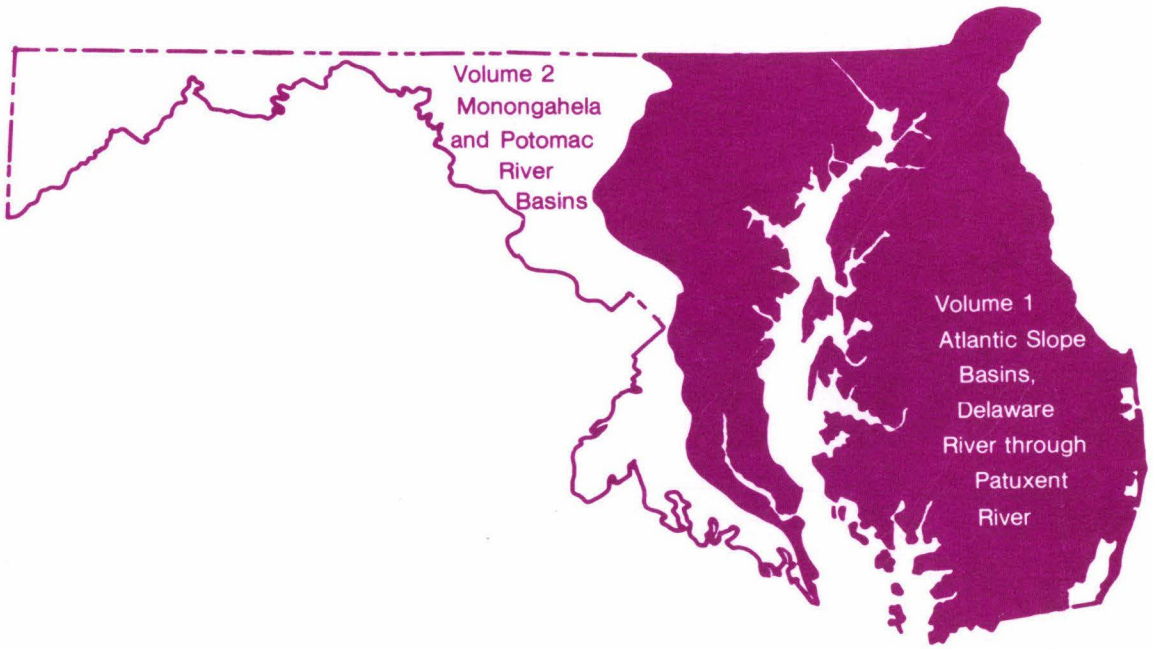
Water Resources Data Maryland and Delaware Water Year 1989

Volume 1. Atlantic Slope Basins, Delaware River through Patuxent River



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT MD-DE-89-1
Prepared in cooperation with the States of Maryland and Delaware
and with other agencies

CALENDAR FOR WATER YEAR 1989

1988

OCTOBER

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1989

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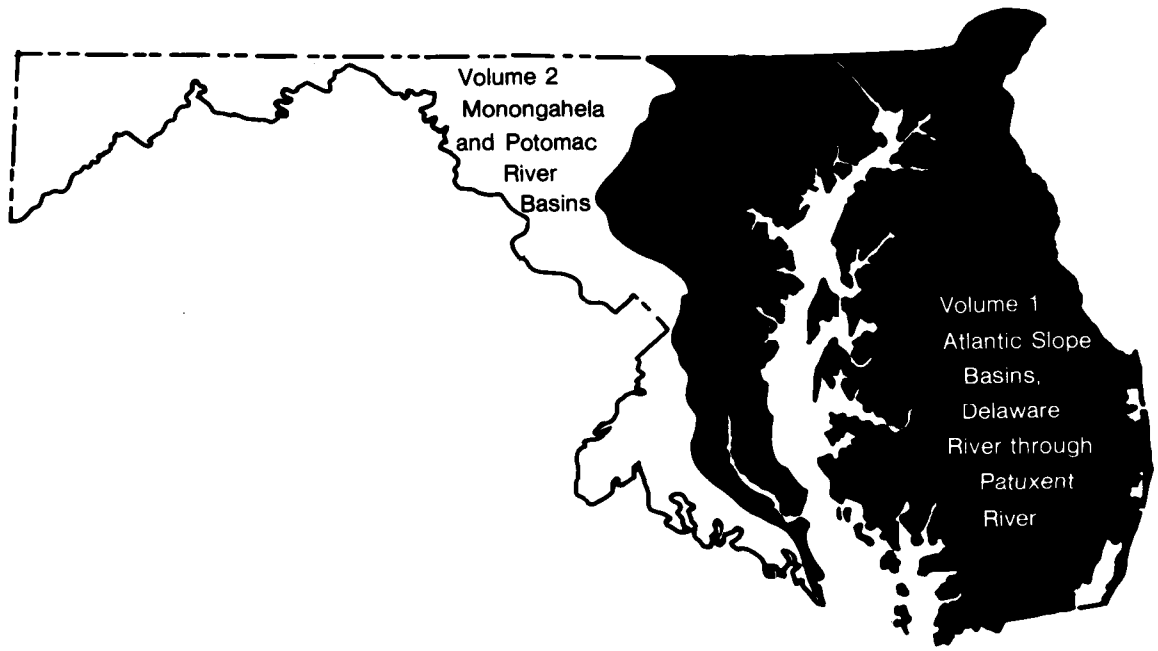
Water Resources Data Maryland and Delaware Water Year 1989

Volume 1. Atlantic Slope Basins, Delaware River through Patuxent River

by R.W. James, Jr., R.H. Simmons, B.F. Strain, and M.J. Smigaj



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT MD-DE-89-1
Prepared in cooperation with the States of Maryland and Delaware and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

MANUEL LUJAN, JR., Secretary

GEOLOGICAL SURVEY

Dallas L. Peck, Director

For additional information write to
District Chief, Water Resources Division
U.S. Geological Survey
208 Carroll Building
8600 La Salle Road
Towson, Maryland 21204

1989

PREFACE

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

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

J. E. Auvil	D. A. DeHanas	L. B. Maclin
J. D. Blomquist	P. E. Exter	J. J. Manning
D. A. Bringman	J. L. Griffith	M. S. Martin
F. A. Danner	B. M. Helinsky	R. H. Pentz
M. R. Danner	J. F. Hornlein	R. J. Sexton
R. G. Davis	M. N. Lys	A. J. Tallman

This report was prepared under the general supervision of H. J. Freiberger, District Chief, Mid-Atlantic District, and S. P. Sauer, Regional Hydrologist, Northeastern Region, and in cooperation with the States of Maryland and Delaware and with other agencies.

50272 - 101

REPORT DOCUMENTATION PAGE	1. REPORT NO. USGS/WRD/HD/90/279	2.	3. Recipient's Accession No.

4. Title and Subtitle

Water Resources Data - Maryland and Delaware, Water Year 1989
Volume 1. Atlantic Slope Basins, Delaware River through Patuxent River

5. Report Date
APRIL 1990

6.

7. Author(s)
R. W. James, Jr., R. H. Simmons, B. F. Strain, M. J. Smigaj

8. Performing Organization Rept. No.
USGS-WDR-MD-DE-89-1

9. Performing Organization Name and Address

U.S. Geological Survey, Water Resources Division
208 Carroll Building
8600 LaSalle Road
Towson, Maryland 21204

10. Project/Task/Work/Unit No.

11. Contract(C) or Grant(G) No.
(C)
(G)

12. Sponsoring Organization Name and Address

U.S. Geological Survey, Water Resources Division
208 Carroll Building
8600 LaSalle Road
Towson, Maryland 21204

13. Type of Report & Period Covered
Annual - Oct. 1, 1988 to Sept. 30, 1989

14.

15. Supplementary Notes

Prepared in cooperation with the states of Maryland and Delaware and with other agencies.

16. Abstract (Limit: 200 words)

Water resources data for the 1989 water year for Maryland and Delaware consist of records of stage, discharge, and water quality of streams; stage and contents of lakes and reservoirs; and water levels and water quality and ground-water wells. This volume contains records for water discharge at 53 gaging stations; water quality at 13 gaging stations and 334 wells; and water levels at 241 observation wells. Also included are data for 2 crest-stage , 17 low-flow, and 6 tidal crest-stage partial-record stations. Additional water data were collected at various sites not involved in the systematic cata-collection program and are published as miscellaneous measurements. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State, local, and Federal agencies in Maryland and Delaware.

17. Document Analysis a. Descriptors

*Maryland, *Delaware, *District of Columbia, * Hydrologic data, *Surface water, *Ground water, *Water quality, Flow rate, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediments, Water temperatures, Sampling sites, Water levels, Water anlyses.

b. Identifiers/Open-Ended Terms

c. COSATI Field/Group

18. Availability Statement: No restriction on distribution. This report may be purchased from:
National Technical Information Service
Springfield, VA 22161

19. Security Class (This Report) UNCLASSIFIED

20. Security Class (This Page) UNCLASSIFIED

21. No. of Pages 605

22. Price

(See ANSI-Z39.18) See Instructions on Reverse

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Department of Commerce

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GROUND-WATER LEVELS-Continued Page

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QUALITY OF GROUND WATER Page

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QUALITY OF GROUND WATER--Continued Page

MARYLAND-Continued:

QUALITY OF GROUND WATER--Continued Page

MARYLAND-Continued:

[Letter after station name designates type of data: (d) discharge, (c) chemical, (b) biological, (m) microbiological, (t) water temperature, (s) sediment, (e) elevation and contents]

[Letter after station name designates type of data: (d) discharge, (c) chemical, (b) biological, (m) microbiological, (t) water temperature, (s) sediment, (e) elevation and contents]

NORTH ATLANTIC SLOPE BASINS--Continued	Station Number
PATAPSCO RIVER BASIN	
North Branch Patapsco River near Reistertown, MD (d)	01586500
North Branch Patapsco River near Marriottsville, MD (d)	01586990
South Branch Patapsco River at Henryton, MD (d)	01587500
Piney Run near Sykesville, MD (d)	01588000
Patapsco River at Woodstock, MD (d)	01588500
Gwynns Falls near Owings Mills, MD (d)	01589200
Gwynns Falls at Villa Nova, MD (d)	01589300
Dead Run at Franklintown, MD (d)	01589330
Jones Falls at Sorrento, MD (d)	01589440
Jones Falls at Maryland Avenue at Baltimore, MD (d)	01589478
Jones Falls near mouth at Baltimore, MD (d,c)	01589480
Curtis Creek:	
Furnace Creek:	
Sawmill Creek at Crain Highway at Glen Burnie, MD (d,c)	01589512
Marley Creek at Harundale, MD (d,c)	01589522
SOUTH RIVER BASIN	
North River (head of South River) near Annapolis, MD (d)	01590500
RHODE RIVER BASIN	
Rhode River:	
Muddy Creek:	
North Fork Muddy Creek at South River, MD (d,t)	01590700
Rhode River near South River, MD (c,t)	01590720
PATUXENT RIVER BASIN	
Patuxent River:	
Cattail Creek near Cookesville, MD (d)	01591350
Cattail Creek at Roxbury Mills, MD (d)	01591500
Patuxent River near Burtonsville, MD (d)	01592000
Little Patuxent River:	
Dorsey Run near Jessup, MD (d)	01594400
Western Branch near Largo, MD (d)	01594500
Cocktown Creek near Huntingtown, MD (d)	01594600
St. Leonard Creek near St. Leonard, MD (d)	01594800

WATER RESOURCES DATA - MARYLAND AND DELAWARE, 1989

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 Maryland and Delaware 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 - Maryland and Delaware."

This report series includes records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; and water levels and water quality of ground-water wells. This volume contains records for water discharge at 53 gaging stations; water quality at 13 gaging stations and 334 wells; and water levels at 241 observation wells. Also included are data for 2 crest-stage, 17 low-flow, and 6 tidal crest-gage partial-record stations. Locations of these sites are shown on figures 3, 4, and 5. Additional water data were collected at various sites not involved in the systematic data-collection program. These data represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in Maryland and Delaware.

This series of annual reports for Maryland and Delaware 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.

Prior to introduction of this series and for several water years concurrent with it, water-resources data for Maryland and Delaware were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-Water Supply of the United States, Parts 6A and 6B." For the 1961 through 1970 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States," and water levels for the 1935 through 1974 water years were published under the title "Ground-Water Levels in the United States." The above mentioned Water-Supply Papers may be consulted in the libraries of the principal cities of the United States and may be purchased from Books and Open-File Reports Section, Federal Center, Bldg. 41, Box 25425, 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 MD-DE-89-2." 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, VA 22161.

Additional information, including current prices, for ordering specific reports may be obtained from the District Chief at the address given on the back of the title page or by telephone (301) 828-1535.

COOPERATION

The U.S. Geological Survey and agencies of the State of Maryland have had cooperative agreements for the collection of water-resource records from 1896 to 1909 and since 1924. Similar cooperative agreements have been had between the Survey and agencies of the State of Delaware since 1943. Organizations that assisted in collecting the data in this report through cooperative agreements with the Survey are:

Maryland Geological Survey, K. N. Weaver, director.

Delaware Geological Survey, R. R. Jordan, State geologist.

Maryland State Highway Adminstration, M. S. Caltrider, adminstrator.

Maryland Department of Environment; Toxics, Environmental Science and Health, Dr. Max Eisenberg, assistant secretary.

District of Columbia Department of Public Works, William B. Johnson, director.

Assistance with funds or services was given by the U.S. Army Corps of Engineers for collecting records at 17 gaging stations and 4 water-quality stations throughout Maryland and Delaware.

The following organizations aided in collecting records:

Delaware: State Department of Natural Resources and Environmental Control, and Water Resources Agency for New Castle County.

Maryland: Maryland Water Resources Administration, Washington Suburban Sanitary Commission, Upper Potomac River Commission, Baltimore City, Baltimore County.

Organizations that provided data are acknowledged in station descriptions.

SUMMARY OF HYDROLOGIC CONDITIONS

Streamflow at the start of the 1989 water year was in the normal range throughout most of the bi-State except for western Maryland where flows were in the excessive range (upper 25 percent of the record) following above-normal rainfall (1 to 2 inches) during September 1988. During October 1988, flows in western Maryland dropped into the normal range following below-normal rainfall (1 to 2 inches). From October 1988 through February 1989, flows throughout most of the bi-state area remained in the normal range. Flows in south central and southern Maryland were in the deficient range (lower 25 percent of the record) during this period and through April. During March, flows on the Eastern shore of Maryland became excessive following above-normal rainfall, averaging 1 to 3 inches. Flow conditions changed little during April, but in May, flows throughout the entire bi-state area were in the excessive range. Above-normal rains averaging 3 to 6 inches kept flows in the excessive range for the remainder of the year for most of the bi-state area. Only in central Maryland did flows return to the normal range for July through September. Rainfall in this area averaged 1 to 2 inches below normal.

During the 1989 water year, three of the four index stations (Potomac River near Washington, D.C. and Seneca Creek at Dawsonville on the Eastern Shore in central Maryland and North Branch Potomac River at Paw Paw, W. Va., in western Maryland) were in the normal range. The Choptank River at Greensboro on the Eastern Shore of Maryland had excessive runoff for the year (157 percent of normal; reference period 1951-80). The yearly average runoff of 198 ft^3/s was the fifth highest since records began in 1949. Several new extremes were set during May. At the Potomac River near Washington, D. C., index site, a record monthly mean was set. At the Seneca Creek at Dawsonville, index site, a record monthly mean and a maximum daily discharge were recorded. At the Choptank River at Greensboro index site, a record monthly mean and a maximum daily discharge were recorded. The new monthly record discharge is 1.5 times greater than that set in 1958. A new record monthly mean was was also recorded for June (1972, previous record).

Monthly and annual mean discharges are compared with long-term averages (reference period 1951-80) for two representative streamflow gaging stations in figure 1. Data for the station, Potomac River at Point of Rocks in central Maryland, reflect runoff conditions in the Potomac River basin, excluding the Coastal Plain. Data for the station, Choptank River at Greensboro on the Eastern Shore of Maryland, reflect runoff from a 113 mi^2 area, of which 21.6 mi^2 is in Delaware in the central part of the Delmarva peninsula.

Average freshwater inflow to the Chesapeake Bay was estimated to be 76,400 ft^3/s, on the basis of flows of the James, Potomac, and Susquehanna Rivers. This is 101 percent of the long-term average during the reference period 1951-89. Flows for the first seven months averaged 40 percent below normal. For the remaining five months, flows averaged 90 percent above normal. A new record monthly high was set for May which was 23 percent greater than the previous high set in 1978. The monthly high for July was the second highest of record and was 36 percent lower than the record high of 1972.

The combined storage in the three major water-supply reservoirs in the Baltimore City Municipal System (combined usable capacity of 85,340 million gallons) increased from 80 percent of capacity in September 1988, to 93 percent of capacity at the end of September 1989.

Ground-Water Levels

Water levels were slightly below normal at the beginning of the 1989 water year and rose to above normal by January. This was in direct response to the above average precipitation which began in the winter and continued throughout the water year. A more detailed explanation is given below for the water-level conditions for each physiographic province:

Appalachian Plateau.--Water levels were normal to slightly above normal at the start of the water year. No record water levels were measured during the year, but levels were above normal throughout most of the water year.

Valley and Ridge.--Water levels were normal to above normal at the start of the water year, followed by a rise in water level through May. Levels then declined throughout the summer but rose to above normal at the end of the water year. No record water levels were recorded.

Blue Ridge.--Water levels were above normal at the start of the water year, with levels increasing through May, when a record high level was recorded in well FR Bd 96. Water levels were above normal throughout the entire water year.

Piedmont.--As the water year started, water levels were above normal throughout Maryland and Delaware. Water levels peaked in May and began dropping during the summer months, but finished the water year above normal. Two artesian wells located in the New Oxford Formation had record water levels. A record high level occurred at well MO Db 68 on May 12, 1989 near the National Institute of Health Animal Center. Well MO Dc 72, which flowed from December 4, 1985 through June 3, 1986, measured 92.46 feet below land surface on August 8, 1989. This decrease water level may be attributable to an increase in ground-water withdrawals at Poolesville, Maryland. A well in Hampstead, Maryland (CL Bf 1) had a record high water level.

Coastal Plain.--Water levels started at normal levels at the beginning of the water year and then dropped slightly, only to rise sharply in December, and then peaking in the months of May and June, with a slight drop near the end of the water year. Two water-table wells in northern Anne Arundel County had record high water levels. The following areas in Maryland with artesian aquifers experienced record low water levels, probably due to increased ground-water withdrawal: Elkton (Potomac), Kent Island (Aquia), Lexington Park (Aquia), nothern Ocean City (Manokin), Prince Frederick (Aquia), and Solomons Island (Aquia).

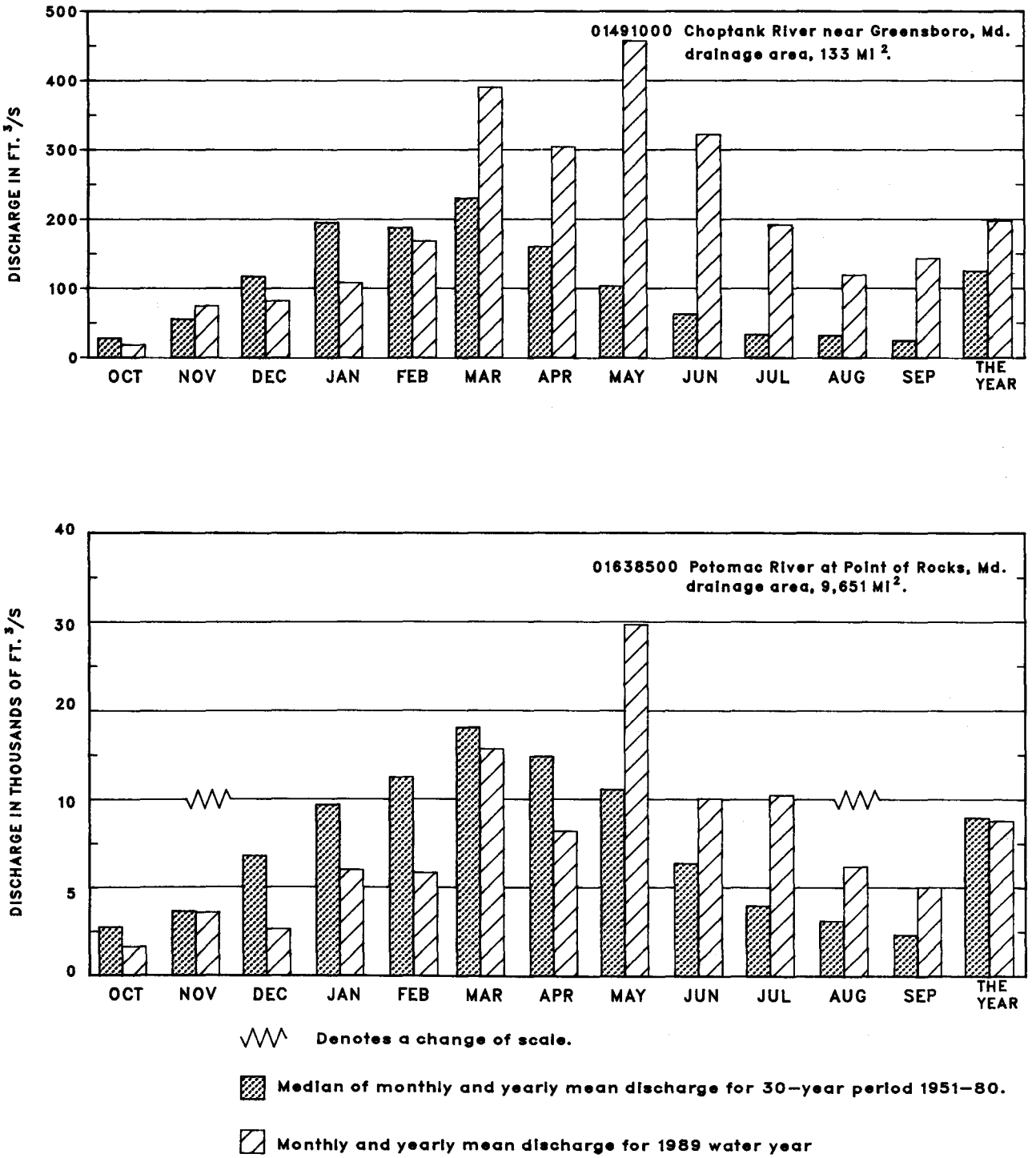

FIGURE 1. COMPARISON OF DISCHARGE AT TWO LONG-TERM REPRESENTATIVE GAGING STATIONS DURING THE 1989 WATER YEAR WITH MEDIAN DISCHARGE FOR INDICATED PERIOD.

SPECIAL NETWORKS AND PROGRAMS

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

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

Tritium Network is a network of stations which has been established to provide baseline information on the occurrence of tritium in the Nation's surface waters. In addition to the surface-water stations in the network, tritium data are also obtained at a number of precipitation stations. The purpose of the precipitation stations is to provide an estimate sufficient for hydrologic studies of the tritium input to the United States.

EXPLANATION OF THE RECORDS

The surface-water and ground-water records published in this report are for the 1988 water year that began October 1, 1986, and ended September 30, 1988. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, water-quality data for surface and ground water, and ground-water-level data. The locations of the stations and wells where the data were collected are shown in figures 3 and 4. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

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

Downstream Order System

Since October 1, 1950, the order of listing hydrologic-station records in Survey reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a mainstream station are listed before that station. A station on a tributary that enters between two mainstream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary with respect to the stream to which it is immediately tributary is indicated by an indention in the "List of Stations" in the front of this report. Each indention represents one rank. This downstream order and system of indention shows which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete eight-digit number for each station, such as 01477800, which appears just to the left of the station name, includes the two-digit Part number "01" plus the six-digit downstream-order number "477800." The Part number designates the major river basin; for example, Part "01" is the North Atlantic slope basin.

Latitude-Longitude System

The identification numbers for wells and miscellaneous surface-water sites are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude, the next seven digits denote degrees, minutes, and seconds of longitude, and the last two digits (assigned sequentially) identify the wells or other sites within a 1-second grid. This site-identification number, once assigned, is a pure number and has no locational significance. In the rare instance where the initial determination of latitude and longitude are found to be in error, the station will retain its initial identification number; however, its true latitude and longitude will be listed in the LOCATION paragraph of the station description. (See figure 2 below.)

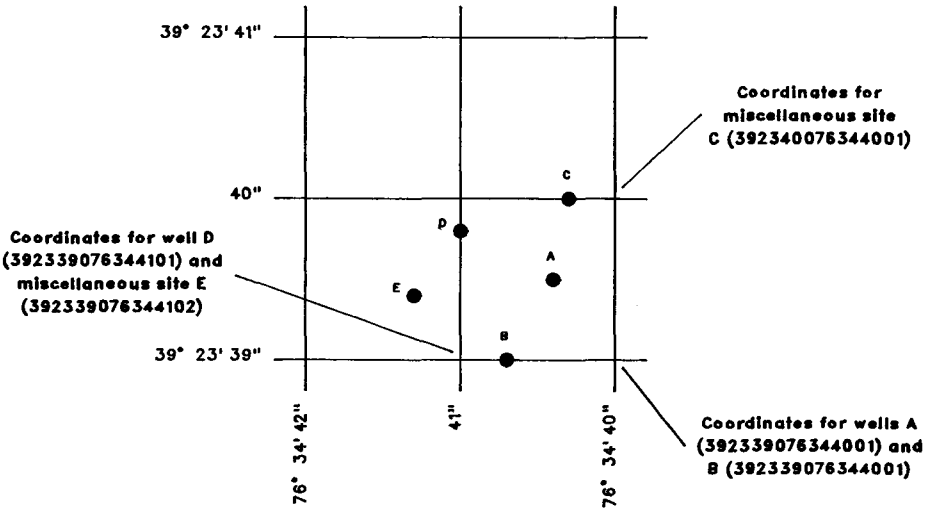

Figure 2. System for numbering wells and miscellaneous sites (latitude and longitude)

Wells in Maryland are also identified on the basis of a second numbering system established by the Maryland Geological Survey. The first two letters of the well number are the county prefix (for example, AL for Allegany). The second part of the well number consists of two letters that designate a 5-minute quadrangle within the county; the first letter (a capital letter) denotes a 5-minute segment of latitude and the second letter (lower case) denotes a 5-minute segment of longitude. The wells are numbered sequentially within each 5-minute quadrangle. For example, well AL Ah 1 is the first well inventoried within the Ah 5-minute quadrangle in Allegany County. Baltimore City well numbers are based on 1-mile grids, with reference to the Washington Monument as the center. Thus, well 7S4E-1 is in grid cell 7 miles south and 4 miles east of the Washington Monument and is the first well inventoried in that grid cell. Wells in Delaware are identified by a numbering system instituted by the Delaware Geological Survey. The State is divided into 5-minute quadrangles of latitude and longitude. The quadrangles are lettered north to south with capital letters. Each 5-minute quadrangle is further subdivided into 25 1-minute blocks which are numbered from north to south from 1 to 5 and are numbered from west to east from 1 to 5. Wells within these 1-minute blocks are assigned numbers in the sequence in which they are inventoried. The identity of a well is established by prefixing the sequence number with an upper and lower case letter followed by two numbers to designate the 5-minute and 1-minute blocks, respectively, in which the well is located. For example, well number Cb41-03 is the third well to be scheduled in the 1-minute block 41 that has coordinate "Cb41".

Records of Stage and Water Discharge

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

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles such as "Crest-stage partial records," or "Low-flow partial records." Records of miscellaneous discharge measurements or of measurements from special studies, such as low-flow seepage studies, may be considered as partial records, but they are presented separately in this report. Location of all complete-record and crest-stage partial-record stations for which data are given in this report are shown in figures 3 and 4.

Data Collection and Computation

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

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

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

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

At some stream-gaging stations, the stage-discharge relation is affected by the backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in computing discharge.

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

For some gaging stations, there are periods when no gage-height record is obtained, or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated from the recorded range in stage, previous or following record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise, daily contents may be estimated from operator's logs, previous or following record, inflow-outflow studies, and other information. Information explaining how estimated daily-discharge values are identified in station records is included in the next two sections, "Data Presentation" (REMARKS paragraph) and "Identifying Estimated Daily Discharge."

Data Presentation

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

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

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

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

REVISED RECORDS.--Published records, because of new information, occasionally are found to be incorrect, and revisions are printed in later reports. Listed under this heading are all the reports in which revisions have been published for the station and the water years to which the revisions apply. If a revision did not include daily, monthly, or annual figures of discharge, that fact is noted after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the most recently revised figure was first published is given.

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

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

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

AVERAGE DISCHARGE.--The discharge value given is the arithmetic mean of the water-year mean discharges. It is computed only for stations having at least 5 water years of complete record, and only water years of complete record are included in the computation. It is not computed for stations where diversions, storage, or other water-use practices cause the value to be meaningless. If water developments significantly altering flow at a station are put into use after the station has been in operation for a period of years, a new average is computed as soon as 5 water years of record have accumulated following the development. The median of yearly mean discharges also is given under this heading for stations having 10 or more water years of record, if the median differs from the average given by more than 10 percent.

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

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

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

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

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

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

The daily table for stream-gaging stations gives mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also is usually expressed in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed "IN."), or in acre-feet (line headed "AC-FT"). Figures for cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion or if the drainage area includes large noncontributing areas. In the yearly summary below the monthly summary, the figures shown are the appropriate discharges for the calendar and water years. At some stations monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversion, or diversions or reservoir contents are given. These figures are identified by a symbol and corresponding footnote.

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

Identifying Estimated Daily Discharge

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

Accuracy of the Records

The accuracy of streamflow records depends primarily on: (1) The stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements; and (2) the accuracy of measurements of stage, measurements of discharge, and interpretation of records.

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

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

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, figures of cubic feet per second per square mile and of runoff, in inches, are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

Other Records Available

Information used in the preparation of the records in this publication, such as discharge-measurement notes, gage-height records, temperature measurements, and rating tables is on file in the Maryland and Delaware offices of the Mid-Atlantic District. Also, most of the daily mean discharges are in computer-readable form and have been analyzed statistically. Information on the availability of the unpublished information or on the results of statistical analyses of the published records may be obtained from the offices whose addresses are given on the back of the title page of this report.

Records of Surface-Water Quality

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

Classification of records

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

A careful distinction needs to be made between "continuing records" , as used in this report, and "continuous recordings," which refers to a continuous graph or a series of discrete values punched at short intervals on a paper tape. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently. Locations of stations for which records on the quality of surface water appear in this report are shown in figure 3.

Arrangement of Records

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

On-site Measurements and Sample Collection

In obtaining water-quality data, a major concern needs to be assuring that the data obtained represent the in situ quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, need to be made onsite when the samples are taken. To assure that measurements made in the laboratory also represent the in situ water, carefully prescribed procedures need to be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in publications on "Techniques of Water-Resources Investigations," Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4. All of these references are listed under "PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS" which appears at the end of the introductory text. Also, detailed information on collecting, treating, and shipping samples may be obtained from the Geological Survey Maryland and Delaware offices.

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load. All samples obtained for the National Stream Quality Accounting Network (see definitions) are obtained from at least several verticals. Whether samples are obtained from the centroid of flow or from several verticals depends on flow conditions and other factors which must be evaluated by the collector.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured and are based upon hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the Geological Survey Maryland office whose address is given on the back of the title page of this report.

Water temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

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

Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross sections.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided-day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method. For periods when no samples were collected, daily discharges of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

At other stations, suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observations, such data are useful in establishing seasonal relations between quality and streamflow and in predicting long-term sediment-discharge characteristics of the stream.

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

Laboratory Measurements

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

Data Presentation

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

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

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

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

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

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

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

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

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

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

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

Remark Codes

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

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

Records of Ground-Water Levels

Water-level data from the Maryland and Delaware Observation-Well Networks and observation wells from 13 ground-water projects are reported. These data are intended to provide historical water-level information for ground-water management and identify ground-water conditions in project areas. The observation well networks were established to observe ground-water level fluctuations through time and to identify areas of man-induced stress on the ground-water flow system. The locations of these observation wells in Maryland and Delaware are shown in figure 4. The locations of project wells are shown in figure 5.

Data Collection and Computation

Measurements of water levels are made in many types of water wells under various conditions. These methods of measurement are standardized to incorporate continuous precision. The equipment and measuring techniques used at each observation well ensures that the measurements at each well are of consistent accuracy and reliability.

The water-level data tables and hydrographs are presented in alphabetical order by counties. The primary identification number is the state well number that appears in the upper left hand corner (see Latitude-Longitude System section on page 5). The secondary identification number is the 15-digit number.

Water levels are measured manually by steel tape or by an electric sensing device approximately every 4 to 6 weeks; some wells are equipped with contiuous graph or punch tape water-level recorders to observe daily fluctuations. The water levels are reported to the nearest hundreth of a foot above or below land-surface datum (lsd) or sea level. Land-surface datum is a datum plane that is approximately at land surface at each well. The elevation of the land-surface datum and the height of the measuring point (MP) above or below land-surface datum is given in each well description. Water levels for wells equipped with graphic or digital recorders report the daily maximum and minimum values.

Data Presentation

A description of each observation well precedes the water-level tables and hydrographs. The following information is given in the description:

WELL NUMBER.--(See Latitude -Longitude System section on page 5.)

SITE ID.--A 15-digit number: the first 6 digits are the latitude, the next 7 digits are the longitude, and the last 2 digits refer to the sequence number for identifying one or more wells at a particular latitude and longitude. The Site ID is the best location at the time of inventory. The actual latitude and longitude may be slightly different as a result of more up-to-date knowledge of location. The Site ID is basically used as an identification number and not an exact location.

PERMIT NUMBER.--The permit number is the state permit number required for drilling wells in Maryland. Upon completion of the well, the driller must submit a completion report which documents specific data on the construction of the well.

LOCATION.--The location is the latitude and longitude in the appropriate designation of degrees, minutes, and seconds. The hydrologic unit is a code for the river basin where the well is located (U.S. Geological Survey, 1974: Hydrologic Unit Map). Also a brief local description of the location is given along with the well-owner's name.

AQUIFER.--The aquifer is the geologic formation from which the well receives its water supply. Each aquifer is identified by its geologic age and its U. S. Geological Survey data base system code.

WELL CHARACTERISTICS.--This describes the type of well, the physical characteristics of the well, and the known construction information.

INSTRUMENTATION.--This provides information on the frequency of measurement of water levels and the equipment used.

DATUM.--This lists the altitude of land surface above sea level at the well to the nearest 10 feet as determined from a 7-1/2 minute quadrangle topographic map, or to the nearest hundreth of a foot as determined from surveying. The measuring point (MP) is the distance above or below the land-surface datum of the point at which the measurements are made.

REMARKS.--This section gives important miscellaneous data relevant to the well site.

PERIOD OF RECORD.--The period of record lists the beginning and ending month and year of water-level record or "current year" if the records are to be continued into the following year.

EXTREMES FOR PERIOD OF RECORD.--The extremes for period identify the date or dates of highest and lowest water-level measurements.

A table of water levels follows the station description for each well. Water levels are reported in feet above or below land-surface datum or sea level, with all taped measurements of water levels listed. Wells equipped with graphic or digital recorders report a daily maximum and minimum value, as well as monthly maximum and minimum values. A 5-year hydrograph follows each water-level table.

Records of Ground-Water Quality

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

Data Collection and Computation

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

Most methods for collecting and analyzing water samples are described in the "U.S. Geological Survey Techniques of Water-Resources Investigations" manuals listed at the end of the introductory text. 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. 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. The REMARK codes listed for surface-water-quality records are also applicable to ground-water-quality records.

ACCESS TO WATSTORE DATA

The National WATer Data STOrage and REtrieval System (WATSTORE) was established for handling water data collected through the activities of the U.S. Geological Survey and to provide for more effective and efficient means of releasing the data to the public. The system is operated and maintained on the central computer facilities of the Survey at its National Center in Reston, Virginia.

WATSTORE can provide a variety of useful products ranging from simple data tables to complex statistical analyses. A minimal fee, plus the actual computer cost incurred in producing a desired product, is charged to the requester. Information about the availability of specific types of data, the acquisition of data or products, and user charges can be obtained locally from the offices whose addresses are given on the back of the title page.

General inquiries about WATSTORE may be directed to:

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

DEFINITION OF TERMS

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

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

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 plus or minus 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 plus or minus 0.2°C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal streptococcal bacteria are bacteria found also in 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 plus or minus 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.

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

Biochemical oxygen demand (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by micro-organisms, 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.

Bottom material: See Bed material.

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

Cubic-foot-per-second day is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, about 646,000 gallons, or 2,445 cubic meters.

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

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

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

Control structure as used in this report is a structure on a stream or canal that is used to regulate the flow or stage of the stream or to prevent the intrusion of salt water.

Cubic foot per second (ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

Cubic feet per second per square mile [$(ft^3/s)/mi^2$] is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

Discharge is the volume of water (or more broadly, volume of fluid plus suspended sediment) that passes a given point within a given period of time.

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period.

Instantaneous discharge is the discharge at a particular instant of time.

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

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.

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

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

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the more general term "stage," although gage height is more appropriate when used with a reading on a gage.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of hydrologic data are obtained.

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

Micrograms per liter (UG/L, ug/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.

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

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

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 sedimentaiton 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:

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

The particle-size 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 ($1 \times 10^{}$) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7×10 radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

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

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

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

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

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

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

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/(m^2.time)] for periphyton and macrophytes and [mg C/(m^3.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 O_2/(m^2.time)] for periphyton and macrophytes and [mg O_2/(m^3.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.

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

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.

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

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

Bed load is the sediment that is transported in a stream by rolling, sliding, or skipping along the bed and very close to it. In this report, bed load is considered to consist of particles in transit within 0.25 ft of the streambed.

Bed load discharge (tons per day) is the quantity of bed load measured by dry weight that moves past a section as bed load in a given time.

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

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

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

Suspended-sediment discharge (tons/day) is the rate at which dry mass of sediment passes a section of a stream or is the quantity of sediment, as measured by dry mass or volume, that passes a section in a given time. It is calculated in units of tons per day as as follows: concentration (mg/L) x discharge (ft^3/s) x 0.0027.

Suspended-sediment load is a general term that refers to material in suspension. It is not synonymous with either discharge or concentration.

Total sediment discharge (tons/day) is the sum of the suspended-sediment discharge and the bed-load discharge. It is the total quantity of sediment, as measured by dry mass or volume, that passes a section during a given time.

Total-sediment load or total load is a term which refers to the total sediment (bed load plus suspended-sediment load) that is in transport. It is not synonymous with total-sediment discharge.

7-day 10-year low flow ($7\ Q_{10}$) is the discharge at the 10-year recurrence interval taken from a frequency curve of annual values of the lowest mean discharge for 7 consecutive days (the 7-day low flow).

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.

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

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

Substrate is the physical surface upon which an organism lives.

Natural substrate refers to any naturally occurring emersed or submersed solid surface, such as a rock or tree, upon which an organism lives.

Artificial substrate is a device which is purposely placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is taken. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multiplate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton collection.

Surface area of a lake is that area outlined on the latest U.S.G.S. topographic map as the boundary of the lake and measured by a planimeter in acres. In localities not covered by topographic maps, the areas are computed from the best maps available at the time planimetered. All areas shown are those for the stage when the planimetered map was made.

Surficial bed material is the part (0.1 to 0.2 ft) of the bed material that is sampled using U.S. Series Bed-Material Samplers.

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

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

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

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

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchial 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	Hexagenia
Species	Hexagenia limbata

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.

Tons per acre-foot indicates the dry mass of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration of the constituent, in milligrams per liter, by 0.00136.

Tons per day (T/DAY) is the quantity of a substance in solution or suspension that passes a stream section during a 24-hour period.

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 discharge is the total quantity of any individual constituent, as measured by dry mass or volume, that passes through a stream cross-section per unit of time. This term needs to be qualified, such as "total sediment discharge," "total chloride discharge," and so on.

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.

Tritium Network is a network of stations which has been established to provide baseline information on the occurrence of tritium in the Nation's surface waters. In addition to the surface-water stations in the network, tritium data are also obtained at a number of precipitation stations. The purpose of the precipitation stations is to provide an estimate sufficient for hydrologic studies of the tritium input to the United States.

Water year in Geological Survey reports dealing with surface-water supply 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, 1985, is called the "1985 water year."

WDR is used as an abbreviation for "Water-Data Report" in the REVISED RECORDS paragraph to refer to State annual hydrologic-data reports (WRD was used as an abbreviation for "Water-Resources Data" in reports published prior to 1976).

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

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

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

The U.S. Geological Survey publishes a series of manuals describing procedures for planning and conducting specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) pertains to surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises.

The reports listed below are for sale by the U.S. Geological Survey, Books and Open-File Reports Section, Federal Center, Box 25425, 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. 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 measurements, and data presentation**, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.

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

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

2-D2. **Application of seismic-refraction techniques to hydrologic studies**, by F. P. Haeni: USGS--TWRI Book 2, Chapter d2. 1988. 86 pages.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

3-A18. **Determination of stream reaeration coefficients by use of tracers**, by F. A. Kilpatrick, R. E. Rathbun, N. Yotsukura, G. W. Parker, and L. L. Delong: USGS-TWRI Book 3, Chapter 18A. 1989. 52 pages.

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

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

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

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

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

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

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

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

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

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

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

5-A1. **Methods for determination of inorganic substances in water and fluvial sediments**, by M. J. Fishman and L. C. Friedman: 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 determination of organic substances in water** and fluvial sediments, by R. L. Wershaw, M. J. Fishman, R. R. Grabbe, and L. E. Lowe: USGS--TWRI Book 5, Chapter A3. 1987. 80 pages.

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

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

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

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

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

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

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

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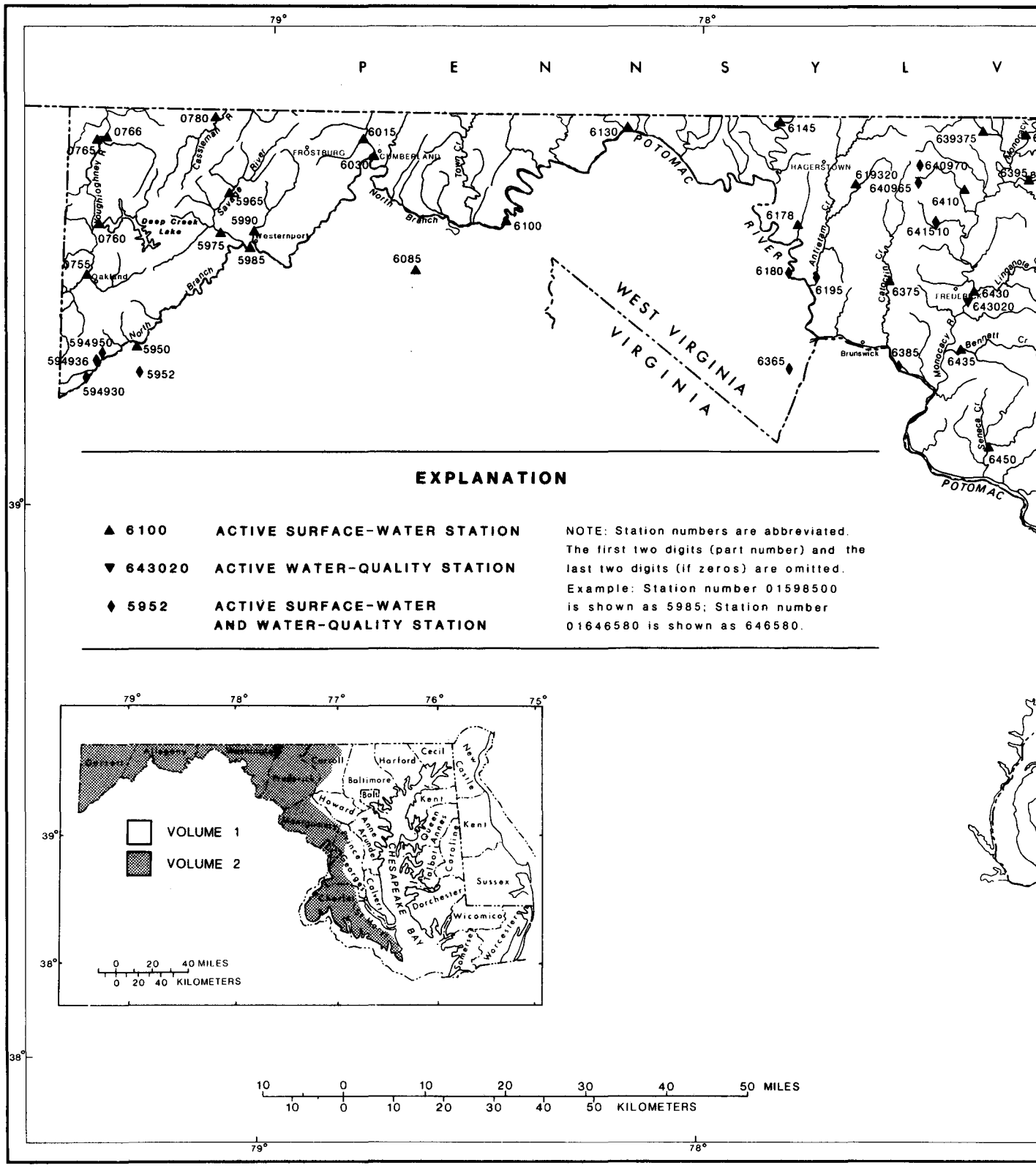
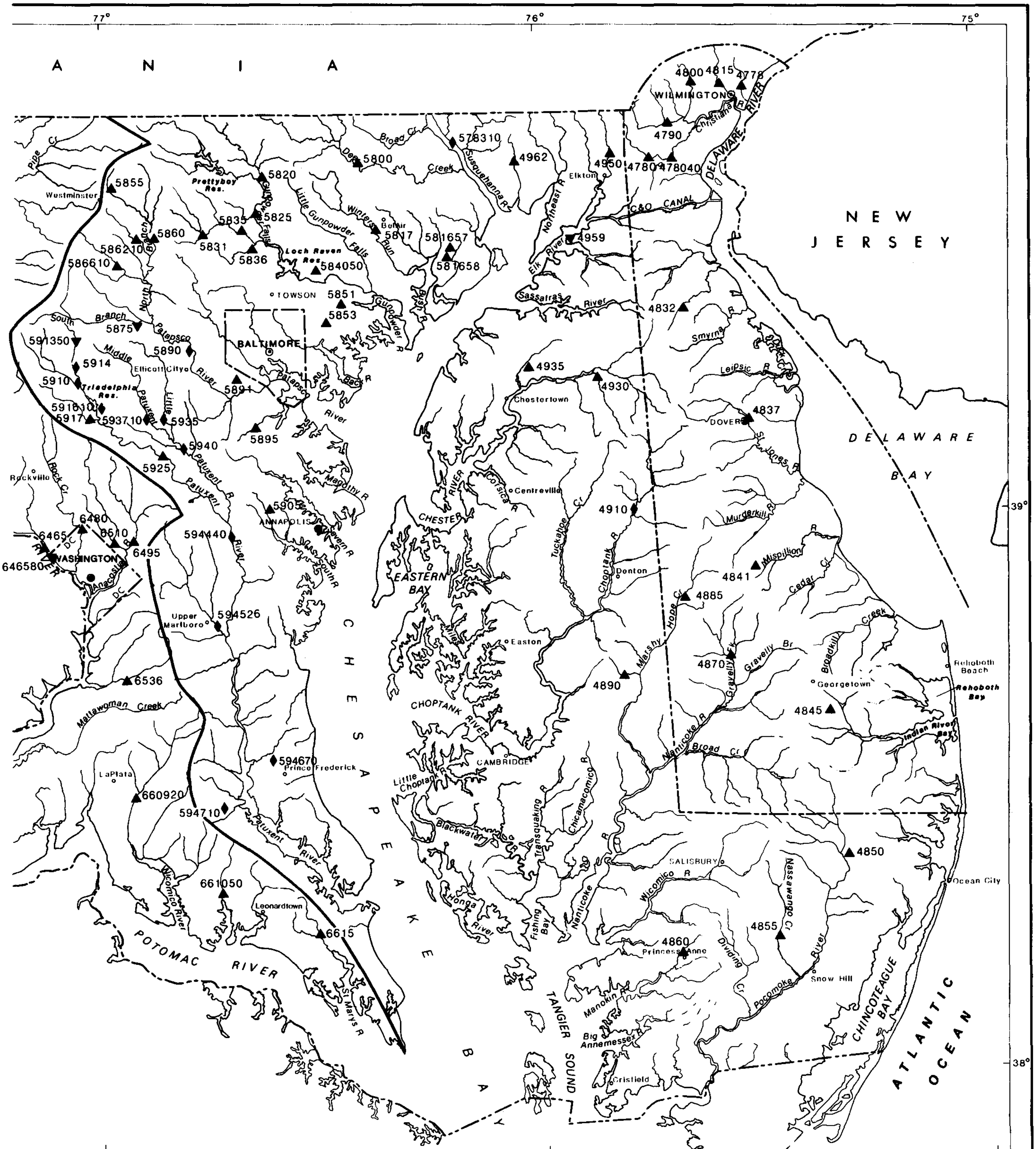


Base map modified from U.S. Geological Survey 1:500,000

Figure 3. Location of surface-water and water-quality stations in Maryland and Delaware



77°
76°
75°
39°
38°
A N I A
N E W
J E R S E Y
DELAWARE BAY
ATLANTIC OCEAN
CHESAPEAKE BAY
TANGIER SOUND
POTOMAC RIVER
CHINCOTEAGUE BAY
WILMINGTON
BALTIMORE
WASHINGTON
ANNAPOLIS
DOVER
TOWSON
Westminster
Elkton
Chestertown
Centreville
Denton
Easton
CAMBRIDGE
SALISBURY
Princess Anne
Snow Hill
Ocean City
Georgetown
Rehoboth Beach
Rehoboth Bay
Upper Marlboro
Prince Frederick
LaPlata
Leonardtown
Rockville
Ellicott City
Crisfield
C&O CANAL
DELAWARE RIVER
Prettyboy Res.
Loch Raven Res.
Triadelphia Res.
EASTERN BAY
CHOPTANK RIVER
CHESTER RIVER
4800
4815
4778
4790
4780
478040
4950
4962
578310
5800
5820
5825
5835
5831
5836
5855
5860
586210
586610
5817
581657
581658
584050
5851
5853
5875
591350
5890
5914
5910
591810
5917
593710
5935
5891
5895
5940
5925
4959
4832
4935
4930
4837
4910
4841
4885
4870
4890
4845
4850
4855
4860
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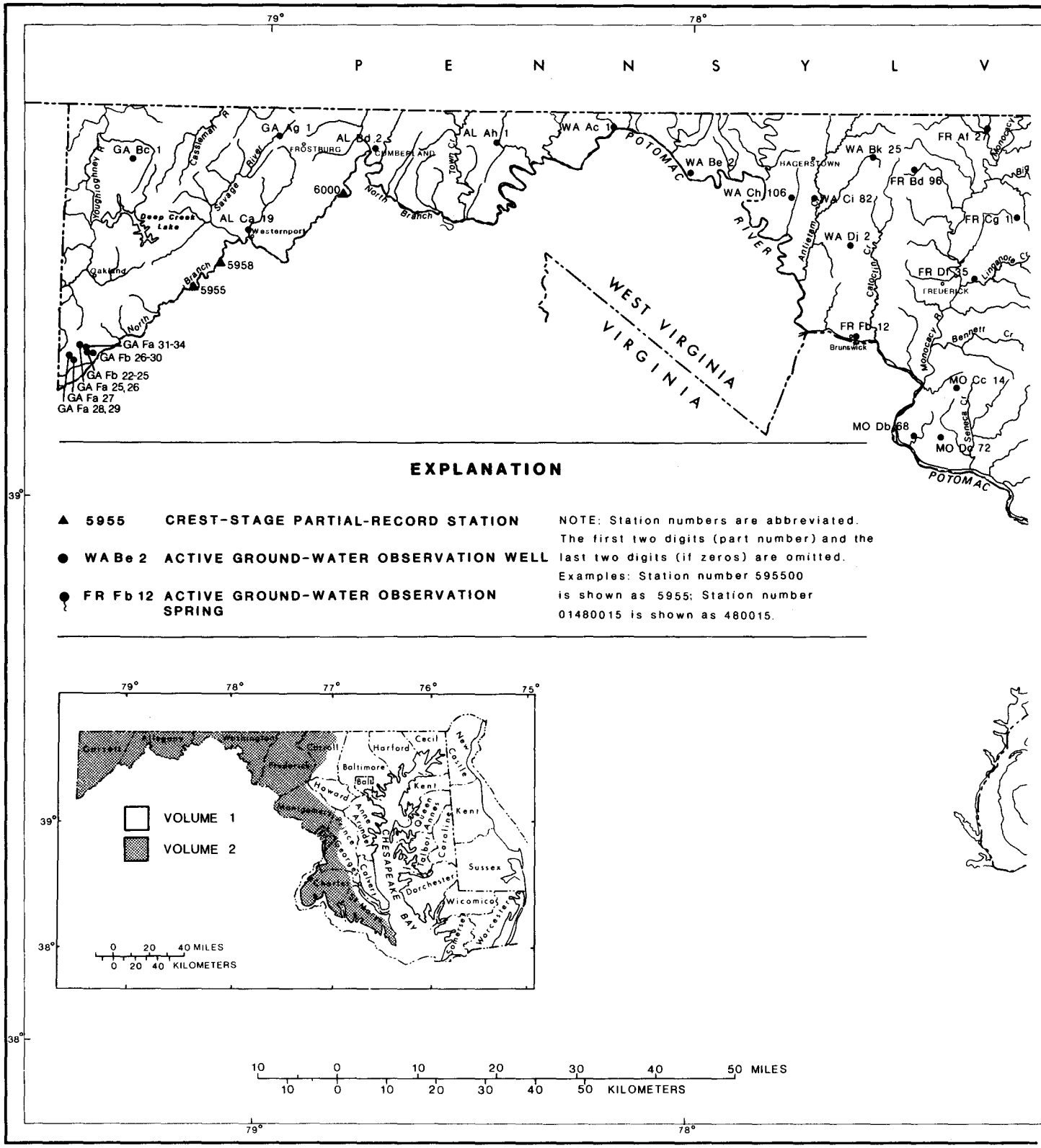
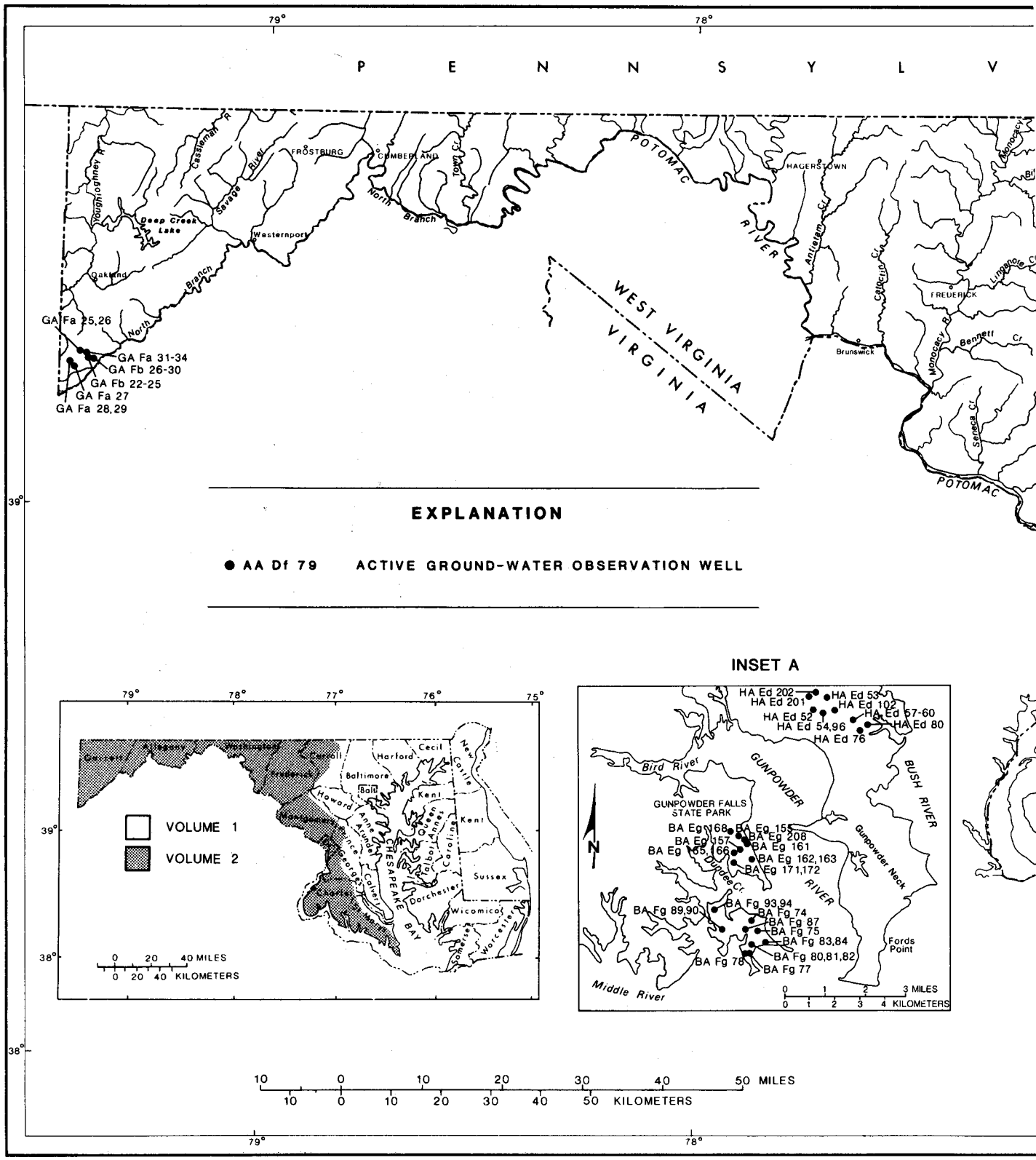
661050
6615



Base map modified from U.S. Geological Survey 1:500,000

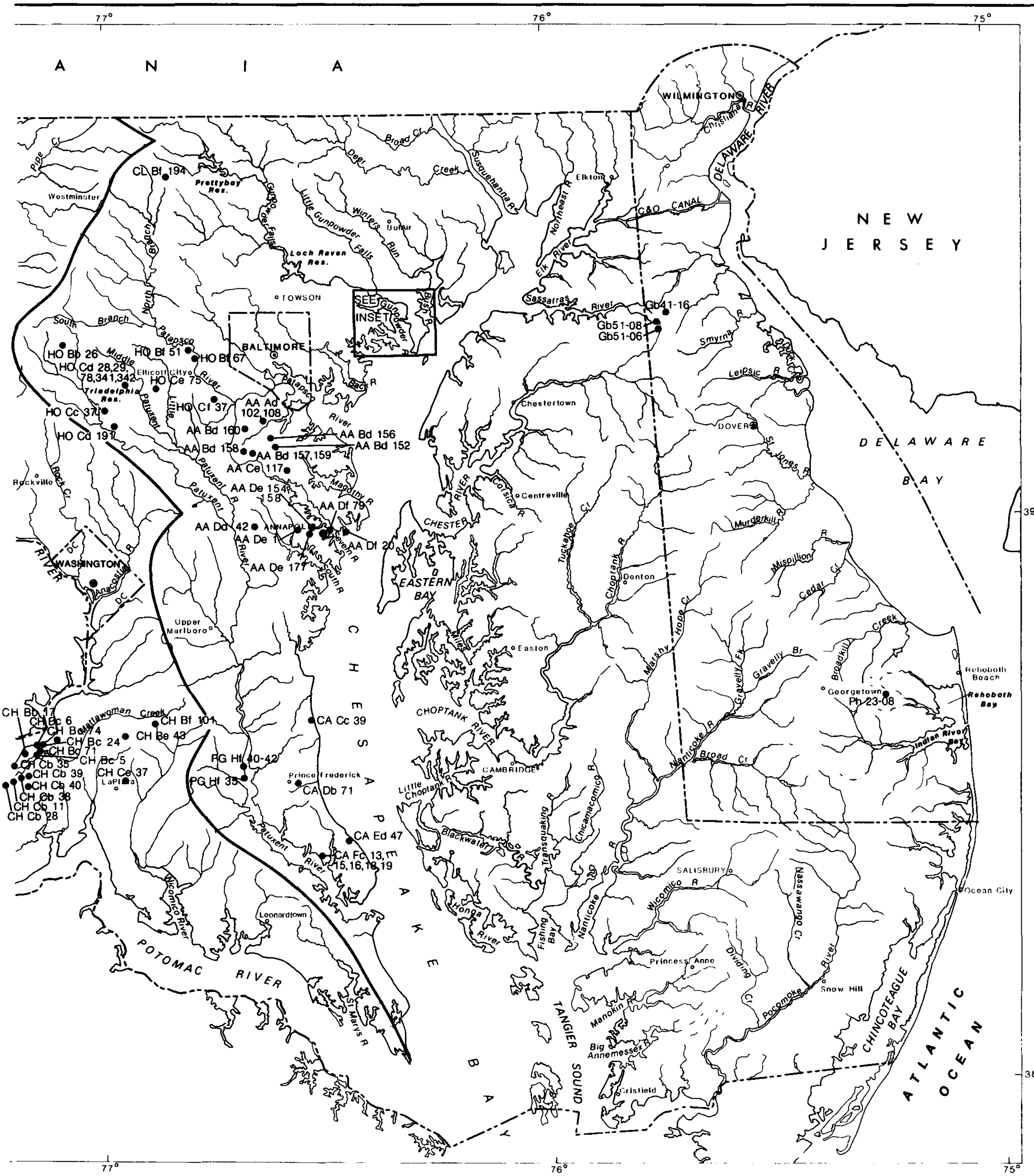
Figure 4. Location of crest-gage partial-record stations and ground-water observation wells in Maryland and Delaware.


77°
76°
75°
A N I A
N E W
J E R S E Y
D E L A W A R E
B A Y
C H E S A P E A K E
B A Y
ATLANTIC
OCEAN
CHINCOTEAGUE
BAY
POTOMAC
RIVER
TANGIER SOUND
CHOPTANK RIVER
EASTERN BAY
WILMINGTON
DOVER
BALTIMORE
WASHINGTON
ANNAPOLIS
TOWSON
Westminster
Rockville
Ellicott City
Upper Marlboro
Chestertown
Centreville
Easton
Denton
Georgetown
Rehoboth Beach
Rehoboth Bay
Ocean City
Snow Hill
Princess Anne
SALISBURY
Crisfield
Leonardtown
La Plata
Prince Frederick
CAMBRIDGE
Elkton
Bel Air
C&O CANAL
Prettyboy Res.
Loch Raven Res.
Triadelphia Res.
39°
38°
CL Ad 47
CL Bf 184
HA Bd 31
HA Ca 23
HA De 66
HA Ec 11
HA Ed 24
BA Cd 26
BA Ce 21
BA Dc 444
BA Ec 43
BA Ea 18
BA Gf 11
BA Gf 168,169
BA Gf 178
FR Eh 11
HO Bd 1
HO Cd 25
HO Ce 38
MO Eh 20
PG Bc 16
PG Df 2
PG De 21
PG Fb 36
PG Fc 17
PG Fd 41
AA Ad 11
AA Ad 104
AA Ad 29
AA Bf 3
AA Cc 40
AA Ed 45
AA Fd 43
AA Cg 25
CA Bb 27,28
CA Cc 18
CA Cc 57
CA Db 47
CA Fd 51,54
CA Fe 22
CA Gd 6
CH Bg 12
CH Bf 128
CH Bg 13
CH Cb 7
CH Cf 33
CH De 45
CH Dd 33
CH Ee 16
SM Bb 15,22
SM Dd 50
SM Df 84
SM Df 71
SM Dd 46,49, 62,63
SM Ef 80
SM Eg 27
SM Fe 30,31
SM Fg 45
SM Gh 11
CE Ce 54
CE Cd 51,52
CE Be 73,74
CE Bf 82
CE Cd 53
CE Ce 55
CE Ce 56
CE Dd 81
CE Ee 29
KE Ac 20
KE Be 43
KE Bg 33,34
KE Cd 44
KE Cb 36
KE Db 40
QA Be 15,16,17
QA Cg 1
QA Db 35
QA Eb 155
QA Ec 1
TA Bf 73,74
TA Cc 35
CO Bc 1
CO Bd 53
CO Dc 129
CO Dd 47
DO Bg 59
DO Ce 78
DO Ce 88
DO Ce 21
DO Cd 1
DO Db 17, 18,19
SO Be 42
SO Ce 42
SO Cf 2
WI Ce 204
WI Cf 147
WI Ce 13
WI Cf 3
WI Cg 20
WO Ah 6
WO Ah 35, 36,37
WO Bh 34
WO Bh 31, 84,85,89
WO Ae 23,24,25
WO Bg 15, 45,46
WO Bg 47,48
WO Bg 49
WO Bg 1
WO Cg 72
WO De 36
WO Dg 21
WO Dd 7
WO Fb 2
Hb14-1
Id55-1
Jd42-3
Md22-1
Mc51-1
Nc13-3
Ng11-1
Nc45-1
Qe44-1
Db24-17
478040
480015
2S5E-1
3S2E
5S2E-24,25
S4E-1
Nanticoke R
Pocomoke
Wicomico R
Manokin R
Big Annemessex R
Patuxent River
Potomac
Mattawoman Creek
Wicomico River
St Marys R
Susquehanna R
Deer Creek
Broad Cr
Elk River
Sassafras River
Chester River
Corsica R
Tuckahoe Cr
Choptank R
Marshyhope Cr
Murderkill R
Mispillion R
Leipsic R
Smyrna R
St Jones R
Christina R
DELAWARE RIVER
Indian River Bay
Broadkill R
Gravelly Br
Little Choptank
Blackwater R
Transquaking R
Chicamacomico R
Fishing Bay
Honga River
Dividing Cr
Nassawango Cr
Gunpowder R
Little Gunpowder Falls
Winters Run
Patapsco R
Severn R
Magothy R
South R
Anacostia R
Rock Cr
Pipe Cr



Base map modified from U.S. Geological Survey 1:500,000

Figure 5. Location of project ground-water observation wells in Maryland and Delaware.


NEW JERSEY
DELAWARE BAY
ATLANTIC OCEAN
CHESAPEAKE BAY
POTOMAC RIVER
TANGIER SOUND
CHINCOTEAGUE BAY
WILMINGTON
BALTIMORE
WASHINGTON
ANNAPOLIS
DOVER
SALISBURY
CAMBRIDGE
TOWSON
SEE INSET
Ocean City
Snow Hill
Princess Anne
Crisfield
Easton
Denton
Centreville
Chestertown
Elkton
Georgetown
Rehoboth Beach
Leonardtown
Prince Frederick
Upper Marlboro
La Plata
Rockville
Ellicott City
Westminster
Bel Air
CL Bf 194
HO Bb 26
HO Cd 28,29, 78,341,342
HO Bf 51
HO Bf 67
HO Ce 75
HO Cf 37
HO Cc 37
HO Cd 191
AA Ad 102,108
AA Bd 160
AA Bd 156
AA Bd 152
AA Bd 158
AA Bd 157,159
AA Ce 117
AA De 154, 158
AA Df 79
AA Dd 42
AA De 1
AA Df 20
AA De 177
CH Bb 17
CH Bc 6
CH Bc 74
CH Bc 24
CH Bc 71
CH Bc 5
CH Cb 35
CH Cb 39
CH Cb 40
CH Cb 38
CH Cb 11
CH Cb 28
CH Ce 37
CH Be 43
CH Bf 101
PG Hf 40-42
PG Hf 35
CA Cc 39
CA Db 71
CA Ed 47
CA Fc 13, 15,16,18,19
Gb41-16
Gb51-08
Gb51-06
Pb 23-08
77°
76°
75°
39°
38°

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SURFACE-WATER RECORDS

REMARK CODES.--The following remark codes may appear with the water-quality data in this section.

PRINTED OUTPUT	REMARK
E	Estimated
>	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 egual to or greater than 15 percent (dominant).
&	Biological organism estimated as dominant.

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

NORTH ATLANTIC SLOPE BASINS

DELAWARE RIVER BASIN

01477800 SHELLPOT CREEK AT WILMINGTON, DE

LOCATION.--Lat 39°45'39", long 75°31'10", New Castle County, Hydrologic Unit 02040205, on right bank 100 ft east of intersection of 44th and Pine Streets in Clifton Park, 700 ft downstream from bridge on North Market Street in Wilmington, 0.2 mi downstream from Matson Run, and 2.3 mi upstream from mouth.

DRAINAGE AREA.--7.46 mi^2.

PERIOD OF RECORD.--December 1945 to current year.

REVISED RECORDS.--WSP 1382: 1948(m).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 15.16 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good below 100 ft^3/s and above 4,000 ft^3/s, except those for Dec. 12, 16, 18, Jan. 4, 5, 22, Feb. 9-12, 25, Mar. 8 (ice effect) and those between 100 and 4,000 ft^3/s, which are fair, and those for May 25 to June 6 (no gage-height record) and Aug. 26 to Sept. 4 (intake lag), which are poor. Occasional regulation at low flow from unknown source upstream from station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

AVERAGE DISCHARGE.--43 years (water years 1947-89), 9.75 ft^3/s, 17.75 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,040 ft^3/s, July 5, 1989, gage height, 13.76 ft, from rating curve extended above 200 ft^3/s on basis of culvert and flow-over-road measurements at gage heights 9.10 ft and 11.91 ft; minimum daily discharge, 0.09 ft^3/s, Oct. 2, 4, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1940, that of July 5, 1989. Flood of Aug. 1, 1945, reached a stage of about 8.5 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 550 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 28	0115	914	4.19	July 5	1000	*8,040	*13.76
Mar. 31	0140	1,410	5.06	July 20	0810	3,440	7.82
May 2	0545	1,400	5.05	July 21	0130	1,070	4.47
June 7	1510	2,340	6.47	Sept. 20	1620	654	3.74

Minimum daily discharge, 0.71 ft^3/s, Oct. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	23	3.3	2.8	2.3	3.7	14	7.9	e5.8	1.4	2.4	e1.3
2	3.0	2.7	2.7	2.7	2.0	3.3	6.8	196	e5.4	1.3	2.0	e1.3
3	4.8	1.2	2.4	2.1	14	3.0	12	9.2	e5.2	1.3	1.8	e1.2
4	1.3	1.1	1.9	e1.5	8.5	2.8	7.4	6.4	e5.0	3.2	1.5	e1.2
5	1.1	7.4	1.8	e1.3	3.5	3.6	11	25	e23	1310	1.3	1.2
6	1.1	3.4	1.8	1.6	3.0	42	33	102	e9.2	21	1.2	1.2
7	1.0	1.4	1.8	1.7	2.7	8.0	15	21	262	9.0	2.4	1.1
8	1.1	1.1	1.7	22	2.4	e5.0	16	8.6	12	5.1	1.3	1.1
9	1.1	1.1	1.7	13	e2.2	10	11	7.5	52	3.7	1.1	1.1
10	1.0	1.3	1.6	3.5	e2.0	8.8	6.2	134	14	3.1	1.1	1.1
11	.85	1.2	1.5	2.4	e1.8	7.5	5.2	23	4.6	2.8	6.0	1.2
12	.84	1.3	e1.5	53	e1.8	6.7	4.8	9.9	3.4	2.3	16	1.4
13	.76	11	1.5	9.7	2.5	4.9	4.2	7.8	3.1	57	20	1.3
14	.77	2.6	1.7	4.7	16	4.4	3.9	7.1	2.7	7.0	3.2	4.9
15	.83	1.4	1.7	60	22	4.4	23	7.2	3.4	4.5	2.1	3.0
16	.82	1.5	e1.5	7.4	19	3.3	19	23	3.8	85	2.1	15
17	.71	66	1.5	4.4	4.9	3.0	6.5	9.8	3.6	15	1.7	16
18	.79	4.4	e1.3	3.7	3.5	19	5.3	8.0	2.3	e6.5	1.7	4.5
19	.83	4.2	1.3	3.1	3.1	7.7	8.6	8.0	2.1	e5.0	54	74
20	.79	119	1.4	2.6	2.9	9.6	4.5	7.7	2.9	465	9.5	118
21	31	16	4.4	2.2	65	28	3.9	8.1	5.4	94	16	20
22	27	4.9	2.5	e2.0	52	6.6	3.7	7.4	4.0	8.5	11	11
23	1.6	3.2	5.7	2.1	10	4.4	3.5	21	7.6	5.9	18	3.9
24	3.9	2.7	13	2.1	5.6	154	3.6	58	11	4.6	4.9	2.4
25	1.4	2.2	6.5	2.0	e3.7	19	3.5	e11	3.3	5.1	2.4	2.3
26	1.0	2.1	2.4	2.1	6.3	7.8	3.8	e5.8	2.3	5.2	e1.6	29
27	.99	16	1.9	2.8	6.5	6.1	4.0	e30	2.0	7.6	e1.5	1.9
28	1.0	164	4.4	1.9	4.5	5.4	4.0	e14	1.7	3.3	e1.4	1.4
29	1.0	7.5	3.1	1.8	---	4.8	8.7	e8.6	1.6	2.3	e1.3	1.2
30	1.0	4.5	1.8	8.3	---	7.6	5.9	e7.2	1.5	2.0	e1.5	1.2
31	1.1	---	1.8	3.0	---	150	---	e6.2	---	7.8	e1.4	---
TOTAL	95.48	479.4	83.1	233.5	273.7	554.4	262.0	806.4	465.9	2155.5	193.4	325.4
MEAN	3.08	16.0	2.68	7.53	9.77	17.9	8.73	26.0	15.5	69.5	6.24	10.8
MAX	31	164	13	60	65	154	33	196	262	1310	54	118
MIN	.71	1.1	1.3	1.3	1.8	2.8	3.5	5.8	1.5	1.3	1.1	1.1
CFSM	.41	2.14	.36	1.01	1.31	2.40	1.17	3.49	2.08	9.32	.84	1.45
IN.	.48	2.39	.41	1.16	1.36	2.76	1.31	4.02	2.32	10.75	.96	1.62

CAL YR 1988 TOTAL 3354.56 MEAN 9.17 MAX 247 MIN .51 CFSM 1.23 IN. 16.73
WTR YR 1989 TOTAL 5928.18 MEAN 16.2 MAX 1310 MIN .71 CFSM 2.18 IN. 29.56

e Estimated

01478000 CHRISTINA RIVER AT COOCHS BRIDGE, DE

LOCATION.--Lat 39°38'14", long 75°43'43", New Castle County, Hydrologic Unit 02040205, on right bank 60 ft downstream from highway bridge, 0.5 mi southeast of Coochs Bridge, 3.3 mi south of Newark, 3.6 mi upstream from Belltown Run, and 22.6 mi upstream from mouth.

DRAINAGE AREA.--20.5 mi^2.

PERIOD OF RECORD.--April 1943 to current year.

REVISED RECORDS.--WDR MD-DE-79-1: 1943-70(P). WDR MD-DE-87-1: 1980-82(P).

GAGE.--Water-stage recorder. Datum of gage is 25.54 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 14, 1944, nonrecording gage on upstream side of bridge at same datum. Sept. 14, 1944, to May 13, 1969, recording gage at site on left bank at downstream side of highway bridge at same datum. May 26, 1969, to Dec. 5, 1973, recording gage on left bank 82 ft downstream from highway bridge at same datum.

REMARKS.--No estimated daily discharges. Records good. Low and medium flow regulated by mill upstream from station. Gage-height telemeter at station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

AVERAGE DISCHARGE.--46 years, 28.6 ft^3/s, 18.94 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,530 ft^3/s, July 5, 1989, gage height, 13.12 ft; minimum daily discharge, 0.2 ft^3/s, Aug. 7, 14, 18, 21, 27, 28, 1966.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 28	0615	1,590	10.50	July 16	1645	2,610	11.40
Mar. 31	0545	1,390	10.30	July 20	1315	2,680	11.44
June 23	1245	2,000	11.23	Sept. 20	2200	1,090	9.98
July 5	1430	*5,530	*13.12				

Minimum daily discharge, 3.2 ft^3/s, Oct. 12

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	44	14	11	12	20	82	29	16	25	22	10
2	7.2	16	12	12	11	18	32	245	15	25	20	10
3	10	7.7	11	11	40	17	37	34	14	24	19	9.6
4	5.5	7.0	11	10	41	17	30	22	14	127	17	9.2
5	4.9	17	10	8.5	17	18	37	62	15	2000	17	9.2
6	4.4	20	10	8.9	15	103	129	316	55	179	15	9.6
7	4.0	8.8	10	12	13	39	46	99	68	55	16	9.7
8	4.2	6.6	10	48	12	22	60	33	24	29	15	9.3
9	4.1	6.1	9.8	53	11	30	37	27	78	23	14	9.2
10	4.3	6.2	9.6	20	11	31	26	196	38	21	14	9.2
11	4.1	7.2	9.5	15	11	28	23	66	18	16	15	8.8
12	3.2	5.6	8.5	142	11	25	21	35	15	14	23	8.7
13	3.5	18	8.7	51	11	21	20	27	15	129	31	8.5
14	3.7	13	8.9	20	39	19	19	28	15	34	17	8.5
15	4.4	7.7	9.5	179	43	19	56	24	16	15	15	9.0
16	4.1	6.5	9.1	35	62	18	70	87	18	925	14	33
17	3.9	127	8.6	19	20	16	26	43	18	101	13	37
18	4.1	26	8.3	17	15	37	23	26	14	31	13	10
19	8.9	23	8.5	15	14	33	34	23	13	25	164	152
20	16	213	8.7	14	13	22	22	19	14	858	24	390
21	42	89	12	13	179	71	20	19	93	170	20	89
22	65	23	11	12	135	26	19	18	100	46	17	29
23	11	19	16	12	44	20	18	38	667	36	14	20
24	11	17	24	12	24	348	17	115	152	30	13	15
25	7.7	16	26	12	19	85	17	27	48	27	12	15
26	5.4	15	11	13	24	33	17	20	36	42	12	83
27	5.2	29	10	13	23	25	17	50	31	26	12	19
28	5.5	410	12	12	22	22	16	23	29	23	11	14
29	5.5	33	12	11	---	21	27	18	28	19	12	13
30	5.4	18	9.7	21	---	23	22	17	26	19	12	13
31	5.6	---	9.5	15	---	371	---	17	---	36	11	---
TOTAL	278.3	1255.4	348.9	847.4	892	1598	1020	1803	1703	5130	644	1070.5
MEAN	8.98	41.8	11.3	27.3	31.9	51.5	34.0	58.2	56.8	165	20.8	35.7
MAX	65	410	26	179	179	371	129	316	667	2000	164	390
MIN	3.2	5.6	8.3	8.5	11	16	16	17	13	14	11	8.5
CFSM	.44	2.04	.55	1.33	1.55	2.51	1.66	2.84	2.77	8.07	1.01	1.74
IN.	.51	2.28	.63	1.54	1.62	2.90	1.85	3.27	3.09	9.31	1.17	1.94

CAL YR 1988 TOTAL 10089.17 MEAN 27.6 MAX 1150 MIN .87 CFSM 1.34 IN. 18.31
WTR YR 1989 TOTAL 16590.5 MEAN 45.5 MAX 2000 MIN 3.2 CFSM 2.22 IN. 30.11

01479000 WHITE CLAY CREEK NEAR NEWARK, DE

LOCATION.--Lat 39°41'47", long 75°40'33", New Castle County, Hydrologic Unit 02040205, on left bank 35 ft downstream from bridge on private road at Delaware Park Race Track, 0.4 mi downstream from the Baltimore and Ohio Railroad bridge, 1.1 mi downstream from Pike Creek, 3.8 mi east of Newark, and 5.0 mi upstream from mouth.

DRAINAGE AREA.--89.1 mi^2.

PERIOD OF RECORD.--October 1931 to September 1936, June 1943 to September 1957, October 1959 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 1051: 1933(M). WSP 1382: 1932, 1934. WDR MD-DE-83-1: 1978-82(P).

GAGE.--Water-stage recorder. Datum of gage is 9.00 ft above National Geodetic Vertical Datum of 1929. Nov. 17, 1931, to Sept. 30, 1936, June 4, 1943, to Sept. 30, 1957, and Oct. 1, 1959, to Apr. 7, 1976, at site 0.5 mi upstream at datum 2.6 ft higher.

REMARKS.--Records good except those for estimated daily discharges (ice effect), which are fair. Slight diurnal fluctuation at low flow caused by mills upstream from station. Records do not include a negligible diversion upstream from station by E. I. du Pont de Nemours & Co. Gage-height telemeter at station. Several measurements of water temperature were made during the year. Water-quality records for some periods have been collected at this location.

AVERAGE DISCHARGE.--49 years (water years 1932-36, 1944-57, 1960-89), 115 ft^3/s, 17.53 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,600 ft^3/s, July 5, 1989, gage height, 16.55 ft, from rating curve extended above 6,700 ft^3/s on basis of contracted-opening and flow-over-road measurement of peak flow; maximum gage-height, 17.74 ft, June 22, 1972, at previous site and datum; minimum discharge, 4.7 ft^3/s, Sept. 11, 1966; minimum daily discharge, 5.0 ft^3/s, Sept. 10, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 23 ft, previous site and datum, in July 1937 (probably affected by backwater from railroad bridge which has since been raised and widened), from information by Baltimore & Ohio Railroad.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 28	0600	2,130	12.22	July 16	1530	6,810	15.31
June 23	1245	2,170	12.28	July 20	1145	3,950	14.03
July 5	1230	*11,600	*16.55	Aug. 19	1415	2,290	12.45

Minimum daily discharge, 33 ft^3/s, Oct. 12, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	104	98	65	62	86	468	121	117	90	186	92
2	39	66	84	67	59	79	181	569	118	86	172	89
3	49	48	77	64	105	77	172	178	105	82	164	83
4	40	44	72	61	106	76	156	133	101	188	154	81
5	36	85	68	e56	73	82	159	193	100	4500	145	80
6	34	89	66	e60	68	227	296	1020	197	662	140	82
7	34	52	65	e64	66	144	181	471	285	291	142	83
8	35	44	63	e90	60	113	176	201	178	206	135	80
9	35	43	60	e130	e58	112	154	167	320	169	125	80
10	35	42	58	97	e54	113	135	498	565	152	123	77
11	34	42	58	81	e54	118	126	288	159	139	134	74
12	33	40	e50	255	e58	120	121	196	131	129	170	72
13	34	68	e54	193	65	106	118	168	124	527	227	72
14	33	65	e62	104	110	95	116	159	120	246	161	75
15	34	48	e60	329	128	96	167	150	121	149	137	77
16	35	44	e58	144	176	88	232	564	122	2360	130	100
17	35	262	e56	104	99	80	139	294	121	504	120	162
18	35	107	e56	89	81	118	126	184	108	206	114	84
19	38	76	e54	82	74	158	139	156	98	162	948	318
20	37	480	e54	76	70	108	119	145	98	1360	243	1070
21	90	286	e54	66	308	181	113	139	178	1030	188	374
22	247	117	e58	e64	387	124	111	131	459	326	150	180
23	72	92	75	e64	186	104	106	268	659	260	145	157
24	61	82	103	e62	124	626	102	700	336	227	124	143
25	54	75	118	61	109	368	100	200	159	209	114	110
26	44	70	73	62	108	175	100	159	135	223	110	255
27	42	95	63	68	104	145	98	209	119	218	108	138
28	42	961	72	59	96	133	93	162	112	193	107	107
29	42	174	76	58	---	127	111	133	108	174	109	99
30	41	117	63	81	---	128	120	126	94	169	112	94
31	39	---	60	72	---	712	---	122	---	225	97	---
TOTAL	1493	3918	2088	2928	3048	5019	4535	8204	5647	15462	5234	4588
MEAN	48.2	131	67.4	94.5	109	162	151	265	188	499	169	153
MAX	247	961	118	329	387	712	468	1020	659	4500	948	1070
MIN	33	40	50	56	54	76	93	121	94	82	97	72
CFSM	.54	1.47	.76	1.06	1.22	1.82	1.70	2.97	2.11	5.60	1.89	1.72
IN.	.62	1.64	.87	1.22	1.27	2.10	1.89	3.43	2.36	6.46	2.19	1.92

CAL YR 1988 TOTAL 39125 MEAN 107 MAX 1970 MIN 28 CFSM 1.20 IN. 16.34
WTR YR 1989 TOTAL 62164 MEAN 170 MAX 4500 MIN 33 CFSM 1.91 IN. 25.95

e Estimated

01480000 RED CLAY CREEK AT WOODDALE, DE

LOCATION.--Lat 39°45'52", long 75°38'08", New Castle County, Hydrologic Unit 02040205, on right bank 12 ft upstream from bridge on State Highway 48, 0.3 mi south of Wooddale, 2.3 mi north of Marshallton, and 4.9 mi upstream from mouth.

DRAINAGE AREA.--47.0 mi^2.

PERIOD OF RECORD.--April 1943 to current year.

REVISED RECORDS.--WSP 1141: 1948. WSP 1272: 1951(m). WSP 1432: 1944(M), 1945, 1946(M), 1948, 1949(M). WSP 2102: 1960(M), 1964(M), 1966-67(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 81.46 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 21, 1950, nonrecording gage at site 10 ft downstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Some diurnal fluctuation at low flow caused by mills upstream from station. National Weather Service gage-height telemeter at station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

AVERAGE DISCHARGE.--46 years, 63.8 ft^3/s, 18.43 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,010 ft^3/s, July 21, 1975, gage height, 10.32 ft, from rating curve extended above 3,900 ft^3/s on basis of contracted-opening measurement at gage height 9.93 ft; minimum discharge, 2.9 ft^3/s, Sept. 4, 1966; minimum daily discharge, 4.5 ft^3/s, Sept. 4, 1966.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
June 9	2400	1,440	5.16	Aug. 19	1315	1,360	5.04
July 5	1430	*3,860	*8.59	Sept. 20	0845	1,600	5.42
July 16	1630	1,360	5.04	Sept. 20	2200	1,480	5.23

Minimum discharge, 17 ft^3/s, Oct. 13, 14, 17, gage height, 2.34 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	40	48	33	37	49	189	62	63	50	93	49
2	21	35	44	35	36	46	90	222	58	49	86	48
3	28	26	41	34	46	46	88	89	55	47	81	46
4	22	25	39	32	51	45	81	70	55	76	77	45
5	20	45	37	29	41	46	80	97	54	1650	72	44
6	19	70	38	30	39	111	159	417	99	271	69	46
7	19	33	37	34	39	72	93	208	141	145	72	45
8	19	29	35	56	36	55	93	99	87	102	68	44
9	19	27	35	71	34	55	84	85	246	85	65	43
10	19	26	34	46	32	59	75	221	344	79	62	42
11	19	25	33	41	33	62	71	157	89	72	67	41
12	18	24	27	115	33	64	69	107	72	68	87	40
13	18	31	30	83	32	56	68	92	69	237	121	39
14	18	34	33	50	52	53	66	86	67	114	76	41
15	19	28	32	147	69	53	88	83	68	81	66	41
16	19	26	32	68	87	50	122	372	67	497	62	45
17	18	114	30	52	50	47	78	157	67	190	58	90
18	19	50	29	47	44	64	71	100	59	110	56	47
19	19	37	29	45	41	80	72	84	55	96	423	163
20	18	232	30	43	40	55	64	79	55	315	118	838
21	25	109	35	39	137	90	60	75	67	279	79	278
22	111	51	36	37	175	64	59	69	112	134	68	110
23	32	42	38	38	88	56	57	114	140	113	80	88
24	30	40	45	37	64	228	56	224	168	98	62	69
25	27	36	54	38	53	148	55	92	84	92	58	63
26	23	36	38	38	54	81	55	79	70	125	56	130
27	23	39	35	41	55	69	54	96	62	152	55	74
28	22	334	36	37	53	65	53	80	58	101	56	63
29	23	78	39	36	---	61	57	69	56	86	57	60
30	21	55	34	43	---	62	63	66	52	82	56	58
31	22	---	34	42	---	334	---	65	---	119	51	---
TOTAL	751	1777	1117	1517	1551	2426	2370	3916	2739	5715	2557	2830
MEAN	24.2	59.2	36.0	48.9	55.4	78.3	79.0	126	91.3	184	82.5	94.3
MAX	111	334	54	147	175	334	189	417	344	1650	423	838
MIN	18	24	27	29	32	45	53	62	52	47	51	39
CFSM	.52	1.26	.77	1.04	1.18	1.67	1.68	2.69	1.94	3.92	1.75	2.01
IN.	.59	1.41	.88	1.20	1.23	1.92	1.88	3.10	2.17	4.52	2.02	2.24

CAL YR 1988 TOTAL 18629 MEAN 50.9 MAX 491 MIN 16 CFSM 1.08 IN. 14.74
WTR YR 1989 TOTAL 29266 MEAN 80.2 MAX 1650 MIN 18 CFSM 1.71 IN. 23.16

01481500 BRANDYWINE CREEK AT WILMINGTON, DE

LOCATION.--Lat 39°46'09", long 75°34'25", New Castle County, Hydrologic Unit 02040205, on right bank in Rockford Park, 0.2 mi downstream from Rising Sun Bridge, in Wilmington, and 4.2 mi upstream from mouth.

DRAINAGE AREA.--314 mi^2.

PERIOD OF RECORD.--October 1946 to current year. Prior to December 1946 monthly discharge only, published in WSP 1302.

REVISED RECORDS.--WSP 1432: 1948, 1950.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 68.23 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Some diurnal fluctuation at low flow caused by mills upstream from station. Flow regulated since November 1973 by Marsh Creek Reservoir, capacity 7,230,000,000 gal, about 27 mi upstream. No diversion just upstream from station by plant of E. I. du Pont de Nemours & Co. since June 13, 1960. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

AVERAGE DISCHARGE.--43 years, 479 ft^3/s, 20.72 in/yr, adjusted for storage since November 1973.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,000 ft^3/s, June 23, 1972, gage height, 15.49 ft, from rating curve extended above 18,000 ft^3/s; minimum discharge, about 30 ft^3/s, Dec. 26, 1948, during period of ice effect; minimum daily discharge, 56 ft^3/s, Aug. 23, 24, 1957.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 6	1600	4,940	7.64	July 5	1015	*9,850	*9.94
May 17	0015	4,820	7.57	Sept. 20	1845	4,890	7.61

Minimum discharge, 83 ft^3/s, Oct. 31, gage height, 2.56 ft; minimum daily discharge, 122 ft^3/s, Oct. 13, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	137	210	413	237	291	344	1140	423	597	449	642	324
2	150	216	372	245	272	329	695	1310	571	426	559	320
3	228	175	352	240	302	323	673	754	549	420	521	314
4	187	156	300	232	333	320	678	521	580	436	496	302
5	140	193	281	163	291	323	632	522	554	4330	470	299
6	132	382	276	235	277	537	906	3410	676	2560	443	303
7	126	260	270	286	273	529	728	2110	1090	987	469	301
8	129	201	256	343	264	367	643	1080	998	755	448	292
9	132	189	254	495	237	361	606	1030	1060	658	413	289
10	133	483	252	346	198	365	564	1510	2120	614	399	287
11	135	499	251	294	234	390	530	1680	870	565	417	282
12	130	490	181	430	238	443	502	1010	683	524	525	276
13	122	523	193	693	228	446	489	886	645	1320	1070	268
14	122	580	244	387	306	381	472	818	622	1530	712	279
15	127	287	243	813	389	371	521	785	609	777	558	283
16	126	212	215	632	623	357	826	2130	925	1370	520	288
17	128	569	188	400	392	331	629	2730	938	1340	514	410
18	125	578	187	341	315	359	570	1360	652	771	473	330
19	124	336	208	327	291	563	529	1100	569	722	904	510
20	128	1240	199	311	288	392	494	807	534	1780	810	3200
21	172	1880	227	296	564	547	461	754	548	1500	498	1700
22	1100	563	282	253	1450	517	446	703	911	932	430	888
23	454	417	252	279	820	409	422	800	878	867	427	611
24	270	363	313	272	504	844	413	2250	1040	744	387	851
25	245	332	393	275	385	1530	412	1140	640	629	359	462
26	193	318	300	274	388	755	409	867	693	682	355	716
27	169	329	254	297	388	639	401	872	551	690	350	602
28	166	1910	253	279	368	590	393	847	524	637	347	428
29	163	747	296	264	---	517	398	715	551	579	354	395
30	151	475	259	288	---	525	440	676	487	523	362	386
31	149	---	245	330	---	1190	---	615	---	677	339	---
TOTAL	5993	15113	8209	10557	10909	15894	17022	36215	22665	30794	15571	16196
MEAN	193	504	265	341	390	513	567	1168	755	993	502	540
MAX	1100	1910	413	813	1450	1530	1140	3410	2120	4330	1070	3200
MIN	122	156	181	163	198	320	393	423	487	420	339	268
(†)	-4.1	-52.1	-1.0	+15.0	+28.4	+21.5	-3.4	+0.8	+1.3	-1.5	-1.0	+2.4
MEAN≠	189	452	264	356	418	535	564	1169	756	992	501	542
CFSM≠	0.62	1.60	0.84	1.08	1.24	1.63	1.81	3.72	2.41	3.16	1.60	1.72
IN≠	0.71	1.79	0.97	1.25	1.29	1.88	2.02	4.29	2.69	3.65	1.84	1.92

CAL YR 1988 TOTAL 156755 MEAN 428 MAX 4260 MIN 119 MEAN≠ 423 CFSM≠ 1.35 IN≠ 18.35
WTR YR 1989 TOTAL 205138 MEAN 562 MAX 4330 MIN 122 MEAN≠ 563 CFSM≠ 1.79 IN≠ 24.32

† Change in contents in Marsh Creek Reservoir, equivalent in cubic feet per second, provided by Pennsylvania Department of Environmental Resources.
≠ Adjusted for change in reservoir contents.

01483200 BLACKBIRD CREEK AT BLACKBIRD, DE

LOCATION.--Lat 39°21'58", long 75°40'10", New Castle County, Hydrologic Unit 02040205, on left bank 15 ft downstream from highway culverts, 0.5 mi upstream from Barlow Branch, 0.6 mi southwest of Blackbird, 5.6 mi northwest of Smyrna, and 13.8 mi upstream from mouth.

DRAINAGE AREA.--3.85 mi^2.

PERIOD OF RECORD.--Annual maximum, water years 1952-56, and occasional low-flow measurements, water years 1952-53, 1955-56. October 1956 to current year.

GAGE.--Water-stage recorder. Concrete control since May 23, 1968. Datum of gage is 17.89 ft above National Geodetic Vertical Datum of 1929. Mar. 5, 1951, to Oct. 16, 1956, nonrecording gage and crest-stage gage at site 15 ft upstream at datum 1.0 ft higher. Oct. 17, 1956, to June 16, 1986, recording gage at same site on right bank at datum 1.0 ft higher.

REMARKS.--No estimated daily discharges. Records good. Occasional regulation at low and medium flow by Blackbird Lake Dam upstream from station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

AVERAGE DISCHARGE.--33 years, 4.70 ft^3/s, 16.58 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 712 ft^3/s, June 22, 1972, gage height, 5.04 ft, from rating curve extended above 200 ft^3/s on basis of Type III culvert measurement of peak flow; no flow at times during 1964, 1965, 1966, 1969.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 24	2145	60	2.44	July 5	1245	65	2.45
May 2	1430	199	3.98	July 20	1730	78	2.67
May 6	1315	83	2.75	July 27	0245	*250	*4.34
June 6	0915	60	2.37	July 28	0930	59	2.34
July 4	2230	118	3.23	Sept. 26	1415	62	2.40

Minimum discharge, 0.13 ft^3/s, Oct. 11, 16, 17, 18, gage height, 0.64 ft; minimum daily discharge, 0.14 ft^3/s, Oct. 17.

REVISIONS.--The peak discharges and annual maximum (*) reported for water years 1987 and 1988 have been revised as shown in the following table. They supersede figures published in reports for 1987 and 1988.

Water Year	Date	Time	Discharge (ft^3/s)	Gage height (ft)	Water Year	Date	Time	Discharge (ft^3/s)	Gage height (ft)
1987	Dec. 24, 1986	2315	111	3.14	1988	Feb. 12, 1988	1600	73	2.58
1987	Dec. 25, 1986	0030	*224	*4.16	1988	May 19, 1988	0645	*214	*4.09

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.57	3.3	2.7	2.2	3.0	5.2	8.9	7.1	3.8	3.4	10	2.0
2	.65	4.0	2.5	3.5	2.4	4.7	7.2	79	3.4	2.9	7.7	2.0
3	.62	1.6	2.3	3.4	3.9	4.5	7.8	23	3.0	2.5	6.7	1.8
4	.57	1.0	1.9	2.5	6.1	4.5	8.0	9.9	2.8	31	5.5	1.8
5	.51	2.2	1.9	1.8	3.8	4.9	7.4	9.8	3.3	58	4.6	1.8
6	.48	5.8	2.0	2.6	3.3	12	15	53	36	41	4.1	1.8
7	.40	3.2	1.9	3.8	3.2	12	14	27	26	22	4.0	1.7
8	.38	1.3	1.9	5.0	3.0	7.0	29	12	13	8.6	3.9	1.8
9	.35	1.0	1.8	5.0	2.7	6.0	13	9.3	10	5.7	3.2	1.6
10	.31	1.1	1.7	3.2	2.2	7.1	9.1	25	11	4.8	3.4	1.6
11	.21	2.0	1.7	2.6	2.4	7.4	7.8	24	6.1	4.5	4.8	1.5
12	.24	.74	1.4	3.6	2.5	6.6	6.6	12	4.7	4.1	7.3	1.3
13	.37	1.2	1.3	4.2	2.5	5.6	6.5	9.6	4.6	6.1	9.1	1.6
14	.32	1.8	1.4	2.8	8.4	5.1	6.0	8.6	4.9	7.6	5.7	1.6
15	.24	1.3	1.8	8.5	7.9	5.1	8.6	7.9	6.4	4.4	4.7	1.8
16	.17	1.1	1.8	7.4	6.7	4.6	13	8.0	9.0	16	4.7	2.7
17	.14	3.0	1.5	4.1	4.7	4.2	8.2	8.1	9.1	23	3.9	10
18	1.1	3.4	1.4	3.2	3.8	4.8	6.9	7.1	6.7	7.7	3.7	3.0
19	.39	2.1	1.5	3.2	3.7	7.1	12	6.4	4.7	5.6	6.2	17
20	.36	7.1	1.7	2.9	3.2	5.6	9.3	6.1	5.1	40	4.6	29
21	1.8	6.4	2.1	2.5	20	9.0	6.9	5.7	21	26	4.0	24
22	5.2	3.3	2.1	2.3	24	8.0	6.4	5.3	34	9.4	4.4	8.1
23	2.5	2.0	2.2	2.6	11	5.6	5.6	7.7	15	7.1	3.2	4.8
24	1.2	1.7	3.2	2.6	7.2	33	5.2	12	10	5.7	2.8	4.6
25	.89	1.6	4.2	2.6	5.5	29	5.4	7.5	7.2	4.8	2.7	4.6
26	.73	1.5	2.6	2.8	5.9	11	4.8	5.8	6.1	17	2.6	40
27	.63	2.0	2.0	2.9	6.5	8.1	5.1	11	5.1	90	2.7	12
28	.70	20	2.1	2.3	6.3	7.3	4.5	10	4.9	37	2.3	5.0
29	.65	10	1.9	2.2	---	7.0	6.4	5.6	4.5	11	2.2	3.9
30	.63	4.7	1.8	3.3	---	7.5	11	4.6	3.5	7.9	4.6	3.9
31	.62	---	1.8	4.0	---	8.9	---	4.2	---	12	2.2	---
TOTAL	23.93	101.44	62.1	105.6	165.8	258.4	265.6	432.3	284.9	526.8	141.5	198.3
MEAN	.77	3.38	2.00	3.41	5.92	8.34	8.85	13.9	9.50	17.0	4.56	6.61
MAX	5.2	20	4.2	8.5	24	33	29	79	36	90	10	40
MIN	.14	.74	1.3	1.8	2.2	4.2	4.5	4.2	2.8	2.5	2.2	1.3
CFSM	.20	.88	.52	.88	1.54	2.17	2.30	3.62	2.47	4.41	1.19	1.72
IN.	.23	.98	.60	1.02	1.60	2.50	2.57	4.18	2.75	5.09	1.37	1.92

CAL YR 1988 TOTAL 1200.96 MEAN 3.28 MAX 94 MIN .14 CFSM .85 IN. 11.60
WTR YR 1989 TOTAL 2566.67 MEAN 7.03 MAX 90 MIN .14 CFSM 1.83 IN. 24.80

01483700 ST. JONES RIVER AT DOVER, DE

LOCATION.--Lat 39°09'49", long 75°31'10", Kent County, Hydrologic Unit 02040207, on left bank 150 ft upstream from Division Street Bridge in Dover, 1,950 ft downstream from Silver Lake, and 12.5 mi upstream from mouth.

DRAINAGE AREA.--31.9 mi^2.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 0.00 ft above National Geodetic Vertical Datum of 1929. Prior to June 1973, at datum 0.50 ft higher.

REMARKS.--Records good. Flow affected by Silver Lake. Flow occasionally affected by tide and wind effect. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

AVERAGE DISCHARGE.--31 years, 36.8 ft^3/s, 15.67 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,900 ft^3/s, Sept. 13, 1960, gage height, 9.45 ft, from flood-mark; no flow at times in 1959, 1961, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 628 ft^3/s, June 22, gage height, 6.07 ft; minimum daily discharge, 1.4 ft^3/s, Oct. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	29	43	15	22	51	85	60	26	41	59	15
2	4.2	28	26	15	19	44	76	243	22	35	50	15
3	8.7	21	18	15	24	39	71	424	18	30	37	12
4	7.7	13	16	16	28	36	70	216	17	60	30	11
5	5.9	11	13	9.7	29	36	77	119	15	107	24	11
6	4.2	10	13	19	24	83	121	187	62	114	20	11
7	3.4	8.7	12	26	24	149	157	263	75	154	26	12
8	3.1	7.0	13	29	22	133	257	181	56	109	30	11
9	e2.5	7.1	12	27	19	93	245	105	54	61	26	12
10	2.5	6.8	12	23	14	72	159	156	58	40	19	11
11	3.3	7.4	12	18	15	78	102	264	44	31	24	11
12	2.5	4.3	10	21	16	81	76	191	26	26	71	17
13	2.4	7.7	9.3	25	15	72	64	114	24	44	138	14
14	1.4	8.1	9.2	21	43	63	58	81	17	66	93	14
15	1.6	7.1	11	45	51	55	71	67	32	52	114	37
16	1.9	7.6	11	50	49	50	109	61	83	85	317	e48
17	2.0	23	11	41	38	45	119	56	142	242	151	52
18	2.6	25	9.6	29	30	48	88	52	241	189	65	50
19	2.8	24	9.3	23	25	58	99	45	200	86	90	e57
20	1.7	44	10	22	23	59	115	38	113	56	119	123
21	15	44	12	17	73	75	93	33	384	57	78	98
22	32	32	13	14	130	89	68	30	528	55	54	60
23	22	22	13	16	131	77	55	48	444	44	43	52
24	13	14	16	16	100	245	49	97	298	35	33	51
25	8.1	11	20	16	61	532	46	138	221	28	27	50
26	6.3	9.7	15	16	51	304	42	81	176	56	24	55
27	4.3	12	13	16	50	175	39	71	101	168	22	157
28	4.5	66	15	14	52	112	36	69	71	261	22	109
29	3.7	83	12	14	---	85	44	57	63	137	21	58
30	3.7	69	12	21	---	80	62	37	53	68	21	52
31	2.3	---	11	24	---	81	---	29	---	57	18	---
TOTAL	182.4	662.5	432.4	673.7	1178	3200	2753	3613	3664	2594	1866	1286
MEAN	5.88	22.1	13.9	21.7	42.1	103	91.8	117	122	83.7	60.2	42.9
MAX	32	83	43	50	131	532	257	424	528	261	317	157
MIN	1.4	4.3	9.2	9.7	14	36	36	29	15	26	18	11
CFSM	.18	.69	.44	.68	1.32	3.24	2.88	3.65	3.83	2.62	1.89	1.34
IN.	.21	.77	.50	.79	1.37	3.73	3.21	4.21	4.27	3.02	2.18	1.50

CAL YR 1988 TOTAL 7677.8 MEAN 21.0 MAX 251 MIN 1.4 CFSM .66 IN. 8.95
WTR YR 1989 TOTAL 22105.0 MEAN 60.6 MAX 532 MIN 1.4 CFSM 1.90 IN. 25.78

e Estimated

01484100 BEAVERDAM BRANCH AT HOUSTON, DE

LOCATION.--Lat 38°54'20", long 75°30'49", Kent County, Hydrologic Unit 02040207, on left bank 15 ft upstream from culverts on State Highway 384, 0.8 mi south of Houston, and 1.2 mi upstream from Blairs Pond and mouth.

DRAINAGE AREA.--2.83 mi^2.

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

REVISED RECORDS.--WDR MD-DE-84-1: 1981, 1983 (M).

GAGE.--Water-stage recorder and concrete control; timber control prior to Nov. 8, 1979. Datum of gage is 35.67 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Diversion for irrigation of about 150 acres upstream from station during some years. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

AVERAGE DISCHARGE.--31 years, 3.59 ft^3/s, 17.23 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 176 ft^3/s, Sept. 12, 1960, gage height, 5.55 ft, from rating curve extended above 75 ft^3/s; no flow July 28, 1977 (result of pumpage for irrigation).

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 30 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 24	2130	*44	*3.59	May 2	1545	31	3.29

Minimum discharge, 0.72 ft^3/s, Oct. 19, 20, 21, gage height, 2.40 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	1.8	2.9	1.9	2.5	3.9	13	7.4	e3.5	3.7	9.1	2.9
2	1.0	1.4	2.8	2.0	2.4	3.6	8.0	21	e3.4	3.5	4.9	2.7
3	1.2	1.1	2.8	1.9	2.5	3.4	8.4	14	3.2	3.4	4.3	2.7
4	1.2	1.0	2.7	1.9	2.4	3.4	7.8	7.8	3.1	3.4	3.9	2.5
5	1.1	1.0	2.7	1.8	2.4	3.6	7.0	6.8	3.0	4.1	3.6	2.5
6	1.0	1.0	2.7	2.3	2.5	8.5	11	13	3.2	4.3	3.5	2.5
7	1.0	.97	2.7	2.4	2.5	9.8	9.2	10	14	4.2	3.5	2.5
8	.99	.93	2.5	2.4	2.3	5.3	21	7.3	8.6	3.4	3.2	2.4
9	.93	.93	2.5	2.2	2.3	5.3	12	6.3	6.5	3.2	3.0	2.4
10	.93	.99	2.5	2.1	2.3	6.6	8.3	15	6.7	3.0	2.8	2.4
11	.89	.97	2.5	2.1	2.3	6.0	7.0	13	4.7	2.9	3.2	2.4
12	.83	.93	2.3	2.5	2.3	5.6	6.4	8.7	4.2	2.8	12	2.5
13	.79	.96	2.4	2.5	2.2	5.3	6.1	7.2	4.0	2.9	19	2.4
14	.81	.99	2.2	2.2	2.6	5.2	5.5	6.4	3.9	2.8	7.6	2.5
15	.83	1.0	2.3	4.2	2.4	5.0	7.7	6.0	4.2	2.6	9.2	2.4
16	.79	.99	2.2	3.1	2.3	5.2	10	5.8	4.4	5.1	6.2	2.4
17	.79	2.2	2.2	2.7	2.2	4.8	6.9	5.7	5.2	5.6	5.3	2.8
18	.79	1.7	2.1	2.7	2.2	5.3	6.5	5.3	4.1	3.5	5.2	2.4
19	.77	1.4	2.2	2.7	2.2	6.5	10	5.1	3.6	3.3	7.8	6.7
20	.72	2.0	2.2	2.7	2.2	5.2	7.4	4.8	3.6	3.1	5.8	4.6
21	1.2	1.8	2.2	2.5	4.0	8.3	6.3	4.7	4.3	3.0	4.8	3.1
22	1.8	1.6	2.2	2.5	5.4	6.3	5.8	4.4	5.8	2.9	4.5	2.9
23	1.1	1.5	2.3	2.5	3.8	5.4	5.4	4.4	13	2.7	4.2	2.8
24	1.0	1.5	2.3	2.5	3.4	27	5.2	4.8	13	2.6	4.0	2.5
25	.92	1.5	2.3	2.5	3.2	26	5.1	4.4	6.4	2.6	3.8	2.5
26	.88	1.5	2.1	2.5	3.4	11	4.9	4.2	5.5	3.0	3.7	7.3
27	.85	1.7	2.1	2.5	3.9	8.0	4.9	5.1	4.8	3.0	3.7	4.0
28	.83	11	2.1	2.4	4.1	7.1	4.7	4.6	4.4	5.7	3.6	3.3
29	.90	4.6	1.8	2.5	---	6.6	6.7	3.9	4.1	3.3	3.6	3.2
30	.86	3.2	1.8	2.6	---	9.6	14	3.7	3.8	2.9	3.5	3.1
31	.86	---	1.9	2.6	---	22	---	3.6	---	16	3.1	---
TOTAL	29.56	54.16	72.5	75.9	78.2	244.8	242.2	224.4	162.2	118.5	165.6	91.3
MEAN	.95	1.81	2.34	2.45	2.79	7.90	8.07	7.24	5.41	3.82	5.34	3.04
MAX	1.8	11	2.9	4.2	5.4	27	21	21	14	16	19	7.3
MIN	.72	.93	1.8	1.8	2.2	3.4	4.7	3.6	3.0	2.6	2.8	2.4
CFSM	.34	.64	.83	.87	.99	2.79	2.85	2.56	1.91	1.35	1.89	1.08
IN.	.39	.71	.95	1.00	1.03	3.22	3.18	2.95	2.13	1.56	2.18	1.20

CAL YR 1988 TOTAL 849.55 MEAN 2.32 MAX 18 MIN .67 CFSM .82 IN. 11.17
WTR YR 1989 TOTAL 1559.32 MEAN 4.27 MAX 27 MIN .72 CFSM 1.51 IN. 20.50

e Estimated

01484500 STOCKLEY BRANCH AT STOCKLEY, DE

LOCATION.--Lat 38°38'19"ong 75°20'31", Sussex County, Hydrologic Unit 02060010, on left bank at highway bridge in Stockley, 1.6 mi upstream from mouth, and 4.4 mi southeast of Georgetown.

DRAINAGE AREA.--5.24 mi^2.

PERIOD OF RECORD.--April 1943 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 24.54 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 16, 1950, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

AVERAGE DISCHARGE.--46 years, 6.84 ft^3/s, 17.73 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 217 ft^3/s, Feb. 26, 1979, gage height, 5.01 ft, from rating curve extended above 130 ft^3/s; minimum discharge observed, 0.13 ft^3/s, Sept. 1-11, 1944.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 45 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 24	1630	52	3.14	Aug. 7	2000	92	3.68
Mar. 31	2400	49	3.10	Aug. 12	2300	*144	*4.25
Apr. 8	0715	48	3.09	Aug. 19	1000	62	3.30
July 31	1300	51	3.13				

Minimum discharge, 0.43 ft^3/s, Nov. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.63	1.4	.83	.79	.92	1.8	33	13	7.3	5.1	23	9.2
2	.61	.92	.81	.76	.92	1.8	17	20	6.9	4.9	14	8.8
3	.78	.75	.75	.75	.94	1.7	15	17	6.7	4.6	12	8.3
4	1.0	.73	.75	.83	.95	1.9	15	13	6.5	4.6	11	7.8
5	.81	.67	.75	.83	.97	2.0	14	12	6.2	4.7	11	7.3
6	.74	.72	.75	1.1	1.0	4.2	27	13	6.8	5.3	9.6	7.2
7	.69	.69	.75	1.1	1.1	8.0	21	13	8.8	5.2	44	7.0
8	.73	.64	.75	.92	1.0	3.8	41	11	16	4.5	34	6.6
9	.63	.68	.78	.84	1.0	3.5	24	11	12	4.2	17	6.3
10	.55	.67	.75	.83	1.0	4.2	18	16	9.9	4.0	14	6.1
11	.53	.67	.75	.83	1.0	4.9	15	15	8.3	3.8	18	5.8
12	.52	.66	.75	.97	1.0	4.9	14	12	7.4	3.6	88	8.8
13	.53	.61	.75	.93	1.0	4.8	13	11	7.2	4.4	86	6.2
14	.55	.61	.75	.84	1.0	4.8	12	11	8.0	4.4	36	5.8
15	.53	.58	.75	1.3	1.1	5.0	16	10	13	3.7	31	5.6
16	.49	.61	.75	1.0	1.0	7.1	23	17	9.5	16	36	5.5
17	.49	1.1	.75	.95	1.0	5.5	17	30	13	17	24	5.5
18	.50	.81	.75	.94	1.0	6.1	15	17	9.6	9.0	23	5.1
19	.55	.68	.75	.92	1.1	8.3	17	13	8.8	7.5	51	20
20	.55	.87	.75	.92	1.0	6.2	14	12	8.4	6.5	30	16
21	.95	.80	.77	.92	1.5	13	13	11	8.4	6.2	23	11
22	1.1	.68	.79	.92	2.2	10	12	10	8.2	5.7	20	9.3
23	.75	.68	.75	.92	1.7	7.9	11	10	8.3	5.2	18	8.8
24	.68	.69	.75	.92	1.6	34	11	10	8.2	5.0	16	7.8
25	.73	.71	.75	.88	1.5	25	11	9.6	7.6	4.7	14	7.4
26	.71	.68	.75	.91	1.5	14	10	9.2	7.0	18	13	17
27	.72	.74	.75	.92	1.6	12	10	9.3	6.5	21	12	11
28	.69	1.3	.75	.92	1.7	11	9.9	8.9	6.2	20	11	9.5
29	.68	.96	.75	.92	---	11	14	8.4	5.7	12	11	9.0
30	.68	.83	.75	1.0	---	13	18	8.2	5.4	9.7	10	8.7
31	.66	---	.75	.98	---	28	---	7.1	---	34	9.7	---
TOTAL	20.76	23.14	23.48	28.56	33.30	269.4	500.9	388.7	251.8	264.5	770.3	258.4
MEAN	.67	.77	.76	.92	1.19	8.69	16.7	12.5	8.39	8.53	24.8	8.61
MAX	1.1	1.4	.83	1.3	2.2	34	41	30	16	34	88	20
MIN	.49	.58	.75	.75	.92	1.7	9.9	7.1	5.4	3.6	9.6	5.1
CFSM	.13	.15	.14	.18	.23	1.66	3.19	2.39	1.60	1.63	4.74	1.64
IN.	.15	.16	.17	.20	.24	1.91	3.56	2.76	1.79	1.88	5.47	1.83

CAL YR 1988 TOTAL 1430.63 MEAN 3.91 MAX 34 MIN .49 CFSM .75 IN. 10.16
WTR YR 1989 TOTAL 2833.24 MEAN 7.76 MAX 88 MIN .49 CFSM 1.48 IN. 20.11

01485000 POCOMOKE RIVER NEAR WILLARDS, MD

LOCATION.--Lat 38°23'20", long 75°19'30", Worcester County, Hydrologic Unit 02060009, on left bank 30 ft downstream from bridge on State Highway 346, 0.6 mi upstream from Burnt Mill Branch, 1.3 mi east of Willards, 1.3 mi west of Whaleysville, and 50.3 mi upstream from mouth.

DRAINAGE AREA.--60.5 mi^2.

PERIOD OF RECORD.--December 1949 to current year.

GAGE.--Water-stage recorder. Datum of gage is 13.95 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

AVERAGE DISCHARGE.--39 years (water years 1951-89), 71.6 ft^3/s, 16.07 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,820 ft^3/s, Aug. 20, 1989, gage height, 15.41 ft, from rating curve extended above 1,600 ft^3/s; minimum discharge, 2.2 ft^3/s, Aug. 18, 19, 1957, gage height, 1.91 ft.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 24	2000	682	10.34	Aug. 13	2200	1,110	11.84
July 17	1800	994	11.48	Aug. 20	0200	*2,820	*15.41

Minimum daily discharge, 7.4 ft^3/s, Oct. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.3	20	41	17	27	140	348	89	28	37	268	63
2	7.4	38	36	19	26	137	252	98	27	34	178	58
3	10	38	32	20	25	120	205	105	25	31	127	53
4	12	31	30	20	26	117	184	87	24	29	100	48
5	13	29	28	19	26	109	161	78	23	28	83	44
6	13	29	26	20	27	143	284	84	23	63	76	41
7	12	26	26	31	33	423	271	90	23	61	119	39
8	12	23	25	35	41	284	458	80	23	48	191	36
9	11	22	24	34	39	201	371	71	26	37	123	34
10	11	21	23	32	36	176	271	93	38	31	94	32
11	11	20	23	30	35	159	207	133	34	27	95	30
12	10	19	21	30	33	142	169	111	32	24	408	32
13	9.6	18	21	36	31	122	147	93	31	23	968	32
14	9.1	17	20	36	31	117	133	82	46	24	984	30
15	8.9	17	20	44	31	111	143	77	166	22	617	30
16	8.7	16	19	56	30	104	274	72	84	209	363	34
17	8.7	19	19	51	29	98	210	77	90	900	376	44
18	8.5	29	18	45	28	92	171	77	91	785	785	38
19	9.5	29	17	42	30	96	215	70	72	447	2150	192
20	9.0	31	17	38	31	88	187	63	59	280	2580	344
21	9.2	38	17	34	55	148	152	59	52	178	1790	252
22	19	34	18	31	145	178	131	54	47	120	1190	182
23	23	30	18	31	130	131	115	51	85	93	734	153
24	23	28	18	30	97	445	104	48	186	78	413	124
25	20	26	18	28	76	616	95	45	99	66	263	106
26	17	24	18	27	87	421	89	41	76	75	175	220
27	16	24	17	27	108	300	83	38	64	206	125	237
28	16	31	17	28	124	223	78	36	55	206	100	167
29	15	49	18	26	---	181	75	33	49	168	86	136
30	13	46	17	26	---	162	92	31	42	110	78	118
31	13	---	16	28	---	345	---	30	---	231	70	---
TOTAL	386.9	822	678	971	1437	6129	5675	2196	1720	4671	15709	2949
MEAN	12.5	27.4	21.9	31.3	51.3	198	189	70.8	57.3	151	507	98.3
MAX	23	49	41	56	145	616	458	133	186	900	2580	344
MIN	7.4	16	16	17	25	88	75	30	23	22	70	30
CFSM	.21	.45	.36	.52	.85	3.27	3.13	1.17	.95	2.49	8.38	1.62
IN.	.24	.51	.42	.60	.88	3.77	3.49	1.35	1.06	2.87	9.66	1.81

CAL YR 1988 TOTAL 17365.9 MEAN 47.4 MAX 490 MIN 7.0 CFSM .78 IN. 10.68
WTR YR 1989 TOTAL 43343.9 MEAN 119 MAX 2580 MIN 7.4 CFSM 1.96 IN. 26.65

01485500 NASSAWANGO CREEK NEAR SNOW HILL, MD

LOCATION.--Lat 38°13'44", long 75°28'19", Worcester County, Hydrologic Unit 02060009, on right bank 15 ft downstream from bridge on State Highway 12, 0.5 mi upstream from Furnace Branch, 0.6 mi downstream from Millville Creek, 5.5 mi northwest of Snow Hill, and 7.3 mi upstream from mouth.

DRAINAGE AREA.--44.9 mi^2.

PERIOD OF RECORD.--December 1949 to current year.

REVISED RECORDS.--WSP 1332: 1953.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 12.29 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

AVERAGE DISCHARGE.--39 years (water years 1951-89), 54.0 ft^3/s, 16.33 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 9.07 ft, Aug. 19, 1989, discharge not determined; minimum discharge, 0.80 ft^3/s, Sept. 8, 9, 10, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 280 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 8	1100	429	5.89	July 18	1300	444	5.93
Mar. 25	1900	780	6.67	Aug. 13	1300	1,070	7.11
Apr. 1	1200	485	6.04	Aug. 19	0800	*unknown	*9.07
Apr. 9	0900	485	6.04	Sept. 21	0200	381	5.75

Minimum daily discharge, 4.7 ft^3/s, Oct. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	20	33	16	18	112	463	40	10	11	130	23
2	4.7	24	29	18	17	119	355	53	9.0	9.6	140	21
3	13	24	26	18	17	111	235	58	8.0	8.4	99	19
4	23	25	23	18	20	99	179	54	7.3	8.1	54	16
5	21	23	22	16	21	91	145	48	7.5	8.2	33	15
6	18	21	20	18	22	97	181	46	9.1	8.5	28	15
7	15	18	19	23	27	227	254	49	9.5	11	71	14
8	14	17	18	24	29	405	382	47	12	14	177	13
9	13	16	18	25	29	284	456	44	18	13	159	13
10	11	15	18	25	25	186	303	72	22	9.8	109	12
11	9.5	14	18	23	23	139	200	98	19	7.3	85	11
12	8.3	13	16	23	22	116	144	107	14	5.8	324	11
13	7.5	13	14	27	21	101	112	95	12	5.9	974	17
14	7.0	13	14	28	22	95	94	71	20	7.5	819	17
15	6.8	13	14	33	22	91	95	53	45	6.9	471	18
16	6.4	13	15	36	21	90	161	42	50	43	254	18
17	5.9	20	14	35	20	82	216	58	85	143	165	22
18	5.7	23	13	33	19	73	185	64	74	385	304	23
19	6.4	28	13	29	20	74	161	61	53	291	e2590	100
20	7.2	35	12	26	22	71	147	48	36	151	e1660	265
21	9.1	35	14	24	44	83	122	36	27	75	856	338
22	21	32	18	21	89	114	99	29	22	39	439	218
23	19	29	18	20	145	145	81	25	21	26	235	133
24	17	26	17	20	166	250	67	23	24	20	149	89
25	16	23	17	19	131	685	55	21	28	16	104	64
26	15	22	16	18	100	632	47	18	39	17	78	103
27	13	21	16	18	92	337	42	17	34	21	61	142
28	11	28	15	17	97	211	37	15	24	47	47	162
29	10	33	15	17	---	156	34	13	18	37	39	120
30	9.6	34	14	17	---	143	38	12	14	26	33	86
31	8.9	---	14	18	---	267	---	11	---	80	27	---
TOTAL	358.1	671	543	703	1301	5686	5090	1428	771.4	1552.0	10714	2118
MEAN	11.6	22.4	17.5	22.7	46.5	183	170	46.1	25.7	50.1	346	70.6
MAX	23	35	33	36	166	685	463	107	85	385	2590	338
MIN	4.7	13	12	16	17	71	34	11	7.3	5.8	27	11
CFSM	.26	.50	.39	.51	1.03	4.09	3.78	1.03	.57	1.12	7.70	1.57
IN.	.30	.56	.45	.58	1.08	4.71	4.22	1.18	.64	1.29	8.88	1.75

CAL YR 1988 TOTAL 12729.3 MEAN 34.8 MAX 367 MIN 1.8 CFSM .77 IN. 10.55
WTR YR 1989 TOTAL 30935.5 MEAN 84.8 MAX 2590 MIN 4.7 CFSM 1.89 IN. 25.63

e Estimated

01486000 MANOKIN BRANCH NEAR PRINCESS ANNE, MD

LOCATION.--Lat 38°12'50", long 75°40'18", Somerset County, Hydrologic Unit 02060009, on right bank 45 ft downstream from farm bridge, 1.4 mi northeast of Princess Anne, and 1.6 mi upstream from confluence with Loretto Branch.

DRAINAGE AREA.--4.80 mi^2.

PERIOD OF RECORD.--April 1951 to September 1971, October 1974 to current year.

REVISED RECORDS.--WDR MD-DE-75-1: Drainage area. WDR MD-DE-85-1: 1983-84 (P).

GAGE.--Water-stage recorder. Datum of gage is 7.03 ft above National Geodetic Vertical Datum of 1929. Artificial control since Apr. 30, 1975. Nov. 26, 1968, to Sept. 30, 1971, water-stage recorder above and nonrecording gage below gage height 1.4 ft. Prior to Nov. 26, 1968, recording gage at datum 1.0 ft higher.

REMARKS.--No estimated daily discharges. Records good. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

AVERAGE DISCHARGE.--35 years (water years 1952-71, 1975-89), 4.65 ft^3/s, 13.15 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 547 ft^3/s, Aug. 20, 1969, gage height, 5.44 ft, from rating curve extended above 27 ft^3/s on basis of channel-conveyance study; maximum gage height, 7.08 ft, Aug. 19, 1985; no flow at times in 1954, 1963, 1964, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
June 23	1830	58	3.18	Aug. 19	0300	*179	*4.88
July 16	2000	69	3.33				

Minimum daily discharge, 0.55 ft^3/s, Oct. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.56	1.0	1.6	1.3	1.9	13	33	5.6	2.0	3.9	13	3.7
2	.57	1.5	1.6	1.5	1.8	10	18	6.3	1.9	3.3	8.8	3.5
3	.84	1.5	1.5	1.5	1.8	9.2	16	5.7	1.8	3.0	6.2	3.1
4	1.0	1.3	1.5	1.5	1.9	8.7	14	4.8	1.6	2.8	4.9	3.0
5	1.1	1.3	1.4	1.3	2.2	8.7	17	4.7	1.6	2.6	4.2	2.9
6	.91	1.2	1.4	1.5	2.3	16	53	5.4	1.7	2.8	3.7	2.7
7	.78	1.1	1.4	1.7	3.1	49	36	5.9	2.5	2.7	3.7	2.5
8	.77	1.1	1.3	1.7	3.4	21	54	4.8	3.6	2.4	3.5	2.4
9	.73	1.2	1.3	1.7	3.0	17	28	4.3	4.3	2.2	3.0	2.3
10	.72	1.0	1.3	1.6	2.7	14	18	9.0	4.6	2.0	2.9	2.3
11	.70	1.0	1.3	1.6	2.6	13	14	9.3	2.9	1.8	3.6	2.1
12	.66	.93	1.2	1.8	2.5	11	12	7.1	2.5	1.7	19	2.0
13	.59	.94	1.2	2.5	2.3	9.6	11	5.8	2.7	4.3	31	2.0
14	.57	.96	1.2	2.5	2.4	11	9.2	5.0	4.3	4.4	16	2.0
15	.59	.93	1.2	3.1	2.4	11	21	4.6	8.6	2.7	12	2.1
16	.59	.92	1.2	3.3	2.4	9.6	30	4.4	4.8	22	9.3	2.0
17	.57	1.4	1.1	2.9	2.3	8.7	17	4.3	5.1	29	8.2	3.1
18	.58	1.9	1.1	2.7	2.5	8.7	14	3.8	4.7	13	34	2.3
19	.59	1.7	1.1	2.6	2.7	11	19	3.5	3.9	8.7	119	13
20	.55	1.8	1.1	2.5	2.8	8.7	13	3.3	3.3	6.6	47	11
21	.64	1.8	1.2	2.2	7.9	17	11	3.2	3.0	5.2	26	6.8
22	1.1	1.6	1.2	2.0	18	14	8.9	3.0	3.3	4.4	16	5.6
23	1.2	1.5	1.2	2.1	13	12	7.8	2.9	22	3.9	11	5.0
24	.95	1.5	1.3	2.0	11	61	6.9	2.8	27	3.6	8.8	4.2
25	.83	1.4	1.3	1.9	9.2	40	6.2	2.6	17	3.2	7.2	4.0
26	.75	1.4	1.2	1.9	9.6	24	5.9	2.5	10	3.0	6.3	8.9
27	.69	1.4	1.1	2.0	11	17	5.6	2.5	7.6	2.9	5.6	7.5
28	.67	1.6	1.2	1.8	12	14	5.2	2.3	5.8	4.7	5.0	5.6
29	.66	1.8	1.2	1.8	---	12	5.4	2.1	4.8	4.0	4.7	5.0
30	.63	1.7	1.1	2.0	---	19	6.1	2.1	4.2	3.1	4.4	4.5
31	.62	---	1.2	2.0	---	53	---	2.1	---	23	4.0	---
TOTAL	22.71	40.38	39.2	62.5	140.7	551.9	516.2	135.7	173.1	182.9	452.0	127.1
MEAN	.73	1.35	1.26	2.02	5.02	17.8	17.2	4.38	5.77	5.90	14.6	4.24
MAX	1.2	1.9	1.6	3.3	18	61	54	9.3	27	29	119	13
MIN	.55	.92	1.1	1.3	1.8	8.7	5.2	2.1	1.6	1.7	2.9	2.0
CFSM	.15	.28	.26	.42	1.05	3.71	3.58	.91	1.20	1.23	3.04	.88
IN.	.18	.31	.30	.48	1.09	4.28	4.00	1.05	1.34	1.42	3.50	.99

CAL YR 1988 TOTAL 1418.83 MEAN 3.88 MAX 56 MIN .46 CFSM .81 IN. 11.00
WTR YR 1989 TOTAL 2444.39 MEAN 6.70 MAX 119 MIN .55 CFSM 1.40 IN. 18.94

01487000 NANTICOKE RIVER NEAR BRIDGEVILLE, DE

LOCATION.--Lat 38°43'42", long 75°33'44", Sussex County, Hydrologic Unit 02060008, on left bank at downstream side of highway bridge, 800 ft downstream from Gum Branch, 2.5 mi southeast of Bridgeville, and 50.5 mi upstream from mouth.

DRAINAGE AREA.--75.4 mi^2.

PERIOD OF RECORD.--April 1943 to current year. Prior to October 1955, published as Gravelly Fork near Bridgeville.

REVISED RECORDS.--WSP 1111: 1947. WSP 1232: 1945-49.

GAGE.--Water-stage recorder. Datum of gage is 13.64 ft above National Geodetic Vertical Datum of 1929 (levels by Soil Conservation Service). Prior to Apr. 19, 1947, nonrecording gage, and Apr. 19, 1947, to Dec. 18, 1969, recording gage at present site and datum. Timber control Sept. 3, 1947, to Dec. 18, 1969. Feb. 18, 1970, to Oct. 1, 1973, recording gage at site 300 ft downstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

AVERAGE DISCHARGE.--46 years, 90.3 ft^3/s, 16.26 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,020 ft^3/s, Feb. 26, 1979, gage height, 10.31 ft; minimum discharge observed, 6.3 ft^3/s, Sept. 29, 1943.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, about 11.0 ft in September 1935, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 360 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 25	0100	*847	*7.48	May 2	1900	704	7.14
Mar. 31	0800	468	6.51	July 27	0500	406	6.31
Apr. 8	0900	527	6.68	July 31	2200	430	6.39
Apr. 30	0700	506	6.62				

Minimum daily discharge, 22 ft^3/s, Oct. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	31	61	38	49	88	320	299	104	103	344	96
2	22	32	58	38	48	86	253	494	99	98	231	95
3	26	28	55	37	48	84	238	449	96	95	182	92
4	28	26	53	37	47	84	241	299	94	92	157	90
5	27	26	51	36	46	84	224	259	91	95	143	87
6	24	26	50	41	47	108	279	284	90	93	133	85
7	24	25	50	49	48	230	274	291	136	94	126	84
8	24	25	49	46	47	142	459	248	138	89	117	83
9	24	25	48	45	45	122	336	220	118	83	110	79
10	24	25	48	42	44	127	274	253	121	77	106	78
11	23	25	47	41	44	136	243	322	110	75	107	73
12	23	24	45	44	45	129	222	263	101	70	130	83
13	23	24	45	49	43	122	208	229	97	71	246	77
14	23	25	45	45	46	119	198	207	95	72	221	80
15	23	24	45	71	45	116	205	194	98	67	209	87
16	23	24	44	75	45	143	278	185	97	81	199	84
17	23	35	43	64	43	134	239	181	123	114	173	112
18	23	36	41	61	43	128	217	170	111	97	159	93
19	23	30	40	59	45	157	243	159	100	87	188	122
20	23	34	40	58	44	139	235	153	97	81	192	169
21	26	35	41	55	57	184	208	147	107	77	170	134
22	43	32	41	53	104	208	193	140	147	73	155	118
23	31	30	39	54	96	162	180	135	220	66	145	113
24	28	29	39	53	85	445	170	137	291	64	136	108
25	27	29	39	52	79	635	163	131	194	58	127	103
26	26	29	37	51	79	342	158	123	155	92	121	143
27	25	32	37	52	84	273	154	120	139	324	116	157
28	25	108	37	49	89	245	149	120	126	273	112	134
29	24	112	38	49	---	226	161	114	116	218	109	124
30	24	70	37	52	---	227	432	110	108	149	106	119
31	23	---	37	53	---	424	---	108	---	276	101	---
TOTAL	778	1056	1380	1549	1585	5849	7154	6544	3719	3404	4871	3102
MEAN	25.1	35.2	44.5	50.0	56.6	189	238	211	124	110	157	103
MAX	43	112	61	75	104	635	459	494	291	324	344	169
MIN	22	24	37	36	43	84	149	108	90	58	101	73
CFSM	.33	.47	.59	.66	.75	2.50	3.16	2.80	1.64	1.46	2.08	1.37
IN.	.38	.52	.68	.76	.78	2.89	3.53	3.23	1.83	1.68	2.40	1.53

CAL YR 1988 TOTAL 20567 MEAN 56.2 MAX 245 MIN 18 CFSM .75 IN. 10.15
WTR YR 1989 TOTAL 40991 MEAN 112 MAX 635 MIN 22 CFSM 1.49 IN. 20.22

01488500 MARSHYHOPE CREEK NEAR ADAMSVILLE, DE

LOCATION.--Lat 38°50'59", long 75°40'24", Kent County, Hydrologic Unit 02060008, on left bank 45 ft upstream from highway bridge, 1.4 mi upstream from Cattail Branch, 1.6 mi northeast of Adamsville, 4.9 mi northwest of Greenwood, and 33 mi upstream from mouth.

DRAINAGE AREA.--43.9 mi^2.

PERIOD OF RECORD.--April 1943 to March 1969, October 1971 to current year.

REVISED RECORDS.--WSP 1141: 1948(P). WSP 1432: 1946(M), 1948, 1952.

GAGE.--Water-stage recorder. Datum of gage is 26.21 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 24, 1953, nonrecording gage and crest-stage gage, and Nov. 24, 1953, to March 1969, recording gage at site on old channel about 240 ft southeast of present site at datum 2.00 ft higher.

REMARKS.--No estimated daily discharges. Records good. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

AVERAGE DISCHARGE.--43 years (water years 1944-68, 1972-89), 54.3 ft^3/s, 16.80 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,700 ft^3/s, July 13, 1975, gage height, 13.19 ft, from rating curve extended above 3,300 ft^3/s; maximum gage height, 13.98 ft, Aug. 5, 1967, present datum; minimum discharge, 1.0 ft^3/s, Sept. 9, 10, 1964, Aug. 20, 1965.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 16.5 ft, present datum, in September 1935, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 450 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 28	1000	814	6.22	May 6	1015	687	5.78
Mar. 6	2330	474	4.96	May 24	0145	1,640	8.70
Mar. 24	1815	*1,720	*8.91	June 7	0600	618	5.53
Apr. 8	0345	755	6.02	June 21	0115	764	6.05
Apr. 30	0145	963	6.71	July 31	1215	667	5.71
May 2	1300	1,180	7.41				

Minimum discharge, 7.2 ft^3/s, Oct. 14, 16, 18, gage height, 2.14 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.3	11	62	23	34	89	160	179	62	59	157	33
2	8.2	16	54	24	33	80	118	604	58	55	93	32
3	8.9	14	49	24	33	73	118	273	54	51	74	29
4	9.1	12	46	25	32	69	119	164	50	49	64	29
5	8.8	11	42	22	32	66	105	127	47	51	58	27
6	8.3	11	41	25	32	184	190	378	55	51	52	26
7	8.1	11	40	32	33	259	167	230	376	55	50	26
8	8.1	11	38	35	32	128	467	151	168	49	46	26
9	7.9	10	36	36	31	106	217	116	150	45	42	25
10	7.9	10	36	33	30	138	156	233	256	42	40	24
11	7.9	10	34	32	31	158	122	255	120	40	41	22
12	7.9	10	32	34	30	130	105	164	89	38	51	23
13	7.7	10	32	46	28	108	95	125	78	37	121	22
14	7.5	10	32	39	31	98	85	105	71	37	82	26
15	7.6	10	31	84	32	91	104	94	72	34	81	61
16	7.5	11	29	75	33	87	209	90	73	61	69	32
17	7.6	77	29	57	33	79	129	91	157	133	59	111
18	7.7	66	28	51	33	78	109	80	92	63	54	51
19	7.7	31	27	49	34	111	155	72	73	52	122	155
20	7.6	30	26	46	33	85	130	67	141	48	97	199
21	8.7	45	26	43	78	133	103	62	397	45	72	100
22	12	33	26	39	173	122	90	58	203	41	63	75
23	14	27	25	39	121	94	80	203	232	39	57	65
24	11	25	26	38	88	953	73	770	234	37	52	55
25	9.6	24	27	37	79	622	68	203	141	35	48	50
26	8.8	22	24	36	78	252	65	130	107	41	45	192
27	8.3	22	23	36	91	180	62	125	90	97	43	149
28	8.3	406	25	34	103	146	59	126	79	77	40	93
29	8.3	140	25	33	---	124	108	89	70	57	39	77
30	8.3	76	23	35	---	131	467	76	63	45	37	68
31	8.3	---	23	35	---	235	---	68	---	334	35	---
TOTAL	265.9	1202	1017	1197	1451	5209	4235	5508	3858	1898	1984	1903
MEAN	8.58	40.1	32.8	38.6	51.8	168	141	178	129	61.2	64.0	63.4
MAX	14	406	62	84	173	953	467	770	397	334	157	199
MIN	7.5	10	23	22	28	66	59	58	47	34	35	22
CFSM	.20	.91	.75	.88	1.18	3.83	3.22	4.05	2.93	1.39	1.46	1.44
IN.	.23	1.02	.86	1.01	1.23	4.41	3.59	4.67	3.27	1.61	1.68	1.61

CAL YR 1988 TOTAL 12425.8 MEAN 34.0 MAX 699 MIN 7.5 CFSM .77 IN. 10.53
WTR YR 1989 TOTAL 29727.9 MEAN 81.4 MAX 953 MIN 7.5 CFSM 1.86 IN. 25.19

01489000 FAULKNER BRANCH AT FEDERALSBURG, MD

LOCATION.--Lat 38°42'44", long 75°47'34", Caroline County, Hydrologic Unit 02060008, on right bank 25 ft downstream from bridge on Laurel Grove Road, 0.9 mi upstream from mouth, and 1.0 mi northwest of Federalsburg.

DRAINAGE AREA.--7.10 mi^2.

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

REVISED RECORDS.--WSP 1552: 1952. WSP 2103: 1960(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 16.70 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Diversion for irrigation of about 500 acres upstream from station during some years. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

AVERAGE DISCHARGE.--39 years, 9.04 ft^3/s, 17.29 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,680 ft^3/s, July 13, 1975, gage height, 5.98 ft, from rating curve extended above 400 ft^3/s on basis of contracted-opening measurement of peak flow; no flow at times during many years (result of pumpage for irrigation).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1935 is believed to have been higher than that of July 13, 1975, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 60 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 28	0630	120	2.92	May 6	0615	104	2.80
Mar. 6	2215	91	2.67	May 23	2215	238	3.57
Mar. 21	1130	100	2.76	June 7	0315	126	2.96
Mar. 24	1530	230	3.53	June 23	1715	67	2.40
Mar. 30	1945	151	3.12	June 26	0545	160	3.17
Apr. 8	0015	232	3.54	July 16	2000	75	2.49
Apr. 29	2145	317	3.90	July 31	1015	129	2.98
May 2	0930	*341	*3.99				

Minimum discharge, 0.94 ft^3/s, Oct. 14; minimum daily discharge, 1.2 ft^3/s, Oct. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	2.3	6.2	4.1	5.5	12	27	25	11	15	25	4.1
2	1.2	2.2	5.7	4.2	5.2	11	21	122	10	14	18	3.2
3	1.3	1.9	5.5	4.0	5.6	11	23	37	9.6	12	15	4.9
4	1.4	1.8	5.3	4.0	5.4	11	22	26	9.1	11	14	4.3
5	1.3	2.6	5.1	3.8	5.4	11	20	23	7.8	11	12	3.4
6	1.5	4.0	5.0	4.5	5.4	30	34	49	10	11	12	4.2
7	1.5	2.2	5.0	5.1	5.5	28	44	29	47	14	11	3.1
8	1.5	2.0	4.8	5.1	5.3	17	86	23	15	11	8.2	3.3
9	1.5	1.8	4.7	5.0	5.1	16	33	20	14	11	8.8	3.9
10	1.5	1.8	4.5	4.4	5.0	17	26	25	17	9.0	8.8	3.9
11	1.4	1.8	4.4	4.4	5.1	16	22	24	12	7.9	9.1	3.3
12	1.3	1.8	4.1	5.3	5.0	16	20	20	11	7.7	9.7	3.6
13	1.3	1.9	4.0	5.4	4.6	14	19	18	11	8.7	11	3.5
14	1.3	1.9	4.2	4.8	4.9	14	17	17	11	8.3	10	14
15	1.4	1.8	4.2	11	4.8	13	25	16	15	6.1	11	15
16	1.3	1.9	4.2	8.5	4.9	24	33	17	14	25	9.8	8.0
17	1.3	3.8	4.4	7.6	4.5	16	22	16	18	25	9.0	7.9
18	1.3	3.5	4.2	7.4	4.6	18	21	14	14	15	9.0	7.1
19	1.3	2.8	3.9	7.3	4.9	19	22	14	12	13	12	19
20	1.4	3.1	4.4	7.1	4.9	16	19	13	14	12	11	21
21	1.9	3.0	4.5	6.4	12	42	18	13	32	11	10	17
22	2.2	2.7	4.4	6.2	16	22	17	12	35	8.6	9.6	15
23	1.7	2.6	4.2	6.2	13	19	16	41	40	8.8	9.0	13
24	1.7	2.5	4.3	6.2	11	123	15	49	33	8.0	8.3	11
25	1.6	2.4	4.3	5.9	11	48	14	20	25	6.0	7.8	11
26	1.6	2.4	3.9	5.7	12	29	14	16	70	11	7.4	31
27	1.5	2.8	3.7	5.9	12	24	14	15	27	9.4	7.2	21
28	1.6	42	4.1	5.5	12	22	13	13	21	27	6.3	17
29	1.6	10	3.8	5.5	---	20	61	12	18	15	6.4	15
30	1.6	7.1	3.7	6.1	---	44	52	12	16	12	6.1	14
31	1.6	---	4.0	5.9	---	48	---	11	---	55	4.4	---
TOTAL	46.0	124.4	138.7	178.5	200.6	771	790	762	599.5	419.5	316.9	305.7
MEAN	1.48	4.15	4.47	5.76	7.16	24.9	26.3	24.6	20.0	13.5	10.2	10.2
MAX	2.2	42	6.2	11	16	123	86	122	70	55	25	31
MIN	1.2	1.8	3.7	3.8	4.5	11	13	11	7.8	6.0	4.4	3.1
CFSM	.21	.58	.63	.81	1.01	3.50	3.71	3.46	2.81	1.91	1.44	1.44
IN.	.24	.65	.73	.94	1.05	4.04	4.14	3.99	3.14	2.20	1.66	1.60

CAL YR 1988 TOTAL 2051.86 MEAN 5.61 MAX 168 MIN .27 CFSM .79 IN. 10.75
WTR YR 1989 TOTAL 4652.8 MEAN 12.7 MAX 123 MIN 1.2 CFSM 1.80 IN. 24.38

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD

LOCATION.--Lat 38°59'50", long 75°47'09", Caroline County, Hydrologic Unit 02060005, on left bank at highway bridge, 0.1 mi upstream from Gravelly Branch, 2.0 mi northeast of Greensboro, and 60 mi upstream from mouth.

DRAINAGE AREA.--113 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1948 to current year.

REVISED RECORDS.--WSP 1622: 1948. WDR MD-DE-79-1: 1961(P).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 3.51 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Diversions for irrigation of about 500 acres upstream from station.

AVERAGE DISCHARGE.--41 years, 130 ft^3/s, 15.62 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,970 ft^3/s, Aug. 4, 1967, gage height, 14.47 ft, from rating curve extended above 3,600 ft^3/s; minimum discharge, 1.2 ft^3/s, Aug. 29, 1966, and Sept. 3, 1987.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1935 is believed to have been higher than that of Aug. 4, 1967, from information by local residents.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 25	0930	*2,510	*9.41	May 7	0430	1,410	7.52
Apr. 8	2345	1,200	7.04	May 24	2100	1,120	6.86
May 3	0615	2,000	8.59	June 23	0115	1,290	7.25

Minimum discharge, 12 ft^3/s, Oct. 16, gage height, 2.08 ft; minimum daily discharge, 12 ft^3/s, Oct. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	29	188	60	99	236	285	245	166	177	159	63
2	15	49	151	66	95	214	263	854	152	154	152	58
3	21	43	132	66	94	194	229	1620	139	143	136	56
4	23	36	121	66	102	180	226	707	128	145	123	51
5	21	36	111	63	104	173	227	438	119	176	110	47
6	17	54	101	63	104	232	284	759	179	208	97	47
7	16	49	97	82	104	619	443	1210	287	244	92	47
8	15	43	92	95	104	583	825	666	307	244	94	44
9	15	36	88	106	99	353	931	444	269	182	91	43
10	15	33	83	110	89	295	563	367	231	149	80	43
11	14	32	80	99	88	378	385	560	208	133	80	41
12	14	31	72	98	87	376	282	539	172	120	93	54
13	14	31	73	112	83	303	241	387	150	111	133	58
14	13	33	71	119	97	261	213	298	139	117	158	51
15	13	32	72	145	123	232	208	255	137	114	137	61
16	12	31	70	209	144	212	311	235	200	124	130	59
17	13	40	64	203	145	191	400	235	351	286	157	67
18	13	55	62	165	136	175	277	232	454	360	133	75
19	13	58	60	149	127	193	264	205	467	234	154	102
20	13	75	59	138	122	209	347	182	286	176	194	284
21	15	99	61	128	160	227	290	168	381	160	183	500
22	40	115	62	116	429	342	228	156	795	144	152	329
23	39	88	60	108	585	290	196	166	1070	133	137	196
24	31	71	62	106	418	584	181	788	725	123	120	163
25	25	63	70	103	276	2160	169	775	600	108	105	140
26	21	59	68	99	228	1080	166	421	499	110	94	244
27	19	58	62	96	220	575	159	285	349	311	87	546
28	17	198	60	95	233	416	154	304	264	606	82	392
29	17	367	63	90	---	311	161	280	226	318	80	238
30	17	292	61	90	---	256	211	213	200	195	73	190
31	17	---	58	100	---	245	---	182	---	161	67	---
TOTAL	563	2236	2534	3345	4695	12095	9119	14176	9650	5966	3683	4289
MEAN	18.2	74.5	81.7	108	168	390	304	457	322	192	119	143
MAX	40	367	188	209	585	2160	931	1620	1070	606	194	546
MIN	12	29	58	60	83	173	154	156	119	108	67	41
CFSM	.16	.66	.72	.95	1.48	3.45	2.69	4.05	2.85	1.70	1.05	1.27
IN.	.19	.74	.83	1.10	1.55	3.98	3.00	4.67	3.18	1.96	1.21	1.41

CAL YR 1988 TOTAL 27912.1 MEAN 76.3 MAX 951 MIN 5.5 CFSM .67 IN. 9.19
WTR YR 1989 TOTAL 72351 MEAN 198 MAX 2160 MIN 12 CFSM 1.75 IN. 23.82

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965 to current year.
PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1974 to September 1981, October 1984 to current year.
WATER TEMPERATURE: October 1974 to current year.
SUSPENDED-SEDIMENT DISCHARGE: October 1980 to current year.
REMARKS.--Water temperatures are measured daily in field by local observer at time of sampling.
EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE (water years 1975-81, 1988): Maximum daily, 313 microsiemens, Dec. 20, 1987; minimum daily, 40 microsiemens, Jan. 31, 1980.
WATER TEMPERATURE (water years 1975-81, 1985, 1988-89): Maximum daily, 28.5°C, Aug. 14, 1988; minimum daily, 0.0°C, on many days during winter periods.
SEDIMENT CONCENTRATION: Maximun daily mean, 107 mg/L, Dec. 26, 1986; minimum daily mean, 1 mg/L, on many days during water years 1982-88.
SEDIMENT LOAD: Maximum daily, 448 tons, Dec. 26, 1986; minimum daily, 0.02 ton, Aug. 30, Sept. 7, 1982, July 25, 1986, Oct. 16, 23, 26, 27, 1987, Sept. 23, 1988.
EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum daily, 26.5°C, Aug. 6; minimum daily, 0.5°C, Dec. 13, 17-19.
SEDIMENT CONCENTRATION: Maximum daily mean, 89 mg/L, Nov. 28; minimum daily mean, 1 mg/L, on many days during the year.
SEDIMENT LOAD: Maximum daily, 387 tons, Mar. 25; minimum daily, 0.04 ton, Oct. 9, 10, 17-21.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT											
27...	1400	18	198	6.1	9.5	14.5	--	--	11.1	--	--
NOV											
02...	0945	51	--	5.8	7.5	9.0	--	--	8.7	--	--
03...	1045	42	195	6.6	9.0	16.0	768	1.5	8.5	73	180
15...	1430	31	182	5.5	10.0	16.0	--	--	9.8	--	--
18...	0950	56	174	5.5	9.0	8.5	--	--	8.8	--	--
21...	1040	94	173	5.8	10.5	12.0	--	--	7.9	--	--
28...	1200	220	134	6.4	12.5	10.5	--	--	7.8	--	--
29...	0945	354	136	6.5	9.0	9.5	--	--	7.8	--	--
29...	1330	354	128	6.8	9.0	9.0	--	--	7.7	--	--
30...	1200	292	102	6.6	7.5	11.5	--	--	8.6	--	--
DEC											
01...	1300	197	126	6.4	7.0	13.5	--	--	9.0	--	--
15...	1100	72	--	5.3	1.5	10.5	--	--	11.4	--	--
JAN											
05...	1400	59	165	5.3	0.5	-2.0	--	--	12.8	--	--
12...	1445	99	156	5.4	5.0	6.5	765	--	11.8	92	--
17...	1100	206	141	5.4	4.5	9.0	--	--	14.0	--	--
30...	1030	87	147	6.5	5.5	20.0	756	--	12.8	102	--
FEB											
01...	1135	99	158	6.5	7.0	22.0	762	3.9	10.9	90	39
22...	0915	351	116	6.7	9.5	7.0	--	--	9.1	--	--
23...	0910	602	101	6.7	8.0	5.0	--	--	8.9	--	--
23...	1315	590	100	6.9	8.0	5.5	--	--	9.1	--	--
27...	1030	220	129	6.9	3.0	5.0	--	--	--	--	--
MAR											
03...	1130	194	132	5.5	5.0	6.0	--	--	12.3	--	--
03...	1135	194	132	5.5	5.0	6.0	--	--	12.3	--	--
06...	1400	206	135	6.5	4.5	0.0	--	--	13.9	--	--
08...	1000	610	96	7.0	1.0	-5.0	--	--	12.6	--	--
08...	1400	555	98	7.1	1.0	-1.0	--	--	--	--	--
09...	0930	365	103	7.1	2.0	1.0	--	--	12.6	--	--
10...	1145	285	117	7.0	4.0	5.0	773	--	12.6	95	--
21...	1400	227	132	5.7	9.0	9.0	762	--	11.8	102	--
24...	1045	420	120	7.7	7.5	9.0	763	--	11.2	93	--
24...	1430	606	109	6.1	8.0	9.0	--	--	10.6	--	--
25...	1045	2510	67	6.3	7.0	15.5	--	--	--	--	--
25...	1415	2380	61	5.6	8.0	15.5	764	--	11.3	95	--
26...	0845	1160	68	5.7	9.0	12.5	769	--	10.4	89	--
26...	1730	817	--	6.3	11.0	15.0	--	--	--	--	--
27...	1330	560	90	5.6	12.5	21.0	769	--	10.2	95	--
28...	1130	418	101	6.4	15.0	24.0	765	--	7.6	75	--
31...	1430	246	118	5.8	14.5	19.0	747	--	--	--	--
APR											
06...	1400	281	122	6.2	14.0	11.5	762	--	8.0	78	--
08-08	0400	686	100	6.1	--	--	--	--	--	--	--
08...	1215	744	96	6.1	9.0	13.5	758	--	9.5	83	--
08-09	1230	1110	94	5.9	--	--	--	--	--	--	--
09...	1015	985	77	5.7	9.5	12.0	759	--	7.3	64	--
09-11	1045	578	83	6.3	--	--	--	--	--	--	--
10...	0945	584	87	5.7	10.5	9.5	767	--	7.8	69	--
11...	1345	379	100	5.7	11.5	13.5	770	--	8.8	79	--
20...	1030	354	115	5.8	14.5	16.5	--	--	7.8	--	--
27...	1040	159	125	6.3	15.0	26.0	760	--	8.0	80	--

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
MAY											
02...	1000	678	97	6.2	15.0	15.0	754	--	7.1	71	--
02-02	1155	1130	82	5.9	--	--	--	--	--	--	--
02...	1445	1100	74	6.0	16.5	18.0	756	--	5.0	52	--
03-03	0015	1640	64	6.3	--	--	--	--	--	--	--
03...	1015	1850	59	6.0	10.0	14.0	763	--	5.4	48	--
03...	1600	1430	56	6.6	16.0	16.5	--	28	6.2	--	350
04...	1010	710	70	6.0	10.0	20.0	770	--	5.8	51	--
04...	1400	649	72	6.0	17.0	25.0	768	--	5.2	53	--
05...	1130	435	86	5.7	15.0	15.0	--	--	5.8	--	--
06...	1115	807	82	6.0	17.0	22.0	758	--	5.4	56	--
06...	1430	906	86	6.7	18.5	24.0	756	--	4.9	53	--
07...	1115	1280	65	5.9	15.0	13.0	758	--	4.8	48	--
08...	1430	620	76	5.5	15.5	18.0	761	--	6.2	62	--
11...	1115	584	99	6.2	13.0	11.0	755	--	7.2	69	--
11...	1400	620	96	6.3	13.5	13.0	755	--	6.8	66	--
12...	1130	541	91	6.1	13.5	18.0	759	--	7.8	75	--
24...	1030	678	91	5.6	18.0	16.5	754	--	5.6	60	--
24...	1040	678	91	5.6	18.0	16.5	754	--	5.3	57	--
24...	1400	824	91	5.6	18.0	21.0	754	--	5.8	62	--
25...	1030	772	71	5.7	18.5	22.0	762	--	6.2	66	--
25...	1400	703	72	5.8	19.0	28.0	760	--	6.0	65	--
JUN											
06...	1410	190	118	6.2	22.0	25.0	760	--	5.3	61	--
22...	0915	712	82	6.8	23.0	28.0	--	--	5.2	--	--
22...	1500	727	83	6.7	23.0	28.0	765	--	5.0	58	--
23...	1130	1010	67	6.0	23.0	26.0	765	--	4.8	56	--
23...	1400	955	77	6.2	21.0	23.0	764	--	4.7	53	--
24...	1100	714	85	5.9	23.5	27.0	763	--	5.0	59	--
JUL											
14...	1200	118	137	6.1	22.5	27.5	--	--	5.3	--	--
AUG											
11...	1030	78	134	5.9	20.0	19.0	765	--	6.8	75	--
SEP											
07...	1130	48	158	6.8	19.0	24.0	769	3.4	7.4	79	49
07...	1145	48	156	5.6	19.0	23.0	767	--	7.5	80	--
07...	1150	48	156	5.6	19.0	23.0	767	--	7.5	80	--

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
OCT											
27...	--	--	--	--	--	29	--	--	--	14	--
NOV											
02...	--	--	--	--	--	26	--	--	--	13	--
03...	1300	14	4.4	11	4.6	22	26	22	<0.10	15	133
15...	--	--	--	--	--	23	--	--	--	--	--
18...	--	--	--	--	--	25	--	--	--	16	--
21...	--	--	--	--	--	27	--	--	--	16	--
28...	--	--	--	--	--	14	--	--	--	11	--
29...	--	--	--	--	--	13	--	--	--	15	--
29...	--	--	--	--	--	12	--	--	--	14	--
30...	--	--	--	--	--	11	--	--	--	11	--
DEC											
01...	--	--	--	--	--	11	--	--	--	15	--
15...	--	--	--	--	--	16	--	--	--	23	--
JAN											
05...	--	--	--	--	--	16	--	--	--	20	--
12...	--	--	--	--	--	15	--	--	--	20	--
17...	--	--	--	--	--	17	--	--	--	16	--
30...	--	--	--	--	--	17	--	--	--	20	--
FEB											
01...	19	11	3.3	8.3	2.2	21	23	13	0.10	19	88
22...	--	--	--	--	--	12	--	--	--	15	--
23...	--	--	--	--	--	11	--	--	--	12	--
23...	--	--	--	--	--	9	--	--	--	12	--
27...	--	--	--	--	--	10	--	--	--	20	--
MAR											
03...	--	--	--	--	--	10	--	--	--	19	--
03...	--	--	--	--	--	10	--	--	--	19	--
06...	--	--	--	--	--	13	--	--	--	18	--
08...	--	--	--	--	--	10	--	--	--	12	--
08...	--	--	--	--	--	9	--	--	--	12	--
09...	--	--	--	--	--	8	--	--	--	15	--
10...	--	--	--	--	--	9	--	--	--	18	--
21...	--	--	--	--	--	10	--	--	--	15	--
24...	--	--	--	--	--	8	--	--	--	14	--
24...	--	--	--	--	--	--	--	--	--	11	--
25...	--	--	--	--	--	9	--	--	--	6.2	--
25...	--	--	--	--	--	8	--	--	--	5.1	--
26...	--	--	--	--	--	8	--	--	--	7.5	--
26...	--	--	--	--	--	15	--	--	--	9.7	--
27...	--	--	--	--	--	8	--	--	--	12	--
28...	--	--	--	--	--	7	--	--	--	14	--
31...	--	--	--	--	--	14	--	--	--	16	--
APR											
06...	--	--	--	--	--	11	--	--	--	14	--
08-08	--	--	--	--	--	16	--	--	--	12	--
08...	--	--	--	--	--	14	--	--	--	11	--
08-09	--	--	--	--	--	10	--	--	--	13	--
09...	--	--	--	--	--	12	--	--	--	9.0	--
09-11	--	--	--	--	--	11	--	--	--	9.8	--
10...	--	--	--	--	--	14	--	--	--	12	--
11...	--	--	--	--	--	9	--	--	--	14	--
20...	--	--	--	--	--	15	--	--	--	13	--
27...	--	--	--	--	--	18	--	--	--	14	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
MAY											
02...	--	--	--	--	--	18	--	--	--	9.5	--
02-02	--	--	--	--	--	14	--	--	--	8.1	--
02...	--	--	--	--	--	15	--	--	--	6.9	--
03-03	--	--	--	--	--	12	--	--	--	7.2	--
03...	--	--	--	--	--	13	--	--	--	6.8	--
03...	K3300	4.5	1.6	2.5	2.7	11	9.0	4.9	0.10	6.8	68
04...	--	--	--	--	--	15	--	--	--	10	--
04...	--	--	--	--	--	14	--	--	--	11	--
05...	--	--	--	--	--	14	--	--	--	14	--
06...	--	--	--	--	--	--	--	--	--	9.0	--
06...	--	--	--	--	--	--	--	--	--	11	--
07...	--	--	--	--	--	16	--	--	--	7.7	--
08...	--	--	--	--	--	13	--	--	--	11	--
11...	--	--	--	--	--	17	--	--	--	14	--
11...	--	--	--	--	--	13	--	--	--	13	--
12...	--	--	--	--	--	17	--	--	--	12	--
24...	--	--	--	--	--	14	--	--	--	10	--
24...	--	--	--	--	--	--	--	--	--	11	--
24...	--	--	--	--	--	16	--	--	--	11	--
25...	--	--	--	--	--	11	--	--	--	8.1	--
25...	--	--	--	--	--	11	--	--	--	9.1	--
JUN											
06...	--	--	--	--	--	26	--	--	--	12	--
22...	--	--	--	--	--	11	--	--	--	10	--
22...	--	--	--	--	--	15	--	--	--	10	--
23...	--	--	--	--	--	15	--	--	--	8.5	--
23...	--	--	--	--	--	14	--	--	--	9.0	--
24...	--	--	--	--	--	25	--	--	--	12	--
JUL											
14...	--	--	--	--	--	32	--	--	--	18	--
AUG											
11...	--	--	--	--	--	22	--	--	--	18	--
SEP											
07...	180	12	3.7	9.6	2.4	24	16	15	0.10	20	85
07...	--	--	--	--	--	23	--	--	--	19	--
07...	--	--	--	--	--	23	--	--	--	19	--

K: Results based on colony count outside the accepted range (non-ideal colony).

CHOPTANK RIVER BASIN

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)
OCT											
27...	--	--	<0.010	0.840	--	<0.010	0.50	0.50	0.030	0.017	0.009
NOV											
02...	--	1.08	0.020	1.10	--	0.020	0.60	0.50	0.050	0.020	0.012
03...	113	--	--	0.580	<0.010	0.010	0.40	--	0.040	0.030	0.007
15...	--	--	--	--	--	--	--	--	--	--	--
18...	--	0.920	0.010	0.930	--	0.040	0.50	0.50	0.050	0.024	0.013
21...	--	--	<0.010	1.00	--	0.040	0.60	0.70	0.060	0.034	0.019
28...	--	1.48	0.020	1.50	--	0.030	1.6	0.70	0.110	0.021	0.014
29...	--	1.08	0.020	1.10	--	0.030	1.0	0.60	0.180	0.038	0.025
29...	--	0.840	0.010	0.850	--	<0.010	1.0	0.70	0.200	0.038	0.027
30...	--	--	<0.010	0.710	--	<0.010	1.0	0.60	0.170	0.030	0.022
DEC											
01...	--	--	<0.010	1.00	--	0.010	0.70	0.60	0.100	0.024	0.017
15...	--	1.69	0.010	1.70	--	0.070	0.30	0.30	0.030	0.013	0.008
JAN											
05...	--	--	<0.010	1.50	--	0.040	1.1	0.70	0.030	0.010	0.007
12...	--	1.38	0.021	1.40	--	0.030	0.40	0.40	0.030	0.010	0.005
17...	--	1.20	0.002	1.20	--	0.050	0.60	0.60	0.080	0.016	0.026
30...	--	1.59	0.011	1.60	--	0.030	<0.20	<0.20	0.030	0.012	0.011
FEB											
01...	100	1.49	0.008	1.50	0.030	0.040	0.40	0.50	0.030	0.010	0.007
22...	--	1.29	0.006	1.30	--	0.060	0.80	0.30	0.170	0.018	0.047
23...	--	0.956	0.014	0.970	--	0.060	1.1	0.70	0.200	0.036	0.056
23...	--	0.962	0.008	0.970	--	0.060	0.90	0.60	0.190	0.029	0.047
27...	--	1.50	0.003	1.50	--	0.040	0.40	0.30	0.050	0.012	0.040
MAR											
03...	--	1.39	0.007	1.40	--	0.020	0.20	0.20	0.050	0.010	0.007
03...	--	--	0.009	--	--	--	--	--	--	0.011	0.009
06...	--	1.59	0.011	1.60	--	0.030	<0.20	<0.20	0.040	0.012	0.009
08...	--	--	<0.010	0.960	--	0.060	1.1	0.60	0.120	0.020	0.012
08...	--	0.990	0.010	1.00	--	0.070	1.1	0.80	0.110	0.025	0.018
09...	--	1.19	0.007	1.20	--	0.050	0.90	0.60	0.070	0.016	0.012
10...	--	1.49	0.007	1.50	--	0.030	0.90	0.50	0.050	0.014	0.010
21...	--	1.29	0.009	1.30	--	0.040	0.40	0.40	0.050	0.014	0.011
24...	--	1.29	0.008	1.30	--	0.030	0.40	0.40	0.060	0.017	0.014
24...	--	1.29	0.008	1.30	--	0.060	0.50	0.50	0.130	0.027	0.019
25...	--	0.518	0.012	0.530	--	0.090	0.70	0.60	0.200	0.032	0.024
25...	--	0.431	0.009	0.440	--	0.080	0.90	0.50	0.150	0.024	0.023
26...	--	0.642	0.008	0.650	--	0.060	0.80	0.60	0.100	0.036	0.036
26...	--	--	<0.010	0.800	--	0.050	0.60	0.50	0.090	0.022	0.018
27...	--	0.933	0.007	0.940	--	0.050	0.60	0.60	0.060	0.021	0.021
28...	--	0.992	0.008	1.00	--	0.040	0.60	0.50	0.060	0.012	0.016
31...	--	1.19	0.012	1.20	--	0.090	0.60	0.60	0.060	0.032	0.028
APR											
06...	--	1.28	0.015	1.30	--	0.080	0.60	0.40	0.060	0.023	0.021
08-08	--	0.989	0.011	1.00	--	0.100	1.4	0.70	0.120	0.069	0.042
08...	--	0.975	0.015	0.990	--	0.130	0.90	0.70	0.070	0.052	0.047
08-09	--	0.901	0.009	0.910	--	0.060	0.80	0.70	0.090	0.047	0.031
09...	--	0.747	0.013	0.760	--	0.110	1.0	1.0	0.110	0.068	0.054
09-11	--	0.731	0.009	0.740	--	0.090	0.90	0.70	0.100	0.036	0.024
10...	--	0.926	0.014	0.940	--	0.060	0.60	0.60	<0.010	0.054	0.049
11...	--	1.19	0.007	1.20	--	0.070	1.0	0.80	0.060	0.040	0.032
20...	--	1.08	0.018	1.10	--	0.130	0.80	0.70	0.080	0.081	0.040
27...	--	1.09	0.007	1.10	--	0.040	0.30	0.30	0.050	0.030	0.027

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)
MAY											
02...	--	0.927	0.013	0.940	--	0.170	0.80	0.60	0.020	0.028	0.023
02-02	--	0.665	0.015	0.680	--	0.190	1.2	1.1	0.120	0.065	0.048
02...	--	0.638	0.012	0.650	--	0.210	0.90	<0.20	0.130	0.046	0.039
03-03	--	0.429	0.011	0.440	--	0.110	1.3	0.90	0.120	0.048	0.028
03...	--	0.369	0.011	0.380	--	0.110	0.90	0.80	0.130	0.048	0.034
03...	42	--	<0.010	0.400	0.120	0.110	0.80	0.60	0.130	0.050	0.030
04...	--	0.562	0.008	0.570	--	0.120	1.1	0.80	0.100	0.034	0.025
04...	--	0.611	0.009	0.620	--	0.130	1.0	1.0	0.100	0.040	0.033
05...	--	0.820	0.010	0.830	--	0.130	0.60	1.0	0.080	0.046	0.035
06...	--	0.808	0.012	0.820	--	0.080	1.0	0.60	0.110	0.050	0.038
06...	--	0.827	0.013	0.840	--	0.140	0.60	0.60	0.120	0.058	0.044
07...	--	0.401	0.009	0.410	--	0.060	0.90	0.70	0.110	0.038	0.028
08...	--	0.560	0.010	0.570	--	0.060	0.90	0.80	0.110	0.037	0.028
11...	--	0.844	0.016	0.860	--	0.120	1.0	1.0	0.110	0.059	0.042
11...	--	0.755	0.015	0.770	--	0.130	1.0	0.90	0.100	0.048	0.035
12...	--	0.746	0.014	0.760	--	0.120	1.1	0.90	0.090	0.053	0.037
24...	--	0.851	0.029	0.880	--	0.130	0.70	0.80	0.160	0.059	0.041
24...	--	0.853	0.027	0.880	--	0.130	0.60	0.60	0.160	0.050	0.028
24...	--	0.701	0.029	0.730	--	0.130	0.90	0.80	0.180	0.033	0.019
25...	--	0.449	0.021	0.470	--	0.090	1.1	0.80	0.160	0.044	0.023
25...	--	0.476	0.014	0.490	--	0.090	0.60	0.50	0.160	0.041	0.022
JUN											
06...	--	1.18	0.024	1.20	--	0.140	0.90	0.90	0.160	0.072	0.080
22...	--	0.553	0.017	0.570	--	0.140	1.5	1.3	0.140	0.077	0.050
22...	--	0.545	0.015	0.560	--	0.120	1.4	1.3	0.180	0.073	0.058
23...	--	0.580	0.020	0.600	--	0.130	1.0	0.80	0.180	0.124	0.083
23...	--	0.501	0.019	0.520	--	0.120	1.2	0.80	0.220	0.103	0.071
24...	--	0.552	0.018	0.570	--	0.130	1.0	0.90	0.010	0.128	0.094
JUL											
14...	--	1.19	0.011	1.20	--	0.080	0.60	0.70	0.110	0.066	0.015
AUG											
11...	--	1.19	0.009	1.20	--	0.050	0.60	0.70	0.080	0.065	0.031
SEP											
07...	99	--	<0.010	1.10	0.030	0.030	0.50	--	0.050	0.020	0.030
07...	--	1.38	0.015	1.40	--	0.040	0.40	0.30	0.060	0.039	0.029
07...	--	1.39	0.008	1.40	--	0.030	0.40	0.40	0.060	0.043	0.030

CHOPTANK RIVER BASIN

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)
OCT											
27...	<10	--	--	--	--	--	--	--	--	--	--
NOV											
02...	20	--	--	--	--	--	--	--	--	--	--
03...	20	<1	74	<0.5	2	<1	<3	4	310	<5	<4
15...	--	--	--	--	--	--	--	--	--	--	--
18...	20	--	--	--	--	--	--	--	--	--	--
21...	10	--	--	--	--	--	--	--	--	--	--
28...	90	--	--	--	--	--	--	--	--	--	--
29...	80	--	--	--	--	--	--	--	--	--	--
29...	80	--	--	--	--	--	--	--	--	--	--
30...	130	--	--	--	--	--	--	--	--	--	--
DEC											
01...	280	--	--	--	--	--	--	--	--	--	--
15...	20	--	--	--	--	--	--	--	--	--	--
JAN											
05...	20	--	--	--	--	--	--	--	--	--	--
12...	40	--	--	--	--	--	--	--	--	--	--
17...	60	--	--	--	--	--	--	--	--	--	--
30...	30	--	--	--	--	--	--	--	--	--	--
FEB											
01...	30	<1	64	<0.5	<1	<1	<3	2	170	<5	<4
22...	160	--	--	--	--	--	--	--	--	--	--
23...	170	--	--	--	--	--	--	--	--	--	--
23...	340	--	--	--	--	--	--	--	--	--	--
27...	130	--	--	--	--	--	--	--	--	--	--
MAR											
03...	40	--	--	--	--	--	--	--	--	--	--
03...	50	--	--	--	--	--	--	--	--	--	--
06...	60	--	--	--	--	--	--	--	--	--	--
08...	340	--	--	--	--	--	--	--	--	--	--
08...	250	--	--	--	--	--	--	--	--	--	--
09...	220	--	--	--	--	--	--	--	--	--	--
10...	160	--	--	--	--	--	--	--	--	--	--
21...	60	--	--	--	--	--	--	--	--	--	--
24...	90	--	--	--	--	--	--	--	--	--	--
24...	120	--	--	--	--	--	--	--	--	--	--
25...	170	--	--	--	--	--	--	--	--	--	--
25...	250	--	--	--	--	--	--	--	--	--	--
26...	290	--	--	--	--	--	--	--	--	--	--
26...	240	--	--	--	--	--	--	--	--	--	--
27...	240	--	--	--	--	--	--	--	--	--	--
28...	210	--	--	--	--	--	--	--	--	--	--
31...	100	--	--	--	--	--	--	--	--	--	--
APR											
06...	90	--	--	--	--	--	--	--	--	--	--
08-08	270	--	--	--	--	--	--	--	--	--	--
08...	260	--	--	--	--	--	--	--	--	--	--
08-09	240	--	--	--	--	--	--	--	--	--	--
09...	220	--	--	--	--	--	--	--	--	--	--
09-11	--	--	--	--	--	--	--	--	--	--	--
10...	270	--	--	--	--	--	--	--	--	--	--
11...	220	--	--	--	--	--	--	--	--	--	--
20...	110	--	--	--	--	--	--	--	--	--	--
27...	40	--	--	--	--	--	--	--	--	--	--

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)
MAY											
02...	80	--	--	--	--	--	--	--	--	--	--
02-02	--	--	--	--	--	--	--	--	--	--	--
02...	110	--	--	--	--	--	--	--	--	--	--
03-03	--	--	--	--	--	--	--	--	--	--	--
03...	280	--	--	--	--	--	--	--	--	--	--
03...	210	<1	38	<0.5	<1	2	<3	46	540	<5	<4
04...	260	--	--	--	--	--	--	--	--	--	--
04...	250	--	--	--	--	--	--	--	--	--	--
05...	230	--	--	--	--	--	--	--	--	--	--
06...	130	--	--	--	--	--	--	--	--	--	--
06...	150	--	--	--	--	--	--	--	--	--	--
07...	280	--	--	--	--	--	--	--	--	--	--
08...	270	--	--	--	--	--	--	--	--	--	--
11...	170	--	--	--	--	--	--	--	--	--	--
11...	180	--	--	--	--	--	--	--	--	--	--
12...	230	--	--	--	--	--	--	--	--	--	--
24...	80	--	--	--	--	--	--	--	--	--	--
24...	110	--	--	--	--	--	--	--	--	--	--
24...	70	--	--	--	--	--	--	--	--	--	--
25...	240	--	--	--	--	--	--	--	--	--	--
25...	150	--	--	--	--	--	--	--	--	--	--
JUN											
06...	40	--	--	--	--	--	--	--	--	--	--
22...	90	--	--	--	--	--	--	--	--	--	--
22...	170	--	--	--	--	--	--	--	--	--	--
23...	180	--	--	--	--	--	--	--	--	--	--
23...	250	--	--	--	--	--	--	--	--	--	--
24...	180	--	--	--	--	--	--	--	--	--	--
JUL											
14...	50	--	--	--	--	--	--	--	--	--	--
AUG											
11...	30	--	--	--	--	--	--	--	--	--	--
SEP											
07...	20	<1	63	<0.5	<1	1	<3	12	460	2	5
07...	10	--	--	--	--	--	--	--	--	--	--
07...	20	--	--	--	--	--	--	--	--	--	--

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT										
27...	--	--	--	--	--	--	--	--	--	4.0
NOV										
02...	--	--	--	--	--	--	--	--	--	5.2
03...	26	<0.1	<10	4	<1	1.0	120	<6	13	5.7
15...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	5.5
21...	--	--	--	--	--	--	--	--	--	6.8
28...	--	--	--	--	--	--	--	--	--	14
29...	--	--	--	--	--	--	--	--	--	11
29...	--	--	--	--	--	--	--	--	--	11
30...	--	--	--	--	--	--	--	--	--	12
DEC										
01...	--	--	--	--	--	--	--	--	--	9.9
15...	--	--	--	--	--	--	--	--	--	3.7
JAN										
05...	--	--	--	--	--	--	--	--	--	3.4
12...	--	--	--	--	--	--	--	--	--	4.3
17...	--	--	--	--	--	--	--	--	--	7.9
30...	--	--	--	--	--	--	--	--	--	3.3
FEB										
01...	41	<0.1	<10	5	<1	1.0	100	<6	18	3.2
22...	--	--	--	--	--	--	--	--	--	7.3
23...	--	--	--	--	--	--	--	--	--	8.4
23...	--	--	--	--	--	--	--	--	--	11
27...	--	--	--	--	--	--	--	--	--	5.6
MAR										
03...	--	--	--	--	--	--	--	--	--	5.3
03...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	5.1
08...	--	--	--	--	--	--	--	--	--	10
08...	--	--	--	--	--	--	--	--	--	8.4
09...	--	--	--	--	--	--	--	--	--	9.3
10...	--	--	--	--	--	--	--	--	--	7.5
21...	--	--	--	--	--	--	--	--	--	6.2
24...	--	--	--	--	--	--	--	--	--	7.2
24...	--	--	--	--	--	--	--	--	--	8.3
25...	--	--	--	--	--	--	--	--	--	11
25...	--	--	--	--	--	--	--	--	--	13
26...	--	--	--	--	--	--	--	--	--	13
26...	--	--	--	--	--	--	--	--	--	16
27...	--	--	--	--	--	--	--	--	--	13
28...	--	--	--	--	--	--	--	--	--	11
31...	--	--	--	--	--	--	--	--	--	8.6
APR										
06...	--	--	--	--	--	--	--	--	--	7.3
08-08	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	12
08-09	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	14
09-11	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	13
11...	--	--	--	--	--	--	--	--	--	13
20...	--	--	--	--	--	--	--	--	--	12
27...	--	--	--	--	--	--	--	--	--	6.3

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAY										
02...	--	--	--	--	--	--	--	--	--	10
02-02	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	9.6
03-03	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	15
03...	57	<0.1	<10	4	<1	<1.0	36	<6	18	17
04...	--	--	--	--	--	--	--	--	--	19
04...	--	--	--	--	--	--	--	--	--	19
05...	--	--	--	--	--	--	--	--	--	17
06...	--	--	--	--	--	--	--	--	--	9.9
06...	--	--	--	--	--	--	--	--	--	13
07...	--	--	--	--	--	--	--	--	--	12
08...	--	--	--	--	--	--	--	--	--	19
11...	--	--	--	--	--	--	--	--	--	13
11...	--	--	--	--	--	--	--	--	--	14
12...	--	--	--	--	--	--	--	--	--	16
24...	--	--	--	--	--	--	--	--	--	9.0
24...	--	--	--	--	--	--	--	--	--	10
24...	--	--	--	--	--	--	--	--	--	11
25...	--	--	--	--	--	--	--	--	--	14
25...	--	--	--	--	--	--	--	--	--	15
JUN										
06...	--	--	--	--	--	--	--	--	--	11
22...	--	--	--	--	--	--	--	--	--	15
22...	--	--	--	--	--	--	--	--	--	16
23...	--	--	--	--	--	--	--	--	--	18
23...	--	--	--	--	--	--	--	--	--	19
24...	--	--	--	--	--	--	--	--	--	22
JUL										
14...	--	--	--	--	--	--	--	--	--	7.2
AUG										
11...	--	--	--	--	--	--	--	--	--	5.5
SEP										
07...	47	<0.1	<10	2	<1	<1.0	120	<6	6	--
07...	--	--	--	--	--	--	--	--	--	4.3
07...	--	--	--	--	--	--	--	--	--	4.1

CHOPTANK RIVER BASIN

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT							
27...	1400	18	9.5	198	2	0.10	--
NOV							
02...	0945	51	7.5	--	6	0.83	--
03...	1045	42	9.0	195	2	0.23	94
15...	1430	31	10.0	182	9	0.75	--
18...	0950	56	9.0	174	20	3.0	--
21...	1040	94	10.5	173	23	5.8	--
28...	1200	220	12.5	134	161	96	--
29...	0945	354	9.0	136	59	56	--
29...	1330	354	9.0	128	67	64	--
30...	1200	292	7.5	102	52	41	--
DEC							
01...	1300	197	7.0	126	24	13	--
15...	1100	72	1.5	--	4	0.78	--
JAN							
05...	1400	59	0.5	165	6	0.96	--
12...	1445	99	5.0	156	6	1.6	--
17...	1100	206	4.5	141	25	14	--
30...	1030	87	5.5	147	12	2.8	--
FEB							
01...	1135	99	7.0	158	3	0.80	92
22...	0915	351	9.5	116	58	55	--
23...	0910	602	8.0	101	69	112	--
23...	1315	590	8.0	100	61	97	--
27...	1030	220	3.0	129	11	6.5	--
MAR							
03...	1130	194	5.0	132	12	6.3	--
03...	1135	194	5.0	132	8	4.2	--
06...	1400	206	4.5	135	14	7.8	--
08...	1000	610	1.0	96	31	51	--
08...	1400	555	1.0	98	27	40	--
09...	0930	365	2.0	103	33	33	--
10...	1145	285	4.0	117	15	12	--
21...	1400	227	9.0	132	10	6.1	--
24...	1045	420	7.5	120	19	22	--
24...	1430	606	8.0	109	52	85	--
25...	1045	2510	7.0	67	98	664	--
25...	1415	2380	8.0	61	58	373	--
26...	0845	1160	9.0	68	30	94	--
26...	1730	817	11.0	--	21	46	--
27...	1330	560	12.5	90	25	38	--
28...	1130	418	15.0	101	11	12	--
31...	1430	246	14.5	118	10	6.6	--
APR							
06...	1400	281	14.0	122	11	8.3	--
08-08	0400	686	--	100	23	43	--
08...	1215	744	9.0	96	34	68	--
08-09	1230	1110	--	94	26	78	--
09...	1015	985	9.5	77	31	82	--
09-11	1045	578	--	83	28	44	--
10...	0945	584	10.5	87	61	96	--
11...	1345	379	11.5	100	55	56	--
20...	1030	354	14.5	115	34	32	--
27...	1040	159	15.0	125	7	3.0	--

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY							
02...	1000	678	15.0	97	43	79	--
02-02	1155	1130	--	82	40	122	--
02...	1445	1100	16.5	74	50	148	--
03-03	0015	1640	--	64	45	199	--
03...	1015	1850	10.0	59	39	195	--
03...	1600	1430	16.0	56	35	135	--
04...	1010	710	10.0	70	26	50	--
04...	1400	649	17.0	72	21	37	--
05...	1130	435	15.0	86	22	26	--
06...	1115	807	17.0	82	44	96	--
06...	1430	906	18.5	86	36	88	--
07...	1115	1280	15.0	65	46	159	--
08...	1430	620	15.5	76	21	35	--
11...	1115	584	13.0	99	36	57	--
11...	1400	620	13.5	96	30	50	--
12...	1130	541	13.5	91	24	35	--
24...	1030	678	18.0	91	37	68	--
24...	1040	678	18.0	91	32	59	--
24...	1400	824	18.0	91	47	105	--
25...	1030	772	18.5	71	48	100	--
25...	1400	703	19.0	72	37	70	--
JUN							
06...	1410	190	22.0	118	54	28	--
22...	0915	712	23.0	82	50	96	--
22...	1500	727	23.0	83	46	90	--
23...	1130	1010	23.0	67	52	142	--
23...	1400	955	21.0	77	56	144	--
24...	1100	714	23.5	85	33	64	--
JUL							
14...	1200	118	22.5	137	58	18	--
AUG							
11...	1030	78	20.0	134	--	--	--
SEP							
07...	1130	48	19.0	158	3	0.39	93
07...	1145	48	19.0	156	10	1.3	--
07...	1150	48	19.0	156	1	0.13	--

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE
INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	117	---	133	121	106	---	---	---	126	144
2	---	190	---	153	133	120	---	88	---	---	129	146
3	---	195	---	152	132	120	109	56	---	---	131	---
4	---	---	147	142	132	120	111	59	---	---	134	158
5	---	---	154	148	133	123	111	80	---	---	134	151
6	---	---	---	146	133	134	110	77	105	---	137	153
7	---	197	---	143	132	---	103	60	---	---	137	153
8	---	206	---	144	134	95	87	71	135	---	139	156
9	---	197	---	145	134	106	69	---	---	---	146	156
10	---	---	---	---	134	121	80	---	---	---	141	---
11	---	197	---	---	136	121	90	91	---	---	142	---
12	---	195	---	156	137	---	---	84	228	---	---	---
13	---	194	---	140	136	116	---	---	227	---	135	---
14	---	188	---	---	132	116	---	---	---	140	135	---
15	---	197	159	---	132	117	---	---	---	---	134	---
16	---	---	155	128	132	116	---	---	---	---	---	---
17	---	176	156	126	136	118	---	---	---	---	---	---
18	---	178	159	126	135	---	---	---	---	---	130	---
19	---	175	155	129	135	---	---	---	---	---	130	---
20	---	169	---	129	---	122	105	---	---	---	125	---
21	---	175	---	129	129	122	---	---	---	---	125	---
22	---	---	154	---	120	118	---	---	76	---	126	---
23	---	162	158	134	105	112	---	---	69	---	131	---
24	---	162	134	133	---	100	---	84	76	---	---	---
25	---	---	---	---	---	56	---	65	---	---	136	---
26	---	169	---	---	112	69	---	---	---	125	136	---
27	204	170	154	132	121	85	125	---	---	113	138	---
28	---	129	155	132	121	92	---	---	---	---	142	---
29	---	142	153	132	---	99	---	---	---	88	143	---
30	---	106	154	132	---	105	---	---	---	106	142	---
31	---	---	---	132	---	107	---	---	---	118	147	---

WATER TEMPERATURE, DEGREES CELSIUS
INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.0	---	7.0	---	7.0	3.0	12.0	17.0	24.0	21.5	22.0	22.0
2	---	9.5	---	5.0	9.5	3.5	---	16.5	24.0	21.0	22.0	24.0
3	---	10.0	---	4.0	9.0	5.0	11.0	10.0	24.5	22.5	23.0	---
4	18.0	---	5.0	3.0	6.0	6.0	14.0	10.0	25.0	24.0	24.5	21.0
5	---	13.5	6.5	1.0	4.0	7.0	7.0	15.5	24.0	23.5	26.0	21.0
6	14.5	---	5.0	1.0	4.0	4.5	14.0	17.0	21.5	24.0	26.5	21.5
7	13.0	13.0	5.5	1.5	4.5	2.0	12.0	15.0	23.0	25.0	26.0	21.5
8	12.5	11.0	---	3.0	3.0	1.0	9.0	15.5	22.0	25.0	23.0	21.0
9	12.0	10.5	---	4.0	2.0	2.0	9.5	14.0	21.0	25.0	22.0	22.5
10	13.0	---	---	---	1.0	2.0	10.5	15.0	21.0	---	21.0	24.5
11	13.0	10.0	---	---	1.0	2.5	11.5	13.0	21.0	---	20.0	25.0
12	12.0	10.0	---	5.0	.5	---	10.0	13.5	23.0	26.0	---	24.0
13	9.5	9.5	.5	4.0	1.5	6.0	10.5	14.0	23.5	24.0	23.0	23.0
14	9.0	9.0	---	---	4.0	7.0	---	12.0	21.0	22.5	23.0	23.0
15	10.0	10.5	3.0	---	5.5	11.0	13.0	16.0	22.0	24.0	23.0	24.0
16	13.0	---	2.5	5.5	9.0	9.0	13.5	---	23.0	22.5	---	---
17	13.0	11.5	.5	4.5	6.0	10.0	---	17.0	23.5	22.0	---	---
18	14.5	10.0	.5	5.0	4.0	---	16.0	17.0	24.0	---	24.0	21.5
19	14.0	8.0	.5	6.0	4.0	---	18.0	19.5	23.5	22.5	23.0	20.0
20	12.0	9.0	---	6.0	---	9.5	17.5	20.0	---	23.5	23.0	22.0
21	11.0	10.5	---	3.0	9.5	9.5	17.0	21.0	24.0	24.0	23.0	23.5
22	13.0	---	1.0	---	9.5	9.5	---	---	23.0	25.0	24.0	24.0
23	11.5	6.5	3.0	6.0	8.0	9.0	15.5	20.0	23.0	25.5	25.0	24.0
24	11.5	6.0	5.5	6.5	---	8.0	15.5	18.0	23.5	26.0	---	18.0
25	11.0	---	---	---	---	8.0	14.0	19.0	23.0	26.0	23.0	15.0
26	---	9.0	---	---	3.0	9.0	16.0	19.0	24.0	25.5	22.0	17.0
27	10.0	9.0	4.5	5.5	4.0	15.0	18.0	23.0	25.0	23.5	22.0	---
28	9.5	12.5	8.0	6.5	5.0	15.0	17.5	19.5	25.0	---	23.0	15.0
29	10.0	9.0	4.0	5.0	---	18.0	17.0	---	24.0	24.0	24.0	15.0
30	---	7.5	4.5	5.5	---	18.0	---	19.0	22.0	22.5	24.5	---
31	7.0	---	---	8.0	---	14.5	---	20.5	---	22.0	23.0	---

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	OCTOBER MEAN CONCEN-TRATION (MG/L)	OCTOBER LOADS (T/DAY)	NOVEMBER MEAN CONCEN-TRATION (MG/L)	NOVEMBER LOADS (T/DAY)	DECEMBER MEAN CONCEN-TRATION (MG/L)	DECEMBER LOADS (T/DAY)	JANUARY MEAN CONCEN-TRATION (MG/L)	JANUARY LOADS (T/DAY)	FEBRUARY MEAN CONCEN-TRATION (MG/L)	FEBRUARY LOADS (T/DAY)	MARCH MEAN CONCEN-TRATION (MG/L)	MARCH LOADS (T/DAY)
1	3	.12	11	.83	26	13	4	.65	4	1.1	9	5.7
2	4	.16	5	.66	16	6.5	3	.53	5	1.3	8	4.6
3	4	.23	2	.23	11	3.9	3	.53	4	1.0	8	4.2
4	2	.12	2	.19	8	2.6	7	1.2	5	1.4	7	3.4
5	2	.11	4	.39	6	1.8	6	1.0	5	1.4	6	2.8
6	3	.14	17	2.4	5	1.4	8	1.4	5	1.4	9	6.4
7	5	.22	10	1.3	4	1.0	7	1.5	4	1.1	32	57
8	2	.08	7	.81	3	.75	8	2.1	5	1.4	29	46
9	1	.04	5	.49	2	.48	10	2.9	5	1.3	18	17
10	1	.04	5	.45	2	.45	9	2.7	5	1.2	14	11
11	4	.15	5	.43	2	.43	8	2.1	7	1.7	12	12
12	4	.15	4	.33	3	.58	6	1.6	6	1.4	15	15
13	2	.08	4	.33	4	.79	8	2.4	5	1.1	11	9.0
14	3	.11	3	.27	4	.77	9	2.9	6	1.6	7	4.9
15	8	.28	3	.26	3	.58	13	5.1	7	2.3	5	3.1
16	5	.16	4	.33	4	.76	24	14	7	2.7	6	3.4
17	1	.04	4	.43	4	.69	22	12	7	2.7	8	4.1
18	1	.04	5	.74	4	.67	15	6.7	8	2.9	8	3.8
19	1	.04	3	.47	4	.65	11	4.4	8	2.7	11	5.7
20	1	.04	5	1.0	4	.64	6	2.2	8	2.6	14	7.9
21	1	.04	10	2.7	4	.66	5	1.7	20	9.6	9	5.5
22	1	.11	11	3.4	3	.50	4	1.3	59	72	10	9.2
23	3	.32	10	2.4	4	.65	4	1.2	61	97	9	7.0
24	2	.17	8	1.5	2	.33	4	1.1	33	38	28	62
25	2	.13	7	1.2	2	.38	4	1.1	14	10	66	387
26	2	.11	6	.96	4	.73	4	1.1	9	5.5	23	71
27	2	.10	4	.63	6	1.0	4	1.0	9	5.3	12	19
28	3	.14	89	48	3	.49	4	1.0	8	5.0	10	11
29	1	.05	53	51	3	.51	5	1.2	---	---	7	5.9
30	1	.05	44	36	4	.66	5	1.2	---	---	7	4.8
31	1	.05	---	---	4	.63	5	1.3	---	---	6	4.0
TOTAL	---	3.62	---	160.13	---	44.98	---	81.11	---	276.7	---	813.4

DAY	APRIL MEAN CONCEN-TRATION (MG/L)	APRIL LOADS (T/DAY)	MAY MEAN CONCEN-TRATION (MG/L)	MAY LOADS (T/DAY)	JUNE MEAN CONCEN-TRATION (MG/L)	JUNE LOADS (T/DAY)	JULY MEAN CONCEN-TRATION (MG/L)	JULY LOADS (T/DAY)	AUGUST MEAN CONCEN-TRATION (MG/L)	AUGUST LOADS (T/DAY)	SEPTEMBER MEAN CONCEN-TRATION (MG/L)	SEPTEMBER LOADS (T/DAY)
1	7	5.4	9	6.0	9	4.0	7	3.3	10	4.3	3	.51
2	6	4.3	32	84	9	3.7	6	2.5	9	3.7	5	.78
3	6	3.7	40	181	9	3.4	5	1.9	8	2.9	7	1.1
4	6	3.7	20	38	9	3.1	6	2.3	7	2.3	7	.96
5	8	4.9	14	17	10	3.2	7	3.3	6	1.8	5	.63
6	11	8.4	30	68	26	13	8	4.5	6	1.6	4	.51
7	16	19	45	151	23	18	7	4.6	6	1.5	4	.51
8	25	55	21	38	17	14	8	5.3	6	1.5	3	.36
9	26	69	14	17	13	9.4	6	2.9	11	2.7	2	.23
10	14	21	11	11	10	6.2	6	2.4	7	1.5	3	.35
11	10	10	12	18	10	5.6	5	1.8	3	.65	3	.33
12	8	6.1	11	16	9	4.2	5	1.6	3	.75	6	.88
13	6	3.9	10	10	8	3.2	5	1.5	5	1.8	3	.47
14	5	2.9	7	5.6	8	3.0	5	1.6	6	2.6	4	.55
15	5	2.8	9	6.2	8	2.8	3	.92	6	2.2	3	.49
16	10	8.4	6	3.8	25	14	16	6.2	6	2.1	3	.48
17	14	15	7	4.4	22	21	35	27	6	2.5	4	.72
18	9	6.7	10	6.3	23	28	20	19	6	2.2	5	1.0
19	10	7.1	9	5.0	22	28	11	6.9	6	2.5	15	5.0
20	13	12	9	4.4	20	15	8	3.8	6	3.1	30	21
21	9	7.0	8	3.6	20	22	7	3.0	6	3.0	14	19
22	7	4.3	8	3.4	39	89	9	3.5	5	2.1	8	7.1
23	6	3.2	15	7.5	40	118	8	2.9	4	1.5	5	2.6
24	7	3.4	51	109	27	54	13	4.3	4	1.3	3	1.3
25	6	2.7	35	76	21	34	11	3.2	4	1.1	5	1.9
26	8	3.6	21	24	17	23	11	3.3	3	.76	10	8.7
27	7	3.0	16	12	14	13	34	34	3	.70	35	52
28	6	2.5	19	16	11	7.8	34	58	4	.89	11	12
29	6	2.6	16	12	9	5.5	12	11	4	.86	6	3.9
30	8	4.6	11	6.3	6	3.2	7	3.7	3	.59	5	2.6
31	---	---	10	4.9	---	---	11	4.8	3	.54	---	---
TOTAL	---	306.2	---	965.4	---	572.3	---	235.02	---	57.54	---	147.96

TOTAL LOAD FOR YEAR: 3664.36 TONS.

01493000 UNICORN BRANCH NEAR MILLINGTON, MD

LOCATION.--Lat 39°14'59", long 75°51'40", Queen Annes County, Hydrologic Unit 02060002, on right bank 20 ft upstream from bridge on State Highway 313, 0.9 mi upstream from mouth, and 1.4 mi southwest of Millington.

DRAINAGE AREA.--22.3 mi^2.

PERIOD OF RECORD.--January 1948 to current year.

REVISED RECORDS.--WSP 1382: 1952(P).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 3.57 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Occasional regulation at low and medium flow by Unicorn Lake Dam upstream from station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

AVERAGE DISCHARGE.--41 years, 24.7 ft^3/s, 15.04 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,060 ft^3/s, Sept. 12, 1960, gage height, 7.17 ft, from rating curve extended above 600 ft^3/s; no flow for part of each day June 13, 14, 1965, caused by regulation at Unicorn Lake Dam.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 180 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 25	0300	248	3.78	May 6	1945	292	3.97
May 2	2230	*397	*4.38	June 21	0645	261	3.84

Minimum discharge, 0.33 ft^3/s, Feb. 14, 15, gage height, 1.64 ft; minimum daily discharge, 5.7 ft^3/s, Oct. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.7	13	29	14	17	35	40	34	24	31	53	17
2	7.1	14	23	14	17	31	35	171	22	29	41	17
3	7.7	9.4	20	15	17	29	36	252	20	27	35	17
4	7.8	9.0	18	16	18	28	39	100	19	33	31	16
5	7.0	9.0	29	16	19	28	37	64	22	38	29	16
6	6.9	8.5	33	15	19	52	57	165	84	66	28	17
7	6.7	9.6	19	16	25	120	62	191	81	73	26	17
8	6.6	9.0	17	16	33	67	125	95	77	46	25	17
9	6.2	8.0	17	20	31	50	95	63	52	34	24	16
10	5.7	8.5	17	26	28	52	63	70	53	29	24	15
11	6.6	8.0	16	28	21	57	47	98	36	26	30	15
12	6.0	7.5	13	26	14	52	39	71	29	25	33	15
13	5.8	9.0	11	23	12	46	36	56	27	29	42	15
14	6.0	8.5	11	21	6.7	41	34	48	28	32	30	16
15	6.1	8.5	11	22	10	37	37	43	30	26	28	17
16	5.9	9.0	11	30	34	34	63	42	41	33	27	25
17	6.5	12	9.0	34	29	31	54	39	47	79	25	30
18	6.3	14	9.0	33	24	31	43	35	49	53	24	18
19	6.0	13	10	32	22	42	60	32	37	37	31	42
20	6.1	24	12	25	21	36	67	30	75	101	28	61
21	10	24	16	21	48	54	47	28	199	86	26	41
22	15	16	18	21	122	60	39	27	89	55	23	32
23	9.5	13	13	20	102	42	34	31	90	42	21	25
24	7.9	12	14	20	60	102	31	52	76	34	21	21
25	7.5	11	13	17	44	204	29	42	74	31	20	21
26	6.9	11	13	16	39	99	29	33	52	44	19	80
27	6.7	12	14	16	39	62	27	37	42	135	20	89
28	6.2	74	14	16	39	50	25	40	39	92	19	43
29	6.8	102	14	16	---	44	29	30	36	60	20	32
30	6.9	41	14	16	---	40	37	26	33	42	20	28
31	6.9	---	14	16	---	41	---	25	---	56	17	---
TOTAL	220.0	527.5	492.0	637	910.7	1697	1396	2070	1583	1524	840	831
MEAN	7.10	17.6	15.9	20.5	32.5	54.7	46.5	66.8	52.8	49.2	27.1	27.7
MAX	15	102	33	34	122	204	125	252	199	135	53	89
MIN	5.7	7.5	9.0	14	6.7	28	25	25	19	25	17	15
CFSM	.32	.79	.71	.92	1.46	2.45	2.09	2.99	2.37	2.20	1.22	1.24
IN.	.37	.88	.82	1.06	1.52	2.83	2.33	3.45	2.64	2.54	1.40	1.39

CAL YR 1988 TOTAL 6682.46 MEAN 18.3 MAX 110 MIN .26 CFSM .82 IN. 11.15
WTR YR 1989 TOTAL 12728.2 MEAN 34.9 MAX 252 MIN 5.7 CFSM 1.56 IN. 21.23

01493500 MORGAN CREEK NEAR KENNEDYVILLE, MD

LOCATION.--Lat 39°16'48", long 76°00'54", Kent County, Hydrologic Unit 02060002, on right bank 200 ft upstream from highway bridge, 2.0 mi southwest of Kennedyville, and 4.5 mi upstream from mouth.

DRAINAGE AREA.--12.7 mi^2.

PERIOD OF RECORD.--May 1951 to current year.

REVISED RECORDS.--WSP 1552: 1952, 1953(P), 1954(M), 1955, 1956-57(M). WDR MD-DE-76-1: Drainage area. WDR MD-DE-79-1: 1961(M). WDR MD-DE-80-1: 1976(P).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1.76 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good below 50 ft^3/s and fair above, except those for estimated daily discharges (backwater from storm tides), which are poor. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

AVERAGE DISCHARGE.--38 years, 10.5 ft^3/s, 11.23 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,500 ft^3/s, June 22, 1972, gage height, 13.07 ft, from rating curve extended above 640 ft^3/s on basis of culvert and flow-over-road measurement of peak flow; minimum discharge, 0.60 ft^3/s, Aug. 28, 29, 1966.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 20	2345	305	5.00	July 6	1400	Unknown	a4.61
June 24	1200	*588	*6.48				

a Backwater from high tide.

Minimum discharge, 2.5 ft^3/s, Oct. 12, 13, 14, 15; minimum daily discharge, 2.5 ft^3/s, Oct. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	8.0	5.9	5.9	6.0	6.8	13	11	6.9	9.0	21	9.2
2	3.3	9.4	5.2	7.7	5.7	6.4	7.6	e88	6.6	8.5	11	7.8
3	3.7	5.6	5.0	7.2	7.7	6.5	9.2	38	6.2	8.3	9.3	7.2
4	3.8	4.5	4.8	6.1	10	6.4	9.0	9.8	6.1	11	8.8	7.1
5	3.6	6.1	4.6	5.0	6.6	7.2	7.9	11	8.1	e59	8.4	7.2
6	3.1	8.7	4.6	5.8	6.2	26	15	111	e86	e150	8.2	7.4
7	3.0	5.7	4.6	7.5	6.2	27	13	47	e108	61	8.2	7.7
8	3.0	4.7	4.9	11	6.2	8.8	e46	16	48	18	8.0	7.5
9	3.0	4.4	5.3	11	5.5	8.1	16	9.0	e39	10	7.6	7.5
10	3.0	4.6	5.4	6.8	4.9	9.0	9.0	21	37	9.4	7.7	7.4
11	2.8	5.3	5.3	5.9	5.1	8.4	7.7	24	12	8.9	9.4	7.4
12	2.6	5.0	4.8	7.9	5.3	7.6	7.4	12	8.5	8.6	12	7.4
13	2.5	5.9	4.6	8.3	5.2	7.1	7.4	9.1	8.2	12	18	7.4
14	2.6	6.8	4.9	5.8	27	7.0	7.3	8.6	8.6	14	12	7.9
15	2.8	5.7	5.7	36	17	7.0	10	11	12	9.5	10	8.4
16	2.9	5.5	5.4	21	11	6.8	15	19	32	14	9.5	9.7
17	2.9	16	5.1	7.9	7.5	6.6	8.6	12	20	18	8.8	18
18	2.9	15	4.9	6.7	6.4	7.8	8.0	8.9	9.7	11	8.8	9.0
19	3.0	8.3	5.0	6.2	6.1	10	23	8.0	8.1	9.5	12	29
20	3.0	18	5.3	6.0	6.0	7.2	13	8.0	63	e112	10	e55
21	4.4	17	6.3	5.3	e26	16	7.9	7.6	177	43	9.3	e30
22	11	8.5	6.4	5.0	46	9.5	7.4	7.4	70	15	9.6	e11
23	7.3	6.8	6.1	5.5	21	7.1	7.1	8.5	114	10	8.5	e8.2
24	4.4	6.2	7.4	5.6	8.3	65	7.1	13	297	8.9	8.1	7.7
25	4.0	5.9	8.7	5.7	6.4	63	7.0	8.9	78	8.6	7.8	7.5
26	3.6	5.9	6.1	6.0	7.2	13	7.0	7.6	e27	e83	7.8	e47
27	3.4	7.2	5.4	6.3	8.0	8.0	7.0	8.5	17	26	8.0	26
28	3.5	e75	5.8	5.5	7.7	7.6	6.8	8.4	13	17	7.9	9.9
29	4.2	28	5.8	5.4	---	7.4	11	6.9	12	10	8.1	8.3
30	4.2	8.0	5.4	7.2	---	7.7	15	6.6	9.5	8.7	e33	8.2
31	4.1	---	5.4	7.6	---	10	---	6.7	---	e42	21	---
TOTAL	114.8	321.7	170.1	250.8	292.2	402.0	336.4	572.5	1348.5	833.9	337.8	399.0
MEAN	3.70	10.7	5.49	8.09	10.4	13.0	11.2	18.5	44.9	26.9	10.9	13.3
MAX	11	75	8.7	36	46	65	46	111	297	150	33	55
MIN	2.5	4.4	4.6	5.0	4.9	6.4	6.8	6.6	6.1	8.3	7.6	7.1
CFSM	.29	.84	.43	.64	.82	1.02	.88	1.45	3.54	2.12	.86	1.05
IN.	.34	.94	.50	.73	.86	1.18	.99	1.68	3.95	2.44	.99	1.17

CAL YR 1988 TOTAL 2839.2 MEAN 7.76 MAX 129 MIN 2.5 CFSM .61 IN. 8.32
WTR YR 1989 TOTAL 5379.7 MEAN 14.7 MAX 297 MIN 2.5 CFSM 1.16 IN. 15.76

e Estimated

01495000 BIG ELK CREEK AT ELK MILLS, MD

LOCATION.--Lat 39°39'26", long 75°49'20", Cecil County, Hydrologic Unit 02060002, on right bank 100 ft downstream from highway bridge at Elk Mills, 3.5 mi north of Elkton, and 7 mi upstream from confluence with Little Elk Creek.

DRAINAGE AREA.--52.6 mi^2.

PERIOD OF RECORD.--April 1932 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 1432: 1932-33, 1934(M), 1935, 1936(M), 1938, 1919-40(M), 1942(M), 1943-51, 1952-53(P).

GAGE.--Water-stage recorder. Datum of gage is 68.5 ft above National Geodetic Vertical Datum of 1929. Prior to May 17, 1946, nonrecording gage at bridge 100 ft upstream at same datum.

REMARKS.--Records good except those for estimated daily discharges (ice effect), which are fair. Slight diurnal fluctuation caused by mills upstream from station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

AVERAGE DISCHARGE.--57 years, 69.2 ft^3/s, 17.87 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,600 ft^3/s, July 5, 1937, gage height, 14.5 ft, from floodmarks, from rating curve extended above 1,700 ft^3/s on basis of velocity-area and conveyance studies; minimum discharge, 4.5 ft^3/s, Jan. 21, 1955, (result of freezeup); minimum daily discharge, 4.8 ft^3/s, Sept. 8-10, 1966; minimum gage height observed, 2.09 ft, Sept. 19, 22-24, 1932.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1884 reached a stage of about 19 ft, from information by local residents; discharge, about 18,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 28	0500	2,030	6.03	July 5	1815	*5,030	*8.64
May 6	0730	2,350	6.34	July 20	1130	2,590	6.56
May 24	0500	2,190	6.19	July 21	0515	2,170	6.17

Minimum daily discharge, 18 ft^3/s, Oct. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	40	55	37	45	48	235	65	67	52	93	52
2	21	41	48	39	43	45	104	248	62	49	87	51
3	26	32	45	39	56	44	98	93	59	49	83	48
4	23	29	43	37	66	44	92	68	57	126	80	46
5	21	30	41	e36	50	46	87	96	57	2270	76	47
6	20	45	40	40	47	118	156	739	94	267	74	48
7	20	31	40	45	e45	79	99	207	150	145	74	48
8	20	28	38	62	43	57	96	109	98	103	72	47
9	20	27	38	96	41	54	89	91	124	86	68	47
10	20	26	37	54	e41	58	77	218	295	80	67	46
11	20	27	36	46	e41	65	72	161	80	75	73	44
12	19	26	e32	145	e41	70	68	107	66	71	90	44
13	18	31	e33	124	e45	62	e66	91	65	284	133	44
14	19	42	e35	64	58	55	e63	84	64	138	86	50
15	20	31	e36	193	74	55	e88	78	64	86	75	48
16	20	28	34	94	111	51	e120	152	65	605	71	63
17	20	143	33	66	62	46	e80	128	66	191	66	77
18	21	54	33	58	52	60	71	85	59	112	63	51
19	21	34	35	55	49	91	78	73	55	98	148	164
20	21	303	34	52	47	56	68	69	55	682	91	495
21	27	167	38	48	200	96	64	66	149	548	77	122
22	193	62	41	e46	250	68	61	61	188	150	69	93
23	44	47	40	e46	118	56	58	234	304	121	68	88
24	36	42	52	e46	68	318	56	685	195	105	61	103
25	34	39	70	45	58	198	56	125	89	97	57	60
26	30	37	43	46	56	92	55	95	77	98	56	139
27	29	42	38	49	56	74	54	111	65	93	56	74
28	30	611	39	44	54	68	52	94	62	94	56	59
29	31	103	42	43	---	64	58	75	60	83	57	56
30	29	67	38	48	---	67	66	71	54	82	68	54
31	28	---	36	51	---	441	---	69	---	109	55	---
TOTAL	922	2265	1243	1894	1917	2746	2487	4648	2945	7149	2350	2408
MEAN	29.7	75.5	40.1	61.1	68.5	88.6	82.9	150	98.2	231	75.8	80.3
MAX	193	611	70	193	250	441	235	739	304	2270	148	495
MIN	18	26	32	36	41	44	52	61	54	49	55	44
CFSM	.57	1.44	.76	1.16	1.30	1.68	1.58	2.85	1.87	4.38	1.44	1.53
IN.	.65	1.60	.88	1.34	1.36	1.94	1.76	3.29	2.08	5.06	1.66	1.70

CAL YR 1988 TOTAL 23501 MEAN 64.2 MAX 1690 MIN 18 CFSM 1.22 IN. 16.62
WTR YR 1989 TOTAL 32974 MEAN 90.3 MAX 2270 MIN 18 CFSM 1.72 IN. 23.32

e Estimated

01495900 ELK RIVER NEAR TOWN POINT, MD

LOCATION.--Lat 39°30'09", long 75°54'58", Cecil County, Hydrologic Unit 02060001, at site of Old Town Point Wharf, at the Corps of Engineers substation, on left bank of Elk River, 0.7 mi west of Port Herman, 1.1 mi northwest of Town Point, and 1.8 mi downstream from mouth of Back Creek.

PERIOD OF RECORD.--Water years 1982 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1981 to November 1985, October 1986 to current year.
WATER TEMPERATURE: October 1981 to November 1985, October 1986 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1981.

REMARKS.--Records good except those which were partly estimated (probes out of water for short periods during extreme low tides), which are fair. Probes are attached to southeast side of bulkhead of wharf; prior to Oct. 1986, probes were attached to bulkhead on the north side of the wharf.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE (water year 1982-85, 1987-89): Maximum, 19,900 microsiemens, Oct. 26, 1982; minimum, 117 microsiemens, July 21-23, 28, 1984.
WATER TEMPERATURE (water year 1982-85, 1987-89): Maximum, 33.0°C, Aug. 6, 1988; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 13,900 microsiemens, Mar. 10; minimum, 174 microsiemens, July 13.
WATER TEMPERATURE: Maximum, 30.5°C, July 26, 27, 28; minimum, 0.0°C, on many days during winter periods.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	5510	4700	5070	4060	3640	3930	1080	661	796	1900	1760	1820
2	5030	3840	4440	4100	3600	3960	961	546	803	4700	1860	2420
3	4380	4200	4270	3820	3120	3480	1220	380	617	3040	2160	2560
4	7710	4020	4300	3400	2940	3110	721	421	552	3320	2760	3070
5	8350	5210	6100	4380	3180	3480	641	320	452	7390	3300	3750
6	5690	4780	5230	4320	3640	3990	380	300	332	3820	3240	3500
7	5330	4900	5110	4420	3840	4080	501	320	383	11000	3960	6190
8	10300	5210	6680	4400	4100	4250	440	380	410	11000	6610	8220
9	12900	9170	10500	4320	4140	4260	420	380	399	8150	6270	6850
10	9270	7290	8210	4200	4100	4160	460	360	395	6930	5450	6070
11	7530	6670	6950	4140	3860	4010	420	340	369	6010	5590	5820
12	6650	6080	6430	3820	3580	3670	4780	360	988	6630	5650	5880
13	6010	5490	5790	3720	3440	3600	4880	1060	1920	5990	5330	5690
14	6090	5140	5530	3620	3280	3490	3960	1400	2340	5410	3860	4740
15	5370	4500	4900	3400	2880	3100	2960	2120	2500	4600	3720	3950
16	5210	4460	4650	3200	2740	2870	2440	1680	1970	3740	3240	3530
17	5010	4780	4840	3200	2740	2860	2320	2180	2260	3640	1960	3140
18	5170	4800	4910	2860	2520	2690	2300	2100	2220	2680	1880	2290
19	5350	5130	5200	2580	2260	2380	2400	2320	2370	2820	2260	2420
20	5410	5270	5360	3120	2180	2460	2360	2200	2280	2520	1960	2240
21	5390	4960	5310	2600	2140	2330	2520	2220	2330	2100	961	1690
22	8650	5130	6120	2500	2050	2260	2520	2240	2370	1400	941	1200
23	6110	5670	5890	2960	1960	2200	5030	2420	2730	1300	901	1010
24	5790	5330	5540	4260	2260	2800	3500	2460	2840	1060	941	987
25	5370	5110	5270	3900	2860	3200	2960	2540	2760	1020	941	974
26	5210	4880	5090	3020	2460	2760	2660	2300	2500	1600	1020	1180
27	4960	4800	4900	2720	2170	2530	2400	2260	2310	1200	1040	1110
28	4820	4480	4720	2260	1580	1890	2500	2260	2390	1180	1060	1120
29	4560	4300	4400	2180	1040	1510	2280	2080	2190	1160	1080	1110
30	4360	3940	4130	1020	802	886	2060	1960	2010	1280	1120	1180
31	4100	4000	4040	---	---	---	1980	1820	1900	2140	1300	1520
MONTH	12900	3840	5480	4420	802	3070	5030	300	1640	11000	901	3140

ELK RIVER BASIN

01495900 ELK RIVER NEAR TOWN POINT, MD--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	2580	1720	2010	4100	2120	3520	3020	2560	2730	1060	836	941
2	2700	2460	2590	2980	2100	2650	2740	1860	2350	992	814	904
3	7010	2400	3730	2720	2520	2590	2200	1300	1840	1030	952	997
4	5090	3140	4280	6650	2520	4120	1680	1000	1320	1110	1030	1070
5	6130	4120	4880	8930	5510	6790	1440	821	1050	1110	1070	1090
6	6410	4780	5390	6930	5330	6090	1320	901	1050	1090	905	1010
7	5390	4720	5060	9010	5570	7120	1080	621	771	1030	883	936
8	5430	4200	4780	11400	8330	9640	1000	721	822	963	700	809
9	4440	2660	3450	13200	11100	12300	1240	601	762	739	678	715
10	3080	2080	2580	13900	12600	13100	1200	501	756	777	615	699
11	2480	2020	2270	13800	11200	12500	661	541	588	755	615	673
12	2000	1660	1900	11700	10600	11200	721	460	584	714	692	699
13	2120	1660	1890	11200	10500	10900	521	400	470	712	670	688
14	1860	1740	1800	11000	9850	10500	721	420	511	690	627	671
15	1860	1720	1790	9990	6050	8820	541	440	468	668	565	631
16	2240	1860	2010	7590	5530	6510	480	420	440	625	563	590
17	2400	2100	2220	7770	6330	7130	641	440	505	583	561	579
18	3460	2320	2900	6670	4660	5630	661	480	551	581	498	544
19	4060	3360	3690	4480	3380	4160	621	521	565	538	496	521
20	5230	4000	4640	6430	4460	5140	661	501	539	516	432	489
21	5530	5230	5330	5270	4160	4620	701	460	557	492	391	429
22	5350	4460	4930	4460	4160	4310	541	480	510	469	348	393
23	4960	4280	4730	5150	4440	4750	641	460	502	408	326	373
24	4280	e3860	e4100	8530	4920	6340	601	380	503	366	324	347
25	5350	4100	4510	8290	6890	7610	561	400	464	403	342	366
26	5690	3960	5160	7070	5090	6170	460	400	429	361	280	319
27	4460	3620	4240	5850	4960	5570	501	400	439	359	279	314
28	4080	3580	3840	5450	3040	4540	521	420	477	396	297	338
29	---	---	---	4460	1940	2670	538	478	505	395	274	339
30	---	---	---	3340	1780	2280	856	537	710	313	211	262
31	---	---	---	4780	2920	4020	---	---	---	390	210	246
MONTH	7010	1660	3600	13900	1780	6560	3020	380	792	1110	210	612
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	268	208	230	257	238	240	1330	1020	1240	3660	3310	3520
2	245	205	219	238	219	234	1390	1170	1280	3330	2740	2970
3	263	203	223	237	200	220	1250	1110	1200	3760	2760	3110
4	262	221	239	219	199	211	1230	1000	1100	5550	3460	4120
5	301	220	260	218	180	203	1150	e1000	e1080	5130	3660	4350
6	441	284	345	236	198	209	1030	e862	e940	4460	3900	4240
7	369	317	348	236	197	211	903	862	892	4160	3920	4090
8	386	335	358	216	197	206	3300	863	1310	4100	3190	3980
9	386	334	361	216	177	200	1700	1130	1410	4480	4000	4200
10	386	352	362	197	177	190	1640	1410	1500	4900	4440	4650
11	404	334	361	215	195	201	5310	1480	1890	4920	e4360	e4520
12	386	351	362	214	194	198	6530	3730	4720	4960	4680	4890
13	369	334	358	214	174	192	5650	4240	5000	4920	4760	4870
14	352	316	328	194	174	191	5770	4800	5140	4940	4700	4860
15	2220	871	1240	212	174	193	5110	4620	4930	4940	4620	4870
16	1260	627	890	212	192	204	5090	4620	4850	7830	4720	5420
17	688	369	484	290	212	243	4880	4500	4710	8010	6370	7070
18	387	333	367	5130	1180	2430	5450	4520	4860	7850	6010	6720
19	351	333	337	1960	1550	1780	7930	5470	6530	8150	4920	6950
20	351	297	318	1670	1220	1480	7830	7070	7630	8710	8190	8410
21	333	279	303	1390	1260	1320	7210	5730	6570	8950	7950	8540
22	297	260	288	1510	816	1290	5950	5030	5550	8890	8430	8650
23	297	260	283	1450	1340	1390	5630	4480	4970	8410	6610	7410
24	278	206	263	1490	1260	1340	6350	4720	4960	6630	5510	6140
25	278	259	265	1450	1280	1370	5950	4840	5120	5990	5670	5900
26	277	259	263	1280	1060	1190	5150	3530	4500	6070	5390	5900
27	259	240	253	1060	778	894	4560	3920	4200	6090	e5470	e5870
28	258	221	243	880	778	814	4160	3920	4080	5830	4980	5550
29	240	221	235	921	799	849	4080	3620	3900	5750	3460	5120
30	258	220	240	1230	921	1040	3820	3370	3670	4160	3540	3790
31	---	---	---	1070	902	997	3780	3580	3670	---	---	---
MONTH	2220	203	354	5130	174	701	7930	862	3660	8950	2740	5360

e Estimated

01495900 ELK RIVER NEAR TOWN POINT, MD--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	21.5	19.5	20.5	10.5	9.5	10.0	7.0	6.0	6.5	3.0	1.0	2.0
2	21.0	20.0	20.5	10.5	9.5	9.5	6.0	5.0	5.5	3.5	2.5	3.0
3	21.0	19.5	20.5	10.5	8.5	9.5	6.5	4.5	5.5	3.5	2.5	3.0
4	20.0	19.0	19.5	11.0	9.0	10.0	5.5	3.5	5.0	2.5	.0	1.5
5	20.0	18.5	19.5	11.0	10.5	10.5	4.0	3.5	4.0	2.5	.0	.5
6	18.5	16.5	17.5	11.5	10.5	11.0	5.5	3.5	4.0	1.0	.0	.5
7	16.5	15.5	16.0	11.5	10.5	11.0	5.0	4.0	4.5	2.0	.0	1.0
8	17.5	13.5	15.0	11.0	9.5	10.0	5.0	4.0	4.5	2.0	1.5	1.5
9	17.0	16.0	16.5	11.0	9.0	10.0	4.5	3.5	4.0	2.0	1.5	1.5
10	17.0	15.5	16.5	11.0	9.5	10.0	3.5	2.0	2.5	2.0	1.0	1.5
11	16.0	14.5	15.5	10.5	9.5	10.0	3.0	.0	1.5	2.5	1.5	2.0
12	14.5	12.5	13.5	9.5	8.0	9.0	4.0	.0	.5	2.5	2.0	2.0
13	12.5	11.0	11.5	10.0	9.0	9.5	3.0	1.0	1.5	2.0	.5	2.0
14	13.0	10.0	11.5	10.5	9.0	9.5	3.0	1.0	2.0	2.0	.0	1.5
15	13.5	12.0	12.5	11.0	9.0	10.0	2.5	1.5	2.5	2.5	2.0	2.0
16	14.5	12.5	13.5	10.5	9.5	10.0	1.5	.0	.5	3.0	2.0	2.5
17	15.0	13.0	14.0	10.5	9.0	10.5	1.5	.5	1.0	3.0	1.5	2.0
18	14.0	13.5	14.0	10.0	8.5	9.0	.5	.0	.0	3.5	1.5	2.5
19	14.5	13.0	13.5	9.0	8.5	8.5	1.5	.5	1.0	4.5	2.5	3.5
20	14.5	12.0	13.0	9.5	8.5	9.0	2.0	.5	1.5	3.5	2.5	3.0
21	13.5	12.5	12.5	9.5	8.0	9.0	2.5	1.5	2.0	2.0	.0	1.0
22	13.5	12.0	12.5	8.5	6.0	7.5	3.5	1.0	2.0	2.0	.5	1.0
23	13.0	11.0	12.0	9.0	7.0	8.0	2.0	1.5	2.0	2.5	1.0	1.5
24	13.5	12.0	12.5	9.0	6.5	7.5	3.0	2.0	2.5	3.0	1.5	2.0
25	12.5	11.0	12.0	8.5	7.0	7.5	3.5	2.5	3.0	3.0	2.5	2.5
26	12.5	11.0	11.5	8.5	7.5	8.0	3.0	1.5	2.5	3.0	2.5	2.5
27	11.5	10.0	11.0	9.5	8.0	8.5	3.0	2.0	2.5	3.5	2.5	3.0
28	12.0	10.5	11.5	9.5	7.5	8.5	4.5	3.0	3.5	4.0	2.0	3.0
29	12.0	10.0	11.0	7.5	6.5	7.0	3.5	1.5	2.5	4.5	3.0	4.0
30	11.0	9.5	10.5	7.5	6.5	7.0	3.0	1.5	2.5	4.5	4.0	4.0
31	11.0	8.5	10.0	---	---	---	3.5	2.5	3.0	4.5	3.0	4.0
MONTH	21.5	8.5	14.0	11.5	6.0	9.0	7.0	.0	3.0	4.5	.0	2.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	5.5	3.5	4.0	3.0	1.5	2.0	9.5	8.5	9.0	16.5	15.5	16.5
2	6.0	4.0	5.0	4.5	1.5	3.0	11.0	7.5	9.0	18.0	15.5	16.5
3	5.5	4.0	5.0	3.5	2.5	3.0	11.0	9.5	10.0	17.0	14.0	16.0
4	4.0	1.5	3.0	4.0	3.0	3.0	12.5	10.0	11.5	18.5	14.0	16.5
5	4.0	3.5	3.5	3.5	3.0	3.5	13.0	12.0	12.5	17.0	16.0	16.5
6	5.0	3.5	4.0	3.5	.0	2.0	12.5	11.5	12.0	17.5	16.0	16.5
7	4.0	3.0	3.5	1.0	.0	.5	11.0	9.5	10.5	16.0	14.0	15.0
8	4.0	2.5	3.0	1.0	.0	.5	11.5	9.0	10.5	15.0	13.5	14.5
9	2.5	.5	1.0	3.0	.0	1.5	11.5	10.0	11.0	16.0	13.5	15.0
10	1.5	.5	.5	4.0	1.5	2.5	11.0	8.5	10.0	15.0	12.5	14.0
11	2.0	.5	1.0	4.5	2.5	3.0	12.0	7.0	9.5	14.5	12.5	13.5
12	3.0	1.0	1.5	5.0	3.0	4.0	13.0	9.5	11.0	15.5	13.5	14.5
13	2.0	.5	1.5	5.0	1.0	3.5	12.5	10.0	11.0	16.5	14.5	15.5
14	3.0	2.0	2.5	5.0	4.0	4.5	13.5	9.5	11.5	17.0	15.0	16.0
15	4.0	3.0	3.5	6.5	4.5	5.5	12.5	11.5	11.5	17.0	15.0	16.0
16	4.0	2.5	3.5	8.0	5.0	6.0	12.5	11.0	11.5	16.5	15.5	15.5
17	2.5	.5	1.5	9.5	6.0	7.0	14.0	11.0	12.5	19.0	15.0	16.5
18	2.5	1.0	2.0	10.5	7.5	8.5	16.0	12.5	14.5	19.0	16.0	17.5
19	4.0	1.5	2.5	8.5	6.0	7.0	16.5	14.0	15.0	19.5	17.0	18.0
20	4.0	2.5	3.0	8.0	6.0	7.0	16.5	13.5	15.0	20.0	17.5	18.5
21	4.0	3.5	3.5	8.0	7.0	7.5	15.5	14.0	15.0	20.5	18.5	19.0
22	4.5	3.5	4.0	8.5	4.0	6.5	16.0	12.5	14.5	20.0	18.5	19.5
23	4.5	2.5	3.5	9.0	6.5	7.5	15.0	11.5	13.5	19.5	18.5	19.0
24	2.5	.0	1.0	7.0	6.0	6.5	16.0	13.0	14.5	19.0	18.0	18.5
25	2.5	.0	1.5	9.0	6.0	7.5	17.0	13.5	15.0	20.0	17.5	19.0
26	2.5	1.5	2.0	10.5	7.5	9.0	16.5	15.0	16.0	20.5	19.5	20.0
27	2.5	1.0	1.5	11.5	8.0	10.0	17.5	15.0	16.5	22.0	19.0	20.5
28	2.5	1.0	2.0	12.5	10.0	11.0	17.5	15.0	16.5	22.5	18.0	20.0
29	---	---	---	12.5	11.0	12.0	16.5	15.0	16.0	22.5	19.5	20.5
30	---	---	---	11.5	10.5	11.0	19.0	15.0	16.5	21.5	19.5	20.5
31	---	---	---	10.5	9.5	10.5	---	---	---	23.5	20.0	21.5
MONTH	6.0	.0	2.5	12.5	.0	5.5	19.0	7.0	13.0	23.5	12.5	17.5

ELK RIVER BASIN

01495900 ELK RIVER NEAR TOWN POINT, MD--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	25.5	21.5	23.0	28.0	24.5	26.0	26.5	23.5	25.5	27.0	25.5	26.0
2	26.0	22.5	24.0	27.5	25.0	26.0	27.0	25.0	26.0	27.0	24.5	26.0
3	26.0	23.0	24.5	27.0	25.5	26.0	27.5	25.0	26.5	25.5	21.5	24.0
4	25.5	23.5	24.5	26.0	25.0	25.5	28.0	26.0	27.0	25.0	23.5	24.0
5	25.0	23.0	24.0	25.0	24.5	25.0	29.0	26.5	27.5	24.5	22.5	23.5
6	24.5	23.0	23.5	25.5	24.5	25.0	29.5	27.5	28.5	24.5	23.0	23.5
7	23.5	22.0	23.0	27.0	25.0	26.0	28.5	25.0	27.5	25.5	23.0	24.0
8	24.5	22.0	23.5	28.0	25.5	26.5	27.5	23.5	25.5	25.5	23.5	24.5
9	24.0	23.0	23.5	27.5	25.5	26.5	27.5	24.5	26.0	26.0	23.5	24.5
10	25.0	22.0	24.0	27.5	26.0	27.0	25.5	23.0	25.0	27.5	24.5	25.5
11	24.5	21.0	23.0	29.5	26.5	28.0	23.5	21.5	22.0	27.5	25.0	26.0
12	25.0	22.0	23.5	28.0	27.0	27.5	24.0	23.0	23.5	26.0	25.0	25.5
13	24.0	23.0	23.5	27.0	24.0	25.0	26.5	23.5	25.0	26.0	24.5	25.0
14	23.0	22.0	22.0	28.0	24.5	26.0	26.0	24.5	25.5	26.0	25.0	25.5
15	24.0	22.0	22.5	28.5	25.0	26.5	26.0	25.0	25.5	26.0	25.0	25.5
16	24.5	22.5	23.5	26.5	23.5	25.5	27.5	25.0	26.0	24.5	22.5	23.5
17	24.5	23.0	23.5	26.0	23.0	24.5	28.0	25.5	26.5	25.0	24.0	24.0
18	25.5	23.0	24.0	27.0	24.5	25.5	26.0	23.0	24.0	24.0	22.5	23.0
19	25.5	23.5	24.5	27.0	25.0	25.5	24.0	21.5	23.0	23.5	19.5	21.5
20	25.5	24.0	24.5	27.0	24.5	26.0	26.0	24.0	25.0	24.5	23.0	23.5
21	25.5	24.0	24.5	26.5	25.5	26.0	25.5	24.5	25.0	25.5	23.5	24.5
22	26.0	24.5	25.0	28.0	25.5	26.5	27.0	24.5	25.5	24.5	24.0	24.5
23	25.0	24.5	25.0	29.0	26.5	28.0	27.5	25.0	26.5	24.0	20.5	23.0
24	26.5	23.5	25.5	29.5	27.5	28.5	27.5	25.0	26.0	22.5	18.0	20.5
25	26.5	24.5	25.5	29.5	27.5	28.5	27.0	24.5	26.0	21.5	20.0	21.0
26	27.5	25.0	26.5	30.5	28.0	29.0	28.0	25.0	26.0	21.5	20.0	20.5
27	28.5	26.0	27.0	30.5	27.5	29.0	27.5	25.0	26.0	21.0	18.5	20.0
28	27.0	26.0	26.5	30.5	26.5	29.0	27.5	25.5	26.5	21.0	19.0	20.0
29	27.0	24.0	25.5	28.5	25.5	27.0	27.5	26.0	26.5	20.0	19.0	19.5
30	28.0	23.5	25.5	28.0	26.5	27.0	27.5	26.0	27.0	20.5	18.5	19.5
31	---	---	---	26.5	24.0	25.0	27.5	24.5	26.0	---	---	---
MONTH	28.5	21.0	24.5	30.5	23.0	26.5	29.5	21.5	25.5	27.5	18.0	23.5

01496200 PRINCIPIO CREEK NEAR PRINCIPIO FURNACE, MD

LOCATION.--Lat 39°37'34", long 76°02'27", Cecil County, Hydrologic Unit 02060002, on left bank, 55 ft downstream from bridge on Belvedere Road, 3.5 mi north of Principio Furnace, and 4.9 mi upstream from mouth.

DRAINAGE AREA.--9.03 mi^2.

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

GAGE.--Water-stage recorder. Elevation of gage is 215 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

AVERAGE DISCHARGE.--22 years, 12.4 ft^3/s, 18.65 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,060 ft^3/s, Aug. 4, 1969, gage height, 9.26 ft, from rating curve extended above 600 ft^3/s on basis of slope-area measurements at gage heights 8.89 ft and 9.26 ft; minimum discharge, 0.79 ft^3/s, Sept. 16, 1986.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 28	0100	606	5.22	May 23	2315	356	4.42
Mar. 31	0115	329	4.32	July 5	1315	*850	*5.85
Mar. 31	1900	324	4.30	July 20	0830	522	4.97
May 6	0315	833	5.81	July 21	0215	309	4.24
May 23	1445	620	5.26				

Minimum discharge, 2.6 ft^3/s, Oct. 11, gage height, 1.75 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	5.8	9.1	6.7	6.7	8.7	27	12	12	6.8	8.8	4.5
2	3.1	5.2	8.2	7.6	6.4	8.4	16	81	11	6.6	8.0	4.5
3	3.6	4.5	7.7	7.7	11	8.2	16	16	10	6.5	7.4	4.2
4	3.2	4.5	7.4	6.6	13	8.1	14	12	10	10	6.9	4.2
5	3.0	13	7.1	e6.2	8.3	8.8	15	45	10	175	6.4	4.2
6	2.8	7.7	6.8	6.8	8.0	38	29	214	15	28	6.5	4.4
7	2.8	4.6	6.7	6.5	7.3	14	15	37	29	15	6.5	4.4
8	2.9	4.5	6.5	20	6.7	9.8	17	19	14	11	6.1	4.3
9	2.9	4.1	6.4	19	6.2	12	16	16	31	9.7	5.7	4.2
10	2.9	4.1	6.3	10	e5.9	13	13	45	25	8.8	5.7	4.2
11	2.8	4.0	6.1	9.1	e5.9	12	11	33	12	8.0	7.0	4.2
12	2.7	3.8	e5.7	48	6.0	12	11	19	11	7.7	8.2	4.0
13	2.7	5.1	e5.5	18	5.7	9.9	10	16	11	27	10	4.2
14	2.8	5.0	5.7	9.9	11	9.4	9.8	15	11	13	6.8	4.3
15	2.9	4.3	6.1	48	16	9.4	19	14	11	8.8	6.3	4.4
16	2.9	4.3	5.7	15	23	8.5	22	57	11	73	6.1	5.1
17	2.9	31	e5.5	10	9.8	8.1	13	37	11	18	5.7	7.5
18	3.1	7.4	e5.2	9.2	8.3	19	11	18	9.8	11	5.5	4.5
19	3.2	7.1	5.3	8.7	8.0	14	15	15	8.9	9.9	9.1	28
20	3.1	66	5.5	8.1	7.9	10	11	14	9.0	101	6.8	28
21	8.9	18	7.3	7.0	66	22	10	13	9.5	63	6.1	11
22	28	8.2	6.7	e6.7	49	11	9.5	12	9.0	16	5.5	13
23	5.1	6.8	8.0	6.8	18	9.7	9.1	129	10	13	5.3	14
24	4.8	6.1	13	6.8	11	76	8.9	79	10	11	5.0	9.8
25	4.3	5.7	12	6.8	10	26	8.9	23	8.8	9.4	5.0	6.5
26	4.0	5.5	7.6	7.2	9.8	15	8.7	18	8.7	11	4.8	26
27	4.1	11	6.9	7.2	9.9	13	8.5	19	7.8	8.9	4.8	8.1
28	4.2	142	7.5	6.4	9.4	12	8.1	15	8.2	8.4	4.9	6.6
29	4.4	15	7.3	6.6	---	11	9.6	14	7.7	7.4	5.0	6.3
30	4.1	11	6.5	8.4	---	13	9.6	13	7.2	7.6	5.6	5.9
31	4.0	---	6.4	7.3	---	109	---	12	---	13	4.6	---
TOTAL	135.2	425.3	217.7	358.3	364.2	559.0	401.7	1082	359.6	723.5	196.1	244.5
MEAN	4.36	14.2	7.02	11.6	13.0	18.0	13.4	34.9	12.0	23.3	6.33	8.15
MAX	28	142	13	48	66	109	29	214	31	175	10	28
MIN	2.7	3.8	5.2	6.2	5.7	8.1	8.1	12	7.2	6.5	4.6	4.0
CFSM	.48	1.57	.78	1.28	1.44	2.00	1.48	3.87	1.33	2.58	.70	.90
IN.	.56	1.75	.90	1.48	1.50	2.30	1.65	4.46	1.48	2.98	.81	1.01

CAL YR 1988 TOTAL 3877.8 MEAN 10.6 MAX 270 MIN 1.7 CFSM 1.17 IN. 15.97
WTR YR 1989 TOTAL 5067.1 MEAN 13.9 MAX 214 MIN 2.7 CFSM 1.54 IN. 20.87

e Estimated

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD

LOCATION.--Lat 39°39'31", long 76°10'28", Harford County, Hydrologic Unit 02050306, at downstream side of Conowingo Dam, 1.0 mi southwest of Conowingo, and 9.9 mi upstream from mouth.

DRAINAGE AREA.--27,100 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 5.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharge. Water-discharge records good. Flow regulated by Conowingo Reservoir beginning October 1928, usable capacity, 55,070,000,000 gal; dead storage, 45,290,000,000 gal. Records do not include a small infrequent diversion upstream from station to augment municipal supply of city of Baltimore. Records of diversion available from Baltimore Department of Public Works. Gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,130,000 ft^3/s, June 24, 1972, gage height, 36.83 ft; minimum discharge, 144 ft^3/s, Mar. 2, 1969, gage height, 6.28 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 280,000 ft^3/s, May 18, gage height, 23.48 ft; minimum discharge, 1,710 ft^3/s, Oct. 27, gage height, 8.20 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4730	22300	31900	14800	27100	34700	136000	25200	38300	49700	22700	8140
2	4300	11400	37900	21600	21200	31700	183000	26400	27300	36300	22400	6800
3	4310	12700	16000	27900	29300	30600	179000	26300	24200	46000	23600	6410
4	10100	10300	10500	27300	11300	21100	145000	27400	15600	30200	22400	6520
5	10900	4710	25700	28000	9490	13200	118000	43300	39400	52600	12400	6680
6	10900	4720	23600	23300	26300	29400	109000	86600	41500	63100	9590	8870
7	5170	9040	25300	4590	27500	39100	100000	117000	43200	58500	19600	6590
8	4540	16700	23200	4450	24100	38600	95800	153000	43200	50700	13600	7630
9	4680	26000	20100	4630	24800	16600	83200	155000	42700	42500	12400	7940
10	4600	34200	8260	24400	18100	22500	82700	144000	40200	37600	13800	6170
11	4580	47900	4370	23000	4870	17500	70500	148000	25700	47700	17000	14700
12	9170	33500	26200	29200	5640	11500	70400	175000	39100	36100	10900	6360
13	10700	9200	22000	35600	20400	31900	57000	211000	39000	39200	8830	6170
14	11800	25600	4450	19200	17400	32300	43500	192000	30100	51200	17100	6160
15	4550	25900	6150	25000	27000	32800	35100	166000	40500	40700	16000	4990
16	4550	32100	8220	41200	19100	34200	28700	157000	49000	28300	15300	4300
17	4570	36300	5850	42500	23700	33000	41600	217000	67400	53200	12900	4290
18	4530	35000	4410	39000	23400	24300	42700	232000	111000	70700	8560	4360
19	4500	17700	14200	37500	13500	18400	38600	192000	134000	61200	8910	9840
20	4500	30200	11500	37700	30900	39300	33800	138000	110000	40500	13600	23200
21	6080	43900	9010	19100	30800	38400	35700	106000	100000	45900	24600	19200
22	11700	53600	25200	6780	35900	42500	31300	93600	119000	64300	15100	21100
23	4490	54100	16100	26300	48100	45200	22500	77800	164000	49600	18700	4320
24	4440	46500	6370	24900	55300	48700	28300	76300	143000	48400	8880	4310
25	11000	45600	4390	26500	59600	48700	25800	69200	118000	41300	12400	6180
26	11100	47600	12200	27900	35200	65500	22100	52300	123000	37500	6530	21100
27	17700	26500	28300	20600	45100	76100	21900	53100	107000	35200	6510	25700
28	22500	36100	28400	5160	37500	104000	23300	43600	76100	33600	6430	16200
29	4390	34600	31100	4310	---	95900	17700	47900	73200	15900	11600	20400
30	4490	26900	32500	22000	---	91600	11600	54800	63700	14200	12100	7380
31	22300	---	8900	22500	---	99100	---	46100	---	23100	10600	---
TOTAL	247870	860870	532280	716920	752600	1308400	1933800	3352900	2088400	1345000	435040	302010
MEAN	7996	28700	17170	23130	26880	42210	64460	108200	69610	43390	14030	10070
MAX	22500	54100	37900	42500	59600	104000	183000	232000	164000	70700	24600	25700
MIN	4300	4710	4370	4310	4870	11500	11600	25200	15600	14200	6430	4290
CFSM	.30	1.06	.63	.85	.99	1.56	2.38	3.99	2.57	1.60	.52	.37
IN.	.34	1.18	.73	.98	1.03	1.80	2.65	4.60	2.87	1.85	.60	.41

CAL YR 1988 TOTAL 9939980 MEAN 27160 MAX 184000 MIN 2260 CFSM 1.00 IN. 13.64
WTR YR 1989 TOTAL 13876090 MEAN 38020 MAX 232000 MIN 4290 CFSM 1.40 IN. 19.05

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1978 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: June 1979 to April 1981, July 1984 to current year.
WATER TEMPERATURE: June 1979 to April 1981, July 1984 to current year.
SUSPENDED-SEDIMENT DISCHARGE: October 1979 to April 1981, July 1984 to current year.

REMARKS.--Water temperatures are measured daily in field by local observer at time of sampling.

COOPERATION.--Some chemical data were collected by the U. S. Geological Survey and analyzed by the Pennsylvania Department of Environmental Resources Laboratory.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 475 microsiemens, Nov. 13-15, 1980; minimum daily, 113 microsiemens, Mar. 17, 1986.
WATER TEMPERATURE: Maximum daily, 30.5°C, Aug. 18, 1988; minimum daily, 1.0°C, Feb. 5, 6, 9, 1980, Feb. 12, 1988.
SEDIMENT CONCENTRATION: Maximun daily mean, 207 mg/L, Mar. 17, 1986; minimum daily mean, 1 mg/L, June 27, 1987.
SEDIMENT LOAD: Maximum daily, 197,000 tons, Mar. 16, 17, 1986; minimum daily, 4.4 tons, Feb. 10, 1985.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 409 microsiemens, Sep. 29; minimum daily, 120 microsiemens, May 15.
WATER TEMPERATURE: Maximum daily, 27.5°C, Aug. 5; minimum daily, 3.0°C, Jan. 10, 11, 14.
SEDIMENT CONCENTRATION: Maximum daily mean, 82 mg/L, June 23; minimum daily mean, 3 mg/L, on many days during the year.
SEDIMENT LOAD: Maximum daily, 36,300 tons, June 23; minimum daily, 36 tons, Dec. 18.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TEMPERATURE AIR (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)
OCT											
05...	1115	13400	284	7.2	21.0	18.0	769	--	5.0	56	--
26...	1115	25000	358	7.3	14.0	14.5	763	--	9.0	87	--
NOV											
02...	1305	15100	405	7.2	12.0	19.0	755	2.5	10.5	98	K12
16...	1100	53000	300	7.4	10.0	13.0	768	--	10.4	91	--
16...	1105	53000	300	7.2	10.0	13.0	768	--	10.4	91	--
30...	1035	40300	187	7.5	6.5	5.0	779	--	--	--	--
30...	1036	40300	--	7.5	6.5	--	--	--	--	--	--
30...	1037	40300	--	7.4	6.5	--	--	--	--	--	--
30...	1040	40300	187	7.5	6.5	5.0	779	--	--	--	--
30...	1041	40300	--	7.4	6.5	5.0	779	--	--	--	--
DEC											
08...	1005	51300	232	7.3	5.0	14.0	772	--	11.9	92	--
08...	1010	51300	--	--	5.0	14.0	772	--	--	--	--
21...	1135	16000	272	7.3	4.0	15.0	768	--	12.3	93	--
JAN											
09...	1105	4400	300	6.9	3.0	13.0	773	3.0	13.6	100	K2
18...	1125	79000	270	7.2	3.0	15.0	769	--	14.4	106	--
21...	1105	48700	266	7.6	--	--	--	--	--	--	--
FEB											
14...	1105	48000	282	7.6	4.0	18.0	772	--	13.8	104	--
14...	1110	48000	--	7.8	--	--	--	--	--	--	--
14...	1111	48000	--	--	--	--	--	--	--	--	--
25...	1010	78100	--	--	--	--	--	--	--	--	--
25...	1012	78100	--	--	--	--	--	--	--	--	--
27...	1400	77200	--	--	--	--	--	--	--	--	--
27...	1405	77200	--	--	--	--	--	--	--	--	--
MAR											
01...	1115	79000	233	7.0	3.0	5.0	769	--	14.3	105	--
01...	1120	79000	--	--	--	--	--	--	--	--	--
16...	1130	73800	258	7.3	5.0	15.0	772	2.4	13.5	104	--
21...	1500	30000	265	7.2	8.5	16.0	765	--	11.8	100	--
28...	1130	133000	190	7.9	13.5	28.0	765	--	10.4	99	--
28...	1135	133000	--	--	--	--	--	--	--	--	--
28...	1140	133000	204	7.3	13.5	28.0	765	--	10.4	99	--
28...	1145	133000	209	7.8	13.5	28.0	765	--	10.4	99	--
28...	1200	133000	196	7.8	13.5	28.0	765	--	10.4	99	--
29...	1230	118000	195	7.1	11.0	24.0	761	--	11.4	104	--
30...	1200	80700	200	7.1	11.0	20.5	762	--	11.6	105	--

K: Results based on colony count outside the accepted range (non-ideal colony).

SUSQUEHANNA RIVER BASIN

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
APR											
01...	0715	115000	175	7.6	8.5	--	--	--	--	--	--
01...	0716	115000	--	--	--	--	--	--	--	--	--
01...	0720	115000	--	--	--	--	--	--	--	--	--
01...	0721	115000	--	--	--	--	--	--	--	--	--
02...	0715	175000	153	7.8	--	--	--	--	--	--	--
02...	0730	173000	--	--	--	--	--	--	--	--	--
02...	1515	173000	143	7.1	11.0	9.0	--	--	--	--	--
02...	1530	173000	144	7.1	11.0	9.0	--	--	--	--	--
02...	1545	173000	143	7.1	11.0	9.0	--	--	--	--	--
02...	2030	203000	146	7.2	9.0	9.0	--	--	--	--	--
02...	2035	208000	--	--	--	--	--	--	--	--	--
03...	0100	204000	145	7.1	8.5	8.0	--	--	--	--	--
03...	0630	193000	143	7.3	8.0	7.0	--	--	--	--	--
03...	1130	193000	136	7.1	9.0	12.0	--	--	--	--	--
03...	1145	193000	142	7.3	9.5	12.0	--	--	--	--	--
03...	1150	192000	--	--	--	--	--	--	--	--	--
03...	1200	193000	140	7.2	9.0	12.0	--	--	--	--	--
03...	1430	190000	--	--	--	--	--	--	--	--	--
04...	1330	164000	148	6.9	10.0	25.0	761	--	12.3	109	--
04...	1335	164000	148	6.9	10.0	25.0	761	--	12.3	109	--
04...	1340	163000	--	--	--	--	--	--	--	--	--
05...	1000	117000	150	7.0	9.0	19.0	764	--	12.5	108	--
05...	1005	117000	146	6.8	9.0	19.0	764	--	12.5	108	--
05...	1330	147000	150	6.9	10.0	21.5	763	--	12.4	110	--
05...	1335	133000	--	--	--	--	--	--	--	--	--
06...	1100	128000	147	7.0	9.0	17.0	760	--	12.0	104	--
06...	1105	143000	--	--	--	--	--	--	--	--	--
07...	1215	123000	149	8.0	--	--	--	--	--	--	--
07...	1216	123000	147	8.0	--	--	--	--	--	--	--
08...	1640	87900	152	7.3	8.0	--	--	--	--	--	--
08...	1641	87900	--	--	--	--	--	--	--	--	--
10...	1000	87000	--	--	--	--	--	--	--	--	--
10...	1005	87000	--	--	--	--	--	--	--	--	--
19...	1130	66600	208	7.2	12.0	16.0	766	--	10.9	101	--
MAY											
02...	1230	40400	248	7.3	17.0	23.0	755	3.5	9.0	94	K3
06...	1220	135000	252	7.3	--	--	--	--	--	--	--
07...	1410	117000	236	7.3	--	--	--	--	--	--	--
08...	1140	177000	186	7.4	--	--	--	--	--	--	--
09...	1200	177000	167	7.5	17.0	19.0	766	--	10.0	103	--
10...	1015	158000	--	--	--	--	--	--	--	--	--
12...	1230	195000	151	7.2	12.0	15.0	--	--	11.8	--	--
15...	1215	178000	125	7.6	12.0	17.0	--	--	11.6	--	--
17...	1300	178000	158	7.1	13.0	20.0	764	--	11.4	108	--
19...	1130	209000	148	7.0	16.0	26.0	770	--	10.9	109	--
JUN											
14...	1130	49100	244	6.8	22.0	19.0	763	--	7.1	81	--
14...	1133	48900	--	--	--	--	--	--	--	--	--
14...	1135	48900	244	6.8	22.0	19.0	763	--	7.1	81	--
18...	0810	104000	208	--	--	--	--	--	--	--	--
18...	0812	104000	208	--	--	--	--	--	--	--	--
19...	1244	158000	183	--	--	--	--	--	--	--	--
19...	1245	158000	183	--	--	--	--	--	--	--	--
20...	1625	127000	154	--	20.5	--	--	--	--	--	--
20...	1626	127000	154	--	--	--	--	--	--	--	--
22...	1145	143000	162	7.1	22.0	29.0	768	--	8.2	93	--
23...	1200	184000	157	7.1	21.0	24.0	766	--	9.5	106	--
24...	1205	157000	129	--	--	--	--	--	--	--	--
24...	1206	157000	131	--	--	--	--	--	--	--	--
25...	1035	117000	133	--	--	--	--	--	--	--	--
25...	1036	117000	132	--	--	--	--	--	--	--	--
28...	1000	80000	151	6.7	22.0	24.0	763	2.5	8.2	94	220
28...	1005	80100	--	--	--	--	--	--	--	--	--
30...	0830	52700	152	--	23.5	--	--	--	--	--	--
30...	0831	52700	--	--	--	--	--	--	--	--	--

K: Results based on colony count outside the accepted range (non-ideal colony).

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
JUL											
05...	1415	71800	177	--	25.0	--	--	--	--	--	--
05...	1416	71800	177	--	--	--	--	--	--	--	--
18...	1125	67000	225	7.3	24.0	27.0	767	--	7.5	89	--
20...	1635	59000	205	--	23.5	--	--	--	--	--	--
20...	1640	59000	205	--	23.5	--	--	--	--	--	--
22...	1245	65800	205	--	23.0	--	--	--	--	--	--
22...	1246	65800	174	--	21.0	--	--	--	--	--	--
24...	1255	65200	210	--	25.0	--	--	--	--	--	--
31...	1320	36700	227	--	26.5	--	--	--	--	--	--
31...	1321	36700	227	--	26.5	--	--	--	--	--	--
AUG											
07...	1200	29700	270	--	25.0	--	--	--	--	--	--
16...	1320	35100	302	--	25.5	--	--	--	--	--	--
16...	1325	35100	302	--	25.5	--	--	--	--	--	--
SEP											
08...	1125	6400	322	7.4	25.0	24.0	766	2.6	7.6	92	49

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
OCT											
05...	--	--	--	--	--	53	--	--	--	1.1	--
26...	--	--	--	--	--	62	--	--	--	1.0	--
NOV											
02...	e K6	39	13	17	2.8	70	80	24	0.10	0.82	230
16...	--	--	--	--	--	58	--	--	--	2.5	--
16...	--	--	--	--	--	58	--	--	--	2.4	--
30...	--	--	--	--	--	--	--	--	--	5.0	--
30...	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	4.9	--
30...	--	--	--	--	--	--	--	--	--	--	--
DEC											
08...	--	--	--	--	--	41	--	--	--	4.5	--
08...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	50	--	--	--	3.3	--
JAN											
09...	K4	28	8.4	10	1.9	47	54	15	0.10	2.3	164
18...	--	--	--	--	--	47	--	--	--	2.6	--
21...	--	--	--	--	--	--	--	--	--	--	--
FEB											
14...	--	--	--	--	--	50	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
MAR											
01...	--	--	--	--	--	38	--	--	--	3.6	--
01...	--	--	--	--	--	--	--	--	--	--	--
16...	--	24	7.0	11	1.8	45	38	16	0.10	2.2	139
21...	--	--	--	--	--	50	--	--	--	1.6	--
28...	--	--	--	--	--	38	--	--	--	3.7	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	41	--	--	--	3.5	--
28...	--	--	--	--	--	36	--	--	--	3.4	--
28...	--	--	--	--	--	36	--	--	--	3.7	--
29...	--	--	--	--	--	32	--	--	--	11	--
30...	--	--	--	--	--	35	--	--	--	9.8	--
APR											
01...	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	24	--	--	--	4.4	--
02...	--	--	--	--	--	28	--	--	--	5.0	--
02...	--	--	--	--	--	24	--	--	--	5.0	--
02...	--	--	--	--	--	26	--	--	--	5.0	--
02...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	25	--	--	--	5.0	--
03...	--	--	--	--	--	22	--	--	--	5.0	--
03...	--	--	--	--	--	22	--	--	--	4.7	--
03...	--	--	--	--	--	22	--	--	--	4.7	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	24	--	--	--	4.6	--
03...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	24	--	--	--	4.6	--
04...	--	--	--	--	--	24	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	26	--	--	--	4.7	--
05...	--	--	--	--	--	23	--	--	--	4.7	--
05...	--	--	--	--	--	24	--	--	--	4.7	--
05...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	24	--	--	--	4.8	--
06...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	37	--	--	--	4.5	--

K: Results based on colony count outside the accepted range (non-ideal colony).

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
MAY											
02...	K6	26	6.9	8.4	1.7	45	40	13	0.10	0.25	127
06...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	30	--	--	--	4.9	--
10...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	26	--	--	--	5.4	--
15...	--	--	--	--	--	29	--	--	--	5.0	--
17...	--	--	--	--	--	33	--	--	--	5.4	--
19...	--	--	--	--	--	27	--	--	--	5.8	--
JUN											
14...	--	--	--	--	--	48	--	--	--	1.6	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	48	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	33	--	--	--	5.2	--
23...	--	--	--	--	--	33	--	--	--	5.3	--
24...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
28...	110	18	4.7	4.6	1.7	29	27	6.5	0.10	5.7	106
28...	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
JUL											
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	55	--	--	--	4.3	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--
AUG											
07...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
SEP											
08...	100	35	10	11	2.5	66	51	16	0.10	2.3	178

K: Results based on colony count outside the accepted range (non-ideal colony).

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)
OCT											
05...	--	1.06	0.040	--	1.10	--	0.020	0.40	0.40	0.010	0.003
26...	--	1.04	0.060	--	1.10	--	0.090	0.30	0.30	0.020	0.003
NOV											
02...	224	1.06	0.040	--	1.10	0.220	0.240	0.60	0.60	0.030	0.010
16...	--	--	<0.010	--	1.00	--	0.110	0.80	0.60	0.030	0.008
16...	--	--	<0.010	--	1.00	--	0.100	0.50	0.40	0.020	0.007
30...	--	1.49	0.010	--	1.50	--	0.090	0.40	0.40	0.040	0.016
30...	--	--	--	1.35	1.35	0.070	0.070	<0.20	<0.20	0.060	0.030
30...	--	--	--	1.35	1.34	0.070	0.060	<0.20	<0.20	0.060	0.030
30...	--	1.39	0.010	--	1.40	--	0.060	0.50	0.30	0.040	0.017
30...	--	--	--	1.40	1.40	0.090	0.080	<0.20	<0.20	0.060	0.040
DEC											
08...	--	1.59	0.010	--	1.60	--	0.060	0.40	0.30	0.030	0.009
08...	--	--	--	1.46	1.37	0.070	0.070	<0.20	<0.20	0.040	0.040
21...	--	1.39	0.010	--	1.40	--	0.090	0.30	0.30	0.030	0.010
JAN											
09...	128	1.38	0.016	--	1.40	0.110	0.120	0.60	0.60	0.030	0.007
18...	--	1.69	0.009	--	1.70	--	0.150	0.40	0.40	0.030	0.013
21...	--	--	--	1.88	1.88	0.155	0.150	0.86	0.86	0.080	0.050
FEB											
14...	--	1.38	0.016	--	1.40	--	0.010	0.50	0.30	<0.010	0.006
14...	--	--	--	1.51	1.46	0.030	0.040	0.24	0.21	0.030	0.030
14...	--	--	--	1.47	1.47	0.030	0.040	0.21	<0.20	0.050	0.040
25...	--	--	--	1.44	1.44	0.010	0.010	0.77	0.62	0.080	0.050
25...	--	--	--	1.44	1.42	0.010	0.010	0.70	0.49	0.080	0.040
27...	--	--	--	1.66	1.66	0.010	0.010	0.84	0.47	0.080	0.040
27...	--	--	--	1.66	1.66	0.010	0.010	0.77	0.57	0.080	0.050
MAR											
01...	--	1.49	0.008	--	1.50	--	0.090	0.50	0.20	0.050	0.005
01...	--	--	--	1.53	1.53	0.110	0.100	0.63	0.48	0.060	0.020
16...	134	1.49	0.012	--	1.50	0.080	0.070	0.60	0.40	0.030	0.021
21...	--	1.78	0.015	--	1.80	--	0.100	0.40	0.40	0.050	0.007
28...	--	1.69	0.014	--	1.70	--	0.100	0.40	0.40	0.060	0.012
28...	--	--	--	1.80	1.80	0.030	0.030	0.86	0.71	0.060	0.030
28...	--	1.68	0.016	--	1.70	--	0.070	0.40	0.40	0.060	0.010
28...	--	1.69	0.014	--	1.70	--	0.070	0.40	0.40	0.050	0.007
28...	--	1.59	0.014	--	1.60	--	0.080	0.40	0.40	0.060	0.014
29...	--	1.39	0.013	--	1.40	--	0.100	0.40	0.30	0.070	0.029
30...	--	1.39	0.014	--	1.40	--	0.100	0.50	0.50	0.060	0.009
APR											
01...	--	--	--	1.34	1.34	0.040	0.040	0.99	0.78	0.050	0.030
01...	--	--	--	1.34	1.34	0.040	0.040	0.96	0.81	0.040	0.030
01...	--	--	--	1.34	1.34	0.040	0.040	1.0	0.68	0.040	0.030
01...	--	--	--	1.34	1.32	0.040	0.040	0.96	0.68	0.040	0.030
02...	--	--	--	1.14	1.14	0.060	0.050	1.1	0.91	0.040	0.030
02...	--	--	--	1.12	1.12	0.040	0.040	1.2	0.83	0.060	0.040
02...	--	0.989	0.011	--	1.00	--	0.090	0.30	0.30	0.060	0.008
02...	--	0.990	0.010	--	1.00	--	0.090	0.30	0.30	0.080	0.007
02...	--	0.989	0.011	--	1.00	--	0.080	0.40	0.40	0.070	0.008
02...	--	0.960	0.010	--	0.970	--	0.080	0.40	0.30	0.080	0.008
02...	--	--	--	1.01	1.01	0.060	0.060	0.44	0.39	0.040	0.030
03...	--	0.940	0.010	--	0.950	--	0.080	0.40	0.30	0.080	0.010
03...	--	0.920	0.010	--	0.930	--	0.080	0.40	0.30	0.090	0.005
03...	--	0.910	0.010	--	0.920	--	0.080	0.40	0.30	0.090	0.007
03...	--	0.920	0.010	--	0.930	--	0.130	0.40	0.40	0.090	0.006
03...	--	--	--	0.990	0.990	0.030	0.030	0.81	0.49	0.050	0.030
03...	--	0.940	0.010	--	0.950	--	0.080	0.40	0.30	0.070	0.005
03...	--	--	--	--	--	--	--	--	--	--	--
04...	--	0.899	0.011	--	0.910	--	0.070	0.50	0.50	0.090	0.017
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	0.970	0.970	0.040	0.130	0.90	0.80	0.100	0.020
05...	--	0.949	0.011	--	0.960	--	0.070	0.80	0.30	0.060	0.008
05...	--	0.919	0.011	--	0.930	--	0.070	0.60	0.40	0.070	0.007
05...	--	0.919	0.011	--	0.930	--	0.100	0.30	0.30	0.070	0.008
05...	--	--	--	1.03	1.03	0.040	0.090	<0.85	0.50	0.060	0.030
06...	--	0.970	0.010	--	0.980	--	0.070	0.50	0.30	0.060	0.011
06...	--	--	--	1.06	1.06	0.030	0.020	0.55	0.48	0.070	0.020
07...	--	--	--	1.14	1.14	0.050	0.050	0.70	0.53	0.050	0.020
07...	--	--	--	1.14	1.14	0.050	0.050	0.70	0.53	0.060	0.020
08...	--	--	--	1.14	1.14	0.070	0.060	0.62	0.56	0.050	0.020
08...	--	--	--	1.14	1.14	0.050	0.060	0.60	0.40	0.060	0.020
10...	--	--	--	1.17	1.17	0.070	0.100	0.74	0.56	0.050	0.030
10...	--	--	--	1.17	1.17	0.070	0.070	0.73	0.33	0.060	0.030
19...	--	1.28	0.015	--	1.30	--	0.090	0.50	0.40	0.030	0.009

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)
MAY											
02...	128	0.986	0.014	--	1.00	0.140	0.170	0.70	0.20	0.050	0.008
06...	--	--	--	0.840	0.810	0.150	0.150	1.1	0.69	0.110	0.030
07...	--	--	--	1.10	1.10	0.120	0.110	1.5	0.69	0.240	0.020
08...	--	--	--	1.32	1.28	0.110	0.110	1.3	0.89	0.210	0.040
09...	--	1.48	0.016	--	1.50	--	0.090	0.70	0.70	0.030	0.014
10...	--	--	--	1.41	1.41	0.090	0.080	0.34	0.29	0.110	0.030
12...	--	1.09	0.010	--	1.10	--	0.060	0.50	0.20	0.020	0.010
15...	--	0.893	0.007	--	0.900	--	0.040	0.50	0.50	0.050	0.010
17...	--	1.09	0.010	--	1.10	--	0.070	0.70	0.40	0.040	0.018
19...	--	1.49	0.014	--	1.50	--	0.080	0.40	0.40	0.030	0.016
JUN											
14...	--	1.08	0.017	--	1.10	--	0.080	0.40	0.50	0.030	0.006
14...	--	--	--	1.23	1.23	0.110	0.110	0.27	<0.20	0.050	0.030
14...	--	--	--	1.23	1.23	0.110	0.110	0.30	<0.20	0.060	0.030
18...	--	--	--	1.19	1.14	0.040	0.030	0.95	0.52	0.070	0.040
18...	--	--	--	1.17	1.17	0.040	0.040	0.89	0.54	0.070	0.040
19...	--	--	--	1.01	1.01	0.020	0.020	0.82	0.49	0.090	0.020
19...	--	--	--	1.01	1.01	0.030	0.020	0.80	0.49	0.090	0.020
20...	--	--	--	0.970	0.900	0.030	0.030	0.69	0.41	0.080	<0.020
20...	--	--	--	0.970	0.970	0.040	0.030	0.74	0.74	0.080	0.020
22...	--	0.954	0.016	--	0.970	--	0.070	0.50	<0.20	0.020	0.013
23...	--	1.18	0.017	--	1.20	--	0.100	0.40	0.30	0.110	0.016
24...	--	--	--	1.19	1.19	0.070	0.050	0.92	0.52	0.100	0.040
24...	--	--	--	1.17	1.17	0.070	0.070	0.67	0.49	0.100	0.050
25...	--	--	--	1.12	1.12	0.060	0.040	0.82	0.57	0.080	0.040
25...	--	--	--	1.12	1.12	0.050	0.040	0.85	0.49	0.070	0.040
28...	91	1.18	0.016	--	1.20	0.080	0.070	0.40	0.30	0.030	0.023
28...	--	--	--	1.21	1.19	0.050	0.050	0.57	0.32	0.090	0.040
30...	--	--	--	1.23	1.21	0.020	<0.020	0.68	0.60	0.070	0.030
30...	--	--	--	--	--	--	--	--	--	--	--
JUL											
05...	--	--	--	1.43	1.43	0.050	0.030	0.21	<0.20	0.070	0.030
05...	--	--	--	1.43	1.34	0.050	0.050	0.21	<0.20	0.080	0.030
18...	--	1.58	0.018	--	1.60	--	0.090	0.70	0.30	0.030	0.010
20...	--	--	--	1.67	1.65	0.090	0.080	0.39	<0.20	0.090	0.030
20...	--	--	--	1.67	1.65	0.090	0.090	0.32	0.25	0.090	0.040
22...	--	--	--	1.83	1.83	0.100	0.100	0.36	0.25	0.090	0.040
22...	--	--	--	1.83	1.83	0.110	0.110	0.38	0.28	0.090	0.040
24...	--	--	--	2.09	2.09	0.110	0.090	0.25	0.20	0.070	0.040
31...	--	--	--	1.74	1.74	0.070	0.060	0.32	0.21	0.070	0.030
31...	--	--	--	1.74	1.74	0.070	0.070	0.29	<0.20	0.070	0.030
AUG											
07...	--	--	--	1.78	1.78	0.080	0.080	0.55	0.23	0.060	0.050
16...	--	--	--	1.76	1.76	0.130	0.130	0.30	0.28	0.060	0.040
16...	--	--	--	1.76	1.76	0.120	0.120	<0.20	<0.20	0.070	0.040
SEP											
08...	174	--	--	--	1.40	0.090	0.090	0.70	0.40	0.040	0.010

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
OCT											
05...	0.008	20	--	--	--	--	--	--	--	--	--
26...	0.002	10	--	--	--	--	--	--	--	--	--
NOV											
02...	0.002	<10	<1	35	<0.5	<1	<1	<3	3	5	<5
16...	<0.001	10	--	--	--	--	--	--	--	--	--
16...	<0.001	20	--	--	--	--	--	--	--	--	--
30...	0.004	--	--	--	--	--	--	--	--	--	--
30...	0.012	--	--	--	--	--	--	--	--	--	--
30...	<0.005	--	--	--	--	--	--	--	--	--	--
30...	0.007	--	--	--	--	--	--	--	--	--	--
30...	0.006	--	--	--	--	--	--	--	--	--	--
DEC											
08...	0.006	20	--	--	--	--	--	--	--	--	--
08...	0.014	--	--	--	--	--	--	--	--	--	--
21...	0.008	10	--	--	--	--	--	--	--	--	--
JAN											
09...	0.005	10	--	--	--	--	--	--	--	--	--
18...	0.004	20	--	--	--	--	--	--	--	--	--
21...	0.022	--	--	--	--	--	--	--	--	--	--
FEB											
14...	0.003	30	--	--	--	--	--	--	--	--	--
14...	<0.002	--	--	--	--	--	--	--	--	--	--
14...	<0.002	--	--	--	--	--	--	--	--	--	--
25...	0.002	--	--	--	--	--	--	--	--	--	--
25...	<0.002	--	--	--	--	--	--	--	--	--	--
27...	<0.002	--	--	--	--	--	--	--	--	--	--
27...	<0.002	--	--	--	--	--	--	--	--	--	--
MAR											
01...	--	30	--	--	--	--	--	--	--	--	--
01...	0.002	--	--	--	--	--	--	--	--	--	--
16...	0.005	30	<1	28	<0.5	<1	<1	<3	1	85	<5
21...	0.007	30	--	--	--	--	--	--	--	--	--
28...	0.009	30	--	--	--	--	--	--	--	--	--
28...	0.004	--	--	--	--	--	--	--	--	--	--
28...	0.007	30	--	--	--	--	--	--	--	--	--
28...	0.008	30	--	--	--	--	--	--	--	--	--
28...	0.007	30	--	--	--	--	--	--	--	--	--
29...	0.006	30	--	--	--	--	--	--	--	--	--
30...	0.006	20	--	--	--	--	--	--	--	--	--
APR											
01...	0.003	--	--	--	--	--	--	--	--	--	--
01...	0.003	--	--	--	--	--	--	--	--	--	--
01...	0.003	--	--	--	--	--	--	--	--	--	--
01...	0.003	--	--	--	--	--	--	--	--	--	--
02...	0.004	--	--	--	--	--	--	--	--	--	--
02...	0.004	--	--	--	--	--	--	--	--	--	--
02...	0.008	20	--	--	--	--	--	--	--	--	--
02...	0.007	60	--	--	--	--	--	--	--	--	--
02...	0.007	20	--	--	--	--	--	--	--	--	--
02...	0.006	30	--	--	--	--	--	--	--	--	--
02...	0.004	--	--	--	--	--	--	--	--	--	--
03...	0.006	20	--	--	--	--	--	--	--	--	--
03...	0.004	30	--	--	--	--	--	--	--	--	--
03...	0.006	30	--	--	--	--	--	--	--	--	--
03...	0.006	20	--	--	--	--	--	--	--	--	--
03...	0.005	--	--	--	--	--	--	--	--	--	--
03...	0.006	20	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
04...	0.007	30	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	0.002	--	--	--	--	--	--	--	--	--	--
05...	0.005	30	--	--	--	--	--	--	--	--	--
05...	0.009	30	--	--	--	--	--	--	--	--	--
05...	0.005	40	--	--	--	--	--	--	--	--	--
05...	<0.002	--	--	--	--	--	--	--	--	--	--
06...	0.005	30	--	--	--	--	--	--	--	--	--
06...	<0.002	--	--	--	--	--	--	--	--	--	--
07...	0.002	--	--	--	--	--	--	--	--	--	--
07...	0.002	--	--	--	--	--	--	--	--	--	--
08...	0.002	--	--	--	--	--	--	--	--	--	--
08...	0.005	--	--	--	--	--	--	--	--	--	--
10...	0.009	--	--	--	--	--	--	--	--	--	--
10...	0.009	--	--	--	--	--	--	--	--	--	--
19...	0.006	30	--	--	--	--	--	--	--	--	--

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
MAY											
02...	0.006	70	<1	24	<0.5	<1	<1	<3	5	5	<5
06...	0.005	--	--	--	--	--	--	--	--	--	--
07...	0.002	--	--	--	--	--	--	--	--	--	--
08...	0.004	--	--	--	--	--	--	--	--	--	--
09...	0.012	30	--	--	--	--	--	--	--	--	--
10...	0.007	--	--	--	--	--	--	--	--	--	--
12...	0.003	30	--	--	--	--	--	--	--	--	--
15...	0.006	30	--	--	--	--	--	--	--	--	--
17...	0.012	40	--	--	--	--	--	--	--	--	--
19...	0.021	30	--	--	--	--	--	--	--	--	--
JUN											
14...	<0.001	30	--	--	--	--	--	--	--	--	--
14...	0.002	--	--	--	--	--	--	--	--	--	--
14...	<0.002	--	--	--	--	--	--	--	--	--	--
18...	0.006	--	--	--	--	--	--	--	--	--	--
18...	0.007	--	--	--	--	--	--	--	--	--	--
19...	0.011	--	--	--	--	--	--	--	--	--	--
19...	0.008	--	--	--	--	--	--	--	--	--	--
20...	0.007	--	--	--	--	--	--	--	--	--	--
20...	0.006	--	--	--	--	--	--	--	--	--	--
22...	0.012	30	--	--	--	--	--	--	--	--	--
23...	0.015	40	--	--	--	--	--	--	--	--	--
24...	0.014	--	--	--	--	--	--	--	--	--	--
24...	0.015	--	--	--	--	--	--	--	--	--	--
25...	0.008	--	--	--	--	--	--	--	--	--	--
25...	0.009	--	--	--	--	--	--	--	--	--	--
28...	0.016	30	--	--	--	--	--	--	--	--	--
28...	0.007	--	--	--	--	--	--	--	--	--	--
30...	0.019	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
JUL											
05...	0.007	--	--	--	--	--	--	--	--	--	--
05...	0.006	--	--	--	--	--	--	--	--	--	--
18...	0.007	40	--	--	--	--	--	--	--	--	--
20...	0.015	--	--	--	--	--	--	--	--	--	--
20...	0.014	--	--	--	--	--	--	--	--	--	--
22...	0.003	--	--	--	--	--	--	--	--	--	--
22...	0.005	--	--	--	--	--	--	--	--	--	--
24...	0.003	--	--	--	--	--	--	--	--	--	--
31...	<0.002	--	--	--	--	--	--	--	--	--	--
31...	<0.002	--	--	--	--	--	--	--	--	--	--
AUG											
07...	0.005	--	--	--	--	--	--	--	--	--	--
16...	0.003	--	--	--	--	--	--	--	--	--	--
16...	<0.002	--	--	--	--	--	--	--	--	--	--
SEP											
08...	0.002	20	<1	42	<0.5	<1	<1	<3	4	4	<1

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT											
05...	--	--	--	--	--	--	--	--	--	--	3.8
26...	--	--	--	--	--	--	--	--	--	--	3.1
NOV											
02...	5	5	<0.1	<10	5	<1	<1.0	240	<6	8	2.3
16...	--	--	--	--	--	--	--	--	--	--	2.4
16...	--	--	--	--	--	--	--	--	--	--	2.7
30...	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	3.0
30...	--	--	--	--	--	--	--	--	--	--	3.0
30...	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	2.6
DEC											
08...	--	--	--	--	--	--	--	--	--	--	2.9
08...	--	--	--	--	--	--	--	--	--	--	2.3
21...	--	--	--	--	--	--	--	--	--	--	2.8
JAN											
09...	--	--	--	--	--	--	--	--	--	--	2.9
18...	--	--	--	--	--	--	--	--	--	--	3.0
21...	--	--	--	--	--	--	--	--	--	--	2.2
FEB											
14...	--	--	--	--	--	--	--	--	--	--	2.6
14...	--	--	--	--	--	--	--	--	--	--	2.3
14...	--	--	--	--	--	--	--	--	--	--	2.3
25...	--	--	--	--	--	--	--	--	--	--	2.5
25...	--	--	--	--	--	--	--	--	--	--	2.6
27...	--	--	--	--	--	--	--	--	--	--	3.2
27...	--	--	--	--	--	--	--	--	--	--	3.2
MAR											
01...	--	--	--	--	--	--	--	--	--	--	3.0
01...	--	--	--	--	--	--	--	--	--	--	2.8
16...	7	170	<0.1	<10	1	<1	<1.0	130	<6	4	2.1
21...	--	--	--	--	--	--	--	--	--	--	2.8
28...	--	--	--	--	--	--	--	--	--	--	3.3
28...	--	--	--	--	--	--	--	--	--	--	2.5
28...	--	--	--	--	--	--	--	--	--	--	3.1
28...	--	--	--	--	--	--	--	--	--	--	3.6
28...	--	--	--	--	--	--	--	--	--	--	3.7
29...	--	--	--	--	--	--	--	--	--	--	3.5
30...	--	--	--	--	--	--	--	--	--	--	3.7
APR											
01...	--	--	--	--	--	--	--	--	--	--	2.3
01...	--	--	--	--	--	--	--	--	--	--	2.7
01...	--	--	--	--	--	--	--	--	--	--	1.8
01...	--	--	--	--	--	--	--	--	--	--	2.6
02...	--	--	--	--	--	--	--	--	--	--	3.4
02...	--	--	--	--	--	--	--	--	--	--	3.5
02...	--	--	--	--	--	--	--	--	--	--	3.4
02...	--	--	--	--	--	--	--	--	--	--	3.4
02...	--	--	--	--	--	--	--	--	--	--	3.7
02...	--	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--	2.4
03...	--	--	--	--	--	--	--	--	--	--	4.1
03...	--	--	--	--	--	--	--	--	--	--	3.6
03...	--	--	--	--	--	--	--	--	--	--	4.7
03...	--	--	--	--	--	--	--	--	--	--	4.3
03...	--	--	--	--	--	--	--	--	--	--	2.9
03...	--	--	--	--	--	--	--	--	--	--	4.2
03...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	4.4
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	2.6
05...	--	--	--	--	--	--	--	--	--	--	3.7
05...	--	--	--	--	--	--	--	--	--	--	4.2
05...	--	--	--	--	--	--	--	--	--	--	4.0
05...	--	--	--	--	--	--	--	--	--	--	2.8
06...	--	--	--	--	--	--	--	--	--	--	3.3
06...	--	--	--	--	--	--	--	--	--	--	2.5
07...	--	--	--	--	--	--	--	--	--	--	2.8
07...	--	--	--	--	--	--	--	--	--	--	2.1
08...	--	--	--	--	--	--	--	--	--	--	2.2
08...	--	--	--	--	--	--	--	--	--	--	2.9
10...	--	--	--	--	--	--	--	--	--	--	2.6
10...	--	--	--	--	--	--	--	--	--	--	2.7
19...	--	--	--	--	--	--	--	--	--	--	2.4

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAY											
02...	5	10	<0.1	<10	3	<1	<1.0	120	<6	8	2.6
06...	--	--	--	--	--	--	--	--	--	--	2.6
07...	--	--	--	--	--	--	--	--	--	--	3.9
08...	--	--	--	--	--	--	--	--	--	--	4.7
09...	--	--	--	--	--	--	--	--	--	--	5.2
10...	--	--	--	--	--	--	--	--	--	--	3.6
12...	--	--	--	--	--	--	--	--	--	--	4.0
15...	--	--	--	--	--	--	--	--	--	--	3.8
17...	--	--	--	--	--	--	--	--	--	--	3.9
19...	--	--	--	--	--	--	--	--	--	--	3.9
JUN											
14...	--	--	--	--	--	--	--	--	--	--	3.1
14...	--	--	--	--	--	--	--	--	--	--	2.8
14...	--	--	--	--	--	--	--	--	--	--	2.9
18...	--	--	--	--	--	--	--	--	--	--	2.9
18...	--	--	--	--	--	--	--	--	--	--	2.8
19...	--	--	--	--	--	--	--	--	--	--	2.3
19...	--	--	--	--	--	--	--	--	--	--	1.6
20...	--	--	--	--	--	--	--	--	--	--	4.3
20...	--	--	--	--	--	--	--	--	--	--	2.5
22...	--	--	--	--	--	--	--	--	--	--	3.7
23...	--	--	--	--	--	--	--	--	--	--	4.6
24...	--	--	--	--	--	--	--	--	--	--	3.4
24...	--	--	--	--	--	--	--	--	--	--	3.4
25...	--	--	--	--	--	--	--	--	--	--	3.4
25...	--	--	--	--	--	--	--	--	--	--	3.3
28...	--	--	--	--	--	--	--	--	--	--	3.8
28...	--	--	--	--	--	--	--	--	--	--	3.1
30...	--	--	--	--	--	--	--	--	--	--	2.9
30...	--	--	--	--	--	--	--	--	--	--	--
JUL											
05...	--	--	--	--	--	--	--	--	--	--	3.1
05...	--	--	--	--	--	--	--	--	--	--	3.2
18...	--	--	--	--	--	--	--	--	--	--	4.3
20...	--	--	--	--	--	--	--	--	--	--	4.4
20...	--	--	--	--	--	--	--	--	--	--	4.2
22...	--	--	--	--	--	--	--	--	--	--	3.8
22...	--	--	--	--	--	--	--	--	--	--	4.3
24...	--	--	--	--	--	--	--	--	--	--	3.5
31...	--	--	--	--	--	--	--	--	--	--	3.3
31...	--	--	--	--	--	--	--	--	--	--	3.4
AUG											
07...	--	--	--	--	--	--	--	--	--	--	2.9
16...	--	--	--	--	--	--	--	--	--	--	2.8
16...	--	--	--	--	--	--	--	--	--	--	2.8
SEP											
08...	8	29	<0.1	20	1	<1	<1.0	190	<6	13	3.1

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

RADIOCHEMICAL ANALYSES

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	URANIUM NATURAL DIS-SOLVED (UG/L AS U)
MAR										
16...	1130	73800	0.9	<0.4	2.0	<0.4	0.04	1.7	<0.4	0.07

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT							
05...	1115	13400	21.0	284	7	253	--
26...	1115	25000	14.0	358	6	405	--
NOV							
02...	1305	15100	12.0	405	4	163	97
16...	1100	53000	10.0	300	7	1000	--
30...	1035	40300	6.5	187	5	544	--
30...	1036	40300	6.5	--	7	762	--
30...	1040	40300	6.5	187	7	762	--
30...	1041	40300	6.5	--	8	870	--
DEC							
08...	1005	51300	5.0	232	5	693	--
21...	1135	16000	4.0	272	4	173	--
JAN							
09...	1105	4400	3.0	300	4	48	--
18...	1125	79000	3.0	270	5	1070	--
FEB							
14...	1105	48000	4.0	282	6	778	--
25...	1010	78100	--	--	8	1690	--
25...	1012	78100	--	--	8	1690	--
27...	1405	77200	--	--	10	2080	--
MAR							
01...	1115	79000	3.0	233	11	2350	--
16...	1130	73800	5.0	258	5	996	75
21...	1500	30000	8.5	265	13	1050	--
28...	1130	133000	13.5	190	23	8260	--
28...	1140	133000	13.5	204	17	6100	--
28...	1145	133000	13.5	209	18	6460	--
28...	1200	133000	13.5	196	23	8260	--
29...	1230	118000	11.0	195	20	6370	--
30...	1200	80700	11.0	200	17	3700	--
APR							
01...	0715	115000	8.5	175	20	6210	--
01...	0716	115000	--	--	20	6210	--
01...	0720	115000	--	--	17	5280	--
01...	0721	115000	--	--	19	5900	--
02...	0715	175000	--	153	23	10900	--
02...	0730	173000	--	--	29	13500	--
02...	1515	173000	11.0	143	24	11200	--
02...	1530	173000	11.0	144	31	14500	--
02...	1545	173000	11.0	143	31	14500	--
02...	2030	203000	9.0	146	33	18100	--
03...	0100	204000	8.5	145	39	21500	--
03...	0630	193000	8.0	143	40	20800	--
03...	1130	193000	9.0	136	45	23400	--
03...	1145	193000	9.5	142	38	19800	--
03...	1200	193000	9.0	140	31	16200	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
APR							
03...	1430	190000	--	--	31	16500	98
04...	1330	164000	10.0	148	47	20800	--
05...	1000	117000	9.0	150	37	11700	--
05...	1005	117000	9.0	146	36	11400	--
05...	1330	147000	10.0	150	35	13900	--
06...	1100	128000	9.0	147	28	9680	--
07...	1215	123000	--	149	22	7310	--
08...	1640	87900	8.0	152	17	4030	--
08...	1641	87900	--	--	17	4030	--
10...	1000	87000	--	--	17	3990	--
19...	1130	66600	12.0	208	9	1620	--
MAY							
02...	1230	40400	17.0	248	8	873	99
06...	1220	135000	--	252	28	10200	--
07...	1410	117000	--	236	70	22100	--
08...	1140	177000	--	186	78	37300	--
09...	1200	177000	17.0	167	50	23900	--
10...	1015	158000	--	--	40	17100	--
17...	1300	178000	13.0	158	50	24000	--
19...	1130	209000	16.0	148	43	24300	--
JUN							
14...	1130	49100	22.0	244	8	1060	--
18...	0810	104000	--	208	32	8990	--
19...	1244	158000	--	183	32	13700	--
19...	1245	158000	--	183	33	14100	--
20...	1625	127000	20.5	154	29	9940	--
20...	1626	127000	--	154	30	10300	--
22...	1145	143000	22.0	162	30	11600	--
23...	1200	184000	21.0	157	88	43700	--
24...	1205	157000	--	129	60	25400	--
24...	1206	157000	--	131	66	28000	--
25...	1035	117000	--	133	47	14800	--
25...	1036	117000	--	132	47	14800	--
28...	1000	80000	22.0	151	32	6910	97
30...	0830	52700	23.5	152	29	4130	--
30...	0831	52700	--	--	28	3980	--
JUL							
05...	1415	71800	25.0	177	18	3490	--
05...	1416	71800	--	177	19	3680	--
18...	1125	67000	24.0	225	21	3800	--
20...	1635	59000	23.5	205	22	3500	--
20...	1640	59000	23.5	205	22	3500	--
22...	1245	65800	23.0	205	25	4440	--
22...	1246	65800	21.0	174	24	4260	--
24...	1255	65200	25.0	210	15	2640	--
31...	1320	36700	26.5	227	9	892	--
AUG							
07...	1200	29700	25.0	270	7	561	--
16...	1320	35100	25.5	302	12	1140	--
16...	1325	35100	25.5	302	10	948	--
SEP							
08...	1125	6400	25.0	322	7	121	98

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE
INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	290	396	214	293	257	216	175	216	203	180	235	329
2	300	392	218	288	253	219	152	216	203	---	246	321
3	296	399	212	294	256	217	143	216	203	---	254	321
4	302	399	215	283	265	225	148	221	209	---	261	321
5	294	400	216	289	269	223	150	221	209	177	267	---
6	300	398	215	263	266	218	147	228	209	---	268	320
7	302	398	214	269	257	208	135	214	209	---	267	319
8	307	398	215	---	264	213	142	177	---	218	276	319
9	317	398	221	277	264	209	145	177	226	212	279	323
10	323	---	219	268	270	215	---	131	226	220	288	323
11	325	---	219	257	263	217	148	135	230	223	285	329
12	320	---	220	254	263	228	153	135	228	227	289	329
13	326	---	227	251	267	220	153	135	227	230	291	328
14	340	---	228	261	274	235	158	124	244	225	291	333
15	337	---	226	271	267	240	170	120	242	227	290	333
16	339	290	236	267	258	257	162	122	240	250	297	338
17	342	292	235	271	260	255	168	158	240	251	301	336
18	342	265	234	257	263	256	172	---	236	250	303	341
19	342	252	238	251	266	258	180	148	215	251	305	345
20	338	255	239	252	265	266	184	---	182	204	306	354
21	341	245	242	246	265	258	191	---	169	196	306	354
22	344	234	---	246	---	252	191	146	157	201	310	369
23	346	231	253	246	---	233	216	155	155	218	310	374
24	354	231	---	246	---	252	203	155	163	221	320	374
25	354	226	258	252	258	252	205	153	163	203	322	374
26	352	226	247	246	255	247	206	153	163	202	322	381
27	363	224	252	249	250	221	206	182	162	208	333	383
28	382	198	267	251	221	213	210	187	162	213	332	397
29	384	203	281	250	---	189	214	194	167	213	331	409
30	392	204	287	255	---	178	214	200	173	213	331	408
31	386	---	292	253	---	179	---	202	---	226	329	---

WATER TEMPERATURE, DEGREES CELSIUS
INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.0	13.0	8.5	5.0	4.5	5.0	11.0	16.0	22.0	24.0	26.0	26.0
2	21.0	13.0	8.0	5.0	5.0	5.0	11.0	16.0	21.0	24.0	26.0	27.0
3	21.0	13.0	8.0	5.0	5.0	5.0	11.0	16.0	23.0	24.0	26.0	27.0
4	21.0	13.0	7.5	5.0	5.5	5.0	11.0	16.0	23.0	24.0	27.0	27.0
5	20.0	13.0	7.0	5.0	5.5	5.0	11.0	16.0	24.0	25.0	27.5	27.0
6	20.0	13.0	7.0	4.0	5.0	5.0	11.0	16.0	24.0	25.0	27.0	26.0
7	19.0	13.0	7.0	4.0	5.0	5.0	11.0	16.0	24.0	25.0	27.0	26.0
8	19.0	12.0	7.0	4.0	4.5	4.0	11.0	15.5	23.0	26.0	27.0	25.0
9	19.0	12.0	6.0	4.0	7.0	5.0	11.0	15.0	24.0	26.0	27.0	25.5
10	19.0	11.0	6.0	3.0	4.5	5.0	11.0	14.5	24.0	26.0	24.0	26.0
11	18.5	11.0	6.0	3.0	4.5	5.0	11.0	12.0	23.0	26.0	27.0	26.0
12	18.0	11.0	6.0	5.0	4.0	6.0	11.0	12.0	24.0	27.0	26.0	26.0
13	17.0	11.0	5.0	5.0	4.0	6.0	12.0	12.0	24.0	27.0	26.0	25.0
14	16.5	11.0	5.0	3.0	4.5	6.0	12.0	13.0	23.0	27.0	26.0	26.0
15	16.0	11.0	5.0	4.0	5.0	6.0	12.0	13.0	22.0	27.0	26.0	26.0
16	16.0	10.5	4.5	4.0	5.0	6.0	12.0	13.0	22.0	27.0	26.0	25.0
17	15.5	11.0	4.5	4.0	5.0	8.0	12.0	13.0	22.0	27.0	25.0	25.0
18	15.5	11.0	4.0	4.0	5.0	8.0	12.0	14.0	22.0	27.0	26.0	25.0
19	15.0	11.0	4.0	4.0	5.0	9.0	13.0	14.0	23.0	27.0	26.0	25.0
20	16.0	10.0	4.0	4.0	5.0	9.0	13.0	16.0	21.0	24.0	26.0	26.0
21	15.0	10.0	4.5	4.5	5.0	9.0	14.0	17.0	21.0	24.0	26.0	26.0
22	15.0	9.5	4.0	4.0	5.0	9.0	14.0	18.0	23.0	24.0	25.0	26.0
23	15.0	9.0	4.0	4.0	5.0	9.0	14.0	18.5	23.0	24.0	25.0	26.0
24	15.0	10.0	5.0	5.0	5.0	10.0	15.0	18.5	22.0	24.0	26.0	25.0
25	15.0	9.5	3.5	4.0	5.0	10.0	15.0	18.5	22.0	24.0	25.0	24.0
26	15.0	9.0	3.5	4.0	5.0	10.0	15.5	18.2	23.0	24.0	26.0	24.0
27	15.0	9.0	3.5	4.0	5.0	10.0	15.5	19.5	23.0	26.0	26.0	23.0
28	14.0	9.0	3.5	4.0	5.0	10.0	15.0	19.0	23.0	26.0	26.0	21.0
29	14.0	9.0	3.0	4.5	---	11.0	15.0	20.0	23.0	26.0	26.0	20.0
30	14.0	8.5	4.0	4.5	---	11.0	15.0	20.5	24.0	26.0	26.0	21.0
31	13.0	---	4.0	4.5	---	11.0	---	21.5	---	26.0	26.0	---

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

SUSPENDED SEDIMENT

DAY	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/ DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	13	166	6	361	6	517	5	200	3	220	11	1030
2	11	128	5	154	11	1130	9	525	8	458	10	856
3	9	105	9	309	18	778	6	452	9	712	9	744
4	13	355	8	222	6	170	7	516	8	244	7	399
5	10	294	6	76	5	347	9	680	8	205	6	214
6	11	324	5	64	4	255	6	377	6	426	7	556
7	16	223	5	122	6	410	4	50	8	594	5	528
8	15	184	4	180	5	313	4	48	9	586	5	521
9	13	164	4	281	6	326	4	50	7	469	6	269
10	14	174	4	369	5	112	6	395	7	342	6	364
11	13	161	5	647	4	47	5	310	6	79	5	236
12	17	421	5	452	3	212	4	315	7	107	8	248
13	18	520	6	149	5	297	3	288	8	441	10	861
14	15	478	6	415	4	48	3	156	6	282	6	523
15	9	111	7	490	12	199	3	202	6	437	5	443
16	13	160	8	693	15	333	3	334	5	258	5	462
17	9	111	6	588	7	111	6	688	5	320	7	624
18	9	110	8	756	3	36	6	632	4	253	8	525
19	13	158	8	382	3	115	10	1010	3	109	8	397
20	11	134	9	734	4	124	10	1020	3	250	9	955
21	8	131	10	1190	4	97	8	413	3	249	12	1240
22	12	379	9	1300	4	272	6	110	5	485	13	1490
23	8	97	12	1750	5	217	6	426	7	909	10	1220
24	11	132	14	1760	6	103	5	336	9	1340	11	1450
25	9	267	19	2340	10	119	4	286	10	1610	11	1450
26	7	210	16	2060	10	329	5	377	10	950	15	2650
27	6	287	13	930	5	382	6	334	13	1580	17	3490
28	8	486	14	1360	4	307	5	70	13	1320	22	6180
29	11	130	7	654	4	336	6	70	---	---	22	5700
30	9	109	7	508	5	439	5	297	---	---	20	4950
31	6	361	---	---	5	120	6	364	---	---	23	6150
TOTAL	---	7070	---	21296	---	8601	---	11331	---	15235	---	46725
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	20	7340	12	816	11	1140	32	4290	11	674	8	176
2	27	13300	10	713	11	811	27	2650	13	786	14	257
3	46	22200	13	923	10	653	23	2860	13	828	20	346
4	48	18800	10	740	10	421	21	1710	11	665	15	264
5	36	11500	12	1400	7	745	18	2560	17	569	11	198
6	28	8240	27	6310	10	1120	17	2900	15	388	10	239
7	22	5940	78	24600	11	1280	18	2840	8	423	9	160
8	25	6470	60	24800	10	1170	19	2600	8	294	8	165
9	22	4940	49	20500	10	1150	19	2180	9	301	9	193
10	20	4470	35	13600	10	1090	17	1730	11	410	10	167
11	22	4190	30	12000	5	347	16	2060	9	413	5	198
12	17	3230	34	16100	8	845	14	1360	14	412	5	86
13	13	2000	42	23900	10	1050	23	2430	11	262	4	67
14	17	2000	41	21300	9	731	16	2210	22	1020	6	100
15	17	1610	47	21100	12	1310	24	2640	15	648	7	94
16	16	1240	49	20800	11	1460	25	1910	11	454	4	46
17	16	1800	50	29300	19	3460	25	3590	11	383	4	46
18	10	1150	48	30100	30	8990	21	4010	13	300	5	59
19	9	938	43	22300	27	9770	22	3640	12	289	6	159
20	16	1460	36	13400	22	6530	24	2620	15	551	12	752
21	12	1160	28	8010	20	5400	27	3350	12	797	12	622
22	15	1270	19	4800	33	10600	25	4340	12	489	11	627
23	16	972	12	2520	82	36300	17	2280	11	555	11	128
24	14	1070	15	3090	62	23900	15	1960	10	240	12	140
25	13	906	20	3740	48	15300	15	1670	7	234	11	184
26	13	776	17	2400	50	16600	15	1520	8	141	13	741
27	11	650	13	1860	40	11600	17	1620	12	211	13	902
28	14	881	11	1290	31	6370	18	1630	10	174	10	437
29	14	669	10	1290	27	5340	17	730	9	282	12	661
30	11	345	10	1480	30	5160	15	575	10	327	11	219
31	---	---	10	1240	---	---	10	624	9	258	---	---
TOTAL	---	131517	---	336422	---	180643	---	73089	---	13778	---	8433

TOTAL LOAD FOR YEAR: 854140 TONS.

