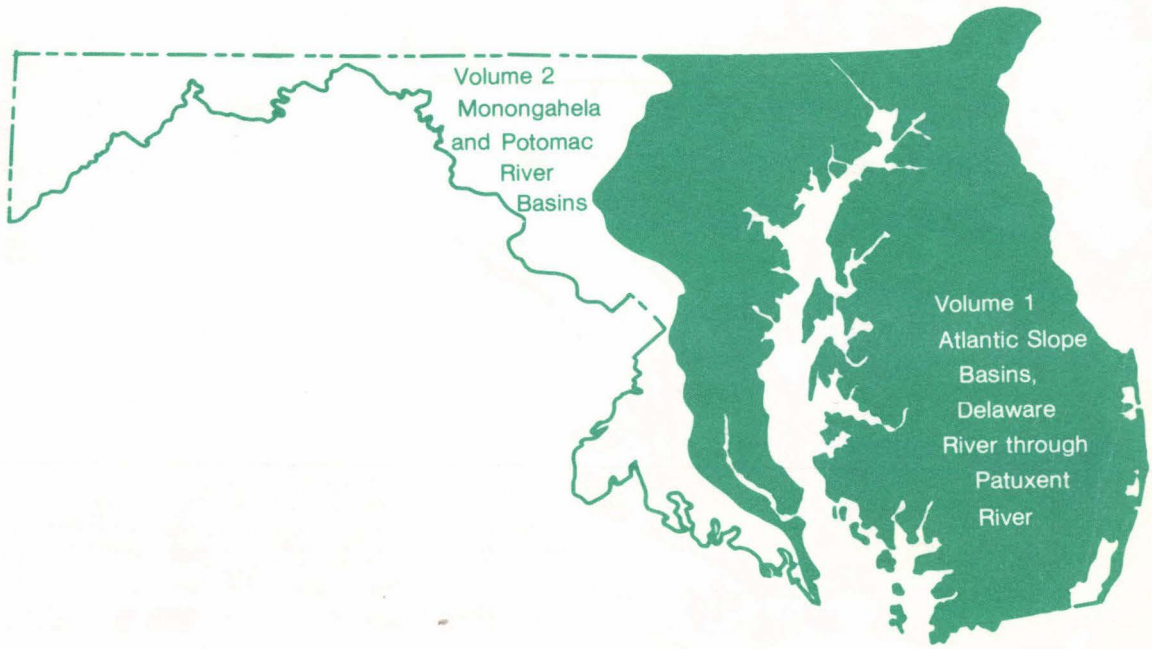
Water Resources Data Maryland and Delaware Water Year 1990

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



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT MD-DE-90-1
Prepared in cooperation with the States of Maryland and Delaware
and with other agencies

CALENDAR FOR WATER YEAR 1990

1989

OCTOBER

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1990

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AUGUST

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SEPTEMBER

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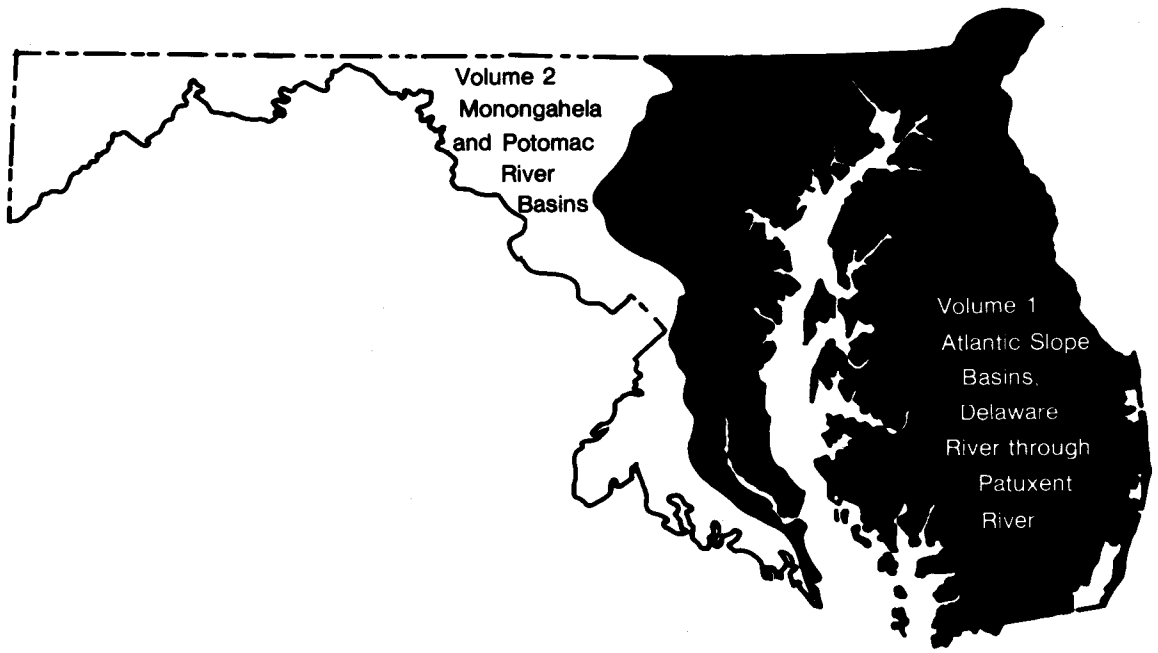
Water Resources Data Maryland and Delaware Water Year 1990

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

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



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT MD-DE-90-1
Prepared in cooperation with the States of Maryland and Delaware and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

MANUEL LUJAN, JR., Secretary

U.S. 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

1990

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	P. E. Exter	R. H. Pentz
J. D. Blomquist	J. L. Griffith	A. J. Tallman
D. A. Bringman	J. F. Hornlein	J. L. Tegeler
D. P. Brower	L. B. Maclin	M. E. Wieczorek
F. A. Danner	J. J. Manning	
M. R. Danner	M. S. Martin	

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-91/251	2.	3. Recipient's Accession No.
4. Title and Subtitle: Water Resources Data - Maryland and Delaware, Water Year 1990 Volume 1. Atlantic Slope Basins, Delaware River through Patuxent River			5. Report Date: MARCH 1991 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-90-1
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, 1989 to Sept. 30, 1990 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 1990 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 48 gaging stations; water quality at 9 gaging stations and 241 wells; and water levels at 224 observation wells. Also included are data for 1 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	21. No. of Pages: 523
	20. Security Class (This Page): UNCLASSIFIED	22. Price

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[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]

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GROUND-WATER LEVELS

GROUND-WATER LEVELS-Continued Page

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GROUND-WATER LEVELS-Continued Page

MARYLAND-Continued:

GROUND-WATER LEVELS-Continued Page

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QUALITY OF GROUND WATER--Continued Page

MARYLAND:

QUALITY OF GROUND WATER--Continued Page

MARYLAND:

[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

BACK RIVER BASIN
Herring Run (head of Back River):
West Branch Herring Run at Idlewylde, MD (d) 01585200
Stemmers Run (head of Northeast Creek) at Rossville, MD (d) 01585300
Brien Run at Stemmers Run, MD (d) 01585400
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,c) 01587500
Piney Run near Sykesville, MD (d) 01588000
Patapsco River at Woodstock, MD (d) 01588500
West Branch Herbert Run:
East Branch Herbert Run at Arbutus, MD (d) 01589100
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) 01590000
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 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
Wesrtern Branch at Upper Marlboro, MD (d,c) 01594526
Cocktown Creek near Huntingtown, MD (d) 01594600
St. Leonard Creek near St. Leonard, MD (d) 01594800

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WATER RESOURCES DATA - MARYLAND AND DELAWARE, 1990

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 48 gaging stations; water quality at 9 gaging stations and 241 wells; and water levels at 224 observation wells. Also included are data for 1 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-90-1." 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, Water Resources Agency for New Castle County.

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

Organizations that provided data are acknowledged in station descriptions.

SUMMARY OF HYDROLOGIC CONDITIONS

Streamflow at the start of the 1990 water year was in the excessive (upper 25 percent of the record) range throughout the bi-State area following above-normal rainfall (2 to 6 inches) during September 1989. During October 1989, flows remained in the excessive range following continuing above-normal rainfall (2 to 6 inches). During November 1989, flows in western Maryland and on the Eastern Shore of Maryland remained in the excessive range, whereas flows in central and southern Maryland decreased to the normal range following below-normal rainfall (1 to 2 inches). Because of continuing below-normal rainfall (1.5 to 2.5 inches) throughout the bi-State area during December 1989, flows in western Maryland and the Eastern Shore of Maryland decreased to the normal range whereas flows in central and southern Maryland decreased to the deficient range (lower 25 percent of the record). During January 1990, flows in central and southern Maryland remained in the normal range. Flows in the remainder of the bi-State area moved from the deficient into the normal range following above-normal rainfall (1.5 to 2 inches). Flow conditions changed little during February, but in March, flows throughout the bi-State area decreased to the deficient range following below-normal rainfall (1 to 3 inches). Above-normal rainfall averaging 1.5 inches increased flows into the normal range during April. Flows remained in the normal range for May through September.

During the 1990 water year, flows at the four index stations used (Potomac River near Washington, D.C. and Seneca Creek at Dawsonville in central Maryland, North Branch Potomac River at Paw Paw, W. Va., in western Maryland, and Choptank River at Greensboro on the Eastern Shore of Maryland) were in the normal range. A new record minimum monthly mean was set at the North Branch Potomac River at Paw Paw index site. The new monthly record is about 30 percent less than that set in 1988. At the Choptank River at Greensboro index site, a record maximum daily discharge was recorded.

Monthly and annual mean discharges in water year 1990 are compared to 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 (square mile) 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 76,300 ft^3/s (cubic feet per second), on the basis of flows of the James, Potomac, and Susquehanna Rivers. This equals the long-term average during the reference period 1951-90. Flows for the first 5 months averaged 94 percent above normal. For the remaining 7 months, flows averaged in the normal range. No new record monthly means were set during the water year.

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 92 percent of capacity in September 1989, to 95 percent of capacity at the end of September 1990.

Ground-Water Levels

Ground-water levels in water-table and artesian observation wells, in Maryland and Delaware fluctuate with response to precipitation and ground-water withdrawal. Water-table levels in Maryland and Delaware were above normal at the start of the 1990 water year and remained above normal the entire water year. The elevated water levels resulted from above-average precipitation during the water year. No record maximum or minimum ground-water levels occurred during the water year. In the bi-State areas where artesian aquifers are the main source of municipal water supply, the water levels continued to decline in most of the area. Water-level conditions are summarized below for each of the physiographic provinces in the bi-state area:

Appalachian Plateau.-- Water-table levels were above normal at the beginning of the 1990 water year and declined slightly during March and June. During the remainder of the water year, water-levels recovered and were higher at the end of the water year than at the beginning of the water year.

Valley and Ridge.-- Water-table levels were above normal at the beginning of the water year, reached the maximum level in February, and then declined gradually during the remainder of the water year. Water-table levels at the end of the water year were slightly below those at the beginning of the water year, but levels remained above normal.

Blue Ridge.-- Water-table levels were above normal at the beginning of the water year and remained above normal throughout the water year.

Piedmont.-- Water-table levels were above normal at the beginning of the water year and remained above normal throughout the water year.

Coastal Plain.-- Water-table levels were above normal at the beginning of the water year and remained above normal throughout the water year except in southern Charles and Somerset Counties, Maryland, where levels declined during the last quarter of the water year. Water-table levels did not fluctuate substantially because of persistent saturated conditions. At the following locations in Maryland, artesian aquifers (identified in parentheses), experienced record low water levels, because of increased ground-water withdrawals: Elkton (Potomac), Leonardtown (Aquia), Lexington Park (Aquia), northern Ocean City (Manokin), Prince Frederick (Aquia), and Solomons Island (Aquia).

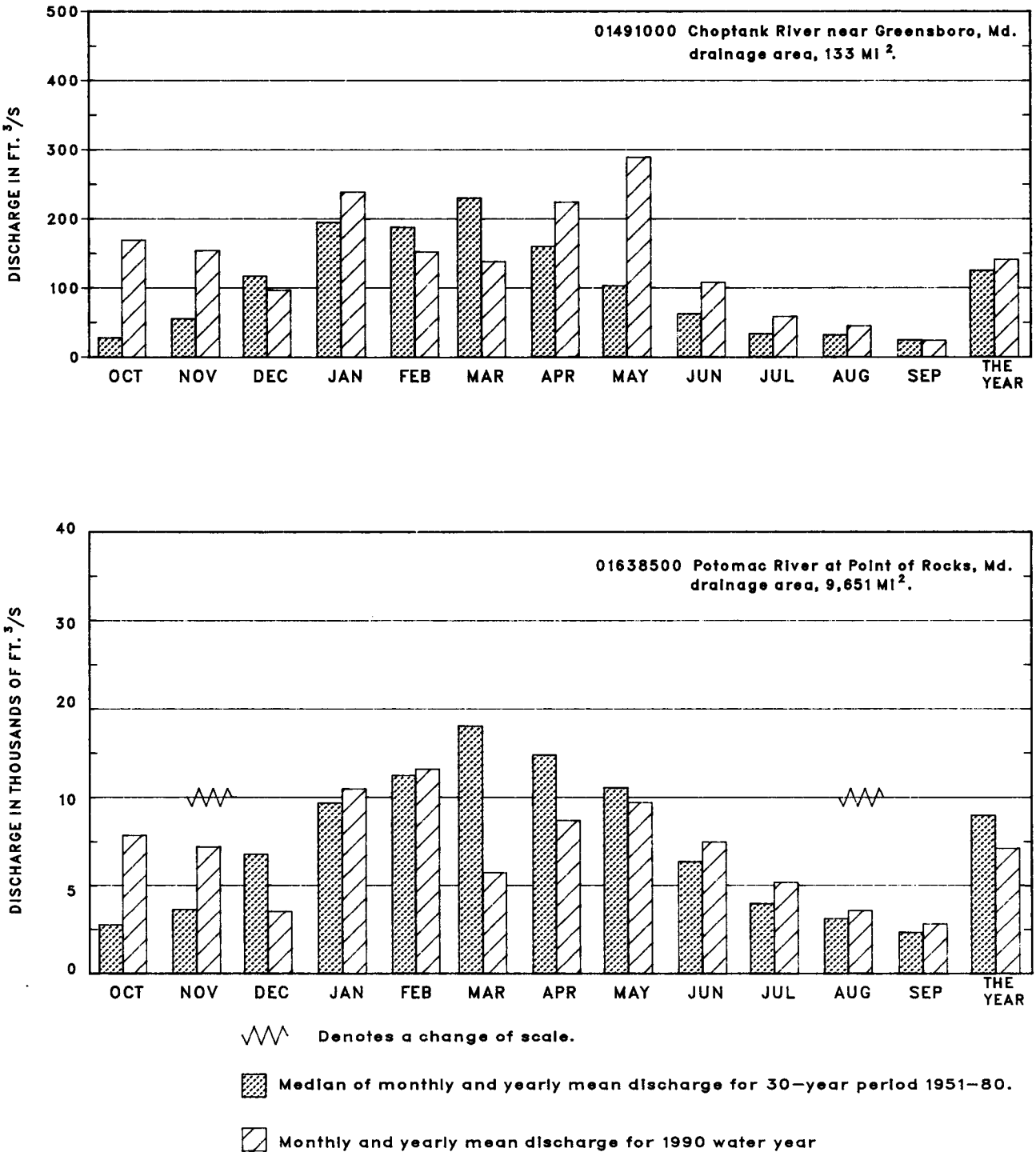

FIGURE 1. COMPARISON OF DISCHARGE AT TWO LONG-TERM REPRESENTATIVE GAGING STATIONS DURING THE 1990 WATER YEAR WITH MEDIAN DISCHARGE FOR INDICATED PERIOD.

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 1990 water year that began October 1, 1989, and ended September 30, 1990. 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.)

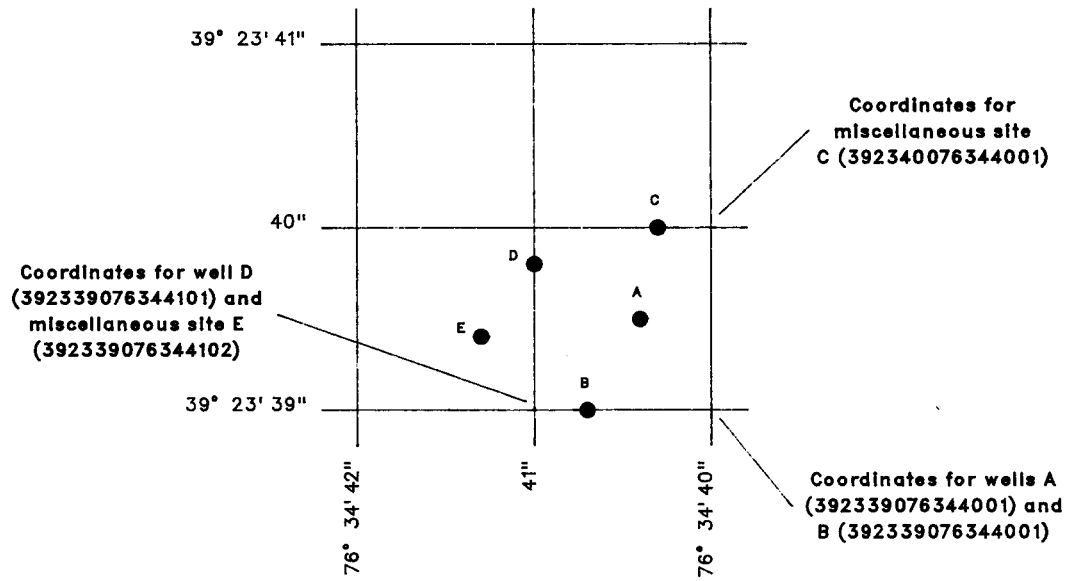

Figure 2. System for numbering wells and miscellaneous sites (latitude and longitude)

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 or spring number (Local Identifier). The prime identification number for wells or springs sampled is the 15-digit (site ID) number derived from the latitude-longitude locations. The site ID includes a two digit sequence number for use at locations having multiple sites. 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 (1×10^{-12}) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7×10^{10} radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

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

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

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

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

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

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

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. **Fluorometric 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-A19. **Levels of streamflow gaging stations**, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A19. 1990. 27 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-B2. **Introduction to ground-water hydraulics, a programmed text for self-instruction**, by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.

3-B3. **Type curves for selected problems of flow to wells in confined aquifers**, by J. E. Reed: USGS--TWRI Book 3, Chapter B3. 1980. 106 pages.

3-B4. **Regression modeling of ground-water flow**, by Richard L. Cooley and Richard L. Naff: USGS--TWRI Book 3, Chapter B4. 1990. 232 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.

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

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

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

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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.

5-A4. **Methods for collection and analysis of aquatic biological and microbiological samples**, by L. J. Britton and P. E. Greeson, editors: USGS--TWRI Book 5, Chapter A4. 1989. 363 pages.

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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.

8-A2. **Installation and service manual for U. S. Geological Survey manometers**, by J. D. Craig: USGS--TWRI Book 8, Chapter A2. 1983. 57 pages.

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

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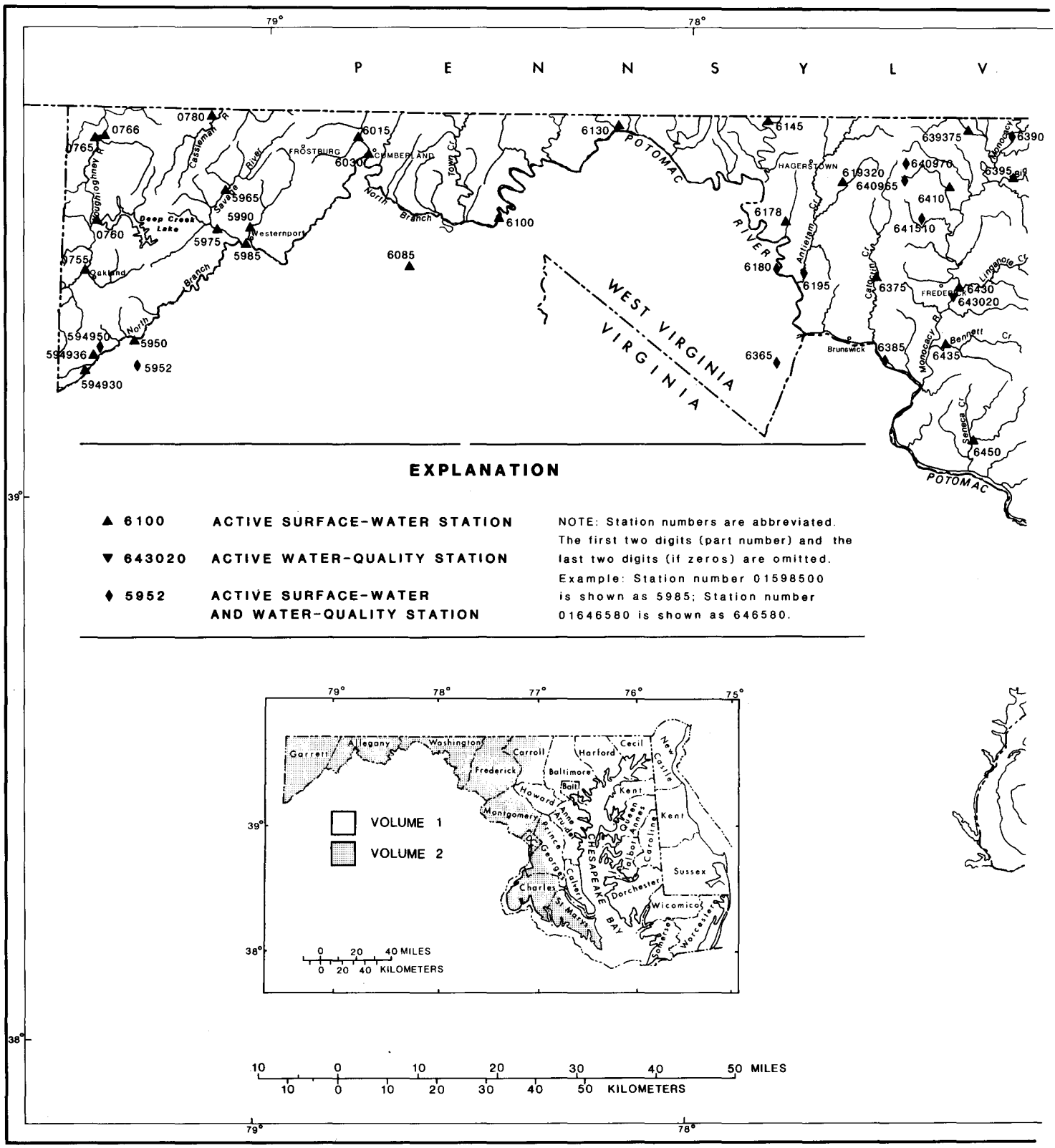
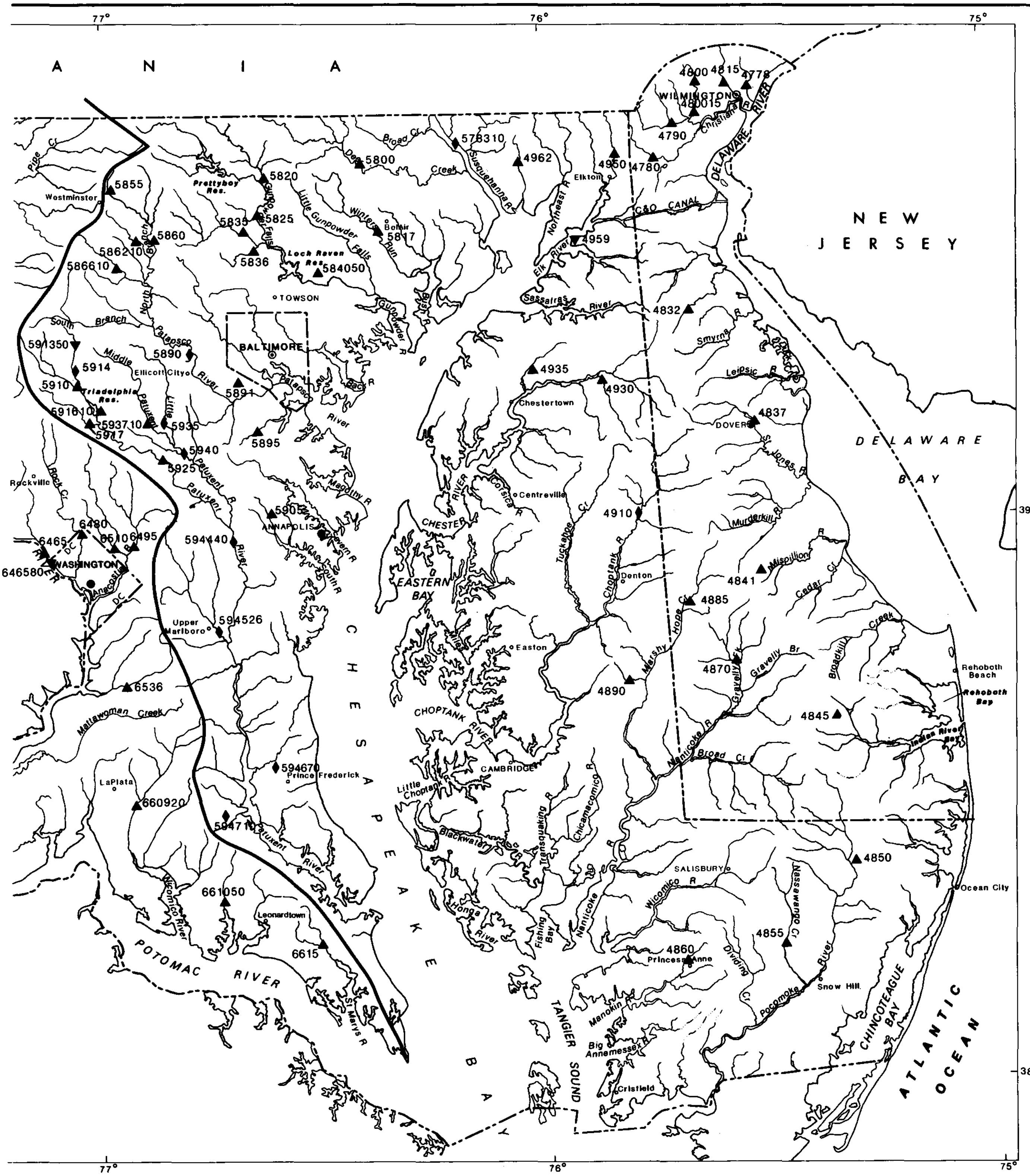
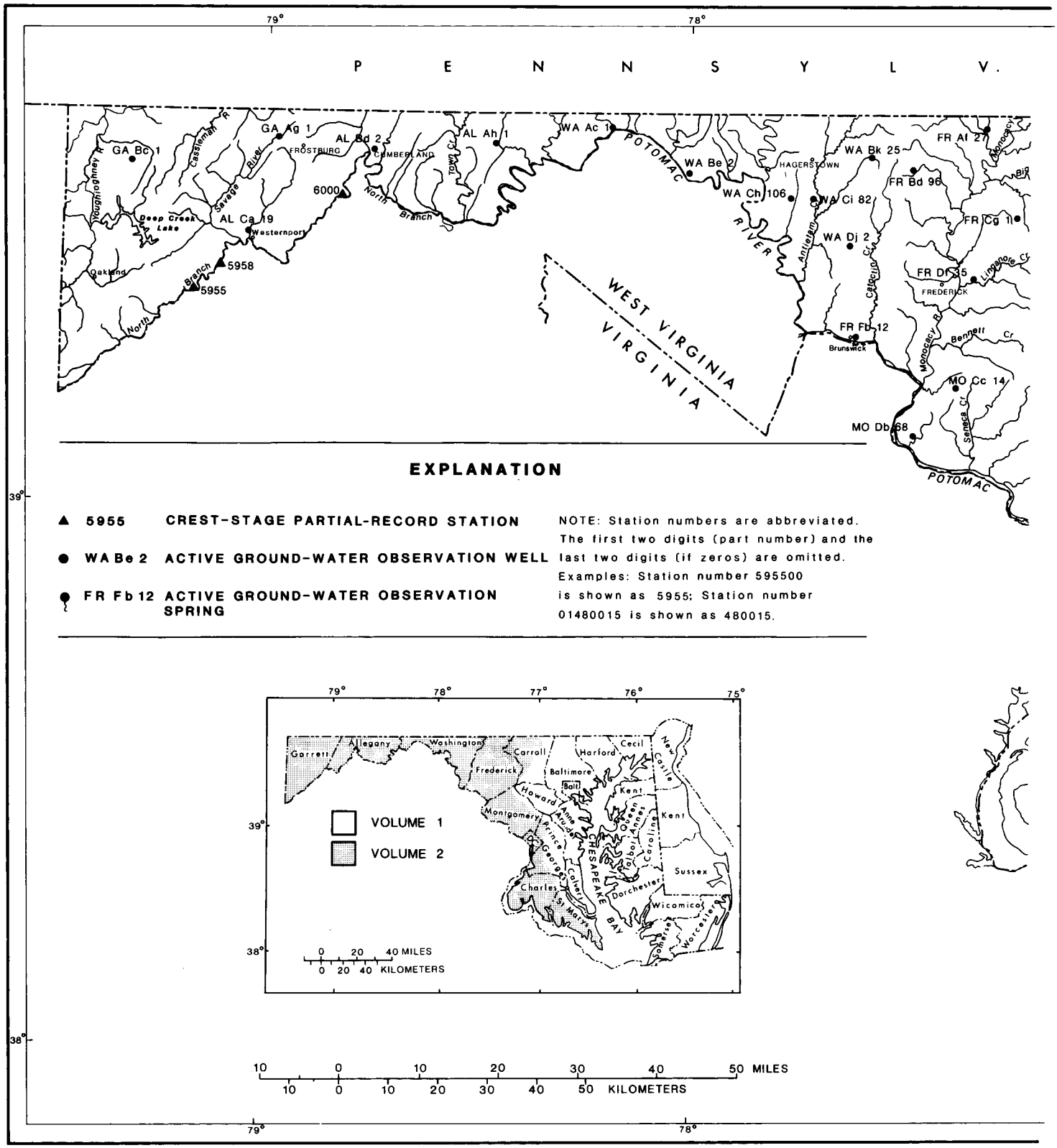


Base map modified from U.S. Geological Survey 1:500,000

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

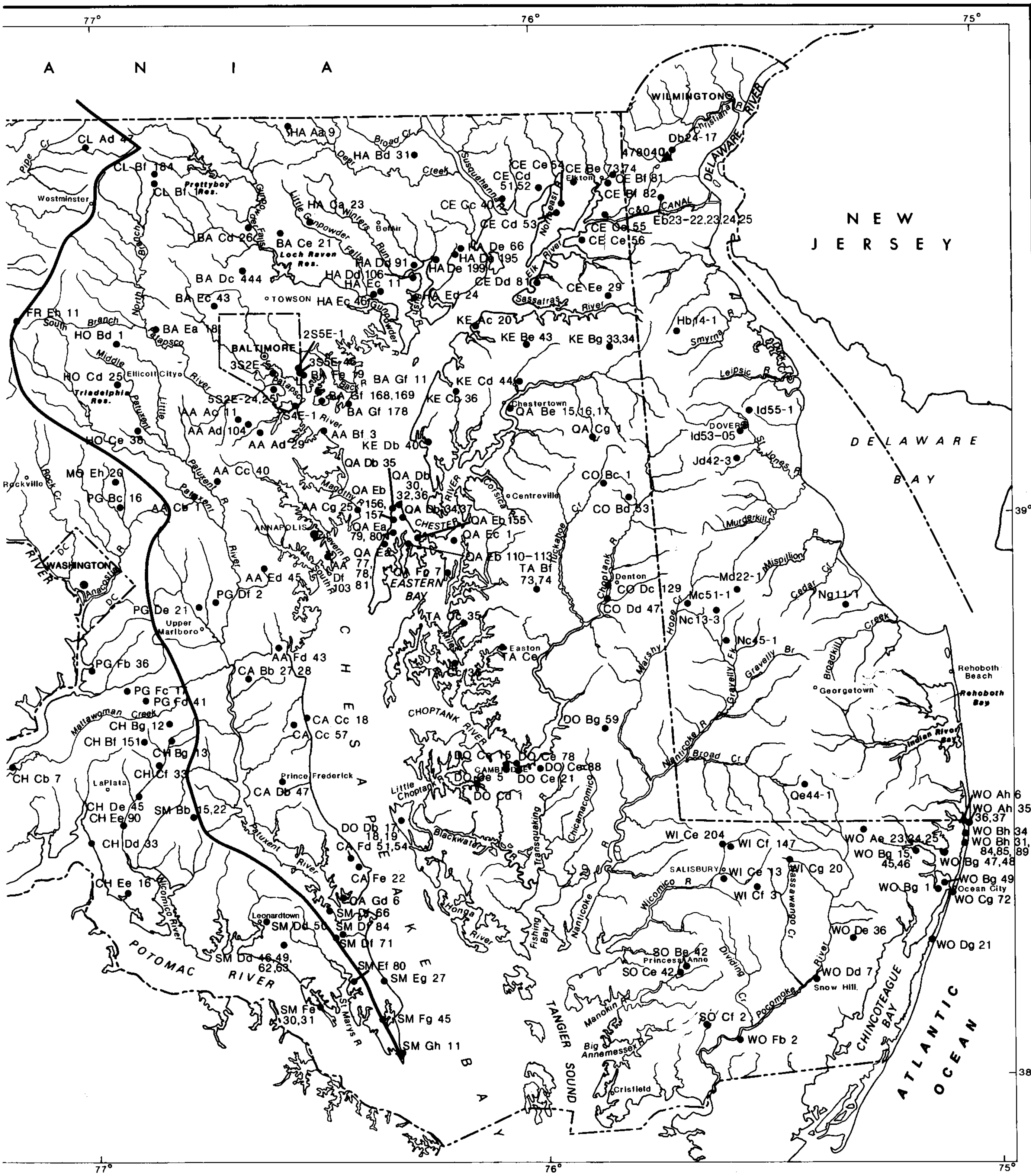


77°
76°
75°
39°
38°
NEW JERSEY
DELAWARE BAY
ATLANTIC OCEAN
CHESAPEAKE BAY
TANGIER SOUND
POTOMAC RIVER
CHINCOTEAGUE BAY
EASTERN BAY
CHOPTANK RIVER
CHESTER RIVER
DELAWARE RIVER
C&O CANAL
WILMINGTON
BALTIMORE
WASHINGTON
ANNAPOLIS
TOWSON
DOVER
SALISBURY
CAMBRIDGE
Chestertown
Centreville
Denton
Easton
Elkton
Westminster
Rockville
Upper Marlboro
Prince Frederick
LaPlata
Leonardtown
Princess Anne
Snow Hill
Ocean City
Rehoboth Beach
Rehoboth Bay
Crisfield
Ellicott City
Bel Air
Triadelphia Res.
Prettyboy Res.
Loch Raven Res.

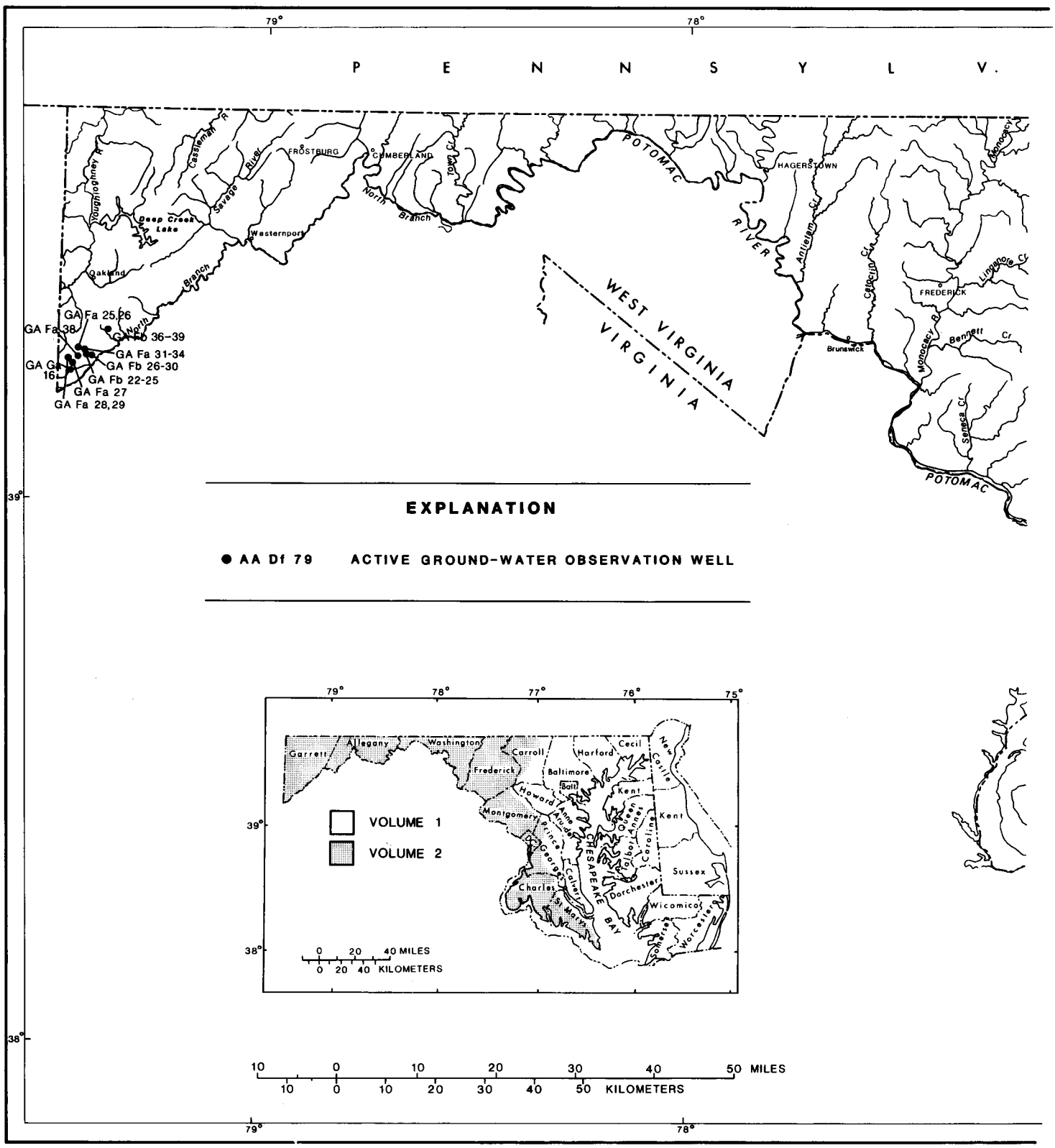


Base map modified from U.S. Geological Survey 1:500,000

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

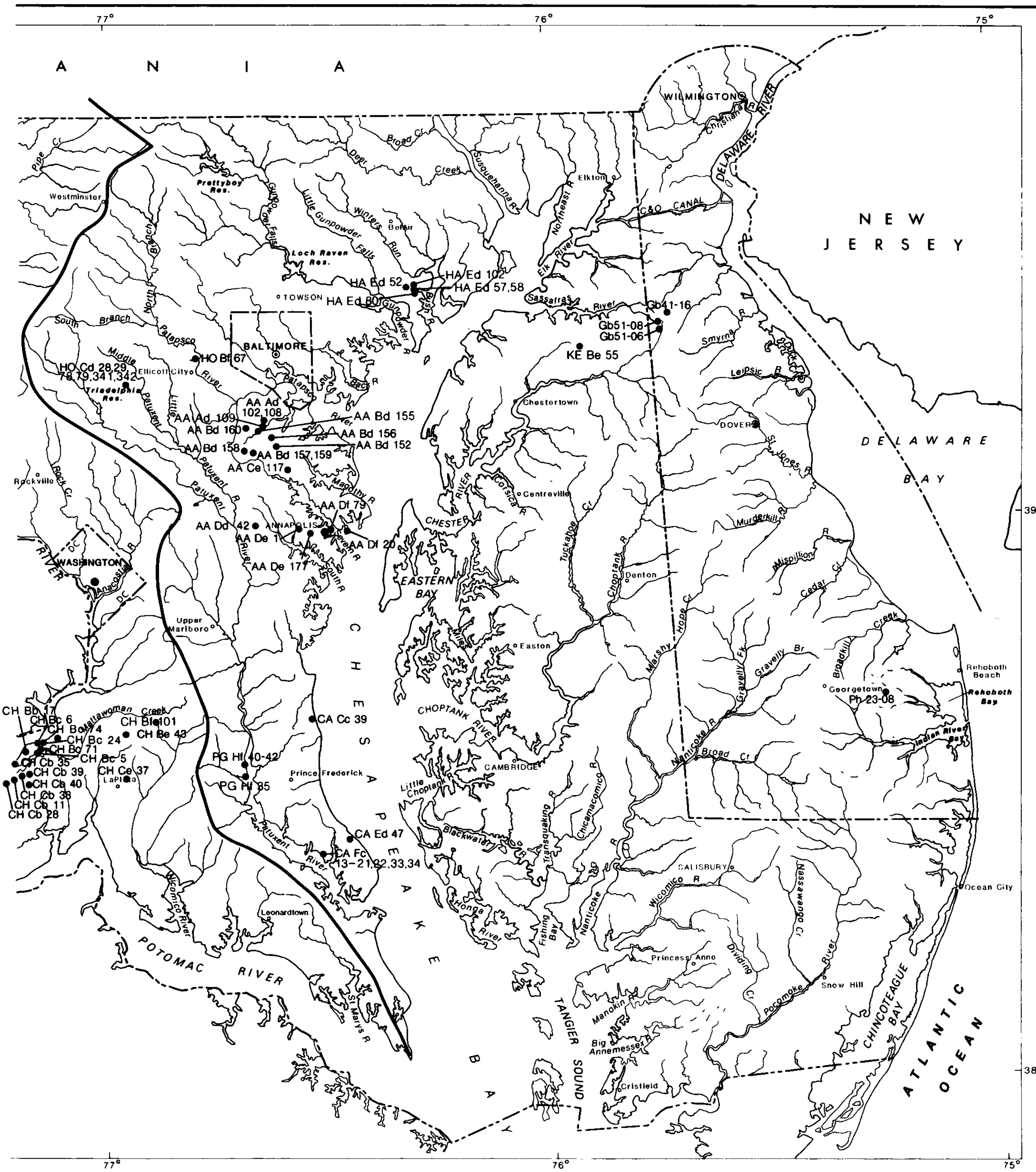


77°
76°
75°
A N I A
N E W
J E R S E Y
WILMINGTON
DELAWARE RIVER
D E L A W A R E
B A Y
C H E S A P E A K E
B A Y
ATLANTIC OCEAN
CHINCOTEAGUE BAY
TANGIER SOUND
POTOMAC RIVER
CHOPTANK RIVER
EASTERN BAY
BALTIMORE
WASHINGTON
ANNAPOLIS
TOWSON
DOVER
Chestertown
Centreville
Denton
Easton
Georgetown
Rehoboth Beach
Rehoboth Bay
SALISBURY
Princess Anne
Snow Hill
Ocean City
Crisfield
Leonardtown
Prince Frederick
Upper Marlboro
Ellicott City
Westminster
Rockville
La Plata
Elkton
Bel Air
Loch Raven Res.
Prettyboy Res.
Triadelphia Res.
C&D CANAL
39°
38°
CL Ad 47
CL Bf 184
CL Bf 1
HA Aa 9
HA Bd 31
HA Ca 23
HA De 66
HA De 195
HA De 199
HA Dd 91
HA Dd 106
HA Ec 11
HA Ec 46
HA Ed 24
CE Ce 54
CE Cd 51,52
CE Gc 40
CE Cd 53
CE Be 73,74
CE Bf 81
CE Bf 82
CE Ce 55
CE Ce 56
CE Dd 81
CE Ee 29
Db24-17
478040
Eb23-22,23,24,25
BA Cd 26
BA Ce 21
BA Dc 444
BA Ec 43
BA Ea 18
BA Fe 79
BA Gf 11
BA Gf 168,169
BA Gf 178
2S5E-1
3S5E-46
3S2E-5
5S2E-24,25
S4E-1
FR Eb 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 11
PG Fd 41
AA Ac 11
AA Ad 104
AA Ad 29
AA Bf 3
AA Cc 40
AA Cb 1
AA Cg 25
AA Ed 45
AA Df 77, 78, 103
AA Fd 43
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 Db 30, 32,36
QA Eb 156, 157
QA Ea 79, 80
QA Ea 81
QA Eb 155
QA Ec 1
QA Eb 110-113
QA Fd 7
TA Bf 73,74
TA Cc 35
TA Ce
CO Bc 1
CO Bd 63
CO Dc 129
CO Dd 47
Hb14-1
Id55-1
Id53-05
Jd42-3
Md22-1
Mc51-1
Nc13-3
Nc45-1
Ng11-1
Qe44-1
CA Bb 27,28
CA Cc 18
CA Cc 57
CA Db 47
CA Fd 51,54
CA Fe 22
CH Bg 12
CH Bf 151
CH Bg 13
CH Cf 33
CH Cb 7
CH De 45
CH Ee 90
CH Dd 33
CH Ee 16
SM Bb 15,22
SM Dd 50
SM Dd 46,49, 62,63
SM Df 66
SM Df 84
SM Df 71
SM Ef 80
SM Eg 27
SM Fe 30,31
SM Fg 45
SM Gh 11
DO Bg 59
DO Ce 15
DO Ce 78
DO Ce 88
DO Ce 21
DO Cd 1
DO Db 17, 18,19
WI Ce 204
WI Cf 147
WI Ce 13
WI Cg 20
WI Cf 3
SO Be 42
SO Ce 42
SO Cf 2
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



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

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


77°
76°
75°
A N I A
NEW JERSEY
DELAWARE BAY
CHESAPEAKE BAY
ATLANTIC OCEAN
WILMINGTON
DELAWARE RIVER
Christiana R
Elkton
C&O CANAL
Northeast R
Susquehanna R
Broad Cr
Deer Creek
Winters Run
Bel Air
Little Gunpowder Falls
Gunpowder Falls
Loch Raven Res.
Prettyboy Res.
Westminster
Pipe Cr
North Branch
South Branch
Patapsco
Middle
TOWSON
BALTIMORE
Back R
HA Ed 52
HA Ed 102
HA Ed 57,58
HA Ed 80
Elk River
Sassafras River
Gb41-16
Gb51-08
Gb51-06
KE Be 55
Smyrna
Leipsic R
Duck Cr
Chestertown
DOVER
St Jones R
HO Bf 67
HO Cd 28,29, 78,79,341,342
Ellicott City
Triadelphia Res.
AA Ad 102,108
AA Ad 109
AA Bd 160
AA Bd 158
AA Bd 155
AA Bd 156
AA Bd 152
AA Bd 157,159
AA Ce 117
Magothy R
AA Df 79
AA Df 20
AA Dd 42
AA De 1
AA De 177
ANNAPOLIS
Severn R
South R
Rockville
Rock Cr
Patuxent R
WASHINGTON
DC
Anacostia
Upper Marlboro
CHESTER RIVER
Corsica R
Centreville
Tuckahoe Cr
Choptank R
Murderkill R
Mispillion R
Cedar Cr
EASTERN BAY
Denton
Easton
Marshy Hope Cr
Gravelly Fk
Gravelly Br
Broadkill
Rehoboth Beach
Rehoboth Bay
Georgetown
Ph 23-08
Indian River Bay
CHOPTANK RIVER
CAMBRIDGE
Nanticoke R
Broad Cr
Mattawoman Creek
CH Bb 17
CH Bc 6
CH Bc 4
CH Bc 24
CH Bc 71
CH Bc 5
CH Bf 101
CH Be 43
CH Cb 35
CH Cb 39
CH Cb 40
CH Cb 38
CH Cb 11
CH Cb 28
CH Ce 37
La Plata
CA Cc 39
PG Hf 40-42
PG Hf 85
Prince Frederick
Little Choptank
Blackwater R
Transquaking R
Chicamacomico R
CA Ed 47
CA Fc 13-21,22,33,34
SALISBURY
Wicomico R
Nassawango Cr
Ocean City
Leonardtown
Wicomico River
POTOMAC RIVER
St Marys R
Honga River
Fishing Bay
Nanticoke
Princess Anne
Dividing Cr
Pocomoke River
Snow Hill
CHINCOTEAGUE BAY
Manokin R
Big Annemessex R
TANGIER SOUND
Crisfield
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 estimated daily discharges (ice effect) and those between 100 and 4,000 ft^3/s, which are fair. 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.--44 years (water years 1947-90), 9.77 ft^3/s, 17.79 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 1,000 ft^3/s (revised) and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 13	2000	1,230	4.74	Aug. 6	2140	*2,140	*6.20
May 29	1520	1,610	5.39				

Minimum discharge, 0.63 ft^3/s, July 31; minimum daily discharge, 0.77 ft^3/s, Aug. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	4.0	2.3	75	5.9	3.0	6.6	3.4	3.8	1.6	1.4	1.3
2	105	2.4	2.4	6.4	6.1	2.9	9.8	2.5	3.4	1.4	.86	1.2
3	9.3	4.9	2.2	4.4	6.9	3.1	82	2.3	6.4	1.4	.77	1.2
4	3.3	2.8	2.0	3.7	16	2.7	13	7.8	6.7	1.3	.87	1.1
5	2.3	2.2	1.9	5.0	8.6	2.5	8.5	51	3.4	14	18	1.1
6	2.5	1.8	1.9	4.1	6.9	2.5	7.0	4.5	2.9	3.2	218	1.1
7	3.6	1.8	1.8	3.1	6.9	2.4	30	3.0	4.2	1.4	23	1.2
8	1.8	9.9	1.8	17	7.0	2.3	8.3	2.6	13	1.2	2.6	1.1
9	1.6	32	1.9	37	8.8	2.3	5.8	2.4	10	7.2	5.2	.99
10	1.6	2.5	1.9	18	38	3.4	5.6	175	3.5	3.4	16	1.1
11	2.5	1.5	1.9	7.8	8.3	2.4	12	19	2.4	1.9	6.6	1.2
12	1.5	1.7	2.2	5.6	6.1	2.5	5.3	5.6	2.2	4.8	2.3	1.0
13	1.5	1.7	2.8	4.0	5.6	2.4	4.1	105	2.1	20	1.7	1.0
14	1.5	1.8	2.4	3.6	5.1	2.4	3.9	15	3.0	5.3	3.1	5.6
15	1.7	4.5	e2.0	7.0	4.4	2.2	92	5.3	86	11	1.5	4.8
16	1.6	9.7	e2.0	5.1	5.2	2.7	7.8	4.1	4.6	2.7	1.4	1.8
17	28	3.6	e1.8	3.9	4.8	25	6.5	6.8	3.0	1.4	1.3	2.5
18	8.8	2.9	1.8	3.3	3.2	31	5.6	4.1	8.4	1.3	1.2	.94
19	79	3.0	1.5	2.7	3.6	5.3	4.1	2.5	11	1.2	1.2	1.7
20	150	3.2	1.6	14	2.7	16	3.9	2.2	7.5	1.4	1.2	3.4
21	7.2	2.8	1.3	8.9	2.3	6.0	6.0	4.7	3.9	1.4	1.3	1.0
22	3.1	3.5	1.0	4.4	6.6	4.3	4.3	2.7	9.5	1.3	22	104
23	2.3	6.1	e1.3	3.0	14	3.9	3.6	2.3	9.5	10	3.9	3.6
24	1.8	6.8	e2.2	2.6	4.8	4.6	3.4	2.3	3.8	1.4	1.8	1.6
25	1.8	4.1	e2.9	132	2.9	4.4	3.3	2.2	2.2	1.1	24	1.3
26	1.7	7.4	e1.8	105	2.5	3.6	3.4	46	2.0	.99	4.2	1.2
27	1.7	7.6	e1.6	9.9	3.1	3.1	3.1	6.3	1.8	.94	1.9	1.2
28	2.0	8.6	1.4	6.7	3.4	3.0	3.0	3.6	1.8	.95	1.6	1.1
29	2.6	3.5	1.2	38	---	2.8	12	361	1.7	1.1	15	1.1
30	2.7	2.8	1.2	40	---	16	5.6	36	1.6	.98	6.8	1.1
31	4.0	---	11	7.0	---	14	---	5.1	---	1.5	1.6	---
TOTAL	439.7	151.1	67.0	588.2	199.7	184.7	369.5	896.3	225.3	108.76	392.30	152.53
MEAN	14.2	5.04	2.16	19.0	7.13	5.96	12.3	28.9	7.51	3.51	12.7	5.08
MAX	150	32	11	132	38	31	92	361	86	20	218	104
MIN	1.5	1.5	1.0	2.6	2.3	2.2	3.0	2.2	1.6	.94	.77	.94
CFSM	1.90	.68	.29	2.54	.96	.80	1.65	3.88	1.01	.47	1.70	.68
IN.	2.19	.75	.33	2.93	1.00	.92	1.84	4.47	1.12	.54	1.96	.76

CAL YR 1989 TOTAL 5928.0 MEAN 16.2 MAX 1310 MIN 1.0 CFSM 2.18 IN. 29.56
WTR YR 1990 TOTAL 3775.09 MEAN 10.3 MAX 361 MIN .77 CFSM 1.39 IN. 18.82

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.--Records good except those for estimated daily discharges (ice effect), which are fair. 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.--47 years, 28.7 ft^3/s, 19.01 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)
Oct. 20	1445	1,130	10.54	May 29	1830	*1,620	*11.45
May 10	1700	1,240	10.72	June 15	0800	1,400	11.04

Minimum daily discharge, 6.9 ft^3/s, Sept. 12, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	17	16	250	28	18	25	17	28	12	10	11
2	310	15	16	35	26	18	34	14	24	12	8.2	9.5
3	47	19	16	23	33	18	203	12	41	11	7.9	8.7
4	21	16	15	22	72	17	46	18	52	11	7.6	8.2
5	17	15	15	24	33	16	36	142	23	150	16	8.1
6	16	15	15	21	26	16	28	25	21	45	111	8.2
7	17	15	15	19	24	16	98	17	21	15	52	8.0
8	14	27	15	61	23	16	36	14	24	13	13	7.5
9	13	87	15	134	22	18	25	12	29	21	35	7.1
10	13	27	15	52	113	19	23	486	42	21	93	7.4
11	15	18	15	27	41	19	37	127	18	20	29	7.1
12	13	17	16	22	28	19	23	31	16	31	14	6.9
13	9.2	15	18	18	24	18	19	128	15	152	11	7.0
14	8.2	15	16	16	23	17	18	85	14	74	11	18
15	8.0	17	15	23	22	16	166	27	502	36	9.4	9.4
16	7.7	25	15	21	23	16	36	22	43	22	9.1	10
17	52	19	13	18	23	65	27	42	27	16	8.9	12
18	20	16	13	18	20	99	24	28	28	14	8.8	6.9
19	166	15	13	17	21	27	20	18	98	14	8.8	9.2
20	380	16	13	31	20	27	19	17	33	13	8.9	12
21	57	15	13	32	19	22	26	20	32	18	9.5	7.3
22	25	15	12	23	25	18	22	17	56	13	35	80
23	20	20	11	18	64	17	18	16	70	21	16	18
24	18	17	e10	17	32	18	16	15	23	11	11	9.1
25	17	17	e10	263	25	18	16	14	18	9.7	23	7.8
26	16	22	e10	302	18	17	16	152	16	9.0	12	7.5
27	16	20	e10	49	18	15	14	39	15	9.0	8.7	7.6
28	16	24	e10	31	19	15	13	21	14	9.0	8.1	7.2
29	15	18	e11	60	---	14	21	639	14	9.0	66	7.0
30	15	17	13	161	---	31	25	153	13	9.0	131	7.0
31	18	---	21	35	---	42	---	39	---	15	15	---
TOTAL	1392.1	611	431	1843	865	722	1130	2407	1370	835.7	807.9	340.7
MEAN	44.9	20.4	13.9	59.5	30.9	23.3	37.7	77.6	45.7	27.0	26.1	11.4
MAX	380	87	21	302	113	99	203	639	502	152	131	80
MIN	7.7	15	10	16	18	14	13	12	13	9.0	7.6	6.9
CFSM	2.19	.99	.68	2.90	1.51	1.14	1.84	3.79	2.23	1.32	1.27	.55
IN.	2.53	1.11	.78	3.34	1.57	1.31	2.05	4.37	2.49	1.52	1.47	.62

CAL YR 1989 TOTAL 17142.0 MEAN 47.0 MAX 2000 MIN 7.7 CFSM 2.29 IN. 31.11
WTR YR 1990 TOTAL 12755.4 MEAN 34.9 MAX 639 MIN 6.9 CFSM 1.70 IN. 23.15

e Estimated

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.--50 years (water years 1932-36, 1944-57, 1960-90), 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)
May 29	1845	*3,270	*13.51	No other peak greater than base discharge.			

Minimum daily discharge, 44 ft^3/s, Aug. 4, Sept. 9, 11, 12, 13, 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90	126	96	e525	152	106	110	99	147	71	50	56
2	550	114	93	e170	142	104	126	88	132	69	46	53
3	209	124	94	e109	143	106	417	81	146	66	45	51
4	132	116	101	e109	176	100	179	93	184	64	44	49
5	113	111	91	121	139	96	150	350	121	344	66	47
6	109	110	91	111	126	96	130	126	112	118	284	49
7	111	109	91	102	122	92	209	102	113	77	187	48
8	98	129	88	153	117	91	149	91	108	71	80	46
9	93	231	e87	226	115	94	120	84	170	80	99	44
10	93	154	e86	223	274	106	114	731	127	87	301	46
11	105	122	e88	169	182	98	142	370	101	85	159	44
12	93	116	89	129	137	96	118	159	95	89	90	44
13	89	110	95	110	125	93	106	248	90	272	75	44
14	87	109	88	99	120	91	103	222	90	170	88	68
15	87	113	e90	112	115	89	342	131	732	115	70	57
16	85	144	e97	111	116	90	160	119	161	93	65	52
17	156	135	e91	109	112	147	131	149	122	78	63	53
18	156	109	e93	110	105	227	123	120	113	71	60	45
19	429	105	e89	105	108	118	111	102	169	67	59	49
20	762	105	e95	128	103	117	107	96	110	63	59	55
21	272	95	e90	165	99	109	115	106	109	62	63	45
22	169	94	e84	127	116	101	109	99	122	63	107	195
23	143	112	e79	110	175	96	100	91	128	75	112	93
24	133	105	e75	105	150	97	94	88	95	57	76	53
25	127	104	e73	409	119	101	91	83	87	55	70	48
26	122	118	e73	720	101	96	91	259	83	51	65	46
27	118	117	e72	220	105	90	87	147	81	52	61	46
28	117	122	e72	162	107	88	85	105	84	52	58	45
29	115	107	e80	183	---	88	108	1240	75	52	277	44
30	114	99	155	581	---	120	116	620	73	52	208	45
31	122	---	189	186	---	134	---	188	---	51	65	---
TOTAL	5199	3565	2875	5999	3701	3277	4143	6587	4080	2772	3152	1660
MEAN	168	119	92.7	194	132	106	138	212	136	89.4	102	55.3
MAX	762	231	189	720	274	227	417	1240	732	344	301	195
MIN	85	94	72	99	99	88	85	81	73	51	44	44
CFSM	1.88	1.33	1.04	2.17	1.48	1.19	1.55	2.38	1.53	1.00	1.14	.62
IN.	2.17	1.49	1.20	2.50	1.55	1.37	1.73	2.75	1.70	1.16	1.32	.69

CAL YR 1989 TOTAL 66304 MEAN 182 MAX 4500 MIN 54 CFSM 2.04 IN. 27.68
WTR YR 1990 TOTAL 47010 MEAN 129 MAX 1240 MIN 44 CFSM 1.45 IN. 19.63

e Estimated

01479197 MILL CREEK AT MILL CREEK ROAD AT HOCKESSIN, DE

LOCATION.--Lat 39°46'48", long 75°41'49", New Castle County, Hydrologic Unit 02040205, on right bank at downstream side of highway bridge on Mill Creek Road, at Hockessin, and 6.8 mi upstream from mouth.

