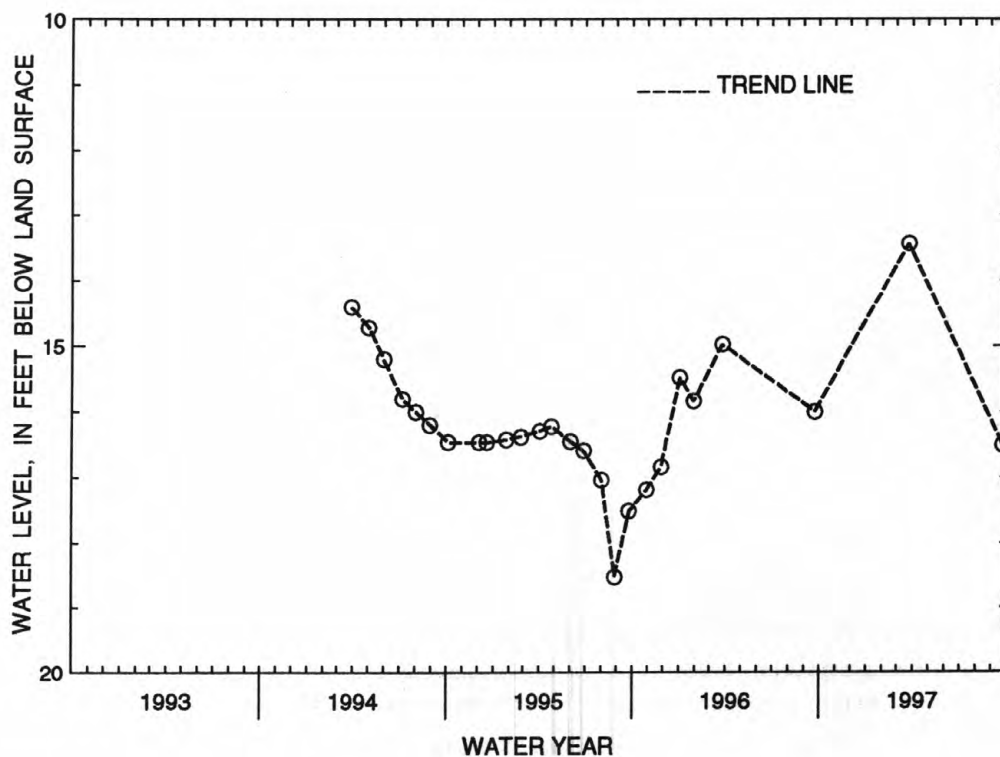
DATUM.--Elevation of land-surface datum is 23.11 ft above sea level. Measuring point: Top of casing, 2.06 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.44 ft below land-surface datum, Mar. 25, 1997; lowest measured, 18.52 ft below land-surface datum, Aug. 28, 1995.

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

		DATE	WATER LEVEL	DATE	WATER LEVEL
		MAR 25	13.44	SEP 24	16.51
WATER YEAR 1997	HIGHEST	13.44	MAR 25, 1997		
	LOWEST	16.51	SEP 24, 1997		



GROUND-WATER LEVELS

KING GEORGE COUNTY

381734077014501. Local number, 54Q 76.

LOCATION.--Lat 38°17'34", long 77°01'45", Hydrologic Unit 02070011, along fence line 1.0 mi east of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 9.1 ft, 19.1 to 19.6 ft, depth 19.6 ft, screened 9.1 to 19.1 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

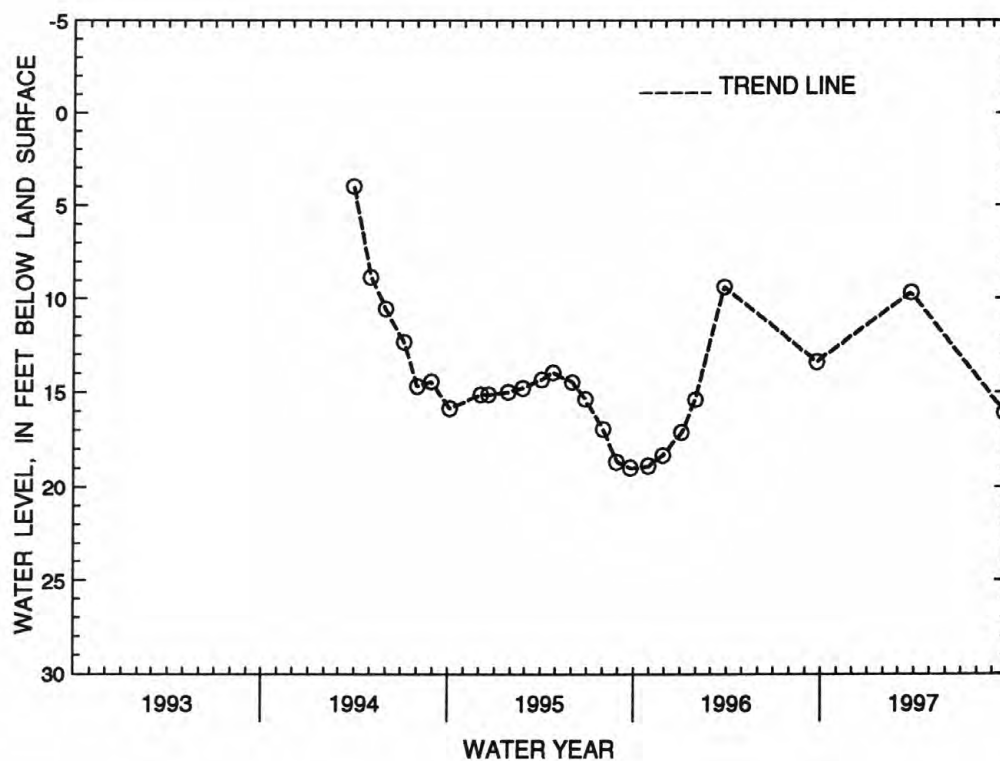
DATUM.--Elevation of land-surface datum is 22.20 ft above sea level. Measuring point: Top of casing, 2.5 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.00 ft below land-surface datum, Mar. 29, 1994; lowest measured, 19.00 ft below land-surface datum, Sept. 25, 1995.

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

	DATE	WATER LEVEL	DATE	WATER LEVEL
	MAR 25	9.70	SEP 24	16.08
WATER YEAR 1997	HIGHEST	9.70	MAR 25, 1997	
	LOWEST	16.08	SEP 24, 1997	



GROUND-WATER LEVELS

KING GEORGE COUNTY

381236077013801. Local number, 54Q 77.

LOCATION.--Lat 38°17'36", long 77°01'38", Hydrologic Unit 02070011, along fence line 1.1 mi east of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 14.7 ft, 24.7 to 25.2 ft, depth 25.2 ft, screened 14.7 to 24.7 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

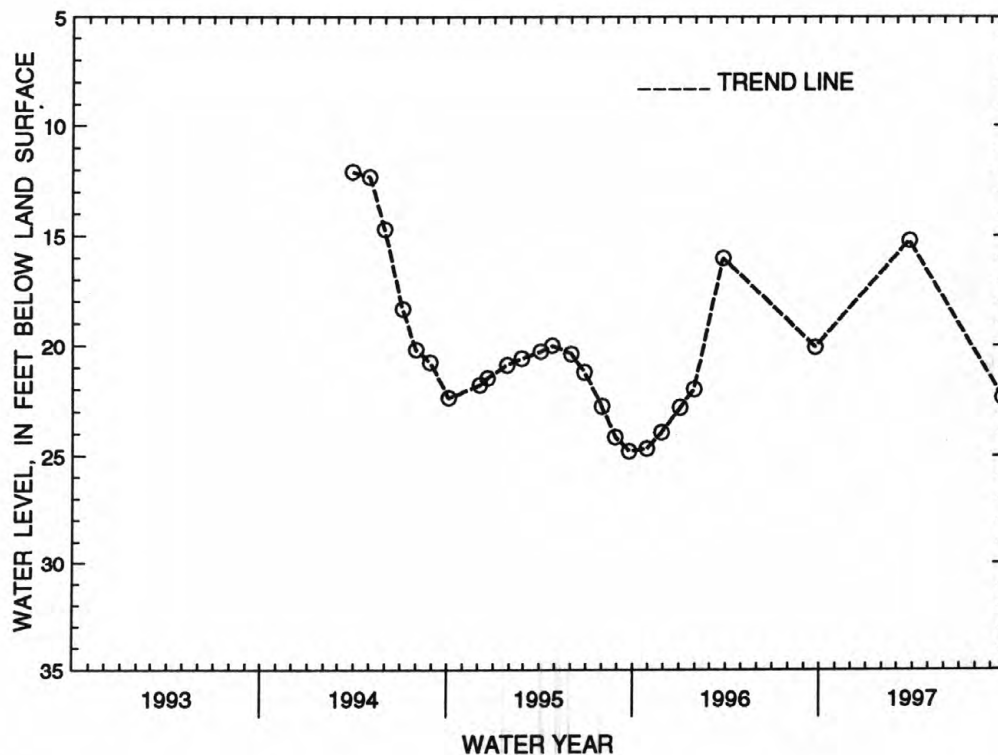
DATUM.--Elevation of land-surface datum is 21.73 ft above sea level. Measuring point: Top of casing, 2.12 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.10 ft below land-surface datum, Mar. 29, 1994; lowest measured, 24.79 ft (below bottom of screen; may not reflect true water-level elevation in the aquifer) below land-surface datum, Sept. 25, 1995.

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

	DATE	WATER LEVEL	DATE	WATER LEVEL
	MAR 25	15.23	SEP 24	22.36
WATER YEAR 1997	HIGHEST	15.23	MAR 25, 1997	
	LOWEST	22.36	SEP 24, 1997	



GROUND-WATER LEVELS

KING GEORGE COUNTY

381812077015201. Local number, 54Q 78.

LOCATION.--Lat 38°18'12", long 77°01'52", Hydrologic Unit 02070011, at intersection of two unnamed roads, 1.1 mi northeast of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 7.5 ft, 17.5 to 20.0 ft, depth 20.0 ft, screened 7.5 to 17.5 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 16.33 ft above sea level. Measuring point: Top of casing, 0.11 ft below land-surface datum.

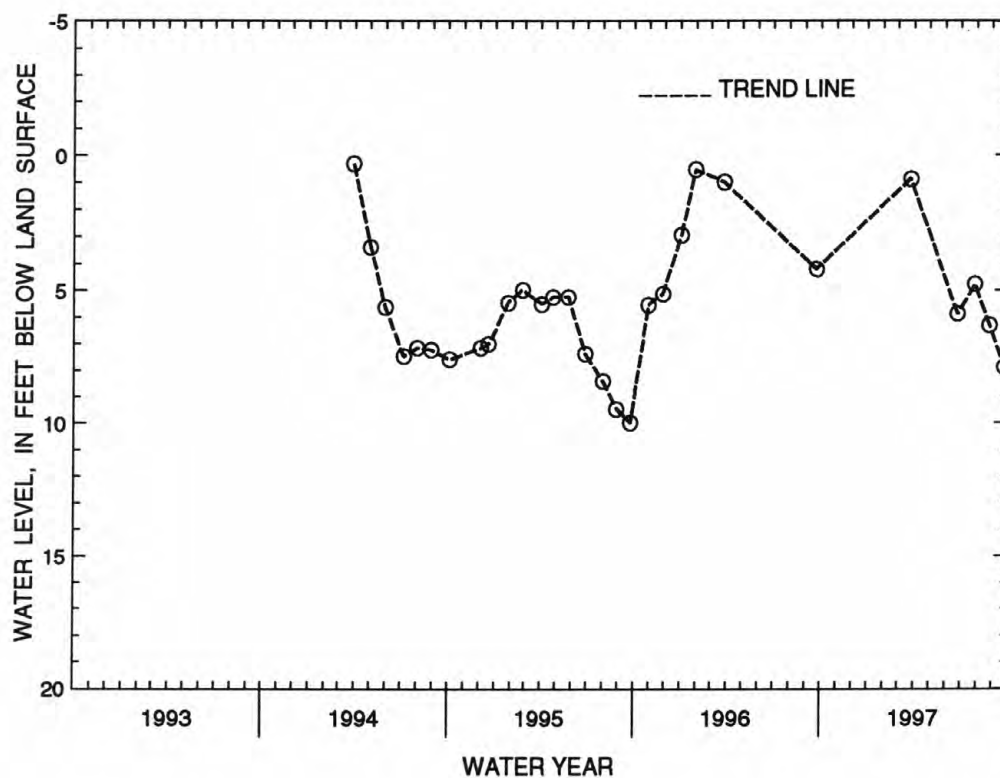
PERIOD OF RECORD.--March 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.30 ft below land-surface datum, Mar. 29, 1994; lowest measured, 9.99 ft below land-surface datum, Sept. 25, 1995.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 25	0.87	JUN 25	5.88	JUL 29	4.77	AUG 26	6.31	SEP 24	7.89

WATER YEAR 1997	HIGHEST	0.87	MAR 25, 1997
	LOWEST	7.89	SEP 24, 1997



GROUND-WATER LEVELS

KING GEORGE COUNTY

381825077021101. Local number, 54Q 79.

LOCATION.--Lat 38°18'25", long 77°02'11", Hydrologic Unit 02070011, 1.1 mi northeast of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 9.1 ft, 14.1 to 16.6 ft, depth 16.6 ft, screened 9.1 to 14.1 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

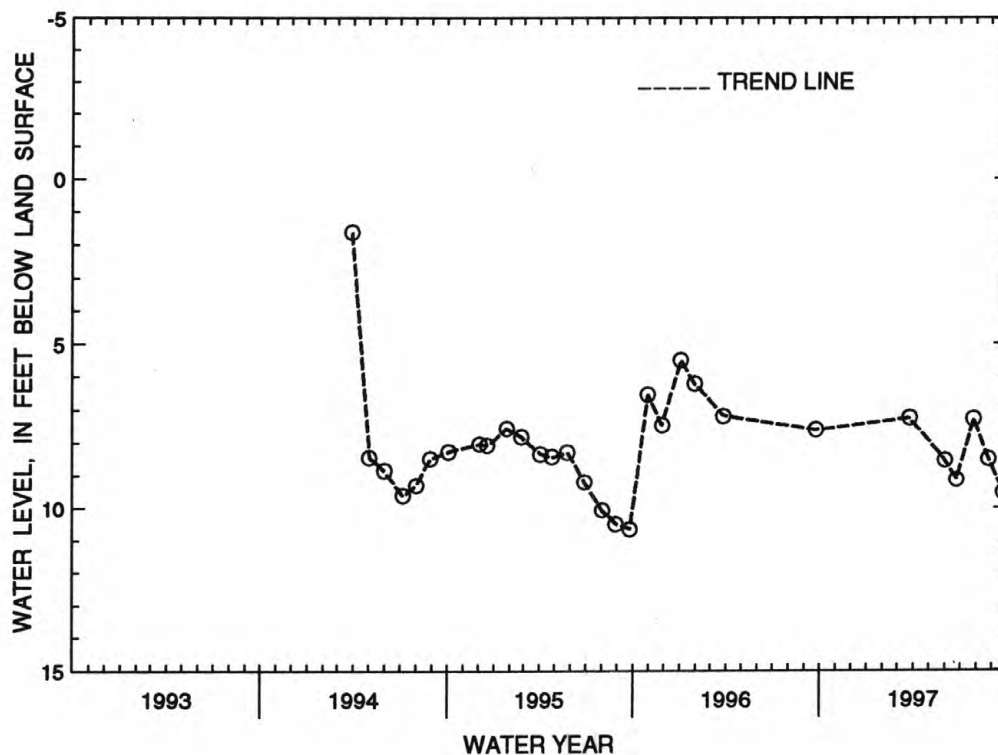
DATUM.--Elevation of land-surface datum is 11.43 ft above sea level. Measuring point: Top of casing, 0.10 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.62 ft below land-surface datum, Mar. 29, 1994; lowest measured, 10.66 ft below land-surface datum, Sept. 25, 1995.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 25	7.26	JUN 02	8.55	JUN 25	9.14	JUL 29	7.28	AUG 26	8.51	SEP 24	9.54
WATER YEAR 1997		HIGHEST	7.26	MAR 25, 1997							
		LOWEST	9.54	SEP 24, 1997							



GROUND-WATER LEVELS

KING GEORGE COUNTY

381817077023101. Local number, 54Q 80.

LOCATION.--Lat 38°18'17", long 77°02'31", Hydrologic Unit 02070011, 0.9 mi northeast of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 7.2 ft, 12.2 to 14.7 ft, depth 14.7 ft, screened 7.2 to 12.2 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

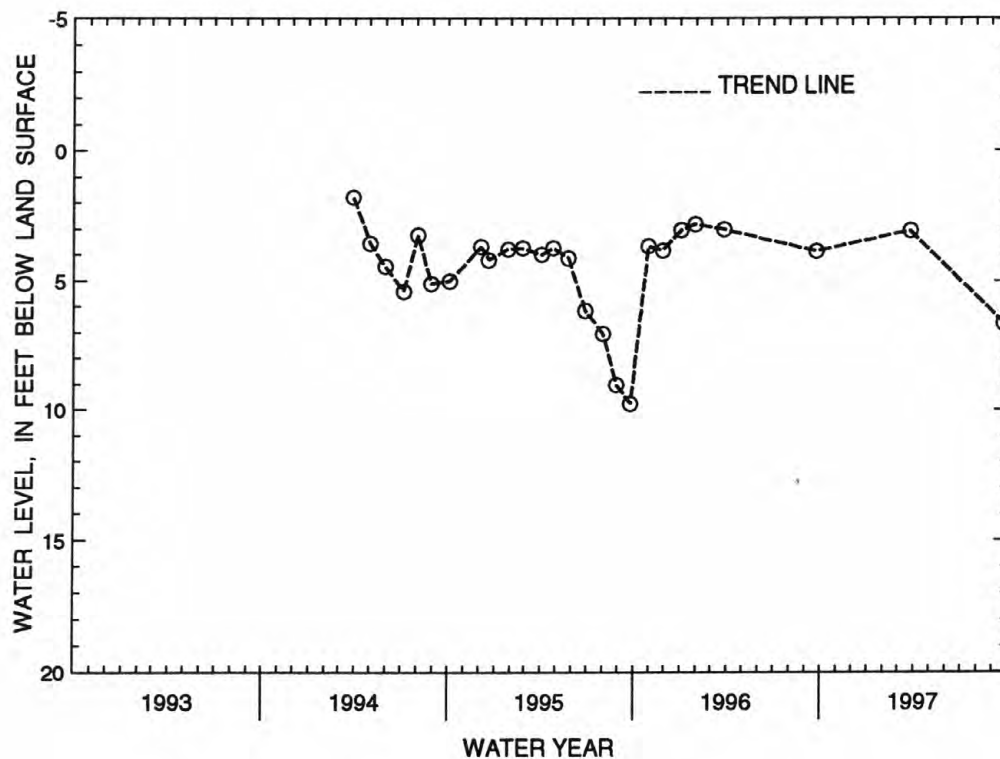
DATUM.--Elevation of land-surface datum is 15.20 ft above sea level. Measuring point: Top of casing, 0.05 ft below land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.79 ft below land-surface datum, Mar. 29, 1994; lowest measured, 9.76 ft below land-surface datum, Sept. 25, 1995.

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

		DATE	WATER LEVEL	DATE	WATER LEVEL
		MAR 25	3.08	SEP 24	6.65
WATER YEAR 1997	HIGHEST	3.08	MAR 25, 1997		
	LOWEST	6.65	SEP 24, 1997		



GROUND-WATER LEVELS

KING GEORGE COUNTY

381820077024501. Local number, 54Q 81.

LOCATION.--Lat 38°18'20", long 77°02'45", Hydrologic Unit 02070011, 0.9 mi northeast of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 4.7 ft, 9.7 to 12.2 ft, depth 12.2 ft, screened 4.7 to 9.7 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

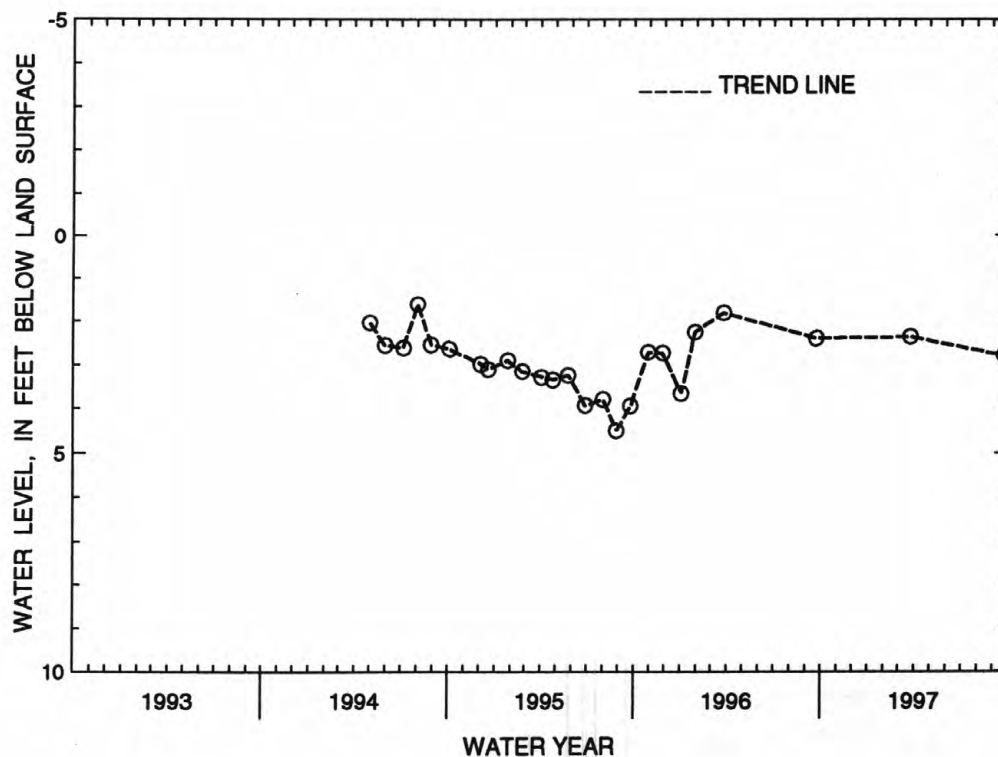
DATUM.--Elevation of land-surface datum is 13.21 ft above sea level. Measuring point: Top of casing, 0.31 ft below land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.61 ft below land-surface datum, Aug. 3, 1994; lowest measured, 4.49 ft below land-surface datum, Aug. 29, 1995.

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

		DATE	WATER LEVEL	DATE	WATER LEVEL
		MAR 25	2.37	SEP 24	2.80
WATER YEAR 1997	HIGHEST	2.37	MAR 25, 1997		
	LOWEST	2.80	SEP 24, 1997		



GROUND-WATER LEVELS

KING GEORGE COUNTY

381830077024501. Local number, 54Q 82.

LOCATION.--Lat 38°18'30", long 77°02'45", Hydrologic Unit 02070011, 1.1 mi northeast of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 4.8 ft, 19.8 to 22.3 ft, depth 22.3 ft, screened 4.8 to 19.8 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

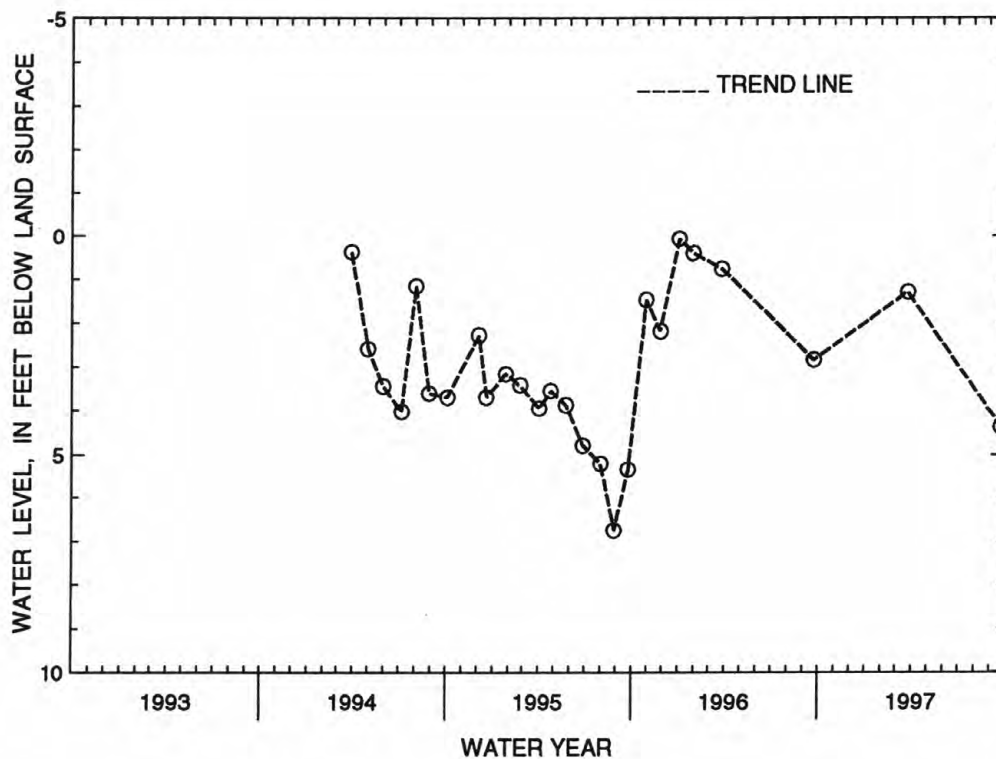
DATUM.--Elevation of land-surface datum is 11.81 ft above sea level. Measuring point: Top of casing, 0.05 ft below land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.07 ft below land-surface datum, Jan. 03, 1996; lowest measured, 6.75 ft below land-surface datum, Aug. 29, 1995.

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

	DATE	WATER LEVEL	DATE	WATER LEVEL
	MAR 25	1.30	SEP 24	4.38
WATER YEAR 1997	HIGHEST	1.30	MAR 25, 1997	
	LOWEST	4.38	SEP 24, 1997	



GROUND-WATER LEVELS

KING GEORGE COUNTY

381804077022001. Local number, 54Q 86.

LOCATION.--Lat 38°18'04", long 77°02'20", Hydrologic Unit 02070011, 0.7 mi northeast of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 4.5 ft, 14.5 to 17.0 ft, depth 17.0 ft, screened 4.5 to 14.5 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

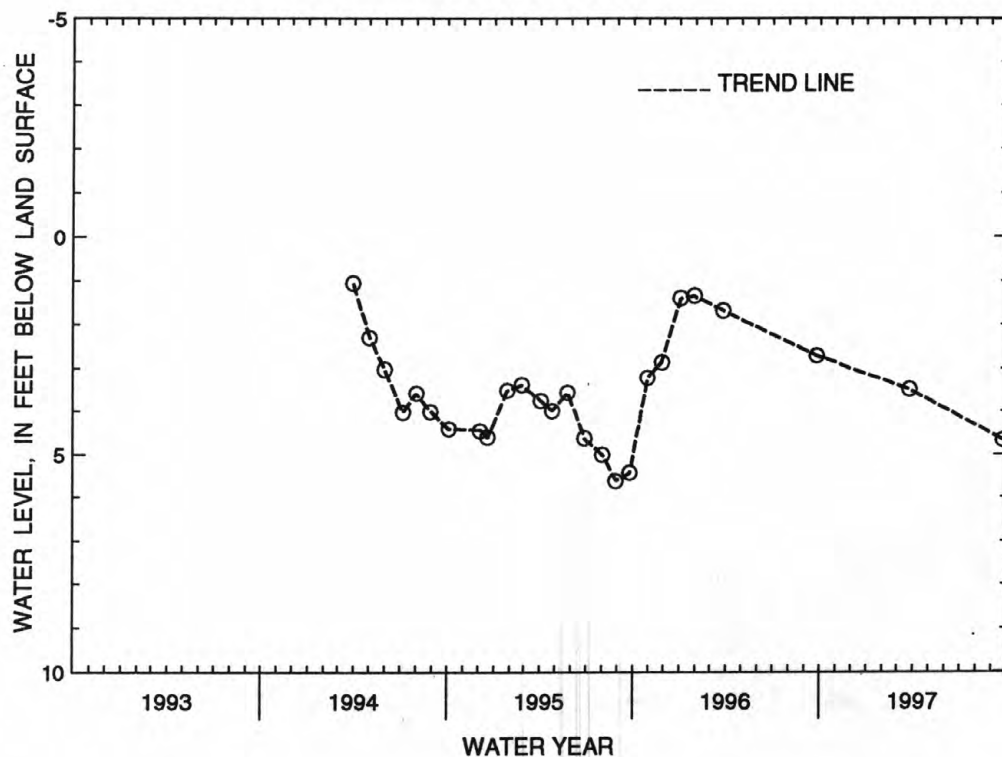
DATUM.--Elevation of land-surface datum is 17.30 ft above sea level. Measuring point: Top of casing, 0.4 ft below land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.06 ft below land-surface datum, Mar. 30, 1994; lowest measured, 5.62 ft below land-surface datum, Aug. 29, 1995.

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

		DATE	WATER LEVEL	DATE	WATER LEVEL
		MAR 25	3.49	SEP 24	4.67
WATER YEAR 1997	HIGHEST	3.49	MAR 25, 1997		
	LOWEST	4.67	SEP 24, 1997		



GROUND-WATER LEVELS

KING GEORGE COUNTY

382341077032401. Local number, 54R 2.

LOCATION.--Lat 38°23'41", long 77°03'24", Hydrologic Unit 02070011, 50 ft southeast of steep bank of the Potomac River, 150 ft west of State Highway 687, 1.5 mi west of the intersection of U.S. Highway 301 and State Highway 614, 1.9 mi north of the intersection of State Highways 629 and 687, and near Dahlgren. Owner: E. V. Bruchez.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled withdrawal water well, diameter 4 in. to 210 ft, diameter 2 in. from 210 to 806 ft, depth 806 ft, screened 781 to 801 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 70 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

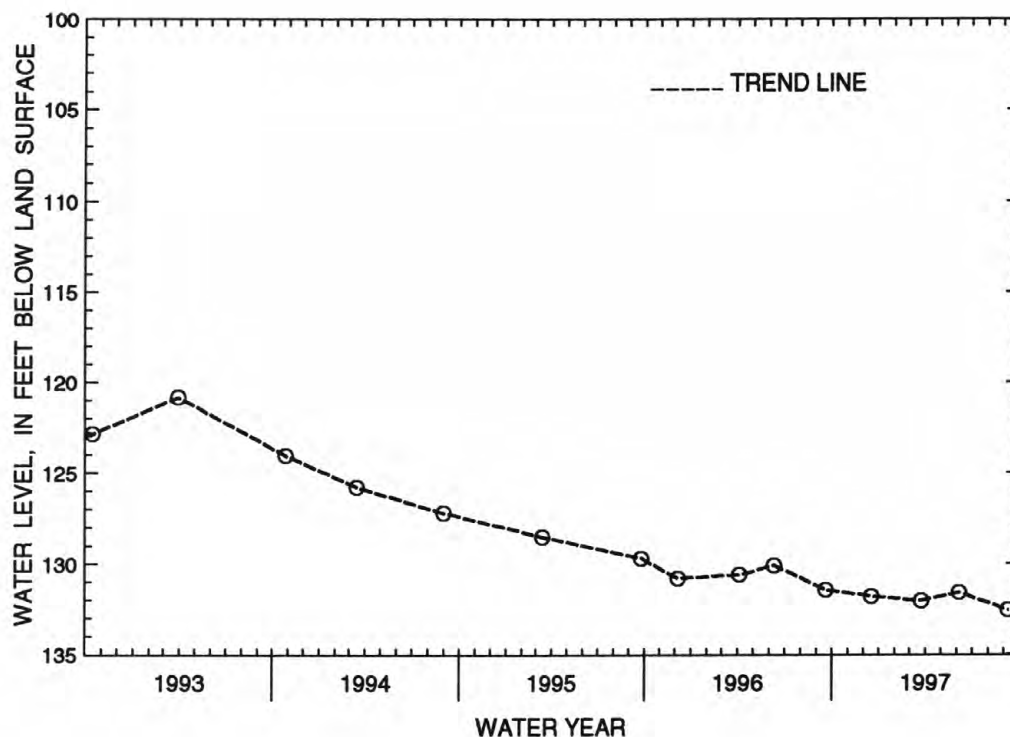
REMARKS.--Water level affected by regional drawdown.

PERIOD OF RECORD.--October 1969 to current year. Unpublished records available prior to October 1988 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 70.00 ft below land-surface datum, Oct. 15, 1969; lowest measured, 132.56 ft below land-surface datum, Sept. 9, 1997.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 17	131.80	MAR 24	132.04	JUN 06	131.59	SEP 09	132.56
WATER YEAR 1997		HIGHEST	131.59	JUN 06, 1997			
		LOWEST	132.56	SEP 09, 1997			



GROUND-WATER LEVELS

KING WILLIAM COUNTY

373226076481201. Local number, 56J 2.

LOCATION.--Lat 37°32'26", long 76°48'12", Hydrologic Unit 02080106, 0.1 mi west of State Highway 30, 0.3 mi north of State Highway 33, and in West Point. Owner: Chesapeake Corporation.

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

WELL CHARACTERISTICS.--Drilled unused withdrawal water well, diameter 18 in. to 300 ft, diameter 8 in. from 300 to 600 ft, depth 600 ft, screened 390 to 400 ft, 550 to 570 ft, 580 to 600 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 25 ft above sea level, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.

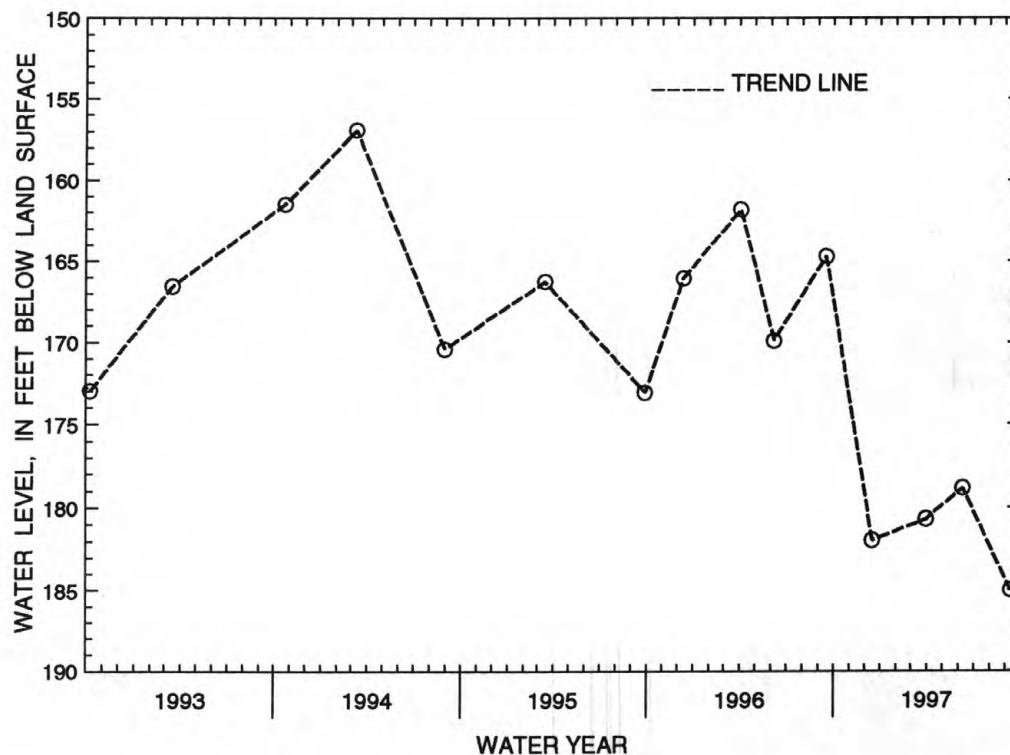
REMARKS.--Water level affected by local pumpage and regional drawdown.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 141.48 ft below land-surface datum, Feb. 15, 1983; lowest measured, 185.01 ft below land-surface datum, Sept. 11, 1997.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 16	181.97	MAR 31	180.70	JUN 10	178.85	SEP 11	185.01
WATER YEAR 1997	HIGHEST	178.85	JUN 10, 1997				
	LOWEST	185.01	SEP 11, 1997				



GROUND-WATER LEVELS

KING WILLIAM COUNTY

373459076510201. Local number, 56J 10.

LOCATION.--Lat 37°34'59", long 76°51'02", Hydrologic Unit 02080105, 100 ft northeast of State Highway 30 at the Virginia State Police office, 4.2 mi west of the intersection of State Highways 30 and 33 in West Point.
Owner: Virginia Department of State Police.

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

WELL CHARACTERISTICS.--Drilled withdrawal water well, diameter 4 in., depth 437 ft, screened 417 to 437 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 101 ft above sea level, from topographic map. Measuring point: Top of casing, 1.2 ft below land-surface datum.

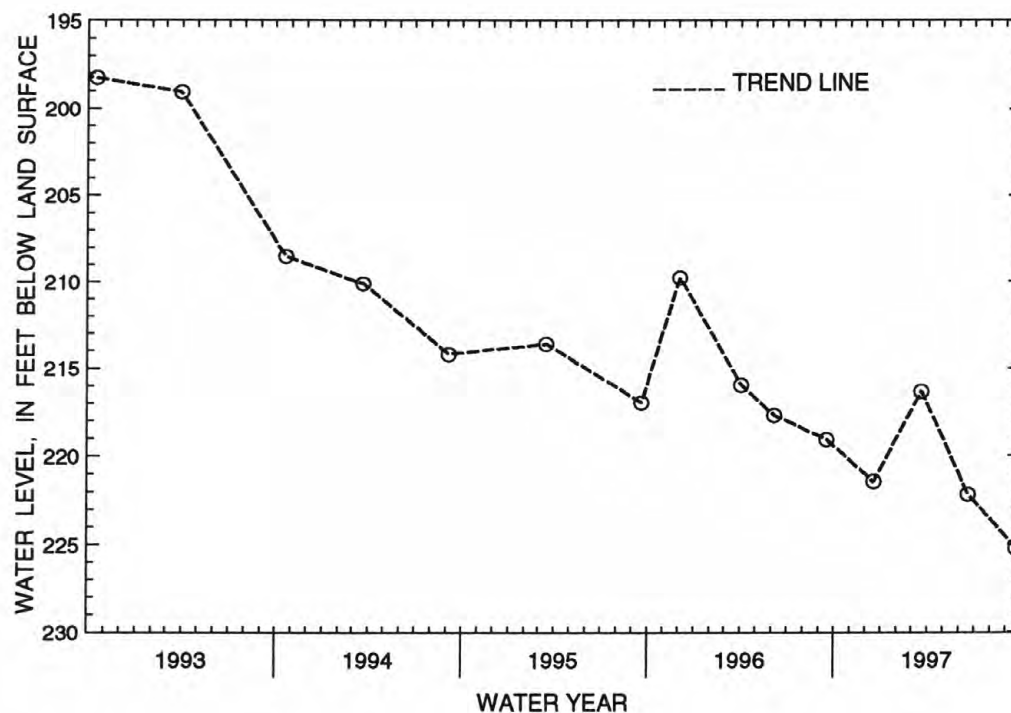
REMARKS.--Water level affected by regional drawdown.

PERIOD OF RECORD.--December 1972, December 1974, October 1983 to current year. Unpublished records available prior to October 1987 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 176.00 ft below land-surface datum, Dec. 8, 1972; lowest measured, 225.24 ft below land-surface datum, Sept. 22, 1997.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 18	221.45	MAR 21	216.34	JUN 20	222.18	SEP 22	225.24
WATER YEAR 1997	HIGHEST	216.34	MAR 21, 1997				
	LOWEST	225.24	SEP 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.

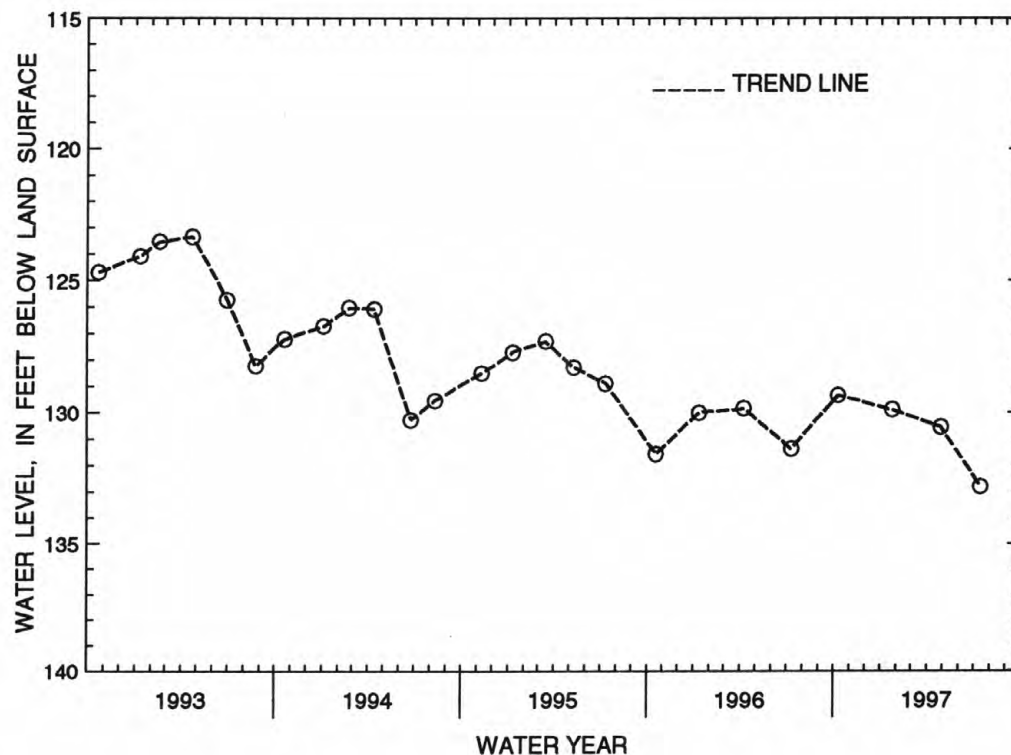
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage and regional drawdown.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	129.35	JAN 23	129.90	APR 28	130.55	JUL 15	132.80
WATER YEAR 1997		HIGHEST	129.35	OCT 10, 1996			
		LOWEST	132.80	JUL 15, 1997			



GROUND-WATER LEVELS

LANCASTER COUNTY

374142076272701. Local number, 59K 9.

LOCATION.--Lat 37°41'42", long 76°27'27", Hydrologic Unit 02080104, on the south bank of Moran Creek, 1,000 ft northwest of the intersection of State Highway 630 and a private dirt drive, 0.8 mi west of Wesley Church, 3.0 mi north of Weems, 4.0 mi west of Kilmarnock and the intersection of State Highways 629 and 630, and near Weems. Owner: Fred Hansen.

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

WELL CHARACTERISTICS.--Drilled withdrawal water well, diameter 4 in. to 147 ft, diameter 2 in. from 147 to 585 ft, depth 585 ft, screened 565 to 580 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

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.--Water level affected by regional drawdown.

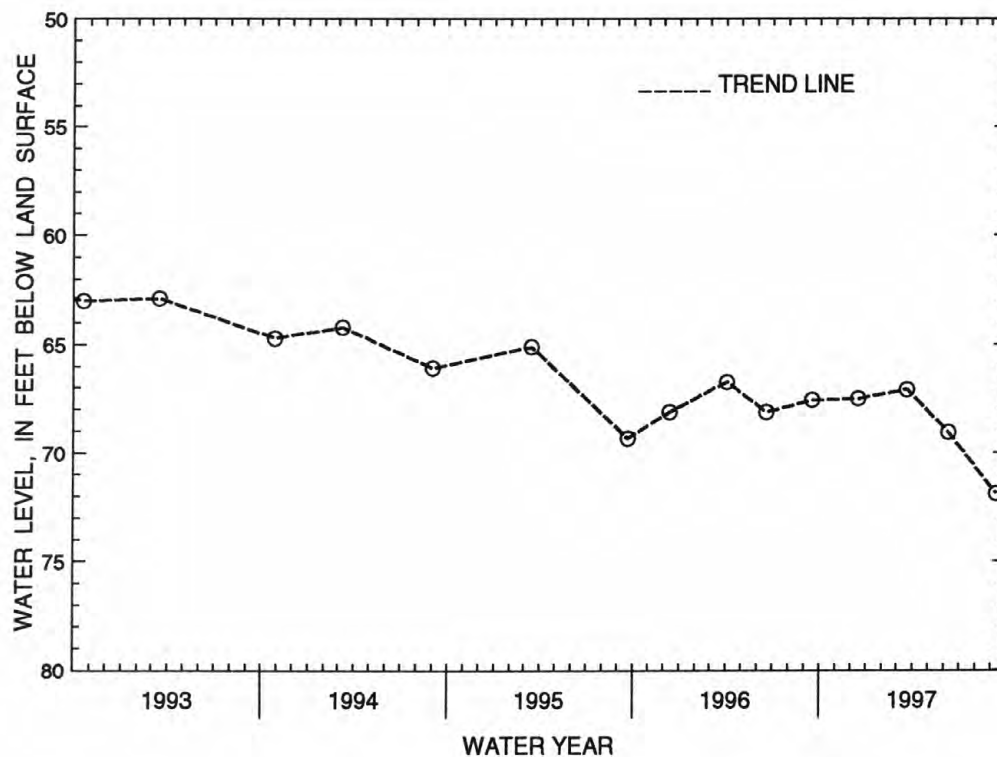
PERIOD OF RECORD.--September 1969 to current year. Unpublished records available prior to October 1988 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 40.00 ft below land-surface datum, Sept. 16, 1969; lowest measured, 71.89 ft below land-surface datum, Sept. 11, 1997.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 16	67.51	MAR 21	67.09	JUN 10	69.10	SEP 11	71.89

WATER YEAR 1997	HIGHEST	67.09	MAR 21, 1997
	LOWEST	71.89	SEP 11, 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.

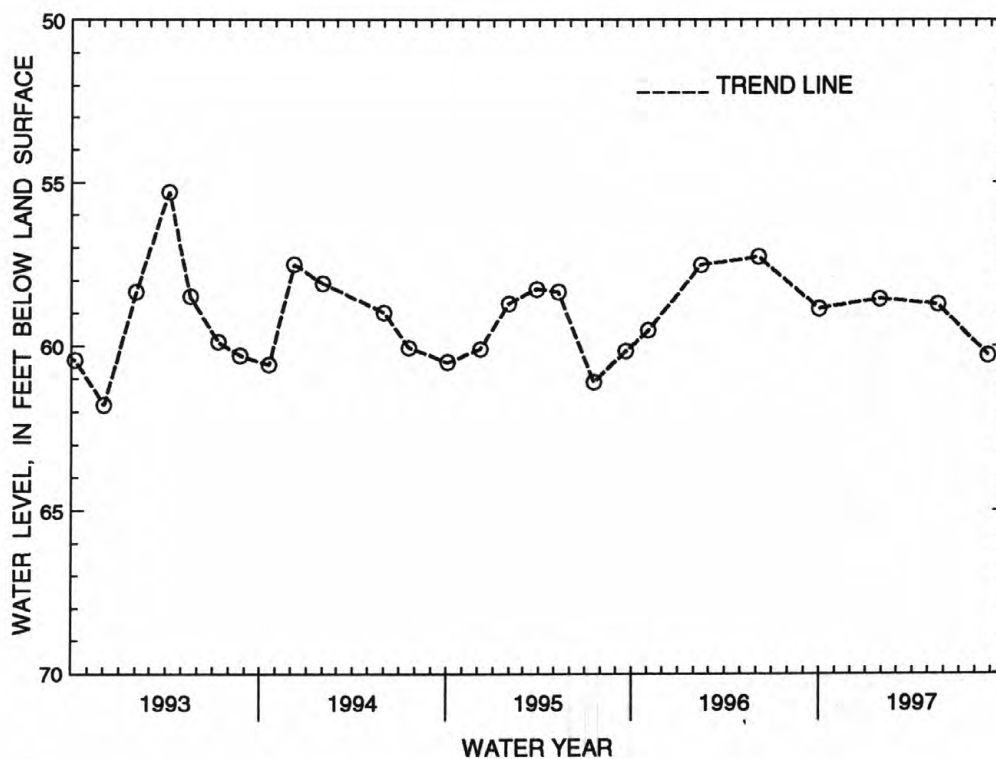
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02	58.86	JAN 29	58.57	MAY 22	58.74	AUG 28	60.29
WATER YEAR 1997 HIGHEST		58.57	JAN 29, 1997				
LOWEST		60.29	AUG 28, 1997				



GROUND-WATER LEVELS

LOUDOUN COUNTY

390623077314201. Local number, 50W 4C.

LOCATION.--Lat 39°06'23", long 77°31'42", Hydrologic Unit 02070008, under water tower 500 ft east of State Highway 7, 0.75 mi east of Leesburg. Owner: Town of Leesburg.

AQUIFER.--Slightly metamorphosed Balls Bluff Formation of Late Triassic age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6 in., depth 535 ft, cased to 6 ft, open hole 6 to 535 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by USGS personnel.

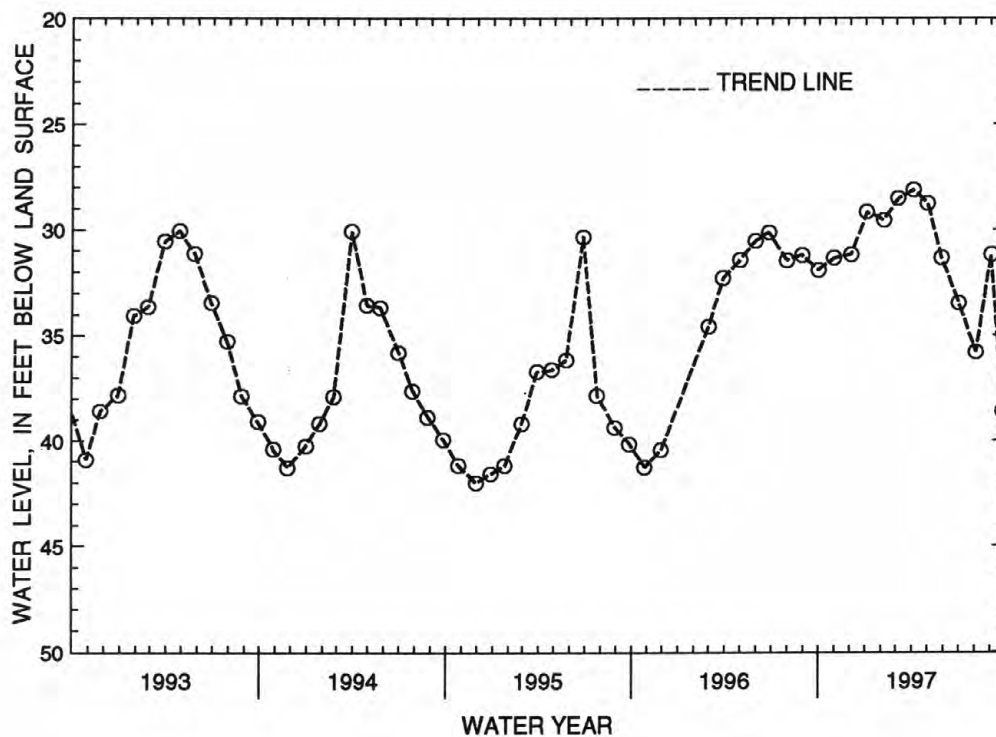
DATUM.--Elevation of land-surface datum is 400 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

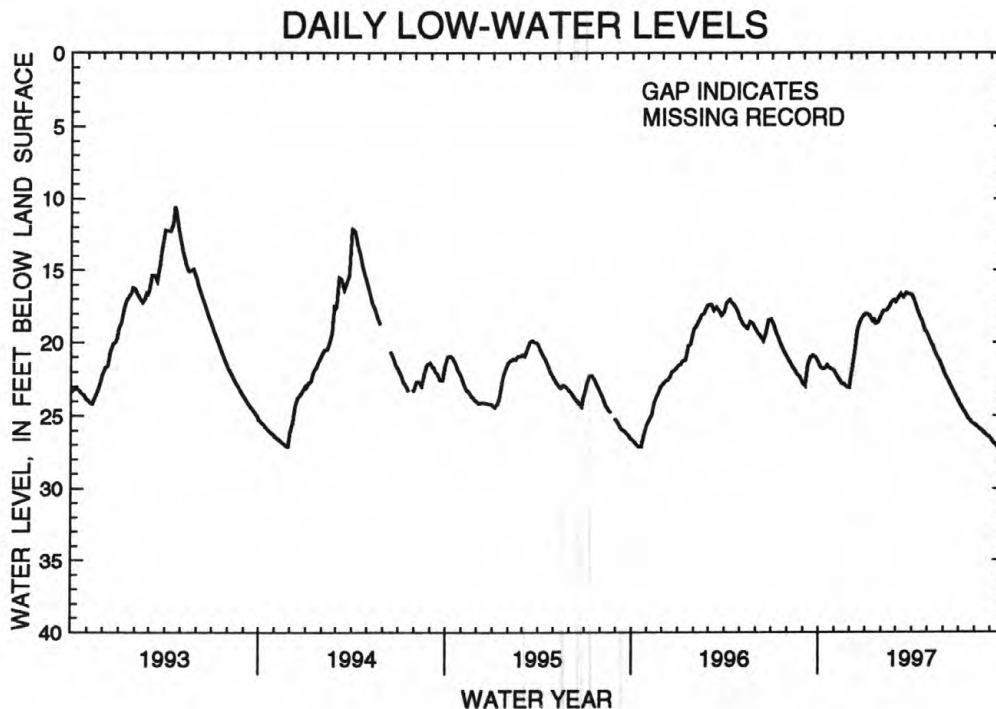
PERIOD OF RECORD.--October 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 28.13 ft below land-surface datum, Apr. 3, 1997; lowest measured, 49.06 ft below land-surface datum, Nov. 27, 1985.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	31.35	JAN 03	29.17	MAR 05	28.53	MAY 01	28.77	JUL 01	33.47	SEP 02	31.18
DEC 04	31.18	FEB 05	29.56	APR 03	28.13	MAY 28	31.32	AUG 04	35.79	SEP 25	38.60
WATER YEAR 1997		HIGHEST	28.13	APR 03, 1997							
		LOWEST	38.60	SEP 25, 1997							





GROUND-WATER LEVELS

LOUISA COUNTY

380043078111301. Local number, 45N 4.

LOCATION.--Lat 38°00'45", long 78°11'14", Hydrologic Unit 02080106, 0.25 mi east of U.S. Highway 15, 4.1 mi south of Boswells Tavern. Owner: Virginia Department of Corrections.

AQUIFER.--Metamorphosed sedimentary and volcanic rocks of unknown age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6 in., depth 200 ft, cased to 42 ft, open hole 42 to 200 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

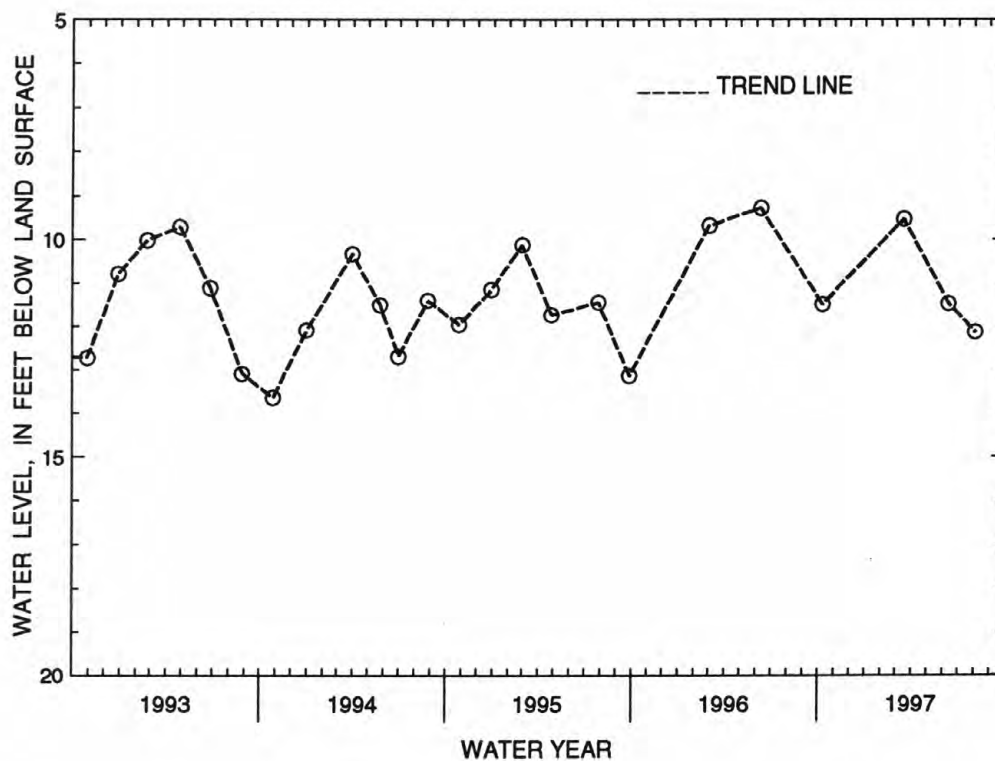
DATUM.--Elevation of land-surface datum is 415 ft above sea level, from topographic map. Measuring point: Top of casing, 2.3 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.28 ft below land-surface datum, June 10, 1996; lowest measured, 14.43 ft below land-surface datum, Aug. 26, 1981.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 09	11.49	MAR 17	9.54	JUN 13	11.48	AUG 04	12.14
WATER YEAR 1997	HIGHEST	9.54	MAR 17, 1997				
	LOWEST	12.14	AUG 04, 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.

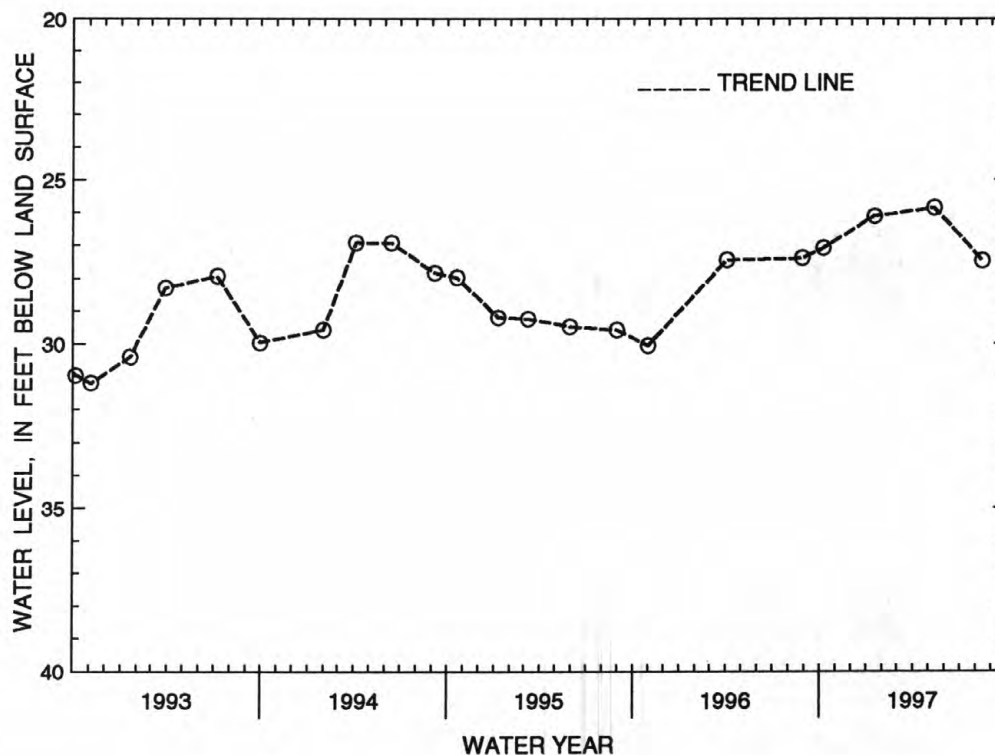
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 26.12 ft below land-surface datum, Jan. 16, 1997; lowest measured, 34.78 ft below land-surface datum, Dec. 8, 1981.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	27.10	JAN 16	26.12	MAY 12	25.87	AUG 14	27.49
WATER YEAR 1997	HIGHEST	25.87	MAY 12, 1997				
	LOWEST	27.49	AUG 14, 1997				



GROUND-WATER LEVELS

MONTGOMERY COUNTY

370812080261901. Local number, 27F 2 SOW 019.

LOCATION.--Lat 37°08'12", long 80°26'19", Hydrologic Unit 05050001, off entrance road to Round Meadow Country Club, 400 ft north of State Highway 661, and 0.5 mi west of Christiansburg. Owner: Town of Christiansburg.

AQUIFER.--Beekmantown Formation of Early Ordovician age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 10 in., depth 450 ft, length of casing unknown.

INSTRUMENTATION.--Continuous strip-chart recorder. Prior to Apr. 5, 1969, one measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 1,970 ft above sea level, from topographic map. Measuring point: Top of casing, 1.5 ft below land-surface datum prior to May 1, 1990; 0.43 ft above land-surface datum thereafter.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Lowest recorded water level, 7.39 ft, is a result of the Mexico earthquake of Sept. 19, 1985, but is not shown as the minimum of record since it is an earthquake-induced measurement. Prior to May 1, 1990, brief periods when water flowed over top of casing.

PERIOD OF RECORD.--July 1953, April 1969 to current year. Unpublished record available July 1953 in files of the Virginia Department of Environmental Quality - Water Division.

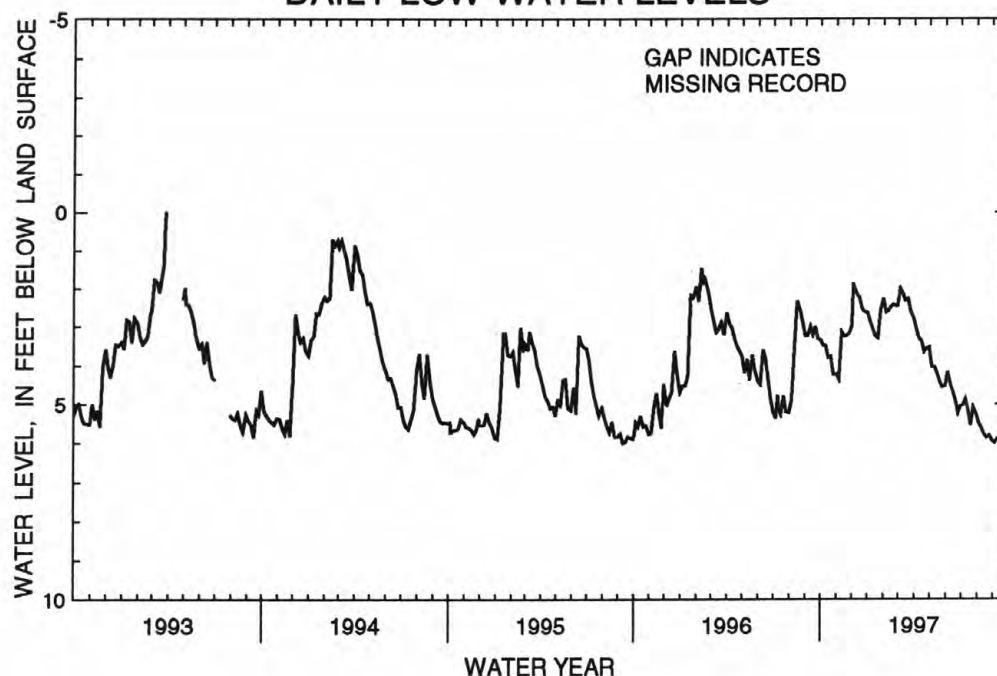
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.02 ft above land-surface datum, Mar. 28, 1993; lowest recorded, 7.30 ft below land-surface datum, Dec. 5, 1969.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.48	4.35	1.97	2.88	2.63	2.01	3.08	4.03	4.17	5.03	5.49	5.99
10	3.50	3.14	2.15	3.07	2.58	2.13	3.30	4.03	4.48	4.87	5.62	5.89
15	3.80	3.25	2.24	3.25	2.48	2.33	3.37	4.19	4.67	5.17	5.77	5.95
20	3.77	3.24	2.53	3.30	2.43	2.27	3.66	4.41	4.91	5.55	5.86	5.99
25	4.24	3.16	2.62	2.58	2.47	2.60	3.56	4.55	5.23	5.09	5.80	5.75
EOM	4.23	2.99	2.64	2.27	2.46	2.79	3.54	4.54	5.06	5.27	5.95	5.77

WATER YEAR 1997 HIGHEST INSTANTANEOUS 1.66 DEC 01, 1996
 LOWEST INSTANTANEOUS 6.07 SEP 22, 1997

DAILY LOW-WATER LEVELS



GROUND-WATER LEVELS

NEW KENT COUNTY

373111077104601. Local number, 53J 6.

LOCATION.--Lat 37°31'11", long 77°10'46", Hydrologic Unit 02080206, 0.18 mi south of State Highway 249 in Brookwood Manor Subdivision, 0.7 mi northeast of the intersection of Interstate Highway 64 and State Highway 249, and 2.95 mi southwest of Quinton. Owner: Thomas M. Brooks.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled withdrawal water well, diameter 6 in., depth 305 ft, screened 285 to 305 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 115 ft above sea level, from topographic map. Measuring point: Top of casing, 1.3 ft above land-surface datum.

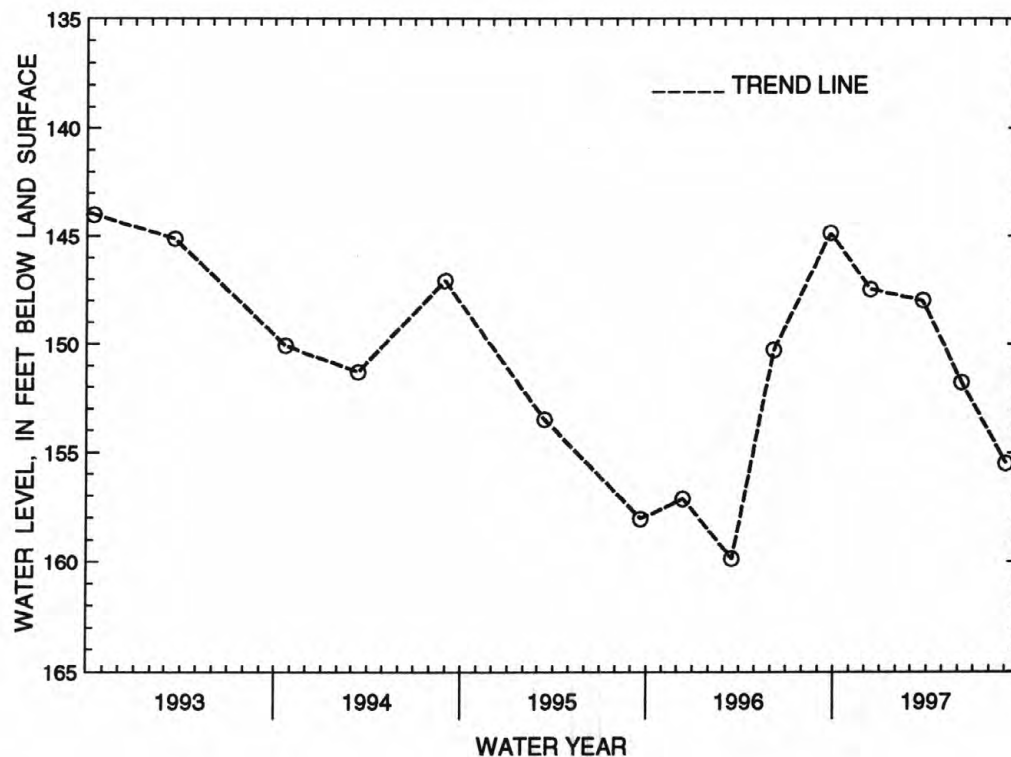
REMARKS.--Water level affected by regional drawdown.