01580000 DEER CREEK AT ROCKS, MD

LOCATION.--Lat 39°37'49", long 76°24'13", Harford County, Hydrologic Unit 02050306, on right bank 0.3 mi upstream from bridge on Cherry Hill Road, 0.8 mi southeast of Rocks, 1.2 mi upstream from Stirrup Run, and 23.5 mi upstream from mouth.

DRAINAGE AREA.--94.4 mi^2.

PERIOD OF RECORD.--October 1926 to current year. Monthly discharge only for November and December 1926, published in WSP 1302.

REVISED RECORDS.--WSP 726: Drainage area. WSP 1502: 1927-36 (maximum and minimum only 1927-29, maximum only 1930-32, 1936).

GAGE.--Water-stage recorder. Concrete control since Sept. 7, 1938. Datum of gage is 250.40 ft above National Geodetic Vertical Datum of 1929 (Baltimore City bench mark).

REMARKS.--Records good . Prior to 1965, some regulation at low flow by mills upstream from station. Several measurments of water temperature were made during the year. Water-quality records for some prior years have been collected at this station.

AVERAGE DISCHARGE.--63 years, 124 ft^3/s, 17.84 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,600 ft^3/s, Aug. 23, 1933, gage height, 17.7 ft, from flood-marks, from rating curve extended above 3,000 ft^3/s, on basis of slope-area measurements at gage heights 13.3 ft and 17.7 ft; minimum discharge, 8 ft^3/s, Dec. 16, 1930, Jan. 26, 1939, result of regulation; minimum daily discharge, 8.6 ft^3/s, Sept. 11, 12, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1888, that of Aug. 23, 1933.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,900 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 6	0400	*8,950	*14.53	No other peak greater than base discharge.			

Minimum discharge, 45 ft^3/s, Feb. 09, result of freezeup; minimum daily discharge, 48 ft^3/s, Oct. 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	60	91	72	77	93	149	116	223	144	137	92
2	55	61	84	73	74	88	134	200	212	140	132	90
3	80	57	80	75	90	87	142	135	204	138	126	87
4	61	57	77	73	99	86	137	116	240	416	121	84
5	57	67	74	e70	84	91	135	168	204	640	117	84
6	54	113	73	e70	80	156	165	2850	222	263	113	85
7	52	71	72	81	77	133	139	691	306	216	114	84
8	52	61	71	102	73	119	133	375	229	175	115	84
9	52	59	70	121	e70	101	132	292	270	159	109	84
10	50	57	69	91	e75	106	125	344	272	154	107	83
11	49	57	68	83	e70	121	121	383	201	148	110	80
12	48	54	70	138	e70	133	120	279	185	142	119	79
13	48	63	73	170	e70	130	118	250	185	291	119	79
14	49	74	85	117	88	120	118	235	186	213	114	81
15	49	60	77	251	105	118	143	441	190	166	141	79
16	49	57	e75	173	134	111	152	693	187	265	119	81
17	50	108	e70	134	97	103	128	641	185	233	108	104
18	51	89	e70	118	86	113	124	380	175	179	104	84
19	54	74	e70	108	83	129	130	325	165	165	175	121
20	51	371	67	101	80	110	120	299	163	383	140	229
21	67	222	71	91	167	142	116	277	178	193	115	141
22	202	125	76	e80	225	122	112	258	171	168	109	117
23	87	101	71	e85	165	109	108	491	185	152	104	106
24	74	89	97	e85	130	322	107	805	230	141	99	100
25	67	81	121	80	122	253	107	370	169	162	96	89
26	60	76	83	81	112	181	107	320	158	196	94	133
27	57	81	74	85	109	159	105	314	153	141	94	102
28	57	224	76	76	101	151	102	277	230	132	99	88
29	56	124	83	75	---	144	108	248	166	124	116	85
30	55	101	72	81	---	143	118	237	149	125	116	83
31	54	---	71	83	---	165	---	232	---	153	96	---
TOTAL	1899	2894	2381	3123	2813	4139	3755	13042	5993	6317	3578	2918
MEAN	61.3	96.5	76.8	101	100	134	125	421	200	204	115	97.3
MAX	202	371	121	251	225	322	165	2850	306	640	175	229
MIN	48	54	67	70	70	86	102	116	149	124	94	79
CFSM	.65	1.02	.81	1.07	1.06	1.41	1.33	4.46	2.12	2.16	1.22	1.03
IN.	.75	1.14	.94	1.23	1.11	1.63	1.48	5.14	2.36	2.49	1.41	1.15

CAL YR 1988 TOTAL 44367 MEAN 121 MAX 1260 MIN 48 CFSM 1.28 IN. 17.48
WTR YR 1989 TOTAL 52852 MEAN 145 MAX 2850 MIN 48 CFSM 1.53 IN. 20.83

e Estimated

01581657 CRANBERRY RUN AT ABERDEEN, MD

LOCATION.--Lat 39°29'22", long 76°11'32", Harford County, Hydrologic Unit 02060003, on left bank at downstream side of bridge on U. S. Highway 40, 2.0 mi southwest of intersection with State Highway 132, and 2.1 mi upstream from mouth.

DRAINAGE AREA.--4.16 mi^2.

PERIOD OF RECORD.--October 1987 to September 1989 (discontinued).

GAGE.--Water-stage recorder and concrete block control. Elevation of gage is 25 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily values (periods of backwater from unknown sources and periods of doubtful record), which are fair. Several measurements of water temperature were made during the year. Water-quality records for some prior years have been collected at this location.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 443 ft^3/s, Nov. 28, 1988, gage height, 5.71 ft; minimum discharge, 0.11 ft^3/s, Aug. 14, 15, 17, 1988; minimum daily discharge, 0.16 ft^3/s, Aug. 14, 1988.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 28	0115	*443	*5.71	May 24	0015	333	4.71
May 2	0600	338	4.76	June 9	2400	430	5.59
May 6	0330	360	4.96	July 20	0715	386	5.20

Minimum discharge, 0.24 ft^3/s, Oct. 10, 11, 12.

REVISIONS.--The maximum discharge reported for water year 1988 has been revised to 413 ft^3/s, May 19, 1988, gage height, 5.05 ft, superseding figures published in the report for 1988. Peak discharge for Aug. 24, 1988 (2300 hours) has been revised to 394 ft^3/s, gage height, 5.27 ft. Peak discharge for Aug. 29, 1988 (1530 hours) has been revised to 336 ft^3/s, gage height, 4.74 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.76	e3.5	3.9	2.5	2.7	3.6	12	8.3	e2.5	e2.0	2.8	.98
2	1.3	e1.5	3.1	4.4	2.5	3.1	6.4	92	e2.2	e1.8	2.2	1.1
3	1.1	e1.3	2.9	3.7	11	3.0	9.9	9.9	e1.9	e1.8	1.8	1.1
4	.47	e1.3	2.5	2.8	9.9	2.9	6.1	5.1	e1.9	e3.8	1.6	1.0
5	.41	e2.2	2.3	1.9	4.9	4.1	10	35	e1.8	e32	1.5	.95
6	.41	e2.4	2.2	2.0	3.9	24	22	102	e6.0	e40	1.3	1.0
7	.35	e1.6	2.1	2.2	3.3	9.4	10	21	e18	e17	1.3	e1.1
8	.35	e1.4	2.0	13	2.8	4.8	10	9.9	e5.0	5.1	1.3	e1.2
9	.33	e1.4	1.9	14	2.4	6.5	10	e6.0	57	2.9	1.1	e1.2
10	.31	e1.4	1.7	7.4	2.1	7.1	5.0	e28	47	2.3	1.1	e1.2
11	.35	e1.5	1.6	5.7	2.1	6.1	3.7	e16	6.2	2.0	1.9	e1.2
12	.35	e1.4	1.3	46	2.2	5.1	e3.4	e9.0	3.4	1.7	2.9	e1.2
13	.49	e3.0	1.3	14	2.0	3.6	e3.2	e6.0	3.1	7.2	1.9	e1.4
14	.69	e1.6	1.4	6.5	19	3.4	e3.0	e6.0	3.8	3.4	1.5	1.2
15	.70	e1.1	1.6	51	14	3.2	15	e5.5	3.8	1.8	1.4	1.2
16	1.3	1.4	1.4	11	15	2.8	13	e22	3.3	e13	1.3	e5.0
17	1.2	32	1.2	6.3	6.2	2.6	5.4	e18	6.9	5.4	1.3	2.6
18	e.80	4.7	1.2	4.9	4.7	3.8	4.7	e6.0	4.2	2.6	1.3	.93
19	e.90	6.8	1.2	4.1	4.0	3.3	9.1	e4.6	2.2	1.9	6.3	e21
20	e1.0	39	1.3	3.6	3.4	3.3	4.2	e4.0	6.0	66	1.8	7.9
21	17	9.7	2.6	2.8	64	14	3.1	e3.4	19	19	1.6	4.8
22	20	3.9	2.0	2.4	33	5.6	e3.0	e3.0	8.7	6.4	1.3	4.4
23	2.0	2.9	3.2	2.5	12	3.7	e2.6	e45	40	3.6	1.1	2.2
24	2.5	2.6	5.2	2.5	6.6	99	e2.4	51	12	2.4	1.0	1.9
25	1.7	2.2	5.0	2.5	4.5	18	e2.3	e8.0	6.0	1.9	1.2	1.4
26	1.6	2.0	2.5	2.9	5.1	8.9	e2.2	e5.0	3.3	e30	1.0	e11
27	1.4	11	2.1	3.2	5.3	5.9	e2.0	16	e2.8	3.7	1.1	2.1
28	e1.3	106	3.7	2.5	4.8	5.0	e1.8	e6.0	e2.8	2.4	1.2	1.4
29	e1.2	9.6	3.1	2.4	---	4.4	e3.6	e3.8	e2.5	1.8	1.6	1.5
30	e1.1	5.4	2.3	4.3	---	8.9	e3.4	e3.0	e2.2	2.0	2.8	1.2
31	e1.1	---	2.2	3.2	---	42	---	e2.8	---	8.5	1.2	---
TOTAL	64.47	265.8	72.0	238.2	253.4	321.1	192.5	561.3	285.5	295.4	52.7	86.36
MEAN	2.08	8.86	2.32	7.68	9.05	10.4	6.42	18.1	9.52	9.53	1.70	2.88
MAX	20	106	5.2	51	64	99	22	102	57	66	6.3	21
MIN	.31	1.1	1.2	1.9	2.0	2.6	1.8	2.8	1.8	1.7	1.0	.93
CFSM	.50	2.13	.56	1.85	2.18	2.49	1.54	4.35	2.29	2.29	.41	.69
IN.	.58	2.38	.64	2.13	2.27	2.87	1.72	5.02	2.55	2.64	.47	.77

CAL YR 1988 TOTAL 2115.31 MEAN 5.78 MAX 115 MIN .16 CFSM 1.39 IN. 18.92
WTR YR 1989 TOTAL 2688.73 MEAN 7.37 MAX 106 MIN .31 CFSM 1.77 IN. 24.04

e Estimated

01581658 CRANBERRY RUN AT PERRYMAN, MD

LOCATION.--Lat 39°28'42", long 76°12'08", Harford County, Hydrologic Unit 02060003, on right bank 150 ft downstream from bridge on Mayberry Road, 0.5 mi north of Perryman, and 1.0 mi upstream from mouth.

DRAINAGE AREA.--5.22 mi^2.

PERIOD OF RECORD.--May 1987 to September 1989 (discontinued).

GAGE.--Water-stage recorder and concrete block control. Elevation of gage is 6.6 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 714 ft^3/s, Sept. 9, 1987, gage height, 6.20 ft, from floodmarks; minimum discharge, 0.39 ft^3/s, Aug. 23, 1987; minimum daily discharge, 0.50 ft^3/s, Aug. 21, 1987.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 28	0230	*584	*5.52	June 10	0100	543	5.33
May 2	0700	426	4.89	July 20	0815	475	5.05
May 6	0415	462	5.01				

Minimum discharge, 0.80 ft^3/s, Oct. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.91	3.7	5.3	3.1	3.9	4.6	12	8.3	3.5	2.9	4.1	1.3
2	1.0	2.4	4.1	4.9	3.6	4.1	7.4	99	3.0	2.6	3.4	1.3
3	2.1	1.9	3.8	4.6	10	3.7	10	11	2.7	2.6	2.9	1.3
4	1.1	1.7	3.5	3.7	10	3.5	7.8	6.6	2.7	4.1	2.6	1.2
5	1.0	2.5	3.4	2.6	5.7	4.5	11	29	2.6	33	2.3	1.3
6	.99	4.2	3.3	2.7	5.0	23	22	113	8.3	42	2.0	1.4
7	.91	2.4	3.2	2.9	4.5	9.4	10	19	19	17	1.9	1.4
8	.89	1.9	3.0	13	4.0	5.7	11	9.0	6.7	6.2	1.9	1.5
9	.91	1.9	2.9	15	3.6	6.6	10	7.0	42	4.2	1.7	1.5
10	.91	1.9	2.5	7.6	3.2	7.3	6.8	30	66	3.6	1.8	1.5
11	.91	2.1	2.4	6.2	e3.2	6.6	5.6	17	7.0	3.1	2.8	1.5
12	.91	1.9	1.8	43	e3.2	5.8	5.1	9.2	4.8	2.7	3.9	1.5
13	.91	3.9	1.7	14	3.1	4.6	4.8	7.0	4.5	6.4	2.7	1.7
14	.91	2.4	1.7	6.8	18	4.3	4.3	7.2	4.8	4.6	2.1	1.5
15	1.0	1.5	1.9	48	13	4.3	14	6.2	5.3	3.1	1.9	1.5
16	1.5	1.7	1.8	10	15	3.7	12	23	4.7	13	1.9	4.2
17	1.4	32	1.7	6.9	6.8	3.4	6.4	19	7.4	6.7	1.7	4.3
18	1.0	6.1	1.6	5.7	5.6	4.4	5.8	7.7	5.6	4.1	1.7	1.6
19	1.1	6.7	1.5	5.2	5.0	4.4	9.4	5.6	3.6	3.3	5.9	21
20	1.2	38	1.6	4.9	4.7	4.0	5.7	4.9	6.0	73	3.0	8.7
21	12	11	3.1	4.0	59	14	4.7	4.1	18	17	2.3	4.6
22	25	5.5	2.9	3.5	33	6.7	4.1	3.7	10	7.2	1.9	5.2
23	2.9	4.2	3.8	3.7	12	5.3	3.7	43	43	5.2	1.7	2.6
24	3.6	3.6	5.4	3.7	7.1	90	3.4	62	12	3.8	1.5	2.0
25	2.5	3.2	5.8	3.7	5.3	19	3.3	9.5	7.3	3.2	1.5	1.5
26	2.2	3.0	3.2	4.1	5.8	9.5	3.2	6.5	5.2	30	1.3	11
27	1.7	7.5	2.7	4.4	5.9	7.3	2.9	16	4.1	5.2	1.3	2.8
28	1.7	135	4.0	3.8	5.8	6.6	2.6	7.4	4.1	3.8	1.3	1.7
29	1.6	10	3.9	3.7	---	6.1	4.7	4.9	3.7	2.9	1.4	1.7
30	1.5	6.5	2.9	5.2	---	8.5	4.5	4.1	3.1	3.0	3.2	1.5
31	1.5	---	2.7	4.5	---	39	---	3.8	---	8.1	1.5	---
TOTAL	77.76	310.3	93.1	255.1	265.0	329.9	218.2	603.7	320.7	327.6	71.1	95.8
MEAN	2.51	10.3	3.00	8.23	9.46	10.6	7.27	19.5	10.7	10.6	2.29	3.19
MAX	25	135	5.8	48	59	90	22	113	66	73	5.9	21
MIN	.89	1.5	1.5	2.6	3.1	3.4	2.6	3.7	2.6	2.6	1.3	1.2
CFSM	.48	1.98	.58	1.58	1.81	2.04	1.39	3.73	2.05	2.02	.44	.61
IN.	.55	2.21	.66	1.82	1.89	2.35	1.55	4.30	2.29	2.33	.51	.68

CAL YR 1988 TOTAL 2463.59 MEAN 6.73 MAX 138 MIN .70 CFSM 1.29 IN. 17.56
WTR YR 1989 TOTAL 2968.26 MEAN 8.13 MAX 135 MIN .89 CFSM 1.56 IN. 21.15

e Estimated

01581700 WINTERS RUN NEAR BENSON, MD

LOCATION.--Lat 39°31'12", long 76°22'24", Harford County, Hydrologic Unit 02060003, on left bank 30 ft downstream from bridge on U.S. Highway 1, 0.1 mi upstream from Heavenly Waters, 1.2 mi northeast of Benson, 1.8 mi southwest of Bel Air, and 10.5 mi upstream from mouth.

DRAINAGE AREA.--34.8 mi^2.

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

GAGE.--Water-stage recorder. Elevation of gage is 195 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good below 200 ft^3/s and fair above, except those for May 17-21 (doubtful record), which are also fair. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--22 years, 52.4 ft^3/s, 20.45 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,600 ft^3/s, June 22, 1972, gage height, 11.60 ft; minimum discharge, 3.0 ft^3/s, Jan. 10, 1982, result of freezeup; minimum daily discharge, 6.7 ft^3/s, Aug. 28, 29, 1981.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 6	0330	4,000	8.40	July 5	1145	2,070	6.12
May 24	0015	1,900	5.88	July 20	0730	*4,730	*9.13
June 9	2130	1,010	4.41	July 25	2100	1,250	4.84

Minimum discharge, 11 ft^3/s, Dec. 12, result of freezeup; minimum daily discharge, 17 ft^3/s, Oct. 11-17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	26	35	28	30	33	71	50	71	47	65	36
2	19	25	32	31	28	32	58	151	67	46	59	35
3	20	22	30	30	42	30	64	57	64	44	55	33
4	20	22	28	27	42	32	56	45	63	101	52	32
5	19	25	28	e28	35	36	56	168	61	659	49	32
6	18	48	27	28	34	91	87	909	76	172	48	32
7	18	26	27	29	31	51	60	150	172	91	47	32
8	18	23	26	50	30	39	57	89	88	65	46	31
9	18	21	26	56	27	42	55	74	195	54	44	31
10	18	21	25	38	27	43	49	131	150	50	44	31
11	17	21	25	36	29	43	46	120	79	47	47	30
12	17	21	22	120	28	42	44	81	74	44	50	30
13	17	29	25	78	28	40	45	71	70	106	51	32
14	17	27	26	48	48	38	43	69	72	73	47	35
15	17	23	26	142	53	37	63	248	73	53	47	31
16	17	23	23	64	65	35	62	481	85	213	45	37
17	17	70	23	47	40	33	49	e300	76	94	42	39
18	18	36	23	42	36	40	49	e140	66	69	41	31
19	19	35	23	39	34	42	56	e110	58	56	64	95
20	18	186	24	36	33	37	46	e100	66	709	50	122
21	43	75	30	32	147	61	43	e90	63	123	46	58
22	86	43	28	33	131	42	42	85	58	93	43	52
23	28	34	31	32	65	38	41	214	76	79	41	53
24	27	32	46	e30	46	266	41	456	59	69	38	44
25	24	30	45	31	39	103	39	117	56	154	37	39
26	22	28	32	32	40	64	38	96	63	120	37	79
27	21	38	28	32	38	54	38	101	52	67	37	47
28	22	160	31	30	35	50	37	87	81	61	44	39
29	21	50	31	30	---	48	42	79	55	54	49	37
30	21	39	28	33	---	55	44	76	49	56	59	36
31	21	---	27	32	---	146	---	74	---	84	38	---
TOTAL	697	1259	881	1344	1261	1743	1521	5019	2338	3753	1462	1291
MEAN	22.5	42.0	28.4	43.4	45.0	56.2	50.7	162	77.9	121	47.2	43.0
MAX	86	186	46	142	147	266	87	909	195	709	65	122
MIN	17	21	22	27	27	30	37	45	49	44	37	30
CFSM	.65	1.21	.82	1.25	1.29	1.62	1.46	4.65	2.24	3.48	1.36	1.24
IN.	.75	1.35	.94	1.44	1.35	1.86	1.63	5.37	2.50	4.01	1.56	1.38

CAL YR 1988 TOTAL 17149 MEAN 46.9 MAX 620 MIN 14 CFSM 1.35 IN. 18.33
WTR YR 1989 TOTAL 22569 MEAN 61.8 MAX 909 MIN 17 CFSM 1.78 IN. 24.13

e Estimated

01582000 LITTLE FALLS AT BLUE MOUNT, MD

LOCATION.--Lat 39°36'16", long 76°37'16", Baltimore County, Hydrologic Unit 02060003, on left bank at downstream side of Pennsylvania Railroad bridge, 0.2 mi north of Blue Mount, 0.6 mi upstream from mouth, 0.9 mi downstream from First Mine Branch, and 1.2 mi south of White Hall.

DRAINAGE AREA.--52.9 mi^2.

PERIOD OF RECORD.--June 1944 to current year.

REVISED RECORDS.--WSP 111: 1944(M), 1945-47(P). WDR MD-DE-85-1: 1984(P).

GAGE.--Water-stage recorders. Elevation of gage is 305 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges (ice effect), which are fair. Slight diurnal fluctuation at low flow caused by mill upstream from station. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--45 years, 67.8 ft^3/s, 17.40 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,280 ft^3/s, June 22, 1972, gage height, 18.54 ft, from rating curve extended above 1,300 ft^3/s on basis of contracted-opening measurement of peak flow; minimum discharge, 1.9 ft^3/s, Aug. 29, 1966; minimum daily discharge, 4.5 ft^3/s, Sept. 11, 1966.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 6	0345	*3,480	*8.83	No other peak greater than base discharge.			

Minimum discharge, 21 ft^3/s, Dec. 16, 17, result of freezeup; minimum daily discharge, 25 ft^3/s, Oct. 11, 12, 13

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	33	43	36	39	47	72	57	102	69	67	47
2	30	32	40	36	38	45	65	102	97	66	62	45
3	40	30	38	36	49	44	69	63	93	65	59	42
4	30	30	37	33	49	44	65	55	111	115	56	41
5	27	47	35	e36	42	47	67	149	93	119	54	41
6	26	58	35	e38	41	90	79	1110	102	95	53	42
7	26	37	34	40	39	65	66	311	125	82	56	41
8	26	34	34	62	37	57	65	195	103	72	55	41
9	26	32	34	57	36	51	64	155	153	67	52	41
10	26	32	33	45	e36	55	59	195	128	64	51	39
11	25	31	e33	42	e36	61	56	180	96	61	51	40
12	25	30	e33	90	e36	67	55	141	90	59	56	39
13	25	40	e32	85	e38	63	54	125	90	141	54	39
14	26	38	e32	60	48	59	53	121	93	90	90	40
15	26	33	e32	153	57	59	73	125	93	79	76	39
16	26	32	32	92	68	55	68	246	93	166	58	51
17	26	64	e32	69	49	51	59	251	92	110	53	58
18	28	45	e32	62	45	58	57	164	82	86	52	43
19	29	42	32	56	43	59	61	141	77	78	81	53
20	28	199	32	51	42	54	54	128	85	154	62	87
21	39	100	39	45	89	79	52	121	91	99	54	71
22	116	61	36	51	108	62	51	114	84	87	52	55
23	41	49	39	53	78	56	49	163	186	78	51	53
24	38	44	61	47	64	175	49	316	126	72	48	51
25	34	41	58	41	57	121	49	162	88	69	46	46
26	32	38	41	42	56	93	49	140	80	66	45	73
27	31	41	37	43	53	80	48	138	75	64	45	51
28	31	99	39	39	49	73	46	120	112	61	52	46
29	30	55	40	38	---	69	50	112	81	57	67	45
30	30	47	36	43	---	68	51	109	72	62	96	43
31	29	---	35	42	---	82	---	106	---	79	50	---
TOTAL	998	1494	1146	1663	1422	2089	1755	5615	2993	2632	1804	1443
MEAN	32.2	49.8	37.0	53.6	50.8	67.4	58.5	181	99.8	84.9	58.2	48.1
MAX	116	199	61	153	108	175	79	1110	186	166	96	87
MIN	25	30	32	33	36	44	46	55	72	57	45	39
CFSM	.61	.94	.70	1.01	.96	1.27	1.11	3.42	1.89	1.60	1.10	.91
IN.	.70	1.05	.81	1.17	1.00	1.47	1.23	3.95	2.10	1.85	1.27	1.01

CAL YR 1988 TOTAL 22821 MEAN 62.4 MAX 625 MIN 23 CFSM 1.18 IN. 16.05
WTR YR 1989 TOTAL 25054 MEAN 68.6 MAX 1110 MIN 25 CFSM 1.30 IN. 17.62

e Estimated

01582500 GUNPOWDER FALLS AT GLENCOE, MD

LOCATION.--Lat 39°32'59", long 76°38'11", Baltimore County, Hydrologic Unit 02060003, on right downstream wingwall of bridge on Glencoe Road at intersection of Upper Glencoe Road and Lower Glencoe Road in Glencoe, and 0.7 mi upstream from Piney Creek.

DRAINAGE AREA.--160 mi^2.

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

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

REMARKS.--Records good except those for estimated daily discharges (ice effect and missing record), which are fair. Flow regulated by Prettyboy Reservoir, 12 mi upstream, beginning Apr. 10, 1933, for water supply of Baltimore City (usable capacity, 20,000,000,000 gal; dead storage, 1,080,000,000 gal). Several measurements of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,900 ft^3/s, revised, Feb. 12, 1985, gage height, 13.2 ft, from floodmarks; minimum discharge, 35 ft^3/s, Jan. 4, 1983, result of freezeup; minimum daily discharge, 42 ft^3/s, Sept. 17, 18, 1986.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,600 ft^3/s, May 6, gage height, 12.7 ft, from floodmarks; minimum daily discharge, 80 ft^3/s, Oct. 1, 7, 8, 9, 10.

REVISIONS.--The maximum discharge for the water year 1985 has been revised to 4,900 ft^3/s, Feb. 12, 1985, gage height, 13.2 ft, from floodmarks, superseding figures published in the report for 1985.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80	235	130	115	117	111	158	127	285	199	199	135
2	82	234	125	115	116	108	144	192	282	188	187	132
3	100	232	122	116	127	108	150	121	273	184	177	128
4	86	231	119	114	133	108	145	111	290	243	167	126
5	82	247	117	e110	122	110	143	197	267	334	161	125
6	82	274	116	e110	120	167	167	e2000	279	289	155	126
7	80	243	115	120	118	142	147	e900	331	263	155	126
8	80	238	114	141	114	124	143	e600	311	230	156	126
9	80	237	113	151	e110	118	142	442	359	203	146	127
10	80	235	111	127	e110	122	136	526	397	192	141	123
11	125	235	110	123	e110	130	132	546	303	185	141	123
12	225	233	109	173	e110	138	130	456	257	169	149	123
13	223	243	e109	192	108	134	130	402	249	288	148	122
14	224	245	109	147	121	128	128	381	251	264	165	123
15	225	236	110	262	124	127	151	376	257	263	213	122
16	225	234	106	197	140	125	157	583	259	371	175	140
17	225	273	102	163	115	120	137	765	264	319	161	152
18	227	242	e105	149	107	126	134	551	241	249	150	128
19	229	124	105	142	103	135	139	457	222	222	208	139
20	228	333	104	136	103	123	130	405	227	360	234	184
21	241	224	114	129	157	159	128	373	257	299	199	169
22	348	155	117	e128	196	136	127	340	260	262	178	146
23	248	139	117	125	161	128	124	407	352	244	161	146
24	242	131	140	122	136	286	122	813	453	216	149	142
25	238	125	154	121	128	240	122	550	320	198	137	132
26	235	121	124	121	124	188	122	441	267	191	133	174
27	234	125	118	123	122	169	122	415	237	199	131	142
28	233	218	119	118	115	159	119	365	289	187	133	132
29	233	149	122	117	---	153	121	320	253	171	138	130
30	233	135	115	121	---	152	126	301	217	167	212	128
31	231	---	114	122	---	174	---	295	---	214	138	---
TOTAL	5704	6326	3605	4250	3467	4448	4076	14758	8509	7363	5097	4071
MEAN	184	211	116	137	124	143	136	476	284	238	164	136
MAX	348	333	154	262	196	286	167	2000	453	371	234	184
MIN	80	121	102	110	103	108	119	111	217	167	131	122
(†)	16374	15115	14923	15303	15834	17344	17985	19984	19907	19918	19846	19748

CAL YR 1988 TOTAL 71579 MEAN 196 MAX 1310 MIN 80 CFSM 1.22 IN. 16.64
WTR YR 1989 TOTAL 71674 MEAN 196 MAX 2000 MIN 80 CFSM 1.23 IN. 16.66

e Estimated
† Month-end contents, in millions of gallons in Prettyboy Reservoir (contents on Sept. 30, 1988, 18,374,000,000 gal). Records provided by Baltimore Department of Public Works.

01583500 WESTERN RUN AT WESTERN RUN, MD

LOCATION.--Lat 39°30'38", long 76°40'37", Baltimore County, Hydrologic Unit 02060003, on right bank 100 ft downstream from bridge on Western Run Road, 0.3 mi southeast of Western Run, 2.5 mi northwest of Cockeysville, 3.2 mi upstream from Beaverdam Run, and 5.0 mi upstream from mouth.

DRAINAGE AREA.--59.8 mi^2.

PERIOD OF RECORD.--September 1944 to current year.

REVISED RECORDS.--WSP 1502: 1945-46, 1948(M).

GAGE.--Water-stage recorder. Datum of gage is 262.78 ft above National Geodetic Vertical Datum of 1929 (Baltimore County bench mark).

REMARKS.--Records good except those for Dec. 12-13, 17-18, Jan. 5, and Feb. 10-11 (ice effect) and Mar. 24-25 and 30-31 (backwater from tree), which are fair. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--45 years, 68.5 ft^3/s, 15.56 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,000 ft^3/s, June 22, 1972, gage height, 26.0 ft, from floodmarks, from rating curve extended above 3,200 ft^3/s, on basis of slope-area measurement and contracted-opening measurement of peak flow; minimum discharge, 2.4 ft^3/s, Sept. 12, 1966.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 6	0400	*5,640	*9.99	May 24	0645	1,220	4.71
May 6	2245	1,450	5.13	July 4	2115	1,210	4.69

Minimum discharge, 24 ft^3/s, Oct. 11, 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	30	44	38	41	51	101	60	104	79	84	49
2	27	29	41	38	40	49	85	102	100	76	78	48
3	32	27	39	39	49	48	88	65	96	75	73	47
4	29	26	37	38	53	48	81	57	95	276	69	46
5	28	37	36	e34	44	51	78	158	92	176	66	46
6	26	62	35	37	43	108	92	1840	103	139	64	47
7	26	36	35	37	41	80	77	355	128	113	65	47
8	26	31	34	58	39	63	74	183	106	96	64	47
9	25	29	34	67	37	60	74	150	148	88	61	47
10	26	29	33	52	e36	66	69	218	146	84	61	46
11	25	28	32	48	e36	72	66	177	101	79	62	44
12	25	26	e30	112	37	75	63	146	94	76	67	44
13	25	34	e32	103	35	68	62	132	95	129	64	44
14	26	36	33	68	55	63	60	129	103	99	168	46
15	27	30	33	174	59	63	82	124	108	85	129	44
16	26	29	30	96	73	58	81	284	99	133	75	59
17	27	57	e30	73	55	56	67	298	102	101	67	65
18	28	43	e30	64	50	62	64	164	90	88	64	48
19	29	39	29	59	47	65	69	141	84	84	90	53
20	28	246	29	55	46	59	61	130	149	202	74	106
21	36	109	35	49	93	100	59	121	128	174	74	88
22	119	61	35	47	123	73	57	114	111	115	68	63
23	38	51	38	46	89	64	56	174	172	101	62	60
24	34	45	55	45	70	e250	55	425	157	93	58	58
25	30	41	64	44	60	e150	54	164	103	88	56	52
26	28	39	42	45	60	107	54	141	94	85	56	88
27	27	41	38	46	59	91	52	140	88	76	55	61
28	28	104	41	42	54	83	51	124	104	74	55	54
29	27	57	46	41	---	77	55	116	89	70	55	53
30	27	48	39	45	---	e100	56	111	82	71	56	51
31	26	---	37	43	---	e180	---	108	---	109	51	---
TOTAL	958	1500	1146	1783	1524	2540	2043	6651	3271	3334	2191	1651
MEAN	30.9	50.0	37.0	57.5	54.4	81.9	68.1	215	109	108	70.7	55.0
MAX	119	246	64	174	123	250	101	1840	172	276	168	106
MIN	25	26	29	34	35	48	51	57	82	70	51	44
CFSM	.52	.84	.62	.96	.91	1.37	1.14	3.59	1.82	1.80	1.18	.92
IN.	.60	.93	.71	1.11	.95	1.58	1.27	4.14	2.03	2.07	1.36	1.03

CAL YR 1988 TOTAL 21207 MEAN 57.9 MAX 861 MIN 20 CFSM .97 IN. 13.19
WTR YR 1989 TOTAL 28592 MEAN 78.3 MAX 1840 MIN 25 CFSM 1.31 IN. 17.79

e Estimated

01583600 BEAVERDAM RUN AT COCKEYSVILLE, MD

LOCATION.--Lat 39°29'13", long 76°38'42", Baltimore County, Hydrologic Unit 02060003, on left bank 50 ft upstream from bridge on Beaverdam Run Lane, 600 ft downstream from bridge on Maryland Route 45 at Cockeysville, and 0.45 mi upstream from mouth.

DRAINAGE AREA.--20.9 mi^2.

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

REVISED RECORDS.--WDR MD-DE-88: 1983-87.

GAGE.--Water-stage recorder. Datum of gage is 239.04 ft above National Geodetic Vertical Datum of 1929. Previously operated as a low-flow site during water years 1955-59 and 1962-64 at site 600 ft upstream.

REMARKS.--Records good except those for estimated daily discharges (missing record), which are fair. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--7 years, 27.6 ft^3/s, 17.93 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,360 ft^3/s, July 1, 1984, gage height 12.1 ft, from floodmarks, from rating curve extended above 1,000 ft^3/s; minimum discharge, 4.1 ft^3/s, Oct. 1, 1986.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 650 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 6	Unknown	Unknown	*a11.2	No other peak greater than base discharge.			

a Backwater (from floodmarks)

Minimum discharge, 9.6 ft^3/s, Oct. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	21	21	18	16	20	40	42	33	26	30	18
2	15	15	19	18	16	20	35	66	31	27	28	17
3	13	16	19	16	34	19	39	28	32	25	28	14
4	13	15	20	19	21	20	31	25	32	126	26	15
5	12	52	17	14	19	29	31	150	32	70	24	16
6	12	27	16	15	17	72	45	e500	48	130	25	16
7	12	17	16	17	17	31	35	e120	66	43	24	17
8	12	16	16	51	17	27	33	e65	36	34	23	18
9	14	15	16	33	15	33	34	56	58	31	22	18
10	12	15	16	26	15	30	29	90	40	29	23	16
11	11	14	16	21	16	29	29	62	32	28	24	14
12	12	14	14	77	18	29	24	50	29	28	24	14
13	12	31	14	38	16	24	23	46	30	57	23	16
14	12	16	14	32	43	23	23	46	62	31	36	16
15	13	15	15	81	38	23	44	54	45	24	31	16
16	13	14	15	33	32	20	35	203	37	167	24	46
17	12	54	15	28	21	20	29	116	38	44	22	24
18	14	19	15	26	20	32	31	61	33	36	22	18
19	13	39	13	25	20	22	34	52	31	29	45	45
20	12	108	14	23	18	29	25	45	54	139	24	45
21	60	32	25	20	81	40	25	42	45	50	36	35
22	37	25	16	20	66	24	24	41	45	39	25	26
23	18	22	28	18	34	23	25	102	38	34	22	32
24	21	19	39	17	26	141	24	132	40	31	21	25
25	15	18	27	17	24	49	22	56	33	29	20	23
26	15	18	17	19	28	39	23	46	30	29	20	69
27	14	50	16	20	23	36	23	52	27	31	17	24
28	14	85	22	19	21	32	23	38	35	32	24	21
29	14	29	17	18	---	28	35	37	28	28	24	22
30	15	24	14	23	---	67	26	36	26	28	21	18
31	13	---	15	17	---	78	---	35	---	55	18	---
TOTAL	488	855	557	819	732	1109	899	2494	1146	1510	776	714
MEAN	15.7	28.5	18.0	26.4	26.1	35.8	30.0	80.5	38.2	48.7	25.0	23.8
MAX	60	108	39	81	81	141	45	500	66	167	45	69
MIN	11	14	13	14	15	19	22	25	26	24	17	14
CFSM	.75	1.36	.86	1.26	1.25	1.71	1.43	3.85	1.83	2.33	1.20	1.14
IN.	.87	1.52	.99	1.46	1.30	1.97	1.60	4.44	2.04	2.69	1.38	1.27

CAL YR 1988 TOTAL 10019 MEAN 27.4 MAX 398 MIN 11 CFSM 1.31 IN. 17.83
WTR YR 1989 TOTAL 12099 MEAN 33.1 MAX 500 MIN 11 CFSM 1.59 IN. 21.54

e Estimated

01584050 LONG GREEN CREEK AT GLEN ARM, MD

LOCATION.--Lat 39°27'17", long 76°28'45", Baltimore County, Hydrologic Unit 02060003, on right bank 0.5 mi downstream from bridge on Glen Arm Road, 0.6 mi upstream from State Highway 147 (Harford Road), 0.8 mi east of Glen Arm, and 1.6 mi upstream from mouth.

DRAINAGE AREA.--9.40 mi^2.

PERIOD OF RECORD.--October 1975 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 230 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges (doubtful or missing record), which are fair. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--14 years, 11.3 ft^3/s, 16.32 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,250 ft^3/s, July 1, 1984, gage height, 6.70 ft, from rating curve extended above 1,300 ft^3/s; minimum discharge, 1.0 ft^3/s, Jan. 29, 1977, gage height, 0.79 ft, result of freezeup.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 6	0215	632	4.32	July 6	1115	312	3.54
May 23	2345	315	3.55	July 16	1000	358	3.68
July 5	1115	328	3.59	July 20	0630	*2,550	*6.27

Minimum daily discharge, 4.0 ft^3/s, Oct. 11, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	5.5	8.9	6.7	8.0	9.9	14	11	13	11	14	9.2
2	5.1	5.0	8.0	7.3	7.7	e9.4	12	22	13	10	13	8.9
3	5.1	4.7	7.7	7.1	9.8	e8.2	14	11	12	10	12	8.6
4	4.7	4.5	7.4	6.5	9.5	e8.4	12	9.9	12	13	12	8.3
5	4.5	7.4	7.0	5.7	8.2	e9.0	13	33	12	74	11	8.3
6	4.2	8.7	7.0	6.2	8.2	23	18	144	14	68	11	8.5
7	4.2	5.2	6.8	6.2	7.7	13	13	28	28	21	11	8.3
8	4.3	5.0	6.7	11	7.4	11	13	18	15	15	11	8.3
9	4.3	5.1	6.4	12	7.0	12	13	16	35	14	10	8.3
10	4.3	4.7	6.4	9.2	6.9	12	12	37	29	13	10	8.2
11	4.0	4.8	6.3	9.2	7.0	11	11	24	15	12	11	7.8
12	4.0	4.3	5.7	e28	7.1	11	11	18	13	12	12	7.9
13	e4.1	6.4	6.2	14	6.8	10	11	16	14	16	12	7.9
14	e4.1	5.4	6.1	11	12	10	10	15	17	13	11	9.0
15	e4.1	5.0	6.2	35	12	e9.5	15	15	16	12	11	8.2
16	e4.1	4.9	5.9	14	13	e9.4	13	87	15	100	11	12
17	e4.1	15	5.6	11	9.9	e9.0	11	38	15	21	10	10
18	4.1	7.3	5.5	11	9.0	10	11	20	14	16	9.8	8.6
19	4.2	9.1	5.6	10	8.7	e11	13	17	12	15	22	30
20	4.1	33	5.7	9.6	8.7	e10	11	16	25	225	12	20
21	11	13	7.2	8.8	29	13	10	15	15	25	14	12
22	13	9.3	6.4	8.5	28	10	10	14	13	20	11	11
23	5.9	8.4	7.4	8.4	15	9.6	10	58	21	17	10	13
24	6.0	7.7	10	8.2	12	61	9.4	71	14	16	9.8	10
25	5.2	7.0	9.3	8.3	11	19	9.7	21	13	15	9.5	9.3
26	4.8	7.0	7.3	8.6	11	15	9.9	18	13	15	9.5	22
27	4.7	10	6.8	8.6	10	13	9.3	18	12	14	9.5	11
28	4.5	35	7.5	7.7	10	12	9.4	16	12	14	22	9.6
29	4.5	11	6.9	7.7	---	12	9.9	15	11	13	13	9.2
30	4.7	9.6	6.5	8.8	---	13	9.7	14	11	13	11	8.8
31	4.2	---	6.4	8.1	---	22	---	14	---	16	9.9	---
TOTAL	154.8	269.0	212.8	322.4	300.6	416.4	348.3	869.9	474	869	366.0	322.2
MEAN	4.99	8.97	6.86	10.4	10.7	13.4	11.6	28.1	15.8	28.0	11.8	10.7
MAX	13	35	10	35	29	61	18	144	35	225	22	30
MIN	4.0	4.3	5.5	5.7	6.8	8.2	9.3	9.9	11	10	9.5	7.8
CFSM	.53	.95	.73	1.11	1.14	1.43	1.24	2.99	1.68	2.98	1.26	1.14
IN.	.61	1.06	.84	1.28	1.19	1.65	1.38	3.44	1.88	3.44	1.45	1.28

CAL YR 1988 TOTAL 3580.1 MEAN 9.78 MAX 90 MIN 3.8 CFSM 1.04 IN. 14.17
WTR YR 1989 TOTAL 4925.4 MEAN 13.5 MAX 225 MIN 4.0 CFSM 1.44 IN. 19.49

e Estimated

01585100 WHITEMARSH RUN AT WHITE MARSH, MD

LOCATION.--Lat 39°22'15", long 76°26'46", Baltimore County, Hydrologic Unit 02060003, on left bank at upstream side of bridge on State Highway 7, 1.0 mi southwest of White Marsh, and 3.0 mi upstream from mouth.

DRAINAGE AREA.--7.61 mi^2.

PERIOD OF RECORD.--February 1959 to September 1989 (discontinued).

REVISED RECORDS.--WDR MD-DE-73-1: 1960(M), 1967-68, 1969(M). WDR MD-DE-79-1: 1965-66(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 38.96 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges (backwater from unknown sources and ice effect), which are fair. Low flow affected by operations of sand and gravel plant in vicinity of gage. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

AVERAGE DISCHARGE.--30 years, 11.5 ft^3/s, 20.52 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,000 ft^3/s, Aug. 1, 1971, gage height, 14.05 ft, from rating curve extended above 1,300 ft^3/s on basis of a culvert measurement at gage height 10.04 ft and on basis of a culvert and flow-over-road measurement at gage height 14.05 ft; no flow for part of Mar. 20, 1965, caused by construction work upstream from station; minimum daily discharge, 0.10 ft^3/s, Sept. 11, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 750 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 28	0230	1,130	5.98	June 23	0045	1,570	8.14
May 6	0200	1,710	8.81	July 5	1200	811	4.57
May 23	1315	790	4.49	July 6	1030	1,390	7.25
May 23	2330	1,090	5.77	July 16	0615	*3,140	*11.11
May 27	1130	780	4.45	July 20	0630	1,880	9.43
June 9	2200	1,480	7.69				

Minimum discharge, 0.91 ft^3/s, Oct. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	e10	3.5	4.6	3.8	4.4	9.7	31	4.7	4.5	5.7	3.3
2	2.3	e2.6	3.2	9.6	3.5	4.2	6.2	142	4.4	4.3	5.1	3.2
3	2.7	2.6	2.9	4.4	31	4.2	15	9.9	4.2	4.3	4.3	2.9
4	1.9	2.7	2.9	3.3	11	4.3	6.8	6.7	4.1	20	3.8	2.8
5	1.6	10	2.9	2.2	5.1	10	12	173	32	185	3.7	2.7
6	1.4	7.1	2.9	2.7	4.4	69	28	295	45	172	3.7	3.0
7	1.4	2.4	2.9	3.9	4.2	13	13	20	158	16	3.8	3.1
8	1.5	2.3	2.4	37	3.8	e7.5	9.7	8.0	12	8.2	3.5	3.1
9	1.5	2.4	e2.4	15	3.2	14	8.9	6.1	174	6.5	3.3	3.0
10	1.5	2.7	e2.4	5.9	e3.0	8.5	5.8	71	43	5.9	3.5	2.9
11	1.2	2.9	e2.2	4.6	e3.0	6.8	5.2	18	9.8	5.1	4.1	2.7
12	1.4	2.5	1.9	82	e3.0	6.0	5.0	9.0	7.8	4.7	6.5	2.5
13	e1.2	11	1.9	12	e3.5	5.2	12	6.9	6.9	18	5.9	2.6
14	e1.2	2.9	2.2	7.8	58	4.7	5.1	6.7	15	6.0	3.8	3.5
15	e1.2	2.0	2.4	95	20	4.6	32	7.7	7.7	4.7	3.8	2.6
16	e1.2	3.2	2.2	9.2	16	4.2	8.9	111	6.6	553	3.6	7.4
17	e1.8	50	1.9	6.0	5.9	4.2	6.1	27	50	38	3.3	6.1
18	e2.0	4.6	1.9	5.0	4.7	8.5	12	9.0	11	12	3.4	3.0
19	e1.8	24	1.9	4.5	4.3	4.9	24	6.6	6.2	8.1	61	57
20	e1.5	56	2.2	4.2	4.4	11	6.4	5.7	46	213	6.2	18
21	49	9.0	6.4	3.9	111	28	5.6	5.1	11	25	21	6.5
22	16	4.6	3.2	3.7	58	6.2	4.8	4.5	25	11	6.2	6.2
23	3.4	3.2	10	3.7	12	4.8	4.6	167	180	8.0	4.8	32
24	6.5	2.9	20	3.8	6.9	186	4.4	77	14	6.3	3.5	7.4
25	2.5	2.6	7.8	3.6	e6.5	18	4.2	12	7.5	6.1	3.4	4.7
26	e2.4	2.6	3.5	5.3	9.1	8.7	4.2	8.4	6.6	5.9	3.3	58
27	e2.4	5.7	3.2	4.3	6.6	6.8	4.2	82	5.9	5.4	3.1	5.6
28	e2.4	185	6.1	3.5	5.2	6.2	4.1	10	5.8	4.9	45	4.1
29	e2.2	9.0	3.9	3.5	---	5.6	10	6.6	5.3	4.4	9.4	3.8
30	e2.0	4.6	2.4	8.7	---	14	4.9	5.8	4.6	5.2	6.1	3.4
31	e2.2	---	2.4	4.3	---	44	---	5.1	---	35	3.5	---
TOTAL	123.2	433.1	118.0	367.2	411.1	527.5	282.8	1353.8	914.1	1406.5	251.3	267.1
MEAN	3.97	14.4	3.81	11.8	14.7	17.0	9.43	43.7	30.5	45.4	8.11	8.90
MAX	49	185	20	95	111	186	32	295	180	553	61	58
MIN	1.2	2.0	1.9	2.2	3.0	4.2	4.1	4.5	4.1	4.3	3.1	2.5
CFSM	.52	1.90	.50	1.56	1.93	2.24	1.24	5.74	4.00	5.96	1.07	1.17
IN.	.60	2.12	.58	1.79	2.01	2.58	1.38	6.62	4.47	6.88	1.23	1.31

CAL YR 1988 TOTAL 3989.06 MEAN 10.9 MAX 185 MIN .67 CFSM 1.43 IN. 19.50
WTR YR 1989 TOTAL 6455.7 MEAN 17.7 MAX 553 MIN 1.2 CFSM 2.32 IN. 31.56

e Estimated

01585300 STEMMERS RUN AT ROSSVILLE, MD

LOCATION.--Lat 39°20'28", long 76°29'17", Baltimore County, Hydrologic Unit 02060003, on left bank 500 ft upstream from bridge on State Highway 7, at Rossville, 0.9 mi upstream from Brien Run, and 2.1 mi upstresm from mouth.

DRAINAGE AREA.--4.46 mi^2.

PERIOD OF RECORD.--December 1958 to September 1972, October 1973 to September 1989 (discontinued).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 21.64 ft above National Geodetic Vertical Datum of 1929 (Baltimore County bench mark). Prior to Sept. 30, 1972, at site on old channel about 550 ft southeast of present site at datum 2.40 ft lower.

REMARKS.--Records good except those for Mar. 1-5, May 6, June 9, July 16, and July 20 (periods of backwater effect), which are fair. Slight diurnal fluctuation at times from unknown source. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

AVERAGE DISCHARGE.--29 years (water years 1960-72, 1974-89), 6.59 ft^3/s, 20.07 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,950 ft^3/s, Aug. 1, 1971, gage height, 11.34 ft, from high-water mark in well, site and datum then in use, from rating curve extended above 1,100 ft^3/s on basis of contracted-opening and flow-over-road measurement of peak flow; minimum discharge, 0.02 ft^3/s, Aug. 21, 1987, gage height, 1.12 ft; minimum daily discharge, 0.03 ft^3/s, Aug. 20, 21, Sept. 3, 4, 5, 1987.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 27	2315	1,200	4.17	June 9	2145	Unknown	a5.24
May 6	0115	Unknown	a5.02	June 20	1600	1,080	4.01
May 23	1245	774	3.64	July 6	1015	1,270	4.25
May 23	2300	*1,540	4.57	July 16	0900	Unknown	*a10.55
May 27	1115	882	3.76	July 20	0515	Unknown	a6.06

a Backwater

Minimum discharge, 0.13 ft^3/s, Oct. 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.37	5.0	1.5	2.4	1.3	e2.0	4.6	17	2.2	1.4	2.5	.76
2	.45	.83	1.2	4.4	1.2	e2.0	2.8	86	1.9	1.3	3.9	.72
3	.90	.47	1.2	1.8	18	e2.0	7.5	5.1	1.8	1.3	2.0	.61
4	.44	.45	.99	1.7	5.9	e2.0	3.2	3.0	1.7	5.8	1.7	.59
5	.32	3.5	.95	.95	2.3	e7.0	6.7	109	33	54	1.5	.60
6	.23	3.0	.94	1.0	1.9	43	16	e190	24	112	1.5	.73
7	.24	.63	.92	1.9	1.6	10	7.8	11	120	6.1	1.6	.67
8	.24	.50	.83	21	1.5	5.8	5.4	5.4	7.2	2.7	1.3	.67
9	.23	.49	.90	8.0	1.2	9.0	4.9	4.0	e120	2.0	1.2	.65
10	.23	.49	.88	3.2	1.2	6.3	2.7	29	21	1.7	1.1	.60
11	.19	.54	.76	2.2	1.2	5.2	2.3	9.7	5.4	1.5	1.4	.57
12	.17	.43	.63	54	1.2	4.4	2.2	5.0	3.8	1.4	2.4	.53
13	.16	5.1	.66	6.1	1.3	3.6	2.1	3.7	3.2	9.7	2.2	.51
14	.17	1.1	.74	4.2	37	3.4	1.9	3.8	14	2.2	1.2	.89
15	.19	.59	.83	61	11	3.3	18	3.9	4.5	1.4	1.2	.57
16	.19	1.2	.73	5.1	9.5	2.8	4.9	70	3.3	e300	1.3	3.7
17	.39	25	.70	2.8	3.1	2.7	2.7	16	17	9.9	1.0	2.3
18	.66	1.6	.63	2.2	2.3	5.7	6.4	5.2	3.8	4.6	.92	.61
19	.48	13	.94	1.9	2.1	2.9	17	3.7	2.3	3.2	46	19
20	.21	25	1.0	1.7	1.9	6.8	3.5	3.0	31	e140	2.1	8.5
21	27	3.3	2.6	1.4	85	17	2.5	2.6	4.9	8.6	6.4	1.8
22	6.8	1.4	1.1	1.3	32	3.5	2.2	2.3	7.1	4.7	2.0	1.4
23	.97	1.2	4.2	1.4	6.8	2.5	2.0	139	33	3.4	3.1	16
24	2.3	.97	8.7	1.3	3.6	124	2.0	35	5.6	2.7	1.1	2.2
25	.56	.88	3.0	1.3	e3.0	11	1.8	6.1	3.0	2.3	.96	1.2
26	.37	.82	1.2	2.3	5.0	5.2	1.7	3.9	2.4	2.3	.96	29
27	.38	50	1.1	1.6	3.4	3.8	1.7	57	2.1	2.4	.97	1.6
28	.38	59	3.1	1.2	2.4	3.2	1.5	5.3	1.9	3.3	3.9	1.1
29	.36	3.5	1.4	1.2	---	2.8	5.4	3.3	1.7	2.1	1.9	1.0
30	.33	1.9	.97	4.6	---	7.0	2.1	2.8	1.5	1.9	1.7	.90
31	.35	---	.95	1.7	---	17	---	2.4	---	26	.81	---
TOTAL	46.26	211.89	46.25	206.85	247.9	326.9	145.5	843.2	484.3	721.9	101.82	99.98
MEAN	1.49	7.06	1.49	6.67	8.85	10.5	4.85	27.2	16.1	23.3	3.28	3.33
MAX	27	59	8.7	61	85	124	18	190	120	300	46	29
MIN	.16	.43	.63	.95	1.2	2.0	1.5	2.3	1.5	1.3	.81	.51
CFSM	.33	1.58	.33	1.50	1.99	2.36	1.09	6.10	3.62	5.22	.74	.75
IN.	.39	1.77	.39	1.73	2.07	2.73	1.21	7.03	4.04	6.02	.85	.83

CAL YR 1988 TOTAL 2004.83 MEAN 5.48 MAX 115 MIN .15 CFSM 1.23 IN. 16.72
WTR YR 1989 TOTAL 3482.75 MEAN 9.54 MAX 300 MIN .16 CFSM 2.14 IN. 29.05

e Estimated

01585500 CRANBERRY BRANCH NEAR WESTMINSTER, MD

LOCATION.--Lat 39°35'35", long 76°58'05", Carroll County, Hydrologic Unit 02060003, on left bank 80 ft upstream from culvert, 0.7 mi upstream from mouth, and 1.8 mi northeast of Westminster.

DRAINAGE AREA.--3.29 mi^2.

PERIOD OF RECORD.--September 1949 to current year.

REVISED RECORDS.--WSP 1432: Drainage area, 1954-55. WDR MD-DE-75-1: 1972(M). WDR MD-DE-79-1: 1973-78(P).

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 670 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Occasional small diversions to and releases from Cranberry Reservoir located offstream 1 mi upstream from station since August 1957, capacity, 113,700,000 gal. Beginning October 1972 occasional large diversions past the gaging station from the reservoir through a 30-inch pipe. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

AVERAGE DISCHARGE.--40 years, 3.39 ft^3/s, 13.99 in/yr, unadjusted for storage and diversions.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,220 ft^3/s, Sept. 26, 1975, gage height, 7.47 ft, from rating curve extended above 200 ft^3/s on the basis of culvert measurements at gage heights 5.54 ft and 7.47; minimum daily discharge, 0.16 ft^3/s, Oct. 29, 30, 1986.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 80 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 5	2230	*626	*4.59	No other peak greater than base discharge.			

Minimum discharge, 0.20 ft^3/s, Dec. 16, 18, Feb. 9, gage height, 1.33 ft, result of regulation; minimum daily discharge, 0.28 ft^3/s, Dec. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.67	.79	.47	.47	.97	2.0	1.9	4.9	4.2	1.7	.91	1.7
2	1.2	.88	1.3	.43	.36	2.2	1.3	6.7	4.0	2.8	.71	1.6
3	1.8	.67	1.4	.51	2.3	1.3	1.3	1.9	3.1	1.8	.97	1.6
4	.82	.62	1.3	.39	2.1	.89	2.7	1.5	3.2	1.9	1.2	1.6
5	.83	1.3	1.3	.52	.52	2.3	3.4	65	2.5	3.2	1.2	1.6
6	.77	.93	1.3	.32	.79	6.4	3.7	51	2.6	5.6	1.3	1.7
7	.86	.95	1.3	.33	1.7	3.3	3.3	12	14	3.7	.89	1.6
8	.83	.87	1.2	3.1	1.4	1.7	2.9	5.1	4.1	2.3	1.6	1.7
9	.74	.68	1.3	3.0	.48	1.6	2.8	3.1	7.2	1.0	2.1	1.6
10	.81	.39	.86	1.3	.59	3.0	2.9	10	5.5	1.0	2.1	1.6
11	.73	.39	.73	.44	.49	4.1	2.7	5.5	4.2	1.8	2.2	1.6
12	.68	.39	1.0	5.6	.58	4.3	2.7	2.9	2.0	1.6	2.3	1.6
13	.68	.93	1.0	3.3	.49	2.9	2.7	5.9	3.1	4.0	2.2	1.6
14	.67	.69	1.0	1.0	1.1	3.1	2.6	5.7	3.7	2.6	2.3	1.6
15	.69	.41	1.3	8.1	2.1	3.4	3.7	5.8	3.5	1.2	2.3	1.5
16	.76	.39	1.0	2.7	1.9	2.9	3.3	17	3.0	1.4	2.1	2.5
17	.72	.99	.43	.84	1.7	2.1	2.8	10	4.8	1.8	2.0	1.9
18	.71	.83	.93	1.1	1.4	3.0	2.9	1.9	3.5	1.7	2.0	1.1
19	.81	.85	.89	.62	1.9	3.2	2.9	3.3	1.7	2.0	5.2	.91
20	.68	11	.28	.87	1.2	2.7	2.7	5.5	3.9	1.3	2.6	4.9
21	1.6	3.5	1.2	.45	4.3	5.4	1.3	5.4	4.6	1.1	2.5	7.9
22	1.7	.95	.48	1.0	7.2	2.0	1.5	5.4	4.0	.72	2.2	3.1
23	1.0	.93	.77	.59	4.1	1.2	2.4	6.1	5.9	2.0	2.1	1.5
24	.69	.88	3.6	1.3	2.9	12	2.1	7.7	4.9	1.1	1.9	.94
25	.79	.82	2.4	1.0	2.6	4.9	1.0	5.7	4.1	1.3	1.1	.62
26	.66	.82	.47	.73	1.9	1.6	.61	5.6	3.8	.62	1.9	3.4
27	.64	.93	.55	.84	2.4	2.0	1.6	5.7	3.3	.63	.90	1.3
28	.71	3.5	.62	.40	2.2	2.2	2.2	4.9	5.3	1.2	1.4	.59
29	.73	1.1	.44	.50	---	2.8	2.1	4.6	3.9	1.7	1.9	.53
30	.68	.57	.39	1.1	---	3.0	2.0	4.5	3.1	1.4	1.8	.52
31	.68	---	.53	.86	---	3.4	---	4.4	---	.93	1.7	---
TOTAL	26.34	38.95	31.74	43.71	51.67	96.89	72.01	284.7	126.7	57.10	57.58	55.91
MEAN	.85	1.30	1.02	1.41	1.85	3.13	2.40	9.18	4.22	1.84	1.86	1.86
MAX	1.8	11	3.6	8.1	7.2	12	3.7	65	14	5.6	5.2	7.9
MIN	.64	.39	.28	.32	.36	.89	.61	1.5	1.7	.62	.71	.52
CFSM	.26	.39	.31	.43	.56	.95	.73	2.79	1.28	.56	.56	.57
IN.	.30	.44	.36	.49	.58	1.10	.81	3.22	1.43	.65	.65	.63

CAL YR 1988 TOTAL 783.62 MEAN 2.14 MAX 38 MIN .28 CFSM .65 IN. 8.86
WTR YR 1989 TOTAL 943.30 MEAN 2.58 MAX 65 MIN .28 CFSM .79 IN. 10.67

01586000 NORTH BRANCH PATAPSCO RIVER AT CEDARHURST, MD

LOCATION.--Lat 39°30'00", long 76°53'00", Carroll County, Hydrologic Unit 02060003, on left bank at downstream side of private footbridge at Cedarhurst, 0.8 mi downstream from Roaring Run, 8 mi southeast of Westminster, and 16.5 mi upstream from confluence with South Branch.

DRAINAGE AREA.--56.6 mi^2.

PERIOD OF RECORD.--September 1945 to current year.

REVISED RECORDS.--WSP 1903: 1959-60.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 425 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good. Slight diurnal fluctuation at low and medium flow caused by mill upstream from station. Low flow affected slightly by Cranberry Reservoir since August 1957, capacity, 113,700,000 gal. Records do not include a mean discharge of 2.74 ft^3/s diverted upstream from station for municipal supply of Westminster; sewage effluent discharged into Little Pipe Creek in Monocacy River basin. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--44 years, 63.5 ft^3/s, 15.23 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,800 ft^3/s, June 22, 1972, gage height, 20.75 ft, from high-water mark in well, from rating curve extended above 4,100 ft^3/s on basis of contracted-opening measurement of peak flow; minimum discharge, 1.3 ft^3/s, Sept. 17, 1983 and Aug. 10, 1985, result of regulation; minimum daily discharge, 3.1 ft^3/s, Sept. 10, 12, 1966.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 6	0215	*5,640	*10.24	June 23	1830	1,770	5.72
May 6	2115	1,230	4.86	June 23	2115	1,070	4.55

Minimum discharge, 9.2 ft^3/s, Dec. 12, gage height, 1.29 ft; minimum daily discharge, 18 ft^3/s, Oct. 12, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	24	34	31	36	47	71	53	69	51	46	26
2	25	24	32	32	34	45	65	122	64	50	40	26
3	39	21	31	33	49	44	67	62	62	49	38	25
4	25	21	30	29	58	51	64	51	71	78	36	25
5	21	36	28	25	42	52	63	240	63	85	34	25
6	19	46	28	27	38	107	71	1710	74	87	33	25
7	19	29	27	32	37	70	63	e320	145	67	35	25
8	20	25	27	58	34	57	61	e200	85	55	34	26
9	19	24	26	64	30	54	61	e160	85	48	32	27
10	20	23	26	45	31	60	56	e190	114	46	32	26
11	19	23	24	40	33	69	53	154	66	43	33	24
12	18	22	19	117	33	74	52	127	60	42	36	25
13	19	36	21	90	31	66	50	115	61	80	36	23
14	19	32	25	58	51	61	50	111	71	62	38	24
15	20	25	27	156	56	62	64	119	74	46	40	23
16	19	24	23	83	72	57	65	258	77	52	34	35
17	18	56	22	63	50	53	55	220	89	50	31	47
18	22	37	21	56	44	62	53	142	77	44	30	29
19	24	34	23	52	42	65	58	115	59	43	78	30
20	20	211	23	48	41	57	50	107	111	71	48	79
21	28	88	34	42	89	94	48	106	84	72	45	109
22	82	51	34	38	122	66	47	99	76	51	38	63
23	35	41	39	40	83	60	46	111	284	45	33	45
24	30	37	68	39	64	232	44	146	135	41	31	39
25	26	34	65	38	56	124	43	103	80	39	29	31
26	23	33	39	40	58	91	42	97	67	39	29	62
27	22	34	34	42	56	80	41	101	60	38	29	40
28	22	77	38	37	51	74	40	85	87	37	28	31
29	22	46	40	36	---	70	45	78	66	35	27	31
30	22	37	32	40	---	69	46	75	57	37	30	30
31	21	---	31	38	---	78	---	72	---	66	27	---
TOTAL	760	1251	971	1569	1421	2251	1634	5649	2573	1649	1110	1076
MEAN	24.5	41.7	31.3	50.6	50.7	72.6	54.5	182	85.8	53.2	35.8	35.9
MAX	82	211	68	156	122	232	71	1710	284	87	78	109
MIN	18	21	19	25	30	44	40	51	57	35	27	23
CFSM	.43	.74	.55	.89	.90	1.28	.96	3.22	1.52	.94	.63	.63
IN.	.50	.82	.64	1.03	.93	1.48	1.07	3.71	1.69	1.08	.73	.71

CAL YR 1988 TOTAL 18669 MEAN 51.0 MAX 639 MIN 15 CFSM .90 IN. 12.27
WTR YR 1989 TOTAL 21914 MEAN 60.0 MAX 1710 MIN 18 CFSM 1.06 IN. 14.40

e Estimated

01586210 BEAVER RUN NEAR FINKSBURG, MD

LOCATION.--Lat 39°29'22", long 76°54'12", Carroll County, Hydrologic Unit 02060003, on downstream center line of bridge pier on Hughes Road, 0.25 mi northwest of intersection of Hughes Road and Maryland Route 91, and 0.75 mi southwest of Finksburg.

DRAINAGE AREA.--14.0 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 428.70 ft (corrected) above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for May 5-8 (plugged intake), which are fair. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--7 years, 16.1 ft^3/s, 15.62 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,150 ft^3/s, May 6, 1989, gage height, 5.7 ft, from floodmarks, from rating curve extended above 600 ft^3/s; minimum discharge, 2.0 ft^3/s, Sept. 12, 1983, Sept. 17, 18, 1986.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 6	Unknown	*2,150	*a5.7	June 23	1830	955	4.16

a From floodmarks.

Minimum daily discharge, 4.5 ft^3/s, Oct. 12, 13, 14, 16, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	6.5	9.0	8.5	9.5	12	19	14	21	16	11	6.0
2	5.6	6.3	8.4	8.7	9.1	11	17	26	19	15	9.8	5.8
3	7.0	5.9	8.3	9.3	12	11	17	15	19	14	9.0	5.6
4	5.4	5.9	7.8	8.6	13	11	16	13	18	19	8.4	5.4
5	5.3	9.3	7.6	8.6	10	12	16	e50	17	18	8.0	5.4
6	5.3	11	7.6	9.2	9.6	28	17	e500	20	20	7.7	5.3
7	5.2	7.2	7.6	9.7	9.4	17	15	e90	42	17	8.4	5.4
8	5.0	6.3	7.5	14	8.8	14	15	e65	22	16	8.4	5.6
9	5.0	5.9	7.2	14	e8.8	14	15	44	22	14	7.7	5.7
10	5.0	5.7	7.1	11	8.7	15	14	55	22	13	7.6	5.5
11	5.0	5.6	6.6	10	9.3	17	13	43	17	12	7.8	5.3
12	4.5	5.3	6.6	29	8.8	17	13	38	17	12	8.4	5.3
13	4.5	9.0	7.5	21	8.2	16	12	34	17	19	8.5	5.3
14	4.5	8.0	8.3	15	12	15	12	32	21	15	12	5.3
15	4.6	6.6	7.9	38	14	15	16	36	21	13	12	5.3
16	4.5	6.5	6.8	21	17	14	16	71	20	14	8.9	7.9
17	4.5	15	7.1	17	12	13	14	57	17	14	8.2	9.8
18	5.1	9.3	7.2	15	11	16	13	43	16	12	7.6	6.4
19	5.6	8.9	7.2	14	10	15	14	38	14	12	10	7.4
20	5.3	61	7.1	12	10	14	12	34	34	18	9.1	17
21	8.2	19	8.9	11	22	24	12	32	22	14	8.7	27
22	15	12	8.2	12	29	17	12	30	19	13	8.3	13
23	7.1	10	9.7	10	20	15	11	32	136	11	7.5	11
24	6.8	9.7	16	10	17	55	11	40	41	11	6.9	10
25	6.4	9.0	15	10	e16	31	11	33	25	10	6.5	8.7
26	6.2	8.5	10	10	14	25	11	27	21	9.9	6.5	15
27	6.1	8.7	9.3	10	14	22	10	28	18	9.6	6.5	9.6
28	5.9	19	10	9.6	13	20	10	24	25	9.3	6.9	8.2
29	5.9	11	11	9.5	---	19	11	23	19	8.6	6.7	7.6
30	5.9	9.7	9.1	9.9	---	19	11	22	16	8.6	7.6	7.6
31	5.9	---	8.7	9.7	---	23	---	21	---	13	6.3	---
TOTAL	181.6	321.8	266.3	405.3	356.2	567	406	1610	758	421.0	256.9	248.4
MEAN	5.86	10.7	8.59	13.1	12.7	18.3	13.5	51.9	25.3	13.6	8.29	8.28
MAX	15	61	16	38	29	55	19	500	136	20	12	27
MIN	4.5	5.3	6.6	8.5	8.2	11	10	13	14	8.6	6.3	5.3
CFSM	.42	.77	.61	.93	.91	1.31	.97	3.71	1.80	.97	.59	.59
IN.	.48	.86	.71	1.08	.95	1.51	1.08	4.28	2.01	1.12	.68	.66

CAL YR 1988 TOTAL 4910.4 MEAN 13.4 MAX 199 MIN 4.0 CFSM .96 IN. 13.05
WTR YR 1989 TOTAL 5798.5 MEAN 15.9 MAX 500 MIN 4.5 CFSM 1.13 IN. 15.41

e Estimated

01586610 MORGAN RUN NEAR LOUISVILLE, MD

LOCATION.--Lat 39°27'07", long 76°57'20", Carroll County, Hydrologic Unit 02060003, on right downstream wingwall of bridge on London Bridge Road, 1.4 mi southwest of Gamber, and 1.65 mi south of the intersection of Maryland Route 32, and 1.7 mi west of Louisville.

DRAINAGE AREA.--28.0 mi^2.

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

REVISED RECORDS.--WRD MD-DE-84: 1983(P).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 430 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for March 17 to May 9 (missing record), which are fair. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--7 years, 31.9 ft^3/s, 15.47 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,400 ft^3/s, May 6, 1989, gage height, 8.31 ft, from floodmarks, from rating curve extended above 1,900 ft^3/s; minimum daily discharge, 4.0 ft^3/s, Sept. 18, 19, 20, 1986.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 750 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 6	Unknown	*3,400	*a8.3	June 23	1815	1,530	6.01

a From floodmarks.

Minimum discharge, 5.9 ft^3/s, Dec. 12, gage height, 0.45 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.7	11	17	15	19	26	e42	e30	39	35	23	15
2	9.1	11	15	16	18	24	e38	e60	37	33	22	15
3	12	10	15	16	24	24	e38	e38	36	32	21	14
4	9.9	11	14	15	27	24	e36	e32	35	42	20	14
5	9.2	18	14	15	21	27	e36	e110	34	40	19	14
6	8.4	20	13	14	21	60	e38	e1000	38	50	19	14
7	8.4	13	13	15	20	41	e34	e200	90	37	20	14
8	8.4	12	13	25	18	32	e34	e150	46	31	19	14
9	8.4	11	13	29	16	31	e34	e100	48	29	18	14
10	8.4	11	13	22	e16	35	e30	122	43	28	18	14
11	8.4	11	12	20	e18	40	e28	98	35	26	18	14
12	8.1	10	12	58	e17	41	e26	81	34	26	19	13
13	8.1	15	16	50	e16	37	e26	70	34	43	19	13
14	8.4	14	16	32	26	35	e26	67	51	32	31	13
15	8.5	12	15	75	31	35	e36	73	43	27	25	13
16	8.6	12	13	47	38	31	e36	165	42	30	20	19
17	8.6	24	14	36	27	e28	e30	139	36	29	19	20
18	9.1	17	14	32	24	e35	e28	104	33	26	18	16
19	9.9	16	14	29	22	e32	e30	88	30	26	21	16
20	9.4	84	13	26	22	e30	e28	78	62	35	20	25
21	14	39	17	23	44	e50	e26	72	47	31	19	50
22	25	24	15	23	64	e40	e26	65	42	27	19	24
23	13	20	18	23	49	e34	e24	71	251	25	21	21
24	12	18	28	21	38	e120	e24	80	93	23	17	19
25	11	16	28	21	33	e75	e24	61	57	23	17	17
26	10	16	19	21	33	e55	e24	55	46	22	16	29
27	10	16	17	21	31	e48	e22	56	41	22	16	19
28	10	32	18	19	28	e44	e22	48	58	21	16	17
29	10	20	18	19	---	e42	e24	45	42	20	16	16
30	10	18	16	21	---	e42	e24	43	37	21	17	16
31	9.8	---	15	20	---	e50	---	42	---	29	15	---
TOTAL	312.8	562	488	819	761	1268	894	3443	1560	921	598	532
MEAN	10.1	18.7	15.7	26.4	27.2	40.9	29.8	111	52.0	29.7	19.3	17.7
MAX	25	84	28	75	64	120	42	1000	251	50	31	50
MIN	8.1	10	12	14	16	24	22	30	30	20	15	13
CFSM	.36	.67	.56	.94	.97	1.46	1.06	3.97	1.86	1.06	.69	.63
IN.	.42	.75	.65	1.09	1.01	1.68	1.19	4.57	2.07	1.22	.79	.71

CAL YR 1988 TOTAL 9433.0 MEAN 25.8 MAX 340 MIN 8.1 CFSM .92 IN. 12.53
WTR YR 1989 TOTAL 12158.8 MEAN 33.3 MAX 1000 MIN 8.1 CFSM 1.19 IN. 16.15

e Estimated

01587500 SOUTH BRANCH PATAPSCO RIVER AT HENRYTON, MD

WATER-QUALITY RECORDS

LOCATION.--Lat 39°21'05", long 76°54'50", Howard County, Hydrologic Unit 02060003, on right bank at downstream side of highway bridge on Henryton Road at Henryton, 1.3 mi upstream from Piney Run, 2.5 mi upstream from confluence with North Branch, and 3.2 mi southeast of Sykesville.

DRAINAGE AREA--64.4 mi^2.

PERIOD OF RECORD.--Water years 1965-74, 1976-80, October 1988 to September 1989.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)
DEC									
20...	0830	25	201	6.7	0.0	-2.5	3	13.2	14
APR									
26...	1620	62	163	8.3	17.0	19.0	10	6.4	13
SEP									
11...	1120	33	185	7.0	20.0	30.5	2	7.4	16

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT IT FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
DEC									
20...	4.7	14	2.1	34	11	21	0.20	6.5	105
APR									
26...	4.7	11	2.2	38	8.5	18	0.10	3.6	145
SEP									
11...	4.7	13	2.4	42	8.0	18	0.10	8.3	122

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
DEC								
20...	93	3.40	0.270	200	72	60	51	2.2
APR								
26...	80	2.80	0.070	200	64	20	24	2.5
SEP								
11...	96	4.00	0.100	180	36	30	20	1.8

01589000 PATAPSCO RIVER AT HOLLOFIELD, MD

LOCATION.--Lat 39°18'36", long 76°47'34", Baltimore County, Hydrologic Unit 02060003, on left bank at downstream side of highway bridge at Hollofield, 0.3 mi downstream from Dogwood Run, 3.0 mi north of Ellicott City, and 28 mi upstream from mouth.

DRAINAGE AREA.--285 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1944 to current year.

GAGE.--Water-stage recorder. Datum of gage is 187.7 ft above National Geodetic Vertical Datum of 1929. June 26 to Dec. 8, 1972, nonrecording gage at same site and datum. Prior to June 22, 1972, water-stage recorder at site on opposite bank at same datum.

REMARKS.--Water-discharge records good except those for Dec. 10-28 and Sept. 13-30 (periods of missing record), which are fair. Flow regulated by Liberty Reservoir, 11 mi upstream, beginning July 22, 1954, usable capacity, 42,070,000,000 gal; dead storage, 1,260,000,000 gal. Diversions upstream from station for municipal supply of Westminster (sewage effluent discharged into Little Pipe Creek), and from Liberty Reservoir beginning Feb. 26, 1953, for municipal supply of Baltimore, and beginning February 1970 for a small municipal supply for part of Carroll County.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 80,600 ft^3/s, June 22, 1972, gage height, 31.3 ft, from flood-marks, from rating curve extended above 27,000 ft^3/s on basis of slope-area measurement of peak flow; minimum discharge, 6 ft^3/s, Sept. 6, 1944; minimum daily discharge, 7.9 ft^3/s, Oct. 12, 1986.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,800 ft^3/s, May 6, gage height, 10.22 ft; minimum daily discharge, 37 ft^3/s, Oct. 13, 14, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	60	78	67	75	93	215	119	170	154	147	76
2	41	61	72	73	73	88	180	276	160	165	136	70
3	47	55	67	76	89	86	181	157	154	162	120	70
4	46	54	66	68	112	85	168	124	148	314	118	66
5	43	77	64	e65	86	97	171	384	158	253	109	66
6	40	142	62	64	80	254	216	4660	228	367	102	70
7	39	66	60	70	76	202	165	863	356	257	106	70
8	38	55	60	97	72	126	158	402	231	235	102	72
9	39	53	e58	148	64	120	156	320	219	182	91	74
10	39	52	e58	106	e60	129	139	472	215	159	88	70
11	39	51	e55	90	e60	139	130	352	167	152	91	66
12	38	49	49	286	e60	137	123	293	151	133	97	64
13	37	65	49	288	66	128	119	260	147	202	93	e60
14	37	77	e55	155	169	116	117	244	209	169	93	e60
15	38	61	e55	325	137	114	164	241	226	119	146	e60
16	38	56	e50	203	164	107	186	773	173	346	111	e90
17	37	130	48	149	119	100	139	724	170	177	93	e130
18	39	101	48	126	102	107	128	368	151	142	93	e80
19	40	90	e50	113	94	116	156	302	134	128	163	e80
20	38	293	e50	101	90	105	129	268	544	338	128	e180
21	56	208	e75	91	233	231	119	244	372	174	139	e250
22	127	110	e75	82	419	159	114	223	299	143	154	e170
23	57	89	e80	e80	310	127	106	289	329	128	149	e130
24	53	78	e100	e80	225	548	104	418	808	117	104	e110
25	50	71	e140	78	119	373	101	250	266	111	97	e90
26	48	67	e80	80	118	229	101	220	216	108	88	e180
27	49	77	e70	83	116	194	98	254	190	116	91	e110
28	50	251	e75	75	102	176	95	216	192	113	88	e90
29	51	114	80	72	---	162	100	188	172	102	86	e90
30	50	89	68	81	---	172	112	179	160	97	91	e85
31	50	---	66	82	---	368	---	174	---	291	78	---
TOTAL	1435	2802	2063	3554	3490	5188	4190	14257	7115	5654	3392	2879
MEAN	46.3	93.4	66.5	115	125	167	140	460	237	182	109	96.0
MAX	127	293	140	325	419	548	216	4660	808	367	163	250
MIN	37	49	48	64	60	85	95	119	134	97	78	60
(†)	30496	30629	29805	29789	29671	31548	32411	40738	42329	41250	39391	37109
(≠)	188	154	140	159	172	160	133	152	193	242	209	229

CAL YR 1988 TOTAL 39992 MEAN 109 MAX 1600 MIN 33 ≠ 167
WTR YR 1989 TOTAL 56019 MEAN 153 MAX 4660 MIN 37 ≠ 178

e Estimated

† Month-end contents, in millions of gallons in Liberty Reservoir (contents on Sept. 30, 1988, 33,090,000,000 gal). Records provided by Baltimore Department of Public Works.

≠ Diversions, in cubic feet per second, upstream from station for municipal supply of city of Westminster; and from Liberty Reservoir for municipal supply of city of Baltimore, and for part of Carroll County. Records provided by cities of Westminster and Baltimore, respectively.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969-74, 1976-83, October 1988 to September 1989.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TEMPERATURE AIR (DEG C)	COLOR (PLATINUM-COBALT UNITS)	OXYGEN, DISSOLVED (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)
DEC									
19...	0950	48	113	7.3	0.0	2.5	2	12.6	18
APR									
25...	1005	101	234	7.8	13.5	29.0	12	10.3	16
SEP									
11...	0955	68	185	7.7	21.0	29.0	10	7.1	19

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
DEC									
19...	6.2	11	2.2	47	16	17	0.10	9.4	124
APR									
25...	5.7	10	2.3	40	12	17	0.10	4.6	108
SEP									
11...	5.7	12	2.7	54	11	17	0.20	11	129

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
DEC								
19...	108	2.90	0.070	310	57	50	53	2.3
APR								
25...	92	2.00	0.030	560	97	90	92	1.8
SEP								
11...	111	2.80	0.080	620	47	80	46	2.2

01589100 EAST BRANCH HERBERT RUN AT ARBUTUS, MD

LOCATION.--Lat 39°14'24", long 76°41'33", Baltimore County, Hydrologic Unit 02060003, on left bank 50 ft upstream from bridge on Tom Day Boulevard at U.S. Route 1 in Arbutus, 0.5 mi upstream from mouth, and 2 mi south of Baltimore city limits.

DRAINAGE AREA.--2.47 mi^2.

PERIOD OF RECORD.--August 1957 to September 1989 (discontinued).

REVISED RECORDS.--WDR MD-DE-81: 1979.

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Elevation of gage is 45 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to August 1981 at site 100 ft downstream at same datum.

REMARKS.--Records good except those for estimated daily discharges (periods of backwater from unknown sources and periods of doubtful or missing record), which are fair. Slight regulation at low flow from unknown source upstream from station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

AVERAGE DISCHARGE.--32 years, 3.29 ft^3/s, 18.09 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,460 ft^3/s, Sept. 6, 1979, gage height, 13.7 ft, present site, from floodmarks, from rating curve extended above 280 ft^3/s on basis of culvert measurement at gage height 5.0 ft, present site, and culvert and flow-over-road measurement of peak flow at gage height 13.7 ft, present site, from floodmarks; minimum daily discharge, 0.30 ft^3/s, July 24, Sept. 4, 11, 1966, Oct. 12, 1986.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 27	2230	444	4.45	June 20	1430	*998	*7.19
May 6	0030	845	6.43	July 6	1200	404	4.23
May 23	2145	642	5.45	July 16	0400	522	4.86
June 5	2145	443	4.44	July 20	0430	825	6.33
June 14	1815	476	4.62				

Minimum discharge, 0.25 ft^3/s, Jan. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.43	5.1	1.1	2.8	e.90	e1.3	1.8	12	1.5	1.2	2.1	.66
2	1.1	e.80	1.0	2.5	e.80	e1.3	1.5	20	1.4	1.2	1.9	.64
3	.57	e.70	1.0	1.1	e7.0	e1.3	3.9	e2.7	1.2	1.2	1.1	.57
4	.49	e.70	.77	1.0	e2.4	e1.3	1.7	e2.7	1.2	10	1.1	.57
5	.36	e4.0	.80	.59	e1.5	e5.0	6.9	36	28	2.8	1.1	.67
6	.37	e1.0	.84	.81	e1.1	e19	e6.6	72	10	30	.98	.61
7	.36	e.60	.86	1.8	e1.0	e4.0	4.9	6.0	40	2.8	1.1	.62
8	e.35	e.60	.76	13	e.90	e2.2	2.4	3.9	4.3	1.8	.95	.63
9	e.35	e.60	1.1	3.3	e.80	e4.0	3.7	3.5	11	1.4	.90	.61
10	e.35	e.70	.73	1.3	e.80	e2.6	1.6	17	3.1	1.2	.96	.59
11	e.32	e.70	.64	1.2	e.80	e2.0	1.6	4.1	2.2	1.2	1.1	.57
12	e.32	e.60	.59	22	.65	e1.8	1.5	2.8	2.0	1.2	1.2	.64
13	e.32	e5.0	.70	2.3	3.4	e1.6	1.4	3.1	2.5	6.4	1.1	1.1
14	e.32	e.60	.75	3.0	21	e1.4	1.4	2.5	17	1.4	.97	.79
15	e.32	.52	.74	23	5.6	e1.3	13	4.8	3.7	1.1	.98	.63
16	e.32	e1.0	.63	2.0	4.0	e1.2	2.2	33	3.2	33	5.2	19
17	e.40	e12	1.0	1.3	1.4	e1.2	1.6	8.2	6.7	3.0	1.0	1.1
18	e.70	e1.2	.59	1.1	1.1	e2.6	7.1	3.3	2.1	2.4	.83	.72
19	e.50	e8.0	.62	1.0	1.1	e1.4	13	2.6	1.9	1.7	2.1	9.5
20	e.40	11	.69	.98	1.6	e8.0	2.0	2.2	61	42	.87	7.4
21	21	e2.0	2.3	.86	e32	7.4	1.6	2.0	20	3.1	1.3	5.2
22	2.1	e1.0	.75	.88	e15	1.7	1.5	1.8	5.2	2.4	4.8	1.4
23	.92	e.80	3.9	.90	e4.0	1.7	1.3	44	5.8	2.0	1.6	6.7
24	1.7	e.70	9.6	.84	e2.4	41	1.3	16	2.9	1.8	.88	1.2
25	.61	e.60	1.2	.84	e2.0	4.1	1.2	3.9	2.1	1.7	.75	1.8
26	e.60	e.60	.56	e1.5	e3.0	2.5	1.1	2.5	1.8	1.6	.76	16
27	e.60	20	.55	e.90	e2.2	2.2	1.1	8.0	1.8	2.3	.74	1.3
28	e.60	23	2.2	e.80	e1.6	2.1	1.1	2.2	1.7	1.5	4.0	1.1
29	e.55	2.1	.66	e.80	---	2.0	4.4	1.8	1.5	1.1	1.2	1.1
30	e.55	1.3	.54	e2.2	---	e5.5	1.3	1.8	1.3	1.6	1.7	.83
31	e.60	---	.51	e1.2	---	e3.7	---	1.6	---	18	.70	---
TOTAL	38.48	107.52	38.68	97.80	120.05	138.4	95.7	328.0	248.1	184.1	45.97	84.25
MEAN	1.24	3.58	1.25	3.15	4.29	4.46	3.19	10.6	8.27	5.94	1.48	2.81
MAX	21	23	9.6	23	32	41	13	72	61	42	5.2	19
MIN	.32	.52	.51	.59	.65	1.2	1.1	1.6	1.2	1.1	.70	.57
CFSM	.50	1.45	.51	1.28	1.74	1.81	1.29	4.28	3.35	2.40	.60	1.14
IN.	.58	1.62	.58	1.47	1.81	2.08	1.44	4.94	3.74	2.77	.69	1.27

CAL YR 1988 TOTAL 978.49 MEAN 2.67 MAX 37 MIN .32 CFSM 1.08 IN. 14.74
WTR YR 1989 TOTAL 1527.05 MEAN 4.18 MAX 72 MIN .32 CFSM 1.69 IN. 23.00

e Estimated

01589500 SAWMILL CREEK AT GLEN BURNIE, MD

LOCATION.--Lat 39°10'12", long 76°37'51", Anne Arundel County, Hydrologic Unit 02060003, on left bank 300 ft upstream from bridge on State Highway 648, 0.25 mile southeast of State Highway 3, and 0.50 mile northwest of Glen Burnie.

DRAINAGE AREA.--4.97 mi^2.

PERIOD OF RECORD.--May 1944 to September 1952. Annual maximum, water years 1965-70. October 1983 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 26.07 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Low flow affected by ground-water diversions from Anne Arundel County municipal well fields upstream from station. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--14 years (water years 1945-52, 1984-89), 5.37 ft^3/s, 14.67 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 178 ft^3/s, Aug. 29,1989, gage height, 5.12 ft, from rating curve extended above 157 ft^3/s, on bases of contracted-opening measurement at gage height 4.77 ft.; no flow for part of each day Sept. 6, 7, 1985, July 29, Aug. 2, 1986.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 1933 reached a stage of about 14 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 30 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 6	0500	46	2.82	July 20	0730	49	2.87
May 24	0045	40	2.70	Aug. 29	0430	*178	*5.12
June 21	2015	59	3.06				

Minimum discharge, 0.03 ft^3/s part of each day Oct. 1, 2, 12, 16, 18, 19, Nov. 15,16

REVISIONS.--Revised maximum discharges for water years 1984-1988, revised daily discharges in cubic feet per second, for high-water periods during the years, revised monthly and yearly discharges are given below. These figures supersede those published in the reports for 1984-1988

EXTREMES FOR WATER YEARS 1984-1988.--Peak discharges greater than base discharge of 30 ft^3/s and maximum (*):

Water Year	Date	Time	Discharge (ft^3/s)	Gage height (ft)	Water Year	Date	Time	Discharge (ft^3/s)	Gage height (ft)
1984	Dec. 3, 1984	1400	32	2.55	1987	Dec. 24, 1987	2315	70	3.27
	Mar. 29, 1984	0600	*91	*3.64		Sept. 18, 1987	0545	*99	*3.78
	Aug. 4, 1984	0100	66	3.19					
1985	Feb. 12, 1985	1230	31	2.53	1988	Nov. 29, 1987	1645	33	2.57
	Sept. 27, 1985	0830	*113	*4.03		Nov. 29, 1987	2330	*40	*2.70
1986	July 20, 1986	1830	*26	*2.44					

Daily discharges:

Mar. 29, 1984	36	Sept. 27, 1985	41	Dec. 25, 1986	16	Nov. 29, 1987	15
Aug. 4, 1984	20	Dec. 24, 1986	12	Sept. 18, 1987	34	Nov. 30, 1987	13
Feb. 12, 1985	15						

MONTH		TOTAL	MEAN	MAX	MIN	CFSM	IN.
March	1984	143.30	4.62	36	2.20	.93	1.07
August	1984	106.30	3.43	20	1.40	.69	.80
Wtr. Yr.	1984	1088.97	2.98	36	.30	.60	8.15
February	1985	63.26	2.26	15	.76	.45	.47
September	1985	48.69	1.62	41	.01	.33	.37
Cal. Yr.	1984	999.02	2.73	36	.79	.55	7.48
Wtr. Yr.	1985	373.56	1.02	41	.01	.21	2.79
Cal. Yr.	1985	294.64	.81	41	.01	.16	2.20
December	1986	45.59	1.47	16	.05	.30	.35
September	1987	61.92	2.06	34	.03	.41	.46
Cal. Yr.	1986	163.45	.45	16	.01	.09	1.21
Wtr. Yr.	1987	350.16	.96	34	.01	.19	2.57
November	1987	46.30	1.54	15	.11	.31	.35
Cal. Yr.	1987	398.77	1.09	34	.03	.22	2.97
Wtr. Yr.	1988	441.57	1.21	17	.02	.24	3.33

01589500 SAWMILL CREEK AT GLEN BURNIE, MD

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	.19	.43	.10	.13	.55	1.9	2.4	2.5	2.5	4.7	3.0
2	.04	.07	.27	.10	.11	.49	1.5	12	2.3	2.4	3.2	2.8
3	.05	.08	.20	.10	.48	.49	1.7	4.2	2.2	2.4	5.2	2.6
4	.04	.09	.15	.10	1.2	.51	1.5	2.3	2.0	3.3	3.8	2.5
5	.04	.15	.12	.07	.43	.74	1.7	3.7	3.4	4.4	2.7	2.5
6	.04	.06	.10	.07	.23	4.2	2.8	23	11	7.6	2.4	2.5
7	.04	.05	.09	.07	.17	2.9	2.2	8.1	15	4.3	2.4	2.5
8	.05	.07	.09	.15	.15	1.4	2.5	3.5	6.9	2.9	2.3	2.5
9	.04	.07	.09	.36	.11	1.0	2.3	2.7	4.8	2.6	2.2	2.5
10	.04	.09	.08	.41	.08	1.1	1.7	3.8	6.0	2.5	2.2	2.4
11	.04	.13	.07	.22	.07	.91	1.5	3.5	3.2	2.3	2.4	2.4
12	.05	.15	.06	.81	.07	.85	1.4	2.8	2.7	2.2	2.7	2.3
13	.04	.16	.05	1.1	.11	.77	1.3	2.5	2.8	2.9	3.1	2.4
14	.05	.04	.05	.36	1.7	.77	1.3	2.4	4.0	3.3	2.5	2.5
15	.07	.04	.05	2.4	1.3	.77	2.3	2.4	5.1	2.6	2.4	2.5
16	.05	.05	.05	1.1	.99	.71	2.3	5.5	4.7	4.1	2.3	4.9
17	.08	1.3	.05	.43	.59	.68	1.6	8.1	3.2	3.3	2.2	6.8
18	.07	1.1	.04	.25	.40	1.1	1.8	3.6	2.9	2.6	2.2	2.9
19	.06	.62	.05	.18	.33	1.1	4.7	2.7	2.5	2.5	3.1	3.8
20	.06	2.5	.05	.14	.31	1.0	2.6	2.4	2.5	17	2.5	7.3
21	.41	1.1	.07	.11	2.7	2.9	1.9	2.3	14	5.4	2.2	4.0
22	.24	.36	.05	.08	3.7	1.6	1.6	2.1	22	3.1	2.2	3.0
23	.30	.17	.08	.07	2.1	1.1	1.4	8.6	5.7	2.8	2.1	2.9
24	.13	.14	.18	.07	1.0	8.0	1.4	23	5.0	2.5	2.0	2.7
25	.08	.12	.50	.07	.65	4.9	1.3	5.5	3.6	3.2	1.9	2.6
26	.09	.09	.31	.07	.72	2.3	1.6	3.6	3.2	9.2	2.0	9.1
27	.11	.64	.14	.07	.77	1.7	1.3	5.8	3.0	5.5	2.1	3.9
28	.11	8.5	.17	.07	.61	1.8	1.2	4.6	2.9	3.6	4.8	2.9
29	.12	2.4	.14	.07	---	1.4	2.2	2.9	2.8	2.8	84	2.9
30	.11	.78	.10	.13	---	1.5	2.4	2.6	2.5	2.5	6.0	2.8
31	.11	---	.08	.09	---	2.6	---	2.5	---	12	3.4	---
TOTAL	2.81	21.31	3.96	9.42	21.21	51.84	56.9	165.1	154.4	130.3	169.2	100.4
MEAN	.091	.71	.13	.30	.76	1.67	1.90	5.33	5.15	4.20	5.46	3.35
MAX	.41	8.5	.50	2.4	3.7	8.0	4.7	23	22	17	84	9.1
MIN	.04	.04	.04	.07	.07	.49	1.2	2.1	2.0	2.2	1.9	2.3
CFSM	.02	.14	.03	.06	.15	.34	.38	1.07	1.04	.85	1.10	.67
IN.	.02	.16	.03	.07	.16	.39	.43	1.24	1.16	.98	1.27	.75

CAL YR 1988 TOTAL 368.96 MEAN 1.01 MAX 14 MIN .02 CFSM .20 IN. 2.76
WTR YR 1989 TOTAL 886.85 MEAN 2.43 MAX 84 MIN .04 CFSM .49 IN. 6.64

01590500 BACON RIDGE BRANCH AT CHESTERFIELD, MD

LOCATION.--Lat 39°00'07", long 76°36'53", Anne Arundel County, Hydrologic Unit 02060004, on left bank 50 ft downstream from highway bridge, 0.5 mi east of Chesterfield, 1.4 mi upstream from confluence with North River, and 6.8 mi northwest of Annapolis.

DRAINAGE AREA.--6.92 mi^2.

PERIOD OF RECORD.--October 1942 to September 1952. Annual maximum, water years 1965-74. October 1974 to current year. Monthly discharge only October and November 1942, published in WSP 1302.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 15 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges (ice effect), which are fair. Records include sewage from Crownsville State Hospital, which obtains its water supply from wells. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--25 years (water years 1943-52, 1975-88), 8.83 ft^3/s, 17.33 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,100 ft^3/s, Aug. 2, 1944, gage height, 5.49 ft, from rating curve extended above 200 ft^3/s on basis of contracted-opening measurement at gage height 4.43 ft; minimum discharge, 0.65 ft^3/s, July 27, 28, Aug. 4, 5, 21, 22, 1987; minimum gage height, 1.71 ft, Feb. 11, 1983, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 185 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
June 20	2100	*250	*3.83	No other peak greater than base discharge.			

Minimum discharge, 1.3 ft^3/s, Oct. 11, 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	7.5	5.4	4.6	4.9	5.2	8.7	11	5.8	5.2	9.9	2.5
2	2.8	7.6	4.9	5.8	4.7	5.1	6.2	89	5.2	4.9	6.3	2.4
3	4.6	3.5	4.6	5.5	7.4	5.2	7.9	30	4.9	4.7	5.2	2.2
4	3.0	2.8	4.2	4.9	12	5.2	6.9	14	4.4	6.8	4.7	2.2
5	2.4	3.3	3.9	3.6	5.8	6.5	8.9	14	4.9	28	4.2	2.2
6	1.7	5.7	4.0	5.5	5.2	21	19	59	34	56	3.7	2.3
7	1.7	3.9	4.0	8.0	5.3	22	11	43	39	20	3.6	2.3
8	1.7	3.1	3.7	8.7	5.2	8.5	15	19	18	9.7	3.3	2.4
9	1.8	2.8	3.8	9.7	4.4	7.8	11	14	13	7.5	3.0	2.4
10	1.8	2.8	3.8	6.1	e3.6	8.4	8.1	17	12	6.3	2.9	2.4
11	1.7	3.0	3.5	5.2	e3.6	7.3	7.1	15	7.6	5.5	3.8	2.2
12	1.4	2.7	2.8	8.7	e3.6	6.7	6.6	11	5.9	4.7	5.4	2.2
13	1.3	3.6	2.7	7.7	e4.0	5.9	6.5	9.9	6.1	5.8	9.9	2.5
14	1.5	4.5	3.0	5.1	12	5.8	6.0	9.3	7.7	6.8	4.9	2.6
15	1.5	3.2	4.1	17	8.2	5.7	10	8.7	22	4.8	4.7	2.6
16	1.6	3.3	3.7	11	8.7	5.3	11	16	13	12	4.6	9.8
17	1.7	12	3.1	6.3	6.1	5.2	6.8	17	8.3	15	3.9	31
18	2.0	9.9	2.8	5.7	5.2	5.6	7.4	10	6.2	6.6	3.6	5.3
19	2.3	5.4	3.1	5.3	5.2	6.1	24	8.1	5.2	5.3	6.4	6.9
20	2.2	18	3.6	5.2	5.2	5.6	12	7.1	60	29	5.0	17
21	4.5	12	4.9	4.7	12	15	8.6	6.4	69	11	4.3	8.3
22	13	5.8	4.7	3.9	18	8.4	7.4	5.8	94	6.9	4.1	4.1
23	3.8	4.8	4.8	e4.0	11	6.0	6.6	21	26	5.5	3.7	3.1
24	2.9	4.3	7.8	4.8	6.9	35	6.0	43	21	4.9	3.3	3.1
25	2.6	3.9	12	4.9	5.8	25	5.9	14	16	4.6	3.1	2.3
26	2.5	3.6	5.4	5.0	6.4	12	5.6	10	10	4.5	3.0	32
27	2.5	4.7	4.4	5.0	6.9	9.0	5.6	13	8.3	4.8	3.1	8.9
28	2.5	40	4.9	4.4	6.0	8.1	5.2	13	7.4	6.1	3.1	4.1
29	2.6	15	5.6	4.4	---	7.3	12	7.6	6.7	4.4	3.2	3.6
30	2.6	7.1	4.4	5.8	---	6.9	15	6.5	5.7	3.7	3.1	3.1
31	2.7	---	4.3	5.6	---	11	---	6.2	---	23	2.6	---
TOTAL	82.7	209.8	137.9	192.1	193.3	297.8	278.0	568.6	547.3	324.0	135.6	178.0
MEAN	2.67	6.99	4.45	6.20	6.90	9.61	9.27	18.3	18.2	10.5	4.37	5.93
MAX	13	40	12	17	18	35	24	89	94	56	9.9	32
MIN	1.3	2.7	2.7	3.6	3.6	5.1	5.2	5.8	4.4	3.7	2.6	2.2
CFSM	.39	1.01	.64	.90	1.00	1.39	1.34	2.65	2.64	1.51	.63	.86
IN.	.44	1.13	.74	1.03	1.04	1.60	1.49	3.06	2.94	1.74	.73	.96

CAL YR 1988 TOTAL 1988.32 MEAN 5.43 MAX 42 MIN .83 CFSM .79 IN. 10.69
WTR YR 1989 TOTAL 3145.1 MEAN 8.62 MAX 94 MIN 1.3 CFSM 1.25 IN. 16.91

e Estimated

01591000 PATUXENT RIVER NEAR UNITY, MD

LOCATION.--Lat 39°14'18", long 77°03'23", Montgomery County, Hydrologic Unit 02060006, on right bank at downstream side of bridge on State Highway 97, 0.6 mi upstream from Cattail Creek, 0.8 mi upstream from Triadelphia Reservoir, 1.1 mi northeast of Unity, and 97 mi upstream from mouth.

DRAINAGE AREA.--34.8 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1944 to current year.

REVISED RECORDS.--WSP 1111: 1947. WSP 1432: 1948.

GAGE.--Water stage recorder and concrete control. Datum of gage is 364.76 ft above National Geodetic Vertical Datum of 1929 (Washington Suburban Sanitary Commission bench mark). Prior to Aug. 14, 1946, non-recording gage at same site and datum.

REMARKS.--Water-discharge records good except those for estimated daily discharges (ice effect), which are fair.

AVERAGE DISCHARGE.--45 years, 39.0 ft^3/s, 15.22 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,800 ft^3/s, Sept. 11, 1971, gage height, 18.60 ft, from rating curve extended above 1,500 ft^3/s on basis of slope-area measurement at gage height 13.00 ft; minimum discharge, 0.20 ft^3/s, Sept 10, 11, 12, 1966, gage height, 1.66 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 770 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 6	0330	*4,640	*10.54	June 24	0100	1,150	6.33
May 6	2200	772	5.45				

Minimum discharge, 7.6 ft^3/s, Oct. 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	15	20	17	21	32	67	39	44	36	34	14
2	10	15	18	18	20	29	56	90	41	34	29	13
3	11	13	18	19	24	28	58	49	39	32	26	13
4	11	13	17	19	32	29	53	40	38	36	24	12
5	10	20	16	17	24	34	53	138	46	37	22	12
6	9.5	30	15	17	23	83	61	1390	61	52	21	13
7	9.0	16	15	18	22	60	51	227	138	41	22	13
8	9.0	14	15	22	20	42	48	128	61	34	22	13
9	9.0	13	15	34	18	40	48	102	61	31	21	13
10	9.0	13	15	27	e18	43	43	162	54	30	20	13
11	8.5	12	14	24	e17	47	40	113	42	27	21	12
12	8.1	12	13	98	e17	48	38	94	39	26	23	12
13	8.1	16	12	83	e18	43	37	83	40	47	22	12
14	8.1	18	13	45	50	40	37	78	52	36	23	12
15	8.5	14	15	88	43	39	52	85	54	29	23	12
16	8.5	13	13	57	45	36	52	247	45	50	22	17
17	8.5	29	13	41	34	34	42	185	45	39	20	21
18	9.5	21	12	36	30	37	41	112	40	33	20	14
19	10	21	12	33	28	40	53	93	36	31	23	14
20	9.5	86	13	30	27	36	42	83	80	47	23	20
21	13	45	16	26	55	84	39	75	76	35	21	29
22	29	26	17	27	99	53	37	68	63	31	21	24
23	14	21	18	27	68	44	34	74	151	28	19	21
24	13	19	25	23	49	274	33	91	207	26	17	20
25	12	18	32	23	40	129	33	67	62	24	16	16
26	11	17	21	23	39	86	32	60	52	24	16	39
27	11	17	18	23	38	71	31	68	45	24	17	21
28	11	52	18	21	35	63	30	56	47	34	17	17
29	11	28	19	20	---	57	32	51	43	24	17	16
30	11	22	17	22	---	60	33	48	38	23	16	15
31	11	---	16	22	---	112	---	46	---	59	15	---
TOTAL	331.8	669	511	1000	954	1853	1306	4242	1840	1060	653	493
MEAN	10.7	22.3	16.5	32.3	34.1	59.8	43.5	137	61.3	34.2	21.1	16.4
MAX	29	86	32	98	99	274	67	1390	207	59	34	39
MIN	8.1	12	12	17	17	28	30	39	36	23	15	12
CFSM	.31	.64	.47	.93	.98	1.72	1.25	3.93	1.76	.98	.61	.47
IN.	.35	.72	.55	1.07	1.02	1.98	1.40	4.53	1.97	1.13	.70	.53

CAL YR 1988 TOTAL 13546.6 MEAN 37.0 MAX 514 MIN 8.1 CFSM 1.06 IN. 14.48
WTR YR 1989 TOTAL 14912.8 MEAN 40.9 MAX 1390 MIN 8.1 CFSM 1.17 IN. 15.94

e Estimated

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)
DEC									
20...	1400	14	91	6.8	4.5	12.5	2	13.0	6.4
APR									
26...	1120	32	94	7.0	11.5	--	10	11.9	6.6
SEP									
11...	1310	12	89	6.7	19.5	31.5	5	7.8	6.8

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT IT FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
DEC									
20...	2.9	5.1	1.2	15	11	10	<0.10	7.2	52
APR									
26...	3.1	5.3	1.2	20	3.8	10	0.10	5.7	60
SEP									
11...	2.9	5.2	1.5	18	2.0	9.3	0.10	8.4	67

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
DEC								
20...	53	2.40	<0.010	140	75	40	34	1.2
APR								
26...	46	2.30	0.010	220	69	40	43	1.3
SEP								
11...	47	2.50	0.020	270	100	30	23	1.5

01591350 CATTAIL CREEK NEAR COOKESVILLE, MD

WATER-QUALITY RECORDS

LOCATION.--Lat 39°18'50", long 77°03'15", Howard County, Hydrologic Unit 02060006, on left bank at upstream side of highway bridge on Bushy Park Road, 0.1 mi west of intersection of Carrs Mill Road, 2.3 mi west of Cookesville, and 6.8 mi upstream from mouth.

DRAINAGE AREA--8.37 mi^2.

PERIOD OF RECORD.--October 1988 to September 1989.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)
DEC									
20...	1130	3.6	196	6.6	3.5	6.5	1	14.0	12
APR									
26...	0850	6.3	197	7.0	9.0	16.0	10	11.7	13

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT IT FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
DEC									
20...	6.0	10	1.5	13	4.3	29	<0.10	8.4	114
APR									
26...	6.4	12	1.6	22	4.5	30	0.10	7.0	134

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
DEC								
20...	81	5.80	0.050	170	50	60	47	1.6
APR								
26...	87	5.10	0.030	300	55	80	77	1.7

01591400 CATTAIL CREEK NEAR GLENWOOD, MD

LOCATION (REVISED).--Lat 39°15'21", long 77°03'05", Howard County, Hydrologic Unit 02060006, on right bank at downstream side of bridge on State Highway 97, 1.2 mi upstream from mouth.

DRAINAGE AREA.--22.9 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1978 to September 1983 (published as "at Roxbury Mills Road at Roxbury Mills, MD"), October 1983 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 400 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Dec. 28, 1983, at site 800 ft upstream at datum 1.76 ft lower.

REMARKS.--Water-discharge records good except those for estimated daily discharges (missing record), which are fair.

AVERAGE DISCHARGE.--11 years, 25.0 ft^3/s, 14.83 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,040 ft^3/s, Feb. 12, 1985, gage height, 8.12 ft, from rating curve extended above 175 ft^3/s on basis of contracted-opening and flow-over-road measurement at gage height of 8.1 ft, from floodmarks; minimum discharge, 1.8 ft^3/s, July 5, 1986.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 6	0430	*3,490	*7.70	May 16	1515	771	4.34
May 6	2030	1,510	5.69	June 7	1115	720	4.36

Minimum daily discharge, 7.1 ft^3/s, Oct. 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.6	12	14	12	15	18	31	23	26	22	23	11
2	7.6	12	13	13	14	17	26	47	25	21	23	11
3	8.2	12	13	14	17	17	28	25	23	21	19	11
4	8.1	12	12	13	20	17	26	21	23	30	17	11
5	7.8	17	12	13	16	21	27	120	24	30	16	11
6	7.3	21	12	e16	15	50	32	1380	35	44	16	11
7	7.3	14	12	e21	15	32	26	101	167	29	16	11
8	7.3	12	11	e28	14	24	25	48	41	24	16	11
9	8.8	11	11	e23	13	23	25	40	39	22	14	11
10	8.0	11	11	17	14	26	23	69	34	20	14	10
11	7.5	11	11	16	13	25	22	47	27	19	15	10
12	7.1	11	11	61	13	24	22	39	26	18	16	9.9
13	7.1	15	10	38	12	22	21	36	26	37	15	10
14	7.3	15	11	24	32	21	21	34	38	26	30	10
15	7.7	12	11	51	26	21	30	38	37	21	25	10
16	7.8	12	10	28	26	19	30	223	32	34	18	17
17	7.8	24	10	23	20	18	24	93	32	26	16	18
18	8.1	17	9.7	20	18	20	23	47	29	23	15	13
19	8.7	18	9.8	19	17	20	28	39	25	21	18	13
20	8.4	57	9.9	18	17	20	23	36	70	33	17	20
21	11	27	12	16	36	44	21	34	62	24	17	17
22	18	19	12	17	48	26	20	31	49	21	16	18
23	11	17	13	15	30	23	19	39	55	19	15	16
24	10	15	17	15	24	138	19	43	50	18	14	16
25	9.9	14	18	15	20	50	18	34	32	18	13	13
26	9.6	13	14	16	20	33	18	31	28	17	13	31
27	9.6	14	12	16	20	29	18	37	26	18	13	17
28	9.8	34	13	15	19	27	17	31	26	20	15	14
29	9.9	18	13	15	---	26	19	28	24	16	14	13
30	9.7	15	12	16	---	28	19	27	22	16	13	13
31	9.7	---	12	16	---	47	---	27	---	44	12	---
TOTAL	273.7	512	372.4	640	564	926	701	2868	1153	752	514	407.9
MEAN	8.83	17.1	12.0	20.6	20.1	29.9	23.4	92.5	38.4	24.3	16.6	13.6
MAX	18	57	18	61	48	138	32	1380	167	44	30	31
MIN	7.1	11	9.7	12	12	17	17	21	22	16	12	9.9
CFSM	.39	.75	.52	.90	.88	1.30	1.02	4.04	1.68	1.06	.72	.59
IN.	.44	.83	.60	1.04	.92	1.50	1.14	4.66	1.87	1.22	.83	.66

CAL YR 1988 TOTAL 7969.8 MEAN 21.8 MAX 723 MIN 5.6 CFSM .95 IN. 12.95
WTR YR 1989 TOTAL 9684.0 MEAN 26.5 MAX 1380 MIN 7.1 CFSM 1.16 IN. 15.73

e Estimated

01591400 CATTAIL CREEK NEAR GLENWOOD, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1988 to September 1989.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)
DEC									
21...	0930	11	124	7.5	4.0	8.0	5	13.0	9.0
APR									
26...	1350	20	132	7.3	14.0	--	15	11.6	9.3

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT IT FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
DEC									
21...	4.3	7.9	1.6	15	4.8	16	<0.10	7.9	87
APR									
26...	4.4	7.8	1.3	20	4.8	17	0.10	6.1	95

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
DEC								
21...	61	3.70	0.010	310	70	50	34	2.1
APR								
26...	62	3.40	0.030	670	83	60	45	2.3

01591610 PATUXENT RIVER BELOW BRIGHTON DAM NEAR BRIGHTON, MD

LOCATION.--Lat 39°11'31", long 77°00'16", Montgomery County, Hydrologic Unit 02060006, on right bank at Brighton Dam, 500 ft downstream from Triadelphia Reservoir, 1.3 mi east of Brighton, and 92 mi upstream from mouth.

DRAINAGE AREA.--78.6 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1980 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 310 ft above National Geodetic Vertical Datum of 1929, from topographic map. June 1978 to October 1980, nonrecording gage 300 ft upstream on left bank at different datum.

REMARKS.--No estimated daily discharges. Water-discharge records good. Flow completely regulated by Triadelphia Reservoir, 500 ft upstream, usable capacity, 6,200,000,000 gal; no dead storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,650 ft^3/s, May 6, 1989, gage height, 10.26 ft; minimum discharge, 1.2 ft^3/s, Dec. 3, 1985, gage height, 0.78 ft; minimum daily discharge, 2.1 ft^3/s, Jan. 27, 28, 1983.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 22, 1972, reached a discharge of 17,800 ft^3/s. Data provided by Washington Suburban Sanitary Commission.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,650 ft^3/s, May 6, gage height, 10.26 ft; minimum discharge, 3.5 ft^3/s, May 3, 4, gage height, 0.97 ft; minimum daily discharge, 7.5 ft^3/s, Nov. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.5	8.2	45	51	51	98	100	50	103	111	19	9.8
2	9.1	7.9	45	51	51	96	99	49	103	111	18	9.9
3	9.1	7.8	45	50	51	96	151	36	102	95	213	9.7
4	9.1	7.7	45	51	51	96	192	39	102	82	315	9.5
5	9.8	7.5	45	51	51	96	192	93	103	111	247	9.5
6	9.5	14	70	50	50	96	192	1730	102	111	12	9.5
7	9.5	15	79	51	50	96	191	829	103	111	19	68
8	9.5	8.7	66	51	50	96	192	83	416	111	25	109
9	9.5	8.1	80	51	50	95	192	304	187	111	24	109
10	9.6	10	94	51	49	93	130	112	470	111	24	107
11	9.2	17	63	50	48	93	99	112	273	84	24	256
12	9.5	17	66	51	49	94	99	111	94	64	24	559
13	9.6	17	65	52	48	93	99	111	94	65	24	548
14	9.5	14	65	52	50	93	99	111	97	65	24	712
15	9.7	13	64	53	49	92	99	111	101	23	133	1030
16	9.5	13	59	52	49	92	99	111	101	37	198	395
17	9.3	13	27	51	48	52	99	538	106	65	72	51
18	9.4	12	14	51	49	114	99	642	106	65	72	396
19	9.5	12	14	51	49	116	99	297	106	66	72	457
20	13	12	41	51	49	113	81	111	125	65	71	282
21	12	12	53	51	72	111	49	109	394	65	70	148
22	10	16	54	51	84	99	49	157	341	55	71	134
23	9.9	35	54	51	88	105	49	194	185	19	72	134
24	9.7	16	54	51	100	111	50	194	436	19	60	134
25	9.4	35	53	51	99	107	50	194	164	32	34	133
26	9.1	15	53	51	99	106	50	142	127	57	18	103
27	9.0	15	53	51	99	158	50	110	112	36	18	93
28	8.5	39	53	51	98	259	50	107	111	19	18	59
29	7.8	51	36	51	---	210	50	103	111	19	23	23
30	7.8	45	51	51	---	101	50	103	111	18	18	53
31	7.8	---	51	51	---	101	---	104	---	18	14	---
TOTAL	293.4	513.9	1657	1583	1731	3378	3100	7097	5086	2021	2046	6150.9
MEAN	9.46	17.1	53.5	51.1	61.8	109	103	229	170	65.2	66.0	205
MAX	13	51	94	53	100	259	192	1730	470	111	315	1030
MIN	7.8	7.5	14	50	48	52	49	36	94	18	12	9.5
(†)	4810	5490	5290	5650	5980	6160	6000	6210	5980	6380	6140	3200

CAL YR 1988 TOTAL 28727.7 MEAN 78.5 MAX 610 MIN 7.5 CFSM 1.00 IN. 13.60
WTR YR 1989 TOTAL 34657.2 MEAN 95.0 MAX 1730 MIN 7.5 CFSM 1.21 IN. 16.40

† Month-end contents, in millions of gallons, in Triadelphia Reservoir (contents on Sept. 30, 1988, 4,540,000,000 gal). Records provided by Washington Suburban Sanitary Commission.

01591610 PATUXENT RIVER BELOW BRIGHTON DAM NEAR BRIGHTON, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1988 to September 1989.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TEMPERATURE AIR (DEG C)	COLOR (PLATINUM-COBALT UNITS)	OXYGEN, DISSOLVED (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)
DEC									
21...	1445	53	73	7.1	5.0	9.0	3	11.7	9.9
APR									
26...	1410	50	162	7.0	14.0	22.0	17	10.0	9.0
SEP									
11...	1400	106	117	6.8	22.5	37.0	5	7.5	9.9

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
DEC									
21...	3.8	6.2	2.9	26	6.8	11	0.10	3.3	73
APR									
26...	3.8	6.5	2.5	20	6.8	13	0.10	0.45	71
SEP									
11...	3.6	5.9	2.8	29	6.0	11	0.10	5.7	81

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
DEC								
21...	61	1.00	0.020	90	10	20	2	3.8
APR								
26...	55	1.80	0.010	190	22	40	44	2.4
SEP								
11...	62	1.50	0.020	570	320	240	260	3.8

01591700 HAWLINGS RIVER NEAR SANDY SPRING, MD

LOCATION.--Lat 39°10'29", long 77°01'22", Montgomery County, Hydrologic Unit 02060006, on right bank at downstream side of bridge on State Highway 650, 1.0 mi upstream from mouth, and 1.7 mi north of Sandy Spring.

DRAINAGE AREA.--27.0 mi^2.

PERIOD OF RECORD.--June 1978 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 320 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges (missing record, backwater from leaves, partially plugged intake, ice effect), which are poor. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--11 years, 29.2 ft^3/s, 14.69 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,300 ft^3/s, Sept. 6, 1979, gage height, 8.80 ft, from rating curve extended above 1,200 ft^3/s on basis of contracted-opening and flow-over-road measurement of peak flow; minimum discharge, 0.75 ft^3/s, Jan. 30, 1981, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 6	0130	*3,520	*8.35	June 7	1000	1,010	5.33
June 5	2330	1,160	5.72				

Minimum discharge, 4.7 ft^3/s, Oct. 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e6.0	e14	17	14	16	21	43	e25	22	22	25	9.9
2	e6.0	e11	15	17	15	20	e30	e35	20	21	24	9.9
3	e6.5	e10	14	20	21	20	e28	e30	19	21	25	9.4
4	e6.5	14	14	17	32	19	e27	e26	19	29	20	9.4
5	e6.0	24	12	14	20	29	e26	129	118	31	18	9.4
6	e5.5	29	12	15	18	91	e30	1310	306	47	17	9.7
7	e5.5	11	12	16	17	51	e25	135	405	30	17	9.9
8	e5.5	8.6	12	28	16	33	e25	55	69	24	18	10
9	e7.0	8.3	12	40	14	32	e25	44	64	21	16	10
10	e5.5	7.9	e10	27	e13	34	e23	106	49	20	16	12
11	e5.0	8.2	e9.0	22	e12	34	e22	57	35	19	16	8.9
12	e4.7	8.3	8.9	108	e12	30	e21	45	32	18	17	8.9
13	e4.7	13	8.9	58	13	27	e21	43	30	29	18	8.9
14	e4.7	14	10	30	48	24	e21	41	38	25	17	9.3
15	e5.0	9.5	11	89	35	24	e35	54	45	19	20	9.3
16	e5.0	8.4	10	40	34	22	29	165	35	39	18	17
17	e5.0	36	9.8	28	24	21	e24	114	38	29	16	21
18	e5.0	19	8.8	24	21	22	e23	52	34	23	15	12
19	e5.6	17	9.2	22	20	24	35	41	27	21	17	11
20	e5.4	69	9.5	20	19	23	e25	37	114	124	16	24
21	e6.6	33	12	18	73	75	e23	33	85	43	15	19
22	28	18	14	17	86	38	e22	29	93	28	15	21
23	9.9	14	15	18	48	29	e21	40	103	24	14	17
24	e8.5	13	28	17	33	e200	e20	51	69	21	13	15
25	e7.5	11	31	16	26	e80	e19	34	40	20	12	12
26	e7.5	11	17	17	26	e40	e19	29	33	24	12	46
27	e7.0	12	13	17	25	e30	e18	52	29	24	12	17
28	e7.0	87	14	17	23	e29	e18	34	27	22	e14	13
29	e7.0	29	17	16	---	28	e17	27	26	19	e13	12
30	e7.0	20	14	18	---	e30	e23	25	24	17	12	11
31	e7.0	---	14	18	---	e50	---	24	---	39	10	---
TOTAL	213.1	588.2	414.1	838	760	1230	738	2922	2048	893	508	412.9
MEAN	6.87	19.6	13.4	27.0	27.1	39.7	24.6	94.3	68.3	28.8	16.4	13.8
MAX	28	87	31	108	86	200	43	1310	405	124	25	46
MIN	4.7	7.9	8.8	14	12	19	17	24	19	17	10	8.9
CFSM	.25	.73	.49	1.00	1.01	1.47	.91	3.49	2.53	1.07	.61	.51
IN.	.29	.81	.57	1.15	1.05	1.69	1.02	4.03	2.82	1.23	.70	.57

CAL YR 1988 TOTAL 8051.0 MEAN 22.0 MAX 200 MIN 3.9 CFSM .81 IN. 11.09
WTR YR 1989 TOTAL 11565.3 MEAN 31.7 MAX 1310 MIN 4.7 CFSM 1.17 IN. 15.93

e Estimated

01592500 PATUXENT RIVER NEAR LAUREL, MD

LOCATION.--Lat 39°06'56", long 76°52'27", Prince Georges County, Hydrologic Unit 02060006, on right bank at Rocky Gorge pumping station, 600 ft downstream from T. Howard Duckett Reservoir, 0.7 mi upstream from Walker Branch, 1.3 mi northwest of Laurel, and 81 mi upstream from mouth.

DRAINAGE AREA.--132 mi^2.

PERIOD OF RECORD.--October 1944 to current year.

REVISED RECORDS.--WDR MD-DE-78-1: 1976(M).

GAGE.--Water-stage recorder. Datum of gage is 153.5 ft above National Geodetic Vertical Datum of 1929 (levels by Washington Suburban Sanitary Commission). Prior to Oct. 1, 1955, water-stage recorder and concrete control at site 0.3 mi downstream at different datum. Oct. 1, 1955 to Sept. 30, 1956, nonrecording gage at present site at datum 1.2 ft lower. Oct. 1, 1956 to Jan. 27, 1957, nonrecording gage at present site and datum. Jan. 28, 1957 to May 3, 1972, water-stage recorder and concrete control at present site and datum. May 4, 1972 to Sept. 4, 1973, nonrecording gage at present site and datum.

REMARKS.--No estimated daily discharges. Records good. Records do not include diversion at Patuxent (formerly Willis School) filtration plant for supply of Washington Suburban Sanitary District. Flow regulated by Triadelphia Reservoir, and since March 1954 by T. Howard Duckett Reservoir, combined usable capacity, 11,800,000,000 gal; dead storage, 80,000,000 gal. Several measurements of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 26,000 ft^3/s, June 22, 1972, gage height, about 25 ft, from floodmarks, from rating curve extended above 6,600 ft^3/s on basis of contracted-opening measurement of peak flow; minimum discharge, 0.05 ft^3/s, July 18, 1985 (valve closed for repair); minimum daily discharge, 1.1 ft^3/s, June 26, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,110 ft^3/s, May 7, gage height, 11.81 ft; minimum daily discharge, 17 ft^3/s, Oct. 1-3, 10, 14, Oct. 18 to Nov. 7, Nov. 10-24, Dec. 15, 22, 25, 28, Jan. 3, 8, 9, Apr. 30, May 1.

REVISIONS.--The maximum discharges for the water years 1978 and 1979 have been revised to 5,680 ft^3/s, Jan. 26, 1978, gage height, 12.34 ft, and 3,710 ft^3/s, Sept. 6, 1979, gage height, 10.57 ft, superseding figures published in the reports for 1978 and 1979.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	17	18	18	19	18	147	17	86	88	147	46
2	17	17	18	18	18	18	147	18	86	88	147	46
3	17	17	18	17	18	55	146	18	87	109	148	47
4	18	17	18	18	18	84	145	18	87	140	149	46
5	24	17	18	18	18	80	149	18	71	149	152	46
6	18	17	18	18	18	80	148	3360	168	154	152	46
7	18	17	18	18	18	79	149	2320	365	156	152	45
8	18	18	18	17	18	81	148	368	1160	157	148	45
9	18	18	18	17	18	81	148	452	346	150	136	46
10	17	17	18	18	18	109	144	141	139	144	155	45
11	18	17	18	18	18	146	140	142	188	89	154	45
12	19	17	18	18	18	146	134	141	701	87	153	45
13	18	17	18	18	18	145	149	141	236	112	153	46
14	17	17	18	18	18	148	109	141	143	153	112	40
15	18	17	17	18	18	149	85	141	141	159	122	26
16	18	17	18	18	18	149	84	234	140	157	145	19
17	18	17	18	18	18	140	111	500	143	142	159	19
18	17	17	18	18	18	148	144	762	130	141	177	19
19	17	17	18	18	18	148	144	763	85	143	176	19
20	17	17	18	18	18	123	144	622	83	134	176	19
21	17	17	18	18	18	83	144	143	631	140	175	327
22	17	17	17	18	18	84	144	143	578	136	175	245
23	17	17	18	18	18	84	144	143	289	137	177	19
24	17	17	18	18	18	84	102	196	642	136	182	20
25	17	18	17	18	18	121	67	448	512	136	182	19
26	17	18	18	18	18	84	67	298	147	137	181	19
27	17	18	18	18	18	235	67	143	130	148	180	20
28	17	18	17	18	18	361	67	143	135	149	109	19
29	17	18	18	18	---	266	47	143	110	150	146	19
30	17	18	18	18	---	149	17	108	82	148	102	19
31	17	---	18	18	---	148	---	86	---	146	47	---
TOTAL	547	518	554	555	505	3826	3581	12311	7841	4215	4669	1481
MEAN	17.6	17.3	17.9	17.9	18.0	123	119	397	261	136	151	49.4
MAX	24	18	18	18	19	361	149	3360	1160	159	182	327
MIN	17	17	17	17	18	18	17	17	71	87	47	19
(†)	8700	9210	9430	10540	11440	11580	11440	11790	11490	10850	8460	8160
(≠)	57.9	45.9	40.1	43.0	62.8	62.9	63.0	61.6	62.3	63.9	59.3	60.0

CAL YR 1988 TOTAL 29402.0 MEAN 80.3 MAX 831 MIN 17 ≠ 60.7
WTR YR 1989 TOTAL 40603.0 MEAN 111 MAX 3360 MIN 17 ≠ 56.8

† Combined month-end total contents, in millions of gallons, in Triadelphia and T. Howard Duckett Reservoirs (contents on Sept. 30, 1988, 9,520,000,000 gal). Records provided by Washington Suburban Sanitary Commission.

≠ Diversions, in cubic feet per second, upstream from station at Patuxent (formerly Willis School) filtration plant for supply of Washington Suburban Sanitary District. Records provided by Washington Suburban Sanitary Commission.

01593500 LITTLE PATUXENT RIVER AT GUILFORD, MD

LOCATION.--Lat 39°10'04", long 76°51'07", Howard County, Hydrologic Unit 02060006, on left bank 25 ft downstream from bridge on State Highway 32, 1 mi west of Guilford, 3 mi upstream from Middle Patuxent River, 4 mi north of Laurel, and 20.1 mi upstream from mouth.

DRAINAGE AREA.--38.0 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1932 to current year. Monthly discharge only for April 1932, published in WSP 1302.

REVISED RECORDS.--WSP 1502: 1933, 1934(M), 1939(M), 1945(M), 1948(P).

GAGE.--Water-stage recorder. Concrete control since June 20, 1946. Datum of gage is 259.26 ft above National Geodetic Vertical Datum of 1929. Prior to June 25, 1946, nonrecording gage at same site and datum.

REMARKS.--Water-discharge records good except those for estimated daily discharges (ice effect), which are fair. Low flow affected by regulation from unknown source.

AVERAGE DISCHARGE.--57 years, 43.1 ft^3/s, 15.40 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,400 ft^3/s June 22, 1972, gage height, 18.38 ft, from high-water mark in well, from rating curve extended above 1,800 ft^3/s on basis of contracted-opening measurement at gage height 13.26 ft and contracted-opening and flow-over-embankment measurement at gage height 18.38 ft; no flow Sept. 8, and parts of Sept. 6, 7, 9-12, 1966.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 28	0200	883	6.48	June 6	0300	1,060	7.93
Feb. 21	1600	919	6.64	June 21	0400	1,210	8.36
Mar. 24	1400	1,010	7.06	July 20	0800	1,120	8.10
May 6	0600	*5,070	*13.16				

Minimum discharge, 7.1 ft^3/s, Oct. 8, 9, 10, 11, 12, 13

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.8	31	22	19	23	29	54	105	39	26	63	20
2	9.6	21	19	30	20	27	37	351	36	25	36	19
3	13	16	17	27	46	27	49	57	34	25	31	18
4	11	13	16	25	63	27	39	36	32	112	28	17
5	9.6	55	15	e18	32	49	62	226	107	95	25	18
6	8.7	61	15	e16	27	312	161	2420	570	224	23	18
7	8.0	21	15	24	25	86	54	209	260	77	23	18
8	7.6	16	14	70	23	45	54	90	102	41	22	18
9	7.5	13	14	75	e21	49	65	68	106	33	20	18
10	7.3	12	14	39	e20	49	41	175	81	30	20	18
11	7.2	12	13	31	e19	44	35	88	49	28	21	17
12	7.2	11	e13	308	19	39	33	62	42	26	23	17
13	7.5	29	12	92	19	34	32	57	42	61	22	20
14	7.7	23	12	41	235	32	31	58	80	42	21	27
15	7.8	15	13	319	75	31	127	59	120	29	23	20
16	8.1	13	e13	61	73	28	68	310	49	227	33	57
17	8.1	128	e12	39	40	27	40	396	53	72	22	73
18	9.5	33	e12	33	32	31	53	95	48	46	20	25
19	11	57	12	30	29	34	227	68	36	39	151	38
20	9.4	252	14	26	27	36	55	55	322	524	39	125
21	64	50	18	23	383	194	40	49	480	77	28	189
22	124	26	18	e21	254	52	35	44	143	47	27	64
23	20	20	26	21	74	37	31	169	63	39	22	61
24	20	18	67	21	43	631	29	352	52	34	20	36
25	16	16	53	21	35	148	28	83	43	32	20	24
26	13	16	25	25	37	52	28	59	39	31	20	179
27	12	32	20	24	37	42	27	150	35	33	20	41
28	12	397	23	20	32	37	26	78	34	77	38	27
29	13	44	22	19	---	35	49	50	37	65	69	24
30	12	27	18	34	---	41	42	43	37	69	28	22
31	12	---	18	29	---	186	---	41	---	221	22	---
TOTAL	493.6	1478	595	1581	1763	2491	1652	6103	3171	2507	980	1268
MEAN	15.9	49.3	19.2	51.0	63.0	80.4	55.1	197	106	80.9	31.6	42.3
MAX	124	397	67	319	383	631	227	2420	570	524	151	189
MIN	7.2	11	12	16	19	27	26	36	32	25	20	17
CFSM	.42	1.30	.51	1.34	1.66	2.11	1.45	5.18	2.78	2.13	.83	1.11
IN.	.48	1.45	.58	1.55	1.73	2.44	1.62	5.97	3.10	2.45	.96	1.24

CAL YR 1988 TOTAL 15724.0 MEAN 43.0 MAX 683 MIN 6.6 CFSM 1.13 IN. 15.39
WTR YR 1989 TOTAL 24082.6 MEAN 66.0 MAX 2420 MIN 7.2 CFSM 1.74 IN. 23.58

e Estimated

01593500 LITTLE PATUXENT RIVER AT GUILFORD, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1988 to September 1989.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)
DEC												
21...	1315	16	278	6.9	4.5	9.5	10	11.8	30	5.9	14	3.0
APR												
25...	1410	28	272	8.0	14.5	28.0	15	13.5	26	5.9	18	2.5
SEP												
12...	1345	17	269	7.1	21.0	27.5	5	8.1	30	6.4	14	3.1

DATE	ALKA-LINITY WAT WH TOT IT FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G)
DEC												
21...	58	13	38	0.10	12	186	152	1.70	0.020	--	--	--
APR												
25...	68	16	36	0.10	6.7	178	149	1.10	0.020	--	--	--
SEP												
12...	79	11	29	0.10	15	172	153	1.40	0.030	<1	<1	3

DATE	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MANGA-NESE, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	MERCURY RECOV. FM BOT-TOM MA-TERIAL (UG/G AS HG)	ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
DEC											
21...	--	350	73	--	--	120	110	--	--	--	2.8
APR											
25...	--	350	51	--	--	90	87	--	--	--	2.5
SEP											
12...	1	210	62	3300	<10	60	52	220	<0.01	10	2.8

01593710 MIDDLE PATUXENT RIVER NEAR SIMPSONVILLE, MD

LOCATION.--Lat 39°11'48", long 76°53'59", Howard County, Hydrologic Unit 02060006, on right bank 0.8 mi upstream from bridge on State Highway 32 on W. R. Grace Company property, 1.3 mi northwest of Simpsonville, and 7.8 mi upstream from Little Patuxent River.

DRAINAGE AREA.--48.4 mi^2.

WATER-DISCHARGE RECORDS

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

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

REMARKS.--Water-discharge records good except those for estimated daily discharges (ice effect, missing record), which are fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,800 ft^3/s, May 6, 1989, gage height, 8.84 ft, from rating curve extended above 300 ft^3/s on the basis of slope-area measurement of peak flow ; minimum discharge, 6.6 ft^3/s, Aug. 20, Sept. 3, 4, 5, 1987, gage height, 0.91 ft.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 6	0115	*4,800	*8.84	June 20	1830	4,590	8.62
May 6	2300	990	4.34	June 21	2245	951	4.28
May 16	2115	951	4.28	July 20	0600	1,020	4.39
June 5	2315	2,320	6.09				

Minimum discharge, 12 ft^3/s, Oct. 11,12,13.

REVISIONS.--Revised figures of discharge for water years 1987-88, superseding those published in the 1988 report are given herein.

EXTREMES FOR WATER YEARS 1987-88.--Peak discharges greater than base discharge of 900 ft^3/s and maximum (*):

Water Year	Date	Time	Discharge (ft^3/s)	Gage height (ft)	Water Year	Date	Time	Discharge (ft^3/s)	Gage height (ft)
1987	Sept. 8, 1987	2015	1,110	4.52	1988	Jan. 20, 1988	0600	*2,040	*5.77
1987	Sept. 12, 1987	2200	951	4.28	1988	May 21, 1988	0500	913	4.22
					1988	July 23, 1988	2130	1,130	4.55
1988	Nov. 29, 1988	1700	1,210	4.67					
1988	Jan. 20, 1988	0345	1,390	4.93					

August to September 1987: Minimum discharge, 6.6 ft^3/s, Aug. 20, Sept. 3,4,5, gage height, 0.91 ft.

Water year 1988: Minimum discharge, 9.3 ft^3/s, Aug. 18, 19, gage height, 1.04 ft.

01593710 MIDDLE PATUXENT RIVER NEAR SIMPSONVILLE, MD--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	24	60	41	69	40	41	37	37	17	17	14
2	16	23	47	38	109	39	40	35	36	17	16	13
3	18	23	41	34	108	40	40	35	36	17	15	12
4	23	23	46	e33	92	69	41	36	36	17	15	45
5	16	22	42	e31	66	82	38	98	35	e17	15	35
6	17	21	37	e30	50	52	37	258	33	e16	16	18
7	32	21	35	e29	e47	48	88	97	31	e16	23	15
8	21	22	34	e28	e45	44	98	60	31	e15	15	14
9	18	22	34	e27	e42	44	57	51	41	17	14	14
10	e17	40	33	e26	41	43	49	50	36	19	13	14
11	e16	68	34	e26	46	40	44	76	32	16	13	13
12	e16	45	32	e26	187	39	42	55	30	23	13	12
13	e15	52	30	e28	69	41	41	47	28	19	12	14
14	e14	50	29	e26	56	39	39	43	27	17	12	13
15	e14	40	76	e25	51	38	39	41	26	16	11	12
16	e14	35	52	e24	79	36	39	40	26	15	10	11
17	e14	33	40	e24	54	36	37	55	26	16	10	12
18	e14	52	37	124	51	36	42	154	28	15	9.8	15
19	e14	36	35	77	69	37	49	106	25	16	11	14
20	e14	33	50	751	110	36	39	68	25	17	24	13
21	e22	29	42	93	64	34	38	203	23	e39	20	13
22	19	27	37	64	52	33	35	68	23	e32	13	12
23	18	27	37	52	51	34	35	106	22	e180	12	12
24	19	27	35	47	49	35	37	196	21	77	27	12
25	18	27	35	e46	45	35	35	134	20	26	19	28
26	18	26	59	e45	43	122	33	71	21	31	13	18
27	85	27	42	e44	43	109	44	57	20	28	12	14
28	126	66	42	e43	43	55	87	51	19	23	12	13
29	35	383	52	e43	42	48	44	46	19	21	35	13
30	28	129	40	e42	---	45	40	42	18	18	25	13
31	25	---	39	55	---	42	---	40	---	17	16	---
TOTAL	753	1453	1284	2022	1873	1471	1368	2456	831	830	488.8	471
MEAN	24.3	48.4	41.4	65.2	64.6	47.5	45.6	79.2	27.7	26.8	15.8	15.7
MAX	126	383	76	751	187	122	98	258	41	180	35	45
MIN	14	21	29	24	41	33	33	35	18	15	9.8	11
CFSM	.50	1.00	.86	1.35	1.33	.98	.94	1.64	.57	.55	.33	.32
IN.	.58	1.12	.99	1.55	1.44	1.13	1.05	1.89	.64	.64	.38	.36

WTR YR 1988 TOTAL 15300.8 MEAN 41.8 MAX 751 MIN 9.8 CFSM .86 IN. 11.76

e Estimated

01593710 MIDDLE PATUXENT RIVER NEAR SIMPSONVILLE, MD--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	24	31	27	31	39	64	52	48	51	58	28
2	13	23	28	29	30	38	53	108	44	49	50	28
3	16	20	27	31	37	37	59	53	42	48	45	27
4	15	19	26	29	50	36	54	44	41	113	42	26
5	14	25	25	e28	36	46	60	181	268	82	39	26
6	13	41	25	e28	34	138	90	e2100	360	140	38	27
7	13	22	24	e30	32	79	61	214	317	80	38	28
8	13	19	24	44	31	54	60	98	106	59	39	28
9	13	19	24	59	e28	54	59	78	115	52	36	28
10	13	18	24	42	e28	61	51	164	85	50	36	27
11	13	19	23	38	e28	57	50	102	61	45	37	25
12	12	18	e23	146	e28	52	46	80	55	44	39	27
13	13	25	22	87	28	48	44	73	56	68	38	28
14	14	27	e22	52	92	45	43	69	91	57	36	28
15	14	21	e22	156	62	44	69	79	99	46	47	27
16	14	20	22	67	63	41	69	409	66	146	45	41
17	14	56	22	50	46	39	51	275	72	74	36	47
18	15	31	22	43	41	41	53	104	62	57	35	30
19	16	32	22	41	38	44	95	79	52	52	58	34
20	15	108	22	37	37	41	58	68	1280	267	42	118
21	25	53	26	33	147	113	51	62	363	75	40	72
22	47	32	27	35	141	61	47	56	205	60	40	45
23	18	28	28	37	79	50	44	100	115	54	35	41
24	19	26	44	32	55	339	43	134	97	49	32	38
25	18	25	48	32	47	130	41	73	78	46	32	34
26	17	24	31	33	47	77	40	61	69	44	31	109
27	17	28	28	33	46	64	39	106	62	45	32	46
28	17	134	28	29	42	58	37	64	62	56	40	37
29	18	45	29	29	---	53	43	52	58	42	36	35
30	18	34	26	35	---	52	45	51	53	41	33	34
31	18	---	26	33	---	110	---	50	---	114	29	---
TOTAL	508	1016	821	1425	1404	2141	1619	5239	4482	2206	1214	1169
MEAN	16.4	33.9	26.5	46.0	50.1	69.1	54.0	169	149	71.2	39.2	39.0
MAX	47	134	48	156	147	339	95	2100	1280	267	58	118
MIN	12	18	22	27	28	36	37	44	41	41	29	25
CFSM	.34	.70	.55	.95	1.04	1.43	1.12	3.49	3.09	1.47	.81	.81
IN.	.39	.78	.63	1.10	1.08	1.65	1.24	4.03	3.45	1.70	.93	.90

CAL YR 1988 TOTAL 14155.8 MEAN 38.7 MAX 751 MIN 9.8 CFSM .80 IN. 10.88
WTR YR 1989 TOTAL 23244 MEAN 63.7 MAX 2100 MIN 12 CFSM 1.32 IN. 17.87

e Estimated

01593710 MIDDLE PATUXENT RIVER NEAR SIMPSONVILLE, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1988 to September 1989.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)
DEC												
21...	1115	23	181	7.0	0.5	9.0	3	12.7	16	5.2	8.3	2.0
APR												
26...	1450	40	187	8.7	15.5	19.0	15	11.2	17	5.4	9.1	1.8
SEP												
11...	1515	26	188	7.1	21.0	35.0	3	8.0	19	5.4	9.3	2.4

DATE	ALKA-LINITY WAT WH TOT IT FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G)
DEC												
21...	38	6.9	17	<0.10	12	114	91	2.70	<0.010	--	--	--
APR												
26...	53	8.5	20	0.10	6.7	111	95	2.10	0.020	--	--	--
SEP												
11...	47	7.0	34	0.10	14	127	119	3.00	0.020	1	<1	10

DATE	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MANGA-NESE, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	MERCURY RECOV. FM BOT-TOM MA-TERIAL (UG/G AS HG)	ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
DEC											
21...	--	200	92	--	--	60	56	--	--	--	1.5
APR											
26...	--	290	85	--	--	50	38	--	--	--	1.7
SEP											
11...	5	140	66	6300	<10	20	26	310	<0.01	20	1.5

01594000 LITTLE PATUXENT RIVER AT SAVAGE, MD

LOCATION.--Lat 39°08'06", long 76°48'58", Howard County, Hydrologic Unit 02060006, on left bank 20 ft downstream from bridge on southbound lanes of U.S. Highway 1, 0.4 mi southeast of Savage, 0.9 mi downstream from Middle Patuxent River, and 16.2 mi upstream from mouth.

DRAINAGE AREA.--98.4 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1939 to September 1958. Annual maximums, water years 1959-66, 68, 72, 75. October 1975 to September 1980. May 1985 to current year. Prior to December 1939 monthly discharge only, published in WSP 1302.

GAGE.--Water-stage recorder. Elevation of gage is 125 ft above National Geodetic Vertical Datum of 1929, from topographic maps. Prior to October 1958, water-stage recorder at site 400 ft downstream at same datum. October 1958 to September 1972, crest-stage gage at site 400 ft downstream on right bank at same datum. October 1975 to September 1980, water-stage recorder at site 500 ft downstream at same datum.

REMARKS.--Water-discharge records good. Some diurnal fluctuation at low flow caused by plant 0.5 mi upstream.

AVERAGE DISCHARGE.--28 years (water years 1940-58, 1976-80, 1986-88), 107 ft^3/s, 14.77 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,400 ft^3/s, June 22, 1972, gage height, 25.4 ft, from floodmarks, from rating curve extended above 11,000 ft^3/s on basis of contracted-opening measurement of peak flow; minimum daily discharge, 7.0 ft^3/s, Sept. 19, 1943.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 6	0215	5,950	13.17	June 6	0145	3,180	10.58
May 6	0945	*8,380	*14.87	June 20	2200	5,880	13.12
May 17	0045	1,770	8.51	July 20	0830	1,910	8.76

Minimum discharge, 17 ft^3/s, Oct. 12, 13, gage height 3.06 ft.

REVISIONS.--The peak discharges and annual maximum (*) reported for water years 1985, 1987, and 1988 have been revised as shown in the following table. These figures supersede those published in the reports for 1987 and 1988.

EXTREMES FOR WATER YEARS 1985, 1987-1988.--Peak discharges above base of 1,500 ft^3/s and maximum (*):

Water year	Date	Time	Discharge (ft^3/s)	Gage height (ft)	Water year	Date	Time	Discharge (ft^3/s)	Gage height (ft)
1985	Sept. 27, 1985	1230	2,170	9.20	1988	Nov. 29, 1987	2015	1,890	8.72
					1988	Jan. 20, 1988	0915	*2,460	*9.64
1987	Dec. 25, 1986	0130	*3,180	*10.59	1988	July 23, 1988	2400	1,580	8.15
1987	Sept. 13, 1987	0030	1,580	8.15					

01594000 LITTLE PATUXENT RIVER AT SAVAGE, MD--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR 1988 TO SEPTEMBER 1989

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	51	60	49	60	78	147	135	106	e110	143	53
2	22	48	52	64	56	72	111	374	97	e100	105	50
3	26	34	49	66	82	69	125	134	91	e100	94	48
4	26	31	47	59	126	69	115	100	86	211	86	44
5	24	53	43	52	75	96	119	245	154	224	73	44
6	21	130	42	53	67	334	245	3150	1200	411	68	45
7	19	51	42	60	63	206	137	623	641	209	66	46
8	19	38	42	103	59	116	139	265	264	130	72	46
9	19	35	41	149	54	109	142	203	246	110	68	45
10	21	33	42	92	e50	124	110	425	211	104	66	43
11	21	33	39	73	e48	118	101	291	136	98	67	44
12	18	31	40	349	e48	104	95	213	116	86	71	46
13	17	51	42	230	e48	93	92	185	116	135	69	47
14	18	62	42	110	252	88	88	175	138	129	62	59
15	19	40	43	403	147	86	163	169	310	95	72	48
16	20	35	39	155	150	80	167	730	145	385	81	90
17	21	160	37	102	98	74	110	890	146	178	68	145
18	22	88	37	85	82	78	110	274	143	117	61	60
19	25	75	41	78	75	93	284	200	107	102	196	67
20	23	299	40	70	72	78	138	166	1500	836	97	251
21	53	140	48	64	372	259	110	149	982	186	73	317
22	187	69	52	e60	367	137	100	130	470	128	77	121
23	46	55	55	e60	184	102	90	303	257	109	66	117
24	39	49	103	e60	116	642	86	619	e210	102	62	85
25	35	45	131	60	94	352	83	202	e170	96	59	62
26	29	43	66	61	93	162	82	152	e140	95	56	306
27	26	51	55	64	95	128	79	306	e130	90	57	101
28	26	483	56	56	82	116	76	196	e130	132	73	68
29	27	119	62	54	---	108	98	135	e120	111	117	64
30	28	71	50	74	---	104	105	120	e110	117	67	60
31	28	---	48	73	---	268	---	113	---	355	57	---
TOTAL	947	2503	1586	3088	3115	4543	3647	11372	8672	5391	2449	2622
MEAN	30.5	83.4	51.2	99.6	111	147	122	367	289	174	79.0	87.4
MAX	187	483	131	403	372	642	284	3150	1500	836	196	317
MIN	17	31	37	49	48	69	76	100	86	86	56	43
CFSM	.31	.85	.52	1.01	1.13	1.49	1.24	3.73	2.94	1.77	.80	.89
IN.	.36	.95	.60	1.17	1.18	1.72	1.38	4.30	3.28	2.04	.93	.99

CAL YR 1988 TOTAL 31157 MEAN 85.1 MAX 1100 MIN 14 CFSM .87 IN. 11.78
WTR YR 1989 TOTAL 49935 MEAN 137 MAX 3150 MIN 17 CFSM 1.39 IN. 18.88

e Estimated

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969, 1986 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)
APR												
25...	1225	82	228	8.6	14.5	21.0	15	10.8	20	5.5	12	2.2
DEC												
12...	1406	42	205	7.2	0.5	-3.5	12	--	25	6.4	12	2.7
SEP												
12...	1125	54	222	7.6	20.5	27.5	5	8.4	23	5.7	11	2.7

DATE	ALKA-LINITY WAT WH TOT IT FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G)
APR												
25...	51	13	27	0.10	4.8	138	115	1.40	0.010	--	--	--
DEC												
12...	57	12	27	0.10	14	143	134	2.10	0.020	--	--	--
SEP												
12...	58	9.0	23	0.10	13	144	122	1.70	0.030	<1	<1	6

DATE	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MANGA-NESE, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	MERCURY RECOV. FM BOT-TOM MA-TERIAL (UG/G AS HG)	ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
APR											
25...	--	210	44	--	--	40	37	--	--	--	1.9
DEC											
12...	--	310	81	--	--	80	77	--	--	--	2.1
SEP											
12...	3	120	37	3600	<10	20	8	210	<0.01	10	2.4

01594440 PATUXENT RIVER NEAR BOWIE, MD

LOCATION.--Lat 38°57'21", long 76°41'36", Anne Arundel County, Hydrologic Unit 02060006, on left bank 45 ft upstream from bridge on U.S. Highway 50 (John Hanson Highway), 3.0 mi west of Bowie City Hall, 3.1 mi downstream from mouth of Little Patuxent River, 4.2 mi northwest of Davidsonville, and 60 mi upstream from mouth.

DRAINAGE AREA.--348 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1955 to June 1977 (gage heights and discharge measurements only), August 1977 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 13.10 ft above National Geodetic Vertical Datum of 1929. Prior to June 27, 1977, nonrecording gage at same site and datum.

REMARKS.--Water-discharge records good. Flow regulated by T. Howard Duckett Reservoir, usable capacity 5,600,000,000 gal, 21 mi upstream from station.

AVERAGE DISCHARGE.--12 years, 370 ft^3/s, 14.44 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,100 ft^3/s, June 22, 1972, gage height, 27.9 ft, from flood-marks, on basis of contracted-opening measurement of peak flow; minimum discharge observed, 32 ft^3/s, Aug. 9, 1966; minimum daily discharge, 56 ft^3/s Sept. 17, 18, 19, 1986.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,190 ft^3/s, May 7, gage height, 16.84 ft; minimum daily discharge, 83 ft^3/s, Oct. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	91	153	251	168	195	238	632	304	354	295	646	159
2	94	206	215	198	182	220	462	1320	337	275	395	153
3	103	147	197	e250	203	211	455	1130	317	265	349	146
4	107	130	186	e210	446	241	484	414	301	333	314	142
5	100	127	176	e180	282	285	445	396	302	801	299	144
6	94	227	169	e190	222	613	720	2350	1030	1020	292	144
7	89	198	162	207	206	1210	644	8400	1750	1050	288	145
8	88	145	159	248	200	596	671	4020	1750	489	281	144
9	87	132	158	477	182	414	590	1150	1100	387	273	144
10	88	e130	161	350	161	439	512	1040	1260	352	256	144
11	88	e130	155	253	169	424	432	1070	549	323	277	141
12	85	e130	140	323	175	425	401	696	509	273	288	141
13	83	e150	132	774	169	397	378	570	769	278	299	146
14	84	e240	149	374	373	377	382	528	511	402	286	159
15	85	e180	150	641	482	377	390	499	702	332	250	153
16	87	e150	148	786	447	367	663	762	693	441	274	174
17	89	e400	138	367	348	349	428	2050	489	722	281	425
18	91	443	137	284	256	338	369	1800	463	391	278	201
19	94	202	143	255	232	373	742	1100	362	342	326	168
20	94	605	142	230	215	349	768	1010	534	901	413	307
21	101	557	152	214	370	645	422	897	2130	1510	311	652
22	418	249	173	193	1160	672	352	489	3170	475	303	608
23	227	188	165	191	914	388	320	620	1480	380	290	384
24	141	167	223	190	427	837	303	2170	1200	341	283	258
25	136	154	431	187	304	1990	277	1390	972	321	279	185
26	122	145	251	182	276	830	241	859	792	387	275	593
27	115	154	189	193	297	496	232	726	464	426	275	555
28	114	1070	177	183	259	582	227	914	389	413	277	234
29	114	1110	198	173	---	657	278	521	367	349	287	185
30	113	338	181	181	---	541	370	441	321	334	287	168
31	114	---	171	249	---	614	---	382	---	638	207	---
TOTAL	3536	8357	5579	8901	9152	16495	13590	40018	25367	15246	9439	7302
MEAN	114	279	180	287	327	532	453	1291	846	492	304	243
MAX	418	1110	431	786	1160	1990	768	8400	3170	1510	646	652
MIN	83	127	132	168	161	211	227	304	301	265	207	141
CFSM	.33	.80	.52	.83	.94	1.53	1.30	3.71	2.43	1.41	.87	.70
IN.	.38	.89	.60	.95	.98	1.76	1.45	4.28	2.71	1.63	1.01	.78

CAL YR 1988 TOTAL 111640 MEAN 305 MAX 2480 MIN 83 CFSM .88 IN. 11.93
WTR YR 1989 TOTAL 162982 MEAN 447 MAX 8400 MIN 83 CFSM 1.28 IN. 17.42

e Estimated

01594440 PATUXENT RIVER NEAR BOWIE, MD--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1978-80, 1985 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Water years 1978-80, 1985 to current year.
WATER TEMPERATURE: Water years 1978-80, 1985 to current year.
SUSPENDED-SEDIMENT DISCHARGE: October 1985 to current year.

REMARKS.--Water temperatures are measured daily in field by local observer at time of sampling.

COOPERATION.--Some chemical data were collected by the U. S. Geological Survey and analyzed by the Maryland Department of Health and Mental Hygiene Laboratory Administration.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE (water years 1985-89): Maximum daily, 843 microsiemens, Feb. 1, 1987; minimum daily, 100 microsiemens, May 7, 1989.
WATER TEMPERATURE (water years 1985-89): Maximum daily, 29.0°C, July 25, 1987; minimum daily, 0.0°C, on many days during winter periods.
SEDIMENT CONCENTRATION: Maximun daily mean, 700 mg/L, June 3, 1985; minimum daily mean, 2 mg/L, Dec. 4, 5, 1985.
SEDIMENT LOAD: Maximum daily, 4,050 tons, May 7, 1989; minimum daily, 1.1 tons, Dec. 5, 1985, Oct. 18, 1987, October 13, 1988.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 495 microsiemens, Jan. 10; minimum daily, 100 microsiemens, May 7.
WATER TEMPERATURE: Maximum daily, 27.5°C, Aug. 5; minimum daily, 1.0°C, Dec. 18.
SEDIMENT CONCENTRATION: Maximum daily mean, 382 mg/L, July 20; minimum daily mean, 3 mg/L, Dec. 10, 14.
SEDIMENT LOAD: Maximum daily, 4,050 tons, May 7; minimum daily, 1.1 tons, Oct. 13.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT											
12...	1210	99	350	7.24	13.0	14.0	768	--	8.0	75	--
25...	1210	149	309	7.21	12.0	17.0	762	--	8.2	76	--
NOV											
01...	1310	177	327	7.10	10.0	16.0	760	16	9.0	80	K77
15...	1040	196	300	7.28	10.0	18.5	774	--	9.1	79	--
15...	1045	196	300	7.07	10.0	18.5	774	--	9.1	79	--
18...	1040	515	213	7.31	10.0	12.0	777	--	8.7	76	--
20...	1250	732	215	7.36	--	--	--	66	--	--	--
21...	0810	695	195	7.20	--	--	--	42	--	--	--
22...	1140	267	245	7.19	9.0	19.0	776	--	10.3	87	--
28-28	0915	938	200	7.31	--	--	--	--	--	--	--
28...	1140	978	168	7.48	11.0	13.0	757	--	9.5	87	--
28-28	1300	1150	163	6.94	--	--	--	--	--	--	--
29-29	1310	750	182	7.12	--	--	--	--	--	--	--
29...	1450	865	180	6.75	9.0	13.5	773	--	9.7	83	--
30...	1340	320	218	6.91	7.0	10.0	766	--	10.0	82	--
DEC											
06...	1140	145	310	7.34	6.5	22.5	770	--	11.0	89	--
06...	1145	167	310	7.34	6.5	22.5	770	--	11.0	89	--
20...	1355	142	308	7.33	5.0	23.0	768	--	11.4	89	--
JAN											
04...	1140	197	423	7.18	5.0	5.5	766	3.5	11.6	90	290
12...	1315	290	403	7.56	4.5	6.0	--	--	11.7	--	--
15...	1400	642	--	--	--	--	--	--	--	--	--
15-15	1900	911	--	--	--	--	--	--	--	--	--
16-16	0300	1040	--	--	--	--	--	--	--	--	--
16...	0930	899	--	--	--	--	--	--	--	--	--
17...	1140	363	290	7.16	5.0	15.0	770	--	11.7	91	--
FEB											
15...	1140	451	263	6.81	8.0	17.0	772	--	11.5	96	--
21-23	2315	987	197	6.93	--	--	--	--	--	--	--
22...	1110	1330	182	7.00	7.0	13.0	761	--	10.1	83	--
22...	1340	1360	178	7.12	7.0	12.0	761	--	10.3	85	--
23...	1110	978	193	6.88	6.5	10.0	767	--	10.4	84	--
24...	1350	397	217	6.58	5.0	3.0	769	--	10.8	84	--

K: Results based on colony count outside the accepted range (non-ideal colony).

01594440 PATUXENT RIVER NEAR BOWIE, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
MAR											
17...	1035	346	258	7.12	10.0	21.0	773	6.7	10.3	90	--
22...	1140	685	305	7.03	7.0	11.0	776	--	11.2	91	--
22...	1145	685	300	6.96	7.0	11.0	776	--	11.2	91	--
24-25	1500	962	220	7.01	--	--	--	--	--	--	--
25...	1730	1950	--	6.76	14.0	11.0	765	--	--	--	--
25-28	2015	659	210	7.15	--	--	--	--	--	--	--
APR											
18...	1340	362	250	7.12	16.0	29.0	762	--	8.8	89	--
MAY											
02...	0840	1130	175	6.95	16.0	18.0	756	86	7.8	80	K10000
06...	1430	2150	112	7.26	--	--	--	--	--	--	--
06...	2000	4060	99	7.33	--	--	--	--	--	--	--
06-07	2000	7670	295	7.41	--	--	--	--	--	--	--
07...	1245	9080	123	7.37	--	--	--	--	--	--	--
08...	1330	3520	--	7.30	--	--	--	--	--	--	--
08-10	1430	1730	--	--	--	--	--	--	--	--	--
10...	1330	1070	180	7.40	14.0	13.0	756	--	--	--	--
10...	1335	1070	182	7.46	14.0	13.0	756	--	--	--	--
16...	1210	752	217	6.97	15.0	20.0	760	--	8.4	84	--
JUN											
08...	1140	1900	147	--	19.0	26.0	763	--	6.4	69	--
22...	1400	3260	108	6.96	23.0	--	--	--	6.2	--	--
28...	1040	410	224	7.41	24.0	28.0	762	18	6.9	82	330
JUL											
05-07	0830	1010	175	7.27	--	--	--	--	--	--	--
06...	1110	1000	152	7.07	22.0	26.0	768	--	7.0	79	--
20...	1330	857	170	7.20	24.0	30.0	759	--	7.2	86	--
SEP											
06...	1315	145	306	7.19	21.0	25.0	771	3.0	8.4	93	100
26...	1230	715	185	7.26	17.0	22.0	763	--	7.6	79	--
26...	1240	715	185	7.26	17.0	22.0	763	--	7.6	79	--

K: Results based on colony count outside the accepted range (non-ideal colony).

01594440 PATUXENT RIVER NEAR BOWIE, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
OCT											
12...	--	--	--	--	--	73	--	--	--	7.5	--
25...	--	--	--	--	--	61	--	--	--	8.5	--
NOV											
01...	680	23	4.6	29	6.0	63	27	31	0.30	9.2	192
15...	--	--	--	--	--	61	--	--	--	8.9	--
15...	--	--	--	--	--	60	--	--	--	8.7	--
18...	--	--	--	--	--	43	--	--	--	7.2	--
18...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	40	--	--	--	6.6	--
21...	--	--	--	--	--	--	--	--	--	7.7	--
22...	--	--	--	--	--	47	--	--	--	9.3	--
28-28	--	--	--	--	--	37	--	--	--	6.5	--
28...	--	--	--	--	--	33	--	--	--	5.9	--
28...	--	--	--	--	--	--	--	--	--	--	--
28-28	--	--	--	--	--	32	--	--	--	5.1	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
29-29	--	--	--	--	--	30	--	--	--	7.2	--
29...	--	--	--	--	--	30	--	--	--	6.9	--
30...	--	--	--	--	--	37	--	--	--	9.0	--
DEC											
06...	--	--	--	--	--	59	--	--	--	10	--
06...	--	--	--	--	--	59	--	--	--	10	--
20...	--	--	--	--	--	60	--	--	--	11	--
JAN											
04...	47	22	4.7	54	3.7	50	32	84	0.20	8.3	241
12...	--	--	--	--	--	--	--	--	--	9.0	--
15...	--	--	--	--	--	--	--	--	--	--	--
15-15	--	--	--	--	--	--	--	--	--	--	--
16-16	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	7.5	--
17...	--	--	--	--	--	38	--	--	--	8.5	--
FEB											
15...	--	--	--	--	--	34	--	--	--	7.0	--
21-23	--	--	--	--	--	32	--	--	--	7.2	--
22...	--	--	--	--	--	29	--	--	--	5.9	--
22...	--	--	--	--	--	30	--	--	--	5.9	--
23...	--	--	--	--	--	31	--	--	--	7.3	--
24...	--	--	--	--	--	35	--	--	--	9.3	--
MAR											
17...	--	17	4.3	22	5.1	39	18	31	0.20	6.3	135
22...	--	--	--	--	--	33	--	--	--	7.3	--
22...	--	--	--	--	--	31	--	--	--	7.1	--
24-25	--	--	--	--	--	27	--	--	--	6.0	--
24...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	21	--	--	--	6.1	--
25...	--	--	--	--	--	--	--	--	--	--	--
25-28	--	--	--	--	--	29	--	--	--	7.5	--
APR											
18...	--	--	--	--	--	42	--	--	--	5.4	--
MAY											
02...	K3300	14	2.9	12	3.2	31	16	16	0.20	5.2	100
06...	--	--	--	--	--	--	--	--	--	4.7	--
06...	--	--	--	--	--	--	--	--	--	3.9	--
06-07	--	--	--	--	--	--	--	--	--	4.1	--
07...	--	--	--	--	--	--	--	--	--	3.5	--
08...	--	--	--	--	--	--	--	--	--	4.1	--
08-10	--	--	--	--	--	--	--	--	--	5.8	--
10...	--	--	--	--	--	--	--	--	--	7.5	--
10...	--	--	--	--	--	--	--	--	--	7.1	--
16...	--	--	--	--	--	41	--	--	--	9.1	--
JUN											
08...	--	--	--	--	--	--	--	--	--	7.0	--
22...	--	--	--	--	--	24	--	--	--	6.7	--
28...	750	18	4.1	14	3.6	45	14	19	0.20	9.7	135
JUL											
05-07	--	--	--	--	--	38	--	--	--	7.5	--
06...	--	--	--	--	--	32	--	--	--	7.1	--
20...	--	--	--	--	--	39	--	--	--	7.1	--
SEP											
06...	300	24	4.7	24	4.8	57	16	28	0.30	10	166
26...	--	--	--	--	--	32	--	--	--	6.9	--
26...	--	--	--	--	--	32	--	--	--	7.0	--

K: Results based on colony count outside the accepted range (non-ideal colony).

PATUXENT RIVER BASIN

01594440 PATUXENT RIVER NEAR BOWIE, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)
OCT											
12...	--	4.07	0.030	4.10	--	0.140	0.70	0.70	0.190	0.170	0.100
25...	--	2.87	0.030	2.90	--	0.400	0.80	0.80	0.180	0.120	0.070
NOV											
01...	183	3.16	0.040	3.20	0.640	0.610	1.8	1.1	0.170	0.090	0.060
15...	--	2.55	0.050	2.60	--	0.580	1.3	1.1	0.170	0.090	0.080
15...	--	2.65	0.050	2.70	--	0.600	1.4	1.4	0.180	0.090	0.090
18...	--	1.28	0.020	1.30	--	0.090	0.90	0.50	0.230	0.050	0.050
18...	--	--	--	--	--	--	--	--	--	--	--
20...	--	1.57	0.025	1.60	--	0.132	2.5	0.90	0.900	0.085	0.044
21...	--	1.27	0.029	1.30	--	0.116	1.2	0.65	0.375	0.070	0.066
22...	--	1.76	0.040	1.80	--	0.250	0.80	0.70	0.170	0.070	0.070
28-28	--	1.97	0.030	2.00	--	0.120	1.1	1.0	0.310	0.070	0.040
28...	--	1.38	0.020	1.40	--	0.110	1.6	0.60	0.150	0.040	0.030
28...	--	--	--	--	--	--	--	--	--	--	--
28-28	--	1.08	0.020	1.10	--	0.120	1.0	0.70	0.170	0.040	0.030
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
29-29	--	1.18	0.020	1.20	--	0.180	0.80	0.80	0.180	0.050	0.030
29...	--	1.18	0.020	1.20	--	0.190	0.90	0.80	0.160	0.040	0.030
30...	--	1.59	0.010	1.60	--	0.180	0.70	0.70	0.130	0.030	0.030
DEC											
06...	--	3.30	0.038	3.34	--	0.500	1.9	1.0	1.14	1.00	0.020
06...	--	3.36	0.040	3.40	--	0.430	1.0	0.90	0.130	0.030	0.020
20...	--	3.97	0.030	4.00	--	0.350	0.90	0.90	0.160	0.070	0.050
JAN											
04...	252	2.67	0.030	2.70	0.500	0.510	0.90	0.90	0.200	0.090	0.090
12...	--	3.38	0.020	3.40	--	0.180	0.80	0.70	0.200	0.040	0.020
15...	--	--	<0.010	2.10	--	0.140	1.0	0.50	0.130	0.060	0.050
15-15	--	1.28	0.020	1.30	--	0.140	0.70	0.50	0.120	0.050	0.030
16-16	--	--	<0.010	1.20	--	0.130	0.50	0.50	0.110	0.050	0.040
16...	--	--	<0.010	1.40	--	0.140	0.70	0.50	0.090	0.050	0.040
17...	--	1.59	0.010	1.60	--	0.300	0.90	0.90	0.140	0.040	0.040
FEB											
15...	--	1.88	0.020	1.90	--	0.190	0.80	0.70	0.210	0.030	0.020
21-23	--	--	--	--	--	--	--	--	--	--	--
22...	--	1.17	0.030	1.20	--	0.100	1.6	1.2	0.380	0.040	0.020
22...	--	1.17	0.030	1.20	--	0.110	1.2	0.80	0.320	0.040	0.020
23...	--	1.29	0.010	1.30	--	0.150	1.4	1.1	0.190	0.040	0.030
24...	--	1.69	0.010	1.70	--	0.140	0.60	0.60	0.130	0.050	0.040
MAR											
17...	139	2.47	0.030	2.50	0.150	0.150	0.50	0.40	0.130	0.030	0.050
22...	--	1.38	0.020	1.40	--	0.130	0.80	0.80	0.130	0.020	<0.010
22...	--	1.38	0.020	1.40	--	0.100	0.80	0.50	0.130	0.020	<0.010
24-25	--	1.09	0.010	1.10	--	0.080	0.60	0.50	0.270	0.030	0.020
24...	--	--	--	--	--	--	--	--	--	--	--
25...	--	0.930	0.010	0.940	--	0.080	0.60	0.50	0.150	0.020	0.010
25...	--	--	--	--	--	--	--	--	--	--	--
25-28	--	1.39	0.010	1.40	--	0.050	0.70	0.30	0.140	0.030	0.020
APR											
18...	--	1.99	0.010	2.00	--	0.040	0.60	0.40	0.100	0.050	0.040
MAY											
02...	94	1.07	0.030	1.10	0.160	0.140	1.7	--	0.420	0.060	0.030
06...	--	0.590	0.020	0.610	--	0.100	0.60	0.60	0.130	0.030	0.020
06...	--	0.520	0.020	0.540	--	0.090	1.0	0.50	0.210	0.030	0.020
06-07	--	0.580	0.020	0.600	--	0.150	0.90	0.60	0.230	0.020	0.010
07...	--	0.780	0.020	0.800	--	0.090	0.70	0.40	0.130	0.030	0.010
08...	--	0.940	0.020	0.960	--	0.080	0.40	1.3	0.110	0.030	0.010
08-10	--	1.18	0.017	1.20	--	0.070	1.6	0.60	0.070	0.040	0.020
10...	--	1.39	0.014	1.40	--	0.080	2.0	0.60	0.090	0.050	0.040
10...	--	1.38	0.016	1.40	--	0.060	0.50	0.40	0.080	0.040	0.030
16...	--	1.88	0.020	1.90	--	0.110	1.1	0.60	0.180	0.060	0.040
JUN											
08...	--	0.960	0.030	0.990	--	0.090	1.0	0.80	0.130	0.040	0.040
22...	--	0.770	0.020	0.790	--	0.070	0.70	0.40	0.160	0.030	<0.010
28...	118	1.89	0.010	1.90	0.080	0.060	0.50	0.50	0.160	0.060	0.060
JUL											
05-07	--	1.29	0.010	1.30	--	0.090	0.70	0.70	0.210	0.030	0.030
06...	--	0.970	0.030	1.00	--	0.100	1.4	0.70	0.990	0.050	0.030
20...	--	1.69	0.010	1.70	--	0.090	3.5	0.30	0.670	0.030	0.030
SEP											
06...	167	4.68	0.020	4.70	0.040	0.070	0.60	0.90	0.270	0.170	0.150
26...	--	1.58	0.020	1.60	--	0.110	1.0	1.1	0.340	0.040	0.030
26...	--	1.58	0.020	1.60	--	0.100	2.0	<0.20	0.350	0.040	0.030

01594440 PATUXENT RIVER NEAR BOWIE, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)
OCT											
12...	<10	--	--	--	--	--	--	--	--	--	--
25...	20	--	--	--	--	--	--	--	--	--	--
NOV											
01...	10	<1	22	<0.5	<1	<1	<3	5	230	<5	<4
15...	<10	--	--	--	--	--	--	--	--	--	--
15...	<10	--	--	--	--	--	--	--	--	--	--
18...	40	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
22...	<10	--	--	--	--	--	--	--	--	--	--
28-28	30	--	--	--	--	--	--	--	--	--	--
28...	50	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28-28	70	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
29-29	310	--	--	--	--	--	--	--	--	--	--
29...	80	--	--	--	--	--	--	--	--	--	--
30...	40	--	--	--	--	--	--	--	--	--	--
DEC											
06...	--	--	--	--	--	--	--	--	--	--	--
06...	10	--	--	--	--	--	--	--	--	--	--
20...	<10	--	--	--	--	--	--	--	--	--	--
JAN											
04...	<10	--	--	--	--	--	--	--	--	--	--
12...	20	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
15-15	--	--	--	--	--	--	--	--	--	--	--
16-16	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
17...	40	--	--	--	--	--	--	--	--	--	--
FEB											
15...	60	--	--	--	--	--	--	--	--	--	--
21-23	70	--	--	--	--	--	--	--	--	--	--
22...	50	--	--	--	--	--	--	--	--	--	--
22...	40	--	--	--	--	--	--	--	--	--	--
23...	40	--	--	--	--	--	--	--	--	--	--
24...	80	--	--	--	--	--	--	--	--	--	--
MAR											
17...	20	<1	28	<0.5	<1	<1	<3	2	73	<5	5
22...	60	--	--	--	--	--	--	--	--	--	--
22...	50	--	--	--	--	--	--	--	--	--	--
24-25	110	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
25...	50	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25-28	130	--	--	--	--	--	--	--	--	--	--
APR											
18...	30	--	--	--	--	--	--	--	--	--	--
MAY											
02...	30	<1	24	<0.5	<1	<1	<3	6	120	<5	<4
06...	150	--	--	--	--	--	--	--	--	--	--
06...	50	--	--	--	--	--	--	--	--	--	--
06-07	200	--	--	--	--	--	--	--	--	--	--
07...	90	--	--	--	--	--	--	--	--	--	--
08...	40	--	--	--	--	--	--	--	--	--	--
08-10	50	--	--	--	--	--	--	--	--	--	--
10...	40	--	--	--	--	--	--	--	--	--	--
10...	20	--	--	--	--	--	--	--	--	--	--
16...	30	--	--	--	--	--	--	--	--	--	--
JUN											
08...	110	--	--	--	--	--	--	--	--	--	--
22...	80	--	--	--	--	--	--	--	--	--	--
28...	30	--	--	--	--	--	--	--	--	--	--
JUL											
05-07	70	--	--	--	--	--	--	--	--	--	--
06...	50	--	--	--	--	--	--	--	--	--	--
20...	40	--	--	--	--	--	--	--	--	--	--
SEP											
06...	10	<1	22	<0.5	<1	1	<3	5	38	<1	<4
26...	60	--	--	--	--	--	--	--	--	--	--
26...	40	--	--	--	--	--	--	--	--	--	--

01594440 PATUXENT RIVER NEAR BOWIE, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT										
12...	--	--	--	--	--	--	--	--	--	3.8
25...	--	--	--	--	--	--	--	--	--	4.8
NOV										
01...	130	<0.1	<10	6	<1	1.0	73	<6	18	4.7
15...	--	--	--	--	--	--	--	--	--	4.1
15...	--	--	--	--	--	--	--	--	--	4.2
18...	--	--	--	--	--	--	--	--	--	6.7
18...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	8.5
21...	--	--	--	--	--	--	--	--	--	7.3
22...	--	--	--	--	--	--	--	--	--	6.1
28-28	--	--	--	--	--	--	--	--	--	20
28...	--	--	--	--	--	--	--	--	--	12
28...	--	--	--	--	--	--	--	--	--	--
28-28	--	--	--	--	--	--	--	--	--	15
28...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
29-29	--	--	--	--	--	--	--	--	--	9.0
29...	--	--	--	--	--	--	--	--	--	8.9
30...	--	--	--	--	--	--	--	--	--	6.5
DEC										
06...	--	--	--	--	--	--	--	--	--	3.3
06...	--	--	--	--	--	--	--	--	--	4.0
20...	--	--	--	--	--	--	--	--	--	3.7
JAN										
04...	--	--	--	--	--	--	--	--	--	4.2
12...	--	--	--	--	--	--	--	--	--	4.6
15...	--	--	--	--	--	--	--	--	--	--
15-15	--	--	--	--	--	--	--	--	--	--
16-16	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	5.8
FEB										
15...	--	--	--	--	--	--	--	--	--	4.9
21-23	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	6.5
22...	--	--	--	--	--	--	--	--	--	6.4
23...	--	--	--	--	--	--	--	--	--	6.2
24...	--	--	--	--	--	--	--	--	--	4.9
MAR										
17...	120	<0.1	<10	1	<1	<1.0	80	<6	15	3.6
22...	--	--	--	--	--	--	--	--	--	5.2
22...	--	--	--	--	--	--	--	--	--	5.6
24-25	--	--	--	--	--	--	--	--	--	7.3
24...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	10
25...	--	--	--	--	--	--	--	--	--	--
25-28	--	--	--	--	--	--	--	--	--	6.9
APR										
18...	--	--	--	--	--	--	--	--	--	3.7
MAY										
02...	140	<0.1	<10	<1	<1	<1.0	56	<6	30	--
06...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
06-07	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
08-10	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	4.7
10...	--	--	--	--	--	--	--	--	--	4.6
16...	--	--	--	--	--	--	--	--	--	4.4
JUN										
08...	--	--	--	--	--	--	--	--	--	7.9
22...	--	--	--	--	--	--	--	--	--	9.9
28...	--	--	--	--	--	--	--	--	--	5.7
JUL										
05-07	--	--	--	--	--	--	--	--	--	9.4
06...	--	--	--	--	--	--	--	--	--	8.0
20...	--	--	--	--	--	--	--	--	--	12
SEP										
06...	93	<0.1	10	2	<1	<1.0	85	<6	12	3.3
26...	--	--	--	--	--	--	--	--	--	10
26...	--	--	--	--	--	--	--	--	--	13

01594440 PATUXENT RIVER NEAR BOWIE, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM
OCT								
12...	1210	99	13.0	350	8	2.1	--	--
25...	1210	149	12.0	309	8	3.2	--	--
NOV								
01...	1310	177	10.0	327	10	4.8	49	--
15...	1040	196	10.0	300	8	4.2	--	--
15...	1045	196	10.0	300	8	4.2	--	--
18...	1040	515	10.0	213	55	76	--	--
18...	1045	515	--	--	60	83	89	--
20...	1250	732	--	215	94	186	--	--
21...	0810	695	--	195	54	101	--	--
22...	1140	267	9.0	245	16	12	--	--
28-28	0915	938	--	200	321	813	--	--
28...	1140	978	11.0	168	386	1020	--	--
28...	1145	978	--	--	337	890	98	56
28-28	1300	1150	--	163	321	993	--	--
28...	1633	121	--	--	161	53	84	69
28...	1635	121	--	--	211	69	89	54
29-29	1310	750	--	182	58	117	--	--
29...	1450	865	9.0	180	58	135	--	--
30...	1340	320	7.0	218	30	26	--	--
DEC								
06...	1140	145	6.5	310	7	2.7	--	--
06...	1145	167	6.5	310	7	3.2	--	--
20...	1355	142	5.0	308	6	2.3	--	--
JAN								
12...	1315	290	4.5	403	27	21	--	--
15...	1400	642	--	--	159	276	--	--
15-15	1900	911	--	--	171	421	--	--
16-16	0300	1040	--	--	105	295	--	--
16...	0930	899	--	--	66	160	--	--
17...	1140	363	5.0	290	23	23	--	--
FEB								
15...	1140	451	8.0	263	66	80	--	--
22...	1110	1330	7.0	182	227	815	--	--
22...	1340	1360	7.0	178	178	656	--	--
23...	1110	978	6.5	193	76	201	--	--
24...	1350	397	5.0	217	32	34	--	--
MAR								
17...	1035	346	10.0	258	18	17	97	--
22...	1140	685	7.0	305	44	81	--	--
22...	1145	685	7.0	300	36	67	--	--
24...	1715	1030	--	--	170	472	90	38
25...	1730	1950	14.0	--	55	290	--	--
25...	1735	1040	--	--	39	110	89	58
25-28	2015	659	--	210	52	92	--	--
APR								
18...	1340	362	16.0	250	13	13	--	--
MAY								
02...	0840	1130	16.0	175	241	735	92	--
06...	1430	2150	--	112	194	1130	--	--
06...	2000	4060	--	99	248	2720	--	--
06-07	2000	7670	--	295	308	6380	--	--
07...	1245	9080	--	123	117	2870	--	--
08...	1330	3520	--	--	29	276	--	--
08-10	1430	1730	--	--	39	182	--	--
10...	1330	1070	14.0	180	42	121	--	--
10...	1335	1070	14.0	182	43	124	--	--
16...	1210	752	15.0	217	70	142	--	--
JUN								
08...	1140	1900	19.0	147	63	323	--	--
28...	1040	410	24.0	224	39	43	97	--
JUL								
06...	1110	1000	22.0	152	158	427	--	--
20...	1330	857	24.0	170	532	1230	--	--
SEP								
06...	1315	145	21.0	306	10	3.9	98	--
26...	1230	715	17.0	185	261	504	--	--
26...	1240	715	17.0	185	262	506	--	--

01594440 PATUXENT RIVER NEAR BOWIE, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE
INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	348	280	259	281	286	279	211	238	221	222	185	280
2	348	279	269	292	316	289	208	145	231	222	208	283
3	328	294	280	381	306	287	208	174	229	218	223	292
4	321	310	284	---	259	274	221	220	233	202	229	272
5	326	327	265	375	254	242	208	226	233	144	226	274
6	323	320	293	411	289	205	214	102	134	154	227	290
7	337	259	294	416	294	326	207	100	135	160	231	284
8	351	308	294	451	306	---	199	122	136	190	232	300
9	346	306	294	---	322	---	206	156	134	199	232	295
10	348	323	299	495	322	468	206	168	164	204	238	288
11	340	320	293	456	337	411	210	170	191	210	231	284
12	344	325	293	384	318	248	218	190	173	226	228	283
13	358	315	314	276	302	271	218	194	155	233	227	299
14	370	318	316	302	288	262	221	196	203	216	227	293
15	363	280	317	259	250	271	227	200	177	201	247	290
16	361	281	307	241	267	254	206	195	163	191	229	290
17	349	223	313	274	268	254	220	128	189	167	229	229
18	343	224	318	296	274	256	228	142	199	193	224	238
19	345	254	320	296	277	335	201	146	206	204	217	272
20	357	219	305	300	277	282	192	146	102	127	189	240
21	356	217	302	308	222	356	220	158	101	146	210	181
22	245	243	290	308	175	293	230	207	118	183	226	167
23	222	268	291	329	198	278	231	167	134	218	221	225
24	242	287	308	312	232	---	242	117	133	222	228	242
25	303	294	243	324	251	---	244	149	159	227	230	263
26	299	288	228	314	261	213	267	155	175	193	233	201
27	326	295	256	310	269	234	278	187	194	188	225	206
28	331	---	271	307	276	178	282	160	206	215	223	239
29	342	184	282	308	---	178	247	186	209	215	280	275
30	340	229	281	295	---	207	238	205	226	223	225	286
31	341	---	281	278	---	219	---	221	---	175	260	---

WATER TEMPERATURE, DEGREES CELSIUS
INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.5	9.5	7.0	4.5	9.5	6.0	9.0	16.5	23.0	22.0	22.5	24.5
2	20.0	10.0	5.0	5.0	9.5	6.5	10.0	16.5	24.0	23.0	23.0	24.5
3	19.0	10.0	7.0	5.5	7.5	6.0	13.5	16.0	23.5	23.0	25.0	22.5
4	18.0	11.0	7.0	4.0	6.5	6.5	15.0	16.5	23.5	22.0	26.5	21.5
5	16.5	13.5	6.5	3.0	4.5	7.0	15.5	15.5	22.5	23.0	27.5	21.5
6	14.5	13.5	6.0	3.0	6.0	5.5	13.0	18.0	22.0	23.0	27.0	22.0
7	13.0	12.5	7.0	3.5	5.5	3.0	10.5	14.5	20.5	23.0	25.0	22.0
8	13.0	11.5	7.0	4.5	5.0	3.0	10.0	14.5	20.5	24.0	22.5	22.5
9	13.0	11.0	6.0	4.5	3.0	5.0	11.0	15.0	21.5	24.0	22.0	24.0
10	13.5	11.5	4.5	4.5	3.0	6.0	11.5	14.0	22.0	25.5	21.5	24.5
11	14.0	11.0	3.5	5.0	4.5	7.0	12.0	13.5	22.0	26.5	21.0	25.0
12	12.5	9.5	1.5	6.0	4.5	8.0	12.5	14.0	20.5	25.0	21.5	24.5
13	11.0	10.5	1.5	5.5	4.0	7.0	12.5	15.0	21.0	22.5	23.5	24.0
14	11.0	10.5	3.0	4.5	6.5	7.5	13.5	16.0	21.5	23.5	24.0	24.5
15	12.0	10.0	5.0	5.0	8.0	7.0	12.5	16.0	22.0	24.0	23.5	24.0
16	13.0	11.0	3.5	6.0	8.0	11.5	14.0	15.0	22.5	22.5	25.0	23.0
17	14.0	12.0	2.0	5.5	6.5	12.5	15.5	17.0	23.0	22.0	25.0	23.0
18	15.0	10.5	1.0	5.5	5.0	13.5	17.5	19.0	23.0	23.0	23.0	21.5
19	14.5	10.0	3.5	6.0	5.5	11.5	17.0	19.0	23.0	23.5	22.0	20.5
20	13.0	10.0	5.0	5.5	7.0	8.5	16.0	19.0	22.5	24.0	23.0	22.5
21	12.0	9.5	7.0	4.0	8.5	8.0	15.5	20.5	22.5	25.0	23.0	23.5
22	12.0	8.5	5.5	3.0	7.5	9.0	15.5	19.5	22.0	26.0	24.0	24.0
23	12.5	8.0	5.0	4.5	7.5	8.5	15.5	18.5	22.5	26.5	25.0	22.5
24	13.5	7.5	7.0	5.0	5.0	8.5	15.5	18.0	23.0	26.5	24.5	19.0
25	12.0	7.5	7.0	5.5	4.5	9.0	16.0	19.0	23.0	26.5	23.0	17.0
26	11.5	7.0	5.5	6.5	4.0	9.0	17.5	20.5	23.0	25.5	23.0	18.0
27	10.5	10.0	5.5	7.5	5.5	14.5	18.0	21.0	25.0	26.0	23.0	16.5
28	11.5	9.5	8.0	6.5	6.0	16.0	18.0	19.5	24.0	26.0	25.0	16.5
29	11.0	9.0	5.5	7.0	---	16.5	16.0	19.5	23.5	25.0	25.0	17.0
30	10.5	8.0	5.0	8.0	---	15.0	18.0	20.5	22.0	23.0	25.5	17.5
31	9.5	---	5.5	7.5	---	13.5	---	21.0	---	22.0	24.0	---

01594440 PATUXENT RIVER NEAR BOWIE, MD--Continued

SEDIMENT, SUSPENDED CONCENTRATION (MG/L), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/ DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	5	1.2	15	6.2	40	27	10	4.5	19	10	15	9.6
2	12	3.0	22	12	20	12	9	4.8	25	12	22	13
3	13	3.6	14	5.6	8	4.3	9	6.1	30	16	16	9.1
4	12	3.5	19	6.7	6	3.0	4	2.3	49	59	21	14
5	15	4.0	14	4.8	5	2.4	5	2.4	25	19	19	15
6	13	3.3	22	13	5	2.3	11	5.6	13	7.8	82	175
7	9	2.2	18	9.6	6	2.6	10	5.6	13	7.2	74	242
8	8	1.9	14	5.5	11	4.7	10	6.7	9	4.9	30	48
9	7	1.6	8	2.9	9	3.8	29	37	7	3.4	20	22
10	11	2.6	12	4.2	3	1.3	19	18	12	5.2	25	30
11	10	2.4	20	7.0	7	2.9	15	10	15	6.8	29	33
12	7	1.6	12	4.2	11	4.2	35	31	10	4.7	24	28
13	5	1.1	14	5.7	5	1.8	145	303	7	3.2	19	20
14	7	1.6	20	13	3	1.2	40	40	26	33	17	17
15	10	2.3	11	5.3	5	2.0	115	243	65	85	20	20
16	12	2.8	14	5.7	7	2.8	70	149	29	35	25	25
17	10	2.4	170	184	7	2.6	28	28	22	21	26	24
18	8	2.0	63	75	7	2.6	16	12	15	10	28	26
19	10	2.5	118	64	10	3.9	12	8.3	9	5.6	48	48
20	8	2.0	125	204	7	2.7	13	8.1	10	5.8	28	26
21	83	23	50	75	6	2.5	11	6.4	98	146	68	118
22	180	159	28	19	8	3.7	9	4.7	234	704	46	83
23	41	25	18	9.1	10	4.5	7	3.6	75	185	40	42
24	15	5.7	8	3.6	19	11	15	7.7	35	40	195	441
25	9	3.3	8	3.3	69	80	19	9.6	18	15	90	484
26	7	2.3	10	3.9	28	19	17	8.4	12	8.9	45	101
27	7	2.2	30	12	11	5.6	18	9.4	13	10	35	47
28	13	4.0	241	764	10	4.8	12	5.9	14	9.8	45	71
29	13	4.0	83	249	15	8.0	8	3.7	---	---	40	71
30	8	2.4	35	32	11	5.4	12	5.9	---	---	25	37
31	5	1.5	---	---	8	3.7	19	13	---	---	114	189
TOTAL	---	280.0	---	1809.3	---	238.3	---	1003.7	---	1473.3	---	2528.7
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	74	126	30	25	40	38	35	28	37	65	22	9.4
2	32	40	297	1250	35	32	25	19	25	27	26	11
3	21	26	265	825	30	26	25	18	19	18	17	6.7
4	31	41	75	84	40	33	80	72	18	15	11	4.2
5	50	60	30	32	45	37	110	238	17	14	11	4.3
6	100	194	181	1720	162	510	155	427	14	11	10	3.9
7	36	63	182	4050	150	709	160	454	13	10	11	4.3
8	24	43	38	412	55	260	85	112	17	13	12	4.7
9	28	45	40	124	43	128	35	37	12	8.8	13	5.1
10	16	22	45	126	42	143	28	27	14	9.7	13	5.1
11	10	12	40	116	50	74	23	20	18	13	14	5.3
12	12	13	31	58	73	100	32	24	16	12	13	4.9
13	15	15	30	46	65	135	38	29	19	15	17	6.7
14	16	17	30	43	38	52	38	41	18	14	25	11
15	24	25	30	40	110	208	35	31	22	15	16	6.6
16	55	98	104	214	105	196	115	137	16	12	20	9.4
17	24	28	150	830	60	79	120	234	12	9.1	37	42
18	14	14	40	194	48	60	45	48	20	15	27	15
19	115	245	50	148	40	39	32	30	40	35	40	18
20	47	97	45	123	83	173	382	961	80	89	165	137
21	22	25	30	73	271	1480	115	529	29	24	130	229
22	22	21	35	46	115	984	45	58	14	11	130	213
23	15	13	204	431	45	180	30	31	14	11	50	52
24	15	12	257	1440	50	162	21	19	13	9.9	47	33
25	15	11	50	188	50	131	21	18	17	13	93	46
26	18	12	45	104	47	101	29	30	13	9.7	251	462
27	20	13	55	108	35	44	35	40	11	8.2	140	252
28	20	12	73	180	40	42	40	45	10	7.5	40	25
29	45	34	60	84	40	40	35	33	28	22	28	14
30	65	65	45	54	40	35	32	29	27	21	30	14
31	---	---	35	36	---	---	43	74	25	14	---	---
TOTAL	---	1442	---	13204	---	6231	---	3893	---	571.9	---	1654.6

TOTAL LOAD FOR YEAR: 34329.8 TONS.

01594526 WESTERN BRANCH AT UPPER MARLBORO, MD

LOCATION.--Lat 38°48'52", long 76°44'53", Prince Georges County, Hydrologic Unit 02060006, on right bank 1000 ft upstream from bridge on Water Street, 0.2 mi south of Upper Marlboro, and 4.7 mi upstream from mouth.

DRAINAGE AREA.--89.7 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1985 to April 1989 (discontinued).

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

REMARKS.--Water-discharge records good except those for March 6-7 and 24-25 (manometer malfunction), which are fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,290 ft^3/s, Dec. 25, 1986, gage height, 10.15 ft; minimum discharge, 2.6 ft^3/s, June 19, 1986.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 28	1945	*714	*7.22	No peak greater than base discharge.			

Minimum discharge, 7.2 ft^3/s, Oct. 13, 14, 15, gage height, 0.93 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, OCTOBER 1988 TO APRIL 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	85	68	33	41	57	103	---	---	---	---	---
2	10	55	57	50	38	50	79	---	---	---	---	---
3	58	31	45	45	55	48	87	---	---	---	---	---
4	20	24	38	45	141	48	84	---	---	---	---	---
5	16	21	34	33	76	67	113	---	---	---	---	---
6	11	52	34	75	56	e260	276	---	---	---	---	---
7	9.3	29	32	106	53	e400	168	---	---	---	---	---
8	9.0	24	30	99	49	175	261	---	---	---	---	---
9	9.0	20	29	109	43	142	149	---	---	---	---	---
10	9.8	15	32	73	e42	140	107	---	---	---	---	---
11	8.5	20	29	57	e40	114	86	---	---	---	---	---
12	7.7	14	26	90	e40	99	76	---	---	---	---	---
13	7.3	23	e27	90	e40	83	68	---	---	---	---	---
14	7.2	34	24	60	94	81	63	---	---	---	---	---
15	7.4	21	e26	284	87	78	133	---	---	---	---	---
16	7.7	18	e25	160	126	69	164	---	---	---	---	---
17	8.4	202	e25	88	95	62	98	---	---	---	---	---
18	8.1	115	e24	70	70	69	88	---	---	---	---	---
19	8.2	59	22	59	61	85	337	---	---	---	---	---
20	8.1	310	22	52	56	63	193	---	---	---	---	---
21	22	142	24	44	206	195	107	---	---	---	---	---
22	154	65	33	39	397	134	80	---	---	---	---	---
23	37	47	34	39	202	86	68	---	---	---	---	---
24	26	37	61	38	104	e750	62	---	---	---	---	---
25	21	30	132	38	75	e550	59	---	---	---	---	---
26	18	26	58	37	75	191	56	---	---	---	---	---
27	16	31	43	41	78	127	52	---	---	---	---	---
28	14	587	39	36	65	107	50	---	---	---	---	---
29	13	367	48	35	---	94	300	---	---	---	---	---
30	12	100	36	45	---	85	316	---	---	---	---	---
31	13	---	32	50	---	116	---	---	---	---	---	---
TOTAL	588.7	2604	1189	2120	2505	4625	3883	---	---	---	---	---
MEAN	19.0	86.8	38.4	68.4	89.5	149	129	---	---	---	---	---
MAX	154	587	132	284	397	750	337	---	---	---	---	---
MIN	7.2	14	22	33	38	48	50	---	---	---	---	---
CFSM	.21	.97	.43	.76	1.00	1.66	1.44	---	---	---	---	---
IN.	.24	1.08	.49	.88	1.04	1.92	1.61	---	---	---	---	---

CAL YR 1988 TOTAL 24905.8 MEAN 68.0 MAX 731 MIN 3.8 CFSM .76 IN. 10.33

e Estimated

01594670 HUNTING CREEK NEAR HUNTINGTOWN, MD

LOCATION.--Lat 38°35'02", long 76°36'20", Calvert County, Hydrologic Unit 02060006, on right bank at downstream side of bridge on MD Rte. 263, 200 ft east of intersection of MD Rte. 4, 2.4 mi south of Huntingtown, and 0.1 mi upstream from Sewell Branch.

DRAINAGE AREA.--9.38 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1988 to September 1989.

GAGE.--Water-stage recorder and timber control. Elevation of gage is 10 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Water-discharge records good above 5.0 ft^3/s and poor below except those for Oct. 1 to Nov. 27, which are also poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 395 ft^3/s, June 6, 1989, gage height, 8.83 ft; minimum daily discharge, 0.10 ft^3/s, Oct. 12, 13, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
June 7	1515	*395	*8.83	No other peak greater than base discharge.			

Minimum daily discharge, 0.10 ft^3/s, Oct. 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.15	e2.0	6.5	4.1	4.6	6.2	30	16	11	12	26	1.0
2	e.20	e7.0	5.1	7.2	3.7	4.7	15	109	9.6	12	16	1.0
3	e.40	e2.6	4.4	5.6	3.3	4.5	16	34	8.2	12	13	.82
4	e1.0	e2.0	3.9	4.8	4.2	4.9	15	21	7.7	13	11	.49
5	e.50	e1.8	3.7	3.8	4.4	7.1	16	21	7.3	107	8.4	.26
6	e.20	e1.8	3.5	4.5	4.1	20	40	67	38	38	6.9	.34
7	e.15	e1.1	3.4	9.9	4.9	e18	26	33	195	22	6.3	.37
8	e.15	e.80	3.3	7.8	5.2	e11	51	23	41	18	5.6	.44
9	e.15	e.80	3.3	6.6	4.0	e14	26	20	32	16	4.5	.62
10	e.15	e.80	3.6	4.9	2.7	13	20	40	32	14	4.7	.36
11	e.15	e.80	3.7	4.1	2.5	12	17	27	20	13	12	3.2
12	e.10	e.80	3.2	5.4	2.5	11	16	21	18	11	28	11
13	e.10	e1.8	2.6	7.9	2.6	8.6	15	19	18	12	15	7.0
14	e.15	e1.5	2.3	5.1	5.4	9.9	15	18	32	15	10	5.5
15	e.15	e.90	2.8	13	5.7	9.2	23	17	88	13	9.3	3.9
16	e.15	e1.5	3.5	11	6.5	9.8	28	43	41	70	8.5	5.7
17	e.15	e5.0	3.0	6.7	7.7	7.9	16	52	48	64	6.5	12
18	e.15	e9.0	2.7	5.4	5.1	8.0	15	24	27	23	7.1	5.1
19	e.15	e4.0	2.5	e4.4	4.3	11	18	19	22	19	10	9.3
20	e.15	e8.0	2.9	e3.6	4.1	8.0	15	18	20	18	7.7	27
21	e2.0	e4.0	3.5	e3.2	20	16	13	16	26	16	5.7	16
22	e5.0	e2.8	4.4	3.0	28	13	13	14	37	15	5.3	7.6
23	e1.5	e2.0	e4.0	3.0	16	9.4	12	24	22	14	4.4	5.4
24	e.60	e1.4	4.5	3.0	11	79	12	47	28	13	3.7	8.5
25	e.50	e1.2	5.5	3.0	8.1	49	12	19	23	12	3.1	5.4
26	e.40	e1.1	4.9	3.0	8.0	22	11	16	19	12	2.6	44
27	e.30	e1.3	4.0	3.2	8.4	17	11	19	17	12	3.0	16
28	e.30	39	e4.5	3.1	7.5	15	11	15	15	19	3.0	8.2
29	e.30	19	e4.5	3.1	---	14	12	13	15	13	2.7	6.5
30	e.30	8.9	4.3	3.9	---	13	15	12	13	11	2.6	5.6
31	e.40	---	3.9	5.9	---	22	---	11	---	86	1.6	---
TOTAL	16.05	134.70	117.9	163.2	194.5	468.2	555	848	930.8	745	254.2	218.60
MEAN	.52	4.49	3.80	5.26	6.95	15.1	18.5	27.4	31.0	24.0	8.20	7.29
MAX	5.0	39	6.5	13	28	79	51	109	195	107	28	44
MIN	.10	.80	2.3	3.0	2.5	4.5	11	11	7.3	11	1.6	.26
CFSM	.06	.48	.41	.56	.74	1.61	1.97	2.92	3.31	2.56	.87	.78
IN.	.06	.53	.47	.65	.77	1.86	2.20	3.36	3.69	2.95	1.01	.87

WTR YR 1989 TOTAL 4646.15 MEAN 12.7 MAX 195 MIN .10 CFSM 1.36 IN. 18.43

e Estimated

01594710 KILLPECK CREEK AT HUNTERSVILLE, MD

LOCATION.--Lat 38°28'37", long 76°44'08", St Marys County, Hydrologic Unit 02060006, on left bank at private footbridge, 600 ft upstream from culvert on All Faith Church Road, 0.65 mi north of Huntersville, and 2.3 mi upstream from mouth.

DRAINAGE AREA.--3.54 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and concrete block control. Elevation of gage is 50 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Water-discharge records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 179 ft^3/s, July 31, 1989, gage height, 4.75 ft; minimum discharge, 0.21 ft^3/s, July 8, 1986, Sept. 3, 4, 5, 1987.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
July 31	0530	*179	*4.75	No other peak greater than base discharge.			

Minimum discharge, 0.49 ft^3/s, Oct. 1, 2, 11, 12, 13, 14, gage height, 1.01 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.55	5.6	3.0	2.9	2.0	2.9	4.2	16	3.7	3.4	6.6	1.7
2	.63	1.7	2.5	2.4	2.0	2.8	3.9	30	3.6	3.2	5.1	1.6
3	.74	1.5	2.3	2.1	2.3	2.7	5.2	8.8	3.5	3.2	4.3	1.5
4	1.2	1.3	2.6	2.0	2.4	2.9	4.4	6.6	3.3	3.3	3.6	1.5
5	.71	1.6	2.3	1.6	2.2	3.7	5.4	8.5	4.0	17	3.1	1.6
6	.57	1.7	2.2	3.6	2.1	14	12	28	14	9.0	2.8	1.6
7	.57	1.2	2.2	2.7	2.7	12	12	10	24	6.7	2.7	1.6
8	.57	1.1	2.1	2.4	2.2	5.1	10	8.1	7.6	5.0	2.4	1.5
9	.57	1.1	2.3	2.2	2.0	5.6	6.8	7.6	9.7	4.3	2.4	1.5
10	.57	1.1	2.1	2.0	1.9	5.1	5.8	15	7.0	4.0	2.7	1.4
11	.55	1.1	1.9	2.0	e1.9	4.3	5.2	8.9	5.0	3.4	3.2	1.5
12	.49	1.1	1.7	3.2	1.9	3.9	5.0	7.9	5.0	3.2	4.5	2.0
13	.49	1.6	1.8	2.5	1.9	3.7	4.8	8.2	13	3.3	3.9	9.5
14	.55	1.5	1.9	2.3	2.8	4.1	4.5	7.0	12	3.6	3.3	4.5
15	.57	1.1	2.0	8.1	2.2	3.7	9.9	6.6	12	3.1	3.2	2.9
16	.57	1.4	2.0	3.3	3.6	3.7	7.2	17	16	19	3.0	3.9
17	.57	6.9	1.8	2.6	3.1	3.4	5.4	9.4	11	7.4	2.8	3.2
18	.60	2.5	1.7	2.4	2.3	5.3	12	7.5	7.0	5.4	3.4	2.3
19	.57	2.8	2.0	2.4	2.2	4.2	12	6.8	6.0	4.4	3.2	3.6
20	.57	5.6	2.1	2.2	2.0	4.3	6.7	6.4	5.6	4.0	2.6	9.2
21	3.9	2.7	1.9	2.1	14	7.6	5.8	5.7	6.0	3.8	2.5	4.3
22	2.4	1.8	2.1	1.9	7.9	4.4	5.3	5.2	6.4	3.4	2.4	3.2
23	.95	1.6	1.9	2.0	4.7	4.2	5.0	8.6	8.5	3.2	2.2	3.8
24	.91	1.5	2.3	1.9	3.9	27	4.7	6.5	6.3	3.1	2.1	3.1
25	.82	1.4	2.4	1.8	3.5	9.0	4.5	5.2	5.1	2.9	2.1	2.5
26	.73	1.3	1.9	1.8	3.6	6.7	4.4	4.9	4.7	4.7	2.1	14
27	.68	3.3	1.8	1.8	3.6	5.9	4.2	5.0	4.3	4.1	2.2	3.7
28	.71	31	2.1	1.8	3.4	5.4	4.0	4.3	4.1	4.5	2.0	3.0
29	.76	4.6	2.1	1.8	---	5.0	6.3	4.1	3.8	3.1	1.9	2.8
30	.69	3.6	1.9	2.5	---	4.8	5.0	3.9	3.5	3.0	1.9	2.7
31	.82	---	1.8	2.1	---	4.8	---	3.7	---	36	1.7	---
TOTAL	25.58	96.3	64.7	76.4	90.3	182.2	191.6	281.4	225.7	187.7	91.9	101.2
MEAN	.83	3.21	2.09	2.46	3.22	5.88	6.39	9.08	7.52	6.05	2.96	3.37
MAX	3.9	31	3.0	8.1	14	27	12	30	24	36	6.6	14
MIN	.49	1.1	1.7	1.6	1.9	2.7	3.9	3.7	3.3	2.9	1.7	1.4
CFSM	.23	.91	.59	.70	.91	1.66	1.80	2.56	2.13	1.71	.84	.95
IN.	.27	1.01	.68	.80	.95	1.91	2.01	2.96	2.37	1.97	.97	1.06

CAL YR 1988 TOTAL 919.52 MEAN 2.51 MAX 32 MIN .35 CFSM .71 IN. 9.66
WTR YR 1989 TOTAL 1614.98 MEAN 4.42 MAX 36 MIN .49 CFSM 1.25 IN. 16.97

e Estimated

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in three tables. The first is a table of annual maximum stage and discharge at crest-stage stations, the second is a table of discharge measurements at low-flow partial-record sites in Howard County, MD, and the third is a table of annual maximum stage for tidal crest-stage stations.

Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain, but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained, but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum discharge at crest-stage partial-record stations during water year 1989

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Annual Maximum Date	Annual Maximum Gage height (ft)	Annual Maximum Discharge (ft^3/s)
		DELAWARE RIVER BASIN					
01478040	Christina River near Bear, De.	Lat 39°38′12″, long 75°40′53″, New Castle County, Hydrologic Unit 02040205, on right bank 500 ft upstream from highway bridge, 1.3 mi northwest of Bear, 1.6 mi downstream from Belltown Run, and 17.7 mi upstream from mouth.	40.6	1979-82≠, 1983-89	5-19-88 7- 5-89	11.57 14.34	*3,480 7,500
01480015	Red Clay Creek near Stanton, De.	Lat 39°42′55″, long 75°38′28″, New Castle County, Hydrologic Unit 02040205, on right bank at downstream side of westbound lane of bridge on State Highway 4, near Stanton, and 0.9 mi upstream from mouth.	52.4	1989≠	7- 5-89	12.80	5,320

≠ Operated as a continuous-record station.
* Revision to discharge published in 1988 report.

Howard County low-flow investigations

Base-flow discharge measurements were made throughout Howard County as part of a water-availability study in cooperation with Howard County and the Maryland Geological Survey. The data collected in these measurements, along with that already collected, will provide the basis for determining the base-flow yields throughout the county.

Weather records at Clarksville, in the central portion of the area, and Woodstock, in the northeastern part of the area, were used to check periods prior to measurements for rainfall. Measurements are considered to represent base flow except as indicated.

The measurements on each stream are listed in order proceeding downstream, and each tributary is inserted in the order in which it enters the main stream. Drainage areas were determined from recent U.S. Geological Survey topographic maps of a scale of 1:24,000 and contour interval of 10 to 20 ft. Previous series of measurements were made as indicated.

Discharge measurements of streams in or adjacent to Howard County, MD

Station No.	Station Name	Location	Drainage area (mi^2)	Measured previously (water years)	Date of measurement	Measured discharge (ft^3/s)	Cfs per square mile
		PATAPSCO RIVER BASIN					
01587070	South Branch Patapsco River, at Woodbine, Md.	Lat 39°21′44″, long 77°04′00″, Carroll County, Hydrologic Unit 02060003, at bridge on county highway, 0.1 mi upstream from Gillis Falls, and 0.3 mi west of Woodbine.	11.4	1975-79, 1988	10-13-88 12-05-88 12-20-88 4-26-89	3.03 4.45 3.79 10.3	0.266 .390 .332 .904
01587500	South Branch Patapsco River, at Henryton, Md.	Lat 39°21′05″, long 76°54′50″, Howard County, Hydrologic Unit 02060003, at downstream side of bridge on Henryton Road at Henryton, 1.3 mi upstream from Piney Run, and 3.2 mi southeast of Sykesville.	64.4	1948-80≠, 1988	10-14-88 12-05-88 12-20-88 4-26-89 9-08-89	19.5 31.6 24.7 61.7 35.4	.303 .491 .384 .958 .550
01589040	Rockburn Branch at Elkridge, Md.	Lat 39°13′30″, long 76°43′12″, Howard County, Hydrologic Unit 02060003, at bridge on Levering Avenue, 0.1 mi upstream from mouth, amd 0.8 mi west of Elkridge.	3.69	1988	10-14-88 12-04-88 12-19-88 4-25-89 9-08-89	0.43 1.30 1.05 3.42 1.44	.117 .352 .285 .927 .390
01589080	Deep Run at Hanover, Md.	Lat 39°11′24″, long 76°43′12″, Howard County, Hydrologic Unit 02060003, at bridge on county highway, 0.3 mi southeast of Hanover, and 2.4 mi upstream from mouth.	18.0	1975-79, 1988	10-14-88 12-04-88 12-19-88 4-25-89	1.76 5.49 5.19 12.5	.098 .305 .288 .694
		PATUXENT RIVER BASIN					
01590800	Patuxent River at Mullinix, Md.	Lat 39°17′40″, long 77°08′42″, Howard County, Hydrologic Unit 02060006, at bridge on Mullinix Mill Road, 0.8 mi upstream from Scott Branch, and 3.1 mi east of Damascus.	10.7	1988	10-13-88 12-05-88 12-20-88 4-26-89	1.48 3.18 2.52 10.9	.138 .297 .236 1.019
01590900	Cabin Branch near Florence, Md.	Lat 39°16′36″, long 77°06′20″, Howard County, Hydrologic Unit 02060006, at bridge on light-duty road, 0.9 mi upstream from mouth, and 2.3 mi south of Florence.	8.36	1975-79, 1988	10-13-88 12-05-88 12-20-88 4-26-89	2.31 3.97 3.38 6.80	.276 .475 .404 .813
01591200	Cattail Creek tributary at Carrs Mill, Md.	Lat 39°18′57″, long 77°03′41″, Howard County, Hydrologic Unit 02060006, at bridge on Daisy Road, 0.3 mi upstream from mouth, and 0.5 mi west of Carrs Mill.	3.93	1956-59, 1961-63, 1966, 1988	10-13-88 12-20-88 4-26-89	1.10 1.53 2.85	.280 .389 .725
01591350	Cattail Creek near Cooksville, Md.	Lat 39°18′50″, long 77°03′15″, Howard County, Hydrologic Unit 02060006, at upstream side of bridge on Bushy Park Road, 2.3 mi west of Cookesville, and 6.8 mi upstream from mouth.	8.37	1977-81≠, 1988	10-13-88 12-20-88 4-26-89	2.48 3.64 6.31	.296 .435 .754

≠ Operated as a continuous-record gaging station.

Discharge measurements of streams in or adjacent to Howard County, MD

Station No.	Station Name	Location	Drainage area (mi^2)	Measured previously (water years)	Date of measurement	Measured discharge (ft^3/s)	Cfs per square mile
		PATUXENT RIVER BASIN--Continued					
01591375	Cattail Creek tributary at Daisy, Md.	Lat 39°17'58", long 77°03'52", Howard County, Hydrologic Unit 02060006, at bridge on Daisy Road, 0.3 mi upstream from mouth, and 0.5 mi north of Daisy.	3.12	1977-82, 1988	10-13-88 12-05-88 12-20-88 4-26-89	1.20 1.61 1.51 2.59	0.385 .516 .484 .830
01591475	Dorsey Branch near Knollwood, Md.	Lat 39°15'41", long 77°02'17", Howard County, Hydrologic Unit 02060006, at bridge on Roxbury Road, 0.4 mi upstream from mouth, and 0.8 mi west of Knollwood.	3.78	1988	10-13-88 12-05-88 12-20-88 4-26-89	1.13 2.10 1.53 3.38	.299 .556 .405 .894
01593200	Little Patuxent River at Pine Orchard, Md.	Lat 39°16'42", long 76°51'11", Howard County, Hydrologic Unit 02060006, at bridge on U.S. Highway 40, 0.4 mi east of Pine Orchard, and 2.4 mi upstream from Red Hill Branch.	7.03	1956-59, 1961-64, 1966, 1988	10-17-88 12-19-88 4-25-89	2.52 3.67 5.95	.359 .522 .846
01593300	Red Hill Branch at Columbia, Md.	Lat 39°14'44", long 76°50'43", Howard County, Hydrologic Unit 02060006, 0.05 mi upstream from mouth, 0.1 mi downstream from culvert on Columbia Road, and 2.1 mi north of Columbia.	5.98	1988	10-14-88 12-04-88 12-19-88 4-25-89 9-08-89	0.93 2.45 2.04 4.25 2.54	.156 .410 .341 .711 .425
01593600	Middle Patuxent River near West Friendship, Md.	Lat 39°17'14", long 76°57'33", Howard County, Hydrologic Unit 02060006, at bridge on State Highway 32, 0.25 mi upstream from Terrapin Branch, and 1.1 mi south of West Friendship.	11.4	1956-59, 1961-64, 1966, 1988	10-13-88 12-05-88 12-20-88 4-26-89	3.02 6.69 5.34 8.93	.265 .587 .468 .783
01593675	Middle Patuxent River tributary near Columbia, Md.	Lat 39°14'02", long 76°55'04", Howard County, Hydrologic Unit 02060006, 0.05 mi upstream from mouth, and 3.1 mi west of Columbia.	9.12	1988	10-14-88 12-04-88 12-19-88 4-25-89 9-08-89	2.11 4.66 3.56 7.89 5.13	.232 .511 .390 .865 .562
01593700	Middle Patuxent River tributary near Clarksville, Md.	Lat 39°12'00", long 76°55'12", Howard County, Hydrologic Unit 02060006, 0.1 mi upstream from bridge on Trotter Road, 0.8 mi upstream from mouth, and 1.3 mi southeast of Clarkesville.	6.24	1977-82, 1988	10-13-88 12-04-88 12-19-88 4-25-89	1.30 2.51 2.33 4.86	.208 .402 .373 .779
01594200	Hammond Branch near Laurel, Md.	Lat 39°07'23", long 76°49'31", Howard County, Hydrologic Unit 02060006, at bridge on U.S. Highway 1, 0.5 mi upstream from mouth, and 1.6 mi northeast of Laurel.	6.83	1988	10-14-88 12-04-88 12-19-88 4-25-89 9-08-89	0.86 2.50 2.37 5.78 1.56	.126 .366 .347 .846 .228
01594395	Dorsey Run at Jessup, Md.	Lat 39°08'57", long 76°47'14", Howard County, Hydrologic Unit 02060006, at bridge on Dorsey Run Road, 0.6 mi west of Jessup, and 3.4 mi upstream from mouth.	6.59	---	12-04-88 12-19-88 4-25-89 9-08-89 9-08-89	5.99 1.27 4.63 0.93 1.56	.909 .193 .703 .141 .228

Tidal crest-stage partial-record stations

The following table contains annual maximum stages for tidal crest-stage stations. The informaton is obtained from a crest-stage gage or a water-stage recorder located at each site. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. All stages are elevations above National Geodetic Vertical Datum of 1929. Only the maximum stage is given. Information on some other high stages may have been obtained but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum stage at tidal crest-stage partial-record stations during water year 1989

Station No.	Station Name	Location	Period of Record	Annual Maximum Date	Annual Maximum Elevation, in feet NGVD
		SMYRNA RIVER BASIN			
01483335	Duck Creek at Smyrna, De.	Lat 39°18′31″, long 75°36′34″, Kent County, Hydrologic Unit 02040207, at bridge on U.S. Highway 13, at north edge of Smyrna, 2 mi north of intersection of State Highway 300 and U.S. Highway 13 on downstream right wingwall of bridge.	1966-89	8-18-89	5.00
		MURDERKILL RIVER BASIN			
01484085	Murderkill River at Bowers, De.	Lat 39°03′30″, long 75°23′51″, Kent County, Hydrologic Unit 02040207, at Faulkner's Landing in Bowers, on left bank 10 ft southeast of southeast corner of restaurant on Faulkner's Pier.	1966-89	8-18-89	6.63
		CEDAR CREEK BASIN			
01484235	Cedar Creek near Slaughter Beach, De.	Lat 38°56′06″, long 75°19′26″, Sussex County, Hydrologic Unit 02040207, at bridge No. S-164 on State Highway 36, 1.8 mi northwest of Slaughter Beach.	1966-89	3- 7-89	4.57
		INDIAN RIVER BASIN			
01484549	Vines Creek near Dagsboro, De.	Lat 38°33′23″, long 75°12′13″, Sussex County, Hydrologic Unit 02060010, on right bank at upstream side of bridge on State Highway 26, 2.4 mi east of Dagsboro and 3.8 mi upstream from the confluence with Indian River at Indian River Bay.	1985-89	3- 7-89	3.45
01484595	Indian River at Oak Orchard, De.	Lat 38°35′45″, long 75°10′24″, Sussex County, Hydrologic Unit 02060010, at Hanes Landing, 2.0 mi southeast of intersection of State Highways 24 and 5, at Oak Orchard.	1966-89	9-19-89	3.90
01484670	Rehoboth Bay at Dewey Beach, De.	Lat 38°41′40″, long 75°05′05″, Sussex County, Hydrologic Unit 02060010, on north shore of Rehoboth Bay at Head of Bay Cove, at Dewey Beach and at south end of Ventian Drive on bulkhead of a boat slip.	1985-89	9-19-89	2.81

Water-quality partial-record stations are particular sites where chemical-quality, biological, and/or sediment data are collected systematically over a period of years for use in hydrologic analyses. The data are collected usually less than quarterly. Samples collected at sites other than gaging stations and partial-record stations to give better areal coverage in a river basin are referred to as miscellaneous sites.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

HERRING CREEK BASIN

383930075123101 - PHILLIPS BRANCH NEAR FAIRMOUNT, DE

DATE	TIME	TRI-FLURALIN TOTAL RECOVER (UG/L)	ALACHLOR TOTAL RECOVER (UG/L)	AMETRYNE TOTAL	ATRAZINE, TOTAL (UG/L)	CYANAZINE TOTAL (UG/L)	METOLACHLOR WATER WHOLE TOT.REC (UG/L)
JUN 22...	1500	<0.10	<0.10	<0.10	<0.10	<0.10	<0.1

DATE	METRIBUZIN WATER WHOLE TOT.REC (UG/L)	PROMETRYNE TOTAL (UG/L)	PROMETONE TOTAL (UG/L)	PROPAZINE TOTAL (UG/L)	SIMAZINE TOTAL (UG/L)	SIMETRYNE TOTAL (UG/L)
JUN 22...	<0.1	<0.1	<0.1	<0.10	<0.10	<0.1

POCOMOKE RIVER BASIN

382212075040501 - Atlantic Ocean at 44th street at Ocean City, MD

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE AIR (DEG C)	DENSITY (GM/ML AT 20 C)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3
APR 19...	1200	37400	7.2	14.0	1.019	330	1100	8400	280	105

DATE	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	BROMIDE DISSOLVED (MG/L AS BR)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)
APR 19...	2600	17000	0.70	59	<0.50	32600	29800	<0.100	<0.010	40

DATE	BARIUM, DISSOLVED (UG/L AS BA)	BORON, DISSOLVED (UG/L AS B)	IODIDE, DISSOLVED (MG/L AS I)	IRON, DISSOLVED (UG/L AS FE)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	STRONTIUM, DISSOLVED (UG/L AS SR)	ZINC, DISSOLVED (UG/L AS ZN)
APR 19...	100	4200	0.049	190	120	50	7	6000	20

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

CHESTER RIVER BASIN

392126075440901 - EPHEMERAL POND 9 NEAR VANDYKE, DE

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
JUN 14...	1115	79	5.8	19.0	1.6	5.2	2.2	1.8	6.6	16	8.1	0.10

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	NITROGEN, NITRATE DISSOLVED (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)	TRIFLURALIN TOTAL RECOVER (UG/L)
JUN 14...	1.8	0.080	0.020	0.100	0.650	15	0.260	430	650	27	0.19	<0.10

DATE	ALACHLOR TOTAL RECOVER (UG/L)	AMETRYNE TOTAL	ATRAZINE, TOTAL (UG/L)	CYANAZINE TOTAL (UG/L)	METOLACHLOR WATER WHOLE TOT.REC (UG/L)	METRIBUZIN WATER WHOLE TOT.REC (UG/L)	PROMETRYNE TOTAL (UG/L)	PROMETONE TOTAL (UG/L)	PROPAZINE TOTAL (UG/L)	SIMAZINE TOTAL (UG/L)	SIMETRYNE TOTAL (UG/L)
JUN 14...	<0.10	<0.10	15	12.0	0.4	<0.1	<0.1	<0.1	0.10	3.8	<0.1

392117075441801 - CYPRESS BRANCH TRIBUTARY AT VANDYKE, DE

DATE	TIME	TRIFLURALIN TOTAL RECOVER (UG/L)	ALACHLOR TOTAL RECOVER (UG/L)	AMETRYNE TOTAL	ATRAZINE, TOTAL (UG/L)	CYANAZINE TOTAL (UG/L)	METOLACHLOR WATER WHOLE TOT.REC (UG/L)
JUN 21...	1430	<0.10	<0.10	<0.10	<0.10	<0.10	0.2

DATE	METRIBUZIN WATER WHOLE TOT.REC (UG/L)	PROMETRYNE TOTAL (UG/L)	PROMETONE TOTAL (UG/L)	PROPAZINE TOTAL (UG/L)	SIMAZINE TOTAL (UG/L)	SIMETRYNE TOTAL (UG/L)
JUN 21...	<0.1	<0.1	<0.1	<0.10	<0.10	<0.1

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

PATAPSCO RIVER BASIN

01585681 - NORTH CARROLL SHOPPING CENTER RETENTION POND AT GREENMOUNT, MD

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TEMPERATURE AIR (DEG C)	OXYGEN, DISSOLVED (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)
MAR 30...	1000	303	8.7	15.0	9.0	8.7	19	0.94	38	1.0

DATE	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFIDE TOTAL (MG/L AS S)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)
MAR 30...	44	0.8	8.0	59	0.10	0.60	154	<0.010	0.110	0.010

DATE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BARIUM, DISSOLVED (UG/L AS BA)	BORON, DISSOLVED (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)
MAR 30...	<0.20	0.050	<0.010	40	<1	<1	<100	5	10	<1

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, DISSOLVED (UG/L AS SE)
MAR 30...	3	7	11	12	5	67	<1	2	<1	<1

DATE	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
MAR 30...	2	1.0	55	<1	60	8	6.1	5.5	0.16

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

PATAPSCO RIVER BASIN--Continued

01587070 - SOUTH BRANCH PATAPSCO RIVER AT WOODBINE, MD

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TEMPERATURE AIR (DEG C)	COLOR (PLATINUM-COBALT UNITS)	OXYGEN, DISSOLVED (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)
DEC									
20...	1045	3.8	235	6.4	0.5	10.0	1	14.8	13
APR									
26...	0850	10	304	6.7	11.0	17.0	3	11.9	12

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
DEC									
20...	5.0	22	2.9	30	8.9	33	<0.10	4.7	135
APR									
26...	4.9	17	2.1	26	7.1	30	0.10	2.5	113

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
DEC								
20...	105	4.80	0.280	60	27	20	16	2.1
APR								
26...	91	3.40	0.140	200	43	20	28	1.3

01589040 - ROCKBURN BRANCH AT ELKRIDGE, MD

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TEMPERATURE AIR (DEG C)	COLOR (PLATINUM-COBALT UNITS)	OXYGEN, DISSOLVED (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)
DEC												
19...	0954	1.0	232	7.3	1.0	7.0	1	14.0	21	8.0	11	1.8
APR												
25...	0830	3.4	208	7.7	9.0	16.0	15	11.6	17	6.4	11	1.6
SEP												
12...	0930	--	196	7.5	19.0	24.5	3	7.7	18	6.6	9.0	2.1

DATE	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)
DEC												
19...	48	17	22	0.10	17	114	126	2.10	<0.010	--	--	--
APR												
25...	41	16	22	0.20	9.4	118	107	1.20	<0.010	--	--	--
SEP												
12...	50	12	18	0.10	18	122	113	1.70	0.020	<1	<1	10

DATE	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
DEC											
19...	--	130	69	--	--	40	32	--	--	--	1.4
APR											
25...	--	220	61	--	--	40	38	--	--	--	1.6
SEP											
12...	7	80	40	11000	<10	10	4	300	<0.01	30	1.8

PATAPSCO RIVER BASIN--Continued

01589080 - DEEP RUN AT HANOVER, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)
DEC 19...	1126	5.2	325	6.7	2.0	8.0	15	14.2	25
APR 25...	0945	12	241	7.5	10.5	20.0	15	13.4	20

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT IT FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
DEC 19...	6.3	24	2.2	50	25	41	0.10	9.3	164
APR 25...	5.1	18	2.0	43	24	30	0.10	4.7	144

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
DEC 19...	164	1.10	0.010	560	480	220	220	2.7
APR 25...	129	0.500	0.010	380	160	90	130	2.9

SEVERN RIVER BASIN

01589903 - ANNAPOLIS PLAZA POND INLET AT ANNAPOLIS, MD

DATE	TIME	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
FEB 01...	1400	7.1	18.0	44	2.4	7.3	2.8	61	13	0.10	0.95	178

DATE	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	ANTI-MONY, TOTAL (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BARIUM, DIS-SOLVED (UG/L AS BA)	BORON, DIS-SOLVED (UG/L AS B)
FEB 01...	3.68	0.420	4.10	2.90	10	<0.010	2	<1	1	<100	28	60

DATE	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)
FEB 01...	70	1	1	3	<0	2	19	18	56	<5	<0	<4

DATE	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MOLYB-DENUM, TOTAL RECOV-ERABLE (UG/L AS MO)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	NICKEL, DIS-SOLVED (UG/L AS NI)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)
FEB 01...	50	5	2	18	20	<1.0	130	12	270	280	2.6

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

SEVERN RIVER BASIN--Continued

01589906 - ANNAPOLIS PLAZA POND OUTLET AT ANNAPOLIS, MD

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TEMPERATURE AIR (DEG C)	OXYGEN, DISSOLVED (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3
OCT 07...	0930	--	--	--	--	--	--	--	--	--	--	--
JAN 19...	1015	95	7.1	5.0	14.0	11.6	12	0.75	3.4	0.80	--	17
MAR 29...	0830	109	9.1	17.5	25.0	10.7	12	0.87	8.2	0.80	16	--

DATE	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	BROMIDE DISSOLVED (MG/L AS BR)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)
OCT 07...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 19...	7.8	9.9	<0.10	<0.010	0.17	48	--	0.470	--	--	--	<0.010
MAR 29...	8.8	18	<0.10	--	0.30	59	<0.010	<0.100	0.020	<0.20	<0.010	<0.010

DATE	ALUMINUM, DISSOLVED (UG/L AS AL)	ANTIMONY, DISSOLVED (UG/L AS SB)	ANTIMONY, TOTAL (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	BORON, DISSOLVED (UG/L AS B)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM DISSOLVED (UG/L AS CD)
OCT 07...	--	--	<1	6	--	600	--	--	--	370	16	--
JAN 19...	<10	--	--	--	--	--	--	--	--	--	--	--
MAR 29...	60	<1	<1	<1	<1	100	6	<0.5	20	30	1	0

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MOLYBDENUM, TOTAL RECOVERABLE (UG/L AS MO)
OCT 07...	750	--	--	380	--	--	800	--	--	--	--	7
JAN 19...	--	--	--	--	--	18	--	--	--	4	--	--
MAR 29...	4	0	<1	4	4	12	7	<0	<4	1	0.20	3

DATE	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, DISSOLVED (UG/L AS NI)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
OCT 07...	--	200	--	--	--	9300	--	--	--	--	--
JAN 19...	--	--	--	--	--	--	--	--	--	--	--
MAR 29...	<1	1	1	59	2	80	8	5.8	4.1	<0.010	0.10

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

PATUXENT RIVER BASIN

01590800 - PATUXENT RIVER AT MULLINIX, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)
DEC 20...	1240	2.5	126	7.1	1.5	14.5	1	14.1	9.2
APR 26...	1015	11	156	6.5	12.5	19.0	3	10.1	7.4

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT IT FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
DEC 20...	4.2	6.7	1.6	21	5.0	14	0.10	3.4	70
APR 26...	4.0	5.7	1.3	15	4.5	12	0.10	3.5	72

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
DEC 20...	55	2.80	0.010	70	37	20	21	1.0
APR 26...	48	2.60	0.010	370	33	30	21	1.2

01590900 - CABIN BRANCH NEAR FLORENCE, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)
DEC 20...	1345	3.4	95	6.6	2.0	10.0	2	--	6.4
APR 26...	1145	6.8	133	6.4	14.0	21.0	10	10.8	6.7

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT IT FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
DEC 20...	3.0	5.4	1.5	13	3.3	10	<0.10	7.6	62
APR 26...	3.3	5.8	1.6	14	2.5	11	0.10	5.8	66

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
DEC 20...	45	3.00	0.010	180	110	40	33	1.4
APR 26...	46	2.90	0.020	270	92	20	34	1.2

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

PATUXENT RIVER BASIN--Continued

01591200 - CATTAIL CREEK TRIBUTARY AT CARRS MILL, MD

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TEMPERATURE AIR (DEG C)	COLOR (PLATINUM-COBALT UNITS)	OXYGEN, DISSOLVED (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)
DEC									
20...	1250	1.5	152	6.5	7.0	12.5	5	11.6	10
APR									
26...	0950	2.8	163	7.0	11.0	19.5	15	11.6	11

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
DEC									
20...	5.5	6.3	2.0	14	4.1	14	<0.10	9.0	94
APR									
26...	6.0	7.1	2.6	23	4.3	17	0.10	6.8	112

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
DEC								
20...	60	7.20	0.070	350	51	60	51	2.9
APR								
26...	65	6.30	0.210	4500	150	250	170	7.5

01591375 - CATTAIL CREEK TRIBUTARY AT DAISY, MD

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TEMPERATURE AIR (DEG C)	COLOR (PLATINUM-COBALT UNITS)	OXYGEN, DISSOLVED (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)
DEC									
20...	1030	1.5	95	6.4	4.0	8.5	3	13.2	6.5
APR									
26...	1030	2.6	93	6.9	11.0	21.0	10	10.9	6.8

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
DEC									
20...	2.9	4.6	1.2	15	3.4	10	<0.10	7.1	50
APR									
26...	3.2	5.0	1.3	16	2.7	10	0.10	7.7	60

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
DEC								
20...	44	2.90	0.010	220	58	30	24	1.8
APR								
26...	46	2.80	0.020	310	49	60	51	1.4

PATUXENT RIVER BASIN--Continued

01591475 - DORSEY BRANCH NEAR KNOLLWOOD, MD

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TEMPERATURE AIR (DEG C)	COLOR (PLATINUM-COBALT UNITS)	OXYGEN, DISSOLVED (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)
DEC									
20...	0910	1.5	141	6.5	1.0	-1.5	1	14.0	9.6
APR									
26...	1342	3.4	130	7.2	15.5	22.0	12	10.2	9.9

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
DEC									
20...	4.2	6.2	1.5	20	4.8	13	<0.10	11	84
APR									
26...	4.2	6.7	1.7	23	6.3	13	0.10	7.8	79

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
DEC								
20...	61	4.60	<0.010	90	130	30	19	1.1
APR								
26...	61	3.80	0.020	210	59	20	20	1.4

01593200 - LITTLE PATUXENT RIVER AT PINE ORCHARD, MD

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TEMPERATURE AIR (DEG C)	COLOR (PLATINUM-COBALT UNITS)	OXYGEN, DISSOLVED (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)
APR									
25...	1120	5.9	298	7.3	14.0	24.5	15	13.1	23
DEC									
19...	1120	3.7	265	7.4	0.5	8.0	1	12.2	25

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
APR									
25...	6.4	13	2.3	52	8.3	32	0.10	8.5	173
DEC									
19...	7.0	11	2.0	61	7.6	30	0.10	16	151

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
APR								
25...	127	1.20	0.010	420	70	40	58	1.8
DEC								
19...	132	2.00	<0.010	250	110	60	67	1.4

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

PATUXENT RIVER BASIN--Continued

01593300 - RED HILL BRANCH NEAR COLUMBIA, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)
DEC 19...	1510	2.0	373	7.2	3.0	8.0	3	12.8	40
APR 25...	1315	4.2	369	7.6	17.0	23.5	17	14.4	36

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT IT FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
DEC 19...	8.5	16	2.3	86	25	35	0.10	22	230
APR 25...	7.8	18	2.6	78	22	36	0.10	11	202

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
DEC 19...	202	2.30	0.010	260	200	130	130	1.9
APR 25...	182	1.20	0.030	450	46	100	110	3.0

01593600 - MIDDLE PATUXENT RIVER NEAR WEST FRIENDSHIP, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)
DEC 20...	1525	5.3	141	6.7	1.5	10.5	2	--	10
APR 26...	1510	8.9	182	7.1	17.5	22.5	15	11.3	10

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT IT FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
DEC 20...	5.1	9.4	1.8	19	5.1	19	0.10	11	95
APR 26...	5.2	8.7	1.8	20	5.3	20	0.10	6.7	100

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
DEC 20...	72	3.80	0.010	190	120	40	32	1.4
APR 26...	69	3.20	0.020	280	86	<10	18	1.6

01593675 - MIDDLE PATUXENT RIVER TRIBUTARY NEAR COLUMBIA, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)
APR 25...	1530	7.9	271	8.3	15.5	--	10	12.9	23
DEC 19...	1500	3.6	240	7.3	0.5	9.0	3	12.0	26
SEP 12...	1500	--	232	7.7	19.5	30.0	6	8.6	26

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT IT FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
APR 25...	7.1	8.9	2.0	63	9.3	19	0.10	8.7	132
DEC 19...	7.6	7.9	1.6	67	8.9	19	0.10	13	143
SEP 12...	7.2	8.6	2.4	74	7.0	19	0.10	13	139

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
APR 25...	116	2.20	0.010	430	62	20	31	1.5
DEC 19...	124	3.10	<0.010	180	69	60	56	1.2
SEP 12...	125	2.80	0.040	200	37	30	16	1.5

01593700 - MIDDLE PATUXENT RIVER TRIBUTARY NEAR CLARKSVILLE, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)
APR 25...	1635	4.9	180	7.3	15.0	20.0	15	10.6	11
DEC 19...	1615	2.3	134	7.0	0.0	-1.5	3	10.8	11

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT IT FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
APR 25...	3.9	8.6	2.0	24	8.8	17	0.10	13	94
DEC 19...	3.7	7.1	1.6	27	8.0	13	0.10	18	79

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
APR 25...	79	1.30	0.010	220	84	<10	16	1.5
DEC 19...	78	2.00	0.010	150	65	30	19	1.3

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

PATUXENT RIVER BASIN--Continued

01594200 - HAMMOND BRANCH NEAR LAUREL, MD

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TEMPERATURE AIR (DEG C)	COLOR (PLATINUM-COBALT UNITS)	OXYGEN, DISSOLVED (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)
DEC									
19...	1400	2.4	327	7.8	1.0	8.0	16	18.6	14
APR									
25...	1315	5.8	239	9.1	15.0	21.5	20	13.0	12
SEP									
12...	1250	--	293	7.5	21.0	29.5	15	8.6	14

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
DEC									
19...	3.9	50	2.6	99	10	24	0.10	8.3	168
APR									
25...	3.9	28	2.7	59	10	28	0.10	4.3	135
SEP									
12...	4.1	43	3.8	88	11	26	0.10	6.4	183

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
DEC								
19...	174	2.00	2.80	690	510	100	100	3.6
APR								
25...	124	1.00	1.30	440	99	60	36	3.5
SEP								
12...	162	1.30	3.50	410	110	40	21	3.2

01594395 - DORSEY RUN AT JESSUP, MD

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TEMPERATURE AIR (DEG C)	COLOR (PLATINUM-COBALT UNITS)	OXYGEN, DISSOLVED (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)
DEC												
19...	1252	1.3	319	6.9	2.5	9.0	17	15.4	30	7.5	17	1.7
APR												
25...	1050	4.6	251	7.3	11.0	19.0	30	13.2	23	6.3	16	2.2
SEP												
12...	1025	--	312	6.7	20.0	26.5	50	9.9	32	5.5	15	16

DATE	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)
DEC												
19...	69	20	34	0.10	12	227	162	0.700	<0.010	--	--	--
APR												
25...	61	22	32	0.10	5.4	145	139	0.100	0.020	--	--	--
SEP												
12...	65	22	31	0.20	4.8	231	188	1.10	0.680	1	<1	4

01594395 - DORSEY RUN AT JESSUP, MD--Continued

DATE	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
DEC 19...	--	820	730	--	--	40	370	--	--	--	2.3
APR 25...	--	800	250	--	--	220	230	--	--	--	2.5
SEP 12...	3	3400	850	3700	<10	400	300	90	0.03	20	56

01594680 - MILL CREEK TRIBUTARY AT PRINCE FREDERICK, MD

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
FEB 01...	0900	1220	8.7	15.5	4.4	26	200	1.8	139	23	290

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRATE DISSOLVED (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ANTIMONY, DISSOLVED (UG/L AS SB)
FEB 01...	0.10	1.5	638	1.67	0.030	1.70	0.260	1.1	0.030	<10	2

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BORON, DISSOLVED (UG/L AS B)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)
FEB 01...	1	1	7	10	<0	3	1	8	2	4	<5

DATE	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	MOLYBDENUM, TOTAL RECOVERABLE (UG/L AS MO)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
FEB 01...	<0	2	5	1	2	19	2	670	340	0.23

GROUND-WATER LEVELS

DELAWARE

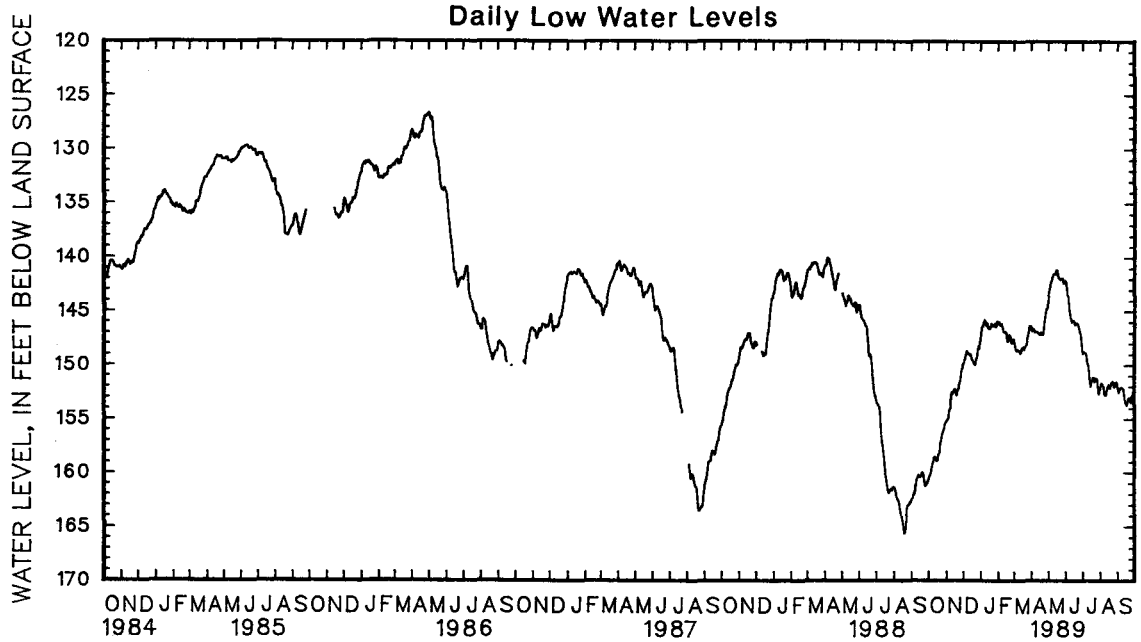
KENT COUNTY

WELL NUMBER.--Id55-01. SITE ID.--391026075304901.
LOCATION.--Lat 39°10'26", long 75°30'49", Hydrologic Unit 02040207, White Oak Rd. at Dover.
Owner: City of Dover.
AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 349 ft; casing diameter 2.5 in., to 329 ft; screened from 329 to 349 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--60-minute recorder interval from Oct. 1, 1984 to current year.
DATUM.--Elevation of land surface is 20 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of casing, 1.0 ft above land-surface datum.
REMARKS.--Water level affected by pumping in the Dover area.
PERIOD OF RECORD.--August 1969 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 67.40 ft below land-surface datum, May 5, 1970; lowest measured, 165.81 ft below land-surface datum, Aug. 19 and 20, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	160.76	160.59	155.25	155.08	149.93	149.87	147.74	147.32	146.05	145.96	148.08	147.79
2	160.58	160.39	155.11	155.08	149.88	149.75	147.30	146.90	146.13	146.05	148.30	148.08
3	160.38	160.26	155.09	155.02	149.74	149.49	146.87	146.44	146.19	146.01	148.56	148.30
4	160.25	160.13	155.01	154.66	149.53	149.39	146.45	146.43	146.31	146.19	148.73	148.56
5	160.12	159.85	154.63	154.18	149.37	149.11	146.44	146.33	146.37	146.30	148.75	148.69
6	159.83	159.55	154.21	154.14	149.10	148.87	146.34	146.05	146.36	146.20	148.75	148.59
7	159.53	159.24	154.14	154.03	148.85	148.68	146.10	145.98	146.38	146.20	148.74	148.57
8	159.23	159.08	154.02	153.68	148.95	148.74	145.96	145.79	146.62	146.39	148.74	148.68
9	159.08	158.97	153.66	153.15	148.98	148.91	146.16	145.91	146.85	146.64	148.68	148.63
10	158.97	158.61	153.11	152.54	148.99	148.95	146.31	146.17	146.95	146.85	148.82	148.67
11	158.60	158.54	152.68	152.53	149.14	148.98	146.33	146.32	146.95	146.93	148.93	148.82
12	158.71	158.57	152.70	152.67	149.16	149.06	146.33	146.13	147.08	146.93	149.05	148.92
13	158.89	158.72	152.68	152.49	149.06	148.95	146.56	146.14	147.10	146.98	149.05	148.84
14	158.94	158.90	152.49	152.30	149.22	149.06	146.68	146.57	147.00	146.92	148.84	148.68
15	158.98	158.93	152.31	152.24	149.51	149.23	146.69	146.62	147.20	147.00	148.67	148.42
16	158.96	158.88	152.27	152.22	149.59	149.52	146.70	146.67	147.63	147.20	148.56	148.42
17	158.88	158.57	152.63	152.28	149.60	149.52	146.70	146.64	147.82	147.64	148.57	148.44
18	158.55	158.29	152.85	152.64	149.70	149.60	146.69	146.48	147.85	147.82	148.51	148.33
19	158.29	158.19	152.89	152.78	149.87	149.70	146.47	146.37	147.84	147.71	148.74	148.53
20	158.20	157.95	152.75	152.36	150.02	149.86	146.35	146.14	147.73	147.50	148.74	148.40
21	157.93	157.23	152.41	152.37	150.02	149.93	146.47	146.24	147.48	147.20	148.39	148.27
22	157.21	157.09	152.40	152.23	150.03	149.97	146.47	146.40	147.67	147.31	148.33	148.16
23	157.10	156.78	152.21	151.87	149.97	149.72	146.42	146.31	147.87	147.68	148.16	148.09
24	156.75	156.39	151.85	151.66	149.73	149.38	146.38	146.32	147.99	147.88	148.09	147.74
25	156.42	156.29	151.66	151.45	149.39	149.31	146.42	146.38	148.01	147.95	147.73	147.37
26	156.29	156.11	151.44	151.10	149.31	149.05	146.42	146.15	147.94	147.63	147.36	147.23
27	156.15	155.93	151.08	150.64	149.03	148.54	146.44	146.16	147.63	147.59	147.23	146.80
28	155.92	155.60	150.63	150.42	148.52	148.22	146.53	146.45	147.78	147.59	146.79	146.50
29	155.61	155.39	150.45	150.29	148.57	148.46	146.47	146.25	---	---	146.49	146.37
30	155.39	155.31	150.28	149.94	148.45	148.06	146.23	145.95	---	---	146.38	146.37
31	155.33	155.25	---	---	148.04	147.75	145.98	145.94	---	---	146.55	146.37
MONTH	160.76	155.25	155.25	149.94	150.03	147.75	147.74	145.79	148.01	145.96	149.05	146.37

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	146.88	146.55	144.22	143.63	142.40	142.18	149.08	148.96	152.45	152.30	152.27	152.08
2	146.95	146.87	143.60	143.24	142.80	142.41	149.06	148.84	152.29	151.94	152.58	152.28
3	146.89	146.66	143.25	142.96	143.39	142.82	148.84	148.80	151.93	151.75	152.60	152.53
4	146.69	146.64	142.96	142.72	143.95	143.40	148.98	148.85	151.75	151.72	152.54	152.42
5	146.84	146.69	142.72	142.41	144.37	143.96	148.98	148.90	151.88	151.74	152.42	152.28
6	147.05	146.84	142.38	142.19	144.90	144.35	149.08	148.90	151.97	151.89	152.28	152.17
7	147.11	146.97	142.23	142.13	145.28	144.91	149.31	149.09	152.33	151.98	152.17	152.08
8	147.00	146.92	142.12	141.86	145.60	145.30	149.73	149.32	152.72	152.35	152.10	152.06
9	146.93	146.88	141.86	141.76	145.74	145.61	149.88	149.75	152.80	152.74	152.17	152.09
10	146.93	146.89	141.75	141.55	146.02	145.76	150.02	149.89	152.81	152.76	152.18	152.15
11	146.98	146.89	141.55	141.50	146.13	146.03	150.47	150.04	152.82	152.80	152.42	152.18
12	147.04	146.98	141.55	141.49	146.12	145.90	151.07	150.50	152.82	152.68	152.83	152.44
13	147.12	147.00	141.60	141.56	145.88	145.85	151.62	151.09	152.67	152.37	153.19	152.84
14	147.21	147.12	141.60	141.46	145.94	145.86	151.99	151.64	152.35	152.13	153.44	153.20
15	147.25	147.18	141.44	141.17	146.03	145.92	152.13	151.99	152.12	151.93	153.74	153.45
16	147.23	147.18	141.18	141.11	146.24	146.05	152.10	151.71	151.94	151.82	153.79	153.73
17	147.22	147.01	141.55	141.19	146.40	146.24	151.70	151.50	152.09	151.85	153.73	153.63
18	147.01	146.97	141.82	141.56	146.39	146.27	151.48	151.38	152.22	152.10	153.63	153.57
19	147.15	147.02	141.93	141.83	146.26	146.14	151.37	151.20	152.21	152.16	153.58	153.39
20	147.25	147.16	141.98	141.93	146.18	146.12	151.32	151.17	152.19	151.92	153.39	153.17
21	147.28	147.19	142.06	141.96	146.18	146.13	151.54	151.33	151.91	151.66	153.20	153.17
22	147.21	147.06	142.10	142.05	146.34	146.17	151.58	151.55	151.66	151.62	153.23	153.17
23	147.06	146.56	142.10	141.99	146.55	146.35	151.55	151.34	151.62	151.52	153.48	153.19
24	146.54	145.94	141.99	141.96	146.79	146.56	151.34	151.22	151.81	151.55	153.55	153.46
25	145.93	145.55	142.00	141.91	146.95	146.81	151.32	151.24	152.03	151.82	153.45	153.13
26	145.53	145.11	142.10	141.91	147.11	146.96	151.51	151.33	152.10	152.03	153.10	152.92
27	145.10	144.79	142.37	142.11	147.49	147.13	151.93	151.52	152.09	151.93	152.98	152.87
28	144.82	144.78	142.52	142.38	148.02	147.51	152.45	151.94	151.91	151.69	152.87	152.74
29	144.78	144.62	142.53	142.36	148.65	148.04	152.80	152.48	151.68	151.62	152.74	152.65
30	144.60	144.24	142.35	142.17	148.96	148.67	152.83	152.69	151.71	151.61	152.75	152.70
31	---	---	142.20	142.14	---	---	152.68	152.46	152.07	151.72	---	---
MONTH	147.28	144.24	144.22	141.11	148.96	142.18	152.83	148.80	152.82	151.52	153.79	152.06

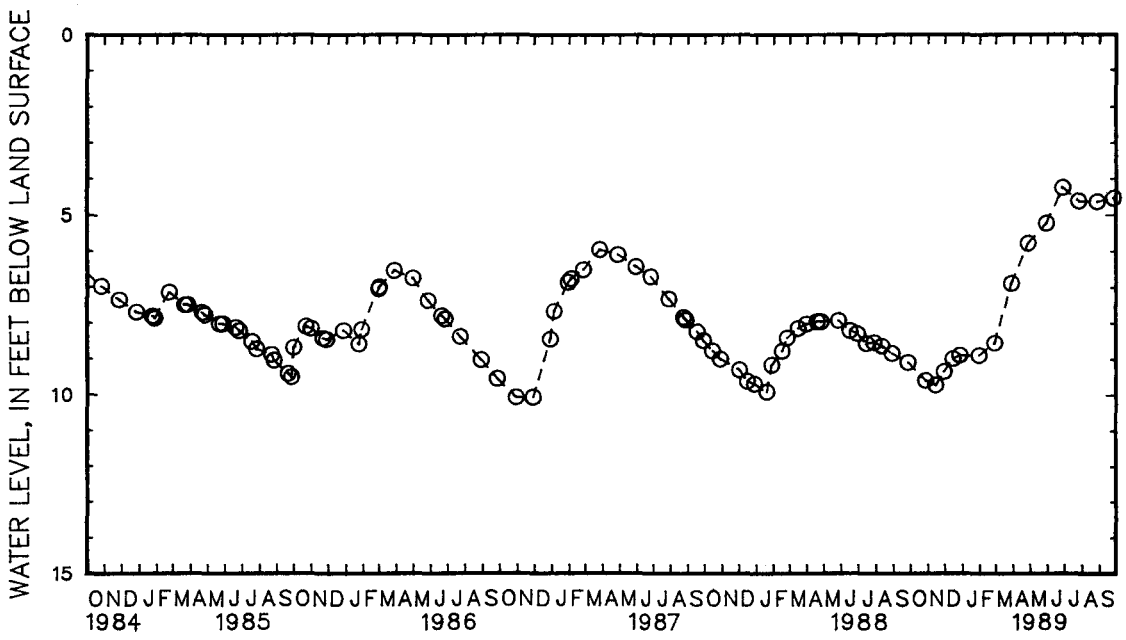


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--Jd42-03. SITE ID.--390607075331501. PERMIT NUMBER.--10230.
LOCATION.--Lat 39°06'07", long 75°33'15", Hydrologic Unit 02040207, 1 mi south of Camden.
Owner: Delaware Department of Transportation.
AQUIFER.--Columbia Group of Pleistocene age. Aquifer code: 112CLMB.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 11 ft; casing diameter 1.25 in., to 8.5 ft; well point from 8.5 to 11 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 44 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing at land-surface datum.
PERIOD OF RECORD.--October 1950 to December 1961, August 1971 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.69 ft below land-surface datum, July 18, 1975; lowest measured, 10.10 ft below land-surface datum, Nov. 28, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	9.61	DEC 15	9.00	FEB 27	8.57	MAY 30	5.22	AUG 28	4.63
NOV 14	9.74	27	8.90	MAR 28	6.88	JUN 27	4.24	SEP 26	4.53
29	9.36	JAN 30	8.92	APR 27	5.77	JUL 26	4.61		

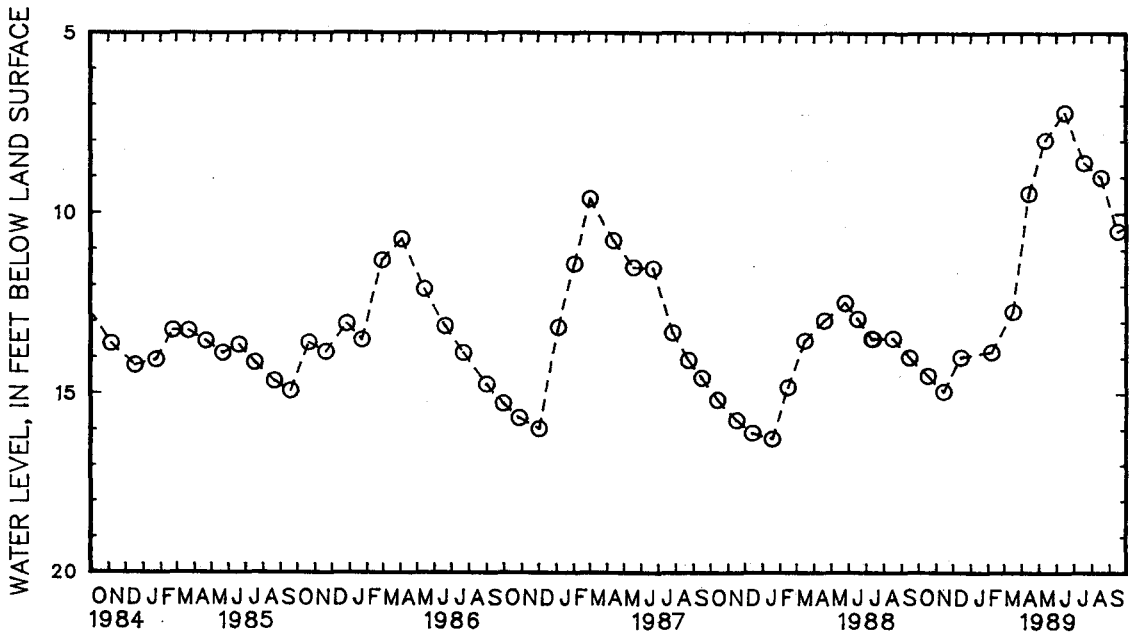


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--Mc51-01. SITE ID.--385041075395601.
LOCATION.--Lat 38°50'41", long 75°39'56", Hydrologic Unit 02060008, 1.3 mi northeast of Adamsville.
Owner: Delaware Department of Transportation.
AQUIFER.--Columbia Group of Pleistocene age. Aquifer code: 112CLMB.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 19 ft; casing diameter 2 in., to 15 ft; well point from 15 to 19 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 55 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing at land-surface datum.
PERIOD OF RECORD.--September 1958 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.28 ft below land-surface datum, May 31, 1984; lowest measured, 16.29 ft below land-surface datum, Jan. 19, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	14.52	DEC 15	14.00	MAR 16	12.72	MAY 11	7.97	JUL 18	8.60	SEP 15	10.49
NOV 14	14.96	FEB 07	13.86	APR 13	9.44	JUN 15	7.20	AUG 17	9.01		

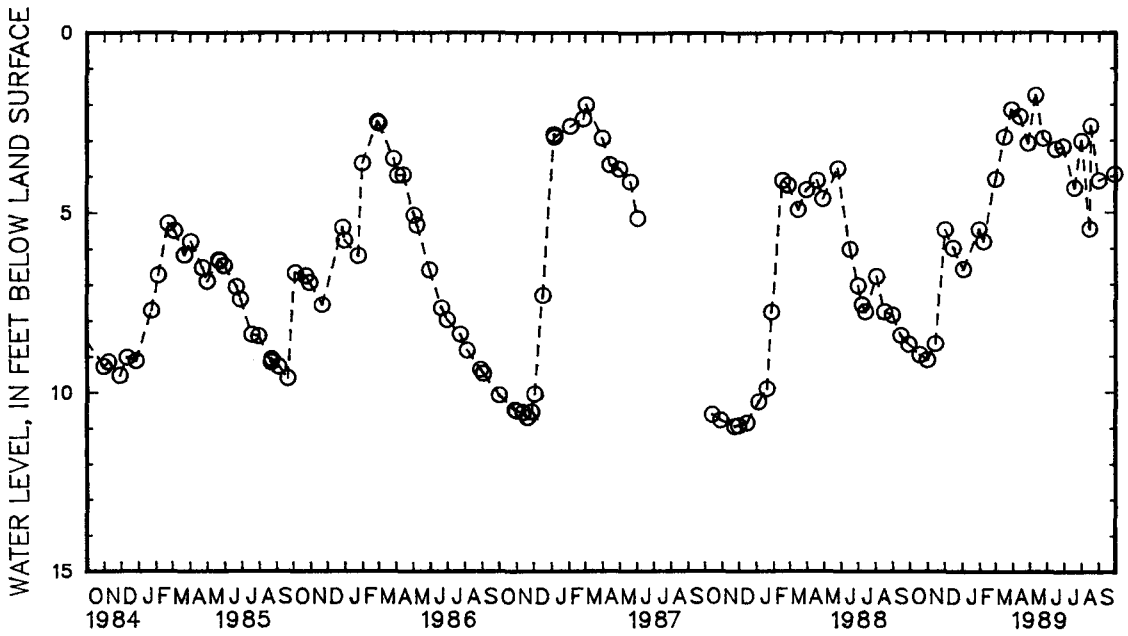


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--Md22-01. SITE ID.--385310075331301. PERMIT NUMBER.--10221.
LOCATION.--Lat 38°53'10", long 75°33'13", Hydrologic Unit 02040207, 2.4 mi west of Williamsville.
Owner: Delaware Department of Transportation.
AQUIFER.--Columbia Group of Pleistocene age. Aquifer code: 112CLMB
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 17 ft; casing diameter 1 in., to 14 ft; well point from 14 to 17 ft.
INSTRUMENTATION.--Bimonthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 58 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing at land-surface datum.
PERIOD OF RECORD.--September 1958 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.07 ft below land-surface datum, July 14, 1975; lowest measured, 11.14 ft below land-surface datum, Jan. 6, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	8.95	DEC 15	5.97	FEB 28	4.07	APR 27	3.07	JUN 28	3.19	AUG 17	2.60
31	9.09	JAN 2	6.56	MAR 16	2.90	MAY 11	1.74	JUL 18	4.33	31	4.13
NOV 14	8.64	30	5.46	29	2.14	24	2.94	31	3.02	SEP 28	3.95
DEC 1	5.45	FEB 7	5.80	APR 13	2.33	JUN 15	3.26	AUG 15	5.47		



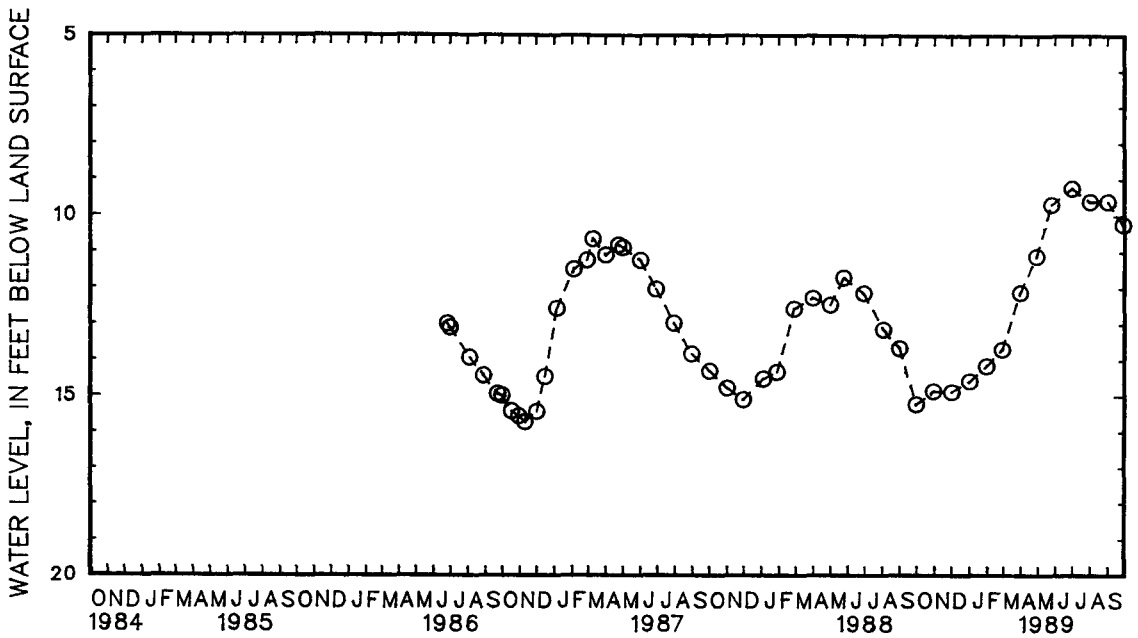
5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

NEW CASTLE COUNTY

WELL NUMBER.--Db24-17. SITE ID.--393856075415402. PERMIT NUMBER.--65430.
LOCATION.--Lat 39°38'56", long 75°41'54", Hydrologic Unit 02040205, 2 mi south of Ogletown.
Owner: Delaware Department of Transportation.
AQUIFER.--Columbia Group of Pleistocene age. Aquifer code: 112CLMB.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 22 ft; casing diameter 2 in., to 17 ft; screened from 17 to 22 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 77 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing, 0.55 ft above land-surface datum.
PERIOD OF RECORD.--June 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.23 ft below land-surface datum, June 30, 1989; lowest measured, 15.74 ft below land-surface datum, Nov. 10, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	14.88	JAN 2	14.59	FEB 27	13.71	APR 28	11.11	JUN 30	9.23	SEP 1	9.60
DEC 2	14.90	31	14.18	MAR 31	12.12	MAY 25	9.67	AUG 1	9.60	28	10.23



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--Gb41-16. SITE ID.--392120075441502. PERMIT NUMBER.--77259.
LOCATION.--Lat 39°21'20", long 75°44'15", Hydrologic Unit 0206002, south of Vandyke.
Owner: U.S. Geological Survey
AQUIFER.--Pleistocene-Pliocene Series of Pleistocene age. Aquifer code: 112PCPC.
WELL CHARACTERISTICS.--Driven, observation, water-table well, depth 17 ft; casing diameter 2 in., to 14 ft; screen diameter 2 in. from 14 to 17 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--60-minute recorder interval from Dec. 14, 1988 to current year.
DATUM.--Elevation of land surface is 84.50 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 3.94 ft above land-surface datum.
PERIOD OF RECORD.--December 1988 to current year.
REMARKS.--National Water Quality Assessment Project observation well.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 81.30 ft above sea level, May 6, 1989; lowest measured, 74.57 ft above sea level, Dec. 26 & 27, 1988.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

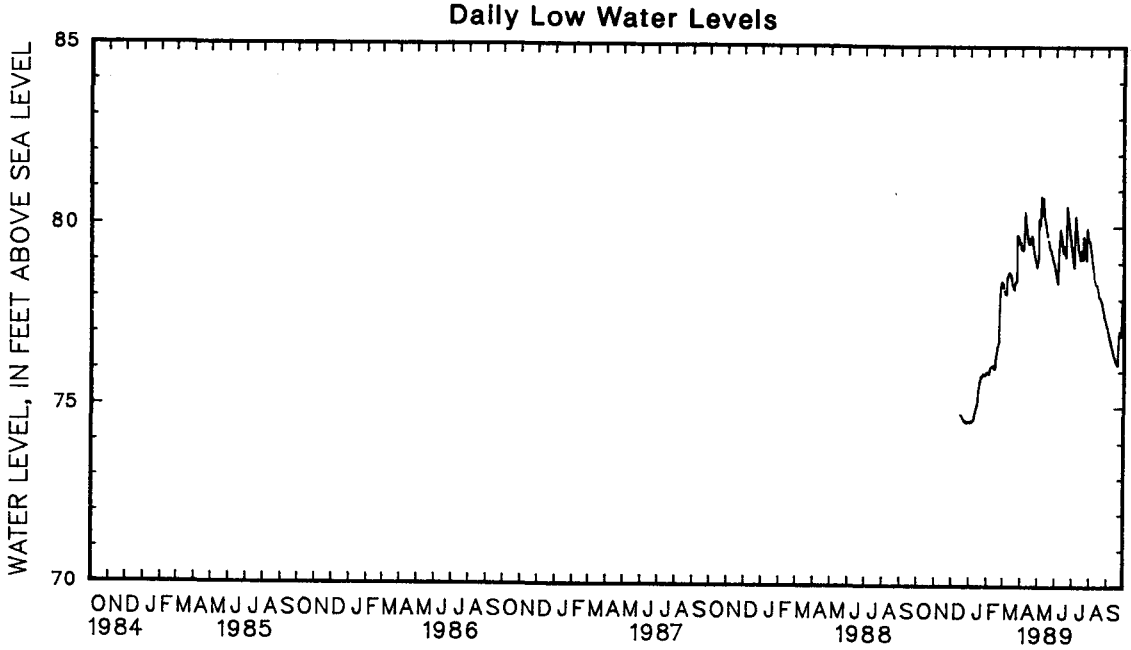
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	---	---	---	---	74.59	74.58	75.98	75.97	78.44	78.34
2	---	---	---	---	---	---	74.61	74.58	---	---	---	---
3	---	---	---	---	---	---	74.70	74.61	75.97	75.93	78.30	78.24
4	---	---	---	---	---	---	74.68	74.61	76.04	75.94	78.24	78.17
5	---	---	---	---	---	---	74.61	74.60	76.10	76.05	78.24	78.17
6	---	---	---	---	---	---	74.64	74.61	76.13	76.11	78.60	78.15
7	---	---	---	---	---	---	74.69	74.63	76.14	76.13	78.63	78.61
8	---	---	---	---	---	---	74.79	74.69	76.17	76.13	78.65	78.63
9	---	---	---	---	---	---	74.85	74.79	76.17	76.13	78.72	78.65
10	---	---	---	---	---	---	74.92	74.85	76.16	76.14	78.75	78.72
11	---	---	---	---	---	---	74.97	74.92	76.18	76.16	78.82	78.75
12	---	---	---	---	---	---	75.05	74.98	76.18	76.09	78.84	78.74
13	---	---	---	---	---	---	75.06	75.05	76.12	76.06	78.74	78.70
14	---	---	---	---	---	---	75.16	75.06	76.30	76.12	78.72	78.70
15	---	---	---	---	74.86	74.79	75.42	75.17	76.41	76.30	78.71	78.59
16	---	---	---	---	74.79	74.78	75.53	75.43	76.48	76.41	78.56	78.43
17	---	---	---	---	74.80	74.78	75.63	75.54	76.58	76.49	78.42	78.39
18	---	---	---	---	74.79	74.74	75.75	75.64	76.70	76.59	78.47	78.37
19	---	---	---	---	74.74	74.70	75.84	75.75	76.74	76.70	78.37	78.29
20	---	---	---	---	74.70	74.68	75.88	75.84	76.80	76.75	78.41	78.28
21	---	---	---	---	74.68	74.65	75.85	75.83	77.61	76.81	78.54	78.44
22	---	---	---	---	74.64	74.60	75.90	75.85	78.07	77.62	78.53	78.50
23	---	---	---	---	74.62	74.60	75.93	75.90	78.31	78.10	78.51	78.49
24	---	---	---	---	74.67	74.62	75.93	75.93	78.42	78.31	79.76	78.52
25	---	---	---	---	74.67	74.59	75.93	75.89	78.48	78.43	79.86	79.78
26	---	---	---	---	74.59	74.57	75.99	75.91	78.57	78.49	79.86	79.79
27	---	---	---	---	74.65	74.57	75.97	75.90	78.55	78.46	79.79	79.74
28	---	---	---	---	74.73	74.60	75.93	75.88	78.47	78.45	79.74	79.70
29	---	---	---	---	74.60	74.58	75.96	75.93	---	---	79.70	79.56
30	---	---	---	---	74.62	74.58	75.99	75.96	---	---	79.59	79.55
31	---	---	---	---	74.62	74.59	75.98	75.94	---	---	79.72	79.59
MONTH	---	---	---	---	---	---	75.99	74.58	---	---	---	---

DELAWARE--Continued

NEW CASTLE COUNTY--Continued

GB41-16--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	79.61	79.45	79.12	79.03	78.89	78.81	79.33	79.21	79.71	79.62	77.24	77.21
2	79.45	79.39	80.49	79.16	78.81	78.71	79.20	79.08	79.61	79.52	77.20	77.09
3	79.52	79.41	80.44	80.23	78.70	78.64	79.08	78.94	79.51	79.38	77.08	77.01
4	79.49	79.46	80.23	80.08	78.64	78.51	79.57	78.88	79.38	79.26	77.01	76.94
5	79.45	79.37	80.24	80.05	78.68	78.44	79.91	79.57	79.26	79.12	76.94	76.89
6	79.91	79.47	81.30	80.28	79.10	78.84	80.35	79.92	79.12	78.99	76.89	76.84
7	80.39	79.89	81.29	80.84	79.61	79.12	80.37	80.29	78.99	78.85	76.84	76.77
8	80.49	80.43	80.84	80.51	79.65	79.61	80.28	80.02	78.85	78.69	76.77	76.71
9	80.49	80.22	80.50	80.34	79.93	79.65	80.01	79.86	78.69	78.55	76.71	76.65
10	80.22	80.02	81.16	80.34	79.95	79.93	79.85	79.71	78.54	78.49	76.65	76.58
11	80.02	79.90	81.13	80.81	79.93	79.79	79.71	79.50	78.49	78.44	76.58	76.50
12	79.89	79.78	80.81	80.52	79.79	79.69	79.48	79.35	78.44	78.41	76.50	76.42
13	79.78	79.67	80.51	80.30	79.69	79.52	79.35	79.31	78.42	78.40	76.42	76.39
14	79.67	79.57	80.30	80.18	79.51	79.37	79.36	79.22	78.40	78.35	76.39	76.35
15	79.74	79.55	80.18	80.09	79.41	79.29	79.22	79.10	78.34	78.30	76.35	76.27
16	79.77	79.69	80.09	80.02	79.48	79.40	79.36	79.09	78.30	78.19	76.27	76.24
17	79.69	79.65	80.01	79.87	79.48	79.47	79.38	79.34	78.19	78.09	76.24	76.22
18	79.67	79.56	79.87	79.76	79.47	79.35	79.34	79.23	78.09	78.05	76.22	76.18
19	79.79	79.57	---	---	79.35	79.23	79.23	79.13	78.05	78.05	76.64	76.17
20	79.79	79.77	79.71	79.63	79.89	79.16	79.75	79.11	78.04	77.99	76.97	76.64
21	79.77	79.69	79.63	79.51	80.56	79.90	79.75	79.73	77.99	77.96	77.08	76.98
22	79.69	79.51	79.51	79.41	80.58	80.56	79.72	79.60	77.96	77.92	77.17	77.08
23	79.51	79.41	79.45	79.38	80.54	80.42	79.60	79.45	77.92	77.84	77.17	77.11
24	79.40	79.31	79.48	79.37	80.41	80.25	79.45	79.28	77.84	77.75	77.10	77.07
25	79.30	79.22	79.37	79.30	80.25	80.11	79.28	79.15	77.74	77.68	77.11	77.07
26	79.22	79.12	79.30	79.22	80.11	79.96	79.87	79.09	77.68	77.60	77.75	77.12
27	79.12	79.05	79.22	79.17	79.96	79.80	79.94	79.88	77.60	77.50	77.87	77.76
28	79.05	78.95	79.17	79.10	79.77	79.67	80.06	79.96	77.50	77.43	77.96	77.88
29	79.00	78.90	79.10	79.03	79.66	79.48	79.95	79.77	77.43	77.38	78.00	77.97
30	79.03	79.01	79.03	78.97	79.47	79.33	79.76	79.61	77.38	77.32	78.00	77.94
31	---	---	78.97	78.89	---	---	79.71	79.60	77.32	77.24	---	---
MONTH	80.49	78.90	---	---	80.58	78.44	80.37	78.88	79.71	77.24	78.00	76.17



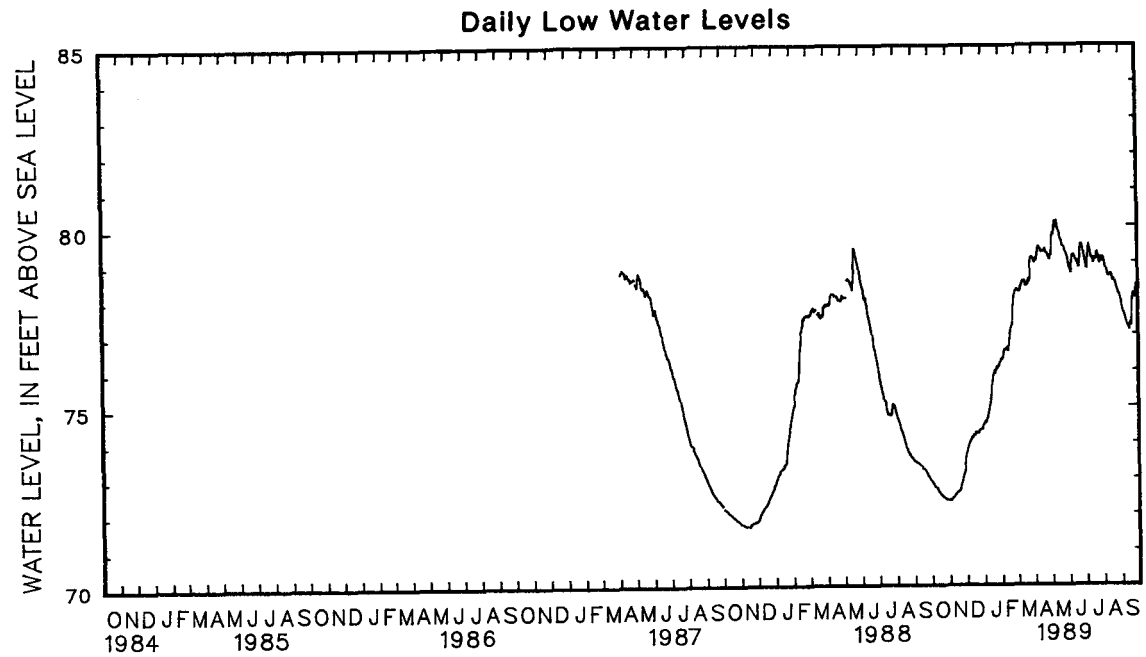
5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--Gb51-06. SITE ID.--392055075443501. PERMIT NUMBER.--70417.
LOCATION.--Lat 39°20'55", long 75°44'35", Hydrologic Unit 0206002, at Vandyke Tract, Blackbird State Forest, near Vandyke.
Owner: U.S. Geological Survey
AQUIFER.--Pleistocene-Pliocene Formation Series of Pleistocene age. Aquifer code: 112PCPC.
WELL CHARACTERISTICS.--Driven, observation, water-table well, depth 12.5 ft, casing diameter 2 in., to 10 ft; screen diameter 2 in. from 10 to 12.5 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--60-minute recorder interval from Apr. 4, 1987 to current year.
DATUM.--Elevation of land surface is 80.82 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 4.24 ft above land-surface datum.
REMARKS.--National Water Quality Assessment Project observation well.
PERIOD OF RECORD.--April 1987 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 80.14 ft above sea level, May 6, 7, 1989; lowest measured, 71.66 ft above sea level, Nov. 11, 1987.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	72.89	72.88	72.36	72.35	73.70	73.64	74.51	74.47	76.31	76.29	78.25	78.21
2	72.88	72.85	72.36	72.36	73.79	73.70	74.56	74.52	76.30	76.27	---	---
3	72.85	72.82	72.35	72.35	73.87	73.79	74.65	74.56	76.36	76.29	78.22	78.20
4	72.82	72.80	72.38	72.35	73.89	73.82	74.63	74.52	76.48	76.32	78.20	78.17
5	72.80	72.76	72.42	72.38	73.94	73.90	74.62	74.55	76.54	76.46	78.27	78.17
6	72.76	72.73	72.42	72.41	74.01	73.94	74.68	74.62	76.57	76.54	78.36	78.18
7	72.73	72.73	72.42	72.42	74.03	74.01	74.72	74.64	76.57	76.55	78.36	78.32
8	72.73	72.71	72.45	72.42	74.03	74.00	74.82	74.72	76.63	76.55	78.36	78.32
9	72.71	72.69	72.47	72.45	74.10	74.03	74.88	74.81	76.61	76.58	78.42	78.36
10	72.69	72.69	72.53	72.47	74.12	74.10	74.99	74.88	76.62	76.59	78.46	78.42
11	72.69	72.64	72.53	72.52	74.12	74.09	75.04	74.99	76.67	76.62	78.54	78.47
12	72.64	72.60	72.53	72.52	74.16	74.10	75.22	75.04	76.66	76.53	78.55	78.44
13	72.60	72.58	72.57	72.54	74.22	74.17	75.21	75.16	76.64	76.53	78.50	78.44
14	72.58	72.57	72.57	72.57	74.23	74.18	75.36	75.17	76.85	76.66	78.52	78.47
15	72.57	72.55	72.59	72.57	74.23	74.17	75.60	75.36	77.00	76.85	78.52	78.39
16	72.55	72.52	72.61	72.59	74.24	74.17	75.70	75.61	77.01	76.98	78.38	78.33
17	72.52	72.51	72.62	72.61	74.27	74.24	75.83	75.71	77.10	77.01	78.44	78.36
18	72.51	72.49	72.64	72.62	74.26	74.24	75.93	75.83	77.18	77.10	78.47	78.40
19	72.50	72.47	72.69	72.64	74.24	74.22	75.94	75.90	77.21	77.18	78.40	78.35
20	72.47	72.45	72.78	72.69	74.27	74.24	76.02	75.95	77.23	77.21	78.50	78.36
21	72.48	72.45	72.82	72.78	74.27	74.24	75.95	75.88	77.70	77.24	78.60	78.51
22	72.48	72.43	72.90	72.83	74.23	74.22	76.02	75.94	77.93	77.71	78.54	78.45
23	72.43	72.41	72.98	72.90	74.32	74.24	76.07	76.02	78.06	77.95	78.50	78.47
24	72.41	72.41	73.03	72.98	74.39	74.31	76.08	76.07	78.15	78.06	78.98	78.52
25	72.41	72.40	73.07	73.03	74.35	74.32	76.07	76.02	78.20	78.15	79.12	79.00
26	72.40	72.38	73.13	73.08	74.33	74.32	76.24	76.05	78.31	78.20	79.13	79.09
27	72.38	72.37	73.19	73.13	74.45	74.33	76.20	76.09	78.26	78.19	79.16	79.11
28	72.37	72.36	73.36	73.19	74.53	74.33	76.15	76.09	78.25	78.24	79.15	79.13
29	72.36	72.36	73.52	73.37	74.42	74.33	76.20	76.16	---	---	79.15	79.08
30	72.36	72.35	73.64	73.52	74.50	74.42	76.27	76.20	---	---	79.15	79.08
31	72.35	72.35	---	---	74.51	74.47	76.29	76.23	---	---	79.24	79.08
MONTH	72.89	72.35	73.64	72.35	74.53	73.64	76.29	74.47	78.31	76.27	---	---

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	79.08	78.98	79.26	79.16	79.07	78.96	79.06	78.97	79.14	79.12	77.94	77.90
2	79.05	78.97	79.77	79.29	78.98	78.86	78.98	78.88	79.12	79.09	77.90	77.74
3	79.15	79.05	79.81	79.78	78.88	78.83	78.90	78.81	79.09	79.01	77.74	77.67
4	79.11	79.08	79.78	79.76	78.87	78.70	79.14	78.82	79.01	78.94	77.67	77.61
5	79.10	79.03	79.86	79.75	78.85	78.69	79.32	79.15	78.96	78.85	77.61	77.59
6	79.26	79.12	80.14	79.88	79.02	78.92	79.49	79.33	78.89	78.79	77.59	77.57
7	79.39	79.22	80.14	80.12	79.19	79.01	79.52	79.47	78.81	78.74	77.57	77.52
8	79.56	79.39	80.12	80.01	79.20	79.17	79.50	79.39	78.74	78.64	77.52	77.46
9	79.50	79.42	80.01	79.95	79.29	79.17	79.39	79.33	78.64	78.59	77.46	77.40
10	79.43	79.40	80.12	79.98	79.29	79.20	79.33	79.25	78.59	78.59	77.42	77.33
11	79.40	79.36	80.13	80.12	79.20	79.15	79.25	79.13	78.63	78.59	77.33	77.28
12	79.37	79.35	80.12	80.02	79.16	79.14	79.13	79.10	78.68	78.62	77.28	77.23
13	79.35	79.29	80.02	79.93	79.19	79.07	79.19	79.11	78.68	78.66	77.23	77.20
14	79.29	79.26	79.93	79.87	79.07	79.06	79.20	79.06	78.66	78.64	77.22	77.20
15	79.41	79.28	79.87	79.84	79.08	79.02	79.06	78.96	78.64	78.64	77.21	77.10
16	79.41	79.30	79.84	79.79	79.10	78.99	79.16	78.97	78.64	78.55	77.29	77.10
17	79.34	79.29	79.79	79.68	79.08	79.01	79.16	79.09	78.55	78.47	77.33	77.28
18	79.33	79.27	79.68	79.61	79.02	78.95	79.10	79.06	78.50	78.47	77.28	77.22
19	79.35	79.29	79.61	79.60	78.96	78.84	79.07	79.06	78.54	78.50	77.74	77.22
20	79.36	79.32	79.60	79.54	79.04	78.84	79.23	79.07	78.52	78.45	78.06	77.74
21	79.37	79.35	79.54	79.45	79.33	79.06	79.26	79.23	78.49	78.45	78.12	78.06
22	79.35	79.27	79.45	79.42	79.46	79.34	79.26	79.25	78.48	78.41	78.21	78.12
23	79.29	79.25	79.47	79.42	79.56	79.47	79.25	79.17	78.43	78.34	78.20	78.01
24	79.27	79.23	79.48	79.41	79.52	79.48	79.17	79.09	78.34	78.27	78.01	78.01
25	79.24	79.21	79.41	79.34	79.50	79.46	79.09	79.01	78.27	78.23	78.09	78.01
26	79.21	79.16	79.37	79.28	79.46	79.37	79.12	78.95	78.23	78.18	78.41	78.11
27	79.18	79.13	79.31	79.25	79.37	79.27	79.18	79.12	78.18	78.12	78.38	78.36
28	79.13	79.07	79.25	79.22	79.27	79.25	79.21	79.09	78.12	78.10	78.40	78.37
29	79.17	79.06	79.22	79.18	79.25	79.12	79.09	79.01	78.10	78.07	78.44	78.38
30	79.18	79.16	79.19	79.14	79.12	79.06	79.02	79.01	78.16	78.01	78.38	78.33
31	---	---	79.14	79.07	---	---	79.12	79.01	78.01	77.94	---	---
MONTH	79.56	78.97	80.14	79.07	79.56	78.69	79.52	78.81	79.14	77.94	78.44	77.10



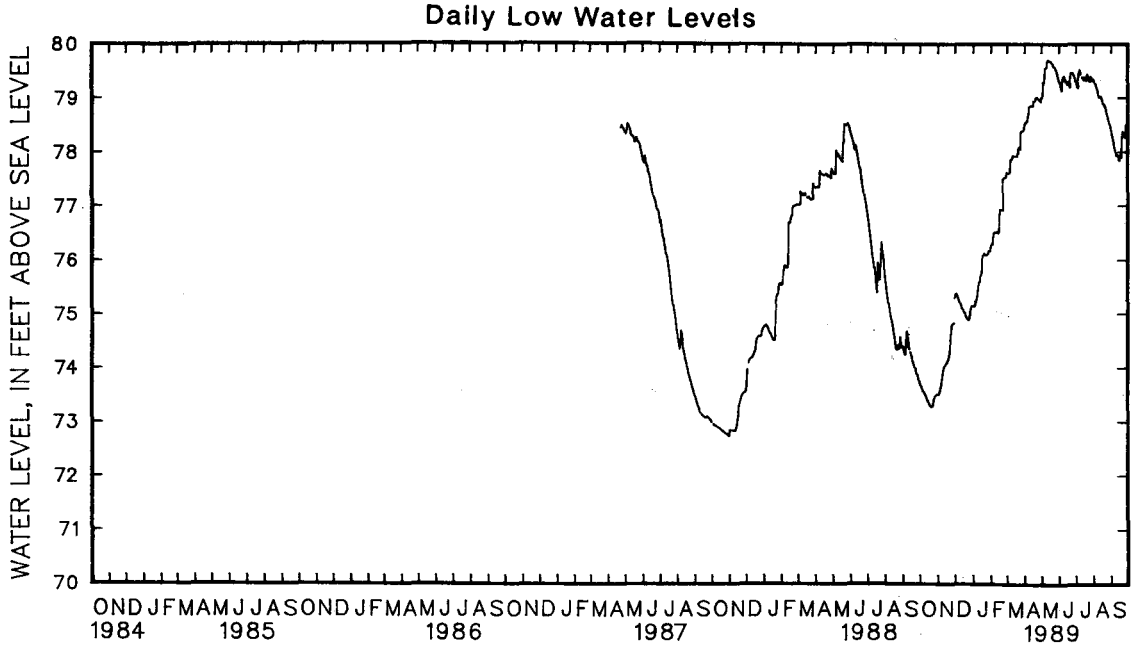
5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--Gb51-08. SITE ID.--392058075443801. PERMIT NUMBER.--70419.
LOCATION.--Lat 39°20'58", long 75°44'38", Hydrologic Unit 0206002, at Vandyke Tract, Blackbird State Forest, near Vandyke.
Owner: U.S. Geological Survey.
AQUIFER.--Pleistocene-Pliocene Series of Pleistocene age. Aquifer code: 112PCPC.
WELL CHARACTERISTICS.--Driven, observation, water-table well, depth 8.5 ft, casing diameter 2 in., to 6 ft; screen diameter 2 in. from 6 to 8.5 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--60-minute recorder interval from Apr. 22, 1986 to current year.
DATUM.--Elevation of land surface is 79.41 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 4.18 ft above land-surface datum.
REMARKS.--National Water Quality Assessment Project observation well.
PERIOD OF RECORD.--April 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 79.70 ft above sea level, May 12, 1989; lowest measured, 72.73 ft above sea level, Oct. 31, 1987.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	73.72	73.69	73.51	73.51	75.39	75.38	75.16	75.15	76.30	76.29	77.62	77.61
2	73.69	73.67	73.54	73.51	75.39	75.39	75.17	75.15	76.30	76.30	77.61	77.60
3	73.66	73.65	73.58	73.55	75.39	75.39	75.24	75.18	76.42	76.30	77.61	77.61
4	73.65	73.62	73.64	73.58	75.39	75.36	75.24	75.24	76.50	76.43	77.61	77.61
5	73.62	73.58	73.68	73.64	75.36	75.33	75.24	75.24	76.52	76.50	77.68	77.61
6	73.58	73.57	73.76	73.69	75.33	75.30	75.28	75.24	76.53	76.52	77.92	77.68
7	73.57	73.56	73.85	73.76	75.30	75.27	75.33	75.28	76.53	76.53	77.91	77.86
8	73.56	73.54	73.93	73.85	75.26	75.22	75.44	75.33	76.53	76.53	77.86	77.86
9	73.54	73.52	73.98	73.93	75.22	75.20	75.55	75.45	76.53	76.52	77.89	77.86
10	73.52	73.50	74.02	73.98	75.20	75.17	75.60	75.55	76.52	76.52	77.96	77.89
11	73.51	73.47	74.04	74.02	75.17	75.11	75.61	75.60	76.54	76.53	77.96	77.94
12	73.47	73.44	74.06	74.04	75.11	75.10	75.70	75.61	76.54	76.52	77.94	77.93
13	73.44	73.41	74.08	74.06	75.10	75.10	75.73	75.70	76.53	76.51	77.93	77.93
14	73.41	73.39	74.09	74.08	75.10	75.06	75.77	75.73	76.86	76.53	77.93	77.93
15	73.39	73.37	74.11	74.09	75.06	75.04	76.03	75.77	76.94	76.86	77.94	77.93
16	73.37	73.35	74.14	74.11	75.04	75.03	76.09	76.04	76.94	76.94	77.93	77.92
17	73.35	73.33	74.15	74.14	75.03	75.03	76.11	76.09	76.94	76.93	77.92	77.92
18	73.33	73.31	74.20	74.15	75.03	74.97	76.13	76.11	76.93	76.93	78.01	77.92
19	73.31	73.29	74.27	74.21	74.97	74.95	76.13	76.13	76.93	76.93	78.01	77.97
20	73.29	73.28	74.39	74.27	74.95	74.93	76.14	76.13	76.93	76.93	78.07	77.97
21	73.29	73.28	74.60	74.40	74.93	74.92	76.14	76.10	77.57	76.93	78.11	78.08
22	73.31	73.28	74.72	74.61	74.92	74.90	76.10	76.10	77.64	77.50	78.08	78.06
23	73.39	73.31	74.79	74.73	74.90	74.90	76.11	76.10	77.59	77.52	78.06	78.06
24	73.44	73.39	74.82	74.80	74.97	74.90	76.12	76.11	77.52	77.52	78.44	78.06
25	73.47	73.44	74.83	74.82	75.06	74.97	76.12	76.12	77.53	77.52	78.41	78.39
26	73.49	73.48	74.84	74.83	75.11	75.06	76.18	76.12	77.58	77.53	78.39	78.39
27	73.50	73.49	74.84	74.84	75.16	75.11	76.18	76.17	77.66	77.55	78.39	78.39
28	73.51	73.50	75.17	74.84	75.19	75.16	76.17	76.17	77.64	77.62	78.40	78.39
29	73.52	73.51	---	---	75.17	75.16	76.18	76.17	---	---	78.41	78.40
30	73.52	73.52	75.38	75.32	75.16	75.16	76.26	76.18	---	---	78.47	78.42
31	73.52	73.51	---	---	75.16	75.16	76.29	76.26	---	---	78.55	78.49
MONTH	73.72	73.28	---	---	75.39	74.90	76.29	75.15	77.66	76.29	78.55	77.60

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	78.55	78.54	79.04	79.01	79.36	79.31	79.31	79.27	79.34	79.34	78.43	78.38
2	78.54	78.54	79.28	79.04	79.31	79.26	79.27	79.23	79.33	79.31	78.38	78.31
3	78.58	78.54	79.30	79.28	79.26	79.22	79.23	79.19	79.31	79.28	78.31	78.27
4	78.58	78.57	79.30	79.29	79.22	79.17	79.38	79.18	79.28	79.24	78.27	78.22
5	78.64	78.57	79.35	79.29	79.32	79.13	79.45	79.38	79.24	79.20	78.22	78.18
6	78.70	78.66	79.55	79.35	79.32	79.31	79.52	79.45	79.20	79.17	78.18	78.14
7	78.84	78.70	79.55	79.55	79.38	79.31	79.53	79.52	79.17	79.14	78.14	78.08
8	78.84	78.84	79.56	79.55	79.38	79.38	79.53	79.51	79.14	79.09	78.08	78.03
9	78.85	78.84	79.56	79.56	79.41	79.37	79.51	79.48	79.09	79.04	78.03	77.99
10	78.86	78.85	79.68	79.56	79.41	79.41	79.48	79.44	79.04	79.01	77.99	77.93
11	78.86	78.86	79.70	79.68	79.41	79.37	---	---	79.01	79.01	77.95	77.95
12	78.86	78.86	79.70	79.70	79.37	79.34	79.39	79.38	79.02	79.01	77.95	77.94
13	78.86	78.86	79.70	79.70	79.34	79.30	79.38	79.37	79.02	79.02	77.94	77.91
14	78.86	78.85	79.70	79.69	79.30	79.29	79.37	79.37	79.02	79.00	77.91	77.90
15	78.94	78.85	79.69	79.69	79.30	79.25	79.37	79.33	79.00	78.97	77.90	77.83
16	78.94	78.94	79.69	79.69	79.30	79.30	79.38	79.33	78.97	78.93	78.31	77.83
17	78.94	78.94	79.69	79.68	79.30	79.30	79.38	79.38	78.93	78.89	78.10	77.94
18	78.95	78.94	79.68	79.66	79.30	79.25	79.38	79.36	78.89	78.88	77.94	77.89
19	79.01	78.95	---	---	79.25	79.21	79.36	79.32	78.88	78.88	78.63	77.89
20	79.01	79.01	79.64	79.64	79.38	79.19	79.44	79.32	78.88	78.84	78.68	78.27
21	79.01	79.01	79.64	79.61	79.46	79.38	79.44	79.44	78.85	78.84	78.40	78.37
22	79.01	79.01	79.61	79.58	79.46	79.46	79.44	79.42	78.84	78.81	78.37	78.36
23	79.01	79.01	79.58	79.58	79.46	79.46	79.42	79.38	78.81	78.75	78.36	78.32
24	79.01	78.99	79.58	79.57	79.47	79.46	79.38	79.34	78.75	78.71	78.32	78.28
25	78.99	78.98	79.57	79.56	79.47	79.47	79.34	79.30	78.70	78.66	78.28	78.26
26	78.98	78.97	79.56	79.53	79.47	79.45	79.39	79.30	78.66	78.63	78.77	78.26
27	78.97	78.95	79.53	79.51	79.45	79.42	79.40	79.39	78.63	78.58	78.54	78.50
28	78.95	78.94	79.51	79.48	79.42	79.41	79.39	79.39	78.58	78.54	78.50	78.48
29	79.01	78.93	79.48	79.45	79.41	79.36	79.39	79.35	78.62	78.51	78.48	78.46
30	79.01	79.01	79.45	79.39	79.36	79.32	79.35	79.32	78.58	78.49	78.46	78.43
31	---	---	79.39	79.36	---	---	79.34	79.32	78.49	78.43	---	---
MONTH	79.01	78.54	---	---	79.47	79.13	---	---	79.34	78.43	78.77	77.83