DRAINAGE AREA.--3.66 mi^2.

PERIOD OF RECORD.--October 1989 to September 1990.

GAGE.--Water-stage recorder. Concrete control since February 12, 1990. Datum of gage is 224.56 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for Dec. 12-15, 19-27 (ice effect), which are fair, and those for Feb. 6-13, April 3-9, June 12-15, 17-19 (no gage-height record), which are poor. For the period Oct. 1 to Feb. 6, records are fair below 50 ft^3/s and poor above. Several measurements of water temperature were made during the year. Water-quality records for some periods have been collected at this location.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 413 ft^3/s, May 29, 1990, gage height, 5.80 ft; minimum daily discharge, 0.65 ft^3/s, Sept. 11, 1990.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 5, 1989 reached a stage of about 8 ft, from floodmarks; discharge, about 1,000 ft^3/s.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 20	1230	271	4.46	May 29	1445	*413	*5.80
May 10	1415	282	5.23	June 15	Unknown	320	a5.4
May 10	1900	201	4.81				

a Floodmark

Minimum daily discharge, 0.65 ft^3/s, Sept. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	2.5	2.0	31	2.7	2.2	2.2	1.9	2.6	1.3	.78	.92
2	41	2.1	2.0	3.1	2.5	2.4	4.8	1.6	2.3	1.2	.71	.89
3	3.9	3.1	1.9	2.4	2.8	2.3	e22	1.5	5.6	1.1	.70	.83
4	2.0	2.1	1.7	2.8	5.1	2.0	e9.0	2.7	3.6	1.1	.68	.77
5	1.7	1.9	2.0	3.1	2.5	1.9	e4.0	16	2.4	3.5	4.9	.79
6	1.8	2.0	2.2	2.5	e2.4	2.0	e2.7	2.3	2.0	1.4	19	.83
7	2.2	1.9	2.1	2.0	e2.3	1.8	e11	1.9	2.1	1.1	6.6	.81
8	1.7	5.1	1.8	4.2	e2.3	1.8	e3.7	1.6	6.3	1.0	1.3	.75
9	1.7	9.0	2.1	10	e4.5	1.8	e2.3	1.5	3.1	3.2	4.7	.73
10	2.0	3.1	2.0	6.8	e6.6	2.4	2.6	69	2.1	1.8	21	.74
11	3.0	2.5	2.0	3.5	e4.6	2.0	4.2	8.5	1.8	1.4	3.7	.65
12	2.2	2.2	e2.0	2.6	e3.2	1.8	2.4	3.2	e1.7	4.0	1.8	.71
13	e1.9	2.1	e1.9	2.0	e2.8	1.8	2.1	17	e1.6	10	1.3	.68
14	e1.7	2.2	e1.8	2.4	2.6	1.7	2.1	5.6	e1.6	7.5	1.1	2.2
15	e1.7	2.7	e1.7	2.9	2.5	1.6	17	2.9	e68	3.4	1.0	1.5
16	e1.7	5.8	1.6	2.5	2.7	1.6	3.1	2.9	3.7	1.9	.98	1.6
17	7.0	2.3	1.7	2.4	2.3	6.4	2.9	3.4	e3.0	1.5	.96	1.9
18	4.9	2.0	1.7	2.6	2.2	7.5	2.4	2.5	e2.6	1.3	.90	.78
19	22	1.8	e1.7	2.0	2.1	2.2	2.1	2.1	e5.0	1.2	1.1	1.2
20	49	1.9	e1.6	4.8	2.0	2.7	2.1	2.0	2.2	1.2	.99	1.7
21	5.5	1.7	e1.6	5.1	2.0	2.0	2.6	3.1	2.2	1.3	1.0	.92
22	3.3	2.1	e1.5	2.7	4.7	1.8	2.3	2.2	2.7	1.3	6.6	16
23	2.9	2.9	e1.5	2.1	7.8	1.7	2.0	2.0	2.7	2.5	2.0	1.7
24	2.6	2.4	e1.4	2.1	4.9	1.9	1.8	1.7	1.9	1.2	1.5	.93
25	2.2	2.6	e1.4	4.8	2.4	1.9	1.8	1.6	1.8	.96	1.2	.91
26	2.2	4.0	e1.3	6.2	1.9	1.8	1.9	12	1.5	.93	1.1	.81
27	2.2	2.8	e1.3	5.0	2.1	1.7	1.6	2.7	2.5	1.0	.95	.73
28	2.0	3.7	1.2	3.1	2.4	1.7	1.5	2.2	1.6	.93	.89	.75
29	2.0	2.3	.82	15	---	1.6	2.9	90	1.4	.91	8.0	.70
30	1.9	2.1	1.5	12	---	3.5	2.7	11	1.3	.87	2.5	.73
31	2.4	---	4.0	3.2	---	3.5	---	3.3	---	.88	1.0	---
TOTAL	184.6	84.9	55.02	156.9	88.9	73.0	125.8	281.9	142.9	62.88	100.94	45.16
MEAN	5.95	2.83	1.77	5.06	3.17	2.35	4.19	9.09	4.76	2.03	3.26	1.51
MAX	49	9.0	4.0	31	7.8	7.5	22	90	68	10	21	16
MIN	1.7	1.7	.82	2.0	1.9	1.6	1.5	1.5	1.3	.87	.68	.65
CFSM	1.68	.80	.50	1.43	.90	.67	1.18	2.57	1.35	.57	.92	.43
IN.	1.94	.89	.58	1.65	.93	.77	1.32	2.96	1.50	.66	1.06	.47

WTR YR 1990 TOTAL 1402.90 MEAN 3.84 MAX 90 MIN .65 CFSM 1.09 IN. 14.74

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.--Records good except those for estimated daily discharges (ice effect), which are fair. 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.--47 years, 63.9 ft^3/s, 18.46 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)
May 29	1715	*1,490	*5.25	No other peak greater than base discharge.			

Minimum discharge, 25 ft^3/s, Sept. 8, 9, 11, 12, 13, 18, 19, 21, gage height, 2.41 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	67	57	e210	78	60	59	56	78	46	33	32
2	254	62	56	84	75	59	69	51	71	44	29	31
3	112	67	57	64	72	60	212	48	75	43	28	30
4	75	63	51	58	86	57	105	53	128	42	28	28
5	66	60	53	61	73	55	86	123	68	45	42	28
6	65	60	54	58	68	56	73	63	63	51	124	29
7	65	61	53	54	66	53	110	54	62	42	141	28
8	60	66	52	60	64	53	83	51	70	40	44	27
9	58	140	54	124	64	54	70	48	96	45	47	26
10	58	85	52	130	163	59	66	305	60	51	133	27
11	65	68	51	92	94	56	84	177	55	44	90	26
12	58	65	52	71	75	55	66	82	52	43	50	26
13	57	61	54	60	69	53	61	105	49	128	42	25
14	55	62	51	54	68	52	60	105	51	87	53	28
15	55	64	49	59	65	51	172	74	426	62	38	32
16	54	85	49	60	66	51	81	68	92	53	36	28
17	81	74	46	60	63	71	71	74	72	45	36	31
18	91	66	45	63	59	112	67	66	65	43	34	26
19	210	62	44	59	61	63	62	58	115	40	34	26
20	335	62	46	87	58	65	60	56	78	39	46	31
21	131	56	44	96	56	59	64	61	65	39	37	26
22	87	56	40	71	62	55	62	57	63	42	83	100
23	76	63	e39	62	96	54	57	52	71	41	67	48
24	72	60	e36	60	87	54	55	50	56	37	44	32
25	70	60	e35	209	66	56	54	48	51	34	41	29
26	68	68	e35	363	56	52	54	99	50	32	38	28
27	66	66	e35	111	58	50	52	70	92	33	35	28
28	66	68	e35	83	62	49	51	55	62	34	34	27
29	65	62	e39	90	---	49	56	517	50	34	39	27
30	63	58	44	269	---	65	63	307	48	32	48	27
31	65	---	51	90	---	67	---	94	---	33	34	---
TOTAL	2761	2017	1459	3072	2030	1805	2285	3127	2434	1424	1608	937
MEAN	89.1	67.2	47.1	99.1	72.5	58.2	76.2	101	81.1	45.9	51.9	31.2
MAX	335	140	57	363	163	112	212	517	426	128	141	100
MIN	54	56	35	54	56	49	51	48	48	32	28	25
CFSM	1.89	1.43	1.00	2.11	1.54	1.24	1.62	2.15	1.73	.98	1.10	.66
IN.	2.19	1.60	1.15	2.43	1.61	1.43	1.81	2.47	1.93	1.13	1.27	.74

CAL YR 1989 TOTAL 31858 MEAN 87.3 MAX 1650 MIN 29 CFSM 1.86 IN. 25.22
WTR YR 1990 TOTAL 24959 MEAN 68.4 MAX 517 MIN 25 CFSM 1.45 IN. 19.75

e Estimated

01480015 RED CLAY CREEK NEAR STANTON, DE

LOCATION.--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.

DRAINAGE AREA.--52.4 mi^2.

PERIOD OF RECORD.--October 1988 to September 1990.

GAGE.--Water-stage recorder. Datum of gage is 0.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges (ice effect, backwater from White Clay Creek), which are fair. Several measurements of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,320 ft^3/s, July 5, 1989, gage height, 19.35 ft; minimum daily discharge, 20 ft^3/s, Oct. 12, 14, 1988.

EXTREMES FOR CURRENT PERIOD.--Peak discharges greater than base discharge of 1,300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
June 10, 1989	0100	1,600	14.02	Sept. 20, 1989	0800	2,910	16.30
July 5, 1989	1445	*5,320	*19.35	Sept. 20, 1989	2300	1,690	14.20
July 16, 1989	1715	Unknown	a15.09				
July 20, 1989	0745	Unknown	a15.41	May 29, 1990	1830	*2,040	*14.88
Aug. 18, 1989	1430	Unknown	a14.02	June 15; 1990	0815	1,380	13.55

a Backwater from White Clay Creek

Water year 1989: Minimum daily discharge, 20 ft^3/s, Oct. 12, 14.

Water year 1990: Minimum daily discharge, 28 ft^3/s, Sept. 9, 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	24	55	58	37	42	56	e201	64	69	53	104	52
2	24	49	52	39	40	52	100	264	63	52	94	52
3	32	34	48	37	56	52	98	97	59	50	87	49
4	25	32	46	37	63	51	91	75	58	67	82	48
5	23	50	43	e37	46	52	91	100	56	e2480	78	47
6	22	101	43	e37	44	135	181	e453	110	400	75	48
7	22	41	43	41	43	89	105	234	156	189	80	48
8	22	33	42	63	40	63	104	107	101	131	75	46
9	21	30	41	88	38	62	93	92	209	108	70	45
10	22	29	40	53	e37	66	82	254	461	99	68	45
11	22	29	39	45	e37	71	77	176	98	90	74	43
12	20	28	37	131	e36	72	74	116	80	83	98	43
13	21	37	e39	109	36	62	73	99	75	e258	137	43
14	20	44	e37	58	62	58	71	92	73	148	87	44
15	21	31	37	180	81	58	93	89	73	99	75	45
16	22	30	e37	82	111	56	139	390	73	e674	69	55
17	21	148	e37	59	58	52	83	182	74	e245	64	98
18	22	65	e36	52	49	68	76	110	64	136	62	49
19	22	45	35	50	46	100	78	92	59	113	e448	172
20	22	258	36	47	44	60	68	85	57	e454	135	1210
21	36	147	38	43	158	103	64	81	69	371	97	362
22	142	64	40	43	215	73	62	76	129	165	74	120
23	41	50	41	43	111	61	59	124	e165	135	84	98
24	36	47	54	41	75	e246	58	e231	190	115	66	78
25	35	43	64	41	60	187	57	102	93	107	61	70
26	30	42	43	42	62	96	57	86	78	176	59	148
27	30	49	39	46	63	79	55	111	68	199	57	83
28	29	e471	41	41	61	74	55	90	62	118	58	71
29	30	102	43	40	---	70	60	76	61	97	59	68
30	29	68	38	49	---	71	67	72	55	91	59	66
31	28	---	37	48	---	e343	---	71	---	138	54	---
TOTAL	916	2252	1304	1759	1814	2738	2572	4291	3038	7641	2790	3446
MEAN	29.5	75.1	42.1	56.7	64.8	88.3	85.7	138	101	246	90.0	115
MAX	142	471	64	180	215	343	201	453	461	2480	448	1210
MIN	20	28	35	37	36	51	55	64	55	50	54	43
CFSM	.56	1.43	.80	1.08	1.24	1.69	1.64	2.64	1.93	4.70	1.72	2.19
IN.	.65	1.60	.93	1.25	1.29	1.94	1.83	3.05	2.16	5.42	1.98	2.45

WTR YR 1989 TOTAL 34561 MEAN 94.7 MAX 2480 MIN 20 CFSM 1.81 IN. 24.54

e Estimated

01480015 RED CLAY CREEK NEAR STANTON, DE--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	76	63	e230	89	66	65	62	89	50	37	37
2	e292	70	62	e110	84	65	75	56	80	48	31	36
3	134	76	63	e75	82	67	242	53	81	47	30	34
4	84	74	57	e68	99	64	124	59	140	46	30	31
5	74	71	59	e69	83	61	96	147	77	77	45	31
6	72	70	60	66	76	61	80	70	71	57	218	33
7	74	70	61	62	74	59	120	60	70	47	161	32
8	67	77	58	75	72	58	93	56	74	44	50	30
9	65	165	61	145	71	60	75	54	120	49	50	28
10	64	104	e60	146	174	66	71	e345	70	59	130	30
11	72	77	e59	108	111	62	91	216	63	49	108	28
12	65	72	59	80	85	61	73	94	59	50	55	28
13	64	68	61	67	77	59	68	127	56	140	47	28
14	62	68	58	60	76	58	66	125	60	97	56	34
15	62	71	57	65	73	57	185	83	e582	68	42	39
16	61	93	e57	67	74	57	91	76	107	59	39	33
17	97	81	e53	66	71	82	78	88	81	50	38	36
18	107	71	e52	69	67	137	74	76	73	47	38	30
19	e244	67	e51	66	69	70	68	67	126	45	38	30
20	e406	67	e52	91	66	71	65	63	86	44	51	37
21	165	63	e49	109	63	66	69	69	72	44	42	30
22	100	62	e46	79	72	61	68	65	74	47	87	123
23	86	71	e43	68	111	59	63	60	80	48	77	58
24	81	67	e41	65	97	59	61	57	63	42	50	36
25	79	66	e39	234	75	61	59	55	58	38	47	32
26	76	76	e39	425	63	58	59	120	56	35	43	31
27	74	75	e38	129	65	55	57	82	90	37	40	30
28	74	77	e39	93	68	54	56	64	72	38	38	30
29	73	69	e43	98	---	54	60	e740	55	38	95	30
30	71	64	e52	300	---	70	69	e418	53	36	59	30
31	74	---	e100	102	---	76	---	110	---	36	40	---
TOTAL	3183	2278	1692	3487	2287	2014	2521	3817	2838	1612	1912	1075
MEAN	103	75.9	54.6	112	81.7	65.0	84.0	123	94.6	52.0	61.7	35.8
MAX	406	165	100	425	174	137	242	740	582	140	218	123
MIN	61	62	38	60	63	54	56	53	53	35	30	28
CFSM	1.96	1.45	1.04	2.15	1.56	1.24	1.60	2.35	1.81	.99	1.18	.68
IN.	2.26	1.62	1.20	2.48	1.62	1.43	1.79	2.71	2.01	1.14	1.36	.76

CAL YR 1989 TOTAL 37242 MEAN 102 MAX 2480 MIN 36 CFSM 1.95 IN. 26.44
WTR YR 1990 TOTAL 28716 MEAN 78.7 MAX 740 MIN 28 CFSM 1.50 IN. 20.39

e Estimated

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.--Records good except those for estimated daily discharges (ice effect), which are fair. 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.--44 years, 479 ft^3/s, 20.31 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)
Oct. 20	2245	4,020	6.91	May 30	1000	*5,450	*7.94
Jan. 30	1030	4,630	7.45				

Minimum discharge, 153 ft^3/s, Aug. 4, 5, gage height, 2.74 ft; minimum daily discharge, 168 ft^3/s, Aug. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	371	430	367	e1070	779	403	394	415	990	288	256	265
2	1030	406	356	799	715	390	452	372	606	283	217	252
3	744	418	353	412	685	392	1120	350	550	279	177	238
4	502	420	311	383	730	384	906	373	577	271	168	255
5	440	392	319	415	730	362	731	687	474	274	191	218
6	419	391	322	431	611	359	607	486	439	566	634	216
7	411	385	322	364	579	351	661	386	433	325	612	213
8	393	404	316	362	553	339	599	359	437	276	311	198
9	379	722	302	514	530	346	490	346	608	274	256	186
10	371	705	282	700	857	380	458	1100	411	323	541	193
11	399	533	322	904	888	372	560	1470	372	285	985	190
12	381	499	317	586	627	371	504	618	357	278	400	184
13	373	428	317	470	568	359	437	706	343	657	297	179
14	367	411	302	407	506	352	423	735	344	459	850	192
15	361	420	274	420	474	343	822	563	1240	389	353	238
16	366	484	307	416	477	346	678	445	591	337	290	209
17	429	615	275	409	477	388	530	465	431	303	271	227
18	605	442	283	415	425	708	506	428	401	281	259	201
19	1210	412	270	417	426	464	457	380	853	263	247	181
20	2070	428	291	442	413	424	438	363	487	257	252	202
21	1740	739	270	655	394	408	440	378	411	250	266	189
22	806	724	e260	548	417	377	448	383	405	266	516	476
23	688	504	e240	475	548	366	416	357	413	269	739	475
24	625	455	e230	452	611	352	398	347	356	242	406	271
25	579	445	e220	765	503	372	384	339	331	228	392	233
26	547	483	e215	2690	391	355	386	512	325	211	356	213
27	530	459	e210	1150	389	344	374	610	321	203	295	205
28	507	459	e215	768	403	333	359	406	318	197	277	191
29	444	441	e230	721	---	332	378	1770	305	197	280	179
30	422	384	e250	2850	---	377	471	3990	296	195	451	172
31	420	---	285	1020	---	445	---	1080	---	201	290	---
TOTAL	18929	14438	8833	22430	15706	11894	15827	21219	14425	9127	11835	6841
MEAN	611	481	285	724	561	384	528	684	481	294	382	228
MAX	2070	739	367	2850	888	708	1120	3990	1240	657	985	476
MIN	361	384	210	362	389	332	359	339	296	195	168	172
(†)	-3.6	-26.7	-1.5	+15.6	+1.4	+14.0	-1.0	+11.7	-12.4	-1.0	+2.3	-2.0
MEAN≠	607	454	284	740	562	398	527	696	469	293	384	226
CFSM≠	1.93	1.45	0.90	2.36	1.79	1.27	1.68	2.22	1.49	0.93	1.22	0.72
IN≠	2.23	1.62	1.04	2.72	1.86	1.46	1.87	2.56	1.66	1.08	1.41	0.80

CAL YR 1989 TOTAL 218023 MEAN 597 MAX 4330 MIN 163 MEAN≠ 600 CFSM≠ 1.91 IN≠ 25.93
WTR YR 1990 TOTAL 171504 MEAN 470 MAX 3990 MIN 168 MEAN≠ 470 CFSM≠ 1.50 IN≠ 20.31

e Estimated
† 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.

REVISED RECORDS.--WRD MD-DE-89-1: 1987-88(P).

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.--34 years, 4.73 ft^3/s, 16.68 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)
May 29	1830	*215	*4.10	July 10	1945	73	2.58

Minimum discharge, 0.68 ft^3/s, July 4, gage height, 0.86 ft; minimum daily discharge, 0.95 ft^3/s, July 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	7.4	5.2	25	6.6	4.6	7.4	7.0	7.4	1.1	2.5	1.6
2	24	6.0	5.1	17	6.4	4.5	6.4	5.0	6.4	1.2	1.3	1.5
3	20	5.5	4.8	8.5	6.5	4.8	22	4.2	5.9	1.1	1.1	1.6
4	5.9	5.5	4.6	6.9	8.5	4.2	13	4.9	6.0	.95	1.1	1.5
5	4.4	3.8	4.8	6.8	7.2	4.0	8.9	12	4.8	1.0	1.1	1.4
6	4.0	3.7	4.7	6.4	6.1	4.0	7.4	6.5	4.5	.99	3.5	1.3
7	3.4	3.5	4.0	5.7	6.0	3.8	16	4.5	4.3	1.0	14	1.4
8	3.9	5.5	4.3	6.2	5.2	3.8	11	4.0	4.2	1.1	2.5	1.4
9	3.7	15	4.3	8.7	5.2	4.1	7.4	3.6	6.3	1.5	4.3	1.4
10	4.1	13	4.5	9.5	9.0	5.8	6.7	12	4.2	9.0	6.1	1.3
11	3.9	7.8	4.5	7.9	8.6	4.6	7.7	17	3.7	9.2	5.9	1.3
12	3.0	5.9	4.6	6.8	6.3	4.3	6.6	5.6	3.4	7.0	2.6	1.2
13	3.3	5.0	4.8	6.2	5.4	4.2	5.8	5.6	3.1	23	2.1	1.1
14	3.0	4.7	4.8	6.0	5.2	4.0	5.6	6.6	3.3	5.5	7.2	1.1
15	2.8	5.1	4.7	6.0	5.0	3.9	11	4.4	8.6	5.5	2.7	1.2
16	3.2	4.9	4.7	5.8	5.3	3.9	8.1	4.1	4.5	6.2	2.0	1.2
17	3.4	6.3	4.4	5.8	5.0	6.5	6.7	4.4	3.5	2.7	1.7	1.7
18	6.0	5.1	4.2	5.9	4.5	23	6.5	5.3	3.0	2.1	1.5	1.8
19	15	4.6	4.1	4.9	4.6	8.1	5.6	3.6	4.2	1.8	1.4	1.7
20	24	4.5	4.0	15	4.4	10	5.3	3.4	3.7	1.7	1.4	1.7
21	17	4.0	3.9	6.2	4.2	7.6	7.0	3.7	2.9	1.4	1.6	1.7
22	7.9	4.1	3.7	5.0	4.5	5.8	7.5	3.8	2.5	1.3	3.4	1.8
23	5.1	4.6	3.5	7.0	5.5	5.1	5.6	3.2	2.8	1.3	3.8	3.3
24	4.5	4.6	3.1	6.0	7.3	5.3	5.1	3.1	2.2	1.2	2.5	1.8
25	3.7	4.7	2.9	17	5.0	6.6	4.8	3.0	1.8	1.2	2.0	1.7
26	3.1	5.2	2.8	38	3.8	6.0	4.6	19	1.7	1.1	1.9	1.6
27	3.2	5.8	2.8	13	4.1	4.9	4.1	12	1.7	1.1	1.6	1.5
28	3.8	5.8	2.8	8.2	4.7	4.5	4.0	5.5	1.5	.96	1.6	1.5
29	2.8	5.6	2.7	7.4	---	4.5	7.0	85	1.4	3.2	1.9	1.3
30	3.4	5.5	2.9	9.7	---	7.2	12	42	1.2	3.0	4.8	1.3
31	5.2	---	3.8	7.6	---	10	---	9.8	---	2.3	1.9	---
TOTAL	204.5	172.7	126.0	296.1	160.1	183.6	236.8	313.8	114.7	101.70	93.0	45.9
MEAN	6.60	5.76	4.06	9.55	5.72	5.92	7.89	10.1	3.82	3.28	3.00	1.53
MAX	24	15	5.2	38	9.0	23	22	85	8.6	23	14	3.3
MIN	2.8	3.5	2.7	4.9	3.8	3.8	4.0	3.0	1.2	.95	1.1	1.1
CFSM	1.71	1.50	1.06	2.48	1.49	1.54	2.05	2.63	.99	.85	.78	.40
IN.	1.98	1.67	1.22	2.86	1.55	1.77	2.29	3.03	1.11	.98	.90	.44

CAL YR 1989 TOTAL 2882.4 MEAN 7.90 MAX 90 MIN 1.3 CFSM 2.05 IN. 27.85
WTR YR 1990 TOTAL 2048.90 MEAN 5.61 MAX 85 MIN .95 CFSM 1.46 IN. 19.80

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 except those for estimated daily discharges, which are fair. 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.--32 years, 36.9 ft^3/s, 15.71 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, 537 ft^3/s, May 30, gage height, 5.50 ft; minimum daily discharge, 0.53 ft^3/s, Dec. 23, result of regulation at Silver Lake Dam.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	34	37	190	58	28	52	124	110	9.1	9.4	4.6
2	53	35	35	226	50	28	54	79	54	13	7.2	4.3
3	62	37	34	132	46	31	128	45	38	11	5.9	4.2
4	87	35	32	81	53	31	160	34	32	9.3	5.5	2.6
5	60	35	31	63	53	27	107	55	25	7.7	4.3	2.8
6	53	34	31	57	48	26	75	73	22	8.0	9.1	3.4
7	53	33	30	51	42	24	89	53	22	6.9	12	4.2
8	52	34	30	56	38	22	123	33	21	6.0	7.8	3.9
9	51	41	29	75	37	24	99	26	27	7.3	8.8	2.8
10	24	54	29	86	47	33	67	92	22	12	25	2.4
11	2.8	82	28	73	58	32	62	316	18	33	22	2.5
12	.74	65	28	57	53	29	59	231	15	30	13	2.7
13	.73	53	29	48	42	27	55	99	14	76	13	3.1
14	30	51	29	40	38	26	54	64	14	58	38	12
15	49	50	29	38	35	25	55	51	24	70	19	9.8
16	48	49	29	38	37	23	54	38	23	61	e10	7.2
17	47	48	30	37	37	32	55	35	17	20	e7.4	12
18	45	47	29	36	32	128	54	33	15	14	e6.5	6.1
19	43	46	12	34	31	148	54	26	21	12	e7.4	4.8
20	45	44	.67	33	29	89	34	22	18	9.8	e8.1	5.8
21	50	40	.64	36	27	59	1.4	26	18	9.2	e6.8	4.5
22	74	36	.55	37	28	48	29	25	16	9.0	e10	13
23	62	36	.53	34	33	57	37	23	17	8.6	e12	15
24	50	35	.55	32	40	53	31	19	13	7.9	10	7.9
25	47	35	.55	62	38	53	29	18	11	7.3	9.2	5.5
26	46	35	.59	138	26	52	27	59	9.1	6.3	8.9	4.9
27	47	37	.80	149	24	52	25	88	9.4	6.0	7.6	4.9
28	44	40	4.2	105	27	51	23	53	8.6	6.4	6.5	4.4
29	42	41	14	69	---	51	33	217	8.0	7.0	6.0	4.4
30	39	39	18	73	---	51	85	477	8.2	7.5	5.6	4.6
31	38	---	31	71	---	52	---	243	---	8.2	4.7	---
TOTAL	1396.27	1281	633.08	2257	1107	1412	1810.4	2777	670.3	557.5	326.7	170.3
MEAN	45.0	42.7	20.4	72.8	39.5	45.5	60.3	89.6	22.3	18.0	10.5	5.68
MAX	87	82	37	226	58	148	160	477	110	76	38	15
MIN	.73	33	.53	32	24	22	1.4	18	8.0	6.0	4.3	2.4
CFSM	1.41	1.34	.64	2.28	1.24	1.43	1.89	2.81	.70	.56	.33	.18
IN.	1.63	1.49	.74	2.63	1.29	1.65	2.11	3.24	.78	.65	.38	.20

CAL YR 1989 TOTAL 24138.05 MEAN 66.1 MAX 532 MIN .53 CFSM 2.07 IN. 28.15
WTR YR 1990 TOTAL 14398.55 MEAN 39.4 MAX 477 MIN .53 CFSM 1.24 IN. 16.79

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.--No estimated daily discharges. 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.--32 years, 3.60 ft^3/s, 17.27 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)
May 11	0345	32	3.32	May 29	2100	*60	*3.84

Minimum discharge, 1.3 ft^3/s, Sept. 30, gage height, 2.48 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	3.3	3.0	11	3.8	2.9	6.1	4.7	7.7	2.2	2.2	1.8
2	5.9	3.0	3.0	4.4	3.8	2.9	6.6	4.0	6.4	2.2	2.1	1.8
3	4.3	3.8	3.0	3.8	3.8	3.1	14	3.7	5.7	2.2	2.0	1.8
4	3.4	3.2	2.8	3.9	5.0	2.9	8.0	3.6	6.4	2.1	2.0	1.7
5	3.1	3.1	3.0	3.8	4.2	2.7	6.4	19	5.2	2.1	2.0	1.8
6	3.1	3.1	3.0	4.1	3.9	2.7	5.8	8.2	4.8	2.0	2.1	1.8
7	2.9	3.0	2.9	3.8	3.8	2.7	10	6.0	4.6	1.9	2.1	1.7
8	2.8	3.2	2.9	4.9	3.6	2.7	7.5	5.2	4.4	1.9	2.0	1.6
9	2.7	5.8	2.9	6.2	3.6	2.7	6.1	4.7	4.2	1.9	1.9	1.6
10	2.7	5.0	2.9	4.7	4.6	2.8	5.8	10	4.4	2.3	3.3	1.6
11	2.7	3.8	2.9	4.3	4.3	2.7	6.1	21	3.9	2.8	2.9	1.5
12	2.5	3.5	3.0	4.0	3.9	2.7	5.2	8.6	3.7	4.0	2.1	1.5
13	2.5	3.3	3.1	3.7	3.8	2.7	4.8	7.3	3.7	15	2.1	1.6
14	2.5	3.3	2.9	3.6	3.7	2.6	4.6	6.4	3.7	4.0	2.1	2.0
15	2.5	3.7	2.8	3.6	3.6	2.5	5.2	5.6	3.8	3.2	2.0	1.8
16	2.5	3.7	2.9	3.6	3.7	2.5	4.9	5.3	3.6	2.8	2.0	1.7
17	2.5	3.4	2.7	3.6	3.5	3.6	4.6	9.7	3.5	2.7	1.9	2.0
18	2.5	3.3	2.6	3.6	3.3	13	4.4	6.0	3.4	2.7	1.9	1.6
19	4.3	3.1	2.5	3.4	3.6	5.1	4.1	5.1	3.2	2.5	2.0	1.6
20	6.6	3.3	2.5	3.4	3.3	4.7	4.1	4.8	3.0	2.5	2.1	1.6
21	4.9	3.2	2.5	3.6	3.3	4.4	4.4	4.9	2.8	2.4	2.1	1.5
22	3.7	3.0	2.4	3.3	3.4	4.0	4.4	4.7	2.9	2.4	2.2	1.7
23	3.3	3.2	2.3	3.3	3.4	3.8	4.1	4.5	3.0	2.4	2.1	1.6
24	3.3	3.0	2.3	3.3	3.4	3.7	4.0	4.2	2.8	3.1	2.0	1.5
25	3.2	3.1	2.4	5.4	3.0	4.1	3.8	4.0	2.6	2.5	2.0	1.5
26	3.1	3.8	2.4	6.7	2.8	4.0	3.8	12	2.5	2.3	1.9	1.5
27	2.9	3.7	2.3	4.9	3.0	3.6	3.7	7.2	2.4	2.3	1.9	1.5
28	2.9	3.5	2.4	4.2	3.1	3.6	3.6	5.6	2.4	2.3	1.8	1.5
29	2.9	3.2	2.3	4.1	---	3.6	4.1	33	2.3	2.9	1.9	1.4
30	2.9	3.1	2.5	4.8	---	4.9	5.1	31	2.2	2.5	2.8	1.4
31	3.6	---	3.6	4.1	---	8.5	---	12	---	2.4	1.9	---
TOTAL	101.7	103.7	84.7	135.1	102.2	118.4	165.3	272.0	115.2	90.5	65.4	49.2
MEAN	3.28	3.46	2.73	4.36	3.65	3.82	5.51	8.77	3.84	2.92	2.11	1.64
MAX	6.6	5.8	3.6	11	5.0	13	14	33	7.7	15	3.3	2.0
MIN	2.5	3.0	2.3	3.3	2.8	2.5	3.6	3.6	2.2	1.9	1.8	1.4
CFSM	1.16	1.22	.97	1.54	1.29	1.35	1.95	3.10	1.36	1.03	.75	.58
IN.	1.34	1.36	1.11	1.78	1.34	1.56	2.17	3.58	1.51	1.19	.86	.65

CAL YR 1989 TOTAL 1693.2 MEAN 4.64 MAX 27 MIN 1.8 CFSM 1.64 IN. 22.26
WTR YR 1990 TOTAL 1403.4 MEAN 3.84 MAX 33 MIN 1.4 CFSM 1.36 IN. 18.45

01484500 STOCKLEY BRANCH AT STOCKLEY, DE

LOCATION.--Lat 38°38'19" Long 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.--47 years, 6.86 ft^3/s, 17.78 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)
May 29	2315	*66	*3.35	No other peak greater than base discharge.			

Minimum discharge, 1.7 ft^3/s, Sept. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.4	8.8	10	26	10	7.3	12	9.3	13	3.0	2.6	2.4
2	15	7.9	9.9	16	10	7.4	10	9.2	12	3.0	2.3	2.3
3	12	9.2	9.8	12	10	7.9	17	6.4	11	2.9	2.2	2.3
4	10	8.5	9.1	12	16	7.4	13	5.7	9.8	2.9	2.2	2.2
5	9.3	8.1	9.2	11	13	7.0	10	8.7	9.2	4.2	2.2	2.1
6	9.0	8.0	9.0	13	11	6.8	9.7	7.2	8.8	5.5	2.5	2.0
7	8.8	7.8	8.6	12	11	6.4	14	6.0	8.4	3.3	7.8	2.0
8	8.3	9.4	8.2	16	10	6.2	12	5.5	7.7	3.1	3.0	1.9
9	7.8	28	8.7	24	10	6.5	10	5.2	7.5	3.0	4.0	1.9
10	7.3	24	8.3	17	16	6.6	9.8	5.9	7.6	6.4	4.0	1.9
11	7.1	16	8.1	15	16	6.4	11	10	6.7	6.0	3.4	1.9
12	6.9	13	8.3	14	13	6.2	9.9	7.2	6.2	3.7	2.7	1.9
13	6.6	12	9.1	12	12	6.1	8.9	6.5	6.0	3.7	2.5	2.0
14	6.3	11	8.7	11	11	5.9	8.6	6.4	5.8	4.2	5.8	9.7
15	6.2	24	8.4	10	10	5.7	9.8	5.5	5.5	4.0	2.9	4.1
16	5.8	20	9.0	10	11	5.7	9.6	5.3	5.3	3.1	2.6	2.9
17	5.8	18	8.4	9.9	11	6.0	9.5	5.3	5.0	3.0	2.5	3.0
18	5.9	14	7.9	9.7	9.7	9.9	8.7	5.1	4.8	2.9	2.5	2.5
19	11	12	7.5	9.2	10	7.7	7.6	4.8	4.9	4.9	3.4	2.4
20	13	12	7.5	9.0	9.5	7.8	7.3	4.7	4.8	4.3	6.7	2.4
21	12	11	7.3	9.8	9.0	7.5	7.4	4.9	4.2	4.2	4.6	2.4
22	9.8	10	6.5	9.3	9.0	7.1	7.4	4.8	3.9	3.8	3.6	2.8
23	9.2	12	5.9	8.9	9.4	7.0	7.0	4.6	3.7	3.1	3.3	2.8
24	8.9	11	5.7	8.7	9.7	6.6	6.5	4.4	3.0	4.4	3.3	2.5
25	8.7	10	5.8	13	8.9	7.3	6.2	4.4	3.0	3.2	3.1	2.4
26	8.4	13	6.7	17	8.1	7.1	6.7	13	2.9	2.9	2.9	2.4
27	8.1	14	6.0	15	8.1	6.5	6.3	9.6	3.0	2.8	2.8	2.3
28	7.9	14	6.0	12	7.9	6.4	6.3	8.1	3.0	2.9	2.8	2.2
29	7.6	12	5.7	12	---	6.0	5.9	39	3.0	2.7	2.8	2.2
30	7.1	11	6.0	13	---	8.2	7.5	37	3.0	2.6	4.7	2.1
31	8.7	---	9.4	11	---	14	---	17	---	2.8	2.7	---
TOTAL	266.9	389.7	244.7	398.5	300.3	220.6	275.6	276.7	182.7	112.5	104.4	77.9
MEAN	8.61	13.0	7.89	12.9	10.7	7.12	9.19	8.93	6.09	3.63	3.37	2.60
MAX	15	28	10	26	16	14	17	39	13	6.4	7.8	9.7
MIN	5.8	7.8	5.7	8.7	7.9	5.7	5.9	4.4	2.9	2.6	2.2	1.9
CFSM	1.64	2.48	1.51	2.45	2.05	1.36	1.75	1.70	1.16	.69	.64	.50
IN.	1.89	2.77	1.74	2.83	2.13	1.57	1.96	1.96	1.30	.80	.74	.55

CAL YR 1989 TOTAL 3667.16 MEAN 10.0 MAX 88 MIN .75 CFSM 1.92 IN. 26.03
WTR YR 1990 TOTAL 2850.5 MEAN 7.81 MAX 39 MIN 1.9 CFSM 1.49 IN. 20.24

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.--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.--40 years (water years 1951-90), 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)
May 29	2000	*609	*10.04	No other peak greater than base discharge.			

Minimum daily discharge, 9.5 ft^3/s, Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	106	90	94	214	87	65	173	118	196	16	13	15
2	268	82	84	198	82	64	136	101	138	17	12	14
3	311	85	81	143	78	66	165	82	108	16	11	14
4	206	93	74	122	223	68	157	72	97	15	10	13
5	148	83	72	130	193	63	125	86	81	15	10	12
6	118	76	70	145	144	60	103	92	70	17	10	12
7	102	74	67	162	125	58	119	77	63	17	15	13
8	88	73	64	187	111	55	137	67	57	14	18	13
9	81	186	65	327	100	56	111	60	52	13	16	12
10	74	245	67	240	109	57	96	58	58	13	15	13
11	70	170	68	181	141	56	103	80	53	15	16	10
12	66	133	68	149	119	54	107	73	46	14	15	9.9
13	63	108	91	122	102	53	89	66	41	14	15	9.6
14	60	97	98	104	93	51	80	76	37	14	15	20
15	58	121	94	96	85	48	89	70	36	13	15	21
16	55	143	120	91	86	46	102	63	34	13	13	17
17	53	154	107	85	109	46	90	58	31	14	12	15
18	55	120	89	81	93	68	82	53	29	19	11	14
19	79	100	75	77	92	76	73	48	28	17	11	13
20	173	92	70	73	92	69	68	43	27	14	50	13
21	215	88	65	75	81	66	67	41	25	13	43	12
22	152	81	59	74	77	61	71	40	23	22	35	12
23	116	103	53	69	79	58	67	39	22	18	31	13
24	97	113	50	66	87	56	63	37	21	15	29	12
25	87	112	e48	76	83	71	59	35	20	13	27	11
26	80	150	45	151	72	78	57	65	19	13	24	11
27	74	170	45	170	69	71	54	128	19	13	23	10
28	70	148	42	129	68	64	51	109	18	13	21	9.7
29	66	127	40	110	---	60	51	343	18	16	19	9.6
30	64	107	41	108	---	76	72	483	18	14	18	9.5
31	71	---	55	97	---	134	---	301	---	13	17	---
TOTAL	3326	3524	2161	4052	2880	1974	2817	3064	1485	463	590	383.3
MEAN	107	117	69.7	131	103	63.7	93.9	98.8	49.5	14.9	19.0	12.8
MAX	311	245	120	327	223	134	173	483	196	22	50	21
MIN	53	73	40	66	68	46	51	35	18	13	10	9.5
CFSM	1.77	1.94	1.15	2.16	1.70	1.05	1.55	1.63	.82	.25	.31	.21
IN.	2.05	2.17	1.33	2.49	1.77	1.21	1.73	1.88	.91	.28	.36	.24

CAL YR 1989 TOTAL 50468 MEAN 138 MAX 2580 MIN 17 CFSM 2.29 IN. 31.03
WTR YR 1990 TOTAL 26719.3 MEAN 73.2 MAX 483 MIN 9.5 CFSM 1.21 IN. 16.43

e Estimated

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.--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.--40 years (water years 1951-90), 54.2 ft^3/s, 16.39 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,930 ft^3/s, Aug. 19, 1989, gage height, 9.07 ft, from rating curve extended above 1,300 ft^3/s on basis of a contracted-opening measurement at gage height 9.07 ft; 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)
Oct. 3	2300	374	5.73	May 30	1900	*636	*6.39

Minimum daily discharge, 2.4 ft^3/s, Sept. 5, 6, 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	51	89	129	82	47	187	49	235	4.3	3.5	3.0
2	142	59	71	229	69	44	180	51	128	4.3	2.9	2.7
3	302	74	59	228	62	51	173	40	79	4.3	2.6	2.6
4	318	74	50	167	150	59	186	31	56	3.9	2.5	2.5
5	195	69	45	140	255	56	165	43	63	3.6	2.5	2.4
6	123	65	43	140	227	51	120	59	55	3.3	2.6	2.4
7	88	57	41	152	160	45	105	69	36	3.2	26	3.1
8	61	52	39	159	123	40	115	60	26	3.3	31	3.7
9	48	85	39	225	103	38	116	40	22	3.4	28	3.1
10	40	193	40	261	98	39	96	34	55	3.5	17	3.2
11	35	254	41	204	118	38	88	60	41	6.5	12	3.0
12	29	186	44	151	135	37	98	64	31	6.1	9.6	2.7
13	26	127	61	118	120	35	99	62	23	7.0	8.3	2.5
14	23	98	73	95	96	33	82	59	18	6.5	6.2	3.4
15	22	86	82	77	76	31	77	50	17	5.7	5.0	3.4
16	20	101	95	64	75	29	84	39	15	4.7	4.3	3.0
17	19	148	91	55	110	27	85	31	14	3.9	3.9	2.9
18	21	159	79	51	118	63	79	24	12	3.6	3.6	2.7
19	49	128	57	48	122	87	65	20	11	3.4	3.4	2.6
20	88	102	47	44	125	92	53	17	9.9	3.1	7.8	2.6
21	137	81	42	48	108	75	48	18	8.7	2.9	7.8	2.5
22	160	63	37	48	89	56	52	18	7.9	3.2	8.1	3.6
23	132	78	31	46	78	47	48	17	8.7	3.4	9.4	4.6
24	97	90	26	45	85	43	43	15	8.2	7.3	8.3	3.6
25	69	100	23	53	88	71	37	14	7.0	5.4	7.8	2.9
26	51	115	22	99	75	100	33	46	6.4	3.8	6.6	2.6
27	43	134	22	166	57	101	29	141	5.8	3.4	5.4	2.6
28	38	146	22	178	51	78	26	185	5.4	3.6	4.3	2.5
29	34	131	22	137	---	55	27	246	5.0	4.0	3.7	2.4
30	30	107	25	110	---	79	42	565	4.5	4.1	3.5	2.4
31	40	---	43	96	---	129	---	484	---	3.8	3.2	---
TOTAL	2545	3213	1501	3763	3055	1776	2638	2651	1014.5	132.5	250.8	87.2
MEAN	82.1	107	48.4	121	109	57.3	87.9	85.5	33.8	4.27	8.09	2.91
MAX	318	254	95	261	255	129	187	565	235	7.3	31	4.6
MIN	19	51	22	44	51	27	26	14	4.5	2.9	2.5	2.4
CFSM	1.83	2.39	1.08	2.70	2.43	1.28	1.96	1.90	.75	.10	.18	.06
IN.	2.11	2.66	1.24	3.12	2.53	1.47	2.19	2.20	.84	.11	.21	.07

CAL YR 1989 TOTAL 36622.4 MEAN 100 MAX 2590 MIN 5.8 CFSM 2.23 IN. 30.34
WTR YR 1990 TOTAL 22627.0 MEAN 62.0 MAX 565 MIN 2.4 CFSM 1.38 IN. 18.75

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.--Records good except those for estimated daily discharges (backwater), which are fair. 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.--36 years (water years 1952-71, 1975-90), 4.72 ft^3/s, 13.35 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)
Oct. 2	1015	62	3.27	May 29	1230	*145	*4.36
Feb. 4	0345	58	3.21				

Minimum daily discharge, 0.56 ft^3/s, Sept. 28, 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.4	8.7	7.3	24	7.7	5.9	16	7.8	13	1.9	1.5	.84
2	37	7.3	6.8	15	7.4	6.0	12	6.0	9.4	2.2	1.2	.84
3	24	9.1	6.1	11	8.1	7.7	24	4.7	7.7	1.8	1.1	.82
4	13	e9.0	5.5	11	43	7.6	15	4.3	6.7	1.7	1.0	.74
5	9.4	e8.0	5.4	12	23	7.0	11	7.4	5.4	1.6	1.0	.73
6	7.7	e7.0	5.2	15	15	6.5	8.7	6.0	4.7	1.6	.98	.76
7	6.4	e7.0	4.8	13	13	5.6	13	4.7	4.2	1.5	16	.79
8	5.4	e7.0	4.9	23	11	5.4	12	4.0	3.8	1.4	7.6	.85
9	4.9	e30	5.2	27	9.8	5.4	8.8	3.5	4.1	1.4	4.7	.74
10	4.2	22	5.2	17	16	5.5	7.7	4.3	11	1.4	3.6	.71
11	4.1	14	5.2	13	16	5.3	10	8.8	5.9	1.7	3.0	.67
12	4.1	11	5.8	11	12	5.0	9.3	5.5	4.5	1.5	2.5	.65
13	4.0	9.1	8.1	8.9	10	4.9	7.4	6.6	4.0	1.6	2.2	.65
14	3.8	8.3	7.9	7.7	8.9	4.7	6.6	15	3.8	1.5	1.9	.75
15	3.7	22	7.5	7.4	8.0	4.4	7.4	8.4	3.5	1.4	1.8	.83
16	3.6	19	11	6.9	12	4.1	8.3	6.3	3.3	1.3	1.7	e.90
17	3.5	15	7.8	6.6	17	4.2	7.6	5.3	3.1	1.2	1.6	e.80
18	3.9	11	6.5	6.4	11	13	7.3	4.3	3.0	1.2	1.5	e.75
19	6.4	9.5	5.9	5.9	17	9.4	6.2	3.7	2.8	1.1	1.4	e.70
20	11	8.8	5.6	5.9	14	8.3	5.7	3.5	2.5	1.1	1.3	e.65
21	10	7.5	5.2	6.7	10	7.6	6.1	4.2	2.4	1.1	1.3	e.65
22	7.7	6.7	4.5	6.4	9.5	6.4	6.8	4.1	2.4	1.0	1.3	e1.0
23	7.0	11	4.1	5.9	9.4	5.8	6.0	3.8	2.8	1.1	1.4	e.80
24	6.4	11	4.0	5.6	11	5.7	5.4	3.5	2.4	1.8	1.3	e.60
25	6.0	12	3.9	9.0	8.3	12	5.0	3.2	2.1	1.2	1.2	.58
26	5.7	15	4.1	21	6.8	11	4.8	9.9	2.0	1.0	1.2	.57
27	5.4	13	3.7	16	6.6	8.2	4.3	35	2.0	1.1	1.1	.57
28	5.2	11	3.8	12	6.4	6.9	4.0	18	2.1	1.3	1.1	.56
29	5.2	9.4	3.7	10	---	6.4	6.3	74	1.9	3.8	1.0	.56
30	5.3	8.1	4.4	10	---	11	11	47	1.8	2.5	.97	.57
31	8.3	---	8.3	8.7	---	19	---	22	---	1.7	.89	---
TOTAL	236.7	347.5	177.4	359.0	347.9	225.9	263.7	344.8	128.3	47.7	70.34	21.63
MEAN	7.64	11.6	5.72	11.6	12.4	7.29	8.79	11.1	4.28	1.54	2.27	.72
MAX	37	30	11	27	43	19	24	74	13	3.8	16	1.0
MIN	3.5	6.7	3.7	5.6	6.4	4.1	4.0	3.2	1.8	1.0	.89	.56
CFSM	1.59	2.41	1.19	2.41	2.59	1.52	1.83	2.32	.89	.32	.47	.15
IN.	1.83	2.69	1.37	2.78	2.70	1.75	2.04	2.67	.99	.37	.55	.17

CAL YR 1989 TOTAL 3103.7 MEAN 8.50 MAX 119 MIN 1.3 CFSM 1.77 IN. 24.05
WTR YR 1990 TOTAL 2570.87 MEAN 7.04 MAX 74 MIN .56 CFSM 1.47 IN. 19.92

e Estimated

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.--47 years, 90.8 ft^3/s, 16.35 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)
May 5	1400	513	6.64	May 29	2300	*829	*7.44
May 11	0600	692	7.11				

Minimum daily discharge, 38 ft^3/s, Sept. 12, 26-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	114	113	117	196	131	98	150	140	248	70	65	51
2	150	108	114	159	130	98	145	129	217	68	56	49
3	171	112	115	133	127	101	212	118	199	68	51	48
4	149	110	112	128	142	98	200	113	194	61	50	46
5	135	107	112	128	140	94	167	348	175	61	47	44
6	127	107	110	129	132	93	150	280	160	66	51	44
7	123	107	109	128	130	90	173	195	154	59	58	46
8	116	111	106	132	125	90	181	162	147	56	51	45
9	112	140	108	178	121	92	157	146	141	58	56	41
10	109	170	106	158	131	92	148	193	138	55	81	42
11	107	148	105	146	137	90	153	571	130	79	92	40
12	105	138	105	142	129	89	146	314	123	69	68	38
13	103	130	109	133	122	88	136	244	116	228	61	42
14	101	127	105	124	120	87	130	224	113	113	76	56
15	99	137	103	122	115	86	137	197	113	90	61	51
16	98	142	105	119	117	85	137	181	109	83	57	48
17	98	137	101	116	115	88	132	177	103	76	54	55
18	100	128	100	116	109	153	128	163	102	70	52	47
19	109	122	99	113	111	134	120	150	100	66	53	44
20	136	122	99	111	109	121	117	143	96	77	70	44
21	155	122	97	114	105	116	121	141	94	62	64	42
22	137	116	95	111	105	110	122	136	90	60	63	44
23	125	121	92	108	108	108	116	131	89	60	62	44
24	118	115	92	107	110	105	114	124	90	65	61	41
25	115	113	92	127	104	106	112	118	84	62	60	39
26	113	119	94	168	99	105	111	200	80	54	58	38
27	111	127	91	166	99	102	109	218	78	55	56	38
28	109	127	92	147	101	100	107	170	78	57	55	38
29	108	124	90	141	---	99	115	461	74	72	54	38
30	106	119	91	146	---	105	135	577	72	89	63	38
31	113	---	100	137	---	135	---	313	---	67	54	---
TOTAL	3672	3719	3166	4183	3324	3158	4181	6777	3707	2276	1860	1321
MEAN	118	124	102	135	119	102	139	219	124	73.4	60.0	44.0
MAX	171	170	117	196	142	153	212	577	248	228	92	56
MIN	98	107	90	107	99	85	107	113	72	54	47	38
CFSM	1.57	1.64	1.35	1.79	1.57	1.35	1.85	2.90	1.64	.97	.80	.58
IN.	1.81	1.83	1.56	2.06	1.64	1.56	2.06	3.34	1.83	1.12	.92	.65

CAL YR 1989 TOTAL 48334 MEAN 132 MAX 635 MIN 36 CFSM 1.76 IN. 23.85
WTR YR 1990 TOTAL 41344 MEAN 113 MAX 577 MIN 38 CFSM 1.50 IN. 20.40

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.--44 years (water years 1944-68, 1972-90), 54.5 ft^3/s, 16.86 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)
May 5	0915	581	5.39	May 29	1515	*1,650	*8.72
May 11	0045	796	6.16	July 29	1600	805	6.19

Minimum discharge, 15 ft^3/s, Sept. 25, 26, 27, 28, 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62	58	50	253	82	44	116	85	124	24	38	19
2	113	53	49	111	77	44	121	70	103	23	33	19
3	123	58	48	85	73	45	263	59	89	22	32	18
4	88	59	44	77	91	43	167	56	100	21	30	18
5	73	54	44	77	85	41	127	322	80	20	29	18
6	65	55	43	76	74	42	105	169	70	20	31	18
7	62	52	41	74	71	39	190	112	66	19	30	18
8	56	53	40	85	65	38	160	88	61	19	28	17
9	52	105	41	155	63	40	115	75	58	20	28	16
10	49	121	40	107	77	39	101	181	58	22	30	17
11	47	85	39	89	87	38	102	410	52	59	34	16
12	46	73	40	81	73	38	90	161	48	31	28	17
13	44	64	41	70	65	37	78	120	47	222	26	16
14	42	62	39	63	63	37	72	100	47	49	30	27
15	41	61	39	61	60	36	80	82	47	35	27	23
16	39	62	41	60	62	35	84	73	44	31	25	18
17	40	58	38	57	61	41	76	105	42	28	24	31
18	40	53	37	56	54	228	69	77	40	26	23	21
19	49	50	36	53	55	118	63	65	40	25	23	17
20	146	51	36	53	52	98	61	60	38	24	27	17
21	136	50	35	55	49	89	63	59	35	23	23	16
22	87	46	33	52	50	76	64	55	32	22	24	17
23	71	49	32	49	53	70	60	52	33	20	23	17
24	64	45	31	48	55	64	57	50	31	22	22	16
25	61	45	32	75	50	63	54	47	29	21	22	16
26	58	51	34	148	45	64	53	148	28	20	21	16
27	54	59	32	113	45	59	51	107	28	19	20	16
28	52	58	32	89	46	55	49	79	26	18	20	15
29	50	54	30	80	---	53	59	812	24	319	20	15
30	49	50	32	124	---	62	93	378	23	105	33	15
31	54	---	43	94	---	118	---	178	---	46	22	---
TOTAL	2013	1794	1192	2670	1783	1894	2843	4435	1543	1375	826	540
MEAN	64.9	59.8	38.5	86.1	63.7	61.1	94.8	143	51.4	44.4	26.6	18.0
MAX	146	121	50	253	91	228	263	812	124	319	38	31
MIN	39	45	30	48	45	35	49	47	23	18	20	15
CFSM	1.48	1.36	.88	1.96	1.45	1.39	2.16	3.26	1.17	1.01	.61	.41
IN.	1.71	1.52	1.01	2.26	1.51	1.60	2.41	3.76	1.31	1.17	.70	.46

CAL YR 1989 TOTAL 32242 MEAN 88.3 MAX 953 MIN 22 CFSM 2.01 IN. 27.32
WTR YR 1990 TOTAL 22908 MEAN 62.8 MAX 812 MIN 15 CFSM 1.43 IN. 19.41

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.--40 years, 9.09 ft^3/s, 17.39 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 140 ft^3/s (revised) and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 10	2100	*383	*4.19	May 29	1030	357	4.12

Minimum discharge, 0.94 ft^3/s, Sept. 11; minimum daily discharge, 1.6 ft^3/s, Sept. 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	10	8.8	28	13	8.3	19	11	22	3.4	5.3	3.7
2	21	9.6	8.6	15	13	8.4	21	11	19	4.2	4.9	3.5
3	20	10	8.7	13	13	8.9	42	9.8	18	4.4	4.3	2.6
4	16	9.6	8.1	13	17	8.1	26	9.6	16	3.3	3.0	2.2
5	15	9.2	8.2	12	14	7.7	21	42	14	3.4	2.8	3.6
6	14	9.3	8.1	13	13	7.6	19	19	13	6.2	3.0	3.4
7	13	9.3	7.5	12	13	7.1	27	15	13	3.1	2.1	2.9
8	12	10	7.2	17	12	7.1	23	13	12	3.0	2.8	2.8
9	11	16	7.4	20	12	7.5	19	12	12	2.6	3.5	2.9
10	10	16	7.2	17	17	7.5	18	81	12	1.9	5.1	2.9
11	10	14	7.1	15	16	7.2	19	63	11	3.5	6.7	1.8
12	9.7	13	7.3	14	14	7.2	16	24	9.4	6.5	5.1	1.6
13	9.4	12	7.6	12	13	7.1	15	22	8.0	38	4.4	1.6
14	9.0	12	7.0	12	12	7.0	14	25	9.1	10	7.5	3.0
15	8.7	12	7.0	11	12	7.0	16	18	8.4	8.5	5.1	3.5
16	8.4	12	7.5	11	12	6.9	15	16	7.6	7.7	4.6	3.2
17	8.3	11	7.0	11	11	9.7	15	15	7.4	7.0	4.3	3.5
18	8.5	10	6.9	11	10	57	13	14	6.7	6.0	4.1	3.0
19	10	9.6	6.8	10	11	22	12	12	5.6	3.7	3.7	3.0
20	21	10	7.1	9.9	10	20	12	12	6.2	3.2	2.6	2.9
21	18	9.7	6.8	11	9.4	17	13	12	5.8	4.7	3.0	2.8
22	15	8.7	6.3	9.7	9.8	16	12	11	5.3	5.5	4.6	3.0
23	13	9.6	6.0	9.2	10	15	12	10	5.8	4.1	4.6	3.0
24	12	8.5	5.9	9.1	11	14	11	9.6	9.0	2.7	4.2	2.8
25	12	8.5	6.0	13	9.0	14	11	9.2	8.1	3.3	4.1	2.6
26	11	9.6	6.5	20	8.3	13	11	40	6.1	2.0	3.9	2.5
27	11	10	5.9	16	8.6	12	10	20	5.8	2.3	3.8	2.6
28	11	10	6.1	15	8.7	12	10	16	4.6	4.3	3.6	2.5
29	10	9.6	5.9	14	---	11	12	160	3.7	8.6	3.0	2.5
30	9.9	9.2	6.2	16	---	13	13	47	2.1	8.9	5.2	2.6
31	11	---	9.4	14	---	22	---	27	---	6.0	4.0	---
TOTAL	381.9	318.0	222.1	423.9	332.8	388.3	497	806.2	286.7	182.0	128.9	84.5
MEAN	12.3	10.6	7.16	13.7	11.9	12.5	16.6	26.0	9.56	5.87	4.16	2.82
MAX	21	16	9.4	28	17	57	42	160	22	38	7.5	3.7
MIN	8.3	8.5	5.9	9.1	8.3	6.9	10	9.2	2.1	1.9	2.1	1.6
CFSM	1.74	1.49	1.01	1.93	1.67	1.76	2.33	3.66	1.35	.83	.59	.40
IN.	2.00	1.67	1.16	2.22	1.74	2.03	2.60	4.22	1.50	.95	.68	.44

CAL YR 1989 TOTAL 5265.7 MEAN 14.4 MAX 123 MIN 3.1 CFSM 2.03 IN. 27.59
WTR YR 1990 TOTAL 4052.3 MEAN 11.1 MAX 160 MIN 1.6 CFSM 1.56 IN. 21.23

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD

LOCATION.--Lat 38°59'50", long 75°47'10", 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.--42 years, 131 ft^3/s, 15.74 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)
May 11	1915	1,050	6.68	May 30	0900	*1,960	*8.52

Minimum discharge, 14 ft^3/s, Sept. 12, gage height, 2.18 ft; minimum daily discharge, 16 ft^3/s, Sept. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	166	136	129	385	219	110	226	235	428	40	33	27
2	223	139	124	649	197	105	238	200	276	41	30	25
3	390	136	119	353	187	111	372	165	215	39	25	25
4	372	136	115	246	183	114	519	147	185	35	24	24
5	248	132	110	225	192	104	382	167	163	32	23	24
6	195	127	111	214	182	99	281	206	144	42	28	24
7	170	124	108	199	169	96	289	186	134	37	32	24
8	155	125	103	189	161	91	414	154	127	34	28	23
9	143	174	102	241	154	91	342	137	120	33	26	19
10	132	301	105	303	156	97	258	162	117	34	51	19
11	125	281	99	264	188	99	231	766	108	134	76	18
12	119	210	98	221	185	96	226	680	95	95	51	16
13	112	180	104	194	165	95	202	349	84	131	38	18
14	108	164	106	171	154	94	179	256	79	125	184	27
15	103	157	99	158	146	93	183	219	89	150	112	33
16	97	156	99	154	142	90	208	184	94	129	56	26
17	93	165	102	150	145	96	205	166	81	75	43	40
18	95	162	108	146	135	221	189	154	73	60	37	28
19	115	147	92	143	130	322	172	139	70	53	33	24
20	177	138	89	136	128	245	157	126	68	48	35	25
21	298	134	84	134	120	219	154	122	65	54	37	23
22	293	128	73	136	115	198	158	122	61	62	42	23
23	209	126	83	132	121	174	156	112	58	49	48	27
24	173	128	84	126	132	160	146	104	54	43	47	25
25	156	123	85	146	129	156	138	97	50	39	57	23
26	146	127	80	365	110	158	133	134	49	35	32	22
27	138	141	75	520	103	152	130	195	46	31	30	21
28	132	148	73	345	109	140	123	172	41	34	31	21
29	126	146	73	253	---	132	124	549	38	37	29	20
30	121	138	75	243	---	136	175	1700	41	39	33	20
31	124	---	92	253	---	171	---	850	---	34	31	---
TOTAL	5254	4629	2999	7394	4257	4265	6710	8955	3253	1824	1382	714
MEAN	169	154	96.7	239	152	138	224	289	108	58.8	44.6	23.8
MAX	390	301	129	649	219	322	519	1700	428	150	184	40
MIN	93	123	73	126	103	90	123	97	38	31	23	16
CFSM	1.50	1.37	.86	2.11	1.35	1.22	1.98	2.56	.96	.52	.39	.21
IN.	1.73	1.52	.99	2.43	1.40	1.40	2.21	2.95	1.07	.60	.45	.24

CAL YR 1989 TOTAL 79900 MEAN 219 MAX 2160 MIN 41 CFSM 1.94 IN. 26.30
WTR YR 1990 TOTAL 51636 MEAN 141 MAX 1700 MIN 16 CFSM 1.25 IN. 17.00

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, 1990): Maximum daily, 313 microsiemens, Dec. 20, 1987; minimum daily, 40 microsiemens, Jan. 31, 1980.
WATER TEMPERATURE (water years 1975-81, 1985, 1988-90): 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 1982-90.
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.--
SPECIFIC CONDUCTANCE: Maximum daily, 162 microsiemens, Dec. 24; minimum daily, 66 microsiemens, May 30.
WATER TEMPERATURE: Maximum daily, 27.0°C, July 5, 10, 21; minimum daily, 0.0°C, Dec. 10, 15, 17-24.
SEDIMENT CONCENTRATION: Maximum daily mean, 70 mg/L, May 30; minimum daily mean, 1 mg/L, on many days during the year.
SEDIMENT LOAD: Maximum daily, 314 tons, May 30; minimum daily, 0.04 ton, Sept. 12.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	Discharge, instantaneous (ft3/s)	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 (col/ 100 ML)
OCT											
04...	1145	378	105	5.60	16.0	15.0	763	--	7.6	77	--
19...	1215	112	144	5.60	15.0	13.5	761	--	6.2	61	--
NOV											
01...	1100	136	143	6.73	15.0	20.0	769	3.4	7.5	74	200
08...	1200	122	138	5.55	12.5	15.0	757	--	7.6	72	--
*22...	1000	129	133	5.60	4.5	0.0	767	--	10.2	78	--
*22...	1030	129	133	5.60	4.5	0.0	767	--	10.2	78	--
DEC											
06...	1115	112	150	5.47	3.0	7.5	756	--	13.0	98	--
JAN											
02...	1200	678	106	5.27	2.0	11.0	774	--	8.3	59	--
04...	1330	243	112	7.40	2.5	10.0	--	--	9.1	--	--
17...	1045	151	130	6.38	7.5	15.0	772	--	14.9	123	--
26...	1015	328	127	6.31	8.5	4.5	755	--	9.1	78	--
26...	1430	422	124	6.17	8.5	6.0	757	--	9.0	77	--
31...	0830	260	122	7.36	7.0	14.0	771	10	10.6	86	170
FEB											
22...	1025	115	135	6.35	8.0	15.0	767	--	6.3	53	--
APR											
13...	1115	203	114	5.72	9.5	10.0	775	--	10.1	87	--
26...	1100	134	125	7.00	19.0	27.0	662	--	7.2	90	--
30...	1030	162	128	6.22	17.5	15.0	762	--	8.0	83	--
MAY											
03...	1010	167	112	6.33	17.0	21.0	774	5.2	7.3	74	46
*08...	1200	154	113	5.19	18.0	24.0	765	--	8.0	84	--
*08...	1205	154	113	5.19	18.0	24.0	765	--	8.0	84	--
11...	1015	672	89	5.89	15.5	18.0	764	--	5.4	54	--
11...	1430	899	82	6.17	15.5	20.0	764	--	4.2	42	--
12...	0930	1020	72	5.74	15.0	14.0	771	--	6.0	59	--
14...	1015	256	97	5.83	16.0	17.5	768	--	8.5	85	--
22...	1115	125	127	6.16	15.5	14.0	762	--	8.5	85	--
30...	1000	1950	67	5.63	15.0	16.0	758	--	6.7	67	--
30...	1130	794	69	5.27	17.0	22.0	769	--	7.3	74	--
30...	1330	1870	64	6.44	15.5	20.0	759	--	7.8	78	--
JUN											
21...	0930	66	140	5.67	23.0	25.0	764	--	6.4	74	--
JUL											
*18...	1000	61	135	5.98	24.5	29.0	770	--	6.3	75	--
*18...	1005	61	135	5.98	24.5	29.0	770	--	6.3	75	--
AUG											
08...	1230	28	152	6.12	25.0	32.0	767	5.8	6.3	76	120
28...	0930	30	149	6.49	24.0	26.0	759	--	--	--	--
SEP											
21...	1000	24	158	6.05	16.5	19.0	768	--	7.8	79	--

*Note: Duplicate samples collected for quality-assurance purposes.