PERIOD OF RECORD.--November 1983 to current year. Unpublished records available prior to October 1987 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 129.91 ft below land-surface datum, Feb. 3, 1984; lowest measured, 159.86 ft below land-surface datum, Mar. 18, 1996.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 12	147.47	MAR 24	147.99	JUN 09	151.78	SEP 03	155.49
WATER YEAR 1997		HIGHEST	147.47	DEC 12, 1996			
		LOWEST	155.49	SEP 03, 1997			



GROUND-WATER LEVELS

NEW KENT COUNTY

373024076542201. Local number, 55J 6.

LOCATION.--Lat 37°30'24", long 76°54'22", Hydrologic Unit 02080106, 0.25 mi north of State Highway 249, 4.3 mi east of New Kent Courthouse. Owner: Chad Brunskole.

AQUIFER.--Aquia aquifer of Paleocene age.

WELL CHARACTERISTICS.--Drilled withdrawal water well, diameter 4 in., depth 275 ft, screened 265 to 275 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 110 ft above sea level, from topographic map. Measuring point: Top of casing, 1.38 ft above land-surface datum.

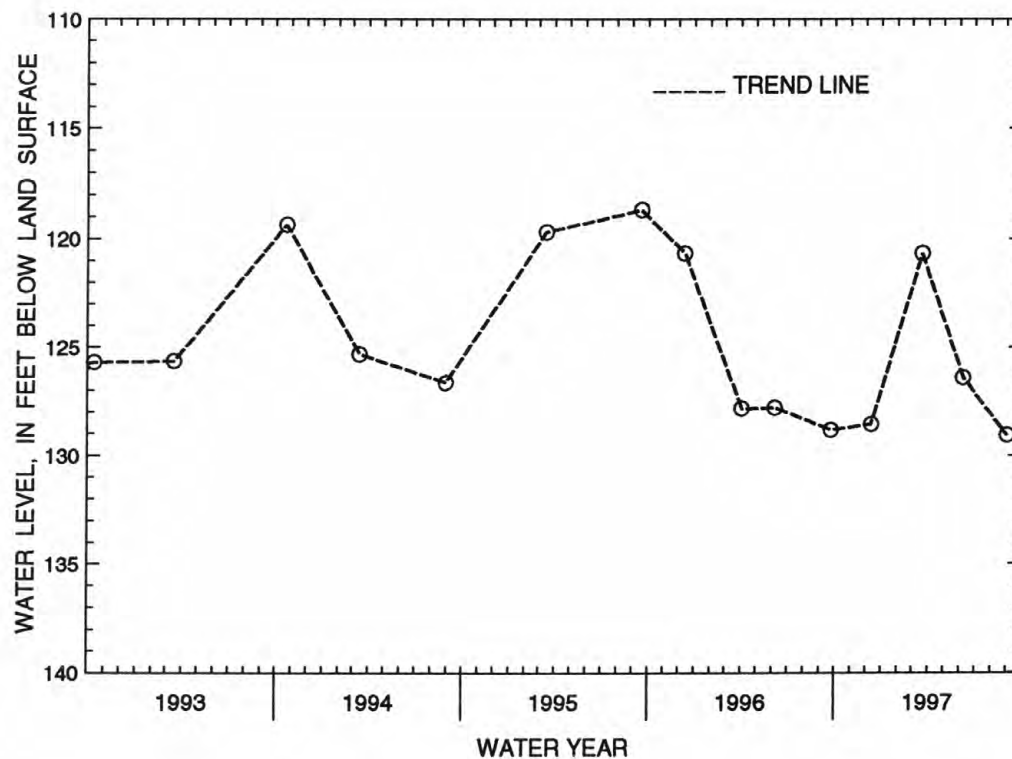
REMARKS.--Water level affected by regional drawdown.

PERIOD OF RECORD.--December 1972, April 1984 to March 1986, March 1988 to current year. Unpublished records available prior to October 1987 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 114.10 ft below land-surface datum, Dec. 7, 1972; lowest measured, 129.10 ft below land-surface datum, Sept. 2, 1997.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 12	128.58	MAR 21	120.67	JUN 09	126.41	SEP 02	129.10
WATER YEAR 1997	HIGHEST	120.67	MAR 21, 1997				
	LOWEST	129.10	SEP 02, 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.

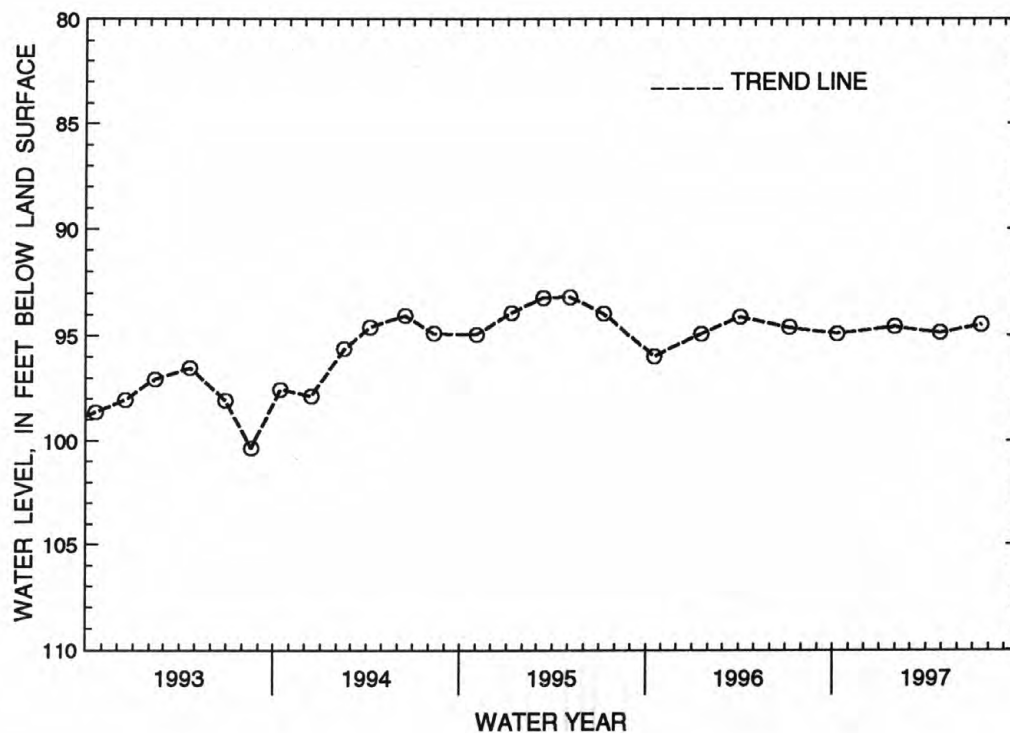
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 09	94.90	JAN 30	94.58	APR 29	94.87	JUL 17	94.48
WATER YEAR 1997	HIGHEST	94.48	JUL 17, 1997				
	LOWEST	94.90	OCT 09, 1996				



GROUND-WATER LEVELS

CITY OF NEWPORT NEWS

371208076341101. Local number, 58F 50 SOW 171A.

LOCATION.--Lat 37°12'08", long 76°34'11", Hydrologic Unit 02080206, 0.4 mi southeast of the intersection of State Highways 143 and 238 and 150 ft north of State Highway 143 in the city of Newport News. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Lower Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 1,236 ft, screened 1,205 to 1,215 ft.

INSTRUMENTATION.--Electronic pressure transducer data logger--60 minute-record interval. Prior to May 8, 1997, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 55 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum prior to Apr. 14, 1993; 1.85 ft thereafter.

REMARKS.--Missing record due to recorder malfunction. Water levels in October and November 1990 may have been affected by well drilled at site by Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown and occasional pumpage for water-quality sampling. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

PERIOD OF RECORD.--July 1984 to current year. Unpublished records available prior to October 1986 in files of the Geological Survey.

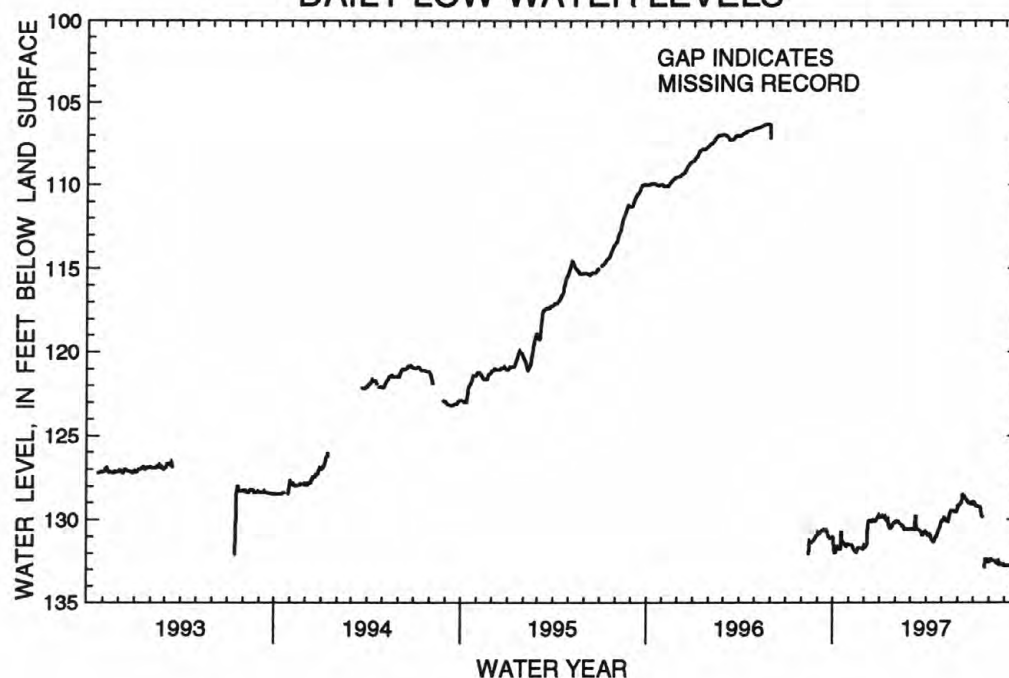
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 106.32 ft below land-surface datum, May 23-27, 1996, 1995; lowest recorded, 132.92 ft below land-surface datum, Sept. 22, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	131.97	131.57	131.62	129.85	130.18	130.61	130.98	130.05	129.13	129.10	132.37	132.81
10	131.65	131.68	130.11	129.83	130.29	130.35	131.05	130.08	128.70	129.22	132.50	132.75
15	131.77	131.93	130.14	130.08	130.41	130.61	131.34	129.97	128.72	129.27	132.55	132.81
20	131.31	131.71	130.03	130.47	130.61	130.67	131.03	129.48	128.92	129.87	132.62	132.80
25	131.55	131.70	130.06	130.43	130.62	130.94	130.66	129.51	129.05	132.42	132.71	132.83
EOM	131.48	131.77	129.82	130.20	130.59	130.70	130.18	129.44	129.10	132.56	132.76	132.75

WATER YEAR 1997 HIGHEST INSTANTANEOUS 128.44 JUN 11, 1997
 LOWEST INSTANTANEOUS 132.92 SEP 22, 1997

DAILY LOW-WATER LEVELS



GROUND-WATER LEVELS

CITY OF NEWPORT NEWS

371208076341102. Local number, 58F 51 SOW 171B.

LOCATION.--Lat 37°12'08", long 76°34'11", Hydrologic Unit 02080206, 0.4 mi southeast of the intersection of State Highways 143 and 238 and 150 ft north of State Highway 143 in the city of Newport News. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 851 ft, screened 820 to 830 ft.

INSTRUMENTATION.--Electronic pressure transducer data logger--60-minute record interval. Prior to Apr. 24, 1996, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 55 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum prior to Apr. 14, 1993; 1.80 ft thereafter.

REMARKS.--Missing record due to recorder malfunction. Water level affected by regional drawdown and occasional pumpage for water-quality sampling. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

PERIOD OF RECORD.--July 1984 to current year. Unpublished records available prior to October 1986 in files of the Geological Survey.

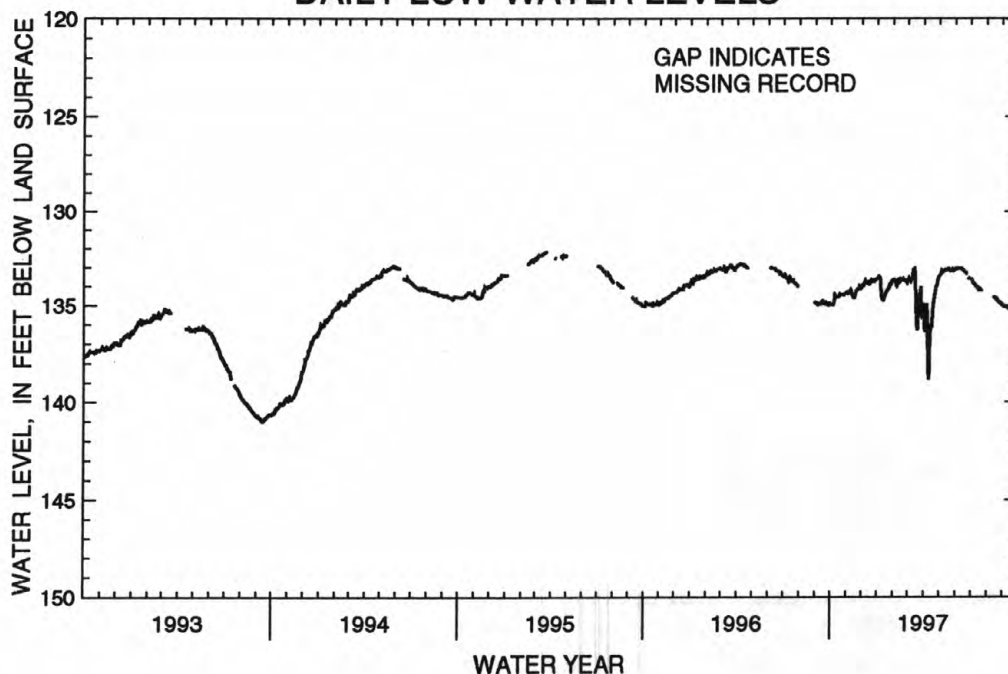
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 126.35 ft below land-surface datum, Mar. 23-25, 1985; lowest recorded, 141.02 ft below land-surface datum, Sept. 13, 1993.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	134.98	134.36	133.97	133.51	133.82	133.71	135.29	133.31	133.09	133.76	---	135.07
10	134.53	134.26	133.83	134.73	133.64	133.45	138.83	133.18	133.08	133.96	---	135.10
15	134.58	134.61	133.90	134.49	133.60	133.37	136.12	133.13	133.15	134.09	134.55	135.19
20	134.42	134.23	133.76	134.16	133.70	136.21	134.78	133.09	133.25	134.20	134.68	135.23
25	134.46	134.14	133.75	133.84	133.72	134.29	134.02	133.14	---	---	134.85	135.26
BOM	134.34	134.10	133.63	133.68	133.83	135.00	133.52	133.13	133.62	---	134.98	135.21

WATER YEAR 1997	HIGHEST INSTANTANEOUS	132.90	MAR 14, 1997
	LOWEST INSTANTANEOUS	138.83	APR 10, 1997

DAILY LOW-WATER LEVELS



GROUND-WATER LEVELS
CITY OF NEWPORT NEWS

371208076341104. Local number, 58F 53 SOW 171D.

LOCATION.--Lat 37°12'08", long 76°34'11", Hydrologic Unit 02080206, 0.4 mi southeast of the intersection of State Highways 143 and 238 and 150 ft north of State Highway 143 in the city of Newport News. Owner: Virginia Department of Environmental Quality.

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

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 343 ft, screened 333 to 343 ft.

INSTRUMENTATION.--Digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 55 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum prior to Apr. 14, 1993; 2.9 ft thereafter.

REMARKS.--Missing record due to recorder malfunction. Water level affected by regional drawdown and occasional pumpage for water-quality sampling. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

PERIOD OF RECORD.--July 1984 to current year. Unpublished records available prior to October 1986 in files of the Geological Survey.

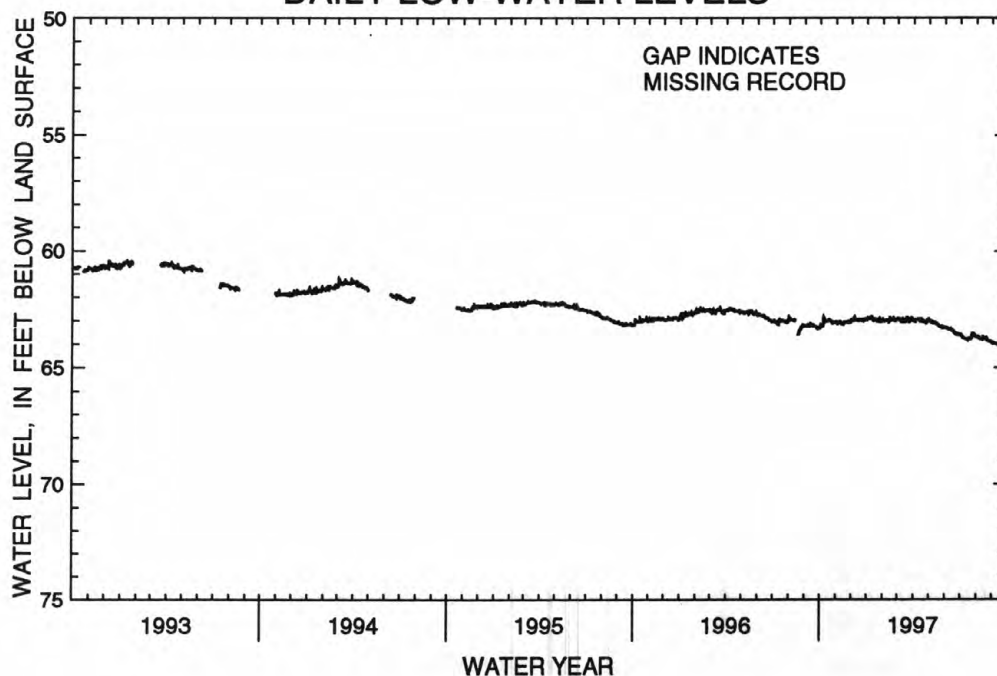
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 55.18 ft below land-surface datum, Feb. 2, 1985; lowest recorded, 64.13 ft below land-surface datum, Sept. 22, 23, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	63.27	63.14	63.02	62.91	63.01	62.96	63.03	63.06	63.34	63.68	63.68	63.99
10	62.96	63.06	62.98	62.81	62.97	63.01	62.94	63.08	63.40	63.76	63.78	63.99
15	63.03	63.17	63.01	63.00	62.92	63.01	63.04	63.10	63.44	63.80	63.71	64.03
20	62.96	63.05	62.99	62.97	62.98	62.87	63.06	63.19	63.53	63.80	63.79	64.06
25	63.08	63.08	62.99	62.95	63.00	63.06	63.08	63.26	63.60	63.56	63.86	64.10
BOM	63.06	63.08	62.96	62.97	62.95	62.94	62.96	63.31	63.63	63.67	63.93	64.07

WATER YEAR 1997	HIGHEST INSTANTANEOUS	62.76	JAN 09, 10, 1997
	LOWEST INSTANTANEOUS	64.13	SEP 22, 23, 1997

DAILY LOW-WATER LEVELS



GROUND-WATER LEVELS

CITY OF NEWPORT NEWS

371208076341105. Local number, 58F 54 SOW 171E.

LOCATION.--Lat 37°12'08", long 76°34'11", Hydrologic Unit 02080206, 0.4 mi southeast of the intersection of State Highways 143 and 238 and 150 ft north of State Highway 143 in the city of Newport News. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown confining unit of Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 88 ft, screened 78 to 88 ft.

INSTRUMENTATION.--Digital recorder--60-minute punch. Removed digital recorder Oct. 18, 1991; reinstalled July 8, 1992. Occasional measurements with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 55 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

REMARKS.--Missing record due to recorder malfunction; lowest water level for the 1994 water year may have occurred during this period. Water level affected by occasional pumpage for water-quality sampling. Stepping in hydrograph due to well not being plum and float rubbing the side of the casing.

PERIOD OF RECORD.--June 1984 to October 1991, July 1992 to current year. Unpublished records available prior to October 1986 in files of the Geological Survey.

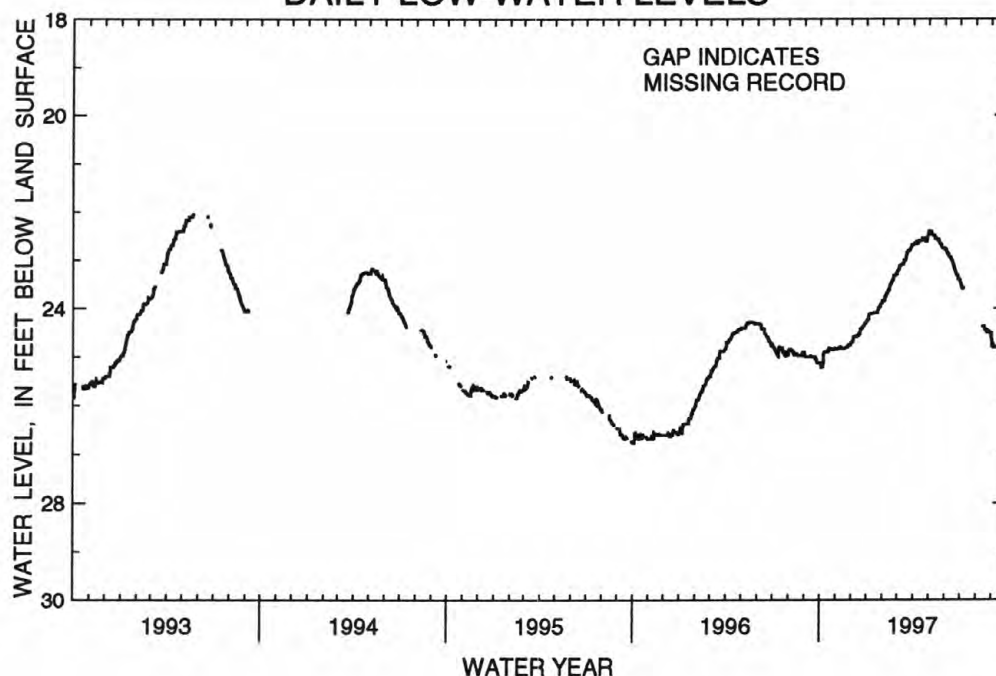
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 22.05 ft below land-surface datum, May 20, 21, 1993; lowest recorded, 27.34 ft below land-surface datum, Nov. 1, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	25.22	24.84	24.70	24.21	23.84	23.21	22.66	22.41	22.81	23.59	---	24.80
10	24.92	24.79	24.58	24.10	23.68	23.11	22.66	22.50	22.93	---	---	24.80
15	24.90	24.83	24.56	24.09	23.55	23.00	22.60	22.56	23.01	---	24.37	24.79
20	24.82	24.82	24.43	24.08	23.43	22.86	22.58	22.58	23.14	---	24.44	24.98
25	24.84	24.79	24.37	24.00	23.33	22.80	22.61	22.67	23.33	---	24.50	24.98
EOM	24.83	24.75	24.30	23.89	23.30	22.69	22.51	22.75	23.41	---	24.51	25.13

WATER YEAR 1997 HIGHEST INSTANTANEOUS 22.41 MAY 01-07, 1997
 LOWEST INSTANTANEOUS 25.22 OCT 04, 05, 1996

DAILY LOW-WATER LEVELS



GROUND-WATER LEVELS

CITY OF NEWPORT NEWS

371208076341106. Local number, 58F 55 SOW 171F.

LOCATION.--Lat 37°12'08", long 76°34'11", Hydrologic Unit 02080206, 0.4 mi southeast of the intersection of State Highways 143 and 238 and 150 ft north of State Highway 143 in the city of Newport News. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Cornwallis Cave aquifer of Pliocene-Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 60 ft, screened 50 to 60 ft.

INSTRUMENTATION.--Digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 55 ft above sea level, from topographic map. Measuring point: Top of casing, 2.9 ft above land-surface datum.

REMARKS.--Missing record due to recorder malfunction. Water level affected by occasional pumpage for water-quality sampling.

PERIOD OF RECORD.--June 1984 to current year. Unpublished records available prior to October 1986 in files of the Geological Survey.

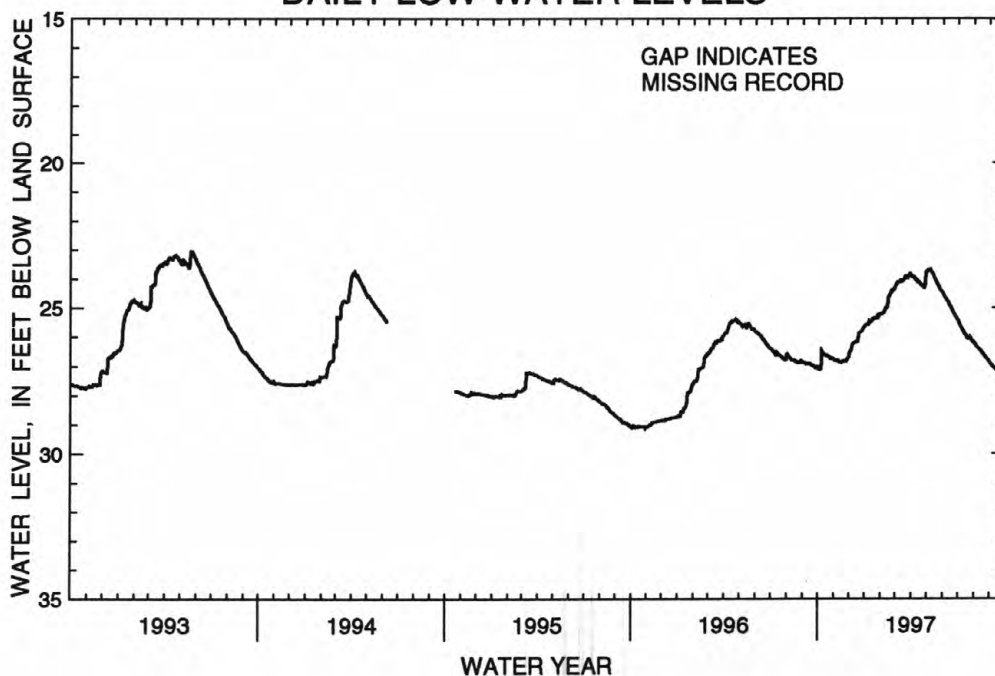
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 23.04 ft below land-surface datum, May 21-24, 1993; lowest recorded, 29.12 ft below land-surface datum, Oct. 29, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997 LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	27.11	26.80	26.49	25.58	25.18	24.18	23.95	23.70	24.62	25.60	26.27	26.98
10	26.51	26.80	26.23	25.47	25.04	24.09	24.03	23.77	24.77	25.76	26.39	27.07
15	26.63	26.87	26.18	25.46	24.82	24.07	24.15	23.88	24.93	25.93	26.48	27.15
20	26.64	26.84	25.92	25.37	24.52	23.96	24.24	24.10	25.09	26.05	26.61	27.28
25	26.72	26.84	25.83	25.31	24.39	23.98	24.30	24.26	25.27	26.03	26.72	27.36
EOM	26.74	26.71	25.67	25.20	24.36	23.85	23.79	24.46	25.42	26.18	26.86	27.47

WATER YEAR 1997 HIGHEST INSTANTANEOUS 23.65 MAY 03, 1997
 LOWEST INSTANTANEOUS 27.47 SEP 30, 1997

DAILY LOW-WATER LEVELS



GROUND-WATER LEVELS

CITY OF NORFOLK

365223076122101. Local number, 61C 1.

LOCATION.--Lat 36°52'23", long 76°12'21", Hydrologic Unit 02080108, at Moores Bridge Filter Plant, 0.3 mi east of intersection of State Highway 165 and U.S. Highway 13 in Norfolk. Owner: City of Norfolk.

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

WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in., depth 970 ft, screened 900 to 960 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 10.80 ft above National Geodetic Vertical Datum of 1929. Measuring point: Inner edge of manhole at land-surface datum. Prior to Oct. 29, 1987, measuring point at top of casing, 3.15 ft above land-surface datum.

REMARKS.--Water level affected by pumpage, regional drawdown, and recharge operations in nearby wells May 18, 1971, to Nov. 5, 1973.

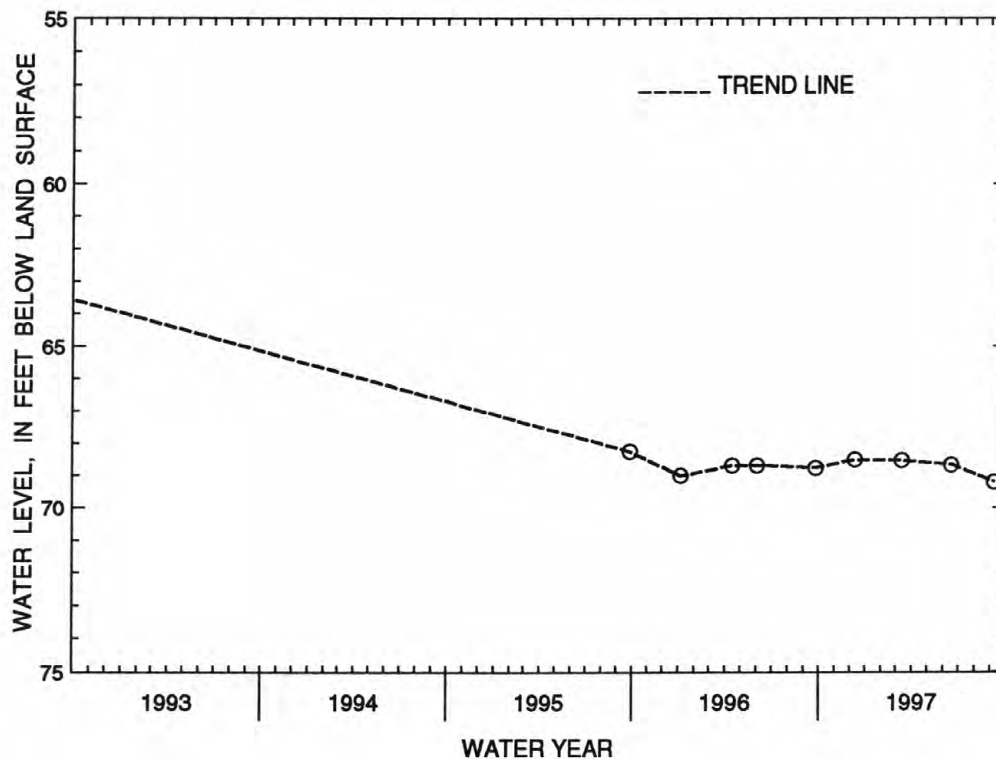
PERIOD OF RECORD.--January 1968 to June 1990, September 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.70 ft below land-surface datum, Feb. 17, 1968; lowest measured, 69.20 ft below land-surface datum, Sept. 8, 1997.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 11	68.51	MAR 12	68.53	JUN 16	68.66	SEP 08	69.20

WATER YEAR 1997	HIGHEST	68.51	DEC 11, 1996
	LOWEST	69.20	SEP 08, 1997



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

371543076003401. Local number, 62G 15 SOW 121.

LOCATION.--Lat 37°15'43", long 76°00'34", Hydrologic Unit 02080110, 100 ft southwest of State Highway 642, 0.5 mi south of intersection of State Highways 184 and 642, and 0.7 mi southeast of Cape Charles. Owner: Brown and Root Corporation.

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

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 190 ft, screened 180 to 190 ft.

INSTRUMENTATION.--Continuous strip-chart recorder. Prior to July 15, 1985, occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 12 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.--November 1980 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

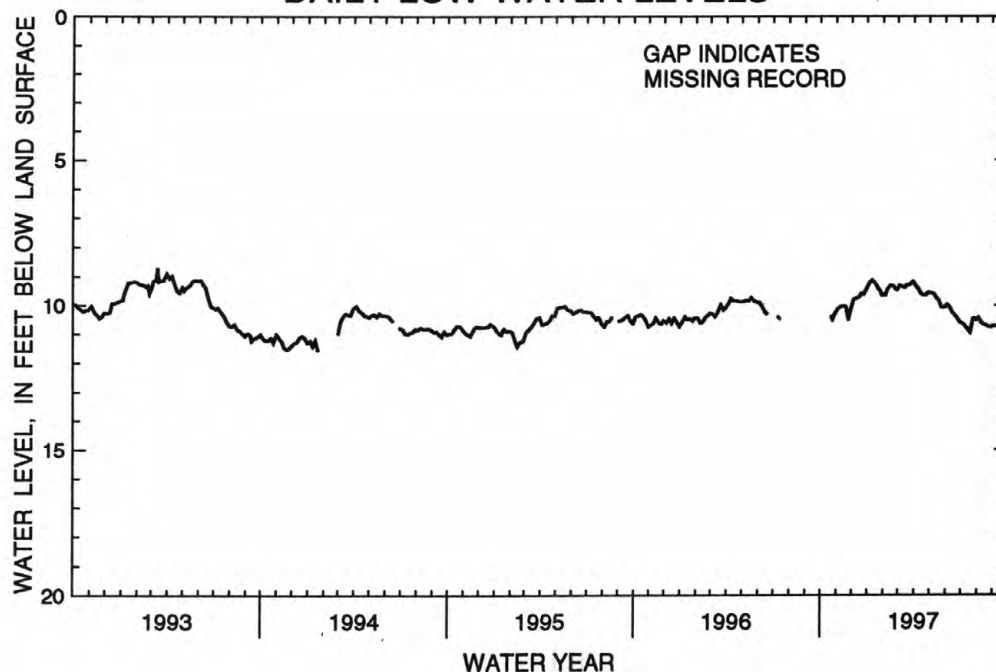
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 8.74 ft below land-surface datum, Mar. 13, 1993; lowest recorded, 14.31 ft below land-surface datum, Jan. 16, 17, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	10.13	9.80	9.24	9.65	9.33	9.35	9.58	9.98	10.62	10.44	10.72
10	---	10.05	9.76	9.14	9.45	9.37	9.43	9.60	10.07	10.73	10.60	10.74
15	---	10.04	9.75	9.24	9.32	9.38	9.60	9.74	10.25	10.86	10.67	10.86
20	---	10.05	9.60	9.37	9.34	9.30	9.64	9.86	10.36	10.97	10.69	10.88
25	10.50	10.52	9.63	9.50	9.42	9.30	9.65	10.08	10.47	10.49	10.77	10.92
EOM	10.26	10.12	9.40	9.63	9.47	9.18	9.55	10.08	10.60	10.52	10.76	10.76

WATER YEAR 1997 HIGHEST INSTANTANEOUS 9.08 JAN 10, 1997
 LOWEST INSTANTANEOUS 10.97 JUL 20, 1997

DAILY LOW-WATER LEVELS



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.

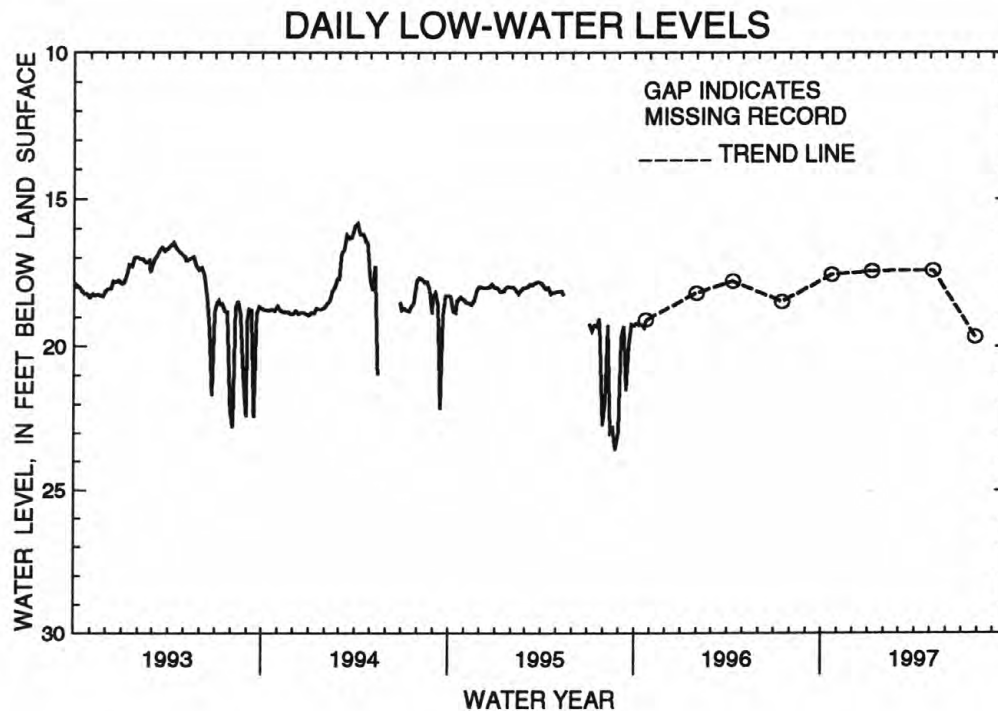
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Missing record due to recorder malfunction. Water level affected by local pumpage.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	17.57	JAN 08	17.45	MAY 07	17.42	JUL 28	19.67
WATER YEAR 1997	HIGHEST	17.42	MAY 07, 1997				
	LOWEST	19.67	JUL 28, 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.

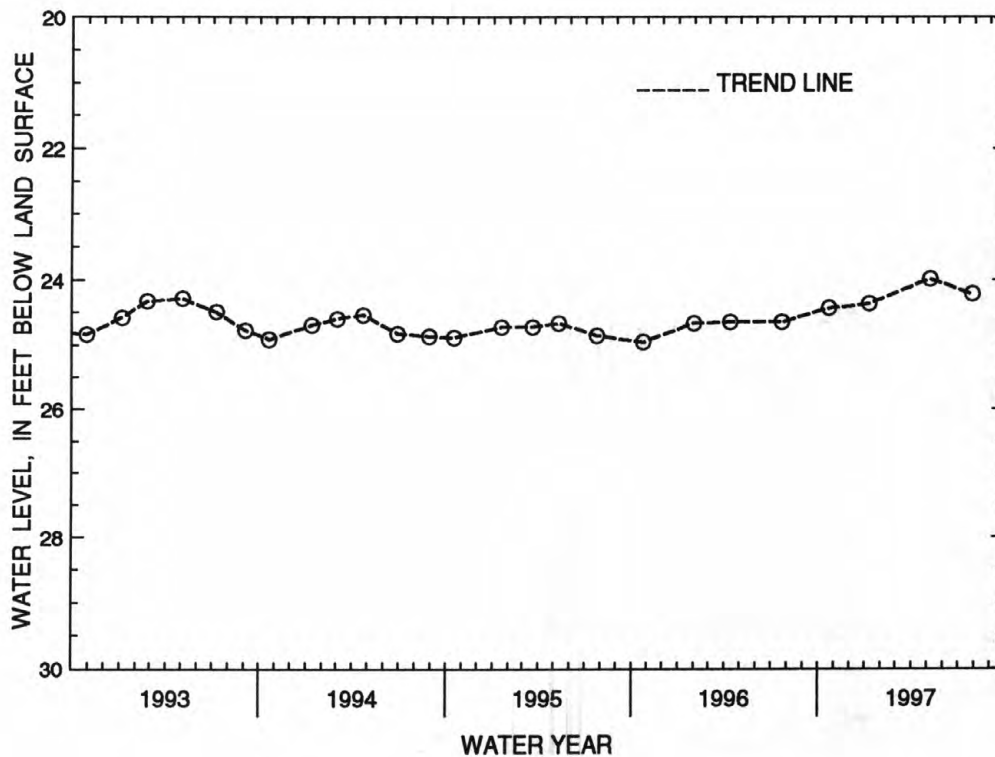
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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, 23.91 ft below land-surface datum, Jan. 9, 1979; lowest measured, 29.58 ft below land-surface datum, May 23, 1986.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	24.44	JAN 08	24.37	MAY 07	23.99	JUL 28	24.22
WATER YEAR 1997 HIGHEST 23.99		MAY 07, 1997					
LOWEST 24.44		OCT 22, 1996					



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.

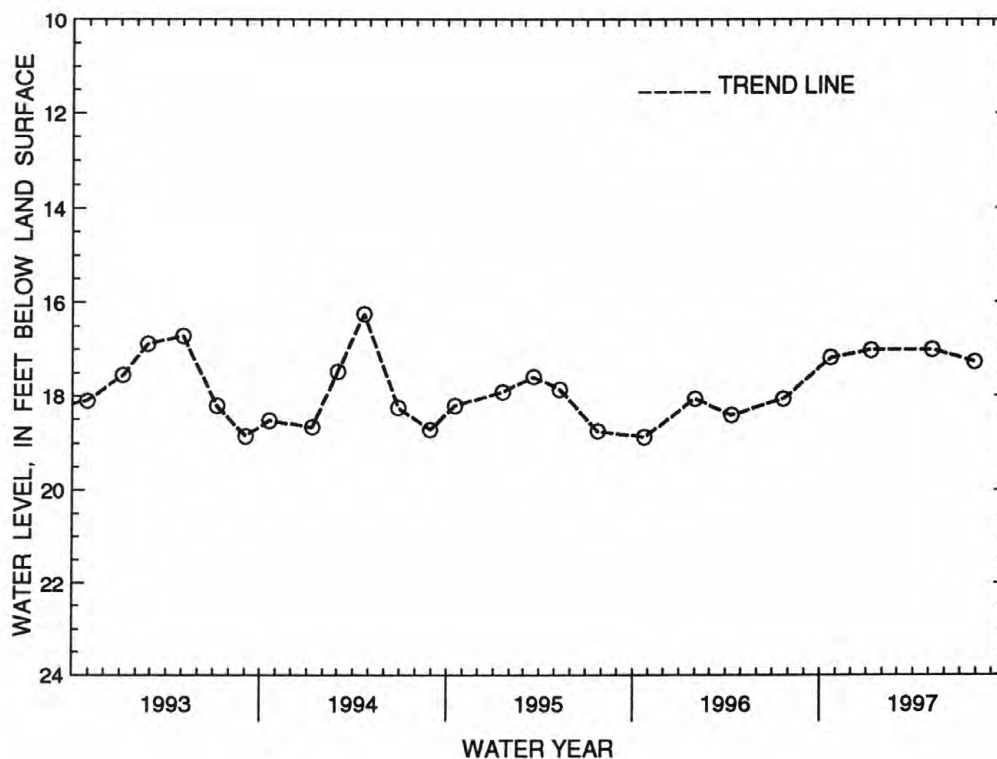
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

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, 15.78 ft below land-surface datum, Apr. 25, 1984; lowest measured, 21.68 ft below land-surface datum, Feb. 11, 1982.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	17.18	JAN 08	17.02	MAY 07	17.01	JUL 28	17.27
WATER YEAR 1997	HIGHEST	17.01	MAY 07, 1997				
	LOWEST	17.27	JUL 28, 1997				



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

371307075583503. 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.

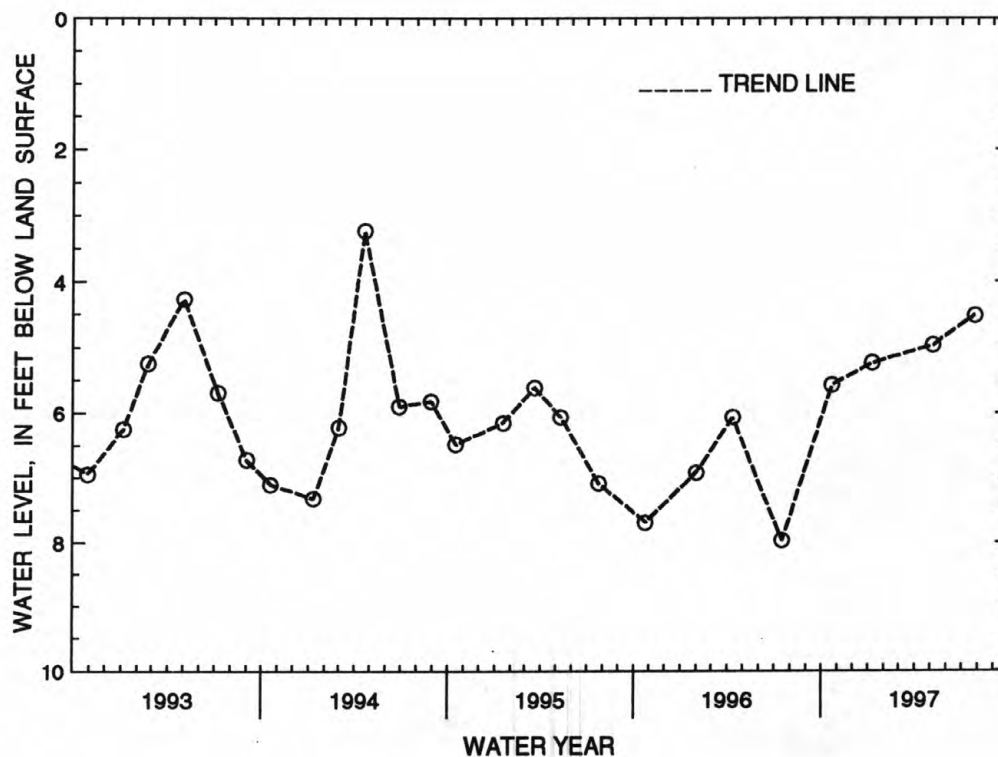
DATUM.--Elevation of land-surface datum is 31.15 ft above sea level. Measuring point: Top of casing, 1.85 ft above land-surface datum.

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, 3.23 ft below land-surface datum, Apr. 21, 1994; lowest measured, 9.08 ft below land-surface datum, Feb. 4, 5, 1989.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	5.57	JAN 08	5.24	MAY 07	4.97	JUL 28	4.52
WATER YEAR 1997	HIGHEST	4.52	JUL 28, 1997				
	LOWEST	5.57	OCT 22, 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.

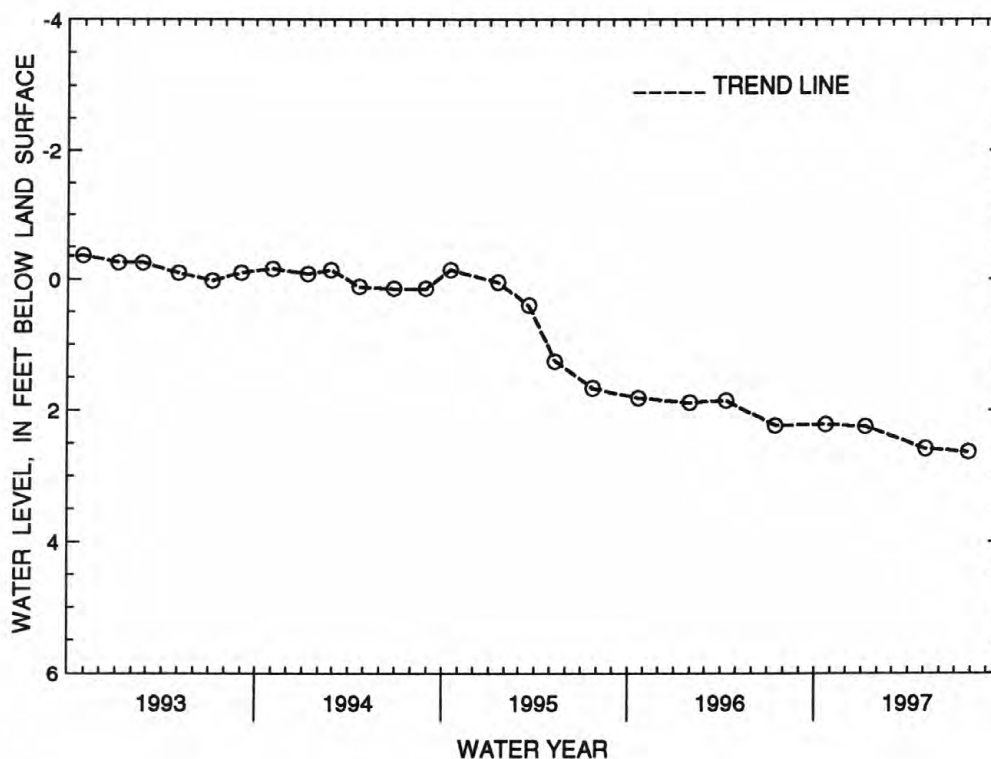
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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, 2.64 ft below land-surface datum, July 28, 1997.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	2.22	JAN 08	2.25	MAY 06	2.59	JUL 28	2.64
WATER YEAR 1997	HIGHEST	2.22	OCT 23, 1996				
	LOWEST	2.64	JUL 28, 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.

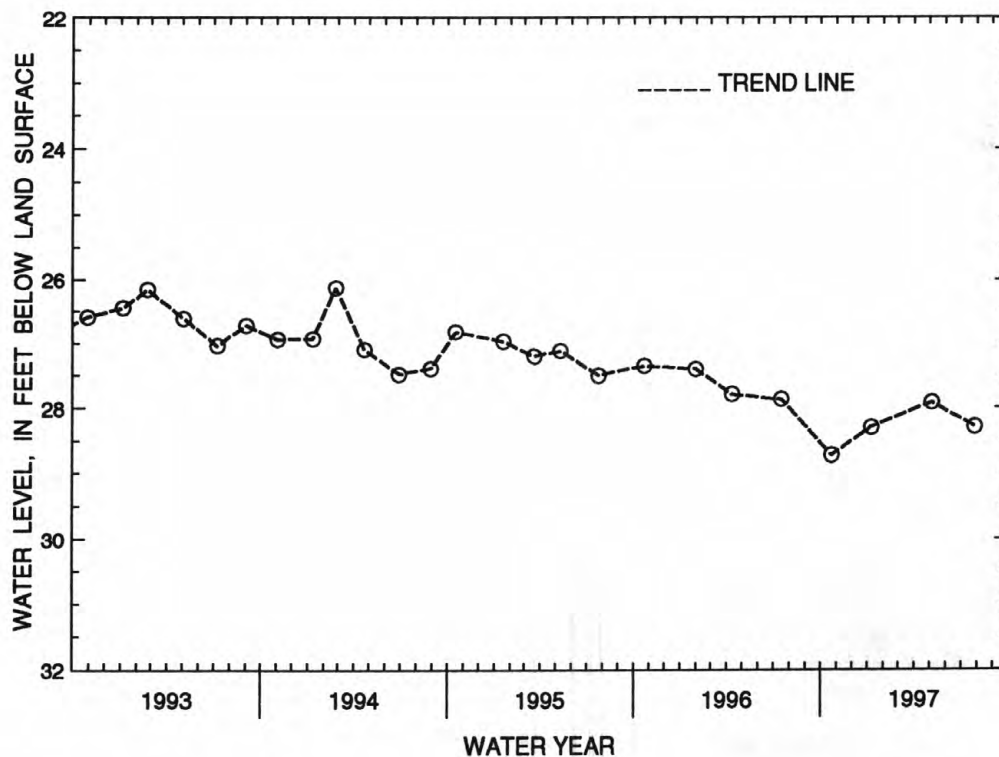
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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, 28.73 ft below land-surface datum, Oct. 23, 1996.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	28.73	JAN 08	28.30	MAY 06	27.92	JUL 28	28.29
WATER YEAR 1997	HIGHEST LOWEST	27.92 28.73	MAY 06, 1997 OCT 23, 1996				



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 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 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.

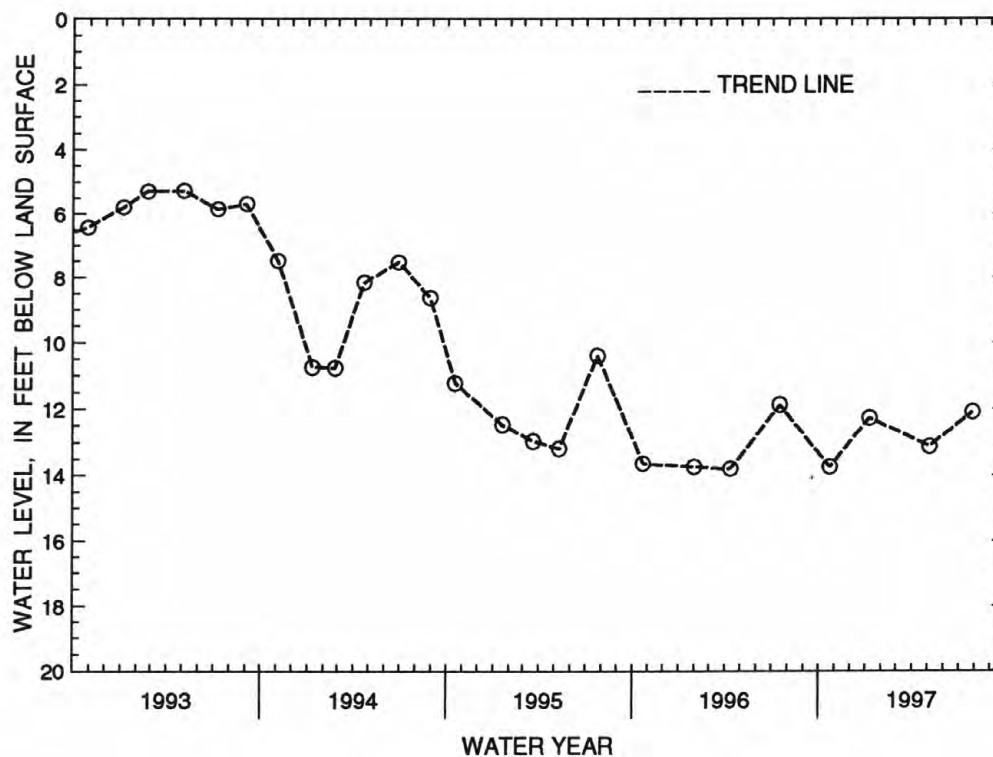
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	13.74	JAN 08	12.27	MAY 06	13.11	JUL 28	12.10
WATER YEAR 1997	HIGHEST	12.10	JUL 28, 1997				
	LOWEST	13.74	OCT 23, 1996				



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.

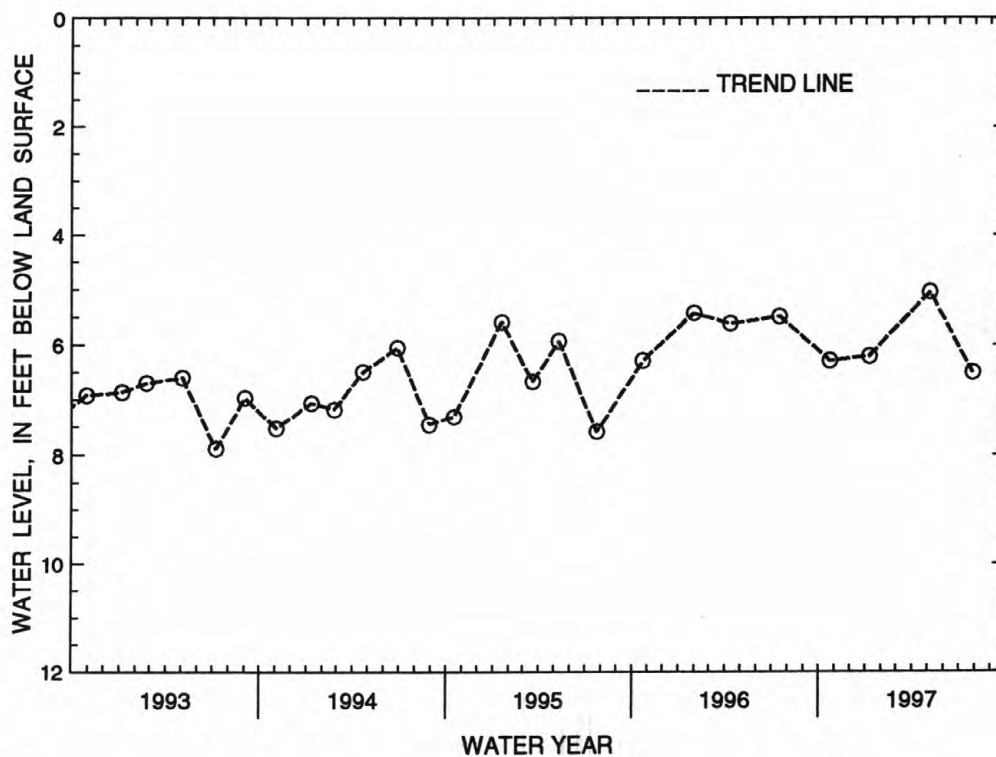
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.05 ft below land-surface datum, May 6, 1997; lowest measured, 7.90 ft below land-surface datum, July 8, 1993.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	6.29	JAN 08	6.21	MAY 06	5.05	JUL 28	6.51
WATER YEAR 1997		HIGHEST	5.05	MAY 06, 1997			
		LOWEST	6.51	JUL 28, 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.

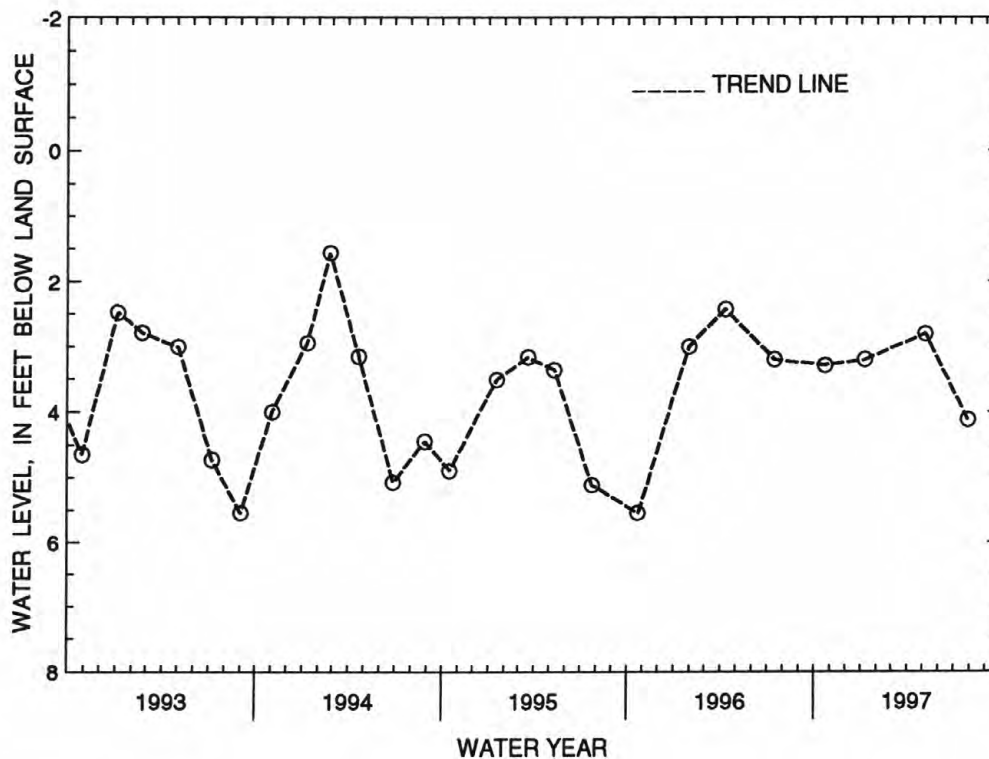
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	3.29	JAN 08	3.21	MAY 06	2.81	JUL 28	4.13
WATER YEAR 1997		HIGHEST	2.81	MAY 06, 1997			
		LOWEST	4.13	JUL 28, 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.

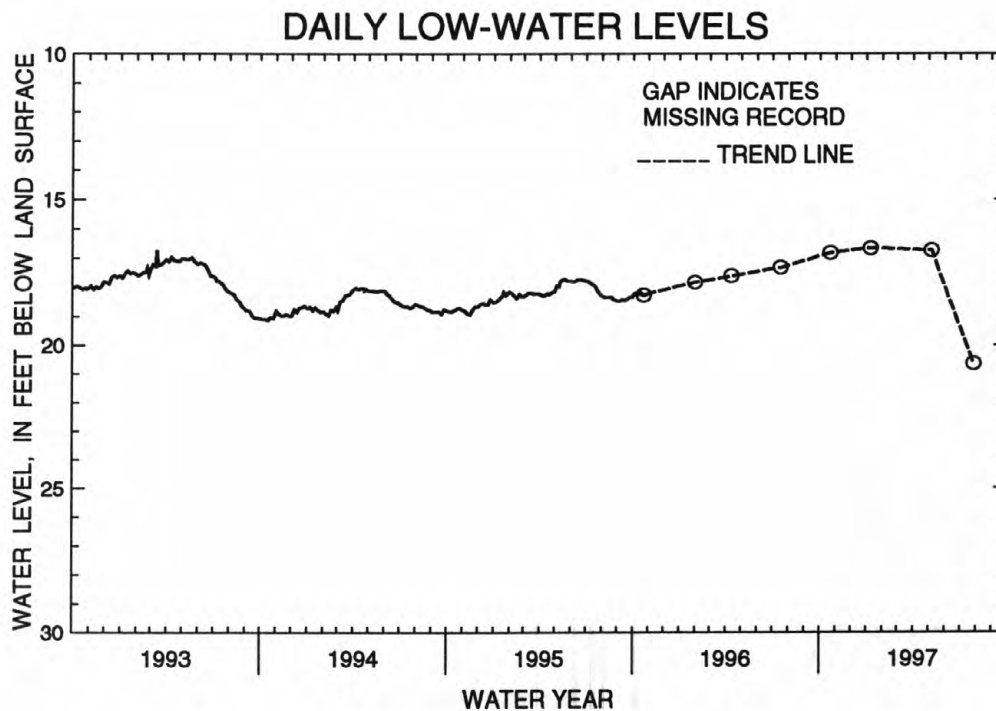
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by pumpage.

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, 16.67 ft below land-surface datum, Jan. 8, 1997; lowest measured, 27.96 ft below land-surface datum, Oct. 8, 1982.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	16.83	JAN 08	16.67	MAY 07	16.74	JUL 28	20.65
WATER YEAR 1997	HIGHEST	16.67	JAN 08, 1997				
	LOWEST	20.65	JUL 28, 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.

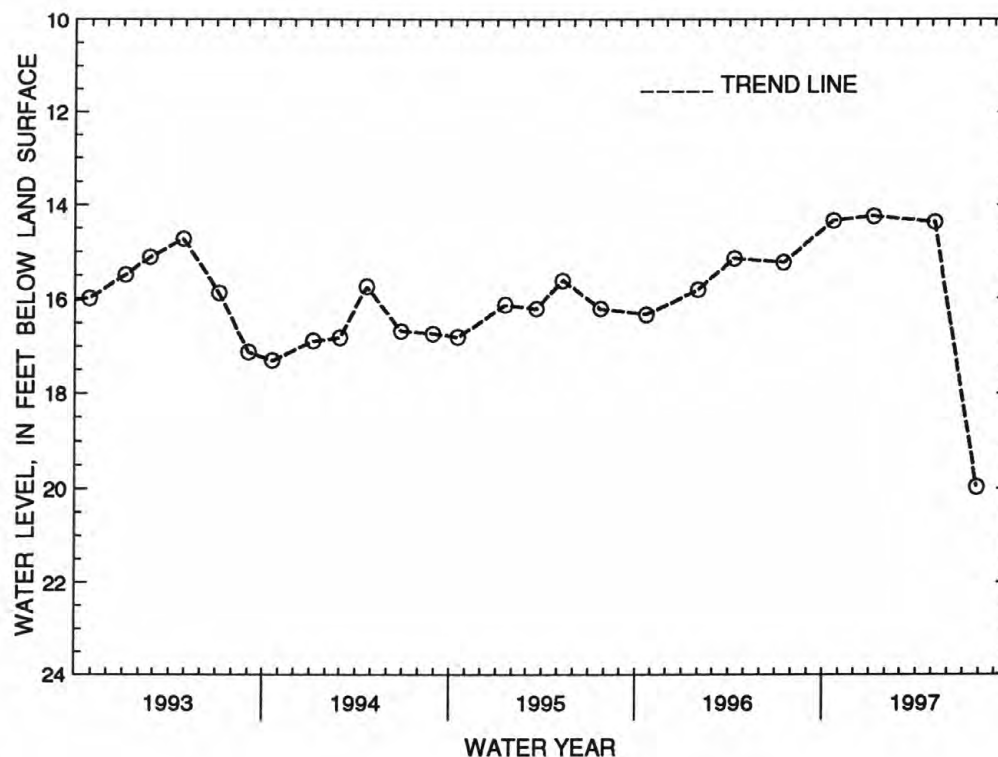
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by pumpage.

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, 13.93 ft below land-surface datum, May 25, 1983; lowest measured, 23.47 ft below land-surface datum, Oct. 8, 1982.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	14.34	JAN 08	14.24	MAY 07	14.37	JUL 28	19.97
WATER YEAR 1997	HIGHEST	14.24	JAN 08, 1997				
	LOWEST	19.97	JUL 28, 1997				



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

371709075560803. Local number, 63G 17 SOW 104A.

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 140 ft, screened 130 to 140 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, 0.05 ft above land-surface datum prior to Feb. 29, 1988; 0.5 ft thereafter.