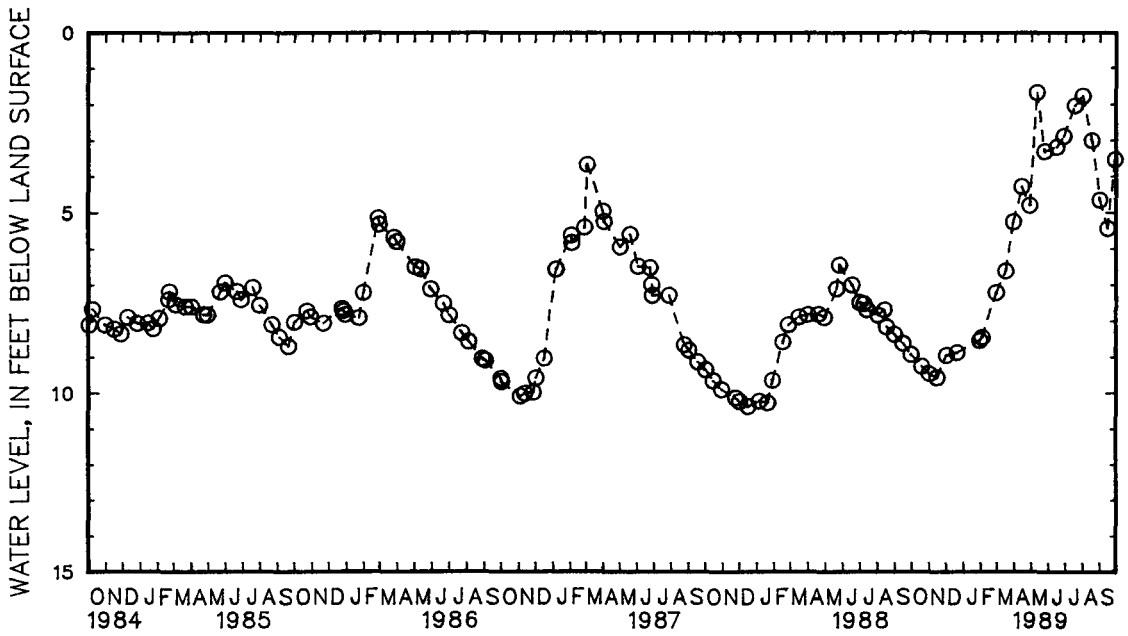


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--Hb14-01. SITE ID.--391949075410701.
LOCATION.--Lat 39°19'49", long 75°41'07", Hydrologic Unit 02040205, at Prices Corners.
Owner: Delaware Department of Transportation.
AQUIFER.--Columbia Group of Pleistocene age. Aquifer code: 112CLMB
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 19 ft; casing diameter 1 in., to 16 ft; well point from 16 to 19 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 72 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing at land-surface datum.
PERIOD OF RECORD.--October 1957 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.49 ft below land-surface datum, Apr. 7, 1958; lowest measured, 11.95 ft below land-surface datum, Aug. 31, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	9.27	DEC 20	8.88	MAR 16	6.60	MAY 11	1.65	JUL 18	2.03	SEP 15	5.45
31	9.47	JAN 30	8.54	30	5.24	24	3.30	AUG 1	1.76	28	3.54
NOV 14	9.58	FEB 3	8.45	APR 13	4.27	JUN 15	3.18	17	3.00		
DEC 1	8.96	27	7.20	27	4.79	28	2.88	SEP 1	4.66		



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

SUSSEX COUNTY

WELL NUMBER.--Nc13-03. SITE ID.--384930075370201. PERMIT NUMBER.--10233.
LOCATION.--Lat 38°49'30", long 75°37'02", Hydrologic Unit 02060008, 2.0 mi northwest of Greenwood.
Owner: University of Delaware.
AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, casing diameter 6 in., to 630 ft, screened diameter 3 in. from 620 to 630 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--60-minute recorder interval from Oct. 1, 1983 to current year.
DATUM.--Elevation of land surface is 62.5 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 3.0 ft above land-surface datum.
PERIOD OF RECORD.--December 1970 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 69.70 ft below land-surface datum, Jan. 1, 1971; lowest measured, 85.25 ft below land-surface datum, Sept. 9 and 10, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	84.33	84.26	84.52	84.24	84.53	84.42	84.78	84.71	84.73	84.63	84.85	84.75
2	84.26	84.17	84.33	84.22	84.58	84.52	84.70	84.63	84.84	84.71	84.87	84.82
3	84.23	84.18	84.44	84.34	84.52	84.41	84.64	84.46	84.91	84.73	84.83	84.78
4	84.24	84.19	84.44	84.36	84.62	84.42	84.81	84.47	84.96	84.90	84.84	84.79
5	84.37	84.24	84.34	84.10	84.61	84.53	84.83	84.78	84.93	84.85	84.84	84.66
6	84.44	84.37	84.32	84.21	84.58	84.49	84.82	84.62	84.85	84.78	84.74	84.67
7	84.44	84.37	84.53	84.32	84.54	84.44	84.83	84.77	84.89	84.79	84.92	84.70
8	84.37	84.31	84.54	84.42	84.69	84.54	84.80	84.62	84.90	84.80	84.94	84.88
9	84.38	84.31	84.61	84.55	84.68	84.54	84.93	84.78	84.95	84.85	84.90	84.82
10	84.34	84.17	84.61	84.36	84.61	84.52	84.95	84.89	84.91	84.84	84.88	84.83
11	84.32	84.14	84.68	84.47	84.72	84.55	84.98	84.92	84.84	84.74	84.85	84.70
12	84.47	84.32	84.71	84.67	84.76	84.67	84.96	84.65	84.94	84.72	84.80	84.62
13	84.55	84.47	84.67	84.50	84.66	84.45	84.95	84.65	84.99	84.87	84.83	84.75
14	84.56	84.45	84.60	84.57	84.61	84.52	84.97	84.77	84.92	84.80	84.75	84.69
15	84.48	84.43	84.65	84.60	84.68	84.51	84.74	84.65	84.91	84.78	84.69	84.61
16	84.49	84.45	84.62	84.50	84.73	84.62	84.81	84.66	85.10	84.91	84.90	84.69
17	84.50	84.44	84.59	84.44	84.61	84.50	84.80	84.72	85.11	85.03	84.90	84.80
18	84.44	84.31	84.70	84.60	84.68	84.59	84.79	84.65	85.05	84.91	84.80	84.61
19	84.43	84.37	84.69	84.60	84.76	84.63	84.74	84.65	84.90	84.82	84.95	84.78
20	84.56	84.44	84.58	84.22	84.73	84.66	84.77	84.58	84.89	84.80	84.95	84.74
21	84.56	84.12	84.62	84.32	84.79	84.66	84.99	84.77	84.80	84.51	84.81	84.61
22	84.27	84.10	84.68	84.62	84.88	84.80	84.98	84.86	84.69	84.55	84.96	84.82
23	84.33	84.27	84.67	84.50	84.87	84.67	84.89	84.78	84.73	84.68	84.99	84.90
24	84.30	84.21	84.56	84.49	84.73	84.48	84.81	84.77	84.74	84.70	84.89	84.60
25	84.36	84.30	84.57	84.52	84.79	84.58	84.95	84.82	84.75	84.69	84.73	84.66
26	84.49	84.36	84.56	84.49	84.91	84.79	84.94	84.63	84.69	84.49	84.83	84.72
27	84.54	84.50	84.51	84.34	84.91	84.70	84.84	84.63	84.69	84.54	84.85	84.78
28	84.54	84.40	84.42	84.25	84.75	84.45	84.90	84.81	84.75	84.69	84.78	84.68
29	84.57	84.51	84.58	84.44	84.85	84.77	84.79	84.73	---	---	84.72	84.64
30	84.61	84.56	84.57	84.42	84.80	84.70	84.70	84.55	---	---	84.71	84.54
31	84.65	84.53	---	---	84.79	84.68	84.73	84.64	---	---	84.58	84.40
MONTH	84.65	84.10	84.71	84.10	84.91	84.41	84.99	84.46	85.11	84.49	84.99	84.40

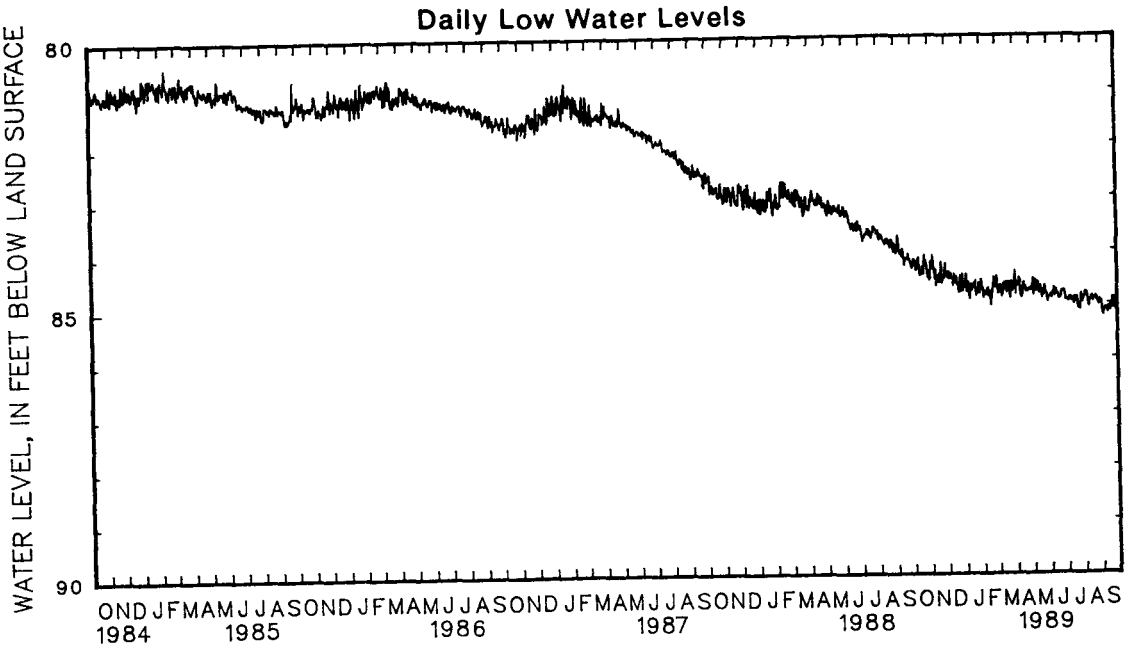
GROUND-WATER LEVELS

DELAWARE--Continued

SUSSEX COUNTY--Continued

Nc13-03--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	84.84	84.59	84.85	84.70	84.96	84.89	85.01	84.95	84.97	84.92	85.08	84.98
2	84.90	84.83	84.72	84.54	84.92	84.87	85.00	84.94	84.95	84.90	85.12	84.98
3	84.85	84.67	84.85	84.72	84.98	84.88	85.01	84.95	84.90	84.87	85.20	85.12
4	84.73	84.64	84.92	84.85	84.93	84.84	85.02	84.97	84.87	84.80	85.25	85.21
5	84.76	84.68	84.87	84.67	84.98	84.90	84.99	84.95	84.84	84.80	85.25	85.23
6	84.71	84.62	84.72	84.57	84.91	84.87	84.99	84.95	84.83	84.81	85.23	85.19
7	84.72	84.53	84.76	84.68	84.85	84.82	84.95	84.90	84.87	84.81	85.19	85.14
8	84.68	84.56	84.82	84.75	84.86	84.83	84.96	84.89	85.02	84.89	85.15	85.12
9	84.79	84.58	84.84	84.78	84.84	84.72	84.98	84.96	85.09	85.02	85.13	85.10
10	84.87	84.79	84.77	84.61	84.87	84.72	84.98	84.92	85.12	85.07	85.12	85.10
11	84.90	84.87	84.70	84.61	84.92	84.87	84.98	84.92	85.07	85.04	85.14	85.10
12	84.92	84.90	84.77	84.68	84.94	84.83	85.03	84.98	85.04	84.96	85.21	85.14
13	84.90	84.82	84.84	84.76	84.82	84.76	84.98	84.92	84.98	84.94	85.24	85.19
14	84.91	84.85	84.84	84.81	84.91	84.82	85.02	84.91	84.99	84.94	85.22	85.08
15	84.86	84.62	84.82	84.76	84.90	84.82	85.12	85.02	84.94	84.89	85.17	85.08
16	84.82	84.63	84.76	84.68	84.92	84.83	85.10	84.89	84.90	84.87	85.18	85.10
17	84.85	84.74	84.86	84.72	84.97	84.87	84.99	84.89	84.99	84.90	85.13	85.09
18	84.76	84.70	84.94	84.84	84.98	84.92	85.04	84.98	85.04	84.97	85.19	85.15
19	84.80	84.69	84.97	84.90	84.98	84.93	85.01	84.93	84.97	84.92	85.20	85.05
20	84.88	84.79	84.90	84.81	84.99	84.92	84.95	84.89	84.95	84.92	85.09	85.08
21	84.82	84.73	84.85	84.81	84.97	84.91	85.07	84.96	84.92	84.90	85.12	85.09
22	84.80	84.74	84.90	84.85	84.92	84.88	85.11	85.08	84.93	84.91	85.09	84.91
23	84.83	84.78	84.85	84.70	84.88	84.78	85.12	85.11	84.92	84.88	85.10	84.91
24	84.84	84.77	84.80	84.68	84.82	84.78	85.14	85.11	84.97	84.89	85.22	85.10
25	84.80	84.76	84.85	84.80	84.83	84.80	85.17	85.12	85.03	84.96	85.22	85.09
26	84.78	84.74	84.85	84.81	84.81	84.77	85.13	85.01	85.03	84.99	85.08	84.92
27	84.79	84.73	84.92	84.82	84.80	84.77	85.02	84.92	85.06	85.00	85.22	85.09
28	84.85	84.74	85.01	84.93	84.85	84.78	84.92	84.83	85.08	85.04	85.22	85.13
29	84.87	84.76	85.04	84.98	84.97	84.84	85.01	84.91	85.05	84.97	85.13	85.03
30	84.85	84.76	84.99	84.92	85.02	84.95	85.05	84.99	85.00	84.94	85.15	85.09
31	---	---	84.96	84.91	---	---	84.99	84.89	85.09	85.00	---	---
MONTH	84.92	84.53	85.04	84.54	85.02	84.72	85.17	84.83	85.12	84.80	85.25	84.91



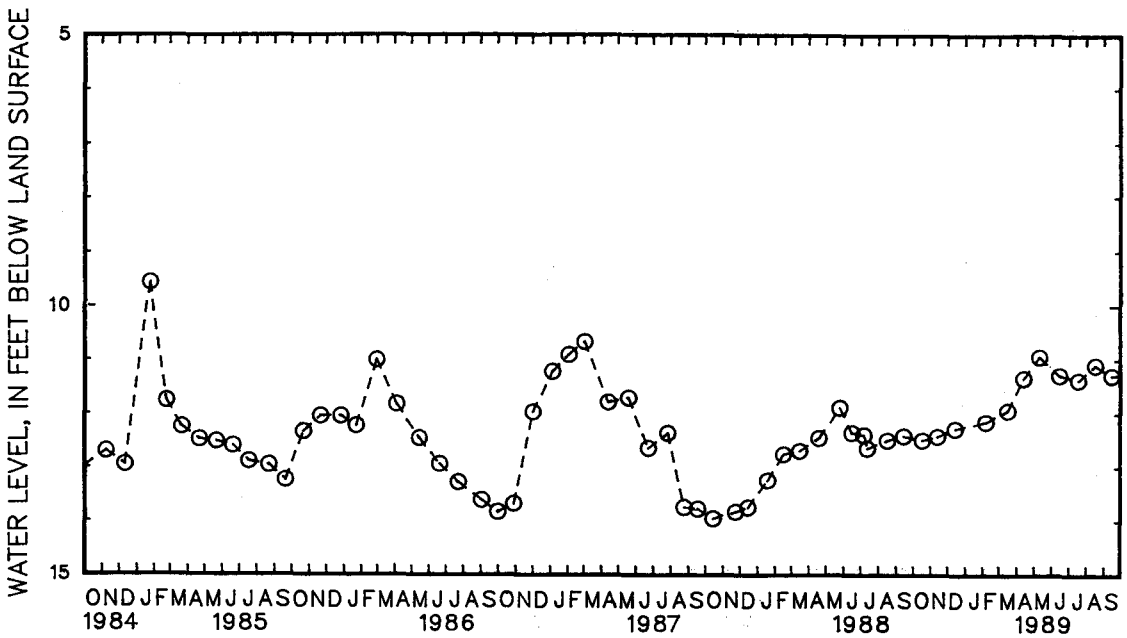
5 YEAR HYDROGRAPH

OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--Nc45-01. SITE ID.--384639075353101. PERMIT NUMBER.--10226.
LOCATION.--Lat 38°46'39", long 75°35'31", Hydrologic Unit 02060008, 2.0 mi south of Greenwood.
Owner: P. H. Cannon.
AQUIFER.--Columbia Group of Pleistocene age. Aquifer code: 112CLMB.
WELL CHARACTERISTICS.--Driven, observation, water-table well, depth 15 ft; casing diameter 1 in., to 14 ft; screened from 14 to 15 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 43 ft above National Geodectic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing, 1.0 ft above land-surface datum.
PERIOD OF RECORD.--October 1950 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.67 ft below land-surface datum, Jan. 30, 1952; lowest measured, 14.66 ft below land-surface datum, Dec. 11, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	12.50	DEC 15	12.30	MAR 16	11.95	MAY 11	10.95	JUL 18	11.38	SEP 15	11.29
NOV 14	12.43	FEB 7	12.16	APR 13	11.35	JUN 15	11.28	AUG 17	11.10		

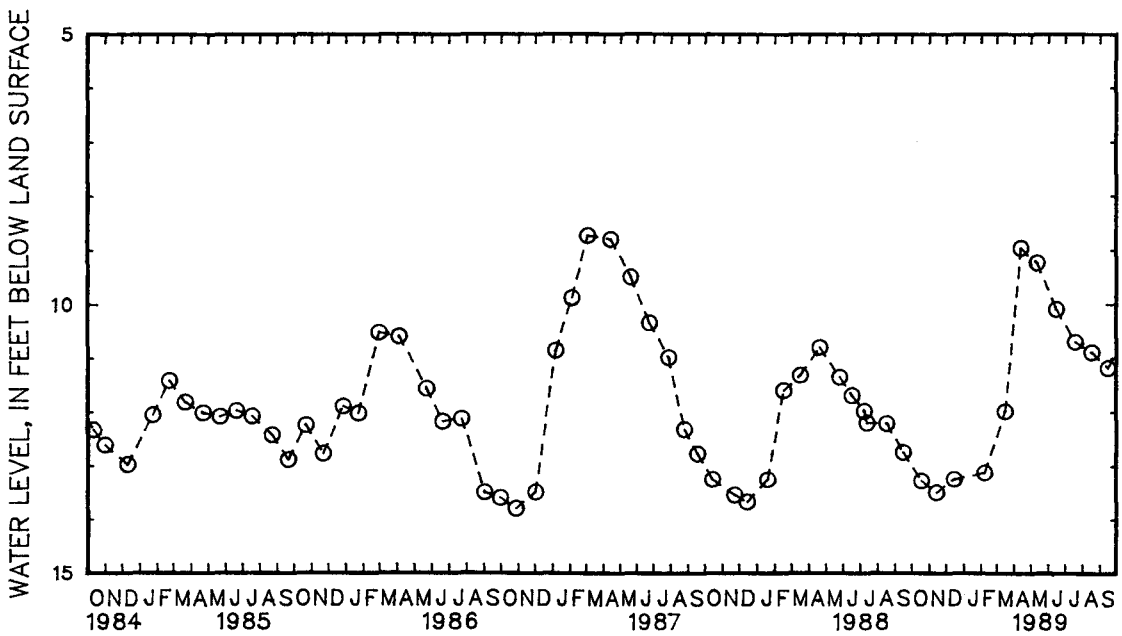


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--Ngll-01. SITE ID.--384955075192801. PERMIT NUMBER.--10227.
LOCATION.--Lat 38°49'55", long 75°19'28", Hydrologic Unit 02040207, 1.2 mi east of Jefferson Crossroads.
Owner: Delaware Department of Transportation.
AQUIFER.--Columbia Group of Pleistocene age. Aquifer code: 112CLMB.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 19 ft; casing diameter 1 in., to 16 ft; well point from 16 to 19 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 24 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing at land-surface datum.
PERIOD OF RECORD.--September 1959 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.91 ft below land-surface datum, Apr. 10, 1984; lowest measured, 14.64 ft below land-surface datum, Jan. 7, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	13.28	DEC 15	13.25	MAR 16	11.98	MAY 11	9.23	JUL 18	10.70	SEP 15	11.19
NOV 14	13.50	FEB 7	13.12	APR 13	8.95	JUN 15	10.09	AUG 17	10.90		



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--Ph23-08. SITE ID.--383854075124801. PERMIT NUMBER.--59699.
LOCATION.--Lat 38°38'54", long 75°12'48", Hydrologic Unit 0206010, south of Fairmount.
Owner: U.S. Geological Survey
AQUIFER.--Columbia Formation of Pleistocene age. Aquifer code: 112CLMB.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 25 ft, casing diameter 2 in., to 20 ft; screen diameter 2 in. from 20 to 25 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--60-minute recorder interval from Jan. 13, 1989 to current year.
DATUM.--Elevation of land surface is 24.68 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 3.72 ft above land-surface datum.
REMARKS.--National Water Quality Assessment Project observation well.
PERIOD OF RECORD.--April 1985 March 1987, August 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 20.22 ft above sea level, Aug. 19, 1989; lowest measured, 12.09 ft above sea level, Oct. 30, 1986.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	---	---	---	---	---	---	12.53	12.53	12.80	12.76
2	---	---	---	---	---	---	---	---	12.53	12.53	12.86	12.80
3	---	---	---	---	---	---	---	---	12.53	12.53	12.94	12.86
4	---	---	---	---	---	---	---	---	12.53	12.53	13.00	12.95
5	---	---	---	---	---	---	---	---	12.53	12.53	13.09	13.00
6	---	---	---	---	---	---	---	---	12.53	12.53	13.20	13.09
7	---	---	---	---	---	---	---	---	12.53	12.53	13.29	13.20
8	---	---	---	---	---	---	---	---	12.53	12.53	13.45	13.30
9	---	---	---	---	---	---	---	---	12.53	12.52	13.60	13.46
10	---	---	---	---	---	---	---	---	12.53	12.52	13.72	13.60
11	---	---	---	---	---	---	---	---	12.53	12.53	13.84	13.72
12	---	---	---	---	---	---	---	---	12.53	12.53	13.91	13.85
13	---	---	---	---	---	---	---	---	12.53	12.53	14.00	13.91
14	---	---	---	---	---	---	12.48	12.48	12.54	12.53	14.07	14.00
15	---	---	---	---	---	---	12.48	12.48	12.53	12.53	14.13	14.07
16	---	---	---	---	---	---	12.48	12.48	12.53	12.52	14.14	14.12
17	---	---	---	---	---	---	12.50	12.48	12.52	12.52	14.21	14.14
18	---	---	---	---	---	---	12.50	12.49	12.52	12.52	14.26	14.21
19	---	---	---	---	---	---	12.49	12.49	12.52	12.52	14.25	14.24
20	---	---	---	---	---	---	12.49	12.49	12.52	12.52	14.32	14.25
21	---	---	---	---	---	---	12.49	12.48	12.55	12.52	14.34	14.32
22	---	---	---	---	---	---	12.48	12.48	12.55	12.55	14.36	14.34
23	---	---	---	---	---	---	12.49	12.48	12.59	12.55	14.44	14.36
24	---	---	---	---	---	---	12.49	12.49	12.62	12.59	14.86	14.44
25	---	---	---	---	---	---	12.49	12.49	12.65	12.62	15.28	14.88
26	---	---	---	---	---	---	12.53	12.49	12.70	12.65	15.49	15.29
27	---	---	---	---	---	---	12.53	12.52	12.72	12.70	15.63	15.49
28	---	---	---	---	---	---	12.52	12.52	12.76	12.73	15.74	15.64
29	---	---	---	---	---	---	12.52	12.52	---	---	15.77	15.75
30	---	---	---	---	---	---	12.53	12.52	---	---	15.86	15.77
31	---	---	---	---	---	---	12.53	12.53	---	---	15.95	15.86
MONTH	---	---	---	---	---	---	---	---	12.76	12.52	15.95	12.76

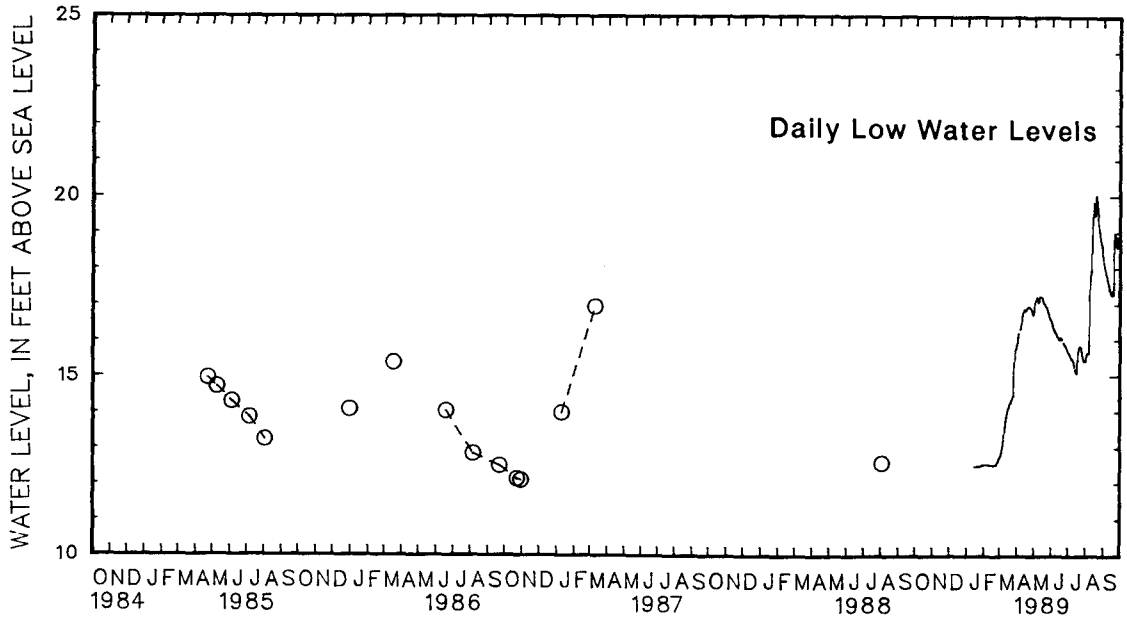
GROUND-WATER LEVELS

DELAWARE--Continued

SUSSEX COUNTY--Continued

Ph23-08--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	15.99	15.92	17.03	16.91	16.54	16.50	15.68	15.65	15.58	15.53	18.37	18.31
2	16.09	15.99	17.09	17.04	16.50	16.44	15.65	15.62	15.62	15.59	18.31	18.16
3	16.20	16.11	17.13	17.09	16.44	16.41	15.62	15.59	15.64	15.63	18.16	18.06
4	16.24	16.19	17.15	17.13	16.41	16.35	15.58	15.55	15.65	15.64	18.06	17.98
5	---	---	17.24	17.16	16.35	16.31	15.55	15.51	15.65	15.65	17.98	17.91
6	---	---	17.28	17.21	16.31	16.28	15.51	15.46	15.84	15.64	17.91	17.84
7	16.41	16.31	17.22	17.16	16.28	16.25	15.48	15.47	17.14	15.86	17.84	17.78
8	16.62	16.40	17.16	17.10	16.25	16.21	15.48	15.46	17.76	17.19	17.77	17.70
9	16.70	16.63	17.10	17.08	16.21	16.20	15.46	15.43	17.84	17.77	17.69	17.61
10	16.78	16.71	17.21	17.09	16.21	16.15	15.43	15.33	17.89	17.85	17.61	17.53
11	16.82	16.78	17.23	17.21	16.15	16.11	15.32	15.27	18.44	17.91	17.53	17.44
12	16.85	16.82	17.24	17.23	16.11	16.10	---	---	19.16	18.46	17.45	17.40
13	16.87	16.85	17.24	17.22	16.10	16.07	15.21	15.19	19.40	19.18	17.45	17.40
14	16.85	16.83	17.22	17.22	16.06	16.02	15.20	15.13	19.82	19.40	17.40	17.38
15	16.91	16.83	17.22	17.22	16.08	16.03	15.13	15.09	19.92	19.84	17.37	17.28
16	16.91	16.88	17.22	17.20	16.08	16.02	15.42	15.09	19.92	19.81	17.33	17.28
17	16.90	16.87	17.19	17.10	16.08	16.05	15.64	15.44	19.80	19.56	17.35	17.32
18	16.92	16.91	17.10	17.06	16.09	16.08	15.74	15.65	19.67	19.48	17.32	17.26
19	16.92	16.92	17.06	17.04	16.09	16.06	15.80	15.75	20.22	19.77	18.72	17.26
20	16.95	16.92	17.04	17.03	16.06	16.04	15.83	15.81	20.21	20.04	18.97	18.74
21	16.97	16.95	17.03	16.97	---	---	15.83	15.83	20.04	19.85	18.98	18.97
22	16.97	16.94	16.97	16.93	15.93	15.93	15.83	15.82	19.85	19.64	19.00	18.96
23	16.94	16.93	16.94	16.93	15.93	15.93	15.83	15.82	19.64	19.43	18.95	18.73
24	16.93	16.90	16.93	16.86	15.93	15.88	15.83	15.71	19.42	19.23	18.72	18.60
25	16.91	16.90	16.86	16.81	15.88	15.86	15.70	15.58	19.23	19.09	18.60	18.57
26	16.90	16.86	16.81	16.76	15.86	15.84	15.58	15.51	19.09	18.96	18.90	18.61
27	16.86	16.82	16.76	16.69	15.84	15.80	15.51	15.45	18.96	18.83	18.90	18.87
28	16.82	16.75	16.68	16.65	15.80	15.76	15.44	15.41	18.83	18.71	18.87	18.84
29	16.77	16.71	16.64	16.61	15.76	15.71	15.41	15.41	18.71	18.67	18.84	18.72
30	16.90	16.77	16.61	16.58	15.71	15.68	15.41	15.41	18.66	18.51	18.71	18.55
31	---	---	16.58	16.54	---	---	15.52	15.41	18.50	18.38	---	---
MONTH	---	---	17.28	16.54	---	---	---	---	20.22	15.53	19.00	17.26

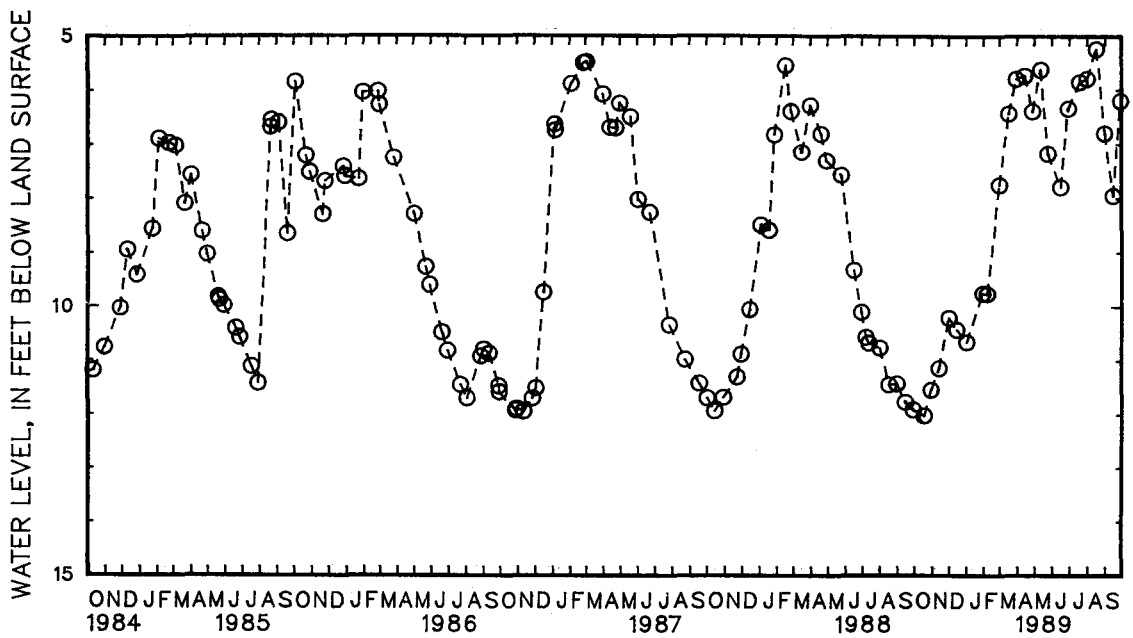


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--Qe44-01. SITE ID.--383138075260201. PERMIT NUMBER.--49320.
LOCATION.--Lat 38°31'38", long 75°26'02", Hydrologic Unit 02060008, 1.0 mi east of Whaleys Crossroads.
Owner: Delaware Department of Transportation.
AQUIFER.--Columbia Group of Pleistocene age. Aquifer code: 112CLMB.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 25 ft; casing diameter 1 in., to 22 ft; well point from 22 to 25 ft.
INSTRUMENTATION.--Bimonthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 50 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing at land-surface datum.
PERIOD OF RECORD.--September 1959 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.98 ft below land-surface datum, Mar. 16, 1979 and Mar. 15, 1984; lowest measured, 12.22 ft below land-surface datum, Dec. 2, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	12.04	DEC 15	10.44	FEB 28	7.75	APR 27	6.39	JUN 28	6.34	AUG 31	6.80
31	11.56	JAN 2	10.67	MAR 16	6.43	MAY 11	5.62	JUL 18	5.85	SEP 15	7.96
NOV 14	11.16	30	9.76	29	5.79	24	7.18	31	5.79	28	6.20
DEC 1	10.22	FEB 7	9.77	APR 13	5.73	JUN 15	7.80	AUG 17	5.24		



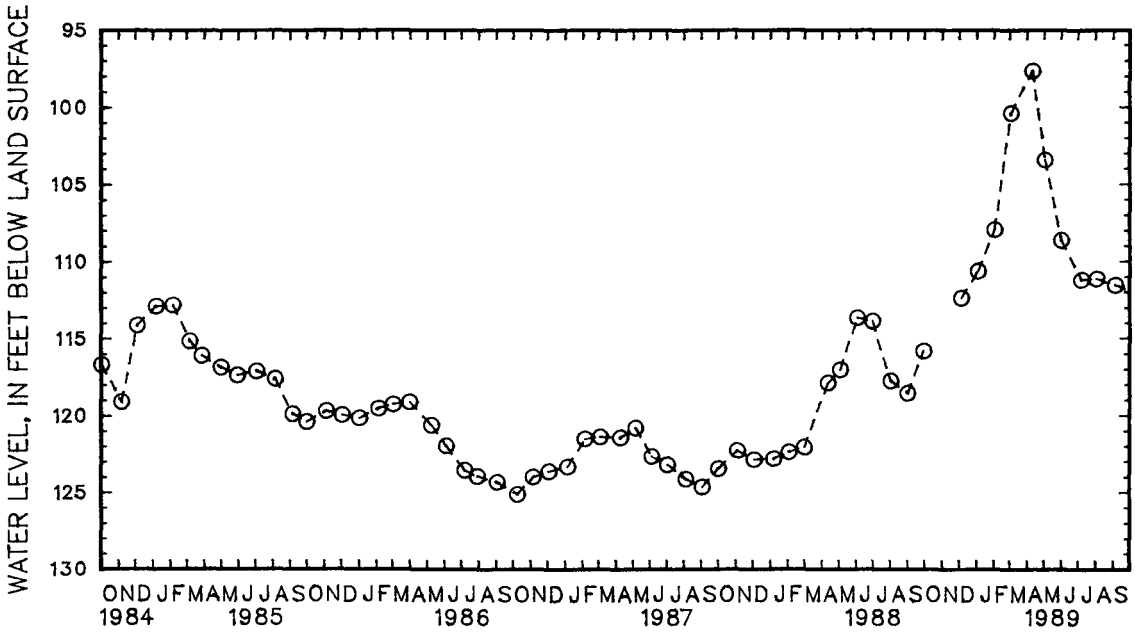
5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

ANNE ARUNDEL COUNTY

WELL NUMBER.--AA Ac 11. SITE ID.--391101076404001. PERMIT NUMBER.--AA-00-2445.
LOCATION.--Lat 39°11'01", long 76°40'40", Hydrologic Unit 02060003, west end of runway 15, Baltimore-Washington International Airport.
Owner: Maryland Department of Transportation.
AQUIFER.--Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.
WELL CHARACTERISTICS.--Drilled, unused, artesian well, depth 320 ft; casing diameter 6 in., to 312 ft; screened from 312 to 320 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 136.9 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top of casing, 1.0 above land-surface datum.
REMARKS.--Well used during construction of airport. Water level reported by driller 90 ft below land-surface datum, Apr. 23, 1948.
PERIOD OF RECORD.--June 1959 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 86.60 ft below land-surface datum, Mar. 9, 1965; lowest measured, 125.12 ft below land-surface datum, Oct. 9, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 5	112.33	FEB 2	107.93	APR 10	97.64	JUN 1	108.66	AUG 3	111.15
JAN 3	110.60	MAR 3	100.38	MAY 3	103.44	JUL 7	111.23	SEP 5	111.57

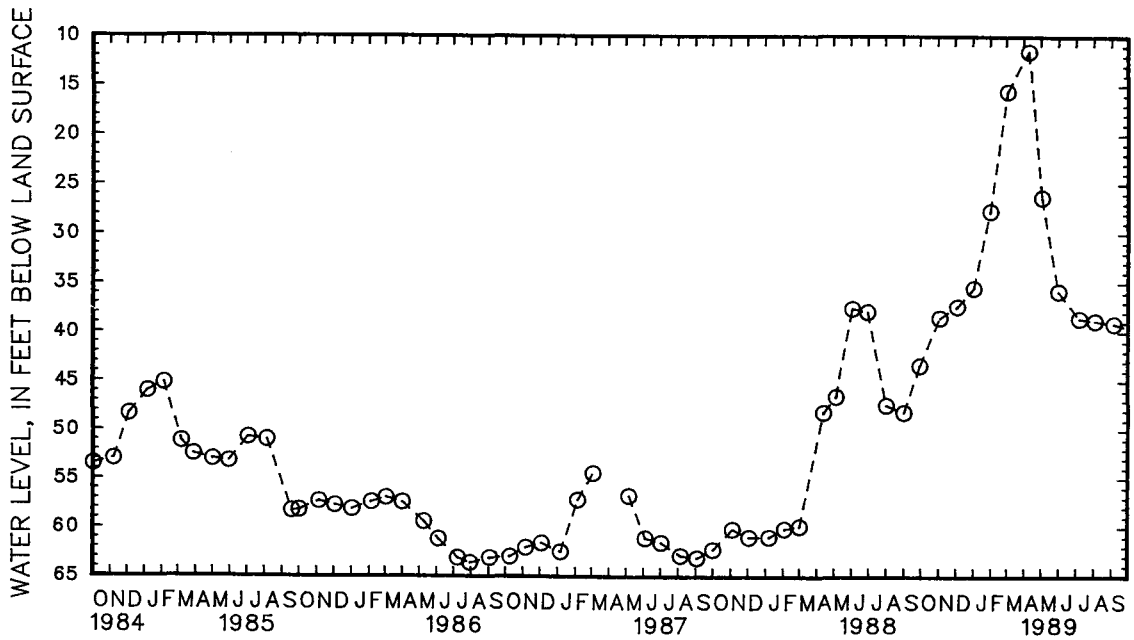


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--AA Ad 29. SITE ID.--391015076373501.
LOCATION.--Lat 39°10'15", long 76°37'35", Hydrologic Unit 02060003, near Linden Lane, Glen Burnie, near the Anne Arundel County Department of Public Works office.
Owner: Anne Arundel County Department of Public Works.
AQUIFER.--Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 500 ft; casing diameter 3 in., to 395 ft and from 400 to 420 ft; casing diameter 2 in. from 420 to 460 ft; screened with 3 in. slotted pipe from 395 to 400 ft; screened with 2 in. slotted pipe from 460 to 500 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with graphic water-level recorder from July 19, 1948 to Jan. 18, 1968.
DATUM.--Elevation of land surface is 37 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.47 ft above land-surface datum.
PERIOD OF RECORD.--June 1948 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.52 ft above land-surface datum, Apr. 10, 1989; lowest measured, 63.63 ft below land-surface datum, July 30, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 4	38.63	JAN 3	35.59	MAR 3	15.60	MAY 3	26.42	JUL 7	38.67	SEP 5	39.16
DEC 5	37.48	FEB 1	27.79	APR 10	11.52	JUN 1	35.92	AUG 3	38.89		



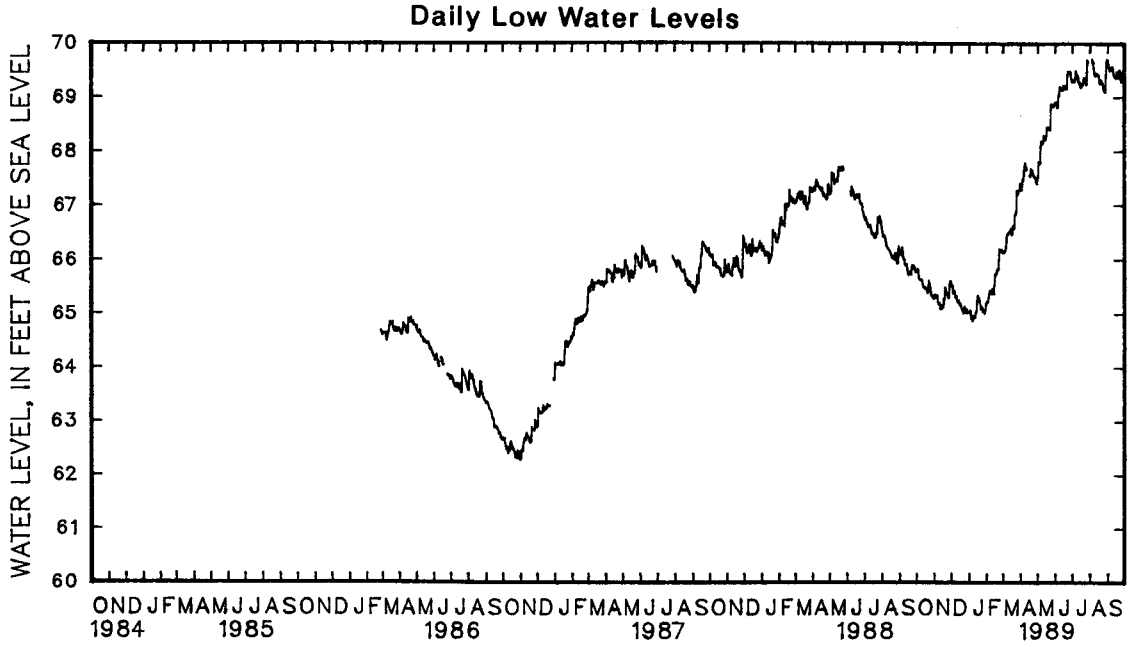
5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--AA Ad 102. SITE ID.--391032076385904. PERMIT NUMBER.--AA-81-2641.
LOCATION.--Lat 39°10′32″, long 76°38′ 59″, Hydrologic Unit 02060003, off Hammonds Ferry Rd., 0.5 mi north of Dorsey Rd. intersection.
Owner: U.S. Geological Survey.
AQUIFER.--Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 108; casing diameter 6 in., to 80 ft; screen diameter 4 in. from 80 to 90 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--60-minute recorder interval from Dec. 1983 to current year.
DATUM.--Elevation of land surface is 77 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring Point: Top of recorder platform, 2.5 ft above land-surface datum.
REMARKS.--Glen Burnie Project observation well. Water levels before Feb. 23, 1986 are not currently available.
PERIOD OF RECORD.--December 1983 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 69.80 ft above sea level, Sept. 1 & 2, 1989; lowest measured, 62.26 ft above sea level, Oct. 31, 1986 and Nov. 1, 1986.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	65.81	65.79	65.50	65.29	65.63	65.53	---	---	65.26	65.22	66.15	66.13
2	65.84	65.81	65.49	65.35	65.52	65.50	65.07	65.02	65.23	65.20	66.16	66.12
3	65.84	65.82	65.35	65.28	65.54	65.51	65.12	65.05	65.30	65.21	66.17	66.15
4	65.82	65.75	65.31	65.29	65.53	65.37	65.12	64.91	65.37	65.31	66.17	66.16
5	65.75	65.65	65.44	65.31	65.45	65.39	64.92	64.90	65.42	65.37	66.34	66.18
6	65.65	65.62	65.42	65.33	65.45	65.42	64.95	64.89	65.46	65.43	66.53	66.30
7	65.64	65.62	65.33	65.22	65.45	65.38	64.88	64.85	65.45	65.40	66.53	66.46
8	65.64	65.62	65.25	65.19	65.38	65.30	65.04	64.88	65.47	65.40	66.47	66.46
9	65.63	65.61	65.19	65.16	65.35	65.30	65.03	64.95	65.44	65.36	66.52	66.47
10	65.67	65.62	65.28	65.19	65.34	65.32	64.96	64.95	65.45	65.41	66.52	66.50
11	65.67	65.55	65.19	65.08	65.33	65.23	64.96	64.92	65.50	65.45	66.61	66.51
12	65.55	65.49	65.08	65.07	65.23	65.21	65.31	64.92	65.49	65.37	66.65	66.50
13	65.49	65.47	65.22	65.08	65.32	65.24	65.31	65.04	65.49	65.36	66.59	66.50
14	65.50	65.47	65.20	65.15	65.28	65.22	65.21	65.04	65.76	65.53	66.63	66.58
15	65.50	65.48	65.15	65.10	65.25	65.15	65.45	65.22	65.86	65.74	66.67	66.56
16	65.48	65.45	65.15	65.10	65.18	65.15	65.44	65.33	65.83	65.73	66.54	66.46
17	65.45	65.44	65.39	65.15	65.22	65.18	65.33	65.29	65.77	65.72	66.61	66.49
18	65.52	65.45	65.33	65.27	65.18	65.13	65.33	65.29	65.82	65.76	66.72	66.62
19	65.48	65.44	65.46	65.25	65.13	65.08	65.33	65.25	65.84	65.82	66.65	66.57
20	65.44	65.38	65.72	65.48	65.10	65.08	65.28	65.19	65.84	65.81	66.80	66.58
21	65.78	65.38	65.63	65.41	65.10	65.04	65.18	65.08	66.26	65.84	66.98	66.84
22	65.79	65.61	65.40	65.35	65.04	65.00	65.12	65.08	66.24	66.20	66.91	66.85
23	65.61	65.54	65.41	65.36	65.13	65.01	65.15	65.12	66.22	66.18	66.89	66.84
24	65.57	65.52	65.40	65.33	65.26	65.12	65.15	65.11	66.18	66.15	67.31	66.90
25	65.51	65.46	65.33	65.30	65.26	65.08	65.11	65.03	66.18	66.15	67.30	67.27
26	65.46	65.35	65.30	65.28	65.08	65.02	65.22	65.03	66.30	66.19	67.27	67.21
27	65.35	65.33	65.49	65.28	65.10	65.01	65.22	65.05	66.25	66.15	67.28	67.21
28	65.40	65.32	65.80	65.56	65.23	65.07	65.05	65.00	66.16	66.15	67.33	67.28
29	65.32	65.30	65.66	65.58	65.07	65.02	65.06	65.05	---	---	67.33	67.29
30	65.30	65.27	65.66	65.60	65.04	65.02	65.22	65.07	---	---	67.39	67.29
31	65.29	65.26	---	---	---	---	65.22	65.19	---	---	67.54	67.41
MONTH	65.84	65.26	65.80	65.07	---	---	---	---	66.30	65.20	67.54	66.12

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	67.41	67.28	67.83	67.51	68.92	68.91	69.34	69.33	---	---	69.80	69.69
2	67.37	67.28	67.96	67.82	68.92	68.92	69.34	69.33	---	---	69.80	69.61
3	67.55	67.38	67.82	67.78	68.91	68.87	69.34	69.30	---	---	69.60	69.55
4	67.53	67.49	67.81	67.78	68.92	68.82	69.33	69.29	69.74	69.71	69.55	69.50
5	67.55	67.46	68.21	67.79	69.00	68.81	69.38	69.33	69.74	69.69	69.55	69.51
6	67.72	67.56	68.25	68.20	69.09	69.03	69.50	69.37	69.69	69.66	69.56	69.55
7	67.81	67.67	68.23	68.18	69.24	69.03	69.52	69.50	69.66	69.55	69.60	69.56
8	67.84	67.80	68.18	68.15	69.21	69.19	69.51	69.44	69.55	69.44	69.60	69.52
9	67.84	67.73	68.18	68.15	69.30	69.20	69.43	69.42	69.44	69.41	69.59	69.57
10	67.73	67.69	68.32	68.19	69.29	69.18	69.43	69.41	69.40	69.40	69.58	69.54
11	67.70	67.66	68.32	68.30	69.18	69.14	69.42	69.35	69.45	69.41	69.53	69.46
12	---	---	68.30	68.25	69.23	69.15	69.34	69.28	69.45	69.45	69.45	69.40
13	---	---	68.25	68.22	69.29	69.19	69.39	69.29	69.46	69.43	69.40	69.40
14	67.51	67.46	68.23	68.22	69.23	69.14	69.39	69.24	69.43	69.42	69.48	69.40
15	---	---	68.29	68.23	69.27	69.23	69.24	69.19	69.44	69.42	69.48	69.36
16	67.70	67.56	68.51	68.29	69.28	69.22	69.33	69.19	69.44	69.41	69.50	69.36
17	67.60	67.53	68.51	68.46	69.23	69.17	69.35	69.26	69.41	69.29	69.50	69.45
18	67.67	67.57	68.46	68.42	69.19	69.18	69.26	69.23	69.29	69.25	69.44	69.38
19	67.71	67.68	68.45	68.41	69.19	69.18	69.29	69.23	69.33	69.27	69.48	69.38
20	67.68	67.63	68.51	68.45	69.19	69.17	69.53	69.29	69.33	69.32	69.53	69.48
21	67.68	67.65	68.50	68.41	69.42	69.16	69.48	69.37	69.32	69.29	69.52	69.50
22	67.66	67.58	68.43	68.41	69.46	69.42	69.36	69.32	69.29	69.25	69.71	69.51
23	67.60	67.57	68.95	68.43	69.53	69.46	69.32	69.29	69.29	69.26	69.70	69.40
24	67.58	67.53	68.99	68.89	69.53	69.49	69.30	69.28	69.25	69.18	69.40	69.29
25	67.58	67.54	68.90	68.88	69.50	69.49	69.45	69.24	69.18	69.13	69.44	69.30
26	67.57	67.50	68.89	68.86	69.50	69.49	69.69	69.45	69.17	69.16	69.64	69.45
27	67.55	67.49	68.94	68.86	69.49	69.49	69.73	69.70	69.16	69.11	69.48	69.36
28	67.49	67.42	68.87	68.83	69.49	69.43	69.73	69.65	69.51	69.10	69.47	69.38
29	67.56	67.40	68.88	68.85	69.43	69.33	---	---	69.75	69.50	69.53	69.47
30	67.57	67.51	68.91	68.88	69.33	69.29	---	---	69.78	69.71	69.50	69.40
31	---	---	68.92	68.91	---	---	---	---	69.70	69.65	---	---
MONTH	---	---	68.99	67.51	69.53	68.81	---	---	---	---	69.80	69.29



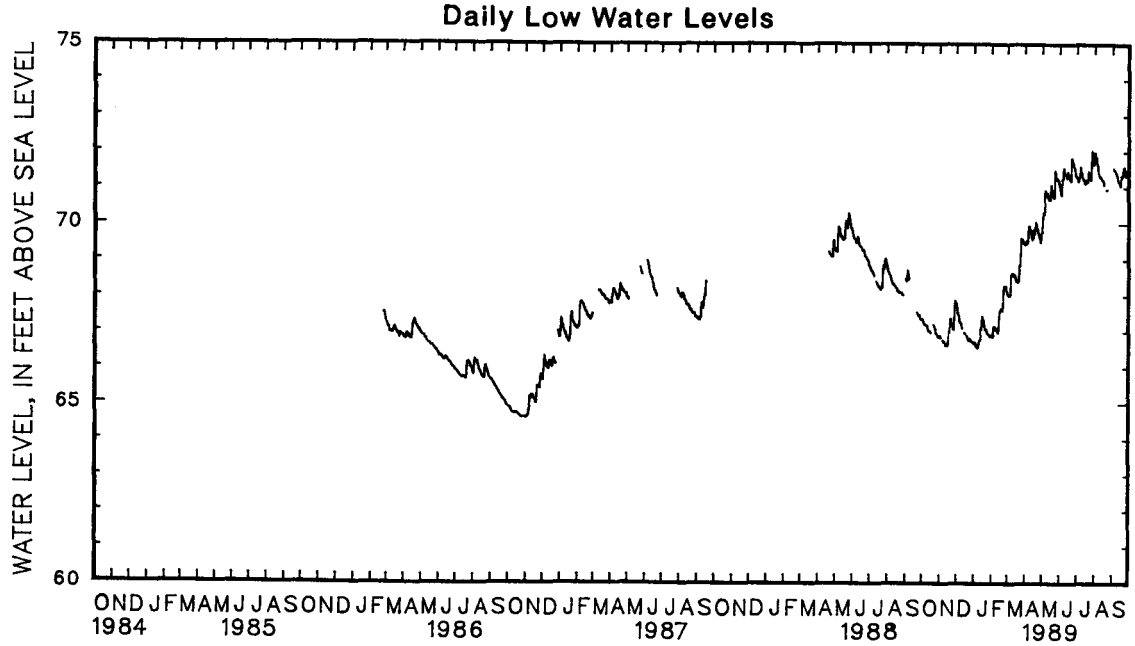
5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--AA Ad 104. SITE ID.--391032076385905. PERMIT NUMBER.--AA-81-2760.
LOCATION.--Lat 39°10'32", long 76°38'59", Hydrologic Unit 02060003, off Hammonds Ferry Rd., 0.5 mi north of Dorsey Rd. intersection.
Owner: U.S. Geological Survey.
AQUIFER.--Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PTXN.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 29 ft; casing diameter 4 in., to 19 ft; screen diameter 4 in. from 19 to 29 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--30-minute recorder interval from November 1985 to current year.
DATUM.--Elevation of land surface is 80 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring Point: Top of recorder platform, 2.3 ft above land-surface datum.
REMARKS.--Glen Burnie Project observation well. Water levels before Feb. 23, 1986 are not currently available.
PERIOD OF RECORD.--February 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 72.25 ft above sea level, July 31, 1989; lowest measured, 64.60 ft above sea level, Oct. 31, and Nov. 1 and 2, 1986.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	67.37	67.34	66.98	66.87	67.91	67.79	66.68	66.66	66.94	66.90	68.12	68.04
2	67.38	67.34	66.98	66.88	67.79	67.74	66.72	66.69	66.90	66.85	68.08	68.03
3	67.35	67.32	66.88	66.82	67.73	67.66	66.79	66.69	66.96	66.86	68.07	68.02
4	67.32	67.27	66.85	66.82	67.66	67.50	66.74	66.60	67.13	66.97	68.02	68.00
5	67.27	67.21	---	---	---	---	66.61	66.59	67.17	67.13	68.13	68.00
6	67.21	67.19	---	---	67.49	67.45	66.63	66.56	67.19	67.14	68.64	68.03
7	67.20	67.19	66.83	66.74	67.46	67.36	66.57	66.54	67.15	67.12	68.64	68.59
8	67.20	67.17	66.79	66.72	67.35	67.24	66.67	66.57	67.14	67.11	68.63	68.60
9	67.17	67.17	66.72	66.69	67.26	67.23	66.72	66.67	67.11	67.04	68.65	68.63
10	67.20	67.17	66.81	66.70	67.23	67.22	66.80	66.74	67.10	67.07	68.65	68.62
11	67.20	67.12	---	---	67.22	67.13	66.80	66.75	67.12	67.08	68.66	68.62
12	67.12	67.04	66.64	66.60	67.12	67.09	67.13	66.77	67.10	66.98	68.66	68.57
13	67.04	67.01	66.70	66.64	---	---	67.13	67.06	67.05	66.97	68.57	68.54
14	67.05	67.01	66.67	66.64	---	---	67.14	67.06	67.43	67.05	68.60	68.56
15	67.03	67.01	66.64	66.60	67.06	66.96	67.47	67.13	67.59	67.43	68.59	68.47
16	67.01	66.98	66.66	66.60	66.98	66.96	67.48	67.42	67.59	67.57	68.46	68.39
17	66.99	66.97	66.99	66.65	66.98	66.94	67.42	67.35	67.63	67.58	68.46	68.41
18	67.02	66.97	67.01	66.98	66.95	66.92	67.40	67.33	67.64	67.63	68.53	68.42
19	---	---	67.18	66.97	66.92	66.86	67.35	67.23	67.64	67.60	68.42	68.38
20	---	---	67.58	67.20	66.87	66.84	67.26	67.15	67.60	67.58	68.58	68.39
21	---	---	67.50	67.35	66.85	66.79	67.14	67.06	68.10	67.58	68.85	68.60
22	67.26	67.19	67.34	67.28	66.79	66.75	67.08	67.07	68.27	68.11	68.85	68.84
23	67.19	67.15	67.29	67.22	66.84	66.76	67.07	67.05	68.28	68.27	68.85	68.82
24	67.18	67.12	67.25	67.17	66.88	66.80	67.05	67.00	68.30	68.26	69.62	68.85
25	67.11	67.05	67.17	67.12	66.86	66.79	67.00	66.94	68.30	68.27	69.61	69.59
26	67.05	66.96	67.12	67.06	66.79	66.73	67.05	66.94	68.35	68.27	69.59	69.57
27	66.96	66.94	67.29	67.05	66.82	66.73	67.01	66.90	68.26	68.16	69.58	69.56
28	66.97	66.92	67.95	67.37	66.89	66.71	66.90	66.87	68.16	68.12	69.58	69.57
29	66.92	66.89	67.89	67.86	66.72	66.70	66.90	66.88	---	---	69.57	69.46
30	66.89	66.85	67.94	67.82	66.75	66.71	66.94	66.89	---	---	69.49	69.46
31	66.86	66.84	---	---	66.75	66.67	66.92	66.90	---	---	69.67	69.49
MONTH	---	---	---	---	---	---	67.48	66.54	68.35	66.85	69.67	68.00

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	69.55	69.45	70.08	69.76	71.17	71.09	71.34	71.31	72.12	71.99	---	---
2	69.46	69.42	70.59	70.11	71.09	71.03	71.31	71.26	71.99	71.95	---	---
3	69.55	69.46	70.40	70.31	71.03	70.96	71.26	71.19	71.95	71.86	71.62	71.55
4	69.56	69.53	70.31	70.28	71.00	70.83	71.25	71.18	71.86	71.85	71.55	71.50
5	69.51	69.46	70.79	70.27	71.20	70.80	71.31	71.25	71.84	71.68	71.52	71.49
6	69.83	69.50	71.21	70.80	71.37	71.23	71.80	71.31	71.68	71.63	71.51	71.48
7	69.95	69.83	71.10	70.93	71.85	71.23	71.69	71.59	71.63	71.51	71.48	71.44
8	69.96	69.95	70.93	70.79	71.68	71.54	71.60	71.46	71.51	71.39	71.44	71.41
9	69.96	69.87	70.79	70.78	71.60	71.54	71.46	71.43	71.39	71.34	71.41	71.37
10	69.87	69.85	71.02	70.79	71.60	71.44	71.44	71.40	71.34	71.31	71.37	71.33
11	69.85	69.78	71.00	70.86	71.44	71.37	71.40	71.27	71.31	71.31	71.32	71.24
12	69.78	69.69	70.86	70.78	71.40	71.36	71.27	71.24	71.31	71.29	71.24	71.17
13	69.71	69.61	70.78	70.70	71.44	71.32	71.29	71.24	71.29	71.25	71.17	71.16
14	69.64	69.57	70.70	70.67	71.47	71.27	71.30	71.17	71.25	71.22	71.21	71.16
15	69.88	69.61	70.67	70.67	71.47	71.44	71.17	71.12	71.23	71.22	71.21	71.06
16	69.89	69.84	71.18	70.67	71.48	71.40	71.29	71.12	71.23	71.18	71.34	71.06
17	69.85	69.80	71.22	71.08	71.43	71.33	71.30	71.21	71.18	71.09	71.39	71.34
18	69.87	69.72	71.08	70.95	71.33	71.30	71.21	71.16	---	---	71.35	71.33
19	70.22	69.87	70.95	70.92	71.30	71.24	71.18	71.16	---	---	71.45	71.33
20	70.13	70.05	70.92	70.85	71.24	71.22	71.76	71.18	---	---	71.61	71.46
21	70.07	70.00	70.85	70.76	71.95	71.19	71.62	71.46	---	---	71.60	71.56
22	70.00	69.90	70.76	70.73	71.95	71.84	71.46	71.40	71.02	70.95	71.68	71.58
23	69.89	69.85	71.65	70.72	71.95	71.80	71.40	71.33	71.03	70.95	71.67	71.41
24	69.85	69.79	71.67	71.48	71.92	71.72	71.33	71.25	---	---	71.41	71.34
25	69.80	69.73	71.48	71.40	71.72	71.67	71.62	71.22	---	---	71.38	71.33
26	69.74	69.65	71.40	71.26	71.67	71.61	72.20	71.56	---	---	71.79	71.39
27	69.67	69.62	71.48	71.23	71.61	71.55	72.20	72.04	---	---	71.60	71.49
28	69.62	69.54	71.35	71.27	71.55	71.48	72.05	71.85	71.55	70.84	71.53	71.49
29	69.72	69.49	71.27	71.24	71.48	71.35	71.84	71.67	---	---	71.56	71.52
30	69.80	69.73	71.24	71.22	71.35	71.34	71.67	71.65	---	---	71.51	71.40
31	---	---	71.22	71.17	---	---	72.25	71.65	71.99	71.95	---	---
MONTH	70.22	69.42	71.67	69.76	71.95	70.80	72.25	71.12	---	---	---	---



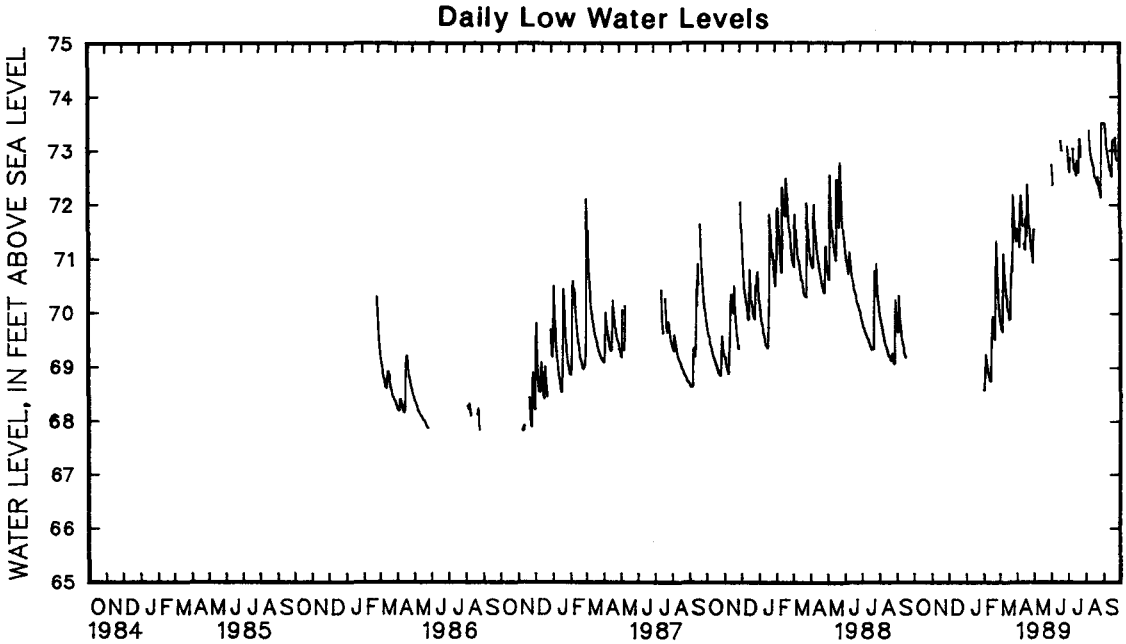
5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--AA Ad 108. SITE ID.--391032076385906. PERMIT NUMBER.--AA-81-3475.
LOCATION.--Lat 39°10'32", long 76°38'59", Hydrologic Unit 02060003, off Hammonds Ferry Rd., 0.5 mi north of Dorsey Rd. intersection.
Owner: U.S. Geological Survey.
AQUIFER.--Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 11.5 ft; casing diameter 4 in., to 6 ft; screen diameter 4 in. from 6 to 11 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--60-minute recorder interval from Feb. 23, 1986 to current year.
DATUM.--Elevation of land surface is 78 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring Point: Top of recorder platform, 3.7 ft above land-surface datum.
REMARKS.--Glen Burnie Project observation well. Water levels before Feb. 23, 1986 are not currently available.
PERIOD OF RECORD.--August 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 73.54 ft above sea level, Aug. 7, 1989; lowest measured, 67.81 ft above sea level, Nov. 10 and 11, 1986.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	---	---	---	---	---	---	---	---	70.06	69.96
2	---	---	---	---	---	---	---	---	68.62	68.57	69.95	69.88
3	---	---	---	---	---	---	---	---	68.78	68.56	69.88	69.79
4	---	---	---	---	---	---	---	---	69.33	68.82	69.79	69.72
5	---	---	---	---	---	---	---	---	69.33	69.23	69.75	69.69
6	---	---	---	---	---	---	---	---	69.23	69.14	71.02	69.66
7	---	---	---	---	---	---	---	---	69.14	69.03	71.21	71.05
8	---	---	---	---	---	---	---	---	69.03	68.96	71.24	71.10
9	---	---	---	---	---	---	---	---	68.96	68.90	71.10	70.85
10	---	---	---	---	---	---	---	---	68.90	68.86	70.85	70.69
11	---	---	---	---	---	---	---	---	68.86	68.84	70.71	70.55
12	---	---	---	---	---	---	---	---	68.84	68.76	70.54	70.39
13	---	---	---	---	---	---	---	---	68.76	68.73	70.41	70.30
14	---	---	---	---	---	---	---	---	69.40	68.73	70.32	70.27
15	---	---	---	---	---	---	---	---	69.75	69.44	70.27	70.08
16	---	---	---	---	---	---	---	---	69.98	69.76	70.10	70.04
17	---	---	---	---	---	---	---	---	70.02	69.93	70.07	70.04
18	---	---	---	---	---	---	---	---	69.92	69.78	70.09	69.91
19	---	---	---	---	---	---	---	---	69.78	69.64	69.93	69.88
20	---	---	---	---	---	---	---	---	69.62	69.54	70.54	69.89
21	---	---	---	---	---	---	---	---	70.74	69.52	71.01	70.56
22	---	---	---	---	---	---	---	---	71.36	70.77	71.06	70.86
23	---	---	---	---	---	---	---	---	71.40	71.34	71.21	70.77
24	---	---	---	---	---	---	---	---	71.33	70.98	72.74	71.36
25	---	---	---	---	---	---	---	---	70.96	70.62	72.60	72.18
26	---	---	---	---	---	---	---	---	70.62	70.43	72.17	71.99
27	---	---	---	---	---	---	---	---	70.40	70.21	71.98	71.87
28	---	---	---	---	---	---	---	---	70.20	70.08	71.86	71.68
29	---	---	---	---	---	---	---	---	---	---	71.66	71.43
30	---	---	---	---	---	---	---	---	---	---	71.45	71.34
31	---	---	---	---	---	---	---	---	---	---	71.75	71.50
MONTH	---	---	---	---	---	---	---	---	---	---	72.74	69.66

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	71.72	71.56	71.98	71.55	---	---	73.07	72.94	---	---	73.51	73.51
2	71.54	71.35	---	---	72.90	72.75	72.93	72.79	---	---	73.51	73.51
3	71.50	71.34	---	---	72.74	72.60	72.78	72.65	---	---	73.51	73.51
4	71.56	71.42	---	---	72.60	72.37	72.85	72.60	---	---	73.51	73.44
5	71.51	71.22	---	---	---	---	73.02	72.86	---	---	73.44	73.37
6	71.92	71.56	---	---	---	---	---	---	---	---	73.36	73.23
7	72.15	71.92	---	---	---	---	---	---	73.54	73.38	73.22	73.10
8	72.21	72.17	---	---	---	---	---	---	73.38	73.19	73.09	73.02
9	72.18	72.08	---	---	---	---	---	---	73.19	73.03	73.01	72.93
10	72.08	71.90	---	---	---	---	73.16	73.04	73.03	72.95	72.93	72.83
11	71.90	71.63	---	---	---	---	73.03	72.80	72.94	72.88	72.83	72.76
12	---	---	---	---	---	---	72.80	72.67	72.87	72.83	72.75	72.69
13	71.45	71.29	---	---	---	---	72.81	72.64	72.83	72.78	72.68	72.65
14	71.29	71.19	---	---	---	---	72.84	72.74	72.78	72.74	72.68	72.64
15	71.72	71.18	---	---	---	---	72.74	72.60	72.74	72.71	72.66	72.53
16	71.89	71.74	---	---	---	---	72.90	72.55	72.71	72.65	72.98	72.52
17	71.88	71.66	---	---	---	---	72.91	72.81	72.64	72.54	73.28	73.03
18	71.67	71.43	---	---	73.26	73.19	72.80	72.70	72.54	72.50	73.25	73.20
19	72.58	71.73	---	---	73.18	73.10	72.70	72.59	72.53	72.50	73.39	73.20
20	72.53	72.38	---	---	73.09	73.01	73.22	72.59	72.51	72.48	---	---
21	72.38	72.19	---	---	---	---	73.22	73.21	72.47	72.43	---	---
22	72.18	71.82	---	---	---	---	73.26	73.22	72.54	72.39	73.31	73.24
23	71.81	71.61	---	---	---	---	73.24	73.09	72.60	72.51	73.25	72.95
24	71.60	71.45	---	---	---	---	73.09	72.89	72.50	72.36	72.94	72.84
25	71.44	71.32	---	---	---	---	---	---	72.36	72.30	72.86	72.82
26	71.32	71.19	---	---	---	---	---	---	72.30	72.25	---	---
27	71.19	71.11	---	---	---	---	---	---	72.25	72.19	---	---
28	71.10	71.00	---	---	---	---	---	---	72.44	72.14	---	---
29	71.51	70.94	---	---	---	---	---	---	73.51	73.51	73.19	73.07
30	71.81	71.54	---	---	73.15	73.07	---	---	73.51	73.51	73.07	72.91
31	---	---	---	---	---	---	---	---	73.51	73.51	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

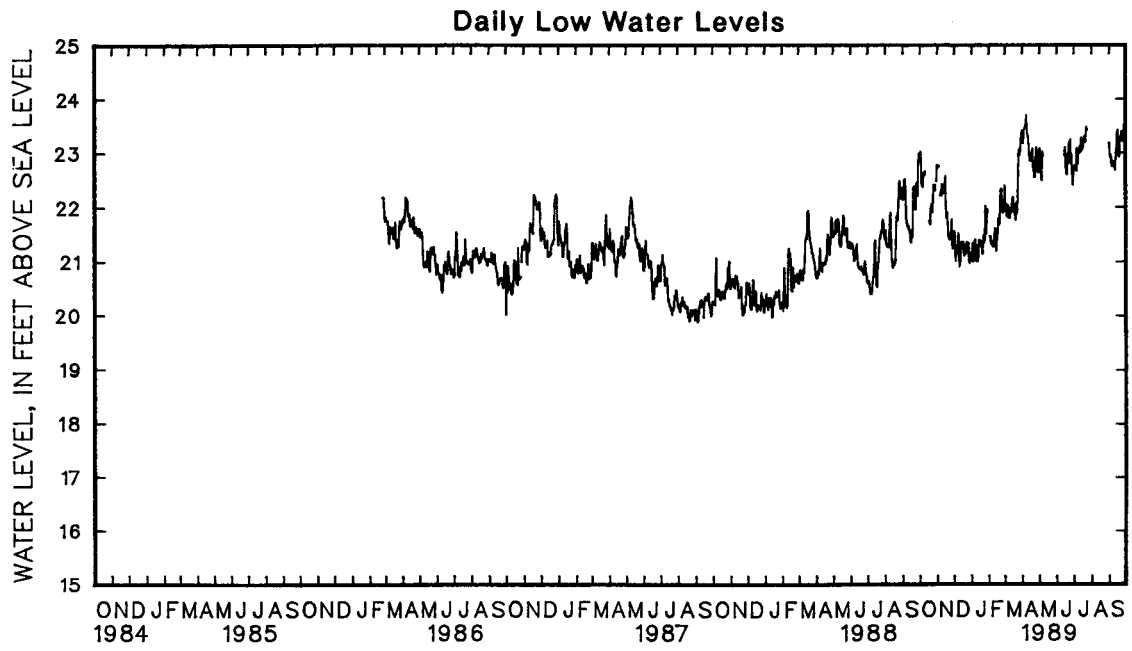
ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Bd 152. SITE ID.--390821076365401. PERMIT NUMBER.--AA-81-3463.
LOCATION.--Lat 39°08'21", long 76°36'54", Hydrologic Unit 02060003, 100 ft north of MD Rt 100, 0.2 mi east of Oakwood Rd.
Owner: U.S. Geological Survey.
AQUIFER.--Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 103 ft; casing diameter 6 in., to 90 ft; screen diameter 4 in. from 90 to 100 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--60-minute recorder interval from Mar. 14, 1985 to current year.
DATUM.--Elevation of land surface is 53 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring Point: Top of recorder platform, 3.0 ft above land-surface datum.
REMARKS.--Glen Burnie Project observation well. Water levels before Feb. 23, 1986 are not currently available.
PERIOD OF RECORD.--March 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 23.89 ft above sea level, July 22, 1989; lowest measured, 19.88 ft above sea level, Aug. 21, 1987.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	23.23	22.98	22.90	22.76	21.82	21.55	21.34	21.00	---	---	22.42	21.94
2	23.26	23.02	22.99	22.74	21.68	21.28	21.80	21.33	21.63	21.46	22.21	21.94
3	23.16	22.82	23.28	22.76	21.37	21.00	21.73	21.27	21.68	21.46	22.15	22.05
4	22.82	22.40	23.04	22.76	21.33	21.22	21.40	21.00	21.58	21.32	22.05	21.83
5	22.67	22.39	---	---	21.43	21.22	21.57	21.15	21.55	21.32	22.39	21.83
6	22.73	22.37	22.66	22.21	21.37	21.14	21.99	21.33	21.49	21.35	22.14	22.03
7	22.90	22.61	22.72	22.26	22.06	21.23	21.93	21.40	21.40	21.28	22.26	21.98
8	---	---	22.66	22.21	21.88	21.52	21.41	21.08	21.50	21.27	21.96	21.83
9	22.93	22.60	22.77	22.42	21.61	21.15	21.32	21.00	21.52	21.39	21.90	21.80
10	22.76	22.65	22.65	22.34	21.14	20.90	21.41	21.16	21.68	21.45	21.92	21.89
11	---	---	22.72	22.25	21.39	21.00	21.48	21.29	22.19	21.61	22.10	21.92
12	22.32	21.93	22.61	22.40	21.39	21.00	21.26	21.00	21.76	21.28	22.43	21.96
13	---	---	22.52	22.33	21.92	21.35	21.54	21.08	21.33	21.19	22.30	22.05
14	22.18	21.84	22.57	22.42	21.65	21.27	21.81	21.39	21.63	21.34	22.26	22.15
15	---	---	23.00	22.57	21.57	21.25	21.72	21.30	21.61	21.51	22.62	22.19
16	---	---	22.76	21.98	21.92	21.24	21.62	21.38	21.96	21.52	22.29	21.92
17	21.91	21.74	22.04	21.80	21.74	21.35	21.50	21.31	22.07	21.79	22.02	21.91
18	21.91	21.74	22.37	21.88	21.35	21.14	21.43	21.28	21.82	21.67	22.59	22.04
19	21.96	21.67	22.26	21.71	21.40	21.10	21.54	21.29	22.35	21.70	22.12	21.77
20	22.40	21.96	21.70	21.46	---	---	21.58	21.14	22.63	22.14	22.30	21.77
21	22.38	22.00	21.63	21.44	21.82	21.14	21.81	21.29	22.85	22.32	22.42	22.09
22	22.48	22.05	21.71	21.40	21.71	21.30	21.81	21.47	22.82	22.34	22.12	21.90
23	22.14	21.90	21.90	21.46	21.64	21.35	21.55	21.35	22.30	22.07	22.62	22.15
24	22.48	22.09	21.84	21.51	21.53	21.22	22.31	21.41	22.05	21.92	23.21	22.65
25	22.55	22.29	22.04	21.54	21.56	21.23	22.34	22.03	22.29	21.90	23.30	23.05
26	22.69	22.41	21.98	21.77	21.55	21.34	22.00	21.59	22.10	21.96	23.26	22.97
27	22.67	22.41	21.74	21.31	21.47	21.00	22.22	21.51	22.38	21.95	23.20	22.97
28	22.74	22.31	21.53	21.23	21.19	20.96	22.36	21.83	22.73	22.40	23.30	23.03
29	---	---	21.56	21.41	21.32	21.08	22.37	21.96	---	---	23.38	23.27
30	22.96	22.48	21.70	21.34	21.57	21.03	---	---	---	---	23.39	23.25
31	23.08	22.77	---	---	21.47	21.16	---	---	---	---	23.71	23.42
MONTH	---	---	---	---	---	---	---	---	---	---	23.71	21.77

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	23.57	23.24	23.27	23.08	---	---	23.22	22.72	---	---	---	---
2	23.34	23.18	23.45	23.07	---	---	23.19	22.76	---	---	---	---
3	23.49	23.28	23.23	22.82	---	---	---	---	---	---	---	---
4	23.58	23.43	22.86	22.51	---	---	---	---	---	---	---	---
5	23.54	23.46	23.02	22.49	---	---	23.28	22.67	---	---	---	---
6	23.67	23.50	23.52	23.01	---	---	23.31	23.08	---	---	---	---
7	23.86	23.55	23.45	22.96	---	---	23.25	22.94	---	---	---	---
8	23.85	23.70	---	---	---	---	23.24	22.80	---	---	---	---
9	23.77	23.50	---	---	---	---	23.36	23.02	---	---	---	---
10	23.48	23.34	---	---	---	---	23.39	23.00	---	---	---	---
11	23.44	23.31	---	---	---	---	23.42	23.12	---	---	---	---
12	23.38	23.17	---	---	---	---	23.30	23.02	---	---	---	---
13	23.35	22.97	---	---	---	---	23.58	23.02	---	---	---	---
14	23.00	22.86	---	---	23.22	22.96	23.68	23.28	---	---	---	---
15	23.29	22.85	---	---	23.39	23.10	23.48	23.18	---	---	---	---
16	23.48	22.99	---	---	23.20	22.82	23.32	23.07	---	---	---	---
17	22.99	22.88	---	---	23.10	22.62	23.56	23.11	---	---	---	---
18	23.22	22.92	---	---	23.02	22.60	23.46	23.20	---	---	---	---
19	23.45	23.08	---	---	23.12	22.60	23.50	23.30	---	---	---	---
20	23.24	22.76	---	---	23.18	22.98	23.58	23.20	---	---	---	---
21	22.89	22.68	---	---	23.20	22.80	23.48	23.20	---	---	---	---
22	22.90	22.55	---	---	23.54	23.11	23.84	23.40	---	---	---	---
23	23.02	22.55	---	---	23.42	23.20	23.80	23.48	---	---	---	---
24	23.04	22.84	---	---	23.72	23.19	23.70	23.42	---	---	---	---
25	23.27	22.91	---	---	23.70	23.24	---	---	---	---	---	---
26	23.51	23.10	---	---	23.51	22.80	---	---	---	---	---	---
27	23.15	22.80	---	---	23.29	22.96	---	---	---	---	---	---
28	22.94	22.64	---	---	23.20	22.56	---	---	---	---	---	---
29	23.12	22.64	---	---	23.12	22.40	---	---	---	---	---	---
30	23.32	22.97	---	---	23.23	22.69	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	23.86	22.55	---	---	---	---	---	---	---	---	---	---



5 YEAR HYDROGRAPH

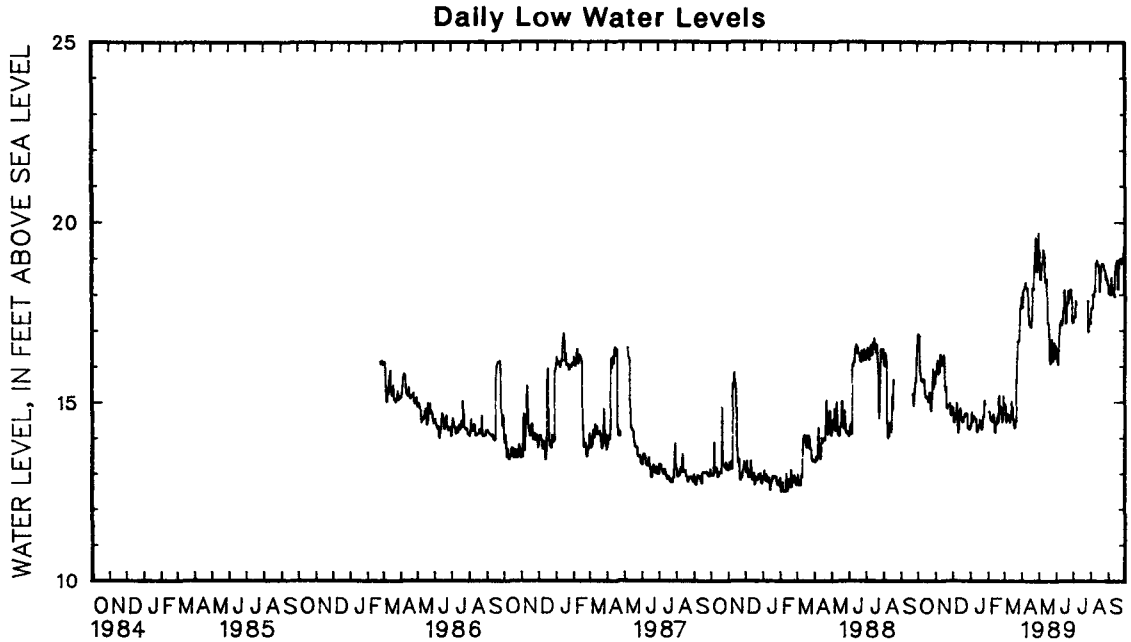
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--AA Bd 156. SITE ID.--390922076371001. PERMIT NUMBER.--AA-81-3462.
LOCATION.--Lat 39°09'22", long 76°37'10", Hydrologic Unit 02060003, off Wardour Rd., 0.3 mi north of Aquahart Rd. intersection.
Owner: U.S. Geological Survey.
AQUIFER.--Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 173 ft; casing diameter 6 in., to 160 ft; screen diameter 4 in. from 160 to 170 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--30-minute recorder interval from October 1984 to current year.
DATUM.--Elevation of land surface is 69 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring Point: Top of recorder platform, 2.7 ft above land-surface datum.
REMARKS.--Glen Burnie Project observation well.
PERIOD OF RECORD.--October 1984 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 20.40 ft above sea level, April 26, 1989; lowest measured, 12.47 ft above sea level, Feb. 10, 1988.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	17.50	16.84	16.76	15.49	15.63	14.86	15.47	14.24	---	---	15.16	14.85
2	17.61	16.87	16.90	15.83	15.88	14.83	15.19	14.34	15.40	14.72	15.55	14.85
3	17.40	16.81	16.66	15.82	15.84	14.73	15.09	14.32	15.51	14.70	15.28	14.93
4	17.40	16.81	17.90	16.02	15.35	14.42	15.94	14.70	15.59	14.53	15.23	14.41
5	17.22	15.83	17.38	16.12	15.28	14.42	15.16	14.44	15.41	14.48	15.80	14.62
6	16.38	15.76	16.55	15.75	15.02	14.57	15.28	14.43	15.22	14.48	15.01	14.66
7	16.07	15.60	16.82	15.81	15.32	14.57	15.51	14.54	15.09	14.45	15.55	14.67
8	16.42	15.56	16.72	15.83	15.17	14.60	15.90	14.59	15.20	14.45	14.81	14.50
9	16.51	15.53	16.92	15.81	16.07	14.97	15.29	14.52	15.12	14.64	14.82	14.50
10	16.43	15.61	16.88	16.30	15.68	14.55	15.15	14.50	15.22	14.64	14.97	14.61
11	16.52	15.61	16.75	16.09	14.94	14.14	15.45	14.52	15.55	14.48	15.32	14.42
12	16.03	15.59	16.92	16.24	14.64	14.13	14.99	14.49	15.13	14.14	15.83	14.53
13	16.36	15.47	16.88	16.06	14.95	14.32	15.14	14.17	14.72	14.14	15.49	14.58
14	15.99	15.20	17.10	15.99	15.29	14.75	14.90	14.14	15.16	14.41	15.13	14.92
15	16.25	15.11	16.80	15.99	15.96	14.81	15.22	14.22	14.73	14.40	16.02	15.00
16	15.92	15.13	16.68	16.29	15.15	14.72	15.69	14.28	15.41	14.40	15.10	14.50
17	15.67	15.08	17.13	16.06	15.54	14.49	15.49	14.28	15.70	14.60	14.92	14.51
18	16.05	15.08	16.22	15.31	15.97	14.53	15.02	14.48	14.93	14.42	16.01	14.33
19	15.55	15.09	16.08	15.31	15.53	14.43	14.85	14.43	16.04	14.63	14.80	14.27
20	15.66	14.98	16.38	15.39	15.12	14.42	14.89	14.45	16.29	15.10	15.28	14.29
21	15.70	14.98	15.91	14.82	15.41	14.45	15.19	14.21	16.44	15.17	15.51	14.47
22	16.07	15.24	15.53	14.80	15.10	14.56	15.55	14.26	16.33	14.86	15.48	14.46
23	16.02	15.24	15.72	14.89	15.87	14.66	15.69	14.48	15.40	14.86	16.20	15.49
24	15.99	14.76	15.77	14.87	15.55	14.66	15.22	14.61	15.06	14.63	17.19	16.21
25	15.34	14.72	15.92	14.90	15.32	14.67	15.26	14.58	15.78	14.43	17.41	16.70
26	16.07	15.05	15.85	14.90	15.53	14.63	15.94	15.04	15.03	14.47	17.39	16.68
27	16.07	15.17	16.01	14.95	15.56	14.65	15.94	14.92	15.81	14.52	17.40	16.70
28	16.48	15.89	15.85	14.66	15.44	14.27	---	---	16.41	15.16	17.62	16.82
29	16.15	15.34	15.31	14.62	15.05	14.26	---	---	---	---	17.91	17.62
30	16.69	15.51	15.56	14.67	14.94	14.26	---	---	---	---	17.93	17.62
31	16.51	15.48	---	---	15.15	14.22	---	---	---	---	18.29	17.92
MONTH	17.61	14.72	17.90	14.62	16.07	14.13	---	---	---	---	18.29	14.27

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	18.19	17.62	20.20	19.19	16.97	16.45	18.94	17.21	18.66	17.42	19.16	18.29
2	18.01	17.62	20.18	19.16	16.98	16.38	19.06	17.36	18.53	17.60	19.63	18.03
3	18.21	17.90	19.74	18.49	17.49	16.20	18.82	17.33	18.38	17.62	19.08	18.03
4	18.30	18.09	19.32	18.41	17.41	16.03	18.35	17.36	18.63	17.61	19.44	18.23
5	18.32	18.14	19.44	18.41	17.13	16.03	18.54	17.82	19.39	18.00	18.68	17.99
6	18.40	18.14	20.13	18.84	17.33	16.81	18.05	17.71	19.15	17.94	18.61	17.99
7	18.52	18.21	20.05	18.85	18.03	16.94	---	---	19.27	18.01	19.84	18.48
8	18.71	18.33	19.95	18.87	18.11	17.16	---	---	18.43	18.08	20.34	18.22
9	18.75	18.18	20.20	19.25	18.17	17.24	---	---	18.86	18.08	19.27	18.08
10	18.32	18.18	19.90	19.18	18.22	17.13	---	---	19.14	18.86	18.90	18.09
11	18.42	18.18	19.80	19.05	18.22	17.13	---	---	19.66	18.88	18.53	17.95
12	18.28	17.61	19.61	18.51	18.20	17.27	---	---	19.98	18.95	18.92	17.95
13	18.28	17.26	19.55	18.32	18.69	17.53	---	---	20.25	18.81	19.34	18.58
14	17.60	17.15	19.42	18.33	18.60	17.58	---	---	19.59	18.80	19.26	18.81
15	17.97	17.15	19.31	18.42	18.48	18.06	---	---	20.14	18.83	19.05	18.86
16	18.18	17.08	19.67	17.42	18.26	18.11	---	---	19.42	18.68	20.15	18.92
17	17.46	17.08	18.19	17.15	18.78	17.59	---	---	19.47	18.08	20.10	18.96
18	17.60	17.23	18.31	17.15	18.47	17.17	---	---	18.80	18.08	19.02	18.15
19	18.61	17.38	19.11	16.86	18.50	17.20	---	---	20.08	18.52	19.12	18.15
20	19.09	18.16	17.53	16.30	18.76	17.77	---	---	20.15	18.81	19.61	18.90
21	18.87	18.16	17.54	16.05	18.26	17.74	---	---	19.82	18.85	19.54	18.91
22	19.03	18.14	16.72	16.06	19.03	17.77	---	---	20.00	18.86	19.67	18.98
23	19.71	18.65	16.95	16.37	18.95	18.09	---	---	19.77	18.83	20.16	18.95
24	19.74	18.98	17.29	16.73	19.30	17.88	---	---	19.62	18.82	19.71	18.87
25	20.00	19.58	16.98	16.12	19.43	17.95	---	---	20.12	18.69	19.49	18.87
26	20.40	19.28	16.89	16.12	19.12	18.13	19.94	17.83	19.68	18.68	19.88	19.03
27	19.85	18.64	17.18	16.40	19.33	18.13	17.88	16.93	19.32	18.60	19.66	19.01
28	19.56	18.63	17.40	16.64	19.80	18.10	17.93	16.94	19.25	18.41	20.12	19.16
29	19.87	18.85	17.60	16.20	19.03	17.26	18.25	17.25	19.66	18.51	19.99	19.21
30	20.24	19.71	16.89	16.21	17.66	17.19	17.39	17.19	19.95	18.40	20.13	19.17
31	---	---	17.29	16.56	---	---	17.89	17.19	19.37	18.31	---	---
MONTH	20.40	17.08	20.20	16.05	19.80	16.03	---	---	20.25	17.42	20.34	17.95



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

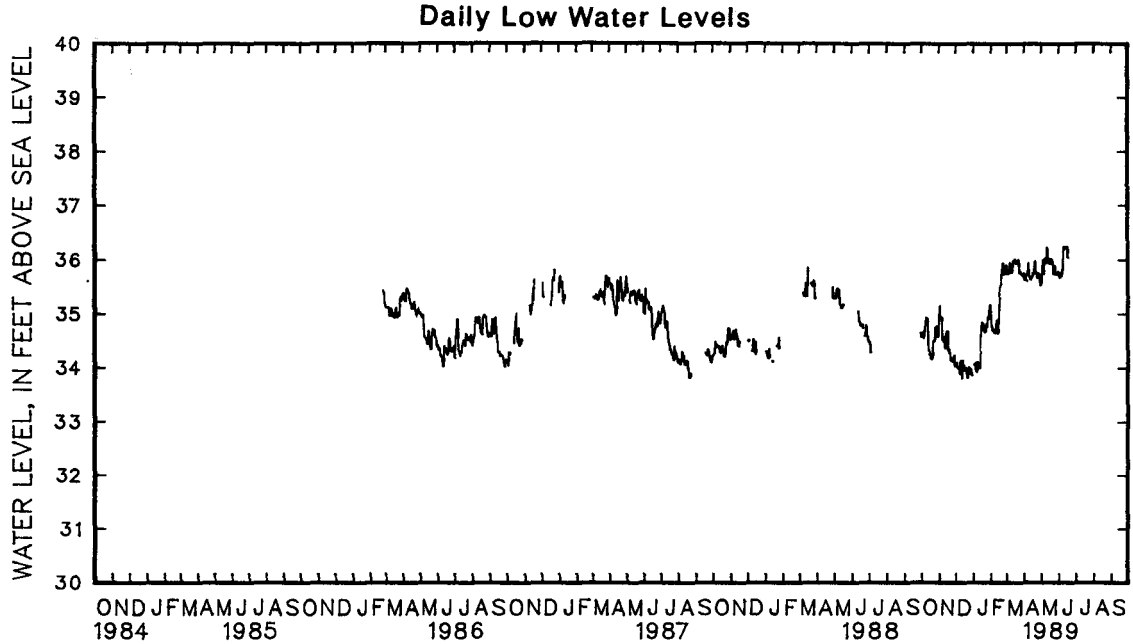
ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Bd 157. SITE ID.--390737076374401. PERMIT NUMBER.--AA-81-3464.
LOCATION.--Lat 39°07'37", long 76°37'44", Hydrologic Unit 02060003, off Nolfield Dr., 0.14 mi east of Phirne Rd.
Owner: U.S. Geological Survey.
AQUIFER.--Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 180 ft; casing diameter 6 in., to 167 ft; screen diameter 4 in. from 167 to 177 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--60-minute recorder interval from March 1985 to current year.
DATUM.--Elevation of land surface is 75 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring Point: Top of recorder platform, 2.5 ft above land-surface datum.
REMARKS.--Glen Burnie Project observation well.
PERIOD OF RECORD.--March 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 36.53 ft above sea level, June 10, 1989; lowest measured, 33.79 ft above sea level, Dec. 12, and 22, 1988.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	35.13	34.56	35.22	34.94	34.24	34.06	---	---	35.06	34.94	35.94	35.75
2	35.13	34.57	35.28	35.14	34.22	34.02	34.07	34.05	34.95	34.76	35.91	35.75
3	34.92	34.57	35.21	34.92	34.31	34.08	34.07	34.05	34.87	34.74	35.89	35.80
4	34.92	34.64	35.22	34.89	34.19	33.99	34.47	34.07	34.78	34.68	35.80	35.76
5	34.84	34.54	35.31	34.92	34.03	33.99	34.07	33.95	34.85	34.68	36.03	35.76
6	34.86	34.64	35.30	34.90	33.99	33.98	34.06	33.94	34.82	34.69	35.98	35.96
7	34.90	34.71	35.19	34.52	34.09	33.99	34.35	33.91	34.70	34.65	36.03	35.81
8	34.99	34.82	34.99	34.53	34.12	33.88	34.69	34.10	34.75	34.64	35.80	35.77
9	35.17	34.92	35.17	34.50	34.60	34.12	34.27	34.04	34.87	34.67	35.86	35.77
10	35.17	34.88	34.94	34.49	34.32	34.11	34.13	33.99	35.05	34.76	35.86	35.77
11	35.16	34.90	34.93	34.56	34.11	33.88	34.09	33.99	35.42	34.87	35.98	35.80
12	35.13	34.88	34.87	34.38	34.08	33.79	34.13	33.98	35.13	34.74	36.26	35.98
13	34.93	34.45	34.94	34.35	34.34	34.13	34.67	34.08	34.73	34.63	36.06	35.98
14	34.69	34.33	34.96	34.58	34.32	33.98	34.69	34.58	35.08	34.67	36.03	36.00
15	34.84	34.29	34.90	34.66	34.46	34.03	34.92	34.70	35.27	35.08	36.28	36.02
16	34.62	34.22	34.92	34.61	34.02	33.95	35.09	34.83	35.62	35.25	36.03	35.94
17	34.52	34.16	35.24	34.67	34.14	33.97	34.89	34.81	35.64	35.49	35.98	35.94
18	34.55	34.15	34.65	34.32	34.51	33.98	34.86	34.80	35.54	35.51	36.29	35.98
19	34.41	34.14	34.49	34.27	34.17	33.94	34.85	34.74	35.83	35.54	36.02	35.94
20	34.45	34.17	34.70	34.33	33.95	33.90	34.82	34.66	36.01	35.74	36.26	35.94
21	34.56	34.23	34.53	34.17	34.09	33.88	34.89	34.66	36.23	35.82	36.26	36.01
22	34.85	34.48	34.17	34.12	33.97	33.79	34.87	34.66	36.24	35.95	36.01	35.96
23	34.86	34.48	34.15	34.12	34.35	33.91	35.16	34.74	35.96	35.76	36.00	35.76
24	34.91	34.49	34.29	34.12	34.22	34.00	34.91	34.81	35.76	35.74	36.20	35.77
25	34.85	34.51	34.48	34.11	34.20	33.98	34.90	34.76	35.98	35.74	36.05	35.78
26	34.93	34.74	34.46	34.16	34.13	33.88	35.53	34.89	35.96	35.89	36.00	35.74
27	35.01	34.73	34.64	34.19	34.14	33.96	35.30	34.94	35.99	35.89	35.97	35.74
28	34.92	34.75	34.53	34.22	34.12	33.91	35.09	34.91	36.02	35.90	35.97	35.74
29	34.94	34.70	34.19	34.02	33.90	33.85	35.54	35.09	---	---	35.82	35.71
30	34.89	34.56	34.10	34.02	33.99	33.85	35.56	35.16	---	---	35.74	35.71
31	34.91	34.59	---	---	---	---	35.23	35.07	---	---	36.02	35.75
MONTH	35.17	34.14	35.31	34.02	---	---	---	---	36.24	34.63	36.29	35.71

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	35.98	35.67	35.72	35.58	35.76	35.71	---	---	---	---	---	---
2	35.76	35.63	36.05	35.75	35.70	35.68	---	---	---	---	---	---
3	35.76	35.65	36.28	35.99	35.91	35.68	---	---	---	---	---	---
4	35.91	35.70	36.00	35.75	35.99	35.73	---	---	---	---	---	---
5	35.80	35.73	36.04	35.74	35.85	35.71	---	---	---	---	---	---
6	35.97	35.74	36.30	36.03	35.99	35.75	---	---	---	---	---	---
7	36.08	35.77	36.31	36.01	36.26	35.83	---	---	---	---	---	---
8	36.11	35.95	36.27	35.95	36.28	36.23	---	---	---	---	---	---
9	36.04	35.75	36.24	35.95	36.50	36.25	---	---	---	---	---	---
10	35.78	35.69	36.50	36.24	36.53	36.21	---	---	---	---	---	---
11	35.76	35.66	36.29	36.21	---	---	---	---	---	---	---	---
12	35.69	35.64	36.34	36.03	---	---	---	---	---	---	---	---
13	35.94	35.65	36.24	35.95	36.37	36.24	---	---	---	---	---	---
14	35.75	35.68	36.24	35.94	36.31	36.23	---	---	---	---	---	---
15	35.99	35.69	36.01	35.95	36.38	36.24	---	---	---	---	---	---
16	36.22	35.76	36.34	35.94	36.29	36.06	---	---	---	---	---	---
17	35.83	35.74	36.49	36.02	---	---	---	---	---	---	---	---
18	36.01	35.75	36.47	36.01	---	---	---	---	---	---	---	---
19	36.24	35.97	36.25	36.00	---	---	---	---	---	---	---	---
20	36.28	35.98	36.04	35.95	---	---	---	---	---	---	---	---
21	36.04	35.77	36.06	35.92	---	---	---	---	---	---	---	---
22	35.99	35.77	35.80	35.75	---	---	---	---	---	---	---	---
23	35.80	35.73	35.97	35.74	---	---	---	---	---	---	---	---
24	35.72	35.68	36.01	35.89	---	---	---	---	---	---	---	---
25	35.94	35.70	35.89	35.77	---	---	---	---	---	---	---	---
26	35.98	35.75	35.77	35.74	---	---	---	---	---	---	---	---
27	35.96	35.74	35.99	35.74	---	---	---	---	---	---	---	---
28	35.91	35.66	35.98	35.75	---	---	---	---	---	---	---	---
29	35.94	35.54	36.00	35.76	---	---	---	---	---	---	---	---
30	35.76	35.53	35.91	35.78	---	---	---	---	---	---	---	---
31	---	---	35.91	35.76	---	---	---	---	---	---	---	---
MONTH	36.28	35.53	36.50	35.58	---	---	---	---	---	---	---	---



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

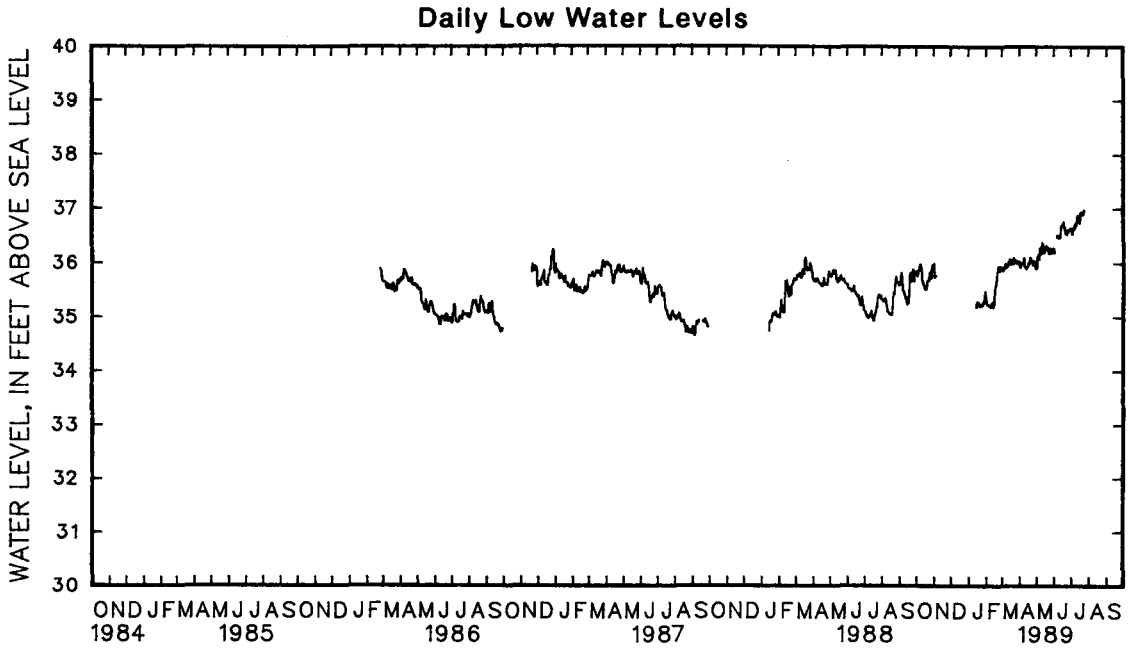
ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Bd 159. SITE ID.--390737076374402. PERMIT NUMBER.--AA-81-3949.
LOCATION.--Lat 39°07'37", long 76°37'44", Hydrologic Unit 02060003, off Nolfield Dr., 0.14 mi east of Phirne Rd.
Owner: U.S. Geological Survey.
AQUIFER.--Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 100 ft; casing diameter 6 in., to 89 ft; screen diameter 4 in. from 89 to 99 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--60-minute recorder interval interval from March 1985 to current year.
DATUM.--Elevation of land surface is 75 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring Point: Top of recorder platform, 2.8 ft above land-surface datum.
REMARKS.--Glen Burnie Project observation well.
PERIOD OF RECORD.--March 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 37.08 ft above sea level, July 23 and 24, 1989; lowest measured, 34.63 ft above sea level, Sept. 5, 1987.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	35.92	35.78	36.11	35.98	---	---	---	---	35.39	35.30	35.93	35.86
2	35.92	35.84	36.01	35.72	---	---	---	---	35.30	35.22	35.95	35.85
3	35.87	35.75	35.94	35.75	---	---	---	---	35.28	35.21	35.94	35.90
4	35.86	35.81	35.91	35.75	---	---	---	---	35.24	35.20	35.92	35.89
5	35.92	35.84	---	---	---	---	---	---	35.25	35.21	36.08	35.90
6	35.98	35.88	---	---	---	---	---	---	35.25	35.20	36.05	35.98
7	36.03	35.94	---	---	---	---	---	---	35.21	35.18	36.02	35.93
8	36.05	35.96	---	---	---	---	---	---	35.23	35.17	35.94	35.91
9	36.03	35.92	---	---	---	---	---	---	35.22	35.18	35.98	35.93
10	35.97	35.87	---	---	---	---	---	---	35.32	35.22	35.98	35.94
11	35.92	35.67	---	---	---	---	---	---	35.51	35.25	36.05	35.95
12	35.82	35.64	---	---	---	---	---	---	35.37	35.18	36.16	36.01
13	35.85	35.60	---	---	---	---	---	---	35.21	35.16	36.13	36.01
14	35.77	35.57	---	---	---	---	35.25	35.16	35.35	35.22	36.13	36.06
15	35.65	35.55	---	---	---	---	35.35	35.25	35.48	35.36	36.21	36.06
16	35.71	35.51	---	---	---	---	35.38	35.26	35.57	35.45	36.05	35.97
17	35.60	35.50	---	---	---	---	35.33	35.24	35.64	35.54	36.06	35.98
18	35.59	35.50	---	---	---	---	35.32	35.25	35.65	35.57	36.24	36.05
19	35.76	35.51	---	---	---	---	35.29	35.22	35.82	35.65	36.04	35.98
20	35.84	35.63	---	---	---	---	35.26	35.18	35.88	35.78	36.24	35.98
21	35.80	35.66	---	---	---	---	35.23	35.18	36.08	35.85	36.31	36.09
22	35.88	35.66	---	---	---	---	35.26	35.18	36.03	35.91	36.09	36.02
23	35.82	35.66	---	---	---	---	35.39	35.21	35.91	35.85	36.07	36.02
24	35.87	35.80	---	---	---	---	35.27	35.22	35.86	35.84	36.24	36.04
25	35.92	35.82	---	---	---	---	35.25	35.20	35.96	35.84	36.18	36.04
26	35.90	35.80	---	---	---	---	35.64	35.25	36.00	35.92	36.12	35.99
27	35.90	35.71	---	---	---	---	35.52	35.26	35.94	35.91	36.11	35.99
28	36.08	35.87	---	---	---	---	35.35	35.25	35.99	35.91	36.12	36.03
29	36.09	35.95	---	---	---	---	35.56	35.37	---	---	36.06	35.98
30	36.07	35.94	---	---	---	---	35.62	35.45	---	---	36.05	35.98
31	36.13	35.95	---	---	---	---	35.49	35.39	---	---	36.20	36.02
MONTH	36.13	35.50	---	---	---	---	---	---	36.08	35.16	36.31	35.85

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	36.09	35.92	36.09	35.91	36.25	36.19	36.75	36.62	---	---	---	---
2	36.01	35.91	36.28	36.11	---	---	36.73	36.63	---	---	---	---
3	36.08	35.98	36.29	36.15	---	---	36.62	36.53	---	---	---	---
4	36.10	36.00	36.15	36.07	---	---	36.67	36.57	---	---	---	---
5	36.05	36.00	36.32	36.07	---	---	36.73	36.65	---	---	---	---
6	36.15	36.00	36.40	36.28	36.62	36.48	36.69	36.62	---	---	---	---
7	36.18	35.98	36.40	36.26	36.64	36.52	36.77	36.63	---	---	---	---
8	36.16	36.09	36.37	36.17	36.61	36.48	36.77	36.72	---	---	---	---
9	36.12	35.96	36.37	36.17	36.52	36.46	36.75	36.68	---	---	---	---
10	35.99	35.92	36.53	36.38	36.56	36.46	36.81	36.69	---	---	---	---
11	35.98	35.91	36.42	36.35	36.62	36.47	36.96	36.75	---	---	---	---
12	35.93	35.89	36.44	36.29	36.65	36.49	36.90	36.84	---	---	---	---
13	36.06	35.91	36.35	36.21	36.82	36.64	37.04	36.88	---	---	---	---
14	35.99	35.93	36.36	36.19	36.88	36.70	36.92	36.86	---	---	---	---
15	36.13	35.94	36.29	36.25	36.78	36.69	36.92	36.85	---	---	---	---
16	36.16	36.00	36.50	36.25	36.89	36.71	36.84	36.74	---	---	---	---
17	36.05	35.98	36.53	36.32	36.97	36.72	36.98	36.81	---	---	---	---
18	36.15	36.01	36.50	36.31	36.98	36.76	36.99	36.93	---	---	---	---
19	36.20	36.10	36.41	36.30	36.87	36.68	37.04	36.94	---	---	---	---
20	36.28	36.10	36.36	36.27	36.77	36.66	36.97	36.91	---	---	---	---
21	36.17	36.06	36.36	36.24	36.66	36.56	36.93	36.90	---	---	---	---
22	36.13	36.05	36.23	36.17	36.70	36.54	36.98	36.90	---	---	---	---
23	36.05	36.00	36.37	36.17	36.70	36.55	37.08	36.94	---	---	---	---
24	36.01	35.96	36.37	36.27	36.73	36.53	37.08	36.98	---	---	---	---
25	36.10	35.99	36.28	36.25	36.73	36.61	---	---	---	---	---	---
26	36.14	36.03	36.26	36.18	36.67	36.58	---	---	---	---	---	---
27	36.10	36.02	36.36	36.18	36.65	36.61	---	---	---	---	---	---
28	36.06	35.94	36.31	36.18	36.64	36.61	---	---	---	---	---	---
29	36.08	35.90	36.34	36.24	36.81	36.61	---	---	---	---	---	---
30	36.00	35.89	36.32	36.27	36.71	36.65	---	---	---	---	---	---
31	---	---	36.29	36.25	---	---	---	---	---	---	---	---
MONTH	36.28	35.89	36.53	35.91	---	---	---	---	---	---	---	---



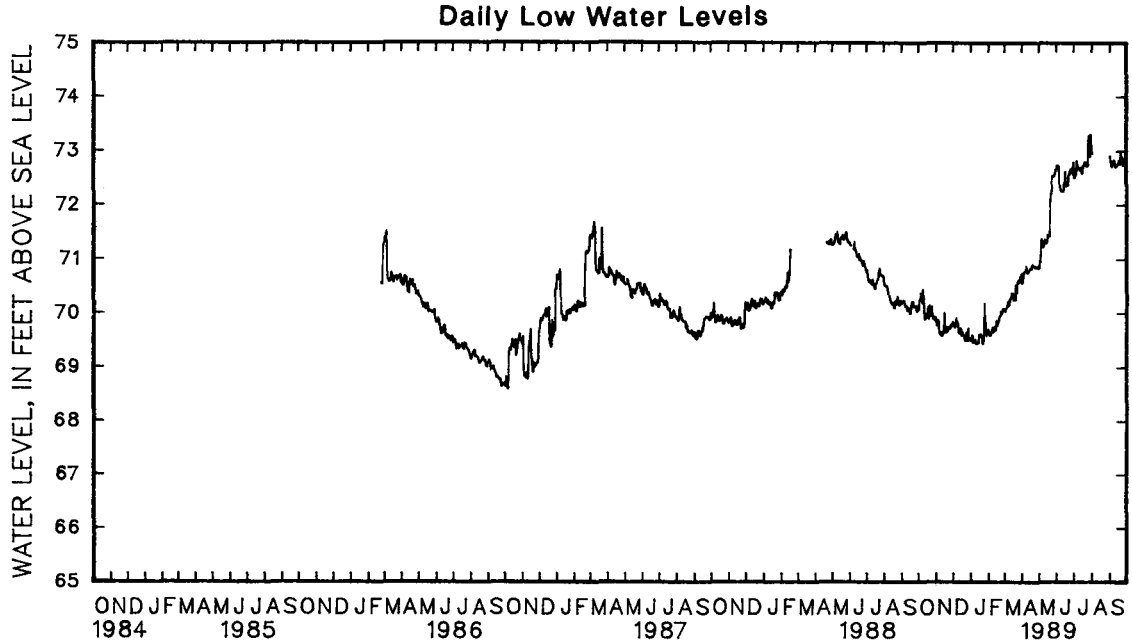
5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--AA Bd 160. SITE ID.--390908076394402. PERMIT NUMBER.--AA-81-3461.
LOCATION.--Lat 39°09'08", long 76°39'44", Hydrologic Unit 02060003, 0.08 mi north of Queenstown Rd., 0.41 mi. east of WB & A Rd.
Owner: U.S. Geological Survey.
AQUIFER.--Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 118 ft; casing diameter 6 in., to 105 ft. screen diameter 4 in. from 105 to 115 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--60-minute recorder interval from April 1985 to current year.
DATUM.--Elevation of land surface is 88 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring Point: Top of recorder platform, 2.5 ft above land-surface datum.
REMARKS.--Glen Burnie Project observation well.
PERIOD OF RECORD.--April 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 73.71 ft above sea level, July 27, 1987; lowest measured, 68.57 ft above sea level, Oct. 7, 1986.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	70.51	70.06	69.95	69.83	69.82	69.77	69.63	69.51	69.78	69.65	70.08	70.04
2	70.69	70.23	69.83	69.76	69.86	69.79	69.58	69.55	69.66	69.59	70.09	70.03
3	70.71	70.24	69.85	69.78	69.86	69.73	69.65	69.58	69.68	69.60	70.26	70.09
4	70.63	70.26	69.93	69.85	69.83	69.73	69.63	69.45	69.61	69.59	70.15	70.10
5	70.69	70.36	69.87	69.75	70.35	69.79	69.51	69.45	69.67	69.62	70.53	70.12
6	70.68	70.29	69.75	69.62	70.39	69.89	69.60	69.49	69.92	69.67	70.25	70.22
7	70.68	70.19	69.68	69.62	70.16	69.78	69.50	69.46	70.04	69.72	70.23	70.15
8	70.71	70.21	69.63	69.60	70.19	69.82	69.60	69.49	69.75	69.70	70.19	70.14
9	70.74	70.43	69.78	69.63	69.83	69.76	69.52	69.43	69.70	69.65	70.25	70.19
10	70.39	70.10	69.69	69.57	69.77	69.70	69.47	69.43	69.74	69.68	70.28	70.25
11	70.12	69.92	69.60	69.57	69.70	69.62	69.47	69.43	69.79	69.74	70.59	70.27
12	70.26	69.88	69.72	69.60	69.80	69.63	69.64	69.44	70.04	69.71	70.50	70.31
13	70.16	69.97	69.69	69.65	69.81	69.70	69.64	69.44	70.01	69.68	70.37	70.31
14	70.33	69.90	70.20	69.63	69.77	69.69	69.56	69.44	70.21	69.85	70.42	70.37
15	70.31	69.93	70.42	69.99	69.69	69.58	69.68	69.59	69.88	69.81	70.48	70.37
16	70.24	69.96	69.97	69.74	69.69	69.58	69.66	69.56	69.99	69.76	70.36	70.25
17	70.51	70.05	69.74	69.64	69.70	69.64	69.63	69.57	69.96	69.83	70.37	70.25
18	70.29	70.10	69.73	69.64	69.65	69.61	69.66	69.60	69.89	69.83	70.47	70.35
19	70.21	69.88	69.94	69.73	69.62	69.58	69.65	69.57	70.00	69.90	70.34	70.25
20	70.54	70.13	69.91	69.70	69.64	69.58	69.66	69.54	69.98	69.92	70.50	70.25
21	70.49	70.07	69.70	69.66	69.61	69.51	69.53	69.43	70.17	69.95	70.84	70.52
22	70.34	69.94	69.77	69.68	69.58	69.48	69.53	69.45	70.13	70.02	70.68	70.38
23	70.37	69.97	69.77	69.73	69.62	69.58	70.16	69.52	70.03	69.99	70.53	70.38
24	70.33	70.11	69.74	69.72	69.70	69.63	70.33	70.18	70.02	69.99	70.73	70.58
25	70.24	69.97	69.74	69.71	69.63	69.50	70.34	69.89	70.08	70.02	70.70	70.61
26	70.29	69.89	69.79	69.73	69.72	69.48	69.87	69.81	70.19	70.08	70.65	70.58
27	70.22	69.88	70.19	69.78	69.98	69.71	69.84	69.62	70.15	70.07	70.68	70.57
28	70.24	69.92	70.11	69.76	69.77	69.53	69.62	69.58	70.10	70.07	70.76	70.67
29	70.29	69.90	69.87	69.76	69.53	69.50	69.65	69.63	---	---	70.74	70.66
30	70.03	69.86	69.87	69.82	69.57	69.51	69.78	69.65	---	---	70.76	70.66
31	69.96	69.91	---	---	69.57	69.49	70.04	69.69	---	---	70.87	70.73
MONTH	70.74	69.86	70.42	69.57	70.39	69.48	70.34	69.43	70.21	69.59	70.87	70.03

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	70.77	70.56	71.01	70.83	72.73	72.67	72.77	72.52	73.09	72.97	72.94	72.91
2	70.65	70.56	71.18	70.98	72.79	72.73	72.55	72.50	72.99	72.96	72.95	72.80
3	70.80	70.66	71.27	70.95	72.76	72.70	72.67	72.55	---	---	72.82	72.75
4	70.99	70.75	71.59	71.29	72.81	72.72	72.63	72.55	---	---	72.79	72.71
5	70.86	70.77	71.74	71.38	72.92	72.72	73.17	72.61	---	---	72.76	72.72
6	70.87	70.77	71.41	71.28	72.95	72.36	73.37	72.82	---	---	72.79	72.76
7	70.89	70.79	71.32	71.23	72.36	72.30	72.80	72.74	---	---	72.85	72.79
8	70.94	70.87	71.31	71.22	72.32	72.26	72.82	72.71	---	---	72.84	72.83
9	70.95	70.77	71.31	71.24	72.40	72.26	72.78	72.68	---	---	72.87	72.82
10	70.81	70.75	71.48	71.30	72.39	72.26	72.74	72.68	---	---	72.84	72.76
11	70.88	70.75	71.48	71.37	72.30	72.25	72.70	72.65	---	---	72.76	72.70
12	70.80	70.76	71.43	71.32	72.38	72.25	72.66	72.64	---	---	72.75	72.72
13	70.91	70.78	71.39	71.30	72.72	72.38	72.77	72.67	---	---	72.75	72.72
14	70.84	70.81	71.42	71.30	72.49	72.38	72.79	72.69	---	---	72.82	72.75
15	70.94	70.83	71.44	71.34	72.62	72.36	72.69	72.59	---	---	72.83	72.75
16	70.99	70.83	71.57	71.45	73.01	72.63	72.77	72.59	---	---	72.87	72.76
17	70.89	70.82	71.61	71.46	72.60	72.38	72.81	72.73	---	---	72.91	72.82
18	70.98	70.88	71.57	71.43	72.40	72.36	72.76	72.73	---	---	72.82	72.76
19	71.03	70.90	72.06	71.43	72.42	72.37	72.80	72.73	---	---	73.21	72.76
20	70.98	70.89	72.27	72.08	72.41	72.37	72.96	72.80	---	---	73.48	72.99
21	70.95	70.88	72.32	72.22	72.56	72.39	72.88	72.77	---	---	72.99	72.89
22	70.93	70.87	72.31	72.21	72.63	72.55	72.77	72.73	---	---	73.03	72.89
23	70.88	70.85	72.59	72.29	72.62	72.57	72.77	72.72	---	---	73.05	72.81
24	70.88	70.86	72.61	72.53	72.71	72.63	72.75	72.72	---	---	72.81	72.73
25	70.95	70.85	72.55	72.52	72.74	72.65	73.17	72.74	---	---	72.88	72.73
26	70.96	70.85	72.59	72.54	72.76	72.67	73.64	73.22	---	---	73.01	72.84
27	70.92	70.85	72.61	72.55	72.73	72.66	73.71	73.29	---	---	72.84	72.74
28	70.91	70.86	72.57	72.54	72.66	72.60	73.27	73.00	---	---	72.84	72.74
29	70.94	70.86	72.62	72.57	73.13	72.58	73.29	72.90	---	---	72.91	72.84
30	70.94	70.83	72.73	72.62	73.26	72.79	73.58	73.32	---	---	72.88	72.78
31	---	---	72.72	72.66	---	---	73.69	73.11	---	---	---	---
MONTH	71.03	70.56	72.73	70.83	73.26	72.25	73.71	72.50	---	---	73.48	72.70

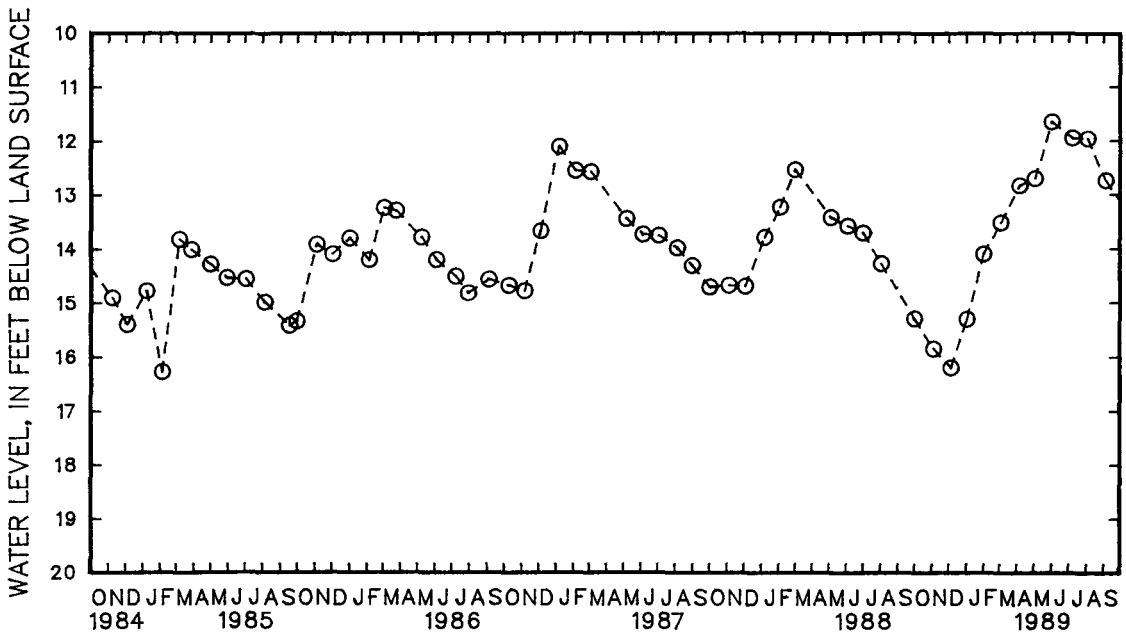


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--AA Bf 3. SITE. ID.--390945076285601.
LOCATION.--Lat 39°09'45", long 76°28'56", Hydrologic Unit 02060003, 8 mi east of Glen Burnie at Fort Smallwood Park.
Owner: Baltimore City Department of Recreation and Parks.
AQUIFER.--Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.
WELL CHARACTERISTICS.--Dug, brick-lined, unused, water-table well, diameter 48 in., depth 22.8 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 20 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Hole in concrete cover at land-surface datum.
REMARKS.--Water level measured 14.10 ft below land-surface datum, Jan. 27, 1944.
PERIOD OF RECORD.--April 1956 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.40 ft below land-surface datum, Mar. 31, 1958; lowest measured, 19.09 ft below land-surface datum, Dec. 7, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 4	15.85	JAN 3	15.30	MAR 3	13.51	MAY 3	12.70	JUL 7	11.94	SEP 5	12.74
DEC 5	16.20	FEB 1	14.09	APR 6	12.83	JUN 1	11.65	AUG 3	11.96		



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--AA Cb 1. SITE ID.--390303076463201. PERMIT NUMBER.--AA-03-5695.
LOCATION.--Lat 39°03'03", long 76°46'32", Hydrologic Unit 02060006, on Duvall Bridge Rd., Fort George G. Meade.
Owner: U.S. Army.
AQUIFER.--Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 505 ft; casing diameter 6 in. to 485 ft; screen diameter 6 in. from 485 to 505 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--60-minute recorder interval from July 2, 1984 to current year.
DATUM.--Elevation of land surface is 126 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top lip of 3 in. extension pipe, 3.35 ft above land-surface datum.
REMARKS.--Glen Burnie Project observation well.
PERIOD OF RECORD.--March 1962 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 85.40 ft above sea level, May 1, 1962; lowest measured, 33.16 ft above sea level, Aug. 10, 1987.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	48.58	48.40	46.39	46.25	---	---	46.97	46.76	50.81	50.75	53.51	53.44
2	48.40	48.00	46.25	46.15	46.53	46.46	47.12	46.98	50.79	50.73	53.61	53.51
3	---	---	46.29	46.15	---	---	47.35	47.12	50.79	50.67	53.72	53.62
4	47.90	47.67	46.47	46.29	---	---	47.35	47.17	50.70	50.66	53.80	53.72
5	47.67	47.58	46.38	46.26	46.50	46.46	47.17	47.17	50.89	50.70	54.07	53.82
6	47.58	47.52	46.26	46.05	46.56	46.40	47.39	47.17	51.15	50.93	54.22	54.06
7	47.53	47.40	46.11	46.05	46.56	46.40	47.33	47.28	51.33	51.15	54.21	54.13
8	47.47	47.38	46.06	46.00	46.46	46.20	47.56	47.37	51.54	51.33	54.12	54.12
9	47.49	47.46	46.18	46.00	46.38	46.20	47.47	47.41	51.65	51.54	54.16	54.12
10	47.45	47.32	46.10	45.88	46.39	46.28	47.45	47.39	51.95	51.71	54.16	54.04
11	47.32	47.12	---	---	46.28	46.20	47.53	47.45	52.17	51.96	54.03	53.96
12	47.12	46.98	---	---	46.20	46.00	48.03	47.53	52.19	52.13	53.96	53.68
13	47.03	46.94	---	---	---	---	48.11	48.02	52.24	52.12	53.67	53.56
14	---	---	46.26	46.17	46.22	46.18	48.40	48.07	52.36	52.25	53.56	53.54
15	46.92	46.89	46.48	46.26	46.18	45.96	48.63	48.41	52.42	52.33	53.59	53.54
16	47.01	46.89	46.48	46.45	---	---	48.77	48.64	52.33	52.12	53.55	53.45
17	47.04	46.91	46.45	46.38	46.12	46.00	49.01	48.78	52.13	52.11	53.57	53.45
18	46.91	46.76	46.39	46.28	46.10	46.06	49.28	49.02	52.30	52.13	53.83	53.63
19	46.75	46.65	46.68	46.28	46.08	46.00	49.38	49.30	52.44	52.31	53.77	53.74
20	46.90	46.65	46.68	46.55	46.14	46.06	49.57	49.40	52.60	52.44	54.13	53.77
21	46.90	46.73	---	---	46.10	45.94	49.48	49.40	52.99	52.61	54.28	54.16
22	46.72	46.68	---	---	45.99	45.88	49.62	49.42	53.03	52.98	54.22	54.17
23	46.72	46.65	---	---	46.07	45.99	49.82	49.62	53.01	52.96	54.34	54.19
24	---	---	46.36	46.20	46.26	46.08	49.96	49.82	52.98	52.95	54.64	54.36
25	46.54	46.34	---	---	46.17	46.02	49.96	49.93	53.16	52.98	54.65	54.64
26	46.34	46.28	---	---	46.02	46.02	50.32	49.95	53.41	53.17	54.68	54.65
27	---	---	46.69	46.50	46.42	46.02	50.32	50.24	53.41	53.38	54.85	54.68
28	46.19	46.00	46.65	46.40	46.64	46.43	50.31	50.20	53.44	53.40	55.10	54.86
29	---	---	46.52	46.42	46.49	46.44	50.45	50.32	---	---	55.18	55.13
30	46.23	46.08	---	---	46.70	46.49	50.69	50.46	---	---	55.38	55.19
31	46.39	46.23	---	---	46.76	46.71	50.74	50.66	---	---	55.56	55.39
MONTH	---	---	---	---	---	---	50.74	46.76	53.44	50.66	55.56	53.44

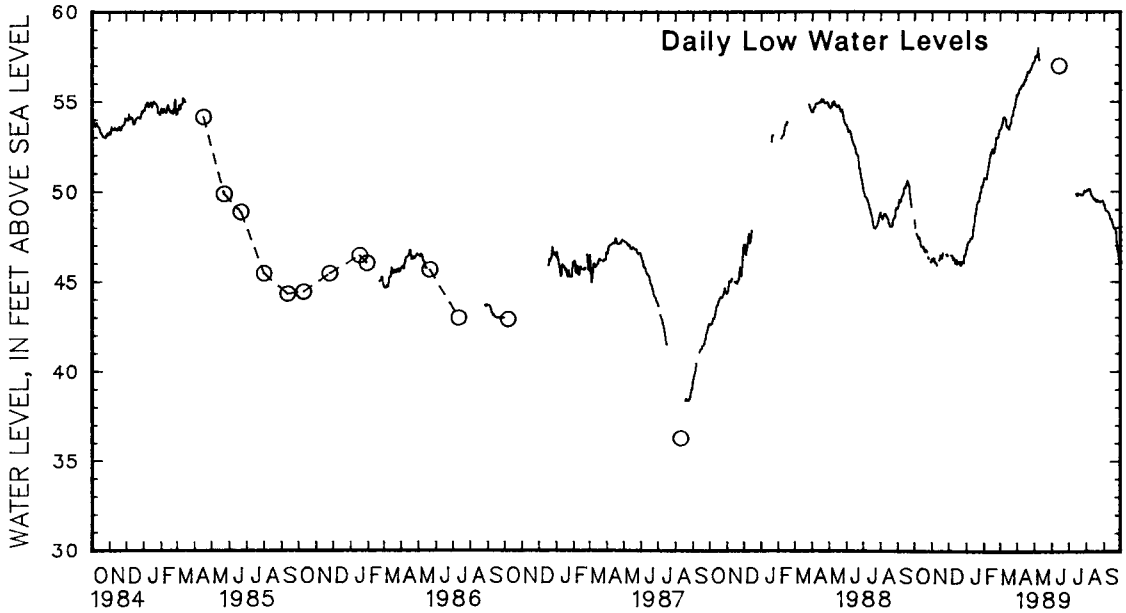
GROUND-WATER LEVELS

MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

AA Cb 1--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	55.50	55.38	57.47	57.27	---	---	---	---	50.03	50.02	49.30	49.27
2	55.44	55.37	57.69	57.48	---	---	---	---	50.06	50.02	49.29	49.14
3	55.72	55.49	57.67	57.55	---	---	---	---	50.09	50.06	49.11	48.99
4	55.75	55.67	57.57	57.49	---	---	---	---	50.13	50.09	48.99	48.91
5	55.72	55.68	57.68	57.52	---	---	---	---	50.13	50.12	48.91	48.90
6	55.81	55.71	57.99	57.70	---	---	---	---	50.13	50.13	48.90	48.90
7	55.92	55.79	58.15	57.99	---	---	---	---	50.13	50.05	48.90	48.88
8	56.00	55.89	57.98	57.52	---	---	---	---	50.05	49.91	48.88	48.83
9	56.01	55.92	57.51	57.32	---	---	---	---	49.90	49.81	48.83	48.80
10	55.93	55.90	57.38	57.32	---	---	---	---	49.80	49.74	48.80	48.74
11	55.99	55.92	---	---	---	---	---	---	49.74	49.70	48.74	48.65
12	56.09	56.00	---	---	---	---	---	---	49.70	49.64	48.65	48.46
13	56.20	56.11	---	---	---	---	---	---	49.64	49.59	48.52	48.46
14	56.20	56.15	---	---	---	---	49.89	49.83	49.59	49.54	48.48	48.45
15	56.42	56.21	---	---	---	---	49.83	49.73	49.57	49.54	48.44	48.28
16	56.47	56.42	---	---	---	---	49.89	49.74	49.57	49.55	48.27	48.25
17	56.53	56.42	---	---	---	---	49.89	49.85	49.55	49.48	48.25	48.11
18	56.65	56.54	---	---	---	---	49.85	49.81	49.47	49.41	48.09	47.95
19	56.72	56.66	---	---	---	---	49.83	49.81	49.49	49.42	47.95	47.93
20	56.72	56.62	---	---	---	---	49.95	49.83	49.49	49.49	47.95	47.94
21	56.64	56.62	---	---	---	---	49.94	49.83	49.49	49.47	47.93	47.87
22	56.79	56.65	---	---	---	---	49.82	49.78	49.47	49.41	47.86	47.77
23	56.81	56.77	---	---	---	---	49.78	49.77	49.45	49.41	47.76	47.24
24	56.85	56.79	---	---	---	---	49.77	49.77	49.45	49.40	47.23	46.86
25	56.96	56.87	---	---	---	---	49.87	49.77	49.43	49.39	46.85	46.68
26	57.04	56.96	---	---	---	---	49.94	49.87	49.46	49.42	47.02	46.77
27	57.15	57.04	---	---	---	---	49.99	49.93	49.46	49.43	46.82	46.24
28	57.17	57.14	---	---	---	---	50.13	50.02	49.46	49.44	46.23	46.04
29	57.20	57.16	---	---	---	---	50.10	50.00	49.49	49.46	46.04	45.92
30	57.27	57.21	---	---	---	---	50.01	49.98	49.49	49.40	45.92	45.79
31	---	---	---	---	---	---	50.04	49.98	49.40	49.27	---	---
MONTH	57.27	55.37	---	---	---	---	---	---	50.13	49.27	49.30	45.79

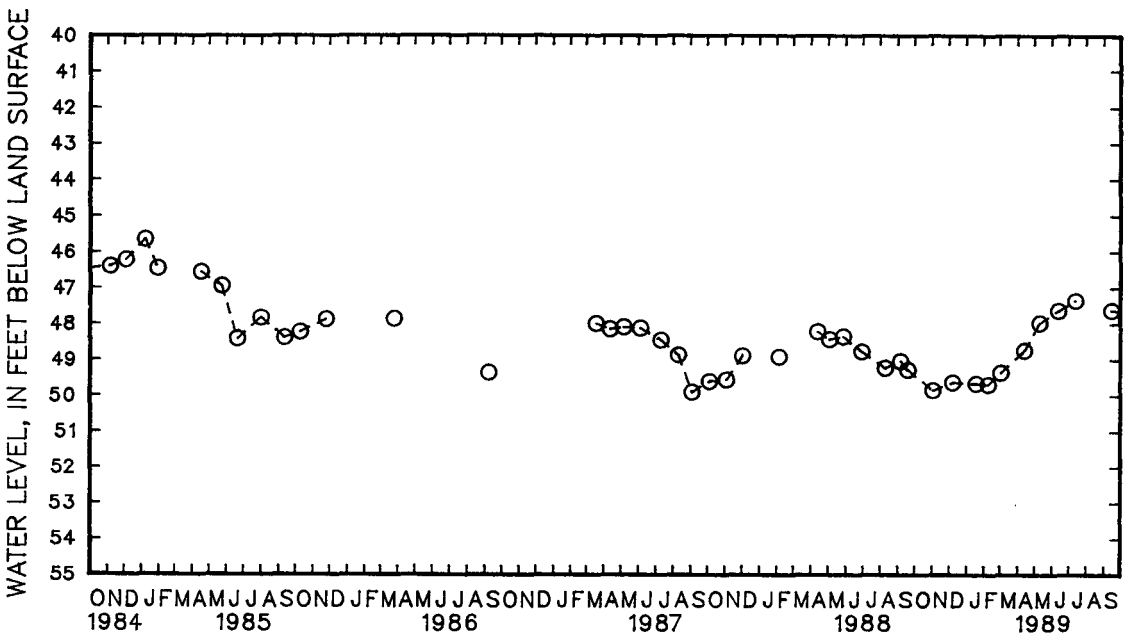


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--AA Cc 40. SITE ID.--390423076432001. PERMIT NUMBER.--AA-03-5693.
LOCATION.--Lat 39°04'23", long 76°43'20", Hydrologic Unit 02060006, on Rifle Range Rd., Fort George G. Meade.
Owner: U.S. Army.
AQUIFER.--Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 238 ft; casing diameter 6 in., to 208 ft; screened from 208 to 238 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with graphic water level recorder from Dec. 4, 1959 to July 21, 1960 and Jan. 12, 1978 to Dec. 1985.
DATUM.--Elevation of land surface is 137 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of recorder platform, 1.0 ft above land-surface datum.
PERIOD OF RECORD.--December 1959 to current year
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 42.58 ft below land-surface datum, Mar. 25, 1961; lowest measured, 50.09 ft below land-surface datum, Oct. 14, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 3	49.87	JAN 19	49.68	MAR 3	49.36	MAY 11	47.99	JUL 13	47.36
DEC 8	49.65	FEB 9	49.71	APR 13	48.76	JUN 13	47.65	SEP 15	47.63



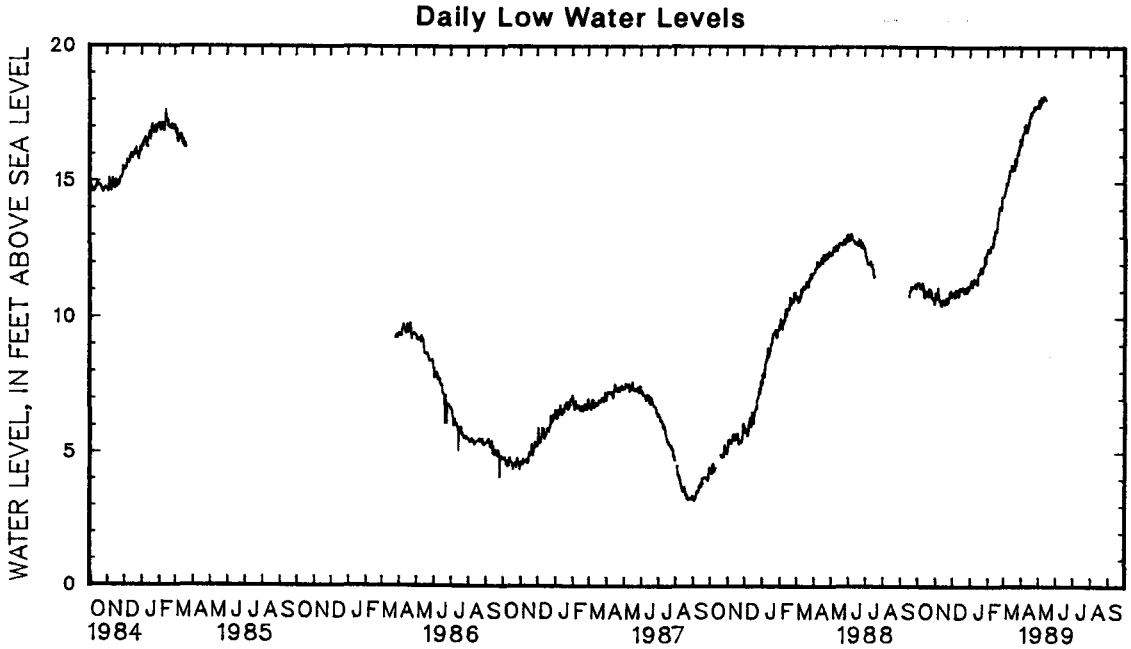
5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--AA Ce 117. SITE ID.--390450076343402. PERMIT NUMBER.--AA-73-0172.
LOCATION.--Lat 39°04'50", long 76°34'34", Hydrologic Unit 02060004, 0.1 mi southwest of intersection of Severndale Rd. and Southway Rd .
Owner: Anne Arundel County Department of Public Utilities.
AQUIFER.--Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 1,060 ft; casing diameter 6 in., to 836 ft, 851 to 870 ft, and 890 to 907 ft; screen diameter 6 in. from 836 to 851 ft, 870 to 890 ft, and 907 to 922 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--30-minute recorder interval from Aug. 18, 1977 to current year.
DATUM.--Elevation of land surface is 85 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of recorder platform, 0.5 ft above land-surface datum.
REMARKS.--Glen Burnie Project observation well.
PERIOD OF RECORD.--August 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.58 ft above sea level, Mar. 27, 1978; lowest measured, 3.14 ft above sea level, Sept. 4, 1987.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	11.34	11.18	11.04	10.70	11.04	10.88	11.37	11.14	12.78	12.56	14.58	14.47
2	11.41	11.27	11.06	10.91	10.97	10.80	11.51	11.26	12.67	12.51	14.58	14.49
3	11.41	11.28	10.97	10.69	11.07	10.90	11.65	11.37	12.75	12.49	14.68	14.56
4	11.35	11.28	10.93	10.70	11.05	10.81	11.67	11.23	12.60	12.45	14.78	14.66
5	11.35	11.26	11.21	10.83	11.02	10.74	11.40	11.13	12.74	12.50	15.05	14.78
6	11.27	11.09	11.13	11.09	11.09	10.91	11.61	11.32	12.87	12.65	15.08	14.99
7	11.18	11.07	11.08	10.74	11.18	11.03	11.49	11.32	12.89	12.67	15.02	14.93
8	11.20	11.10	10.84	10.68	11.06	10.92	11.70	11.44	12.94	12.63	15.02	14.91
9	11.34	11.11	10.71	10.62	11.12	10.81	11.61	11.40	12.83	12.63	15.18	14.99
10	11.45	11.26	11.00	10.58	11.19	11.00	11.45	11.28	12.93	12.74	15.26	15.16
11	11.41	11.16	10.82	10.50	11.13	11.03	11.43	11.27	13.12	12.93	15.51	15.24
12	11.14	11.02	10.48	10.45	11.03	10.78	11.73	11.28	13.14	13.03	15.59	15.44
13	11.02	10.75	10.82	10.48	11.23	10.99	11.69	11.40	13.21	12.98	15.58	15.43
14	11.00	10.74	10.78	10.64	11.27	11.08	11.63	11.26	13.33	13.22	15.76	15.45
15	11.02	10.92	10.70	10.56	11.33	11.08	11.83	11.61	13.43	13.25	15.87	15.63
16	11.02	10.79	10.81	10.57	11.12	10.99	11.81	11.66	13.35	13.20	15.73	15.54
17	11.02	10.98	10.97	10.65	11.30	11.10	11.87	11.62	13.32	13.19	15.70	15.45
18	11.10	10.96	10.68	10.49	11.23	11.11	11.97	11.68	13.56	13.32	15.95	15.61
19	11.06	10.88	10.70	10.49	11.27	11.10	11.98	11.82	13.78	13.56	15.77	15.51
20	10.94	10.80	11.14	10.71	11.27	11.09	12.15	11.87	13.89	13.74	15.91	15.45
21	11.17	10.77	11.10	10.66	11.30	11.02	11.86	11.68	14.19	13.87	16.08	15.89
22	11.24	11.05	10.68	10.53	11.04	10.91	11.90	11.65	14.20	14.08	15.88	15.70
23	11.12	11.02	10.83	10.55	11.22	10.95	12.03	11.79	14.12	14.07	15.91	15.64
24	11.18	11.03	10.93	10.74	11.43	11.09	12.17	11.88	14.08	14.00	16.26	15.82
25	11.08	10.99	10.97	10.72	11.41	11.09	12.15	11.95	14.30	14.01	16.29	16.07
26	11.04	10.78	11.03	10.80	11.12	11.04	12.47	11.96	14.65	14.30	16.28	16.12
27	10.83	10.70	11.20	10.95	11.20	10.92	12.46	12.27	14.60	14.48	16.32	16.05
28	10.97	10.72	11.25	10.99	11.53	11.16	12.36	12.03	14.52	14.47	16.49	16.20
29	10.76	10.68	11.00	10.77	11.25	11.02	12.48	12.26	---	---	16.51	16.37
30	10.70	10.62	11.04	10.78	11.31	11.02	12.65	12.38	---	---	16.68	16.33
31	10.75	10.49	---	---	11.35	11.18	12.69	12.40	---	---	16.98	16.61
MONTH	11.45	10.49	11.25	10.45	11.53	10.74	12.69	11.13	14.65	12.45	16.98	14.47

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	16.77	16.57	18.08	17.79	---	---	---	---	---	---	---	---
2	16.66	16.41	18.27	18.05	---	---	---	---	---	---	---	---
3	16.95	16.63	18.09	17.94	---	---	---	---	---	---	---	---
4	17.04	16.80	18.01	17.83	---	---	---	---	---	---	---	---
5	17.04	16.83	18.30	17.88	---	---	---	---	---	---	---	---
6	17.12	16.85	18.36	18.16	---	---	---	---	---	---	---	---
7	17.25	16.94	18.28	18.11	---	---	---	---	---	---	---	---
8	17.33	17.05	18.20	18.04	---	---	---	---	---	---	---	---
9	17.35	17.16	18.20	18.00	---	---	---	---	---	---	---	---
10	17.18	17.02	18.38	18.12	---	---	---	---	---	---	---	---
11	17.11	16.87	18.35	18.19	---	---	---	---	---	---	---	---
12	17.20	16.96	18.32	18.17	---	---	---	---	---	---	---	---
13	17.32	17.09	18.24	18.11	---	---	---	---	---	---	---	---
14	17.35	17.14	18.20	18.08	---	---	---	---	---	---	---	---
15	17.61	17.26	18.22	18.07	---	---	---	---	---	---	---	---
16	17.60	17.42	---	---	---	---	---	---	---	---	---	---
17	17.70	17.42	---	---	---	---	---	---	---	---	---	---
18	17.74	17.57	---	---	---	---	---	---	---	---	---	---
19	17.75	17.59	---	---	---	---	---	---	---	---	---	---
20	17.75	17.54	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	17.87	17.65	---	---	---	---	---	---	---	---	---	---
23	17.88	17.67	---	---	---	---	---	---	---	---	---	---
24	17.89	17.81	---	---	---	---	---	---	---	---	---	---
25	17.94	17.80	---	---	---	---	---	---	---	---	---	---
26	17.94	17.74	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	18.04	17.84	---	---	---	---	---	---	---	---	---	---
30	18.01	17.83	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

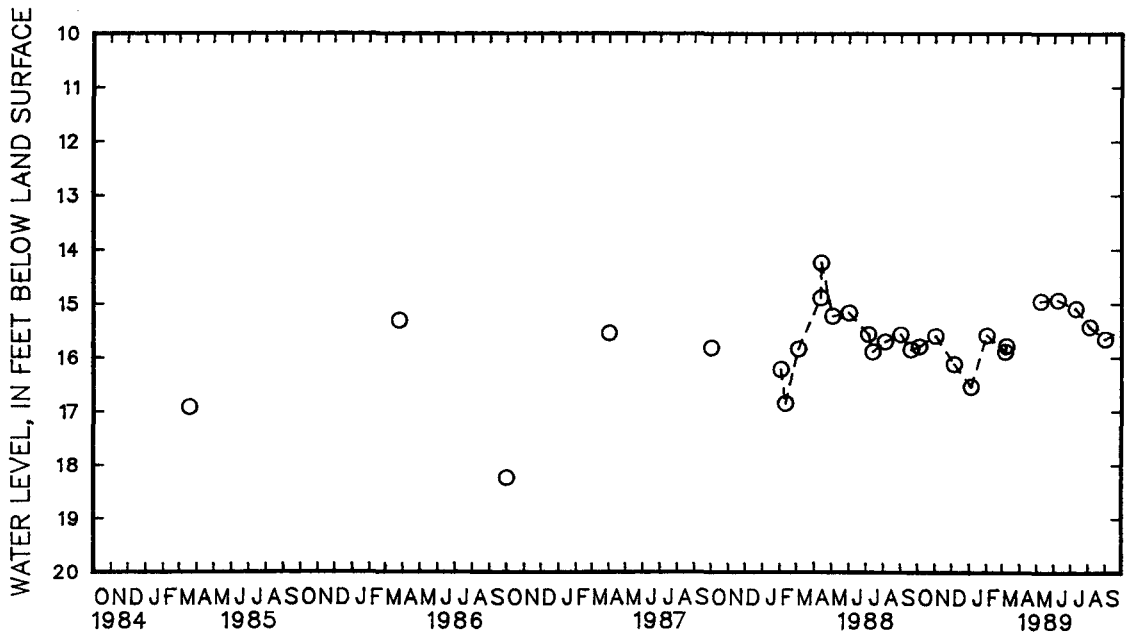
MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Cg 25. SITE ID.--390127076240301. PERMIT NUMBER.--AA-74-1240.
LOCATION.--Lat 39°01'27", long 76°24'03", Hydrologic Unit 02060004, at Sandy Point State Park, nr maintenance area.
Owner: Maryland Department of Natural Resources.
AQUIFER.--Aquia Formation of Paleocene age. Aquifer code: 125AQUI.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 107 ft; casing diameter 3 in., to 100 ft; screen diameter 3 in. from 100 to 107 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 17.33 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 1.1 ft above land-surface datum.
PERIOD OF RECORD.--April 1981 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.24 ft below land-surface datum, Apr. 13, 1988; lowest measured, 18.25 ft below land-surface datum, Oct. 1, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	15.80	DEC 5	16.13	FEB 1	15.59	MAR 8	15.79	JUN 8	14.93	AUG 4	15.43
NOV 2	15.60	JAN 4	16.55	MAR 6	15.90	MAY 8	14.95	JUL 10	15.09	SEP 1	15.66



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

ANNE ARUNDEL COUNTY--Continued

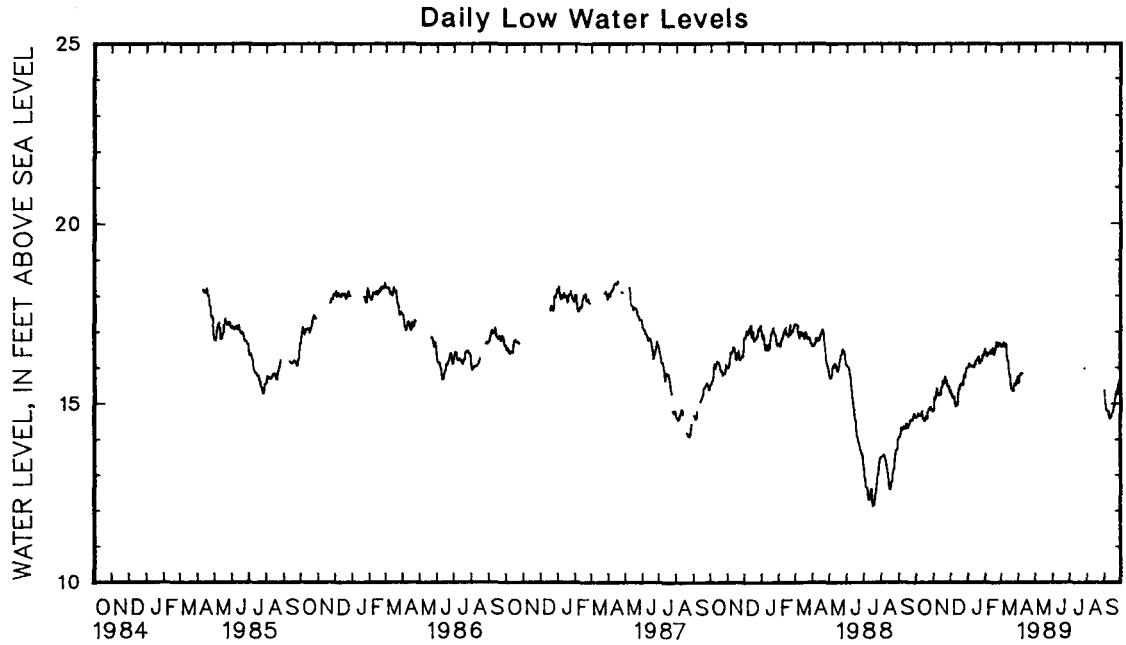
WELL NUMBER.--AA Dd 42. SITE ID.--385808076373502. PERMIT NUMBER.--AA-71-0231.
LOCATION.--Lat 38°58'08", long 76°37'35", Hydrologic Unit 02060004, 30 ft south of MD Rt 50, 0.5 mi from intersection with Howard Grove Rd. and Rutland Rd.
Owner: U.S. Geological Survey.
AQUIFER.--Magothy Formation of Upper Cretaceous age. Aquifer code: 211MGTY.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 275 ft; casing diameter 4 in., to 190 ft; screen diameter 2 in. from 190 to 220 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with graphic water-level recorder from December 1971 to August 1975. Equipped with digital water-level recorder--30-minute recorder interval from August 1975 to current year.
DATUM.--Elevation of land surface is 105 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring Point: Top of recorder platform, 1.0 ft above land-surface datum.
REMARKS.--Glen Burnie Project observation well.
PERIOD OF RECORD.--December 1971 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 25.00 ft above sea level, Feb. 2, 1976; lowest measured, 12.12 ft above sea level, June 17 and 18, 1988.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	14.60	14.60	15.15	14.86	15.40	15.35	16.02	15.98	16.53	16.51	16.66	16.61
2	14.60	14.59	15.18	15.16	15.34	15.24	16.09	16.03	16.51	16.41	16.62	16.58
3	14.64	14.60	15.17	15.10	15.29	15.25	16.23	16.10	16.45	16.40	16.62	16.61
4	14.71	14.64	15.24	15.14	15.30	15.16	16.23	16.05	16.39	16.30	16.64	16.60
5	14.73	14.71	15.45	15.26	15.18	15.13	16.05	16.02	16.33	16.30	16.71	16.64
6	14.73	14.65	15.44	15.41	15.18	15.14	16.12	16.04	16.39	16.33	16.75	16.70
7	14.67	14.65	15.41	15.28	15.19	15.17	16.07	16.02	16.41	16.39	16.69	16.60
8	14.70	14.67	15.33	15.28	15.16	14.98	16.13	16.02	16.45	16.40	16.63	16.59
9	14.69	14.65	15.28	15.21	14.98	14.90	16.10	16.03	16.45	16.38	16.69	16.63
10	14.80	14.69	15.42	15.22	14.97	14.93	16.03	16.02	16.46	16.40	16.67	16.66
11	14.81	14.77	15.41	15.27	14.99	14.97	16.02	16.00	16.56	16.47	16.66	16.61
12	14.77	14.68	15.27	15.23	15.01	14.94	16.21	16.00	16.56	16.42	16.60	16.27
13	14.67	14.57	15.43	15.24	15.27	15.01	16.21	16.07	16.52	16.39	16.26	16.19
14	14.57	14.53	15.43	15.41	15.39	15.27	16.16	16.06	16.53	16.52	16.19	16.16
15	14.59	14.57	15.45	15.43	15.44	15.39	16.25	16.17	16.58	16.53	16.16	15.89
16	14.56	14.51	15.62	15.46	15.43	15.38	16.27	16.19	16.55	16.39	15.89	15.78
17	14.54	14.50	15.74	15.62	15.55	15.43	16.23	16.19	16.40	16.35	15.83	15.78
18	14.66	14.54	15.66	15.54	15.55	15.51	16.31	16.23	16.47	16.40	15.83	15.53
19	14.66	14.63	15.59	15.55	15.53	15.51	16.33	16.27	16.50	16.48	15.52	15.40
20	14.63	14.56	15.92	15.59	15.56	15.51	16.38	16.28	16.61	16.51	15.60	15.40
21	14.80	14.57	15.91	15.74	15.59	15.56	16.27	16.10	16.76	16.61	15.55	15.36
22	14.94	14.81	15.74	15.64	15.59	15.50	16.12	16.10	16.76	16.71	15.37	15.34
23	14.92	14.84	15.67	15.64	15.67	15.50	16.20	16.12	16.71	16.64	15.55	15.34
24	14.96	14.86	15.67	15.54	15.86	15.67	16.23	16.20	16.64	16.59	15.59	15.55
25	14.96	14.89	15.54	15.47	15.86	15.79	16.23	16.18	16.68	16.59	15.57	15.54
26	14.90	14.89	15.47	15.45	15.79	15.71	16.41	16.18	16.79	16.68	15.54	15.51
27	14.89	14.80	15.47	15.45	15.85	15.71	16.41	16.31	16.75	16.68	15.58	15.51
28	14.92	14.82	15.57	15.47	16.09	15.86	16.31	16.26	16.68	16.66	15.70	15.58
29	14.92	14.82	15.51	15.32	16.02	15.96	16.38	16.32	---	---	15.69	15.65
30	14.82	14.78	15.40	15.32	16.01	15.96	16.48	16.38	---	---	15.83	15.67
31	14.86	14.77	---	---	16.04	15.98	16.50	16.42	---	---	15.88	15.75
MONTH	14.96	14.50	15.92	14.86	16.09	14.90	16.50	15.98	16.79	16.30	16.75	15.34

AA Dd 42--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	15.75	15.57	---	---	---	---	---	---	---	---	---	---
2	15.73	15.57	---	---	---	---	---	---	---	---	---	---
3	15.80	15.74	---	---	---	---	---	---	---	---	---	---
4	15.82	15.80	---	---	---	---	---	---	---	---	---	---
5	15.87	15.80	---	---	---	---	---	---	---	---	---	---
6	15.87	15.84	---	---	---	---	---	---	---	---	---	---
7	15.91	15.84	---	---	---	---	---	---	---	---	---	---
8	15.90	15.83	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	15.59	15.52	16.22	16.19	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	16.03	15.93	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	16.41	16.38	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	15.42	15.24	---	---	---	---	16.05	15.97	---	---	---	---
28	---	---	---	---	---	---	16.05	15.98	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	15.28	15.21	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	16.07	16.05	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--AA De 1. SITE ID.--385915076340401.
LOCATION.--Lat 38°59'15", long 76°34'04", Hydrologic Unit 02060004, 0.07 mi north of MD Rt 450, 1.05 mi west of Generals Highway.
Owner: U.S. Geological Survey.
AQUIFER.--Magothy Formation of Upper Cretaceous age. Aquifer code: 211MGTY.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 237 ft; casing diameter 10 in., to 207 ft; screen diameter 6 in. from 207 to 237 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with graphic water-level recorder from May 1969 to Dec. 28, 1977. Equipped with digital water-level recorder--15-minute recorder interval from December 1977 to current year.
DATUM.--Elevation of land surface is 17 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring Point: Top of recorder platform, 2.5 ft above land-surface datum.
REMARKS.--Glen Burnie Project observation well.
PERIOD OF RECORD.--May 1969 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.25 ft above sea level, Nov. 14, 1988; lowest measured, 33.92 ft below sea level, June 10, 1988.

WATER LEVEL, IN FEET BELOW SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
(READINGS ABOVE SEA LEVEL INDICATED BY "+")

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	+3.69	14.36	+5.24	.36	---	---	1.64	9.02	---	---	.70	5.06
2	+3.46	14.44	+3.79	+1.04	---	---	.69	4.50	---	---	.91	5.00
3	+4.30	11.33	+3.74	+.59	---	---	.79	5.54	---	---	1.28	5.13
4	+4.02	4.43	+5.52	3.43	---	---	---	---	---	---	.77	5.35
5	+2.57	5.18	+6.22	3.65	---	---	---	---	---	---	.79	4.94
6	+.91	5.77	+5.84	+.34	---	---	4.37	5.34	---	---	+.04	4.64
7	+.27	6.03	+7.49	3.40	---	---	4.05	4.50	---	---	+.28	3.49
8	+3.29	1.41	+2.31	14.09	---	---	2.84	4.43	---	---	2.14	3.24
9	+3.76	4.67	+6.56	+.32	---	---	1.64	12.49	---	---	---	---
10	+1.04	5.56	+5.76	4.45	---	---	1.76	12.58	---	---	---	---
11	+1.12	6.01	+3.64	+1.05	---	---	4.27	12.17	---	---	---	---
12	+.56	6.40	+3.79	+.83	---	---	1.60	12.23	---	---	---	---
13	+.36	7.55	+6.23	+.62	---	---	---	---	.76	15.34	---	---
14	+.48	4.02	+8.25	2.68	---	---	---	---	.06	12.45	---	---
15	+2.91	3.17	---	---	---	---	---	---	.38	4.49	---	---
16	+2.97	3.72	---	---	---	---	---	---	3.28	11.96	---	---
17	+1.58	6.24	---	---	---	---	---	---	1.07	12.03	---	---
18	+2.33	5.28	---	---	---	---	---	---	.48	12.49	---	---
19	+2.46	3.79	---	---	---	---	---	---	.52	11.84	---	---
20	+.68	3.62	---	---	---	---	---	---	.40	10.65	---	---
21	+1.26	+.68	---	---	---	---	---	---	.69	9.15	---	---
22	+4.58	+1.24	---	---	---	---	---	---	.45	6.26	---	---
23	+4.87	1.99	---	---	---	---	---	---	.26	5.88	---	---
24	+3.08	2.68	---	---	---	---	---	---	.14	6.32	---	---
25	+3.71	2.52	---	---	---	---	---	---	.35	10.41	---	---
26	+3.96	1.97	---	---	---	---	---	---	.71	10.58	---	---
27	+4.75	5.90	---	---	---	---	---	---	.67	6.01	---	---
28	+4.69	5.91	---	---	---	---	---	---	.61	5.35	---	---
29	+4.75	5.99	---	---	1.81	5.34	---	---	---	---	---	---
30	---	---	---	---	1.96	5.35	---	---	---	---	---	---
31	---	---	---	---	1.43	8.92	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

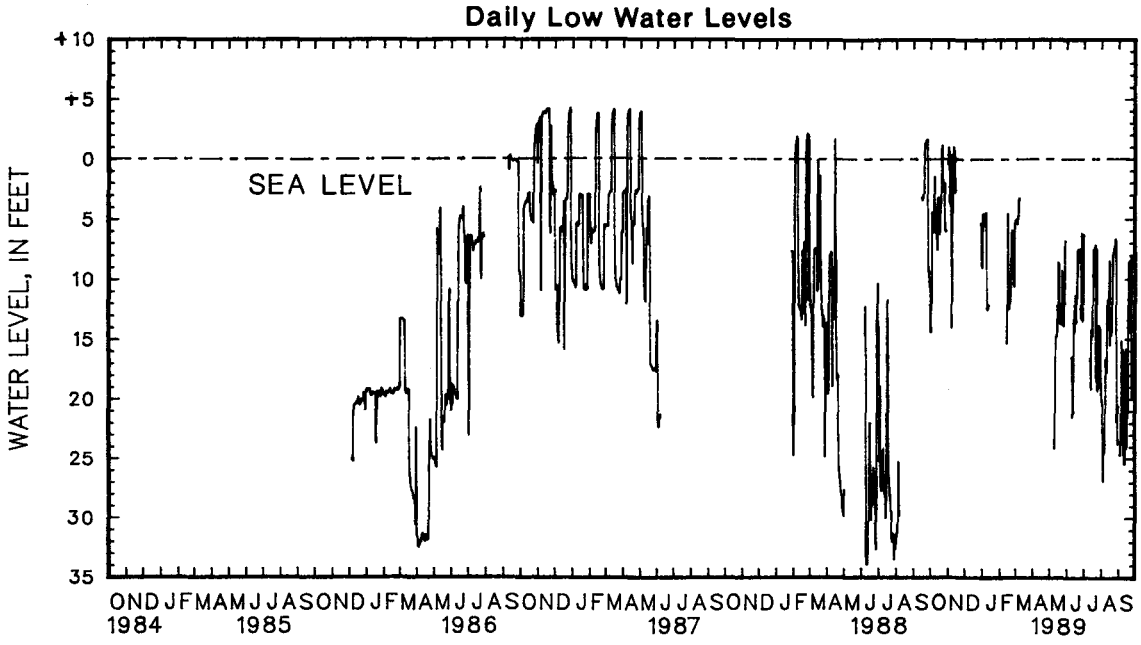
GROUND WATER LEVELS

MARYLAND Continued

ANNE ARUNDEL COUNTY Continued

AA De 1--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	---	---	---	---	4.63	20.24	---	---
2	---	---	---	---	---	---	---	---	5.08	20.55	---	---
3	---	---	---	---	---	---	---	---	6.27	22.54	9.41	24.73
4	---	---	---	---	---	---	---	---	16.05	26.90	8.30	24.28
5	---	---	---	---	---	---	---	---	7.78	23.57	9.46	22.30
6	---	---	---	---	---	---	---	---	10.14	24.49	6.90	15.13
7	---	---	---	---	---	---	---	---	9.29	24.06	6.56	16.52
8	---	---	---	---	---	---	---	---	7.83	16.72	6.10	23.68
9	---	---	---	---	5.51	16.51	---	---	8.64	17.33	7.60	15.91
10	---	---	7.76	24.11	4.79	21.53	---	---	10.29	17.73	6.58	24.43
11	---	---	5.66	16.96	5.74	21.24	---	---	11.15	13.64	23.87	25.49
12	---	---	5.30	15.37	3.86	17.17	7.29	16.59	6.57	11.59	10.98	25.47
13	---	---	3.54	14.73	5.76	13.38	5.86	19.19	6.01	14.09	7.99	23.42
14	---	---	3.65	14.73	4.99	14.44	6.69	14.20	6.34	11.15	7.32	15.79
15	---	---	4.07	14.33	5.52	11.31	10.30	14.75	5.40	8.45	8.43	24.14
16	---	---	2.77	8.57	4.79	13.67	6.20	14.76	5.28	15.49	6.79	22.62
17	---	---	3.62	8.69	4.75	13.58	4.58	9.83	6.43	14.49	6.76	21.00
18	---	---	3.81	12.29	5.05	11.30	4.25	7.51	6.33	14.67	6.54	11.74
19	---	---	4.41	12.87	4.41	9.58	4.19	7.53	5.42	14.44	5.12	8.64
20	---	---	4.93	13.68	4.37	7.58	3.92	7.50	5.59	13.68	4.87	8.50
21	---	---	5.72	13.66	3.75	7.46	3.87	7.17	2.79	8.98	5.75	13.67
22	---	---	4.52	13.73	4.32	8.52	5.22	18.49	1.42	7.75	5.63	14.41
23	---	---	4.53	9.26	3.90	8.28	4.20	7.44	1.43	7.80	4.86	8.04
24	---	---	3.84	12.77	3.95	7.45	1.97	19.34	1.36	7.34	4.82	19.85
25	---	---	3.41	12.57	3.84	7.49	2.10	18.47	1.07	7.42	5.05	19.96
26	---	---	4.16	13.91	1.61	13.29	1.52	17.47	1.36	6.63	4.37	18.79
27	---	---	5.04	12.01	.61	6.14	1.57	19.03	1.97	6.87	5.30	19.79
28	---	---	4.12	7.62	3.77	8.45	1.30	13.86	2.66	21.89	4.83	17.26
29	---	---	.68	6.77	1.38	13.49	1.57	14.03	5.85	20.62	4.87	15.47
30	---	---	---	---	1.04	6.26	1.38	14.31	7.88	23.45	4.98	18.51
31	---	---	---	---	---	---	1.71	19.51	7.41	23.74	---	---
MONTH	---	---	---	---	---	---	---	---	1.07	26.90	---	---



5 YEAR HYDROGRAPH

OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--AA De 154. SITE ID.--385926076321901. PERMIT NUMBER.--AA-81-6439.
LOCATION.--Lat 38°59'26", long 76°32'19", Hydrologic Unit 02060004, near left branch headwaters of Weems Creek, behind Annapolis Plaza Shopping Center, off Jeniffer Rd.
Owner: U.S. Geological Survey.
AQUIFER.--Aquia Formation of Paleocene age. Aquifer Code: 125AQUI.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, measured depth 35 ft; casing diameter 3 in., to 17 ft; slotted casing diameter 3 in. from 17 to 32 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--30-minute recorder interval from Aug. 11, 1986 to Mar. 15, 1989.
DATUM.--Elevation of land surface is 58.48 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 10.42 ft above land-surface datum.
REMARKS.--Stormwater Infiltration Project observation well. Well located down from stormwater retention pond.
PERIOD OF RECORD.--August 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 50.72 ft above sea level, Oct. 6, 1989; lowest measured, 46.38 ft above sea level, Oct. 2 1986.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

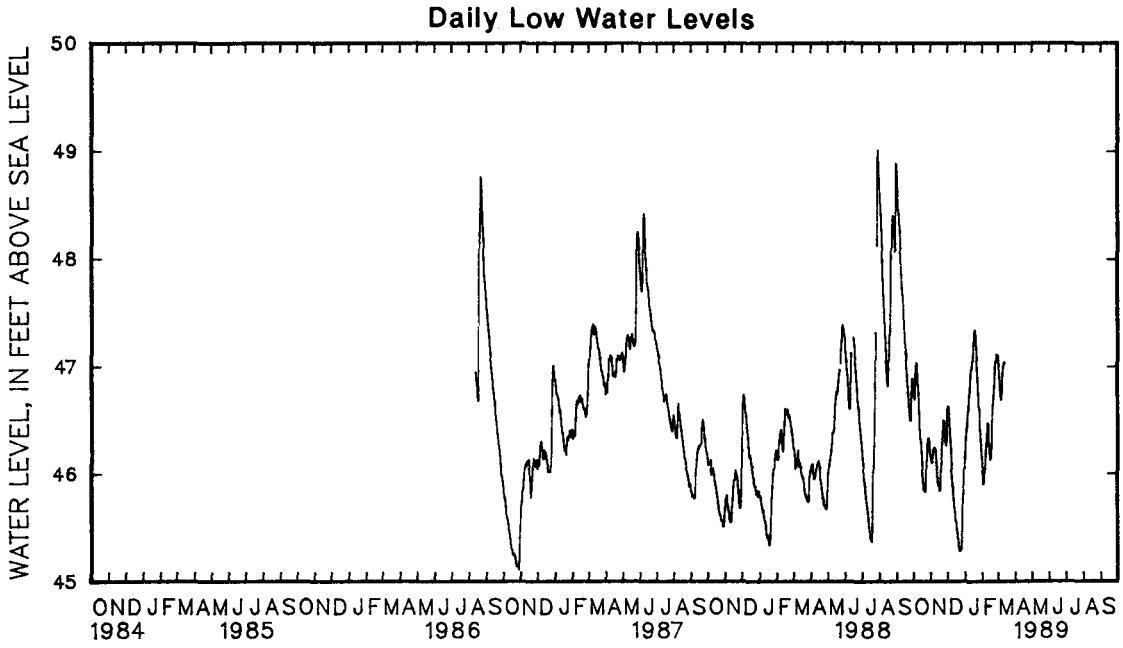
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	46.88	46.81	46.19	46.15	46.67	46.62	46.31	46.20	46.14	46.05	47.11	47.05
2	46.81	46.73	46.15	46.10	46.66	46.62	46.39	46.32	46.06	45.98	47.07	47.03
3	46.78	46.69	46.16	46.10	46.64	46.56	46.53	46.39	46.02	45.90	47.03	46.93
4	46.91	46.78	46.23	46.16	46.56	46.44	46.50	46.43	46.01	45.92	46.93	46.83
5	47.00	46.92	46.32	46.22	46.44	46.33	46.57	46.51	46.15	46.01	46.84	46.73
6	47.06	47.00	46.26	46.20	46.33	46.24	46.64	46.57	46.23	46.15	46.75	46.69
7	47.06	47.03	46.26	46.24	46.23	46.10	46.71	46.59	46.32	46.24	46.75	46.69
8	47.03	46.91	46.36	46.23	46.10	46.01	46.79	46.72	46.44	46.31	46.86	46.75
9	46.91	46.82	46.26	46.22	46.02	45.95	46.84	46.75	46.47	46.39	46.94	46.87
10	46.82	46.75	46.31	46.19	45.95	45.88	46.94	46.84	46.50	46.47	47.00	46.94
11	46.75	46.56	46.18	46.07	45.87	45.78	46.97	46.91	46.50	46.45	47.09	46.99
12	46.56	46.40	46.07	46.04	45.78	45.75	47.08	46.96	46.45	46.28	47.12	47.03
13	46.40	46.32	46.06	45.97	45.78	45.68	47.05	46.98	46.28	46.22	47.09	47.04
14	46.33	46.29	45.97	45.92	45.68	45.64	47.20	47.04	46.26	46.13	47.06	47.03
15	46.29	46.20	45.92	45.89	45.66	45.56	47.24	47.19	46.21	46.14	---	---
16	46.19	46.11	45.92	45.88	45.59	45.55	47.29	47.22	46.24	46.14	---	---
17	46.11	46.06	45.93	45.84	45.56	45.49	47.38	47.29	46.44	46.24	---	---
18	46.07	45.98	46.01	45.85	45.50	45.46	47.42	47.34	46.58	46.44	---	---
19	45.98	45.91	46.22	46.02	45.46	45.40	47.38	47.29	46.65	46.59	---	---
20	45.91	45.85	46.40	46.22	45.41	45.37	47.35	47.18	46.73	46.64	---	---
21	46.01	45.85	46.37	46.28	45.37	45.31	47.18	47.08	46.88	46.73	---	---
22	45.90	45.83	46.48	46.37	45.31	45.29	47.08	47.00	46.87	46.79	---	---
23	46.07	45.84	46.55	46.49	45.33	45.28	47.00	46.89	46.97	46.87	---	---
24	46.17	46.07	46.53	46.49	45.38	45.29	46.89	46.75	47.05	46.98	---	---
25	46.28	46.16	46.49	46.43	45.35	45.30	46.75	46.62	47.13	47.05	---	---
26	46.35	46.28	46.43	46.35	45.53	45.37	46.70	46.60	47.20	47.11	---	---
27	46.38	46.32	46.43	46.29	45.77	45.54	46.59	46.41	47.13	47.07	---	---
28	46.41	46.33	46.37	46.26	45.91	45.76	46.42	46.37	47.14	47.10	---	---
29	46.33	46.30	46.55	46.30	45.99	45.81	46.37	46.29	---	---	---	---
30	46.30	46.21	46.66	46.56	46.15	46.00	46.30	46.17	---	---	---	---
31	46.21	46.17	---	---	46.21	46.15	46.18	46.14	---	---	---	---
MONTH	47.06	45.83	46.66	45.84	46.67	45.28	47.42	46.14	47.20	45.90	---	---

GROUND-WATER LEVELS

MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

AA De 154--Continued



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--AA De 158. SITE ID.--385927076321701. PERMIT NUMBER.--AA-81-6440.
LOCATION.--Lat 38°59'27", long 76°32'17", Hydrologic Unit 02060004, near left branch headwaters of Weems Creek, behind Annapolis Plaza Shopping Center, off Jeniffer Rd.
Owner: U.S. Geological Survey.
AQUIFER.--Aquia Formation of Paleocene age. Aquifer Code: 125AQUI.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, measured depth 43 ft; casing diameter 3 in., to 23.5 ft. and 33.5 to 43 ft; screen diameter 3 in. from 23.5 to 33.5 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with graphic water-level recorder from Aug. 15, 1986 to Mar. 28, 1989.
DATUM.--Elevation of land surface is 55.94 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 12.47 ft above land-surface datum.
REMARKS.--Stormwater Infiltration Project observation well. Well penetrates stormwater retention pond.
PERIOD OF RECORD.--August 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 47.35 ft above sea level, July 7, 1988; lowest measured, 42.77 ft above sea level, Oct. 28, 1986.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

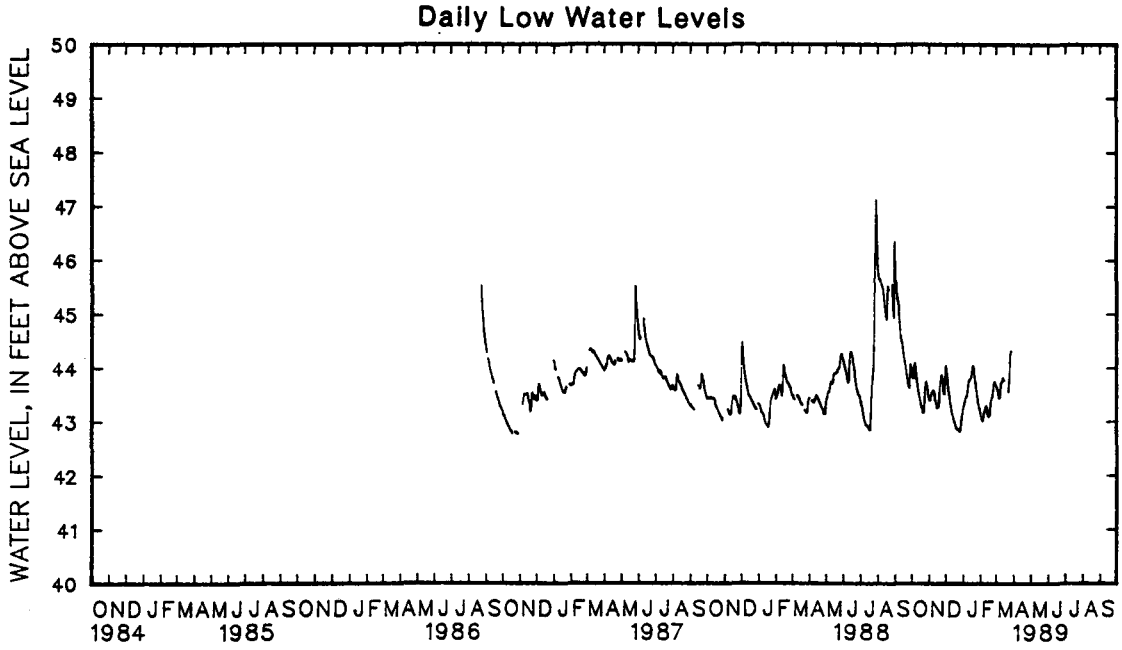
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	43.94	43.87	43.41	43.38	44.07	43.99	43.31	43.27	43.17	43.09	43.67	43.63
2	43.87	43.80	43.44	43.38	43.99	43.89	43.35	43.31	43.09	43.05	43.63	43.62
3	43.94	43.79	43.50	43.44	43.89	43.79	43.41	43.35	43.05	43.01	43.61	43.56
4	44.06	43.94	43.54	43.50	43.78	43.66	43.43	43.41	43.01	43.00	43.56	43.49
5	44.11	44.06	43.57	43.53	43.66	43.56	43.46	43.43	43.09	43.00	43.49	43.44
6	44.11	44.08	43.54	43.52	43.56	43.50	43.48	43.46	43.17	43.09	43.45	43.42
7	44.08	44.00	43.57	43.54	43.50	43.41	43.53	43.46	43.21	43.17	43.57	43.44
8	44.00	43.88	43.61	43.57	43.41	43.33	43.62	43.53	43.26	43.21	43.71	43.57
9	43.88	43.79	43.58	43.54	43.33	43.28	43.72	43.63	43.28	43.26	43.73	43.70
10	43.79	43.70	43.54	43.48	43.28	43.22	43.79	43.72	43.29	43.28	43.75	43.72
11	43.69	43.59	43.48	43.39	43.22	43.15	43.80	43.77	43.29	43.27	43.80	43.75
12	43.60	43.54	43.39	43.35	43.15	43.12	43.80	43.77	43.27	43.19	43.81	43.80
13	43.53	43.49	43.35	43.30	43.12	43.08	43.81	43.79	43.19	43.14	43.81	43.80
14	43.49	43.43	43.30	43.26	43.08	43.05	43.87	43.81	43.15	43.09	43.80	43.76
15	43.43	43.38	43.27	43.24	43.04	42.99	43.94	43.87	43.09	43.08	---	---
16	43.38	43.33	43.27	43.26	43.00	42.97	44.02	43.94	43.12	43.08	---	---
17	43.33	43.28	43.32	43.26	42.97	42.94	44.08	44.03	43.25	43.12	---	---
18	43.28	43.25	43.55	43.33	42.94	42.91	44.07	44.02	43.37	43.26	---	---
19	43.25	43.21	43.68	43.55	42.91	42.87	44.04	43.98	43.41	43.37	---	---
20	43.21	43.16	43.80	43.68	42.88	42.85	43.98	43.88	43.44	43.40	---	---
21	43.21	43.15	43.87	43.81	42.86	42.85	43.87	43.79	43.50	43.44	---	---
22	43.32	43.16	43.87	43.86	42.88	42.85	43.79	43.71	43.57	43.47	43.68	43.55
23	43.62	43.33	43.86	43.85	42.85	42.83	43.71	43.63	43.70	43.57	43.82	43.69
24	43.70	43.62	43.85	43.77	42.83	42.81	43.63	43.55	43.74	43.70	44.08	43.82
25	43.74	43.70	43.77	43.67	42.82	42.81	43.55	43.46	43.76	43.74	44.28	44.09
26	43.75	43.73	43.67	43.58	42.86	42.81	43.46	43.42	43.76	43.73	44.31	44.28
27	43.73	43.68	43.58	43.50	43.01	42.87	43.42	43.33	43.73	43.69	44.31	44.30
28	43.69	43.62	43.74	43.50	43.09	43.01	43.33	43.29	43.69	43.67	---	---
29	43.62	43.55	44.03	43.76	43.14	43.06	43.30	43.24	---	---	---	---
30	43.55	43.46	44.08	44.03	43.23	43.14	43.24	43.20	---	---	---	---
31	43.46	43.41	---	---	43.27	43.23	43.20	43.16	---	---	---	---
MONTH	44.11	43.15	44.08	43.24	44.07	42.81	44.08	43.16	43.76	43.00	---	---

GROUND-WATER LEVELS

MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

AA De 158--Continued



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--AA De 177. SITE ID.--385852076333201. PERMIT NUMBER.--AA-81-9213.
LOCATION.--Lat 38°58'52", long 76°33'32", Hydrologic Unit 02060004, at Broadcreek Water Treatment Plant, Harry Truman Parkway, Annapolis.
Owner: Anne Arundel County Dept. of Public Works.
AQUIFER.--Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 974 ft; casing diameter 26 in., to 72 ft; casing diameter 18 in., to 800 ft; casing diameter 12 in. from 800 to 836 ft, 868 to 880 ft, 894 to 918 ft, and 964 to 974 ft; screen diameter 12 in. from 836 to 868 ft, 880 to 894 ft, and 918 to 964 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--30-minute recorder interval from Aug. 16, 1988 to current year.
DATUM.--Elevation of land surface is 93.85 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 4.37 ft above land-surface datum.
REMARKS.--Southern Maryland Observation Well Network. Water levels are affected by nearby pumping.
PERIOD OF RECORD.--August 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.90 ft above sea level, Mar. 20, 1989; lowest measured, 9.87 ft below sea level, Aug. 28, 1989.

WATER LEVEL, IN FEET BELOW SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
(READINGS ABOVE SEA LEVEL INDICATED BY "+")

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	3.93	4.25	3.05	3.60	2.85	3.68	1.55	1.95	.83	1.63	1.61	1.93
2	3.67	4.10	3.24	3.53	3.00	3.52	1.45	1.86	1.46	1.78	1.68	2.01
3	3.44	4.00	3.55	3.75	2.60	3.37	1.02	1.76	1.27	1.80	1.65	1.92
4	3.68	3.94	3.31	3.77	3.05	3.42	.25	1.23	1.59	1.87	1.64	1.95
5	3.80	4.06	2.94	3.43	+.29	3.42	1.20	1.55	1.59	1.88	1.49	1.85
6	4.02	4.31	2.86	3.27	+2.30	+.35	1.52	1.82	1.67	4.82	1.46	2.10
7	4.26	4.36	2.26	3.27	+3.28	+2.35	1.79	2.02	3.23	5.52	2.25	3.21
8	3.88	4.35	2.80	3.32	+3.61	+1.86	1.85	2.01	3.77	5.36	2.20	2.33
9	3.66	4.19	3.01	3.38	+1.80	+.55	1.73	2.10	3.23	4.79	.97	2.35
10	3.82	3.92	2.77	3.29	+.72	.02	1.85	2.19	4.28	6.14	+.68	2.63
11	3.87	4.14	3.10	3.56	.03	.86	2.10	2.32	4.00	6.42	+2.10	+.41
12	3.94	4.27	3.57	3.65	.81	1.12	1.91	2.33	4.30	6.41	+2.79	+.29
13	4.19	4.39	2.95	3.65	.51	1.05	1.96	2.34	3.31	4.29	+3.85	+2.80
14	4.31	4.42	2.94	6.50	.84	1.24	1.99	2.41	2.77	3.30	+4.52	+3.85
15	3.98	4.38	4.74	7.17	1.20	1.60	1.64	2.05	2.51	2.92	+4.96	+4.53
16	3.84	4.23	3.61	4.72	1.57	1.73	1.66	1.99	2.74	2.97	+5.08	+4.88
17	3.87	4.16	3.07	3.66	1.19	1.69	1.66	2.05	2.63	2.96	+5.52	+5.10
18	3.66	4.01	3.46	3.70	1.24	1.59	1.93	2.04	2.17	2.73	+5.87	+5.52
19	3.66	3.97	3.36	3.71	1.09	1.55	1.82	2.12	1.99	2.33	+5.80	+5.69
20	3.97	4.20	3.09	3.41	1.34	1.64	1.59	2.04	1.91	2.24	+5.90	+3.26
21	3.87	4.21	3.11	4.48	1.59	2.03	1.94	2.25	1.57	2.08	+5.27	+2.60
22	3.43	3.91	4.25	4.69	2.01	2.28	1.87	2.27	1.61	1.92	+3.11	+1.19
23	3.46	3.86	4.41	4.69	1.80	2.28	1.76	2.14	1.67	1.98	+3.07	+.92
24	3.34	3.67	4.34	4.50	1.46	2.03	1.82	2.09	1.76	2.08	+3.06	+1.34
25	3.47	3.75	4.20	4.41	1.26	1.80	1.83	2.17	1.77	2.14	+3.80	+1.70
26	3.50	3.84	3.35	4.25	1.18	1.75	1.70	2.19	1.41	1.84	+2.53	+1.05
27	3.62	3.93	3.04	3.83	1.73	1.87	1.58	1.98	1.57	1.81	+3.42	+.94
28	3.35	3.86	3.36	3.74	1.38	1.86	1.77	2.10	1.59	1.91	+3.05	+1.06
29	3.36	3.82	3.75	3.87	1.65	2.02	1.64	2.01	---	---	+1.21	+.25
30	3.42	3.79	3.59	3.84	1.57	2.01	1.77	1.99	---	---	+.66	+.05
31	3.45	3.82	---	---	1.48	1.89	.59	2.09	---	---	+.56	.14
MONTH	3.34	4.42	2.26	7.17	+3.61	3.68	.25	2.41	.83	6.42	+5.90	3.21

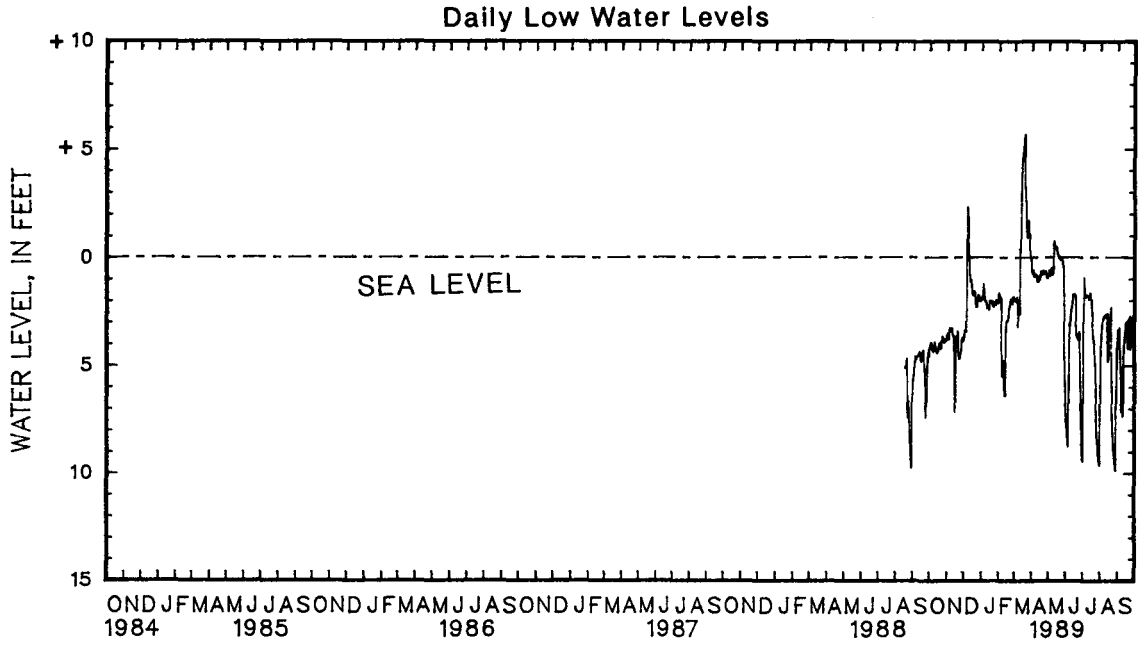
GROUND-WATER LEVELS

MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

AA De 177--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	+.24	.59	.11	.83	6.20	7.25	3.17	9.42	4.50	6.18	3.27	3.74
2	.12	.75	+.22	.60	6.93	7.81	.29	3.09	3.74	4.50	3.03	3.36
3	+.03	.63	.09	.72	7.25	8.09	+.44	.91	3.28	3.76	3.02	3.33
4	.05	.61	.40	.83	7.48	8.45	.93	1.66	3.11	3.33	2.91	3.26
5	.57	.88	.18	.75	5.45	8.76	1.34	1.70	2.73	3.13	2.79	4.54
6	.42	.88	+.09	.49	3.89	5.74	1.47	1.81	2.55	2.81	3.50	5.09
7	.34	.84	.43	.75	3.03	3.90	1.45	1.78	2.37	2.73	4.31	6.64
8	.22	.80	.19	.79	2.58	3.08	1.43	1.74	2.43	2.72	4.45	7.11
9	.25	.81	.07	.75	2.16	2.63	1.44	1.79	2.39	2.70	3.79	6.48
10	.53	.93	+.90	.53	1.93	2.35	1.43	1.77	2.46	2.66	4.75	7.35
11	.92	1.13	+1.23	+.76	1.79	2.27	1.58	1.77	2.54	2.74	4.11	4.73
12	.50	1.14	+1.07	+.60	1.42	2.08	1.66	1.92	2.38	2.74	3.68	4.11
13	.31	.91	+.89	+.45	1.37	1.69	1.18	1.79	2.26	2.59	3.39	3.86
14	.64	1.04	+1.02	+.40	1.46	1.73	1.28	1.64	2.31	4.81	2.79	3.60
15	.44	.98	+.84	+.49	1.42	1.74	1.62	1.91	3.03	4.74	2.82	3.07
16	+.43	.82	+.76	+.43	1.42	1.69	1.55	1.96	2.97	4.33	2.73	3.18
17	.08	.65	+.63	+.22	1.44	1.73	1.42	2.49	2.56	2.99	2.54	2.95
18	+.01	.68	+.41	+.10	1.46	1.77	1.76	2.87	2.52	2.81	2.80	3.03
19	.05	.69	+.29	.01	1.45	3.17	1.89	3.48	1.97	2.61	3.00	4.23
20	+.26	.78	+.22	.01	2.06	3.60	1.99	3.88	1.96	2.31	2.60	3.27
21	+.01	.61	+.51	+.03	1.89	3.68	2.48	3.85	2.08	5.74	2.51	2.84
22	.02	.67	+.25	.10	2.20	3.66	2.37	4.79	5.78	7.26	2.24	2.74
23	.06	.74	+.33	.12	2.31	3.81	3.03	4.97	6.95	8.07	2.06	4.24
24	.13	.71	+.34	+.0	2.33	3.55	3.75	6.36	7.70	8.67	3.03	3.95
25	+.01	.68	+.24	.05	2.29	3.46	6.23	7.59	8.26	9.11	2.82	3.63
26	+.02	.65	+.20	.21	2.44	5.69	7.37	8.28	8.53	9.37	2.40	3.08
27	.58	.77	+.04	.42	5.76	6.89	7.72	8.60	8.74	9.68	2.55	2.78
28	.77	.92	.24	.53	6.44	7.29	8.22	9.07	6.40	9.87	2.33	2.73
29	.32	.95	.50	4.19	7.27	8.70	8.44	9.38	4.79	6.35	2.02	2.52
30	.23	.81	4.24	5.82	8.70	9.37	8.70	9.56	4.12	4.79	2.04	2.36
31	---	---	5.55	6.77	---	---	6.22	9.63	3.67	4.16	---	---
MONTH	+.43	1.14	+1.23	6.77	1.37	9.37	.44	9.63	1.96	9.87	2.02	7.35



5 YEAR HYDROGRAPH

OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Df 20. SITE ID.--385916076270702.
LOCATION.--Lat 38°59'16", long 76°27'07", Hydrologic Unit 02060004, off Hooper Rd, 400 ft from Mclean Rd.
Owner: U.S. Navy.
AQUIFER.--Magothy Formation of Upper Cretaceous age. Aquifer code: 211MGTY.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 255 ft; casing diameter 10 in., to 233 ft; screen diameter 8 in. from 233 to 253 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with graphic water-level recorder from June 1969 to December 1977. Equipped with digital water-level recorder--30-minute recorder interval from December 1977 to current year.
DATUM.--Elevation of land surface is 22 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of recorder platform, 3.0 ft above land-surface datum.
REMARKS.--Glen Burnie Project observation well.
PERIOD OF RECORD.--June 1969 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, .91 ft below sea level, June 20, 1980; lowest measured, 13.77 ft below sea level, July 25, 1988.

WATER LEVEL, IN FEET BELOW SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	12.20	12.20	10.02	10.22	8.89	8.92	8.66	8.68	8.13	8.20	7.71	7.73
2	12.18	12.20	9.83	10.02	8.92	8.98	8.38	8.66	8.13	8.20	7.73	7.87
3	12.09	12.18	9.83	9.94	8.98	9.00	8.29	8.38	8.17	8.22	7.87	7.94
4	11.77	12.09	9.94	9.98	9.00	9.17	8.29	8.51	8.17	8.30	7.93	7.96
5	---	---	9.45	9.98	9.17	9.19	8.49	8.61	8.30	8.31	7.71	7.93
6	---	---	9.31	9.44	9.06	9.18	8.23	8.49	8.24	8.31	7.69	7.74
7	---	---	9.32	9.41	8.99	9.06	8.21	8.24	8.23	8.26	7.74	7.80
8	---	---	9.41	9.55	9.00	9.02	7.88	8.22	8.26	8.30	7.80	7.82
9	---	---	9.55	9.71	9.02	9.03	7.88	8.00	8.30	8.52	7.81	7.82
10	10.30	10.47	9.54	9.72	9.02	9.02	8.00	8.20	8.53	8.70	7.79	7.82
11	10.30	10.33	9.54	9.61	9.01	9.09	8.20	8.38	8.61	8.68	7.60	7.79
12	10.33	10.49	9.61	9.73	9.09	9.22	8.35	8.38	8.61	8.62	7.55	7.60
13	10.49	10.65	9.59	9.73	9.06	9.21	8.34	8.43	8.58	8.62	7.57	7.63
14	10.65	10.70	9.58	9.59	8.93	9.06	8.43	8.54	8.33	8.57	7.61	7.63
15	10.67	10.69	9.58	9.59	8.75	8.93	8.47	8.54	8.33	8.35	7.53	7.62
16	10.67	10.68	9.55	9.60	8.79	9.05	8.46	8.47	8.35	8.42	7.53	7.68
17	10.66	10.68	9.45	9.54	9.05	9.05	8.34	8.46	8.42	8.51	7.68	7.76
18	10.62	10.66	9.45	9.51	9.05	9.06	8.34	8.36	8.50	8.51	7.76	7.78
19	10.61	10.62	9.51	9.54	8.96	9.06	8.33	8.36	8.31	8.50	7.77	8.17
20	10.62	10.63	9.24	9.54	8.96	8.97	---	---	8.23	8.31	7.95	8.19
21	10.53	10.63	9.22	9.32	8.96	9.03	---	---	7.88	8.24	7.83	7.96
22	10.34	10.53	9.32	9.47	9.03	9.20	---	---	7.87	7.88	7.85	8.04
23	10.33	10.34	9.45	9.49	9.04	9.20	---	---	7.88	8.00	8.04	8.07
24	10.18	10.33	9.35	9.44	8.74	9.04	---	---	8.00	8.31	8.05	8.08
25	10.16	10.19	9.07	9.34	8.73	8.76	---	---	8.06	8.37	8.04	8.06
26	10.16	10.16	8.97	9.06	8.76	8.90	---	---	7.52	8.06	8.03	8.06
27	10.16	10.19	8.68	8.97	8.90	8.97	---	---	7.52	7.60	8.06	8.14
28	10.16	10.18	8.65	8.68	8.60	8.95	8.14	8.25	7.60	7.71	8.14	8.22
29	10.16	10.23	8.68	8.87	8.60	8.84	8.25	8.26	---	---	8.21	8.45
30	10.23	10.25	8.88	8.90	8.82	8.87	8.26	8.29	---	---	8.46	8.63
31	10.22	10.26	---	---	8.68	8.82	8.21	8.30	---	---	8.19	8.63
MONTH			8.65	10.22	8.60	9.22	---	---	7.52	8.70	7.53	8.63

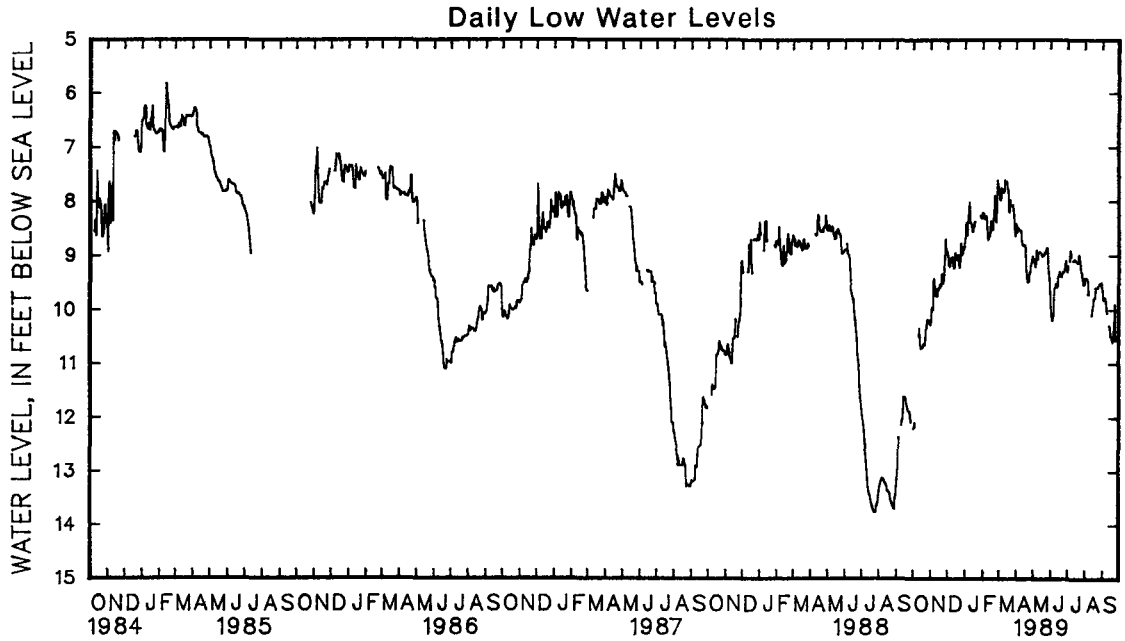
GROUND WATER LEVELS

MARYLAND Continued

ANNE ARUNDEL COUNTY--Continued

AA Df 20 Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.19	8.41	9.01	9.05	9.70	9.97	9.19	9.30	9.40	9.42	9.57	9.58
2	8.41	8.56	9.00	9.05	9.97	10.10	9.16	9.20	9.42	9.42	9.58	9.64
3	8.48	8.56	9.00	9.08	10.10	10.19	---	---	9.41	9.42	9.65	9.82
4	8.45	8.48	9.08	9.18	10.10	10.20	---	---	9.42	9.44	9.80	9.82
5	8.44	8.48	9.11	9.20	10.06	10.10	8.88	9.10	9.43	9.44	9.78	9.80
6	8.47	8.51	8.77	9.11	9.66	10.10	8.88	8.91	9.43	9.52	9.77	9.78
7	8.51	8.52	8.79	8.90	9.60	9.66	8.91	8.96	9.52	9.72	9.76	9.80
8	8.52	8.54	8.90	9.01	9.58	9.60	8.95	9.02	---	---	9.77	9.86
9	8.42	8.53	9.01	9.06	9.54	9.58	---	---	---	---	9.87	9.98
10	8.45	8.58	8.93	9.06	9.50	9.52	---	---	---	---	9.98	10.06
11	8.58	8.74	8.93	8.94	9.51	9.58	9.02	9.10	---	---	---	---
12	8.74	8.80	8.92	8.93	9.57	9.58	9.06	9.10	---	---	---	---
13	8.75	8.80	8.92	8.93	9.36	9.56	9.06	9.08	10.01	10.10	10.27	10.30
14	8.75	8.80	8.93	8.94	9.37	9.39	9.06	9.08	9.96	10.01	10.30	10.32
15	8.75	8.80	8.94	8.95	9.33	9.39	9.07	9.10	9.90	9.96	10.32	10.40
16	8.75	8.80	8.95	8.96	9.30	9.34	9.07	9.10	9.80	9.90	10.38	10.50
17	8.80	8.84	8.96	9.01	9.29	9.30	---	---	9.74	9.80	10.48	10.50
18	8.84	9.05	8.99	9.01	9.30	9.36	---	---	9.74	9.80	10.48	10.55
19	9.05	9.30	8.99	9.00	---	---	9.12	9.13	9.71	9.78	10.55	10.60
20	9.30	9.44	8.98	9.00	9.37	9.39	8.90	9.12	9.62	9.72	10.40	10.58
21	9.44	9.48	8.92	8.98	9.31	9.37	8.90	8.98	9.59	9.60	10.36	10.39
22	9.47	9.48	8.92	8.94	9.30	9.32	8.94	9.00	---	---	9.94	10.38
23	9.42	9.48	8.90	8.95	9.30	9.30	8.99	9.10	---	---	9.69	9.90
24	9.29	9.42	8.83	8.90	9.28	9.30	9.10	9.22	9.58	9.60	9.90	10.57
25	9.27	9.30	8.84	8.86	9.24	9.28	9.22	9.30	9.51	9.58	---	---
26	9.18	9.30	8.82	8.85	9.18	9.24	9.27	9.32	9.50	9.52	---	---
27	9.13	9.18	8.82	8.94	9.10	9.18	9.32	9.40	9.50	9.53	---	---
28	9.10	9.13	8.94	9.23	9.06	9.10	9.39	9.44	9.52	9.53	---	---
29	8.97	9.10	9.23	9.34	9.07	9.20	9.44	9.54	9.49	9.52	---	---
30	8.97	9.01	9.34	9.43	9.16	9.20	9.52	9.54	9.49	9.50	---	---
31	---	---	9.43	9.69	---	---	9.36	9.52	9.50	9.58	---	---
MONTH	8.19	9.48	8.77	9.69	---	---	---	---	---	---	---	---



5 YEAR HYDROGRAPH

OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--AA Df 79. SITE ID.--385905076293601. PERMIT NUMBER.--AA-03-7867.
LOCATION.--Lat 38°59'05", long 76°29'36", Hydrologic Unit 02060004, off Creek Rd., 500 ft north of MD Rt. 450.
Owner: U.S. Navy.
AQUIFER.--Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 705 ft; casing diameter 6 in., to 300 ft; screen diameter 6 in. from 300 to 320 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with graphic water-level recorder from May 20, 1969 to Dec. 19, 1977. Equipped with digital water-level recorder--60-minute recorder interval from Dec. 19, 1977 to current year.
DATUM.--Elevation of land surface is 5 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring Point: Top of recorder platform, 3.0 ft above land-surface datum.
REMARKS.--Glen Burnie Project Observation Well.
PERIOD OF RECORD.--May 1969 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, .12 ft below sea level, Jan. 4, 1982; lowest measured, 13.67 ft below sea level, Aug. 21 and 23, 1987.

WATER LEVEL, IN FEET BELOW SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	9.84	10.15	8.48	8.84	---	---	6.56	6.82	6.31	6.56	6.01	6.27
2	9.64	9.92	8.47	8.74	---	---	6.32	6.63	6.50	6.76	6.28	6.44
3	9.64	9.89	8.63	8.95	---	---	6.18	6.42	6.36	6.71	---	---
4	9.36	9.64	8.55	8.90	---	---	6.28	6.93	---	---	6.12	6.46
5	9.17	9.38	8.12	8.55	---	---	6.36	6.80	---	---	5.86	6.27
6	9.27	9.59	8.11	8.31	---	---	6.12	6.48	6.34	6.63	5.93	6.23
7	9.43	9.62	8.18	8.49	---	---	6.24	6.58	6.51	6.72	6.03	6.30
8	9.34	9.59	8.25	8.62	---	---	5.91	6.32	6.47	6.73	5.94	6.22
9	8.88	9.31	8.44	8.77	---	---	6.20	6.53	6.69	7.02	5.91	6.23
10	8.76	8.95	8.11	8.51	8.10	8.32	6.48	6.70	6.72	7.01	5.84	6.09
11	8.83	9.28	8.14	8.57	8.18	8.51	6.60	6.81	6.56	6.92	5.68	6.02
12	9.18	9.38	8.24	8.68	8.18	8.49	6.40	6.84	6.55	6.77	5.68	6.13
13	9.31	9.57	8.10	8.32	8.13	8.25	6.47	6.96	6.46	6.84	6.01	6.24
14	9.22	9.61	8.09	8.25	7.76	8.13	6.65	7.07	---	---	6.00	6.20
15	9.24	9.43	8.09	8.32	7.70	7.93	6.50	6.71	---	---	6.10	6.42
16	9.18	9.46	8.09	8.24	7.89	7.93	6.48	6.68	---	---	6.45	6.89
17	9.00	9.30	---	---	7.76	7.93	6.35	6.69	6.64	6.91	6.73	6.96
18	9.06	9.21	---	---	7.65	7.92	6.47	6.75	---	---	6.77	7.20
19	9.20	9.55	---	---	7.50	7.73	---	---	6.16	6.50	7.25	7.68
20	9.29	9.59	---	---	7.52	7.81	6.38	6.75	6.13	6.41	7.12	7.54
21	9.21	9.51	---	---	7.60	7.86	6.76	7.09	5.82	6.24	7.09	7.67
22	9.11	9.36	---	---	7.68	7.93	6.67	6.94	---	---	7.58	7.86
23	9.14	9.43	---	---	7.19	7.71	6.66	6.88	---	---	7.66	7.84
24	8.93	9.22	---	---	6.88	7.32	6.50	6.76	---	---	7.47	7.80
25	8.94	9.29	---	---	6.99	7.21	6.51	6.70	---	---	7.47	7.68
26	9.00	9.30	---	---	7.15	7.32	---	---	---	---	7.44	7.82
27	8.95	9.31	---	---	6.82	7.27	6.48	6.82	5.96	6.18	7.66	7.86
28	8.90	9.18	---	---	6.63	6.93	6.59	6.93	6.08	6.28	7.65	7.91
29	9.04	9.45	---	---	7.00	7.26	---	---	---	---	7.90	7.99
30	8.99	9.26	---	---	6.66	7.14	6.49	6.74	---	---	7.87	7.99
31	8.72	9.16	---	---	6.55	6.75	6.35	6.78	---	---	7.53	7.87
MONTH	8.72	10.15	---	---	---	---	---	---	---	---	---	---

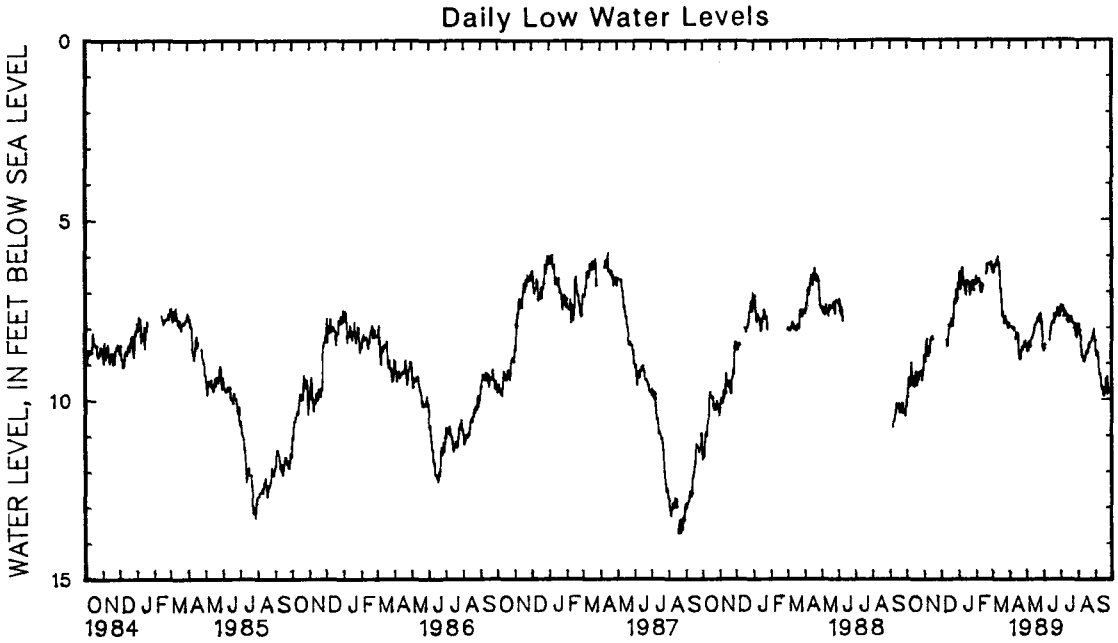
GROUND WATER LEVELS

MARYLAND Continued

ANNE ARUNDEL COUNTY Continued

AA Df 79 Continued

DAY	APRIL MAX	APRIL MIN	MAY MAX	MAY MIN	JUNE MAX	JUNE MIN	JULY MAX	JULY MIN	AUGUST MAX	AUGUST MIN	SEPTEMBER MAX	SEPTEMBER MIN
1	---	---	8.22	8.48	8.26	8.58	7.19	7.41	7.80	7.89	8.15	8.37
2	---	---	8.12	8.46	8.27	8.65	7.06	7.36	7.71	7.89	8.26	8.68
3	---	---	8.29	8.67	8.35	8.60	6.98	7.39	7.82	8.05	8.56	8.80
4	7.70	7.96	8.42	8.66	8.12	8.47	7.13	7.42	7.90	8.17	8.47	8.68
5	7.76	7.99	8.21	8.61	---	---	7.02	7.39	7.94	8.22	8.55	8.70
6	7.86	7.99	8.07	8.40	---	---	7.26	7.50	8.14	8.35	8.61	8.82
7	7.77	7.99	8.17	8.47	---	---	7.36	7.57	8.22	8.55	8.67	8.92
8	7.77	8.04	8.25	8.54	---	---	7.43	7.66	8.55	8.83	8.79	9.31
9	7.65	7.99	8.26	8.53	---	---	7.28	7.60	8.55	8.77	9.13	9.33
10	---	---	8.08	8.29	---	---	7.28	7.57	8.58	8.85	9.08	9.31
11	8.03	8.31	8.13	8.30	8.13	8.35	7.39	7.67	8.80	8.95	9.07	9.44
12	8.11	8.21	8.11	8.22	8.04	8.15	7.51	7.68	8.79	8.93	9.24	9.66
13	8.05	8.16	8.10	8.18	8.02	8.08	7.41	7.67	8.64	8.91	9.40	9.70
14	8.13	8.28	8.03	8.13	7.89	7.98	7.47	7.74	8.61	8.84	9.44	9.71
15	8.06	8.16	7.83	7.99	7.68	7.89	7.52	7.87	8.57	8.77	9.47	9.87
16	8.14	8.34	7.74	7.92	7.62	7.82	7.40	7.78	8.44	8.71	9.47	9.91
17	8.17	8.43	7.77	7.93	7.60	7.87	7.51	7.83	8.37	8.67	9.44	9.71
18	8.31	8.68	7.63	7.88	7.64	7.88	7.49	7.80	8.45	8.74	9.55	9.83
19	8.47	8.86	7.63	7.86	7.61	7.88	7.56	7.81	8.31	8.72	9.26	9.73
20	8.59	8.89	7.55	7.84	7.45	7.78	7.34	7.70	8.20	8.49	9.18	9.44
21	8.56	8.88	7.39	7.72	7.38	7.64	7.56	7.80	8.21	8.46	9.21	9.55
22	8.46	8.72	7.50	7.76	7.42	7.63	7.64	7.87	8.25	8.57	8.76	9.38
23	8.38	8.65	7.34	7.71	7.40	7.65	7.76	7.89	8.17	8.41	8.75	9.57
24	8.31	8.54	7.29	7.62	7.35	7.61	7.72	7.89	8.15	8.41	9.43	9.83
25	8.36	8.61	7.42	7.70	7.28	7.51	7.73	7.91	8.13	8.33	---	---
26	8.29	8.52	7.34	7.60	7.23	7.44	7.80	8.09	8.13	8.24	---	---
27	8.29	8.53	7.62	7.86	7.19	7.47	7.83	7.89	8.11	8.24	---	---
28	8.22	8.44	7.78	7.89	7.17	7.53	7.82	8.21	7.95	8.14	---	---
29	8.17	8.37	7.82	8.10	7.28	7.68	8.06	8.28	7.84	8.05	---	---
30	8.27	8.54	7.91	8.25	7.35	7.55	7.93	8.14	7.84	8.29	---	---
31	---	---	8.14	8.55	---	---	7.63	7.93	8.15	8.38	---	---
MONTH	---	---	7.29	8.67	---	---	6.98	8.28	7.71	8.95	---	---



5 YEAR HYDROGRAPH

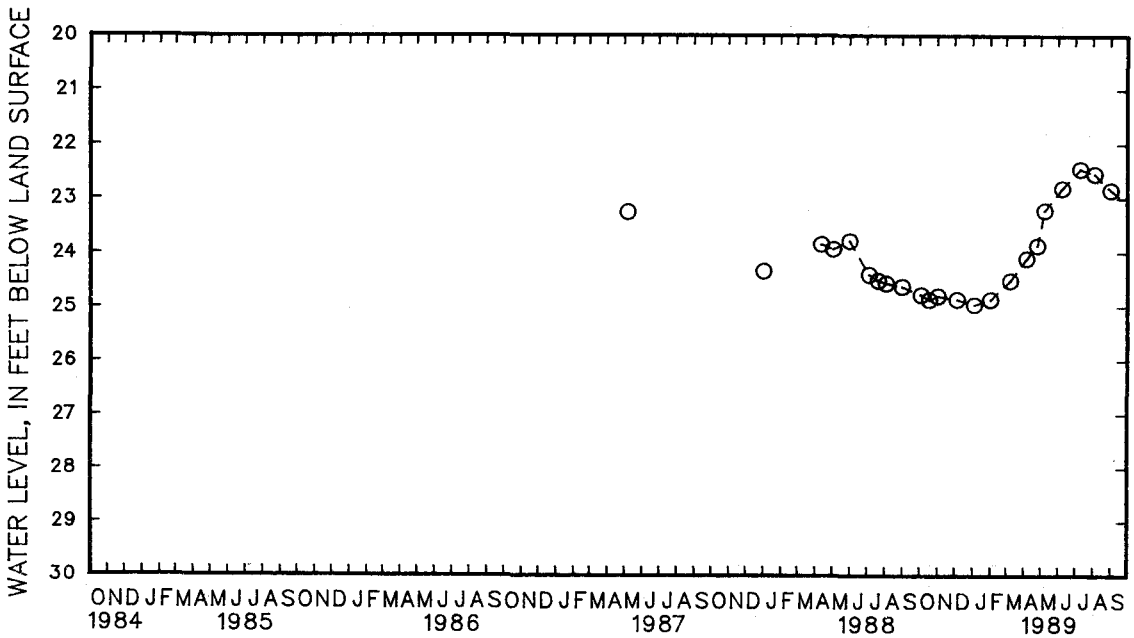
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Df 103. SITE ID.--385623076274401. PERMIT NUMBER.--AA-73-3315.
LOCATION.--Lat 38°56'23", long 76°27'44", Hydrologic Unit 02060004, off West Lake Dr, 900 ft north of intersection with Farragut Rd.
Owner: Mildred Hudson.
AQUIFER.--Aquia Formation of Paleocene age. Aquifer code: 125AQUI.
WELL CHARACTERISTICS.--Drilled, unused, artesian well, depth 46 ft; casing diameter 4 in., to 39 ft; screen diameter 2 in. from 39 to 46 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 26.5 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 1.2 ft above land-surface datum.
PERIOD OF RECORD.--May 1987, January 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.46 ft below land-surface datum, July 10, 1989; lowest measured, 24.98 ft below land-surface datum, Jan. 4, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	24.80	DEC 5	24.88	FEB 1	24.88	APR 6	24.12	JUN 8	22.82	AUG 4	22.55
NOV 2	24.82	JAN 4	24.98	MAR 8	24.53	MAY 8	23.23	JUL 10	22.46	SEP 1	22.85

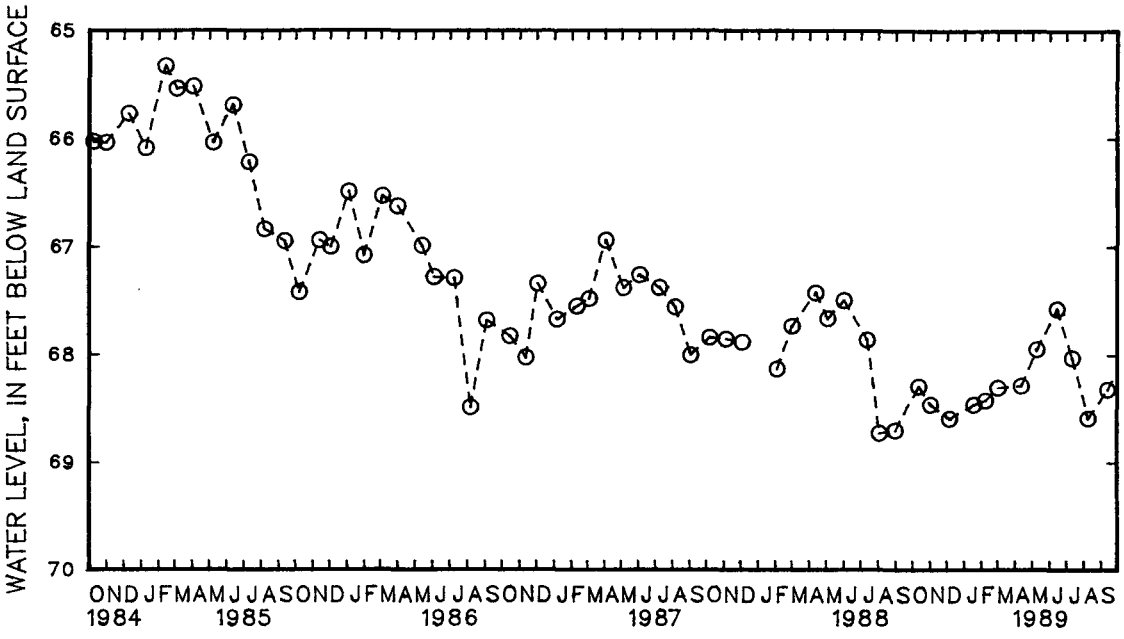


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--AA Ed 45. SITE ID.--385406076383901. PERMIT NUMBER.--AA-74-1005.
LOCATION.--Lat 38°54'06", long 76°38'39", Hydrologic Unit 02060006, at Anne Arundel County Police Academy, near Davidsonville.
Owner: U.S. Geological Survey.
AQUIFER.--Aquia Formation of Paleocene age. Aquifer code: 125AQUI.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 157 ft; casing diameter 4 in., to 147 ft; screen diameter 2 in. from 147 to 157 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 100 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of coupling, 1.0 ft above land-surface datum.
PERIOD OF RECORD.--August 1979 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 63.51 ft below land-surface datum, May 6, 1980; lowest measured, 68.73 ft below land-surface datum, Aug. 3, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	68.30	DEC 6	68.60	FEB 7	68.43	APR 11	68.29	JUN 14	67.57	AUG 9	68.59
NOV 1	68.47	JAN 17	68.47	MAR 1	68.31	MAY 9	67.95	JUL 11	68.03	SEP 12	68.32

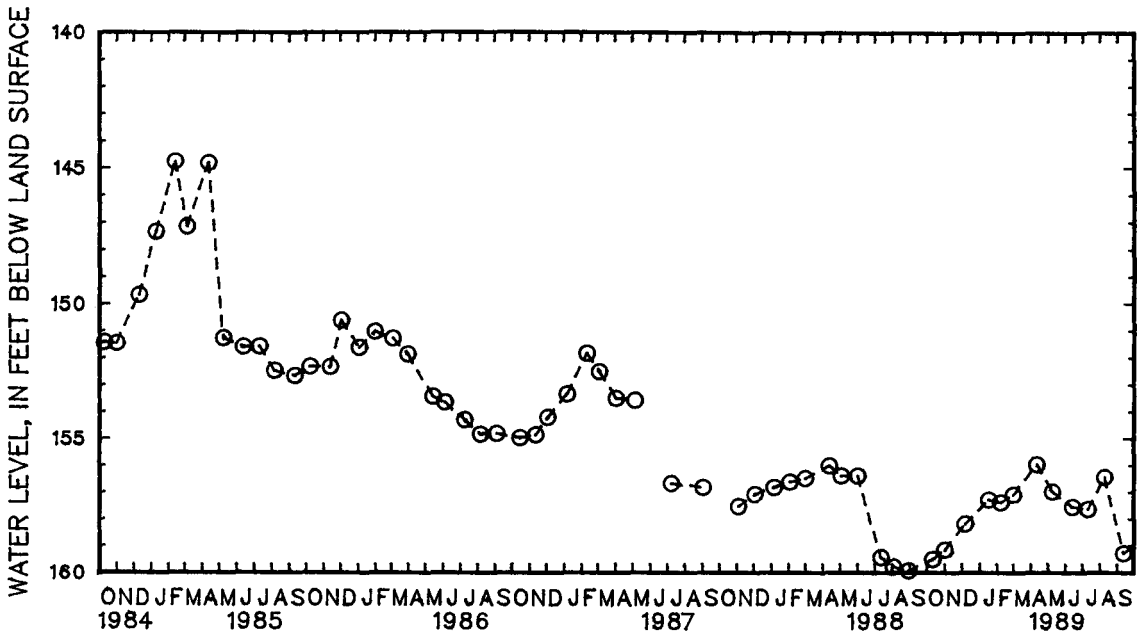


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--AA Fd 43. SITE ID.--384646076352401. PERMIT NUMBER.--AA-74-1004.
LOCATION.--Lat 38°46'46", long. 76°35'24", Hydrologic Unit 02060004 at Tracys Landing Regional Park, 0.2 mi east of Tracys Landing.
Owner: U.S. Geological Survey.
AQUIFER.--Aquia Formation of Paleocene age. Aquifer code: 125AQUI.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 280 ft, casing diameter 4 in., to 231 ft; casing diameter 2 in. from 231 to 270 ft; screen diameter 2 in. from 270 to 280 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 140 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of coupling, 1.1 ft above land-surface datum.
PERIOD OF RECORD.--August 1979 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 143.90 ft below land-surface datum, May 6, 1980; lowest measured, 159.93 ft below land-surface datum, Aug. 30, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	159.50	DEC 6	158.19	FEB 7	157.39	APR 11	155.97	JUN 14	157.55	AUG 9	156.44
NOV 1	159.15	JAN 17	157.29	MAR 1	157.10	MAY 9	156.98	JUL 11	157.62	SEP 12	159.28



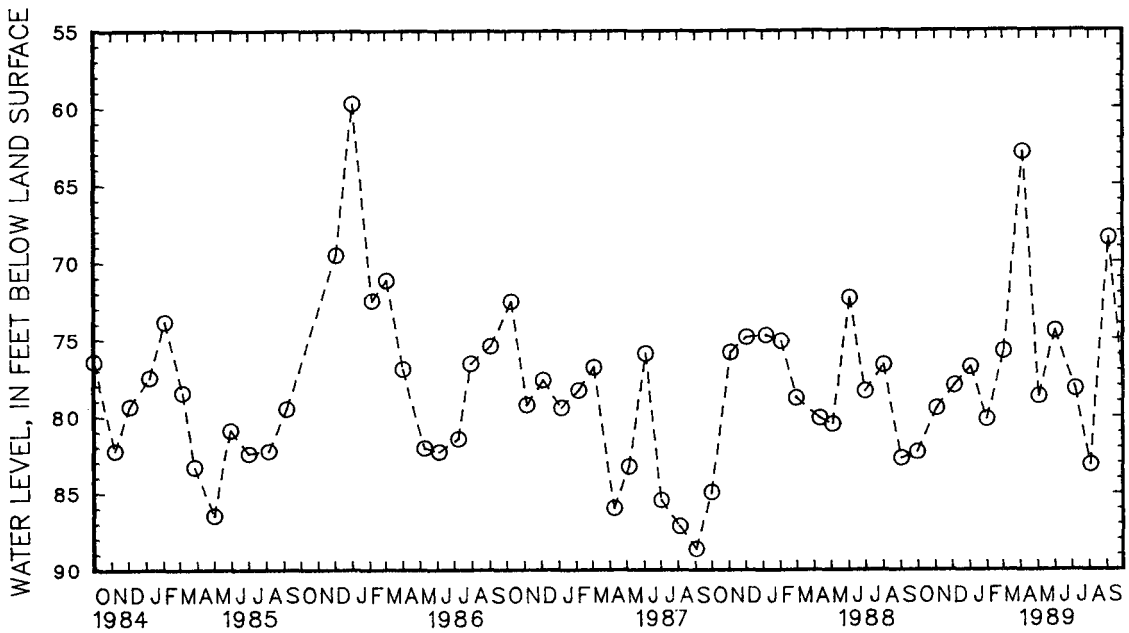
5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

BALTIMORE CITY

WELL NUMBER.--2S5E- 1. SITE ID.--391617076322001.
LOCATION.--Lat 39°16'17", long 76°32'20", Hydrologic Unit 02060003, near Holabird Ave. and Pumphrey St. at Holabird Industrial Park.
Owner: City of Baltimore.
AQUIFER.--Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 290 ft; casing diameter 13 in. to unknown depth.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 30 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: lip of discharge pipe, 2.0 ft above land-surface datum from April 1943 to April 1966; top of casing extension, 1.8 ft above land-surface datum from April 1966 to current year.
REMARKS.--Water level reported 58 ft below land-surface datum in 1934.
PERIOD OF RECORD.--April 1943 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 43.15 ft below land-surface datum, Sept. 27, 1976; lowest measured, 103.70 ft below land-surface datum, Oct. 15, 1948.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 4	79.47	JAN 3	76.81	MAR 3	75.80	MAY 3	78.73	JUL 7	78.24	SEP 5	68.45
DEC 5	77.96	FEB 1	80.18	APR 6	62.91	JUN 1	74.50	AUG 3	83.15		

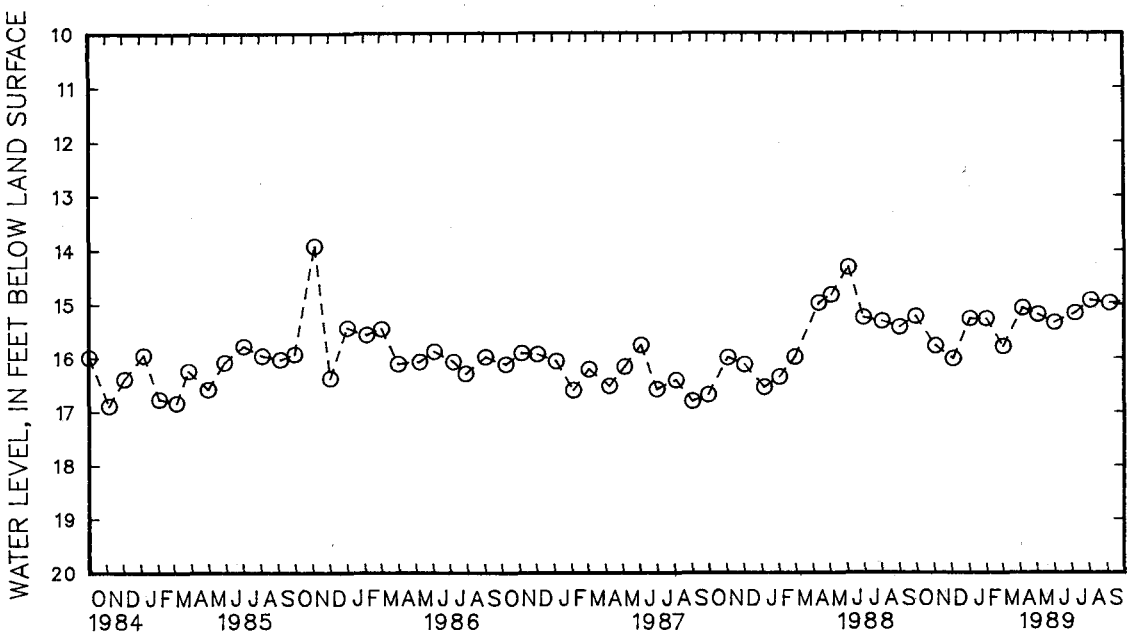


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--3S2E- 5. SITE ID.--391600076353301. PERMIT NUMBER.--BC-81-0087.
LOCATION.--Lat 39°16'00", long 76°35'33", Hydrologic Unit 02060003, at Latrobe Park.
Owner: U.S. Geological Survey.
AQUIFER.--Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 136 ft; casing diameter 4 in., to 126 ft; screen diameter 4 in. from 126 to 136 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 20 ft. above National Geodetic Vertical Datum of 1929, from topographic map. Measuring Point: Top of casing, 0.5 ft above land-surface datum.
PERIOD OF RECORD.--January 1983 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.94 ft below land-surface datum, Nov. 5, 1985; lowest measured, 17.71 ft below land-surface datum, Dec. 30, 1983.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 4	15.79	JAN 3	15.28	MAR 3	15.80	MAY 3	15.20	JUL 7	15.17	SEP 5	14.98
DEC 5	16.03	FEB 1	15.28	APR 6	15.08	JUN 1	15.35	AUG 3	14.93		

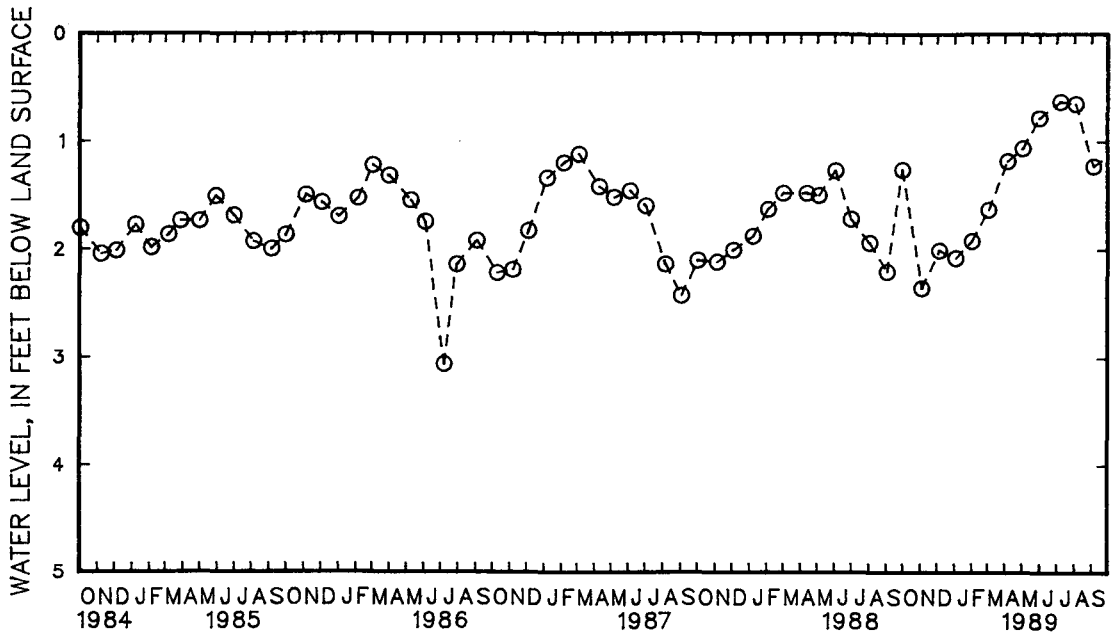


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--3S5E- 46. SITE ID.--391556076315301. PERMIT NUMBER.--BC-81-0088.
LOCATION.--Lat 39°15'56", long 76°31'53", Hydrologic Unit 02060003, at Holabird Industrial Park, near Colgate Creek.
Owner: U.S. Geological Survey.
AQUIFER.-- Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 75 ft; casing diameter 4 in., to 63 ft; screen diameter 4 in. from 63 to 73 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 10 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 0.7 ft above land-surface datum.
PERIOD OF RECORD.--January 1983 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, .22 ft above land-surface datum, May 5, 1983; lowest measured, 3.07 ft below land-surface datum, July 8, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 4	2.36	JAN 3	2.08	MAR 3	1.63	MAY 3	1.06	JUL 7	.63	SEP 5	1.23
DEC 5	2.01	FEB 1	1.92	APR 6	1.18	JUN 1	.78	AUG 3	.65		

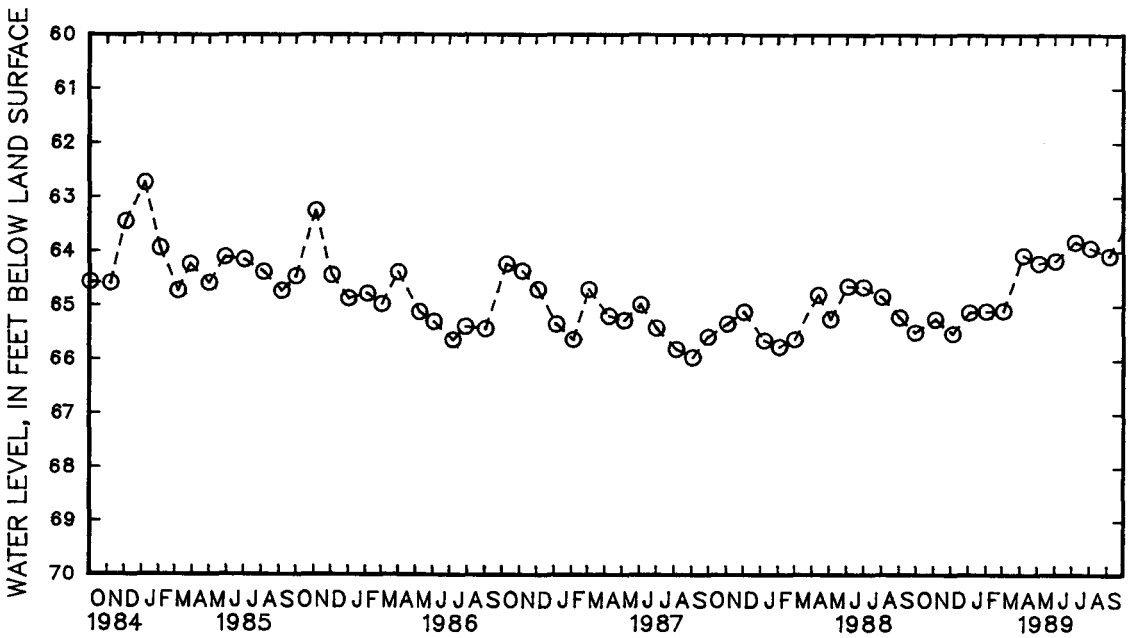


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--5S2E- 24. SITE ID.--391349076354501. PERMIT NUMBER.--BC-81-0089.
LOCATION.--Lat 39°13'49", long 76°35'45", Hydrologic Unit 02060003, at Farrington Park.
Owner: U.S. Geological Survey.
AQUIFER.--Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 272 ft; casing diameter 4 in., to 262 ft; screen diameter 3 in. from 262 ft to 272 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 80 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing, 0.25 ft above land-surface datum.
PERIOD OF RECORD.--January 1983 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 62.74 ft below land-surface datum, Jan. 7, 1985; lowest measured, 66.36 ft below land-surface datum, May 5, 1983.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 4	65.25	JAN 3	65.12	MAR 3	65.09	MAY 3	64.22	JUL 7	63.82	SEP 5	64.08
DEC 5	65.52	FEB 1	65.10	APR 6	64.08	JUN 1	64.17	AUG 3	63.93		

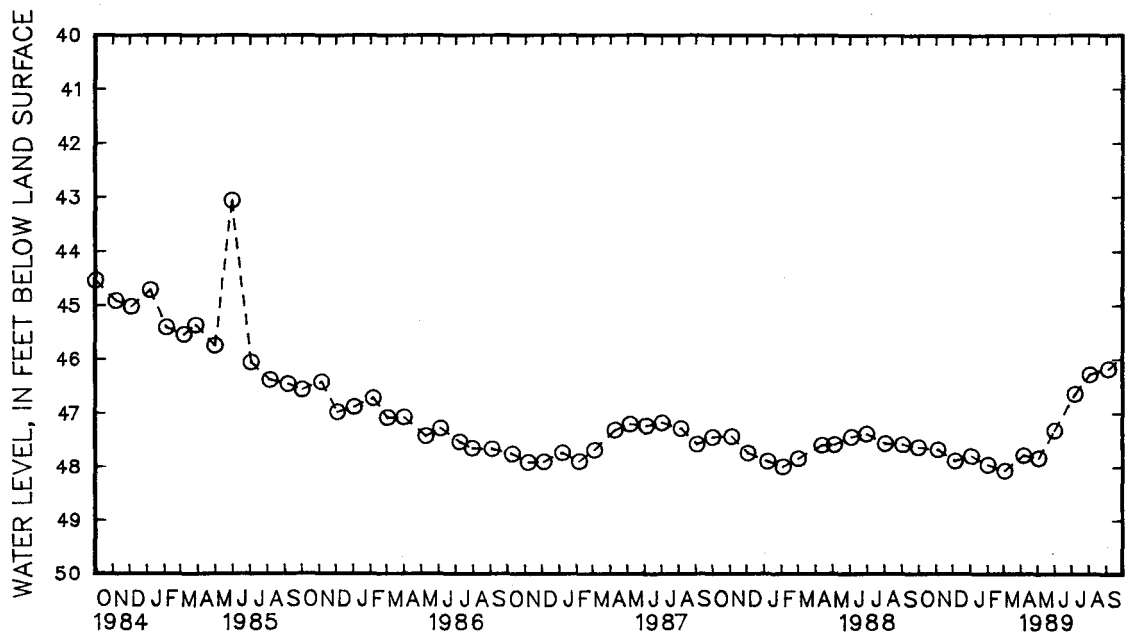


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--5S2E- 25. SITE ID.--391349076354502. PERMIT NUMBER.--BC-81-0090.
LOCATION.--Lat 39°13'49", long 76°35'45", Hydrologic Unit 02060003, at Farrington Park.
Owner: U.S. Geological Survey.
AQUIFER.--Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 115 ft; casing diameter 4 in., to 105 ft; screen diameter 3 in. from 105 to 115 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 80 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing, 0.2 ft above land-surface datum.
PERIOD OF RECORD.--January 1983 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 42.58 ft below land-surface datum, May 2, 1984; lowest measured, 48.08 ft below land-surface datum, Mar. 3, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 4	47.69	JAN 3	47.81	MAR 3	48.08	MAY 3	47.85	JUL 7	46.64	SEP 5	46.18
DEC 5	47.90	FEB 1	47.97	APR 6	47.79	JUN 1	47.32	AUG 3	46.28		

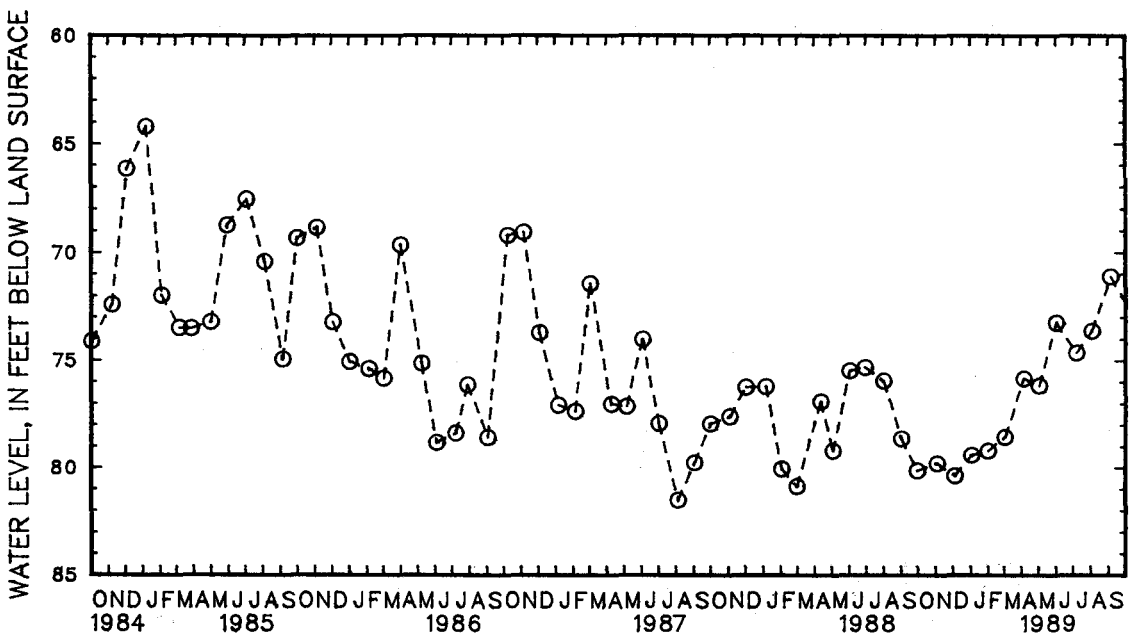


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--7S4E- 1. SITE ID.--391213076324401. PERMIT NUMBER.--BC-01-7129.
LOCATION.--Lat 39°12'13", long 76°32'44", Hydrologic Unit 02060003, near Hawkins Point, at SCM Plant.
Owner: SCM Pigments Corp.
AQUIFER.--Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTNX.
WELL CHARACTERISTICS.--Drilled, unused, artesian well, depth 638 ft; casing diameter 2 in., to 565 ft;
screen diameter 2 in. from 565 to 575 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 40 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing, 1.55 ft above land-surface datum.
PERIOD OF RECORD.--September 1957 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 59.94 ft below land-surface datum, Jan. 3, 1983;
lowest measured, 98.17 ft below land-surface datum, Mar. 30, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 4	79.81	JAN 3	79.42	MAR 3	78.57	MAY 3	76.17	JUL 7	74.64	SEP 5	71.10
DEC 5	80.39	FEB 1	79.22	APR 6	75.84	JUN 1	73.23	AUG 3	73.62		



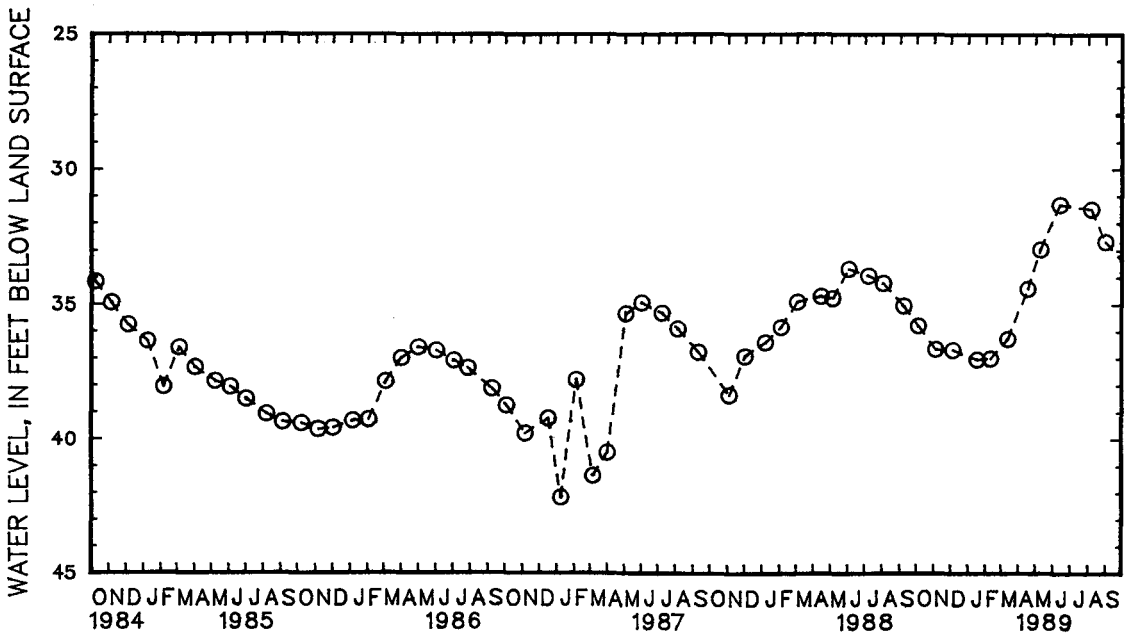
5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

BALTIMORE COUNTY

WELL NUMBER.--BA Cd 26. SITE ID.--393129076384201. PERMIT NUMBER.--BA-02-8527.
LOCATION.--Lat 39°31'29", long 76°38'42", Hydrologic Unit, 02060003, 1.4 mi south of Sparks near York Rd.
Owner: Diecraft, Inc.
AQUIFER.--Baltimore Gneiss of Precambrian age. Aquifer code: 400BLMR.
WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 250 ft; casing diameter 6 in., to 19 ft; open hole.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 480 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing, 0.3 ft above land-surface datum.
PERIOD OF RECORD.--January 1959 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.42 ft below land-surface datum, Sept. 9, 1975; lowest measured, 80.20 ft below land-surface datum, Dec. 23, 1969.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	35.79	DEC 5	36.70	FEB 10	37.01	APR 17	34.41	JUN 13	31.30	SEP 1	32.67
NOV 4	36.65	JAN 17	37.05	MAR 13	36.28	MAY 10	32.95	AUG 7	31.47		

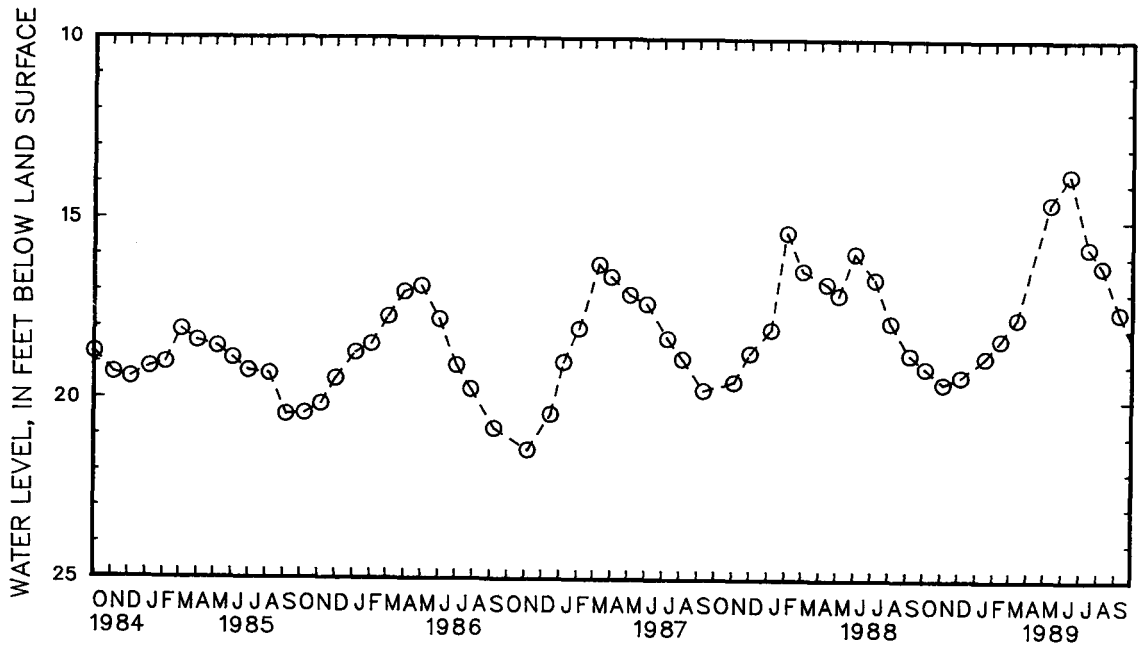


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--BA Ce 21. SITE ID.--393102076341801. PERMIT NUMBER.--BA-02-1266.
LOCATION.--Lat 39°31'02", long 76°34'18", Hydrologic Unit 02060003, on Paper Mill Rd., 0.6 mi west of Jacksonville.
Owner: Baltimore County.
AQUIFER.--Loch Raven Schist of Paleozoic Age. Aquifer code: 300LCRV.
WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 350 ft; casing diameter 10 in., to 12.4 ft; casing diameter 6 in., to 33.1 ft; open hole.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 536 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing, 2.0 ft above land-surface datum.
PERIOD OF RECORD.--November and December 1955, November 1956 through September 1975, July 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.60 ft below land-surface datum, June 23, 1972; lowest measured, 21.54 ft below land-surface datum, Feb. 10, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	19.09	DEC 5	19.32	FEB 13	18.29	MAY 10	14.50	JUL 14	15.72	SEP 7	17.53
NOV 4	19.52	JAN 17	18.78	MAR 13	17.69	JUN 13	13.71	AUG 7	16.24		



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

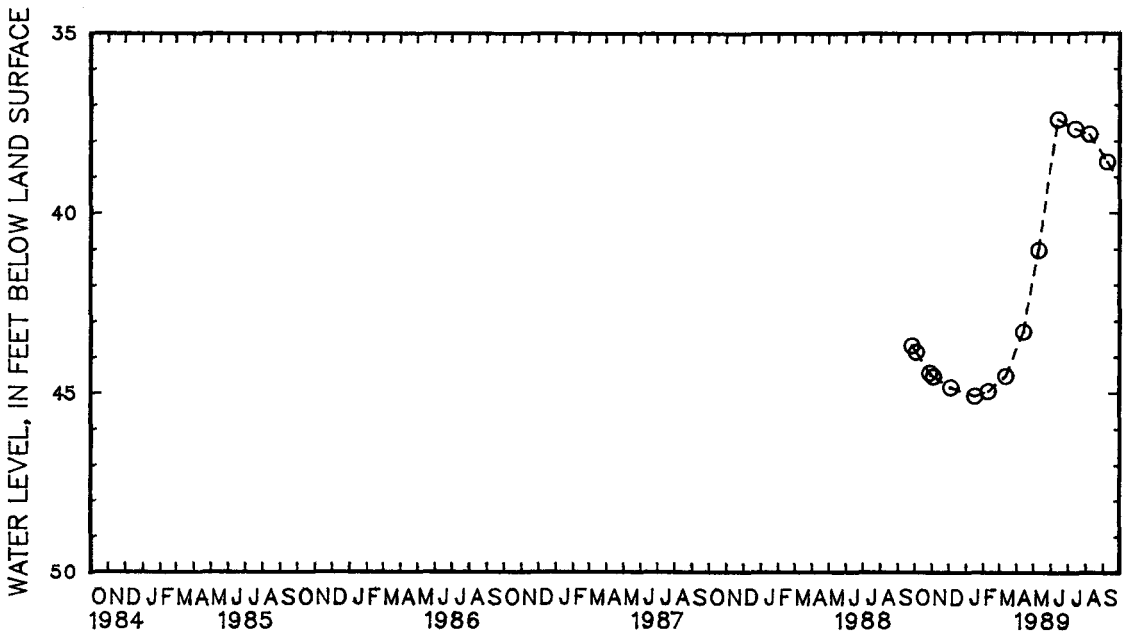
MARYLAND--Continued

BALTIMORE COUNTY--Continued

WELL NUMBER.--BA Dc 444. SITE ID.--392931076410301. PERMIT NUMBER.--BA-81-4198.
LOCATION.--Lat 39°29'31", long 76°41'03", Hydrologic Unit 02060003, Oregon Ridge Park.
Owner: Baltimore County Parks and Recreation.
AQUIFER.--Cockeysville Marble of Paleozoic age. Aquifer code: 300CCKV.
WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 300 ft; casing diameter 6 in., to 88 ft; open hole.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 390 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of casing, 1.0 ft above land-surface datum.
PERIOD OF RECORD.--September 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 37.40 ft below land-surface datum, June 13, 1989; lowest measured, 45.07 ft below land-surface datum, Jan. 17, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	43.85	DEC 5	44.83	MAR 13	44.52	JUN 13	37.40	SEP 8	38.58
OCT 28	44.43	JAN 17	45.07	APR 13	43.28	JUL 13	37.66		
NOV 4	44.53	FEB 10	44.94	MAY 10	41.02	AUG 7	37.79		

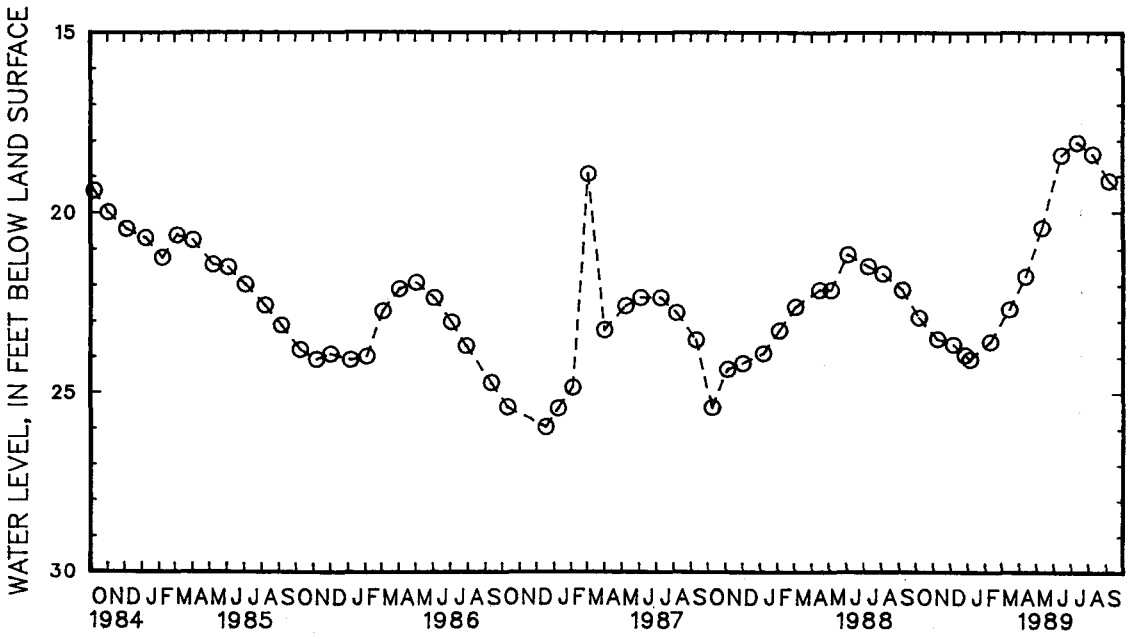


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--BA Ea 18. SITE ID.--392045076512501. PERMIT NUMBER.--BA-01-8151.
LOCATION.--Lat 39°20'45", long 76°51'25", Hydrologic Unit 02060003, at Granite.
Owner: Maryland National Guard.
AQUIFER.--Woodstock Granite of Paleozoic age. Aquifer code: 300WDCK.
WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 250 ft; casing diameter 10 in., to 50.7 ft; casing diameter 6 in. with depth to 71.3 ft; open hole.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 491 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.
REMARKS.--Water level measured 24 ft below land-surface datum, Dec. 20, 1954.
PERIOD OF RECORD.-- November 1956 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.94 ft below land-surface datum, June 24, 1972; lowest measured, 27.57 ft below land-surface datum, Sept. 13, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 6	22.90	DEC 27	23.95	MAR 14	22.66	JUN 14	18.40	SEP 6	19.12
NOV 8	23.50	JAN 5	24.07	APR 11	21.75	JUL 12	18.05		
DEC 6	23.65	FEB 9	23.57	MAY 11	20.41	AUG 8	18.37		

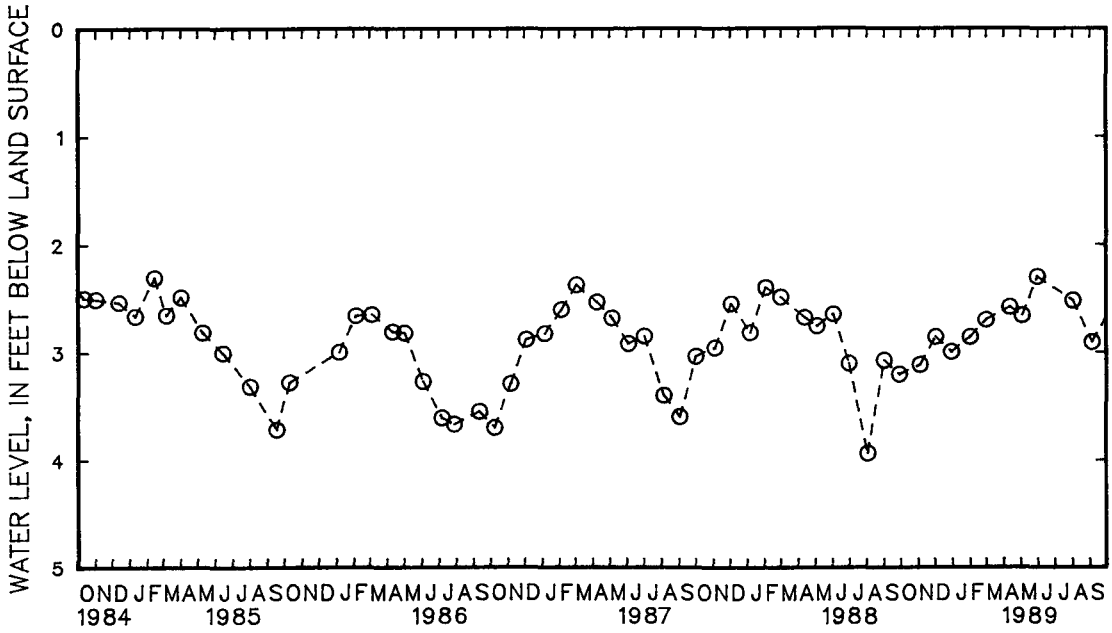


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--BA Ec 43. SITE ID.--392305076432001.
LOCATION.--Lat 39°23'05", long 76°43'20", Hydrologic Unit 02060003, near Pikesville at Druid Ridge Cemetery.
Owner: Druid Ridge Cemetery.
AQUIFER.--Baltimore Gneiss of Precambrian age. Aquifer code: 400BLMR.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
WELL CHARACTERISTICS.--Drilled, unused water-table well, depth 111 ft; casing diameter 6 in., to 40 ft; open hole.
DATUM.--Elevation of land surface is 500 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing, 1.0 ft above land-surface datum.
PERIOD OF RECORD.--March 1956 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.27 ft below land-surface datum, June 24, 1972; lowest measured, 4.69 ft below land-surface datum, Nov. 11, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 4	3.12	DEC 30	3.00	MAR 1	2.70	MAY 4	2.66	AUG 2	2.52
DEC 2	2.86	FEB 1	2.86	APR 12	2.58	MAY 31	2.30	SEP 5	2.91



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--BA Eg 155. SITE ID.--392104076203601.
LOCATION.--Lat 39°21'04", long 76°20'36", Hydrologic Unit 02060003, at Graces Quarters, Aberdeen Proving Ground.
Owner: U.S. Army
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 22 ft; casing diameter 2 in., to 7 ft; screen diameter 2 in. from 7 to 22 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from Dec. 23, 1987 to current year.
DATUM.--Elevation of land surface is 30.1 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of recorder platform, 3.84 ft above land-surface datum.
REMARKS.--Carroll Island/Graces Quarters Hydrologic Assessment Project observation well Q01.
PERIOD OF RECORD.--October 1987 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 28.21 ft above sea level, May 16 and 17, 1989; lowest measured, 21.24 ft above sea level, Sept. 15 and 16, 1988.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	21.33	21.31	21.44	21.36	22.37	22.21	22.31	22.26	23.80	23.76	25.66	25.50
2	21.35	21.33	21.45	21.37	22.21	22.17	22.50	22.31	23.76	23.61	25.52	25.44
3	21.36	21.35	21.37	21.31	22.27	22.20	22.72	22.50	23.90	23.61	25.52	25.46
4	21.37	21.34	21.38	21.32	22.23	21.97	22.69	22.40	24.33	23.91	25.46	25.38
5	21.35	21.29	21.51	21.38	22.09	22.03	22.45	22.39	24.45	24.33	25.68	25.38
6	21.30	21.29	21.45	21.36	22.09	22.04	22.56	22.42	24.50	24.41	26.13	25.68
7	21.31	21.30	21.36	21.28	22.09	22.01	22.43	22.33	24.41	24.28	26.13	26.00
8	21.33	21.31	21.35	21.28	22.00	21.88	22.75	22.44	24.38	24.25	26.06	25.98
9	21.34	21.33	21.30	21.28	21.97	21.88	22.88	22.75	24.29	24.10	26.34	26.06
10	21.40	21.34	21.38	21.29	21.96	21.93	23.07	22.89	24.21	24.14	26.37	26.26
11	21.40	21.38	21.36	21.27	21.96	21.81	23.09	23.02	24.21	24.15	26.65	26.38
12	21.39	21.38	21.29	21.27	21.88	21.78	23.71	23.10	24.17	23.78	26.71	26.34
13	21.43	21.37	21.38	21.29	22.00	21.89	23.70	23.33	23.87	23.69	26.41	26.27
14	21.42	21.37	21.35	21.32	21.91	21.82	23.65	23.33	24.77	23.88	26.46	26.37
15	21.42	21.39	21.33	21.30	21.90	21.79	24.13	23.65	25.17	24.78	26.47	26.21
16	21.39	21.37	21.41	21.32	21.89	21.79	24.06	23.88	25.12	25.10	26.20	25.91
17	21.38	21.36	21.68	21.41	21.96	21.89	23.97	23.86	25.21	25.12	26.07	25.90
18	21.43	21.36	21.62	21.59	21.89	21.82	23.97	23.85	25.32	25.21	26.28	26.08
19	21.36	21.34	21.78	21.62	21.84	21.78	23.96	23.72	25.34	25.24	26.11	26.02
20	21.34	21.30	22.25	21.79	21.86	21.79	23.86	23.58	25.23	25.16	26.58	26.04
21	21.56	21.30	22.17	21.92	21.84	21.74	23.57	23.30	25.76	25.20	26.84	26.60
22	21.57	21.46	21.92	21.87	21.74	21.69	23.44	23.32	25.87	25.76	26.68	26.51
23	21.46	21.45	21.97	21.90	21.88	21.72	23.49	23.44	25.87	25.76	26.57	26.48
24	21.46	21.45	21.97	21.89	22.20	21.86	23.49	23.38	25.76	25.63	27.34	26.58
25	21.45	21.45	21.89	21.84	22.19	22.12	23.38	23.16	25.66	25.62	27.30	27.11
26	21.45	21.43	21.86	21.83	22.13	22.10	23.65	23.16	25.89	25.66	27.10	26.87
27	21.43	21.43	22.14	21.83	22.37	22.13	23.65	23.31	25.78	25.51	26.93	26.82
28	21.43	21.43	22.45	22.17	22.58	22.19	23.43	23.26	25.67	25.57	27.01	26.92
29	21.43	21.35	22.31	22.21	22.27	22.15	23.51	23.44	---	---	27.02	26.80
30	21.35	21.35	22.41	22.28	22.41	22.27	23.75	23.52	---	---	26.95	26.80
31	21.36	21.35	---	---	22.41	22.27	23.77	23.63	---	---	27.27	26.96
MONTH	21.57	21.29	22.45	21.27	22.58	21.69	24.13	22.26	25.89	23.61	27.34	25.38

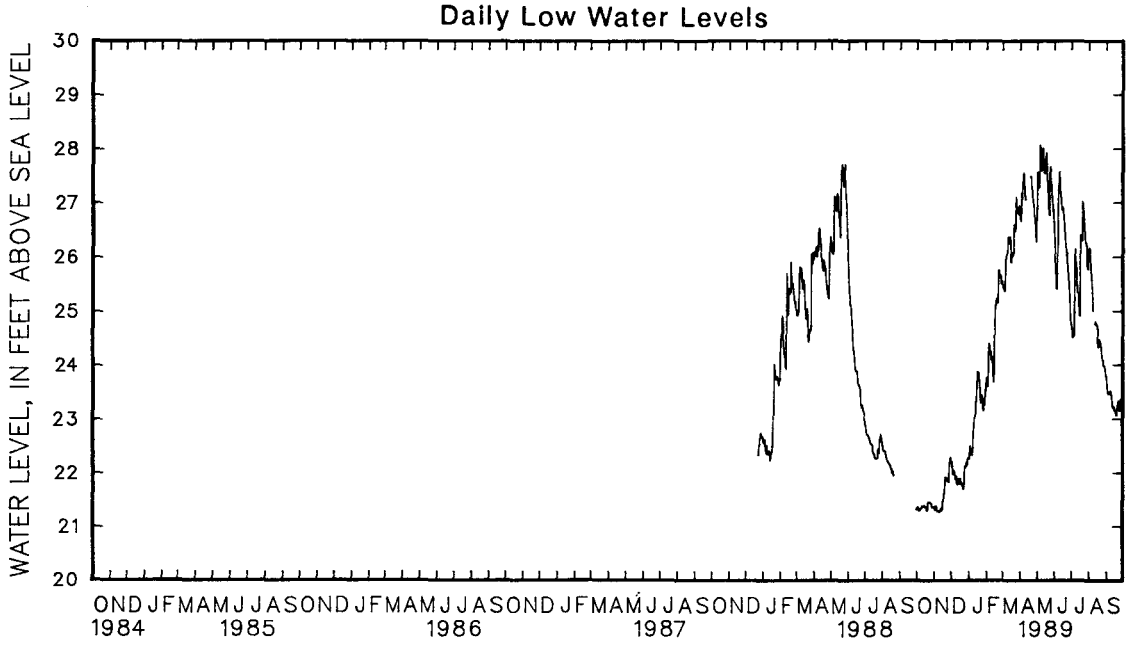
GROUND-WATER LEVELS

MARYLAND--Continued

BALTIMORE COUNTY--Continued

BA Eg 155--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	27.10	26.75	27.56	26.88	26.65	26.34	24.78	24.68	26.17	26.16	23.87	23.78
2	26.81	26.66	27.90	27.58	26.34	26.00	24.68	24.61	26.18	26.15	23.87	23.58
3	27.22	26.81	27.68	27.37	26.00	25.83	24.61	24.51	26.20	26.09	23.58	23.47
4	27.25	27.19	27.37	27.28	25.85	25.45	24.52	24.50	26.09	26.00	23.47	23.45
5	27.32	27.07	28.10	27.29	25.65	25.40	24.97	24.52	26.00	25.72	23.47	23.45
6	27.64	27.33	28.19	28.08	26.49	25.69	26.15	24.97	25.73	25.59	23.49	23.47
7	27.63	27.44	28.18	27.93	27.24	26.47	26.37	26.15	25.59	25.33	23.51	23.49
8	27.63	27.56	27.93	27.66	27.28	27.24	26.31	26.02	25.32	25.00	23.51	23.51
9	27.58	27.30	27.66	27.60	27.95	27.24	26.02	25.91	---	---	23.51	23.47
10	27.30	27.13	28.13	27.62	27.96	27.58	25.91	25.79	---	---	23.47	23.41
11	27.12	27.06	28.14	28.02	27.58	27.24	25.79	25.47	24.81	24.75	23.41	23.30
12	---	---	28.02	27.81	27.24	27.17	25.47	25.34	24.82	24.80	23.30	23.21
13	---	---	27.81	27.62	27.31	27.07	25.43	25.34	24.83	24.75	23.21	23.21
14	---	---	27.62	27.56	27.06	26.87	25.46	25.13	24.75	24.73	23.33	23.21
15	---	---	27.59	27.55	27.04	26.91	25.13	24.91	24.78	24.73	23.32	23.14
16	---	---	28.21	27.60	27.04	26.90	26.44	24.91	24.78	24.66	23.24	23.14
17	---	---	28.21	27.93	26.96	26.83	26.53	26.41	24.66	24.41	23.24	23.12
18	---	---	27.93	27.66	26.89	26.73	26.41	26.30	24.41	24.32	23.13	23.06
19	---	---	27.65	27.52	26.73	26.47	26.32	26.30	24.46	24.35	23.22	23.06
20	27.61	27.49	27.52	27.37	26.47	26.33	27.13	26.31	24.49	24.46	23.26	23.22
21	27.55	27.49	27.37	27.02	26.33	26.15	27.13	27.03	24.49	24.43	23.32	23.26
22	27.49	27.27	27.02	26.78	26.15	26.07	27.03	26.94	24.46	24.39	23.58	23.32
23	27.26	27.16	27.65	26.77	26.08	26.07	26.94	26.72	24.42	24.30	23.58	23.21
24	27.15	27.02	27.83	27.67	26.09	25.89	26.72	26.49	24.30	24.15	23.21	23.14
25	27.05	26.95	27.73	27.61	25.89	25.79	26.49	26.32	24.15	24.09	23.34	23.16
26	26.95	26.77	27.62	27.36	25.79	25.64	26.32	26.24	24.09	24.07	23.62	23.35
27	26.76	26.68	27.47	27.29	25.64	25.45	26.41	26.25	24.07	23.97	23.42	23.30
28	26.68	26.40	27.33	27.12	25.44	25.24	26.44	26.16	23.97	23.97	23.43	23.31
29	26.68	26.28	27.11	26.97	25.24	24.86	26.16	25.86	24.06	23.96	23.51	23.43
30	26.89	26.69	26.97	26.87	24.86	24.78	25.85	25.78	24.07	23.87	23.43	23.28
31	---	---	26.87	26.65	---	---	26.16	25.77	23.87	23.78	---	---
MONTH	---	---	28.21	26.65	27.96	24.78	27.13	24.50	---	---	23.87	23.06



5 YEAR HYDROGRAPH

OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--BA Eg 157. SITE ID.--392054076204001.
LOCATION.--Lat 39°20'54", long 76°20'40", Hydrologic Unit 02060003, at Graces Quarters, Aberdeen Proving Ground.
Owner: U.S. Army.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer Code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 22 ft; casing diameter 2 in., to 7 ft.; screen diameter 2 in. from 7 to 22 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from Aug. 27, 1987 to Oct. 4, 1989.
DATUM.--Elevation of land surface is 11.9 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of recorder platform, 3.39 ft above land-surface datum.
REMARKS.--Carroll Island/Graces Quarters Hydrologic Assessment Project observation well Q05.
PERIOD OF RECORD.--August 1987 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.21 ft above sea level, May 25, 1988; lowest measured, 1.86 ft above sea level, Nov. 11, 1987.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	2.45	2.41	---	---	2.71	2.66	3.16	3.15	4.56	4.54	6.67	6.59
2	2.45	2.41	---	---	2.77	2.71	3.19	3.16	4.56	4.56	6.59	6.56
3	2.45	2.40	---	---	2.83	2.77	3.22	3.19	4.56	4.56	6.59	6.55
4	2.40	2.40	---	---	2.84	2.83	3.22	3.20	4.60	4.53	6.55	6.50
5	2.40	2.40	---	---	2.91	2.84	3.20	3.20	4.66	4.60	6.60	6.50
6	2.40	2.38	---	---	2.95	2.91	3.22	3.20	4.71	4.66	6.89	6.52
7	2.38	2.37	---	---	2.99	2.95	3.23	3.22	4.72	4.71	7.09	6.89
8	2.37	2.31	---	---	2.99	2.99	3.27	3.23	4.75	4.72	7.27	7.09
9	2.38	2.35	---	---	3.01	2.99	3.27	3.27	4.75	4.75	7.42	7.27
10	2.39	2.38	---	---	3.05	3.01	3.27	3.27	4.76	4.75	7.55	7.42
11	2.39	2.34	---	---	3.06	3.05	3.27	3.27	4.81	4.76	7.86	7.56
12	2.34	2.30	---	---	3.06	3.06	3.33	3.27	4.81	4.81	7.92	7.83
13	---	---	---	---	3.09	3.06	3.35	3.30	4.82	4.80	7.90	7.81
14	---	---	---	---	3.11	3.09	3.41	3.35	4.88	4.82	7.92	7.85
15	---	---	---	---	3.13	3.11	3.52	3.41	4.96	4.88	7.91	7.71
16	---	---	---	---	3.13	3.08	3.64	3.47	5.04	4.95	7.70	7.49
17	---	---	---	---	3.09	3.08	3.77	3.64	5.18	5.04	7.49	7.44
18	---	---	---	---	3.09	3.09	3.90	3.77	5.33	5.18	7.58	7.34
19	---	---	2.27	2.19	3.09	3.09	4.01	3.90	5.46	5.32	7.34	7.23
20	---	---	2.26	2.22	3.09	3.09	4.10	4.01	5.56	5.46	7.50	7.23
21	---	---	4.12	2.20	3.10	3.09	4.12	4.10	5.76	5.57	7.82	7.51
22	---	---	2.23	2.20	3.10	3.10	4.22	4.12	6.09	5.76	7.92	7.81
23	---	---	2.31	2.23	3.10	3.10	4.28	4.22	6.39	6.09	7.98	7.92
24	---	---	2.35	2.31	3.12	3.10	4.34	4.28	6.50	6.40	9.66	7.99
25	---	---	2.41	2.35	3.13	3.12	4.38	4.34	6.70	6.50	9.66	9.26
26	---	---	2.43	2.41	3.14	3.13	4.46	4.38	6.89	6.70	9.26	8.94
27	---	---	2.49	2.43	3.14	3.14	4.46	4.46	6.84	6.68	8.94	8.81
28	---	---	2.51	2.50	3.16	3.14	4.46	4.42	6.69	6.67	8.83	8.77
29	---	---	2.56	2.51	3.16	3.14	4.50	4.47	---	---	8.77	8.47
30	---	---	2.66	2.56	3.15	3.14	4.54	4.50	---	---	8.47	8.43
31	---	---	---	---	3.15	3.15	4.54	4.54	---	---	8.71	8.46
MONTH	---	---	---	---	3.16	2.66	4.54	3.15	6.89	4.53	9.66	6.50

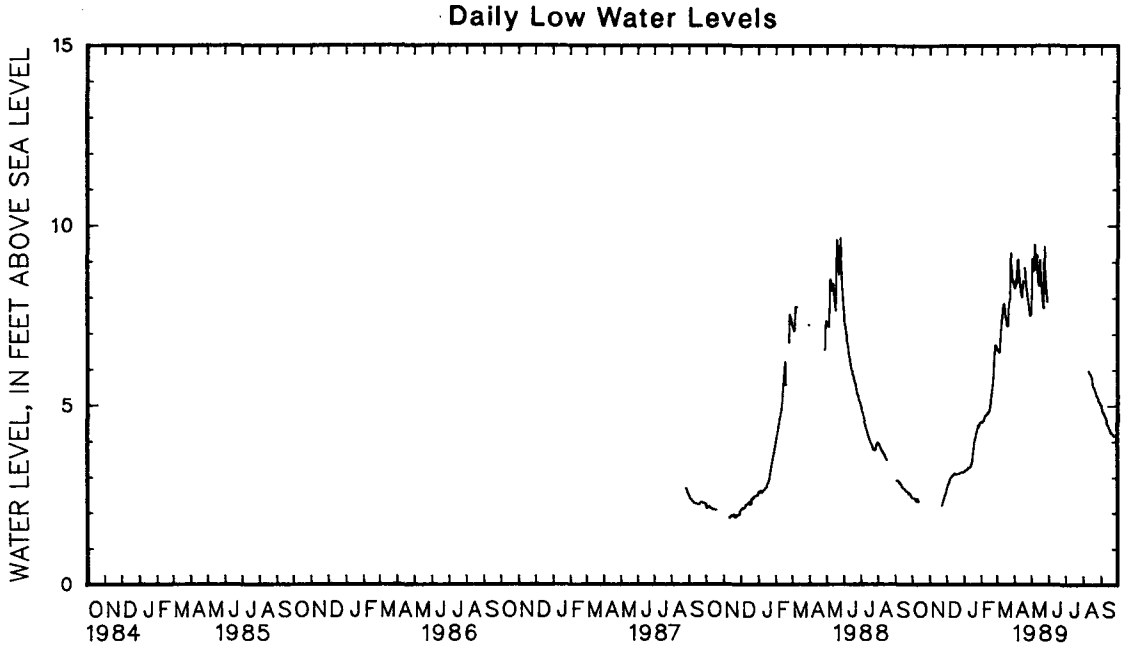
GROUND-WATER LEVELS

MARYLAND--Continued

BALTIMORE COUNTY--Continued

BA Eg 157--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.55	8.33	8.00	7.61	---	---	6.25	6.16	6.17	6.16	5.03	5.02
2	8.33	8.28	9.79	8.02	---	---	6.16	6.11	6.17	6.17	5.03	4.90
3	8.50	8.33	9.55	9.08	---	---	6.11	6.03	6.17	6.17	4.90	4.82
4	8.56	8.50	9.08	8.80	---	---	6.03	6.00	6.17	6.17	4.86	4.82
5	8.67	8.41	9.47	8.76	---	---	6.03	6.00	6.18	6.17	4.82	4.78
6	9.24	8.69	10.12	9.49	---	---	6.04	6.03	6.18	6.18	4.78	4.73
7	9.13	9.05	10.06	9.48	---	---	6.04	6.04	6.18	6.18	4.73	4.72
8	9.08	9.08	9.48	9.05	---	---	6.05	6.04	6.18	6.18	4.73	4.69
9	9.08	8.80	9.05	8.80	---	---	6.05	6.05	6.18	6.03	4.70	4.61
10	8.80	8.58	9.34	8.80	---	---	6.05	6.01	6.03	5.96	4.65	4.60
11	8.57	8.40	9.36	9.21	---	---	6.06	6.05	5.96	5.92	4.60	4.52
12	8.40	8.28	9.21	8.90	---	---	6.06	6.06	5.92	5.90	4.53	4.44
13	8.28	8.13	8.90	8.64	---	---	6.07	6.06	5.91	5.87	4.48	4.43
14	8.13	8.04	8.64	8.44	---	---	6.08	6.07	5.88	5.83	4.48	4.43
15	8.34	8.04	8.44	8.35	---	---	6.08	6.08	5.84	5.81	4.44	4.34
16	8.46	8.34	9.20	8.35	---	---	6.08	6.04	5.81	5.74	4.38	4.31
17	8.57	8.46	9.27	9.07	---	---	6.09	6.08	5.75	5.58	4.35	4.31
18	---	---	9.07	8.71	---	---	6.09	6.05	5.58	5.53	4.31	4.23
19	---	---	8.71	8.40	---	---	6.13	6.05	5.53	5.50	4.28	4.21
20	8.86	8.84	8.46	8.24	---	---	6.14	6.13	5.50	5.48	4.25	4.21
21	8.83	8.67	8.24	7.96	---	---	6.14	6.14	5.48	5.40	4.25	4.21
22	8.67	8.38	7.95	7.77	---	---	6.14	6.14	5.41	5.38	4.21	4.21
23	8.38	8.25	9.48	7.72	---	---	6.15	6.14	5.38	5.30	4.21	4.18
24	8.24	8.10	9.81	9.43	---	---	6.15	6.15	5.33	5.23	4.18	4.12
25	8.10	7.98	9.42	9.02	---	---	6.15	6.15	5.26	5.20	4.16	4.12
26	7.98	7.84	9.06	8.63	---	---	6.15	6.15	5.24	5.20	4.16	4.15
27	7.84	7.73	8.63	8.40	---	---	6.15	6.15	5.20	5.11	4.16	4.16
28	7.74	7.57	8.43	8.23	7.72	6.51	6.16	6.16	5.13	5.10	4.16	4.12
29	7.56	7.52	8.22	8.07	6.51	6.33	6.16	6.16	5.10	5.10	4.16	4.12
30	7.61	7.54	8.07	7.90	6.33	6.25	6.16	6.16	5.10	5.00	4.16	4.10
31	---	---	---	---	---	---	6.16	6.16	5.04	5.00	---	---
MONTH	---	---	---	---	---	---	6.25	6.00	6.18	5.00	5.03	4.10



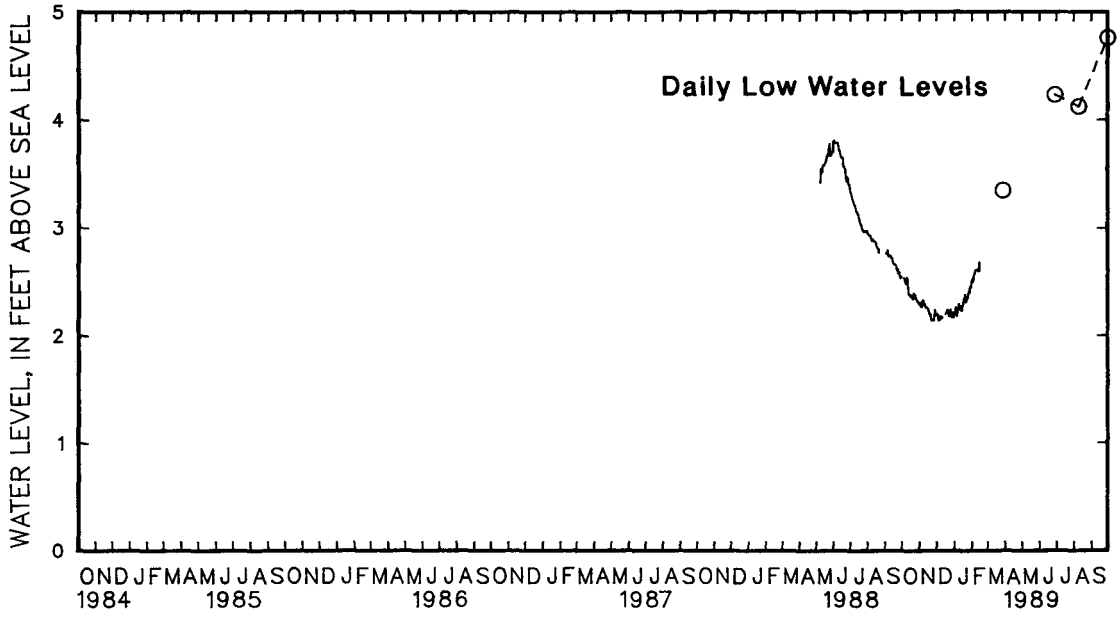
5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--BA Eg 161. SITE ID.--392102076202901.
LOCATION.--Lat 39°21'02", long 76°20'29", Hydrologic Unit 02060003, at Graces Quarters, Aberdeen Proving Ground.
Owner: U.S. Army.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 43 ft; casing diameter 4 in., to 33 ft; screen diameter 4 in. from 33 to 43 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from May 7, 1988 to Oct. 1, 1989.
DATUM.--Elevation of land surface is 37.4 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of recorder platform, 2.80 ft above land-surface datum.
REMARKS.--Carroll Island/Graces Quarters Hydrologic Assessment Project observation well Q13.
PERIOD OF RECORD.--March 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.76 ft above sea level, Sept. 30, 1989; lowest measured, 2.13 ft above sea level, Nov. 22, 23, 24, and 25, 1989 and Dec. 4 and 5, 1989.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	2.59	---	2.30	2.28	2.20	2.19	2.20	2.18	2.54	2.50	---	---
2	2.60	---	2.31	2.29	2.19	2.18	2.25	2.20	2.53	2.49	---	---
3	2.58	---	2.29	2.26	2.19	2.18	2.30	2.25	2.54	2.52	---	---
4	2.54	---	2.26	2.26	2.19	2.13	2.30	2.19	2.54	2.50	---	---
5	2.54	2.52	2.31	2.26	2.14	2.13	2.20	2.17	2.59	2.54	---	---
6	2.53	2.51	2.33	2.31	2.17	2.14	2.23	2.20	2.61	2.59	---	---
7	2.51	2.49	2.33	2.32	2.18	2.17	2.26	2.23	2.63	2.60	---	---
8	2.49	2.47	2.32	2.31	2.18	2.15	2.31	2.25	2.66	2.60	---	---
9	2.53	2.47	2.31	2.28	2.16	2.15	2.31	2.28	2.63	2.60	---	---
10	2.58	2.53	2.28	2.28	2.22	2.16	2.28	2.27	2.62	2.60	---	---
11	2.58	2.51	2.28	2.26	---	---	2.27	2.23	2.66	2.61	---	---
12	2.50	2.43	2.26	2.25	---	---	2.30	2.23	2.64	2.59	---	---
13	2.43	2.37	2.25	2.25	---	---	2.30	2.23	2.67	2.59	---	---
14	2.37	2.37	2.25	2.25	---	---	2.27	2.22	2.68	2.67	---	---
15	2.37	2.37	2.25	2.24	---	---	2.30	2.27	---	---	---	---
16	2.37	2.35	2.24	2.23	2.24	2.19	2.31	2.28	---	---	---	---
17	2.36	2.35	2.23	2.21	2.22	2.20	2.34	2.30	---	---	---	---
18	2.39	2.36	2.21	2.19	2.22	2.21	2.37	2.33	---	---	---	---
19	2.38	2.35	2.19	2.19	2.24	2.22	2.38	2.33	---	---	---	---
20	2.35	2.33	2.23	2.19	2.25	2.23	2.41	2.37	---	---	---	---
21	2.39	2.33	2.22	2.14	2.25	2.21	2.37	2.30	---	---	---	---
22	2.39	2.38	2.14	2.13	2.21	2.17	2.33	2.31	---	---	---	---
23	2.38	2.37	2.14	2.13	2.19	2.17	2.34	2.33	---	---	---	---
24	2.39	2.37	2.14	2.13	2.25	2.19	2.37	2.34	---	---	---	---
25	2.38	2.36	2.16	2.13	2.25	2.23	2.38	2.35	---	---	---	---
26	2.36	2.33	2.18	2.16	2.23	2.17	2.49	2.38	---	---	---	---
27	2.33	2.32	2.24	2.18	2.20	2.16	2.45	2.40	---	---	---	---
28	2.33	2.32	2.24	2.23	2.27	2.20	2.43	2.39	---	---	---	---
29	2.32	2.30	2.23	2.18	2.23	2.16	2.46	2.44	---	---	---	---
30	2.30	2.29	2.20	2.18	2.19	2.16	2.50	2.45	---	---	---	---
31	2.29	2.28	---	---	2.20	2.20	2.52	2.44	---	---	---	---
MONTH	2.60	---	2.33	2.13	---	---	2.52	2.17	---	---	---	---

BA Eg 161--Continued



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--BA Eg 162. SITE ID.--392045076202501.
LOCATION.--Lat 39°20'45", long 76°20'25", Hydrologic Unit 02060003, at Graces Quarters, Aberdeen Proving Ground.
Owner: U.S. Army.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 87 ft; casing diameter 4 in., to 77 ft; screen diameter 4 in. from 77 to 87 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from May 12, 1988 to Oct. 4, 1989.
DATUM.--Elevation of land-surface is 12.1 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of recorder platform, 2.83 ft above land-surface datum.
REMARKS.--Carroll Island/Graces Quarters Hydrologic Assessment Project observation well Q16A.
PERIOD OF RECORD.--February 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.12 ft above sea level, May 5, 1989; lowest measured, .87 ft above sea level, Oct. 13, 1988.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	2.00	1.49	1.86	1.52	2.05	1.57	2.04	1.73	2.91	2.39	3.64	3.17
2	2.08	1.61	1.97	1.44	1.86	1.56	2.42	1.95	2.65	2.18	3.21	2.79
3	1.98	1.23	1.49	1.11	1.93	1.66	2.39	2.02	2.95	2.30	3.25	2.88
4	1.69	1.35	1.55	1.14	1.80	1.07	2.10	1.22	2.63	1.95	3.56	2.96
5	2.05	1.60	2.26	1.39	2.01	1.40	2.32	1.22	2.80	2.34	3.82	3.18
6	1.86	1.29	2.30	1.89	2.19	1.55	2.38	2.02	3.03	2.49	3.50	2.90
7	1.57	1.23	1.86	1.38	2.09	1.76	2.48	1.88	2.79	2.28	3.35	2.82
8	1.57	1.15	1.79	1.23	1.93	1.49	2.78	2.15	2.78	2.32	3.51	3.13
9	2.42	1.57	1.52	.98	2.13	1.60	2.48	1.81	2.69	1.81	3.68	3.08
10	2.36	1.94	2.10	1.33	2.28	1.66	2.16	1.66	2.45	1.96	3.79	3.41
11	2.07	1.30	1.91	1.12	2.23	1.33	2.09	1.63	2.78	2.13	4.18	3.62
12	1.43	1.05	1.71	.98	2.10	1.30	2.46	1.72	2.56	2.15	4.19	3.50
13	1.33	.87	1.90	1.41	2.26	1.82	2.46	1.54	2.71	2.05	3.95	3.28
14	1.80	1.06	1.87	1.32	2.49	1.71	2.16	1.53	3.04	2.47	4.17	3.70
15	1.80	1.31	1.84	1.16	2.59	1.62	2.50	2.03	2.90	2.31	4.34	3.76
16	1.74	1.25	1.79	1.24	1.92	1.21	2.40	1.96	2.62	2.25	3.77	3.31
17	1.88	1.50	1.93	1.28	2.17	1.79	2.78	2.13	2.72	2.12	3.88	3.43
18	2.00	1.65	1.44	1.16	2.09	1.69	2.56	1.98	2.87	2.48	3.94	3.47
19	1.86	1.25	1.57	1.17	2.35	1.88	2.70	2.20	3.23	2.65	3.45	2.76
20	1.70	1.39	2.12	1.38	2.27	1.75	2.59	2.21	3.16	2.84	4.19	3.01
21	1.92	1.47	1.85	1.11	1.94	1.56	2.20	1.49	3.52	2.85	4.09	3.47
22	2.02	1.57	1.58	.94	1.79	1.20	2.41	1.90	3.42	2.84	3.64	3.25
23	1.96	1.48	1.86	1.24	2.27	1.66	2.40	2.00	3.02	2.60	3.86	3.51
24	2.09	1.72	1.89	1.29	2.53	1.87	2.69	2.17	2.77	2.05	4.05	3.53
25	2.05	1.45	2.17	1.57	2.40	1.66	2.63	2.29	3.64	2.15	4.31	3.83
26	1.91	1.33	2.11	1.59	2.01	1.39	2.95	2.29	4.00	3.59	4.45	3.88
27	1.89	1.29	2.37	1.88	2.25	1.45	2.94	2.20	3.62	3.09	4.17	3.73
28	1.88	1.52	2.36	1.52	2.45	2.07	2.67	1.98	3.39	2.93	4.35	3.93
29	1.79	1.02	1.76	1.36	2.11	1.25	2.68	2.32	---	---	4.18	3.67
30	1.65	1.12	2.01	1.75	2.15	1.57	2.72	2.17	---	---	4.13	3.56
31	1.73	1.21	---	---	2.23	1.83	2.86	2.22	---	---	4.77	4.15
MONTH	2.42	.87	2.37	.94	2.59	1.07	2.95	1.22	4.00	1.81	4.77	2.76