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	Strep-tococci fecal, KF agar (cols. per 100 ML)	Calcium dis-solved (mg/L as Ca)	Magne-sium, dis-solved (mg/L as Mg)	Sodium, dis-solved (mg/L as Na)	Potas-sium, dis-solved (mg/L as K)	Alka-linity, wat wh tot fet 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)
OCT											
04...	--	--	--	--	--	14	--	--	--	17	--
19...	--	--	--	--	--	28	--	--	--	19	--
NOV											
01...	330	11	3.5	8.0	3.1	19	18	13	0.10	20	86
08...	--	--	--	--	--	17	--	--	--	20	--
22...	--	--	--	--	--	18	--	--	--	22	--
22...	--	--	--	--	--	18	--	--	--	21	--
DEC											
06...	--	--	--	--	--	20	--	--	--	20	--
JAN											
02...	--	--	--	--	--	9	--	--	--	8.0	--
04...	--	--	--	--	--	9	--	--	--	16	--
17...	--	--	--	--	--	12	--	--	--	20	--
26...	--	--	--	--	--	15	--	--	--	15	--
26...	--	--	--	--	--	12	--	--	--	14	--
31...	1000	8.2	2.8	6.6	2.2	14	18	10	<0.10	18	87
FEB											
22...	--	--	--	--	--	16	--	--	--	17	--
APR											
13...	--	--	--	--	--	12	--	--	--	17	--
26...	--	--	--	--	--	17	--	--	--	15	--
30...	--	--	--	--	--	17	--	--	--	15	--
MAY											
03...	38	8.2	2.8	6.9	2.2	15	14	11	<0.10	17	82
08...	--	--	--	--	--	15	--	--	--	19	--
08...	--	--	--	--	--	15	--	--	--	19	--
11...	--	--	--	--	--	12	--	--	--	11	--
11...	--	--	--	--	--	12	--	--	--	9.7	--
12...	--	--	--	--	--	13	--	--	--	9.4	--
14...	--	--	--	--	--	15	--	--	--	16	--
22...	--	--	--	--	--	15	--	--	--	19	--
30...	--	--	--	--	--	15	--	--	--	6.6	--
30...	--	--	--	--	--	--	--	--	--	9.2	--
30...	--	--	--	--	--	8	--	--	--	6.1	--
JUN											
21...	--	--	--	--	--	26	--	--	--	19	--
JUL											
18...	--	--	--	--	--	17	--	--	--	16	--
18...	--	--	--	--	--	17	--	--	--	16	--
AUG											
08...	170	12	3.7	9.0	2.7	26	17	19	<0.10	17	107
28...	--	--	--	--	--	23	--	--	--	17	--
SEP											
21...	--	--	--	--	--	19	--	--	--	11	--

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	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 total (mg/L as N)	Nitrogen, ammonia dissolved (mg/L as N)	Nitrogen, ammonia + organic total (mg/L as N)	Nitrogen, ammonia + organic DIS. (mg/L as N)	Phosphorous total (mg/L as P)	Phosphorous dissolved (mg/L as P)	Phosphorous ortho, dissolved (mg/L as P)
OCT											
04...	--	0.711	0.009	0.720	--	0.060	0.80	1.2	0.080	0.069	0.048
19...	--	0.933	0.007	0.940	--	0.020	0.40	0.40	0.040	0.084	0.018
NOV											
01...	94	1.09	0.006	1.10	0.010	0.020	0.40	0.40	0.040	<0.010	0.005
08...	--	1.09	0.012	1.10	--	0.020	0.40	0.30	0.040	0.027	0.022
22...	--	1.39	0.011	1.40	--	0.040	0.40	0.50	0.050	0.028	0.022
22...	--	1.39	0.013	1.40	--	0.030	0.30	0.50	0.050	0.036	0.020
DEC											
06...	--	1.89	0.007	1.90	--	0.060	0.90	0.60	0.090	0.014	0.013
JAN											
02...	--	1.08	0.021	1.10	--	0.320	1.4	1.1	0.160	0.048	0.029
04...	--	1.38	0.018	1.40	--	0.180	0.80	1.0	0.080	0.029	0.020
17...	--	1.59	0.010	1.60	--	0.060	0.30	0.50	0.030	0.011	0.002
26...	--	1.39	0.014	1.40	--	0.100	0.60	<0.20	0.170	0.106	0.094
26...	--	1.28	0.017	1.30	--	0.110	0.70	0.30	0.090	0.017	0.011
31...	82	1.48	0.017	1.50	0.280	0.260	1.0	0.60	0.130	0.020	0.014
FEB											
22...	--	1.50	0.005	1.50	--	0.050	0.30	0.80	0.050	0.018	0.014
APR											
13...	--	1.08	0.023	1.10	--	0.040	0.40	0.40	0.040	0.014	0.005
26...	--	0.888	0.012	0.900	--	0.040	0.60	0.50	0.050	0.007	0.015
30...	--	0.876	0.024	0.900	--	0.130	0.80	0.60	0.060	0.016	0.026
MAY											
03...	77	0.877	0.023	0.900	0.130	0.150	0.50	0.50	0.070	0.030	0.022
08...	--	1.07	0.028	1.10	--	0.100	0.50	0.70	0.070	0.014	0.009
08...	--	1.06	0.042	1.10	--	0.100	0.50	0.60	0.070	0.041	0.027
11...	--	0.875	0.025	0.900	--	0.240	1.1	<0.20	0.210	0.037	0.028
11...	--	0.773	0.027	0.800	--	0.260	1.4	<0.20	0.250	0.044	0.002
12...	--	0.778	0.022	0.800	--	0.170	1.1	0.40	0.190	0.048	0.032
14...	--	1.08	0.023	1.10	--	0.140	1.0	0.80	0.090	0.057	0.004
22...	--	1.17	0.035	1.20	--	0.080	0.40	0.60	0.070	0.041	0.026
30...	--	1.08	0.022	1.10	--	0.190	1.3	1.0	0.140	0.054	0.028
30...	--	0.982	0.018	1.00	--	0.110	0.90	1.0	0.110	0.054	0.029
30...	--	0.977	0.023	1.00	--	0.200	1.4	1.1	0.190	0.056	0.030
JUN											
21...	--	1.29	0.011	1.30	--	0.060	0.50	0.70	0.080	0.047	0.036
JUL											
18...	--	1.28	0.018	1.30	--	0.030	0.50	0.70	0.070	--	--
18...	--	1.28	0.017	1.30	--	0.010	0.50	0.40	0.070	0.035	0.022
AUG											
08...	103	1.38	0.017	1.40	0.040	0.030	0.40	0.50	0.060	0.040	0.032
28...	--	1.68	0.018	1.70	--	0.050	0.40	0.40	0.050	0.039	0.032
SEP											
21...	--	1.49	0.011	1.50	--	<0.010	0.60	0.50	0.040	0.026	0.021

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

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											
04...	80	--	--	--	--	--	--	--	--	--	--
19...	30	--	--	--	--	--	--	--	--	--	--
NOV											
01...	30	<1	73	<0.5	<1	<1	<3	1	700	<1	<4
08...	20	--	--	--	--	--	--	--	--	--	--
22...	30	--	--	--	--	--	--	--	--	--	--
22...	20	--	--	--	--	--	--	--	--	--	--
DEC											
06...	30	--	--	--	--	--	--	--	--	--	--
JAN											
02...	90	--	--	--	--	--	--	--	--	--	--
04...	70	--	--	--	--	--	--	--	--	--	--
17...	20	--	--	--	--	--	--	--	--	--	--
26...	40	--	--	--	--	--	--	--	--	--	--
26...	40	--	--	--	--	--	--	--	--	--	--
31...	120	<1	61	<0.5	<1	<1	<3	<10	350	<10	<4
FEB											
22...	20	--	--	--	--	--	--	--	--	--	--
APR											
13...	30	--	--	--	--	--	--	--	--	--	--
26...	60	--	--	--	--	--	--	--	--	--	--
30...	40	--	--	--	--	--	--	--	--	--	--
MAY											
03...	70	<1	66	<0.5	1	1	<3	4	1400	<1	<4
08...	20	--	--	--	--	--	--	--	--	--	--
08...	20	--	--	--	--	--	--	--	--	--	--
11...	90	--	--	--	--	--	--	--	--	--	--
11...	90	--	--	--	--	--	--	--	--	--	--
12...	140	--	--	--	--	--	--	--	--	--	--
14...	240	--	--	--	--	--	--	--	--	--	--
22...	20	--	--	--	--	--	--	--	--	--	--
30...	190	--	--	--	--	--	--	--	--	--	--
30...	200	--	--	--	--	--	--	--	--	--	--
30...	110	--	--	--	--	--	--	--	--	--	--
JUN											
21...	30	--	--	--	--	--	--	--	--	--	--
JUL											
18...	40	--	--	--	--	--	--	--	--	--	--
18...	40	--	--	--	--	--	--	--	--	--	--
AUG											
08...	<10	<1	73	<0.5	<1	<1	<3	1	490	<1	<4
28...	10	--	--	--	--	--	--	--	--	--	--
SEP											
21...	10	--	--	--	--	--	--	--	--	--	--

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

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)	Hardness total (mg/L as CaCO3)
OCT											
04...	--	--	--	--	--	--	--	--	--	9.6	--
19...	--	--	--	--	--	--	--	--	--	5.8	--
NOV											
01...	67	<0.1	<10	2	<1	<1.0	100	<6	<3	5.3	42
08...	--	--	--	--	--	--	--	--	--	4.7	--
22...	--	--	--	--	--	--	--	--	--	4.6	--
22...	--	--	--	--	--	--	--	--	--	4.6	--
DEC											
06...	--	--	--	--	--	--	--	--	--	3.9	--
JAN											
02...	--	--	--	--	--	--	--	--	--	10	--
04...	--	--	--	--	--	--	--	--	--	7.3	--
17...	--	--	--	--	--	--	--	--	--	3.5	--
26...	--	--	--	--	--	--	--	--	--	6.8	--
26...	--	--	--	--	--	--	--	--	--	7.8	--
31...	32	<0.1	<10	<10	<1	<1.0	74	<6	15	6.0	32
FEB											
22...	--	--	--	--	--	--	--	--	--	3.5	--
APR											
13...	--	--	--	--	--	--	--	--	--	6.3	--
26...	--	--	--	--	--	--	--	--	--	5.9	--
30...	--	--	--	--	--	--	--	--	--	8.2	--
MAY											
03...	86	<0.1	<10	4	<1	<1.0	83	<6	7	8.9	32
08...	--	--	--	--	--	--	--	--	--	7.5	--
08...	--	--	--	--	--	--	--	--	--	7.4	--
11...	--	--	--	--	--	--	--	--	--	12	--
11...	--	--	--	--	--	--	--	--	--	11	--
12...	--	--	--	--	--	--	--	--	--	13	--
14...	--	--	--	--	--	--	--	--	--	11	--
22...	--	--	--	--	--	--	--	--	--	5.0	--
30...	--	--	--	--	--	--	--	--	--	14	--
30...	--	--	--	--	--	--	--	--	--	15	--
30...	--	--	--	--	--	--	--	--	--	13	--
JUN											
21...	--	--	--	--	--	--	--	--	--	4.4	--
JUL											
18...	--	--	--	--	--	--	--	--	--	5.8	--
18...	--	--	--	--	--	--	--	--	--	6.0	--
AUG											
08...	68	<0.1	<10	2	<1	<1.0	120	<6	5	4.0	45
28...	--	--	--	--	--	--	--	--	--	3.9	--
SEP											
21...	--	--	--	--	--	--	--	--	--	3.4	--

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

DATE	TIME	Discharge, instantaneous (ft3/s)	Sediment, suspended (mg/L)	Sediment, discharge, suspended (T/DAY)	Sed. susp. sieve diam. % finer than .062 MM
OCT					
04...	1145	378	11	11	--
19...	1215	112	10	3.0	--
NOV					
01...	1100	136	3	1.1	100
08...	1200	122	11	3.6	--
22...	1000	129	7	2.4	--
DEC					
06...	1115	112	3	0.91	--
JAN					
02...	1200	678	41	75	--
04...	1330	243	13	8.5	--
17...	1045	151	3	1.2	--
26...	1015	328	22	19	--
26...	1430	422	21	24	--
31...	0830	260	7	4.9	100
FEB					
22...	1025	115	3	0.93	--
APR					
13...	1115	203	4	2.2	--
26...	1100	134	4	1.4	--
30...	1030	162	10	4.4	--
MAY					
03...	1010	167	5	2.3	77
08...	1200	154	6	2.5	--
08...	1205	154	7	2.9	--
11...	1015	672	55	100	--
11...	1430	899	79	192	--
12...	0930	1020	48	132	--
14...	1015	256	11	7.6	--
22...	1115	125	6	2.0	--
30...	1000	1950	76	400	--
30...	1130	794	23	49	--
JUN					
21...	0930	66	5	0.89	--
JUL					
18...	1000	61	5	0.82	--
18...	1005	61	6	0.98	--
AUG					
08...	1230	28	6	0.45	--
28...	0930	30	5	0.41	--
SEP					
21...	1000	24	5	0.32	--

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	134	113	117	137	---	121	84	149	151	148
2	---	---	---	104	118	134	117	111	95	153	153	150
3	---	139	136	102	124	138	114	114	106	153	157	149
4	106	138	136	112	124	135	96	118	113	161	153	152
5	---	139	140	118	125	138	98	117	119	155	151	152
6	---	139	140	---	126	137	102	119	123	154	156	150
7	---	140	140	122	125	139	105	113	126	---	152	---
8	---	140	140	124	125	---	105	114	126	157	152	151
9	---	137	---	124	126	137	99	117	129	154	---	---
10	---	129	142	124	127	138	105	121	129	156	138	155
11	---	123	---	---	129	138	109	89	130	138	147	156
12	---	122	142	122	128	138	---	78	133	156	---	155
13	---	138	---	121	125	138	115	---	135	133	150	155
14	---	126	142	---	126	136	115	98	134	133	97	---
15	---	130	148	125	128	137	118	105	134	115	129	155
16	142	133	148	126	130	136	119	111	135	117	132	155
17	143	131	152	126	---	138	115	116	134	128	135	144
18	148	135	155	128	130	125	115	119	136	133	137	151
19	144	135	157	130	130	121	118	122	---	138	137	156
20	141	134	156	---	131	113	119	124	138	139	141	156
21	127	138	156	130	134	---	121	126	140	139	138	157
22	---	133	159	132	134	114	124	128	141	---	149	156
23	125	134	161	131	134	116	---	131	144	---	144	154
24	127	138	162	135	134	118	123	131	140	144	148	158
25	131	138	---	131	134	121	124	132	143	145	153	155
26	133	140	---	121	135	---	124	123	145	148	158	154
27	137	---	---	104	136	122	126	---	145	148	149	154
28	137	---	153	104	137	123	125	125	150	148	150	157
29	137	136	151	112	---	123	126	102	---	147	150	157
30	145	136	147	112	---	---	127	66	149	151	150	---
31	138	---	144	117	---	125	---	67	---	150	148	---

WATER TEMPERATURE, DEGREES CELSIUS
INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.0	---	5.0	2.0	7.0	5.0	---	17.0	17.5	26.5	23.5	23.0
2	18.0	---	---	1.0	9.0	5.0	10.0	18.5	19.5	24.5	23.0	24.0
3	19.5	12.5	4.0	1.0	10.0	7.0	11.0	17.5	22.5	23.0	25.0	24.0
4	16.0	10.5	1.0	1.0	9.0	7.0	10.0	15.5	23.0	25.5	23.0	23.0
5	14.0	10.0	1.5	4.5	6.5	5.5	12.0	15.0	19.0	27.0	23.0	23.5
6	15.0	11.0	4.0	---	5.5	7.0	11.0	15.0	18.0	25.5	25.0	24.0
7	16.0	12.0	4.5	3.0	7.0	5.0	8.0	15.0	20.5	---	25.0	---
8	14.0	12.5	3.0	4.0	7.0	---	7.0	17.0	21.0	25.0	25.5	22.5
9	13.0	15.0	---	2.0	9.0	7.0	9.0	19.0	23.0	24.5	---	---
10	11.0	12.5	.0	5.0	11.0	9.0	12.5	20.0	24.0	27.0	23.0	22.0
11	12.5	10.0	---	---	8.0	10.0	15.0	16.0	22.0	25.5	24.0	21.0
12	14.0	11.0	1.5	5.0	8.0	12.0	---	15.5	21.5	25.5	---	22.0
13	15.0	10.0	---	3.0	6.5	15.5	10.0	---	21.0	22.5	25.5	22.0
14	16.5	14.0	1.0	---	9.5	17.0	13.5	17.0	21.0	23.0	23.5	---
15	18.0	15.0	.0	3.0	10.0	19.0	16.0	19.0	20.5	25.0	23.5	22.0
16	18.0	16.0	.5	4.0	12.0	20.0	17.5	20.0	22.0	25.5	24.0	20.5
17	19.5	11.0	.0	6.0	---	19.5	16.0	22.0	23.5	25.0	24.0	19.0
18	19.0	8.5	.0	8.0	7.5	16.0	15.0	20.5	24.0	26.5	24.5	19.0
19	15.0	6.0	.0	8.5	19.0	14.0	15.0	20.0	---	25.5	25.0	15.0
20	15.0	8.0	.0	---	7.5	11.0	15.0	21.0	24.0	26.5	23.5	16.5
21	12.5	7.5	.0	8.5	6.0	---	15.5	19.0	23.0	27.0	21.5	18.0
22	---	4.5	.0	7.0	5.5	10.0	18.0	19.0	25.0	---	21.0	17.0
23	13.0	2.0	.0	8.0	12.0	12.0	---	15.0	24.5	---	21.0	16.0
24	11.0	2.0	.0	8.5	10.5	9.0	18.0	16.0	24.0	26.5	22.0	15.5
25	11.0	3.0	---	10.0	5.0	8.0	18.0	17.0	22.5	25.0	22.0	15.0
26	12.0	6.0	---	9.0	1.0	---	19.5	18.0	23.0	25.0	23.0	15.0
27	13.0	---	---	6.5	.5	8.0	22.0	---	23.5	25.0	24.0	15.0
28	15.0	---	.5	7.0	4.0	8.0	23.0	17.0	25.0	25.0	25.0	15.5
29	15.0	8.0	.5	65.0	---	10.0	22.5	17.0	---	24.5	25.0	16.0
30	15.0	5.0	.5	7.5	---	---	18.0	15.0	26.5	24.0	25.0	---
31	17.0	---	2.0	7.0	---	9.0	---	16.0	---	24.0	24.0	---

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

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	2.2	3	1.1	3	1.0	28	36	8	4.7	3	.89
2	5	3.0	4	1.5	2	.67	43	78	5	2.7	5	1.4
3	8	8.4	4	1.5	2	.64	17	16	5	2.5	9	2.7
4	10	10	4	1.5	2	.62	10	6.6	4	2.0	6	1.8
5	5	3.3	5	1.8	1	.30	5	3.0	5	2.6	4	1.1
6	4	2.1	4	1.4	2	.60	4	2.3	5	2.5	4	1.1
7	4	1.8	3	1.0	2	.58	3	1.6	5	2.3	7	1.8
8	3	1.3	4	1.3	1	.28	2	1.0	5	2.2	6	1.5
9	2	.77	8	3.8	2	.55	4	2.6	4	1.7	5	1.2
10	4	1.4	13	11	2	.57	11	9.0	5	2.1	3	.79
11	4	1.3	11	8.3	2	.53	13	9.3	5	2.5	3	.80
12	3	.96	8	4.5	2	.53	9	5.4	6	3.0	3	.78
13	3	.91	8	3.9	2	.56	5	2.6	6	2.7	3	.77
14	3	.87	4	1.8	3	.86	5	2.3	4	1.7	3	.76
15	3	.83	4	1.7	2	.53	5	2.1	5	2.0	3	.75
16	1	.26	2	.84	3	.80	4	1.7	5	1.9	3	.73
17	1	.25	1	.45	4	1.1	4	1.6	5	2.0	4	1.0
18	1	.26	2	.87	4	1.2	5	2.0	3	1.1	13	8.5
19	2	.62	2	.79	4	.99	4	1.5	3	1.1	17	15
20	4	1.9	1	.37	2	.48	4	1.5	2	.69	8	5.3
21	9	7.2	1	.36	3	.68	4	1.4	2	.65	7	4.1
22	8	6.3	3	1.0	2	.39	6	2.2	3	.93	7	3.7
23	4	2.3	3	1.0	1	.22	6	2.1	2	.65	4	1.9
24	4	1.9	2	.69	2	.45	5	1.7	3	1.1	3	1.3
25	4	1.7	1	.33	2	.46	8	3.2	3	1.0	3	1.3
26	4	1.6	1	.34	2	.43	24	27	3	.89	3	1.3
27	3	1.1	2	.76	1	.20	33	46	4	1.1	3	1.2
28	3	1.1	4	1.6	1	.20	18	17	4	1.2	4	1.5
29	3	1.0	4	1.6	1	.20	10	6.8	---	---	3	1.1
30	2	.65	4	1.5	2	.40	8	5.2	---	---	3	1.1
31	3	1.0	---	---	3	.75	9	6.1	---	---	6	2.8
TOTAL	---	68.28	---	58.60	---	17.77	---	291.8	---	51.51	---	69.97
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6	3.7	10	6.3	15	17	4	.43	4	.36	2	.15
2	6	3.9	10	5.4	14	10	7	.77	4	.32	1	.07
3	20	21	7	3.1	12	7.0	3	.32	3	.20	2	.13
4	25	36	7	2.8	10	5.0	6	.57	3	.19	1	.06
5	12	12	10	4.5	7	3.1	5	.43	1	.06	1	.06
6	8	6.1	9	5.0	6	2.3	9	1.0	6	.45	1	.06
7	7	5.5	9	4.5	8	2.9	9	.90	6	.52	1	.06
8	9	10	7	2.9	7	2.4	6	.55	5	.38	1	.06
9	9	8.3	5	1.8	5	1.6	4	.36	4	.28	1	.05
10	5	3.5	8	3.5	6	1.9	8	.73	9	1.2	1	.05
11	5	3.1	60	140	6	1.7	17	6.2	9	1.8	1	.05
12	5	3.1	40	81	4	1.0	11	2.8	6	.83	1	.04
13	5	2.7	16	15	5	1.1	12	4.2	5	.51	1	.05
14	4	1.9	13	9.0	5	1.1	12	4.0	29	15	3	.22
15	4	2.0	12	7.1	8	1.9	18	7.3	9	2.7	2	.18
16	5	2.8	11	5.5	7	1.8	14	4.9	5	.76	1	.07
17	6	3.3	9	4.0	5	1.1	8	1.6	5	.58	2	.22
18	5	2.6	8	3.3	5	.99	6	.97	5	.50	1	.08
19	6	2.8	8	3.0	5	.94	6	.86	6	.53	1	.06
20	5	2.1	9	3.1	4	.73	5	.65	5	.47	1	.07
21	6	2.5	8	2.6	5	.88	6	.87	4	.40	2	.12
22	6	2.6	6	2.0	5	.82	7	1.2	7	.79	1	.06
23	6	2.5	6	1.8	6	.94	6	.79	6	.78	2	.15
24	6	2.4	5	1.4	4	.58	6	.70	4	.51	1	.07
25	5	1.9	6	1.6	4	.54	5	.53	5	.77	1	.06
26	5	1.8	11	4.0	4	.53	3	.28	4	.35	1	.06
27	4	1.4	15	7.9	3	.37	4	.33	5	.40	1	.06
28	6	2.0	9	4.2	3	.33	5	.46	4	.33	1	.06
29	5	1.7	68	156	2	.21	5	.50	2	.16	1	.05
30	9	4.3	70	314	2	.22	4	.42	3	.27	1	.05
31	---	---	25	60	---	---	4	.37	2	.17	---	---
TOTAL	---	159.5	---	866.3	---	70.98	---	45.99	---	32.57	---	2.53

TOTAL LOAD FOR YEAR: 1735.80 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.--42 years, 24.8 ft^3/s, 15.10 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)
Jan. 1	1730	200	3.48	May 30	0230	*403	*4.40

Minimum discharge, 0.48 ft^3/s, Feb. 9, 10, gage height, 1.66 ft; minimum daily discharge, 0.87 ft^3/s, Feb. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	34	25	102	42	23	42	37	51	14	13	13
2	70	29	24	109	40	23	45	28	37	17	12	12
3	107	30	23	55	39	24	77	23	33	15	11	12
4	58	29	33	42	39	23	76	22	29	14	9.6	12
5	39	27	34	40	39	21	51	45	26	12	11	11
6	33	27	33	37	42	21	38	39	24	11	17	11
7	31	26	32	33	44	20	57	27	23	11	22	11
8	28	32	22	33	42	20	68	22	21	13	14	11
9	27	54	15	43	26	20	44	19	23	16	14	11
10	26	54	16	52	.87	23	35	36	23	28	39	11
11	25	40	16	43	34	22	35	79	21	62	76	11
12	24	33	17	36	34	21	33	43	20	27	24	11
13	24	30	17	33	31	21	28	33	19	47	20	11
14	24	29	17	33	29	20	26	38	19	25	48	14
15	22	32	19	31	28	19	41	28	26	22	27	13
16	22	32	21	31	29	19	44	24	21	23	19	13
17	23	34	20	31	28	26	35	23	19	17	17	16
18	25	30	23	31	26	68	32	20	18	16	16	12
19	38	27	23	29	26	55	28	18	20	14	18	12
20	54	26	23	25	25	47	26	18	18	13	16	12
21	80	25	22	25	24	46	28	18	17	16	17	11
22	52	24	22	29	25	37	31	19	17	15	21	15
23	39	26	21	31	27	30	27	17	17	14	21	15
24	33	25	20	30	30	27	25	17	16	13	20	12
25	30	25	19	32	26	29	25	16	15	12	18	13
26	29	29	19	105	23	30	23	39	15	11	17	11
27	27	33	18	104	22	26	21	41	15	11	16	12
28	26	31	15	61	23	24	20	28	15	11	16	11
29	25	29	12	51	---	22	24	121	13	14	15	11
30	25	26	12	52	---	26	43	309	12	16	16	11
31	31	---	13	47	---	41	---	106	---	14	14	---
TOTAL	1123	928	646	1436	843.87	874	1128	1353	643	564	634.6	362
MEAN	36.2	30.9	20.8	46.3	30.1	28.2	37.6	43.6	21.4	18.2	20.5	12.1
MAX	107	54	34	109	44	68	77	309	51	62	76	16
MIN	22	24	12	25	.87	19	20	16	12	11	9.6	11
CFSM	1.62	1.39	.93	2.08	1.35	1.26	1.69	1.96	.96	.82	.92	.54
IN.	1.87	1.55	1.08	2.40	1.41	1.46	1.88	2.26	1.07	.94	1.06	.60

CAL YR 1989 TOTAL 14185.7 MEAN 38.9 MAX 252 MIN 6.7 CFSM 1.74 IN. 23.66
WTR YR 1990 TOTAL 10535.47 MEAN 28.9 MAX 309 MIN .87 CFSM 1.29 IN. 17.57

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.--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, 10.6 ft^3/s, 11.33 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)
May 29	2000	*359	*5.34	Aug. 14	0715	255	4.62
July 13	0745	266	4.71				

Minimum discharge, 5.2 ft^3/s, Sept. 28; minimum daily discharge, 5.4 ft^3/s, Sept. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.9	16	8.3	86	11	9.2	13	13	10	6.2	6.6	5.8
2	71	11	8.4	28	10	8.8	11	9.9	8.5	6.5	6.3	5.8
3	64	12	8.3	13	10	9.5	35	8.8	7.9	6.5	5.9	5.9
4	15	11	7.4	12	14	8.6	18	9.1	7.2	6.3	6.0	6.1
5	8.8	10	8.4	14	11	8.0	11	16	6.4	6.4	6.2	6.1
6	8.1	9.7	9.0	12	10	8.2	9.7	12	6.3	6.4	27	6.1
7	8.3	9.6	8.8	10	9.9	7.9	23	9.3	6.5	6.2	50	6.2
8	7.9	16	7.8	13	9.7	7.9	16	8.4	7.3	6.2	15	6.0
9	7.8	33	9.0	25	9.7	8.6	10	8.1	7.9	9.0	7.5	5.9
10	7.6	22	8.7	23	14	11	8.8	28	7.5	17	11	6.3
11	7.8	12	8.4	12	14	8.9	9.2	50	6.9	31	9.9	5.5
12	7.8	9.9	8.9	10	11	9.7	8.6	14	6.7	25	7.3	5.6
13	7.8	9.4	10	9.2	10	9.3	8.1	10	7.0	154	19	5.7
14	7.8	9.4	9.0	8.6	9.8	9.0	9.4	9.5	7.1	39	145	6.2
15	8.1	10	8.5	8.9	9.5	8.7	22	7.6	47	15	21	6.1
16	7.9	12	8.9	8.8	10	9.1	16	6.9	20	9.0	8.8	6.9
17	16	10	8.0	8.8	9.8	18	10	7.5	8.7	7.4	7.6	8.0
18	23	8.7	7.9	9.2	8.7	35	9.2	8.7	7.4	6.6	7.2	6.4
19	41	8.5	7.4	8.7	8.8	14	8.6	7.3	6.4	6.1	7.0	5.9
20	59	9.1	7.9	8.8	8.7	12	8.3	6.8	6.3	5.8	7.6	6.1
21	48	8.7	7.7	10	8.4	10	11	7.2	6.9	6.2	8.3	5.9
22	18	8.3	7.2	9.1	9.0	9.4	11	7.4	7.3	6.3	17	9.7
23	12	10	6.9	8.6	11	8.8	9.9	7.0	7.6	6.3	18	9.0
24	10	10	7.0	8.9	12	9.6	8.9	6.7	6.8	6.0	16	6.6
25	9.8	10	7.4	31	9.2	12	8.1	6.8	6.5	5.9	9.0	5.6
26	9.7	12	7.5	90	7.5	10	8.0	27	6.6	5.7	8.1	5.4
27	9.6	11	7.5	33	8.0	8.6	7.8	33	6.5	5.7	7.8	5.6
28	9.6	10	7.7	16	9.2	8.3	7.8	9.3	6.6	6.0	7.3	5.5
29	9.5	9.2	7.6	13	---	8.2	12	152	6.4	8.5	6.9	5.5
30	9.5	8.7	8.4	24	---	10	15	108	6.0	9.0	6.5	5.5
31	17	---	12	13	---	19	---	22	---	7.3	6.0	---
TOTAL	555.3	347.2	255.9	585.6	283.9	335.3	364.4	637.3	266.2	448.5	492.8	186.9
MEAN	17.9	11.6	8.25	18.9	10.1	10.8	12.1	20.6	8.87	14.5	15.9	6.23
MAX	71	33	12	90	14	35	35	152	47	154	145	9.7
MIN	7.6	8.3	6.9	8.6	7.5	7.9	7.8	6.7	6.0	5.7	5.9	5.4
CFSM	1.41	.91	.65	1.49	.80	.85	.96	1.62	.70	1.14	1.25	.49
IN.	1.63	1.02	.75	1.72	.83	.98	1.07	1.87	.78	1.31	1.44	.55

CAL YR 1989 TOTAL 5931.5 MEAN 16.3 MAX 297 MIN 4.9 CFSM 1.28 IN. 17.37
WTR YR 1990 TOTAL 4759.3 MEAN 13.0 MAX 154 MIN 5.4 CFSM 1.03 IN. 13.94

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 68.69 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.--58 years, 69.3 ft^3/s, 17.89 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)
May 29	1430	*2,010	*6.01	No other peak greater than base discharge.			

Minimun discharge, 27 ft^3/s, gage height, 2.45 ft, Aug. 4, 5; minimum daily discharge, 28 ft^3/s, Aug. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	69	67	e382	96	69	69	64	78	41	33	38
2	271	61	66	138	90	66	78	57	70	40	30	36
3	107	66	66	87	88	68	194	53	86	40	29	47
4	68	63	65	84	108	64	97	58	93	39	28	36
5	60	60	65	75	88	61	89	144	65	88	32	34
6	59	60	65	70	80	62	78	70	61	63	111	34
7	59	60	65	73	78	59	112	59	60	42	102	34
8	54	66	63	78	75	58	91	55	58	40	43	33
9	53	106	e64	140	73	61	74	52	76	43	61	31
10	52	82	e64	180	162	65	71	365	64	48	117	33
11	57	63	e66	117	113	63	89	189	53	59	96	32
12	53	60	69	78	86	62	75	89	51	46	51	32
13	51	58	68	64	79	60	67	107	50	148	42	32
14	50	58	65	59	77	58	65	117	51	89	58	34
15	50	62	65	61	74	58	173	80	255	61	40	37
16	50	87	58	63	75	58	95	73	82	66	37	34
17	68	79	e56	62	72	74	79	76	63	50	36	37
18	76	63	e56	64	66	130	75	69	59	45	35	33
19	212	60	e54	60	69	73	68	61	79	42	34	33
20	445	60	e54	69	65	71	65	59	58	40	34	40
21	146	65	e52	98	63	67	69	63	57	40	37	34
22	86	65	e50	72	71	63	67	62	57	40	59	86
23	72	73	e48	61	107	61	63	58	61	39	81	62
24	68	70	e45	58	101	60	60	55	52	36	47	38
25	65	72	e43	213	77	63	59	53	47	35	43	35
26	63	81	e43	497	64	60	58	133	46	33	40	33
27	61	80	e41	138	70	57	56	90	45	33	38	33
28	61	79	e43	95	68	56	54	66	44	33	36	32
29	60	71	e43	103	---	57	58	658	43	34	153	31
30	59	67	e55	419	---	69	71	333	42	33	148	31
31	65	---	e80	114	---	80	---	99	---	33	45	---
TOTAL	2753	2066	1804	3872	2335	2033	2419	3567	2006	1519	1776	1115
MEAN	88.8	68.9	58.2	125	83.4	65.6	80.6	115	66.9	49.0	57.3	37.2
MAX	445	106	80	497	162	130	194	658	255	148	153	86
MIN	50	58	41	58	63	56	54	52	42	33	28	31
CFSM	1.69	1.31	1.11	2.37	1.59	1.25	1.53	2.19	1.27	.93	1.09	.71
IN.	1.95	1.46	1.28	2.74	1.65	1.44	1.71	2.52	1.42	1.07	1.26	.79

CAL YR 1989 TOTAL 35167 MEAN 96.3 MAX 2270 MIN 36 CFSM 1.83 IN. 24.87
WTR YR 1990 TOTAL 27265 MEAN 74.7 MAX 658 MIN 28 CFSM 1.42 IN. 19.28

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. Interruption of the daily specific conductance record was caused by buildup of sediment at the probe. 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 years 1982-85, 1987-89): Maximum, 19,900 microsiemens, Oct. 26, 1982; minimum, 117 microsiemens, July 21-23, 28, 1984.
WATER TEMPERATURE (water years 1982-85, 1987-90): Maximum, 33.0°C, Aug. 6, 1988; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 30.1°C, July 23; minimum, 0.2°C, Dec. 3, 4, 8, 9, 10.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	4360	3980	4170	2130	1840	2020	727	609	662	5360	5080	5190
2	4340	4020	4190	1920	1550	1740	746	e413	e533	5170	e4820	e5010
3	4380	4160	4270	1790	1710	1750	746	452	573	4830	e4330	e4550
4	4300	3820	4020	1870	1730	1800	531	491	509	4330	4020	4180
5	3860	2080	2860	1870	1730	1780	531	491	512	4020	3670	3840
6	2540	2000	2260	1750	1540	1630	491	275	385	3680	3460	3570
7	2210	1940	2040	1640	1290	1440	294	216	248	3460	3230	3360
8	2190	1920	2090	1420	1230	1320	334	275	305	3230	3080	3180
9	2090	1670	1820	1350	1160	1240	550	314	380	3100	3020	3060
10	1980	1810	1900	1270	668	1130	1790	550	1210	3100	2990	3050
11	2090	1740	1880	1000	668	798	2330	1790	2070	---	---	---
12	2090	1810	1910	923	531	666	2750	2330	2440	---	---	---
13	2160	1780	1930	1080	668	798	3810	2750	3060	---	---	---
14	2070	1920	2020	844	609	680	4690	3810	4350	---	---	---
15	2020	1850	1940	746	531	656	4620	3830	4140	---	---	---
16	2100	1830	1910	648	491	552	3870	e3270	e3600	---	---	---
17	1980	1810	1880	883	373	585	3270	2640	2920	---	---	---
18	1850	1390	1680	511	392	437	2640	2290	2460	---	---	---
19	7900	1850	4220	511	392	464	2310	1690	2100	---	---	---
20	7910	7210	7480	491	314	401	2020	1160	1720	---	---	---
21	7660	5420	6540	392	294	348	1920	1270	1800	---	---	---
22	5420	3190	3890	550	373	477	1850	1270	1780	---	---	---
23	4530	3260	3570	805	550	702	1870	1750	1830	---	---	---
24	4530	2840	3500	1250	785	971	3540	1750	2050	---	---	---
25	3220	2430	2910	1370	1250	1320	8930	3540	6520	---	---	---
26	2750	2210	2510	1350	1230	1280	9450	8850	9250	---	---	---
27	2470	1990	2190	1270	1160	1210	8850	6930	7550	---	---	---
28	2240	2010	2110	1190	883	1120	6930	5960	6420	---	---	---
29	2120	1910	2050	883	e727	e789	5970	5390	5660	---	---	---
30	2130	1830	2010	746	707	732	5430	4030	5180	---	---	---
31	2370	1650	2060	---	---	---	5150	4990	5070	---	---	---
MONTH	7910	1390	2900	2130	294	1030	9450	216	2820	---	---	---

e Estimated

01495900 ELK RIVER NEAR TOWN POINT, MD--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	---	---	---	2010	e1640	e1860
2	---	---	---	---	---	---	---	---	---	1810	1450	1630
3	---	---	---	---	---	---	---	---	---	1690	1520	1600
4	---	---	---	---	---	---	---	---	---	1650	1570	1630
5	---	---	---	---	---	---	---	---	---	1790	1630	1710
6	---	---	---	---	---	---	1060	860	934	1820	1630	1690
7	---	---	---	---	---	---	939	859	887	2570	1760	2110
8	---	---	---	---	---	---	938	879	908	1890	1640	1790
9	---	---	---	---	---	---	937	777	856	1790	1580	1710
10	---	---	---	---	---	---	797	338	602	1640	880	1360
11	---	---	---	---	---	---	577	298	376	1040	404	647
12	---	---	---	---	---	---	418	238	341	640	462	562
13	---	---	---	---	---	---	477	317	384	561	384	490
14	---	---	---	---	---	---	356	277	313	541	384	486
15	---	---	---	---	---	---	336	256	281	502	425	459
16	---	---	---	---	---	---	335	236	272	444	405	433
17	---	---	---	---	---	---	315	e216	e234	484	347	430
18	---	---	---	---	---	---	236	e197	e192	445	269	355
19	---	---	---	---	---	---	294	216	262	328	289	310
20	---	---	---	---	---	---	255	216	222	348	309	319
21	---	---	---	---	---	---	255	196	222	348	309	334
22	---	---	---	---	---	---	292	215	260	705	348	562
23	---	---	---	---	---	---	273	214	221	645	505	582
24	---	---	---	---	---	---	214	e194	e203	566	486	527
25	---	---	---	---	---	---	913	214	548	727	546	609
26	---	---	---	---	---	---	1320	e466	e1020	708	607	663
27	---	---	---	---	---	---	1420	e891	e1250	768	667	726
28	---	---	---	---	---	---	1610	1120	1370	889	728	794
29	---	---	---	---	---	---	1570	1220	1410	909	769	822
30	---	---	---	---	---	---	2690	1490	2210	930	789	879
31	---	---	---	---	---	---	---	---	---	991	830	903
MONTH	---	---	---	---	---	---	---	---	---	2570	269	935

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	991	771	859	457	417	422	4400	4080	4180	2520	e2160	e2390
2	811	510	648	497	417	448	4660	4200	4430	2460	2150	2200
3	570	312	421	1770	497	852	4420	3680	4040	2170	2090	2120
4	432	293	339	658	336	474	3800	3400	3620	3230	2090	2480
5	372	e273	e306	417	316	364	3560	3180	3440	3450	2610	3020
6	392	273	319	356	316	335	3440	3000	3350	2890	2450	2640
7	293	253	273	1830	336	907	3380	3280	3330	2590	2330	2480
8	294	234	266	1020	739	842	3400	3300	3360	3510	2310	2620
9	274	234	251	840	437	653	3560	3220	3340	5070	3170	3940
10	274	234	258	517	376	465	5820	3240	4070	3970	3170	3460
11	294	e234	e266	437	396	418	6140	4340	4890	3470	2950	3090
12	1360	234	671	2090	396	1030	5660	4420	4830	3390	3050	3180
13	1860	957	1410	5480	981	2300	5080	4200	4560	3290	3030	3150
14	1200	957	1060	6600	4960	5740	4640	2860	3270	3090	2810	2910
15	998	898	940	6160	3480	4320	3600	3080	3270	2870	2630	2720
16	958	838	895	3480	2150	2710	3200	2360	2790	2670	2370	2490
17	959	859	895	2700	2130	2360	2740	2360	2590	2550	2350	2470
18	922	638	838	2330	1950	2140	2640	2240	2460	3290	2370	2790
19	740	638	692	2070	1610	1850	2460	2000	2240	3130	2770	2910
20	679	598	649	1830	1410	1620	3000	2080	2360	2970	2430	2680
21	780	618	707	1570	1310	1440	5740	3000	4810	2930	2350	2540
22	800	659	723	1470	1370	1410	6970	5300	6090	2610	2010	2390
23	841	659	741	1550	1390	1480	7350	6530	7010	2130	1730	1970
24	780	679	739	1690	1410	1500	6990	5900	6530	2030	1430	1660
25	739	679	706	3710	1530	2240	5900	5290	5700	1590	1290	1390
26	739	638	681	4720	2380	3160	5290	4320	4710	1410	933	1070
27	719	659	683	5640	3750	4460	4580	3600	4090	1600	914	993
28	659	517	601	5860	4300	4850	4180	3180	3550	1540	1160	1240
29	557	457	504	6300	5660	5960	3540	2460	2840	1240	1080	1150
30	497	457	463	6560	4960	5540	2600	e2420	e2500	1160	1060	1100
31	---	---	---	5540	4120	4690	2720	e2520	e2650	---	---	---
MONTH	1860	234	627	6600	316	2160	7350	2000	3900	5070	914	2370

e Estimated

01495900 ELK RIVER NEAR TOWN POINT, MD--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	19.8	17.8	18.9	15.8	14.2	15.0	4.4	3.2	3.8	1.3	.6	.6
2	20.2	19.5	19.8	14.6	13.0	14.0	5.0	2.1	3.4	1.4	.6	.7
3	20.8	18.6	19.9	14.1	11.9	13.4	4.2	.2	2.7	1.2	.6	.7
4	18.6	16.6	17.5	12.6	10.6	11.8	.8	.2	.3	1.2	.6	.8
5	18.1	16.1	17.2	13.1	12.0	12.5	1.7	.4	1.1	1.1	.6	.8
6	17.9	17.0	17.5	13.1	12.5	12.8	2.3	1.5	1.9	1.4	.6	.8
7	17.9	16.0	17.3	13.5	12.2	12.8	2.6	.9	2.1	.9	.6	.7
8	17.3	15.5	16.3	13.4	12.7	13.0	1.0	.2	.4	.8	.6	.6
9	16.3	14.6	15.5	13.5	12.3	13.1	.6	.2	e.3	1.9	.6	1.0
10	16.3	14.7	15.3	12.3	11.2	11.7	2.5	.2	1.1	2.4	1.1	1.7
11	17.1	14.9	15.8	11.7	10.1	11.1	1.8	.8	1.3	2.6	1.2	1.9
12	17.3	15.0	16.1	11.7	10.6	11.1	1.6	.4	1.1	2.6	1.4	2.0
13	18.4	15.9	17.0	11.7	9.4	10.6	2.5	.3	1.2	1.9	.7	1.3
14	18.5	16.5	17.5	12.6	10.9	11.8	2.1	.8	1.4	2.3	.6	1.4
15	19.2	16.8	17.9	13.6	12.4	12.9	1.3	.3	.8	2.8	2.0	2.3
16	19.3	17.4	18.2	13.5	10.9	12.7	1.0	.3	.3	3.4	1.8	2.6
17	18.7	18.1	18.4	10.9	8.9	9.9	.7	.3	.4	4.3	2.6	3.4
18	18.4	13.9	16.5	9.9	7.1	9.3	1.1	.4	.6	5.1	4.0	4.6
19	16.0	13.1	14.3	8.0	5.3	7.0	.9	.4	.5	5.2	2.9	4.3
20	16.4	14.7	15.9	9.5	7.9	8.7	.9	.4	.6	4.7	3.9	4.0
21	14.8	13.4	14.4	8.4	e3.5	e5.7	.9	.4	.5	5.0	3.9	4.3
22	14.7	13.1	13.7	5.6	2.0	3.9	.8	.4	.5	4.7	3.6	4.2
23	14.8	12.7	13.7	6.8	2.6	3.8	.7	.4	.4	4.9	3.5	4.2
24	15.1	13.2	14.1	7.0	4.3	5.4	1.0	.4	.5	5.7	4.2	4.9
25	14.9	13.3	14.0	5.6	3.7	4.6	.9	.5	.6	5.9	5.0	5.4
26	15.6	13.6	14.5	5.6	4.1	4.8	.7	.5	.5	6.0	4.7	5.6
27	15.9	13.4	14.8	6.0	4.1	5.0	.6	.5	.5	5.9	3.8	4.8
28	15.8	14.2	15.1	6.5	5.2	5.7	.6	.5	.5	6.1	4.2	5.1
29	16.6	14.4	15.4	5.3	3.5	4.4	.6	.5	.5	5.6	4.3	5.1
30	16.3	14.7	15.4	4.0	2.7	3.4	.7	.5	.5	6.0	4.8	5.4
31	16.5	15.4	15.8	---	---	---	.9	.6	.6	6.6	4.8	5.7
MONTH	20.8	12.7	16.2	15.8	2.0	9.4	5.0	.2	1.0	6.6	.6	2.9
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	6.6	4.9	5.9	5.2	2.7	3.9	9.3	8.9	9.1	18.9	17.1	18.1
2	7.3	6.3	6.7	4.5	3.7	4.2	9.6	8.8	9.2	20.0	17.7	18.8
3	6.8	6.5	6.7	6.6	4.3	5.3	9.4	8.5	9.2	18.6	17.4	18.0
4	6.5	5.6	6.2	6.0	2.6	4.6	8.5	7.8	8.0	17.4	16.3	16.9
5	6.0	3.0	4.7	6.2	4.2	5.2	11.1	7.8	9.1	18.4	15.8	17.1
6	6.6	5.0	5.8	5.4	3.1	4.9	9.5	8.3	9.0	18.3	15.3	16.9
7	7.2	5.2	6.1	5.4	e2.4	e3.5	9.3	7.4	8.3	19.1	15.8	17.4
8	7.7	5.2	6.5	6.4	3.4	4.8	10.3	6.8	8.5	20.1	16.7	18.2
9	7.7	5.9	6.9	7.1	4.4	5.7	11.4	7.9	9.7	19.9	18.2	19.0
10	8.5	7.1	7.9	8.3	5.8	6.9	11.1	9.6	10.4	19.2	18.2	18.6
11	7.6	5.7	6.7	8.6	6.6	7.5	11.6	7.1	10.5	19.1	16.7	17.7
12	7.1	6.2	6.6	9.9	7.3	8.5	10.8	e7.3	e9.4	17.4	12.0	16.4
13	7.4	5.6	6.6	11.6	8.6	9.8	12.0	e8.3	e10.2	18.0	16.8	17.4
14	8.3	7.2	7.6	12.4	9.9	10.8	11.8	10.0	11.0	21.2	16.7	18.8
15	7.6	7.0	7.2	12.2	10.1	10.9	13.1	11.2	12.0	19.6	17.7	18.7
16	8.5	7.3	7.7	12.5	11.4	11.8	14.7	11.8	13.1	19.5	18.6	19.1
17	8.6	5.7	7.9	13.4	12.1	12.8	13.5	10.6	12.5	20.9	19.0	19.9
18	6.7	e4.6	e5.7	15.4	12.6	13.6	13.9	e8.1	e11.0	19.9	18.6	19.2
19	8.0	6.4	7.0	13.5	11.8	12.8	14.9	11.1	12.8	21.0	18.1	19.5
20	7.0	4.1	5.7	12.6	8.8	10.9	14.1	11.7	12.7	21.6	19.0	20.0
21	7.3	4.7	5.8	12.2	7.7	10.0	13.7	12.2	13.0	19.4	16.8	18.0
22	7.3	5.3	6.3	12.1	9.3	10.7	16.8	10.9	14.3	19.0	16.6	17.9
23	9.4	7.1	8.4	13.5	10.5	11.7	17.5	13.7	15.4	19.4	17.5	18.5
24	8.8	7.1	8.0	10.6	7.7	8.6	18.3	14.4	15.9	19.5	17.6	18.7
25	7.6	e1.5	e3.8	9.9	8.6	9.2	17.0	14.0	15.7	20.7	17.8	19.3
26	2.6	e1.4	e1.7	11.0	8.1	9.5	18.9	15.2	17.0	19.9	17.2	18.6
27	3.7	2.1	2.9	9.8	6.3	8.4	19.6	16.7	18.1	19.5	16.4	18.1
28	5.1	3.0	3.8	10.9	7.6	9.4	19.9	17.6	18.9	19.5	18.1	18.8
29	---	---	---	10.3	8.7	9.4	19.8	16.7	18.5	18.7	17.0	17.7
30	---	---	---	8.7	7.9	8.3	17.6	16.5	17.0	19.7	16.1	18.0
31	---	---	---	9.3	8.1	8.8	---	---	---	19.9	17.5	18.5
MONTH	9.4	1.4	6.2	15.4	2.4	8.5	19.9	6.8	12.3	21.6	12.0	18.3

e Estimated

01495900 ELK RIVER NEAR TOWN POINT, MD--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	21.7	18.1	19.6	29.4	26.5	27.7	28.1	24.9	26.4	28.1	25.8	26.8
2	22.6	19.4	20.6	27.9	25.4	26.5	28.2	24.2	26.2	28.1	25.7	26.8
3	22.2	20.1	21.1	28.3	25.8	26.9	28.4	25.5	26.9	27.4	25.4	26.3
4	22.1	e19.4	e21.3	28.0	25.8	26.9	28.2	25.8	27.1	26.6	24.4	25.6
5	22.8	e12.5	e19.3	28.7	26.2	27.3	27.1	25.9	26.3	26.8	25.2	25.9
6	22.7	20.4	21.5	29.3	24.8	27.3	26.6	25.5	26.0	28.0	25.3	26.4
7	23.9	21.2	22.5	27.3	25.6	26.5	27.8	25.3	26.4	26.9	25.8	26.4
8	23.7	21.4	22.5	26.9	25.7	26.3	28.0	25.4	26.8	26.3	23.8	25.0
9	24.3	22.1	23.0	28.4	25.8	27.0	26.9	24.3	25.3	24.9	24.1	24.5
10	25.0	22.7	23.7	29.5	26.5	27.6	26.0	24.1	25.0	25.8	24.2	24.9
11	23.1	17.1	20.8	27.1	25.2	26.0	26.9	24.9	25.9	26.4	23.9	25.3
12	23.4	14.8	20.9	27.3	24.0	25.4	28.0	25.5	26.7	26.5	24.6	25.4
13	22.9	21.1	22.1	24.7	21.3	22.6	28.3	26.0	27.1	25.8	24.8	25.2
14	23.4	21.8	22.5	24.7	22.4	23.7	29.2	25.9	27.5	25.5	24.7	25.0
15	23.5	21.2	22.3	25.6	24.1	24.8	29.0	26.4	27.6	25.2	22.9	24.5
16	25.0	21.9	23.4	26.6	24.3	25.5	28.7	26.8	27.8	24.5	22.2	23.2
17	26.5	22.9	24.3	27.6	24.9	26.2	29.6	26.8	28.1	23.0	19.9	21.0
18	26.2	23.6	24.6	28.9	25.6	27.0	29.8	27.2	28.4	21.7	18.6	20.1
19	26.1	23.9	24.9	29.5	26.5	27.8	29.5	26.3	28.3	20.8	19.8	20.3
20	26.9	23.5	25.1	29.6	27.1	28.3	26.3	22.7	23.5	21.4	20.0	20.7
21	27.1	24.4	25.7	29.6	26.9	28.3	24.3	22.8	23.7	21.3	18.9	20.3
22	27.7	24.7	26.1	29.8	27.0	28.4	23.7	22.9	23.4	20.7	19.8	20.2
23	26.7	25.3	26.0	30.1	27.9	28.8	23.7	22.8	23.3	19.8	18.1	19.0
24	26.1	24.5	25.3	28.9	26.6	27.9	24.4	23.0	23.8	19.2	17.5	18.2
25	25.7	23.1	24.5	29.2	26.6	27.9	25.7	23.4	24.2	19.6	17.5	18.5
26	26.8	23.9	25.4	28.9	25.6	27.5	26.6	23.9	25.2	19.1	18.1	18.6
27	27.1	25.1	26.1	27.7	26.1	27.0	27.3	24.8	26.1	20.3	17.5	19.0
28	27.9	25.8	26.9	27.8	25.7	26.7	27.9	25.3	26.6	20.9	18.5	19.5
29	28.4	26.4	27.2	27.3	25.5	26.4	27.8	25.9	26.6	21.1	19.1	20.0
30	29.7	26.4	27.9	28.1	26.0	26.9	28.0	25.3	26.4	21.0	19.4	20.2
31	---	---	---	28.6	26.2	27.3	28.3	25.5	26.7	---	---	---
MONTH	29.7	12.5	23.6	30.1	21.3	26.8	29.8	22.7	26.1	28.1	17.5	22.8

e Estimated

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 except for those for estimated daily discharges (ice effect), which are fair. 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.--23 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)
Jan. 29	2400	493	4.88	July 10	2015	350	4.40
May 10	1400	464	4.79	July 13	0100	356	4.42
May 29	1415	*660	*5.37				