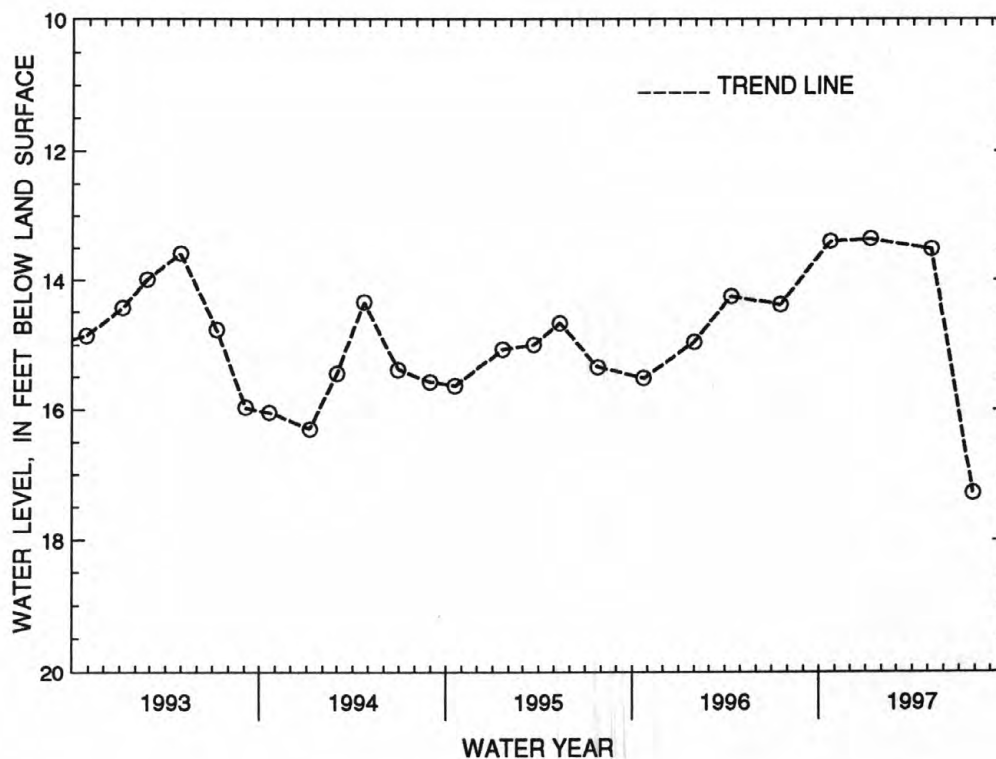
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by pumpage.

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, 13.36 ft below land-surface datum, Jan. 8, 1997; lowest measured, 21.99 ft below land-surface datum, Oct. 8, 1982.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	13.40	JAN 08	13.36	MAY 07	13.52	JUL 28	17.28
WATER YEAR 1997	HIGHEST	13.36	JAN 08, 1997				
	LOWEST	17.28	JUL 28, 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.

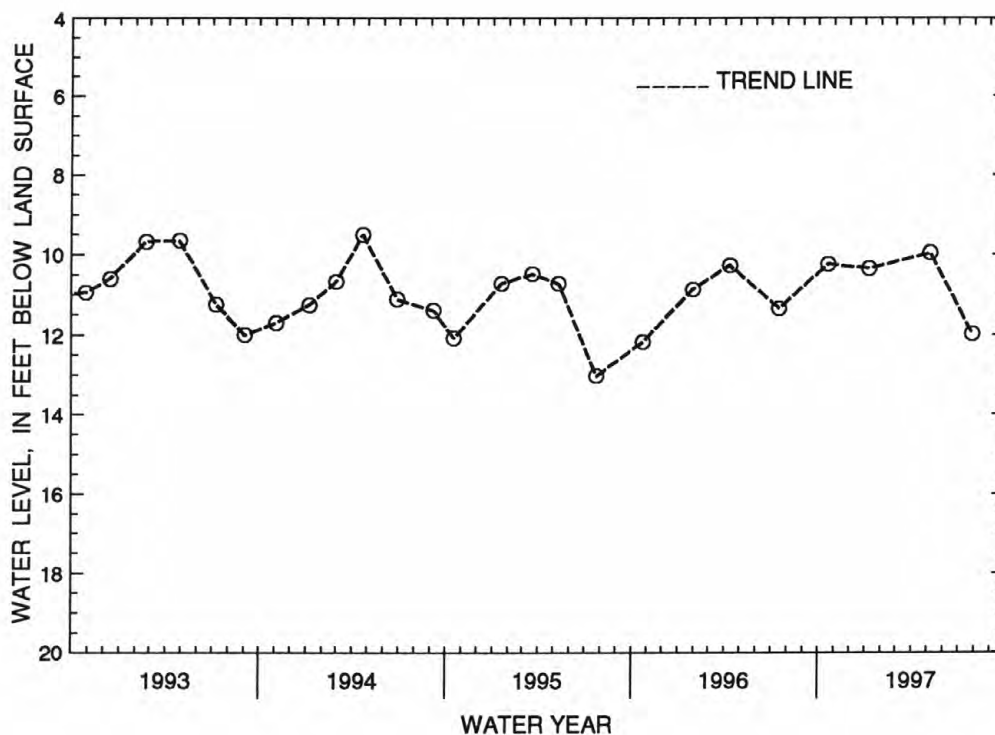
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by pumpage.

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, 8.80 ft below land-surface datum, Feb. 2, 1984; lowest measured, 14.51 ft below land-surface datum, Feb. 17, 1981.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	10.23	JAN 08	10.35	MAY 07	9.96	JUL 28	11.98
WATER YEAR 1997		HIGHEST	9.96	MAY 07, 1997			
		LOWEST	11.98	JUL 28, 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.

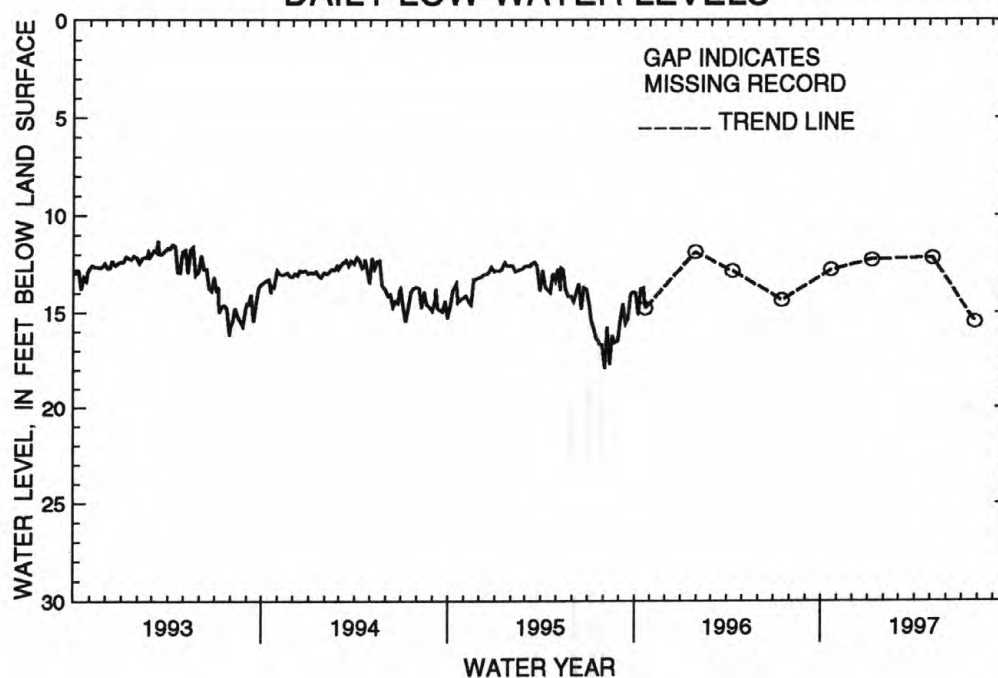
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.01 ft below land-surface datum, Dec. 30, 1982; lowest measured, 22.47 ft below land-surface datum, Sept. 15, 1982.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	12.79	JAN 08	12.26	MAY 07	12.17	JUL 28	15.46

WATER YEAR 1997	HIGHEST	12.17	MAY 07, 1997
	LOWEST	15.46	JUL 28, 1997

DAILY LOW-WATER LEVELS



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..

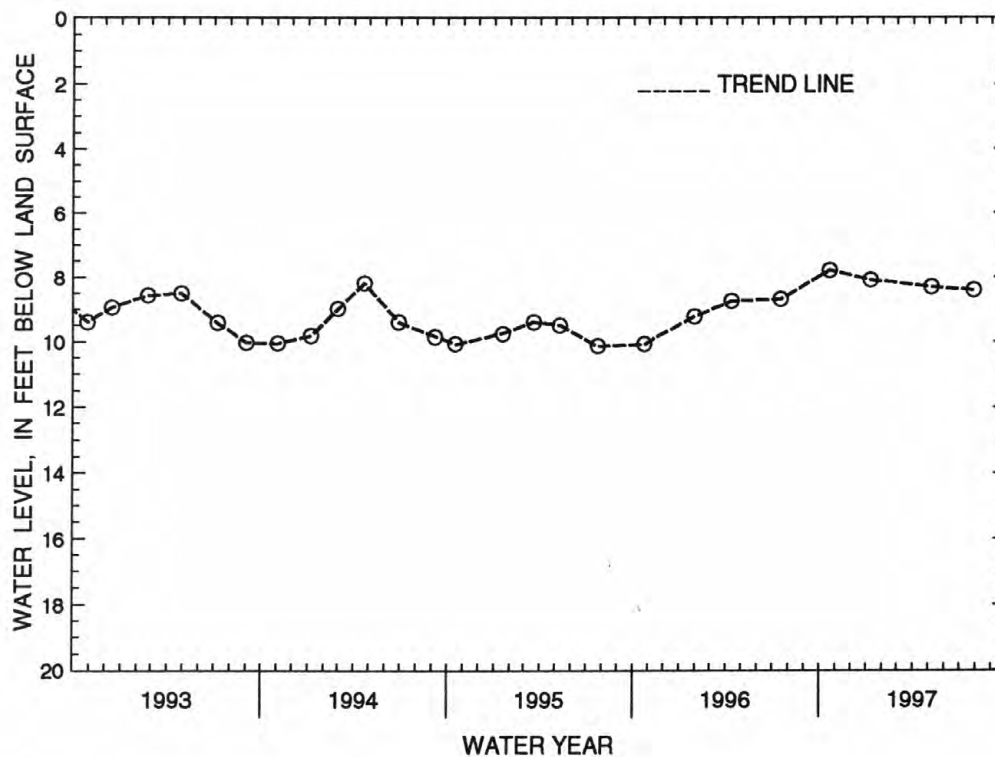
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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, 7.80 ft below land-surface datum, Oct. 21, 1996; lowest measured, 10.82 ft below land-surface datum, Nov. 11, 1986.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	7.80	JAN 08	8.10	MAY 07	8.32	JUL 28	8.42
WATER YEAR 1997	HIGHEST	7.80	OCT 21, 1996				
	LOWEST	8.42	JUL 28, 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.

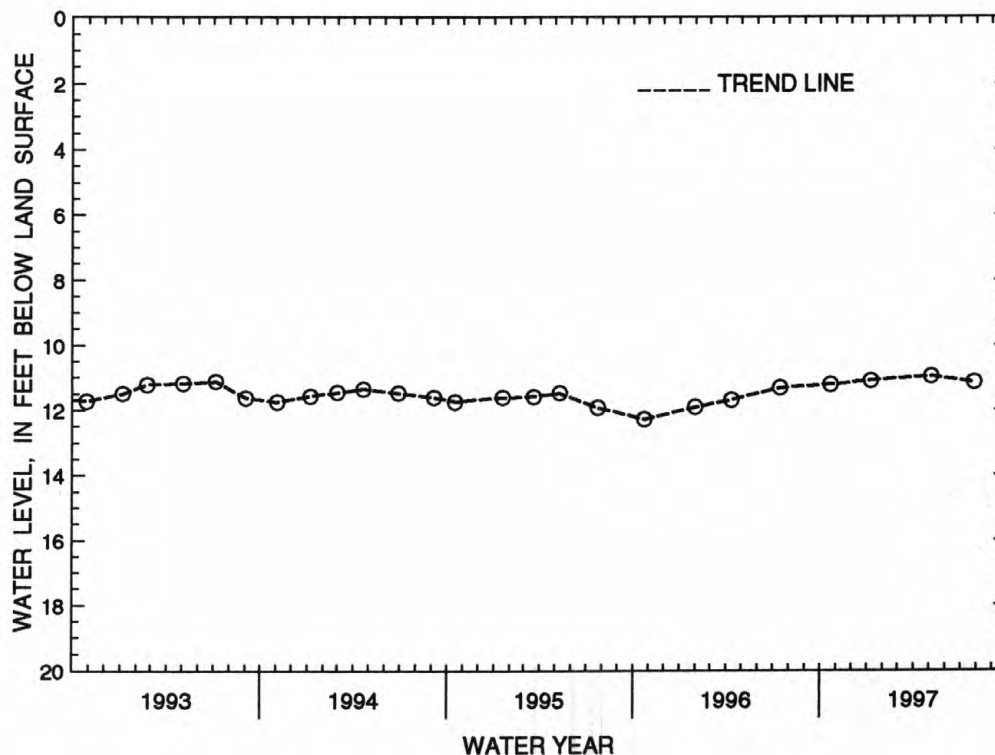
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	11.22	JAN 08	11.10	MAY 06	10.96	JUL 29	11.15
WATER YEAR 1997	HIGHEST	10.96	MAY 06, 1997				
	LOWEST	11.22	OCT 22, 1996				



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.

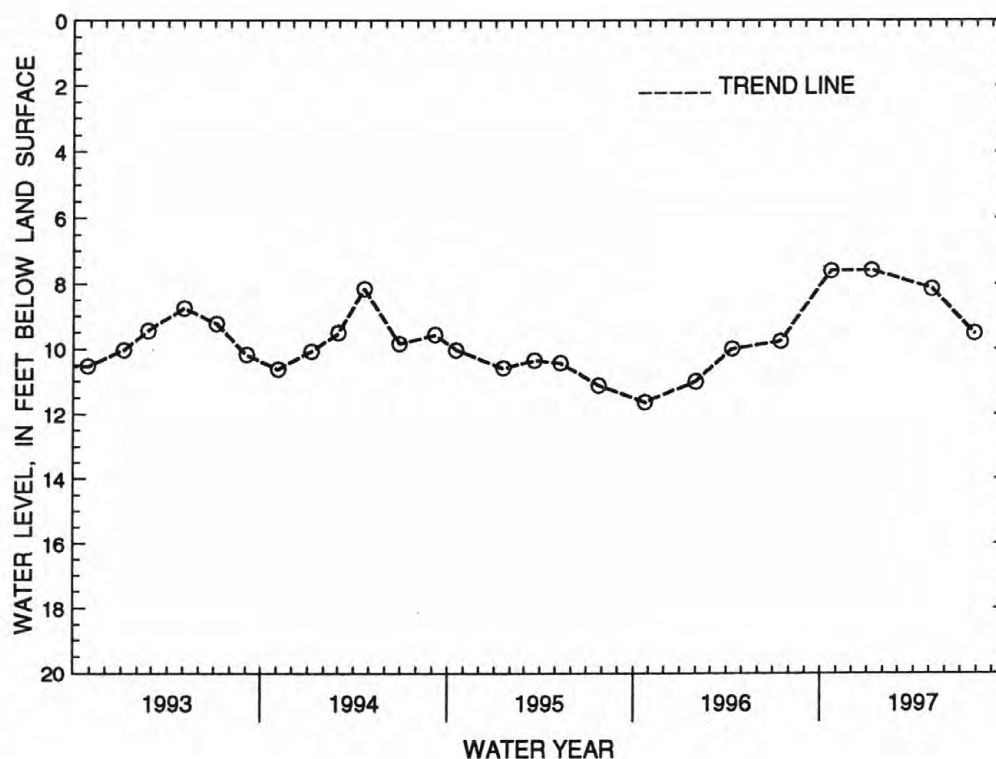
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	7.60	JAN 08	7.59	MAY 06	8.15	JUL 29	9.53
WATER YEAR 1997	HIGHEST	7.59	JAN 08, 1997				
	LOWEST	9.53	JUL 29, 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.

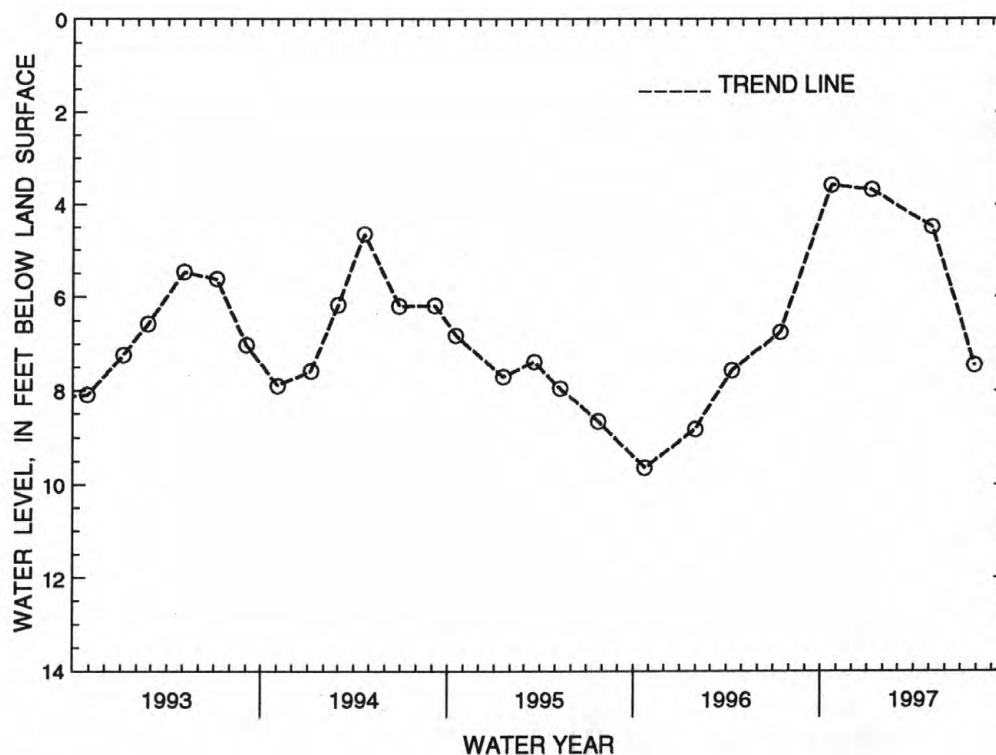
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	3.58	JAN 08	3.68	MAY 06	4.49	JUL 29	7.46
WATER YEAR 1997	HIGHEST	3.58	OCT 22, 1996				
	LOWEST	7.46	JUL 29, 1997				



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.

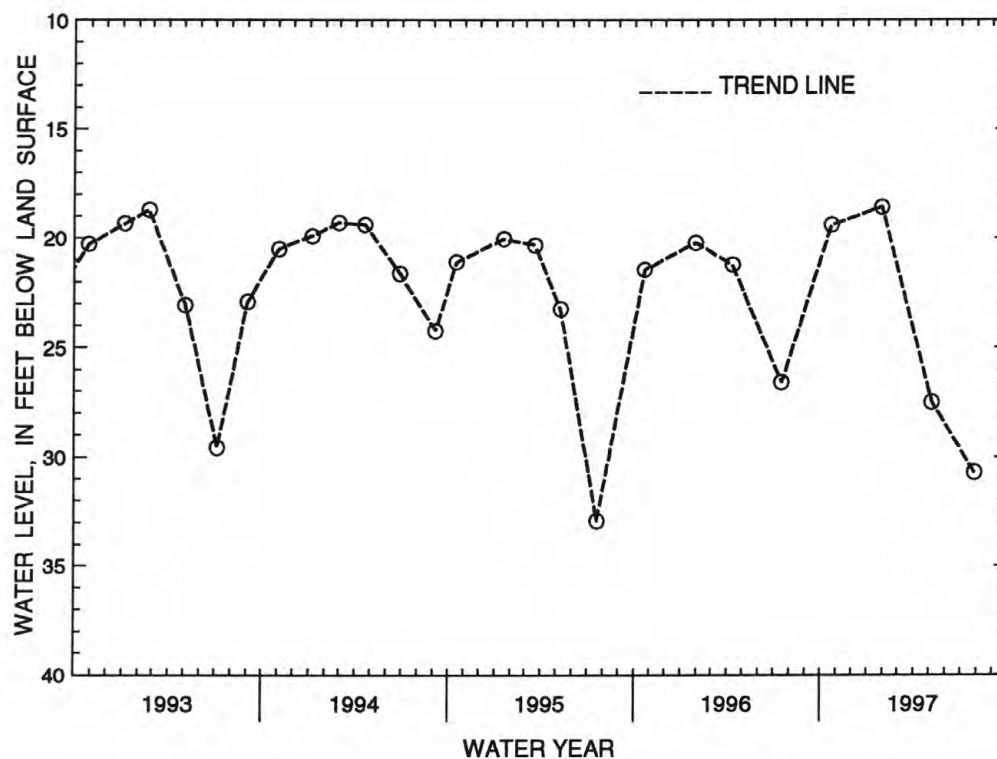
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	19.40	JAN 29	18.58	MAY 06	27.52	JUL 28	30.72
WATER YEAR 1997		HIGHEST	18.58	JAN 29, 1997			
		LOWEST	30.72	JUL 28, 1997			



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.

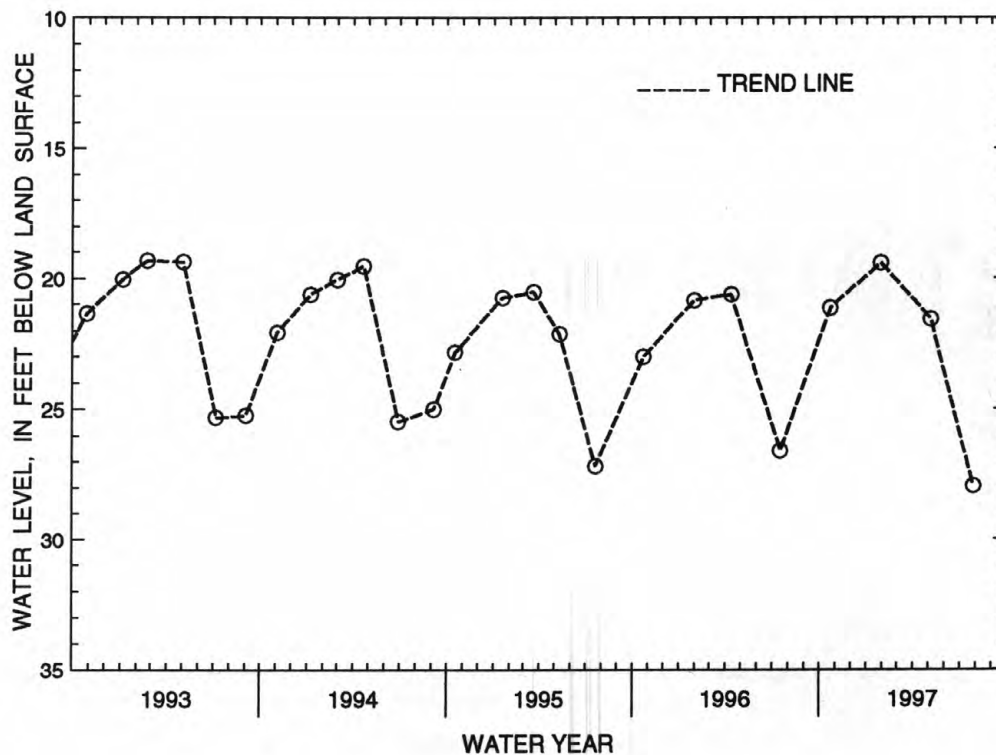
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	21.16	JAN 29	19.44	MAY 06	21.58	JUL 28	27.96
WATER YEAR 1997	HIGHEST	19.44	JAN 29, 1997				
	LOWEST	27.96	JUL 28, 1997				



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.

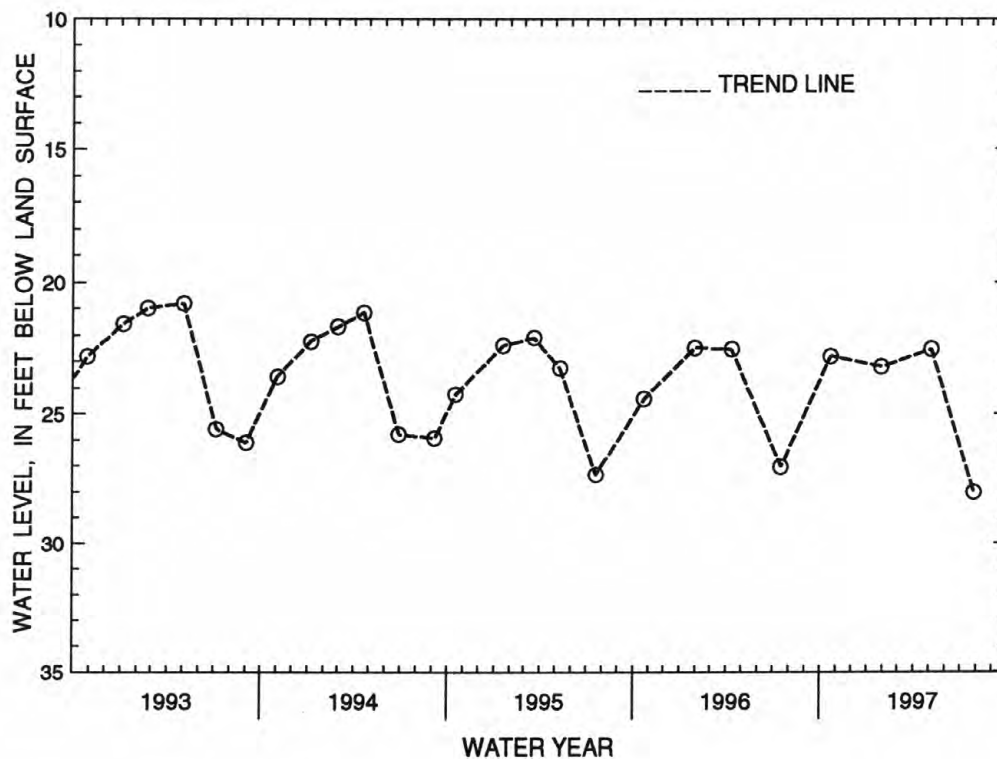
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	22.81	JAN 29	23.21	MAY 06	22.55	JUL 28	28.02
WATER YEAR 1997	HIGHEST	22.55	MAY 06, 1997				
	LOWEST	28.02	JUL 28, 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.

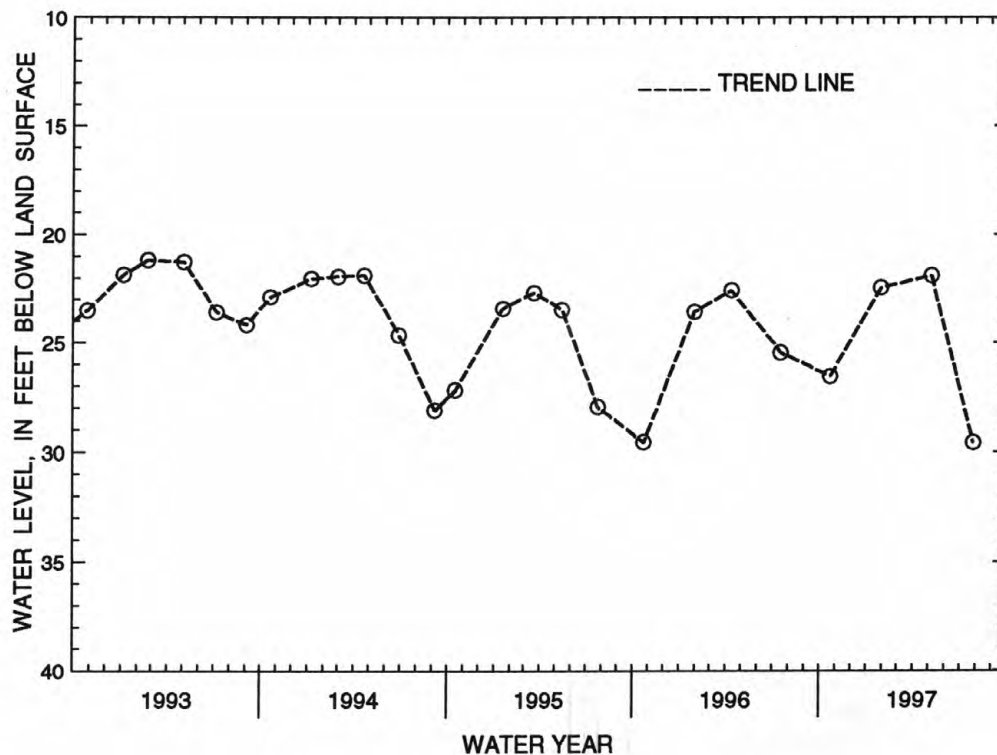
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	26.56	JAN 29	22.45	MAY 07	21.90	JUL 28	29.59
WATER YEAR 1997		HIGHEST	21.90	MAY 07, 1997			
		LOWEST	29.59	JUL 28, 1997			



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.

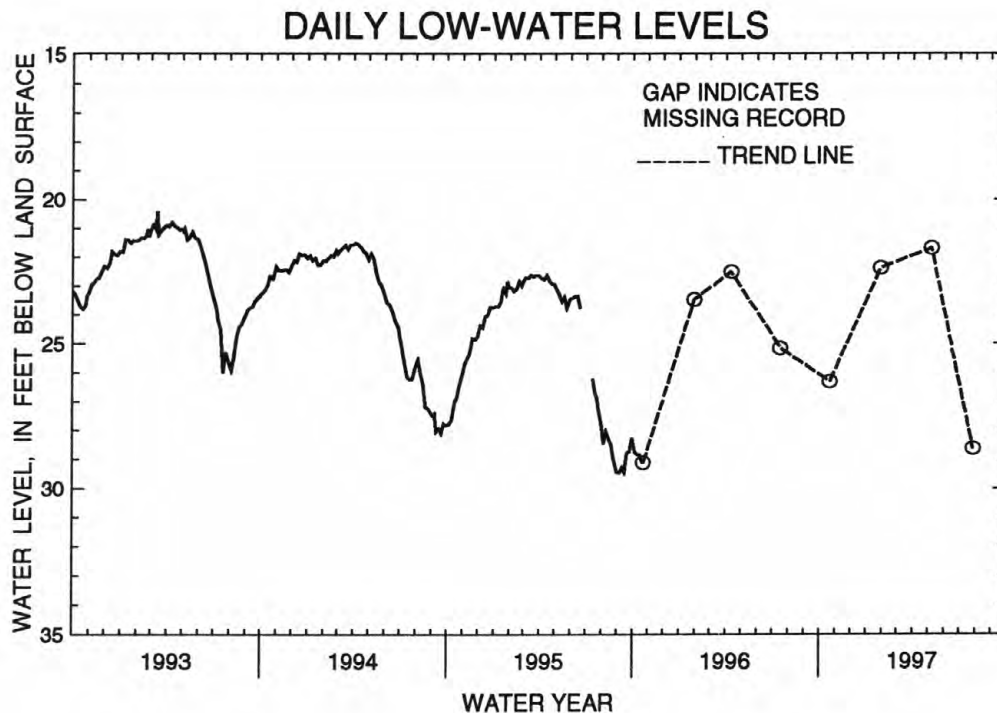
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage prior to October 1991; seasonal and tidal effects thereafter.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	26.32	JAN 29	22.39	MAY 07	21.70	JUL 28	28.64
WATER YEAR 1997		HIGHEST	21.70	MAY 07, 1997			
		LOWEST	28.64	JUL 28, 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.

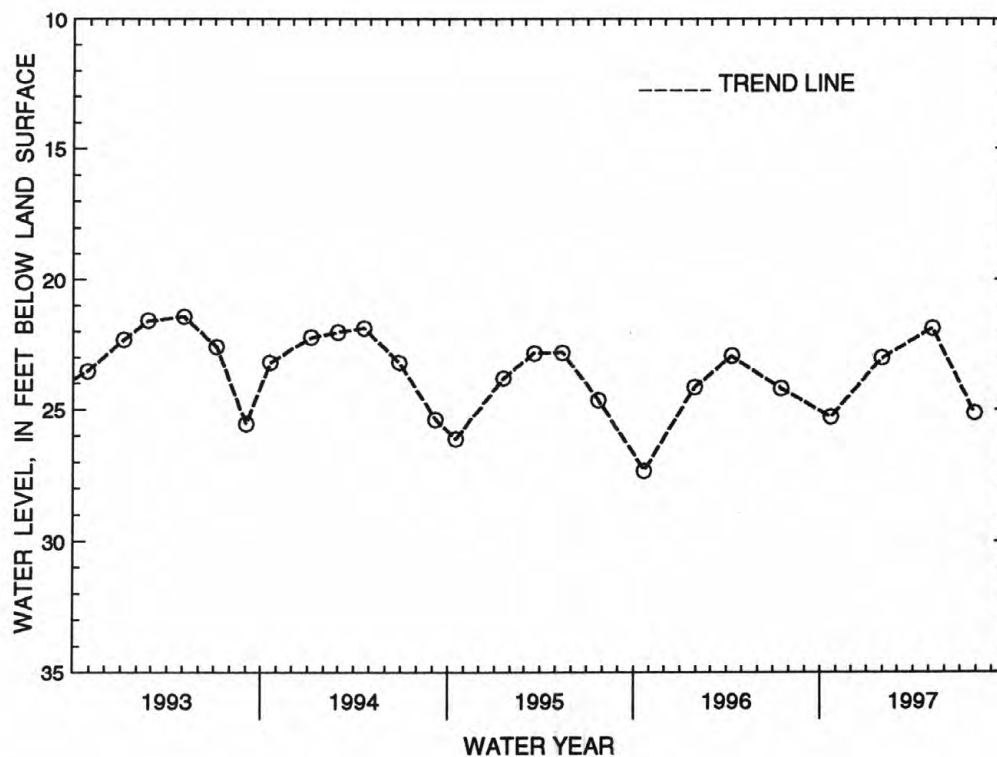
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	25.29	JAN 29	23.02	MAY 07	21.88	JUL 28	25.13
WATER YEAR 1997	HIGHEST	21.88	MAY 07, 1997				
	LOWEST	25.29	OCT 22, 1996				



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, 0.4 ft above land-surface datum.

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

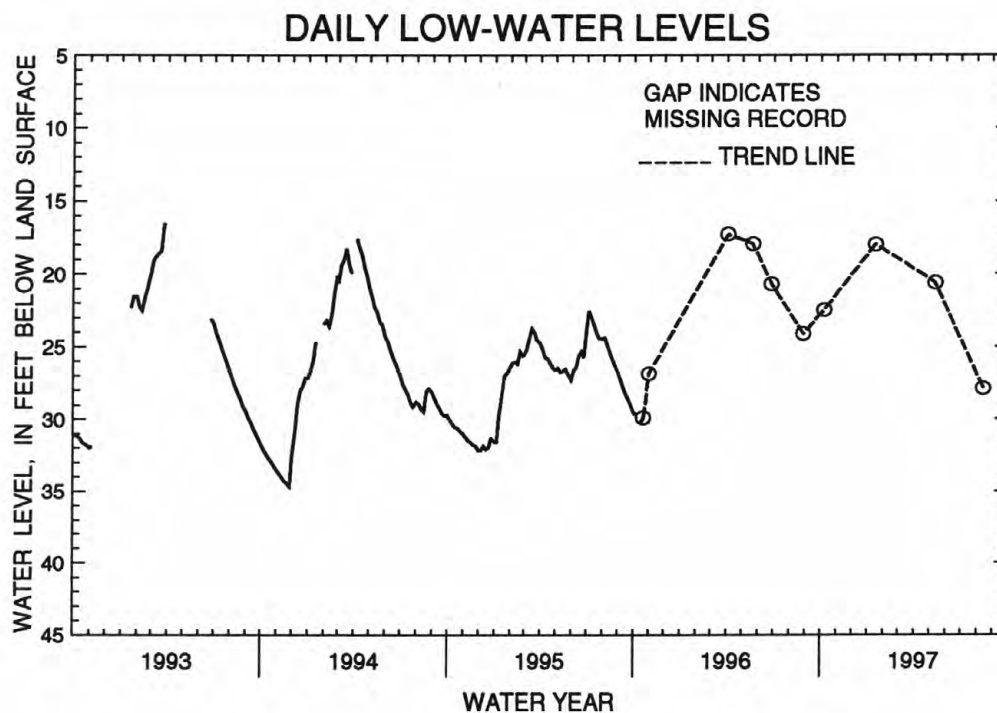
PERIOD OF RECORD.--February 1965 to current year.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	22.50	JAN 16	17.98	MAY 12	20.60	AUG 14	27.92

WATER YEAR 1997	HIGHEST	17.98	JAN 16, 1997
	LOWEST	27.92	AUG 14, 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 northeast 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.

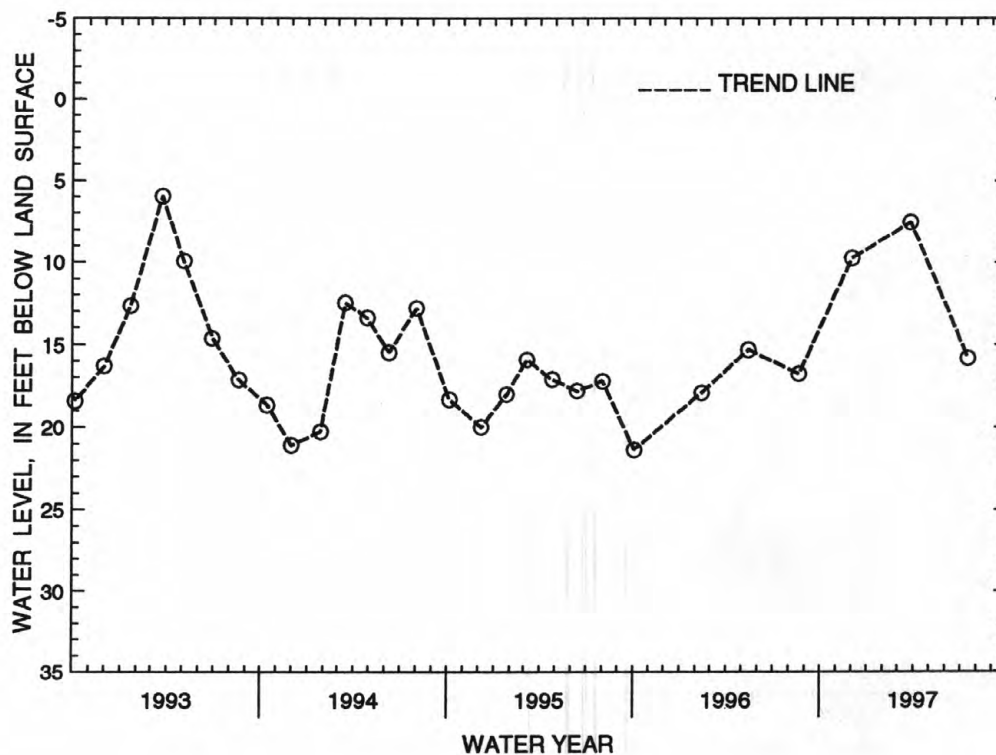
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 02	9.75	MAR 26	7.54	JUL 16	15.81
WATER YEAR 1997	HIGHEST	7.54	MAR 26, 1997		
	LOWEST	15.81	JUL 16, 1997		



GROUND-WATER LEVELS

CITY OF PORTSMOUTH

364823076181501. Local number, 60C 27.

LOCATION.--Lat 36°48'23", long 76°18'15", Hydrologic Unit 02080208, 100 ft east of State Highway 239 (Victory Boulevard), 0.1 mi south of the intersection of State Highway 239 (Victory Boulevard) and State Highway 337 (Elem Avenue) in the city of Portsmouth. Owner: U.S. Department of the Navy.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 2 in., depth 908 ft, screened 903 to 908 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 18 ft above sea level, from topographic map. Measuring point: Top of casing, 2.5 ft above land-surface datum.

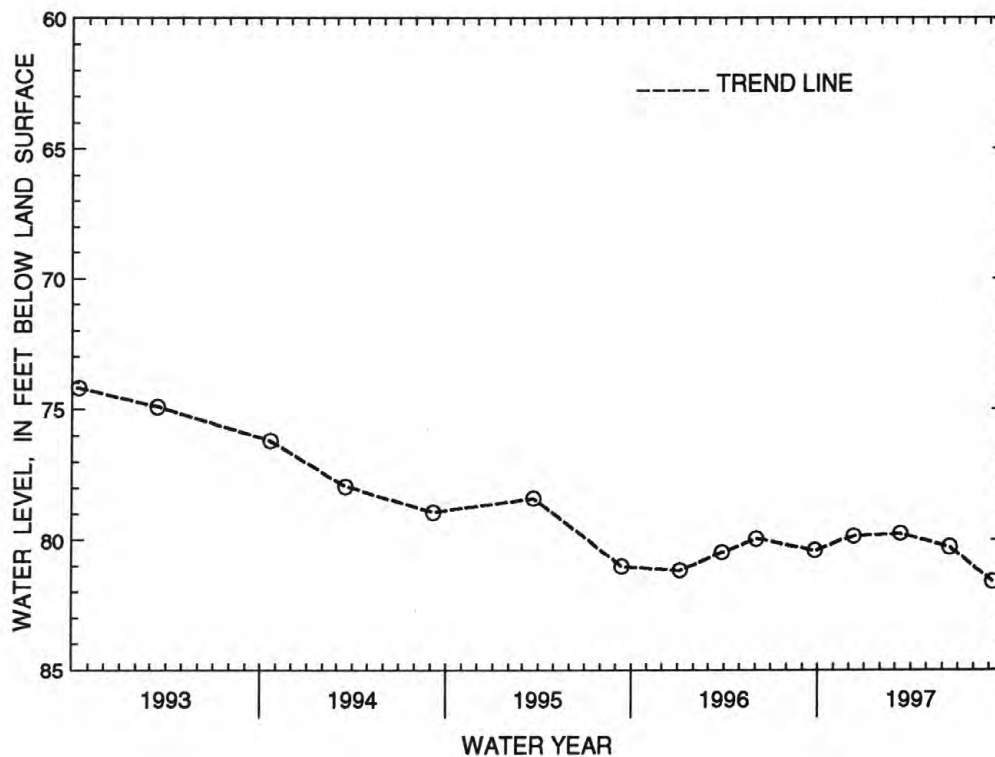
REMARKS.--Water level affected by regional drawdown.

PERIOD OF RECORD.--June 1985 to current year. Unpublished records available prior to October 1987 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 63.65 ft below land-surface datum, June 19, 1985; lowest measured, 81.60 ft below land-surface datum, Sept. 8, 1997.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 11	79.85	MAR 12	79.77	JUN 16	80.28	SEP 08	81.60
WATER YEAR 1997		HIGHEST	79.77	MAR 12, 1997			
		LOWEST	81.60	SEP 08, 1997			



GROUND-WATER LEVELS

CITY OF PORTSMOUTH

365313076215101. Local number, 60D 2.

LOCATION.--Lat 36°53'13", long 76°21'51", Hydrologic Unit 02080208, 1.1 mi east of the main gate of the U.S. Naval Supply Center on Main Street in Building 285, 2.0 mi northwest of West Norfolk in the city of Portsmouth, and 2.25 mi north of the intersection of U.S. Highway 17 and Cedar Lane (Craney Island Road). Owner: U.S. Department of the Navy.

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

WELL CHARACTERISTICS.--Drilled unused water well, diameter 8 in. to 170 ft, diameter 4 in. from 170 to 565 ft, depth 565 ft, screened 545 to 565 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

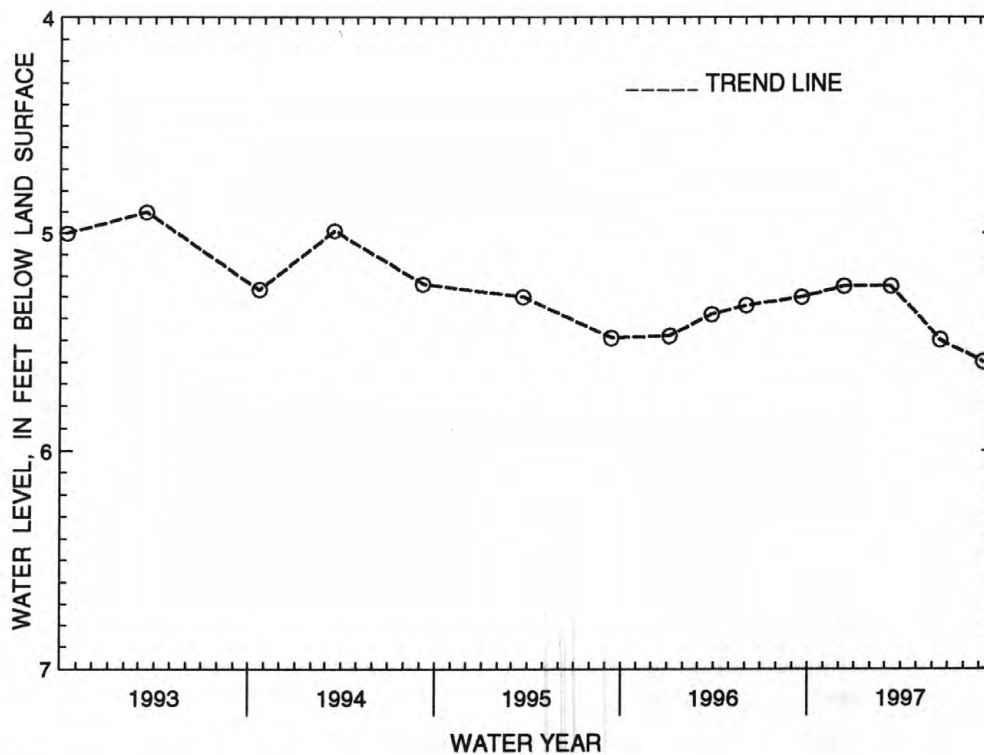
DATUM.--Elevation of land-surface datum is 12 ft above sea level, from topographic map. Measuring point: Top of casing, 0.6 ft above land-surface datum.

PERIOD OF RECORD.--January 1984 to current year. Unpublished records available prior to October 1987 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.01 ft below land-surface datum, Sept. 18, 1985; lowest measured, 5.60 ft below land-surface datum, Sept. 8, 1997.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 11	5.25	MAR 12	5.25	JUN 16	5.50	SEP 08	5.60
WATER YEAR 1997	HIGHEST	5.25	DEC 11, 1996, MAR 12, 1997				
	LOWEST	5.60	SEP 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.

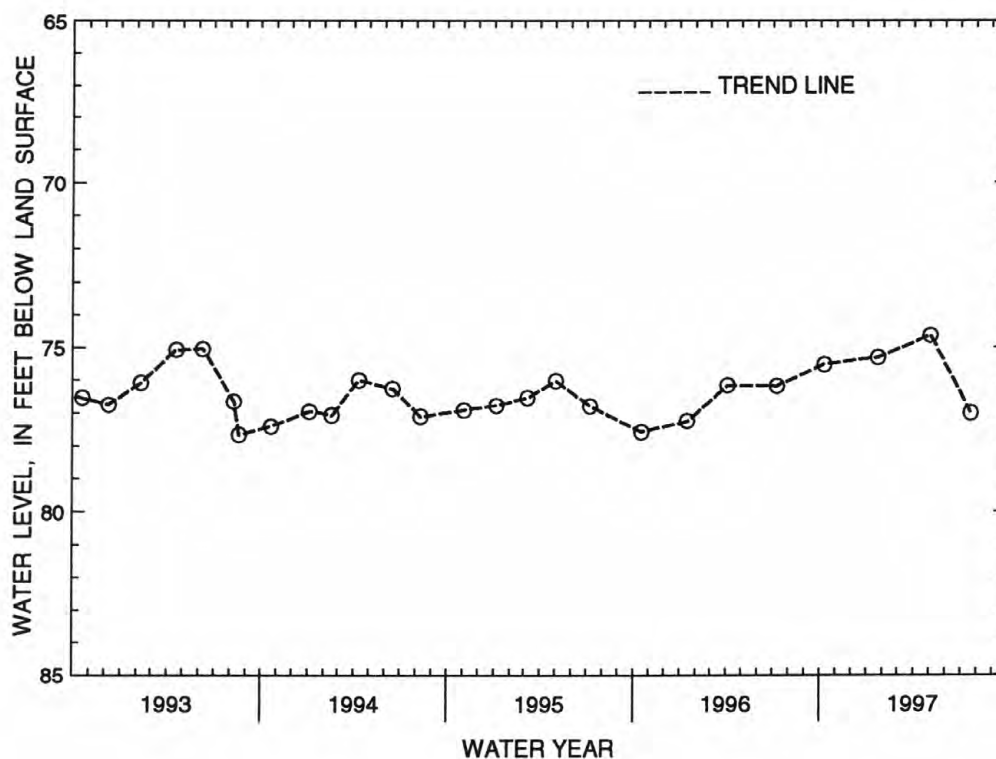
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

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, 77.89 ft below land-surface datum, Sept. 20, 1988.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 09	75.52	JAN 22	75.32	MAY 05	74.64	JUL 22	77.00
WATER YEAR 1997	HIGHEST	74.64	MAY 05, 1997				
	LOWEST	77.00	JUL 22, 1997				



GROUND-WATER LEVELS

PRINCE WILLIAM COUNTY

384931077420301. Local number, 49U 1.

LOCATION.--Lat 38°49'30", long 77°42'08", Hydrologic Unit 02070010, 500 ft north of State Highway 55, 0.8 mi east of Thoroughfare Gap, and 3.7 mi west of Haymarket. Owner: Virginia Department of Transportation.

AQUIFER.--Waterfall Formation of Early Jurassic age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 7 in., depth 345 ft, cased to 20 ft, open hole 20 to 345 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to February 1980, continuous strip-chart recorder.

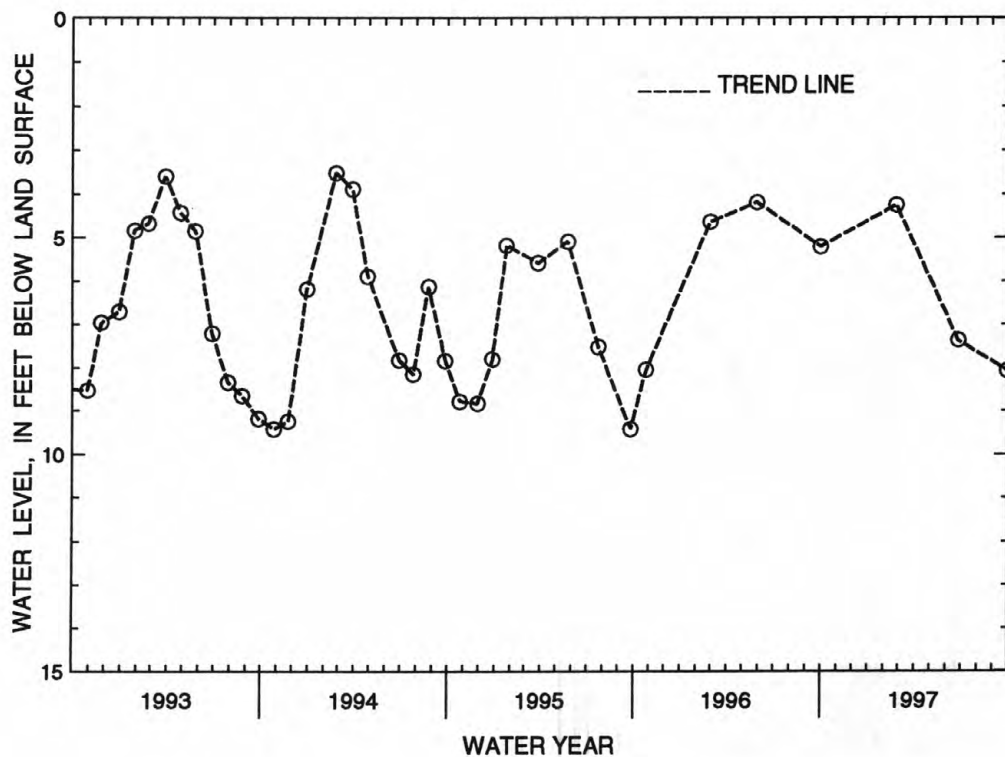
DATUM.--Elevation of land-surface datum is 383 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

PERIOD OF RECORD.--October 1968 to current year. Unpublished records available prior to May 1969 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 2.59 ft below land-surface datum, Mar. 19, 1975; lowest measured, 10.33 ft below land-surface datum, Oct. 14, 1988.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02	5.21	FEB 26	4.25	JUN 27	7.37	SEP 30	8.07
WATER YEAR 1997	HIGHEST	4.25	FEB 26, 1997				
	LOWEST	8.07	SEP 30, 1997				



GROUND-WATER LEVELS

PRINCE WILLIAM COUNTY

385607077381101. Local number, 49V 1.

LOCATION.--Lat 38°56'07", long 77°38'11", Hydrologic Unit 02070010, near intersection of State Highways 600 and 615, 2.8 mi south of Aldie. Owner: J. H. Hutchison.

AQUIFER.--Turkey Run Formation of Early Jurassic age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 7 in., depth 165 ft, cased to 10 ft, open hole 10 to 165 ft.

INSTRUMENTATION.--Occasional measurements with chalked tape by USGS personnel. Prior to Oct. 26, 1995, digital recorder--60-minute punch. Prior to June 19, 1979, continuous strip-chart recorder.

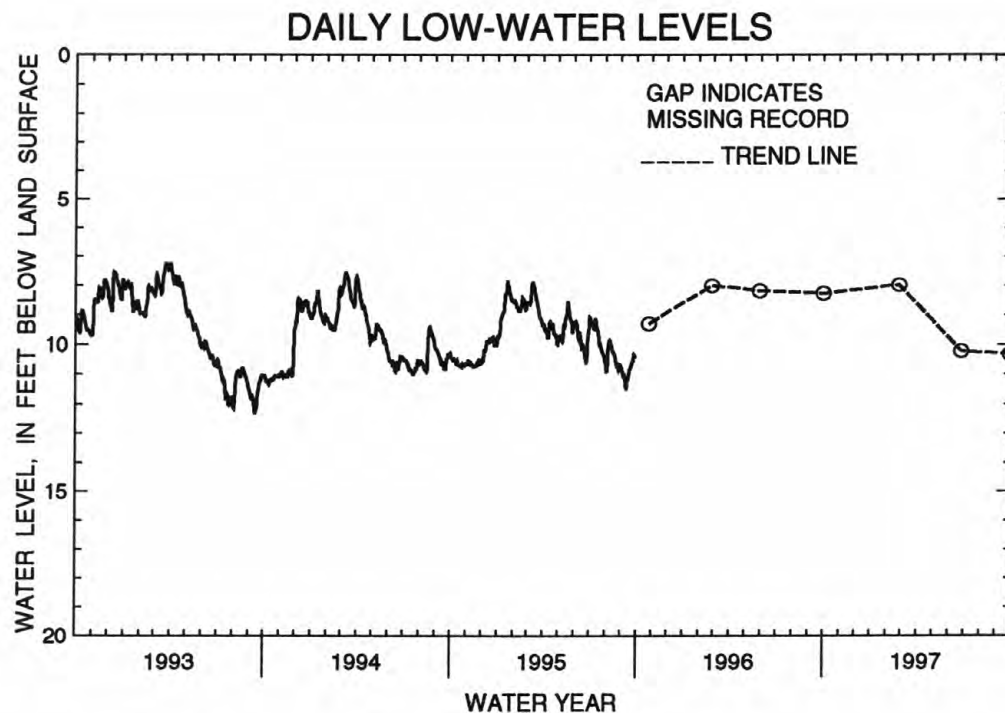
DATUM.--Elevation of land-surface datum is 420 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum. Readings from 1979 to 1981 should be 0.7 ft lower than previously published.

PERIOD OF RECORD.--November 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 6.85 ft below land-surface datum, Oct. 12, 1979; lowest recorded, 13.09 ft below land-surface datum, Sept. 16, 1991.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02	8.27	FEB 26	7.99	JUN 27	10.23	SEP 30	10.33

WATER YEAR 1997	HIGHEST	7.99	FEB 26, 1997
	LOWEST	10.33	SEP 30, 1997



GROUND-WATER LEVELS

PRINCE WILLIAM COUNTY

383423077245901. Local number, 51S 7.

LOCATION.--Lat 38°34'23", long 77°24'59", Hydrologic Unit 02070011, in Prince William Forest Park, 700 ft north of State Highway 619, 0.7 mi southeast of Belfair Crossroads, and 4.6 mi south of Independent Hill. Owner: National Park Service.

AQUIFER.--Lunga Reservoir Formation of Cambrian age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in., depth 490 ft, cased to 50 ft, open hole 50 to 490 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Feb. 1, 1996, digital recorder--60-minute punch. Recorder installed Dec. 21, 1982. Prior to Dec. 21, 1982, manual measurements with chalked tape by USGS personnel. Manual readings only published prior to 1985 water year. Recorded readings for 1985 water year published in addition to manual readings.

DATUM.--Elevation of land-surface datum is 295 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

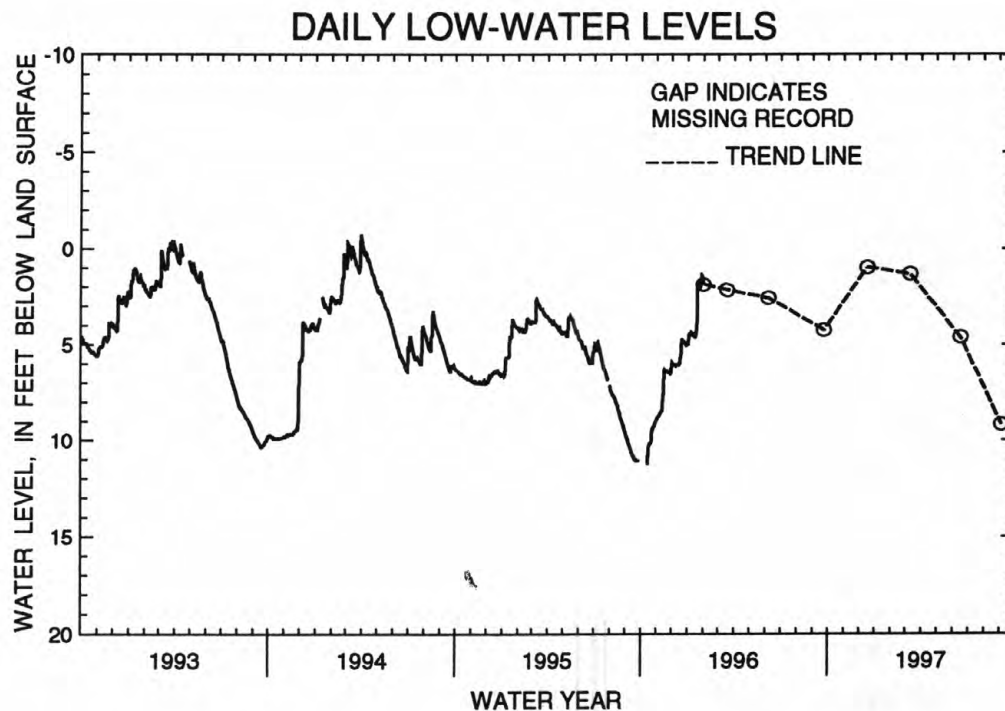
REMARKS.--Missing record due to recorder malfunction. Lowest water level for the 1995 water year may have occurred during this period.

PERIOD OF RECORD.--September 1973 to November 1975, December 1977 to current year. Unpublished records available prior to December 1977 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.97 ft above land-surface datum, Dec. 17, 1996; lowest recorded, 12.95 ft below land-surface datum, Nov. 16, 17, 1988.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 17	0.97	MAR 10	1.31	JUN 17	4.63	SEP 05	9.17
WATER YEAR 1997	HIGHEST	0.97	DEC 17, 1996				
	LOWEST	9.17	SEP 05, 1997				



GROUND-WATER LEVELS

PRINCE WILLIAM COUNTY

383634077151301. Local number, 52S 4.

LOCATION.--Lat 38°36'34", long 77°15'13", Hydrologic Unit 02070010, 193 ft east of Richmond, Fredericksburg, and Potomac (RFP) railroad tracks, 1.1 mi southeast of the intersection of U.S. Highway 1 and State Highway 636 (Featherstone Road), 1.4 mi south of the intersection of State Highway 636 (Featherstone Road) and RFP railroad tracks, and near Woodbridge. Owner: District of Columbia Department of Sanitary Engineering.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 10 in., depth 186 ft, screened 156 to 176 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Aug. 1, 1971, to July 10, 1978, continuous strip-chart recorder. Prior to Aug. 1, 1971, occasional measurement with chalked tape.

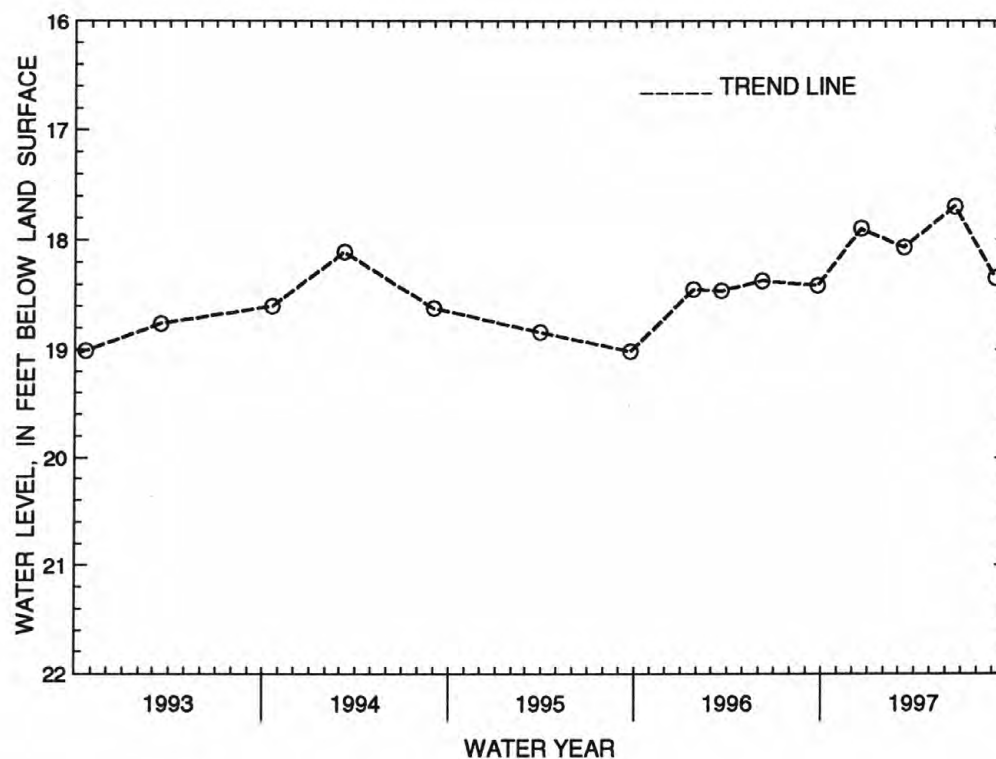
DATUM.--Elevation of land-surface datum is 28 ft above sea level, from topographic map. Measuring point: Top of casing, 3.3 ft above land-surface datum prior to Aug. 28, 1978; 1.9 ft thereafter.

PERIOD OF RECORD.--June 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 17.17 ft below land-surface datum, Apr. 28, 1973; lowest measured, 22.17 ft below land-surface datum, July 1, 1969.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 17	17.90	MAR 10	18.07	JUN 17	17.70	SEP 05	18.35
WATER YEAR 1997	HIGHEST LOWEST	17.70 18.35	JUN 17, 1997 SEP 05, 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.

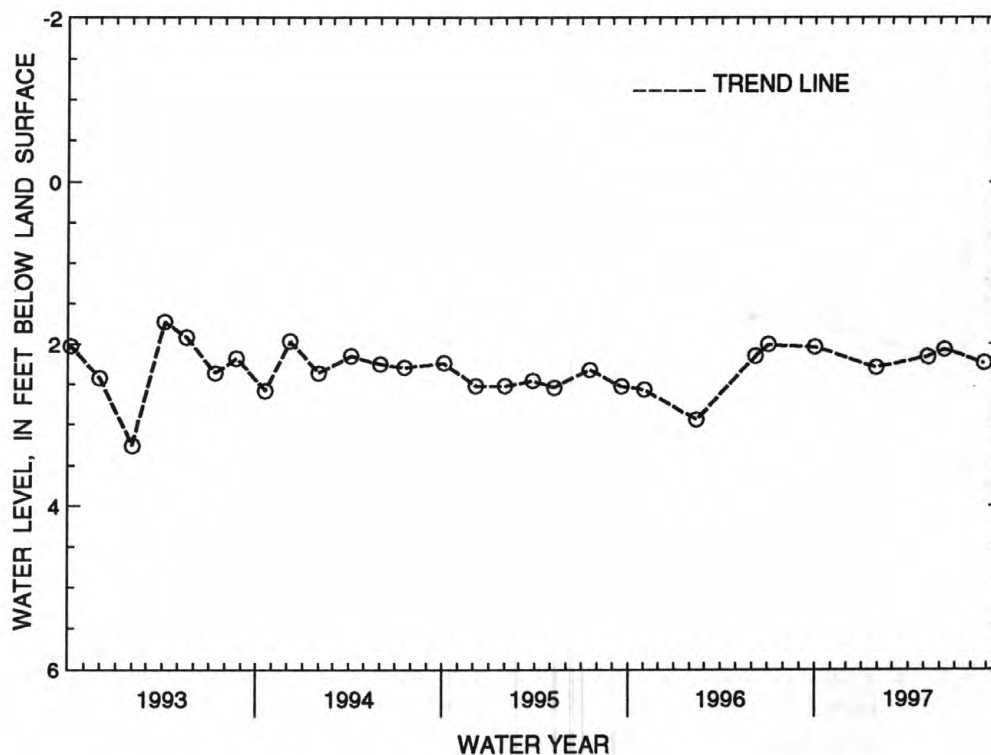
PERIOD OF RECORD.--March 1970 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01	2.04	JAN 28	2.29	MAY 09	2.16	JUN 11	2.07	AUG 27	2.24

WATER YEAR 1997	HIGHEST	2.04	OCT 01, 1996
	LOWEST	2.29	JAN 28, 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.