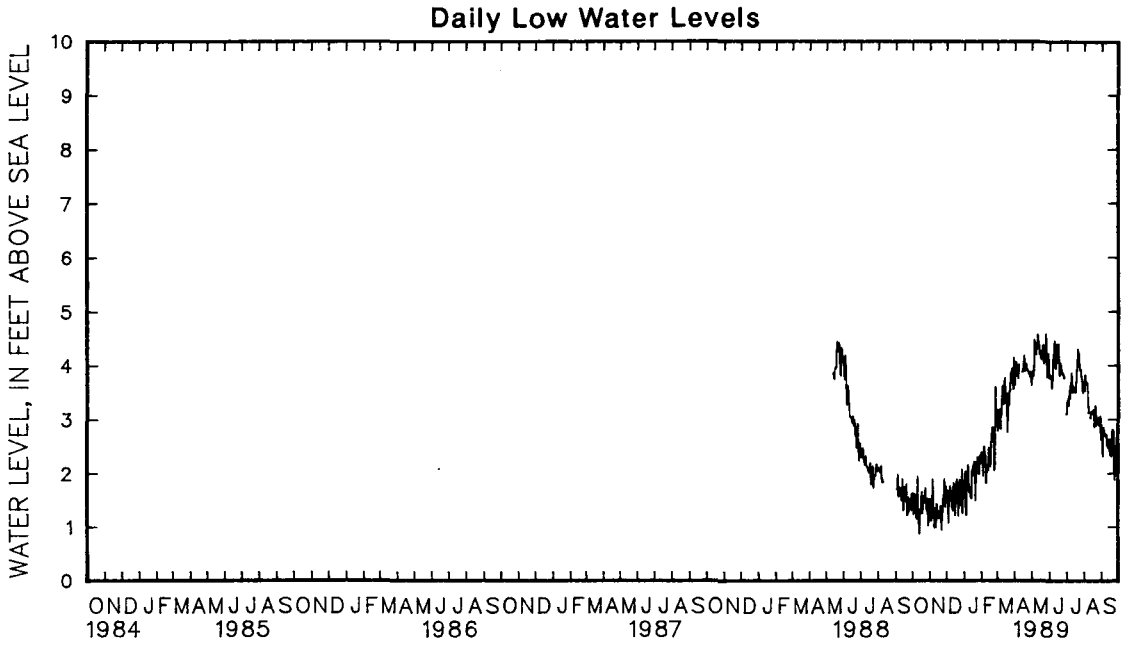
GROUND-WATER LEVELS

MARYLAND--Continued

BALTIMORE COUNTY--Continued

BA Eg 162--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	4.27	3.67	4.45	3.77	4.39	3.80	3.89	3.31	4.07	3.52	3.39	2.89
2	4.18	3.64	4.31	3.88	4.28	3.78	3.95	3.34	4.31	3.82	3.34	2.48
3	4.56	4.06	4.27	3.80	4.41	3.77	3.91	3.38	4.21	3.71	2.99	2.31
4	4.54	4.06	4.70	3.89	4.23	3.56	3.83	3.25	4.20	3.64	3.25	2.83
5	4.39	3.89	5.12	4.48	4.46	3.66	4.11	3.53	4.20	3.65	3.26	2.84
6	4.24	3.80	4.95	4.34	4.46	3.86	3.89	3.39	3.99	3.66	3.23	2.74
7	4.53	4.00	4.79	4.23	4.56	4.14	4.04	3.66	4.01	3.32	3.18	2.71
8	4.68	3.76	4.79	4.20	4.64	4.21	4.04	3.58	3.69	3.12	3.16	2.69
9	4.73	4.01	4.88	4.42	4.73	4.45	4.23	3.85	---	---	3.16	2.72
10	---	---	4.90	4.32	4.56	4.01	4.33	3.73	---	---	3.21	2.70
11	---	---	4.85	4.58	4.43	3.92	4.08	3.50	3.24	3.02	3.16	2.50
12	---	---	4.85	4.46	4.92	4.38	3.94	3.60	3.46	3.13	2.92	2.49
13	---	---	4.76	4.38	4.64	4.04	4.20	3.58	3.67	3.13	3.03	2.47
14	4.14	3.88	4.56	4.21	4.75	4.10	4.05	3.58	3.64	3.13	3.09	2.63
15	4.30	3.93	4.61	4.27	4.82	4.38	4.10	3.50	3.62	3.11	3.06	2.51
16	4.28	3.90	4.47	4.17	4.76	4.38	4.23	3.50	3.68	3.18	3.16	2.34
17	4.54	4.18	4.84	4.11	4.44	3.96	4.03	3.68	3.62	3.09	3.12	2.62
18	4.41	3.98	4.78	4.24	4.33	3.79	4.52	3.89	3.40	2.98	2.98	2.31
19	4.32	3.90	4.70	4.26	4.43	3.98	4.52	3.97	3.60	2.86	3.22	2.36
20	4.44	4.01	4.78	4.38	4.43	4.02	4.82	4.30	3.67	3.25	3.32	2.81
21	4.45	4.02	4.67	4.03	4.41	3.91	4.60	4.16	3.67	3.06	3.27	2.50
22	4.34	3.91	4.66	4.05	4.26	3.86	4.63	4.21	3.50	2.88	3.99	2.79
23	4.34	3.91	4.73	4.28	4.24	3.82	4.58	3.93	3.52	2.97	4.11	2.14
24	4.37	3.89	4.78	4.24	4.19	3.82	4.33	3.90	3.48	2.97	2.45	1.88
25	4.30	3.86	5.01	4.58	4.18	3.81	4.49	3.91	3.63	3.00	2.84	2.47
26	4.31	3.87	5.03	4.18	4.24	3.75	4.47	3.79	3.57	3.03	2.91	2.49
27	4.27	3.79	4.45	3.77	---	---	4.34	3.74	3.42	2.89	2.74	2.21
28	4.40	3.87	4.38	3.84	---	---	4.33	3.55	3.46	2.89	3.01	2.65
29	4.32	3.77	4.65	4.20	3.87	3.10	3.88	3.49	3.51	3.06	2.97	2.67
30	3.98	3.63	4.57	4.02	3.75	3.10	4.29	3.68	3.40	2.84	2.81	2.09
31	---	---	4.26	3.75	---	---	4.46	3.67	3.08	2.63	---	---
MONTH	---	---	5.12	3.75	---	---	4.82	3.25	---	---	4.11	1.88



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--BA Eg 163. SITE ID.--392045076202502.
LOCATION.--Lat 39°20'45", long 76°20'25", Hydrologic Unit 02060003, at Graces Quarters, Aberdeen Proving Ground.
Owner: U.S. Army.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 20 ft; casing diameter 4 in., to 5 ft; screen diameter 4 in. from 5 to 20 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from May 12, 1988 to Oct. 4, 1989.
DATUM.--Elevation of land surface is 12 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of recorder platform, 2.30 ft above land-surface datum.
REMARKS.--Carroll Island/Graces Quarters Hydrologic Assessment Project observation well Q16B.
PERIOD OF RECORD.--May 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.30 ft above sea level, Mar. 24, 1989; lowest measured, 1.67 ft above sea level, Nov. 12, 1988.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	2.02	1.97	1.77	1.72	2.54	2.44	---	---	---	---	---	---
2	2.03	2.00	1.80	1.76	2.44	2.43	---	---	---	---	---	---
3	2.01	1.96	1.76	1.70	2.43	2.42	---	---	---	---	---	---
4	1.96	1.95	1.71	1.70	2.42	2.35	---	---	---	---	---	---
5	2.00	1.95	1.88	1.71	2.35	2.35	---	---	---	---	---	---
6	1.98	1.91	1.91	1.88	2.37	2.35	---	---	---	---	---	---
7	1.91	1.88	1.88	1.76	2.37	2.37	---	---	---	---	---	---
8	1.87	1.85	1.76	1.74	2.37	2.36	---	---	---	---	---	---
9	2.04	1.85	1.74	1.68	2.36	2.36	---	---	---	---	---	---
10	2.05	2.00	1.81	1.69	2.36	2.36	---	---	---	---	---	---
11	2.00	1.85	1.81	1.70	2.36	2.36	---	---	---	---	10.77	10.60
12	1.85	1.78	1.70	1.67	2.36	2.36	---	---	---	---	10.61	10.23
13	1.78	1.73	1.76	1.70	2.36	2.35	---	---	---	---	10.22	9.98
14	1.76	1.75	1.76	1.74	2.35	2.35	---	---	---	---	9.98	9.80
15	1.78	1.77	1.75	1.71	2.55	2.35	---	---	---	---	9.81	9.52
16	1.77	1.75	1.73	1.71	2.47	2.42	---	---	---	---	9.51	9.23
17	1.79	1.75	1.80	1.73	2.49	2.45	---	---	---	---	9.23	9.12
18	1.83	1.78	1.75	1.73	2.48	2.46	---	---	---	---	9.12	9.04
19	1.82	1.74	1.78	1.73	---	---	---	---	---	---	9.10	9.00
20	1.74	1.72	1.92	1.78	---	---	---	---	---	---	9.45	8.94
21	1.83	1.72	1.91	1.87	---	---	---	---	---	---	10.93	9.51
22	1.84	1.82	1.87	1.84	---	---	---	---	---	---	10.70	10.19
23	1.83	1.82	1.93	1.87	---	---	---	---	---	---	10.19	9.94
24	1.87	1.83	1.92	1.92	---	---	---	---	---	---	11.30	9.96
25	1.86	1.81	2.04	1.92	---	---	---	---	---	---	11.13	10.74
26	1.85	1.79	2.06	2.03	---	---	---	---	---	---	10.74	10.38
27	1.79	1.76	2.20	2.06	---	---	---	---	---	---	10.38	10.19
28	1.80	1.78	2.51	2.20	---	---	---	---	---	---	10.19	10.06
29	1.78	1.70	2.58	2.51	---	---	---	---	---	---	10.06	9.82
30	1.71	1.69	2.57	2.54	---	---	---	---	---	---	9.84	9.74
31	1.72	1.69	---	---	---	---	---	---	---	---	10.87	9.86
MONTH	2.05	1.69	2.58	1.67	---	---	---	---	---	---	---	---

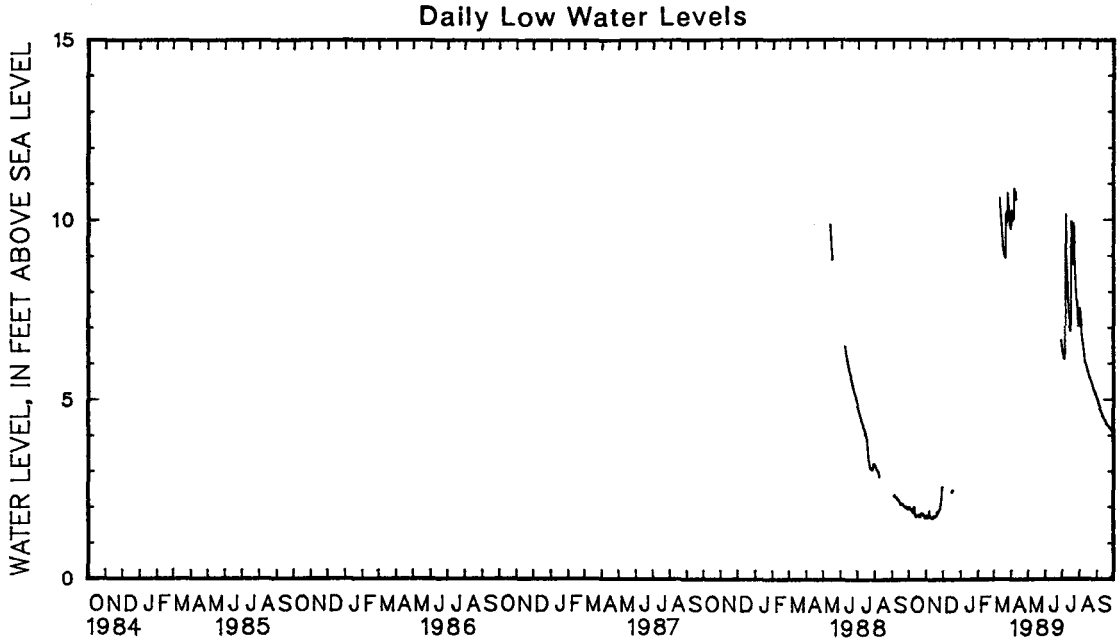
GROUND-WATER LEVELS

MARYLAND--Continued

BALTIMORE COUNTY--Continued

BA Eg 163--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	10.86	10.24	---	---	---	---	6.49	6.38	7.65	7.53	5.04	5.00
2	10.23	9.98	---	---	---	---	6.38	6.28	7.59	7.42	5.00	4.95
3	10.54	9.96	---	---	---	---	6.28	6.18	7.42	7.19	4.95	4.89
4	10.44	10.20	---	---	---	---	6.18	6.12	7.19	7.00	4.89	4.84
5	11.20	10.02	---	---	---	---	6.29	6.11	6.99	6.78	4.84	4.80
6	11.24	10.85	---	---	---	---	11.03	6.30	6.79	6.65	4.80	4.76
7	11.15	10.66	---	---	---	---	10.86	10.14	6.65	6.52	4.76	4.72
8	11.12	10.75	---	---	---	---	10.14	9.34	6.52	6.38	4.72	4.68
9	10.95	10.55	---	---	---	---	9.34	8.79	6.38	6.25	4.68	4.65
10	---	---	---	---	---	---	8.79	8.26	6.25	6.07	4.65	4.61
11	---	---	---	---	---	---	8.26	7.76	6.07	6.01	4.61	4.56
12	---	---	---	---	---	---	7.75	7.45	6.01	5.96	4.56	4.51
13	---	---	---	---	---	---	7.45	7.36	5.96	5.90	4.51	4.48
14	---	---	---	---	---	---	7.36	7.11	5.90	5.84	4.48	4.44
15	---	---	---	---	---	---	7.11	6.90	5.84	5.80	4.44	4.41
16	---	---	---	---	---	---	10.87	6.89	5.80	5.74	4.41	4.38
17	---	---	---	---	---	---	10.78	9.94	5.74	5.67	4.38	4.34
18	---	---	---	---	---	---	9.94	9.26	5.67	5.62	4.35	4.31
19	---	---	---	---	---	---	9.26	8.80	5.62	5.59	4.31	4.29
20	---	---	---	---	---	---	11.11	8.76	5.59	5.54	4.29	4.27
21	---	---	---	---	---	---	10.61	9.91	5.54	5.51	4.27	4.24
22	---	---	---	---	---	---	9.91	9.38	5.51	5.45	4.24	4.24
23	---	---	---	---	---	---	9.38	8.85	5.46	5.42	4.24	4.21
24	---	---	---	---	---	---	8.85	8.40	5.42	5.35	4.21	4.18
25	---	---	---	---	---	---	8.39	8.03	5.35	5.31	4.18	4.17
26	---	---	---	---	---	---	8.03	7.77	5.31	5.26	4.17	4.15
27	---	---	---	---	---	---	7.78	7.67	5.26	5.22	4.15	4.13
28	---	---	---	---	---	---	7.67	7.40	5.22	5.17	4.13	4.12
29	---	---	---	---	6.80	6.63	7.40	7.16	5.17	5.14	4.12	4.12
30	---	---	---	---	6.63	6.50	7.15	7.03	5.14	5.09	4.12	4.09
31	---	---	---	---	---	---	7.53	7.03	5.09	5.04	---	---
MONTH	---	---	---	---	---	---	11.11	6.11	7.65	5.04	5.04	4.09



5 YEAR HYDROGRAPH

OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

GROUND-WATER LEVELS

MARYLAND--Continued

BALTIMORE COUNTY--Continued

WELL NUMBER.--BA Eg 165. SITE ID.--392054076204401.
LOCATION.--Lat 39°20'54", long 76°20'44", Hydrologic Unit 02060003, at Graces Quarters, Aberdeen Proving Ground.
Owner: U.S. Army.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 20 ft; casing diameter 4 in., to 10 ft; screen diameter 4 in. from 10 to 20 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from May 4, 1988 to Oct. 4, 1989.
DATUM.--Elevation of land surface is 8.4 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of recorder platform, 2.50 ft above land-surface datum.
REMARKS.--Carroll Island/Graces Quarters Hydrologic Assessment Project observation well Q18A.
PERIOD OF RECORD.--February 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.10 ft above sea level, May 24 and 25, 1988; lowest measured, 1.80 ft above sea level, Oct. 20 and 21, 1988.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	2.01	2.00	1.88	1.86	3.07	3.04	3.29	3.26	4.57	4.47	6.11	6.00
2	2.00	1.99	1.88	1.88	3.11	3.07	3.33	3.29	4.54	4.48	6.01	5.98
3	1.99	1.98	1.88	1.88	3.14	3.11	3.36	3.33	4.80	4.49	5.99	5.93
4	1.98	1.97	1.89	1.88	3.14	3.12	3.36	3.32	4.81	4.80	5.93	5.89
5	1.97	1.96	1.91	1.88	3.16	3.14	3.34	3.32	4.81	4.79	6.04	5.89
6	1.96	1.95	1.90	1.90	3.18	3.16	3.35	3.33	4.82	4.79	6.68	5.99
7	1.95	1.94	1.90	1.90	3.18	3.18	3.35	3.32	4.80	4.77	6.62	6.52
8	1.94	1.93	1.91	1.90	3.18	3.16	3.43	3.36	4.81	4.72	6.53	6.50
9	1.93	1.92	1.90	1.90	3.19	3.16	3.52	3.43	4.78	4.73	6.64	6.48
10	1.92	1.91	1.92	1.90	3.19	3.19	3.57	3.52	4.78	4.75	6.74	6.57
11	1.91	1.90	1.92	1.90	3.19	3.15	3.60	3.57	4.78	4.71	6.87	6.74
12	1.90	1.90	1.90	1.90	3.16	3.14	3.93	3.60	4.76	4.65	6.90	6.75
13	1.90	1.89	1.92	1.90	3.18	3.16	3.93	3.89	4.69	4.63	6.81	6.71
14	1.89	1.89	1.92	1.90	3.17	3.15	3.96	3.89	5.23	4.70	6.83	6.73
15	1.89	1.88	1.92	1.90	3.17	3.13	4.36	3.97	5.27	5.17	6.84	6.61
16	1.88	1.86	1.93	1.90	3.14	3.13	4.41	4.36	5.29	5.24	6.60	6.50
17	1.86	1.84	2.16	1.90	3.15	3.14	4.50	4.42	5.33	5.28	6.53	6.46
18	1.85	1.84	2.18	2.16	3.15	3.12	4.58	4.50	5.37	5.33	6.60	6.50
19	1.85	1.84	2.22	2.18	3.13	3.12	4.60	4.56	5.39	5.34	6.52	6.43
20	1.84	1.80	2.40	2.22	3.13	3.11	---	---	5.39	5.37	6.78	6.41
21	1.84	1.80	2.41	2.28	3.12	3.09	---	---	6.16	5.34	7.02	6.80
22	1.91	1.84	2.43	2.41	3.09	3.08	4.58	4.55	6.26	6.03	6.94	6.83
23	1.91	1.90	2.44	2.43	3.12	3.08	4.59	4.57	6.27	6.25	6.83	6.79
24	1.91	1.90	2.44	2.44	3.22	3.12	---	---	6.28	6.27	8.02	6.81
25	1.90	1.90	2.45	2.44	3.24	3.22	4.54	4.47	6.27	6.24	7.91	7.24
26	1.90	1.88	2.45	2.44	3.24	3.24	4.58	4.47	6.30	6.23	7.24	7.08
27	1.88	1.88	2.54	2.45	3.26	3.24	4.56	4.46	6.22	6.11	7.08	6.99
28	1.88	1.88	2.94	2.55	3.29	3.23	4.49	4.45	6.17	6.11	6.99	6.92
29	1.88	1.86	2.99	2.94	3.25	3.23	4.50	4.48	---	---	6.93	6.84
30	1.87	1.86	3.04	2.99	3.28	3.26	4.59	4.50	---	---	---	---
31	1.87	1.82	---	---	3.29	3.27	4.58	4.53	---	---	---	---
MONTH	2.01	1.80	3.04	1.86	3.29	3.04	---	---	6.30	4.47	---	---

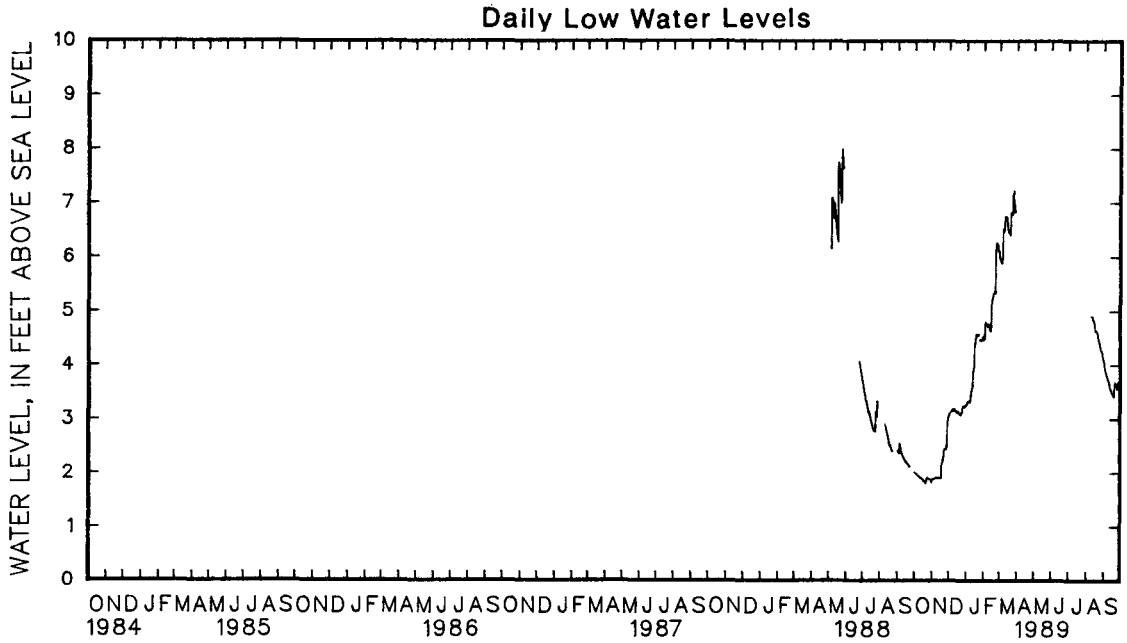
GROUND-WATER LEVELS

MARYLAND--Continued

BALTIMORE COUNTY--Continued

BA Eg 165--Continued

DAY	APRIL MAX	APRIL MIN	MAY MAX	MAY MIN	JUNE MAX	JUNE MIN	JULY MAX	JULY MIN	AUGUST MAX	AUGUST MIN	SEPTEMBER MAX	SEPTEMBER MIN
1	---	---	---	---	---	---	---	---	---	---	4.11	4.08
2	---	---	---	---	---	---	---	---	---	---	4.08	3.98
3	---	---	---	---	---	---	---	---	---	---	3.98	3.92
4	---	---	---	---	---	---	---	---	---	---	3.93	3.87
5	---	---	---	---	---	---	---	---	---	---	3.89	3.84
6	---	---	---	---	---	---	---	---	---	---	3.85	3.80
7	---	---	---	---	---	---	---	---	---	---	3.81	3.78
8	---	---	---	---	---	---	---	---	---	---	3.78	3.74
9	---	---	---	---	---	---	---	---	---	---	3.74	3.70
10	---	---	---	---	---	---	---	---	4.97	4.90	3.70	3.66
11	---	---	---	---	---	---	---	---	4.92	4.90	3.66	3.61
12	---	---	---	---	---	---	---	---	4.92	4.90	3.61	3.56
13	---	---	---	---	---	---	---	---	4.94	4.85	3.57	3.54
14	---	---	---	---	---	---	---	---	4.85	4.82	3.55	3.52
15	---	---	---	---	---	---	---	---	4.82	4.80	3.52	3.47
16	---	---	---	---	---	---	---	---	4.80	4.71	3.48	3.47
17	---	---	---	---	---	---	---	---	4.71	4.63	3.48	3.44
18	---	---	---	---	---	---	---	---	4.64	4.62	3.44	3.41
19	---	---	---	---	---	---	---	---	4.72	4.63	3.68	3.41
20	---	---	---	---	---	---	---	---	4.68	4.61	3.69	3.67
21	---	---	---	---	---	---	---	---	4.62	4.59	3.67	3.63
22	---	---	---	---	---	---	---	---	4.59	4.53	3.69	3.65
23	---	---	---	---	---	---	---	---	4.55	4.45	3.69	3.60
24	---	---	---	---	---	---	---	---	4.47	4.42	3.60	3.56
25	---	---	---	---	---	---	---	---	4.42	4.36	3.57	3.56
26	---	---	---	---	---	---	---	---	4.36	4.32	3.87	3.57
27	---	---	---	---	---	---	---	---	4.32	4.27	3.77	3.68
28	---	---	---	---	---	---	---	---	4.28	4.25	3.68	3.67
29	---	---	---	---	---	---	---	---	4.26	4.23	3.67	3.64
30	---	---	---	---	---	---	---	---	4.24	4.15	3.64	3.58
31	---	---	---	---	---	---	---	---	4.15	4.11	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	4.11	3.41



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--BA Eg 166. SITE ID.--392054076204402.
LOCATION.--Lat 39°20'54", long 76°20'44", Hydrologic Unit 02060003, at Graces Quarters, Aberdeen Proving Ground.
Owner: U.S. Army.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 75 ft; casing diameter 4 in., to 65 ft; screen diameter 4 in. from 65 to 75 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from May 4, 1988 to Oct. 4, 1989.
DATUM.--Elevation of land surface is 8.1 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of recorder platform, 2.14 ft above land-surface datum.
REMARKS.--Carroll Island/Graces Quarters Hydrologic Assessment Project observation well Q18B.
PERIOD OF RECORD.--February 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.37 ft above sea level, June 28, 1989; lowest measured, 1.17 ft above sea level, Oct. 13, 1988.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	1.66	1.52	1.47	1.36	2.09	1.96	2.15	2.09	2.90	2.81	3.67	3.55
2	1.70	1.59	1.56	1.43	2.00	1.95	2.32	2.15	2.81	2.68	3.57	3.43
3	1.68	1.45	1.42	1.27	2.03	1.95	2.37	2.27	2.89	2.70	3.47	3.42
4	1.53	1.45	1.34	1.27	2.01	1.80	2.32	1.97	2.83	2.70	3.55	3.40
5	1.70	1.51	1.73	1.30	1.98	1.81	2.21	1.96	2.91	2.81	3.75	3.52
6	1.63	1.45	1.79	1.69	2.07	1.92	2.31	2.21	3.02	2.90	3.72	3.63
7	1.45	1.38	1.69	1.46	2.07	2.02	2.35	2.17	3.01	2.84	3.67	3.61
8	1.38	1.33	1.48	1.38	2.03	1.91	2.58	2.30	2.89	2.82	3.74	3.67
9	1.86	1.38	1.46	1.26	2.04	1.93	2.56	2.28	2.89	2.66	3.87	3.71
10	1.91	1.76	1.63	1.33	2.11	1.97	2.34	2.22	2.71	2.66	3.97	3.86
11	1.80	1.48	1.62	1.31	2.12	1.88	2.29	2.19	2.82	2.68	4.18	3.97
12	1.48	1.32	1.36	1.24	1.96	1.82	2.50	2.23	2.78	2.66	4.24	4.02
13	1.33	1.17	1.54	1.37	2.09	1.97	2.52	2.30	2.77	2.61	4.07	3.93
14	1.33	1.18	1.54	1.40	2.16	1.99	2.41	2.26	3.07	2.79	4.19	4.06
15	1.36	1.28	1.51	1.34	2.31	2.03	2.68	2.42	3.09	2.96	4.29	4.11
16	1.33	1.24	1.43	1.35	2.03	1.90	2.68	2.62	3.08	2.99	4.10	3.86
17	1.40	1.31	1.60	1.44	2.10	1.98	2.82	2.64	3.04	2.96	3.95	3.84
18	1.53	1.40	1.47	1.41	2.06	1.99	2.77	2.66	3.11	3.04	4.01	3.81
19	1.48	1.27	1.50	1.41	2.20	2.05	2.78	2.67	3.25	3.11	3.92	3.62
20	1.34	1.27	1.84	1.50	2.16	2.05	2.80	2.69	3.26	3.21	4.06	3.62
21	1.54	1.28	1.78	1.59	2.12	2.00	2.71	2.42	3.58	3.24	4.14	4.02
22	1.60	1.50	1.60	1.51	2.00	1.86	2.60	2.43	3.58	3.49	4.02	3.92
23	1.58	1.46	1.72	1.60	2.14	1.93	2.60	2.55	3.50	3.40	4.03	3.94
24	1.67	1.55	1.74	1.62	2.33	2.09	2.71	2.59	3.40	3.24	4.43	4.03
25	1.62	1.45	1.90	1.70	2.33	2.10	2.71	2.60	3.59	3.23	4.55	4.42
26	1.61	1.42	1.90	1.77	2.13	1.98	2.91	2.64	3.93	3.59	4.60	4.44
27	1.51	1.36	2.14	1.87	2.17	1.98	2.91	2.66	3.80	3.56	4.43	4.34
28	1.53	1.45	2.16	2.00	2.34	2.17	2.70	2.57	3.57	3.51	4.48	4.40
29	1.49	1.26	2.00	1.91	2.21	1.96	2.75	2.69	---	---	4.44	4.28
30	1.36	1.25	2.07	1.94	2.13	1.99	2.80	2.67	---	---	4.31	4.21
31	1.36	1.26	---	---	2.19	2.12	2.86	2.66	---	---	4.67	4.32
MONTH	1.91	1.17	2.16	1.24	2.34	1.80	2.91	1.96	3.93	2.61	4.67	3.40

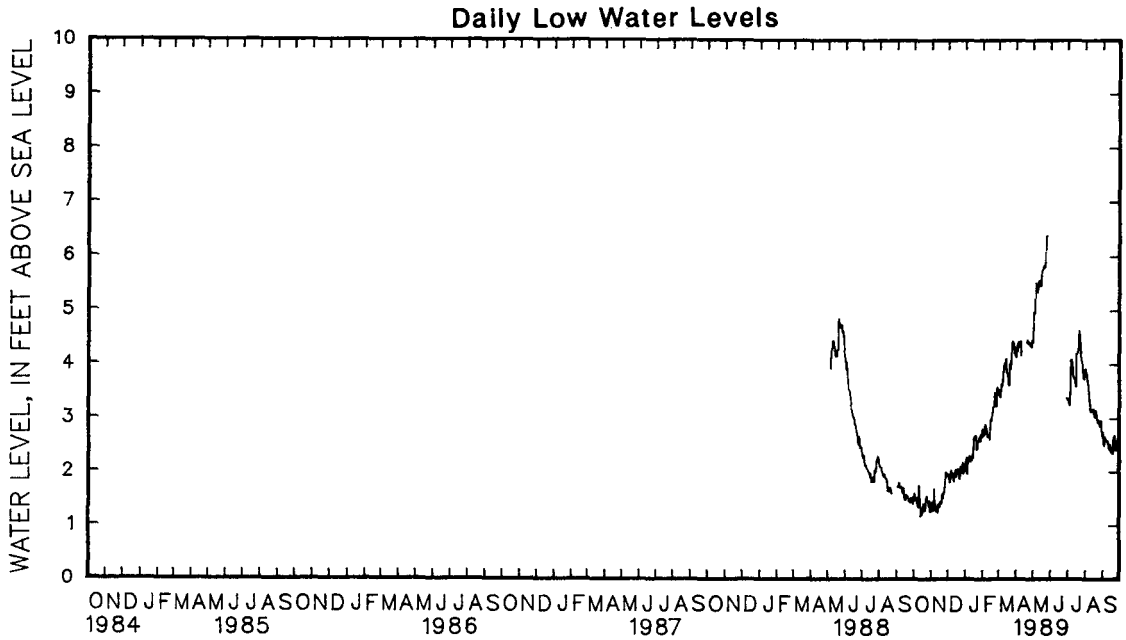
GROUND-WATER LEVELS

MARYLAND--Continued

BALTIMORE COUNTY--Continued

BA Eg 166--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	4.50	4.18	4.65	4.42	6.46	6.40	3.51	3.36	3.97	3.89	2.93	2.74
2	4.24	4.14	5.07	4.66	6.57	6.44	3.52	3.33	4.07	3.92	2.80	2.52
3	4.51	4.24	5.07	4.98	6.56	6.46	3.48	3.31	4.01	3.84	2.60	2.49
4	4.52	4.41	5.02	4.95	6.68	6.50	3.45	3.25	3.88	3.77	2.77	2.61
5	4.45	4.32	5.51	4.97	6.76	6.50	3.75	3.42	3.90	3.69	2.78	2.65
6	4.43	4.36	5.76	5.52	7.15	6.77	4.06	3.59	3.73	3.63	2.74	2.61
7	4.55	4.43	5.66	5.50	7.52	7.15	4.25	4.06	3.72	3.45	2.72	2.59
8	4.64	4.43	5.57	5.44	7.66	7.52	4.25	4.09	3.45	3.32	2.72	2.57
9	4.67	4.44	5.46	5.36	7.87	7.64	4.20	4.09	3.45	3.23	2.74	2.58
10	4.43	4.25	5.69	5.44	7.89	7.72	4.23	4.00	3.33	3.17	2.72	2.56
11	4.26	4.18	5.69	5.55	7.73	7.63	4.03	3.80	3.17	3.12	2.69	2.47
12	---	---	5.70	5.57	7.80	7.67	3.84	3.75	3.20	3.12	2.57	2.42
13	---	---	5.62	5.50	8.01	7.77	3.92	3.75	3.31	3.17	2.63	2.48
14	---	---	5.57	5.47	7.84	7.76	3.89	3.70	3.28	3.16	2.63	2.51
15	---	---	5.60	5.47	8.01	7.84	3.83	3.60	3.27	3.15	2.61	2.37
16	---	---	5.78	5.60	8.15	7.94	4.26	3.59	3.29	3.17	2.64	2.40
17	---	---	5.80	5.75	8.14	7.95	4.25	4.19	3.24	3.09	2.65	2.43
18	---	---	5.94	5.76	8.02	7.91	4.43	4.20	3.11	3.02	2.43	2.34
19	---	---	5.94	5.78	8.01	7.92	4.40	4.24	3.20	3.02	2.78	2.38
20	4.55	4.42	5.97	5.84	8.09	7.95	4.74	4.34	3.27	3.14	2.84	2.65
21	4.59	4.47	6.04	5.84	8.16	8.03	4.74	4.62	3.27	3.09	2.72	2.56
22	4.54	4.43	5.92	5.81	8.14	8.06	4.69	4.56	3.17	2.97	3.46	2.68
23	4.50	4.40	6.32	5.85	8.23	8.09	4.63	4.35	3.12	2.97	3.15	2.43
24	4.52	4.43	6.48	6.32	8.25	8.18	4.38	4.20	3.10	2.91	2.59	2.41
25	4.48	4.38	6.55	6.39	8.29	8.21	4.33	4.13	3.12	2.93	2.72	2.55
26	4.48	4.37	6.70	6.48	8.31	8.21	4.26	4.06	3.11	2.94	2.71	2.51
27	4.48	4.35	6.49	6.32	8.36	8.21	4.17	4.00	3.04	2.85	2.71	2.46
28	4.44	4.33	6.34	6.31	8.37	3.61	4.12	3.89	3.02	2.92	2.72	2.62
29	4.58	4.45	6.43	6.33	3.65	3.38	3.88	3.74	3.07	2.95	2.71	2.51
30	4.51	4.43	6.57	6.43	3.47	3.36	3.93	3.73	3.02	2.74	2.51	2.43
31	---	---	6.52	6.40	---	---	4.13	3.82	2.76	2.68	---	---
MONTH	---	---	6.70	4.42	8.37	3.36	4.74	3.25	4.07	2.68	3.46	2.34



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--BA Eg 168. SITE ID.--392113076205101.
LOCATION.--Lat 39°21'13", long 76°20'51", Hydrologic Unit 02060003, at Graces Quarters, Aberdeen Proving Ground.
Owner: U.S. Army.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well; depth 169 ft; casing diameter 4 in., to 159 ft; screen diameter 4 in. from 159 to 169 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from May 3, 1988 to Oct. 4, 1989.
DATUM.--Elevation of land surface is 40.84 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of recorder platform, 2.14 ft above land-surface datum.
REMARKS.--Carroll Island/Graces Quarters Hydrologic Assessment Project observation well Q19A.
PERIOD OF RECORD.--January 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.35 ft above sea level, May 20, 1988; lowest measured, 6.61 ft below sea level, Aug. 22, and 23, 1988.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
(READINGS BELOW SEA LEVEL INDICATED BY "-")

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	-5.59	-5.59	-5.42	-5.58	-5.25	-5.39	-5.49	-5.55	-5.15	-5.23	-4.79	-4.88
2	-5.59	-5.59	-5.33	-5.42	-5.36	-5.41	-5.33	-5.49	-5.24	-5.36	-4.87	-5.01
3	-5.59	-5.59	-5.43	-5.62	-5.31	-5.40	-5.22	-5.34	-5.23	-5.37	-4.96	-5.02
4	-5.59	-5.59	-5.57	-5.62	-5.33	-5.61	-5.25	-5.72	-5.30	-5.49	-4.88	-5.01
5	-5.59	-5.59	-5.17	-5.57	-5.45	-5.61	-5.54	-5.73	-5.32	-5.40	-4.66	-4.89
6	-5.59	-5.59	-5.08	-5.17	-5.34	-5.49	-5.38	-5.54	-5.23	-5.33	-4.68	-4.84
7	-5.59	-5.59	-5.13	-5.42	-5.31	-5.34	-5.35	-5.49	-5.24	-5.37	-4.84	-5.01
8	-5.59	-5.63	-5.42	-5.48	-5.34	-5.46	-5.10	-5.35	-5.34	-5.41	-4.95	-5.00
9	-5.63	-5.63	-5.44	-5.64	-5.34	-5.45	-5.11	-5.38	-5.34	-5.61	-4.84	-4.98
10	-5.48	-5.63	-5.31	-5.60	-5.25	-5.37	-5.37	-5.50	-5.57	-5.62	-4.80	-4.85
11	-5.48	-5.48	-5.32	-5.60	-5.25	-5.49	-5.46	-5.59	-5.46	-5.61	-4.59	-4.79
12	-5.48	-5.62	-5.61	-5.72	-5.44	-5.58	-5.35	-5.56	-5.47	-5.63	-4.54	-4.69
13	-5.62	-5.83	-5.43	-5.61	-5.27	-5.44	-5.33	-5.65	-5.50	-5.69	-4.69	-4.78
14	-5.83	-5.83	-5.42	-5.51	-5.17	-5.36	-5.54	-5.71	-5.33	-5.50	-4.57	-4.70
15	-5.83	-5.83	-5.43	-5.57	-5.08	-5.29	-5.40	-5.54	-5.37	-5.46	-4.43	-4.57
16	-5.83	-5.83	-5.44	-5.56	-5.29	-5.45	-5.42	-5.50	-5.42	-5.61	-4.51	-4.78
17	-5.77	-5.83	-5.31	-5.48	-5.27	-5.41	-5.33	-5.50	-3.19	-5.67	-4.70	-4.78
18	-5.52	-5.77	-5.48	-5.61	-5.32	-5.37	-5.35	-5.45	-2.22	-4.49	-3.85	-4.70
19	-5.50	-5.57	-5.54	-5.61	-5.18	-5.32	-5.34	-5.41	-4.50	-4.84	-4.50	-5.04
20	-5.57	-5.62	-5.19	-5.54	-5.19	-5.28	-5.28	-5.38	-4.84	-4.97	-4.65	-5.04
21	-5.35	-5.62	-5.24	-5.56	-5.21	-5.37	-5.38	-5.73	-3.85	-4.97	-4.60	-4.78
22	-5.29	-5.35	-5.56	-5.67	-5.37	-5.56	-5.57	-5.72	-4.49	-4.81	-4.78	-4.99
23	-5.34	-5.37	-5.51	-5.63	-5.31	-5.52	-5.55	-5.60	-4.81	-5.06	-4.99	-5.00
24	-5.23	-5.34	-5.50	-5.54	-5.07	-5.32	-5.43	-5.55	-5.06	-5.40	-4.83	-4.99
25	-5.25	-5.36	-5.32	-5.50	-5.08	-5.32	-5.43	-5.49	-5.04	-5.42	-4.79	-4.83
26	-5.30	-5.43	-5.25	-5.35	-5.32	-5.50	-5.16	-5.46	-4.60	-5.03	-4.69	-4.78
27	-5.44	-5.53	-4.96	-5.24	-5.33	-5.53	-5.16	-5.40	-4.66	-4.84	-4.71	-4.77
28	-5.39	-5.46	-4.95	-5.24	-5.08	-5.32	-5.36	-5.50	-4.84	-4.90	-4.70	-4.77
29	-5.40	-5.62	-5.25	-5.43	-5.31	-5.65	-5.31	-5.36	---	---	-4.70	-4.80
30	-5.58	-5.67	-5.26	-5.41	-5.52	-5.64	-5.24	-5.35	---	---	-4.80	-4.89
31	-5.59	-5.69	---	---	-5.46	-5.53	-5.22	-5.41	---	---	-4.88	-4.89
MONTH	-5.23	-5.83	-4.95	-5.72	-5.07	-5.65	-5.10	-5.73	-2.22	-5.69	-3.85	-5.04

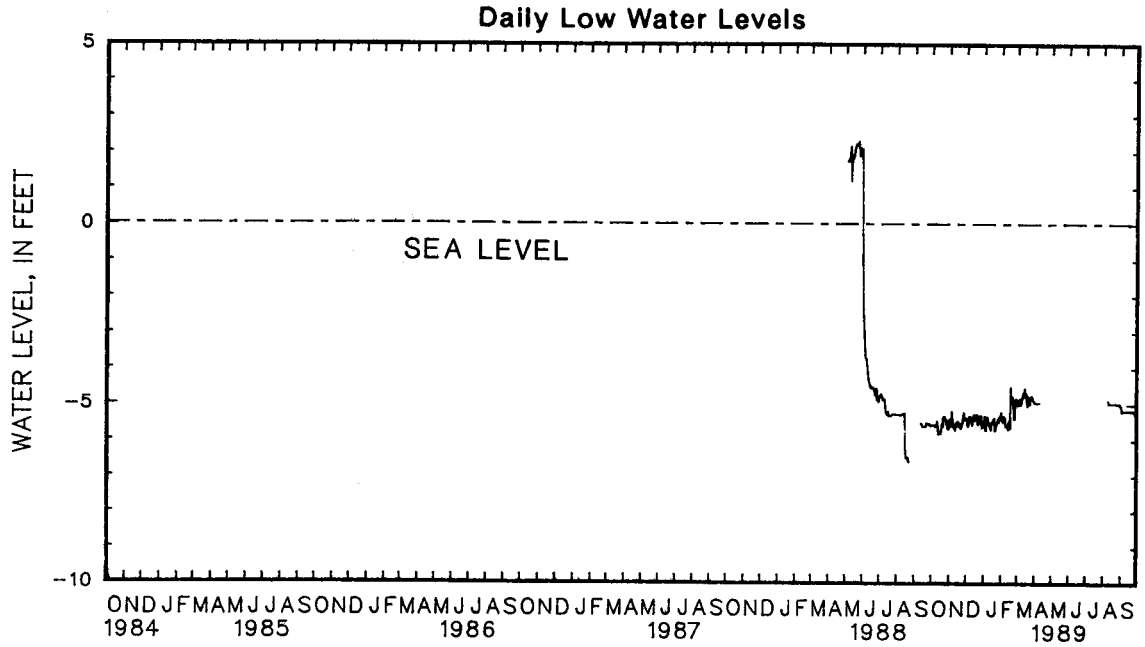
GROUND-WATER LEVELS

MARYLAND--Continued

BALTIMORE COUNTY--Continued

BA Eg 168--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	-4.87	-4.93	---	---	---	---	---	---	---	---	-5.02	-5.02
2	-4.93	-4.96	---	---	---	---	---	---	---	---	-5.02	-5.06
3	-4.96	-4.96	---	---	---	---	---	---	---	---	-5.06	-5.20
4	-4.96	-4.96	---	---	---	---	---	---	---	---	-5.19	-5.20
5	-4.96	-4.96	---	---	---	---	---	---	---	---	-5.19	-5.19
6	-4.96	-4.96	---	---	---	---	---	---	---	---	-5.19	-5.19
7	-4.96	-4.96	---	---	---	---	---	---	---	---	-5.19	-5.19
8	-4.96	-4.96	---	---	---	---	---	---	---	---	-5.19	-5.19
9	-4.96	-4.96	---	---	---	---	---	---	---	---	-5.19	-5.19
10	-4.96	-4.96	---	---	---	---	---	---	-4.90	-4.90	-5.19	-5.19
11	---	---	---	---	---	---	---	---	-4.90	-4.98	-5.19	-5.19
12	---	---	---	---	---	---	---	---	-4.98	-4.98	-5.19	-5.19
13	---	---	---	---	---	---	---	---	-4.98	-4.98	-5.19	-5.19
14	---	---	---	---	---	---	---	---	-4.98	-4.98	-5.19	-5.19
15	---	---	---	---	---	---	---	---	-4.98	-4.98	-5.19	-5.19
16	---	---	---	---	---	---	---	---	-4.98	-4.98	-5.19	-5.19
17	---	---	---	---	---	---	---	---	-4.98	-4.98	-5.19	-5.19
18	---	---	---	---	---	---	---	---	-4.98	-4.98	-5.19	-5.19
19	---	---	---	---	---	---	---	---	-4.98	-4.98	-5.19	-5.19
20	---	---	---	---	---	---	---	---	-4.98	-4.98	-5.19	-5.19
21	---	---	---	---	---	---	---	---	-4.98	-4.98	-5.19	-5.19
22	---	---	---	---	---	---	---	---	-4.98	-4.98	-5.19	-5.19
23	---	---	---	---	---	---	---	---	-4.98	-4.98	-5.19	-5.19
24	---	---	---	---	---	---	---	---	-4.98	-4.98	-5.19	-5.20
25	---	---	---	---	---	---	---	---	-4.98	-4.98	-5.19	-5.20
26	---	---	---	---	---	---	---	---	-4.98	-4.98	-5.13	-5.19
27	---	---	---	---	---	---	---	---	-4.98	-4.98	-5.13	-5.25
28	---	---	---	---	---	---	---	---	-4.98	-4.98	-5.16	-5.25
29	---	---	---	---	---	---	---	---	-4.98	-4.98	-5.14	-5.16
30	---	---	---	---	---	---	---	---	-4.98	-4.98	-5.14	-5.20
31	---	---	---	---	---	---	---	---	-4.98	-5.02	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	-5.02	-5.25



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--BA Eg 171. SITE ID.--392040076205201.
LOCATION.--Lat 39°20'40", long 76°20'52", Hydrologic Unit 02060003, at Graces Quarters, Aberdeen Proving Ground.
Owner: U.S. Army.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 14 ft; casing diameter 4 in., to 4 ft; screen diameter 4 in. from 4 to 14 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from June 7, 1988 to Oct. 11, 1989.
DATUM.--Elevation of land surface is 10.17 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of recorder platform, 2.75 ft above land-surface datum.
REMARKS.--Carroll Island/Graces Quarters Hydrologic Assessment Project observation well Q20A.
PERIOD OF RECORD.--February 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.67 ft above sea level, May 6, 1989; lowest measured, .92 ft above sea level, Oct. 13, 1988.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	1.53	1.34	1.36	1.26	1.83	1.63	1.86	1.75	2.63	2.48	3.29	3.11
2	1.60	1.41	1.47	1.26	1.71	1.63	2.07	1.86	2.47	2.31	3.14	2.96
3	1.55	1.23	1.26	1.06	1.75	1.65	2.12	1.97	2.61	2.35	3.04	2.95
4	1.36	1.23	1.19	1.06	1.71	1.42	2.02	1.55	2.48	2.24	3.17	2.95
5	1.57	1.33	1.68	1.17	1.71	1.44	1.92	1.55	2.58	2.42	3.40	3.09
6	1.48	1.24	1.74	1.60	1.83	1.60	2.06	1.92	2.73	2.52	3.33	3.10
7	1.28	1.16	1.59	1.29	1.82	1.73	2.10	1.86	2.69	2.45	3.17	3.04
8	1.21	1.11	1.37	1.21	1.74	1.59	2.39	2.02	2.57	2.43	3.26	3.16
9	1.82	1.21	1.31	1.06	1.80	1.62	2.27	1.95	2.57	2.21	3.40	3.17
10	1.85	1.64	1.57	1.16	1.90	1.67	1.99	1.86	2.32	2.21	3.49	3.35
11	1.70	1.30	1.52	1.12	1.89	1.55	1.98	1.82	2.47	2.25	3.75	3.46
12	1.30	1.09	1.25	1.03	1.72	1.47	2.20	1.87	2.41	2.25	3.81	3.50
13	1.13	.92	1.44	1.22	1.88	1.70	2.20	1.86	2.41	2.19	3.60	3.38
14	1.21	.95	1.44	1.24	2.03	1.71	2.08	1.82	2.71	2.42	3.76	3.56
15	1.22	1.11	1.41	1.14	2.11	1.70	2.28	2.09	2.69	2.50	3.89	3.62
16	1.20	1.06	1.32	1.17	1.70	1.52	2.27	2.16	2.62	2.49	3.62	3.35
17	1.31	1.20	1.49	1.26	1.84	1.69	2.48	2.21	2.58	2.42	3.51	3.35
18	1.44	1.32	1.27	1.18	1.79	1.66	2.38	2.22	2.70	2.58	3.58	3.41
19	1.38	1.10	1.31	1.18	1.97	1.78	2.44	2.27	2.90	2.67	3.41	3.05
20	1.22	1.11	1.71	1.28	1.92	1.74	2.44	2.27	2.91	2.81	3.64	3.05
21	1.43	1.13	1.59	1.25	1.83	1.65	2.26	1.96	3.19	2.84	3.69	3.46
22	1.51	1.35	1.32	1.15	1.65	1.46	2.23	2.00	3.18	2.97	3.45	3.34
23	1.48	1.30	1.49	1.28	1.88	1.59	2.23	2.13	3.03	2.86	3.54	3.39
24	1.60	1.42	1.52	1.33	2.11	1.78	2.39	2.19	2.87	2.63	3.83	3.50
25	1.54	1.29	1.72	1.44	2.06	1.75	2.36	2.27	3.15	2.62	4.01	3.80
26	1.49	1.25	1.73	1.53	1.83	1.59	2.63	2.29	3.56	3.16	4.09	3.87
27	1.41	1.19	1.98	1.66	1.91	1.59	---	---	3.40	3.11	3.90	3.79
28	1.42	1.31	1.98	1.66	2.10	1.90	---	---	3.16	3.03	3.99	3.84
29	1.39	1.05	1.68	1.54	1.92	1.56	---	---	---	---	3.92	3.70
30	1.23	1.06	1.81	1.64	1.87	1.63	---	---	---	---	3.81	3.62
31	1.25	1.07	---	---	1.92	1.81	---	---	---	---	4.22	3.82
MONTH	1.85	.92	1.98	1.03	2.11	1.42	---	---	3.56	2.19	4.22	2.95

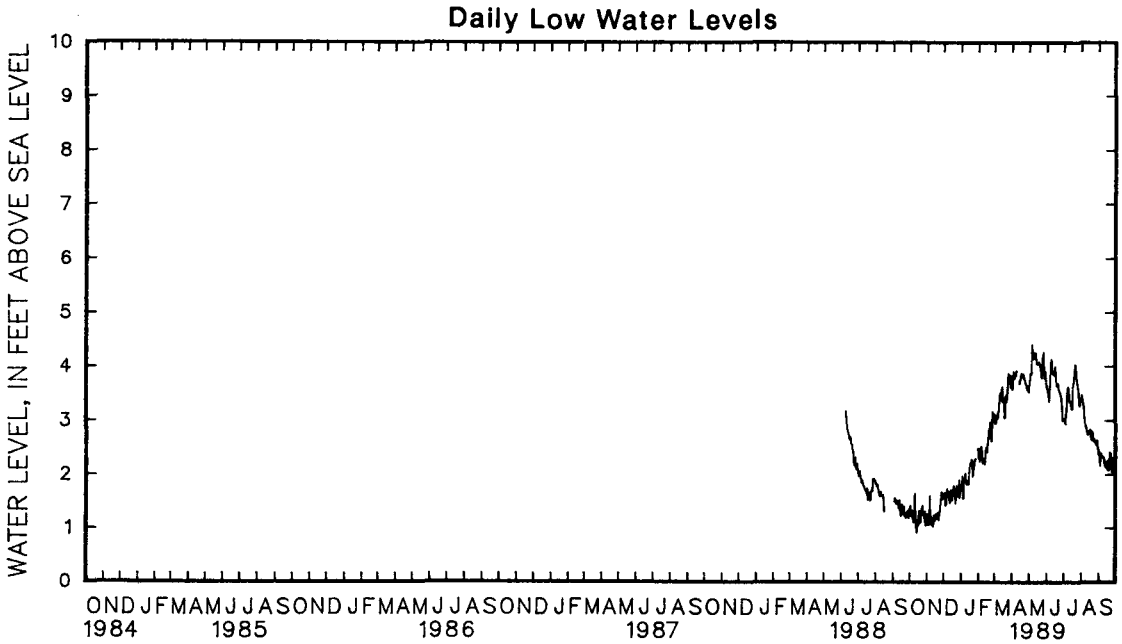
GROUND-WATER LEVELS

MARYLAND--Continued

BALTIMORE COUNTY--Continued

BA Eg 171--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	3.99	3.61	3.73	3.53	3.79	3.61	3.26	3.04	3.55	3.37	2.72	2.45
2	3.76	3.57	4.01	3.70	3.81	3.59	3.28	3.02	3.69	3.47	2.70	2.28
3	4.07	3.75	4.01	3.87	3.70	3.52	3.25	3.02	3.63	3.41	2.32	2.16
4	4.07	3.90	3.97	3.84	3.77	3.46	3.18	2.94	3.55	3.34	2.55	2.32
5	3.98	3.81	4.43	3.87	3.56	3.35	3.46	3.11	3.55	3.28	2.56	2.39
6	3.90	3.78	4.67	4.41	3.91	3.56	3.51	3.18	3.36	3.23	2.57	2.35
7	4.05	3.86	4.49	4.30	4.07	3.77	3.73	3.51	3.36	3.04	2.53	2.34
8	4.17	3.83	4.41	4.21	4.23	4.04	3.75	3.58	3.04	2.89	2.52	2.31
9	4.22	3.91	4.29	4.14	4.33	4.13	3.78	3.62	3.10	2.88	2.51	2.32
10	---	---	4.48	4.25	4.38	4.10	3.85	3.57	3.04	2.81	2.54	2.31
11	---	---	4.43	4.22	4.12	3.87	3.64	3.35	2.82	2.74	2.51	2.21
12	---	---	4.43	4.25	4.07	3.88	3.45	3.34	2.85	2.74	2.33	2.16
13	---	---	4.34	4.16	4.34	3.91	3.58	3.35	2.99	2.80	2.37	2.14
14	3.77	3.69	4.26	4.05	3.94	3.84	3.51	3.31	2.97	2.79	2.44	2.23
15	3.91	3.74	4.15	4.05	4.17	3.91	3.49	3.22	2.97	2.80	2.43	2.19
16	3.88	3.77	4.19	4.05	4.25	3.99	3.74	3.21	3.01	2.83	2.46	2.09
17	4.08	3.85	4.15	4.04	4.22	3.85	3.71	3.62	2.97	2.76	2.47	2.25
18	4.03	3.86	4.33	4.08	3.91	3.69	4.00	3.67	2.79	2.67	2.40	2.08
19	3.95	3.82	4.28	4.05	3.82	3.64	4.01	3.77	2.92	2.64	2.52	2.10
20	4.01	3.82	4.21	4.03	3.85	3.66	4.27	3.91	3.00	2.80	2.61	2.41
21	4.03	3.86	4.24	3.94	3.86	3.68	4.21	4.03	3.01	2.76	2.66	2.29
22	3.95	3.80	3.97	3.82	3.74	3.58	4.20	4.03	2.89	2.63	3.29	2.39
23	3.89	3.75	4.15	3.79	3.72	3.55	4.16	3.84	2.86	2.65	3.41	2.28
24	3.90	3.75	4.34	4.16	3.67	3.53	3.93	3.72	2.82	2.60	2.27	2.04
25	3.82	3.68	4.42	4.14	3.66	3.50	3.92	3.67	2.90	2.63	2.34	2.16
26	3.81	3.66	4.58	4.26	3.65	3.45	3.88	3.59	2.88	2.63	2.46	2.29
27	3.77	3.62	4.26	3.96	3.67	3.39	3.77	3.51	2.79	2.55	2.32	2.15
28	3.70	3.57	3.97	3.78	3.59	3.27	3.72	3.36	2.79	2.55	2.49	2.30
29	3.84	3.64	3.97	3.81	3.37	3.00	3.40	3.27	2.85	2.63	2.51	2.40
30	3.68	3.53	4.11	3.90	3.19	3.00	3.56	3.28	2.79	2.50	2.45	2.12
31	---	---	4.00	3.68	---	---	3.75	3.40	2.49	2.37	---	---
MONTH	---	---	4.67	3.53	4.38	3.00	4.27	2.94	3.69	2.37	3.41	2.04



5 YEAR HYDROGRAPH

OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--BA Eg 172. SITE ID.--392040076205202.
LOCATION.--Lat 39°20'40", long 76°20'52", Hydrologic Unit 02060003, at Graces Quarters, Aberdeen Proving Ground.
Owner: U.S. Army.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 90 ft; casing diameter 4 in., to 80 ft; screen diameter 4 in. from 80 to 90 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from June 7, 1988 to Oct. 11, 1989.
DATUM.--Elevation of land surface is 10.59 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of recorder platform, 2.75 ft above land-surface datum.
REMARKS.--Carroll Island/Graces Quarters Hydrologic Assessment Project observation well Q20B.
PERIOD OF RECORD.--February 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.19 ft above sea level, May 6, 1989; lowest measured, 1.76 ft above sea level, Nov. 15, 1988.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	2.34	2.33	1.88	1.87	2.67	2.61	3.13	3.12	4.30	4.29	5.73	5.66
2	2.33	2.30	1.87	1.85	2.74	2.67	3.15	3.13	4.30	4.30	5.73	5.67
3	2.30	2.30	1.85	1.84	2.79	2.74	3.17	3.15	4.32	4.30	5.73	5.69
4	2.30	2.28	1.85	1.84	2.81	2.79	3.17	3.15	4.35	4.32	5.73	5.72
5	2.28	2.25	1.86	1.83	2.84	2.81	3.17	3.16	4.39	4.35	5.78	5.73
6	2.25	2.23	1.83	1.82	2.89	2.84	3.19	3.18	4.43	4.39	6.04	5.78
7	2.23	2.22	1.82	1.80	2.91	2.89	3.20	3.18	4.46	4.43	6.13	6.04
8	2.22	2.20	1.82	1.80	2.95	2.91	3.21	3.20	4.49	4.46	6.17	6.13
9	2.20	2.19	1.81	1.80	2.96	2.95	3.21	3.20	4.51	4.49	6.27	6.17
10	2.19	2.17	1.82	1.79	2.99	2.96	3.24	3.21	4.53	4.51	6.46	6.27
11	2.17	2.14	1.79	1.78	3.00	2.99	3.26	3.24	4.55	4.53	6.63	6.47
12	2.14	2.11	1.79	1.78	3.02	3.00	3.32	3.26	4.55	4.53	6.67	6.62
13	2.11	2.04	1.80	1.78	3.05	3.02	3.39	3.32	4.54	4.52	6.66	6.62
14	2.06	2.04	1.78	1.77	3.06	3.04	3.49	3.39	4.61	4.54	6.68	6.64
15	2.04	2.02	1.77	1.76	3.05	3.02	3.60	3.49	4.68	4.61	6.69	6.60
16	2.02	1.99	1.78	1.77	3.06	3.04	3.75	3.61	4.78	4.68	6.60	6.52
17	2.00	1.98	1.89	1.77	3.07	3.06	3.87	3.75	4.87	4.78	6.62	6.52
18	2.00	1.98	1.97	1.89	3.06	3.06	3.97	3.87	4.95	4.87	6.68	6.62
19	1.98	1.95	2.02	1.98	3.06	3.05	4.04	3.97	5.00	4.96	6.62	6.59
20	1.95	1.94	2.09	2.02	3.07	3.06	4.09	4.04	5.03	5.00	6.83	6.60
21	1.97	1.94	2.14	2.09	3.07	3.05	4.13	4.09	5.16	5.03	7.04	6.84
22	1.97	1.95	2.19	2.14	3.05	3.05	4.16	4.13	5.43	5.17	7.04	7.00
23	1.95	1.94	2.22	2.19	3.07	3.05	4.19	4.16	5.61	5.43	7.01	6.98
24	1.95	1.93	2.23	2.22	3.08	3.06	4.20	4.19	5.67	5.61	8.49	7.02
25	1.93	1.92	2.24	2.23	3.07	3.06	4.22	4.20	5.70	5.67	8.34	8.14
26	1.92	1.90	2.24	2.24	3.07	3.06	4.25	4.22	5.74	5.70	8.14	8.02
27	1.91	1.90	2.28	2.24	3.10	3.07	4.25	4.24	5.73	5.68	8.08	7.92
28	1.91	1.89	2.40	2.28	3.12	3.07	4.25	4.24	5.73	5.70	7.96	7.91
29	1.89	1.88	2.51	2.40	3.10	3.08	4.27	4.25	---	---	7.93	7.81
30	1.88	1.87	2.61	2.51	3.12	3.10	4.28	4.27	---	---	7.90	7.79
31	1.87	1.86	---	---	3.12	3.11	4.32	4.28	---	---	8.04	7.91
MONTH	2.34	1.86	2.61	1.76	3.12	2.61	4.32	3.12	5.74	4.29	8.49	5.66

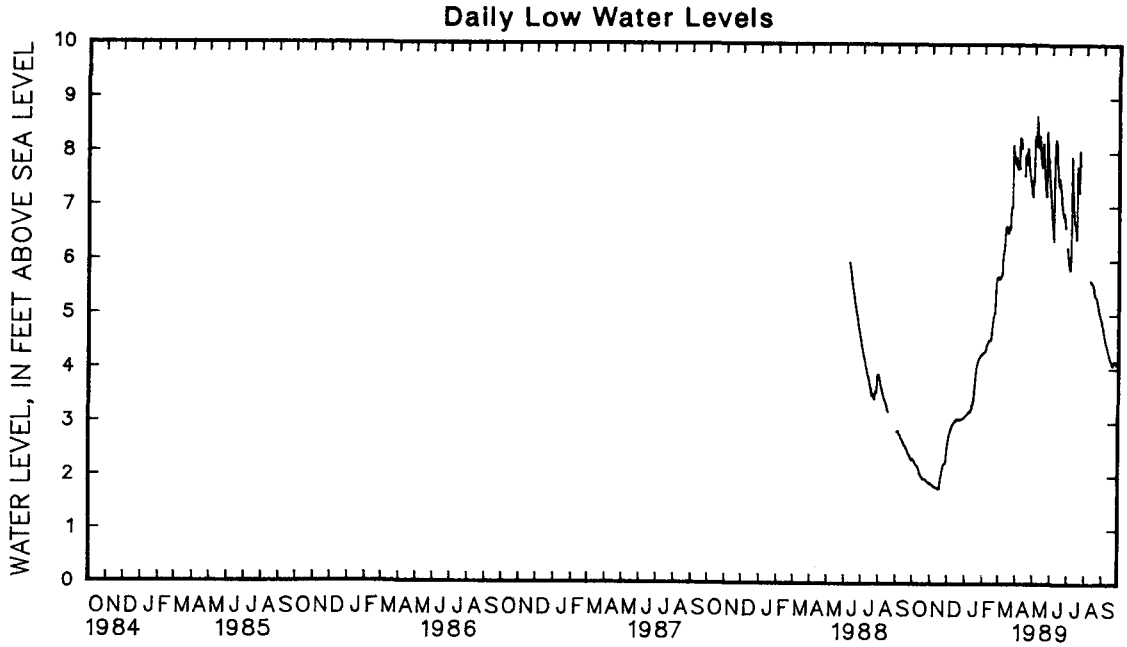
GROUND-WATER LEVELS

MARYLAND--Continued

BALTIMORE COUNTY--Continued

BA Eg 172--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.99	7.76	8.11	7.48	7.18	6.99	6.13	6.03	---	---	4.79	4.75
2	7.76	7.70	9.11	8.14	6.99	6.79	6.04	5.94	---	---	4.75	4.69
3	7.96	7.72	8.58	8.32	6.79	6.64	5.94	5.86	---	---	4.69	4.63
4	7.90	7.83	8.32	8.16	6.66	6.45	6.00	5.82	---	---	4.63	4.58
5	8.30	7.71	8.82	8.13	7.43	6.35	6.50	6.00	---	---	4.59	4.54
6	8.45	8.28	9.19	8.68	8.14	7.50	8.75	6.50	---	---	4.54	4.49
7	8.41	8.21	8.89	8.48	8.98	7.90	8.34	7.93	---	---	4.49	4.45
8	8.41	8.26	8.48	8.25	8.55	8.23	7.96	7.54	---	---	4.45	4.42
9	8.28	8.09	8.25	8.10	8.73	8.21	7.54	7.29	---	---	4.42	4.38
10	---	---	8.70	8.15	8.63	8.14	7.29	7.06	5.68	5.62	4.38	4.33
11	---	---	8.52	8.31	8.14	7.81	7.06	6.82	5.62	5.59	4.33	4.29
12	---	---	8.30	8.09	7.81	7.62	6.82	6.67	5.59	5.59	4.29	4.25
13	---	---	8.09	7.93	7.67	7.46	6.82	6.67	5.60	5.57	4.25	4.21
14	7.62	7.58	7.93	7.81	7.61	7.37	6.84	6.58	5.57	5.54	4.21	4.18
15	8.11	7.57	7.88	7.73	7.64	7.50	6.57	6.40	5.54	5.50	4.18	4.14
16	8.12	7.96	8.49	7.89	7.61	7.40	8.18	6.40	5.50	5.44	4.14	4.12
17	7.95	7.90	8.48	8.17	7.52	7.31	8.14	7.74	5.44	5.37	4.12	4.09
18	7.98	7.79	8.17	7.89	7.51	7.27	7.74	7.44	5.37	5.33	4.09	4.06
19	8.34	7.98	7.89	7.70	7.27	7.07	7.44	7.26	5.34	5.33	4.09	4.05
20	8.24	8.08	7.71	7.54	7.07	6.97	8.60	7.26	5.34	5.31	4.13	4.09
21	8.08	7.95	7.55	7.34	6.97	6.88	8.30	8.04	5.31	5.28	4.14	4.13
22	7.95	7.78	7.34	7.19	6.91	6.80	8.04	7.77	5.28	5.24	4.17	4.13
23	7.78	7.67	8.91	7.19	7.03	6.79	---	---	5.24	5.19	4.17	4.12
24	7.67	7.58	8.91	8.39	7.04	6.85	---	---	5.19	5.13	4.12	4.09
25	7.58	7.50	8.39	8.15	6.85	6.72	---	---	5.13	5.07	4.08	4.07
26	7.50	7.41	8.17	7.89	6.72	6.60	---	---	5.07	5.02	4.14	4.07
27	7.41	7.35	8.10	7.86	---	---	---	---	5.02	4.97	4.15	4.13
28	7.35	7.23	7.93	7.65	---	---	---	---	4.97	4.93	4.13	4.13
29	7.58	7.19	7.65	7.45	6.40	6.23	---	---	4.93	4.90	4.13	4.12
30	7.60	7.50	7.46	7.32	6.23	6.12	---	---	4.90	4.85	4.12	4.07
31	---	---	7.31	7.16	---	---	---	---	4.85	4.79	---	---
MONTH	---	---	9.19	7.16	---	---	---	---	---	---	4.79	4.05

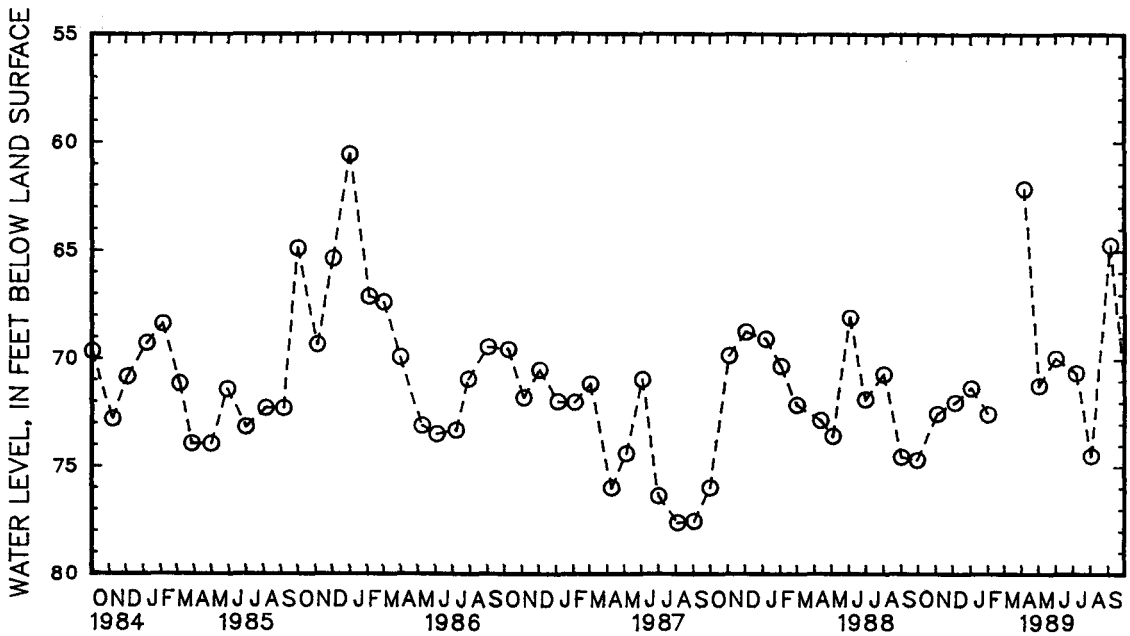


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--BA Fe 19. SITE ID.--391607076312901.
LOCATION.--Lat 39°16'07", long 76°31'29", Hydrologic Unit 02060003, 0.2 mi east of Willow Spring Rd., Dundalk.
Owner: Seagrams Distillery.
AQUIFER.--Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.
WELL CHARACTERISTICS.--Drilled, unused, artesian well, depth 402 ft; casing diameter 8 in., to unknown depth; screen length 35 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 30 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 0.5 ft above land-surface datum.
PERIOD OF RECORD.--January 1952 to March 1954, January 1983 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 57.34 ft below land-surface datum, Jan. 3, 1983; lowest measured, 95.88 ft below land-surface datum, Oct. 6, 1952.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 4	72.54	JAN 3	71.36	APR 6	62.13	JUN 1	69.98	AUG 3	74.50
DEC 5	72.02	FEB 1	72.56	MAY 3	71.24	JUL 7	70.65	SEP 5	64.72



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--BA Fg 74. SITE ID.--391928076203101. PERMIT NUMBER.--BA-88-0785.
LOCATION.--Lat 39°19'28", long 76°20'31", Hydrologic Unit 02060003, at Carroll Island, Aberdeen Proving Ground.
Owner: U.S. Army.
AQUIFER.--Talbot Formation of Pleistocene age. Aquifer code: 112TLBT.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 19 ft; casing diameter 2 in. to 4 ft; screen diameter 2 in. from 4 to 19 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from Sept. 2, 1987 to Sept. 25, 1989.
DATUM.--Elevation of land surface is 5.43 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of recorder platform, 2.96 ft above land-surface datum.
REMARKS.--Carroll Island/Graces Quarters Hydrologic Assessment Project observation well I01.
PERIOD OF RECORD.--July 1987 to September 1989.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.44 ft above sea level, July 6, 1989; lowest measured, .09 ft below sea level, Sept. 7, 1987.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

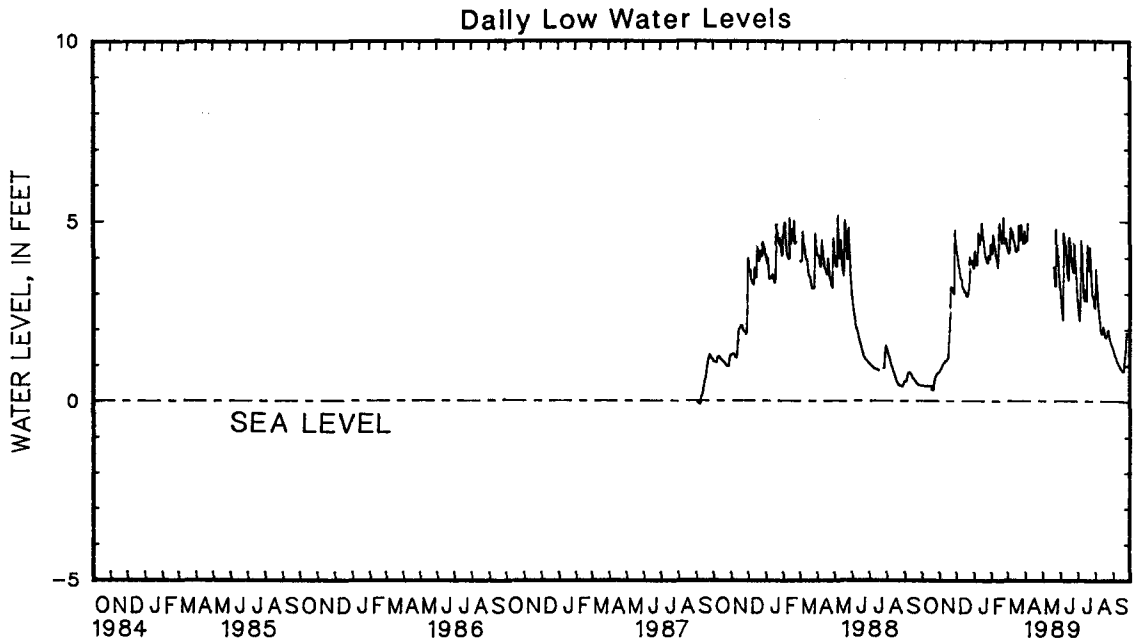
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	.43	.43	.84	.79	4.33	4.15	4.11	3.71	4.37	4.19	1.42	1.29
2	.43	.43	.87	.84	4.15	4.05	4.33	4.12	4.19	4.11	1.29	1.22
3	.43	.43	.90	.87	4.05	3.97	4.25	4.17	5.09	4.11	1.24	1.17
4	.43	.43	.93	.90	3.97	3.80	4.18	3.91	5.04	4.66	1.18	1.13
5	.43	.42	.97	.93	3.80	3.72	3.91	3.81	4.65	4.51	1.90	1.18
6	.42	.42	1.01	.97	3.72	3.66	3.85	3.81	4.51	4.41	2.32	1.66
7	.42	.41	1.04	1.01	3.67	3.54	3.91	3.79	4.41	4.29	2.15	1.84
8	.41	.41	1.06	1.04	3.54	3.43	4.89	3.91	4.32	4.21	1.83	1.67
9	.41	.41	1.07	1.06	3.46	3.41	4.90	4.70	4.21	4.06	2.09	1.57
10	.42	.41	1.11	1.07	3.44	3.38	4.70	4.52	4.06	3.98	1.95	1.73
11	.42	.42	1.11	1.11	3.38	3.20	4.52	4.37	4.01	3.94	1.81	1.65
12	.42	.41	1.11	1.11	3.20	3.15	5.23	4.37	3.97	3.81	1.73	1.52
13	.41	.41	1.13	1.11	3.16	3.13	5.03	4.62	4.18	3.73	1.52	1.46
14	.41	.41	1.16	1.13	3.15	3.05	4.93	4.51	5.24	4.25	1.47	1.43
15	.41	.41	1.18	1.16	3.15	3.07	5.31	4.94	5.20	4.96	1.45	1.32
16	.41	.41	1.22	1.18	3.07	3.05	5.05	4.75	5.13	4.84	1.31	1.19
17	.41	.41	1.75	1.22	3.05	3.02	4.75	4.58	4.84	4.66	1.22	1.17
18	.41	.41	1.97	1.75	3.02	2.95	4.58	4.52	4.66	4.58	1.75	1.20
19	.41	.31	2.34	1.97	2.95	2.93	4.53	4.35	4.58	4.46	1.58	1.28
20	.31	.30	3.31	2.35	2.93	2.92	4.35	4.18	4.51	4.41	2.24	1.23
21	.34	.30	3.31	3.21	3.08	2.92	4.18	4.04	5.31	4.52	2.30	1.90
22	.50	.34	3.21	3.16	3.13	3.09	4.05	3.99	5.31	5.11	1.89	1.58
23	.59	.50	3.17	3.16	3.41	3.13	4.03	3.98	5.11	4.77	1.80	1.50
24	.66	.59	3.16	3.08	4.16	3.41	3.99	3.89	4.77	4.53	2.34	1.83
25	.70	.66	3.08	3.03	4.16	4.00	3.94	3.85	4.53	4.42	2.25	1.92
26	.73	.70	3.04	3.00	4.00	3.85	4.18	3.85	4.84	4.48	1.92	1.67
27	.75	.73	4.85	3.00	3.88	3.84	4.18	4.05	4.83	1.60	1.67	1.58
28	.78	.76	5.20	4.78	3.99	3.87	4.05	3.98	1.60	1.42	1.58	1.53
29	.78	.78	4.77	4.46	3.97	3.91	4.01	3.96	---	---	1.53	1.42
30	.78	.78	4.46	4.34	3.91	3.84	4.72	3.96	---	---	1.94	1.40
31	.79	.78	---	---	3.86	3.75	4.49	4.37	---	---	2.18	1.75
MONTH	.79	.30	5.20	.79	4.33	2.92	5.31	3.71	5.31	1.42	2.34	1.13

MARYLAND--Continued

BALTIMORE COUNTY--Continued

BA Fg 74--Continued

DAY	APRIL MAX	APRIL MIN	MAY MAX	MAY MIN	JUNE MAX	JUNE MIN	JULY MAX	JULY MIN	AUGUST MAX	AUGUST MIN	SEPTEMBER MAX	SEPTEMBER MIN
1	1.92	1.52	---	---	3.13	2.93	2.82	2.63	4.01	3.70	1.45	1.42
2	1.52	1.44	---	---	2.93	2.74	2.63	2.45	3.70	3.44	1.42	1.35
3	2.14	1.45	---	---	2.74	2.57	2.45	2.31	3.44	3.17	1.35	1.29
4	1.76	1.57	---	---	2.57	2.39	2.91	2.25	3.16	2.94	1.29	1.24
5	2.35	1.50	---	---	5.25	2.26	4.58	2.91	2.94	2.69	1.24	1.21
6	2.35	1.97	---	---	5.30	4.69	5.44	4.38	2.69	2.54	1.21	1.17
7	---	---	---	---	5.38	4.68	5.09	4.48	2.54	2.38	1.17	1.13
8	---	---	---	---	5.01	4.47	4.48	3.91	2.38	2.22	1.13	1.09
9	---	---	---	---	5.24	4.43	3.91	3.58	2.22	1.99	1.09	1.06
10	---	---	---	---	5.11	4.31	3.58	3.24	1.99	1.91	1.06	1.02
11	---	---	---	---	4.31	3.82	3.23	2.94	1.91	1.88	1.02	.99
12	---	---	---	---	3.82	3.60	2.94	2.82	1.95	1.88	.99	.96
13	---	---	---	---	3.76	3.51	3.41	2.83	2.08	1.95	.96	.92
14	---	---	---	---	4.97	3.38	3.43	3.10	2.08	2.07	.92	.90
15	---	---	---	---	5.15	4.47	3.10	2.82	2.07	2.01	.90	.87
16	---	---	---	---	5.14	4.55	5.25	2.80	2.00	1.91	.88	.86
17	---	---	---	---	5.19	4.53	5.02	4.36	1.91	1.83	.86	.84
18	---	---	---	---	5.04	4.32	4.36	3.95	1.83	1.78	.84	.82
19	---	---	---	---	4.32	3.92	3.95	3.66	1.82	1.77	.94	.82
20	---	---	3.97	3.73	3.99	3.76	5.22	3.66	1.85	1.82	1.21	.94
21	---	---	3.73	3.45	3.99	3.72	4.77	4.29	1.97	1.83	1.36	1.21
22	---	---	3.45	3.23	3.94	3.64	4.29	3.98	2.04	1.97	1.50	1.36
23	---	---	5.38	3.20	5.27	3.59	3.98	3.62	2.04	1.98	1.91	1.50
24	---	---	5.37	4.80	5.05	4.42	3.62	3.30	1.98	1.84	1.96	1.91
25	---	---	4.80	4.33	4.42	4.05	3.30	3.07	1.84	1.75	---	---
26	---	---	4.33	4.04	4.05	3.80	3.07	2.92	1.75	1.70	---	---
27	---	---	4.97	4.03	3.98	3.59	3.06	2.91	1.70	1.64	---	---
28	---	---	4.29	3.81	3.59	3.41	3.25	2.92	1.63	1.59	---	---
29	---	---	3.81	3.51	3.41	3.06	3.02	2.74	1.58	1.56	---	---
30	---	---	3.51	3.31	3.06	2.82	2.74	2.61	1.56	1.52	---	---
31	---	---	3.31	3.13	---	---	4.03	2.61	1.52	1.46	---	---
MONTH	---	---	---	---	5.38	2.26	5.44	2.25	4.01	1.46	---	---



5 YEAR HYDROGRAPH

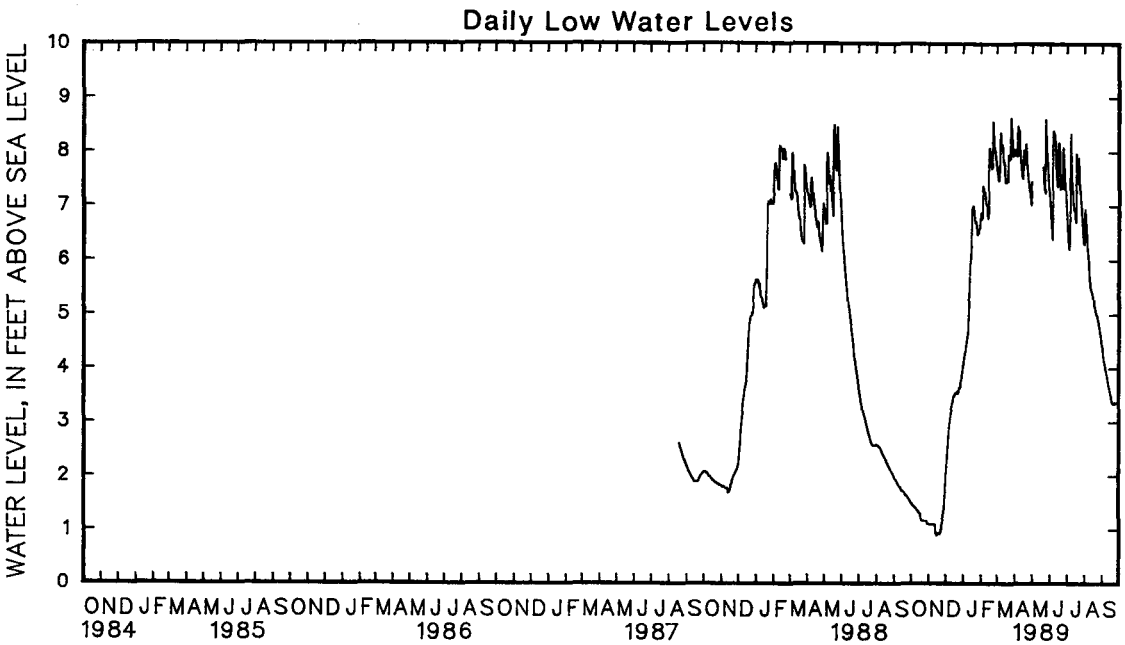
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--BA Fg 75. SITE ID.--391910076201401. PERMIT NUMBER.--BA-88-0790.
LOCATION.--Lat 39°19'10", long 76°20'14", Hydrologic Unit 02060003, at Carroll Island, Aberdeen Proving Ground.
Owner: U.S. Army.
AQUIFER.--Talbot Formation of Pleistocene age. Aquifer code: 112TLBT.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 23 ft; casing diameter 2 in., to 8 ft; screen diameter 2 in. from 8 to 23 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from Aug. 17, 1987 to Sept. 25, 1989.
DATUM.--Elevation of land surface is 10 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring Point: Top of recorder platform, 2.76 ft above land-surface datum.
REMARKS.--Carroll Island/Graces Quarters Hydrologic Assessment Project observation well I06.
PERIOD OF RECORD.--July 1987 to September 1989.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.49 ft above sea level, June 7, 1989; lowest measured, .89 ft above sea level, Nov. 15, 1988.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	1.51	1.49	1.11	1.10	2.11	1.89	4.13	4.06	6.90	6.87	7.83	7.70
2	1.50	1.49	1.10	1.10	2.30	2.11	4.22	4.13	6.87	6.76	7.70	7.62
3	1.49	1.47	1.10	1.10	2.50	2.30	4.37	4.22	7.27	6.78	7.64	7.54
4	1.47	1.45	1.10	1.10	2.64	2.50	4.37	4.30	7.38	7.28	7.54	7.47
5	1.45	1.44	1.10	1.10	2.80	2.64	4.42	4.32	7.39	7.36	7.76	7.47
6	1.44	1.43	1.10	1.10	2.92	2.80	4.53	4.42	7.43	7.32	8.72	7.76
7	1.43	1.42	1.10	1.10	3.03	2.92	4.56	4.48	7.32	7.22	8.65	8.36
8	1.41	1.40	1.10	1.10	3.09	3.03	4.65	4.56	7.25	7.18	8.36	8.16
9	1.41	1.40	1.10	1.10	3.18	3.10	4.92	4.64	7.18	7.05	8.26	8.08
10	1.40	1.39	1.10	1.09	3.26	3.18	5.25	4.93	7.09	7.03	8.26	8.13
11	1.39	1.37	1.09	1.09	3.29	3.26	5.39	5.25	7.05	7.02	8.16	8.08
12	1.37	1.36	1.09	1.09	3.35	3.29	5.89	5.40	7.02	6.81	8.12	7.86
13	1.36	1.34	1.09	.93	3.41	3.35	5.98	5.89	6.86	6.76	7.86	7.82
14	1.34	1.34	.93	.93	3.47	3.41	6.22	5.98	7.97	6.87	7.84	7.77
15	1.34	1.31	.93	.89	3.48	3.47	6.96	6.22	8.22	7.97	7.77	7.58
16	1.32	1.31	.93	.92	3.49	3.48	6.99	6.96	8.16	8.07	7.58	7.44
17	1.31	1.30	.93	.93	3.53	3.49	7.05	6.98	8.06	7.99	7.47	7.43
18	1.30	1.29	.93	.92	3.53	3.53	7.08	7.00	8.00	7.94	7.54	7.47
19	1.29	1.17	.93	.92	3.54	3.53	7.07	6.94	7.94	7.78	7.50	7.47
20	1.17	1.17	.94	.92	3.56	3.54	7.00	6.84	7.78	7.70	7.92	7.45
21	1.17	1.17	.99	.94	3.56	3.56	6.84	6.69	8.66	7.71	8.26	7.95
22	1.17	1.17	1.06	.99	3.56	3.53	6.71	6.70	8.85	8.57	8.17	7.95
23	1.17	1.16	1.13	1.06	3.57	3.53	6.71	6.70	8.63	8.29	7.94	7.87
24	1.16	1.16	1.18	1.13	3.63	3.57	6.70	6.61	8.29	8.10	9.35	7.88
25	1.16	1.16	1.24	1.18	3.63	3.63	6.61	6.47	8.10	8.01	9.05	8.63
26	1.16	1.16	1.28	1.24	3.65	3.63	6.71	6.49	8.06	8.02	8.63	8.32
27	1.16	1.16	1.35	1.29	3.77	3.65	6.70	6.54	8.03	7.87	8.32	8.21
28	1.16	1.16	1.42	1.35	3.89	3.77	6.57	6.50	7.95	7.83	8.21	8.14
29	1.16	1.11	1.65	1.43	3.89	3.81	6.59	6.57	---	---	8.14	7.93
30	1.11	1.11	1.89	1.65	4.01	3.90	6.76	6.60	---	---	8.01	7.93
31	1.11	1.11	---	---	4.06	4.01	6.89	6.77	---	---	8.38	8.04
MONTH	1.51	1.11	1.89	.89	4.06	1.89	7.08	4.06	8.85	6.76	9.35	7.43

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.38	8.03	8.40	7.44	7.19	7.01	6.77	6.58	6.96	6.93	4.41	4.37
2	8.03	7.95	---	---	7.02	6.83	6.58	6.41	6.93	6.83	4.37	4.23
3	8.29	7.96	---	---	6.83	6.68	6.41	6.27	6.83	6.65	4.23	4.16
4	8.21	8.04	---	---	6.69	6.50	6.35	6.20	6.65	6.48	4.16	4.10
5	8.62	7.93	---	---	8.36	6.38	7.33	6.36	6.48	6.30	4.10	4.07
6	8.83	8.48	---	---	8.74	8.38	9.34	7.33	6.30	6.18	4.07	4.02
7	8.71	8.34	---	---	9.49	8.39	8.92	8.34	6.18	6.05	4.02	3.96
8	8.71	8.40	---	---	8.94	8.28	8.34	7.91	6.05	5.92	3.96	3.92
9	8.39	8.13	---	---	8.86	8.32	7.91	7.62	5.92	5.69	3.92	3.86
10	8.13	7.95	---	---	8.79	8.13	7.62	7.33	5.69	5.60	3.86	3.81
11	7.95	7.82	---	---	8.14	7.80	7.33	7.05	5.60	5.50	3.81	3.74
12	7.81	7.72	---	---	7.80	7.64	7.05	6.93	5.50	5.44	3.74	3.67
13	7.72	7.58	---	---	7.67	7.50	7.09	6.91	5.44	5.42	3.67	3.63
14	7.58	7.52	---	---	8.24	7.36	7.12	6.93	5.42	5.38	3.63	3.60
15	8.20	7.51	---	---	8.46	8.11	6.93	6.74	5.38	5.33	3.60	3.52
16	8.21	8.03	---	---	8.46	8.17	8.32	6.70	5.33	5.26	3.52	3.49
17	8.02	7.95	---	---	8.41	8.08	8.32	7.97	5.26	5.16	3.49	3.43
18	8.03	7.77	---	---	8.40	7.97	7.97	7.67	5.16	5.13	3.43	3.38
19	8.59	8.03	---	---	7.97	7.31	7.67	7.44	5.13	5.08	3.38	3.35
20	8.39	8.15	7.92	7.72	7.69	7.56	8.36	7.42	5.08	5.03	3.35	3.34
21	8.15	7.98	7.73	7.47	7.56	7.46	8.20	7.89	5.03	4.99	3.34	3.33
22	7.98	7.76	7.48	7.29	7.50	7.36	7.88	7.64	5.00	4.98	3.43	3.34
23	7.76	7.62	9.17	7.24	8.52	7.32	7.64	7.36	4.98	4.93	3.43	3.36
24	7.62	7.50	9.18	8.61	8.51	8.08	7.36	7.13	4.93	4.87	3.36	3.34
25	7.50	7.40	8.59	8.24	8.08	7.83	7.13	6.96	4.87	4.83	---	---
26	7.40	7.29	8.24	7.98	7.84	7.67	6.96	6.80	4.83	4.76	---	---
27	7.29	7.20	8.23	7.92	7.67	7.41	6.80	6.72	4.76	4.69	---	---
28	7.20	7.06	8.08	7.78	7.41	7.22	6.73	6.60	4.69	4.63	---	---
29	7.40	7.01	7.78	7.57	7.22	6.96	6.59	6.43	4.63	4.59	---	---
30	7.48	7.41	7.57	7.37	6.96	6.78	6.42	6.30	4.58	4.48	---	---
31	---	---	7.37	7.19	---	---	6.94	6.29	4.48	4.41	---	---
MONTH	8.83	7.01	---	---	9.49	6.38	9.34	6.20	6.96	4.41	---	---



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

BALTIMORE COUNTY--Continued

WELL NUMBER.--BA Fg 77. SITE ID.--391835076203201. PERMIT NUMBER.--BA-88-0797.
LOCATION.--Lat 39°18'35", long 76°20'32", Hydrologic Unit 02060003, at Carroll Island, Aberdeen Proving Ground.
Owner: U.S. Army.
AQUIFER.--Talbot Formation of Pleistocene age. Aquifer code: 112TLBT.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 20 ft; casing diameter 2 in., to 6 ft; screen diameter 2 in. from 6 to 20 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from Aug. 17, 1987 to Sept. 25, 1989.
DATUM.--Elevation of land surface is 4.80 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of recorder platform, 2.86 ft above land-surface datum.
REMARKS.--Carroll Island/Graces Quarters Hydrologic Assessment Project observation well.
PERIOD OF RECORD.--July 1987 to September 1989.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.08 ft above sea level, Mar. 26, 1988; lowest measured, 1.39 ft below sea level, Oct. 13, 14, 15, 16, and 17, 1988.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
(READINGS BELOW SEA LEVEL INDICATED BY "-")

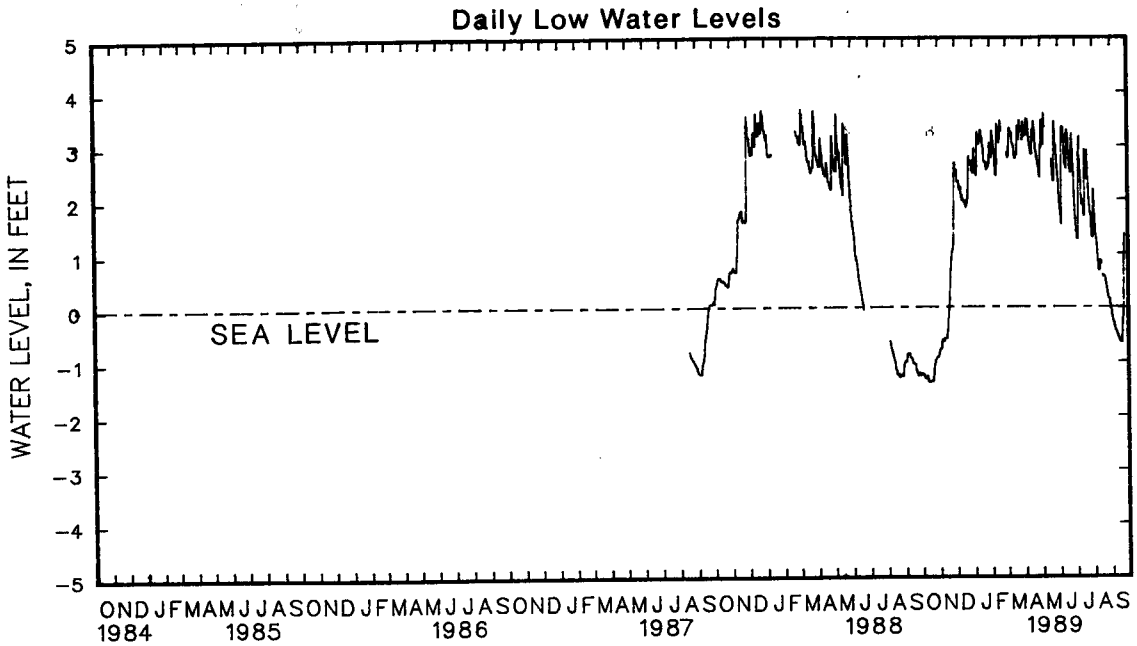
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	-1.23	-1.24	-.81	-.88	2.71	2.54	2.63	2.48	3.06	2.91	---	---
2	-1.23	-1.24	-.78	-.81	2.54	2.50	3.00	2.64	2.91	2.77	2.91	2.86
3	-1.23	-1.25	-.78	-.78	2.55	2.53	3.01	2.94	3.42	2.77	2.89	2.80
4	-1.25	-1.25	-.78	-.78	2.54	2.31	2.96	2.59	3.42	3.27	2.81	2.77
5	-1.23	-1.25	-.64	-.78	2.37	2.31	2.59	2.51	3.27	3.16	3.24	2.81
6	-1.24	-1.29	-.61	-.64	2.36	2.33	2.60	2.50	3.16	3.07	3.68	3.20
7	-1.29	-1.32	-.61	-.61	2.36	2.27	2.58	2.44	3.07	2.95	3.57	3.32
8	-1.32	-1.33	-.61	-.61	2.27	2.17	3.28	2.59	2.95	2.88	3.32	3.24
9	-1.29	-1.33	-.61	-.64	2.25	2.17	3.32	3.25	2.88	2.67	3.43	3.18
10	-1.27	-1.29	-.58	-.63	2.25	2.22	3.25	3.16	2.68	2.46	3.38	3.25
11	-1.27	-1.28	-.58	-.58	2.22	2.05	3.16	3.02	2.63	2.43	3.27	3.22
12	-1.29	-1.35	-.58	-.58	2.07	1.99	3.56	3.02	3.53	2.66	3.26	3.05
13	-1.35	-1.39	-.58	-.58	2.16	2.07	3.47	3.13	3.56	3.40	3.05	3.01
14	-1.39	-1.39	-.58	-.58	2.10	1.99	3.28	3.08	3.45	3.32	3.04	2.99
15	-1.39	-1.39	-.45	-.58	2.11	1.96	3.63	3.28	3.32	3.19	3.02	2.86
16	-1.39	-1.39	-.39	-.45	1.99	1.94	3.43	3.24	3.19	3.06	2.86	2.76
17	-1.38	-1.39	-.13	-.39	2.04	1.97	3.24	3.15	3.23	3.04	2.81	2.75
18	-1.34	-1.38	-.04	-.13	1.97	1.90	3.15	3.11	3.74	3.23	3.06	2.81
19	---	---	.14	-.04	1.90	1.85	3.13	2.98	3.69	3.47	3.05	2.86
20	-1.37	-1.38	.58	.14	1.92	1.87	3.03	2.87	3.46	3.26	3.47	2.83
21	-1.30	-1.38	.72	.58	2.00	1.88	2.87	2.69	---	---	3.58	3.35
22	-1.14	-1.30	.90	.72	2.01	1.99	2.73	2.70	---	---	3.35	3.16
23	-1.08	-1.14	1.02	.90	2.38	2.02	2.73	2.69	---	---	3.20	3.10
24	-1.01	-1.08	1.05	1.02	2.99	2.39	2.70	2.66	---	---	3.87	3.22
25	-.98	-1.01	1.12	1.05	2.99	2.80	2.67	2.55	---	---	3.68	3.46
26	-.97	-.98	1.16	1.12	2.80	2.66	2.93	2.55	---	---	3.46	3.31
27	-.94	-.97	1.73	1.16	2.74	2.65	2.93	2.67	---	---	3.31	3.26
28	-.91	-.94	2.78	1.79	2.88	2.70	2.67	2.59	3.19	3.07	---	---
29	-.91	-.93	2.72	2.66	2.70	2.65	2.67	2.63	---	---	---	---
30	-.92	-.93	2.74	2.68	2.65	2.60	3.18	2.66	---	---	3.42	3.10
31	-.88	-.92	---	---	2.65	2.51	3.12	3.03	---	---	3.60	3.43
MONTH	---	---	2.78	-.88	2.99	1.85	3.63	2.44	---	---	---	---

MARYLAND--Continued

BALTIMORE COUNTY--Continued

BA Fg 77--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	3.51	3.23	3.72	2.96	2.37	2.10	1.64	1.46	2.31	2.18	-.03	-.05
2	3.22	3.17	3.91	3.48	2.17	1.92	1.46	1.37	2.19	1.96	-.05	-.16
3	3.53	3.19	3.48	3.16	1.94	1.80	1.38	1.26	1.99	1.70	-.16	-.23
4	3.41	3.26	3.16	3.01	1.86	1.64	1.82	1.26	1.74	1.51	-.23	-.26
5	3.70	3.19	3.74	3.01	3.15	1.53	2.97	1.83	1.53	1.32	-.26	-.30
6	3.75	3.49	3.90	3.61	3.55	3.21	3.69	2.97	1.35	1.25	-.30	-.34
7	3.69	3.61	3.73	3.34	3.92	3.35	3.56	3.16	1.25	1.13	-.34	-.38
8	3.69	3.48	---	---	3.67	3.33	3.19	2.70	1.13	.95	-.37	-.41
9	3.49	3.30	---	---	3.73	3.33	2.74	2.49	.95	.82	-.40	-.45
10	3.30	3.15	---	---	3.72	3.16	2.54	2.25	.83	.67	-.44	-.46
11	3.15	3.05	---	---	3.16	2.80	2.27	2.05	.71	.67	-.46	-.50
12	3.05	2.99	---	---	2.84	2.66	2.07	1.90	.86	.71	-.50	-.53
13	2.99	2.88	---	---	2.86	2.63	2.30	1.98	.95	.86	-.53	-.56
14	2.88	2.83	---	---	3.38	2.57	2.33	1.91	.89	.85	-.56	-.58
15	3.59	2.84	---	---	3.55	3.26	1.94	1.68	.85	.81	-.58	-.63
16	3.59	3.29	---	---	3.55	3.28	3.38	1.70	---	---	-.63	-.64
17	3.28	3.23	---	---	3.48	3.18	3.36	2.92	.69	.59	-.63	-.64
18	3.45	3.10	---	---	3.48	3.06	2.92	2.58	.59	.56	-.63	-.66
19	3.70	3.45	---	---	3.06	2.75	2.60	2.37	.61	.56	-.46	-.66
20	3.49	3.31	2.92	2.74	2.75	2.61	3.35	2.37	.63	.57	-.22	-.45
21	3.31	3.18	2.75	2.49	2.71	2.55	3.19	2.90	.57	.55	-.14	-.22
22	3.18	2.97	2.49	2.33	2.67	2.49	2.90	2.55	.57	.50	1.07	-.14
23	2.97	2.87	3.75	2.33	3.55	2.49	2.62	2.26	.51	.41	1.57	1.13
24	2.87	2.80	3.76	3.44	3.55	3.21	2.30	2.00	.41	.34	1.49	1.35
25	2.80	2.72	3.44	3.22	3.21	2.92	2.07	1.86	.34	.27	---	---
26	2.72	2.64	3.22	2.99	2.93	2.66	1.91	1.74	.27	.23	---	---
27	2.64	2.59	3.40	2.99	2.77	2.49	1.87	1.73	.23	.17	---	---
28	2.57	2.43	3.18	2.81	2.50	2.11	1.83	1.53	.18	.16	---	---
29	3.19	2.40	2.81	2.60	2.11	1.86	1.53	1.33	.16	.15	---	---
30	3.19	3.00	2.61	2.49	1.86	1.64	1.35	1.29	.15	.05	---	---
31	---	---	2.49	2.34	---	---	2.41	1.29	.05	-.03	---	---
MONTH	3.75	2.40	---	---	3.92	1.53	3.69	1.26	---	---	---	---



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--BA Fg 78. SITE ID.--391835076203501. PERMIT NUMBER.--BA-88-0804.
LOCATION.--Lat 39°18'35", long 76°20'35", Hydrologic Unit 02060003, at Carroll Island, Aberdeen Proving Ground.
Owner: U.S. Army.
AQUIFER.--Talbot Formation of Pleistocene age. Aquifer code: 112TLBT.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 19 ft; casing diameter 4 in., to 14 ft; screen diameter 4 in. from 14 to 19 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from Nov. 24, 1987 to Sept. 25, 1989.
DATUM.--Elevation of land surface is 3.4 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of recorder platform, 2.34 ft above land-surface datum.
REMARKS.--Carroll Island/Graces Quarters Hydrologic Assessment Project observation well I19.
PERIOD OF RECORD.--November 1987 to September 1989.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.94 ft above sea level, Sept. 23, 1989; lowest measured, .73 ft below sea level, Oct. 13, 1988.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
(READINGS BELOW SEA LEVEL INDICATED BY "-")

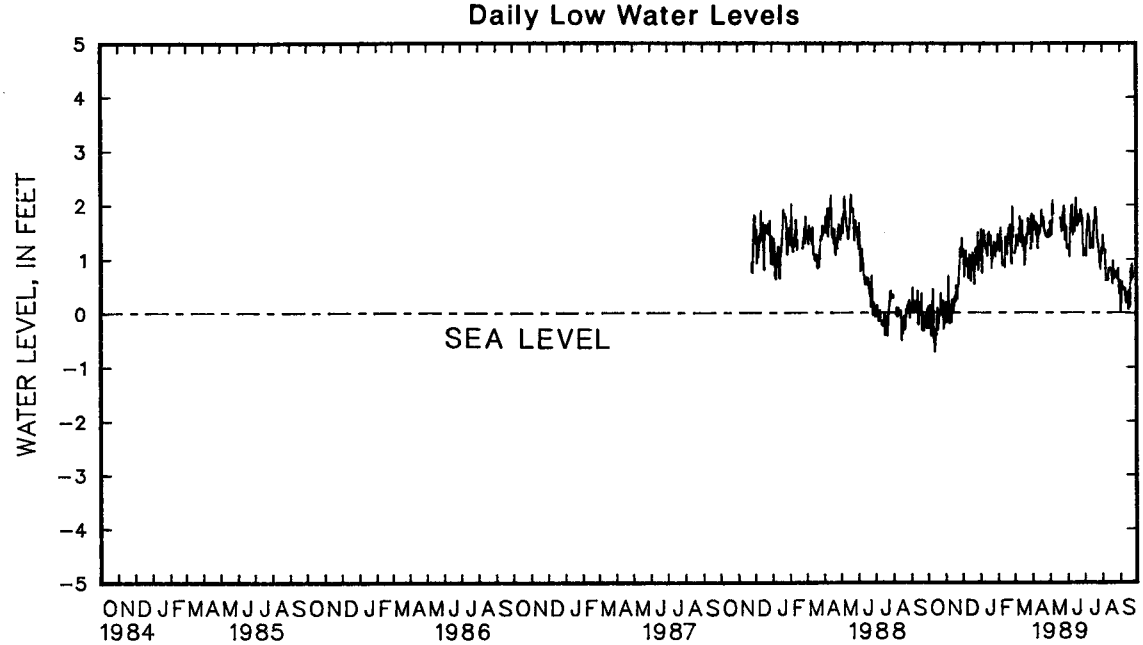
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	.56	-.01	.59	.18	1.74	1.17	1.48	1.12	2.04	1.45	---	---
2	.67	.11	.76	.19	1.49	1.12	1.96	1.38	1.76	1.25	1.53	1.11
3	.57	-.29	.25	-.18	1.50	1.16	1.95	1.55	2.14	1.33	1.56	1.17
4	.22	-.11	.27	-.14	1.35	.66	1.62	.75	1.83	1.14	1.89	1.24
5	.64	.14	1.10	.10	1.48	.83	1.75	.74	1.96	1.45	2.18	1.44
6	.42	-.25	1.16	.70	1.66	.93	1.86	1.38	2.17	1.58	1.84	1.30
7	.06	-.38	.70	.20	1.56	1.15	1.94	1.24	1.80	1.30	1.76	1.25
8	.02	-.43	.72	.06	1.35	.87	2.42	1.54	1.81	1.33	1.88	1.42
9	.94	-.01	.39	-.21	1.56	.95	2.15	1.43	1.64	.87	1.95	1.33
10	.91	.44	1.04	.13	1.73	.99	1.81	1.24	1.31	.89	2.07	1.59
11	.58	-.18	.75	-.03	1.62	.69	1.74	1.18	1.60	.95	2.40	1.79
12	-.07	-.46	.60	-.18	1.42	.64	2.09	1.22	1.37	.94	2.34	1.55
13	-.21	-.73	.85	.24	1.63	1.08	2.09	1.11	1.50	.84	2.01	1.29
14	.18	-.62	.82	.19	1.90	.98	1.63	1.06	2.06	1.43	2.19	1.68
15	.18	-.36	.82	.02	1.96	.93	2.01	1.47	1.91	1.25	2.33	1.70
16	.20	-.42	.79	.12	1.22	.58	1.86	1.40	1.59	1.23	1.71	1.23
17	.33	-.13	.87	.29	1.49	1.05	2.18	1.50	1.61	1.08	1.83	1.41
18	.46	.09	.50	.21	1.38	.92	1.87	1.25	1.70	1.28	1.90	1.30
19	.36	-.33	.68	.23	1.68	1.13	2.00	1.43	2.05	1.43	1.29	.88
20	.17	-.19	1.39	.50	1.59	.98	1.84	1.41	1.93	1.57	2.12	.96
21	.41	-.07	1.18	.41	1.24	.78	1.37	.81	2.38	1.57	2.13	1.40
22	.56	-.02	.89	.26	1.08	.53	1.51	.98	2.17	1.64	1.63	1.27
23	.64	.05	1.20	.50	1.67	.90	1.47	1.04	1.76	1.32	1.85	1.46
24	.80	.37	1.23	.55	2.04	1.20	1.78	1.19	1.42	.92	2.05	1.45
25	.82	.10	1.56	.83	1.88	1.17	1.67	1.31	2.07	.90	2.16	1.75
26	.63	.0	1.51	.88	1.54	.89	2.07	1.29	2.45	1.99	2.30	1.62
27	.66	-.04	1.78	1.19	1.73	.91	2.02	1.27	2.03	1.58	1.93	1.46
28	.62	.22	1.78	1.20	1.96	1.51	1.74	1.03	1.90	1.41	---	---
29	.55	-.31	1.49	1.03	1.58	.78	1.74	1.30	---	---	---	---
30	.38	-.21	1.72	1.40	1.64	.98	1.79	1.14	---	---	1.83	1.19
31	.50	-.13	---	---	1.69	1.25	2.00	1.30	---	---	2.52	1.85
MONTH	.94	-.73	1.78	-.21	2.04	.53	2.42	.74	2.45	.84	---	---

MARYLAND--Continued

BALTIMORE COUNTY--Continued

BA Fg 78--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	1.99	1.39	1.99	1.42	1.83	1.19	1.86	1.15	1.79	1.10	1.16	.60
2	1.90	1.32	2.43	1.70	1.97	1.25	1.90	1.16	2.03	1.45	.99	.18
3	2.34	1.80	2.12	1.50	1.88	1.22	1.85	1.19	1.90	1.28	.76	.0
4	2.31	1.79	2.01	1.45	2.03	1.26	1.76	1.05	1.80	1.17	1.05	.53
5	2.15	1.57	2.53	1.59	1.68	1.04	2.29	1.48	1.78	1.15	1.04	.57
6	2.04	1.54	2.88	2.09	2.43	1.62	2.22	1.66	1.61	1.16	1.04	.48
7	2.30	1.68	2.47	1.83	2.49	1.80	2.30	1.85	1.62	.82	.99	.44
8	2.37	1.44	---	---	2.48	1.99	2.18	1.53	1.30	.59	.97	.42
9	2.47	1.65	---	---	2.50	2.00	2.15	1.78	---	---	.97	.46
10	1.97	1.31	---	---	2.52	1.75	2.23	1.49	---	---	1.03	.45
11	1.79	1.19	---	---	2.01	1.44	1.90	1.20	.84	.61	1.00	.23
12	1.91	1.51	---	---	2.07	1.67	1.71	1.36	1.11	.77	.75	.19
13	2.03	1.60	---	---	2.49	1.52	1.97	1.31	1.40	.82	.86	.20
14	1.80	1.46	---	---	1.95	1.52	1.90	1.37	1.42	.82	.93	.37
15	2.04	1.61	---	---	2.55	1.97	1.96	1.20	1.43	.83	.92	.24
16	2.08	1.60	---	---	2.72	2.14	2.17	1.20	---	---	1.03	.06
17	2.35	1.91	---	---	2.71	1.89	2.00	1.54	1.43	.78	1.00	.42
18	2.18	1.65	---	---	2.34	1.70	2.42	1.72	1.18	.68	.74	.10
19	2.18	1.66	---	---	2.25	1.61	2.29	1.67	1.41	.53	1.31	.14
20	2.29	1.77	2.30	1.75	2.32	1.75	2.58	1.96	1.49	.98	1.41	.83
21	2.23	1.70	2.38	1.70	2.34	1.82	2.36	1.83	1.45	.80	1.42	.58
22	2.06	1.55	2.04	1.51	2.19	1.69	2.29	1.75	1.34	.63	2.87	.92
23	2.04	1.52	2.26	1.56	2.17	1.70	2.18	1.39	1.36	.71	2.94	.79
24	2.04	1.45	2.51	1.88	2.39	1.92	1.85	1.31	1.32	.70	1.30	.65
25	1.96	1.42	2.49	1.87	2.38	1.90	1.98	1.28	1.49	.74	---	---
26	1.98	1.46	2.67	1.99	2.36	1.80	1.95	1.13	1.41	.77	---	---
27	1.94	1.46	2.07	1.56	2.42	1.74	1.80	1.08	1.25	.63	---	---
28	1.96	1.40	1.76	1.34	2.32	1.46	1.79	.89	1.30	.67	---	---
29	2.12	1.53	1.96	1.64	1.96	1.05	1.30	.81	1.36	.82	---	---
30	1.85	1.41	2.21	1.58	1.80	1.07	1.73	1.00	1.23	.48	---	---
31	---	---	2.01	1.19	---	---	2.02	1.21	.84	.35	---	---
MONTH	2.47	1.19	---	---	2.72	1.04	2.58	.81	---	---	---	---



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--BA Fg 80. SITE ID.--391846076202901. PERMIT NUMBER.--BA-88-0808.
LOCATION.--Lat 39°18'46", long 76°20'29", Hydrologic Unit 02060003, at Carroll Island, Aberdeen Proving Ground.
Owner: U.S. Army.
AQUIFER.--Talbot Formation of Pleistocene age. Aquifer code: 112TLBT.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 65 ft; casing diameter 4 in., to 55 ft; screen diameter 4 in. from 55 to 65 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from Dec. 10, 1987 to Sept. 7, 1989.
DATUM.--Elevation of land surface is 3.6 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of recorder platform, 2.85 ft above land-surface datum.
REMARKS.--Carroll Island/Graces Quarters Hydrologic Assessment Project observation well I22A.
PERIOD OF RECORD.--November 1987 to September 1989.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.27 ft above sea level, Apr. 15, 1988; lowest measured, .66 ft below sea level, Jan. 14, 1988.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
(READINGS BELOW SEA LEVEL INDICATED BY "-")

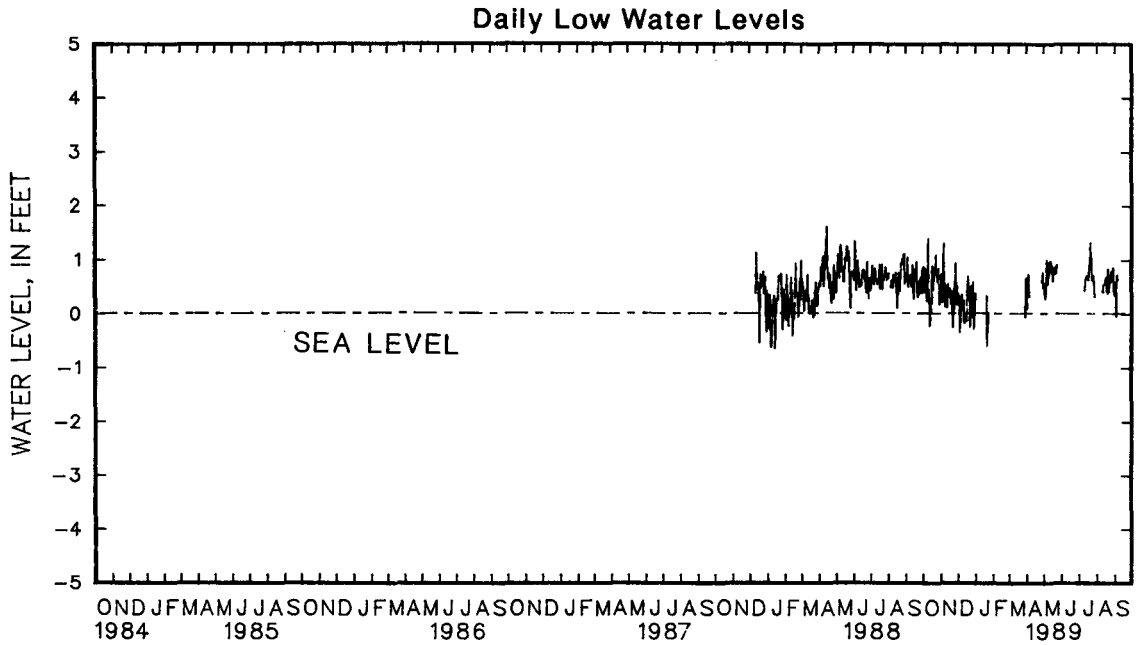
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	1.26	.71	1.05	.72	.88	.31	.80	.26	---	---	---	---
2	1.37	.87	1.21	.69	.59	.26	---	---	---	---	---	---
3	1.28	.39	.72	.20	.59	.31	---	---	---	---	---	---
4	.86	.54	.60	.23	.47	-.36	---	---	---	---	---	---
5	1.38	.85	1.61	.48	.54	-.15	---	---	---	---	---	---
6	1.23	.53	1.75	1.30	.77	.06	---	---	---	---	---	---
7	.78	.32	1.29	.69	.73	.38	---	---	---	---	---	---
8	.66	.24	1.10	.55	.52	.09	---	---	---	---	---	---
9	1.88	.66	.75	.12	.75	.20	---	---	---	---	---	---
10	1.89	1.39	1.42	.47	.96	.24	---	---	---	---	---	---
11	1.47	.65	1.13	.32	.87	-.07	---	---	---	---	---	---
12	.68	.21	.81	.11	.60	-.18	---	---	---	---	---	---
13	.42	-.24	1.14	.55	---	---	---	---	---	---	---	---
14	.71	-.10	1.09	.54	---	---	---	---	---	---	---	---
15	.71	.27	1.08	.31	---	---	---	---	---	---	---	---
16	.80	.20	1.02	.37	.53	-.14	---	---	---	---	---	---
17	1.02	.60	1.11	.45	.82	.43	---	---	---	---	---	---
18	1.16	.88	.58	.25	.75	.31	---	---	---	---	---	---
19	1.11	.43	.58	.19	1.18	.70	---	---	---	---	---	---
20	.91	.61	1.18	.42	1.07	.50	.72	.32	---	---	---	---
21	1.21	.74	.97	.0	.70	.25	.28	-.61	---	---	---	---
22	1.33	.84	.37	-.26	.32	-.26	.30	-.30	---	---	---	---
23	1.32	.80	.70	.02	.90	.19	.74	-.15	---	---	---	---
24	1.50	1.11	.76	.10	1.26	.51	.71	.01	---	---	---	---
25	1.45	.77	1.19	.47	1.08	.31	---	---	---	---	---	---
26	1.28	.68	1.18	.60	.64	-.07	---	---	---	---	---	---
27	1.22	.59	1.55	.94	.75	-.07	---	---	---	---	---	---
28	1.19	.85	1.52	.54	1.09	.60	---	---	---	---	.68	.13
29	1.11	.18	.89	.16	.71	-.30	---	---	---	---	.64	-.07
30	.82	.27	.86	.51	.66	-.03	---	---	---	---	1.43	.66
31	.95	.35	---	---	.75	.40	---	---	---	---	.91	.15
MONTH	1.89	-.24	1.75	-.26	---	---	---	---	---	---	---	---

MARYLAND--Continued

BALTIMORE COUNTY--Continued

BA Fg 80--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	.66	.09	1.01	.48	---	---	---	---	---	---	1.23	.58
2	1.23	.67	1.34	.56	---	---	---	---	---	---	1.07	.22
3	1.23	.72	.95	.31	---	---	---	---	---	---	.67	-.05
4	1.10	.46	.82	.28	---	---	---	---	---	---	1.16	.59
5	.81	.32	1.51	.44	---	---	---	---	---	---	1.19	.71
6	---	---	1.88	1.00	---	---	---	---	---	---	1.19	.64
7	---	---	1.32	.72	---	---	---	---	---	---	---	---
8	---	---	1.22	.54	---	---	---	---	---	---	---	---
9	---	---	1.14	.57	---	---	---	---	---	---	---	---
10	---	---	1.49	.96	---	---	---	---	---	---	---	---
11	---	---	1.35	.73	---	---	1.08	.43	.65	.41	---	---
12	---	---	1.42	.98	---	---	.91	.62	.84	.53	---	---
13	---	---	1.37	.96	---	---	1.33	.65	1.11	.54	---	---
14	---	---	1.30	.80	---	---	1.17	.70	1.11	.55	---	---
15	---	---	1.19	.88	---	---	1.34	.66	1.13	.57	---	---
16	---	---	1.28	.74	---	---	1.49	.66	1.25	.67	---	---
17	---	---	1.01	.60	---	---	1.12	.63	1.26	.67	---	---
18	---	---	1.46	.79	---	---	1.57	.78	1.00	.55	---	---
19	---	---	1.46	.79	---	---	1.56	.91	1.22	.38	---	---
20	---	---	1.39	.86	---	---	1.99	1.34	1.39	.84	---	---
21	---	---	1.60	.88	---	---	1.56	1.06	1.37	.71	---	---
22	---	---	1.27	.75	---	---	1.52	1.02	1.19	.42	---	---
23	---	---	1.56	.85	---	---	1.45	.68	1.14	.57	---	---
24	---	---	1.55	.91	---	---	1.18	.63	1.16	.58	---	---
25	---	---	---	---	---	---	1.32	.71	1.41	.72	---	---
26	---	---	---	---	---	---	1.39	.62	1.39	.79	---	---
27	---	---	---	---	---	---	1.24	.55	1.26	.62	---	---
28	1.22	.59	---	---	---	---	1.24	.37	1.30	.64	---	---
29	1.39	.77	---	---	---	---	.75	.32	1.42	.87	---	---
30	.96	.47	---	---	---	---	---	---	1.27	.49	---	---
31	---	---	---	---	---	---	---	---	.78	.34	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---



5 YEAR HYDROGRAPH

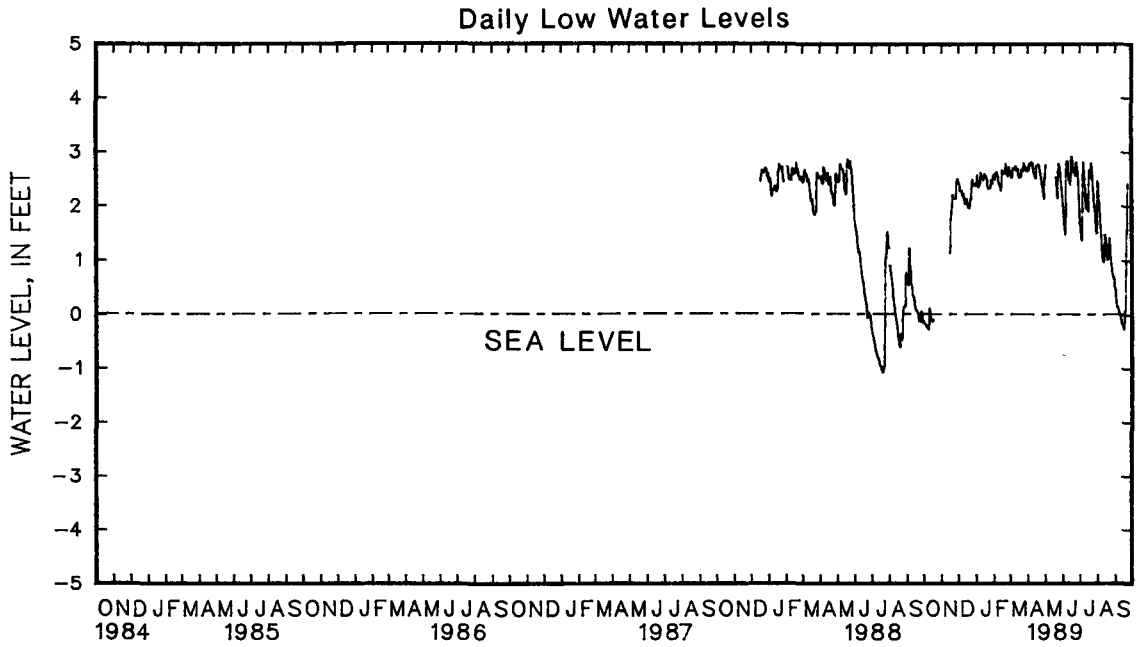
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--BA Fg 81. SITE ID.--391846076202902. PERMIT NUMBER.--BA-88-0809.
LOCATION.--Lat 39°18'46", long 76°20'29", Hydrologic Unit 02060003, at Carroll Island, Aberdeen Proving Ground.
Owner: U.S. Army.
AQUIFER.--Talbot Formation of Pleistocene age. Aquifer code: 112TLBT.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 19 ft; casing diameter 4 in., to 14 ft; screen diameter 4 in. from 14 to 19 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from Dec. 17, 1987 to Sept. 25, 1989.
DATUM.--Elevation of land surface is 3.7 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of recorder platform, 2.61 ft above land-surface datum.
REMARKS.--Carroll Island/Graces Quarters Hydrologic Assessment Project observation well I22B.
PERIOD OF RECORD.--November 1987 to September 1989.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.95 ft above sea level, June 17, 1989; lowest measured, 1.09 ft below sea level, July 20, 1988.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
(READINGS BELOW SEA LEVEL INDICATED BY "-")

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	-.12	-.14	---	---	2.53	2.46	2.45	2.39	2.62	2.60	2.69	2.65
2	-.14	-.16	---	---	2.45	2.42	2.58	2.45	2.60	2.51	2.65	2.59
3	-.16	-.18	---	---	2.43	2.41	2.62	2.58	2.64	2.51	2.59	2.55
4	-.18	-.19	---	---	2.42	2.29	2.61	2.43	2.65	2.62	2.56	2.53
5	-.19	-.21	---	---	2.30	2.28	2.43	2.36	2.64	2.62	2.71	2.56
6	-.21	-.23	---	---	2.31	2.28	2.46	2.37	2.65	2.64	2.82	2.71
7	-.23	-.25	---	---	2.32	2.29	2.43	2.40	2.64	2.59	2.80	2.70
8	-.25	-.26	---	---	2.29	2.20	2.64	2.44	2.59	2.56	2.71	2.70
9	-.17	-.28	---	---	2.26	2.20	2.67	2.63	2.56	2.45	2.73	2.69
10	.21	-.17	---	---	2.26	2.23	2.63	2.59	2.44	2.41	2.75	2.73
11	.24	.13	---	---	2.25	2.12	2.59	2.53	2.43	2.40	2.78	2.75
12	.13	.0	---	---	2.12	2.05	2.66	2.52	2.43	2.36	2.79	2.72
13	.0	-.09	---	---	2.11	2.05	2.66	2.56	2.39	2.30	2.72	2.67
14	-.08	-.11	---	---	2.13	2.05	2.57	2.50	2.67	2.40	2.69	2.68
15	-.07	-.10	---	---	2.20	2.13	2.67	2.57	2.72	2.67	2.71	2.69
16	-.10	-.13	1.26	1.14	2.15	2.05	2.66	2.60	2.71	2.65	2.68	2.56
17	-.10	-.13	1.84	1.27	2.07	2.05	2.60	2.58	2.65	2.61	2.56	2.53
18	-.03	-.11	1.89	1.84	2.05	1.98	2.58	2.56	2.63	2.61	2.64	2.55
19	---	---	2.03	1.88	2.00	1.98	2.57	2.53	2.63	2.62	2.65	2.56
20	---	---	2.30	2.03	2.01	1.97	2.56	2.50	2.65	2.63	2.68	2.55
21	---	---	2.31	2.22	2.14	2.01	2.50	2.36	2.81	2.65	2.80	2.68
22	---	---	2.22	2.16	2.16	2.13	2.37	2.33	2.84	2.80	2.77	2.68
23	---	---	2.19	2.16	2.32	2.13	2.37	2.35	2.80	2.70	2.68	2.66
24	---	---	2.19	2.15	2.53	2.32	2.37	2.34	2.70	2.60	2.87	2.67
25	---	---	2.16	2.14	2.55	2.50	2.37	2.35	2.61	2.56	2.86	2.81
26	---	---	2.17	2.15	2.50	2.41	2.54	2.35	2.77	2.60	2.81	2.76
27	---	---	2.44	2.16	2.43	2.39	2.55	2.49	2.77	2.74	2.76	2.72
28	---	---	2.58	2.45	2.53	2.42	2.49	2.42	2.74	2.69	2.72	2.71
29	---	---	2.55	2.50	2.50	2.42	2.43	2.43	---	---	2.72	2.67
30	---	---	2.53	2.51	2.42	2.40	2.57	2.43	---	---	2.71	2.66
31	---	---	---	---	2.43	2.41	2.61	2.57	---	---	2.85	2.71
MONTH	---	---	---	---	2.55	1.97	2.67	2.33	2.84	2.30	2.87	2.53

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	2.84	2.72	2.76	2.59	2.20	2.03	1.89	1.71	2.55	2.48	.48	.47
2	2.72	2.67	2.89	2.76	2.03	1.86	1.71	1.56	2.53	2.44	.47	.32
3	2.81	2.68	---	---	1.86	1.71	1.56	1.43	2.44	2.26	.32	.18
4	2.82	2.80	---	---	1.71	1.58	1.77	1.37	2.25	2.07	.18	.14
5	2.83	2.77	---	---	1.80	1.48	2.61	1.78	2.06	1.84	.15	.14
6	2.86	2.81	---	---	2.66	1.82	2.85	2.61	1.83	1.67	.14	.12
7	2.85	2.80	---	---	2.86	2.66	2.85	2.82	1.67	1.48	.12	.08
8	2.85	2.82	---	---	2.86	2.83	2.82	2.67	1.48	1.25	.08	.03
9	2.85	2.80	---	---	2.94	2.82	2.67	2.52	1.25	1.10	.03	-.01
10	2.80	2.71	---	---	2.94	2.83	2.52	2.34	1.10	.99	-.01	-.04
11	2.71	2.63	---	---	2.83	2.61	2.34	2.09	1.01	.97	-.04	-.09
12	2.63	2.60	---	---	2.61	2.49	2.09	1.96	1.30	1.01	-.09	-.16
13	2.60	2.58	---	---	2.57	2.49	2.29	1.99	1.55	1.30	-.16	-.18
14	2.58	2.53	---	---	2.57	2.41	2.36	2.22	1.53	1.47	-.15	-.18
15	2.77	2.53	---	---	2.87	2.57	2.22	1.93	1.47	1.41	-.16	-.24
16	2.79	2.76	---	---	2.93	2.87	2.65	1.90	1.41	1.30	-.13	-.27
17	2.79	2.76	---	---	2.95	2.92	2.74	2.66	1.30	1.13	.13	-.12
18	2.79	2.76	---	---	2.94	2.85	2.72	2.66	1.13	1.02	.12	.07
19	2.84	2.78	---	---	2.85	2.72	2.66	2.55	1.19	1.02	.82	.07
20	2.82	2.78	2.64	2.54	2.72	2.65	2.83	2.53	1.26	1.20	1.52	.83
21	2.78	2.74	2.54	2.38	2.68	2.65	2.84	2.80	1.44	1.22	1.58	1.52
22	2.74	2.66	2.38	2.19	2.69	2.62	2.80	2.72	1.47	1.41	2.83	1.55
23	2.66	2.59	2.67	2.15	2.80	2.57	2.72	2.55	1.41	1.27	3.04	2.43
24	2.59	2.53	2.83	2.68	2.88	2.80	2.55	2.33	1.27	1.04	2.45	2.34
25	2.53	2.45	2.82	2.79	2.88	2.82	2.33	2.15	1.04	.93	---	---
26	2.45	2.38	2.80	2.75	2.82	2.74	2.14	2.01	.93	.86	---	---
27	2.38	2.33	2.76	2.70	2.75	2.64	2.05	1.97	.86	.75	---	---
28	2.33	2.19	2.76	2.60	2.64	2.46	2.03	1.89	.75	.70	---	---
29	2.51	2.14	2.60	2.46	2.46	2.19	1.88	1.60	.74	.70	---	---
30	2.63	2.51	2.46	2.35	2.19	1.90	1.60	1.50	.74	.63	---	---
31	---	---	2.35	2.20	---	---	2.48	1.51	.63	.48	---	---
MONTH	2.86	2.14	---	---	2.95	1.48	2.85	1.37	2.55	.48	---	---



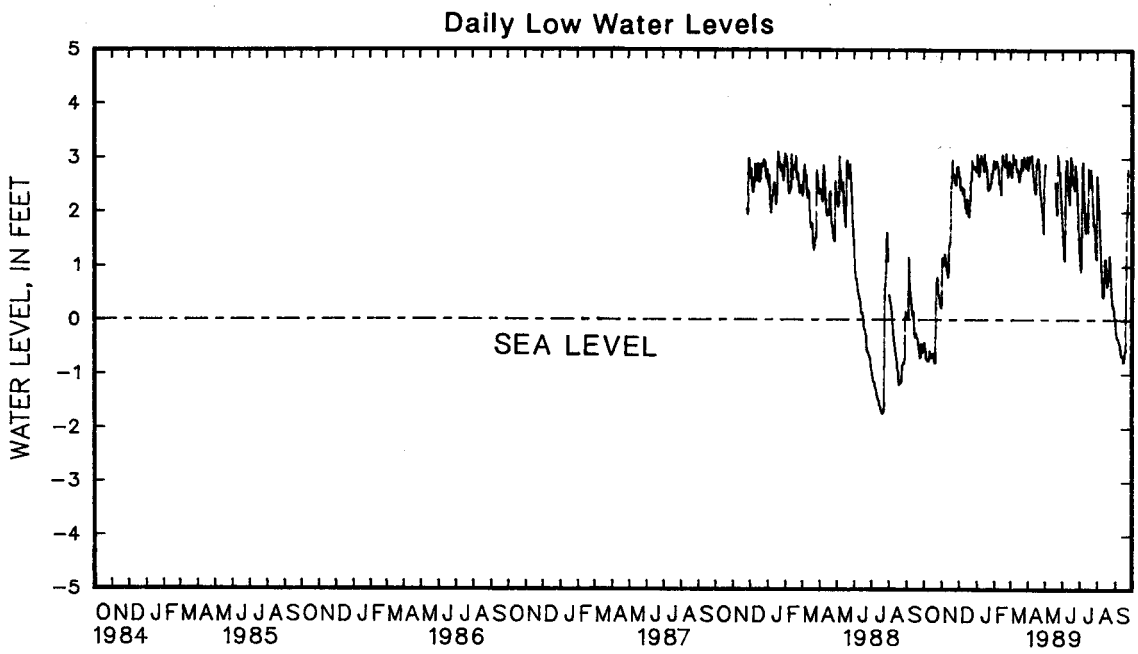
5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--BA Fg 82. SITE ID.--391846076202903. PERMIT NUMBER.--BA-88-0810.
LOCATION.--Lat 39°18'46", long 76°20'29", Hydrologic Unit 02060003, at Carroll Island, Aberdeen Proving Ground.
Owner: U.S. Army.
AQUIFER.--Talbot Formation of Pleistocene age. Aquifer code: 112TLBT.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 10 ft; casing diameter 4 in., to 5 ft; screen diameter 4 in. from 5 to 10 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from Nov. 25, 1987 to Sept. 25, 1989.
DATUM.--Elevation of land surface is 3.6 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of recorder platform, 2.75 ft above land-surface datum.
REMARKS.--Carroll Island/Graces Quarters Hydrologic Assessment Project observation well I22c.
RERIOD OF RECORD.--November 1987 to September 1989.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.45 ft above sea level, Sept. 23, 1989; lowest measured, 1.74 ft below sea level, July 20, 1989 .

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
(READINGS BELOW SEA LEVEL INDICATED BY "-")

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	-.41	-.46	1.18	.36	2.85	2.69	3.08	2.75	3.02	2.90	2.94	2.80
2	-.35	-.43	1.26	1.15	2.72	2.64	3.18	3.09	2.90	2.81	2.86	2.71
3	-.43	-.53	1.15	1.00	2.75	2.63	3.16	3.01	3.12	2.84	2.79	2.68
4	-.51	-.58	1.06	1.01	2.67	2.41	3.09	2.78	3.06	2.94	2.86	2.65
5	-.58	-.72	1.30	1.06	2.54	2.46	2.78	2.67	3.03	2.95	3.16	2.86
6	-.70	-.75	1.51	1.22	2.56	2.44	2.88	2.74	3.03	2.91	3.21	3.08
7	-.66	-.74	1.47	1.19	2.56	2.45	2.98	2.76	3.01	2.84	3.11	2.93
8	-.64	-.77	1.26	1.11	2.44	2.32	3.20	2.99	2.97	2.77	3.03	2.91
9	-.70	-.77	1.11	.99	2.60	2.35	3.13	3.05	2.79	2.54	3.18	2.95
10	-.37	-.72	1.23	1.01	2.57	2.41	3.09	3.00	2.62	2.52	3.12	2.98
11	-.37	-.58	1.07	.84	2.53	2.22	3.05	2.90	2.70	2.57	3.11	2.97
12	-.58	-.69	.87	.79	2.22	2.08	3.31	2.98	2.66	2.44	3.08	2.81
13	-.66	-.70	1.36	.87	2.23	2.16	3.20	2.84	2.79	2.32	2.89	2.76
14	-.56	-.70	1.56	1.36	2.32	1.98	3.19	2.76	3.14	2.81	2.89	2.79
15	-.58	-.64	1.51	1.40	2.35	2.24	3.28	3.08	3.23	3.06	2.91	2.72
16	-.64	-.69	1.74	1.43	2.27	2.13	3.10	2.94	3.11	2.98	2.71	2.58
17	-.62	-.69	2.54	1.75	2.22	2.14	3.04	2.90	3.04	2.91	2.67	2.57
18	-.47	-.63	2.63	2.54	2.13	1.92	3.04	2.85	3.02	2.90	2.90	2.67
19	-.62	-.72	2.96	2.55	2.07	1.91	2.97	2.79	2.97	2.87	2.89	2.78
20	-.72	-.80	3.20	2.97	2.23	2.02	2.89	2.63	2.95	2.84	3.17	2.76
21	-.16	-.80	2.99	2.71	2.67	2.23	2.63	2.39	3.34	2.96	3.27	2.98
22	.77	-.15	2.72	2.65	2.68	2.57	2.63	2.41	3.18	3.09	2.98	2.85
23	.76	.67	2.76	2.69	3.02	2.61	2.68	2.48	3.09	2.93	2.93	2.80
24	.95	.75	2.69	2.57	3.21	2.96	2.66	2.44	2.93	2.78	3.31	2.95
25	.91	.79	2.58	2.51	3.09	2.88	2.63	2.52	2.83	2.65	3.17	3.02
26	.79	.54	2.56	2.50	2.88	2.81	3.05	2.53	3.04	2.83	3.01	2.91
27	.54	.44	3.08	2.56	2.96	2.81	3.04	2.72	3.09	2.93	2.96	2.88
28	.60	.41	3.12	2.84	3.14	2.83	2.82	2.64	3.04	2.94	2.96	2.90
29	.41	.32	2.84	2.75	2.95	2.81	2.79	2.72	---	---	2.94	2.83
30	.35	.25	2.93	2.83	2.94	2.84	3.17	2.80	---	---	3.03	2.87
31	.36	.22	---	---	2.95	2.76	3.05	2.96	---	---	3.23	3.03
MONTH	.95	-.80	3.20	.36	3.21	1.91	3.31	2.39	3.34	2.32	3.31	2.57

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	3.03	2.81	3.13	2.71	2.01	1.81	1.52	1.30	2.77	2.68	.12	.02
2	2.89	2.79	3.23	2.89	1.81	1.57	1.29	1.13	2.69	2.52	.07	-.22
3	3.21	2.89	---	---	1.56	1.42	1.12	.96	2.52	2.25	-.22	-.30
4	3.10	3.03	---	---	1.43	1.14	1.55	.90	2.25	2.02	-.30	-.35
5	3.16	2.95	---	---	1.60	1.10	2.84	1.57	2.02	1.68	-.32	-.35
6	3.24	3.03	---	---	2.82	1.65	3.14	2.84	1.69	1.48	-.34	-.37
7	3.18	2.98	---	---	3.21	2.81	3.11	2.93	1.48	1.19	-.36	-.41
8	3.18	3.05	---	---	3.14	2.97	2.96	2.59	1.19	.92	-.41	-.45
9	3.12	2.88	---	---	3.27	2.97	2.60	2.33	.91	.74	-.45	-.49
10	2.90	2.75	---	---	3.23	2.83	2.33	2.07	.74	.43	-.49	-.56
11	2.75	2.63	---	---	2.83	2.48	2.07	1.74	.45	.42	-.56	-.64
12	2.63	2.53	---	---	2.48	2.33	1.74	1.62	.75	.46	-.63	-.68
13	2.54	2.40	---	---	2.48	2.29	2.31	1.70	1.16	.76	-.66	-.68
14	2.43	2.35	---	---	2.62	2.14	2.38	1.98	1.18	1.15	-.59	-.68
15	3.16	2.38	---	---	3.05	2.63	1.98	1.64	1.18	1.13	-.64	-.79
16	3.16	2.93	---	---	3.13	3.02	2.96	1.63	1.13	.97	-.68	-.79
17	2.99	2.90	---	---	3.15	2.98	2.98	2.82	.97	.74	-.54	-.68
18	3.03	2.83	---	---	3.11	2.90	2.82	2.64	.74	.63	-.57	-.59
19	3.13	3.00	---	---	2.90	2.63	2.64	2.47	.80	.65	.93	-.58
20	3.00	2.91	2.81	2.55	2.63	2.51	2.97	2.47	.92	.80	1.99	.96
21	2.92	2.78	2.56	2.23	2.61	2.51	2.93	2.80	1.19	.85	2.03	1.94
22	2.77	2.51	2.23	1.99	2.68	2.50	2.80	2.69	1.30	1.19	2.90	1.94
23	2.51	2.36	3.09	1.96	2.96	2.41	2.69	2.43	1.26	1.06	3.45	2.80
24	2.36	2.26	3.20	3.07	3.02	2.88	2.43	2.15	1.06	.78	2.82	2.69
25	2.26	2.16	3.08	2.97	2.88	2.76	2.14	1.92	.78	.58	---	---
26	2.16	2.02	3.00	2.76	2.75	2.64	1.91	1.74	.57	.43	---	---
27	2.05	1.95	3.07	2.76	2.69	2.41	1.87	1.78	.43	.29	---	---
28	1.94	1.69	2.96	2.73	2.40	2.16	1.86	1.61	.29	.23	---	---
29	2.65	1.60	2.73	2.44	2.16	1.76	1.60	1.28	.34	.23	---	---
30	2.80	2.66	2.44	2.20	1.76	1.52	1.28	1.14	.31	.12	---	---
31	---	---	2.20	2.00	---	---	2.71	1.13	.12	.03	---	---
MONTH	3.24	1.60	---	---	3.27	1.10	3.14	.90	2.77	.03	---	---



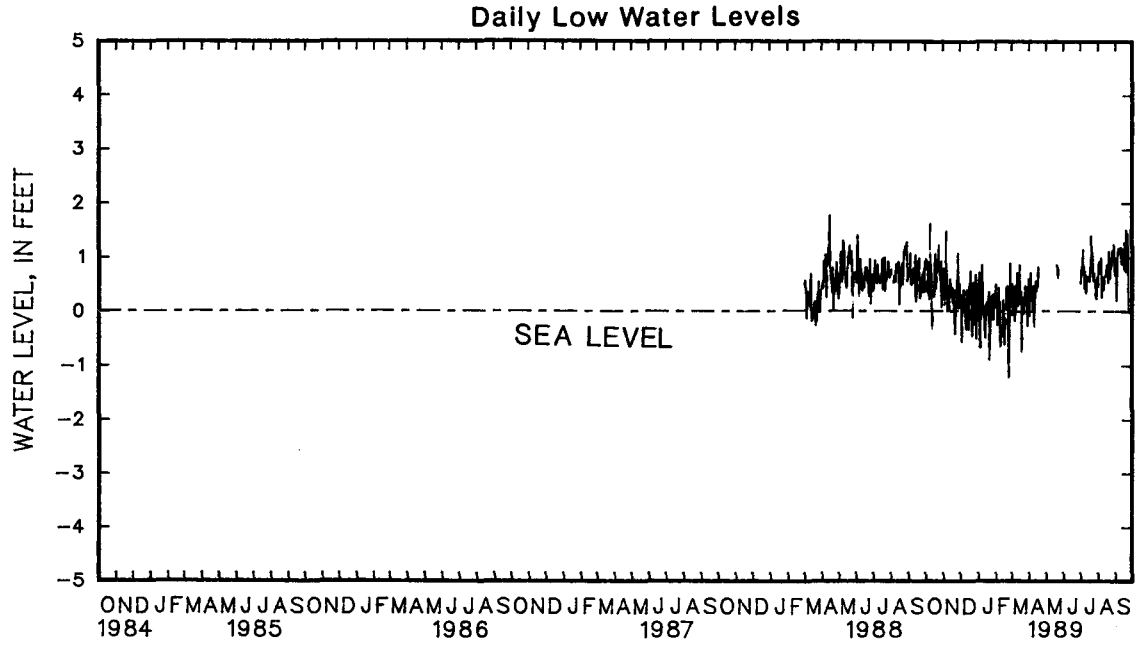
5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--BA Fg 83. SITE ID.--391855076195901. PERMIT NUMBER.--BA-88-0816.
LOCATION.--Lat 39°18'55", long 76°19'59", Hydrologic Unit 02060003, at Carroll Island, Aberdeen Proving Ground.
Owner: U.S. Army.
AQUIFER.--Talbot Formation of Pleistocene age. Aquifer code: 112TLBT.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 63 ft; casing diameter 4 in., to 53 ft; screen diameter 4 in. from 53 to 63 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from Feb. 29, 1988 to Sept. 25, 1989.
DATUM.--Elevation of land surface is 3.8 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of recorder platform, 2.41 ft above land-surface datum.
REMARKS.--Carroll Island/Graces Quarters Hydrologic Assessment Project observation well I27A.
PERIOD OF RECORD.--November 1987 to September 1989.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.67 ft above sea level, Sept. 23, 1989; lowest measured, 1.23 ft below sea level, Feb. 24, 1988.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
(READINGS BELOW SEA LEVEL INDICATED BY "-")

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	1.39	.78	1.18	.79	.93	.25	.59	.20	1.14	.51	1.10	.52
2	1.53	.97	1.35	.73	.58	.21	1.14	.52	.71	.15	.52	-.06
3	1.42	.36	.74	.12	.60	.29	1.13	.72	1.13	.30	.42	-.01
4	.96	.49	.64	.14	.47	-.58	.80	-.66	.54	-.26	.89	.10
5	1.55	.91	1.82	.51	.60	-.32	.87	-.67	.78	.23	1.29	.47
6	1.35	.54	1.97	1.49	.86	.02	1.07	.61	1.12	.45	.96	.04
7	.82	.35	1.48	.70	.79	.39	1.20	.40	.87	.14	.38	-.17
8	.75	.23	1.14	.48	.51	.0	1.73	.87	.73	.17	.63	.17
9	2.13	.76	.82	-.01	.81	.15	1.51	.39	.63	-.65	.77	.05
10	2.13	1.63	1.57	.46	1.04	.21	.79	.03	.02	-.58	.94	.47
11	1.74	.66	1.35	.26	1.00	-.22	.61	-.07	.45	-.37	1.42	.72
12	.73	.15	.89	.01	.64	-.34	.91	.01	.19	-.26	1.41	.49
13	.44	-.33	1.26	.61	.99	.39	.92	-.35	.40	-.44	.96	.12
14	.89	-.10	1.25	.56	1.34	.33	.26	-.49	.94	.22	1.29	.71
15	.90	.36	1.17	.26	1.51	.35	.74	.15	.56	-.16	1.53	.87
16	.91	.27	1.09	.36	.48	-.34	.52	.01	.20	-.30	.86	.20
17	1.15	.74	1.25	.43	.90	.46	1.02	.19	.08	-.61	.88	.31
18	1.37	1.06	.55	.18	.80	.28	.61	-.06	.30	-.14	.97	.37
19	1.28	.40	.60	.15	1.27	.75	.87	.21	.88	.08	.35	-.74
20	.97	.56	1.35	.39	1.11	.47	.74	.36	.83	.45	1.23	-.51
21	1.33	.75	1.08	-.07	.75	.17	.31	-.91	1.30	.47	1.15	.27
22	1.45	.93	.36	-.42	.25	-.47	.29	-.46	1.18	.35	.30	-.03
23	1.40	.85	.79	-.01	.98	.13	.24	-.23	.48	-.17	.64	.19
24	1.63	1.23	.86	.07	1.37	.55	.74	.01	-.05	-1.23	.80	.25
25	1.55	.80	1.33	.51	1.26	.25	.69	.30	.89	-1.19	.95	.48
26	1.45	.69	1.30	.64	.66	-.24	1.20	.31	1.57	.90	1.15	.38
27	1.30	.58	1.71	1.08	.81	-.21	1.19	.23	1.08	.37	.64	.12
28	1.30	.93	1.70	.51	1.21	.68	.73	-.14	.67	.11	.89	.35
29	1.22	.07	.66	.05	.81	-.51	.77	.33	---	---	.62	-.04
30	.86	.22	.90	.51	.69	-.12	.75	.07	---	---	.58	-.26
31	1.01	.32	---	---	.81	.39	1.05	.14	---	---	1.53	.61
MONTH	2.13	-.33	1.97	-.42	1.51	-.58	1.73	-.91	1.57	-1.23	1.53	-.74

DAY	APRIL MAX	APRIL MIN	MAY MAX	MAY MIN	JUNE MAX	JUNE MIN	JULY MAX	JULY MIN	AUGUST MAX	AUGUST MIN	SEPTEMBER MAX	SEPTEMBER MIN
1	.94	-.02	---	---	---	---	1.30	.52	1.18	.46	1.71	.99
2	.61	-.07	---	---	---	---	1.47	.65	1.55	.91	1.63	.53
3	1.27	.61	---	---	---	---	1.52	.83	1.47	.88	1.10	.21
4	1.24	.71	---	---	---	---	1.46	.70	1.54	.74	1.64	1.06
5	1.07	.35	---	---	---	---	1.93	1.15	1.54	.93	1.65	1.17
6	.72	.20	---	---	---	---	1.41	.83	1.44	.99	1.67	1.08
7	1.06	.38	---	---	---	---	1.24	.81	1.47	.61	1.62	1.08
8	1.19	.04	---	---	---	---	1.11	.43	1.10	.26	1.62	1.07
9	1.38	.49	---	---	---	---	1.29	.75	1.25	.64	1.66	1.15
10	.71	-.03	---	---	---	---	1.44	.66	1.22	.56	1.79	1.18
11	.54	-.29	---	---	---	---	1.09	.34	.69	.41	1.76	.93
12	.77	.30	---	---	---	---	.90	.50	.95	.57	1.42	.88
13	1.02	.57	---	---	---	---	1.40	.62	1.29	.65	1.58	.88
14	.75	.38	---	---	---	---	1.20	.64	1.29	.65	1.73	1.16
15	1.05	.51	---	---	---	---	1.38	.62	1.32	.70	1.72	1.08
16	.94	.47	---	---	---	---	1.55	.62	1.47	.84	1.82	.78
17	1.35	.83	---	---	---	---	1.11	.56	1.47	.86	1.86	1.28
18	1.22	.64	---	---	---	---	1.62	.75	1.19	.72	1.67	.76
19	---	---	---	---	---	---	1.60	.93	1.47	.53	1.96	.74
20	---	---	1.37	.86	---	---	2.06	1.41	1.67	1.13	2.08	1.52
21	---	---	1.52	.82	---	---	1.55	1.06	1.67	.96	2.09	1.03
22	---	---	1.17	.62	---	---	1.51	1.02	1.44	.61	3.55	1.45
23	---	---	1.49	.77	---	---	1.45	.60	1.43	.83	3.67	.55
24	---	---	---	---	---	---	1.13	.57	1.45	.84	.78	.01
25	---	---	---	---	---	---	1.33	.70	1.75	1.01	---	---
26	---	---	---	---	---	---	1.42	.57	1.75	1.12	---	---
27	---	---	---	---	---	---	1.26	.50	1.59	.93	---	---
28	---	---	---	---	---	---	1.27	.29	1.67	.93	---	---
29	---	---	---	---	---	---	.72	.24	1.80	1.24	---	---
30	---	---	---	---	---	---	1.40	.51	1.67	.87	---	---
31	---	---	---	---	---	---	1.79	.64	1.15	.64	---	---
MONTH	---	---	---	---	---	---	2.06	.24	1.80	.26	---	---



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--BA Fg 84. SITE ID.--391855076195902. PERMIT NUMBER.--BA-88-0817.
LOCATION.--Lat 39°18'55", long 76°19'59", Hydrologic Unit 02060003, at Carroll Island, Aberdeen Proving Ground.
Owner: U.S. Army.
AQUIFER.--Talbot Formation of Pleistocene age. Aquifer code: 112TLBT.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 8 ft; casing diameter 4 in., to 3 ft; screen diameter 4 in. from 3 to 8 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from Feb. 29, 1988 to Sept. 25, 1989.
DATUM.--Elevation of land surface is 3.9 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of recorder platform, 2.33 ft above land-surface datum.
REMARKS.--Carroll Island/Graces Quarters Hydrologic Assessment Project observation well I27B.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.31 ft above sea level, Sept. 23, 1989; lowest measured, .82 ft below sea level, July 21, 1988.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
(READINGS BELOW SEA LEVEL INDICATED BY "-")

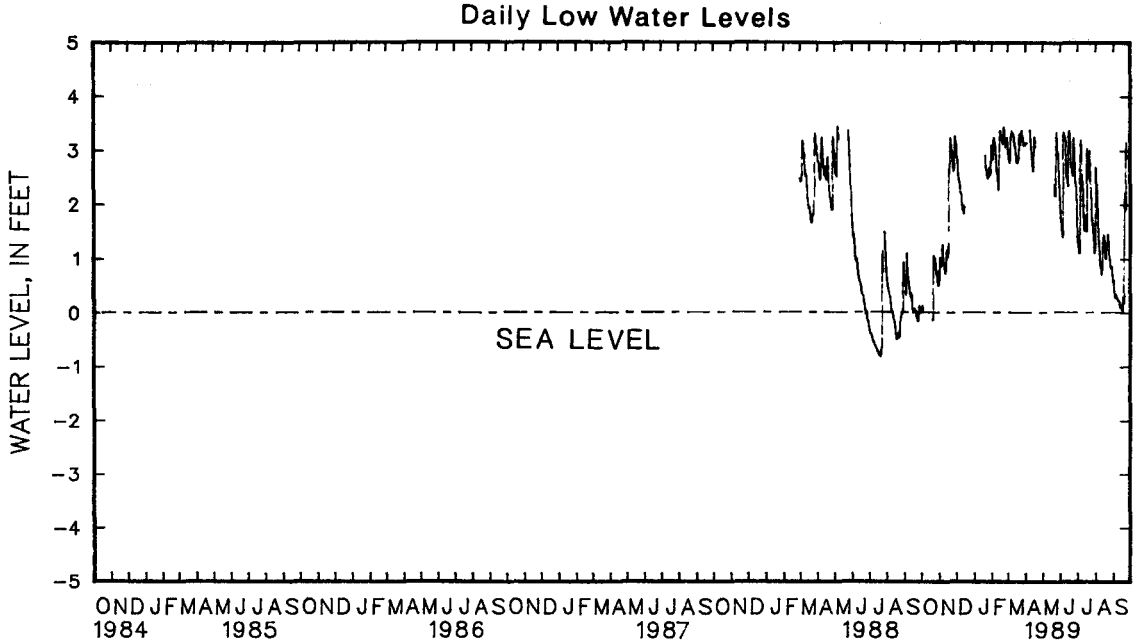
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	.18	.09	1.23	.60	3.13	2.96	---	---	3.12	2.96	3.16	3.02
2	.21	.12	1.27	1.03	2.96	2.86	---	---	2.96	2.83	3.03	2.93
3	.19	.05	1.02	.86	2.86	2.77	---	---	3.43	2.84	2.94	2.84
4	---	---	.89	.85	2.76	2.57	---	---	3.38	3.25	2.91	2.78
5	---	---	1.27	.89	2.57	2.48	---	---	3.25	3.21	3.38	2.88
6	---	---	1.42	1.27	2.52	2.42	---	---	3.21	3.14	3.52	3.28
7	---	---	1.38	1.07	2.51	2.35	---	---	3.14	3.02	3.44	3.36
8	---	---	1.07	1.01	2.36	2.23	---	---	3.07	2.92	3.35	3.31
9	---	---	1.01	.88	2.36	2.20	---	---	2.92	2.71	3.46	3.28
10	---	---	1.08	.90	2.32	2.18	---	---	2.70	2.58	3.39	3.32
11	---	---	1.08	.79	2.28	1.99	---	---	2.75	2.55	3.38	3.27
12	---	---	.84	.72	1.98	1.89	---	---	2.64	2.42	3.31	3.16
13	---	---	1.24	.84	2.03	1.98	---	---	3.01	2.27	3.17	3.10
14	---	---	1.25	1.16	2.13	1.83	---	---	3.47	3.08	3.12	3.06
15	---	---	1.21	1.04	2.20	1.95	---	---	3.49	3.38	3.10	2.96
16	---	---	1.22	1.03	---	---	---	---	3.45	3.36	2.96	2.80
17	---	---	3.07	1.23	---	---	---	---	3.36	3.28	2.80	2.77
18	---	---	2.92	2.69	---	---	---	---	3.28	3.24	3.27	2.77
19	---	---	3.25	2.58	---	---	---	---	3.24	3.18	3.18	2.90
20	-.07	-.14	3.38	3.25	---	---	3.09	2.91	3.23	3.13	3.48	2.85
21	1.29	-.14	3.27	3.11	---	---	2.91	2.70	3.63	3.23	3.49	3.32
22	1.44	1.07	3.11	3.01	---	---	2.79	2.65	3.55	3.45	3.32	3.19
23	1.07	.97	3.02	2.95	---	---	2.74	2.61	3.45	3.32	3.32	3.12
24	1.16	1.01	2.94	2.80	---	---	2.69	2.50	3.32	3.18	3.61	3.34
25	1.09	.93	2.80	2.70	---	---	2.64	2.48	3.22	3.07	3.47	3.38
26	.99	.81	2.74	2.62	---	---	3.02	2.51	3.39	3.20	3.38	3.27
27	.82	.72	3.47	2.65	---	---	3.01	2.68	3.37	3.24	3.27	3.23
28	.89	.76	3.51	3.28	---	---	2.67	2.54	3.27	3.16	3.23	3.20
29	.77	.61	3.28	3.18	---	---	2.63	2.55	---	---	3.20	3.10
30	.66	.51	3.20	3.13	---	---	3.32	2.55	---	---	3.10	3.10
31	.60	.50	---	---	---	---	3.18	3.11	---	---	3.14	3.10
MONTH	---	---	3.51	.60	---	---	---	---	3.63	2.27	3.61	2.77

MARYLAND--Continued

BALTIMORE COUNTY--Continued

BA Fg 84--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	3.14	3.14	---	---	2.13	1.87	1.49	1.30	3.03	2.69	.70	.59
2	3.14	3.14	---	---	1.94	1.71	1.38	1.20	2.69	2.39	.70	.39
3	3.14	3.14	---	---	1.71	1.62	1.28	1.10	2.38	1.99	.39	.27
4	---	---	---	---	1.68	1.47	2.42	1.10	1.99	1.79	.39	.32
5	---	---	---	---	3.33	1.40	3.34	2.40	1.83	1.51	.44	.32
6	---	---	---	---	3.50	3.34	3.54	3.20	1.57	1.31	.43	.28
7	---	---	---	---	3.60	3.34	3.33	3.10	1.45	1.11	.39	.25
8	3.48	3.38	---	---	3.45	3.27	3.16	2.68	1.16	.91	.37	.23
9	3.44	3.27	---	---	3.55	3.25	2.68	2.38	1.05	.86	.35	.22
10	3.27	3.13	---	---	3.52	3.18	2.40	2.00	.97	.80	.35	.20
11	3.13	2.99	---	---	3.18	2.77	2.00	1.62	.80	.70	.31	.15
12	2.99	2.85	---	---	2.77	2.57	1.70	1.52	1.33	.80	.19	.09
13	2.86	2.73	---	---	2.85	2.49	2.38	1.68	1.58	1.35	.18	.08
14	2.73	2.62	---	---	3.41	2.34	2.38	1.80	1.53	1.43	.24	.13
15	3.50	2.62	---	---	3.53	3.33	1.84	1.50	1.48	1.41	.19	.06
16	3.42	3.26	---	---	3.53	3.37	3.42	1.50	1.46	1.32	.29	.03
17	3.26	3.21	---	---	3.53	3.33	3.30	3.04	1.32	1.11	.39	.29
18	3.44	3.05	---	---	3.48	3.20	3.04	2.74	1.11	1.00	.37	.17
19	---	---	---	---	3.19	2.87	2.75	2.50	1.27	1.00	2.20	.21
20	---	---	---	---	3.01	2.68	3.42	2.49	1.35	1.28	2.38	2.21
21	---	---	2.71	2.37	3.02	2.71	3.25	3.01	1.70	1.28	2.33	1.89
22	---	---	2.37	2.16	2.96	2.58	3.05	2.77	1.73	1.45	4.20	1.92
23	---	---	3.56	2.16	3.49	2.53	2.79	2.31	1.59	1.30	4.31	3.16
24	---	---	3.57	3.35	3.48	3.25	2.33	1.91	1.35	1.08	3.16	2.87
25	---	---	3.35	3.21	3.26	3.00	1.99	1.71	1.21	.99	---	---
26	---	---	3.23	2.99	3.01	2.77	1.81	1.61	1.12	.95	---	---
27	---	---	3.45	2.96	2.83	2.42	1.89	1.63	.98	.82	---	---
28	---	---	3.29	2.86	2.46	2.17	1.88	1.41	.94	.82	---	---
29	---	---	2.88	2.52	2.17	1.76	1.43	1.11	.96	.84	---	---
30	---	---	2.55	2.35	1.77	1.42	1.34	1.11	.92	.69	---	---
31	---	---	2.35	2.12	---	---	3.22	1.25	.68	.56	---	---
MONTH	---	---	---	---	3.60	1.40	3.54	1.10	3.03	.56	---	---



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--BA Fg 87. SITE ID.--391912076203501. PERMIT NUMBER.--BA-88-0824.
LOCATION.--Lat 39°19'12", long 76°20'35", Hydrologic Unit 02060003, at Carroll Island, Aberdeen Proving Ground.
Owner: U.S. Army.
AQUIFER.--Talbot Formation of Pleistocene age. Aquifer code: 112TLBT.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 24.5 ft; casing diameter 4 in., to 19.5 ft; screen diameter 4 in. from 19.5 to 24.5 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from Dec. 22, 1987 to Sept. 25, 1989.
DATUM.--Elevation of land surface is 2.9 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of recorder platform, 2.61 ft above land-surface datum.
REMARKS.--Carroll Island/Graces Quarters Hydrologic Assessment Project observation well I33.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.22 ft above sea level, May 24, 1988 and June 17, 1989; lowest measured, .50 ft below sea level, July 20, 1988.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	.46	.44	1.22	.84	2.73	2.66	2.73	2.72	2.95	2.92	2.98	2.93
2	.51	.46	1.30	1.22	2.66	2.62	2.73	2.72	2.92	2.83	2.93	2.88
3	.51	.44	1.26	1.15	2.67	2.63	2.73	2.73	2.93	2.83	2.88	2.86
4	.44	.42	1.17	1.15	2.67	2.53	2.80	2.73	2.93	2.90	2.86	2.85
5	.43	.36	1.45	1.17	2.54	2.53	2.76	2.70	2.95	2.92	3.00	2.85
6	.36	.26	1.52	1.45	2.58	2.52	2.70	2.70	2.97	2.95	3.08	3.00
7	.26	.24	1.49	1.31	2.59	2.56	2.70	2.70	2.96	2.90	3.08	2.98
8	.25	.21	1.31	1.27	2.55	2.45	2.70	2.70	2.90	2.87	2.98	2.96
9	.48	.21	1.28	1.20	2.50	2.44	2.70	2.70	2.88	2.79	3.01	2.96
10	.78	.46	1.36	1.20	2.53	2.49	2.70	2.70	2.79	2.77	3.04	3.01
11	.79	.68	1.35	1.16	2.53	2.40	2.70	2.70	2.79	2.77	3.12	3.04
12	.68	.53	1.16	1.09	2.40	2.34	2.70	2.70	2.79	2.67	3.14	3.05
13	.52	.42	1.36	1.12	2.45	2.36	2.91	2.70	2.71	2.62	3.04	3.00
14	.43	.40	1.42	1.36	2.46	2.37	2.89	2.85	2.90	2.72	3.03	3.01
15	.43	.42	1.42	1.38	2.50	2.41	2.96	2.85	2.99	2.90	3.08	3.03
16	.42	.37	1.51	1.38	2.41	2.36	2.96	2.96	2.98	2.90	3.03	2.88
17	.38	.37	1.81	1.52	2.36	2.36	2.96	2.92	2.90	2.88	2.88	2.86
18	.49	.38	1.91	1.81	2.36	2.32	---	---	2.94	2.90	2.97	2.88
19	.49	.38	2.08	1.91	2.32	2.31	---	---	2.96	2.94	2.95	2.87
20	.38	.28	2.44	2.08	2.31	2.30	2.92	2.86	2.95	2.94	3.01	2.87
21	.64	.28	2.44	2.33	2.30	2.30	2.85	2.71	3.14	2.95	3.11	3.01
22	1.04	.65	2.33	2.29	2.30	2.30	2.72	2.70	3.14	3.08	3.05	2.96
23	1.06	1.02	2.39	2.32	2.30	2.30	2.74	2.72	3.08	2.99	2.96	2.94
24	1.19	1.06	2.39	2.37	2.30	2.30	2.74	2.73	2.99	2.94	3.17	2.95
25	1.18	1.12	2.38	2.34	2.57	2.30	2.73	2.67	2.94	2.91	3.17	3.12
26	1.13	1.02	2.40	2.37	2.57	2.57	2.89	2.67	3.10	2.94	3.12	3.05
27	1.02	.94	2.65	2.40	2.57	2.57	2.89	2.81	3.09	3.01	3.04	3.02
28	1.01	.95	2.72	2.66	2.86	2.57	2.81	2.76	3.01	2.98	3.04	3.02
29	.99	.89	2.69	2.62	2.79	2.73	2.80	2.79	---	---	3.04	2.99
30	.89	.83	2.73	2.63	2.73	2.73	2.93	2.80	---	---	3.02	2.98
31	.84	.79	---	---	2.73	2.73	2.94	2.89	---	---	3.17	3.02
MONTH	1.19	.21	2.73	.84	2.86	2.30	---	---	3.14	2.62	3.17	2.85

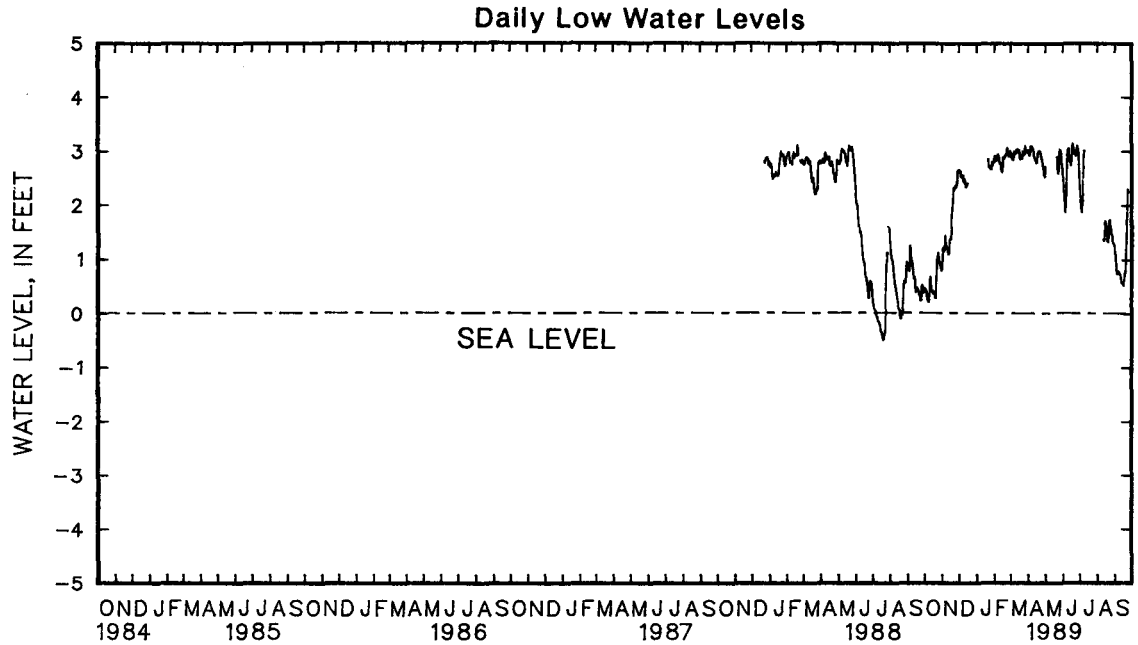
GROUND-WATER LEVELS

MARYLAND--Continued

BALTIMORE COUNTY--Continued

BA Fg 87--Continued

DAY	APRIL MAX	APRIL MIN	MAY MAX	MAY MIN	JUNE MAX	JUNE MIN	JULY MAX	JULY MIN	AUGUST MAX	AUGUST MIN	SEPTEMBER MAX	SEPTEMBER MIN
1	3.13	2.98	---	---	2.55	2.41	2.33	2.16	---	---	1.13	1.09
2	2.98	2.93	---	---	2.41	2.25	2.16	2.04	---	---	1.13	.94
3	3.10	2.95	---	---	2.24	2.09	2.04	1.93	---	---	.94	.80
4	3.12	3.10	---	---	2.11	1.97	2.07	1.88	---	---	.80	.74
5	3.11	3.06	---	---	2.19	1.88	2.73	2.09	---	---	.78	.75
6	3.14	3.10	---	---	2.74	2.20	3.18	2.73	---	---	.78	.78
7	3.13	3.04	---	---	3.00	2.75	3.10	3.03	---	---	.79	.78
8	3.08	3.06	---	---	3.04	3.00	---	---	---	---	.78	.75
9	3.08	2.99	---	---	3.18	3.04	---	---	---	---	.76	.73
10	2.99	2.91	---	---	3.18	3.07	---	---	1.48	1.37	.74	.71
11	2.91	2.88	---	---	3.07	2.90	---	---	1.37	1.35	.72	.65
12	2.88	2.84	---	---	2.90	2.82	---	---	1.55	1.37	.65	.57
13	2.85	2.83	---	---	2.91	2.82	---	---	1.72	1.55	.58	.56
14	2.83	2.79	---	---	2.84	2.75	---	---	1.73	1.72	.64	.56
15	2.99	2.79	---	---	3.07	2.83	---	---	1.72	1.70	.65	.54
16	3.00	2.97	---	---	3.17	3.07	---	---	1.70	1.64	.67	.52
17	3.01	2.97	---	---	3.22	3.15	---	---	1.64	1.47	.84	.67
18	3.02	3.00	---	---	3.17	3.12	---	---	1.46	1.34	.84	.78
19	3.06	3.01	---	---	3.12	3.02	---	---	1.50	1.33	1.30	.77
20	3.03	3.01	2.94	2.89	3.02	2.96	---	---	1.60	1.50	1.70	1.32
21	3.01	3.00	2.89	2.77	2.99	2.96	---	---	1.74	1.59	1.74	1.71
22	3.00	2.93	2.77	2.61	2.98	2.95	---	---	1.78	1.74	2.81	1.74
23	2.93	2.88	2.92	2.58	3.05	2.92	---	---	1.79	1.73	3.02	2.31
24	2.88	2.84	3.04	2.93	3.13	3.05	---	---	1.73	1.55	2.31	2.25
25	2.83	2.78	3.06	3.03	3.13	3.11	---	---	1.57	1.47	---	---
26	2.78	2.72	3.12	3.03	3.11	3.06	---	---	1.50	1.44	---	---
27	2.72	2.68	3.02	2.97	3.09	2.99	---	---	1.44	1.33	---	---
28	2.68	2.56	2.98	2.87	2.99	2.77	---	---	1.34	1.30	---	---
29	2.72	2.53	2.87	2.76	2.77	2.53	---	---	1.37	1.29	---	---
30	2.81	2.72	2.76	2.68	2.53	2.33	---	---	1.38	1.27	---	---
31	---	---	2.68	2.55	---	---	---	---	1.27	1.11	---	---
MONTH	3.14	2.53	---	---	3.22	1.88	---	---	---	---	---	---



5 YEAR HYDROGRAPH

OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--BA Fg 89. SITE ID.--391912076211601. PERMIT NUMBER.--BA-88-0840.
LOCATION.--Lat 39°19'12", long 76°21'16", Hydrologic Unit 02060003, at Carroll Island, Aberdeen Proving Ground.
Owner: U.S. Army.
AQUIFER.--Talbot Formation of Pleistocene age. Aquifer code: 112TLBT.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 10 ft; casing diameter 4 in., to 5 ft; screen diameter 4 in. from 5 to 10 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from Dec. 22, 1987 to Sept. 25, 1989.
DATUM.--Elevation of land surface is 3.5 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of recorder platform, 2.85 ft above land-surface datum.
REMARKS.--Carroll Island/Graces Quarters Hydrologic Assessment Project observation well I47A.
PERIOD OF RECORD.--November 1987 to September 1989.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.94 ft above sea level, Sept. 23, 1989; lowest measured, 1.33 ft below sea level, July 20, 1988.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
(READINGS BELOW SEA LEVEL INDICATED BY "-")

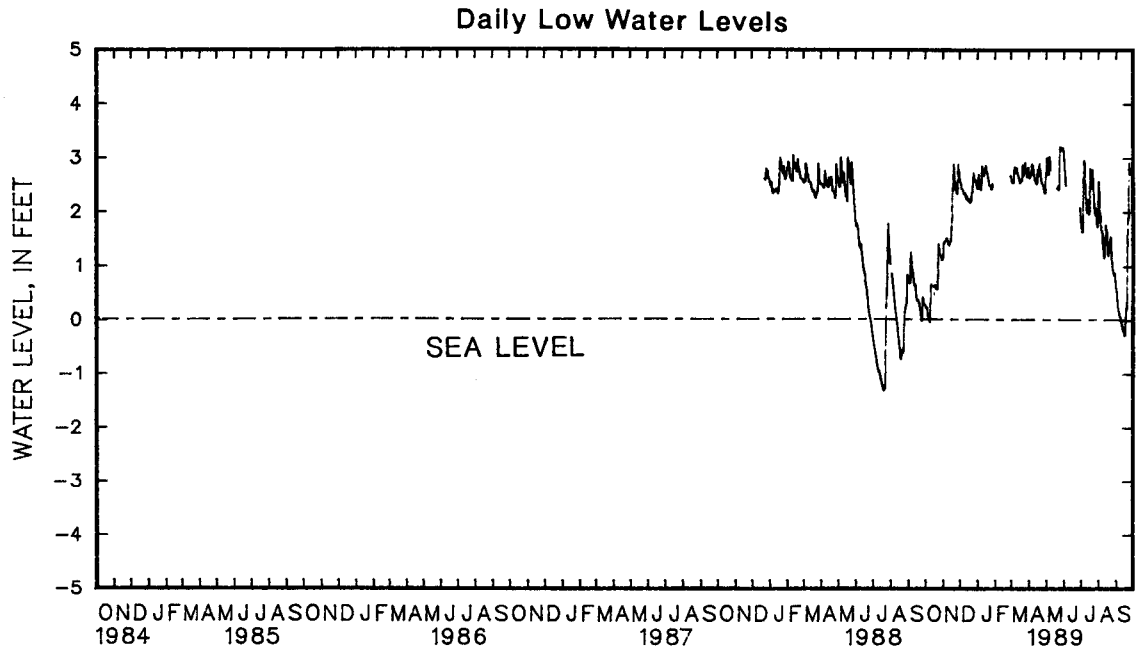
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	.28	.26	1.43	1.19	2.70	2.60	2.63	2.43	---	---	2.68	2.61
2	.28	.22	1.57	1.42	2.60	2.55	2.80	2.63	---	---	2.60	2.58
3	.23	.22	1.54	1.44	2.57	2.52	2.76	2.69	---	---	2.59	2.55
4	.25	.21	1.46	1.44	2.52	2.43	2.69	2.51	---	---	2.55	2.54
5	.21	.10	1.46	1.46	2.46	2.42	2.51	2.46	---	---	2.83	2.54
6	.10	.03	1.67	1.46	2.44	2.41	2.50	2.43	---	---	3.10	2.80
7	.04	.01	1.67	1.51	2.44	2.38	2.53	2.41	---	---	3.01	2.84
8	.02	-.04	1.53	1.51	2.38	2.33	2.98	2.53	---	---	2.83	2.77
9	.29	-.05	1.53	1.46	2.42	2.33	2.99	2.87	---	---	2.88	2.73
10	.73	.31	1.46	1.46	2.39	2.34	2.87	2.78	---	---	2.91	2.81
11	.74	.66	1.46	1.40	2.37	2.27	2.77	2.68	---	---	2.88	2.82
12	.67	.63	1.44	1.38	2.29	2.24	3.08	2.68	---	---	2.83	2.72
13	.64	.62	1.44	1.44	2.37	2.29	2.98	2.79	---	---	2.72	2.69
14	.66	.62	1.48	1.44	2.34	2.23	2.85	2.74	---	---	2.69	2.66
15	.64	.62	1.68	1.48	2.34	2.22	3.16	2.86	---	---	2.66	2.60
16	.64	.61	1.85	1.68	2.28	2.21	2.97	2.83	---	---	2.60	2.55
17	.64	.61	2.68	1.85	2.31	2.24	2.83	2.74	---	---	2.56	2.54
18	.69	.63	2.59	2.45	2.24	2.19	2.74	2.71	---	---	2.76	2.56
19	.67	.62	2.88	2.39	2.22	2.17	2.71	2.64	---	---	2.74	2.62
20	.62	.57	2.98	2.89	2.25	2.19	2.65	2.57	---	---	2.96	2.59
21	.57	.57	2.90	2.68	2.49	2.21	2.57	2.50	---	---	3.02	2.89
22	.75	.56	2.68	2.56	2.46	2.37	2.52	2.49	---	---	2.89	2.75
23	1.43	.75	2.56	2.49	2.67	2.37	2.52	2.49	---	---	2.75	2.69
24	1.49	1.41	2.49	2.40	2.92	2.62	2.50	2.47	---	---	3.23	2.76
25	1.42	1.33	2.40	2.35	2.90	2.72	2.47	2.42	---	---	3.07	2.92
26	1.33	1.22	2.35	2.33	2.72	2.59	2.67	2.43	---	---	2.92	2.81
27	1.22	1.20	3.09	2.34	2.60	2.57	2.66	2.52	---	---	2.81	2.76
28	1.30	1.19	3.14	2.89	2.69	2.60	2.53	2.48	2.77	2.68	2.76	2.73
29	1.19	1.16	2.88	2.76	2.63	2.55	---	---	---	---	2.73	2.66
30	1.16	1.11	2.76	2.70	2.55	2.51	---	---	---	---	2.82	2.66
31	1.19	1.11	---	---	2.54	2.45	---	---	---	---	2.92	2.83
MONTH	1.49	-.05	3.14	1.19	2.92	2.17	---	---	---	---	3.23	2.54

MARYLAND--Continued

BALTIMORE COUNTY--Continued

BA Fg 89--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	2.87	2.70	3.16	2.69	3.20	2.98	2.04	1.80	2.83	2.58	.62	.54
2	2.70	2.64	3.30	3.03	3.04	2.80	1.91	1.69	2.59	2.37	.54	.38
3	2.89	2.66	3.03	2.85	2.82	2.65	1.81	1.63	2.42	2.13	.38	.27
4	2.81	2.72	2.85	2.75	2.76	2.49	2.64	1.65	2.21	1.92	.28	.19
5	3.06	2.69	3.14	2.70	3.86	2.45	3.08	2.65	1.99	1.71	.20	.14
6	3.09	2.90	3.19	3.04	3.92	3.86	3.35	2.96	1.84	1.67	.16	.10
7	3.02	2.85	3.12	2.95	4.21	3.90	3.13	2.91	1.77	1.61	.11	.06
8	3.00	2.86	2.95	2.78	4.10	4.06	2.92	2.63	1.64	1.41	.07	.04
9	2.89	2.76	---	---	4.31	4.07	2.65	2.43	1.46	1.30	.04	-.02
10	2.76	2.67	---	---	4.30	4.10	2.49	2.21	1.40	1.15	-.01	-.07
11	2.67	2.61	---	---	4.12	3.98	2.28	2.04	1.47	1.18	-.06	-.12
12	2.61	2.58	---	---	4.00	3.95	2.16	1.98	1.83	1.47	-.12	-.18
13	2.58	2.54	---	---	4.09	3.94	2.66	2.16	1.94	1.76	-.17	-.21
14	2.54	2.52	---	---	4.58	3.95	2.67	2.23	1.79	1.68	-.19	-.22
15	3.02	2.53	---	---	4.72	4.55	2.28	1.96	1.74	1.64	-.22	-.29
16	2.99	2.80	---	---	4.87	4.70	3.13	2.00	1.69	1.42	.05	-.29
17	2.80	2.74	---	---	5.05	4.85	3.06	2.81	1.46	1.22	.21	.06
18	2.89	2.67	---	---	5.06	4.88	2.81	2.59	1.26	1.20	.23	.21
19	3.08	2.90	---	---	4.90	4.75	2.62	2.44	1.62	1.27	1.43	.21
20	2.92	2.79	2.66	2.44	4.86	4.69	3.16	2.45	1.64	1.44	2.04	1.44
21	2.79	2.71	2.62	2.48	4.88	4.71	2.97	2.79	1.81	1.43	2.05	1.88
22	2.70	2.60	2.49	2.41	4.84	4.67	2.79	2.60	1.81	1.54	3.65	1.89
23	2.60	2.54	3.33	2.43	5.37	4.73	2.63	2.34	1.59	1.27	3.94	2.91
24	2.57	2.52	3.31	3.22	5.38	5.33	2.41	2.14	1.27	1.07	2.91	2.70
25	2.55	2.50	3.24	3.21	5.36	5.30	2.24	2.02	1.09	.95	---	---
26	2.50	2.45	3.22	3.14	5.32	5.17	2.17	1.95	1.02	.90	---	---
27	2.45	2.41	3.39	3.15	5.28	5.07	2.25	2.07	.93	.84	---	---
28	2.41	2.35	3.32	3.19	5.14	2.33	2.43	2.01	.89	.83	---	---
29	2.86	2.35	3.21	3.17	2.36	2.08	2.02	1.74	.96	.86	---	---
30	2.86	2.73	3.22	3.19	2.16	1.92	1.84	1.73	.96	.70	---	---
31	---	---	3.23	3.14	---	---	2.88	1.80	.71	.59	---	---
MONTH	3.09	2.35	---	---	5.38	1.92	3.35	1.63	2.83	.59	---	---



5 YEAR HYDROGRAPH

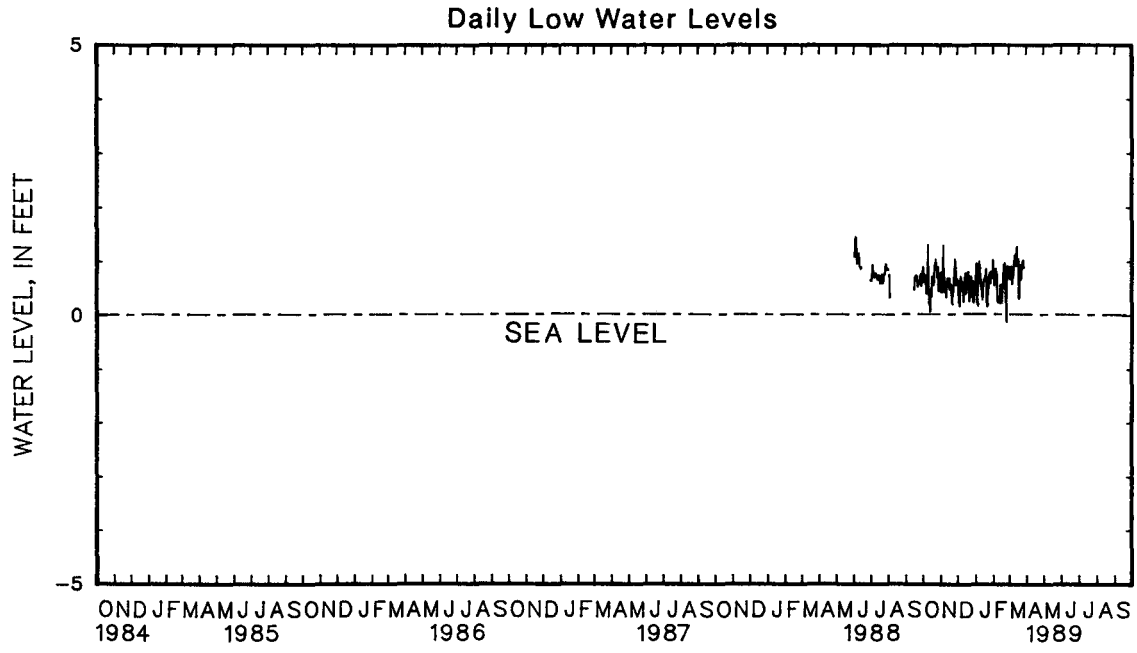
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

BALTIMORE COUNTY--Continued

WELL NUMBER.--BA Fg 90. SITE ID.--391912076211602. PERMIT NUMBER.--BA-88-0841.
LOCATION.--Lat 39°19'12", long 76°21'16", Hydrologic Unit 02060003, at Carroll Island, Aberdeen Proving Ground.
Owner: U.S. Army.
AQUIFER.--Talbot Formation of Pleistocene age. Aquifer code: 112TLBT.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 65.6 ft; casing diameter 4 in., to 60.6 ft; screen diameter 4 in. from 60.6 to 65.6 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from June 1, 1988 to Mar. 28, 1989.
DATUM.--Elevation of land surface is 3.3 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of recorder platform, 2.40 ft above land-surface datum.
REMARKS.--Carroll Island/Graces Quarters Hydrologic Assessment Project observation well I47B.
PERIOD OF RECORD.--November 1987 to March 1989.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.68 ft above sea level, June 3, 1988; lowest measured, .14 ft below sea level, Feb. 25, 1989.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
(READINGS BELOW SEA LEVEL INDICATED BY "-")

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	.98	.78	.79	.63	.91	.65	.68	.58	1.16	1.02	1.12	.88
2	1.09	.88	.96	.78	.70	.58	.98	.67	1.01	.75	.98	.71
3	1.05	.60	.79	.41	.71	.59	1.09	.94	1.06	.77	.74	.66
4	.74	.60	.51	.40	.69	.15	1.05	.21	.95	.53	.92	.65
5	1.10	.72	1.32	.51	.54	.15	.64	.15	.87	.70	1.25	.89
6	1.01	.69	1.51	1.29	.73	.43	.93	.65	1.10	.84	1.20	.79
7	.69	.53	1.32	.87	.77	.70	1.02	.73	1.08	.77	.78	.56
8	.52	.38	.87	.69	.74	.49	1.50	.98	.83	.72	.80	.67
9	1.66	.50	.82	.41	.71	.53	1.48	.88	.83	.26	.93	.69
10	1.65	1.30	1.10	.53	.85	.59	.94	.64	.33	.21	1.06	.92
11	1.39	.80	1.06	.54	.85	.43	.74	.52	.51	.24	1.44	1.06
12	.80	.42	.55	.31	.49	.23	.80	.56	.50	.31	1.48	1.10
13	.42	.04	.88	.55	.80	.50	.87	.42	.53	.20	1.15	.90
14	.37	.06	.88	.66	1.01	.66	.49	.26	.84	.54	1.37	1.13
15	.44	.38	.84	.55	1.22	.77	.76	.50	.70	.51	1.58	1.27
16	.47	.32	.75	.57	.76	.38	.73	.61	.65	.38	1.32	.90
17	.68	.45	.93	.66	.76	.47	.96	.65	.38	.21	1.06	.90
18	.94	.70	.66	.46	.72	.60	.93	.67	.55	.38	1.16	1.03
19	.91	.54	.55	.45	1.04	.72	.91	.71	.87	.55	1.03	.30
20	.66	.54	1.01	.55	.96	.79	.94	.84	.96	.86	1.12	.29
21	.99	.60	.95	.44	.94	.66	.83	.14	1.28	.93	1.19	.92
22	1.05	.91	.44	.18	.66	.24	.49	.16	1.28	.95	.91	.64
23	1.04	.88	.57	.34	.74	.36	.49	.37	.95	.58	.85	.68
24	1.23	1.02	.64	.42	1.09	.70	.75	.47	.58	-.10	1.04	.84
25	1.14	.87	.99	.62	1.09	.68	.76	.70	.65	-.14	1.13	.97
26	1.14	.83	1.05	.82	.73	.36	1.16	.74	1.40	.67	1.26	1.01
27	.90	.68	1.47	1.03	.59	.31	1.16	.77	1.22	.90	1.00	.87
28	.95	.88	1.47	.88	1.00	.60	.78	.57	.90	.77	---	---
29	.93	.44	.88	.54	.89	.21	.89	.79	---	---	---	---
30	.61	.43	.87	.59	.53	.24	.86	.69	---	---	---	---
31	.63	.44	---	---	.75	.54	1.03	.67	---	---	---	---
MONTH	1.66	.04	1.51	.18	1.22	.15	1.50	.14	1.40	-.14	---	---



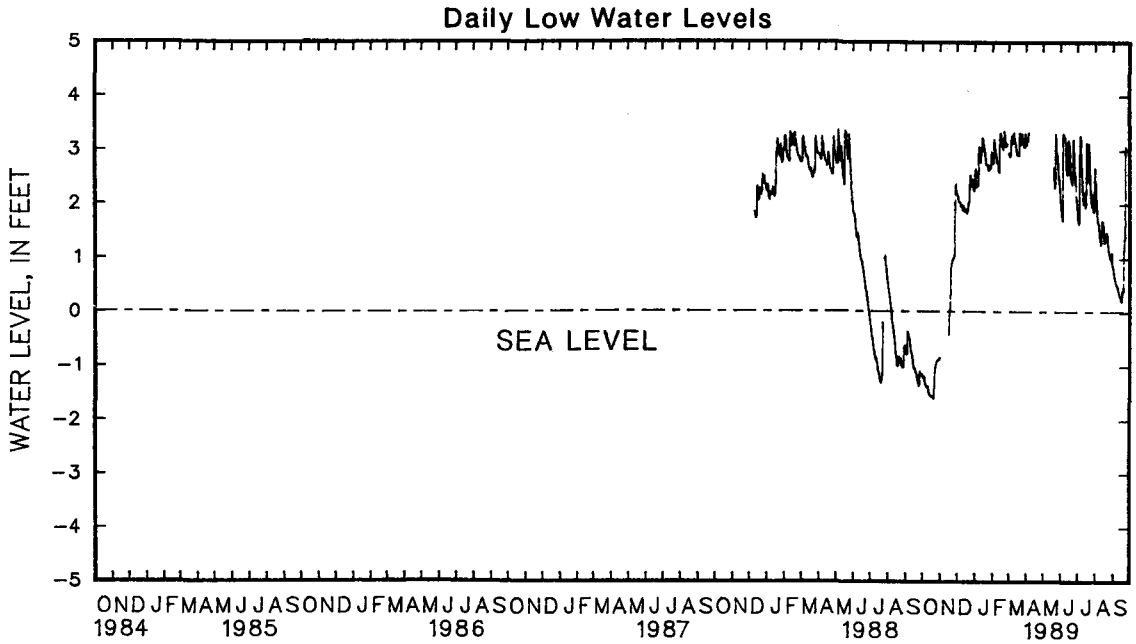
5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--BA Fg 93. SITE ID.--391938076212701. PERMIT NUMBER.--BA-88-0850.
LOCATION.--Lat 39°19'38", long 76°21'27", Hydrologic Unit 02060003, at Carroll Island, Aberdeen Proving Ground.
Owner: U.S. Army.
AQUIFER.--Talbot Formation of Pleistocene age. Aquifer code: 112TLBT.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 9 ft; casing diameter 4 in., to 4 ft; screen diameter 4 in. from 4 to 9 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from Dec. 11, 1987 to Sept. 25, 1989.
DATUM.--Elevation of land surface is 3.6 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of recorder platform, 2.58 ft above land-surface datum.
REMARKS.--Carroll Island/Graces Quarters Hydrologic Assessment Project observation well I54A.
PERIOD OF RECORD.--November 1987 to September 1989.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.05 ft above sea level, Sept. 23, 1989; lowest measured, 1.61 ft below sea level, Oct. 20 and 21, 1988.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
(READINGS BELOW SEA LEVEL INDICATED BY "-")

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	-1.14	-1.20	-.75	-.86	2.33	2.20	2.58	2.25	2.98	2.86	---	---
2	-1.16	-1.23	-.72	-.75	2.20	2.16	2.92	2.58	2.87	2.76	2.97	2.95
3	-1.18	-1.22	-.73	-.74	2.21	2.14	2.78	2.65	3.35	2.78	2.95	2.90
4	-1.16	-1.21	-.71	-.73	2.15	2.05	2.65	2.38	3.34	3.20	2.91	2.88
5	-1.19	-1.30	-.62	-.71	2.10	2.05	2.38	2.32	3.20	3.10	3.31	2.91
6	-1.29	-1.35	-.60	-.64	2.10	2.04	2.43	2.33	3.11	3.02	3.48	3.20
7	-1.33	-1.37	-.60	-.63	2.10	2.02	2.56	2.34	3.02	2.93	3.39	3.27
8	-1.35	-1.40	-.63	-.63	2.02	1.96	3.22	2.56	2.95	2.87	3.27	3.19
9	-1.36	-1.40	-.62	-.63	2.08	1.97	3.24	3.08	2.87	2.77	3.36	3.14
10	-1.33	-1.39	-.62	-.62	2.04	1.98	3.08	2.92	2.79	2.76	3.39	3.30
11	-1.37	-1.45	-.60	-.62	2.02	1.91	2.91	2.78	2.82	2.76	3.37	3.33
12	-1.45	-1.50	-.61	-.62	1.97	1.88	3.36	2.78	2.76	2.62	3.33	3.22
13	-1.50	-1.54	-.61	-.61	2.06	1.97	3.28	3.07	3.21	2.59	3.22	3.14
14	-1.53	-1.55	-.48	-.61	2.01	1.90	3.22	3.00	3.46	3.25	3.14	3.10
15	-1.54	-1.56	-.47	-.49	2.01	1.87	3.46	3.23	3.42	3.32	3.12	3.02
16	-1.54	-1.58	-.41	-.47	1.96	1.87	3.32	3.20	3.40	3.29	3.02	2.93
17	-1.55	-1.58	-.03	-.41	1.99	1.90	3.20	3.10	3.29	3.19	2.96	2.91
18	-1.52	-1.57	.09	-.02	1.90	1.86	3.10	3.04	3.19	3.13	3.26	2.96
19	-1.53	-1.59	.36	.09	1.89	1.83	3.04	2.95	3.13	3.05	3.16	2.95
20	-1.59	-1.61	.91	.36	1.95	1.87	2.97	2.85	3.12	3.02	3.41	2.91
21	-1.39	-1.61	.93	.90	2.23	1.89	2.85	2.74	3.58	3.13	3.44	3.33
22	-1.12	-1.38	.95	.91	2.14	2.04	2.78	2.73	3.46	3.37	3.33	3.19
23	-1.03	-1.12	1.02	.96	2.51	2.05	2.78	2.73	3.37	3.26	3.25	3.11
24	-.97	-1.03	1.01	.99	2.95	2.34	2.74	2.70	3.26	3.14	3.52	3.26
25	-.93	-.97	1.03	.99	2.90	2.54	2.70	2.63	3.14	3.08	3.40	3.31
26	-.92	-.93	1.08	1.02	2.54	2.37	3.05	2.65	3.24	3.08	3.31	3.21
27	-.90	-.92	1.88	1.08	2.47	2.35	2.98	2.71	3.28	3.11	3.21	3.16
28	-.86	-.90	2.90	1.97	2.62	2.46	2.73	2.65	---	---	3.16	3.13
29	-.87	-.89	2.63	2.39	2.46	2.34	2.73	2.68	---	---	3.14	3.07
30	-.87	-.89	2.39	2.33	2.40	2.31	3.25	2.74	---	---	3.36	3.06
31	-.86	-.89	---	---	2.40	2.26	3.11	2.98	---	---	3.40	3.32
MONTH	-.86	-1.61	2.90	-.86	2.95	1.83	3.46	2.25	---	---	---	---

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	3.36	3.20	2.11	2.11	2.46	2.09	2.07	1.79	3.09	2.68	.90	.81
2	3.20	3.10	2.11	2.11	2.27	1.94	1.95	1.70	2.70	2.38	.83	.72
3	3.37	3.11	2.11	2.11	2.10	1.87	1.87	1.63	2.47	2.09	.74	.64
4	3.30	3.21	2.11	2.11	2.06	1.73	2.80	1.67	2.22	1.87	.67	.59
5	3.46	3.18	2.11	2.11	3.48	1.70	3.37	2.73	1.98	1.68	.63	.56
6	3.47	3.33	2.11	2.11	3.52	3.29	3.61	3.27	1.86	1.66	.61	.53
7	3.33	2.79	2.11	2.11	3.57	3.32	3.42	3.21	1.78	1.63	.58	.49
8	2.93	2.83	2.11	2.11	3.41	3.25	3.25	2.85	1.68	1.46	.53	.48
9	2.87	2.81	2.12	2.11	3.50	3.24	2.89	2.57	1.54	1.38	.51	.44
10	2.81	2.70	2.12	2.12	3.46	3.16	2.69	2.29	1.48	1.24	.46	.39
11	2.70	2.58	2.12	2.12	3.16	2.80	2.40	2.10	1.53	1.29	.41	.35
12	2.58	2.54	2.12	2.12	2.85	2.62	2.24	2.00	1.87	1.53	.36	.30
13	2.54	2.48	2.12	2.12	2.84	2.55	2.86	2.16	1.91	1.69	.32	.28
14	2.48	2.43	2.12	2.12	3.42	2.55	2.81	2.21	1.74	1.62	.33	.27
15	2.43	2.43	---	---	3.39	3.20	2.27	1.94	1.71	1.60	.28	.20
16	2.43	2.43	---	---	3.37	3.13	3.47	2.00	1.67	1.40	.38	.20
17	2.43	2.43	---	---	3.36	3.09	3.40	3.15	1.49	1.29	.50	.39
18	2.43	2.43	---	---	3.33	2.95	3.15	2.83	1.38	1.31	.45	.38
19	2.43	2.43	---	---	2.96	2.59	2.86	2.42	1.70	1.38	1.17	.38
20	2.43	2.43	2.87	2.68	2.72	2.48	3.50	2.64	1.68	1.46	1.53	1.17
21	2.43	2.43	2.76	2.47	2.73	2.42	3.34	3.14	1.77	1.47	1.51	1.36
22	2.43	2.43	2.54	2.30	2.69	2.37	3.14	2.89	1.70	1.41	2.75	1.41
23	2.43	2.43	3.54	2.39	3.49	2.47	2.91	2.48	1.50	1.24	4.05	3.07
24	2.43	2.40	3.52	3.32	3.43	3.21	2.60	2.20	1.29	1.14	3.28	3.02
25	2.40	2.37	3.33	3.10	3.21	2.95	2.37	2.05	1.19	1.08	---	---
26	2.37	2.30	3.15	2.91	2.99	2.67	2.46	1.96	1.15	1.05	---	---
27	2.30	2.22	3.34	2.91	2.97	2.50	2.72	2.16	1.10	1.00	---	---
28	2.22	2.11	3.11	2.74	2.62	2.35	2.78	2.18	1.10	.97	---	---
29	2.11	2.11	2.77	2.51	2.42	2.08	2.19	1.88	1.17	1.10	---	---
30	2.11	2.11	2.66	2.45	2.19	1.92	2.07	1.86	1.17	.92	---	---
31	---	---	2.58	2.31	---	---	3.27	2.19	.94	.84	---	---
MONTH	3.47	2.11	---	---	3.57	1.70	3.61	1.63	3.09	.84	---	---



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--BA Fg 94. SITE ID.--391938076212702. PERMIT NUMBER.--BA-88-0851.
LOCATION.--Lat 39°19'38", long 76°21'27", Hydrologic Unit 02060003, at Carroll Island, Aberdeen Proving Ground.
Owner: U.S. Army.
AQUIFER.--Talbot Formation of Pleistocene age. Aquifer code: 112TLBT.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 59 ft; casing diameter 4 in., to 49 ft; screen diameter 4 in. from 49 to 59 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from Dec. 11, 1987 to Sept. 25, 1989.
DATUM.--Elevation of land surface is 3.4 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of recorder platform, 2.51 ft above land-surface datum.
REMARKS.--Carroll Island/Graces Quarters Hydrologic Assessment Project observation well. Water levels are affected by nearby pumping.
PERIOD OF RECORD.--November 1987 to September 1989.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.36 ft above sea level, Apr. 15, 1988; lowest measured, 1.76 ft below sea level, Aug. 16, 1988.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
(READINGS BELOW SEA LEVEL INDICATED BY "-")

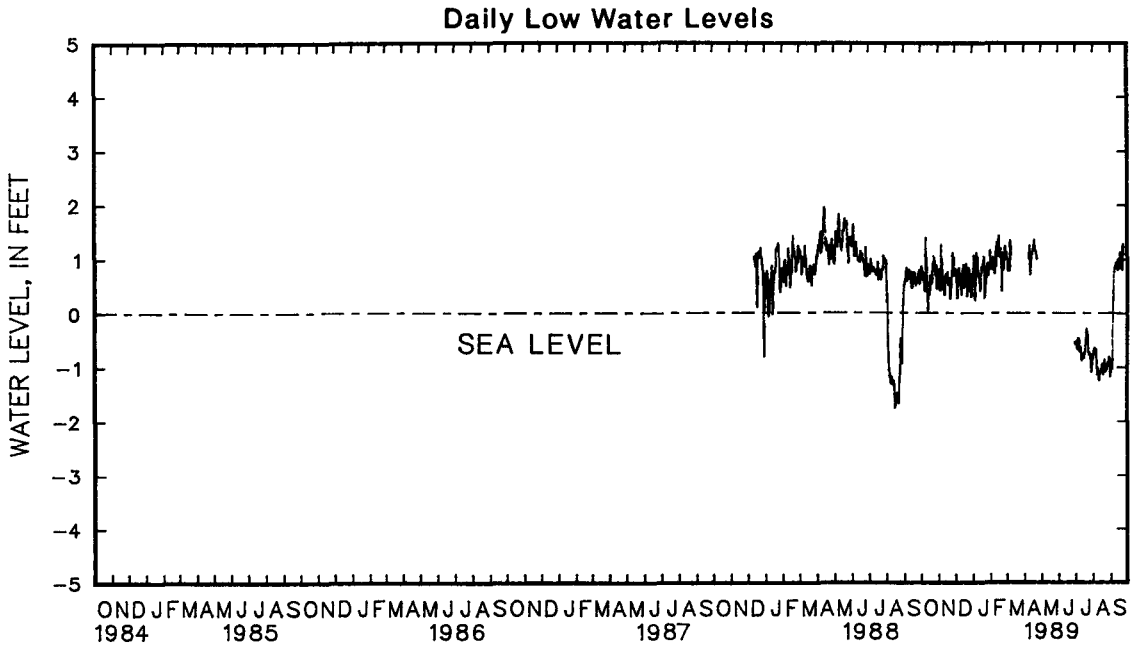
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	1.00	.82	.84	.64	1.09	.82	.82	.71	1.29	1.17	1.31	1.14
2	1.09	.86	1.01	.82	.88	.75	1.13	.83	1.18	.88	1.25	.98
3	1.07	.63	.85	.44	.88	.75	1.22	1.08	.94	.85	1.00	.79
4	.78	.62	.56	.42	.86	.28	1.19	.28	.90	.82	1.63	1.01
5	1.13	.76	1.28	.56	.72	.28	.81	.24	1.08	.81	1.50	.85
6	1.07	.74	1.47	1.28	.90	.59	1.08	.82	1.37	1.06	1.02	.79
7	.73	.56	1.43	.94	.93	.86	1.14	.87	1.37	.97	1.49	1.02
8	.55	.40	.94	.73	.91	.62	1.53	1.13	.97	.73	1.51	1.37
9	1.40	.53	.89	.44	.87	.67	1.53	1.03	1.00	.86	1.49	1.24
10	1.55	1.41	1.10	.58	.97	.73	1.09	.78	1.11	.88	1.23	1.08
11	1.44	.85	1.10	.59	1.00	.55	.89	.67	1.24	1.12	---	---
12	.84	.42	.59	.34	.60	.35	.99	.71	1.57	1.23	---	---
13	.43	.04	.93	.58	.93	.61	1.06	.57	1.60	1.32	---	---
14	.37	.08	.95	.72	1.01	.81	.71	.42	1.31	1.07	---	---
15	.49	.38	.90	.60	1.32	.90	.99	.72	1.51	1.30	---	---
16	.51	.34	.78	.62	.90	.47	.95	.83	1.67	1.44	---	---
17	.70	.44	1.02	.76	.91	.60	1.18	.87	1.54	1.05	---	---
18	.98	.70	.75	.53	.86	.72	1.15	.86	1.20	1.04	---	---
19	.94	.55	.65	.53	1.16	.87	1.12	.93	1.30	1.20	---	---
20	.68	.55	1.12	.64	1.10	.91	1.14	1.05	1.21	.42	---	---
21	1.02	.63	1.11	.57	1.07	.77	1.05	.28	1.29	.41	---	---
22	1.07	.95	.57	.27	.77	.32	.69	.32	1.36	1.13	---	---
23	1.07	.91	.71	.46	.89	.49	.69	.55	1.12	.80	---	---
24	1.22	1.06	.77	.54	1.17	.85	.93	.66	1.03	.84	---	---
25	1.19	.89	1.06	.77	1.18	.81	.95	.89	1.24	1.02	---	---
26	1.12	.86	1.11	.95	.86	.46	1.27	.91	1.34	1.19	---	---
27	.89	.70	1.51	1.12	.73	.42	1.30	.93	1.48	1.25	---	---
28	.99	.89	1.55	1.04	1.12	.74	.93	.70	1.24	1.09	---	---
29	.97	.45	1.04	.70	1.04	.30	1.04	.92	---	---	---	---
30	.65	.46	1.05	.73	.69	.37	1.01	.82	---	---	---	---
31	.64	.47	---	---	.90	.70	1.16	.82	---	---	---	---
MONTH	1.55	.04	1.55	.27	1.32	.28	1.53	.24	1.67	.41	---	---

MARYLAND--Continued

BALTIMORE COUNTY--Continued

BA Fg 94--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	---	---	-.32	-.53	-.66	-.84	-.54	-1.09
2	---	---	---	---	---	---	-.35	-.57	-.48	-.69	-.51	-.86
3	---	---	---	---	---	---	-.37	-.56	-.49	-.65	-.87	-1.04
4	---	---	---	---	---	---	-.45	-.67	-.54	-.76	.27	-.88
5	---	---	---	---	---	---	-.13	-.46	-.50	-.66	.68	.29
6	---	---	---	---	---	---	-.28	-.47	-.62	-.68	.80	.69
7	---	---	---	---	---	---	-.40	-.49	-.55	-.89	.93	.78
8	1.36	1.02	---	---	---	---	-.45	-.71	-.90	-1.14	1.01	.85
9	1.56	1.26	---	---	---	---	-.48	-.71	-.85	-1.02	1.06	.86
10	1.26	.92	---	---	---	---	-.36	-.63	-.79	-1.08	1.16	.94
11	.95	.72	---	---	---	---	-.58	-.87	-1.09	-1.24	1.17	.92
12	1.13	.96	---	---	---	---	-.78	-.88	-1.11	-1.25	.96	.84
13	1.31	1.13	---	---	---	---	-.53	-.83	-.93	-1.13	1.04	.80
14	1.24	1.11	---	---	---	---	-.63	-.76	-.92	-1.11	1.14	.98
15	1.40	1.18	---	---	---	---	-.59	-.81	-.90	-1.06	1.17	1.02
16	1.30	1.17	---	---	---	---	-.33	-.84	-.81	-.98	1.02	.84
17	1.59	1.28	---	---	---	---	-.38	-.72	-.80	-.95	1.19	.87
18	1.57	1.36	---	---	---	---	-.36	-.72	-.94	-1.07	1.28	1.14
19	1.40	1.17	---	---	---	---	-.28	-.51	-.93	-1.14	1.22	.93
20	1.33	1.15	---	---	---	---	.04	-.28	-.72	-.92	.94	.83
21	1.31	1.15	---	---	---	---	-.13	-.35	-.67	-.87	1.24	.81
22	1.26	1.08	---	---	---	---	-.29	-.40	-.79	-1.10	1.38	1.26
23	1.19	1.01	---	---	---	---	-.33	-.64	-.87	-1.05	1.49	1.28
24	---	---	---	---	---	---	-.59	-.77	-.86	-1.07	1.28	1.09
25	---	---	---	---	---	---	-.56	-.73	-.73	-1.05	---	---
26	---	---	---	---	---	---	-.51	-.76	-.67	-.92	---	---
27	---	---	---	---	---	---	-.61	-.85	-.72	-.95	---	---
28	---	---	---	---	---	---	-.64	-.96	-.74	-.98	---	---
29	---	---	---	---	.01	-.54	-.97	-1.10	-.62	-.81	---	---
30	---	---	---	---	-.40	-.58	-.71	-1.07	-.66	-.95	---	---
31	---	---	---	---	---	---	-.37	-.74	-.96	-1.18	---	---
MONTH	---	---	---	---	---	---	.04	-1.10	-.48	-1.25	---	---

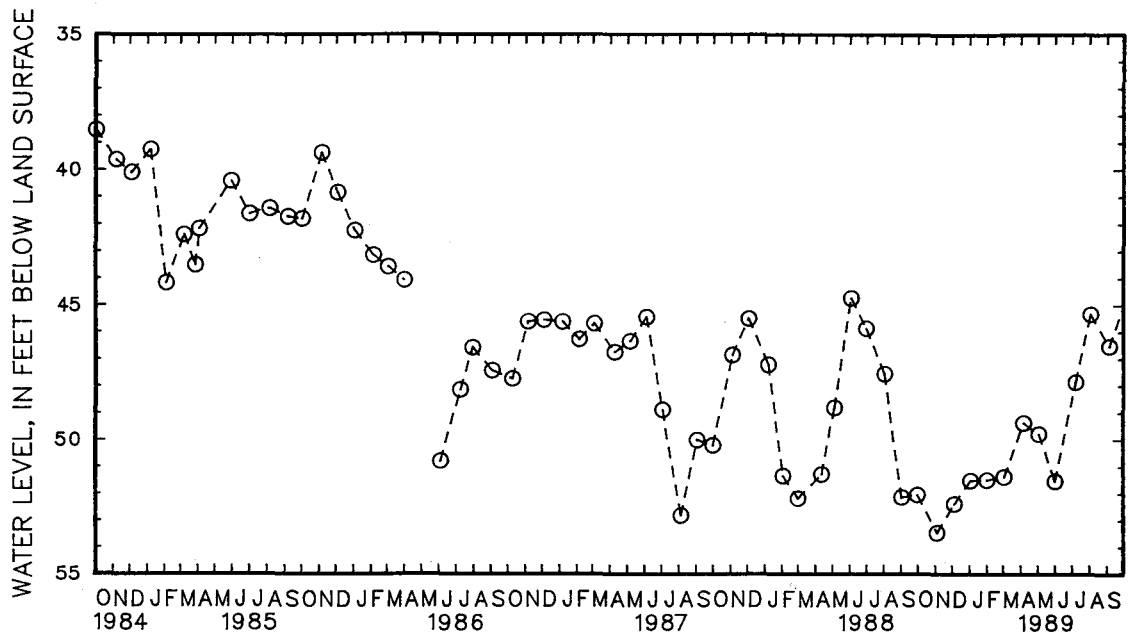


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--BA Gf 11. SITE ID.--391356076293501.
LOCATION.--Lat 39°13'56", long 76°29'35", Hydrologic Unit 02060003, near Tin Mill Rd., Sparrows Point.
Owner: Bethlehem Steel Co.
AQUIFER.-- Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.
WELL CHARACTERISTICS.--Drilled, unused, artesian well, depth 645 ft; casing diameter 14 in., to unknown depth.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 13.6 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top of casing 3.3 ft above land-surface datum.
PERIOD OF RECORD.--September 1981, March 1982, September 1982, January 1983 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 31.25 ft below land-surface datum, June 3, 1983; lowest measured, 53.47 ft below land-surface datum, Nov. 4, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 4	53.47	JAN 3	51.53	MAR 3	51.39	MAY 3	49.79	JUL 7	47.86	SEP 5	46.53
DEC 5	52.40	FEB 1	51.51	APR 6	49.38	JUN 1	51.55	AUG 3	45.33		

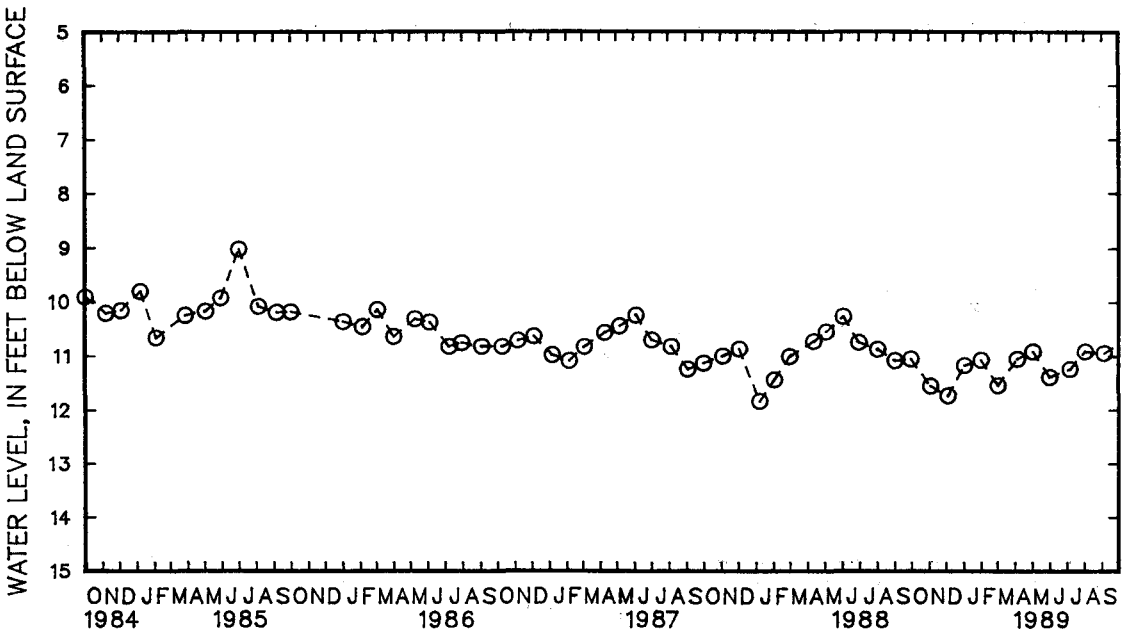


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--BA Gf 168. SITE ID.--391257076282501.
LOCATION.--Lat 39°12'57", long 76°28'25", Hydrologic Unit 02060003, at Sparrows Point.
Owner: Bethlehem Steel Co.
AQUIFER.--Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.
WELL CHARACTERISTICS.--Drilled, unused, artesian well, depth 308 ft; casing diameter 10 to 6 in., to 283 ft; screened from 283 to 304 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 10 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 0.6 ft above land-surface datum.
PERIOD OF RECORD.--September 1943 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.01 ft below land-surface datum, July 6, 1983; lowest measured, 109.54 ft below land-surface datum, July 18, 1955.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 4	11.57	JAN 3	11.19	MAR 3	11.56	MAY 3	10.93	JUL 7	11.25	SEP 5	10.95
DEC 5	11.75	FEB 1	11.09	APR 6	11.07	JUN 1	11.40	AUG 3	10.92		

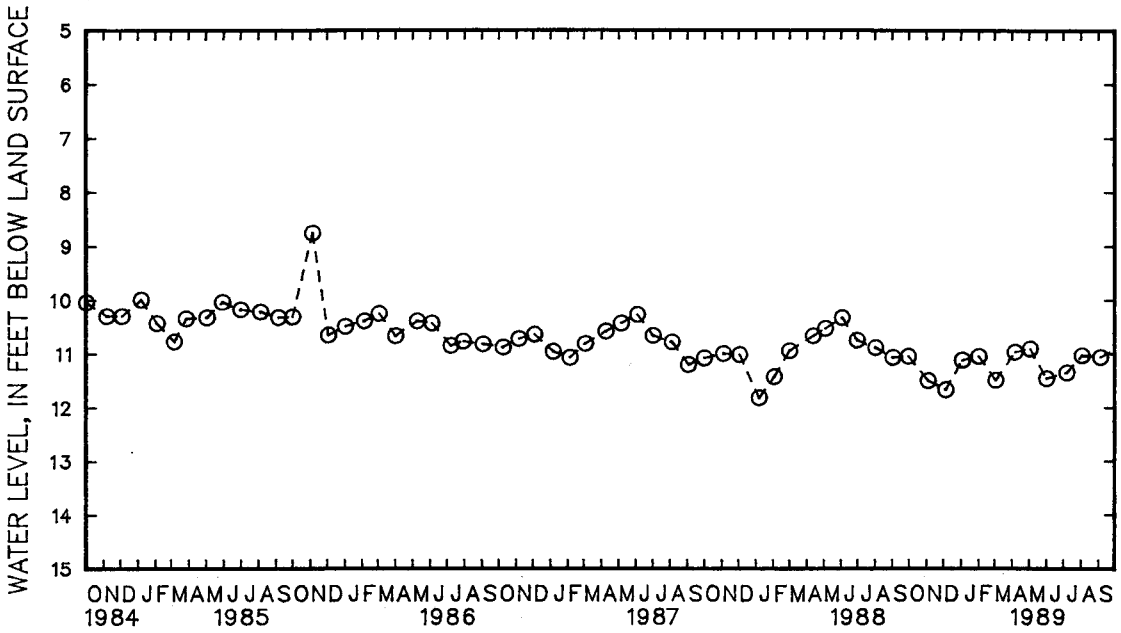


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--BA Gf 169. SITE. ID.--391256076282501.
LOCATION.--Lat 39°12'56", long 76°28'25", Hydrologic Unit 02060003, at Sparrows Point.
Owner: Bethlehem Steel Co.
AQUIFER.--Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.
WELL CHARACTERISTICS.--Drilled, unused, artesian well, depth 224 ft; casing diameter 10 to 6 in., to 202 ft; screened from 202 to 222 ft.
INSTRUMENTATION.-- Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 10 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing, 1.0 ft above land-surface datum.
PERIOD OF RECORD.--August 1943 to September 1946, March 1948 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.76 ft below land-surface datum, Nov. 5, 1985; lowest measured, 85.19 ft below land-surface datum, Sept. 30, 1957.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 4	11.51	JAN 3	11.13	MAR 3	11.50	MAY 3	10.92	JUL 7	11.36	SEP 5	11.07
DEC 5	11.68	FEB 1	11.06	APR 6	10.98	JUN 1	11.47	AUG 3	11.04		



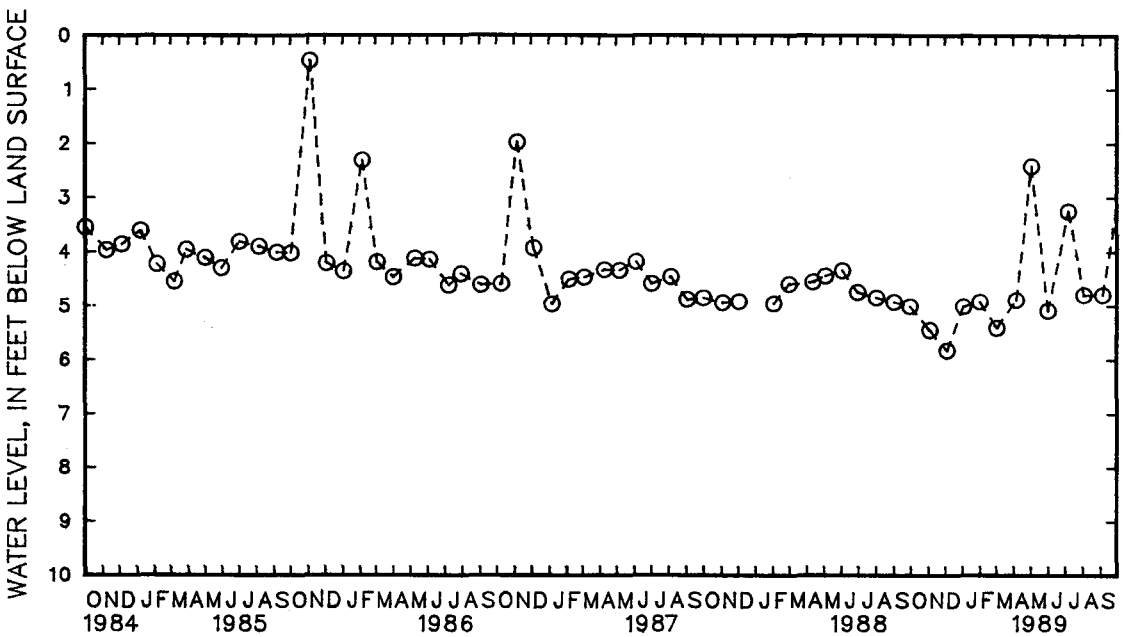
5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

BALTIMORE COUNTY--Continued

WELL NUMBER.--BA Gf 178. SITE ID.--391226076253401.
LOCATION.--Lat 39°12'26", long 76°25'34", Hydrologic Unit 02060003, at former Bay Shore Park.
Owner: Bethlehem Steel Co.
AQUIFER.--Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.
WELL CHARACTERISTICS.--Drilled, unused, artesian well, depth 339.5 ft; casing diameter 8 in. to unknown depth; screen at unknown depth.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 6 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.
PERIOD OF RECORD.--October 1945 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, .32 ft below land-surface datum, Apr. 6, 1984; lowest measured, 61.97 ft below land-surface datum, Dec. 2, 1957.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 4	5.46	JAN 3	5.02	MAR 3	5.42	MAY 3	2.42	JUL 7	3.25	SEP 5	4.80
DEC 5	5.84	FEB 1	4.93	APR 6	4.90	JUN 1	5.10	AUG 3	4.80		



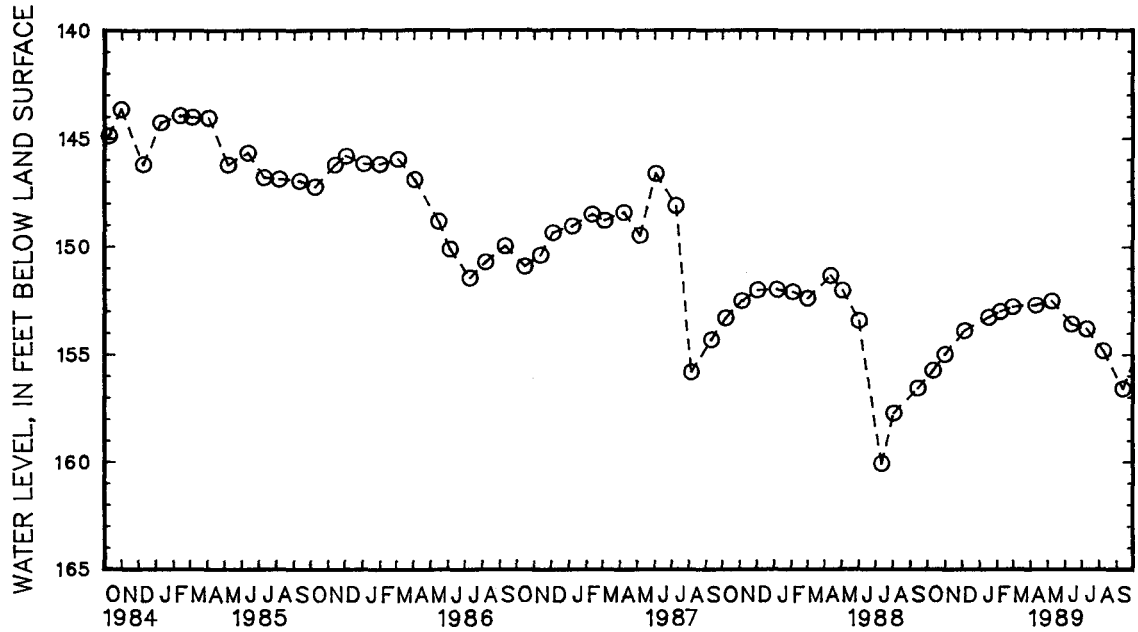
5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

CALVERT COUNTY

WELL NUMBER.--CA Bb 27. SITE ID.--384333076394701. PERMIT NUMBER.--CA-73-3303.
LOCATION.--Lat 38°43'33", long 76°39'47", Hydrologic Unit 02060006, at Dunkirk Regional Park, Dunkirk.
Owner: U.S. Geological Survey.
AQUIFER.--Aquia Formation of Paleocene age. Aquifer code: 125AQUI.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 320 ft; casing diameter 4 in., to 250 ft; casing diameter 2 in. from 250 to 310 ft; screen diameter 2 in. from 310 to 320 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 140 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.3 ft above land-surface datum.
PERIOD OF RECORD.--August 1979 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 133.82 ft below land-surface datum, May 6, 1980; lowest measured, 160.09 ft below land-surface datum, July 12, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	155.76	DEC 6	153.89	FEB 7	152.99	APR 11	152.67	JUN 14	153.57	AUG 9	154.83
NOV 1	155.03	JAN 17	153.27	MAR 1	152.77	MAY 9	152.48	JUL 11	153.80	SEP 12	156.60

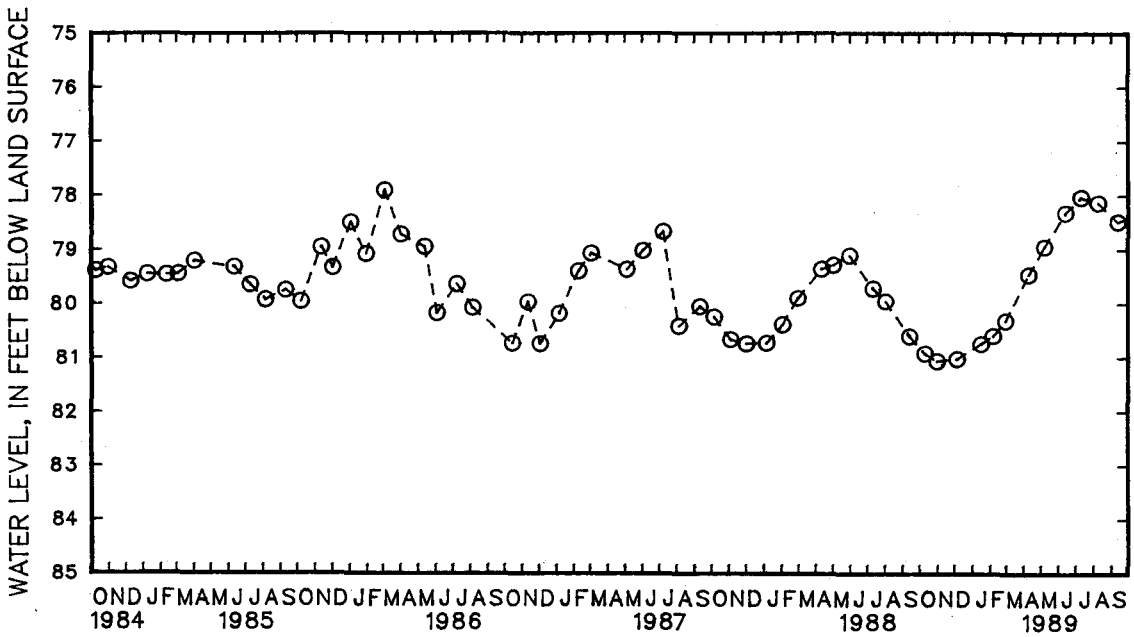


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--CA Bb 28. SITE ID.--384333076394702. PERMIT NUMBER.--CA-73-3721.
LOCATION.--Lat 38°43'33", long 76°39'47", Hydrologic Unit 02060006, at Dunkirk Regional Park, Dunkirk.
Owner: U.S. Geological Survey.
AQUIFER.--Nanjemoy Formation of Eocene age. Aquifer code: 124NNJM.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 170 ft; casing diameter 4 in., to 147 ft; casing diameter 2 in. from 147 to 160 ft; screen diameter 2 in. from 160 to 170 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 140 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing, 2.05 ft above land-surface datum.
PERIOD OF RECORD.--July 1980 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 77.60 ft below land-surface datum, June 7, 1983; lowest measured, 81.18 ft below land-surface datum, Jan. 5, 1982.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	80.94	DEC 6	81.04	FEB 7	80.61	APR 11	79.47	JUN 14	78.32	AUG 9	78.13
NOV 1	81.08	JAN 17	80.76	MAR 1	80.34	MAY 9	78.95	JUL 11	78.03	SEP 12	78.48

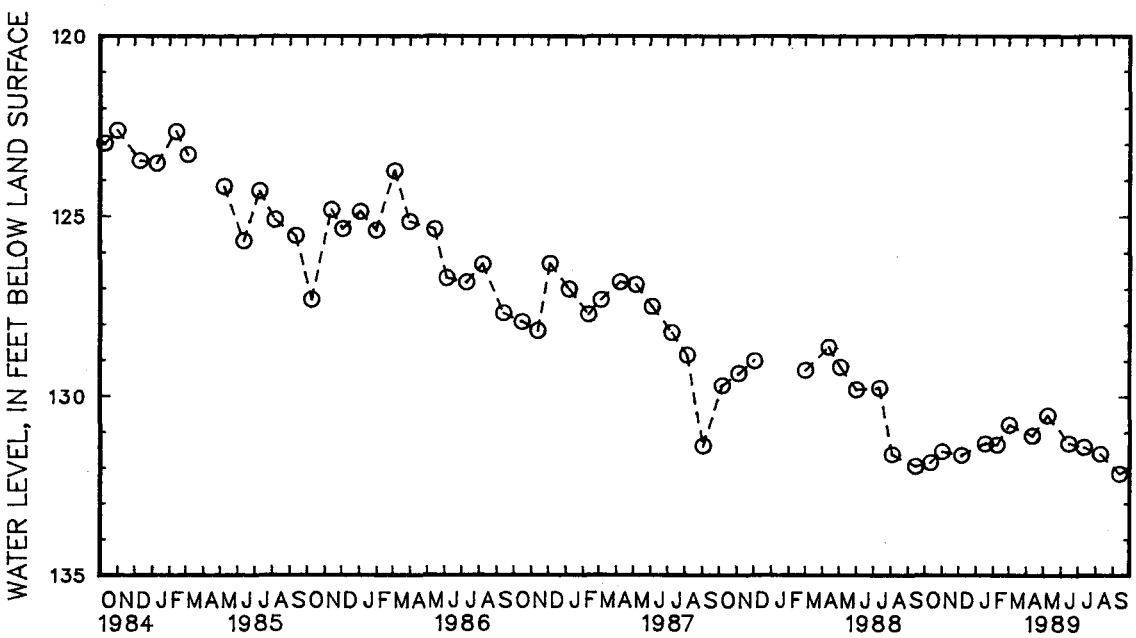


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--CA Cc 18. SITE ID.--383940076314801.
LOCATION.--Lat 38°39'40", long 76°31'48", Hydrologic Unit 02060006, at Naval Research Laboratory, Randle Cliff.
Owner: U.S. Navy.
AQUIFER.--Aquia Formation of Paleocene age. Aquifer code: 125AQUI.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 476 ft; casing diameter 6 in., to 462 ft; screened from 462 to 476 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with water-level recorder Sept. 15, 1958 to Dec. 7, 1962.
DATUM.--Elevation of land surface is 111.31 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top of casing, 0.3 ft above land-surface datum.
REMARKS.--Water level measured 76.68 ft below land-surface datum, Sept. 10, 1952.
PERIOD OF RECORD.--September 1958 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 103.63 ft below land-surface datum, May 14, 1961; lowest measured, 132.17 ft below land-surface datum, Sept. 12, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	131.87	DEC 6	131.66	FEB 7	131.36	APR 11	131.10	JUN 14	131.33	AUG 9	131.61
NOV 1	131.56	JAN 17	131.33	MAR 1	130.80	MAY 9	130.53	JUL 11	131.42	SEP 12	132.17



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--CA Cc 39. SITE ID.--383934076320202. PERMIT NUMBER.--CA-01-2070.
LOCATION.--Lat 38°39'34", long 76°32'02", Hydrologic Unit 02060004, at Naval Research Laboratory, Randle Cliff.
Owner: U.S. Navy.
AQUIFER.--Aquia Formation of Lower Cretaceous age. Aquifer code: 125AQUI.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 540 ft; casing diameter 8 in., to 520 ft; screen diameter 8 in. from 520 to 540 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with graphic water-level recorder from Dec. 6, 1977 to Jan. 2, 1980. Equipped with digital water-level recorder--60-minute recorder interval from Feb. 8, 1980 to current year.
DATUM.--Elevation of land surface is 93.74 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top of casing, 1.70 ft above land-surface datum.
REMARKS.--Southern Maryland Observation Well Network. Water levels are affected by nearby pumping.
PERIOD OF RECORD.--December 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, .72 ft below sea level, Jan. 26, 1978; lowest measured, 46.15 ft below sea level, Feb. 2, 1980.

WATER LEVEL, IN FEET BELOW SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	21.14	21.61	20.91	21.35	20.61	21.18	20.51	20.87	20.28	21.01	20.16	20.69
2	20.96	21.40	20.74	21.19	20.77	21.28	20.28	20.94	20.58	21.25	20.29	20.83
3	20.95	21.59	20.96	21.86	20.60	21.03	20.19	20.69	20.49	21.12	20.31	20.97
4	21.17	21.73	21.18	21.72	20.69	21.57	20.25	21.38	20.60	21.20	20.18	20.79
5	21.05	21.61	20.56	21.21	20.69	21.19	20.52	21.26	20.47	20.96	19.95	20.49
6	21.17	21.69	20.55	20.99	20.66	21.25	20.27	20.94	20.40	20.88	20.01	20.53
7	21.31	21.76	20.74	21.35	20.61	21.51	20.36	20.85	20.31	20.91	20.10	20.69
8	21.39	21.85	21.08	21.46	20.85	21.31	20.18	20.62	20.53	20.92	20.32	24.19
9	20.96	21.79	21.15	21.68	20.69	21.08	20.25	21.10	20.60	21.28	21.56	24.75
10	20.87	21.36	20.73	21.72	20.60	21.16	20.69	21.10	20.74	21.42	20.76	21.50
11	20.94	21.64	20.92	21.45	20.59	21.04	20.64	21.22	20.54	21.10	20.24	20.75
12	21.29	22.31	21.13	21.53	20.71	21.32	20.47	21.36	20.54	21.27	20.04	20.69
13	21.71	22.23	20.79	21.19	20.53	21.02	20.42	21.25	20.60	21.21	20.24	20.90
14	21.53	22.22	20.93	21.49	20.39	21.10	20.56	21.41	20.51	21.05	20.03	20.76
15	21.35	21.82	21.04	21.44	20.24	21.13	20.40	21.22	20.53	21.14	19.97	20.56
16	21.36	21.81	20.93	21.29	20.67	21.40	20.39	21.30	20.71	20.85	20.20	20.85
17	21.21	21.67	20.70	21.17	20.41	20.93	20.68	21.15	20.71	21.27	20.29	20.80
18	21.11	21.50	20.97	21.63	20.53	21.07	20.56	21.11	20.56	21.31	20.04	20.53
19	21.10	21.63	20.96	21.50	20.52	20.92	20.49	21.04	20.33	20.80	20.32	21.20
20	21.23	21.65	20.56	21.15	20.59	21.35	20.28	20.71	20.30	20.82	20.34	21.01
21	20.82	21.57	20.55	21.41	20.61	21.34	20.58	21.32	19.99	20.58	20.05	20.50
22	20.74	21.25	21.15	21.61	21.06	21.47	20.64	21.41	19.95	20.86	20.33	21.18
23	20.86	21.33	20.88	21.46	20.87	21.42	20.68	21.21	20.35	20.89	20.35	20.84
24	20.79	21.26	20.76	21.30	20.52	21.31	20.62	21.22	20.36	21.00	19.91	20.60
25	20.91	21.52	20.64	21.21	20.61	21.31	20.57	21.29	20.18	21.02	20.06	20.57
26	21.07	21.68	20.55	21.05	20.85	21.48	20.36	21.09	19.84	20.45	19.95	20.81
27	21.22	21.66	20.30	20.82	20.80	21.61	20.32	20.95	20.11	20.73	20.29	20.73
28	21.04	21.60	20.30	20.88	20.61	21.22	20.54	21.29	20.19	20.70	20.13	20.65
29	21.18	21.75	20.74	21.25	20.82	21.57	20.40	20.95	---	---	20.17	20.71
30	21.19	21.68	20.57	21.09	20.79	21.51	20.36	20.89	---	---	20.06	20.72
31	21.11	21.68	---	---	20.65	21.24	20.33	20.98	---	---	19.76	20.37
MONTH	20.74	22.31	20.30	21.86	20.24	21.61	20.18	21.41	19.84	21.42	19.76	24.75

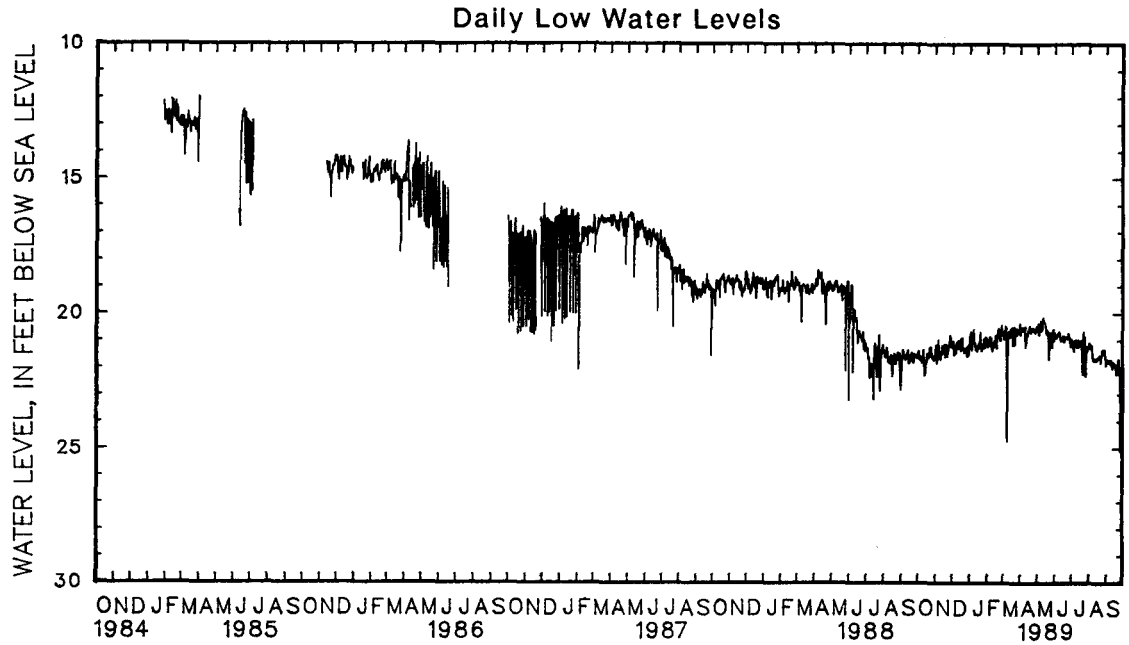
GROUND WATER LEVELS

MARYLAND Continued

CALVERT COUNTY Continued

CA Cc 39 Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	19.86	20.62	19.88	20.48	20.36	20.72	20.61	20.95	20.84	21.20	21.29	21.79
2	20.18	20.80	19.69	20.39	20.21	20.85	20.48	21.08	20.63	21.10	21.12	21.73
3	20.05	20.55	20.24	20.68	20.29	20.88	20.54	21.26	20.62	21.16	21.41	21.84
4	20.00	20.53	20.22	20.79	20.19	20.91	20.63	21.15	20.80	21.31	21.30	21.74
5	19.95	20.64	19.87	20.55	20.36	20.84	20.37	21.41	20.71	21.27	21.19	21.73
6	19.97	20.58	19.69	20.29	20.22	20.78	20.57	21.03	20.80	21.17	21.28	21.81
7	19.93	20.53	19.89	20.38	20.20	20.74	20.52	21.04	20.73	21.47	21.29	21.76
8	19.90	20.66	19.89	20.53	20.27	20.81	20.62	21.10	21.16	21.68	21.27	21.87
9	19.74	20.50	19.98	20.65	20.18	20.68	20.52	21.00	21.19	21.76	21.28	21.80
10	20.08	21.27	19.75	20.31	20.25	20.79	20.62	21.24	21.22	21.69	21.26	21.75
11	20.54	21.12	19.69	20.16	20.42	21.04	20.79	21.27	21.31	21.78	21.25	21.95
12	20.43	20.95	19.82	20.32	20.35	20.91	20.75	21.26	21.27	21.71	21.55	22.05
13	20.20	20.74	19.79	20.35	20.25	20.96	20.55	21.00	21.24	21.73	21.47	21.82
14	20.20	20.82	19.85	20.38	20.54	21.01	20.69	21.24	21.14	21.74	21.41	21.83
15	20.07	20.68	19.89	20.52	20.31	20.85	20.65	21.15	21.17	21.75	21.41	21.96
16	19.96	20.56	19.87	20.60	20.31	20.87	20.41	21.09	21.09	21.66	21.42	21.88
17	19.94	20.47	20.01	20.74	20.32	20.86	20.35	21.22	21.09	21.67	21.36	21.95
18	19.92	20.65	20.11	20.79	20.34	21.06	20.57	21.03	21.17	21.68	21.47	22.07
19	20.00	20.59	20.16	20.64	20.54	21.00	20.55	21.14	21.09	21.66	21.46	22.27
20	19.99	20.72	20.03	20.69	20.36	20.89	20.27	22.28	20.99	21.56	21.38	21.96
21	20.04	20.63	20.01	21.73	20.45	20.92	20.69	21.09	21.07	21.66	21.50	21.97
22	19.96	20.54	20.38	21.01	20.35	20.87	20.55	20.74	21.23	21.85	21.01	21.80
23	20.05	20.63	20.21	21.33	20.35	20.89	20.57	20.69	21.16	21.63	20.95	21.71
24	20.06	20.64	20.16	20.74	20.33	20.94	20.63	22.30	21.15	21.61	21.64	22.28
25	20.03	20.66	20.30	21.05	20.27	20.74	20.65	20.87	20.96	21.38	21.61	22.08
26	20.01	20.58	20.08	20.71	20.23	20.78	20.90	22.35	20.92	21.35	21.31	25.12
27	20.05	20.72	20.23	20.84	20.27	20.91	20.94	21.55	20.98	21.51	22.12	22.86
28	20.05	20.72	20.53	21.27	20.36	21.07	20.86	21.24	20.99	21.48	21.67	22.33
29	19.89	20.49	20.29	20.59	20.57	21.24	20.94	21.41	20.91	21.35	21.59	22.32
30	20.03	20.63	20.26	20.78	20.66	21.18	20.82	21.23	20.85	21.60	21.82	22.46
31	---	---	20.49	21.01	---	---	20.57	21.30	21.36	21.95	---	---
MONTH	19.74	21.27	19.69	21.73	20.18	21.24	20.27	22.35	20.62	21.95	20.95	25.12



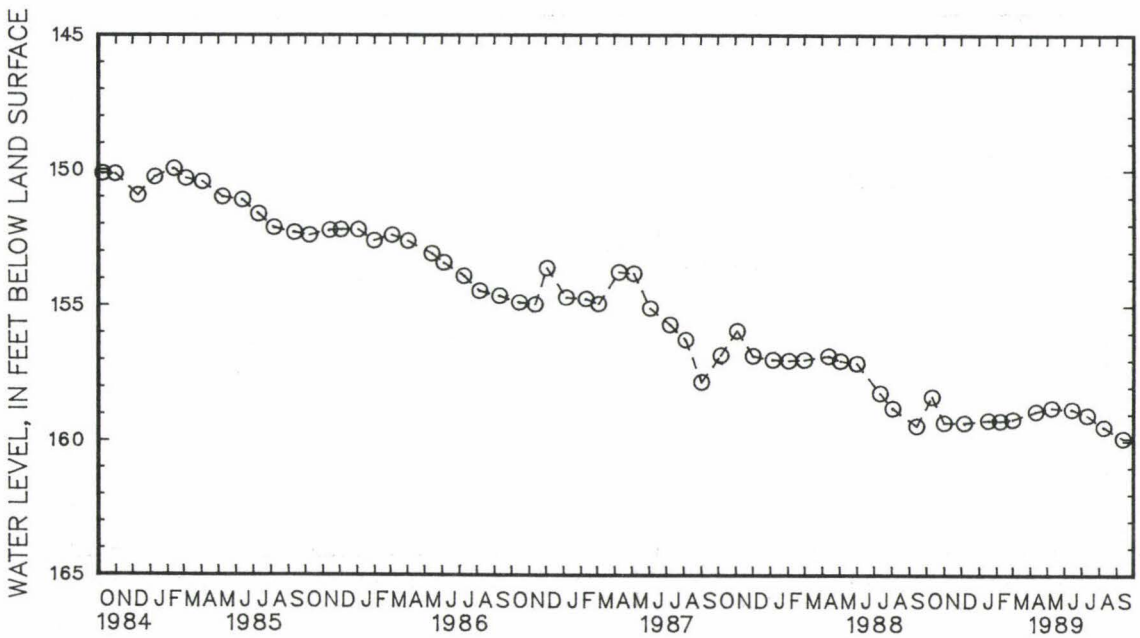
5 YEAR HYDROGRAPH

OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--CA Cc 57. SITE ID.--383605076344601. PERMIT NUMBER.--CA-73-2893.
LOCATION.--Lat 38°36'05", long 76°34'46", Hydrologic Unit 02060006, Cox Rd. nr MD Rt. 263, Huntingtown.
Owner: U.S. Geological Survey.
AQUIFER.--Aquia Formation of Paleocene age. Aquifer code: 125AQUI.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 579 ft; casing diameter 4 in., to 211 ft; casing diameter 2 in. from 211 to 511 ft, and 521 to 579 ft; screen diameter 3 in. from 511 to 521 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 135 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.8 ft above land-surface datum.
PERIOD OF RECORD.--December 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 140.00 ft below land-surface datum, Mar. 7, 1979; lowest measured, 159.92 ft below land-surface datum, Sept. 12, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	158.39	DEC 6	159.35	FEB 7	159.28	APR 11	158.93	JUN 14	158.84	AUG 9	159.50
NOV 1	159.35	JAN 17	159.26	MAR 1	159.22	MAY 9	158.79	JUL 11	159.06	SEP 12	159.92

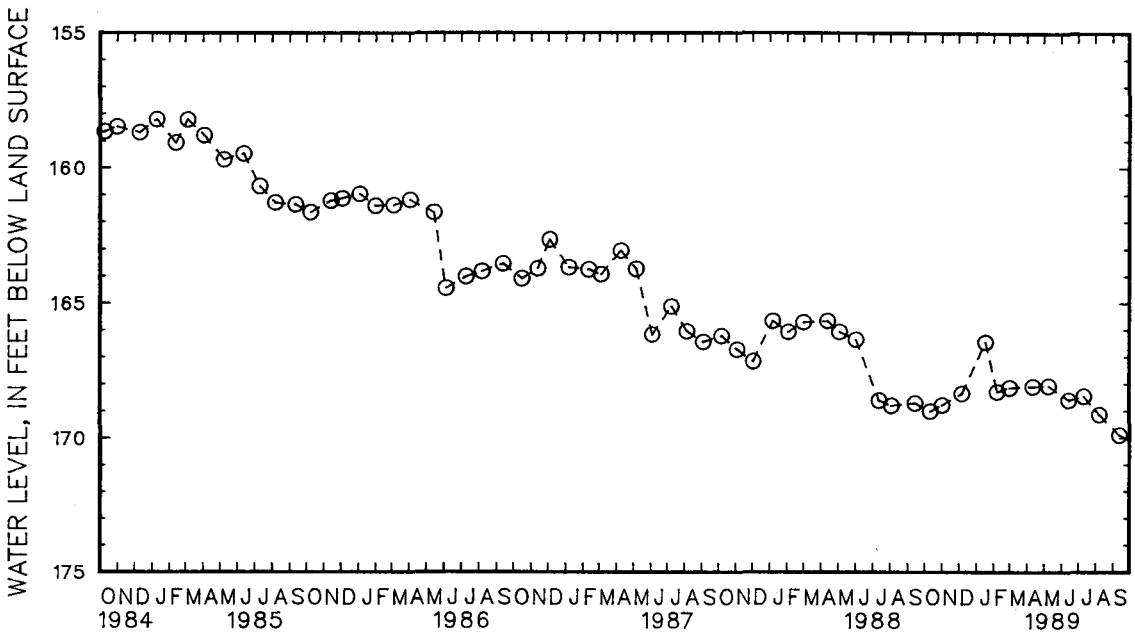


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--CA Db 47. SITE ID.--383239076354201. PERMIT NUMBER.--CA-73-3304.
LOCATION.--Lat 38°32'39", long 76°35'42", Hydrologic Unit 02060006, near Prince Frederick.
Owner: U.S. Geological Survey.
AQUIFER.--Aquia Formation of Paleocene age. Aquifer code: 125AQUI.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 570 ft; casing diameter 4 in., to 483 ft; casing diameter 2 in. from 483 to 560 ft; screen diameter 2 in. from 560 to 570 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 140 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.46 ft above land-surface datum.
PERIOD OF RECORD.--July 1979 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 148.54 ft below land-surface datum, July 31, 1979; lowest measured, 169.92 ft below land-surface datum, Sept. 12, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	169.04	DEC 6	168.38	FEB 7	168.32	APR 11	168.12	JUN 14	168.64	AUG 8	169.16
NOV 1	168.81	JAN 17	166.48	MAR 1	168.17	MAY 9	168.10	JUL 11	168.48	SEP 12	169.92



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--CA Db 71. SITE ID.--383217076351701. PERMIT NUMBER.--CA-81-2416.
LOCATION.--Lat 38°32'17", long 76°35'17", Hydrologic Unit 02060006, approximately 700 ft east of Mill Creek headwaters, at northeast corner of intersection of MD Rt. 231 and 2 in Prince Frederick. Owner: U.S. Geological Survey.
AQUIFER.-- Upland Deposits of Pleistocene age. Aquifer code: 112UPLD.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, measured depth 40 ft; casing diameter 3 in., to 27 ft; slotted casing diameter 3 in. from 27 to 37 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--30-minute recorder interval from Oct. 8, 1986 to Mar. 3, 1989.
DATUM.--Elevation of land surface is 156.78 ft above National Geodetic Vertical Datum of 1929. Measuring Point: Top of casing, 2.21 ft above land-surface datum.
REMARKS.--Stormwater Infiltration Project observation well. Well penetrates porous pavement parking lot.
PERIOD OF RECORD.--October 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 133.82 ft above sea level, Aug. 3, 1989; lowest measured, 129.64 ft above sea level, Feb. 22 and 23, 1989.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL
AUG 3	133.82

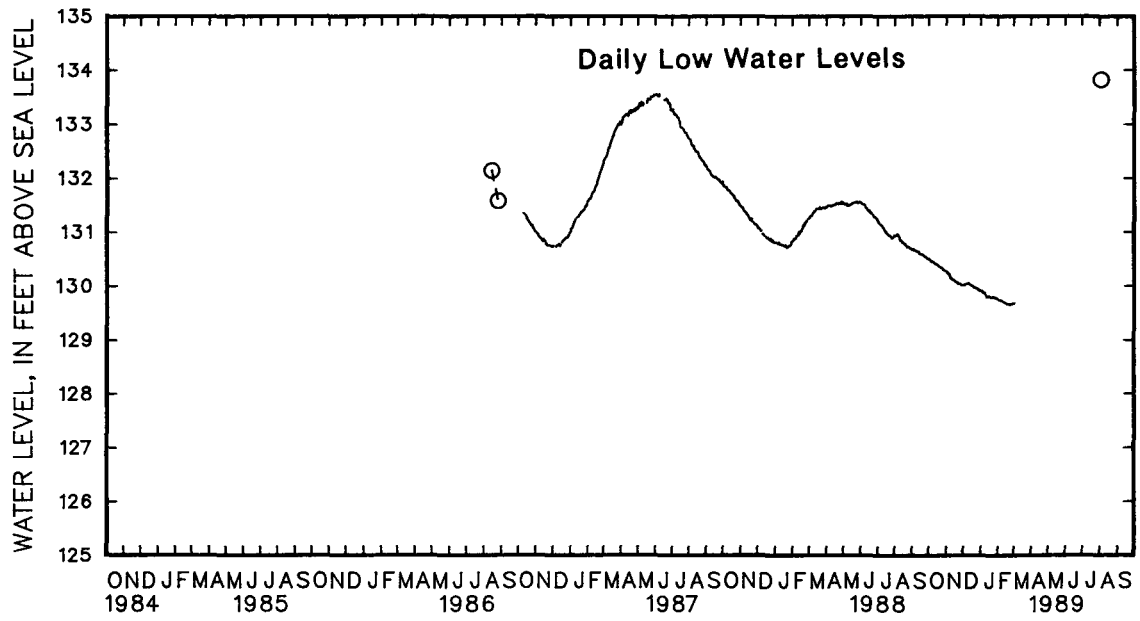
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	130.49	130.49	130.28	130.26	130.01	130.00	129.90	129.89	129.75	129.74	129.69	129.66
2	130.49	130.49	130.26	130.24	130.02	130.00	129.89	129.89	129.75	129.73	129.70	129.67
3	130.49	130.47	130.24	130.23	130.03	130.01	129.91	129.89	129.74	129.72	---	---
4	130.47	130.46	130.23	130.23	130.03	130.00	129.89	129.87	129.73	129.72	---	---
5	130.46	130.44	130.25	130.21	130.03	130.02	129.87	129.86	129.73	129.72	---	---
6	130.44	130.44	130.21	130.21	130.05	130.02	129.87	129.85	129.74	129.72	---	---
7	130.44	130.44	130.21	130.18	130.04	130.02	129.86	129.85	129.72	129.71	---	---
8	130.44	130.44	130.21	130.14	130.02	130.02	129.87	129.86	129.72	129.71	---	---
9	130.44	130.43	130.15	130.14	130.04	130.02	129.86	129.84	129.71	129.70	---	---
10	130.44	130.43	130.17	130.13	130.04	130.04	129.84	129.81	129.70	129.69	---	---
11	130.44	130.41	130.13	130.11	130.04	130.02	129.81	129.79	129.70	129.69	---	---
12	130.43	130.40	130.11	130.11	130.02	130.02	129.82	129.79	129.70	129.68	---	---
13	130.40	130.39	130.12	130.10	130.04	130.01	129.81	129.78	129.69	129.68	---	---
14	130.41	130.39	130.11	130.10	130.01	130.00	129.82	129.78	129.69	129.68	---	---
15	130.40	130.39	130.10	130.09	130.01	129.99	129.82	129.80	129.68	129.67	---	---
16	130.39	130.38	130.10	130.08	130.00	129.99	129.80	129.79	129.67	129.66	---	---
17	130.38	130.37	130.09	130.06	130.00	129.99	129.80	129.78	129.66	129.65	---	---
18	130.39	130.36	130.07	130.06	129.99	129.98	129.80	129.78	129.66	129.65	---	---
19	130.37	130.35	130.07	130.06	129.98	129.97	129.79	129.78	129.66	129.65	---	---
20	130.35	130.34	130.09	130.06	129.98	129.97	129.79	129.77	129.66	129.65	---	---
21	130.39	130.34	130.05	130.03	129.97	129.95	129.78	129.77	129.68	129.65	---	---
22	130.38	130.33	130.04	130.03	129.95	129.95	129.79	129.78	129.65	129.64	---	---
23	130.33	130.33	130.04	130.03	129.95	129.95	129.80	129.79	129.65	129.64	---	---
24	130.33	130.32	130.03	130.03	129.97	129.95	129.79	129.78	129.65	129.65	---	---
25	130.32	130.31	130.03	130.03	129.95	129.93	129.78	129.77	129.65	129.65	---	---
26	130.31	130.29	130.03	130.02	129.93	129.93	129.80	129.77	129.67	129.65	---	---
27	130.29	130.29	130.03	130.01	129.94	129.93	129.79	129.76	129.67	129.66	---	---
28	130.30	130.28	130.03	130.00	129.95	129.90	129.77	129.76	129.69	129.66	---	---
29	130.28	130.27	130.01	130.00	129.92	129.90	129.78	129.77	---	---	---	---
30	130.27	130.26	130.02	130.00	129.92	129.91	129.78	129.76	---	---	---	---
31	130.27	130.26	---	---	129.91	129.90	129.76	129.75	---	---	---	---
MONTH	130.49	130.26	130.28	130.00	130.05	129.90	129.91	129.75	129.75	129.64	---	---

GROUND-WATER LEVELS

MARYLAND--Continued

CALVERT COUNTY--Continued

CA Db 71--Continued



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--CA Ed 47. SITE ID.--382549076260101. PERMIT NUMBER.--CA-81-0754.
LOCATION.--Lat 38°25'49", long 76°26'01", Hydrologic Unit 020600004, at Calvert Cliffs Nuclear Power Plant, 4.3 mi. southeast of St. Leonard.
Owner: Baltimore Gas and Electric Co.
AQUIFER.--Aquia Formation of Paleocene age. Aquifer code: 125AQUI.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 523 ft; casing diameter 4 in., to 455 ft; casing diameter 2 in. from 455 to 477 ft, 482 to 503 ft, and 508 to 518 ft; screen diameter 2 in. from 477 to 482 ft, 503 to 508 ft, and 518 to 523 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with graphic water-level recorder from Apr. 11, 1984 to June 6, 1984, and Nov. 13, 1985 to Dec. 17, 1985. Equipped with digital water-level recorder--30-minute recorder interval from June 6, 1984 to Nov. 13, 1985, and Dec. 17, 1985 to current year.
DATUM.--Elevation of land surface is 10 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring Point: Top of recorder platform, 4.0 ft above land-surface datum.
REMARKS.--Southern Maryland Observation Well Network. Water levels are affected by nearby pumping.
PERIOD OF RECORD.--April 1984 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 37.11 ft below sea level, May 4, 1987; lowest measured, 57.93 ft below sea level, June 10, 1986.