Minimum discharge, 2.9 ft^3/s, Dec. 4, result of freezeup; minimun daily discharge, 4.5 ft^3/s, Sept. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	8.7	7.3	e56	14	9.7	9.7	10	13	7.7	5.6	6.1
2	36	7.6	7.2	12	13	9.7	15	8.1	12	7.4	5.0	5.8
3	11	8.5	7.2	8.9	15	9.8	39	7.5	30	7.2	4.9	5.5
4	7.6	7.7	7.2	8.7	23	8.9	14	9.0	21	6.9	4.9	5.3
5	6.7	7.5	7.1	9.3	14	8.7	13	59	13	7.9	11	5.3
6	6.7	7.6	7.2	8.7	12	8.7	12	12	11	9.2	51	5.2
7	6.7	7.3	7.0	7.8	11	8.2	26	9.5	11	7.7	23	5.1
8	6.1	8.9	6.9	9.6	11	8.3	14	8.4	26	7.3	7.8	4.9
9	5.9	14	e7.0	17	11	8.9	11	7.9	20	7.5	24	4.8
10	5.8	9.4	e7.3	34	53	9.1	10	121	17	51	45	4.9
11	6.3	8.0	e7.0	15	18	8.8	13	31	11	17	17	4.7
12	5.8	7.6	7.1	11	14	8.6	10	14	10	19	11	4.6
13	5.7	7.3	7.4	8.8	12	8.3	9.1	40	10	76	8.4	4.7
14	5.5	7.3	7.4	8.0	12	8.1	8.9	25	10	16	7.5	4.9
15	5.6	7.7	e7.0	9.5	11	8.0	41	14	45	13	7.0	4.8
16	5.5	15	e6.7	9.3	11	8.1	14	12	13	14	6.8	4.9
17	10	9.1	e6.7	8.8	10	14	12	13	11	9.1	6.5	5.3
18	9.8	7.6	e6.2	9.1	9.9	23	11	11	13	8.2	6.2	4.5
19	54	7.2	e5.9	8.1	10	10	9.6	9.9	24	7.6	6.3	5.3
20	70	7.3	e6.2	13	9.2	9.6	9.3	9.6	11	7.3	6.3	5.9
21	16	6.9	e6.2	13	9.1	9.0	10	10	11	7.5	6.8	4.7
22	11	7.1	e5.7	10	11	8.4	9.5	9.5	12	7.4	20	20
23	9.2	8.2	e5.5	8.8	19	8.0	8.7	8.9	14	7.3	12	7.1
24	8.7	7.7	e5.5	8.6	17	8.4	8.3	8.7	12	6.4	8.5	5.3
25	8.2	8.1	e5.2	71	11	8.8	8.0	8.2	9.8	6.0	9.8	5.0
26	7.9	9.7	e5.0	94	9.9	8.3	8.0	27	9.1	5.8	7.7	4.9
27	7.6	8.5	e5.0	19	9.6	7.7	7.6	12	8.8	5.7	6.7	4.9
28	7.5	9.3	e5.0	14	10	7.5	7.2	10	8.6	5.8	6.2	4.8
29	7.5	8.0	e5.2	52	---	7.5	9.4	167	8.1	5.8	13	4.6
30	7.5	7.4	e6.5	72	---	10	14	38	7.8	5.7	12	4.7
31	9.5	---	e9.0	16	---	12	---	16	---	6.2	6.6	---
TOTAL	377.1	252.2	202.8	651.0	390.7	292.1	392.3	747.2	433.2	376.6	374.5	168.5
MEAN	12.2	8.41	6.54	21.0	14.0	9.42	13.1	24.1	14.4	12.1	12.1	5.62
MAX	70	15	9.0	94	53	23	41	167	45	76	51	20
MIN	5.5	6.9	5.0	7.8	9.1	7.5	7.2	7.5	7.8	5.7	4.9	4.5
CFSM	1.35	.93	.72	2.33	1.55	1.04	1.45	2.67	1.60	1.35	1.34	.62
IN.	1.55	1.04	.84	2.68	1.61	1.20	1.62	3.08	1.78	1.55	1.54	.69

CAL YR 1989 TOTAL 5121.0 MEAN 14.0 MAX 214 MIN 4.0 CFSM 1.55 IN. 21.10
WTR YR 1990 TOTAL 4658.2 MEAN 12.8 MAX 167 MIN 4.5 CFSM 1.41 IN. 19.19

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, 176,000 ft^3/s, Feb. 6, gage height, 20.55 ft; minimum discharge, 772 ft^3/s, Dec. 18, gage height, 7.32 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4510	23500	36500	10900	108000	52800	17200	30300	70500	8520	19800	18300
2	20600	25000	18600	22200	95100	51600	40400	26400	59000	23400	11300	25500
3	17900	24500	12400	18400	85800	19900	49800	26600	44300	13200	14600	20400
4	13200	13700	43700	22200	90000	25600	53100	26300	48100	17700	6280	19400
5	15300	11400	19000	22700	123000	41800	58300	23700	46300	21600	6260	18300
6	12400	29500	19300	9630	142000	36000	67500	16800	28000	17100	20200	21700
7	7440	19700	18200	6400	129000	39700	78600	36500	23900	8200	26800	13800
8	4660	20800	25800	26300	110000	32700	78600	46100	28400	9090	26600	6680
9	4660	27300	12000	24300	82900	28800	81900	40800	25200	23800	23500	6220
10	7630	28300	2950	24400	73900	15800	72300	40100	26700	15100	30200	16600
11	12000	21700	17200	26700	75800	16800	67100	49800	30800	10500	13800	15300
12	9530	13000	16000	35800	94000	31400	74200	67100	33800	12000	17100	17200
13	8930	30800	21400	12800	106000	26200	80300	62900	34600	21800	29400	17300
14	4960	29100	21500	10500	89800	28400	90700	74300	25300	30900	20500	16900
15	4550	26600	22600	27600	86400	38000	88500	62900	32900	66200	19300	9910
16	4640	29500	5250	25700	81400	32400	84600	58800	15900	73800	19700	8780
17	21500	40500	2900	23100	82700	34100	69800	76600	19800	64600	19900	22100
18	9940	56400	8190	23300	84700	38700	60800	97900	30400	59100	7830	19600
19	22900	67200	10500	27600	110000	43400	51300	94800	30000	49900	6550	22800
20	44800	67800	13300	23700	113000	53100	49700	87900	30900	44300	16900	24900
21	70300	73800	11200	39500	96200	47600	42300	95600	28600	19900	27300	29300
22	81300	55400	13300	58600	82400	49300	30000	86500	29200	26500	20300	21100
23	87000	37900	3470	64500	71700	50800	43000	70700	14800	38600	31800	12700
24	78600	47100	6920	69300	59300	53400	37300	74500	14400	30900	31200	25800
25	65200	36000	3080	73500	64400	42000	34400	70700	29500	28600	25700	21300
26	56400	26500	9680	65600	63900	54700	34900	56000	16700	33100	36700	19400
27	43700	37600	14400	70200	61200	50900	31100	45700	21600	29400	38700	17100
28	28200	32900	14200	72900	52300	48000	27600	39400	13200	15700	36200	13200
29	15800	32100	14500	86300	---	45900	20000	52500	20400	11600	27400	6440
30	33900	34600	9930	122000	---	43300	33800	67300	6330	24100	24100	8660
31	27100	---	5570	119000	---	34700	---	77200	---	23700	20600	---
TOTAL	839550	1020200	453540	1265630	2514900	1207800	1649100	1782700	879530	872910	676520	516690
MEAN	27080	34010	14630	40830	89820	38960	54970	57510	29320	28160	21820	17220
MAX	87000	73800	43700	122000	142000	54700	90700	97900	70500	73800	38700	29300
MIN	4510	11400	2900	6400	52300	15800	17200	16800	6330	8200	6260	6220
CFSM	1.00	1.25	.54	1.51	3.31	1.44	2.03	2.12	1.08	1.04	.81	.64
IN.	1.15	1.40	.62	1.74	3.45	1.66	2.26	2.45	1.21	1.20	.93	.71

CAL YR 1989 TOTAL 14548360 MEAN 39860 MAX 232000 MIN 2900 CFSM 1.47 IN. 19.97
WTR YR 1990 TOTAL 13679070 MEAN 37480 MAX 142000 MIN 2900 CFSM 1.38 IN. 18.78

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. Missing water temperature and conductance data during periods when observer failed to take samples.

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 (water years 1980, 1985-89): Maximum daily, 475 microsiemens, Nov. 13-15, 1980; minimum daily, 113 microsiemens, Mar. 17, 1986.
WATER TEMPERATURE (water years 1980, 1985-89): 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.--
SEDIMENT CONCENTRATION: Maximum daily mean, 57 mg/L, Jan. 31; minimum daily mean, 3 mg/L, Jan. 18.
SEDIMENT LOAD: Maximum daily, 18,300 tons, Jan. 31; minimum daily, 47 tons, Dec. 17.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	Discharge, instantaneous (ft3/s)	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 (col/100 ML)
OCT											
*04...	1130	42000	395	7.40	20.0	--	--	--	--	--	--
*04...	1135	42000	395	7.40	20.0	--	--	--	--	--	--
*11...	1000	32500	383	7.04	16.0	15.0	768	--	8.4	85	--
*11...	1010	32500	383	7.04	16.0	15.0	768	--	8.4	85	--
23...	1320	113000	--	--	11.5	--	--	--	--	--	--
25...	1155	80100	228	6.91	12.0	15.0	773	--	10.6	97	--
27...	1510	57000	207	7.70	12.5	--	--	--	--	--	--
NOV											
02...	1130	47900	220	6.94	14.0	15.0	769	5.1	10.0	96	K28
14...	1200	52200	275	7.20	13.0	20.0	766	--	11.0	104	--
JAN											
10...	1130	40700	380	7.71	4.0	15.0	755	--	13.6	105	--
31...	1430	105000	182	--	10.0	9.0	--	--	--	--	--
FEB											
01...	1130	151000	180	7.38	5.0	14.0	770	31	13.1	102	580
13...	1400	107000	165	7.54	15.0	22.0	765	--	12.8	126	--
21...	1200	114000	180	7.41	5.0	16.0	780	--	13.5	103	--
MAR											
07...	1200	66000	240	6.64	5.0	3.0	787	3.2	13.3	101	K13
21...	1300	61300	260	7.35	13.0	16.0	768	--	9.9	93	--
28...	0940	68600	207	6.59	8.0	13.0	778	--	11.9	98	--
APR											
04...	1200	67800	202	7.58	8.0	10.0	749	--	12.7	109	--
*20...	1200	62200	173	7.22	12.0	17.0	775	--	11.2	102	--
*20...	1205	62200	173	7.22	12.0	17.0	775	--	11.2	102	--
MAY											
03...	1330	61100	--	7.25	17.0	14.0	--	8.1	7.9	--	K4
16...	1240	79200	200	7.00	17.0	22.0	764	--	9.2	95	--
18...	1330	133000	185	6.95	18.0	24.0	759	--	9.2	98	--
19...	1230	89600	169	8.11	24.0	24.0	--	--	6.5	--	--
20...	1530	89000	--	6.37	20.5	22.0	--	--	--	--	--
21...	1230	87900	157	6.83	17.0	19.0	760	--	9.3	97	--
23...	1200	88600	170	7.06	18.5	20.0	--	--	9.6	--	--
JUN											
13...	1230	52600	237	6.74	23.0	25.0	769	--	7.7	89	--
27...	1125	48300	265	7.22	25.0	28.0	764	7.2	6.7	81	K2
JUL											
18...	1135	79000	250	6.87	24.0	28.0	770	--	7.8	92	--
25...	1200	52800	186	6.98	27.0	28.0	768	--	6.6	82	--
AUG											
01...	1120	6200	207	6.79	27.0	24.0	764	--	6.6	83	--
16...	1130	6400	270	7.09	27.5	28.0	--	--	6.7	--	--
29...	1200	53000	283	6.91	25.0	28.0	758	--	7.6	93	--
SEP											
06...	1100	41000	267	6.99	26.0	28.0	764	2.2	6.6	81	K1
*26...	0945	28000	283	7.14	18.0	19.0	760	--	8.2	87	--
*26...	0950	28000	283	7.14	18.0	19.0	760	--	8.2	87	--

*Note: Duplicate samples collected for quality assurance purposes.

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

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	Strep-tococci fecal, KF agar (cols. per 100 ML)	Calcium dis-solved (mg/L as Ca)	Magne-sium, dis-solved (mg/L as Mg)	Sodium, dis-solved (mg/L as Na)	Potas-sium, dis-solved (mg/L as K)	Alka-linity, wat wh tot fet field (mg/L as CaCO3)	Alka-linity wat dis tot it field (mg/L as CaCO3)	Bicar-bonate water, dis it field (mg/L as HCO3)	Car-bonate water, dis it field (mg/L as CO3)	Sulfate dis-solved (mg/L as SO4)	Chlo-ride, dis-solved (mg/L as Cl)	Fluo-ride, dis-solved (mg/L as F)
OCT												
04...	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	71	--	--	--	--	--	--
11...	--	--	--	--	--	71	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	45	--	--	--	--	--	--
27...	--	--	--	--	--	45	--	--	--	--	--	--
NOV												
02...	K11	23	6.0	7.1	2.3	48	--	--	--	31	10	0.10
14...	--	--	--	--	--	59	--	--	--	--	--	--
JAN												
10...	--	--	--	--	--	58	--	--	--	--	--	--
31...	--	--	--	--	--	56	--	--	--	--	--	--
FEB												
01...	--	17	4.3	7.3	2.0	32	--	--	--	22	12	0.10
13...	--	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	30	--	--	--	--	--	--
MAR												
07...	K3	22	6.3	8.0	1.4	50	--	--	--	33	13	<0.10
21...	--	--	--	--	--	50	--	--	--	--	--	--
28...	--	--	--	--	--	37	--	--	--	--	--	--
APR												
04...	--	--	--	--	--	40	--	--	--	--	--	--
20...	--	--	--	--	--	30	--	--	--	--	--	--
20...	--	--	--	--	--	30	--	--	--	--	--	--
MAY												
03...	K1	14	6.3	7.9	1.3	47	47	56	46	29	12	0.10
16...	--	--	--	--	--	40	--	--	--	--	--	--
18...	--	--	--	--	--	36	--	--	--	--	--	--
19...	--	--	--	--	--	31	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	27	--	--	--	--	--	--
23...	--	--	--	--	--	31	--	--	--	--	--	--
JUN												
13...	--	--	--	--	--	50	--	--	--	--	--	--
27...	K8	28	8.3	8.0	1.7	51	--	--	--	48	11	0.20
JUL												
18...	--	--	--	--	--	40	--	--	--	--	--	--
25...	--	--	--	--	--	34	--	--	--	--	--	--
AUG												
01...	--	--	--	--	--	40	--	--	--	--	--	--
16...	--	--	--	--	--	46	--	--	--	--	--	--
29...	--	--	--	--	--	44	--	--	--	--	--	--
SEP												
06...	K1	26	7.7	8.3	2.0	45	--	--	--	46	13	0.20
26...	--	--	--	--	--	45	--	--	--	--	--	--
26...	--	--	--	--	--	45	--	--	--	--	--	--

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

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	Silica, dissolved (mg/L as SiO2)	Solids, residue at 180 deg. C dissolved (mg/L)	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)	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 total (mg/L as N)	Nitrogen, ammonia + organic DIS. (mg/L as N)	Phosphorous total (mg/L as P)
OCT												
04...	--	--	--	--	--	1.47	1.47	0.090	0.090	<1.0	<1.0	0.080
04...	--	--	--	--	--	1.47	1.47	0.090	0.090	<1.0	<1.0	0.080
11...	2.1	--	--	1.37	0.034	--	1.40	--	0.070	0.80	0.50	0.050
11...	2.1	--	--	1.37	0.030	1.40	1.40	0.060	0.060	0.60	0.50	0.050
23...	--	--	--	--	--	2.09	2.07	0.020	<0.020	<1.0	<1.0	0.090
25...	4.6	--	--	1.89	0.012	--	1.90	--	0.060	0.60	0.40	0.090
27...	--	--	--	--	--	1.74	1.69	0.080	0.080	<1.0	<1.0	0.070
NOV												
02...	5.0	111	121	1.59	0.010	--	1.60	0.060	0.060	0.30	0.50	0.040
14...	3.0	--	--	1.49	0.011	--	1.50	--	0.010	0.60	0.40	0.040
JAN												
10...	2.0	--	--	2.39	0.015	--	2.40	--	0.170	0.40	0.50	0.060
31...	5.0	--	--	1.78	0.020	--	1.80	--	0.140	0.70	0.60	0.120
FEB												
01...	5.1	105	96	1.59	0.011	--	1.60	0.140	0.110	0.60	0.40	0.090
13...	5.3	--	--	1.39	0.007	--	1.40	--	0.110	0.30	0.70	0.050
21...	4.8	--	--	1.19	0.009	--	1.20	--	0.110	0.80	0.60	0.050
MAR												
07...	5.1	127	127	1.69	0.011	--	1.70	0.100	0.110	0.40	0.20	0.030
21...	3.6	--	--	1.48	0.021	--	1.50	--	0.130	0.40	0.80	0.040
28...	4.2	--	--	1.26	0.035	--	1.30	--	0.060	0.40	0.30	0.020
APR												
04...	3.8	--	--	0.678	0.522	--	1.20	--	0.050	0.70	0.30	0.040
20...	4.1	--	--	1.08	0.015	--	1.10	--	0.060	0.30	0.30	0.030
20...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
03...	0.57	93	150	0.983	0.017	--	1.00	0.090	0.100	0.50	0.20	0.030
16...	3.4	--	--	1.28	0.018	--	1.30	--	0.050	0.40	0.40	0.050
18...	3.9	--	--	1.09	0.012	--	1.10	--	0.060	0.50	0.20	0.050
19...	4.1	--	--	--	0.017	--	--	--	0.020	0.30	0.40	0.040
20...	4.5	--	--	1.08	0.015	--	1.10	--	0.070	0.50	0.30	0.060
21...	5.1	--	--	1.08	0.022	--	1.10	--	0.060	0.60	3.7	0.030
23...	4.6	--	--	0.983	0.017	--	1.00	--	0.070	0.70	0.30	0.050
JUN												
13...	2.2	--	--	1.28	0.015	--	1.30	--	0.070	0.50	<0.20	0.040
27...	2.7	154	144	1.10	0.004	--	1.10	0.180	0.170	0.90	0.50	0.020
JUL												
18...	3.9	--	--	0.966	0.034	--	1.00	--	0.050	0.30	0.50	0.040
25...	4.4	--	--	0.881	0.019	--	0.900	--	0.040	0.70	0.40	0.030
AUG												
01...	3.7	--	--	0.873	0.027	--	0.900	--	0.110	0.40	0.30	0.040
16...	3.0	--	--	1.05	0.050	--	1.10	--	0.090	0.60	0.30	0.080
29...	3.6	--	--	1.25	0.051	--	1.30	--	0.050	0.50	0.70	0.050
SEP												
06...	4.5	142	141	1.26	0.037	--	1.30	0.070	0.080	0.70	0.40	<0.010
26...	1.9	--	--	0.886	0.014	--	0.900	--	0.050	0.40	0.30	0.020
26...	--	--	--	--	--	--	--	--	--	--	--	--

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	Phosphorous dissolved (mg/L as P)	Phosphorus, ortho, total (mg/L as P)	Phosphorous 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, dissolved (ug/L as BA)	Beryllium, dissolved (ug/L as BE)	Cadmium total recoverable (ug/L as Cd)	Cadmium dissolved (ug/L as Cd)	Chromium, total recoverable (ug/L as CR)
OCT											
04...	0.040	--	0.026	--	--	--	--	--	--	--	--
04...	0.040	--	0.026	--	--	--	--	--	--	--	--
11...	0.018	--	0.006	30	--	--	--	--	--	--	--
11...	<0.010	0.030	<0.010	--	--	--	--	--	--	--	--
23...	0.060	--	0.027	--	--	--	--	--	--	--	--
25...	0.026	--	0.032	30	--	--	--	--	--	--	--
27...	0.040	--	0.015	--	--	--	--	--	--	--	--
NOV											
02...	0.017	--	0.012	20	--	<1	27	<0.5	--	<1	--
14...	0.015	--	0.002	20	--	--	--	--	--	--	--
JAN											
10...	0.030	--	0.023	20	--	--	--	--	--	--	--
31...	--	--	0.021	80	--	--	--	--	--	--	--
FEB											
01...	0.022	--	0.016	90	--	--	--	--	--	--	--
13...	0.008	--	0.007	30	--	--	--	--	--	--	--
21...	0.006	--	0.006	20	--	--	--	--	--	--	--
MAR											
07...	0.008	--	0.008	30	--	<1	27	<0.5	--	<1	--
21...	0.006	--	0.008	30	--	--	--	--	--	--	--
28...	0.005	--	0.006	30	--	--	--	--	--	--	--
APR											
04...	0.003	--	0.009	30	--	--	--	--	--	--	--
20...	0.014	--	0.004	30	<1	--	--	--	<1	--	2
20...	--	--	--	40	<1	--	--	--	<1	--	2
MAY											
03...	0.011	--	0.004	40	--	<1	27	<0.5	<1	<1	1
16...	0.009	--	0.020	30	--	--	--	--	--	--	--
18...	0.007	--	<0.001	50	1	--	--	--	<1	--	2
19...	0.011	--	0.007	20	<1	--	--	--	<1	--	1
20...	0.017	--	0.010	40	<1	--	--	--	<1	--	4
21...	0.013	--	0.008	30	<1	--	--	--	<1	--	2
23...	0.025	--	0.007	20	<1	--	--	--	<1	--	<1
JUN											
13...	0.008	--	0.003	60	<1	--	--	--	<1	--	1
27...	0.013	--	0.015	30	<1	--	--	--	<1	--	<1
JUL											
18...	0.009	--	0.005	30	<1	--	--	--	<1	--	<1
25...	0.002	--	0.003	30	<1	--	--	--	<1	--	<1
AUG											
01...	0.007	--	0.004	30	--	--	--	--	--	--	--
16...	0.008	--	0.002	40	<1	--	--	--	<1	--	10
29...	0.009	--	0.004	30	<1	--	--	--	<1	--	<1
SEP											
06...	0.002	--	<0.001	20	<1	<1	30	<0.5	<1	<1	5
26...	0.001	--	0.008	30	<1	--	--	--	<1	--	2
26...	--	--	--	20	<1	--	--	--	<1	--	2

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	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 dissolved (ug/L as Hg)	Mercury total recoverable (ug/L as Hg)
OCT											
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
NOV											
02...	<1	<3	--	2	60	--	<1	5	58	0.2	--
14...	--	--	--	--	--	--	--	--	--	--	--
JAN											
10...	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--
FEB											
01...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
MAR											
07...	<5	<3	--	<10	93	--	<10	5	190	<0.1	--
21...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
APR											
04...	--	--	--	--	--	--	--	--	--	--	--
20...	<1	--	6	2	--	2	<1	--	--	--	<0.10
20...	<1	--	4	2	--	2	<1	--	--	--	<0.10
MAY											
03...	1	<3	11	2	11	3	<1	5	27	<0.1	--
16...	--	--	--	--	--	--	--	--	--	--	--
18...	<1	--	4	2	--	2	1	--	--	--	<0.10
19...	<1	--	3	1	--	2	<1	--	--	--	<0.10
20...	2	--	4	3	--	3	5	--	--	--	<0.10
21...	<1	--	3	2	--	2	<1	--	--	--	<0.10
23...	<1	--	3	2	--	2	<1	--	--	--	<0.10
JUN											
13...	<1	--	4	7	--	1	1	--	--	--	0.10
27...	<1	--	4	2	--	1	<1	--	--	--	<0.10
JUL											
18...	<1	--	3	8	--	1	<1	--	--	--	<0.10
25...	<1	--	3	2	--	1	<1	--	--	--	<0.10
AUG											
01...	--	--	--	--	--	--	--	--	--	--	--
16...	<1	--	6	4	--	9	1	--	--	--	0.10
29...	<1	--	5	4	--	2	1	--	--	--	<0.10
SEP											
06...	<1	<3	4	3	5	1	<1	7	2	--	<0.10
26...	<1	--	3	2	--	2	<1	--	--	--	<0.10
26...	<1	--	3	1	--	3	<1	--	--	--	<0.10

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	Molybdenum, dissolved (ug/L as Mo)	Nickel, total recoverable (ug/L as Ni)	Nickel, dissolved (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)	Zinc, total recoverable (ug/L as Zn)	Zinc, dissolved (ug/L as Zn)
OCT											
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	<1	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
NOV											
02...	<10	--	2	--	<1	--	<1.0	110	<6	--	5
14...	--	--	--	--	--	--	--	--	--	--	--
JAN											
10...	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--
FEB											
01...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
MAR											
07...	<10	--	<10	--	<1	--	1.0	100	<6	--	9
21...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
APR											
04...	--	--	--	--	--	--	--	--	--	--	--
20...	--	5	3	<1	--	<1	--	--	--	20	<10
20...	--	4	3	<1	--	<1	--	--	--	10	<10
MAY											
03...	<10	5	2	--	<1	<1	<1.0	110	<6	10	3
16...	--	--	--	--	--	--	--	--	--	--	--
18...	--	4	2	<1	--	<1	--	--	--	<10	<10
19...	--	4	2	<1	--	<1	--	--	--	10	<10
20...	--	5	2	<1	--	<1	--	--	--	20	<10
21...	--	4	2	<1	--	<1	--	--	--	10	<10
23...	--	4	1	<1	--	<1	--	--	--	<10	<10
JUN											
13...	--	3	2	<1	--	<1	--	--	--	<10	20
27...	--	3	2	<1	--	<1	--	--	--	<10	<10
JUL											
18...	--	4	3	<1	--	<1	--	--	--	10	<10
25...	--	2	2	<1	--	<1	--	--	--	<10	<10
AUG											
01...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	3	<1	--	<1	--	--	--	20	<10
29...	--	6	2	<1	--	<1	--	--	--	<10	<10
SEP											
06...	<10	7	3	<1	<1	<1	<1.0	120	<6	<10	5
26...	--	3	1	<1	--	<1	--	--	--	20	<10
26...	--	2	2	<1	--	<1	--	--	--	20	<10

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	Carbon, organic total (mg/L as C)	Hardness total (mg/L as CaCO3)	Naphthalenes, polychlor. total (ug/L)	Trifluralin, total recover (ug/L)	PCB, total (ug/L)	Alachlor, total recover (ug/L)	Aldrin, total (ug/L)	Ametryne, total	Atrazine, total (ug/L)	Chlordane, total (ug/L)	Cyanazine, total (ug/L)
OCT											
04...	2.7	--	--	--	--	--	--	--	--	--	--
04...	2.7	--	--	--	--	--	--	--	--	--	--
11...	3.2	--	--	--	--	--	--	--	--	--	--
11...	3.1	--	--	--	--	--	--	--	--	--	--
23...	1.5	--	--	--	--	--	--	--	--	--	--
25...	4.4	--	--	--	--	--	--	--	--	--	--
27...	4.2	--	--	--	--	--	--	--	--	--	--
NOV											
02...	3.6	82	--	--	--	--	--	--	--	--	--
14...	3.4	--	--	--	--	--	--	--	--	--	--
JAN											
10...	2.2	--	--	--	--	--	--	--	--	--	--
31...	3.4	--	--	--	--	--	--	--	--	--	--
FEB											
01...	3.9	60	--	--	--	--	--	--	--	--	--
13...	2.9	--	--	--	--	--	--	--	--	--	--
21...	2.6	--	--	--	--	--	--	--	--	--	--
MAR											
07...	1.8	81	--	--	--	--	--	--	--	--	--
21...	2.3	--	--	--	--	--	--	--	--	--	--
28...	2.5	--	--	--	--	--	--	--	--	--	--
APR											
04...	2.3	--	--	--	--	--	--	--	--	--	--
20...	3.1	--	--	<0.10	--	<0.10	--	<0.10	<0.10	--	<0.10
20...	--	--	<0.10	<0.10	<0.1	<0.10	<0.010	<0.10	<0.10	<0.1	<0.10
MAY											
03...	2.4	61	<0.10	<0.10	<0.1	<0.10	<0.010	<0.10	<0.10	<0.1	<0.10
16...	3.3	--	--	--	--	--	--	--	--	--	--
18...	3.0	--	<0.10	<0.10	<0.1	<0.10	<0.010	<0.10	0.20	<0.1	0.20
19...	3.0	--	<0.10	<0.10	<0.1	<0.10	<0.010	<0.10	0.10	<0.1	0.10
20...	3.6	--	--	<0.10	--	0.10	--	<0.10	0.90	--	0.70
21...	3.5	--	<0.10	<0.10	<0.1	<0.10	<0.010	<0.10	0.50	<0.1	0.40
23...	4.1	--	<0.10	<0.10	<0.1	<0.10	<0.010	<0.10	0.20	<0.1	0.10
JUN											
13...	2.7	--	<0.10	<0.10	<0.1	<0.10	<0.010	<0.10	0.20	<0.1	0.10
27...	2.1	100	<0.10	<0.10	<0.1	0.10	<0.010	<0.10	0.60	<0.1	0.50
JUL											
18...	3.0	--	<0.10	<0.10	<0.1	<0.10	<0.010	<0.10	0.20	<0.1	0.20
25...	3.0	--	<0.10	<0.10	<0.1	<0.10	<0.010	<0.10	0.20	<0.1	0.10
AUG											
01...	2.8	--	--	--	--	--	--	--	--	--	--
16...	2.9	--	<0.10	<0.10	<0.1	<0.10	<0.010	<0.10	0.10	<0.1	<0.10
29...	4.0	--	<0.10	<0.10	<0.1	<0.10	<0.010	<0.10	0.10	<0.1	0.10
SEP											
06...	3.2	97	--	<0.10	--	<0.10	--	<0.10	0.10	--	<0.10
26...	3.2	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	DDD, total (ug/L)	DDE, total (ug/L)	DDT, total (ug/L)	Di-azinon, total (ug/L)	Di-eldrin, total (ug/L)	Di-syston total (ug/L)	Endo-sulfan, total (ug/L)	Endrin, total (ug/L)	Ethion, total (ug/L)	Hepta-chlor, total (ug/L)	Hepta-chlor epoxide total (ug/L)
OCT											
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
NOV											
02...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
JAN											
10...	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--
FEB											
01...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
MAR											
07...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
APR											
04...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	<0.010	<0.010	<0.010	<0.01	<0.010	<0.01	<0.010	<0.010	<0.01	<0.010	<0.010
MAY											
03...	<0.010	<0.010	<0.010	<0.01	<0.010	<0.01	<0.010	<0.010	<0.01	<0.010	<0.010
16...	--	--	--	--	--	--	--	--	--	--	--
18...	<0.010	<0.010	<0.010	<0.01	<0.010	<0.01	<0.010	<0.010	<0.01	<0.010	<0.010
19...	<0.010	<0.010	<0.010	<0.01	<0.010	<0.01	<0.010	<0.010	<0.01	<0.010	<0.010
20...	--	--	--	--	--	--	--	--	--	--	--
21...	<0.010	<0.010	<0.010	<0.01	<0.010	<0.01	<0.010	<0.010	<0.01	<0.010	<0.010
23...	<0.010	<0.010	<0.010	<0.01	<0.010	<0.01	<0.010	<0.010	<0.01	<0.010	<0.010
JUN											
13...	<0.010	<0.010	<0.010	<0.01	<0.010	<0.01	<0.010	<0.010	<0.01	<0.010	<0.010
27...	<0.010	<0.010	<0.010	<0.01	<0.010	<0.01	<0.010	<0.010	<0.01	<0.010	<0.010
JUL											
18...	<0.010	<0.010	<0.010	<0.01	<0.010	<0.01	<0.010	<0.010	<0.01	<0.010	<0.010
25...	<0.010	<0.010	<0.010	<0.01	<0.010	<0.01	<0.010	<0.010	<0.01	<0.010	<0.010
AUG											
01...	--	--	--	--	--	--	--	--	--	--	--
16...	<0.010	<0.010	<0.010	<0.01	<0.010	<0.01	<0.010	<0.010	<0.01	<0.010	<0.010
29...	<0.010	<0.010	<0.010	<0.01	<0.010	<0.01	<0.010	<0.010	<0.01	<0.010	<0.010
SEP											
06...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	Lindane total (ug/L)	Malathion, total (ug/L)	Methomyl, total (ug/L)	Methoxychlor, total (ug/L)	Methyl parathion, total (ug/L)	Methyl trithion, total (ug/L)	Metolachlor, water, whole, Tot.Rec (ug/L)	Metribuzin, water, whole, Tot.Rec (ug/L)	Mirex, total (ug/L)	Parathion, total (ug/L)	Perthane, total (ug/L)
OCT											
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
NOV											
02...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
JAN											
10...	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--
FEB											
01...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
MAR											
07...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
APR											
04...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	<0.5	--	--	--	<0.1	<0.1	--	--	--
20...	<0.010	<0.01	<0.5	<0.01	<0.01	<0.01	<0.1	<0.1	<0.01	<0.01	<0.1
MAY											
03...	<0.010	<0.01	<0.5	<0.01	<0.01	<0.01	<0.1	<0.1	<0.01	<0.01	<0.1
16...	--	--	--	--	--	--	--	--	--	--	--
18...	<0.010	0.01	<0.5	<0.01	<0.01	<0.01	0.1	<0.1	<0.01	<0.01	<0.1
19...	<0.010	0.01	<0.5	<0.01	<0.01	<0.01	<0.1	<0.1	<0.01	<0.01	<0.1
20...	--	--	<0.5	--	--	--	0.5	<0.1	--	--	--
21...	<0.010	<0.01	<0.5	<0.01	<0.01	<0.01	0.2	<0.1	<0.01	<0.01	<0.1
23...	<0.010	<0.01	<0.5	<0.01	<0.01	<0.01	0.1	<0.1	<0.01	<0.01	<0.1
JUN											
13...	<0.010	<0.01	<0.5	<0.01	<0.01	<0.01	0.1	<0.1	<0.01	<0.01	<0.1
27...	<0.010	<0.01	<0.5	<0.01	<0.01	<0.01	0.2	<0.1	<0.01	<0.01	<0.1
JUL											
18...	<0.010	<0.01	<0.5	<0.01	<0.01	<0.01	0.1	<0.1	<0.01	<0.01	<0.1
25...	<0.010	<0.01	<0.5	<0.01	<0.01	<0.01	<0.1	<0.1	<0.01	<0.01	<0.1
AUG											
01...	--	--	--	--	--	--	--	--	--	--	--
16...	<0.010	<0.01	<0.5	<0.01	<0.01	<0.01	<0.1	<0.1	<0.01	<0.01	<0.1
29...	<0.010	<0.01	<0.5	<0.01	<0.01	<0.01	0.1	<0.1	<0.01	<0.01	<0.1
SEP											
06...	--	--	<0.5	--	--	--	<0.1	<0.1	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	Def total (ug/L)	Phorate otal (ug/L)	Prome-tryne, total (ug/L)	Prome-tone, total (ug/L)	Pro-pazine, total (ug/L)	Propham total (ug/L)	Tox-aphene, total (ug/L)	Tri-thion total (ug/L)	Sevin, total (ug/L)	Sima-zine, total (ug/L)	Sime-tryne, total (ug/L)
OCT											
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
NOV											
02...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
JAN											
10...	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--
FEB											
01...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
MAR											
07...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
APR											
04...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	<0.1	<0.1	<0.10	<0.5	--	--	<0.50	<0.10	<0.1
20...	<0.01	<0.01	<0.1	<0.1	<0.10	<0.5	<1	<0.01	<0.50	<0.10	<0.1
MAY											
03...	<0.01	<0.01	<0.1	<0.1	<0.10	<0.5	<1	<0.01	<0.50	<0.10	<0.1
16...	--	--	--	--	--	--	--	--	--	--	--
18...	<0.01	<0.01	<0.1	<0.1	<0.10	<0.5	<1	<0.01	<0.50	0.10	<0.1
19...	<0.01	<0.01	<0.1	<0.1	<0.10	<0.5	<1	<0.01	<0.50	0.10	<0.1
20...	--	--	<0.1	0.1	<0.10	<0.5	--	--	<0.50	0.10	<0.1
21...	<0.01	<0.01	<0.1	<0.1	<0.10	<0.5	<1	<0.01	<0.50	0.10	<0.1
23...	<0.01	<0.01	<0.1	<0.1	<0.10	<0.5	<1	<0.01	<0.50	0.10	<0.1
JUN											
13...	<0.01	<0.01	<0.1	<0.1	<0.10	<0.5	<1	<0.01	<0.50	0.10	<0.1
27...	<0.01	<0.01	<0.1	<0.1	<0.10	<0.5	<1	<0.01	<0.50	0.10	<0.1
JUL											
18...	<0.01	<0.01	<0.1	<0.1	<0.10	<0.5	<1	<0.01	<0.50	0.10	<0.1
25...	<0.01	<0.01	<0.1	<0.1	<0.10	<0.5	<1	<0.01	<0.50	<0.10	<0.1
AUG											
01...	--	--	--	--	--	--	--	--	--	--	--
16...	<0.01	<0.01	<0.1	<0.1	<0.10	<0.5	<1	<0.01	<0.50	<0.10	<0.1
29...	<0.01	<0.01	<0.1	0.1	<0.10	<0.5	<1	<0.01	<0.50	<0.10	<0.1
SEP											
06...	--	--	<0.1	<0.1	<0.10	<0.5	--	--	<0.50	<0.10	<0.1
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--

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)
SEP 1989										
08...	1125	6400	<0.4	<0.4	4.3	<0.4	0.10	5.3	<0.4	0.28

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
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 1990										
07...	1200	66000	1.0	<0.4	1.6	<0.4	0.08	1.9	<0.4	<0.01

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

DATE	TIME	Dis-charge, instan-taneous (ft3/s)	Sedi-ment, sus-pended (mg/L)	Sedi-ment, dis-charge, sus-pended (T/DAY)	Sed. susp. sieve diam. % finer than .062 MM
OCT					
04...	1130	42000	11	1250	--
04...	1135	42000	11	1250	--
25...	1155	80100	16	3460	--
NOV					
02...	1130	47900	10	1290	--
03...	1130	47900	10	1290	96
14...	1200	52200	10	1410	--
JAN					
10...	1130	40700	4	440	--
31...	1430	105000	58	16500	--
FEB					
01...	1130	151000	48	19500	--
13...	1400	107000	13	3760	--
21...	1200	114000	22	6750	--
MAR					
07...	1200	66000	7	1250	96
21...	1300	61300	19	3140	--
28...	0940	68600	12	2220	--
APR					
04...	1200	67800	9	1650	--
20...	1200	62200	15	2520	--
20...	1205	62200	15	2520	--
MAY					
03...	1330	61100	13	2150	79
16...	1240	79200	20	4280	--
18...	1330	133000	15	5370	98
19...	1230	89600	18	4360	87
20...	1530	89000	37	8890	100
21...	1230	87900	23	5460	--
23...	1200	88600	15	3590	98
JUN					
13...	1230	52600	10	1420	100
27...	1125	48300	11	1430	97
JUL					
18...	1135	79000	12	2560	100
25...	1200	52800	10	1430	92
AUG					
01...	1120	6200	12	201	--
16...	1130	6400	8	138	92
29...	1200	53000	8	1140	96
SEP					
06...	1100	41000	5	553	98
06...	1105	41000	6	664	91
26...	0945	28000	20	1510	86
26...	0950	28000	20	1510	--

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	408	209	---	---	176	186	186	208	190	269	207	249
2	408	---	---	---	171	191	161	215	192	268	---	250
3	405	---	---	---	171	200	180	222	193	271	211	250
4	404	---	---	---	159	200	165	222	195	273	209	247
5	392	---	---	---	176	202	187	226	198	275	206	246
6	392	---	---	---	180	209	185	231	202	278	211	245
7	390	---	---	---	160	210	212	228	205	280	210	248
8	391	---	---	---	160	214	204	235	208	281	207	---
9	391	---	---	---	157	217	191	226	213	281	221	---
10	373	---	---	---	155	218	186	238	213	289	221	---
11	373	---	---	---	157	225	173	233	213	290	247	---
12	369	---	---	---	158	224	173	223	226	293	250	---
13	357	---	---	---	176	237	174	230	226	295	250	---
14	361	---	---	---	179	235	---	220	233	300	268	---
15	361	---	---	---	169	218	165	198	234	304	268	---
16	365	---	---	325	168	245	155	190	233	292	268	---
17	365	---	---	321	172	251	155	178	232	281	269	---
18	363	---	---	314	173	250	161	182	232	235	262	---
19	363	---	---	320	176	257	160	172	249	233	260	---
20	338	---	---	320	182	265	160	162	249	222	262	---
21	339	---	---	291	171	256	160	154	251	206	262	---
22	348	---	---	290	152	235	173	163	254	199	272	---
23	281	---	---	257	158	219	173	163	259	185	262	---
24	234	---	---	258	---	202	183	165	259	190	258	---
25	206	---	---	235	158	192	192	165	258	186	259	---
26	205	---	---	215	163	193	196	165	258	186	259	---
27	207	---	---	193	184	199	202	166	263	198	265	---
28	207	---	---	197	168	194	206	166	263	205	262	---
29	207	---	---	203	---	188	212	166	266	210	259	274
30	207	---	---	201	---	187	208	167	270	211	256	274
31	208	---	---	187	---	183	---	188	---	212	253	---

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	15.0	---	---	7.0	6.0	10.0	18.5	18.0	25.5	25.5	23.0
2	20.0	---	---	---	7.0	5.0	10.0	26.0	18.0	26.0	---	23.0
3	21.0	---	---	---	7.0	5.0	10.0	20.0	19.0	26.0	26.5	25.0
4	21.0	---	---	---	7.0	5.0	10.0	20.0	19.0	26.0	26.5	25.0
5	18.0	---	---	---	7.0	6.0	10.0	19.5	19.0	27.0	27.0	25.0
6	19.0	---	---	---	7.0	6.0	10.0	19.5	19.0	26.0	27.0	25.0
7	19.0	---	---	---	7.0	6.0	10.0	18.0	19.0	28.0	26.0	---
8	19.0	---	---	---	7.0	4.0	10.0	18.0	20.0	28.0	26.0	---
9	18.0	---	---	---	7.0	7.0	10.0	18.0	20.0	28.0	26.0	---
10	18.0	---	---	---	7.0	7.0	10.0	18.0	20.0	28.0	26.0	---
11	17.5	---	---	---	7.0	7.0	11.0	18.0	20.0	28.0	26.5	---
12	18.0	---	---	---	8.0	7.0	10.0	18.0	20.0	28.0	27.0	---
13	17.0	---	---	---	8.0	8.0	11.0	18.0	21.0	27.0	27.0	---
14	17.0	---	---	---	7.0	---	---	17.5	23.0	27.0	28.0	---
15	17.0	---	---	---	7.0	9.0	11.0	17.0	23.0	27.0	28.0	---
16	17.0	---	---	4.0	7.5	9.0	11.0	17.0	23.0	27.0	28.0	---
17	19.0	---	---	4.0	6.0	9.0	11.0	18.0	23.0	27.5	28.0	---
18	17.0	---	---	5.0	6.0	11.0	11.0	18.0	23.0	27.5	26.0	---
19	17.0	---	---	5.0	6.0	14.0	11.5	18.0	23.5	25.0	26.0	---
20	18.0	---	---	5.0	6.0	15.0	12.0	18.0	23.5	25.0	25.0	---
21	17.0	---	---	6.0	6.0	14.0	12.0	18.0	24.0	25.0	24.0	---
22	16.5	---	---	6.0	7.0	13.0	12.0	18.0	27.0	26.0	25.0	---
23	15.0	---	---	5.0	7.0	12.5	12.0	18.0	26.0	25.0	24.0	---
24	12.0	---	---	5.0	---	13.0	12.5	17.0	25.5	26.0	24.0	---
25	14.0	---	---	5.0	7.0	12.5	13.0	18.0	25.0	26.0	26.0	---
26	13.5	---	---	6.0	6.0	11.0	13.0	18.0	25.0	26.5	26.0	---
27	13.0	---	---	6.0	6.0	11.0	17.0	18.0	26.0	26.0	23.0	---
28	13.0	---	---	6.0	5.0	10.0	17.5	18.0	27.0	26.0	23.0	---
29	13.0	---	---	6.0	---	10.0	18.5	18.0	28.0	26.5	23.0	18.0
30	14.0	---	---	6.0	---	10.0	18.0	18.0	28.5	25.5	23.0	20.0
31	14.5	---	---	7.0	---	10.0	---	18.0	---	25.5	23.0	---

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

SEDIMENT, SUSPENDED CONCENTRATION (MG/L), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

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	11	134	15	952	e17	1680	e12	353	47	13700	10	1430
2	12	667	19	1280	e14	703	e14	839	28	7190	7	975
3	13	628	10	661	e12	402	e14	696	18	4170	7	376
4	11	392	e12	444	e18	2120	e14	839	13	3160	7	484
5	11	454	e9	277	e14	718	e12	735	15	4980	6	677
6	8	268	e16	1270	e14	730	e11	286	16	6130	6	583
7	8	161	e14	745	e14	688	e10	173	22	7660	7	750
8	7	88	e14	786	e15	1040	e8	568	22	6530	7	618
9	9	113	e16	1180	e12	389	e8	525	15	3360	7	544
10	11	227	e16	1220	e6	48	8	527	16	3190	8	341
11	12	389	e14	820	e13	604	e7	505	15	3070	6	272
12	16	412	e12	421	e13	562	e8	773	16	4060	6	509
13	11	265	e12	998	e14	809	e8	276	13	3720	5	354
14	9	121	10	786	e14	813	e8	227	10	2420	5	383
15	9	111	e9	646	e15	915	e8	596	15	3500	6	616
16	8	100	e12	956	e8	113	6	416	22	4840	6	525
17	8	464	e18	1970	e6	47	4	249	25	5580	6	552
18	13	349	e20	3050	e10	221	3	189	20	4570	7	731
19	15	927	e21	3810	e12	340	13	969	15	4450	11	1290
20	10	1210	e22	4030	e12	431	23	1470	19	5800	25	3580
21	16	3040	e22	4380	e12	363	21	2240	21	5450	20	2570
22	21	4610	e20	2990	e12	431	10	1580	23	5120	16	2130
23	e24	5640	e18	1840	e7	66	7	1220	21	4070	14	1920
24	e23	4880	e19	2420	e10	187	9	1680	20	3200	16	2310
25	16	2820	e17	1650	e6	50	12	2380	21	3650	12	1360
26	15	2280	e15	1070	e12	314	12	2130	27	4660	13	1920
27	12	1420	e18	1830	e12	467	10	1900	18	2970	15	2060
28	16	1220	e17	1510	e12	460	14	2760	25	3530	12	1560
29	15	640	e16	1390	e12	470	14	3260	---	---	12	1490
30	14	1280	e17	1590	e11	295	29	9550	---	---	13	1520
31	9	659	---	---	e9	135	57	18300	---	---	9	843
TOTAL	---	35969	---	46972	---	16611	---	58211	---	134730	---	35273
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	10	464	13	1060	21	4000	9	207	12	642	13	642
2	11	1200	10	713	16	2550	7	442	10	305	11	757
3	12	1610	13	934	11	1320	10	356	10	394	11	606
4	10	1430	21	1490	13	1690	11	526	10	170	12	629
5	11	1730	22	1410	13	1630	11	642	9	152	11	544
6	16	2920	10	454	10	756	13	600	9	491	5	293
7	15	3180	14	1380	12	774	9	199	5	362	10	373
8	20	4240	22	2740	10	767	10	245	5	359	e5	90
9	16	3540	16	1760	10	680	10	643	8	508	e5	84
10	16	3120	10	1080	10	721	9	367	10	815	e10	448
11	14	2540	12	1610	10	832	11	312	21	782	e9	372
12	16	3210	17	3080	6	548	12	389	22	1020	e10	464
13	19	4120	19	3230	10	934	13	765	12	953	e10	467
14	19	4650	19	3810	6	410	15	1250	13	720	e10	456
15	19	4540	21	3570	7	622	9	1610	20	1040	e11	294
16	25	5710	20	3180	6	258	9	1790	10	532	e6	142
17	24	4520	14	2900	4	214	10	1740	11	591	e11	656
18	25	4100	15	3960	5	410	12	1910	11	233	e11	582
19	23	3190	19	4860	6	486	10	1350	16	283	e12	739
20	16	2150	34	8070	6	501	13	1550	21	958	e12	807
21	24	2740	25	6450	7	541	12	645	15	1110	e14	1110
22	15	1210	21	4900	6	473	7	501	14	767	e11	627
23	14	1630	16	3050	11	440	12	1250	14	1200	e8	274
24	29	2920	14	2820	6	233	10	834	13	1100	e12	836
25	21	1950	15	2860	5	398	9	695	10	694	e15	863
26	12	1130	11	1660	19	857	7	626	24	2380	e20	1050
27	13	1090	12	1480	12	700	12	953	22	2300	e12	554
28	11	820	12	1280	10	356	18	763	14	1370	e8	285
29	17	918	13	1840	12	661	8	251	9	666	e8	139
30	9	821	12	2180	9	154	9	586	12	781	e10	234
31	---	---	17	3540	---	---	15	960	13	723	---	---
TOTAL	---	77393	---	83351	---	24916	---	24957	---	24401	---	15417

TOTAL LOAD FOR YEAR: 578201 TONS.

e Estimated

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 except those for estimated daily discharges (ice effect), which are fair. 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.--64 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 floodmarks, 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)
July 14	1900	*3,950	*8.86	No other peak greater than base discharge.			

Minimum discharge, 66 ft^3/s, Aug. 3, 4, 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	83	130	101	e840	192	114	115	127	184	90	75	92
2	177	113	100	e270	179	114	144	113	167	88	69	89
3	120	114	100	e140	172	116	259	106	159	85	68	151
4	94	107	e100	118	192	111	160	117	155	83	67	95
5	88	103	99	124	162	107	154	194	144	82	77	89
6	86	103	99	115	151	107	139	132	140	93	359	88
7	83	101	98	107	146	102	171	119	136	82	290	86
8	79	104	96	104	139	101	153	112	142	81	122	83
9	79	127	e96	110	137	106	135	106	198	83	158	81
10	77	123	e96	159	206	118	131	231	144	96	230	85
11	81	106	e95	149	172	108	145	233	131	96	153	83
12	78	102	95	124	152	105	139	147	127	190	122	83
13	77	99	96	109	143	103	132	225	122	303	106	84
14	75	98	e96	100	140	100	125	239	122	798	99	86
15	75	100	e92	102	135	99	189	166	194	295	94	83
16	73	665	e90	103	135	100	149	156	140	164	89	80
17	95	245	e88	104	130	141	140	173	127	124	87	90
18	120	159	e88	110	123	181	129	150	123	109	82	75
19	427	138	e86	106	126	125	121	138	186	100	107	78
20	604	130	e84	115	121	127	119	132	139	96	101	84
21	257	124	e82	134	117	124	121	136	127	187	105	75
22	171	116	e80	118	121	115	119	127	118	177	325	134
23	144	120	e82	107	130	109	114	120	116	125	241	113
24	131	114	e82	105	141	105	111	117	111	97	149	83
25	125	112	e80	157	123	109	108	114	104	87	129	77
26	120	119	e80	376	121	105	107	263	101	82	118	76
27	116	113	e79	216	120	100	105	178	99	80	108	77
28	112	120	e78	171	116	98	102	143	96	80	102	71
29	108	109	e78	214	---	99	122	517	94	79	101	71
30	106	103	e95	571	---	118	154	429	93	82	121	71
31	129	---	e200	231	---	121	---	220	---	80	97	---
TOTAL	4190	4117	2911	5609	4042	3488	4112	5480	4039	4294	4151	2613
MEAN	135	137	93.9	181	144	113	137	177	135	139	134	87.1
MAX	604	665	200	840	206	181	259	517	198	798	359	151
MIN	73	98	78	100	116	98	102	106	93	79	67	71
CFSM	1.43	1.45	.99	1.92	1.53	1.19	1.45	1.87	1.43	1.47	1.42	.92
IN.	1.65	1.62	1.15	2.21	1.59	1.37	1.62	2.16	1.59	1.69	1.64	1.03

CAL YR 1989 TOTAL 56896 MEAN 156 MAX 2850 MIN 70 CFSM 1.65 IN. 22.42
WTR YR 1990 TOTAL 49046 MEAN 134 MAX 840 MIN 67 CFSM 1.42 IN. 19.33

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 estimated daily discharges, which are also fair. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--23 years, 52.7 ft^3/s, 20.57 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)
June 3	2015	1,840	5.78	July 14	1900	*2,260	*6.37
June 15	0545	1,320	4.97	Aug. 6	0100	1,450	5.18
July 12	2245	1,470	5.22	Aug. 6	2100	1,830	5.77

Minimum discharge, 21 ft^3/s, Dec. 4, result of freezeup; minimum daily discharge, 30 ft^3/s, Dec. 22-29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	50	36	e160	61	40	47	53	57	40	36	46
2	116	43	36	e46	56	40	68	43	52	39	34	45
3	56	43	36	e40	56	41	112	e40	218	38	34	87
4	42	41	e34	e40	75	39	60	e46	110	37	33	48
5	37	40	36	e42	56	38	53	e90	67	38	53	46
6	36	41	35	e40	51	38	51	e46	59	39	412	45
7	35	41	36	e38	49	37	78	42	56	36	155	43
8	33	44	35	e38	47	37	e55	41	75	36	57	41
9	32	56	e35	51	46	39	49	41	101	44	207	41
10	32	48	e34	59	102	44	46	246	76	59	214	42
11	35	42	e34	e50	68	40	59	116	57	61	89	40
12	33	41	36	e42	54	39	47	99	50	159	65	40
13	32	39	37	e40	50	38	43	99	49	226	61	41
14	32	39	e35	e40	48	37	42	88	48	373	59	42
15	32	41	e34	e42	46	36	117	61	382	e180	51	41
16	31	105	e34	e42	47	37	59	55	83	102	48	48
17	43	57	e34	e42	45	62	52	59	63	68	46	50
18	45	42	e32	e42	42	80	48	53	58	59	44	39
19	199	39	e32	e40	43	47	44	46	123	53	51	45
20	245	38	e32	45	41	45	43	45	80	50	62	47
21	89	36	e32	47	40	42	45	54	65	50	57	40
22	59	36	e30	42	44	39	43	47	59	48	276	98
23	49	40	e30	39	53	38	41	43	60	52	106	56
24	45	e38	e30	39	59	40	40	41	53	44	e75	43
25	43	38	e30	119	45	42	38	40	48	42	e65	40
26	42	41	e30	207	e40	40	38	154	46	40	55	39
27	42	41	e30	82	40	38	36	72	45	39	52	39
28	41	41	e30	61	41	36	35	54	43	39	49	38
29	40	37	e30	129	---	36	56	313	42	39	91	e37
30	40	36	e32	202	---	47	68	121	40	39	68	e36
31	56	---	e50	73	---	54	---	67	---	39	49	---
TOTAL	1727	1314	1047	2019	1445	1306	1613	2415	2365	2208	2754	1383
MEAN	55.7	43.8	33.8	65.1	51.6	42.1	53.8	77.9	78.8	71.2	88.8	46.1
MAX	245	105	50	207	102	80	117	313	382	373	412	98
MIN	31	36	30	38	40	36	35	40	40	36	33	36
CFSM	1.60	1.26	.97	1.87	1.48	1.21	1.55	2.24	2.27	2.05	2.55	1.32
IN.	1.85	1.40	1.12	2.16	1.54	1.40	1.72	2.58	2.53	2.36	2.94	1.48

CAL YR 1989 TOTAL 23820 MEAN 65.3 MAX 909 MIN 27 CFSM 1.88 IN. 25.46
WTR YR 1990 TOTAL 21596 MEAN 59.2 MAX 412 MIN 30 CFSM 1.70 IN. 23.09

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.--46 years, 67.9 ft^3/s, 17.43 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)
Nov. 16	1415	*2,000	*6.11	No other peak greater than base discharge.			