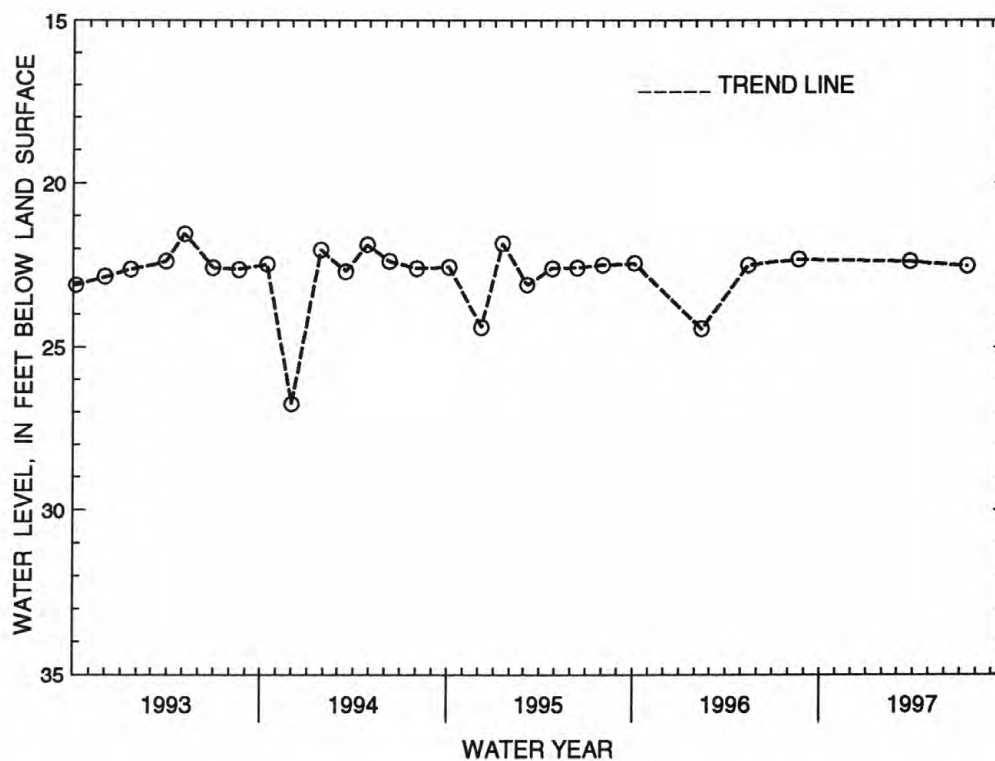
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

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 1996 TO SEPTEMBER 1997

	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
	DEC 02	23.05	MAR 26	22.40	JUL 15	22.53
WATER YEAR 1997	HIGHEST	22.40	MAR 26, 1997			
	LOWEST	23.05	DEC 02, 1996			



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.

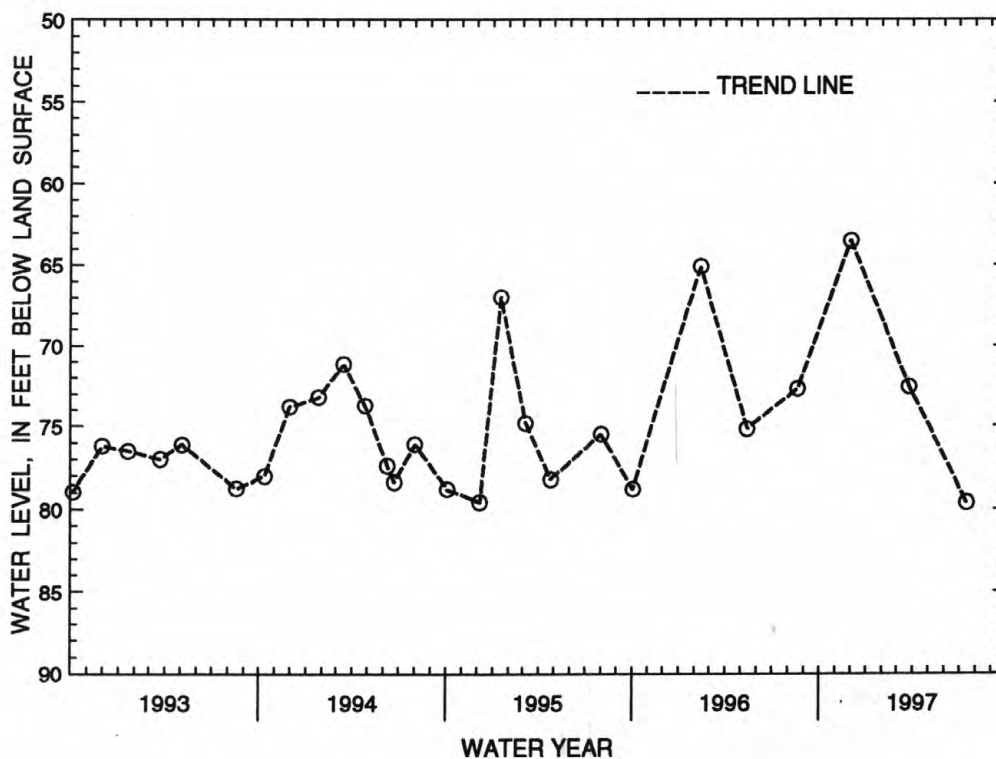
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
	DEC 02	63.50	MAR 26	72.56	JUL 16	79.64
WATER YEAR 1997	HIGHEST	63.50	DEC 02, 1996			
	LOWEST	79.64	JUL 16, 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.

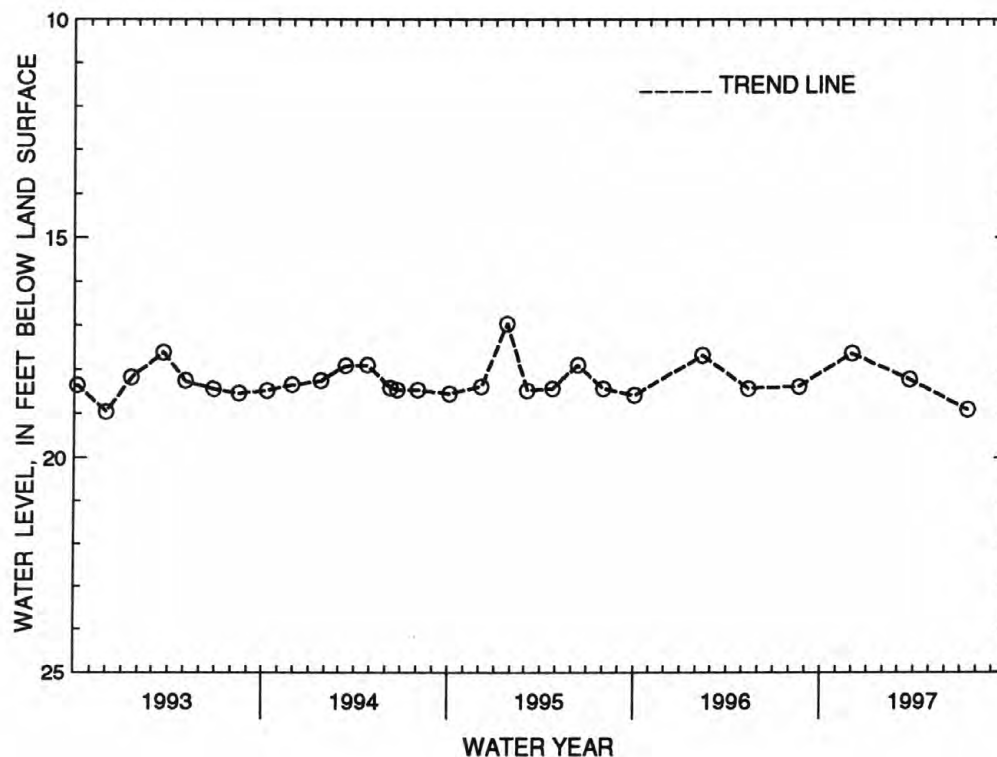
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
AUG 20	18.38	DEC 02	17.63	MAR 24	18.22	JUL 16	18.91
WATER YEAR 1997	HIGHEST	17.63	DEC 02, 1996				
	LOWEST	18.91	JUL 16, 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.

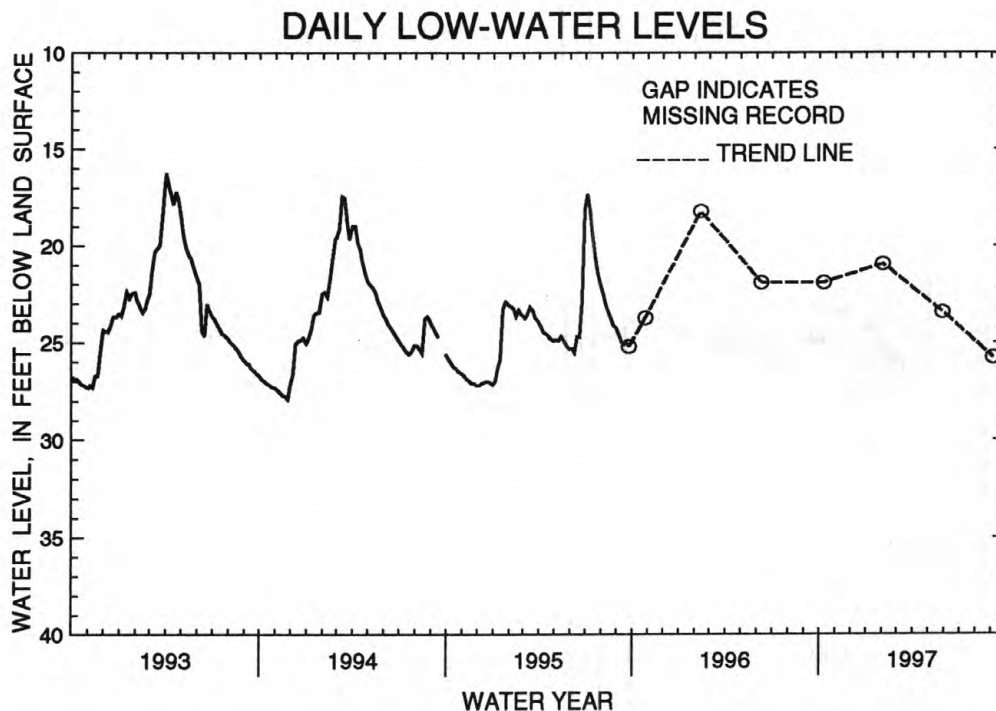
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Missing record due to recorder malfunction.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	21.90	FEB 03	20.94	MAY 30	23.45	SEP 05	25.78
WATER YEAR 1997							
HIGHEST	20.94	FEB 03, 1997					
LOWEST	25.78	SEP 05, 1997					



GROUND-WATER LEVELS

ROCKINGHAM COUNTY

383155078571201. Local number, 39S 4.

LOCATION.--Lat 38°31'55", long 78°57'12", Hydrologic Unit 02070005, 500 ft southwest of State Highway 771 and 1.1 mi north of the intersection of State Highways 771 and 613. Owner: U.S. Geological Survey.

AQUIFER.--Regolith overlying Elbrook Formation of Late and Middle Cambrian age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 3 in., depth 21 ft, screened 11 to 21 ft.

INSTRUMENTATION.--Digital recorder--30-minute punch. Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land surface is 1523.78 ft above National Geodetic Vertical Datum of 1929, from level. Measuring point: Top of casing, 3.71 ft above land surface.

REMARKS.--Well sampled periodically for water quality. Data tables for water year 1994 and 1995 were titled lowest daily values but should have been titled mean daily values.

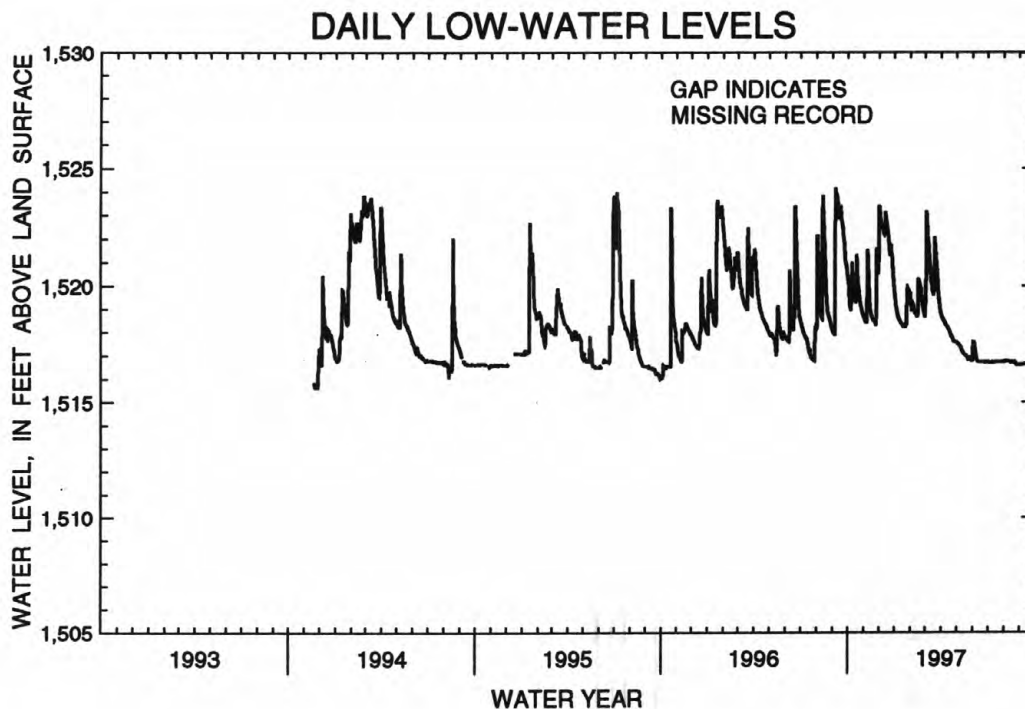
PERIOD OF RECORD.--November 1993 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1525.19 ft above sea level, Sept. 6, 1996; lowest measured, 1515.63 ft above sea level, Nov. 22, 1993.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	1519.29	1518.45	1522.78	1518.98	1519.23	1522.82	1518.58	1517.49	1517.51	1516.72	1516.76	1516.62
10	1520.96	1521.03	1522.27	1518.55	1518.80	1521.07	1518.33	1517.32	1516.79	1516.73	1516.77	1516.62
15	1519.54	1518.85	1522.88	1518.35	1518.74	1519.96	1518.17	1517.09	1516.75	1516.72	1516.73	1516.65
20	1520.71	1518.52	1522.00	1518.23	1519.94	1522.06	1517.90	1516.99	1516.73	1516.73	1516.73	1516.66
25	1519.42	1518.28	1521.69	1519.80	1519.10	1520.52	1517.64	1516.83	1516.74	1516.74	1516.63	1516.66
EOM	1518.77	1520.52	1519.91	1519.68	1518.70	1518.91	1517.58	1516.79	1516.73	1516.75	1516.61	1516.66

WATER YEAR 1997 HIGHEST INSTANTANEOUS 1524.02 DEC 01, 1996
 LOWEST INSTANTANEOUS 1516.60 AUG 27, 1997



GROUND-WATER LEVELS

ROCKINGHAM COUNTY

383152078570902. Local number, 39S 9.

LOCATION.--Lat 38°31'52", long 78°57'09", Hydrologic Unit 02070005, 400 ft southwest of State Highway 771 and 1.1 mi north of the intersection of State Highways 771 and 613. Owner: U.S. Geological Survey.

AQUIFER.--Elbrook Formation of Late and Middle Cambrian age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 3 in., depth 40 ft, screened 20 to 30 ft.

INSTRUMENTATION.--Digital recorder--30-minute punch. Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land surface is 1518.11 ft above National Geodetic Vertical Datum of 1929, from level. Measuring point: Top of casing, 3.77 ft above land surface.

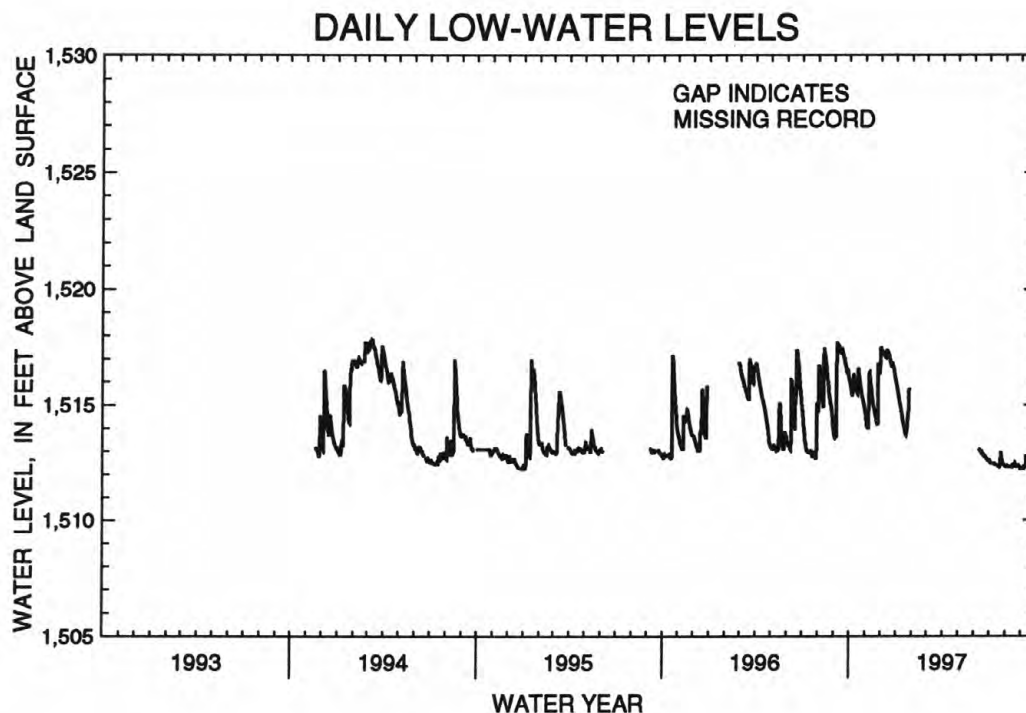
REMARKS.--Well sampled periodically for water quality. Data tables for water year 1994 and 1995 were titled lowest daily values but should have been titled mean daily values.

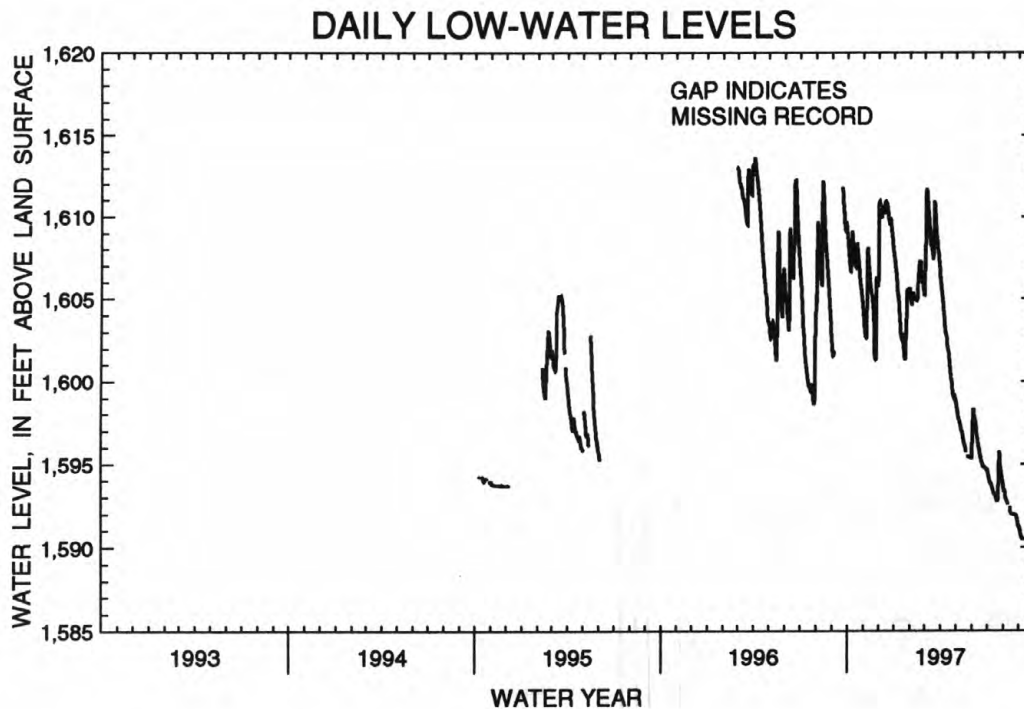
PERIOD OF RECORD.--November 1993 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1518.40 ft above sea level, Sept. 6, 1996; lowest measured, 1512.20 ft above sea level, Sept. 1, 2, 1997.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997 LOWEST DAILY VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	1515.66	1514.06	1517.26	1515.47	---	---	---	---	---	1512.47	1512.35	1512.22
10	1516.33	1516.38	1517.09	1514.85	---	---	---	---	---	1512.47	1512.30	1512.37
15	1515.66	1515.29	1517.31	1514.17	---	---	---	---	1512.99	1512.39	1512.30	1512.57
20	1516.42	1514.66	1516.90	1513.69	---	---	---	---	1512.82	1512.31	1512.33	1512.36
25	1515.55	1514.16	1516.72	1514.98	---	---	---	---	1512.69	1512.63	1512.37	1512.54
EOM	1514.86	1516.34	1516.06	---	---	---	---	---	1512.61	1512.34	1512.22	1512.76

WATER YEAR 1997	HIGHEST INSTANTANEOUS	1517.97	DEC 01, 1996
	LOWEST INSTANTANEOUS	1512.20	SEP 1, 2, 1997





GROUND-WATER LEVELS

ROCKINGHAM COUNTY

383155078571202. Local number, 39S 19.

LOCATION.--Lat 38°31'55", long 78°57'12", Hydrologic Unit 02070005, 500 ft southwest of State Highway 771 and 1.1 mi north of the intersection of State Highways 771 and 613. Owner: U.S. Geological Survey.

AQUIFER.--Elbrook Formation of Late and Middle Cambrian age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 3 in. to 17 ft, diameter 2 in. from 17 to 47 ft, depth 47 ft, screened 27 to 47 ft.

INSTRUMENTATION.--Digital recorder--30-minute punch. Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land surface is 1523.90 ft above sea level, from level. Measuring point: Floor of digital recorder shelter, 4.12 ft above land surface.

REMARKS.--Well sampled periodically for water quality. Data table for water year 1995 was titled lowest daily values but should have been titled mean daily values.

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

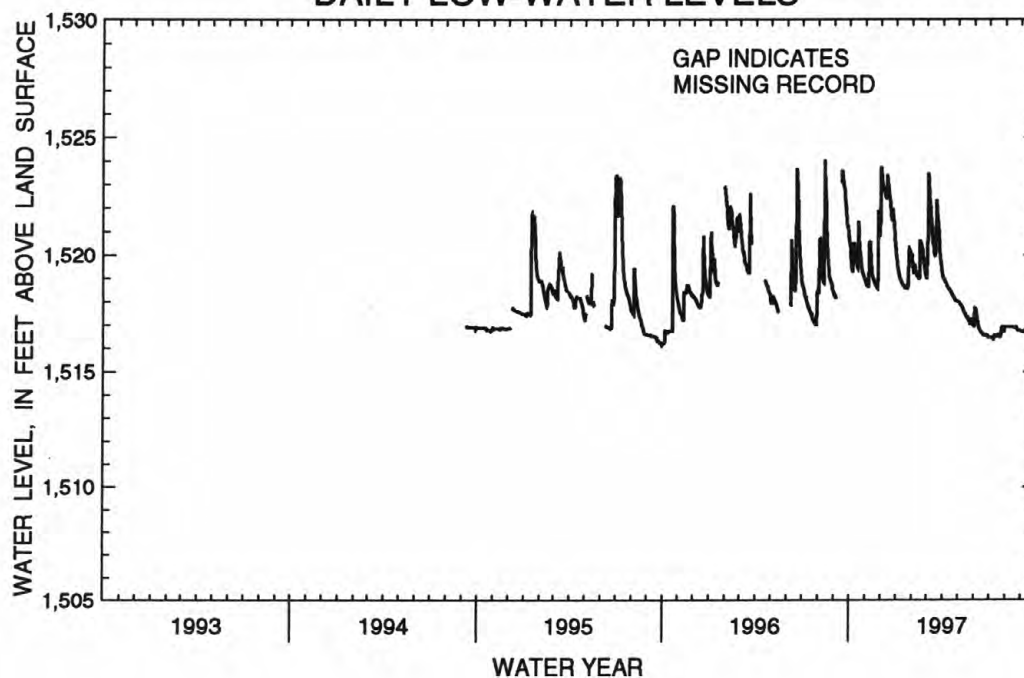
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1524.49 ft above sea level, Dec. 1, 1996; lowest measured, 1516.14 ft above sea level, Sept. 29, 1995.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	1577.51	1577.07	---	---	1578.22	1579.93	1577.04	1574.60	1575.02	1571.39	---	1561.58
10	1578.43	1578.38	---	---	1577.83	1578.28	1576.29	1574.43	1574.08	1570.24	---	1560.79
15	1578.00	1577.31	---	---	1577.72	1577.68	1576.26	1574.30	1573.62	1568.70	---	1564.57
20	1577.85	1577.16	---	---	1578.42	1578.93	1575.37	1574.27	1573.11	1567.16	---	1562.05
25	1577.67	1576.99	---	---	1577.64	1577.51	1574.85	1573.93	1572.66	1573.54	---	1560.44
EOM	1577.47	---	---	1578.70	1577.51	1576.89	1575.13	1574.06	1571.86	---	1562.77	1562.45

WATER YEAR 1997	HIGHEST INSTANTANEOUS	1524.49	DEC 01, 1996
	LOWEST INSTANTANEOUS	1516.34	JUL 09, 1997

DAILY LOW-WATER LEVELS



GROUND-WATER LEVELS

ROCKINGHAM COUNTY

382150078424001. Local number, 41Q 1.

LOCATION.--Lat 38°21'50", long 78°42'40", Hydrologic Unit 02070005, at Virginia Department of Transportation garage, 1.3 mi southeast of McGaheysville. Owner: U.S. Geological Survey.

AQUIFER.--Conococheague Formation of Late Cambrian age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 6.25 in., depth 310 ft, cased to 131 ft, open hole 131 to 310 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Oct. 26, 1995, digital recorder--60-minute punch. Prior to June 27, 1979, continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 1,105 ft above sea level, from topographic map. Measuring point: Top of casing 2.4 ft above land-surface datum. Prior to Feb. 27, 1996, top edge of recorder shelf, 3.5 ft above land-surface datum.

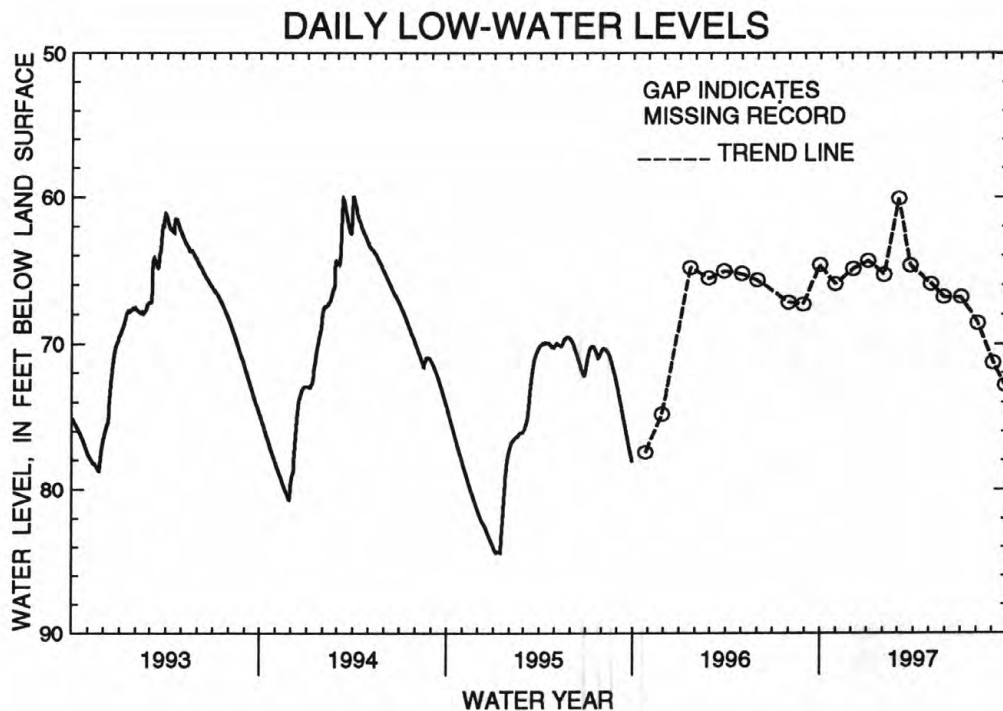
PERIOD OF RECORD.--August 1970 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 59.81 ft below land-surface datum, Mar. 31, 1994; lowest recorded, 88.08 ft below land-surface datum, Jan. 14, 1989.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	65.92	JAN 03	64.37	MAR 03	60.12	MAY 05	65.93	JUL 02	66.82	SEP 03	71.32
DEC 05	64.91	FEB 03	65.28	MAR 26	64.70	MAY 30	66.83	AUG 04	68.58	SEP 26	72.85

WATER YEAR 1997	HIGHEST	60.12	MAR 03, 1997
	LOWEST	72.85	SEP 26, 1997



GROUND-WATER LEVELS

SOUTHAMPTON COUNTY

363410077150801. Local number, 52A 1.

LOCATION.--Lat 36°34'10", long 77°15'08", Hydrologic Unit 03010204, along Seaboard Coastline railroad, 0.15 mi northwest of intersection of State Highways 195 and 701 in Branchville. Owner: L. W. Grizzard.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled withdrawal water well, diameter 4 in., depth 217 ft, screened 204 to 217 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 44 ft above sea level, from topographic map. Measuring point: Top of casing, 0.8 ft above land-surface datum.

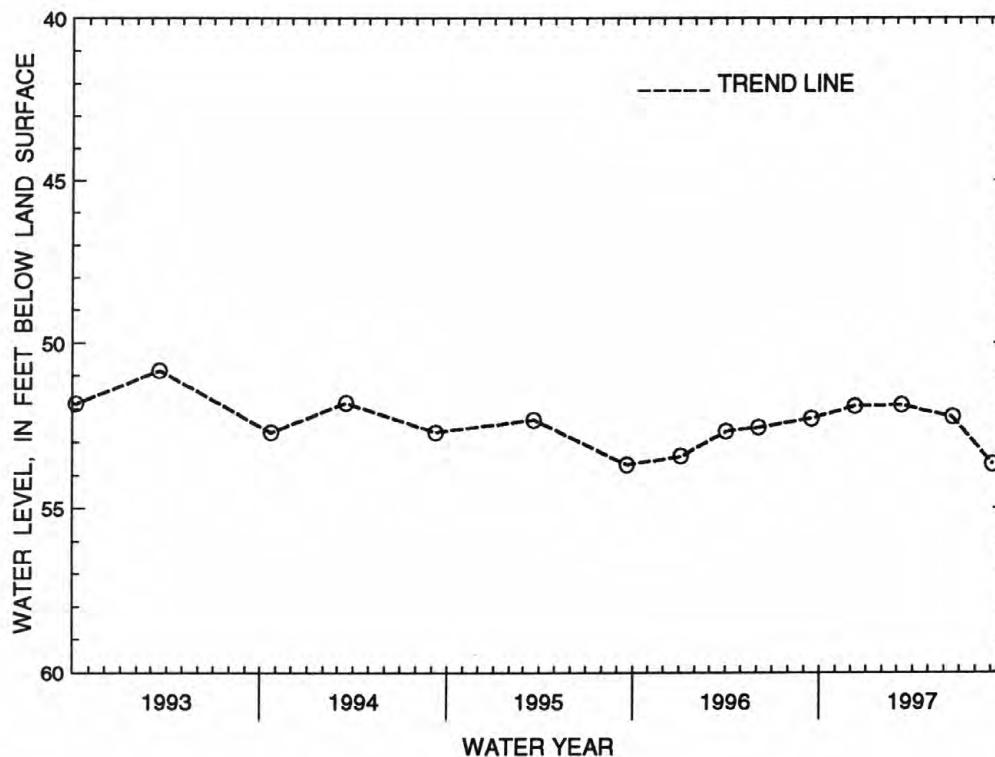
REMARKS.--Water level affected by regional drawdown.

PERIOD OF RECORD.--September 1970 to December 1975, January 1978 to current year. Unpublished records available prior to October 1985 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 32.85 ft below land-surface datum, Sept. 9, 1970; lowest measured, 53.70 ft below land-surface datum, Sept. 20, 1995.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 10	51.93	MAR 11	51.90	JUN 18	52.26	SEP 04	53.67
WATER YEAR 1997		HIGHEST	51.90	MAR 11, 1997			
		LOWEST	53.67	SEP 04, 1997			



GROUND-WATER LEVELS

SOUTHAMPTON COUNTY

363916077201001. Local number, 52B 8 SOW 178A.

LOCATION.--Lat 36°39'16", long 77°20'10", Hydrologic Unit 03010204, 0.25 mi northeast of State Highway 661, 0.6 mi south of the intersection of State Highways 652 and 661, and 4.5 mi southeast of Drewryville. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Newark Supergroup sandstone of Jurassic and Triassic age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 316 ft, screened 285 to 295 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 120 ft above sea level, from topographic map. Measuring point: Top of casing, 1.6 ft above land-surface datum.

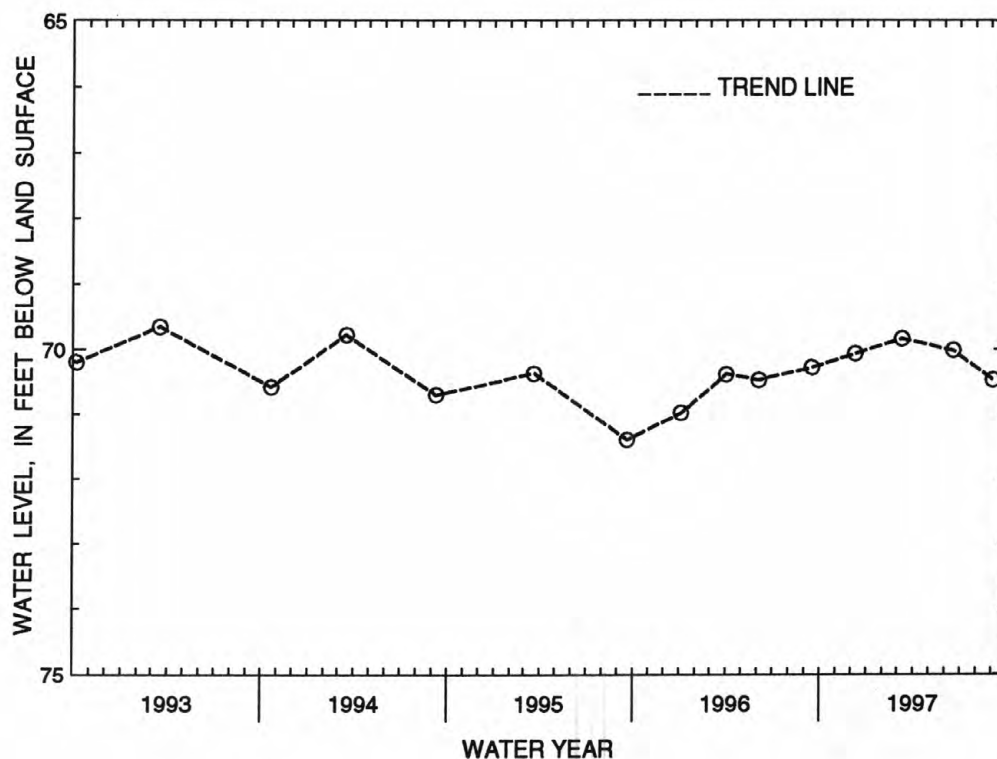
REMARKS.--Water level may be affected by regional drawdown. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 69.30 ft below land-surface datum, Mar. 15, 1990; lowest measured, 71.39 ft below land-surface datum, Sept. 20, 1995.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 10	70.07	MAR 11	69.84	JUN 18	70.02	SEP 04	70.47
WATER YEAR 1997		HIGHEST	69.84	MAR 11, 1997			
		LOWEST	70.47	SEP 04, 1997			



GROUND-WATER LEVELS

SOUTHAMPTON COUNTY

363916077201004. Local number, 52B 11 SOW 178D.

LOCATION.--Lat 36°39'16", long 77°20'10", Hydrologic Unit 03010204, 0.25 mi northeast of State Highway 661, 0.6 mi south of intersection of State Highways 652 and 661, and 4.5 mi southeast of Drewryville. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 190 ft, screened 160 to 170 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to November 1987, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 120 ft above sea level, from topographic map. Measuring point: Top of casing, 2.1 ft above land-surface datum.

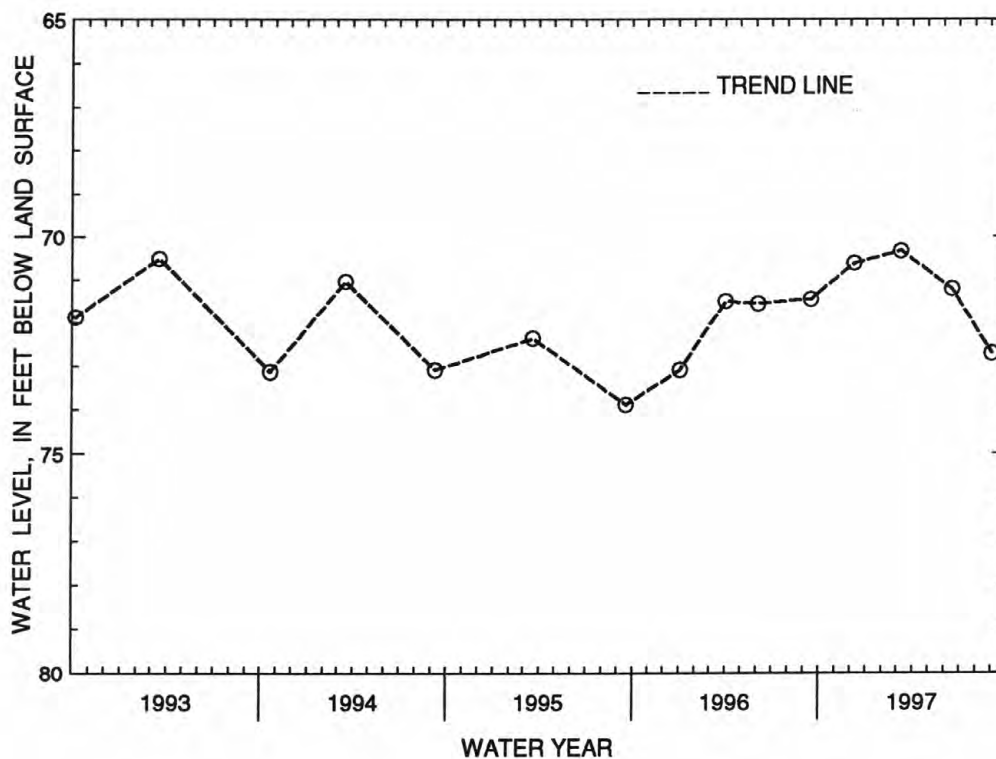
REMARKS.--Water level may be affected by regional drawdown.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 69.81 ft below land-surface datum, Apr. 16, 1987; lowest recorded, 73.89 ft below land-surface datum, Sept. 20, 1995.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 10	70.62	MAR 11	70.33	JUN 18	71.22	SEP 04	72.72
WATER YEAR 1997	HIGHEST	70.33	MAR 11, 1997				
	LOWEST	72.72	SEP 04, 1997				



GROUND-WATER LEVELS

SOUTHAMPTON COUNTY

363916077201005. Local number, 52B 12 SOW 178E.

LOCATION.--Lat 36°39'16", long 77°20'10", Hydrologic Unit 03010204, 0.25 mi northeast of State Highway 661, 0.6 mi south of intersection of State Highways 652 and 661, and 4.5 mi southeast of Drewryville. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 135 ft, screened 120 to 130 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to November 1987, digital recorder--60-minute punch.

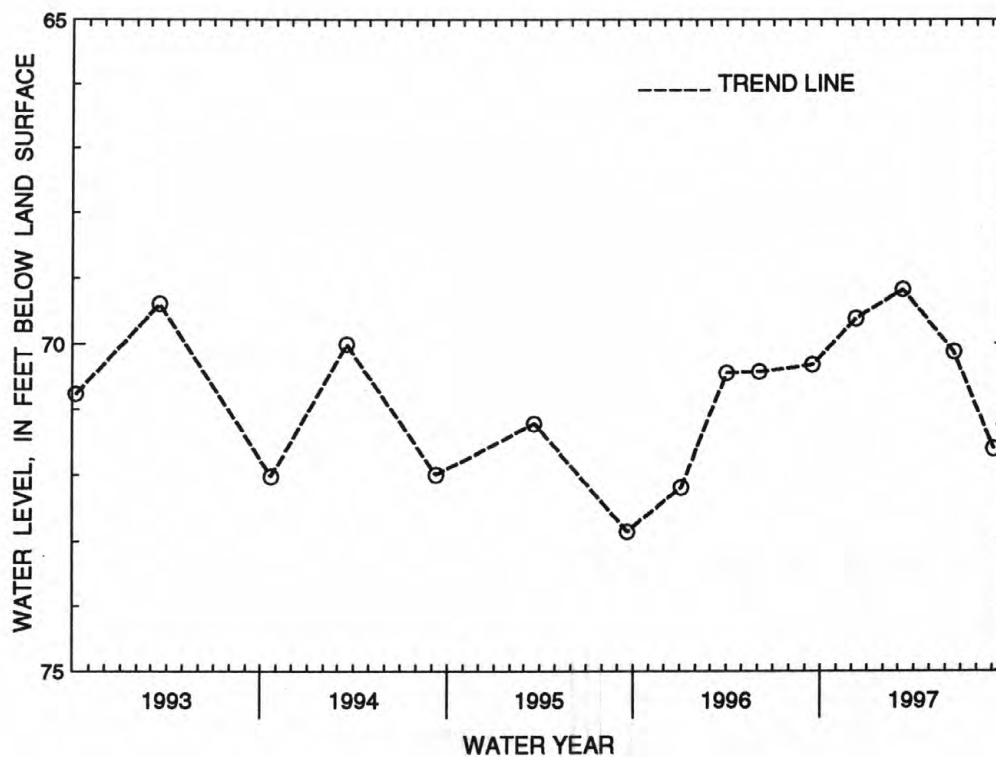
DATUM.--Elevation of land-surface datum is 120 ft above sea level, from topographic map. Measuring point: Top of casing, 2.2 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 68.75 ft below land-surface datum, Apr. 16, 1987; lowest recorded, 72.86 ft below land-surface datum, Sept. 20, 1995.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 10	69.62	MAR 11	69.18	JUN 18	70.13	SEP 04	71.61
WATER YEAR 1997		HIGHEST	69.18	MAR 11, 1997		LOWEST	71.61
			71.61	SEP 04, 1997			



GROUND-WATER LEVELS

SOUTHAMPTON COUNTY

363916077201006. Local number, 52B 13 SOW 178F.

LOCATION.--Lat 36°39'16", long 77°20'10", Hydrologic Unit 03010204, 0.25 mi northeast of State Highway 661, 0.6 mi south of intersection of State Highways 652 and 661, and 4.5 mi southeast of Drewryville. Owner: Virginia Department of Environmental Quality.

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

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 65 ft, screened 40 to 50 ft.

INSTRUMENTATION.--Occasional measurements with chalked tape by USGS personnel. Prior to November 1987, digital recorder--60-minute punch.

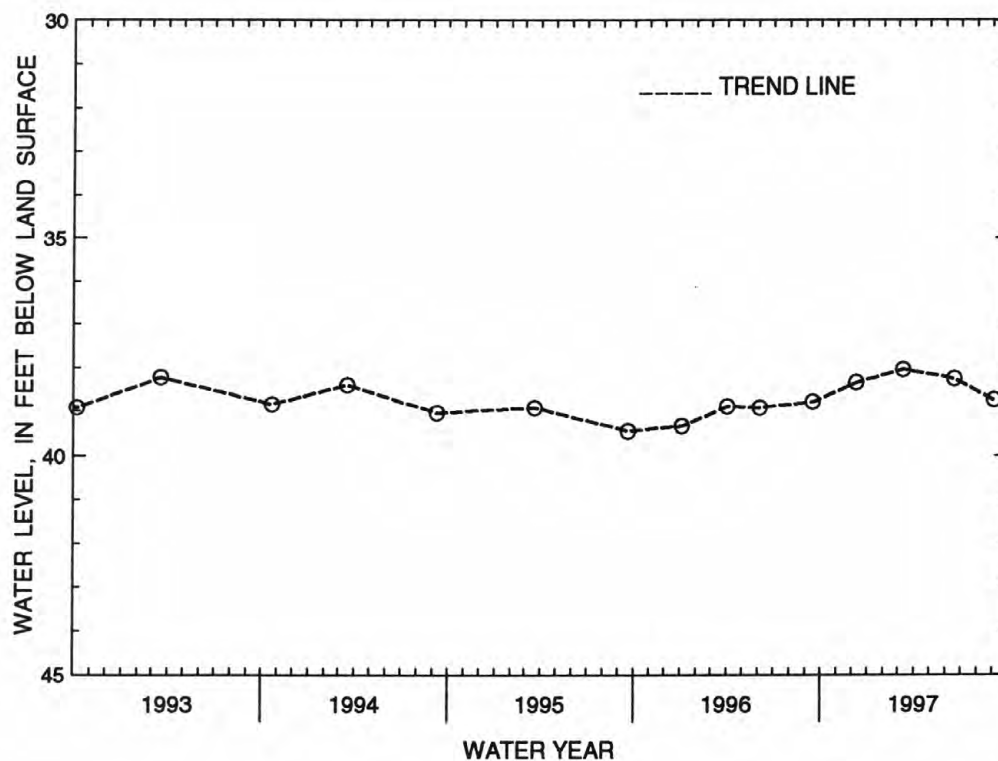
DATUM.--Elevation of land-surface datum is 120 ft above sea level, from topographic map. Measuring point: Top of casing, 2.9 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 37.90 ft below land-surface datum, Apr. 29, 1987; lowest recorded, 43.77 ft below land-surface datum, Oct. 6-9, 1987.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 10	38.35	MAR 11	38.04	JUN 18	38.26	SEP 04	38.75
.							
WATER YEAR 1997	HIGHEST	38.04	MAR 11, 1997				
	LOWEST	38.75	SEP 04, 1997				



GROUND-WATER LEVELS

SOUTHAMPTON COUNTY

363722077014601. Local number, 54A 1.

LOCATION.--Lat 36°37'22", long 77°01'46", Hydrologic Unit 03010201, 100 ft west of State Highway 681, 0.5 mi north of intersection of State Highways 672 and 681, and 2.4 mi north of Sunbeam. Owner: William Britt.

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

WELL CHARACTERISTICS.--Drilled withdrawal water well, diameter 4 in., depth 254 ft, screened 244 to 254 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 35 ft above sea level, from topographic map. Measuring point: Top of casing, 1.03 ft above land-surface datum.

REMARKS.--Water level affected by regional drawdown.

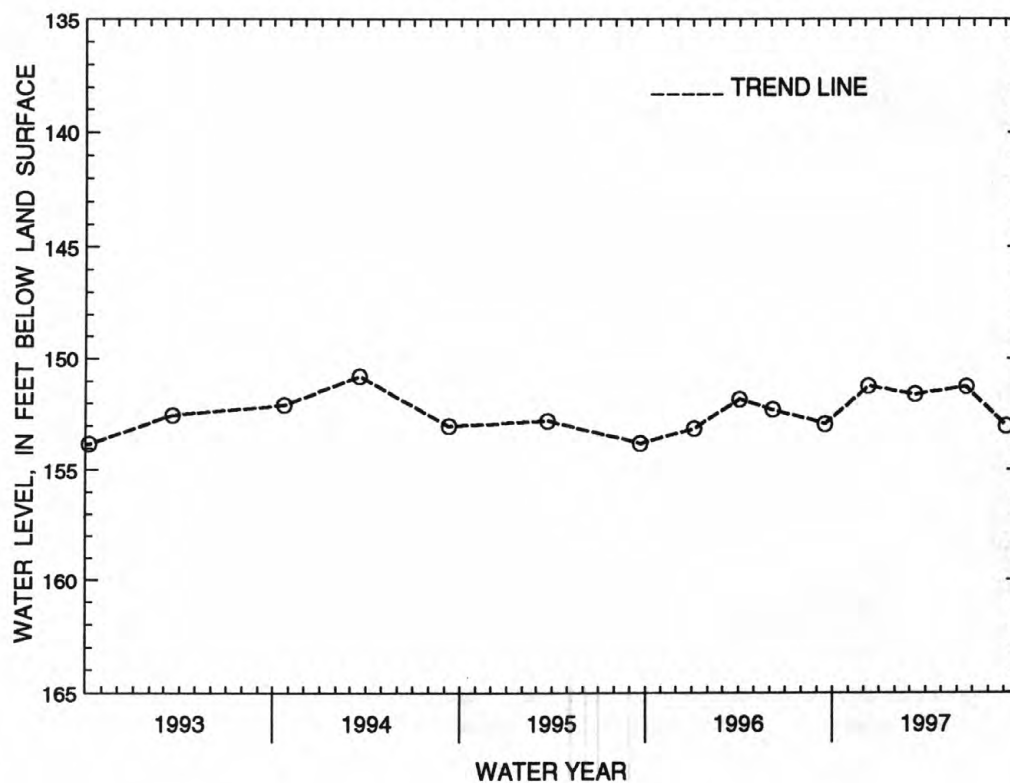
PERIOD OF RECORD.--August 1970 to December 1975, January 1978 to current year. Unpublished records available prior to October 1985 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 113.40 ft below land-surface datum, Aug. 17, 1970; lowest measured, 153.85 ft below land-surface datum, Oct. 7, 1992.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 10	151.23	MAR 11	151.60	JUN 18	151.25	SEP 04	153.03

WATER YEAR 1997	HIGHEST	151.23	DEC 10, 1996
	LOWEST	153.03	SEP 04, 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.

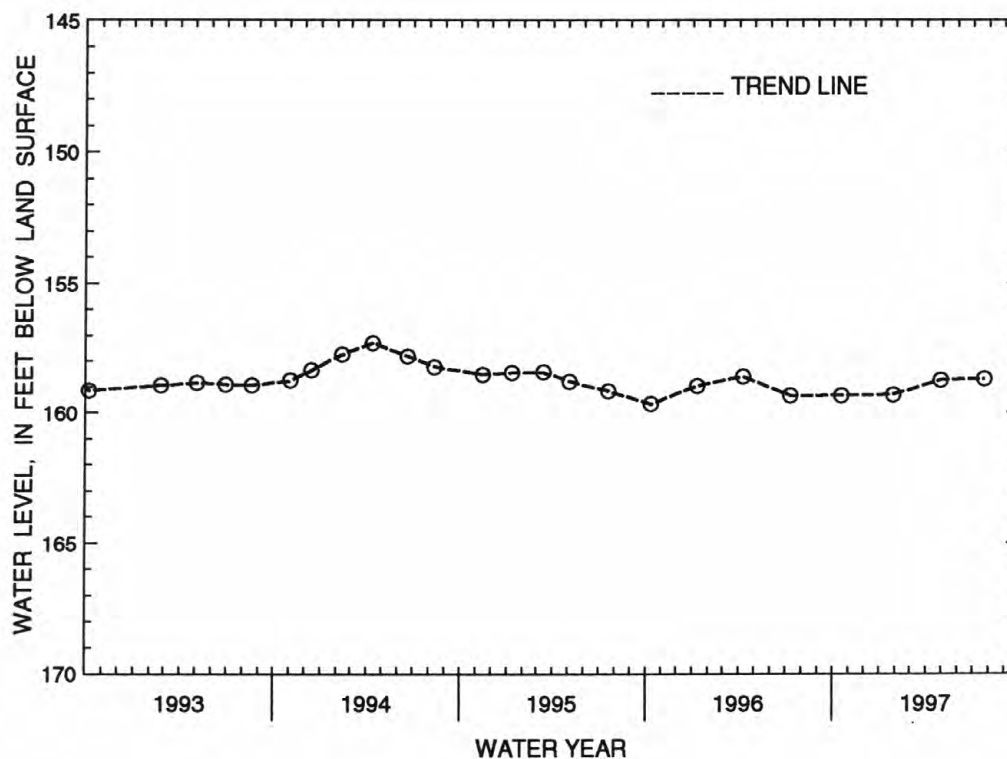
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division prior to Mar. 1, 1989; U.S. Geological Survey Mar. 2, 1989, to Oct. 7, 1992; Virginia Department of Environmental Quality - Water Division thereafter. Water level affected by regional drawdown.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	159.34	JAN 27	159.32	APR 30	158.75	JUL 23	158.71
WATER YEAR 1997	HIGHEST	158.71	JUL 23, 1997				
	LOWEST	159.34	OCT 18, 1996				



GROUND-WATER LEVELS

SOUTHAMPTON COUNTY

365120076585101. Local number, 55C 10.

LOCATION.--Lat 36°51'20", long 76°58'51", Hydrologic Unit 03010202, 100 ft west of State Highway 616, 0.3 mi south of Berlin. Owner: R. L. Harrup.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled withdrawal water well, diameter 4 in., depth 326 ft, screened 316 to 326 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 65 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

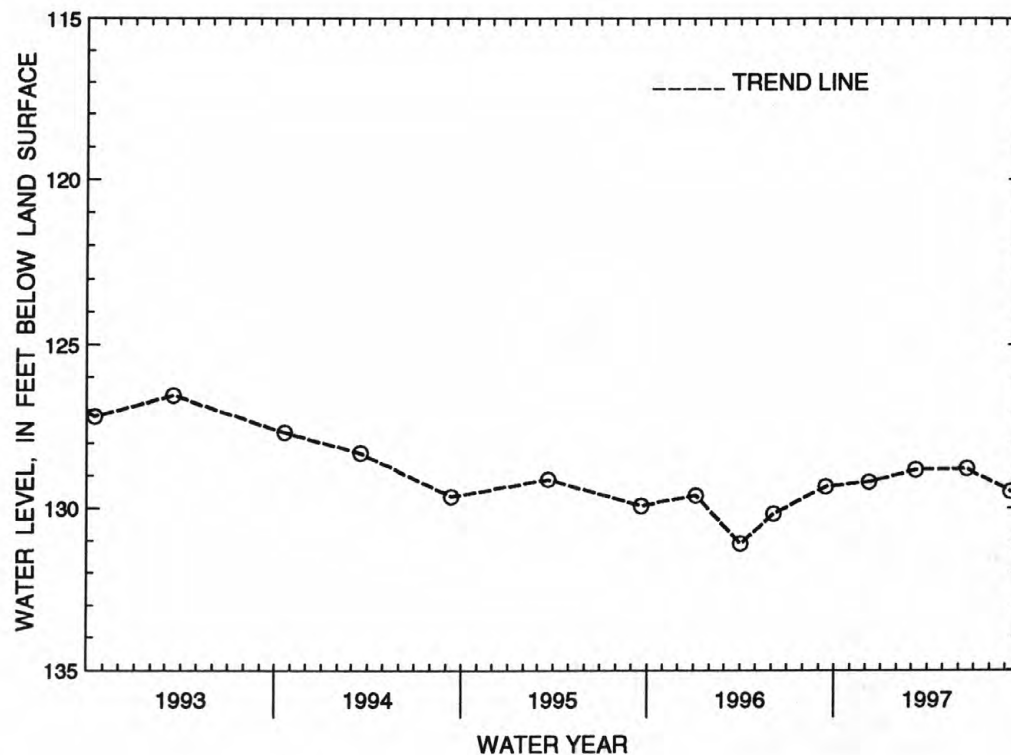
REMARKS.--Water level affected by regional drawdown.

PERIOD OF RECORD.--August 1970 to December 1975, January 1978 to current year. Unpublished records available prior to October 1985 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 94.62 ft below land-surface datum, Aug. 21, 1970; lowest measured, 132.10 ft below land-surface datum, Apr. 2, 1996.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 10	129.20	MAR 11	128.83	JUN 18	128.80	SEP12	129.50
WATER YEAR 1997	HIGHEST	128.80	JUN 18, 1997				
	LOWEST	129.50	SEP 12, 1997				



GROUND-WATER LEVELS

SOUTHAMPTON COUNTY

365415076535201. Local number, 55D 5.

LOCATION.--Lat 36°54'15", long 76°53'20", Hydrologic Unit 03010202, off State Highway 616, 0.25 mi southwest of intersection of State Highway 616 and U.S. Highway 460 in Ivor. Owner: Town of Ivor.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled withdrawal water well, diameter 8 in., depth 450 ft, screened 384 to 394 ft, 425 to 440 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 90 ft above sea level, from topographic map. Measuring point: Top of water-level access line, 1.75 ft above land-surface datum.

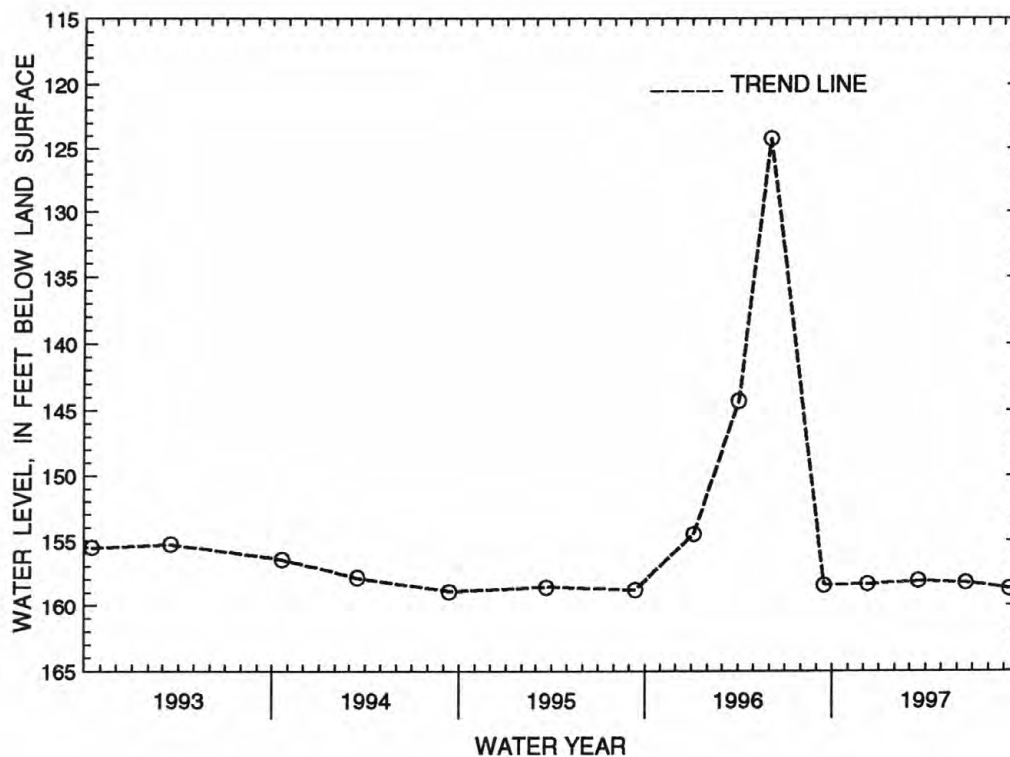
REMARKS.--Water level affected by regional drawdown.

PERIOD OF RECORD.--October 1970 to December 1975, January 1978 to current year. Unpublished records available prior to October 1985 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 120.47 ft below land-surface datum, Nov. 2, 1970; lowest measured, 158.94 ft below land-surface datum, Sept. 12, 1994.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 10	158.36	MAR 18	158.14	JUN 18	158.25	SEP 12	158.71
WATER YEAR 1997		HIGHEST	158.14	MAR 18, 1997			
		LOWEST	158.71	SEP 12, 1997			



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.

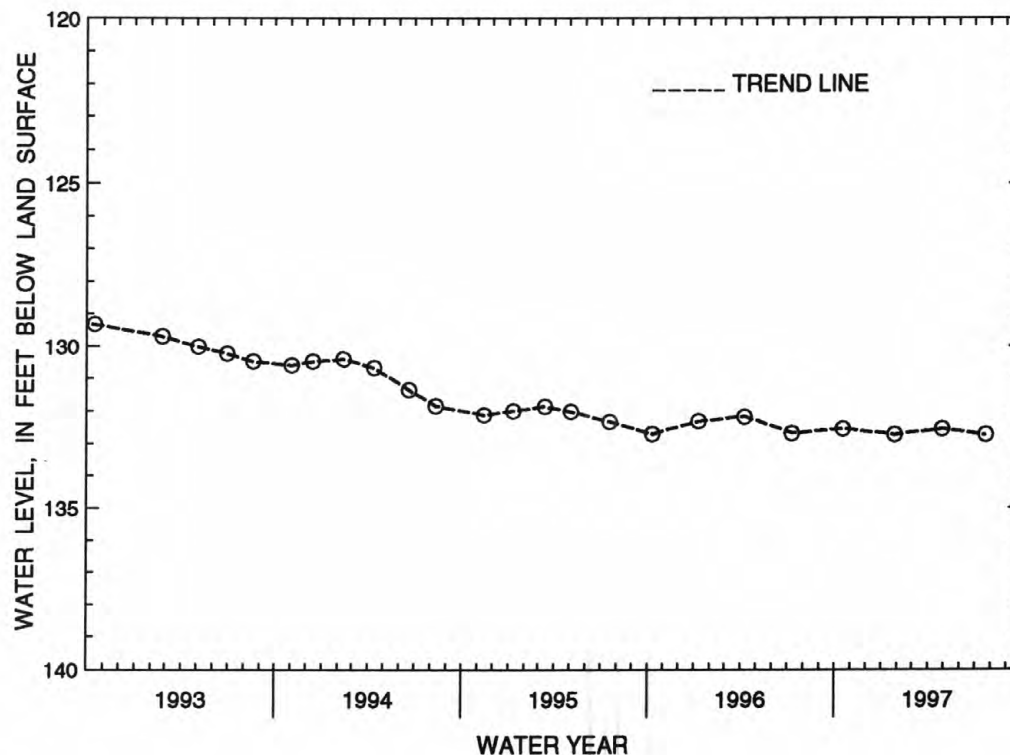
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division prior to Mar. 1, 1989; U.S. Geological Survey Mar. 2, 1989, to Oct. 15, 1992; Virginia Department of Environmental Quality - Water Division thereafter. Water level affected by regional drawdown.

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, 132.75 ft below land-surface datum, July 23, 1997.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	132.56	JAN 27	132.74	APR 30	132.57	JUL 23	132.75
WATER YEAR 1997	HIGHEST	132.56	OCT 18, 1996				
	LOWEST	132.75	JUL 23, 1997				



GROUND-WATER LEVELS

CITY OF SUFFOLK

363653076455401. Local number, 56A 11 SOW 089.

LOCATION.--Lat 36°36'53", long 76°45'54", Hydrologic Unit 03010203, off State Highway 616, 1.1 mi east of Holy Neck Church, and 3.4 mi north 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 861 ft, screened 830 to 840 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 79 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum prior to Nov. 18, 1987; 0.6 ft Nov. 18, 1987, to Jan. 12, 1988; 1.3 ft thereafter.

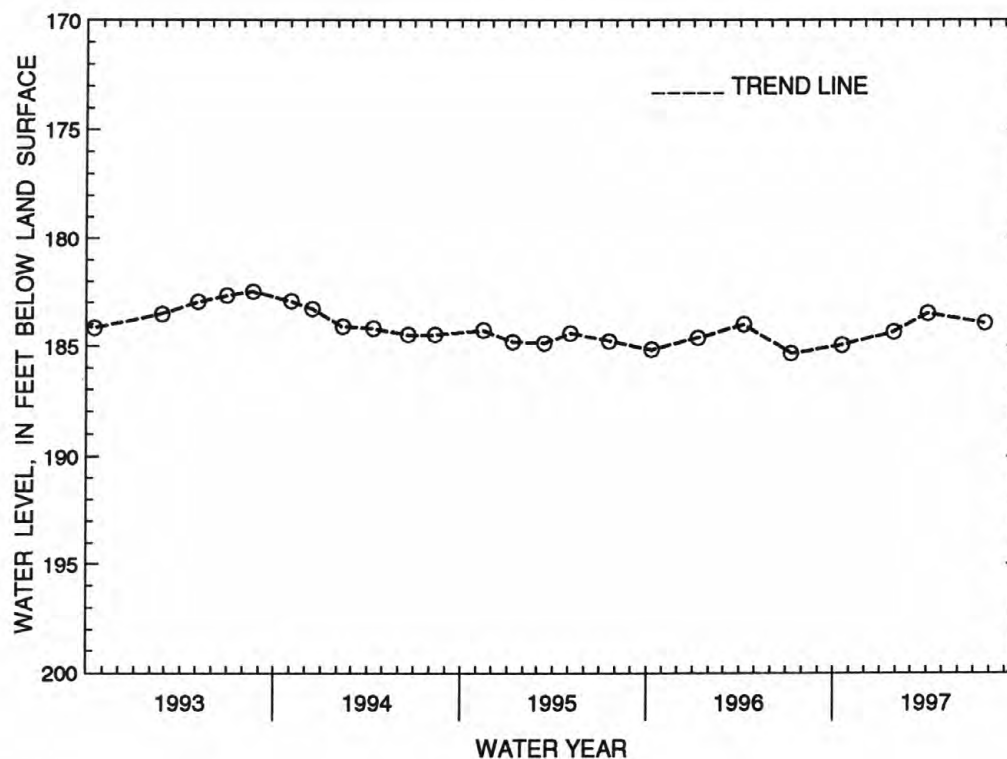
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division prior to Mar. 1 1989; U.S. Geological Survey Mar. 2, 1989, to Oct. 15, 1992; Virginia Department of Environmental Quality - Water Division thereafter. Water level affected by regional drawdown.

PERIOD OF RECORD.--August 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, 154.00 ft below land-surface datum, Aug. 9, 1977; lowest measured, 185.34 ft below land-surface datum, Jul. 11, 1996.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	184.97	JAN 27	184.36	APR 30	183.52	JUL 23	183.96
WATER YEAR 1997	HIGHEST	183.52	APR 30, 1997				
	LOWEST	184.97	OCT 18, 1996				



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.

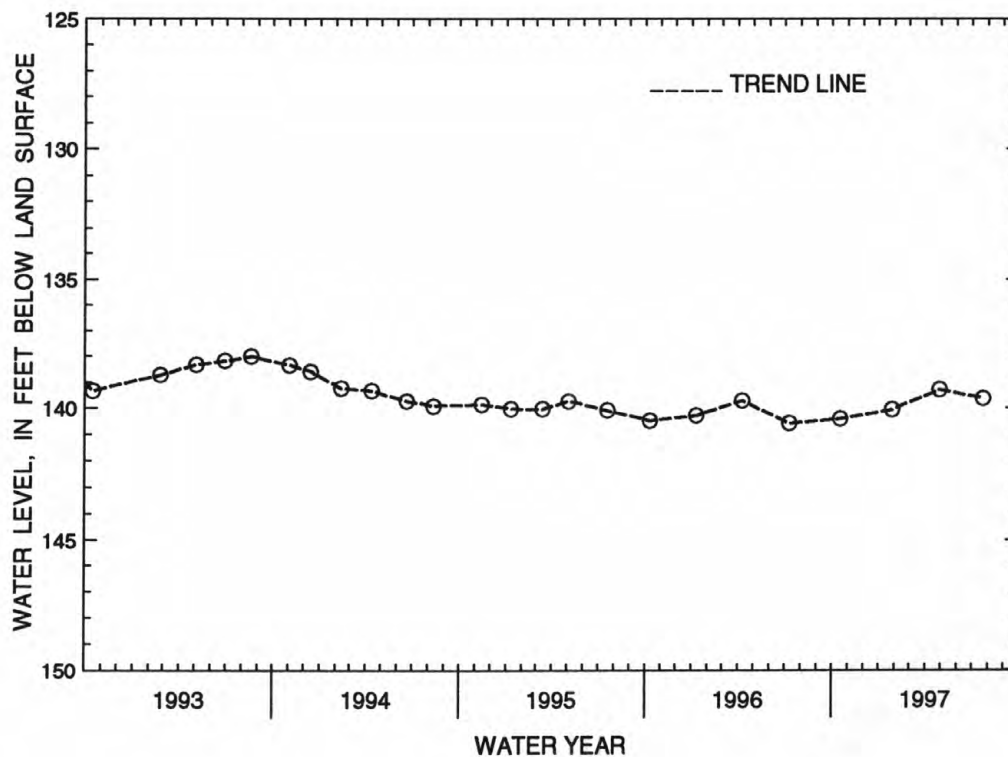
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division prior to Mar. 1, 1989; U.S. Geological Survey Mar. 2, 1989, to Oct. 7, 1992; Virginia Department of Environmental Quality - Water Division thereafter. Water level affected by regional drawdown.