WATER LEVEL, IN FEET BELOW SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	45.97	46.56	45.07	46.16	43.66	44.57	41.57	42.52	42.06	43.32	43.44	45.25
2	45.64	46.39	44.42	45.88	43.95	44.97	41.22	43.35	42.87	43.70	43.28	44.07
3	45.51	49.32	44.42	45.49	43.72	44.45	43.24	44.76	42.88	43.62	42.70	43.90
4	47.11	48.38	44.84	45.54	43.40	44.08	43.59	44.70	42.92	43.60	41.47	42.64
5	45.68	47.24	43.76	44.78	43.11	46.27	43.14	43.98	41.97	43.11	41.50	42.02
6	45.53	46.50	43.74	44.39	45.80	47.45	42.71	43.61	41.71	42.42	41.41	44.36
7	46.09	46.68	43.78	47.20	45.73	47.90	41.90	42.66	41.82	42.78	42.80	44.67
8	45.28	46.17	46.17	47.80	44.46	45.82	41.12	41.83	42.17	43.04	42.62	44.79
9	44.35	45.27	46.29	48.31	43.86	44.73	41.34	43.53	42.43	43.69	41.89	42.54
10	43.96	47.53	45.54	46.32	43.12	43.87	42.96	45.70	43.27	44.25	41.95	42.96
11	47.31	49.26	45.55	46.53	43.02	43.80	45.10	47.48	42.58	43.45	41.90	42.80
12	46.82	48.86	45.22	46.12	42.11	43.74	43.95	45.24	42.58	43.23	41.66	42.48
13	46.24	47.06	44.59	45.14	41.96	48.33	43.46	44.62	42.51	44.52	41.85	43.92
14	45.95	47.25	44.52	47.47	44.71	47.15	43.63	44.57	42.23	44.45	42.42	43.78
15	45.16	46.33	46.74	48.82	44.22	45.35	42.88	44.19	43.42	45.19	42.03	43.36
16	44.74	45.55	45.90	48.56	44.29	46.31	42.80	44.33	42.86	43.66	41.88	43.11
17	44.33	45.72	44.96	46.31	45.61	46.28	44.20	45.26	43.54	44.64	41.58	42.61
18	44.47	46.71	46.02	48.23	43.57	46.18	43.58	45.28	42.80	43.94	41.49	42.38
19	44.96	46.57	45.82	47.12	43.56	46.43	43.47	44.30	42.29	43.11	42.00	42.92
20	44.96	46.24	44.17	45.90	45.19	46.18	43.51	44.29	42.33	43.56	41.77	43.93
21	44.45	45.47	43.99	46.41	44.86	46.21	43.54	44.41	43.32	44.22	41.11	43.30
22	43.21	44.45	45.75	47.81	45.47	46.19	43.42	44.21	42.98	44.04	42.80	44.54
23	42.64	43.57	44.91	47.91	43.36	46.33	43.39	46.40	42.61	43.47	42.28	43.22
24	42.66	45.37	43.75	44.81	42.18	43.74	45.53	46.76	42.89	44.08	42.19	42.92
25	43.86	46.40	42.96	43.87	42.07	42.79	44.37	46.61	41.92	43.41	41.94	42.99
26	43.52	44.88	42.57	43.20	42.69	45.03	43.75	44.47	41.18	41.89	41.28	42.35
27	43.77	44.71	42.12	42.94	44.31	45.74	44.13	44.81	41.19	44.30	42.00	44.51
28	43.74	44.48	42.01	45.41	43.17	45.16	43.20	44.37	44.23	45.38	43.91	46.52
29	43.83	44.61	45.45	46.62	43.50	44.48	42.83	43.38	---	---	44.00	46.44
30	43.58	44.02	44.18	46.41	43.42	44.55	42.61	45.02	---	---	42.61	43.99
31	43.54	46.27	---	---	42.45	43.39	43.30	45.47	---	---	42.13	43.14
MONTH	42.64	49.32	42.01	48.82	41.96	48.33	41.12	47.48	41.18	45.38	41.11	46.52

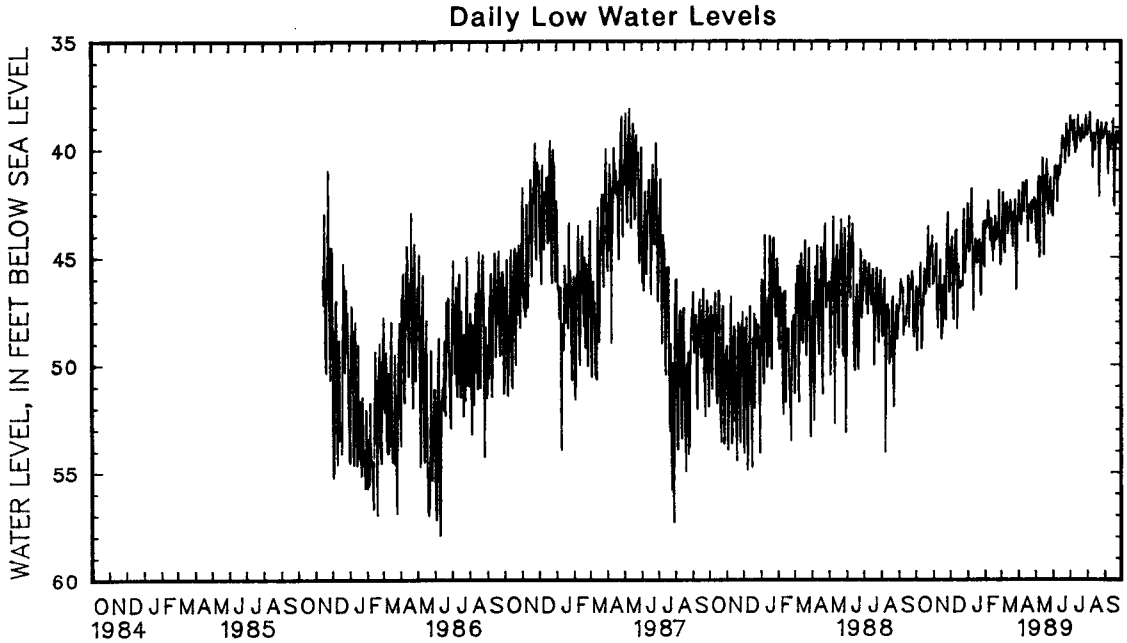
GROUND-WATER LEVELS

MARYLAND--Continued

CALVERT COUNTY--Continued

CA Ed 47--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	41.96	42.76	41.35	43.22	41.15	43.11	38.26	39.15	37.99	39.35	38.37	39.24
2	40.77	41.93	42.10	44.08	41.34	42.33	37.88	38.46	37.77	39.13	38.32	39.05
3	40.77	42.63	42.75	44.35	40.36	41.64	37.65	39.00	37.99	39.09	38.18	39.03
4	41.42	43.34	41.91	42.97	39.98	40.85	37.80	38.88	38.00	38.99	37.96	38.81
5	42.19	42.90	41.19	42.20	39.78	41.33	37.41	38.71	37.77	38.77	37.85	39.34
6	42.28	43.50	40.40	41.56	39.79	40.78	37.87	39.10	37.60	38.32	38.40	39.41
7	41.90	43.00	40.33	41.28	39.62	40.96	38.02	39.59	37.39	39.13	38.60	40.64
8	40.80	42.01	41.21	45.02	39.88	41.37	38.41	39.34	38.24	39.63	39.76	41.16
9	40.60	41.56	41.99	44.79	40.96	42.44	37.86	38.68	38.11	39.32	38.93	40.18
10	40.45	42.33	40.90	42.61	40.17	41.34	37.79	39.94	38.09	39.55	38.18	39.20
11	41.22	42.89	40.29	41.32	39.81	40.80	38.30	40.16	39.37	40.88	38.16	40.03
12	41.12	42.13	40.10	41.61	39.63	41.23	38.27	39.24	38.79	39.89	38.69	39.84
13	40.81	41.69	40.04	41.49	39.44	41.18	38.11	40.00	38.17	39.27	38.58	39.71
14	40.52	41.56	39.71	40.42	39.05	40.35	38.46	39.49	38.24	39.68	38.49	39.40
15	40.52	41.45	39.48	43.08	39.01	40.87	38.13	39.08	38.28	40.05	38.35	39.65
16	40.89	41.67	42.63	44.91	39.36	40.18	37.54	38.45	38.41	39.33	38.27	39.28
17	40.91	43.90	40.93	43.43	38.94	39.56	37.39	39.34	38.26	39.30	37.87	38.61
18	41.99	44.27	40.26	41.25	38.66	39.39	37.87	39.08	38.35	39.31	38.11	42.53
19	41.32	42.63	40.89	42.42	38.65	39.96	37.92	39.06	38.05	38.82	39.55	42.65
20	40.98	42.61	39.94	41.30	38.84	39.92	37.56	39.66	37.69	38.68	38.87	40.46
21	41.97	43.19	39.65	40.47	38.53	39.53	38.51	39.61	37.65	39.21	39.00	40.03
22	42.21	43.24	39.48	41.21	38.49	39.68	38.16	39.34	38.29	41.45	38.02	39.28
23	41.51	42.48	39.50	43.02	39.18	40.65	37.99	38.88	40.16	42.20	38.02	39.18
24	41.16	43.45	40.93	42.73	38.40	39.85	37.90	39.31	38.95	40.34	38.24	39.39
25	41.71	42.99	40.08	41.80	37.89	38.83	38.23	39.50	38.66	39.66	38.20	39.68
26	41.26	42.41	40.86	42.34	37.77	39.19	38.29	39.50	38.27	39.07	38.14	39.72
27	41.46	42.60	40.51	42.05	38.18	39.73	38.24	39.32	38.10	38.80	38.66	39.42
28	41.46	42.76	40.60	41.33	38.22	39.25	38.13	39.36	38.05	39.49	38.28	39.15
29	41.40	42.26	40.63	42.77	38.35	40.35	37.98	38.89	38.19	39.51	38.32	39.10
30	41.39	42.33	41.09	42.97	39.05	39.99	37.79	38.44	38.35	39.46	38.35	39.10
31	---	---	40.79	42.08	---	---	37.33	39.12	38.31	39.36	---	---
MONTH	40.45	44.27	39.48	45.02	37.77	43.11	37.33	40.16	37.39	42.20	37.85	42.65



5 YEAR HYDROGRAPH

OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--CA Fc 13. SITE ID.--382343076302901. PERMIT NUMBER.--CA-81-2391.
LOCATION.--Lat 38°23'41", long 76°30'29", Hydrologic Unit 02060006, Jefferson Patterson Park and Museum.
Owner: U.S. Geological Survey.
AQUIFER.--Chesapeake Group of Miocene age. Aquifer code: 122CSPK.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 34 ft; casing diameter 3.5 in., to 29 ft; screen diameter 3.5 in. from 29 to 34 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--60-minute recorder interval from Oct. 2, 1986 to current year.
DATUM.--Elevation of land surface is 47.44 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of recorder platform, 2.10 ft above land-surface datum.
REMARKS.--Best Management Practices Project observation well.
PERIOD OF RECORD.--October 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 24.92 ft below land-surface datum, July 27 & 28, 1989; lowest measured, 30.69 ft below land-surface datum, Feb. 27 & 28, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	29.30	29.28	29.73	29.63	30.16	30.09	30.45	30.45	30.64	30.63	---	---
2	29.28	29.25	29.76	29.63	30.17	30.16	30.45	30.44	---	---	30.47	30.47
3	29.32	29.26	29.80	29.76	30.16	30.11	30.44	30.36	30.61	30.61	30.47	30.46
4	29.34	29.32	29.80	29.76	30.21	30.11	30.51	30.36	30.62	30.62	30.46	30.46
5	29.42	29.35	29.76	29.64	30.21	30.17	30.51	30.50	30.62	30.62	30.46	30.46
6	29.44	29.42	29.81	29.73	30.18	30.15	30.50	30.45	30.63	30.62	30.46	30.46
7	29.44	29.41	29.89	29.82	30.17	30.15	30.54	30.49	30.63	30.63	30.46	30.45
8	29.41	29.40	29.89	29.86	30.23	30.17	30.51	30.46	30.63	30.63	30.45	30.45
9	29.42	29.41	29.92	29.88	30.23	30.20	30.56	30.49	30.64	30.63	---	---
10	29.41	29.34	29.91	29.80	30.23	30.21	30.56	30.56	30.64	30.64	30.10	30.05
11	29.45	29.34	29.96	29.85	30.27	30.21	---	---	30.64	30.64	30.05	29.92
12	29.52	29.45	29.98	29.96	30.29	30.26	30.55	30.45	30.65	30.64	29.92	29.88
13	29.54	29.52	29.95	29.88	30.25	30.17	30.58	30.45	30.65	30.65	29.88	29.88
14	29.54	29.51	29.95	29.91	---	---	30.58	30.49	---	---	29.88	29.88
15	29.51	29.51	29.97	29.95	---	---	30.49	30.46	30.60	30.60	29.88	29.88
16	29.54	29.51	29.97	29.93	30.31	30.27	30.55	30.48	30.65	30.60	29.88	29.87
17	29.55	29.54	30.01	29.90	30.26	30.23	30.55	30.53	30.66	30.65	29.87	29.87
18	29.54	29.48	30.04	30.01	30.32	30.27	30.54	30.50	30.66	30.66	29.87	29.87
19	29.58	29.53	30.03	29.98	30.33	30.32	30.54	30.50	30.66	30.66	29.87	29.87
20	29.62	29.58	29.98	29.83	30.33	30.33	30.56	30.49	30.67	30.66	29.87	29.87
21	29.62	29.44	30.08	29.90	30.36	30.33	30.61	30.56	30.67	30.67	29.87	29.86
22	29.58	29.44	30.10	30.08	30.39	30.36	30.61	30.57	30.67	30.67	29.86	29.86
23	29.63	29.59	30.08	30.03	30.39	30.31	30.57	30.55	30.68	30.67	29.86	29.86
24	29.63	29.58	30.06	30.02	30.32	30.26	30.55	30.55	30.68	30.68	---	---
25	29.67	29.63	30.09	30.06	30.41	30.29	30.55	30.55	30.68	30.68	---	---
26	29.71	29.66	30.08	30.08	30.45	30.41	30.55	30.55	30.68	30.68	29.11	29.01
27	29.74	29.71	30.08	30.03	30.45	30.36	---	---	30.69	30.68	29.01	28.86
28	29.73	29.67	30.13	30.00	---	---	30.61	30.58	30.69	30.69	28.86	28.72
29	29.76	29.73	30.17	30.13	30.48	30.43	30.62	30.61	---	---	28.71	28.67
30	29.76	29.75	30.16	30.09	30.45	30.42	30.62	30.62	---	---	---	---
31	29.77	29.73	---	---	30.45	30.41	30.63	30.62	---	---	28.57	28.46
MONTH	29.77	29.25	30.17	29.63	---	---	---	---	---	---	---	---

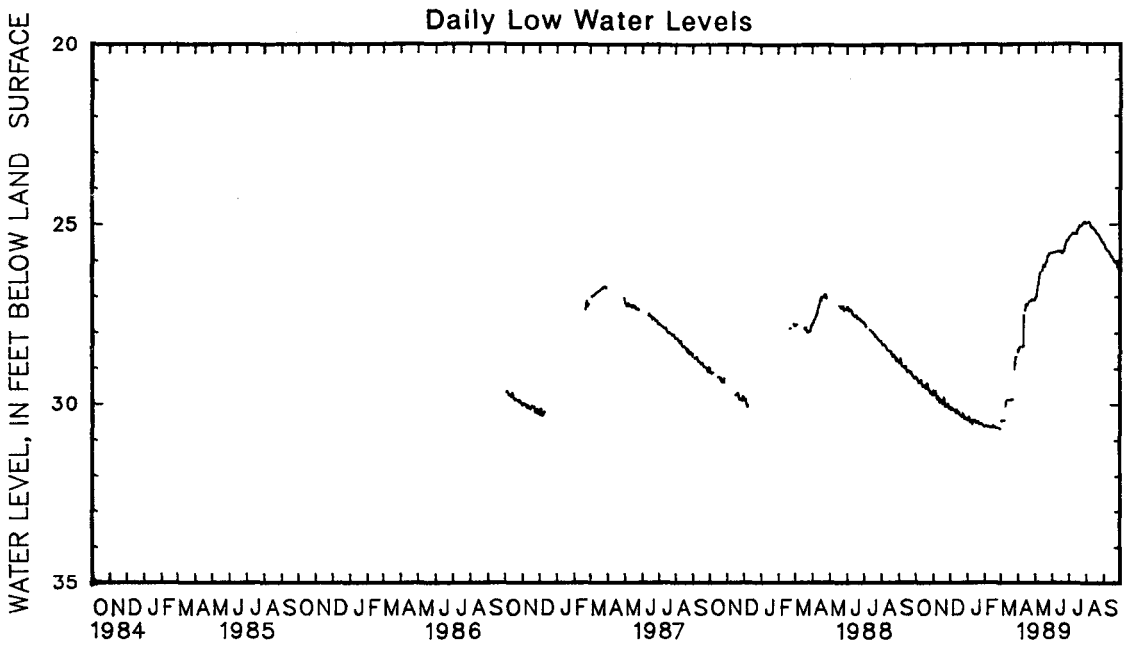
GROUND-WATER LEVELS

MARYLAND--Continued

CALVERT COUNTY--Continued

CA Fc 13--Continued

DAY	APRIL MAX	APRIL MIN	MAY MAX	MAY MIN	JUNE MAX	JUNE MIN	JULY MAX	JULY MIN	AUGUST MAX	AUGUST MIN	SEPTEMBER MAX	SEPTEMBER MIN
1	28.55	28.53	27.09	27.06	25.77	25.77	25.39	25.36	24.96	24.96	25.57	25.54
2	28.55	28.49	27.05	27.00	25.77	25.76	25.36	25.33	24.96	24.95	25.63	25.56
3	28.48	28.39	27.00	27.00	25.76	25.76	25.33	25.31	24.95	24.94	25.67	25.63
4	28.39	28.39	27.00	26.96	25.76	25.76	25.31	25.30	24.94	24.93	25.69	25.67
5	28.39	28.38	26.95	26.80	25.76	25.75	25.30	25.28	24.94	24.93	25.70	25.69
6	28.38	28.38	26.77	26.68	25.75	25.75	25.28	25.27	24.95	24.93	25.71	25.70
7	28.38	28.38	26.68	26.65	25.75	25.74	25.27	25.24	24.99	24.95	25.72	25.71
8	28.38	28.38	26.65	26.57	25.74	25.74	25.25	25.24	25.05	24.99	25.73	25.72
9	28.38	28.38	26.56	26.43	25.74	25.74	25.26	25.25	25.08	25.06	25.76	25.73
10	28.38	28.37	26.42	26.35	25.74	25.73	25.26	25.23	25.09	25.08	25.79	25.76
11	28.37	27.50	---	---	25.73	25.73	25.25	25.24	25.08	25.07	25.83	25.79
12	---	---	26.32	26.29	25.73	25.73	25.27	25.26	25.09	25.08	25.87	25.83
13	27.43	27.36	26.29	26.27	25.72	25.72	25.27	25.24	25.12	25.09	25.89	25.87
14	27.36	27.30	26.27	26.22	---	---	---	---	25.14	25.12	25.89	25.88
15	27.30	27.19	26.22	26.15	25.78	25.73	25.28	25.25	25.14	25.14	25.94	25.89
16	27.21	27.19	26.15	26.11	25.78	25.74	25.28	25.13	25.16	25.14	25.95	25.93
17	27.23	27.21	---	---	25.80	25.76	25.14	25.13	25.23	25.16	25.99	25.95
18	27.22	27.18	26.15	26.14	25.78	25.77	25.13	25.11	25.25	25.23	26.03	25.99
19	27.19	27.18	26.14	26.09	25.79	25.78	25.10	25.04	25.25	25.24	26.04	26.03
20	---	---	26.08	26.03	25.79	25.74	25.03	25.02	25.26	25.25	26.08	26.04
21	27.17	27.12	26.03	26.01	25.74	25.72	25.04	25.03	25.28	25.26	---	---
22	27.12	27.10	26.01	25.99	25.72	25.70	25.04	25.03	25.30	25.28	26.09	26.01
23	27.10	27.10	25.99	25.86	25.70	25.66	25.03	25.01	25.32	25.30	26.17	26.05
24	27.10	27.10	25.86	25.86	25.66	25.57	25.01	25.00	25.37	25.32	26.21	26.17
25	27.10	27.06	25.86	25.84	25.57	25.52	25.00	24.97	25.40	25.37	26.20	26.16
26	27.06	27.06	25.84	25.79	25.52	25.48	24.97	24.95	25.42	25.40	26.24	26.11
27	27.06	27.05	25.79	25.79	25.48	25.44	24.95	24.92	25.46	25.42	26.29	26.24
28	27.07	27.05	25.79	25.78	25.44	25.42	24.94	24.92	25.50	25.46	26.31	26.28
29	27.07	27.07	25.78	25.78	25.43	25.42	24.98	24.95	25.50	25.48	26.29	26.27
30	27.09	27.07	25.78	25.78	25.43	25.39	24.98	24.96	25.53	25.48	26.34	26.29
31	---	---	25.78	25.77	---	---	24.96	24.93	25.57	25.53	---	---
MONTH	---	---	---	---	---	---	---	---	25.57	24.93	---	---



5 YEAR HYDROGRAPH

OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--CA Fc 15. SITE ID.--382340076303001. PERMIT NUMBER.--CA-81-2389.
LOCATION.--Lat 38°23'39", long 76°30'35", Hydrologic Unit 02060006, Jefferson Patterson Park and Museum.
Owner: U.S. Geological Survey.
AQUIFER.--Chesapeake Group of Miocene age. Aquifer code: 122CSPK.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 36 ft; casing diameter 3.5 in., to 31 ft; screen diameter 3.5 in. from 31 to 36 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from Oct. 2, 1986 to current year.
DATUM.--Elevation of land surface is 30.56 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of recorder platform, 1.78 ft above land-surface datum.
REMARKS.--Best Management Practices Project observation well.
PERIOD OF RECORD.--October 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.20 ft below land-surface datum, June 25, 26, and 27, 1989; lowest measured, 18.25 ft below land-surface datum, Feb. 19, 20, and 21, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	16.73	16.72	17.16	17.15	17.54	17.52	17.93	17.92	18.13	18.12	---	---
2	16.74	16.73	17.18	17.16	17.55	17.54	17.94	17.93	18.15	18.13	17.76	17.73
3	16.76	16.74	17.20	17.18	17.56	17.55	17.95	17.94	18.15	18.14	17.73	17.71
4	16.78	16.76	17.21	17.20	17.58	17.56	17.96	17.95	18.15	18.14	17.71	17.69
5	16.80	16.78	17.22	17.21	17.59	17.58	17.97	17.96	18.15	18.14	17.69	17.66
6	16.82	16.80	17.24	17.22	17.61	17.59	17.98	17.96	18.16	18.15	17.67	17.51
7	16.83	16.82	17.27	17.24	17.62	17.61	17.99	17.98	18.17	18.15	17.58	17.52
8	16.84	16.83	17.28	17.26	17.64	17.62	18.00	17.99	18.17	18.16	17.54	17.46
9	16.86	16.84	17.30	17.28	17.65	17.64	18.02	18.00	18.18	18.17	17.46	17.39
10	16.86	16.85	17.30	17.29	17.66	17.65	18.03	18.02	18.19	18.18	17.39	17.34
11	16.88	16.86	17.33	17.30	17.68	17.66	18.06	18.02	18.19	18.19	17.34	17.28
12	16.91	16.88	17.34	17.33	17.69	17.68	18.03	18.02	18.20	18.19	17.28	17.25
13	16.93	16.91	17.35	17.34	17.70	17.69	18.05	18.03	18.21	18.20	17.25	17.21
14	16.93	16.92	17.36	17.35	---	---	18.05	18.05	18.24	18.21	17.21	17.17
15	16.95	16.93	17.38	17.36	---	---	18.05	18.02	18.22	18.22	17.17	17.14
16	16.96	16.95	17.38	17.38	17.73	17.72	18.04	18.03	18.23	18.22	17.15	17.13
17	16.97	16.96	17.40	17.36	17.74	17.73	18.03	18.03	18.24	18.23	17.13	17.09
18	16.98	16.97	17.42	17.40	17.75	17.74	18.03	18.02	18.24	18.24	17.09	17.06
19	17.00	16.98	17.43	17.42	17.77	17.75	18.04	18.02	18.25	18.24	17.08	17.05
20	17.02	17.00	17.44	17.41	17.78	17.77	18.04	18.03	18.25	18.25	17.05	17.00
21	17.02	16.98	17.47	17.44	17.79	17.78	18.06	18.04	18.25	18.05	17.00	16.98
22	17.03	16.99	17.48	17.47	17.80	17.78	18.06	18.06	18.16	18.09	16.98	16.95
23	17.05	17.03	17.49	17.48	17.81	17.80	18.07	18.06	18.08	18.01	16.95	16.88
24	17.06	17.05	17.51	17.49	17.81	17.80	18.08	18.07	18.00	17.95	16.88	16.58
25	17.08	17.06	17.52	17.51	17.83	17.81	18.09	18.08	17.95	17.89	16.63	16.47
26	17.10	17.08	17.53	17.52	17.85	17.83	18.09	18.08	17.88	17.84	16.47	16.37
27	17.11	17.10	17.54	17.53	17.85	17.85	18.12	18.08	17.84	17.81	16.37	16.28
28	17.13	17.11	17.54	17.48	---	---	18.10	18.10	17.81	17.79	16.28	16.21
29	17.14	17.13	17.53	17.53	17.90	17.89	18.11	18.10	---	---	16.21	16.18
30	17.15	17.14	17.53	17.52	17.91	17.90	18.12	18.11	---	---	---	---
31	17.16	17.16	---	---	17.92	17.91	18.12	18.12	---	---	16.09	16.01
MONTH	17.16	16.72	17.54	17.15	---	---	18.12	17.92	18.25	17.79	---	---

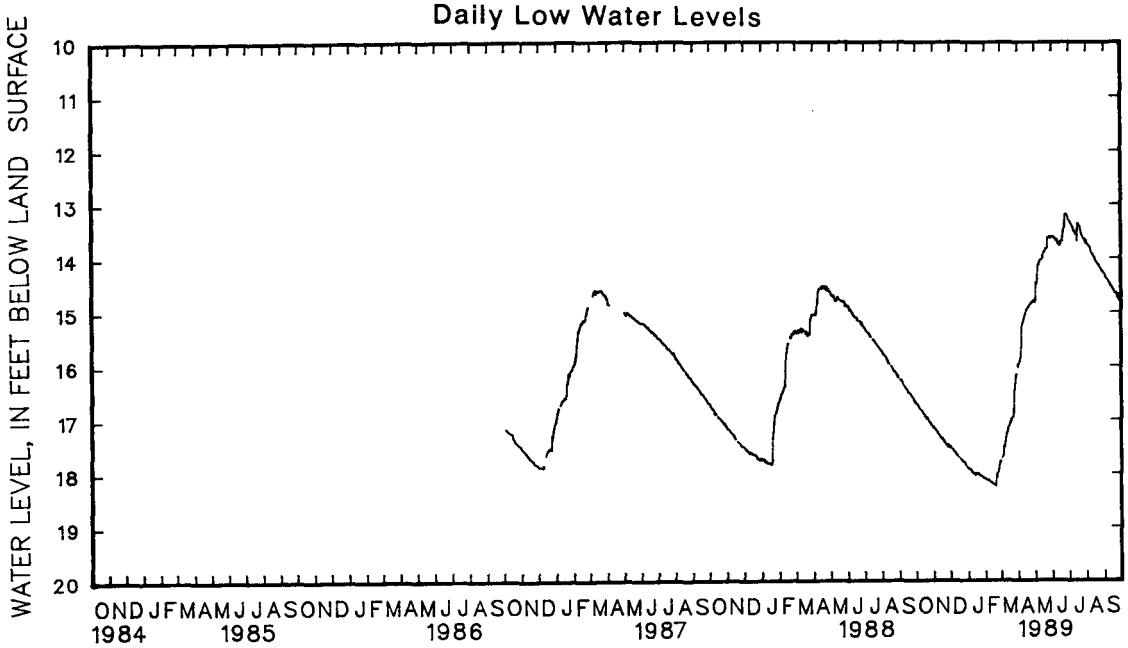
GROUND-WATER LEVELS

MARYLAND--Continued

CALVERT COUNTY--Continued

CA Fc 15--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	16.07	16.04	14.84	14.79	13.63	13.62	13.32	13.31	13.74	13.70	14.32	14.29
2	16.05	15.97	14.79	14.47	13.63	13.61	13.34	13.32	13.76	13.74	14.35	14.31
3	15.97	15.92	14.53	14.50	13.65	13.61	13.37	13.34	13.77	13.76	14.37	14.35
4	15.93	15.89	14.51	14.48	13.66	13.61	13.40	13.37	13.78	13.77	14.39	14.37
5	15.90	15.83	14.48	14.40	13.68	13.64	13.42	13.38	13.81	13.78	14.40	14.39
6	15.83	15.65	14.40	14.14	13.67	13.64	13.44	13.42	13.83	13.80	14.41	14.40
7	15.65	15.32	14.17	14.14	13.69	13.67	13.45	13.43	13.87	13.82	14.43	14.41
8	15.36	15.24	14.15	14.13	13.70	13.68	13.49	13.44	13.91	13.87	14.44	14.43
9	15.26	15.23	14.15	14.09	13.70	13.66	13.51	13.49	13.93	13.91	14.46	14.44
10	15.23	15.19	14.09	14.05	13.75	13.69	13.52	13.50	13.94	13.93	14.48	14.46
11	15.20	15.14	14.18	14.04	13.77	13.75	13.56	13.52	13.95	13.93	14.51	14.48
12	15.22	15.10	14.05	14.04	13.77	13.74	13.58	13.55	13.96	13.95	14.53	14.51
13	15.10	15.07	14.05	14.04	13.78	13.72	13.58	13.57	13.98	13.96	14.55	14.53
14	15.08	15.04	14.04	14.02	13.86	13.78	---	---	14.00	13.98	14.55	14.54
15	15.04	14.97	14.02	14.00	13.79	13.76	13.70	13.68	14.01	14.00	14.58	14.55
16	15.00	14.98	14.00	13.90	13.80	13.70	13.69	13.36	14.04	14.01	14.60	14.58
17	15.00	14.94	14.00	13.90	13.71	13.68	13.39	13.36	14.07	14.04	14.62	14.59
18	14.95	14.92	13.90	13.88	13.69	13.68	13.41	13.38	14.08	14.07	14.64	14.62
19	14.95	14.92	13.89	13.85	13.70	13.69	13.42	13.41	14.10	14.08	14.65	14.64
20	15.04	14.90	13.85	13.83	13.72	13.53	13.47	13.41	14.11	14.10	14.68	14.65
21	14.90	14.88	13.85	13.83	13.53	13.50	13.54	13.47	14.13	14.11	---	---
22	14.89	14.86	13.85	13.83	13.51	13.46	13.57	13.54	14.14	14.13	14.68	14.65
23	14.89	14.85	13.83	13.63	13.47	13.44	13.58	13.57	14.16	14.14	14.74	14.68
24	14.88	14.84	13.65	13.62	13.45	13.22	13.63	13.59	14.18	14.16	14.74	14.74
25	14.85	14.82	13.66	13.62	13.23	13.20	13.64	13.62	14.20	14.19	14.75	14.72
26	14.85	14.82	13.64	13.61	13.21	13.20	13.65	13.64	14.22	14.20	14.78	14.68
27	14.84	14.80	13.66	13.61	13.22	13.20	13.66	13.64	14.24	14.22	14.80	14.78
28	14.86	14.82	13.67	13.64	13.25	13.22	13.69	13.65	14.26	14.24	14.80	14.78
29	14.84	14.81	13.65	13.62	13.31	13.25	13.73	13.69	14.26	14.25	14.81	14.79
30	14.85	14.83	13.63	13.61	13.32	13.30	13.75	13.73	14.29	14.26	14.84	14.81
31	---	---	13.63	13.61	---	---	13.74	13.67	14.31	14.29	---	---
MONTH	16.07	14.80	14.84	13.61	13.86	13.20	---	---	14.31	13.70	---	---



5 YEAR HYDROGRAPH

OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--CA Fc 16. SITE ID.--382340076303002. PERMIT NUMBER.--CA-81-2392.
LOCATION.--Lat 38°23'40", long 76°30'35", Hydrologic Unit 02060006, Jefferson Patterson Park and Museum.
Owner: U.S. Geological Survey.
AQUIFER.--Chesapeake Group of Miocene age. Aquifer code: 122CSPK.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 23 ft; casing diameter 3.5 in., to 18 ft; screen diameter 3.5 in. from 18 to 23 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--30-minute recorder interval from Dec. 24, 1986 to Sept. 3, 1987 and Jan. 11, 1989 to current year.
DATUM.--Elevation of land surface is 30.75 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of recorder platform, 1.72 ft above land-surface datum.
REMARKS.--Best Management Practices Project observation well.
PERIOD OF RECORD.--December 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.63 ft below land-surface datum, July 17, 1989; lowest measured, 18.51 ft below land-surface datum, Feb. 21, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	---	---	---	---	---	---	18.38	18.37	---	---
2	---	---	---	---	---	---	---	---	---	---	17.98	17.95
3	---	---	---	---	---	---	---	---	18.39	18.37	17.95	17.92
4	---	---	---	---	---	---	---	---	18.38	18.38	17.92	17.90
5	---	---	---	---	---	---	---	---	18.39	18.38	17.90	17.88
6	---	---	---	---	---	---	---	---	18.40	18.39	17.88	17.74
7	---	---	---	---	---	---	---	---	18.40	18.40	17.84	17.76
8	---	---	---	---	---	---	---	---	18.41	18.40	17.77	17.69
9	---	---	---	---	---	---	---	---	18.42	18.41	---	---
10	---	---	---	---	---	---	---	---	18.42	18.42	17.65	17.59
11	---	---	---	---	---	---	---	---	18.43	18.42	17.59	17.52
12	---	---	---	---	---	---	18.28	18.27	18.44	18.43	17.52	17.48
13	---	---	---	---	---	---	18.30	18.28	18.44	18.44	17.48	17.43
14	---	---	---	---	---	---	18.30	18.30	---	---	17.43	17.39
15	---	---	---	---	---	---	18.30	18.29	18.48	18.47	17.39	17.37
16	---	---	---	---	---	---	18.30	18.29	18.48	18.48	17.37	17.36
17	---	---	---	---	---	---	18.30	18.29	18.49	18.48	17.36	17.32
18	---	---	---	---	---	---	18.29	18.29	18.49	18.49	17.32	17.28
19	---	---	---	---	---	---	18.29	18.29	18.50	18.49	17.30	17.28
20	---	---	---	---	---	---	18.29	18.29	18.50	18.50	17.28	17.22
21	---	---	---	---	---	---	18.30	18.29	18.51	18.27	17.22	17.19
22	---	---	---	---	---	---	18.31	18.30	18.44	18.36	17.19	17.17
23	---	---	---	---	---	---	18.31	18.31	18.36	18.27	17.17	17.10
24	---	---	---	---	---	---	18.32	18.31	18.27	18.19	---	---
25	---	---	---	---	---	---	18.33	18.32	18.19	18.13	16.85	16.01
26	---	---	---	---	---	---	18.33	18.33	18.12	18.07	16.63	16.54
27	---	---	---	---	---	---	---	---	18.07	18.03	16.54	16.45
28	---	---	---	---	---	---	18.34	18.34	18.03	18.01	16.45	16.38
29	---	---	---	---	---	---	18.35	18.34	---	---	16.38	16.36
30	---	---	---	---	---	---	18.35	18.35	---	---	---	---
31	---	---	---	---	---	---	18.37	18.35	---	---	16.30	16.20
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

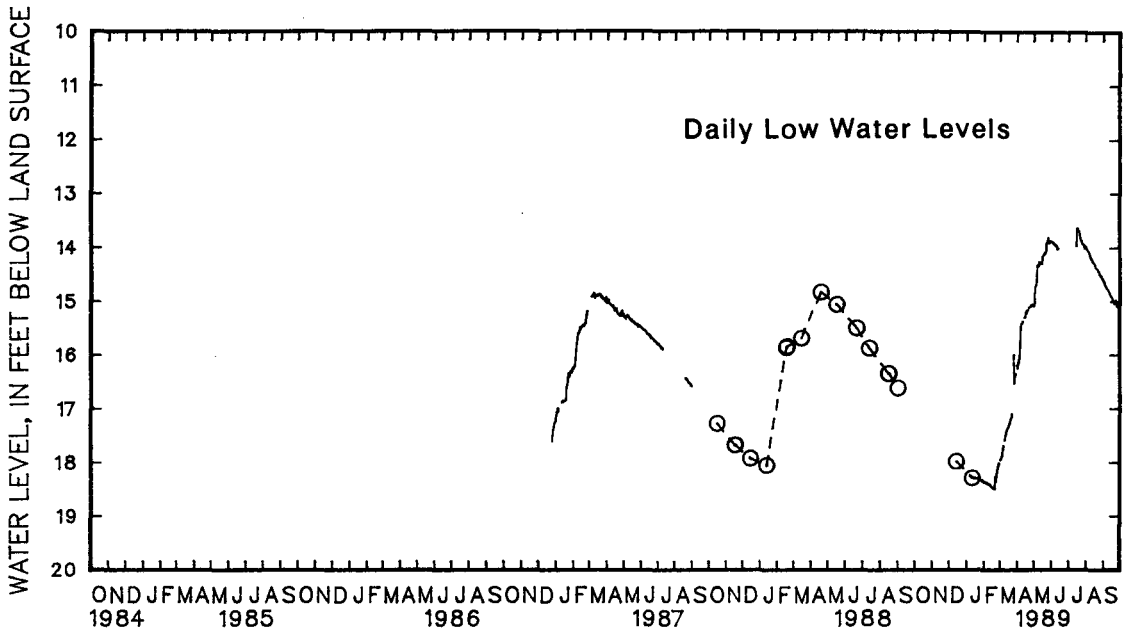
GROUND-WATER LEVELS

MARYLAND--Continued

CALVERT COUNTY--Continued

CA Fc 16--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	16.29	16.25	15.09	15.04	13.90	13.89	---	---	14.02	13.98	14.64	14.62
2	16.26	16.18	15.05	14.73	13.90	13.89	---	---	14.04	14.02	14.69	14.64
3	16.18	16.13	14.75	14.71	13.91	13.90	---	---	14.06	14.04	14.71	14.69
4	16.15	16.11	14.73	14.69	13.94	13.90	---	---	14.06	14.06	14.72	14.71
5	16.13	16.06	14.70	14.64	13.96	13.93	---	---	14.09	14.06	14.75	14.72
6	16.06	15.85	14.65	14.33	13.95	13.93	---	---	14.11	14.09	14.76	14.75
7	15.85	15.52	14.38	14.34	13.96	13.95	---	---	14.15	14.11	14.77	14.76
8	15.55	15.43	14.36	14.34	13.97	13.96	---	---	14.19	14.15	14.79	14.77
9	15.45	15.42	14.36	14.32	13.97	13.95	---	---	14.22	14.19	14.81	14.79
10	15.44	15.41	14.32	14.27	14.03	13.97	---	---	14.23	14.22	14.83	14.81
11	15.41	15.38	---	---	14.06	14.03	---	---	14.24	14.22	14.87	14.83
12	---	---	14.29	14.28	14.06	14.03	---	---	14.26	14.24	14.89	14.87
13	15.33	15.30	14.30	14.29	14.07	14.02	---	---	14.28	14.26	14.90	14.89
14	15.31	15.28	14.30	14.29	---	---	---	---	14.29	14.28	14.92	14.90
15	15.28	15.20	14.29	14.27	---	---	13.98	13.97	14.31	14.29	14.94	14.92
16	15.25	15.22	14.27	14.17	---	---	13.98	13.64	14.33	14.31	14.97	14.94
17	15.24	15.19	---	---	---	---	13.65	13.63	14.37	14.33	14.99	14.97
18	15.20	15.17	14.15	14.13	---	---	13.68	13.65	14.38	14.37	15.00	14.99
19	15.20	15.17	14.14	14.12	---	---	13.69	13.68	14.39	14.38	15.03	15.00
20	---	---	14.12	14.10	---	---	13.75	13.69	14.41	14.39	15.06	15.03
21	15.15	15.12	14.19	14.09	---	---	13.82	13.76	14.43	14.41	---	---
22	15.14	15.11	14.11	14.08	---	---	13.86	13.82	14.44	14.43	15.00	14.98
23	15.14	15.10	14.10	13.91	---	---	13.88	13.86	14.46	14.44	15.06	15.00
24	15.13	15.09	13.91	13.90	---	---	13.92	13.88	14.49	14.46	15.07	15.06
25	15.10	15.07	13.92	13.88	---	---	13.93	13.92	14.51	14.49	15.07	15.03
26	15.10	15.08	13.89	13.81	---	---	13.95	13.93	14.53	14.51	15.10	15.01
27	15.10	15.06	13.92	13.88	---	---	13.95	13.94	14.55	14.53	15.12	15.10
28	15.12	15.07	13.93	13.91	---	---	13.99	13.94	14.57	14.55	15.12	15.10
29	15.10	15.07	13.92	13.90	---	---	14.02	13.99	14.57	14.56	15.13	15.11
30	15.11	15.09	13.90	13.89	---	---	14.03	14.02	14.61	14.57	15.15	15.13
31	---	---	13.89	13.88	---	---	14.03	13.97	14.63	14.61	---	---
MONTH	---	---	---	---	---	---	---	---	14.63	13.98	---	---



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--CA Fc 18. SITE ID.--382340076303801. PERMIT NUMBER.--CA-81-2387.
LOCATION.--Lat 38°23'39", long 76°30'39", Hydrologic Unit 02060006, Jefferson Patterson Park and Museum.
Owner: U.S. Geological Survey.
AQUIFER.--Chesapeake Group of Miocene age. Aquifer code: 122CSPK.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 23 ft; casing diameter 3.5 in., to 18 ft; screen diameter 3.5 in. from 18 to 23 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from Oct. 2, 1986 to current year.
DATUM.--Elevation of land surface is 15.56 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of recorder platform, 2.81 ft above land-surface datum.
REMARKS.--Best Management Practices Project observation well.
PERIOD OF RECORD.--October 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.67 ft below land-surface datum, July 16, 1989; lowest measured, 9.58 ft below land-surface datum, Feb. 16, 17, 18, and 19, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.62	8.60	---	---	8.81	8.73	9.45	9.44	9.45	9.44	---	---
2	8.64	8.62	---	---	8.88	8.82	9.45	9.44	---	---	8.52	8.51
3	8.65	8.64	---	---	8.93	8.88	9.44	9.43	9.47	9.45	8.53	8.52
4	8.66	8.65	9.06	9.04	9.00	8.93	9.48	9.44	9.48	9.46	8.53	8.52
5	8.66	8.64	9.06	9.04	9.05	9.00	9.48	9.47	9.48	9.47	8.53	8.51
6	8.69	8.66	9.04	9.04	9.08	9.05	9.47	9.45	9.48	9.46	8.54	7.82
7	8.71	8.69	9.06	9.04	9.12	9.08	9.47	9.46	9.49	9.46	7.82	7.79
8	8.73	8.71	9.08	9.06	9.16	9.12	9.46	9.43	9.50	9.48	7.80	7.77
9	8.73	8.70	9.10	9.08	9.19	9.16	9.47	9.44	9.51	9.49	---	---
10	8.71	8.69	9.10	9.10	9.21	9.19	9.50	9.47	9.52	9.51	7.88	7.84
11	8.75	8.71	9.13	9.10	9.25	9.21	---	---	9.52	9.52	7.90	7.87
12	8.78	8.75	9.14	9.13	9.27	9.25	9.49	9.47	9.53	9.52	7.95	7.89
13	8.80	8.78	9.14	9.14	9.27	9.27	9.49	9.47	9.54	9.53	7.97	7.95
14	8.82	8.80	9.15	9.14	---	---	9.51	9.49	---	---	7.98	7.97
15	8.83	8.82	9.16	9.15	---	---	9.50	9.14	9.57	9.56	8.01	7.98
16	8.85	8.83	9.17	9.16	9.28	9.26	9.14	9.11	9.58	9.57	8.05	8.01
17	8.86	8.85	9.17	9.14	9.28	9.28	9.11	9.08	9.58	9.58	8.07	8.05
18	8.86	8.86	9.19	9.17	9.29	9.28	9.10	9.08	9.58	9.58	8.08	8.06
19	8.88	8.86	9.20	9.19	9.30	9.29	9.14	9.10	9.58	9.56	8.08	8.06
20	8.91	8.88	9.21	9.20	9.31	9.30	9.17	9.14	9.57	9.55	8.08	8.01
21	8.91	8.90	9.23	9.21	9.34	9.31	9.24	9.17	9.56	8.70	8.01	7.81
22	8.90	8.90	9.24	9.23	9.36	9.34	9.28	9.24	8.70	8.47	7.82	7.80
23	8.92	8.90	9.24	9.24	9.36	9.35	9.32	9.28	8.47	8.40	7.80	7.75
24	8.93	8.92	9.25	9.24	9.36	9.35	9.34	9.32	8.43	8.39	---	---
25	8.94	8.93	9.25	9.25	9.38	9.36	9.36	9.34	8.43	8.43	6.91	6.75
26	8.97	8.94	9.25	9.25	9.40	9.38	9.36	9.35	8.44	8.42	7.03	6.91
27	8.98	8.97	9.25	9.25	9.40	9.40	---	---	8.48	8.44	7.09	7.03
28	---	---	9.25	8.40	---	---	9.40	9.39	8.49	8.48	7.13	7.09
29	---	---	8.65	8.52	9.43	9.41	9.42	9.40	---	---	7.21	7.14
30	---	---	8.73	8.65	9.44	9.43	9.44	9.42	---	---	---	---
31	---	---	---	---	9.44	9.44	9.46	9.44	---	---	7.03	6.99
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

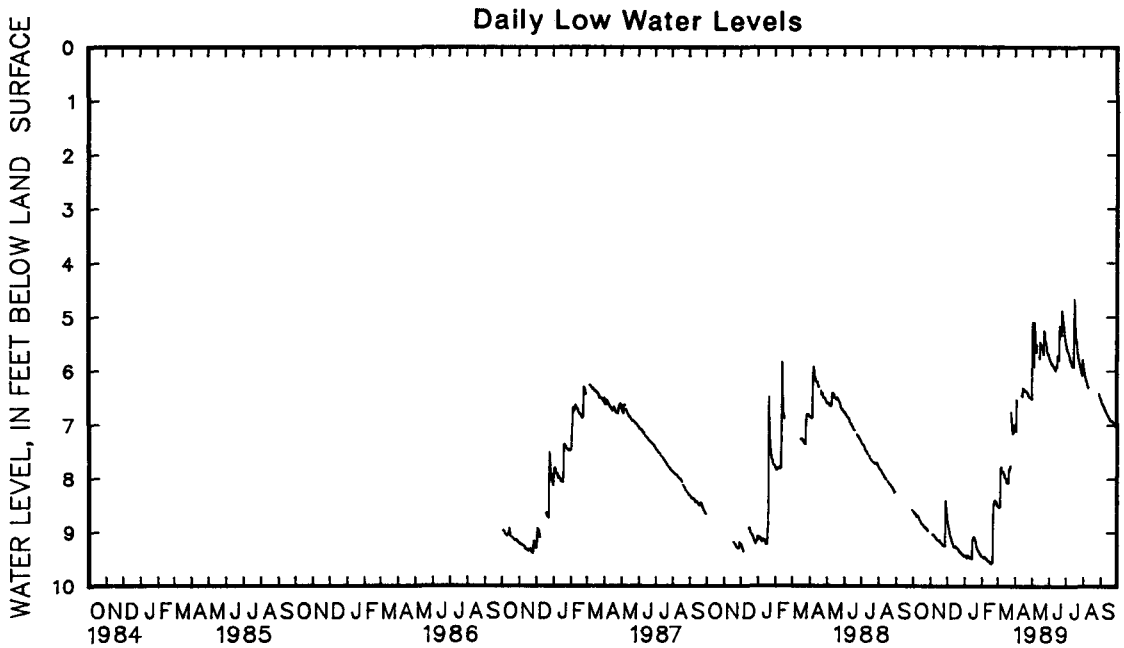
GROUND-WATER LEVELS

MARYLAND--Continued

CALVERT COUNTY--Continued

CA Fc 18--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.09	7.03	6.54	6.50	5.77	5.74	5.55	5.50	5.96	5.89	6.54	6.51
2	7.11	7.08	6.50	5.08	5.80	5.77	5.59	5.55	6.02	5.95	6.59	6.54
3	7.14	7.10	5.83	5.61	5.82	5.80	5.64	5.59	6.08	6.02	6.61	6.59
4	7.13	6.53	5.91	5.83	5.86	5.81	5.67	5.64	6.11	6.08	6.62	6.61
5	---	---	5.94	5.91	5.89	5.86	5.70	5.65	6.16	6.11	6.64	6.62
6	---	---	5.93	5.09	5.89	5.85	5.73	5.69	6.18	6.16	6.66	6.64
7	---	---	5.55	5.37	5.89	5.88	5.75	5.72	6.23	6.18	6.68	6.66
8	---	---	5.64	5.55	5.91	5.89	5.79	5.75	6.26	6.23	6.71	6.68
9	---	---	5.68	5.64	5.91	5.91	5.82	5.79	6.29	6.26	6.74	6.71
10	---	---	5.68	5.52	5.95	5.91	5.85	5.82	6.32	6.29	6.76	6.74
11	---	---	---	---	5.99	5.95	5.89	5.85	---	---	6.79	6.75
12	---	---	5.66	5.62	5.99	5.97	5.91	5.89	---	---	6.81	6.78
13	6.46	6.44	---	---	6.01	5.97	5.92	5.91	---	---	6.83	6.80
14	6.49	6.46	5.76	5.73	---	---	---	---	---	---	6.85	6.82
15	6.49	6.31	5.80	5.76	5.97	5.93	5.97	5.92	---	---	6.87	6.84
16	6.37	6.31	5.81	5.47	5.97	5.72	5.96	4.67	---	---	6.89	6.86
17	6.38	6.35	---	---	5.74	5.71	5.27	4.95	---	---	6.91	6.88
18	6.42	6.36	5.56	5.51	5.79	5.74	5.40	5.27	---	---	6.94	6.91
19	6.38	6.35	5.60	5.56	5.85	5.79	5.47	5.40	---	---	6.94	6.92
20	---	---	5.63	5.59	5.87	5.16	5.57	5.46	---	---	6.95	6.92
21	6.38	6.36	5.68	5.62	5.35	5.24	5.66	5.57	---	---	---	---
22	6.41	6.37	5.72	5.68	5.35	5.31	5.73	5.66	---	---	6.96	6.94
23	6.41	6.39	5.72	5.25	5.37	5.33	5.79	5.73	---	---	6.99	6.94
24	6.44	6.41	5.44	5.28	5.37	4.88	5.84	5.79	---	---	7.01	6.99
25	6.45	6.43	5.47	5.44	5.07	4.96	5.88	5.84	---	---	7.02	7.01
26	6.47	6.45	5.53	5.47	5.17	5.07	5.92	5.88	---	---	7.02	6.99
27	6.48	6.47	5.61	5.53	5.25	5.17	5.97	5.92	---	---	7.04	7.02
28	6.49	6.48	5.65	5.61	5.34	5.25	6.02	5.97	---	---	7.07	7.04
29	6.50	6.48	5.68	5.65	5.45	5.34	6.07	6.02	6.45	6.42	7.08	7.06
30	6.53	6.50	5.69	5.67	5.50	5.45	6.10	6.06	6.49	6.45	7.10	7.08
31	---	---	5.74	5.69	---	---	6.09	5.78	6.52	6.49	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---



5 YEAR HYDROGRAPH

OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--CA Fc 19. SITE ID.--382337076303701. PERMIT NUMBER.--CA-81-2386.
LOCATION.--Lat 38°23'37", long 76°30'38", Hydrologic Unit 02060006, Jefferson Patterson Park and Museum.
Owner: U.S. Geological Survey.
AQUIFER.--Chesapeake Group of Miocene age. Aquifer code: 122CSPK.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 33 ft; casing diameter 3.5 in., to 28 ft; screen diameter 3.5 in. from 28 to 33 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--60-minute recorder interval from Oct. 2, 1986 to current year.
DATUM.--Elevation of land surface is 25.49 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of recorder platform, 3.11 ft above land-surface datum.
REMARKS.--Best Management Practice Project observation well.
PERIOD OF RECORD.--October 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.67 ft below land-surface datum, July 9, 10, and 11, 1989; lowest measured, 19.21 ft below land-surface datum, Feb. 20, 21, 22, 23, 24, and 25, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	17.94	17.94	18.23	18.22	18.54	18.53	18.83	18.83	19.09	19.08	---	---
2	17.97	17.94	18.24	18.23	18.56	18.54	18.85	18.83	19.09	19.09	---	---
3	17.98	17.97	18.25	18.24	18.56	18.56	18.86	18.85	19.10	19.09	---	---
4	17.99	17.98	18.26	18.25	18.58	18.56	18.87	18.86	19.11	19.10	---	---
5	17.99	17.99	18.27	18.26	18.59	18.58	18.88	18.87	19.11	19.11	19.13	19.11
6	18.00	17.99	18.27	18.27	18.60	18.59	18.90	18.88	19.12	19.11	19.10	19.07
7	18.01	18.00	18.28	18.27	18.61	18.60	18.90	18.90	19.12	19.12	19.07	19.05
8	18.04	18.01	18.30	18.28	18.62	18.61	18.91	18.90	19.13	19.12	19.05	19.02
9	18.04	18.04	18.32	18.30	18.62	18.62	18.93	18.91	19.14	19.13	19.02	18.99
10	18.04	18.04	18.33	18.32	18.63	18.62	18.93	18.93	19.15	19.14	18.99	18.96
11	18.06	18.04	18.34	18.33	18.64	18.63	18.95	18.93	19.15	19.15	18.96	18.92
12	18.07	18.06	18.35	18.34	18.65	18.64	18.95	18.95	19.16	19.15	18.92	18.89
13	18.09	18.07	18.36	18.35	18.66	18.65	18.96	18.95	19.17	19.16	18.89	18.86
14	18.11	18.09	18.37	18.36	---	---	18.97	18.96	19.17	19.17	18.86	18.83
15	18.12	18.11	18.38	18.37	---	---	18.98	18.97	19.18	19.17	18.83	18.79
16	---	---	18.40	18.39	18.68	18.68	18.98	18.98	19.19	19.18	18.79	18.77
17	---	---	18.41	18.40	18.69	18.68	18.99	18.98	19.19	19.18	18.77	18.74
18	---	---	18.42	18.41	18.70	18.69	19.00	18.99	19.19	19.19	18.74	18.68
19	---	---	18.43	18.42	18.70	18.69	19.01	19.00	19.20	19.19	18.68	18.65
20	---	---	18.44	18.43	18.71	18.70	19.01	19.01	19.21	19.20	18.65	18.60
21	---	---	18.45	18.44	18.72	18.71	19.02	19.01	19.21	19.21	18.60	18.54
22	---	---	18.46	18.45	18.73	18.72	19.03	19.02	19.21	19.21	18.54	18.49
23	---	---	18.48	18.46	18.74	18.73	19.03	19.02	19.21	19.21	18.49	18.44
24	---	---	18.49	18.48	18.75	18.74	19.03	19.03	19.21	19.21	18.44	18.38
25	---	---	18.50	18.49	18.75	18.74	19.04	19.03	19.21	19.20	18.38	18.33
26	---	---	18.51	18.50	18.76	18.75	19.04	19.04	19.20	19.16	18.33	18.29
27	---	---	18.51	18.51	18.77	18.76	19.05	19.04	19.16	19.15	18.29	18.25
28	---	---	18.52	18.51	---	---	19.06	19.05	19.15	19.15	18.24	18.21
29	18.20	18.19	18.53	18.52	18.80	18.78	19.07	19.06	---	---	18.21	18.18
30	18.21	18.20	18.53	18.53	18.82	18.80	19.07	19.07	---	---	---	---
31	18.22	18.21	---	---	18.83	18.82	19.08	19.07	---	---	---	---
MONTH	---	---	18.53	18.22	---	---	19.08	18.83	19.21	19.08	---	---

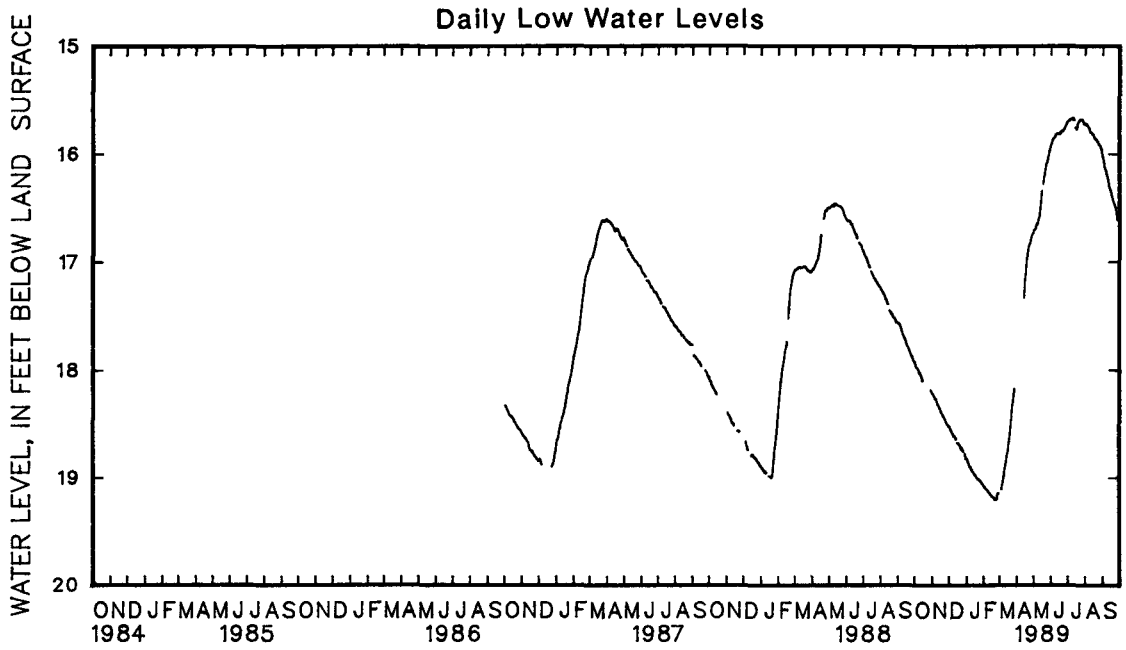
GROUND-WATER LEVELS

MARYLAND--Continued

CALVERT COUNTY--Continued

CA Fc 19--Continued

DAY	APRIL MAX	APRIL MIN	MAY MAX	MAY MIN	JUNE MAX	JUNE MIN	JULY MAX	JULY MIN	AUGUST MAX	AUGUST MIN	SEPTEMBER MAX	SEPTEMBER MIN
1	---	---	16.73	16.71	15.94	15.93	15.71	15.70	15.74	15.73	16.05	16.03
2	---	---	16.71	16.70	15.93	15.91	15.70	15.70	15.73	15.73	16.08	16.05
3	---	---	16.70	16.70	15.91	15.90	15.70	15.69	15.73	15.72	16.12	16.08
4	---	---	16.70	16.70	15.90	15.88	15.69	15.69	15.74	15.73	16.14	16.12
5	---	---	16.70	16.67	15.88	15.86	15.69	15.68	15.75	15.73	16.15	16.14
6	---	---	16.67	16.65	15.86	15.86	15.68	15.68	15.75	15.74	16.17	16.15
7	---	---	16.66	16.66	15.86	15.85	15.68	15.68	15.76	15.75	16.19	16.17
8	---	---	16.66	16.65	15.85	15.85	15.68	15.68	15.79	15.76	16.21	16.19
9	---	---	16.65	16.63	15.85	15.84	15.68	15.67	15.80	15.78	16.23	16.21
10	---	---	16.62	16.60	15.84	15.82	15.67	15.67	15.81	15.80	16.26	16.23
11	---	---	16.60	16.58	15.82	15.82	15.68	15.67	15.81	15.80	16.29	16.26
12	---	---	16.58	16.55	15.82	15.82	15.69	15.68	15.82	15.80	16.32	16.30
13	17.39	17.33	16.54	16.50	15.82	15.81	15.69	15.69	15.82	15.81	16.34	16.32
14	17.33	17.25	16.50	16.45	15.81	15.81	---	---	15.83	15.82	16.35	16.34
15	17.24	17.16	16.45	16.40	15.81	15.81	15.77	15.76	15.83	15.82	16.38	16.35
16	17.16	17.11	16.40	16.35	15.81	15.81	15.78	15.77	15.84	15.82	16.40	16.38
17	17.10	17.04	---	---	15.81	15.81	15.77	15.77	15.86	15.84	16.42	16.40
18	17.04	16.98	16.31	16.28	15.81	15.81	15.77	15.75	15.87	15.86	16.44	16.42
19	16.98	16.96	16.28	16.25	15.81	15.81	15.74	15.72	15.87	15.86	16.46	16.44
20	16.96	16.92	16.24	16.21	15.81	15.79	15.72	15.71	15.87	15.86	16.47	16.46
21	16.92	16.89	16.21	16.19	15.79	15.79	15.71	15.70	15.88	15.87	16.49	16.47
22	16.89	16.86	16.19	16.15	15.79	15.79	15.70	15.69	15.89	15.87	16.50	16.49
23	16.86	16.84	16.14	16.11	15.79	15.79	15.69	15.69	15.89	15.89	16.53	16.50
24	16.84	16.83	16.11	16.09	15.79	15.78	15.69	15.68	15.91	15.89	16.56	16.53
25	16.83	16.81	16.09	16.08	15.78	15.77	15.69	15.68	15.92	15.91	16.59	16.56
26	16.81	16.78	16.08	16.06	15.77	15.76	15.69	15.68	15.92	15.91	16.61	16.59
27	16.78	16.77	16.05	16.03	15.76	15.75	15.69	15.68	15.93	15.92	16.64	16.61
28	16.77	16.75	16.03	16.02	15.75	15.74	15.70	15.68	15.95	15.93	---	---
29	16.75	16.74	16.02	15.99	15.74	15.72	15.73	15.70	15.96	15.95	16.71	16.70
30	16.74	16.73	15.99	15.97	15.72	15.71	15.73	15.72	15.99	15.96	16.73	16.71
31	---	---	15.97	15.95	---	---	15.73	15.72	16.03	16.00	---	---
MONTH	---	---	---	---	15.94	15.71	---	---	16.03	15.72	---	---

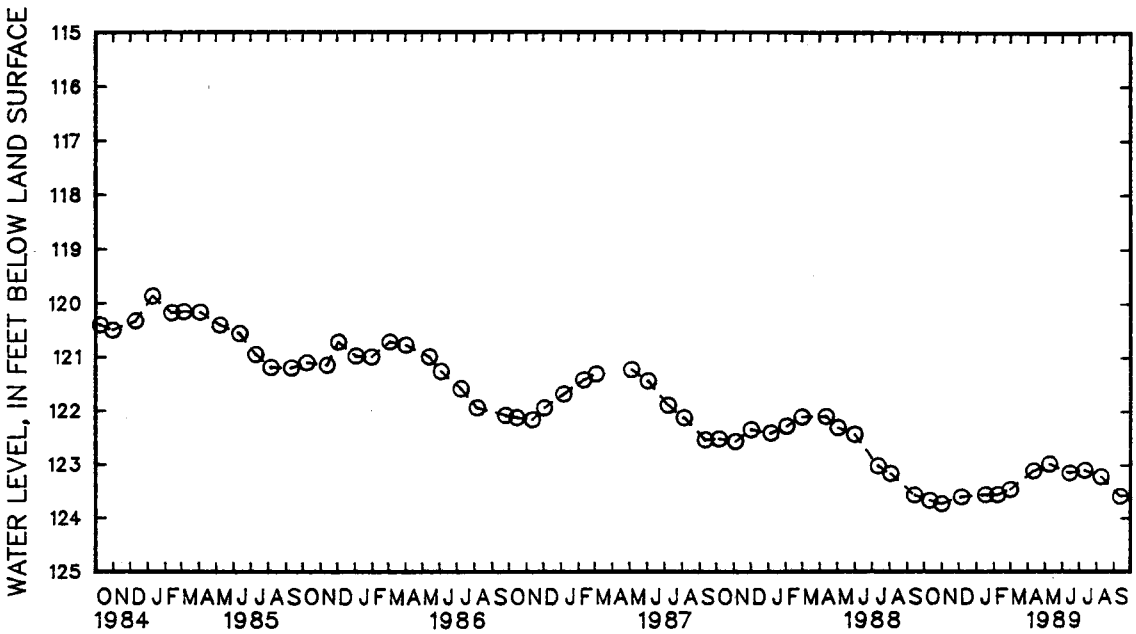


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--CA Fd 51. SITE ID.--382408076260401. PERMIT NUMBER.--CA-73-1449.
LOCATION.--Lat 38°24'08", long 76°26'04", Hydrologic Unit 02060004, at Calvert Cliffs State Park.
Owner: U.S. Geological Survey.
AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 352 ft; casing diameter 6 in., to 140 ft; casing diameter 2 in. from 140 to 342 ft; screen diameter 2 in. from 342 to 352 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 120 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing, 3.0 ft above land-surface datum.
PERIOD OF RECORD.--February 1977 to current year.
EXTREMES FOR PERIODOF RECORD.--Highest water level measured, 116.36 ft below land-surface datum, Jan. 8, 1980; lowest measured, 123.73 ft below land-surface datum, Nov. 1, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	123.67	DEC 6	123.60	FEB 7	123.56	APR 11	123.11	JUN 14	123.15	AUG 9	123.22
NOV 1	123.73	JAN 17	123.56	MAR 1	123.46	MAY 9	122.98	JUL 11	123.10	SEP 12	123.59

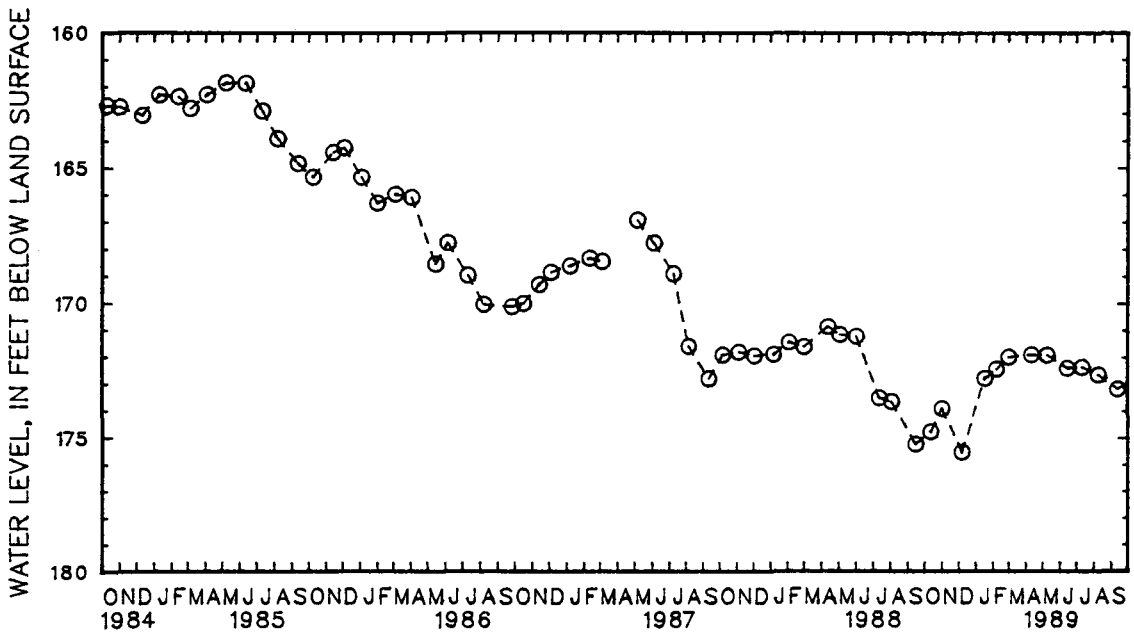


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--CA Fd 54. SITE ID.--382407076260301. PERMIT NUMBER.--CA-73-2892.
LOCATION.--Lat 38°24'07", long 76°26'03", Hydrologic Unit 02060006, at Calvert Cliffs State Park.
Owner: U.S. Geological Survey.
AQUIFER.--Aquia Formation of Paleocene age. Aquifer code: 125AQUI.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 698 ft; casing diameter 4 in., to 234 ft; casing diameter 2 in. from 234 to 641 ft, and 651 to 698 ft; screen diameter 2 in. from 641 to 651 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 129 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing, 1.93 ft above land-surface datum.
PERIOD OF RECORD.--October 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 142.69 ft below land-surface datum, Apr. 21, 1980; lowest measured, 175.55 ft below land-surface datum, Dec. 6, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	174.79	DEC 6	175.55	FEB 7	172.43	APR 11	171.89	JUN 14	172.39	AUG 9	172.64
NOV 1	173.92	JAN 17	172.78	MAR 1	171.98	MAY 9	171.90	JUL 11	172.36	SEP 12	173.18

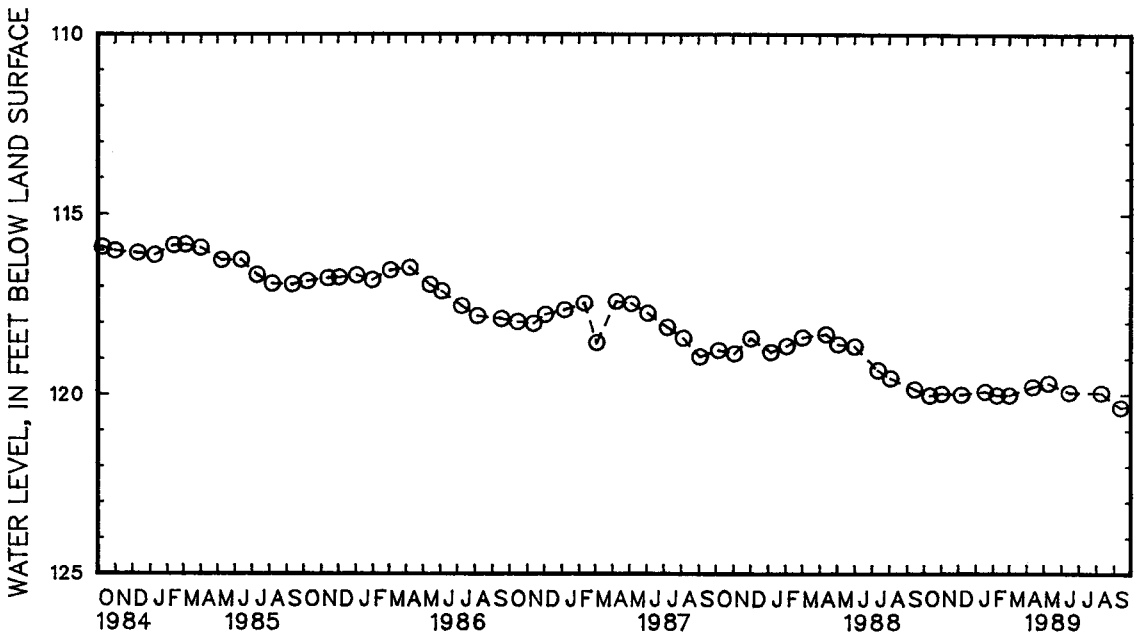


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--CA Fe 22. SITE ID.--382318076242401. PERMIT NUMBER.--CA-73-1386.
LOCATION.--Lat 38°23'18", long 76°24'24", Hydrologic Unit 02060004, at Columbia LNG Plant, Cove Point.
Owner: U.S. Geological Survey.
AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 350 ft; casing diameter 6 in., to 10 ft; casing diameter 2 in. from 10 to 340 ft; screen diameter 2 in. from 340 to 350 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 120 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing, 3.4 ft above land-surface datum.
PERIOD OF RECORD.--October 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 111.50 ft below land-surface datum, Oct. 5, 1976; lowest measured, 120.37 ft below land-surface datum, Sept. 12, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	120.03	DEC 6	120.00	FEB 7	120.02	APR 11	119.79	JUN 14	119.95	SEP 12	120.37
NOV 1	119.98	JAN 17	119.92	MAR 1	120.02	MAY 9	119.69	AUG 9	119.96		

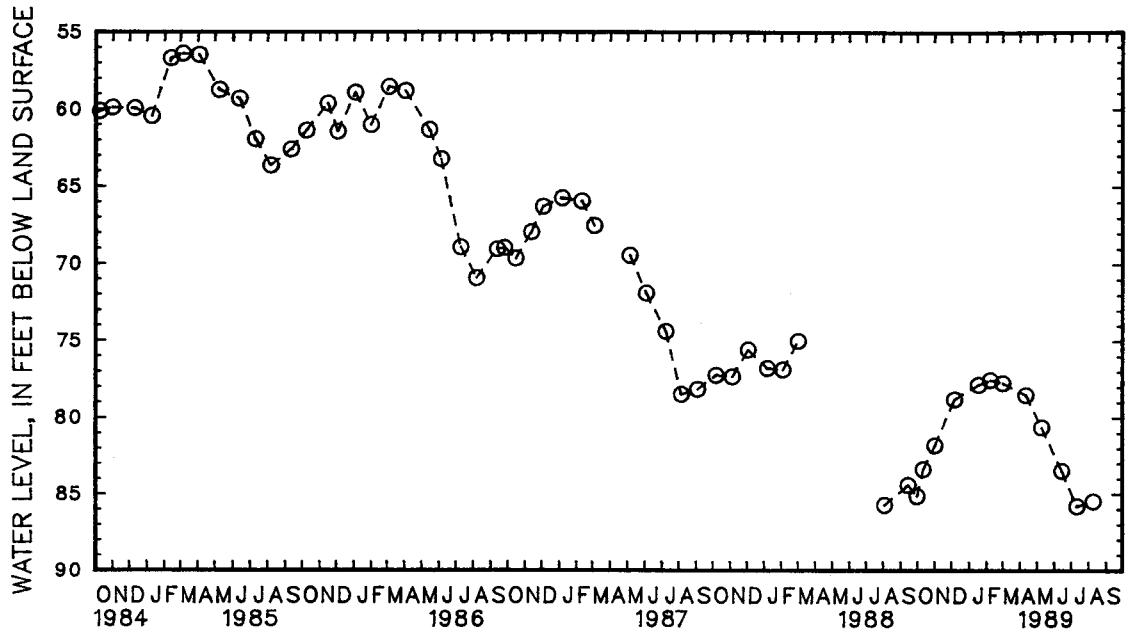


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--CA Gd 6. SITE ID.--381952076270901.
LOCATION.--Lat 38°19'52", long 76°27'09", Hydrologic Unit 02060006, at the Lord Calvert Yacht Club, 0.5 mi northeast of Solomons.
Owner: Calvert Marina.
AQUIFER.--Aquia Formation of Paleocene age. Aquifer code: 125AQUI.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 493 ft; casing diameter 8 in., to 272 ft and casing diameter 6 in., to 472 ft; screened from 469 to 493 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with water-level recorder. Oct. 19, 1949 to Feb. 25, 1960.
DATUM.--Elevation of land surface is 12.58 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Edge of manhole cover 5.90 ft. above land-surface datum.
REMARKS.--Water level reported at land surface 1942; water level measured 58.9 ft below land-surface datum, Jan. 13, 1944. Well not measured from April through July 1988 during building construction at well site.
PERIOD OF RECORD.-- October 1949 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.15 ft below land-surface datum May 18, 1950; lowest measured, 85.81 ft below land-surface datum, July 11, 1989

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	83.42	DEC 6	78.84	FEB 7	77.55	APR 11	78.53	JUN 14	83.50	AUG 9	85.49
NOV 1	81.84	JAN 17	77.87	MAR 1	77.75	MAY 9	80.64	JUL 11	85.81		



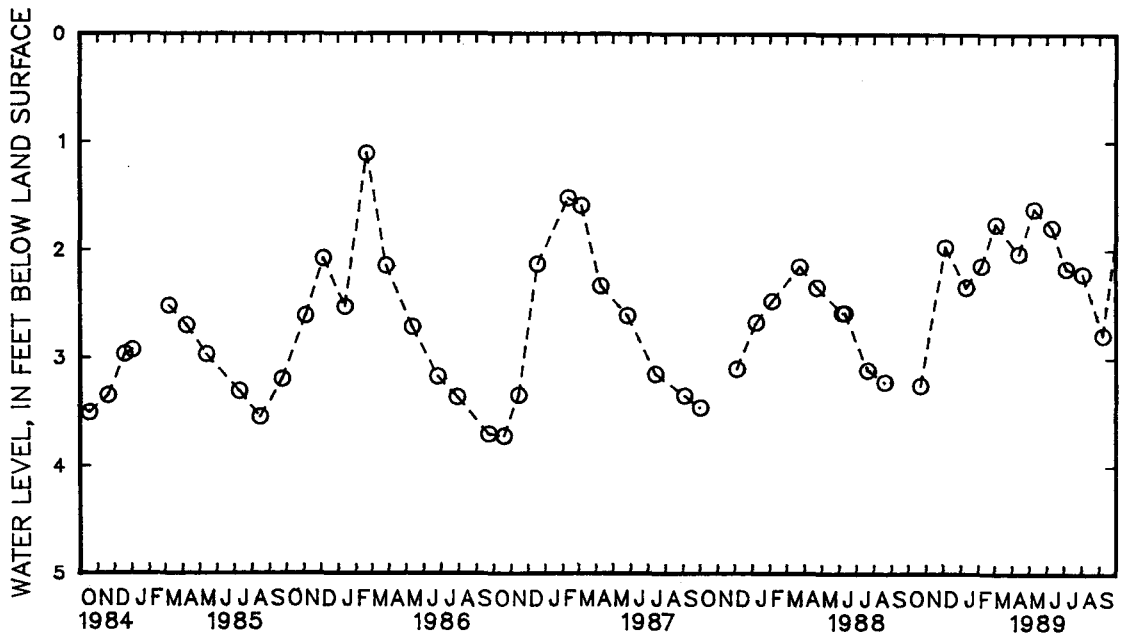
5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

CAROLINE COUNTY

WELL NUMBER.--CO Bc 1. SITE ID.--390333075504501.
LOCATION.--Lat 39°03'33", long 75°50'45", Hydrologic Unit 02060005, at Baltimore Corner.
Owner: Maryland State Highway Administration.
AQUIFER.--Pleistocene Series of Pleistocene age. Aquifer code: 112PLSC.
WELL CHARACTERISTICS.--Driven, observation, water-table well, depth 20.5 ft; well point diameter 1.25 in., to 20.5 ft.
INSTRUMENTATION--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 50 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing, 0.25 above land-surface datum.
PERIOD OF RECORD.--August 1949 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, .25 ft above land-surface datum, Nov. 27, 1951; lowest measured, 4.37 ft below land-surface datum, Oct. 11, 1957.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct 21	3.25	Jan 10	2.34	Mar 3	1.76	May 9	1.62	Jul 5	2.17	SEP 7	2.79
Dec 5	1.97	Feb 6	2.14	Apr 13	2.03	Jun 9	1.79	Aug 3	2.22		

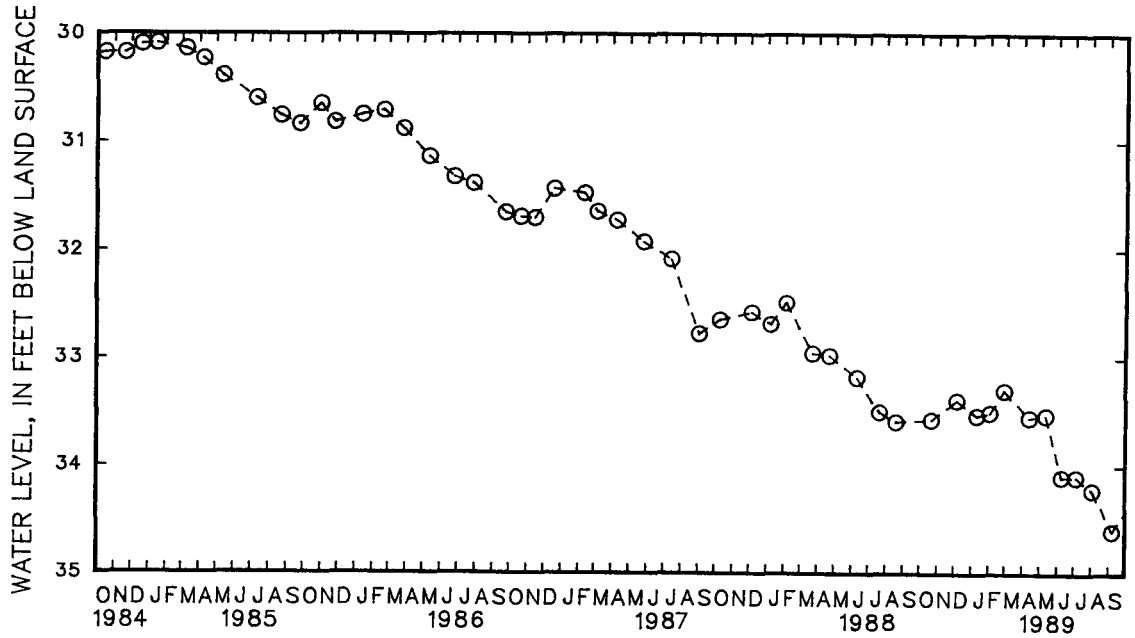


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--CO Bd 53. SITE ID.--390227075470201. PERMIT NUMBER.--CO-73-0541.
LOCATION.--Lat 39°02'27", long 75°47'02", Hydrologic Unit 02060005, near MD Rt. 311, Goldsboro.
Owner: U.S. Geological Survey.
AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 312 ft; casing diameter 6 in., to 70 ft; casing diameter 2 in. from 70 to 300 ft; screen diameter 2 in. from 300 to 312 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 60 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.6 ft above land-surface datum.
PERIOD OF RECORD.--February 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 28.64 ft below land-surface datum, Dec. 10, 1976; lowest measured, 34.60 ft below land-surface datum, Sept 7, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	33.57	JAN 10	33.53	FEB 28	33.30	MAY 11	33.53	JUL 5	34.10	SEP 7	34.60
DEC 5	33.39	FEB 2	33.50	APR 12	33.55	JUN 9	34.10	AUG 3	34.22		

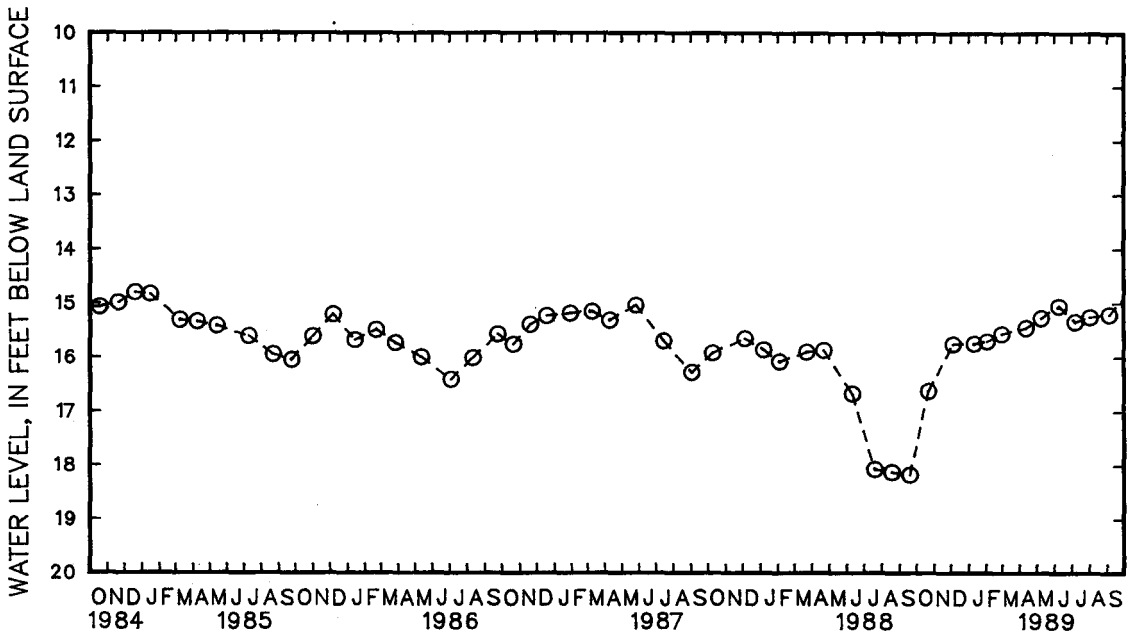


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--CO Dc 129. SITE ID.--385310075503601. PERMIT NUMBER.--CO-02-3881.
LOCATION.--Lat 38°53'10", long 75°50'36", Hydrologic Unit 02060005, at West Denton.
Owner: Wilson Laurel Farms, Inc.
AQUIFER.--Choptank Formation of Miocene age. Aquifer code: 122CPNK.
WELL CHARACTERISTICS.--Drilled, unused, artesian well, depth 229 ft; casing diameter 4 in., to 137.4 ft; open hole.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 20 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing, 0.4 ft below land-surface datum.
REMARKS.--Equipped with water level recorder from Aug. 1, 1956 to June 8, 1957.
PERIOD OF RECORD.--August 1956 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.63 ft below land-surface datum, Apr. 5, 1973; lowest measured, 56.09 ft below land-surface datum, Nov. 5, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	16.62	JAN 10	15.74	FEB 28	15.57	MAY 9	15.27	JUL 7	15.34	SEP 5	15.22
DEC 5	15.75	FEB 2	15.70	APR 12	15.45	JUN 9	15.05	AUG 2	15.25		

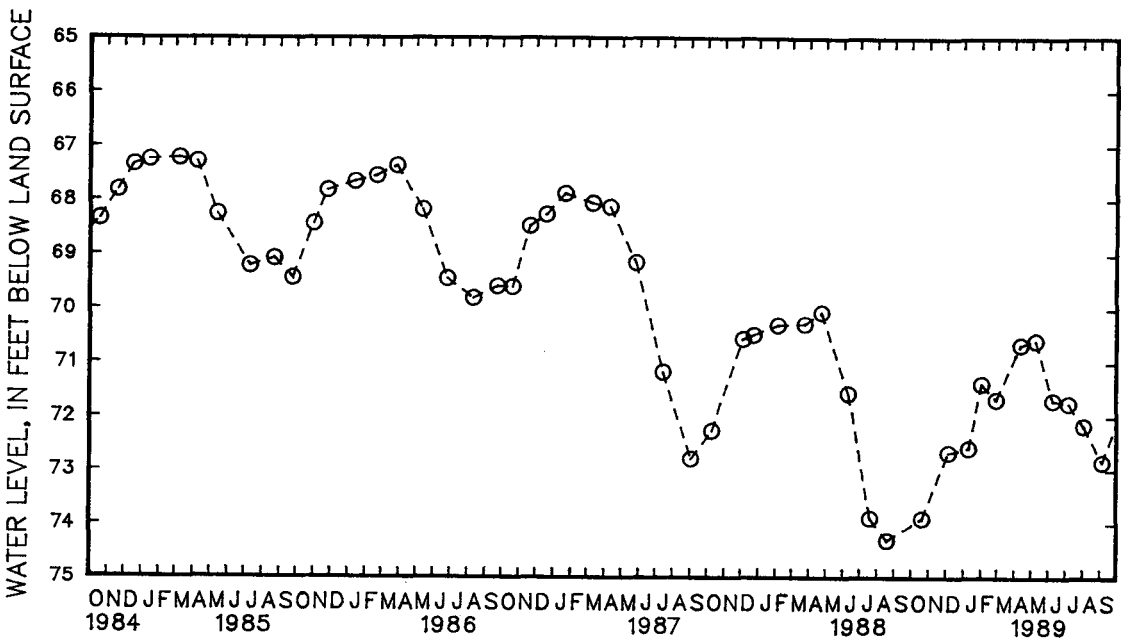


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--CO Dd 47. SITE ID.--385217075490601. PERMIT NUMBER.--CO-73-0486.
LOCATION.--Lat 38°52'17", long 75°49'06", Hydrologic Unit 02060005, at Denton Sewage Lagoon.
Owner: U.S. Geological Survey.
AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 380 ft; casing diameter 4 in., to 86 ft; casing diameter 2 in. from 86 to 365 ft; screen diameter 2 in. from 365 to 375 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 46 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.4 ft above land-surface datum.
PERIOD OF RECORD.--April 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 62.78 ft below land-surface datum, May 27, 1976; lowest measured, 74.31 ft below land-surface datum, Aug. 19, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	73.90	JAN 10	72.59	FEB 28	71.68	MAY 9	70.58	JUL 7	71.74	SEP 5	72.84
DEC 5	72.67	FEB 2	71.39	APR 12	70.66	JUN 9	71.69	AUG 2	72.16		



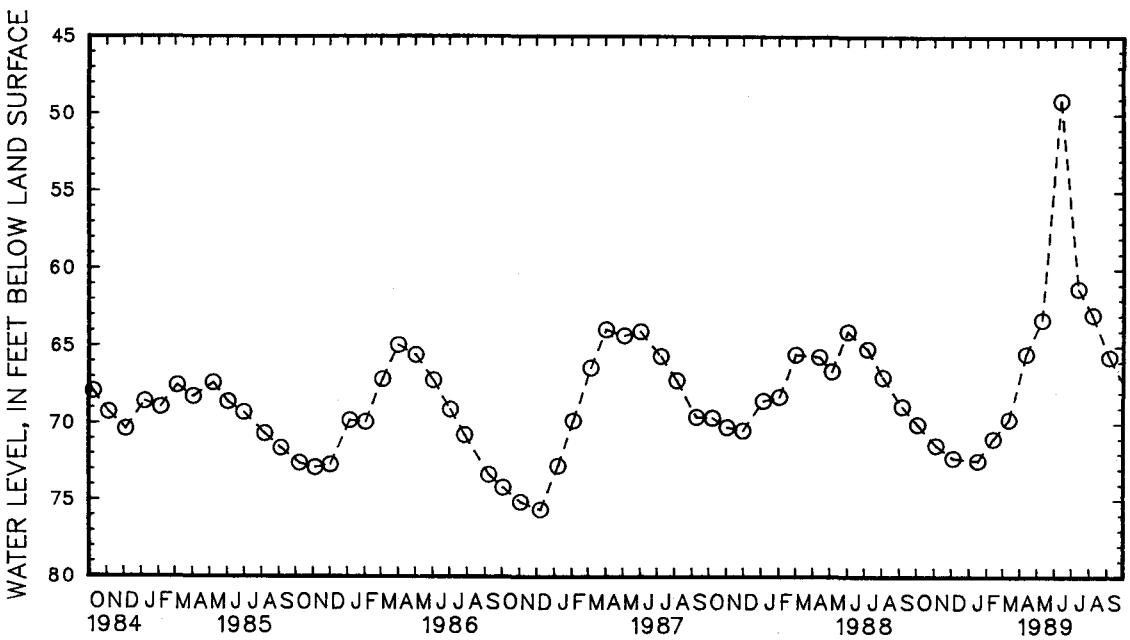
5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

CARROLL COUNTY

WELL NUMBER.--CL Bf 1. SITE ID.--393638076510001.
LOCATION.--Lat 39°36'38", long 76°51'00", Hydrologic Unit 02060003, on Hillcrest St., Hampstead.
Owner: Town of Hampstead.
AQUIFER.-- Prettyboy Schist of Paleozoic age. Aquifer code: 300PRTB.
WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 407 ft; casing diameter 8 in., to approximately 65 ft; open hole.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with water-level recorder from July 1, 1952, to Nov. 7, 1962.
DATUM.--Elevation of land surface is 933 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of 2 in. casing extension, 2.35 ft above land-surface datum.
PERIOD OF RECORD.--September and December 1946, April and September 1947, February 1949 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 49.10 ft below land-surface datum, June 13, 1989; lowest measured, 76.26 ft below land-surface datum, Feb. 10, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	70.10	DEC 5	72.31	FEB 13	71.03	APR 12	65.52	JUN 13	49.10	AUG 7	62.99
NOV 5	71.47	JAN 17	72.48	MAR 13	69.78	MAY 10	63.29	JUL 13	61.28	SEP 5	65.73

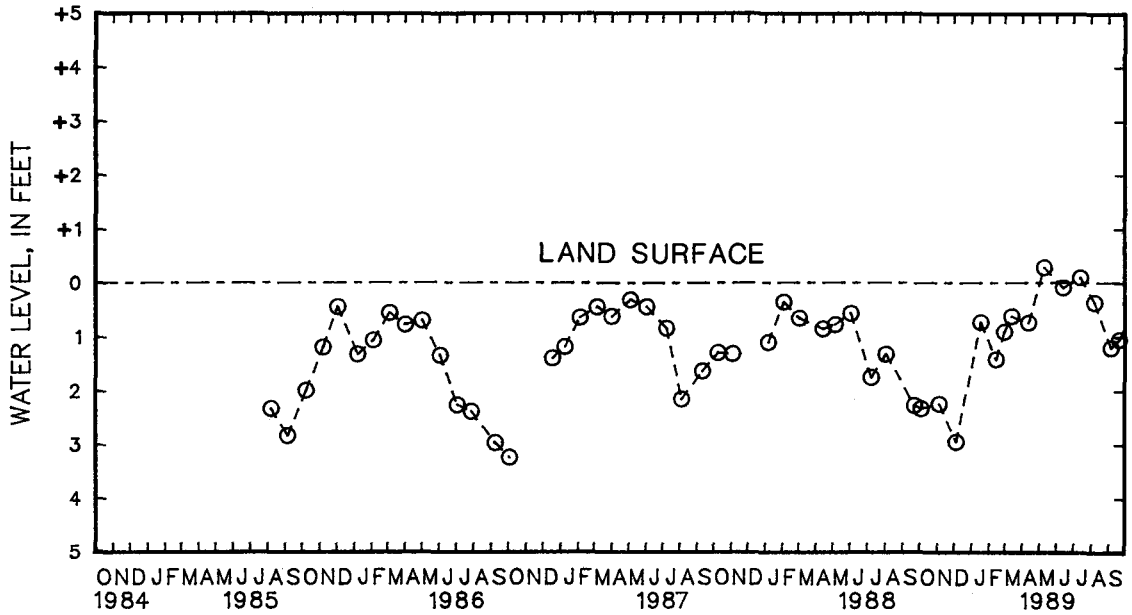


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--CL Bf 184. SITE ID.--393754076512401. PERMIT NUMBER.--CL-73-6466.
LOCATION.--Lat 39°37'54", long 76°51'24", Hydrologic Unit 02060003, near Utz Rd., Greenmount.
Owner: U.S. Geological Survey.
AQUIFER.--Prettyboy Schist of Paleozoic age. Aquifer code: 300PRTB.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 340 ft; casing diameter 6 in., to 50 ft; open hole.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 790 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.8 ft above land-surface datum.
PERIOD OF RECORD.--August 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, .30 ft above land-surface datum, May 10, 1989; lowest measured, 3.24 ft below land-surface datum, Oct. 3, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
(READINGS ABOVE LAND-SURFACE INDICATED BY "+")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	2.32	JAN 17	.72	MAR 13	.61	JUN 13	.08	SEP 5	1.20
NOV 5	2.24	FEB 13	1.41	APR 12	.73	JUL 13	+.11	SEP 20	1.05
DEC 5	2.95	FEB 28	.90	MAY 10	+.30	AUG 7	.36		



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--CL Bf 194. SITE ID.--393811076521101. PERMIT NUMBER.--CL-81-2609.
LOCATION.--Lat 39°38'11", long 76°52'11", Hydrologic Unit 02060003, near headwaters of the East Branch Patapsco River, behind Greenmount Shopping Center, nr intersection of MD Rt 30 and Broadneck Rd. Owner: U.S. Geological Survey.
AQUIFER.--Prettyboy Schist of Paleozoic age. Aquifer Code: 300PRTB.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, measured depth 53 ft, casing diameter 3 in., to 48 ft; slotted casing from 48 to 53 ft.
INSTRUMENTATION.--Measurements with chalked steel tape by USGS personnel. Equipped with analog water-level recorder from Jan. 25, 1986 to Feb. 28, 1989.
DATUM.--Elevation of land surface is 819.36 ft above National Geodetic Vertical Datum of 1929. Measuring Point: Top of casing, 6.62 ft above land-surface datum.
REMARKS.--Stormwater Infiltration Project observation well. Well penetrates stormwater retention pond.
PERIOD OF RECORD.--January 1989 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 815.97 ft above sea level, Mar. 9, 1987; lowest measured, 805.51 ft above sea level, Nov. 1 and 2, 1986.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL
AUG 4	814.21	SEP 8	811.76

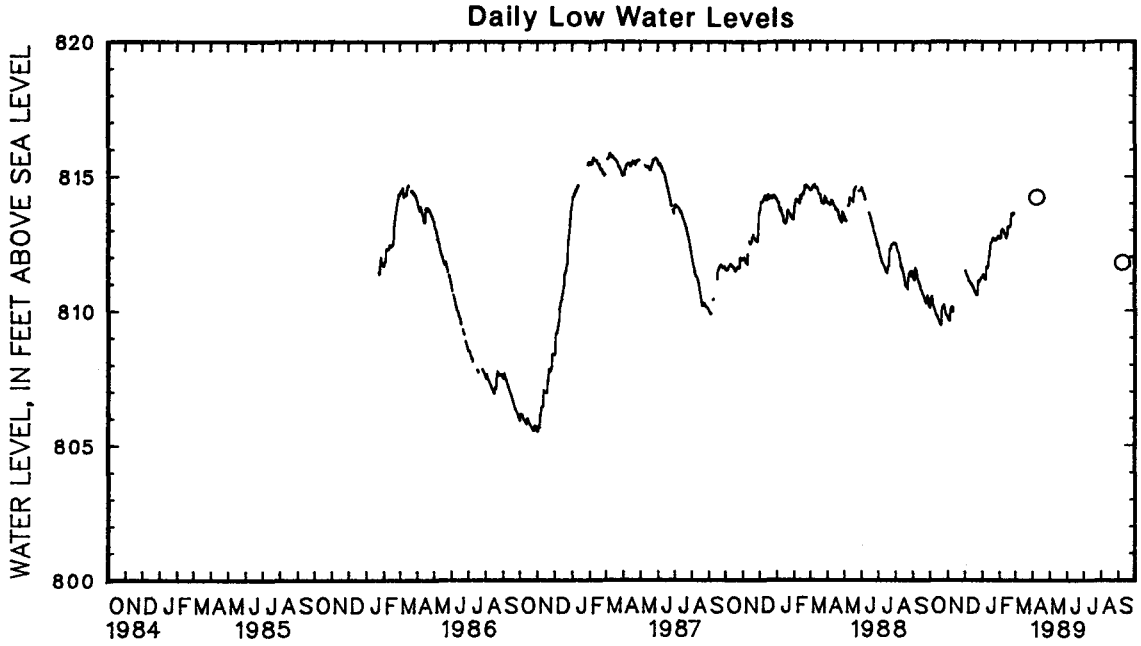
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	810.18	810.14	809.83	809.81	---	---	811.25	811.22	812.80	812.74	---	---
2	810.47	810.11	809.82	809.75	811.51	811.48	811.33	811.25	812.74	812.68	---	---
3	810.51	810.46	809.74	809.68	811.51	811.40	811.42	811.33	813.08	812.70	---	---
4	810.55	810.51	809.68	809.65	811.39	811.32	811.39	811.28	813.07	812.97	---	---
5	810.56	810.55	810.06	809.66	811.33	811.29	811.28	811.20	813.05	812.99	---	---
6	810.54	810.36	810.08	810.05	811.30	811.28	811.23	811.17	813.08	813.04	---	---
7	810.35	810.21	810.12	810.08	811.30	811.22	811.17	811.13	813.07	813.01	---	---
8	810.21	810.12	810.18	810.12	811.22	811.10	811.92	811.17	813.07	813.01	---	---
9	810.12	810.07	810.20	810.17	811.14	811.10	811.92	811.63	813.02	812.90	---	---
10	810.07	810.04	810.20	810.15	811.12	811.09	811.63	811.59	812.94	812.86	---	---
11	810.04	809.96	810.15	809.98	811.10	811.00	811.66	811.59	812.91	812.88	---	---
12	809.96	809.87	---	---	811.00	810.97	812.34	811.66	812.88	812.73	---	---
13	809.90	809.84	---	---	811.05	810.99	812.30	812.02	812.76	812.69	---	---
14	809.84	809.80	---	---	810.99	810.94	812.17	812.02	812.85	812.77	---	---
15	809.80	809.74	---	---	810.98	810.86	812.68	812.27	813.32	812.84	---	---
16	809.74	809.69	---	---	810.86	810.84	812.61	812.51	813.33	813.13	---	---
17	809.68	809.65	---	---	810.87	810.83	812.60	812.52	813.13	813.08	---	---
18	809.65	809.60	---	---	810.83	810.77	812.70	812.57	813.16	813.11	---	---
19	809.60	809.55	---	---	810.77	810.70	812.73	812.67	813.17	813.13	---	---
20	809.55	809.49	---	---	810.70	810.66	812.79	812.71	813.19	813.13	---	---
21	810.36	809.47	---	---	810.66	810.60	812.71	812.61	813.66	813.19	---	---
22	810.50	810.13	---	---	810.60	810.56	812.67	812.63	813.76	813.58	---	---
23	810.16	810.11	---	---	810.69	810.56	812.69	812.66	813.69	813.61	---	---
24	810.21	810.16	---	---	811.52	810.69	812.70	812.67	813.63	813.58	---	---
25	810.25	810.21	---	---	811.45	811.10	812.68	812.61	813.63	813.56	---	---
26	810.26	810.24	---	---	811.09	811.04	812.80	812.62	813.76	813.64	---	---
27	810.24	810.13	---	---	811.16	811.05	812.78	812.68	813.70	813.62	---	---
28	810.12	810.00	---	---	811.26	811.12	812.75	812.68	---	---	---	---
29	810.00	809.91	---	---	811.19	811.12	812.78	812.73	---	---	---	---
30	809.91	809.84	---	---	811.26	811.20	812.85	812.78	---	---	---	---
31	809.84	809.82	---	---	811.26	811.21	812.81	812.75	---	---	---	---
MONTH	810.56	809.47	---	---	---	---	812.85	811.13	---	---	---	---

GROUND-WATER LEVELS

MARYLAND--Continued

CARROLL COUNTY--Continued

CL Bf 194--Continued



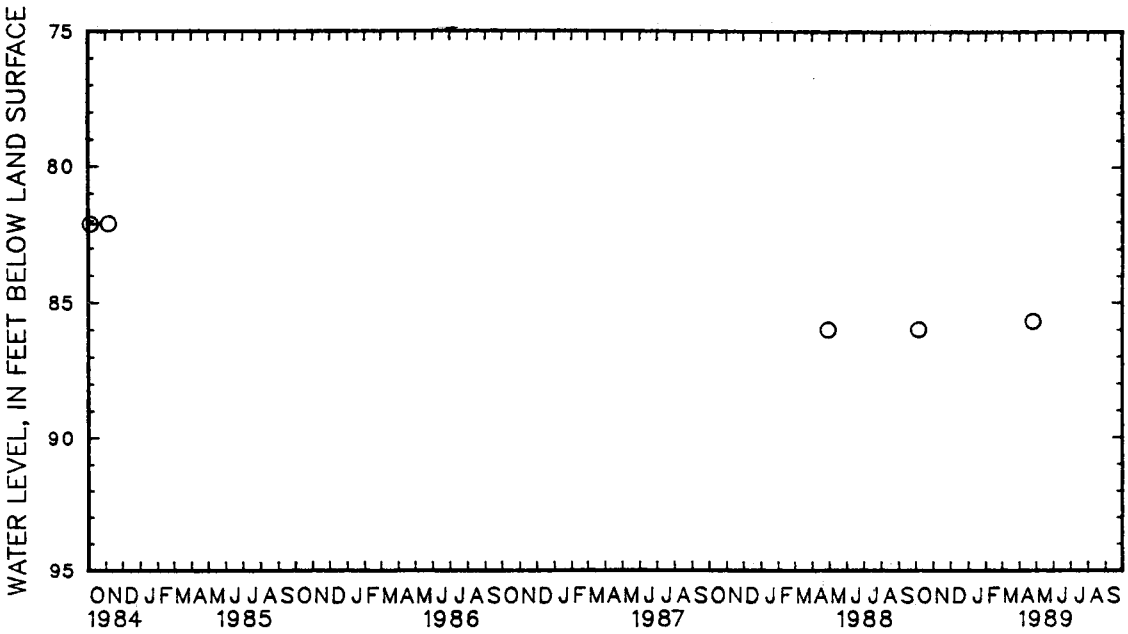
5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

CECIL COUNTY

WELL NUMBER.--CE Be 73. SITE ID.--393637075535001. PERMIT NUMBER.--CE-81-0464.
LOCATION.--Lat 39°36'37", long 75°53'50", Hydrologic Unit 02060002, 2 mi west of Elkton nr US Rt. 40.
Owner: U.S. Geological Survey.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 152 ft; casing diameter 2 in., to 147 ft; screen diameter 2 in. from 147 to 152 ft.
INSTRUMENTATION.--Twice yearly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land-surface is 162 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of casing, 1.95 ft above land-surface datum.
REMARKS.--Measured twice yearly since April 1988.
PERIOD OF RECORD.--November 1982 to November 1984, April 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 82.06 ft below land-surface datum, July 31, 1984; lowest measured, 88.01 ft below land-surface datum, Apr. 29, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 6	86.03	APR 25	85.72

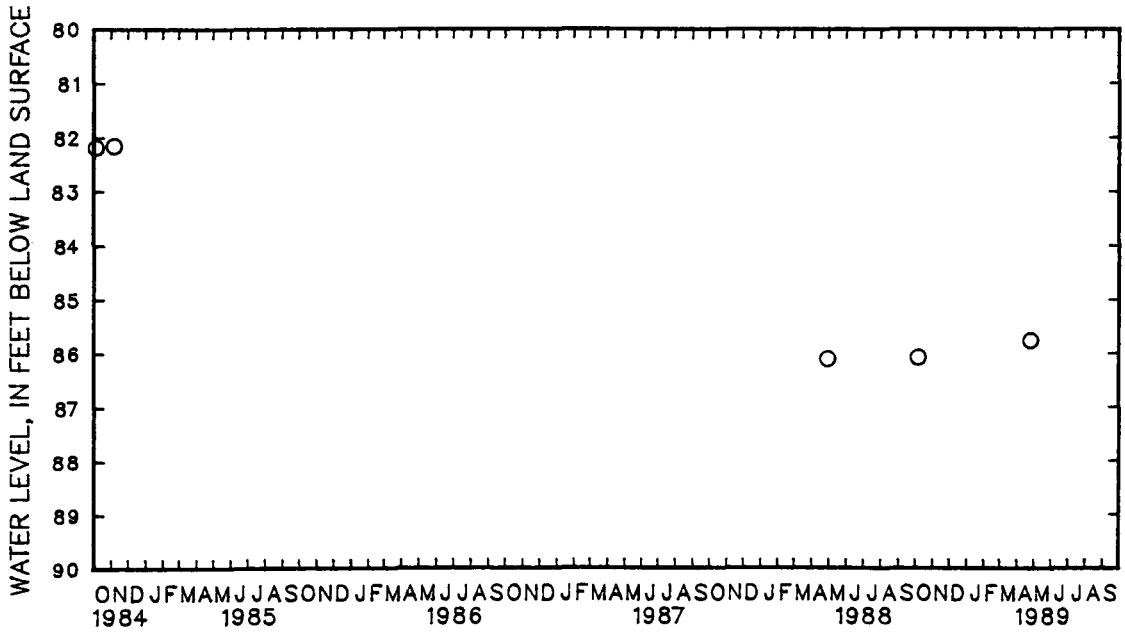


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--CE Be 74. SITE ID.--393637075535002. PERMIT NUMBER.--CE-81-0464.
LOCATION.--Lat 39°36'37", long 75°53'50", Hydrologic Unit 02060002, 2 mi west of Elkton nr US Rt. 40.
Owner: U.S. Geological Survey.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 115 ft; casing diameter 2 in., to 110 ft; screen diameter 2 in. from 110 to 115 ft.
INSTRUMENTATION.--Twice yearly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 160 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of casing, 2.0 ft above land-surface datum.
REMARKS.--Measured twice yearly since April 1988.
PERIOD OF RECORD.--November 1982 to November 1984, April 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 82.12 ft below land-surface datum, July 31, 1984; lowest measured, 86.10 ft below land-surface datum, Apr. 29, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 6	86.07	APR 25	85.77

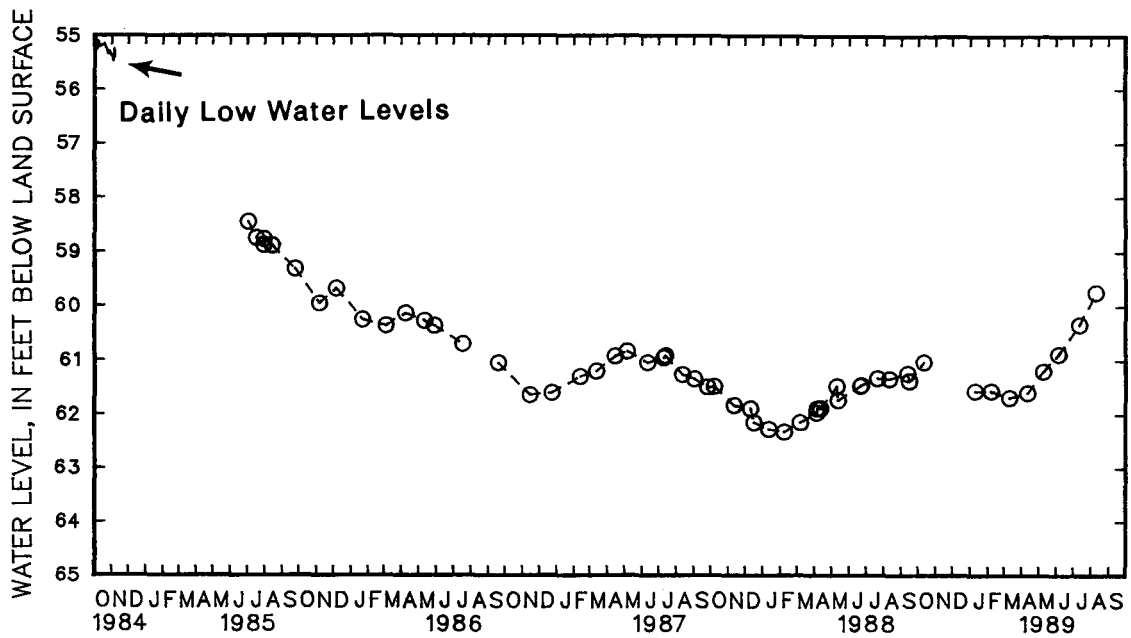


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--CE Bf 82. SITE ID.--393537075492001. PERMIT NUMBER.--CE-81-0470.
LOCATION.--Lat 39°35'37", long 75°49'20", Hydrologic Unit 02060002, at Holly Hall Elementary School, Elkton.
Owner: U.S. Geological Survey.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 125 ft; casing diameter 4 in., to 120 ft; screen diameter 2 in. from 120 to 125 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with water-level recorder July 1, 1983 to Nov. 6, 1984.
DATUM.--Elevation of land surface is 70 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.6 ft above land-surface datum.
PERIOD OF RECORD.--February 1983 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 53.13 ft below land-surface datum, July 1, 1983; lowest measured, 62.34 ft below land-surface datum, Feb. 8, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	61.04	FEB 6	61.57	APR 11	61.60	JUN 5	60.88	AUG 9	59.73
JAN 9	61.57	MAR 10	61.69	MAY 9	61.20	JUL 12	60.33		

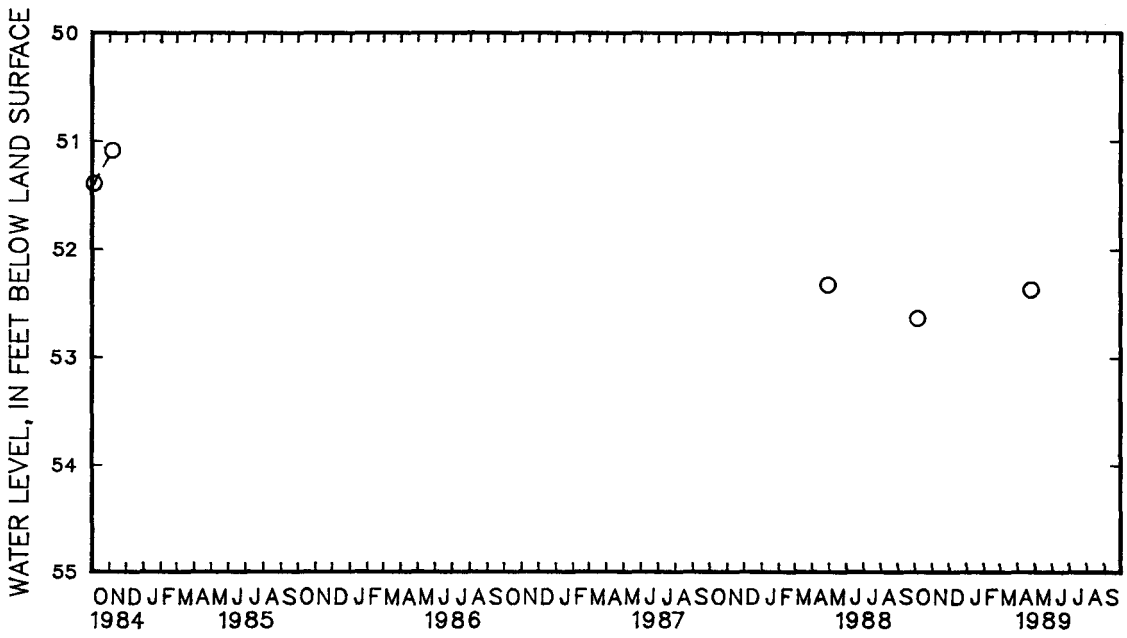


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--CE Cd 51. SITE ID.--393432075593601. PERMIT NUMBER.--CE-81-0440.
LOCATION.--Lat 39°34′32″, long 75°59′36″, Hydrologic Unit 02060002, nr intersection of MD Rts. 7 & 267, 1 mi west of Charlestown.
Owner: U.S. Geological Survey.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 125 ft; casing diameter 4 in., to 120 ft; screen diameter 2 in. from 120 to 125 ft.
INSTRUMENTATION.--Twice yearly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land-surface is 70 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of casing, 3.12 ft above land-surface datum.
REMARKS.--Measured twice yearly since April 1988.
PERIOD OF RECORD.--November 1982 to November 1984, April 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 50.80 ft below land-surface datum, Apr. 6, 1984; lowest measured, 53.17 ft below land-surface datum, Dec. 8, 1982.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 6	52.64	APR 25	52.37

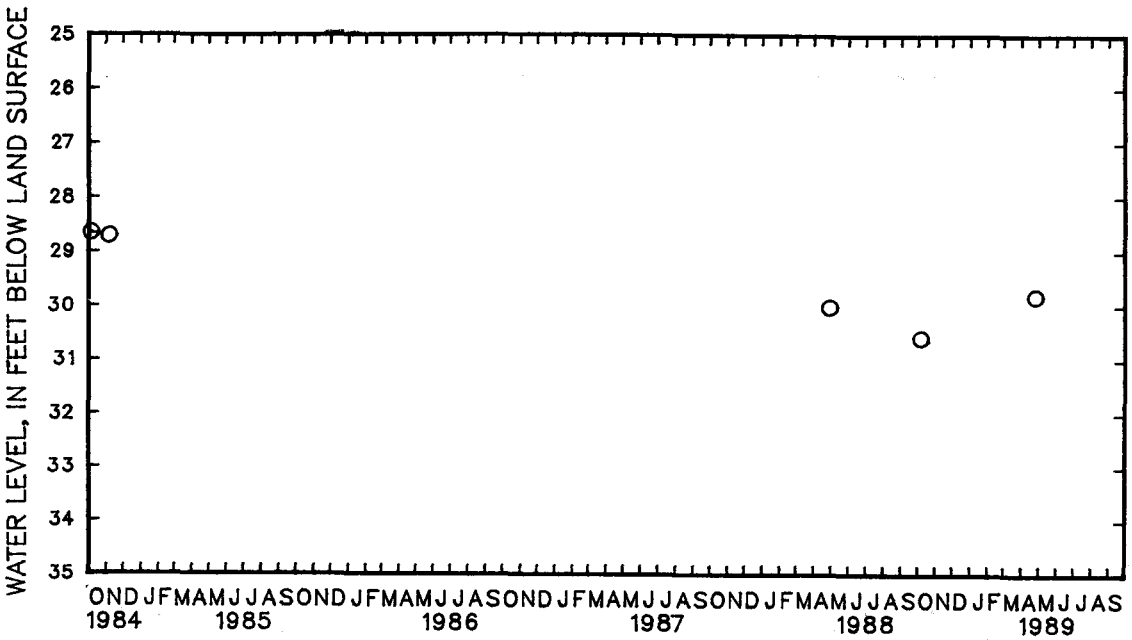


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--CE Cd 52. SITE ID.--393432075593602. PERMIT NUMBER.--CE-81-0440.
LOCATION.--Lat 39°34'32", long 75°59'36", Hydrologic Unit 02060002, nr intersection of
MD Rts. 7 & 267, 1 mi west of Charlestown.
Owner: U.S. Geological Survey.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 48 ft; casing diameter 4 in., to 43 ft;
screen diameter 2 in. from 43 to 48 ft.
INSTRUMENTATION.--Twice yearly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land-surface is 70 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 3.18 ft above land-surface datum.
REMARKS.--Measured twice yearly starting April 1988.
PERIOD OF RECORD.--November 1982 to November 1984, April 1988 to currrent year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 27.75 ft below land-surface datum, July 5, 1983;
lowest measured, 30.60 ft below land-surface datum, Oct. 6, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 6	30.60	APR 25	29.81

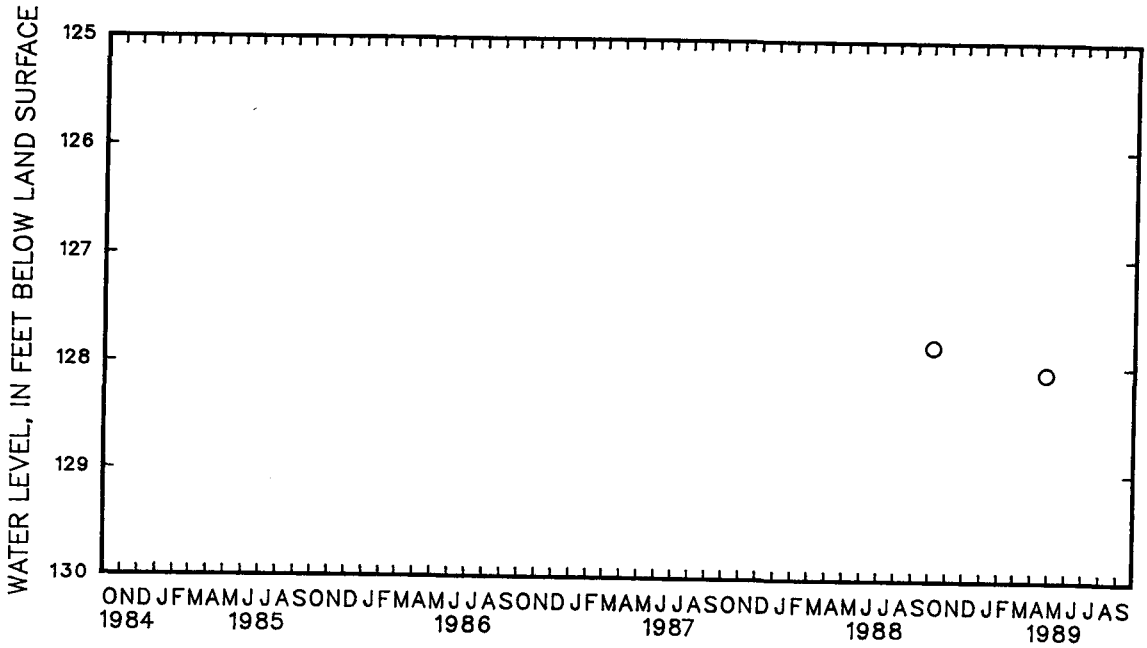


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--CE Cd 53. SITE ID.--393216075564201. PERMIT NUMBER.--CE-81-0463.
LOCATION.--Lat 39°32'16", long 75°56'42", Hydrologic Unit 02060002, Elk Neck State Forest, 0.5 mi north of Black Hill Lookout Tower.
Owner: U.S. Geological Survey.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 350 ft; casing diameter 4 in., to 345 ft; screen diameter 2 in. from 345 to 350 ft.
INSTRUMENTATION.--Twice yearly measurements with chalked steel tape by USGS personnel. Equipped with graphic water-level recorder from July 22, 1983 to Oct. 24, 1984.
DATUM.--Elevation of land surface is 140 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring Point: Top of casing, 2.0 ft above land-surface datum.
REMARKS.--Measured twice yearly since October 1988.
PERIOD OF RECORD.--March 1983 to October 1984, October 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 126.65 ft below land-surface datum, Apr. 6, 1984; lowest measured, 128.07 ft below land-surface datum, Apr. 25, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 6	127.83	APR 25	128.07

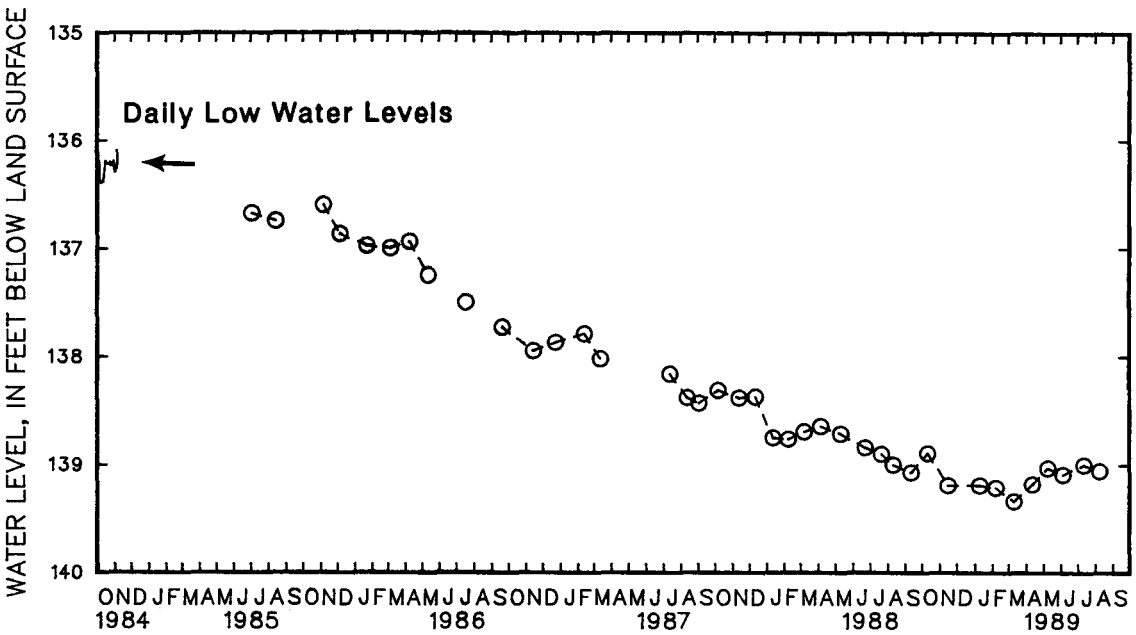


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--CE Ce 54. SITE ID.--393433075544901. PERMIT NUMBER.--CE-81-0461.
LOCATION.--Lat 39°34'33", long 75°54'49", Hydrologic Unit 02060002, Elk Neck State Forest near Irishtown Rd.
Owner: U.S. Geological Survey.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 250 ft; casing diameter 4 in., to 245 ft.; screen diameter 2 in. from 245 to 250 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with graphic water-level recorder July 21, 1983 to Nov. 6, 1984.
DATUM.--Elevation of land surface is 180 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing, 2.0 ft above land-surface datum.
PERIOD OF RECORD.--March 1983 to November 1984, July 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 136.10 ft below land-surface datum, Mar. 29, 1984, Apr. 6, 1984 and Nov. 6, 1984; lowest measured, 139.34 ft below land-surface datum, Mar. 10, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	138.89	JAN 9	139.19	MAR 10	139.34	MAY 9	139.03	JUL 12	139.00
NOV 15	139.19	FEB 6	139.21	APR 11	139.18	JUN 5	139.09	AUG 9	139.05

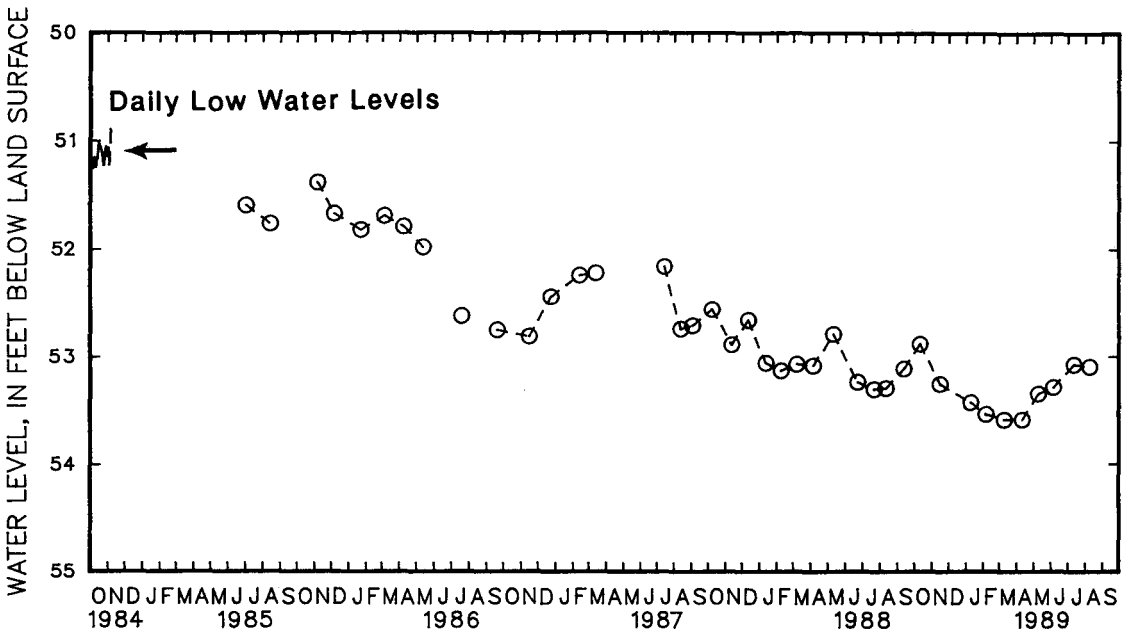


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--CE Ce 55. SITE ID.--393241075500201. PERMIT NUMBER.--CE-81-0465.
LOCATION.--Lat 39°32'41", long 75°50'02", Hydrologic Unit 02060002, Canal National Wildlife Refuge near Elk Forest Rd.
Owner: U.S. Geological Survey.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 375 ft; casing diameter 4 in., to 370 ft; screen diameter 2 in. from 370 to 375 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with graphic water-level recorder from July 21, 1983 to Nov. 6, 1984.
DATUM.--Elevation of land surface is 60 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing 2.4 ft above land-surface datum.
PERIOD OF RECORD.--March 1983 to November 1984, July 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 50.56 ft below land-surface datum, April 17, 1984; lowest measured, 53.31 ft below land-surface datum, July 21, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	52.89	JAN 9	53.43	MAR 10	53.59	MAY 9	53.35	JUL 12	53.08
NOV 15	53.26	FEB 6	53.54	APR 11	53.59	JUN 5	53.29	AUG 9	53.10

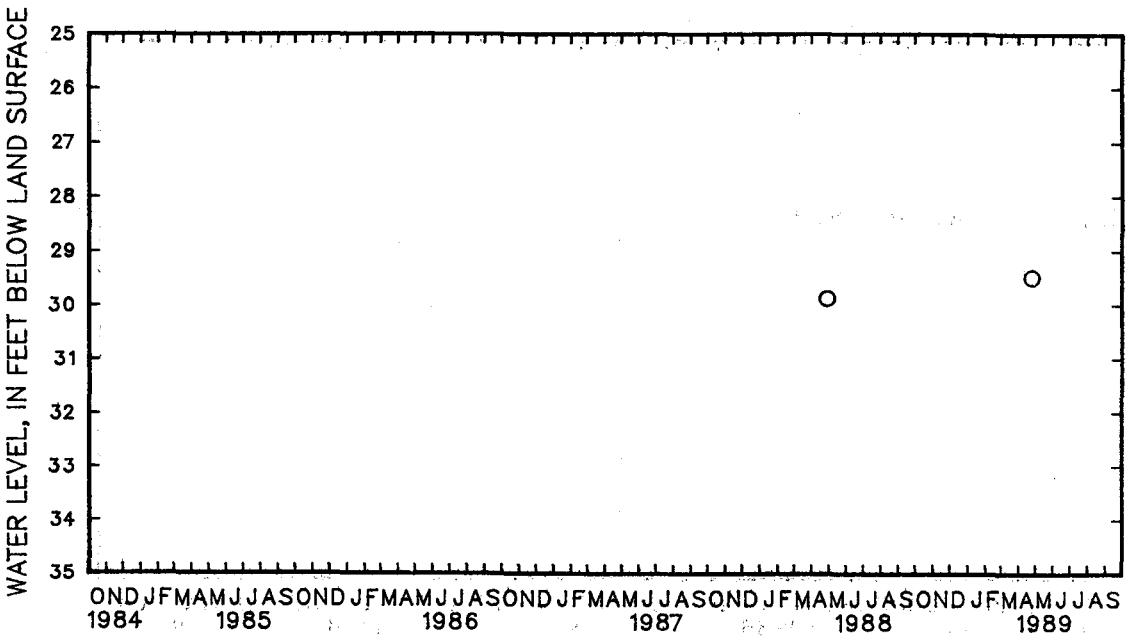


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--CE Ce 56. SITE ID.--393026075523101. PERMIT NUMBER.--CE-81-0466.
LOCATION.--Lat 39°30'26", long 75°52'31", Hydrologic Unit 02060002, south of Courthouse Point Rd.
1.2 mi east of Courthouse Point.
Owner: U.S. Geological Survey.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 121 ft; casing diameter 4 in., to 116 ft; screen diameter 2 in. from 116 to 121 ft.
INSTRUMENTATION.--Twice yearly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land-surface is 38 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of casing, 2.0 ft above land-surface datum.
REMARKS.--Measured twice yearly since April 1988.
PERIOD OF RECORD.--April 1983 to September 1984, April 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 28.82 ft below land-surface datum, Apr. 6, 1984; lowest measured, 34.48 ft below land-surface datum, Nov. 19, 1983.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL
APR 25	29.50

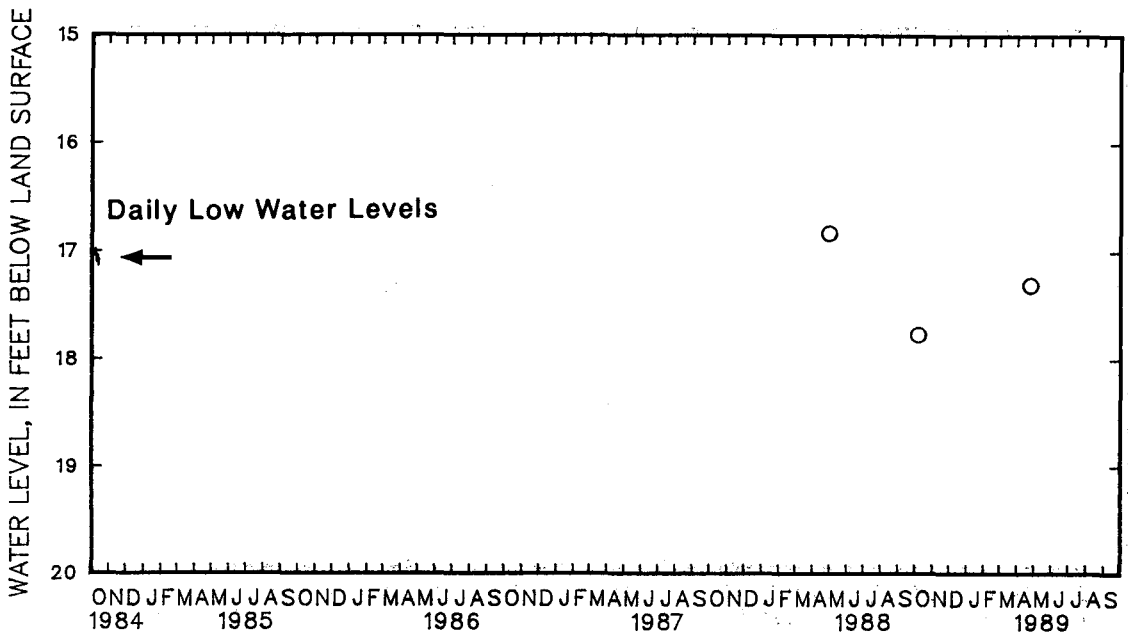


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--CE Dd 81. SITE ID.--392536075593201. PERMIT NUMBER.--CE-81-0469.
LOCATION.--Lat 39°25'36", long 75°59'32", Hydrologic Unit 02060002, at dredge spoil site off Pond Neck Road nr West View Shores.
Owner: U.S. Geological Survey.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 115 ft; casing diameter 4 in., to 110 ft; screen diameter 2 in. from 110 to 115 ft.
INSTRUMENTATION.--Twice yearly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land-surface is 24 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of casing, 1.8 ft above land-surface datum.
REMARKS.--Measured twice yearly since April 1988.
PERIOD OF RECORD.--March 1983 to October 1983, April 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.25 ft below land-surface datum, July 1, 1983; lowest measured, 17.78 ft below land surface datum, Oct. 6, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 6	17.78	APR 25	17.31

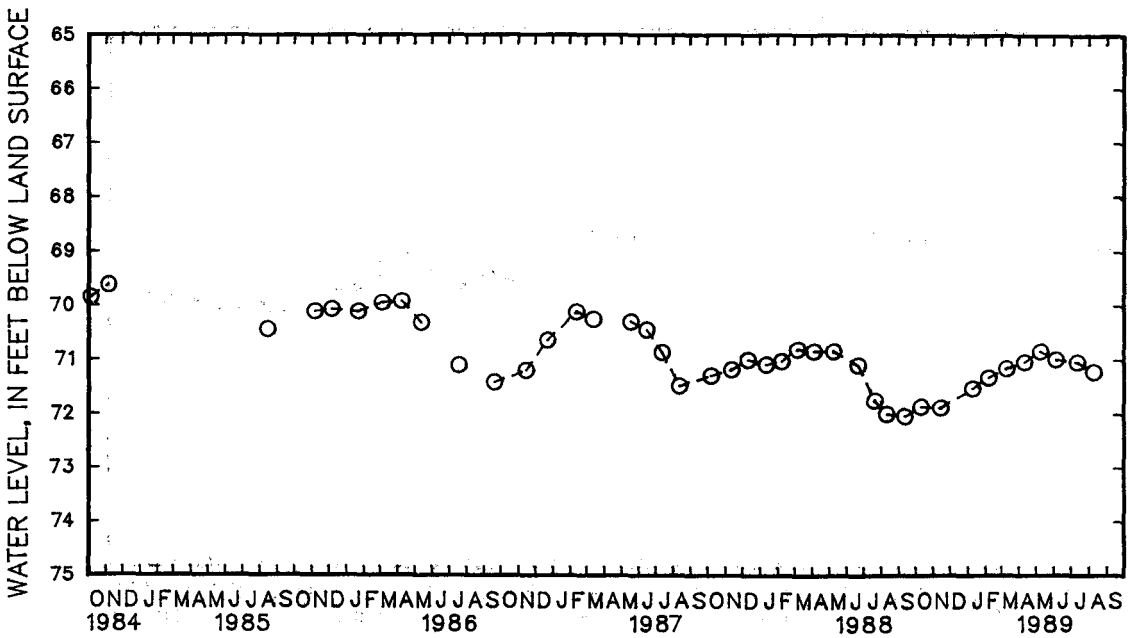


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--CE Ee 29. SITE ID.--392403075521801. PERMIT NUMBER.--CE-73-2266.
LOCATION.--Lat 39°24'03", long 75°52'18", Hydrologic Unit 02060002, 0.3 mi southwest of MD Rts. 213 and 282, Cecilton.
Owner: U.S. Geological Survey.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 547 ft; casing diameter 10 in., to 158 ft; casing diameter 4 in., to 515 ft and 525 to 547 ft; screen diameter 4 in. from 515 to 525 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with water-level recorder from Aug. 22, 1979 to Dec. 4, 1979.
DATUM.--Elevation of land surface is 80 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.35 ft above land-surface datum.
PERIOD OF RECORD.--August 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 67.99 ft below land-surface datum, Mar. 25, 1979; lowest measured, 72.06 ft below land-surface datum, Sept. 12, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	71.88	JAN 9	71.54	MAR 10	71.17	MAY 9	70.85	JUL 12	71.05
NOV 15	71.90	FEB 6	71.34	APR 11	71.05	JUN 5	71.00	AUG 9	71.23



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

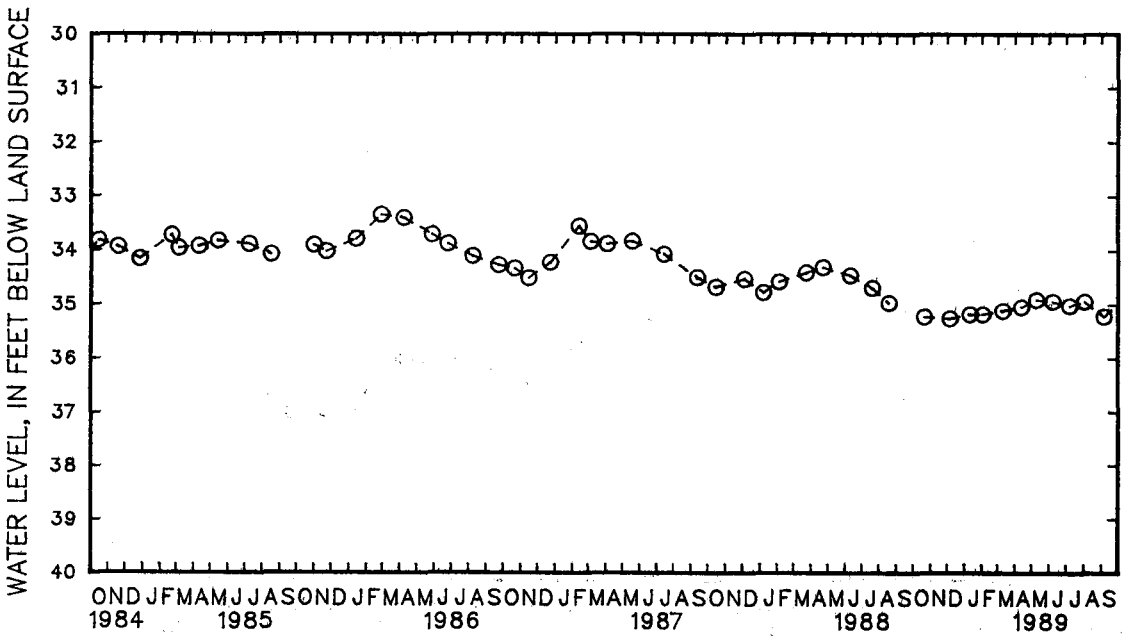
MARYLAND--Continued

DORCHESTER COUNTY

WELL NUMBER.--DO Bg 59. SITE ID.--383708075503801. PERMIT NUMBER.--DO-73-0612.
LOCATION.--Lat 38°37'08" long 75°50'38", Hydrologic Unit 02060008, at Hurlock Sewage Treatment Plant.
Owner: U.S. Geological Survey.
AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 537 ft; casing diameter 6 in., to 65 ft; casing diameter 2 in. from 65 to 527 ft; screen diameter 2 in. from 527 to 537 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 25 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of casing, 1.55 ft above land-surface datum.
PERIOD OF RECORD.--October 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 31.79 ft below land-surface datum, Aug. 2, 1978; lowest measured, 35.28 ft below land-surface datum, Dec. 5, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	35.25	JAN 10	35.20	MAR 10	35.13	MAY 9	34.92	JUL 7	35.03	SEP 5	35.23
DEC 5	35.28	FEB 2	35.20	APR 12	35.06	JUN 7	34.95	AUG 2	34.94		

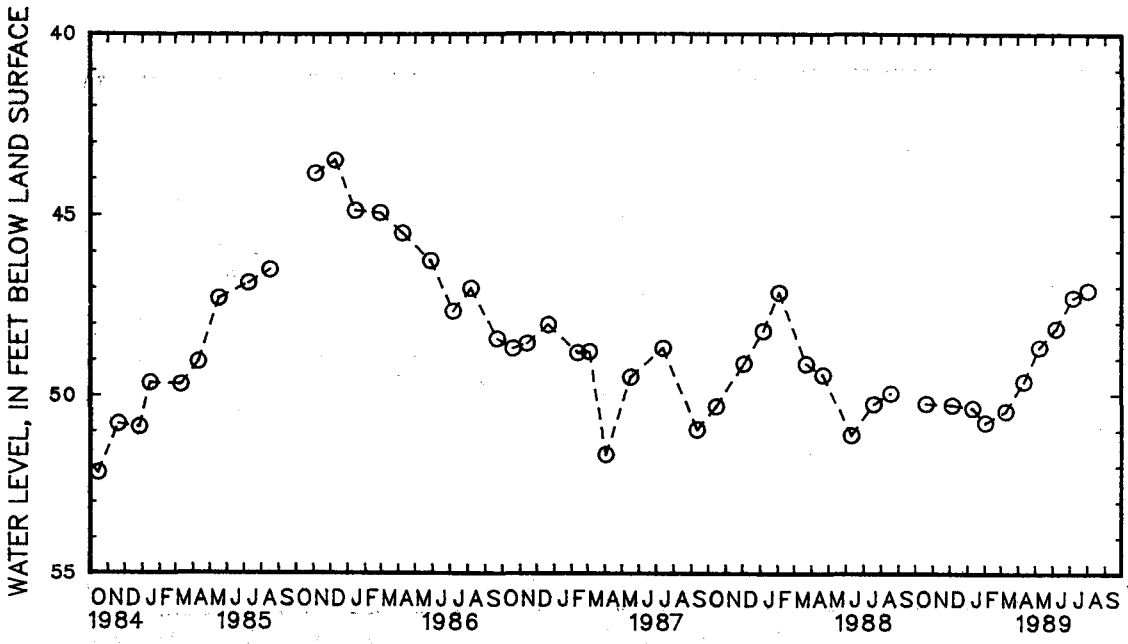


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--DO Cd 1. SITE ID.--383151076080801.
LOCATION.--Lat 38°31'51", long 76°08'08", Hydrologic Unit 02060005, near Christs Rock.
Owner: Harold E. Fee.
AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 390 ft; casing diameter 2 in., to unknown depth.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 4 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing, 0.5 ft above land-surface datum.
PERIOD OF RECORD.--October 1966 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 43.50 ft below land-surface datum, Dec. 9, 1985; lowest measured, 80.32 ft below land-surface datum, Oct. 16, 1970.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	50.27	JAN 10	50.40	MAR 10	50.48	MAY 9	48.70	JUL 7	47.30	SEP 5	47.23
DEC 5	50.31	FEB 2	50.80	APR 12	49.65	JUN 7	48.17	AUG 2	47.10		

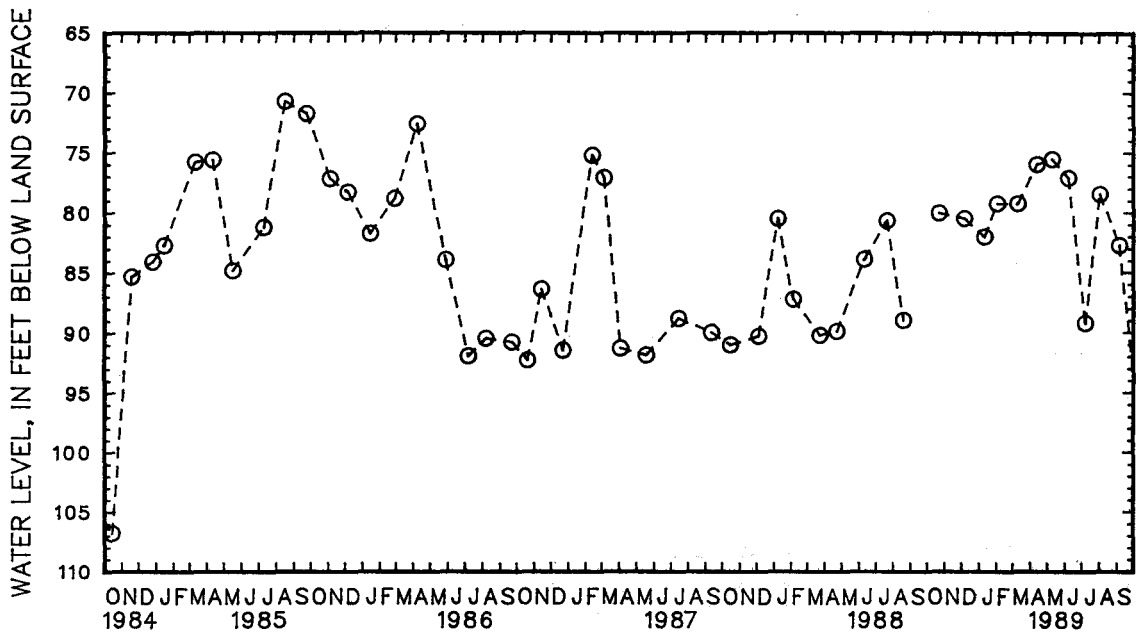


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--DO Ce 5. SITE ID.--383340076041601.
LOCATION.--Lat 38°33'40", long 76°04'16", Hydrologic Unit 02060005, at Cambridge Pumping Station.
Owner: Municipal Utilities Commission.
AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.
WELL CHARACTERISTICS.--Drilled, unused, artesian well, depth 405 ft; casing diameter 12 in., to 385 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 18 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing, 4.0 ft above land-surface datum.
PERIOD OF RECORD.--October 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured 70.71 ft below land-surface datum, Aug. 16, 1985; lowest measured, 115.06 ft below land-surface datum, Aug. 29, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	80.04	JAN 10	82.02	MAR 10	79.25	MAY 9	75.54	JUL 7	89.25	SEP 5	82.73
DEC 5	80.49	FEB 2	79.24	APR 12	75.97	JUN 7	77.10	AUG 2	78.45		

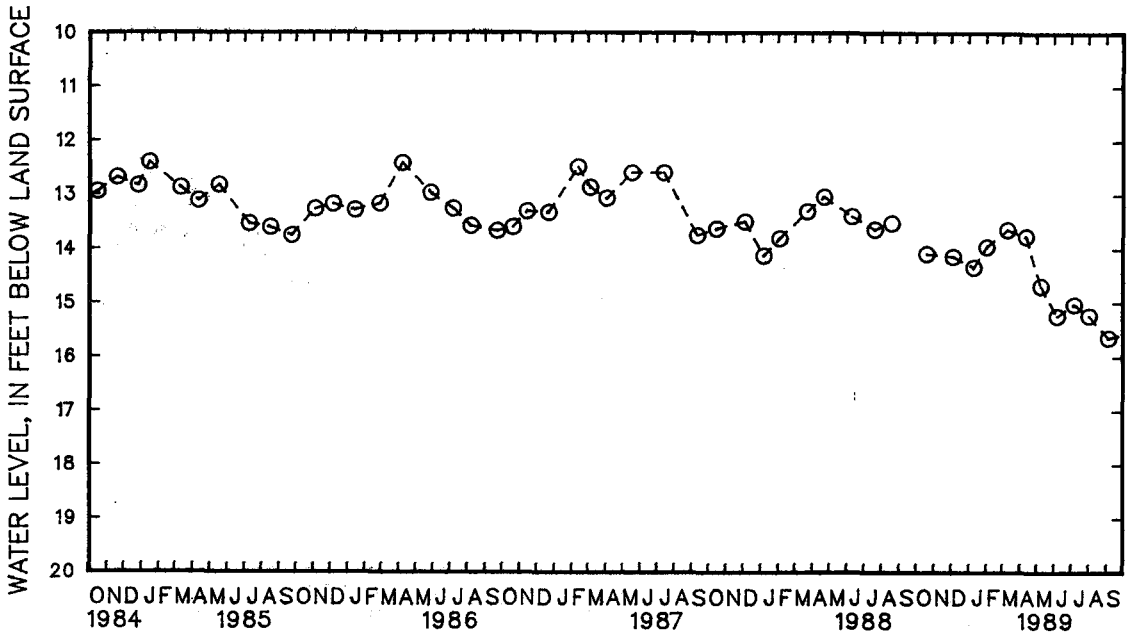


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL LOCATION.--DO Ce 15. SITE ID.--383408076042402. PERMIT NUMBER.--DO-00-1220.
LOCATION.--Lat 38°34'08", long 76°04'23", Hydrologic Unit 02060005, near Cambridge Creek off Trenton St., Cambridge.
Owner: Carroll W. Thomas & Sons., Inc.
AQUIFER.--Magothy Formation of Upper Cretaceous age. Aquifer code: 211MGTY.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 973.7 ft; casing diameter 10 in., to 25 ft.; casing diameter 8 in. from 25 to 236.5 ft; casing diameter 6 in. from 230 to 513.5 ft; casing diameter 4 in. from 468 to 911.5 ft; casing diameter 3 in. from 902.5 to 950.5 ft; screen 950.5 to 970.5 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 6 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing, 1.5 ft above land-surface datum.
REMARKS--Water level reported 68 ft below land-surface datum Aug. 30, 1947.
PERIOD OF RECORD.--June 1958 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.41 ft below land-surface datum, Mar. 1, 1960; lowest measured, 41.12 ft below land-surface datum, Aug. 7, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	14.10	JAN 10	14.35	MAR 10	13.65	MAY 9	14.69	JUL 7	15.03	SEP	15.65
DEC 5	14.15	FEB 2	13.97	APR 12	13.78	JUN 7	15.25	AUG 2	15.24		

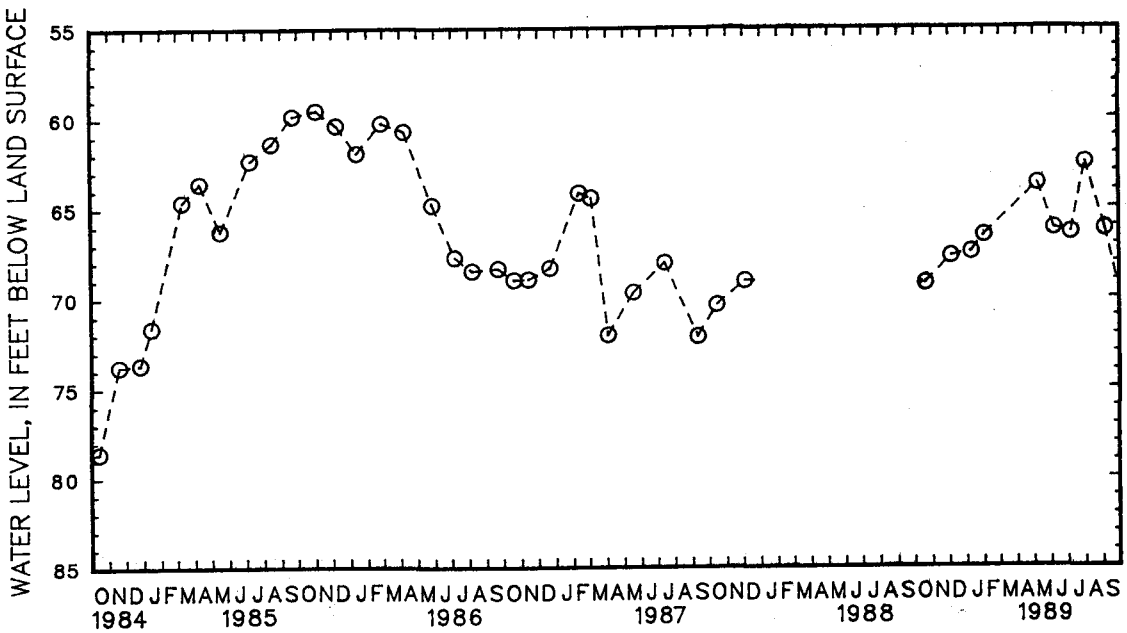


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--DO Ce 21. SITE ID.--383346076030301.
LOCATION.--Lat 38°33'46", long 76°03'03", Hydrologic Unit 02060005, on Shoal Creek about 1.5 mi southeast of Cambridge.
Owner: Eastern Shore State Hospital.
AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.
WELL CHARACTERISTICS.--Drilled, unused, artesian well, depth 368.5 ft; casing diameter 8 in., to 239 ft; casing diameter 4.5 in., to 368.5 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with graphic water-level recorder Aug. 23, 1956 to Nov. 6, 1958, and Sept. 11, 1965 to Oct. 13, 1966.
DATUM.--Elevation of land surface is 11.7 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top of casing at land-surface datum.
REMARKS.--Water level measured 73.77 ft below land-surface datum, Feb. 14, 1952. Water levels may be affected by nearby pumping. Access to well blocked by construction equipment, from January 1988 through September 1988.
PERIOD OF RECORD.--August 1956 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level reported, 14 ft below land-surface datum, August 1914; highest water level measured, 59.53 ft below land-surface datum, Nov. 4, 1985; lowest measured, 132.95 ft below land-surface datum, Sept. 6, 1956.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	69.23	JAN 10	67.50	MAY 9	63.70	JUL 7	66.45	SEP 5	66.24
DEC 5	67.73	FEB 2	66.57	JUN 7	66.20	AUG 2	62.54		

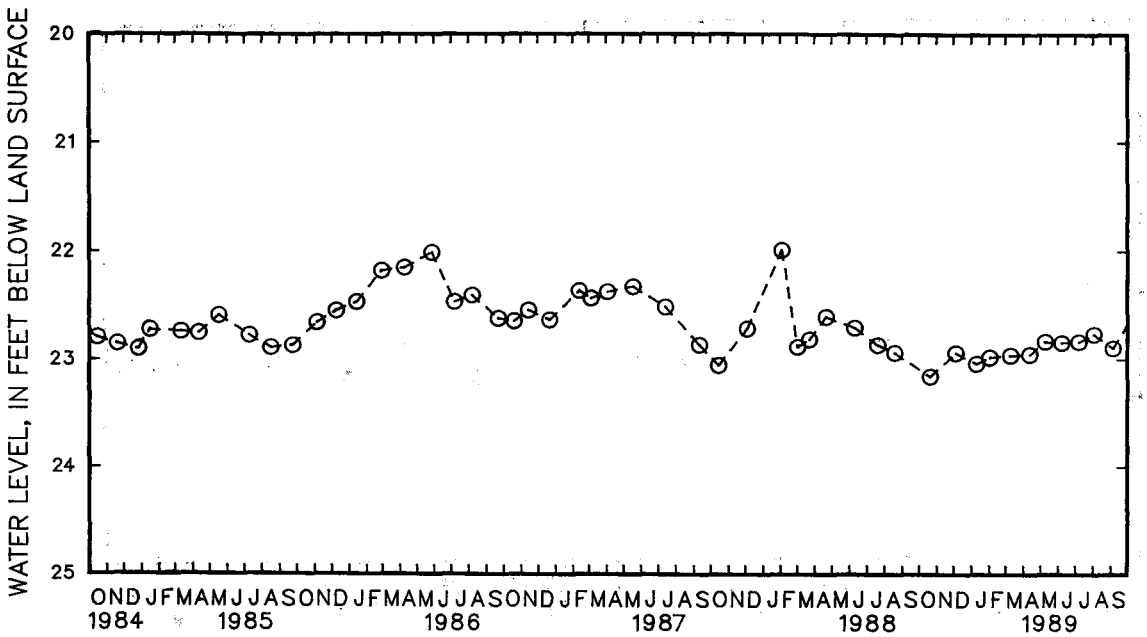


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--DO Ce 78. SITE ID.--383243076042301. PERMIT NUMBER.--DO-66-0026.
LOCATION.--Lat 38°32'43", long 76°04'23", Hydrologic Unit 02060005, at Stone Boundary Rd., Cambridge.
Owner: City of Cambridge.
AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.
WELL CHARACTERISTICS.--Drilled, unused, artesian well, depth 517 ft; casing diameter 12 in.; screen diameter 12 in. from 360.3 to 363.7 ft, 368 to 380 ft, 385 to 400 ft, 405 to 420 ft, 425 to 440 ft, 445 to 460 ft, 465 to 480 ft, and 485 to 500 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 15 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.1 ft above land-surface datum.
PERIOD OF RECORD.--October 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.00 ft below land-surface datum, Feb. 4, 1988; lowest measured, 26.39 ft below land-surface datum, Oct. 4, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	23.17	JAN 10	23.05	MAR 10	22.97	MAY 9	22.84	JUL 7	22.84	SEP 5	22.90
DEC 5	22.95	FEB 2	22.99	APR 12	22.96	JUN 7	22.85	AUG 2	22.77		



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

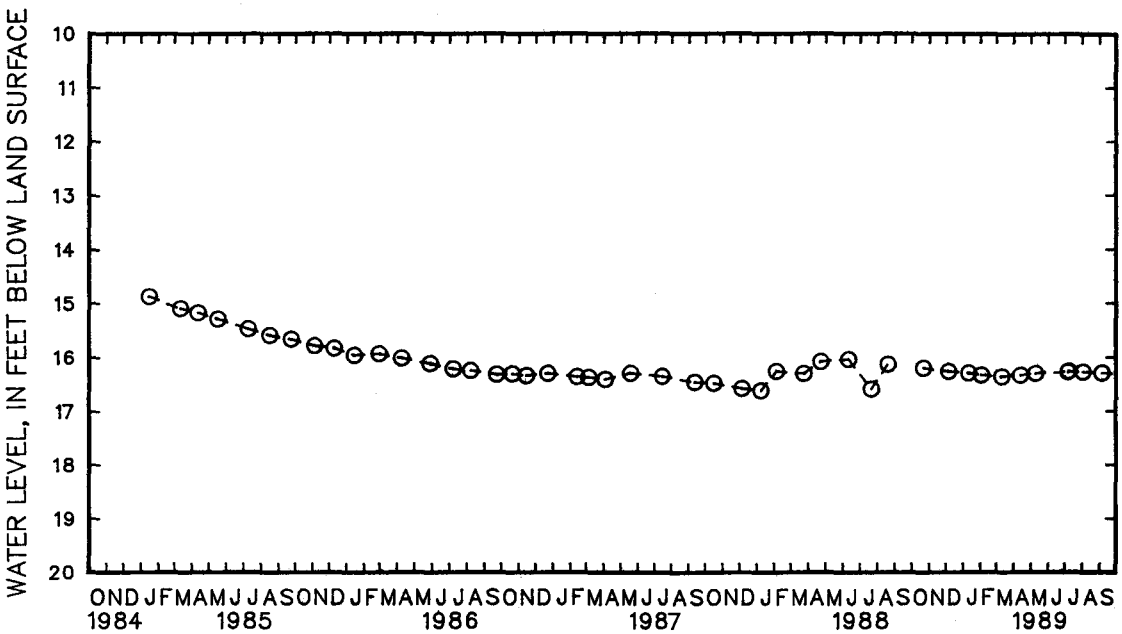
MARYLAND--Continued

DORCHESTER COUNTY--Continued

WELL NUMBER.--DO Ce 88. SITE ID.--383401076032001. PERMIT NUMBER.--DO-73-1369.
LOCATION.--Lat 38°34'01", long 76°03'20", Hydrologic Unit 02060005, at Eastern Shore State Hospital, Cambridge.
Owner: U.S. Geological Survey.
AQUIFER.--Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 1427.4 ft; casing diameter 12 in., to 103 ft; casing diameter 4 in., to 1427.4 ft; perforated casing diameter 4 in. from 1417.4 to 1427.4 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 4.4 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top of casing, 1.18 ft above land-surface datum.
PERIOD OF RECORD.--October 1981 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.51 ft below land-surface datum, July 20, 1983; lowest measured, 22.22 ft below land-surface datum, Nov. 13, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	16.21	JAN 10	16.30	MAR 10	16.37	MAY 9	16.31	JUL 7	16.26	SEP 5	16.30
DEC 5	16.27	FEB 2	16.34	APR 12	16.34	JUL 6	16.27	AUG 2	16.28		

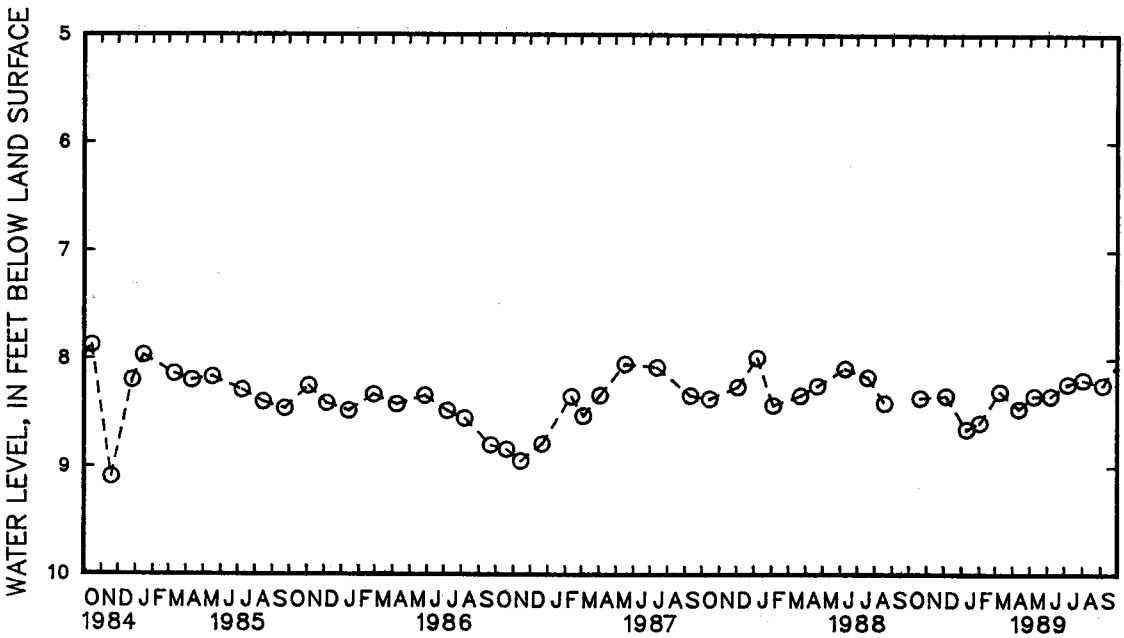


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--DO Db 17. SITE ID.--382800076180701.
LOCATION.--Lat 38°28'00", long 76°18'07", Hydrologic Unit 02060005, near MD Rt. 16, Taylors Island.
Owner: U.S. Geological Survey.
AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 320 ft; casing diameter 6 in., to 55 ft; casing diameter 2 in. from 55 to 270 ft; screen diameter 2 in. from 270 to 280 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 4 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.
PERIOD OF RECORD.--April 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.77 ft below land-surface datum, Oct. 4, 1979; lowest measured, 9.10 ft below land-surface datum, Nov. 19, 1984.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	8.36	JAN 10	8.65	MAR 10	8.30	MAY 9	8.34	JUL 7	8.23	SEP 5	8.24
DEC 5	8.34	FEB 2	8.59	APR 12	8.46	JUN 7	8.34	AUG 2	8.19		

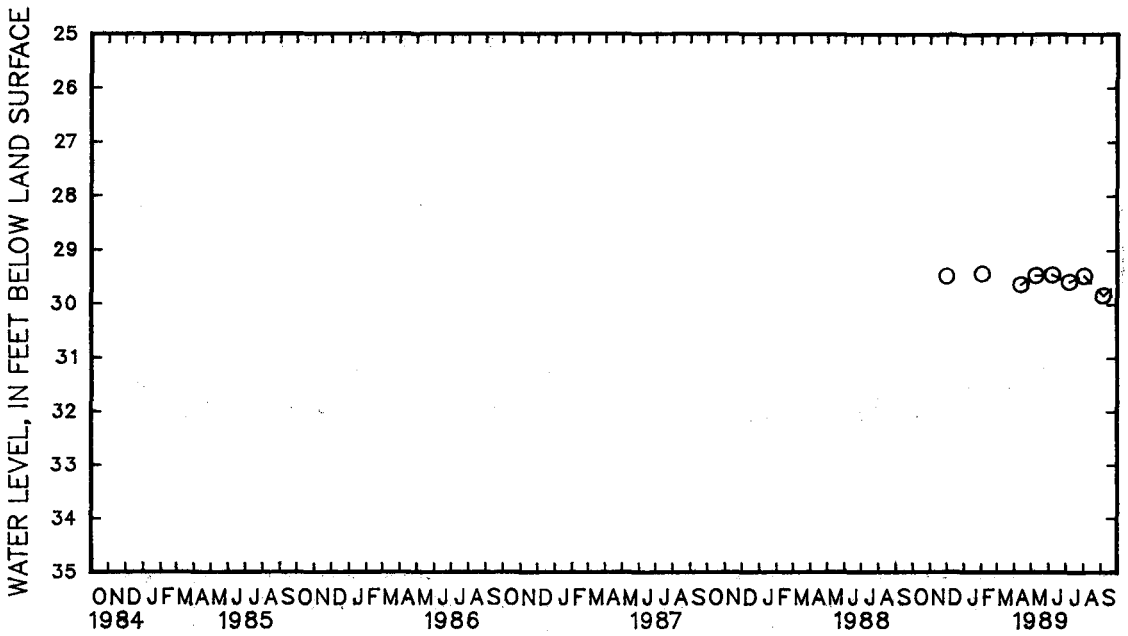


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--DO Db 18. SITE ID.--382807076175801. PERMIT NUMBER.--DO-81-1314.
LOCATION.-- Lat 38°28'07", long 76°17'58", Hydrologic Unit 02060005, Taylors Island.
Owner: Eleanor Polley.
AQUIFER.--Aquia Formation of Paleocene age. Aquifer code: 125AQUI.
WELL CHARACTERISTICS.--Drilled, domestic, artesian well, depth 540 ft; casing diameter 4 in., to 140 ft; casing diameter 2 in. from 140 to 540 ft; screen diameter 2 in. from 520 to 540 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 2 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring Point: Top of casing, 1.5 ft above land-surface datum.
PERIOD OF RECORD.--November 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 29.44 ft below land-surface datum, Feb. 2, 1989; lowest measured, 29.84 ft below land-surface datum, Sept. 5, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 30	29.49	APR 12	29.64	JUN 7	29.46	AUG 2	29.49
FEB 2	29.44	MAY 9	29.47	JUL 7	29.60	SEP 5	29.84

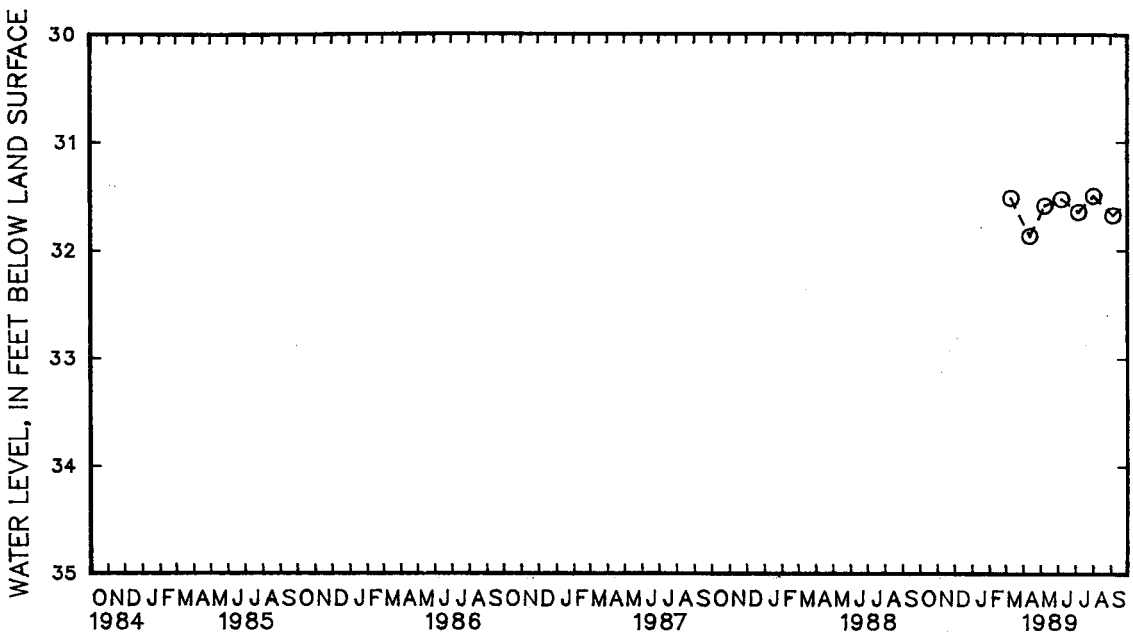


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--DO Db 19. SITE ID.--382847076190901. PERMIT NUMBER.--DO-81-1164.
LOCATION.--Lat 38°28'47", long 76°19'09", Hydrologic Unit 02060005, Taylors Island.
Owner: Elmer Wiley.
AQUIFER.--Aquia Formation of Paleocene age. Aquifer code: 125AQUI.
WELL CHARACTERISTICS.--Drilled, domestic, artesian well, depth 540 ft; casing diameter 4 in. to 140 ft; casing diameter 2 in. from 140 to 540 ft; screen diameter 2 in. from 520 to 540 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 4 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of casing, 2.5 ft above land-surface datum.
PERIOD OF RECORD.--November 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 31.50 ft below land-surface datum, Aug. 2, 1989; lowest measured, 31.87 ft below land-surface datum, Apr. 12, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 10	31.52	MAY 9	31.59	JUL 7	31.65	AUG 2	31.50	SEP 5	31.68
APR 12	31.87	JUN 7	31.53						



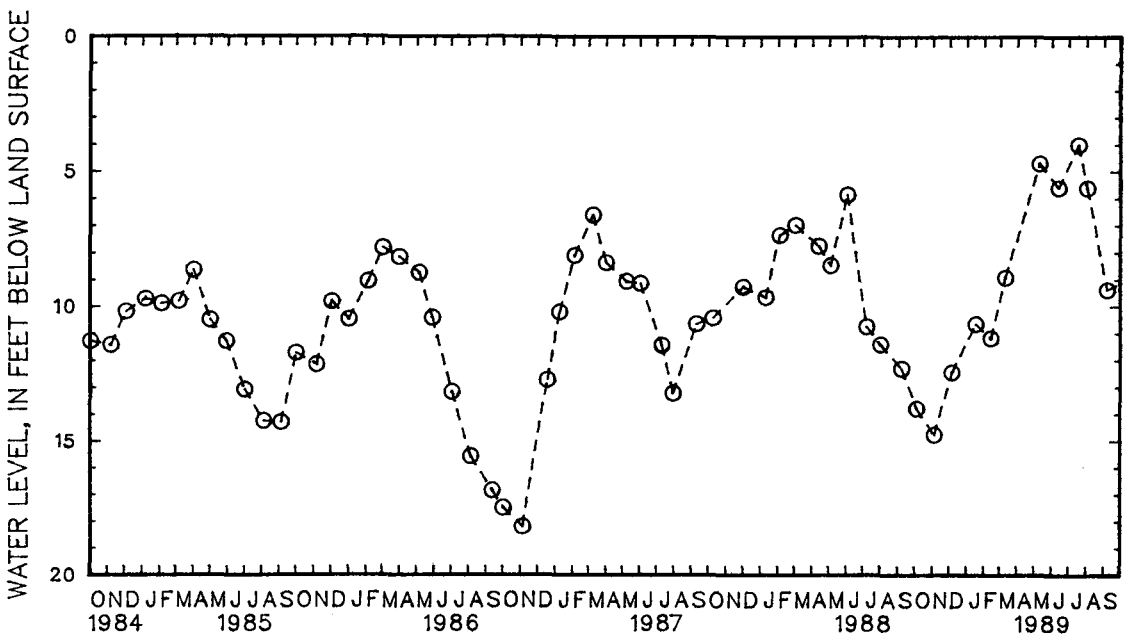
5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

HARFORD COUNTY

WELL NUMBER.--HA Bd 31. SITE ID.--393902076160001.
LOCATION.--Lat 39°39'02", long 76°16'00", Hydrologic Unit 02050306, at Dublin.
Owner: Walter Lee Moody, Sr.
AQUIFER.--Baltimore Gabbro Complex of Paleozoic age. Aquifer code: 300BLMR.
WELL CHARACTERISTICS.--Dug, stone-lined, water-table well, measured depth 25.9 ft; approximate diameter 36 in.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with water-level recorder from July 9, 1954 to Aug. 5, 1958.
DATUM.--Elevation of land surface is 460 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of wood floor, 0.1 ft above land-surface datum.
PERIOD OF RECORD.--May 1954 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.00 ft below land-surface datum, Mar. 8, 1979; lowest measured, 19.59 ft below land-surface datum, Feb. 7, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	13.81	DEC 5	12.46	FEB 13	11.19	MAY 10	4.69	JUL 18	4.00	SEP 7	9.39
NOV 4	14.78	JAN 17	10.66	MAR 11	8.92	JUN 13	5.60	AUG 2	5.61		

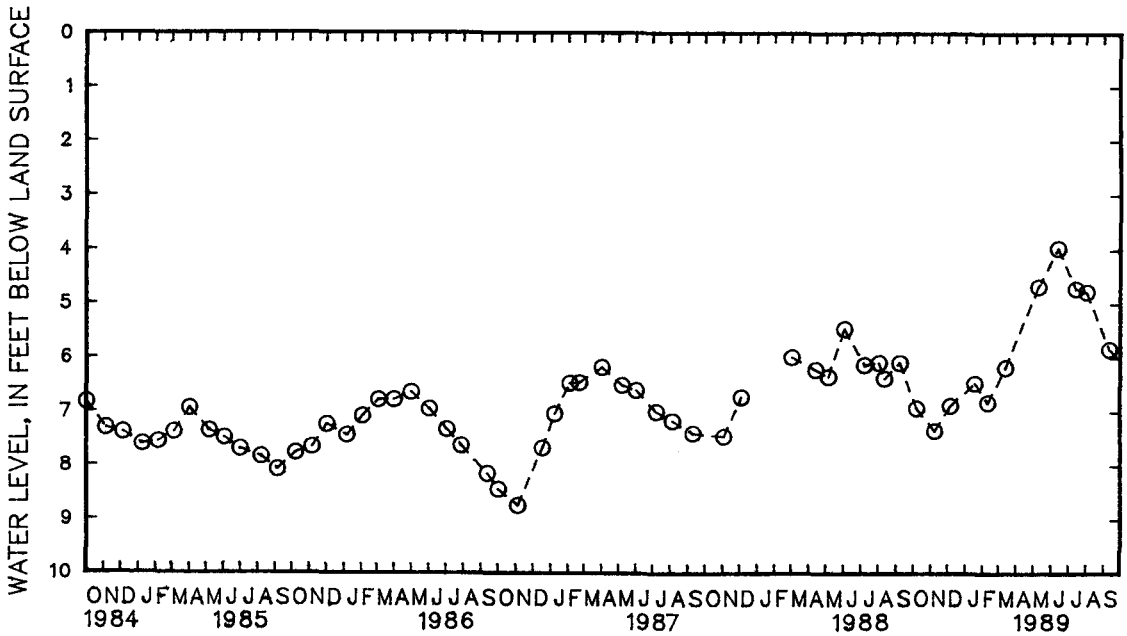


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--HA Ca 23. SITE ID.--393158076302601.
LOCATION.--Lat 39°31'58", long 76°30'26", Hydrologic Unit 02060003, at Gunpowder State Park, Hess.
Owner: U.S. Geological Survey.
AQUIFER.--Loch Raven Schist of Paleozoic age. Aquifer code: 300LCRV.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 200 ft; casing diameter 6 in., to 24 ft; open hole.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with water-level recorder from July 10, 1974 to Sept. 13, 1976.
DATUM.--Elevation of land surface is 470 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.6 ft above land-surface datum.
PERIOD OF RECORD.--July 1974 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.59 ft below land-surface datum, Sept. 27, 1975; lowest measured, 9.03 ft below land-surface datum, Dec. 15, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 7	6.93	DEC 6	6.88	FEB 10	6.82	MAY 10	4.67	JUL 14	4.71	SEP 11	5.84
NOV 8	7.35	JAN 17	6.47	MAR 13	6.17	JUN 13	3.96	AUG 2	4.77		



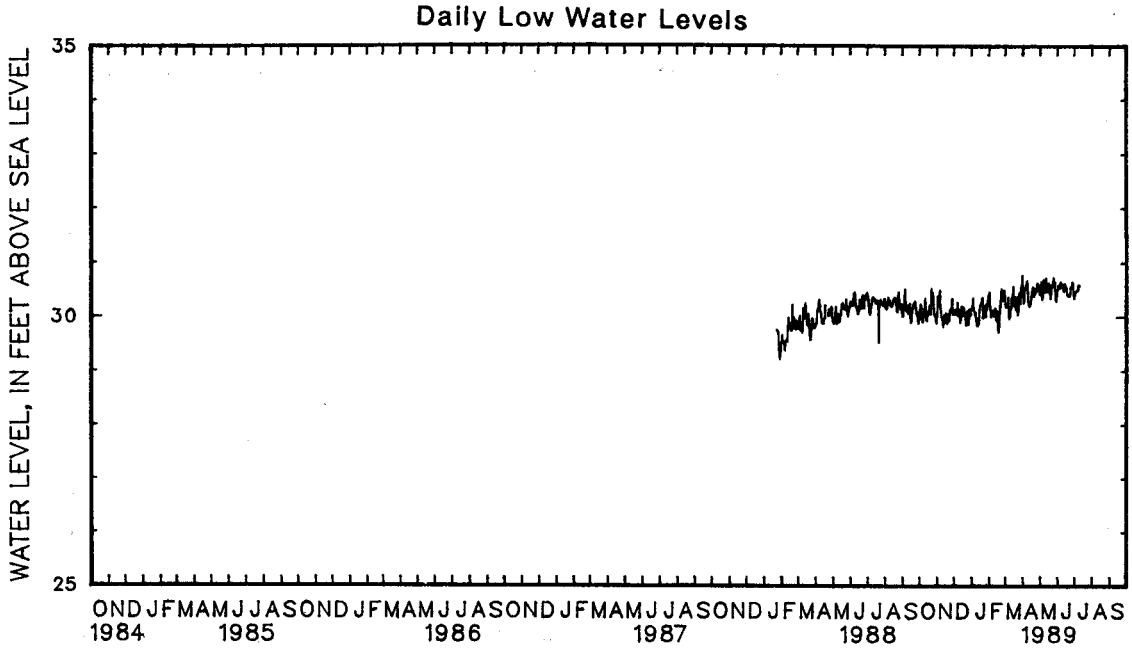
5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--HA Dd 89. SITE ID.--392529076180901. PERMIT NUMBER.--HA-81-4130.
LOCATION.--Lat 39°25'29", long 76°18'09", Hydrologic Unit 02060003, at Edgewood Elementary School on Cedar Drive, Edgewood.
Owner: U.S. Geological Survey.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 271PTMC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 140 ft; casing diameter 4 in., to 120 ft; screen diameter 4 in. from 120 to 140 ft.
INSTRUMENTATION.--Equipped with digital water-level recorder--15-minute recorder interval from Jan. 1, 1988 to July 11, 1989. Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 99.05 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of recorder platform, 1.73 ft above land-surface datum.
REMARKS.--Harford County Coastal Plain Project observation well.
PERIOD OF RECORD.--January 1988 to July 1989.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 30.86 ft above sea level, May 24, 1989; lowest measured, 29.19 ft above sea level, Jan. 29, 1988.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	30.13	29.98	30.43	30.02	30.24	30.12	30.19	30.12	30.53	30.45	30.39	30.23
2	30.31	30.13	30.48	30.38	30.12	30.06	30.34	30.19	30.45	30.25	30.23	30.17
3	30.29	30.22	30.38	30.20	30.31	30.12	30.61	30.34	30.33	30.14	30.26	30.23
4	30.22	30.19	30.33	30.20	30.31	30.03	30.61	30.17	30.13	29.99	30.26	30.22
5	30.19	30.01	30.73	30.33	30.12	30.04	30.17	30.09	30.09	30.01	30.45	30.23
6	30.01	29.89	30.69	30.49	30.24	30.09	30.28	30.10	30.23	30.10	30.44	30.36
7	29.97	29.89	30.49	30.16	30.30	30.25	30.16	30.03	30.20	30.11	30.36	30.03
8	30.09	29.97	30.19	30.10	30.25	30.01	30.31	30.06	30.19	30.08	30.03	29.95
9	30.14	30.05	30.10	29.98	30.14	30.01	30.22	29.95	30.15	30.00	30.12	29.98
10	30.44	30.14	30.28	29.98	30.21	30.12	29.95	29.87	30.15	30.02	30.15	30.10
11	30.48	30.33	30.22	29.91	30.21	29.98	29.92	29.82	30.34	30.15	30.41	30.14
12	30.33	30.09	29.91	29.80	29.98	29.88	30.31	29.82	30.37	30.09	30.53	30.35
13	30.08	29.93	30.11	29.86	30.32	29.98	30.31	29.93	30.08	29.93	30.40	30.28
14	30.01	29.91	30.06	30.02	30.31	30.19	30.12	29.87	30.17	30.08	30.56	30.40
15	30.08	30.01	30.03	29.95	30.32	30.08	30.34	30.13	30.22	30.09	30.68	30.56
16	30.07	30.05	30.20	29.97	30.12	30.01	30.34	30.22	30.14	29.79	30.58	30.25
17	30.11	30.04	30.29	30.05	30.31	30.13	30.29	30.22	29.79	29.70	30.35	30.20
18	30.32	30.11	30.05	29.88	30.26	30.17	30.44	30.25	30.05	29.79	30.62	30.36
19	30.27	30.20	29.99	29.86	30.18	30.06	30.45	30.33	30.21	30.06	30.45	30.15
20	30.20	30.04	30.52	29.99	30.13	30.06	30.55	30.35	30.31	30.20	30.43	30.12
21	30.54	30.04	30.49	30.04	30.15	30.02	30.37	29.97	30.69	30.31	30.59	30.36
22	30.64	30.51	30.04	29.91	30.03	29.83	30.06	29.97	30.67	30.51	30.36	30.10
23	30.51	30.38	30.12	29.93	30.10	29.83	30.20	30.06	30.51	30.35	30.11	30.03
24	30.53	30.43	30.17	30.12	30.43	30.08	30.27	30.20	30.35	30.30	30.48	30.11
25	30.46	30.36	30.15	30.11	30.41	30.09	30.23	29.99	30.42	30.30	30.50	30.44
26	30.36	30.16	30.23	30.14	30.09	29.85	30.46	29.99	30.75	30.42	30.46	30.30
27	30.15	30.02	30.49	30.24	30.12	29.85	30.46	30.24	30.74	30.49	30.38	30.25
28	30.18	30.02	30.54	30.32	30.55	30.13	30.24	30.12	30.49	30.39	30.59	30.38
29	30.09	29.99	30.31	30.03	30.19	30.01	30.37	30.23	---	---	30.63	30.57
30	29.99	29.91	30.24	30.03	30.19	30.02	30.62	30.37	---	---	30.76	30.56
31	30.02	29.87	---	---	30.23	30.14	30.56	30.43	---	---	30.95	30.77
MONTH	30.64	29.87	30.73	29.80	30.55	29.83	30.62	29.82	30.75	29.70	30.95	29.95

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	30.80	30.39	30.68	30.42	30.58	30.51	30.45	30.40	---	---	---	---
2	30.38	30.25	30.82	30.64	30.63	30.57	30.50	30.45	---	---	---	---
3	30.55	30.31	30.64	30.43	30.63	30.53	30.50	30.47	---	---	---	---
4	30.63	30.52	30.43	30.33	30.69	30.60	30.49	30.47	---	---	---	---
5	30.62	30.54	30.73	30.37	30.67	30.55	30.53	30.48	---	---	---	---
6	30.67	30.55	30.80	30.68	30.70	30.64	30.54	30.49	---	---	---	---
7	30.72	30.57	30.74	30.62	30.65	30.62	30.64	30.54	---	---	---	---
8	30.73	30.66	30.62	30.52	30.62	30.59	30.65	30.58	---	---	---	---
9	30.74	30.45	30.53	30.46	30.79	30.60	30.59	30.56	---	---	---	---
10	30.45	30.28	30.76	30.54	30.79	30.58	30.67	30.58	---	---	---	---
11	30.28	30.21	30.78	30.72	30.58	30.48	---	---	---	---	---	---
12	30.24	30.19	30.72	30.61	30.60	30.47	---	---	---	---	---	---
13	30.34	30.24	30.61	30.49	30.73	30.61	---	---	---	---	---	---
14	30.35	30.25	30.51	30.46	30.71	30.59	---	---	---	---	---	---
15	30.64	30.35	30.62	30.51	30.63	30.56	---	---	---	---	---	---
16	30.65	30.46	30.75	30.62	30.61	30.52	---	---	---	---	---	---
17	30.54	30.39	30.73	30.52	30.53	30.43	---	---	---	---	---	---
18	30.61	30.54	30.52	30.39	30.45	30.40	---	---	---	---	---	---
19	30.62	30.47	30.43	30.34	30.44	30.40	---	---	---	---	---	---
20	30.47	30.38	30.59	30.43	30.43	30.40	---	---	---	---	---	---
21	30.55	30.44	30.63	30.58	30.43	30.38	---	---	---	---	---	---
22	30.58	30.51	30.60	30.55	30.43	30.39	---	---	---	---	---	---
23	30.55	30.47	30.83	30.60	30.54	30.43	---	---	---	---	---	---
24	30.57	30.47	30.86	30.72	30.55	30.54	---	---	---	---	---	---
25	30.62	30.54	30.72	30.64	30.58	30.53	---	---	---	---	---	---
26	30.63	30.62	30.69	30.64	30.64	30.58	---	---	---	---	---	---
27	30.69	30.59	30.64	30.50	30.67	30.64	---	---	---	---	---	---
28	30.67	30.55	30.49	30.33	30.67	30.62	---	---	---	---	---	---
29	30.55	30.50	30.36	30.29	30.62	30.41	---	---	---	---	---	---
30	30.53	30.42	30.48	30.36	30.41	30.35	---	---	---	---	---	---
31	---	---	30.53	30.48	---	---	---	---	---	---	---	---
MONTH	30.80	30.19	30.86	30.29	30.79	30.35	---	---	---	---	---	---

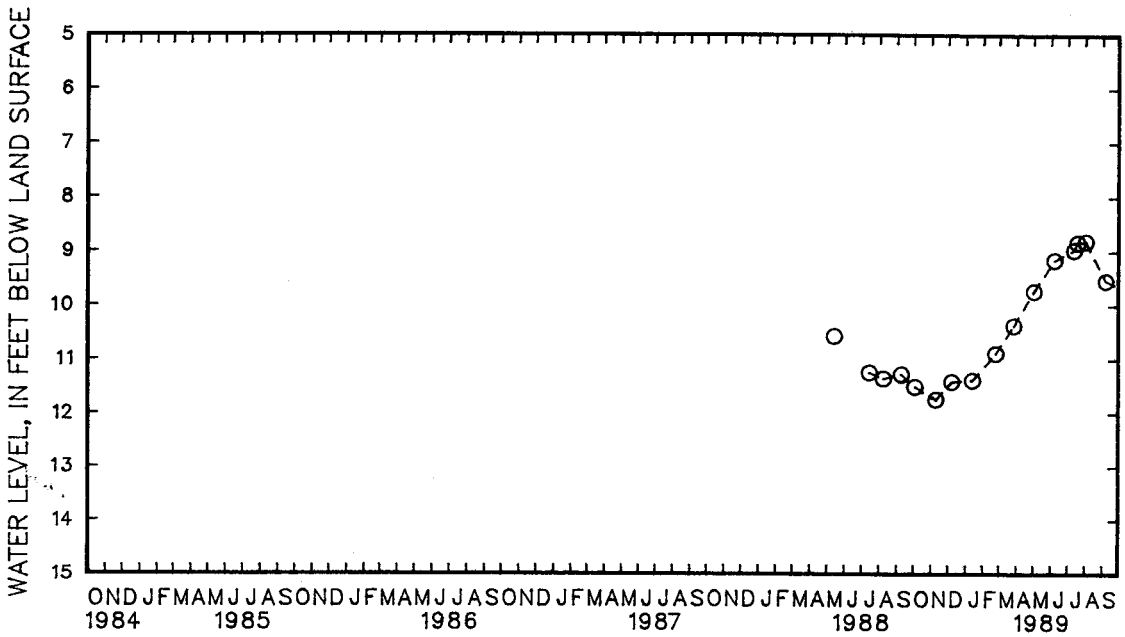


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--HA Dd 92. SITE ID.--392721076150302. PERMIT NUMBER.--HA-81-4137
LOCATION.--Lat 39°27'21", long 76°15'03", Hydrologic Unit 02060003, at William Longley Park, nr intersection of Long Bar Harbor and Longley Rds., Long Bar Harbor.
Owner: U.S. Geological Survey.
AQUIFER.--Talbot Formation of Pleistocene age. Aquifer code: 112TLBT.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 28 ft; casing diameter 4 in., to 18 ft; screen diameter 4 in. from 18 to 28 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 20.06 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 2.08 ft above land-surface datum.
PERIOD OF RECORD.--May 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.81 ft below land-surface datum, Aug. 2, 1989; lowest measured, 11.76 ft below land-surface datum, Nov. 9, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	11.53	DEC 7	11.43	FEB 23	10.90	MAY 2	9.74	JUL 12	8.97	AUG 2	8.81
NOV 9	11.76	JAN 13	11.40	MAR 27	10.38	JUN 7	9.16	JUL 18	8.83	SEP 7	9.54



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--HA De 66. SITE ID.--392921076100401. PERMIT NUMBER.--HA-69-0394.
LOCATION.--Lat 39°29'21", long 76°10'04", Hydrologic Unit 02060003, at Short Lane, near Aberdeen.
Owner: Harford County Metropolitan Commission.
AQUIFER.--Talbot Formation of Pleistocene age. Aquifer code: 112TLBT.
WELL CHARACTERISTICS.--Drilled, unused, artesian well, depth 135 ft; casing diameter 4 in., to 45 ft; screen diameter 4 in. from 45 to 66 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--60-minute recorder interval from Dec. 12, 1986 to July 11, 1989.
DATUM.--Elevation of land surface is 67.75 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top of casing, 1.6 ft above land-surface datum.
PERIOD OF RECORD.--October 1973 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 49.44 ft above sea level, July 28, 1975; lowest measured, 38.71 ft above sea level, Jan. 22, 1988.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL
AUG 2	45.42	SEP 7	45.03

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	40.91	40.91	40.59	40.58	40.30	40.29	40.48	40.46	40.60	40.58	40.86	40.83
2	40.91	40.90	40.59	40.56	40.33	40.30	40.48	40.47	40.61	40.58	40.88	40.85
3	40.90	40.89	40.56	40.54	40.36	40.33	40.49	40.46	40.62	40.57	40.91	40.87
4	40.89	40.87	40.56	40.54	40.37	40.33	40.47	40.42	40.62	40.58	40.91	40.88
5	40.87	40.85	40.57	40.53	40.39	40.36	40.44	40.42	40.65	40.60	40.95	40.91
6	40.86	40.84	40.53	40.52	40.41	40.38	40.43	40.40	40.65	40.63	40.96	40.89
7	40.84	40.84	40.52	40.49	40.42	40.41	40.41	40.39	40.66	40.63	40.95	40.91
8	40.84	40.82	40.51	40.48	40.45	40.40	40.43	40.38	40.67	40.64	40.97	40.94
9	40.83	40.82	40.49	40.43	40.47	40.44	40.39	40.35	40.67	40.64	40.99	40.97
10	40.83	40.82	40.47	40.42	40.48	40.46	40.37	40.35	40.69	40.66	41.01	40.98
11	40.83	40.80	40.43	40.40	40.48	40.46	40.37	40.33	40.70	40.68	41.05	41.01
12	40.80	40.78	40.41	40.39	40.49	40.46	40.42	40.35	40.70	40.66	41.06	41.02
13	40.78	40.77	40.42	40.39	40.51	40.49	40.37	40.32	40.71	40.66	41.07	41.04
14	40.78	40.76	40.39	40.38	40.51	40.49	40.40	40.34	40.71	40.68	41.14	41.06
15	40.77	40.75	40.38	40.37	40.52	40.49	40.42	40.35	40.74	40.68	41.12	41.06
16	40.75	40.74	40.37	40.36	40.53	40.49	40.38	40.34	40.70	40.67	41.11	41.08
17	40.74	40.73	40.37	40.33	40.53	40.51	40.39	40.35	40.72	40.69	41.17	41.11
18	40.74	40.72	40.34	40.33	40.52	40.51	40.42	40.37	40.74	40.71	41.17	41.12
19	40.73	40.71	40.34	40.32	40.52	40.50	40.42	40.37	40.75	40.72	41.17	41.14
20	40.72	40.69	40.39	40.31	40.53	40.51	40.45	40.40	40.76	40.73	41.22	41.17
21	40.75	40.69	40.31	40.29	40.52	40.50	40.43	40.38	40.91	40.74	41.23	41.19
22	40.75	40.68	40.30	40.29	40.51	40.49	40.45	40.42	40.77	40.73	41.22	41.19
23	40.68	40.67	40.30	40.29	40.53	40.50	40.47	40.44	40.77	40.74	41.25	41.21
24	40.68	40.66	40.29	40.28	40.55	40.50	40.48	40.46	40.79	40.75	41.33	41.25
25	40.66	40.64	40.29	40.28	40.52	40.50	40.49	40.45	40.81	40.77	41.30	41.25
26	40.64	40.62	40.29	40.28	40.50	40.48	40.56	40.49	40.83	40.81	41.30	41.27
27	40.62	40.61	40.32	40.27	40.52	40.48	40.53	40.50	40.83	40.80	41.33	41.29
28	40.62	40.60	40.32	40.24	40.55	40.46	40.55	40.51	40.85	40.82	41.36	41.33
29	40.61	40.59	40.27	40.24	40.50	40.47	40.57	40.54	---	---	41.38	41.35
30	40.59	40.57	40.31	40.27	40.50	40.47	40.60	40.55	---	---	41.43	41.36
31	40.58	40.57	---	---	40.50	40.46	40.59	40.56	---	---	41.48	41.38
MONTH	40.91	40.57	40.59	40.24	40.55	40.29	40.60	40.32	40.91	40.57	41.48	40.83

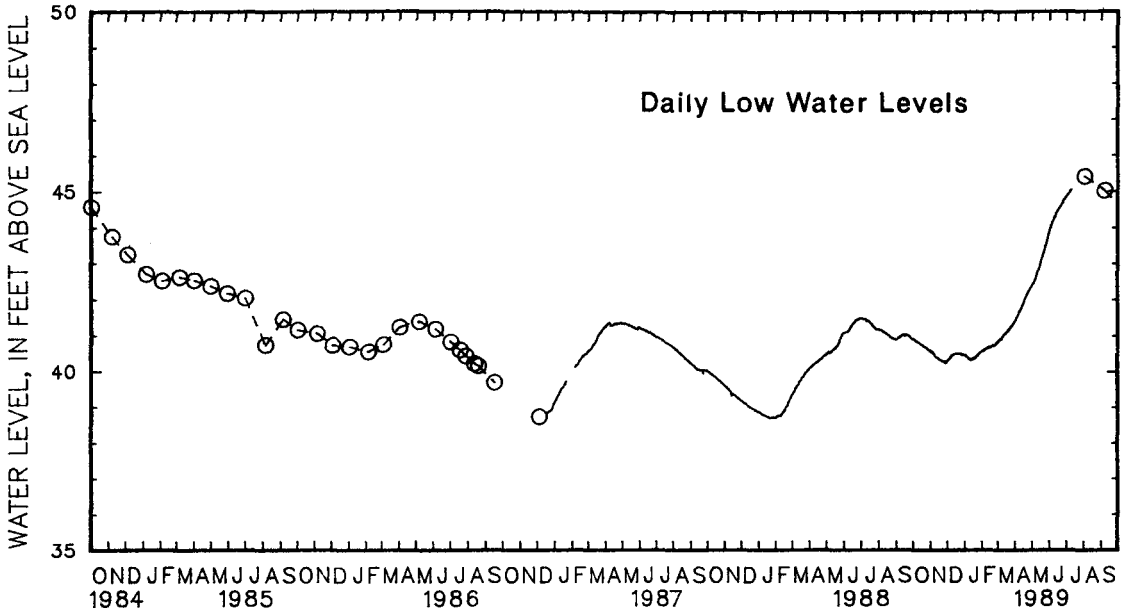
GROUND-WATER LEVELS

MARYLAND--Continued

HARFORD COUNTY--Continued

HA De 66--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	41.44	41.42	42.47	42.40	43.98	43.92	44.91	44.87	---	---	---	---
2	41.50	41.44	42.49	42.44	44.03	43.97	44.93	44.90	---	---	---	---
3	41.53	41.49	42.48	42.45	44.09	44.02	44.93	44.92	---	---	---	---
4	41.58	41.52	42.51	42.47	44.11	44.08	44.96	44.93	---	---	---	---
5	41.60	41.54	42.61	42.51	44.16	44.11	44.97	44.96	---	---	---	---
6	41.64	41.58	42.64	42.54	44.20	44.16	45.00	44.97	---	---	---	---
7	41.67	41.61	42.62	42.58	44.24	44.19	45.04	45.00	---	---	---	---
8	41.71	41.66	42.66	42.62	44.26	44.23	45.04	45.01	---	---	---	---
9	41.71	41.68	42.74	42.66	44.33	44.26	45.07	45.03	---	---	---	---
10	41.74	41.71	42.80	42.74	44.33	44.31	45.08	45.05	---	---	---	---
11	41.78	41.74	42.84	42.79	44.35	44.32	---	---	---	---	---	---
12	41.82	41.77	42.88	42.84	44.43	44.36	---	---	---	---	---	---
13	41.85	41.82	42.94	42.89	44.45	44.42	---	---	---	---	---	---
14	41.89	41.85	43.00	42.93	44.48	44.43	---	---	---	---	---	---
15	41.96	41.89	43.06	43.00	44.50	44.47	---	---	---	---	---	---
16	41.96	41.93	43.12	43.06	44.53	44.50	---	---	---	---	---	---
17	42.03	41.96	43.17	43.11	44.55	44.51	---	---	---	---	---	---
18	42.05	42.01	43.21	43.16	44.57	44.54	---	---	---	---	---	---
19	42.07	42.03	43.26	43.20	44.59	44.57	---	---	---	---	---	---
20	42.11	42.06	43.32	43.26	44.62	44.59	---	---	---	---	---	---
21	42.14	42.10	43.37	43.32	44.64	44.61	---	---	---	---	---	---
22	42.17	42.14	43.42	43.37	44.66	44.64	---	---	---	---	---	---
23	42.21	42.17	43.51	43.42	44.70	44.66	---	---	---	---	---	---
24	42.24	42.20	43.53	43.50	44.72	44.69	---	---	---	---	---	---
25	42.27	42.24	43.58	43.51	44.76	44.72	---	---	---	---	---	---
26	42.30	42.27	43.65	43.58	44.79	44.76	---	---	---	---	---	---
27	42.34	42.30	43.68	43.63	44.84	44.79	---	---	---	---	---	---
28	42.35	42.33	43.75	43.68	44.84	44.80	---	---	---	---	---	---
29	42.39	42.35	43.82	43.74	44.85	44.82	---	---	---	---	---	---
30	42.40	42.38	43.87	43.81	44.87	44.84	---	---	---	---	---	---
31	---	---	43.92	43.86	---	---	---	---	---	---	---	---
MONTH	42.40	41.42	43.92	42.40	44.87	43.92	---	---	---	---	---	---



5 YEAR HYDROGRAPH

OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--HA De 151. SITE ID.--392628076133101. PERMIT NUMBER.--HA-81-0952.
LOCATION.--Lat 39°26'28", long 76°13'31", Hydrologic Unit 02060003, 2.1 mi. south of Perryman, .5 mi. west of Chelsea Rd.
Owner: Baltimore Gas & Electric.
AQUIFER.--Potomac Group (?) of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 180 ft; casing diameter 4 in., to 168 ft; screen diameter 4 in. from 168 to 178 ft.
INSTRUMENTATION.--Equipped with digital water-level recorder--15-minute recorder interval from Mar. 1, 1987 to July 11, 1989. Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 31.74 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 3.45 ft above land-surface datum.
REMARKS.--Harford County Coastal Plain Project observation well.
PERIOD OF RECORD.--March 1987 to July 1989.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.60 ft above sea level, June 27, 1989; lowest measured, 6.49 ft above sea level, Jan. 15, 1988.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.35	7.29	7.36	7.18	7.28	7.16	7.26	7.20	7.51	7.45	7.50	7.44
2	7.46	7.34	7.43	7.36	7.17	7.16	7.41	7.26	7.47	7.30	7.47	7.35
3	7.43	7.28	7.36	7.14	7.25	7.16	7.51	7.41	7.36	7.31	7.38	7.34
4	7.31	7.27	7.20	7.14	7.25	6.95	7.51	7.02	7.35	7.17	7.42	7.31
5	7.40	7.29	7.52	7.21	7.12	6.95	7.15	6.99	7.32	7.21	7.61	7.42
6	7.38	7.26	7.59	7.52	7.24	7.11	7.35	7.15	7.41	7.32	7.61	7.45
7	7.26	7.22	7.58	7.31	7.29	7.24	7.33	7.24	7.42	7.28	7.45	7.24
8	7.22	7.15	7.31	7.23	7.26	7.11	7.51	7.34	7.32	7.27	7.32	7.24
9	7.53	7.16	7.24	7.03	7.22	7.12	7.51	7.30	7.32	7.10	7.44	7.32
10	7.69	7.54	7.31	7.06	7.28	7.22	7.30	7.19	7.12	7.09	7.51	7.44
11	7.70	7.40	7.31	7.05	7.31	7.08	7.21	7.10	7.23	7.10	7.73	7.51
12	7.40	7.14	7.05	6.97	7.08	7.00	7.34	7.11	7.24	7.08	7.75	7.61
13	7.14	6.95	7.21	7.03	7.29	7.09	7.35	7.10	7.19	7.01	7.61	7.49
14	7.07	6.95	7.23	7.16	7.34	7.25	7.20	7.02	7.32	7.20	7.74	7.61
15	7.17	7.08	7.19	7.09	7.45	7.30	7.31	7.20	7.31	7.26	7.81	7.72
16	7.15	7.11	7.19	7.09	7.30	7.12	7.31	7.25	7.27	7.07	7.75	7.48
17	7.26	7.11	7.33	7.19	7.29	7.17	7.33	7.25	7.07	7.02	7.60	7.47
18	7.43	7.25	7.19	7.05	7.28	7.24	7.35	7.29	7.21	7.06	7.70	7.60
19	7.38	7.21	7.13	7.05	7.38	7.28	7.35	7.28	7.35	7.22	7.60	7.18
20	7.20	7.19	7.41	7.13	7.38	7.34	7.42	7.33	7.45	7.35	7.65	7.18
21	7.59	7.18	7.40	7.07	7.37	7.21	7.33	6.93	7.64	7.46	7.71	7.56
22	7.59	7.51	7.07	6.94	7.21	7.00	7.09	6.93	7.66	7.49	7.56	7.35
23	7.51	7.46	7.10	6.97	7.24	7.04	7.13	7.10	7.49	7.26	7.45	7.35
24	7.58	7.49	7.12	7.07	7.42	7.24	7.23	7.13	7.25	6.95	7.64	7.46
25	7.53	7.43	7.24	7.10	7.43	7.23	7.24	7.20	7.24	6.93	7.66	7.60
26	7.46	7.32	7.30	7.24	7.23	7.04	7.50	7.21	7.70	7.25	7.68	7.60
27	7.32	7.24	7.58	7.31	7.20	7.03	7.51	7.30	7.68	7.49	7.59	7.51
28	7.40	7.28	7.62	7.34	7.47	7.21	7.29	7.19	7.49	7.41	7.68	7.59
29	7.32	7.12	7.33	7.12	7.35	7.05	7.37	7.29	---	---	7.69	7.57
30	7.16	7.08	7.28	7.12	7.19	7.05	7.41	7.35	---	---	7.58	7.48
31	7.17	7.07	---	---	7.26	7.20	7.44	7.29	---	---	7.85	7.58
MONTH	7.70	6.95	7.62	6.94	7.47	6.95	7.51	6.93	7.70	6.93	7.85	7.18

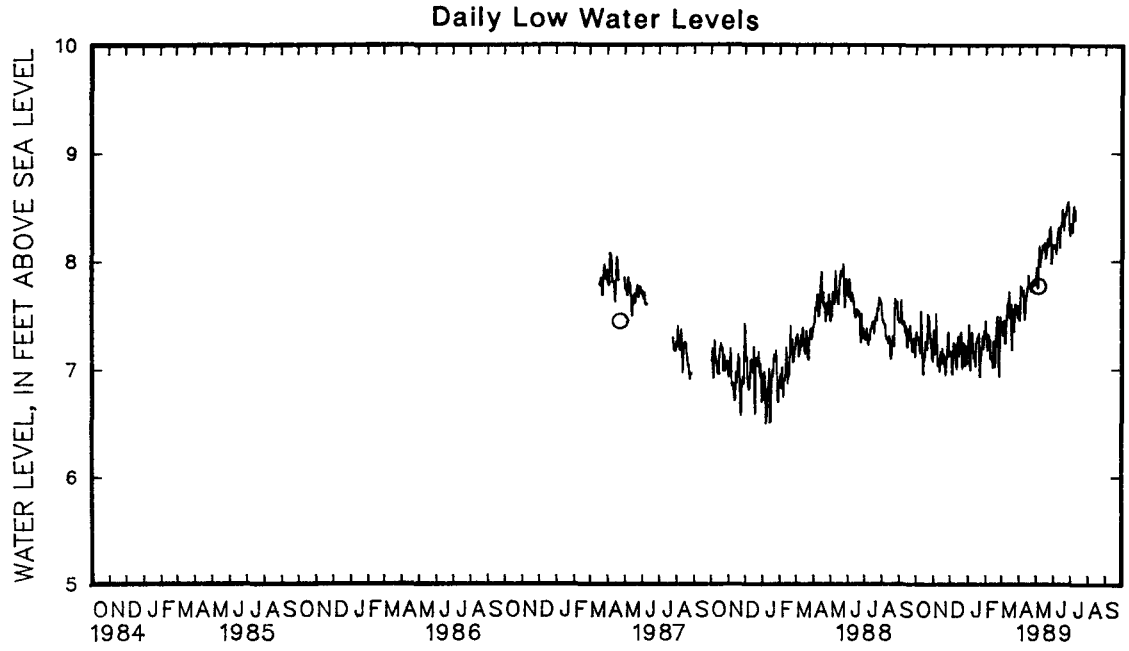
GROUND-WATER LEVELS

MARYLAND--Continued

HARFORD COUNTY--Continued

HA De 151--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.83	7.49	7.94	7.79	8.16	8.12	8.38	8.30	---	---	---	---
2	7.52	7.45	8.05	7.94	8.19	8.13	8.40	8.35	---	---	---	---
3	7.77	7.52	7.96	7.81	8.18	8.12	8.37	8.30	---	---	---	---
4	7.83	7.77	7.80	7.75	8.22	8.15	8.37	8.27	---	---	---	---
5	7.83	7.76	8.14	7.77	8.15	8.07	8.55	8.37	---	---	---	---
6	7.76	7.71	8.29	8.14	8.25	8.13	8.55	8.49	---	---	---	---
7	7.79	7.71	8.20	8.06	8.29	8.23	8.54	8.51	---	---	---	---
8	7.79	7.68	8.05	8.00	8.31	8.26	8.52	8.38	---	---	---	---
9	7.83	7.73	8.03	7.95	8.46	8.30	8.48	8.38	---	---	---	---
10	7.73	7.57	8.20	8.03	8.46	8.31	8.53	8.47	---	---	---	---
11	7.57	7.46	8.17	8.09	8.31	8.13	---	---	---	---	---	---
12	7.64	7.53	8.18	8.15	8.33	8.13	---	---	---	---	---	---
13	7.74	7.64	8.16	8.13	8.50	8.33	---	---	---	---	---	---
14	7.72	7.68	8.15	8.12	8.42	8.32	---	---	---	---	---	---
15	7.89	7.71	8.17	8.11	8.47	8.34	---	---	---	---	---	---
16	7.87	7.76	8.22	8.17	8.54	8.46	---	---	---	---	---	---
17	7.94	7.76	8.19	8.03	8.54	8.48	---	---	---	---	---	---
18	7.94	7.87	8.14	8.03	8.48	8.35	---	---	---	---	---	---
19	7.87	7.76	8.15	8.08	8.35	8.29	---	---	---	---	---	---
20	7.82	7.75	8.22	8.14	8.43	8.34	---	---	---	---	---	---
21	7.87	7.79	8.29	8.21	8.47	8.42	---	---	---	---	---	---
22	7.85	7.76	8.21	8.14	8.47	8.44	---	---	---	---	---	---
23	7.80	7.72	8.37	8.15	8.54	8.43	---	---	---	---	---	---
24	7.87	7.79	8.39	8.29	8.53	8.50	---	---	---	---	---	---
25	7.84	7.77	8.32	8.22	8.57	8.50	---	---	---	---	---	---
26	7.84	7.78	8.43	8.32	8.59	8.54	---	---	---	---	---	---
27	7.88	7.79	8.36	8.16	8.60	8.55	---	---	---	---	---	---
28	7.86	7.78	8.16	7.98	8.58	8.50	---	---	---	---	---	---
29	7.98	7.82	8.14	7.98	8.50	8.26	---	---	---	---	---	---
30	7.93	7.80	8.27	8.14	8.32	8.24	---	---	---	---	---	---
31	---	---	8.24	8.15	---	---	---	---	---	---	---	---
MONTH	7.98	7.45	8.43	7.75	8.60	8.07	---	---	---	---	---	---



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--HA De 181. SITE ID.--392606076145801. PERMIT NUMBER.--HA-81-4134.
LOCATION.--Lat 39°26'06", long 76°14'58", Hydrologic Unit 02060003. northeast end of Kennard Ave. at Willoughby Beach, Crestwood.
Owner: U.S. Geological Survey.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 290 ft; casing diameter 4 in., to 264 ft and 269 to 275 ft and 260 to 290 ft; screen diameter 4 in. from 264 to 269 ft and 275 to 280 ft.
INSTRUMENTATION.--Equipped with digital water-level recorder--15-minute recorder interval from May 24, 1988 to July 11, 1989. Measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 12.22 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 2.10 ft above land-surface datum.
REMARKS.--Harford County Coastal Plain Project observation well.
PERIOD OF RECORD.--May 1988 to July 1989.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.83 ft above sea level, July 5, 1989; lowest measured, 4.07 ft above sea level, Feb. 24, 1989.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	5.07	4.72	5.04	4.72	4.97	4.60	4.84	4.57	5.16	4.74	5.18	4.78
2	5.21	4.88	5.18	4.78	4.86	4.54	5.14	4.76	4.96	4.65	4.90	4.55
3	5.18	4.63	4.85	4.50	4.88	4.62	5.19	4.84	5.13	4.64	4.88	4.60
4	4.97	4.74	4.82	4.53	4.76	4.18	4.94	4.31	4.87	4.41	5.07	4.62
5	5.13	4.81	5.43	4.68	4.82	4.44	4.97	4.32	4.95	4.60	5.32	4.76
6	4.97	4.56	5.41	5.06	4.97	4.50	5.03	4.77	5.11	4.69	5.00	4.62
7	4.78	4.53	5.08	4.72	4.86	4.44	5.11	4.64	4.90	4.59	4.85	4.50
8	4.79	4.46	5.01	4.59	4.92	4.44	5.40	4.83	4.99	4.56	4.84	4.56
9	5.36	4.73	4.80	4.41	5.06	4.57	5.20	4.66	4.90	4.24	4.99	4.53
10	5.38	5.07	5.20	4.58	5.06	4.34	4.91	4.51	4.68	4.36	5.05	4.72
11	5.25	4.72	4.97	4.47	4.80	4.25	4.88	4.41	4.92	4.45	5.32	4.89
12	4.83	4.50	4.86	4.32	5.00	4.62	5.09	4.48	4.73	4.34	5.35	4.79
13	4.64	4.24	5.00	4.58	5.06	4.57	5.09	4.29	4.80	4.30	5.19	4.68
14	4.84	4.27	5.00	4.56	5.31	4.57	4.74	4.30	5.02	4.55	5.32	4.94
15	4.84	4.48	4.99	4.48	4.68	4.30	4.99	4.64	4.95	4.51	5.52	4.96
16	4.84	4.41	4.98	4.51	5.03	4.67	4.87	4.52	4.63	4.34	5.02	4.68
17	4.93	4.64	5.10	4.58	4.96	4.63	5.11	4.57	4.63	4.19	5.13	4.77
18	5.07	4.80	4.73	4.45	5.09	4.80	4.97	4.51	4.74	4.42	5.22	4.79
19	5.00	4.56	4.74	4.40	5.12	4.71	5.01	4.65	5.01	4.54	4.79	4.32
20	4.89	4.56	5.28	4.57	4.96	4.60	4.99	4.71	5.01	4.73	5.27	4.51
21	5.05	4.66	5.01	4.39	---	---	4.68	4.13	5.35	4.78	5.25	4.77
22	5.27	4.89	4.71	4.27	---	---	4.70	4.36	5.20	4.77	4.82	4.58
23	5.17	4.81	4.91	4.40	5.01	4.48	4.76	4.38	4.91	4.51	4.93	4.68
24	5.29	4.98	4.92	4.50	5.28	4.66	4.94	4.51	4.61	4.07	5.09	4.69
25	5.24	4.80	5.11	4.60	5.12	4.62	4.88	4.55	5.07	4.17	5.16	4.88
26	5.10	4.72	5.12	4.71	4.84	4.35	5.19	4.58	5.40	4.99	5.21	4.79
27	5.05	4.61	5.41	4.91	5.02	4.32	5.17	4.61	5.15	4.76	5.04	4.72
28	5.07	4.78	5.38	4.74	5.24	4.85	4.93	4.44	5.03	4.67	5.20	4.87
29	4.97	4.48	4.93	4.50	4.85	4.28	4.97	4.68	---	---	5.07	4.67
30	4.90	4.46	4.97	4.72	4.89	4.44	5.09	4.68	---	---	5.06	4.64
31	4.91	4.45	---	---	4.98	4.60	5.14	4.67	---	---	5.53	5.07
MONTH	5.38	4.24	5.43	4.27	---	---	5.40	4.13	5.40	4.07	5.53	4.32

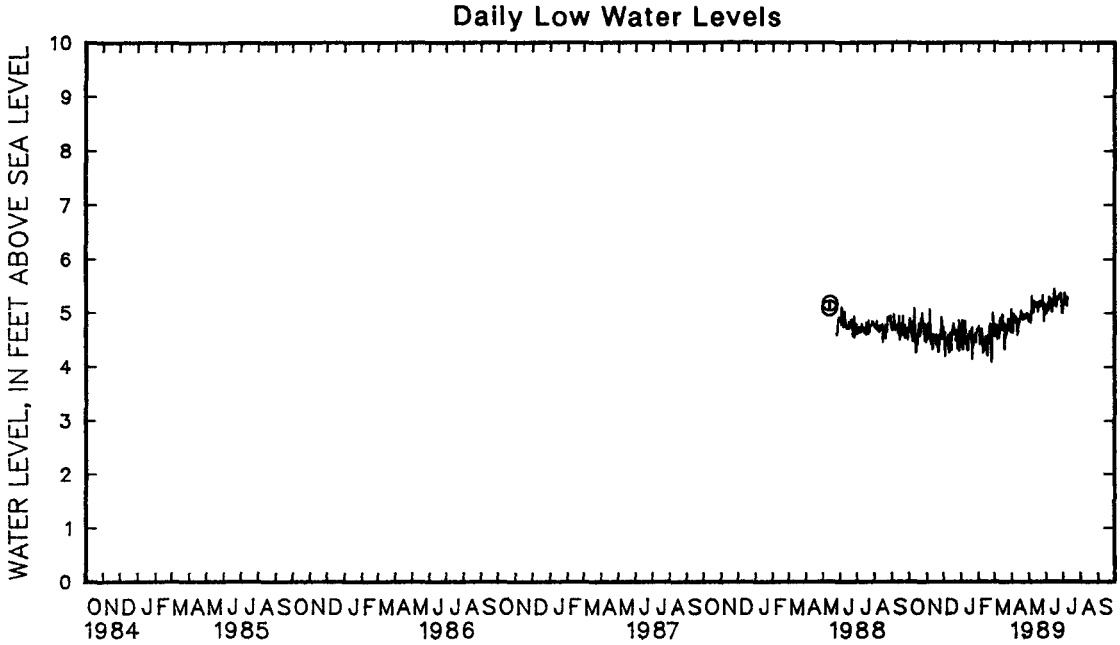
GROUND-WATER LEVELS

MARYLAND--Continued

HARFORD COUNTY--Continued

HA De 181--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	5.16	4.69	5.29	4.89	5.42	4.98	5.43	5.12	---	---	---	---
2	5.05	4.63	5.57	4.94	5.53	5.05	5.43	5.15	---	---	---	---
3	5.36	4.92	5.26	4.82	5.49	5.06	5.43	5.17	---	---	---	---
4	5.38	4.97	5.15	4.81	5.68	5.16	5.72	5.37	---	---	---	---
5	5.25	4.89	5.70	4.96	5.46	5.04	5.83	5.28	---	---	---	---
6	5.18	4.85	5.79	5.33	5.73	5.30	5.65	5.27	---	---	---	---
7	5.31	4.92	5.55	5.08	5.62	5.17	5.63	5.28	---	---	---	---
8	5.43	4.81	5.53	5.09	5.61	5.23	5.42	5.13	---	---	---	---
9	5.41	4.88	5.41	5.00	5.69	5.27	5.67	5.29	---	---	---	---
10	5.11	4.65	5.59	5.21	5.69	5.13	5.57	5.26	---	---	---	---
11	4.97	4.59	5.58	5.15	5.36	5.01	---	---	---	---	---	---
12	5.09	4.75	5.55	5.20	5.45	5.12	---	---	---	---	---	---
13	5.19	4.86	5.50	5.17	5.80	5.17	---	---	---	---	---	---
14	5.11	4.82	5.46	5.11	5.49	5.17	---	---	---	---	---	---
15	5.26	4.93	5.44	5.14	5.73	5.36	---	---	---	---	---	---
16	5.20	4.93	5.54	5.19	5.82	5.44	---	---	---	---	---	---
17	5.37	5.04	5.37	5.01	5.81	5.29	---	---	---	---	---	---
18	5.33	4.96	5.56	5.14	5.55	5.15	---	---	---	---	---	---
19	5.26	4.88	5.55	5.10	5.55	5.12	---	---	---	---	---	---
20	5.28	4.96	5.56	5.17	5.63	5.23	---	---	---	---	---	---
21	5.31	4.96	5.67	5.22	5.66	5.28	---	---	---	---	---	---
22	5.22	4.88	5.50	5.12	5.59	5.24	---	---	---	---	---	---
23	5.23	4.90	5.67	5.20	5.68	5.29	---	---	---	---	---	---
24	5.27	4.92	5.70	5.21	5.63	5.30	---	---	---	---	---	---
25	5.29	4.91	5.63	5.20	5.67	5.34	---	---	---	---	---	---
26	5.32	4.94	5.80	5.32	5.74	5.35	---	---	---	---	---	---
27	5.34	4.98	5.46	4.99	5.80	5.36	---	---	---	---	---	---
28	5.35	4.92	5.16	4.83	5.78	5.23	---	---	---	---	---	---
29	5.46	4.96	5.34	5.02	5.57	4.99	---	---	---	---	---	---
30	5.21	4.84	5.55	5.15	5.42	4.99	---	---	---	---	---	---
31	---	---	5.47	4.99	---	---	---	---	---	---	---	---
MONTH	5.46	4.59	5.80	4.81	5.82	4.98	---	---	---	---	---	---



5 YEAR HYDROGRAPH

OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--HA De 182. SITE ID.--392606076145802. PERMIT NUMBER.--HA-81-4135.
LOCATION.--Lat 39°26'06", long 76°14'58", Hydrologic Unit 02060003, northeast end of Kennard Ave. at Willoughby Beach, Crestwood.
Owner: U.S. Geological Survey.
AQUIFER.--Talbot Formation of Pleistocene age. Aquifer code: 112TLBT.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 40 ft; casing diameter 4 in., to 30 ft; screen diameter 4 in. from 30 to 40 ft.
INSTRUMENTATION.--Equipped with digital water-level recorder--15-minute recorder interval from July 21, 1988 to July 11, 1989. Measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 12.29 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 2.51 ft above land-surface datum.
REMARKS.--Harford County Coastal Plain Project observation well.
PERIOD OF RECORD.--May 1988 to July 1989.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.88 ft above sea level, May 26, 1989; lowest measured, 1.11 ft above sea level, Dec. 4, 1988.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	2.65	1.88	2.51	1.83	2.52	1.80	2.38	1.80	3.08	2.23	3.64	2.76
2	2.82	2.03	2.65	1.82	2.45	1.79	2.88	2.10	2.84	2.10	3.08	2.30
3	2.68	1.59	1.95	1.41	2.40	1.93	2.77	2.13	3.21	2.17	3.09	2.46
4	2.34	1.76	2.10	1.49	2.12	1.11	2.28	1.13	2.88	1.83	3.54	2.55
5	2.76	2.06	3.01	1.78	2.51	1.78	2.87	1.39	2.99	2.22	3.82	2.82
6	2.41	1.63	2.90	2.19	2.74	1.80	2.71	2.08	3.22	2.37	3.18	2.29
7	2.10	1.59	2.18	1.71	2.52	1.97	2.93	1.90	2.85	2.09	3.16	2.16
8	2.22	1.46	2.40	1.43	2.39	1.67	3.24	2.22	3.03	2.15	3.17	2.54
9	3.14	2.11	2.13	1.26	2.66	1.74	2.94	1.81	2.91	1.58	3.44	2.46
10	2.95	2.24	2.77	1.67	2.87	1.88	2.59	1.71	2.62	1.90	3.47	2.76
11	2.59	1.55	2.36	1.34	2.76	1.35	2.54	1.68	3.02	2.06	3.96	3.07
12	1.95	1.40	2.39	1.20	2.64	1.38	2.93	1.80	2.64	1.95	3.82	2.69
13	1.90	1.16	2.49	1.72	2.74	1.99	2.96	1.52	2.93	1.88	3.69	2.53
14	2.44	1.37	2.44	1.52	3.02	1.77	2.60	1.64	3.19	2.16	3.87	3.06
15	2.44	1.58	2.45	1.41	3.17	1.62	2.94	2.16	3.01	2.05	4.07	2.99
16	2.33	1.45	2.34	1.50	2.21	1.19	2.76	1.98	2.50	1.91	3.21	2.53
17	2.48	1.77	2.58	1.56	2.60	1.91	3.26	2.16	2.75	1.81	3.56	2.80
18	2.60	1.90	1.90	1.45	2.53	1.83	2.89	1.94	2.84	2.20	3.57	2.81
19	2.33	1.44	2.12	1.45	2.74	1.97	3.07	2.27	3.29	2.37	2.78	1.97
20	2.24	1.65	2.88	1.72	2.73	1.86	2.91	2.38	3.15	2.57	3.97	2.55
21	2.48	1.84	2.33	1.38	2.29	1.61	2.37	1.36	3.64	2.54	3.69	2.83
22	2.61	1.83	2.23	1.26	2.24	1.25	2.66	2.04	3.38	2.49	3.11	2.40
23	2.56	1.79	2.53	1.58	2.75	1.81	2.69	1.92	2.90	2.22	3.40	2.83
24	2.68	2.07	2.56	1.61	3.03	1.94	3.04	2.14	2.52	1.60	3.53	2.68
25	2.75	1.70	2.84	1.86	2.79	1.72	2.90	2.20	3.74	1.85	3.80	3.07
26	2.48	1.65	2.73	1.86	2.34	1.42	3.18	2.20	4.08	3.26	3.95	2.96
27	2.58	1.58	3.01	2.21	2.78	1.48	3.15	2.03	3.37	2.66	3.64	2.85
28	2.50	1.86	2.92	1.69	2.91	2.28	2.86	1.84	3.31	2.48	3.91	3.14
29	2.34	1.35	2.21	1.59	2.26	1.18	2.91	2.19	---	---	3.60	2.74
30	2.35	1.47	2.53	2.09	2.51	1.68	2.99	2.11	---	---	3.54	2.69
31	2.36	1.53	---	---	2.68	1.88	3.19	2.18	---	---	4.32	3.47
MONTH	3.14	1.16	3.01	1.20	3.17	1.11	3.26	1.13	4.08	1.58	4.32	1.97

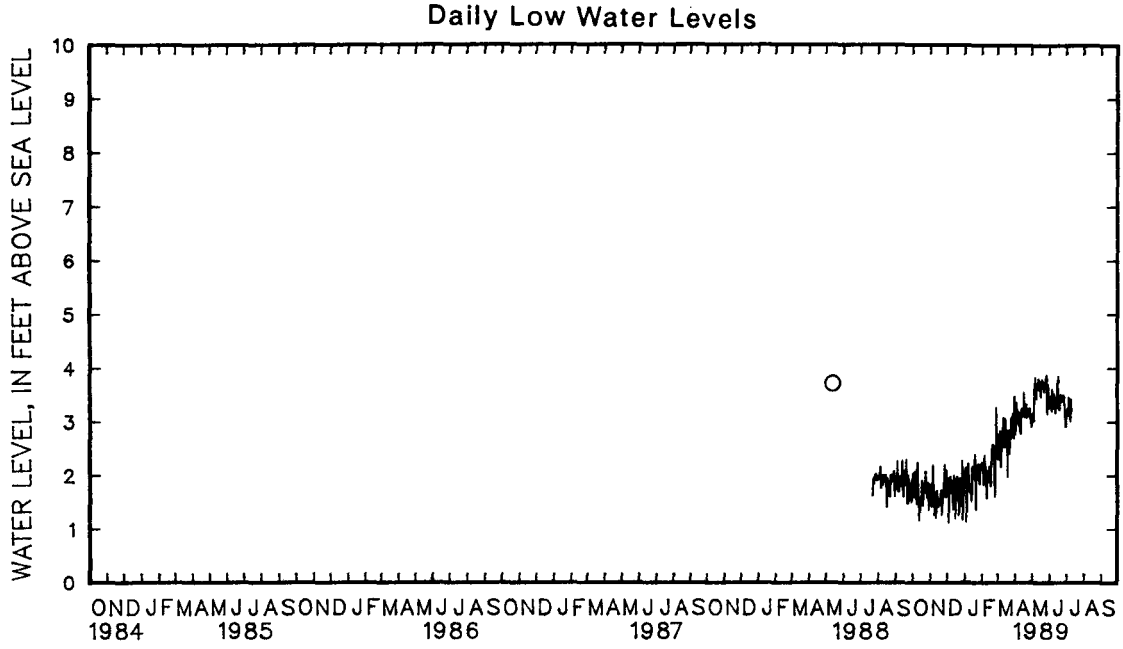
GROUND WATER LEVELS

MARYLAND--Continued

HARFORD COUNTY--Continued

HA De 182--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	3.59	2.76	3.77	2.99	4.19	3.26	4.13	3.18	---	---	---	---
2	3.73	2.84	4.18	3.14	4.43	3.43	4.23	3.20	---	---	---	---
3	4.11	3.36	3.89	3.06	4.31	3.38	4.15	3.25	---	---	---	---
4	4.05	3.24	3.86	3.02	4.55	3.47	4.10	3.12	---	---	---	---
5	3.83	3.03	4.51	3.37	4.13	3.20	4.38	3.46	---	---	---	---
6	3.72	2.99	4.77	3.83	4.48	3.61	3.92	3.15	---	---	---	---
7	4.11	3.19	4.48	3.54	4.21	3.26	3.97	3.27	---	---	---	---
8	4.28	2.92	4.55	3.59	4.23	3.43	3.84	3.01	---	---	---	---
9	4.27	3.15	4.33	3.43	4.30	3.51	4.08	3.43	---	---	---	---
10	3.80	2.82	4.50	3.71	4.26	3.29	4.13	3.20	---	---	---	---
11	3.66	2.77	4.60	3.62	3.79	3.17	---	---	---	---	---	---
12	3.88	3.17	4.51	3.79	4.13	3.45	---	---	---	---	---	---
13	3.95	3.24	4.42	3.75	4.63	3.28	---	---	---	---	---	---
14	3.73	3.13	4.34	3.60	4.00	3.27	---	---	---	---	---	---
15	3.90	3.10	4.29	3.61	4.49	3.75	---	---	---	---	---	---
16	3.87	3.10	4.40	3.71	4.58	3.85	---	---	---	---	---	---
17	4.19	3.55	4.13	3.46	4.48	3.46	---	---	---	---	---	---
18	3.95	3.16	4.71	3.78	4.07	3.25	---	---	---	---	---	---
19	3.89	3.09	4.65	3.70	4.19	3.22	---	---	---	---	---	---
20	4.08	3.32	4.57	3.74	4.31	3.48	---	---	---	---	---	---
21	4.09	3.31	4.69	3.71	4.29	3.50	---	---	---	---	---	---
22	3.90	3.08	4.39	3.56	4.11	3.38	---	---	---	---	---	---
23	3.97	3.22	4.64	3.71	4.20	3.40	---	---	---	---	---	---
24	4.00	3.13	4.59	3.74	4.13	3.47	---	---	---	---	---	---
25	4.01	3.11	4.72	3.80	4.16	3.50	---	---	---	---	---	---
26	4.04	3.19	4.88	3.87	4.27	3.46	---	---	---	---	---	---
27	4.01	3.25	4.20	3.36	4.36	3.47	---	---	---	---	---	---
28	3.99	3.12	3.76	3.15	4.32	3.20	---	---	---	---	---	---
29	4.18	3.04	4.28	3.70	3.95	2.91	---	---	---	---	---	---
30	3.58	2.90	4.61	3.64	3.96	2.91	---	---	---	---	---	---
31	---	---	4.29	3.28	---	---	---	---	---	---	---	---
MONTH	4.28	2.76	4.88	2.99	4.63	2.91	---	---	---	---	---	---



5 YEAR HYDROGRAPH

OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--HA De 183. SITE ID.--392606076145803. PERMIT NUMBER.--HA-81-4577.
LOCATION.--Lat 39°26'06", long 76°14'58", Hydrologic Unit 02060003, northeast end of Kennard Ave. at Willoughby Beach, Crestwood
Owner: U.S. Geological Survey.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 175 ft; casing diameter 4 in., to 155 ft; and 165 to 175 ft; screen diameter 4 in. from 155 to 165 ft.
INSTRUMENTATION.--Equipped with digital water-level recorder--15-minute recorder interval from May 24, 1988 to July 11, 1989. Measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 12.53 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 2.53 ft above land-surface datum.
REMARKS.--Harford County Coastal Plain observation well.
PERIOD OF RECORD.--May 1988 to July 1989.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.24 ft above sea level, July 5, 1989; lowest measured, 1.08 ft above sea level, Feb. 24, 1989.

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	3.20	2.59	2.99	2.51	2.94	2.29	2.72	2.25	3.26	2.56	3.42	2.76
2	3.38	2.76	3.16	2.49	2.69	2.25	3.23	2.57	2.87	2.29	2.82	2.24
3	3.22	2.19	2.54	2.05	2.74	2.37	3.18	2.70	3.23	2.38	2.80	2.32
4	2.80	2.36	2.62	2.09	2.55	1.52	2.73	1.58	2.78	1.95	3.20	2.40
5	3.30	2.70	3.66	2.40	2.77	1.97	3.01	1.60	2.98	2.37	3.57	2.74
6	3.11	2.30	3.72	3.14	3.01	2.20	3.09	2.62	3.26	2.55	3.14	2.29
7	2.65	2.21	3.11	2.49	2.89	2.47	3.25	2.46	2.99	2.27	2.75	2.01
8	2.66	2.06	2.98	2.25	2.69	2.10	3.69	2.81	2.99	2.29	2.86	2.39
9	3.82	2.63	2.61	1.91	2.96	2.19	3.45	2.39	2.91	1.64	3.14	2.30
10	3.78	3.22	3.43	2.30	3.19	2.34	2.85	2.12	2.43	1.83	3.21	2.69
11	3.41	2.39	3.10	2.09	3.11	1.88	2.76	2.04	2.84	2.01	3.68	2.94
12	2.53	2.01	2.85	1.89	2.83	1.76	3.06	2.13	2.54	1.99	3.57	2.68
13	2.34	1.61	3.14	2.42	3.09	2.45	3.08	1.81	2.77	1.88	3.29	2.37
14	2.83	1.81	3.09	2.35	3.36	2.37	2.56	1.78	3.18	2.38	3.56	2.91
15	2.83	2.22	3.07	2.14	3.55	2.30	2.98	2.34	2.89	2.13	3.80	2.96
16	2.83	2.12	2.94	2.21	2.53	1.71	2.79	2.18	2.45	1.96	3.01	2.40
17	2.97	2.51	3.15	2.31	2.97	2.44	3.26	2.34	2.51	1.73	3.22	2.57
18	3.20	2.73	2.53	2.10	2.90	2.33	2.88	2.15	2.68	2.18	3.29	2.67
19	3.03	2.19	2.59	2.07	3.21	2.64	3.06	2.40	3.17	2.35	2.65	1.64
20	2.79	2.35	3.34	2.31	3.15	2.45	2.95	2.57	3.11	2.69	3.58	2.05
21	3.08	2.52	2.98	1.97	2.73	2.19	2.53	1.38	3.53	2.67	3.45	2.63
22	3.25	2.65	2.50	1.70	2.45	1.67	2.62	1.94	3.36	2.53	2.73	2.25
23	3.19	2.58	2.87	2.08	3.07	2.19	2.62	2.05	2.77	2.05	3.00	2.52
24	3.36	2.90	2.93	2.13	3.42	2.52	3.04	2.24	2.20	1.08	3.11	2.49
25	3.28	2.52	3.30	2.46	3.26	2.29	2.94	2.43	3.30	1.29	3.31	2.75
26	3.10	2.40	3.25	2.55	2.74	1.87	3.35	2.45	3.88	3.23	3.47	2.72
27	3.06	2.27	3.59	2.93	3.03	1.89	3.32	2.32	3.36	2.64	3.09	2.49
28	3.06	2.59	3.58	2.40	3.39	2.79	2.92	2.03	3.04	2.41	3.32	2.75
29	2.92	1.96	2.71	2.06	2.85	1.69	2.98	2.45	---	---	3.03	2.33
30	2.72	2.02	2.93	2.52	2.82	2.03	2.99	2.28	---	---	2.94	2.16
31	2.84	2.07	---	---	3.02	2.41	3.19	2.33	---	---	3.81	2.96
MONTH	3.82	1.61	3.72	1.70	3.55	1.52	3.69	1.38	3.88	1.08	3.81	1.64

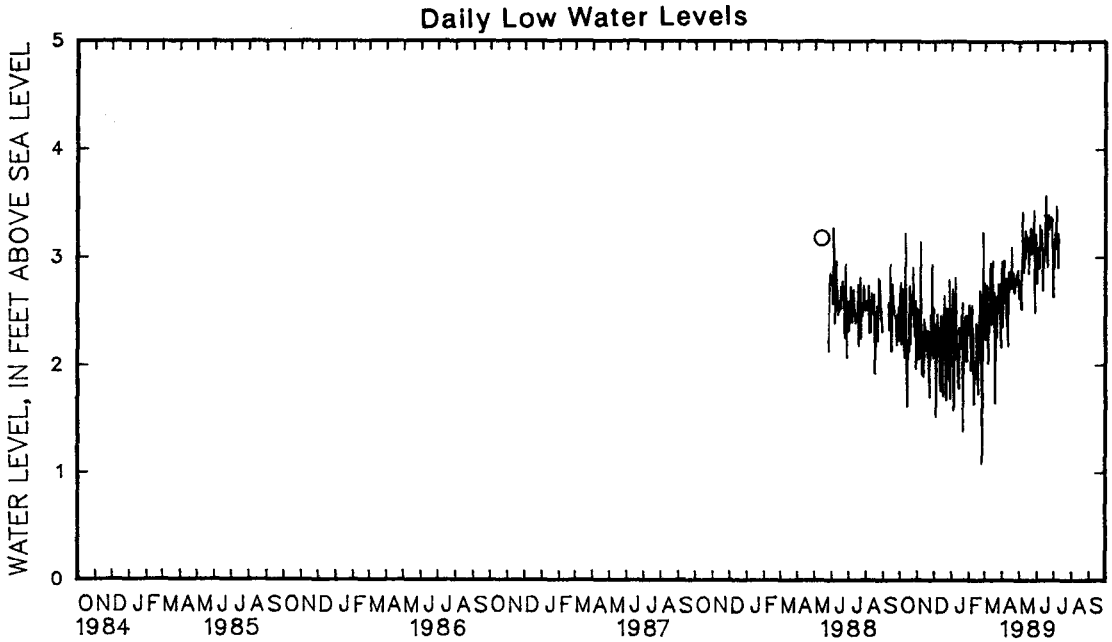
GROUND-WATER LEVELS

MARYLAND--Continued

HARFORD COUNTY--Continued

HA De 183--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	3.23	2.37	3.31	2.68	3.45	2.76	3.75	2.97	---	---	---	---
2	3.08	2.35	3.68	2.78	3.73	2.91	3.91	3.08	---	---	---	---
3	3.61	2.93	3.27	2.56	3.69	2.99	3.92	3.22	---	---	---	---
4	3.59	2.97	3.16	2.52	3.96	3.09	3.86	3.08	---	---	---	---
5	3.38	2.73	3.99	2.82	3.61	2.90	4.24	3.47	---	---	---	---
6	3.12	2.57	4.23	3.42	4.04	3.30	3.79	3.18	---	---	---	---
7	3.45	2.79	3.73	2.99	3.77	3.07	3.74	3.21	---	---	---	---
8	3.62	2.43	3.72	2.93	3.80	3.17	3.61	2.90	---	---	---	---
9	3.69	2.80	3.56	2.86	3.87	3.25	3.77	3.21	---	---	---	---
10	3.12	2.35	3.81	3.17	3.87	2.99	3.95	3.14	---	---	---	---
11	2.98	2.17	3.77	2.99	3.30	2.69	---	---	---	---	---	---
12	3.23	2.67	3.80	3.24	3.61	2.89	---	---	---	---	---	---
13	3.39	2.86	3.75	3.21	4.15	3.04	---	---	---	---	---	---
14	3.17	2.71	3.66	3.06	3.54	3.03	---	---	---	---	---	---
15	3.36	2.76	3.58	3.06	4.02	3.38	---	---	---	---	---	---
16	3.28	2.75	3.69	3.09	4.19	3.57	---	---	---	---	---	---
17	3.65	3.09	3.37	2.85	4.17	3.25	---	---	---	---	---	---
18	3.50	2.87	3.89	3.18	3.67	3.04	---	---	---	---	---	---
19	3.31	2.71	3.88	3.11	3.69	2.91	---	---	---	---	---	---
20	3.44	2.85	3.84	3.18	3.89	3.21	---	---	---	---	---	---
21	3.46	2.85	4.00	3.27	3.96	3.39	---	---	---	---	---	---
22	3.29	2.67	3.66	3.03	3.81	3.26	---	---	---	---	---	---
23	3.31	2.70	3.95	3.15	3.89	3.28	---	---	---	---	---	---
24	3.44	2.79	3.91	3.17	3.81	3.29	---	---	---	---	---	---
25	3.39	2.75	3.88	3.11	3.88	3.37	---	---	---	---	---	---
26	3.44	2.81	4.21	3.43	3.95	3.34	---	---	---	---	---	---
27	3.46	2.84	3.52	2.80	4.04	3.35	---	---	---	---	---	---
28	3.51	2.76	3.03	2.48	4.00	3.07	---	---	---	---	---	---
29	3.73	2.88	3.51	2.93	3.61	2.63	---	---	---	---	---	---
30	3.18	2.62	3.87	3.21	3.48	2.63	---	---	---	---	---	---
31	---	---	3.68	2.78	---	---	---	---	---	---	---	---
MONTH	3.73	2.17	4.23	2.48	4.19	2.63	---	---	---	---	---	---



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--HA De 197. SITE ID.--392819076130901. PERMIT NUMBER.--HA-81-4140.
LOCATION.--Lat 39°28'19", long 76°13'09", Hydrologic Unit 02060003, northwest end of Fords Lane, Perryman.
Owner: U.S. Geological Survey.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 95 ft; casing diameter 4 in., to 75 ft; and 85 to 95 ft; screen diameter 4 in. from 75 to 85 ft.
INSTRUMENTATION.--Equipped with digital water-level recorder--15-minute recorder interval from Jan. 17, 1989 to July 11, 1989. Measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 19.08 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 1.78 ft above land-surface datum.
REMARKS.--Harford County Coastal Plain Project observation well.
PERIOD OF RECORD.--May 1988 to July 1989.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.43 ft above sea level, July 5, 1989; lowest measured, 6.64 ft above sea level, Nov. 9, 1988.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	---	---	---	---	---	---	7.28	6.78	7.55	6.98
2	---	---	---	---	---	---	---	---	7.13	6.75	7.19	6.89
3	---	---	---	---	---	---	---	---	7.38	6.76	7.17	6.91
4	---	---	---	---	---	---	---	---	7.13	6.71	7.45	6.92
5	---	---	---	---	---	---	---	---	7.19	6.76	7.65	6.99
6	---	---	---	---	---	---	---	---	7.34	6.81	7.20	6.95
7	---	---	---	---	---	---	---	---	7.09	6.75	7.22	6.95
8	---	---	---	---	---	---	---	---	7.20	6.76	7.22	6.94
9	---	---	---	---	---	---	---	---	7.13	6.70	7.39	6.94
10	---	---	---	---	---	---	---	---	6.91	6.72	7.40	6.97
11	---	---	---	---	---	---	---	---	7.16	6.75	7.72	7.13
12	---	---	---	---	---	---	---	---	6.95	6.71	7.61	6.97
13	---	---	---	---	---	---	---	---	7.12	6.70	7.55	6.97
14	---	---	---	---	---	---	---	---	7.31	6.75	7.64	7.12
15	---	---	---	---	---	---	---	---	7.18	6.74	7.80	7.08
16	---	---	---	---	---	---	---	---	6.87	6.73	7.25	6.97
17	---	---	---	---	---	---	---	---	6.98	6.71	7.45	7.01
18	---	---	---	---	---	---	7.13	6.73	7.03	6.77	7.46	7.04
19	---	---	---	---	---	---	7.24	6.78	7.31	6.80	7.03	6.93
20	---	---	---	---	---	---	7.17	6.82	7.24	6.88	7.67	6.95
21	---	---	---	---	---	---	6.86	6.67	7.56	6.87	7.51	7.04
22	---	---	---	---	---	---	6.94	6.70	7.37	6.91	7.15	6.96
23	---	---	---	---	---	---	6.97	6.70	7.10	6.88	7.32	6.99
24	---	---	---	---	---	---	7.17	6.73	6.91	6.88	7.38	7.00
25	---	---	---	---	---	---	7.11	6.72	7.51	6.88	7.52	7.10
26	---	---	---	---	---	---	7.33	6.72	7.75	7.24	7.61	7.05
27	---	---	---	---	---	---	7.30	6.72	7.34	6.98	7.43	7.05
28	---	---	---	---	---	---	7.12	6.70	7.34	6.95	7.60	7.14
29	---	---	---	---	---	---	7.15	6.76	---	---	7.39	7.06
30	---	---	---	---	---	---	7.22	6.78	---	---	7.36	7.07
31	---	---	---	---	---	---	7.36	6.78	---	---	7.86	7.32
MONTH	---	---	---	---	---	---	---	---	7.75	6.70	7.86	6.89

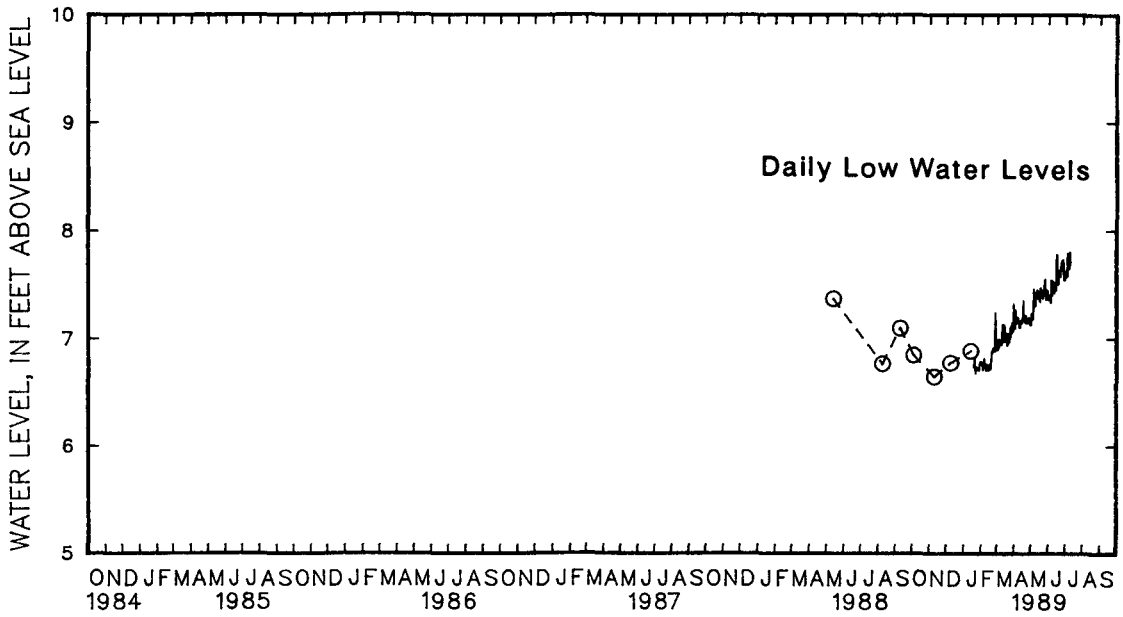
GROUND WATER LEVELS

MARYLAND--Continued

HARFORD COUNTY--Continued

HA De 197--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.41	7.10	7.58	7.13	7.83	7.36	8.16	7.58	---	---	---	---
2	7.51	7.09	7.87	7.23	7.99	7.39	8.26	7.60	---	---	---	---
3	7.75	7.26	7.61	7.19	7.93	7.36	8.22	7.63	---	---	---	---
4	7.71	7.19	7.58	7.18	8.11	7.40	8.20	7.58	---	---	---	---
5	7.57	7.14	7.99	7.26	7.87	7.33	8.43	7.79	---	---	---	---
6	7.51	7.17	8.17	7.46	8.13	7.54	8.15	7.67	---	---	---	---
7	7.74	7.19	7.91	7.32	7.99	7.40	8.16	7.70	---	---	---	---
8	7.85	7.17	7.96	7.36	8.02	7.47	8.07	7.65	---	---	---	---
9	7.83	7.16	7.84	7.30	8.06	7.53	8.23	7.80	---	---	---	---
10	7.54	7.10	7.92	7.42	8.02	7.44	8.25	7.69	---	---	---	---
11	7.42	7.10	8.00	7.40	7.71	7.42	---	---	---	---	---	---
12	7.57	7.14	7.93	7.45	7.92	7.51	---	---	---	---	---	---
13	7.61	7.16	7.88	7.43	8.23	7.45	---	---	---	---	---	---
14	7.50	7.14	7.82	7.37	7.87	7.45	---	---	---	---	---	---
15	7.59	7.18	7.80	7.37	8.17	7.67	---	---	---	---	---	---
16	7.57	7.17	7.88	7.43	8.27	7.78	---	---	---	---	---	---
17	7.78	7.35	7.70	7.34	8.23	7.60	---	---	---	---	---	---
18	7.64	7.17	8.05	7.47	7.99	7.50	---	---	---	---	---	---
19	7.61	7.16	8.03	7.41	8.07	7.51	---	---	---	---	---	---
20	7.70	7.21	7.99	7.44	8.14	7.60	---	---	---	---	---	---
21	7.70	7.21	8.06	7.42	8.16	7.63	---	---	---	---	---	---
22	7.57	7.14	7.90	7.37	8.07	7.58	---	---	---	---	---	---
23	7.62	7.18	8.06	7.45	8.20	7.63	---	---	---	---	---	---
24	7.64	7.14	7.99	7.45	8.10	7.68	---	---	---	---	---	---
25	7.66	7.15	8.09	7.50	8.14	7.72	---	---	---	---	---	---
26	7.68	7.16	8.20	7.55	8.18	7.71	---	---	---	---	---	---
27	7.68	7.19	7.84	7.40	8.30	7.73	---	---	---	---	---	---
28	7.68	7.15	7.53	7.36	8.28	7.61	---	---	---	---	---	---
29	7.79	7.14	7.84	7.45	8.06	7.54	---	---	---	---	---	---
30	7.46	7.12	8.06	7.44	8.04	7.54	---	---	---	---	---	---
31	---	---	7.88	7.37	---	---	---	---	---	---	---	---
MONTH	7.85	7.09	8.20	7.13	8.30	7.33	---	---	---	---	---	---



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--HA De 198. SITE ID.--392819076130090 2. PERMIT NUMBER.--HA-81-4141.
LOCATION.--Lat 39°28'19", long 76°13'09", Hydrologic Unit 02060003, northwest end of Fords Lane, Perryman.
Owner: U.S. Geological Survey.
AQUIFER.--Talbot Formation of Pleistocene age. Aquifer code: 112TLBT.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 29 ft; casing diameter 4 in., to 9 ft; screen diameter 4 in. from 9 to 19 ft.
INSTRUMENTATION.--Equipped with digital water-level recorder--15-minute recorder interval Jan. 17, 1989 to July 11, 1989. Measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 18.92 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 1.49 ft above land-surface datum.
REMARKS.--Harford County Coastal Plain Project observation well.
PERIOD OF RECORD.--May 1988 to July 1989.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.77 ft above sea level, May 24, 1989; lowest measured, 10.08 ft above sea level, Nov. 9, 1988.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	---	---	---	---	---	---	11.33	11.27	11.91	11.84
2	---	---	---	---	---	---	---	---	11.27	11.21	11.90	11.83
3	---	---	---	---	---	---	---	---	11.33	11.22	11.89	11.84
4	---	---	---	---	---	---	---	---	11.53	11.34	11.85	11.81
5	---	---	---	---	---	---	---	---	11.57	11.52	11.92	11.83
6	---	---	---	---	---	---	---	---	11.59	11.52	12.11	11.81
7	---	---	---	---	---	---	---	---	11.53	11.46	12.14	12.07
8	---	---	---	---	---	---	---	---	11.51	11.45	12.16	12.08
9	---	---	---	---	---	---	---	---	11.45	11.37	12.26	12.13
10	---	---	---	---	---	---	---	---	11.44	11.38	12.27	12.23
11	---	---	---	---	---	---	---	---	11.43	11.38	12.34	12.27
12	---	---	---	---	---	---	---	---	11.38	11.23	12.36	12.14
13	---	---	---	---	---	---	---	---	11.29	11.21	12.22	12.13
14	---	---	---	---	---	---	---	---	11.48	11.29	12.21	12.16
15	---	---	---	---	---	---	---	---	11.70	11.48	12.22	12.05
16	---	---	---	---	---	---	---	---	11.76	11.68	12.04	11.93
17	---	---	---	---	---	---	---	---	11.81	11.74	12.07	11.97
18	---	---	---	---	---	---	11.56	11.48	11.80	11.76	12.13	11.92
19	---	---	---	---	---	---	11.53	11.43	11.79	11.69	11.92	11.87
20	---	---	---	---	---	---	11.51	11.37	11.71	11.67	12.09	11.89
21	---	---	---	---	---	---	11.37	11.28	11.97	11.70	12.19	12.09
22	---	---	---	---	---	---	11.38	11.33	12.08	11.96	12.15	12.10
23	---	---	---	---	---	---	11.38	11.36	12.11	12.04	12.16	12.10
24	---	---	---	---	---	---	11.37	11.32	12.08	12.03	12.68	12.15
25	---	---	---	---	---	---	11.32	11.23	12.05	12.00	12.71	12.65
26	---	---	---	---	---	---	11.39	11.24	12.11	11.99	12.65	12.59
27	---	---	---	---	---	---	11.38	11.24	11.99	11.85	12.64	12.58
28	---	---	---	---	---	---	11.30	11.23	11.93	11.86	12.61	12.56
29	---	---	---	---	---	---	11.31	11.28	---	---	12.60	12.43
30	---	---	---	---	---	---	11.36	11.28	---	---	12.54	12.43
31	---	---	---	---	---	---	11.32	11.26	---	---	12.89	12.55
MONTH	---	---	---	---	---	---	---	---	12.11	11.21	12.89	11.81

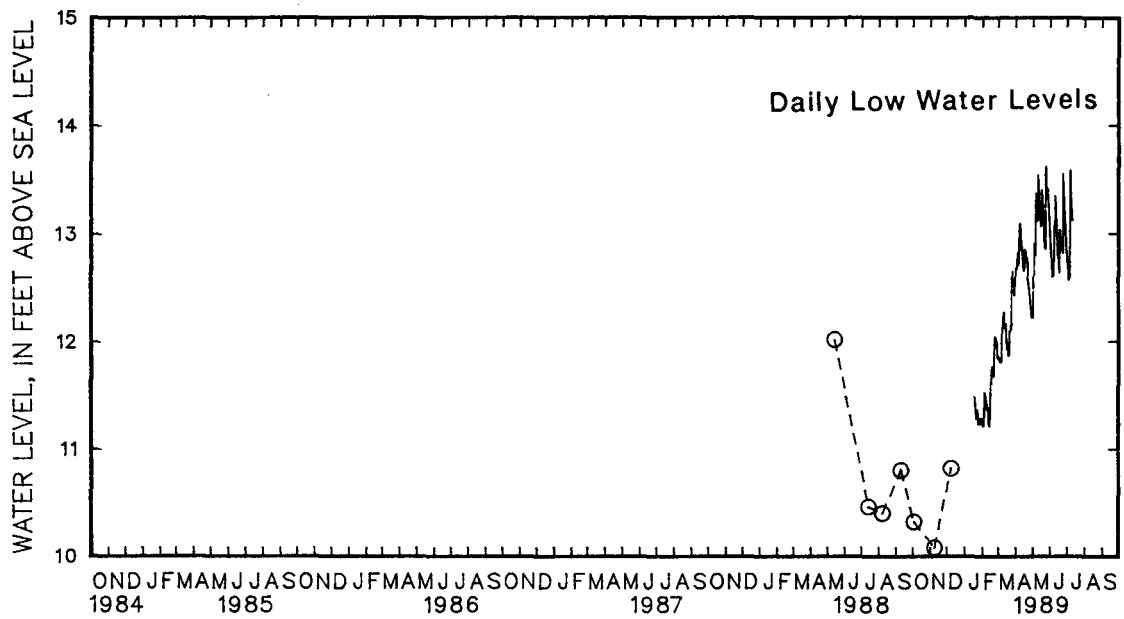
GROUND WATER LEVELS

MARYLAND--Continued

HARFORD COUNTY--Continued

HA De 198--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	12.78	12.68	12.49	12.22	13.01	12.91	12.81	12.74	---	---	---	---
2	12.77	12.68	12.99	12.50	12.91	12.80	12.74	12.68	---	---	---	---
3	12.92	12.76	13.01	12.91	12.80	12.74	12.68	12.61	---	---	---	---
4	12.89	12.82	12.90	12.82	12.77	12.61	12.61	12.57	---	---	---	---
5	12.84	12.71	13.24	12.80	12.63	12.60	13.13	12.58	---	---	---	---
6	13.12	12.85	13.45	13.25	12.77	12.60	13.58	13.14	---	---	---	---
7	13.13	13.03	13.46	13.37	13.17	12.76	13.68	13.58	---	---	---	---
8	13.14	13.09	13.39	13.19	13.18	13.07	13.61	13.37	---	---	---	---
9	13.14	13.01	13.19	13.12	13.41	13.02	13.37	13.22	---	---	---	---
10	13.03	12.93	13.54	13.15	13.45	13.34	13.22	13.12	---	---	---	---
11	12.96	12.87	13.58	13.54	13.34	13.16	---	---	---	---	---	---
12	12.87	12.81	13.55	13.39	13.16	13.09	---	---	---	---	---	---
13	12.83	12.70	13.39	13.23	13.13	12.90	---	---	---	---	---	---
14	12.73	12.66	13.24	13.14	12.90	12.79	---	---	---	---	---	---
15	12.92	12.68	13.15	13.07	12.82	12.76	---	---	---	---	---	---
16	12.95	12.85	13.39	13.08	12.76	12.69	---	---	---	---	---	---
17	12.93	12.84	13.52	13.40	13.02	12.64	---	---	---	---	---	---
18	12.91	12.79	13.50	13.33	13.18	13.03	---	---	---	---	---	---
19	12.85	12.74	13.33	13.24	13.10	12.93	---	---	---	---	---	---
20	12.83	12.77	13.24	13.12	12.93	12.87	---	---	---	---	---	---
21	12.80	12.73	13.12	12.94	12.94	12.89	---	---	---	---	---	---
22	12.73	12.58	12.93	12.87	12.89	12.84	---	---	---	---	---	---
23	12.61	12.55	13.61	12.86	13.58	12.82	---	---	---	---	---	---
24	12.56	12.50	13.77	13.62	13.67	13.55	---	---	---	---	---	---
25	12.51	12.46	13.74	13.61	13.58	13.43	---	---	---	---	---	---
26	12.46	12.38	13.63	13.37	13.44	13.29	---	---	---	---	---	---
27	12.42	12.33	13.51	13.32	13.29	13.13	---	---	---	---	---	---
28	12.33	12.25	13.47	13.41	13.13	13.00	---	---	---	---	---	---
29	12.26	12.22	13.40	13.27	13.00	12.85	---	---	---	---	---	---
30	12.26	12.22	13.27	13.15	12.85	12.81	---	---	---	---	---	---
31	---	---	13.15	13.01	---	---	---	---	---	---	---	---
MONTH	13.14	12.22	13.77	12.22	13.67	12.60	---	---	---	---	---	---

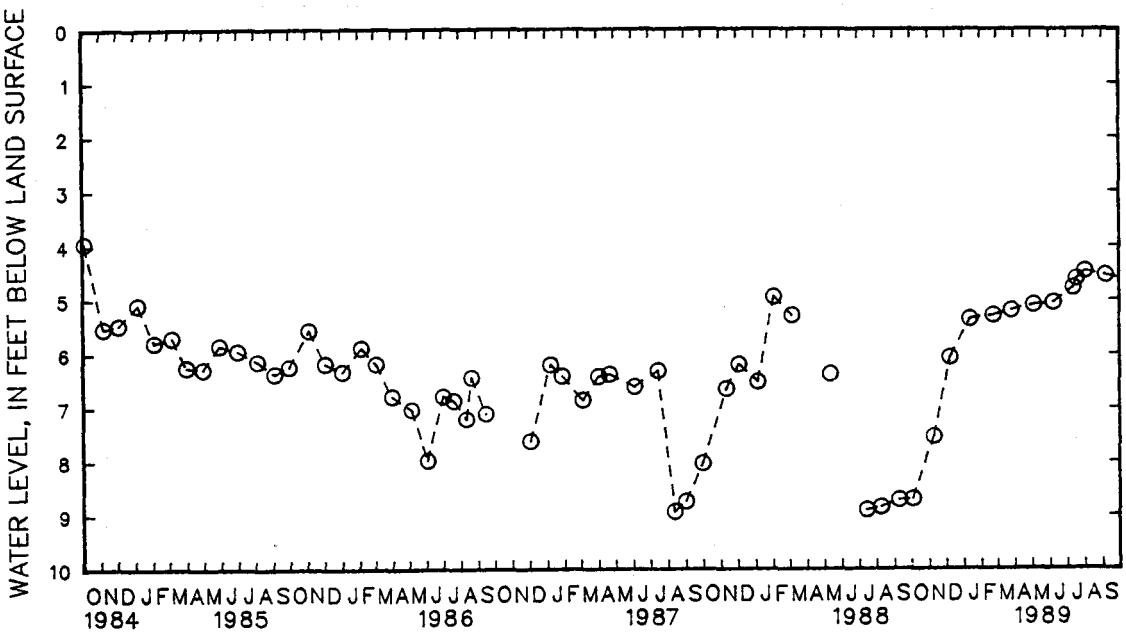


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--HA Ec 11. SITE ID.--392433076203301. PERMIT NUMBER.--HA-04-7211.
LOCATION.--Lat 39°24'33", long 76°20'33", Hydrologic Unit 02060003, off Trimble Rd., Joppatowne.
Owner: Joppatowne Utilities Corp.
AQUIFER.--Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 68 ft; diameter of casing 6 in., to 63 ft; screen diameter 2 in. from 63 to 68 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with water-level recorder from May 23, 1962 to Dec. 17, 1983.
DATUM.--Elevation of land surface is 11.7 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.5 ft above land-surface datum.
PERIOD OF RECORD.--May 1962 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, at land-surface datum, May 24, 1962; lowest measured, 12.80 ft below land-surface datum, May 26, 1972.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	8.71	DEC 8	6.06	FEB 23	5.28	MAY 4	5.08	JUL 12	4.78	AUG 2	4.47
NOV 9	7.54	JAN 13	5.35	MAR 27	5.19	JUN 7	5.05	JUL 18	4.61	SEP 7	4.55

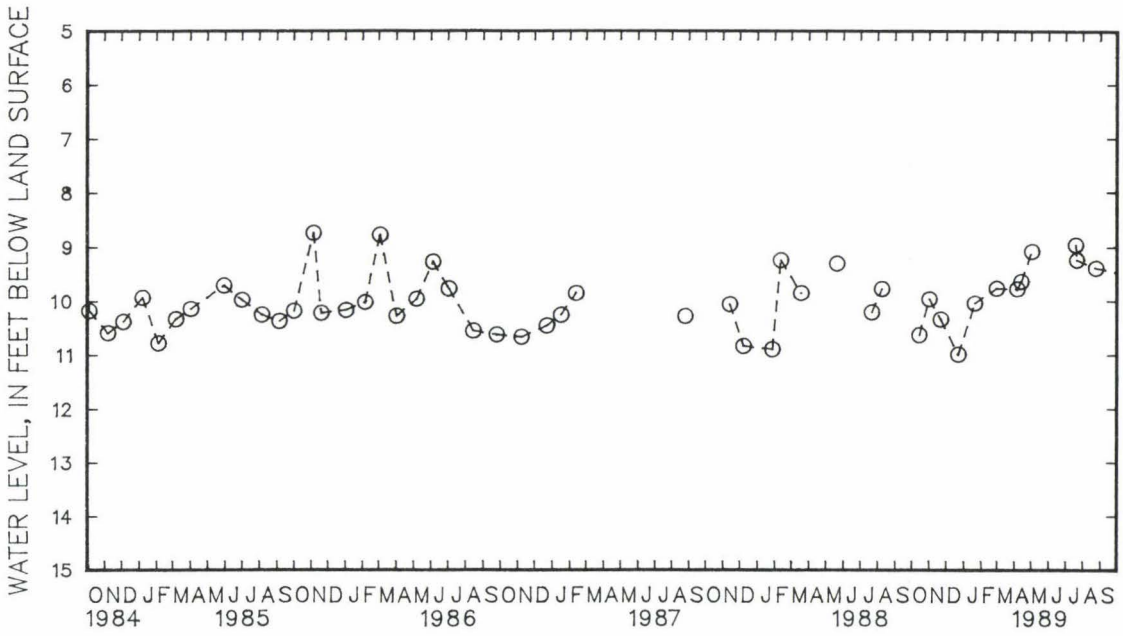


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--HA Ed 24. SITE ID.--392343076161901.
LOCATION.--Lat 39°23'43", long 76°16'19", Hydrologic Unit 02060003, at Bush River Rd. and 29th St., about 2 mi southeast of Edgewood.
Owner: U.S. Army.
AQUIFER.--Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 149 ft; casing diameter 18 in., to 73 ft; casing diameter 10 in. from 65 to 120 ft; screen diameter 10 in. from 120 to 135 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with water-level recorder from Jan. 24, 1950, to June 6, 1961.
DATUM.--Elevation of land surface is 12.8 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top of casing, 1.15 ft above land-surface datum.
REMARKS.--Water level measured, 8.24 ft below land-surface datum, Apr. 13, 1944.
PERIOD OF RECORD.-- September 1949, January 1950 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.41 ft below land-surface datum, Sept. 17, 1984; lowest measured, 42.55 ft below land-surface datum, June 26, 1955.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14	10.64	NOV 21	10.35	JAN 20	10.05	APR 6	9.78	MAY 2	9.08	JUL 21	9.24
NOV 1	9.97	DEC 22	11.00	FEB 28	9.77	APR 13	9.64	JUL 19	8.96	AUG 24	9.39



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--HA Ed 49. SITE ID.--392455076192103. PERMIT NUMBER.--HA-81-4129.
LOCATION.--Lat 39°24'55", long 76°19'21", Hydrologic Unit 02060003, 0.2 mi east of intersection of MD Rt. 152 and Trimble Rd., Edgewood Park.
Owner: U.S. Geological Survey.
AQUIFER.--Talbot Formation of Pleistocene age. Aquifer code: 112TLBT.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 28 ft; casing diameter 4 in., to 13 ft; casing diameter 4 in. from 23 to 28 ft; screen diameter 4 in. from 13 to 23 ft.
INSTRUMENTATION.--Monthly measurement with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from June 3, 1988 to July 11, 1989.
DATUM.--Elevation of land surface is 91.89 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of recorder shelf, 2.19 ft above land-surface datum.
PERIOD OF RECORD.--June 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 80.25 ft above sea level, June 13, 1989; lowest measured, 77.84 ft above sea level, Nov. 9, 1988.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JUL 18	79.68	AUG 2	79.63	SEP 7	78.64

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	78.38	78.36	77.94	77.94	78.70	78.63	78.55	78.54	78.90	78.87	79.37	79.32
2	78.36	78.34	77.94	77.93	78.76	78.70	78.54	78.53	78.87	78.85	79.32	79.29
3	78.34	78.32	77.93	77.92	78.81	78.76	78.54	78.53	78.85	78.83	79.29	79.25
4	78.33	78.31	77.92	77.92	78.82	78.81	78.54	78.51	78.84	78.83	79.25	79.21
5	78.33	78.30	77.92	77.91	78.84	78.82	78.51	78.50	78.87	78.84	79.21	79.19
6	78.30	78.28	77.91	77.90	78.85	78.84	78.50	78.49	78.88	78.87	79.19	79.17
7	78.28	78.26	77.90	77.89	78.85	78.84	78.49	78.48	78.87	78.86	79.20	79.18
8	78.26	78.24	77.89	77.88	78.84	78.82	78.49	78.48	78.86	78.85	79.24	79.20
9	78.24	78.22	77.88	77.84	78.82	78.81	78.49	78.48	78.85	78.83	79.27	79.24
10	78.22	78.21	77.84	77.84	78.81	78.79	78.52	78.48	78.83	78.82	79.28	79.27
11	78.21	78.18	77.84	77.82	78.79	78.75	78.55	78.52	78.82	78.82	79.31	79.28
12	78.18	78.15	77.82	77.81	78.75	78.73	78.65	78.55	78.82	78.80	79.31	79.28
13	78.15	78.13	77.82	77.81	78.73	78.72	78.67	78.59	78.80	78.78	79.28	79.27
14	78.13	78.12	77.81	77.80	78.72	78.71	78.76	78.67	78.80	78.78	79.27	79.26
15	78.12	78.09	77.80	77.79	78.71	78.70	78.86	78.76	78.85	78.80	79.25	79.21
16	78.09	78.07	77.79	77.79	78.70	78.69	78.96	78.87	78.90	78.85	79.21	79.16
17	78.07	78.06	77.84	77.79	78.69	78.68	79.03	78.96	78.96	78.90	79.16	79.14
18	78.06	78.04	77.90	77.84	78.68	78.67	79.08	79.03	79.00	78.96	79.15	79.13
19	78.04	78.03	77.96	77.90	78.67	78.65	---	---	79.02	79.00	79.13	79.10
20	78.03	78.00	78.03	77.96	78.65	78.64	79.12	79.10	79.03	79.02	79.11	79.09
21	78.01	78.00	78.09	78.03	78.64	78.63	79.11	79.09	79.08	79.03	79.12	79.09
22	78.01	78.00	78.14	78.09	78.63	78.63	79.09	79.09	79.17	79.08	79.09	79.09
23	78.00	77.99	78.19	78.14	78.63	78.62	79.09	79.09	79.25	79.17	79.10	79.09
24	78.00	77.99	78.23	78.19	78.63	78.62	79.09	79.06	79.31	79.25	79.34	79.10
25	77.99	77.99	78.25	78.23	78.63	78.60	79.06	79.01	79.36	79.32	79.47	79.34
26	77.99	77.98	78.27	78.25	78.60	78.58	79.03	79.01	79.40	79.36	79.53	79.47
27	77.98	77.97	78.30	78.27	78.59	78.58	79.03	78.97	79.40	79.38	79.58	79.53
28	77.97	77.97	78.40	78.30	78.62	78.57	78.97	78.95	79.38	79.37	79.64	79.58
29	77.97	77.96	78.52	78.40	78.57	78.56	78.95	78.93	---	---	79.64	79.64
30	77.96	77.95	78.62	78.52	78.56	78.56	78.93	78.92	---	---	79.65	79.64
31	77.95	77.94	---	---	78.56	78.55	78.92	78.90	---	---	79.67	79.64
MONTH	78.38	77.94	78.62	77.79	78.85	78.55	---	---	79.40	78.78	79.67	79.09

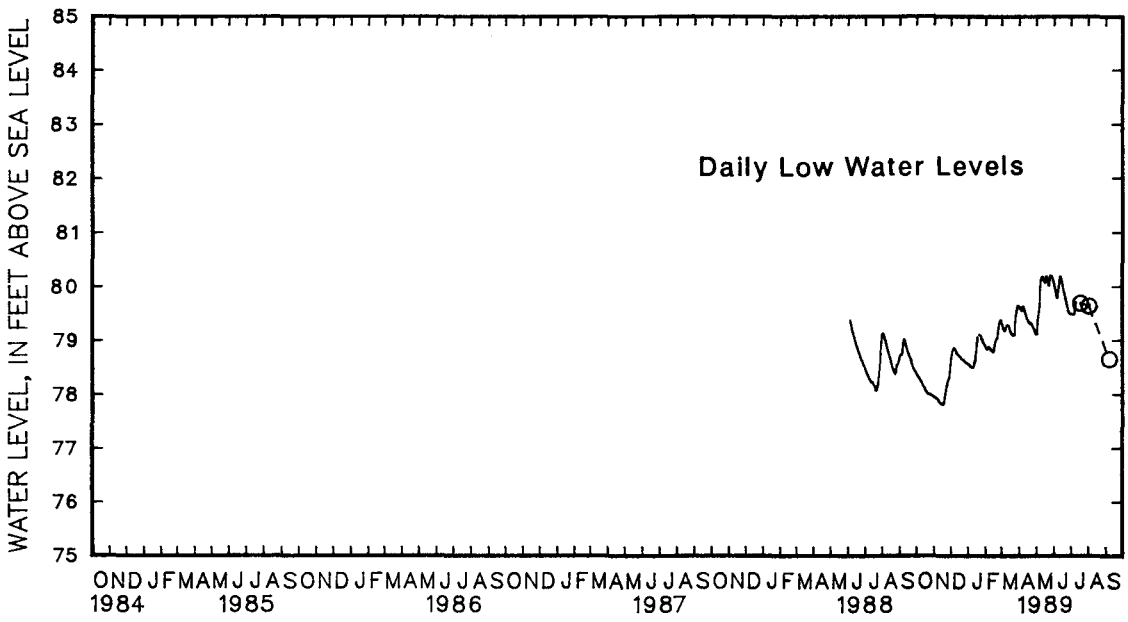
GROUND-WATER LEVELS

MARYLAND--Continued

HARFORD COUNTY--Continued

HA Ed 49--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	79.64	79.61	79.11	79.10	80.09	80.04	79.49	79.49	---	---	---	---
2	79.61	79.60	79.35	79.11	80.04	79.99	79.49	79.49	---	---	---	---
3	79.63	79.61	79.46	79.36	79.99	79.94	79.49	79.48	---	---	---	---
4	79.61	79.59	79.53	79.46	79.94	79.88	79.48	79.48	---	---	---	---
5	79.58	79.55	79.61	79.53	79.88	79.82	79.48	79.48	---	---	---	---
6	79.59	79.55	79.92	79.61	79.82	79.79	79.49	79.48	---	---	---	---
7	79.63	79.59	80.08	79.92	79.90	79.79	79.56	79.49	---	---	---	---
8	79.64	79.63	80.14	80.08	79.96	79.91	79.64	79.56	---	---	---	---
9	79.64	79.59	80.17	80.14	80.05	79.96	79.70	79.64	---	---	---	---
10	79.59	79.56	80.18	80.17	80.17	80.05	79.73	79.70	---	---	---	---
11	79.56	79.52	80.19	80.18	80.19	80.17	---	---	---	---	---	---
12	79.52	79.48	80.19	80.18	80.19	80.19	---	---	---	---	---	---
13	79.48	79.44	80.18	80.15	80.19	80.18	---	---	---	---	---	---
14	79.44	79.40	80.15	80.11	80.18	80.13	---	---	---	---	---	---
15	79.40	79.39	80.11	80.08	80.13	80.08	---	---	---	---	---	---
16	79.39	79.36	80.15	80.07	80.08	80.02	---	---	---	---	---	---
17	79.36	79.35	80.19	80.15	80.02	79.96	---	---	---	---	---	---
18	79.35	79.32	80.19	80.19	79.96	79.92	---	---	---	---	---	---
19	79.32	79.31	80.19	80.18	79.92	79.88	---	---	---	---	---	---
20	79.32	79.31	80.18	80.16	79.88	79.83	---	---	---	---	---	---
21	79.32	79.32	80.16	80.09	79.83	79.77	---	---	---	---	---	---
22	79.32	79.30	80.09	80.03	79.77	79.73	---	---	---	---	---	---
23	79.30	79.28	80.13	80.02	79.73	79.69	---	---	---	---	---	---
24	79.28	79.26	80.20	80.13	79.69	79.64	---	---	---	---	---	---
25	79.26	79.23	80.20	80.20	79.64	79.60	---	---	---	---	---	---
26	79.23	79.21	80.20	80.20	79.60	79.55	---	---	---	---	---	---
27	79.21	79.19	80.20	80.20	79.55	79.52	---	---	---	---	---	---
28	79.19	79.15	80.20	80.19	79.52	79.50	---	---	---	---	---	---
29	79.15	79.13	80.19	80.17	79.50	79.49	---	---	---	---	---	---
30	79.13	79.11	80.17	80.14	79.49	79.49	---	---	---	---	---	---
31	---	---	80.14	80.09	---	---	---	---	---	---	---	---
MONTH	79.64	79.11	80.20	79.10	80.19	79.49	---	---	---	---	---	---



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

HARFORD COUNTY--CONTINUED

WELL NUMBER.--HA Ed 52. SITE ID.--392405076183701. PERMIT NUMBER.--HA-81-4077.
LOCATION.--Lat 39°24'05", long 76°18'37", Hydrologic Unit 02060003, at Edgewood Arsenal.
Owner: U.S. Army.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 21 ft; casing diameter 4 in., to 16 ft; screen diameter 4 in. from 16 to 21 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from Apr. 6, 1988 to current year.
DATUM.--Elevation of land surface is 11.9 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 2.73 ft above land-surface datum.
REMARKS.--Canal Creek Hydrologic Assessment Project observation well CC-44A.
PERIOD OF RECORD.--April 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.87 ft above sea level, June 9, 1989; lowest measured, 10.17 ft above sea level, July 20, 1988.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	10.32	10.25	10.67	10.62	10.51	10.47	10.65	10.62	10.77	10.74
2	---	---	10.32	10.27	10.62	10.61	10.55	10.51	10.63	10.60	10.75	10.74
3	---	---	10.29	10.26	10.62	10.60	10.56	10.53	10.75	10.61	10.75	10.73
4	---	---	10.31	10.29	10.60	10.56	10.54	10.47	10.75	10.67	10.74	10.73
5	---	---	10.37	10.31	10.57	10.55	10.47	10.46	10.67	10.62	10.80	10.74
6	---	---	10.36	10.33	10.57	10.55	10.49	10.47	10.62	10.58	11.01	10.77
7	---	---	10.33	10.29	10.57	10.54	10.49	10.45	10.58	10.55	10.97	10.88
8	---	---	10.30	10.29	10.54	10.52	10.64	10.49	10.57	10.55	10.88	10.87
9	---	---	10.29	10.27	10.54	10.52	10.64	10.61	10.56	10.53	10.92	10.86
10	---	---	10.32	10.28	10.53	10.52	10.61	10.59	10.56	10.55	10.92	10.90
11	---	---	10.31	10.27	10.53	10.49	10.59	10.56	10.57	10.55	10.91	10.90
12	---	---	10.27	10.26	10.50	10.48	10.89	10.57	10.56	10.52	10.91	10.86
13	---	---	10.32	10.27	10.53	10.50	10.82	10.69	10.58	10.51	10.87	10.85
14	---	---	10.31	10.28	10.50	10.48	10.73	10.68	10.80	10.59	10.88	10.86
15	10.24	10.23	10.28	10.26	10.50	10.48	11.05	10.73	10.76	10.71	10.87	10.83
16	10.23	10.22	10.29	10.26	10.49	10.47	10.90	10.81	10.75	10.70	10.82	10.79
17	10.23	10.22	10.67	10.28	10.50	10.47	10.81	10.77	10.70	10.69	10.81	10.79
18	10.26	10.23	10.54	10.46	10.47	10.45	10.77	10.76	10.69	10.69	10.86	10.81
19	10.25	10.22	10.56	10.43	10.45	10.44	10.76	10.72	10.69	10.68	10.83	10.80
20	10.22	10.22	10.73	10.57	10.45	10.43	10.74	10.69	10.68	10.66	10.96	10.80
21	10.52	10.22	10.64	10.54	10.47	10.43	10.69	10.64	11.12	10.68	11.00	10.93
22	10.52	10.38	10.54	10.51	10.45	10.44	10.67	10.65	11.01	10.93	10.93	10.89
23	10.38	10.34	10.52	10.49	10.52	10.45	10.68	10.66	10.95	10.87	10.90	10.88
24	10.35	10.32	10.49	10.47	10.60	10.50	10.67	10.65	10.87	10.83	11.36	10.90
25	10.32	10.29	10.47	10.46	10.59	10.52	10.65	10.63	10.83	10.81	11.24	11.11
26	10.29	10.26	10.46	10.45	10.52	10.49	10.71	10.63	10.85	10.82	11.11	11.05
27	10.27	10.25	11.01	10.46	10.54	10.49	10.70	10.63	10.82	10.78	11.06	11.03
28	10.29	10.27	11.10	10.83	10.58	10.51	10.65	10.62	10.79	10.77	11.05	11.04
29	10.27	10.24	10.83	10.72	10.51	10.48	10.66	10.64	---	---	11.04	11.01
30	---	---	10.72	10.68	10.51	10.49	10.69	10.65	---	---	11.15	11.01
31	---	---	---	---	10.51	10.48	10.65	10.63	---	---	11.16	11.11
MONTH	---	---	11.10	10.25	10.67	10.43	11.05	10.45	11.12	10.51	11.36	10.73

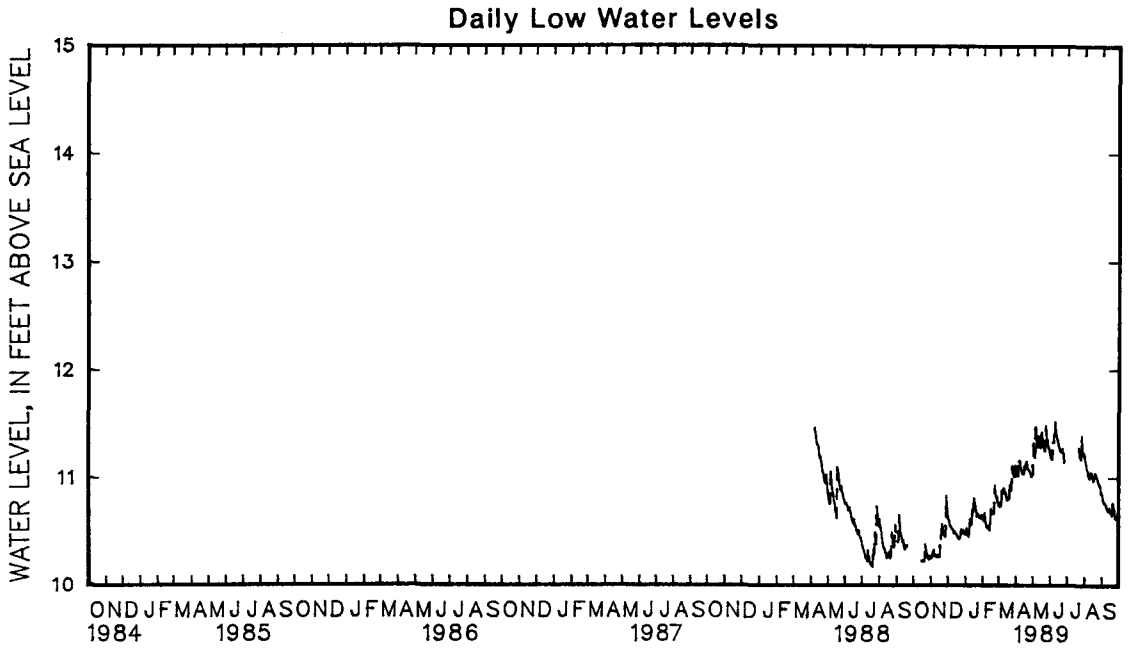
GROUND-WATER LEVELS

MARYLAND--Continued

HARFORD COUNTY--CONTINUED

HA Ed 52--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	11.11	11.03	11.31	11.03	11.27	11.22	---	---	11.27	11.22	10.88	10.86
2	11.05	11.02	11.66	11.32	11.25	11.19	---	---	11.22	11.19	10.87	10.82
3	11.10	11.05	11.34	11.23	11.22	11.18	---	---	11.20	11.15	10.83	10.79
4	11.08	11.06	11.23	11.19	11.23	11.17	---	---	11.18	11.13	10.82	10.78
5	11.15	11.02	11.47	11.19	11.39	11.17	---	---	11.16	11.09	10.81	10.77
6	11.23	11.15	11.76	11.47	11.42	11.33	---	---	11.13	11.07	10.80	10.76
7	11.20	11.15	11.58	11.38	11.72	11.33	---	---	11.09	11.06	10.79	10.76
8	11.20	11.16	11.38	11.32	11.52	11.41	---	---	11.07	11.02	10.79	10.75
9	11.16	11.10	11.32	11.29	11.87	11.41	---	---	11.04	11.00	10.77	10.73
10	11.10	11.08	11.51	11.31	11.79	11.52	---	---	11.02	10.99	10.76	10.71
11	11.08	11.06	11.46	11.39	11.51	11.43	---	---	11.05	11.01	10.74	10.70
12	11.06	11.05	11.40	11.34	11.43	11.40	---	---	11.09	11.05	10.72	10.69
13	11.06	11.04	11.34	11.30	11.43	11.38	---	---	11.09	11.05	10.72	10.70
14	11.05	11.03	11.31	11.29	11.38	11.36	---	---	11.06	11.04	10.74	10.72
15	11.20	11.04	11.33	11.28	11.37	11.33	---	---	11.05	11.02	10.73	10.68
16	11.19	11.11	11.61	11.33	11.34	11.30	---	---	11.03	10.99	10.75	10.70
17	11.12	11.10	11.59	11.42	11.34	11.29	---	---	11.01	10.97	10.74	10.69
18	11.14	11.08	11.42	11.36	11.31	11.27	---	---	11.00	10.98	10.70	10.65
19	11.24	11.13	11.36	11.33	11.29	11.25	---	---	11.14	11.00	10.92	10.66
20	11.17	11.15	11.34	11.31	11.28	11.26	---	---	11.10	11.04	10.83	10.77
21	11.15	11.13	11.31	11.27	11.27	11.24	---	---	11.09	11.04	10.77	10.70
22	11.13	11.09	11.28	11.25	11.27	11.24	11.34	11.28	11.07	11.02	10.84	10.72
23	11.10	11.08	11.75	11.26	11.29	11.27	11.29	11.23	11.06	11.00	10.85	10.66
24	11.08	11.07	11.72	11.48	11.28	11.23	11.25	11.19	11.01	10.99	10.66	10.63
25	11.08	11.06	11.47	11.40	11.26	11.23	11.22	11.18	11.01	10.97	10.64	10.62
26	11.07	11.05	11.42	11.35	11.25	11.13	11.72	11.17	10.99	10.95	10.82	10.64
27	11.06	11.04	11.42	11.35	---	---	11.55	11.39	10.97	10.93	10.69	10.63
28	11.04	11.01	11.35	11.30	---	---	11.40	11.29	10.95	10.93	10.64	10.62
29	11.12	11.01	11.31	11.28	---	---	11.29	11.23	10.96	10.93	10.63	10.62
30	11.08	11.03	11.30	11.28	---	---	11.24	11.21	10.94	10.88	10.62	10.59
31	---	---	11.29	11.25	---	---	11.33	11.23	10.89	10.85	---	---
MONTH	11.24	11.01	11.76	11.03	---	---	---	---	11.27	10.85	10.92	10.59



5 YEAR HYDROGRAPH

OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--HA Ed 53. SITE ID.--392425076181501.
LOCATION.--Lat 39°24'25", long 76°18'15", Hydrologic Unit 02060003, at Edgewood Arsenal.
Owner: U.S. Army.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 27 ft; casing diameter 4 in., to 22 ft; screen diameter 4 in. from 22 to 27 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from Apr. 6, 1988 to current year.
DATUM.--Elevation of land surface is 28.9 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 2.85 ft above land-surface datum.
REMARKS.--Canal Creek Hydrologic Assessment Project observation well CC-122A.
PERIOD OF RECORD.--April 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 23.44 ft above sea level, June 10, 1989; lowest measured, 19.78 ft above sea level, Nov. 12, 1988.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

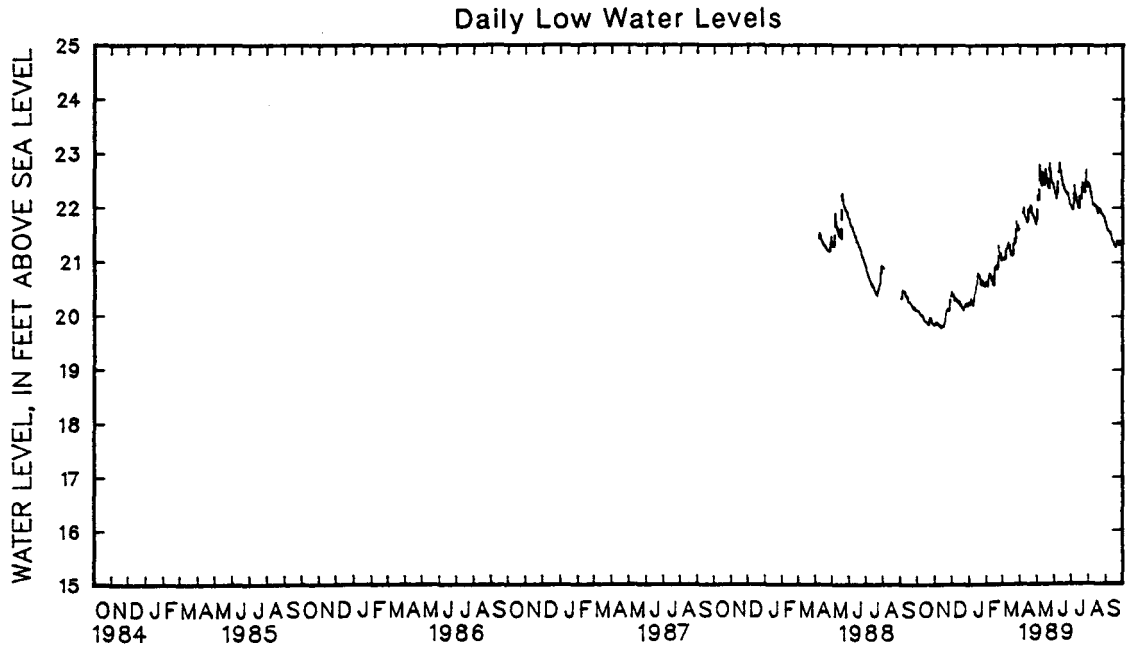
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	20.11	20.10	19.93	19.85	20.45	20.39	20.27	20.21	20.68	20.62	21.12	21.05
2	20.11	20.09	19.93	19.88	20.42	20.38	20.33	20.27	20.63	20.56	21.12	21.05
3	20.10	20.09	19.88	19.85	20.45	20.39	20.44	20.32	20.72	20.60	21.10	21.06
4	20.09	20.08	19.87	19.85	20.39	20.29	20.38	20.24	20.83	20.72	21.09	21.05
5	20.08	20.05	19.94	19.87	20.37	20.34	20.29	20.24	20.85	20.79	21.20	21.08
6	20.05	20.03	19.89	19.86	20.38	20.34	20.32	20.23	20.87	20.78	21.42	21.06
7	20.03	20.03	19.88	19.83	20.37	20.32	20.28	20.19	20.81	20.73	21.38	21.23
8	20.03	20.01	19.87	19.83	20.32	20.28	20.38	20.28	20.82	20.73	21.28	21.23
9	20.01	20.00	19.83	19.81	20.34	20.29	20.43	20.36	20.74	20.66	21.34	21.25
10	20.02	20.00	19.88	19.82	20.33	20.30	20.49	20.41	20.74	20.70	21.37	21.30
11	20.01	19.97	19.82	19.79	20.31	20.24	20.50	20.43	20.76	20.72	21.46	21.36
12	19.97	19.94	19.80	19.78	20.29	20.23	20.97	20.50	20.72	20.59	21.47	21.28
13	19.94	19.91	19.84	19.80	20.31	20.27	20.85	20.58	20.68	20.57	21.38	21.29
14	19.93	19.91	19.84	19.81	20.27	20.22	20.77	20.59	20.95	20.68	21.40	21.31
15	19.92	19.90	19.82	19.80	20.27	20.18	21.16	20.75	21.04	20.91	21.38	21.22
16	19.90	19.89	19.84	19.81	20.24	20.18	20.92	20.80	20.94	20.90	21.21	21.12
17	19.89	19.88	19.91	19.84	20.25	20.20	20.86	20.77	20.97	20.89	21.26	21.16
18	19.91	19.87	19.94	19.89	20.20	20.17	20.87	20.77	20.99	20.94	21.34	21.15
19	19.87	19.86	20.02	19.92	20.18	20.15	20.82	20.72	20.97	20.90	21.17	21.12
20	19.85	19.84	20.23	20.02	20.19	20.15	20.81	20.67	20.93	20.87	21.43	21.15
21	19.99	19.84	20.13	20.09	20.17	20.12	20.67	20.58	21.51	20.93	21.52	21.43
22	20.00	19.95	20.13	20.09	20.13	20.10	20.67	20.63	21.43	21.31	21.43	21.36
23	19.97	19.94	20.17	20.13	20.22	20.14	20.70	20.66	21.32	21.19	21.42	21.35
24	19.99	19.96	20.14	20.12	20.34	20.19	20.68	20.64	21.21	21.16	22.21	21.42
25	19.97	19.94	20.14	20.11	20.29	20.24	20.64	20.57	21.19	21.13	22.06	21.75
26	19.94	19.89	20.13	20.10	20.26	20.21	20.75	20.59	21.26	21.16	21.75	21.66
27	19.89	19.87	20.34	20.12	20.35	20.24	20.71	20.56	21.15	21.04	21.71	21.64
28	19.91	19.86	20.72	20.36	20.43	20.19	20.64	20.55	21.16	21.07	21.71	21.68
29	19.86	19.85	20.45	20.38	20.27	20.20	20.66	20.61	---	---	21.70	21.59
30	19.85	19.83	20.51	20.45	20.32	20.25	20.72	20.63	---	---	21.75	21.60
31	19.85	19.82	---	---	20.32	20.22	20.68	20.61	---	---	---	---
MONTH	20.11	19.82	20.72	19.78	20.45	20.10	21.16	20.19	21.51	20.56	---	---

MARYLAND--Continued

HARFORD COUNTY--Continued

HA Ed 53--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	22.22	21.79	22.41	22.34	22.07	22.03	22.52	22.46	21.80	21.73
2	---	---	22.82	22.24	22.35	22.28	22.04	22.01	22.48	22.45	21.76	21.64
3	---	---	22.47	22.19	22.31	22.26	22.01	21.97	22.47	22.40	21.64	21.61
4	---	---	22.20	22.15	22.33	22.18	21.98	21.97	22.41	22.38	21.62	21.58
5	---	---	22.79	22.16	22.25	22.18	22.09	21.98	22.38	22.29	21.61	21.58
6	22.22	21.92	23.03	22.80	22.36	22.26	22.65	22.08	22.33	22.25	21.60	21.58
7	22.09	21.99	22.98	22.58	23.03	22.31	22.63	22.41	22.27	22.18	21.59	21.56
8	22.09	22.02	22.59	22.42	22.90	22.67	22.46	22.29	22.18	22.09	21.57	21.55
9	22.07	21.87	22.45	22.41	23.42	22.67	22.30	22.25	22.09	22.06	21.55	21.52
10	21.90	21.84	22.94	22.45	23.44	22.85	22.26	22.22	22.07	22.05	21.53	21.49
11	21.88	21.81	22.86	22.67	22.85	22.70	22.22	22.11	22.10	22.07	21.49	21.43
12	21.84	21.78	22.67	22.53	22.73	22.69	22.13	22.11	22.09	22.06	21.43	21.39
13	21.84	21.76	22.53	22.44	22.77	22.60	22.17	22.12	22.10	22.04	21.40	21.37
14	21.81	21.74	22.47	22.43	22.60	22.54	22.17	22.01	22.06	22.04	21.42	21.37
15	22.11	21.79	22.47	22.43	22.59	22.53	22.03	22.00	22.06	22.04	21.40	21.31
16	22.14	21.98	23.09	22.47	22.54	22.47	22.36	22.00	22.04	21.98	21.36	21.31
17	22.06	21.96	23.10	22.72	22.51	22.42	22.36	22.21	21.98	21.91	21.35	21.28
18	22.03	21.93	22.73	22.56	22.45	22.41	22.22	22.17	21.93	21.90	21.28	21.27
19	22.22	21.97	22.57	22.54	22.42	22.36	22.21	22.17	22.05	21.93	21.39	21.27
20	22.13	22.06	22.57	22.50	22.37	22.35	22.98	22.19	22.03	22.00	21.40	21.39
21	22.08	22.03	22.51	22.38	22.35	22.31	22.68	22.47	22.03	21.96	21.41	21.39
22	22.03	21.92	22.38	22.36	22.33	22.29	22.48	22.42	22.00	21.97	21.49	21.39
23	21.96	21.90	23.15	22.36	22.35	22.30	22.42	22.34	22.01	21.92	21.47	21.31
24	21.93	21.86	23.29	22.83	22.34	22.26	22.34	22.29	21.95	21.89	21.31	21.31
25	21.91	21.86	22.83	22.68	22.28	22.27	22.30	22.28	21.92	21.89	21.34	21.31
26	21.87	21.81	22.72	22.56	22.27	22.24	22.96	22.28	21.91	21.88	21.43	21.35
27	21.87	21.79	22.63	22.51	22.25	22.19	22.97	22.70	21.88	21.84	21.40	21.38
28	21.80	21.72	22.52	22.48	22.20	22.15	22.72	22.49	21.85	21.84	21.41	21.38
29	21.78	21.70	22.49	22.46	22.15	22.06	22.49	22.41	21.88	21.84	21.42	21.40
30	21.82	21.78	22.50	22.45	22.07	22.06	22.41	22.39	21.86	21.76	21.41	21.40
31	---	---	22.45	22.39	---	---	22.53	22.39	21.76	21.73	---	---
MONTH	---	---	23.29	21.79	23.44	22.06	22.98	21.97	22.52	21.73	21.80	21.27



5 YEAR HYDROGRAPH

OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--HA Ed 54. SITE ID.--392357076185201. PERMIT NUMBER.--HA-81-3027.
LOCATION.--Lat 39°23'57", long 76°18'52", Hydrologic Unit 02060003, at Edgewood Arsenal.
Owner: U.S. Army.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 23 ft; casing diameter 4 in., to 18 ft; screened with 4 in. slotted pipe from 18 to 23 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recording interval, May 1988 to current year.
DATUM.--Elevation of land surface is 11.7 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 2.56 ft above land-surface datum.
REMARKS.--Canal Creek Hydrologic Assessment Project.
PERIOD OF RECORD.--May 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.00 ft above sea level, Sept. 23, 1989; lowest measured, 2.28 ft above sea level, Oct. 14, 1988.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	3.05	2.52	2.85	2.47	2.71	2.43	2.44	2.37	3.01	2.58	3.19	2.70
2	3.24	2.63	2.97	2.44	2.47	2.39	2.99	2.44	2.69	2.47	2.72	2.61
3	3.03	2.44	2.44	2.34	2.51	2.39	2.89	2.52	3.15	2.48	2.62	2.59
4	2.58	2.44	2.40	2.34	2.47	2.38	2.56	2.35	2.71	2.49	3.05	2.59
5	3.18	2.52	3.46	2.37	2.58	2.38	2.87	2.33	2.83	2.52	3.44	2.71
6	2.89	2.42	3.57	3.05	2.83	2.39	2.88	2.50	3.16	2.58	3.06	2.71
7	2.47	2.39	3.14	2.48	2.66	2.46	3.10	2.42	2.93	2.53	2.70	2.63
8	2.46	2.37	2.80	2.37	2.50	2.39	3.60	2.62	2.77	2.52	2.72	2.60
9	3.87	2.46	2.66	2.32	2.73	2.40	3.45	2.48	2.76	2.47	2.92	2.59
10	3.74	3.03	3.27	2.36	2.97	2.41	2.75	2.42	2.47	2.46	3.03	2.71
11	3.32	2.46	3.23	2.34	2.96	2.39	2.63	2.41	2.70	2.46	3.60	2.82
12	2.46	2.36	2.71	2.30	2.69	2.35	2.93	2.43	2.53	2.45	3.41	2.72
13	2.36	2.33	2.94	2.41	2.86	2.45	2.94	2.43	2.64	2.43	3.08	2.63
14	2.67	2.28	2.94	2.40	3.17	2.43	2.51	2.41	3.07	2.56	3.34	2.77
15	2.69	2.34	2.87	2.34	3.39	2.43	2.81	2.48	2.75	2.56	3.58	2.83
16	2.55	2.33	2.54	2.33	2.42	2.38	2.59	2.50	2.61	2.53	2.82	2.63
17	2.83	2.43	2.96	2.41	2.72	2.40	3.09	2.49	2.53	2.50	2.97	2.62
18	3.05	2.58	2.41	2.34	2.64	2.38	2.72	2.49	2.58	2.50	2.98	2.70
19	2.79	2.34	2.42	2.34	3.04	2.52	2.88	2.49	3.05	2.57	2.69	2.56
20	2.59	2.34	3.14	2.40	2.92	2.37	2.69	2.52	2.93	2.67	3.40	2.56
21	2.95	2.38	2.83	2.39	2.58	2.39	2.55	2.40	3.43	2.68	3.22	2.67
22	3.01	2.61	2.42	2.38	2.39	2.33	2.47	2.39	3.39	2.73	2.67	2.60
23	3.03	2.47	2.70	2.38	2.89	2.33	2.47	2.42	2.73	2.61	2.77	2.60
24	3.19	2.68	2.72	2.39	3.24	2.47	2.79	2.44	2.61	2.58	3.06	2.67
25	3.20	2.46	3.17	2.47	3.19	2.40	2.79	2.49	3.22	2.57	3.04	2.75
26	3.18	2.42	3.15	2.48	2.56	2.34	3.15	2.49	3.75	3.14	3.25	2.72
27	2.96	2.37	3.49	2.73	2.81	2.34	3.15	2.48	3.15	2.67	2.81	2.67
28	2.96	2.49	3.54	2.55	3.08	2.56	2.73	2.43	2.81	2.62	3.02	2.69
29	2.81	2.34	2.55	2.43	2.69	2.36	2.76	2.51	---	---	2.74	2.65
30	2.60	2.32	2.63	2.46	2.58	2.35	2.77	2.48	---	---	2.69	2.63
31	2.55	2.31	---	---	2.70	2.42	3.01	2.48	---	---	3.39	2.72
MONTH	3.87	2.28	3.57	2.30	3.39	2.33	3.60	2.33	3.75	2.43	3.60	2.56

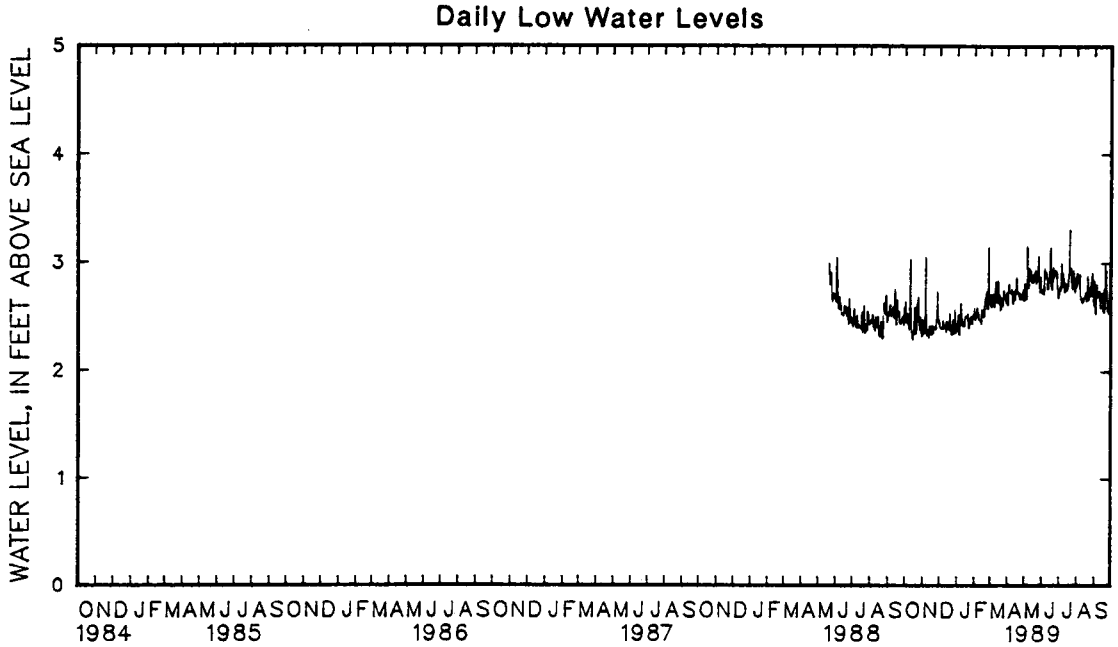
GROUND-WATER LEVELS

MARYLAND--Continued

HARFORD COUNTY--Continued

HA Ed 54--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	2.92	2.63	2.98	2.65	3.15	2.73	3.42	2.71	3.28	2.79	3.58	2.83
2	2.84	2.61	3.62	2.80	3.44	2.72	3.61	2.74	3.70	2.91	3.01	2.55
3	3.33	2.75	---	---	3.38	2.74	3.61	2.78	3.54	2.88	3.06	2.53
4	3.30	2.80	3.00	2.67	3.72	2.76	3.56	2.75	3.62	2.82	3.47	2.75
5	3.08	2.73	3.77	2.69	3.27	2.71	3.99	3.00	3.63	2.87	3.46	2.80
6	2.89	2.73	4.21	3.15	3.78	2.95	3.90	2.86	3.37	2.89	3.40	2.72
7	3.23	2.73	3.49	2.86	3.55	2.87	3.34	2.90	3.45	2.72	3.39	2.71
8	3.43	2.72	3.47	2.79	3.44	2.87	3.15	2.78	3.05	2.66	3.40	2.69
9	3.47	2.75	3.31	2.77	3.64	2.91	3.52	2.86	3.29	2.68	3.53	2.74
10	2.85	2.65	3.58	2.95	3.63	2.85	3.53	2.82	3.26	2.64	3.48	2.73
11	2.70	2.62	3.51	2.85	2.97	2.76	3.17	2.73	2.68	2.63	3.13	2.60
12	2.95	2.66	3.51	2.93	3.26	2.76	3.13	2.77	2.96	2.64	3.34	2.58
13	3.08	2.73	3.46	2.90	3.91	2.85	3.49	2.79	3.29	2.68	3.45	2.72
14	2.83	2.66	3.33	2.82	3.10	2.83	3.30	2.80	3.30	2.68	---	---
15	3.07	2.75	3.23	2.82	3.77	2.99	3.46	2.75	3.31	2.69	---	---
16	2.96	2.72	3.34	2.88	3.99	3.14	3.72	2.78	3.43	2.73	3.60	2.56
17	3.41	2.86	3.09	2.82	3.98	2.91	3.13	2.81	3.37	2.71	3.52	2.76
18	3.15	2.75	3.68	2.90	3.30	2.79	3.78	2.86	3.09	2.65	3.37	2.54
19	3.04	2.72	3.65	2.84	3.33	2.75	3.74	2.92	3.45	2.65	3.64	2.57
20	3.18	2.72	3.55	2.87	3.56	2.83	4.30	3.30	3.57	2.88	3.91	2.98
21	3.19	2.72	3.76	2.93	3.65	2.96	---	---	3.59	2.79	3.78	2.67
22	2.95	2.69	3.36	2.80	3.47	2.87	3.57	2.95	3.35	2.66	4.99	2.93
23	3.02	2.66	3.75	2.83	3.48	2.90	3.50	2.79	3.42	2.70	5.00	2.68
24	3.12	2.71	3.63	2.91	3.43	2.89	3.17	2.76	3.33	2.70	2.68	2.55
25	3.07	2.67	3.61	2.86	3.48	2.93	3.50	2.79	3.67	2.76	3.04	2.59
26	3.12	2.68	3.98	3.06	3.50	2.91	3.66	2.93	3.64	2.82	3.05	2.63
27	3.12	2.70	3.14	2.80	3.70	2.91	3.54	2.82	3.55	2.70	2.88	2.53
28	2.97	2.67	2.81	2.72	3.67	2.79	3.48	2.77	3.65	2.91	3.07	2.73
29	3.42	2.75	3.18	2.74	3.21	2.68	2.92	2.73	3.65	2.90	3.06	2.75
30	2.83	2.65	3.60	2.87	3.15	2.68	3.62	2.76	3.45	2.63	3.00	2.53
31	---	---	3.32	2.74	---	---	3.95	2.86	3.40	2.61	---	---
MONTH	3.47	2.61	---	---	3.99	2.68	---	---	3.70	2.61	---	---



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--HA Ed 57. SITE ID.--392035076172201. PERMIT NUMBER.--HA-81-2983.
LOCATION.--Lat 39°20'35", long 76°17'22", Hydrologic Unit 02060003, at Edgewood Arsenal.
Owner: U.S. Army.
AQUIFER.--Talbot Formation of Pleistocene age. Aquifer code: 112TLBT.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 27 ft; casing diameter 4 in., to 22 ft; screen diameter 4 in. from 22 to 27 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from Apr. 13, 1987 to current year.
DATUM.--Elevation of land surface is 8.1 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 2.71 ft above land-surface datum.
REMARKS.--Canal Creek Hydrologic Assessment Project observation well CC-1A.
PERIOD OF RECORD.--April 1987 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.86 ft above sea level, May 6, 1989; lowest measured, 4.38 ft above sea level, Aug. 21, 1987.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	5.41	5.37	5.55	5.33	6.79	6.58	5.83	5.79	6.26	6.17	6.63	6.49
2	5.47	5.41	5.57	5.42	6.58	6.50	5.97	5.83	6.17	6.03	6.51	6.46
3	5.44	5.37	5.42	5.30	6.57	6.49	6.17	5.97	6.31	6.04	6.50	6.43
4	5.37	5.33	5.44	5.33	6.53	6.25	6.13	5.79	6.49	6.32	6.44	6.38
5	5.33	5.20	5.68	5.44	6.32	6.26	5.83	5.77	6.51	6.47	6.53	6.39
6	5.20	5.17	5.55	5.44	6.31	6.24	5.93	5.79	6.54	6.44	7.05	6.50
7	5.26	5.18	5.45	5.26	6.31	6.19	5.78	5.69	6.44	6.33	7.04	6.81
8	5.29	5.23	5.38	5.26	6.19	6.02	6.16	5.78	6.39	6.30	6.81	6.77
9	5.29	5.23	5.29	5.22	6.12	6.02	6.26	6.16	6.32	6.17	6.93	6.74
10	5.40	5.28	5.51	5.27	6.09	6.03	6.30	6.23	6.26	6.19	6.93	6.87
11	5.41	5.20	5.40	5.17	6.09	5.87	6.30	6.19	6.29	6.20	6.98	6.89
12	5.19	5.07	5.24	5.14	5.93	5.82	6.92	6.21	6.24	5.97	7.00	6.75
13	5.07	5.04	5.41	5.25	6.09	5.94	6.92	6.54	6.07	5.92	6.77	6.69
14	5.15	5.03	5.36	5.32	5.98	5.87	6.70	6.51	6.64	6.08	6.76	6.71
15	5.15	5.12	5.34	5.27	5.97	5.73	7.25	6.70	6.81	6.63	6.78	6.61
16	5.11	5.08	5.48	5.31	5.84	5.72	7.14	6.89	6.73	6.62	6.60	6.43
17	5.12	5.07	6.07	5.48	5.92	5.82	6.89	6.79	6.63	6.56	6.51	6.41
18	5.26	5.11	6.02	5.96	5.82	5.73	6.84	6.75	6.67	6.61	6.63	6.42
19	5.15	5.08	6.18	5.95	5.75	5.67	6.82	6.63	6.68	6.59	6.42	6.30
20	5.08	5.01	6.87	6.20	5.74	5.67	6.71	6.52	6.59	6.53	6.58	6.30
21	5.55	5.01	6.75	6.38	5.67	5.56	6.51	6.29	7.29	6.57	6.82	6.59
22	5.66	5.52	6.38	6.29	5.56	5.49	6.34	6.29	7.37	7.26	6.74	6.58
23	5.52	5.45	6.38	6.33	5.74	5.54	6.36	6.32	7.28	7.05	6.58	6.53
24	5.57	5.50	6.35	6.23	5.98	5.71	6.34	6.26	7.05	6.91	7.62	6.58
25	5.50	5.44	6.23	6.16	5.96	5.83	6.26	6.09	6.91	6.84	7.57	7.30
26	5.46	5.33	6.17	6.13	5.83	5.73	6.42	6.09	7.00	6.86	7.30	7.07
27	5.33	5.26	6.61	6.15	5.96	5.73	6.42	6.11	6.89	6.72	7.07	7.00
28	5.44	5.31	7.26	6.65	6.18	5.78	6.16	6.05	6.72	6.63	7.04	7.00
29	5.31	5.25	7.02	6.79	5.79	5.71	6.20	6.15	---	---	7.03	6.85
30	5.28	5.22	6.86	6.79	5.92	5.79	6.35	6.21	---	---	6.94	6.84
31	5.33	5.20	---	---	5.93	5.79	6.26	6.17	---	---	7.12	6.94
MONTH	5.66	5.01	7.26	5.14	6.79	5.49	7.25	5.69	7.37	5.92	7.62	6.30

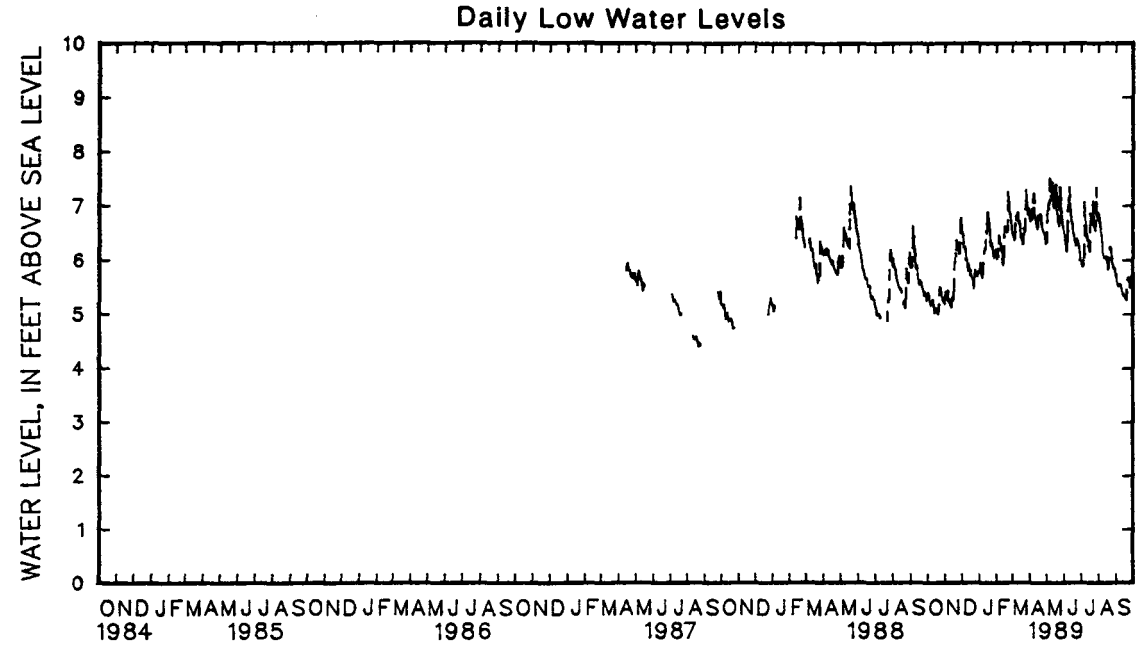
GROUND-WATER LEVELS

MARYLAND--Continued

HARFORD COUNTY--Continued

HA Ed 57--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.02	6.78	6.70	6.34	6.55	6.48	6.00	5.98	6.98	6.86	5.82	5.73
2	6.77	6.72	7.54	6.72	6.48	6.38	5.98	5.95	6.86	6.79	5.79	5.60
3	6.95	6.77	7.34	7.06	6.38	6.31	5.95	5.89	6.79	6.70	5.60	5.55
4	6.92	6.87	7.06	6.94	6.35	6.18	5.90	5.88	6.69	6.64	5.54	5.51
5	7.07	6.77	7.50	6.94	6.33	6.16	6.10	5.90	6.64	6.50	5.55	5.52
6	7.39	7.09	7.86	7.51	6.58	6.34	7.23	6.10	6.51	6.43	5.56	5.54
7	7.30	7.18	7.77	7.45	7.16	6.54	7.24	7.08	6.43	6.29	5.57	5.55
8	7.31	7.24	7.45	7.19	7.15	6.99	7.08	6.82	6.28	6.12	5.56	5.54
9	7.24	6.98	7.18	7.11	7.75	6.98	6.82	6.71	6.12	6.05	5.55	5.54
10	6.98	6.84	7.58	7.12	7.75	7.34	6.71	6.62	6.05	6.03	5.54	5.49
11	6.84	6.76	7.58	7.43	7.33	7.03	6.62	6.44	6.07	6.04	5.49	5.42
12	6.76	6.69	7.43	7.22	7.03	6.96	6.44	6.38	6.09	6.06	5.42	5.36
13	6.71	6.63	7.22	7.05	7.00	6.83	6.44	6.38	6.10	6.07	5.39	5.36
14	6.63	6.58	7.05	6.98	6.83	6.72	6.45	6.26	6.07	6.04	5.48	5.37
15	6.93	6.62	7.01	6.97	6.73	6.69	6.26	6.16	6.07	6.05	5.45	5.32
16	6.98	6.83	7.60	7.01	6.69	6.59	7.07	6.16	6.06	5.99	5.42	5.31
17	6.85	6.77	7.62	7.39	6.59	6.52	7.08	6.86	5.99	5.86	5.41	5.32
18	6.84	6.78	7.39	7.16	6.52	6.46	6.86	6.73	5.86	5.82	5.32	5.26
19	6.97	6.78	7.16	6.93	6.46	6.36	6.72	6.67	6.26	5.86	5.65	5.26
20	6.94	6.85	6.93	6.86	6.36	6.33	7.53	6.67	6.26	6.24	5.67	5.65
21	6.87	6.81	6.86	6.71	6.33	6.27	7.40	7.09	6.29	6.20	5.69	5.65
22	6.81	6.68	6.70	6.64	6.42	6.27	7.09	6.93	6.28	6.23	5.90	5.68
23	6.68	6.62	7.50	6.63	6.47	6.40	6.93	6.79	6.25	6.15	5.91	5.57
24	6.62	6.54	7.59	7.34	6.47	6.35	6.78	6.65	6.15	6.03	5.57	5.48
25	6.59	6.54	7.33	7.14	6.35	6.34	6.65	6.57	6.03	5.96	5.63	5.49
26	6.58	6.51	7.14	6.95	6.34	6.29	7.43	6.54	5.97	5.93	5.92	5.63
27	6.54	6.48	6.99	6.90	6.29	6.23	7.48	7.34	5.93	5.86	5.79	5.67
28	6.49	6.35	6.89	6.75	6.22	6.15	7.34	7.03	5.86	5.85	5.76	5.68
29	6.38	6.30	6.75	6.69	6.15	6.00	7.03	6.83	5.92	5.85	5.81	5.75
30	6.40	6.34	6.69	6.64	6.02	5.99	6.82	6.75	5.91	5.78	5.75	5.64
31	---	---	6.64	6.55	---	---	7.00	6.74	5.78	5.72	---	---
MONTH	7.39	6.30	7.86	6.34	7.75	5.99	7.53	5.88	6.98	5.72	5.92	5.26