Minimum discharge, 24 ft^3/s, Oct. 1, gage height, 0.43 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	57	55	e140	105	62	64	65	104	54	39	45
2	98	52	54	e100	97	62	87	58	95	54	38	43
3	59	53	54	e70	97	63	148	56	90	51	38	42
4	50	51	55	e60	106	60	92	65	86	49	37	40
5	46	50	53	e66	88	59	86	106	80	53	41	40
6	45	50	54	e64	82	58	80	68	77	55	150	40
7	43	50	53	58	79	56	101	62	75	49	91	40
8	41	52	52	58	76	56	85	58	85	48	52	39
9	41	63	e50	59	75	59	76	56	119	56	58	39
10	41	55	e50	104	111	63	74	172	99	63	85	39
11	43	51	e52	80	90	58	80	120	89	58	64	38
12	41	50	52	67	81	57	70	82	85	81	55	38
13	40	47	53	59	77	57	65	190	83	119	48	39
14	40	48	49	57	75	56	64	128	82	109	45	39
15	40	48	e48	57	73	55	96	92	116	92	43	39
16	39	458	e47	57	74	56	74	86	86	70	42	40
17	70	121	e46	58	70	92	70	113	79	58	40	45
18	64	87	e45	63	66	90	66	81	77	55	39	37
19	238	75	e44	59	68	67	63	74	132	51	49	40
20	305	71	e43	69	65	75	62	71	88	49	50	43
21	119	64	e43	73	63	69	64	78	76	63	48	38
22	84	60	e42	63	66	64	62	71	69	72	178	75
23	71	64	e42	58	72	61	60	67	68	60	116	50
24	64	59	e41	57	81	62	58	65	65	50	72	41
25	60	58	e41	98	67	63	57	62	61	48	61	39
26	57	62	e40	203	64	60	57	163	59	45	56	39
27	54	59	e39	117	64	57	56	96	58	43	52	39
28	53	62	e38	95	64	56	55	81	56	43	49	37
29	52	56	e38	140	---	56	69	308	55	42	60	37
30	52	55	e43	256	---	68	76	200	54	42	62	37
31	59	---	e60	124	---	67	---	123	---	44	47	---
TOTAL	2152	2188	1476	2689	2196	1944	2217	3117	2448	1826	1905	1237
MEAN	69.4	72.9	47.6	86.7	78.4	62.7	73.9	101	81.6	58.9	61.5	41.2
MAX	305	458	60	256	111	92	148	308	132	119	178	75
MIN	39	47	38	57	63	55	55	56	54	42	37	37
CFSM	1.31	1.38	.90	1.64	1.48	1.19	1.40	1.90	1.54	1.11	1.16	.78
IN.	1.51	1.54	1.04	1.89	1.54	1.37	1.56	2.19	1.72	1.28	1.34	.87

CAL YR 1989 TOTAL 27232 MEAN 74.6 MAX 1110 MIN 33 CFSM 1.41 IN. 19.15
WTR YR 1990 TOTAL 25395 MEAN 69.6 MAX 458 MIN 37 CFSM 1.32 IN. 17.86

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.

REVISED RECORDS.--WDR MD-DE-89-1: 1985(M).

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), 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, 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, 2,490 ft^3/s, Nov. 16, gage height, 8.52 ft; minimum daily discharge, 100 ft^3/s, Dec. 29, 30 (estimated).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	128	171	146	e450	368	184	200	245	358	135	147	151
2	205	154	142	e280	323	182	225	216	311	134	144	144
3	156	154	154	235	303	186	438	192	285	141	144	143
4	135	144	141	203	334	184	344	197	276	138	144	139
5	123	138	125	204	296	174	311	320	255	143	149	138
6	118	134	129	192	263	176	273	255	237	151	368	138
7	119	134	139	180	250	171	314	220	231	139	266	137
8	114	137	132	178	235	167	289	200	237	137	168	136
9	113	167	135	193	229	170	251	186	293	147	175	134
10	113	172	e130	238	300	183	235	368	267	164	212	136
11	116	154	133	249	292	177	255	594	245	175	187	133
12	113	145	134	226	263	176	232	372	223	189	170	133
13	113	135	140	203	239	174	212	488	211	347	161	133
14	112	132	135	174	231	171	203	505	209	319	157	135
15	112	134	e130	176	223	167	274	346	241	300	154	135
16	110	844	e125	176	222	165	253	293	172	243	151	139
17	143	561	e120	178	230	220	236	353	170	206	148	148
18	150	338	e115	183	197	279	224	294	171	179	120	132
19	463	249	e110	184	200	216	201	249	274	146	134	136
20	821	212	e110	191	194	239	191	226	281	143	136	143
21	604	213	e108	221	181	239	196	235	261	154	134	134
22	360	163	e108	204	186	206	197	223	227	199	355	179
23	257	170	e105	188	206	199	190	238	212	181	267	154
24	213	162	e105	182	249	191	183	227	209	173	228	138
25	190	156	e104	228	246	190	178	208	187	173	210	134
26	176	163	e104	496	190	187	187	378	138	156	186	132
27	165	160	e102	402	182	176	188	332	136	153	169	134
28	157	172	e102	324	187	171	179	276	133	153	159	132
29	149	168	e100	324	---	169	198	615	132	152	171	130
30	146	152	e100	755	---	191	262	712	133	152	221	129
31	153	---	e200	469	---	203	---	452	---	157	165	---
TOTAL	6147	6088	3863	8086	6819	5883	7119	10015	6715	5479	5700	4159
MEAN	198	203	125	261	244	190	237	323	224	177	184	139
MAX	821	844	200	755	368	279	438	712	358	347	368	179
MIN	110	132	100	174	181	165	178	186	132	134	120	129
(†)	20158	20050	19922	20409	19999	19979	20143	20112	19963	19922	19917	19841

CAL YR 1989 TOTAL 72137 MEAN 198 MAX 2000 MIN 100 CFSM 1.24 IN. 16.77
WTR YR 1990 TOTAL 76073 MEAN 208 MAX 844 MIN 100 CFSM 1.30 IN. 17.69

e Estimated
† Month-end contents, in millions of gallons in Prettyboy Reservoir (contents on Sept. 30, 1989, 19,748,000,000 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 Nov. 5-9 (leaves?) and Dec. 10, Dec 15 to Jan. 1 (ice effect), which are fair. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--46 years, 68.7 ft^3/s, 15.60 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,000 ft^3/s, June 22, 1972, gage height, 26.0 ft, from flood-marks, 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)
Oct. 20	1345	1,100	4.48	May 13	2200	1,450	5.12
Nov. 16	1500	*2,720	*6.95				

Minimum discharge, 32 ft^3/s, Sept. 12, 16, 30, gage height, 0.47 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	61	61	e260	106	68	70	84	98	53	39	40
2	120	57	60	92	98	68	100	74	94	51	37	38
3	74	62	60	75	95	68	202	69	92	50	37	38
4	59	59	57	72	111	65	105	76	92	50	36	36
5	55	e56	58	78	92	64	95	235	86	50	39	37
6	54	e55	59	71	87	64	89	101	85	55	113	36
7	54	e54	58	67	84	62	117	87	85	48	89	36
8	52	e60	58	68	81	62	96	79	84	48	49	35
9	53	e70	59	70	80	65	86	75	95	48	56	34
10	52	74	e56	110	117	67	83	217	89	51	94	36
11	54	68	57	95	98	64	90	154	69	61	69	34
12	53	63	57	79	87	63	79	100	65	57	53	33
13	53	59	59	70	82	62	75	295	66	102	48	35
14	52	58	56	65	81	61	74	217	68	88	47	39
15	53	57	e56	68	79	60	109	116	74	85	43	36
16	50	647	e55	67	79	60	84	104	66	64	42	35
17	61	134	e55	67	76	93	80	107	63	55	41	47
18	70	95	e52	69	72	97	76	94	66	52	40	34
19	225	82	e52	66	74	72	72	85	74	49	38	36
20	379	78	e51	70	70	81	71	82	65	47	56	42
21	125	72	e50	74	69	75	74	87	67	51	50	35
22	84	68	e49	67	71	68	72	83	62	67	134	53
23	71	71	e49	64	77	66	68	81	63	59	114	45
24	65	67	e50	64	86	67	67	79	62	48	69	36
25	61	67	e51	104	72	69	65	78	58	46	59	34
26	59	69	e50	225	66	66	65	188	57	44	53	35
27	57	67	e49	123	68	63	63	111	56	42	49	36
28	57	70	e48	100	69	61	61	90	54	43	46	34
29	57	65	e48	136	---	62	125	298	53	42	43	34
30	57	62	e52	266	---	72	105	161	52	42	44	33
31	60	---	e95	123	---	77	---	109	---	41	41	---
TOTAL	2426	2627	1727	3025	2327	2112	2618	3816	2160	1689	1768	1112
MEAN	78.3	87.6	55.7	97.6	83.1	68.1	87.3	123	72.0	54.5	57.0	37.1
MAX	379	647	95	266	117	97	202	298	98	102	134	53
MIN	50	54	48	64	66	60	61	69	52	41	36	33
CFSM	1.31	1.46	.93	1.63	1.39	1.14	1.46	2.06	1.20	.91	.95	.62
IN.	1.51	1.63	1.07	1.88	1.45	1.31	1.63	2.37	1.34	1.05	1.10	.69

CAL YR 1989 TOTAL 31768 MEAN 87.0 MAX 1840 MIN 34 CFSM 1.46 IN. 19.76
WTR YR 1990 TOTAL 27407 MEAN 75.1 MAX 647 MIN 33 CFSM 1.26 IN. 17.05

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. 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 flood-marks, 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)
Nov. 16	0815	730	5.73	July 12	2045	*810	6.07
Nov. 16	1000	741	5.78	Aug. 6	1815	716	5.67
June 3	1900	774	*a6.15				

a Backwater

Minimum discharge, 14 ft^3/s, Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	22	20	127	38	24	27	30	34	18	19	20
2	79	21	20	33	35	24	82	26	32	17	19	20
3	22	23	18	26	37	24	62	27	133	16	19	19
4	20	20	20	26	41	21	34	39	49	17	19	21
5	19	19	20	25	31	23	29	80	34	16	58	19
6	19	20	20	21	30	23	38	29	31	16	162	17
7	18	20	20	20	29	22	51	26	30	14	53	18
8	16	25	20	22	27	23	30	25	44	15	24	17
9	18	31	19	33	27	25	28	25	55	30	63	17
10	18	22	18	35	57	27	27	124	37	39	53	18
11	18	21	19	27	31	22	38	48	28	27	34	19
12	18	19	20	24	30	22	26	33	28	120	29	18
13	18	20	21	22	28	23	26	143	27	62	29	18
14	17	20	19	20	28	22	26	76	27	103	24	19
15	16	19	19	24	26	22	69	40	47	43	23	19
16	17	250	18	22	29	22	29	35	29	26	24	28
17	35	45	16	22	26	50	29	36	27	24	22	22
18	28	30	18	21	25	36	26	31	30	23	23	18
19	154	24	18	21	25	25	26	29	29	23	23	22
20	166	25	18	25	25	30	25	28	27	25	44	21
21	50	22	17	21	25	25	29	31	30	30	27	19
22	33	22	18	21	30	23	26	27	29	28	187	45
23	27	25	18	21	35	23	26	26	25	37	47	21
24	22	22	16	21	34	26	25	25	23	25	33	17
25	22	22	19	78	25	26	25	25	22	24	29	17
26	22	22	18	103	25	25	25	132	21	23	28	17
27	21	24	18	39	25	22	24	46	20	22	27	17
28	21	23	16	31	25	21	23	33	19	20	26	15
29	20	21	16	93	---	21	86	169	19	22	22	16
30	21	20	16	100	---	34	50	61	19	21	21	17
31	25	---	54	44	---	39	---	41	---	20	20	---
TOTAL	1023	919	607	1168	849	795	1067	1546	1005	946	1231	591
MEAN	33.0	30.6	19.6	37.7	30.3	25.6	35.6	49.9	33.5	30.5	39.7	19.7
MAX	166	250	54	127	57	50	86	169	133	120	187	45
MIN	16	19	16	20	25	21	23	25	19	14	19	15
CFSM	1.58	1.47	.94	1.80	1.45	1.23	1.70	2.39	1.60	1.46	1.90	.94
IN.	1.82	1.64	1.08	2.08	1.51	1.42	1.90	2.75	1.79	1.68	2.19	1.05

CAL YR 1989 TOTAL 12748 MEAN 34.9 MAX 500 MIN 14 CFSM 1.67 IN. 22.69
WTR YR 1990 TOTAL 11747 MEAN 32.2 MAX 250 MIN 14 CFSM 1.54 IN. 20.91

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. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--15 years, 11.4 ft^3/s, 16.47 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)
June 3	2015	484	4.01	July 14	1615	394	3.78
June 15	0600	309	3.53	Aug. 6	0045	*621	*4.30
July 12	2145	372	3.72				

Minimum discharge, 3.1 ft^3/s, Dec. 22, result of freezeup; minimum daily discharge, 6.3 ft^3/s, Dec. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.5	10	8.0	43	15	9.6	9.9	11	14	9.1	8.1	9.7
2	27	9.6	7.8	10	14	9.7	16	9.8	13	8.8	7.8	9.7
3	12	9.9	7.7	8.9	13	9.9	18	9.3	65	8.6	7.7	9.4
4	10	9.4	7.2	9.1	17	9.3	12	11	28	8.4	7.5	9.1
5	9.4	9.3	7.7	9.5	14	9.0	11	20	15	8.2	26	9.2
6	9.0	9.3	7.7	9.0	13	9.0	11	11	13	8.5	91	9.2
7	8.8	9.0	7.6	8.4	12	8.6	17	10	12	8.1	16	9.1
8	8.3	10	7.6	9.1	12	8.5	12	9.5	18	8.1	11	8.8
9	8.1	11	7.6	13	11	9.0	11	9.3	23	8.2	66	8.6
10	7.7	9.7	7.4	15	27	9.6	11	64	15	14	37	8.6
11	8.2	9.3	7.5	11	15	9.0	12	21	12	12	17	8.3
12	8.0	9.0	7.8	9.8	13	8.9	10	14	11	56	14	8.2
13	7.7	8.7	8.0	8.8	12	8.7	9.8	41	11	36	13	8.2
14	7.7	8.7	7.6	8.3	12	8.7	9.6	21	11	81	13	8.3
15	7.8	8.9	7.4	8.8	11	8.4	23	14	68	26	11	8.1
16	7.6	26	7.3	8.8	11	8.6	12	13	15	16	11	9.1
17	9.8	10	7.3	8.7	11	15	12	13	13	13	10	8.7
18	9.4	9.4	6.9	8.7	10	15	11	11	13	12	9.9	7.7
19	55	9.0	e6.9	8.3	10	10	10	11	16	11	9.8	8.4
20	66	8.9	6.9	8.9	9.9	10	10	10	12	11	11	8.8
21	18	8.1	e6.8	9.2	9.9	9.8	11	11	14	10	11	7.9
22	14	8.0	e6.5	8.6	11	9.3	10	10	15	10	76	14
23	13	8.9	6.4	8.0	13	9.0	9.8	10	14	12	21	9.3
24	12	8.2	6.6	8.0	14	9.3	9.5	9.6	11	9.8	16	8.2
25	11	8.6	6.7	30	10	9.5	9.3	9.5	10	9.4	14	7.7
26	11	9.0	6.7	50	9.5	9.1	9.2	37	10	8.8	13	7.7
27	11	8.5	e6.5	17	9.7	8.6	9.0	14	9.7	9.0	12	7.7
28	10	9.0	6.4	14	9.7	8.3	8.7	12	9.4	8.9	11	7.7
29	10	8.2	6.3	43	---	8.3	12	76	9.3	9.0	11	7.6
30	10	8.0	6.8	40	---	9.9	15	22	9.1	8.7	11	7.3
31	13	---	11	17	---	12	---	15	---	8.5	10	---
TOTAL	429.0	289.6	226.6	469.9	349.7	297.6	351.8	560.0	509.5	468.1	603.8	260.3
MEAN	13.8	9.65	7.31	15.2	12.5	9.60	11.7	18.1	17.0	15.1	19.5	8.68
MAX	66	26	11	50	27	15	23	76	68	81	91	14
MIN	7.6	8.0	6.3	8.0	9.5	8.3	8.7	9.3	9.1	8.1	7.5	7.3
CFSM	1.47	1.03	.78	1.61	1.33	1.02	1.25	1.92	1.81	1.61	2.07	.92
IN.	1.70	1.15	.90	1.86	1.38	1.18	1.39	2.22	2.02	1.85	2.39	1.03

CAL YR 1989 TOTAL 5234.0 MEAN 14.3 MAX 225 MIN 5.7 CFSM 1.53 IN. 20.71
WTR YR 1990 TOTAL 4815.9 MEAN 13.2 MAX 91 MIN 6.3 CFSM 1.40 IN. 19.06

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.--Records good except those for Dec. 15-30 (ice effect), which are fair. 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.--41 years, 3.38 ft^3/s, 13.95 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 10	1215	*533	*4.36	May 13	1815	241	3.51

Minimum discharge, 0.34 ft^3/s, Sept. 15, 21, 24, 25, 27-30, gage height, 1.36 ft, result of regulation; minimum daily discharge, 0.36 ft^3/s, Sept. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.57	1.5	2.5	8.8	5.2	2.7	3.5	.89	5.0	1.2	.61	.50
2	5.0	1.4	2.4	3.5	4.8	2.7	8.1	.79	4.2	1.5	.57	.49
3	1.4	2.1	2.4	3.1	4.9	2.3	9.1	.81	4.3	1.8	.58	.48
4	.53	2.1	e2.2	3.6	5.8	2.0	3.8	2.2	4.1	1.7	.57	.46
5	.51	2.1	2.4	2.1	4.4	2.0	3.7	9.0	3.6	1.5	.66	.47
6	.50	1.6	2.5	2.7	4.0	2.5	2.9	3.4	3.5	2.4	4.1	.48
7	.46	1.6	2.4	1.3	2.8	1.9	5.7	.93	3.4	1.2	3.0	.47
8	.46	1.9	2.3	1.7	3.4	2.4	2.6	.92	6.0	1.2	1.6	.45
9	.83	4.0	e2.3	1.6	3.4	2.6	1.5	1.5	6.0	.99	1.3	.47
10	.59	1.8	e2.3	3.8	5.2	2.7	1.5	55	3.2	1.0	11	.46
11	.52	.90	2.4	3.2	4.2	2.6	1.8	11	3.1	.97	2.5	.44
12	.61	.63	2.4	2.2	3.8	2.1	1.5	6.5	3.5	1.5	.71	.46
13	.61	.46	2.4	1.4	1.9	1.6	1.7	23	2.8	2.6	.65	.45
14	.46	.88	2.4	1.2	2.0	1.5	1.9	9.4	2.3	4.3	.62	.42
15	.64	.51	e2.3	1.3	2.5	1.6	5.5	4.1	1.9	4.0	.66	.39
16	.91	16	e2.2	.92	2.6	1.6	2.4	4.7	2.6	2.3	.59	1.2
17	3.8	3.3	e2.2	1.1	2.6	3.9	1.9	8.8	2.1	1.3	.57	2.0
18	3.6	1.7	e2.2	1.8	1.6	3.8	1.1	3.0	3.9	1.2	.55	1.0
19	16	1.4	e2.0	1.3	.85	3.5	.74	1.4	6.7	1.2	.60	.86
20	21	1.3	e2.0	3.0	2.4	6.9	.74	1.0	4.8	.76	3.3	1.3
21	4.9	2.2	e2.0	3.4	2.4	4.6	1.0	1.9	4.0	2.7	2.2	.39
22	2.5	1.9	e2.0	2.1	3.0	3.8	.74	2.3	1.7	3.1	7.0	1.8
23	2.4	1.4	e2.0	1.8	4.3	3.4	.80	1.0	1.4	4.2	4.8	1.3
24	2.7	.89	e2.0	1.6	5.5	3.0	.71	1.0	1.4	2.1	3.0	.39
25	2.6	1.2	e2.0	5.4	2.7	3.5	.72	.92	.97	.78	1.1	.38
26	2.4	.98	e2.0	12	e1.1	1.5	.76	11	1.5	.72	.86	.39
27	1.5	2.2	e2.0	4.9	.71	1.5	.67	4.6	1.0	.64	.63	.38
28	.61	3.0	e2.0	3.1	2.1	3.0	1.1	3.5	1.0	.65	.59	.37
29	.67	2.7	e2.0	13	---	2.4	9.2	26	1.1	.64	.58	.36
30	.62	2.6	e2.0	12	---	2.4	5.3	9.7	.80	.65	.79	.42
31	.89	---	5.4	5.9	---	2.4	---	6.6	---	.64	.70	---
TOTAL	80.79	66.25	71.6	114.82	90.16	84.4	82.68	216.86	91.87	51.44	56.99	19.43
MEAN	2.61	2.21	2.31	3.70	3.22	2.72	2.76	7.00	3.06	1.66	1.84	.65
MAX	21	16	5.4	13	5.8	6.9	9.2	55	6.7	4.3	11	2.0
MIN	.46	.46	2.0	.92	.71	1.5	.67	.79	.80	.64	.55	.36
CFSM	.79	.67	.70	1.13	.98	.83	.84	2.13	.93	.50	.56	.20
IN.	.91	.75	.81	1.30	1.02	.95	.93	2.45	1.04	.58	.64	.22

CAL YR 1989 TOTAL 1064.91 MEAN 2.92 MAX 65 MIN .32 CFSM .89 IN. 12.04
WTR YR 1990 TOTAL 1027.29 MEAN 2.81 MAX 55 MIN .36 CFSM .86 IN. 11.62

e Estimated

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 2.79 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.--45 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)
Oct. 20	1245	1,410	5.18	May 10	1545	1,370	5.12
Nov. 16	1200	*1,740	*5.67	May 13	2100	1,670	5.57
Jan. 30	0030	1,120	4.64				

Minimum discharge, 3.9 ft^3/s, June 30, gage height, 1.18 ft; minimum daily discharge, 23 ft^3/s, Sept. 11, 12, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	43	40	e200	99	53	58	73	106	43	25	29
2	95	40	40	79	86	56	95	63	97	42	24	29
3	49	40	39	60	79	54	228	59	94	40	24	28
4	34	39	e35	60	90	50	108	70	89	39	24	26
5	31	39	38	70	75	48	95	172	81	41	26	26
6	31	39	38	59	72	49	86	86	76	49	81	27
7	29	37	38	52	66	47	120	70	76	37	62	26
8	28	39	36	49	66	46	92	63	81	37	36	26
9	28	71	34	54	66	50	77	59	106	37	38	26
10	27	54	36	101	108	54	73	476	79	39	183	25
11	29	39	37	84	78	51	81	185	69	45	69	23
12	28	36	37	67	70	47	68	119	64	52	45	23
13	28	35	38	56	65	45	64	319	63	82	38	27
14	27	37	34	50	64	44	61	186	62	68	34	30
15	27	38	33	53	62	44	102	118	62	78	32	27
16	26	387	33	56	64	44	71	104	61	57	31	33
17	64	97	30	57	61	78	66	140	58	43	31	43
18	60	68	30	60	57	77	63	93	68	40	29	26
19	278	58	29	56	57	54	57	77	88	37	30	27
20	441	55	e28	63	54	102	56	78	72	36	61	40
21	114	51	e28	68	53	74	58	84	64	50	45	27
22	77	48	e27	58	56	61	57	78	57	53	124	55
23	61	50	e28	50	63	56	53	71	56	58	101	39
24	57	47	e28	50	100	55	51	67	56	41	56	28
25	53	45	e28	95	65	58	50	64	51	33	45	26
26	51	49	e28	221	e50	53	49	213	48	30	43	26
27	48	46	28	116	52	48	48	107	46	29	36	25
28	45	54	26	92	53	47	47	84	45	30	33	23
29	41	45	28	189	---	48	144	420	44	29	33	24
30	40	40	31	303	---	61	105	177	42	28	36	24
31	42	---	70	111	---	65	---	122	---	27	31	---
TOTAL	2019	1766	1053	2739	1931	1719	2383	4097	2061	1350	1506	864
MEAN	65.1	58.9	34.0	88.4	69.0	55.5	79.4	132	68.7	43.5	48.6	28.8
MAX	441	387	70	303	108	102	228	476	106	82	183	55
MIN	26	35	26	49	50	44	47	59	42	27	24	23
CFSM	1.15	1.04	.60	1.56	1.22	.98	1.40	2.34	1.21	.77	.86	.51
IN.	1.33	1.16	.69	1.80	1.27	1.13	1.57	2.69	1.35	.89	.99	.57

CAL YR 1989 TOTAL 23770 MEAN 65.1 MAX 1710 MIN 23 CFSM 1.15 IN. 15.62
WTR YR 1990 TOTAL 23488 MEAN 64.4 MAX 476 MIN 23 CFSM 1.14 IN. 15.44

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 Dec 15 to Jan. 1 (ice effect) and July 7-12 (backwater), which are fair. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--8 years, 16.0 ft^3/s, 15.52 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)
Nov. 16	1045	*426	*3.06	No peak greater than base discharge.			

Minimum discharge, 4.0 ft^3/s, Dec. 14; minimun daily discharge, 5.9 ft^3/s, Aug. 19, Sept. 9, 11, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.8	11	10	e70	29	13	15	21	26	10	6.9	6.9
2	21	11	9.9	19	26	13	32	18	24	9.7	6.6	6.9
3	11	11	e9.5	14	25	13	58	17	23	9.0	6.4	6.8
4	8.7	10	e9.0	13	28	12	30	21	23	8.7	6.4	6.5
5	7.9	10	9.5	14	23	12	26	65	21	8.5	7.1	6.5
6	7.6	9.9	9.5	12	21	12	25	23	19	10	14	6.5
7	7.5	9.9	9.3	11	20	11	32	20	19	e8.5	12	6.5
8	7.1	10	9.2	11	19	11	25	17	19	e8.0	8.3	6.4
9	7.2	16	8.1	11	18	12	23	16	25	e8.0	9.5	5.9
10	7.0	12	9.0	21	30	13	22	87	19	e8.0	e38	6.1
11	7.6	10	9.0	16	22	12	24	42	17	e10	13	5.9
12	7.2	10	9.1	14	20	11	20	29	16	e26	9.0	5.9
13	7.1	9.2	9.1	11	19	11	19	51	16	24	7.8	7.9
14	6.9	9.1	8.1	11	18	11	18	42	16	14	7.2	7.0
15	6.9	9.1	e8.0	11	17	11	26	30	15	15	6.9	7.1
16	6.9	86	e8.0	11	17	11	20	27	15	12	6.5	8.6
17	14	20	e7.5	11	16	20	19	27	14	9.7	6.5	9.2
18	12	15	e7.0	11	15	18	18	23	17	8.9	6.2	6.5
19	e65	13	e7.0	11	15	14	17	21	23	8.2	5.9	6.8
20	92	13	e7.0	12	14	23	16	19	15	8.5	13	8.2
21	25	12	e6.5	12	13	18	17	20	15	9.7	8.1	6.7
22	18	12	e6.5	11	14	16	17	19	14	12	23	11
23	15	12	e6.5	9.9	15	15	16	18	14	12	16	8.2
24	13	11	e6.5	9.9	21	14	15	17	14	9.2	11	7.2
25	13	11	e6.5	20	15	15	14	16	12	8.5	9.2	6.9
26	12	12	e6.5	46	e13	14	14	46	12	7.9	8.5	6.9
27	11	11	e6.5	23	13	13	13	23	11	7.7	7.9	6.9
28	11	12	e6.5	19	13	13	13	19	11	7.4	7.5	6.9
29	11	11	e6.5	53	---	13	47	87	10	7.6	7.4	6.9
30	11	10	e7.5	67	---	16	28	40	10	7.6	8.6	6.9
31	11	---	e30	35	---	18	---	30	---	7.4	7.2	---
TOTAL	469.4	419.2	268.8	620.8	529	429	679	951	505	321.7	311.6	212.6
MEAN	15.1	14.0	8.67	20.0	18.9	13.8	22.6	30.7	16.8	10.4	10.1	7.09
MAX	92	86	30	70	30	23	58	87	26	26	38	11
MIN	6.9	9.1	6.5	9.9	13	11	13	16	10	7.4	5.9	5.9
CFSM	1.08	1.00	.62	1.43	1.35	.99	1.62	2.19	1.20	.74	.72	.51
IN.	1.25	1.11	.71	1.65	1.41	1.14	1.80	2.53	1.34	.85	.83	.56

CAL YR 1989 TOTAL 6186.2 MEAN 16.9 MAX 500 MIN 5.3 CFSM 1.21 IN. 16.44
WTR YR 1990 TOTAL 5717.1 MEAN 15.7 MAX 92 MIN 5.9 CFSM 1.12 IN. 15.19

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 December 20 to January 4 (ice effect) and August 11-23 (missing record), which are fair. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--8 years, 32.0 ft^3/s, 15.52 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)
Nov. 16	1000	*548	*4.04	No peak greater than base discharge.			

Minimum discharge, 7.9 ft^3/s, Dec. 14; minimun daily discharge, 12 ft^3/s, Sept. 9-13, 26, 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	21	19	e110	60	26	35	46	60	22	15	15
2	40	20	18	e38	55	25	48	40	54	21	15	14
3	22	20	18	e30	51	26	99	37	52	20	14	14
4	18	20	17	e30	58	25	71	44	52	19	14	13
5	17	19	18	37	47	23	62	123	46	19	15	13
6	16	19	18	31	42	23	58	66	43	21	32	13
7	16	19	18	27	40	22	70	56	42	19	22	13
8	15	20	17	27	38	21	59	49	44	18	17	13
9	15	29	17	27	37	22	52	44	53	18	20	12
10	15	23	18	44	55	27	50	183	46	18	72	12
11	16	20	18	41	45	24	56	92	39	22	e30	12
12	15	20	18	35	40	23	48	75	35	43	e18	12
13	15	18	18	29	37	22	44	121	34	62	e16	12
14	15	18	16	25	36	22	42	85	33	36	e15	13
15	15	19	e16	25	34	21	58	73	32	40	e14	14
16	15	117	16	25	34	21	46	70	32	29	e13	17
17	25	43	16	25	32	38	44	68	30	24	e13	18
18	22	31	15	25	29	39	42	61	39	22	e13	13
19	94	26	15	24	29	29	38	54	48	21	e12	13
20	134	25	e15	25	28	54	37	51	34	20	e26	15
21	50	23	e14	27	26	44	39	54	31	20	e16	13
22	34	21	e14	24	27	38	38	49	29	22	e46	20
23	28	23	e14	22	32	34	36	45	30	27	e36	16
24	25	21	e14	22	43	32	35	42	29	20	24	14
25	24	21	e14	43	29	33	33	40	26	19	21	13
26	23	22	e14	86	26	32	31	81	24	18	19	12
27	22	21	e14	60	26	30	29	58	23	17	18	13
28	22	23	e14	51	26	28	28	48	22	17	17	13
29	21	21	e14	90	---	28	61	142	22	17	16	12
30	21	19	e16	121	---	35	59	83	21	17	15	12
31	21	---	e42	67	---	41	---	68	---	16	15	---
TOTAL	848	762	525	1293	1062	908	1448	2148	1105	724	649	409
MEAN	27.4	25.4	16.9	41.7	37.9	29.3	48.3	69.3	36.8	23.4	20.9	13.6
MAX	134	117	42	121	60	54	99	183	60	62	72	20
MIN	15	18	14	22	26	21	28	37	21	16	12	12
CFSM	.98	.91	.60	1.49	1.35	1.05	1.72	2.47	1.32	.83	.75	.49
IN.	1.13	1.01	.70	1.72	1.41	1.21	1.92	2.85	1.47	.96	.86	.54

CAL YR 1989 TOTAL 12931 MEAN 35.4 MAX 1000 MIN 13 CFSM 1.27 IN. 17.18
WTR YR 1990 TOTAL 11881 MEAN 32.6 MAX 183 MIN 12 CFSM 1.16 IN. 15.78

e Estimated

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.

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.--Records good except those for estimated daily discharges (missing record, ice effect), 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, 2,960 ft^3/s, Nov. 16, gage height, 5.09 ft; minimum daily discharge, 45 ft^3/s, Sept. 9, 10, 11, 12, 13, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e75	100	82	e450	218	117	168	166	177	78	56	54
2	e160	92	78	e180	200	116	276	132	162	77	54	54
3	e120	95	76	162	184	116	548	117	209	68	52	52
4	e90	91	75	137	221	110	247	124	226	62	52	48
5	e85	89	76	156	193	107	210	196	166	60	60	48
6	81	91	74	130	164	106	200	144	154	60	209	48
7	78	90	76	111	161	102	284	124	140	56	146	48
8	74	100	75	115	149	100	227	111	141	55	80	48
9	74	195	73	151	143	106	189	105	160	56	117	45
10	74	192	e73	178	262	121	174	405	154	66	276	45
11	74	165	e74	192	221	111	194	353	125	72	183	45
12	73	157	76	149	181	109	166	189	117	105	105	45
13	72	150	e75	119	158	106	152	185	111	323	81	45
14	71	86	e74	105	155	104	144	183	108	158	84	45
15	72	86	e72	104	147	104	254	162	111	161	71	51
16	73	862	e70	104	150	104	186	157	113	118	67	53
17	98	289	e70	104	138	168	165	166	108	90	61	65
18	136	199	e68	104	126	219	160	152	124	80	58	49
19	516	122	e66	101	126	137	136	127	256	70	55	47
20	725	107	e66	94	123	166	131	122	151	66	127	54
21	270	92	e66	106	117	169	144	133	119	68	103	51
22	172	87	e66	99	123	137	142	131	115	75	126	81
23	135	99	e66	92	162	126	126	121	136	119	164	78
24	116	91	e64	91	195	125	121	115	107	76	111	57
25	103	89	e64	202	136	137	113	110	99	66	97	50
26	98	97	e64	494	112	134	113	378	94	66	97	47
27	93	93	e60	261	118	119	107	216	87	62	83	47
28	91	97	e62	195	117	114	105	169	84	62	71	47
29	89	87	e66	256	---	110	286	644	80	61	66	46
30	91	81	e70	633	---	140	234	341	78	60	64	55
31	95	---	e200	264	---	227	---	208	---	60	56	---
TOTAL	4174	4271	2317	5639	4500	3967	5702	5986	4012	2656	3032	1548
MEAN	135	142	74.7	182	161	128	190	193	134	85.7	97.8	51.6
MAX	725	862	200	633	262	227	548	644	256	323	276	81
MIN	71	81	60	91	112	100	105	105	78	55	52	45
(†)	37108	36236	35706	35068	35931	35958	38348	42041	42301	41816	40477	39300
(≠)	239	200	219	203	187	170	151	184	204	206	205	200

CAL YR 1989 TOTAL 60481 MEAN 166 MAX 4660 MIN 60 ≠ 192
WTR YR 1990 TOTAL 47804 MEAN 131 MAX 862 MIN 45 ≠ 197

e Estimated

† Month-end contents, in millions of gallons in Liberty Reservoir (contents on Sept. 30, 1989, 37,109,000,000 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.

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.

REVISED RECORDS.--WDR MD-DE-89-1: 1984-88.

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.--15 years (water years 1945-52, 1984-90), 5.29 ft^3/s, 14.45 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 basis 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)
Apr. 29	1300	32	2.56	July 12	2215	*90	*3.63
May 29	1315	36	2.64				

Minimum discharge, 2.4 ft^3/s, Oct. 10, 12, 15, Dec. 22, 23, Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	3.7	3.2	11	4.0	3.2	4.5	5.4	4.0	2.8	2.8	2.7
2	11	3.3	3.3	5.2	3.9	3.3	6.1	4.3	3.8	2.9	2.8	2.7
3	5.0	3.7	3.3	3.9	3.8	3.4	9.1	3.8	4.0	2.8	2.7	2.7
4	3.1	3.4	3.1	4.0	4.8	3.1	4.6	4.2	4.2	2.7	2.7	2.7
5	2.8	3.3	3.2	4.1	3.9	3.0	3.9	6.1	4.3	2.7	3.4	2.7
6	2.7	3.4	3.2	3.7	3.6	3.0	4.3	4.2	4.9	2.8	13	2.7
7	2.6	3.4	3.2	3.4	3.6	3.0	7.1	3.7	4.9	2.6	6.3	2.6
8	2.5	4.7	3.1	4.5	3.4	3.0	4.3	3.5	4.2	2.6	3.4	2.5
9	2.5	5.5	3.4	5.5	3.5	3.3	3.6	3.5	3.9	2.8	11	2.5
10	2.5	4.0	3.4	4.5	5.7	3.2	3.7	14	3.8	4.2	11	2.7
11	2.5	3.4	3.3	3.7	4.5	3.2	4.2	9.7	3.4	5.2	4.5	2.5
12	2.5	3.3	3.5	3.4	3.7	3.2	3.5	4.5	3.2	16	3.6	2.6
13	2.5	3.2	3.8	3.1	3.4	3.2	3.4	5.2	3.2	20	5.7	2.6
14	2.5	3.3	3.5	3.0	3.4	3.1	3.4	4.5	3.3	7.3	7.8	2.9
15	2.5	3.6	3.2	3.1	3.4	3.1	14	3.9	7.1	6.8	3.8	2.7
16	2.5	9.6	3.2	3.0	3.7	3.1	5.5	4.0	4.0	4.0	3.4	3.7
17	3.7	5.4	2.9	3.0	3.4	8.6	4.5	4.2	3.3	3.8	3.3	4.4
18	4.2	3.7	2.9	3.1	3.1	8.1	4.1	3.9	3.4	9.3	3.1	2.8
19	15	3.4	2.8	3.0	3.3	3.9	3.6	3.4	4.4	4.9	3.1	2.7
20	17	3.5	3.1	3.0	3.1	4.0	3.6	3.4	3.8	4.0	4.9	2.8
21	8.1	3.5	2.9	3.2	3.1	3.7	4.8	3.7	3.2	8.7	3.9	2.6
22	4.3	3.3	2.5	3.0	3.5	3.3	4.4	3.6	6.0	4.4	7.1	4.5
23	3.5	3.7	2.6	2.9	4.6	3.3	3.8	3.5	5.6	3.6	6.0	3.3
24	3.4	3.4	2.6	3.0	4.8	3.6	3.6	3.3	3.4	3.2	4.2	2.7
25	3.2	3.3	2.9	8.9	3.6	4.2	3.6	3.3	3.1	3.1	3.8	2.6
26	3.2	3.8	3.2	15	3.0	3.8	3.5	12	3.1	2.9	3.9	2.7
27	3.2	3.6	3.2	5.9	3.2	3.4	3.4	5.8	3.0	2.9	3.2	2.7
28	3.2	3.6	3.2	4.1	3.3	3.2	3.4	4.2	3.2	2.9	3.0	2.6
29	3.2	3.3	3.2	6.4	---	3.3	12	18	3.0	2.9	2.9	2.7
30	3.6	3.2	3.3	11	---	4.3	9.9	9.5	2.9	3.1	2.8	2.7
31	4.2	---	4.9	5.0	---	8.2	---	4.5	---	3.0	2.8	---
TOTAL	135.6	115.5	99.1	149.6	104.3	119.3	153.4	170.8	117.6	150.9	145.9	85.3
MEAN	4.37	3.85	3.20	4.83	3.72	3.85	5.11	5.51	3.92	4.87	4.71	2.84
MAX	17	9.6	4.9	15	5.7	8.6	14	18	7.1	20	13	4.5
MIN	2.5	3.2	2.5	2.9	3.0	3.0	3.4	3.3	2.9	2.6	2.7	2.5
CFSM	.88	.77	.64	.97	.75	.77	1.03	1.11	.79	.98	.95	.57
IN.	1.01	.86	.74	1.12	.78	.89	1.15	1.28	.88	1.13	1.09	.64

CAL YR 1989 TOTAL 1208.97 MEAN 3.31 MAX 84 MIN .07 CFSM .67 IN. 9.05
WTR YR 1990 TOTAL 1547.3 MEAN 4.24 MAX 20 MIN 2.5 CFSM .85 IN. 11.58

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 September 1990 (discontinued). 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 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.--26 years (water years 1943-52, 1975-90), 8.78 ft^3/s, 17.23 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)
Jan. 1	0600	*112	*3.01	No peak greater than base discharge.			

Minimum daily discharge, 1.7 ft^3/s, Sept. 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	7.9	4.7	59	7.7	e6.0	10	12	e8.5	e2.5	e2.0	e2.6
2	44	6.6	4.9	16	7.4	e6.0	12	7.9	e7.5	e2.6	e1.8	e2.4
3	19	7.8	5.0	9.5	6.9	6.2	26	6.9	e7.0	e2.4	e1.8	e2.2
4	6.9	6.1	3.6	9.2	9.1	e5.8	12	6.7	e12	e2.2	e1.8	e2.2
5	e5.2	5.6	4.9	10	7.0	e5.6	9.5	12	e8.0	e2.2	e2.0	e2.2
6	e5.0	5.7	5.2	8.8	6.6	5.6	9.2	7.4	e6.0	e2.1	e26	e2.0
7	e4.6	6.2	4.7	7.4	6.7	e5.4	18	6.1	e6.0	e2.0	e10	e1.9
8	e4.6	7.8	3.7	9.3	6.4	e5.4	10	5.6	e7.0	e2.0	e5.0	e1.8
9	e4.6	12	e4.6	15	6.5	6.0	8.2	5.2	e19	e2.0	e4.4	e1.8
10	e4.6	6.1	e4.8	11	12	5.9	8.1	29	e10	e2.0	e36	e1.8
11	e4.6	4.9	e4.8	8.1	9.5	5.7	9.3	28	e7.0	e2.2	e16	e1.8
12	4.6	4.7	e4.8	7.0	6.9	6.0	7.7	9.6	e5.5	e5.0	e6.0	e1.7
13	4.4	4.4	e4.8	5.9	6.6	5.9	7.1	9.7	e5.0	e36	e4.0	e1.7
14	4.4	4.4	e4.6	5.2	6.6	5.6	7.1	8.9	e5.0	e11	e8.0	e2.0
15	4.4	5.0	e4.4	6.3	6.3	5.7	18	6.8	e50	e8.0	e5.0	e2.0
16	e4.4	9.0	e4.2	6.1	6.7	5.9	e11	6.6	12	e5.0	e4.0	e2.6
17	e6.5	7.9	e4.2	6.0	6.1	18	e10	6.6	6.9	e4.0	e3.4	e6.0
18	9.3	5.1	e4.0	6.2	5.4	29	e9.0	5.9	5.8	e3.0	e3.0	e3.4
19	33	4.4	e4.0	5.3	6.0	9.8	e8.0	4.5	6.6	e2.6	e5.0	e2.6
20	40	5.0	e3.8	5.2	5.5	9.5	e8.0	4.5	6.0	e3.5	e16	e2.4
21	22	4.4	e3.4	5.7	5.5	8.3	e10	6.0	4.5	e12	e8.0	e2.2
22	11	4.2	e3.2	5.0	e7.5	7.1	e8.5	5.4	5.0	e14	e19	e5.0
23	8.7	6.1	e3.0	4.9	e12	6.7	e7.5	5.0	10	e9.0	e15	e4.0
24	8.1	5.3	e3.0	5.2	e9.0	7.4	e6.8	4.6	5.1	e5.0	e6.0	e3.0
25	7.4	5.4	e3.0	16	e7.0	9.3	e6.4	4.3	3.8	e3.4	e4.8	e2.6
26	7.3	7.4	e3.0	36	e6.5	8.0	e6.2	34	3.3	e2.8	e4.2	e2.4
27	6.9	6.6	e3.0	16	e6.2	6.8	e6.0	13	3.0	e2.6	e3.8	e2.4
28	6.6	6.2	e3.0	9.3	e6.2	6.5	e6.0	7.5	2.9	e2.4	e3.4	e2.2
29	6.7	5.4	e3.0	9.2	---	6.5	e16	44	2.7	e2.3	e3.0	e2.0
30	6.6	5.0	e3.0	20	---	10	26	26	e2.5	e2.2	e2.8	e2.0
31	8.4	---	e5.0	9.3	---	20	---	10	---	e2.1	e2.6	---
TOTAL	316.9	182.6	125.3	353.1	201.8	255.6	317.6	349.7	243.6	160.1	233.8	74.9
MEAN	10.2	6.09	4.04	11.4	7.21	8.25	10.6	11.3	8.12	5.16	7.54	2.50
MAX	44	12	5.2	59	12	29	26	44	50	36	36	6.0
MIN	3.1	4.2	3.0	4.9	5.4	5.4	6.0	4.3	2.5	2.0	1.8	1.7
CFSM	1.48	.88	.58	1.65	1.04	1.19	1.53	1.63	1.17	.75	1.09	.36
IN.	1.70	.98	.67	1.90	1.08	1.37	1.71	1.88	1.31	.86	1.26	.40

CAL YR 1989 TOTAL 3339.5 MEAN 9.15 MAX 94 MIN 2.2 CFSM 1.32 IN. 17.95
WTR YR 1990 TOTAL 2815.0 MEAN 7.71 MAX 59 MIN 1.7 CFSM 1.11 IN. 15.13

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.

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.--Records good except those for estimated daily discharges (ice effect), which are fair.

AVERAGE DISCHARGE.--46 years, 38.9 ft^3/s, 15.18 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)
Nov. 16	1330	*893	*5.75	No other peak greater than base discharge.			

Minimum discharge, 9.0 ft^3/s, Sept. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	20	22	152	63	35	52	43	47	20	12	14
2	39	19	21	49	57	35	119	38	42	21	11	13
3	25	20	22	37	53	36	182	35	41	18	11	13
4	18	19	21	37	68	33	87	39	48	17	11	12
5	16	19	21	41	57	32	71	46	37	16	12	12
6	16	19	21	36	49	32	68	37	35	16	36	12
7	16	19	21	32	47	30	93	35	34	15	23	12
8	15	20	21	33	44	29	74	32	32	15	16	11
9	15	31	23	37	43	31	62	30	36	15	24	11
10	15	29	22	48	88	32	59	113	36	15	89	11
11	15	23	21	47	66	31	68	81	30	15	34	9.9
12	15	21	21	39	55	30	56	50	28	18	21	9.7
13	15	20	22	33	49	29	51	50	27	43	18	10
14	14	20	22	30	47	29	49	45	26	27	18	11
15	14	21	22	30	45	28	79	39	26	32	16	11
16	14	264	20	29	46	28	58	38	26	24	15	14
17	18	63	20	29	43	48	54	39	24	19	15	20
18	22	40	19	29	39	50	50	34	23	18	14	11
19	109	33	19	27	39	36	46	31	30	17	16	11
20	137	30	19	27	37	55	44	30	24	16	27	12
21	51	27	18	28	35	47	51	35	23	20	20	11
22	33	25	17	26	37	41	48	32	23	19	23	17
23	27	27	e17	25	43	38	43	29	25	26	31	15
24	24	25	e17	25	59	38	41	28	22	17	23	12
25	23	24	e16	49	40	43	40	27	21	16	20	10
26	22	27	e16	136	36	42	39	97	20	15	18	10
27	21	26	e16	68	35	37	37	55	19	14	17	12
28	20	26	e15	52	36	35	36	41	18	14	16	11
29	20	24	e15	79	---	35	43	177	18	14	15	10
30	19	23	e20	185	---	43	50	89	17	14	14	10
31	20	---	42	77	---	73	---	57	---	13	13	---
TOTAL	844	1004	629	1572	1356	1161	1850	1552	858	579	649	358.6
MEAN	27.2	33.5	20.3	50.7	48.4	37.5	61.7	50.1	28.6	18.7	20.9	12.0
MAX	137	264	42	185	88	73	182	177	48	43	89	20
MIN	14	19	15	25	35	28	36	27	17	13	11	9.7
CFSM	.78	.96	.58	1.46	1.39	1.08	1.77	1.44	.82	.54	.60	.34
IN.	.90	1.07	.67	1.68	1.45	1.24	1.98	1.66	.92	.62	.69	.38

CAL YR 1989 TOTAL 15878 MEAN 43.5 MAX 1390 MIN 12 CFSM 1.25 IN. 16.97
WTR YR 1990 TOTAL 12412.6 MEAN 34.0 MAX 264 MIN 9.7 CFSM .98 IN. 13.27

e Estimated

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 1990 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	Discharge, instantaneous (ft3/s)	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)
OCT 16...	1435	4.3	202	6.89	17.5	29.0	5	8.3	13	6.3	12	3.7

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)	Phosphorous 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)
OCT 16...	23	4.0	32	0.10	9.4	110	92	5.40	0.090	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)
OCT 16...	3	620	150	6600	<10	60	59	520	<0.01	20	3.0

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 (ice effect), which are fair.

AVERAGE DISCHARGE.--12 years, 24.8 ft^3/s, 14.71 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)
Oct. 20	1145	504	3.84	Jan. 1	0700	623	4.14
Nov. 16	1215	*1,890	*6.17				

Minimum discharge, 5.6 ft^3/s, Aug. 3, 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	19	21	177	30	22	30	26	25	12	7.8	9.1
2	32	19	20	31	29	22	80	23	23	12	7.4	8.9
3	20	19	20	23	28	22	84	22	23	11	6.7	8.7
4	15	19	19	22	38	21	38	25	26	10	6.7	8.3
5	14	18	19	32	31	20	32	28	21	9.9	7.2	8.4
6	14	18	20	27	28	20	34	23	20	10	19	8.4
7	13	18	20	23	27	19	52	21	20	9.2	12	8.0
8	13	19	20	23	25	19	37	20	20	9.6	9.1	7.8
9	13	26	21	27	25	21	31	19	26	9.2	15	7.4
10	12	23	20	35	55	22	30	62	22	9.0	59	7.7
11	12	20	19	29	35	21	35	38	19	9.9	22	7.3
12	12	19	20	25	30	21	29	26	18	11	14	7.3
13	12	18	20	21	27	20	27	27	17	28	12	7.5
14	12	18	19	20	27	20	26	25	17	17	12	7.9
15	12	19	19	21	26	19	47	22	17	21	11	8.2
16	12	411	18	20	27	20	32	22	17	15	11	9.7
17	17	41	18	20	25	33	30	24	16	12	10	11
18	21	28	18	20	23	32	28	21	15	12	9.7	8.4
19	110	24	18	19	23	23	26	19	26	11	9.5	8.5
20	144	23	18	20	22	33	25	18	17	11	18	8.9
21	37	22	18	20	21	28	29	22	17	11	12	8.0
22	26	22	17	19	23	24	27	20	16	12	16	12
23	23	23	e17	18	28	22	25	19	19	12	19	9.8
24	22	22	e17	18	35	23	24	18	16	11	14	8.6
25	21	22	e16	37	24	27	23	17	14	10	14	9.1
26	20	24	e16	80	21	26	23	69	14	9.5	14	8.7
27	19	23	e16	35	21	23	22	33	13	9.1	12	8.6
28	19	23	e15	28	22	21	21	26	13	9.1	11	8.2
29	18	22	e15	54	---	21	28	115	13	9.0	10	7.9
30	18	21	e17	86	---	27	30	43	12	9.0	9.9	7.9
31	19	---	35	35	---	43	---	29	---	8.7	9.4	---
TOTAL	765	1043	586	1065	776	735	1005	922	552	360.2	420.4	256.2
MEAN	24.7	34.8	18.9	34.4	27.7	23.7	33.5	29.7	18.4	11.6	13.6	8.54
MAX	144	411	35	177	55	43	84	115	26	28	59	12
MIN	12	18	15	18	21	19	21	17	12	8.7	6.7	7.3
CFSM	1.08	1.52	.83	1.50	1.21	1.04	1.46	1.30	.80	.51	.59	.37
IN.	1.24	1.69	.95	1.73	1.26	1.19	1.63	1.50	.90	.59	.68	.42

CAL YR 1989 TOTAL 10919.9 MEAN 29.9 MAX 1380 MIN 9.9 CFSM 1.31 IN. 17.74
WTR YR 1990 TOTAL 8485.8 MEAN 23.2 MAX 411 MIN 6.7 CFSM 1.02 IN. 13.78

e Estimated

01591400 CATTAIL CREEK NEAR GLENWOOD, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1988 to September 1990 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	Discharge, instantaneous (ft3/s)	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)
OCT 13...	1300	13	143	7.01	13.0	28.0	5	10.5	9.4	4.5	7.8	1.7

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)	Phosphorous 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)
OCT 13...	21	4.0	17	<0.10	10	73	66	4.00	0.020	<1	<1	6

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)
OCT 13...	6	240	76	7200	<10	30	26	200	0.01	30	1.5

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.

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.--Records good except those for June 12-14 (missing record), which are fair. 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, 692 ft^3/s, Nov. 20, gage height, 3.73 ft; minimum discharge, 4.4 ft^3/s, Jan. 30, gage height, 1.02 ft; minimum daily discharge, 7.3 ft^3/s, Mar. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	54	92	9.3	9.7	101	70	8.8	213	10	100	54
2	53	54	91	9.1	8.6	101	102	8.8	101	10	99	54
3	53	53	92	49	8.2	101	188	8.9	84	10	99	54
4	41	53	59	46	8.1	101	375	9.0	15	10	99	55
5	53	53	46	9.2	8.0	44	249	9.5	14	9.9	97	55
6	53	53	46	9.4	7.7	7.9	101	9.6	e15	9.7	91	55
7	53	54	46	9.4	39	7.3	102	103	e15	9.9	53	55
8	54	54	34	9.5	108	7.4	102	90	e15	9.9	53	53
9	54	54	11	9.5	60	70	194	9.7	e15	32	53	51
10	54	54	11	9.5	55	104	147	10	e15	37	54	51
11	54	53	11	9.5	54	104	109	197	e15	32	54	52
12	54	53	11	9.4	133	149	100	316	e120	40	49	52
13	54	53	11	9.1	176	177	104	235	e300	58	53	51
14	54	53	11	9.0	395	149	99	9.1	e150	56	53	51
15	54	53	11	8.9	290	87	96	8.8	e52	57	53	52
16	49	54	11	9.0	100	53	149	8.8	e52	55	52	51
17	50	45	11	9.0	103	51	231	9.1	e52	58	53	51
18	54	52	11	9.1	101	51	134	152	e52	57	54	81
19	152	41	11	9.2	101	50	50	310	e52	79	54	62
20	201	393	11	9.0	101	51	51	192	54	56	56	30
21	201	356	11	8.7	101	50	51	8.4	54	56	55	63
22	201	92	11	8.4	101	50	51	8.4	54	54	55	13
23	155	103	11	8.4	101	50	159	8.5	40	55	54	13
24	82	102	11	8.4	103	51	245	8.3	89	76	54	43
25	54	103	11	49	71	51	152	8.3	8.1	54	54	90
26	47	103	12	50	76	165	102	8.9	11	54	54	46
27	54	64	9.2	8.5	103	231	103	8.4	12	83	54	54
28	54	46	7.8	11	102	233	103	8.2	11	98	54	59
29	54	47	8.8	11	---	191	65	153	11	96	54	9.6
30	54	60	8.8	11	---	99	12	487	11	101	54	9.9
31	54	---	9.1	10	---	54	---	414	---	101	54	---
TOTAL	2306	2462	748.7	445.5	2624.3	2791.6	3796	2826.5	1702.1	1524.4	1925	1470.5
MEAN	74.4	82.1	24.2	14.4	93.7	90.1	127	91.2	56.7	49.2	62.1	49.0
MAX	201	393	92	50	395	233	375	487	300	101	100	90
MIN	41	41	7.8	8.4	7.7	7.3	12	8.2	8.1	9.7	49	9.6
(†)	3220	3290	3790	5740	5930	5910	5930	6430	6190	6090	5980	5610

CAL YR 1989 TOTAL 37709.6 MEAN 103 MAX 1730 MIN 7.8
WTR YR 1990 TOTAL 24622.6 MEAN 67.5 MAX 487 MIN 7.3

e Estimated
† Month-end contents, in millions of gallons, in Triadelphia Reservoir (contents on Sept. 30, 1989, 3,200,000,000 gal). Records provided by Washington Suburban Sanitary Commission.

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 (backwater from leaves, missing record), which are poor. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--12 years, 29.0 ft^3/s, 14.59 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)
Nov. 16	1215	*786	*4.73	No other peak greater than base discharge.			

Minimum discharge, 5.6 ft^3/s, Aug. 4, 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	e19	19	e160	35	25	41	30	29	10	6.9	11
2	44	e19	19	e40	32	25	75	26	26	12	6.8	10
3	22	e18	18	e29	30	25	134	25	42	9.5	6.1	9.9
4	15	e18	17	e30	40	23	45	25	37	8.9	5.9	9.5
5	13	e18	18	e32	34	22	36	29	26	8.5	6.5	9.4
6	12	e18	18	27	29	22	36	25	24	8.5	63	9.1
7	12	e18	18	25	28	21	73	23	24	7.8	32	8.9
8	11	e20	18	23	27	20	45	20	25	8.1	14	8.6
9	11	33	e19	e30	26	21	36	19	23	8.0	34	8.1
10	11	28	e18	e35	59	22	33	115	26	7.8	187	8.5
11	11	22	e18	e30	40	22	38	59	20	7.6	50	7.8
12	e11	20	e19	e26	32	22	32	31	19	10	26	7.4
13	e11	19	e19	e23	29	22	30	31	17	40	21	8.0
14	e11	19	e19	22	28	21	28	29	17	27	21	8.9
15	e11	20	e18	e20	27	20	72	25	18	32	14	9.1
16	11	312	e18	e19	29	20	39	25	17	21	13	11
17	22	55	e17	e18	27	41	34	25	16	13	12	13
18	23	30	e17	e18	25	44	32	22	15	11	10	8.3
19	134	23	e17	e17	25	28	29	19	17	10	16	8.0
20	168	22	e16	e17	24	37	28	19	16	9.1	46	9.0
21	47	21	e16	e17	23	33	34	21	14	28	23	7.5
22	29	20	15	e17	28	27	33	21	14	26	24	14
23	23	23	15	e16	39	25	28	20	17	28	31	12
24	21	22	15	e16	47	26	26	19	14	13	24	8.7
25	20	21	e14	e35	30	32	25	17	12	9.9	30	7.4
26	19	25	e14	e100	24	33	25	130	12	8.6	27	7.2
27	19	24	e14	e50	25	27	24	46	11	7.7	19	7.4
28	19	23	e13	e37	25	26	23	31	11	7.7	16	7.2
29	19	21	e13	e60	---	24	28	226	10	7.7	13	7.0
30	19	19	e17	127	---	33	42	63	9.7	7.8	12	6.5
31	e19	---	e35	42	---	100	---	34	---	7.5	11	---
TOTAL	829	970	541	1158	867	889	1204	1250	578.7	421.7	821.2	268.4
MEAN	26.7	32.3	17.5	37.4	31.0	28.7	40.1	40.3	19.3	13.6	26.5	8.95
MAX	168	312	35	160	59	100	134	226	42	40	187	14
MIN	11	18	13	16	23	20	23	17	9.7	7.5	5.9	6.5
CFSM	.99	1.20	.65	1.38	1.15	1.06	1.49	1.49	.71	.50	.98	.33
IN.	1.14	1.34	.75	1.60	1.19	1.22	1.66	1.72	.80	.58	1.13	.37

CAL YR 1989 TOTAL 12689.9 MEAN 34.8 MAX 1310 MIN 8.9 CFSM 1.29 IN. 17.48
WTR YR 1990 TOTAL 9798.0 MEAN 26.8 MAX 312 MIN 5.9 CFSM .99 IN. 13.50

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). WDR MD-DE-89-1: 1978(M), 1979(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.--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, 1,100 ft^3/s, Nov. 21, gage height, 7.75 ft; minimum daily discharge, 18 ft^3/s, June 29, July 3-6, 8-11, 14-15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	19	78	35	93	149	76	37	425	19	20	20
2	19	20	78	30	92	77	76	21	88	19	20	20
3	20	20	78	25	92	77	250	21	89	18	20	20
4	20	20	82	25	92	77	486	50	69	18	20	20
5	19	20	69	25	92	77	530	74	74	18	20	24
6	19	20	65	26	92	77	158	75	90	18	112	20
7	19	20	62	26	91	78	74	75	89	19	198	20
8	19	209	52	25	91	80	75	47	90	18	198	20
9	20	114	52	25	126	79	257	20	89	18	132	20
10	20	20	52	25	91	79	304	48	89	18	19	20
11	19	20	52	25	91	79	75	410	91	18	19	20
12	19	20	52	25	91	79	76	490	93	24	19	20
13	20	20	52	26	90	78	76	72	92	22	71	20
14	20	20	49	26	110	79	76	73	92	18	101	20
15	20	20	26	25	141	77	76	73	92	18	100	20
16	20	21	26	25	141	76	108	54	92	19	100	21
17	20	21	26	25	191	77	177	19	92	19	100	20
18	20	21	26	25	221	77	346	167	92	19	99	20
19	20	21	26	25	220	77	495	338	49	19	100	20
20	20	51	26	25	132	77	256	250	25	19	53	20
21	21	681	38	25	84	77	75	65	19	19	19	20
22	21	e640	48	25	77	76	75	75	19	19	19	20
23	21	e78	39	25	76	79	75	75	19	19	19	20
24	62	e78	26	25	77	77	75	85	19	20	19	20
25	317	e78	26	25	78	77	75	90	19	19	19	20
26	180	e78	25	25	186	122	75	90	19	19	19	19
27	19	e78	26	25	264	280	75	90	19	19	19	19
28	19	e78	25	25	260	394	75	88	19	19	19	20
29	19	e78	30	25	---	242	75	132	18	19	20	20
30	20	e78	25	243	---	76	75	492	19	20	20	20
31	19	---	25	321	---	77	---	567	---	20	20	---
TOTAL	1110	2662	1362	1308	3482	3203	4797	4263	2191	590	1733	603
MEAN	35.8	88.7	43.9	42.2	124	103	160	138	73.0	19.0	55.9	20.1
MAX	317	681	82	321	264	394	530	567	425	24	198	24
MIN	19	19	25	25	76	76	74	19	18	18	19	19
CFSM	.27	.67	.33	.32	.94	.78	1.21	1.04	.55	.14	.42	.15
IN.	.31	.75	.38	.37	.98	.90	1.35	1.20	.62	.17	.49	.17
(†)	8850	8880	8870	11140	11290	11330	11510	12080	11750	11620	11570	11010
(≠)	61.0	55.1	60.6	47.1	51.7	51.4	47.8	40.4	44.2	62.0	60.2	60.5

CAL YR 1989 TOTAL 44118.0 MEAN 121 MAX 3360 MIN 17 ≠ 59.6
WTR YR 1990 TOTAL 27304.0 MEAN 74.8 MAX 681 MIN 18 ≠ 53.5

† Combined month-end total contents, in millions of gallons, in Triadelphia and T. Howard Duckett Reservoirs (contents on Sept. 30, 1989, 8,160,000,000 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 Guilford Road (formerly 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 Oct. 10-17 (backwater) and Dec. 9-17, Jan. 1 (ice effect), which are fair. Low flow affected by regulation from unknown source.