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, 140.59 ft below land-surface datum, July 11, 1996.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	140.42	JAN 27	140.07	APR 30	139.30	JUL 23	139.64
WATER YEAR 1997	HIGHEST	139.30	APR 30, 1997				
	LOWEST	140.42	OCT 18, 1996				



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.

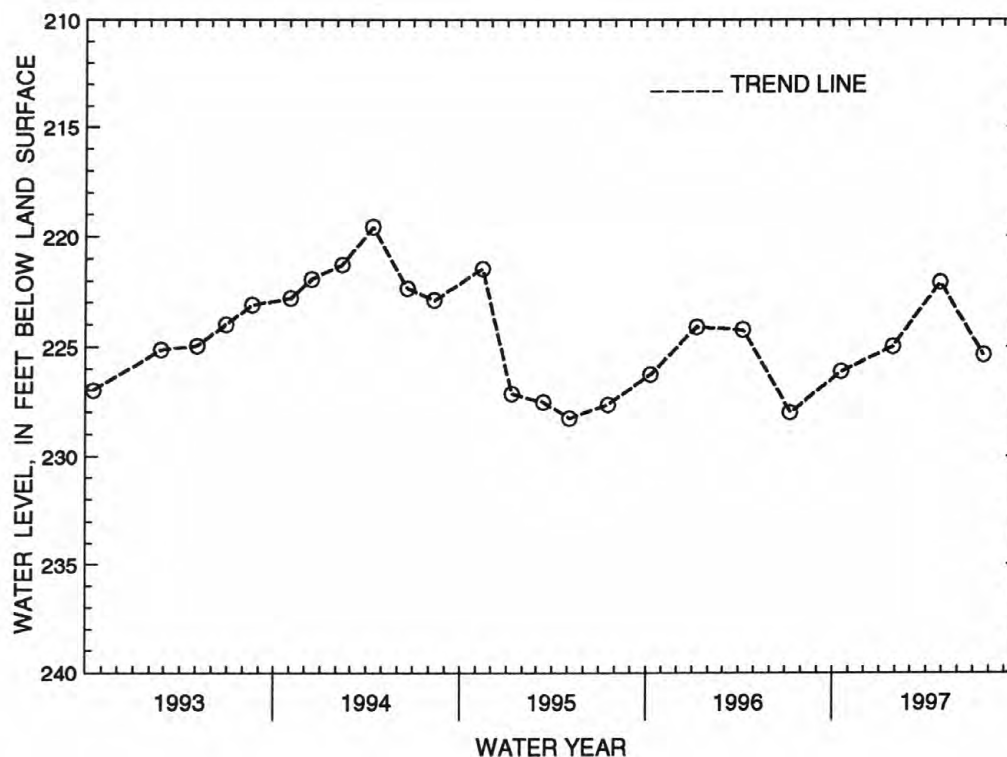
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division prior to Mar. 1, 1989; U.S. Geological Survey Mar. 2, 1989, to Oct. 15, 1992; Virginia Department of Environmental Quality - Water Division thereafter. Water level affected by local pumpage and regional drawdown.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	226.13	JAN 27	225.00	APR 30	222.09	JUL 23	225.39
WATER YEAR 1997	HIGHEST	222.09	APR 30, 1997				
	LOWEST	226.13	OCT 18, 1996				



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.

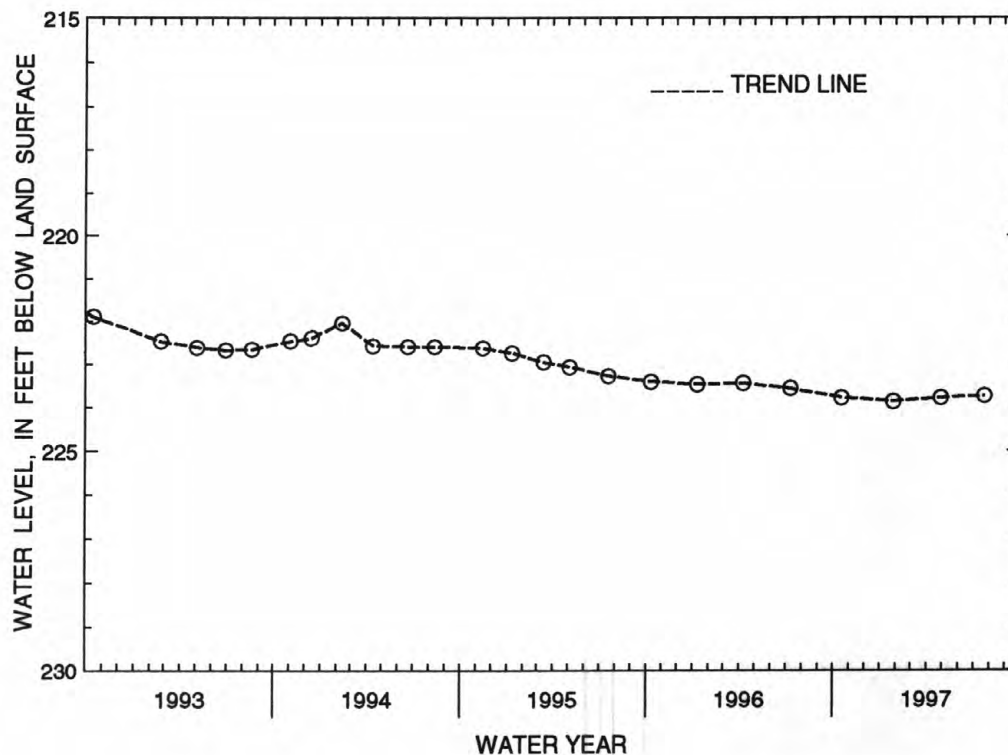
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division prior to Mar. 1, 1989; U.S. Geological Survey Mar. 2, 1989, to Oct. 15, 1992; Virginia Department of Environmental Quality - Water Division thereafter. Water level affected by regional drawdown.

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, 223.87 ft below land-surface datum, July 27, 1997.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	223.78	JAN 27	223.87	APR 30	223.79	JUL 23	223.75
WATER YEAR 1997	HIGHEST	223.75	JUL 23, 1997				
	LOWEST	223.87	JAN 27, 1997				



GROUND-WATER LEVELS

CITY OF SUFFOLK

363834076382301. Local number, 57B 8.

LOCATION.--Lat 36°38'27", long 76°38'05", Hydrologic Unit 03010205, 0.3 mi southwest of State Highway 664, 0.8 mi southeast of U.S. Highway 13, and 1.1 mi south of Nurneysville. Owner: Soren F. Andresen.

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

WELL CHARACTERISTICS.--Drilled flowing water well, diameter 2 in., depth 65 ft, screened 50 to 65 ft.

INSTRUMENTATION.--Occasional measurement with manometer by USGS personnel. Dec. 1, 1988, to June 1, 1990, quarterly measurement with a manometer. Prior to Dec. 1, 1988, bimonthly measurement with a manometer.

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

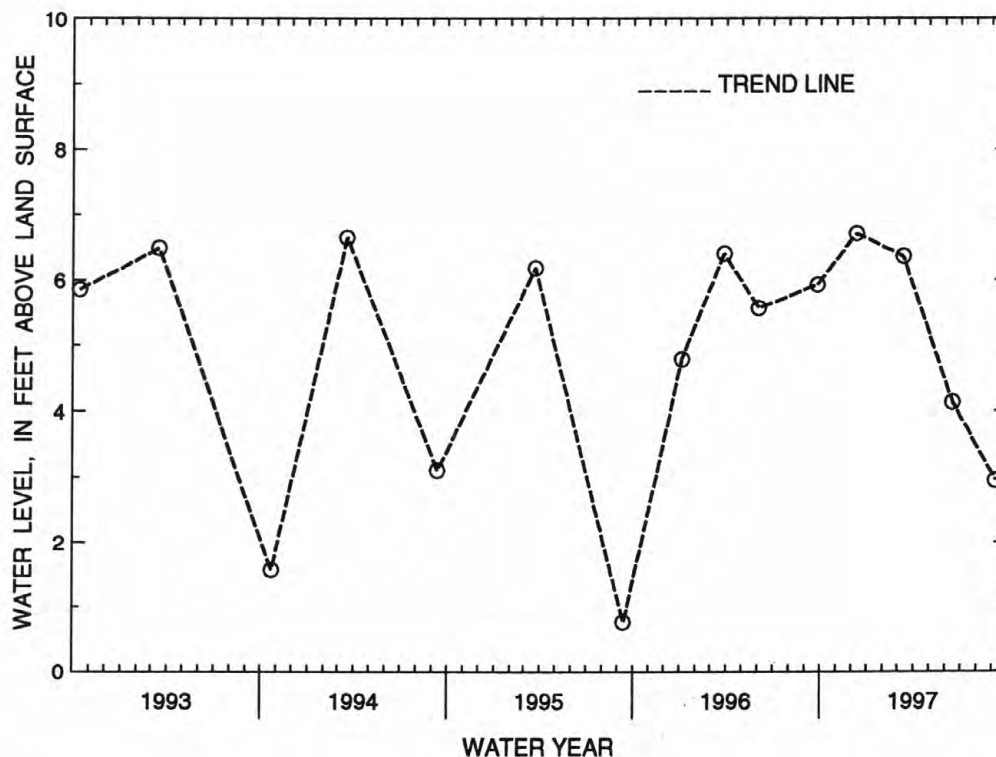
REMARKS.--Capped flowing well; readings are above land-surface datum. Occasional small withdrawals that supply nearby cabin can effect water levels.

PERIOD OF RECORD.--March 1975, November 1977 to current year. Unpublished records available March 1975 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.70 ft above land-surface datum, Dec. 11, 1996; lowest measured, at land-surface datum, Sept. 26, 1980.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 11	6.70	MAR 12	6.35	JUN 16	4.13	SEP 08	2.95
WATER YEAR 1997		HIGHEST	6.70	DEC 11, 1996			
		LOWEST	2.95	SEP 08, 1997			



GROUND-WATER LEVELS

CITY OF SUFFOLK

364703076383701. Local number, 57C 21 SOW 099A.

LOCATION.--Lat 36°47'03", long 76°38'37", Hydrologic Unit 02080208, 700 ft south of U.S. Highway 460, 0.5 mi west of Providence Church, and 1.0 mi west of Kings Fork. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Aquia aquifer of Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 248 ft, screened 238 to 248 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 7, 1985, to July 19, 1995, bimonthly measurement with chalked tape. Prior to Oct. 7, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 72 ft above sea level, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum prior to Jan. 12, 1988; 1.1 ft thereafter.

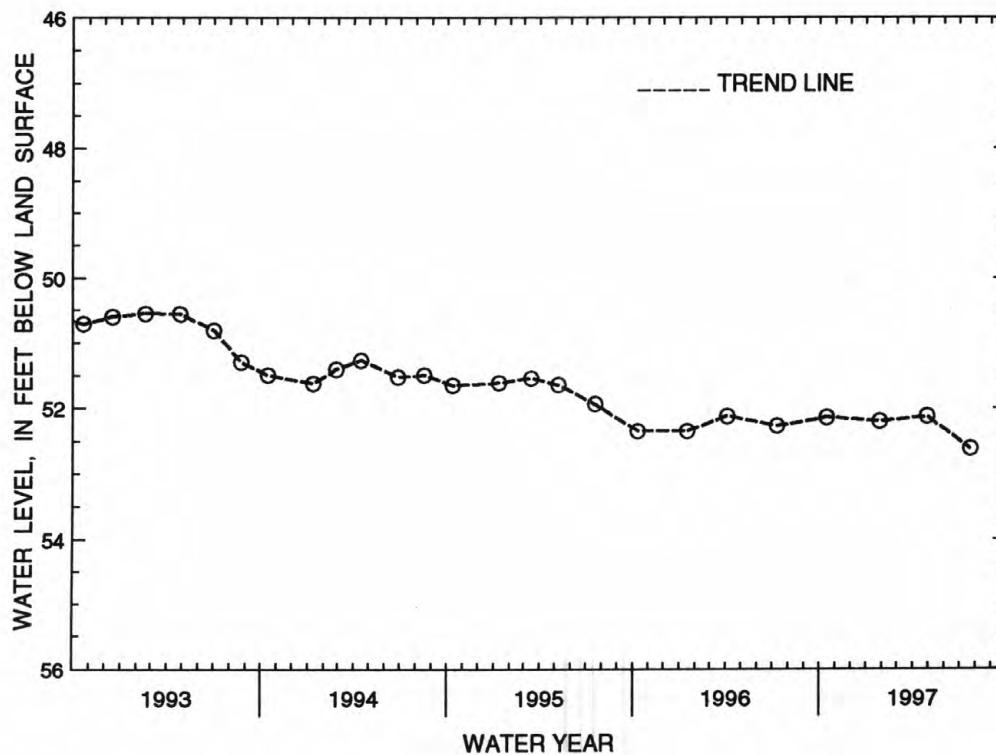
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

PERIOD OF RECORD.--September 1983 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, 46.32 ft below land-surface datum, Apr. 19, 1984; lowest measured, 52.62 ft below land-surface datum, July 23, 1997.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	52.14	JAN 27	52.20	APR 30	52.13	JUL 23	52.62
WATER YEAR 1997		HIGHEST	52.13	APR 30, 1997			
		LOWEST	52.62	JUL 23, 1997			



GROUND-WATER LEVELS

CITY OF SUFFOLK

364703076383704. Local number, 57C 24 SOW 099D.

LOCATION.--Lat 36°47'03", long 76°38'37", Hydrologic Unit 02080208, 700 ft south of U.S. Highway 460, 0.5 mi west of Providence Church, and 1.0 mi west of Kings 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.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 7, 1985, to July 19, 1995, bimonthly measurement with chalked tape. Prior to Oct. 7, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 72 ft above sea level, from topographic map. Measuring point: Top of casing, 0.5 ft above land-surface datum prior to Mar. 25, 1987; 2.0 ft Mar. 25, 1987, to Jan. 12, 1988; 1.3 ft Jan. 13, 1988, to June 24, 1990; 0.3 ft June 25 to Aug. 15, 1990; 1.8 ft thereafter.

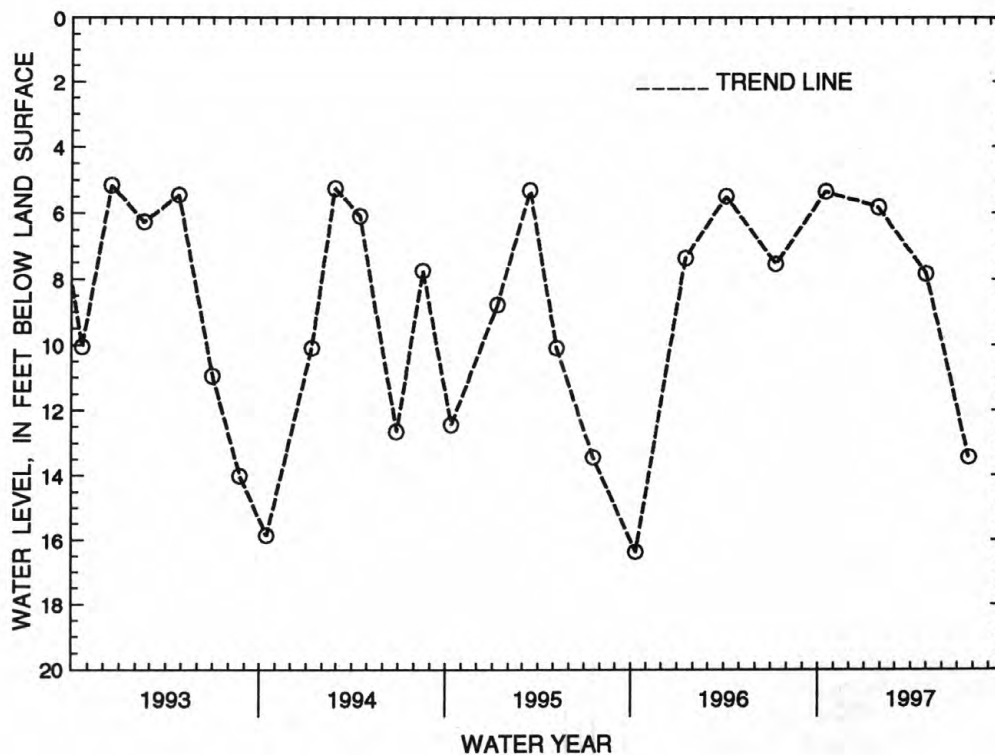
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--September 1983 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, 2.90 ft below land-surface datum, Mar. 14, 1989; lowest measured, 16.38 ft below land-surface datum, Oct. 15, 1995.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	5.35	JAN 27	5.83	APR 30	7.84	JUL 23	13.44
WATER YEAR 1997	HIGHEST	5.35	OCT 15, 1996				
	LOWEST	13.44	JUL 23, 1997				



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.

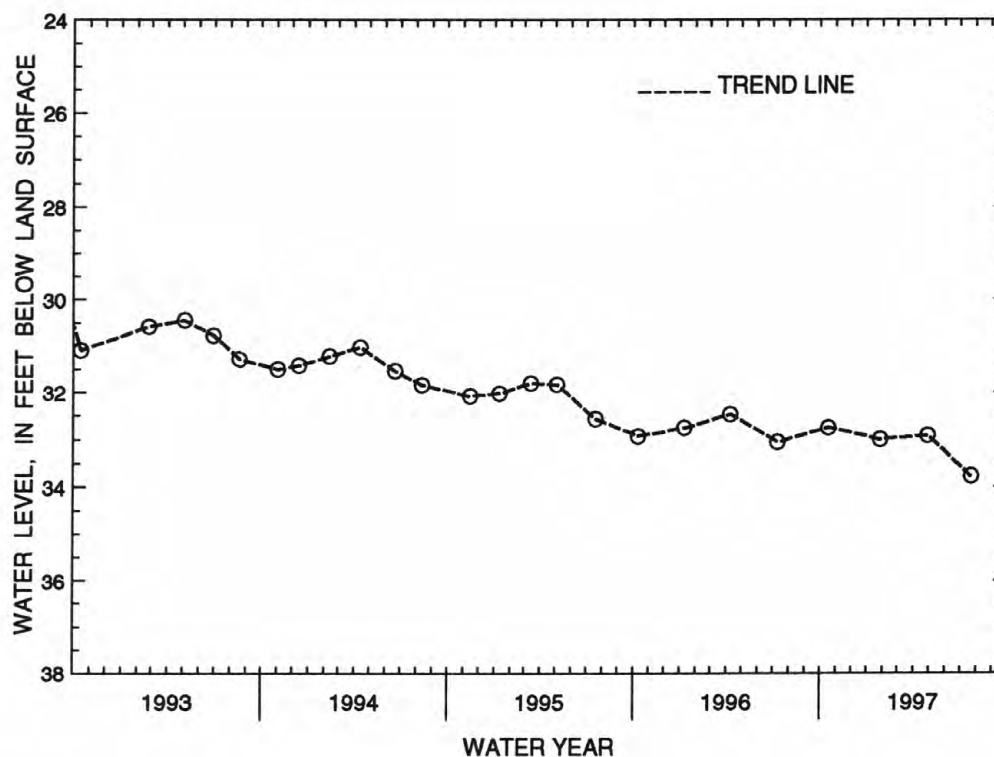
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division prior to Mar. 1, 1989; U.S. Geological Survey Mar. 2, 1989, to Oct. 14, 1992; Virginia Department of Environmental Quality - Water Division thereafter. Water level affected by regional drawdown.

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, 33.78 ft below land-surface datum, July 23, 1997.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	32.75	JAN 27	33.00	APR 30	32.92	JUL 23	33.78
WATER YEAR 1997	HIGHEST	32.75	OCT 18, 1996				
	LOWEST	33.78	JUL 23, 1997				



GROUND-WATER LEVELS

CITY OF SUFFOLK

363655076332002. Local number, 58A 77 SOW 180A.

LOCATION.--Lat 36°36'55", long 76°33'20", Hydrologic Unit 03010205, 0.3 mi north of Great Dismal Swamp Wildlife Refuge Headquarters on Desert Road, 2.0 mi east of Cypress Chapel. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Lower Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 1,158 ft, diameter 3 in. from 1,136 to 1,209 ft, depth 1,209 ft, screened 1,199 to 1,209 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Apr. 15, 1992, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 34.02 ft above sea level. Measuring point: Top of casing, 2.5 ft above land-surface datum.

REMARKS.--Water level affected by regional drawdown. Low-water level in August 1993 is the result of the well being pumped for water-quality sampling. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

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

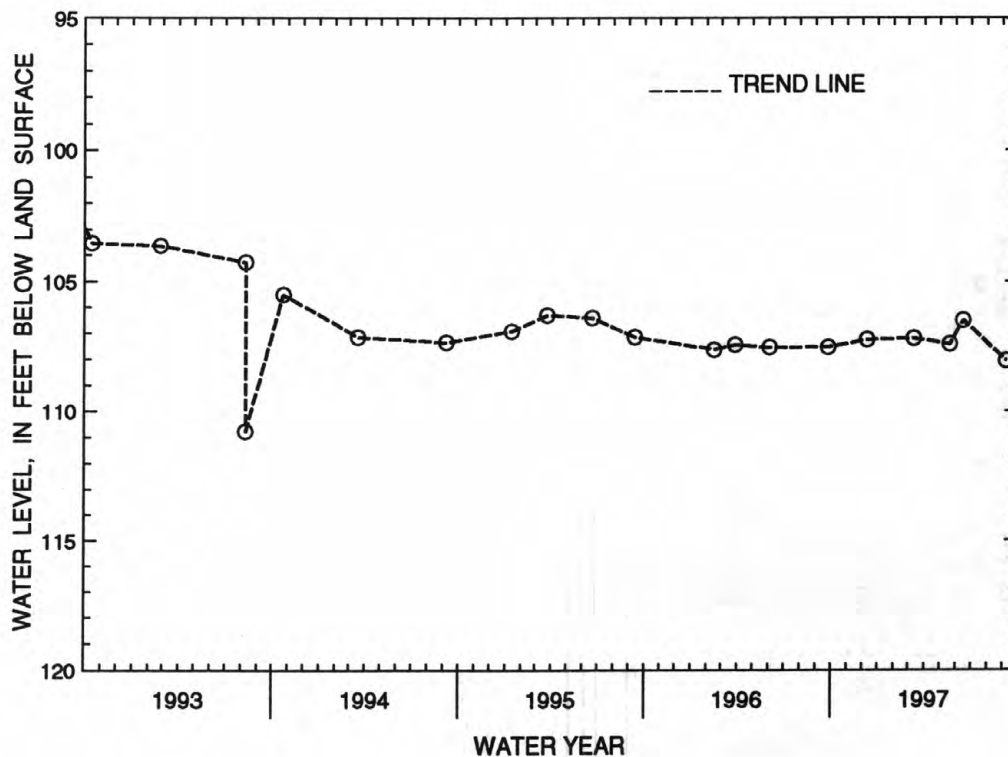
REVISED RECORDS.--WDR VA-89-1: 1987.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 96.83 ft below land-surface datum, Sept. 30, 1987; lowest measured, 108.06 ft below land-surface datum, Sept. 8, 1997.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 11	107.25	MAR 12	107.20	MAY 21	107.43	JUN 16	106.51	SEP 08	108.06

WATER YEAR 1997	HIGHEST	106.51	JUN 16, 1997
	LOWEST	108.06	SEP 08, 1997



GROUND-WATER LEVELS

CITY OF SUFFOLK

363655076332003. Local number, 58A 78 SOW 180B.

LOCATION.--Lat 36°36'55", long 76°33'20", Hydrologic Unit 03010205, 0.3 mi north of Great Dismal Swamp Wildlife Refuge Headquarters on Desert Road, 2.0 mi east of Cypress Chapel. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 811 ft, diameter 2 in. from 766 to 880 ft, depth 880 ft, screened 850 to 860 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Apr. 15, 1992, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 34.02 ft above sea level. Measuring point: Top of casing, 2.5 ft above land-surface datum.

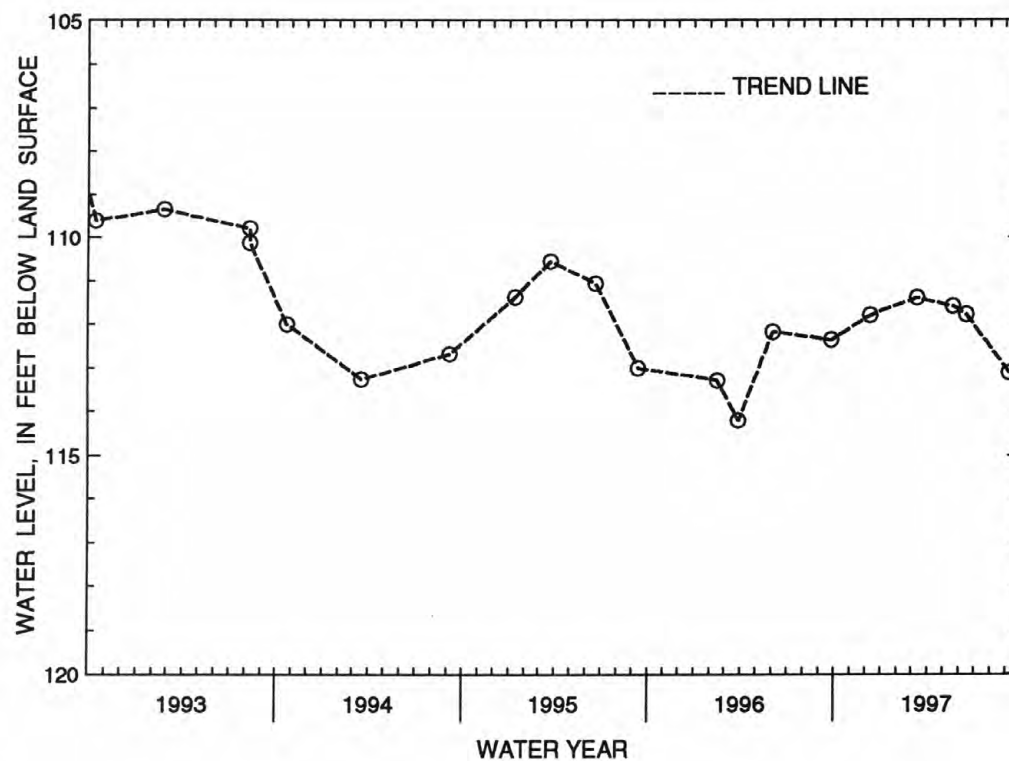
REMARKS.--Water level affected by regional drawdown and occasional pumpage for water-quality sampling.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 102.14 ft below land-surface datum, June 5, 27, 1987; lowest measured, 114.22 ft below land-surface datum, Mar. 28, 1996.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 11	111.80	MAR 12	111.40	MAY 21	111.60	JUN 16	111.79	SEP 08	113.12
WATER YEAR 1997		HIGHEST	111.40	MAR 12, 1997					
		LOWEST	113.12	SEP 08, 1997					



GROUND-WATER LEVELS

CITY OF SUFFOLK

363655076332004. Local number, 58A 79 SOW 180C.

LOCATION.--Lat 36°36'55", long 76°33'20", Hydrologic Unit 03010205, 0.3 mi north of Great Dismal Swamp Wildlife Refuge Headquarters on Desert Road, 2.0 mi east of Cypress Chapel. 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. to 670 ft, diameter 2 in. from 657 to 710 ft, depth 710 ft, screened 700 to 710 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Apr. 15, 1992, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 33.97 ft above sea level. Measuring point: Top of casing, 2.4 ft above land-surface datum.

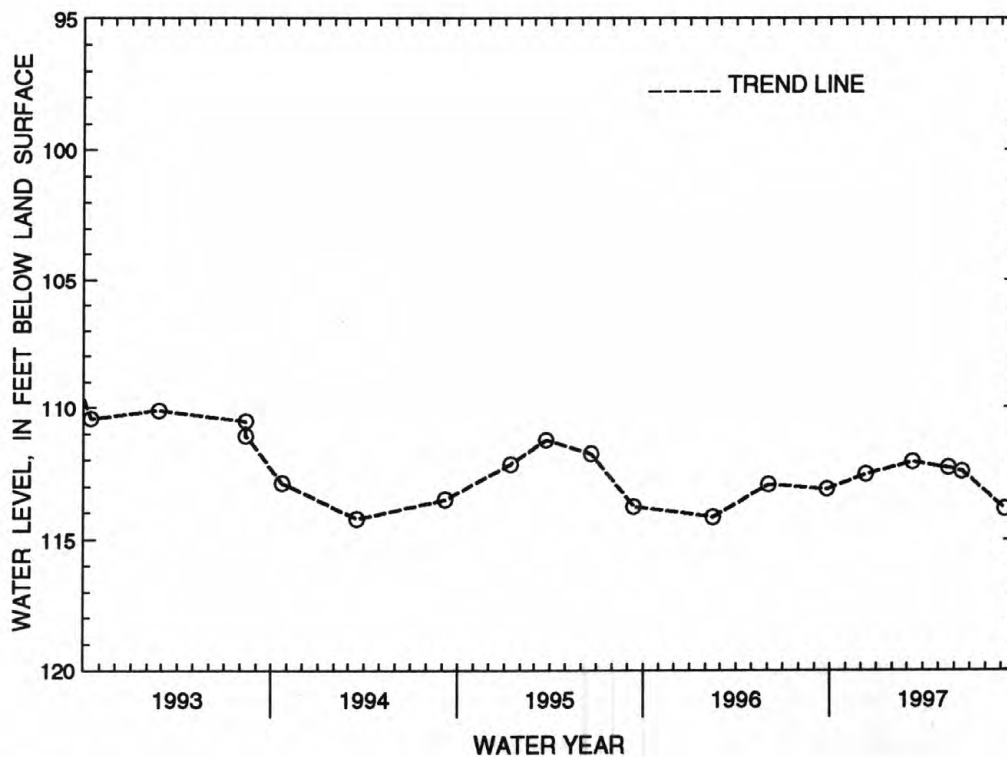
REMARKS.--Water level affected by regional drawdown and occasional pumpage from water-quality sampling.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 102.72 ft below land-surface datum, May 11, 1987; lowest measured, 114.23 ft below land-surface datum, Mar. 18, 1994.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 11	112.54	MAR 12	112.07	MAY 21	112.29	JUN 16	112.43	SEP 08	113.84
WATER YEAR 1997		HIGHEST	112.07	MAR 12, 1997					
		LOWEST	113.84	SEP 08, 1997					



GROUND-WATER LEVELS

CITY OF SUFFOLK

363655076332005. Local number, 58A 80 SOW 180D.

LOCATION.--Lat 36°36'55", long 76°33'20", Hydrologic Unit 03010205, 0.3 mi north of Great Dismal Swamp Wildlife Refuge Headquarters on Desert Road, 2.0 mi east of Cypress Chapel. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Virginia Beach aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in. to 397 ft, diameter 2 in. from 388 to 440 ft, depth 440 ft, screened 430 to 440 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Mar. 27, 1991, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 34.26 ft above sea level. Measuring point: Top of casing, 2.3 ft above land-surface datum.

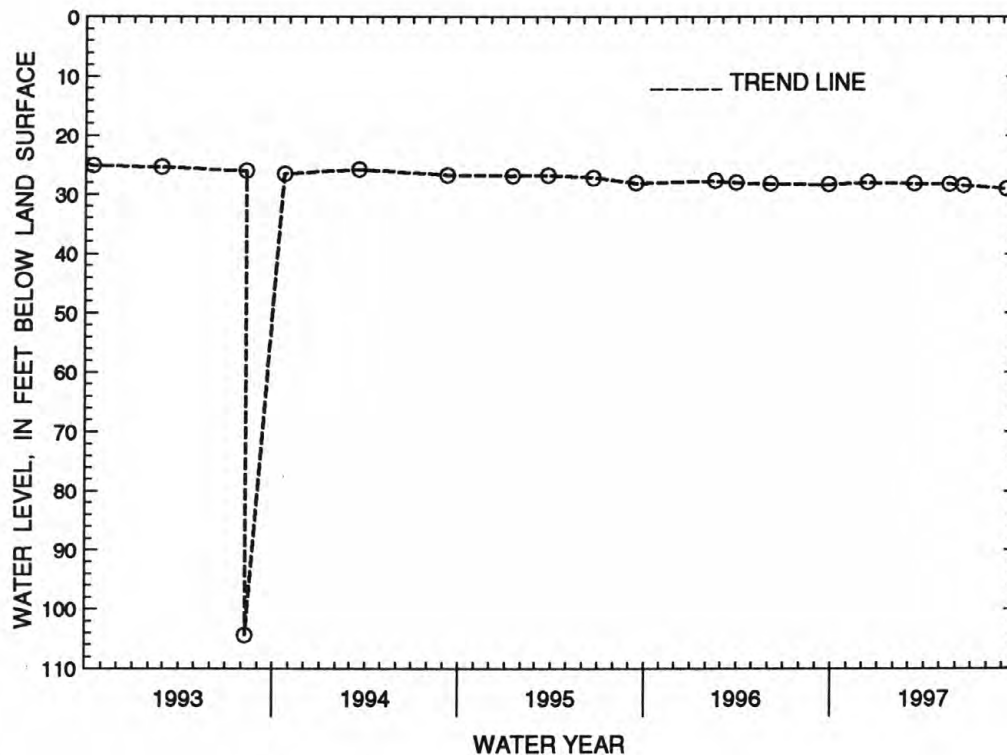
REMARKS.--Water level affected by regional drawdown. Low-water level in August 1993 is the result of the well being pumped for water-quality sampling.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.55 ft below land-surface datum, June 17, 1987; lowest measured, 29.05 ft below land-surface datum, Sept. 8, 1997.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 11	27.98	MAR 12	28.17	MAY 20	28.22	JUN 16	28.47	SEP 08	29.05
WATER YEAR 1997		HIGHEST	27.98	DEC 11, 1996					
		LOWEST	29.05	SEP 08, 1997					



GROUND-WATER LEVELS

CITY OF SUFFOLK

363655076332006. Local number, 58A 81 SOW 180E.

LOCATION.--Lat 36°36'55", long 76°33'20", Hydrologic Unit 03010205, 0.3 mi north of Great Dismal Swamp Wildlife Refuge Headquarters on Desert Road, 2.0 mi east of Cypress Chapel. 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 309 ft, diameter 2 in. from 298 to 329 ft, depth 329 ft, screened 319 to 329 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Apr. 15, 1992, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 34.00 ft above sea level. Measuring point: Top of casing, 2.4 ft above land-surface datum.

REMARKS.--Low-water level in August 1993 is the result of the well being pumped for water-quality sampling. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

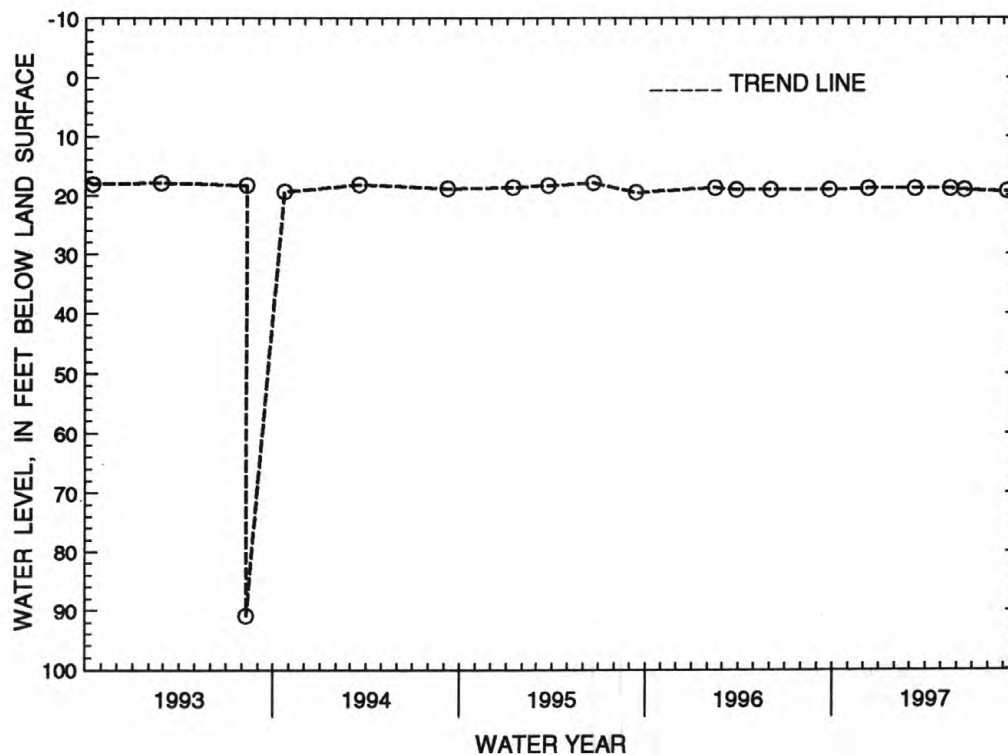
PERIOD OF RECORD.--February 1987 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 15.07 ft below land-surface datum, Feb. 23, 1987; lowest measured, 19.59 ft below land-surface datum, Sept. 13, 1995.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 11	18.88	MAR 12	18.85	MAY 20	18.89	JUN 16	19.09	SEP 08	19.37

WATER YEAR 1997 HIGHEST 18.85 MAR 12, 1997
 LOWEST 19.37 SEP 08, 1997



GROUND-WATER LEVELS

CITY OF SUFFOLK

363655076332009. Local number, 58A 84 SOW 180H.

LOCATION.--Lat 36°36'55", long 76°33'20", Hydrologic Unit 03010205, 0.3 mi north of Great Dismal Swamp Wildlife Refuge Headquarters on Desert Road, 2.0 mi east of Cypress Chapel. 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 USGS personnel. Prior to Feb. 15, 1996, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 33.87 ft above sea level. Measuring point: Top of casing, 2.5 ft above land-surface datum.

REMARKS.--Missing record due to recorder malfunction.

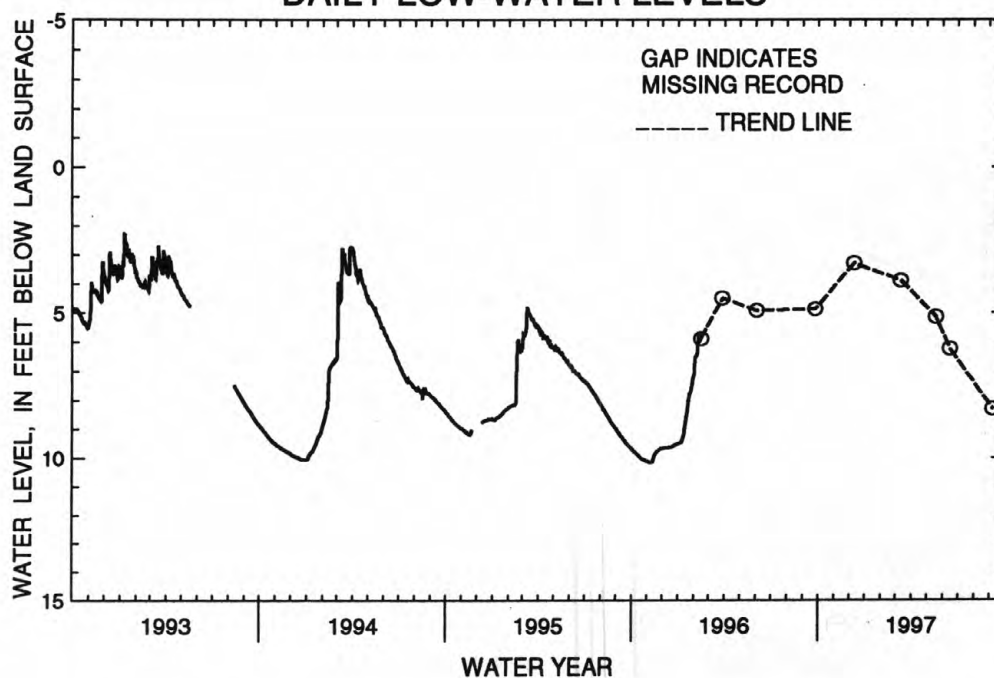
PERIOD OF RECORD.--February 1987 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 1.47 ft below land-surface datum, Mar. 24, 1989; lowest recorded, 10.16 ft below land-surface datum, Nov. 7-10, 1995.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 11	3.30	MAR 12	3.90	MAY 20	5.15	JUN 16	6.23	SEP 08	8.30
WATER YEAR 1997		HIGHEST	3.30	DEC 11, 1996					
		LOWEST	8.03	SEP 08, 1997					

DAILY LOW-WATER LEVELS



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.

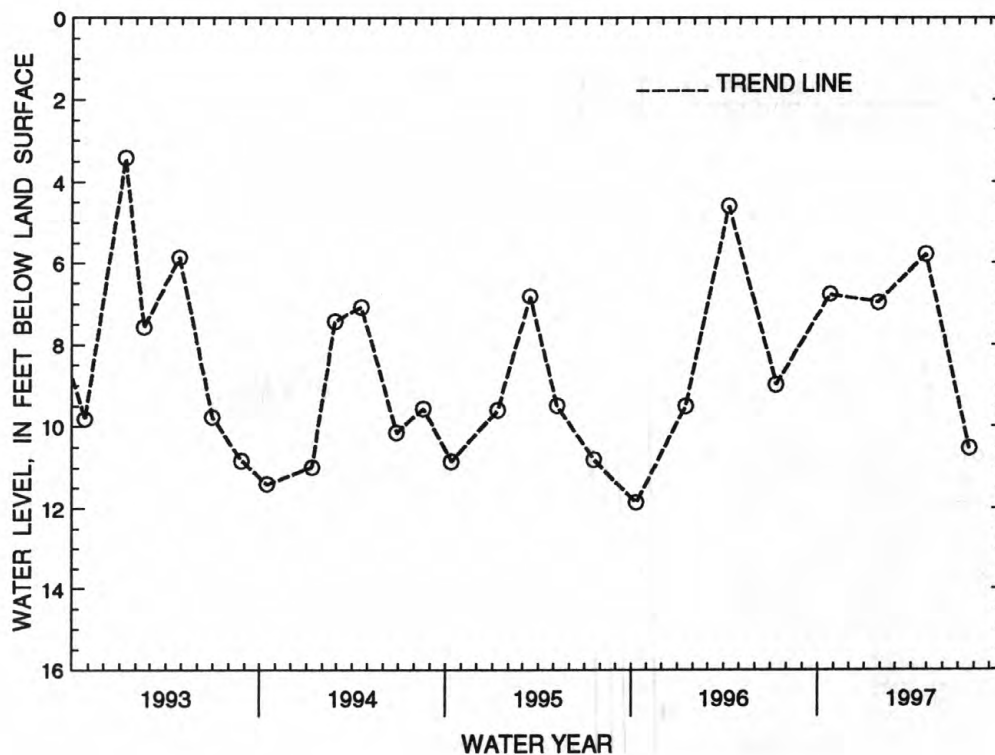
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	6.77	JAN 27	6.97	APR 30	5.79	JUL 23	10.53
WATER YEAR 1997		HIGHEST	5.79	APR 30, 1997			
		LOWEST	10.53	JUL 23, 1997			



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.

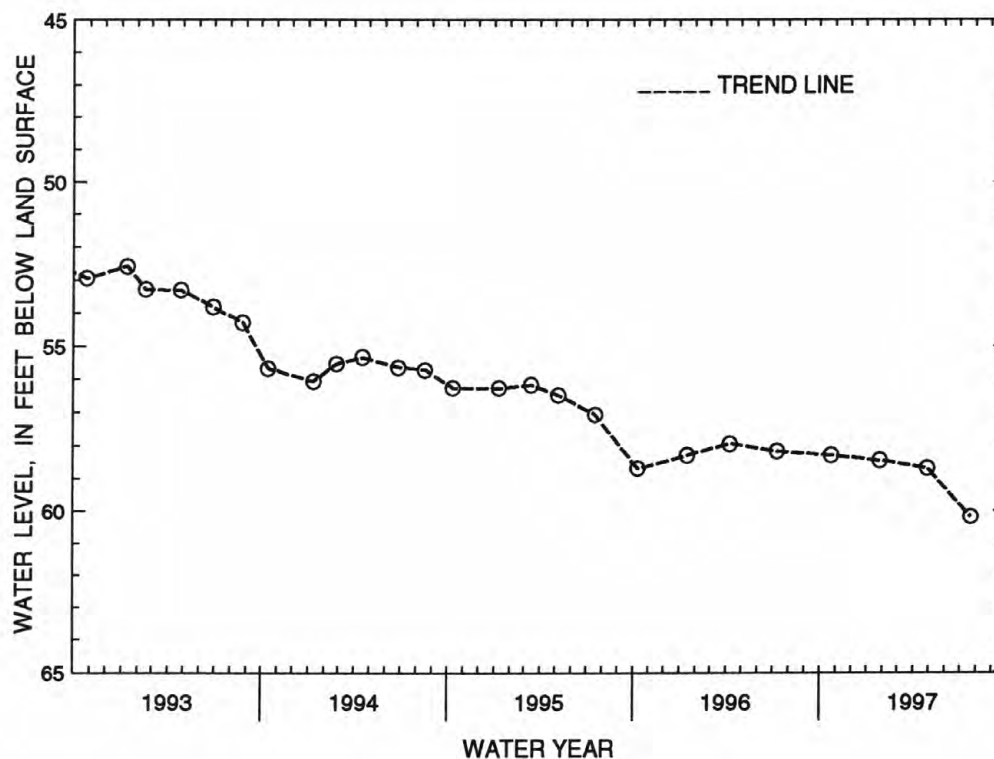
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

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, 60.19 ft below land-surface datum, July 23, 1997.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	58.30	JAN 27	58.45	APR 30	58.69	JUL 23	60.19
WATER YEAR 1997		HIGHEST	58.30	OCT 24, 1996			
		LOWEST	60.19	JUL 23, 1997			



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.

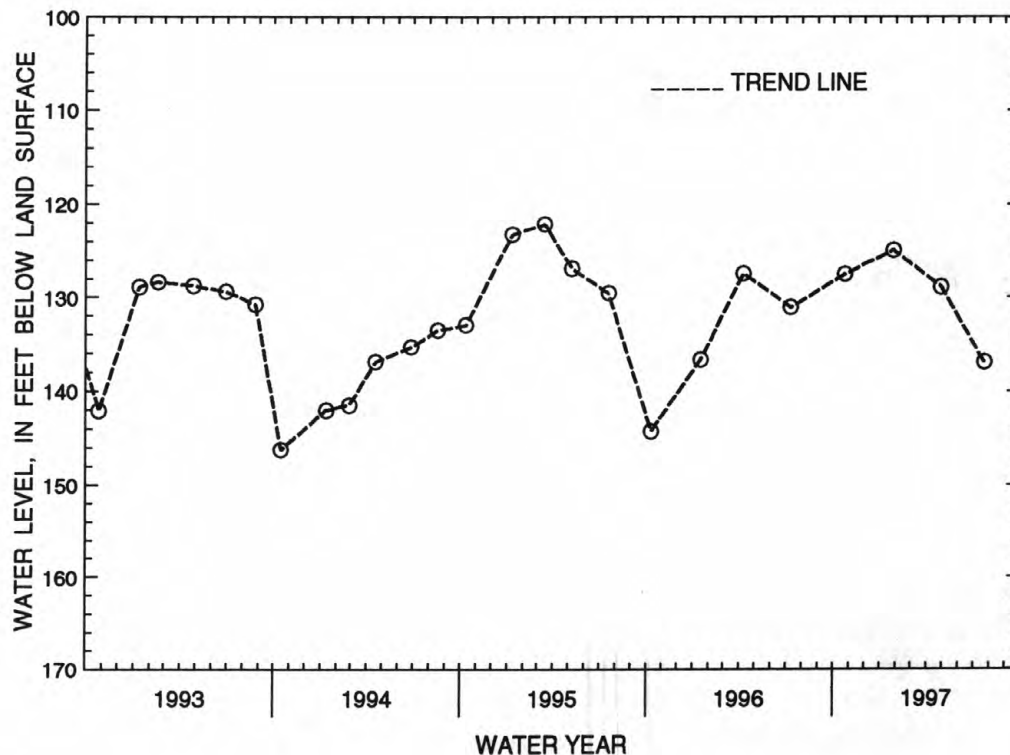
PERIOD OF RECORD.--July 1985 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	127.55	JAN 27	124.95	APR 30	128.90	JUL 23	136.95

WATER YEAR 1997	HIGHEST	124.95	JAN 27, 1997
	LOWEST	136.95	JUL 23, 1997



GROUND -WATER LEVELS

CITY OF SUFFOLK

364317076363501. Local number, 58B271 SOW 169D.

LOCATION.--Lat 36°43'17", long 76°36'35", Hydrologic Unit 02080208, 200 ft south 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 710 ft, screened 501 to 506 ft, 632 to 637 ft, 700 to 710 ft.

INSTRUMENTATION.--Continuous strip-chart recorder. Prior to Nov. 5, 1986, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 29 ft above sea level, from topographic map. Measuring point: Top of casing, 1.4 ft above land-surface datum.

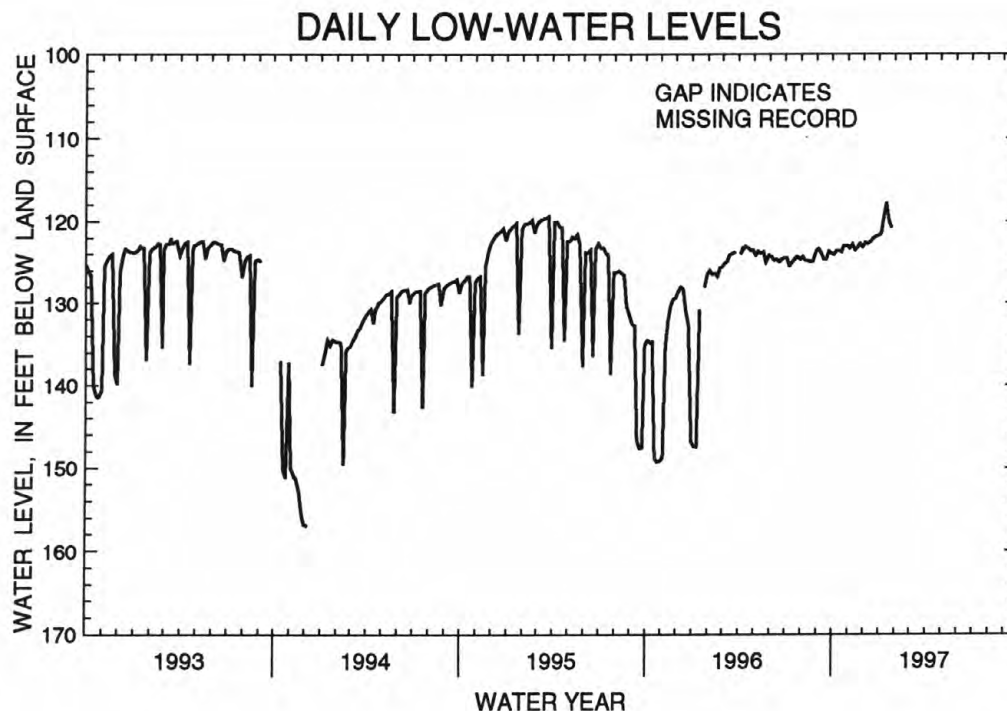
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Missing record due to recorder malfunction. Water level affected by local pumpage. Well discontinued as of Jan. 27, 1997.

PERIOD OF RECORD.--July 1985 to Jan. 27, 1997. 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, 107.70 ft below land-surface datum, Feb. 25, 1986; lowest recorded, 156.96 ft below land-surface datum, Dec. 5, 1993.

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

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	123.03	JAN 27	120.80
WATER YEAR 1997			
HIGHEST INSTANTANEOUS	120.80	JAN 27, 1997	
LOWEST INSTANTANEOUS	123.03	OCT 24, 1996	



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.

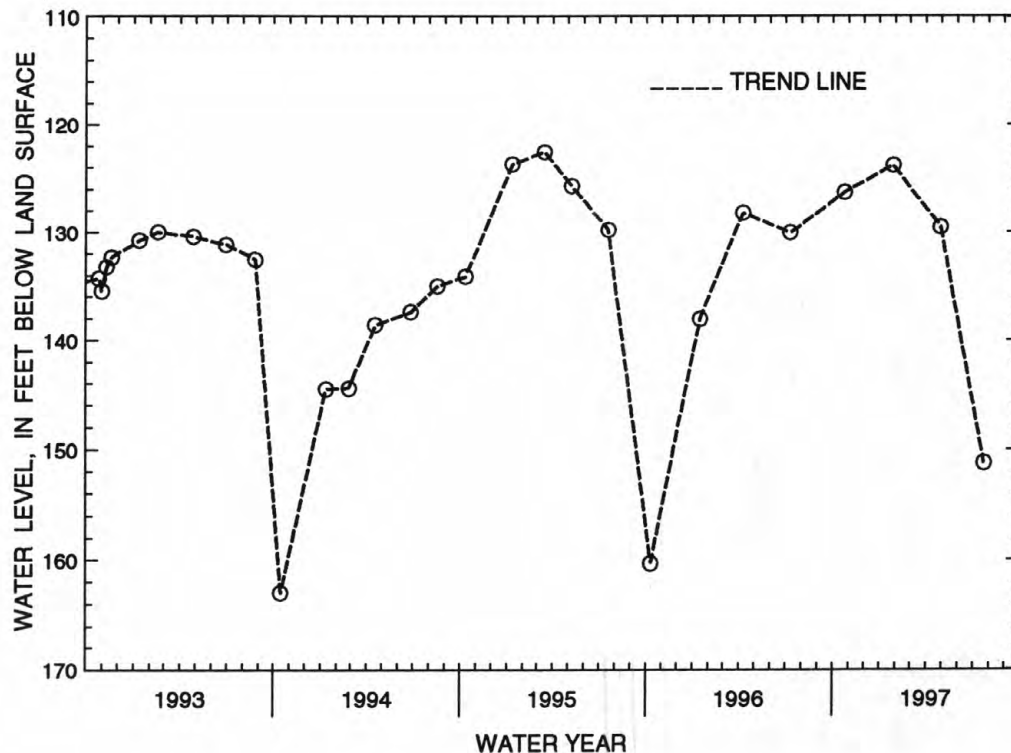
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	126.33	JAN 27	123.83	APR 30	129.57	JUL 23	151.26
WATER YEAR 1997	HIGHEST	123.83	JAN 27, 1997				
	LOWEST	151.26	JUL 23, 1997				



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 thereafter.

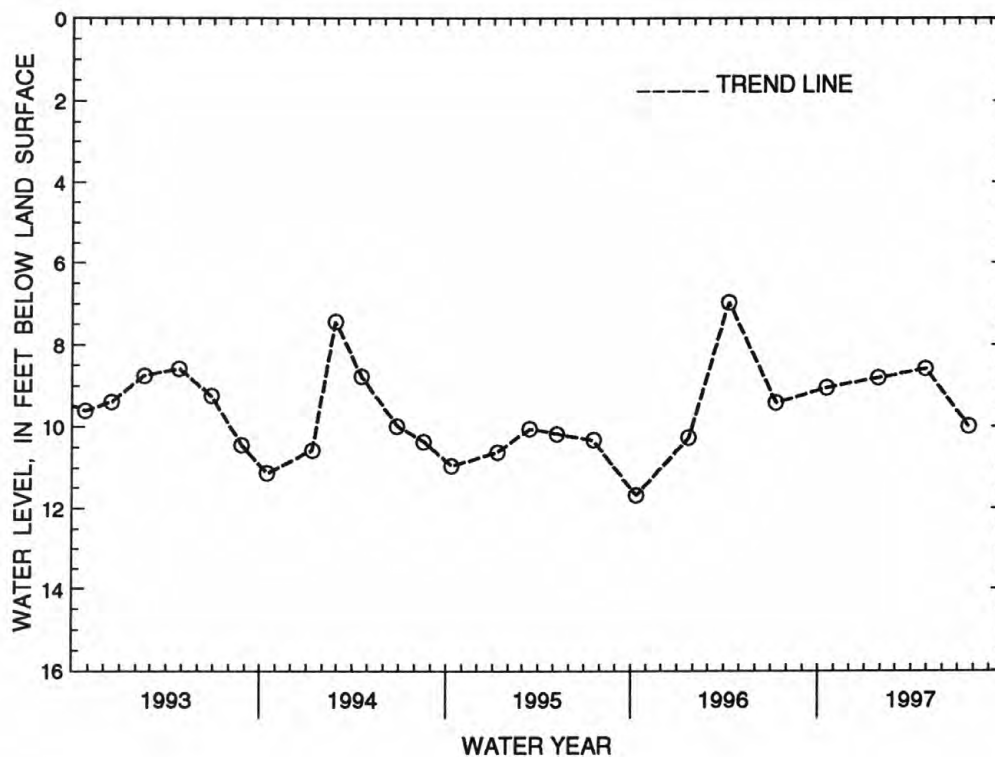
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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, 7.45 ft below land-surface datum, Feb. 25, 1994; lowest measured, 11.68 ft below land-surface datum, Oct. 11, 1995.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	9.04	JAN 27	8.81	APR 30	8.58	JUL 23	9.99
WATER YEAR 1997	HIGHEST	8.58	APR 30, 1997				
	LOWEST	9.99	JUL 23, 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 1996 TO SEPTEMBER 1997

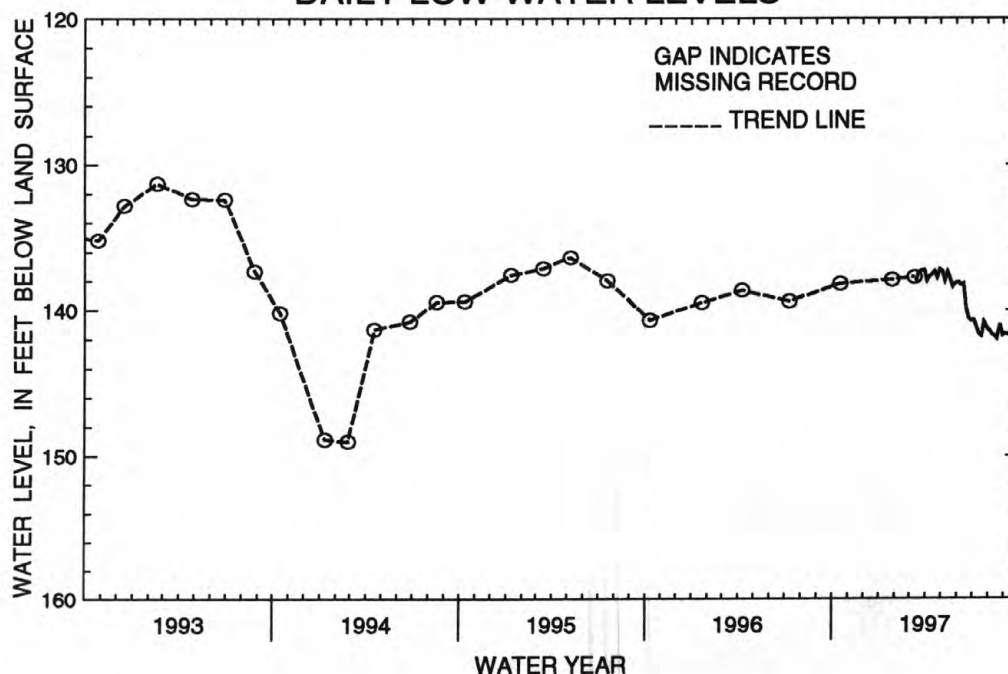
DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	138.18	JAN 27	137.94

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	---	---	---	138.02	137.34	138.10	140.69	141.42	141.62
10	---	---	---	---	---	---	137.71	138.02	138.27	141.15	141.69	141.72
15	---	---	---	---	---	138.02	137.56	137.39	138.21	141.66	141.80	141.47
20	---	---	---	---	---	137.38	137.33	137.90	139.86	141.80	141.96	141.12
25	---	---	---	---	---	137.30	137.78	138.43	140.61	140.82	141.00	140.84
EOM	---	---	---	---	---	137.28	137.20	138.14	140.70	141.27	141.76	140.83

WATER YEAR 1997 HIGHEST 135.92 MAY 03, 1997
 LOWEST 141.96 AUG 17, 20, 1997

DAILY LOW-WATER LEVELS



GROUND-WATER LEVELS

CITY OF SUFFOLK

365133076351203. Local number, 58C 59 SOW 141C.

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

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 447 ft, screened 437 to 447 ft.

INSTRUMENTATION.--Continuous strip-chart recorder. Prior to May 5, 1981, occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 52 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. Missing record due to recorder malfunction. Water level affected by local pumpage.

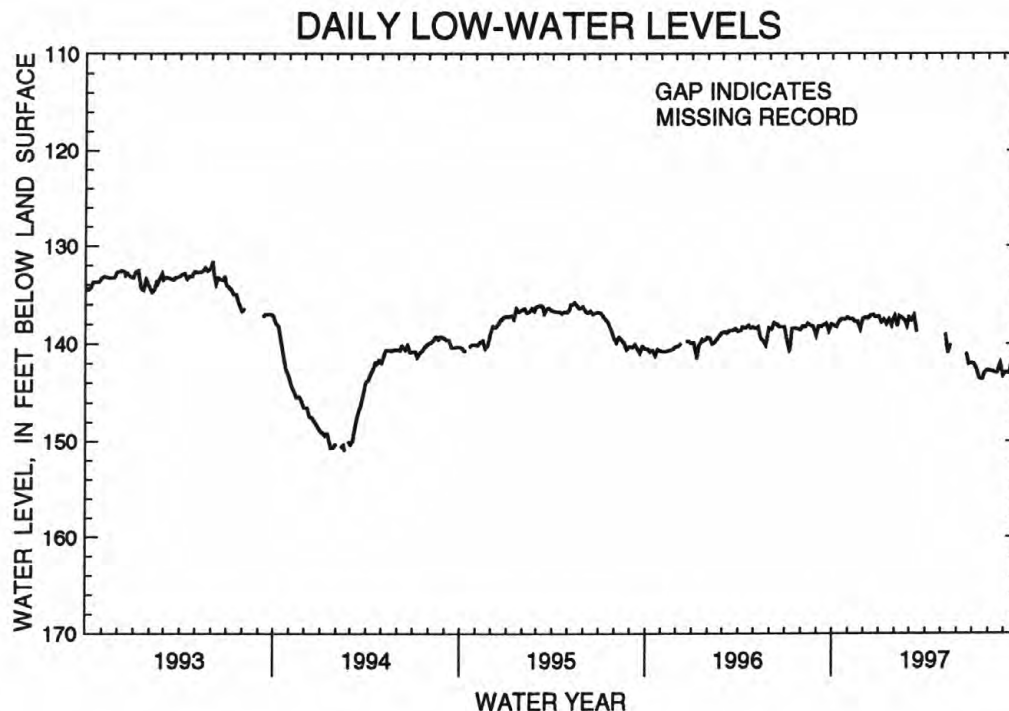
PERIOD OF RECORD.--April 1980 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 108.80 ft below land-surface datum, June 30, 1980; lowest recorded, 151.00 ft below land-surface datum, Feb. 17, 1994.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	138.16	137.50	137.32	137.82	138.24	137.62	---	---	---	142.10	142.74	142.90
10	138.31	137.51	137.45	137.53	137.21	137.14	---	139.00	---	142.60	142.85	143.00
15	137.79	137.76	137.12	138.00	137.39	138.83	---	140.95	---	143.46	142.95	142.17
20	137.49	137.73	137.09	137.57	137.72	---	---	140.08	141.04	143.64	142.93	141.90
25	137.56	138.54	137.31	138.16	138.21	---	---	---	142.10	142.95	142.02	141.39
BOM	137.36	137.48	137.25	137.21	137.33	---	136.92	---	141.95	142.70	143.28	141.32

WATER YEAR 1997	HIGHEST INSTANTANEOUS	136.61	MAY 04, 1997
	LOWEST INSTANTANEOUS	143.80	JUL 19, 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.

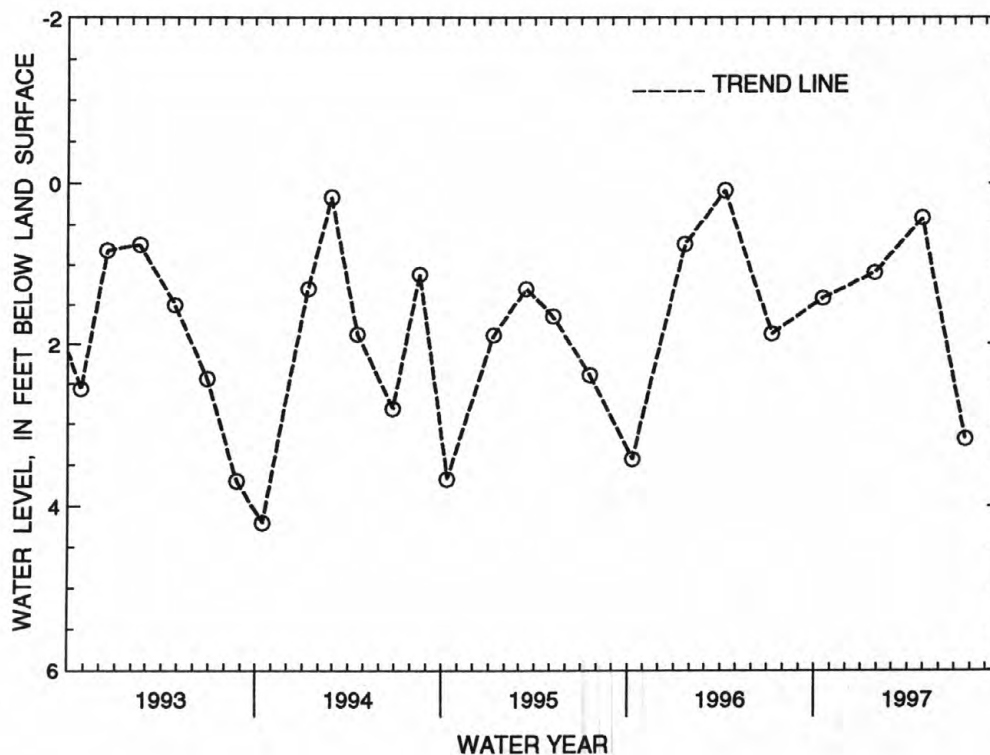
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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, 0.09 ft below land-surface datum, Apr. 9, 1996; lowest measured, 4.20 ft below land-surface datum, Oct. 15, 1993.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	1.42	JAN 27	1.10	APR 30	0.42	JUL 23	3.18
WATER YEAR 1997	HIGHEST	0.42	APR 30, 1997				
	LOWEST	3.18	JUL 23, 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.