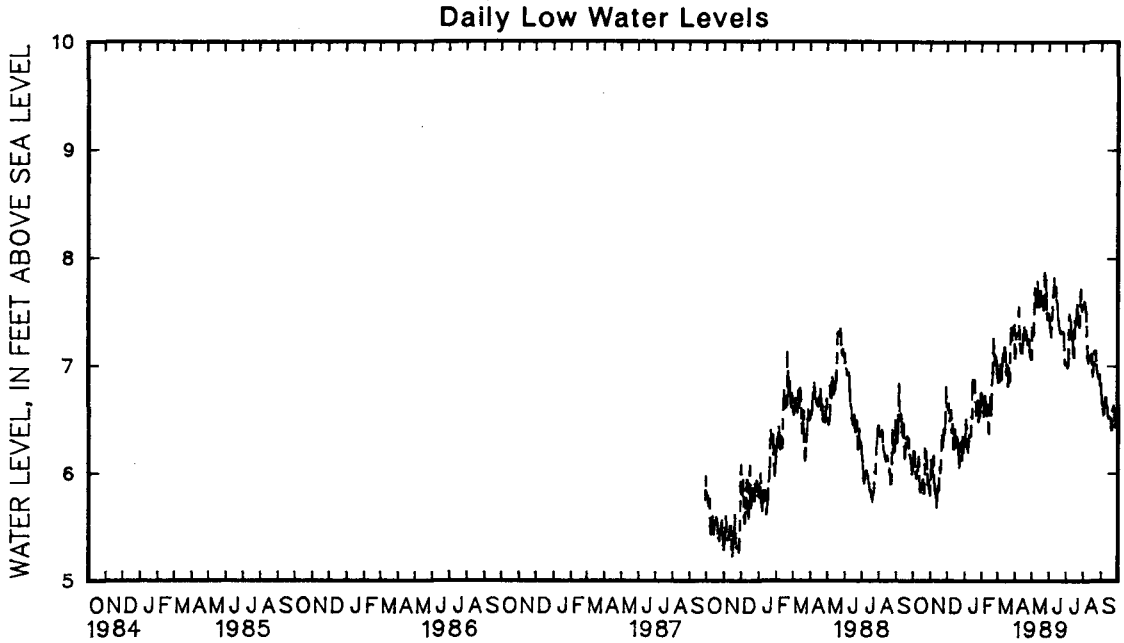
5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--HA Ed 58. SITE ID.--392035076172202. PERMIT NUMBER.--HA-81-2984.
LOCATION.--Lat 39°20'35", long 76°17'22", Hydrologic Unit 02060003, at Edgewood Arsenal.
Owner: U.S. Army.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 52 ft; casing diameter 4 in., to 47 ft; screen diameter 4 in. from 47 to 52 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from Sept. 28, 1987 to current year.
DATUM.--Elevation of land surface is 7.8 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 3.06 ft above land-surface datum.
REMARKS.--Canal Creek Hydrologic Assessment Project observation well CC-1B.
PERIOD OF RECORD.--September 1987 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.11 ft above sea level, June 9, 1989; lowest measured, 5.23 ft above sea level, Nov. 15, and 16, 1987.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	6.20	6.10	6.24	5.94	6.80	6.65	6.36	6.29	6.81	6.73	7.02	6.90
2	6.33	6.20	6.27	6.12	6.65	6.59	6.50	6.37	6.73	6.57	6.93	6.85
3	6.28	6.20	6.11	5.98	6.78	6.65	6.73	6.50	6.68	6.58	6.93	6.89
4	6.20	6.15	6.09	5.99	6.76	6.49	6.72	6.30	6.61	6.53	6.91	6.85
5	6.15	6.01	6.40	6.09	6.57	6.51	6.30	6.23	6.71	6.62	7.05	6.88
6	6.01	5.95	6.31	6.16	6.65	6.52	6.44	6.27	6.80	6.72	7.15	7.01
7	6.03	5.95	6.16	5.92	6.66	6.59	6.31	6.19	6.76	6.66	7.13	6.91
8	6.07	6.02	5.99	5.90	6.59	6.38	6.53	6.28	6.75	6.64	6.93	6.87
9	6.10	6.02	5.91	5.81	6.51	6.38	6.49	6.36	6.69	6.54	7.07	6.93
10	6.33	6.09	6.09	5.84	6.54	6.46	6.42	6.34	6.65	6.56	7.09	7.04
11	6.34	6.15	6.02	5.75	6.54	6.33	6.42	6.34	6.77	6.63	7.32	7.09
12	6.15	5.94	5.76	5.68	6.33	6.22	6.89	6.35	6.74	6.48	7.36	7.12
13	5.94	5.84	5.98	5.77	6.60	6.28	6.89	6.53	6.55	6.37	7.19	7.08
14	5.91	5.82	5.93	5.88	6.58	6.41	6.75	6.51	6.74	6.55	7.30	7.17
15	5.94	5.90	5.90	5.83	6.54	6.30	7.03	6.76	6.88	6.71	7.33	7.13
16	5.91	5.88	6.04	5.86	6.34	6.24	7.01	6.87	6.80	6.59	7.13	6.95
17	5.93	5.86	6.20	6.05	6.51	6.34	6.95	6.87	6.65	6.54	7.10	6.92
18	6.10	5.93	6.09	6.00	6.45	6.33	7.01	6.87	6.83	6.65	7.24	7.01
19	6.01	5.94	6.21	6.03	6.35	6.25	7.01	6.87	6.90	6.82	7.01	6.82
20	5.93	5.81	6.77	6.22	6.33	6.25	7.02	6.84	6.93	6.85	7.25	6.81
21	6.31	5.81	6.70	6.35	6.31	6.18	6.84	6.54	7.32	6.94	7.25	6.98
22	6.38	6.23	6.35	6.24	6.17	6.05	6.63	6.54	7.33	7.25	6.98	6.88
23	6.22	6.13	6.45	6.31	6.31	6.07	6.70	6.63	7.25	7.11	7.20	6.85
24	6.28	6.20	6.46	6.41	6.59	6.28	6.72	6.68	7.11	7.05	7.49	7.21
25	6.21	6.13	6.41	6.36	6.56	6.29	6.68	6.48	7.09	7.01	7.49	7.35
26	6.13	5.99	6.47	6.40	6.29	6.12	6.90	6.48	7.35	7.09	7.34	7.24
27	5.98	5.89	6.85	6.48	6.40	6.12	6.90	6.62	7.29	7.06	7.37	7.24
28	6.07	5.92	6.99	6.80	6.73	6.34	6.65	6.53	7.07	7.02	7.48	7.36
29	5.96	5.88	6.80	6.62	6.33	6.19	6.74	6.65	---	---	7.44	7.34
30	5.89	5.82	6.81	6.64	6.40	6.25	6.93	6.75	---	---	7.52	7.34
31	5.93	5.79	---	---	6.42	6.31	6.82	6.71	---	---	7.65	7.38
MONTH	6.38	5.79	6.99	5.68	6.80	6.05	7.03	6.19	7.35	6.37	7.65	6.81

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.38	7.08	7.35	7.06	7.51	7.48	7.05	7.03	7.61	7.57	6.94	6.83
2	7.25	7.07	7.67	7.36	7.48	7.43	7.06	7.02	7.61	7.56	6.93	6.72
3	7.38	7.25	7.53	7.36	7.43	7.35	7.04	7.01	7.62	7.60	6.72	6.60
4	7.41	7.30	7.36	7.28	7.46	7.32	7.02	6.98	7.63	7.59	6.60	6.54
5	7.50	7.29	7.72	7.31	7.44	7.27	7.08	7.00	7.63	7.55	6.61	6.55
6	---	---	7.92	7.73	7.51	7.43	7.48	7.07	7.57	7.51	6.66	6.60
7	7.61	7.47	7.85	7.72	7.67	7.46	7.60	7.48	7.51	7.37	6.71	6.66
8	7.62	7.55	7.73	7.59	7.68	7.65	7.59	7.47	7.37	7.17	6.73	6.68
9	7.61	7.34	7.60	7.55	8.11	7.65	7.46	7.44	7.17	7.06	6.74	6.71
10	7.34	7.21	7.87	7.61	8.02	7.82	7.48	7.42	7.07	7.03	6.74	6.71
11	7.21	7.15	7.87	7.79	7.82	7.69	7.45	7.32	7.11	7.07	6.71	6.62
12	7.18	7.12	7.80	7.68	7.76	7.67	7.32	7.25	7.13	7.09	6.62	6.53
13	7.23	7.16	7.68	7.57	7.84	7.74	7.37	7.27	7.13	7.10	6.55	6.51
14	7.20	7.12	7.59	7.55	7.74	7.62	7.37	7.20	7.10	7.07	6.67	6.53
15	7.47	7.20	7.65	7.57	7.65	7.60	7.20	7.08	7.15	7.10	6.67	6.52
16	7.48	7.30	7.89	7.65	7.61	7.54	7.50	7.08	7.15	7.11	6.62	6.51
17	7.37	7.24	7.86	7.70	7.56	7.45	7.52	7.42	7.11	6.96	6.60	6.51
18	7.40	7.36	7.72	7.60	7.47	7.43	7.42	7.37	6.96	6.90	6.51	6.40
19	7.41	7.34	7.62	7.56	7.43	7.37	7.45	7.38	7.11	6.94	6.62	6.40
20	7.34	7.27	7.69	7.61	7.37	7.34	7.81	7.44	7.16	7.11	6.62	6.60
21	7.39	7.33	7.68	7.60	7.35	7.31	7.74	7.57	7.21	7.14	6.64	6.59
22	7.38	7.29	7.60	7.52	7.33	7.30	7.57	7.51	7.18	7.13	6.93	6.63
23	7.30	7.23	7.99	7.57	7.39	7.32	7.51	7.46	7.20	7.14	6.94	6.61
24	7.29	7.20	8.01	7.87	7.39	7.32	7.46	7.40	7.14	7.01	6.61	6.43
25	7.31	7.24	7.87	7.81	7.34	7.31	7.40	7.36	7.01	6.94	6.59	6.43
26	7.31	7.25	7.83	7.74	7.35	7.32	7.81	7.38	6.98	6.95	6.78	6.60
27	7.31	7.22	7.75	7.62	7.34	7.31	7.84	7.66	6.96	6.90	6.64	6.46
28	7.27	7.12	7.62	7.49	7.31	7.24	7.85	7.72	6.91	6.88	6.59	6.46
29	7.14	7.08	7.49	7.43	7.24	7.04	7.71	7.57	7.00	6.89	6.71	6.59
30	7.15	7.06	7.54	7.48	7.05	7.01	7.56	7.51	7.02	6.92	6.66	6.53
31	---	---	7.53	7.49	---	---	7.62	7.53	6.92	6.82	---	---
MONTH	---	---	8.01	7.06	8.11	7.01	7.85	6.98	7.63	6.82	6.94	6.40



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--HA Ed 59. SITE ID.--392035076172203. PERMIT NUMBER.--HA-81-2985.
LOCATION.--Lat 39°20'35", long 76°17'22", Hydrologic Unit 02060003, at Edgewood Arsenal.
Owner: U.S. Army.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 72 ft; casing diameter 4 in., to 67 ft; screen diameter 4 in. from 67 to 72 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from July 6, 1987 to current year.
DATUM.--Elevation of land surface is 8.3 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 2.61 ft above land-surface datum.
REMARKS.--Canal Creek Hydrologic Assessment Project observation well CC-1C.
PERIOD OF RECORD.--July 1987 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.21 ft above sea level, June 9, 1989; lowest measured, 5.39 ft above sea level, Sept. 4, 1987, and Nov. 15 and 16, 1987.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	6.45	6.34	6.50	6.39	6.88	6.74	6.49	6.43	6.84	6.74	7.15	7.02
2	6.58	6.45	6.39	6.21	6.75	6.68	6.63	6.50	6.92	6.65	7.05	6.98
3	6.54	6.46	6.30	6.21	6.92	6.75	6.87	6.63	6.90	6.85	7.06	7.03
4	6.46	6.40	6.65	6.30	6.91	6.62	6.86	6.43	6.88	6.69	7.05	7.00
5	6.40	6.25	6.62	6.41	6.71	6.64	6.43	6.36	6.93	6.78	7.22	7.02
6	6.25	6.17	6.41	6.15	6.81	6.68	6.58	6.40	6.80	6.53	7.23	7.15
7	6.25	6.17	6.20	6.10	6.84	6.77	6.44	6.33	6.81	6.77	7.21	6.96
8	6.32	6.26	6.15	6.01	6.77	6.57	6.64	6.41	6.95	6.80	6.99	6.93
9	6.36	6.26	6.32	6.03	6.70	6.57	6.57	6.41	6.80	6.60	7.14	6.99
10	6.60	6.35	6.28	5.98	6.74	6.66	6.47	6.38	7.00	6.59	7.18	7.12
11	6.62	6.43	5.98	5.86	6.74	6.52	6.47	6.39	7.02	6.97	7.40	7.17
12	6.43	6.19	6.18	5.92	6.52	6.40	6.89	6.41	7.39	7.01	7.49	7.28
13	6.18	6.06	6.14	6.08	---	---	6.89	6.54	7.41	7.38	7.33	7.22
14	6.14	6.04	6.11	6.02	---	---	6.78	6.52	7.38	7.26	7.45	7.33
15	6.19	6.14	6.23	6.04	---	---	7.01	6.78	7.27	7.13	7.52	7.39
16	6.16	6.13	6.38	6.23	---	---	7.01	6.88	7.50	7.20	7.38	7.11
17	6.38	6.11	6.23	6.10	---	---	6.98	6.88	7.46	7.21	7.24	7.08
18	6.33	6.23	6.22	6.13	---	---	7.08	6.91	---	---	7.44	7.23
19	6.23	6.07	6.84	6.23	---	---	7.09	6.94	---	---	7.23	6.97
20	6.46	6.06	---	---	---	---	7.16	6.96	---	---	7.28	6.96
21	6.61	6.47	---	---	6.48	6.34	6.96	6.65	---	---	7.41	7.20
22	6.51	6.37	6.39	6.29	6.33	6.19	6.85	6.73	---	---	7.20	7.00
23	6.52	6.43	6.54	6.37	6.45	6.21	6.87	6.67	---	---	7.07	6.97
24	6.48	6.37	6.55	6.51	6.74	6.43	6.87	6.61	---	---	7.51	7.08
25	6.39	6.25	6.53	6.48	6.69	6.41	7.07	6.89	---	---	7.55	7.49
26	6.24	6.09	6.61	6.53	6.41	6.23	6.98	6.69	---	---	7.51	7.39
27	6.29	6.11	6.94	6.61	6.53	6.23	6.87	6.78	---	---	7.46	7.35
28	6.22	6.08	6.98	6.82	6.88	6.47	7.12	6.87	---	---	7.61	7.46
29	6.10	6.04	6.81	6.64	6.47	6.33	7.09	6.89	---	---	7.63	7.51
30	6.11	5.98	6.88	6.66	6.53	6.37	7.00	6.96	---	---	7.65	7.50
31	6.45	6.11	---	---	6.55	6.44	6.96	6.79	---	---	7.81	7.63
MONTH	6.62	5.98	---	---	---	---	7.16	6.33	---	---	7.81	6.93

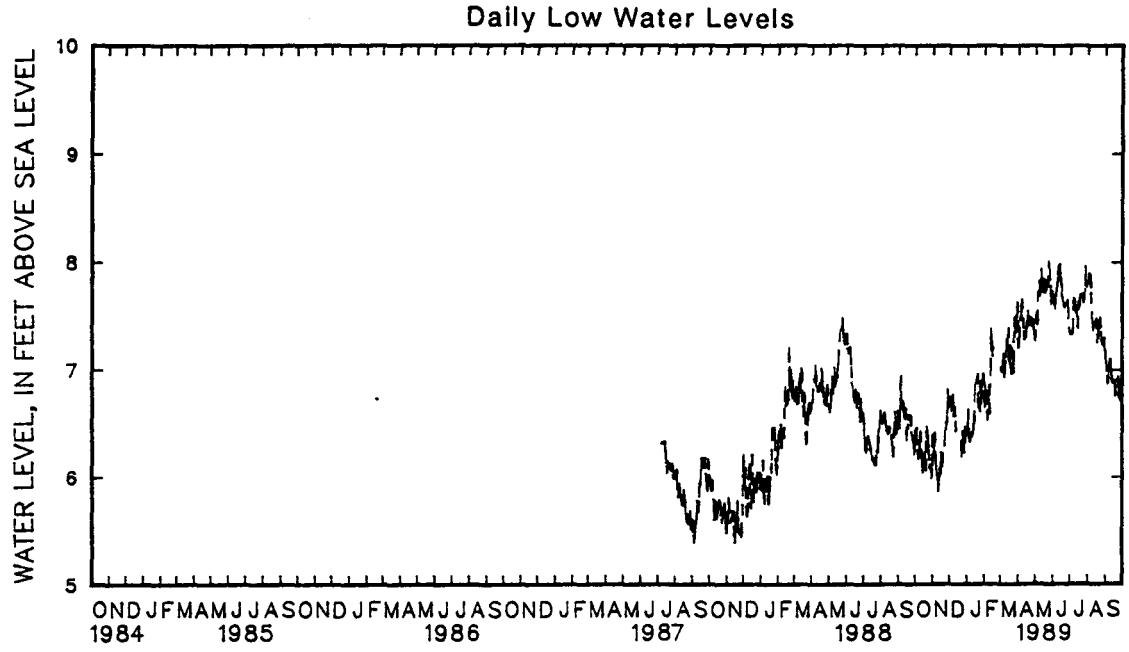
GROUND-WATER LEVELS

MARYLAND--Continued

HARFORD COUNTY--Continued

HA Ed 59--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.63	7.29	7.53	7.27	7.75	7.71	7.39	7.36	7.84	7.81	7.32	7.19
2	7.30	7.20	7.77	7.53	7.75	7.70	7.41	7.36	7.88	7.82	7.31	7.08
3	7.52	7.30	7.62	7.48	7.70	7.62	7.39	7.36	7.91	7.88	7.08	6.94
4	7.58	7.48	7.48	7.42	7.75	7.61	7.36	7.33	7.95	7.90	6.94	6.87
5	7.55	7.47	7.82	7.46	7.71	7.57	7.41	7.34	7.95	7.89	6.93	6.88
6	7.67	7.50	8.00	7.82	7.73	7.69	7.64	7.38	7.91	7.86	7.00	6.93
7	7.72	7.59	7.92	7.83	7.80	7.69	7.78	7.63	7.86	7.72	7.06	7.00
8	7.72	7.66	7.84	7.72	7.83	7.80	7.78	7.67	7.72	7.52	7.10	7.05
9	7.74	7.48	7.75	7.69	8.21	7.83	7.69	7.66	7.51	7.40	7.12	7.09
10	7.48	7.36	7.98	7.75	8.09	7.96	7.74	7.66	7.41	7.37	7.12	7.10
11	7.36	7.30	8.00	7.94	7.96	7.86	7.66	7.54	7.46	7.41	7.10	7.00
12	7.34	7.28	7.94	7.84	7.97	7.85	7.66	7.56	7.47	7.44	7.00	6.90
13	7.41	7.33	7.84	7.74	8.06	7.98	7.67	7.59	7.47	7.45	6.90	6.88
14	7.39	7.30	7.76	7.72	7.99	7.86	7.59	7.40	7.45	7.42	7.04	6.90
15	7.63	7.39	7.84	7.75	7.90	7.83	7.63	7.39	7.51	7.45	7.05	6.90
16	7.64	7.46	8.02	7.84	7.86	7.78	7.70	7.63	7.53	7.48	6.98	6.89
17	7.55	7.41	7.98	7.84	7.80	7.70	7.64	7.59	7.48	7.33	6.97	6.88
18	7.59	7.55	7.85	7.75	7.71	7.67	7.75	7.61	7.33	7.25	6.88	6.76
19	7.58	7.49	7.80	7.72	7.69	7.64	8.01	7.76	7.43	7.29	6.92	6.76
20	7.49	7.42	7.90	7.79	7.65	7.61	---	---	7.48	7.41	6.91	6.90
21	7.57	7.49	7.90	7.83	7.63	7.58	---	---	7.52	7.46	6.92	6.89
22	7.57	7.49	---	---	7.61	7.59	7.76	7.71	7.50	7.45	7.26	6.92
23	7.50	7.43	8.10	7.78	7.66	7.61	7.72	7.70	7.54	7.49	7.26	6.94
24	7.51	7.41	8.11	8.01	7.68	7.62	7.70	7.66	7.49	7.35	6.94	6.74
25	7.52	7.45	8.00	7.95	7.65	7.61	7.68	7.63	7.34	7.27	6.89	6.74
26	7.52	7.47	8.01	7.93	7.67	7.63	8.03	7.66	7.32	7.29	7.06	6.90
27	7.53	7.44	7.94	7.78	7.66	7.65	8.05	7.78	7.31	7.24	6.91	6.72
28	7.50	7.36	7.77	7.65	7.64	7.57	8.08	7.96	7.25	7.23	6.86	6.72
29	7.37	7.31	7.68	7.61	7.57	7.37	7.95	7.82	7.36	7.24	7.00	6.86
30	7.36	7.28	7.76	7.68	7.37	7.33	7.81	7.77	7.38	7.30	6.96	6.83
31	---	---	7.76	7.73	---	---	7.85	7.80	7.29	7.18	---	---
MONTH	7.74	7.20	---	---	8.21	7.33	---	---	7.95	7.18	7.32	6.72



5 YEAR HYDROGRAPH

OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

HARFORD COUNTY--Continued

WELL NUMBER.--HA Ed 60. SITE ID.--392035076172204. PERMIT NUMBER.--HA-81-2986.
LOCATION.--Lat 39°20'35", long 76°17'22", Hydrologic Unit 02060003, at Edgewood Arsenal.
Owner: U.S. Army.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 154 ft; casing diameter 4 in., to 149 ft; screen diameter 4 in. from 149 to 154 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from July 14, 1987 to current year.
DATUM.--Elevation of land surface is 8.3 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 2.78 ft above land-surface datum.
REMARKS.--Canal Creek Hydrologic Assessment Project observation well CC-1D.
PERIOD OF RECORD.--July 1987 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.46 ft above sea level, May 23 and 24, 1989; lowest measured, 5.89 ft above sea level, Sept. 28, 1987.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	6.47	6.41	6.13	5.98	6.37	6.33	6.34	6.30	6.54	6.49	6.71	6.68
2	6.55	6.47	6.15	6.12	6.33	6.31	6.41	6.34	6.52	6.45	6.69	6.68
3	6.55	6.53	6.12	6.04	6.38	6.32	6.53	6.41	6.50	6.42	6.70	6.67
4	6.53	6.51	6.06	6.04	6.38	6.28	6.53	6.38	6.42	6.35	6.69	6.66
5	6.51	6.47	6.21	6.06	6.29	6.27	6.38	6.32	6.36	6.34	6.77	6.67
6	6.47	6.44	6.23	6.20	6.33	6.27	6.45	6.32	6.39	6.34	6.83	6.77
7	6.44	6.43	6.22	6.12	6.38	6.33	6.40	6.38	6.38	6.33	6.80	6.66
8	6.44	6.40	6.13	6.08	6.35	6.28	6.52	6.40	6.35	6.32	6.66	6.64
9	6.46	6.40	6.08	6.02	6.35	6.28	6.50	6.43	6.33	6.28	6.69	6.65
10	6.64	6.46	6.12	6.02	6.40	6.34	6.43	6.41	6.29	6.28	6.72	6.69
11	6.66	6.59	6.10	6.00	6.40	6.33	6.41	6.36	6.33	6.28	6.84	6.72
12	6.59	6.44	6.00	5.96	6.33	6.30	6.51	6.36	6.34	6.26	6.88	6.82
13	6.44	6.30	6.05	5.97	6.42	6.31	6.51	6.38	6.29	6.22	6.85	6.83
14	6.30	6.26	6.05	6.02	6.41	6.39	6.42	6.34	6.35	6.29	6.93	6.85
15	6.30	6.26	6.05	6.02	6.41	6.34	6.49	6.42	6.41	6.33	6.98	6.92
16	6.30	6.29	6.08	6.02	6.34	6.30	6.50	6.45	6.38	6.28	6.96	6.85
17	6.33	6.29	6.19	6.08	6.35	6.31	6.50	6.45	6.28	6.26	6.86	6.82
18	6.41	6.33	6.10	6.02	6.33	6.30	6.56	6.48	6.34	6.27	6.96	6.86
19	6.39	6.35	6.06	6.01	6.32	6.30	6.56	6.54	6.42	6.34	6.90	6.76
20	6.35	6.28	6.25	6.06	6.35	6.30	6.63	6.54	6.51	6.42	6.86	6.73
21	6.53	6.28	6.24	6.08	6.36	6.29	6.54	6.40	6.72	6.51	6.92	6.86
22	6.55	6.49	6.08	6.02	6.29	6.20	6.41	6.39	6.71	6.68	6.86	6.75
23	6.49	6.46	6.10	6.03	6.29	6.20	6.43	6.40	6.68	6.62	6.77	6.73
24	6.51	6.46	6.13	6.09	6.43	6.27	6.42	6.40	6.62	6.56	6.90	6.77
25	6.46	6.39	6.15	6.11	6.41	6.31	6.40	6.31	6.55	6.52	6.90	6.89
26	6.39	6.28	6.23	6.15	6.30	6.21	6.47	6.31	6.74	6.54	6.90	6.88
27	6.28	6.19	6.50	6.23	6.28	6.21	6.47	6.39	6.74	6.72	6.88	6.87
28	6.22	6.17	6.49	6.39	6.45	6.29	6.39	6.35	6.72	6.70	6.96	6.88
29	6.17	6.07	6.39	6.30	6.33	6.28	6.42	6.37	---	---	6.98	6.96
30	6.06	5.98	6.37	6.30	6.31	6.26	6.51	6.43	---	---	7.01	6.96
31	5.98	5.92	---	---	6.32	6.30	6.49	6.45	---	---	7.10	7.01
MONTH	6.66	5.92	6.50	5.96	6.45	6.20	6.63	6.30	6.74	6.22	7.10	6.64

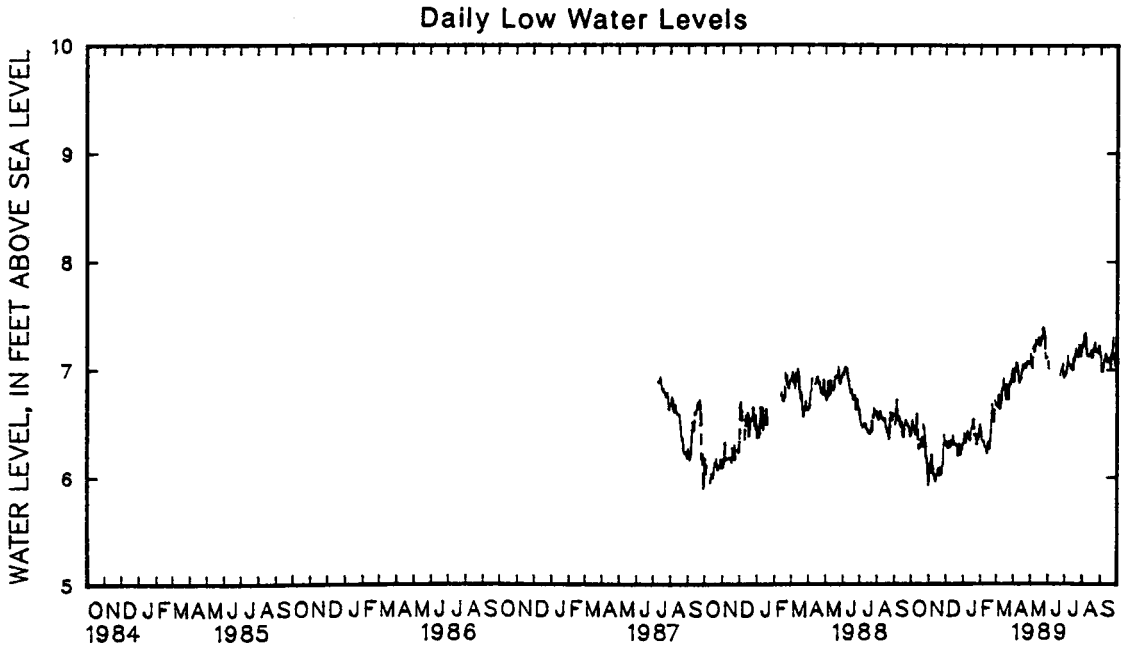
GROUND-WATER LEVELS

MARYLAND--Continued

HARFORD COUNTY--Continued

HA Ed 60--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.06	6.94	7.18	7.06	---	---	6.96	6.94	7.23	7.20	7.20	7.14
2	6.94	6.89	7.30	7.15	7.10	7.08	6.98	6.95	7.26	7.22	7.20	7.12
3	7.02	6.90	7.15	7.07	7.08	7.02	6.99	6.97	7.30	7.26	7.11	7.01
4	7.07	7.01	7.07	7.02	---	---	7.01	6.97	7.33	7.30	7.01	6.98
5	7.09	7.02	7.21	7.02	---	---	7.09	7.01	7.34	7.33	7.02	6.99
6	7.10	7.07	7.31	7.21	---	---	7.27	7.08	7.35	7.34	7.06	7.02
7	7.12	7.02	7.27	7.23	---	---	7.14	7.13	7.35	7.31	7.09	7.06
8	7.12	7.06	7.23	7.18	---	---	7.14	7.08	7.31	7.20	7.12	7.09
9	7.12	7.02	7.20	7.17	---	---	7.08	7.05	7.20	7.15	7.15	7.11
10	7.04	6.96	7.30	7.20	---	---	7.10	7.05	7.15	7.13	7.17	7.15
11	6.97	6.91	7.31	7.28	---	---	7.10	7.05	7.14	7.14	7.17	7.14
12	6.91	6.88	7.29	7.27	---	---	7.05	7.02	7.15	7.13	7.14	7.09
13	6.95	6.90	7.27	7.25	---	---	7.11	7.01	7.15	7.14	7.09	7.07
14	6.94	6.92	7.26	7.24	---	---	7.11	7.04	7.15	7.13	7.15	7.08
15	7.07	6.92	7.30	7.26	---	---	7.05	7.00	7.18	7.15	7.15	7.10
16	7.08	7.00	7.38	7.30	---	---	7.14	7.00	7.21	7.18	7.14	7.09
17	7.05	6.99	7.35	7.27	---	---	7.15	7.10	7.20	7.15	7.13	7.11
18	7.11	7.05	7.27	7.23	---	---	7.11	7.08	7.15	7.11	7.11	7.05
19	7.12	7.02	7.26	7.23	---	---	7.15	7.11	7.21	7.13	7.16	7.02
20	7.05	7.02	7.31	7.26	---	---	7.37	7.15	7.21	7.18	7.16	7.13
21	7.08	7.02	7.33	7.31	---	---	7.25	7.20	7.26	7.21	7.18	7.16
22	7.08	7.06	7.32	7.29	---	---	7.20	7.18	7.26	7.24	7.34	7.18
23	7.06	7.02	7.46	7.30	6.99	6.95	7.19	7.17	7.26	7.25	7.39	7.30
24	7.07	7.04	7.46	7.39	6.99	6.99	7.17	7.13	7.25	7.20	7.30	7.12
25	7.08	7.06	7.38	7.35	7.02	6.99	7.14	7.12	7.20	7.17	7.14	7.09
26	7.09	7.08	7.38	7.35	7.05	7.02	7.40	7.14	7.21	7.18	7.24	7.15
27	7.11	7.08	7.36	7.29	7.07	7.02	7.27	7.23	7.20	7.17	7.16	7.04
28	7.11	7.06	7.29	7.16	7.09	7.06	7.28	7.23	7.18	7.16	7.08	7.04
29	7.12	7.06	7.16	7.11	7.07	6.97	7.23	7.16	7.24	7.17	7.16	7.08
30	7.12	7.07	7.15	7.11	6.97	6.93	7.17	7.13	7.26	7.22	7.14	7.07
31	---	---	7.15	7.12	---	---	7.23	7.17	7.22	7.15	---	---
MONTH	7.12	6.88	7.46	7.02	---	---	7.40	6.94	7.35	7.11	7.39	6.98



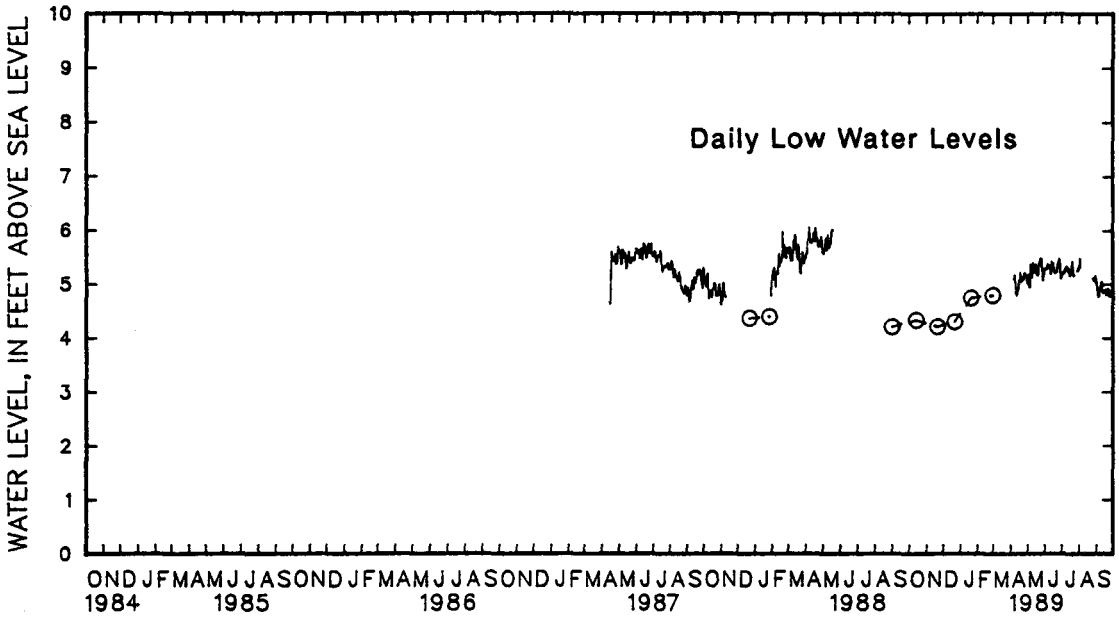
5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--HA Ed 76. SITE ID.--392332076172401. PERMIT NUMBER.--HA-81-3005.
LOCATION.--Lat 39°23'32", long 76°17'24", Hydrologic Unit 02060003, at Edgewood Arsenal.
Owner: U.S. Army.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 90 ft; casing diameter 4 in., to 85 ft; screen diameter 4 in. from 85 to 90 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from Apr. 13, 1987 to current year.
DATUM.--Elevation of land-surface datum is 28.3 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 3.35 ft above land-surface datum.
REMARKS.--Canal Creek Hydrologic Assessment Project observation well CC-7A.
PERIOD OF RECORD.--April 1987 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.20 ft above sea level, Apr. 18, 1988; lowest measured, 4.20 ft above sea level, Sept. 1, 1988.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14	4.33	DEC 22	4.30	FEB 28	4.79
NOV 21	4.21	JAN 20	4.74		

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	5.23	5.01	5.32	5.26	5.19	5.13	5.33	5.30	5.23	5.04
2	---	---	5.42	5.17	5.36	5.29	5.25	5.17	5.46	5.32	5.23	4.94
3	---	---	5.17	4.98	5.36	5.28	5.24	5.21	5.50	5.46	4.94	4.79
4	---	---	4.99	4.93	5.46	5.30	5.22	5.19	---	---	4.79	4.75
5	---	---	5.38	4.94	5.38	5.27	5.29	5.21	---	---	4.84	4.77
6	5.17	5.08	5.44	5.36	5.45	5.37	5.27	5.21	---	---	4.90	4.84
7	5.23	5.10	5.37	5.22	5.39	5.34	5.37	5.27	---	---	4.95	4.90
8	5.29	5.16	5.25	5.16	5.35	5.32	5.39	5.27	---	---	5.00	4.95
9	5.30	5.02	5.22	5.12	5.57	5.34	5.33	5.26	---	---	5.06	5.00
10	5.02	4.86	5.47	5.23	5.56	5.31	5.42	5.32	---	---	5.10	5.04
11	4.86	4.78	5.44	5.39	5.31	5.18	5.40	5.27	---	---	5.07	4.94
12	4.89	4.81	5.42	5.31	5.40	5.18	5.27	5.23	---	---	4.95	4.84
13	5.01	4.89	5.33	5.22	5.57	5.41	5.40	5.27	---	---	4.88	4.83
14	4.99	4.90	5.27	5.22	5.47	5.34	5.42	5.26	---	---	5.02	4.85
15	5.24	4.99	5.37	5.24	5.46	5.37	5.26	5.14	---	---	5.02	4.87
16	5.24	5.07	5.48	5.36	5.45	5.38	5.35	5.14	---	---	4.98	4.86
17	5.20	5.06	5.43	5.22	5.40	5.27	5.35	5.22	---	---	4.97	4.90
18	5.24	5.21	5.26	5.17	5.27	5.22	5.28	5.22	---	---	4.90	4.79
19	5.23	5.08	5.24	5.15	5.23	5.20	5.40	5.26	---	---	4.90	4.80
20	5.09	5.04	5.42	5.19	5.26	5.21	5.55	5.40	---	---	4.90	4.80
21	5.18	5.08	5.46	5.38	5.25	5.22	5.49	5.17	---	---	4.90	4.90
22	5.21	5.12	5.38	5.35	5.28	5.22	5.18	5.14	---	---	5.07	4.90
23	5.15	5.08	5.63	5.37	5.37	5.28	5.34	5.14	---	---	5.07	4.76
24	5.18	5.10	5.65	5.47	5.40	5.37	---	---	---	---	4.77	4.76
25	5.22	5.14	5.47	5.39	5.42	5.37	---	---	5.15	5.10	4.89	4.77
26	5.25	5.20	5.57	5.45	5.48	5.42	---	---	5.14	5.10	4.97	4.84
27	5.29	5.17	5.46	5.23	5.53	5.46	---	---	5.13	5.06	4.83	4.77
28	5.26	5.13	5.22	5.06	5.52	5.39	---	---	5.09	5.06	4.93	4.79
29	5.19	5.13	5.14	5.06	5.38	5.12	5.35	5.24	5.22	5.08	4.93	4.91
30	5.14	5.02	5.32	5.14	5.15	5.09	5.34	5.26	5.25	5.15	4.91	4.86
31	---	---	5.32	5.26	---	---	5.40	5.30	5.15	5.02	---	---
MONTH	---	---	5.65	4.93	5.57	5.09	---	---	---	---	5.23	4.75



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--HA Ed 80. SITE ID.--392334076171303. PERMIT NUMBER.--HA-81-3008.
LOCATION.--Lat 39°23'34", long 76°17'13", Hydrologic Unit 02060003, at Edgewood Arsenal.
Owner: U.S. Army.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 95 ft; casing diameter 4 in., to 90 ft; screen diameter 4 in. from 90 to 95 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from Apr. 14, 1987 to current year.
DATUM.--Elevation of land surface is 18.1 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 2.65 ft above land-surface datum.
REMARKS.--Canal Creek Hydrologic Assessment Project observation well CC-8C.
PERIOD OF RECORD.--April 1987 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.74 ft above sea level, May 24, 1989; lowest measured, 4.63 ft above sea level, Sept. 4, 1987.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	5.44	5.24	5.52	5.12	5.43	5.22	5.35	5.23	5.90	5.72	5.82	5.63
2	5.59	5.45	5.61	5.35	5.27	5.15	5.58	5.36	5.72	5.52	5.68	5.55
3	5.60	5.37	5.35	5.12	5.49	5.27	5.85	5.52	5.67	5.37	5.71	5.62
4	5.44	5.35	5.28	5.12	5.45	5.08	5.78	5.16	5.37	5.20	5.73	5.62
5	5.44	5.20	5.85	5.29	5.29	5.11	5.25	5.08	5.48	5.31	6.02	5.68
6	5.21	5.06	5.71	5.49	5.45	5.21	5.42	5.21	5.63	5.46	5.91	5.75
7	5.14	5.05	5.49	5.09	5.49	5.38	5.28	5.12	5.56	5.44	5.75	5.43
8	5.22	5.14	5.20	5.06	5.38	5.15	5.57	5.28	5.57	5.39	5.44	5.39
9	5.50	5.20	5.05	4.89	5.37	5.14	5.47	5.15	5.52	5.25	5.68	5.44
10	5.76	5.43	5.37	4.96	5.49	5.27	5.17	5.05	5.41	5.28	5.73	5.63
11	5.76	5.46	5.24	4.85	5.47	5.08	5.17	4.98	5.66	5.40	6.04	5.71
12	5.45	5.15	4.91	4.73	5.20	4.95	5.62	5.05	5.65	5.29	6.15	5.84
13	5.14	4.95	5.14	4.91	5.51	5.21	5.62	5.04	5.42	5.16	5.98	5.76
14	5.13	4.91	5.12	4.98	5.63	5.29	5.36	4.99	5.57	5.38	6.15	5.96
15	5.13	5.07	5.10	4.93	5.65	5.20	5.61	5.36	5.62	5.37	6.35	6.06
16	5.13	5.03	5.28	4.99	5.31	5.09	5.54	5.37	5.41	5.07	6.05	5.74
17	5.23	5.08	5.34	4.98	5.54	5.32	5.64	5.37	5.15	4.98	5.93	5.73
18	5.48	5.24	4.98	4.82	5.39	5.26	5.72	5.46	5.45	5.15	6.20	5.90
19	5.35	5.18	4.99	4.81	5.41	5.24	5.69	5.56	5.67	5.45	5.89	5.54
20	5.22	5.03	5.70	5.00	5.43	5.23	5.79	5.58	5.77	5.61	6.01	5.54
21	5.60	5.03	5.51	4.96	5.34	5.12	5.57	5.13	6.14	5.77	6.18	5.82
22	5.75	5.49	4.96	4.82	5.12	4.93	5.33	5.14	6.09	5.86	5.81	5.58
23	5.51	5.35	5.22	4.93	5.32	4.98	5.47	5.31	5.85	5.66	5.67	5.55
24	5.63	5.49	5.23	5.14	5.74	5.25	5.55	5.47	5.66	5.53	6.03	5.67
25	5.49	5.37	5.33	5.14	5.64	5.23	5.54	5.27	5.84	5.48	6.03	5.97
26	5.43	5.18	5.45	5.24	5.23	4.96	5.90	5.30	6.22	5.84	6.02	5.83
27	5.17	5.03	5.75	5.42	5.40	4.94	5.89	5.49	6.14	5.84	5.96	5.78
28	5.27	5.11	5.74	5.37	5.85	5.31	5.59	5.34	5.88	5.77	6.18	5.96
29	5.17	4.96	5.37	5.09	5.30	5.05	5.68	5.57	---	---	6.21	6.03
30	5.04	4.90	5.43	5.15	5.40	5.11	5.96	5.69	---	---	6.29	6.03
31	5.11	4.84	---	---	5.42	5.24	5.84	5.65	---	---	6.62	6.29
MONTH	5.76	4.84	5.85	4.73	5.85	4.93	5.96	4.98	6.22	4.98	6.62	5.39

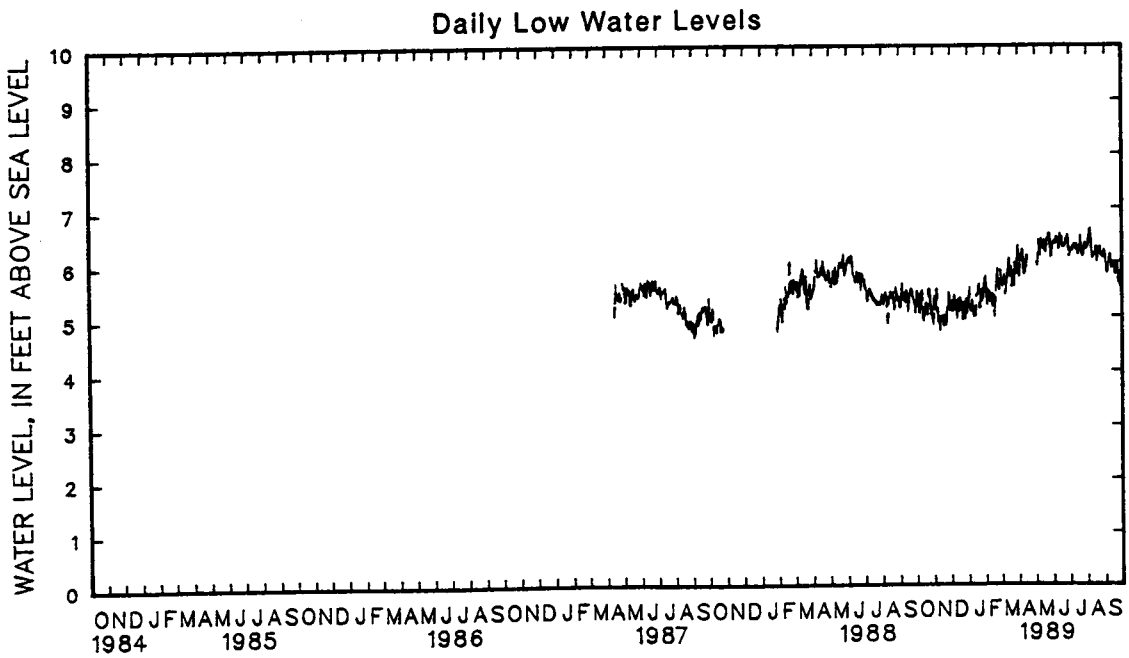
GROUND-WATER LEVELS

MARYLAND--Continued

HARFORD COUNTY--Continued

HA Ed 80--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.29	5.82	---	---	6.42	6.32	6.27	6.14	6.37	6.27	6.37	6.11
2	5.89	5.72	---	---	6.49	6.37	6.32	6.19	6.48	6.32	6.35	5.97
3	6.23	5.89	6.18	5.98	6.46	6.34	6.34	6.23	6.54	6.45	5.96	5.84
4	6.30	6.09	5.99	5.93	6.62	6.38	6.32	6.20	6.71	6.48	5.88	5.80
5	6.20	6.08	6.49	5.97	6.51	6.33	6.40	6.25	6.71	6.58	5.96	5.80
6	6.22	6.08	6.56	6.40	6.60	6.45	6.31	6.21	6.67	6.60	6.02	5.87
7	6.29	6.15	6.41	6.26	6.52	6.41	6.42	6.30	6.68	6.44	6.08	5.97
8	6.40	6.22	6.33	6.19	6.47	6.38	6.44	6.26	6.44	6.26	6.12	6.03
9	6.40	6.02	6.28	6.13	6.65	6.44	6.39	6.27	6.26	6.08	6.19	6.09
10	6.02	5.84	6.57	6.29	6.66	6.35	6.43	6.32	6.16	6.06	6.25	6.13
11	5.89	5.77	6.53	6.43	6.36	6.23	6.45	6.27	6.14	6.08	6.22	6.00
12	5.93	5.80	6.51	6.33	6.51	6.24	6.32	6.22	6.21	6.11	6.04	5.88
13	6.08	5.92	6.40	6.24	6.72	6.51	6.46	6.31	6.28	6.15	5.99	5.88
14	6.05	5.90	6.33	6.24	6.53	6.39	6.50	6.25	6.24	6.14	6.17	5.91
15	6.31	6.02	6.45	6.27	6.55	6.44	6.30	6.13	6.33	6.17	6.16	5.93
16	6.29	6.10	6.56	6.39	6.58	6.44	6.39	6.13	6.39	6.27	6.16	5.91
17	---	---	6.46	6.27	6.51	6.33	6.36	6.23	6.31	6.13	6.10	5.99
18	---	---	6.35	6.19	6.36	6.28	6.33	6.21	6.13	6.01	6.00	5.78
19	---	---	6.30	6.17	6.35	6.27	6.48	6.25	6.24	6.07	6.03	5.76
20	---	---	6.51	6.29	6.38	6.28	6.64	6.47	6.33	6.17	6.04	5.89
21	---	---	6.57	6.43	6.37	6.29	6.49	6.23	6.33	6.24	6.00	5.84
22	---	---	6.45	6.38	6.37	6.29	6.26	6.16	6.32	6.16	6.53	5.96
23	---	---	6.73	6.43	6.46	6.34	6.24	6.13	6.36	6.26	6.55	5.86
24	---	---	6.74	6.52	6.49	6.39	6.20	6.10	6.32	6.14	5.85	5.62
25	---	---	6.56	6.41	6.49	6.38	6.25	6.12	6.29	6.11	5.85	5.63
26	---	---	6.67	6.50	6.54	6.44	6.33	6.21	6.27	6.15	6.07	5.79
27	---	---	6.50	6.26	6.61	6.49	6.46	6.32	6.24	6.09	5.78	5.54
28	---	---	6.26	6.08	6.60	6.38	6.58	6.34	6.21	6.08	5.80	5.59
29	---	---	6.24	6.10	6.41	6.11	6.34	6.23	6.36	6.12	5.99	5.80
30	---	---	6.42	6.22	6.19	6.10	6.36	6.23	6.39	6.20	5.91	5.71
31	---	---	6.44	6.32	---	---	6.47	6.29	6.19	6.07	---	---
MONTH	---	---	---	---	6.72	6.10	6.64	6.10	6.71	6.01	6.55	5.54



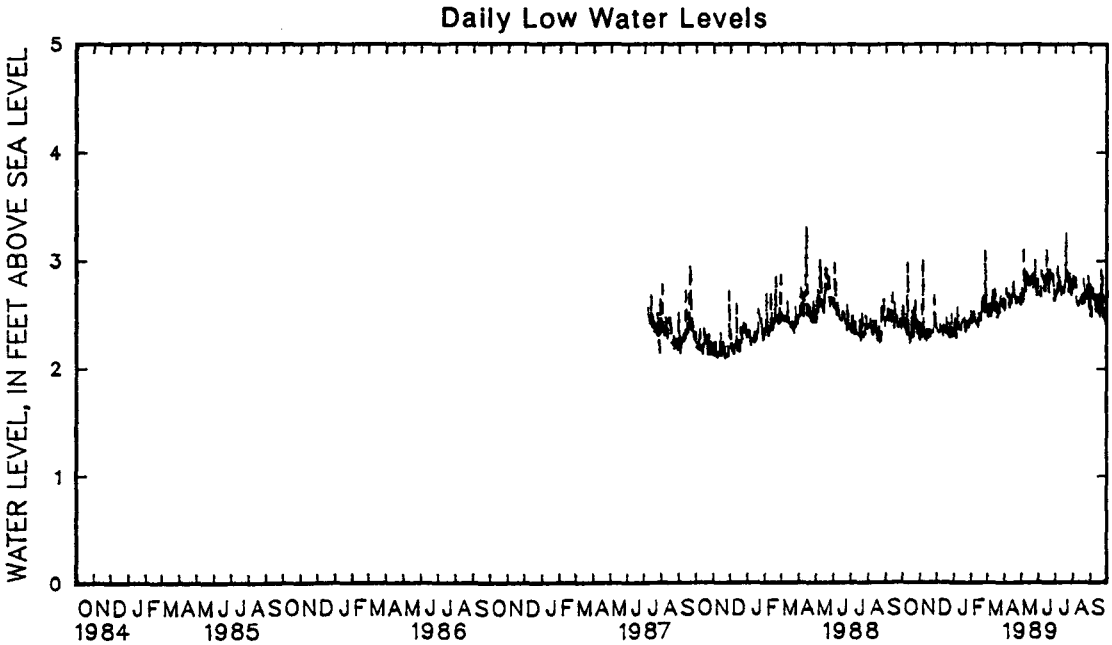
5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--HA Ed 96. SITE ID.--392357076185202. PERMIT NUMBER.--HA-81-3028.
LOCATION.--Lat 39°23'57", long 76°18'52", Hydrologic Unit 02060003, at Edgewood Arsenal.
Owner: U.S. Army.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 38 ft; casing diameter 4 in., to 33 ft; screen diameter 4 in. from 33 to 38 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from July 6, 1987 to current year.
DATUM.--Elevation of land surface is 12 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 2.56 ft above land-surface datum.
REMARKS.--Canal Creek Hydrologic Assessment Project observation well CC-16B.
PERIOD OF RECORD.--July 1987 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.93 ft above sea level, Sept. 23, 1989; lowest measured, 2.09 ft above sea level, Nov. 22, 1987.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	3.00	2.47	2.80	2.42	2.66	2.38	2.39	2.32	2.96	2.53	3.07	2.58
2	3.19	2.58	2.92	2.39	2.42	2.34	2.94	2.39	2.64	2.42	2.60	2.49
3	2.98	2.39	2.39	2.29	2.46	2.34	2.84	2.47	3.10	2.43	2.50	2.48
4	2.53	2.39	2.35	2.29	2.42	2.33	2.51	2.30	2.66	2.44	2.94	2.48
5	3.13	2.47	3.41	2.32	2.53	2.33	2.82	2.28	2.78	2.47	3.33	2.60
6	2.84	2.37	3.52	3.00	2.78	2.34	2.83	2.45	3.11	2.53	2.95	2.60
7	2.42	2.34	3.07	2.43	2.61	2.41	3.05	2.37	2.88	2.48	2.59	2.52
8	2.41	2.32	2.75	2.32	2.45	2.34	3.55	2.57	2.72	2.47	2.62	2.50
9	3.82	2.41	2.59	2.27	2.68	2.35	3.40	2.43	2.71	2.42	2.82	2.49
10	3.69	2.98	3.22	2.31	2.92	2.36	2.70	2.37	2.42	2.41	2.93	2.61
11	3.27	2.41	3.16	2.29	2.91	2.34	2.58	2.36	2.65	2.41	3.50	2.72
12	2.41	2.31	2.66	2.25	2.64	2.30	2.88	2.38	2.48	2.40	3.31	2.62
13	2.31	2.28	2.89	2.36	2.81	2.40	2.89	2.38	2.59	2.38	2.99	2.54
14	2.62	2.23	2.89	2.35	3.12	2.38	2.46	2.36	3.02	2.51	3.25	2.68
15	2.64	2.29	2.82	2.29	3.34	2.38	2.76	2.43	2.70	2.51	3.49	2.74
16	2.50	2.28	2.49	2.28	2.37	2.33	2.54	2.45	2.56	2.48	2.73	2.54
17	2.78	2.38	2.91	2.36	2.67	2.35	3.04	2.44	2.48	2.45	2.88	2.53
18	3.00	2.53	2.36	2.29	2.59	2.33	2.67	2.44	2.53	2.45	2.90	2.62
19	2.74	2.29	2.37	2.29	2.99	2.47	2.83	2.44	3.00	2.52	2.61	2.48
20	2.54	2.29	3.09	2.35	2.87	2.32	2.64	2.47	2.88	2.62	3.32	2.48
21	2.90	2.33	2.75	2.34	2.53	2.34	2.50	2.35	3.38	2.63	3.14	2.59
22	2.96	2.56	2.37	2.33	2.34	2.28	2.42	2.34	3.34	2.68	2.59	2.52
23	2.98	2.42	2.65	2.33	2.84	2.28	2.42	2.37	2.68	2.56	2.69	2.52
24	3.14	2.63	2.67	2.34	3.19	2.42	2.74	2.39	2.56	2.53	2.99	2.60
25	3.15	2.41	3.12	2.42	3.14	2.35	2.74	2.44	3.17	2.52	2.97	2.68
26	3.11	2.37	3.10	2.43	2.51	2.29	3.10	2.44	3.70	3.09	3.18	2.65
27	2.91	2.32	3.44	2.68	2.76	2.29	3.10	2.43	3.10	2.62	2.74	2.60
28	2.91	2.44	3.49	2.50	3.03	2.51	2.68	2.38	2.69	2.55	2.95	2.62
29	2.76	2.29	2.50	2.38	2.64	2.31	2.71	2.46	---	---	2.68	2.59
30	2.55	2.27	2.58	2.41	2.53	2.30	2.72	2.43	---	---	2.63	2.57
31	2.50	2.26	---	---	2.65	2.37	2.96	2.43	---	---	3.33	2.66
MONTH	3.82	2.23	3.52	2.25	3.34	2.28	3.55	2.28	3.70	2.38	3.50	2.48

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	2.86	2.57	2.93	2.60	3.11	2.69	3.37	2.66	3.23	2.74	3.53	2.78
2	2.78	2.55	3.57	2.75	3.40	2.68	3.56	2.69	3.65	2.86	2.96	2.50
3	3.28	2.70	2.91	2.64	3.34	2.70	3.56	2.73	3.49	2.83	3.01	2.48
4	3.25	2.75	2.95	2.62	3.68	2.72	3.51	2.70	3.57	2.77	3.42	2.70
5	3.03	2.68	3.72	2.64	3.23	2.67	3.94	2.95	3.58	2.82	3.41	2.75
6	2.84	2.68	4.16	3.10	3.74	2.91	3.85	2.81	3.32	2.84	3.35	2.67
7	3.18	2.68	3.44	2.81	3.51	2.83	3.29	2.85	3.40	2.67	3.34	2.66
8	3.38	2.67	3.42	2.74	3.40	2.83	3.10	2.73	3.00	2.61	3.35	2.64
9	3.42	2.70	3.26	2.72	3.60	2.87	3.47	2.81	3.24	2.63	3.48	2.69
10	2.80	2.60	3.53	2.90	3.59	2.81	3.48	2.77	3.21	2.59	3.43	2.68
11	2.65	2.57	3.46	2.80	2.93	2.72	3.12	2.68	2.63	2.58	3.08	2.55
12	2.90	2.61	3.46	2.88	3.22	2.72	3.08	2.72	2.91	2.59	3.29	2.53
13	3.03	2.68	3.41	2.85	3.87	2.81	3.44	2.74	3.24	2.63	3.40	2.67
14	2.78	2.61	3.28	2.77	3.06	2.79	3.25	2.75	3.25	2.63	3.37	2.69
15	3.02	2.70	3.18	2.77	3.73	2.95	3.41	2.70	3.26	2.64	3.26	2.59
16	2.91	2.67	3.29	2.83	3.95	3.10	3.67	2.73	3.38	2.68	3.55	2.51
17	3.36	2.81	3.04	2.77	3.94	2.87	3.08	2.76	3.32	2.66	3.47	2.70
18	3.10	2.70	3.63	2.85	3.26	2.75	3.73	2.81	3.04	2.60	3.31	2.48
19	2.99	2.67	3.60	2.79	3.29	2.71	3.69	2.87	3.40	2.60	3.58	2.51
20	3.13	2.67	3.50	2.82	3.52	2.79	4.25	3.25	3.52	2.83	3.85	2.92
21	3.14	2.67	3.71	2.88	3.61	2.92	3.58	2.91	3.54	2.74	3.72	2.60
22	2.90	2.64	3.31	2.75	3.42	2.83	3.52	2.90	3.30	2.61	4.92	2.86
23	2.97	2.61	3.70	2.78	3.43	2.85	3.45	2.74	3.37	2.65	4.93	2.61
24	3.07	2.66	3.58	2.86	3.38	2.84	3.12	2.71	3.28	2.65	2.61	2.48
25	3.02	2.62	3.56	2.81	3.43	2.88	3.45	2.74	3.62	2.71	2.96	2.52
26	3.07	2.63	3.93	3.01	3.45	2.86	3.61	2.88	3.59	2.77	2.97	2.55
27	3.07	2.65	3.09	2.75	3.65	2.86	3.49	2.77	3.50	2.65	2.80	2.45
28	2.92	2.62	2.76	2.68	3.62	2.74	3.43	2.72	3.60	2.86	2.99	2.65
29	3.37	2.70	3.14	2.70	3.16	2.63	2.87	2.68	3.60	2.85	2.97	2.66
30	2.78	2.60	3.56	2.83	3.10	2.63	3.57	2.71	3.40	2.58	2.91	2.44
31	---	---	3.28	2.70	---	---	3.90	2.81	3.35	2.56	---	---
MONTH	3.42	2.55	4.16	2.60	3.95	2.63	4.25	2.66	3.65	2.56	4.93	2.44



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--HA Ed 102. SITE ID.--392400076180602. PERMIT NUMBER.--HA-81-3035.
LOCATION.--Lat 39°24'00", long 76°18'06", Hydrologic Unit 02060003, at Edgewood Arsenal.
Owner: U.S. Army.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 70 ft; casing diameter 4 in., to 65 ft; screen diameter 4 in. from 65 to 70 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from Aug. 10, 1987 to current year.
DATUM.--Elevation of land surface is 19.9 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 3.07 ft above land-surface datum.
REMARKS.--Canal Creek Hydrologic Assessment Project observation well CC-18B.
PERIOD OF RECORD.--August 1987 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.76 ft above sea level, May 6 and 26, 1989; lowest measured, 7.51 ft above sea level, Sept. 18, 1987 and other numerous occasions.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.80	7.77	7.74	7.58	8.18	8.12	8.05	8.02	8.49	8.45	8.74	8.72
2	7.86	7.78	7.80	7.74	8.12	8.09	8.16	8.05	8.45	8.32	8.72	8.65
3	7.85	7.77	7.75	7.63	8.17	8.10	8.26	8.16	8.37	8.32	8.67	8.66
4	7.77	7.75	7.66	7.63	8.17	8.05	8.26	8.03	8.37	8.29	8.68	8.65
5	7.80	7.75	7.91	7.66	8.08	8.05	8.04	7.99	8.41	8.32	8.82	8.68
6	7.78	7.67	7.94	7.91	8.13	8.07	8.14	8.04	8.51	8.41	8.82	8.80
7	7.67	7.64	7.92	7.70	8.15	8.12	8.12	8.03	8.51	8.44	8.81	8.69
8	7.65	7.64	7.70	7.65	8.12	8.01	8.26	8.08	8.44	8.41	8.69	8.68
9	7.85	7.64	7.66	7.60	8.06	8.01	8.27	8.13	8.45	8.35	8.79	8.69
10	7.93	7.85	7.78	7.60	8.10	8.06	8.13	8.10	8.39	8.35	8.85	8.79
11	7.93	7.73	7.78	7.61	8.12	7.99	8.13	8.10	8.46	8.39	9.01	8.85
12	7.73	7.57	7.60	7.55	7.99	7.95	8.37	8.10	8.46	8.33	9.05	8.96
13	7.57	7.51	7.72	7.59	8.09	7.98	8.40	8.25	8.33	8.25	8.96	8.88
14	7.53	7.51	7.73	7.69	8.10	8.05	8.30	8.20	8.46	8.33	8.99	8.93
15	7.55	7.53	7.71	7.65	8.17	8.04	8.51	8.31	8.52	8.46	9.06	8.99
16	7.54	7.52	7.73	7.65	8.03	7.96	8.51	8.46	8.52	8.40	9.02	8.78
17	7.56	7.52	7.86	7.73	8.05	7.97	8.51	8.45	8.42	8.38	8.81	8.75
18	7.68	7.56	7.79	7.73	8.04	7.98	8.52	8.47	8.55	8.42	8.92	8.82
19	7.65	7.56	7.82	7.73	8.01	7.99	8.53	8.47	8.64	8.55	8.88	8.70
20	7.56	7.51	8.10	7.82	8.01	7.97	8.53	8.48	8.67	8.65	8.91	8.69
21	7.76	7.51	8.10	7.91	8.00	7.94	8.48	8.26	8.89	8.67	8.99	8.91
22	7.81	7.76	7.91	7.86	7.94	7.85	8.29	8.25	8.91	8.84	8.91	8.78
23	7.78	7.73	7.96	7.87	7.99	7.85	8.34	8.29	8.83	8.75	8.80	8.77
24	7.83	7.76	7.97	7.95	8.15	7.99	8.37	8.34	8.75	8.72	9.10	8.81
25	7.81	7.72	7.99	7.96	8.17	8.02	8.37	8.26	8.77	8.71	9.14	9.10
26	7.75	7.67	8.02	7.99	8.02	7.92	8.48	8.26	9.03	8.77	9.14	9.08
27	7.67	7.59	8.19	8.01	8.03	7.92	8.51	8.37	9.00	8.79	9.08	9.04
28	7.70	7.61	8.31	8.19	8.22	8.03	8.37	8.28	8.79	8.73	9.14	9.07
29	7.67	7.57	8.19	8.07	8.14	7.98	8.37	8.31	---	---	9.15	9.10
30	7.59	7.55	8.18	8.07	8.04	7.98	8.47	8.37	---	---	9.13	9.07
31	7.58	7.54	---	---	8.08	8.04	8.46	8.38	---	---	9.31	9.13
MONTH	7.93	7.51	8.31	7.55	8.22	7.85	8.53	7.99	9.03	8.25	9.31	8.65

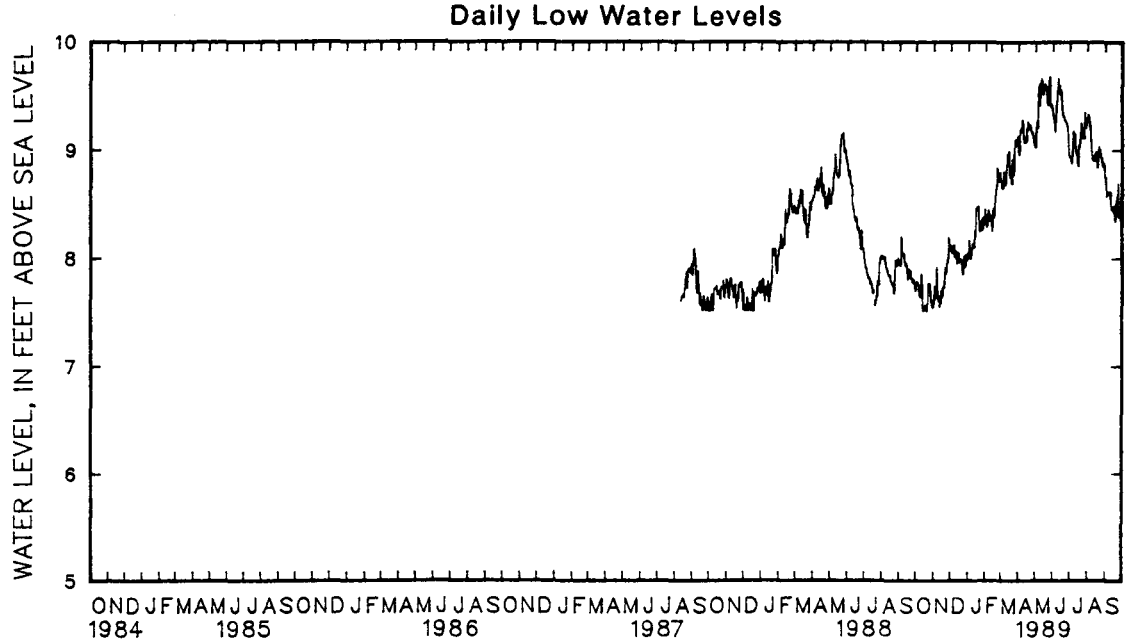
GROUND-WATER LEVELS

MARYLAND--Continued

HARFORD COUNTY--Continued

HA Ed 102--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.28	9.03	9.16	9.03	9.40	9.35	8.96	8.93	9.33	9.29	8.85	8.75
2	9.03	8.96	9.38	9.16	9.36	9.32	8.96	8.93	9.36	9.30	8.86	8.68
3	9.19	9.00	9.36	9.26	9.32	9.27	8.96	8.91	9.37	9.33	8.68	8.57
4	9.23	9.19	9.26	9.21	9.31	9.24	8.94	8.88	9.33	9.30	8.59	8.57
5	9.23	9.17	9.52	9.21	9.25	9.17	9.05	8.94	9.35	9.26	8.63	8.58
6	9.23	9.17	9.76	9.53	9.36	9.25	9.18	9.01	9.27	9.22	8.65	8.61
7	9.30	9.23	9.72	9.62	9.42	9.33	9.24	9.17	9.24	9.12	8.65	8.61
8	9.32	9.28	9.62	9.54	9.48	9.42	9.25	9.17	9.11	8.98	8.66	8.61
9	9.37	9.25	9.54	9.42	9.69	9.47	9.18	9.15	8.99	8.91	8.65	8.61
10	9.25	9.12	9.69	9.50	9.73	9.66	9.20	9.15	8.93	8.91	8.66	8.61
11	9.12	9.07	9.69	9.66	9.66	9.54	9.15	9.03	8.91	8.90	8.62	8.55
12	9.09	9.07	9.70	9.65	9.59	9.54	9.03	8.97	8.95	8.90	8.54	8.45
13	9.14	9.09	9.65	9.58	9.72	9.59	9.05	8.96	8.98	8.95	8.48	8.44
14	9.13	9.08	9.58	9.53	9.65	9.52	9.04	8.95	8.97	8.94	8.54	8.47
15	9.24	9.09	9.55	9.52	9.58	9.52	8.95	8.87	8.99	8.96	8.54	8.46
16	9.24	9.20	9.66	9.55	9.59	9.55	9.10	8.85	9.01	8.98	8.49	8.42
17	9.28	9.19	9.66	9.61	9.56	9.47	9.10	9.04	9.00	8.90	8.53	8.48
18	9.28	9.26	9.64	9.60	9.47	9.37	9.10	9.03	8.90	8.84	8.49	8.34
19	9.27	9.22	9.60	9.57	9.36	9.33	9.13	9.07	8.95	8.84	8.45	8.34
20	9.23	9.21	9.62	9.58	9.34	9.31	9.36	9.13	9.03	8.96	8.59	8.46
21	9.27	9.23	9.63	9.56	9.34	9.31	9.34	9.25	9.08	9.03	8.61	8.53
22	9.27	9.23	9.56	9.44	9.32	9.28	9.25	9.22	9.06	9.00	8.86	8.53
23	9.23	9.18	9.64	9.42	9.30	9.27	9.24	9.17	9.05	9.00	9.02	8.69
24	9.20	9.18	9.72	9.64	9.30	9.26	9.17	9.11	9.01	8.94	8.68	8.39
25	9.19	9.16	9.68	9.63	9.28	9.26	9.14	9.11	8.98	8.93	8.44	8.38
26	9.18	9.16	9.76	9.68	9.28	9.24	9.27	9.11	8.97	8.92	8.56	8.44
27	9.16	9.12	9.71	9.56	9.27	9.21	9.35	9.27	8.96	8.87	8.52	8.38
28	9.15	9.06	9.55	9.41	9.21	9.14	9.41	9.35	8.89	8.85	8.53	8.38
29	9.14	9.06	9.42	9.40	9.14	8.97	9.35	9.23	8.95	8.88	8.59	8.53
30	9.12	9.04	9.51	9.42	8.97	8.94	9.26	9.21	8.95	8.87	8.59	8.45
31	---	---	9.50	9.40	---	---	9.37	9.26	8.86	8.75	---	---
MONTH	9.37	8.96	9.76	9.03	9.73	8.94	9.41	8.85	9.37	8.75	9.02	8.34



5 YEAR HYDROGRAPH

OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--HA Ed 201. SITE ID.--392437076183101.
LOCATION.--Lat 39°24'37", long 76°18'31", Hydrologic Unit 02060003, at Edgewood Arsenal.
Owner: U.S. Army.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 66 ft; casing diameter 4 in., to 61 ft; screen diameter 4 in. from 61 to 66 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from Dec. 6, 1988 to current year.
DATUM.--Elevation of land surface is 29 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of casing, 3.03 ft above land-surface datum.
REMARKS.--Canal Creek Hydrologic Assessment Project observation well CC-139A
PERIOD OF RECORD.--December 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.48 ft above sea level, May 23 and 24, 1989; lowest measured, 12.20 ft above sea level, Feb. 5, 1989.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	---	---	---	---	---	---	12.55	12.51	12.85	12.79
2	---	---	---	---	---	---	---	---	12.51	12.39	12.79	12.77
3	---	---	---	---	---	---	---	---	12.41	12.28	12.82	12.77
4	---	---	---	---	---	---	---	---	12.28	12.14	12.80	12.75
5	---	---	---	---	---	---	---	---	12.14	12.11	12.85	12.76
6	---	---	---	---	---	---	---	---	12.16	12.12	12.90	12.85
7	---	---	---	---	12.53	12.53	---	---	12.17	12.14	12.88	12.75
8	---	---	---	---	12.53	12.53	---	---	12.21	12.14	12.75	12.71
9	---	---	---	---	12.53	12.53	---	---	12.20	12.16	12.75	12.72
10	---	---	---	---	---	---	---	---	12.27	12.19	12.77	12.75
11	---	---	---	---	---	---	---	---	12.38	12.26	12.87	12.76
12	---	---	---	---	---	---	---	---	12.39	12.31	12.93	12.87
13	---	---	---	---	---	---	---	---	12.36	12.27	12.91	12.86
14	---	---	---	---	---	---	---	---	12.43	12.36	12.99	12.91
15	---	---	---	---	---	---	---	---	12.48	12.39	13.03	12.98
16	---	---	---	---	---	---	---	---	12.45	12.34	12.99	12.86
17	---	---	---	---	---	---	---	---	12.34	12.32	12.89	12.84
18	---	---	---	---	---	---	---	---	12.45	12.34	12.99	12.89
19	---	---	---	---	---	---	---	---	12.53	12.45	12.92	12.80
20	---	---	---	---	---	---	---	---	12.61	12.52	12.91	12.79
21	---	---	---	---	11.78	11.72	12.73	12.55	12.83	12.61	12.98	12.90
22	---	---	---	---	11.72	11.63	12.55	12.48	12.84	12.82	12.89	12.78
23	---	---	---	---	11.71	11.63	12.48	12.42	12.83	12.78	12.92	12.76
24	---	---	---	---	11.83	11.68	12.42	12.32	12.79	12.77	12.96	12.88
25	---	---	---	---	---	---	12.32	12.14	12.79	12.76	---	---
26	---	---	---	---	---	---	12.31	12.14	12.94	12.79	---	---
27	---	---	---	---	---	---	12.31	12.25	12.96	12.88	---	---
28	---	---	---	---	---	---	12.28	12.22	12.89	12.85	---	---
29	---	---	---	---	---	---	12.37	12.28	---	---	---	---
30	---	---	---	---	---	---	12.50	12.37	---	---	---	---
31	---	---	---	---	---	---	12.53	12.47	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	12.96	12.11	---	---

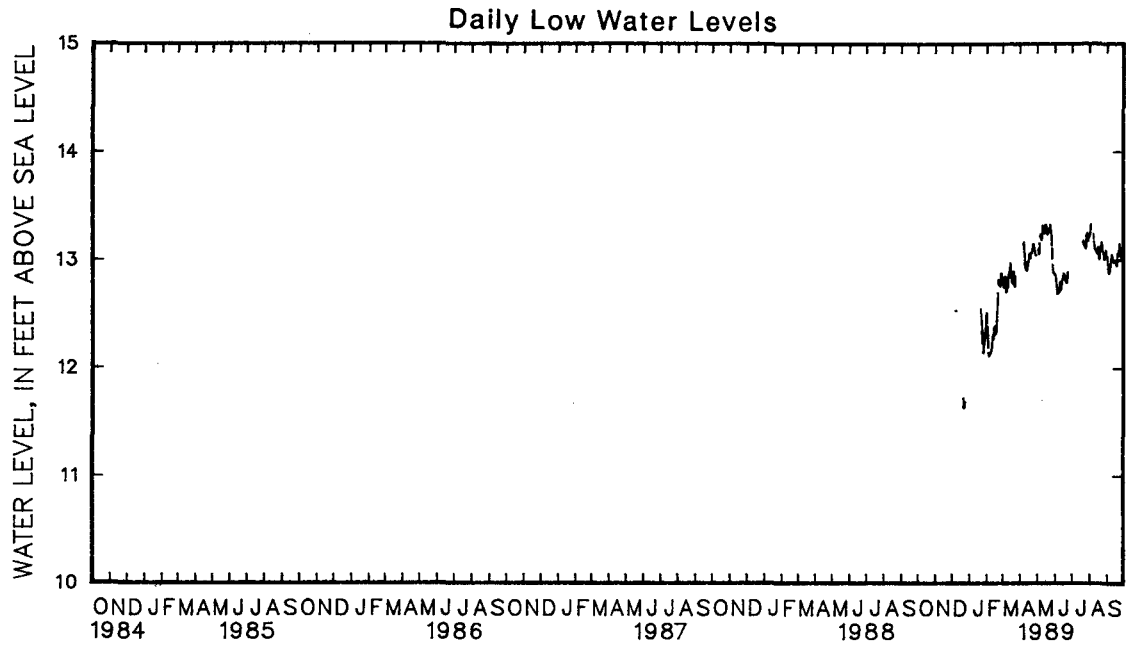
GROUND-WATER LEVELS

MARYLAND--Continued

HARFORD COUNTY--Continued

HA Ed 201--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	12.91	12.87	---	---	13.25	13.22	13.10	13.04
2	---	---	---	---	12.88	12.86	---	---	13.29	13.24	13.09	13.00
3	---	---	13.17	13.10	12.86	12.82	---	---	13.34	13.28	13.00	12.92
4	---	---	13.10	13.06	12.86	12.76	---	---	13.39	13.33	12.92	12.88
5	---	---	13.23	13.07	12.77	12.69	---	---	---	---	12.92	12.88
6	13.19	13.15	13.30	13.22	12.77	12.70	---	---	---	---	12.95	12.90
7	13.22	13.15	13.27	13.24	12.75	12.70	---	---	---	---	13.00	12.94
8	13.24	13.17	13.25	13.21	12.72	12.70	---	---	13.32	13.24	13.03	12.98
9	13.21	13.06	13.22	13.19	12.88	12.72	---	---	13.24	13.16	13.06	13.02
10	13.06	12.96	13.33	13.22	12.87	12.80	---	---	13.16	13.11	13.08	13.05
11	12.96	12.92	13.34	13.32	12.80	12.76	---	---	13.12	13.10	13.08	13.03
12	12.95	12.92	13.35	13.29	12.78	12.73	---	---	13.11	13.09	13.04	12.99
13	12.95	12.91	13.30	13.26	12.86	12.78	---	---	13.11	13.08	13.01	12.98
14	13.08	12.95	13.26	13.25	12.86	12.82	---	---	13.09	13.06	13.05	12.98
15	13.06	12.99	13.33	13.27	12.89	12.85	---	---	13.12	13.08	13.05	12.98
16	13.07	12.99	13.41	13.33	12.90	12.88	---	---	13.13	13.12	13.04	12.98
17	13.13	13.06	13.40	13.32	12.92	12.87	---	---	13.13	13.06	13.03	13.00
18	13.10	13.03	13.33	13.27	12.90	12.87	---	---	13.06	13.01	13.01	12.95
19	13.08	13.02	13.26	13.24	12.87	12.84	---	---	13.11	13.03	13.08	12.95
20	13.11	13.07	13.31	13.26	12.84	12.81	13.30	13.17	13.12	13.09	13.08	13.06
21	13.11	13.07	13.32	13.29	12.83	12.81	13.25	13.18	13.16	13.12	13.08	13.05
22	13.11	13.07	13.30	13.27	12.83	12.79	13.18	13.14	13.17	13.15	13.22	13.07
23	13.16	13.11	13.42	13.28	12.89	12.83	13.15	13.13	13.18	13.17	13.24	13.15
24	13.17	13.15	13.42	13.33	12.92	12.89	13.14	13.12	13.17	13.11	13.15	13.05
25	13.18	13.15	13.32	13.27	---	---	13.14	13.11	13.11	13.07	13.11	13.04
26	13.16	13.11	13.28	13.23	---	---	13.28	13.13	13.07	13.05	13.20	13.11
27	13.12	13.09	13.23	13.11	---	---	13.26	13.23	13.06	13.01	13.13	13.03
28	13.12	13.05	13.11	12.96	---	---	13.29	13.25	13.04	13.01	13.06	13.02
29	13.22	13.05	12.96	12.89	---	---	13.24	13.19	13.10	13.03	13.11	13.06
30	---	---	12.89	12.88	---	---	13.21	13.18	13.12	13.09	13.11	13.04
31	---	---	12.90	12.88			13.25	13.21	13.09	13.04	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	13.24	12.88



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--HA Ed 202. SITE ID.--392443076184401.
LOCATION.--Lat 39°24'43", long 76°18'44", Hydrologic Unit 02060003, at Edgewood Arsenal.
Owner: U.S. Army.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 86 ft; casing diameter 4 in., to 81 ft; screen diameter 4 in. from 81 to 86 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from Nov. 22, 1988 to current year.
DATUM.--Elevation of land surface is 32 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of casing, 2.77 ft above land-surface datum.
REMARKS.--Canal Creek Hydrologic Assessment Project observation well CC-140A
PERIOD OF RECORD.--November 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.81 ft above sea level, May 24, 1989; lowest measured, 11.42 ft above sea level, Nov. 22 and 23, 1988.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	---	---	12.82	12.77	---	---	12.90	12.87	13.21	13.15
2	---	---	---	---	12.78	12.76	---	---	12.87	12.76	13.15	13.13
3	---	---	---	---	12.84	12.78	---	---	12.81	12.68	13.20	13.13
4	---	---	---	---	12.85	12.74	---	---	12.69	12.55	13.16	13.12
5	---	---	---	---	12.77	12.74	---	---	12.55	12.51	13.20	13.12
6	---	---	---	---	12.81	12.75	---	---	12.55	12.52	13.24	13.20
7	---	---	---	---	12.86	12.81	---	---	12.54	12.52	13.25	13.13
8	---	---	---	---	12.82	12.73	---	---	12.60	12.52	13.13	13.08
9	---	---	---	---	12.79	12.73	---	---	12.58	12.53	13.11	13.08
10	---	---	---	---	12.84	12.77	---	---	12.65	12.54	13.15	13.10
11	---	---	---	---	12.82	12.73	---	---	12.76	12.62	13.23	13.12
12	---	---	---	---	12.73	12.68	---	---	12.77	12.66	13.28	13.22
13	---	---	---	---	12.72	12.68	---	---	12.72	12.62	13.26	13.22
14	---	---	---	---	12.73	12.66	---	---	12.80	12.71	13.34	13.26
15	---	---	---	---	12.70	12.61	---	---	12.81	12.74	13.37	13.33
16	---	---	---	---	12.65	12.59	---	---	12.81	12.70	13.34	13.22
17	---	---	---	---	12.70	12.65	---	---	12.70	12.68	13.25	13.21
18	---	---	---	---	12.72	12.69	---	---	12.83	12.70	13.32	13.24
19	---	---	---	---	12.71	12.67	---	---	12.87	12.79	13.27	13.17
20	---	---	---	---	---	---	---	---	12.95	12.87	13.27	13.15
21	---	---	---	---	---	---	13.07	12.92	13.17	12.95	13.36	13.25
22	---	---	---	---	---	---	12.94	12.86	13.18	13.15	13.25	13.16
23	---	---	12.51	12.42	---	---	12.88	12.81	13.18	13.12	13.17	13.13
24	---	---	12.52	12.50	---	---	12.83	12.71	13.18	13.11	13.31	13.16
25	---	---	12.59	12.52	---	---	12.73	12.54	13.17	13.11	13.30	13.28
26	---	---	12.65	12.56	---	---	12.68	12.54	13.29	13.14	13.29	13.25
27	---	---	12.86	12.65	---	---	12.71	12.63	13.33	13.22	13.28	13.23
28	---	---	12.89	12.81	---	---	12.66	12.60	13.24	13.20	13.38	13.28
29	---	---	12.83	12.74	---	---	12.73	12.65	---	---	13.41	13.38
30	---	---	12.82	12.74	---	---	12.85	12.73	---	---	13.50	13.38
31	---	---	---	---	---	---	12.88	12.83	---	---	13.53	13.49
MONTH	---	---	---	---	---	---	---	---	13.33	12.51	13.53	13.08

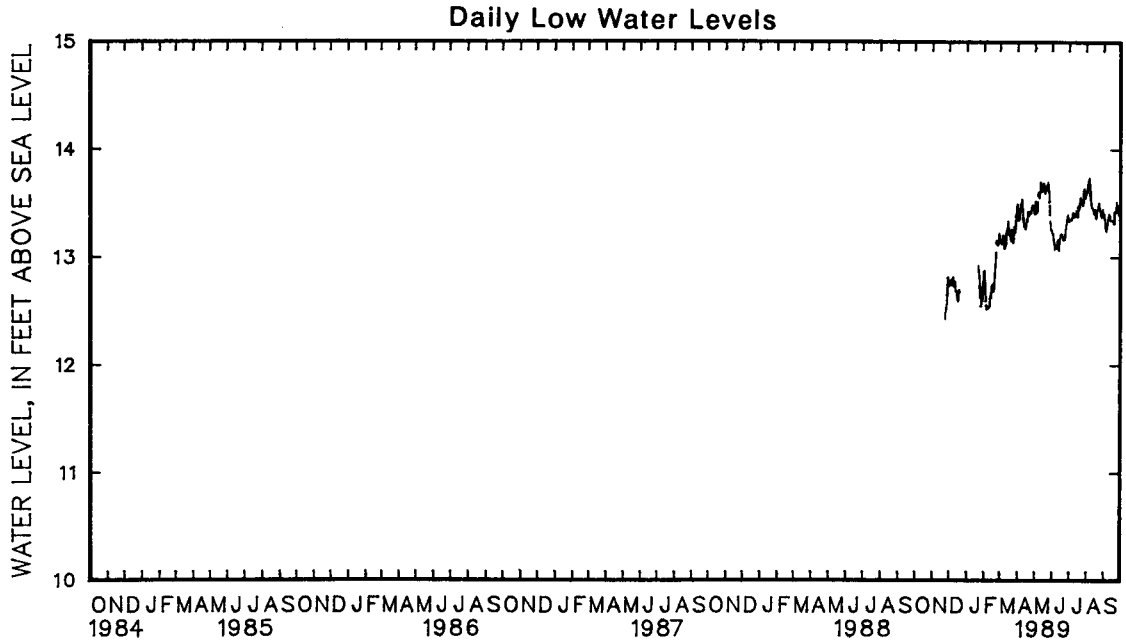
GROUND-WATER LEVELS

MARYLAND--Continued

HARFORD COUNTY--Continued

HA Ed 202--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13.51	13.40	13.51	13.40	13.30	13.22	13.38	13.34	13.63	13.60	13.47	13.40
2	13.40	13.34	13.60	13.51	13.24	13.21	13.38	13.34	13.65	13.60	13.47	13.37
3	13.44	13.35	13.52	13.46	13.24	13.17	13.38	13.34	13.72	13.65	13.37	13.29
4	13.48	13.42	13.47	13.41	13.24	13.13	13.40	13.34	13.77	13.67	13.31	13.25
5	13.52	13.44	13.58	13.42	13.17	13.07	13.41	13.36	13.76	13.71	13.27	13.24
6	13.54	13.49	13.65	13.57	13.17	13.09	13.44	13.37	13.74	13.73	13.31	13.27
7	13.59	13.49	13.63	13.60	13.13	13.09	13.44	13.41	13.77	13.68	13.35	13.30
8	13.62	13.53	13.64	13.57	13.14	13.08	13.44	13.38	13.69	13.58	13.41	13.34
9	13.61	13.45	13.59	13.55	13.23	13.08	13.40	13.37	13.59	13.51	13.42	13.37
10	13.45	13.35	13.70	13.59	13.23	13.16	13.42	13.38	13.51	13.46	13.45	13.40
11	13.36	13.31	13.70	13.69	13.16	13.11	13.41	13.40	13.48	13.46	13.45	13.39
12	13.31	13.28	13.74	13.65	13.16	13.06	13.43	13.38	13.48	13.45	13.40	13.36
13	13.31	13.28	13.66	13.61	13.20	13.12	13.49	13.40	13.46	13.43	13.38	13.34
14	13.33	13.26	13.62	13.61	13.22	13.17	13.48	13.43	13.43	13.40	13.40	13.34
15	13.41	13.29	13.68	13.62	13.25	13.20	13.43	13.37	13.45	13.42	13.43	13.34
16	13.43	13.35	13.77	13.68	13.24	13.21	13.49	13.37	13.47	13.44	13.40	13.34
17	13.39	13.33	13.76	13.68	13.26	13.21	13.52	13.47	13.46	13.39	13.42	13.34
18	13.44	13.39	13.69	13.63	13.27	13.21	13.48	13.44	13.40	13.36	13.36	13.31
19	13.46	13.42	13.64	13.59	13.25	13.19	13.54	13.46	13.44	13.37	13.43	13.31
20	13.45	13.38	13.66	13.62	13.20	13.16	13.66	13.52	13.46	13.43	13.43	13.42
21	13.43	13.40	13.70	13.65	13.21	13.16	13.61	13.55	13.49	13.44	13.44	13.42
22	13.45	13.42	13.65	13.62	13.21	13.16	13.55	13.52	13.50	13.47	13.57	13.43
23	13.43	13.41	13.79	13.64	13.24	13.19	13.58	13.50	13.53	13.50	13.62	13.51
24	13.44	13.41	13.81	13.69	13.30	13.25	13.56	13.49	13.55	13.46	13.52	13.44
25	13.48	13.44	13.70	13.65	13.32	13.27	13.51	13.48	13.47	13.43	13.49	13.42
26	13.50	13.48	13.66	13.60	13.37	13.32	13.64	13.50	13.44	13.42	13.61	13.47
27	13.51	13.48	13.62	13.48	13.43	13.36	13.65	13.61	13.43	13.38	13.51	13.40
28	13.50	13.45	13.48	13.33	13.42	13.39	13.68	13.63	13.41	13.37	13.43	13.39
29	13.46	13.43	13.33	13.26	13.42	13.36	13.63	13.57	13.46	13.38	13.49	13.43
30	13.47	13.40	13.26	13.25	13.37	13.33	13.60	13.55	13.47	13.44	13.48	13.42
31	---	---	13.28	13.24	---	---	13.63	13.58	13.47	13.40	---	---
MONTH	13.62	13.26	13.81	13.24	13.43	13.06	13.68	13.34	13.77	13.36	13.62	13.24



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

HOWARD COUNTY

WELL NUMBER.--HO Bb 26. SITE ID.--391931077063801. PERMIT NUMBER.--HO-73-0118.
LOCATION.--Lat 39°19'29", long 77°06'26", Hydrologic Unit 02060006, on Old Annapolis Rd. nr Florence.
Owner: Melvin Thomas.
AQUIFER.--Prettyboy Schist of Paleozoic age. Aquifer code: 300PRTB.
WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 300 ft; casing diameter 6 in., to 19 ft; open hole.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with graphic water-level recorder from Dec. 7, 1987 to June 12, 1989.
DATUM.--Elevation of land surface is 750 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of casing, 2.2 ft above land-surface datum.
REMARKS.--Howard County Project observation well.
PERIOD OF RECORD.--October 1978 to June 1981, October 1987 to June 1989.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 19.46 ft below land-surface datum, Oct. 16, 1979; lowest measured, 42.46 ft below land-surface datum, Mar. 3, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	36.91	36.89	37.84	37.82	38.54	38.52	39.04	39.04	37.88	37.84	35.65	35.38
2	36.93	36.90	37.89	37.83	38.55	38.54	39.05	39.04	37.88	37.85	35.38	35.22
3	36.97	36.93	37.92	37.89	38.56	38.54	39.05	39.03	37.90	37.85	35.21	35.12
4	37.00	36.97	37.93	37.92	38.59	38.57	39.08	39.06	37.92	37.89	35.10	34.92
5	37.08	37.00	37.94	37.89	38.59	38.58	39.08	39.08	37.89	37.85	34.97	34.94
6	37.14	37.08	37.99	37.94	38.60	38.59	39.10	39.08	37.86	37.85	35.06	34.96
7	37.15	37.14	38.05	38.00	38.62	38.60	39.11	39.10	37.87	37.85	35.05	34.86
8	37.17	37.15	38.09	38.06	38.65	38.63	39.13	39.10	37.87	37.83	34.85	34.59
9	37.18	37.17	38.11	38.09	38.66	38.65	39.15	39.13	37.88	37.84	34.57	34.33
10	37.19	37.18	38.12	38.08	38.68	38.66	39.15	39.15	37.84	37.81	34.31	33.91
11	37.23	37.18	38.18	38.13	38.71	38.68	39.16	39.15	37.81	37.79	33.89	33.81
12	37.29	37.23	38.19	38.18	38.72	38.71	39.15	39.12	37.86	37.79	33.80	33.41
13	37.32	37.29	38.20	38.18	38.73	38.70	39.16	39.13	37.87	37.82	33.39	33.04
14	37.34	37.32	38.22	38.21	38.74	38.73	39.16	39.10	37.84	37.81	33.02	32.91
15	37.35	37.34	38.24	38.22	38.78	38.74	39.09	39.05	37.84	37.80	33.19	33.04
16	37.38	37.35	38.25	38.24	38.78	38.78	---	---	37.87	37.82	33.11	32.86
17	37.39	37.38	38.28	38.25	38.80	38.78	---	---	37.87	37.81	32.87	32.67
18	37.40	37.39	38.29	38.28	38.81	38.80	---	---	37.81	37.73	33.03	32.89
19	37.44	37.40	38.30	38.29	38.83	38.81	---	---	37.73	37.68	33.04	32.72
20	37.48	37.44	38.30	38.27	38.84	38.83	---	---	37.67	37.59	32.89	32.62
21	37.49	37.44	38.41	38.30	38.86	38.84	---	---	37.58	37.41	33.01	32.90
22	37.49	37.43	38.41	38.41	38.88	38.87	---	---	37.45	37.42	33.00	32.89
23	37.52	37.49	38.42	38.41	38.88	38.87	---	---	37.41	37.30	32.89	32.44
24	37.55	37.52	38.43	38.42	38.90	38.88	---	---	37.29	37.09	32.41	31.26
25	37.60	37.56	38.44	38.43	38.93	38.90	---	---	37.07	36.74	31.21	30.53
26	37.63	37.60	38.44	38.44	38.95	38.93	---	---	36.73	36.13	30.51	29.96
27	37.65	37.63	38.44	38.44	38.96	38.94	---	---	36.13	35.87	29.94	29.57
28	37.67	37.65	38.48	38.44	38.98	38.92	---	---	35.86	35.66	29.61	29.55
29	37.69	37.67	38.50	38.48	38.99	38.98	---	---	---	---	29.55	29.37
30	37.82	37.69	38.52	38.49	39.01	38.99	---	---	---	---	29.57	29.26
31	37.84	37.82	---	---	39.04	39.01	37.90	37.88	---	---	29.96	29.59
MONTH	37.84	36.89	38.52	37.82	39.04	38.52	---	---	37.92	35.66	35.65	29.26

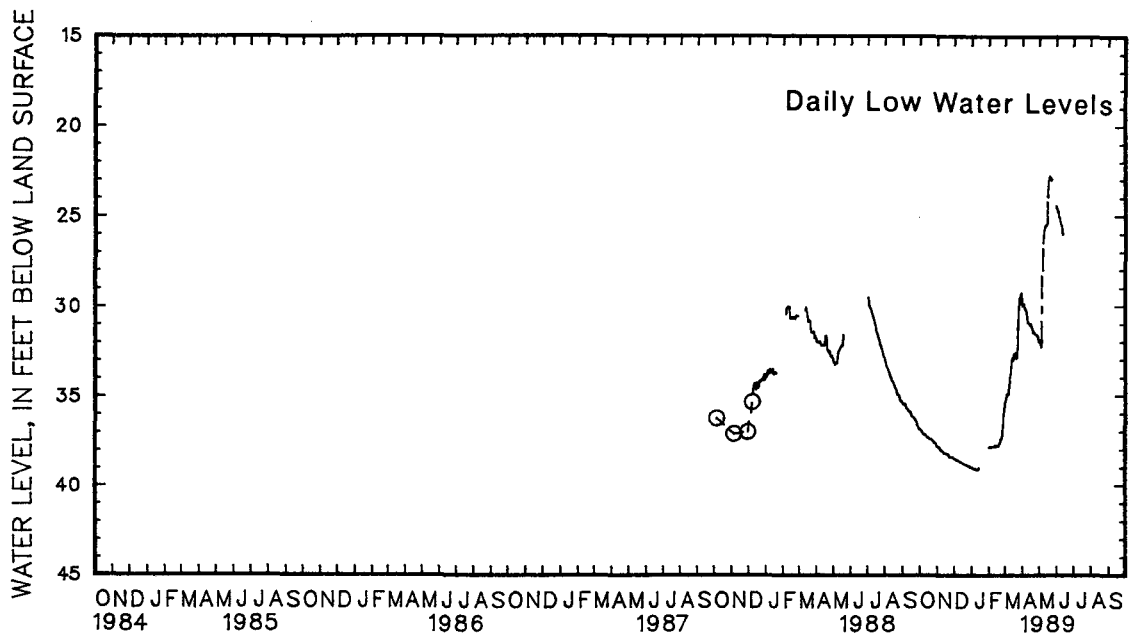
GROUND-WATER LEVELS

MARYLAND--Continued

HOWARD COUNTY--Continued

HO Bb 26--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	30.09	29.98	32.11	31.98	24.67	24.58	---	---	---	---	---	---
2	30.01	29.97	32.09	31.91	24.83	24.67	---	---	---	---	---	---
3	29.97	29.87	32.29	32.10	24.89	24.82	---	---	---	---	---	---
4	30.13	29.90	32.34	32.29	25.09	24.83	---	---	---	---	---	---
5	30.20	30.13	32.30	32.02	25.13	25.08	---	---	---	---	---	---
6	30.30	30.12	31.99	28.00	25.32	25.10	---	---	---	---	---	---
7	30.34	30.20	27.87	26.48	25.45	25.32	---	---	---	---	---	---
8	30.54	30.30	26.46	26.22	25.55	25.46	---	---	---	---	---	---
9	30.81	30.55	26.22	25.82	25.65	25.50	---	---	---	---	---	---
10	30.97	30.82	25.81	25.66	26.00	25.69	---	---	---	---	---	---
11	31.03	30.92	25.66	25.53	26.13	26.01	---	---	---	---	---	---
12	31.04	30.98	25.54	25.51	---	---	---	---	---	---	---	---
13	31.14	30.99	25.55	25.53	---	---	---	---	---	---	---	---
14	31.15	31.05	25.55	25.46	---	---	---	---	---	---	---	---
15	31.05	30.96	25.47	25.41	---	---	---	---	---	---	---	---
16	31.29	31.07	25.40	23.92	---	---	---	---	---	---	---	---
17	31.33	31.18	23.85	23.09	---	---	---	---	---	---	---	---
18	31.26	31.19	23.11	22.96	---	---	---	---	---	---	---	---
19	31.46	31.29	22.97	22.82	---	---	---	---	---	---	---	---
20	31.53	31.46	22.82	22.78	---	---	---	---	---	---	---	---
21	31.46	31.42	23.00	22.83	---	---	---	---	---	---	---	---
22	31.54	31.45	23.03	22.99	---	---	---	---	---	---	---	---
23	31.59	31.53	23.07	22.95	---	---	---	---	---	---	---	---
24	31.66	31.57	---	---	---	---	---	---	---	---	---	---
25	31.66	31.58	---	---	---	---	---	---	---	---	---	---
26	31.73	31.60	---	---	---	---	---	---	---	---	---	---
27	31.77	31.67	---	---	---	---	---	---	---	---	---	---
28	31.87	31.70	---	---	---	---	---	---	---	---	---	---
29	31.98	31.88	---	---	---	---	---	---	---	---	---	---
30	32.10	31.99	---	---	---	---	---	---	---	---	---	---
31	---	---	24.59	24.45	---	---	---	---	---	---	---	---
MONTH	32.10	29.87	---	---	---	---	---	---	---	---	---	---

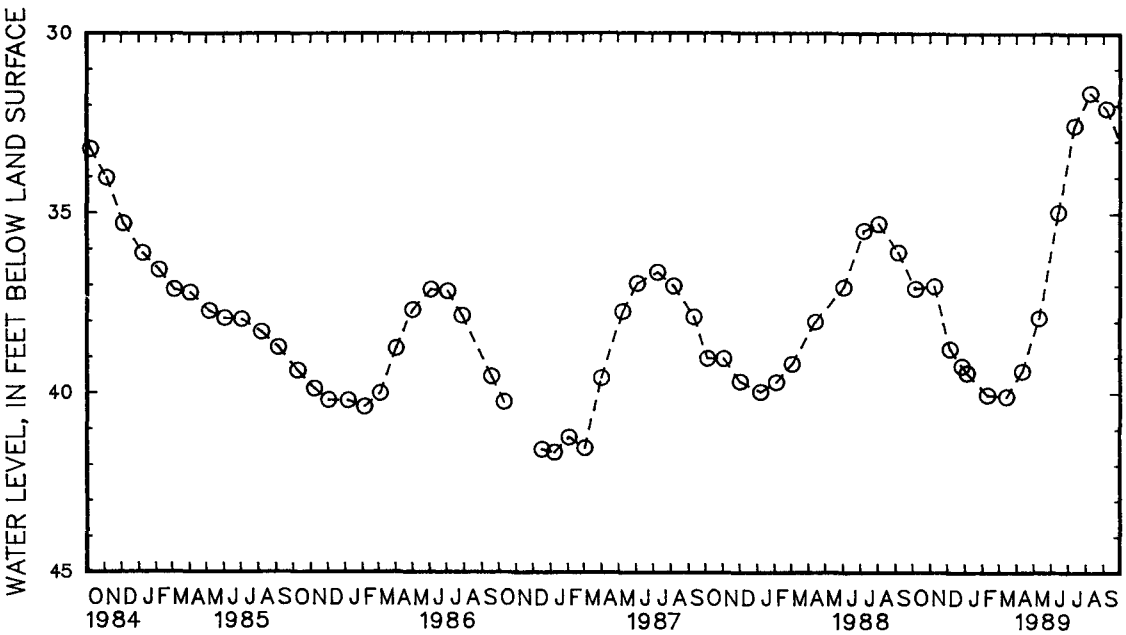


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--HO Bd 1. SITE ID.--391910076565701.
LOCATION.--Lat 39°19'10", long 76°56'57", Hydrologic Unit 02060006, Slacks Corner near MD Rts. 32 and 99.
Owner: Maryland State Highway Administration.
AQUIFER.--Loch Raven Schist of Paleozoic age. Aquifer code: 300LCRV.
WELL CHARACTERISTICS.--Dug, stone-lined, observation, water-table well, measured depth 48 ft; diameter 60 in.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 630 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Hole in center of steel plate well cover, 0.4 ft above land-surface datum.
PERIOD OF RECORD.--October 1946 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 27.76 ft below land-surface datum, July 3, 1972; lowest measured, 46.88 ft below land-surface datum, Sept. 10, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 6	37.10	DEC 27	39.26	MAR 14	40.11	JUN 14	34.96	SEP 6	32.07
NOV 8	37.03	JAN 5	39.45	APR 11	39.40	JUL 12	32.55		
DEC 6	38.78	FEB 9	40.06	MAY 11	37.91	AUG 8	31.64		



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--HO Bf 51. SITE ID.--391817076482301. PERMIT NUMBER.--HO-73-0809.
LOCATION.--Lat 39°18'17", long 76°48'23", Hydrologic Unit 02060003, at intersection of Daniels Rd. and Old Frederick Rd., near Daniels.
Owner: Edward Bolanowski.
AQUIFER.--Baltimore Gneiss of Precambian age. Aquifer code: 400BLMR.
WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 150 ft; casing diameter 6 in., to 23 ft; open hole.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with graphic water-level recorder from Aug. 1, 1988 to Aug. 28, 1989.
DATUM.--Elevation of land surface is 465 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of casing, 3.2 ft above land-surface datum.
REMARKS.--Howard County Project observation well.
PERIOD OF RECORD.--June 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.84 ft below land-surface datum, July 21, 22 and 23, 1989; lowest measured, 31.39 ft below land-surface datum, Jan. 5, 6, 9, 10, 11 and 12, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

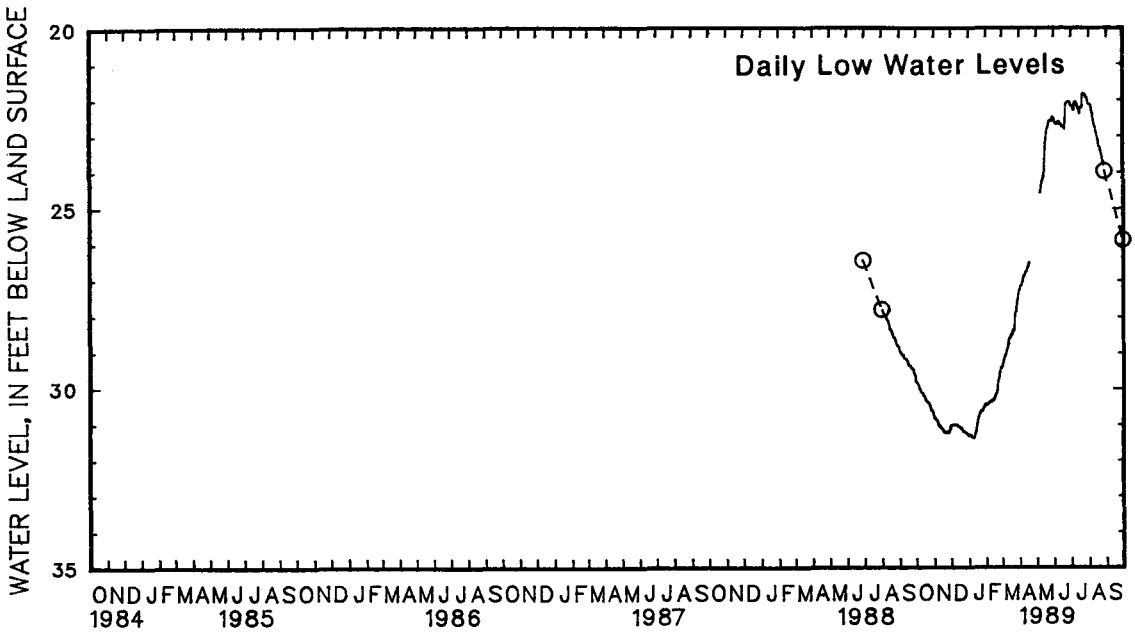
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	29.86	29.84	30.84	30.84	31.05	31.05	31.33	31.33	30.48	30.48	29.41	29.39
2	29.86	29.85	30.87	30.84	31.05	31.05	31.33	31.32	30.50	30.48	29.39	29.30
3	29.91	29.87	30.89	30.87	31.05	31.03	31.33	31.33	30.49	30.45	29.29	29.22
4	29.95	29.91	30.90	30.89	31.03	31.03	31.34	31.33	30.45	30.45	29.22	29.18
5	30.01	29.95	30.90	30.90	31.03	31.03	31.39	31.34	30.45	30.44	29.18	29.13
6	30.06	30.01	30.94	30.90	31.03	31.02	31.39	31.38	30.44	30.41	29.14	29.09
7	30.06	30.05	30.99	30.94	31.02	31.02	31.38	31.38	30.41	30.39	29.09	29.06
8	30.13	30.06	31.06	30.99	31.04	31.02	31.38	31.38	30.39	30.39	29.06	29.01
9	30.13	30.13	31.06	31.06	31.04	31.03	31.39	31.38	30.39	30.39	29.01	28.93
10	30.15	30.13	31.06	31.06	31.04	31.03	31.39	31.39	30.40	30.39	28.92	28.87
11	30.16	30.15	31.10	31.06	31.06	31.04	31.39	31.39	30.39	30.35	28.87	28.78
12	30.21	30.16	31.12	31.10	31.09	31.06	31.39	31.31	30.35	30.35	28.77	28.77
13	30.25	30.21	31.14	31.12	31.08	31.08	31.30	31.25	30.36	30.35	28.77	28.68
14	30.27	30.25	31.15	31.14	31.09	31.08	31.25	31.20	30.35	30.32	28.68	28.62
15	30.27	30.27	31.17	31.15	31.09	31.09	31.19	31.04	30.33	30.29	28.62	28.60
16	30.35	30.27	31.20	31.17	31.13	31.09	31.03	30.96	30.30	30.29	28.60	28.60
17	30.37	30.36	31.23	31.20	31.13	31.13	30.96	30.88	30.30	30.23	28.60	28.51
18	30.38	30.37	31.25	31.23	31.13	31.13	30.88	30.81	30.23	30.18	28.51	28.51
19	30.38	30.38	31.26	31.25	31.16	31.13	30.81	30.77	30.18	30.14	28.51	28.51
20	30.42	30.38	31.26	31.24	31.20	31.16	30.77	30.71	30.14	30.09	28.51	28.39
21	30.42	30.42	31.25	31.24	31.20	31.20	30.72	30.71	30.09	29.93	28.40	28.39
22	30.43	30.42	31.25	31.25	31.24	31.20	30.71	30.66	29.92	29.79	28.40	28.40
23	30.48	30.43	31.25	31.25	31.24	31.23	30.66	30.64	29.78	29.73	28.40	28.29
24	30.53	30.48	31.25	31.24	31.23	31.23	30.64	30.64	29.72	29.63	28.28	27.94
25	30.57	30.53	31.25	31.25	31.25	31.23	30.64	30.64	29.62	29.55	27.94	27.88
26	30.63	30.58	31.25	31.25	31.26	31.25	30.64	30.60	29.54	29.44	27.88	27.79
27	30.63	30.63	31.25	31.22	31.29	31.26	30.60	30.55	29.44	29.44	27.78	27.67
28	30.65	30.63	31.22	31.19	31.30	31.29	30.55	30.55	29.44	29.41	27.66	27.57
29	30.70	30.65	31.19	31.16	31.30	31.29	30.55	30.52	---	---	27.56	27.50
30	30.76	30.70	31.16	31.05	31.33	31.29	30.52	30.46	---	---	27.50	27.37
31	30.84	30.77	---	---	31.33	31.32	30.49	30.46	---	---	27.36	27.29
MONTH	30.84	29.84	31.26	30.84	31.33	31.02	31.39	30.46	30.50	29.41	29.41	27.29

MARYLAND--Continued

HOWARD COUNTY--Continued

HO Bf 51--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	27.29	27.27	---	---	22.56	22.53	22.17	22.17	22.13	22.12	---	---
2	27.27	27.15	---	---	22.64	22.56	22.18	22.17	22.13	22.13	---	---
3	27.18	27.15	---	---	22.65	22.64	22.18	22.18	22.15	22.13	---	---
4	27.18	27.14	26.38	26.35	22.67	22.64	22.29	22.19	22.19	22.15	---	---
5	27.14	27.08	---	---	22.68	22.67	22.30	22.29	22.30	22.19	---	---
6	27.07	27.03	---	---	22.68	22.68	22.29	22.28	22.38	22.30	---	---
7	27.03	26.93	---	---	22.69	22.66	22.28	22.09	22.48	22.38	---	---
8	26.93	26.88	24.59	24.57	22.66	22.65	22.08	22.07	22.58	22.48	---	---
9	26.88	26.87	24.59	24.52	22.66	22.61	22.07	22.06	22.68	22.58	---	---
10	26.87	26.84	24.51	24.40	22.61	22.61	22.09	22.06	22.73	22.68	---	---
11	26.84	26.79	24.40	24.29	22.68	22.62	22.12	22.10	22.78	22.73	---	---
12	26.79	26.77	24.29	24.22	22.68	22.68	22.22	22.14	22.87	22.78	---	---
13	26.77	26.74	24.22	24.18	22.69	22.68	22.23	22.23	22.92	22.87	---	---
14	26.73	26.68	24.18	24.07	22.77	22.69	22.27	22.23	23.00	22.92	---	---
15	26.68	26.63	24.06	23.98	22.80	22.74	22.38	22.27	23.06	23.01	---	---
16	26.62	26.59	23.98	23.65	22.74	22.74	22.47	22.38	23.13	23.06	---	---
17	26.59	26.54	23.59	23.21	22.75	22.74	22.46	22.23	23.32	23.13	---	---
18	26.54	26.51	23.20	23.10	22.77	22.75	22.23	22.23	23.29	23.22	---	---
19	---	---	23.10	22.94	22.81	22.77	22.23	22.22	23.31	23.29	---	---
20	---	---	22.93	22.83	22.85	22.81	22.24	22.22	23.36	23.30	---	---
21	---	---	22.83	22.80	22.85	22.58	22.20	21.84	23.42	23.36	---	---
22	---	---	22.80	22.76	22.57	22.11	21.84	21.84	23.51	23.42	---	---
23	---	---	22.75	22.67	22.10	22.10	21.85	21.84	23.57	23.51	---	---
24	---	---	22.67	22.61	22.10	22.08	21.85	21.85	23.69	23.57	---	---
25	---	---	22.61	22.59	22.08	22.08	21.85	21.85	23.71	23.69	---	---
26	---	---	22.59	22.58	22.08	22.06	21.92	21.85	23.80	23.71	---	---
27	---	---	22.58	22.58	22.06	22.06	21.94	21.92	23.90	23.80	---	---
28	---	---	22.58	22.58	22.07	22.06	21.94	21.94	---	---	---	---
29	---	---	22.59	22.58	22.12	22.07	22.02	21.94	---	---	---	---
30	---	---	22.58	22.49	22.17	22.13	22.09	22.02	---	---	---	---
31	---	---	22.53	22.49	---	---	22.13	22.09	---	---	---	---
MONTH	---	---	---	---	22.85	22.06	22.47	21.84	---	---	---	---



5 YEAR HYDROGRAPH

OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--HO Bf 67. SITE ID.--391715076472201. PERMIT NUMBER.--HO-02-6318.
LOCATION.--Lat 39°17'15", long 76°47'22", Hydrologic Unit 02060003, at Hollofield Campground near Ellicott City.
Owner: Patapsco Valley State Park.
AQUIFER.--Mount Washington Amphibolite of Paleozoic age. Aquifer code: 300MWSG.
WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 161 ft; casing diameter 6 in., to 62.4 ft; open hole.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with graphic water-level recorder from Apr. 6, 1989 to current year.
DATUM.--Elevation of land surface is 425 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring Point: Top of casing, 0.4 ft above land-surface datum.
REMARKS.--Howard County Project observation well.
PERIOD OF RECORD.--October 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.58 ft below land-surface datum, July 21 and 22, 1989; lowest measured, 25.19 ft below land-surface datum, Nov. 3, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	24.27	DEC 2	24.75	MAR 1	20.88	MAY 3	16.02	SEP 29	17.86
NOV 3	25.19	FEB 1	23.41	APR 6	16.55	JUN 30	14.03		

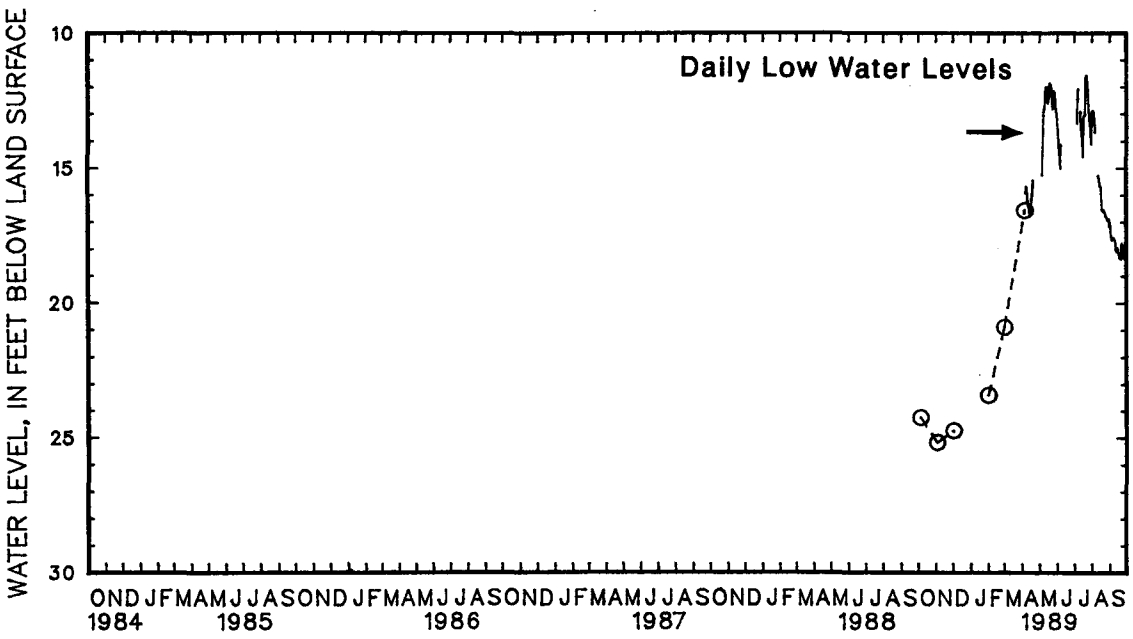
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	13.89	13.55	14.39	14.26	13.34	12.90	17.21	17.04
2	---	---	---	---	14.29	13.90	---	---	12.91	12.88	17.53	17.23
3	---	---	---	---	14.55	14.31	---	---	13.13	12.92	17.67	17.55
4	---	---	15.58	15.27	14.98	14.56	---	---	13.33	13.14	17.71	17.68
5	---	---	15.25	14.50	15.21	15.02	14.32	13.34	13.67	13.40	17.71	17.66
6	---	---	14.47	13.70	15.06	14.17	13.31	12.44	13.97	13.68	17.67	17.63
7	16.37	15.93	13.66	13.07	---	---	12.43	12.08	---	---	17.64	17.60
8	15.93	15.69	13.02	12.86	---	---	---	---	---	---	17.66	17.62
9	16.10	15.73	12.99	12.81	---	---	---	---	---	---	17.69	17.65
10	16.34	16.10	12.78	12.33	---	---	---	---	---	---	17.81	17.70
11	16.45	16.34	12.32	12.03	---	---	13.47	12.93	15.37	15.29	18.00	17.83
12	16.55	16.45	12.08	11.99	---	---	13.79	13.49	15.47	15.37	18.11	18.04
13	16.72	16.51	12.40	12.09	---	---	14.00	13.79	15.62	15.48	18.12	18.09
14	16.84	16.72	12.58	12.40	---	---	14.56	14.04	15.68	15.62	18.09	17.97
15	16.82	16.59	12.71	12.58	---	---	14.91	14.59	15.72	15.68	18.23	18.02
16	16.69	16.59	12.73	12.42	---	---	14.84	13.61	15.82	15.72	18.22	18.13
17	16.63	16.17	12.40	12.05	---	---	13.56	13.10	16.58	15.96	18.35	18.16
18	16.21	16.05	12.03	11.85	---	---	13.11	13.07	16.62	16.58	18.47	18.35
19	16.11	15.92	11.96	11.90	---	---	13.17	13.06	16.59	16.56	18.46	18.37
20	15.90	15.46	12.06	11.92	---	---	13.05	11.76	16.57	16.55	18.44	18.39
21	---	---	12.53	12.06	---	---	11.73	11.58	16.63	16.57	18.40	18.11
22	---	---	12.93	12.54	---	---	11.80	11.58	16.66	16.63	18.10	17.80
23	---	---	13.02	12.82	---	---	12.22	11.81	16.72	16.64	18.36	17.88
24	---	---	12.79	12.48	---	---	12.61	12.24	16.80	16.73	18.46	18.36
25	---	---	12.47	12.15	---	---	12.98	12.63	16.85	16.82	18.40	17.98
26	---	---	12.35	12.19	---	---	13.27	12.99	16.88	16.84	18.03	17.88
27	---	---	12.61	12.38	---	---	13.41	13.28	16.94	16.89	18.12	18.05
28	---	---	12.81	12.63	---	---	13.82	13.42	16.96	16.94	18.07	17.87
29	---	---	12.93	12.81	---	---	14.13	13.85	16.95	16.90	---	---
30	---	---	13.15	12.94	---	---	14.13	14.13	17.17	16.90	---	---
31	---	---	13.54	13.16	---	---	14.12	13.35	17.21	17.17	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

GROUND-WATER LEVELS

MARYLAND--Continued

HOWARD COUNTY--Continued

HO Bf 67--Continued



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--HO Cc 37. SITE ID.--391150077000301. PERMIT NUMBER.--HO-72-0199.
LOCATION.--Lat 39°11'50", long 77°00'03", Hydrologic Unit 02060006, on Brighton Dam Rd. near Brighton Dam.
Owner: Robert Oler.
AQUIFER.--Loch Raven Schist of Paleozoic age. Aquifer code: 300LCRV.
WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 285 ft; casing diameter 6 in., to 51 ft; open hole.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with graphic water-level recorder from Dec. 7, 1987 to Jan. 19, 1989.
DATUM.--Elevation of land surface is 470 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of casing, 2.6 ft above land-surface datum.
REMARKS.--Howard County Project observation well. Water levels affected by pumpage from nearby domestic well.
PERIOD OF RECORD.--December 1987 to January 1989.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 45.91 ft below land-surface datum, June 2, 1988; lowest measured, 48.13 ft below land-surface datum, Jan. 7, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

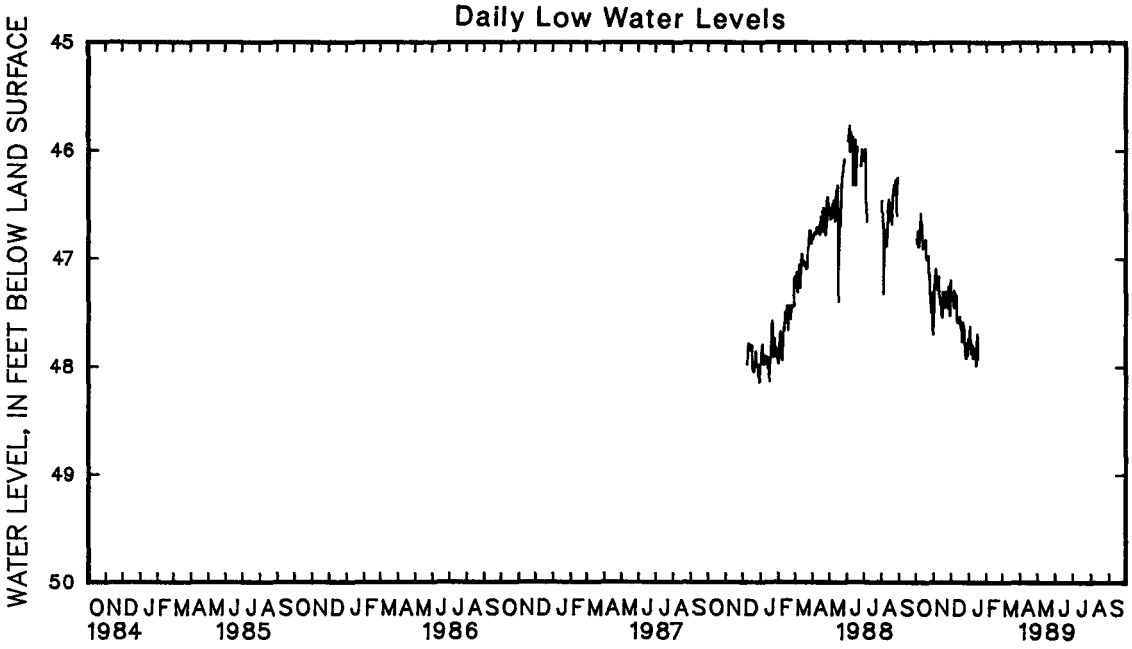
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	47.69	47.48	47.59	47.20	47.98	47.81	---	---	---	---
2	47.03	46.82	47.47	47.30	47.59	47.33	47.88	47.72	---	---	---	---
3	47.03	46.86	47.44	47.25	47.57	47.37	47.91	47.63	---	---	---	---
4	46.90	46.75	47.43	47.16	47.53	47.38	47.99	47.81	---	---	---	---
5	47.14	46.89	47.28	47.10	47.72	47.39	47.97	47.88	---	---	---	---
6	47.16	46.89	47.48	47.18	47.73	47.45	47.93	47.79	---	---	---	---
7	46.99	46.83	47.47	47.28	47.49	47.30	48.13	47.87	---	---	---	---
8	46.91	46.68	47.52	47.29	47.55	47.44	48.07	47.81	---	---	---	---
9	46.75	46.58	47.38	47.20	47.53	47.33	48.02	47.92	---	---	---	---
10	46.77	46.67	47.43	47.17	47.63	47.39	47.99	47.89	---	---	---	---
11	46.86	46.68	47.44	47.35	47.77	47.57	47.98	47.91	---	---	---	---
12	46.89	46.78	47.56	47.42	47.74	47.59	48.00	47.83	---	---	---	---
13	47.07	46.91	47.57	47.41	47.66	47.59	48.06	47.89	---	---	---	---
14	47.02	46.88	47.83	47.48	47.78	47.58	48.06	47.99	---	---	---	---
15	46.99	46.87	47.85	47.54	47.65	47.57	48.06	47.81	---	---	---	---
16	47.07	46.90	47.68	47.52	47.79	47.54	48.03	47.70	---	---	---	---
17	46.89	46.83	47.55	47.31	47.85	47.61	48.07	47.93	---	---	---	---
18	47.13	46.83	47.46	47.33	47.81	47.64	---	---	---	---	---	---
19	47.31	46.99	47.93	47.45	48.00	47.62	---	---	---	---	---	---
20	47.09	47.01	47.87	47.39	47.96	47.77	---	---	---	---	---	---
21	47.25	47.00	47.40	47.31	47.74	47.59	---	---	---	---	---	---
22	47.42	46.98	47.50	47.41	47.78	47.61	---	---	---	---	---	---
23	47.22	46.98	47.52	47.32	47.75	47.64	---	---	---	---	---	---
24	47.47	47.14	47.72	47.37	47.88	47.66	---	---	---	---	---	---
25	47.36	47.16	47.72	47.46	47.93	47.79	---	---	---	---	---	---
26	47.64	47.36	47.45	47.34	48.04	47.86	---	---	---	---	---	---
27	47.73	47.50	47.48	47.26	48.03	47.92	---	---	---	---	---	---
28	47.68	47.45	47.57	47.37	47.96	47.84	---	---	---	---	---	---
29	47.64	47.32	47.65	47.53	48.02	47.90	---	---	---	---	---	---
30	47.91	47.66	47.58	47.31	47.94	47.83	---	---	---	---	---	---
31	47.88	47.70	---	---	48.00	47.75	---	---	---	---	---	---
MONTH	---	---	47.93	47.10	48.04	47.20	---	---	---	---	---	---

GROUND-WATER LEVELS

MARYLAND--Continued

HOWARD COUNTY--Continued

HO Cc 37--Continued

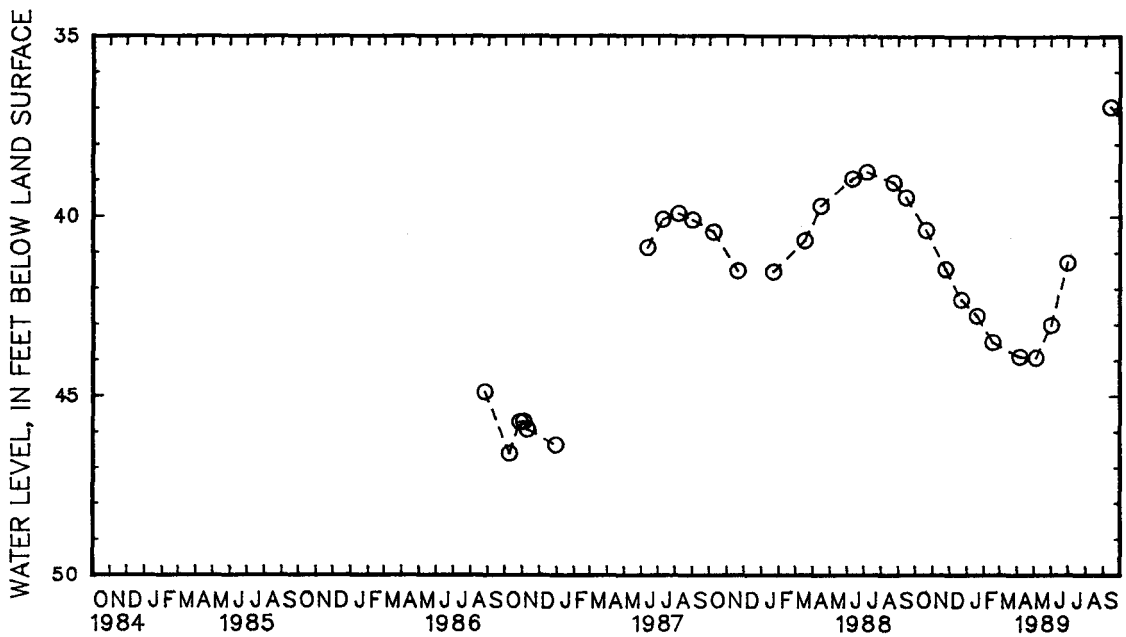


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--HO Cd 25. SITE ID.--391444076554701. PERMIT NUMBER.--HO-81-1578.
LOCATION.--Lat 39°14'44", long 76°55'47", Hydrologic Unit 02060006, south of Homewood Rd. at the University of Maryland Central Farm.
Owner: U.S. Geological Survey.
AQUIFER.--Wissahickon Formation of Paleozoic age. Aquifer code: 300WSCK.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 100 ft; casing diameter 6 in., to 58 ft; open hole.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 470.9 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 2.37 ft above land-surface datum.
PERIOD OF RECORD.--August 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 36.96 ft below land-surface datum, Sep. 14, 1989; lowest measured, 46.61 ft below land-surface datum, Oct. 9, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19	40.39	DEC 22	42.33	FEB 16	43.52	MAY 4	43.95	JUN 30	41.28
NOV 23	41.47	JAN 19	42.78	APR 5	43.92	JUN 1	43.03	SEP 14	36.96



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--HO Cd 28. SITE ID.--391447076554702.
LOCATION.--Lat 39°14'43", long 76°55'48", Hydrologic Unit 02060006, south of Homewood Rd. at the University of Maryland Central Farm.
Owner: U.S. Geological Survey.
AQUIFER.--Loch Raven Schist of Paleozoic age. Aquifer code: 300LCRV.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 46 ft; casing diameter 3.5 in., to 41 ft; screen diameter 3.5 in. from 41 to 46 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--60-minute recorder interval from Oct. 30, 1986 to current year.
DATUM.--Elevation of land surface is 453.11 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of recorder platform, 3.17 ft above land-surface datum.
REMARKS.--Best Management Practice Project observation well.
PERIOD OF RECORD.--October 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 23.63 ft below land-surface datum, Aug. 6 and 7, 1989 and Sept. 1, 1989; lowest measured, 32.03 ft below land-surface datum, Dec. 13 and 14, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	27.28	27.24	28.06	27.94	28.85	28.75	29.46	29.45	29.89	29.85	30.14	30.12
2	27.24	27.21	28.07	27.93	28.88	28.85	29.45	29.43	29.92	29.89	30.15	30.11
3	27.32	27.24	28.16	28.08	28.85	28.79	29.45	29.36	29.96	29.90	30.11	30.11
4	27.36	27.32	28.15	28.11	28.94	28.80	29.56	29.37	29.98	29.96	30.12	30.11
5	27.47	27.37	28.11	27.95	28.93	28.88	29.57	29.55	29.96	29.94	30.12	30.04
6	27.51	27.47	28.19	28.03	28.92	28.88	29.58	29.50	29.95	29.91	30.08	30.05
7	27.51	27.46	28.31	28.19	28.94	28.88	29.62	29.58	29.99	29.95	30.15	30.08
8	27.48	27.44	28.31	28.26	29.02	28.94	29.59	29.52	30.00	29.96	30.15	30.14
9	27.50	27.46	28.37	28.31	29.02	28.96	29.68	29.60	30.03	29.98	30.14	30.08
10	27.47	27.37	28.34	28.20	29.00	28.97	29.69	29.67	30.01	29.97	30.09	30.07
11	27.54	27.36	28.44	28.27	29.08	28.97	29.71	29.67	29.97	29.93	30.07	30.00
12	27.66	27.54	28.46	28.41	29.11	29.06	29.71	29.55	30.05	29.95	30.05	29.98
13	27.70	27.67	28.41	28.30	29.05	28.94	29.76	29.55	30.07	30.01	30.06	30.02
14	27.71	27.64	28.43	28.37	29.08	28.99	29.76	29.66	30.04	29.98	30.02	29.98
15	27.67	27.64	28.48	28.43	29.17	29.03	29.66	29.60	---	---	29.99	29.95
16	27.71	27.67	28.47	28.39	29.18	29.12	29.75	29.66	---	---	30.07	30.00
17	27.73	27.71	28.54	28.37	29.13	29.08	29.75	29.72	30.17	30.13	30.06	29.99
18	27.71	27.62	28.59	28.54	29.18	29.13	29.75	29.68	30.13	30.07	29.99	29.92
19	---	---	28.58	28.53	29.22	29.18	---	---	30.07	30.05	30.05	29.98
20	---	---	28.53	28.31	29.22	29.20	---	---	30.08	30.06	30.04	29.92
21	27.86	27.63	28.64	28.36	29.27	29.21	29.86	29.79	30.07	29.96	29.96	29.87
22	27.76	27.60	28.68	28.64	---	---	29.86	29.81	30.09	30.00	30.01	29.97
23	27.85	27.77	---	---	---	---	29.81	29.79	30.13	30.09	30.01	29.97
24	27.86	27.80	---	---	---	---	29.81	29.79	30.14	30.13	29.96	29.84
25	27.91	27.87	---	---	---	---	29.87	29.82	30.13	30.09	29.87	29.85
26	28.00	27.92	28.68	28.67	---	---	29.87	29.71	30.09	30.00	29.90	29.87
27	28.05	28.01	28.67	28.63	---	---	29.86	29.71	30.11	30.02	29.89	29.86
28	28.03	27.96	28.77	28.62	---	---	29.89	29.85	30.12	30.11	29.85	29.79
29	28.09	28.04	28.85	28.78	---	---	29.85	29.83	---	---	29.79	29.78
30	28.11	28.07	28.82	28.73	29.43	29.38	29.82	29.76	---	---	29.79	29.72
31	28.13	28.06	---	---	29.45	29.37	29.88	29.83	---	---	29.72	29.66
MONTH	---	---	---	---	---	---	---	---	---	---	30.15	29.66

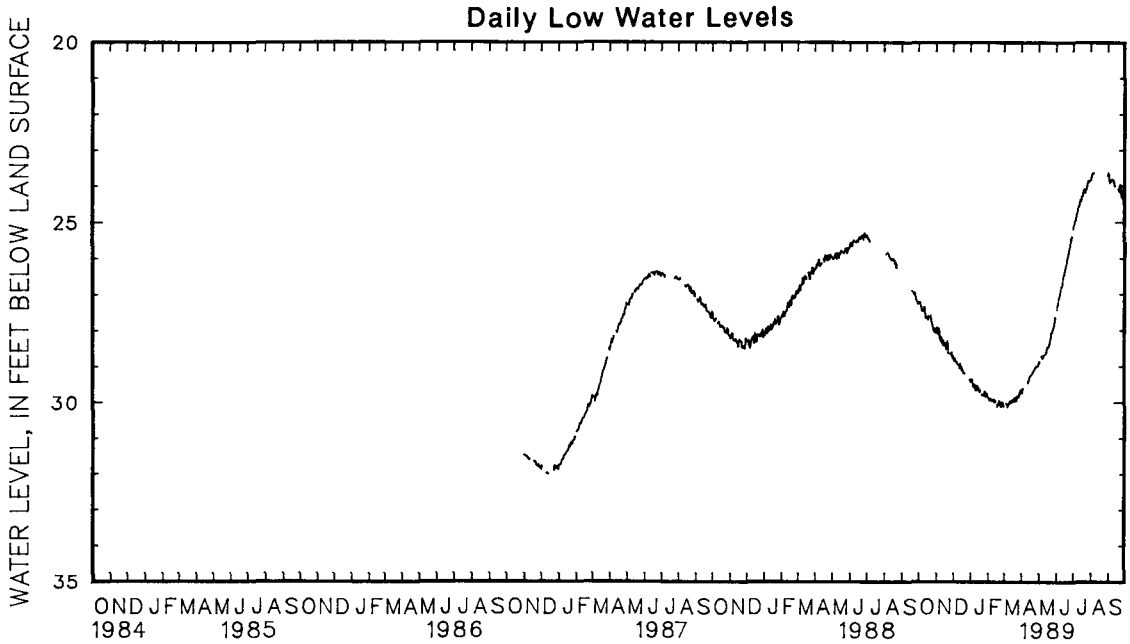
GROUND-WATER LEVELS

MARYLAND--Continued

HOWARD COUNTY--Continued

HO Cd 28--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	29.80	29.72	28.99	28.91	---	---	25.31	25.20	23.85	23.83	23.74	23.63
2	29.81	29.75	28.94	28.88	27.57	27.43	25.20	25.11	23.83	23.77	23.85	23.66
3	29.74	29.65	---	---	27.43	27.30	25.11	25.06	23.77	23.71	23.91	23.86
4	29.66	29.62	---	---	27.29	27.26	25.06	24.99	23.71	23.64	23.96	23.91
5	---	---	28.98	28.74	27.27	27.12	24.99	24.95	23.65	23.64	23.93	23.89
6	---	---	28.77	28.72	27.11	27.09	24.95	24.86	23.65	23.63	23.89	23.85
7	---	---	28.78	28.77	27.09	27.01	24.86	24.77	---	---	23.86	23.83
8	---	---	28.78	28.78	27.01	26.93	24.77	24.75	---	---	23.85	23.82
9	---	---	28.80	28.75	26.93	26.80	24.75	24.69	---	---	23.85	23.82
10	---	---	28.74	28.69	26.84	26.80	24.69	24.58	---	---	23.86	23.83
11	---	---	28.69	28.69	26.83	26.75	24.58	24.55	---	---	23.96	23.86
12	29.51	29.47	28.69	28.68	26.75	26.58	24.55	24.51	---	---	24.02	23.96
13	29.47	29.42	28.68	28.67	26.57	26.50	24.50	24.40	---	---	24.03	24.00
14	29.43	29.38	28.67	28.61	26.52	26.46	24.41	24.38	---	---	---	---
15	29.38	29.29	28.61	28.54	26.46	26.36	24.46	24.41	---	---	---	---
16	29.32	29.29	28.54	28.47	26.36	26.31	24.43	24.28	---	---	---	---
17	29.33	29.26	28.52	28.47	26.33	26.26	24.28	24.27	---	---	---	---
18	29.26	29.24	28.51	28.47	26.26	26.18	24.27	24.25	---	---	---	---
19	29.25	29.23	28.47	28.40	26.18	26.10	24.25	24.14	---	---	24.17	24.09
20	29.24	29.21	28.39	28.31	26.10	26.00	24.13	24.08	---	---	24.15	24.10
21	29.21	29.16	28.31	28.26	26.02	25.95	24.18	24.10	---	---	24.19	24.16
22	29.16	29.13	28.26	28.19	25.95	25.87	24.18	24.17	---	---	24.16	23.96
23	29.15	29.11	28.19	28.07	25.87	25.77	24.17	24.11	---	---	24.28	23.96
24	29.12	29.08	28.07	28.06	25.77	25.70	24.11	24.07	---	---	24.40	24.29
25	29.08	29.05	28.07	28.01	25.70	25.60	24.07	24.02	---	---	24.37	24.23
26	29.05	29.04	28.00	27.95	25.60	25.52	24.02	23.95	---	---	24.31	24.13
27	29.04	29.00	27.95	27.91	25.52	25.44	23.95	23.85	---	---	24.49	24.33
28	29.03	29.00	27.93	27.86	25.44	25.40	23.86	23.84	---	---	24.47	24.35
29	29.01	28.99	27.85	27.76	---	---	23.93	23.87	---	---	24.34	24.26
30	29.00	28.99	27.75	27.65	---	---	23.92	23.86	---	---	24.43	24.31
31	---	---	---	---	---	---	23.86	23.85	23.79	23.71	---	---
MONTH	---	---	---	---	---	---	25.31	23.84	---	---	---	---



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--HO Cd 29. SITE ID.--391442076554702.
LOCATION.--Lat 39°14'42", long 76°55'45", Hydrologic Unit 02060006, south of Homewood Rd. at the University of Maryland Central Farm.
Owner: U.S. Geological Survey.
AQUIFER.--Loch Raven Schist of Paleozoic age. Aquifer code: 300LCRV.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 68 ft; casing diameter 3.5 in., to 63 ft; screen diameter 3.5 in. from 63 to 68 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--60-minute recorder interval from Oct. 24, 1986 to current year.
DATUM.--Elevation of land surface is 470.34 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of recorder platform, 2.44 ft above land-surface datum.
REMARKS.--Best Management Practice Project observation well.
PERIOD OF RECORD.--October 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 40.37 ft below land-surface datum, Aug. 30, 1989; lowest measured, 49.71 ft below land-surface datum, Jan. 16, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	43.92	43.86	44.65	44.49	45.42	45.30	46.10	46.08	46.64	46.57	47.23	47.19
2	43.86	43.81	44.64	44.48	45.46	45.41	46.08	46.04	46.72	46.65	47.24	47.20
3	43.96	43.85	44.75	44.65	45.41	45.32	46.08	45.94	46.78	46.68	47.23	47.20
4	44.01	43.96	44.74	44.68	45.54	45.36	46.22	45.98	46.82	46.78	47.25	47.22
5	44.14	44.01	44.67	44.48	45.51	45.44	46.23	46.19	46.79	46.75	47.24	47.16
6	44.18	44.14	44.77	44.60	45.50	45.42	46.23	46.12	46.78	46.71	47.26	47.19
7	44.18	44.11	44.93	44.77	45.52	45.41	46.29	46.23	46.84	46.77	47.35	47.26
8	44.12	44.08	44.94	44.85	45.62	45.52	46.25	46.13	46.85	46.79	47.36	47.34
9	44.13	44.08	44.99	44.94	45.62	45.53	46.37	46.26	46.90	46.84	47.34	47.29
10	44.10	43.96	44.94	44.77	45.58	45.53	46.38	46.33	46.86	46.82	47.32	47.29
11	44.15	43.96	45.05	44.86	45.69	45.53	46.40	46.34	46.85	46.79	47.31	47.22
12	44.30	44.15	45.08	45.00	45.72	45.63	46.38	46.18	46.99	46.82	47.34	47.19
13	44.34	44.30	45.00	44.88	45.62	45.48	46.45	46.19	47.02	46.92	47.36	47.30
14	44.35	44.26	45.02	44.96	45.66	45.55	46.45	46.30	46.99	46.89	47.31	47.26
15	44.29	44.26	45.07	45.02	45.79	45.58	46.32	46.24	47.01	46.93	47.34	47.24
16	44.33	44.29	45.05	44.94	45.80	45.69	46.43	46.32	47.10	47.02	47.42	47.35
17	44.36	44.31	45.14	44.92	45.71	45.63	46.43	46.38	47.11	47.04	47.42	47.34
18	44.31	44.21	45.19	45.13	45.78	45.71	46.44	46.35	47.04	46.96	47.38	47.26
19	44.40	44.30	45.17	45.08	45.84	45.77	---	---	46.98	46.94	47.46	47.39
20	44.48	44.40	45.08	44.83	45.84	45.79	---	---	47.01	46.98	47.46	47.30
21	44.48	44.19	45.22	44.92	45.92	45.82	46.50	46.39	46.98	46.85	47.42	47.25
22	44.35	44.17	45.27	45.21	---	---	46.49	46.43	47.06	46.92	47.48	47.42
23	44.45	44.36	---	---	---	---	46.43	46.39	47.11	47.06	47.49	47.44
24	44.45	44.35	---	---	---	---	46.47	46.40	47.13	47.10	47.44	47.33
25	44.51	44.46	---	---	---	---	46.56	46.47	47.13	47.07	47.40	47.36
26	44.63	44.52	45.24	45.20	---	---	46.56	46.35	47.07	46.95	47.47	47.41
27	44.69	44.63	45.20	45.14	---	---	46.57	46.36	47.15	47.02	47.48	47.42
28	44.65	44.54	45.36	45.14	---	---	46.61	46.54	47.19	47.15	47.42	47.36
29	44.71	44.66	45.45	45.36	---	---	46.56	46.52	---	---	47.41	47.35
30	44.73	44.69	45.39	45.27	46.07	45.99	46.53	46.44	---	---	47.41	47.33
31	44.75	44.65	---	---	46.10	45.99	46.61	46.54	---	---	47.39	47.27
MONTH	44.75	43.81	---	---	---	---	---	---	47.19	46.57	47.49	47.16

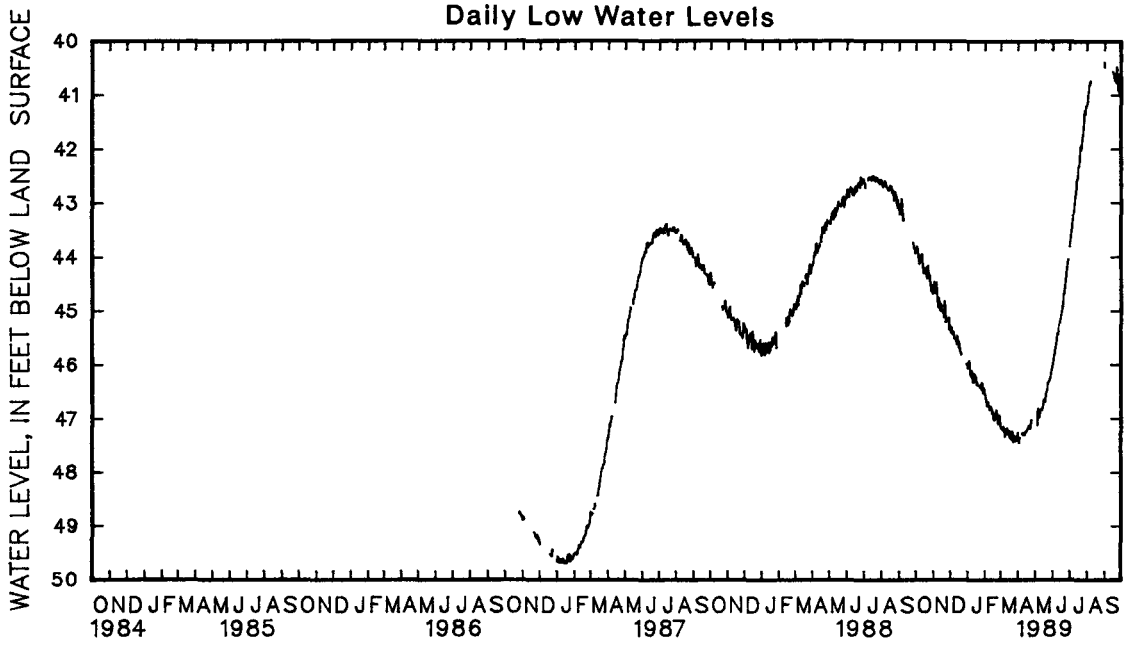
GROUND-WATER LEVELS

MARYLAND--Continued

HOWARD COUNTY--Continued

HO Cd 29--Continued

DAY	APRIL MAX	APRIL MIN	MAY MAX	MAY MIN	JUNE MAX	JUNE MIN	JULY MAX	JULY MIN	AUGUST MAX	AUGUST MIN	SEPTEMBER MAX	SEPTEMBER MIN
1	47.52	47.39	---	---	46.05	45.99	43.93	43.81	41.21	41.14	40.59	40.47
2	47.54	47.46	---	---	45.99	45.93	43.81	43.71	41.14	41.02	---	---
3	47.46	47.37	---	---	45.94	45.85	43.71	43.62	41.02	40.94	---	---
4	47.40	47.37	47.19	47.13	45.85	45.82	43.62	43.53	40.94	40.81	---	---
5	---	---	47.13	46.82	45.85	45.71	43.53	43.46	40.85	40.79	---	---
6	---	---	47.01	46.87	45.73	45.70	43.45	43.33	40.80	40.74	---	---
7	47.43	47.28	46.99	46.98	45.70	45.62	43.32	43.20	---	---	---	---
8	47.36	47.28	46.99	46.97	45.62	45.55	43.19	43.15	---	---	---	---
9	47.39	47.31	46.99	46.91	45.55	45.43	43.15	43.03	---	---	---	---
10	47.32	47.28	46.90	46.84	45.48	45.45	43.03	42.90	---	---	---	---
11	47.34	47.29	46.85	46.84	45.47	45.40	42.91	42.84	---	---	---	---
12	47.37	47.31	46.86	46.84	45.40	45.25	42.86	42.75	---	---	---	---
13	47.31	47.26	46.86	46.84	45.24	45.19	42.74	42.59	---	---	---	---
14	47.29	47.25	46.84	46.80	45.22	45.15	42.62	42.56	---	---	---	---
15	47.30	47.25	46.80	46.73	45.17	45.08	42.63	42.54	---	---	40.63	40.56
16	47.28	47.23	46.73	46.66	45.10	45.03	42.54	42.34	---	---	40.64	40.59
17	47.24	47.20	46.72	46.68	45.07	45.00	42.36	42.32	---	---	40.71	40.59
18	47.21	47.19	46.73	46.69	45.00	44.92	42.33	42.22	---	---	40.79	40.71
19	47.21	47.15	46.69	46.61	44.92	44.85	42.22	42.03	---	---	40.80	40.70
20	47.22	47.16	46.61	46.52	44.85	44.70	42.02	41.95	---	---	40.78	40.72
21	47.21	47.18	46.52	46.50	44.76	44.68	42.05	42.00	---	---	40.81	40.76
22	47.21	47.19	46.51	46.45	44.69	44.57	42.05	41.95	---	---	40.76	40.48
23	47.21	47.09	46.45	46.34	44.57	44.46	41.95	41.84	---	---	40.91	40.51
24	47.13	47.04	46.38	46.34	44.45	44.39	41.84	41.75	---	---	41.04	40.91
25	---	---	46.38	46.32	44.39	44.28	41.75	41.63	---	---	41.02	40.82
26	---	---	46.32	46.29	44.28	44.19	41.62	41.52	---	---	40.95	40.71
27	---	---	46.31	46.27	44.19	44.10	41.51	41.35	---	---	41.13	40.97
28	---	---	46.32	46.25	44.11	44.05	41.37	41.29	---	---	41.11	40.95
29	---	---	46.25	46.17	---	---	41.43	41.35	---	---	40.95	40.85
30	---	---	46.17	46.10	---	---	41.36	41.24	---	---	41.06	40.93
31	---	---	46.09	46.06	---	---	41.24	41.20	40.48	40.39	---	---
MONTH	---	---	---	---	---	---	43.93	41.20	---	---	---	---



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--HO Cd 78. SITE ID.--391440076555402. PERMIT NUMBER.--HO-81-2389.
LOCATION.--Lat 39°14'41", long 76°55'52", Hydrologic Unit 02060006, south of Homewood Rd. at the University of Maryland Central Farm.
Owner: U.S. Geological Survey.
AQUIFER.--Loch Raven Schist of Paleozoic age. Aquifer code: 300LCRV.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 19 ft; casing diameter 3.5 in., to 9 ft; screen diameter 3.5 in. from 9 to 19 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--30-minute recorder interval from Feb. 11, 1988 to current year.
DATUM.--Elevation of land surface is 425.58 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of recorder platform, 1.6 ft above land-surface datum.
REMARKS.--Best Management Practice Project observation well.
PERIOD OF RECORD.--February 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.95 ft below land-surface datum, May 17, 1989; lowest measured, 9.87 ft below land-surface datum, Nov. 12, 15, and 16, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	9.64	9.63	9.82	9.79	9.43	9.37	9.83	9.83	9.49	9.46	9.03	8.97
2	9.64	9.63	9.82	9.79	9.47	9.43	9.83	9.82	9.52	9.50	9.05	9.03
3	9.65	9.65	9.84	9.82	9.50	9.47	9.83	9.80	9.55	9.52	9.08	9.05
4	9.66	9.65	9.84	9.82	9.55	9.50	9.87	9.81	9.56	9.55	9.12	9.08
5	9.69	9.66	9.82	9.78	9.58	9.55	9.87	9.86	9.55	9.53	9.12	9.08
6	9.71	9.69	9.82	9.80	9.58	9.58	9.87	9.84	9.54	9.52	9.16	8.82
7	9.71	9.70	9.85	9.82	9.62	9.58	9.88	9.86	9.56	9.54	8.83	8.69
8	9.71	9.70	9.85	9.83	9.65	9.62	9.86	9.83	9.56	9.54	8.77	8.72
9	9.72	9.71	9.85	9.85	9.66	9.65	9.84	9.81	9.58	9.56	8.81	8.77
10	9.72	9.71	9.85	9.81	9.67	9.66	9.81	9.78	9.56	9.55	8.85	8.81
11	9.74	9.71	9.86	9.83	9.71	9.67	9.78	9.77	9.56	9.54	8.85	8.78
12	9.76	9.74	9.87	9.86	9.72	9.71	9.77	8.71	9.60	9.55	8.81	8.75
13	9.77	9.76	9.86	9.84	9.72	9.70	8.69	8.58	9.61	9.58	8.81	8.78
14	9.77	9.76	9.86	9.85	9.74	9.72	8.85	8.69	9.57	9.38	8.81	8.79
15	9.77	9.76	9.87	9.86	9.77	9.73	8.86	8.03	---	---	8.85	8.76
16	9.79	9.77	9.87	9.85	9.77	9.76	8.39	8.05	---	---	8.90	8.85
17	9.79	9.78	9.85	9.83	9.77	9.76	8.63	8.40	9.29	9.25	8.91	8.88
18	9.79	9.77	9.85	9.84	9.79	9.77	8.76	8.63	9.25	9.23	8.91	8.85
19	---	---	9.84	9.78	9.81	9.79	---	---	9.25	9.23	8.95	8.91
20	---	---	---	---	9.81	9.80	---	---	9.27	9.25	8.95	8.90
21	9.81	9.74	---	---	9.83	9.81	9.11	9.02	9.27	8.76	8.90	8.85
22	9.77	9.74	---	---	---	---	9.16	9.11	8.76	8.27	8.92	8.90
23	9.79	9.77	---	---	---	---	9.19	9.16	8.48	8.27	8.90	8.87
24	9.79	9.77	---	---	---	---	9.25	9.19	8.64	8.48	8.87	7.46
25	9.80	9.79	---	---	---	---	9.31	9.25	8.74	8.64	7.77	7.45
26	9.82	9.80	9.64	9.63	---	---	9.31	9.27	8.81	8.74	8.08	7.78
27	9.82	9.82	9.65	9.59	---	---	9.39	9.31	8.92	8.81	8.18	8.09
28	9.82	9.80	9.59	9.29	---	---	9.40	9.38	8.97	8.92	8.24	8.18
29	9.83	9.82	9.32	9.29	---	---	9.41	9.39	---	---	8.34	8.24
30	9.83	9.83	9.37	9.32	9.81	9.80	9.44	9.40	---	---	8.36	8.32
31	9.84	9.82	---	---	9.82	9.80	9.46	9.44	---	---	8.35	8.01
MONTH	---	---	---	---	---	---	---	---	---	---	9.16	7.45

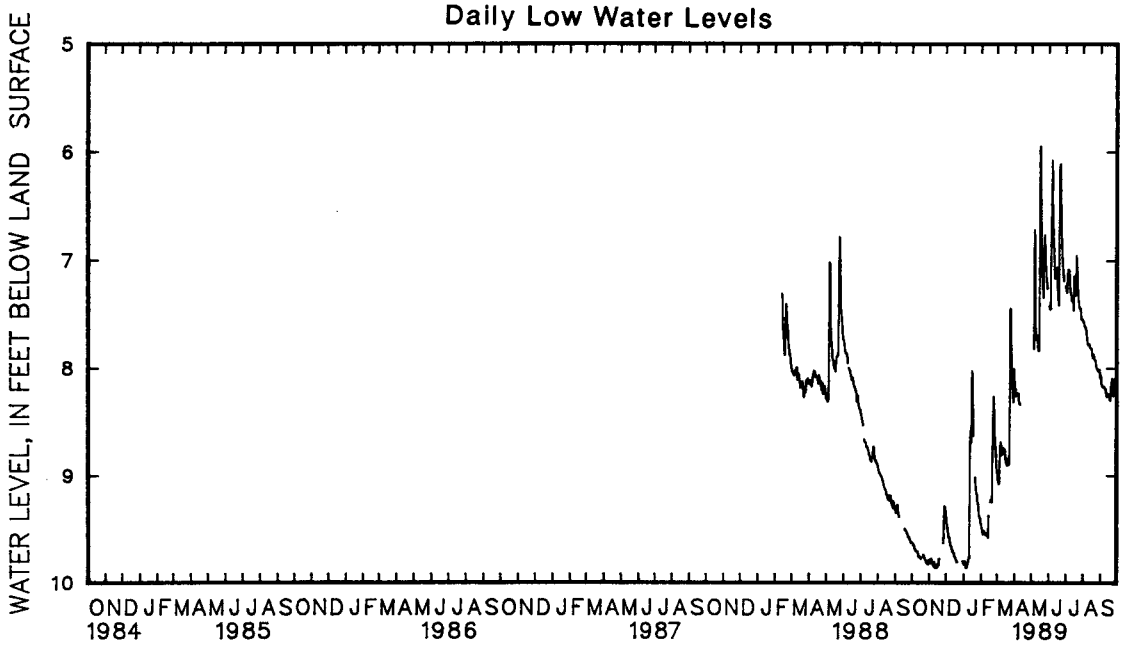
GROUND-WATER LEVELS

MARYLAND--Continued

HOWARD COUNTY--Continued

HO Cd 78--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.21	8.13	---	---	---	---	7.28	7.24	7.58	7.56	8.10	8.07
2	8.25	8.21	---	---	7.47	7.43	7.31	7.27	7.59	7.58	8.16	8.09
3	8.26	8.20	---	---	7.48	7.46	7.32	7.30	7.62	7.58	8.18	8.16
4	8.31	8.26	---	---	7.57	7.45	7.31	7.14	7.62	7.62	8.20	8.17
5	---	---	8.67	7.82	7.57	6.87	7.22	7.13	7.67	7.62	8.20	8.18
6	---	---	7.71	6.72	6.82	6.49	7.22	7.09	7.69	7.64	8.19	8.18
7	8.28	8.24	7.38	6.81	6.64	6.08	7.19	7.10	7.73	7.68	8.19	8.18
8	8.33	8.24	7.74	7.40	6.79	6.22	7.26	7.14	7.78	7.73	8.19	8.18
9	8.36	8.33	7.84	7.74	6.89	6.79	7.30	7.26	7.80	7.78	8.21	8.19
10	8.37	8.33	7.81	7.72	7.08	6.89	7.33	7.30	7.80	7.79	8.23	8.20
11	8.37	8.34	7.75	7.70	7.18	7.08	7.40	7.33	7.80	7.78	8.26	8.23
12	---	---	7.83	7.75	7.20	7.17	7.41	7.38	7.80	7.78	8.28	8.26
13	---	---	7.90	7.83	7.28	7.16	7.40	7.37	7.83	7.80	8.28	8.27
14	---	---	7.87	7.84	7.33	7.10	7.47	7.38	7.84	7.82	---	---
15	---	---	7.86	7.83	7.21	7.07	7.49	7.47	7.84	7.82	8.30	8.25
16	---	---	7.83	5.99	7.31	7.20	7.49	7.15	7.86	7.82	8.30	8.25
17	---	---	6.47	5.95	7.37	7.28	7.27	7.15	7.91	7.86	8.30	8.25
18	---	---	6.92	6.47	7.42	7.37	7.33	7.27	7.92	7.91	8.32	8.30
19	---	---	7.14	6.93	7.46	7.42	7.34	7.33	7.91	7.88	8.32	8.28
20	---	---	7.25	7.14	7.46	6.19	7.35	6.96	7.90	7.88	8.29	8.17
21	---	---	7.35	7.24	6.56	6.12	7.22	7.02	7.93	7.90	8.17	8.15
22	---	---	7.38	7.35	6.57	6.11	7.31	7.22	7.94	7.93	8.15	8.10
23	---	---	7.38	6.96	6.82	6.57	7.38	7.31	7.97	7.93	8.26	8.12
24	---	---	6.97	6.77	6.98	6.82	7.44	7.38	8.00	7.97	8.29	8.26
25	---	---	7.08	6.87	7.06	6.98	7.46	7.44	8.02	8.00	8.29	8.23
26	---	---	7.21	7.06	7.14	7.06	7.49	7.45	8.02	8.01	8.23	8.11
27	---	---	7.26	7.07	7.20	7.14	7.49	7.45	8.04	8.02	8.18	8.15
28	---	---	7.23	7.18	7.27	7.19	7.55	7.47	8.05	8.03	8.16	8.14
29	---	---	7.27	7.23	---	---	7.57	7.55	8.05	8.02	8.17	8.14
30	---	---	7.32	7.26	---	---	7.58	7.55	8.09	8.02	8.23	8.17
31	---	---	---	---	---	---	7.57	7.55	8.10	8.09	---	---
MONTH	---	---	---	---	---	---	7.58	6.96	8.10	7.56	---	---



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--HO Cd 191. SITE ID.--391005076593901. PERMIT NUMBER.--HO-73-2269.
LOCATION.--Lat 39°10'05", long 76°59'39", Hydrologic Unit 02060006, 0.15 mi. east of Mink Hollow Rd., near Patuxent River bridge.
Owner: John McCarthy.
AQUIFER.--Loch Raven Schist of Paleozoic age. Aquifer code: 300LCRV.
WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 505 ft; casing diameter 6 in., to 49 ft; open hole.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with graphic water-level recorder from Jan. 18, 1989 to current year.
DATUM.--Elevation of land surface is 340 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring Point: Top of casing, 2.0 ft above land-surface datum.
REMARKS.--Howard County Project observation well.
PERIOD OF RECORD.--January 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.17 ft below land-surface datum, May 10, 1989; lowest measured, 15.81 ft below land-surface datum, Feb. 13, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 3	14.54	JAN 2	15.46	AUG 30	12.15
DEC 2	14.97	AUG 1	11.54	SEP 29	12.76

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	---	---	---	---	---	---	15.61	15.57	---	---
2	---	---	---	---	---	---	---	---	15.66	15.61	---	---
3	---	---	---	---	---	---	---	---	15.71	15.65	15.43	15.39
4	---	---	---	---	---	---	---	---	15.73	15.71	15.47	15.43
5	---	---	---	---	---	---	---	---	15.71	15.69	15.46	15.42
6	---	---	---	---	---	---	---	---	15.69	15.66	15.47	15.37
7	---	---	---	---	---	---	---	---	15.72	15.69	15.37	15.25
8	---	---	---	---	---	---	---	---	15.72	15.68	15.25	15.17
9	---	---	---	---	---	---	---	---	15.75	15.71	15.16	15.14
10	---	---	---	---	---	---	---	---	15.73	15.71	15.14	15.14
11	---	---	---	---	---	---	---	---	15.71	15.68	15.14	15.13
12	---	---	---	---	---	---	---	---	15.79	15.69	15.14	15.12
13	---	---	---	---	---	---	---	---	15.81	15.76	15.15	15.14
14	---	---	---	---	---	---	---	---	15.79	15.75	15.14	15.13
15	---	---	---	---	---	---	---	---	15.79	15.76	15.17	15.13
16	---	---	---	---	---	---	---	---	15.80	15.78	15.23	15.18
17	---	---	---	---	---	---	---	---	15.80	15.74	15.24	15.19
18	---	---	---	---	---	---	---	---	15.73	15.65	15.25	15.15
19	---	---	---	---	---	---	---	---	15.64	15.63	15.31	15.26
20	---	---	---	---	---	---	15.39	15.30	15.65	15.63	15.31	15.18
21	---	---	---	---	---	---	15.49	15.40	15.63	15.44	15.21	15.18
22	---	---	---	---	---	---	15.49	15.47	15.41	15.20	15.20	15.14
23	---	---	---	---	---	---	15.47	15.47	15.19	15.06	15.14	15.00
24	---	---	---	---	---	---	15.52	15.47	---	---	14.99	14.05
25	---	---	---	---	---	---	15.58	15.52	---	---	14.03	13.77
26	---	---	---	---	---	---	15.57	15.47	---	---	13.77	13.74
27	---	---	---	---	---	---	15.59	15.47	---	---	13.76	13.71
28	---	---	---	---	---	---	15.61	15.59	---	---	13.70	13.64
29	---	---	---	---	---	---	15.59	15.57	---	---	13.69	13.64
30	---	---	---	---	---	---	---	---	---	---	13.69	13.62
31	---	---	---	---	---	---	15.59	15.55	---	---	13.65	13.55
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

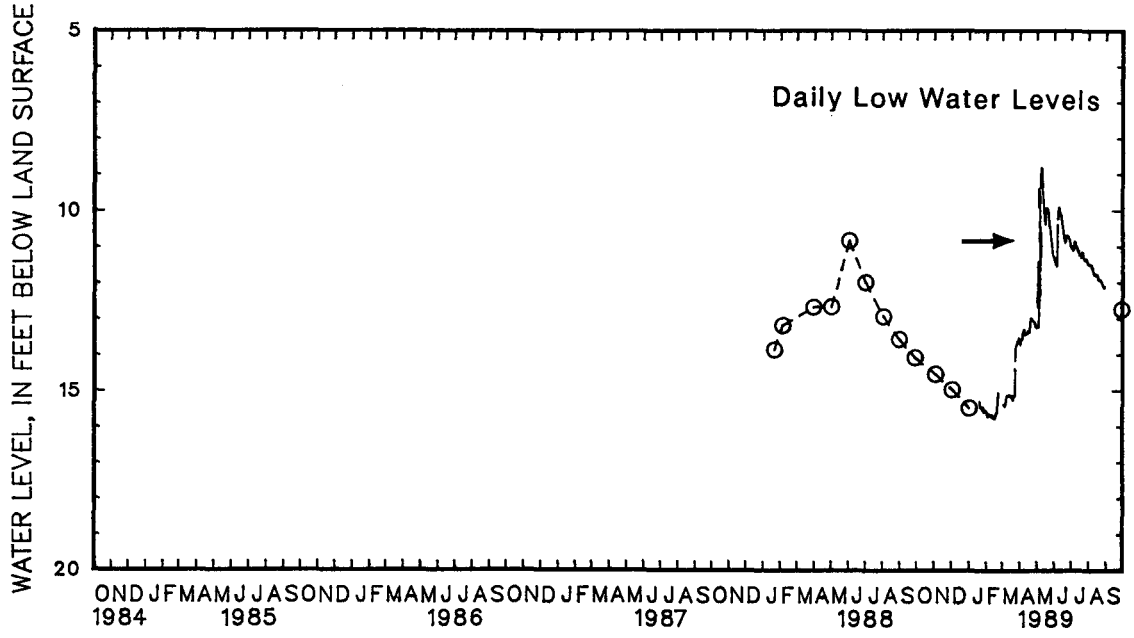
GROUND-WATER LEVELS

MARYLAND--Continued

HOWARD COUNTY--Continued

HO Cd 191--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13.77	13.66	13.32	13.22	11.42	11.36	11.04	11.02	---	---	---	---
2	13.79	13.73	13.23	13.20	11.48	11.42	11.06	11.04	11.54	11.53	---	---
3	13.73	13.61	13.24	13.20	11.52	11.48	11.11	11.06	11.54	11.53	---	---
4	13.62	13.57	13.26	13.23	11.60	11.49	11.12	11.10	11.54	11.53	---	---
5	13.61	13.57	13.23	12.90	11.63	11.54	11.09	11.07	11.57	11.53	---	---
6	13.60	13.49	12.71	11.44	11.52	10.99	11.07	10.93	11.60	11.56	---	---
7	13.49	13.37	11.42	9.19	10.99	10.22	10.93	10.87	11.66	11.60	---	---
8	13.37	13.32	9.14	8.81	10.19	10.00	10.97	10.88	11.76	11.66	---	---
9	13.43	13.31	9.15	8.82	10.00	9.92	11.02	10.97	11.80	11.76	---	---
10	13.47	13.44	9.37	9.17	10.03	9.93	11.04	11.02	11.82	11.80	---	---
11	13.48	13.44	9.55	9.38	10.14	10.04	11.12	11.05	11.80	11.79	---	---
12	13.47	13.43	9.80	9.56	10.17	10.14	11.15	11.12	11.79	11.79	---	---
13	13.43	13.41	10.08	9.80	10.25	10.12	11.14	11.11	11.82	11.79	---	---
14	13.46	13.41	10.27	10.09	10.39	10.26	11.23	11.12	11.84	11.82	---	---
15	13.41	13.35	10.39	10.28	10.48	10.40	11.29	11.24	11.83	11.81	---	---
16	13.43	13.35	10.44	10.37	10.60	10.49	11.29	11.23	11.86	11.81	---	---
17	13.46	13.38	10.36	10.00	10.74	10.60	11.31	11.23	11.94	11.86	---	---
18	13.39	13.37	10.00	9.93	10.81	10.75	11.33	11.31	11.96	11.94	---	---
19	13.40	13.26	9.96	9.93	10.88	10.81	11.33	11.29	11.95	11.93	---	---
20	13.26	13.08	10.02	9.96	10.90	10.88	11.28	11.16	11.95	11.93	---	---
21	13.08	12.99	10.24	10.03	10.89	10.84	11.30	11.18	11.97	11.95	---	---
22	13.02	12.99	10.41	10.25	10.84	10.75	11.35	11.30	11.99	11.97	---	---
23	13.07	13.02	10.47	10.42	10.75	10.70	11.38	11.35	12.01	11.99	---	---
24	13.11	13.06	10.67	10.47	10.71	10.69	11.40	11.38	12.07	12.02	---	---
25	13.10	13.07	10.82	10.69	10.73	10.71	11.42	11.40	12.11	12.08	---	---
26	13.13	13.08	10.95	10.82	10.78	10.73	11.42	11.41	12.12	12.10	---	---
27	13.15	13.11	11.10	10.96	10.81	10.78	11.41	11.37	12.16	12.12	---	---
28	13.22	13.14	11.23	11.11	10.91	10.81	11.43	11.37	12.17	12.16	---	---
29	13.25	13.22	11.27	11.23	11.02	10.92	11.50	11.44	12.17	12.13	---	---
30	13.31	13.25	11.29	11.26	11.05	11.02	11.51	11.50	---	---	---	---
31	---	---	11.36	11.30	---	---	11.52	11.49	---	---	---	---
MONTH	13.79	12.99	13.32	8.81	11.63	9.92	11.52	10.87	---	---	---	---



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--HO Cd 341. SITE ID.--391447076554707. PERMIT NUMBER.--HO-88-0061.
LOCATION.--Lat 39°14'43", long 76°55'48", Hydrologic Unit 02060006, south of Homewood Rd. at the University of Maryland Central Farm.
Owner: U.S. Geological Survey.
AQUIFER.--Loch Raven Schist of Paleozoic age. Aquifer code: 300LCRV.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 30 ft; casing diameter 3.5 in., to 25 ft; screen diameter 3.5 in. from 25 to 30 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--60-minute recorder interval from Aug. 23, 1988 to current year.
DATUM.--Elevation of land surface is 453.00 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of recorder platform, 3.27 ft above land-surface datum.
REMARKS.--Best Management Practice Project observation well.
PERIOD OF RECORD.--August 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 23.53 ft below land-surface datum, Aug. 6, 1989; lowest measured, dry, from Dec. 22, 1988 to May 4, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	27.19	27.16	27.97	27.85	28.76	28.67	DRY	DRY	DRY	DRY	DRY	DRY
2	27.16	27.12	27.99	27.85	28.78	28.75	DRY	DRY	DRY	DRY	DRY	DRY
3	27.25	27.16	28.08	28.00	28.75	28.69	DRY	DRY	DRY	DRY	DRY	DRY
4	27.29	27.25	28.07	28.03	28.84	28.72	DRY	DRY	DRY	DRY	DRY	DRY
5	27.39	27.29	28.02	27.87	28.83	28.78	DRY	DRY	DRY	DRY	DRY	DRY
6	27.42	27.39	28.12	27.97	28.82	28.78	DRY	DRY	DRY	DRY	DRY	DRY
7	27.42	27.39	28.24	28.12	28.85	28.78	DRY	DRY	DRY	DRY	DRY	DRY
8	27.40	27.37	28.25	28.18	28.91	28.85	DRY	DRY	DRY	DRY	DRY	DRY
9	27.41	27.38	28.29	28.25	28.91	28.85	DRY	DRY	DRY	DRY	DRY	DRY
10	27.39	27.30	28.27	28.13	28.90	28.87	DRY	DRY	DRY	DRY	DRY	DRY
11	27.45	27.30	28.36	28.21	28.98	28.87	DRY	DRY	DRY	DRY	DRY	DRY
12	27.56	27.45	28.38	28.34	29.01	28.94	DRY	DRY	DRY	DRY	DRY	DRY
13	27.60	27.57	28.34	28.24	28.93	28.84	DRY	DRY	DRY	DRY	DRY	DRY
14	27.61	27.55	28.36	28.31	28.99	28.90	DRY	DRY	DRY	DRY	DRY	DRY
15	27.58	27.55	28.40	28.36	29.07	28.93	DRY	DRY	DRY	DRY	DRY	DRY
16	27.62	27.58	28.39	28.32	29.07	29.01	DRY	DRY	DRY	DRY	DRY	DRY
17	27.64	27.61	28.47	28.31	29.03	28.97	DRY	DRY	DRY	DRY	DRY	DRY
18	27.61	27.53	28.52	28.47	29.09	29.04	DRY	DRY	DRY	DRY	DRY	DRY
19	---	---	28.51	28.46	29.12	29.08	DRY	DRY	DRY	DRY	DRY	DRY
20	---	---	28.46	28.26	29.13	29.10	DRY	DRY	DRY	DRY	DRY	DRY
21	27.75	27.52	28.57	28.33	29.18	29.12	DRY	DRY	DRY	DRY	DRY	DRY
22	27.66	27.50	28.61	28.57	DRY	29.18	DRY	DRY	DRY	DRY	DRY	DRY
23	27.75	27.68	---	---	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
24	27.76	27.69	---	---	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
25	27.81	27.77	---	---	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
26	27.91	27.81	28.60	28.58	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
27	27.96	27.91	28.58	28.54	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
28	27.95	27.86	28.68	28.53	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
29	28.00	27.96	28.76	28.69	DRY	DRY	DRY	DRY	---	---	DRY	DRY
30	28.03	27.99	28.72	28.64	DRY	DRY	DRY	DRY	---	---	DRY	DRY
31	28.05	27.97	---	---	DRY	DRY	DRY	DRY	---	---	DRY	DRY
MONTH	---	---	---	---	DRY	28.67	DRY	DRY	DRY	DRY	DRY	DRY

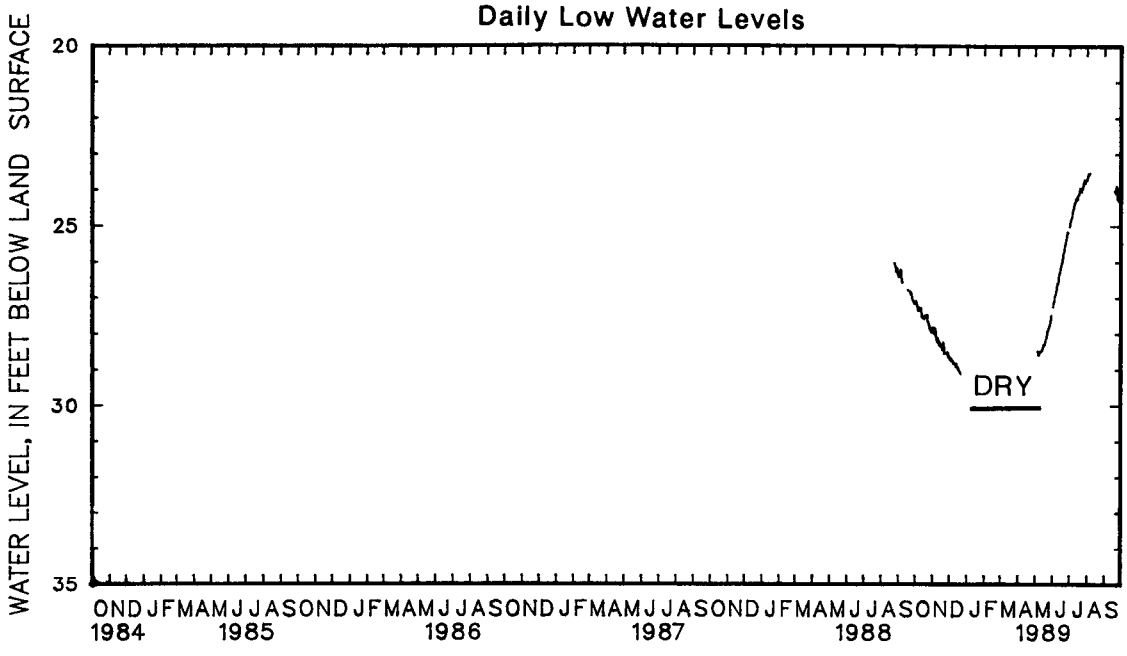
GROUND-WATER LEVELS

MARYLAND--Continued

HOWARD COUNTY--Continued

HO Cd 341--Continued

DAY	APRIL MAX	APRIL MIN	MAY MAX	MAY MIN	JUNE MAX	JUNE MIN	JULY MAX	JULY MIN	AUGUST MAX	AUGUST MIN	SEPTEMBER MAX	SEPTEMBER MIN
1	DRY	DRY	DRY	DRY	---	---	25.10	25.01	23.75	23.71	---	---
2	DRY	DRY	DRY	DRY	27.36	27.26	25.01	24.92	23.71	23.65	---	---
3	DRY	DRY	DRY	DRY	27.26	27.15	24.92	24.86	23.65	23.61	---	---
4	DRY	DRY	DRY	28.74	27.14	27.11	24.86	24.80	23.61	23.54	---	---
5	DRY	DRY	28.74	28.50	27.13	26.96	24.80	24.74	23.59	23.55	---	---
6	DRY	DRY	28.60	28.50	26.96	26.93	24.73	24.64	23.57	23.53	---	---
7	DRY	DRY	28.62	28.60	26.94	26.84	24.64	24.54	---	---	---	---
8	DRY	DRY	28.63	28.60	26.84	26.76	24.55	24.52	---	---	---	---
9	DRY	DRY	28.63	28.56	26.75	26.62	24.53	24.46	---	---	---	---
10	DRY	DRY	28.55	28.51	26.66	26.63	24.46	24.37	---	---	---	---
11	DRY	DRY	28.51	28.51	26.63	26.56	24.39	24.35	---	---	---	---
12	DRY	DRY	28.51	28.50	26.55	26.38	24.38	24.31	---	---	---	---
13	DRY	DRY	28.51	28.49	26.37	26.32	24.30	24.22	---	---	---	---
14	DRY	DRY	28.49	28.44	26.34	26.28	24.29	24.20	---	---	---	---
15	DRY	DRY	28.44	28.38	26.29	26.18	24.32	24.26	---	---	---	---
16	DRY	DRY	28.38	28.31	26.18	26.11	24.26	24.13	---	---	---	---
17	DRY	DRY	28.36	28.31	26.15	26.07	24.16	24.12	---	---	---	---
18	DRY	DRY	28.36	28.32	26.07	25.99	24.16	24.11	---	---	---	---
19	DRY	DRY	28.32	28.25	25.98	25.91	24.11	24.00	---	---	24.10	24.02
20	DRY	DRY	28.24	28.17	25.91	25.77	24.00	23.94	---	---	24.10	24.05
21	DRY	DRY	28.16	28.13	25.80	25.73	24.07	24.01	---	---	24.13	24.09
22	DRY	DRY	28.13	28.06	25.74	25.65	24.08	24.04	---	---	24.09	23.88
23	DRY	DRY	28.05	27.93	25.65	25.54	24.04	23.98	---	---	24.24	23.92
24	DRY	DRY	27.93	27.92	25.53	25.49	23.99	23.94	---	---	24.33	24.24
25	DRY	DRY	27.93	27.86	25.48	25.38	23.95	23.88	---	---	24.31	24.15
26	DRY	DRY	27.86	27.81	25.37	25.30	23.88	23.82	---	---	24.27	24.07
27	DRY	DRY	27.82	27.77	25.30	25.22	23.82	23.73	---	---	24.41	24.29
28	DRY	DRY	27.80	27.72	25.25	25.17	23.80	23.71	---	---	24.39	24.27
29	DRY	DRY	27.72	27.61	---	---	23.85	23.80	---	---	24.26	24.19
30	DRY	DRY	27.61	27.51	---	---	23.81	23.74	---	---	24.36	24.26
31	DRY	DRY	---	---	---	---	23.76	23.73	---	---	---	---
MONTH	DRY	DRY	DRY	---	---	---	25.10	23.71	---	---	---	---



5 YEAR HYDROGRAPH

OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--HO Cd 342. SITE ID.--391438076555001. PERMIT NUMBER.--HO-88-0062.
LOCATION.--Lat 39°14'39", long 76°55'49", Hydrologic Unit 02060006, south of Homewood Rd. at the University of Maryland Central Farm.
Owner: U.S. Geological Survey.
AQUIFER.--Loch Raven Schist of Paleozoic age. Aquifer code: 300LCRV.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 25 ft; casing diameter 3.5 in., to 20 ft; screen diameter 3.5 in. from 20 to 25 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--30-minute recorder interval from Aug. 23, 1988 to current year.
DATUM.--Elevation of land surface is 436.46 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of recorder platform, 3.79 ft above land-surface datum.
REMARKS.--Best Management Practice Project observation well.
PERIOD OF RECORD.--August 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 17.46 ft below land-surface datum, June 27 and 28, 1989; lowest measured, 23.86 ft below land-surface datum, Feb. 16 and 17, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	22.75	22.74	23.37	23.33	23.31	23.31	23.61	23.60	23.43	23.42	23.47	23.46
2	22.77	22.75	23.33	23.33	23.32	23.31	23.61	23.60	23.45	23.43	23.47	23.46
3	22.80	22.77	23.35	23.33	23.32	23.31	23.60	23.58	23.47	23.45	23.46	23.46
4	22.82	22.80	23.35	23.34	23.34	23.31	23.62	23.58	23.48	23.47	23.46	23.46
5	22.85	22.82	23.34	23.31	23.35	23.34	23.62	23.61	23.49	23.48	23.46	23.45
6	22.89	22.85	23.32	23.31	23.35	23.35	23.63	23.62	23.49	23.49	23.46	23.45
7	22.90	22.89	23.35	23.32	23.37	23.35	23.65	23.63	23.51	23.49	23.45	23.45
8	22.92	22.90	23.35	23.34	23.40	23.37	23.64	23.63	23.51	23.51	23.45	23.41
9	22.95	22.92	23.36	23.35	23.40	23.40	23.66	23.64	23.52	23.51	23.41	23.37
10	22.96	22.95	23.36	23.34	23.46	23.40	23.66	23.65	23.52	23.52	23.37	23.35
11	22.99	22.96	23.36	23.34	23.49	23.46	23.66	23.65	23.52	23.51	23.35	23.32
12	23.03	22.99	23.37	23.36	23.54	23.49	23.66	23.58	23.54	23.51	23.32	23.31
13	23.07	23.04	23.37	23.36	23.54	23.54	23.58	23.52	23.55	23.54	23.31	23.29
14	23.09	23.07	23.36	23.36	---	---	23.52	23.44	23.54	23.52	23.29	23.26
15	23.12	23.09	23.37	23.36	---	---	23.44	23.33	---	---	---	---
16	23.15	23.12	23.36	23.36	---	---	23.33	23.27	---	---	---	---
17	---	---	23.36	23.35	---	---	23.27	23.21	23.86	23.80	---	---
18	---	---	23.38	23.36	---	---	23.21	23.17	23.80	23.75	---	---
19	---	---	23.38	23.38	---	---	---	---	23.75	23.74	---	---
20	---	---	23.38	23.30	---	---	---	---	23.74	23.73	---	---
21	23.38	23.34	23.32	23.30	---	---	23.29	23.24	23.73	23.70	---	---
22	23.34	23.32	23.32	23.31	---	---	23.29	23.29	23.69	23.64	---	---
23	23.35	23.33	---	---	---	---	23.30	23.29	23.64	23.57	---	---
24	23.34	23.34	---	---	---	---	23.32	23.30	23.57	23.52	---	---
25	23.35	23.34	---	---	---	---	23.36	23.32	23.52	23.49	---	---
26	23.36	23.34	23.33	23.33	---	---	23.36	23.35	23.48	23.45	---	---
27	23.37	23.36	23.34	23.33	---	---	23.37	23.35	23.46	23.45	---	---
28	23.37	23.36	23.34	23.33	---	---	23.39	23.37	23.46	23.46	---	---
29	23.37	23.36	23.35	23.34	---	---	23.39	23.39	---	---	---	---
30	23.38	23.37	23.34	23.31	23.60	23.59	23.40	23.39	---	---	---	---
31	23.37	23.37	---	---	23.60	23.59	23.42	23.40	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

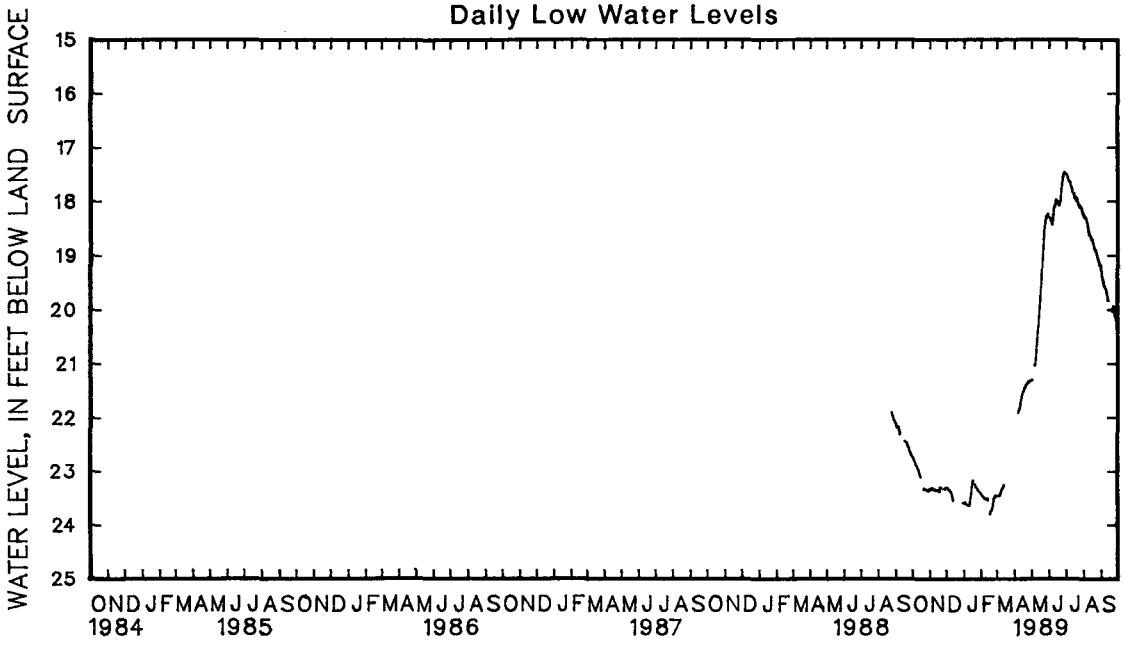
GROUND-WATER LEVELS

MARYLAND--Continued

HOWARD COUNTY--Continued

HO Cd 342--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	21.32	21.31	---	---	17.50	17.49	18.31	18.30	19.31	19.28
2	---	---	21.31	21.30	18.34	18.29	17.53	17.50	18.31	18.30	19.43	19.31
3	---	---	---	---	18.38	18.34	17.58	17.54	18.32	18.31	19.49	19.43
4	---	---	---	---	18.45	18.35	17.61	17.58	18.33	18.32	19.55	19.50
5	---	---	21.30	21.03	18.46	18.40	17.64	17.61	18.38	18.32	19.56	19.55
6	---	---	21.20	21.04	18.44	18.43	17.65	17.64	18.41	18.37	19.59	19.56
7	21.94	21.92	21.13	21.03	18.44	18.36	17.65	17.63	18.48	18.41	19.61	19.59
8	21.92	21.87	21.03	20.95	18.35	18.26	17.70	17.63	18.57	18.48	19.63	19.61
9	21.87	21.85	20.95	20.82	18.26	18.11	17.73	17.70	18.62	18.57	19.66	19.63
10	21.85	21.81	20.82	20.66	18.12	18.11	17.76	17.73	18.64	18.62	19.71	19.66
11	21.81	21.74	20.66	20.53	18.12	18.08	17.83	17.76	18.65	18.63	19.78	19.71
12	21.73	21.68	20.53	20.41	18.08	18.00	17.85	17.83	18.67	18.65	19.84	19.79
13	21.68	21.63	20.41	20.30	18.00	17.97	17.85	17.84	18.71	18.67	19.87	19.84
14	21.63	21.59	20.29	20.15	18.03	18.00	17.94	17.85	18.72	18.71	---	---
15	21.59	21.53	20.14	20.00	18.03	18.00	17.98	17.94	18.73	18.72	---	---
16	21.53	21.52	20.00	19.86	18.04	18.01	17.98	17.94	18.77	18.73	---	---
17	21.52	21.49	19.86	19.69	18.08	18.03	17.99	17.94	18.85	18.77	---	---
18	21.49	21.46	19.68	19.51	18.08	18.07	18.01	17.99	18.88	18.85	---	---
19	21.47	21.46	19.51	19.28	18.11	18.08	18.01	17.98	18.88	18.88	20.03	20.02
20	21.47	21.43	19.27	19.05	18.12	18.01	18.01	17.96	18.91	18.88	20.04	20.02
21	21.43	21.40	19.05	18.89	18.08	17.99	18.07	18.01	18.95	18.91	20.05	20.04
22	21.40	21.38	18.88	18.70	17.99	17.84	18.09	18.07	18.97	18.95	20.04	19.94
23	21.38	21.37	18.70	18.51	17.84	17.71	18.11	18.09	19.00	18.97	20.10	19.94
24	21.37	21.36	18.51	18.45	17.70	17.64	18.13	18.11	19.07	19.01	20.17	20.11
25	21.36	21.34	18.45	18.35	17.64	17.56	18.14	18.12	19.10	19.07	20.17	20.13
26	21.34	21.34	18.35	18.30	17.56	17.50	18.14	18.12	19.13	19.10	20.17	20.09
27	21.34	21.32	18.33	18.28	17.50	17.46	18.14	18.11	19.18	19.13	20.24	20.18
28	21.32	21.32	18.34	18.29	17.48	17.46	18.19	18.12	19.20	19.18	20.38	20.21
29	21.32	21.32	18.30	18.25	---	---	18.25	18.19	19.20	19.19	20.41	20.38
30	21.32	21.32	18.25	18.23	---	---	18.26	18.24	19.25	19.19	20.43	20.41
31	---	---	---	---	---	---	18.29	18.26	19.31	19.25	---	---
MONTH	---	---	---	---	---	---	18.29	17.49	19.31	18.30	---	---



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--HO Ce 38. SITE ID.--391001076540001. PERMIT NUMBER.--HO-01-1827.
LOCATION.--Lat 39°10'01", long 76°54'00", Hydrologic Unit 02060006, at Johns Hopkins University Applied Physics Lab, Scaggsville.
Owner: Johns Hopkins University.
AQUIFER.--Wissahickon Formation (oligoclase) of Paleozoic age. Aquifer code: 300WSCK.
WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 125 ft; casing diameter 6 in., to 51.4 ft; open hole.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with graphic water-level recorder from Dec. 9, 1987 to current year.
DATUM.--Elevation of land surface is 430 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.8 ft above land-surface datum.
REMARKS.--Howard County Project observation well.
PERIOD OF RECORD.--May 1956 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 25.84 ft below land-surface datum, May 5, 1972; lowest measured, 36.87 ft below land-surface datum, Dec. 5, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 30	35.99	MAY 3	34.92	AUG 1	32.26	SEP 29	32.85
APR 3	35.61	MAY 30	33.86	AUG 30	32.32		

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	35.21	35.18	---	---	36.07	36.03	36.22	36.21	36.31	36.29	36.16	36.15
2	35.19	35.17	---	---	36.07	36.06	36.21	36.20	36.32	36.30	36.17	36.11
3	35.22	35.19	---	---	36.07	36.04	36.21	36.17	36.34	36.29	36.11	36.10
4	35.25	35.22	---	---	36.11	36.07	36.26	36.21	36.35	36.34	36.09	36.08
5	35.31	35.25	---	---	36.10	36.08	36.27	36.25	36.35	36.33	36.08	36.00
6	35.34	35.31	---	---	36.11	36.09	36.26	36.23	36.32	36.30	36.03	36.01
7	35.34	35.33	---	---	36.11	36.09	36.27	36.24	36.33	36.31	36.09	36.03
8	35.35	35.33	---	---	36.13	36.11	36.26	36.22	36.33	36.30	36.09	36.07
9	35.36	35.35	---	---	36.13	36.11	36.28	36.26	36.35	36.32	36.06	36.02
10	35.36	35.32	---	---	36.14	36.12	36.28	36.27	36.33	36.31	36.03	36.01
11	35.38	35.31	---	---	36.17	36.13	36.29	36.28	36.31	36.27	36.01	35.96
12	35.44	35.39	---	---	36.18	36.17	36.28	36.22	36.29	36.27	35.96	35.95
13	35.46	35.44	---	---	36.16	36.13	36.31	36.23	36.32	36.27	35.96	35.94
14	35.47	35.46	---	---	36.17	36.14	36.31	36.27	36.27	36.26	35.94	35.88
15	35.47	35.46	---	---	36.20	36.14	36.27	36.24	36.26	36.22	35.88	35.86
16	35.49	35.47	---	---	36.20	36.18	36.30	36.27	36.28	36.25	35.90	35.88
17	35.50	35.48	---	---	36.19	36.16	36.30	36.29	36.28	36.27	35.89	35.83
18	35.49	35.46	---	---	36.21	36.19	36.31	36.28	36.27	36.24	35.83	35.80
19	35.52	35.47	---	---	36.23	36.21	36.30	36.28	36.24	36.22	35.84	35.83
20	35.56	35.52	---	---	36.22	36.20	36.32	36.28	36.22	36.18	35.83	35.78
21	35.57	35.55	---	---	36.24	36.21	36.36	36.32	36.17	36.10	35.78	35.75
22	35.54	35.47	---	---	36.25	36.24	36.36	36.34	36.16	36.15	35.82	35.78
23	35.59	35.49	---	---	36.24	36.19	36.34	36.31	36.18	36.16	35.81	35.77
24	35.58	35.56	---	---	36.21	36.16	36.31	36.30	36.20	36.18	35.76	35.71
25	35.62	35.57	---	---	36.25	36.20	36.33	36.30	36.21	36.19	35.72	35.70
26	35.65	35.62	---	---	36.28	36.25	36.32	36.24	36.18	36.14	35.71	35.70
27	35.70	35.65	---	---	36.28	36.22	36.28	36.24	36.16	36.15	35.70	35.67
28	35.70	35.68	---	---	36.27	36.16	36.30	36.27	36.16	36.15	35.66	35.62
29	35.73	35.66	---	---	36.29	36.28	36.27	36.24	---	---	35.62	35.62
30	35.74	35.73	---	---	36.29	36.18	36.30	36.19	---	---	35.62	35.57
31	35.76	35.74	---	---	36.22	36.18	36.32	36.31	---	---	35.58	35.53
MONTH	35.76	35.17	---	---	36.29	36.03	36.36	36.17	36.35	36.10	36.17	35.53

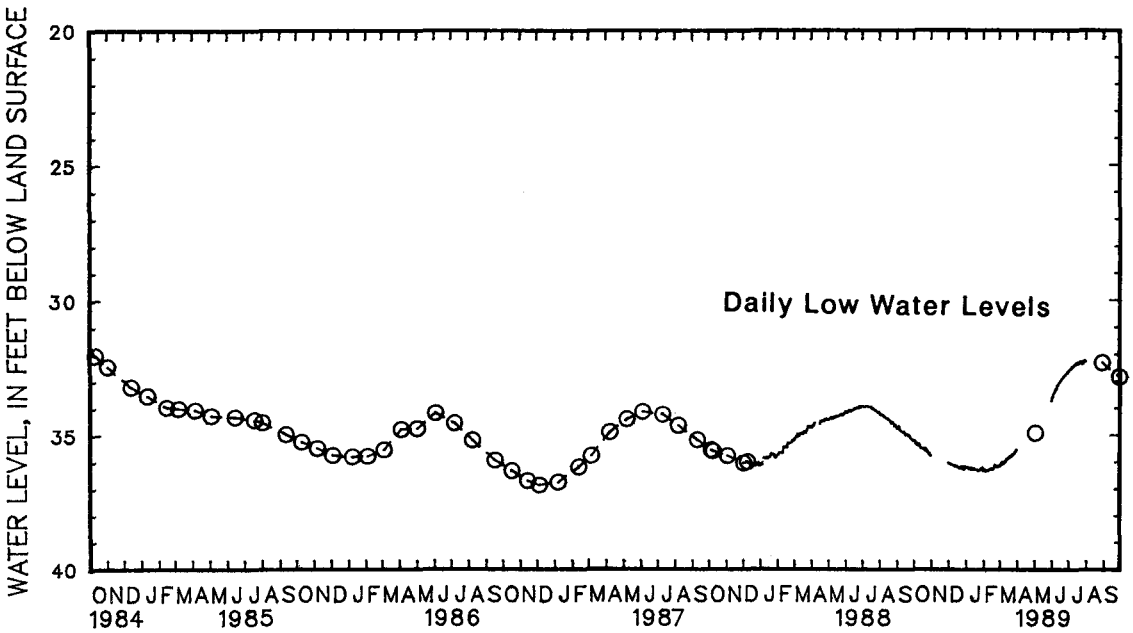
GROUND-WATER LEVELS

MARYLAND--Continued

HOWARD COUNTY--Continued

HO Ce 38--Continued

DAY	APRIL MAX	APRIL MIN	MAY MAX	MAY MIN	JUNE MAX	JUNE MIN	JULY MAX	JULY MIN	AUGUST MAX	AUGUST MIN	SEPTEMBER MAX	SEPTEMBER MIN
1	---	---	---	---	33.71	33.60	32.64	32.61	---	---	---	---
2	---	---	---	---	33.60	33.58	32.61	32.57	---	---	---	---
3	---	---	---	---	33.58	33.49	32.58	32.56	---	---	---	---
4	---	---	---	---	33.50	33.46	32.56	32.53	---	---	---	---
5	---	---	---	---	33.46	33.43	32.53	32.52	---	---	---	---
6	---	---	---	---	33.43	33.36	32.52	32.49	---	---	---	---
7	---	---	---	---	33.36	33.30	32.49	32.45	---	---	---	---
8	---	---	---	---	33.33	33.31	32.47	32.44	---	---	---	---
9	---	---	---	---	33.32	33.27	32.46	32.45	---	---	---	---
10	---	---	---	---	33.27	33.16	32.45	32.43	---	---	---	---
11	---	---	---	---	33.18	33.16	32.43	32.39	---	---	---	---
12	---	---	---	---	33.18	33.11	32.42	32.39	---	---	---	---
13	---	---	---	---	33.11	33.06	32.42	32.38	---	---	---	---
14	---	---	---	---	33.08	33.03	32.37	32.35	---	---	---	---
15	---	---	---	---	33.07	33.02	32.37	32.34	---	---	---	---
16	---	---	---	---	33.02	32.99	32.42	32.37	---	---	---	---
17	---	---	---	---	32.99	32.95	32.41	32.34	---	---	---	---
18	---	---	---	---	32.95	32.94	32.35	32.32	---	---	---	---
19	---	---	---	---	32.94	32.91	32.35	32.34	---	---	---	---
20	---	---	---	---	32.92	32.88	32.35	32.32	---	---	---	---
21	---	---	---	---	32.89	32.86	32.32	32.27	---	---	---	---
22	---	---	---	---	32.85	32.82	32.30	32.26	---	---	---	---
23	---	---	---	---	32.83	32.79	32.34	32.30	---	---	---	---
24	---	---	---	---	32.79	32.77	32.35	32.34	---	---	---	---
25	---	---	---	---	32.78	32.77	32.34	32.33	---	---	---	---
26	---	---	---	---	32.76	32.72	32.33	32.31	---	---	---	---
27	---	---	---	---	32.72	32.69	32.32	32.27	---	---	---	---
28	---	---	---	---	32.69	32.66	32.27	32.24	---	---	---	---
29	---	---	---	---	32.71	32.69	32.28	32.22	---	---	---	---
30	---	---	---	---	32.70	32.64	32.30	32.25	---	---	---	---
31	---	---	33.77	33.72	---	---	32.26	32.25	---	---	---	---
MONTH	---	---	---	---	33.71	32.64	32.64	32.22	---	---	---	---



5 YEAR HYDROGRAPH

OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--HO Ce 75. SITE ID.--391332076535701. PERMIT NUMBER.--HO-68-0054.
LOCATION.--Lat 39°13'32", long 76°53'57", Hydrologic Unit 02060006, at Hobbits Glen Golf Course near Columbia.
Owner: Hobbits Glen Golf Club.
AQUIFER.--Oella Formation of Paleozoic age. Aquifer code: 300OELL.
WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 227 ft; casing diameter 6 in., to 71.1 ft; open hole.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with graphic water-level recorder from Mar. 11, 1988 to June 12, 1989.
DATUM.--Elevation of land surface is 435 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of casing, 1.0 ft above land-surface datum.
REMARKS.--Howard County Project observation well.
PERIOD OF RECORD.--March 1988 to June 1989.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.11 ft below land-surface datum, June 12, 1989; lowest measured, 23.44 ft below land-surface datum, Jan. 7, and 8, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	22.20	22.18	22.95	22.94	23.14	23.14	23.40	23.39	22.62	22.61	21.96	21.93
2	22.22	22.20	22.98	22.95	23.15	23.14	23.40	23.39	22.62	22.61	21.93	21.86
3	22.25	22.22	22.99	22.97	23.15	23.14	23.40	23.39	22.63	22.60	21.86	21.83
4	22.28	22.25	23.00	22.99	23.16	23.14	23.42	23.40	22.62	22.61	21.83	21.80
5	22.32	22.28	23.01	22.99	23.16	23.15	23.43	23.42	22.61	22.59	21.80	21.76
6	22.35	22.32	23.04	23.01	23.17	23.16	23.43	23.41	22.59	22.58	21.77	21.72
7	22.37	22.35	23.08	23.04	23.18	23.16	23.44	23.43	22.59	22.58	21.73	21.72
8	22.40	22.37	23.08	23.07	23.19	23.18	23.44	23.42	22.59	22.57	21.72	21.67
9	22.43	22.40	23.10	23.09	23.19	23.18	23.43	23.42	22.58	22.57	21.67	21.62
10	22.44	22.43	23.11	23.10	23.20	23.19	23.42	23.41	22.57	22.56	21.62	21.58
11	22.47	22.44	23.14	23.11	23.22	23.20	23.41	23.37	22.56	22.55	21.58	21.50
12	22.51	22.47	23.15	23.14	23.22	23.22	23.37	23.31	22.57	22.55	21.50	21.48
13	22.54	22.51	23.15	23.14	23.23	23.21	23.31	23.27	22.57	22.54	21.48	21.42
14	22.56	22.54	23.17	23.15	23.24	23.23	23.26	23.19	22.54	22.53	21.42	21.37
15	22.58	22.56	23.18	23.17	23.26	23.24	23.18	23.09	22.53	22.52	21.37	21.34
16	22.61	22.58	23.19	23.18	23.26	23.26	23.09	23.03	22.52	22.51	21.35	21.33
17	22.63	22.61	23.21	23.19	23.28	23.26	23.02	22.96	22.51	22.48	21.33	21.27
18	22.64	22.63	23.22	23.21	23.29	23.28	22.95	22.90	22.48	22.44	21.27	21.22
19	22.68	22.65	23.22	23.21	23.30	23.29	22.90	22.85	22.44	22.42	21.25	21.22
20	22.71	22.68	23.21	23.18	23.31	23.30	22.84	22.83	22.41	22.38	21.22	21.15
21	22.73	22.71	23.20	23.20	23.34	23.31	22.83	22.80	22.38	22.31	21.15	21.13
22	22.73	22.71	23.20	23.19	23.34	23.33	22.80	22.79	22.31	22.26	21.15	21.13
23	22.76	22.73	23.19	23.17	23.34	23.33	22.79	22.75	22.26	22.21	21.13	21.09
24	22.77	22.76	23.18	23.16	23.34	23.32	22.75	22.73	22.21	22.16	21.08	20.95
25	22.80	22.77	23.18	23.17	23.37	23.35	22.73	22.71	22.16	22.09	20.94	20.88
26	22.82	22.80	23.18	23.18	23.37	23.37	22.71	22.67	22.09	22.04	20.88	20.83
27	22.85	22.82	23.18	23.17	23.37	23.36	22.67	22.66	22.04	22.00	20.83	20.76
28	22.86	22.85	23.17	23.16	23.39	23.35	22.67	22.64	22.00	21.96	20.76	20.69
29	22.88	22.86	23.17	23.16	23.39	23.39	22.64	22.62	---	---	20.68	20.64
30	22.90	22.88	23.20	23.14	23.39	23.33	22.64	22.60	---	---	20.64	20.56
31	22.94	22.90	---	---	23.40	23.38	22.63	22.62	---	---	20.56	20.49
MONTH	22.94	22.18	23.22	22.94	23.40	23.14	23.44	22.60	22.63	21.96	21.96	20.49

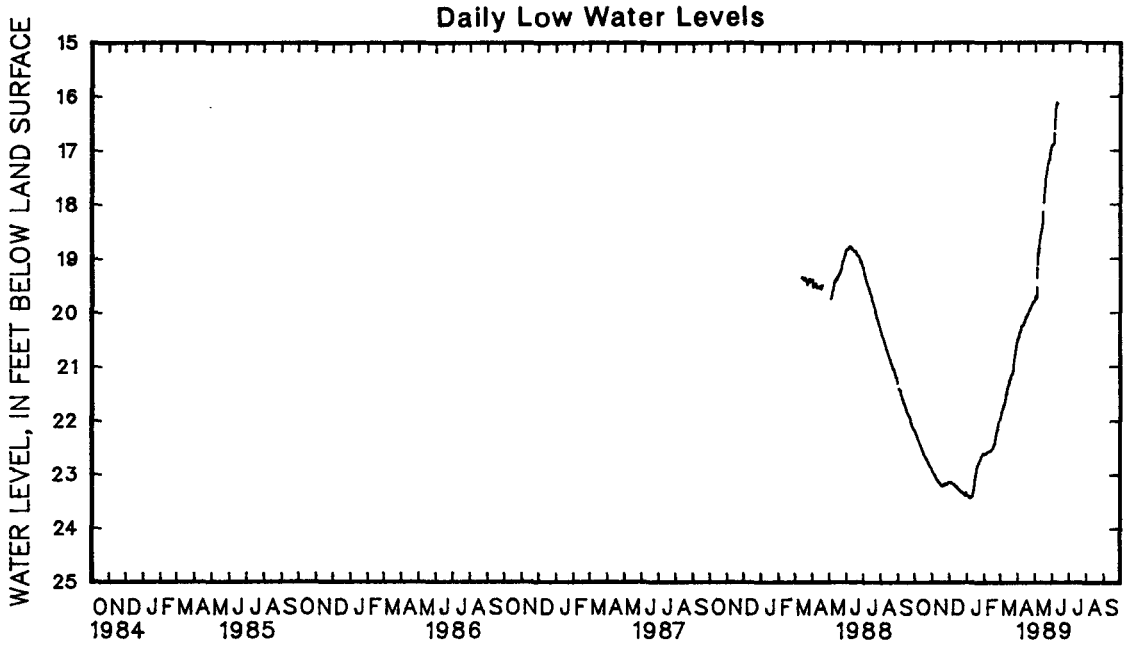
GROUND-WATER LEVELS

MARYLAND--Continued

HOWARD COUNTY--Continued

HO Ce 75--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	20.53	20.50	19.78	19.70	16.93	16.90	---	---	---	---	---	---
2	20.52	20.46	19.75	19.70	16.91	16.89	---	---	---	---	---	---
3	20.46	20.42	19.76	19.74	16.93	16.87	---	---	---	---	---	---
4	20.42	20.37	19.76	19.71	16.93	16.86	---	---	---	---	---	---
5	20.39	20.35	19.71	19.10	16.93	16.59	---	---	---	---	---	---
6	20.35	20.32	19.09	18.92	16.50	16.42	---	---	---	---	---	---
7	20.33	20.27	18.92	18.87	16.43	16.24	---	---	---	---	---	---
8	20.28	20.24	18.86	18.82	16.23	16.20	---	---	---	---	---	---
9	20.27	20.24	18.82	18.71	16.20	16.12	---	---	---	---	---	---
10	20.26	20.24	18.70	18.63	16.15	16.13	---	---	---	---	---	---
11	20.24	20.21	18.63	18.56	16.16	16.13	---	---	---	---	---	---
12	20.21	20.18	18.56	18.51	---	---	---	---	---	---	---	---
13	20.18	20.16	18.51	18.46	---	---	---	---	---	---	---	---
14	20.16	20.12	18.46	18.40	---	---	---	---	---	---	---	---
15	20.12	20.08	18.40	18.32	---	---	---	---	---	---	---	---
16	20.10	20.08	18.31	17.95	---	---	---	---	---	---	---	---
17	20.10	20.05	17.93	17.82	---	---	---	---	---	---	---	---
18	20.06	20.03	17.82	17.71	---	---	---	---	---	---	---	---
19	20.04	20.02	17.71	17.58	---	---	---	---	---	---	---	---
20	20.02	19.98	17.58	17.48	---	---	---	---	---	---	---	---
21	19.98	19.95	17.48	17.43	---	---	---	---	---	---	---	---
22	19.95	19.92	17.44	17.37	---	---	---	---	---	---	---	---
23	19.94	19.90	17.36	17.26	---	---	---	---	---	---	---	---
24	19.90	19.87	17.26	17.24	---	---	---	---	---	---	---	---
25	19.87	19.84	17.25	17.19	---	---	---	---	---	---	---	---
26	19.84	19.83	17.19	17.18	---	---	---	---	---	---	---	---
27	19.83	19.80	17.18	17.09	---	---	---	---	---	---	---	---
28	19.82	19.80	17.10	17.04	---	---	---	---	---	---	---	---
29	19.80	19.78	17.04	16.99	---	---	---	---	---	---	---	---
30	19.80	19.78	16.98	16.94	---	---	---	---	---	---	---	---
31	---	---	16.95	16.91	---	---	---	---	---	---	---	---
MONTH	20.53	19.78	19.78	16.91	---	---	---	---	---	---	---	---



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--HO Cf 37. SITE ID.--391206076465101 PERMIT NUMBER.--HO-72-0227.
LOCATION.--Lat 39°12'06", long 76°46'51", Hydrologic Unit 02060003, on MD Rt 103, 1.5 mi. north of U.S. Rt. 1.
Owner: Meadowridge Pub & Spirit.
AQUIFER.--Mount Washington Amphibolite of Paleozoic age. Aquifer code: 300MWSG.
WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 145 ft; casing diameter 6 in., to 57 ft; open hole.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with graphic water-level recorder from May 12, 1988 to June 12, 1989.
DATUM.--Elevation of land surface is 335 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of casing, 1.8 ft above land-surface datum.
REMARKS.--Howard County Project observation well.
PERIOD OF RECORD.--May 1988 to June 1989.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 20.59 ft below land-surface datum, May 31, 1989 and June 12, 1989; lowest measured, 21.98 ft below land-surface datum, Sept. 29, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	21.98	21.92	21.66	21.65	21.69	21.68	21.69	21.67	21.41	21.39	---	---
2	21.93	21.87	21.66	21.61	21.69	21.69	21.67	21.65	21.43	21.39	---	---
3	21.92	21.87	21.64	21.57	21.69	21.68	21.64	21.62	21.43	21.40	21.29	21.25
4	21.94	21.89	21.58	21.55	21.71	21.68	21.71	21.63	21.44	21.41	21.30	21.25
5	21.97	21.91	21.57	21.53	21.71	21.69	21.72	21.67	21.42	21.40	21.27	21.20
6	22.02	21.97	21.63	21.56	21.70	21.68	21.70	21.60	21.42	21.39	21.22	21.18
7	22.00	21.96	21.64	21.61	21.68	21.64	21.68	21.64	21.43	21.39	21.27	21.20
8	21.99	21.95	21.69	21.64	21.71	21.67	21.66	21.59	21.42	21.40	21.28	21.23
9	21.99	21.95	21.76	21.69	21.70	21.68	21.68	21.62	21.43	21.41	21.25	21.21
10	21.98	21.88	21.75	21.69	21.70	21.68	21.68	21.63	21.42	21.40	21.23	21.20
11	21.99	21.88	21.85	21.74	21.72	21.70	21.65	21.63	21.41	21.40	21.20	21.17
12	22.04	21.98	21.85	21.83	---	---	21.64	21.53	21.44	21.40	21.17	21.11
13	22.11	22.06	21.84	21.77	---	---	21.57	21.53	21.44	21.40	21.17	21.16
14	22.13	22.04	21.84	21.81	---	---	21.57	21.50	21.42	21.40	21.16	21.13
15	22.09	22.04	21.84	21.84	---	---	21.49	21.48	21.41	21.39	21.15	21.11
16	22.10	22.06	21.85	21.82	---	---	21.50	21.47	21.43	21.40	21.22	21.15
17	22.10	22.06	21.84	21.81	---	---	21.49	21.46	21.42	21.40	21.22	21.20
18	22.06	22.00	21.88	21.85	---	---	21.47	21.43	21.40	21.37	21.21	21.14
19	22.07	22.01	21.87	21.75	---	---	21.46	21.43	21.39	21.36	21.26	21.21
20	22.16	22.07	21.75	21.69	---	---	21.47	21.41	21.38	21.35	21.26	21.20
21	22.15	22.01	21.82	21.71	---	---	21.50	21.46	---	---	21.20	21.13
22	22.01	21.93	21.81	21.79	---	---	21.48	21.44	---	---	21.24	21.20
23	22.03	21.99	21.78	21.74	---	---	21.46	21.43	---	---	21.25	21.22
24	22.04	21.96	21.78	21.74	---	---	21.44	21.42	---	---	21.22	21.09
25	22.05	21.86	21.77	21.74	---	---	21.44	21.43	---	---	21.12	21.09
26	21.97	21.71	21.76	21.74	---	---	21.44	21.38	---	---	21.14	21.09
27	21.82	21.72	21.74	21.70	---	---	21.40	21.39	---	---	21.13	21.11
28	21.80	21.73	21.70	21.66	---	---	21.41	21.40	---	---	21.11	21.07
29	21.81	21.69	21.70	21.70	---	---	21.40	21.38	---	---	21.07	21.06
30	21.73	21.69	21.71	21.68	---	---	21.39	21.22	---	---	21.07	21.02
31	21.81	21.66	---	---	21.71	21.69	21.40	21.39	---	---	21.01	20.96
MONTH	22.16	21.66	21.88	21.53	---	---	21.72	21.22	---	---	---	---

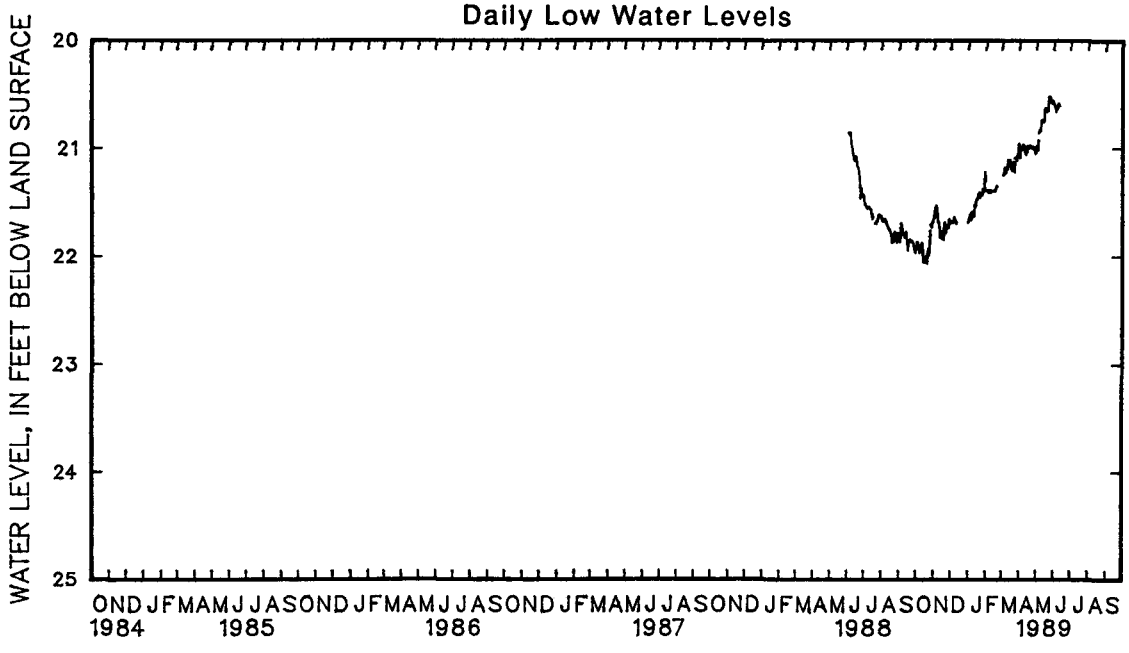
GROUND-WATER LEVELS

MARYLAND--Continued

HOWARD COUNTY--Continued

HO Cf 37--Continued

DAY	APRIL MAX	APRIL MIN	MAY MAX	MAY MIN	JUNE MAX	JUNE MIN	JULY MAX	JULY MIN	AUGUST MAX	AUGUST MIN	SEPTEMBER MAX	SEPTEMBER MIN
1	21.11	21.01	21.09	20.98	20.65	20.58	---	---	---	---	---	---
2	21.11	21.09	21.02	20.98	20.67	20.59	---	---	---	---	---	---
3	21.11	21.00	21.07	21.01	20.70	20.61	---	---	---	---	---	---
4	21.05	21.00	21.09	21.02	20.70	20.62	---	---	---	---	---	---
5	21.07	21.01	21.04	20.86	20.72	20.66	---	---	---	---	---	---
6	21.04	20.99	20.91	20.83	20.68	20.64	---	---	---	---	---	---
7	21.04	20.97	20.91	20.83	20.65	20.63	---	---	---	---	---	---
8	21.02	20.97	20.91	20.84	20.64	20.63	---	---	---	---	---	---
9	21.05	20.98	20.89	20.82	20.63	20.59	---	---	---	---	---	---
10	21.07	21.03	20.81	20.75	20.60	20.59	---	---	---	---	---	---
11	21.07	21.05	20.75	20.74	20.61	20.60	---	---	---	---	---	---
12	21.06	21.06	20.76	20.74	---	---	---	---	---	---	---	---
13	21.06	21.04	20.77	20.75	---	---	---	---	---	---	---	---
14	21.05	21.04	20.77	20.76	---	---	---	---	---	---	---	---
15	21.04	20.99	20.76	20.74	---	---	---	---	---	---	---	---
16	21.02	20.98	20.73	20.64	---	---	---	---	---	---	---	---
17	21.03	21.00	20.66	20.63	---	---	---	---	---	---	---	---
18	21.02	20.98	20.72	20.65	---	---	---	---	---	---	---	---
19	21.01	20.98	20.72	20.66	---	---	---	---	---	---	---	---
20	21.04	20.99	20.69	20.63	---	---	---	---	---	---	---	---
21	21.02	20.98	20.69	20.63	---	---	---	---	---	---	---	---
22	21.02	20.99	20.71	20.65	---	---	---	---	---	---	---	---
23	21.03	21.00	20.67	20.53	---	---	---	---	---	---	---	---
24	21.03	21.00	20.56	20.52	---	---	---	---	---	---	---	---
25	21.02	20.99	20.55	20.55	---	---	---	---	---	---	---	---
26	21.02	20.99	20.55	20.53	---	---	---	---	---	---	---	---
27	21.02	21.01	20.55	20.54	---	---	---	---	---	---	---	---
28	21.05	21.01	20.59	20.55	---	---	---	---	---	---	---	---
29	21.06	21.05	20.61	20.58	---	---	---	---	---	---	---	---
30	21.09	21.05	20.60	20.56	---	---	---	---	---	---	---	---
31	---	---	20.60	20.56	---	---	---	---	---	---	---	---
MONTH	21.11	20.97	21.09	20.52	---	---	---	---	---	---	---	---



5 YEAR HYDROGRAPH

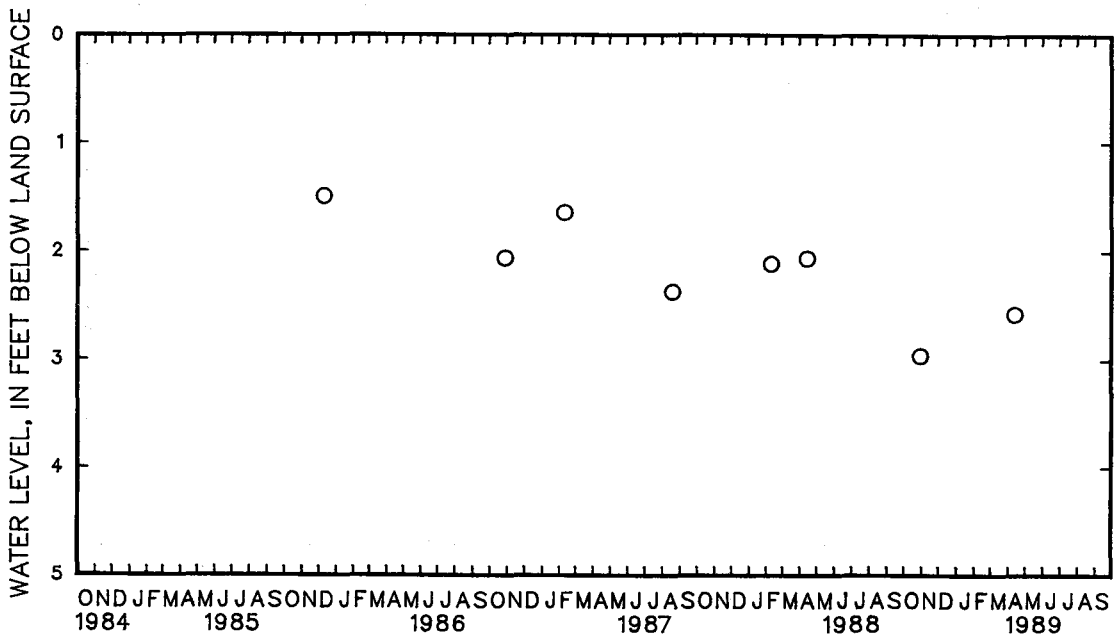
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

KENT COUNTY

WELL NUMBER.--KE Ac 20. SITE ID.--392007076075501. PERMIT NUMBER.--KE-73-0658.
LOCATION.--Lat 39°20'07", long 76°07'50", Hydrologic Unit 02060001, at U.S. Coast Guard Station at end of Still Pond Neck Rd.
Owner: U.S. Geological Survey.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 582 ft; casing diameter 10 in., to 73 ft; casing diameter 4 in., to 550 ft and 560 to 582 ft; screen diameter 4 in. from 550 to 560 ft.
INSTRUMENTATION.--Twice yearly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 7 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of casing, 4.18 ft above land-surface datum.
REMARKS.--Measured twice yearly since October 1986.
PERIOD OF RECORD.--December 1977 to December 1978, December 1985, October 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.50 ft below land-surface datum, Apr. 13, 1978, May 5, 1978, Dec. 11, 1985; lowest measured, 2.97 ft below land-surface datum, Oct. 31, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	2.97	APR 13	2.58



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

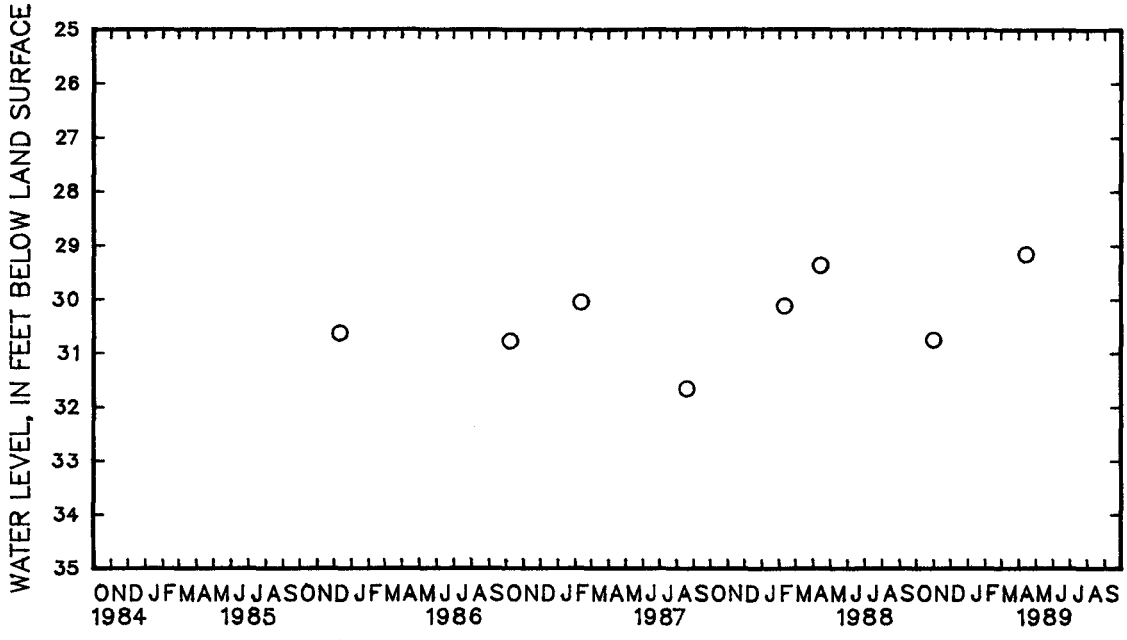
MARYLAND--Continued

KENT COUNTY--Continued

WELL NUMBER.--KE Be 43. SITE ID.--391823075594701. PERMIT NUMBER.--KE-73-0659.
LOCATION.--Lat 39°18'23", long 75°59'47", Hydrologic Unit 02060002, at Kennedyville.
Owner: U.S. Geological Survey.
AQUIFER.--Magothy Formation of Upper Cretaceous age. Aquifer code: 211MGTY.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 297 ft; casing diameter 10 in., to 171 ft; casing diameter 4 in to 275 ft and 285 to 297 ft; screen diameter 4 in. from 275 to 285 ft.
INSTRUMENTATION.--Twice yearly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 65 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of casing, 3.5 ft above land-surface datum.
REMARKS.--Measured twice yearly beginning October 1986.
PERIOD OF RECORD.--February 1979 to July 1979, December 1985, October 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.31 ft below land-surface datum, June 5, 1979; lowest measured, 31.66 ft below land-surface datum, Aug. 19, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	30.76	APR 13	29.16

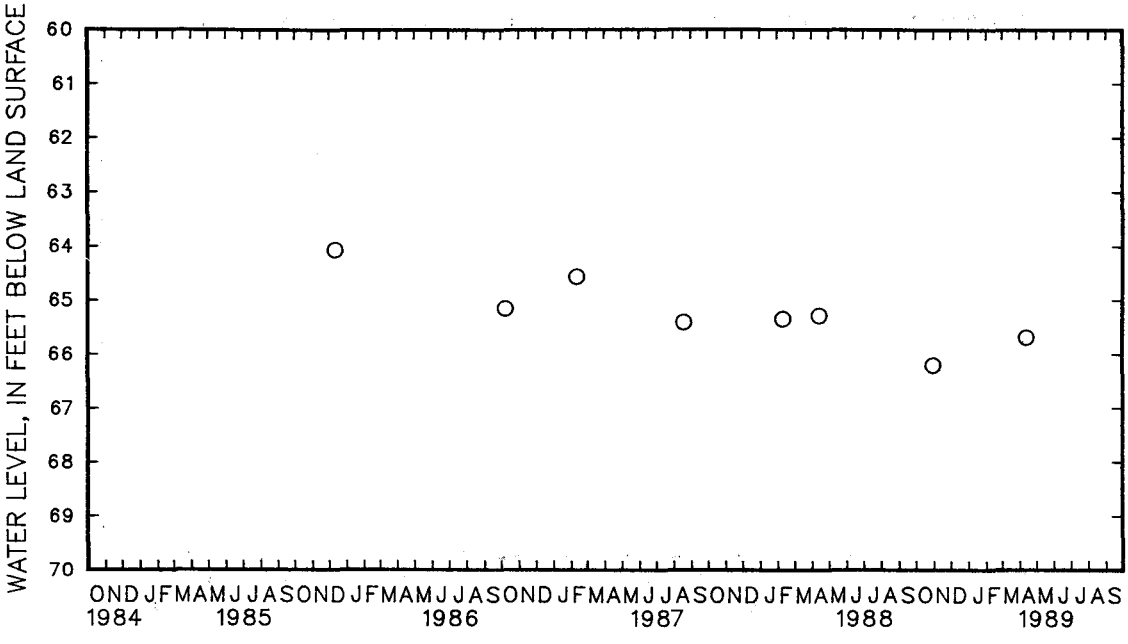


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--KE Bg 33. SITE ID.--391815075472101. PERMIT NUMBER.--KE-73-0670.
LOCATION.--Lat 39°18'15", long 75°47'21", Hydrologic Unit 02060002, 2 mi west of Massey at Millington Wildlife Management Area.
Owner: U.S. Geological Survey.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 705 ft; casing diameter 4 in., to 695 ft; screen diameter 4 in. from 695 to 705 ft.
INSTRUMENTATION.--Twice yearly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 65 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of casing, 3.5 ft above land-surface datum.
REMARKS.--Measured twice yearly beginning October 1986.
PERIOD OF RECORD.--March 1979 to July 1979, December 1985, October 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 61.62 ft below land-surface datum, June 5, 1979; lowest measured, 66.22 ft below land-surface datum, Oct. 31, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	66.22	APR 13	65.70

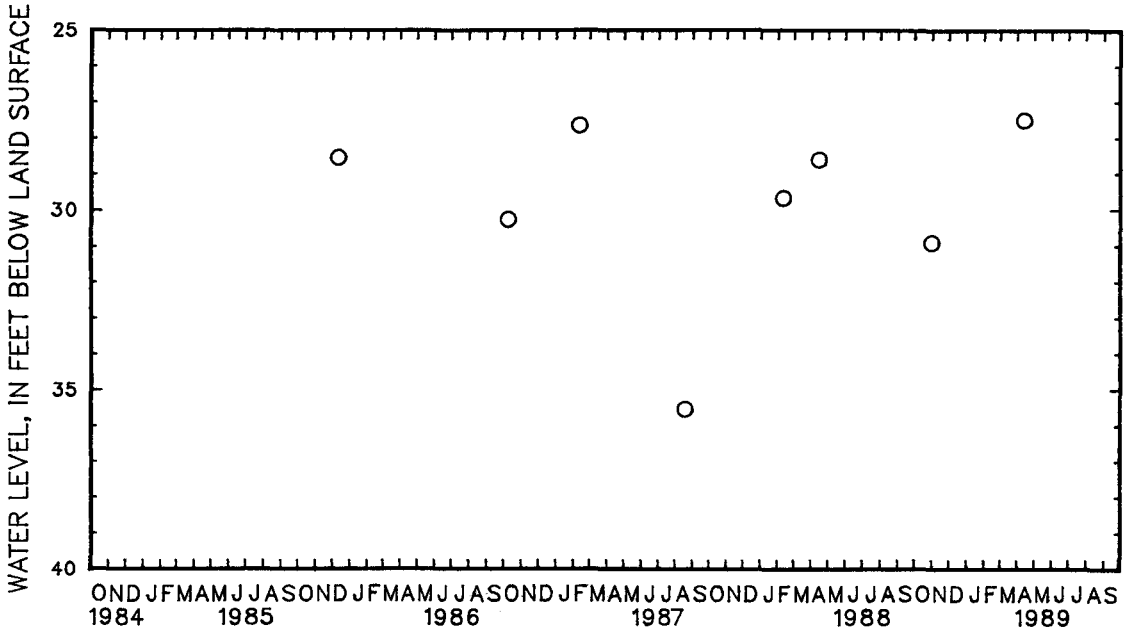


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--KE Bg 34. SITE ID.--391815075472102. PERMIT NUMBER.--KE-73-0686.
LOCATION.--Lat 39°18'15", long 75°47'22", Hydrologic Unit 02060002, 2 mi west of Massey at Millington Wildlife Management Area.
Owner: U.S. Geological Survey.
AQUIFER.--Aquia Formation of Paleocene age. Aquifer code: 125AQUI.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 186 ft; casing diameter 6 in., to 125 ft; screen diameter 6 in. from 125 to 186 ft.
INSTRUMENTATION.--Twice yearly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 65 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of casing, 3.2 ft above land-surface datum.
REMARKS.--Measured twice yearly since October 1986.
PERIOD OF RECORD.--April 1979 to July 1979, December 1985, October 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 25.37 ft below land-surface datum, Apr. 11, 1979; lowest measured, 35.54 ft below land-surface datum, Aug. 19, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	30.92	APR 13	27.50

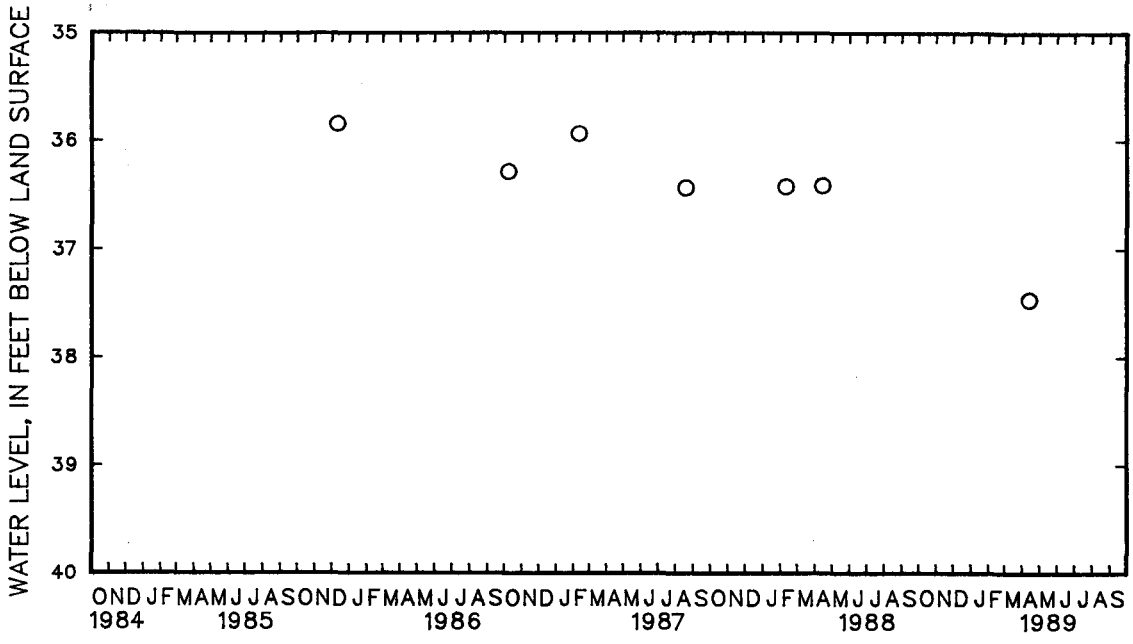


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--KE Cb 36. SITE ID.--391400076101401. PERMIT NUMBER.--KE-73-0660.
LOCATION.--Lat 39°14'00", long 76°10'14", Hydrologic Unit 02060002, north of Fairlee at sewage treatment facility.
Owner: U.S. Geological Survey.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 650 ft; casing diameter 10 in., to 114 ft; casing diameter 4 in., to 595 ft and 605 to 650 ft; screen diameter 4 in. from 595 to 605 ft.
INSTRUMENTATION.--Twice yearly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 40 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of casing, 4.15 ft above land-surface datum.
REMARKS.--Measured twice yearly beginning October 1986.
PERIOD OF RECORD.--June 1978 to July 1979, December 1985, October 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 35.72 ft below land-surface datum, Nov. 20, 1978; lowest measured, 37.47 ft below land-surface datum, June 5, 1978 and Apr. 13, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL
APR 13	37.47

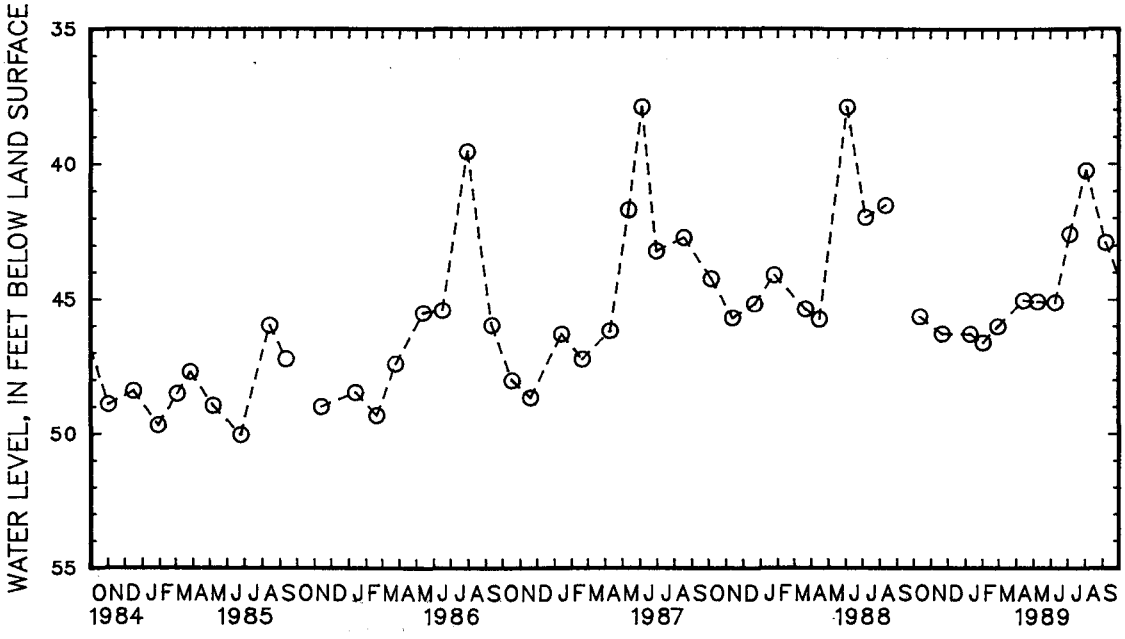


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--KE Cd 44. SITE ID.--391432076015501. PERMIT NUMBER.--KE-03-6139.
LOCATION.--Lat 39°14'32", long 76°01'55", Hydrologic Unit 02060002, MD Rt. 291, 2.6 mi northeast of Chestertown.
Owner: Campbell Soup Co.
AQUIFER.--Aquia Formation of Paleocene age. Aquifer code: 125AQUI.
WELL CHARACTERISTICS.--Drilled, unused, artesian well, depth 84 ft; casing diameter 4 in., to 79 ft;
screen diameter 5 in. from 79 to 84 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 50 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing, 2.0 ft above land-surface datum.
REMARKS.--Water levels measured by plant personnel with an electric tape, Sept. 18, 1959 to Apr. 18, 1963.
PERIOD OF RECORD.--September 1959 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 25.00 ft below land-surface datum, Sept. 18, 1959;
lowest measured, 54.46 ft below land-surface datum, Aug. 4, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	45.68	JAN 10	46.32	FEB 28	46.03	MAY 9	45.09	JUL 5	42.58	SEP 7	42.90
NOV 21	46.32	FEB 2	46.64	APR 14	45.05	JUN 9	45.12	AUG 3	40.23		

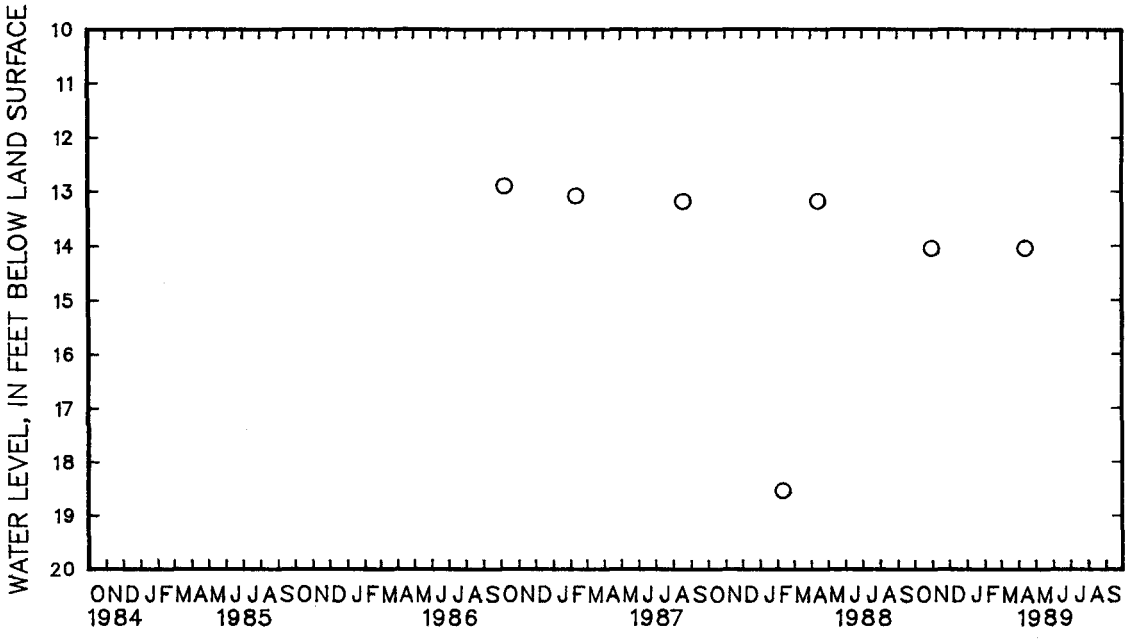


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--KE Db 40. SITE ID.--390837076140401. PERMIT NUMBER.--KE-73-0805.
LOCATION.--Lat 39°08'37", long 76°14'04", Hydrologic Unit 02070002, nr Rock Hall.
Owner: U.S. Geological Survey.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 1,030 ft; casing diameter 4 in., to 1,018 ft; screen diameter 4 in. from 1,018 to 1,030 ft.
INSTRUMENTATION.--Twice yearly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 15 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of casing, 1.65 ft above land-surface datum.
REMARKS.--Measured twice yearly since October 1986.
PERIOD OF RECORD.--December 1978 to July 1979, October 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.23 ft below land-surface datum, Mar. 6, 1979; lowest measured, 18.54 ft below land-surface datum, Feb. 10, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	14.05	APR 13	14.05



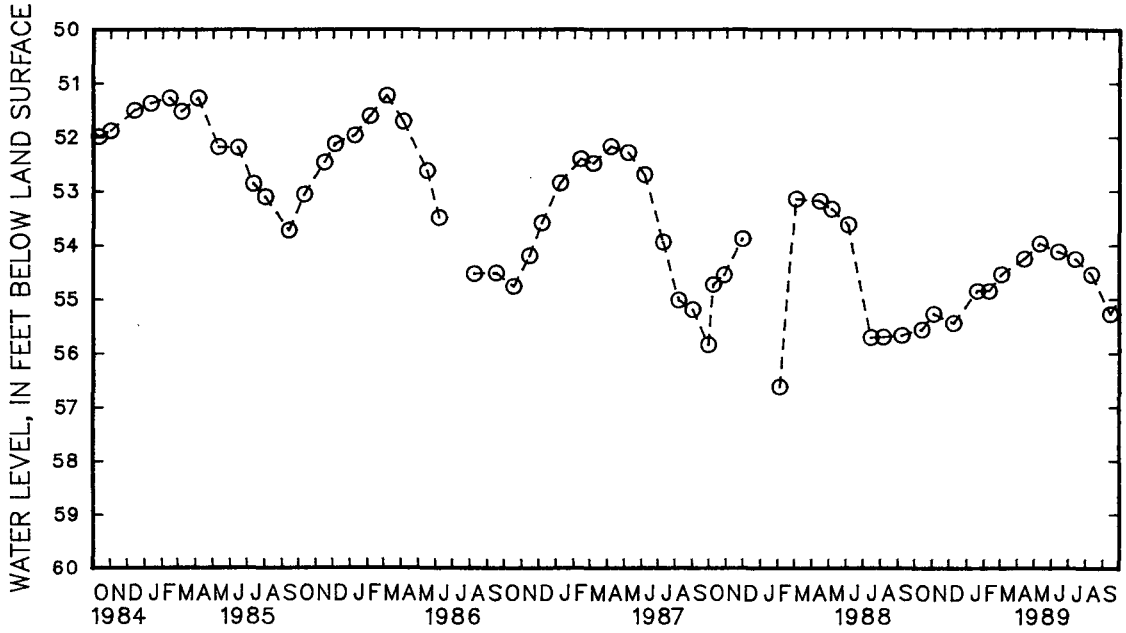
5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

PRINCE GEORGES COUNTY

WELL NUMBER.--PG De 21. SITE ID.--385130076465501. PERMIT NUMBER.--PG-02-2875.
LOCATION.--Lat 38°51'30", long 76°46'55", Hydrologic Unit 02060006, Agricultural Experiment Station Southern Maryland Research & Educational Facility at Oak Grove.
Owner: University of Maryland.
AQUIFER.--Magothy Formation of Upper Cretaceous age. Aquifer code: 211MGTY.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 155 ft; casing diameter 6 in., to 150 ft; screen diameter 6 in. from 150 to 155 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with water-level recorder from May 26, 1958 to Jan. 27, 1965.
DATUM.--Elevation of land surface is 96 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 0.9 ft above land-surface datum.
PERIOD OF RECORD.--May 1958 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 38.39 ft below land-surface datum, May 29, 1958; lowest measured, 56.63 ft below land-surface datum, Feb. 3, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13	55.57	DEC 8	55.45	FEB 9	54.85	APR 13	54.25	JUN 13	54.12	AUG 11	54.54
NOV 3	55.28	JAN 19	54.85	MAR 3	54.54	MAY 11	53.97	JUL 13	54.26	SEP 14	55.28

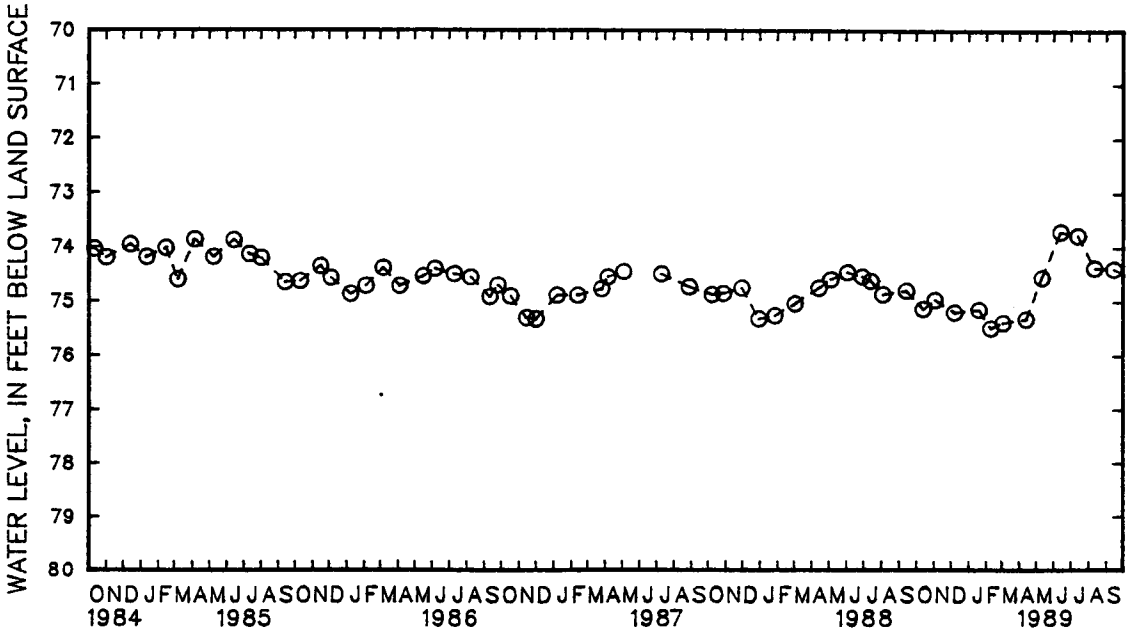


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--PG Df 2. SITE ID.--385152076431301.
LOCATION.--Lat 38°51'52", long 76°43'13", Hydrologic Unit 02060006, near Leeland.
Owner: A. R. Rogers.
AQUIFER.--Nanjemoy Formation of Eocene age. Aquifer code: 124NNJM.
WELL CHARACTERISTICS.--Dug, unused, artesian well, depth 81.5 ft; diameter of concrete-ring lining 48 in.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 145 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Edge of steel cover, 3.0 ft below land-surface datum.
PERIOD OF RECORD.--November 1948 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured 69.87 ft below land-surface datum, Dec. 17, 1979; lowest measured, 75.96 ft below land-surface datum, Nov. 19, 1951.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13	75.15	DEC 7	75.21	FEB 9	75.50	APR 13	75.33	JUN 13	73.71	AUG 11	74.38
NOV 3	74.98	JAN 19	75.16	MAR 3	75.40	MAY 11	74.56	JUL 13	73.78	SEP 14	74.40



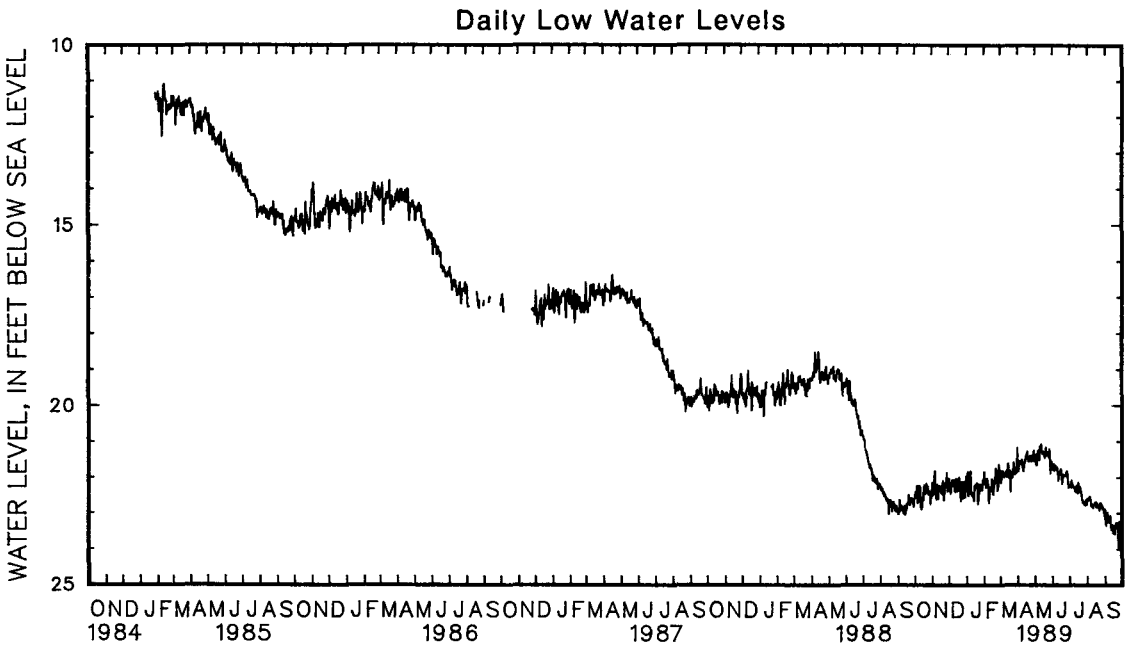
5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--PG Hf 35. SITE ID.--383228076410601. PERMIT NUMBER.--PG-72-0086.
LOCATION.--Lat 38°32'28", long 76°41'06", Hydrologic Unit 02060006, at Chalk Point Power Plant, 1.8 mi. south of Eagle Harbor.
Owner: Potomac Electric Power Co.
AQUIFER.--Aquia Formation of Lower Cretaceous age. Aquifer code: 125AQUI.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 430 ft; casing diameter 6 in., to 401 ft; casing diameter 4 in. from 389 to 399 ft; screen diameter 4 in. from 399 to 430 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with graphic water-level recorder from May 1, 1974 to July 8, 1976. Equipped with digital water-level recorder--60-minute recorder interval from July 8, 1976 to current year.
DATUM.--Elevation of land surface is 11.22 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 2.22 ft above land-surface datum.
REMARKS.--Southern Maryland Observation Well Network.
PERIOD OF RECORD.--May 1974 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.70 ft below sea level, July 1, 1975; lowest measured, 23.96 ft below sea level, Sept. 24, 1989.

WATER LEVEL, IN FEET BELOW SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	22.05	22.60	21.57	22.16	21.70	22.04	21.70	22.15	21.35	21.85	21.39	21.82
2	21.97	22.42	21.60	22.15	21.84	22.20	21.49	21.97	21.73	22.16	21.71	22.16
3	22.10	22.54	22.01	22.50	21.77	22.17	21.44	21.85	21.50	22.08	21.65	22.00
4	21.96	22.42	21.81	22.43	21.80	22.46	21.43	22.53	21.71	22.28	21.41	21.88
5	21.87	22.24	21.19	21.99	21.69	22.26	21.61	22.41	21.54	22.12	21.15	21.82
6	21.91	22.73	21.26	21.83	21.53	22.21	21.31	21.98	21.35	22.04	21.16	21.89
7	22.27	22.70	21.62	22.42	21.48	22.08	21.49	22.07	21.50	22.18	21.39	21.97
8	22.12	22.63	21.93	22.48	21.73	22.21	21.23	21.83	21.65	22.21	21.41	21.99
9	21.68	22.24	22.03	22.63	21.50	22.13	21.53	22.41	21.85	22.73	21.33	21.93
10	21.60	22.26	21.53	22.21	21.50	22.09	21.90	22.47	21.93	22.52	21.26	21.92
11	21.92	22.56	21.69	22.60	21.64	22.33	21.94	22.52	21.68	22.38	21.15	21.84
12	22.23	22.86	21.89	22.61	21.77	22.41	21.58	22.44	21.73	22.30	21.08	21.90
13	22.41	22.91	21.70	22.24	21.39	22.05	21.58	22.49	21.74	22.37	21.34	21.99
14	22.21	22.84	21.75	22.39	21.45	22.06	22.02	22.66	21.57	22.04	21.23	21.80
15	22.15	22.59	21.91	22.35	21.33	22.06	21.70	22.25	21.79	22.27	21.18	21.62
16	22.02	22.64	21.77	22.29	21.83	22.40	21.79	22.26	21.81	22.38	21.50	22.00
17	21.89	22.37	21.69	22.26	21.55	22.07	21.73	22.20	21.93	22.49	21.54	22.02
18	21.82	22.23	22.02	22.46	21.62	22.10	21.73	22.25	21.74	22.23	21.34	21.82
19	21.98	22.45	21.72	22.44	21.50	22.01	21.61	22.16	21.49	22.11	21.71	22.42
20	21.94	22.47	21.50	22.10	21.68	22.22	21.51	22.23	21.51	22.02	21.31	21.89
21	21.58	22.37	21.49	22.48	21.78	22.42	22.08	22.76	21.11	21.75	21.03	21.90
22	21.57	22.18	22.03	22.65	22.09	22.67	21.84	22.51	21.16	22.05	21.55	22.00
23	21.74	22.33	21.71	22.42	21.64	22.31	21.84	22.43	21.57	22.04	21.37	21.86
24	21.62	22.26	21.68	22.19	21.40	22.13	21.62	22.20	21.69	22.38	21.01	21.58
25	21.70	22.45	21.49	22.16	21.50	22.36	21.69	22.24	21.35	22.25	21.16	21.68
26	21.74	22.49	21.54	22.18	22.07	22.59	21.50	22.24	20.98	21.64	21.10	21.91
27	21.87	22.47	21.26	21.88	21.84	22.53	21.54	22.25	21.45	21.85	21.49	21.91
28	21.73	22.41	21.28	22.12	21.53	22.13	21.82	22.36	21.46	21.94	21.27	21.83
29	22.18	22.76	21.90	22.41	22.12	22.57	21.64	22.09	---	---	21.34	21.81
30	22.13	22.56	21.53	22.26	21.70	22.39	21.67	22.18	---	---	20.98	21.87
31	21.88	22.55	---	---	21.63	21.98	21.49	22.07	---	---	20.59	21.18
MONTH	21.57	22.91	21.19	22.65	21.33	22.67	21.23	22.76	20.98	22.73	20.59	22.42

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	21.08	21.83	20.82	21.55	21.16	21.78	21.57	22.24	22.19	22.64	22.39	22.90
2	21.12	21.83	20.72	21.38	21.01	21.66	21.56	22.24	21.95	22.59	22.40	23.30
3	20.90	21.55	20.90	21.66	21.00	21.64	21.62	22.27	22.07	22.63	22.72	23.34
4	20.98	21.58	21.07	21.67	20.98	21.81	21.54	22.08	21.93	22.58	22.62	23.10
5	20.98	21.62	20.74	21.36	21.20	21.78	21.50	22.19	21.90	22.54	22.50	22.99
6	21.03	21.64	20.33	21.26	21.05	21.68	21.73	22.26	21.94	22.54	22.62	23.11
7	20.83	21.54	20.78	21.49	21.15	21.73	21.77	22.24	22.06	22.62	22.67	23.10
8	20.89	21.51	20.93	21.51	21.18	21.79	21.77	22.28	22.34	22.81	22.76	23.25
9	20.68	21.60	20.87	21.51	21.13	21.74	21.73	22.28	22.37	22.75	22.65	23.17
10	21.13	21.81	20.55	21.13	21.30	21.86	21.81	22.31	22.31	22.82	22.65	23.08
11	21.26	21.83	20.62	21.19	21.68	22.10	21.95	22.40	22.32	22.85	22.68	23.34
12	21.22	21.59	20.65	21.08	21.14	21.87	21.84	22.28	22.34	22.78	22.84	23.46
13	21.01	21.59	20.88	21.32	21.16	21.86	21.75	22.23	22.26	22.75	22.79	23.34
14	21.08	21.52	20.94	21.35	21.34	21.92	21.85	22.33	22.25	22.71	22.71	23.33
15	20.89	21.40	20.90	21.29	21.29	21.77	21.85	22.44	22.20	22.70	22.68	23.56
16	20.93	21.37	20.82	21.35	21.27	21.82	21.54	22.15	22.07	22.68	22.67	23.35
17	20.81	21.29	20.92	21.38	21.28	21.94	21.74	22.39	22.07	22.84	22.59	23.40
18	20.86	21.47	20.82	21.46	21.54	22.19	21.75	22.38	22.11	22.72	23.02	23.58
19	20.87	21.50	20.84	21.34	21.51	22.02	21.76	22.26	22.22	22.79	22.70	23.37
20	20.92	21.57	20.67	21.17	21.37	21.93	21.52	22.35	22.15	22.79	22.64	23.27
21	20.94	21.47	20.57	21.35	21.28	21.95	21.79	22.41	22.21	22.79	22.89	23.40
22	20.91	21.44	20.83	21.39	21.42	21.96	21.95	22.50	22.28	22.92	22.26	23.27
23	20.90	21.40	20.62	21.31	21.39	21.96	22.08	22.63	22.17	22.73	22.31	23.40
24	20.90	21.54	20.58	21.34	21.36	21.96	22.08	22.70	22.24	22.71	23.14	23.96
25	20.99	21.56	20.78	21.43	21.35	21.89	22.15	22.67	22.24	22.75	23.05	23.51
26	20.92	21.40	20.61	21.21	21.23	21.83	22.20	22.74	22.27	22.75	22.81	23.23
27	20.89	21.39	21.00	21.50	21.34	21.93	22.18	22.77	22.29	22.87	23.02	23.58
28	20.81	21.37	21.32	21.90	21.39	22.11	22.15	22.73	22.32	22.83	22.80	23.35
29	20.69	21.26	21.10	21.74	21.57	22.29	22.20	22.78	22.27	22.90	22.85	23.37
30	21.02	21.56	20.99	21.56	21.71	22.22	22.13	22.62	22.33	22.96	23.07	23.66
31	---	---	21.01	21.78	---	---	21.89	22.75	22.50	23.07	---	---
MONTH	20.68	21.83	20.33	21.90	20.98	22.29	21.50	22.78	21.90	23.07	22.26	23.96



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--PG Hf 40. SITE ID.--383348076411301. PERMIT NUMBER.--PG-73-0298.
LOCATION.--Lat 38°33'48", long 76°41'13", Hydrologic Unit 02060006, at Chalk Point Power Plant, 0.4 mi. south of Eagle Harbor.
Owner: Potomac Electric Power Co.
AQUIFER.--Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 870 ft; casing diameter 6 in., to 150 ft; casing diameter 4 in. from 150 to 860 ft; screen diameter 4 in. from 860 to 870 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with graphic water-level recorder from Dec. 16, 1974 to July 8, 1976. Equipped with digital water-level recorder--30-minute recorder interval from July 8, 1976 to current year.
DATUM.--Elevation of land surface is 27.98 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 2.46 ft above land-surface datum.
REMARKS.--Southern Maryland Observation Well Network. Water levels are affected by nearby pumping.
PERIOD OF RECORD.--December 1974 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.64 ft above sea level, Jan. 11, 1975; lowest measured, 20.65 ft below sea level, Sept. 24, 1989.

WATER LEVEL, IN FEET BELOW SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	17.00	17.32	16.32	16.71	17.13	17.36	17.51	17.75	18.31	18.62	18.97	19.25
2	16.90	17.19	16.33	16.65	17.24	17.47	17.38	17.63	18.49	18.71	19.24	19.43
3	16.92	17.27	16.59	16.96	17.22	17.45	17.32	17.57	18.39	18.71	19.21	19.42
4	16.90	17.17	16.62	16.93	17.22	17.70	17.32	17.98	18.61	18.91	19.15	19.41
5	16.88	17.13	16.30	16.71	17.30	17.54	17.59	17.95	18.48	18.79	19.01	19.40
6	16.99	17.35	16.36	16.74	17.20	17.53	17.36	17.73	18.33	18.70	19.05	19.43
7	17.12	17.35	16.64	17.14	17.12	17.41	17.56	17.86	18.40	18.77	19.20	19.55
8	17.05	17.32	16.88	17.22	17.25	17.56	17.37	17.74	18.48	18.81	19.29	19.63
9	16.75	17.07	17.06	17.39	17.18	17.51	---	---	18.67	19.17	19.29	19.61
10	16.68	16.98	16.78	17.25	17.15	17.51	17.86	18.18	18.72	19.09	19.25	19.63
11	16.79	17.24	16.94	17.40	17.20	17.69	17.92	18.23	18.63	19.00	19.17	19.58
12	17.04	17.41	17.12	17.44	17.40	17.73	17.69	18.22	18.64	19.03	19.10	19.65
13	17.25	17.51	16.88	17.30	17.13	17.56	17.73	18.39	18.77	19.16	19.37	19.72
14	17.04	17.47	17.00	17.26	17.16	17.53	18.02	18.43	18.70	18.95	19.30	19.54
15	17.01	17.26	17.06	17.32	17.10	17.53	17.86	18.16	18.80	19.11	19.25	19.48
16	16.99	17.28	16.90	17.30	17.42	17.79	17.93	18.18	18.89	19.31	19.45	19.83
17	16.85	17.13	16.86	17.18	17.26	17.55	17.93	18.23	19.10	19.37	19.54	19.87
18	16.73	17.03	17.15	17.37	17.34	17.59	17.95	18.25	18.94	19.26	19.41	19.71
19	16.79	17.11	16.99	17.38	17.29	17.58	17.89	18.18	18.76	19.13	19.69	20.12
20	16.83	17.08	16.73	17.11	17.37	17.66	17.85	18.27	18.79	19.13	19.47	19.87
21	16.49	17.02	16.72	17.39	17.47	17.82	18.22	18.67	18.52	18.96	19.30	19.83
22	16.46	16.78	17.16	17.47	17.70	18.02	18.21	18.59	18.59	19.09	19.63	19.92
23	16.55	16.86	16.97	17.34	17.44	17.82	18.24	18.57	18.80	19.18	19.60	19.90
24	16.39	16.73	16.95	17.22	17.29	17.69	18.14	18.48	18.97	19.37	19.33	19.73
25	16.45	16.84	16.90	17.25	17.38	17.84	18.21	18.64	18.82	19.37	19.43	19.73
26	16.48	16.87	16.91	17.22	17.70	18.01	18.13	18.65	18.65	18.97	19.43	19.90
27	16.56	16.92	16.80	17.14	17.59	18.02	18.20	18.70	18.82	19.17	19.62	19.91
28	16.46	16.82	16.74	17.24	17.35	17.70	18.47	18.74	18.96	19.25	19.52	19.84
29	16.68	16.98	17.23	17.46	17.68	17.98	18.43	18.67	---	---	19.52	19.78
30	16.68	16.91	17.05	17.40	17.50	17.87	18.41	18.68	---	---	19.31	19.82
31	16.58	16.91	---	---	17.44	17.67	18.33	18.67	---	---	19.08	19.39
MONTH	16.39	17.51	16.30	17.47	17.10	18.02	---	---	18.31	19.37	18.97	20.12

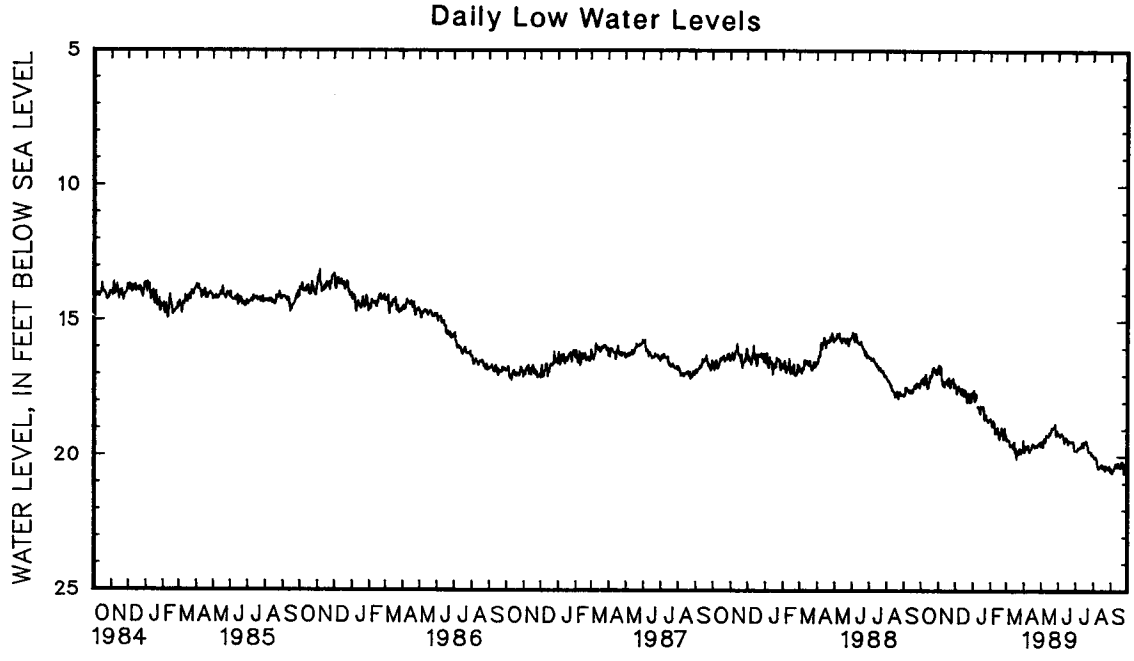
GROUND WATER LEVELS

MARYLAND Continued

PRINCE GEORGES COUNTY Continued

PG Hf 40 Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	19.36	19.81	19.09	19.62	18.83	19.18	19.44	19.80	19.70	19.98	20.08	20.45
2	19.48	19.86	19.05	19.44	18.78	19.17	19.44	19.80	19.67	20.01	20.11	20.60
3	19.32	19.63	19.21	19.61	18.79	19.18	19.43	19.82	19.71	20.08	20.32	20.64
4	19.34	19.63	19.32	19.66	18.75	19.27	19.44	19.77	19.71	20.09	20.21	20.54
5	19.36	19.74	19.10	19.46	18.91	19.26	19.31	19.69	19.71	20.04	20.20	20.51
6	19.37	19.70	18.82	19.35	18.79	19.21	19.41	19.74	19.76	20.06	20.20	20.52
7	19.26	19.62	19.07	19.46	18.80	19.15	19.39	19.70	19.81	20.14	20.16	20.44
8	19.26	19.60	19.16	19.46	18.89	19.21	19.39	19.70	20.07	20.33	20.13	20.39
9	19.15	19.74	19.15	19.47	18.84	19.22	19.32	19.67	20.13	20.43	20.08	20.34
10	19.46	19.83	18.90	19.27	18.94	19.31	19.38	19.62	20.21	20.46	20.02	20.27
11	19.53	19.86	18.95	19.21	19.21	19.50	19.41	19.67	20.19	20.46	20.01	20.35
12	19.52	19.76	18.96	19.22	19.01	19.41	19.30	19.58	20.11	20.40	20.06	20.41
13	19.45	19.73	19.00	19.25	19.01	19.32	19.27	19.49	20.10	20.40	20.02	20.33
14	19.44	19.73	19.03	19.28	19.04	19.41	19.25	19.52	20.09	20.37	19.90	20.25
15	19.33	19.60	18.92	19.24	19.01	19.32	19.30	19.66	20.03	20.31	19.90	20.39
16	19.32	19.54	18.89	19.13	19.02	19.35	19.10	19.47	19.95	20.31	19.89	20.31
17	19.29	19.54	18.88	19.18	19.05	19.44	19.10	19.52	19.96	20.44	19.88	20.33
18	19.28	19.60	18.80	19.14	19.20	19.55	19.16	19.48	20.09	20.42	20.09	20.44
19	19.27	19.62	18.80	19.09	19.23	19.49	19.12	19.43	20.08	20.45	19.92	20.40
20	19.36	19.68	18.66	18.95	19.16	19.44	19.02	19.46	20.03	20.37	19.91	20.21
21	19.33	19.62	18.59	18.97	19.14	19.48	19.23	19.57	20.09	20.44	20.05	20.33
22	19.32	19.61	18.70	18.99	19.17	19.49	19.34	19.66	20.13	20.53	19.65	20.22
23	19.33	19.61	18.49	18.95	19.17	19.48	19.44	19.79	20.05	20.37	19.65	20.34
24	19.32	19.64	18.49	18.92	19.15	19.45	19.48	19.84	20.07	20.40	20.26	20.65
25	19.35	19.64	18.63	18.95	19.15	19.46	19.52	19.83	20.07	20.39	20.10	20.43
26	19.30	19.55	18.56	18.81	19.13	19.45	19.56	19.86	20.10	20.41	19.97	20.28
27	19.26	19.55	18.73	19.05	19.16	19.48	19.54	19.87	20.14	20.49	20.12	20.48
28	19.26	19.50	18.94	19.24	19.16	19.60	19.53	19.85	20.16	20.45	20.07	20.35
29	19.22	19.48	18.80	19.16	19.32	19.80	19.61	19.96	20.09	20.37	19.92	20.24
30	19.30	19.63	18.76	19.06	19.47	19.80	19.63	19.94	20.05	20.50	20.05	20.40
31	---	---	18.76	19.21	---	---	19.49	20.00	20.20	20.55	---	---
MONTH	19.15	19.86	18.49	19.66	18.75	19.80	19.02	20.00	19.67	20.55	19.65	20.65



5 YEAR HYDROGRAPH

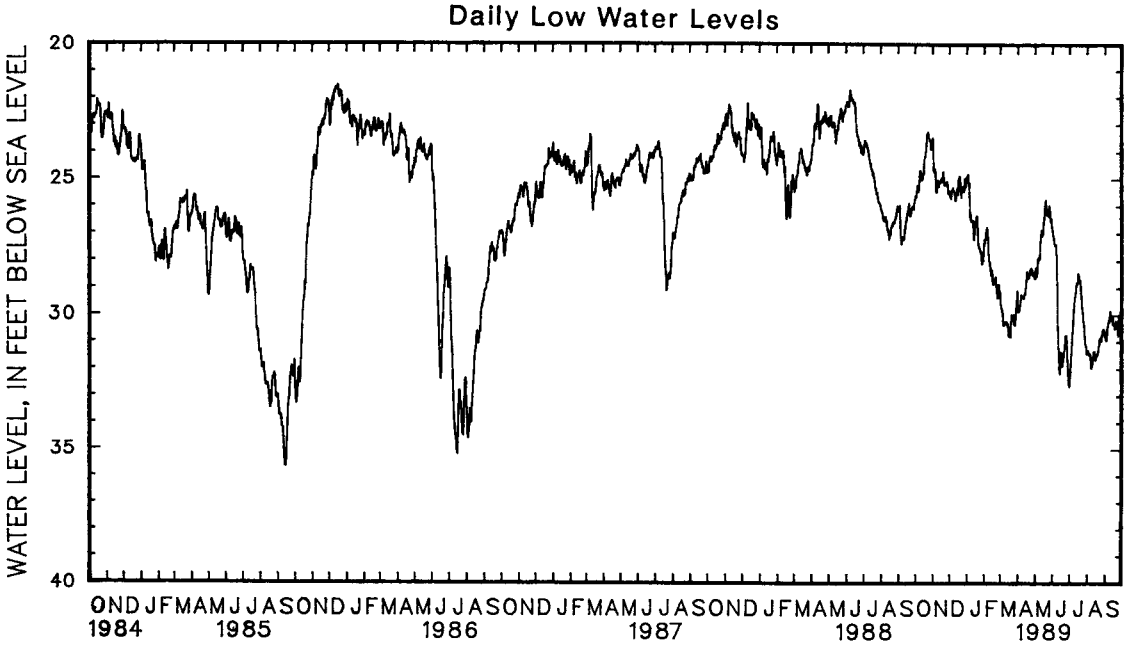
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--PG Hf 41. SITE ID.--383348076411302. PERMIT NUMBER.--PG-73-0297.
LOCATION.--Lat 38°33'48", long 76°41'13", Hydrologic Unit 02060006, at Chalk Point Power Plant, 0.4 mi. south of Eagle Harbor.
Owner: Potomac Electric Power Co.
AQUIFER.--Magothy Formation of Lower Cretaceous age. Aquifer code: 211MGTY.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 665 ft; casing diameter 6 in., to 150 ft; casing diameter 4 in. from 150 to 644 ft, and 654 to 665 ft; screen diameter 4 in. from 644 to 654 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with graphic water-level recorder from Dec. 16, 1974 to July 8, 1976. Equipped with digital water-level recorder--60-minute recorder interval from July 8, 1976 to current year.
DATUM.--Elevation of land surface is 28.30 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 2.60 ft above land-surface datum.
REMARKS.--Southern Maryland Observation Network. Water levels are affected by nearby pumping.
PERIOD OF RECORD.--December 1974 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.27 ft below sea level, Dec. 24, 1974; lowest measured, 38.10 ft below sea level, Jan. 11, and 14, 1984.

WATER LEVEL, IN FEET BELOW SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	25.34	25.77	23.20	23.47	25.17	25.46	24.79	25.06	26.94	27.26	28.90	29.24
2	25.24	25.64	23.26	24.06	25.30	25.65	24.53	24.96	27.05	27.38	29.31	29.63
3	25.29	25.69	24.03	24.69	25.28	25.61	24.47	24.83	26.70	27.23	29.44	29.77
4	25.11	25.51	24.45	24.75	25.26	25.74	24.46	25.26	26.76	27.16	29.52	29.85
5	25.00	25.26	24.14	24.65	25.06	25.44	24.61	25.15	26.45	26.93	29.52	29.96
6	25.01	25.49	24.23	24.80	24.98	25.41	24.53	25.68	26.32	26.79	29.66	30.33
7	25.15	25.46	24.66	25.40	24.93	25.33	25.64	26.41	26.43	27.14	30.00	30.42
8	24.97	25.38	25.03	25.51	25.08	25.45	25.86	26.33	26.84	27.41	29.98	30.38
9	24.44	24.91	24.98	25.47	25.04	25.46	26.07	26.56	27.27	28.01	29.88	30.32
10	24.27	24.68	24.44	25.04	25.05	25.54	26.11	26.55	27.61	28.04	29.81	30.28
11	24.37	24.82	24.58	25.25	25.14	25.79	26.16	26.57	27.71	28.11	29.80	30.28
12	24.50	24.94	24.84	25.29	25.35	25.80	26.06	26.55	27.86	28.36	29.73	30.30
13	24.67	25.05	24.62	25.08	25.03	25.58	26.22	27.05	28.12	28.55	29.98	30.40
14	24.48	24.97	24.69	25.10	25.04	25.54	26.62	27.25	28.00	28.36	30.05	30.37
15	24.46	24.82	24.72	25.13	24.89	25.33	26.33	26.79	28.17	28.52	30.10	30.44
16	24.29	24.81	24.65	25.12	24.98	25.58	26.33	26.74	28.23	28.78	30.33	30.81
17	23.96	24.44	24.60	24.99	24.66	25.13	26.11	26.55	28.57	28.90	30.42	30.82
18	23.68	24.18	24.65	25.08	24.53	24.98	26.02	26.43	28.45	28.79	30.13	30.57
19	23.75	24.16	24.48	24.97	24.47	24.89	25.97	26.35	28.28	28.74	30.41	30.85
20	23.55	24.03	24.25	24.72	24.65	25.08	26.07	26.75	28.31	28.73	29.69	30.33
21	23.04	23.78	24.28	25.12	24.84	25.40	26.70	27.34	28.12	28.62	29.40	30.01
22	22.93	23.34	24.83	25.24	25.21	25.69	26.97	27.46	28.24	28.99	29.78	30.19
23	22.89	23.35	24.72	25.20	24.99	25.46	27.19	27.57	28.68	29.10	29.84	30.21
24	22.77	23.26	24.71	25.13	24.76	25.29	27.16	27.58	28.88	29.39	29.59	30.12
25	22.90	23.44	24.75	25.21	24.80	25.34	27.23	27.69	28.74	29.39	29.64	30.01
26	22.91	23.49	24.81	25.24	25.10	25.48	27.11	27.70	28.48	28.90	29.66	30.38
27	23.10	23.58	24.60	25.11	24.82	25.43	27.17	27.92	28.74	29.09	29.88	30.41
28	23.12	23.57	24.60	25.27	24.56	24.99	27.82	28.14	28.79	29.15	29.62	30.09
29	23.49	23.90	25.23	25.55	24.98	25.33	27.73	28.04	---	---	29.46	29.85
30	23.50	23.84	25.03	25.48	24.67	25.15	27.45	28.01	---	---	29.00	29.67
31	23.25	23.79	---	---	24.59	24.93	27.10	27.68	---	---	28.69	29.12
MONTH	22.77	25.77	23.20	25.55	24.47	25.80	24.46	28.14	26.32	29.39	28.69	30.85

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	29.06	29.77	28.08	28.66	26.38	26.89	32.19	32.57	31.06	31.42	30.22	30.64
2	29.55	29.90	27.85	28.28	26.44	27.08	31.76	32.20	30.85	31.32	30.29	30.89
3	29.40	29.87	27.93	28.51	26.64	27.17	31.36	31.86	30.90	31.45	30.49	30.94
4	29.33	29.82	28.11	28.57	26.68	27.37	30.74	31.51	31.00	31.48	30.23	30.73
5	29.15	29.63	27.79	28.24	26.96	27.43	30.34	30.97	31.02	31.44	30.04	30.47
6	28.95	29.41	27.38	27.88	26.96	27.42	30.10	30.67	31.04	31.46	30.04	30.40
7	28.77	29.27	27.50	27.96	26.99	27.42	29.71	30.32	31.18	31.67	29.98	30.31
8	28.91	29.36	27.55	27.97	27.31	28.04	29.49	29.93	31.59	31.98	29.87	30.25
9	28.66	29.32	27.26	27.90	28.15	29.12	29.11	29.74	31.46	31.86	29.64	30.06
10	28.94	29.34	26.82	27.35	29.25	30.55	28.97	29.35	31.47	31.79	29.56	29.86
11	28.92	29.40	26.56	27.07	30.65	31.27	28.94	29.31	31.12	31.62	29.54	30.09
12	28.92	29.26	26.53	26.88	30.96	31.39	28.71	29.14	31.01	31.37	29.74	30.18
13	28.77	29.25	26.67	27.08	31.15	32.12	28.57	28.88	30.96	31.35	29.68	30.09
14	28.57	29.05	26.69	27.05	31.53	32.20	28.53	28.81	31.00	31.59	29.59	30.05
15	28.39	28.77	26.47	26.87	31.21	31.53	28.42	28.79	31.21	31.68	29.63	30.35
16	28.34	28.66	26.30	26.60	31.09	31.42	27.96	28.46	31.13	31.56	29.83	30.35
17	28.01	28.40	26.13	26.45	30.84	31.42	27.98	28.57	31.07	31.55	29.82	30.38
18	28.04	28.58	25.85	26.15	31.13	31.91	28.14	28.72	30.93	31.50	30.06	30.51
19	28.18	28.65	25.61	25.96	31.31	31.80	28.31	28.71	30.99	31.44	29.86	30.42
20	28.24	28.64	25.35	25.75	31.06	31.55	28.20	28.92	30.79	31.38	29.83	30.24
21	28.15	28.54	25.34	26.08	30.95	31.55	28.64	29.20	30.66	31.15	30.07	30.47
22	28.06	28.48	25.76	26.31	30.70	31.26	28.90	29.37	30.58	31.09	29.53	30.32
23	27.85	28.33	25.84	26.30	30.48	31.03	29.24	29.72	30.44	30.89	29.53	30.37
24	27.84	28.27	25.81	26.26	30.18	30.79	29.46	29.90	30.52	30.93	30.21	30.77
25	27.94	28.33	25.77	26.34	30.23	30.78	29.72	30.24	30.52	30.96	30.03	30.36
26	28.11	28.45	25.59	25.98	30.55	31.00	29.91	30.36	30.42	30.79	29.77	30.09
27	28.16	28.54	25.79	26.18	30.60	31.58	30.07	30.81	30.34	30.74	29.84	30.24
28	28.09	28.52	26.07	26.53	31.41	32.03	30.41	30.93	30.24	30.59	29.59	29.98
29	28.04	28.44	26.11	26.52	31.67	32.57	30.55	31.11	30.14	30.53	29.42	29.85
30	28.21	28.65	26.08	26.46	32.16	32.67	30.67	31.17	30.11	30.60	29.53	29.95
31	---	---	26.11	26.79	---	---	30.66	31.44	30.25	30.68	---	---
MONTH	27.84	29.90	25.34	28.66	26.38	32.67	27.96	32.57	30.11	31.98	29.42	30.94



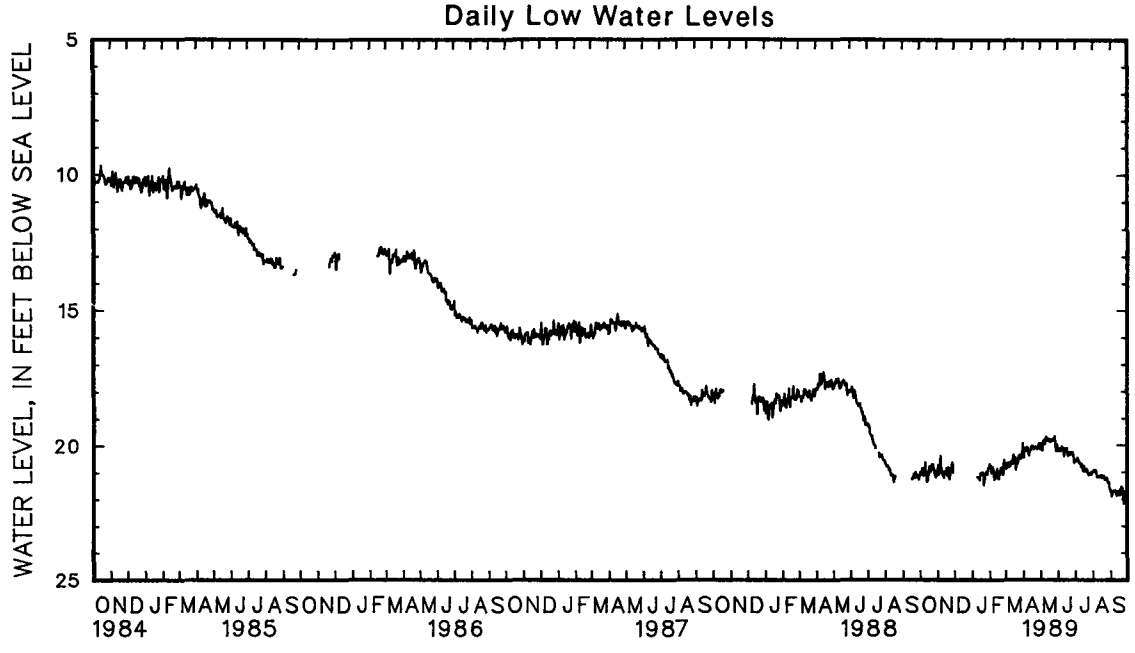
5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--PG Hf 42. SITE ID.--383348076411303. PERMIT NUMBER.--PG-73-0294.
LOCATION.--Lat 38°33'48", long 76°41'13", Hydrologic Unit 02060006, at Chalk Point Power Plant, 0.4 mi. south of Eagle Harbor.
Owner: Potomac Electric Power Co.
AQUIFER.--Aquia Formation of Lower Cretaceous age. Aquifer code: 125AQUI.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 386 ft; casing diameter 6 in., to 150 ft; casing diameter 4 in. from 150 to 366 ft and 376 to 386 ft; screen diameter 4 in. from 366 to 376 ft.
INSTRUMENTATION.--Measurements with chalked steel tape by USGS personnel. Equipped with graphic water-level recorder from Jan. 2, 1975 to July 8, 1976. Equipped with digital water-level recorder--60-minute recorder interval from July 8, 1976 to current year.
DATUM.--Elevation of land surface is 27.76 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 2.65 ft above land-surface datum.
REMARKS.--Southern Maryland Observation Well Network.
PERIOD OF RECORD.--January 1975 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.84 ft above sea level, Apr. 22, 1975; lowest measured, 22.20 ft below sea level, Sept. 24, 1989.