AVERAGE DISCHARGE.--58 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)
Oct. 20	1130	814	6.97	Jan. 1	0300	ice jam	*8.01
Nov. 16	1200	*1,040	7.85	May 29	1330	910	7.40

Minimum discharge, 6.8 ft^3/s, Aug. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	28	24	e300	49	31	59	68	42	12	9.3	13
2	183	25	24	59	44	30	107	39	37	13	7.6	12
3	56	29	24	43	42	31	216	33	99	11	8.4	11
4	33	26	e22	43	69	28	56	39	117	10	7.6	11
5	28	26	22	45	52	27	45	55	41	9.9	11	9.4
6	27	24	23	38	40	26	52	33	33	9.9	139	10
7	25	24	23	34	38	25	119	29	31	9.0	57	9.4
8	24	34	22	41	35	25	50	28	37	9.7	18	9.3
9	24	59	e22	68	34	27	39	24	50	9.9	164	9.0
10	e23	39	e23	68	115	28	36	232	34	9.0	219	9.3
11	e24	27	e23	47	62	26	46	117	28	12	68	8.7
12	e24	25	e23	39	44	26	35	48	24	80	30	8.2
13	e23	24	e23	33	38	25	31	53	23	213	46	8.4
14	e22	24	e22	31	37	24	30	46	23	46	58	10
15	e22	25	e21	33	34	24	192	34	28	41	23	10
16	e22	470	e21	32	40	24	58	32	26	23	20	29
17	e60	95	e20	31	36	139	48	35	23	18	17	33
18	52	40	20	31	30	121	45	32	32	15	15	14
19	402	31	19	30	31	45	38	26	75	13	34	12
20	456	28	19	33	29	50	36	25	32	18	111	12
21	113	27	18	34	28	41	52	32	18	79	39	10
22	48	24	16	30	55	37	45	28	18	50	85	44
23	35	33	15	28	123	34	36	26	27	60	62	24
24	30	29	15	30	96	43	32	23	19	22	32	14
25	28	27	15	152	49	55	31	24	16	15	25	12
26	27	31	16	302	32	46	30	311	15	13	21	11
27	26	28	15	77	31	35	29	86	14	12	18	11
28	25	29	17	50	32	32	34	46	13	11	16	9.9
29	25	26	18	126	---	34	183	493	12	11	15	9.5
30	24	25	20	274	---	63	146	121	12	10	14	9.6
31	30	---	77	64	---	187	---	55	---	10	13	---
TOTAL	1967	1382	682	2246	1345	1389	1956	2273	999	875.4	1402.9	403.7
MEAN	63.5	46.1	22.0	72.5	48.0	44.8	65.2	73.3	33.3	28.2	45.3	13.5
MAX	456	470	77	302	123	187	216	493	117	213	219	44
MIN	22	24	15	28	28	24	29	23	12	9.0	7.6	8.2
CFSM	1.67	1.21	.58	1.91	1.26	1.18	1.72	1.93	.88	.74	1.19	.35
IN.	1.93	1.35	.67	2.20	1.32	1.36	1.91	2.23	.98	.86	1.37	.40

CAL YR 1989 TOTAL 25547 MEAN 70.0 MAX 2420 MIN 15 CFSM 1.84 IN. 25.01
WTR YR 1990 TOTAL 16921.0 MEAN 46.4 MAX 493 MIN 7.6 CFSM 1.22 IN. 16.56

e Estimated

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.

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

REVISED RECORDS.--WDR MD-DE-89-1: 1987-88(P).

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

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 20	1130	1,320	4.83	May 29	1245	984	4.33
Nov. 16	1400	*1,560	*5.15				

Minimum discharge, 14 ft^3/s, Aug. 5, gage height, 1.13 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	43	46	e300	e75	52	76	67	56	24	18	20
2	131	41	46	e90	e70	52	128	54	51	26	16	20
3	57	43	46	e65	e65	52	204	50	79	23	15	19
4	41	38	44	e60	e80	49	83	54	77	22	15	18
5	37	38	44	60	e70	47	70	62	50	20	19	19
6	36	39	44	54	e60	47	70	51	46	20	71	19
7	35	39	43	49	e60	45	126	47	43	19	57	19
8	34	43	e41	53	e55	45	82	44	45	20	24	18
9	34	58	e41	68	e55	47	68	43	57	20	66	17
10	33	49	e43	82	e100	48	64	203	48	18	201	18
11	34	42	e44	64	e80	47	73	114	40	21	62	17
12	34	41	e44	55	e70	46	61	63	38	28	38	17
13	33	39	e44	48	60	45	56	65	37	84	32	17
14	32	40	e42	44	57	44	55	60	37	50	35	19
15	32	41	e40	46	55	44	131	52	37	57	26	19
16	31	420	e40	45	59	43	74	51	37	37	25	23
17	48	93	e38	45	55	81	68	52	34	28	24	27
18	49	64	e38	45	51	83	65	49	34	25	23	18
19	298	56	e36	42	52	55	59	43	49	23	29	18
20	449	55	e36	43	50	62	57	42	35	22	58	19
21	95	51	e34	45	49	56	65	47	33	44	35	18
22	61	48	e32	42	55	51	61	45	32	33	53	32
23	52	54	e30	40	79	49	54	42	40	51	63	26
24	48	50	e30	41	86	50	51	40	31	26	40	19
25	45	50	e30	107	60	61	51	39	29	23	34	18
26	44	56	e30	243	51	60	50	198	28	20	33	17
27	42	52	e30	e80	51	51	48	79	27	19	28	18
28	41	53	e32	e65	52	49	46	57	26	19	25	17
29	40	49	e34	e140	---	49	77	391	25	19	23	17
30	40	46	e38	e220	---	65	92	111	24	19	22	17
31	42	---	e80	e100	---	145	---	66	---	18	21	---
TOTAL	2064	1831	1240	2481	1762	1720	2265	2381	1225	878	1231	580
MEAN	66.6	61.0	40.0	80.0	62.9	55.5	75.5	76.8	40.8	28.3	39.7	19.3
MAX	449	420	80	300	100	145	204	391	79	84	201	32
MIN	31	38	30	40	49	43	46	39	24	18	15	17
CFSM	1.38	1.26	.83	1.65	1.30	1.15	1.56	1.59	.84	.59	.82	.40
IN.	1.59	1.41	.95	1.91	1.35	1.32	1.74	1.83	.94	.67	.95	.45

CAL YR 1989 TOTAL 26034 MEAN 71.3 MAX 2100 MIN 25 CFSM 1.47 IN. 20.01
WTR YR 1990 TOTAL 19658 MEAN 53.9 MAX 449 MIN 15 CFSM 1.11 IN. 15.11

e Estimated

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.

REVISED RECORDS.--WRD MD-DE-89: 1985, 1987-88(P).

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 except those for estimated daily discharges (ice effect), which are fair. Some diurnal fluctuation at low flow caused by plant 0.5 mi upstream.

AVERAGE DISCHARGE.--29 years (water years 1940-58, 1976-80, 1986-90), 108 ft^3/s, 14.90 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)
Oct. 20	1500	1,810	8.58	May 29	1515	1,710	8.40
Nov. 16	1545	*1,990	*8.90				

Minimum discharge, 28 ft^3/s, Aug. 5, gage height 3.21 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	90	76	468	139	102	159	166	119	46	35	41
2	333	74	74	196	129	100	190	112	107	47	32	39
3	135	80	75	142	121	104	509	100	167	42	31	38
4	81	74	71	129	168	96	168	104	266	41	30	37
5	68	70	71	135	146	91	137	136	111	39	33	36
6	69	70	73	121	118	91	136	101	94	38	208	36
7	68	70	74	111	113	87	281	91	88	36	152	37
8	59	81	70	120	108	84	169	86	93	36	54	35
9	60	129	e70	165	106	88	129	79	140	38	211	33
10	58	112	e70	171	241	92	122	415	106	37	447	34
11	61	81	e70	131	173	88	145	318	81	41	166	33
12	58	78	e70	109	126	88	125	127	73	111	81	32
13	60	72	e68	93	114	86	108	127	70	367	92	32
14	57	71	e68	85	110	83	105	123	70	118	132	36
15	57	74	e68	88	107	83	366	99	76	132	60	36
16	54	859	e66	88	114	83	156	94	73	76	53	62
17	106	248	e64	86	109	243	127	101	67	58	50	82
18	117	129	e62	86	96	261	122	93	66	53	46	40
19	680	106	e60	82	98	120	109	77	136	48	69	35
20	906	99	e58	83	94	123	106	75	83	46	160	37
21	260	88	e56	92	89	116	127	87	61	136	90	35
22	137	81	e54	81	111	103	123	81	61	135	135	72
23	109	97	e50	78	249	99	107	76	78	119	145	64
24	94	91	e47	79	206	105	100	72	62	62	85	40
25	86	86	e47	268	133	129	95	70	54	48	71	35
26	82	98	e47	638	102	125	95	510	52	43	66	33
27	79	92	e47	211	102	102	90	188	50	39	57	34
28	85	89	e56	140	103	95	92	117	48	39	52	34
29	84	83	e64	217	---	98	265	859	46	39	47	32
30	83	77	e72	592	---	135	293	308	45	38	44	33
31	92	---	e170	179	---	360	---	146	---	37	42	---
TOTAL	4342	3549	2088	5264	3625	3660	4856	5138	2643	2185	2976	1203
MEAN	140	118	67.4	170	129	118	162	166	88.1	70.5	96.0	40.1
MAX	906	859	170	638	249	360	509	859	266	367	447	82
MIN	54	70	47	78	89	83	90	70	45	36	30	32
CFSM	1.42	1.20	.68	1.73	1.32	1.20	1.64	1.68	.90	.72	.98	.41
IN.	1.64	1.34	.79	1.99	1.37	1.38	1.84	1.94	1.00	.83	1.13	.45

CAL YR 1989 TOTAL 54878 MEAN 150 MAX 3150 MIN 43 CFSM 1.53 IN. 20.75
WTR YR 1990 TOTAL 41529 MEAN 114 MAX 906 MIN 30 CFSM 1.16 IN. 15.70

e Estimated

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 except those for estimated daily discharges (ice effect and missing record), which are fair. Flow regulated by T. Howard Duckett Reservoir, usable capacity 5,600,000,000 gal, 21 mi upstream from station.

AVERAGE DISCHARGE.--13 years, 369 ft^3/s, 14.40 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, 3,140 ft^3/s, May 30, gage height, 11.44 ft; minimum daily discharge, 102 ft^3/s, Aug. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	165	224	250	1070	765	490	713	747	960	142	115	122
2	708	196	252	1040	458	335	493	374	722	142	110	118
3	728	208	248	447	404	303	1070	273	361	132	103	117
4	281	209	232	324	e500	286	942	250	569	123	103	117
5	210	188	212	336	e440	271	845	494	355	120	102	113
6	186	188	193	291	e390	265	877	387	295	118	646	117
7	178	186	190	262	e360	260	822	299	294	117	629	114
8	168	211	177	268	341	254	673	278	282	114	379	110
9	163	538	186	463	330	260	417	229	517	116	475	106
10	163	396	184	491	445	273	613	509	538	119	1240	108
11	162	234	195	392	686	269	586	1460	325	124	817	106
12	160	205	e180	301	427	265	376	904	282	139	286	106
13	155	194	e170	255	361	260	310	827	260	930	204	110
14	154	188	e170	225	340	254	293	460	256	562	440	125
15	152	191	e160	221	319	251	850	324	527	665	293	121
16	152	367	193	225	321	245	1000	292	345	278	250	114
17	178	1500	e160	220	340	391	543	284	273	198	228	311
18	435	503	e160	213	412	1060	491	266	254	163	211	159
19	956	295	e160	203	443	556	669	404	293	161	209	121
20	1800	255	e160	195	441	385	760	510	283	138	265	119
21	1840	261	166	212	310	382	501	392	198	272	312	117
22	566	573	e160	205	282	309	447	256	181	343	249	123
23	326	991	e170	190	540	284	329	245	276	205	443	203
24	267	450	e160	188	569	284	298	232	195	218	268	136
25	285	293	e160	359	424	353	279	233	166	144	207	114
26	479	300	e160	1270	309	378	271	721	160	129	191	109
27	319	306	e160	1230	436	366	264	1310	149	120	167	109
28	205	285	162	510	492	517	258	468	145	116	155	108
29	196	269	157	388	---	604	374	872	143	118	140	106
30	193	252	159	1250	---	465	1090	2530	138	118	133	108
31	204	---	197	1080	---	745	---	1100	---	124	126	---
TOTAL	12134	10456	5643	14324	11885	11620	17454	17930	9742	6508	9496	3767
MEAN	391	349	182	462	424	375	582	578	325	210	306	126
MAX	1840	1500	252	1270	765	1060	1090	2530	960	930	1240	311
MIN	152	186	157	188	282	245	258	229	138	114	102	106
CFSM	1.12	1.00	.52	1.33	1.22	1.08	1.67	1.66	.93	.60	.88	.36
IN.	1.30	1.12	.60	1.53	1.27	1.24	1.87	1.92	1.04	.70	1.02	.40

CAL YR 1989 TOTAL 173743 MEAN 476 MAX 8400 MIN 141 CFSM 1.37 IN. 18.57
WTR YR 1990 TOTAL 130959 MEAN 359 MAX 2530 MIN 102 CFSM 1.03 IN. 14.00

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 1985-90): Maximum daily, 954 microsiemens, Dec. 15, 1989; minimum daily, 100 microsiemens, May 7, 1989.
WATER TEMPERATURE (water years 1985-90): 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, 1 mg/L, Jan. 22,1990.
SEDIMENT LOAD: Maximum daily, 4,050 tons, May 7, 1989; minimum daily, 0.55 ton, Jan. 22, 1990.
EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 959 microsiemens, Dec. 15; minimum daily, 145 microsiemens, Nov. 23, May 31.
WATER TEMPERATURE: Maximum daily, 26.5°C, Jul. 6, 9, 10; minimum daily, 1.0°C, Dec. 16, 17, 22-27.
SEDIMENT CONCENTRATION: Maximum daily mean, 293 mg/L, May 26; minimum daily mean, 1 mg/L, Jan. 22.
SEDIMENT LOAD: Maximum daily, 830 tons, Nov. 17; minimum daily, 0.55 ton, Jan. 22.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	Discharge, instantaneous (ft3/s)	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 (col/100 ML)
OCT											
02-03	1530	1040	183	7.22	--	--	--	--	--	--	--
10...	1440	166	300	7.15	12.0	20.0	768	--	9.0	83	--
OCT											
19-21	1415	1700	160	7.30	--	--	--	--	--	--	--
19...	1540	1080	192	7.18	13.0	19.0	762	--	7.8	74	--
20...	1140	1860	157	7.28	13.0	15.0	758	--	8.4	80	--
NOV											
01...	1400	229	283	6.94	15.5	18.0	768	3.8	8.1	81	240
02...	1400	253	--	--	--	--	--	--	--	--	--
15...	1010	185	293	7.01	15.0	21.0	763	--	8.7	86	--
15...	1015	185	293	7.01	15.0	21.0	763	--	8.7	86	--
NOV											
23-27	0400	490	267	7.32	--	--	--	--	--	--	--
JAN											
02...	1310	970	328	7.81	3.0	17.0	774	--	12.1	89	--
*17...	1240	216	358	7.45	7.0	24.0	770	--	14.0	114	--
*17...	1245	216	358	7.45	7.0	24.0	770	--	14.0	114	--
26...	1300	1340	265	7.62	8.0	15.0	760	--	10.3	87	--
31...	1210	1010	213	6.68	6.0	14.0	772	25	11.3	90	1200
FEB											
14...	1310	342	225	7.19	17.0	32.0	765	--	10.4	107	--
MAR											
08...	1230	254	288	6.66	5.0	19.0	781	2.9	11.0	84	10
APR											
03...	1230	1120	--	--	11.0	15.0	755	--	10.4	--	--
05...	1040	828	192	7.23	9.0	15.0	759	--	10.5	91	--
09...	0910	417	240	7.38	9.0	16.0	778	--	10.5	89	--
MAY											
01...	1215	740	--	8.75	17.0	23.0	--	--	8.3	--	--
02...	1040	370	222	7.36	17.0	23.0	768	12	8.2	84	600
08...	1100	272	242	6.87	17.0	25.0	767	--	7.1	73	--
11...	1010	1680	163	6.97	16.0	20.0	763	--	7.2	73	--
22...	1110	252	248	6.85	16.0	18.0	765	--	7.7	78	--
29...	1330	917	165	8.03	15.0	16.0	--	59	9.6	--	--
30...	1010	3120	137	6.50	14.0	22.0	762	--	7.6	74	--
31...	1140	1040	157	6.68	16.0	23.0	770	--	7.3	73	--
JUN											
20...	0930	291	230	6.64	21.0	25.0	762	--	6.9	77	--
28...	1040	141	305	7.00	24.0	30.0	767	7.0	6.5	77	130
JUL											
13...	1210	1010	173	6.72	22.0	23.0	768	--	6.4	73	--
16...	1010	273	213	7.01	23.0	28.0	770	--	6.6	76	--
*26...	1110	126	280	7.09	24.0	30.0	770	--	6.7	79	--
*26...	1115	126	280	7.09	24.0	30.0	770	--	6.7	79	--
AUG											
10...	1530	1410	233	7.12	25.0	25.5	--	--	6.6	--	--
SEP											
07...	1040	111	300	7.08	24.0	30.0	759	3.7	7.0	84	K400

*Note: Duplicate samples collected for quality-assurance purposes.
K: Results based on colony count outside the acceptance range (non-ideal colony count).

01594440 PATUXENT RIVER NEAR BOWIE, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	Strep-tococci fecal, KF agar (cols. per 100 ML)	Calcium dis-solved (mg/L as Ca)	Magne-sium, dis-solved (mg/L as Mg)	Sodium, dis-solved (mg/L as Na)	Potas-sium, dis-solved (mg/L as K)	Alka-linity, wat wh tot fet 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)
OCT											
02-03	--	--	--	--	--	38	--	--	--	6.0	--
10...	--	--	--	--	--	58	--	--	--	12	--
OCT											
19-21	--	--	--	--	--	32	--	--	--	7.2	--
19...	--	--	--	--	--	36	--	--	--	6.4	--
20...	--	--	--	--	--	28	--	--	--	7.2	--
NOV											
01...	400	23	4.9	21	3.7	53	20	28	0.20	11	180
02...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	54	--	--	--	10	--
15...	--	--	--	--	--	54	--	--	--	9.5	--
NOV											
23-27	--	--	--	--	--	40	--	--	--	51	--
JAN											
02...	--	--	--	--	--	28	--	--	--	7.0	--
17...	--	--	--	--	--	49	--	--	--	10	--
17...	--	--	--	--	--	49	--	--	--	10	--
26...	--	--	--	--	--	32	--	--	--	6.7	--
31...	--	14	3.2	17	3.0	29	15	28	0.10	7.2	120
FEB											
14...	--	--	--	--	--	45	--	--	--	8.6	--
MAR											
08...	20	18	4.5	18	3.6	54	16	28	0.20	6.8	150
APR											
03...	--	--	--	--	--	--	--	--	--	6.6	--
05...	--	--	--	--	--	32	--	--	--	5.2	--
09...	--	--	--	--	--	40	--	--	--	8.2	--
MAY											
01...	--	--	--	--	--	53	--	--	--	7.9	--
02...	190	14	4.1	16	3.1	47	--	30	<0.10	8.1	124
08...	--	--	--	--	--	48	--	--	--	6.6	--
11...	--	--	--	--	--	36	--	--	--	5.9	--
22...	--	--	--	--	--	48	--	--	--	8.5	--
29...	--	14	3.1	--	--	--	13	--	--	--	--
30...	--	--	--	--	--	26	--	--	--	5.6	--
31...	--	--	--	--	--	30	--	--	--	5.7	--
JUN											
20...	--	--	--	--	--	49	--	--	--	8.1	--
28...	360	24	4.6	21	4.2	60	22	35	0.30	9.5	171
JUL											
13...	--	--	--	--	--	32	--	--	--	5.2	--
16...	--	--	--	--	--	41	--	--	--	9.3	--
26...	--	--	--	--	--	53	--	--	--	9.2	--
26...	--	--	--	--	--	53	--	--	--	9.2	--
AUG											
10...	--	--	--	--	--	30	--	--	--	6.9	--
SEP											
07...	400	26	4.5	29	5.9	62	25	38	0.30	8.8	187

01594440 PATUXENT RIVER NEAR BOWIE, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	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 total (mg/L as N)	Nitrogen, ammonia dissolved (mg/L as N)	Nitrogen, ammonia + organic total (mg/L as N)	Nitrogen, ammonia + organic DIS. (mg/L as N)	Phosphorous total (mg/L as P)	Phosphorous dissolved (mg/L as P)	Phosphorous ortho, dissolved (mg/L as P)
OCT											
02-03	--	1.28	0.020	1.30	--	0.070	1.2	0.60	0.330	0.030	0.030
10...	--	3.68	0.020	3.70	--	0.100	0.70	0.40	0.150	0.050	0.060
OCT											
19-21	--	--	<0.010	0.970	--	0.040	0.80	0.60	0.120	0.040	0.030
19...	--	1.09	0.010	1.10	--	0.050	1.0	0.50	0.150	0.050	0.050
20...	--	--	<0.010	0.960	--	0.030	0.70	0.40	0.490	--	0.020
NOV											
01...	158	2.98	0.020	3.00	0.060	0.060	0.60	0.80	0.090	0.020	0.020
02...	--	--	--	--	--	--	--	--	--	--	--
15...	--	3.06	0.040	3.10	--	0.370	1.0	1.0	0.120	0.030	0.030
15...	--	3.27	0.026	3.30	--	0.392	1.6	0.85	0.100	0.030	0.028
NOV											
23-27	--	2.08	0.020	2.10	--	0.270	0.70	0.60	0.090	0.030	0.020
JAN											
02...	--	1.58	0.020	1.60	--	0.490	1.3	0.80	0.170	0.030	0.020
17...	--	2.86	0.040	2.90	--	0.600	1.2	1.0	0.090	0.020	0.020
17...	--	2.86	0.040	2.90	--	0.600	1.2	1.2	0.080	0.020	0.020
26...	--	1.28	0.020	1.30	--	0.280	1.1	0.90	0.210	0.020	0.040
31...	111	1.29	0.010	1.30	0.050	0.050	0.60	0.70	0.060	0.010	<0.010
FEB											
14...	--	2.18	0.020	2.20	--	0.320	1.9	1.2	0.070	0.020	0.010
MAR											
08...	141	2.75	0.050	2.80	0.200	0.230	0.70	0.60	0.050	0.010	<0.010
APR											
03...	--	1.28	0.020	1.30	--	0.110	1.1	0.50	0.290	0.020	0.020
05...	--	1.69	0.010	1.70	--	0.060	0.40	0.70	0.100	0.020	<0.010
09...	--	1.79	0.010	1.80	--	0.050	0.30	0.50	0.070	0.020	0.020
MAY											
01...	--	1.18	0.020	1.20	--	0.090	0.80	<0.20	0.110	0.030	0.020
02...	--	1.68	0.020	1.70	0.200	0.190	0.60	0.70	0.090	0.030	0.020
08...	--	2.38	0.020	2.40	--	0.070	0.40	0.60	0.080	0.030	0.020
11...	--	0.980	0.020	1.00	--	0.120	1.0	0.50	0.200	0.020	0.010
22...	--	2.47	0.030	2.50	--	0.120	0.50	0.80	0.100	0.020	0.020
29...	--	1.68	0.020	1.70	--	0.110	1.3	0.70	0.410	0.030	0.020
30...	--	0.980	0.020	1.00	--	0.120	0.70	0.80	0.170	0.030	0.020
31...	--	1.48	0.020	1.50	--	0.070	1.2	0.40	0.060	0.030	0.020
JUN											
20...	--	2.08	0.020	2.10	--	0.090	0.50	0.40	0.070	0.040	0.030
28...	171	3.16	0.040	3.20	0.160	0.160	0.70	0.80	0.090	0.030	0.020
JUL											
13...	--	1.48	0.020	1.50	--	0.040	1.6	0.60	0.450	0.010	0.030
16...	--	1.78	0.020	1.80	--	0.090	0.80	<0.20	0.070	0.030	0.020
26...	--	3.08	0.020	3.10	--	0.070	0.70	0.70	0.150	0.030	0.030
26...	--	3.08	0.020	3.10	--	0.070	0.80	0.70	0.130	0.030	0.030
AUG											
10...	--	0.990	0.010	1.00	--	0.060	0.80	0.50	0.100	0.040	0.040
SEP											
07...	193	3.89	0.010	3.90	0.080	0.060	0.90	1.0	0.150	0.040	0.050

01594440 PATUXENT RIVER NEAR BOWIE, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

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											
02-03	40	--	--	--	--	--	--	--	--	--	--
10...	20	--	--	--	--	--	--	--	--	--	--
OCT											
19-21	120	--	--	--	--	--	--	--	--	--	--
19...	100	--	--	--	--	--	--	--	--	--	--
20...	80	--	--	--	--	--	--	--	--	--	--
NOV											
01...	20	<1	33	<0.5	<1	<1	<3	2	360	<1	8
02...	--	--	--	--	--	--	--	--	--	--	--
15...	10	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
NOV											
23-27	20	--	--	--	--	--	--	--	--	--	--
JAN											
02...	130	--	--	--	--	--	--	--	--	--	--
17...	<10	--	--	--	--	--	--	--	--	--	--
17...	10	--	--	--	--	--	--	--	--	--	--
26...	180	--	--	--	--	--	--	--	--	--	--
31...	120	--	--	--	--	--	--	--	--	--	--
FEB											
14...	20	--	--	--	--	--	--	--	--	--	--
MAR											
08...	10	<1	28	<0.5	<1	<5	<3	<10	120	10	<4
APR											
03...	130	--	--	--	--	--	--	--	--	--	--
05...	50	--	--	--	--	--	--	--	--	--	--
09...	40	--	--	--	--	--	--	--	--	--	--
MAY											
01...	40	--	--	--	--	--	--	--	--	--	--
02...	20	1	36	<0.5	3	<1	<3	6	320	<1	4
08...	20	--	--	--	--	--	--	--	--	--	--
11...	180	--	--	--	--	--	--	--	--	--	--
22...	<10	--	--	--	--	--	--	--	--	--	--
29...	80	--	--	--	--	--	--	--	--	--	--
30...	120	--	--	--	--	--	--	--	--	--	--
31...	50	--	--	--	--	--	--	--	--	--	--
JUN											
20...	40	--	--	--	--	--	--	--	--	--	--
28...	10	--	--	--	--	--	--	--	--	--	--
JUL											
13...	60	--	--	--	--	--	--	--	--	--	--
16...	40	--	--	--	--	--	--	--	--	--	--
26...	20	--	--	--	--	--	--	--	--	--	--
26...	20	--	--	--	--	--	--	--	--	--	--
AUG											
10...	30	--	--	--	--	--	--	--	--	--	--
SEP											
07...	10	<1	27	<0.5	<1	<1	<3	5	63	1	6

01594440 PATUXENT RIVER NEAR BOWIE, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

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)	Hardness total (mg/L as CaCO3)
OCT											
02-03	--	--	--	--	--	--	--	--	--	8.9	--
10...	--	--	--	--	--	--	--	--	--	3.6	--
OCT											
19-21	--	--	--	--	--	--	--	--	--	9.7	--
19...	--	--	--	--	--	--	--	--	--	9.2	--
20...	--	--	--	--	--	--	--	--	--	8.4	--
NOV											
01...	160	--	<10	3	<1	<1.0	91	<6	9	4.3	78
02...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	3.6	--
15...	--	--	--	--	--	--	--	--	--	3.5	--
NOV											
23-27	--	--	--	--	--	--	--	--	--	4.3	--
JAN											
02...	--	--	--	--	--	--	--	--	--	6.0	--
17...	--	--	--	--	--	--	--	--	--	3.3	--
17...	--	--	--	--	--	--	--	--	--	3.1	--
26...	--	--	--	--	--	--	--	--	--	7.6	--
31...	--	--	--	--	--	--	--	--	--	5.3	48
FEB											
14...	--	--	--	--	--	--	--	--	--	3.2	--
MAR											
08...	150	<0.1	<10	10	<1	3.0	83	<6	23	2.7	64
APR											
03...	--	--	--	--	--	--	--	--	--	7.7	--
05...	--	--	--	--	--	--	--	--	--	4.5	--
09...	--	--	--	--	--	--	--	--	--	3.9	--
MAY											
01...	--	--	--	--	--	--	--	--	--	9.8	--
02...	140	<0.1	<10	4	<1	<1.0	79	<6	15	5.4	52
08...	--	--	--	--	--	--	--	--	--	3.9	--
11...	--	--	--	--	--	--	--	--	--	7.4	--
22...	--	--	--	--	--	--	--	--	--	3.9	--
29...	--	--	--	--	--	--	--	--	--	11	48
30...	--	--	--	--	--	--	--	--	--	8.7	--
31...	--	--	--	--	--	--	--	--	--	5.0	--
JUN											
20...	--	--	--	--	--	--	--	--	--	4.5	--
28...	--	--	--	--	--	--	--	--	--	4.3	79
JUL											
13...	--	--	--	--	--	--	--	--	--	10	--
16...	--	--	--	--	--	--	--	--	--	7.0	--
26...	--	--	--	--	--	--	--	--	--	5.2	--
26...	--	--	--	--	--	--	--	--	--	5.3	--
AUG											
10...	--	--	--	--	--	--	--	--	--	8.5	--
SEP											
07...	100	0.2	<10	5	2	<1.0	110	<6	21	3.8	84

01594440 PATUXENT RIVER NEAR BOWIE, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

DATE	TIME	Discharge, instantaneous (ft3/s)	Sediment, suspended (mg/L)	Sediment, discharge, suspended (T/DAY)	Sed. susp. sieve diam. % finer than .062 MM
OCT					
02-03	1530	1040	135	379	--
10...	1440	166	6	2.7	--
OCT					
19-21	1415	1700	79	363	--
19...	1540	1080	194	566	--
20...	1140	1860	50	251	--
NOV					
01...	1400	229	8	4.9	--
02...	1400	253	8	5.5	96
15...	1010	185	9	4.5	--
NOV					
23-27	0400	490	25	33	--
JAN					
02...	1310	970	74	194	--
17...	1240	216	26	15	--
26...	1300	1340	155	561	--
31...	1210	1010	63	172	97
FEB					
14...	1310	342	12	11	--
MAR					
08...	1230	254	4	2.7	95
APR					
03...	1230	1120	247	747	--
05...	1040	828	41	92	--
09...	0910	417	15	17	--
MAY					
01...	1215	740	52	104	--
02...	1040	370	21	21	97
08...	1100	272	23	17	--
11...	1010	1680	113	513	--
22...	1110	252	26	18	--
29...	1330	917	179	443	--
30...	1010	3120	94	792	--
31...	1140	1040	42	118	--
JUN					
20...	0930	291	41	32	--
28...	1040	141	20	7.6	98
JUL					
13...	1210	1010	282	769	--
16...	1010	273	57	42	--
26...	1110	126	93	32	--
AUG					
10...	1530	1410	93	354	--
SEP					
07...	1040	111	13	3.9	98

01594440 PATUXENT RIVER NEAR BOWIE, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	289	283	264	489	218	240	211	197	152	294	290	298
2	180	283	263	321	247	250	235	226	187	295	296	304
3	201	276	260	305	246	255	172	245	197	310	298	304
4	247	281	254	308	257	263	178	256	184	309	313	300
5	268	278	275	315	262	268	170	211	212	316	310	304
6	285	287	280	315	252	271	176	224	231	309	169	308
7	313	286	295	323	258	266	209	239	231	317	192	323
8	311	285	292	317	262	267	211	239	239	319	186	313
9	296	194	292	517	258	261	229	261	199	314	170	305
10	310	230	312	689	241	262	185	185	189	317	157	304
11	310	256	---	605	239	260	213	---	224	321	179	320
12	301	262	478	435	252	257	229	160	235	242	211	306
13	311	275	567	375	256	263	235	170	245	171	242	313
14	311	277	849	352	257	265	239	217	243	205	186	308
15	305	282	954	340	260	241	157	227	221	198	206	301
16	301	252	593	324	258	276	183	237	217	231	219	304
17	293	147	595	323	256	245	198	251	242	249	224	242
18	231	211	529	326	222	232	212	248	244	279	232	248
19	172	237	509	313	219	242	184	190	258	275	231	285
20	156	247	441	318	222	240	168	181	---	253	230	295
21	150	250	402	320	251	255	211	220	254	267	214	292
22	203	151	389	317	257	251	226	236	280	204	245	274
23	230	145	390	323	241	258	228	247	247	243	237	252
24	248	336	372	319	235	257	233	250	274	251	248	249
25	253	403	355	294	254	260	239	267	281	260	277	281
26	190	342	332	268	267	270	242	170	291	282	278	281
27	247	301	321	255	217	225	242	169	299	287	278	288
28	269	272	331	265	217	185	239	204	308	291	287	296
29	272	267	328	277	---	186	214	154	301	291	299	287
30	274	268	311	224	---	233	175	---	301	293	298	293
31	273	---	328	199	---	212	---	145	---	293	297	---

WATER TEMPERATURE, DEGREES CELSIUS
INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.5	15.5	6.5	2.0	7.5	11.0	10.5	18.0	18.5	25.0	24.0	23.0
2	19.5	13.5	6.5	2.0	9.5	12.0	9.0	18.5	21.0	24.0	23.5	23.0
3	19.0	13.5	5.0	3.5	9.0	9.0	10.5	17.0	21.5	24.0	24.0	23.0
4	16.5	11.0	3.5	5.0	8.5	8.0	9.5	16.0	20.5	25.0	24.0	22.5
5	16.0	11.5	4.5	5.5	7.5	7.5	12.0	16.0	19.0	26.0	24.0	22.0
6	16.5	12.5	6.0	5.5	8.0	8.0	10.5	17.0	20.5	26.5	23.5	23.0
7	15.0	13.0	6.0	5.0	8.5	7.0	9.5	17.0	21.0	24.5	24.0	24.0
8	13.5	14.0	3.5	4.0	9.0	6.5	11.0	19.0	22.0	24.5	24.0	23.5
9	12.5	14.5	2.5	4.5	11.0	8.5	12.0	19.0	23.0	26.5	22.0	21.5
10	13.5	12.5	3.0	5.5	11.0	11.5	13.0	18.0	23.0	26.5	22.0	22.5
11	14.5	11.0	---	6.5	9.0	12.5	14.0	---	21.0	25.0	23.0	22.5
12	15.5	12.0	4.0	6.0	8.0	15.0	12.0	15.0	29.0	23.0	24.0	22.5
13	17.0	12.0	3.5	4.5	9.0	16.5	12.5	17.0	20.5	22.0	24.5	22.0
14	18.0	14.0	3.0	4.0	11.5	17.0	13.0	18.0	21.5	22.0	24.5	22.0
15	19.5	16.0	2.5	5.5	11.0	18.0	14.5	19.0	21.0	24.0	24.0	22.0
16	19.5	15.0	1.0	7.0	12.0	18.0	16.0	20.5	21.0	24.0	24.0	20.5
17	19.0	11.0	1.0	8.5	11.0	17.0	14.0	20.5	23.0	24.5	24.5	18.0
18	17.5	9.5	1.5	11.0	8.5	15.5	13.0	20.0	24.0	25.0	25.0	16.5
19	14.5	8.0	1.5	9.5	9.5	14.0	13.5	18.0	23.0	26.0	25.0	16.5
20	13.5	10.5	2.0	8.5	8.5	10.0	14.0	19.0	---	26.0	22.0	18.0
21	13.0	8.0	1.5	9.0	7.5	10.0	15.5	18.0	24.0	24.5	20.5	18.0
22	13.5	7.0	1.0	8.5	9.5	12.0	17.0	16.0	24.0	25.0	20.5	18.0
23	13.5	5.5	1.0	8.5	12.5	13.5	18.5	16.0	24.0	26.0	21.0	17.5
24	13.0	5.0	1.0	9.0	11.0	10.0	19.0	17.0	23.0	25.5	21.5	16.0
25	13.5	5.5	1.0	10.0	6.0	8.5	19.5	17.0	22.5	25.0	23.0	16.0
26	14.5	8.0	1.0	8.5	4.0	9.5	21.5	17.0	23.0	26.0	24.0	16.0
27	15.0	8.0	1.0	7.0	8.0	10.0	22.0	18.0	24.0	25.0	24.5	17.0
28	15.5	10.5	2.5	7.5	10.0	10.0	23.0	17.0	25.0	24.5	25.0	18.0
29	15.5	8.5	2.5	8.5	---	10.0	19.0	15.5	26.0	24.5	24.0	19.0
30	16.0	7.0	4.0	8.0	---	9.5	16.5	---	27.0	24.5	24.0	19.5
31	17.0	---	3.0	7.5	---	9.0	---	17.0	---	25.0	23.0	---

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	30	13	19	11	11	7.4	147	471	15	31	11	15
2	158	414	10	5.3	11	7.5	85	358	9	11	8	7.2
3	126	299	7	3.9	7	4.7	35	42	9	9.8	11	9.0
4	50	38	9	5.1	8	5.0	23	20	22	30	13	10
5	20	11	7	3.6	6	3.4	15	14	17	20	6	4.4
6	8	4.0	9	4.6	8	4.2	9	7.1	9	9.5	8	5.7
7	11	5.3	12	6.0	7	3.6	6	4.2	7	6.8	6	4.2
8	12	5.4	20	11	10	4.8	8	5.8	8	7.4	4	2.7
9	12	5.3	60	87	17	8.5	23	29	12	11	7	4.9
10	17	7.5	22	24	12	6.0	24	32	30	36	8	5.9
11	18	7.9	28	18	7	3.7	17	18	61	113	10	7.3
12	20	8.6	41	23	7	3.4	10	8.1	25	29	19	14
13	20	8.4	20	10	8	3.7	6	4.1	12	12	13	9.1
14	18	7.5	18	9.1	5	2.3	4	2.4	13	12	19	13
15	10	4.1	8	4.1	4	1.7	4	2.4	16	14	18	12
16	8	3.3	88	148	5	2.6	5	3.0	16	14	10	6.6
17	105	50	205	830	5	2.2	20	12	16	15	86	115
18	156	183	55	75	3	1.3	22	13	13	14	68	195
19	150	536	50	40	4	1.7	12	6.6	10	12	28	42
20	62	301	25	17	6	2.6	7	3.7	12	14	20	21
21	55	273	15	11	6	2.7	5	2.9	9	7.5	15	15
22	30	46	41	63	6	2.6	1	.55	9	6.9	19	16
23	25	22	20	54	6	2.8	2	1.0	119	196	19	15
24	20	14	11	13	5	2.2	46	23	140	215	12	9.2
25	10	7.7	8	6.3	8	3.5	54	52	46	53	7	6.7
26	42	54	7	5.7	6	2.6	130	446	25	21	10	10
27	16	14	8	6.6	5	2.2	72	248	18	21	19	19
28	17	9.4	12	9.2	5	2.2	34	47	17	23	45	63
29	19	10	23	17	5	2.1	7	7.3	---	---	42	68
30	19	9.9	18	12	5	2.1	15	51	---	---	20	25
31	23	13	---	---	7	3.7	25	73	---	---	145	292
TOTAL	---	2385.3	---	1533.5	---	109.0	---	2008.15	---	964.9	---	1042.9
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	110	212	70	141	37	96	30	12	20	6.2	15	4.9
2	79	105	33	33	33	64	34	13	20	5.9	9	2.9
3	276	742	40	29	31	30	23	8.2	30	8.3	19	6.0
4	90	229	34	23	136	209	15	5.0	25	7.0	17	5.4
5	50	114	100	133	80	77	16	5.2	15	4.1	10	3.1
6	35	83	65	68	37	29	17	5.4	240	484	7	2.2
7	52	115	35	28	30	24	14	4.4	155	263	12	3.7
8	30	55	25	19	30	23	16	4.9	65	67	13	3.9
9	13	15	35	22	118	165	17	5.3	115	147	6	1.7
10	30	50	216	345	115	167	18	5.8	125	418	10	2.9
11	30	47	124	489	80	70	43	14	50	110	8	2.3
12	23	23	64	156	48	37	90	34	38	29	8	2.3
13	24	20	40	89	34	24	232	514	21	12	10	3.0
14	20	16	29	36	34	24	90	137	104	124	12	4.0
15	265	579	36	31	134	191	58	104	53	42	10	3.3
16	75	202	44	35	42	39	48	36	27	18	35	11
17	48	70	42	32	25	18	38	20	23	14	134	113
18	35	46	40	29	23	16	32	14	24	14	33	14
19	25	45	85	93	30	24	30	13	20	11	22	7.2
20	35	72	65	90	47	36	95	35	28	20	28	9.0
21	25	34	40	42	36	19	175	129	27	23	20	6.3
22	30	36	33	23	20	9.8	120	111	35	24	25	8.3
23	25	22	23	15	35	26	45	25	53	63	30	16
24	23	19	20	13	38	20	30	18	35	25	12	4.4
25	24	18	30	19	30	13	26	10	19	11	33	10
26	35	26	293	641	25	11	12	4.2	22	11	28	8.2
27	31	22	140	517	18	7.2	16	5.2	40	18	13	3.8
28	75	52	48	61	20	7.8	20	6.3	25	10	20	5.8
29	115	116	168	534	21	8.1	22	7.0	10	3.8	21	6.0
30	100	294	95	657	21	7.8	20	6.4	10	3.6	20	5.8
31	---	---	43	128	---	---	19	6.4	18	6.1	---	---
TOTAL	---	3479	---	4571	---	1492.7	---	1318.7	---	2003.0	---	280.4

TOTAL LOAD FOR YEAR: 21188.55 TONS.

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 current year.

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 estimated daily discharges (ice effect), which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 568 ft^3/s, June 15, 1990, gage height, 9.54 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)
May 29	1600	406	8.88	June 15	0830	*568	*9.54

Minimum daily discharge, 1.8 ft^3/s, Sept. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	15	9.0	75	13	11	18	17	24	10	3.9	3.7
2	49	9.0	8.8	e25	14	11	23	13	21	11	2.9	3.5
3	19	11	8.9	e14	14	13	44	11	19	9.3	2.4	3.2
4	7.2	9.6	7.8	e16	26	11	21	12	17	8.0	2.1	2.7
5	5.5	8.5	8.9	e15	16	10	17	96	14	12	2.0	2.4
6	4.8	8.6	9.2	e15	14	10	17	34	14	27	4.2	2.7
7	4.5	8.8	8.7	e14	14	9.4	31	22	13	9.8	9.6	2.8
8	3.8	15	7.3	20	13	9.3	19	18	13	8.9	3.6	2.5
9	3.6	27	e8.5	29	12	10	16	16	21	8.4	40	2.3
10	3.5	14	e8.4	20	30	11	16	38	106	7.0	59	2.4
11	3.6	10	e8.3	16	25	10	18	51	22	6.2	16	2.1
12	3.5	9.5	e8.2	15	17	9.9	15	22	16	9.7	24	1.9
13	3.4	9.1	e8.2	13	15	9.6	14	23	14	23	9.4	2.4
14	3.2	9.2	e8.0	13	14	9.4	14	33	14	13	28	3.7
15	3.4	9.4	e7.8	13	14	9.0	24	19	221	11	9.6	3.9
16	3.5	15	e7.6	13	15	9.0	17	17	49	8.1	7.3	2.8
17	4.2	14	7.3	12	14	15	15	16	32	6.3	6.5	6.0
18	6.9	9.6	7.6	13	12	37	14	13	27	5.4	4.4	3.1
19	37	8.6	6.5	12	15	15	13	12	29	4.6	4.4	2.6
20	38	8.7	7.8	11	12	15	13	12	23	3.8	5.4	3.5
21	21	8.6	7.4	13	12	13	14	14	19	5.1	6.4	2.6
22	11	7.4	e7.2	12	13	11	14	14	18	11	13	4.6
23	8.3	12	e6.2	11	14	11	12	13	18	4.9	96	5.8
24	7.7	12	e5.8	11	14	10	11	11	15	3.0	22	2.9
25	7.4	11	e5.6	22	11	12	11	11	16	2.4	14	2.1
26	7.2	15	e5.4	46	9.6	11	11	29	13	1.9	11	1.8
27	7.0	16	e5.4	24	11	9.9	10	18	13	2.1	9.1	1.9
28	6.9	12	e5.4	17	12	9.5	9.3	13	13	2.1	7.5	2.1
29	6.9	10	e5.6	16	---	9.8	20	180	11	26	6.3	2.3
30	7.0	9.2	e6.0	17	---	18	42	64	10	12	5.4	2.3
31	15	---	e9.0	14	---	28	---	31	---	5.7	4.3	---
TOTAL	319.0	342.8	231.8	577	415.6	387.8	533.3	893	855	278.7	439.7	88.6
MEAN	10.3	11.4	7.48	18.6	14.8	12.5	17.8	28.8	28.5	8.99	14.2	2.95
MAX	49	27	9.2	75	30	37	44	180	221	27	96	6.0
MIN	3.2	7.4	5.4	11	9.6	9.0	9.3	11	10	1.9	2.0	1.8
CFSM	1.10	1.22	.80	1.98	1.58	1.33	1.90	3.07	3.04	.96	1.51	.31
IN.	1.27	1.36	.92	2.29	1.65	1.54	2.12	3.54	3.39	1.11	1.74	.35

CAL YR 1989 TOTAL 5271.10 MEAN 14.4 MAX 195 MIN .26 CFSM 1.54 IN. 20.90
WTR YR 1990 TOTAL 5362.3 MEAN 14.7 MAX 221 MIN 1.8 CFSM 1.57 IN. 21.27

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 except those for estimated daily values (ice effect), which are fair.

AVERAGE DISCHARGE.--5 years, 3.92 ft^3/s, 15.04 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 255 ft^3/s, May 29, 1990, gage height, 5.50 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)
May 5	0500	105	3.90	June 9	2330	248	5.43
May 29	1230	*255	*5.50	June 15	0900	129	4.21

Minimum discharge, 1.5 ft^3/s, Aug. 2, gage height, 1.08 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	4.5	3.6	22	4.9	4.2	6.1	5.7	7.5	4.2	2.3	2.3
2	20	3.9	3.5	6.6	4.9	4.7	12	4.8	6.8	3.9	2.3	2.2
3	6.3	4.8	3.5	5.2	7.2	5.3	13	4.2	6.6	3.5	2.1	2.2
4	4.1	3.9	3.3	5.7	9.2	4.3	7.1	4.7	6.4	3.3	2.0	2.1
5	3.5	3.7	3.4	4.9	5.7	4.2	5.9	27	5.7	3.9	2.1	2.1
6	3.3	4.1	3.5	6.0	5.4	4.1	6.5	7.7	5.5	3.9	2.9	2.1
7	2.9	3.6	3.3	4.6	5.1	3.9	11	5.9	5.4	3.2	2.3	2.0
8	2.8	11	e3.3	12	5.1	4.0	6.2	5.2	5.1	3.3	1.9	2.0
9	2.7	7.3	e3.3	8.8	4.8	4.2	5.5	4.7	26	3.1	20	2.0
10	2.7	4.9	e3.3	6.1	16	4.2	5.0	18	24	2.9	8.7	2.1
11	2.7	4.2	e3.3	5.1	7.7	4.0	4.8	9.3	7.9	2.9	6.8	1.9
12	2.6	4.1	e3.2	4.8	6.3	4.0	4.8	6.7	6.5	3.0	3.4	1.9
13	2.4	4.0	e3.2	4.3	5.4	3.9	4.7	14	6.2	3.5	3.7	3.6
14	2.5	4.0	e3.2	4.3	5.4	3.9	4.5	9.7	6.0	4.2	4.9	2.6
15	2.6	3.9	e3.1	4.3	5.0	3.8	8.9	6.4	24	3.9	3.0	2.3
16	2.5	6.0	e3.1	4.1	5.9	3.8	5.6	5.6	8.1	3.7	3.0	2.3
17	3.4	4.0	e3.1	4.0	5.0	11	5.2	5.0	6.6	3.1	2.7	2.5
18	3.5	3.8	3.1	4.1	4.6	14	4.9	4.3	13	2.8	2.5	1.9
19	14	3.6	3.2	3.9	5.9	6.5	4.5	4.0	11	2.6	2.4	2.0
20	15	3.6	e3.1	4.0	4.8	6.3	4.5	4.0	7.2	2.5	3.3	2.0
21	5.9	3.2	e3.0	4.5	4.5	5.2	5.0	5.2	5.9	3.8	2.9	1.9
22	4.4	3.4	e3.0	3.9	4.7	4.8	4.7	4.8	5.5	3.4	9.9	3.5
23	4.0	4.7	2.9	3.9	5.1	4.7	4.4	4.3	5.4	2.6	18	e2.4
24	3.9	4.0	e2.9	4.1	4.8	4.4	4.1	3.9	4.9	2.4	5.1	e2.2
25	3.7	4.4	e2.9	12	4.2	4.8	4.1	3.7	4.5	2.2	4.0	e2.0
26	3.4	6.1	e2.9	19	4.0	4.4	3.8	11	4.4	2.0	3.5	e1.8
27	3.4	4.6	2.9	7.8	4.3	4.0	3.6	6.3	4.3	2.1	3.1	e1.7
28	3.4	4.2	2.9	6.6	4.3	3.9	3.6	5.0	4.7	2.2	2.8	e1.7
29	3.4	3.8	2.9	6.4	---	4.3	12	69	4.1	12	2.8	e1.6
30	3.4	3.6	3.1	6.4	---	7.0	10	13	3.8	3.7	2.5	e1.6
31	7.1	---	8.3	5.1	---	11	---	9.1	---	2.9	2.3	---
TOTAL	149.6	134.9	103.3	204.5	160.2	162.8	186.0	292.2	243.0	106.7	139.2	64.5
MEAN	4.83	4.50	3.33	6.60	5.72	5.25	6.20	9.43	8.10	3.44	4.49	2.15
MAX	20	11	8.3	22	16	14	13	69	26	12	20	3.6
MIN	2.4	3.2	2.9	3.9	4.0	3.8	3.6	3.7	3.8	2.0	1.9	1.6
CFSM	1.36	1.27	.94	1.86	1.62	1.48	1.75	2.66	2.29	.97	1.27	.61
IN.	1.57	1.42	1.09	2.15	1.68	1.71	1.95	3.07	2.55	1.12	1.46	.68

CAL YR 1989 TOTAL 1816.2 MEAN 4.98 MAX 36 MIN 1.4 CFSM 1.41 IN. 19.09
WTR YR 1990 TOTAL 1946.9 MEAN 5.33 MAX 69 MIN 1.6 CFSM 1.51 IN. 20.46

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 1990

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≠, 1983-90	5-29-90	10.04	2,240

≠ Operated as a continuous-record station.

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, 1988-89	10-06-89	5.48	0.481
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≠, 1988-89	10-16-89 3-08-90 3-28-90 4-27-90 6-27-90	41.9 55.4 66.9 73.3 47.3	.651 .860 1.039 1.138 .734
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	1988-89	3-08-90 3-28-90 4-27-90 6-27-90	3.32 3.67 3.64 1.68	.900 .995 .986 .455
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,	10-16-89	5.53	.307
		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	1988-89	10-05-89 3-08-90 3-29-90 4-27-90 6-27-90	2.65 8.16 10.8 11.6 4.95	.248 .763 1.009 1.084 .463
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, 1988-89	10-13-89	3.97	.475
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, 1988-89	10-13-89	1.83	.466
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≠, 1988-89	10-16-89	4.28	.511

≠ 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, 1988-89	10-13-89	1.67	0.535
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	1988-89	10-13-89 3-08-90 3-29-90 4-27-90 6-27-90	2.10 3.41 3.30 3.60 2.38	.556 .902 .873 .952 .630
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, 1988-89	10-16-89	3.91	.556
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	1988-89	10-16-89 3-08-90 4-27-90 6-27-90	2.86 3.92 4.36 2.51	.478 .656 .729 .420
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, 1988-89	10-16-89 4-26-90 9-10-90	5.35 10.8 4.44	.469 .947 .389
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	1988-89	3-08-90 4-27-90 4-27-90 6-27-90 9-10-90	8.89 8.53 9.19 5.56 3.61	.975 .935 1.008 .610 .396
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, 1988-89	10-16-89	3.17	.508
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	1988-89	3-08-90 3-28-90 4-27-90 6-27-90	5.45 5.85 5.58 2.44	.798 .857 .817 .357
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	1989	3-08-90 3-28-90 4-27-90 6-27-90 7-27-90 9-13-90	4.72 5.02 4.36 1.45 1.72 4.80	.716 .762 .662 .220 .261 .728

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 1990

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.	1966-90 (Discontinued)	10-19-89	4.73
		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.	1966-90 (Discontinued)	10-19-89	6.91
		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.	1966-90	10-19-89	5.38
		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.	1985-90	10-19-89	4.16
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.	1966-90 (Discontinued)	10-19-89	4.60
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.	1985-90	10-19-89	3.48

Mill Creek seepage investigation--Headwaters to gaging station at Mill Creek Road, New Castle County, DE

One series of discharge measurements was made during the 1990 water year, on June 27, on Mill Creek and its main tributaries in Delaware, to study the effects of ground-water withdrawals on channel gains and losses. The reach is 1.75 mi in length and extends from the headwaters to 7.33 mi upstream from the mouth. The measurements were made during periods of base flow; for 4 days before the investigation no measurable precipitation had fallen. Tributary flow was considered a contribution and not a gain. Indicated gains or losses may be substantially in error as affected by small inaccuracies in open-channel measurements.

Mill Creek mile	Stream	Location	Meas. discharge (ft^3/s)	Gain or loss	Water temp. (°C)
				June 27, 1990	
9.08	Mill Creek	Lat 39°47'47", long 75°42'23", New Castle Co., 0.75 mi northwest of Hockessin.	0.37	-	16.5
8.40	....do....	Lat 39°47'25", long 75°42'02", New Castle Co., 0.20 mi northwest of Hockessin.	0.73	+ .36	19.0
-	Mill Creek tributary	Lat 39°47'39", long 75°41'52", New Castle Co., 0.4 mi upstream from mouth and 0.5 mi north of Hockessin.	0.22	-	16.0
8.36	....do....	Lat 39°47'25", long 75°42'00", New Castle Co., at mouth and 0.18 mi northwest of Hockessin.	0.28	+ .06	18.0
		Overall net gain or loss Unnamed Mill Creek tributary		+ .06	
8.10	Mill Creek	Lat 39°47'12", long 75°42'01", New Castle Co., 0.18 mi southwest of Hockessin.	1.10	+ .09	-
-	Mill Creek tributary	Lat 39°47'14", long 75°41'33", New Castle Co., 0.3 mi east of Hockessin and 0.6 mi upstream from mouth.	0.01	-	-
-	....do....	Lat 39°47'03", long 75°42'02", New Castle Co., 100 ft upstream from mouth and 0.4 mi south of Hockessin.	dry	- .01	-
		Overall net gain or loss Unnamed Mill Creek tributary		- .01	
7.77	Mill Creek	Lat 39°46'59", long 75°42'07", New Castle Co., 0.62 mi southwest of Hockessin.	0.75	- .36	18.0
-	Mill Creek tributary	Lat 39°47'06", long 75°42'23", New Castle Co., 0.3 mi upstream from mouth and 0.5 mi southwest of Hockessin.	0.03	-	21.0
7.74	....do....	Lat 39°46'56", long 75°42'12", New Castle Co., 50 ft upstream from mouth and 0.5 mi south of Hockessin.	dry	- .03	-
		Overall net gain or loss Unnamed Mill Creek Tributary		- .03	

Headwaters to gaging station at Mill Creek Road, New Castle County, DE

-	North Fork Mill Creek tributary	Lat 39°47'13", long 75°43'13", New Castle Co., 1.32 mi west of Hockessin and 1.5 mi upstream from mouth.	0.13	-	17.0
-	....do....	Lat 39°47'05", long 75°42'37", New Castle Co., 0.72 mi west of Hockessin and 0.92 mi upstream from mouth.	0.65	+ .52	24.0
-	....do....	Lat 39°46'56", long 75°42'28", New Castle Co., 0.65 mi upstream from mouth and 0.68 mi southwest of Hockessin.	0.54	- .11	21.0
7.73	....do....	Lat 39°46'51", long 75°42'07", New Castle Co., 0.27 mi upstream from mouth and 0.55 mi southwest of Hockessin.	0.56	+ .02	19.0
		Overall net gain or loss North Fork Mill Creek tributary		+ .43	
-	South Fork Mill Creek tributary	Lat 39°46'29", long 75°42'57", New Castle Co., 1.0 mi upstream from mouth and 1.4 mi southwest of Hockessin.	0.26	-	17.0
-	....do....	Lat 39°46'37", long 75°42'22", New Castle Co., 0.5 mi upstream from mouth and 0.9 mi southwest of Hockessin.	0.43	+ .17	20.5
7.67	....do....	Lat 39°46'49", long 75°42'08", New Castle Co., 0.2 mi upstream from mouth and 0.65 mi southwest of Hockessin.	0.45	+ .02	20.5
		Overall net gain or loss South Fork Mill Creek tributary		+ .19	
7.33	Mill Creek	Lat 39°46'48", long 75°41'48", Gaging station at Mill Creek Road at Hockessin (01479197).	1.81	+ .02	21.0
		Overall net gain or loss on Mill Creek		+ .11	

Middle Patuxent River seepage investigations--Headwaters to Simpsonville, MD

Two series of discharge measurements were made during the 1990 water year on the Middle Patuxent River and its tributaries. The reach is 20.47 mi in length and extends from its mouth near Savage, MD, to its headwaters. These measurements are part of the Appalachian-Piedmont Regional-Aquifer System Analysis (APRASA) project, of which this subbasin is a type area. The measurements were made from April 26 to 27 and from September 10 to 11. These dates were inferred to be periods of baseflow because there was no precipitation for five days before the April measurements and, except for a trace of precipitation three days before the measurements, there was no precipitation for nine days before the September measurements. Tributary flow was considered a contribution and not a gain. Indicated gains or losses may be substantially in error as affected by small inaccuracies in open-channel measurements.