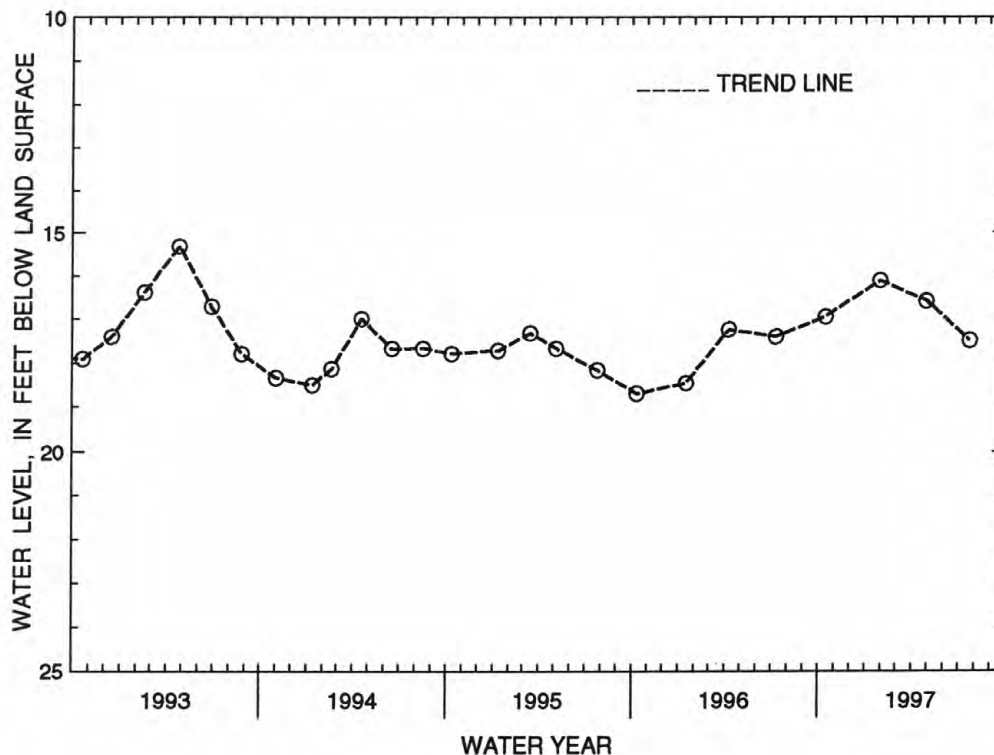
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Well reported dry several days in 1985-1990.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	16.95	JAN 30	16.12	APR 30	16.59	JUL 23	17.49
WATER YEAR 1997	HIGHEST	16.12	JAN 30, 1997				
	LOWEST	17.49	JUL 23, 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.

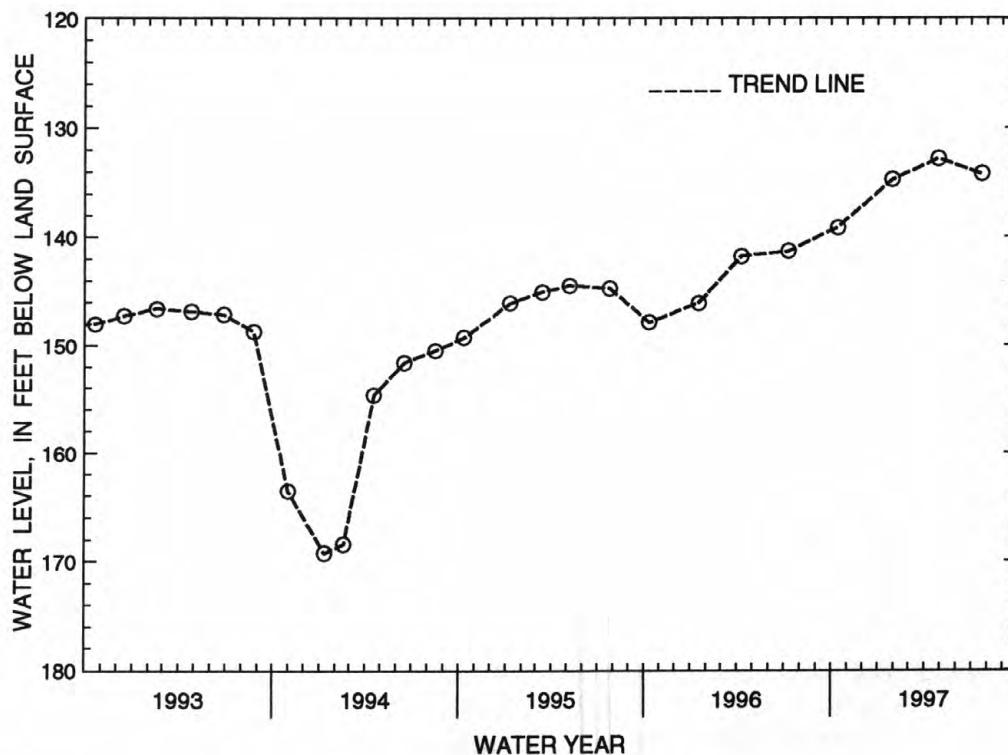
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level may be affected by local pumpage.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	139.13	JAN 30	134.72	APR 30	132.80	JUL 23	134.19
WATER YEAR 1997	HIGHEST	132.80	APR 30, 1997				
	LOWEST	139.13	OCT 15, 1996				



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.

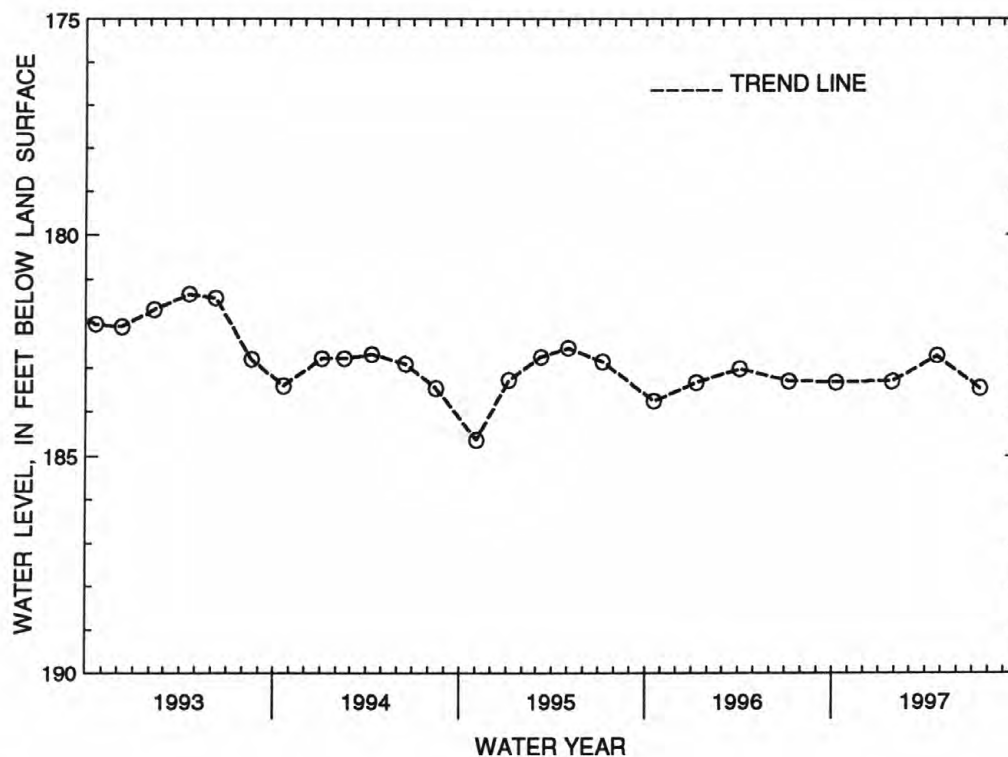
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 09	183.34	JAN 27	183.32	APR 24	182.74	JUL 17	183.48
WATER YEAR 1997	HIGHEST	182.74	APR 24, 1997				
	LOWEST	183.48	JUL 17, 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 north-west of Bacons Castle. 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 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.

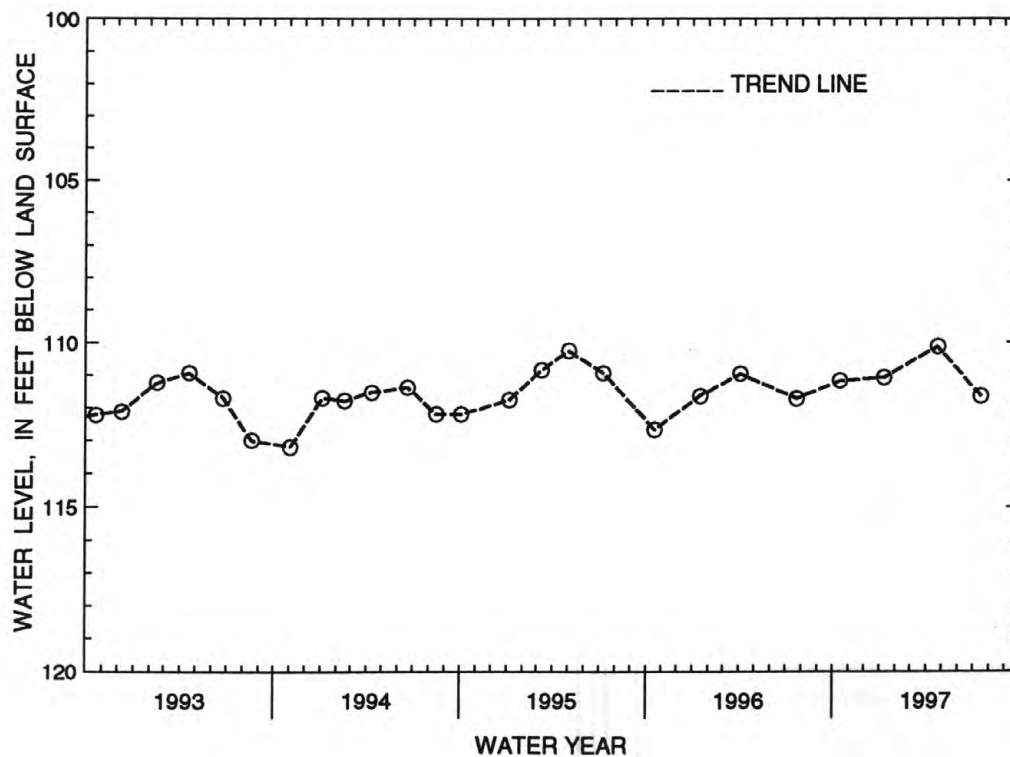
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage and regional drawdown.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	111.19	JAN 10	111.08	APR 24	110.14	JUL 17	111.66
WATER YEAR 1997	HIGHEST	110.14	APR 24, 1997				
	LOWEST	111.66	JUL 17, 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 north-west 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.

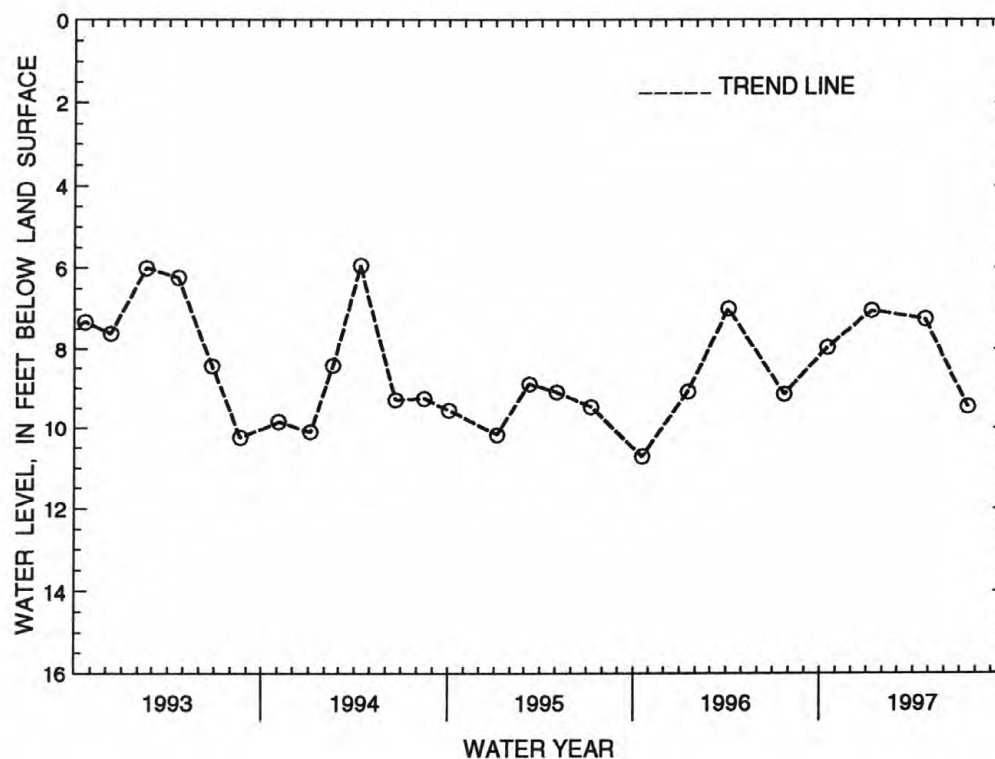
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	7.96	JAN 10	7.05	APR 24	7.26	JUL 17	9.47
WATER YEAR 1997	HIGHEST	7.05	JAN 10, 1997				
	LOWEST	9.47	JUL 17, 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.

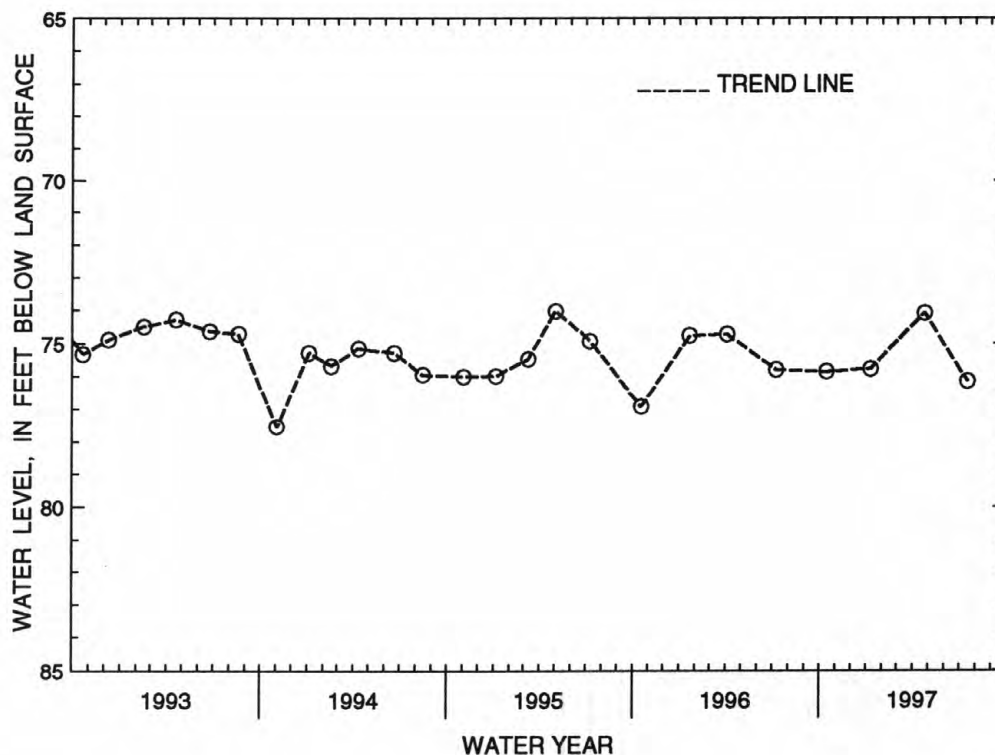
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage and regional drawdown. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	75.85	JAN 10	75.76	APR 24	74.08	JUL 17	76.15
WATER YEAR 1997	HIGHEST	74.08	APR 24, 1997				
	LOWEST	76.15	JUL 17, 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.

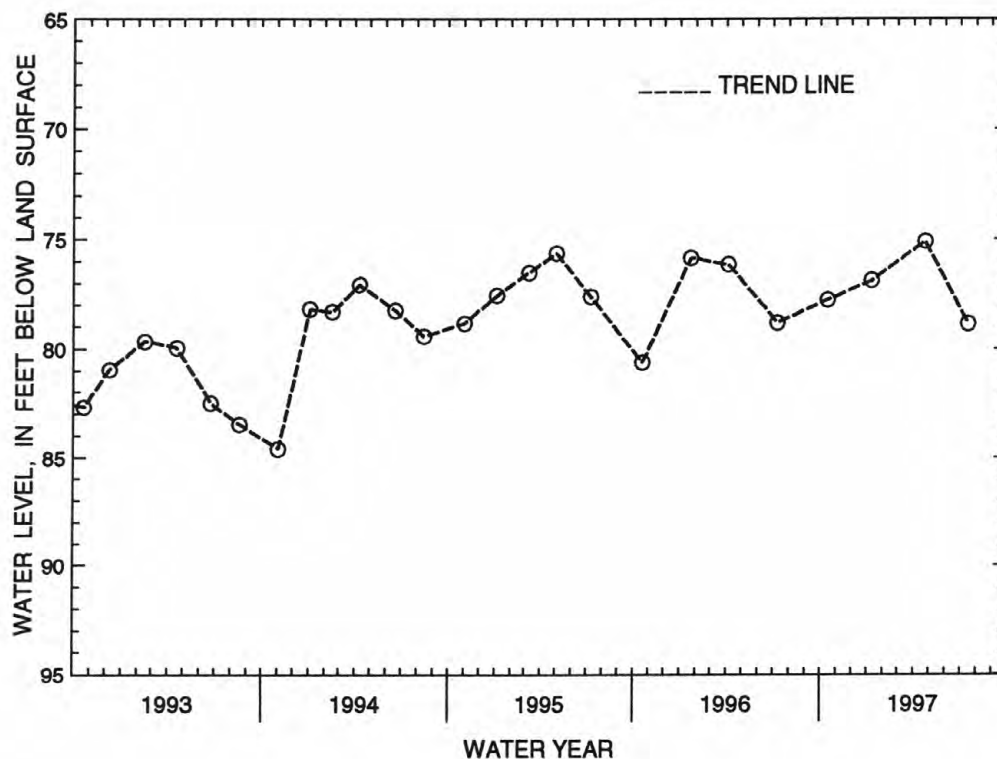
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage and regional drawdown.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	77.76	JAN 10	76.90	APR 24	75.10	JUL 17	78.86
WATER YEAR 1997		HIGHEST	75.10	APR 24, 1997			
		LOWEST	78.86	JUL 17, 1997			



GROUND-WATER LEVELS

SUSSEX COUNTY

365530077104002. Local number, 53D 6 SOW 179A.

LOCATION.--Lat 36°55'30", long 77°10'40", Hydrologic Unit 03010201, off State Highway 634, 1.4 mi south of State Highway 35, and 1.7 mi southeast of Homeville. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Lower Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in. to 460 ft, diameter 2 in., 439 ft to 460 ft, depth 470 ft, screened 460 to 470 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Mar. 1, 1988, digital recorder--60-minute punch.

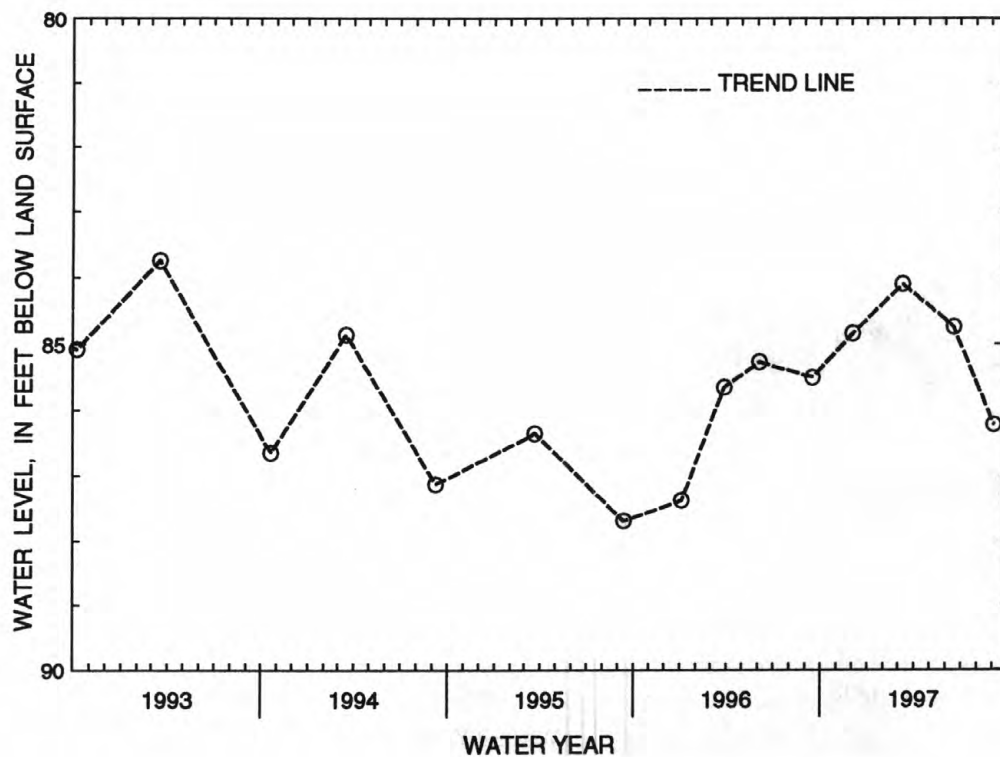
DATUM.--Elevation of land-surface datum is 90 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 78.50 ft below land-surface datum, Feb. 12, 1988; lowest measured, 87.70 ft below land-surface datum, Sept. 12, 1995.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 04	84.84	MAR 11	84.10	JUN 18	84.74	SEP 04	86.22
WATER YEAR 1997	HIGHEST	84.10	MAR 11, 1997				
	LOWEST	86.22	SEP 04, 1997				



GROUND-WATER LEVELS

SUSSEX COUNTY

365530077104006. Local number, 53D 10 SOW 179E.

LOCATION.--Lat 36°55'30", long 77°10'40", Hydrologic Unit 03010201, off State Highway 634, 1.4 mi south of State Highway 35, and 1.7 mi southeast of Homeville. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in. to 130 ft, diameter 4 in. from 140 to 145 ft, depth 145 ft, screened 130 to 140 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Mar. 1, 1988, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 90 ft above sea level, from topographic map. Measuring point: Top of casing, 1.3 ft above land-surface datum.

REMARKS.--Water level affected by local pumpage and regional drawdown.

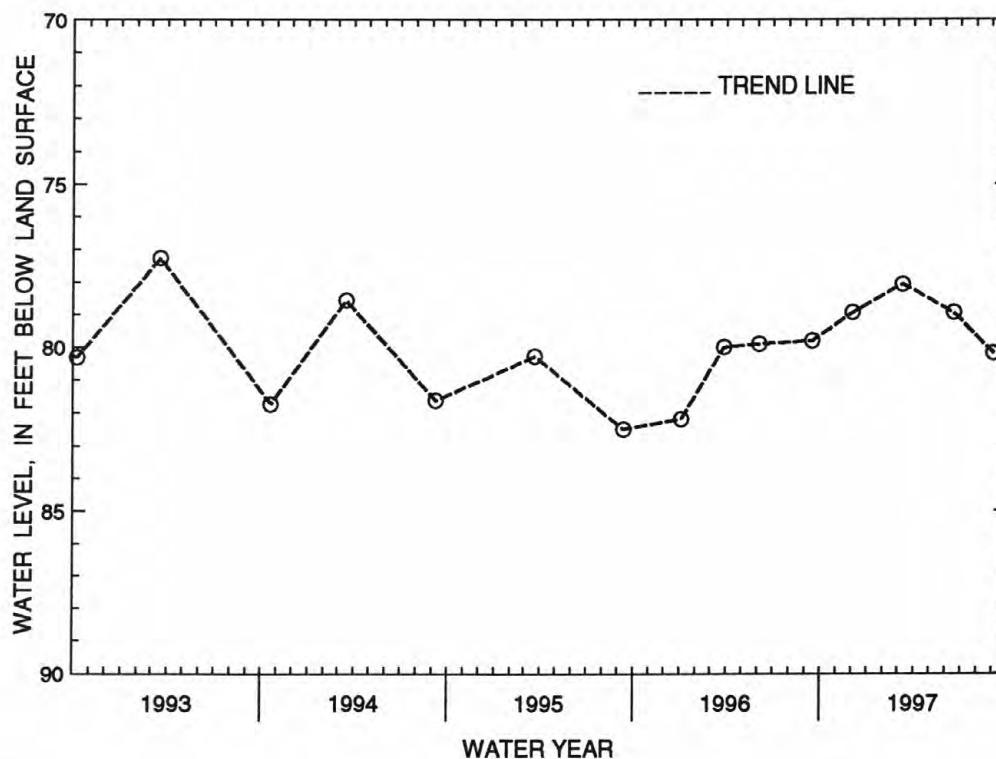
PERIOD OF RECORD.--December 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 76.25 ft below land-surface datum, Apr. 24, 1987; lowest measured, 82.50 ft below land-surface datum, Sept. 12, 1995.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 04	78.93	MAR 11	78.06	JUN 18	78.93	SEP 04	80.18

WATER YEAR 1997	HIGHEST	78.06	MAR 11, 1997
	LOWEST	80.18	SEP 04, 1997



GROUND-WATER LEVELS

SUSSEX COUNTY

365530077104007. Local number, 53D 11 SOW 179F.

LOCATION.--Lat 36°55'30", long 77°10'40", Hydrologic Unit 03010201, off State Highway 634, 1.4 mi south of State Highway 35, and 1.7 mi southeast of Homeville. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Aquia aquifer of Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in. to 82 ft, diameter 4 in. from 92 to 97 ft, depth 97 ft, screened 82 to 92 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Mar. 1, 1988, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 90 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

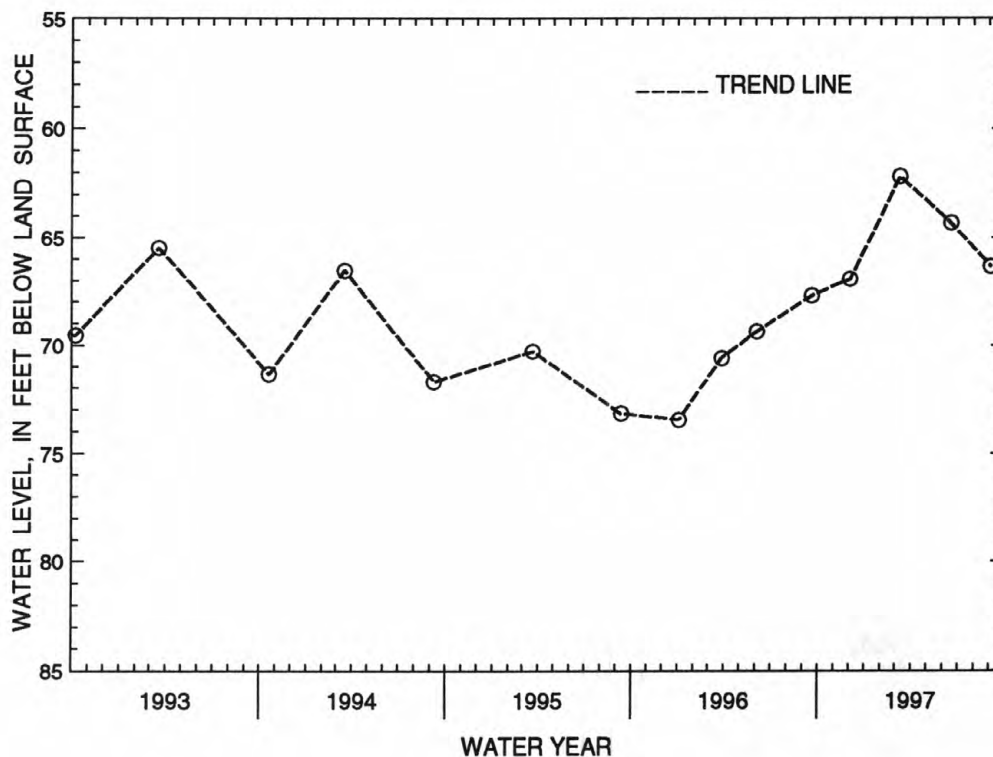
REMARKS.--Water level affected by local pumpage.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 62.17 ft below land-surface datum, Mar. 11, 1997; lowest recorded, 77.16 ft below land-surface datum, Nov. 28 to Dec. 1, 1987.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 04	66.95	MAR 11	62.17	JUN 18	64.31	SEP 04	66.35
WATER YEAR 1997	HIGHEST	62.17	MAR 11, 1997				
	LOWEST	66.95	DEC 04, 1996				



GROUND-WATER LEVELS

SUSSEX COUNTY

365235077150501. Local number, 53E 5 SOW 045.

LOCATION.--Lat 37°02'37", long 77°11'30", Hydrologic Unit 03010201, 400 ft northeast of State Highway 625, 2.5 mi north of Newville. Owner: Butler Lumber Company.

AQUIFER.--Aquia aquifer of Paleocene age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 4 in., depth 172 ft, screened 162 to 172 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Mar. 1, 1989, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 126.65 ft above sea level. Measuring point: Top of casing, 0.3 ft above land-surface datum prior to Mar. 8, 1988; 1.2 ft thereafter.

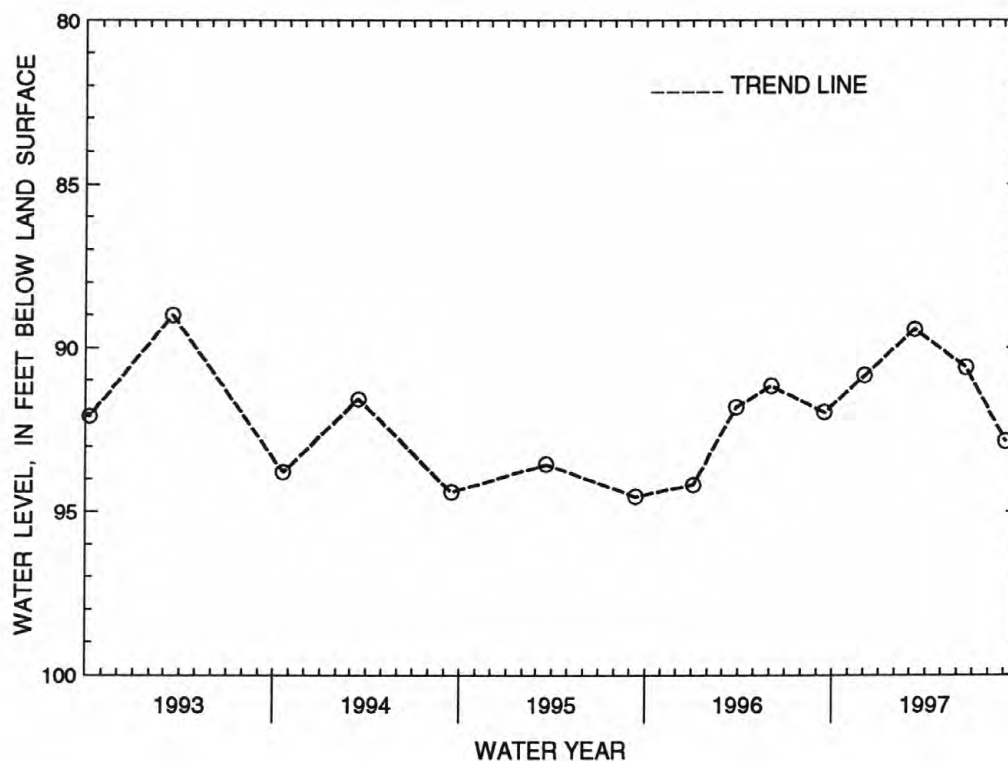
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division prior to Mar. 1, 1989; U.S. Geological Survey thereafter. Water level affected by local pumpage and regional drawdown.

PERIOD OF RECORD.--September 1971, October 1974 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, 81.90 ft below land-surface datum, Mar. 16, 1976; lowest measured, 94.54 ft below land-surface datum, Sept. 12, 1995.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 04	90.85	MAR 11	89.44	JUN 18	90.61	SEP 04	92.86
WATER YEAR 1997		HIGHEST	89.44	MAR 11, 1997		LOWEST	92.86
			92.86	SEP 04, 1997			



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.

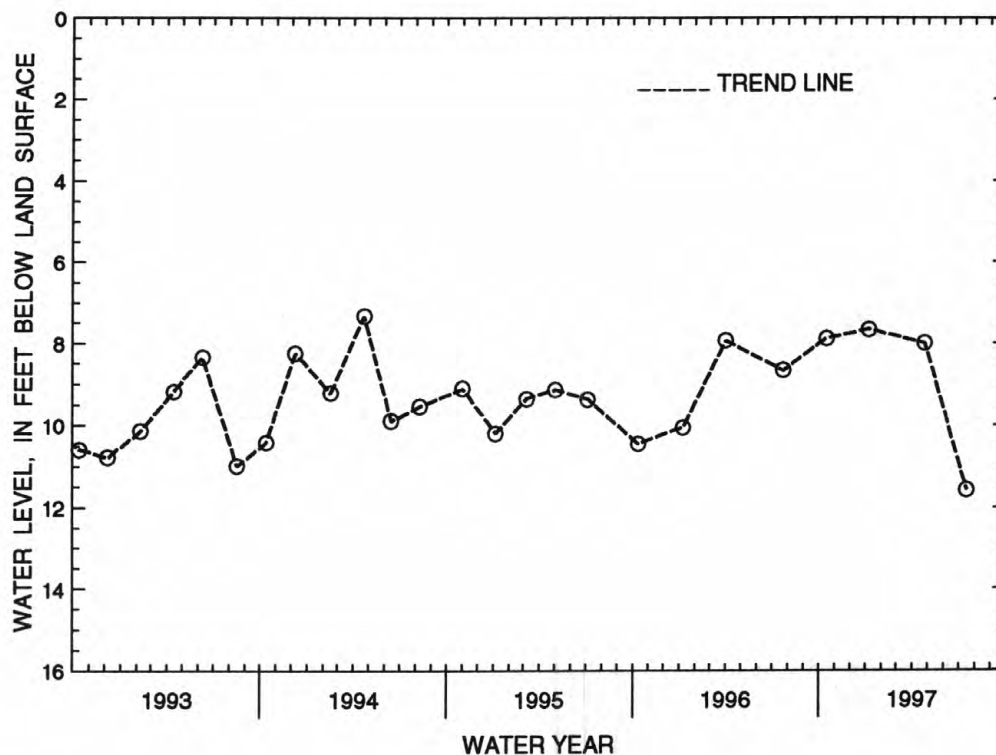
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	7.88	JAN 06	7.66	APR 25	8.00	JUL 16	11.58
WATER YEAR 1997		HIGHEST	7.66	JAN 06, 1997			
		LOWEST	11.58	JUL 16, 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.

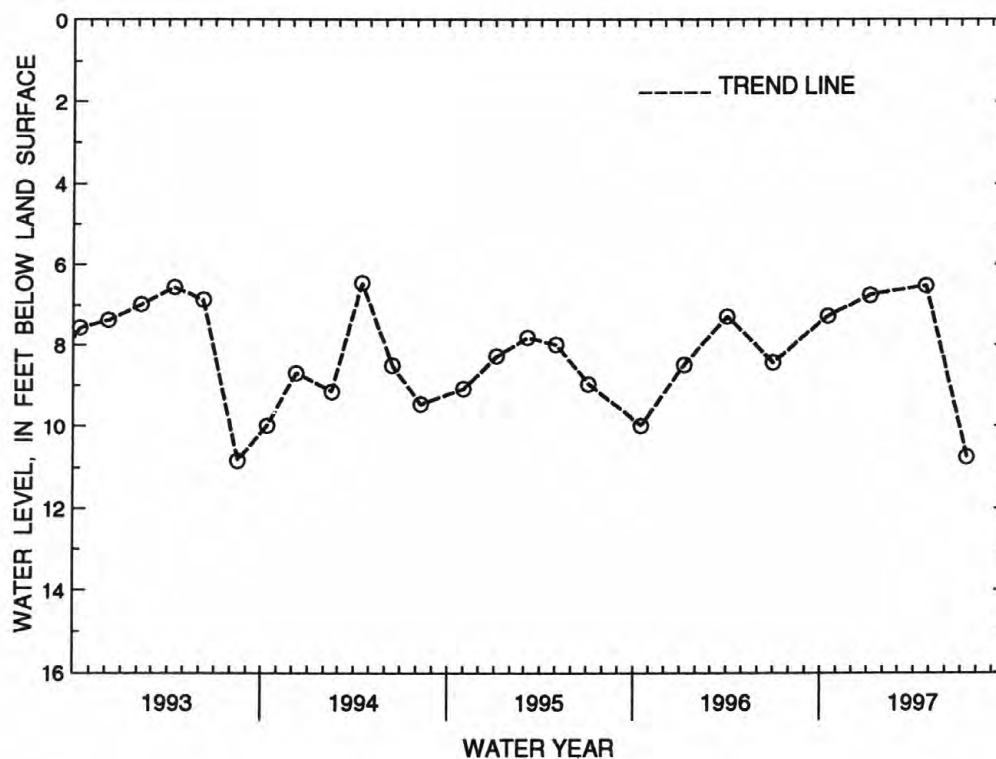
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	7.29	JAN 06	6.76	APR 25	6.52	JUL 14	10.75
WATER YEAR 1997		HIGHEST	6.52	APR 25, 1997			
		LOWEST	10.75	JUL 14, 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.

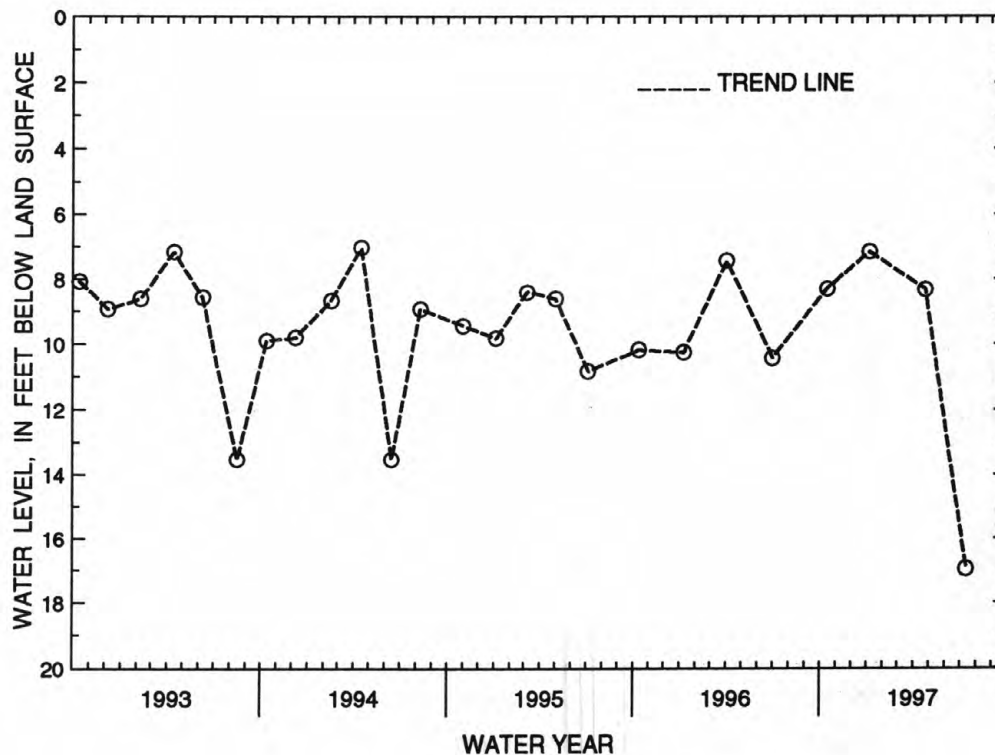
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	8.31	JAN 06	7.18	APR 25	8.33	JUL 14	16.97
WATER YEAR 1997	HIGHEST	7.18	JAN 06, 1997				
	LOWEST	16.97	JUL 14, 1997				



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.

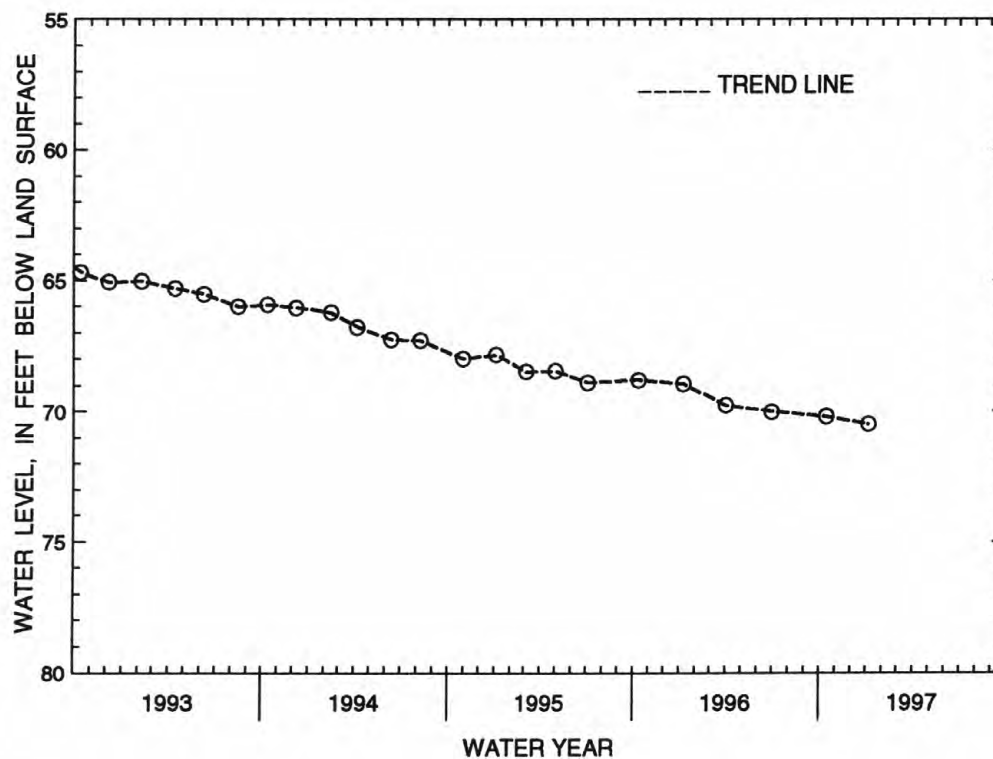
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

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, 70.48 ft below land-surface datum, Jan. 6, 1997.

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

		DATE	WATER LEVEL	DATE	WATER LEVEL
		OCT 15	70.19	JAN 06	70.48
WATER YEAR 1997	HIGHEST	70.19	OCT 15, 1996		
	LOWEST	70.48	JAN 06, 1997		



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 Craggs 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.

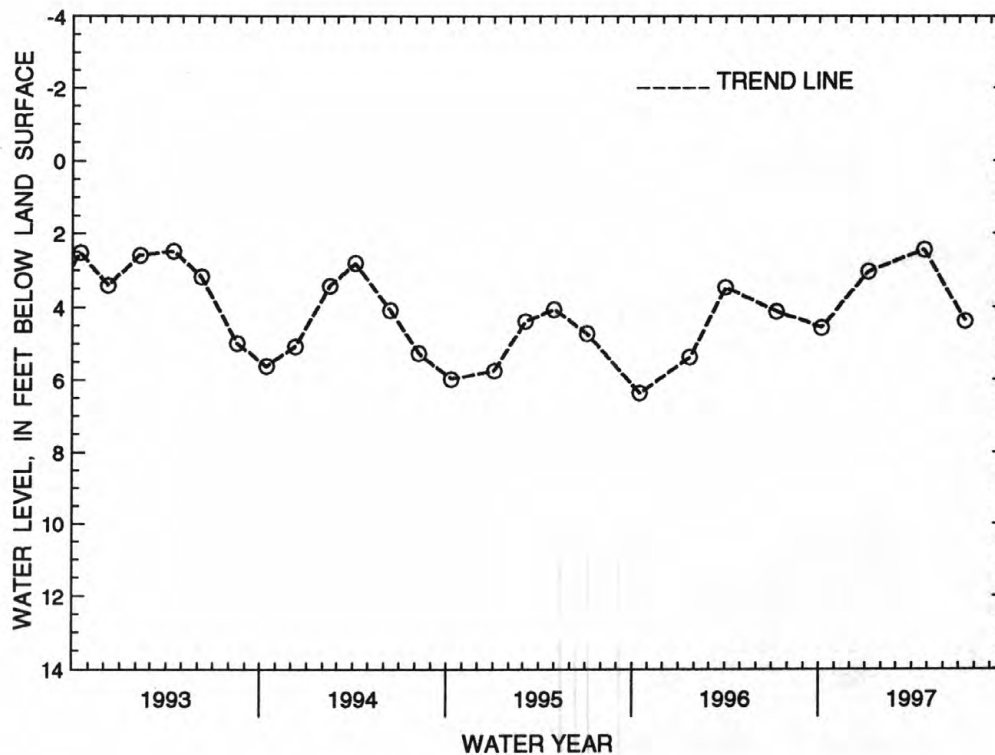
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07	4.56	JAN 06	3.04	APR 24	2.45	JUL 14	4.39
WATER YEAR 1997		HIGHEST	2.45	APR 24, 1997			
		LOWEST	4.56	OCT 07, 1996			



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.

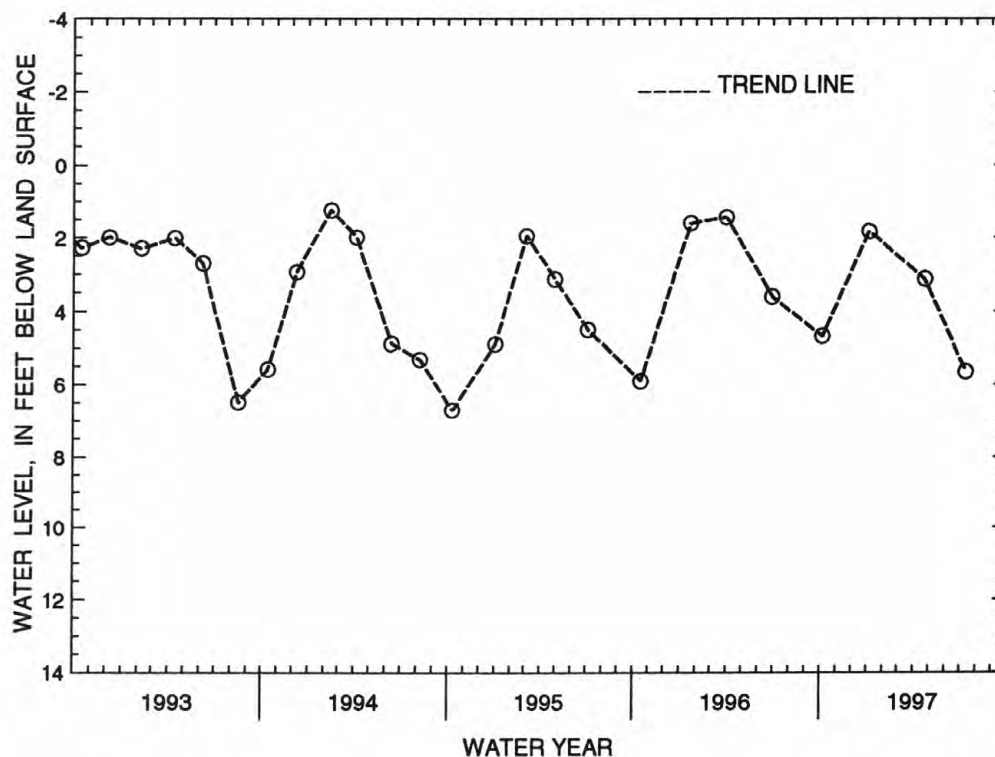
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07	4.68	JAN 06	1.84	APR 24	3.14	JUL 14	5.66
WATER YEAR 1997	HIGHEST	1.84	JAN 06, 1997				
	LOWEST	5.66	JUL 14, 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.

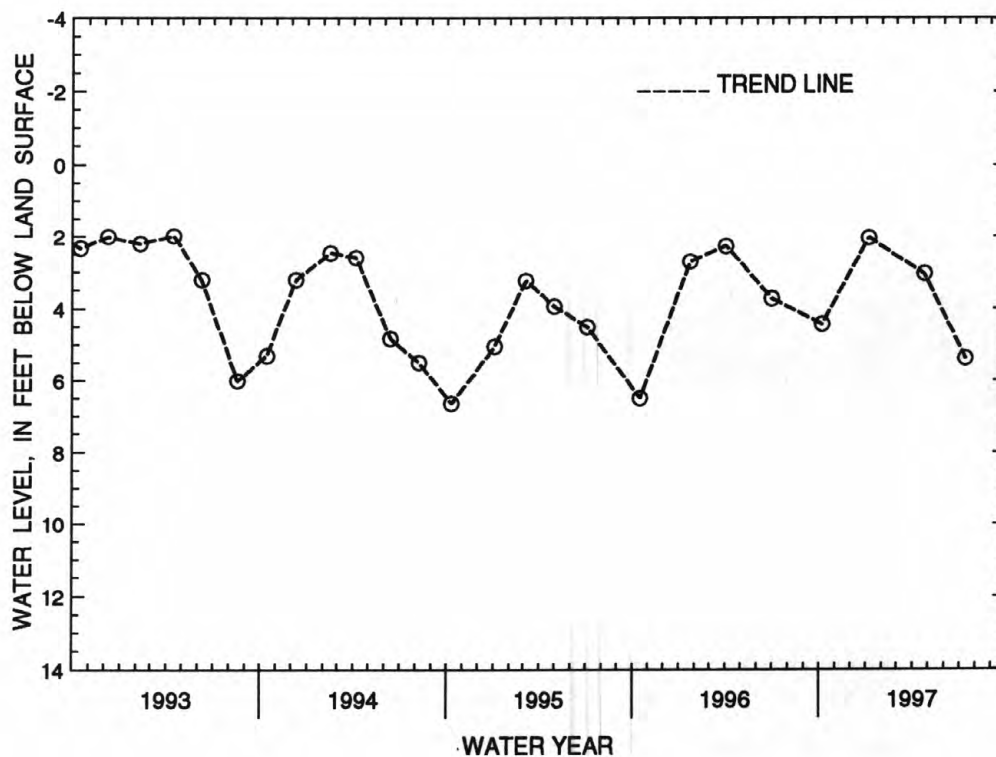
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07	4.45	JAN 06	2.04	APR 24	3.05	JUL 14	5.39
WATER YEAR 1997	HIGHEST	2.04	JAN 06, 1997				
	LOWEST	5.39	JUL 14, 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.

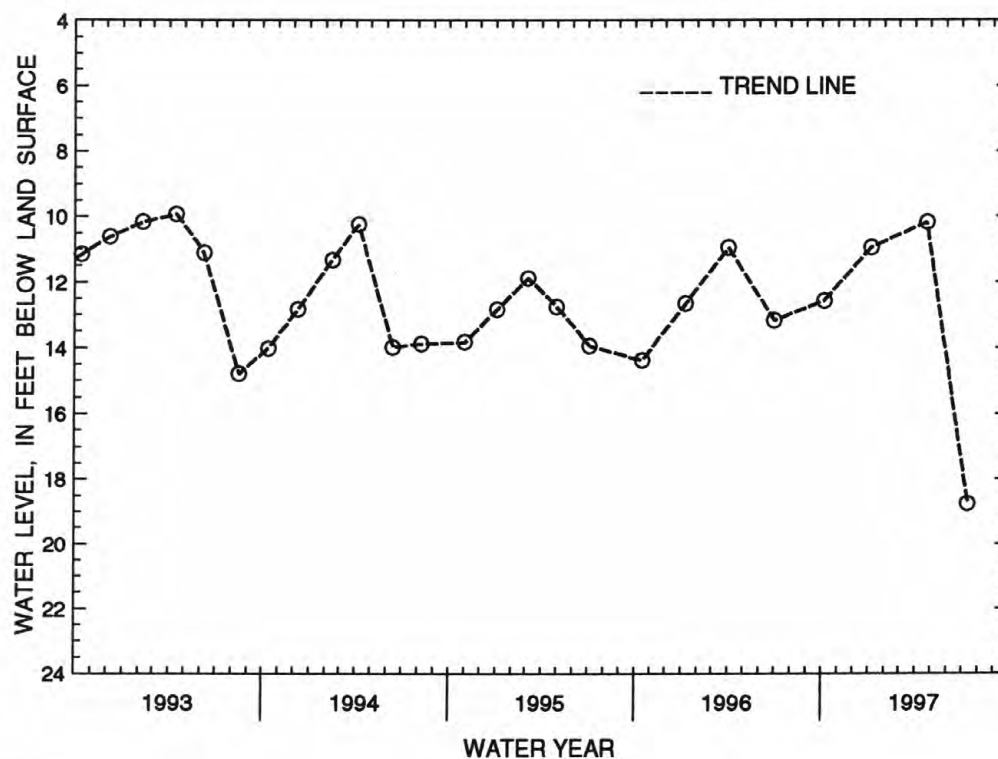
PERIOD OF RECORD.--December 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07	12.57	JAN 06	10.95	APR 24	10.19	JUL 14	18.75

WATER YEAR 1997	HIGHEST	10.19	APR 24, 1997
	LOWEST	18.75	JUL 14, 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.

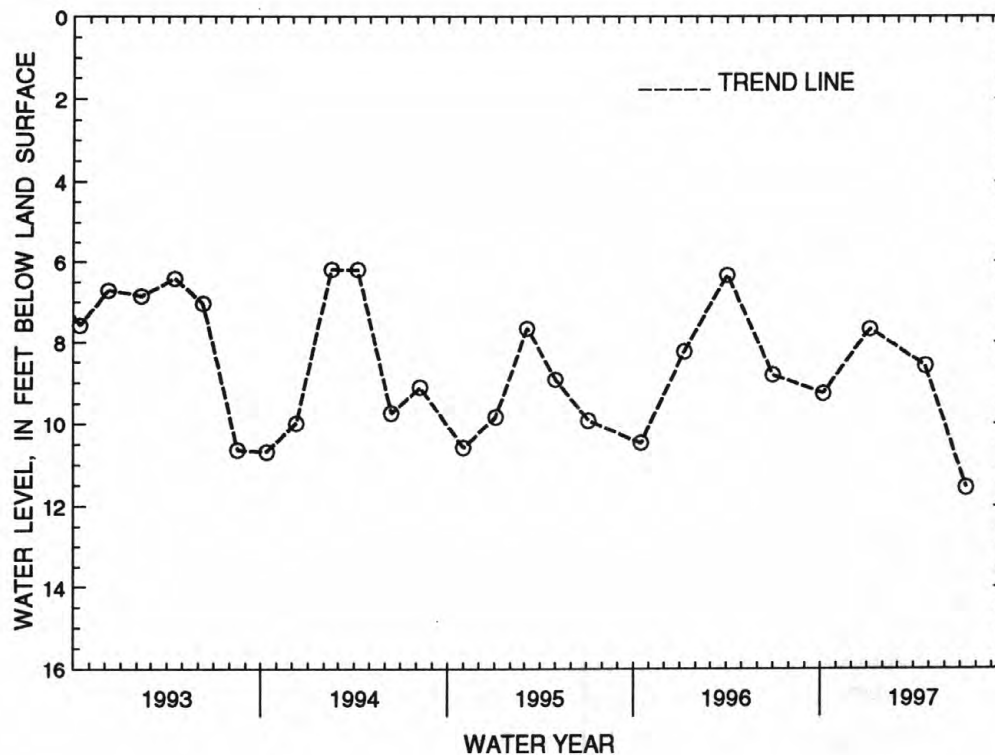
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07	9.26	JAN 06	7.68	APR 24	8.58	JUL 14	11.55
WATER YEAR 1997	HIGHEST	7.68	JAN 06, 1997				
	LOWEST	11.55	JUL 14, 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.

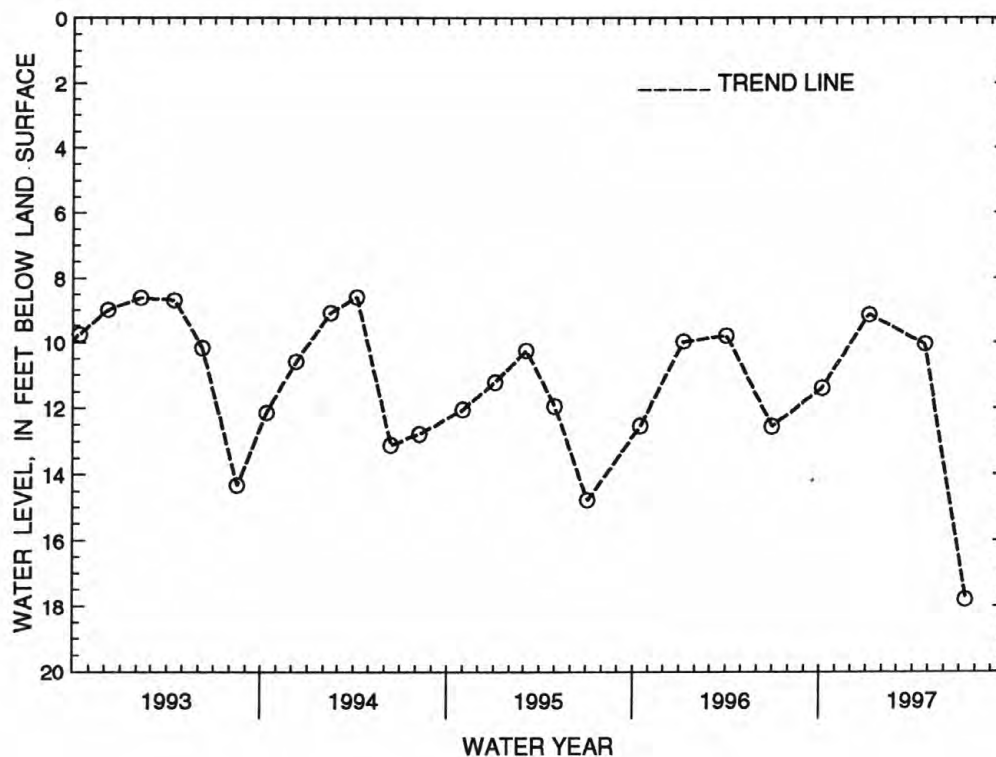
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07	11.39	JAN 06	9.14	APR 24	10.06	JUL 14	17.80
WATER YEAR 1997	HIGHEST	9.14	JAN 06, 1997				
	LOWEST	17.80	JUL 14, 1997				



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.

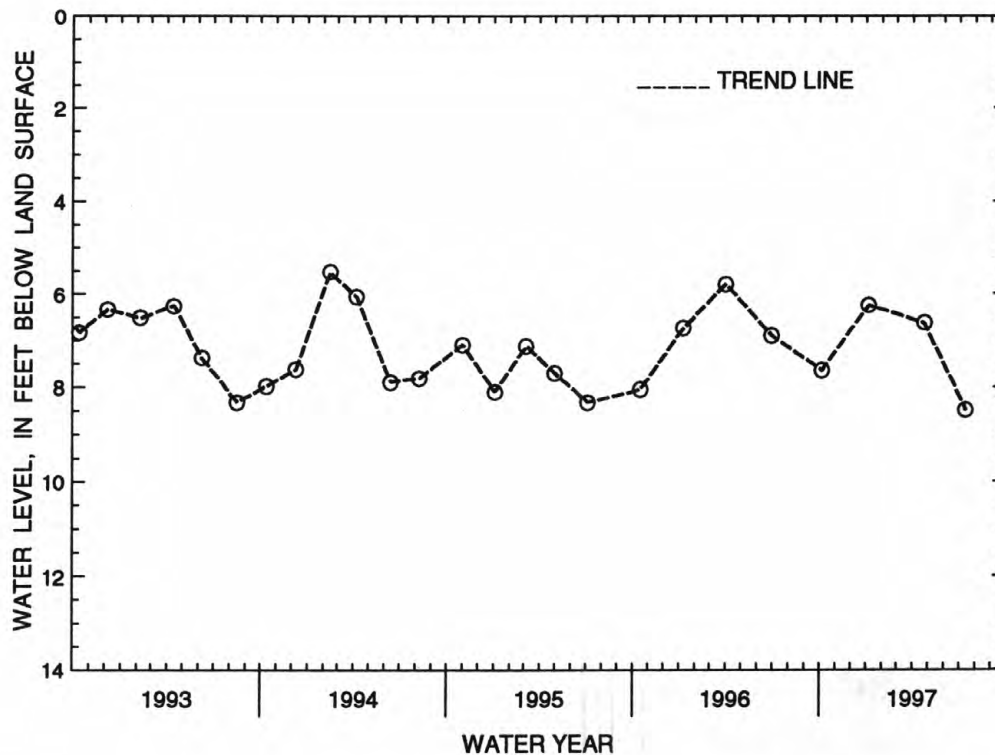
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07	7.65	JAN 06	6.25	APR 24	6.63	JUL 14	8.49
WATER YEAR 1997	HIGHEST	6.25	JAN 06, 1997				
	LOWEST	8.49	JUL 14, 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.

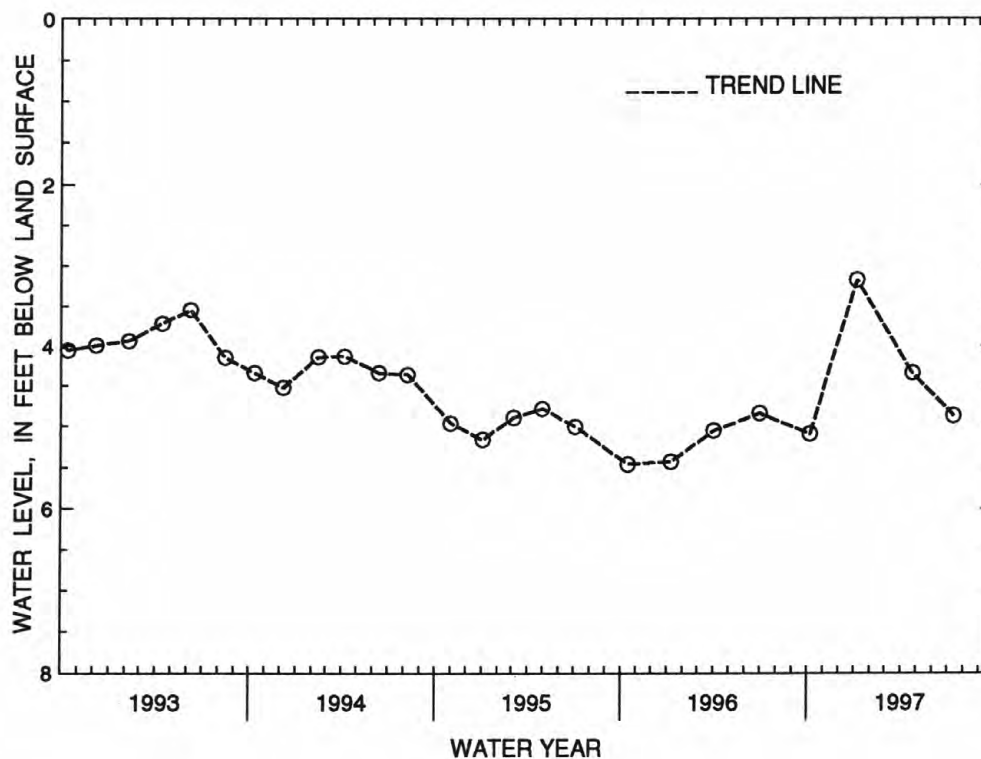
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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, 5.46 ft below land-surface datum, Oct. 16, 1995.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07	5.09	JAN 06	3.17	APR 24	4.34	JUL 14	4.87
WATER YEAR 1997	HIGHEST	3.17	JAN 06, 1997				
	LOWEST	5.09	OCT 07, 1996				



GROUND-WATER LEVELS

WESTMORELAND COUNTY

381110076550501. Local number, 55P 5.

LOCATION.--Lat 38°11'10", long 76°55'05", Hydrologic Unit 02070011, behind craft shop at George Washington Birthplace National Monument, 3.8 mi southeast of Colonial Beach. Owner: National Park Service.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in., depth 471 ft, screened 451 to 466 ft.

INSTRUMENTATION.--Digital recorder--60-minute punch. Prior to Apr. 24, 1979, continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 24 ft above sea level, from topographic map. Measuring point: Top of recorder shelf, 3.0 ft above land-surface datum.

REMARKS.--Missing record due to recorder malfunction. Water level affected by local pumpage and regional drawdown.