WATER LEVEL, IN FEET BELOW SEA LEVEL, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	20.97	21.13	20.52	20.88	---	---	---	---	20.41	20.71	20.47	20.70
2	20.85	21.00	20.52	20.76	---	---	---	---	20.61	20.84	20.69	20.90
3	20.85	21.09	20.76	21.11	---	---	---	---	20.44	20.80	20.62	20.86
4	20.86	21.03	20.72	21.01	---	---	---	---	20.68	21.05	20.49	20.79
5	20.66	20.86	20.15	20.71	---	---	---	---	20.61	20.96	20.26	20.68
6	20.79	21.14	20.22	20.42	---	---	---	---	20.48	20.83	20.27	20.65
7	21.06	21.15	20.42	20.83	---	---	---	---	20.53	20.95	20.41	20.74
8	21.03	21.15	20.71	20.91	---	---	---	---	20.63	20.97	20.43	20.82
9	20.43	21.03	20.84	21.08	---	---	---	---	20.83	21.29	20.43	20.80
10	20.37	20.66	20.52	21.08	---	---	20.86	21.19	20.93	21.26	20.38	20.72
11	20.52	21.03	20.69	21.13	---	---	20.92	21.23	20.71	21.15	20.19	20.63
12	20.93	21.19	20.90	21.23	---	---	20.61	21.21	20.72	21.06	20.08	20.60
13	21.15	21.38	20.60	21.03	---	---	20.65	21.20	20.74	21.19	20.31	20.70
14	20.96	21.33	20.79	20.99	---	---	20.92	21.30	20.64	20.89	20.20	20.48
15	20.93	21.13	20.85	21.06	---	---	20.72	21.06	20.75	21.04	20.10	20.36
16	20.92	21.13	20.64	21.05	---	---	20.76	21.04	20.81	21.21	20.26	20.69
17	20.69	20.92	20.58	20.86	---	---	20.73	21.07	21.02	21.26	20.39	20.67
18	20.55	20.79	20.86	21.14	---	---	20.79	21.11	20.84	21.13	20.14	20.47
19	20.59	21.00	20.85	21.14	---	---	20.70	21.02	20.62	20.97	20.46	20.95
20	20.79	20.97	20.43	20.84	---	---	20.61	21.06	20.62	20.93	20.23	20.71
21	20.41	20.89	20.43	21.22	---	---	21.03	21.51	20.28	20.84	19.97	20.58
22	20.36	20.72	21.02	21.28	---	---	20.92	21.34	20.32	20.82	20.40	20.68
23	20.54	20.85	20.76	21.11	---	---	20.88	21.20	20.57	20.85	20.29	20.60
24	20.48	20.75	20.67	20.92	---	---	20.67	21.10	20.69	21.10	19.96	20.44
25	20.56	20.90	20.56	20.88	---	---	20.69	21.01	20.47	21.10	20.06	20.37
26	20.64	20.99	20.54	20.79	---	---	20.50	21.04	20.14	20.53	20.02	20.49
27	20.87	21.11	20.29	20.65	---	---	20.56	20.98	20.40	20.68	20.23	20.52
28	20.83	21.04	20.26	20.73	---	---	20.74	21.09	20.52	20.78	20.10	20.44
29	20.98	21.21	20.75	21.02	---	---	20.63	20.86	---	---	20.11	20.38
30	20.97	21.14	---	---	---	---	20.59	20.88	---	---	19.87	20.47
31	20.87	21.14	---	---	---	---	20.42	20.84	---	---	19.58	19.92
MONTH	20.36	21.38	---	---	---	---	---	---	20.14	21.29	19.58	20.95

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	19.85	20.43	19.63	20.11	19.83	20.17	20.23	20.59	20.69	20.99	21.23	21.67
2	20.08	20.47	19.47	19.94	19.76	20.13	20.20	20.56	20.57	20.94	21.26	21.80
3	19.79	20.16	19.69	20.18	19.76	20.15	20.17	20.62	20.61	20.98	21.54	21.91
4	19.79	20.11	19.84	20.20	19.70	20.24	20.24	20.59	20.59	21.01	21.40	21.73
5	19.79	20.23	19.60	19.99	19.88	20.24	20.08	20.47	20.57	20.93	21.41	21.69
6	19.83	20.19	19.32	19.82	19.77	20.17	20.23	20.60	20.64	20.94	21.47	21.72
7	19.73	20.09	19.56	19.97	19.73	20.07	20.34	20.61	20.69	21.03	21.45	21.70
8	19.70	20.09	19.66	19.97	19.81	20.10	20.38	20.69	20.92	21.20	21.45	21.73
9	19.58	20.21	19.65	19.96	19.74	20.11	20.32	20.67	20.93	21.20	21.43	21.68
10	19.94	20.33	19.36	19.72	19.82	20.19	20.38	20.68	20.97	21.19	21.41	21.69
11	20.01	20.39	19.46	19.68	20.03	20.43	20.48	20.81	20.99	21.21	21.41	21.81
12	19.97	20.22	19.49	19.74	19.86	20.27	20.41	20.71	20.93	21.15	21.50	21.88
13	19.88	20.17	19.52	19.76	19.81	20.14	20.38	20.76	20.85	21.19	21.47	21.78
14	19.92	20.19	19.56	19.84	19.91	20.24	20.57	20.92	20.88	21.18	21.34	21.71
15	19.76	20.04	19.58	19.80	19.80	20.12	20.59	20.98	20.82	21.12	21.36	21.85
16	19.79	20.04	19.47	19.77	19.82	20.12	20.37	20.77	20.75	21.12	21.32	21.85
17	19.74	20.02	19.55	19.88	19.85	20.28	20.37	20.97	20.76	21.23	21.24	21.66
18	19.76	20.13	19.53	19.89	19.99	20.41	20.60	20.99	20.88	21.21	21.47	21.85
19	19.77	20.15	19.57	19.87	20.05	20.34	20.63	20.97	20.86	21.22	21.29	21.80
20	19.81	20.16	19.47	19.80	19.93	20.30	20.53	20.90	20.79	21.14	21.25	21.54
21	19.79	20.10	19.39	19.85	19.91	20.27	20.58	20.90	20.88	21.21	21.35	21.79
22	19.76	20.07	19.56	19.86	19.97	20.37	20.62	20.97	21.03	21.29	20.98	21.61
23	19.76	20.09	19.31	19.84	20.01	20.35	20.72	21.06	20.95	21.23	20.97	21.79
24	19.75	20.09	19.28	19.72	19.97	20.28	20.75	21.12	20.93	21.26	21.81	22.20
25	19.82	20.15	19.45	19.80	19.93	20.26	20.73	21.06	20.96	21.22	21.63	21.86
26	19.76	20.06	19.34	19.67	19.93	20.26	20.76	21.08	20.96	21.24	21.36	21.72
27	19.75	20.05	19.61	19.95	19.94	20.33	20.75	21.08	21.03	21.40	21.56	21.94
28	19.71	19.96	19.88	20.24	19.96	20.47	20.68	21.04	21.11	21.40	21.49	21.79
29	19.66	19.93	19.78	20.12	20.18	20.67	20.74	21.10	21.05	21.37	21.37	21.75
30	19.74	20.15	19.72	19.99	20.30	20.63	20.72	21.00	21.04	21.60	21.55	21.93
31	---	---	19.71	20.22	---	---	20.51	21.02	21.34	21.69	---	---
MONTH	19.58	20.47	19.28	20.24	19.70	20.67	20.08	21.12	20.57	21.69	20.97	22.20

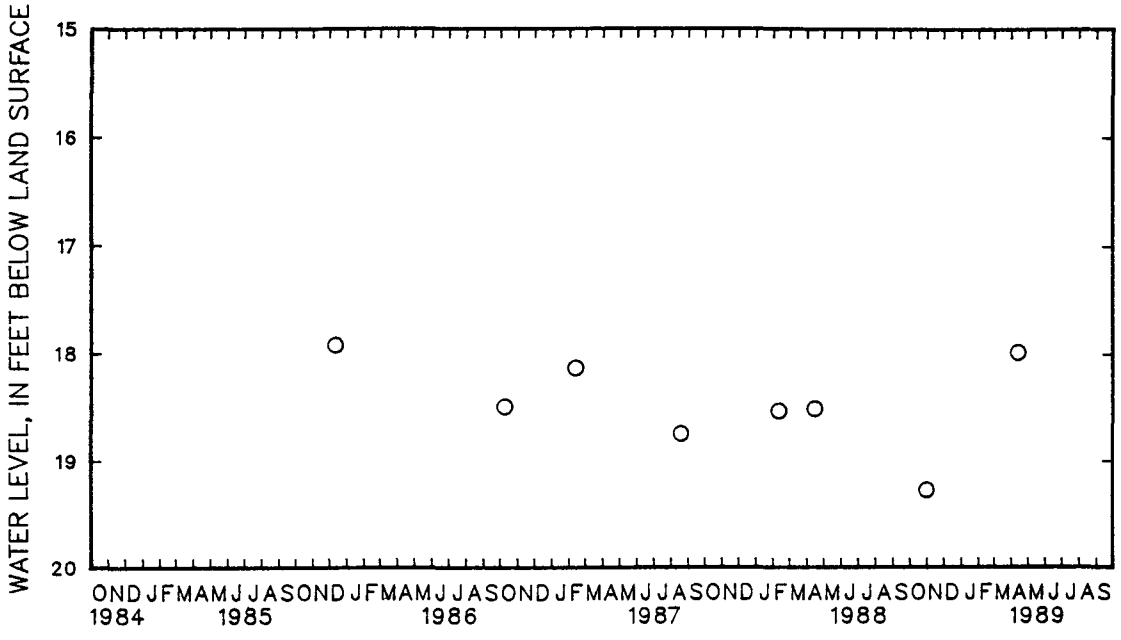


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--QA Be 15. SITE ID.--391203076024301. PERMIT NUMBER.--QA-70-0130.
LOCATION.--Lat 39°12'03", long 76°02'43", Hydrologic Unit 02060002, at Kingstown off MD Rt. 213.
Owner: U.S. Geological Survey.
AQUIFER.--Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 1,171 ft; casing diameter 4 in., to 1,161 ft; screen diameter 4 in. from 1,161 to 1,171 ft.
INSTRUMENTATION.--Twice yearly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 25 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of casing, 2.75 ft above land-surface datum.
REMARKS.--Measured twice yearly since Feburary 1988.
PERIOD OF RECORD.--March 1971 to October 1972, July 1977 to December 1978, October 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.52 ft below land-surface datum, Oct. 10, 1971; lowest measured, 19.28 ft below land-surface datum, Oct. 31, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	19.28	APR 13	17.99

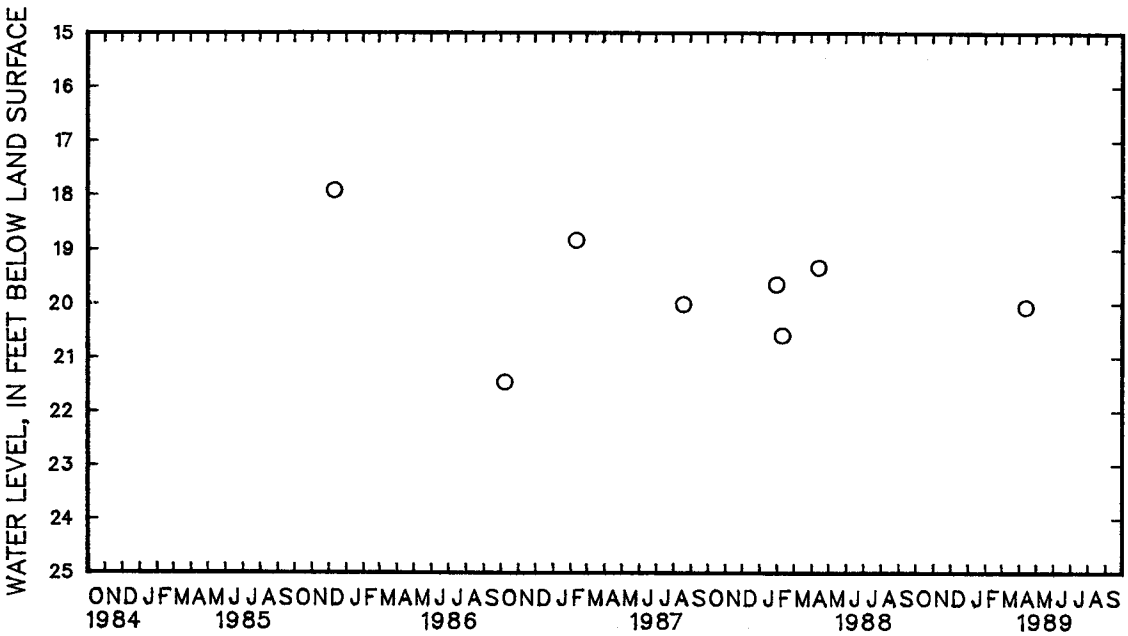


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--QA Be 16. SITE ID.--391203076024302. PERMIT NUMBER.--QA-70-0130.
LOCATION.--Lat 39°12'03", long 76°02'43", Hydrologic Unit 02060002, at Kingstown off MD Rt. 213.
Owner: U.S. Geological Survey.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 498 ft; casing diameter 6 in., to 475 ft; screen diameter 6 in. from 475 to 495 ft.
INSTRUMENTATION.--Twice yearly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 25 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of casing, 2.7 ft above land-surface datum.
REMARKS.--Measured twice yearly since Feburary 1988.
PERIOD OF RECORD.--March 1971 to September 1972, July 1977 to May 1979, October 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.41 ft below land-surface datum, Sept. 11, 1971; lowest measured, 21.47 ft below land-surface datum, Oct. 8, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	19.65	APR 13	20.07

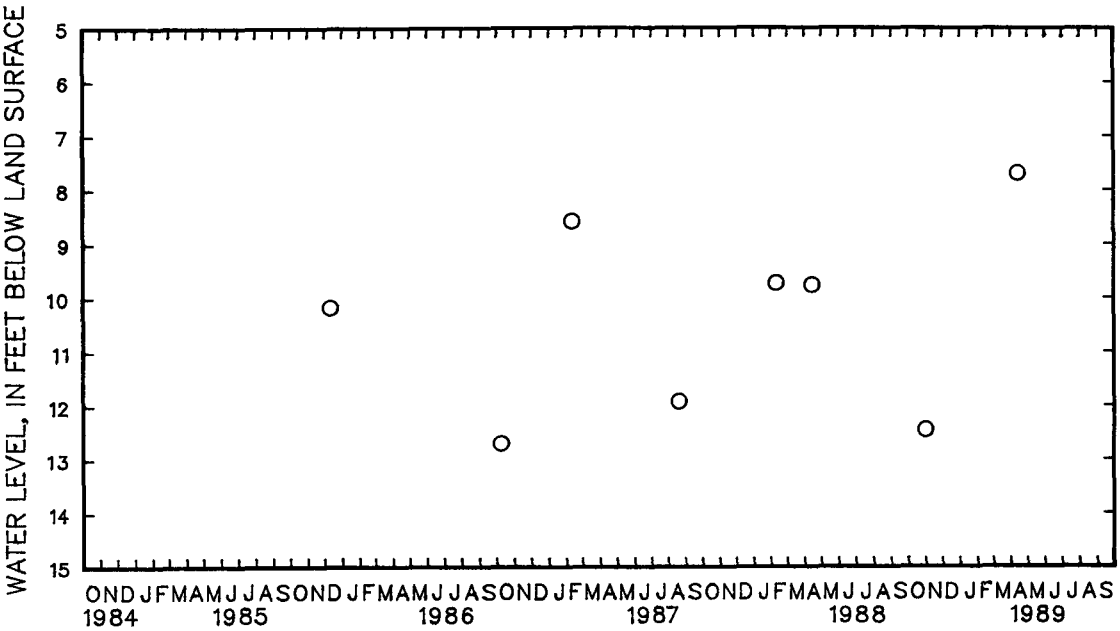


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--QA Be 17. SITE ID.--391203076024303.
LOCATION.--Lat 39°12'03", long 76°02'43", Hydrologic Unit 02060002, at Kingstown off MD Rt. 213.
Owner: U.S. Geological Survey.
AQUIFER.--Aquia Formation of Paleocene age. Aquifer code: 125AQUI.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 120 ft; casing diameter 6 in., to 100 ft; screen diameter 6 in. from 100 to 120 ft.
INSTRUMENTATION.--Twice yearly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 25 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of casing, 2.5 ft above land-surface datum.
REMARKS.--Measured twice yearly since Feburary 1988.
PERIOD OF RECORD.--July 1977 to July 1979, October 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.94 ft below land-surface datum, Mar. 6, 1979; lowest measured, 13.00 ft below land-surface datum, Sept. 30, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	12.46	APR 13	7.70

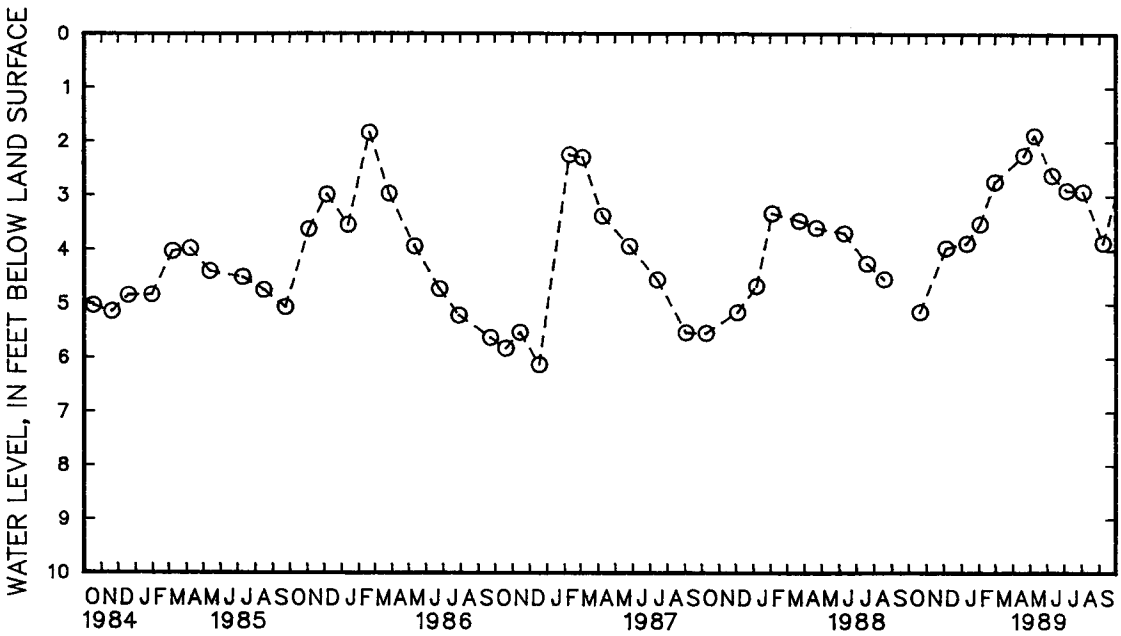


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--QA Cg 1. SITE ID.--390841075515201. PERMIT NUMBER.--QA-00-3949.
LOCATION.--Lat 39°08'41", long 75°51'52", Hydrologic Unit 02060002, at Barclay.
Owner: Town of Barclay.
AQUIFER.--Pensauken Formation of Miocene age. Aquifer code: 122PNSK.
WELL CHARACTERISTICS.--Drilled, unused, water-table well, reported depth 60 ft, measured depth 44 ft; casing diameter 4 in., to 50 ft; screened from 50 to 60 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 69 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Lip of hose connector, 1.9 ft above land-surface datum.
REMARKS.--Reported water level 4.0 ft below land-surface datum, June 10, 1949.
PERIOD OF RECORD.--July 1953, May 1956 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.67 ft below land-surface datum, Feb. 8, 1973; lowest measured, 6.47 ft below land-surface datum, Jan. 3, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	5.16	JAN 10	3.88	FEB 28	2.74	MAY 9	1.88	JUL 5	2.90	SEP 7	3.87
DEC 5	3.97	FEB 2	3.52	APR 20	2.25	JUN 9	2.62	AUG 3	2.92		

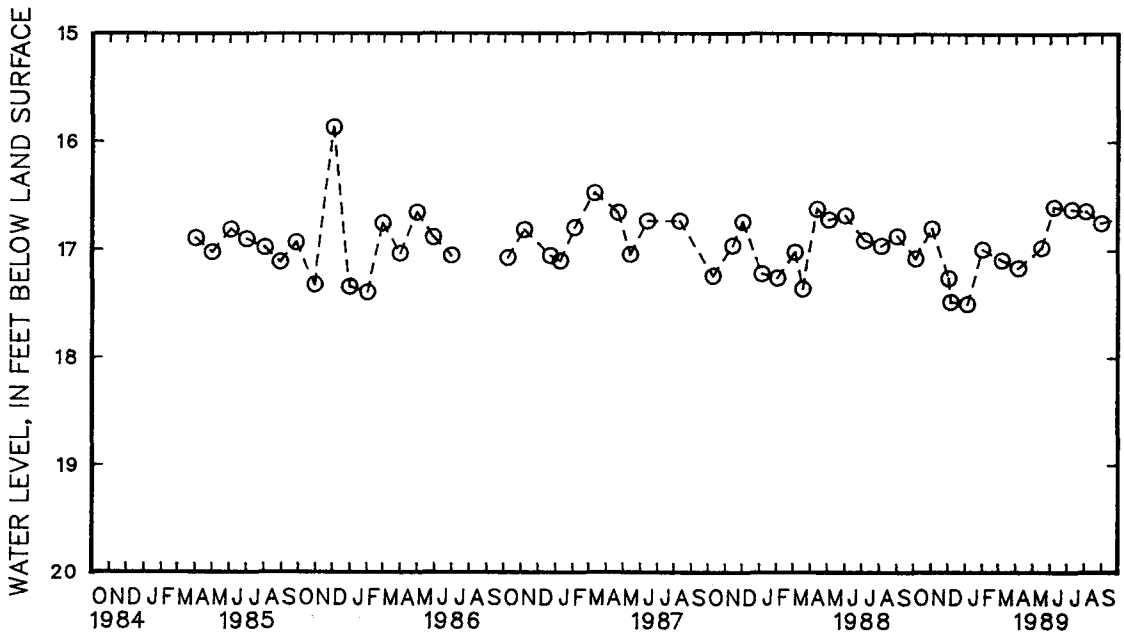


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--QA Db 30. SITE ID.--390201076182701. PERMIT NUMBER.--QA-81-0473.
LOCATION.--Lat 39°02'01", long 76°18'27", Hydrologic Unit 02060002, north side of Pier Avenue, 0.5 mi south of Love Point.
Owner: Maryland Geological Survey.
AQUIFER.--Aquia Formation of Paleocene age. Aquifer code: 125AQUI.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 220 ft; casing diameter 4 in., to 210 ft; screen diameter 4 in. from 210 to 220 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 23.4 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top of casing, 2.4 ft above land-surface datum.
PERIOD OF RECORD.--April 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.87 ft below land-surface datum, Dec. 2, 1985; lowest measured, 17.51 ft below land-surface datum, Jan. 4, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	17.09	DEC 5	17.49	MAR 8	17.10	JUN 8	16.61	SEP 1	16.75
NOV 2	16.81	JAN 4	17.51	APR 6	17.17	JUL 10	16.63		
DEC 1	17.27	FEB 1	17.00	MAY 17	16.98	AUG 4	16.64		



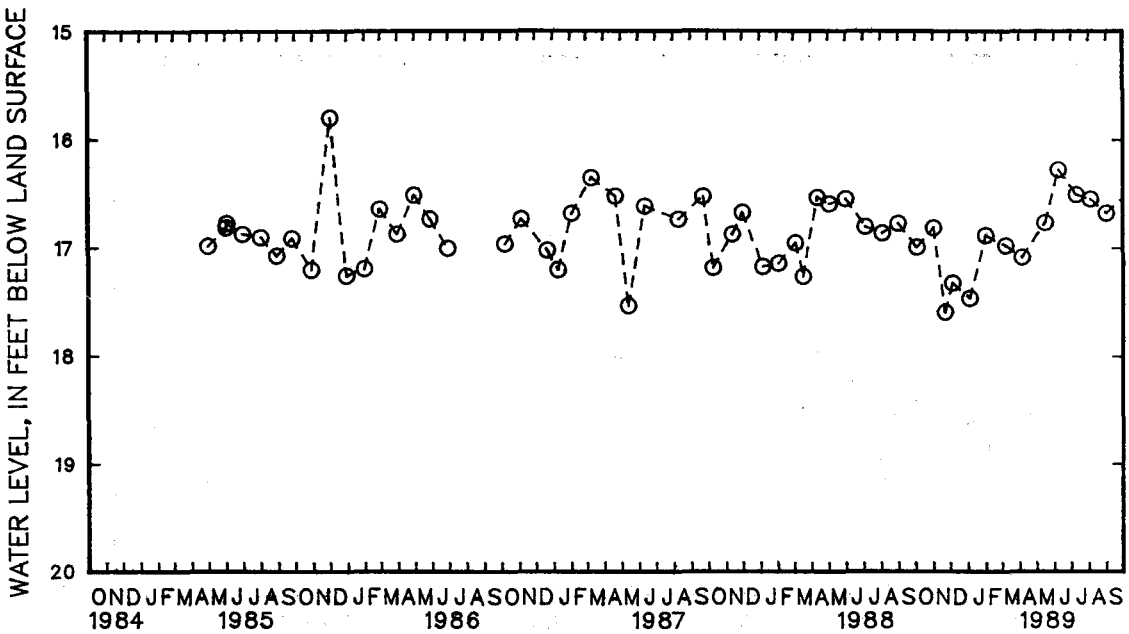
5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

QUEEN ANNES COUNTY--Continued

WELL NUMBER.--QA Db 32. SITE ID.--390201076182703. PERMIT NUMBER.--QA-81-0473.
LOCATION.--Lat 39°02'01", long 76°18'27", Hydrologic Unit 02060002, north side of Pier Avenue, 0.5 mi south of Love Point.
Owner: Maryland Geological Survey.
AQUIFER.--Aquia Formation of Paleocene age. Aquifer code: 125AQUI.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 116 ft; casing diameter 4 in., to 106 ft; screen diameter 4 in. from 106 to 116 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 21.2 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top of casing, 2.1 ft above land-surface datum.
PERIOD OF RECORD.--May 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.80 ft below land-surface datum, Dec. 2, 1985; lowest measured, 17.60 ft below land-surface datum, Nov. 22, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	17.00	DEC 5	17.33	MAR 8	16.99	JUN 8	16.28	SEP 1	16.68
NOV 2	16.82	JAN 4	17.47	APR 6	17.09	JUL 10	16.51		
NOV 22	17.60	FEB 1	16.89	MAY 16	16.77	AUG 4	16.55		

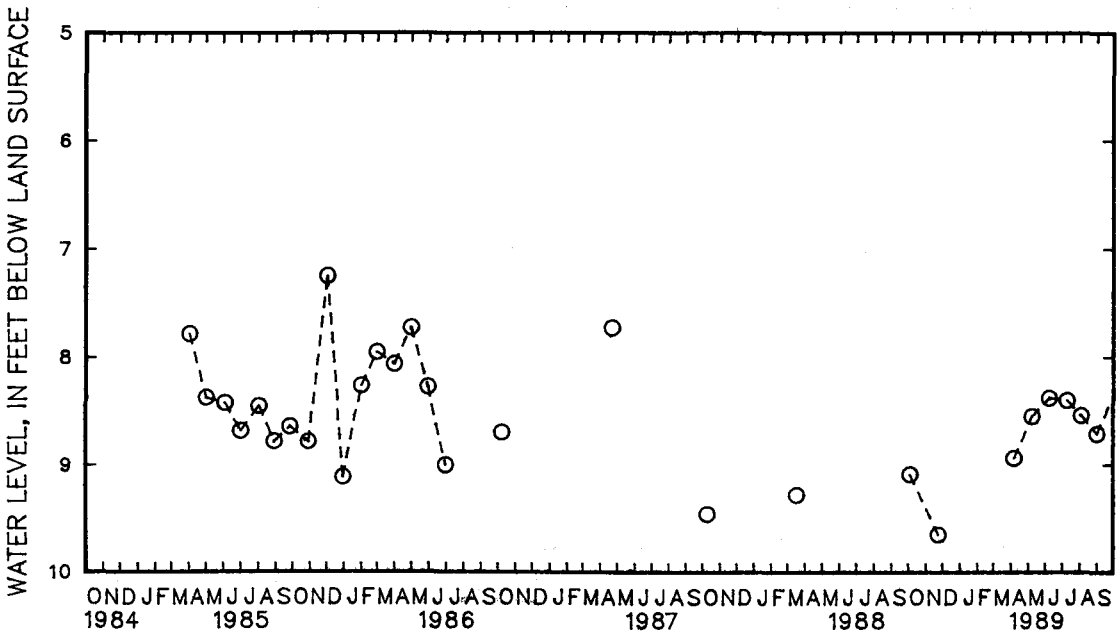


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--QA Db 34. SITE ID.--390023076174301. PERMIT NUMBER.--QA-81-0471.
LOCATION.--Lat 39°00'23", long 76°17'43", Hydrologic Unit 02060002, nr Cloverfields community park, Kent Island.
Owner: Maryland Geological Survey.
AQUIFER.--Aquia Formation of Paleocene age. Aquifer code: 125AQUI.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 180 ft; casing diameter 4 in., to 170 ft; screen diameter 4 in. from 170 to 180 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 7.4 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 2.5 ft above land-surface datum.
REMARKS.--Measured twice yearly from April 1986 to April 1989.
PERIOD OF RECORD.--April 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.25 ft below land-surface datum, Dec. 2, 1985; lowest measured, 9.65 ft below land-surface datum, Nov. 23, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	9.09	APR 6	8.94	JUN 8	8.38	AUG 4	8.54
NOV 23	9.65	MAY 8	8.55	JUL 10	8.40	SEP 1	8.71

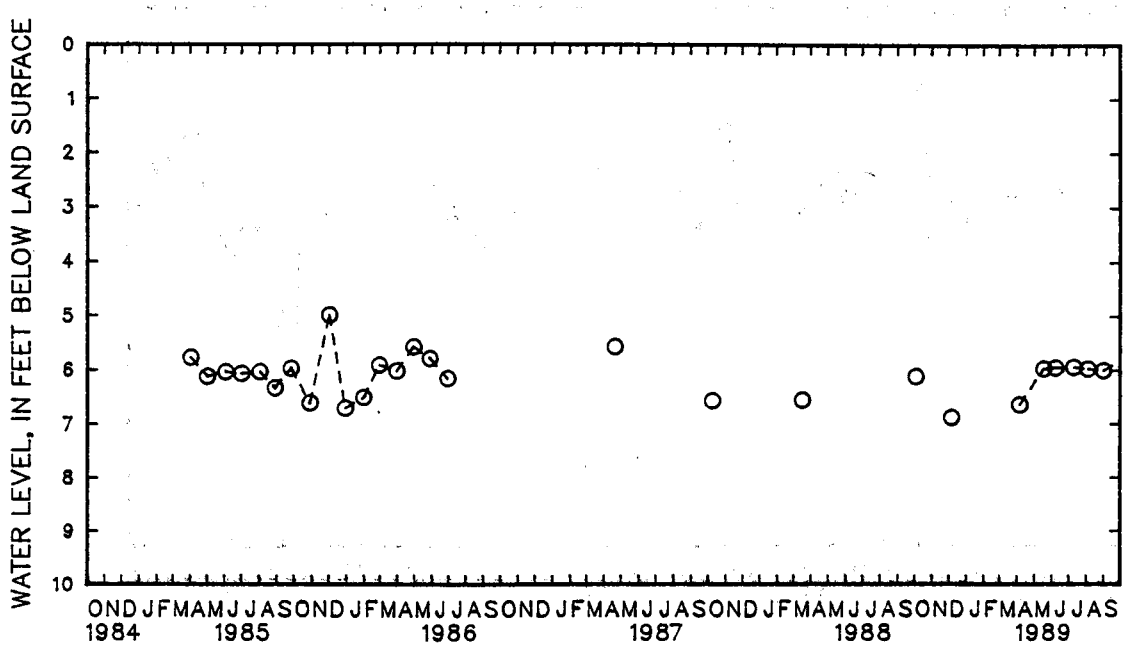


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--QA Db 35. SITE ID.--390119076191001. PERMIT NUMBER.--QA-81-0472.
LOCATION.--Lat 39°01'19", long 76°19'10", Hydrologic Unit 02060002, 0.5 mi west of MD Rt. 18 at Mylander Farms, Kent Island.
Owner: Maryland Geological Survey.
AQUIFER.--Aquia Formation of Paleocene age. Aquifer code: 125AQUI.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 200 ft; casing diameter 4 in., to 190 ft; screen diameter 4 in. from 190 to 200 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 7.5 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 2.2 ft above land-surface datum.
REMARKS.--Measured twice yearly from April 1987 to April 1989.
PERIOD OF RECORD.--April 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.00 ft below land-surface datum, Dec. 2, 1985; lowest measured, 6.89 ft below land-surface datum, Dec. 6, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	6.13	APR 6	6.65	JUN 8	5.96	AUG 4	5.98
DEC 6	6.89	MAY 18	5.98	JUL 10	5.95	SEP 1	6.01

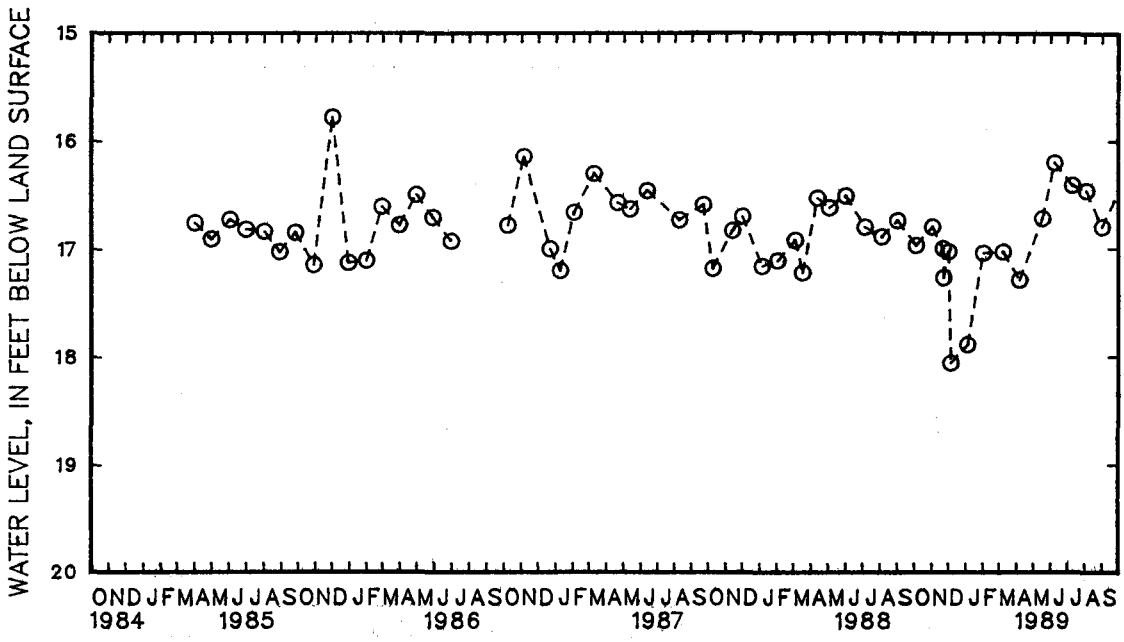


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--QA Db 36. SITE ID.--390201076182704. PERMIT NUMBER.--QA-81-0473.
LOCATION.--Lat 39°02'01", long 76°18'27", Hydrologic Unit 02060002, north side of Pier Avenue, 0.5 mi south of Love Point.
Owner: Maryland Geological Survey.
AQUIFER.--Aquia Formation of Paleocene age. Aquifer code: 125AQUI.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 180 ft; casing diameter 4 in., to 170 ft; screen diameter 4 in. from 170 to 180 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 21.3 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top of casing, 2.6 ft above land-surface datum.
PERIOD OF RECORD.--April 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.78 ft below land-surface datum, Dec. 2, 1985; lowest measured, 18.06 ft below land-surface datum, Dec. 5, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	16.97	NOV 22	17.27	JAN 4	17.89	APR 6	17.29	JUL 10	16.41
NOV 2	16.80	DEC 1	17.03	FEB 1	17.04	MAY 17	16.72	AUG 4	16.47
NOV 21	17.00	DEC 5	18.06	MAR 8	17.03	JUN 8	16.20	SEP 1	16.80

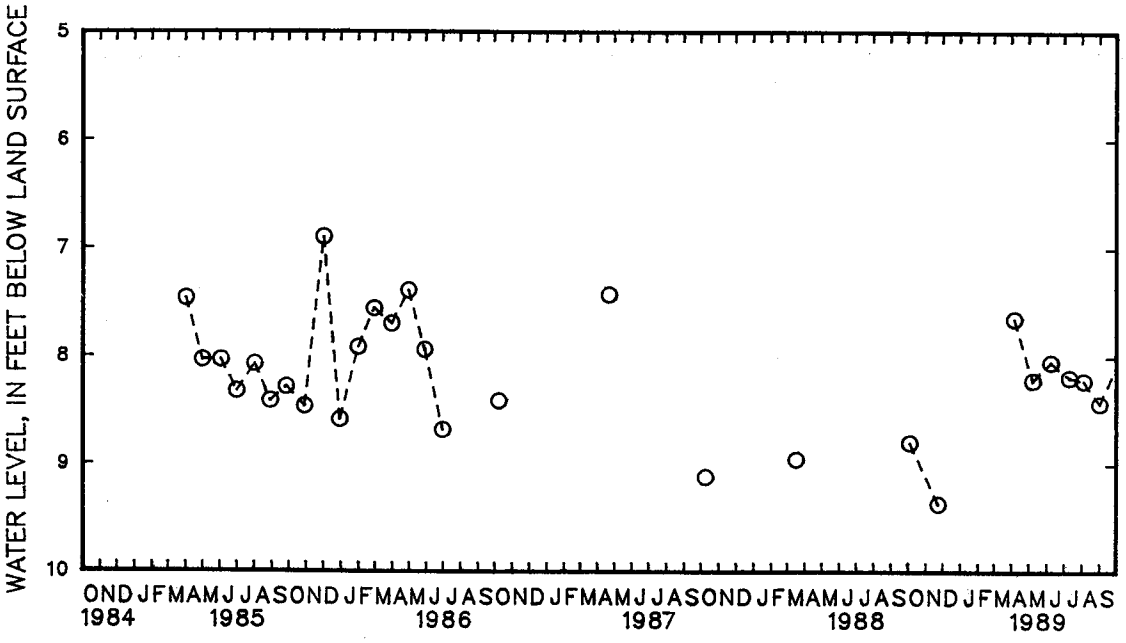


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--QA Db 37. SITE ID.--390023076174302. PERMIT NUMBER.--QA-81-0471.
LOCATION.--Lat 39°00'23", long 76°17'43", Hydrologic Unit 02060002, nr Cloverfield community park, Kent Island.
Owner: Maryland Geological Survey.
AQUIFER.--Aquia Formation of Paleocene age. Aquifer code: 125AQUI.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 250 ft; casing diameter 4 in., to 240 ft; screen diameter 4 in. from 240 to 250 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 7.1 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 2.5 ft above land-surface datum.
PERIOD OF RECORD.--April 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.90 ft below land-surface datum, Dec.2, 1985; lowest measured, 9.37 ft below land-surface datum, Nov. 23, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	8.80	APR 6	7.65	JUN 8	8.05	AUG 4	8.22
NOV 23	9.37	MAY 8	8.22	JUL 10	8.19	SEP 1	8.43

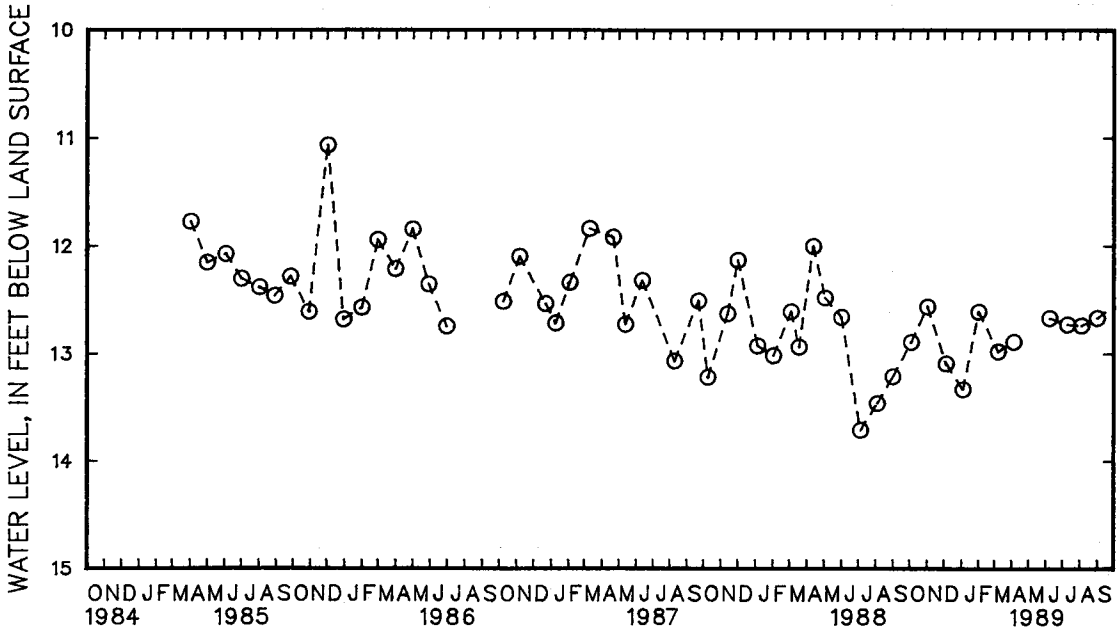


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--QA Ea 77. SITE ID.--385718076211501. PERMIT NUMBER.--QA-81-0474.
LOCATION.--Lat 38°57'18", long 76°21'15", Hydrologic Unit 02060002, at Matapeake State Park.
Owner: Maryland Geological Survey.
AQUIFER.--Aquia Formation of Paleocene age. Aquifer code: 125AQUI.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 205 ft; casing diameter 4 in., to 195 ft; screen diameter 4 in. from 195 to 205 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 10.8 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top of casing, 2.24 ft above land-surface datum.
PERIOD OF RECORD.--April 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.07 ft below land-surface datum, Dec. 2, 1985; lowest measured, 13.71 ft below land-surface datum, July 5, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	12.89	DEC 5	13.09	FEB 1	12.61	APR 5	12.89	JUL 10	12.73	SEP 1	12.67
NOV 2	12.56	JAN 4	13.33	MAR 8	12.98	JUN 8	12.67	AUG 4	12.74		

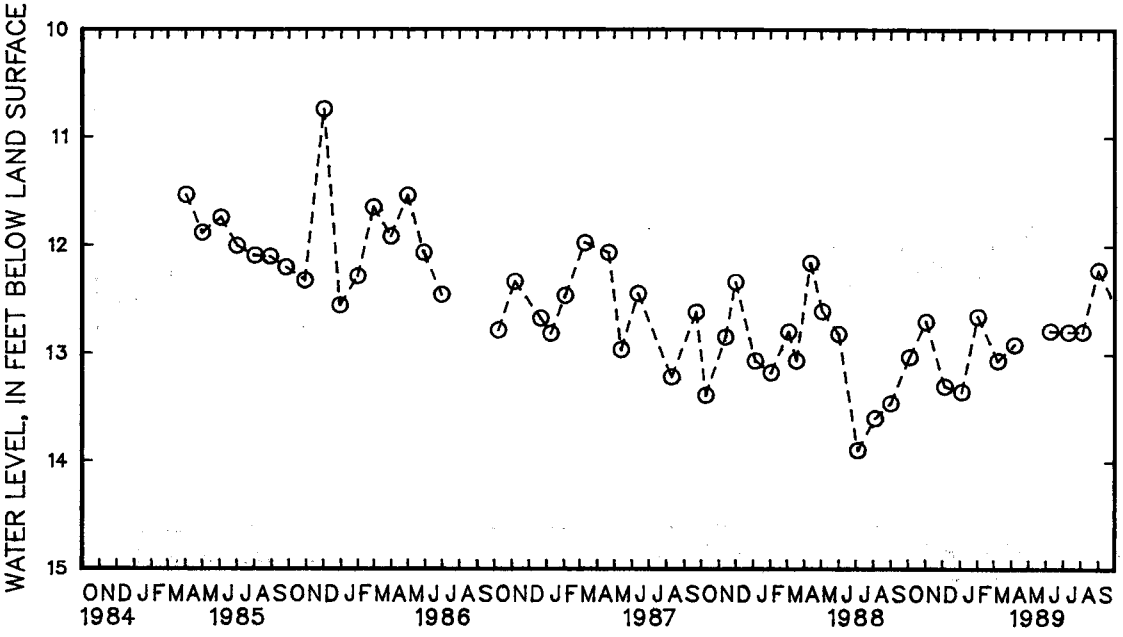


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--QA Ea 78. SITE ID.--385718076211502 . PERMIT NUMBER.--QA-81-0474.
LOCATION.--Lat 38°57'18", long 76°21'15", Hydrologic Unit 02060002, at Matapeake State Park.
Owner: Maryland Geological Survey.
AQUIFER.--Aquia Formation of Paleocene age. Aquifer code: 125AQUI.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 135 ft; casing diameter 4 in., to 125 ft; screen diameter 4 in. from 125 to 135 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 11.8 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top of casing, 1.98 ft above land-surface datum.
PERIOD OF RECORD.--April 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.74 ft below land-surface datum, Dec. 2, 1985; lowest measured, 13.90 ft below land-surface datum, July 5, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	13.03	DEC 5	13.30	FEB 1	12.65	APR 6	12.91	JUL 10	12.79	SEP 1	12.22
NOV 2	12.70	JAN 4	13.35	MAR 8	13.06	JUN 8	12.78	AUG 4	12.79		

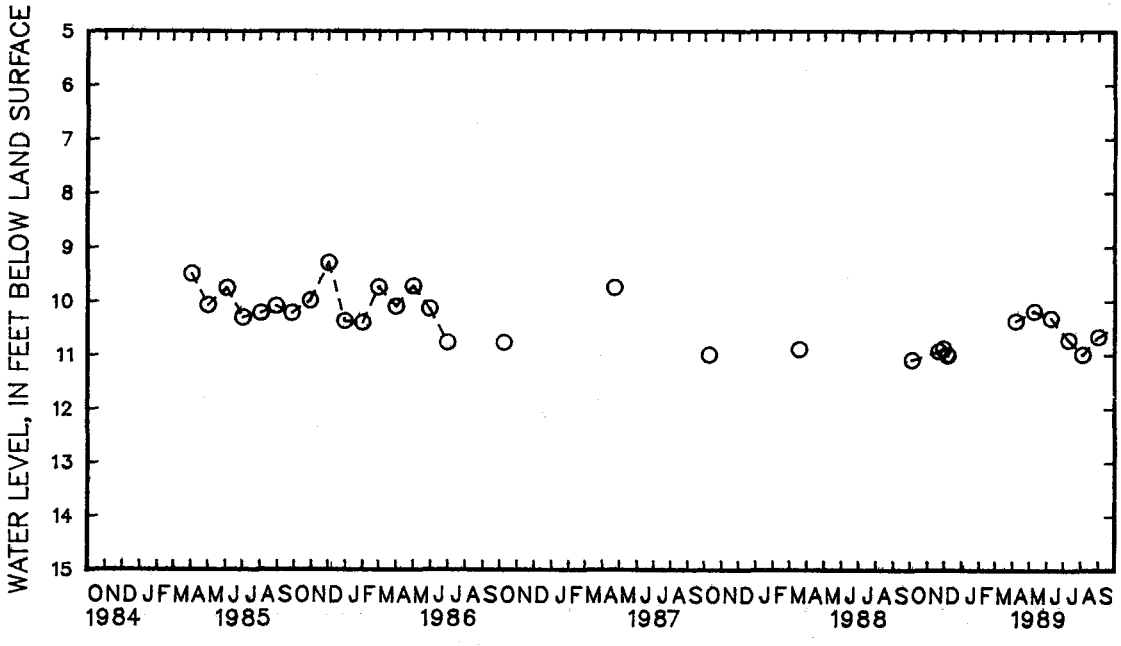


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--QA Ea 79. SITE ID.--385757076200101. PERMIT NUMBER.--QA-81-0469.
LOCATION.--Lat 38°57'57", long 76°20'01", Hydrologic Unit 02060002, at Mowbray Park, Kent Island.
Owner: Maryland Geological Survey.
AQUIFER.--Aquia Formation of Paleocene age. Aquifer code: 125AQUI.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 298 ft; casing diameter 4 in., to 288 ft; screen diameter 4 in. from 288 to 298 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 8.3 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 2.3 ft above land-surface datum.
REMARKS.--Measured twice yearly from October 1986 to April 1989.
PERIOD OF RECORD.--April 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.30 ft below land-surface datum, Dec. 2, 1985; lowest measured, 11.09 ft below land-surface datum, Oct. 4, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	11.09	NOV 29	10.88	APR 6	10.37	JUN 8	10.32	AUG 4	10.99
NOV 21	10.93	DEC 7	11.01	MAY 9	10.19	JUL 10	10.73	SEP 1	10.67

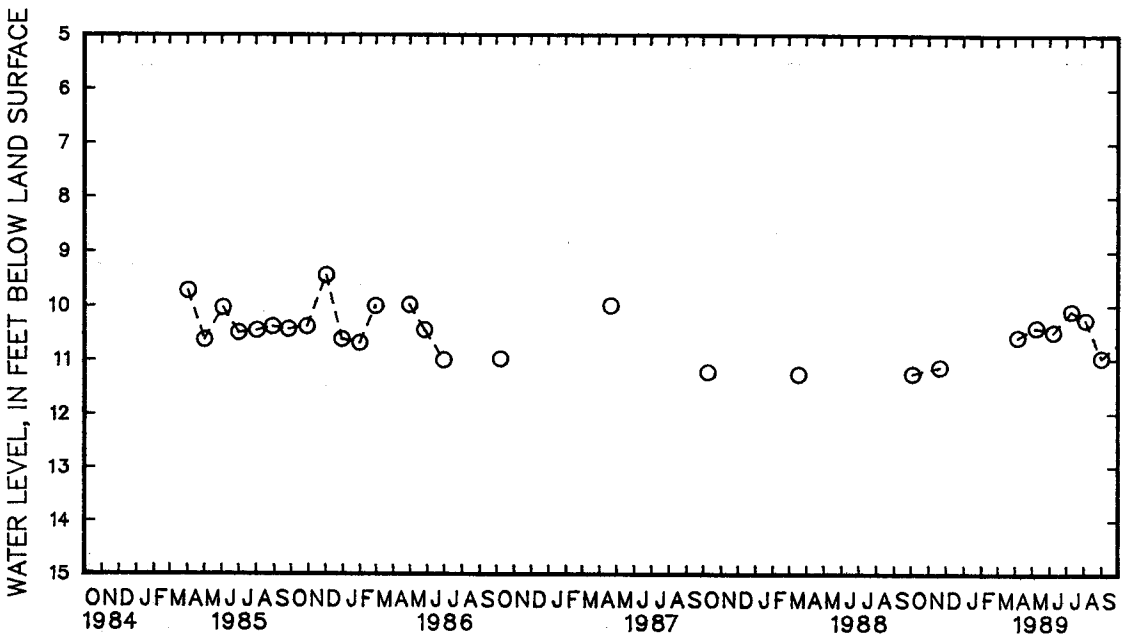


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--QA Ea 80. SITE ID.--385757076200102. PERMIT NUMBER.--QA-81-0469.
LOCATION.--Lat 38°57'57", long 76°20'01", Hydrologic Unit 02060002, at Mowbray Park, Kent Island.
Owner: Maryland Geological Survey.
AQUIFER.--Aquia Formation of Paleocene age. Aquifer code: 125AQUI.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 130 ft; casing diameter 4 in., to 120 ft; screen diameter 4 in. from 120 to 130 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 8.5 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 2.5 ft above land-surface datum.
REMARKS.--Measured twice yearly from October 1986 to April 1989.
PERIOD OF RECORD.--April 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.45 ft below land-surface datum, Dec. 2, 1985; lowest measured, 11.29 ft below land-surface datum, Mar. 18, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	11.28	APR 6	10.60	JUN 8	10.50	AUG 4	10.27
NOV 21	11.16	MAY 9	10.42	JUL 10	10.11	SEP 1	10.98

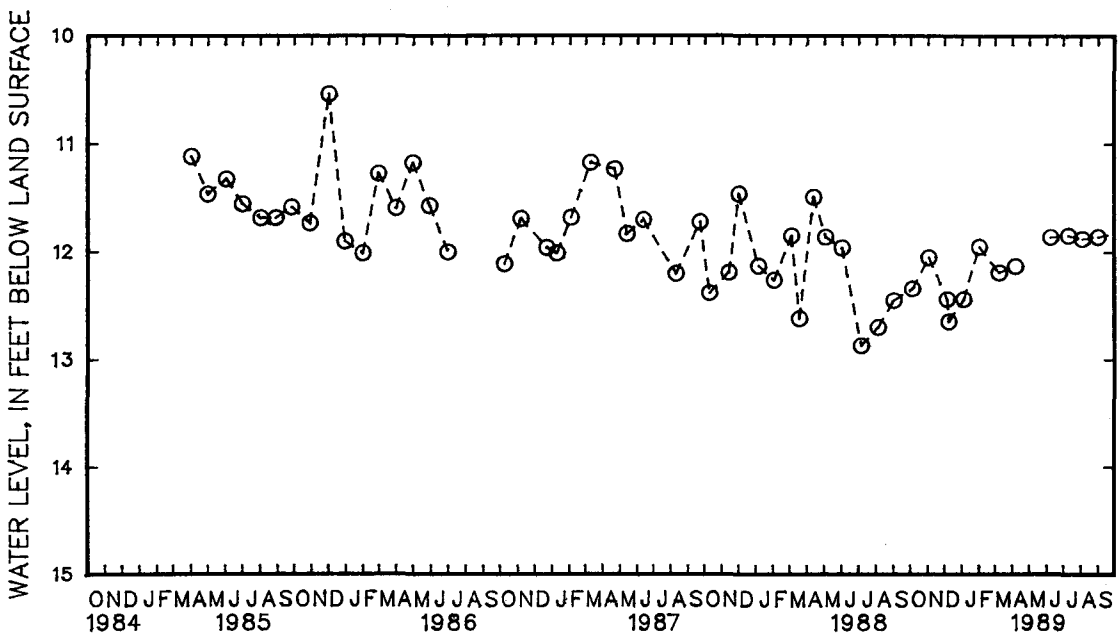


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--QA Ea 81. SITE ID.--385718076211503. PERMIT NUMBER.--QA-81-0474.
LOCATION.--Lat 38°57'18", long 76°21'15", Hydrologic Unit 02060002, at Matapeake State Park.
Owner: Maryland Geological Survey.
AQUIFER.--Aquia Formation of Paloecene age. Aquifer code: 125AQUI.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 310 ft; casing diameter 4 in., to 300 ft; screen diameter 4 in. from 300 to 310 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 12 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing, 2.63 ft above land-surface datum.
PERIOD OF RECORD.--April 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.54 ft below land-surface datum, Dec. 2, 1985; lowest measured, 12.88 ft below land-surface datum, July 5, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	12.35	DEC 5	12.45	JAN 4	12.45	MAR 8	12.20	JUN 8	11.86	AUG 4	11.88
NOV 2	12.06	DEC 8	12.66	FEB 1	11.96	APR 6	12.14	JUL 10	11.85	SEP 1	11.86



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--QA Eb 113. SITE ID.--385748076172001. PERMIT NUMBER.--QA-73-3172.
LOCATION.--Lat 38°57'48", long 76°17'20", Hydrologic Unit 02060002, nr Chester, Kent Island.
Owner: U.S. Geological Survey.
AQUIFER.--Aquia Formation of Paleocene age. Aquifer code: 125AQUI.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 216 ft; casing diameter 6 in., to 176 ft; screen diameter 6 in. from 176 to 216 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with graphic water-level recorder from June 30, 1986 to current year.
DATUM.--Elevation of land surface is 10 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of casing, 2.6 ft above land-surface datum.
PERIOD OF RECORD.--April 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.05 ft below land-surface datum, Apr. 18, 1989; lowest measured, 19.47 ft below land surface datum, Aug. 13 and 16, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	18.49	18.43	18.09	17.91	---	---	---	---	17.24	17.14	17.29	17.08
2	18.43	18.34	18.05	17.90	---	---	---	---	17.32	17.24	17.29	17.24
3	18.47	18.36	18.23	18.05	---	---	---	---	17.34	17.17	17.28	17.22
4	18.45	18.37	18.21	18.08	---	---	17.82	17.72	17.40	17.19	17.33	17.28
5	---	---	---	---	18.09	---	17.82	17.68	17.42	17.30	17.33	17.27
6	18.48	18.35	---	---	---	---	17.71	17.50	17.35	17.20	17.33	17.23
7	18.51	18.41	---	---	---	---	17.66	17.59	17.27	17.18	17.28	17.11
8	18.52	18.42	18.16	18.00	---	---	17.62	17.39	17.34	17.21	17.14	17.05
9	18.43	18.25	18.24	18.07	---	---	17.63	17.46	17.33	17.22	17.17	17.11
10	18.23	18.12	---	---	17.84	17.75	17.66	17.60	17.48	17.32	17.16	17.06
11	18.44	18.14	---	---	---	---	17.70	17.62	17.47	17.39	17.11	16.94
12	18.60	18.39	18.19	18.14	---	---	17.70	17.41	17.47	17.35	17.11	16.84
13	18.70	18.58	18.15	18.00	17.87	17.69	17.73	17.44	17.59	17.41	17.12	17.00
14	18.69	18.57	18.10	18.00	17.79	17.66	17.74	17.56	17.63	17.54	17.00	16.88
15	18.60	18.51	18.08	18.02	17.82	17.61	17.56	17.45	17.55	17.37	16.90	16.79
16	18.61	18.56	---	---	17.89	17.80	17.62	17.50	17.48	17.38	17.12	16.90
17	18.55	18.32	---	---	17.80	17.69	17.62	17.45	17.59	17.38	17.16	16.97
18	18.32	18.21	---	---	17.84	17.77	17.53	17.41	17.69	17.58	17.06	16.86
19	18.37	18.26	18.05	18.00	17.82	17.73	17.49	17.37	17.71	17.56	17.29	17.05
20	18.40	18.32	---	---	17.81	17.73	17.51	17.33	17.58	17.51	17.25	16.92
21	18.31	17.96	---	---	17.94	17.76	17.77	17.52	17.51	17.44	17.05	16.79
22	18.11	17.94	---	---	---	---	17.69	17.62	17.50	17.40	17.13	17.02
23	18.11	17.97	---	---	17.99	17.80	17.65	17.57	17.47	17.16	17.13	17.02
24	18.07	17.92	---	---	---	---	17.57	17.50	17.28	17.17	17.01	16.80
25	18.10	17.96	---	---	---	---	17.57	17.50	17.39	17.26	16.90	16.80
26	18.19	17.97	---	---	17.93	17.78	17.50	17.24	17.45	17.36	17.17	16.83
27	18.18	18.09	---	---	17.89	17.72	17.50	17.27	17.55	17.45	17.17	16.97
28	18.11	17.99	---	---	---	---	17.50	17.38	17.46	17.12	16.97	16.88
29	18.20	18.10	---	---	---	---	17.42	17.34	---	---	17.00	16.87
30	18.26	18.14	---	---	---	---	17.36	17.26	---	---	17.00	16.83
31	18.26	18.09	---	---	---	---	17.36	17.20	---	---	16.82	16.58
MONTH	---	---	---	---	---	---	---	---	17.71	17.12	17.33	16.58

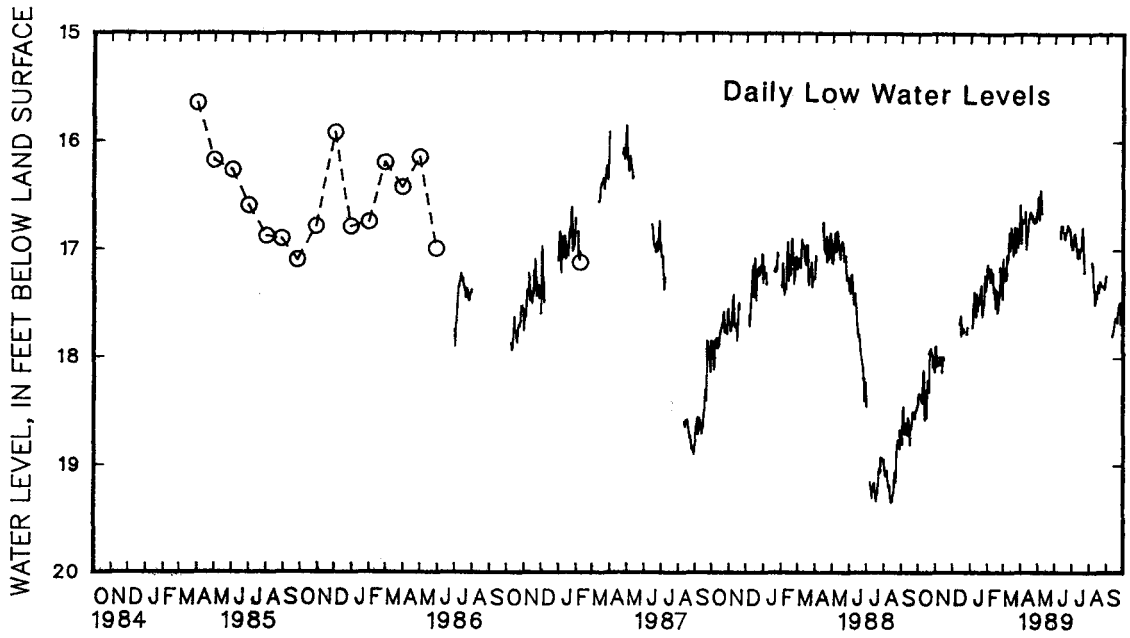
GROUND-WATER LEVELS

MARYLAND--Continued

QUEEN ANNES COUNTY--Continued

QA Eb 113--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	17.05	16.75	16.79	16.51	---	---	17.12	16.95	---	---	---	---
2	17.06	16.94	16.74	16.51	---	---	17.12	16.99	---	---	---	---
3	16.92	16.75	16.87	16.69	---	---	17.17	16.99	---	---	---	---
4	16.83	16.72	16.88	16.72	---	---	17.12	16.96	---	---	---	---
5	16.87	16.75	16.76	16.45	---	---	16.96	16.86	17.27	17.12	---	---
6	16.87	16.74	16.66	16.45	---	---	16.94	16.85	17.27	17.17	---	---
7	16.86	16.73	16.76	16.56	---	---	16.95	16.85	17.31	17.15	---	---
8	16.81	16.72	16.73	16.66	---	---	17.05	16.90	17.37	17.32	---	---
9	16.92	16.64	---	---	---	---	17.02	16.95	17.44	17.36	---	---
10	17.03	16.85	---	---	---	---	17.05	16.98	17.56	17.38	---	---
11	17.05	16.99	---	---	17.03	16.89	17.14	17.03	17.56	17.51	17.88	17.80
12	17.00	16.91	---	---	16.98	16.78	17.16	17.07	17.55	17.49	17.86	17.78
13	16.94	16.85	---	---	---	---	17.08	17.02	17.54	17.44	17.85	17.77
14	16.96	16.81	---	---	16.93	16.83	17.14	16.99	17.56	17.45	17.80	17.73
15	16.81	16.71	---	---	16.84	16.78	17.28	17.07	17.51	17.40	17.74	17.69
16	16.83	16.71	---	---	---	---	17.19	17.00	17.45	17.34	17.75	17.65
17	16.78	16.66	---	---	---	---	17.14	16.99	17.44	17.32	17.72	17.63
18	16.76	16.65	---	---	17.03	16.84	17.10	17.00	17.48	17.39	17.78	17.66
19	16.81	16.66	---	---	17.00	16.90	17.07	16.90	17.46	17.36	17.78	17.66
20	16.79	16.70	---	---	16.97	16.86	16.95	16.79	17.43	17.29	17.92	17.67
21	16.77	16.68	---	---	16.94	16.85	17.08	16.87	17.36	17.30	17.77	17.58
22	16.85	16.69	---	---	16.91	16.83	17.16	16.97	17.37	17.32	17.67	17.53
23	16.83	16.74	---	---	16.89	16.82	17.25	17.09	17.41	17.33	17.78	17.50
24	16.89	16.74	---	---	16.90	16.77	17.30	17.21	17.38	17.33	17.76	17.52
25	16.79	16.75	---	---	16.89	16.81	---	---	17.40	17.34	17.73	17.49
26	16.80	16.71	---	---	16.85	16.79	---	---	17.41	17.34	17.79	17.68
27	16.78	16.72	---	---	16.86	16.80	---	---	17.41	17.33	17.72	17.55
28	16.79	16.74	---	---	16.89	16.80	---	---	17.49	17.36	17.54	17.49
29	16.79	16.65	---	---	17.07	16.85	---	---	17.45	17.33	17.54	17.46
30	16.84	16.69	---	---	17.07	16.95	---	---	17.36	17.29	17.46	17.06
31	---	---	---	---	---	---	---	---	17.46	17.24	---	---
MONTH	17.06	16.64	---	---	---	---	---	---	---	---	---	---

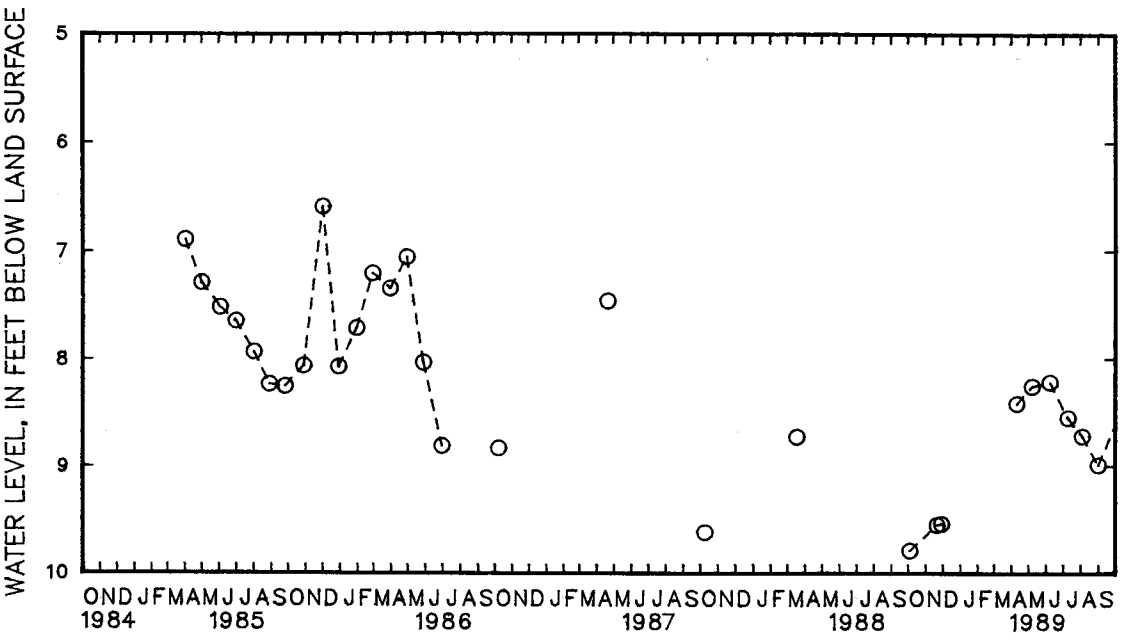


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--QA Eb 155. SITE ID.--385843076155302. PERMIT NUMBER.--QA-81-0470.
LOCATION.--Lat 38°58'43", long 76°15'53", Hydrologic Unit 02060002, at north end of Piney Creek Rd., Kent Island.
Owner: Maryland Geological Survey.
AQUIFER.--Aquia Formation of Paleocene age. Aquifer code: 125AQUI.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 245 ft; casing diameter 4 in., to 235 ft; screen diameter 4 in. from 235 to 245 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 3.9 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 2.5 ft above land-surface datum.
REMARKS.--Measured twice yearly from June 1986 to April 1989.
PERIOD OF RECORD.--April 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.60 ft below land-surface datum, Dec. 2, 1985; lowest measured, 9.79 ft below land-surface datum, Oct. 4, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	9.79	NOV 29	9.54	MAY 8	8.26	JUL 10	8.55	SEP 1	8.99
NOV 21	9.55	APR 11	8.42	JUN 8	8.22	AUG 4	8.72		

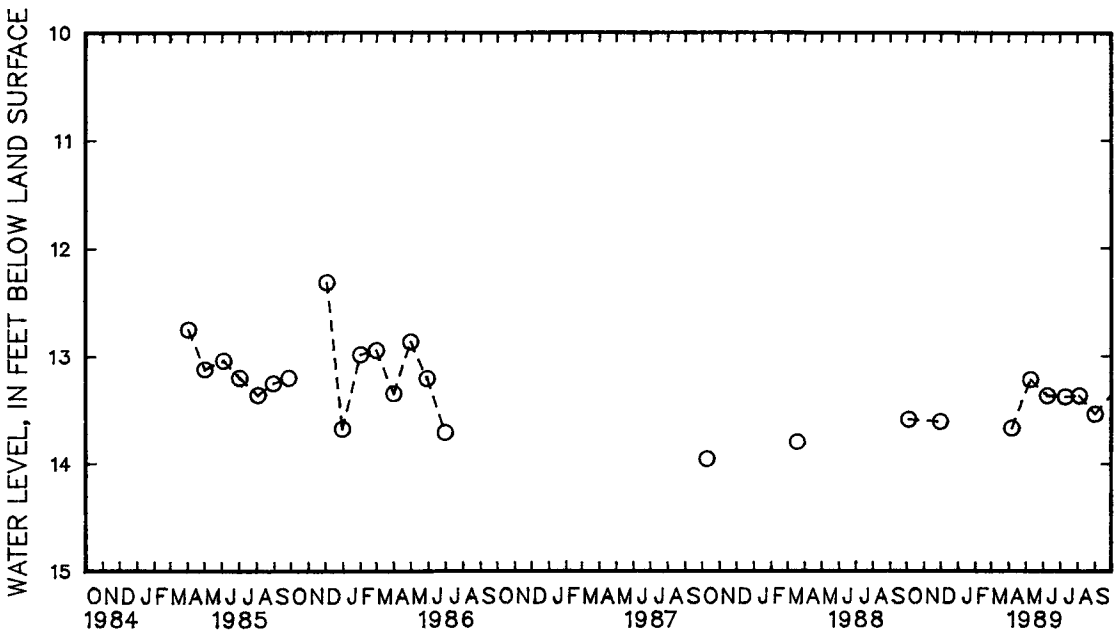


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--QA Eb 156. SITE ID.--385852076195201. PERMIT NUMBER.--QA-81-0475.
LOCATION.--Lat 38°58'52", long 76°19'52", Hydrologic Unit 02060002, north of US Rt. 50, 0.7 mi west of intersection MD Rt. 8, Kent Island.
Owner: Maryland Geological Survey.
AQUIFER.--Aquia Formation of Paleocene age. Aquifer code: 125AQUI.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 220 ft; casing diameter 4 in., to 210 ft; screen diameter 4 in. from 210 to 220 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 7.5 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 2.3 ft above land-surface datum.
REMARKS.--Measured twice yearly from September 1987 to April 1989.
PERIOD OF RECORD.--April 1985 to June 1986, September 1987 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.32 ft below land-surface datum, Dec. 2, 1985; lowest measured, 13.96 ft below land-surface datum, Oct. 9, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	13.59	APR 6	13.67	JUN 8	13.37	AUG 4	13.37
NOV 30	13.61	MAY 9	13.22	JUL 10	13.38	SEP 1	13.54



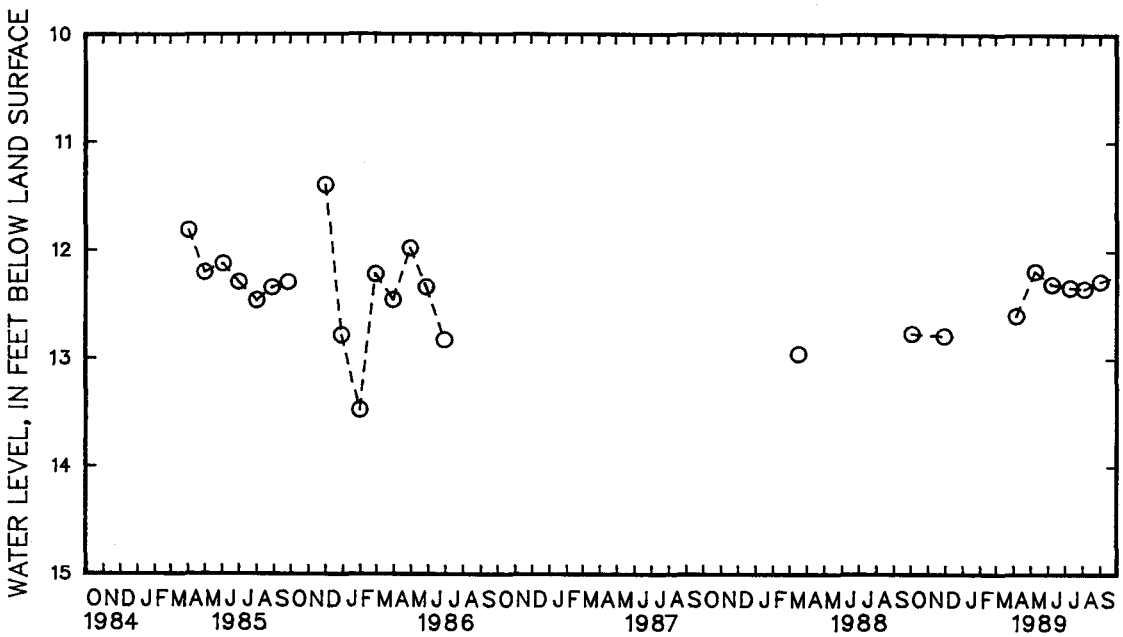
5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

QUEEN ANNES COUNTY--Continued

WELL NUMBER.--QA Eb 157. SITE ID.--385852076195202. PERMIT NUMBER.--QA-81-0475.
LOCATION.--Lat 38°58'52", long 76°19'52", Hydrologic Unit 02060002, north of US Rt. 50, 0.7 mi west of intersection with MD Rt. 8, Kent Island.
Owner: Maryland Geological Survey.
AQUIFER.--Aquia Formation of Paleocene age. Aquifer code: 125AQUI.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 120 ft; casing diameter 4 in., to 110 ft; screen diameter 4 in. from 110 to 120 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 12 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of casing, 2.5 ft above land-surface datum.
REMARKS.--Measured twice yearly from March 1988 to April 1989
PERIOD OF RECORD.--April 1985 to June 1986, March 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.40 ft below land-surface datum, Dec. 2, 1985; lowest measured, 13.48 ft below land-surface datum, Jan. 31, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	12.77	APR 6	12.60	JUN 8	12.31	AUG 4	12.35
NOV 30	12.79	MAY 9	12.19	JUL 10	12.34	SEP 1	12.28

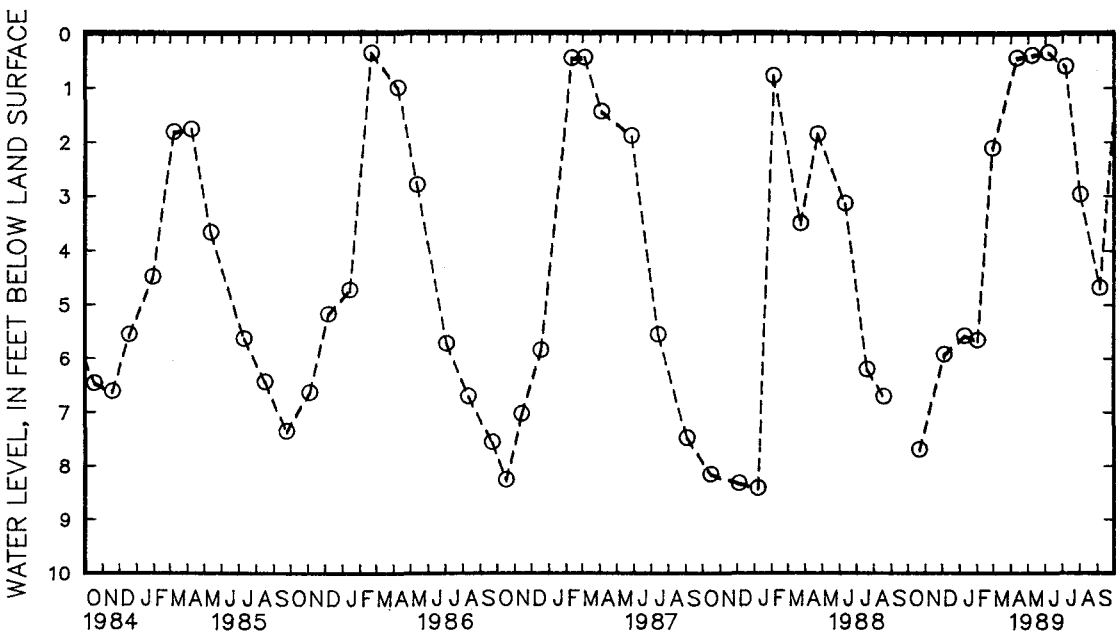


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--QA Ec 1. SITE ID.--385756076105301.
LOCATION.--Lat 38°57'56", long 76°10'53", Hydrologic Unit 02060002, near Grasonville, south side of old U.S. Rt. 50.
Owner: Maryland State Highway Administration.
AQUIFER.--Kent Island Formation of Pleistocene age. Aquifer code: 112KILD.
WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 21 ft; casing diameter 1.25 in., to 21 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 20 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of 2 in. sleeve at land-surface datum.
PERIOD OF RECORD.--September 1949 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, .04 ft below land-surface datum, May 8, 1958; lowest measured, 8.46 ft below land-surface datum, Jan. 7, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	7.74	JAN 10	5.62	FEB 28	2.13	MAY 9	.42	JUL 7	.63	SEP 6	4.72
DEC 5	5.97	FEB 2	5.70	APR 12	.47	JUN 7	.37	AUG 2	3.00		

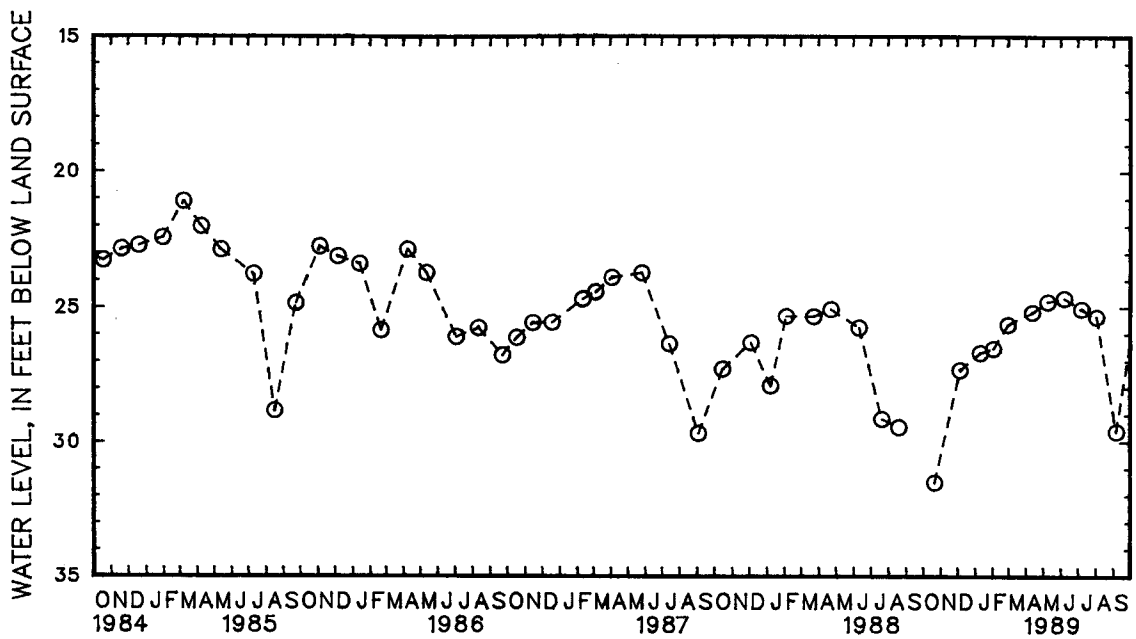


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--QA Fc 7. SITE ID.--385429076120201. PERMIT NUMBER.--QA-73-2191.
LOCATION.--Lat 38°54'29", long 76°12'02", Hydrologic Unit 02060002, at Prospect Plantation.
Owner: Maryland Community Developers Incorporated.
AQUIFER.--Aquia Formation of Paleocene age. Aquifer code: 125AQUI.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 356 ft; casing diameter 4 in., to 336 ft; screen diameter 2 in. from 336 to 356 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 10 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing at land-surface datum.
PERIOD OF RECORD.--September 1980 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 19.77 ft below land-surface datum, Mar. 3, 1983; lowest measured, 31.53 ft below land-surface datum, Oct. 21, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	31.53	JAN 10	26.70	FEB 28	25.65	MAY 9	24.79	JUL 7	25.06	SEP 6	29.62
DEC 5	27.34	FEB 2	26.54	APR 12	25.19	JUN 7	24.66	AUG 2	25.35		



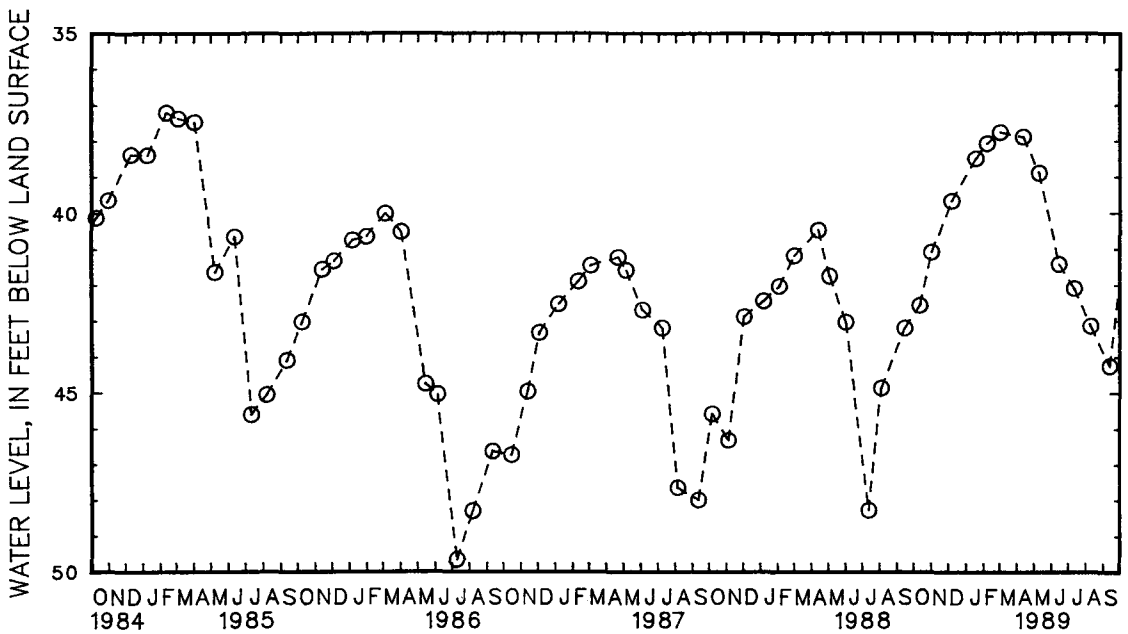
5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

ST. MARYS COUNTY

WELL NUMBER.--SM Df 66. SITE ID.--381841076284401. PERMIT NUMBER.--SM-73-1990.
LOCATION.--Lat 38°18'41", long 76°28'44", Hydrologic Unit 02060006, 0.8 mi south of Town Point.
Owner: U.S. Geological Survey.
AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 258 ft; casing diameter 6 in., to 84 ft; casing diameter 2 in. from 84 to 248 ft; screen diameter 2 in. from 248 to 258 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 15 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing, 3.55 ft above land-surface datum.
PERIOD OF RECORD.--July 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 30.79 ft below land-surface datum, Apr. 5, 1979; lowest measured, 49.66 ft below land-surface datum, July 9, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	42.55	DEC 6	39.65	FEB 6	38.06	APR 11	37.88	JUN 14	41.43	AUG 9	43.15
NOV 1	41.07	JAN 17	38.48	MAR 1	37.75	MAY 9	38.89	JUL 11	42.10	SEP 12	44.26

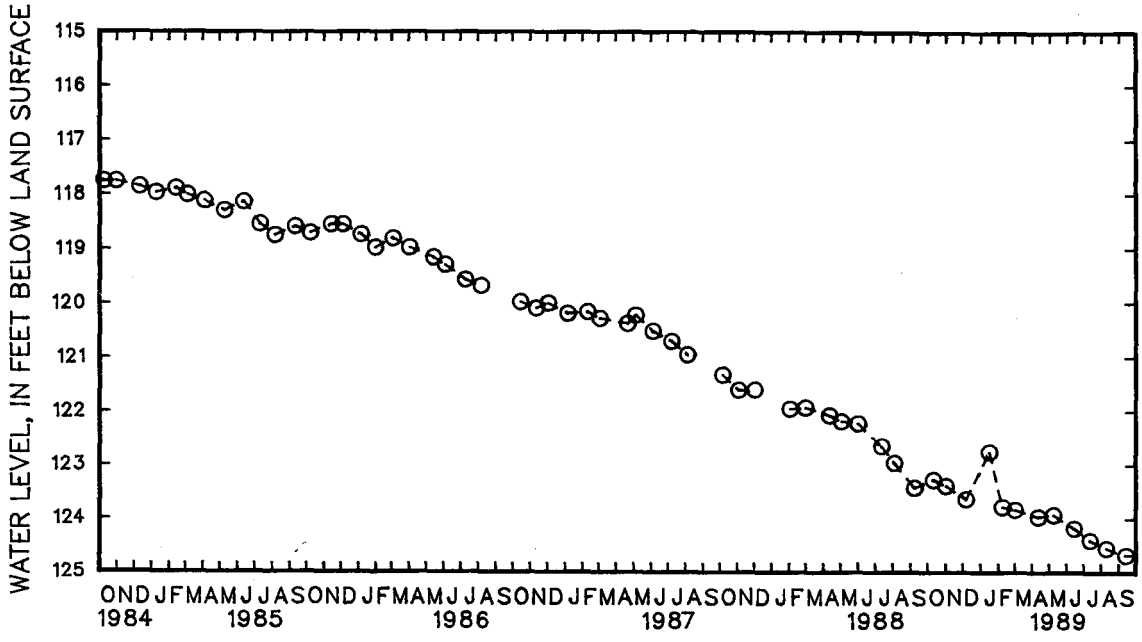


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--SM Df 84. SITE ID.--381548076272102. PERMIT NUMBER.--SM-81-0119.
LOCATION.--Lat 38°15'48", long 76°27'21", Hydrologic Unit 0206001, at Lexington Park.
Owner: Maryland Geological Survey.
AQUIFER.--Brightseat Formation of Paleocene age. Aquifer code: 125BRGS.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 920 ft; casing diameter 6 in., to 246 ft; casing diameter 4 in. from 246 ft to 831 ft, 856 to 862 ft, and 867 to 897; screen diameter 4 in. from 831 to 856 ft, 862 to 867 ft, and 897 to 912 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 105 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing 3.0 ft above land-surface datum.
PERIOD OF RECORD.--June 1984 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 117.27 ft below land-surface datum, June 11, 1984; lowest measured, 124.68 ft below land-surface datum, Sept. 13, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	123.29	DEC 6	123.65	FEB 7	123.79	APR 12	123.97	JUN 14	124.18	AUG 10	124.55
NOV 1	123.40	JAN 17	122.77	MAR 1	123.84	MAY 9	123.93	JUL 12	124.40	SEP 13	124.68

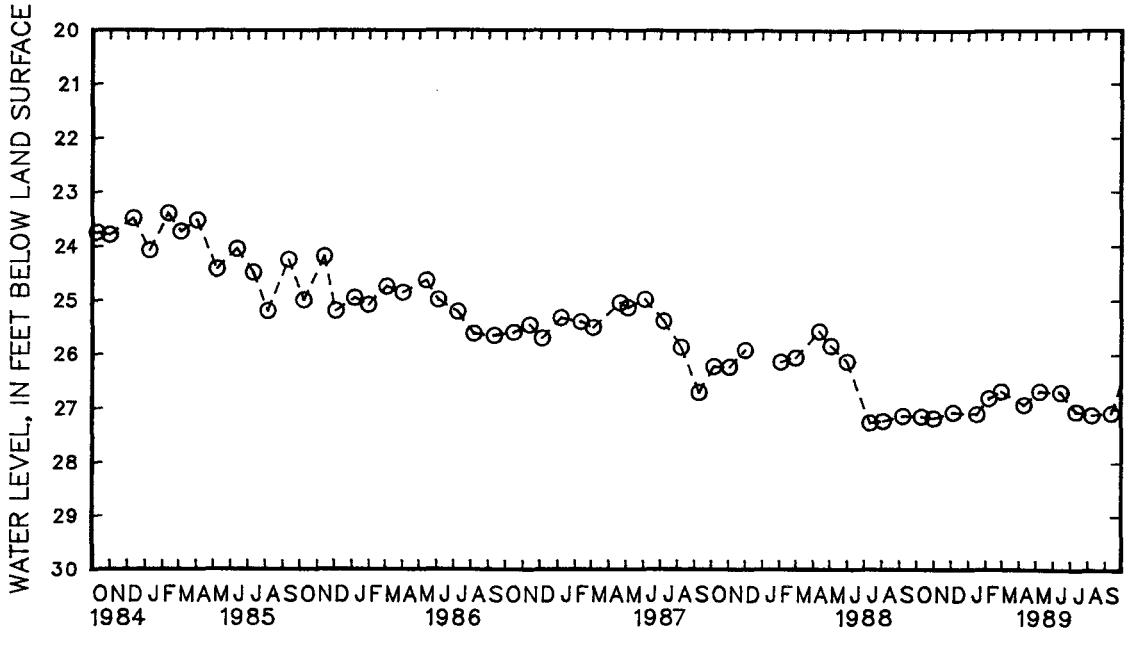


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--SM Eg 27. SITE ID.--381213076222801. PERMIT NUMBER.--SM-73-1993.
LOCATION.--Lat 38°12'13", long 76°22'28", Hydrologic Unit 02060001, 1.6 miles east of St. James at the St. Marys Co. Environmental Studies Area.
Owner: U.S. Geological Survey.
AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 320 ft; casing diameter 6 in., to 70 ft; casing diameter 2 in. from 70 to 310 ft; screen diameter 2 in. from 310 to 320 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 10 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.3 ft above land-surface datum.
PERIOD OF RECORD.--August 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 19.84 ft below land-surface datum, May 12, 1978; lowest measured, 27.27 ft below land-surface datum, July 12, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	27.15	DEC 6	27.07	FEB 7	26.80	APR 11	26.92	JUN 15	26.69	AUG 9	27.11
NOV 1	27.18	JAN 17	27.10	MAR 1	26.67	MAY 9	26.67	JUL 12	27.05	SEP 13	27.08

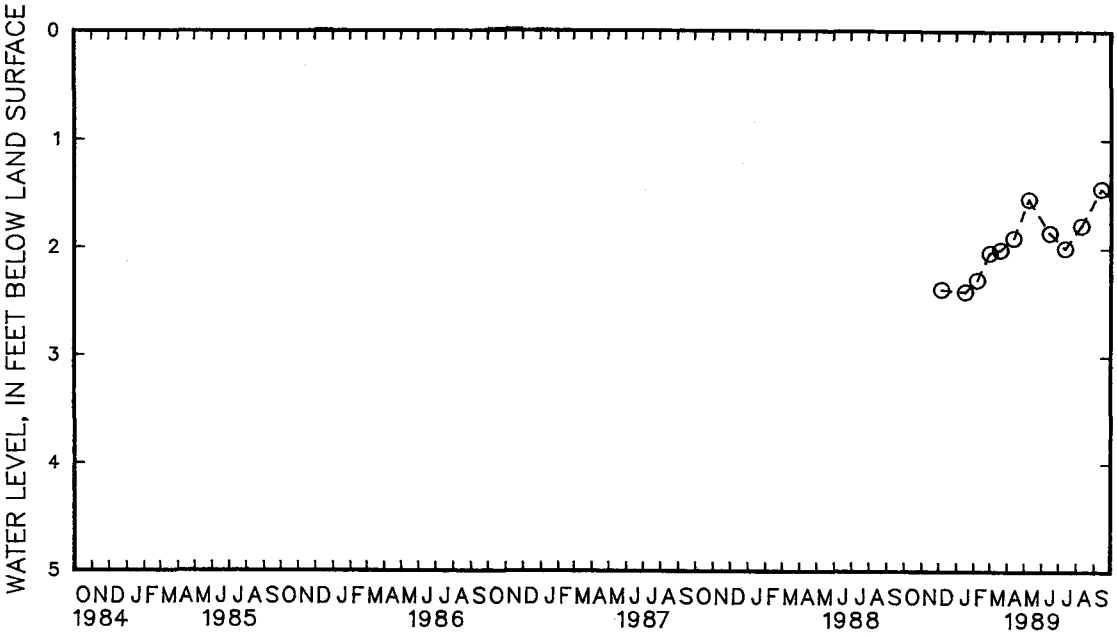


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--SM Gh 11. SITE ID.--380347076200101.
LOCATION.--Lat 38 °03'47", long 76°20'01", Hydrologic Unit 02006001,
Owner: Maryland Forest, Park and Wildlife Service.
AQUIFER.--Talbot Formation of Pleistocene age. Aquifer code: 112TLBT.
WELL CHARACTERISTICS.--Drilled, domestic, water-table well, measured depth 22.4;
casing diameter, 2.0 in., screen length unknown.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 10 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of casing, 1.3 ft above land-surface datum.
PERIOD OF RECORD.--December 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.45 ft below land-surface datum, Sept. 13, 1989;
lowest measured, 2.41 ft below land-surface datum, Jan. 9, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 6	2.39	FEB 7	2.30	MAR 20	2.02	MAY 9	1.55	JUL 12	2.00	SEP 13	1.45
JAN 17	2.41	MAR 1	2.05	APR 12	1.91	JUN 15	1.86	AUG 9	1.79		



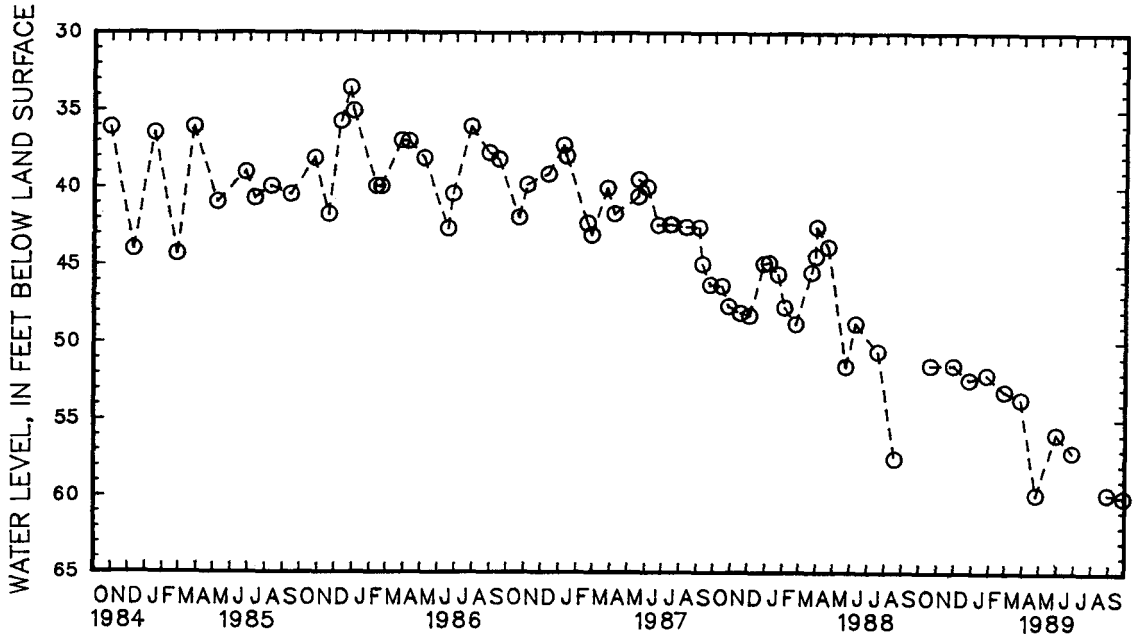
5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

SOMERSET COUNTY

WELL NUMBER.--SO Be 42. SITE ID.--381156075412501.
LOCATION.--Lat 38°11'56", long 75°41'25", Hydrologic Unit 02060009, 0.1 mi northeast of US Rt. 13 and Hampden Ave., Princess Anne.
Owner: E. Mace Smith.
AQUIFER.--Manokin aquifer of Miocene age. Aquifer code: 122MNKN.
WELL CHARACTERISTICS.--Drilled, unused, artesian well, measured depth 184 ft; casing diameter 2 in., to unknown depth.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 17 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing, 2.5 ft above land-surface datum.
PERIOD OF RECORD.--August 1952 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.15 ft below land-surface datum, May 1, 1953; lowest measured 60.07 ft below land-surface datum, Sept. 27, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	51.50	DEC 27	52.40	FEB 27	53.18	APR 25	59.87	JUN 27	57.12	SEP 27	60.07
NOV 29	51.50	JAN 27	52.09	MAR 28	53.70	MAY 30	55.94	AUG 29	59.84		



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--SO Ce 42. SITE ID.--380927075423701. PERMIT NUMBER.--SO-81-0394.
LOCATION.--Lat 38°09'30", long 75°41'56", Hydrologic Unit 02060009, at Eastern Shore Correctional Institution.
Owner: Maryland Department of Correction.
AQUIFER.--Manokin aquifer of Miocene age. Aquifer code: 122MNKN.
WELL CHARACTERISTICS.-Drilled, observation, artesian well, depth 215 ft; casing diameter 4 in., to 185 ft; screen diameter 4 in. from 185 to 215 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--60-minute recording interval, from Jan. 2, 1986 to current year.
DATUM.--Elevation of land surface is 10 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring Point: Top of recorder shelf, 1.6 ft above land-surface datum.
REMARKS.--Water levels affected by nearby pumping.
PERIOD OF RECORD.--January 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 20.97 ft below land-surface datum, Feb. 21, 1986; lowest measured, 44.31 ft below land-surface datum, Oct. 14, 1988 .

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	44.10	43.98	43.11	42.88	42.15	41.98	40.88	40.78	41.30	41.21	41.45	41.31
2	44.04	43.84	43.03	42.90	41.98	41.77	40.79	40.66	41.35	41.26	41.50	41.46
3	43.89	43.82	43.18	43.04	41.77	41.58	40.70	40.55	41.39	41.23	41.54	41.47
4	43.82	43.72	43.18	43.14	41.60	41.51	40.67	40.54	41.49	41.38	41.61	41.51
5	43.87	43.71	43.16	43.05	41.50	41.36	40.66	40.55	41.47	41.37	41.67	41.53
6	44.02	43.81	43.30	43.02	41.37	41.22	40.61	40.43	41.45	41.31	41.73	41.59
7	44.07	43.99	43.50	43.22	41.23	41.15	40.66	40.51	41.43	41.33	41.80	41.64
8	44.07	44.00	43.52	43.41	41.21	41.14	40.56	40.29	41.42	41.30	41.80	41.68
9	44.05	43.89	43.47	43.38	41.14	40.97	40.46	40.32	41.46	41.32	41.79	41.63
10	44.02	43.87	43.40	43.18	40.94	40.71	40.39	40.28	41.46	41.40	41.76	41.58
11	44.16	43.89	43.34	43.21	40.72	40.60	40.33	40.27	41.42	41.32	41.75	41.56
12	44.27	44.14	43.37	43.28	40.62	40.39	40.31	40.14	41.38	41.28	41.65	41.46
13	44.31	44.23	43.31	43.10	40.37	40.13	40.46	40.18	41.40	41.30	41.61	41.39
14	44.31	44.23	43.23	43.14	40.31	40.18	40.57	40.47	41.30	41.22	41.39	41.18
15	44.28	44.19	43.25	43.18	40.22	40.09	40.61	40.49	41.26	41.10	41.20	41.05
16	44.24	44.14	43.23	43.12	40.24	40.15	40.69	40.59	41.14	41.10	41.12	41.06
17	44.16	44.02	43.19	42.99	40.15	40.04	40.71	40.62	41.17	41.12	41.11	41.02
18	44.09	44.00	43.28	43.19	40.10	39.97	40.83	40.69	41.18	41.13	41.05	40.95
19	44.16	44.06	43.27	43.11	40.02	39.91	41.00	40.80	41.23	41.12	41.16	41.03
20	44.16	44.01	43.11	42.73	40.09	39.95	41.12	40.92	41.29	41.17	41.12	40.94
21	44.05	43.68	42.82	42.70	40.25	40.07	41.32	41.12	41.25	41.09	40.95	40.82
22	43.72	43.58	42.80	42.71	40.34	40.24	41.31	41.24	41.41	41.16	40.98	40.89
23	43.69	43.55	42.70	42.53	40.30	40.16	41.26	41.17	41.54	41.38	40.92	40.82
24	43.57	43.38	42.54	42.42	40.27	40.13	41.22	41.13	41.57	41.48	40.79	40.43
25	43.48	43.30	42.52	42.32	40.39	40.20	41.31	41.16	41.57	41.46	40.53	40.42
26	43.40	43.23	42.42	42.29	40.68	40.39	41.31	41.14	41.51	41.33	40.49	40.36
27	43.36	43.20	42.39	42.19	40.75	40.64	41.32	41.14	41.49	41.41	40.49	40.36
28	43.28	43.08	42.27	42.13	40.88	40.64	41.36	41.31	41.46	41.14	40.36	40.26
29	43.29	43.22	42.29	42.23	41.03	40.90	41.36	41.28	---	---	40.33	40.25
30	43.28	43.19	42.28	42.13	41.02	40.91	41.34	41.27	---	---	40.34	40.21
31	43.23	43.08	---	---	40.91	40.82	41.37	41.27	---	---	40.23	40.14
MONTH	44.31	43.08	43.52	42.13	42.15	39.91	41.37	40.14	41.57	41.09	41.80	40.14

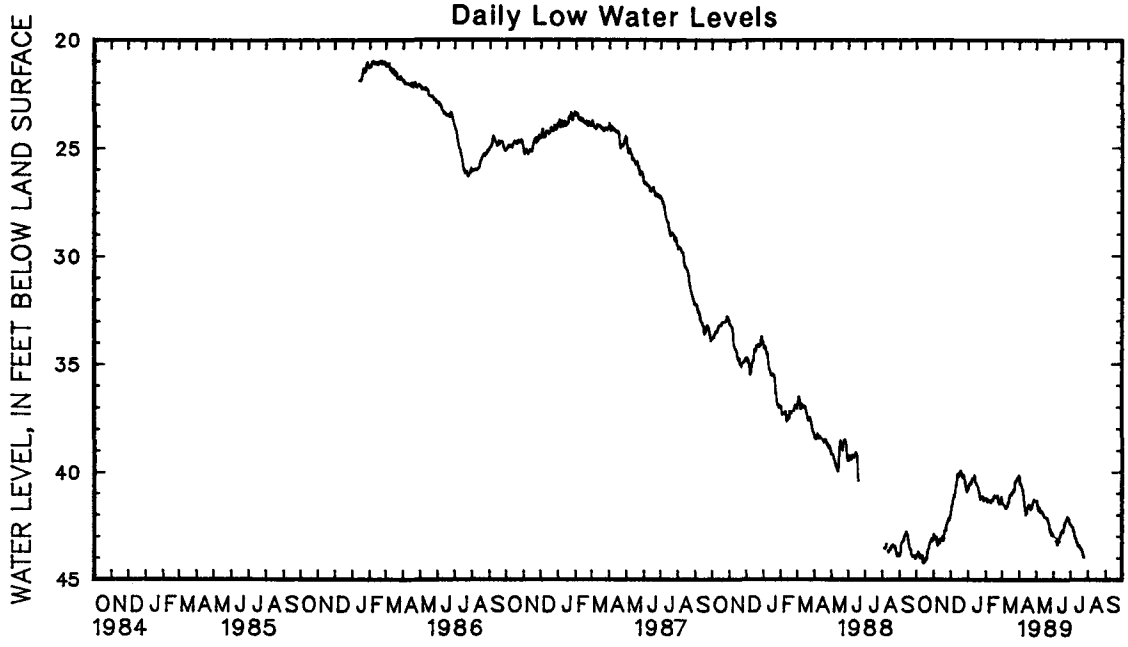
GROUND-WATER LEVELS

MARYLAND--Continued

SOMERSET COUNTY--Continued

SO Ce 42--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	40.53	40.19	41.49	41.34	43.11	42.96	42.59	42.43	---	---	---	---
2	40.66	40.53	41.54	41.31	43.22	43.00	42.62	42.45	---	---	---	---
3	40.65	40.50	41.74	41.48	43.28	43.09	42.66	42.46	---	---	---	---
4	40.73	40.58	41.88	41.68	43.30	43.10	42.69	42.53	---	---	---	---
5	40.82	40.63	41.90	41.78	43.31	43.18	42.76	42.53	---	---	---	---
6	40.95	40.76	41.84	41.63	43.33	43.08	42.83	42.66	---	---	---	---
7	41.09	40.85	41.91	41.71	43.46	43.24	42.89	42.75	---	---	---	---
8	41.40	41.03	41.95	41.80	43.49	43.37	43.01	42.86	---	---	---	---
9	41.63	41.29	41.98	41.87	43.45	43.22	43.08	42.97	---	---	---	---
10	41.80	41.57	41.96	41.79	43.32	43.23	43.12	43.04	---	---	---	---
11	41.98	41.81	41.92	41.80	43.28	43.20	43.23	43.09	---	---	---	---
12	42.05	41.97	41.95	41.83	43.22	43.01	43.40	43.24	---	---	---	---
13	42.02	41.93	42.02	41.91	43.04	42.92	43.45	43.23	---	---	---	---
14	41.98	41.91	42.22	41.99	42.99	42.79	43.52	43.35	---	---	---	---
15	41.91	41.64	42.20	42.08	42.86	42.76	43.64	43.43	---	---	---	---
16	41.71	41.60	42.14	42.06	42.89	42.70	43.65	43.41	---	---	---	---
17	41.66	41.53	42.22	42.08	42.90	42.76	43.62	43.37	---	---	---	---
18	41.66	41.51	42.25	42.08	42.91	42.79	43.67	43.48	---	---	---	---
19	41.74	41.56	42.27	42.12	42.83	42.70	43.71	43.53	---	---	---	---
20	41.82	41.63	42.28	42.15	42.68	42.52	43.70	43.53	---	---	---	---
21	41.85	41.73	42.37	42.14	42.54	42.39	43.79	43.59	---	---	---	---
22	41.84	41.71	42.48	42.29	42.46	42.32	43.86	43.68	---	---	---	---
23	41.80	41.63	42.55	42.38	42.41	42.28	43.96	43.81	---	---	---	---
24	41.66	41.50	42.71	42.43	42.34	42.19	44.01	43.89	---	---	---	---
25	41.53	41.40	42.78	42.65	42.28	42.13	44.05	43.94	---	---	---	---
26	41.42	41.31	42.80	42.62	42.23	42.08	---	---	---	---	---	---
27	41.36	41.27	42.89	42.76	42.24	42.10	---	---	---	---	---	---
28	41.36	41.30	43.00	42.90	42.35	42.12	---	---	---	---	---	---
29	41.42	41.31	43.00	42.89	42.47	42.25	---	---	---	---	---	---
30	41.49	41.33	42.97	42.83	42.55	42.37	---	---	---	---	---	---
31	---	---	43.04	42.87	---	---	---	---	---	---	---	---
MONTH	42.05	40.19	43.04	41.31	43.49	42.08	---	---	---	---	---	---



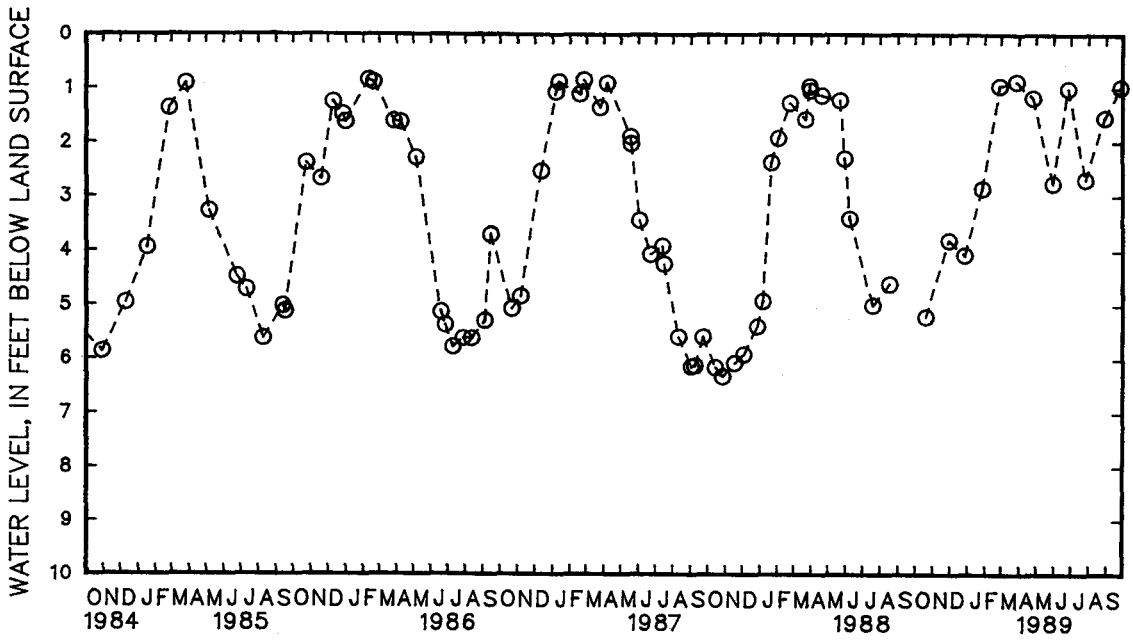
5 YEAR HYDROGRAPH

OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--SO Cf 2. SITE ID.--380616075380701.
LOCATION.--Lat 38°06'16", long 75°38'07", Hydrologic Unit 02060009, on U.S. Rt. 13, 4.5 mi west of intersection of U.S. Rt. 13 and MD Rt. 364, near Costen.
Owner: Maryland State Highway Administration.
AQUIFER.--Kent Island Formation of Pleistocene age. Aquifer code: 112KILD.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 15 ft; casing diameter 1.25 in., to unknown depth.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 20 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of casing, 1.0 ft above land-surface datum.
PERIOD OF RECORD.--August 1949 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, .28 ft below land-surface datum, May 9, 1958; lowest measured, 6.34 ft below land-surface datum, Oct. 27, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	5.23	DEC 27	4.08	FEB 27	.95	APR 25	1.17	JUN 27	1.00	AUG 29	1.54
NOV 29	3.81	JAN 27	2.85	MAR 28	.87	MAY 30	2.76	JUL 26	2.68	SEP 27	.97



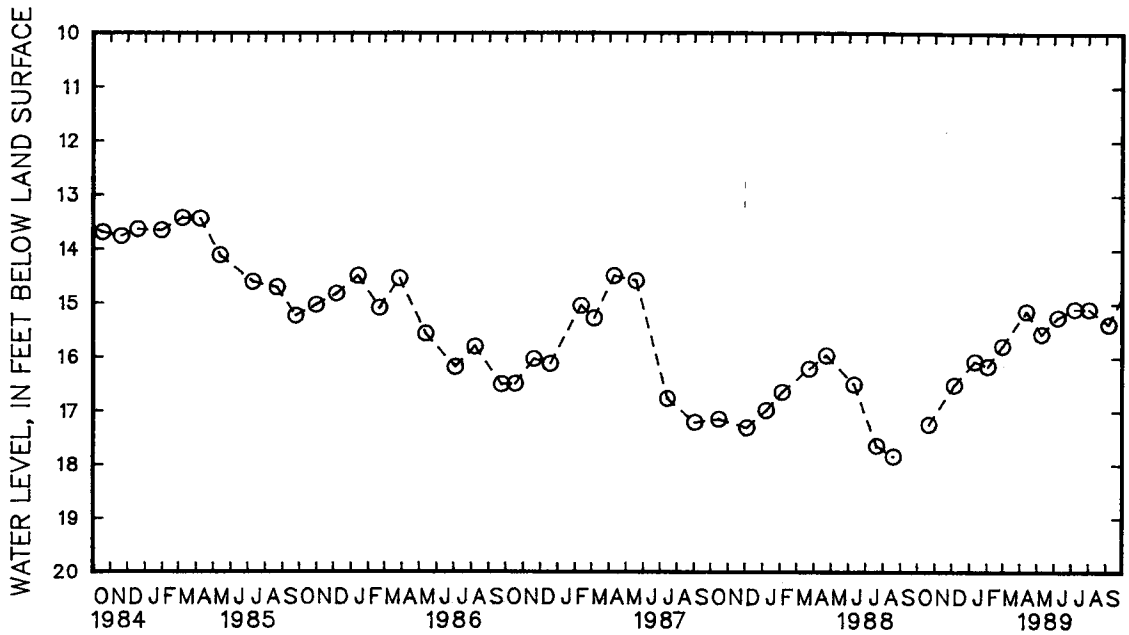
5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

TALBOT COUNTY

WELL NUMBER.--TA Bf 73. SITE ID.--385242075593101. PERMIT NUMBER.--TA-02-1641.
LOCATION.--Lat 38°52'42", long 75°59'31", Hydrologic Unit 02060005, at Cordova.
Owner: William Schluderberg-T. J. Kurdle Co.
AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.
WELL CHARACTERISTICS.--Drilled, unused, artesian well, depth 288 ft; casing diameter 4 in., to 276 ft; casing diameter 2 in. from 276 to 283 ft; screen diameter 3 in. from 283 to 288 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 42 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing, 0.5 ft above land-surface datum.
REMARKS.--Water level reported by driller, 26 ft below land-surface datum Dec. 16, 1955; water level measured 26.64 ft below land-surface datum Mar. 10, 1956. Measurements may be affected by nearby pumping.
PERIOD OF RECORD.--December 1960 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.29 ft below land-surface datum, May 4, 1961; lowest measured, 76.57 ft below land-surface datum, Dec. 6, 1974.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	17.26	JAN 10	16.09	FEB 28	15.80	MAY 9	15.57	JUL 7	15.10	SEP 6	15.39
DEC 5	16.53	FEB 2	16.18	APR 12	15.15	JUN 7	15.26	AUG 2	15.10		

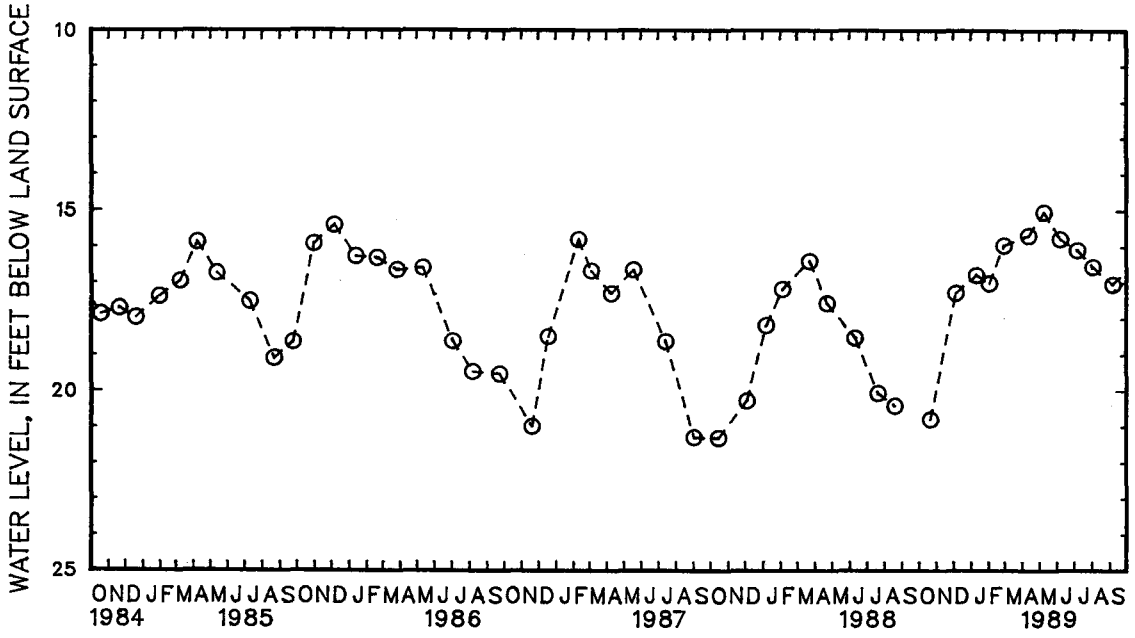


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--TA Bf 74. SITE ID.--385242075593102. PERMIT NUMBER.--TA-02-1805.
LOCATION.--Lat 38°52'42", long 75°59'31", Hydrologic Unit 02060005, at Cordova.
Owner: William Schluderberg-T. J. Kurdle Co.
AQUIFER.--Wicomico Formation of Pleistocene age. Aquifer code: 112WCML.
WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 48.4 ft; casing diameter 4 in., to 42.5 ft; screen diameter 3 in. from 43.2 to 48.4 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 42 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing, 0.7 ft above land-surface datum.
PERIOD OF RECORD.--April 1956 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.48 ft below land-surface datum, Dec. 14, 1971; lowest measured, 21.32 ft below land-surface datum, Oct. 15, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	20.80	JAN 10	16.79	FEB 28	15.96	MAY 9	15.04	JUL 7	16.09	SEP 6	17.05
DEC 5	17.29	FEB 2	17.02	APR 12	15.69	JUN 7	15.79	AUG 2	16.56		

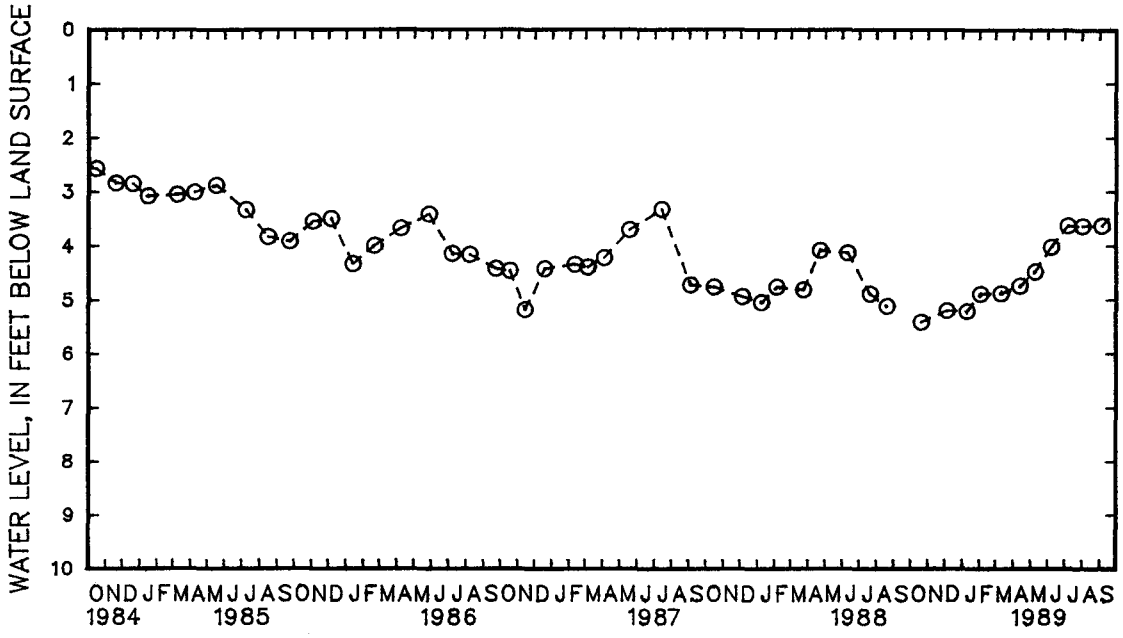


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--TA Cc 35. SITE ID.--384923076100601. PERMIT NUMBER.--TA-73-0767.
LOCATION.--Lat 38°49'23", long 76°10'06", Hydrologic Unit 02060002, at Tunis Mills.
Owner: U.S. Geological Survey.
AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 220 ft; casing diameter 6 to 2 in.; screened from 170 to 180 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 5 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing, 1.8 ft above land-surface datum.
PERIOD OF RECORD.--August 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, .97 ft below land-surface datum, Apr. 2, 1980; lowest measured, 5.43 ft below land-surface datum, Oct. 20, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	5.43	JAN 10	5.22	MAR 10	4.89	MAY 9	4.49	JUL 7	3.62	SEP 5	3.63
DEC 5	5.21	FEB 2	4.90	APR 12	4.75	JUN 7	4.03	AUG 2	3.64		



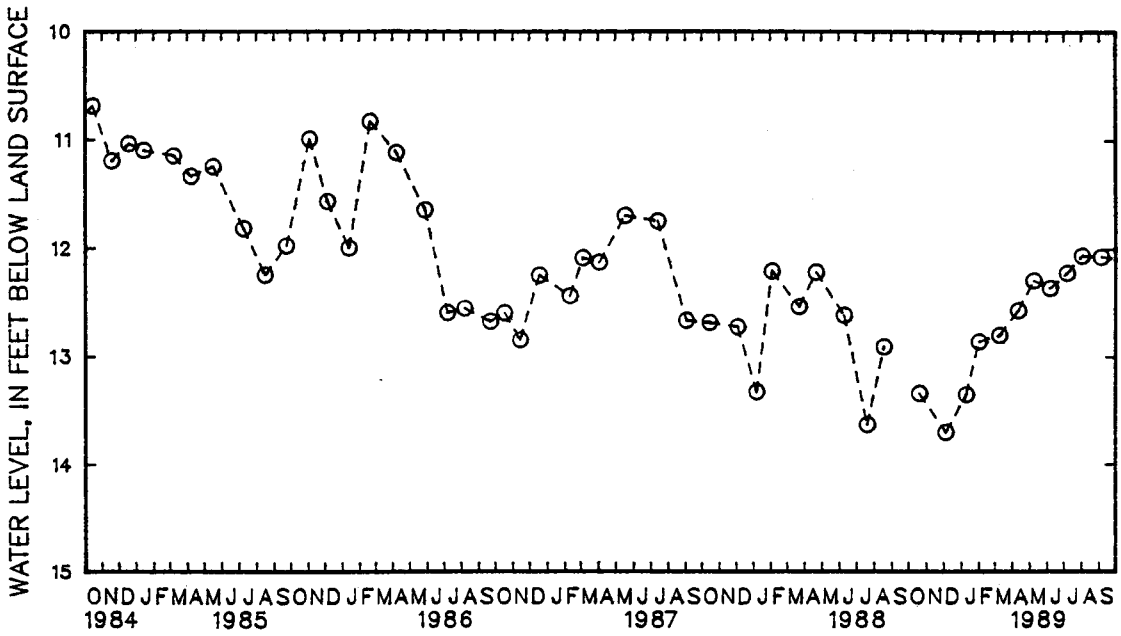
5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

TALBOT COUNTY--Continued

WELL NUMBER.--TA Co 36. SITE ID.--384514076103701. PERMIT NUMBER.--TA-73-0750.
LOCATION.--Lat 38°45'14", long 76°10'37", Hydrologic Unit 02060002, at Newcomb.
Owner: U.S. Geological Survey.
AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 241 ft; casing diameter 6 in., to 57 ft; casing diameter 2 in. from 51 to 231 ft; screen diameter 2 in. from 231 to 241 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 7 ft above National Geodetic Vertical of 1929, from topographic map.
Measuring point: Top of casing, 1.4 ft above land-surface datum.
PERIOD OF RECORD.--October 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.89 ft below land-surface datum, Apr. 2, 1980; lowest measured, 13.70 ft below land-surface datum, Dec. 5, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	13.34	JAN 10	13.35	MAR 10	12.80	MAY 9	12.29	JUL 7	12.22
DEC 5	13.70	FEB 2	12.86	APR 12	12.57	JUN 7	12.36	AUG 2	12.06



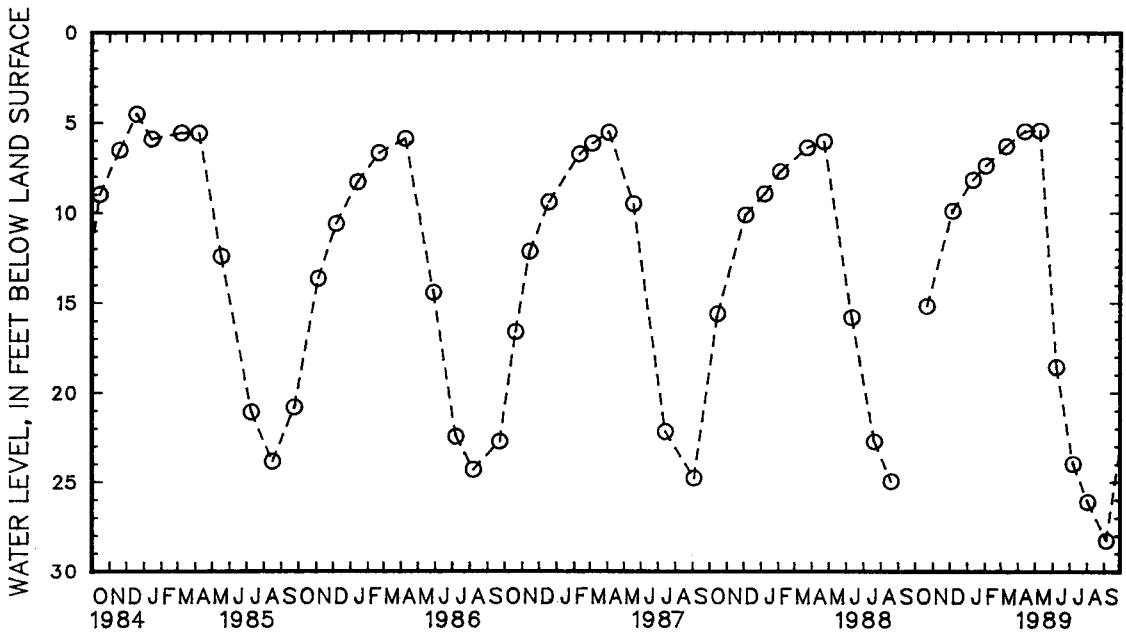
5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

TALBOT COUNTY--Continued

WELL NUMBER.--TA Ce 7. SITE ID.--384643076043801.
LOCATION.--Lat 38°46'43", long 76°04'38", Hydrologic Unit 02060005, in Easton.
Owner: Easton Utilities Commission.
AQUIFER.--Calvert Formation of Miocene age. Aquifer code: 122CLVR.
WELL CHARACTERISTICS.--Drilled, unused, artesian well, measured depth 104 ft; casing diameter 4 in., to unknown depth.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 13 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.4 ft above land-surface datum.
REMARKS.--Water level measured 43.43 ft below land-surface datum Oct. 7, 1948; water levels may be affected by nearby pumping.
PERIOD OF RECORDS.--April 1956 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, .97 ft below land-surface datum, Apr. 16, 1984; lowest measured 75.36 ft below land-surface datum, Aug. 2, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	15.19	JAN 10	8.18	MAR 10	6.30	MAY 9	5.43	JUL 7	24.00
DEC 5	9.90	FEB 2	7.39	APR 12	5.47	JUN 7	18.59	AUG 2	26.12



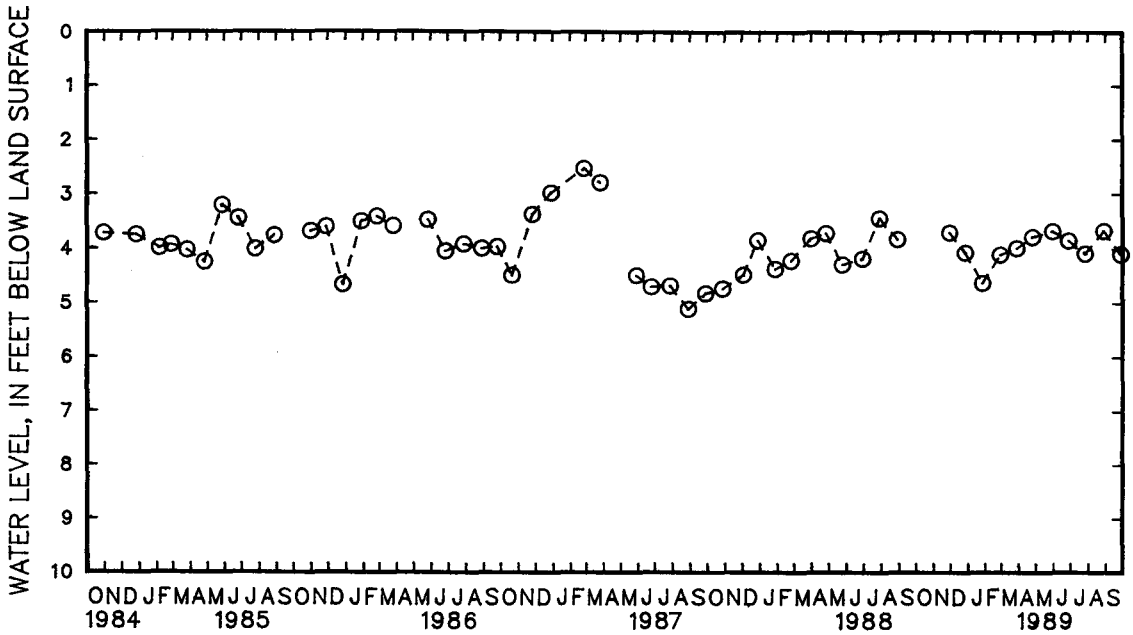
5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WICOMICO COUNTY

WELL NUMBER.--WI Ce 13. SITE ID.--382150075352101.
LOCATION.--Lat 38°21'50", long 75°35'21", Hydrologic Unit 02060007, at Municipal Zoo Park, Salisbury.
Owner: City of Salisbury.
AQUIFER.--Beaverdam Sand of Pleistocene age. Aquifer code: 112BVDM.
WELL CHARACTERISTICS.--Drilled, unused, water-table well, reported depth 65 ft, measured depth 51.7 ft; casing diameter 16 to 10 in., to unknown depth; screen diameter and interval unknown; screen length 20 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with water-level recorder from July 16, 1947 to Jan. 3, 1955; Aug. 23, 1962 to Aug. 20, 1968.
DATUM.--Elevation of land surface is 7 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.04 ft above land-surface datum.
PERIOD OF RECORD.--July 1947 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.07 ft below land-surface datum, Aug. 5, 1948; lowest measured, 10.72 ft below land-surface datum, Aug. 30, 1947.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 29	3.70	JAN 27	4.64	MAR 28	3.99	MAY 30	3.68	JUL 26	4.09	SEP 27	4.10
DEC 27	4.07	FEB 27	4.11	APR 25	3.78	JUN 27	3.85	AUG 28	3.67		

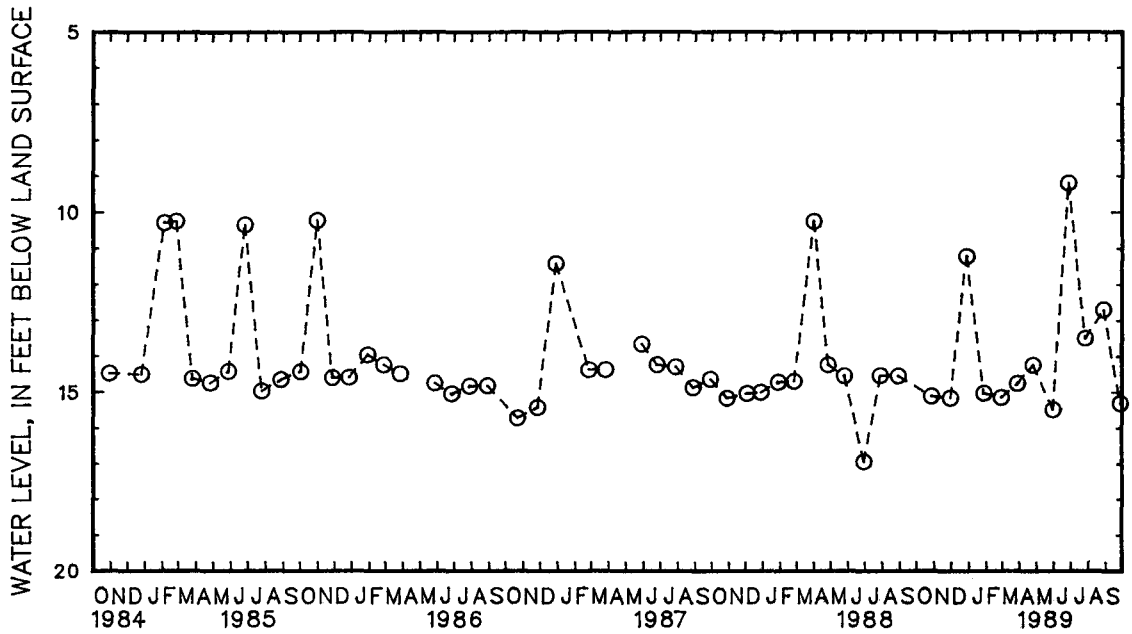


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--WI Ce 204. SITE ID.--382404075355401 PERMIT NUMBER.--WI-67-0191.
LOCATION.--Lat 38°24'04", long 75°35'54", Hydrologic Unit 02060007, north side of Naylor Mill Rd., near Salisbury
Owner: City of Salisbury.
AQUIFER.--Beaverdam Sand of Pleistocene age. Aquifer code: 112BVDM.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 113 ft; casing diameter 8 in., to 109 ft; screen diameter 3 in. from 109 to 113 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 28 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.14 ft above land-surface datum.
PERIOD OF RECORD.--April 1967 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.35 ft below land-surface datum, Apr. 27, 1967; lowest measured, 16.96 ft below land-surface datum, June 29, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	15.13	DEC 27	11.23	FEB 27	15.17	APR 25	14.26	JUN 27	9.19	AUG 28	12.70
NOV 29	15.20	JAN 27	15.05	MAR 28	14.78	MAY 30	15.50	JUL 26	13.51	SEP 27	15.32

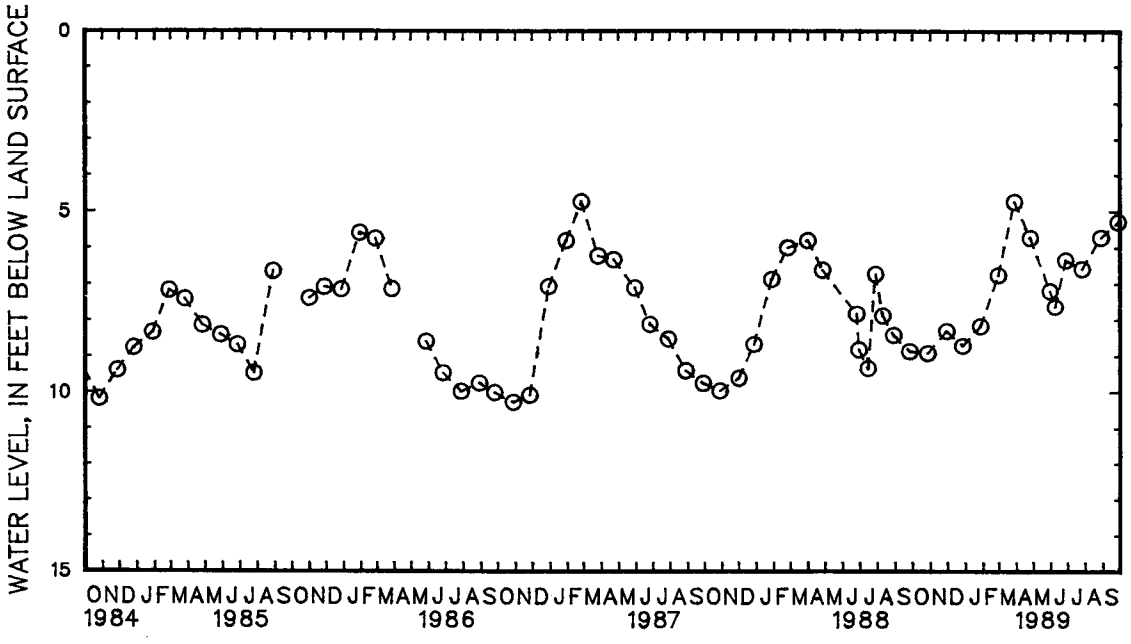


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--WI Cf 3. SITE ID.--382037075310801.
LOCATION.--Lat 38°20'37", long 75°31'08", Hydrologic Unit 02060007, on Airport Rd., about 5 mi southeast of Salisbury.
Owner: Salisbury-Wicomico Airport.
AQUIFER.--Beaverdam Sand of Pleistocene age. Aquifer code: 112BVDM.
WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 109 ft; casing diameter 16 in., to 90 ft; screened from 90 to 110 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with water-level recorder from Mar. 24, 1948 to July 9, 1948, Aug. 2, 1949 to Apr. 11, 1960, and Aug. 29, 1963 to Aug. 20, 1968.
DATUM.--Elevation of land surface is 44.79 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top of casing, 2.0 ft above land-surface datum.
REMARKS.--Water level reported 7.2 ft below land-surface datum, Oct. 26, 1942.
PERIOD OF RECORD.--September 1947 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.90 ft below land-surface datum, May 7, 1958; lowest measured, 13.44 ft below land-surface datum, Sept. 18, 1947.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	8.94	JAN 27	8.18	APR 25	5.73	JUN 27	6.35	SEP 27	5.29
NOV 29	8.32	FEB 27	6.76	MAY 30	7.20	JUL 26	6.59		
DEC 27	8.73	MAR 28	4.73	JUN 8	7.64	AUG 28	5.72		

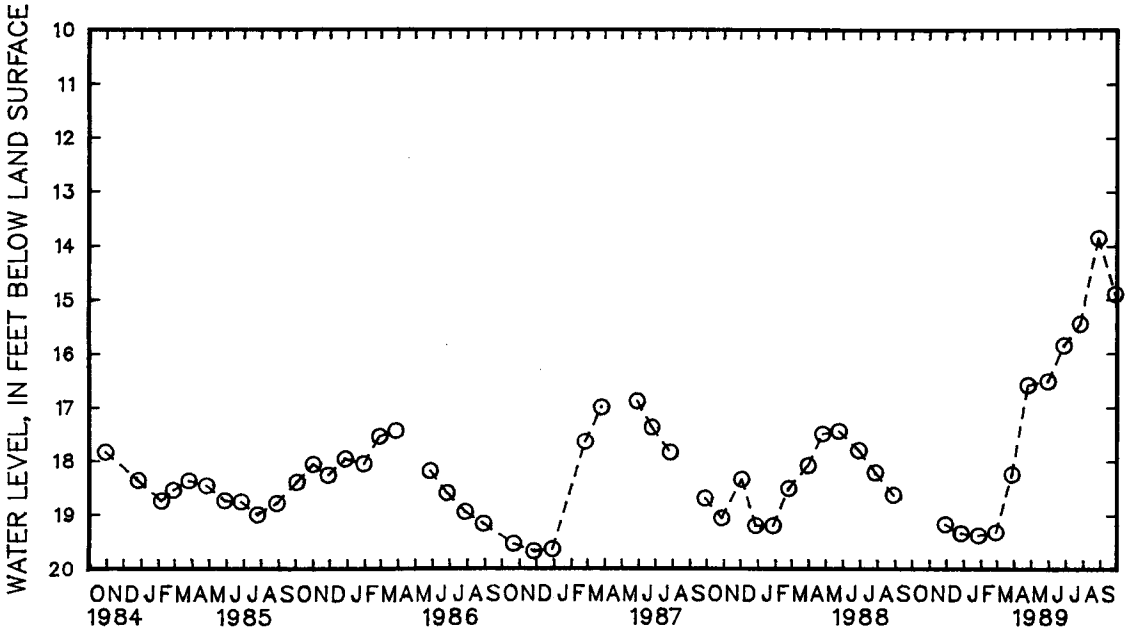


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--WI Cf 147. SITE ID.--382429075344501.
LOCATION.--Lat 38°24'29", long 75°34'45", Hydrologic Unit 02060007, south side of Naylor Mill Rd., near Salisbury.
Owner: A. S. Abell Co.
AQUIFER.--Beaverdam Sand of Pleistocene age. Aquifer code: 112BVDM.
WELL CHARACTERISTICS.--Drilled, unused, artesian well, depth 80 ft; casing diameter 2 in., to 80 ft; casing slotted from 60 to 80 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 41.83 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top of casing at land-surface datum.
PERIOD OF RECORD.--November 1964; March 1966 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.78 ft below land-surface datum, June 18, 1979; lowest measured, 19.68 ft below land-surface datum, Nov. 26, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 29	19.16	JAN 27	19.37	MAR 28	18.23	MAY 30	16.51	JUL 26	15.45	SEP 14	14.90
DEC 27	19.33	FEB 27	19.31	APR 25	16.58	JUN 27	15.85	AUG 28	13.85		

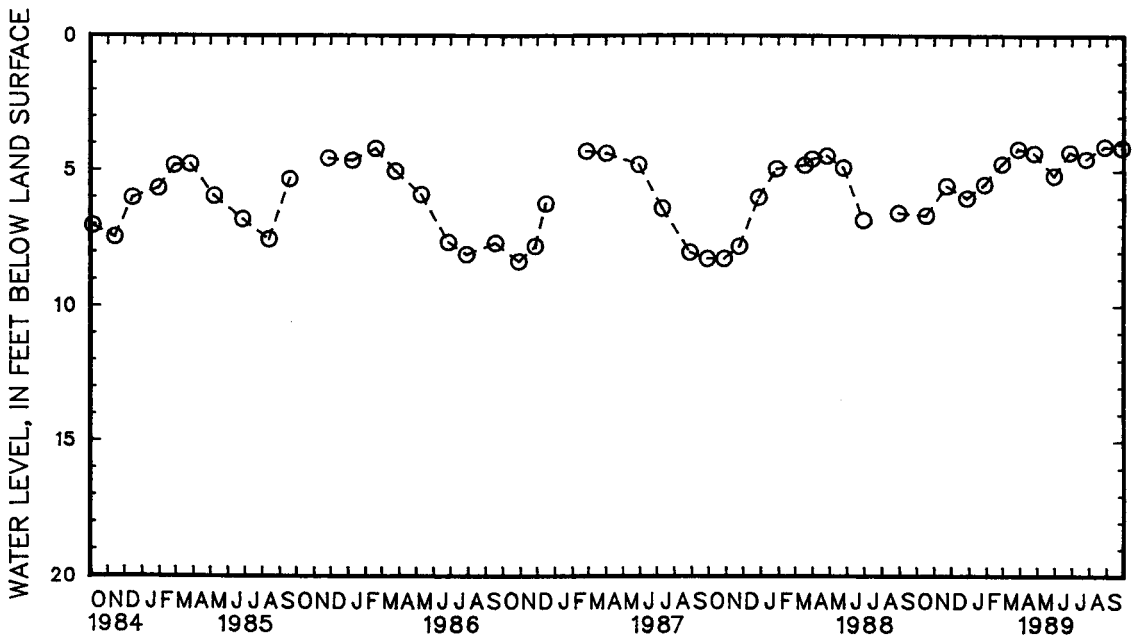


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--WI Cg 20. SITE ID.--382329075263701.
LOCATION.--Lat 38°23'29", long 75°26'37", Hydrologic Unit 02060009, 1.45 mi east of Parsonsburg on south side of MD Rt. 346.
Owner: Maryland State Highway Administration.
AQUIFER.--Parsonsburg Sand of Pleistocene age. Aquifer code: 112PRBG.
WELL CHARACTERISTICS.--Driven, unused, water-table well, depth 25 ft, casing diameter 1.25 in., to unknown depth.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 68 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of 2 in. sleeve, 0.17 ft above land-surface datum.
PERIOD OF RECORD.--August 1949 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.84 ft below land-surface datum, Jan. 31, 1950; lowest measured, 8.68 ft below land-surface datum, Oct. 10, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17	6.65	DEC 27	6.01	FEB 27	4.75	APR 25	4.35	JUN 27	4.32	AUG 28	4.10
NOV 22	5.56	JAN 27	5.51	MAR 28	4.20	MAY 30	5.19	JUL 26	4.56	SEP 27	4.15



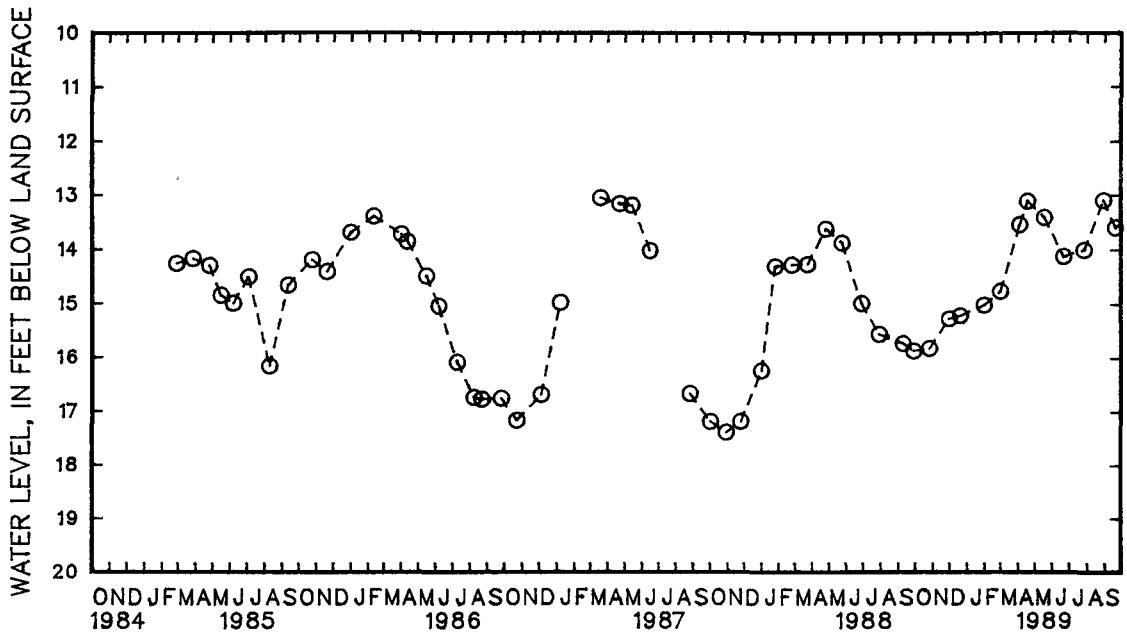
5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WORCESTER COUNTY

WELL NUMBER.--WO Ae 23. SITE ID.--382621075174201. PERMIT NUMBER.--WO-73-0512.
LOCATION.--Lat 38°26'21", long 75°17'42", Hydrologic Unit 02060010, 2.75 mi north of Whaleysville.
Owner: U.S. Geological Survey.
AQUIFER.--Manokin aquifer of Miocene age. Aquifer code: 122MNKN.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 280 ft; casing diameter 4 in., to 270 ft; screen diameter 4 in. from 270 to 280 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 40 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of 4 in. coupling, 3.7 ft above land-surface datum.
PERIOD OF RECORD.--October 1975 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.85 ft below land-surface datum, Dec. 16, 1975; lowest measured, 17.40 ft below land-surface datum, Oct. 29, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	15.84	DEC 20	15.22	MAR 1	14.76	APR 18	13.10	JUN 21	14.12	AUG 30	13.09
NOV 30	15.28	JAN 31	15.02	APR 4	13.53	MAY 18	13.40	JUL 27	14.00	SEP 20	13.59

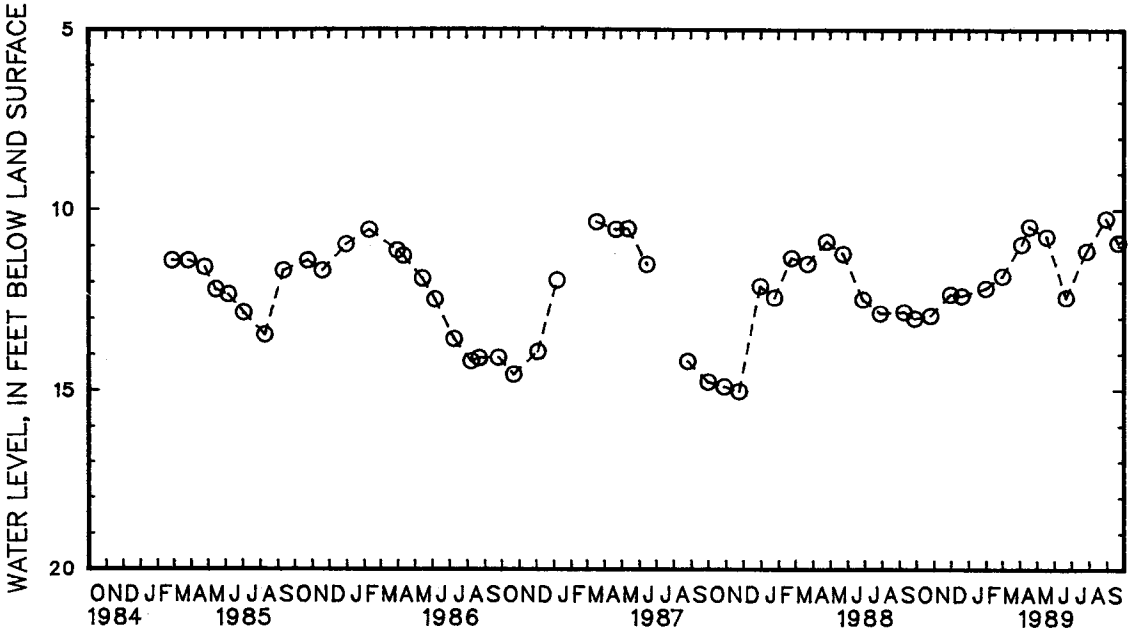


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--WO Ae 24. SITE ID.--382621075174202. PERMIT NUMBER.--WO-73-0515.
LOCATION.--Lat 38°26'21", long 75°17'42", Hydrologic Unit 02060010, 2.75 mi north of Whaleysville.
Owner: U.S. Geological Survey.
AQUIFER.--Ocean City aquifer of Miocene age. Aquifer code: 122OCNC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 200 ft; casing diameter 4 in., to 190 ft; screen diameter 4 in. from 190 to 200 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 40 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of 4 in. coupling, 4.4 ft above land-surface datum.
PERIOD OF RECORD.--October 1975 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.49 ft below land-surface datum, May 31, 1978; lowest measured, 15.06 ft below land-surface datum, Nov. 24, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	12.95	DEC 20	12.39	MAR 1	11.84	APR 18	10.47	JUN 21	12.43	AUG 30	10.24
NOV 30	12.35	JAN 31	12.18	APR 4	10.96	MAY 18	10.75	JUL 27	11.14	SEP 20	10.91

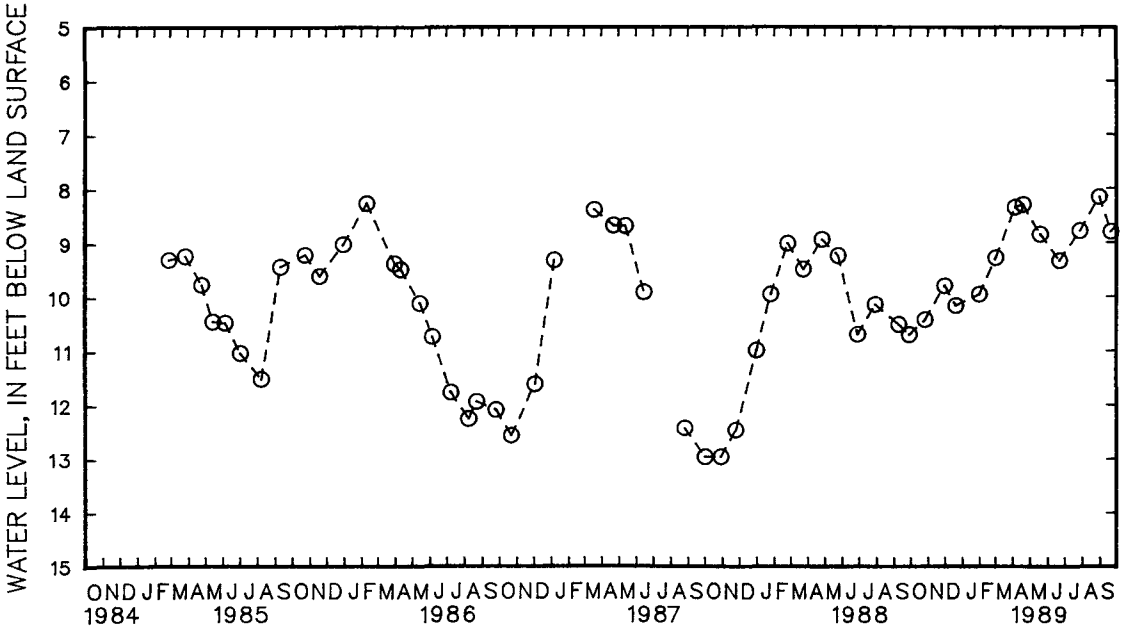


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--WO Ae 25. SITE ID.--382621075174203. PERMIT NUMBER.--WO-73-0514.
LOCATION.--Lat 38°26'21", long 75°17'42", Hydrologic Unit 02060010, 2.75 mi north of Whaleysville.
Owner: U.S. Geological Survey.
AQUIFER.--Pocomoke aquifer of Miocene age. Aquifer code: 122PCMK.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 118 ft; casing diameter 4 in., to 108 ft; screened diameter 4 in. from 108 to 118 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 40 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of 4 in. coupling, 3.6 ft above land-surface datum.
PERIOD OF RECORD.--October 1975 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.79 ft below land-surface datum, Nov. 20, 1975; lowest measured, 12.96 ft below land-surface datum, Oct. 1 and 29, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	10.43	DEC 20	10.17	MAR 1	9.28	APR 18	8.30	JUN 21	9.34	AUG 30	8.16
NOV 30	9.80	JAN 31	9.96	APR 4	8.35	MAY 18	8.85	JUL 27	8.78	SEP 20	8.80



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--WO Ah 6. SITE ID.--382632075031801. PERMIT NUMBER.--WO-70-0009.
LOCATION.--Lat 38°26'32", long 75°03'18", Hydrologic Unit 02060010, at east end of 137th St., Ocean City.
Owner: U.S. Geological Survey
AQUIFER.--Manokin aquifer of Miocene age. Aquifer code: 122MNKN.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 357 ft; casing diameter 4 in., to 347 ft; screen diameter 4 in. from 347 to 357 ft.
INSTRUMENTATION.--Periodic measurements with chalked steel tape from June 1972 to March 1985. Equipped with digital water-level recorder--15-minute recording interval, March 1985 to current year.
DATUM.--Elevation of land surface is 6.35 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of shelter floor, 3.27 ft above land-surface datum.
REMARKS.--Water levels affected by nearby pumping.
PERIOD OF RECORD.--June 1972 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.32 ft below land-surface datum, Apr. 8, 1988; lowest recorded, 52.46 ft below land-surface datum, July 24, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	35.95	20.72	27.00	8.16	5.44	4.75	4.43	3.92	4.52	3.67	4.39	3.20
2	35.97	17.78	25.64	8.16	5.72	4.92	4.32	3.53	4.38	3.66	4.58	3.76
3	34.48	15.73	26.05	8.27	5.63	5.03	4.32	3.60	4.33	3.09	4.37	3.70
4	30.15	13.82	26.43	7.75	5.74	4.95	4.46	3.20	4.42	3.28	4.09	3.01
5	28.83	12.04	8.02	6.35	5.74	4.99	4.87	3.52	4.49	3.23	4.24	2.91
6	29.82	12.15	7.01	6.25	5.55	4.45	4.88	3.48	4.50	3.07	4.29	2.92
7	30.29	12.19	7.10	6.21	5.67	4.65	4.25	3.02	4.56	3.15	3.87	2.83
8	32.91	12.23	7.28	6.28	5.76	4.62	---	---	4.62	3.33	3.83	2.83
9	33.20	17.87	7.22	6.13	5.72	4.14	5.01	3.63	5.24	4.07	3.86	2.83
10	30.78	13.86	6.95	5.72	5.43	4.14	5.31	3.99	5.07	3.77	3.89	2.83
11	26.88	10.92	6.82	5.67	5.40	4.24	6.00	4.05	4.91	3.76	4.01	2.84
12	30.19	11.60	6.83	5.63	6.11	4.09	6.51	4.29	4.73	3.77	4.05	2.88
13	28.83	11.37	6.48	5.31	5.33	3.96	5.42	4.40	4.56	3.60	3.89	2.95
14	29.30	11.21	6.37	5.34	4.98	3.78	---	---	4.59	3.47	3.85	2.89
15	30.77	17.58	6.59	5.57	4.96	3.84	---	---	4.67	3.64	3.96	2.96
16	30.56	13.16	6.24	5.19	5.16	4.27	4.91	3.89	4.81	3.74	4.19	3.23
17	28.38	10.77	6.13	5.16	4.82	3.97	5.29	3.87	4.78	3.84	6.12	3.43
18	27.76	9.93	6.40	5.45	4.83	3.76	5.65	4.09	4.48	3.69	4.29	3.46
19	27.78	9.67	6.28	5.23	5.24	3.90	7.52	5.66	4.52	3.37	4.31	3.41
20	27.68	9.83	5.99	4.87	5.45	4.11	8.10	6.41	4.37	3.48	20.69	3.23
21	27.01	9.61	6.82	4.96	5.45	4.26	6.37	5.19	4.24	3.25	4.34	3.29
22	26.82	9.34	6.69	5.30	5.51	4.16	6.09	4.88	---	---	4.20	3.31
23	27.90	10.56	6.25	4.75	5.18	3.69	5.64	4.38	---	---	4.22	3.05
24	28.69	11.02	5.73	4.31	4.98	3.84	5.09	3.94	3.94	2.51	3.68	2.85
25	23.48	8.51	5.66	4.39	4.93	3.80	4.86	3.90	3.58	2.48	3.68	2.86
26	27.69	9.46	5.62	4.37	5.31	4.32	4.59	3.72	3.83	2.90	4.08	3.04
27	28.38	10.36	5.47	4.46	5.29	4.19	4.65	3.81	4.19	3.29	4.12	3.27
28	26.52	8.84	5.27	4.33	5.10	3.88	4.75	4.06	3.91	3.37	4.21	3.27
29	28.18	9.46	5.92	5.07	5.30	4.62	4.63	4.01	---	---	4.30	3.49
30	28.37	10.40	5.78	4.97	4.94	4.24	4.77	3.96	---	---	4.53	2.94
31	26.93	9.11	---	---	4.79	4.09	4.34	3.62	---	---	3.93	2.86
MONTH	35.97	8.51	27.00	4.31	6.11	3.69	---	---	---	---	20.69	2.83

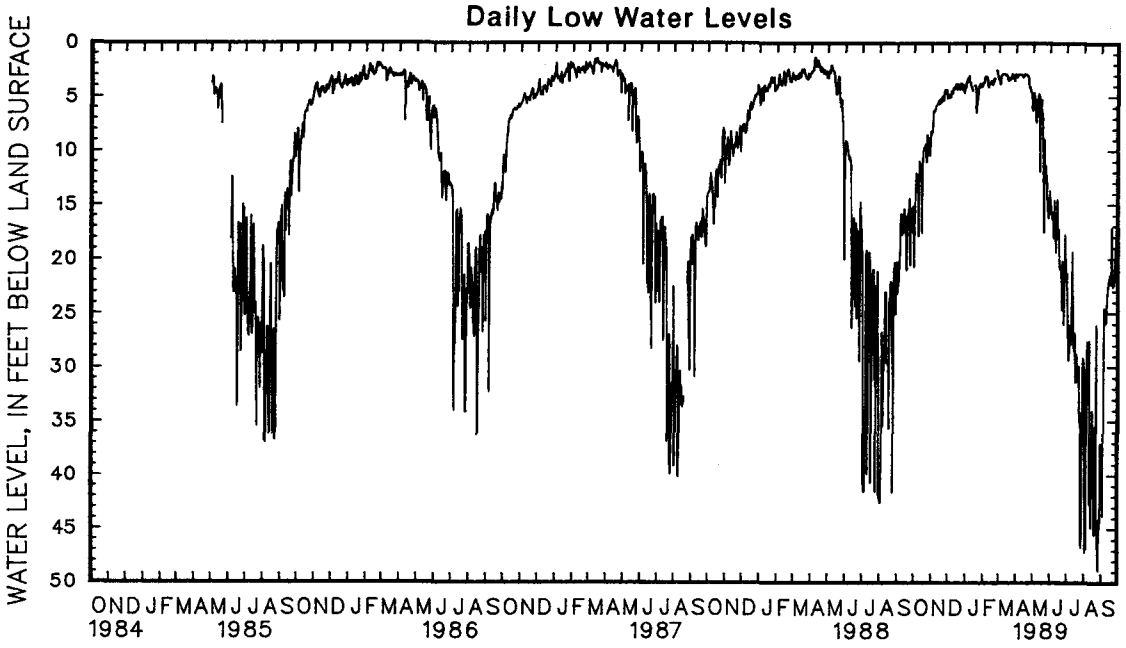
GROUND-WATER LEVELS

MARYLAND--Continued

WORCESTER COUNTY--Continued

WO Ah 6--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	4.00	2.87	17.94	6.24	29.21	13.74	37.67	21.42	50.20	36.92	49.83	42.22
2	4.16	3.16	11.23	4.56	30.43	14.97	45.90	25.15	51.36	36.89	50.76	41.82
3	4.16	3.02	15.43	5.05	32.67	15.51	47.91	27.17	51.30	47.19	50.18	41.97
4	4.05	2.91	9.94	5.51	32.05	15.79	47.67	29.43	49.22	30.21	49.67	43.75
5	4.14	2.88	15.98	5.25	29.79	16.34	46.05	28.41	49.55	46.87	46.12	27.94
6	4.09	2.87	18.42	6.13	31.84	15.88	44.70	26.13	48.93	28.69	31.87	24.53
7	14.48	2.87	19.16	7.33	31.73	18.08	44.52	27.93	49.21	27.63	32.39	26.00
8	3.83	2.87	15.98	6.19	31.87	17.44	43.73	27.43	50.76	28.65	31.65	25.65
9	4.04	2.87	17.34	6.80	31.34	14.65	46.00	26.80	49.28	33.09	32.65	25.88
10	4.11	2.93	20.14	5.13	33.14	17.05	46.27	22.91	50.61	27.55	32.65	24.74
11	4.07	2.99	13.76	4.69	32.73	19.43	42.84	19.33	50.39	42.62	25.14	23.70
12	4.01	3.11	14.69	4.81	32.93	17.85	47.48	24.61	50.04	42.07	24.42	22.93
13	3.81	3.09	16.49	6.75	31.05	18.16	47.74	28.25	50.33	42.55	23.81	22.45
14	3.75	3.00	19.88	11.92	30.91	14.58	48.15	28.59	50.17	44.87	23.44	22.12
15	3.65	2.88	12.47	5.89	32.96	17.82	45.67	26.91	49.74	34.00	23.21	21.84
16	3.23	2.88	22.58	5.23	32.73	17.96	47.69	31.43	50.25	42.03	23.12	21.53
17	3.61	2.89	21.97	6.33	31.80	17.30	46.79	31.44	50.04	42.00	23.49	21.61
18	10.45	2.88	18.64	6.68	34.18	20.86	48.95	28.90	50.20	40.64	23.50	22.32
19	3.47	2.88	23.07	6.93	35.45	20.98	48.17	29.98	49.90	35.79	22.57	17.15
20	18.45	2.92	26.45	12.70	36.45	20.62	48.21	31.31	50.75	45.56	22.99	21.80
21	18.57	3.06	29.00	17.60	35.51	21.12	49.93	31.38	51.20	35.48	23.56	22.60
22	18.40	3.07	25.32	8.94	35.35	24.74	50.31	29.99	50.11	37.48	23.30	22.32
23	19.89	3.76	29.74	11.85	34.06	20.27	50.53	35.11	49.27	26.08	23.65	22.40
24	19.19	4.14	29.27	11.41	34.68	20.38	52.46	34.38	49.74	45.46	23.53	21.63
25	17.72	4.04	30.24	12.20	35.14	26.11	52.30	34.31	50.43	45.46	21.72	20.62
26	20.46	4.38	29.11	13.02	37.69	23.30	52.05	46.15	50.88	48.03	20.78	19.06
27	19.94	4.54	28.22	15.56	33.50	21.25	51.96	46.70	51.50	48.91	20.38	18.87
28	19.36	4.55	30.57	14.53	35.38	17.78	51.79	45.40	51.21	44.09	19.83	16.68
29	14.80	5.61	18.46	16.24	38.24	19.96	50.65	31.22	50.34	44.89	19.67	15.42
30	16.14	6.02	33.33	15.92	38.96	21.67	51.11	29.17	49.98	44.11	19.88	17.45
31	---	---	29.78	14.80	---	---	50.53	29.61	48.98	37.04	---	---
MONTH	20.46	2.87	33.33	4.56	38.96	13.74	52.46	19.33	51.50	26.08	50.76	15.42



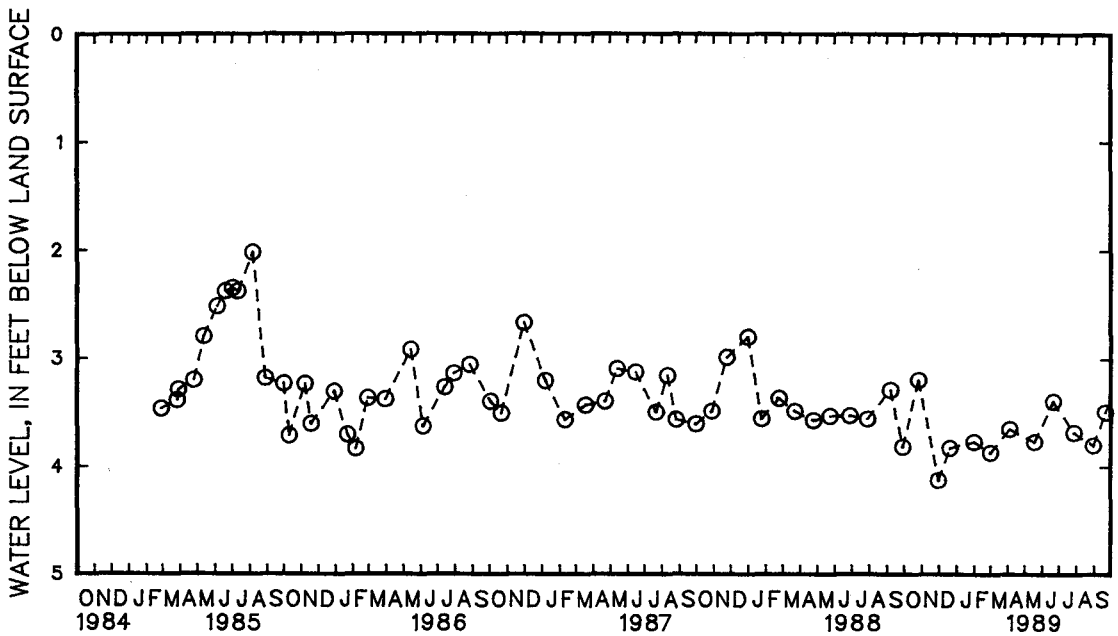
5 YEAR HYDROGRAPH

OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--WO Ah 35. SITE ID.--382635075030601. PERMIT NUMBER.--WO-73-0516.
LOCATION.--Lat 38°26'35", long 75°03'06", Hydrologic Unit 02060010, at east end of 137th St., Ocean City.
Owner: U.S. Geological Survey.
AQUIFER.--Choptank Formation of Miocene age. Aquifer code: 122CPNK.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 726 ft; casing diameter 4 in., to 726 ft; screen diameter 2 in. from 716 to 726 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 13.99 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top of 4 in. coupling, 3.7 ft above land-surface datum.
PERIOD OF RECORD.--October 1975 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.90 ft below land-surface datum, Mar. 10, 1976; lowest measured, 10.26 ft below land-surface datum, Oct. 28, 1975.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	3.20	DEC 20	3.83	MAR 01	3.87	MAY 18	3.77	JUL 27	3.68	SEP 21	3.49
NOV 30	4.13	JAN 31	3.77	APR 04	3.65	JUN 21	3.39	AUG 30	3.80		

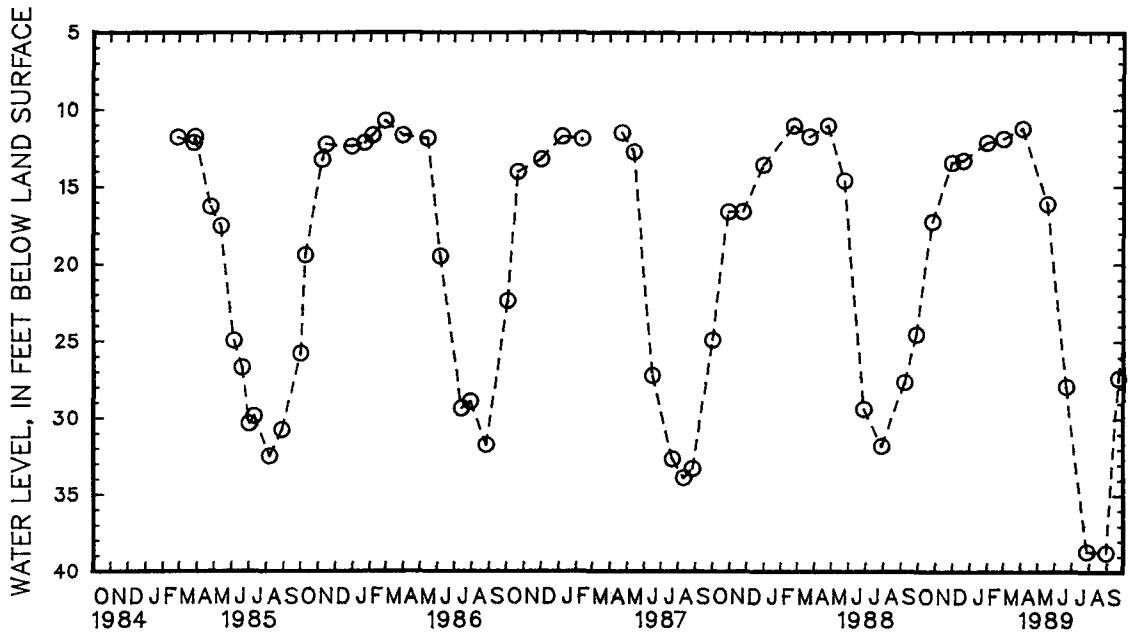


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--WO Ah 36. SITE ID.--382635075030602. PERMIT NUMBER.--WO-73-0516.
LOCATION.--Lat 38°26'35", long 75°03'06", Hydrologic Unit 02060010, at east end of 137th St., Ocean City.
Owner: U.S. Geological Survey.
AQUIFER.--Manokin aquifer of Miocene age. Aquifer code: 122MNKN.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 430 ft; casing diameter 4 in., to 420 ft; screen diameter 2 in. from 420 to 430 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 14.32 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top of 4 in. coupling, 1.08 ft above land-surface datum.
REMARKS.--Water levels affected by nearby pumping.
PERIOD OF RECORD.--October 1975 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.61 ft below land-surface datum, Apr. 18, 1984; lowest measured, 38.75 ft below land-surface datum, Aug. 30, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	17.20	DEC 20	13.27	MAR 1	11.86	MAY 18	16.11	JUL 27	38.68	SEP 21	27.34
NOV 30	13.40	JAN 31	12.11	APR 4	11.22	JUN 21	27.93	AUG 30	38.75		

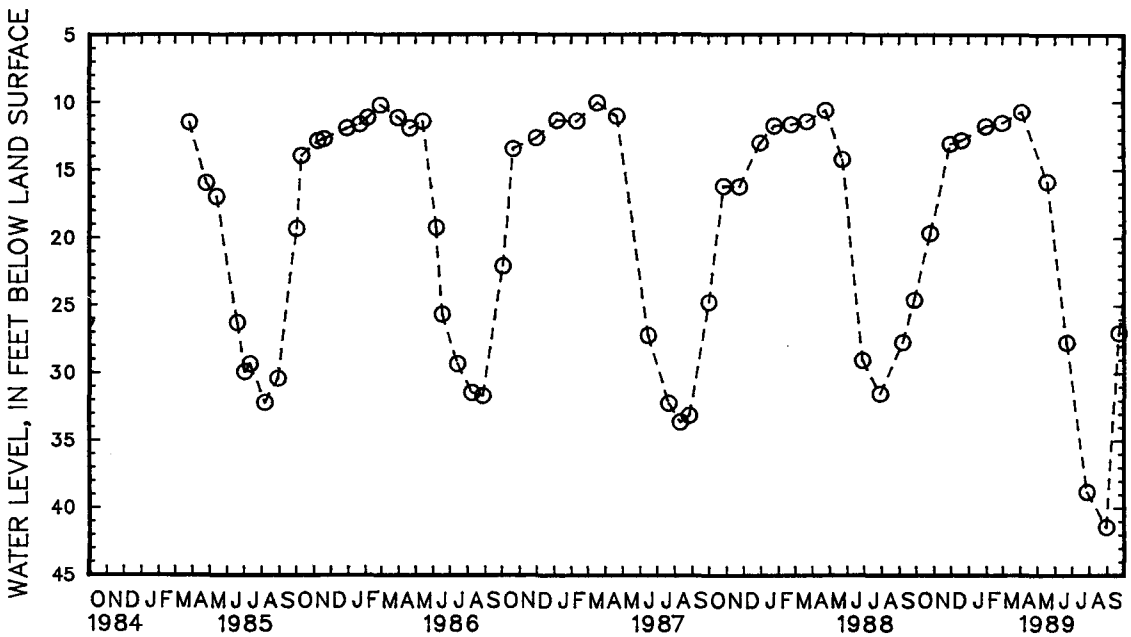


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--WO Ah 37. SITE ID.--382635075030603. PERMIT NUMBER.--WO-73-0517.
LOCATION.--Lat 38°26'35", long 75°03'06", Hydrologic Unit 02060010, at east end of 137th St., Ocean City.
Owner: U.S. Geological Survey.
AQUIFER.--Manokin aquifer of Miocene age. Aquifer code: 122MNKN.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 478 ft; casing diameter 4 in., to 468 ft; screen diameter 2 in. from 468 to 478 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 13.89 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top of 4 in. casing, 2.75 ft above land-surface datum.
REMARKS.--Water levels affected by nearby pumping.
PERIOD OF RECORD.--October 1975 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.58 ft below land-surface datum, Feb. 10, 1977; lowest measured, 41.42 ft below land-surface datum, Aug. 30, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	19.68	DEC 20	12.81	MAR 1	11.52	MAY 18	15.88	JUL 27	38.82	SEP 21	26.99
NOV 30	13.07	JAN 31	11.77	APR 4	10.70	JUN 21	27.75	AUG 30	41.42		

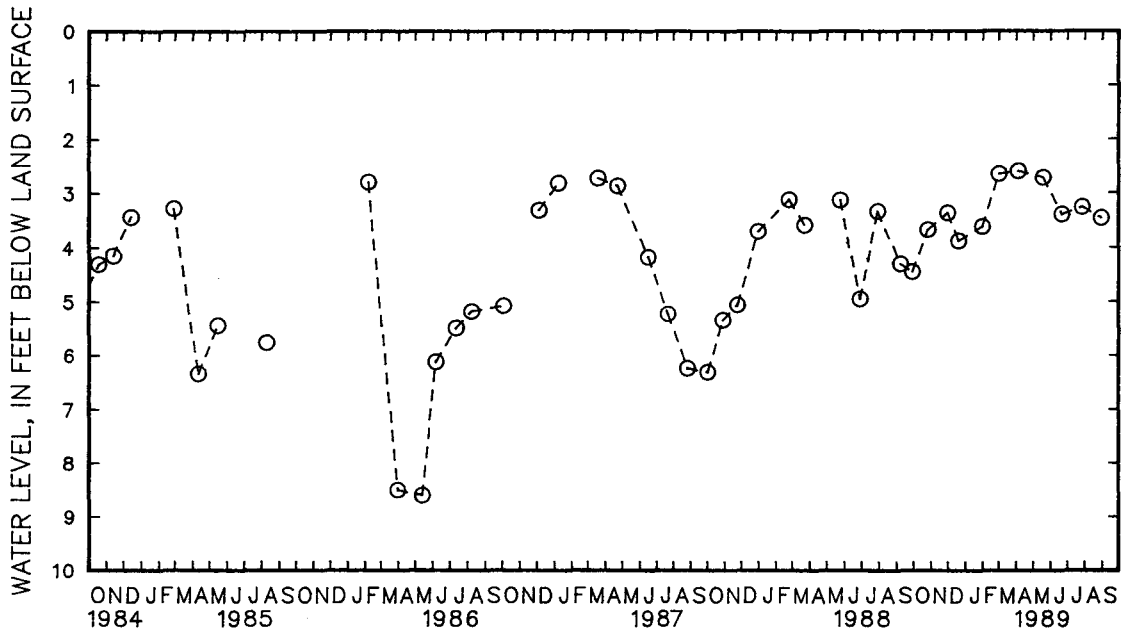


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--WO Bg 1. SITE ID.--382022075072401.
LOCATION.--Lat 38°20'22", long 75°07'24", Hydrologic Unit 02060010, 0.4 mi east of Herring Creek on U.S. Rt. 50.
Owner: MD State Highway Administration.
AQUIFER.--Sinepuxent Formation of Pleistocene age. Aquifer code: 112SNPX.
WELL CHARACTERISTICS.--Driven, water-table well, depth 14 ft; casing diameter 1.25 in., to 14 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 5 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing, 0.25 ft above land-surface datum.
PERIOD OF RECORD.--August 1949 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.41 ft below land-surface datum, Mar. 8, 1962; lowest measured, 8.61 ft below land-surface datum, May 14, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	3.67	DEC 20	3.88	MAR 1	2.64	MAY 18	2.71	JUL 27	3.26
NOV 30	3.36	JAN 31	3.62	APR 4	2.59	JUN 21	3.39	AUG 30	3.46

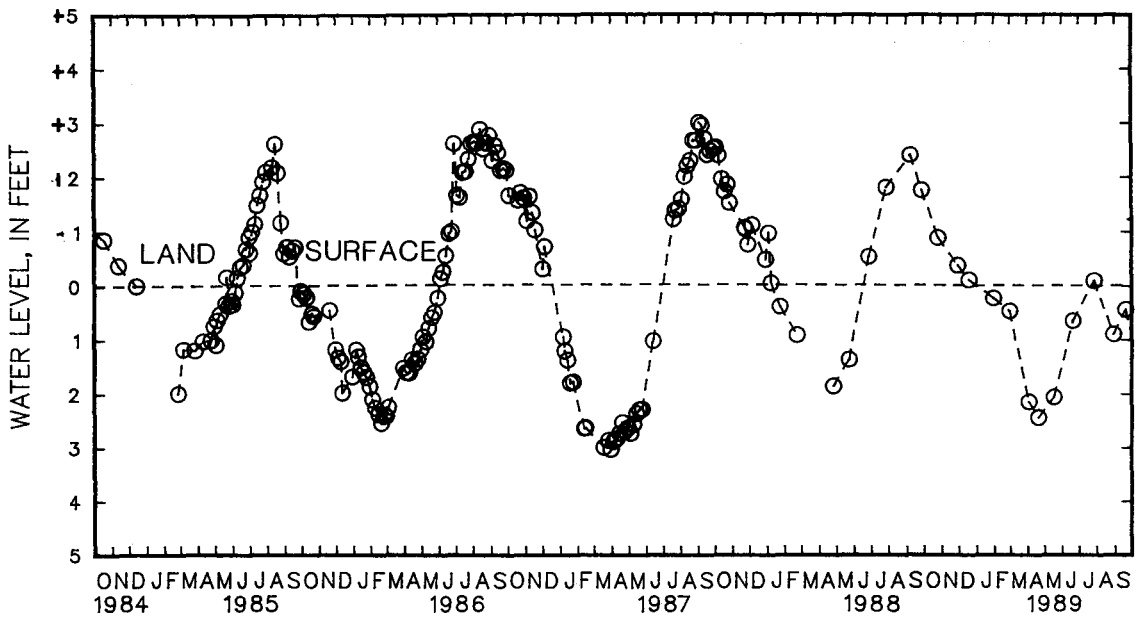


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--WO Bg 15. SITE ID.--382359075094501. PERMIT NUMBER.--WO-78-0066.
LOCATION.--Lat 38°23'59", long 75°09'45", Hydrologic Unit 02060010, south side of Beauchamp Rd. at Ocean Pines.
Owner: Ocean Pines.
AQUIFER.--Manokin aquifer of Miocene age. Aquifer code: 122MNKN.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 318 ft; casing diameter 6 in., to 288 ft; screen diameter 6 in. from 288 to 318 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personel.
DATUM.--Elevation of land surface is 7 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of 6 in. casing, 5.94 ft above land-surface datum.
PERIOD OF RECORD.--September 1970 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.13 ft above land-surface datum, Feb. 29, 1972; lowest measured, 3.0 ft below land-surface datum, Sept. 5, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
(READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	.88	DEC 20	.10	MAR 1	+.48	APR 21	+2.45	JUN 21	+.65	AUG 30	+.90
NOV 30	.37	JAN 31	+.24	APR 4	+2.16	MAY 18	+2.07	JUL 27	.10	SEP 20	+.44

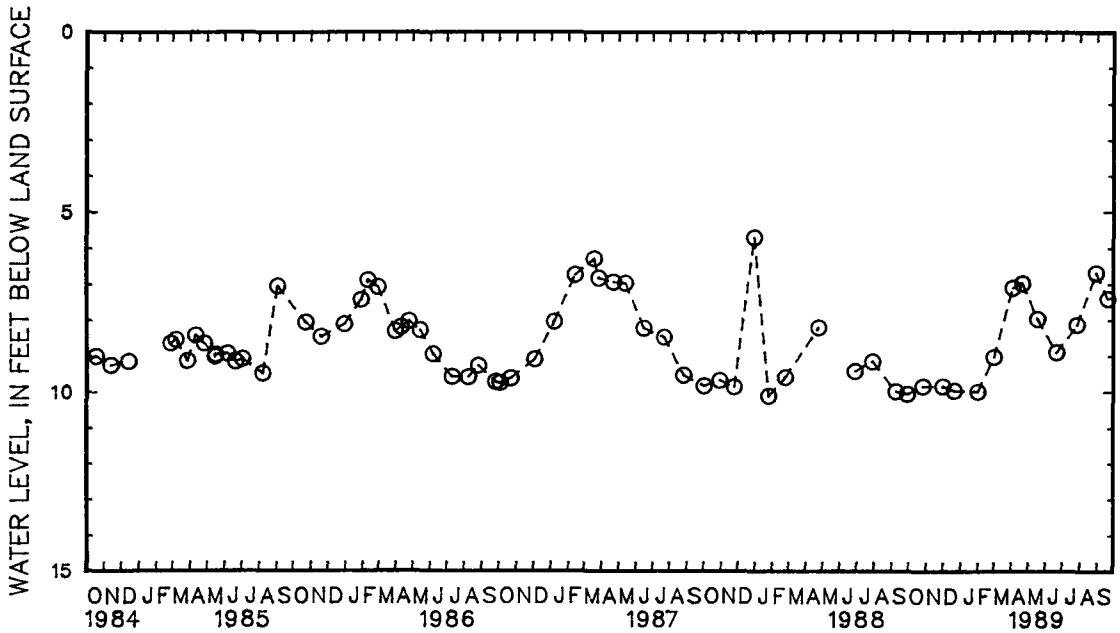


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--WO Bg 45. SITE ID.--382358075094501. PERMIT NUMBER.--WO-78-0066.
LOCATION.--Lat 38°23'58", long 75°09'45", Hydrologic Unit 02060010, south side of Beauchamp Rd. at Ocean Pines.
Owner: Ocean Pines.
AQUIFER.--Columbia Formation of Pleistocene age. Aquifer code: 112CLMB.
WELL CHARACTERISTICS.--Drilled, observation well, depth 77 ft; casing diameter 2 in., to 56 ft; screen diameter 2 in. from 56 to 77 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personel.
DATUM.--Elevation of land surface is 10 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of 2 in. casing, 1.7 ft above land-surface datum.
PERIOD OF RECORD.--May 1971 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.22 ft below land-surface datum, Jan. 8, 1971; lowest measured, 10.12 ft below land-surface datum, Jan. 25, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	9.85	DEC 20	9.97	MAR 1	9.03	APR 21	6.98	JUN 21	8.91	AUG 30	6.69
NOV 30	9.85	JAN 31	10.00	APR 4	7.10	MAY 18	7.98	JUL 27	8.13	SEP 20	7.41

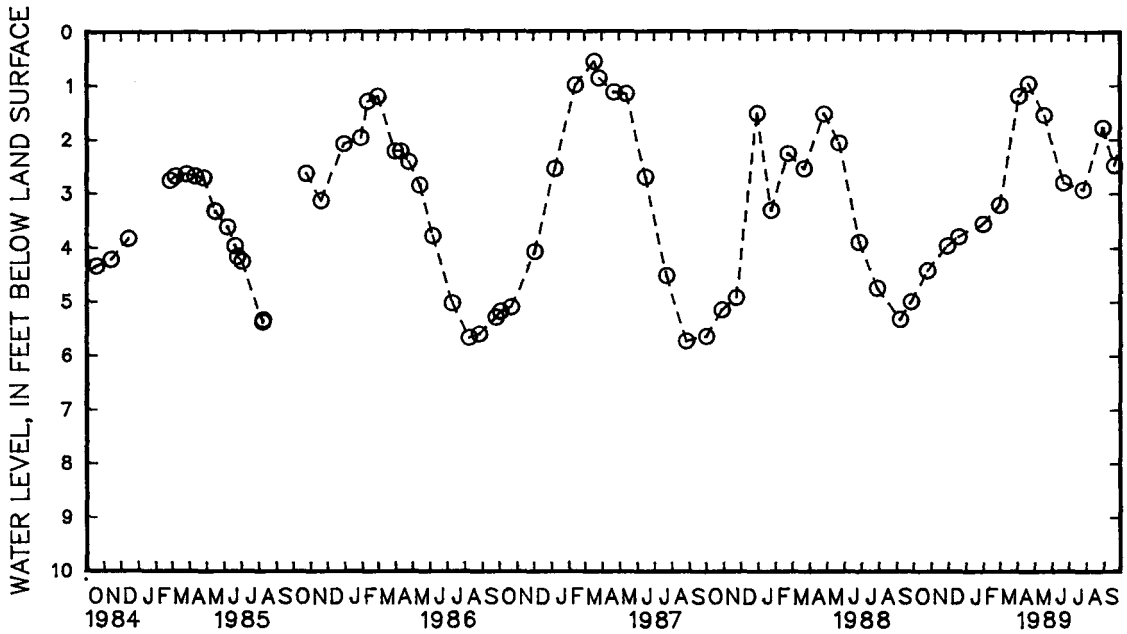


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--WO Bg 46. SITE ID.--382358075094502 PERMIT NUMBER.--WO-78-0066
LOCATION.--Lat 38°23'58", long 75°09'45", Hydrologic Unit 02060010, south side of Beauchamp Rd. at Ocean Pines.
Owner: Ocean Pines
AQUIFER.--Pocomoke aquifer of Miocene age. Aquifer code: 122PCMK.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 194 ft; casing diameter 6 in., to 164 ft; screen diameter 6 in. from 164 to 194 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personel.
DATUM.--Elevation of land surface is 10 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of 2 in. coupling, 2.5 ft above land-surface datum.
PERIOD OF RECORD.--October 1970 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, .22 ft above land-surface datum, Apr. 27, 1983; lowest measured, 5.74 ft below land-surface datum, Aug. 26, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	4.43	DEC 20	3.80	MAR 1	3.21	APR 21	.96	JUN 21	2.80	AUG 30	1.78
NOV 30	3.97	JAN 31	3.56	APR 4	1.18	MAY 18	1.54	JUL 27	2.93	SEP 20	2.48



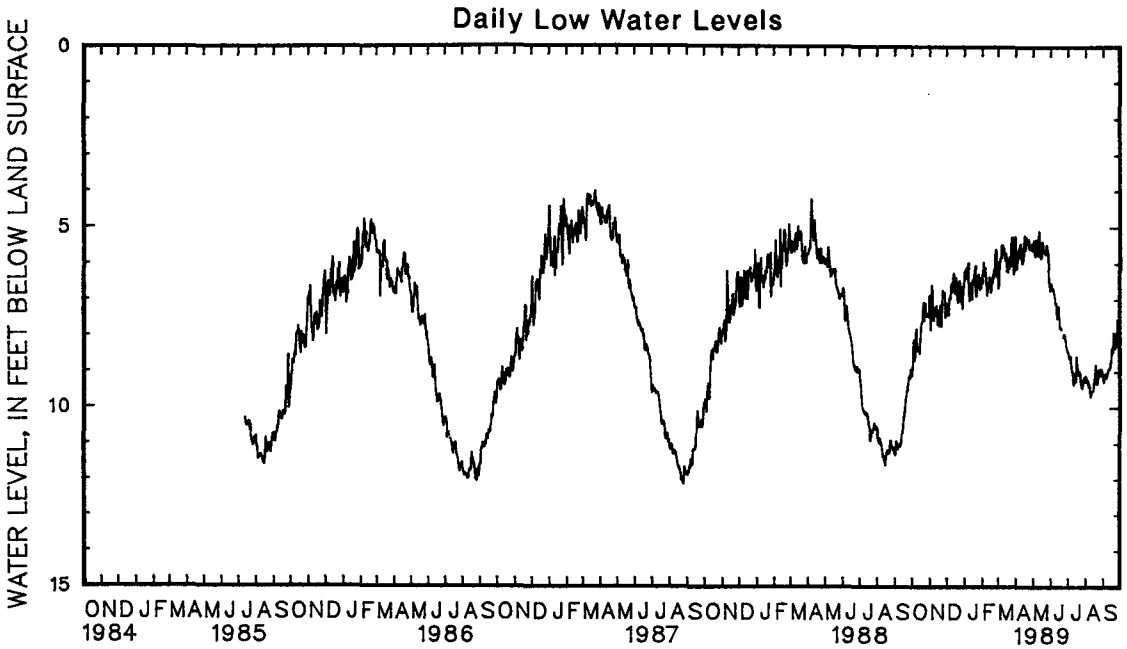
5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--WO Bg 47. SITE ID.--382325075063301. PERMIT NUMBER.--WO-73-0521.
LOCATION.--Lat 38°23'25", long 75°06'33", Hydrologic Unit 02060010, at intersection of MD Rt. 90 and Isle of Wight Rd., Isle of Wight.
Owner: U.S. Geological Survey.
AQUIFER.--Ocean City aquifer of Miocene age. Aquifer code: 122OCNC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 268 ft; casing diameter 4 in., to 258 ft; screen diameter 4 in. from 258 to 268 ft.
INSTRUMENTATION.--Periodic measurements with chalked steel tape September 1975 to July 1985. Equipped with digital water-level recorder--60-minute recording interval from July 1985 to current year.
DATUM.--Elevation of land surface is 5 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of recorder shelf, 4.07 ft above land-surface datum.
REMARKS.--Water levels affected by nearby pumping.
PERIOD OF RECORD.--September 1975 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 4.24 ft below land-surface datum, Feb. 27, 1976; lowest recorded, 12.72 ft below land-surface datum, Aug. 26, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	9.81	9.14	7.81	6.90	7.63	7.11	7.10	6.49	7.19	6.53	7.16	6.12
2	9.73	8.99	7.87	6.99	7.85	7.30	6.89	6.22	7.19	6.54	7.24	6.69
3	9.56	8.79	8.30	7.86	7.88	7.43	6.94	6.40	6.92	5.96	7.24	6.57
4	9.15	8.20	8.21	7.32	7.86	7.40	7.05	6.12	6.94	6.25	6.85	5.89
5	8.66	8.13	7.60	6.61	7.89	7.42	7.21	6.41	7.06	6.20	6.54	5.85
6	9.19	8.69	7.36	6.74	7.76	6.95	7.41	6.38	6.89	6.12	6.74	5.84
7	9.22	8.55	7.81	7.16	7.65	7.00	6.87	6.00	7.00	6.24	6.28	5.51
8	8.88	7.93	8.08	7.53	7.69	6.95	6.82	5.98	7.06	6.37	6.30	5.48
9	8.40	7.83	8.23	7.58	7.55	6.66	7.44	6.73	7.62	6.61	6.28	5.48
10	8.85	8.20	8.05	7.25	7.36	6.57	7.78	7.02	7.46	6.88	6.33	5.57
11	8.98	8.44	8.03	7.38	7.47	6.78	7.63	7.00	7.34	6.65	6.45	5.61
12	8.98	8.35	8.22	7.41	7.45	6.67	7.35	6.59	7.31	6.65	6.60	5.77
13	9.06	8.40	7.98	7.17	7.20	6.32	7.48	6.55	7.17	6.65	6.48	5.90
14	9.05	8.36	8.07	7.35	7.14	6.27	7.47	6.98	7.26	6.37	6.48	5.72
15	9.10	8.50	8.37	7.69	7.11	6.44	7.12	6.53	7.26	6.59	6.60	5.82
16	8.95	8.12	8.12	7.32	7.40	6.82	7.11	6.46	7.33	6.71	6.72	6.07
17	8.63	7.89	7.99	7.37	7.34	6.60	7.19	6.44	7.44	6.79	6.74	6.21
18	8.43	7.69	8.23	7.73	7.12	6.40	7.24	6.57	7.39	6.64	6.77	6.22
19	8.44	7.62	8.24	7.49	7.44	6.60	6.94	6.14	7.09	6.40	6.85	6.23
20	8.28	7.60	7.92	7.15	7.54	6.87	6.94	6.06	7.10	6.51	6.66	5.92
21	8.18	7.18	8.20	7.34	7.72	7.07	7.32	6.77	6.96	6.30	6.40	5.81
22	7.75	7.09	8.47	7.75	7.75	6.97	7.54	6.91	6.90	6.37	6.62	6.07
23	8.20	7.58	8.12	7.13	7.47	6.51	7.36	6.62	6.91	6.00	6.59	5.84
24	8.16	7.44	7.64	6.75	7.28	6.48	7.04	6.34	6.36	5.69	6.09	5.29
25	7.98	7.12	7.62	6.82	7.27	6.63	7.01	6.45	6.38	5.61	6.20	5.27
26	8.13	7.38	7.67	6.82	7.63	7.05	6.82	6.30	6.68	5.92	6.66	5.79
27	8.17	7.45	7.60	6.88	7.61	6.85	7.23	6.43	7.02	6.34	6.69	6.07
28	8.25	7.45	7.54	6.82	7.40	6.66	7.20	6.72	6.70	6.28	6.79	6.06
29	8.26	7.47	8.10	7.50	7.75	7.25	7.31	6.66	---	---	6.92	6.29
30	8.24	7.48	7.99	7.32	7.34	6.78	7.01	6.67	---	---	6.70	5.86
31	8.05	7.41	---	---	7.23	6.66	6.99	6.39	---	---	6.06	5.26
MONTH	9.81	7.09	8.47	6.61	7.89	6.27	7.78	5.98	7.62	5.61	7.24	5.26

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.54	5.72	6.29	5.60	7.35	6.56	9.28	8.45	9.93	9.13	9.80	9.20
2	6.65	6.14	6.05	5.36	7.35	6.56	9.30	8.54	9.98	9.17	9.89	9.29
3	6.66	5.94	6.33	5.71	7.48	6.64	9.47	8.64	10.03	9.29	9.84	9.15
4	6.48	5.85	6.52	5.79	7.51	6.71	9.31	8.63	9.87	9.30	9.71	9.07
5	6.49	5.78	6.37	5.43	7.55	6.70	9.42	8.57	9.95	9.25	9.68	9.06
6	6.40	5.65	6.17	5.34	7.57	6.75	9.53	8.77	9.97	9.42	9.76	9.18
7	6.38	5.55	6.38	5.34	7.63	6.84	9.55	8.92	9.94	9.36	9.78	9.15
8	6.17	5.51	6.51	5.67	7.71	6.93	9.50	8.99	9.99	9.41	9.72	9.06
9	6.51	5.45	6.42	5.77	7.65	7.11	9.56	8.99	10.22	9.69	9.73	9.03
10	6.65	5.84	5.95	5.53	7.74	7.10	9.75	9.22	10.35	9.66	9.70	8.94
11	6.63	5.91	5.92	5.10	7.91	7.31	9.95	9.37	10.19	9.56	9.71	8.93
12	6.57	5.98	6.12	5.40	7.99	7.51	9.84	9.23	10.21	9.56	9.65	8.89
13	6.44	5.89	6.28	5.64	8.04	7.39	9.80	9.07	10.26	9.54	9.66	8.90
14	6.32	5.79	6.31	5.85	7.92	7.17	9.75	9.05	10.30	9.53	9.50	8.74
15	6.30	5.43	6.24	5.79	7.97	7.29	9.97	9.26	10.24	9.43	9.46	8.74
16	5.78	5.23	6.21	5.54	8.18	7.59	9.83	8.58	10.15	9.20	9.24	8.38
17	6.17	5.62	5.98	5.40	8.47	7.77	9.61	8.80	10.11	9.31	9.07	8.34
18	6.05	5.48	6.25	5.60	8.51	7.76	9.93	8.95	9.95	8.89	9.22	8.47
19	5.94	5.28	6.37	5.67	8.56	7.81	9.87	9.08	9.51	8.82	8.90	7.92
20	6.04	5.43	6.33	5.64	8.54	7.81	9.78	9.06	9.83	8.96	8.90	8.22
21	6.08	5.38	6.39	5.70	---	---	9.77	9.00	10.00	9.35	9.15	8.36
22	6.05	5.37	6.43	5.73	---	---	9.84	9.03	10.09	9.32	8.82	7.95
23	6.10	5.33	6.35	5.67	8.67	8.04	9.95	9.26	9.94	9.13	8.90	8.30
24	6.19	5.55	6.33	5.49	8.59	7.97	9.97	9.34	9.79	8.94	8.94	8.26
25	6.19	5.59	6.38	5.61	8.68	7.97	10.05	9.43	9.77	8.94	8.79	7.96
26	6.15	5.51	6.52	5.70	8.66	8.08	10.15	9.46	9.85	9.10	8.27	7.56
27	6.14	5.48	6.65	5.91	8.80	8.14	10.13	9.34	9.80	8.94	8.28	7.69
28	6.16	5.46	6.88	6.12	8.95	8.29	10.06	9.25	9.71	8.93	8.35	7.79
29	6.13	5.62	6.98	6.45	9.16	8.37	9.97	9.17	9.65	8.94	8.37	7.81
30	6.23	5.61	7.15	6.62	9.23	8.44	10.07	9.27	9.72	9.05	8.45	7.64
31	---	---	7.39	6.74	---	---	9.94	9.16	9.75	9.13	---	---
MONTH	6.66	5.23	7.39	5.10	---	---	10.15	8.45	10.35	8.82	9.89	7.56



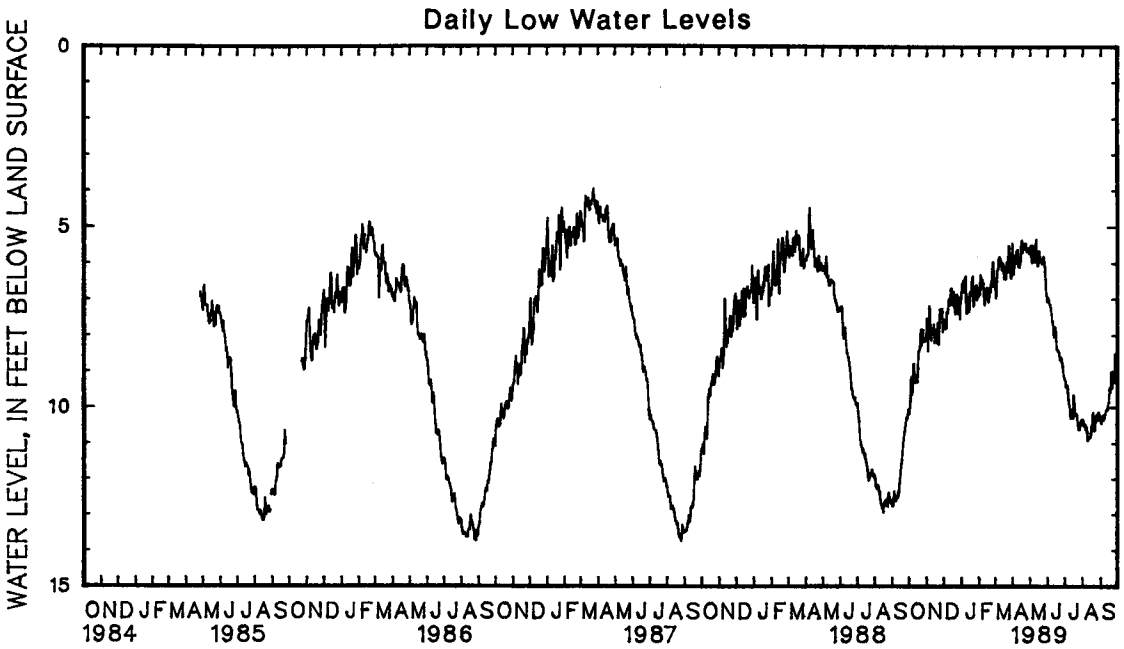
5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--WO Bg 48. SITE ID.--382325075063302. PERMIT NUMBER.--WO-73-0522.
LOCATION.--Lat 38°23'25", long 75°06'33", Hydrologic Unit 02060010, at intersection of MD Rt. 90 and Isle of Wight Rd., Isle of Wight.
Owner: U.S. Geological Survey.
AQUIFER.--Manokin aquifer of Miocene age. Aquifer code: 122MNKN.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 420 ft; casing diameter 4 in., to 410 ft; screen diameter 4 in. from 410 to 420 ft.
INSTRUMENTATION.--Periodic measurements with chalked steel tape September 1975 to April 1985. Equipped with digital water-level recorder--60 minute recording interval from July 1985 to current year.
DATUM.--Elevation of land surface is 5 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of recorder shelf, 3.87 ft above land-surface datum.
REMARKS.--Water levels affected by nearby pumping.
PERIOD OF RECORD.--September 1975 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.92 ft below land-surface datum, Jan. 30 1976; lowest recorded, 14.29 ft below land-surface datum, Aug. 26, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	10.77	10.19	8.35	7.54	8.00	7.56	7.31	6.79	7.39	6.80	7.35	6.43
2	10.66	10.03	8.38	7.60	8.17	7.73	7.11	6.54	7.38	6.85	7.44	6.97
3	10.48	9.82	8.80	8.44	8.20	7.82	7.16	6.70	7.16	6.32	7.44	6.86
4	10.10	9.26	8.73	7.95	8.16	7.77	7.31	6.48	7.16	6.60	7.08	6.23
5	9.61	9.17	8.14	7.18	8.18	7.80	7.48	6.77	7.28	6.55	6.75	6.16
6	10.09	9.65	7.82	7.28	8.06	7.37	7.63	6.73	7.10	6.45	6.91	6.13
7	10.11	9.52	8.25	7.70	7.92	7.38	7.14	6.39	7.19	6.56	6.50	5.84
8	9.78	8.90	8.52	8.07	7.96	7.35	7.09	6.36	7.28	6.71	6.52	5.82
9	9.28	8.79	8.68	8.14	7.85	7.09	7.71	7.09	7.81	6.92	6.51	5.84
10	9.64	9.11	8.52	7.85	7.66	6.98	8.02	7.39	7.67	7.15	6.55	5.90
11	9.76	9.32	8.47	7.93	7.74	7.16	7.89	7.37	7.51	6.97	6.64	5.94
12	9.78	9.24	8.67	7.97	7.76	7.08	7.66	6.97	7.49	6.92	6.78	6.05
13	9.83	9.26	8.40	7.70	7.49	6.73	7.75	6.93	7.35	6.94	6.66	6.18
14	9.80	9.20	8.47	7.88	7.42	6.69	7.76	7.34	7.42	6.67	6.65	5.99
15	9.80	9.29	8.77	8.19	7.39	6.80	7.37	6.91	7.45	6.86	6.76	6.07
16	9.65	8.93	8.54	7.86	7.67	7.15	7.36	6.81	7.55	6.99	6.87	6.31
17	9.31	8.67	8.41	7.89	7.61	6.97	7.42	6.80	7.64	7.08	6.88	6.43
18	9.10	8.45	8.65	8.20	7.40	6.78	7.47	6.86	7.59	6.94	6.88	6.42
19	9.10	8.40	8.67	8.01	7.72	6.96	7.15	6.48	7.27	6.69	6.94	6.43
20	8.95	8.35	8.34	7.67	7.83	7.22	7.13	6.37	7.27	6.78	6.77	6.10
21	8.86	7.95	8.64	7.83	7.95	7.41	7.50	7.02	7.13	6.57	6.48	5.98
22	8.38	7.83	8.85	8.25	8.00	7.34	7.71	7.18	7.09	6.64	6.72	6.24
23	8.81	8.27	8.55	7.69	7.74	6.89	7.55	6.89	7.11	6.33	6.70	6.05
24	8.78	8.14	8.06	7.28	7.52	6.85	7.22	6.65	6.62	6.02	6.24	5.51
25	8.60	7.86	8.01	7.34	7.52	6.98	7.20	6.75	6.63	5.96	6.30	5.51
26	8.72	8.10	8.05	7.32	7.88	7.40	7.05	6.61	6.89	6.24	6.75	5.98
27	8.80	8.17	7.96	7.34	7.87	7.15	7.44	6.70	7.22	6.62	6.77	6.26
28	8.84	8.14	7.92	7.27	7.61	6.95	7.43	7.01	6.94	6.58	6.83	6.23
29	8.84	8.16	8.48	7.90	7.94	7.54	7.49	6.94	---	---	6.95	6.41
30	8.81	8.16	8.38	7.79	7.60	7.09	7.22	6.92	---	---	6.75	5.99
31	8.63	8.07	---	---	7.43	6.95	7.18	6.69	---	---	6.12	5.44
MONTH	10.77	7.83	8.85	7.18	8.20	6.69	8.02	6.36	7.81	5.96	7.44	5.44

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.63	5.84	6.33	5.73	7.61	6.94	9.93	9.24	11.01	10.35	10.86	10.39
2	6.70	6.29	6.10	5.51	7.63	6.97	9.97	9.32	11.07	10.40	10.94	10.46
3	6.71	6.08	6.38	5.87	7.77	7.06	10.14	9.43	11.13	10.52	10.91	10.34
4	6.53	5.99	6.59	5.97	7.83	7.12	10.03	9.41	10.99	10.53	10.78	10.24
5	6.54	5.93	6.45	5.64	7.89	7.15	10.13	9.40	11.07	10.48	10.75	10.23
6	6.43	5.81	6.24	5.53	7.94	7.22	10.28	9.61	11.08	10.63	10.82	10.35
7	6.41	5.68	6.43	5.54	8.01	7.32	10.34	9.78	11.06	10.56	10.84	10.33
8	6.22	5.67	6.58	5.85	8.12	7.43	10.33	9.90	11.13	10.64	10.80	10.23
9	6.54	5.62	6.52	5.96	8.08	7.64	10.41	9.94	11.37	10.93	10.80	10.20
10	6.68	6.00	6.07	5.71	8.19	7.63	10.60	10.14	11.50	10.93	10.75	10.10
11	6.65	6.07	6.05	5.33	8.37	7.86	10.80	10.31	11.36	10.83	10.75	10.09
12	6.61	6.11	6.27	5.63	8.45	8.05	10.71	10.20	11.37	10.83	10.70	10.05
13	6.48	6.02	6.43	5.86	8.48	7.94	10.67	10.06	11.45	10.84	10.69	10.06
14	6.35	5.92	6.46	6.07	8.40	7.77	10.64	10.07	11.49	10.84	10.54	9.88
15	6.33	5.54	6.40	6.00	8.45	7.90	10.88	10.30	11.42	10.75	10.48	9.88
16	5.83	5.36	6.36	5.78	8.69	8.16	10.77	9.66	11.32	10.52	10.28	9.51
17	6.17	5.70	6.16	5.67	8.97	8.38	10.57	9.87	11.29	10.65	10.08	9.46
18	6.09	5.62	6.41	5.87	9.03	8.39	10.91	10.05	11.14	10.21	10.21	9.58
19	5.99	5.45	6.54	5.94	9.08	8.45	10.89	10.23	10.75	10.15	9.91	9.03
20	6.07	5.58	6.49	5.91	9.07	8.45	10.82	10.21	11.03	10.27	9.88	9.29
21	6.09	5.49	6.55	5.97	9.20	8.47	10.85	10.19	11.18	10.65	9.46	9.46
22	6.04	5.46	6.61	6.01	9.24	8.60	10.91	10.23	11.27	10.63	9.83	9.05
23	6.08	5.45	6.54	5.94	9.20	8.68	11.00	10.44	11.10	10.41	9.86	9.32
24	6.17	5.63	6.53	5.81	9.14	8.63	11.03	10.51	10.96	10.24	9.88	9.31
25	6.18	5.67	6.61	5.93	9.24	8.65	11.10	10.59	10.94	10.22	9.73	8.98
26	6.15	5.60	6.74	6.03	9.23	8.76	11.19	10.63	10.98	10.36	9.20	8.54
27	6.14	5.58	6.86	6.23	9.37	8.85	11.18	10.52	10.92	10.19	9.16	8.66
28	6.18	5.57	7.09	6.44	9.55	9.00	11.10	10.43	10.83	10.15	9.19	8.70
29	6.16	5.73	7.19	6.74	9.78	9.13	11.04	10.37	10.75	10.15	9.15	8.70
30	6.29	5.73	7.35	6.89	9.87	9.21	11.13	10.47	10.79	10.24	9.22	8.49
31	---	---	7.61	7.06	---	---	11.00	10.35	10.82	10.33	---	---
MONTH	6.71	5.36	7.61	5.33	9.87	6.94	11.19	9.24	11.50	10.15	10.94	8.49



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--WO Bg 49. SITE ID.--382038075065901. PERMIT NUMBER.--WO-73-0520.
LOCATION.--Lat 38°20'38", long 75°06'59", Hydrologic Unit 020060010, near Keyser Point Rd., West Ocean City.
Owner: U.S. Geological Survey.
AQUIFER.--Ocean City aquifer of Miocene age. Aquifer code: 122OCNC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 243 ft; casing diameter 4 in., to 233 ft; screen diameter 4 in. from 233 to 243 ft.
INSTRUMENTATION.--Periodic measurements with chalked steel tape October 1975 to May 1985. Equipped with digital water-level recorder--60-minute recording interval, May 1985 to current year.
DATUM.--Elevation of land surface is 10 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of recorder shelf, 4.4 ft above land-surface datum.
REMARKS.--Water levels affected by nearby pumping.
PERIOD OF RECORD.--October 1975 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 5.71 ft below land-surface datum, Apr. 18, 1984; lowest recorded, 24.84 ft below land-surface datum, Aug. 16, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

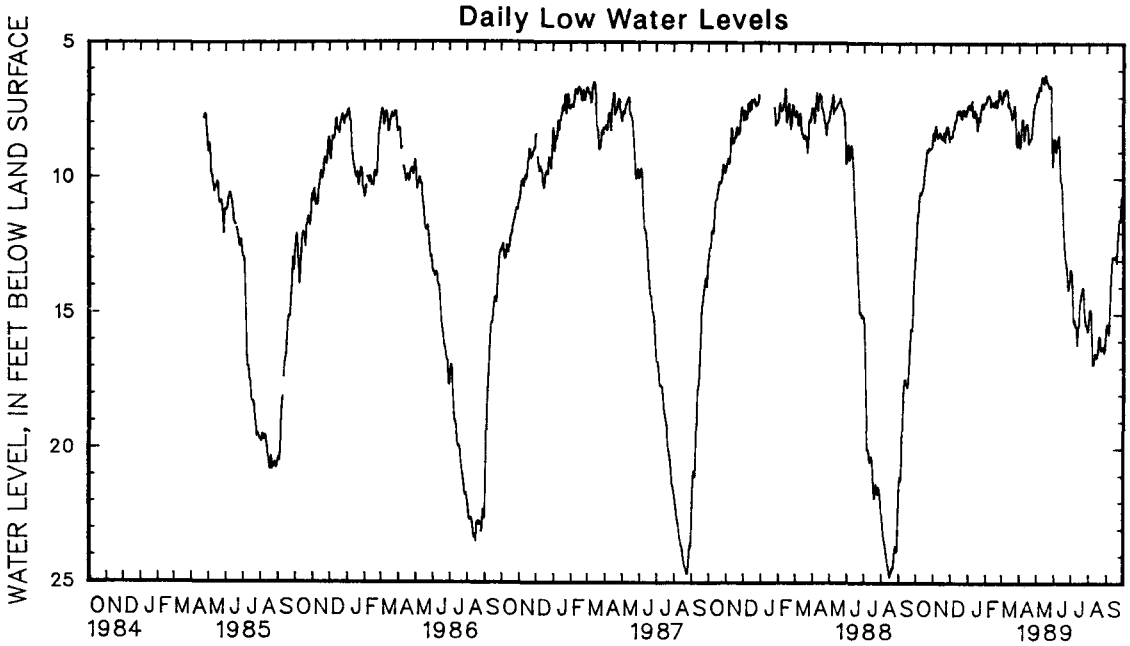
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	13.24	12.93	8.74	8.36	8.61	8.45	7.54	7.35	7.30	7.16	7.22	6.99
2	12.91	12.57	8.50	8.30	8.53	8.45	7.39	7.27	7.31	7.20	7.34	7.20
3	12.56	12.16	8.76	8.52	8.55	8.48	7.42	7.35	7.21	6.95	7.34	7.17
4	12.14	11.63	8.77	8.56	8.50	8.46	7.51	7.29	7.11	6.99	7.18	6.81
5	11.62	11.33	8.55	8.09	8.51	8.43	7.63	7.43	7.14	6.96	6.94	6.76
6	11.46	11.36	8.13	8.04	8.44	8.22	7.66	7.38	7.03	6.91	7.03	6.89
7	11.42	11.19	8.36	8.15	8.27	8.17	7.42	7.24	7.04	6.93	6.97	6.81
8	11.18	10.72	8.48	8.38	8.25	8.14	7.31	7.12	7.09	7.01	6.89	6.70
9	10.72	10.52	8.54	8.49	8.19	7.96	7.65	7.35	7.41	7.06	6.79	6.69
10	10.62	10.54	8.52	8.35	8.01	7.85	7.77	7.67	7.42	7.32	6.82	6.71
11	10.65	10.59	8.49	8.36	7.97	7.86	7.78	7.70	7.37	7.27	6.87	6.73
12	10.62	10.50	8.58	8.44	7.97	7.80	7.71	7.50	7.38	7.25	7.26	6.83
13	10.59	10.46	8.47	8.29	7.81	7.59	7.76	7.47	7.34	7.28	7.48	7.25
14	10.52	10.36	8.44	8.33	7.70	7.51	7.82	7.73	7.30	7.16	7.45	7.32
15	10.42	10.32	8.69	8.43	7.61	7.49	7.76	7.57	7.33	7.20	7.37	7.21
16	10.33	10.09	8.70	8.52	7.73	7.60	8.18	7.77	7.41	7.26	7.49	7.37
17	10.08	9.87	8.53	8.43	7.73	7.55	8.38	8.18	7.42	7.32	7.51	7.41
18	9.85	9.64	8.68	8.53	7.59	7.46	8.40	8.21	7.41	7.19	7.62	7.50
19	9.70	9.52	8.68	8.55	7.73	7.49	8.21	7.95	7.22	7.09	7.82	7.63
20	9.56	9.42	8.55	8.28	7.82	7.66	7.98	7.72	7.33	7.20	7.88	7.80
21	9.46	9.04	8.64	8.33	7.87	7.77	7.97	7.82	7.39	7.35	7.85	7.74
22	9.05	8.92	8.71	8.64	7.91	7.77	8.02	7.87	7.40	7.33	7.76	7.69
23	9.14	9.01	8.67	8.34	7.81	7.55	7.90	7.63	7.38	7.09	7.76	7.62
24	9.15	8.98	8.35	8.12	7.61	7.45	7.65	7.43	7.07	6.72	7.62	7.29
25	9.03	8.85	8.23	8.09	7.61	7.47	7.50	7.38	6.84	6.70	7.83	7.29
26	9.00	8.89	8.22	8.06	7.78	7.64	7.37	7.23	6.96	6.80	8.61	7.84
27	9.02	8.92	8.19	8.06	7.83	7.60	7.46	7.22	7.23	6.96	8.77	8.61
28	9.03	8.88	8.38	8.17	7.65	7.48	7.50	7.40	7.19	7.05	8.84	8.70
29	9.01	8.86	8.76	8.38	7.80	7.66	7.47	7.35	---	---	8.98	8.80
30	8.98	8.83	8.76	8.61	7.76	7.54	7.41	7.26	---	---	8.95	8.51
31	8.88	8.73	---	---	7.55	7.47	7.25	7.16	---	---	8.49	8.23
MONTH	13.24	8.73	8.77	8.04	8.61	7.45	8.40	7.12	7.42	6.70	8.98	6.69

MARYLAND--Continued

WORCESTER COUNTY--Continued

WO Bg 49--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.75	8.37	7.24	7.02	9.29	8.86	13.48	13.38	15.67	15.25	15.55	15.38
2	8.96	8.77	7.03	6.81	8.86	8.54	13.89	13.51	15.23	14.89	15.50	15.38
3	8.98	8.84	6.96	6.88	8.64	8.54	14.61	13.92	14.89	14.84	15.74	15.51
4	8.89	8.62	7.04	6.93	8.97	8.55	15.26	14.63	15.05	14.86	15.89	15.75
5	8.68	8.35	6.97	6.76	9.26	9.00	15.54	15.27	15.91	15.05	15.87	15.44
6	8.35	8.00	6.78	6.60	9.10	8.93	15.54	15.34	16.86	15.93	15.41	14.87
7	8.01	7.79	6.75	6.59	8.90	8.75	15.32	15.22	17.07	16.89	14.84	14.31
8	8.07	7.79	6.82	6.66	8.72	8.63	15.49	15.32	17.05	16.86	14.29	13.80
9	8.59	8.04	6.78	6.70	8.61	8.48	15.58	15.47	17.01	16.89	13.78	13.39
10	8.65	8.57	6.68	6.38	8.73	8.40	15.60	15.44	16.99	16.67	13.38	13.06
11	8.55	8.38	6.35	6.23	9.54	8.77	16.15	15.52	16.66	16.46	13.06	12.87
12	8.36	8.20	6.41	6.25	10.06	9.58	16.30	16.15	16.66	16.55	12.96	12.88
13	8.25	8.04	6.50	6.36	10.32	10.09	16.19	15.81	16.72	16.61	13.00	12.92
14	8.08	8.00	6.52	6.47	10.28	10.12	15.81	15.48	16.72	16.63	13.02	12.94
15	8.07	7.94	6.50	6.42	10.66	10.25	15.55	15.43	16.70	16.55	13.00	12.89
16	8.29	8.06	6.44	6.20	11.22	10.70	15.52	14.76	16.61	16.34	12.96	12.85
17	8.71	8.33	6.25	6.16	11.85	11.26	14.78	14.54	16.52	16.37	13.20	12.93
18	8.79	8.70	6.33	6.18	12.29	11.89	14.63	14.45	16.46	16.01	13.34	13.09
19	8.72	8.63	6.60	6.35	12.66	12.31	14.45	14.27	16.00	15.82	13.06	12.47
20	8.67	8.60	6.55	6.45	13.05	12.66	14.31	14.20	16.17	15.89	12.45	12.20
21	8.65	8.54	6.58	6.45	13.14	13.03	14.22	14.06	16.37	16.18	12.18	11.94
22	8.59	8.50	6.74	6.56	13.29	13.10	14.26	14.02	16.50	16.35	11.92	11.54
23	8.65	8.49	6.76	6.63	13.48	13.27	14.88	14.28	16.53	16.26	11.61	11.51
24	8.53	8.27	6.66	6.56	13.76	13.48	15.15	14.89	16.39	16.26	11.65	11.57
25	8.25	7.99	6.69	6.56	14.12	13.76	15.42	15.16	16.42	16.23	11.63	11.36
26	7.95	7.75	6.73	6.57	14.24	14.12	15.55	15.41	16.40	16.31	11.33	10.91
27	7.72	7.54	7.33	6.69	14.30	14.09	15.56	15.38	16.57	16.43	10.93	10.79
28	7.51	7.37	8.52	7.37	14.08	13.83	15.55	15.43	16.56	16.36	10.82	10.63
29	7.40	7.25	9.50	8.56	13.97	13.76	15.65	15.51	16.38	16.16	10.63	10.52
30	7.28	7.18	9.73	9.54	13.76	13.37	15.90	15.65	16.21	15.89	10.55	10.27
31	---	---	9.63	9.30	---	---	15.90	15.63	15.88	15.53	---	---
MONTH	8.98	7.18	9.73	6.16	14.30	8.40	16.30	13.38	17.07	14.84	15.89	10.27



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--WO Bh 31. SITE ID.--382215075041801. PERMIT NUMBER.--WO-04-9586.
LOCATION.--Lat 38°22'15", long 75°04'18", Hydrologic Unit 020060010, at 44th St, Ocean City.
Owner: Town of Ocean City
AQUIFER.--Ocean City aquifer of Miocene age. Aquifer code: 122OCNC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 278 ft; casing diameter 4 in., to 263 ft; screen diameter 4 in. from 263 to 278 ft.
INSTRUMENTATION.--Periodic measurements with chalked steel tape September 1970 to May 1985. Equipped with digital water-level recorder--60-minute recording interval, May 1985 to current year.
DATUM.--Elevation of land surface is 5.59 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of recorder shelf, 3.47 ft above land-surface datum.
REMARKS.--Water levels affected by nearby pumping.
PERIOD OF RECORD.--September 1970 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 4.83 ft below land-surface datum, May 4, 1982; lowest recorded, 51.03 ft below land-surface datum, July 27, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

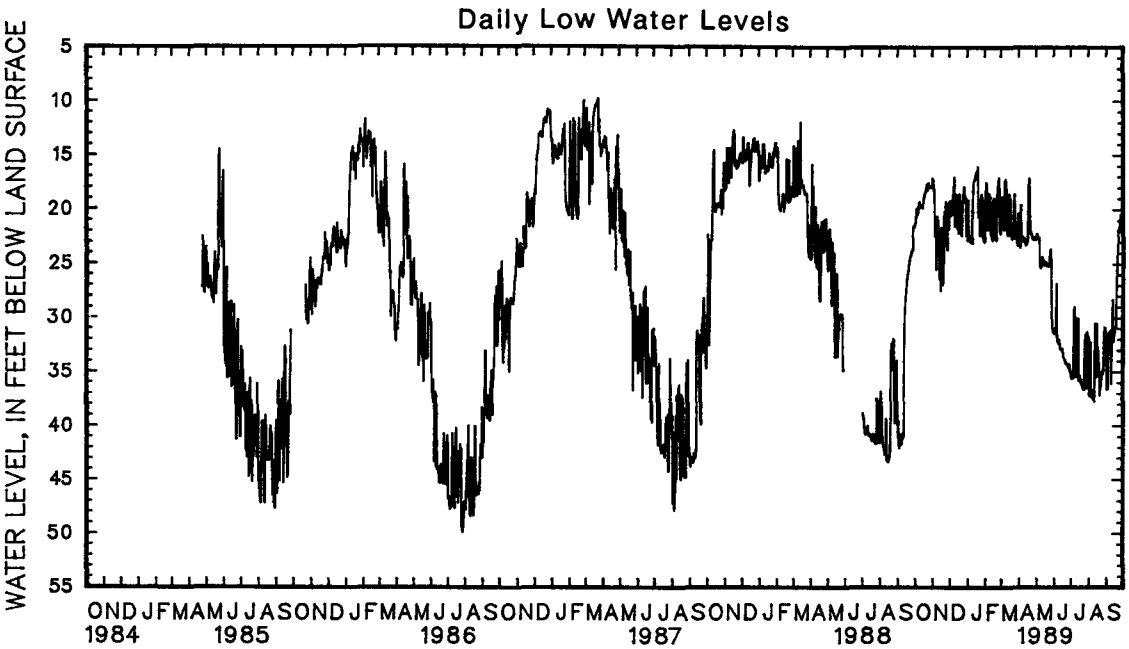
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	22.47	21.44	18.32	17.13	23.56	19.23	23.38	22.86	23.30	19.28	23.10	19.07
2	22.24	21.25	18.63	17.28	24.36	20.13	23.21	19.14	23.19	18.80	23.10	19.24
3	21.91	20.77	18.94	18.25	24.44	20.53	23.69	22.59	22.23	17.52	22.97	18.85
4	21.27	19.95	22.73	18.12	24.68	20.29	24.16	22.51	22.85	17.65	22.76	21.37
5	20.82	19.86	29.26	22.48	24.68	20.42	24.57	23.01	23.02	21.68	23.22	21.72
6	21.21	20.39	29.43	21.13	24.05	19.16	24.59	23.02	23.22	21.85	23.25	21.81
7	21.29	20.14	30.52	25.57	23.76	18.91	23.89	22.43	23.15	18.56	22.76	17.60
8	20.82	19.50	26.15	22.40	23.47	18.09	23.89	22.40	22.59	18.53	20.77	17.31
9	20.27	19.30	28.84	20.63	22.15	17.01	24.49	23.08	23.15	18.63	21.89	17.20
10	20.71	19.72	29.22	22.39	22.83	21.52	24.24	20.17	22.83	18.83	22.22	18.11
11	20.76	19.79	29.99	20.96	22.86	18.80	21.17	18.39	23.57	21.92	23.11	21.35
12	20.76	19.62	30.98	23.24	22.69	18.63	19.00	17.36	23.78	22.42	23.40	21.95
13	20.75	19.62	31.50	26.40	22.28	18.62	18.56	17.31	23.77	22.80	23.29	22.31
14	20.73	19.66	30.65	24.51	22.25	18.77	18.37	17.27	23.80	22.54	22.96	19.13
15	20.82	19.82	31.76	27.50	23.10	21.80	17.77	16.80	23.87	22.71	22.81	18.57
16	20.47	19.24	30.29	23.30	23.17	19.67	17.58	16.61	23.70	19.20	23.43	21.18
17	19.90	18.86	30.25	21.66	23.12	22.19	18.89	16.49	23.59	18.92	23.31	18.95
18	19.69	18.66	28.46	26.96	23.03	18.60	19.10	16.57	23.60	22.50	23.57	22.45
19	19.62	18.43	30.67	26.81	24.24	22.10	21.75	16.04	23.60	22.49	23.60	22.69
20	19.41	18.36	30.58	24.77	24.32	19.43	22.61	20.69	23.85	22.81	23.56	22.45
21	19.35	17.93	28.48	22.08	23.67	19.34	23.09	19.05	23.65	22.50	23.33	22.26
22	18.98	17.70	23.67	20.16	24.05	22.43	23.19	19.37	23.18	19.05	23.64	22.63
23	19.38	18.20	24.52	23.19	24.18	19.23	23.49	22.40	22.34	18.53	23.14	19.38
24	19.41	18.00	24.58	19.30	23.00	19.13	23.41	22.30	21.47	17.83	22.28	18.60
25	19.09	17.56	24.47	23.12	20.25	18.32	23.30	18.78	21.34	17.09	22.82	21.61
26	19.30	17.83	24.85	23.68	22.24	17.91	22.42	18.57	22.07	18.16	23.65	22.27
27	19.26	17.92	24.89	23.72	22.61	19.11	23.00	19.18	23.15	21.74	23.97	22.73
28	19.16	17.89	24.02	19.43	23.22	19.29	23.46	22.58	22.89	22.21	24.16	23.05
29	19.14	17.94	24.08	19.62	23.16	18.95	23.92	22.82	---	---	24.41	23.31
30	19.06	17.95	24.46	21.79	23.12	21.96	23.53	22.98	---	---	23.99	23.08
31	18.72	17.81	---	---	23.67	22.56	23.48	22.63	---	---	23.53	20.35
MONTH	22.47	17.56	31.76	17.13	24.68	17.01	24.59	16.04	23.87	17.09	24.41	17.20

MARYLAND--Continued

WORCESTER COUNTY--Continued

WO Bh 31--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	24.37	22.84	23.88	22.62	32.94	31.50	36.42	35.34	37.85	31.82	37.34	31.54
2	24.62	23.49	23.49	22.23	32.82	31.35	36.98	35.65	38.33	37.16	37.72	36.62
3	24.62	23.27	23.84	22.57	32.94	31.47	37.13	35.66	38.39	37.25	37.65	36.48
4	24.36	19.60	23.95	22.49	32.92	31.03	36.92	35.44	38.02	32.30	37.37	36.60
5	24.22	22.87	26.72	22.74	32.81	26.86	36.85	35.60	38.76	36.20	36.93	31.56
6	24.19	22.78	26.68	25.12	33.29	31.64	36.27	29.54	38.62	37.40	36.99	31.81
7	24.39	22.48	26.91	25.25	33.28	32.17	35.25	29.01	38.21	37.38	36.88	31.28
8	23.95	22.57	26.67	25.36	33.55	32.22	35.77	30.14	38.36	36.81	36.93	31.26
9	24.15	22.63	26.42	25.30	33.19	32.41	36.00	30.02	38.40	37.45	36.91	31.20
10	24.27	22.97	25.82	24.87	33.27	32.09	36.43	35.38	38.48	37.76	36.97	36.12
11	24.18	23.04	25.53	24.40	33.59	32.48	36.69	35.50	38.32	37.61	37.05	32.00
12	24.22	23.25	25.71	24.72	33.94	32.98	36.71	31.40	38.45	30.57	33.67	28.33
13	23.96	23.18	26.03	24.86	33.95	32.97	36.35	30.24	38.63	30.57	33.55	32.26
14	24.04	23.02	26.02	25.12	33.86	32.92	36.39	30.06	38.59	35.52	33.27	31.76
15	23.99	22.68	25.82	24.77	33.78	32.92	36.80	35.81	38.53	30.57	32.94	31.58
16	23.46	22.46	25.90	25.03	34.18	32.91	37.08	35.43	38.51	34.57	32.54	30.95
17	23.51	18.75	25.72	24.89	34.71	33.25	36.81	35.61	38.38	32.78	32.26	30.87
18	19.16	17.36	26.22	25.18	35.02	33.70	37.30	35.85	38.15	33.22	34.35	30.77
19	20.91	17.14	26.24	25.15	35.21	33.77	37.44	36.05	38.02	34.27	34.71	25.62
20	22.53	20.92	26.34	25.18	35.37	33.91	37.36	36.12	38.44	35.36	25.57	23.80
21	23.07	21.93	26.43	25.16	35.48	34.01	37.55	36.27	38.53	37.17	26.63	22.90
22	23.32	22.21	26.36	25.19	35.51	34.33	37.70	36.52	38.42	35.97	23.15	21.84
23	23.62	22.36	26.24	25.08	35.50	34.31	38.01	36.67	38.00	36.35	22.91	21.80
24	23.77	22.70	25.84	23.87	35.50	34.32	37.90	36.65	36.69	35.29	22.68	21.57
25	23.71	22.74	25.45	23.67	35.63	34.33	37.80	32.95	36.16	35.04	22.42	21.14
26	23.72	22.69	28.76	24.70	35.60	34.53	37.84	31.88	36.19	35.21	21.81	20.42
27	23.64	22.71	30.86	28.43	35.58	34.65	37.72	31.54	36.08	34.89	21.35	20.43
28	23.73	22.58	31.86	30.02	35.74	34.37	37.58	36.53	36.62	31.74	21.41	20.36
29	23.64	22.75	32.13	30.95	36.21	34.88	37.49	31.33	36.69	30.89	21.37	20.34
30	23.88	22.69	32.68	31.31	36.31	35.01	37.55	31.58	37.18	34.37	21.35	20.05
31	---	---	32.90	31.34	---	---	38.01	36.38	37.16	31.28	---	---
MONTH	24.62	17.14	32.90	22.23	36.31	26.86	38.01	29.01	38.76	30.57	37.72	20.05



5 YEAR HYDROGRAPH

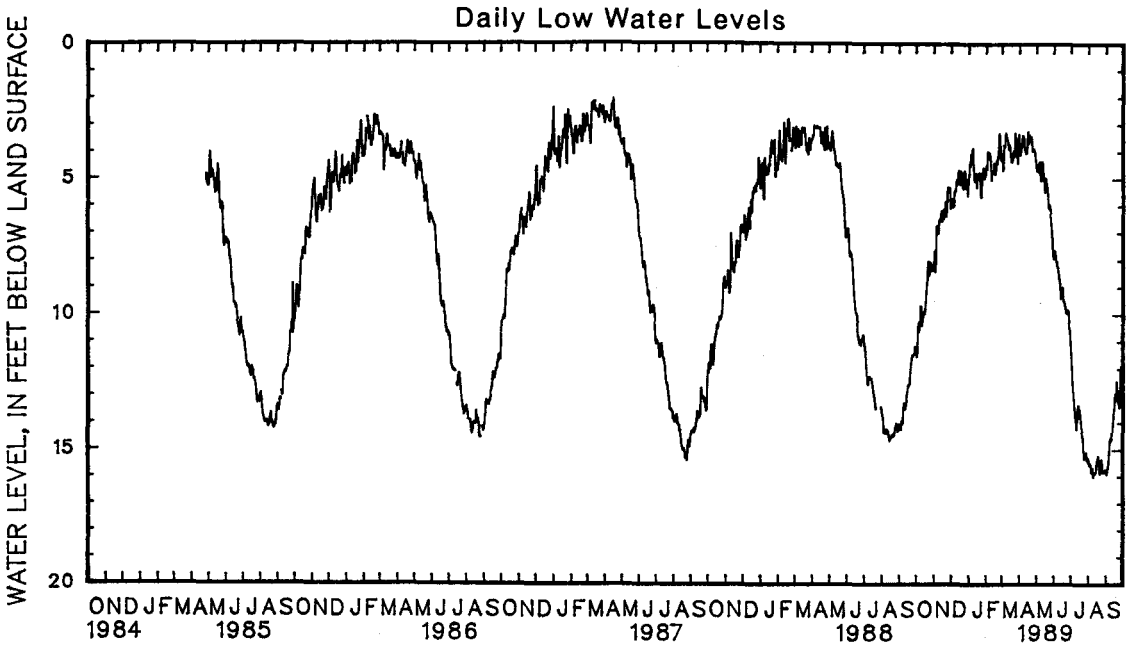
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--WO Bh 34. SITE ID.382443075033501. PERMIT NUMBER.--WO-04-9588.
LOCATION.--Lat 38°24'43", long 75°03'35", Hydrologic Unit 02060010, north side of 100th St., 0.2 mi west of MD Rt. 528, Ocean City.
Owner: Town of Ocean City.
AQUIFER.--Manokin aquifer of Miocene age. Aquifer code: 122MNKN.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 353 ft; casing diameter 4 in., to 337 ft; screened from 337 to 353 ft.
INSTRUMENTATION.--April 1985 to current year, digital water-level recorder--60-minute recording interval. Prior to April 1985, periodic measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 4 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of recorder shelf, 2.86 ft above land-surface datum.
REMARKS.--Water levels affected by nearby pumping.
PERIOD OF RECORD.--December 1972 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 2.54 ft above land-surface datum, Mar. 27, 1973; lowest recorded, 17.04 ft below land-surface datum, Aug. 22, 1989.

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	12.34	11.48	8.78	7.66	6.38	5.72	5.31	4.79	5.44	4.61	5.27	4.08
2	12.44	11.56	8.80	7.73	6.68	5.91	5.18	4.38	5.23	4.61	5.45	4.68
3	12.34	11.39	9.04	8.40	6.62	6.03	5.18	4.48	5.22	3.95	5.28	4.60
4	11.72	10.58	8.86	7.80	6.69	5.94	5.33	4.05	5.30	4.20	4.97	3.88
5	11.12	10.28	8.16	6.74	6.69	5.98	5.73	4.41	5.37	4.15	5.05	3.72
6	11.39	10.63	7.50	6.71	6.50	5.44	5.75	4.41	5.25	4.00	5.11	3.76
7	11.36	10.35	7.75	6.85	6.40	5.47	5.13	3.90	5.41	4.09	4.65	3.31
8	10.85	9.69	7.94	7.00	6.47	5.41	5.15	3.84	5.44	4.26	4.61	3.28
9	10.62	9.69	7.94	6.93	6.34	5.08	5.84	4.62	6.13	5.03	4.65	3.40
10	11.15	10.30	7.70	6.52	6.18	5.01	6.25	5.00	5.96	4.72	4.70	3.49
11	11.28	10.39	7.60	6.52	6.28	5.18	6.10	5.07	5.79	4.74	4.84	3.54
12	11.04	10.06	7.67	6.51	6.18	5.03	5.89	4.76	5.62	4.71	4.89	3.70
13	10.97	9.98	7.30	6.17	5.94	4.73	6.22	4.90	5.45	4.71	4.72	3.86
14	10.85	9.87	7.23	6.24	5.69	4.66	6.20	5.29	5.49	4.39	4.70	3.70
15	10.80	9.95	7.49	6.53	5.81	4.76	5.81	4.93	5.57	4.58	4.84	3.83
16	10.75	9.78	7.16	6.13	6.05	5.19	5.70	4.81	5.72	4.70	5.07	4.12
17	10.47	9.52	7.06	6.14	5.71	4.88	5.93	4.77	5.66	4.79	5.13	4.33
18	10.10	9.14	7.35	6.47	5.72	4.67	5.79	4.95	5.68	4.63	5.17	4.35
19	9.88	8.88	7.21	6.23	6.16	4.85	6.15	4.74	5.35	4.30	5.18	4.30
20	9.67	8.72	6.90	5.85	6.43	5.10	6.35	5.06	5.39	4.41	5.02	4.04
21	9.56	8.22	7.52	5.96	6.43	5.34	6.53	5.65	5.20	4.16	4.85	3.95
22	9.23	8.02	7.60	6.36	6.49	5.23	6.73	5.64	5.12	4.21	5.00	4.15
23	9.65	8.55	7.22	5.76	6.15	4.70	6.37	5.16	5.04	3.81	5.02	3.92
24	9.65	8.43	6.67	5.29	5.91	4.67	5.83	4.77	4.34	3.30	4.48	3.27
25	9.48	8.05	6.59	5.37	5.86	4.79	5.65	4.72	4.43	3.39	4.49	3.43
26	9.46	8.11	6.58	5.36	6.24	5.33	5.30	4.57	4.71	3.84	4.95	3.93
27	9.34	8.20	6.41	5.43	6.23	5.15	5.62	4.73	5.09	4.26	4.99	4.15
28	9.42	8.22	6.23	5.31	5.99	5.00	5.60	4.96	4.79	4.27	5.09	4.16
29	9.27	8.20	6.91	6.07	6.24	5.61	5.66	4.90	---	---	5.19	4.40
30	9.29	8.35	6.77	5.99	5.85	5.16	5.25	4.82	---	---	4.64	3.85
31	9.18	8.36	---	---	5.66	5.00	5.24	4.48	---	---	4.24	3.32
MONTH	12.44	8.02	9.04	5.29	6.69	4.66	6.73	3.84	6.13	3.30	5.45	3.27

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	4.89	3.65	5.62	4.68	8.96	7.67	12.57	11.40	16.47	15.32	16.65	15.84
2	5.03	4.10	5.49	4.45	8.93	7.64	13.01	11.92	16.54	15.51	16.72	15.92
3	5.04	3.96	5.77	4.61	9.13	7.79	13.61	12.45	16.61	15.58	16.65	15.72
4	4.93	3.84	6.07	4.71	9.28	8.01	13.87	12.83	16.52	15.53	16.54	15.67
5	5.03	3.76	5.94	4.39	9.29	8.03	14.25	13.07	16.58	15.60	16.45	15.51
6	4.96	3.52	5.71	4.34	9.30	8.20	14.45	13.39	16.61	15.85	16.11	15.22
7	4.95	3.35	6.05	4.79	9.43	8.25	14.53	13.56	16.58	15.78	15.76	14.94
8	4.62	3.41	6.23	5.05	9.51	8.42	14.54	13.79	16.46	15.69	15.54	14.69
9	4.89	3.50	6.08	5.05	9.51	8.65	14.68	13.89	16.66	16.01	15.41	14.58
10	4.98	3.83	5.60	4.57	9.53	8.71	14.94	14.23	16.86	16.01	15.51	14.62
11	4.94	3.90	5.30	4.35	9.87	9.02	14.91	13.94	16.65	15.86	15.48	14.41
12	4.90	4.04	5.47	4.60	10.02	9.39	14.46	13.62	16.70	15.87	15.25	14.14
13	4.66	4.02	5.81	4.83	10.08	9.26	14.24	13.35	16.81	15.87	15.16	13.93
14	4.61	3.89	6.05	5.25	9.93	9.04	14.21	13.37	16.96	15.82	14.91	13.60
15	4.48	3.52	6.16	5.47	9.91	8.99	14.68	13.81	16.85	15.58	14.76	13.45
16	4.03	3.24	6.01	5.00	10.18	9.32	14.90	13.54	16.73	15.42	14.40	13.05
17	4.46	3.66	5.77	4.96	10.49	9.50	14.81	13.71	16.80	15.55	14.26	12.94
18	4.35	3.53	6.12	5.19	10.61	9.52	15.24	13.99	16.75	15.22	14.44	13.13
19	4.26	3.35	6.29	5.29	10.74	9.66	15.39	14.25	16.43	15.27	14.01	12.47
20	4.43	3.56	6.49	5.55	10.85	9.70	15.46	14.32	16.72	15.53	13.87	12.82
21	4.50	3.47	6.93	6.03	10.97	9.86	15.52	14.48	16.96	15.89	14.19	13.19
22	4.38	3.41	7.15	6.08	11.05	9.96	15.93	14.57	17.04	15.84	14.05	13.02
23	4.59	3.68	7.06	5.95	10.94	9.91	16.16	15.02	16.70	15.50	14.33	13.40
24	4.79	3.95	7.20	6.03	10.74	9.84	16.30	15.33	16.44	15.36	14.24	13.42
25	4.80	3.92	7.43	6.22	10.83	9.83	16.32	15.32	16.56	15.49	14.09	12.82
26	4.73	3.88	7.73	6.54	10.88	9.97	16.33	15.31	16.78	15.84	13.36	12.00
27	4.84	3.93	7.88	6.89	11.26	10.27	16.35	15.14	16.90	15.79	12.87	12.05
28	4.98	4.01	8.25	7.15	11.49	10.49	16.15	15.10	16.92	15.85	12.95	11.94
29	5.14	4.27	8.52	7.58	11.72	10.59	16.33	15.27	16.84	15.80	12.96	12.02
30	5.56	4.46	8.85	7.84	12.12	11.02	16.56	15.41	16.78	15.76	13.03	11.98
31	---	---	9.05	7.93	---	---	16.61	15.44	16.74	15.81	---	---
MONTH	5.56	3.24	9.05	4.34	12.12	7.64	16.61	11.40	17.04	15.22	16.72	11.94

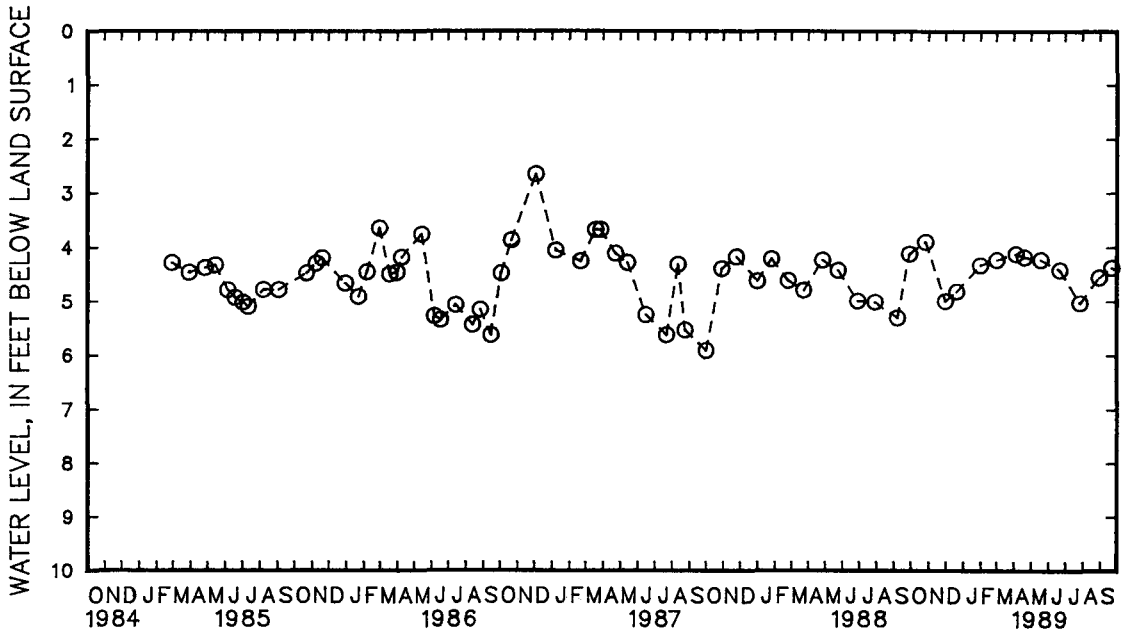


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--WO Bh 84. SITE ID.--382215075041901. PERMIT NUMBER.--WO-73-0095.
LOCATION.--Lat 38°22'15", long 75°04'19", Hydrologic Unit 02060010, west end of 44th St., Ocean City.
Owner: U.S. Geological Survey.
AQUIFER.--Columbia Formation of Pleistocene age. Aquifer code: 122CLMB.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 86 ft; casing diameter 4 in., to 81 ft; screen diameter 4 in. from 81 to 86 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personel.
DATUM.--Elevation of land surface is 5 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of 4 in. coupling, 0.9 ft above land-surface datum.
PERIOD OF RECORD.--April 1973 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.65 ft below land-surface datum, Dec. 3, 1986, lowest measured, 5.92 ft below land-surface datum, Oct. 1, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	3.90	DEC 20	4.82	MAR 1	4.23	APR 19	4.18	JUN 21	4.42	AUG 30	4.56
NOV 30	5.00	JAN 31	4.33	APR 4	4.12	MAY 18	4.23	JUL 27	5.03	SEP 21	4.38

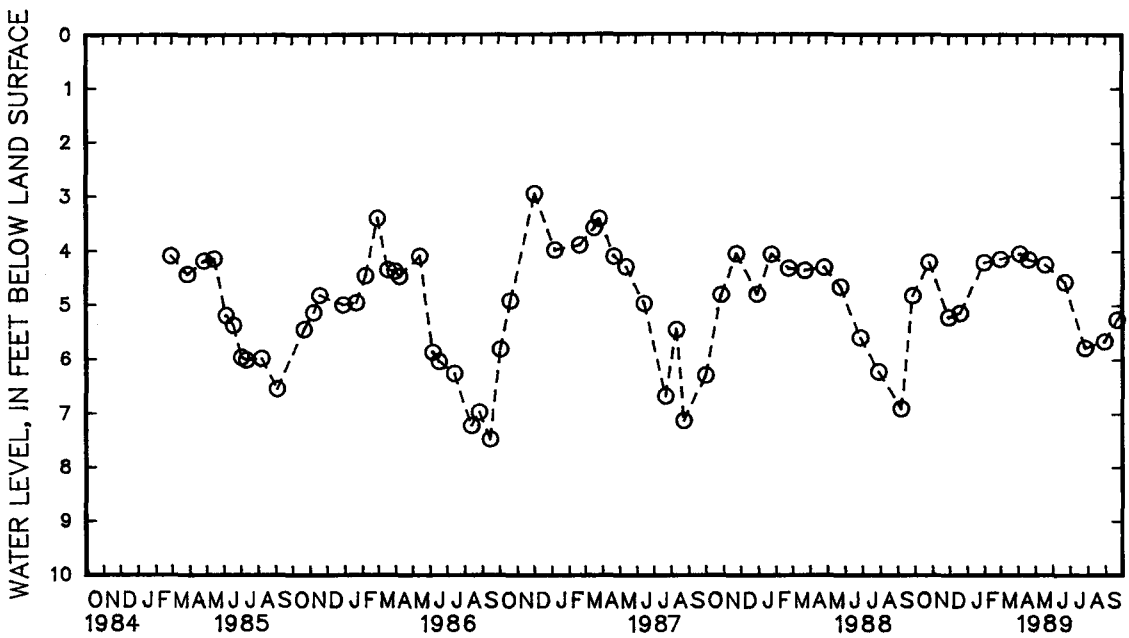


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--WO Bh 85. SITE ID.--382215075041902. PERMIT NUMBER.--WO-73-0094.
LOCATION.--Lat 38°22'15", long 75°04'19", Hydrologic Unit 02060010, west end of 44th St, Ocean City.
Owner: U.S. Geological Survey.
AQUIFER.--Pocomoke aquifer of Miocene age. Aquifer code: 122PCMK.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 195 ft; casing diameter 4 in., to 190 ft; screen diameter 4 in. from 190 to 195 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personel.
DATUM.--Elevation of land surface is 5 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of 4 in. coupling, 2.1 ft above land-surface datum.
PERIOD OF RECORD.--April 1973 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.00 ft below land-surface datum, Apr. 26, 1973; lowest measured, 7.48 ft below land-surface datum, Sept. 15, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	4.20	DEC 20	5.14	MAR 1	4.14	APR 19	4.15	JUN 21	4.56	AUG 30	5.66
NOV 30	5.22	JAN 31	4.20	APR 4	4.04	MAY 18	4.24	JUL 27	5.78	SEP 21	5.26



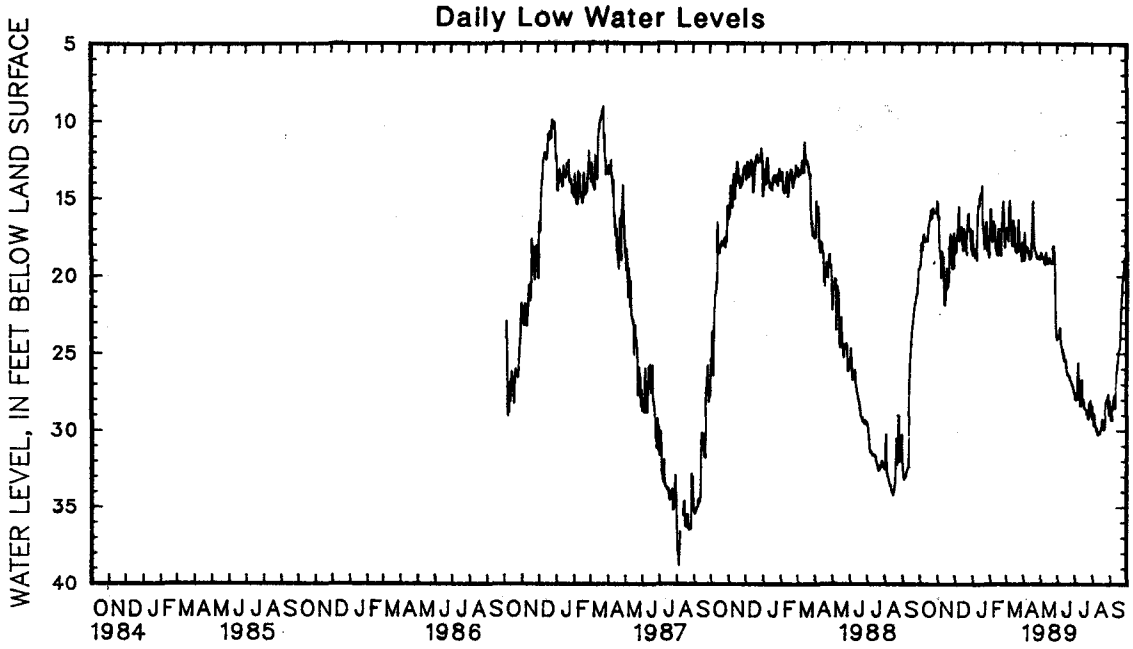
5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--WO Bh 89. SITE ID.--382215075041903 PERMIT NUMBER.--WO-81-1497.
LOCATION.--Lat 38°22'15", long 75°04'19", Hydrologic Unit 020060010, at 44th St, Ocean City.
Owner: Town of Ocean City
AQUIFER.--Manokin aquifer of Miocene age. Aquifer code: 122MNKN.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 500 ft; casing diameter 4 in., to 388 ft; screen diameter 4 in. from 388 to 500 ft.
INSTRUMENTATION.--Equipped with digital water-level recorder--60-minute recording interval, October 1986 to current year.
DATUM.--Elevation of land surface is 5.59 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of recorder shelf, 2.90 ft above land-surface datum.
REMARKS.--Water levels affected by nearby pumping.
PERIOD OF RECORD.--October 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 9.17 ft below land-surface datum, Mar. 24, 1987; lowest recorded, 39.83 ft below land-surface datum, Aug. 6, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	20.32	19.43	16.32	15.20	19.51	17.26	19.12	18.63	19.19	17.32	18.98	17.09
2	20.08	19.19	16.52	15.35	20.04	18.06	18.95	17.10	19.08	16.87	18.97	17.27
3	19.76	18.78	16.83	16.28	20.08	18.49	19.27	18.33	18.15	15.68	18.88	16.91
4	19.20	17.98	18.25	16.19	20.27	18.26	19.71	18.32	18.47	15.78	18.51	17.40
5	18.65	17.87	20.76	18.21	20.30	18.36	20.09	18.78	18.68	17.61	18.93	17.63
6	19.04	18.36	21.10	18.79	20.08	17.54	20.18	18.82	18.97	17.79	19.05	17.75
7	19.11	18.12	22.36	20.12	19.81	17.34	19.54	18.30	19.01	16.58	18.56	15.84
8	18.64	17.48	21.56	19.92	19.58	16.61	19.51	18.27	18.43	16.49	17.30	15.35
9	18.12	17.33	21.21	18.40	18.17	15.56	20.15	18.97	18.98	16.67	17.61	15.17
10	18.53	17.69	21.25	19.65	18.85	17.76	19.99	18.11	18.62	16.80	17.91	15.94
11	18.59	17.79	21.66	18.77	18.99	17.07	18.98	16.58	19.31	17.81	18.72	17.07
12	18.59	17.63	22.73	20.63	18.84	16.96	17.00	15.57	19.50	18.34	19.05	17.71
13	18.60	17.64	23.25	21.83	18.47	16.84	16.51	15.46	19.51	18.65	18.98	18.06
14	18.57	17.64	22.80	20.78	18.33	16.98	16.37	15.52	19.58	18.47	18.66	16.97
15	18.62	17.78	23.51	21.58	19.12	17.94	15.78	14.96	19.66	18.67	18.53	16.46
16	18.36	17.30	22.67	20.83	19.20	17.92	15.62	14.78	19.66	17.26	19.12	17.91
17	17.84	16.90	22.35	19.55	19.15	18.36	15.77	14.67	19.50	16.97	18.93	16.82
18	17.59	16.67	22.01	20.78	19.04	16.99	15.77	14.75	19.33	18.39	19.19	18.25
19	17.51	16.49	22.68	20.68	19.88	18.31	17.40	14.21	19.32	18.35	19.26	18.47
20	17.31	16.40	22.47	20.44	19.89	17.48	18.22	16.61	19.55	18.68	19.21	18.25
21	17.25	15.97	22.49	19.81	19.93	17.37	18.86	17.06	19.45	18.48	19.00	18.10
22	16.80	15.76	20.88	18.15	19.74	18.64	18.88	17.25	19.11	17.04	19.25	18.43
23	17.24	16.28	20.15	19.01	19.85	17.19	19.19	18.25	18.20	16.56	18.87	17.14
24	17.23	16.08	20.26	17.34	18.73	17.02	19.13	18.18	17.38	15.87	18.05	16.40
25	16.97	15.65	20.02	18.89	17.50	16.39	19.15	16.85	17.28	15.23	18.48	17.18
26	17.15	15.92	20.38	19.35	17.96	16.00	18.21	16.57	17.93	16.17	19.15	17.92
27	17.07	15.96	20.49	19.53	18.38	16.99	18.75	17.07	18.95	17.62	19.43	18.40
28	17.07	15.93	19.85	17.49	18.91	17.15	19.15	18.39	18.71	18.18	19.66	18.67
29	17.02	15.95	19.76	17.58	18.94	16.95	19.60	18.63	---	---	19.82	19.03
30	16.94	15.96	20.15	19.50	18.83	17.72	19.27	18.79	---	---	19.39	18.80
31	16.65	15.86	---	---	19.34	18.34	19.28	18.51	---	---	18.98	17.85
MONTH	20.32	15.65	23.51	15.20	20.30	15.56	20.18	14.21	19.66	15.23	19.82	15.17

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	19.72	18.43	19.90	18.83	25.16	23.92	28.82	27.65	30.25	28.44	29.92	28.39
2	19.88	19.02	19.59	18.50	25.15	23.90	29.12	27.99	30.59	29.52	30.28	29.37
3	19.93	18.86	19.90	18.80	25.26	24.01	29.28	28.04	30.70	29.70	30.17	29.27
4	19.77	17.21	20.08	18.77	25.29	23.95	29.10	27.97	30.44	28.93	30.16	29.35
5	19.57	18.44	20.23	18.84	25.09	23.37	29.18	27.99	30.80	29.60	29.67	28.45
6	19.57	18.34	20.17	18.78	25.51	24.01	28.75	26.35	30.85	29.77	29.67	28.64
7	19.71	18.12	20.41	18.92	25.59	24.49	27.68	25.63	30.69	30.00	29.43	28.16
8	19.38	18.19	20.44	19.18	25.79	24.61	28.20	26.76	30.78	29.87	29.26	27.86
9	19.65	18.22	20.32	19.26	25.63	24.94	28.45	26.71	30.93	30.17	29.26	27.73
10	19.78	18.62	19.74	18.79	25.65	24.77	28.93	28.01	31.02	30.31	29.44	28.58
11	19.75	18.72	19.53	18.47	26.02	25.10	29.09	28.42	30.92	30.19	29.56	28.53
12	19.79	18.92	19.66	18.78	26.27	25.48	29.20	28.43	30.99	30.13	28.49	26.40
13	19.52	18.89	19.90	18.95	26.33	25.52	28.72	26.92	31.15	30.22	27.38	26.17
14	19.54	18.76	19.86	19.20	26.29	25.41	28.84	26.76	31.20	30.15	27.08	25.70
15	19.54	18.40	19.74	18.98	26.31	25.44	29.21	28.33	31.14	30.03	26.72	25.45
16	18.92	18.19	19.79	18.95	26.66	25.83	29.44	27.99	31.12	29.89	26.36	24.93
17	19.10	16.66	19.61	18.84	27.10	26.19	29.25	28.15	30.97	29.48	25.99	24.76
18	16.98	15.41	20.02	19.13	27.33	26.27	29.66	28.55	30.85	29.30	26.80	24.70
19	17.01	15.18	20.13	19.10	27.49	26.42	29.77	28.63	30.55	29.36	27.21	23.92
20	18.64	17.10	20.14	19.12	27.57	26.42	29.76	28.64	30.92	29.61	23.84	22.10
21	19.15	18.15	20.24	19.17	27.74	26.47	29.86	28.67	31.05	29.95	22.43	21.24
22	19.33	18.34	20.18	19.14	27.83	26.57	30.05	28.79	30.92	29.90	21.46	20.26
23	19.63	18.46	20.16	18.98	27.79	26.78	30.25	29.15	30.76	29.32	21.21	20.19
24	19.78	18.77	19.82	18.16	27.79	26.78	30.26	29.27	29.68	28.41	21.02	19.98
25	19.77	18.87	19.40	18.06	27.98	26.89	30.26	29.24	29.27	28.11	20.71	19.54
26	19.75	18.80	21.14	18.68	27.98	27.06	30.17	28.55	29.22	28.21	20.09	18.87
27	19.70	18.82	22.98	20.86	28.02	27.10	30.17	28.25	29.08	27.96	19.68	18.87
28	19.78	18.73	24.01	22.37	28.17	27.19	30.14	29.07	29.34	28.18	19.73	18.77
29	19.71	18.92	24.55	23.38	28.44	27.39	29.97	28.07	29.43	27.68	19.65	18.73
30	19.90	18.88	25.05	23.84	28.66	27.54	30.04	28.34	29.93	29.03	19.63	18.44
31	---	---	25.16	24.14	---	---	30.35	29.26	29.95	28.09	---	---
MONTH	19.93	15.18	25.16	18.06	28.66	23.37	30.35	25.63	31.20	27.68	30.28	18.44

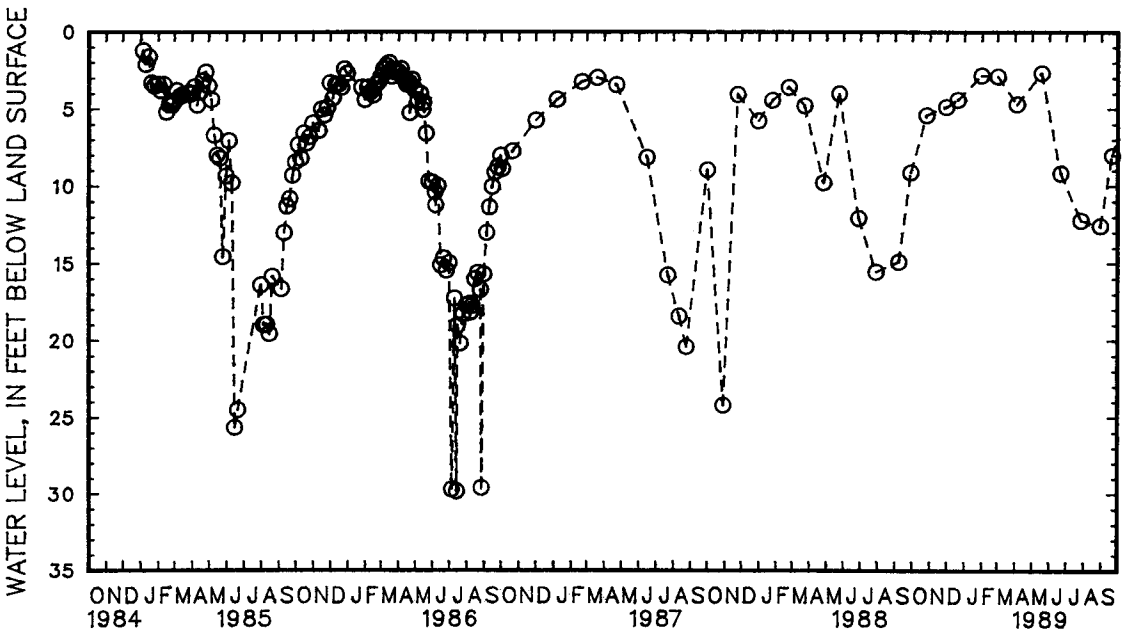


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--WO Cg 72. SITE ID.--381939075052101. PERMIT NUMBER.--WO-73-1304.
LOCATION.--Lat 38°19'39", long 75°05'21", Hydrologic Unit 02060010, at South Division St., Ocean City.
Owner: Town of Ocean City.
AQUIFER.--Manokin aquifer of Miocene age. Aquifer code: 122MNKN.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 450 ft; casing diameter 4 in., to 384 ft; screen diameter 4 in. from 384 to 450 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 4 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of 6 in. flange, 3.2 ft above land-surface datum.
REMARKS.--Water levels affected by nearby pumping.
PERIOD OF RECORD.--January 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.20 ft below land-surface datum, Jan. 5, 1985, lowest measured, 29.85 ft below land-surface datum, July 14, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	5.40	DEC 20	4.40	MAR 1	2.88	MAY 18	2.68	JUL 27	12.25	SEP 20	8.04
NOV 30	4.87	JAN 31	2.82	APR 4	4.70	JUN 21	9.20	AUG 30	12.60		

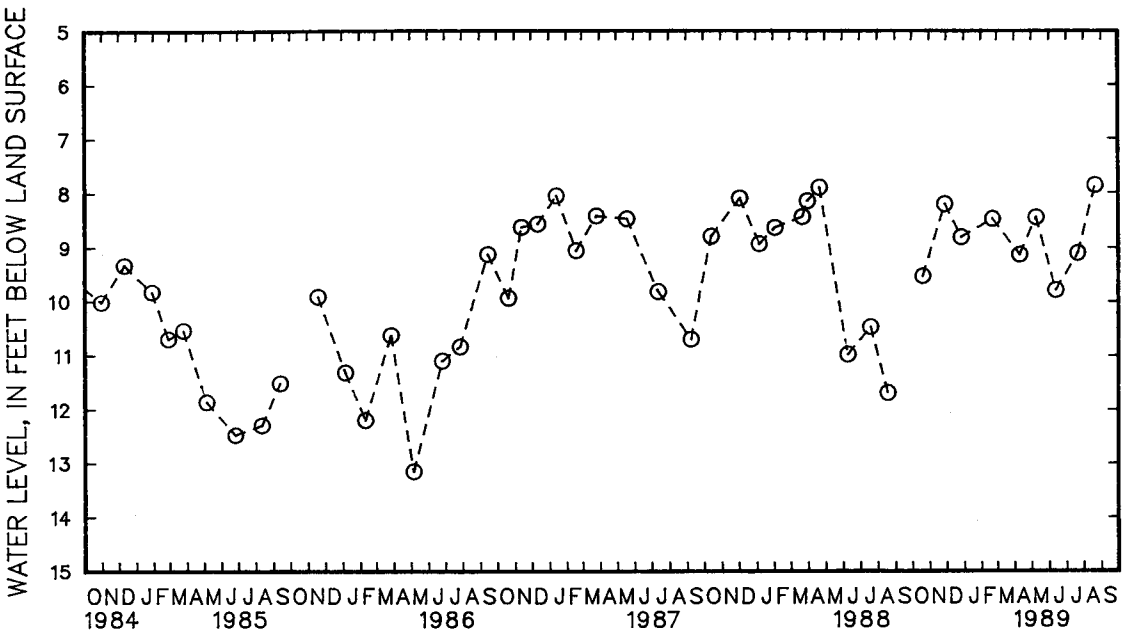


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--WO Dd 7. SITE ID.--381037075234301.
LOCATION.--Lat 38°10'37", long 75°23'43", Hydrologic Unit 02060009, near intersection of Green and Commerce Sts., Snow Hill.
Owner: City of Snow Hill.
AQUIFER.--Manokin aquifer of Miocene age. Aquifer code: 122MNKN.
WELL CHARACTERISTICS.--Drilled, unused, artesian well, depth 290 ft; casing diameter 6 in.; casing length unknown.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 13 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing extension, .40 ft below land-surface datum.
REMARKS.--Water levels affected by nearby pumping.
PERIOD OF RECORD.--July 1958 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.63 ft below land-surface datum, Mar. 8, 1962; lowest measured, 38.02 ft below land-surface datum, Sept. 17, 1970.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	9.53	DEC 27	8.81	APR 10	9.13	JUN 12	9.79	AUG 21	7.85
NOV 28	8.20	FEB 21	8.47	MAY 9	8.44	JUL 21	9.10		

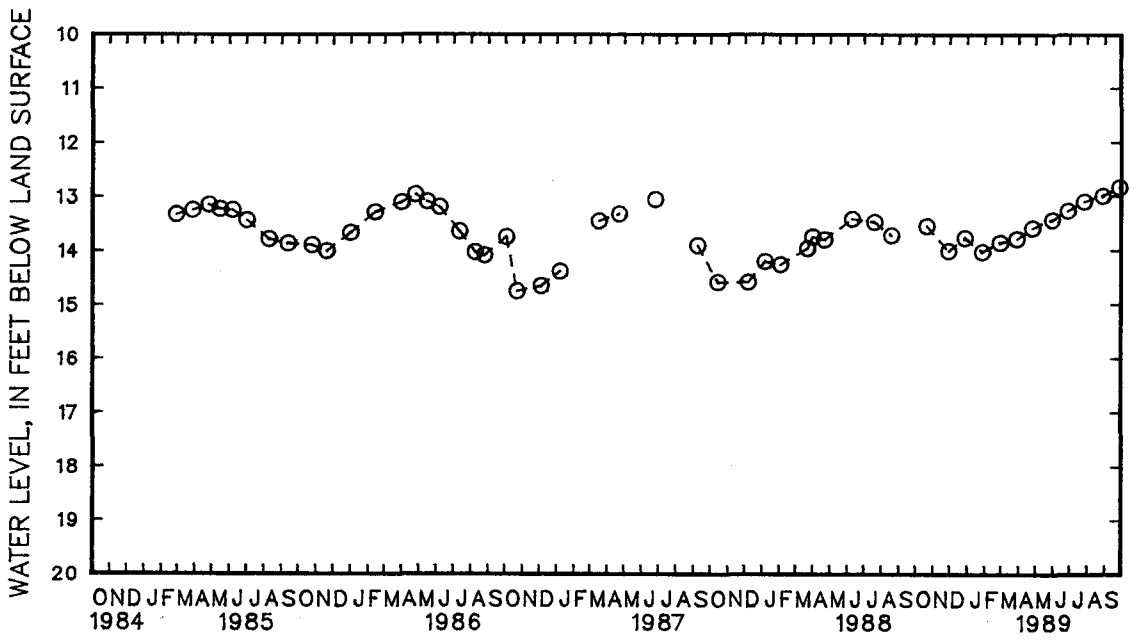


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--WO De 36. SITE ID.--381457075174101. PERMIT NUMBER.--WO-73-0515.
LOCATION.--Lat 38°14'57", long 75°17'41", Hydrologic Unit 02060010, at Newark, Md.
Owner: U.S. Geological Survey.
AQUIFER.--Manokin aquifer of Miocene age. Aquifer code: 122MNKN.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 330 ft; casing diameter 4 in., to 320 ft; screen diameter 4 in. from 320 to 330 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personel.
DATUM.--Elevation of land surface is 30 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of 4 in. coupling, 2.0 ft above land-surface datum.
PERIOD OF RECORD.--September 1975 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.62 ft below land-surface datum, May 20, 1976, lowest measured, 14.75 ft below land-surface datum, Oct. 22, 1975.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	13.56	DEC 27	13.78	FEB 27	13.87	APR 25	13.60	JUN 27	13.28	AUG 28	13.00
NOV 28	14.02	JAN 27	14.04	MAR 28	13.80	MAY 30	13.45	JUL 26	13.11	SEP 27	12.84



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--WO Dg 21. SITE ID.--381427075081102. PERMIT NUMBER.--WO-73-0519.
LOCATION.--Lat 38°14'27", long 75°08'11", Hydrologic Unit 020060010, at Assateague Island State Park.
Owner: U.S. Geological Survey.
AQUIFER.--Manokin aquifer of Miocene age. Aquifer code: 122MNKN.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 310 ft; casing diameter 4 in., to 300 ft; screen diameter 4 in. from 300 to 310 ft.
INSTRUMENTATION.--Periodic measurements with chalked steel tape October 1975, to April 1985. Equipped with digital water-level recorder--60-minute recording interval, April 1985 to current year.
DATUM.--Elevation of land surface is 6 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of recorder shelf, 4.06 ft above land-surface datum.
REMARKS.--Water levels affected by nearby pumping.
PERIOD OF RECORD.--October 1975 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, .66 ft above land-surface datum, Apr. 18, 1984; lowest recorded, 5.25 ft below land-surface datum, Aug. 25, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	3.04	2.54	2.50	2.22	2.01	1.71	1.60	1.26	1.25	.87
2	---	---	2.93	2.49	2.60	2.30	1.73	1.52	1.57	1.29	1.42	1.04
3	---	---	3.26	2.88	2.63	2.39	1.68	1.42	1.47	1.04	1.33	1.11
4	---	---	3.25	2.93	2.73	2.36	1.71	1.18	1.56	1.06	1.21	.78
5	---	---	3.02	2.36	2.70	2.47	1.85	1.34	1.54	1.05	1.04	.62
6	---	---	2.57	2.25	2.60	2.24	1.82	1.28	1.47	.94	1.04	.59
7	---	---	2.85	2.32	2.54	2.16	1.58	1.07	1.48	.95	.95	.44
8	---	---	2.97	2.58	2.55	2.14	1.48	.92	1.54	1.06	1.04	.48
9	---	---	3.04	2.68	2.52	1.99	1.83	1.25	1.88	1.41	1.00	.48
10	---	---	3.03	2.56	2.37	1.89	2.04	1.61	1.97	1.52	.98	.50
11	---	---	2.92	2.52	2.33	1.82	2.11	1.72	1.89	1.49	.99	.56
12	---	---	3.06	2.63	2.38	1.96	2.06	1.50	1.85	1.50	1.06	.59
13	---	---	2.93	2.45	2.24	1.73	2.08	1.54	1.80	1.48	1.06	.71
14	---	---	2.83	2.45	2.08	1.63	2.13	1.75	1.74	1.35	1.06	.69
15	---	---	2.95	2.61	2.02	1.63	1.97	1.68	1.72	1.37	1.08	.74
16	---	---	2.93	2.50	2.23	1.80	1.94	1.60	1.85	1.41	1.27	.87
17	---	---	2.74	2.33	2.11	1.78	2.00	1.59	1.88	1.53	1.31	1.02
18	---	---	2.92	2.52	2.04	1.69	1.90	1.61	1.86	1.45	1.31	1.01
19	---	---	2.89	2.28	2.27	1.68	1.83	1.43	1.70	1.25	1.31	1.01
20	---	---	2.97	2.29	2.39	1.89	1.81	1.32	1.61	1.19	1.31	.82
21	---	---	2.96	2.33	2.52	1.99	2.12	1.56	1.47	.95	1.02	.67
22	---	---	2.70	2.01	2.51	2.07	2.17	1.82	1.26	.91	1.16	.85
23	---	---	2.48	1.97	2.45	1.85	2.15	1.67	1.28	.80	1.20	.79
24	---	---	2.41	1.94	2.21	1.71	1.93	1.46	1.01	.49	.98	.40
25	---	---	2.29	1.91	2.10	1.69	1.78	1.44	.79	.54	.78	.49
26	---	---	2.19	1.79	2.33	2.00	1.65	1.24	.83	.60	1.07	.63
27	3.23	2.78	2.46	1.76	2.43	1.97	1.67	1.32	1.16	.74	1.16	.85
28	3.30	2.84	2.66	2.28	2.20	1.84	1.76	1.50	1.11	.90	1.19	.87
29	3.30	2.90	---	---	2.41	2.14	1.80	1.49	---	---	1.26	.92
30	3.32	2.94	---	---	2.35	1.96	1.63	1.39	---	---	1.08	.61
31	3.25	2.94	---	---	2.13	1.92	1.53	1.31	---	---	.60	.35
MONTH	---	---	---	---	2.73	1.63	2.17	.92	1.97	.49	1.42	.35

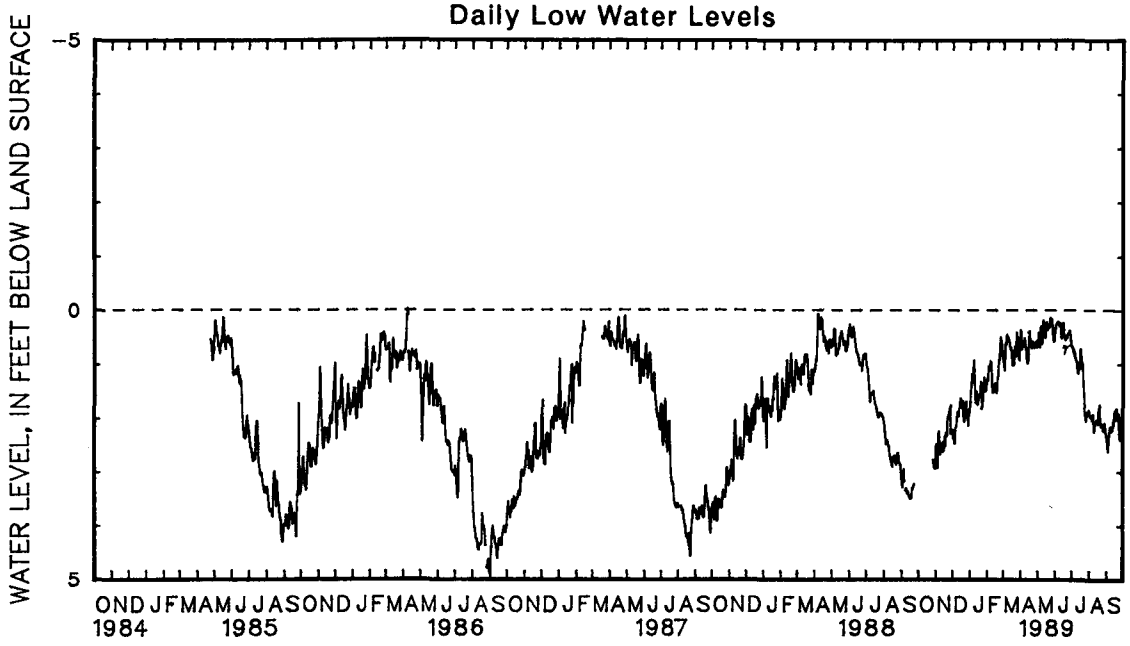
GROUND-WATER LEVELS

MARYLAND--Continued

WORCESTER COUNTY--Continued

WO Dg 21--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	.93	.37	1.00	.61	.94	.39	1.15	.67	2.26	1.85	2.67	2.35
2	1.11	.72	.87	.41	.84	.29	1.16	.69	2.28	1.93	2.82	2.45
3	1.09	.66	.99	.55	.83	.26	1.23	.76	2.32	1.97	2.92	2.54
4	1.06	.62	1.17	.68	.76	.24	1.16	.73	2.30	1.95	2.96	2.62
5	1.12	.65	1.13	.46	.74	.21	1.15	.77	2.27	1.97	2.82	2.43
6	1.13	.57	.93	.29	.63	.20	1.18	.84	2.33	2.04	2.63	2.32
7	1.11	.51	.94	.49	.61	.21	1.18	.88	2.30	1.97	2.54	2.25
8	1.06	.57	1.00	.61	.62	.24	1.19	.92	2.21	1.93	2.48	2.16
9	1.17	.67	1.01	.59	.59	.28	1.21	.95	2.40	2.14	2.47	2.19
10	1.27	.82	.75	.23	.56	.23	1.29	1.02	2.56	2.25	2.56	2.24
11	1.31	.92	.47	.18	.69	.36	1.42	1.15	2.41	2.14	2.61	2.21
12	1.29	.98	.57	.20	.76	.51	1.48	1.17	2.38	2.08	2.58	2.17
13	1.12	.93	.71	.33	.73	.42	1.41	1.04	2.42	2.08	2.63	2.16
14	1.06	.83	.75	.50	.66	.31	1.30	.98	2.44	2.04	2.55	2.04
15	.96	.56	.73	.47	.61	.22	1.42	1.08	2.47	2.05	2.54	2.05
16	.69	.38	.69	.30	.65	.33	1.46	.71	2.51	2.05	2.45	1.89
17	.85	.53	.53	.21	.81	.44	1.20	.77	2.56	2.11	2.37	1.87
18	1.45	.58	.65	.28	.92	.49	1.39	.93	2.58	1.89	2.52	2.03
19	.91	.57	.75	.33	.95	.54	1.43	.97	2.20	1.75	2.43	1.84
20	1.01	.69	.69	.27	.94	.48	1.48	1.03	2.24	1.79	2.21	1.83
21	1.06	.65	.68	.29	.93	.50	1.78	1.35	2.45	2.01	2.37	2.03
22	.96	.58	.70	.30	.93	.51	1.96	1.53	2.59	2.15	2.40	1.96
23	.97	.66	.62	.13	.85	.44	2.15	1.75	2.57	2.11	2.51	1.93
24	1.00	.69	.52	.13	.77	.43	2.26	1.89	2.55	2.11	2.64	2.31
25	1.01	.67	.55	.15	.75	.41	2.37	2.00	2.54	2.13	2.96	2.40
26	.97	.65	.58	.16	.73	.39	2.47	2.05	2.60	2.23	2.51	2.00
27	.92	.63	.64	.27	.74	.37	2.41	1.99	2.68	2.24	2.44	2.07
28	.96	.57	.82	.40	.81	.45	2.31	1.89	2.62	2.18	2.53	2.17
29	.93	.68	.89	.57	1.00	.57	2.29	1.88	2.53	2.09	2.58	2.20
30	1.00	.61	.92	.53	1.11	.65	2.35	1.94	2.57	2.19	2.68	2.33
31	---	---	.98	.55	---	---	2.32	1.88	2.62	2.28	---	---
MONTH	1.45	.37	1.17	.13	1.11	.20	2.47	.67	2.68	1.75	2.96	1.83

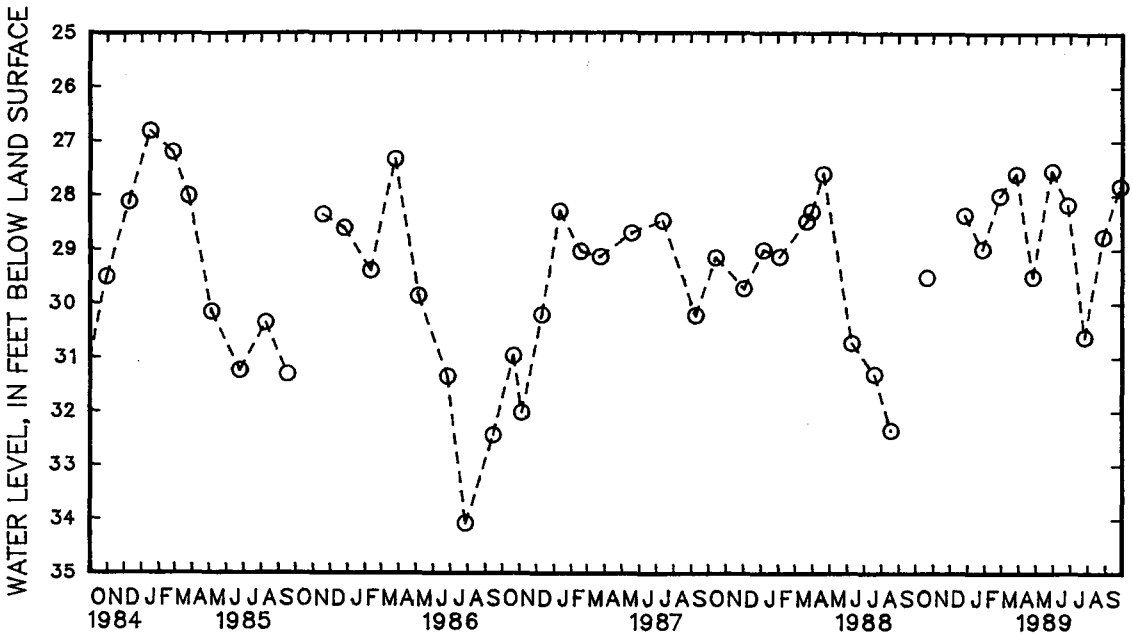


5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

WELL NUMBER.--WO Fb 2. SITE ID.--380408075335701.
LOCATION.--Lat 38°04'08", long 75°33'57", Hydrologic Unit 02060009, nr 7th and Young Sts., Pocomoke City.
Owner: Pocomoke City.
AQUIFER.--Pocomoke aquifer of Miocene age. Aquifer code: 122PCMK.
WELL CHARACTERISTICS.--Drilled, unused, artesian well, depth 130 ft; casing diameter 16 in., to 100 ft; casing diameter 10 in., to 100 ft; screen diameter 9.5 in. from 100 to 130 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 15 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of 1.5 in. casing extension, 3.4 ft above land-surface datum.
REMARKS.--Water level reported 30 ft below land-surface datum Oct. 3, 1947; water level may be affected by nearby pumpage.
PERIOD OF RECORD.--January 1953 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.61 ft below land-surface datum, Feb. 20, 1953; lowest measured, 49.70 ft below land-surface datum, July 1, 1954.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	29.50	JAN 27	28.98	MAR 28	27.60	MAY 30	27.55	JUL 26	30.62	SEP 27	27.83
DEC 27	28.36	FEB 27	28.00	APR 25	29.50	JUN 27	28.17	AUG 28	28.76		



5 YEAR HYDROGRAPH
OCTOBER 1, 1984 THROUGH SEPTEMBER 30, 1989

GROUND-WATER QUALITY RECORDS

REMARK CODES.--The following remark codes may appear with the water-quality data in this section.

PRINTED OUTPUT	REMARK
E	Estimated
>	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 egual to or greater than 15 percent (dominant).
&	Biological organism estimated as dominant.