Middle Patuxent mile	Stream	Location	Meas. discharge (ft^3/s)	Gain or loss	Water temp. (°C)	Conductivity (micro-siemens)	Meas. discharge (ft^3/s)	Gain or loss	Water temp. (°C)	Conductivity (micro-siemens)
			April 26, 27, 1990				September 10, 11, 1990			
20.47	Middle Patuxent River	Lat 39°18'14", long 77°00'06", Howard Co., .07 mi north of Inwood.	0.07	-	13.3	696	0.01	-	17.5	385
20.43	....do....	Lat 39°19'16", long 77°01'08", Howard Co., .04 mi northeast of Inwood.	0.14	+ .07	15.8	368	0.04	+ .03	16.0	236
19.93	Middle Patuxent River tributary	Lat 39°19'05", long 77°00'39", Howard Co., .15 mi upstream from mouth, .5 mi east southeast of Cooksville.	0.14	-	19.0	252	0.015	-	18.3	223
19.50	Middle Patuxent River tributary	Lat 39°18'36", long 77°00'28", Howard Co., .03 mi upstream from mouth, .85 mi northeast of Inwood.	0.27	-	13.2	191	0.16	-	-	179
19.51	Middle Patuxent River	Lat 39°18'36", long 77°00'27", Howard Co., .87 mi northeast of Inwood.	1.35	+ .80	13.7	207	0.48	+ .265	17.0	190
	Middle Patuxent River tributary	Lat 39°18'58", long 77°00'12", Howard Co., on MD route 144, .48 mi upstream from mouth, .95 mi east of Cookesville.	0.03	-	18.4	404	dry	-	-	-
	Outfall from pump	Lat 39°18'34", long 77°00'25", Howard Co., 1.03 mi southeast of Cooksville, outflow from pump at Walnut Spring Nursery pond, .02 mi upstream from mouth.	0.09	-	14.9	206	0.10	-	17.9	197
19.47	Middle Patuxent River tributary	Lat 39°18'33", long 77°00'25", Howard, Co., .01 mi upstream from mouth, .88 mi northeast of Inwood.	0.17	-	14.7	176	0.12	-	20.8	255
		Overall net gain or loss Unnamed Middle Patuxent River tributary		+ .05				+ .02		

Middle Patuxent River seepage investigations--Headwaters to Simpsonville, MD

Middle Patuxent mile	Stream	Location	Meas. discharge (ft^3/s)	Gain or loss	Water temp. (°C)	Conductivity (microsiemens)	Meas. discharge (ft^3/s)	Gain or loss	Water temp. (°C)	Conductivity (microsiemens)
			April 26, 27, 1990				September 10, 11, 1990			
19.28	Middle Patuxent River	Lat 39°19'05", long 77°00'39", Howard Co., .9 mi northeast of Inwood.	1.82	+ .30	15.1	207	1.01	+ .41	18.8	204
18.85	....do....	Lat 39°18'14", long 77°00'06", Howard Co., 1.0 mi east of Inwood.	1.91	+ .09	19.7	186	0.87	- .14	17.3	177
	North Fork Middle Patuxent River tributary	Lat 39°18'06", long 77°00'43", Howard Co., .36 mi upstream from confluence, .43 mi upstream from Middle Patuxent River, 1.4 mi southeast of Cooksville.	0.05	-	14.4	170	0.02	-	16.7	136
	Tributary to North Fork Middle Patuxent River tributary	Lat 39°18'07", long 77°00'44", Howard Co., .34 mi upstream from confluence, .43 mi upstreams from Middle Patuxent River, 1.4 mi southeast of Cooksville.	0.01	-	18.7	258	0.004	-	20.2	145
18.82	South Fork Middle Patuxent River tributary	Lat 39°17'32", long 77°00'38", Howard Co., .34 mi upstream from confluence, .43 mi upstream from Middle Patuxent River, 2.03 mi southest of Cooksville.	0.04	-	17.9	104	dry	-	-	-
18.69	Middle Patuxent River	Lat 39°18'06", long 77°59'56", Howard Co., 2.43 mi west of West Friendship.	3.16	+ 1.15	14.8	187	1.38	+ .486	17.6	159
18.32	Middle Patuxent River tributary	Lat 39°17'41", long 76°59'41", Howard Co., .28 mi upstream from mouth, 2.3 mi southwest of West Friendship.	0.06	-	11.7	97	0.02	-	17.2	102
18.11	Middle Patuxent River	Lat 39°17'54', long 76°59'22", Howard Co., 1.95 mi southwest of West Friendship.	3.95	+ .73	12.7	168	1.77	+ .37	17.9	149
	West Fork Middle Patuxent River tributary	Lat 39°18'35", long 76°58'47", Howard Co., .31 mi upstream from confluence, .43 mi upstream from Middle Patuxent River, 1.5 mi west of West Friendship.	1.33	-	15.7	217	0.63	-	16.2	209
17.52	East Fork Middle Patuxent River tributary	Lat 39°18'34", long 76°58'32", Howard Co., .24 mi upstream from confluence, .43 mi upstream from Middle Patuxent River, 1.3 mi west of West Friendship.	1.00	-	16.0	204	0.29	-	16.5	255

Middle Patuxent River seepage investigations--Headwaters to Simpsonville, MD

Middle Patuxent mile	Stream	Location	Meas. discharge (ft^3/s)	Gain or loss	Water temp. (°C)	Conductivity (microsiemens)	Meas. discharge (ft^3/s)	Gain or loss	Water temp. (°C)	Conductivity (microsiemens)
			April 26, 27, 1990				September 10, 11, 1990			
	West Fork Middle Patuxent River tributary	Lat 39°17'14", long 76°59'27", Howard Co., .12 mi upstream from confluence, .85 mi upstream from Middle Patuxent River, 2.3 mi southwest of West Friendship.	0.31	-	19.7	68	0.18	-	17.5	69
17.34	East Fork Middle Patuxent River tributary	Lat 39°17'06", long 76°59'21", Howard Co., .23 mi upstream from confluence, .85 mi upstream from Middle Patuxent River, 2.3 mi southeast of West Friendship.	0.25	-	23.0	97	0.18	-	18.6	90
16.89	Middle Patuxent River	Lat 39°17'34", long 76°58'21", Howard Co., 1.2 mi southwest of West Friendship.	8.04	+ 1.20	21.4	159	3.31	+ .26	17.3	155
16.21	Middle Patuxent River tributary	Lat 39°17'03", long 76°57'52", Howard Co., .27 mi upstream from mouth, 1.37 mi southwest of West Friendship.	1.55	-	17.2	180	0.56	-	18.5	165
16.04	Middle Patuxent River	Lat 39°17'14", long 76°57'33", at bridge on MD route 32 1.1 mi south of West Friendship.	10.8	+ 1.21	17.7	166	4.44	+ .57	19.8	164
15.76	Middle Patuxent River tributary	Lat 39°17'27", long 76°57'17", Howard Co., at bridge on MD route 32, .2 mi upstream from mouth, .8 mi south of West Friendship.	1.57	-	17.8	371	0.85	-	19.8	353
14.89	Middle Patuxent River	Lat 39°16'54", long 76°56'25", Howard Co., 1.6 mi southeast of West Friendship.	14.1	+ 1.73	17.2	180	5.67	+ .38	19.5	177
	Middle Patuxent River tributary	Lat 39°17'49", long 76°55'50", Howard Co., at MD route 144, .98 mi upstream from mouth, 1.3 mi east of West Friendship.	0.46	-	21.8	393	0.11	-	18.8	370
	Tributary to Middle Patuxent River tributary	Lat 39°17'47", long 76°55'48" Howard Co., at MD route 144, .06 mi upstream from confluence, .95 mi upstream from Middle Patuxent River, 1.4 mi east of West Friendship.	0.29	-	21.6	230	0.08	-	18.3	285

Middle Patuxent River seepage investigations--Headwaters to Simpsonville, MD

Middle Patuxent mile	Stream	Location	Meas. discharge (ft^3/s)	Gain or loss	Water temp. (°C)	Conductivity (micro-siemens)	Meas. discharge (ft^3/s)	Gain or loss	Water temp. (°C)	Conductivity (micro-siemens)
			April 26, 27, 1990				September 10, 11, 1990			
	Tributary to Middle Patuxent River tributary	Lat 39°17'52", long 76°56'02", Howard Co., .21 mi upstream from confluence, .92 mi upstream from Middle Patuxent River, 1.1 mi east of West Friendship.	0.73	-	19.6	205	0.46	-	-	207
	....do....	Lat 39°17'43", long 76°55'51", Howard Co., .03 mi upstream from confluence, .92 mi upstream from Middle Patuxent River, 1.28 mi east of West Friendship.	0.80	-	20.0	214	0.50	+ .04	16.8	216
	Middle Patuxent River tributary	Lat 39°17'22", long 76°56'05", Howard Co., .51 mi upstream from mouth, 1.3 mi southeast of West Friendship.	1.86	+ .31	15.9	251	0.69	.00	18.7	240
14.73	....do....	Lat 39°17'00", long 76°56'18", Howard Co., at Triadelphia .07 mi upstream, from mouth, 1.52 mi southeast of West Friendship.	2.15	+ .29	17.4	242	0.75	+ .06	19.2	234
		Overall net gain or loss Unnamed Middle Patuxent River tributary		+ .60				+ .06		
	Benson Branch	Lat 39°15'25", long 76°58'03", Howard Co., 1.44 mi southeast of Glenelg, 2.72 mi upstream from mouth.	0.44	-	19.3	107	0.24	-	-	99
	....do....	Lat 39°15'24', long 76°57'44", Howard Co., 1.73 mi southeast of Glenelg, 2.38 mi upstream from mouth.	1.01	+ .57	21.3	108	0.58	+ .34	23.8	108
13.41	....do....	Lat 39°16'10", long 76°55'57", Howard Co., .33 mi upstream from mouth, 1.83 mi southwest of Mayfield.	2.79	+ 1.78	18.5	136	1.50	+ .92	19.4	148
		Overall net gain or loss Benson Branch		+ 2.35				+ 1.26		
12.76	Middle Patuxent River	Lat 39°15'21", long 76°55'38", Howard Co., at Folly Quarter Road, 3.5 mi southeast of West Friendship.	20.5	+ 1.46	19.2	189	8.12	+ .20	21.6	187

Patuxent River basin seepage investigations--Continued

Middle Patuxent River seepage investigations--Headwaters to Simpsonville, MD

Middle Patuxent mile	Stream	Location	Meas. discharge (ft^3/s)	Gain or loss	Water temp. (°C)	Conductivity (microsiemens)	Meas. discharge (ft^3/s)	Gain or loss	Water temp. (°C)	Conductivity (microsiemens)
			April 26, 27, 1990				September 10, 11, 1990			
11.90	Middle Patuxent River tributary	Lat 39°15'37", long 76°54'53", Howard Co., .06 mi upstream from mouth, 2.35 mi south of Mayfield.	2.75	-	17.1	202	1.29	-	18.1	239
10.79	Middle Patuxent River	Lat 39°14'37", long 76°54'34", Howard Co., 1.75 mi northwest of Columbia.	25.6	+ 2.35	19.2	199	11.1	+ 1.69	20.4	210
	Middle Patuxent River tributary	Lat 39°14'32", long 76°58'36", Howard Co., at MD route 32, .6 mi northeast of Dayton, 4.59 mi upstream from mouth.	0.51	-	18.3	178	0.48	-	17.8	154
	Tributary to Middle Patuxent River tributary	Lat 39°14'30", long 76°58'35", Howard Co., at MD route 32, at mouth, 4.56 mi upstream from Middle Patuxent River, .6 mi northeast of Dayton.	0.15	-	22.3	113	0.06	-	21.3	103
	Tributary to Middle Patuxent River tributary	Lat 39°14'21", long 76°58'32", Howard Co., at MD route 32, .16 mi upstream from confluence, .62 mi east of Dayton, 4.3 mi upstream from Middle Patuxent River.	0.02	-	16.6	97	dry	-	-	-
	Tributary to Middle Patuxent River tributary	Lat 39°14'10", long 76°58'29", Howard Co., at MD route 32 .3 mi upstream from confluence, .68 mi southeast of Dayton, 4.17 mi upstream from Middle Patuxent River.	0.55	-	18.3	149	0.27	-	18.3	138
	Middle Patuxent River tributary	Lat 39°14'17", long 76°58'10", Howard Co., .91 mi east of Dayton, 4.14 mi upstream from mouth.	1.45	+ .22	20.0	164	0.73	- .08	19.8	163
	Tributary to Middle Patuxent River tributary	Lat 39°14'29", long 76°58'01", Howard Co., .18 mi upstream from confluence, .99 mi east of Dayton, 3.63 mi upstream from Middle Patuxent River.	0.44	-	20.0	184	0.20	-	20.2	79
	Middle Patuxent River tributary	Lat 39°14'26", long 76°57'24", Howard Co., 2.5 mi north-northwest of Clarksville, 3.05 mi upstream from mouth.	2.35	+ .46	19.6	235	1.07	+ .14	19.6	256
	....do....	Lat 39°14'12", long 76°57'17", Howard Co., 2.15 mi northwest of Clarksville, 2.7 mi upstream from mouth.	2.94	+ .59	23.8	212	0.95	- .12	20.7	233

Middle Patuxent River seepage investigations--Headwaters to Simpsonville, MD

Middle Patuxent mile	Stream	Location	Meas. discharge (ft^3/s)	Gain or loss	Water temp. (°C)	Conductivity (microsiemens)	Meas. discharge (ft^3/s)	Gain or loss	Water temp. (°C)	Conductivity (microsiemens)
			April 26, 27, 1990				September 10, 11, 1990			
	Tributary to Middle Patuxent River tributary	Lat 39°13'30", long 76°57'23", Howard Co., .93 mi upstream from confluence, 2.05 mi upstream from Middle Patuxent River, 1.4 mi northwest of Clarksville.	0.79	-	18.9	83	0.31	-	18.2	95
	....do....	Lat 39°13'56", long 76°56'44" Howard Co., .01 mi upstream from confluence, 1.7 mi north of Clarksville, 2.05 mi upstream of Middle Patuxent River.	1.26	+ .47	21.5	199	0.54	+ .23	18.7	215
	Middle Patuxent River tributary	Lat 39°14'12", long 76°56'27", Howard Co., at bridge on Sheppard Road, 1.6 mi upstream from mouth, 2.5 mi east of Dayton.	4.12	- .08	23.6	184	2.07	+ .58	21.1	244
	Tributary of Middle Patuxent River tributary	Lat 39°14'25", long 76°56'32" Howard Co., .23 mi upstream from confluence, 1.46 mi upstream from Middle Patuxent River, 2.3 mi north of Clarksville	1.56	-	20.2	285	0.62	-	17.9	330
	Tributary of Middle Patuxent River tributary	Lat 39°13'34", long 76°56'09" Howard Co., .54 mi upstream from Middle Patuxent River, .83 mi upstream from confluence, 1.42 mi northeast of Clarksville.	1.41	-	24.0	135	0.61	-	24.4	233
10.04	Middle Patuxent River tributary	Lat 39°14'01", long 76°55'03", .02 mi upstream from mouth, 2.35 mi northeast of Clarksville.	9.19	+ 2.10	18.8	243	3.61	+ .31	19.2	254
		Overall net gain or loss Unnamed Middle Patuxent River tributary		+ 3.76				+ 1.06		
8.23	Middle Patuxent River	Lat 39°12'32", long 76°54'24", Howard Co., .9 mi southwest of Columbia.	39.7	+ 4.91	17.2	145	14.7	- .01	18.9	217
	Middle Patuxent River tributary	Lat 39°12'12", long 76°57'42", Howard Co., 1.0 mi west of Clarksville, 3.71 mi upstream from mouth.	0.57	-	21.4	106	0.18	-	19.2	120
	....do....	Lat 39°11'41", long 76°56'07", Howard Co., at MD route 32, .9 mi southest of Clarksville, 2.06 mi upstream from mouth.	2.68	+ 2.11	23.4	149	1.19	+ 1.01	19.8	157

Patuxent River basin seepage investigations--Continued

Middle Patuxent River seepage investigations--Headwaters to Simpsonville, MD

Middle Patuxent mile	Stream	Location	Meas. discharge (ft^3/s)	Gain or loss	Water temp. (°C)	Conductivity (microsiemens)	Meas. discharge (ft^3/s)	Gain or loss	Water temp. (°C)	Conductivity (microsiemens)
			April 26, 27, 1990				September 10, 11, 1990			
	Tributary of Middle Patuxent River tributary	Lat 39°11'40", long 76°56'06", Howard Co., at Md route 32, .03 mi upstream from confluence, 1.4 mi northeast of Clarksville, 2.03 mi upstream from Middle Patuxent River.	1.78	-	22.6	137	0.65	-	19.5	139
	Middle Patuxent River tributary	Lat 39°12'00", long 76°55'12", Howard Co., 0.1 mi upstream from bridge on Trotter Road, 0.8 mi upstream from mouth, 1.3 mi southeast of Clarksville.	5.98	+ 1.52	23.5	135	2.21	+ .37	18.9	144
7.84	....do....	Lat 39°12'11", long 76°54'24", Howard Co., .01 mi upstream from mouth, 1.4 mi southwest of Columbia.	-	-	-	-	2.46	+ .25	18.9	138
		Overall net gain or loss Unnamed Middle Patuxent River tributary		+ 3.63				+ 1.63		
7.23	Middle Patuxent River	Gaging station near Simpsonville (01593710)	51.8	+ 6.12	-	-	16.1	- 1.06	19.2	204
		Overall net gain or loss Middle Patuxent River		+22.12				+ 3.451		

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 1989 TO SEPTEMBER 1990

POCOMOKE RIVER BASIN

01484980 - POCOMOKE RIVER AT CAREYTOWN, MD

DATE	TIME	Specific conductance (US/CM)	Ph (standard units)	Temperature, water (deg C)	Temperature, air (deg C)	Barometric pressure (mm of Hg)	Oxygen, dissolved (mg/L)	Oxygen, dissolved (percent saturation)	Calcium dissolved (mg/L as Ca)	Magnesium, dissolved (mg/L as Mg)	Sodium, dissolved (mg/L as Na)	Potassium, dissolved (mg/L as K)
JUN 14...	1500	92	6.26	19.0	19.5	759	6.5	71	5.7	1.8	7.1	2.0

Alkalinity, wat wh tot fet field (mg/L as CaCO3)	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 dissolved (mg/L as N)	Nitrogen, ammonia dissolved (mg/L as N)
15	15	18	8.7	10	0.20	0.020	21	71	<0.010	1.10	0.170

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)	Cadmium dissolved (ug/L as Cd)	Chromium, dissolved (ug/L as CR)	Cobalt, dissolved (ug/L as CO)	Copper, dissolved (ug/L as Cu)
0.50	<0.010	210	<1	<1	63	<0.5	10	<1	<5	<3	<10

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)	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 dissolved (mg/L as C)
400	<10	<4	67	<10	<10	<1	<1.0	77	<6	7	9.3

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

POCOMOKE RIVER BASIN--Continued

01484985 - GREEN RUN NEAR CAREYTOWN, MD

DATE	TIME	Specific conductance (US/CM)	Ph (standard units)	Temperature, air (deg C)	Barometric pressure (mm of Hg)	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)
JUN 14...	1200	79	6.44	21.5	6	6.2	7.7	2.4	8.1	3.0	23

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)	Aluminum, dissolved (ug/L as Al)	Antimony, dissolved (ug/L as SB)
23	28	9.4	11	0.20	<0.010	22	78	<10	<1

Arsenic, dissolved (ug/L as As)	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)	Iron, dissolved (ug/L as Fe)	Lead, dissolved (ug/L as Pb)
<1	64	<0.5	20	<1	<5	4	<10	460	<10

Lithium dissolved (ug/L as Li)	Manganese, dissolved (ug/L as Mn)	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 dissolved (mg/L as C)
<4	55	<10	<10	<1	<1.0	86	<6	7	7.9

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

POCOMOKE RIVER BASIN--Continued

01485050 - MURRAY BRANCH NEAR WILLARDS, MD

DATE	TIME	Specific conductance (US/CM)	Ph (standard units)	Temperature, water (deg C)	Temperature, air (deg C)	Barometric pressure (mm of Hg)	Oxygen, dissolved (mg/L)	Oxygen, dissolved (percent saturation)	Calcium dissolved (mg/L as Ca)	Magnesium, dissolved (mg/L as Mg)
JUN 14...	1000	126	5.66	20.5	23.0	761	2.2	24	10	4.0

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)	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)
6.7	7.4	14	14	17	22	13	0.20	<0.010	5.7

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)	Arsenic, dissolved (ug/L as As)
85	1.28	0.020	1.30	0.070	0.40	<0.010	270	<1	<1

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)	Iron, dissolved (ug/L as Fe)	Lead, dissolved (ug/L as Pb)	Lithium dissolved (ug/L as Li)
68	<0.5	30	<1	<5	5	<10	940	<10	<4

Manganese, dissolved (ug/L as Mn)	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 dissolved (mg/L as C)
58	<10	<10	<1	<1.0	67	<6	11	15

CHOPTANK RIVER BASIN

01491150 - CORKEL DITCH NEAR DENTON, MD

DATE	TIME	Specific conductance (US/CM)	Ph (standard units)	Temperature, water (deg C)	Oxygen, dissolved (mg/L)	Alkalinity, wat wh tot fet field (mg/L as CaCO3)	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)
OCT 25...	1300	89	6.20	11.5	7.3	27	1.39	0.010	1.40	0.060	0.50	0.020

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

CHESTER RIVER BASIN

01493110 - CHESTER RIVER TRIBUTARY AT CHESTERVILLE, MD

DATE	TIME	Specific conductance (US/CM)	Ph (standard units)	Temperature, water (deg C)	Temperature, air (deg C)	Barometric pressure (mm of Hg)	Oxygen, dissolved (mg/L)	Oxygen, dissolved (percent saturation)	Calcium dissolved (mg/L as Ca)	Magnesium, dissolved (mg/L as Mg)	Sodium, dissolved (mg/L as Na)	Potassium, dissolved (mg/L as K)
JUN 07...	1400	145	6.42	17.0	22.0	761	9.2	95	14	5.9	4.3	2.5

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)	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)	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)
29	6.1	13	<0.10	0.020	9.9	114	9.19	0.010	9.20	<0.010	0.50

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)	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)
<0.010	<10	<1	<1	130	<0.5	<10	1	<5	<3	<10	47

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)	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)	Radon 222, total (pCi/L)
<10	<4	65	<10	<10	<1	<1.0	81	<6	12	<80

Carbon, organic dissolved (mg/L as C)	Trifluralin, total recover (ug/L)	Alachlor, total recover (ug/L)	Ametryne, total	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)
1.2	<0.10	0.20	<0.10	<0.10	<0.10	<0.01	<0.5	<0.1	<0.1	<0.01

Prometryne, total (ug/L)	Prometone, total (ug/L)	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)
<0.1	<0.1	<0.10	<0.5	<0.01	<0.01	<0.01	<0.50	<0.01	0.10	<0.1

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

CHESTER RIVER BASIN--Continued

01493490 - MORGAN CREEK TRIBUTARY AT BLACK, MD

DATE	TIME	Specific conductance (US/CM)	Temperature, water (deg C)	Temperature, air (deg C)	Barometric pressure (mm of Hg)	Oxygen, dissolved (mg/L)	Oxygen, dissolved (percent saturation)	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)
JUN 07...	1700	150	23.0	24.0	762	6.4	74	12	4.3	6.0	3.6	35

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)	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)
7.8	13	<0.10	<0.010	8.3	101	5.05	0.150	5.20	0.310	0.70	0.020

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)	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)
140	<1	1	90	<0.5	<10	<1	<5	<3	<10	450	<10

Lithium dissolved (ug/L as Li)	Manganese, dissolved (ug/L as Mn)	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)	Radon 222, total (pCi/L)	Carbon, organic dissolved (mg/L as C)	Trifluralin, total recover (ug/L)
<4	1100	<10	<10	<1	<1.0	95	<6	4	<80	4.4	<0.10

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)
<0.10	<0.10	3.7	0.90	2.6	<0.1	<0.1	<0.1	<0.10	0.10	<0.1

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

CHESTER RIVER BASIN--Continued

01493495 - MORGAN CREEK NEAR LOCUST GROVE, 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)	Sulfate dissolved (mg/L as SO4)
JUN 07...	1500	149	6.97	19.0	23.0	7.6	11	5.3	5.7	4.3	58	6.4

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)	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)
13	<0.10	<0.010	14	108	2.96	0.040	3.00	0.030	0.30	<0.010	<10

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)	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)
<1	<1	70	<0.5	10	<1	<5	<3	<10	190	<10	<4

Manganese, dissolved (ug/L as Mn)	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)	Radon 222, total (pCi/L)	Carbon, organic dissolved (mg/L as C)	Trifluralin, total recover (ug/L)
180	<10	<10	<1	<1.0	87	<6	<3	<80	3.6	<0.10

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)
<0.10	<0.10	2.4	0.60	1.8	<0.1	<0.1	<0.1	<0.10	0.20	<0.1

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

PATAPSCO RIVER BASIN

01587070 - SOUTH BRANCH PATAPSCO RIVER AT WOODBINE, MD

DATE	TIME	Discharge, instantaneous (ft3/s)	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)	Alkalinity, wat wh tot it field (mg/L as CaCO3)
OCT 06...	1040	5.5	6.92	12.5	19.5	7	11.1	16	5.2	20	2.9	30

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)	Phosphorous 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)
8.0	35	0.10	6.1	154	111	4.60	0.210	3	1	6

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)
7	30	20	7600	20	<10	7	700	0.01	30	1.9

01589080 - DEEP RUN AT HANOVER, MD

DATE	TIME	Discharge, instantaneous (ft3/s)	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)
OCT 16...	0955	5.5	273	7.21	15.5	24.0	5	10.3	23

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)
5.4	21	2.8	57	19	34	0.10	7.5	150

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)
147	0.700	0.010	530	150	70	67	2.5

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

PATUXENT RIVER BASIN

01590800 - PATUXENT RIVER AT MULLINIX, MD

DATE	TIME	Discharge, instantaneous (ft3/s)	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)
OCT 06...	1320	2.7	101	6.56	12.0	22.0	18	8.4	9.8	4.2	6.1	2.5

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)	Phosphorous 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)
31	4.0	14	0.10	5.3	70	61	2.20	0.020	2	<1	6

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)
4	90	33	7700	<10	10	13	620	0.01	30	1.9

01590900 - CABIN BRANCH NEAR FLORENCE, MD

DATE	TIME	Discharge, instantaneous (ft3/s)	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)
OCT 13...	1015	4.0	101	8.52	12.0	24.5	3	11.0	6.9

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)
3.2	5.8	1.7	24	2.0	10	<0.10	8.9	56

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)
48	3.30	0.020	160	68	20	19	1.2

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

PATUXENT RIVER BASIN--Continued

01591200 - CATTAIL CREEK TRIBUTARY AT CARRS MILL, MD

DATE	TIME	Discharge, instantaneous (ft3/s)	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)
OCT 13...	1555	1.8	161	6.79	17.5	29.0	12	8.9	11

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)
5.7	6.7	3.1	18	3.0	15	<0.10	9.4	104

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)
64	7.50	0.140	430	63	60	46	2.7

01591375 - CATTAIL CREEK TRIBUTARY AT DAISY, MD

DATE	TIME	Discharge, instantaneous (ft3/s)	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)
OCT 13...	1505	1.7	97	6.94	15.0	27.0	7	9.6	7.0

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)
3.1	5.1	1.6	17	2.0	9.9	<0.10	8.3	57

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)
47	2.80	0.010	150	45	40	20	1.4

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

PATUXENT RIVER BASIN--Continued

01591475 - DORSEY BRANCH NEAR KNOLLWOOD, MD

DATE	TIME	Discharge, instantaneous (ft3/s)	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)
OCT 13...	1400	2.1	140	6.97	14.0	25.0	3	9.4	10	4.5	6.4	2.0

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)	Phosphorous 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)
21	4.0	14	<0.10	12	86	66	4.70	0.020	<1	<1	6

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)
3	290	52	4800	<10	40	16	170	<0.01	20	1.4

01593200 - LITTLE PATUXENT RIVER AT PINE ORCHARD, MD

DATE	TIME	Discharge, instantaneous (ft3/s)	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)
OCT 16...	1650	3.9	225	7.17	17.5	25.0	7	9.1	26

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)
6.6	12	3.3	63	7.0	30	0.10	14	156

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)
137	1.30	0.020	230	88	40	37	1.9

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

PATUXENT RIVER BASIN--Continued

01593300 - RED HILL BRANCH NEAR COLUMBIA, MD

DATE	TIME	Discharge, instantaneous (ft3/s)	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)
OCT 16...	1135	2.9	340	7.14	15.0	28.0	15	8.1	41

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)
8.3	17	3.5	98	21	35	0.10	20	203

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)
202	1.40	0.040	500	48	180	170	2.3

01593600 - MIDDLE PATUXENT RIVER NEAR WEST FRIENDSHIP, MD

DATE	TIME	Discharge, instantaneous (ft3/s)	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)
OCT 16...	1540	5.4	132	7.15	16.5	27.0	4	9.3	11

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)
4.9	9.1	2.9	24	4.0	30	0.10	10	92

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)
85	3.20	0.070	330	100	30	28	2.8

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

PATUXENT RIVER BASIN--Continued

01593700 - MIDDLE PATUXENT RIVER TRIBUTARY NEAR CLARKSVILLE, MD

DATE	TIME	Discharge, instantaneous (ft3/s)	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)
OCT 16...	1320	3.2	142	7.18	16.0	29.0	15	9.9	12

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)
3.9	8.2	2.8	32	8.0	14	0.10	18	72

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)
87	1.40	0.020	150	53	20	10	1.5

GROUND-WATER SPRING DISCHARGE

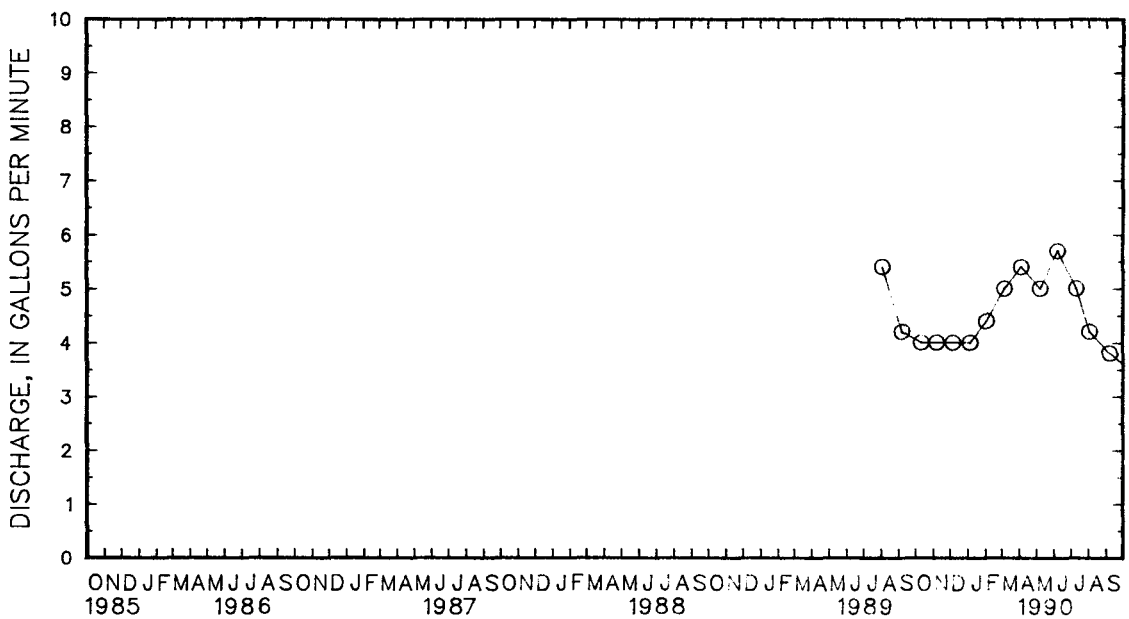
MARYLAND

CECIL COUNTY

SPRING NUMBER.--CE Cc 40. SITE ID.--393459076045001.
LOCATION.--Lat 39°34'59", long 76°04'50", Hydrologic Unit 02050306, 0.1 mi north of intersection of Cokesbury and St. Marks Church Rd., 0.8 mi northeast of Perryman.
Owner: John McMullen.
AQUIFER.--James Run Formation, Frenchtown Member of Paleozoic age. Aquifer code: 300JMSR.
SPRING IMPROVEMENTS.--2 in. outflow pipe.
INSTRUMENTATION.--Monthly volumetric measurements by USGS personnel.
DATUM.--Elevation of land surface is 180 ft above National Geodetic Vertical Datum of 1929, from topographic map.
REMARKS.--Maryland Water-Level and Water Quality Network observation spring. Temperatures are available.
PERIOD OF RECORD.--April 1981, Aug. 1989 to current year.
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge measured, 5.71 gal/min, June 7, 1990; minimum discharge measured, 3.50 gal/min, April 3, 1981.

DISCHARGE, IN GALLONS PER MINUTE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	DISCHARGE	DATE	DISCHARGE	DATE	DISCHARGE	DATE	DISCHARGE	DATE	DISCHARGE
OCT 11	4.00	JAN 5	4.00	APR 3	5.45	JUN 7	5.71	AUG 3	4.28
NOV 7	4.00	FEB 2	4.40	MAY 7	5.00	JUL 10	5.00	SEP 7	3.87
DEC 6	4.00	MAR 5	5.00						



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER SPRING DISCHARGE

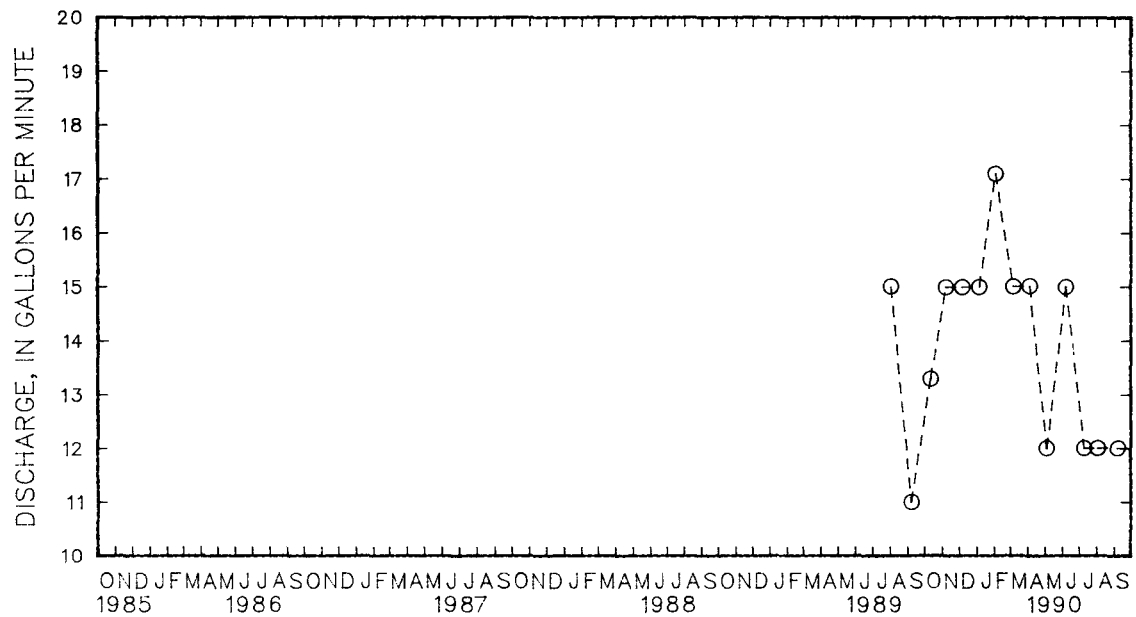
MARYLAND--Continued

HARFORD COUNTY

SPRING NUMBER.--HA Aa 9. SITE ID.--394153076325701.
LOCATION.--Lat 39°41'53", long 76°32'57", Hydrologic Unit 02050306, 30 ft south of Church Lane, .5 mi west of Norrisville.
Owner: Milton Smith.
AQUIFER.--Prettyboy Schist of Paleozoic age. Aquifer code: 300PTRB.
SPRING IMPROVEMENTS.--4 in. plastic outflow pipe.
INSTRUMENTATION.--Monthly volumetric measurements by USGS personnel.
DATUM.--Elevation of land surface is 640 ft above National Geodetic Vertical Datum of 1929, from topographic map.
REMARKS.--Maryland Water-Level and Water Quality Network observation spring. Temperatures are available.
PERIOD OF RECORD.--October 6, 1980, Aug. 2, 1989 to current year.
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge measured, 20.0 gal/min, Jan. 2, 1990; minimum discharge measured, 7.0 gal/min, Oct. 6, 1980.

DISCHARGE, IN GALLONS PER MINUTE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	DISCHARGE	DATE	DISCHARGE	DATE	DISCHARGE	DATE	DISCHARGE	DATE	DISCHARGE
OCT 11	13.33	JAN 5	15.00	APR 3	15.00	JUN 7	15.00	AUG 3	12.00
NOV 7	15.00	FEB 2	17.14	MAY 4	12.00	JUL 10	12.00	SEP 7	12.00
DEC 6	15.00	MAR 5	15.00						



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

DELAWARE--Continued

KENT COUNTY

WELL NUMBER.--Id53-05. SITE ID.--391039075325501.
LOCATION.--Lat 39°10'39", long 75°32'55", Hydrologic Unit 02040207, 700 ft southwest of State College Rd. and Penn Central Railroad.
Owner: City of Dover.
AQUIFER.--Fredrica aquifer of Miocene age. Aquifer code: 122FRDC.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 47 ft; casing diameter 6 in., to 44 ft; screen diameter 4 in. from 44 to 47 ft.
INSTRUMENTATION.--Measurements with chalked steel tape by USGS personnel. Equipped with graphic water-level recorder from March 21, 1973 to current year.
DATUM.--Elevation of land surface is 36 ft above National Geodetic Vertical Datum of 1929.
Measuring Point:Top of casing, 3.7 ft above land surface.
REMARKS.--Water levels affected by nearby pumping. Minor variations in water levels are caused by trains passing on nearby tracks.
PERIOD OF RECORD.--March 21, 1973 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.25 ft below land surface, March 29, 1978; lowest measured, 12.23 ft below land surface, Dec. 31, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	3.53	3.49	3.84	3.77	4.01	3.93	4.04	3.94	3.38	3.33	4.03	3.96
2	3.50	3.28	3.86	3.81	4.01	3.93	3.93	3.82	3.34	3.32	4.00	3.95
3	3.32	3.28	3.85	3.80	3.98	3.92	3.82	3.76	3.42	3.34	4.09	4.01
4	3.35	3.31	3.89	3.86	4.02	3.98	3.76	3.70	3.36	3.30	4.13	4.10
5	3.40	3.35	3.91	3.88	4.06	4.01	3.75	3.71	3.45	3.36	4.19	4.11
6	3.43	3.40	3.89	3.88	4.08	4.05	3.75	3.72	3.45	3.42	4.23	4.19
7	3.52	3.42	3.91	3.89	4.20	4.09	3.74	3.62	3.47	3.42	4.22	4.17
8	3.58	3.52	3.92	3.79	4.21	4.14	3.62	3.57	3.52	3.47	4.18	4.16
9	3.66	3.58	3.78	3.62	4.18	4.14	3.56	3.50	3.50	3.46	4.20	4.16
10	3.72	3.66	3.62	3.60	4.20	4.14	3.53	3.44	3.45	3.42	4.21	4.18
11	3.77	3.70	3.62	3.56	4.22	4.19	3.50	3.43	3.49	3.45	4.23	4.20
12	3.81	3.78	3.63	3.56	4.25	4.19	3.62	3.51	3.55	3.47	4.25	4.22
13	3.87	3.81	3.66	3.62	4.24	4.18	3.67	3.63	3.59	3.55	4.26	4.24
14	3.90	3.87	3.63	3.61	4.26	4.23	3.66	3.64	3.62	3.55	4.31	4.26
15	3.96	3.90	3.62	3.58	4.28	4.19	3.70	3.66	3.63	3.60	4.31	4.28
16	3.99	3.96	3.61	3.54	4.27	4.20	3.71	3.69	3.60	3.58	4.29	4.04
17	4.01	3.99	3.71	3.62	4.32	4.27	3.72	3.68	3.76	3.60	4.04	3.98
18	4.06	4.01	3.78	3.70	4.34	4.29	3.82	3.72	3.79	3.72	3.99	3.88
19	4.05	3.85	3.82	3.75	4.36	4.30	3.80	3.72	3.73	3.69	3.88	3.83
20	3.85	3.60	---	---	4.35	4.29	3.77	3.70	3.82	3.73	3.88	3.86
21	3.59	3.53	3.82	3.66	---	---	---	---	3.85	3.81	3.89	3.82
22	3.57	3.53	3.88	3.82	4.45	4.40	---	---	3.82	3.71	---	---
23	3.61	3.57	3.89	3.80	4.49	4.44	3.87	3.81	3.73	3.70	---	---
24	3.63	3.61	3.96	3.89	4.46	4.43	3.89	3.84	3.81	3.69	---	---
25	3.65	3.62	3.96	3.89	4.45	4.40	3.88	3.58	3.98	3.82	---	---
26	3.68	3.64	3.89	3.87	4.51	4.40	3.58	3.50	4.02	3.98	---	---
27	3.72	3.68	3.92	3.88	4.55	4.49	3.50	3.42	4.00	3.95	---	---
28	3.76	3.72	3.87	3.82	4.57	4.53	3.43	3.39	3.99	3.94	---	---
29	3.80	3.76	3.93	3.86	4.60	4.55	3.40	3.26	---	---	---	---
30	3.82	3.79	3.93	3.90	4.58	4.54	3.35	3.26	---	---	---	---
31	3.81	3.75	---	---	4.55	4.06	3.38	3.33	---	---	---	---
MONTH	4.06	3.28	3.96	3.54	4.60	3.92	4.04	3.26	4.02	3.30	4.31	3.82

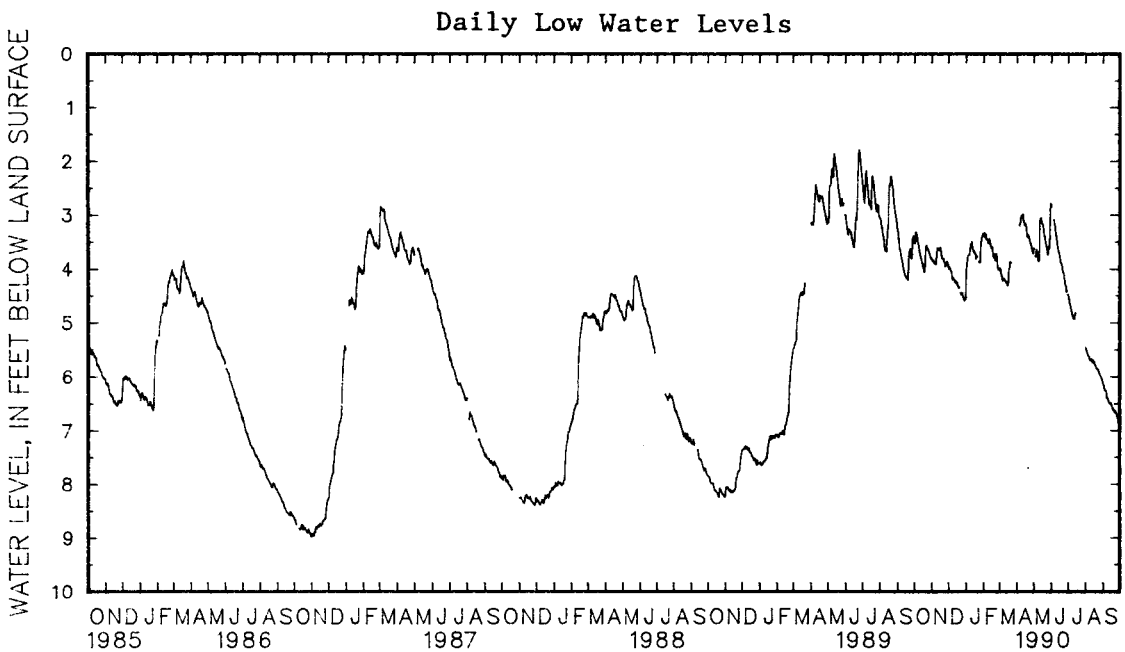
GROUND-WATER LEVELS

DELAWARE--Continued

KENT COUNTY

Id53-05--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	3.63	3.59	2.84	2.79	4.51	4.47	5.47	5.40	6.15	6.11
2	---	---	---	---	---	---	4.58	4.51	5.51	5.46	6.17	6.13
3	---	---	3.77	3.70	---	---	4.65	4.58	5.54	5.49	6.23	6.16
4	---	---	3.77	3.67	---	---	4.67	4.62	5.58	5.52	6.27	6.23
5	3.18	3.14	3.65	3.60	3.09	2.98	4.72	4.66	5.61	5.56	6.27	6.24
6	3.20	3.13	3.70	3.61	3.15	3.09	4.77	4.69	5.63	5.59	6.27	6.24
7	3.11	3.01	3.76	3.70	3.22	3.15	4.82	4.75	5.65	5.58	6.32	6.26
8	3.02	2.99	3.83	3.77	3.31	3.22	4.86	4.82	5.70	5.65	6.41	6.32
9	3.04	3.00	3.86	3.82	3.36	3.30	4.89	4.84	5.71	5.69	6.40	6.39
10	3.00	2.93	3.84	3.15	3.44	3.36	4.93	4.84	5.70	5.65	6.44	6.39
11	2.99	2.90	3.13	3.02	3.54	3.44	4.92	4.86	5.68	5.65	6.47	6.42
12	3.10	2.99	3.07	3.03	3.62	3.54	4.94	4.86	5.72	5.67	6.50	6.46
13	3.18	3.10	3.05	3.01	3.67	3.62	4.86	4.83	5.75	5.67	6.51	6.49
14	3.19	3.16	3.11	3.02	3.70	3.67	4.83	4.80	5.71	5.66	6.51	6.43
15	3.16	3.12	3.16	3.12	3.75	3.69	---	---	5.72	5.66	6.50	6.42
16	3.17	3.12	3.17	3.14	3.82	3.75	---	---	5.74	5.70	6.54	6.50
17	3.23	3.16	3.21	3.16	3.88	3.82	---	---	5.78	5.73	6.58	6.52
18	3.34	3.23	3.31	3.22	3.90	3.87	---	---	5.80	5.75	6.62	6.58
19	3.41	3.34	3.39	3.32	3.92	3.88	---	---	5.82	5.78	6.61	6.57
20	3.41	3.38	3.43	3.40	3.99	3.92	---	---	5.86	5.82	6.65	6.59
21	3.38	3.35	3.51	3.43	4.03	3.98	---	---	5.87	5.84	6.67	6.65
22	3.42	3.36	3.56	3.52	4.08	4.03	---	---	5.87	5.85	6.65	6.59
23	3.47	3.41	3.62	3.57	4.10	4.06	---	---	5.88	5.87	6.66	6.59
24	3.52	3.46	3.71	3.64	4.18	4.10	---	---	5.92	5.88	6.69	6.67
25	3.54	3.51	3.74	3.67	4.27	4.18	---	---	5.95	5.92	6.73	6.69
26	3.58	3.53	3.66	3.55	4.31	4.27	---	---	5.97	5.92	6.76	6.73
27	3.65	3.58	3.59	3.57	4.34	4.31	---	---	5.99	5.95	6.78	6.75
28	3.68	3.62	3.62	3.47	4.43	4.34	---	---	6.02	5.96	6.85	6.78
29	3.72	3.62	3.45	2.86	---	---	---	---	6.04	5.99	6.81	6.79
30	3.62	3.60	2.86	2.78	4.48	4.40	---	---	6.07	6.03	6.81	6.79
31	---	---	2.79	2.76	---	---	---	---	6.12	6.07	---	---
MONTH	3.72	2.90	3.86	2.76	4.48	2.79	4.94	4.47	6.12	5.40	6.85	6.11



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Water level affected by pumping in the Dover area. No record from Dec. 22, 1989 to Jan. 2, 1990, due to recorder malfunction.
PERIOD OF RECORD.--August 1969 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 67.40 ft below land surface, 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 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	152.74	152.42	150.67	150.60	148.01	147.99	---	---	143.83	143.69	142.56	142.46
2	152.39	151.91	150.67	150.62	148.00	147.55	---	---	143.76	143.67	142.46	142.37
3	151.99	151.85	150.85	150.62	147.55	147.41	143.28	143.07	143.85	143.69	142.37	142.29
4	152.10	152.01	150.98	150.87	147.41	147.17	143.07	143.04	143.66	143.43	142.44	142.33
5	152.23	152.11	150.98	150.82	147.16	147.06	143.29	143.06	143.53	143.45	142.45	142.35
6	152.30	152.24	150.80	150.61	147.05	146.74	143.33	143.24	143.44	143.32	142.57	142.33
7	152.47	152.31	150.62	150.54	146.82	146.74	143.33	143.30	143.36	143.23	142.63	142.53
8	152.47	152.25	150.53	150.23	146.82	146.56	143.32	143.19	143.39	143.32	142.62	142.49
9	152.24	152.15	150.22	150.09	146.54	146.31	143.37	143.27	143.36	143.26	143.04	142.62
10	152.16	152.02	150.29	150.16	146.29	146.13	143.53	143.34	143.24	143.10	143.38	143.04
11	152.01	151.93	150.31	150.23	146.12	145.95	143.53	143.30	143.21	143.02	143.40	143.34
12	152.03	151.95	150.27	150.20	145.97	145.90	143.44	143.31	143.01	142.93	143.35	143.18
13	152.08	152.01	150.27	150.09	145.93	145.88	143.63	143.45	142.97	142.88	143.20	143.12
14	152.09	152.05	150.09	150.05	145.93	145.81	143.63	143.49	142.96	142.89	143.13	143.08
15	152.06	151.83	150.06	149.82	145.82	145.58	143.48	143.22	142.99	142.95	143.43	143.13
16	151.82	151.54	149.93	149.66	145.77	145.62	143.22	143.07	142.99	142.93	143.58	143.43
17	151.55	151.52	150.11	149.95	146.14	145.78	143.07	142.90	143.50	143.02	143.59	143.56
18	151.58	151.54	150.26	150.11	145.98	145.83	143.05	142.89	143.52	143.28	143.68	143.57
19	151.58	151.46	150.28	150.00	145.94	145.88	143.52	143.07	143.25	142.95	143.68	143.51
20	151.47	151.41	149.98	149.63	145.90	145.88	143.67	143.53	143.03	142.99	143.54	143.51
21	151.49	151.45	149.95	149.67	145.87	145.73	143.71	143.59	143.00	142.79	143.56	143.50
22	151.45	151.32	149.99	149.87	---	---	143.71	143.63	142.81	142.53	143.59	143.45
23	151.31	151.09	149.90	149.81	---	---	143.73	143.65	142.56	142.51	143.50	143.37
24	151.09	150.99	149.90	149.72	---	---	143.64	143.57	142.60	142.50	143.63	143.50
25	150.97	150.75	149.71	149.36	---	---	143.64	143.45	142.70	142.60	143.63	143.57
26	150.84	150.73	149.33	149.03	---	---	143.94	143.46	142.70	142.45	143.63	143.52
27	150.98	150.84	149.01	148.63	---	---	144.01	143.93	142.45	142.37	143.76	143.63
28	151.05	150.98	148.60	148.36	---	---	143.95	143.86	142.49	142.40	143.75	143.58
29	151.05	150.91	148.42	148.24	---	---	143.88	143.48	---	---	143.72	143.61
30	150.91	150.73	148.23	147.98	---	---	143.81	143.52	---	---	143.86	143.72
31	150.73	150.55	---	---	---	---	143.86	143.82	---	---	143.94	143.86
MONTH	152.74	150.55	150.98	147.98	148.01	145.58	144.01	142.89	143.85	142.37	143.94	142.29

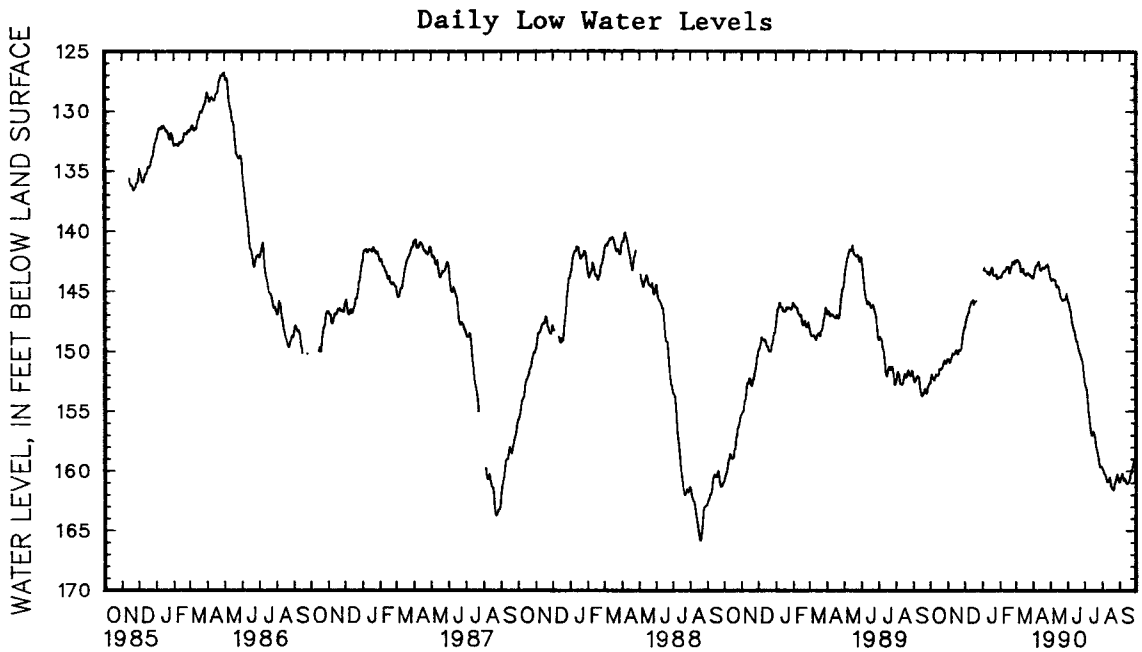
GROUND-WATER LEVELS

DELAWARE--Continued

KENT COUNTY--Continued

Id55-01--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	143.94	143.85	143.91	143.77	145.72	145.48	152.68	152.28	159.80	159.72	160.96	160.87
2	143.82	143.48	144.06	143.92	145.95	145.73	152.94	152.69	159.88	159.79	160.86	160.57
3	143.46	143.21	144.13	144.06	146.02	145.95	153.04	152.95	160.01	159.88	160.56	160.51
4	143.20	142.97	144.12	143.98	146.30	146.01	153.21	153.04	160.17	160.01	160.51	160.32
5	142.96	142.85	143.98	143.88	146.58	146.32	153.63	153.22	160.29	160.17	160.31	160.14
6	142.90	142.86	144.06	143.93	146.68	146.59	154.30	153.66	160.33	160.29	160.25	160.13
7	142.86	142.80	144.05	143.93	147.14	146.69	154.90	154.33	160.46	160.31	160.52	160.26
8	142.85	142.72	144.03	143.96	147.50	147.16	155.21	154.92	160.69	160.47	160.82	160.55
9	142.76	142.56	144.05	144.00	147.81	147.52	155.52	155.22	160.90	160.70	160.83	160.67
10	142.56	142.37	144.10	143.93	147.96	147.82	155.97	155.53	160.95	160.91	160.69	160.66
11	142.56	142.35	144.48	144.12	148.16	147.96	156.43	155.99	160.94	160.88	160.79	160.70
12	142.90	142.57	144.69	144.51	148.31	148.18	156.74	156.46	160.88	160.71	160.86	160.80
13	143.22	142.91	144.67	144.50	148.36	148.32	157.04	156.77	160.70	160.52	161.04	160.87
14	143.31	143.23	144.57	144.50	148.63	148.36	157.05	156.95	160.56	160.52	161.09	161.03
15	143.22	143.19	144.67	144.58	148.97	148.64	156.94	156.71	160.79	160.57	161.06	160.99
16	143.19	143.05	144.68	144.65	149.20	148.99	156.75	156.71	161.11	160.81	161.06	160.90
17	143.04	142.92	144.87	144.65	149.23	149.15	156.86	156.76	161.33	161.12	160.93	160.86
18	143.07	142.97	145.20	144.89	149.21	149.12	157.04	156.86	161.45	161.33	160.86	160.68
19	143.05	142.99	145.47	145.22	149.49	149.21	157.35	157.05	161.55	161.45	160.68	160.29
20	143.10	143.05	145.53	145.46	149.75	149.50	157.67	157.36	161.62	161.55	160.28	160.23
21	143.07	143.01	145.66	145.46	149.97	149.75	158.03	157.68	161.62	161.51	160.26	160.16
22	143.05	142.94	145.78	145.66	150.15	149.98	158.19	158.03	161.49	161.16	160.15	159.87
23	142.94	142.80	145.81	145.70	150.28	150.16	158.38	158.19	161.15	160.97	159.86	159.63
24	142.87	142.80	145.70	145.63	150.33	150.29	158.65	158.39	160.97	160.86	159.63	159.49
25	142.81	142.68	145.72	145.65	150.54	150.34	158.93	158.67	160.85	160.66	159.49	159.34
26	142.77	142.68	145.74	145.69	150.72	150.55	159.25	158.94	160.65	160.36	159.34	159.11
27	142.92	142.78	145.74	145.63	150.88	150.73	159.54	159.26	160.35	160.23	159.17	159.11
28	143.09	142.93	145.62	145.45	151.27	150.90	159.70	159.55	160.33	160.24	159.24	159.17
29	143.45	143.10	145.44	145.15	151.72	151.29	159.71	159.67	160.56	160.34	159.22	159.12
30	143.76	143.46	145.22	145.16	152.26	151.75	159.67	159.61	160.82	160.58	159.11	158.86
31	---	---	145.46	145.23	---	---	159.71	159.61	160.94	160.83	---	---
MONTH	143.94	142.35	145.81	143.77	152.26	145.48	159.71	152.28	161.62	159.72	161.09	158.86