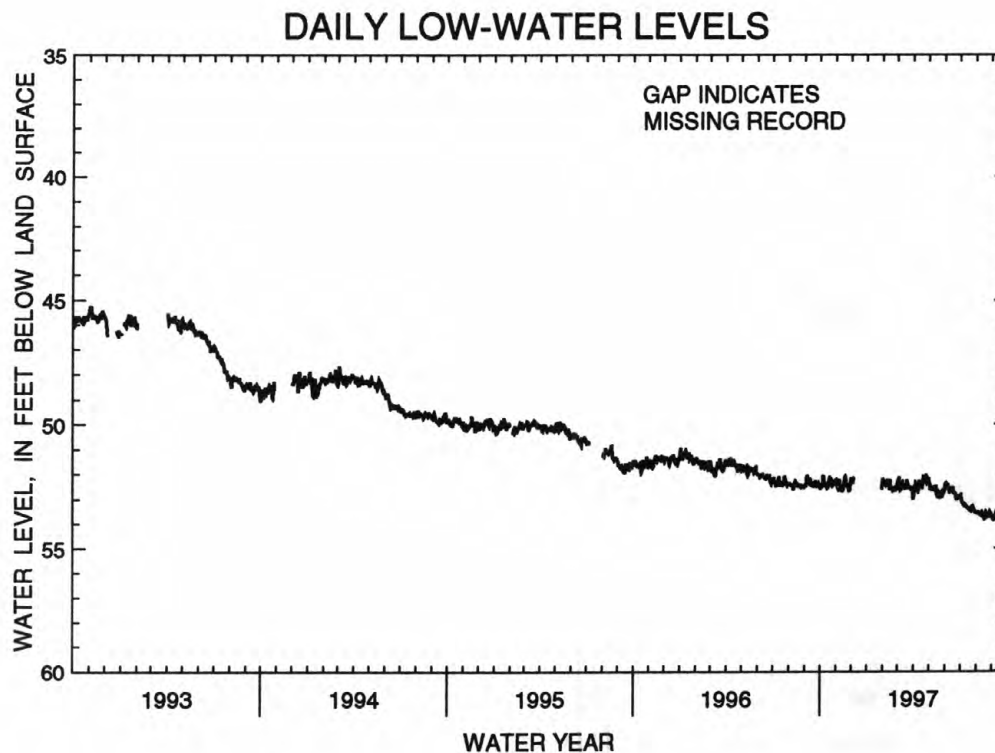
PERIOD OF RECORD.--June 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 25.05 ft below land-surface datum, June 24, 1974;
lowest recorded, 53.98 ft below land-surface datum, Sept. 21, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	52.38	52.52	52.36	---	52.28	52.13	52.53	52.55	52.42	53.15	53.57	53.82
10	52.39	52.48	---	---	52.33	52.40	52.73	52.59	52.66	53.23	53.65	53.53
15	52.53	52.65	---	---	52.23	52.47	52.50	52.45	52.64	53.34	53.62	53.82
20	52.21	52.13	---	---	52.66	52.25	52.27	52.75	52.80	53.48	53.74	53.74
25	52.39	52.43	---	---	52.63	52.56	52.18	52.77	52.97	53.34	53.72	53.81
BOM	52.30	52.41	---	52.41	52.61	52.81	52.23	52.73	52.96	53.57	53.66	53.85

WATER YEAR 1997	HIGHEST INSTANTANEOUS	51.47	OCT 08, 1996
	LOWEST INSTANTANEOUS	53.98	SEP 21, 1997



GROUND-WATER LEVELS

WESTMORELAND COUNTY

381132076551001. Local number, 55P 9.

LOCATION.--Lat 38°11'32", long 76°55'10", Hydrologic Unit 02070011, at George Washington Birthplace National Monument, 500 ft east of park road, 0.6 mi north of the end of State Highway 204, and 3.4 mi southeast of Colonial Beach. Owner: National Park Service.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Dug unused water well, diameter 36 in., depth 22.6 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by USGS personnel.

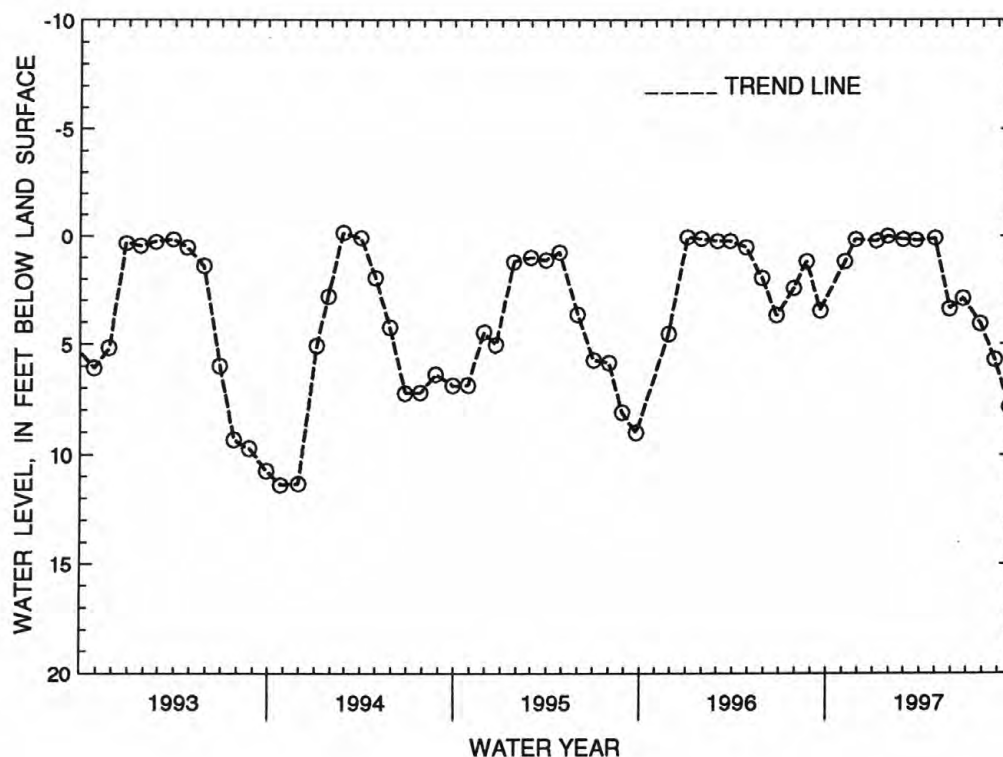
DATUM.--Elevation of land-surface datum is 17 ft above sea level, from topographic map. Measuring point: Top of concrete hatch on well casing, 2.25 ft above land-surface datum. Prior to July 3, 1995, top of concrete lip on casing, 1.65 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.13 ft above land-surface datum, Feb. 24, 1994; lowest measured, 12.80 ft below land-surface datum, Dec. 27, 1988.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 06	1.21	JAN 07	0.24	FEB 28	0.16	MAY 01	0.12	JUN 25	2.91	AUG 26	5.71
27	0.16	29	0.01	MAR 24	0.20	30	3.38	JUL 29	4.07	SEP 24	7.88
WATER YEAR 1997		HIGHEST	0.01	JAN 29, 1997							
		LOWEST	7.88	SEP 24, 1997							



GROUND-WATER LEVELS

WESTMORELAND COUNTY

380538076490801. Local number, 56N 1 SOW 016.

LOCATION.--Lat 38°05'38", long 76°49'08", Hydrologic Unit 02080104, at Washington and Lee School, 0.5 mi east of Montross. Owner: Westmoreland County Public Schools.

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

WELL CHARACTERISTICS.--Drilled unused water well, diameter 4 in. to 189 ft, diameter 2 in. from 189 to 641 ft, depth 641 ft, screened 608 to 628 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. Mar. 31, 1979, to Oct. 2, 1985, occasional measurement with chalked tape. Prior to Mar. 31, 1979, continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 149 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

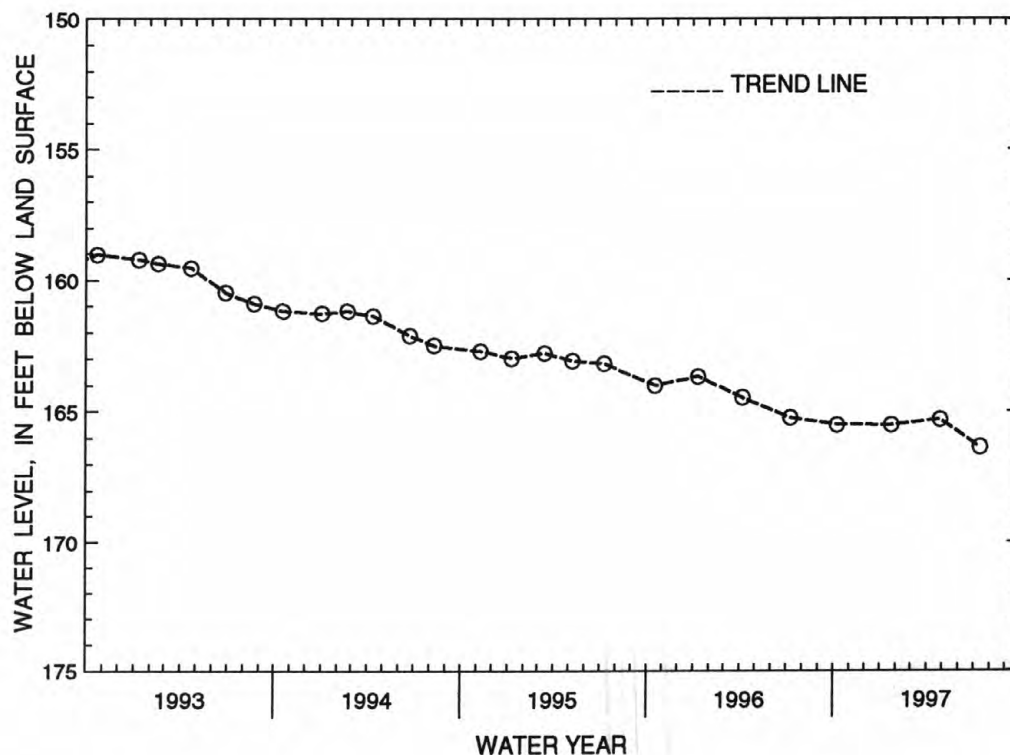
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 133.47 ft below land-surface datum, Aug. 28, 1967; lowest measured, 166.36 ft below land-surface datum, July 15, 1997.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	165.50	JAN 23	165.51	APR 28	165.30	JUL 15	166.36
WATER YEAR 1997	HIGHEST	165.30	APR 28, 1997				
	LOWEST	166.36	JUL 15, 1997				



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.

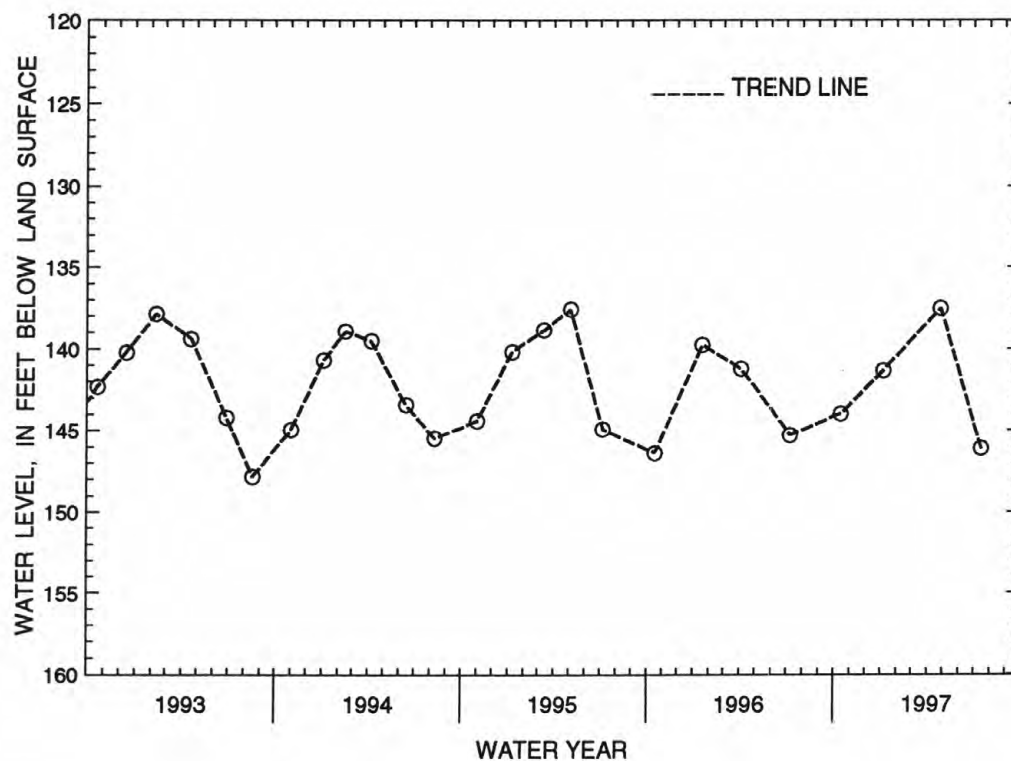
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	143.97	JAN 07	141.33	APR 29	137.53	JUL 17	146.12
WATER YEAR 1997		HIGHEST	137.53	APR 29, 1997			
		LOWEST	146.12	JUL 17, 1997			



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.

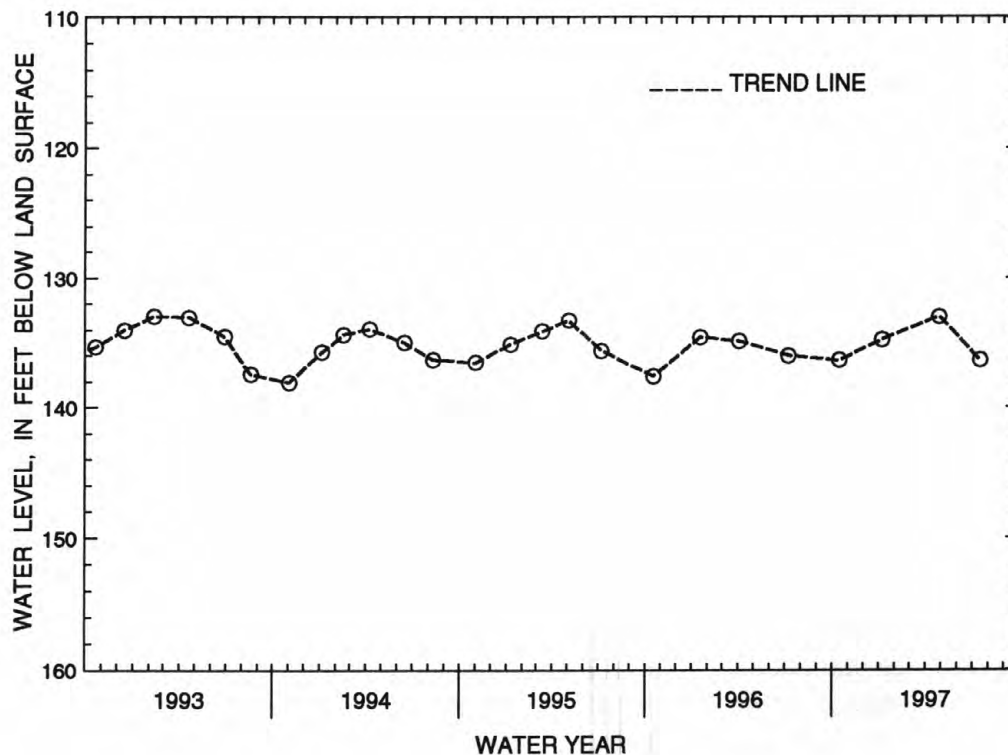
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

PERIOD OF RECORD.--November 1972 to current year. 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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	136.38	JAN 07	134.79	APR 29	133.00	JUL 17	136.39
WATER YEAR 1997	HIGHEST	133.00	APR 29, 1997				
	LOWEST	136.39	JUL 17, 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.

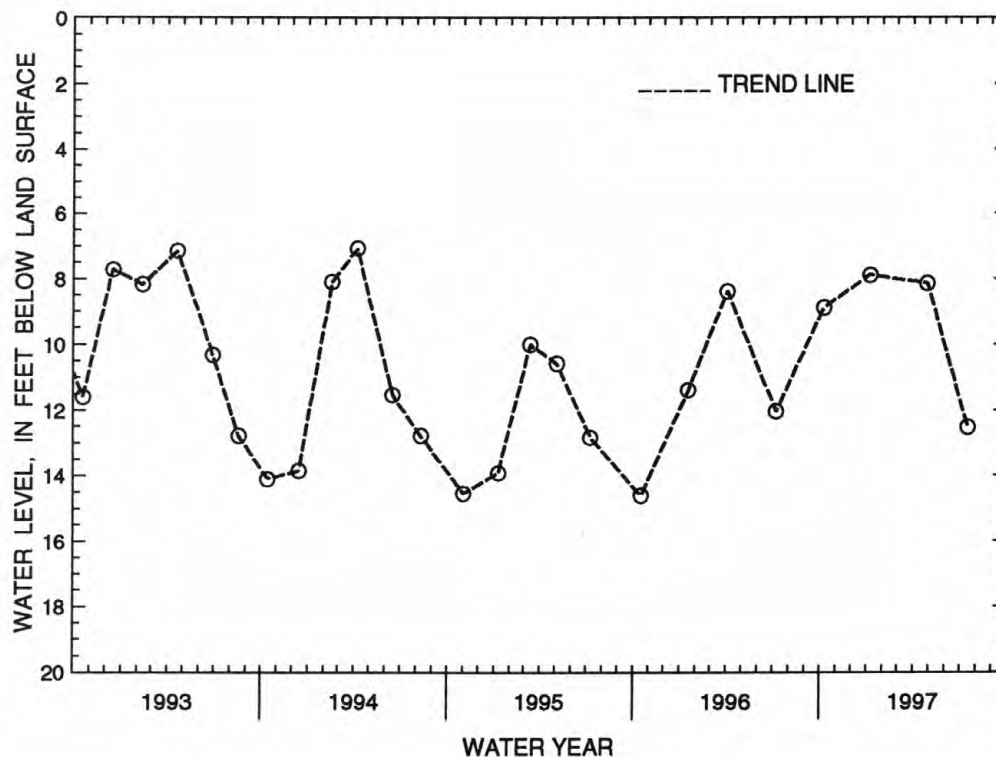
PERIOD OF RECORD.--September 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 09	8.89	JAN 07	7.90	APR 29	8.15	JUL 17	12.53

WATER YEAR 1997	HIGHEST	7.90	JAN 07, 1997
	LOWEST	12.53	JUL 17, 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.

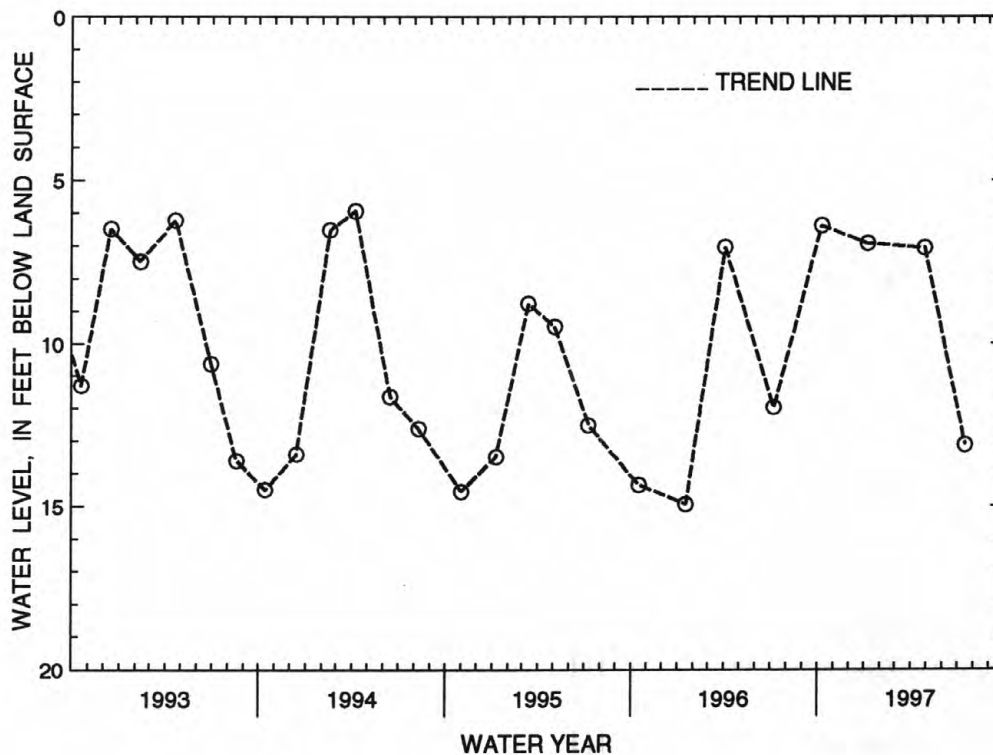
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 09	6.39	JAN 07	6.94	APR 29	7.07	JUL 17	13.13
WATER YEAR 1997	HIGHEST	6.39	OCT 09, 1996				
	LOWEST	13.13	JUL 17, 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.

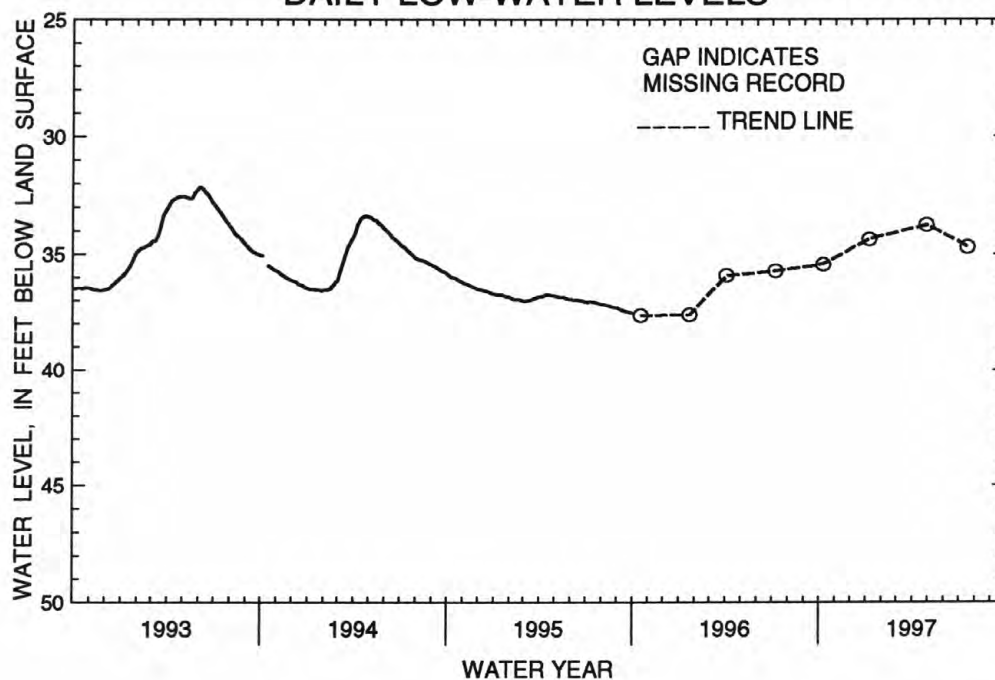
PERIOD OF RECORD.--November 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 32.17 ft below land-surface datum, June 4, 5, 1993; lowest recorded, 38.38 ft below land-surface datum, Mar. 13, 1992.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 09	35.44	JAN 07	34.36	APR 29	33.76	JUL 17	34.69
WATER YEAR 1997	HIGHEST	33.76	APR 29, 1997				
	LOWEST	35.44	OCT 09, 1996				

DAILY LOW-WATER LEVELS



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.

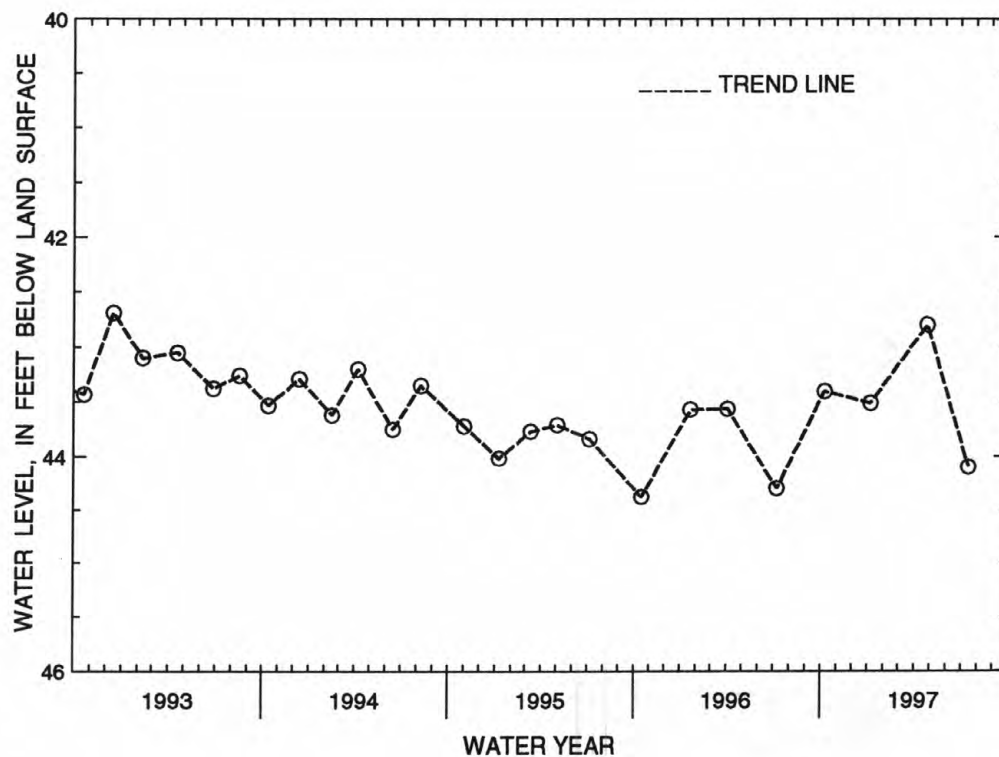
PERIOD OF RECORD.--October 1969 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 40.00 ft below land-surface datum, Oct. 27, 1969; lowest measured, 44.69 ft below land-surface datum, July 9, 1981.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 09	43.40	JAN 07	43.51	APR 29	42.80	JUL 17	44.10

WATER YEAR 1997	HIGHEST	42.80	APR 29, 1997
	LOWEST	44.10	JUL 17, 1997



GROUND-WATER LEVELS

YORK COUNTY

370841076275202. Local number, 59F 72 SOW 184A.

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

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in. to 98 ft, diameter 3.5 in. from 98 to 131 ft, depth 131 ft, screened 121 to 131 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.

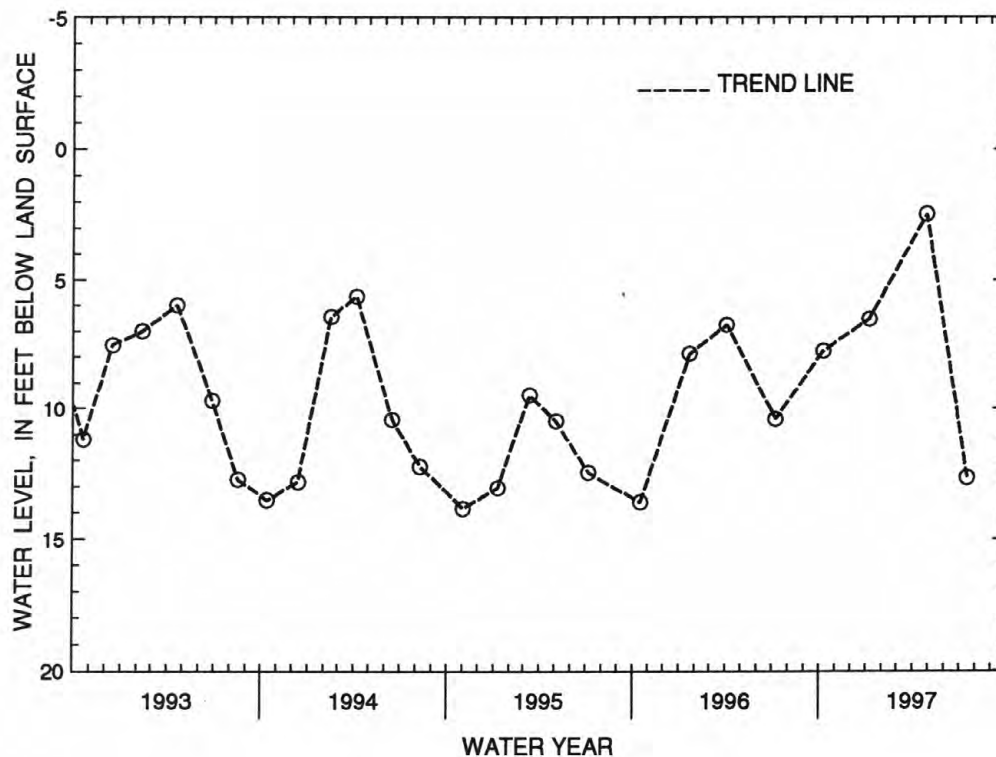
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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, 2.46 ft below land-surface datum, Apr. 29, 1997; lowest recorded, 13.99 ft below land-surface datum, Nov. 27, 30, Dec. 1, 1990.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 09	7.77	JAN 07	6.53	APR 29	2.46	JUL 17	12.65
WATER YEAR 1997	HIGHEST	2.46	APR 29, 1997				
	LOWEST	13.99	JUL 17, 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.

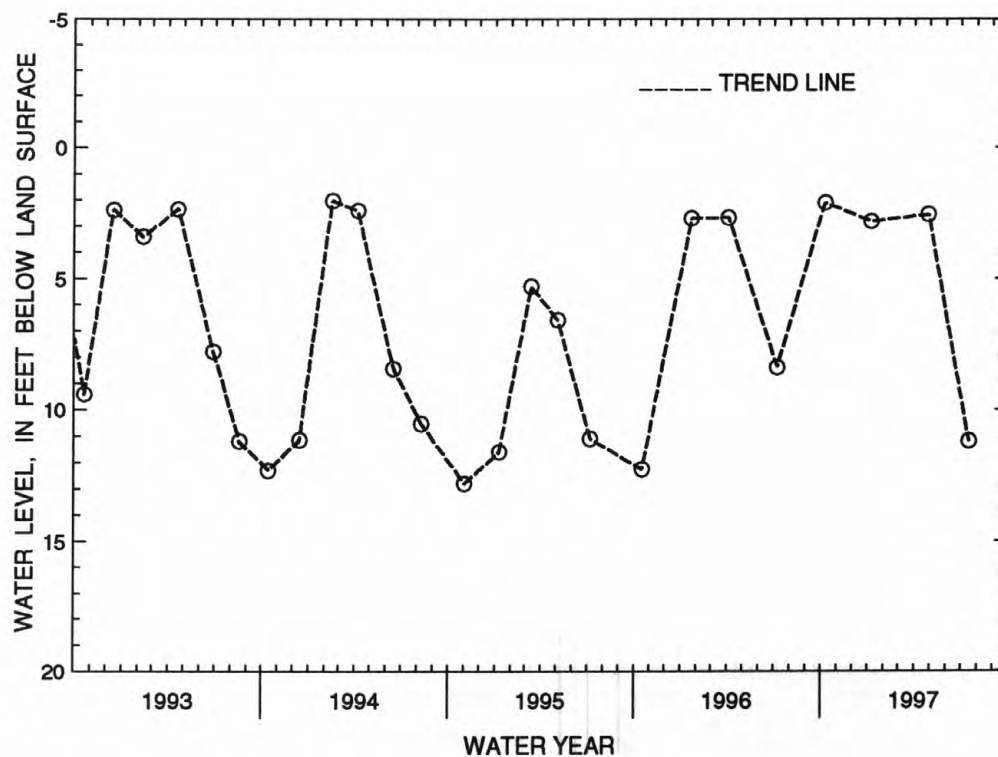
PERIOD OF RECORD.--July 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 09	2.11	JAN 07	2.83	APR 29	2.56	JUL 17	11.20

WATER YEAR 1997	HIGHEST	2.11	OCT 09, 1996
	LOWEST	11.20	JUL 17, 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.

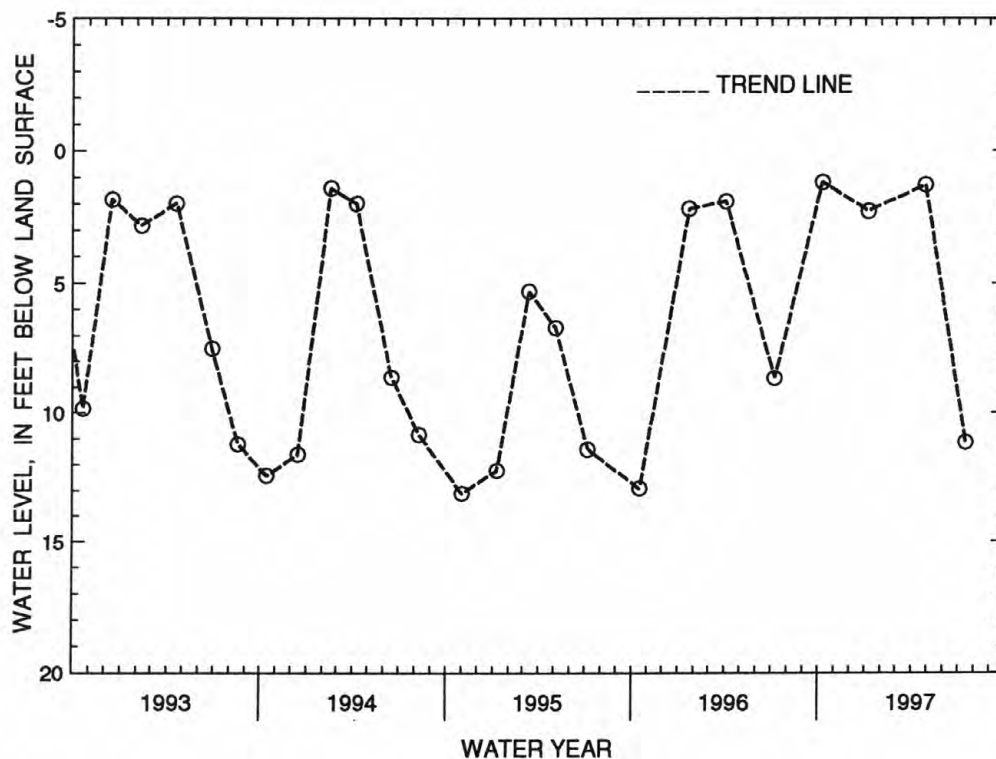
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 09	1.19	JAN 07	2.28	APR 29	1.30	JUL 17	11.15
WATER YEAR 1997	HIGHEST	1.19	OCT 09, 1996				
	LOWEST	11.15	JUL 17, 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.

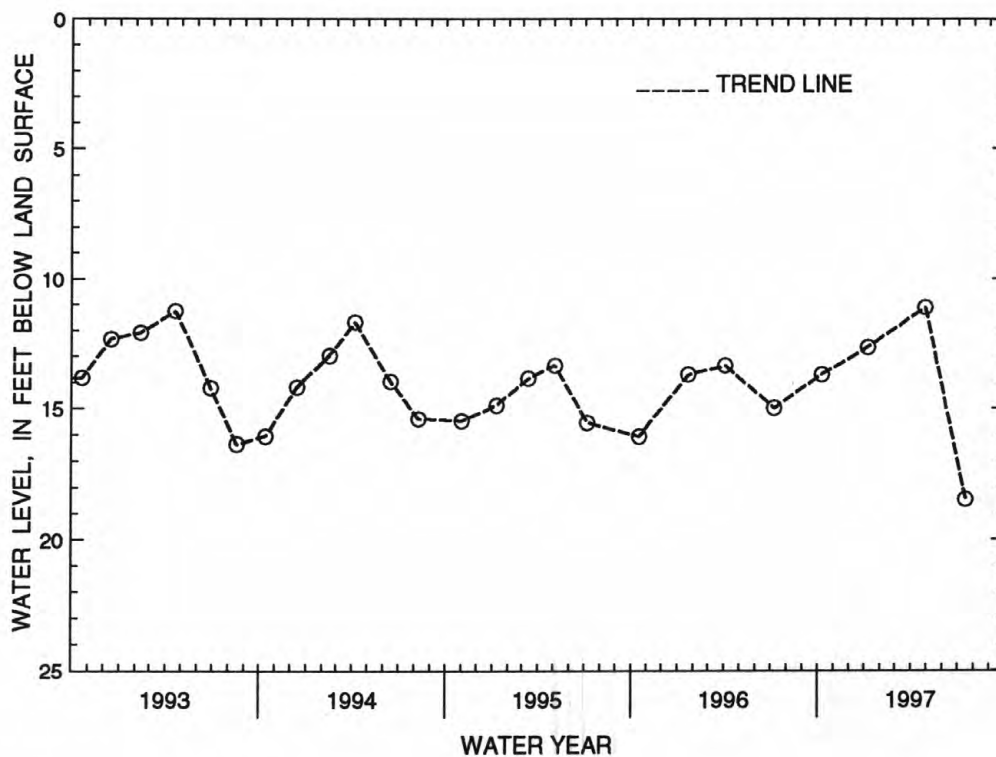
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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, 11.14 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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 09	13.70	JAN 07	12.66	APR 29	11.14	JUL 17	18.47
WATER YEAR 1997		HIGHEST	11.14	APR 29, 1997			
		LOWEST	18.47	JUL 17, 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.

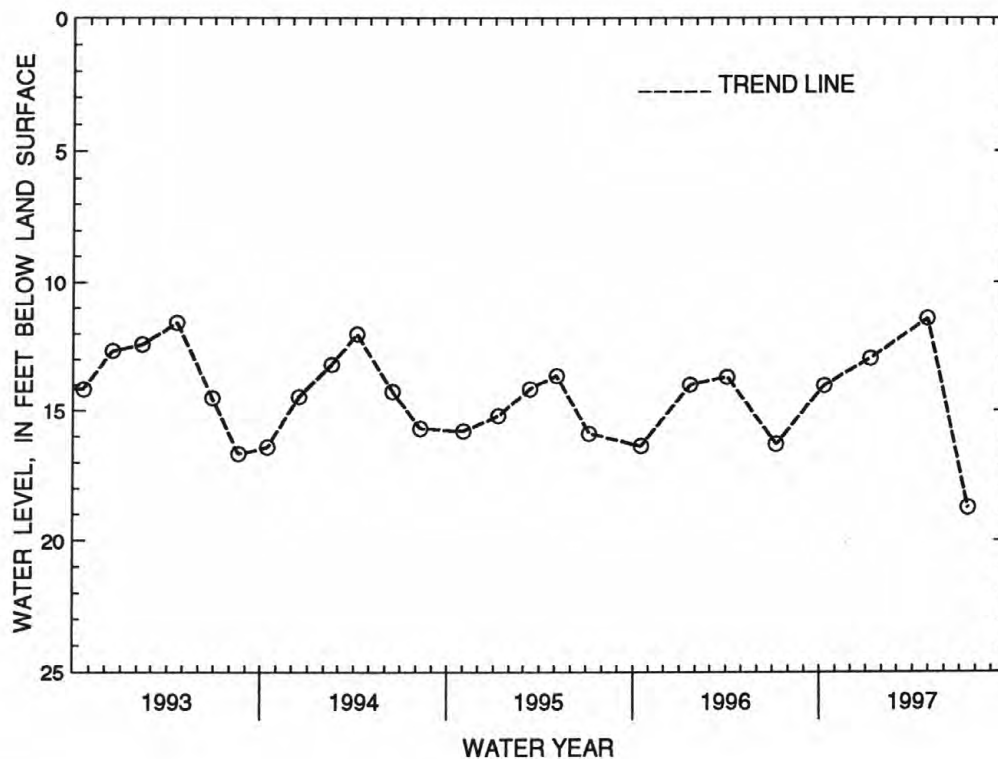
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 09	14.03	JAN 07	12.97	APR 29	11.42	JUL 17	18.74
WATER YEAR 1997	HIGHEST	11.42	APR 29, 1997				
	LOWEST	18.74	JUL 17, 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.

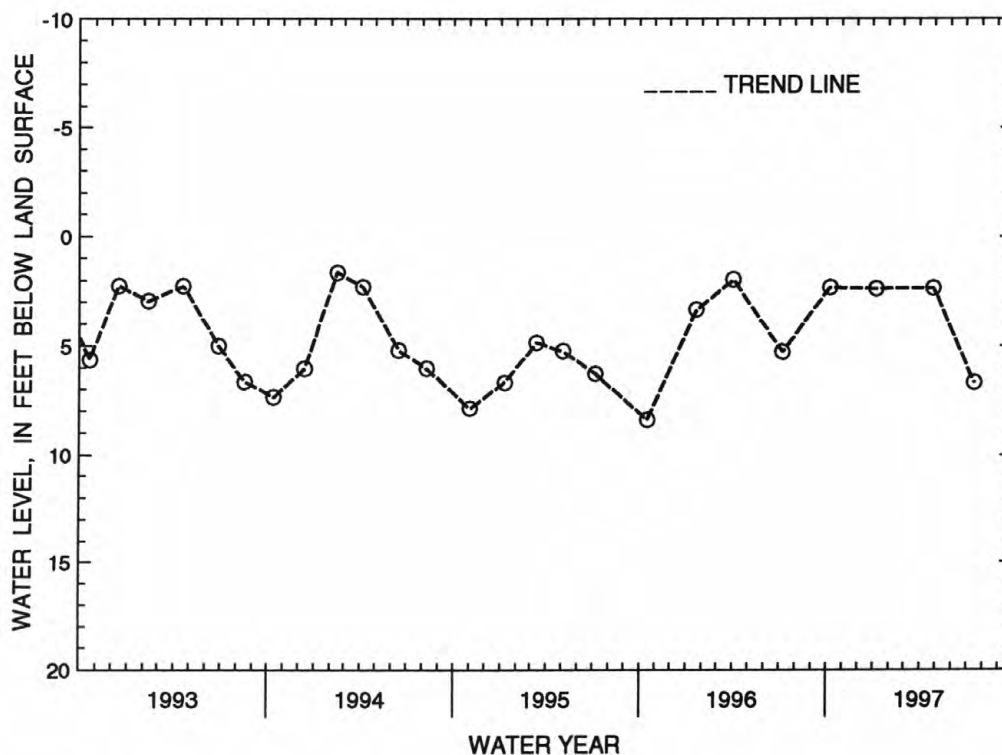
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 09	2.34	JAN 07	2.39	APR 29	2.36	JUL 17	6.70
WATER YEAR 1997		HIGHEST	2.34	OCT 09, 1996			
		LOWEST	6.70	JUL 17, 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.

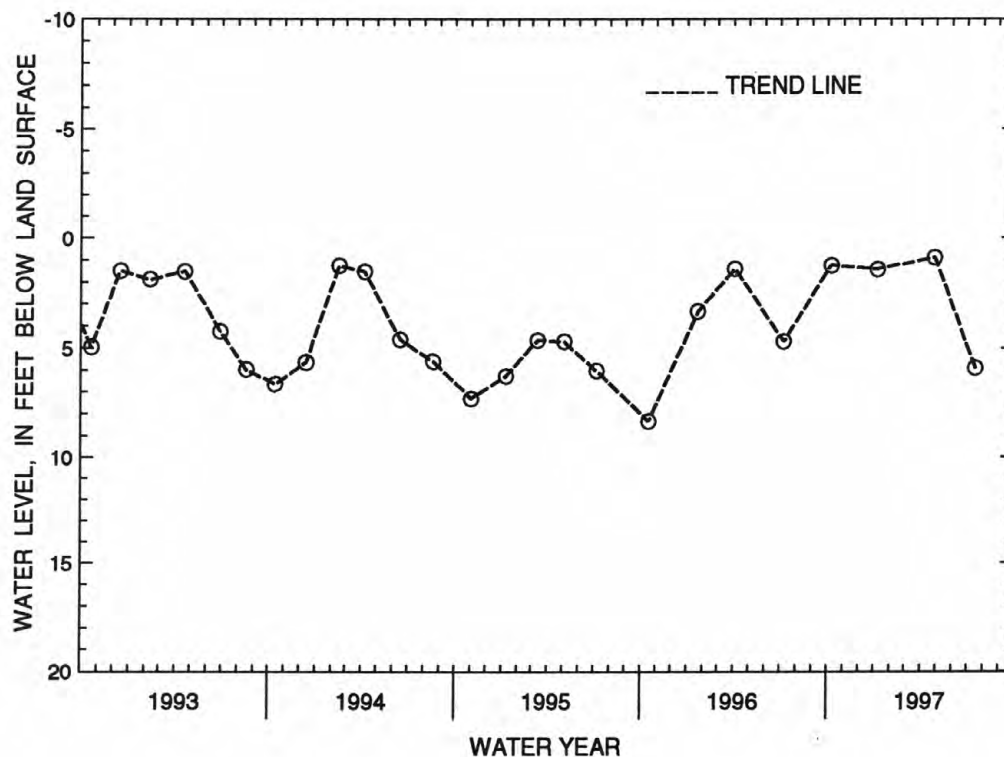
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 09	1.25	JAN 07	1.43	APR 29	0.90	JUL 17	5.92
WATER YEAR 1997	HIGHEST	0.90	APR 29, 1997				
	LOWEST	5.92	JUL 17, 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.

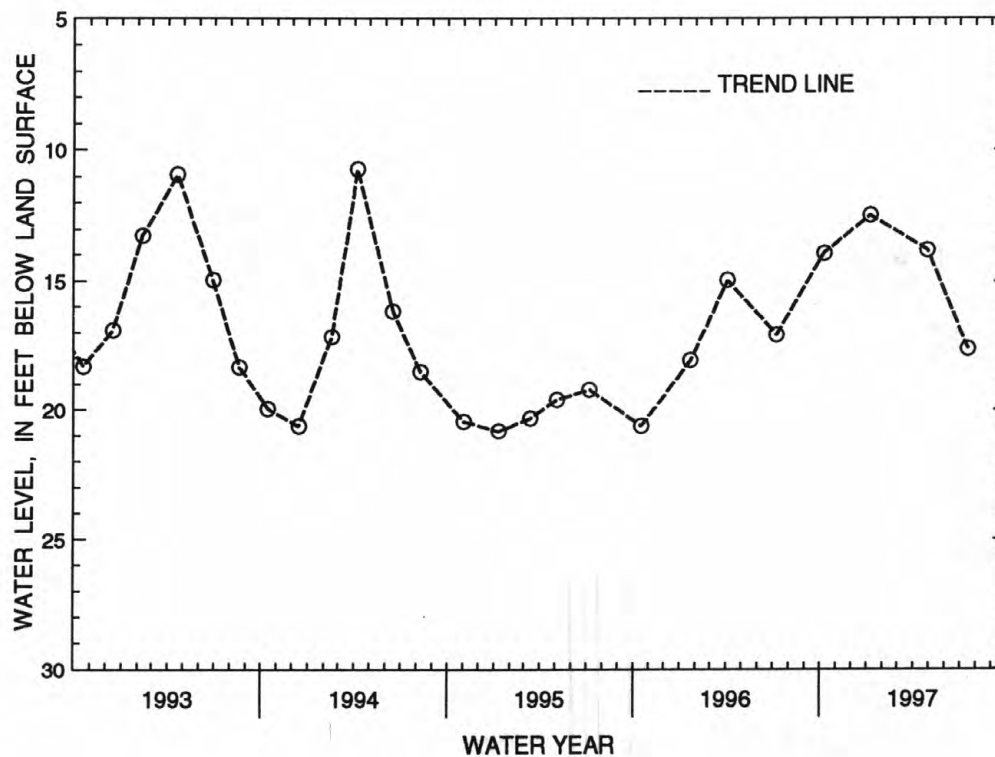
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 09	13.93	JAN 07	12.46	APR 29	13.82	JUL 17	17.63
WATER YEAR 1997	HIGHEST	12.46	JAN 07, 1997				
	LOWEST	17.63	JUL 17, 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.

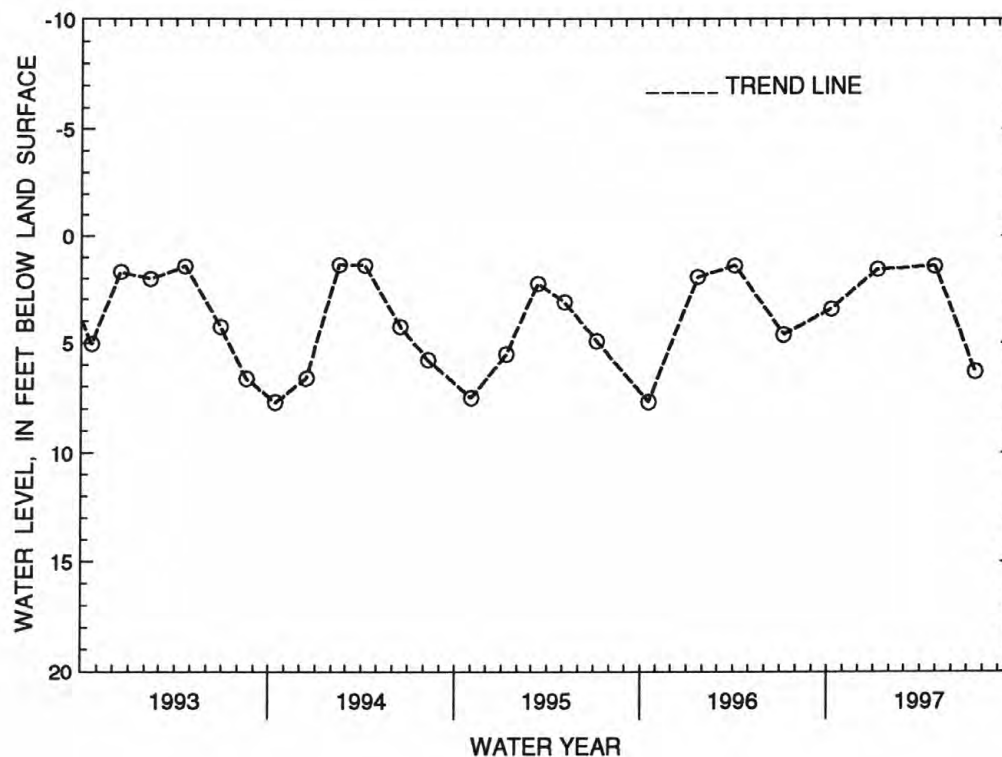
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 09	3.45	JAN 07	1.59	APR 29	1.43	JUL 17	6.34
WATER YEAR 1997	HIGHEST	1.43	APR 29, 1997				
	LOWEST	6.34	JUL 17, 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.

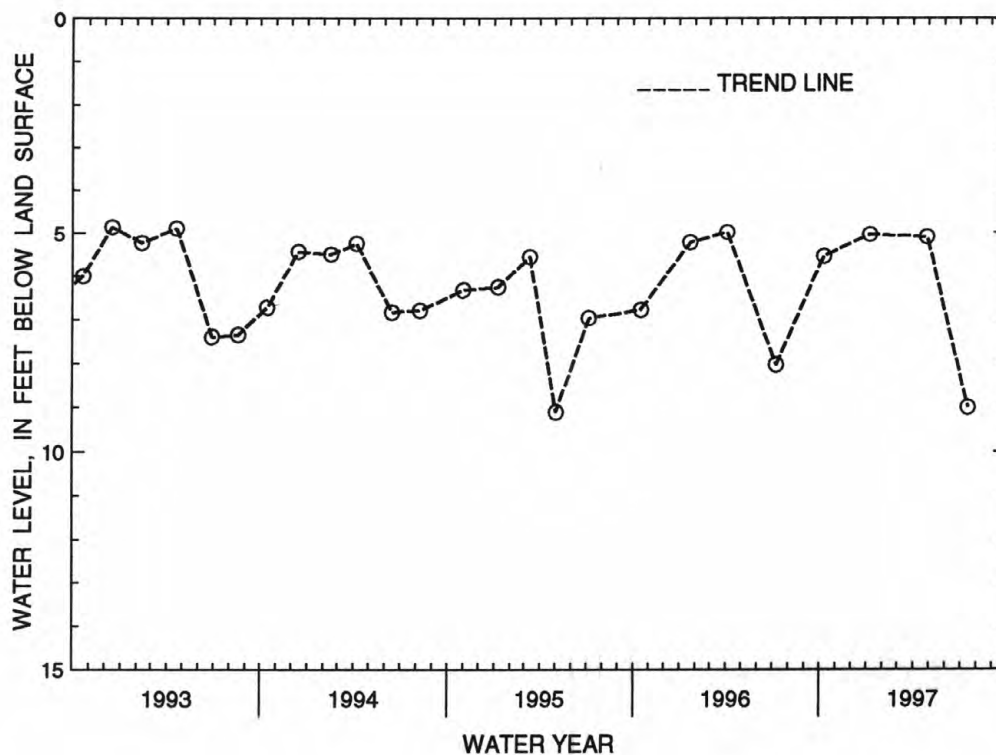
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 09	5.54	JAN 07	5.04	APR 29	5.10	JUL 17	9.00
WATER YEAR 1997	HIGHEST	5.04	JAN 07, 1997				
	LOWEST	9.00	JUL 17, 1997				



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 northeast 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.

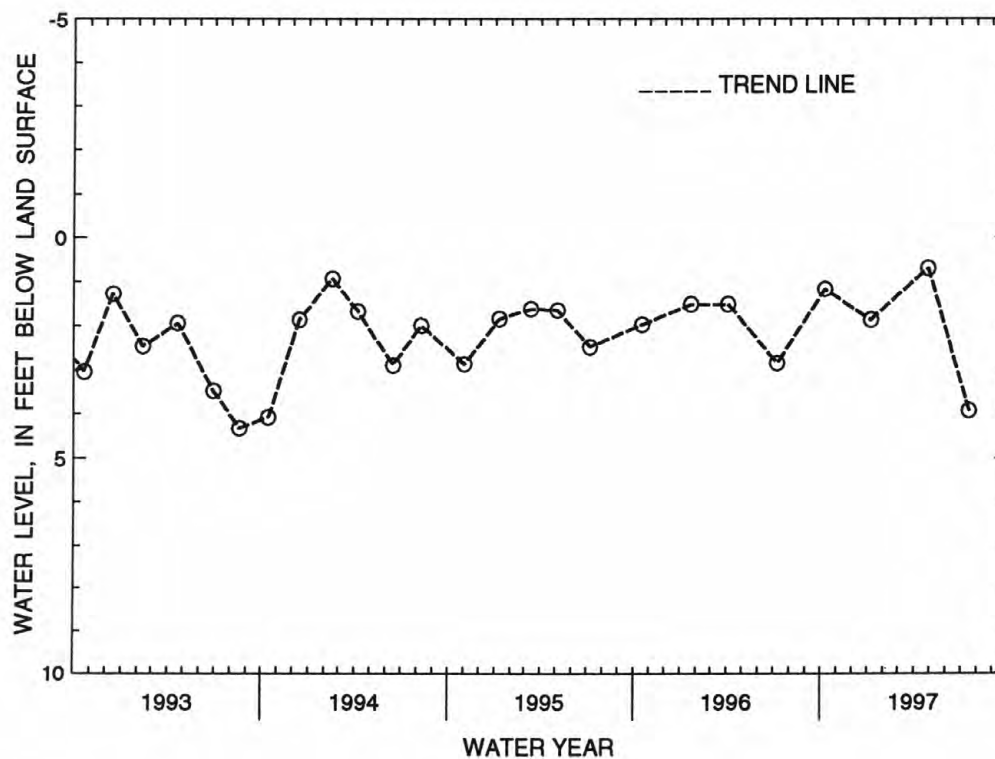
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 09	1.18	JAN 07	1.88	APR 29	0.70	JUL 17	3.94
WATER YEAR 1997	HIGHEST	0.70	APR 29, 1997				
	LOWEST	3.94	JUL 17, 1997				



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.

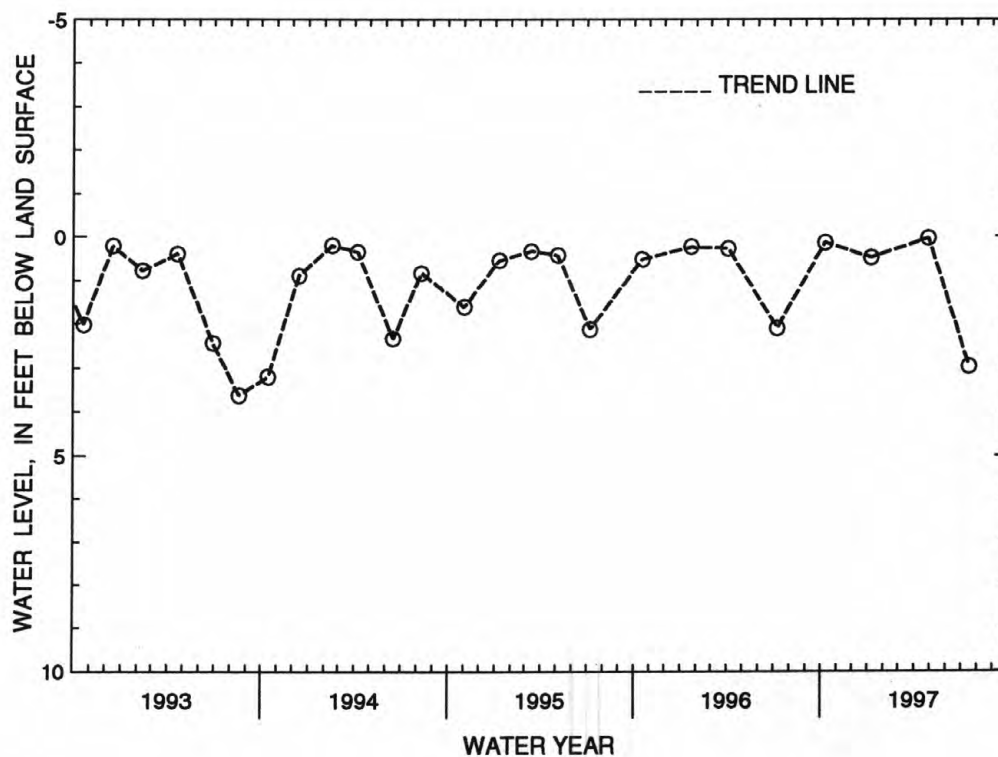
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 09	0.14	JAN 07	0.48	APR 29	0.04	JUL 17	2.97
WATER YEAR 1997	HIGHEST	0.04	APR 29, 1997				
	LOWEST	2.97	JUL 17, 1997				



GROUND-WATER-QUALITY RECORDS

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

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.

Dissolved Trace-Element Concentrations

NOTE.--Traditionally, dissolved trace-element concentrations have been reported at the microgram per liter (ug/L) level. Recent evidence, mostly from large rivers, indicates that actual dissolved-phase concentrations for a number of trace elements are within the range of 10's to 100's of nanograms per liter (ng/L). Data above the ug/L level should be viewed with caution. Such data may actually represent elevated environmental concentrations from natural or human causes; however, these data could reflect contamination introduced during sampling, processing, or analysis. To confidently produce dissolved trace-element data with insignificant contamination, the U.S. Geological Survey began using new trace-element protocols at some stations in water year 1994. Full implementation of the protocols will take place during the 1995 water year.

Change in National Trends Network procedures

NOTE.--Sample handling procedures at all National Trends Network stations were changed substantially on January 11, 1994, in order to reduce contamination from the sample shipping container. The data for samples before and after that date are different and not directly comparable. A tabular summary of the differences, based on a special intercomparison study, is available from the NADP/NTN Coordination Office, Colorado State University, Fort Collins, CO 80523 (Telephone: 303-491-5643).

QUALITY OF GROUND WATER

The following records are from wells and seeps for a study of variation in concentrations of natural organic material in the Chickahominy River.

WATER QUALITY DATA (CHICKAHOMINY RIVER), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

LOCAL IDENT- I- FIER	STATION	NUMBER	GEO- LOGIC UNIT *	DATE	DEPTH OF WELL, TOTAL (FEET) (72008)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)
NEW KENT COUNTY									
54H 18	372729077053302		110QRNR	06-18-97	5.30	42.6	--	--	95
54H 20	372729077053304		110QRNR	06-17-97	9.90	43.6	--	13.0	49
54H 21	372729077053305		110QRNR	06-17-97	13.20	43.5	--	--	33
54H 29	372739077053701		110QRNR	06-17-97	7.10	46.4	--	14.5	95
			110QRNR	08-06-97	7.10	46.4	--	19.0	108
54H 27	372736077053901		110QRNR	06-17-97	5.10	--	--	--	--
			110QRNR	08-06-97	5.10	--	23.0	19.0	153
54H 28	372736077053902		110QRNR	06-17-97	9.40	--	--	13.5	200
			110QRNR	08-06-97	9.40	--	23.0	18.0	180
54HS-001	372741077054001		110QRNR	06-16-97	--	42.0	--	--	63
54HS-002	372741077054002		110QRNR	06-16-97	--	42.0	--	--	80
54HS-003	372741077054003		110QRNR	06-16-97	--	42.0	--	--	100
			110QRNR	08-06-97	--	42.0	--	--	196
54H 26	372735077054102		110QRNR	06-16-97	7.50	--	--	--	49
			110QRNR	08-06-97	7.50	--	--	18.0	51

LOCAL IDENT- I- FIER	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	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)	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)
NEW KENT COUNTY									
54H 18	4.7	--	1.6	1.6	8.8	0.9	2.5	21	<0.1
54H 20	5.1	3	3.4	0.53	2.2	0.6	7.9	4.3	<0.1
54H 21	5.3	4	1.4	0.50	2.8	0.9	4.7	3.1	<0.1
54H 29	5.8	22	6.6	1.2	4.9	0.5	12	10	<0.1
	5.4	--	--	--	--	--	--	--	--
54H 27	--	--	--	--	--	--	--	--	--
	5.6	--	--	--	--	--	--	--	--
54H 28	6.0	48	--	--	--	--	--	--	--
	5.9	--	--	--	--	--	--	--	--
54HS-001	5.2	5	3.6	1.2	2.8	1.7	6.8	9.7	<0.1
54HS-002	5.9	16	4.9	1.7	2.8	2.1	3.1	10	<0.1
54HS-003	6.1	30	8.2	2.7	2.9	2.6	1.7	11	<0.1
	--	--	--	--	--	--	--	--	--
54H 26	4.9	3	1.4	1.1	3.0	0.7	5.7	6.3	<0.1
	4.7	--	--	--	--	--	--	--	--

*110QRNR Columbia aquifer

QUALITY OF GROUND WATER

WATER QUALITY DATA (CHICKAHOMINY RIVER), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

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)	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)	LIGHT ABSOR- BENCE AT 253.7 NM (PER CM) ** (99905)	CARBON, ORGANIC DIS- SOLVED (MG/L) (00681)
NEW KENT COUNTY--Continued									
54H 18	0.02	8.8	56	26	18	-32.7	-5.79	0.017	0.7
54H 20	0.02	6.6	36	530	23	-33.6	-6.09	0.043	1.4
54H 21	0.01	21	43	34	9	-36.6	-6.25	0.035	0.6
54H 29	0.14	18	81	3300	110	-33.6	-6.09	0.880	3.6
	--	--	--	--	--	-32.7	-6.00	0.156	2.5
54H 27	--	--	--	--	--	-33.5	-5.89	--	4.9
	--	--	--	--	--	-30.2	-5.66	2.45	2.8
54H 28	--	--	--	--	--	-32.0	-5.76	0.509	5.2
	--	--	--	--	--	-30.7	-5.71	0.691	2.6
54HS-001	0.02	10	52	590	50	-31.7	-5.83	0.131	4.1
54HS-002	0.06	8.6	60	3900	96	-31.5	-5.84	0.365	6.2
54HS-003	0.11	7.5	85	6500	170	-32.0	-5.93	0.668	9.5
	--	--	--	--	--	-31.4	-5.59	0.148	4.9
54H 26	0.03	10	37	65	16	-32.4	-6.12	0.036	1.4
	--	--	--	--	--	-33.0	-6.05	0.209	1.3

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

QUALITY OF GROUND WATER

The following records are from wells sampled for a study of variations in chloride concentrations of the Coastal Plain aquifers of Virginia.

WATER QUALITY DATA (COASTAL PLAIN AQUIFERS), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

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)
CITY OF SUFFOLK								
58A 77 SOW 180A	363655076332002	217PTXN	05-20-97	1210	1210	1200	34.0	6440
58A 78 SOW 180B	363655076332003	217PPSC	05-22-97	880.00	860	850	34.0	1260
58A 79 SOW 180C	363655076332004	211CRCSU	05-23-97	710.00	710	700	34.0	1340
CITY OF CHESAPEAKE								
61B 13	364227076074707	217PPSC	04-22-97	1390	1380	1370	15.0	15500
61B 14	364227076074708	211CRCSU	04-24-97	1113	1100	1090	15.0	6080
CITY OF NEWPORT NEWS								
58F 92	371041076351701	211CRCSU	12-19-96	560	560	530	28.8	2300
58F 89	371041076351703	217PPSC	02-06-97	1131	1131	1018	30.01	5860
58F 50 SOW 171A	371208076341101	217PTXN	07-21-97	1236	1220	1210	55.0	8520
58F 51 SOW 171B	371208076341102	217PPSC	06-25-97	851.00	830	820	55.0	4850
58F 52 SOW 171C	371208076341103	211CRCSU	07-24-97	537.00	537	527	55.0	2460
JAMES CITY COUNTY								
56G 13	371640076473001	211CRCSU	06-24-97	389.00	382	371	83.0	752
57G 22	371934076441401	124EOCN	06-23-97	305.00	285	240	100	328
GLOUCESTER COUNTY								
57H 20	372621076404201	217PPSC	03-12-97	910.00	910	900	6.0	1320
KING AND QUEEN COUNTY								
57J 3 SOW 074	373008076425601	217PPSC	03-11-97	760	756	741	51.0	880
56J 11 SOW 073	373126076454101	217PTXN	03-11-97	1254	1250	1230	15.0	3820
KING WILLIAM COUNTY								
55J 15	373523076523401	217PTXN	03-11-97	1225	1220	1190	90.0	1410

QUALITY OF GROUND WATER

WATER QUALITY DATA (COASTAL PLAIN AQUIFERS), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

LOCAL IDENT- I- FIER	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)
CITY OF SUFFOLK--Continued									
58A 77 SOW 180A	7.2	21.0	0.6	130	27	15	1280	28	571
58A 78 SOW 180B	8.1	20.5	0.6	8	1.6	0.88	289	8.3	525
58A 79 SOW 180C	8.1	21.0	--	7	1.4	0.95	303	10	569
CITY OF CHESAPEAKE--Continued									
61B 13	7.3	20.0	0.7	560	120	61	3110	54	282
61B 14	8.1	20.0	0.3	89	18	11	1210	25	477
CITY OF NEWPORT NEWS--Continued									
58F 92	7.9	21.0	3.2	23	6.1	1.9	480	12	367
58F 89	7.3	24.0	0.4	110	29	8.5	1300	17	268
58F 50 SOW 171A	7.6	--	0.7	180	45	16	1650	25	214
58F 51 SOW 171B	7.5	20.5	1.0	70	16	7.2	963	17	297
58F 52 SOW 171C	8.3	20.0	0.7	19	4.1	2.2	498	14	387
JAMES CITY COUNTY--Continued									
56G 13	8.2	17.3	--	37	8.1	4.1	150	11	218
57G 22	7.9	17.0	--	27	7.3	2.1	63	7.6	161
GLOUCESTER COUNTY--Continued									
57H 20	8.1	21.0	0.5	9	2.8	0.41	280	4.4	410
KING AND QUEEN COUNTY--Continued									
57J 3 SOW 074	8.0	20.0	0.6	5	1.7	0.25	190	4.3	362
56J 11 SOW 073	7.8	23.0	0.6	41	12	2.7	740	7.8	468
KING WILLIAM COUNTY--Continued									
55J 15	8.1	23.5	0.5	7	2.2	0.48	300	4.1	538

QUALITY OF GROUND WATER

WATER QUALITY DATA (COASTAL PLAIN AQUIFERS), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

LOCAL IDENT- I- FIER	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)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
CITY OF SUFFOLK--Continued									
58A 77 SOW 180A	200	1600	0.26	5.8	37	3680	3580	6000	179
58A 78 SOW 180B	23	81	3.2	0.34	15	762	736	310	21
58A 79 SOW 180C	18	84	4.4	0.35	12	802	775	110	3.9
CITY OF CHESAPEAKE--Continued									
61B 13	280	5100	0.45	18	14	8720	8880	3900	240
61B 14	120	1600	1.4	6.0	13	3260	3310	660	52
CITY OF NEWPORT NEWS--Continued									
58F 92	56	470	2.7	1.6	21	1300	1270	29	13
58F 89	110	1800	1.3	6.5	38	3430	3470	160	54
58F 50 SOW 171A	140	2400	0.59	9.3	19	4580	4450	960	122
58F 51 SOW 171B	77	1300	1.2	4.8	32	2730	2610	1200	48
58F 52 SOW 171C	52	500	2.4	1.9	13	1350	1320	110	10
JAMES CITY COUNTY--Continued									
56G 13	11	88	1.2	0.34	33	432	440	75	4.1
57G 22	4.9	3.0	0.75	0.012	42	234	226	20	2.1
GLOUCESTER COUNTY--Continued									
57H 20	31	190	1.3	0.73	34	758	759	81	16
KING AND QUEEN COUNTY--Continued									
57J 3 SOW 074	23	47	1.9	0.19	34	544	526	44	9.0
56J 11 SOW 073	70	920	2.0	3.7	14	2090	2000	280	56
KING WILLIAM COUNTY--Continued									
55J 15	22	120	3.1	0.46	15	832	794	100	20

QUALITY OF GROUND WATER

The following water-quality samples have been collected as part of a hydrogeologic study conducted at the Naval Weapons Station Yorktown in Yorktown, Virginia.