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

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

KENT COUNTY, DELAWARE

LOCAL IDENT-I-FIER	DATE	TIME	STATION NUMBER	GEO-LOGIC UNIT	SAM-PLING METHOD, CODES	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DEPTH OF WELL, TOTAL (FEET)	DEPTH TO TOP OF SAMPLE INTER-VAL (FT)	DEPTH TO BOT-TOM OF SAMPLE INTER-VAL (FT)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)
Hd14-01	06-14-89	1000	391804075305101	112PCPC	4040	3.30	28.25	25	28	15.0

PUMP OR FLOW PERIOD PRIOR TO SAM-PLING (MIN)	FLOW RATE, INSTAN-TANEOUS (G/M)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)
18	0.8	229	4.0	13.0	0.4	11	7.8	14	1.2

ALKA-LINITY WAT WH TOT IT FIELD MG/L AS CACO3	BICAR-BONATE WATER WH IT FIELD MG/L AS HCO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	BROMIDE DIS-SOLVED (MG/L AS BR)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)
0	0	58	19	0.20	0.070	21	<0.010	0.490	<0.010

NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ANTI-MONY, DIS-SOLVED (UG/L AS SB)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)
0.40	<0.010	390	<1	1	57	1	20	2	<5

COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)
10	<10	250	<10	9	120	<0.1	<10	30	<1

SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137)	RADON 222 TOTAL (PC/L)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/YT-90)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)
<1.0	120	<6	61	7.4	4.5	810	3.7	0.7

Geologic unit (aquifer): 112PCPC - Pleistocene-Pliocene Series

Sampling method: 4040 - Submersible pump

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

NEW CASTLE COUNTY, DELAWARE

LOCAL IDENT-I-FIER	DATE	TIME	STATION NUMBER	GEO-LOGIC UNIT	SAM-PLING METHOD, CODES	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DEPTH OF WELL, TOTAL (FEET)	DEPTH TO TOP OF SAMPLE INTER-VAL (FT)	DEPTH TO BOT-TOM OF SAMPLE INTER-VAL (FT)
Ga55-01	06-14-89	1230	392054075453401	112PCPC	4040	3.75	17.00	14	17
Gb41-08	06-15-89	1000	392123075440801	112PCPC	4040	1.08	11.00	8.0	11
Gb41-09	11-29-88	1000	392120075441901	112CLMB	4040	11.60	15.00	12	15
	06-15-89	1145		112CLMB	4040	4.57	15.00	12	15
Gb41-10	06-15-89	1315	392120075441501	112CLMB	4040	3.40	15.00	12	15
Gb41-11	04-11-89	1600	392119075441301	112CLMB	4040	0.40	13.00	10	13
	06-21-89	1400		112CLMB	4040	0.0	13.00	10	13
Gb41-12	11-29-88	1615	392120075441001	112CLMB	4040	7.00	18.00	15	18
	06-14-89	1300		112CLMB	4040	1.68	18.00	15	18
Gb41-17	06-15-89	1415	392117075441701	112CLMB	4080	0.78	9.00	6.0	9.0
Gb41-19	01-25-89	1130	392125075440801	112PCPC	4080	5.45	10.75	8.2	11
	06-14-89	1045		112PCPC	4040	1.01	10.75	8.2	11
Gb41-20	12-01-88	1100	392128075441201	112CLMB	4080	7.35	11.50	9.0	12
	06-21-89	0840		112CLMB	4040	1.70	11.50	9.0	12
Gb41-21	01-25-89	1030	392127075441401	112CLMB	4080	4.87	11.50	9.0	12
Gb41-21	04-11-89	1400	392127075441401	112CLMB	4040	0.20	11.50	9.0	12
	06-21-89	1240		112CLMB	4040	0.0	11.50	9.0	12
Gb42-03	11-29-88	1430	392131075440801	112CLMB	4040	11.70	23.00	20	23
	04-11-89	1200		112CLMB	4040	4.30	23.00	20	23
	06-20-89	1530		112CLMB	4040	5.45	23.00	20	23
Gb51-08	11-29-88	1140	392058075443801	112CLMB	4040	4.60	8.50	6.0	8.5

LOCAL IDENT-I-FIER	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	PUMP OR FLOW PERIOD PRIOR TO SAM-PLING (MIN)	FLOW RATE, INSTAN-TANEOUS (G/M)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
Ga55-01	82.0	45	--	122	5.4	15.0	6.9	8.7	3.6	5.5
Gb41-08	80.9	15	0.7	121	5.1	15.0	5.1	7.2	3.3	5.7
Gb41-09	84.1	15	0.8	156	5.2	15.5	7.9	13	8.8	6.4
	84.2	20	0.7	175	5.6	14.5	7.3	10	8.9	4.6
Gb41-10	82.8	20	0.7	166	5.3	14.5	6.5	8.0	8.9	3.3
Gb41-11	80.3	25	0.3	230	6.4	11.0	1.9	8.0	4.1	36
	80.3	16	0.8	203	6.2	16.5	51.0	11	5.6	16
Gb41-12	80.8	13	0.5	205	5.1	15.5	8.6	14	10	4.8
	80.8	25	0.6	196	5.5	13.0	8.3	14	9.2	4.4
Gb41-17	78.5	35	0.2	102	5.4	15.5	6.0	6.1	2.1	7.2
Gb41-19	81.2	60	0.2	282	5.7	11.5	4.6	15	7.4	19
	81.2	20	0.6	225	5.5	13.5	5.7	11	7.6	13
Gb41-20	80.7	85	0.2	139	5.8	12.0	8.1	13	4.3	4.6
	9.0	20	0.2	168	5.6	14.5	4.4	15	4.8	4.7
Gb41-21	80.7	30	0.2	110	5.4	10.5	0	6.5	3.5	2.6
Gb41-21	80.7	20	0.4	79	4.7	11.0	0.8	4.6	2.8	2.3
	80.7	15	0.8	133	5.4	14.5	1.7	8.4	4.7	3.9
Gb42-03	84.9	12	0.5	94	5.0	15.0	7.2	4.0	3.2	6.1
	84.9	25	0.4	98	4.4	13.0	10.2	4.2	3.4	6.1
	84.9	30	0.6	97	4.8	14.5	8.4	4.0	3.1	5.9
Gb51-08	72.0	8	1.0	41	4.9	13.0	1.1	1.3	0.51	2.7

Geologic unit (aquifer): 112CLMB - Columbia Formation
112PCPC - Pleistocene-Pliocene Series

Sampling method: 4040 - Submersible pump

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

NEW CASTLE COUNTY, DELAWARE--Continued

LOCAL IDENTIFIER	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3	BICARBONATE WATER WH IT FIELD MG/L AS HCO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	BROMIDE DISSOLVED (MG/L AS BR)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRATE DISSOLVED (MG/L AS N)
Ga55-01	2.2	10	12	4.0	12	0.10	0.020	17	83	--
Gb41-08	4.8	9	--	--	13	<0.10	--	16	--	--
Gb41-09	1.9	7	8	17	30	<0.10	--	12	103	--
	2.4	10	--	--	14	<0.10	--	10	--	--
Gb41-10	3.7	8	--	--	25	<0.10	--	6.5	--	1.19
Gb41-11	2.3	48	58	5.8	31	0.10	--	6.5	124	--
	3.3	42	51	12	14	0.10	0.030	12	104	--
Gb41-12	1.5	2	2	22	19	<0.10	--	19	133	--
	1.3	5	--	--	15	<0.10	--	17	--	--
Gb41-17	1.1	9	--	--	12	0.10	--	21	--	--
Gb41-19	1.7	17	--	20	44	0.10	--	21	169	--
	2.5	15	--	--	14	<0.10	--	23	--	--
Gb41-20	0.50	2	3	6.7	27	<0.10	--	6.5	72	--
	0.40	8	9	5.0	32	<0.10	0.030	6.3	78	--
Gb41-21	1.3	8	--	5.4	21	0.10	--	5.4	61	--
Gb41-21	1.5	8	10	4.4	13	0.10	--	6.2	44	--
	2.0	5	7	2.0	17	<0.10	0.050	5.8	71	--
Gb42-03	1.3	2	2	0.80	11	<0.10	--	16	65	4.69
	1.2	0	0	<1.0	12	0.10	--	15	--	--
	1.1	3	4	<1.0	12	<0.10	0.030	15	--	--
Gb51-08	0.50	1	1	7.9	4.1	0.10	--	12	31	--

LOCAL IDENTIFIER	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ANTIMONY, DISSOLVED (UG/L AS SB)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)
Ga55-01	<0.010	5.30	<0.010	0.60	<0.010	10	<1	<1	69	<0.5
Gb41-08	<0.010	1.60	<0.010	0.50	0.020	--	--	--	--	--
Gb41-09	<0.010	2.20	<0.010	0.30	<0.010	<10	<1	<1	97	<0.5
	<0.010	5.50	<0.010	0.40	<0.010	--	--	--	--	--
Gb41-10	0.010	1.20	0.060	0.30	<0.010	--	--	--	--	--
Gb41-11	<0.010	0.290	0.080	0.50	0.030	70	<1	<1	18	<0.5
	<0.010	0.710	0.190	0.60	0.030	20	<1	<1	32	<0.5
Gb41-12	<0.010	9.40	0.020	0.30	<0.010	20	<1	<1	89	<0.5
	<0.010	8.10	<0.010	13	<0.010	--	--	--	--	--
Gb41-17	<0.010	3.50	0.020	0.30	0.020	--	--	--	--	--
Gb41-19	<0.010	6.50	0.040	0.60	0.020	--	<1	<1	82	<0.5
	<0.010	5.80	0.070	16	0.030	--	--	--	--	--
Gb41-20	<0.010	1.60	0.020	<0.20	<0.010	<10	<1	<1	110	<0.5
	<0.010	1.00	0.020	0.30	<0.010	<10	<1	<1	91	<0.5
Gb41-21	<0.010	1.70	0.010	<0.20	0.010	--	<1	<1	110	<0.5
Gb41-21	<0.010	0.450	0.010	0.20	<0.010	30	<1	<1	100	<0.5
	<0.010	5.00	<0.010	0.50	0.020	20	<1	<1	160	<0.5
Gb42-03	0.010	4.70	<0.010	0.40	<0.010	30	<1	<1	140	<0.5
	<0.010	4.60	<0.010	0.70	<0.010	20	<1	<1	130	<0.5
	<0.010	3.40	<0.010	<0.20	<0.010	20	<1	<1	120	<0.5
Gb51-08	<0.010	<0.100	0.030	0.30	<0.010	190	<1	<1	74	<0.5

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

NEW CASTLE COUNTY, DELAWARE--Continued

LOCAL IDENTIFIER	BORON, DISSOLVED (UG/L AS B)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)
Ga55-01	<10	<1	<5	<3	<10	<8	<10	<4	64	<0.1
Gb41-08	--	--	--	--	--	11	--	--	66	--
Gb41-09	<10	<1	<5	<3	<10	<5	<10	<4	15	--
	--	--	--	--	--	16	--	--	40	--
Gb41-10	--	--	--	--	--	4	--	--	41	--
Gb41-11	<10	<1	<5	<3	<10	90	<10	<4	53	--
	<10	<1	<5	6	<10	960	<10	<4	400	--
Gb41-12	<10	<1	<5	8	<10	7	<10	<4	92	--
	--	--	--	--	--	9	--	--	15	--
Gb41-17	--	--	--	--	--	180	--	--	26	--
Gb41-19	<10	<1	<5	<3	<10	1100	<10	<4	130	--
	--	--	--	--	--	660	--	--	120	--
Gb41-20	<10	<1	<5	<3	<10	370	10	<4	110	--
	<10	1	<5	<3	10	360	<10	<4	120	--
Gb41-21	10	<1	<5	<3	<10	2900	<10	<4	160	--
Gb41-21	10	<1	<5	<3	<10	1900	<10	<4	110	--
	20	2	<5	<3	<10	1400	<10	<4	190	--
Gb42-03	<10	<1	<5	<3	<10	13	<10	<4	60	--
	<10	<1	<5	<3	<10	<7	<10	<4	41	--
	<10	<1	<5	<3	<10	3	<10	<4	40	--
Gb51-08	<10	<1	<5	<3	<10	1500	<10	<4	22	--

	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	GROSS ALPHA, DISSOLVED (UG/L AS U-NAT)	GROSS BETA, DISSOLVED (PCI/L AS CS-137)	RADON 222 TOTAL (PC/L)	GROSS BETA, DISSOLVED (PCI/L AS SR/YT-90)	CARBON ORGANIC DISSOLVED (MG/L AS C)
Ga55-01	<10	<10	<1	<1.0	110	<6	9	0.4	2.9	230	2.5	0.7
Gb41-08	--	--	--	--	--	--	--	--	--	--	--	--
Gb41-09	<10	<10	1	<1.0	100	<6	10	--	--	--	--	0.5
	--	--	--	--	--	--	--	--	--	--	--	--
Gb41-10	--	--	--	--	--	--	--	--	--	--	--	--
Gb41-11	<10	<10	<1	<1.0	17	<6	5	--	--	--	--	4.7
	<10	<10	<1	2.0	44	<6	<3	--	--	--	--	2.1
Gb41-12	<10	<10	<1	<1.0	190	<6	33	--	--	--	--	0.5
	--	--	--	--	--	--	--	--	--	--	--	--
Gb41-17	--	--	--	--	--	--	--	--	--	--	--	--
Gb41-19	<10	<10	<1	<1.0	120	8	250	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--	--	--
Gb41-20	<10	20	<1	<1.0	140	<6	90	--	--	--	--	2.4
	<10	<10	<1	<1.0	170	<6	55	0.4	1.0	340	0.9	0.8
Gb41-21	<10	<10	<1	<1.0	64	<6	26	--	--	--	--	--
Gb41-21	<10	<10	<1	<1.0	50	<6	18	--	--	--	--	0.7
	<10	<10	<1	<1.0	76	<6	14	--	--	--	--	0.5
Gb42-03	<10	<10	<1	<1.0	99	<6	13	--	--	--	--	0.4
	<10	<10	<1	<1.0	99	<6	6	--	--	--	--	0.4
	<10	<10	<1	3.0	100	<6	<3	--	--	--	--	0.4
Gb51-08	<10	<10	<1	<1.0	23	<6	7	--	--	--	--	2.7

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

SUSSEX COUNTY, DELAWARE

LOCAL IDENT-I-FIER	DATE	TIME	STATION NUMBER	GEO-LOGIC UNIT	SAM-PLING METHOD, CODES	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DEPTH OF WELL, TOTAL (FEET)	DEPTH TO TOP OF SAMPLE INTER-VAL (FT)	DEPTH TO BOT-TOM OF SAMPLE INTER-VAL (FT)
Nb24-03	06-27-89	1430	384837075415202	112PCPC	4040	2.66	13.00	11	13
Nd41-04	06-28-89	0900	384630075345101	112PCPC	4040	5.90	20.00	17	20
Of12-01	06-28-89	1330	384458075230601	112PCPC	4040	1.74	31.50	29	32
Of12-02	06-28-89	1200	384458075230602	112PCPC	4040	2.04	18.00	15	18
Pg14-01	06-28-89	1540	383939075163801	112PCPC	4040	5.92	23.00	20	23
Pg15-02	01-24-89	1300	383921075151501	112CLMB	4040	10.38	69.50	66	70
	06-21-89	1600		112CLMB	4040	3.84	69.50	66	70
Pg15-03	01-24-89	1400	383921075151502	112CLMB	4080	10.41	15.00	12	15
	06-21-89	1700		112CLMB	4040	3.78	15.00	12	15
Ph12-05	01-24-89	1000	383906075130301	112CLMB	4040	18.25	68.00	65	68
	06-27-89	1400		112CLMB	4040	15.54	68.00	65	68
Ph12-06	12-07-88	1430	383906075130302	112CLMB	4040	18.35	23.00	20	23
	04-12-89	0910		112CLMB	4040	14.90	23.00	20	23
	06-22-89	1040		112CLMB	4040	15.60	23.00	20	23
Ph12-08	06-27-89	1100	383908075133501	112CLMB	4040	13.17	20.00	17	20
Ph12-09	06-27-89	1210	383915075130801	112CLMB	4040	9.48	17.05	14	17
Ph13-03	06-26-89	1315	383907075124104	112CLMB	4040	--	25.00	20	25
Ph13-04	06-21-89	1045	383903075123005	112CLMB	4040	5.94	25.00	20	25
Ph13-14	06-28-89	1100	383929075123102	112CLMB	4040	12.67	75.00	70	75
Ph13-16	12-08-88	1000	383907075124103	112CLMB	4040	11.73	45.00	40	45
	04-12-89	1400		112CLMB	4040	7.61	45.00	40	45
	06-22-89	1230		112CLMB	4040	9.11	45.00	40	45
Ph13-18	06-26-89	1230	383907075124101	112CLMB	4040	9.09	85.00	80	85
Ph13-23	12-07-88	1530	383903075123004	112CLMB	4040	9.15	45.00	40	45
	06-26-89	1100		112CLMB	4040	3.12	45.00	40	45
Ph13-25	06-26-89	1015	383903075123002	112CLMB	4040	6.08	87.00	80	85
Ph13-28	06-28-89	1115	383929075123104	112CLMB	4040	12.70	40.00	35	40
Ph13-29	12-08-88	1400	383939075120101	112CLMB	4040	4.85	78.00	75	78
	06-27-89	1530		112CLMB	4040	3.84	78.00	75	78
Ph13-30	12-08-88	1230	383939075120102	112CLMB	4040	4.92	15.00	12	15
	06-27-89	1640		112CLMB	4040	4.06	15.00	12	15
Ph13-31	06-27-89	1600	383939075120104	112CLMB	4080	4.17	39.00	34	39
Ph21-07	01-24-89	1130	383853075141201	112CLMB	4080	11.02	15.00	12	15
	04-12-89	1120		112CLMB	4040	6.40	15.00	12	15
	06-22-89	0830		112CLMB	4040	5.92	15.00	12	15
	06-22-89	0835		112CLMB	4040	--	15.00	12	15
Ph22-08	06-21-89	1230	383834075130501	112CLMB	4040	6.70	18.00	15	18
Ph22-09	12-07-88	1145	383845075132101	112CLMB	4040	11.88	63.00	55	63
	12-07-88	1150		112CLMB	4040	--	63.00	55	63
Ph22-10	12-07-88	1000	383845075132102	112CLMB	4040	11.47	13.00	10	13
	06-19-89	1300		112CLMB	4040	6.81	13.00	10	13
Ph22-11	12-06-88	1100	383855075135701	112CLMB	4040	11.20	54.00	51	54
	06-22-89	1015		112CLMB	4040	5.66	54.00	51	54
Ph22-12	12-06-88	0930	383855075135702	112CLMB	4040	10.62	15.00	12	15
	04-12-89	1010		112CLMB	4040	6.20	15.00	12	15
	06-22-89	0930		112CLMB	4040	6.27	15.00	12	15
Ph22-13	06-19-89	1230	383845075132103	112CLMB	4040	6.91	36.00	31	36
Ph22-15	06-27-89	1015	383855075135704	112CLMB	4080	5.83	88.00	83	88
Ph23-08	06-21-89	1330	383854075124801	112CLMB	4040	--	30.00	25	30
Ph23-10	12-06-88	1530	383854075122004	112CLMB	4040	10.77	25.00	20	25
	06-22-89	1245		112CLMB	4040	6.11	25.00	20	25
Ph23-12	06-22-89	1330	383854075122003	112CLMB	4040	6.09	46.00	40	45
Ph23-14	12-06-88	1345	383854075122001	112CLMB	4040	10.25	83.00	78	83
	06-22-89	1130		112CLMB	4040	6.36	83.00	78	83

Geologic unit (aquifer): 112CLMB - Columbia Formation
112PCPC - Pleistocene-Pliocene Series

Sampling method: 4040 - Submersible pump
4080 - Peristaltic pump

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

SUSSEX COUNTY, DELAWARE--Continued

LOCAL IDENT-I-FIER	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	PUMP OR FLOW PERIOD PRIOR TO SAM-PLING (MIN)	FLOW RATE, INSTAN-TANEOUS (G/M)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
Nb24-03	38.0	10	0.7	44	5.2	16.0	7.2	2.5	1.2	3.3
Nd41-04	45.0	18	0.7	310	5.2	18.0	7.9	24	8.4	4.4
Of12-01	48.0	20	0.9	49	5.7	16.5	6.8	2.5	0.60	5.0
Of12-02	48.0	12	0.9	249	4.9	14.5	6.4	11	5.1	20
Pg14-01	41.0	20	0.5	261	4.3	16.0	8.0	14	14	3.5
Pg15-02	34.6	30	1.0	47	5.2	14.0	4.4	--	--	--
	34.5	45	0.7	59	5.7	17.5	3.3	1.7	0.84	6.1
Pg15-03	34.5	25	1.0	51	5.3	13.0	9.2	--	--	--
	34.6	20	0.7	49	4.6	19.5	6.5	1.2	2.4	2.7
Ph12-05	31.9	45	1.0	114	5.6	13.5	7.1	4.0	1.7	13
	31.9	60	0.7	117	5.5	17.5	6.1	4.5	2.0	12
Ph12-06	32.1	10	0.3	181	4.5	16.0	6.8	4.2	5.2	15
	32.1	30	0.6	203	4.4	13.5	7.0	5.4	6.7	15
	32.1	20	0.5	143	4.9	15.5	8.1	3.4	4.0	9.7
Ph12-08	33.1	30	0.7	182	4.4	16.0	7.8	7.6	9.4	6.5
Ph12-09	25.0	30	0.7	203	4.7	15.0	7.3	12	9.1	5.9
Ph13-03	22.4	30	0.7	294	4.5	16.5	6.5	25	6.1	6.1
Ph13-04	19.3	60	0.5	306	4.8	16.0	6.7	22	12	7.1
Ph13-14	25.1	35	--	64	5.8	16.0	4.4	2.7	0.60	8.4
Ph13-16	22.5	53	0.3	299	5.0	13.0	7.1	18	15	7.9
	22.5	30	0.6	303	4.9	13.5	7.8	18	15	8.0
	22.5	25	0.7	314	5.2	14.5	9.3	19	15	8.6
Ph13-18	22.5	60	0.7	114	5.2	17.0	3.8	5.8	1.3	11
Ph13-23	19.3	45	0.4	364	4.9	13.5	7.7	28	14	8.5
	19.3	25	0.7	350	4.7	16.0	6.4	27	13	8.3
Ph13-25	19.3	50	0.7	173	5.0	16.0	5.1	12	3.4	12
Ph13-28	25.1	25	0.7	338	5.6	16.0	6.5	32	10	9.6
Ph13-29	11.3	70	0.5	207	5.4	13.0	5.7	15	4.0	13
	11.3	40	0.7	180	5.4	15.5	5.6	13	3.3	12
Ph13-30	11.3	15	0.4	104	4.6	14.5	3.4	2.9	4.0	7.7
	11.3	25	0.7	96	5.1	16.0	2.8	2.7	3.3	7.9
Ph13-31	11.4	65	0.7	259	5.5	15.5	7.6	21	6.0	13
Ph21-07	31.3	50	0.2	131	5.6	15.0	7.7	2.5	8.5	2.9
	31.3	20	0.7	133	4.7	12.0	8.0	2.8	9.7	2.8
	31.3	30	0.7	134	5.0	14.0	8.8	2.8	9.3	3.0
	31.3	--	--	--	--	--	--	--	--	--
Ph22-08	25.2	30	0.7	333	4.7	18.0	6.6	28	8.8	6.7
Ph22-09	26.0	55	0.4	400	5.0	14.0	1.7	32	11	11
	26.0	--	--	--	--	--	--	--	--	--
Ph22-10	26.6	23	0.1	494	4.7	14.0	6.8	37	9.7	10
	26.6	60	0.7	402	4.7	17.0	7.0	28	7.0	8.0
Ph22-11	28.7	43	0.5	173	4.8	13.5	5.4	8.1	2.8	17
	28.7	35	0.7	170	5.2	15.0	3.7	5.6	2.8	13
Ph22-12	28.6	13	0.5	209	4.2	13.0	3.0	8.9	8.8	6.5
	28.6	15	0.7	277	4.2	10.5	2.9	12	12	8.9
	28.6	12	0.7	248	4.8	13.5	4.8	10	10	8.9
Ph22-13	26.7	20	0.7	462	5.0	16.0	0.3	41	13	13
Ph22-15	28.2	40	0.2	107	5.8	15.5	5.6	5.2	1.1	12
Ph23-08	13.3	50	0.7	212	4.9	16.0	7.1	17	7.8	4.5
Ph23-10	19.1	10	1.0	348	4.0	14.5	1.7	22	19	12
	19.1	20	0.7	470	4.8	14.5	3.4	27	23	12
Ph23-12	19.0	30	0.7	356	5.2	14.5	3.9	24	16	10
Ph23-14	19.2	60	0.5	283	4.7	13.5	3.8	27	7.9	11
	19.2	--	0.7	311	5.2	15.0	1.8	27	8.1	12

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

SUSSEX COUNTY, DELAWARE--Continued

LOCAL IDENTIFIER	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3	BICARBONATE WATER WH IT FIELD MG/L AS HCO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	BROMIDE DISSOLVED (MG/L AS BR)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRATE DISSOLVED (MG/L AS N)
Nb24-03	0.70	3	4	8.0	5.2	<0.10	<0.010	13	37	--
Nd41-04	8.8	2	2	16	20	<0.10	0.010	7.8	171	--
Of12-01	2.0	8	10	6.0	4.9	<0.10	0.010	12	38	--
Of12-02	5.8	4	4	12	52	0.10	0.030	8.3	128	--
Pg14-01	4.2	0	0	30	27	0.10	<0.010	21	--	--
Pg15-02	--	10	--	--	--	--	--	--	--	--
	1.3	10	--	2.0	6.9	<0.10	--	13	39	--
Pg15-03	--	5	--	--	--	--	--	--	--	--
	0.80	1	--	10	4.4	<0.10	--	6.9	32	--
Ph12-05	1.8	9	--	1.2	11	<0.10	--	17	86	--
	1.7	6	--	1.0	12	<0.10	--	17	85	6.79
Ph12-06	7.3	1	1	11	13	0.10	--	12	122	--
	8.1	0	0	10	13	0.10	--	12	136	--
	5.9	2	3	8.0	11	<0.10	0.030	11	91	--
Ph12-08	2.6	0	--	38	20	0.10	--	7.9	98	1.29
Ph12-09	2.3	2	--	11	15	<0.10	0.030	15	134	14.0
Ph13-03	15	0	--	16	32	0.10	--	9.4	177	--
Ph13-04	7.4	1	--	19	21	<0.10	0.030	16	199	--
Ph13-14	1.1	10	--	1.0	7.3	0.10	--	22	58	--
Ph13-16	4.7	4	5	17	19	<0.10	--	17	208	--
	4.4	4	5	16	20	0.10	--	17	195	--
	4.2	3	4	14	20	0.10	0.030	17	207	--
Ph13-18	2.3	7	--	2.0	11	<0.10	--	18	83	--
Ph13-23	7.8	2	2	20	19	0.10	--	16	261	--
	8.4	2	--	19	19	0.10	--	15	231	--
Ph13-25	2.1	5	--	2.0	13	<0.10	--	18	119	--
Ph13-28	2.7	6	--	14	21	<0.10	0.050	20	142	--
Ph13-29	2.3	5	6	1.4	16	<0.10	--	20	150	--
	1.9	5	--	<1.0	15	<0.10	--	19	--	13.0
Ph13-30	1.3	2	3	10	14	<0.10	--	10	63	--
	1.2	3	--	12	13	<0.10	--	9.2	54	--
Ph13-31	10	4	--	<1.0	18	<0.10	--	18	--	--
Ph21-07	5.0	3	--	9.0	10	<0.10	--	10	84	--
	1.1	2	3	9.3	10	0.10	--	10	83	--
	1.1	2	2	10	10	<0.10	0.040	10	83	--
	--	--	--	--	--	--	--	--	--	--
Ph22-08	15	0	--	22	10	<0.10	0.020	10	216	--
Ph22-09	9.9	5	6	10	26	<0.10	--	20	273	33.0
	--	--	--	--	--	--	--	--	--	--
Ph22-10	36	1	1	47	13	0.10	--	5.9	324	--
	30	2	--	38	9.5	0.10	--	4.6	245	--
Ph22-11	2.8	5	7	<0.20	17	<0.10	--	14	--	--
	2.5	5	--	<1.0	16	<0.10	--	13	--	--
Ph22-12	7.4	0	0	6.6	12	<0.10	--	9.0	133	--
	7.1	0	0	4.8	15	0.10	--	7.8	172	--
	6.6	1	1	5.0	13	0.10	0.16	7.8	152	--
Ph22-13	5.4	8	--	42	19	<0.10	--	13	291	32.0
Ph22-15	1.3	10	--	<1.0	9.4	<0.10	--	22	--	5.19
Ph23-08	5.3	0	--	20	12	<0.10	--	10	135	--
Ph23-10	3.3	5	7	22	15	<0.10	--	11	255	--
	2.9	5	--	20	31	0.10	--	11	299	--
Ph23-12	3.1	8	--	16	19	<0.10	--	16	238	--
Ph23-14	2.3	--	--	13	17	<0.10	--	19	211	25.0
	2.4	4	--	9.0	18	<0.10	--	19	213	26.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

SUSSEX COUNTY, DELAWARE--Continued

LOCAL IDENT-I-FIER	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ANTI-MONY, DIS-SOLVED (UG/L AS SB)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)
Nb24-03	<0.010	0.160	0.010	<0.20	<0.010	<10	<1	<1	35	<0.5
Nd41-04	<0.010	18.0	0.020	0.30	<0.010	10	<1	<1	380	<0.5
Of12-01	<0.010	<0.100	<0.010	<0.20	<0.010	<10	<1	<1	40	<0.5
Of12-02	<0.010	2.40	0.230	0.50	<0.010	70	<1	<1	440	<0.5
Pg14-01	<0.010	8.90	0.010	0.50	<0.010	570	<1	<1	500	1
Pg15-02	<0.010	<0.100	<0.010	<0.20	<0.010	--	--	--	--	--
	<0.010	<0.100	<0.010	<0.20	<0.010	--	--	--	--	--
Pg15-03	<0.010	0.370	<0.010	<0.20	<0.010	--	--	--	--	--
	<0.010	0.390	<0.010	<0.20	<0.010	--	--	--	--	--
Ph12-05	<0.010	6.90	<0.010	0.30	<0.010	--	<1	<1	85	<0.5
	0.010	6.80	0.020	0.50	<0.010	--	--	--	--	--
Ph12-06	<0.010	12.0	<0.010	0.60	<0.010	30	<1	<1	430	0.5
	<0.010	14.0	<0.010	0.30	<0.010	50	<1	<1	610	<0.5
	<0.010	8.10	0.030	0.50	<0.010	30	<1	<1	330	<0.5
Ph12-08	0.010	1.30	0.010	0.20	<0.010	--	--	--	--	--
Ph12-09	0.010	14.0	0.020	0.50	<0.010	--	--	--	--	--
Ph13-03	<0.010	15.0	<0.010	0.60	<0.010	--	--	--	--	--
Ph13-04	<0.010	21.0	<0.010	0.30	<0.010	--	--	--	--	--
Ph13-14	<0.010	1.80	<0.010	<0.20	<0.010	--	--	--	--	--
Ph13-16	<0.010	24.0	<0.010	1.2	<0.010	<10	<1	<1	390	<0.5
	<0.010	21.0	<0.010	0.60	<0.010	<10	<1	<1	390	<0.5
	<0.010	24.0	0.030	0.60	<0.010	<10	<1	<1	390	<0.5
Ph13-18	<0.010	6.00	<0.010	0.80	<0.010	--	--	--	--	--
Ph13-23	<0.010	33.0	<0.010	1.1	<0.010	20	<1	<1	310	<0.5
	<0.010	27.0	<0.010	0.70	0.010	--	--	--	--	--
Ph13-25	<0.010	12.0	0.010	0.50	<0.010	--	--	--	--	--
Ph13-28	<0.010	6.30	<0.010	0.60	<0.010	--	--	--	--	--
Ph13-29	<0.010	17.0	0.020	0.60	<0.010	<10	<1	<1	130	<0.5
	0.010	13.0	<0.010	0.30	<0.010	--	--	--	--	--
Ph13-30	<0.010	2.50	<0.010	<0.20	<0.010	20	<1	<1	54	<0.5
	<0.010	0.880	0.020	<0.20	<0.010	--	--	--	--	--
Ph13-31	<0.010	21.0	<0.010	0.80	<0.010	--	--	--	--	--
Ph21-07	<0.010	7.40	0.640	1.0	<0.010	--	<1	<1	36	<0.5
	<0.010	8.00	0.150	0.80	<0.010	40	<1	<1	34	<0.5
	<0.010	8.00	0.040	0.60	<0.010	50	<1	<1	38	<0.5
Ph21-07	--	--	--	--	--	40	--	--	--	--
Ph22-08	<0.010	26.0	<0.010	0.30	<0.010	--	--	--	--	--
Ph22-09	0.010	33.0	2.10	2.4	<0.010	<10	<1	<1	390	<0.5
	--	--	--	--	--	--	--	--	--	--
Ph22-10	<0.010	37.0	<0.010	1.4	<0.010	290	<1	<1	86	<0.5
	<0.010	27.0	<0.010	0.60	<0.010	--	--	--	--	--
Ph22-11	<0.010	11.0	0.030	0.80	<0.010	<10	<1	<1	220	<0.5
	<0.010	7.40	0.030	0.40	<0.010	--	--	--	--	--
Ph22-12	<0.010	16.0	<0.010	1.0	<0.010	280	<1	<1	270	<0.5
	<0.010	23.0	<0.010	1.2	<0.010	470	<1	<1	310	<0.5
	<0.010	20.0	0.040	0.60	<0.010	370	<1	<1	260	<0.5
Ph22-13	0.020	32.0	0.030	0.60	<0.010	--	--	--	--	--
Ph22-15	0.010	5.20	0.010	0.30	<0.010	--	--	--	--	--
Ph23-08	<0.010	13.0	<0.010	0.50	<0.010	--	--	--	--	--
Ph23-10	<0.010	33.0	<0.010	1.3	0.010	70	<1	<1	170	<0.5
	<0.010	38.0	0.030	0.60	<0.010	--	--	--	--	--
Ph23-12	<0.010	29.0	0.040	0.60	<0.010	--	--	--	--	--
Ph23-14	0.010	25.0	<0.010	0.90	<0.010	20	<1	<1	180	<0.5
	0.020	26.0	0.100	0.60	<0.010	--	--	--	--	--

SUSSEX COUNTY, DELAWARE--Continued

LOCAL IDENT-I-FIER	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)
Nb24-03	10	<1	<5	<3	<10	45	10	<4	150	<0.1
Nd41-04	50	<1	<5	5	<10	5	<10	<4	140	<0.1
Of12-01	<10	<1	<5	<3	<10	<5	<10	<4	8	<0.1
Of12-02	<10	<1	<5	4	<10	4	<10	<4	30	<0.1
Pg14-01	30	<1	<5	5	<10	10	<10	<4	39	<0.1
Pg15-02	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	15	--	--	55	--
Pg15-03	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	6	--	--	6	--
Ph12-05	<10	<1	<5	<3	<10	11	<10	<4	12	--
	--	--	--	--	--	5	--	--	7	--
Ph12-06	<10	<1	<5	<3	<10	<3	<10	<4	29	--
	<10	<1	<5	<3	<10	6	<10	<4	32	--
	10	<1	<5	<3	<10	7	<10	<4	23	--
Ph12-08	--	--	--	--	--	<3	--	--	14	--
Ph12-09	--	--	--	--	--	6	--	--	16	--
Ph13-03	--	--	--	--	--	7	--	--	55	--
Ph13-04	--	--	--	--	--	10	--	--	59	--
Ph13-14	--	--	--	--	--	4	--	--	3	--
Ph13-16	<10	<1	<5	4	<10	5	<10	<4	59	--
	20	<1	<5	4	<10	<6	<10	<4	60	--
	10	1	<5	5	<10	5	<10	<4	59	--
Ph13-18	--	--	--	--	--	5	--	--	9	--
Ph13-23	<10	<1	<5	8	<10	<5	<10	<4	45	--
	--	--	--	--	--	6	--	--	45	--
Ph13-25	--	--	--	--	--	11	--	--	12	--
Ph13-28	--	--	--	--	--	5	--	--	8	--
Ph13-29	<10	<1	<5	<3	<10	<3	<10	<4	14	--
	--	--	--	--	--	3	--	--	4	--
Ph13-30	<10	<1	<5	<3	<10	<6	10	<4	16	--
	--	--	--	--	--	12	--	--	13	--
Ph13-31	--	--	--	--	--	7	--	--	5	--
Ph21-07	10	<1	<5	<3	<10	490	<10	<4	220	--
	10	<1	<5	<3	<10	75	<10	<4	180	--
	10	<1	<5	<3	<10	25	<10	<4	120	--
	--	--	--	--	--	20	--	--	--	--
Ph22-08	--	--	--	--	--	7	--	--	30	--
Ph22-09	<10	<1	<5	30	<10	<4	<10	<4	310	--
	--	--	--	--	--	--	--	--	--	--
Ph22-10	<10	<1	<5	<3	<10	17	<10	<4	34	--
	--	--	--	--	--	9	--	--	21	--
Ph22-11	<10	<1	<5	<3	<10	<5	<10	<4	16	--
	--	--	--	--	--	5	--	--	15	--
Ph22-12	20	<1	<5	<3	<10	<5	<10	<4	200	--
	20	<1	<5	<3	<10	<6	<10	<4	260	--
	30	<1	<5	<3	<10	<3	<10	<4	190	--
Ph22-13	--	--	--	--	--	15	--	--	320	--
Ph22-15	--	--	--	--	--	3	--	--	9	--
Ph23-08	--	--	--	--	--	6	--	--	17	--
Ph23-10	<10	<1	<5	9	<10	<7	<10	<4	470	--
	--	--	--	--	--	5	--	--	660	--
Ph23-12	--	--	--	--	--	5	--	--	47	--
Ph23-14	<10	<1	<5	<3	<10	37	<10	4	8	--
	--	--	--	--	--	32	--	--	8	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

SUSSEX COUNTY, DELAWARE--Continued

LOCAL IDENTIFIER	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	GROSS ALPHA, DISSOLVED (UG/L AS U-NAT)	GROSS BETA, DISSOLVED (PCI/L AS CS-137)	RADON 222 TOTAL (PC/L)
Nb24-03	<10	<10	<1	1.0	35	<6	<3	<0.4	1.5	93
Nd41-04	<10	<10	2	<1.0	290	<6	8	0.5	13	400
Of12-01	<10	<10	<1	<1.0	30	<6	4	<0.4	1.5	160
Of12-02	<10	<10	<1	<1.0	150	<6	3	<0.4	7.0	220
Pg14-01	<10	<10	6	<1.0	80	<6	16	0.6	5.4	220
Pg15-02	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
Pg15-03	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
Ph12-05	<10	<10	<1	<1.0	110	<6	6	--	--	--
	--	--	--	--	--	--	--	--	--	--
Ph12-06	<10	<10	<1	<1.0	98	<6	7	--	--	--
	<10	<10	<1	<1.0	130	<6	18	--	--	--
	<10	<10	<1	<1.0	88	<6	8	--	--	--
Ph12-08	--	--	--	--	--	--	--	--	--	--
Ph12-09	--	--	--	--	--	--	--	--	--	--
Ph13-03	--	--	--	--	--	--	--	--	--	--
Ph13-04	--	--	--	--	--	--	--	--	--	--
Ph13-14	--	--	--	--	--	--	--	--	--	--
Ph13-16	<10	<10	1	<1.0	450	<6	11	--	--	--
	<10	<10	1	<1.0	450	<6	17	--	--	--
	<10	<10	1	<1.0	480	<6	5	--	--	--
Ph13-18	--	--	--	--	--	--	--	--	--	--
Ph13-23	<10	<10	1	<1.0	430	<6	49	--	--	--
	--	--	--	--	--	--	--	--	--	--
Ph13-25	--	--	--	--	--	--	--	--	--	--
Ph13-28	--	--	--	--	--	--	--	--	--	--
Ph13-29	<10	<10	<1	<1.0	360	<6	11	--	--	--
	--	--	--	--	--	--	--	--	--	--
Ph13-30	<10	<10	<1	2.0	72	<6	<3	--	--	--
	--	--	--	--	--	--	--	--	--	--
Ph13-31	--	--	--	--	--	--	--	--	--	--
Ph21-07	<10	<10	<1	1.0	58	<6	5	--	--	--
	<10	<10	<1	<1.0	61	<6	7	--	--	--
	<10	<10	<1	1.0	67	<6	<3	--	--	--
	--	--	--	--	--	--	--	--	--	--
Ph22-08	--	--	--	--	--	--	--	--	--	--
Ph22-09	<10	30	<1	<1.0	690	<6	27	--	--	--
	--	--	--	--	--	--	--	--	--	--
Ph22-10	<10	<10	1	<1.0	260	<6	51	--	--	--
	--	--	--	--	--	--	--	--	--	--
Ph22-11	<10	<10	<1	<1.0	200	<6	<3	--	--	--
	--	--	--	--	--	--	--	--	--	--
Ph22-12	<10	<10	<1	<1.0	170	<6	16	--	--	--
	<10	<10	<1	<1.0	230	<6	10	--	--	--
	<10	<10	<1	<1.0	200	<6	4	--	--	--
Ph22-13	--	--	--	--	--	--	--	--	--	--
Ph22-15	--	--	--	--	--	--	--	--	--	--
Ph23-08	--	--	--	--	--	--	--	--	--	--
Ph23-10	<10	<10	<1	<1.0	310	<6	23	--	--	--
	--	--	--	--	--	--	--	--	--	--
Ph23-12	--	--	--	--	--	--	--	--	--	--
Ph23-14	<10	<10	1	<1.0	620	<6	20	--	--	--
	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

SUSSEX COUNTY, DELAWARE--Continued

LOCAL IDENTIFIER	GROSS BETA, DISSOLVED (PCI/L AS SR/YT-90)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)	TRIFLURALIN TOTAL RECOVER (UG/L)	ALACHLOR TOTAL RECOVER (UG/L)	AMETRYNE TOTAL
Pg15-02	--	--	0.03	--	--	--
Pg15-03	--	--	0.05	--	--	--
Ph12-05	--	--	0.08	--	--	--
Ph12-08	--	--	0.03	--	--	--
Ph12-09	--	--	0.23	--	--	--
Ph13-03	--	--	0.46	--	--	--
Ph13-04	--	--	0.46	<0.10	<0.10	<0.10
Ph13-14	--	--	0.04	--	--	--
Ph13-16	--	0.8	--	<0.10	<0.10	<0.10
Ph13-18	--	--	0.35	--	--	--
Ph13-23	--	0.9	--	--	--	--
	--	--	0.43	--	--	--
Ph13-25	--	--	0.20	--	--	--
Ph13-28	--	--	0.30	--	--	--
Ph13-29	--	--	0.17	--	--	--
Ph13-30	--	--	0.03	--	--	--
Ph13-31	--	--	0.27	--	--	--
Ph22-08	--	--	0.68	<0.10	<0.10	<0.10
Ph22-10	--	--	0.49	<0.10	<0.10	<0.10
Ph22-11	--	--	0.19	<0.10	<0.10	<0.10
Ph22-13	--	--	0.50	<0.10	<0.10	<0.10
Ph22-15	--	--	0.08	--	--	--
Ph23-08	--	--	0.19	<0.10	<0.10	<0.10
Ph23-10	--	--	0.73	<0.10	<0.10	<0.10
Ph23-12	--	--	0.50	--	--	--
Ph23-14	--	--	0.47	<0.10	<0.10	<0.10

	ATRAZINE, TOTAL (UG/L)	CYANAZINE TOTAL (UG/L)	DICAMBA (MEDIBEN) (BANVEL D) TOTAL (UG/L)	METHOMYL TOTAL (UG/L)	METOLACHLOR WATER WHOLE TOT.REC (UG/L)	METRIBUZIN WATER WHOLE TOT.REC (UG/L)	PICLORAM (TORDON) (AMDON) TOTAL (UG/L)	PROMETRYNE TOTAL (UG/L)	PROMETONE TOTAL (UG/L)
Ph13-04	0.60	<0.10	--	--	<0.1	<0.1	--	<0.1	<0.1
Ph13-16	0.30	<0.10	--	<0.5	<0.1	<0.1	--	<0.1	<0.1
Ph22-08	0.70	<0.10	--	--	<0.1	<0.1	--	<0.1	<0.1
Ph22-10	0.40	<0.10	--	--	<0.1	<0.1	--	<0.1	<0.1
Ph22-11	<0.10	<0.10	--	--	1.1	<0.1	--	<0.1	<0.1
Ph22-13	0.40	<0.10	--	--	<0.1	<0.1	--	<0.1	<0.1
Ph23-08	0.70	<0.10	--	--	<0.1	<0.1	--	<0.1	<0.1
Ph23-10	0.30	<0.10	--	--	<0.1	<0.1	--	<0.1	<0.1
Ph23-14	<0.10	<0.10	--	--	<0.1	<0.1	--	<0.1	<0.1

	PROPAZINE TOTAL (UG/L)	PROPHAM TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SEVIN, TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	SIMAZINE TOTAL (UG/L)	SIMETRYNE TOTAL (UG/L)
Ph13-04	<0.10	--	--	--	--	--	--	<0.10	<0.1
Ph13-16	<0.10	<0.5	--	--	--	<0.50	--	<0.10	<0.1
Ph22-08	<0.10	--	--	--	--	--	--	0.10	<0.1
Ph22-10	<0.10	--	--	--	--	--	--	0.10	<0.1
Ph22-11	<0.10	--	--	--	--	--	--	<0.10	<0.1
Ph22-13	<0.10	--	--	--	--	--	--	<0.10	<0.1
Ph23-08	<0.10	--	--	--	--	--	--	<0.10	<0.1
Ph23-10	<0.10	--	--	--	--	--	--	<0.10	<0.1
Ph23-14	<0.10	--	--	--	--	--	--	<0.10	<0.1

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

ANNE ARUNDEL COUNTY, MARYLAND

LOCAL IDENTIFIER	DATE	TIME	STATION NUMBER	GEOLOGIC UNIT	SAMPLING METHOD, CODES	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DEPTH OF WELL, TOTAL (FEET)	DEPTH TO TOP OF SAMPLE INTERVAL (FT)
AA Ce 127	06-07-89	1330	390404076300702	211MGTY	4040	10.00	75.00	60
AA Ce 128	06-08-89	1315	390404076300703	211MGTY	4040	10.00	175.00	160
AA Cf 141	06-02-89	1230	390326076295003	125AQUI	4040	69.00	185.00	170
AA Cg 25	01-24-89	1340	390127076240301	112PLSC	4040	16.30	107.00	100
AA De 64	10-31-88	1450	385545076341301	125AQUI	4030	--	55.00	40
	05-09-89	1100		125AQUI	4040	--	55.00	40
AA De 90	11-16-88	1410	385617076322701	125AQUI	4040	16.18	90.00	75
	05-11-89	1000		125AQUI	--	--	90.00	75
AA De 140	01-19-89	1000	385920076322401	125AQUI	4040	37.38	45.00	32
AA De 156	01-18-89	1130	385927076321703	125AQUI	4040	11.96	39.00	24
	03-29-89	1130		125AQUI	4020	11.70	39.00	24
AA De 157	01-18-89	1120	385927076321702	125AQUI	4040	11.49	24.00	10
	03-29-89	1330		125AQUI	4020	11.37	24.00	10
AA De 163	10-25-88	1330	385731076313001	125AQUI	4040	26.64	48.00	44
	05-02-89	1530		125AQUI	4040	25.00	48.00	44
AA De 164	11-02-88	1545	385715076321301	125AQUI	4040	24.97	82.00	72
AA De 165	10-25-88	1100	385600076305601	125AQUI	4040	30.65	50.00	43
	05-04-89	1300		125AQUI	4040	30.00	50.00	43
AA De 166	11-16-88	0900	385711076310801	125AQUI	4040	13.95	55.00	48
	05-12-89	1325		125AQUI	4040	12.00	55.00	48
AA De 167	10-27-88	1150	385709076331101	125AQUI	4040	4.44	42.00	35
	05-11-89	1230		125AQUI	4040	4.00	42.00	35
AA De 168	05-05-89	1400	385647076315501	125AQUI	4040	8.00	43.00	36
AA De 173	11-16-88	1045	385628076323101	125AQUI	4040	33.97	70.00	65
	05-09-89	1320		125AQUI	4040	32.00	70.00	65
AA De 174	10-31-88	1210	385632076325901	125AQUI	4040	14.66	50.00	45
	05-12-89	1510		125AQUI	4040	14.00	50.00	45
AA De 175	11-02-88	1330	385518076312501	125AQUI	4040	--	83.00	65
AA De 176	11-16-88	0930	385740076345601	125AQUI	4040	71.55	110.00	103
	05-12-89	1420		125AQUI	4040	70.00	110.00	103
AA De 179	10-27-88	1135	385726076330801	125AQUI	4040	37.16	65.00	60
	05-02-89	1200		125AQUI	4040	36.00	65.00	60
AA De 180	10-27-88	1030	385706076324701	125AQUI	4040	27.15	80.00	70
	05-05-89	1445		125AQUI	4040	25.00	80.00	70
AA De 181	10-27-88	1130	385726076325202	125AQUI	4040	35.45	100.00	90
	05-12-89	1545		125AQUI	4040	34.00	100.00	90
AA De 182	10-31-88	1230	385606076323101	125AQUI	4040	7.24	60.00	55
	05-09-89	1225		125AQUI	4040	2.35	60.00	55
AA De 184	11-02-88	1220	385520076321601	125AQUI	4040	14.66	123.00	103
	05-15-89	1045		125AQUI	4040	15.00	123.00	103
AA De 185	10-28-88	1020	385642076301801	125AQUI	4040	38.02	87.00	80
	05-05-89	1320		125AQUI	4040	37.00	87.00	80
AA De 187	11-16-88	1130	385521076305801	125AQUI	4040	20.90	40.00	35
	05-09-89	--		125AQUI	4040	--	40.00	35
AA De 188	11-16-88	1150	385519076305701	125AQUI	4040	7.91	50.00	45
AA De 190	10-31-88	1250	385547076325301	125AQUI	4040	10.45	58.00	53
AA De 191	11-17-88	1130	385750076325201	125AQUI	4040	29.87	57.00	53
	05-05-89	0940		125AQUI	4040	30.00	57.00	53
AA De 193	05-24-89	1250	385628076323601	211MNMT	4040	39.00	150.00	140
AA De 194	05-23-89	1215	385628076323602	125AQUI	4040	38.00	97.00	82
AA De 195	04-05-89	1300	385628076323603	125AQUI	4040	36.10	65.00	60
AA De 198	05-10-89	1210	385521076305701	125AQUI	4040	26.00	115.00	108
AA Df 32	10-06-88	1500	385653076273101	125AQUI	4030	--	65.00	48
AA Df 86	10-19-88	0920	385518076282702	125AQUI	4040	7.60	49.00	44
	04-27-89	1359		125AQUI	4040	5.00	49.00	44
AA Df 98	10-20-88	1020	385550076292101	125AQUI	4040	11.32	40.00	33
	05-16-89	1035		125AQUI	4040	10.00	40.00	33
AA Df 103	01-25-89	1215	385623076274401	125AQUI	4040	25.06	46.00	39
AA Df 104	10-18-88	0915	385623076274402	125AQUI	4040	27.33	90.00	83
	04-26-89	1050		125AQUI	4040	25.00	90.00	83
AA Df 105	10-18-88	1020	385637076272301	125AQUI	4040	10.55	58.00	48
	04-25-89	1430		125AQUI	4040	9.00	58.00	48
AA Df 107	10-19-88	1100	385622076272001	125AQUI	4040	39.51	95.00	88
	04-26-89	1130		125AQUI	4040	38.00	95.00	88
AA Df 108	11-29-88	1530	385640076293701	125AQUI	4040	34.03	48.00	43
	05-05-89	1245		125AQUI	4040	33.00	48.00	43
AA Df 109	10-18-88	1150	385502076274001	125AQUI	4040	6.45	62.00	57
	04-27-89	1310		125AQUI	4040	6.00	62.00	57

Geologic unit (aquifer): 112PLSC - Pleistocene Series
125AQUI - Aquia Formation
211MGTY - Magothy Formation
211MNMT - Monmouth Formation

Sampling method: 4020 - Bailer
4030 - Suction pump
4040 - Submersible pump

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

ANNE ARUNDEL COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DEPTH TO BOTTOM OF SAMPLE INTERVAL (FT)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	PUMP OR FLOW PERIOD PRIOR TO SAMPLING (MIN)	FLOW RATE, INSTANTANEOUS (G/M)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	COLOR (PLATINUM-COBALT UNITS)	OXYGEN, DISSOLVED (MG/L)
AA Ce 127	70	11.0	180	38	113	5.2	13.0	10	--
AA Ce 128	170	11.0	195	65	114	4.1	13.5	25	--
AA Cf 141	180	60.0	180	30	195	6.2	13.5	150	--
AA Cg 25	107	10.0	130	1.4	105	6.4	13.5	--	--
AA De 64	55	30.0	15	10	580	7.3	--	--	--
	55	30.0	15	10	510	7.1	--	--	--
AA De 90	90	23.0	5	50	324	7.4	--	--	--
	90	23.0	5	50	380	6.9	--	--	--
AA De 140	42	85.0	--	0.2	33	5.1	14.0	--	8.5
AA De 156	34	55.9	--	0.5	156	5.3	17.0	--	4.0
	34	55.9	90	0.6	154	5.0	15.5	--	0.5
AA De 157	20	55.7	--	0.3	148	5.3	16.0	--	2.8
	20	55.7	60	--	101	5.3	15.0	--	2.6
AA De 163	48	29.9	15	10	72	4.9	14.5	--	--
	48	29.9	15	10	70	5.8	--	--	--
AA De 164	82	26.7	10	10	76	6.3	--	--	--
AA De 165	50	30.8	15	10	136	4.6	15.0	--	--
	50	30.8	15	10	148	5.2	--	--	--
AA De 166	55	19.3	10	10	152	6.5	14.5	--	--
	55	19.3	15	10	156	5.9	--	--	--
AA De 167	42	3.7	15	10	220	5.9	--	--	--
	42	3.7	15	10	140	6.0	--	--	--
AA De 168	43	9.0	15	10	635	7.0	--	--	--
AA De 173	70	33.7	15	10	152	6.1	--	--	--
	70	33.7	15	10	162	6.6	--	--	--
AA De 174	50	15.0	15	10	160	5.2	15.5	--	--
	50	15.0	15	10	128	6.2	--	--	--
AA De 175	83	55.0	15	10	545	7.3	14.5	--	--
AA De 176	110	72.9	15	10	82	6.2	14.0	--	--
	110	72.9	15	10	69	5.5	--	--	--
AA De 179	65	45.4	15	10	81	5.1	14.0	--	--
	65	45.4	15	10	71	4.5	--	--	--
AA De 180	80	27.1	15	10	74	6.3	15.5	--	--
	80	27.1	15	10	81	6.7	--	--	--
AA De 181	100	42.7	15	10	107	6.3	14.5	--	--
	100	42.7	15	10	132	6.9	--	--	--
AA De 182	60	1.7	15	10	435	7.0	15.0	--	--
	60	1.7	15	10	470	7.3	--	--	--
AA De 184	123	25.5	15	10	340	7.7	--	--	--
	123	25.5	15	10	355	--	--	--	--
AA De 185	87	50.9	15	10	310	7.3	14.0	--	--
	87	50.9	15	10	310	7.6	--	--	--
AA De 187	40	20.5	10	7.0	1760	6.0	16.5	--	--
	40	20.5	15	10	1350	6.6	--	--	--
AA De 188	50	6.5	15	10	240	6.4	15.5	--	--
AA De 190	58	10.4	15	10	420	7.6	14.5	--	--
AA De 191	57	50.0	10	7.0	163	6.1	--	--	--
	57	50.0	15	10	250	5.8	--	--	--
AA De 193	150	40.0	190	23	15000	6.7	15.0	130	--
AA De 194	92	39.0	195	21	1680	6.8	15.0	25	--
AA De 195	60	37.0	150	13	121	5.8	14.5	1	--
AA De 198	115	29.0	15	10	11400	6.6	--	--	--
AA Df 32	65	9.0	20	10	3600	6.8	15.0	<1	--
AA Df 86	49	7.3	15	10	1000	6.6	14.5	--	--
	49	7.3	15	10	1000	6.7	--	--	--
AA Df 98	40	11.3	15	10	370	7.0	15.5	--	--
	40	11.3	10	10	390	7.6	--	--	--
AA Df 103	46	22.0	60	1.5	243	5.5	13.0	--	--
AA Df 104	90	27.6	15	10	346	7.2	14.0	--	--
	90	27.6	15	10	360	7.0	--	--	--
AA Df 105	58	10.2	15	10	177	5.6	16.0	--	--
	58	10.2	15	10	91	5.2	--	--	5.3
AA Df 107	95	39.2	15	10	315	7.0	14.5	--	--
	95	39.2	15	10	322	6.7	--	--	--
AA Df 108	48	46.1	10	10	600	4.4	--	--	--
	48	46.1	15	10	668	4.6	--	--	--
AA Df 109	62	6.4	15	10	378	7.4	14.5	--	--
	62	6.4	15	10	395	7.3	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

ANNE ARUNDEL COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3	BICARBONATE WATER WH IT FIELD MG/L AS HCO3	SULFIDE TOTAL (MG/L AS S)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
AA Ce 127	3.6	1.7	1.7	1.6	--	--	--	33	3.5
AA Ce 128	2.6	1.2	1.5	1.3	--	--	--	33	0.90
AA Cf 141	6.0	2.5	1.3	2.0	--	--	--	35	0.90
AA Cg 25	8.2	2.3	3.4	3.5	75	92	--	6.9	5.5
AA De 64	--	--	--	--	--	--	--	--	100
	--	--	--	--	--	--	--	--	74
AA De 90	--	--	--	--	--	--	--	--	5.2
	--	--	--	--	--	--	--	--	5.6
AA De 140	0.96	0.56	1.6	4.8	1	--	--	0.50	3.8
AA De 156	8.6	5.4	9.7	5.7	4	--	--	2.8	45
	7.5	4.8	11	4.4	3	--	<0.5	<0.20	44
AA De 157	4.8	1.7	16	3.7	5	--	--	0.70	34
	3.3	1.2	12	2.2	7	--	0.8	0.30	22
AA De 163	--	--	--	--	--	--	--	--	11
	--	--	--	--	--	--	--	--	10
AA De 164	--	--	--	--	--	--	--	--	4.3
AA De 165	--	--	--	--	--	--	--	--	41
	--	--	--	--	--	--	--	--	30
AA De 166	--	--	--	--	--	--	--	--	5.6
	--	--	--	--	--	--	--	--	2.5
AA De 167	--	--	--	--	--	--	--	--	54
	--	--	--	--	--	--	--	--	19
AA De 168	--	--	--	--	--	--	--	--	120
AA De 173	--	--	--	--	--	--	--	--	19
	--	--	--	--	--	--	--	--	17
AA De 174	--	--	--	--	--	--	--	--	18
	--	--	--	--	--	--	--	--	10
AA De 175	--	--	--	--	--	--	--	--	46
AA De 176	--	--	--	--	--	--	--	--	4.5
	--	--	--	--	--	--	--	--	4.5
AA De 179	--	--	--	--	--	--	--	--	8.5
	--	--	--	--	--	--	--	--	5.6
AA De 180	--	--	--	--	--	--	--	--	2.5
	--	--	--	--	--	--	--	--	4.4
AA De 181	--	--	--	--	--	--	--	--	7.9
	--	--	--	--	--	--	--	--	7.7
AA De 182	--	--	--	--	--	--	--	--	6.9
	--	--	--	--	--	--	--	--	7.3
AA De 184	--	--	--	--	--	--	--	--	6.3
	--	--	--	--	--	--	--	--	4.3
AA De 185	--	--	--	--	--	--	--	--	4.4
	--	--	--	--	--	--	--	--	4.4
AA De 187	--	--	--	--	--	--	--	--	570
	--	--	--	--	--	--	--	--	400
AA De 188	--	--	--	--	--	--	--	--	8.9
AA De 190	--	--	--	--	--	--	--	--	37
AA De 191	--	--	--	--	--	--	--	--	24
	--	--	--	--	--	--	--	--	34
AA De 193	1400	90	2600	13	--	--	--	790	5900
AA De 194	--	--	--	--	--	--	--	38	310
AA De 195	14	2.6	2.9	4.4	--	--	--	1.3	5.5
AA De 198	--	--	--	--	--	--	--	--	4600
AA Df 32	910	30	130	8.2	--	--	--	54	1700
AA Df 86	--	--	--	--	--	--	--	--	190
	--	--	--	--	--	--	--	--	210
AA Df 98	--	--	--	--	--	--	--	--	22
	--	--	--	--	--	--	--	--	19
AA Df 103	19	7.7	21	4.4	17	21	--	9.6	67
AA Df 104	--	--	--	--	--	--	--	--	4.0
	--	--	--	--	--	--	--	--	4.4
AA Df 105	--	--	--	--	--	--	--	--	22
	--	--	--	--	--	--	--	--	18
AA Df 107	--	--	--	--	--	--	--	--	12
	--	--	--	--	--	--	--	--	11
AA Df 108	--	--	--	--	--	--	--	--	170
	--	--	--	--	--	--	--	--	160
AA Df 109	--	--	--	--	--	--	--	--	6.6
	--	--	--	--	--	--	--	--	7.1

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

ANNE ARUNDEL COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	FLUORIDE, DISSOLVED (MG/L AS F)	BROMIDE DISSOLVED (MG/L AS BR)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)
AA Ce 127	0.10	--	9.3	81	--	--	<0.100	--	--
AA Ce 128	0.10	--	9.5	56	--	--	<0.100	--	--
AA Cf 141	0.20	--	11	70	--	--	<0.100	--	--
AA Cg 25	0.60	0.12	27	--	118	--	<0.100	--	--
AA De 64	--	0.062	--	--	--	--	3.40	--	--
	--	0.060	--	--	--	--	3.90	--	--
AA De 90	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
AA De 140	0.10	0.019	14	--	33	--	--	1.20	--
AA De 156	<0.10	0.015	18	--	98	--	--	<0.100	--
	0.10	--	19	--	--	<0.010	--	<0.100	0.010
AA De 157	<0.10	0.030	15	--	82	--	--	0.550	--
	<0.10	--	14	--	61	<0.010	--	0.470	0.020
AA De 163	--	--	--	--	--	--	--	--	--
	--	<0.010	--	--	--	--	--	--	--
AA De 164	--	--	--	--	--	--	--	--	--
AA De 165	--	0.080	--	--	--	--	1.50	--	--
	--	<0.010	--	--	--	--	1.20	--	--
AA De 166	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
AA De 167	--	0.20	--	--	--	--	--	--	--
	--	0.070	--	--	--	--	--	--	--
AA De 168	--	0.36	--	--	--	--	--	--	--
AA De 173	--	0.073	--	--	--	--	--	--	--
	--	0.050	--	--	--	--	--	--	--
AA De 174	--	0.11	--	--	--	--	--	--	--
	--	0.080	--	--	--	--	--	--	--
AA De 175	--	0.068	--	--	--	--	--	--	--
AA De 176	--	0.036	--	--	--	--	--	--	--
	--	0.020	--	--	--	--	--	--	--
AA De 179	--	0.058	--	--	--	--	--	--	--
	--	<0.010	--	--	--	--	--	--	--
AA De 180	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
AA De 181	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
AA De 182	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
AA De 184	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
AA De 185	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
AA De 187	--	1.9	--	--	--	--	2.90	--	--
	--	1.4	--	--	--	--	2.80	--	--
AA De 188	--	0.095	--	--	--	--	--	--	--
AA De 190	--	0.080	--	--	--	--	<0.100	--	--
AA De 191	--	0.026	--	--	--	--	0.900	--	--
	--	<0.010	--	--	--	--	--	--	--
AA De 193	<0.10	20	21	11900	10900	--	<0.100	--	--
AA De 194	0.20	1.3	--	990	--	--	<0.100	--	--
AA De 195	0.10	<0.010	24	82	84	--	0.300	--	--
AA De 198	--	17	--	--	--	--	<0.100	--	--
AA Df 32	0.10	4.7	30	2990	2950	--	0.300	--	--
AA Df 86	--	0.82	--	--	--	--	1.40	--	--
	--	0.54	--	--	--	--	--	--	--
AA Df 98	--	0.066	--	--	--	--	5.80	--	--
	--	0.050	--	--	--	--	4.90	--	--
AA Df 103	0.10	0.058	16	--	155	--	1.90	--	--
AA Df 104	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
AA Df 105	--	0.059	--	--	--	--	3.50	--	--
	--	<0.010	--	--	--	--	--	--	--
AA Df 107	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
AA Df 108	--	0.25	--	--	--	--	3.70	--	--
	--	0.26	--	--	--	--	3.40	--	--
AA Df 109	--	--	--	--	--	--	--	--	--
	--	<0.010	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

ANNE ARUNDEL COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)
AA Ce 127	--	0.030	--	--	--	--	--	--	--
AA Ce 128	--	0.030	--	--	--	--	--	--	--
AA Cf 141	--	<0.010	--	--	--	--	--	--	--
AA Cg 25	--	0.990	--	<10	--	--	--	--	--
AA De 140	--	--	<0.010	--	30	--	--	--	--
AA De 156	--	--	<0.010	--	20	--	--	--	--
	0.30	0.080	0.020	--	20	<1	<1	69	<0.5
AA De 157	--	--	<0.010	--	10	--	--	--	--
	0.20	0.090	<0.010	--	<10	<1	<1	19	<0.5
AA De 193	--	0.090	--	--	--	--	--	--	--
AA De 194	--	0.050	--	--	--	--	--	--	--
AA De 195	--	0.010	--	--	--	--	--	--	--
AA Df 32	--	<0.010	--	--	--	--	--	--	--
AA Df 103	--	0.060	--	150	--	--	--	--	--

LOCAL IDENTIFIER	BORON, DISSOLVED (UG/L AS B)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)
AA Cg 25	--	<10	--	--	--	--	--	--	--
AA De 156	20	--	7	9	5	4	3	10	35
AA De 157	40	--	1	1	45	2	1	3	13
AA Df 103	--	20	--	--	--	--	--	--	--

LOCAL IDENTIFIER	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)
AA Ce 127	14000	14000	--	--	120	130	--	--	--
AA Ce 128	8700	8400	--	--	90	93	--	--	--
AA Cf 141	30000	30000	--	--	200	210	--	--	--
AA Cg 25	13000	15000	--	--	370	360	--	--	--
AA De 140	--	4	--	--	--	38	--	--	--
AA De 156	--	5	--	--	--	27	--	--	--
	--	6	<5	2	--	19	0.10	<1	28
AA De 157	--	<3	--	--	--	18	--	--	--
	--	6	<5	1	--	9	0.10	1	7
AA De 193	42000	2200	--	--	590	530	--	--	--
AA De 194	4900	--	--	--	130	--	--	--	--
AA De 195	50	5	--	--	40	39	--	--	--
AA Df 32	190	30	--	--	120	110	--	--	--
AA Df 103	760	21	--	--	10	12	--	--	--

LOCAL IDENTIFIER	STRONTIUM, TOTAL RECOVERABLE (UG/L AS SR)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
AA Cg 25	--	--	--	<10	--	1.7	--	--	--
AA De 156	70	31	<1	--	110	1.1	1.1	<0.010	0.05
AA De 157	30	13	<1	--	18	1.3	1.2	<0.010	0.08
AA Df 103	--	--	--	<10	--	1.5	--	--	--

ANNE ARUNDEL COUNTY, MARYLAND--Continued

LOCAL IDENT-I-FIER	DATE	TIME	STATION NUMBER	GEO-LOGIC UNIT	SAM-PLING METHOD, CODES	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DEPTH OF WELL, TOTAL (FEET)	DEPTH TO TOP OF SAMPLE INTER-VAL (FT)
AA Df 110	10-25-88	1230	385643076285101	125AQUI	4040	21.15	69.00	62
	05-01-89	1200		125AQUI	4040	--	69.00	62
AA Df 111	10-19-88	1430	385644076281701	125AQUI	4040	30.00	94.00	89
	04-26-89	1335		125AQUI	4040	--	94.00	89
AA Df 112	10-26-88	1330	385608076292401	125AQUI	4040	32.28	57.00	50
	05-05-89	1105		125AQUI	4040	31.00	57.00	50
AA Df 114	10-19-88	1130	385519076274301	125AQUI	4040	18.27	62.00	55
	04-28-89	1140		125AQUI	4040	16.00	62.00	55
AA Df 117	10-20-88	1445	385602076295801	125AQUI	4040	18.50	111.00	104
	05-02-89	1500		125AQUI	4040	--	111.00	104
AA Df 118	10-21-88	1020	385505076282601	125AQUI	4040	10.30	40.00	35
	05-16-89	1415		125AQUI	4040	8.00	40.00	35
AA Df 119	10-21-88	1100	385500076282801	125AQUI	4040	18.10	71.00	65
	04-28-89	1155		125AQUI	4040	17.00	71.00	65
AA Df 121	10-20-88	0955	385641076283701	125AQUI	4040	35.08	60.00	53
	05-02-89	1100		125AQUI	4040	34.00	60.00	53
AA Df 123	11-22-88	1100	385536076294701	125AQUI	4040	10.06	50.00	43
AA Df 124	10-26-88	1245	385654076273501	125AQUI	4040	8.20	27.00	22
	04-25-89	1310		125AQUI	4040	7.00	27.00	22
AA Df 126	10-19-88	1015	385545076282901	125AQUI	4040	8.78	90.00	83
	04-28-89	1010		125AQUI	4040	4.00	90.00	83
AA Df 134	10-19-88	1200	385635076284401	125AQUI	4040	--	100.00	94
AA Df 136	10-18-88	1130	385533076275101	125AQUI	4040	5.40	58.00	51
	04-28-89	1325		125AQUI	4040	5.00	58.00	51
AA Df 137	10-20-88	1045	385547076294901	125AQUI	4040	8.53	83.00	76
	05-02-89	1430		125AQUI	4040	6.00	83.00	76
AA Df 138	10-26-88	1430	385715076282501	125AQUI	4040	17.74	56.00	52
	04-26-89	1500		125AQUI	4040	--	56.00	52
AA Df 139	10-20-88	1340	385608076295701	125AQUI	4040	33.82	105.00	85
	05-01-89	1315		125AQUI	4040	--	105.00	85
AA Df 143	04-26-89	1410	385650076284201	125AQUI	4040	33.00	85.00	80
AA Df 144	10-27-88	0950	385627076273401	125AQUI	4040	46.35	85.00	78
	04-28-89	1400		125AQUI	4040	45.00	85.00	78
AA Df 145	10-20-88	1130	385632076271701	125AQUI	4040	26.22	54.00	49
	04-25-89	1315		125AQUI	4040	26.00	54.00	49
AA Df 146	10-20-88	1145	385618076281201	125AQUI	4040	19.24	95.00	85
	05-17-89	1300		125AQUI	4040	18.00	95.00	85
AA Df 147	10-26-88	1210	385608076273301	125AQUI	4040	--	--	43
	04-26-89	1215		125AQUI	4040	--	50.00	43
AA Df 148	11-03-88	1100	385539076295701	125AQUI	4040	7.62	26.00	22
AA Df 150	12-02-88	1435	385453076273301	125AQUI	4040	3.62	26.00	19
	04-28-89	1255		125AQUI	4040	2.50	26.00	19
AA Df 151	02-08-89	1300	385700076280201	211MNMT	4040	20.56	178.00	163
AA Df 152	02-09-89	1230	385700076280202	125AQUI	4040	23.00	118.00	103
AA Df 153	02-10-89	1130	385700076280203	125AQUI	4040	23.00	38.00	23
AA Df 154	05-18-89	1145	385536076294401	211MNMT	4040	3.00	165.00	150
AA Df 155	05-22-89	1215	385622076271101	211MNMT	4040	41.00	199.00	184
AA Ee 49	11-09-88	1420	385345076304102	125AQUI	4040	--	106.00	101
AA Ee 70	11-22-88	1200	385311076323101	125AQUI	4040	11.64	70.00	65
AA Ee 71	11-22-88	1230	385330076302301	125AQUI	4040	14.60	59.00	52
AA Ee 73	11-02-88	1420	385424076304701	125AQUI	4040	4.71	95.00	90
	05-15-89	1345		125AQUI	4040	3.00	95.00	90
AA Ee 74	11-02-88	1100	385454076322401	125AQUI	4040	108.52	223.00	203
	05-15-89	1030		125AQUI	4040	105.00	223.00	203
AA Ee 77	11-03-88	1130	385417076301201	125AQUI	4040	38.92	80.00	75
	05-17-89	1110		125AQUI	4040	26.00	80.00	75
AA Ee 78	11-22-88	1245	385430076314601	125AQUI	4040	13.30	98.00	88
	05-15-89	1120		125AQUI	4040	--	98.00	88
AA Ee 80	05-15-89	1155	385409076311001	125AQUI	4040	1.00	46.00	36
AA Ee 81	03-15-89	1550	385457076305701	211MNMT	4040	7.11	191.00	176
AA Ef 17	11-09-88	1135	385318076294501	125AQUI	4040	--	41.00	37
AA Ef 20	10-19-88	1300	385450076281701	125AQUI	4040	--	32.00	27
	05-16-89	1250		125AQUI	4040	--	32.00	27

Geologic unit (aquifer): 125AQUI - Aquia Formation
211MNMT - Monmouth Formation

Sampling method: 4040 - Submersible pump

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

ANNE ARUNDEL COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DEPTH TO BOTTOM OF SAMPLE INTERVAL (FT)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	PUMP OR FLOW PERIOD PRIOR TO SAMPLING (MIN)	FLOW RATE, INSTANTANEOUS (G/M)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	COLOR (PLATINUM-COBALT UNITS)	CALCIUM DISSOLVED (MG/L AS CA)
AA Df 110	69	27.9	15	10	380	7.2	14.0	--	--
	69	27.9	15	10	422	7.5	--	--	--
AA Df 111	94	29.8	15	10	111	7.2	14.0	--	--
	94	29.8	15	10	440	7.3	--	--	--
AA Df 112	57	35.2	15	10	312	6.8	14.5	--	--
	57	35.2	15	10	300	6.0	--	--	--
AA Df 114	62	17.8	15	10	412	7.0	14.5	--	--
	62	17.8	15	10	450	6.7	--	--	--
AA Df 117	111	21.9	15	10	360	7.4	15.5	--	--
	111	21.9	15	10	415	8.0	--	--	--
AA Df 118	40	9.6	15	10	455	7.0	14.0	--	--
	40	9.6	15	10	470	7.8	--	--	--
AA Df 119	71	18.2	15	10	364	7.5	14.0	--	--
	71	18.2	15	10	370	7.6	--	--	--
AA Df 121	60	47.7	15	10	970	6.6	15.5	--	--
	60	47.7	15	10	1000	6.3	--	--	--
AA Df 123	50	10.5	15	10	540	6.7	15.0	--	--
AA Df 124	27	7.8	15	10	425	5.6	15.5	--	--
	27	7.8	30	10	817	4.5	--	--	--
AA Df 126	90	9.1	15	10	355	7.9	15.0	--	--
	90	9.1	5	10	360	7.6	--	--	--
AA Df 134	100	40.0	15	10	400	--	--	--	--
AA Df 136	58	5.3	15	10	510	7.0	14.5	--	--
	58	5.3	15	10	473	7.1	--	--	--
AA Df 137	83	8.7	15	10	398	7.1	15.0	--	--
	83	8.7	15	10	440	7.3	--	--	--
AA Df 138	56	19.1	15	10	427	7.2	--	--	--
	56	19.1	15	10	480	7.2	--	--	--
AA Df 139	105	38.4	15	10	439	7.2	--	--	--
	105	38.4	15	10	478	7.7	--	--	--
AA Df 143	85	30.0	15	10	42	7.4	--	--	--
AA Df 144	85	46.8	15	10	272	7.3	14.5	--	--
	85	46.8	15	10	280	6.8	--	--	--
AA Df 145	54	25.9	15	10	2470	6.3	--	--	--
	54	25.9	10	10	350	6.0	--	--	--
AA Df 146	95	40.0	15	10	439	7.4	13.0	--	--
	95	40.0	10	10	460	--	--	--	--
AA Df 147	50	20.0	15	10	199	5.1	14.0	--	--
	50	20.0	15	10	248	4.4	--	--	--
AA Df 148	26	7.0	15	10	5000	6.7	16.0	--	--
AA Df 150	26	3.6	15	10	860	4.3	15.0	--	--
	26	3.6	15	10	1030	4.4	--	--	--
AA Df 151	173	20.0	210	14	475	7.2	15.0	10	82
AA Df 152	113	20.0	180	14	400	7.8	15.0	1	83
AA Df 153	33	20.0	150	20	186	5.3	15.0	<1	16
AA Df 154	160	4.0	165	13	400	--	16.0	25	71
AA Df 155	194	40.0	195	13	18300	6.3	16.0	--	--
AA Ee 49	106	45.0	5	60	315	--	--	--	--
AA Ee 70	70	12.0	15	10	395	7.6	15.0	--	--
AA Ee 71	59	16.2	5	10	370	6.9	--	--	--
AA Ee 73	95	5.2	15	10	282	7.6	--	--	--
	95	5.2	15	10	323	7.8	--	--	--
AA Ee 74	223	115	15	10	435	7.3	14.0	--	--
	223	115	15	10	500	7.4	--	--	--
AA Ee 77	80	28.0	10	10	225	6.3	15.5	--	--
	80	28.0	10	10	260	7.4	--	--	--
AA Ee 78	98	17.8	60	10	420	7.6	--	--	--
	98	17.8	15	10	410	6.8	--	--	--
AA Ee 80	46	5.0	15	10	370	--	--	--	--
AA Ee 81	186	10.0	200	25	200	6.9	15.5	30	39
AA Ef 17	41	21.0	15	10	250	5.8	--	--	--
AA Ef 20	32	10.0	15	10	440	6.8	17.0	--	--
	32	10.0	10	10	2400	5.2	--	--	--

ANNE ARUNDEL COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	BROMIDE DISSOLVED (MG/L AS BR)	SILICA, DISSOLVED (MG/L AS SIO2)
AA Df 110	--	--	--	--	5.2	--	--	--
	--	--	--	--	5.0	--	--	--
AA Df 111	--	--	--	--	3.7	--	--	--
	--	--	--	--	3.5	--	--	--
AA Df 112	--	--	--	--	28	--	0.10	--
	--	--	--	--	21	--	<0.010	--
AA Df 114	--	--	--	--	29	--	0.095	--
	--	--	--	--	27	--	--	--
AA Df 117	--	--	--	--	4.8	--	--	--
	--	--	--	--	3.9	--	--	--
AA Df 118	--	--	--	--	26	--	0.15	--
	--	--	--	--	30	--	0.12	--
AA Df 119	--	--	--	--	24	--	0.18	--
	--	--	--	--	23	--	0.15	--
AA Df 121	--	--	--	--	140	--	0.15	--
	--	--	--	--	130	--	0.14	--
AA Df 123	--	--	--	--	88	--	0.45	--
AA Df 124	--	--	--	--	120	--	0.39	--
	--	--	--	--	240	--	0.71	--
AA Df 126	--	--	--	--	3.6	--	0.020	--
	--	--	--	--	3.1	--	--	--
AA Df 134	--	--	--	--	3.4	--	--	--
AA Df 136	--	--	--	--	11	--	0.075	--
	--	--	--	--	11	--	<0.010	--
AA Df 137	--	--	--	--	4.5	--	--	--
	--	--	--	--	3.9	--	--	--
AA Df 138	--	--	--	--	7.7	--	--	--
	--	--	--	--	21	--	<0.010	--
AA Df 139	--	--	--	--	14	--	0.072	--
	--	--	--	--	13	--	<0.010	--
AA Df 143	--	--	--	--	11	--	<0.010	--
AA Df 144	--	--	--	--	9.0	--	--	--
	--	--	--	--	7.5	--	--	--
AA Df 145	--	--	--	--	13	--	0.048	--
	--	--	--	--	14	--	<0.010	--
AA Df 146	--	--	--	--	3.8	--	0.023	--
	--	--	--	--	3.7	--	0.020	--
AA Df 147	--	--	--	--	19	--	0.053	--
	--	--	--	--	20	--	<0.010	--
AA Df 148	--	--	--	--	1100	--	3.3	--
AA Df 150	--	--	--	--	200	--	0.83	--
	--	--	--	--	190	--	0.73	--
AA Df 151	7.4	16	4.7	26	51	0.20	0.19	36
AA Df 152	2.2	3.2	4.0	4.3	5.5	0.20	0.058	37
AA Df 153	5.2	16	6.9	0.40	46	<0.10	0.085	27
AA Df 154	5.3	1.6	4.7	4.0	2.2	0.20	0.030	27
AA Df 155	--	--	--	--	--	--	--	--
AA Ee 49	--	--	--	--	15	--	--	--
AA Ee 70	--	--	--	--	8.8	--	--	--
AA Ee 71	--	--	--	--	11	--	0.030	--
AA Ee 73	--	--	--	--	3.0	--	--	--
	--	--	--	--	2.5	--	--	--
AA Ee 74	--	--	--	--	4.9	--	--	--
	--	--	--	--	3.3	--	--	--
AA Ee 77	--	--	--	--	40	--	0.13	--
	--	--	--	--	15	--	0.080	--
AA Ee 78	--	--	--	--	11	--	0.025	--
	--	--	--	--	9.3	--	--	--
AA Ee 80	--	--	--	--	3.5	--	--	--
AA Ee 81	5.3	2.4	4.8	22	1.7	0.20	<0.010	20
AA Ef 17	--	--	--	--	48	--	0.069	--
AA Ef 20	--	--	--	--	110	--	0.14	--
	--	--	--	--	950	--	0.26	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

ANNE ARUNDEL COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
AA Df 110	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
AA Df 111	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
AA Df 112	--	--	2.80	--	--	--	--	--
	--	--	2.60	--	--	--	--	--
AA Df 114	--	--	<0.100	--	--	--	--	--
	--	--	--	--	--	--	--	--
AA Df 117	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
AA Df 118	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
AA Df 119	--	--	0.200	--	--	--	--	--
	--	--	--	--	--	--	--	--
AA Df 121	--	--	0.200	--	--	--	--	--
	--	--	0.100	--	--	--	--	--
AA Df 123	--	--	0.900	--	--	--	--	--
AA Df 124	--	--	1.20	--	--	--	--	--
	--	--	2.10	--	--	--	--	--
AA Df 126	--	--	<0.100	--	--	--	--	--
	--	--	--	--	--	--	--	--
AA Df 134	--	--	--	--	--	--	--	--
AA Df 136	--	--	<0.100	--	--	--	--	--
	--	--	--	--	--	--	--	--
AA Df 137	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
AA Df 138	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
AA Df 139	--	--	1.30	--	--	--	--	--
	--	--	1.70	--	--	--	--	--
AA Df 143	--	--	--	--	--	--	--	--
AA Df 144	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
AA Df 145	--	--	10.0	--	--	--	--	--
	--	--	11.0	--	--	--	--	--
AA Df 146	--	--	<0.100	--	--	--	--	--
	--	--	--	--	--	--	--	--
AA Df 147	--	--	15.0	--	--	--	--	--
	--	--	--	--	--	--	--	--
AA Df 148	--	--	1.00	--	--	--	--	--
AA Df 150	--	--	<0.100	--	--	--	--	--
	--	--	--	--	--	--	--	--
AA Df 151	336	325	<0.100	0.060	3800	150	70	52
AA Df 152	263	269	0.300	0.060	1200	160	20	16
AA Df 153	156	122	7.80	<0.010	150	27	20	12
AA Df 154	229	238	<0.100	0.120	1900	34	30	27
AA Df 155	--	--	--	--	--	--	--	--
AA Ee 49	--	--	--	--	--	--	--	--
AA Ee 70	--	--	--	--	--	--	--	--
AA Ee 71	--	--	--	--	--	--	--	--
AA Ee 73	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
AA Ee 74	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
AA Ee 77	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
AA Ee 78	--	--	--	--	--	--	--	--
	--	--	<0.100	--	--	--	--	--
AA Ee 80	--	--	<0.100	--	--	--	--	--
AA Ee 81	158	160	<0.100	0.240	6000	38	70	67
AA Ef 17	--	--	--	--	--	--	--	--
AA Ef 20	--	--	1.50	--	--	--	--	--
	--	--	2.50	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

ANNE ARUNDEL COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	TIME	STATION NUMBER	GEOLOGIC UNIT	SAMPLING METHOD, CODES	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DEPTH OF WELL, TOTAL (FEET)	DEPTH TO TOP OF SAMPLE INTERVAL (FT)
AA Ef 22	10-21-88	1200	385450076282001	125AQUI	4040	5.23	42.00	35
	04-27-89	1435		125AQUI	4040	3.00	42.00	35
AA Ef 23	11-03-88	1315	385405076294001	125AQUI	4040	17.35	62.00	55
AA Ef 24	11-18-88	1200	385427076295701	125AQUI	4040	24.10	66.00	59
	05-17-89	1050		125AQUI	4040	22.00	66.00	59
AA Ef 26	11-09-88	1115	385301076294101	125AQUI	4040	15.86	50.00	40
	05-15-89	1450		125AQUI	4040	14.00	50.00	40
AA Ef 27	11-09-88	1235	385408076294001	125AQUI	4040	15.63	41.00	35
	05-17-89	0945		125AQUI	4040	14.00	41.00	35
AA Ef 28	11-09-88	1230	385410076293901	125AQUI	4040	15.66	75.00	68
	05-17-89	1005		125AQUI	4040	21.00	75.00	68
AA Ef 30	02-02-89	1330	385458076273802	125AQUI	4040	4.55	50.00	35
AA Ef 31	02-07-89	1210	385458076273803	125AQUI	4040	7.00	135.00	120
AA Ef 32	05-31-89	1315	385334076293701	211MNMT	4040	11.00	225.00	210
AA Ef 33	05-30-89	1315	385334076293702	125AQUI	4040	10.00	137.00	122
AA Ef 34	05-26-89	1215	385334076293703	125AQUI	4040	10.00	85.00	70
AA Ef 35	02-06-89	1420	385458076273804	125AQUI	4040	4.65	200.00	185

LOCAL IDENTIFIER	DEPTH TO BOTTOM OF SAMPLE INTERVAL (FT)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	PUMP OR FLOW PERIOD PRIOR TO SAMPLING (MIN)	FLOW RATE, INSTANTANEOUS (G/M)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	COLOR (PLATINUM-COBALT UNITS)	OXYGEN, DISSOLVED (MG/L)
AA Ef 22	42	5.6	15	10	3800	7.0	14.5	--	--
	42	4.0	15	10	3700	6.9	--	--	--
AA Ef 23	62	15.0	10	10	582	6.7	15.0	--	--
AA Ef 24	66	23.0	10	10	510	6.6	16.0	--	--
	66	23.0	10	10	628	6.9	--	--	--
AA Ef 26	50	15.0	15	10	355	--	--	--	--
	50	15.0	15	10	400	8.0	--	--	7400
AA Ef 27	41	15.0	15	10	725	4.1	--	--	--
	41	15.0	15	10	820	4.9	--	--	--
AA Ef 28	75	15.0	15	10	2230	6.5	15.5	--	--
	75	15.0	15	10	2800	6.5	--	--	--
AA Ef 30	45	10.0	230	14	460	6.8	--	--	--
AA Ef 31	130	7.0	160	22	12000	7.0	16.0	3	--
AA Ef 32	220	12.0	195	14	16000	6.2	16.5	<1	--
AA Ef 33	132	11.0	195	60	6830	6.9	16.0	250	--
AA Ef 34	80	11.0	195	609	480	7.0	16.0	10	--
AA Ef 35	195	10.0	230	12	5100	6.5	16.0	2	--

Geologic unit (aquifer): 125AQUI - Aquia Formation
211MNMT - Monmouth Formation

Sampling method: 4040 - Submersible pump

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

ANNE ARUNDEL COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	BROMIDE DISSOLVED (MG/L AS BR)	SILICA, DISSOLVED (MG/L AS SIO2)
AA Ef 22	--	--	--	--	--	1000	--	4.3	--
	--	--	--	--	--	1200	--	4.3	--
AA Ef 23	--	--	--	--	--	73	--	0.19	--
AA Ef 24	--	--	--	--	--	65	--	0.24	--
	--	--	--	--	--	63	--	0.18	--
AA Ef 26	--	--	--	--	--	11	--	--	--
	--	--	--	--	--	9.7	--	--	--
AA Ef 27	--	--	--	--	--	190	--	0.60	--
	--	--	--	--	--	190	--	0.56	--
AA Ef 28	--	--	--	--	--	770	--	2.3	--
	--	--	--	--	--	860	--	2.8	--
AA Ef 30	--	--	--	--	--	73	--	0.17	--
AA Ef 31	2200	230	1100	23	780	6000	<0.10	19	25
AA Ef 32	1900	240	1600	30	760	6400	<0.10	8.5	30
AA Ef 33	900	37	550	16	310	2300	0.10	8.5	27
AA Ef 34	91	3.0	4.6	3.8	3.0	12	0.10	0.070	35
AA Ef 35	730	170	350	16	250	2300	<0.10	7.5	23

LOCAL IDENTIFIER	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
AA Ef 22	--	--	<0.100	--	--	--	--	--
	--	--	--	--	--	--	--	--
AA Ef 23	--	--	--	--	--	--	--	--
AA Ef 24	--	--	<0.100	--	--	--	--	--
	--	--	--	--	--	--	--	--
AA Ef 26	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
AA Ef 27	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
AA Ef 28	--	--	--	--	--	--	--	--
	--	--	0.400	--	--	--	--	--
AA Ef 30	--	--	<0.100	--	--	--	--	--
AA Ef 31	10600	10400	<0.100	0.020	21000	90	180	180
AA Ef 32	12000	11100	<0.100	<0.010	170000	150000	1500	1600
AA Ef 33	4500	4200	<0.100	0.010	10000	50	500	530
AA Ef 34	308	292	<0.100	0.070	110	10	30	8
AA Ef 35	4050	3880	<0.100	0.200	82000	29000	700	760

LOCAL IDENTIFIER	DATE	TIME	STATION NUMBER	GEOLOGIC UNIT	SAMPLING METHOD, CODES	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DEPTH OF WELL, TOTAL (FEET)	DEPTH TO TOP OF SAMPLE INTERVAL (FT)	DEPTH TO BOTTOM OF SAMPLE INTERVAL (FT)
BA Dc 444	10-26-88	1408	392931076410301	300CCKV	4040	44.25	300.00	88	300
	04-13-89	1504		300CCKV	4040	43.13	300.00	88	300
	06-14-89	1550		300CCKV	4040	36.56	300.00	88	300

LOCAL IDENTIFIER	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	PUMP OR FLOW PERIOD PRIOR TO SAMPLING (MIN)	FLOW RATE, INSTANTANEOUS (G/M)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
BA Dc 444	390	143	8.6	280	8.0	12.0	8.0	30	15	1.6
	390	205	6.0	267	7.5	13.0	5.9	31	14	1.6
	390	145	8.1	266	7.4	12.0	1.5	31	14	1.6

LOCAL IDENTIFIER	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3	BICARBONATE WATER WH IT FIELD MG/L AS HCO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)
BA Dc 444	1.4	141	172	2.2	3.6	0.10	8.9	147	0.300
	1.5	138	--	1.6	3.2	0.10	8.8	144	0.300
	1.5	138	168	2.0	3.3	0.10	9.2	145	0.300

LOCAL IDENTIFIER	PHOSPHOROUS TOTAL (MG/L AS P)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	BORON, TOTAL RECOVERABLE (UG/L AS B)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
BA Dc 444	0.010	20	<10	820	13	<10	1	<10	4.0
	<0.010	120	30	640	12	<10	<1	10	0.3
	<0.010	<10	<10	240	12	<10	3	<10	0.3

Geologic unit (aquifer): 300CCKV - Cockeysville Marble

Sampling method: 4040 - Submersible pump

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

CALVERT COUNTY, MARYLAND

LOCAL IDENTIFIER	DATE	TIME	STATION NUMBER	GEOLOGIC UNIT	SITE TYPE	SAMPLING METHOD, CODES	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DEPTH OF WELL, TOTAL (FEET)	DEPTH TO TOP OF SAMPLE INTERVAL (FT)	DEPTH TO BOTTOM OF SAMPLE INTERVAL (FT)
CA Db 66	10-19-88	0900	383216076351402	112UPLD	GW	4020	26.00	34.00	21	31
	01-20-89	1150		112UPLD	GW	4020	26.78	34.00	21	31
	03-01-89	1415		112UPLD	GW	4020	26.92	34.00	21	31
CA Db 69	10-19-88	0930	383217076351802	112UPLD	GW	--	--	39.00	26	36
	01-20-89	1230		112UPLD	GW	4020	30.40	39.00	26	36
	03-01-89	1400		112UPLD	GW	4020	30.15	39.00	26	36
CA Db 72	01-20-89	1200	383217076351702	112UPLD	GW	4020	27.37	35.00	22	32
	03-01-89	1115		112UPLD	GW	4020	27.27	35.00	22	32
CA Db 73	10-19-88	0945	383217076351703	112UPLD	GW	4020	26.80	32.00	19	29
	01-20-89	1215		112UPLD	GW	4020	28.02	32.00	19	29
	03-01-89	1300		112UPLD	GW	4020	27.48	32.00	19	29
CA Db 84	01-20-89	1100	383218076351703	112UPLD	LYS	4080	--	2.10	1.25	1.50
	03-01-89	0900		112UPLD	LYS	4080	--	2.10	1.25	1.50
CA Db 85	10-19-88	1130	383217076351704	112UPLD	LYS	4080	--	2.10	0.50	0.98
	03-01-89	0945		112UPLD	LYS	--	--	2.10	0.50	0.98
CA Fc 13	12-14-88	1315	382343076302901	122CSPK	GW	4040	30.27	34.00	29	34

LOCAL IDENTIFIER	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	PUMP OR FLOW PERIOD PRIOR TO SAMPLING (MIN)	FLOW RATE, INSTANTANEOUS (G/M)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
CA Db 66	170	--	--	--	--	--	--	--	--	--
	170	--	--	345	7.1	15.5	0.7	61	2.7	3.4
	170	--	--	340	7.2	15.5	0.6	65	2.9	3.7
CA Db 69	168	--	--	--	--	--	--	--	--	--
	168	--	--	830	4.5	15.5	0.3	6.4	23	120
	168	--	--	820	4.7	15.0	0.2	5.9	21	110
CA Db 72	167	--	--	620	5.6	17.0	1.5	20	12	74
	167	--	--	730	5.6	17.0	2.5	26	16	87
CA Db 73	167	--	--	--	--	--	--	--	--	--
	167	--	--	750	5.7	17.0	1.2	29	18	80
	167	--	--	4100	5.8	17.0	194	41	17	650
CA Db 84	156	--	--	--	--	--	--	21	140	620
	156	--	--	--	--	--	--	8.7	47	750
CA Db 85	157	--	--	--	--	--	--	--	--	--
	157	--	--	970	8.5	5.0	10.1	9.4	66	240
CA Fc 13	47.4	10	0.5	572	6.7	15.0	4.9	110	5.4	9.5

LOCAL IDENTIFIER	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRATE DISSOLVED (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)
CA Db 66	--	--	--	--	--	--	--	--	--	--
	1.5	148	22	2.4	0.10	7.9	196	--	--	--
	1.3	15	24	2.5	0.20	8.2	118	--	0.010	--
CA Db 69	--	--	--	--	--	--	--	--	--	--
	2.6	--	4.8	250	0.20	7.8	441	--	--	--
	2.5	--	5.1	240	0.20	8.2	417	4.88	0.020	--
CA Db 72	3.6	24	15	160	0.20	12	321	--	--	--
	4.3	23	18	200	0.20	13	388	--	<0.010	--
CA Db 73	--	--	--	--	--	--	--	--	--	--
	3.2	30	10	200	0.10	12	386	--	--	--
	6.9	--	13	1400	0.10	13	2170	2.69	0.010	--
CA Db 84	4.3	--	51	1000	0.10	0.90	2030	--	--	--
	2.0	--	43	1000	0.10	1.2	1980	--	--	--
CA Db 85	--	--	--	--	--	--	--	--	--	--
	2.2	230	30	330	0.10	1.3	821	--	<0.010	--
CA Fc 13	3.7	--	16	13	0.20	22	374	--	--	8.10

Geologic unit (aquifer): 112UPLD - Upland Deposits
122CSPK - Chesapeake Group

Sampling method: 4020 - Bailer
4040 - Submersible pump
4080 - Peristaltic pump

Site type: GW - Groundwater
LYS - Lysimeter

CALVERT COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ALUMINUM, DISSOLVED (UG/L AS AL)	ANTIMONY, DISSOLVED (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)
CA Db 66	--	--	--	--	--	--	--	--	--	--
	<0.100	--	--	--	<0.010	--	20	--	--	--
	<0.100	0.040	0.40	0.580	0.010	--	20	<1	5	<1
CA Db 69	--	--	--	--	--	--	--	--	--	--
	5.60	--	--	--	<0.010	--	870	--	--	--
	4.90	0.020	1.0	0.170	<0.010	--	810	<1	--	<1
CA Db 72	2.00	--	--	--	<0.010	--	120	--	--	--
	1.90	0.030	0.50	0.390	<0.010	--	110	<1	1	<1
CA Db 73	--	--	--	--	--	--	--	--	--	--
	3.00	--	--	--	<0.010	--	40	--	--	--
	2.70	0.050	1.4	0.070	<0.010	--	60	<1	1	1
CA Db 84	1.00	--	--	--	<0.010	--	20	--	--	--
	--	--	--	--	--	--	--	<1	--	<1
CA Db 85	--	--	--	--	--	--	--	--	--	--
	0.790	<0.010	0.30	<0.010	<0.010	--	10	<1	1	1
CA Fc 13	8.50	--	--	0.140	--	10	--	--	--	--

LOCAL IDENTIFIER	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	BORON, DISSOLVED (UG/L AS B)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, DISSOLVED (UG/L AS CO)
CA Db 66	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
	25	<0.5	--	--	1	<1	17	<2	6	<1
CA Db 69	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
	170	<0.5	--	--	--	<1	--	<1	--	20
CA Db 72	--	--	--	--	--	--	--	--	--	--
	130	<0.5	--	--	2	1	11	<1	30	30
CA Db 73	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
	100	<10	--	--	2	1	9	<1	20	20
CA Db 84	--	--	--	--	--	--	--	--	--	--
	<100	<10	<10	--	--	1	--	1	--	2
CA Db 85	--	--	--	--	--	--	--	--	--	--
	<100	<10	--	--	1	<1	2	<1	1	<1
CA Fc 13	--	--	--	50	--	--	--	--	--	--

LOCAL IDENTIFIER	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MOLYBDENUM, TOTAL RECOVERABLE (UG/L AS MO)
CA Db 66	--	--	--	--	--	--	--	--	--	--
	--	--	--	14	--	--	--	51	--	--
	10	<1	--	120	<5	<1	--	47	0.30	7
CA Db 69	--	--	--	--	--	--	--	--	--	--
	--	--	--	16	--	--	--	140	--	--
	--	4	--	58	--	<1	--	160	--	--
CA Db 72	--	--	--	7	--	--	--	610	--	--
	7	1	--	14	<5	<1	--	820	0.10	5
CA Db 73	--	--	--	--	--	--	--	--	--	--
	--	--	--	<3	--	--	--	410	--	--
	8	2	--	40	<5	<1	--	670	2.4	6
CA Db 84	--	--	--	<10	--	--	--	<10	--	--
	--	6	--	10	--	1	--	<10	--	--
CA Db 85	--	--	--	--	--	--	--	--	--	--
	3	1	--	<10	<5	<1	--	<10	<0.10	32
CA Fc 13	--	--	30	8	--	--	<10	<1	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

CALVERT COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, DISSOLVED (UG/L AS NI)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)	H-2 / H-1 STABLE ISOTOPE RATIO PER MIL	O-18 / O-16 STABLE ISOTOPE RATIO PER MIL	CARBON, ORGANIC TOTAL (MG/L AS C)
CA Db 66	--	--	--	--	--	--	--	-43.5	-7.45	--
	--	--	--	--	--	--	--	--	--	--
	2	8	5	340	<1	60	7	--	--	--
CA Db 69	--	--	--	--	--	--	--	-43.5	-7.30	--
	--	--	--	--	--	--	--	--	--	--
	<1	--	16	110	3	--	46	--	--	--
CA Db 72	--	--	--	--	--	--	--	--	--	--
	<1	44	33	210	1	140	5	--	--	--
CA Db 73	--	--	--	--	--	--	--	-43.5	-7.35	--
	--	--	--	--	--	--	--	--	--	--
	1	39	37	300	400	100	90	--	--	--
CA Db 84	--	--	--	--	--	--	--	--	--	--
	1	--	7	40	19	--	<10	--	--	--
CA Db 85	--	--	--	--	--	--	--	-28.5	-5.15	--
	2	4	3	20	3	<10	<10	--	--	--
CA Fc 13	--	--	--	--	--	30	--	--	--	13

LOCAL IDENTIFIER	CYANIDE TOTAL (MG/L AS CN)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)	PCN DISSOLV (UG/L)	BROMOFORM TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CARBON-TETRACHLORIDE TOTAL (UG/L)	CHLOROBENZENE TOTAL (UG/L)	CHLORODIBROMOMETHANE TOTAL (UG/L)	CHLOROFORM TOTAL (UG/L)	CHLOROETHANE TOTAL (UG/L)
CA Db 66	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
	<0.010	<0.01	--	--	--	--	--	--	--	--
CA Db 69	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
	--	0.07	--	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
CA Db 72	--	--	--	--	--	--	--	--	--	--
	<0.010	0.05	--	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
CA Db 73	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
	<0.010	4.3	--	--	--	--	--	--	--	--
CA Db 84	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
CA Db 85	--	--	--	--	--	--	--	--	--	--
	<0.010	0.18	--	--	--	--	--	--	--	--
CA Fc 13	--	--	<0.10	--	--	--	--	--	--	--

LOCAL IDENTIFIER	CIS 1,3-DICHLOROPROPENE TOTAL (UG/L)	DICHLOROBROMOMETHANE TOTAL (UG/L)	DICHLORODIFLUOROMETHANE TOTAL (UG/L)	ETHYLBENZENE TOTAL (UG/L)	METHYLBROMIDE TOTAL (UG/L)	METHYLCHLORIDE TOTAL (UG/L)	METHYLENE CHLORIDE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	TETRACHLOROETHYLENE TOTAL (UG/L)	TRICHLOROFLUOROMETHANE TOTAL (UG/L)
CA Db 69	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20
CA Db 72	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20

LOCAL IDENTIFIER	TOLUENE TOTAL (UG/L)	TRANS-1,3-DICHLOROPROPENE TOTAL (UG/L)	TRICHLOROETHYLENE TOTAL (UG/L)	TRIFLURALIN TOTAL RECOVER (UG/L)	VINYL CHLORIDE TOTAL (UG/L)	XYLENE TOTAL WATER WHOLE TOT REC (UG/L)	1,1-DICHLOROETHANE TOTAL (UG/L)	1,1-DICHLOROETHYLENE TOTAL (UG/L)	1,1,1-TRICHLOROETHANE TOTAL (UG/L)	1,1,2-TRICHLOROETHANE TOTAL (UG/L)
CA Db 69	<0.20	<0.20	<0.2	--	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20
CA Db 72	<0.20	<0.20	0.2	--	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20
CA Fc 13	--	--	--	<0.10	--	--	--	--	--	--

CALVERT COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	1,1,2,2 TETRACHLOROETHANE TOTAL (UG/L)	1,2-DIBROMOETHANE WATER WHOLE TOTAL (UG/L)	1,2-DICHLOROBENZENE TOTAL (UG/L)	1,2-DICHLOROETHANE TOTAL (UG/L)	1,2-DICHLOROPROPANE TOTAL (UG/L)	1,2-TRANSDICHLOROETHENE TOTAL (UG/L)	1,3-DICHLOROPROPENE TOTAL (UG/L)	1,3-DICHLOROBENZENE TOTAL (UG/L)	1,4-DICHLOROBENZENE TOTAL (UG/L)	2-CHLOROETHYLVINYLETHER TOTAL (UG/L)
CA Db 69	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
CA Db 72	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

LOCAL IDENTIFIER	PCB, DISSOLVED (UG/L)	ALACHLOR TOTAL RECOVER (UG/L)	ALDRIN, DISSOLVED (UG/L)	AMETRYNE TOTAL	ATRAZINE, TOTAL (UG/L)	CHLORDANE, DISSOLVED (UG/L)	CYANAZINE TOTAL (UG/L)	DDD, DISSOLVED (UG/L)	DDE, DISSOLVED (UG/L)	DDT, DISSOLVED (UG/L)
CA Fc 13	<0.1	<0.10	<0.01	<0.10	0.10	<0.1	<0.10	<0.01	<0.01	<0.01

LOCAL IDENTIFIER	DIAZINON, DISSOLVED (UG/L)	DIELDRIN DISSOLVED (UG/L)	ENDOSULFAN DISSOLV (UG/L)	ENDRIN, DISSOLVED (UG/L)	ETHION DISSOLV (UG/L)	HEPTACHLOR, DISSOLVED (UG/L)	HEPTACHLOR EPOXIDE DISSOLVED (UG/L)	LINDANE DISSOLVED (UG/L)	MALATHION, DISSOLVED (UG/L)	METHOXYCHLOR DISSOLV (UG/L)
	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

LOCAL IDENTIFIER	METHYL PARATHION, DISSOLVED (UG/L)	METHYLTRITHION DISSOLV (UG/L)	METOLACHLOR WATER WHOLE TOT.REC (UG/L)	METRIBUZIN WATER WHOLE TOT.REC (UG/L)	MIREX, DISSOLVED (UG/L)	PARATHION, DISSOLVED (UG/L)	PERTHANE DISSOLV (UG/L)	PROMETRYNE TOTAL (UG/L)	PROMETONE TOTAL (UG/L)
	<0.01	<0.01	<0.1	<0.1	<0.01	<0.01	<0.10	<0.1	<0.1

LOCAL IDENTIFIER	PROPAZINE TOTAL (UG/L)	TOXAPHENE, DISSOLVED (UG/L)	TRITHION DISSOLV (UG/L)	2,4-D, TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	SIMAZINE TOTAL (UG/L)	SIMETRYNE TOTAL (UG/L)
	<0.10	<1.0	<0.01	<0.01	<0.01	<0.01	<0.01	<0.10	<0.1

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

CALVERT COUNTY, MARYLAND--Continued

LOCAL IDENT-I-FIER	DATE	TIME	STATION NUMBER	GEO-LOGIC UNIT	SAM-PLING METHOD, CODES	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DEPTH OF WELL, TOTAL (FEET)
CA Fc 13	12-14-88	1320	382343076302901	122CSPK	4040	30.27	34.00
	01-11-89	1040		122CSPK	4040	30.57	34.00
	01-27-89	0905		122CSPK	4040	30.55	34.00
	02-02-89	0830		122CSPK	4040	30.64	34.00
	02-14-89	0850		122CSPK	4040	30.65	34.00
	03-01-89	0815		122CSPK	4040	30.47	34.00
	03-09-89	0830		122CSPK	4040	30.47	34.00
	03-24-89	0825		122CSPK	4040	29.37	34.00
	03-30-89	0825		122CSPK	4040	28.59	34.00
	04-12-89	0835		122CSPK	4040	27.47	34.00
	04-20-89	0835		122CSPK	4040	27.20	34.00
	05-11-89	0855		122CSPK	4040	26.32	34.00
	05-17-89	0910		122CSPK	4040	26.11	34.00
	06-14-89	0830		122CSPK	4040	25.72	34.00
	09-21-89	0852		122CSPK	4040	26.10	34.00
CA Fc 14	06-14-89	0850	382343076302902	111LLND	4040	25.92	30.00
	09-21-89	0920		111LLND	4040	26.29	30.00
CA Fc 15	12-14-88	1105	382340076303001	122CSPK	4040	17.71	36.00
	03-30-89	0955		122CSPK	4040	16.15	36.00
	09-21-89	1000		122CSPK	4040	14.69	36.00
CA Fc 16	12-14-88	1130	382340076303002	122CSPK	4040	17.98	23.00
	01-11-89	0900		122CSPK	4040	18.28	23.00
	01-27-89	1020		122CSPK	4040	18.34	23.00
	02-02-89	0945		122CSPK	4040	18.38	23.00
	02-14-89	0950		122CSPK	4040	18.45	23.00
	03-01-89	0915		122CSPK	4040	17.99	23.00
	03-09-89	0915		122CSPK	4040	17.67	23.00
	03-24-89	0905		122CSPK	4040	16.86	23.00
	03-30-89	1015		122CSPK	4040	16.34	23.00
	04-12-89	0900		122CSPK	4040	15.38	23.00
	04-20-89	0915		122CSPK	4040	15.19	23.00
	05-11-89	0935		122CSPK	4040	14.28	23.00
	05-17-89	1010		122CSPK	4040	14.17	23.00
	06-14-89	0920		122CSPK	4040	14.09	23.00
	09-21-89	1015		122CSPK	4040	15.06	23.00
CA Fc 17	12-14-88	1030	382343076303801	122CSPK	4040	14.82	32.00
	03-30-89	1055		122CSPK	4040	12.74	32.00
	09-28-89	0830		122CSPK	4040	12.53	32.00
CA Fc 18	12-14-88	0855	382340076303801	122CSPK	4040	9.27	23.00
	01-11-89	0940		122CSPK	4040	9.50	23.00
	01-27-89	1110		122CSPK	4040	9.36	23.00
	02-02-89	1030		122CSPK	4040	9.47	23.00
	02-14-89	1040		122CSPK	4040	9.53	23.00
	03-01-89	0955		122CSPK	4040	8.49	23.00
	03-09-89	0950		122CSPK	4040	7.82	23.00
	03-24-89	0945		122CSPK	4040	6.96	23.00
	03-30-89	1125		122CSPK	4040	7.21	23.00
	04-12-89	0940		122CSPK	4040	6.40	23.00
	04-20-89	1010		122CSPK	4040	6.38	23.00
	05-11-89	1010		122CSPK	4040	5.60	23.00
	05-17-89	1115		122CSPK	4040	5.52	23.00
	06-14-89	0955		122CSPK	4040	6.03	23.00
	09-21-89	1105		122CSPK	4040	6.95	23.00
CA Fc 19	12-14-88	0915	382337076303701	122CSPK	4040	18.67	33.00
	03-30-89	1240		122CSPK	4040	18.15	33.00
	09-28-89	0935		122CSPK	4040	16.66	33.00
CA Fc 20	12-14-88	0955	382337076303702	122CSPK	4040	14.14	27.00
	03-30-89	1205		122CSPK	4040	12.50	27.00
	09-28-89	0900		122CSPK	4040	11.92	27.00
CA Fc 21	12-14-88	1205	382342076303401	122CSPK	4040	20.33	33.00
	03-30-89	0850		122CSPK	4040	17.91	33.00
	09-28-89	1100		122CSPK	4040	16.82	33.00
	09-28-89	1105		122CSPK	4040	16.82	33.00
CA Fc 22	12-14-88	1250	382340076303201	122CSPK	4040	20.40	35.00
	03-30-89	0920		122CSPK	4040	18.24	35.00
	09-28-89	1030		122CSPK	4040	17.24	35.00

Geologic Unit (aquifer): 111LLND - Lowland Deposits
122CSPK - Chesapeake Group

Sampling method: 4040 -Submersible pump

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

CALVERT COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DEPTH TO TOP OF SAMPLE INTERVAL (FT)	DEPTH TO BOTTOM OF SAMPLE INTERVAL (FT)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	PUMP OR FLOW PERIOD PRIOR TO SAMPLING (MIN)	FLOW RATE, INSTANTANEOUS (G/M)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)
CA Fc 13	29	34	47.4	10	0.5	572	6.7
	29	34	47.4	15	1.3	602	7.1
	29	34	47.4	5	1.2	624	6.8
	29	34	47.4	10	0.5	632	7.1
	29	34	47.4	10	1.0	630	7.1
	29	34	47.4	10	0.5	626	8.2
	29	34	47.4	10	0.8	639	7.0
	29	34	47.4	15	0.5	733	7.2
	29	34	47.4	10	0.5	707	7.0
	29	34	47.4	10	1.0	654	6.8
	29	34	47.4	8	1.0	656	6.9
	29	34	47.4	10	1.0	659	6.9
	29	34	47.4	10	0.8	625	7.7
	29	34	47.4	10	0.7	623	6.9
	29	34	47.4	7	1.2	583	6.9
CA Fc 14	25	30	47.6	5	0.7	560	6.7
	25	30	47.6	3	1.2	573	6.8
CA Fc 15	31	36	30.6	25	0.8	568	7.3
	31	36	30.6	25	0.8	586	7.2
	31	36	30.6	25	1.2	533	6.8
CA Fc 16	18	23	30.7	15	0.3	580	7.4
	18	23	30.7	15	1.0	581	7.4
	18	23	30.7	5	0.9	566	6.8
	18	23	30.7	5	0.8	574	7.3
	18	23	30.7	5	1.0	582	7.1
	18	23	30.7	10	1.0	573	8.0
	18	23	30.7	10	1.0	592	7.4
	18	23	30.7	25	0.8	569	7.3
	18	23	30.7	10	0.7	573	7.2
	18	23	30.7	10	1.2	574	7.0
	18	23	30.7	10	1.2	570	7.0
	18	23	30.7	15	1.2	574	7.0
	18	23	30.7	10	1.0	577	7.6
	18	23	30.7	10	0.8	581	7.3
	18	23	30.7	10	1.0	561	7.1
CA Fc 17	27	32	22.6	30	1.0	608	6.7
	27	32	22.6	25	0.8	604	7.1
	27	32	22.6	20	1.2	583	7.3
CA Fc 18	18	23	15.6	30	1.0	622	6.9
	18	23	15.6	25	0.8	599	6.9
	18	23	15.6	25	1.5	597	6.8
	18	23	15.6	25	0.8	594	7.0
	18	23	15.6	30	1.5	589	7.0
	18	23	15.6	15	1.0	604	7.0
	18	23	15.6	20	1.0	596	7.0
	18	23	15.6	25	1.0	584	7.9
	18	23	15.6	15	1.0	590	7.0
	18	23	15.6	15	1.5	584	6.9
	18	23	15.6	20	1.3	580	6.9
	18	23	15.6	20	1.3	563	6.9
	18	23	15.6	25	1.0	560	7.3
	18	23	15.6	25	0.6	514	7.3
	18	23	15.6	30	1.5	628	6.8
CA Fc 19	28	33	25.5	15	1.0	593	7.0
	28	33	25.5	25	0.6	577	6.9
	28	33	25.5	23	0.7	571	6.9
CA Fc 20	22	27	20.6	15	1.0	612	7.2
	22	27	20.6	30	0.7	620	7.0
	22	27	20.6	15	1.1	523	7.2
CA Fc 21	28	33	35.5	20	0.8	529	6.9
	28	33	35.5	15	0.8	506	7.2
	28	33	35.5	20	0.7	422	7.3
	28	33	35.5	20	0.7	422	7.3
CA Fc 22	30	35	36.5	30	0.5	601	6.7
	30	35	36.5	20	0.8	597	7.1
	30	35	36.5	20	1.2	539	7.2

CALVERT COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	NITROGEN, NITRATE DISSOLVED (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)
CA Fc 13	15.0	4.9	--	<0.010	8.50	0.030	0.40
	15.5	5.0	--	<0.010	8.40	0.040	0.50
	15.0	5.1	--	<0.010	8.50	0.020	0.20
	15.0	5.1	--	<0.010	9.40	<0.010	1.2
	14.5	5.2	--	<0.010	5.70	0.020	0.80
	14.5	5.0	--	<0.010	8.20	0.030	0.30
	13.5	5.0	--	<0.010	9.60	0.020	0.70
	14.0	3.6	--	<0.010	9.10	0.020	0.30
	15.5	3.5	--	<0.010	9.50	0.020	0.50
	14.5	5.1	--	<0.010	9.50	0.020	0.40
	14.5	5.8	--	<0.010	8.80	0.020	0.70
	14.5	6.0	--	<0.010	8.40	0.020	0.50
	14.5	7.1	--	<0.010	8.40	0.030	0.50
	15.5	6.6	--	<0.010	8.60	<0.010	0.30
	15.5	6.2	--	<0.010	7.50	<0.010	0.80
CA Fc 14	18.0	7.1	--	<0.010	7.40	<0.010	0.50
	17.5	6.7	--	<0.010	7.50	<0.010	1.1
CA Fc 15	15.0	6.3	--	<0.010	10.0	0.020	0.60
	14.5	7.0	--	<0.010	9.10	0.010	0.50
	15.5	7.0	--	<0.010	9.40	0.010	0.80
CA Fc 16	15.5	6.0	--	<0.010	10.0	0.040	0.50
	13.5	9.0	--	<0.010	10.0	0.040	0.70
	14.0	7.9	--	<0.010	10.0	0.020	<0.20
	14.0	7.4	11.0	0.010	11.0	<0.010	1.2
	12.5	4.1	--	<0.010	9.50	0.010	0.40
	13.0	4.1	--	<0.010	11.0	0.030	0.90
	10.0	7.5	11.0	0.010	11.0	0.030	0.50
	13.0	3.4	--	<0.010	9.90	0.010	0.30
	14.0	6.8	--	<0.010	9.80	0.010	0.50
	12.5	6.9	--	<0.010	10.0	0.020	0.30
	13.0	7.3	--	<0.010	9.10	0.030	0.40
	12.5	7.5	--	<0.010	8.90	0.020	0.60
	13.0	8.0	--	<0.010	9.40	0.030	0.70
	14.0	7.4	--	<0.010	9.40	0.010	0.30
	16.0	6.9	--	<0.010	9.70	<0.010	0.40
CA Fc 17	15.5	6.1	--	<0.010	8.70	0.030	0.60
	14.5	6.6	--	<0.010	8.00	0.020	0.20
	16.0	6.8	--	<0.010	6.50	0.020	<0.20
CA Fc 18	14.0	5.1	--	<0.010	6.60	0.030	0.70
	14.0	4.6	--	<0.010	5.90	0.040	0.80
	13.5	5.5	7.28	0.020	7.30	0.020	0.40
	13.5	5.4	7.09	0.010	7.10	0.010	1.0
	13.0	5.3	--	<0.010	5.70	0.010	0.50
	12.0	7.4	--	<0.010	8.40	0.040	0.70
	10.5	7.6	9.69	0.010	9.70	0.020	0.50
	11.5	7.7	--	<0.010	8.20	0.020	0.50
	12.5	7.8	--	<0.010	8.10	0.020	0.60
	11.0	8.4	--	<0.010	8.50	0.030	0.60
	12.0	8.4	--	<0.010	7.90	0.030	0.60
	12.0	9.1	--	<0.010	9.40	0.030	0.70
	12.5	8.8	--	<0.010	9.70	0.030	0.50
	15.0	6.9	--	<0.010	7.80	0.010	0.40
	18.5	6.4	--	<0.010	7.30	0.020	0.40
CA Fc 19	14.0	5.2	--	<0.010	5.50	0.090	0.40
	15.0	4.0	--	<0.010	5.00	0.010	0.50
	15.0	5.6	--	<0.010	5.70	0.010	<0.20
CA Fc 20	15.0	6.2	--	<0.010	8.80	0.030	0.60
	13.5	7.5	--	<0.010	9.10	0.020	0.40
	15.5	7.4	--	<0.010	6.40	0.010	<0.20
CA Fc 21	15.0	4.2	--	<0.010	<0.100	<0.010	0.60
	14.5	4.6	--	<0.010	8.10	<0.010	0.20
	15.0	6.0	--	<0.010	7.10	<0.010	<0.20
	15.0	6.0	--	<0.010	7.20	0.010	<0.20
CA Fc 22	14.5	5.7	--	<0.010	10.0	0.030	0.50
	14.5	6.8	--	<0.010	10.0	0.020	0.50
	15.0	6.9	--	<0.010	8.00	0.010	<0.20

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

CALVERT COUNTY, MARYLAND--Continued

LOCAL IDENT-I-FIER	DATE	TIME	STATION NUMBER	GEO-LOGIC UNIT	SITE	SAM-PLING METHOD, CODES	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DEPTH OF WELL, TOTAL (FEET)
CA Fc 28	01-27-89	1150	382340076303401	111LLND	LYS	4030	--	3.50
	02-02-89	1105		111LLND	LYS	4030	--	3.50
	02-14-89	1125		111LLND	LYS	4030	--	3.50
	03-01-89	1140		111LLND	LYS	4030	--	3.50
	03-09-89	1030		111LLND	LYS	4030	--	3.50
	03-24-89	1140		111LLND	LYS	4030	--	3.50
	03-30-89	1315		111LLND	LYS	4030	--	3.50
	04-12-89	1010		111LLND	LYS	4030	--	3.50
	04-20-89	1115		111LLND	LYS	4030	--	3.50
	05-11-89	1130		111LLND	LYS	4030	--	3.50
	05-17-89	1210		111LLND	LYS	4030	--	3.50
	06-14-89	1030		111LLND	LYS	4030	--	3.50
	09-28-89	1215		111LLND	LYS	4030	--	3.50
CA Fc 29	01-27-89	1205	382340076303402	111LLND	LYS	4030	--	8.50
	02-02-89	1125		111LLND	LYS	4030	--	8.50
	02-14-89	1155		111LLND	LYS	4030	--	8.50
	03-01-89	1150		111LLND	LYS	4030	--	8.50
	03-09-89	1050		111LLND	LYS	4030	--	8.50
	03-24-89	1155		111LLND	LYS	4030	--	8.50
	03-30-89	1335		111LLND	LYS	4030	--	8.50
	04-12-89	1025		111LLND	LYS	4030	--	8.50
	04-20-89	1120		111LLND	LYS	4030	--	8.50
	05-11-89	1135		111LLND	LYS	4030	--	8.50
	05-17-89	1215		111LLND	LYS	4030	--	8.50
	06-14-89	1050		111LLND	LYS	4030	--	8.50
CA Fc 30	12-15-88	0805	382340076303403	111LLND	LYS	4030	--	13.70
	01-11-89	1230		111LLND	LYS	4030	--	13.70
	01-27-89	1235		111LLND	LYS	4030	--	13.70
	02-02-89	1140		111LLND	LYS	4030	--	13.70
	02-14-89	1210		111LLND	LYS	4030	--	13.70
	03-01-89	1200		111LLND	LYS	4030	--	13.70
	03-09-89	1110		111LLND	LYS	4030	--	13.70
	03-24-89	1210		111LLND	LYS	4030	--	13.70
	03-30-89	1345		111LLND	LYS	4030	--	13.70
	04-12-89	1045		111LLND	LYS	4030	--	13.70
	04-20-89	1125		111LLND	LYS	4030	--	13.70
	05-11-89	1145		111LLND	LYS	4030	--	13.70
	05-17-89	1225		111LLND	LYS	4030	--	13.70
	06-14-89	1105		111LLND	LYS	4030	--	13.70
	09-28-89	1225		111LLND	LYS	4030	--	13.70
CA Fc 31	02-02-89	1155	382340076303802	111LLND	LYS	4030	--	2.50
	02-14-89	1225		111LLND	LYS	4030	--	2.50
	03-01-89	1215		111LLND	LYS	4030	--	2.50
	03-09-89	1130		111LLND	LYS	4030	--	2.50
	03-24-89	1230		111LLND	LYS	4030	--	2.50
	03-30-89	1450		111LLND	LYS	4030	--	2.50
	04-12-89	1100		111LLND	LYS	4030	--	2.50
	04-20-89	1155		111LLND	LYS	4030	--	2.50
	05-11-89	1200		111LLND	LYS	4030	--	2.50
	05-17-89	1235		111LLND	LYS	4030	--	2.50
	06-14-89	1125		111LLND	LYS	4030	--	2.50
CA Fc 33	03-09-89	1215	382339076304201	111LLND	GW	4030	7.35	13.70
	03-24-89	1045		111LLND	GW	4030	4.54	13.70
	03-30-89	1515		111LLND	GW	4030	7.50	13.70
	04-12-89	1145		111LLND	GW	4030	7.00	13.70
	04-20-89	1220		111LLND	GW	4030	6.88	13.70
	05-11-89	1215		111LLND	GW	4030	6.26	13.70
	05-17-89	1250		111LLND	GW	4030	8.14	13.70
	06-14-89	1210		111LLND	GW	4030	7.22	13.70
	09-21-89	1210		111LLND	GW	4030	7.35	13.70
CA Fc 34	05-17-89	1305	382339076304202	111LLND	GW	4030	6.78	17.80
	06-14-89	1215		111LLND	GW	4030	7.11	17.80
	09-21-89	1215		111LLND	GW	4030	7.34	17.80

Geologic unit (aquifer): 111LLND - Lowland Deposits

Sampling method: 4030 - Suction pump

Site type: GW - Ground Water
LYS - Lysimeter

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

CALVERT COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DEPTH TO TOP OF SAMPLE INTERVAL (FT)	DEPTH TO BOTTOM OF SAMPLE INTERVAL (FT)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	PUMP OR FLOW PERIOD PRIOR TO SAMPLING (MIN)	FLOW RATE, INSTANTANEOUS (G/M)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)
CA Fc 28	3.5	3.5	31.4	--	--	254	--	--
	3.5	3.5	31.4	--	--	248	--	--
	3.5	3.5	31.4	--	--	261	--	--
	3.5	3.5	31.4	--	--	289	--	--
	3.5	3.5	31.4	--	--	319	--	--
	3.5	3.5	31.4	--	--	--	--	--
	3.5	3.5	31.4	--	--	346	--	--
	3.5	3.5	31.4	--	--	319	--	--
	3.5	3.5	31.4	--	--	287	--	--
	3.5	3.5	31.4	--	--	249	--	--
	3.5	3.5	31.4	--	--	230	--	--
	3.5	3.5	31.4	--	--	211	--	--
	3.5	3.5	31.4	--	--	185	--	--
CA Fc 29	8.5	8.5	31.4	--	--	300	--	--
	8.5	8.5	31.4	--	--	288	--	--
	8.5	8.5	31.4	--	--	285	--	--
	8.5	8.5	31.4	--	--	288	--	--
	8.5	8.5	31.4	--	--	312	--	--
	8.5	8.5	31.4	--	--	342	--	--
	8.5	8.5	31.4	--	--	423	--	--
	8.5	8.5	31.4	--	--	422	--	--
	8.5	8.5	31.4	--	--	449	--	--
	8.5	8.5	31.4	--	--	448	--	--
	8.5	8.5	31.4	--	--	450	--	--
	8.5	8.5	31.4	--	--	423	--	--
CA Fc 30	14	14	31.4	--	--	557	--	--
	14	14	31.4	--	--	--	--	--
	14	14	31.4	--	--	--	--	--
	14	14	31.4	--	--	539	--	--
	14	14	31.4	--	--	544	--	--
	14	14	31.4	--	--	618	--	--
	14	14	31.4	--	--	888	--	--
	14	14	31.4	--	--	839	--	--
	14	14	31.4	--	--	533	--	--
	14	14	31.4	--	--	624	--	--
	14	14	31.4	--	--	573	--	--
	14	14	31.4	--	--	565	--	--
	14	14	31.4	--	--	541	--	--
	14	14	31.4	--	--	533	--	--
	14	14	31.4	--	--	592	--	--
CA Fc 31	2.5	2.5	15.5	--	--	479	--	--
	2.5	2.5	15.5	--	--	472	--	--
	2.5	2.5	15.5	--	--	461	--	--
	2.5	2.5	15.5	--	--	508	--	--
	2.5	2.5	15.5	--	--	524	--	--
	2.5	2.5	15.5	--	--	520	--	--
	2.5	2.5	15.5	--	--	669	--	--
	2.5	2.5	15.5	--	--	861	--	--
	2.5	2.5	15.5	--	--	1040	--	--
	2.5	2.5	15.5	--	--	--	--	--
	2.5	2.5	15.5	--	--	1580	--	--
CA Fc 33	12	14	12.2	--	--	682	7.3	9.0
	12	14	12.2	--	--	675	7.3	8.0
	12	14	12.2	--	--	666	7.4	9.5
	12	14	12.2	--	--	662	7.2	10.0
	12	14	12.2	--	--	672	7.0	10.5
	12	14	12.2	--	--	662	7.2	11.0
	12	14	12.2	--	--	672	7.4	11.5
	12	14	12.2	--	--	585	7.3	13.5
	12	14	12.2	--	--	602	7.1	17.5
CA Fc 34	16	18	12.0	--	--	641	7.2	11.5
	16	18	12.0	--	--	563	7.1	13.0
	16	18	12.0	--	--	553	7.0	16.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

CALVERT COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	OXYGEN, DISSOLVED (MG/L)	NITROGEN, NITRATE DISSOLVED (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	CARBON, ORGANIC TOTAL (MG/L AS C)
CA Fc 28	--	3.78	0.020	3.80	0.020	<0.20	--
	--	3.59	0.010	3.60	<0.010	0.70	--
	--	--	<0.010	2.90	<0.010	<0.20	--
	--	--	<0.010	2.90	0.020	0.30	--
	--	2.69	0.010	2.70	0.010	0.50	--
	--	--	<0.010	2.90	<0.010	0.30	--
	--	--	<0.010	2.90	<0.010	0.30	--
	--	--	<0.010	2.60	0.020	0.40	--
	--	--	<0.010	2.20	0.030	0.80	--
	--	--	<0.010	2.10	0.010	0.50	--
	--	--	<0.010	2.10	0.020	0.50	--
	--	--	<0.010	2.20	0.020	0.30	--
	--	--	<0.010	0.120	0.040	1.1	--
CA Fc 29	--	0.950	0.010	0.960	0.020	0.20	2.0
	--	0.710	0.010	0.720	0.010	<0.20	--
	--	--	<0.010	0.570	0.010	0.30	--
	--	--	<0.010	0.630	0.030	0.20	--
	--	0.690	0.010	0.700	0.010	0.20	--
	--	--	<0.010	1.00	0.020	0.30	--
	--	--	<0.010	1.60	<0.010	0.30	2.4
	--	--	<0.010	1.70	0.020	0.40	--
	--	--	<0.010	1.80	0.020	0.50	--
	--	--	<0.010	2.00	0.020	0.40	--
	--	--	<0.010	1.90	0.020	0.40	--
	--	--	<0.010	1.80	<0.010	0.50	--
CA Fc 30	--	--	<0.010	5.20	0.060	0.40	--
	--	--	<0.010	5.60	0.070	0.50	--
	--	--	<0.010	5.60	0.060	0.20	--
	--	6.78	0.020	6.80	0.020	0.30	--
	--	--	<0.010	5.70	<0.010	0.80	--
	--	--	<0.010	6.50	0.010	0.60	--
	--	4.79	0.010	4.80	0.030	0.40	--
	--	--	<0.010	3.40	0.030	0.50	--
	--	--	<0.010	2.60	0.010	0.30	--
	--	--	<0.010	2.80	0.020	0.50	--
	--	--	<0.010	2.40	0.030	0.30	--
	--	--	<0.010	2.60	0.020	0.70	--
	--	--	<0.010	2.10	0.020	0.50	--
	--	--	<0.010	2.00	<0.010	0.70	--
	--	--	<0.010	5.40	0.050	0.30	--
CA Fc 31	--	6.59	0.010	6.60	<0.010	1.0	4.5
	--	--	<0.010	5.70	0.010	0.50	--
	--	--	<0.010	7.60	<0.010	0.60	--
	--	9.98	0.020	10.0	0.030	1.2	--
	--	9.79	0.010	9.80	0.030	0.80	--
	--	--	<0.010	9.40	0.020	0.30	3.5
	--	--	<0.010	11.0	0.030	0.60	--
	--	--	<0.010	11.0	0.040	0.70	--
	--	--	<0.010	12.0	0.050	0.50	--
	--	--	<0.010	13.0	0.060	0.30	--
	--	--	<0.010	13.0	0.050	0.30	--
CA Fc 33	1.7	0.340	0.060	0.400	0.040	<0.20	--
	0.9	0.310	0.010	0.320	0.050	0.30	--
	1.9	0.340	0.040	0.380	0.030	0.30	--
	2.8	--	0.010	<0.100	0.080	<0.20	6.7
	2.0	0.210	0.030	0.240	0.050	0.20	--
	1.4	0.550	0.030	0.580	0.050	<0.20	2.9
	0.8	0.600	0.020	0.620	0.060	0.20	--
	2.5	1.65	0.050	1.70	0.020	0.40	3.9
	0.5	0.130	0.040	0.170	0.030	0.30	--
CA Fc 34	5.1	3.18	0.020	3.20	0.060	1.1	--
	5.0	2.98	0.520	3.50	0.030	0.50	10
	0.9	0.200	1.00	1.20	0.310	0.40	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

CAROLINE COUNTY, MARYLAND

LOCAL IDENTIFIER	DATE	TIME	STATION NUMBER	GEOLOGIC UNIT	SAMPLING METHOD, CODES	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DEPTH OF WELL, TOTAL (FEET)	DEPTH TO TOP OF SAMPLE INTERVAL (FT)	DEPTH TO BOTTOM OF SAMPLE INTERVAL (FT)
CO Dc 146	06-27-89	1040	385302075540101	112PCPC	4040	0.51	20.00	17	20

ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	PUMP OR FLOW PERIOD PRIOR TO SAMPLING (MIN)	FLOW RATE, INSTANTANEOUS (G/M)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
45.0	20	1.0	181	5.6	14.5	8.8	8.3	12	3.2

POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3	BICARBONATE WATER WH IT FIELD MG/L AS HCO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	BROMIDE DISSOLVED (MG/L AS BR)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)
2.5	4	5	13	14	<0.10	0.010	12	117	<0.010

NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ANTIMONY, DISSOLVED (UG/L AS SB)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	BORON, DISSOLVED (UG/L AS B)
11.0	0.020	0.50	0.070	30	<1	<1	170	0.6	<10

CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)
<1	<5	3	<10	40	<10	<4	57	<0.1	<10

NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	GROSS ALPHA, DISSOLVED (UG/L AS U-NAT)	GROSS BETA, DISSOLVED (PCI/L AS CS-137)	RADON 222 TOTAL (PC/L)	GROSS BETA, DISSOLVED (PCI/L AS SR/YT-90)	CARBON, ORGANIC DISSOLVED (MG/L AS C)
<10	2	<1.0	140	<6	11	<0.4	2.8	210	2.3	0.9

Geologic unit (aquifer): 112PCPC - Pleistocene-Pliocene series

Sampling method: 4040 - Submersible pump

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

CARROLL COUNTY, MARYLAND

LOCAL IDENTIFIER	DATE	TIME	STATION NUMBER	GEOLOGIC UNIT	SITE TYPE	SAMPLING METHOD, CODES	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DEPTH OF WELL, TOTAL (FEET)	DEPTH TO TOP OF SAMPLE INTERVAL (FT)	DEPTH TO BOTTOM OF SAMPLE INTERVAL (FT)
CL Bf 184	02-28-89	1335	393754076512401	300PRTB	GW	4040	0.90	340.00	50	340
	06-19-89	1336		300PRTB	GW	4040	0.22	340.00	50	340
	09-20-89	1300		300PRTB	GW	4030	1.15	340.00	50	340
CL Bf 194	03-30-89	1530	393811076521101	300PRTB	GW	4020	4.12	53.00	48	53
CL Bf 195	03-30-89	1400	393811076521102	300PRTB	GW	4020	2.69	18.00	8.0	18
CL Bf 198	03-30-89	1345	393817076520801	300PRTB	GW	4020	48.76	73.00	46	71
CL Bf 199	03-30-89	1130	393810076521001	300PRTB	GW	4020	3.19	18.00	5.0	15
CL Bf 201	03-30-89	0845	393811076521103	300PRTB	LYS	4080	--	2.90	2.1	2.4

LOCAL IDENTIFIER	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	PUMP OR FLOW PERIOD PRIOR TO SAMPLING (MIN)	FLOW RATE, INSTANTANEOUS (G/M)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)
CL Bf 184	785	125	15	198	6.8	11.5	--	21	4.5
	785	186	8.2	193	6.2	12.5	6.5	23	4.9
	785	159	11	194	6.4	11.5	--	23	4.8
CL Bf 194	819	--	--	269	5.3	12.0	0.6	8.8	9.3
CL Bf 195	819	50	--	289	5.3	9.5	0.2	9.9	19
CL Bf 198	866	--	--	339	5.2	12.0	--	10	8.5
CL Bf 199	818	60	0.9	260	5.7	8.5	4.1	15	4.5
CL Bf 201	821	--	--	--	--	--	--	33	3.3

LOCAL IDENTIFIER	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3	BICARBONATE WATER WH IT FIELD MG/L AS HCO3	SULFIDE TOTAL (MG/L AS S)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)
CL Bf 184	3.7	0.60	35	43	--	4.1	10	0.10	9.2
	3.9	0.50	35	42	--	4.0	11	<0.10	9.9
	3.9	0.50	34	41	--	4.0	10	<0.10	9.9
CL Bf 194	22	1.7	13	--	--	5.2	35	<0.10	7.3
CL Bf 195	14	4.2	8	--	--	<0.20	24	<0.10	5.8
CL Bf 198	27	1.5	8	--	--	24	54	<0.10	6.0
CL Bf 199	26	0.90	16	--	<0.5	19	48	<0.10	5.5
CL Bf 201	39	1.1	--	--	--	5.0	60	0.20	1.7

LOCAL IDENTIFIER	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)
CL Bf 184	74	--	9.10	--	--	--	0.020	--	40
	78	--	8.90	--	--	--	0.010	--	140
	76	--	8.70	--	--	--	0.020	--	<10
CL Bf 194	150	--	--	12.0	--	--	--	<0.010	--
CL Bf 195	--	--	--	27.0	--	--	--	<0.010	--
CL Bf 198	149	--	--	3.10	--	--	--	<0.010	--
CL Bf 199	141	<0.010	--	2.80	0.030	0.40	0.060	<0.010	--
CL Bf 201	198	--	--	<0.100	--	--	--	<0.010	--

Geologic unit (aquifer): 300PRTB - Prettyboy Schist

Site type: GW - Groundwater
LYS - Lysimeter

Sampling method: 4020 - Bailer
4030 -Suction pump
4040 - Submersible pump
4080 - Peristaltic pump

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

CARROLL COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BARIUM, DISSOLVED (UG/L AS BA)	BORON, DISSOLVED (UG/L AS B)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM DISSOLVED (UG/L AS CD)
CL Bf 184	--	--	--	--	--	--	<10	--	--
	--	--	--	--	--	--	<10	--	--
	--	--	--	--	--	--	<10	--	--
CL Bf 194	20	--	--	--	--	--	--	--	--
CL Bf 195	20	--	--	--	--	--	--	--	2
CL Bf 198	20	--	--	--	--	--	--	--	--
CL Bf 199	40	<1	<1	100	49	10	--	<1	--
CL Bf 201	20	--	--	--	--	--	--	--	<0.2

LOCAL IDENTIFIER	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)
CL Bf 184	--	--	--	--	90	34	--	--	<10
	--	--	--	--	510	30	--	--	<10
	--	--	--	--	320	19	--	--	10
CL Bf 194	--	--	--	21	--	<3	--	--	--
CL Bf 195	--	<1	--	56	--	5	--	1	--
CL Bf 198	--	--	--	45	--	<3	--	--	--
CL Bf 199	8	--	12	12	--	4	5	--	--
CL Bf 201	--	<1	--	24	--	9	--	<1	--

LOCAL IDENTIFIER	MANGANESE, DISSOLVED (UG/L AS MN)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)
CL Bf 184	4	--	--	--	--	--	--	--	--
	7	--	--	--	--	--	--	--	--
	3	--	--	--	--	--	--	--	--
CL Bf 194	31	<1	--	--	--	--	--	--	<1
CL Bf 195	190	<1	--	--	--	--	--	--	<1
CL Bf 198	160	<1	--	--	--	--	--	--	<1
CL Bf 199	170	<1	3	<1	<1	1	1.0	51	<1
CL Bf 201	5900	<1	--	--	--	--	--	--	<1

LOCAL IDENTIFIER	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)	TRIFLURALIN TOTAL RECOVER (UG/L)	ALACHLOR TOTAL RECOVER (UG/L)	AMETRYNE TOTAL
CL Bf 184	<10	--	3.3	--	--	--	<0.10	<0.10	<0.10
	10	--	0.5	--	--	--	<0.10	<0.10	<0.10
	<10	--	0.3	--	--	--	<0.10	<0.10	<0.10
CL Bf 194	--	50	--	--	--	--	--	--	--
CL Bf 195	--	140	--	--	--	--	--	--	--
CL Bf 198	--	35	--	--	--	--	--	--	--
CL Bf 199	30	21	1.8	1.3	<0.010	0.05	--	--	--
CL Bf 201	--	35	--	--	--	--	--	--	--

CARROLL COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	ATRAZINE, TOTAL (UG/L)	CYANAZINE TOTAL (UG/L)	METOLACHLOR WATER WHOLE TOT.REC (UG/L)	METRIBUZIN WATER WHOLE TOT.REC (UG/L)	PROMETRYNE TOTAL (UG/L)	PROMETONE TOTAL (UG/L)	PROPAZINE TOTAL (UG/L)	SIMAZINE TOTAL (UG/L)	SIMETRYNE TOTAL (UG/L)
CL Bf 184	0.10	<0.10	<0.1	<0.1	<0.1	<0.1	<0.10	<0.10	<0.1
	0.20	<0.10	<0.1	<0.1	<0.1	<0.1	<0.10	<0.10	<0.1
	0.10	<0.10	<0.1	<0.1	<0.1	<0.1	<0.10	<0.10	<0.1
CL Bf 194	--	--	--	--	--	--	--	--	--
CL Bf 195	--	--	--	--	--	--	--	--	--
CL Bf 198	--	--	--	--	--	--	--	--	--
CL Bf 199	--	--	--	--	--	--	--	--	--
CL Bf 201	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

CECIL COUNTY, MARYLAND

LOCAL IDENTIFIER	DATE	TIME	STATION NUMBER	GEOLOGIC UNIT	SAMPLING METHOD, CODES	DEPTH OF WELL, TOTAL (FEET)	DEPTH TO TOP OF SAMPLE INTERVAL (FT)	DEPTH TO BOTTOM OF SAMPLE INTERVAL (FT)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)
CE Cc 40	02-21-89	1145	393459076045001	300LFPF	4010	--	--	--	180
CE Cf 88	09-21-89	1100	393057075493801	211MGTY	4040	48.00	43	48	38.0

LOCAL IDENTIFIER	PUMP OR FLOW PERIOD PRIOR TO SAMPLING (MIN)	FLOW RATE, INSTANTANEOUS (G/M)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)
CE Cc 40	--	4.8	291	5.34	11.0	--	16	9.4	17	1.0
CE Cf 88	12	7.9	1210	4.98	13.5	0.6	36	25	100	5.5

LOCAL IDENTIFIER	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3	BICARBONATE WATER WH IT FIELD MG/L AS HCO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	BROMIDE DISSOLVED (MG/L AS BR)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)
CE Cc 40	13	16	2.3	91	0.10	--	20	165	--	1.00
CE Cf 88	14	18	350	190	0.20	0.92	23	853	<0.010	--

LOCAL IDENTIFIER	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ALUMINUM, DISSOLVED (UG/L AS AL)	ANTIMONY, DISSOLVED (UG/L AS SB)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)
CE Cc 40	--	--	--	<0.010	--	30	--	--	--	--
CE Cf 88	<0.100	0.170	0.50	--	0.070	--	190	<1	<1	25

LOCAL IDENTIFIER	BERYLLIUM, DISSOLVED (UG/L AS BE)	BORON, DISSOLVED (UG/L AS B)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)
CE Cc 40	--	--	20	--	--	--	--	50	20	--
CE Cf 88	1	40	--	3	<5	10	<10	--	110000	<10

LOCAL IDENTIFIER	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)
CE Cc 40	--	10	8	--	--	--	--	--	--	--
CE Cf 88	150	--	1900	0.2	<10	20	<1	<1.0	400	17

LOCAL IDENTIFIER	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)	RADON 222 TOTAL (PC/L)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	BROMOBENZENE WATER, WHOLE, TOTAL (UG/L)	BROMOFORM TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CARBONTETRACHLORIDE TOTAL (UG/L)	CHLOROBENZENE TOTAL (UG/L)
CE Cc 40	20	--	--	0.9	--	--	--	--	--	--
CE Cf 88	--	9	<80	--	0.7	<0.20	<0.20	<0.20	<0.20	<0.20

Geologic unit (aquifer): 211MGTY - Magothy Formation
300LFPF - Little Northeast Creek, Frenchtown, Principio Furnace Members, James Run Formation

Sampling method: 4010 - Thief sampler
4040 - Submersible pump

		CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	DI-BROMO-METHANE WATER WHOLE RECOVER (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-CHLO-RIDE TOTAL (UG/L)
CE Cc	40	--	--	--	--	--	--	--	--	--	--
CE Cf	88	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

		METHYL-ENE CHLO-RIDE TOTAL (UG/L)	O-CHLORO-TOLUENE WATER WHOLE TOTAL (UG/L)	PARA-CHLORO-TOLUENE WATER, WHOLE, TOTAL (UG/L)	STYRENE TOTAL (UG/L)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-FLURA-LIN TOTAL RECOVER (UG/L)
CE Cc	40	--	--	--	--	--	--	--	--	--	<0.10
CE Cf	88	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.2	<0.10

		VINYL CHLO-RIDE TOTAL (UG/L)	XYLENE TOTAL WATER WHOLE TOT REC (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1-DI CHLORO-PRO-PENE, WAT, WH TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	1,1,1,2 TETRA-CHLORO-ETHANE, WAT, WH TOTAL (UG/L)	1,2-DIBROMO ETHANE WATER WHOLE TOTAL (UG/L)
CE Cc	40	--	--	--	--	--	--	--	--	--	--
CE Cf	88	<0.20	<0.2	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.2

		1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-ETHENE WATER WHOLE RECOVER (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	123-TRI CHLORO-PROPANE WATER WHOLE TOTAL (UG/L)	1,3-DI CHLORO-PRO-PANE, WAT. WH TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	2,2-DI CHLORO-PRO-PANE WAT, WH TOTAL (UG/L)	ALA-CHLOR TOTAL RECOVER (UG/L)
CE Cc	40	--	--	--	--	--	--	--	--	--	<0.10
CE Cf	88	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.10

		AME-TRYNE TOTAL	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	DICAMBA (MED-IBEN) (BAN-VEL D) TOTAL (UG/L)	METHO-MYL TOTAL (UG/L)	METOLA-CHLOR WATER WHOLE TOT.REC (UG/L)	METRI-BUZIN WATER WHOLE TOT.REC (UG/L)	PICLO-RAM (TOR-DON) (AMDON) TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)
CE Cc	40	<0.10	<0.10	<0.10	--	--	<0.1	<0.1	--	<0.1	<0.1
CE Cf	88	<0.10	<0.10	<0.10	<0.01	<0.5	<0.1	<0.1	<0.01	<0.1	<0.1

		PRO-PAZINE TOTAL (UG/L)	PROPHAM TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SEVIN, TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)
CE Cc	40	<0.10	--	--	--	--	--	--	<0.10	<0.1
CE Cf	88	<0.10	<0.5	<0.01	<0.01	<0.01	<0.50	<0.01	<0.10	<0.1

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

CHARLES COUNTY, MARYLAND

LOCAL IDENTIFIER	DATE	TIME	STATION NUMBER	GEOLOGIC UNIT	SAMPLING METHOD, CODES	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DEPTH OF WELL, TOTAL (FEET)	DEPTH TO TOP OF SAMPLE INTERVAL (FT)	DEPTH TO BOTTOM OF SAMPLE INTERVAL (FT)
CH Bb 6	11-01-88	1345	383505077101006	217PPSC	4040	--	398.00	251	397
	12-01-88	1005		217PPSC	4040	--	398.00	251	397
CH Bb 7	11-01-88	1350	383505077101007	217PPSC	4040	--	399.00	255	399
	12-01-88	1000		217PPSC	4040	--	399.00	255	399
CH Bb 9	11-01-88	1620	383505077101009	217PPSC	4040	--	390.00	185	376
	12-01-88	1215		217PPSC	4040	--	390.00	185	376
CH Bb 12	11-02-88	1015	383552077100401	217PPSC	4040	--	515.00	238	298
	12-02-88	0955		217PPSC	4040	--	515.00	238	298
CH Bb 19	11-01-88	1610	383533077104002	217PPSC	4040	--	380.00	270	380
	12-01-88	1145		217PPSC	4040	--	380.00	270	380
CH Bc 3	11-01-88	1540	383507077094903	210CRCS	4040	--	390.00	--	--
	12-01-88	1020		210CRCS	4040	--	390.00	--	--
CH Bc 6	11-02-88	1315	383631077083501	217PTXN	4040	--	412.00	362	412
CH Bc 23	11-02-88	0945	383545077095501	217PPSC	4040	--	352.00	229	311
	12-02-88	1010		217PPSC	4040	--	352.00	229	311
CH Bc 49	11-02-88	1135	383540077090701	217PTXN	4040	--	404.00	340	404
	12-01-88	1410		217PTXN	4040	--	404.00	340	404
CH Bc 67	11-02-88	0930	383606077092101	217PTXN	4040	--	522.00	488	522
	12-02-88	1025		217PTXN	4040	--	522.00	488	522
CH Bc 68	11-02-88	1245	383610077081001	217PTXN	4040	--	514.00	414	514
	12-01-88	1450		217PTXN	4040	--	514.00	414	514
CH Bc 70	11-02-88	1130	383554077085702	217PTXN	4040	--	442.00	372	442
	12-01-88	1345		217PTXN	4040	--	442.00	372	442
CH Bc 72	11-02-88	1115	383548077091101	217PPSC	4040	--	360.00	224	347
	12-01-88	1415		217PPSC	4040	--	360.00	224	347
CH Cb 9	11-01-88	0920	383354077121501	217PPSC	4040	--	280.00	191	280
	11-28-88	1630		217PPSC	4040	--	280.00	191	280
CH Cb 11	11-01-88	1220	383313077125401	217PTXN	4040	--	454.00	--	--
	12-01-88	1210		217PTXN	4040	--	454.00	--	--
CH Cb 18	11-01-88	0940	383412077112802	217PPSC	4040	--	295.00	261	295
	11-28-88	1640		217PPSC	4040	--	295.00	261	295
CH Cb 19	11-01-88	0950	383448077105202	217PPSC	4040	--	302.00	208	302
	12-01-88	1530		217PPSC	4040	--	302.00	208	302
CH Cb 28	11-01-88	1215	383315077131401	217PPSC	4040	--	290.00	190	290
	12-02-88	1130		217PPSC	4040	--	290.00	190	290
CH Cb 29	11-01-88	1515	383451077102601	217PPSC	4040	--	286.00	228	286
	12-01-88	1510		217PPSC	4040	--	286.00	228	286
CH Cb 34	11-01-88	1000	383427077121001	217PPSC	4040	--	232.00	217	232
	12-02-88	1425		217PPSC	4040	--	232.00	217	232
CH Cb 35	12-01-88	1215	383407077120501	217PTXN	4040	--	486.00	433	486
	12-02-88	1400		217PTXN	4040	--	488.00	433	486
CH Cb 38	11-01-88	1445	393328077114201	217PPSC	4040	--	235.00	220	235
	12-01-88	1230		217PPSC	4040	--	235.00	220	235
CH Ee 90	06-05-89	1645	382456076562201	112BRND	4020	4.60	21.00	--	21

Geologic unit (aquifer): 112BRND - Brandywine Formation
210CRCS - Cretaceous System
217PPSC - Patapsco Formation
217PXTN - Patuxent Formation

Sampling method: 4020 - Bailer
4040 - Submersible pump

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

CHARLES COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	PUMP OR FLOW PERIOD PRIOR TO SAMPLING (MIN)	FLOW RATE, INSTANTANEOUS (G/M)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)
CH Bb 6	38.7	>1000	150	280	8.0	16.0	0.32	0.25	64	--
	38.7	>1000	150	255	7.9	15.5	0.33	0.25	66	--
CH Bb 7	38.9	60	150	300	8.0	16.0	0.25	0.21	66	--
	38.9	>1000	150	302	7.9	16.0	0.26	0.24	71	--
CH Bb 9	32.1	>1000	150	274	--	15.5	0.40	0.34	63	--
	32.1	>1000	150	256	7.8	17.0	0.41	0.24	64	--
CH Bb 12	95.0	15	200	835	7.3	15.0	8.2	5.8	180	--
	95.0	20	200	622	7.2	16.0	4.6	2.9	140	--
CH Bb 19	90.0	15	150	497	7.7	15.5	0.89	0.83	120	--
	90.0	15	150	501	7.6	16.5	0.94	0.81	120	--
CH Bc 3	18.7	>1000	150	281	8.0	15.5	0.29	0.32	68	--
	18.7	>1000	150	279	8.0	15.5	0.22	0.19	68	--
CH Bc 6	55.0	60	150	256	8.1	15.5	0.14	0.06	57	--
CH Bc 23	65.0	240	150	511	7.6	14.5	2.1	1.7	110	--
	65.0	120	150	719	7.5	15.0	5.2	3.9	170	--
CH Bc 49	33.0	60	150	261	8.0	15.0	0.33	0.15	61	--
	33.0	20	150	243	8.0	15.5	0.30	0.14	59	--
CH Bc 67	30.0	30	200	660	7.9	16.5	0.32	0.28	140	--
	30.0	120	200	653	8.0	17.0	0.36	0.37	140	--
CH Bc 68	75.0	30	150	249	8.0	15.0	0.12	0.16	56	--
	75.0	60	150	244	7.9	16.5	0.12	0.22	58	--
CH Bc 70	35.0	240	200	245	8.2	15.5	0.11	0.05	55	--
	35.0	15	200	241	8.0	16.0	0.09	<0.01	57	--
CH Bc 72	34.0	15	200	286	8.0	14.5	0.27	0.24	65	--
	34.0	15	200	286	7.8	15.5	0.30	0.30	72	--
CH Cb 9	24.0	>1000	150	365	8.2	15.0	0.75	0.73	82	--
	24.0	>1000	150	385	7.8	16.5	1.7	1.2	83	--
CH Cb 11	35.0	30	100	324	7.6	16.5	1.5	0.57	68	--
	35.0	20	100	325	7.7	16.0	1.6	0.63	75	--
CH Cb 18	30.5	>1000	150	481	--	15.0	6.7	0.51	110	--
	30.5	>1000	150	488	7.8	17.5	0.46	0.51	110	--
CH Cb 19	32.0	120	150	370	8.1	15.5	0.50	0.47	80	--
	32.0	15	150	288	8.1	15.0	0.70	0.48	69	--
CH Cb 28	5.0	40	150	291	7.8	14.0	1.6	1.3	64	--
	5.0	60	150	290	7.7	15.5	1.7	1.1	68	--
CH Cb 29	12.4	120	150	330	8.2	15.5	0.30	0.29	70	--
	12.4	>1000	150	287	7.9	15.5	0.24	0.22	73	--
CH Cb 34	30.0	60	120	1290	7.7	15.5	7.7	8.3	260	--
	30.0	15	120	1220	7.6	16.0	7.9	8.1	260	--
CH Cb 35	25.0	60	200	509	7.7	16.5	0.41	0.48	130	--
	25.0	>1000	200	522	7.9	17.0	0.56	0.55	140	--
CH Cb 38	5.0	20	15	288	7.9	14.5	1.0	0.95	63	--
	5.0	15	15	277	7.9	15.5	1.1	0.98	65	--
CH Ee 90	7.0	--	--	269	5.8	14.0	25	6.3	12	5.6

CHARLES COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3	BICARBONATE WATER WH IT FIELD MG/L AS HCO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	BROMIDE DISSOLVED (MG/L AS BR)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)
CH Bb 6	--	--	8.5	7.3	--	0.040	32	191	--	--
	--	--	8.4	7.0	--	0.035	34	188	--	--
CH Bb 7	--	--	10	9.7	--	0.050	32	201	--	--
	--	--	9.8	9.3	--	0.045	34	200	--	--
CH Bb 9	--	--	12	4.1	--	0.018	34	202	--	--
	--	--	12	3.3	--	0.021	34	189	--	--
CH Bb 12	--	--	5.5	59	--	0.39	33	529	--	--
	--	--	4.0	37	--	0.17	35	394	--	--
CH Bb 19	--	--	2.3	24	--	0.18	34	337	--	--
	--	--	1.9	26	--	0.041	35	320	--	--
CH Bc 3	--	--	7.7	6.5	--	0.033	33	210	--	--
	--	--	8.2	6.2	--	0.035	35	199	--	--
CH Bc 6	--	--	14	3.2	--	0.021	36	169	--	--
CH Bc 23	--	--	2.9	24	--	0.16	34	341	--	--
	--	--	4.9	43	--	0.16	33	478	--	--
CH Bc 49	--	--	12	4.1	--	0.027	32	187	--	--
	--	--	12	--	--	0.017	32	171	--	--
CH Bc 67	--	--	7.2	120	--	0.37	34	403	--	--
	--	--	7.1	120	--	0.38	35	407	--	--
CH Bc 68	--	--	12	1.2	--	0.011	35	189	--	--
	--	--	12	1.2	--	<0.010	36	170	--	--
CH Bc 70	--	--	13	1.3	--	0.019	35	187	--	--
	--	--	15	1.3	--	<0.010	37	155	--	--
CH Bc 72	--	--	10	5.4	--	0.037	34	206	--	--
	--	--	8.9	7.0	--	0.041	35	200	--	--
CH Cb 9	--	--	17	21	--	0.071	31	238	--	--
	--	--	11	21	--	0.078	32	239	--	--
CH Cb 11	--	--	11	12	--	0.032	33	224	--	--
	--	--	10	12	--	0.035	33	217	--	--
CH Cb 18	--	--	7.2	41	--	0.17	32	311	--	--
	--	--	7.1	41	--	0.18	33	293	--	--
CH Cb 19	--	--	7.7	19	--	0.092	34	250	--	--
	--	--	9.0	8.3	--	0.029	34	205	--	--
CH Cb 28	--	--	11	6.8	--	0.037	31	194	--	--
	--	--	11	11	--	0.018	31	206	--	--
CH Cb 29	--	--	9.8	6.9	--	0.041	32	217	--	--
	--	--	10	6.9	--	0.038	35	210	--	--
CH Cb 34	--	--	3.1	200	--	1.1	37	754	--	--
	--	--	4.6	210	--	0.88	38	772	--	--
CH Cb 35	--	--	7.8	41	--	0.15	34	350	--	--
	--	--	7.7	42	--	0.15	35	371	--	--
CH Cb 38	--	--	15	2.9	--	0.015	33	197	--	--
	--	--	12	2.9	--	0.015	33	194	--	--
CH Ee 90	29	36	54	12	0.10	0.030	12	--	145	4.80

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

CHARLES COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	PHOSPHOROUS TOTAL (MG/L AS P)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	BORON, TOTAL RECOVERABLE (UG/L AS B)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
CH Bb 6	--	--	--	--	48	--	11	--	--
	--	--	--	--	47	--	12	--	--
CH Bb 7	--	--	--	--	34	--	9	--	--
	--	--	--	--	23	--	9	--	--
CH Bb 9	--	--	--	--	65	--	12	--	--
	--	--	--	--	57	--	12	--	--
CH Bb 12	--	--	--	--	1200	--	120	--	--
	--	--	--	--	670	--	75	--	--
CH Bb 19	--	--	--	--	260	--	28	--	--
	--	--	--	--	240	--	18	--	--
CH Bc 3	--	--	--	--	70	--	9	--	--
	--	--	--	--	39	--	9	--	--
CH Bc 6	--	--	--	--	53	--	3	--	--
CH Bc 23	--	--	--	--	310	--	43	--	--
	--	--	--	--	980	--	110	--	--
CH Bc 49	--	--	--	--	110	--	7	--	--
	--	--	--	--	130	--	9	--	--
CH Bc 67	--	--	--	--	130	--	9	--	--
	--	--	--	--	130	--	10	--	--
CH Bc 68	--	--	--	--	52	--	5	--	--
	--	--	--	--	55	--	5	--	--
CH Bc 70	--	--	--	--	92	--	5	--	--
	--	--	--	--	67	--	5	--	--
CH Bc 72	--	--	--	--	120	--	8	--	--
	--	--	--	--	160	--	9	--	--
CH Cb 9	--	--	--	--	96	--	20	--	--
	--	--	--	--	110	--	22	--	--
CH Cb 11	--	--	--	--	97	--	11	--	--
	--	--	--	--	240	--	14	--	--
CH Cb 18	--	--	--	--	190	--	20	--	--
	--	--	--	--	220	--	19	--	--
CH Cb 19	--	--	--	--	110	--	15	--	--
	--	--	--	--	74	--	15	--	--
CH Cb 28	--	--	--	--	590	--	36	--	--
	--	--	--	--	140	--	18	--	--
CH Cb 29	--	--	--	--	99	--	9	--	--
	--	--	--	--	260	--	33	--	--
CH Cb 34	--	--	--	--	410	--	310	--	--
	--	--	--	--	810	--	340	--	--
CH Cb 35	--	--	--	--	68	--	12	--	--
	--	--	--	--	81	--	20	--	--
CH Cb 38	--	--	--	--	360	--	23	--	--
	--	--	--	--	490	--	22	--	--
CH Ee 90	0.060	580	30	1900	57	20	11	20	3.6

LOCAL IDENTIFIER	DATE	TIME	STATION NUMBER	GEOLOGIC UNIT	SAMPLING METHOD, CODES	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DEPTH OF WELL, TOTAL (FEET)	DEPTH TO TOP OF SAMPLE INTERVAL (FT)	DEPTH TO BOTTOM OF SAMPLE INTERVAL (FT)
DO Ce 89	07-26-89	0930	383123076031301	112KILD	4040	2.94	17.50	15	17
DO Cg 46	07-26-89	1330	383218075522802	112BVDM	4040	2.20	17.00	14	17
DO Ch 40	07-27-89	1130	383113075474801	112BVDM	4040	8.17	27.50	25	28

LOCAL IDENTIFIER	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	PUMP OR FLOW PERIOD PRIOR TO SAMPLING (MIN)	FLOW RATE, INSTANTANEOUS (G/M)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
DO Ce 89	12.0	35	0.7	450	6.0	18.0	4.3	12	12	37
DO Cg 46	18.0	20	0.5	109	5.0	16.5	0.5	4.9	3.0	7.2
DO Ch 40	18.0	25	0.5	200	6.5	17.5	0.3	4.3	2.2	7.8

LOCAL IDENTIFIER	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3	BICARBONATE WATER WH IT FIELD MG/L AS HCO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	BROMIDE DISSOLVED (MG/L AS BR)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)
DO Ce 89	3.9	87	105	26	73	0.20	0.13	69	314	<0.010
DO Cg 46	2.0	2	2	18	12	<0.10	0.040	18	68	<0.010
DO Ch 40	1.0	65	79	6.0	19	0.10	0.17	27	140	<0.010

LOCAL IDENTIFIER	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ANTIMONY, DISSOLVED (UG/L AS SB)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	BORON, DISSOLVED (UG/L AS B)
DO Ce 89	1.20	0.120	1.2	<0.010	<10	<1	1	29	<0.5	50
DO Cg 46	<0.100	0.860	0.70	<0.010	<10	<1	<1	67	1	20
DO Ch 40	<0.100	0.500	0.60	0.050	<10	2	7	16	<0.5	<10

LOCAL IDENTIFIER	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)
DO Ce 89	<1	<5	<3	<10	23000	<10	40	730	<0.1	<10
DO Cg 46	<1	<5	<3	<10	24	<10	4	92	<0.1	<10
DO Ch 40	2	<5	<3	<10	33000	10	<4	150	<0.1	<10

LOCAL IDENTIFIER	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	GROSS ALPHA, DISSOLVED (UG/L AS U-NAT)	GROSS BETA, DISSOLVED (PCI/L AS CS-137)	RADON 222 TOTAL (PC/L)	GROSS BETA, DISSOLVED (PCI/L AS SR/YT-90)	CARBON, ORGANIC DISSOLVED (MG/L AS C)
DO Ce 89	10	<1	1.0	78	<6	<3	3.1	6.4	<80	5.2	1.1
DO Cg 46	<10	<1	1.0	55	<6	23	--	--	240	--	4.7
DO Ch 40	10	<1	3.0	44	<6	3	--	--	<80	--	1.2

Geologic unit (aquifer): 112BVDM - Beaverdam Sand
112KILD - Kent Island Formation

Sampling method: 4040 - Submersible pump

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

HARFORD COUNTY, MARYLAND

LOCAL IDENTIFIER	DATE	TIME	STATION NUMBER	GEOLOGIC UNIT	SAMPLING METHOD, CODES	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DEPTH OF WELL, TOTAL (FEET)	DEPTH TO TOP OF SAMPLE INTERVAL (FT)
HA Aa 9	02-16-89	1500	394153076325701	300WSCK	4010	--	--	--
HA Bc 30	02-16-89	1300	393757076240101	300WSCK	4010	--	--	--
HA Ca 23	04-20-89	1200	393158076302601	300LCRV	4040	5.84	200.00	24
	06-14-89	1130		300LCRV	4040	4.02	200.00	23
	09-21-89	1230		300LCRV	4030	5.74	200.00	24
HA Dd 92	01-17-89	1050	392721076150302	112TLBT	4040	12.31	38.00	18
HA Ed 49	01-19-89	1150	392455076192103	112TLBT	4040	12.79	28.00	14

LOCAL IDENTIFIER	DEPTH TO BOTTOM OF SAMPLE INTERVAL (FT)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	PUMP OR FLOW PERIOD PRIOR TO SAMPLING (MIN)	FLOW RATE, INSTANTANEOUS (G/M)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)
HA Aa 9	--	680	0	10	140	5.5	10.5	--	8.3
HA Bc 30	--	290	--	4.0	27	5.7	10.5	--	1.4
HA Ca 23	200	470	90	10	117	6.2	12.5	6.9	7.3
	200	470	105	8.5	112	6.3	12.5	7.2	6.7
	200	470	120	8.9	114	6.0	13.0	--	6.9
HA Dd 92	28	19.0	90	1.5	361	5.9	16.0	--	13
HA Ed 49	23	91.9	30	1.4	174	4.7	13.0	--	9.3

LOCAL IDENTIFIER	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3	BICARBONATE WATER WH IT FIELD MG/L AS HCO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	BROMIDE DISSOLVED (MG/L AS BR)
HA Aa 9	6.5	5.3	1.4	8	10	3.0	10	0.10	0.025
HA Bc 30	1.1	2.2	0.50	17	21	0.40	2.4	0.10	0.024
HA Ca 23	4.1	6.6	2.1	18	22	<1.0	6.5	0.10	--
	3.7	6.3	2.0	16	20	<1.0	6.5	0.10	--
	3.8	6.5	1.9	17	21	<1.0	6.8	0.10	<0.010
HA Dd 92	10	38	1.1	49	60	29	68	0.20	--
HA Ed 49	6.0	3.0	4.2	4	5	45	4.6	0.20	--

LOCAL IDENTIFIER	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	BORON, TOTAL RECOVERABLE (UG/L AS B)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)
HA Aa 9	9.7	49	5.80	0.010	20	10	30	3
HA Bc 30	10	28	0.200	0.020	<10	<10	<10	8
HA Ca 23	22	--	6.70	0.010	<10	20	170	10
	22	--	5.80	0.020	<10	<10	50	16
	22	--	5.30	0.020	<10	<10	370	6
HA Dd 92	34	230	<0.100	0.020	20	<10	5700	6500
HA Ed 49	9.1	85	1.00	<0.010	700	20	60	16

Geologic unit (aquifer): 112TLBT - Talbot Formation
300LCRV - Loch Raven Schist
300WSCK - Wissahickon Formation

Sampling method: 4010 - Thief sample
4030 - Suction pump
4040 - Submersible pump

HARFORD COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	TRIFLURALIN TOTAL RECOVER (UG/L)	ALACHLOR TOTAL RECOVER (UG/L)	AMETRYNE TOTAL	ATRAZINE, TOTAL (UG/L)
HA Aa 9	<10	8	20	0.1	--	--	--	--
HA Bc 30	<10	2	<10	0.2	--	--	--	--
HA Ca 23	<10	7	20	0.8	<0.10	<0.10	<0.10	<0.10
	<10	15	<10	0.7	<0.10	<0.10	<0.10	0.10
	<10	4	10	0.2	--	--	--	--
HA Dd 92	190	190	<10	--	<0.10	<0.10	<0.10	<0.10
HA Ed 49	1200	1300	110	3.0	<0.10	<0.10	<0.10	<0.10

LOCAL IDENTIFIER	CYANAZINE TOTAL (UG/L)	METOLACHLOR WATER WHOLE TOT.REC (UG/L)	METRIBUZIN WATER WHOLE TOT.REC (UG/L)	PROMETRYNE TOTAL (UG/L)	PROMETONE TOTAL (UG/L)	PROPAZINE TOTAL (UG/L)	SIMAZINE TOTAL (UG/L)	SIMETRYNE TOTAL (UG/L)
HA Aa 9	--	--	--	--	--	--	--	--
HA Bc 30	--	--	--	--	--	--	--	--
HA Ca 23	<0.10	<0.1	<0.1	<0.1	<0.1	<0.10	<0.10	<0.1
	<0.10	<0.1	<0.1	<0.1	<0.1	<0.10	<0.10	<0.1
	--	--	--	--	--	--	--	--
HA Dd 92	<0.10	<0.1	<0.1	<0.1	<0.1	<0.10	<0.10	<0.1
HA Ed 49	<0.10	<0.1	<0.1	<0.1	<0.1	<0.10	<0.10	<0.1

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

HOWARD COUNTY, MARYLAND

LOCAL IDENT-I-FIER	DATE	TIME	STATION NUMBER	GEO-LOGIC UNIT	SITE TYPE	SAM-PLING METHOD, CODES	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DEPTH OF WELL, TOTAL (FEET)	DEPTH TO TOP OF SAMPLE INTER-VAL (FT)	DEPTH TO BOT-TOM OF SAMPLE INTER-VAL (FT)
HO Aa 8	04-10-89	1400	392043077105901	300GLLS	GW	4040	--	200.00	0.0	200
HO Ab 78	04-18-89	1140	392036077073201	300GLLS	GW	4040	--	300.00	0.0	300
HO Ab 103	04-18-89	1440	392056077055901	300GLLS	GW	4040	--	160.00	0.0	160
HO Ac 25	05-22-89	1100	392018077024201	300WSCK	GW	4040	--	120.00	0.0	120
HO Ac 82	05-09-89	1100	392057077043301	300WSCK	GW	4040	--	140.00	0.0	140
HO Ad 26	05-23-89	1100	392058076573701	300SKVL	GW	4040	--	345.00	0.0	345
HO Ad 83	05-09-89	1320	392054076552701	300WSCK	GW	4040	--	90.00	0.0	90
HO Ae 3	05-15-89	1100	392058076534301	400BLMR	GW	4040	--	140.00	0.0	140
HO Bb 59	05-01-89	1200	391850077093301	300GLLS	GW	4040	--	300.00	0.0	300
HO Bb 138	05-01-89	1020	391702077051401	300WSCK	GW	4040	--	100.00	0.0	100
HO Bb 156	04-10-89	1030	391929077062901	300PRTB	GW	4040	--	100.00	0.0	100
HO Bc 63	06-14-89	1315	391916077015001	300WSCK	GW	4040	--	75.00	0.0	75
HO Bc 187	12-09-88	1330	391718077014301	300SKVL	GW	4040	--	145.00	0.0	145
HO Bc 246	03-20-89	1125	391652077001301	300SKVL	GW	4040	--	105.00	0.0	105
HO Bc 264	05-08-89	1320	391534077021701	300SKVL	SP	4100	--	--	--	--
HO Bd 77	03-28-89	1145	391733076595301	300SKVL	GW	4040	--	80.00	0.0	80
HO Bd 246	03-28-89	1500	391620076575801	300LCRV	GW	4040	--	128.00	0.0	128
HO Bd 325	03-27-89	1420	391753076555801	300LCRV	GW	4040	--	300.00	0.0	300
HO Bd 390	03-27-89	1115	391927076584401	300SKVL	GW	4040	--	125.00	0.0	125
HO Be 21	06-05-89	1045	391525076544901	400BLMR	GW	4040	--	125.00	0.0	125
HO Be 88	05-08-89	1050	391839076521301	400BLMR	GW	4040	--	200.00	0.0	200
HO Be 96	05-15-89	1430	391724076512001	300OELL	GW	4040	--	140.00	0.0	140
HO Be 109	06-14-89	1000	391503076521301	300OELL	GW	4040	--	160.00	0.0	160
HO Bf 56	06-05-89	1415	391818076481801	400BLMR	GW	4040	--	190.00	0.0	190
HO Bf 77	05-23-89	1330	391541076492201	300MWSG	GW	4040	--	100.00	0.0	100
HO Cc 38	01-18-89	1057	391149077000301	300LCRV	GW	4040	--	280.00	0.0	280
HO Cd 20	12-22-88	1000	391440076555401	300LCRV	GW	4020	8.89	96.00	30	96
	04-06-89	1330		300LCRV	GW	4020	7.34	96.00	30	96
	06-30-89	0945		300LCRV	GW	4020	4.61	96.00	30	96
HO Cd 21	12-22-88	1250	391442076555301	300LCRV	GW	4020	15.98	96.00	55	96
	04-06-89	0820		300LCRV	GW	4020	14.93	96.00	55	96
	06-30-89	0845		300LCRV	GW	4020	12.05	96.00	55	96
HO Cd 25	12-22-88	1620	391444076554701	300LCRV	GW	4020	42.33	97.00	60	97
	04-05-89	1100		300LCRV	GW	4020	43.92	97.00	60	97
	06-30-89	0750		300LCRV	GW	4020	41.28	97.00	60	97
HO Cd 26	12-22-88	1415	391442076554701	300LCRV	GW	4020	47.85	143.00	106	143
	04-06-89	0800		300LCRV	GW	4020	48.94	143.00	106	143
	06-29-89	1225		300LCRV	GW	4020	45.24	143.00	106	143
HO Cd 28	10-19-88	1240	391447076554702	300LCRV	GW	4040	27.74	46.00	41	46
	11-23-88	1205		300LCRV	GW	4040	28.62	46.00	41	46
	12-22-88	1330		300LCRV	GW	4040	29.32	46.00	41	46
	01-19-89	0900		300LCRV	GW	4040	29.73	46.00	41	46
	02-15-89	0900		300LCRV	GW	4040	30.03	46.00	41	46
	04-05-89	1000		300LCRV	GW	4040	29.64	46.00	41	46
	05-03-89	0855		300LCRV	GW	4040	28.95	46.00	41	46
	05-31-89	0920		300LCRV	GW	4040	27.63	46.00	41	46
	06-29-89	1240		300LCRV	GW	4040	25.43	46.00	41	46
	09-14-89	1045		300LCRV	GW	4040	23.99	46.00	41	46
HO Cd 29	12-22-88	1425	391442076554702	300LCRV	GW	4040	45.97	68.00	63	68
	04-05-89	1135		300LCRV	GW	4040	47.43	68.00	63	68
	06-29-89	1015		300LCRV	GW	4040	44.08	68.00	63	68
	09-14-89	1000		300LCRV	GW	4040	40.52	68.00	63	68
HO Cd 78	10-19-88	0945	391440076555402	300LCRV	GW	4040	9.79	19.00	9.0	19
	11-23-88	1135		300LCRV	GW	4040	9.60	19.00	9.0	19
	11-23-88	1140		300LCRV	GW	4040	9.60	19.00	9.0	19
	12-22-88	0910		300LCRV	GW	4040	9.84	19.00	9.0	19
	01-19-89	1015		300LCRV	GW	4040	8.44	19.00	9.0	19
	02-15-89	0930		300LCRV	GW	4040	9.35	19.00	9.0	19
	04-05-89	1400		300LCRV	GW	4040	8.38	19.00	9.0	19
	05-03-89	1050		300LCRV	GW	4040	8.61	19.00	9.0	19
	05-31-89	1115		300LCRV	GW	4040	7.35	19.00	9.0	19
	05-31-89	1120		300LCRV	GW	4040	7.35	19.00	9.0	19
	06-29-89	1510		300LCRV	GW	4040	7.33	19.00	9.0	19
	09-14-89	1300		300LCRV	GW	4040	8.25	19.00	9.0	19

Geologic unit (aquifer): 300GLLS - Gillis Formation
300LCRV - Loch Raven Schist
300MWSG - Mount Washington Amphibolite
300OELL - Oella Formation
300PRTB - Prettyboy Schist
300SKLV - Sykesville Formation
300WSCK - Wissahickon Formation
400BLMR - Baltimore Gneiss

Sampling method: 4020 - Bailer
4040 - Submersible pu
4100 - Flowing well

Site type: GW - Groundwater
SP - Spring

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

HOWARD COUNTY, MARYLAND--Continued

LOCAL IDENT-I-FIER	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	PUMP OR FLOW PERIOD PRIOR TO SAM-PLING (MIN)	FLOW RATE, INSTAN-TANEOUS (G/M)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
HO Aa 8	790	40	8.0	114	5.9	12.0	3.6	12	3.1	3.6
HO Ab 78	740	70	6.0	78	5.3	13.0	7.5	3.8	2.3	6.4
HO Ab 103	680	75	6.5	109	5.1	12.5	8.5	6.7	3.7	6.0
HO Ac 25	620	60	6.4	100	6.4	14.0	9.8	14	1.6	3.3
HO Ac 82	685	60	8.5	64	5.7	13.5	2.1	5.8	1.5	3.4
HO Ad 26	560	90	5.8	186	6.9	13.0	0.7	20	4.2	9.5
HO Ad 83	470	20	3.0	193	6.0	12.0	0.9	11	15	2.6
HO Ae 3	420	60	6.5	204	5.7	14.0	9.0	20	5.2	7.4
HO Bb 59	730	30	6.0	32	5.3	12.5	2.1	1.5	1.3	1.8
HO Bb 138	560	35	8.0	89	5.5	13.5	5.7	5.0	3.2	5.0
HO Bb 156	760	70	5.0	26	5.4	12.5	7.3	0.85	0.61	2.3
HO Bc 63	620	30	30	96	5.5	12.5	8.1	3.6	2.5	5.2
HO Bc 187	545	100	3.5	75	5.5	13.0	8.4	5.2	2.6	5.9
HO Bc 246	595	60	4.5	122	5.6	13.5	5.9	5.3	4.8	7.8
HO Bc 264	450	--	15	205	5.3	10.0	10.3	11	5.8	16
HO Bd 77	575	60	4.0	156	5.2	13.5	8.0	7.4	6.3	9.3
HO Bd 246	605	90	5.0	151	5.2	14.0	7.8	8.4	3.4	13
HO Bd 325	475	60	4.0	167	6.4	13.5	0.2	19	4.0	8.7
HO Bd 390	600	65	5.0	272	5.5	13.5	7.1	11	4.4	32
HO Be 21	420	75	7.0	112	5.5	13.5	9.2	8.8	2.6	6.4
HO Be 88	505	70	6.0	53	5.9	13.5	7.7	2.5	0.92	6.5
HO Be 96	400	45	11	240	5.8	14.5	5.7	20	6.1	12
HO Be 109	465	120	4.0	56	5.9	14.0	9.7	4.9	1.5	6.5
HO Bf 56	445	75	8.2	239	5.9	14.0	3.7	16	5.2	20
HO Bf 77	380	432	2.0	410	6.1	14.0	3.8	45	14	14
HO Cc 38	460	90	6.0	276	7.2	14.0	1.1	28	6.7	12
HO Cd 20	426	70	1.0	101	--	11.0	--	7.0	3.4	5.5
	426	85	1.0	80	6.5	12.0	0.6	5.3	2.7	5.2
	426	90	1.0	94	6.8	12.0	0.4	6.7	3.4	5.4
HO Cd 21	434	85	1.0	62	--	--	--	5.8	3.2	4.7
	434	85	1.0	81	6.8	12.5	0.5	5.5	2.9	4.8
	434	120	1.0	70	6.7	12.5	0.3	4.5	2.7	4.3
HO Cd 25	471	65	1.0	72	--	--	--	4.2	2.4	4.3
	471	60	1.0	58	6.7	12.5	0.8	3.5	1.8	4.4
	471	75	1.0	60	6.5	13.5	3.4	3.2	1.8	4.4
HO Cd 26	470	90	1.0	101	--	--	--	9.7	2.3	4.5
	470	95	1.0	97	8.5	--	--	10	2.4	4.9
	470	75	1.0	93	8.7	--	--	9.2	2.1	4.5
HO Cd 28	453	14	1.0	29	5.7	12.5	7.1	--	--	--
	453	17	1.0	25	5.6	12.0	6.8	--	--	--
	453	20	1.0	26	5.7	12.5	5.9	1.1	0.91	1.2
	453	15	1.0	28	5.8	12.5	6.8	--	--	--
	453	15	1.0	26	6.1	12.5	3.3	--	--	--
	453	--	--	26	5.8	15.0	4.3	1.1	0.90	1.4
	453	10	0.7	26	5.7	13.5	5.5	--	--	--
	453	20	0.5	28	6.1	14.5	6.7	--	--	--
	453	35	0.5	23	5.8	19.0	4.8	1.1	1.0	1.3
	453	10	1.0	28	5.6	15.0	6.6	--	--	--
HO Cd 29	470	30	0.6	23	5.6	12.5	8.2	0.97	0.57	1.2
	470	45	0.7	21	5.6	13.0	7.1	0.96	0.50	1.3
	470	35	0.5	21	5.6	14.0	7.0	1.0	0.63	1.2
	470	30	1.0	19	5.7	13.0	8.6	--	--	--
HO Cd 78	426	8	1.3	78	5.2	13.0	8.7	--	--	--
	426	15	0.6	90	5.3	13.5	8.8	--	--	--
	426	15	0.6	90	5.3	13.5	8.8	--	--	--
	426	7	1.0	81	4.6	12.5	8.7	4.3	3.1	3.4
	426	10	1.5	86	4.8	12.0	8.5	--	--	--
	426	5	1.3	82	6.1	11.5	9.1	--	--	--
	426	10	1.5	93	7.2	9.5	7.7	4.9	3.9	3.5
	426	10	1.2	91	4.9	10.0	9.0	--	--	--
	426	10	1.2	91	5.3	11.5	8.3	--	--	--
	426	10	1.2	91	5.3	11.5	8.3	--	--	--
	422	15	1.2	92	4.9	11.5	8.6	4.7	3.8	3.4
	426	15	1.5	88	5.4	15.0	8.9	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

HOWARD COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3	BICARBONATE WATER WH IT FIELD MG/L AS HCO3	SULFIDE TOTAL (MG/L AS S)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
HO Aa 8	0.80	29	--	--	3.2	5.8	0.10	7.8	67	54
HO Ab 78	1.0	7	--	--	<1.0	8.3	0.10	8.9	60	--
HO Ab 103	1.0	4	--	--	<1.0	14	0.10	7.6	84	--
HO Ac 25	0.80	39	--	--	<1.0	1.8	<0.10	10	71	--
HO Ac 82	0.60	16	--	--	<1.0	3.0	0.10	11	41	--
HO Ad 26	2.4	55	--	--	21	5.7	0.10	17	119	114
HO Ad 83	1.0	50	--	--	31	3.4	0.10	19	116	113
HO Ae 3	2.4	24	--	--	27	8.7	0.10	18	139	103
HO Bb 59	0.50	9	--	--	<1.0	2.9	0.10	5.9	20	--
HO Bb 138	1.4	12	--	--	<1.0	8.2	0.10	10	65	--
HO Bb 156	0.60	5	--	--	<0.20	1.8	0.10	6.1	20	--
HO Bc 63	1.1	15	--	--	<1.0	9.3	<0.10	9.6	61	--
HO Bc 187	1.5	10	--	--	1.0	9.8	<0.10	13	64	45
HO Bc 246	1.8	10	--	--	<0.20	11	0.10	11	81	--
HO Bc 264	2.0	11	--	--	13	35	0.10	13	149	102
HO Bd 77	1.7	7	--	--	<0.20	16	0.10	13	88	--
HO Bd 246	1.9	10	--	--	<0.20	11	0.10	15	99	--
HO Bd 325	2.6	7	--	--	5.0	8.9	0.10	30	120	118
HO Bd 390	2.1	17	--	--	0.60	65	0.10	14	157	140
HO Be 21	1.8	14	--	--	4.0	12	0.10	22	88	68
HO Be 88	1.5	23	--	--	<1.0	2.1	0.20	29	58	--
HO Be 96	2.9	31	--	--	15	17	0.10	26	165	118
HO Be 109	1.8	12	--	--	<1.0	5.2	<0.10	22	78	--
HO Bf 56	2.8	31	--	--	18	33	0.10	28	166	143
HO Bf 77	2.2	76	--	--	44	42	0.20	42	294	250
HO Cc 38	4.1	54	--	--	9.1	44	0.10	25	169	160
HO Cd 20	2.0	--	--	<0.5	15	1.4	0.20	25	--	84
	2.3	26	32	<0.5	6.6	3.7	0.10	19	--	63
	2.5	39	48	<0.5	6.0	2.0	0.20	24	--	77
HO Cd 21	2.1	--	--	<0.5	12	1.3	0.20	23	--	74
	2.5	33	40	<0.5	8.0	1.6	0.20	21	--	68
	2.3	30	37	<0.5	4.0	1.3	0.20	20	--	59
HO Cd 25	2.0	--	--	<0.5	7.5	1.2	0.20	13	--	52
	2.2	20	24	<0.5	5.5	1.0	0.10	21	--	54
	1.9	20	25	<0.5	4.0	1.0	0.20	25	--	58
HO Cd 26	3.3	--	--	<0.5	8.6	1.2	0.20	3.0	--	56
	4.1	39	47	<0.5	8.7	1.0	0.10	7.6	--	62
	4.4	36	44	<0.5	9.0	1.0	0.20	3.4	--	56
HO Cd 28	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
	0.80	--	--	<0.5	0.50	1.2	0.10	9.4	--	22
	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
	1.2	7	9	<0.5	0.70	1.2	0.10	9.7	--	23
	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
	1.0	8	10	<0.5	<1.0	1.2	0.10	9.8	--	--
	--	--	--	--	--	--	--	--	--	--
HO Cd 29	0.90	--	--	<0.5	0.30	1.2	<0.10	7.4	--	18
	1.1	4	5	<0.5	0.40	1.1	0.10	7.0	--	18
	1.0	4	5	<0.5	<1.0	1.1	0.10	7.6	--	--
	--	--	--	--	--	--	--	--	--	--
HO Cd 78	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
	1.4	7	9	<0.5	3.4	8.5	<0.10	13	--	55
	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
	1.5	7	9	<0.5	4.0	8.9	0.10	12	--	57
	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
	1.6	8	10	<0.5	4.0	8.8	0.10	12	--	59
	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

HOWARD COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	NITROGEN, NITRATE DISSOLVED (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)
HO Aa 8	--	<0.010	--	3.60	--	<0.010	--	--	0.020
HO Ab 78	--	<0.010	--	3.60	--	<0.010	--	--	0.020
HO Ab 103	--	<0.010	--	4.70	--	<0.010	--	--	<0.010
HO Ac 25	--	<0.010	--	2.50	--	0.050	--	--	<0.010
HO Ac 82	--	<0.010	--	2.30	--	0.010	--	--	0.030
HO Ad 26	--	<0.010	--	0.700	--	<0.010	--	--	<0.010
HO Ad 83	--	<0.010	--	1.90	--	<0.010	--	--	0.030
HO Ae 3	--	<0.010	--	7.20	--	<0.010	--	--	0.040
HO Bb 59	--	<0.010	--	1.30	--	0.010	--	--	<0.010
HO Bb 138	--	<0.010	--	4.90	--	0.010	--	--	0.010
HO Bb 156	--	<0.010	--	1.50	--	<0.010	--	--	<0.010
HO Bc 63	--	<0.010	--	3.90	--	0.010	--	--	<0.010
HO Bc 187	--	<0.010	--	3.80	--	--	--	--	<0.010
HO Bc 246	--	<0.010	--	5.80	--	0.070	--	--	0.010
HO Bc 264	--	<0.010	--	3.60	--	0.010	--	--	0.030
HO Bd 77	--	<0.010	--	8.00	--	0.020	--	--	<0.010
HO Bd 246	--	<0.010	--	8.90	--	0.040	--	--	0.030
HO Bd 325	--	<0.010	--	0.100	--	<0.010	--	--	<0.010
HO Bd 390	--	<0.010	--	2.30	--	<0.010	--	--	<0.010
HO Be 21	--	0.010	--	3.20	--	0.020	--	--	0.070
HO Be 88	--	<0.010	--	0.900	--	0.020	--	--	0.230
HO Be 96	--	0.010	--	9.60	--	<0.010	--	--	0.040
HO Be 109	--	<0.010	--	3.70	--	0.010	--	--	0.040
HO Bf 56	--	0.010	--	1.80	--	0.020	--	--	0.040
HO Bf 77	--	<0.010	--	2.80	--	<0.010	--	--	0.030
HO Cc 38	--	<0.010	--	<0.100	--	--	--	--	<0.010
HO Cd 20	--	--	<0.010	--	<0.100	--	0.020	<0.20	--
	0.290	--	0.010	--	0.300	--	0.130	0.20	--
	0.110	--	0.010	--	0.120	--	0.070	<0.20	--
HO Cd 21	--	--	<0.010	--	<0.100	--	0.010	0.20	--
	--	--	<0.010	--	<0.100	--	0.020	<0.20	--
	--	--	0.010	--	<0.100	--	0.020	<0.20	--
HO Cd 25	--	--	<0.010	--	0.150	--	0.040	<0.20	--
	--	--	<0.010	--	0.390	--	0.020	<0.20	--
	0.710	--	0.020	--	0.730	--	0.030	0.20	--
HO Cd 26	--	--	<0.010	--	<0.100	--	0.020	0.20	--
	--	--	<0.010	--	<0.100	--	0.020	<0.20	--
	--	--	0.010	--	<0.100	--	0.030	<0.20	--
HO Cd 28	--	--	<0.010	--	0.550	--	0.020	0.20	--
	0.560	--	0.020	--	0.580	--	<0.010	<0.20	--
	--	--	<0.010	--	0.560	--	0.020	0.30	--
	--	--	<0.010	--	0.560	--	0.020	<0.20	--
	--	--	<0.010	--	0.520	--	<0.010	0.30	--
	--	--	<0.010	--	0.540	--	0.010	<0.20	--
	--	--	<0.010	--	0.540	--	0.020	0.40	--
	--	--	<0.010	--	0.550	--	0.040	<0.20	--
	0.470	--	0.010	--	0.480	--	0.050	<0.20	--
	--	--	<0.010	--	0.540	--	<0.010	0.20	--
HO Cd 29	--	--	<0.010	--	0.690	--	<0.010	<0.20	--
	--	--	<0.010	--	0.700	--	<0.010	<0.20	--
	0.660	--	0.010	--	0.670	--	0.010	<0.20	--
	--	--	<0.010	--	0.660	--	<0.010	0.30	--
HO Cd 78	--	--	<0.010	--	3.00	--	<0.010	0.20	--
	2.98	--	0.020	--	3.00	--	<0.010	0.30	--
	2.99	--	0.010	--	3.00	--	<0.010	0.70	--
	--	--	<0.010	--	3.00	--	0.010	0.30	--
	--	--	<0.010	--	3.10	--	<0.010	<0.20	--
	--	--	<0.010	--	2.90	--	<0.010	<0.20	--
	--	--	<0.010	--	3.20	--	<0.010	0.30	--
	--	--	<0.010	--	3.40	--	0.010	0.50	--
	--	--	<0.010	--	3.40	--	0.040	<0.20	--
	--	--	<0.010	--	3.40	--	0.030	<0.20	--
	3.49	--	0.010	--	3.50	--	0.010	0.30	--
	--	--	<0.010	--	3.10	--	<0.010	0.30	--

HOWARD COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	PHOSPHOROUS DISSOLVED (MG/L AS P)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)
HO Aa 8	--	--	<10	<2	<0.5	<1	<5	<3	10
HO Ab 78	--	--	<10	20	<0.5	<1	<5	<3	<10
HO Ab 103	--	--	<10	16	<0.5	<1	<5	<3	80
HO Ac 25	--	--	<10	12	<0.5	<1	<5	<3	70
HO Ac 82	--	--	<10	4	<0.5	2	<5	<3	30
HO Ad 26	--	--	<10	5	<0.5	2	<5	<3	<10
HO Ad 83	--	--	<10	33	<0.5	1	<5	<3	60
HO Ae 3	--	--	<10	56	<0.5	<1	<5	<3	40
HO Bb 59	--	--	<10	14	<0.5	<1	<5	<3	40
HO Bb 138	--	--	<10	35	<0.5	<1	<5	<3	30
HO Bb 156	--	--	10	9	<0.5	2	<5	<3	50
HO Bc 63	--	--	20	25	<0.5	<1	<5	<3	120
HO Bc 187	--	--	<10	19	<0.5	4	<5	<3	30
HO Bc 246	--	--	40	50	<0.5	2	<5	<3	20
HO Bc 264	--	--	10	48	<0.5	2	<5	<3	<10
HO Bd 77	--	--	10	40	<0.5	4	<5	<3	30
HO Bd 246	--	--	30	49	<0.5	3	<5	<3	30
HO Bd 325	--	--	<10	8	<0.5	2	<5	<3	10
HO Bd 390	--	--	40	140	<0.5	2	<5	<3	20
HO Be 21	--	--	20	46	<0.5	<1	<5	<3	60
HO Be 88	--	--	<10	23	1	2	10	<3	<10
HO Be 96	--	--	<10	66	<0.5	<1	<5	<3	20
HO Be 109	--	--	<10	35	<0.5	<1	<5	<3	30
HO Bf 56	--	--	<10	39	<0.5	1	<5	<3	<10
HO Bf 77	--	--	<10	75	<0.5	2	<5	<3	<10
HO Cc 38	--	--	<10	53	<0.5	2	<5	<3	<10
HO Cd 20	0.020	<0.010	<10	--	--	--	--	--	--
	<0.010	<0.010	<10	--	--	--	--	--	--
	<0.010	<0.010	10	--	--	--	--	--	--
HO Cd 21	<0.010	<0.010	<10	--	--	--	--	--	--
	<0.010	<0.010	<10	--	--	--	--	--	--
	0.010	<0.010	10	--	--	--	--	--	--
HO Cd 25	<0.010	<0.010	<10	--	--	--	--	--	--
	<0.010	<0.010	10	--	--	--	--	--	--
	<0.010	<0.010	<10	--	--	--	--	--	--
HO Cd 26	<0.010	<0.010	<10	--	--	--	--	--	--
	<0.010	<0.010	10	--	--	--	--	--	--
	<0.010	<0.010	20	--	--	--	--	--	--
HO Cd 28	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	0.140	<0.010	<10	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	<0.010	<0.010	10	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	0.050	<0.010	20	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
HO Cd 29	<0.010	<0.010	<10	--	--	--	--	--	--
	<0.010	<0.010	10	--	--	--	--	--	--
	<0.010	<0.010	10	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
HO Cd 78	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	<0.010	<0.010	<10	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	<0.010	<0.010	10	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	<0.010	<0.010	20	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

HOWARD COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)
HO Aa 8	31	<10	<4	12	<10	<10	<1.0	52	<6
HO Ab 78	18	<10	<4	19	<10	<10	<1.0	32	<6
HO Ab 103	25	<10	<4	1	<10	<10	<1.0	34	<6
HO Ac 25	5	<10	<4	12	<10	<10	<1.0	38	<6
HO Ac 82	4	<10	<4	8	<10	<10	2.0	41	<6
HO Ad 26	5	<10	6	29	<10	10	<1.0	120	<6
HO Ad 83	<3	<10	<4	5	<10	<10	<1.0	47	<6
HO Ae 3	12	<10	<4	<1	<10	<10	<1.0	120	<6
HO Bb 59	5	<10	<4	9	<10	<10	<1.0	7	<6
HO Bb 138	6	<10	<4	23	<10	<10	<1.0	51	<6
HO Bb 156	6	<10	<4	15	<10	<10	<1.0	4	<6
HO Bc 63	3	<10	<4	32	<10	<10	<1.0	51	<6
HO Bc 187	110	<10	<4	46	<10	<10	<1.0	47	<6
HO Bc 246	11	10	<4	31	<10	<10	<1.0	67	<6
HO Bc 264	25	<10	<4	9	<10	<10	<1.0	110	<6
HO Bd 77	11	<10	<4	25	<10	<10	<1.0	90	<6
HO Bd 246	14	<10	<4	180	<10	<10	1.0	91	<6
HO Bd 325	27	<10	11	140	<10	<10	<1.0	81	<6
HO Bd 390	8	20	<4	49	<10	<10	2.0	140	<6
HO Be 21	6	<10	<4	3	<10	<10	<1.0	120	<6
HO Be 88	6	<10	<4	<1	<10	<10	<1.0	66	<6
HO Be 96	7	<10	6	15	<10	<10	<1.0	340	<6
HO Be 109	6	<10	<4	2	<10	<10	<1.0	68	<6
HO Bf 56	24	<10	12	21	<10	<10	<1.0	110	<6
HO Bf 77	6	<10	6	1	<10	<10	<1.0	470	<6
HO Cc 38	10	<10	18	40	<10	10	<1.0	220	<6
HO Cd 20	1700	--	--	94	--	--	--	--	--
	1300	--	--	150	--	--	--	--	--
	2500	--	--	120	--	--	--	--	--
HO Cd 21	1600	--	--	72	--	--	--	--	--
	1600	--	--	110	--	--	--	--	--
	1200	--	--	120	--	--	--	--	--
HO Cd 25	1100	--	--	92	--	--	--	--	--
	350	--	--	69	--	--	--	--	--
	860	--	--	110	--	--	--	--	--
HO Cd 26	6	--	--	13	--	--	--	--	--
	6	--	--	28	--	--	--	--	--
	5	--	--	10	--	--	--	--	--
HO Cd 28	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	70	--	--	58	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	71	--	--	50	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	230	--	--	82	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
HO Cd 29	9	--	--	6	--	--	--	--	--
	6	--	--	5	--	--	--	--	--
	8	--	--	9	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
HO Cd 78	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	7	--	--	6	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	5	--	--	4	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	8	--	--	4	--	--	--	--	--
	--	--	--	--	--	--	--	--	--

HOWARD COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	ZINC, DISSOLVED (UG/L AS ZN)	RADON 222 TOTAL (PC/L)	CARBON, ORGANIC TOTAL (MG/L AS C)	TRIFLURALIN TOTAL RECOVER (UG/L)	ALACHLOR TOTAL RECOVER (UG/L)	AMETRYNE TOTAL	ATRAZINE, TOTAL (UG/L)	CYANAZINE TOTAL (UG/L)	METHOMYL TOTAL (UG/L)
HO Aa 8	4	7300	0.1	--	--	--	--	--	--
HO Ab 78	7	3100	0.2	<0.10	<0.10	<0.10	<0.10	<0.10	<0.5
HO Ab 103	11	3400	0.3	<0.10	<0.10	<0.10	<0.10	<0.10	<0.5
HO Ac 25	310	3500	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	--
HO Ac 82	<3	4100	0.2	<0.10	<0.10	<0.10	<0.10	<0.10	<0.5
HO Ad 26	9	2500	0.6	<0.10	<0.10	<0.10	<0.10	<0.10	<5.0
HO Ad 83	13	170	1.2	--	--	--	--	--	--
HO Ae 3	4	15000	0.5	<0.10	<0.10	<0.10	<0.10	<0.10	<5.0
HO Bb 59	9	2800	0.2	--	--	--	--	--	<0.5
HO Bb 138	19	3700	0.2	<0.10	<0.10	<0.10	<0.10	<0.10	<0.5
HO Bb 156	14	3600	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	--
HO Bc 63	25	3400	0.3	--	--	--	--	--	--
HO Bc 187	17	3400	1.0	<0.10	<0.10	<0.10	<0.10	<0.10	--
HO Bc 246	15	2600	0.3	<0.10	<0.10	<0.10	<0.10	<0.10	--
HO Bc 264	6	--	1.1	<0.10	<0.10	<0.10	0.30	<0.10	<0.5
HO Bd 77	10	3100	0.2	--	--	--	--	--	--
HO Bd 246	14	6700	0.3	--	--	--	--	--	<0.5
HO Bd 325	6	1900	0.3	--	--	--	--	--	--
HO Bd 390	17	2500	0.3	--	--	--	--	--	<0.5
HO Be 21	15	9000	0.3	<0.10	<0.10	<0.10	<0.10	<0.10	<0.5
HO Be 88	<3	25000	0.2	--	--	--	--	--	<0.5
HO Be 96	23	3400	0.3	--	--	--	--	--	--
HO Be 109	14	16000	0.3	<0.10	<0.10	<0.10	<0.10	<0.10	<0.5
HO Bf 56	25	3500	0.4	--	--	--	--	--	--
HO Bf 77	11	--	0.8	--	--	--	--	--	<5.0
HO Cc 38	<3	2800	0.2	<0.10	<0.10	<0.10	<0.10	<0.10	<0.5
HO Cd 20	--	--	0.8	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	0.9	--	--	--	--	--	--
HO Cd 21	--	--	1.6	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	1.0	--	--	--	--	--	--
HO Cd 25	--	--	1.3	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	2.6	--	--	--	--	--	--
HO Cd 26	--	--	2.0	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	2.2	--	--	--	--	--	--
HO Cd 28	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	13	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	1.0	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
HO Cd 29	--	--	<0.1	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	4.6	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
HO Cd 78	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	<0.1	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	0.4	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

HOWARD COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	METOLACHLOR WATER WHOLE TOT.REC (UG/L)	METRIBUZIN WATER WHOLE TOT.REC (UG/L)	PROMETRYNE TOTAL (UG/L)	PROMETONE TOTAL (UG/L)	PROPAZINE TOTAL (UG/L)	PROPHAM TOTAL (UG/L)	SEVIN, TOTAL (UG/L)	SIMAZINE TOTAL (UG/L)	SIMETRYNE TOTAL (UG/L)
HO Aa 8	--	--	--	--	--	--	--	--	--
HO Ab 78	<0.1	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Ab 103	<0.1	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Ac 25	<0.1	<0.1	<0.1	<0.1	<0.10	--	--	<0.10	<0.1
HO Ac 82	<0.1	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Ad 26	<0.1	<0.1	<0.1	<0.1	<0.10	<5.0	<5.0	<0.10	<0.1
HO Ad 83	--	--	--	--	--	--	--	--	--
HO Ae 3	<0.1	<0.1	<0.1	0.2	<0.10	<5.0	<5.0	<0.10	<0.1
HO Bb 59	--	--	--	--	--	<0.5	<0.50	--	--
HO Bb 138	<0.1	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Bb 156	<0.1	<0.1	<0.1	<0.1	<0.10	--	--	<0.10	<0.1
HO Bc 63	--	--	--	--	--	--	--	--	--
HO Bc 187	<0.1	<0.1	<0.1	<0.1	<0.10	--	--	<0.10	<0.1
HO Bc 246	<0.1	<0.1	<0.1	<0.1	<0.10	--	--	<0.10	<0.1
HO Bc 264	<0.1	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	0.10	<0.1
HO Bd 77	--	--	--	--	--	--	--	--	--
HO Bd 246	--	--	--	--	--	<0.5	<0.50	--	--
HO Bd 325	--	--	--	--	--	--	--	--	--
HO Bd 390	--	--	--	--	--	<0.5	<0.50	--	--
HO Be 21	<0.1	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Be 88	--	--	--	--	--	<0.5	<0.50	--	--
HO Be 96	--	--	--	--	--	--	--	--	--
HO Be 109	<0.1	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Bf 56	--	--	--	--	--	--	--	--	--
HO Bf 77	--	--	--	--	--	<5.0	<5.0	--	--
HO Cc 38	<0.1	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1

HOWARD COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	TIME	STATION NUMBER	GEOLOGIC UNIT	SITE TYPE	SAMPLING METHOD, CODES	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DEPTH OF WELL, TOTAL (FEET)	DEPTH TO TOP OF SAMPLE INTERVAL (FT)	DEPTH TO BOTTOM OF SAMPLE INTERVAL (FT)
HO Cd 79	10-19-88	0910	391445076555101	300LCRV	GW	4040	27.59	53.00	43	53
	11-23-88	1055		300LCRV	GW	4040	28.44	53.00	43	53
	12-22-88	1525		300LCRV	GW	4040	29.11	53.00	43	53
	01-19-89	0940		300LCRV	GW	4040	29.49	53.00	43	53
	02-15-89	1230		300LCRV	GW	4040	29.68	53.00	43	43
	04-05-89	0840		300LCRV	GW	4040	29.04	53.00	43	53
	05-03-89	0815		300LCRV	GW	4040	28.27	53.00	43	53
	05-31-89	0825		300LCRV	GW	4040	26.98	53.00	43	53
	06-29-89	1640		300LCRV	GW	4040	24.82	53.00	43	53
	09-14-89	1345		300LCRV	GW	4040	23.32	53.00	43	53
HO Cd 80	10-19-88	1100	391439076555601	300LCRV	SP	4030	--	2.00	0.0	2.0
	11-23-88	1330		300LCRV	SP	4030	--	2.00	0.0	2.0
	01-19-89	1115		300LCRV	SP	4030	--	2.00	0.0	2.0
	02-15-89	1045		300LCRV	SP	4030	--	2.00	0.0	2.0
	04-06-89	1345		300LCRV	SP	4030	--	2.00	0.0	2.0
	05-03-89	1120		300LCRV	SP	4030	--	2.00	0.0	2.0
	09-14-89	1435		300LCRV	SP	4030	--	2.00	0.0	2.0
HO Cd 81	10-19-88	1125	391439076555602	300LCRV	SP	4030	--	2.00	0.0	2.0
	11-23-88	1345		300LCRV	SP	4030	--	2.00	0.0	2.0
	01-19-89	1345		300LCRV	SP	4030	--	2.00	0.0	2.0
	02-15-89	1050		300LCRV	SP	4030	--	2.00	0.0	2.0
	04-06-89	1400		300LCRV	SP	4030	--	2.00	0.0	2.0
	05-03-89	1130		300LCRV	SP	4030	--	2.00	0.0	2.0
	06-01-89	1000		300LCRV	SP	4030	--	2.00	0.0	2.0
	06-30-89	1050		300LCRV	SP	4030	--	2.00	0.0	2.0
	09-14-89	1440		300LCRV	SP	4030	--	2.00	0.0	2.0
HO Cd 206	06-06-89	1100	391111076585101	300CCKV	GW	4040	--	205.00	0.0	205
HO Cd 240	05-08-89	1420	391054076575801	400BLMR	SP	4100	--	--	--	--
HO Cd 253	11-25-88	1015	391447076554703	300LCRV	LYS	4030	--	1.00	1.0	1.0
	02-22-89	0745		300LCRV	LYS	4030	--	1.00	1.0	1.0
	04-07-89	0705		300LCRV	LYS	4030	--	1.00	1.0	1.0
HO Cd 290	01-26-89	1000	391447076554704	300LCRV	LYS	4030	--	5.00	5.0	5.0
	02-22-89	0830		300LCRV	LYS	4030	--	5.00	5.0	5.0
	04-05-89	1530		300LCRV	LYS	4030	--	5.00	5.0	5.0
	04-07-89	0710		300LCRV	LYS	4030	--	5.00	5.0	5.0
	05-04-89	0730		300LCRV	LYS	4030	--	5.00	5.0	5.0
	06-01-89	0850		300LCRV	LYS	4030	--	5.00	5.0	5.0
	06-30-89	1115		300LCRV	LYS	4030	--	5.00	5.0	5.0
HO Cd 291	10-19-88	1440	391447076554705	300LCRV	LYS	4030	--	9.80	9.8	9.8
	11-25-88	1030		300LCRV	LYS	4030	--	9.80	9.8	9.8
	02-22-89	0900		300LCRV	LYS	4030	--	9.80	9.8	9.8
	04-05-89	1520		300LCRV	LYS	4030	--	9.80	9.8	9.8
	04-07-89	0715		300LCRV	LYS	4030	--	9.80	9.8	9.8
	05-04-89	0735		300LCRV	LYS	4030	--	9.80	9.8	9.8
	06-01-89	0910		300LCRV	LYS	4030	--	9.80	9.8	9.8
	06-30-89	1130		300LCRV	LYS	4030	--	9.80	9.8	9.8
HO Cd 292	10-19-88	1500	391447076554706	300LCRV	LYS	4030	--	13.80	14	14
	02-22-89	0915		300LCRV	LYS	4030	--	13.80	14	14
	04-07-89	0720		300LCRV	LYS	4030	--	13.80	14	14
	05-04-89	0740		300LCRV	LYS	4030	--	13.80	14	14
	06-01-89	0930		300LCRV	LYS	4030	--	13.80	14	14
	06-30-89	1145		300LCRV	LYS	4030	--	13.80	14	14
HO Cd 334	06-27-89	1200	391456076585801	300WSCK	GW	4040	--	200.00	0.0	200
	06-27-89	1210		300LCRV	GW	4040	--	200.00	0.0	200
HO Cd 341	10-19-88	1415	391447076554707	300LCRV	GW	4040	27.65	30.00	25	30
	05-03-89	1230		300LCRV	GW	4020	28.85	30.00	25	30
	05-31-89	1000		300LCRV	GW	4040	27.49	30.00	25	30
	06-29-89	1055		300LCRV	GW	4040	25.21	30.00	25	30
	09-14-89	1115		300LCRV	GW	4040	23.93	30.00	25	30
HO Cd 342	10-19-88	1155	391438076555001	300LCRV	GW	4040	23.18	25.00	20	25
	11-23-88	1300		300LCRV	GW	4040	23.32	25.00	20	25
	12-22-88	1215		300LCRV	GW	4020	23.57	25.00	20	25
	01-19-89	1305		300LCRV	GW	4040	23.17	25.00	20	25
	02-15-89	1145		300LCRV	GW	4040	23.49	25.00	20	25
	04-05-89	1320		300LCRV	GW	4040	22.31	25.00	20	25
	05-03-89	1005		300LCRV	GW	4040	21.30	25.00	20	25
	05-31-89	1045		300LCRV	GW	4040	18.26	25.00	20	25
	05-31-89	1050		300LCRV	GW	4040	18.26	25.00	20	25
	06-29-89	1435		300LCRV	GW	4040	17.52	25.00	20	25
	09-14-89	1230		300LCRV	GW	4040	19.86	25.00	20	25

Geologic unit (aquifer): 300CCKV - Cockeysville Marble
300LCRV - Loch Raven Schist
300WSCK - Wissahickon Formation
400BLMR - Baltimore Gneiss

Sampling method: 4020 - Bailer
4030 - Suction pump
4040 - Submersible pump
4100 - Flowing well

Site type: GW - Groundwater LYS - Lysimeter SP - Spring

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

HOWARD COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	PUMP OR FLOW PERIOD PRIOR TO SAMPLING (MIN)	FLOW RATE, INSTANTANEOUS (G/M)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
HO Cd 79	452	60	0.5	33	5.4	12.0	8.7	--	--	--
	452	45	0.6	39	5.5	12.5	8.5	--	--	--
	452	40	0.6	35	5.5	12.5	9.0	1.7	1.0	1.7
	452	25	0.8	35	5.5	13.0	7.1	--	--	--
	452	30	0.7	37	5.9	12.0	7.6	--	--	--
	452	25	0.8	35	5.8	13.0	6.1	1.8	1.1	1.7
	452	35	0.7	34	5.5	12.5	7.4	--	--	--
	452	35	0.8	35	5.9	14.0	7.5	--	--	--
	452	50	0.6	31	5.6	13.5	6.6	1.6	1.2	1.7
	452	25	0.7	35	5.5	14.0	7.4	--	--	--
HO Cd 80	413	--	--	126	5.5	12.0	8.7	--	--	--
	413	--	--	121	5.6	10.0	7.4	--	--	--
	413	--	--	143	5.6	--	9.0	7.3	6.1	2.6
	413	--	--	119	5.8	9.0	9.5	--	--	--
	413	--	--	129	5.6	9.5	8.8	6.9	5.7	2.7
	413	--	--	124	5.5	10.5	9.0	--	--	--
	413	--	--	116	5.5	15.0	7.2	--	--	--
HO Cd 81	412	--	--	97	5.6	12.0	8.2	--	--	--
	412	--	--	97	5.8	10.5	8.2	--	--	--
	412	--	--	102	5.8	--	8.3	6.6	3.9	3.5
	412	--	--	103	5.8	9.0	8.6	--	--	--
	412	--	--	99	5.7	9.5	8.0	6.7	4.0	3.4
	412	--	--	102	5.6	10.5	8.1	--	--	--
	412	--	--	93	5.7	12.5	8.4	--	--	--
	412	--	--	92	6.0	13.5	8.1	6.2	3.8	3.5
	412	--	--	93	6.0	15.0	7.8	--	--	--
HO Cd 206	500	90	4.0	111	5.9	14.5	10.4	8.0	3.2	5.9
HO Cd 240	500	--	15	77	5.4	12.5	7.2	4.2	2.4	4.5
HO Cd 253	457	--	--	--	--	--	--	--	--	--
	457	--	--	313	--	--	--	--	--	--
	457	--	--	--	--	--	--	--	--	--
HO Cd 290	457	--	--	167	--	--	--	--	--	--
	457	--	--	154	--	--	--	--	--	--
	457	--	--	--	--	--	--	--	--	--
	457	--	--	--	--	--	--	--	--	--
	457	--	--	233	--	--	--	--	--	--
	457	--	--	349	--	--	--	--	--	--
	457	--	--	264	--	--	--	--	--	--
HO Cd 291	457	--	--	--	--	--	--	--	--	--
	457	--	--	--	--	--	--	--	--	--
	457	--	--	176	--	--	--	--	--	--
	457	--	--	--	--	--	--	--	--	--
	457	--	--	--	--	--	--	--	--	--
	457	--	--	191	--	--	--	--	--	--
	457	--	--	149	--	--	--	--	--	--
	457	--	--	163	--	--	--	--	--	--
HO Cd 292	457	--	--	--	--	--	--	--	--	--
	457	--	--	121	--	--	--	--	--	--
	457	--	--	--	--	--	--	--	--	--
	457	--	--	112	--	--	--	--	--	--
	457	--	--	121	--	--	--	--	--	--
	457	--	--	142	--	--	--	--	--	--
HO Cd 334	590	50	6.0	28	5.5	15.5	11.6	0.92	0.83	2.4
	590	50	6.0	28	5.5	15.5	11.6	0.87	0.80	2.4
HO Cd 341	453	3	1.0	50	5.4	12.5	9.6	--	--	--
	453	--	--	65	5.5	12.5	9.2	--	--	--
	453	5	1.0	82	5.8	19.5	7.0	--	--	--
	453	10	0.3	79	5.3	15.5	8.6	3.0	3.3	3.2
	453	10	1.0	51	5.4	16.0	9.5	--	--	--
HO Cd 342	434	2	1.0	72	6.1	12.0	9.8	--	--	--
	434	--	--	69	5.9	11.0	8.3	--	--	--
	434	--	--	76	--	--	--	--	--	--
	434	--	1.0	73	5.9	12.0	5.3	--	--	--
	434	1	1.0	80	6.4	11.0	8.6	--	--	--
	434	--	--	73	5.9	14.5	7.4	5.9	2.5	2.8
	434	--	--	77	5.8	12.0	9.1	--	--	--
	434	20	0.8	70	6.37	14.0	8.7	--	--	--
	434	20	0.8	70	6.37	14.0	8.7	--	--	--
	434	10	0.8	67	5.84	11.5	7.1	5.1	2.4	2.6
	434	10	1.0	65	5.93	15.0	8.7	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

HOWARD COUNTY, MARYLAND--Continued

LOCAL IDENT-I-FIER	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3	BICARBONATE WATER WH IT FIELD MG/L AS HCO3	SULFIDE TOTAL (MG/L AS S)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
HO Cd 79	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
	1.1	--	--	<0.5	<0.20	1.0	0.10	10	--	--
	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
	1.3	10	12	<0.5	0.70	1.0	0.10	11	--	30
	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
	1.3	10	12	<0.5	<1.0	0.90	0.10	11	--	--
	--	--	--	--	--	--	--	--	--	--
HO Cd 80	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
	1.4	6	7	<0.5	9.6	9.8	0.10	9.1	--	75
	--	--	--	--	--	--	--	--	--	--
	1.5	6	7	<0.5	7.6	9.5	<0.10	9.5	--	72
	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
HO Cd 81	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
	2.1	9	11	0.6	4.4	8.3	0.10	13	--	71
	--	--	--	--	--	--	--	--	--	--
	2.0	8	10	<0.5	5.2	8.5	0.10	13	--	68
	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
	1.9	8	10	<0.5	3.0	8.1	0.10	14	--	66
	--	--	--	--	--	--	--	--	--	--
HO Cd 206	1.7	12	--	--	<1.0	20	0.10	14	67	--
HO Cd 240	2.2	13	--	--	2.0	6.4	0.10	14	65	41
HO Cd 253	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
HO Cd 290	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
HO Cd 291	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
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	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
HO Cd 334	0.90	6	--	--	<1.0	2.2	<0.10	9.3	31	--
	0.80	6	--	--	<1.0	2.2	<0.10	9.1	20	--
HO Cd 341	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
	1.7	4	5	<0.5	<1.0	14	0.10	8.0	--	--
	--	--	--	--	--	--	--	--	--	--
HO Cd 342	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
	1.7	14	17	<0.5	0.40	4.3	0.10	15	--	55
	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
	1.5	21	25	<0.5	<1.0	4.9	0.10	15	--	--
	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

HOWARD COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	NITROGEN, NITRATE DISSOLVED (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)
HO Cd 79	--	--	<0.010	--	1.30	--	<0.010	0.30	--
	1.38	--	0.020	--	1.40	--	<0.010	0.30	--
	--	--	<0.010	--	1.40	--	0.010	0.20	--
	--	--	<0.010	--	1.30	--	0.010	<0.20	--
	--	--	<0.010	--	1.40	--	<0.010	0.50	--
	--	--	<0.010	--	1.30	--	0.010	<0.20	--
	--	--	<0.010	--	1.20	--	0.010	<0.20	--
	--	--	<0.010	--	1.20	--	0.010	<0.20	--
	1.19	--	0.010	--	1.20	--	0.020	0.20	--
	--	--	<0.010	--	1.40	--	<0.010	0.30	--
HO Cd 80	--	--	<0.010	--	6.30	--	<0.010	0.30	--
	5.87	--	0.030	--	5.90	--	<0.010	0.30	--
	--	--	<0.010	--	5.80	--	<0.010	0.50	--
	--	--	<0.010	--	5.10	--	0.010	0.40	--
	--	--	<0.010	--	5.60	--	<0.010	0.40	--
	--	--	<0.010	--	5.60	--	0.020	0.50	--
	4.28	--	0.020	--	4.30	--	0.040	0.40	--
HO Cd 81	--	--	<0.010	--	5.10	--	<0.010	0.30	--
	5.19	--	0.010	--	5.20	--	0.010	0.70	--
	--	--	<0.010	--	5.30	--	<0.010	0.80	--
	--	--	<0.010	--	4.80	--	<0.010	0.40	--
	--	--	<0.010	--	4.50	--	<0.010	0.40	--
	--	--	<0.010	--	5.00	--	0.020	0.70	--
	--	--	<0.010	--	2.10	--	0.030	<0.20	--
	4.59	--	0.010	--	4.60	--	0.020	0.30	--
	--	--	<0.010	--	3.90	--	<0.010	0.20	--
HO Cd 206	--	<0.010	--	1.80	--	<0.010	--	--	0.540
HO Cd 240	--	<0.010	--	3.50	--	0.020	--	--	0.020
HO Cd 253	5.09	--	0.010	--	5.10	--	0.040	0.70	--
	--	--	<0.010	--	0.520	--	0.020	0.30	--
	--	--	<0.010	--	0.120	--	<0.010	0.30	--
HO Cd 290	--	--	<0.010	--	3.80	--	<0.010	0.20	--
	--	--	<0.010	--	2.90	--	<0.010	<0.20	--
	--	--	<0.010	--	2.20	--	<0.010	0.70	--
	--	--	<0.010	--	0.960	--	<0.010	<0.20	--
	--	--	<0.010	--	0.330	--	0.020	0.30	--
	--	--	<0.010	--	0.300	--	0.010	<0.20	--
	0.180	--	0.010	--	0.190	--	0.020	<0.20	--
HO Cd 291	--	--	<0.010	--	2.30	--	<0.010	0.50	--
	5.48	--	0.020	--	5.50	--	0.010	2.1	--
	--	--	<0.010	--	9.20	--	<0.010	0.30	--
	--	--	<0.010	--	11.0	--	0.010	0.60	--
	--	--	<0.010	--	12.0	--	<0.010	0.50	--
	--	--	<0.010	--	13.0	--	0.020	1.0	--
	--	--	<0.010	--	14.0	--	<0.010	0.60	--
	13.0	--	0.010	--	13.0	--	0.020	0.50	--
HO Cd 292	--	--	<0.010	--	7.20	--	<0.010	0.30	--
	--	--	<0.010	--	6.40	--	0.020	0.70	--
	--	--	<0.010	--	6.80	--	0.010	0.90	--
	--	--	<0.010	--	7.80	--	0.020	0.20	--
	--	--	<0.010	--	10.0	--	0.040	0.50	--
	13.0	--	0.010	--	13.0	--	0.020	0.40	--
HO Cd 334	--	0.010	--	0.700	--	0.020	--	--	<0.010
	--	<0.010	--	0.900	--	<0.010	--	--	0.030
HO Cd 341	--	--	<0.010	--	2.20	--	0.010	0.20	--
	3.38	--	0.020	--	3.40	--	0.100	0.80	--
	--	--	<0.010	--	4.60	--	0.030	<0.20	--
	1.19	--	0.010	--	1.20	--	0.010	<0.20	--
	--	--	<0.010	--	2.30	--	<0.010	0.30	--
HO Cd 342	--	--	<0.010	--	3.00	--	<0.010	0.50	--
	2.78	--	0.020	--	2.80	--	<0.010	0.20	--
	--	--	<0.010	--	3.10	--	0.020	0.40	--
	--	--	<0.010	--	3.10	--	<0.010	<0.20	--
	--	--	<0.010	--	2.90	--	0.010	0.40	--
	--	--	<0.010	--	3.10	--	<0.010	0.30	--
	--	--	<0.010	--	3.10	--	0.010	0.50	--
	--	--	<0.010	--	1.70	--	0.030	<0.20	--
	--	--	<0.010	--	1.60	--	0.020	<0.20	--
	0.760	--	0.010	--	0.770	--	0.020	<0.20	--
	--	--	<0.010	--	1.60	--	<0.010	0.30	--

HOWARD COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	PHOSPHOROUS DISSOLVED (MG/L AS P)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)
HO Cd 79	12-22-88	<0.010	<0.010	<10	--	--	--	--	--	--
	04-05-89	<0.010	<0.010	<10	--	--	--	--	--	--
	06-29-89	<0.010	<0.010	10	--	--	--	--	--	--
HO Cd 80	01-19-89	<0.010	<0.010	10	--	--	--	--	--	--
	04-06-89	<0.010	<0.010	<10	--	--	--	--	--	--
HO Cd 81	01-19-89	0.010	0.020	10	--	--	--	--	--	--
	04-06-89	<0.010	<0.010	<10	--	--	--	--	--	--
	06-30-89	0.020	<0.010	10	--	--	--	--	--	--
HO Cd 206	06-06-89	--	--	<10	21	<0.5	<1	<5	<3	60
HO Cd 240	05-08-89	--	--	10	49	1	1	6	<3	<10
HO Cd 334	06-27-89	--	--	10	10	<0.5	<1	<5	<3	40
	06-27-89	--	--	10	9	<0.5	<1	<5	<3	70
HO Cd 341	06-29-89	<0.010	<0.010	20	--	--	--	--	--	--
HO Cd 342	04-05-89	0.020	0.010	<10	--	--	--	--	--	--
	06-29-89	0.020	0.050	10	--	--	--	--	--	--

LOCAL IDENTIFIER	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)
HO Cd 79	11	--	--	37	--	--	--	--	--
	10	--	--	44	--	--	--	--	--
	10	--	--	26	--	--	--	--	--
HO Cd 80	39	--	--	26	--	--	--	--	--
	15	--	--	23	--	--	--	--	--
HO Cd 81	7	--	--	5	--	--	--	--	--
	7	--	--	20	--	--	--	--	--
	10	--	--	3	--	--	--	--	--
HO Cd 206	7	<10	<4	<1	<10	<10	<1.0	74	<6
HO Cd 240	12	<10	<4	4	<10	<10	<1.0	35	<6
HO Cd 334	8	<10	<4	4	<10	10	<1.0	10	<6
	5	<10	<4	6	<10	<10	<1.0	10	<6
HO Cd 341	8	--	--	83	--	--	--	--	--
HO Cd 342	8	--	--	8	--	--	--	--	--
	8	--	--	7	--	--	--	--	--

LOCAL IDENTIFIER	DATE	ZINC, DISSOLVED (UG/L AS ZN)	RADON 222 TOTAL (PC/L)	CARBON, ORGANIC TOTAL (MG/L AS C)	TRIFLURALIN TOTAL RECOVER (UG/L)	ALACHLOR TOTAL RECOVER (UG/L)	AMETRYNE TOTAL	ATRAZINE, TOTAL (UG/L)	CYANAZINE TOTAL (UG/L)	METHOMYL TOTAL (UG/L)
HO Cd 79	12-22-88	--	--	0.3	--	--	--	--	--	--
	04-05-89	--	--	2.7	--	--	--	--	--	--
HO Cd 80	04-06-89	--	--	21	--	--	--	--	--	--
HO Cd 81	01-19-89	--	--	2.1	--	--	--	--	--	--
	04-06-89	--	--	0.7	--	--	--	--	--	--
HO Cd 206	06-06-89	32	20000	0.1	--	--	--	--	--	--
HO Cd 240	05-08-89	<3	--	0.2	<0.10	<0.10	<0.10	<0.10	<0.10	<0.5
HO Cd 290	01-26-89	--	--	0.7	--	--	--	--	--	--
	02-22-89	--	--	0.4	--	--	--	--	--	--
	05-04-89	--	--	0.5	--	--	--	--	--	--
	06-01-89	--	--	0.9	--	--	--	--	--	--
	06-30-89	--	--	1.2	--	--	--	--	--	--
HO Cd 291	02-22-89	--	--	0.9	--	--	--	--	--	--
	05-04-89	--	--	0.5	--	--	--	--	--	--
	06-01-89	--	--	0.5	--	--	--	--	--	--
	06-30-89	--	--	0.5	--	--	--	--	--	--
HO Cd 292	06-30-89	--	--	0.8	--	--	--	--	--	--
HO Cd 334	06-27-89	12	1900	0.4	<0.10	<0.10	<0.10	<0.10	<0.10	<0.5
	06-27-89	11	--	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.5
HO Cd 341	06-29-89	--	--	0.7	--	--	--	--	--	--
HO Cd 342	06-29-89	--	--	2.7	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

HOWARD COUNTY, MARYLAND-Continued

LOCAL IDENTIFIER	METOLACHLOR WATER WHOLE TOT.REC (UG/L)	METRIBUZIN WATER WHOLE TOT.REC (UG/L)	PROMETRYNE TOTAL (UG/L)	PROMETONE TOTAL (UG/L)	PROPAZINE TOTAL (UG/L)	PROPHAM TOTAL (UG/L)	SEVIN, TOTAL (UG/L)	SIMAZINE TOTAL (UG/L)	SIMETRYNE TOTAL (UG/L)
HO Cd 240	<0.1	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Cd 334	<0.1	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
	<0.1	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1

LOCAL IDENTIFIER	DATE	TIME	STATION NUMBER	GEOLOGIC UNIT	SAMPLING METHOD, CODES	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DEPTH OF WELL, TOTAL (FEET)	DEPTH TO TOP OF SAMPLE INTERVAL (FT)	DEPTH TO BOTTOM OF SAMPLE INTERVAL (FT)
HO Ce 76	06-06-89	1430	391346076541501	400BLMR	4040	--	120.00	0.0	120
	06-06-89	1440		400BLMR	4040	--	120.00	0.0	120
HO Ce 102	06-19-89	1430	391046076542601	300OELL	4040	--	160.00	0.0	160
	06-19-89	1440		300OELL	4040	--	160.00	0.0	160
HO Ce 132	06-26-89	1530	391409076532201	300OELL	4040	--	85.00	0.0	85
HO Cf 66	07-03-89	1100	391332076451601	300MWSG	4040	--	250.00	0.0	250
HO Cf 107	06-19-89	1100	391353076490301	300OELL	4040	--	160.00	0.0	160
HO Cg 22	12-15-88	1350	391057076443701	300RELY	4040	--	127.00	0.0	127
HO Cg 27	12-15-88	1245	391318076445001	300MWSG	4040	--	260.00	0.0	260
	05-19-89	1406		300MWSG	4040	--	260.00	0.0	260
HO Dd 94	07-03-89	1400	390908076553005	300LCRV	4040	--	300.00	0.0	300
	07-03-89	1410		300LCRV	4040	--	300.00	0.0	300
HO De 51	12-14-88	1345	390852076500701	300MWSG	4040	--	125.00	0.0	125
HO Df 54	12-14-88	1110	390734076475401	217PTXN	4040	--	150.00	0.0	150
HO Df 55	06-26-89	1200	390742076481401	300RELY	4040	--	600.00	0.0	600

LOCAL IDENTIFIER	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	PUMP OR FLOW PERIOD PRIOR TO SAMPLING (MIN)	FLOW RATE, INSTANTANEOUS (G/M)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
HO Ce 76	430	35	12	78	6.74	13.5	9.4	5.9	2.2	6.1
	430	35	12	78	6.74	13.5	9.4	5.8	2.2	6.0
HO Ce 102	375	75	6.0	239	6.33	15.0	14.6	20	7.0	15
	375	75	6.0	239	6.33	15.0	14.6	19	6.3	14
HO Ce 132	465	60	3.0	54	5.82	16.0	7.4	2.8	1.4	5.6
HO Cf 66	340	90	5.0	175	6.84	14.5	0.7	19	6.3	6.4
HO Cf 107	460	70	7.5	88	6.12	14.0	7.8	8.3	1.7	6.9
HO Cg 22	100	--	<1.0	186	5.91	18.5	--	16	5.6	11
HO Cg 27	250	30	3.5	249	7.52	13.0	1.0	35	7.1	5.8
	250	30	4.0	25	7.47	14.0	1.3	--	--	--
HO Dd 94	360	60	6.0	216	5.34	15.5	4.7	0.03	0.03	43
	360	60	6.0	216	5.34	15.5	4.7	0.05	<0.01	44
HO De 51	305	30	3.0	94	6.18	12.5	8.1	8.4	4.1	3.4
HO Df 54	205	70	3.0	61	7.28	12.5	3.7	2.8	1.6	3.0
HO Df 55	235	120	8.0	313	8.39	16.0	0.0	3.7	1.6	70

Geologic unit (aquifer): 217PTXN - Patuxent Formation
300LCRV - Loch Raven Schist
300MWSG - Mount Washingtom Amphibolite
300OELL - Oella Formation
300RELY - Relay Gneiss Member of James Run Formation
400BLMR - Baltimore Gneiss

Sampling method: 4040 - Submersible pump

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

HOWARD COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3	BICARBONATE WATER WH IT FIELD MG/L AS HCO3	SULFIDE TOTAL (MG/L AS S)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
HO Ce 76	1.1	24	--	--	<1.0	4.3	0.10	28	55	--
	1.1	24	--	--	<1.0	4.2	0.10	27	60	--
HO Ce 102	3.1	43	--	--	21	37	0.20	29	142	158
	2.6	43	--	--	21	37	0.20	26	174	152
HO Ce 132	1.3	17	--	--	<1.0	1.8	0.10	26	50	--
HO Cf 66	2.7	83	--	--	5.0	1.7	0.20	40	126	131
HO Cf 107	1.9	37	--	--	<1.0	2.3	0.10	38	72	--
HO Cg 22	4.6	64	--	--	18	6.5	0.30	32	132	133
HO Cg 27	2.7	105	--	--	15	3.4	0.10	28	156	159
	--	--	--	--	--	--	--	--	--	--
HO Dd 94	0.20	16	--	--	<1.0	19	<0.10	8.7	140	--
	0.30	16	--	--	<1.0	20	<0.10	8.7	134	--
HO De 51	0.30	31	--	--	1.1	5.5	<0.10	26	70	68
HO Df 54	1.4	21	--	--	8.5	1.3	0.10	11	41	42
HO Df 55	3.0	156	--	--	11	3.0	0.80	13	194	198

LOCAL IDENTIFIER	NITROGEN, NITRATE DISSOLVED (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)
HO Ce 76	--	<0.010	--	2.20	--	<0.010	--	--	0.380
	--	<0.010	--	2.10	--	<0.010	--	--	0.050
HO Ce 102	--	<0.010	--	<0.100	--	<0.010	--	--	0.010
	--	<0.010	--	<0.100	--	<0.010	--	--	<0.010
HO Ce 132	--	<0.010	--	1.30	--	0.010	--	--	0.110
HO Cf 66	--	<0.010	--	<0.100	--	<0.010	--	--	0.030
HO Cf 107	--	<0.010	--	1.10	--	<0.010	--	--	0.090
HO Cg 22	--	0.010	--	<0.100	--	--	--	--	<0.010
HO Cg 27	--	<0.010	--	0.500	--	--	--	--	0.020
	--	--	--	--	--	--	--	--	--
HO Dd 94	--	<0.010	--	13.0	--	<0.010	--	--	<0.010
	--	<0.010	--	13.0	--	0.020	--	--	<0.010
HO De 51	--	0.010	--	1.70	--	--	--	--	0.020
HO Df 54	--	<0.010	--	<0.100	--	--	--	--	0.080
HO Df 55	--	<0.010	--	<0.100	--	0.050	--	--	0.020

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

HOWARD COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	PHOSPHOROUS DISSOLVED (MG/L AS P)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)
HO Ce 76	--	--	<10	41	<0.5	<1	<5	<3	20
	--	--	<10	41	<0.5	<1	<5	<3	20
HO Ce 102	--	--	<10	15	<0.5	<1	<5	7	30
	--	--	<10	14	<0.5	<1	<5	6	50
HO Ce 132	--	--	<10	17	<0.5	<1	7	<3	20
HO Cf 66	--	--	<10	15	<0.5	1	<5	<3	20
HO Cf 107	--	--	<10	51	<0.5	<1	<5	<3	10
HO Cg 22	--	--	<10	81	<0.5	1	<5	4	20
HO Cg 27	--	--	<10	7	<0.5	2	<5	<3	20
HO Dd 94	--	--	<10	<2	<0.5	<1	<5	<3	30
	--	--	<10	<2	<0.5	<1	<5	<3	30
HO De 51	--	--	--	<2	<0.5	2	<5	<3	70
HO Df 54	--	--	<10	26	1	6	<5	<3	120
HO Df 55	--	--	<10	23	<0.5	<1	6	<3	<10

LOCAL IDENTIFIER	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)
HO Ce 76	8	<10	<4	1	<10	<10	1.0	38	<6
	7	<10	<4	2	<10	<10	<1.0	39	<6
HO Ce 102	900	<10	26	410	<10	<10	2.0	120	<6
	840	<10	25	370	<10	<10	<1.0	110	<6
HO Ce 132	11	<10	6	15	<10	<10	2.0	54	<6
HO Cf 66	27	<10	13	44	<10	<10	<1.0	77	<6
HO Cf 107	6	<10	4	1	<10	<10	2.0	140	<6
HO Cg 22	410	<10	11	430	<10	<10	<1.0	120	<6
HO Cg 27	9	<10	11	2	<10	<10	2.0	98	<6
HO Dd 94	4	20	<4	<1	<10	<10	<1.0	<1	<6
	5	<10	<4	<1	<10	<10	<1.0	1	<6
HO De 51	9	20	<4	<1	<10	<10	<1.0	22	<6
HO Df 54	4300	<10	22	130	<10	<10	<1.0	20	<6
HO Df 55	1100	<10	8	27	<10	<10	<1.0	34	<6

HOWARD COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	ZINC, DISSOLVED (UG/L AS ZN)	RADON 222 TOTAL (PC/L)	CARBON, ORGANIC TOTAL (MG/L AS C)	BROMOFORM TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CARBON-TETRACHLORIDE TOTAL (UG/L)	CHLOROBENZENE TOTAL (UG/L)	CHLORODIBROMOMETHANE TOTAL (UG/L)	CHLOROFORM TOTAL (UG/L)
HO Ce 76	<3	7300	0.1	--	--	--	--	--	--
	<7	7300	0.1	--	--	--	--	--	--
HO Ce 102	4	8300	<0.1	--	--	--	--	--	--
	15	--	0.9	--	--	--	--	--	--
HO Ce 132	7	23000	<0.1	--	--	--	--	--	--
HO Cf 66	7	30000	<0.1	--	--	--	--	--	--
HO Cf 107	4	13000	<0.1	--	--	--	--	--	--
HO Cg 22	50	--	1.3	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
HO Cg 27	5	38000	<0.1	--	--	--	--	--	--
	--	42000	--	--	--	--	--	--	--
HO Dd 94	7	1900	<0.1	--	--	--	--	--	--
	<3	--	0.2	--	--	--	--	--	--
HO De 51	<3	97	<0.1	--	--	--	--	--	--
HO Df 54	8	<80	<0.1	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
HO Df 55	<3	2500	<0.1	--	--	--	--	--	--

LOCAL IDENTIFIER	CHLOROETHANE TOTAL (UG/L)	CIS 1,3-DICHLOROPROPENE TOTAL (UG/L)	DICHLOROBROMOMETHANE TOTAL (UG/L)	DICHLORODIFLUOROMETHANE TOTAL (UG/L)	ETHYLBENZENE TOTAL (UG/L)	METHYLBROMIDE TOTAL (UG/L)	METHYLCHLORIDE TOTAL (UG/L)	METHYLENE CHLORIDE TOTAL (UG/L)	STYRENE TOTAL (UG/L)
HO Cg 22	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2
HO Df 54	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2

LOCAL IDENTIFIER	TETRACHLOROETHYLENE TOTAL (UG/L)	TRICHLOROFLUOROMETHANE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	TRANS-1,3-DICHLOROPROPENE TOTAL (UG/L)	TRICHLOROETHYLENE TOTAL (UG/L)	TRIFLURALIN TOTAL RECOVER (UG/L)	VINYL CHLORIDE TOTAL (UG/L)	XYLENE TOTAL WATER WHOLE TOT REC (UG/L)	1,1-DICHLOROETHANE TOTAL (UG/L)
HO Ce 76	--	--	--	--	--	<0.10	--	--	--
	--	--	--	--	--	<0.10	--	--	--
HO Ce 102	--	--	--	--	--	<0.10	--	--	--
	--	--	--	--	--	<0.10	--	--	--
HO Ce 132	--	--	--	--	--	<0.10	--	--	--
HO Cf 66	--	--	--	--	--	<0.10	--	--	--
HO Cf 107	--	--	--	--	--	<0.10	--	--	--
HO Cg 22	<0.20	<0.20	<0.20	<0.20	<0.2	--	<0.20	<0.2	<0.20
HO Cg 27	--	--	--	--	--	<0.10	--	--	--
HO Dd 94	--	--	--	--	--	<0.10	--	--	--
	--	--	--	--	--	<0.10	--	--	--
HO De 51	--	--	--	--	--	<0.10	--	--	--
HO Df 54	<0.20	<0.20	<0.20	<0.20	<0.2	--	<0.20	<0.2	<0.20

LOCAL IDENTIFIER	1,1-DICHLOROETHYLENE TOTAL (UG/L)	1,1,1-TRICHLOROETHANE TOTAL (UG/L)	1,1,2-TRICHLOROETHANE TOTAL (UG/L)	1,1,2,2 TETRACHLOROETHANE TOTAL (UG/L)	1,2-DIBROMOETHANE WATER WHOLE TOTAL (UG/L)	1,2-DICHLOROBENZENE TOTAL (UG/L)	1,2-DICHLOROETHANE TOTAL (UG/L)	1,2-DICHLOROPROPANE TOTAL (UG/L)	1,2-TRANSDICHLOROETHENE TOTAL (UG/L)
HO Cg 22	<0.20	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20
HO Df 54	<0.20	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

HOWARD COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	1,3-DICHLOROPROPENE TOTAL (UG/L)	1,3-DICHLOROBENZENE TOTAL (UG/L)	1,4-DICHLOROBENZENE TOTAL (UG/L)	2-CHLOROETHYLVINYLETHER TOTAL (UG/L)	ALACHLOR TOTAL RECOVER (UG/L)	AMETRYNE TOTAL	ATRAZINE, TOTAL (UG/L)	CYANAZINE TOTAL (UG/L)	METHOMYL TOTAL (UG/L)
HO Ce 76	--	--	--	--	<0.10	<0.10	<0.10	<0.10	<0.5
	--	--	--	--	<0.10	<0.10	<0.10	<0.10	<0.5
HO Ce 102	--	--	--	--	<0.10	<0.10	<0.10	<0.10	<0.5
	--	--	--	--	<0.10	<0.10	<0.10	<0.10	<0.5
HO Ce 132	--	--	--	--	<0.10	<0.10	<0.10	<0.10	<0.5
HO Cf 66	--	--	--	--	<0.10	<0.10	<0.10	<0.10	<0.5
HO Cf 107	--	--	--	--	<0.10	<0.10	<0.10	<0.10	<0.5
HO Cg 22	<0.20	<0.20	<0.20	<0.20	--	--	--	--	--
HO Cg 27	--	--	--	--	<0.10	<0.10	<0.10	<0.10	<0.5
	--	--	--	--	--	--	--	--	--
HO Dd 94	--	--	--	--	<0.10	<0.10	0.10	<0.10	<0.5
	--	--	--	--	<0.10	<0.10	0.10	<0.10	<0.5
HO De 51	--	--	--	--	<0.10	<0.10	<0.10	<0.10	<0.5
HO Df 54	<0.20	<0.20	<0.20	<0.20	--	--	--	--	--
HO Df 55	--	--	--	--	--	--	--	--	--

LOCAL IDENTIFIER	METOLACHLOR WATER WHOLE TOT.REC (UG/L)	METRIBUZIN WATER WHOLE TOT.REC (UG/L)	PROMETRYNE TOTAL (UG/L)	PROMETONE TOTAL (UG/L)	PROPAZINE TOTAL (UG/L)	PROPHAM TOTAL (UG/L)	SEVIN, TOTAL (UG/L)	SIMAZINE TOTAL (UG/L)	SIMETRYNE TOTAL (UG/L)
HO Ce 76	<0.1	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
	<0.1	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Ce 102	<0.1	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
	<0.1	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Ce 132	<0.1	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Cf 66	<0.1	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Cf 107	<0.1	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Cg 27	<0.1	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Dd 94	<0.1	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
	<0.1	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO De 51	<0.1	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1

LOCAL IDENTIFIER	DATE	TIME	STATION NUMBER	GEOLOGIC UNIT	SAMPLING METHOD, CODES	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DEPTH OF WELL, TOTAL (FEET)	DEPTH TO TOP OF SAMPLE INTERVAL (FT)	DEPTH TO BOTTOM OF SAMPLE INTERVAL (FT)
KE Bd 39	06-13-89	1200	391645076035001	125AQUI	4040	15.31	38.50	36	39
KE Be 49	11-30-88	1030	391923075564301	112PCPC	4040	17.10	25.00	22	25
	09-20-89	1000		112PCPC	4040	9.00	25.00	22	25
KE Be 50	11-28-88	1430	391851075561801	112PCPC	4040	14.50	22.00	20	22
	09-20-89	1150		112PCPC	4040	10.30	22.00	20	22
KE Be 51	11-30-88	1200	391851075554401	112PCPC	4040	17.10	27.00	24	27
	09-19-89	1100		112PCPC	4040	11.53	27.00	24	27
KE Be 52	11-30-88	1400	391810075555801	112PCPC	4040	21.90	36.00	33	36
	04-05-89	1050		112PCPC	4040	20.45	36.00	33	36
	06-14-89	1700		112PCPC	4040	17.80	36.00	33	36
KE Be 60	09-20-89	1400	391811075564901	125AQUI	4040	18.30	22.00	20	22
KE Be 61	07-06-89	1000	391810075555803	125AQUI	4040	16.85	50.50	48	51
KE Be 63	09-07-89	1100	391721075554501	125AQUI	4040	3.90	39.50	37	40
KE Be 64	09-07-89	1430	391721075554502	125AQUI	4040	3.81	16.00	13	16
KE Be 65	06-13-89	1510	391608075594301	125AQUI	4040	9.00	22.00	19	22
KE Bg 36	07-05-89	1430	391957075490602	112PCPC	4040	17.81	31.00	28	31

LOCAL IDENTIFIER	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	PUMP OR FLOW PERIOD PRIOR TO SAMPLING (MIN)	FLOW RATE, INSTANTANEOUS (G/M)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
KE Bd 39	75.0	15	0.7	68	4.9	16.0	0.6	1.1	1.2	3.7
KE Be 49	73.6	15	0.8	327	5.1	14.5	7.0	22	18	5.5
	73.6	17	0.7	303	5.5	15.0	7.1	20	17	5.8
KE Be 50	70.2	15	0.5	514	4.8	14.0	9.0	35	27	13
	70.2	15	0.5	502	5.0	17.0	7.7	34	27	12
KE Be 51	70.0	15	1.0	141	4.7	14.0	9.4	8.3	5.0	5.8
	70.0	45	0.5	159	5.4	14.5	8.5	9.1	5.4	7.0
KE Be 52	70.0	20	0.5	161	5.0	13.0	6.8	11	5.4	5.3
	72.0	25	1.0	164	5.1	14.5	8.6	11	6.3	4.8
	72.0	20	0.4	172	5.0	14.5	8.7	11	6.7	4.4
KE Be 60	78.1	22	0.5	93	5.5	17.0	7.7	6.4	2.4	3.8
KE Be 61	75.0	20	1.0	128	5.1	14.0	9.5	8.8	2.6	5.8
KE Be 63	45.1	65	0.5	66	5.4	14.5	7.8	4.1	1.2	4.4
KE Be 64	45.1	30	0.7	146	5.5	18.5	5.8	8.9	6.5	4.7
KE Be 65	49.0	16	0.7	133	5.7	13.5	5.6	12	5.0	3.2
KE Bg 36	62.0	15	0.3	295	4.8	17.0	7.1	18	15	6.1

Geologic unit (aquifer): 112PCPC - Pleistocene-Pliocene Series
125AQUI - Aquia Formation

Sampling method: 4040 - Submersible pump

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

KENT COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3	BICARBONATE WATER WH IT FIELD MG/L AS HCO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	BROMIDE DISSOLVED (MG/L AS BR)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRATE DISSOLVED (MG/L AS N)
KE Bd 39	3.3	1	1	16	5.7	0.10	0.050	19	54	--
KE Be 49	3.1	5	6	43	36	<0.10	--	12	144	--
	2.5	12	15	35	21	0.10	0.020	11	174	--
KE Be 50	2.0	2	2	<0.20	54	<0.10	--	18	--	--
	1.9	3	4	<1.0	51	0.10	0.020	17	--	--
KE Be 51	2.5	2	2	<0.20	11	<0.10	--	13	--	--
	2.5	4	5	<1.0	12	0.10	0.020	12	--	--
KE Be 52	4.0	2	3	<0.20	14	<0.10	--	13	--	11.0
	3.3	3	3	<1.0	14	0.10	--	13	--	--
	3.3	3	4	<1.0	14	0.10	0.020	13	--	--
KE Be 60	2.3	11	14	<1.0	6.4	<0.10	0.020	11	--	--
KE Be 61	2.9	3	3	<1.0	9.9	<0.10	0.020	11	--	--
KE Be 63	2.0	9	10	<1.0	4.4	<0.10	<0.010	12	--	--
KE Be 64	3.3	6	7	2.0	16	<0.10	<0.010	11	105	--
KE Be 65	1.8	23	28	17	5.7	0.10	<0.010	4.9	69	--
KE Bg 36	2.9	3	4	11	24	<0.10	0.040	13	182	--

LOCAL IDENTIFIER	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ANTIMONY, DISSOLVED (UG/L AS SB)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)
KE Bd 39	<0.010	<0.100	0.010	<0.20	<0.010	20	<1	<1	9	<0.5
KE Be 49	<0.010	<0.100	0.040	0.70	0.010	20	<1	<1	190	<0.5
	<0.010	12.0	0.140	0.50	0.020	10	<1	<1	140	<0.5
KE Be 50	<0.010	41.0	0.060	1.0	<0.010	30	<1	<1	180	<0.5
	<0.010	36.0	<0.010	<0.20	<0.010	30	<1	<1	170	<0.5
KE Be 51	<0.010	11.0	<0.010	0.70	<0.010	<10	<1	<1	120	<0.5
	<0.010	10.0	0.020	0.30	0.020	10	<1	<1	130	<0.5
KE Be 52	0.010	11.0	0.390	1.3	0.010	<20	<1	<1	140	<0.5
	<0.010	12.0	0.090	0.30	0.010	<10	<1	<1	150	<0.5
	<0.010	12.0	0.020	0.20	<0.010	20	<1	<1	160	<0.5
KE Be 60	<0.010	3.80	0.010	0.30	0.010	10	<1	<1	47	<0.5
KE Be 61	<0.010	9.00	0.020	0.70	<0.010	<10	<1	<1	65	<0.5
KE Be 63	<0.010	4.90	0.020	0.30	<0.010	<10	<1	<1	51	<0.5
KE Be 64	<0.010	11.0	0.040	0.90	<0.010	10	<1	<1	110	<0.5
KE Be 65	<0.010	1.30	0.010	0.30	0.010	<10	<1	<1	31	<0.5
KE Bg 36	<0.010	20.0	0.050	0.70	<0.010	30	<1	<1	350	<0.5

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

KENT COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	BORON, DISSOLVED (UG/L AS B)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)
KE Bd 39	30	1	<5	7	<10	3000	<10	<4	51	<0.1
KE Be 49	<10	<1	<5	3	<10	<5	<10	<4	520	--
	<10	<1	<5	<3	<10	160	<10	<4	180	<0.1
KE Be 50	<10	2	<5	4	<10	17	<10	<4	210	--
	<10	<1	<5	<3	<10	<7	<10	<4	150	<0.1
KE Be 51	<10	<1	<5	<3	<10	3	<10	<4	30	--
	20	<1	<5	<3	<10	11	<10	<4	17	<0.1
KE Be 52	20	<1	<5	10	<10	60	<10	<4	170	--
	<10	<1	<5	7	<10	4	<10	<4	110	<0.1
	<10	<1	<5	6	<10	<7	<10	<4	100	<0.1
KE Be 60	30	<1	<5	<3	<10	<3	<10	<4	28	<0.1
KE Be 61	<10	<1	<5	<3	<10	<3	<10	<4	35	<0.1
KE Be 63	<10	<1	<5	<3	<10	5	<10	<4	22	<0.1
KE Be 64	10	<1	<5	<3	<10	21	<10	<4	110	<0.1
KE Be 65	20	<1	<5	<3	<10	<11	<10	<4	4	<0.1
KE Bg 36	<10	<1	6	<3	<10	250	<10	<4	110	<0.1

LOCAL IDENTIFIER	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	GROSS ALPHA, DISSOLVED (UG/L AS U-NAT)	GROSS BETA, DISSOLVED (PCI/L AS CS-137)	RADON 222 TOTAL (PC/L)	GROSS BETA, DISSOLVED (PCI/L AS SR/YT-90)	CARBON, ORGANIC DISSOLVED (MG/L AS C)
KE Bd 39	<10	<10	<1	<1.0	10	<6	45	<0.4	0.4	450	<0.4	0.3
KE Be 49	<10	<10	27	<1.0	240	<6	15	--	--	--	--	0.9
	<10	<10	16	<1.0	230	<6	5	--	--	340	--	0.9
KE Be 50	<10	<10	<1	<1.0	390	<6	18	--	--	--	--	0.7
	<10	<10	<1	<1.0	390	<6	10	--	--	530	--	0.9
KE Be 51	<10	<10	<1	<1.0	100	<6	9	--	--	--	--	0.9
	<10	<10	<1	<1.0	120	<6	9	--	--	580	--	0.8
KE Be 52	<10	<10	<1	<1.0	92	<6	19	--	--	910	--	0.6
	<10	<10	<1	<1.0	110	<6	21	1.5	4.0	800	3.5	0.8
	<10	<10	<1	<1.0	120	<6	16	0.8	4.4	710	3.7	0.4
KE Be 60	<10	<10	<1	<1.0	68	<6	<3	--	--	320	--	0.6
KE Be 61	<10	<10	<1	<1.0	36	<6	19	<0.4	2.9	190	2.6	0.2
KE Be 63	<10	<10	<1	<1.0	28	<6	5	--	--	<80	--	0.5
KE Be 64	<10	<10	<1	<1.0	91	<6	31	--	--	<80	--	0.6
KE Be 65	<10	<10	<1	<1.0	130	<6	<3	0.5	2.6	210	2.2	0.6
KE Bg 36	<10	<10	3	2.0	320	<6	18	1.4	3.9	110	3.1	0.6

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

MONTGOMERY COUNTY, MARYLAND

LOCAL IDENTIFIER	DATE	TIME	STATION NUMBER	GEOLOGIC UNIT	SAMPLING METHOD, CODES	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DEPTH OF WELL, TOTAL (FEET)	DEPTH TO TOP OF SAMPLE INTERVAL (FT)	DEPTH TO BOTTOM OF SAMPLE INTERVAL (FT)
MO Db 68	10-11-88	1603	390802077283801	231NOXF	4040	18.40	252.00	40	252
	03-27-89	1600		231NOXF	4040	12.43	252.00	40	252
	06-26-89	1355		231NOXF	4040	13.85	252.00	40	252
	09-19-89	1440		231NOXF	4040	17.54	252.00	40	252

ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	PUMP OR FLOW PERIOD PRIOR TO SAMPLING (MIN)	FLOW RATE, INSTANTANEOUS (G/M)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
260	153	1.7	224	7.6	12.5	2.7	33	7.4	5.8
260	105	6.0	223	7.4	13.0	6.2	31	6.4	5.4
260	145	7.8	224	7.1	13.5	7.2	33	6.9	6.0
260	145	8.3	266	7.5	13.0	--	33	6.7	5.8

POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3	BICARBONATE WATER WH IT FIELD MG/L AS HCO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)
0.40	114	139	0.90	2.3	<0.10	22	140	1.40
0.50	115	141	1.0	2.3	0.10	20	136	1.00
0.40	113	136	<1.0	2.4	0.10	23	--	1.30
0.40	116	141	<1.0	2.5	0.10	22	--	1.20

PHOSPHOROUS TOTAL (MG/L AS P)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	BORON, TOTAL RECOVERABLE (UG/L AS B)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
0.060	20	<10	6200	15	70	5	<10	2.9
0.070	<10	20	100	12	<10	2	<10	0.3
0.070	<10	<10	40	10	<10	1	<10	0.6
0.050	10	<10	80	22	<10	<1	10	0.3

Geologic unit (aquifer): 231NOXF - New Oxford Formation

Sampling method: 4040 - Submersible pump

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

QUEEN ANNES COUNTY, MARYLAND

LOCAL IDENTIFIER	DATE	TIME	STATION NUMBER	GEOLOGIC UNIT	SAMPLING METHOD, CODES	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DEPTH OF WELL, TOTAL (FEET)	DEPTH TO TOP OF SAMPLE INTERVAL (FT)	DEPTH TO BOTTOM OF SAMPLE INTERVAL (FT)
QA Bh 46	09-21-89	1500	391045075455501	124PNPN	4040	--	250.00	170	250
QA Ch 33	02-12-89	1530	390858075484601	112PCPC	4080	0.11	8.50	6.0	8.5
QA Ch 34	02-12-89	1610	390855075484401	112PCPC	4080	2.29	11.33	8.8	11
QA Db 19	12-13-88	1025	390211076183401	112PLSC	4040	--	60.00	55	60
	03-09-89	1545		112PLSC	4040	--	60.00	55	60
	05-16-89	1615		112PLSC	4040	--	60.00	55	60
	08-14-89	1315		112PLSC	4040	--	60.00	55	60
QA Db 27	12-13-88	1120	390117076191301	125AQUI	4040	--	145.00	110	145
	03-23-89	1355		125AQUI	4040	--	145.00	110	145
	05-16-89	1640		125AQUI	4040	--	145.00	110	145
	08-16-89	1140		125AQUI	4040	--	145.00	110	145
QA Db 30	12-01-88	1630	390201076182701	125AQUI	4040	17.27	220.00	210	220
	03-13-89	1655		125AQUI	4030	17.07	220.00	210	220
	05-18-89	1315		125AQUI	4030	16.89	220.00	210	220
	08-15-89	1420		125AQUI	4040	16.82	220.00	210	220
QA Db 32	11-22-88	1555	390201076182703	125AQUI	4030	17.60	116.00	106	116
	03-13-89	1415		125AQUI	4040	16.98	116.00	106	116
	05-17-89	1650		125AQUI	4040	16.77	116.00	106	116
	08-15-89	1342		125AQUI	4040	17.05	116.00	106	116
QA Db 34	11-23-88	1605	390023076174301	125AQUI	4040	9.65	180.00	170	180
QA Db 35	12-06-88	1520	390119076191001	125AQUI	4030	6.89	200.00	190	200
	03-23-89	1700		125AQUI	4030	6.72	200.00	190	200
	05-18-89	1606		125AQUI	4030	5.98	200.00	190	200
	08-16-89	1150		125AQUI	4040	6.37	200.00	190	200
QA Db 36	12-01-88	1530	390201076182704	125AQUI	4030	17.03	180.00	170	180
	03-09-89	1430		125AQUI	4030	17.02	180.00	170	180
	05-17-89	1630		125AQUI	4030	16.72	180.00	170	180
	08-15-89	1247		125AQUI	4030	16.82	180.00	170	180
QA Db 37	11-23-88	1530	390023076174302	125AQUI	4030	9.37	250.00	240	250
QA Ea 60	12-13-88	1500	385701076212501	125AQUI	4040	--	185.00	165	185
	03-14-89	0950		125AQUI	4040	--	185.00	165	185
	05-16-89	1400		125AQUI	4040	--	185.00	165	185
	08-14-89	1400		125AQUI	4040	--	185.00	165	185
QA Ea 61	12-13-88	1425	385812076202801	125AQUI	4040	--	170.00	150	170
QA Ea 77	11-18-88	1345	385718076211501	125AQUI	4040	13.10	205.00	195	205
	03-14-89	1130		125AQUI	4030	12.33	205.00	195	205
	05-17-89	1250		125AQUI	4030	12.68	205.00	195	205
	08-16-89	1505		125AQUI	4040	12.83	205.00	195	205
QA Ea 78	11-28-88	1415	385718076211502	125AQUI	4030	12.83	135.00	125	135
QA Ea 79	12-07-88	1534	385757076200101	125AQUI	4040	11.01	298.00	288	298
QA Ea 80	11-21-88	1138	385757076200102	125AQUI	4040	11.16	130.00	120	130
QA Ea 81	12-08-88	1445	385718076211503	125AQUI	4040	12.66	310.00	300	310
QA Eb 113	12-22-88	1300	385748076172001	125AQUI	4040	18.03	216.00	176	216
QA Eb 155	11-29-88	1445	385843076155302	125AQUI	4030	9.54	245.00	235	245
QA Eb 156	11-30-88	1215	385852076195201	125AQUI	4030	13.61	220.00	210	220
	03-17-89	1345		125AQUI	4030	13.55	220.00	210	220
	05-19-89	1450		125AQUI	4030	13.18	220.00	210	220
	08-16-89	1330		125AQUI	4040	13.46	220.00	210	220
QA Eb 157	11-30-88	1305	385852076195202	125AQUI	4040	12.79	120.00	110	120
QA Ed 39	06-29-89	1130	385555076075402	122PNSK	4040	7.06	26.00	23	26
QA Fd 02	07-11-89	1430	385456076090301	112CLMB	4040	4.20	39.00	36	39
QA Fd 03	07-11-89	1240	385456076090302	112CLMB	4040	3.25	19.00	16	19

Geologic unit (aquifer):
112CLMB - Columbia Formation
112PCPC - Pleistocene-Pliocene Series
112PLSC - Pleistocene Series
122PNSK - Pensauken Formation
124PNPN - Piney Point Formation
125AQUI - Aquia Formation

Sampling method:
4030 - Suction pump
4040 - Submersible pump
4080 - Peristaltic pump

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

QUEEN ANNES COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	PUMP OR FLOW PERIOD PRIOR TO SAMPLING (MIN)	FLOW RATE, INSTANTANEOUS (G/M)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
QA Bh 46	65.0	85	6.0	340	7.9	15.0	0.4	23	8.5	34
QA Ch 33	--	25	0.2	53	--	10.0	--	--	--	--
QA Ch 34	--	25	0.2	25	--	8.0	--	--	--	--
QA Db 19	23.0	25	10	1250	6.3	15.0	--	--	--	--
	23.0	25	10	1490	6.4	15.0	--	--	--	--
	23.0	20	10	1240	6.0	15.5	--	--	--	--
	23.0	20	10	1260	6.7	15.0	--	--	--	--
QA Db 27	15.0	25	10	1110	7.0	14.0	--	--	--	--
	15.0	25	10	1220	6.9	14.0	--	--	--	--
	15.0	20	10	1270	7.0	14.5	--	--	--	--
	15.0	20	10	1270	7.4	15.0	--	--	--	--
QA Db 30	23.4	260	1.7	12300	6.3	15.0	--	--	--	--
	23.4	325	1.0	13800	6.7	19.0	--	--	--	--
	23.4	205	1.5	14100	6.4	15.0	--	--	--	--
	23.4	73	8.0	13300	6.4	16.0	--	1300	160	1900
QA Db 32	21.2	195	1.0	7600	6.6	17.0	--	--	--	--
	21.2	165	1.4	8470	6.8	14.0	--	--	--	--
	21.2	184	1.5	7310	6.6	15.0	--	--	--	--
	21.2	123	1.6	6150	6.8	15.5	--	--	--	--
QA Db 34	7.4	155	1.7	483	7.2	15.0	--	--	--	--
QA Db 35	7.5	210	2.4	10100	6.5	16.5	--	--	--	--
	7.5	155	2.7	14200	6.6	16.0	--	--	--	--
	7.5	126	3.0	15600	6.3	16.0	--	--	--	--
	7.5	50	8.0	13100	6.7	15.5	--	--	--	--
QA Db 36	21.3	200	3.8	16500	6.6	15.0	--	--	--	--
	21.3	90	4.2	20700	6.7	15.5	--	--	--	--
	21.3	215	1.5	16200	6.5	17.5	--	--	--	--
	21.3	97	3.3	15800	6.7	16.0	--	--	--	--
QA Db 37	7.1	135	3.3	545	7.3	17.0	--	--	--	--
QA Ea 60	7.0	25	10	870	7.2	15.0	--	--	--	--
	7.0	20	10	764	7.6	14.5	--	--	--	--
	7.0	20	10	840	7.4	15.5	--	--	--	--
	7.0	20	10	745	7.7	15.5	--	--	--	--
QA Ea 61	18.0	25	10	1680	7.0	14.5	--	--	--	--
QA Ea 77	11.0	55	10	20000	7.0	16.0	--	--	--	--
	11.0	80	5.4	13600	6.7	15.5	--	--	--	--
	11.0	125	6.0	16200	6.6	18.0	--	--	--	--
	11.0	50	8.0	13300	6.9	16.0	--	1700	320	980
QA Ea 78	11.8	65	12	--	7.0	15.5	--	--	--	--
QA Ea 79	8.3	269	1.5	314	10.0	15.0	--	--	--	--
QA Ea 80	8.5	63	10	362	7.8	15.0	--	--	--	--
QA Ea 81	12.4	245	1.5	447	7.2	16.0	--	--	--	--
QA Eb 113	14.5	85	12	387	7.7	15.5	--	--	--	--
QA Eb 155	3.9	75	15	327	7.3	14.5	--	--	--	--
QA Eb 156	7.5	115	4.0	1150	6.4	16.0	--	--	--	--
	7.5	130	4.6	1550	6.8	16.0	--	--	--	--
	7.5	100	4.0	13700	6.8	16.0	--	--	--	--
	7.5	50	8.0	12800	6.7	15.5	--	--	--	--
QA Eb 157	11.9	155	1.6	300	7.0	14.5	--	--	--	--
QA Ed 39	60.0	20	0.5	107	4.6	14.0	6.7	5.0	3.2	7.0
QA Fd 02	15.0	20	1.0	347	7.1	15.0	0.4	65	0.91	7.6
QA Fd 03	15.0	40	0.4	658	4.0	22.5	5.2	47	26	13

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

QUEEN ANNES COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3	BICARBONATE WATER WH IT FIELD MG/L AS HCO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	BROMIDE DISSOLVED (MG/L AS BR)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)
QA Bh 46	11	173	210	<1.0	1.0	0.90	0.010	39	--	<0.010
QA Ch 33	--	--	--	--	--	--	--	--	--	--
QA Ch 34	--	--	--	--	--	--	--	--	--	--
QA Db 19	--	--	--	--	330	--	1.2	--	--	--
	--	--	--	--	360	--	1.3	--	--	--
	--	--	--	--	260	--	1.1	--	--	--
	--	--	--	--	330	--	1.2	--	--	--
QA Db 27	--	--	--	--	250	--	0.89	--	--	--
	--	--	--	--	320	--	1.1	--	--	--
	--	--	--	--	240	--	1.0	--	--	--
	--	--	--	--	290	--	1.1	--	--	--
QA Db 30	--	--	--	--	6200	--	19	--	--	--
	--	--	--	--	5700	--	20	--	--	--
	--	--	--	--	4500	--	17	--	--	--
	29	--	--	680	5900	<0.10	22	17	--	--
QA Db 32	--	--	--	--	3000	--	10	--	--	--
	--	--	--	--	2800	--	9.2	--	--	--
	--	--	--	--	2600	--	9.2	--	--	--
	--	--	--	--	2800	--	9.7	--	--	--
QA Db 34	--	--	--	--	10	--	0.036	--	--	--
QA Db 35	--	--	--	--	6700	--	21	--	--	--
	--	--	--	--	6400	--	21	--	--	--
	--	--	--	--	6200	--	21	--	--	--
	--	--	--	--	6000	--	21	--	--	--
QA Db 36	--	--	--	--	7100	--	24	--	--	--
	--	--	--	--	7200	--	19	--	--	--
	--	--	--	--	6900	--	20	--	--	--
	--	--	--	--	6000	--	24	--	--	--
QA Db 37	--	--	--	--	12	--	0.035	--	--	--
QA Ea 60	--	--	--	--	180	--	0.62	--	--	--
	--	--	--	--	200	--	0.69	--	--	--
	--	--	--	--	200	--	0.68	--	--	--
	--	--	--	--	230	--	0.81	--	--	--
QA Ea 61	--	--	--	--	520	--	1.8	--	--	--
QA Ea 77	--	--	--	--	7200	--	20	--	--	--
	--	--	--	--	5900	--	20	--	--	--
	--	--	--	--	5800	--	19	--	--	--
	30	--	--	400	5800	<0.10	20	17	9290	--
QA Ea 78	--	--	--	--	3.7	--	0.028	--	--	--
QA Ea 79	--	--	--	--	1.8	--	<0.010	--	--	--
QA Ea 80	--	--	--	--	2.1	--	0.012	--	--	--
QA Ea 81	--	--	--	--	14	--	0.060	--	--	--
QA Eb 113	--	--	--	--	3.0	--	<0.010	--	--	--
QA Eb 155	--	--	--	--	1.6	--	0.021	--	--	--
QA Eb 156	--	--	--	--	6900	--	20	--	--	--
	--	--	--	--	5100	--	20	--	--	--
	--	--	--	--	5300	--	18	--	--	--
	--	--	--	--	5800	--	17	--	--	--
QA Eb 157	--	--	--	--	3.9	--	0.027	--	--	--
QA Ed 39	1.6	5	7	<1.0	13	<0.10	0.020	12	--	<0.010
QA Fd 02	1.0	112	136	48	12	0.30	0.030	49	252	<0.010
QA Fd 03	5.9	0	0	78	80	1.6	0.080	40	--	<0.010

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

QUEEN ANNES COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ALUMINUM, DISSOLVED (UG/L AS AL)	ANTIMONY, DISSOLVED (UG/L AS SB)	ARSENIC DISSOLVED (UG/L AS AS)
QA Bh 46	--	<0.100	0.540	0.90	--	0.020	--	<10	<1	3
QA Ch 33	--	--	--	--	--	--	--	--	--	--
QA Ch 34	--	--	--	--	--	--	--	--	--	--
QA Db 30	<0.100	--	--	--	0.080	--	140	--	--	--
QA Ea 77	<0.100	--	--	--	0.010	--	270	--	--	--
QA Ed 39	--	4.60	<0.010	0.50	--	<0.010	--	40	<1	<1
QA Fd 02	--	0.100	0.060	0.30	--	0.110	--	<10	<1	<1
QA Fd 03	--	29.0	<0.010	0.60	--	0.070	--	4500	<1	<1

LOCAL IDENTIFIER	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	BORON, DISSOLVED (UG/L AS B)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)
QA Bh 46	17	<0.5	520	--	<1	<5	<3	<10	--	200
QA Ch 33	--	--	--	--	--	--	--	--	--	--
QA Ch 34	--	--	--	--	--	--	--	--	--	--
QA Db 30	--	--	--	80	--	--	--	--	220000	180000
QA Ea 77	--	--	--	60	--	--	--	--	19000	10000
QA Ed 39	60	<0.5	30	--	<1	<5	3	<10	--	<3
QA Fd 02	<2	<0.5	<10	--	<1	<5	<3	<10	--	430
QA Fd 03	120	5	10	--	110	<5	30	<10	--	33

LOCAL IDENTIFIER	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)
QA Bh 46	<10	12	--	10	<0.1	<10	<10	<1	<1.0	700
QA Ch 33	--	--	--	--	--	--	--	--	--	--
QA Ch 34	--	--	--	--	--	--	--	--	--	--
QA Db 30	--	--	1500	1000	--	--	--	--	--	--
QA Ea 77	--	--	590	530	--	--	--	--	--	--
QA Ed 39	10	<4	--	44	<0.1	<10	10	<1	<1.0	44
QA Fd 02	<10	8	--	16	<0.1	<10	<10	<1	<1.0	280
QA Fd 03	<10	14	--	160	--	<10	80	1	<1.0	410

LOCAL IDENTIFIER	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)	GROSS ALPHA, DISSOLVED (UG/L AS U-NAT)	GROSS BETA, DISSOLVED (PCI/L AS CS-137)	RADON 222 TOTAL (PC/L)	GROSS BETA, DISSOLVED (PCI/L AS SR/YT-90)	TRITIUM TOTAL (PCI/L)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)
QA Bh 46	<6	--	48	--	--	780	--	<0.3	--	1.4
QA Ch 33	--	--	--	--	--	91	--	--	--	--
QA Ch 34	--	--	--	--	--	180	--	--	--	--
QA Db 30	--	120	--	--	--	--	--	--	0.7	--
QA Ea 77	--	60	--	--	--	--	--	--	1.0	--
QA Ed 39	<6	--	16	2.4	3.1	2400	2.7	--	--	0.5
QA Fd 02	<6	--	<3	0.6	0.6	200	0.4	--	--	1.0
QA Fd 03	<6	--	410	--	--	--	--	--	--	1.4

LOCAL IDENTIFIER	DATE	TIME	STATION NUMBER	GEOLOGIC UNIT	SAMPLING METHOD, CODES	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DEPTH OF WELL, TOTAL (FEET)	DEPTH TO BOTTOM OF SAMPLE INTERVAL (FT)
SM Gh 11	06-06-89	1105	380347076200101	112OMAR	4030	1.95	20.00	20

ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	PUMP OR FLOW PERIOD PRIOR TO SAMPLING (MIN)	FLOW RATE, INSTANTANEOUS (G/M)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
3.0	10	9.6	1040	6.1	15.0	29	17	120

POTASSIUM, DISSOLVED (MG/L AS K)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	BROMIDE DISSOLVED (MG/L AS BR)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)
5.1	51	210	0.10	0.73	33	559	<0.100	0.240

ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	BORON, TOTAL RECOVERABLE (UG/L AS B)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
390	90	34000	32000	3700	3400	1000	2.2

Geologic unit (aquifer): 112OMAR - Omar Formation

Sampling method: 4030 - Suction pump

LOCAL IDENTIFIER	DATE	TIME	STATION NUMBER	GEOLOGIC UNIT	SAMPLING METHOD, CODES	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DEPTH OF WELL, TOTAL (FEET)	DEPTH TO TOP OF SAMPLE INTERVAL (FT)	DEPTH TO BOTTOM OF SAMPLE INTERVAL (FT)
TA Be 85	06-29-89	0930	385440076024401	112PCPC	4040	7.48	23.00	20	23

LOCAL IDENTIFIER	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	PUMP OR FLOW PERIOD PRIOR TO SAMPLING (MIN)	FLOW RATE, INSTANTANEOUS (G/M)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
TA Be 85	45.0	15	0.7	162	4.6	14.5	7.4	12	11	4.1

LOCAL IDENTIFIER	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3	BICARBONATE WATER WH IT FIELD MG/L AS HCO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	BROMIDE DISSOLVED (MG/L AS BR)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)
TA Be 85	2.1	2	2	36	19	<0.10	0.010	16	132	<0.010

LOCAL IDENTIFIER	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ANTIMONY, DISSOLVED (UG/L AS SB)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	BORON, DISSOLVED (UG/L AS B)
TA Be 85	6.70	<0.010	0.40	<0.010	100	<1	<1	150	1	10

LOCAL IDENTIFIER	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)
TA Be 85	<1	<5	9	<10	91	<10	<4	91	<0.1	<10

LOCAL IDENTIFIER	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	GROSS ALPHA, DISSOLVED (UG/L AS U-NAT)	GROSS BETA, DISSOLVED (PCI/L AS CS-137)	RADON 222 TOTAL (PC/L)	GROSS BETA, DISSOLVED (PCI/L AS SR/YT-90)	CARBON, ORGANIC DISSOLVED (MG/L AS C)
TA Be 85	20	4	<1.0	230	<6	29	2.4	4.1	180	3.2	0.6

Geologic unit (aquifer): 112PCPC - Pleistocene-Pliocene series

Sampling method: 4040 - Submersible pump

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

WICOMICO COUNTY, MARYLAND

LOCAL IDENTIFIER	DATE	TIME	STATION NUMBER	GEOLOGIC UNIT	SAMPLING METHOD, CODES	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DEPTH OF WELL, TOTAL (FEET)	DEPTH TO TOP OF SAMPLE INTERVAL (FT)	DEPTH TO BOTTOM OF SAMPLE INTERVAL (FT)
WI Be 53	07-27-89	0830	382644075361202	112BVDM	4040	6.00	19.00	16	19
WI Bg 17	07-12-89	1430	382508075271201	112CLMB	4040	19.30	53.00	50	53
WI Bg 18	07-12-89	1200	382508075271202	112PRBG	4040	5.75	14.00	12	14

LOCAL IDENTIFIER	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	PUMP OR FLOW PERIOD PRIOR TO SAMPLING (MIN)	FLOW RATE, INSTANTANEOUS (G/M)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
WI Be 53	47.0	10	0.7	156	4.7	17.0	7.8	6.7	6.7	5.5
WI Bg 17	65.0	22	1.0	56	6.4	16.0	0.3	1.7	0.37	6.5
WI Bg 18	65.0	15	0.3	71	5.1	17.5	1.0	3.6	1.6	4.6

LOCAL IDENTIFIER	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3	BICARBONATE WATER WH IT FIELD MG/L AS HCO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	BROMIDE DISSOLVED (MG/L AS BR)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)
WI Be 53	2.7	1	1	60	3.4	0.10	0.040	7.9	99	<0.010
WI Bg 17	0.70	15	18	2.0	5.0	0.10	0.070	34	62	<0.010
WI Bg 18	1.4	3	4	13	6.4	0.10	0.010	11	45	<0.010

LOCAL IDENTIFIER	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ANTIMONY, DISSOLVED (UG/L AS SB)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	BORON, DISSOLVED (UG/L AS B)
WI Be 53	0.980	0.010	0.30	<0.010	420	<1	<1	120	<0.5	10
WI Bg 17	<0.100	0.100	0.30	0.030	90	<1	1	11	<0.5	10
WI Bg 18	0.100	0.200	0.50	<0.010	100	1	4	35	<0.5	20

LOCAL IDENTIFIER	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)
WI Be 53	<1	<5	5	<10	8	<10	<4	130	<0.1	<10
WI Bg 17	<1	<5	<3	<10	2700	10	<4	12	<0.1	<10
WI Bg 18	<1	<5	<3	<10	150	<10	<4	39	<0.1	<10

LOCAL IDENTIFIER	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	GROSS ALPHA, DISSOLVED (UG/L AS U-NAT)	GROSS BETA, DISSOLVED (PCI/L AS CS-137)	RADON 222 TOTAL (PC/L)	GROSS BETA, DISSOLVED (PCI/L AS SR/YT-90)	CARBON, ORGANIC DISSOLVED (MG/L AS C)
WI Be 53	10	2	<1.0	41	<6	11	2.0	4.1	340	3.2	--
WI Bg 17	<10	<1	2.0	27	<6	<3	<0.4	1.0	<80	0.9	0.8
WI Bg 18	<10	<1	<1.0	32	<6	<3	<0.4	1.7	250	1.6	1.5

Geologic unit (aquifer): 112BVDM - Beaverdam Sand
112CLMB - Columbia Formation
112PRBG - Parsonsburg Formation

Sampling method: 4040 - Submersible pump

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

WORCESTER COUNTY, MARYLAND

LOCAL IDENTIFIER	DATE	TIME	STATION NUMBER	GEOLOGIC UNIT	SAMPLING METHOD, CODES	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DEPTH OF WELL, TOTAL (FEET)	DEPTH TO TOP OF SAMPLE INTERVAL (FT)	DEPTH TO BOTTOM OF SAMPLE INTERVAL (FT)
WO Ae 23	04-18-89	1005	382621075174201	122MNKN	4030	13.10	280.00	270	280
	09-20-89	1315		122MNKN	4030	13.59	280.00	270	280
WO Ae 24	04-18-89	0950	382621075174202	122OCNC	4030	10.47	200.00	190	200
	09-20-89	1305		122OCNC	4030	10.91	200.00	190	200
WO Ae 25	04-18-89	1025	382621075174203	122PCMK	4030	8.30	118.00	108	118
	09-20-89	1340		122PCMK	4030	8.80	118.00	108	118
WO Ah 34	05-23-89	1445	382632075031901	122MNKN	4010	--	450.00	350	450
WO Ah 36	05-24-89	1000	382635075030602	122MNKN	4040	19.30	430.00	420	430
WO Ah 37	05-24-89	1030	382635075030603	122MNKN	4040	19.80	478.00	468	478
WO Ah 38	05-23-89	1615	382638075033001	122MNKN	4010	--	430.00	330	430
WO Ah 39	05-24-89	1500	382649075033701	122MNKN	4010	--	420.00	320	420
WO Ah 42	05-25-89	1400	382608075032301	122MNKN	4030	10.10	410.00	300	410
WO Bf 86	07-13-89	1200	382332075141801	112BVDM	4040	6.30	49.50	46	50
WO Bf 87	07-13-89	0930	382332075141802	112BVDM	4040	6.34	18.00	15	18
WO Bg 15	04-21-89	1320	382359075094501	122MNKN	4030	-2.45	318.00	288	318
	07-25-89	1640		122MNKN	4030	--	318.00	288	318
	09-20-89	1055		122MNKN	4030	-0.44	318.00	288	318
WO Bg 45	04-21-89	1340	382358075094501	112CLMB	4030	6.98	77.00	56	77
	09-20-89	1125		112CLMB	4030	7.41	77.00	59	77
WO Bg 46	04-21-89	1310	382358075094502	122PCMK	4030	0.96	194.00	164	194
	09-20-89	1035		122PCMK	4030	2.48	194.00	164	194
WO Bg 47	04-21-89	1010	382325075063301	122OCNC	4030	5.83	268.00	258	268
	06-21-89	1900		122OCNC	4030	8.47	268.00	258	268
	09-21-89	1400		122OCNC	4030	8.84	268.00	258	268
WO Bg 48	04-21-89	1000	382325075063302	122MNKN	4030	5.93	420.00	410	420
	06-22-89	1100		122MNKN	4030	5.20	420.00	410	420
	09-21-89	1415		122MNKN	4030	9.85	420.00	410	420
WO Bg 49	04-21-89	1140	382038075065901	122OCNC	4050	8.61	243.00	233	243
	09-20-89	1505		122OCNC	4030	12.25	243.00	233	243
WO Bh 28	05-23-89	1700	382215075041802	122OCNC	4010	--	294.00	248	294
	09-21-89	1130		122OCNC	4040	--	294.00	248	294
WO Bh 29	05-25-89	1500	382216075041201	122OCNC	4010	--	294.00	248	294
WO Bh 31	04-19-89	1320	382215075041801	122OCNC	4030	17.54	278.00	263	278
WO Bh 34	04-21-89	1435	382443075033501	122MNKN	4030	4.41	353.00	337	353
	07-27-89	1300		122MNKN	4030	16.20	353.00	337	353
	09-25-89	1405		122MNKN	4030	13.76	353.00	337	353
WO Bh 81	05-24-89	1500	382208075042601	122OCNC	4010	--	297.00	227	297
WO Bh 84	04-19-89	1435	382215075041901	112CLMB	4030	4.18	86.00	81	86
	09-21-89	1205		112CLMB	4030	4.38	86.00	81	86
WO Bh 85	04-19-89	1430	382215075041902	122PCMK	4030	4.15	195.00	190	195
	09-21-89	1220		122PCMK	4030	5.26	195.00	190	195
WO Bh 89	04-19-89	1350	382215075041903	122MNKN	4030	15.43	500.00	388	500
WO Bh 90	05-25-89	1145	382127075043801	122CPNK	4030	0.30	736.00	711	736
WO Bh 91	07-26-89	1100	382235075040901	122MNKN	4040	25.80	380.00	340	380
WO Bh 92	07-27-89	1115	382447075033701	122MNKN	4040	16.90	403.00	347	403
WO Bh 93	07-26-89	1500	382304075040601	122MNKN	4030	14.70	345.00	335	345
WO Bh 94	07-27-89	1100	382447075033702	122OCNC	4030	16.25	310.00	285	310
WO Bh 95	07-26-89	1700	382304075040602	122OCNC	4040	12.80	295.00	275	295
WO Bh 96	07-26-89	1300	382235075041902	122OCNC	4030	32.10	275.00	255	275
WO Cg 32	04-19-89	1120	381941075052201	122OCNC	4040	--	280.00	245	280
	09-21-89	1015		122OCNC	4040	--	280.00	250	280
WO Cg 75	04-19-89	1040	381939075052102	122MNKN	4040	--	427.00	367	427
	09-21-89	1040		122MNKN	4040	--	427.00	367	427
WO Dg 21	04-18-89	1225	381427075081102	122MNKN	4030	0.83	310.00	300	310
	09-25-89	1135		122MNKN	4030	6.69	310.00	300	310

Geologic unit (aquifer):
112BVDM - Beaverdam Sand
122CPNK - Choptank Formation
122MNKN - Manokin Aquifer
122OCNC - Ocean City Aquifer
122PCMK - Pocomoke Aquifer

Sampling method:
4010 - Thief sample
4030 - Suction pump
4040 - Submersible pump
4050 - Squeeze pump

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

WORCESTER COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	PUMP OR FLOW PERIOD PRIOR TO SAMPLING (MIN)	FLOW RATE, INSTANTANEOUS (G/M)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	COLOR (PLATINUM-COBALT UNITS)	DENSITY (GM/ML AT 20 C)	OXYGEN, DISSOLVED (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)
WO Ae 23	40.0	60	40	139	6.7	14.5	--	--	--	--
	40.0	40	40	139	6.7	14.5	--	--	--	9.1
WO Ae 24	40.0	42	40	465	6.9	14.0	--	--	--	--
	40.0	30	40	459	7.0	14.5	--	--	--	81
WO Ae 25	40.0	30	45	486	6.8	14.0	--	--	--	--
	40.0	35	48	481	7.1	14.5	--	--	--	88
WO Ah 34	5.0	15	1400	505	6.5	18.0	75	0.997	--	22
WO Ah 36	10.0	120	7.0	836	6.6	16.0	45	0.997	--	24
WO Ah 37	10.0	120	7.0	1480	7.0	16.5	20	<0.990	--	20
WO Ah 38	10.0	30	1400	421	6.4	16.0	120	0.996	--	20
WO Ah 39	7.0	10	1500	356	6.4	18.0	140	0.998	--	22
WO Ah 42	6.0	120	8.0	417	6.5	18.0	5	0.997	--	23
WO Bf 86	33.0	25	1.0	153	5.0	15.0	--	--	7.7	5.6
WO Bf 87	33.0	15	0.5	313	5.6	16.0	--	--	6.9	20
WO Bg 15	7.0	45	80	275	6.3	15.0	--	--	--	--
	7.0	60	47	256	6.6	14.5	210	0.997	--	17
	7.0	65	50	271	6.8	15.5	--	--	--	17
WO Bg 45	10.0	25	50	76	5.7	13.5	--	--	--	--
	10.0	45	50	75	6.0	14.0	--	--	--	2.4
WO Bg 46	10.0	30	60	282	6.3	14.0	--	--	--	--
	10.0	45	48	261	6.8	14.5	--	--	--	15
WO Bg 47	5.0	45	36	353	6.6	16.0	--	--	--	--
	5.0	90	4.0	300	6.6	19.5	150	0.997	--	13
	5.0	30	40	349	6.8	16.5	--	--	--	12
WO Bg 48	5.0	45	40	419	6.7	17.0	--	--	--	--
	5.0	120	7.0	410	6.7	19.0	110	0.998	--	16
	5.0	45	30	412	6.8	17.0	--	--	--	15
WO Bg 49	10.0	40	20	411	7.1	15.0	--	--	--	31
	10.0	45	20	405	7.4	15.5	--	--	--	29
WO Bh 28	5.0	--	700	840	6.6	16.5	25	0.997	--	18
	5.0	25	--	815	6.8	17.5	--	--	--	18
WO Bh 29	5.0	15	800	445	6.7	19.0	45	0.996	--	12
WO Bh 31	5.0	80	35	774	6.7	16.5	--	0.997	--	18
WO Bh 34	4.0	20	40	222	6.6	16.5	--	--	--	--
	4.0	120	8.0	220	6.3	17.0	23	0.997	--	15
	4.0	30	34	225	6.7	16.5	--	--	--	14
WO Bh 81	5.0	30	1400	535	6.7	18.0	45	<0.990	--	12
WO Bh 84	5.0	30	40	356	6.4	15.5	--	--	--	--
	5.0	50	48	351	6.9	16.0	--	--	--	17
WO Bh 85	5.0	50	20	400	6.6	15.5	--	--	--	--
	5.0	65	8.0	396	6.8	16.5	--	--	--	15
WO Bh 89	5.0	95	24	1950	6.8	17.0	--	0.999	--	25
WO Bh 90	6.0	105	7.5	10000	7.7	16.5	15	1.000	--	62
WO Bh 91	10.0	120	9.0	1080	6.8	17.0	100	0.997	--	14
WO Bh 92	4.0	120	8.0	378	7.2	16.5	20	0.998	--	30
WO Bh 93	4.0	45	36	897	6.6	17.5	25	0.998	--	24
WO Bh 94	4.0	90	8.0	404	6.7	17.0	22	0.998	--	33
WO Bh 95	4.0	100	8.0	485	6.5	17.0	25	0.997	--	16
WO Bh 96	10.0	105	9.0	491	6.6	16.5	110	0.998	--	12
WO Cg 32	4.0	80	--	435	7.3	16.0	--	--	--	--
	4.0	30	--	434	7.3	17.0	--	--	--	33
WO Cg 75	5.0	40	--	429	7.4	16.0	--	--	--	--
	5.0	40	--	423	7.5	17.5	--	--	--	34
WO Dg 21	6.0	50	20	475	7.6	16.5	--	--	--	--
	6.0	50	20	474	7.8	16.5	--	--	--	37

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

WORCESTER COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3	BICARBONATE WATER WH IT FIELD MG/L AS HCO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	BROMIDE DISSOLVED (MG/L AS BR)	SILICA, DISSOLVED (MG/L AS SIO2)
WO Ae 23	--	--	--	62	--	--	9.5	--	--	--
	3.4	9.2	2.9	63	--	<1.0	5.9	0.10	--	28
WO Ae 24	--	--	--	245	--	--	12	--	--	--
	3.0	7.8	1.5	221	--	<1.0	9.9	0.10	--	30
WO Ae 25	--	--	--	250	--	--	12	--	--	--
	2.3	8.8	0.60	239	--	<1.0	10	0.10	--	36
WO Ah 34	5.6	57	4.4	112	137	<1.0	75	0.10	0.66	34
WO Ah 36	6.7	110	5.8	102	124	<1.0	140	<0.10	0.63	33
WO Ah 37	17	230	11	190	232	7.0	320	0.20	1.0	27
WO Ah 38	4.3	48	3.7	98	120	1.0	59	0.10	0.84	35
WO Ah 39	5.4	33	3.6	96	117	<1.0	52	0.10	0.47	37
WO Ah 42	8.2	29	5.2	112	137	<1.0	51	0.10	0.15	37
WO Bf 86	4.8	11	2.1	2	3	8.0	13	0.10	0.030	17
WO Bf 87	14	11	2.5	7	9	33	30	0.10	0.050	12
WO Bg 15	--	--	--	102	--	--	26	--	--	--
	5.0	25	3.1	96	120	<1.0	24	0.10	0.33	38
	4.6	24	3.2	95	--	<1.0	22	0.10	--	38
WO Bg 45	--	--	--	14	--	--	15	--	--	--
	0.89	9.2	1.6	14	--	<1.0	12	<0.10	--	18
WO Bg 46	--	--	--	133	--	--	12	--	--	--
	6.8	13	5.6	125	--	<1.0	9.4	0.10	--	29
WO Bg 47	--	--	--	107	--	--	46	--	--	--
	6.0	46	4.9	106	89	<1.0	43	0.10	0.42	36
	5.7	44	4.9	108	--	<1.0	41	0.10	--	36
WO Bg 48	--	--	--	102	--	--	65	--	--	--
	8.1	51	7.0	102	82	<1.0	65	0.10	0.31	38
	8.0	49	7.1	109	--	<1.0	61	0.20	--	36
WO Bg 49	9.9	44	9.5	194	--	<1.0	14	0.10	--	24
	8.0	46	8.5	192	--	<1.0	14	0.10	--	24
WO Bh 28	16	110	11	134	163	<1.0	190	0.20	0.74	33
	16	120	9.7	140	--	<1.0	170	0.20	--	33
WO Bh 29	10	57	8.5	109	133	<1.0	71	0.20	0.49	33
WO Bh 31	15	110	10	135	--	<1.0	170	0.20	0.50	36
WO Bh 34	--	--	--	93	--	--	16	--	--	--
	5.8	12	4.7	98	119	<1.0	13	0.10	0.050	35
	5.5	11	4.7	88	--	<1.0	14	0.10	--	35
WO Bh 81	11	52	7.7	117	143	<1.0	96	0.20	0.44	29
WO Bh 84	--	--	--	120	--	--	38	--	--	--
	10	30	11	115	--	<1.0	36	0.10	--	35
WO Bh 85	--	--	--	150	--	--	45	--	--	--
	13	38	11	125	--	<1.0	41	0.20	--	32
WO Bh 89	40	320	14	222	--	15	520	0.20	1.7	27
WO Bh 90	90	1900	52	423	516	210	2900	0.30	10	37
WO Bh 91	17	170	14	183	223	<1.0	250	0.20	0.93	28
WO Bh 92	9.1	30	22	166	202	<1.0	24	0.10	0.060	24
WO Bh 93	9.8	130	9.4	150	183	<1.0	200	0.20	0.92	25
WO Bh 94	3.6	43	11	110	134	1.0	76	0.10	0.28	29
WO Bh 95	9.2	61	7.7	127	155	<1.0	88	0.10	0.29	29
WO Bh 96	11	69	8.5	141	172	<1.0	83	0.20	0.40	32
WO Cg 32	--	--	--	165	--	--	39	--	--	--
	11	36	8.2	172	--	<1.0	38	0.20	--	26
WO Cg 75	--	--	--	175	--	--	36	--	--	--
	11	36	8.1	167	--	<1.0	31	0.10	--	25
WO Dg 21	--	--	--	210	--	--	28	--	--	--
	13	44	9.1	210	--	<1.0	22	0.10	--	20

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

WORCESTER COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ANTIMONY, DISSOLVED (UG/L AS SB)	ARSENIC DISSOLVED (UG/L AS AS)
WO Ae 23	--	--	--	--	--	--	--	--	--	--
	74	--	--	<0.100	--	--	0.090	--	--	--
WO Ae 24	--	--	--	--	--	--	--	--	--	--
	255	--	--	<0.100	--	--	0.080	--	--	--
WO Ae 25	--	--	--	--	--	--	--	--	--	--
	298	--	--	<0.100	--	--	0.090	--	--	--
WO Ah 34	249	--	--	--	--	--	0.100	--	--	--
WO Ah 36	446	--	--	--	--	--	0.090	--	--	--
WO Ah 37	755	751	--	--	--	--	0.180	--	--	--
WO Ah 38	244	243	--	--	--	--	0.120	--	--	--
WO Ah 39	210	--	--	--	--	--	0.110	--	--	--
WO Ah 42	243	--	--	--	--	--	0.010	--	--	--
WO Bf 86	--	101	<0.010	8.50	0.020	0.60	<0.010	<10	<1	<1
WO Bf 87	--	185	<0.010	13.0	0.020	0.50	<0.010	<10	<1	<1
WO Bg 15	--	--	--	--	--	--	--	--	--	--
	184	--	--	--	--	--	0.340	--	--	--
	137	--	--	<0.100	--	--	0.380	--	--	--
WO Bg 45	--	--	--	--	--	--	--	--	--	--
	50	--	--	<0.100	--	--	0.020	--	--	--
WO Bg 46	--	--	--	--	--	--	--	--	--	--
	122	--	--	<0.100	--	--	0.010	--	--	--
WO Bg 47	--	--	--	--	--	--	--	--	--	--
	226	--	--	--	--	--	0.410	--	--	--
	203	--	--	<0.100	--	--	0.410	--	--	--
WO Bg 48	--	--	--	--	--	--	--	--	--	--
	267	--	--	--	--	--	0.360	--	--	--
	230	--	--	<0.100	--	--	0.330	--	--	--
WO Bg 49	249	--	--	<0.100	--	--	0.120	--	--	--
	252	--	--	<0.100	--	--	0.120	--	--	--
WO Bh 28	529	--	--	--	--	--	0.080	--	--	--
	452	--	--	<0.100	--	--	0.160	--	--	--
WO Bh 29	263	--	--	--	--	--	0.270	--	--	--
WO Bh 31	432	--	--	<0.100	--	--	0.110	<10	--	--
WO Bh 34	--	--	--	--	--	--	--	--	--	--
	129	--	--	--	--	--	0.010	--	--	--
	126	--	--	<0.100	--	--	0.050	--	--	--
WO Bh 81	291	--	--	--	--	--	0.290	--	--	--
WO Bh 84	--	--	--	--	--	--	--	--	--	--
	198	--	--	<0.100	--	--	0.230	--	--	--
WO Bh 85	--	--	--	--	--	--	--	--	--	--
	212	--	--	<0.100	--	--	0.210	--	--	--
WO Bh 89	1100	1100	--	<0.100	--	--	0.160	<10	--	--
WO Bh 90	5480	5520	--	--	--	--	0.030	--	--	--
WO Bh 91	602	--	--	--	--	--	0.130	--	--	--
WO Bh 92	258	--	--	--	--	--	0.180	--	--	--
WO Bh 93	490	--	--	--	--	--	0.010	--	--	--
WO Bh 94	277	270	--	--	--	--	0.150	--	--	--
WO Bh 95	267	--	--	--	--	--	<0.010	--	--	--
WO Bh 96	297	--	--	--	--	--	0.310	--	--	--
WO Cg 32	--	--	--	--	--	--	--	--	--	--
	241	--	--	<0.100	--	--	0.160	--	--	--
WO Cg 75	--	--	--	--	--	--	--	--	--	--
	226	--	--	<0.100	--	--	0.100	--	--	--
WO Dg 21	--	--	--	--	--	--	--	--	--	--
	274	--	--	<0.100	--	--	0.160	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

WORCESTER COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	BORON, DISSOLVED (UG/L AS B)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IODIDE, DISSOLVED (MG/L AS I)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)
WO Ae 23	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	5300	--
WO Ae 24	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	14000	--
WO Ae 25	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	15000	--
WO Ah 34	--	--	--	--	--	--	--	--	13000	--
WO Ah 36	--	--	--	--	--	--	--	--	14000	--
WO Ah 37	--	--	--	--	--	--	--	--	2900	--
WO Ah 38	--	--	--	--	--	--	--	--	12000	--
WO Ah 39	--	--	--	--	--	--	--	--	9300	--
WO Ah 42	--	--	--	--	--	--	--	--	29000	--
WO Bf 86	120	<0.5	<10	<1	<5	<3	<10	--	<3	<10
WO Bf 87	61	<0.5	<10	<1	<5	<3	<10	--	<4	<10
WO Bg 15	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	8900	--
	--	--	--	--	--	--	--	--	8900	--
WO Bg 45	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	40	--
WO Bg 46	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	20000	--
WO Bg 47	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	8100	--
	--	--	--	--	--	--	--	--	7500	--
WO Bg 48	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	5200	--
	--	--	--	--	--	--	--	--	4500	--
WO Bg 49	--	--	--	--	--	--	--	--	1300	--
	--	--	--	--	--	--	--	--	1300	--
WO Bh 28	--	--	--	--	--	--	--	--	6200	--
	--	--	--	--	--	--	--	--	3500	--
WO Bh 29	--	--	--	--	--	--	--	--	4700	--
WO Bh 31	56	--	170	--	--	--	--	0.007	6900	--
WO Bh 34	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	16000	--
	--	--	--	--	--	--	--	--	13000	--
WO Bh 81	--	--	--	--	--	--	--	--	4600	--
WO Bh 84	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	5900	--
WO Bh 85	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	4600	--
WO Bh 89	100	--	370	--	--	--	--	0.019	7000	--
WO Bh 90	--	--	--	--	--	--	--	--	60	--
WO Bh 91	--	--	--	--	--	--	--	--	7600	--
WO Bh 92	--	--	--	--	--	--	--	--	1500	--
WO Bh 93	--	--	--	--	--	--	--	--	13000	--
WO Bh 94	--	--	--	--	--	--	--	--	6300	--
WO Bh 95	--	--	--	--	--	--	--	--	17000	--
WO Bh 96	--	--	--	--	--	--	--	--	7100	--
WO Cg 32	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	1900	--
WO Cg 75	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	490	--
WO Dg 21	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	330	--

WORCESTER COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	LITHIUM, DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY, DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)
WO Ae 23	--	--	--	--	--	--	--	--	--	--
	--	110	--	--	--	--	--	--	--	--
WO Ae 24	--	--	--	--	--	--	--	--	--	--
	--	89	--	--	--	--	--	--	--	--
WO Ae 25	--	--	--	--	--	--	--	--	--	--
	--	140	--	--	--	--	--	--	--	--
WO Ah 34	--	130	--	--	--	--	--	--	--	--
WO Ah 36	--	130	--	--	--	--	--	--	--	--
WO Ah 37	--	77	--	--	--	--	--	--	--	--
WO Ah 38	--	120	--	--	--	--	--	--	--	--
WO Ah 39	--	100	--	--	--	--	--	--	--	--
WO Ah 42	--	240	--	--	--	--	--	--	--	--
WO Bf 86	<4	61	<0.1	<10	<10	3	<1.0	140	<6	4
WO Bf 87	<4	7	<0.1	<10	<10	2	<1.0	220	<6	5
WO Bg 15	--	--	--	--	--	--	--	--	--	--
	--	120	--	--	--	--	--	--	--	--
	--	120	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
WO Bg 45	--	2	--	--	--	--	--	--	--	--
WO Bg 46	--	--	--	--	--	--	--	--	--	--
	--	290	--	--	--	--	--	--	--	--
WO Bg 47	--	--	--	--	--	--	--	--	--	--
	--	96	--	--	--	--	--	--	--	--
	--	89	--	--	--	--	--	--	--	--
WO Bg 48	--	--	--	--	--	--	--	--	--	--
	--	98	--	--	--	--	--	--	--	--
	--	96	--	--	--	--	--	--	--	--
WO Bg 49	--	30	--	--	--	--	--	--	--	--
	--	27	--	--	--	--	--	--	--	--
WO Bh 28	--	130	--	--	--	--	--	--	--	--
	--	180	--	--	--	--	--	--	--	--
WO Bh 29	--	100	--	--	--	--	--	--	--	--
WO Bh 31	7	140	--	<1	--	--	--	200	--	24
WO Bh 34	--	--	--	--	--	--	--	--	--	--
	--	120	--	--	--	--	--	--	--	--
	--	110	--	--	--	--	--	--	--	--
WO Bh 81	--	91	--	--	--	--	--	--	--	--
WO Bh 84	--	--	--	--	--	--	--	--	--	--
	--	78	--	--	--	--	--	--	--	--
WO Bh 85	--	--	--	--	--	--	--	--	--	--
	--	88	--	--	--	--	--	--	--	--
WO Bh 89	20	130	--	1	--	--	--	440	--	730
WO Bh 90	--	20	--	--	--	--	--	--	--	--
WO Bh 91	--	75	--	--	--	--	--	--	--	--
WO Bh 92	--	33	--	--	--	--	--	--	--	--
WO Bh 93	--	130	--	--	--	--	--	--	--	--
WO Bh 94	--	67	--	--	--	--	--	--	--	--
WO Bh 95	--	280	--	--	--	--	--	--	--	--
WO Bh 96	--	78	--	--	--	--	--	--	--	--
WO Cg 32	--	--	--	--	--	--	--	--	--	--
	--	88	--	--	--	--	--	--	--	--
WO Cg 75	--	--	--	--	--	--	--	--	--	--
	--	85	--	--	--	--	--	--	--	--
WO Dg 21	--	--	--	--	--	--	--	--	--	--
	--	45	--	--	--	--	--	--	--	--

LOCAL IDENTIFIER	GROSS ALPHA, DISSOLVED (UG/L AS U-NAT)	GROSS BETA, DISSOLVED (PCI/L AS CS-137)	RADON 222 TOTAL (PC/L)	GROSS BETA, DISSOLVED (PCI/L AS SR/YT-90)	CARBON, ORGANIC DISSOLVED (MG/L AS C)
WO Bf 86	<0.4	1.9	240	1.6	0.9
WO Bf 87	<0.4	2.9	400	2.2	1.2

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October 1, 1978

FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI).

Multiply inch-pound units	By	To obtain SI units
	Length	
inches (in)	2.54×10^{1}	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^{0}	kilometers (km)
	Area	
acres	4.047×10^{3}	square meters (m^2)
	4.047×10^{-1}	square hectometers (hm^2)
	4.047×10^{-3}	square kilometers (km^2)
square miles (mi^2)	2.590×10^{0}	square kilometers (km^2)
	Volume	
gallons (gal)	3.785×10^{0}	liters (L)
	3.785×10^{0}	cubic decimeters (dm^3)
	3.785×10^{-3}	cubic meters (m^3)
million gallons	3.785×10^{3}	cubic meters (m^3)
	3.785×10^{-3}	cubic hectometers (hm^3)
cubic feet (ft^3)	2.832×10^{1}	cubic decimeters (dm^3)
	2.832×10^{-2}	cubic meters (m^3)
cfs-days	2.447×10^{3}	cubic meters (m^3)
	2.447×10^{-3}	cubic hectometers (hm^3)
acre-feet (acre-ft)	1.233×10^{3}	cubic meters (m^3)
	1.233×10^{-3}	cubic hectometers (hm^3)
	1.233×10^{-6}	cubic kilometers (km^3)
	Flow	
cubic feet per second (ft^3/s)	2.832×10^{1}	liters per second (L/s)
	2.832×10^{1}	cubic decimeters per second (dm^3/s)
	2.832×10^{-2}	cubic meters per second (m^3/s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm^3/s)
	6.309×10^{-5}	cubic meters per second (m^3/s)
million gallons per day	4.381×10^{1}	cubic decimeters per second (dm^3/s)
	4.381×10^{-2}	cubic meters per second (m^3/s)
	Mass	
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

This publication was printed at the UNICOR Print Plant,
Federal Correctional Institution, Ray Brook, NY

POSTAGE AND FEES PAID
U.S. DEPARTMENT OF THE INTERIOR
INT 413

U.S. DEPARTMENT OF THE INTERIOR
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