WATER QUALITY DATA (NAVAL WEAPONS STATION YORKTOWN), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

LOCAL IDENT- I- FIER	STATION	NUMBER	GEO- LOGIC UNIT	DATE	DEPTH OF WELL, TOTAL (FEET) (72008)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)
CITY OF NEWPORT NEWS							
58FS 6	371252076351701	122YRKN	03-21-97	--	40.0	459	
58F114	371300076341002	121CSPKU	03-26-97	95.55	83.1	408	
58F115	371300076341003	122YRKN	03-05-97	56.80	83.0	445	
58F115	371300076341003	122YRKN	03-05-97	56.80	83.0	445	
58F116	371300076341004	110QRNR	03-05-97	23.55	83.1	54	
JAMES CITY COUNTY							
58FS 7	371307076360401	112PLSC	03-21-97	--	50.0	347	
58FS 9	371338076365601	110QRNR	03-20-97	--	70.0	351	
58FS 8	371338076370101	110QRNR	03-20-97	--	70.0	376	
YORK COUNTY							
58F105	371348076333503	122YRKN	03-07-97	61.80	80.2	390	
58F106	371348076333504	110QRNR	03-07-97	23.79	79.8	43	
JAMES CITY COUNTY							
58F119	371359076365002	121CSPKU	03-27-97	114.80	86.7	482	
58F120	371359076365003	122YRKN	03-06-97	86.80	86.3	505	
58F121	371359076365004	110QRNR	03-06-97	21.78	86.6	40	
YORK COUNTY							
58F110	371403076342803	122YRKN	03-11-97	41.98	65.6	432	
57FS 1	371406076373901	112PLSC	03-20-97	--	70.0	343	
57FS 1	371406076373901	112PLSC	03-20-97	--	70.0	343	
58FS 13	371409076324301	122YRKN	03-12-97	--	50.0	512	
58FS 10	371409076324401	122YRKN	03-12-97	--	50.0	544	
58FS 11	371411076323601	122YRKN	03-12-97	--	40.0	605	
58FS 11	371411076323601	122YRKN	03-12-97	--	40.0	605	
58FS 1	371413076345701	122YRKN	03-20-97	--	25.0	208	
58FS 3	371424076351301	122YRKN	03-13-97	--	25.0	575	
58FS 12	371434076321401	122YRKN	03-13-97	--	30.0	258	
58FS 2	371434076351401	112PLSC	03-14-97	--	35.0	526	
58FS 5	371436076340001	122YRKN	03-17-97	--	35.0	520	
58F 98	371440076314701	121CSPKU	03-28-97	116.80	47.5	603	
58F 99	371440076314702	121CSPKU	03-28-97	94.79	47.2	496	
58F100	371440076314703	122YRKN	03-10-97	36.56	47.4	960	
58FS 4	371450076325301	122YRKN	03-17-97	--	25.0	579	
58GS 2	371522076340301	121CSPKU	03-17-97	--	20.0	54	
58G 57	371544076371403	122YRKN	03-11-97	56.55	58.9	555	
58GS 1	371611076354101	122YRKN	03-18-97	--	25.0	701	
58G 51	371619076345102	121CSPKU	03-25-97	73.78	24.2	405	
58G 52	371619076345103	122YRKN	03-10-97	32.79	24.1	246	

QUALITY OF GROUND WATER

WATER QUALITY DATA (NAVAL WEAPONS STATION YORKTOWN), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

LOCAL IDENT- I- FIER	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	TRITIUM TOTAL (PCI/L) (07000)	TRITIUM 2 SIGMA WATER, WHOLE, TOTAL (PCI/L) (75985)	H-2 / H-1 STABLE ISOTOPE RATIO PER MIL (82082)	O-18 / O-16 STABLE ISOTOPE RATIO PER MIL (82085)
CITY OF NEWPORT NEWS--Continued							
58FS 6	6.7	14.5	2.3	42	3.8	-31.2	-5.91
58F114	7.1	16.0	0.0	1.0	1.0	-33.7	-5.92
58F115	7.6	16.5	0.3	35	2.6	-31.4	-5.95
58F115	7.6	16.5	0.3	34	2.6	-32.1	-5.94
58F116	5.1	16.0	2.7	40	2.6	-29.7	-5.48
JAMES CITY COUNTY--Continued							
58FS 7	6.9	14.5	3.0	35	2.6	-34.9	-6.28
58FS 9	6.9	13.5	1.5	37	3.2	-34.6	-6.27
58FS 8	6.7	13.5	2.7	27	2.6	-35.0	-6.25
YORK COUNTY--Continued							
58F105	7.5	15.0	0.2	11	1.0	-33.4	-6.01
58F106	4.7	14.0	0.6	41	2.6	-31.4	-5.86
JAMES CITY COUNTY--Continued							
58F119	7.2	16.0	0.0	<1.0	1.0	-33.5	-5.92
58F120	7.3	16.0	0	<1.0	1.0	-32.5	-5.81
58F121	5.2	15.0	0.6	45	3.2	-31.1	-5.86
YORK COUNTY--Continued							
58F110	6.8	16.5	3.2	40	2.6	-33.7	-5.96
57FS 1	6.5	13.0	2.2	34	2.6	-33.7	-6.12
57FS 1	6.5	13.0	2.2	31	2.6	-32.9	-6.21
58FS 13	6.8	16.0	2.7	37	3.2	-33.0	-5.89
58FS 10	6.8	15.0	4.3	40	2.6	-33.1	-5.80
58FS 11	6.9	18.0	9.3	41	3.8	-31.9	-5.66
58FS 11	6.9	18.0	9.3	43	3.2	-32.2	-5.72
58FS 1	7.8	11.0	4.8	35	3.2	-41.2	-7.25
58FS 3	7.1	11.0	2.3	32	1.9	-34.1	-6.27
58FS 12	7.0	15.0	7.3	51	5.1	-33.1	-5.90
58FS 2	6.9	11.0	7.5	27	1.9	-32.8	-6.15
58FS 5	7.1	16.0	5.0	34	2.6	-32.8	-5.78
58F 98	7.4	16.0	0.5	<1.0	1.0	-33.9	-5.92
58F 99	7.2	16.0	0.1	<1.0	1.0	-35.7	-6.25
58F100	6.5	15.0	3.0	32	1.9	-35.5	-6.20
58FS 4	6.9	12.0	4.0	41	3.8	-33.7	-6.11
58GS 2	5.3	10.0	0.6	26	2.6	-35.6	-6.28
58G 57	6.9	15.0	0.2	48	3.2	-32.9	-6.06
58GS 1	6.9	11.5	1.3	30	3.2	-32.5	-6.02
58G 51	7.2	15.5	0.0	<1.0	1.0	-36.5	-6.25
58G 52	6.0	15.5	7.2	31	1.9	-36.1	-6.40

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

QUALITY OF GROUND WATER

The following water-quality samples have been collected as part of a hydrogeologic study conducted in the Polecat Creek watershed in Caroline County, Virginia.

WATER QUALITY DATA (POLECAT CREEK), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

LOCAL IDENT- I- FIER	STATION	NUMBER	GEO- LOGIC UNIT	DATE	DEPTH OF WELL, TOTAL (FEET) (72008)	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)	TEMPER- ATURE WATER (DEG C) (00010)
CAROLINE COUNTY									
51M 21	385748077255801	121CSPKU	07-02-97	17.53	185	88	5.7	16.0	
51M 20	385759077254501	110QRNR	07-02-97	14.89	115	288	5.1	16.5	
50M 7	385806077322501	111SDMN	06-30-97	46.28	240	132	6.6	19.0	
50M 5	385809077322001	111SDMN	07-01-97	8.62	210	41	5.5	15.5	
51M 18	385811077254901	125PLCN	07-02-97	52.54	110	478	7.3	24.0	
51M 19	385811077254902	110QRNR	07-02-97	9.80	110	45	5.4	20.0	
50M 4	385812077321801	111SDMN	06-30-97	15.49	235	48	5.3	21.5	
50M 2	385814077321401	111SDMN	06-30-97	39.94	250	83	6.3	19.0	
50M 3	385814077321402	111SDMN	06-30-97	25.14	250	46	5.8	18.5	
51M 17	385819077254501	121CSPKU	07-01-97	13.98	130	136	6.2	21.0	
51M 16	385827077254101	121CSPKU	07-01-97	14.50	160	64	5.3	21.0	
51M 15	385832077253501	121CSPKU	07-01-97	25.29	190	240	5.2	17.0	

LOCAL IDENT- I- FIER	OXYGEN, DIS- SOLVED (MG/L) (00300)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	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- SOLVED (MG/L AS N) (00623)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
CAROLINE COUNTY								
51M 21	6.4	--	<0.010	--	0.179	<0.015	<0.20	<0.010
51M 20	7.7	--	<0.010	--	1.79	<0.015	<0.20	<0.010
50M 7	1.7	--	0.010	0.142	0.152	<0.015	<0.20	0.031
50M 5	2.3	9	<0.010	--	0.214	0.054	<0.20	0.051
51M 18	4.4	210	<0.010	--	0.096	0.117	0.30	0.011
51M 19	7.4	9	<0.010	--	0.112	0.023	<0.20	<0.010
50M 4	7.5	--	<0.010	--	2.91	0.035	0.23	<0.010
50M 2	2.7	26	<0.010	--	0.199	<0.015	<0.20	<0.010
50M 3	5.7	--	0.013	2.55	2.57	0.070	<0.20	<0.010
51M 17	5.9	--	<0.010	--	0.168	0.051	<0.20	<0.010
51M 16	6.2	--	<0.010	--	1.96	0.020	<0.20	<0.010
51M 15	9.0	2	<0.010	--	18.0	<0.015	<0.20	<0.010

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

QUALITY OF GROUND WATER

NATIONAL WATER QUALITY ASSESSMENT PROGRAM
KANAWHA-NEW RIVER BASIN STUDY UNIT - SITE DESCRIPTIONS

NEW RIVER BASIN

REMARKS.--During the summer of 1997, 19 wells were sampled in Virginia in the Kanawha-New River Basin as part of a study unit survey within the National Water-Quality Assessment (NAWQA) Program. Samples included field determinations, major ions, trace metals, nutrients, dissolved organic carbon, radon and microbiology.

363632081092701	21A 1	Lat 36°36'32", long 81°09'27", Grayson County, 1.0 mi south of Independence, 5.6 mi north of Twin Oaks, NC.
363739081284401	19B 1	Lat 36°37'39", long 81°28'44", Grayson County, 5.6 mi southwest of Trout Dale, 5.0 mi west of Volney.
363831080514101	24B 2	Lat 36°38'31", long 80°51'41", Carroll County, 6.0 mi southwest of Woodlawn, 1.1 mi west of Pipers Gap.
363914080471201	24B 1	Lat 36°39'14", long 80°47'12", Carroll County, 5.1 mi southeast of Woodlawn, 1.6 mi east of Higgins Crossroads.
364051081041401	22B 1	Lat 36°40'51", long 81°04'14", Grayson County, 0.2 mi north of Carsonville, 3.3 mi southwest of Providence.
364128081161201	20B 1	Lat 36°41'28", long 81°16'12", Grayson County, 3.4 mi northeast of Grubbs Chapel, 4.2 mi east of Flat Ridge.
364146081293201	19B 2	Lat 36°41'46", long 81°29'32", Grayson County, 4.0 mi north of Grayson Highlands State Park Campground, 2.9 mi west of Trout Dale.
364211080303601	26B 6	Lat 36°42'11", long 80°30'36", Carroll County, 1.1 mi southeast of Laurel Fork, 5.7 mi east of Gladesboro.
364513080422301	25C 1	Lat 36°45'13", long 80°42'23", Carroll County, 5.3 mi south of Liberty Hill, 2.0 mi southeast of Hillsville.
364650080331601	26C 1	Lat 36°46'50", long 80°33'16", Carroll County, 4.0 mi southeast of Dugspur, 4.8 mi northwest of Laurel Fork.
364653081010501	22C 1	Lat 36°46'53", long 81°01'05", Carroll County, 5.6 mi north of Providence, 5.3 mi southeast of Cripple Creek.
364747080510601	24C 1	Lat 36°47'47", long 80°51'06", Carroll County, 3.7 mi south of Poplar Camp, 3.6 mi northwest of Five Forks.
364953080264801	27C 3	Lat 36°49'53", long 80°26'48", Floyd County, 1.5 mi north of Union, 2.6 mi southeast of Willis.
365145080430301	25C 2	Lat 36°51'45", long 80°43'03", Carroll County, 6.8 mi north of Hillsville in Mitchell Crossroads.
365213080255101	27C 2	Lat 36°52'13", long 80°25'51", Floyd County, 4.1 mi north of Union, 3.0 mi northeast of Willis.
365450080184001	28D 3	Lat 36°54'50", long 80°18'40", Floyd County, 1.6 mi south of Poff, 0.5 mi east of Floyd.
365610080185601	28D 2	Lat 36°56'10", long 80°18'56", Floyd County, 1.7 mi north of Floyd, 0.1 mi west of Poff.
370007080312201	26E 1	Lat 37°00'07", long 80°31'22", Montgomery County, 3.3 mi southeast of Graysontown, 6.2 mi southwest of Riner.
370122080263601	27E 1	Lat 37°01'22", long 80°26'36", Montgomery County, 3.0 mi south of Riner, 6.5 mi east of Snowville.

QUALITY OF GROUND WATER

NATIONAL WATER QUALITY ASSESSMENT PROGRAM,
KANAWHA-NEW RIVER BASIN STUDY UNIT

NEW RIVER BASIN

REMARKS.--The following table contains ground-water data for 19 wells located in Virginia which were sampled during the 1996 water year as part of a water-quality assessment of ground-water conditions within the Blue Ridge physiographic province. Similar data was collected for 11 wells in the Blue Ridge province within North Carolina. The 30 well network was established as a part of the National Water Quality Assessment (NAWQA) program in the Kanawha and New River Basins.

[Explanation of column headings- SITE ID, 15 digit unique identifier based on site latitude (first six digits) and longitude (digits 7-13) and a two digit sequence number suffix; LOCATION MAP, name of 1:24,000 U.S. Geological Survey topographic quadrangle ; ELEVATION OF LAND SURFACE, elevation of land surface at well in feet; AQUIFER CODE: 400VGBG, Virginia Blue Ridge Complex, 400MRGR, Mount Rogers Volcanic Group, 400SPRK, Striped Rock Granite, 377ERWN, Erwin Formation, 400ASHE, Ashe Formation Gneiss, 400ASHEA, Ashe Formation Amphibolite, 400LCBG, Lynchburg Formation, 377ROME, Rome Formation, 377CHLH, Chilhowie Group; WATER LEVEL, depth from land surface to water level in the well measured in feet; YIELD, driller's yield estimate of well in gallons per minute.]

SITE-ID	LOCATION MAP	ELEVATION OF LAND SURFACE (FEET)	DEPTH OF WELL (FEET)	AQUIFER CODE	WATER LEVEL (FEET)	YIELD (GPM)
GRAYSON COUNTY						
363632081092701	Sparta West, NC-VA	2880.00	167.0	400VGBG	50.3	5.0
363739081284401	Troutdale, VA	3910.00	300.0	400MRGR	18.5	12.0
364051081041401	Briarpatch Mtn, VA	2545.00	287.0	400SPRK	23.6	10.0
364128081161201	Middle Fox Creek, VA	3155.00	105.0	400MRGR	26.4	10.0
364146081293201	Trout Dale, VA	3490.00	405.0	400VGBG	21.2	34.0
CARROLL COUNTY						
363831080514101	Woodlawn, VA	2730.00	350.0	400ASHE	89.5	5.5
363914080471201	Woodlawn, VA	2920.00	147.0	400ASHE	43.4	20.0
364211080303601	Laurel Fork, VA	2750.00	91.0	400LCBG	17.0	9.0
364513080422301	Hillsville, VA	2485.00	110.0	400ASHEA	7.78	5.0
364650080331601	Dugspur, VA	2400.00	315.0	400ASHEA	60.0	12.0
364653081010501	Cripple Creek, VA	2435.00	325.0	377ERWN	106	5.0
364747080510601	Sylvatus, VA	2675.00	175.0	400ASHE	39.0	17.0
365145080430301	Hillsville, VA	2645.00	175.0	400ASHE	46.2	2.4
FLOYD COUNTY						
364953080264801	Willis, VA	2880.00	270.0	400ASHEA	66.7	4.0
365213080255101	Willis, VA	2630.00	138.0	400ASHEA	21.7	40.0
365450080184001	Floyd, VA	2410.00	205.0	400ASHEA	30.0	60.0
365610080185601	Floyd, VA	2490.00	420.0	400ASHE	65.6	1.0
MONTGOMERY COUNTY						
370007080312201	Radford South, VA	2080.00	325.0	377ROME	124	5.0
370122080263601	Riner, VA	2290.00	360.0	377CHLH	59.1	6.0

QUALITY OF GROUND WATER

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PESTICIDE SCHEDULE A (GC/MS)

REMARKS.--Water from each of the 19 wells in this study was tested for Pesticide schedule A. The table below lists the 47 pesticides on this schedule, the unit of measure (micrograms per Liter, UG/L), the U.S. Geological Survey National Water Information System parameter code, and the method reporting limit (MRL). Pesticide schedule A includes selected pesticides and metabolites that are efficiently partitioned from a water sample by solid phase extraction and are sufficiently volatile and thermally stable for analysis by gas chromatography/mass spectrometry.

Samples are filtered through a glass-fiber membrane filter with openings that are 0.7 microns in size to remove sediment and microorganisms. Therefore, this schedule is suitable for compounds dissolved in water. Each sample was analyzed for all of the compounds in this schedule. Pesticides measured at or above the method detection level in one or more wells are listed in the water-quality table following this schedule list. The MRL provides an index to indicate where measurement uncertainty is increased. When an analyte is detected and all criteria for a positive result are met, the concentration is reported. If the concentration is less than the MRL, an "E" code will be reported with the value. If the analyte is qualitatively identified as present, but the quantitative determination is substantially more uncertain, the laboratory will identify the result with an "E" code even though the measured value is greater than the MRL. A value reported with an "E" code should be used with caution. When no analyte is detected in a sample, the default value is the MRL preceded by a less than sign (<).

ACETO- CHLOR, (UG/L) (49260)	ALA- CHLOR, (UG/L) (46342)	ALPHA BHC (UG/L) (34253)	ATRA- ZINE, (UG/L) (39632)	BENFLUR- ALIN (UG/L) (82673)	BUTYL- ATE, (UG/L) (04028)	CAR- BARYL (UG/L) (82680)	CARBO- FURAN (UG/L) (82674)
<0.002	<0.002	<0.002	<0.001	<0.002	<0.002	<0.003	<0.003
CHLOR- PYRIFOS (UG/L) (38933)	CYANA- ZINE, (UG/L) (04041)	DCPA (UG/L) (82682)	DEETHYL ATRAZINE, (UG/L) (04040)	DI- AZINON, (UG/L) (39572)	DIELDRIN (UG/L) (39381)	2,6-DI-ETHYL ANILINE (UG/L) (82660)	DISUL- FOTON (UG/L) (82677)
<0.004	<0.004	<0.002	<0.002	<0.002	<0.001	<0.003	<0.017
EPTC (UG/L) (82668)	ETHAL FLURALIN (UG/L) (82663)	ETHO- PROP (UG/L) (82672)	PONOFOS (UG/L) (04095)	LINDANE (UG/L) (39341)	LINURON (UG/L) (82666)	MALA- THION, (UG/L) (39532)	METHYL AZINPHOS (UG/L) (82686)
<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	<0.001
METHYL PARATHION (UG/L) (82667)	METO- LACHLOR (UG/L) (39415)	METRIBUZIN SENCOR (UG/L) (82630)	MOLINATE (UG/L) (82671)	NAPROP- AMIDE (UG/L) (82684)	P, P' DDE (UG/L) (34653)	PARA- THION, (UG/L) (39542)	PENDI- PEBULATE (UG/L) (82669)
<0.006	<0.002	<0.004	<0.004	<0.003	<0.006	<0.004	<0.004
PERMETH- ALIN (UG/L) (82683)	CIS PER- METHRIN (UG/L) (82687)	PHORATE (UG/L) (82664)	PROMETON, (UG/L) (04037)	PRON- AMIDE (UG/L) (82676)	PROPA- CHLOR, (UG/L) (04024)	PRO- PANIL (UG/L) (82679)	PRO- PARGITE (UG/L) (82685)
<0.004	<0.005	<0.002	<0.018	<0.003	<0.007	<0.004	<0.013
SI- MAZINE, (UG/L) (04035)	TEBU- THIURON (UG/L) (82670)	TERBACIL (UG/L) (82665)	TERBUFOS (UG/L) (82675)	THIOBENCARB (UG/L) (82681)	TRIALATE (UG/L) (82678)	TRIFLURALIN (UG/L) (82661)	
<0.005	<0.010	<0.007	<0.013	<0.002	<0.001	<0.002	

QUALITY OF GROUND WATER

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PESTICIDE SCHEDULE B (HPLC)

REMARKS.--Water from each of the 19 wells in this study was tested for Pesticide schedule B. The table below lists the 41 pesticides on this schedule, the unit of measure (micrograms per Liter, UG/L), the U.S. Geological Survey National Water Information System parameter code, and the minimum reporting limit (MRL). Pesticide schedule B includes selected pesticides and metabolites that are efficiently partitioned from a water sample by solid phase extraction and are sufficiently volatile and thermally stable for analysis by high performance liquid chromatography (HPLC).

Samples are filtered through a glass-fiber membrane filter with openings that are 0.7 microns in size to remove sediment and microorganisms. Therefore, this schedule is suitable for compounds dissolved in water. Each sample was analyzed for all of the compounds in this schedule. Pesticides measured at or above the method detection level in one or more wells are listed in the water-quality table following this schedule list. The MRL provides an index to indicate where measurement uncertainty is increased. When an analyte is detected and all criteria for a positive result are met, the concentration is reported. If the concentration is less than the MRL, an "E" code will be reported with the value. If the analyte is qualitatively identified as present, but the quantitative determination is substantially more uncertain, the laboratory will identify the result with an "E" code even though the measured value is greater than the MRL. A value reported with an "E" code should be used with caution. When no analyte is detected in a sample, the default value is the MRL preceded by a less than sign (<).

1-NAPH THOL, (UG/L) (49295)	2,4,5-T (UG/L) (39742)	2,4-D, (UG/L) (39732)	2,4-DB (UG/L) (38746)	SILVEX, (UG/L) (39762)	3HYDROXY CARBOFURAN (UG/L) (49308)	DNOC (UG/L) (49299)	ACIFL- UORFEN (UG/L) (49315)	
<0.007	<0.035	<0.035	<0.035	<0.021	<0.014	<0.035	<0.035	
ALDI- CARB, (UG/L) (49312)	ALDICARB SULFONE (UG/L) (49313)	ALDICARB SULFOXIDE, (UG/L) (49314)	BENTA- ZON, (UG/L) (38711)	BRO- MACIL, (UG/L) (04029)	BRO- MOXYNIL (UG/L) (49311)	CARBARYL, (UG/L) (49310)	CARBO- FURAN, (UG/L) (49309)	
<0.016	<0.016	<0.021	<0.014	<0.035	<0.035	<0.008	<0.028	
CHLOR- AMBEN, (UG/L) (49307)	CHLORO- THALO- NIL, (UG/L) (49306)	CLOPYR- ALID, (UG/L) (49305)	DACTHAL MONO- ACID, (UG/L) (49304)	DICAMBA (UG/L) (38442)	DICHLO- BENIL, (UG/L) (49303)	DICHLOR PROP, (UG/L) (49302)	DINOSEB (UG/L) (49301)	
<0.011	<0.035	<0.050	<0.017	<0.035	<0.020	<0.032	<0.035	
DIURON, (UG/L) (49300)	ESFENVAL- ERATE, (UG/L) (49298)	FEN- URON, (UG/L) (49297)	FLUO- METURON (UG/L) (38811)	LINURON (UG/L) (38478)	MCPA, (UG/L) (38482)	MCPB, (UG/L) (38487)	METHIO- CARB, (UG/L) (38501)	
<0.020	<0.019	<0.013	<0.035	<0.018	<0.050	<0.035	<0.026	
METH- OMYL, (UG/L) (49296)	NEB- URON, (UG/L) (49294)	NORFLU RAZON, (UG/L) (49293)	ORY- ZALIN, (UG/L) (49292)	OXAMYL, (UG/L) (38866)	PIC- LORAM, (UG/L) (49291)	PRO- PHAM, (UG/L) (49236)	PRO- POKUR, (UG/L) (38538)	TRICLO- PYR, (UG/L) (49235)

QUALITY OF GROUND WATER

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PESTICIDES

REMARKS.--The following table contains pesticide data for sites at which pesticides were detected. The nineteen sites identified previously and sampled as part of the Kanawha/New River National Water Quality Assessment program were analyzed for the pesticides listed in pesticide schedules A and B. Only those sites where pesticides were detected and only those constituents which had detectable concentrations of pesticides are presented here.

			SIMAZINE, (UG/L) (04035)	DEETHYL ATRA- ZINE, (UG/L) (04040)	LINDANE (UG/L) (39341)	CHLOR- PYRIFOS (UG/L) (38933)
GRAYSON COUNTY						
363632081092701	7-16-97	1500	<0.005	<0.002	<0.004	E0.004
CARROLL COUNTY						
364211080303601	8-06-97	1000	<0.005	E0.010	<0.004	<0.004
FLOYD COUNTY						
365450080184001	7-22-97	1100	<0.005	E0.001	0.152	<0.004
365610080185601	8-13-97	1500	E0.005	E0.049	<0.004	<0.004
MONTGOMERY COUNTY						
370007080312201	8-11-97	1600	0.025	E0.136	<0.004	<0.004
			P, P' DDE (UG/L) (34653)	ALPHA BHC (UG/L) (34253)	ATRA- ZINE, (UG/L) (39632)	CAR- BARYL (UG/L) (82680)
GRAYSON COUNTY						
364146081293201	7-29-97	1300	E0.002	<0.002	<0.001	<0.003
CARROLL COUNTY						
364650080331601	7-31-97	1000	<0.006	<0.002	E0.001	<0.003
364653081010501	7-21-97	1400	<0.006	<0.002	E0.001	<0.003
365145080430301	7-23-97	1100	E0.001	<0.002	<0.001	<0.003
FLOYD COUNTY						
364953080264801	7-30-97	1000	<0.006	<0.002	E0.001	<0.003
365450080184001	7-22-97	1100	<0.006	0.033	E0.002	E0.003
365610080185601	8-13-97	1500	<0.006	<0.002	0.060	<0.003
MONTGOMERY COUNTY						
370007080312201	8-11-97	1600	<0.006	<0.002	0.115	<0.003

QUALITY OF GROUND WATER

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VOLATILE ORGANIC COMPOUND SCHEDULE

REMARKS.--Water from each of the 19 wells in this study was tested for a schedule of 86 volatile organic compounds. The table below lists the compounds on the schedule, the unit of measure (micrograms per Liter, UG/L), the U.S. Geological Survey National Water Information System parameter code, and the method reporting limit (MRL). Each well was analyzed for all the compounds in this schedule. Compounds measured at or above the method detection level in one or more wells are listed in the water-quality table following this schedule list. The MRL provides an index to indicate where measurement uncertainty is increased. When an analyte is detected and all criteria for a positive result are met, the concentration is reported. If the concentration is less than the MRL, an "E" code will be reported with the value. If the analyte is qualitatively identified as present, but the quantitative determination is substantially more uncertain, the laboratory will identify the result with an "E" code even though the measured value is greater than the MRL. A value reported with an "E" code should be used with caution. When no analyte is detected in a sample, the default value is the MRL preceded by a less than sign (<).

ACETONE (UG/L) (81552)	ACRO- LEIN (UG/L) (34210)	ACRYLO- NITRILE (UG/L) (34215)	BENZENE (UG/L) (34030)	BROMO- BENZENE (UG/L) (81555)	CHLORO- BENZENE (UG/L) (34301)	DICHLORO- BENZENE (UG/L) (34536)
<4.90	<1.43	<1.23	<0.032	<0.036	<0.028	<0.048
1,3-DI- CHLORO- BENZENE (UG/L) (34566)	1,4-DI- CHLORO- BENZENE (UG/L) (34571)	1,2,3- TRI- CHLORO- BENZENE (UG/L) (77613)	1,2,4- TRI- CHLORO- BENZENE (UG/L) (34551)	1,2,3-TRI- METHYL- BENZENE (UG/L) (77221)	1,2,4-TRI- METHYL- BENZENE (UG/L) (77222)	1,3,5-TRI- METHYL- BENZENE (UG/L) (77226)
<0.054	<0.050	<0.266	<0.188	<0.124	<0.056	<0.044
PROPYL- BENZENE (UG/L) (77224)	ISO- PROPYL- BENZENE (UG/L) (77223)	BUTYL- BENZENE (UG/L) (77342)	SEC- BUTYL- BENZENE (UG/L) (77350)	TERT- BUTYL- BENZENE (UG/L) (77353)	TRANS-1,4- DICHLORO- 2-BUTENE (UG/L) (73547)	1,2- DIBROMO- ETHANE (UG/L) (77651)
<0.042	<0.032	<0.186	<0.048	<0.096	<0.692	<0.080
CHLORO- ETHANE (UG/L) (34311)	1,1-DI- CHLORO- ETHANE (UG/L) (34496)	1,2-DI- CHLORO- ETHANE (UG/L) (32103)	1,1,1- TRI- CHLORO- ETHANE (UG/L) (34506)	1,1,2- TRI- CHLORO- ETHANE (UG/L) (34511)	1,1,1,2- TETRA- CHLORO- ETHANE, (UG/L) (77562)	1,1,2,2 TETRA- CHLORO- ETHANE, (UG/L) (34516)
<0.120	<0.066	<0.134	<0.032	<0.064	<0.044	<0.132
VINYL BROMIDE (UG/L) (50002)	DICHLORO- METHANE (UG/L) (34423)	1,1-DI- CHLORO- ETHYLENE (UG/L) (34501)	CIS-1,2- DICHLORO- ETHYLENE (UG/L) (77093)	TRANS-1,2- DICHLORO- ETHYLENE (UG/L) (34546)	TRI- CHLORO- ETHYLENE (UG/L) (39180)	TETRA- CHLORO- ETHYLENE (UG/L) (34475)
<0.100	<0.382	<0.044	<0.038	<0.032	<0.038	<0.038
						DIISO- PROPYL ETHER, (UG/L) (81577)
						<0.098

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VOLATILE ORGANIC COMPOUND SCHEDULE--Continued

DIETHYL ETHER (UG/L) (81576)	METHYL- TERT- BUTYL ETHER (UG/L) (78032)	ETHYL TERT- BUTYL ETHER (UG/L) (50004)	TERT- PENTYL- METHYL- ETHER (UG/L) (50005)	1,1,2-TRI- CHLORO- TRIPLUOR- OETHANE (UG/L) (77652)	TETRA- HYDRO- FURAN (UG/L) (81607)	HEXA- CHLORO- BUTADIENE (UG/L) (39702)	2-HEXA- NONE (UG/L) (77103)
<0.170	<0.112	<0.054	<0.112	<0.092	<1.15	<0.142	<0.746
1,2,3,5-TET- RAMETHYL- BENZENE (UG/L) (50000)	METHYL METHAC- RYLATE (UG/L) (81597)	ETHYL METHAC- RYLATE (UG/L) (73570)	BROMO- METHANE (UG/L) (34413)	CHLORO- METHANE (UG/L) (34418)	BROMO- CHLORO- METHANE (UG/L) (77297)	DIBROMO- CHLORO- METHANE (UG/L) (32105)	DIBROMO- METHANE (UG/L) (30217)
<0.240	<0.350	<0.278	<0.148	<0.254	<0.044	<0.182	<0.050
BROMO- DICHORO- METHANE (UG/L) (32101)	DICHLORO- DIFLUORO- METHANE (UG/L) (34668)	METHYL IODIDE (UG/L) (77424)	TETRA- CHLORO- METHANE (UG/L) (32102)	BROMO- FORM (UG/L) (32104)	CHLORO- FORM (UG/L) (32106)	TRICHLORO- FLUORO- METHANE (UG/L) (34488)	METHYL ACRYLATE (UG/L) (49991)
<0.048	<0.096	<0.076	<0.088	<0.104	<0.052	<0.032	<0.612
METHYL ACRYLO- NITRILE (UG/L) (81593)	2-BUTA- NONE (UG/L) (81595)	4-METHYL- 2-PENTA TONE (UG/L) (78133)	NAPTH-- ALENE (UG/L) (34696)	1,2,3,4-TETR- AMETHYL- BENZENE (UG/L) (49999)	1,2-DI- CHLORO- PROPANE (UG/L) (34541)	2,2-DI- CHLORO- PROPANE (UG/L) (77170)	1,3-DI- CHLORO- PROPANE (UG/L) (77173)
<0.570	<1.65	<0.374	<0.250	<0.230	<0.068	<0.078	<0.116
1,2,3-TRI- CHLORO- PROPANE (UG/L) (77443)	1,2-DI- BROMO-3- CHLORO- PROPANE (UG/L) (82625)	3-CHLORO- PROPENE (UG/L) (78109)	1,1-DI- CHLORO- PROPENE, (UG/L) (77168)	CIS 1,3-DI- CHLORO- PROPENE (UG/L) (34704)	TRANS- 1,3-DI- CHLORO- PROPENE (UG/L) (34699)	STYRENE (UG/L) (77128)	TOLUENE (UG/L) (34010)
<0.070	<0.214	<0.196	<0.026	<0.092	<0.134	<0.042	<0.038
2-CHLORO- TOLUENE (UG/L) (77275)	4-CHLORO- TOLUENE (UG/L) (77277)	O-ETHYL TOLUENE (UG/L) (77220)	4-ISOPRO- PYL-1-METH- YLBENZENE (UG/L) (77356)	VINYL CHLORIDE (UG/L) (39175)	O- XYLENE (UG/L) (77135)	M-P- XYLENE (UG/L) (85795)	
<0.042	<0.056	<0.100	<0.110	<0.112	<0.064	<0.064	

QUALITY OF GROUND WATER

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VOLATILE ORGANIC COMPOUNDS

REMARKS.--The following table contains volatile organic compounds (VOC) data for sites at which VOC's were detected. The nineteen sites identified previously and sampled as part of the Kanawha/New River National Water Quality Assessment program were analyzed for the VOC's listed in the volatile organic compound schedule. Only those sites where VOC's were detected and only those constituents which had detectable concentrations of VOC's are presented here.

STATION NUMBER	DATE	TIME	BENZENE (UG/L) (34030)	1,4-DI- CHLORO- BENZENE (UG/L) (34571)	1,2,4- TRICHLOR- OBENZENE (UG/L) (34551)	ISO- PROPYL- BENZENE (UG/L) (77223)	CARBON DISULFIDE (UG/L) (77041)	1,1,1-TRI- CHLORO- ETHANE (UG/L) (34506)
GRAYSON COUNTY								
363632081092701	7-16-97	1500	<0.032	<0.050	<0.188	<0.032	<0.080	E0.005
363739081284401	7-10-97	1500	<0.032	<0.050	<0.188	<0.032	<0.080	<0.032
364051081041401	7-17-97	1000	<0.032	<0.050	<0.188	<0.032	<0.080	E0.010
CARROLL COUNTY								
363831080514101	8-04-97	1600	<0.032	<0.050	<0.188	<0.032	E0.010	E0.010
364211080303601	8-06-97	1000	E0.010	E0.005	<0.188	<0.032	<0.080	E0.010
364653081010501	7-21-97	1400	<0.032	<0.050	<0.188	<0.032	<0.080	<0.032
364747080510601	8-05-97	1000	E0.010	E0.004	<0.188	<0.032	E0.010	E0.006
365145080430301	7-23-97	1100	<0.032	<0.050	<0.188	E0.010	E0.020	E0.010
FLOYD COUNTY								
365450080184001	7-22-97	1100	E0.010	E0.010	E0.020	<0.032	<0.080	E0.010
365610080185601	8-13-97	1500	<0.032	<0.050	<0.188	<0.032	<0.080	<0.032
MONTGOMERY COUNTY								
370007080312201	8-11-97	1600	<0.032	<0.050	<0.188	<0.032	<0.080	<0.032

QUALITY OF GROUND WATER

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VOLATILE ORGANIC COMPOUNDS--Continued

REMARKS.--The following table contains volatile organic compounds (VOC) data for sites at which VOC's were detected. The nineteen sites identified previously and sampled as part of the Kanawha/New River National Water Quality Assessment program were analyzed for the VOC's listed in the volatile organic compound schedule. Only those sites where VOC's were detected and only those constituents which had detectable concentrations of VOC's are presented here.

STATION NUMBER	DATE	CIS-1,2 DICHLORO ETHYLENE (UG/L) (77093)	TRI- CHLOR OETHY- LENE (UG/L) (39180)	TETRA- CHLOR- OETHY- LENE (UG/L) (34475)	METHYL TERT BUTYL ETHER (UG/L) (78032)	CHLORO- FORM (UG/L) (32106)	2-BUTA NONE (UG/L) (81595)	TOLUENE (UG/L) (34010)
GRAYSON COUNTY								
363632081092701	7-16-97	<0.038	<0.038	<0.038	<0.112	E0.020	<1.65	<0.039
363739081284401	7-10-97	<0.038	<0.038	<0.038	<0.112	E0.030	<1.65	<0.038
364051081041401	7-17-97	<0.038	<0.038	E0.010	<0.112	E0.010	<2.00	<0.038
CARROLL COUNTY								
363831080514101	8-04-97	<0.038	<0.038	<0.038	<0.112	<0.052	<1.65	<0.038
364211080303601	8-06-97	<0.038	<0.038	<0.038	<0.112	E0.010	<1.65	<0.038
364653081010501	7-21-97	<0.038	<0.038	<0.038	<0.112	<0.052	<1.65	E0.010
364747080510601	8-05-97	<0.038	<0.038	<0.038	1.20	E0.010	<1.65	<0.038
365145080430301	7-23-97	<0.038	<0.038	<0.038	<0.112	<0.052	<1.65	<0.038
FLOYD COUNTY								
365450080184001	7-22-97	E0.006	E0.006	0.123	E0.050	E0.040	<1.65	E0.020
365610080185601	8-13-97	<0.038	<0.038	<0.038	<0.112	E0.010	<1.65	<0.038
MONTGOMERY COUNTY								
370007080312201	8-11-97	<0.038	<0.038	<0.038	<0.112	<0.052	E0.200	E0.010

QUALITY OF GROUND WATER

NATIONAL WATER QUALITY ASSESSMENT PROGRAM,
KANAWHA-NEW RIVER BASIN STUDY UNIT

NEW RIVER BASIN

STATION	NUMBER	DATE	TIME	GEO- LOGIC UNIT	DEPTH OF WELL, TOTAL (FEET) (72008)	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)	OXID- ATION RED- UCTION POTEN- TIAL (MV) (00090)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	TUR- BID- ITY (NTU) (00076)
363632081092701	07-16-97	1500	400VGBG	167.0	2880	55	5.1	448	14.0	691	2.9	
363632081092701	07-16-97	1509	400VGBG	167.0	2880	--	--	--	--	--	--	
363739081284401	07-10-97	1500	400MRGR	300.0	3910	9	5.7	360	11.0	665	0.29	
363739081284401	07-10-97	1509	400MRGR	300.0	3910	--	--	--	--	--	--	
363831080514101	08-04-97	1600	400ASHE	350.0	2730	65	5.9	417	12.5	690	<0.10	
363831080514101	08-04-97	1609	400ASHE	350.0	2730	--	--	--	--	--	--	
363914080471201	08-14-97	1000	400ASHE	147.0	2920	21	5.5	426	12.0	686	0.11	
363914080471201	08-14-97	1009	400ASHE	147.0	2920	--	--	--	--	--	--	
364051081041401	07-17-97	1000	400SPRK	287.0	2545	106	6.5	283	13.0	698	0.37	
364051081041401	07-17-97	1009	400SPRK	287.0	2545	--	--	--	--	--	--	
364128081161201	07-16-97	1000	400MRGR	105.0	3155	70	5.8	307	12.5	683	0.73	
364128081161201	07-16-97	1009	400MRGR	105.0	3155	--	--	--	--	--	--	
364146081293201	07-29-97	1300	400VGBG	405.0	3490	42	6.4	318	11.0	674	<0.10	
364146081293201	07-29-97	1309	400VGBG	405.0	3490	--	--	--	--	--	--	
364211080303601	08-06-97	1000	400LCBG	91.0	2750	169	6.4	417	13.0	693	0.52	
364211080303601	08-06-97	1009	400LCBG	91.0	2750	--	--	--	--	--	--	
364513080422301	07-24-97	0900	400ASHEA	110.0	2485	76	6.2	305	15.0	698	0.31	
364513080422301	07-24-97	0909	400ASHEA	110.0	2485	--	--	--	--	--	--	
364650080331601	07-31-97	1000	400ASHEA	315.0	2400	175	7.0	319	13.0	706	0.12	
364650080331601	07-31-97	1009	400ASHEA	315.0	2400	--	--	--	--	--	--	
364653081010501	07-21-97	1400	377ERWN	325.0	2435	37	5.1	346	13.5	702	0.43	
364653081010501	07-21-97	1409	377ERWN	325.0	2435	--	--	--	--	--	--	
364747080510601	08-05-97	1000	400ASHE	175.0	2675	48	5.7	449	14.5	691	0.61	
364747080510601	08-05-97	1009	400ASHE	175.0	2675	--	--	--	--	--	--	
364953080264801	07-30-97	1000	400ASHEA	270.0	2880	166	7.6	337	13.0	691	0.12	
364953080264801	07-30-97	1009	400ASHEA	270.0	2880	--	--	--	--	--	--	
365145080430301	07-23-97	1100	400ASHE	175.0	2645	79	5.8	233	14.0	696	2.4	
365145080430301	07-23-97	1109	400ASHE	175.0	2645	--	--	--	--	--	--	
365213080255101	07-30-97	1500	400ASHEA	138.0	2630	230	7.1	-31	13.0	699	0.12	
365213080255101	07-30-97	1509	400ASHEA	138.0	2630	--	--	--	--	--	--	
365450080184001	07-22-97	1100	400ASHEA	205.0	2410	187	5.7	372	13.5	703	<0.10	
365450080184001	07-22-97	1109	400ASHEA	205.0	2410	--	--	--	--	--	--	
365610080185601	08-13-97	1500	400ASHE	420.0	2490	260	6.2	386	13.0	699	1.8	
365610080185601	08-13-97	1509	400ASHE	420.0	2490	--	--	--	--	--	--	
370007080312201	08-11-97	1600	377ROME	325.0	2080	453	7.3	276	14.0	712	2.6	
370007080312201	08-11-97	1609	377ROME	325.0	2080	--	--	--	--	--	--	
370122080263601	08-13-97	1000	377CHLH	360.0	2290	387	7.3	53	13.5	706	<0.10	
370122080263601	08-13-97	1009	377CHLH	360.0	2290	--	--	--	--	--	--	

STATION	NUMBER	DATE	OXYGEN, DIS- SOLVED (MG/L) (00300)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML) (31501)	COLI- FORM, FECAL, UM-MF (COLS./ 100 ML) (31625)	COLI- FORM, TOTAL, WTR UNF MF, MI (COLS./ 100 ML) (90900)	COLI- FORM, TOTAL, ONPG, AUTO AN (MPN/ 100 ML) (90908)	E. COLI WTR FLT MF 0.7U NUT AG- AR+MUG 4HR35D COL/100 (50278)	E. COLI ONPG- MUG, WTR UNFLTRD MF, MI (COLS./ 100 ML) (90901)	E. COLI ONPG- MUG, AUTO AN (COLO- NIES/ 100 ML) (50468)	CLOS- TRIDIUM PERFRI- GENS, MF-MCP, (COL/ 100 ML) (90915)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)
363632081092701	07-16-97	6.6	K1	<1	--	<1	<1	<1	--	<1	--	15
363632081092701	07-16-97	--	--	--	--	--	--	--	--	--	--	--
363739081284401	07-10-97	--	K1	<1	--	<1	<1	<1	--	<1	--	18
363739081284401	07-10-97	--	--	--	--	--	--	--	--	--	--	--
363831080514101	08-04-97	2.7	<1	<1	<1	--	<1	<1	--	--	--	22
363831080514101	08-04-97	--	--	--	--	--	--	--	--	--	--	--
363914080471201	08-14-97	9.1	<1	<1	--	--	<1	--	--	--	--	6
363914080471201	08-14-97	--	--	--	--	--	--	--	--	--	--	--
364051081041401	07-17-97	4.0	<1	<1	--	<1	<1	--	<1	--	--	37
364051081041401	07-17-97	--	--	--	--	--	--	--	--	--	--	--
364128081161201	07-16-97	7.4	<1	<1	--	1	<1	--	<1	<1	--	23
364128081161201	07-16-97	--	--	--	--	--	--	--	--	--	--	--
364146081293201	07-29-97	7.3	K3	<1	--	--	<1	--	--	<2	--	15
364146081293201	07-29-97	--	--	--	--	--	--	--	--	--	--	--
364211080303601	08-06-97	6.5	<1	<1	<1	--	<1	<1	--	--	--	56
364211080303601	08-06-97	--	--	--	--	--	--	--	--	--	--	--
364513080422301	07-24-97	--	K11	<1	--	--	<1	--	--	--	--	29
364513080422301	07-24-97	--	--	--	--	--	--	--	--	--	--	--
364650080331601	07-31-97	5.6	<1	<1	--	--	<1	--	--	--	--	78
364650080331601	07-31-97	--	--	--	--	--	--	--	--	--	--	--
364653081010501	07-21-97	8.8	K1	<1	--	3	<1	--	<1	--	--	14
364653081010501	07-21-97	--	--	--	--	--	--	--	--	--	--	--
364747080510601	08-05-97	4.0	<1	<1	<1	--	<1	<1	--	--	--	15
364747080510601	08-05-97	--	--	--	--	--	--	--	--	--	--	--
364953080264801	07-30-97	5.6	<1	<1	--	--	<1	--	--	<2	--	68
364953080264801	07-30-97	--	--	--	--	--	--	--	--	--	--	--
365145080430301	07-23-97	5.8	K1	<1	--10	<1	--	<1	--	28	--	--
365145080430301	07-23-97	--	--	--	--	--	--	--	--	--	--	--
365213080255101	07-30-97	0.1	K1	<1	--	--	<1	--	--	<2	--	87
365213080255101	07-30-97	--	--	--	--	--	--	--	--	--	--	--
365450080184001	07-22-97	5.2	<1	<1	--	<1	<1	--	<1	--	--	68
365450080184001	07-22-97	--	--	--	--	--	--	--	--	--	--	--
365610080185601	08-13-97	4.9	K4	<1	--	--	<1	--	--	--	--	94
365610080185601	08-13-97	--	--	--	--	--	--	--	--	--	--	--
370007080312201	08-11-97	9.6	--	<1	--	--	--	--	--	--	--	230
370007080312201	08-11-97	--	--	--	--	--	--	--	--	--	--	--
370122080263601	08-13-97	0.0	K14	<1	<1	--	<1	<1	--	--	--	190
370122080263601	08-13-97	--	--	--	--	--	--	--	--	--	--	--

NEW RIVER BASIN

STATION	NUMBER	DATE	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)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	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)
363632081092701	07-16-97	3.6	1.5	5.2	1.2	23	<1	19	2.8	1.9	<0.1	
363632081092701	07-16-97	--	--	--	--	--	--	--	--	--	--	
363739081284401	07-10-97	6.5	0.54	2.8	0.6	27	<1	22	<0.10	2.0	<0.1	
363739081284401	07-10-97	--	--	--	--	--	--	--	--	--	--	
363831080514101	08-04-97	7.2	0.95	3.0	1.4	23	<1	19	7.1	0.8	<0.1	
363831080514101	08-04-97	--	--	--	--	--	--	--	--	--	--	
363914080471201	08-14-97	1.4	0.55	1.6	0.8	10	<1	8	<0.10	1.3	<0.1	
363914080471201	08-14-97	--	--	--	--	--	--	--	--	--	--	
364051081041401	07-17-97	12	1.8	7.7	0.9	53	<1	43	1.7	0.9	2.5	
364051081041401	07-17-97	--	--	--	--	--	--	--	--	--	--	
364128081161201	07-16-97	5.3	2.4	5.2	0.5	31	<1	25	1.8	2.4	0.1	
364128081161201	07-16-97	--	--	--	--	--	--	--	--	--	--	
364146081293201	07-29-97	5.1	0.47	3.2	0.6	26	<1	22	0.47	0.3	<0.1	
364146081293201	07-29-97	--	--	--	--	--	--	--	--	--	--	
364211080303601	08-06-97	12	6.2	4.8	2.5	43	<1	35	2.1	12	<0.1	
364211080303601	08-06-97	--	--	--	--	--	--	--	--	--	--	
364513080422301	07-24-97	6.0	3.5	2.1	0.5	35	<1	28	0.67	5.5	<0.1	
364513080422301	07-24-97	--	--	--	--	--	--	--	--	--	--	
364650080331601	07-31-97	20	6.6	2.6	0.8	88	<1	72	3.1	2.2	<0.1	
364650080331601	07-31-97	--	--	--	--	--	--	--	--	--	--	
364653081010501	07-21-97	1.9	2.2	1.1	0.3	11	<1	9	7.4	0.6	<0.1	
364653081010501	07-21-97	--	--	--	--	--	--	--	--	--	--	
364747080510601	08-05-97	4.2	1.1	2.2	1.3	14	<1	11	5.7	1.0	<0.1	
364747080510601	08-05-97	--	--	--	--	--	--	--	--	--	--	
364953080264801	07-30-97	25	1.4	3.1	2.4	84	<1	69	4.8	3.4	<0.1	
364953080264801	07-30-97	--	--	--	--	--	--	--	--	--	--	
365145080430301	07-23-97	9.1	1.2	2.4	0.3	32	<1	26	1.9	2.8	<0.1	
365145080430301	07-23-97	--	--	--	--	--	--	--	--	--	--	
365213080255101	07-30-97	29	3.6	4.4	3.5	111	<1	91	8.6	7.6	<0.1	
365213080255101	07-30-97	--	--	--	--	--	--	--	--	--	--	
365450080184001	07-22-97	14	8.2	5.0	1.6	51	<1	42	3.7	15	<0.1	
365450080184001	07-22-97	--	--	--	--	--	--	--	--	--	--	
365610080185601	08-13-97	35	1.5	5.9	2.6	105	<1	86	2.3	27	<0.1	
365610080185601	08-13-97	--	--	--	--	--	--	--	--	--	--	
370007080312201	08-11-97	48	27	1.9	2.5	229	<1	188	2.9	11	<0.1	
370007080312201	08-11-97	--	--	--	--	--	--	--	--	--	--	
370122080263601	08-13-97	50	16	3.7	1.1	252	<1	207	9.6	1.2	0.1	
370122080263601	08-13-97	--	--	--	--	--	--	--	--	--	--	

QUALITY OF GROUND WATER

NATIONAL WATER QUALITY ASSESSMENT PROGRAM,
KANAWHA-NEW RIVER BASIN STUDY UNIT

NEW RIVER BASIN

STATION	NUMBER	DATE	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)
363632081092701	07-16-97	21	57	<0.010	0.262	<0.015	<0.20	<0.010	0.017	--	--	--
363632081092701	07-16-97	--	--	--	--	--	--	--	--	5.9	<1.0	--
363739081284401	07-10-97	15	47	<0.010	0.635	<0.015	<0.20	0.011	0.032	--	--	--
363739081284401	07-10-97	--	--	--	--	--	--	--	--	3.3	<1.0	--
363831080514101	08-04-97	14	55	<0.010	0.314	0.033	<0.20	<0.010	<0.010	--	--	--
363831080514101	08-04-97	--	--	--	--	--	--	--	--	6.2	<1.0	--
363914080471201	08-14-97	8.5	23	<0.010	0.309	<0.015	<0.20	<0.010	0.012	--	--	--
363914080471201	08-14-97	--	--	--	--	--	--	--	--	6.6	<1.0	--
364051081041401	07-17-97	26	82	<0.010	0.574	<0.015	<0.20	<0.010	<0.010	--	--	--
364051081041401	07-17-97	--	--	--	--	--	--	--	--	5.0	<1.0	--
364128081161201	07-16-97	31	74	<0.010	0.662	<0.015	<0.20	0.085	0.091	--	--	--
364128081161201	07-16-97	--	--	--	--	--	--	--	--	3.1	<1.0	--
364146081293201	07-29-97	19	46	<0.010	0.120	<0.015	<0.20	<0.010	0.015	--	--	--
364146081293201	07-29-97	--	--	--	--	--	--	--	--	5.6	<1.0	--
364211080303601	08-06-97	21	130	<0.010	6.65	0.021	<0.20	<0.010	0.018	--	--	--
364211080303601	08-06-97	--	--	--	--	--	--	--	--	3.2	<1.0	--
364513080422301	07-24-97	25	68	<0.010	0.534	<0.015	<0.20	<0.010	0.018	--	--	--
364513080422301	07-24-97	--	--	--	--	--	--	--	--	3.6	<1.0	--
364650080331601	07-31-97	25	125	<0.010	0.362	<0.015	<0.20	<0.010	0.011	--	--	--
364650080331601	07-31-97	--	--	--	--	--	--	--	--	3.8	<1.0	--
364653081010501	07-21-97	9.7	32	<0.010	<0.050	<0.015	<0.20	<0.010	<0.010	--	--	--
364653081010501	07-21-97	--	--	--	--	--	--	--	--	5.7	<1.0	--
364747080510601	08-05-97	14	45	<0.010	0.261	0.029	<0.20	<0.010	<0.010	--	--	--
364747080510601	08-05-97	--	--	--	--	--	--	--	--	6.8	<1.0	--
364953080264801	07-30-97	16	115	<0.010	2.56	<0.015	<0.20	<0.010	<0.010	--	--	--
364953080264801	07-30-97	--	--	--	--	--	--	--	--	4.0	<1.0	--
365145080430301	07-23-97	13	57	<0.010	0.303	<0.015	<0.20	0.020	<0.010	--	--	--
365145080430301	07-23-97	--	--	--	--	--	--	--	--	3.8	<1.0	--
365213080255101	07-30-97	28	152	<0.010	<0.050	<0.015	<0.20	<0.010	<0.010	--	--	--
365213080255101	07-30-97	--	--	--	--	--	--	--	--	3.9	<1.0	--
365450080184001	07-22-97	22	123	<0.010	4.89	<0.015	<0.20	0.017	0.023	--	--	--
365450080184001	07-22-97	--	--	--	--	--	--	--	--	2.8	<1.0	--
365610080185601	08-13-97	19	184	<0.010	2.33	<0.015	<0.20	<0.010	<0.010	--	--	--
365610080185601	08-13-97	--	--	--	--	--	--	--	--	3.3	<1.0	--
370007080312201	08-11-97	9.2	259	<0.010	14.1	0.046	<0.20	<0.010	<0.010	--	--	--
370007080312201	08-11-97	--	--	--	--	--	--	--	--	3.3	<1.0	--
370122080263601	08-13-97	16	218	<0.010	<0.050	<0.015	<0.20	<0.010	0.014	--	--	--
370122080263601	08-13-97	--	--	--	--	--	--	--	--	3.4	<1.0	--

QUALITY OF GROUND WATER

NATIONAL WATER QUALITY ASSESSMENT PROGRAM,
KANAWHA-NEW RIVER BASIN STUDY UNIT

NEW RIVER BASIN

STATION	NUMBER	DATE	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
363632081092701	07-16-97	--	--	--	--	--	--	--	--	<3.0	--
363632081092701	07-16-97	<1	5.3	<1.0	<1.0	2.7	<1.0	14	--	2.8	--
363739081284401	07-10-97	--	--	--	--	--	--	--	--	<3.0	--
363739081284401	07-10-97	<1	2.9	<1.0	<1.0	<1.0	<1.0	2.1	--	<1.0	--
363831080514101	08-04-97	--	--	--	--	--	--	--	--	12	--
363831080514101	08-04-97	<1	22	<1.0	<1.0	1.6	<1.0	4.4	--	<1.0	--
363914080471201	08-14-97	--	--	--	--	--	--	--	--	<3.0	--
363914080471201	08-14-97	<1	11	<1.0	<1.0	<1.0	<1.0	5.1	--	1.1	--
364051081041401	07-17-97	--	--	--	--	--	--	--	--	4.8	--
364051081041401	07-17-97	<1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	<1.0	--
364128081161201	07-16-97	--	--	--	--	--	--	--	--	6.8	--
364128081161201	07-16-97	<1	6.9	<1.0	<1.0	1.7	<1.0	1.5	--	1.5	--
364146081293201	07-29-97	--	--	--	--	--	--	--	--	<3.0	--
364146081293201	07-29-97	<1	2.3	<1.0	<1.0	<1.0	<1.0	<1.0	--	<1.0	--
364211080303601	08-06-97	--	--	--	--	--	--	--	--	<3.0	--
364211080303601	08-06-97	<1	38	<1.0	<1.0	1.9	<1.0	6.2	--	<1.0	--
364513080422301	07-24-97	--	--	--	--	--	--	--	--	<3.0	--
364513080422301	07-24-97	<1	8.3	<1.0	<1.0	2.9	<1.0	3.1	--	<1.0	--
364650080331601	07-31-97	--	--	--	--	--	--	--	--	<3.0	--
364650080331601	07-31-97	<1	5.5	<1.0	<1.0	3.3	<1.0	2.2	--	<1.0	--
364653081010501	07-21-97	--	--	--	--	--	--	--	--	55	--
364653081010501	07-21-97	<1	4.6	<1.0	<1.0	1.1	<1.0	3.8	--	<1.0	--
364747080510601	08-05-97	--	--	--	--	--	--	--	--	8.9	--
364747080510601	08-05-97	<1	12	<1.0	<1.0	2.2	<1.0	2.5	--	<1.0	--
364953080264801	07-30-97	--	--	--	--	--	--	--	--	<3.0	--
364953080264801	07-30-97	<1	22	<1.0	<1.0	1.4	<1.0	<1.0	--	<1.0	--
365145080430301	07-23-97	--	--	--	--	--	--	--	--	310	--
365145080430301	07-23-97	<1	6.6	<1.0	<1.0	1.1	<1.0	2.5	--	<1.0	--
365213080255101	07-30-97	--	--	--	--	--	--	--	--	2400	--
365213080255101	07-30-97	<1	19	<1.0	<1.0	1.8	<1.0	<1.0	--	<1.0	--
365450080184001	07-22-97	--	--	--	--	--	--	--	--	<3.0	--
365450080184001	07-22-97	<1	66	<1.0	<1.0	6.9	<1.0	1.4	--	<1.0	--
365610080185601	08-13-97	--	--	--	--	--	--	--	--	4.4	--
365610080185601	08-13-97	<1	35	<1.0	<1.0	1.1	<1.0	8.1	--	<1.0	--
370007080312201	08-11-97	--	--	--	--	--	--	--	--	12	--
370007080312201	08-11-97	<1	26	<1.0	<1.0	4.1	<1.0	<1.0	--	<1.0	--
370122080263601	08-13-97	--	--	--	--	--	--	--	--	980	--
370122080263601	08-13-97	<1	43	<1.0	<1.0	1.2	<1.0	<1.0	--	<1.0	--

QUALITY OF GROUND WATER

NATIONAL WATER QUALITY ASSESSMENT PROGRAM,
KANAWHA-NEW RIVER BASIN STUDY UNIT

NEW RIVER BASIN

STATION	NUMBER	DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	RADON 222 TOTAL (PCI/L) (82303)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)
363632081092701	07-16-97	<1.0	--	--	--	--	--	--	30872	--	0.50
363632081092701	07-16-97	<1.0	<1.0	<1.0	<1	<1.0	6.5	--	--	1.0	--
363739081284401	07-10-97	<1.0	--	--	--	--	--	2349	--	--	0.10
363739081284401	07-10-97	<1.0	<1.0	<1.0	<1	<1.0	401	--	--	<1.0	--
363831080514101	08-04-97	14	--	--	--	--	--	1628	--	--	0.30
363831080514101	08-04-97	13	<1.0	1.6	<1	<1.0	1.5	--	--	<1.0	--
363914080471201	08-14-97	1.2	--	--	--	--	--	2338	--	--	0.20
363914080471201	08-14-97	1.3	<1.0	<1.0	<1	<1.0	93	--	--	<1.0	--
364051081041401	07-17-97	<1.0	--	--	--	--	--	14060	--	--	<0.10
364051081041401	07-17-97	<1.0	4.7	<1.0	<1	<1.0	4.7	--	--	2.8	--
364128081161201	07-16-97	<1.0	--	--	--	--	--	12985	--	--	0.10
364128081161201	07-16-97	<1.0	<1.0	<1.0	<1	<1.0	14	--	--	<1.0	--
364146081293201	07-29-97	<1.0	--	--	--	--	--	5509	--	--	<0.10
364146081293201	07-29-97	<1.0	<1.0	<1.0	<1	<1.0	31	--	--	<1.0	--
364211080303601	08-06-97	4.1	--	--	--	--	--	1783	--	--	0.20
364211080303601	08-06-97	2.8	<1.0	1.7	<1	<1.0	865	--	--	<1.0	--
364513080422301	07-24-97	<1.0	--	--	--	--	--	<80	--	--	<0.10
364513080422301	07-24-97	<1.0	<1.0	<1.0	<1	<1.0	2.6	--	--	<1.0	--
364650080331601	07-31-97	<1.0	--	--	--	--	--	<80	--	--	0.20
364650080331601	07-31-97	<1.0	<1.0	<1.0	<1	<1.0	7.3	--	--	<1.0	--
364653081010501	07-21-97	85	--	--	--	--	--	1827	--	--	0.20
364653081010501	07-21-97	127	<1.0	1.5	<1	<1.0	64	--	--	<1.0	--
364747080510601	08-05-97	24	--	--	--	--	--	4423	--	--	<0.10
364747080510601	08-05-97	21	<1.0	<1.0	<1	<1.0	7.5	--	--	<1.0	--
364953080264801	07-30-97	<1.0	--	--	--	--	--	341	--	--	0.20
364953080264801	07-30-97	<1.0	<1.0	<1.0	<1	<1.0	1.2	--	--	<1.0	--
365145080430301	07-23-97	104	--	--	--	--	--	4323	--	--	0.20
365145080430301	07-23-97	102	<1.0	<1.0	<1	<1.0	3.4	--	--	<1.0	--
365213080255101	07-30-97	248	--	--	--	--	--	200	--	--	0.20
365213080255101	07-30-97	252	<1.0	<1.0	<1	<1.0	<1.0	--	--	<1.0	--
365450080184001	07-22-97	1.3	--	--	--	--	--	2365	--	--	0.20
365450080184001	07-22-97	1.5	<1.0	2.3	<1	<1.0	2.4	--	--	<1.0	--
365610080185601	08-13-97	40	--	--	--	--	--	3830	--	--	0.20
365610080185601	08-13-97	41	<1.0	1.4	<1	<1.0	21	--	--	<1.0	--
370007080312201	08-11-97	<1.0	--	--	--	--	--	760	--	--	0.20
370007080312201	08-11-97	<1.0	<1.0	<1.0	<1	<1.0	287	--	--	<1.0	--
370122080263601	08-13-97	86	--	--	--	--	--	465	--	--	0.20
370122080263601	08-13-97	89	<1.0	<1.0	<1	<1.0	2.4	--	--	<1.0	--

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Prince William County.....	262-266		
Pulaski County	267-268		
Roanoke (independent city).....	269		
Rockbridge County.....	270		
Rockingham County	271-278		
Southampton County	279-287		
Suffolk (independent city).....	288-316,362-364		
Surry County	317-321		
Sussex County	322-325		
Virginia Beach (independent city).....	326-337		
Westmoreland County	338-340		
York County	341-358,365-366		

CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
<i>Length</i>		
inch (in.)	2.54×10^1	millimeter
	2.54×10^{-2}	meter
foot (ft)	3.048×10^{-1}	meter
mile (mi)	1.609×10^0	kilometer
<i>Area</i>		
acre	4.047×10^3	square meter
	4.047×10^{-1}	square hectometer
	4.047×10^{-3}	square kilometer
square mile (mi ²)	2.590×10^0	square kilometer
<i>Volume</i>		
gallon (gal)	3.785×10^0	liter
	3.785×10^0	cubic decimeter
	3.785×10^{-3}	cubic meter
million gallons (Mgal)	3.785×10^3	cubic meter
	3.785×10^{-3}	cubic hectometer
cubic foot (ft ³)	2.832×10^1	cubic decimeter
	2.832×10^{-2}	cubic meter
cubic-foot-per-second day [(ft ³ /s) d]	2.447×10^3	cubic meter
	2.447×10^{-3}	cubic hectometer
acre-foot (acre-ft)	1.233×10^3	cubic meter
	1.233×10^{-3}	cubic hectometer
	1.233×10^{-6}	cubic kilometer
<i>Flow</i>		
cubic foot per second (ft ³ /s)	2.832×10^1	liter per second
	2.832×10^1	cubic decimeter per second
	2.832×10^{-2}	cubic meter per second
gallon per minute (gal/min)	6.309×10^{-2}	liter per second
	6.309×10^{-2}	cubic decimeter per second
	6.309×10^{-5}	cubic meter per second
million gallons per day (Mgal/d)	4.381×10^1	cubic decimeter per second
	4.381×10^{-2}	cubic meter per second
<i>Mass</i>		
ton (short)	9.072×10^{-1}	megagram or metric ton

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

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