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

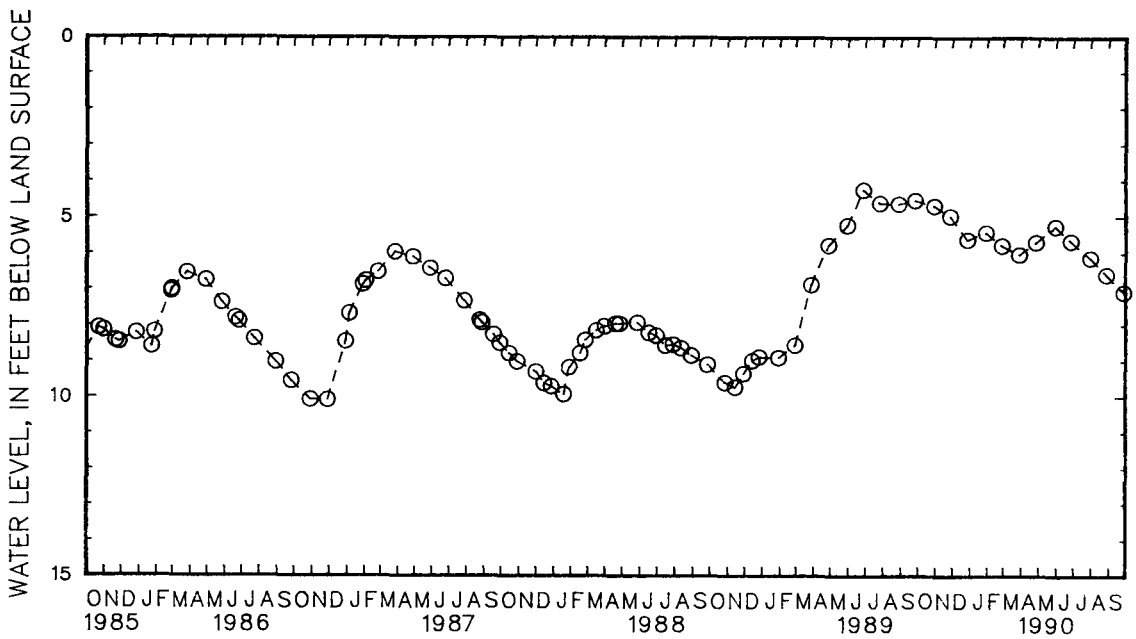
DELAWARE--Continued

KENT COUNTY--Continued

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 or electric sensing device by USGS or Delaware Geological Survey 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.
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, July 18, 1975; lowest measured, 10.10 ft below land surface, Nov. 28, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	4.68	DEC 27	5.62	FEB 26	5.78	APR 26	5.69	JUN 26	5.66	AUG 28	6.60
NOV 27	4.97	JAN 29	5.42	MAR 28	6.03	MAY 30	5.25	JUL 30	6.13	SEP 27	7.09

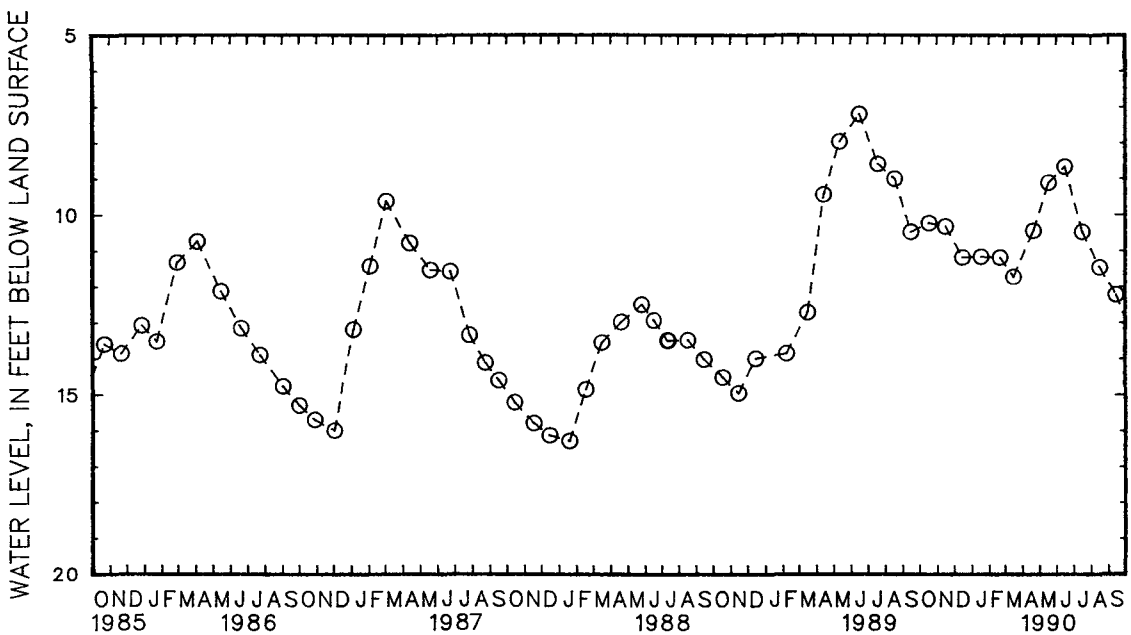


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
PERIOD OF RECORD.--September 1958 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.28 ft below land surface, May 31, 1984; lowest measured, 16.29 ft below land surface, Jan. 19, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17	10.25	DEC 15	11.20	FEB 20	11.20	APR 20	10.45	JUN 15	8.66	AUG 16	11.47
NOV 15	10.34	JAN 17	11.18	MAR 16	11.74	MAY 17	9.11	JUL 16	10.48	SEP 14	12.24



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

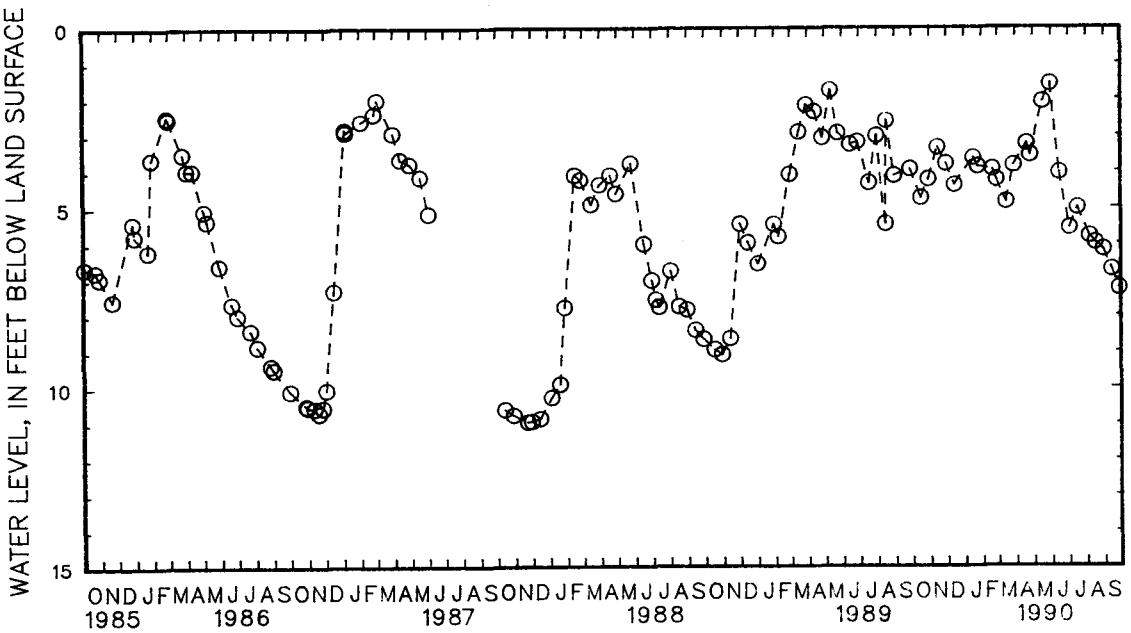
DELAWARE--Continued

KENT COUNTY--Continued

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 and Delaware Geological Survey 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.
PERIOD OF RECORD.--September 1958 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.07 ft below land surface, July 14, 1975; lowest measured, 11.14 ft below land surface, Jan. 6, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17	4.75	DEC 15	4.39	FEB 27	4.23	APR 26	3.57	JUL 2	5.59	AUG 30	6.19
30	4.23	JAN 17	3.64	MAR 16	4.86	MAY 17	2.07	16	5.03	SEP 14	6.75
NOV 15	3.35	25	3.88	29	3.85	30	1.57	AUG 6	5.82	27	7.27
30	3.80	FEB 20	3.94	APR 20	3.25	JUN 15	4.05	16	6.00		



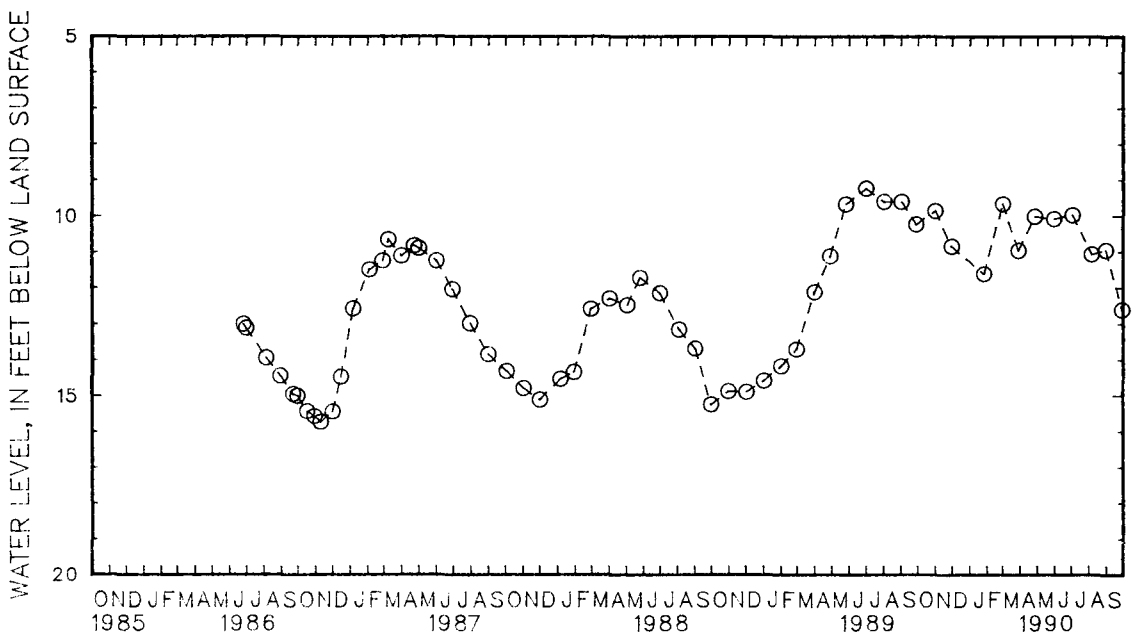
5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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 Delaware Geological Survey 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.
REMARKS.--Water-level measurements furnished by Delaware Geological Survey.
PERIOD OF RECORD.--June 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.23 ft below land surface, June 30, 1989; lowest measured, 15.74 ft below land surface, Nov. 10, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	9.86	JAN 26	11.61	MAR 29	10.96	MAY 31	10.08	AUG 6	11.06	SEP 28	12.62
NOV 30	10.84	FEB 28	9.66	APR 27	10.01	JUL 3	9.97	31	10.97		



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

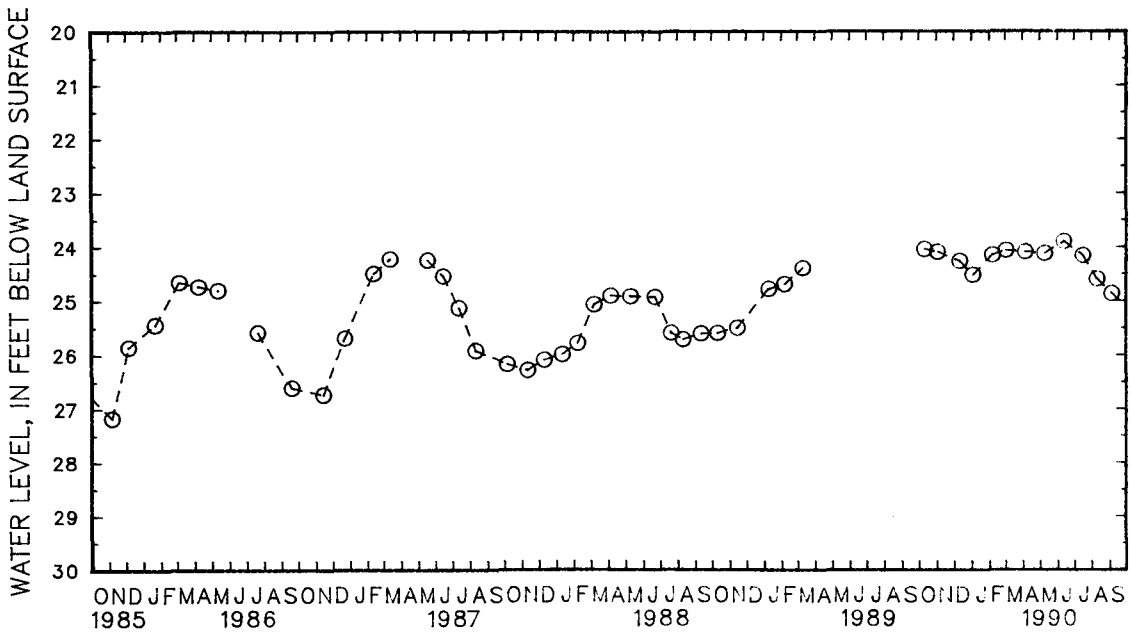
DELAWARE--Continued

NEW CASTLE COUNTY--Continued

WELL NUMBER.--Eb23-22. SITE ID.--393316075421601.
LOCATION.--Lat 39°33'16", long 75°42'16", Hydrologic Unit 02040205, at Lums Pond State Park.
Owner: U.S. Geological Survey.
AQUIFER.--Magothy Formation of Upper Cretaceous age. Aquifer code: 211MGTY.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 732 ft; casing diameter 2 in., to 101 ft, screened from 101 to 105 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, 2.5 ft above land surface.
PERIOD OF RECORD.--November 1980 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 23.84 ft below land surface, April 20, 1982; lowest measured, 27.18 ft below land surface, Nov. 6, 1985.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	24.04	DEC 11	24.26	FEB 6	24.15	APR 5	24.09	JUN 12	23.90	AUG 10	24.60
NOV 2	24.09	JAN 3	24.52	MAR 2	24.06	MAY 9	24.12	JUL 16	24.16	SEP 5	24.87

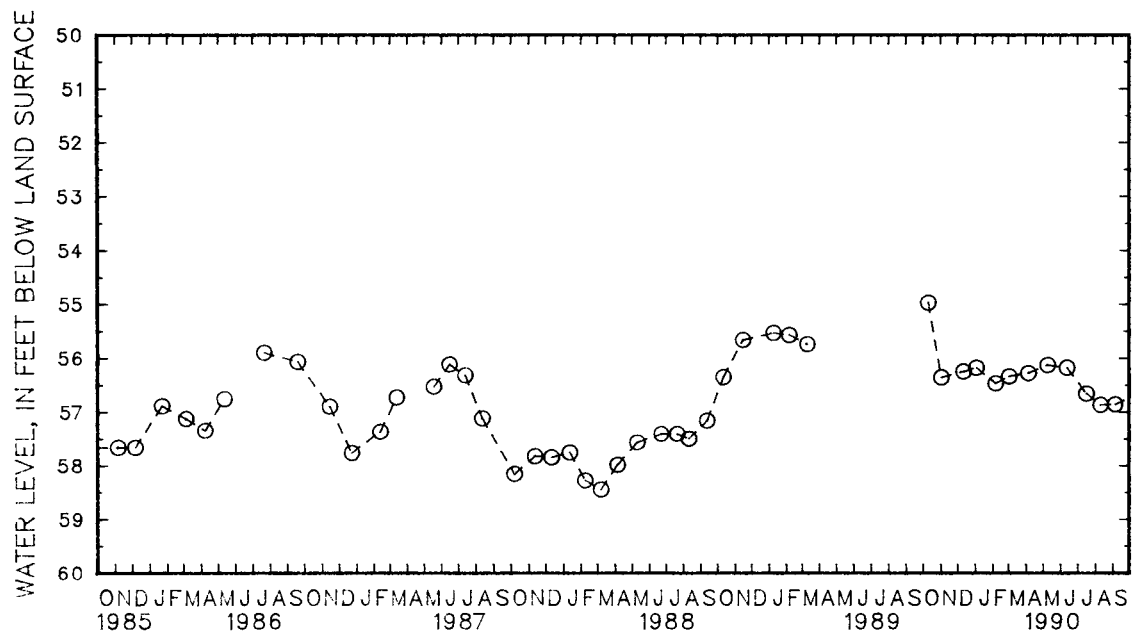


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

WELL NUMBER.--Eb23-23 . SITE ID.--393316075421602.
LOCATION.--Lat 39°33'16", long 75°42'16", Hydrologic Unit 02040205, at Lums Pond State Park.
Owner: U.S. Geological Survey.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 292 ft; casing diameter 2 in., to 288 ft, screened from 288 to 292 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, 2.5 ft above land surface.
PERIOD OF RECORD.--November 1980 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 52.38 ft below land surface, Oct. 12, 1982; lowest measured, 59.05 ft below land surface, March 5, 1985.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	54.97	DEC 11	56.25	FEB 6	56.47	APR 5	56.28	JUN 12	56.18	AUG 10	56.87
NOV 2	56.36	JAN 3	56.18	MAR 2	56.34	MAY 9	56.13	JUL 16	56.66	SEP 5	56.86

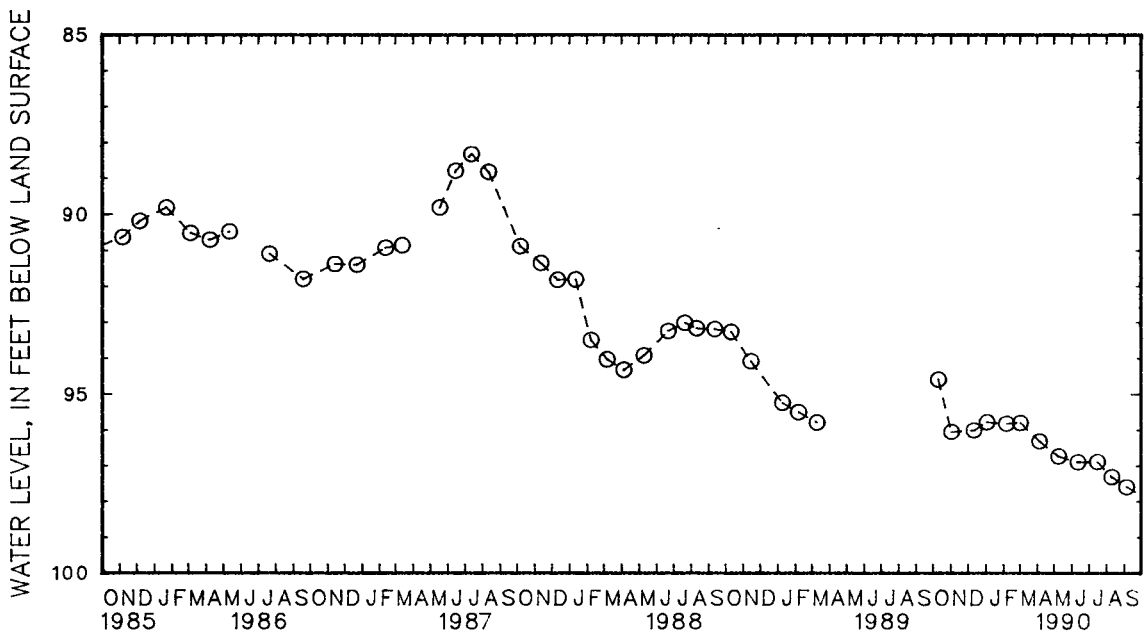


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

WELL NUMBER.--Eb23-24 . SITE ID.--393316075421603.
LOCATION.--Lat 39°33'16", long 75°42'16", Hydrologic Unit 02040205, at Lums Pond State Park.
Owner: U.S. Geological Survey.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 436 ft; casing diameter 2 in., to 432 ft, screened from 432 to 436 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, 2.5 ft above land surface.
PERIOD OF RECORD.--November 1980 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 88.17 ft below land surface, Nov. 13, 1980; lowest measured, 97.60 ft below land surface, Sept. 5, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	94.60	DEC 11	96.02	FEB 6	95.83	APR 5	96.33	JUN 12	96.91	AUG 10	97.32
NOV 2	96.06	JAN 3	95.79	MAR 2	95.81	MAY 9	96.75	JUL 16	96.90	SEP 5	97.60

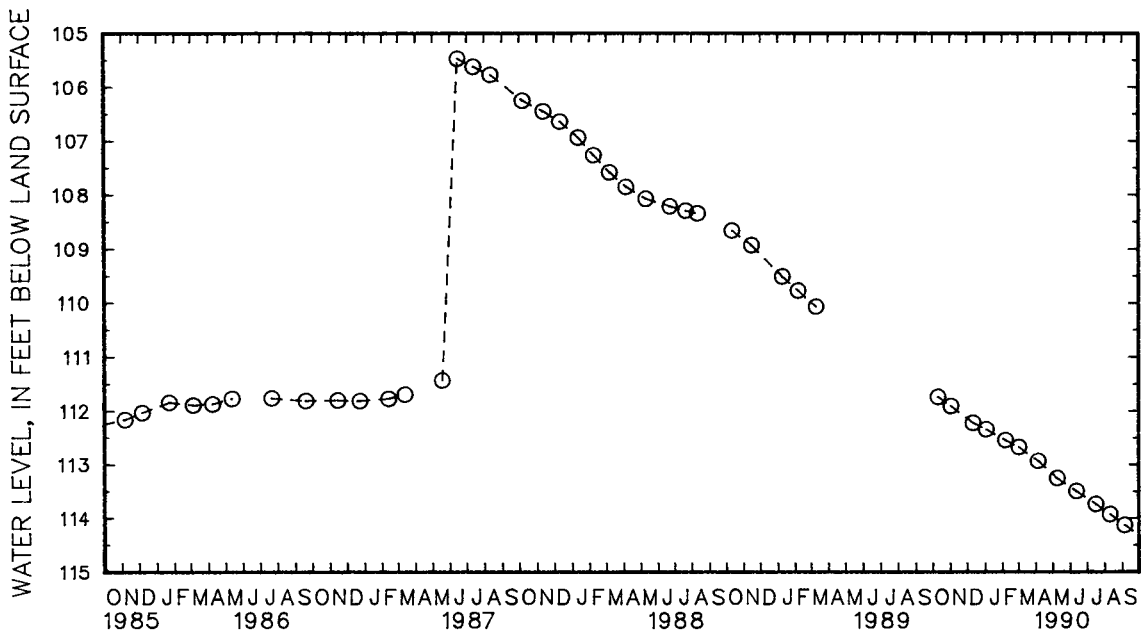


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

WELL NUMBER.--Eb23-25. SITE ID.--393316075421604.
LOCATION.--Lat 39°33'16", long 75°42'16", Hydrologic Unit 02040205, at Lums Pond State Park.
Owner: U.S. Geological Survey.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 604 ft; screen diameter 2 in., to 600 ft, screened from 600 to 604 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, 2.5 ft above land surface.
PERIOD OF RECORD.--November 1980 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 105.07 ft below land surface, April 20, 1982; lowest measured, 114.13 ft below land surface, Sept. 5, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	111.75	DEC 11	112.23	FEB 6	112.55	APR 5	112.94	JUN 12	113.50	AUG 10	113.93
NOV 2	111.92	JAN 3	112.35	MAR 2	112.68	MAY 9	113.26	JUL 16	113.74	SEP 5	114.13



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

DELAWARE--Continued

NEW CASTLE COUNTY--Continued

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.
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 and 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	77.94	77.93	78.53	78.39	78.10	78.03	77.52	77.06	79.09	79.07	77.93	77.91
2	78.60	77.93	78.39	78.38	78.14	78.02	77.64	77.52	79.09	79.01	77.92	77.91
3	78.74	78.62	78.39	78.33	78.12	77.98	77.72	77.65	79.00	78.89	77.92	77.87
4	78.81	78.75	78.33	78.28	77.98	77.94	77.81	77.72	79.08	78.95	77.86	77.76
5	78.81	78.80	78.28	78.22	77.94	77.91	77.81	77.81	78.99	78.90	77.76	77.71
6	78.80	78.73	78.24	78.20	77.91	77.88	77.85	77.83	78.90	78.88	77.71	77.64
7	78.73	78.54	78.20	78.17	77.87	77.73	77.84	77.84	---	---	77.63	77.59
8	78.54	78.43	78.53	78.13	77.72	77.72	77.89	77.85	78.83	78.77	77.60	77.58
9	78.43	78.28	78.81	78.54	77.72	77.71	78.06	77.89	78.79	78.77	77.63	77.61
10	78.27	78.22	78.90	78.82	77.71	77.67	78.14	78.08	78.83	78.78	77.61	77.59
11	78.22	78.11	78.93	78.89	77.67	77.61	78.27	78.13	78.78	78.76	77.59	77.57
12	78.11	78.06	78.93	78.77	77.61	77.60	78.25	78.19	78.77	78.65	77.57	77.56
13	78.06	77.98	78.77	78.73	77.60	77.56	78.19	78.06	78.68	78.64	77.56	77.53
14	77.98	77.93	78.74	78.71	77.56	77.53	78.06	78.02	78.68	78.56	77.53	77.48
15	77.93	77.84	78.74	78.71	77.62	77.51	78.04	78.02	78.56	78.54	77.48	77.45
16	77.84	77.79	78.84	78.74	77.57	77.45	78.02	77.97	78.55	78.54	77.45	77.43
17	77.82	77.76	78.76	78.63	77.45	77.42	77.97	77.94	78.53	78.33	77.64	77.43
18	77.83	77.81	78.63	78.51	77.42	77.36	77.98	77.90	78.34	78.29	77.99	77.67
19	78.41	77.83	78.54	78.47	77.36	77.34	77.89	77.83	78.39	78.27	78.10	77.99
20	79.02	78.42	78.67	78.54	77.35	77.30	77.91	77.83	78.27	78.15	78.24	78.10
21	79.14	79.02	78.59	78.32	77.30	77.23	77.98	77.89	78.15	78.13	78.24	78.23
22	79.14	79.11	78.32	78.28	77.23	77.19	77.89	77.82	78.26	78.13	78.27	78.23
23	79.11	79.05	78.29	78.20	77.19	77.14	77.82	77.75	78.26	78.20	78.28	78.17
24	79.05	78.97	78.20	78.14	77.15	77.14	77.77	77.72	78.26	78.15	78.17	78.12
25	78.97	78.87	78.22	78.14	77.14	77.12	78.41	77.72	78.14	77.99	78.19	78.15
26	78.87	78.76	78.28	78.22	77.13	77.04	78.89	78.47	77.98	77.96	78.20	78.16
27	78.76	78.69	78.24	78.16	77.04	77.02	79.04	78.89	78.00	77.96	78.15	78.08
28	78.69	78.60	78.30	78.18	77.02	76.96	79.08	79.05	78.00	77.93	78.07	78.02
29	78.59	78.52	78.18	78.11	76.96	76.94	79.24	79.08	---	---	78.02	77.96
30	78.52	78.45	78.14	78.10	76.94	76.90	79.23	79.15	---	---	78.08	77.96
31	78.55	78.44	---	---	77.04	76.90	79.14	79.08	---	---	78.29	78.08
MONTH	79.14	77.76	78.93	78.10	78.14	76.90	79.24	77.06	79.09	77.93	78.29	77.43

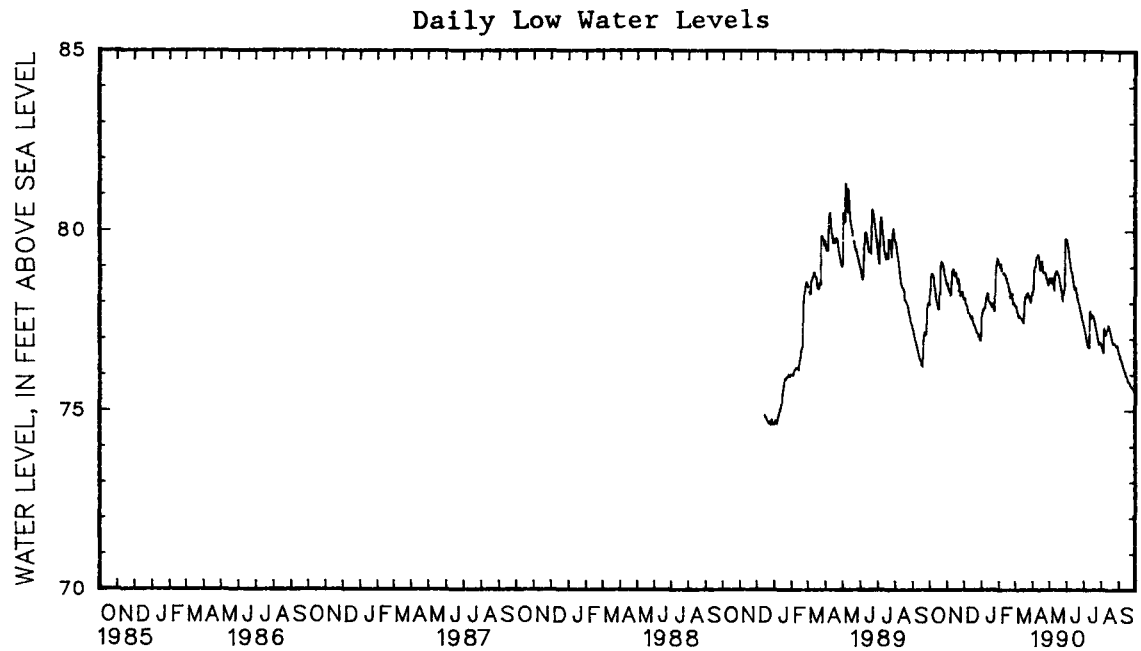
GROUND-WATER LEVELS

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	78.33	78.29	78.70	78.68	79.76	79.69	77.39	77.31	76.85	76.77	76.61	76.57
2	78.39	78.33	78.70	78.56	79.68	79.57	77.31	77.20	76.77	76.72	76.57	76.53
3	78.86	78.45	78.56	78.45	79.57	79.49	77.20	77.13	76.72	76.65	76.53	76.44
4	78.99	78.87	78.57	78.45	79.49	79.31	77.13	77.07	76.65	76.61	76.44	76.39
5	79.01	78.99	78.70	78.56	79.30	79.16	77.06	76.98	76.61	76.57	---	---
6	79.02	79.00	78.69	78.58	79.16	79.06	76.98	76.90	77.25	76.53	76.38	76.34
7	79.23	79.04	78.58	78.47	79.06	78.92	76.90	76.82	77.30	77.14	76.34	76.28
8	79.29	79.24	78.46	78.36	78.92	78.82	76.82	76.77	77.14	77.11	76.27	76.20
9	79.29	79.28	78.36	78.31	78.87	78.83	76.77	76.74	77.11	77.09	76.20	76.16
10	79.35	79.28	78.76	78.31	78.83	78.74	76.75	76.68	77.20	77.09	76.16	76.10
11	79.35	79.20	78.83	78.77	78.74	78.60	76.75	76.75	77.23	77.21	76.10	76.05
12	79.19	79.00	78.86	78.83	78.60	78.47	77.59	76.75	77.23	77.20	76.05	75.98
13	79.00	78.92	78.90	78.86	78.47	78.38	77.77	77.56	77.29	77.16	75.98	75.94
14	78.91	78.90	78.90	78.84	78.38	78.28	77.57	77.56	77.38	77.33	75.94	75.92
15	79.15	78.90	78.84	78.80	78.44	78.28	77.67	77.57	77.33	77.29	75.92	75.87
16	79.15	79.15	78.80	78.78	78.43	78.34	77.67	77.65	77.29	77.22	75.87	75.82
17	79.17	79.04	78.78	78.68	78.34	78.27	77.65	77.63	77.21	77.14	75.82	75.78
18	79.03	78.90	78.68	78.57	78.27	78.20	77.63	77.60	77.14	77.07	75.78	75.76
19	78.90	78.85	78.57	78.47	78.23	78.17	77.60	77.52	77.07	76.98	75.76	75.76
20	78.85	78.84	78.47	78.40	78.17	78.12	77.52	77.44	76.98	76.91	75.76	75.70
21	78.85	78.84	78.40	78.30	78.12	78.04	77.44	77.35	76.91	76.85	75.69	75.67
22	78.85	78.84	78.30	78.22	78.04	77.99	77.35	77.25	76.85	76.82	75.67	75.66
23	78.84	78.78	78.22	78.15	77.99	77.95	77.25	77.16	76.85	76.82	75.66	75.63
24	78.78	78.70	78.15	78.06	77.95	77.86	77.16	77.07	76.87	76.85	75.63	75.62
25	78.70	78.67	78.06	78.01	77.86	77.75	77.07	76.98	76.87	76.84	75.62	75.62
26	78.66	78.57	78.35	78.01	77.75	77.69	76.98	76.90	76.84	76.81	75.62	75.58
27	78.57	78.51	78.38	78.36	77.69	77.61	76.90	76.84	76.81	76.78	75.58	75.53
28	78.51	78.41	78.38	78.38	77.60	77.53	76.84	76.77	76.78	76.72	75.53	75.50
29	78.55	78.35	79.72	78.38	77.53	77.47	76.89	76.75	76.79	76.65	75.50	75.44
30	78.67	78.56	79.79	79.74	77.47	77.39	76.89	76.89	76.80	76.68	75.44	75.40
31	---	---	79.79	79.77	---	---	76.89	76.85	76.68	76.61	---	---
MONTH	79.35	78.29	79.79	78.01	79.76	77.39	77.77	76.68	77.38	76.53	76.61	75.40



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
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, and 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	78.34	78.33	78.69	78.62	78.86	78.79	78.78	78.68	79.46	79.39	79.10	79.04
2	78.64	78.38	78.68	78.63	78.97	78.79	78.89	78.78	79.45	79.36	79.12	79.10
3	78.65	78.62	78.73	78.65	78.90	78.79	78.93	78.89	79.39	79.30	79.12	79.05
4	78.64	78.62	78.66	78.63	78.82	78.78	79.02	78.94	79.49	79.35	79.04	78.98
5	78.62	78.60	78.66	78.64	78.83	78.78	78.98	78.91	79.35	79.30	78.99	78.95
6	78.61	78.58	78.69	78.66	78.80	78.77	78.97	78.91	79.35	79.32	78.99	78.93
7	78.58	78.49	78.67	78.65	78.75	78.62	78.96	78.91	79.36	79.29	78.94	78.91
8	78.54	78.47	78.86	78.64	78.72	78.63	79.04	78.95	79.30	79.28	78.99	78.94
9	78.47	78.40	78.92	78.86	78.74	78.71	79.10	78.99	79.34	79.30	79.02	78.99
10	78.44	78.40	78.94	78.88	78.74	78.70	79.12	79.05	79.38	79.28	79.00	78.97
11	78.40	78.34	78.98	78.89	78.70	78.67	79.17	79.05	79.31	79.28	79.00	78.98
12	78.34	78.32	78.96	78.86	78.69	78.66	79.11	79.03	79.31	79.23	79.00	78.98
13	78.32	78.26	78.93	78.86	78.69	78.66	79.03	78.94	79.31	79.23	78.98	78.95
14	78.26	78.25	78.93	78.90	78.67	78.65	78.97	78.93	79.31	79.20	78.96	78.93
15	78.25	78.19	78.99	78.91	78.79	78.64	79.00	78.98	79.26	79.20	78.93	78.90
16	---	---	79.06	78.91	78.70	78.62	78.98	78.96	79.28	79.26	78.93	78.90
17	78.25	78.17	78.91	78.87	78.62	78.61	79.00	78.96	79.26	79.07	79.03	78.91
18	78.28	78.23	78.92	78.83	---	---	79.01	78.89	79.20	79.07	79.16	79.04
19	78.54	78.31	78.97	78.83	78.63	78.56	78.90	78.86	79.25	79.13	79.25	79.14
20	78.73	78.54	79.04	78.94	78.63	78.57	79.02	78.91	79.13	79.06	79.30	79.25
21	78.80	78.73	78.92	78.79	78.57	78.50	79.05	78.95	79.11	79.05	79.30	79.25
22	78.75	78.72	78.86	78.78	78.50	78.49	78.98	78.92	79.25	79.10	79.30	79.25
23	78.73	78.72	78.88	78.80	78.50	78.48	78.96	78.87	79.25	79.17	79.31	79.21
24	78.73	78.72	78.79	78.77	78.55	78.49	78.94	78.88	79.23	79.13	79.24	79.20
25	78.72	78.71	78.86	78.77	78.56	78.53	79.20	78.88	79.12	79.06	79.29	79.24
26	78.71	78.69	78.89	78.86	78.57	78.40	79.33	79.22	79.07	79.05	79.29	79.25
27	78.69	78.67	78.94	78.84	78.46	78.40	79.40	79.32	79.17	79.07	79.25	79.22
28	78.67	78.65	78.98	78.86	78.47	78.38	79.42	79.39	79.14	79.08	79.23	79.21
29	78.65	78.63	78.87	78.84	78.40	78.37	79.59	79.41	---	---	79.21	79.17
30	78.64	78.63	78.90	78.84	78.42	78.38	79.53	79.39	---	---	79.28	79.20
31	78.78	78.64	---	---	78.64	78.38	79.41	79.39	---	---	79.35	79.28
MONTH	78.80	78.17	79.06	78.62	78.97	78.37	79.59	78.68	79.49	79.05	79.35	78.90

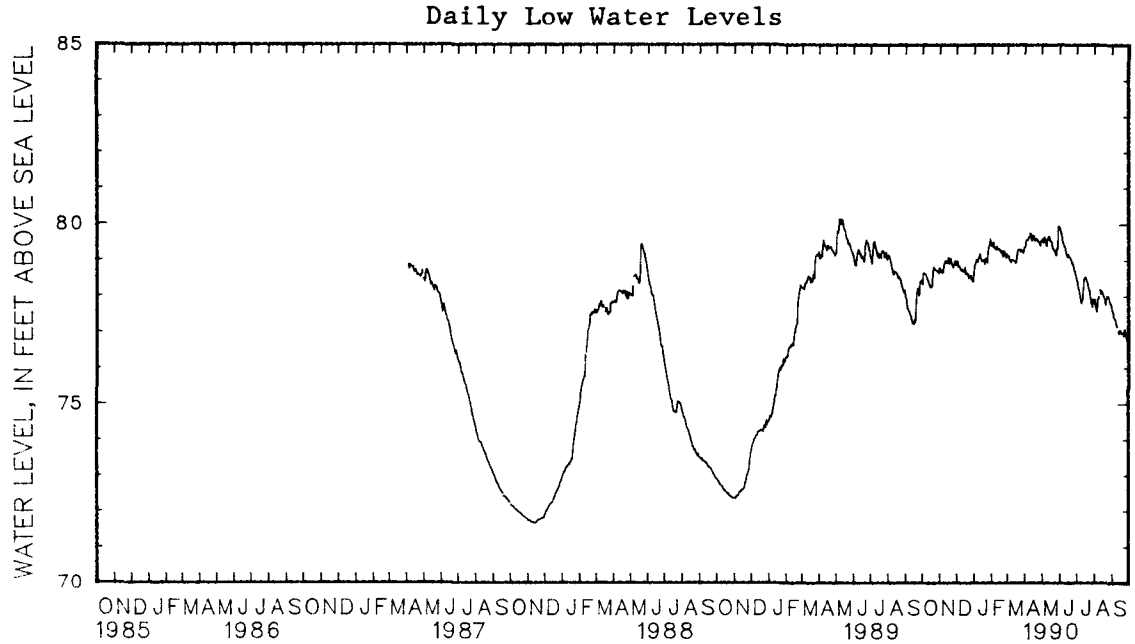
GROUND-WATER LEVELS

DELAWARE--Continued

NEW CASTLE COUNTY--Continued

Gb51-06--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	79.36	79.34	79.58	79.56	79.88	79.82	78.42	78.31	77.91	77.78	77.60	77.57
2	79.42	79.35	79.55	79.48	79.82	79.75	78.31	78.23	77.78	77.71	77.57	77.51
3	79.55	79.44	79.49	79.45	79.76	79.71	78.23	78.16	77.71	77.63	77.51	77.40
4	79.57	79.55	79.63	79.48	79.71	79.57	78.17	78.08	77.63	77.57	77.40	77.37
5	79.57	79.54	79.64	79.59	79.57	79.49	78.08	77.96	77.57	77.55	77.37	77.34
6	79.57	79.52	79.59	79.51	79.49	79.45	78.00	77.87	77.90	77.55	77.36	77.33
7	79.62	79.58	79.51	79.45	79.46	79.34	77.88	77.83	77.93	77.91	77.33	77.23
8	79.65	79.62	79.45	79.40	79.38	79.24	77.83	77.80	77.93	77.92	77.22	77.14
9	79.66	79.63	79.40	79.37	79.38	79.31	77.80	77.66	77.98	77.92	77.15	77.14
10	79.75	79.66	79.58	79.38	79.32	79.24	77.88	77.75	---	---	77.15	77.07
11	79.75	79.61	79.57	79.54	79.24	79.16	77.93	77.89	78.19	78.09	---	---
12	79.61	79.54	79.63	79.54	79.16	79.11	78.20	77.89	78.09	78.04	77.01	76.96
13	79.54	79.52	79.67	79.63	79.12	79.08	78.42	78.22	78.11	77.97	76.96	76.95
14	79.59	79.54	79.63	79.54	79.08	79.05	78.50	78.44	78.15	78.10	77.04	76.95
15	79.69	79.59	79.54	79.53	79.15	79.07	78.53	78.50	78.10	78.06	77.04	76.89
16	79.68	79.64	79.53	79.52	79.14	79.09	78.52	78.47	78.06	78.01	76.98	76.83
17	79.68	79.57	79.52	79.43	79.10	79.06	78.47	78.43	78.01	77.95	77.00	76.95
18	79.56	79.53	79.43	79.34	79.08	78.97	78.43	78.38	77.95	77.89	76.95	76.93
19	79.54	79.51	79.34	79.31	79.06	78.96	78.38	78.30	77.89	77.79	76.95	76.93
20	79.58	79.53	79.31	79.27	79.02	78.95	78.30	78.21	77.79	77.79	---	---
21	79.60	79.59	---	---	78.97	78.90	78.22	78.15	77.79	77.78	76.89	76.86
22	79.59	79.55	79.26	79.24	78.90	78.87	78.16	78.11	77.93	77.78	77.05	76.86
23	79.57	79.52	79.24	79.19	78.93	78.85	78.13	77.97	78.00	77.93	77.07	76.95
24	79.52	79.48	79.19	79.13	78.85	78.76	77.97	77.90	78.00	77.99	76.95	76.88
25	79.52	79.48	79.13	79.09	78.76	78.71	77.90	77.79	77.99	77.96	76.88	76.85
26	79.51	79.44	79.33	79.09	78.71	78.67	77.79	77.73	77.96	77.90	76.85	76.79
27	79.44	79.41	79.34	79.32	78.67	78.61	77.73	77.70	77.90	77.84	76.79	76.73
28	79.41	79.34	79.32	79.30	78.61	78.54	77.70	77.65	77.84	77.75	76.73	76.70
29	79.52	79.27	79.92	79.30	78.54	78.48	77.91	77.65	77.77	77.64	76.70	76.67
30	79.55	79.52	79.95	79.93	78.48	78.39	77.91	77.89	77.78	77.68	76.67	76.61
31	---	---	79.93	79.88	---	---	77.91	77.89	77.68	77.60	---	---
MONTH	79.75	79.27	79.95	79.09	79.88	78.39	78.53	77.65	78.19	77.55	77.60	76.61



5 YEAR HYDROGRAPH

OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
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	78.43	78.41	78.67	78.65	78.77	78.76	78.84	78.81	79.16	79.16	79.10	79.09
2	78.76	78.41	78.65	78.64	78.76	78.76	78.81	78.80	79.16	79.16	79.09	79.09
3	78.68	78.64	78.64	78.64	78.76	78.75	78.80	78.80	79.16	79.16	79.09	79.08
4	78.64	78.62	78.64	78.64	78.75	78.73	78.80	78.80	79.20	79.17	79.08	79.07
5	78.62	78.60	78.64	78.63	78.73	78.72	78.80	78.80	79.20	79.20	79.07	79.04
6	78.60	78.59	78.63	78.62	78.72	78.72	78.80	78.80	79.20	79.20	79.04	79.03
7	78.59	78.56	78.62	78.62	78.72	78.70	78.80	78.79	79.20	79.20	79.03	79.01
8	78.56	78.54	78.92	78.62	78.70	78.69	78.84	78.79	79.20	79.20	79.01	79.00
9	78.54	78.50	78.82	78.76	78.69	78.69	78.87	78.85	79.20	79.20	79.00	78.99
10	78.50	78.48	78.80	78.80	78.69	78.68	78.87	78.86	79.22	79.20	78.99	78.99
11	78.48	78.46	78.80	78.79	78.68	78.67	78.86	78.86	79.22	79.22	78.99	78.99
12	78.46	78.43	78.79	78.78	78.67	78.67	78.86	78.86	79.22	79.21	78.99	78.98
13	78.43	78.39	78.78	78.77	78.67	78.67	78.86	78.86	79.21	79.21	78.98	78.97
14	78.39	78.38	78.77	78.77	78.67	78.67	78.86	78.86	79.21	79.20	78.97	78.96
15	78.38	78.35	78.77	78.77	78.67	78.66	78.86	78.86	79.20	79.20	78.96	78.94
16	78.35	78.33	78.83	78.77	78.66	78.65	78.86	78.85	79.20	79.20	78.94	78.93
17	78.57	78.33	78.82	78.81	78.65	78.63	78.85	78.85	79.20	79.18	79.06	78.93
18	78.48	78.42	78.81	78.79	78.63	78.61	78.85	78.85	79.18	79.17	79.11	79.07
19	78.62	78.48	78.79	78.79	78.62	78.62	78.85	78.84	79.17	79.16	79.10	79.10
20	78.79	78.62	78.79	78.78	78.62	78.62	78.84	78.84	79.16	79.14	79.14	79.11
21	78.73	78.72	78.78	78.78	78.62	78.61	78.84	78.84	79.14	79.12	79.14	79.14
22	78.72	78.71	78.78	78.77	78.61	78.58	78.84	78.84	79.12	79.11	79.14	79.14
23	78.71	78.70	78.77	78.76	78.58	78.56	78.84	78.83	79.13	79.11	79.14	79.13
24	78.70	78.68	78.76	78.76	78.56	78.55	78.83	78.83	79.14	79.14	79.13	79.13
25	78.68	78.66	78.76	78.76	78.55	78.54	79.04	78.82	79.14	79.14	79.13	79.13
26	78.66	78.65	78.79	78.76	78.54	78.51	79.09	79.04	79.14	79.12	79.13	79.13
27	78.65	78.64	78.79	78.79	78.51	78.50	79.10	79.09	79.12	79.11	79.13	79.13
28	78.64	78.63	78.79	78.79	78.50	78.47	79.10	79.10	79.11	79.10	79.13	79.12
29	78.63	78.62	78.78	78.78	78.47	78.45	79.15	79.10	---	---	79.12	79.12
30	78.62	78.61	78.78	78.77	78.45	78.45	79.16	79.16	---	---	79.13	79.11
31	78.70	78.61	---	---	78.86	78.45	79.16	79.16	---	---	79.19	79.13
MONTH	78.79	78.33	78.92	78.62	78.86	78.45	79.16	78.79	79.22	79.10	79.19	78.93

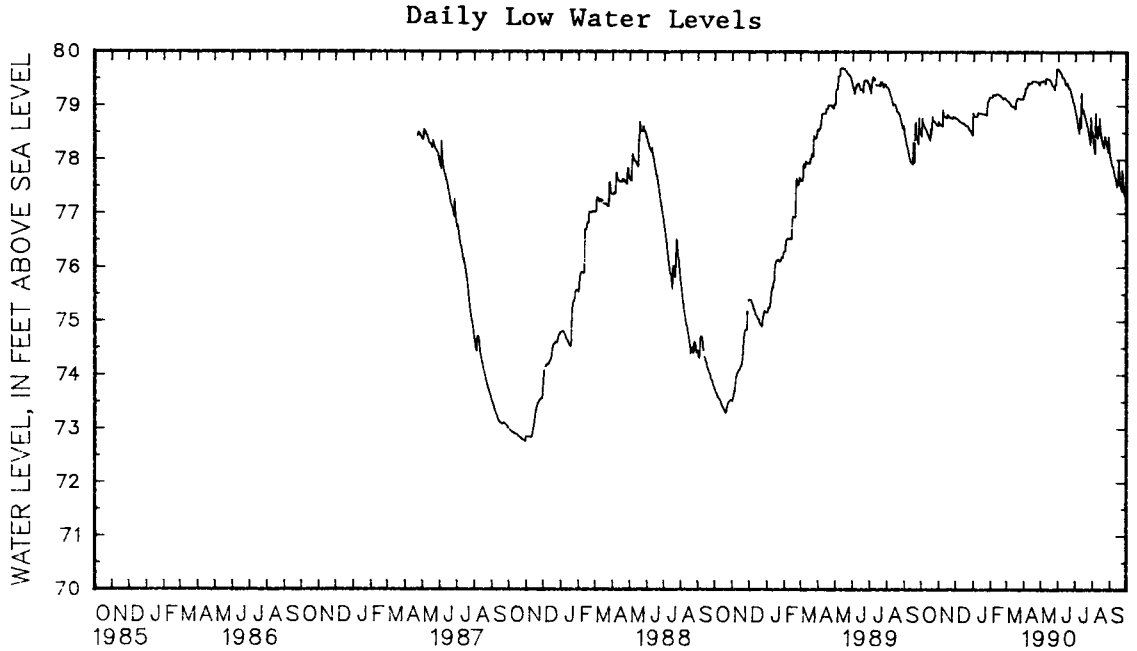
GROUND-WATER LEVELS

DELAWARE--Continued

NEW CASTLE COUNTY--Continued

Gb51-08--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	79.19	79.19	79.45	79.45	79.68	79.67	78.90	78.85	78.44	78.33	78.02	77.98
2	79.24	79.19	79.45	79.45	79.67	79.64	78.85	78.79	78.33	78.25	77.98	77.93
3	79.31	79.27	79.45	79.45	79.64	79.63	78.79	78.73	78.25	78.17	77.93	77.88
4	79.33	79.31	79.45	79.44	79.63	79.61	78.73	78.67	78.17	78.11	77.88	77.83
5	79.33	79.33	79.47	79.44	79.61	79.59	78.67	78.57	78.11	78.08	77.87	77.79
6	79.35	79.33	79.46	79.46	79.59	79.56	78.58	78.55	78.86	78.11	77.87	77.77
7	79.42	79.36	79.46	79.44	79.55	79.53	78.55	78.49	78.51	78.43	77.77	77.73
8	79.42	79.42	79.44	79.41	79.53	79.51	78.49	78.45	78.43	78.37	77.73	77.67
9	79.42	79.41	79.41	79.38	79.52	79.52	78.62	78.36	78.40	78.37	77.67	77.65
10	79.41	79.41	79.51	79.38	79.52	79.50	78.79	78.39	78.61	78.40	77.65	77.60
11	79.42	79.41	79.51	79.51	79.50	79.47	78.60	78.53	78.51	78.46	77.60	77.53
12	79.42	79.42	79.50	79.50	79.47	79.42	79.24	78.49	78.46	78.40	77.53	77.49
13	79.42	79.42	79.50	79.50	79.42	79.38	78.88	78.87	78.76	78.35	77.49	77.47
14	79.42	79.42	79.50	79.50	79.38	79.36	78.87	78.86	78.54	78.46	77.60	77.47
15	79.46	79.42	79.50	79.49	79.42	79.38	78.92	78.84	78.46	78.39	77.53	77.42
16	79.46	79.46	79.49	79.48	79.42	79.42	78.87	78.85	78.39	78.37	77.97	77.38
17	79.46	79.46	79.48	79.46	79.42	79.38	78.84	78.81	78.37	78.32	77.75	77.52
18	79.46	79.46	79.46	79.44	79.38	79.33	78.81	78.76	78.32	78.26	77.52	77.44
19	79.46	79.46	79.44	79.41	79.33	79.33	78.76	78.71	78.26	78.22	77.50	77.43
20	79.46	79.46	79.41	79.38	79.33	79.31	78.71	78.67	78.22	78.22	77.48	77.40
21	79.46	79.45	79.38	79.37	79.31	79.28	78.67	78.62	78.22	78.17	77.40	77.38
22	79.45	79.45	79.37	79.36	79.28	79.24	78.62	78.59	78.36	78.17	77.80	77.38
23	79.45	79.45	79.36	79.34	79.24	79.22	78.59	78.52	78.43	78.29	77.61	77.45
24	79.45	79.45	79.34	79.31	79.21	79.17	78.52	78.46	78.35	78.30	77.45	77.37
25	79.45	79.43	79.30	79.27	79.17	79.13	78.46	78.40	78.30	78.25	77.37	77.35
26	79.43	79.41	79.40	79.27	79.13	79.07	78.40	78.32	78.25	78.19	77.35	77.32
27	79.41	79.39	79.40	79.40	79.07	79.05	78.32	78.28	78.19	78.14	77.32	77.28
28	79.39	79.36	79.40	79.40	79.05	79.00	78.28	78.21	78.14	78.08	77.28	77.23
29	79.44	79.35	79.68	79.40	79.00	78.95	78.78	78.21	78.42	78.04	77.23	77.19
30	79.45	79.44	79.69	79.68	78.95	78.90	78.47	78.41	78.24	78.09	77.19	77.15
31	---	---	79.68	79.68	---	---	78.51	78.37	78.09	78.02	---	---
MONTH	79.46	79.19	79.69	79.27	79.68	78.90	79.24	78.21	78.86	78.02	78.02	77.15

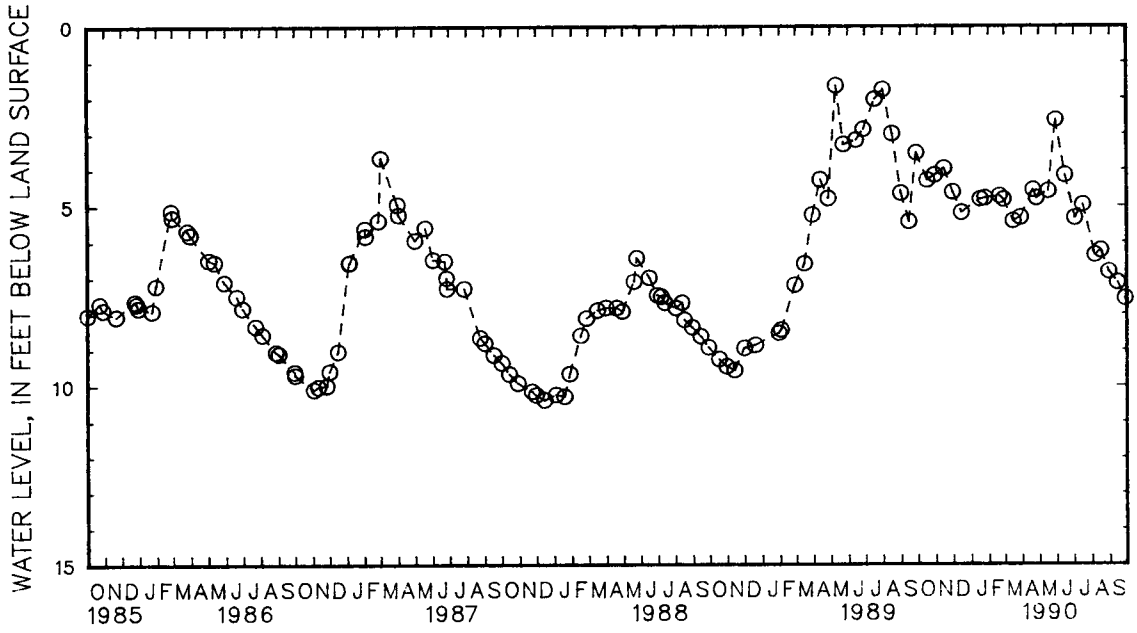


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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 or electric sensing device by USGS and Delaware Geological Survey 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.
PERIOD OF RECORD.--October 1957 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.49 ft below land surface, April 7, 1958; lowest measured, 11.95 ft below land surface, Aug. 31, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17	4.30	DEC 15	5.20	FEB 27	4.84	APR 26	4.80	JUN 15	4.16	AUG 30	6.85
NOV 15	3.97	JAN 17	4.83	MAR 16	5.44	MAY 17	4.60	JUL 2	5.35	SEP 14	7.15



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
PERIOD OF RECORD.--December 1970 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 69.70 ft below land surface, Jan. 1, 1971; lowest measured, 85.70 ft below land surface, Sept. 28, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	85.15	85.08	85.18	85.04	85.27	85.16	85.26	84.93	85.29	85.17	85.43	85.33
2	85.08	84.91	85.19	85.12	85.27	84.98	85.32	85.27	85.16	85.08	85.33	85.16
3	85.01	84.92	85.14	85.06	85.06	84.99	85.30	85.26	85.28	85.14	85.16	85.10
4	85.02	84.98	85.21	85.16	85.12	85.03	85.25	85.09	85.13	84.96	85.36	85.17
5	85.02	84.99	85.20	85.18	85.08	85.02	85.23	85.10	85.30	85.13	85.41	85.36
6	84.99	84.94	85.17	85.08	85.08	85.01	85.23	85.10	85.29	85.20	85.53	85.36
7	85.04	84.94	85.10	85.05	85.37	85.05	85.23	85.15	85.26	85.13	85.60	85.53
8	85.05	85.00	85.06	84.97	85.37	85.22	85.15	84.96	85.29	85.23	85.58	85.47
9	85.12	85.02	84.96	84.87	85.21	85.15	85.13	85.04	85.24	85.08	85.47	85.26
10	85.19	85.11	85.10	84.96	85.16	85.12	85.10	84.95	85.10	84.92	85.38	85.30
11	85.16	85.08	85.10	85.03	85.19	85.11	85.11	84.86	85.15	85.11	85.36	85.30
12	85.16	85.10	85.23	85.02	85.19	85.09	85.05	84.92	85.28	85.12	85.32	85.26
13	85.14	85.10	85.24	85.16	85.15	85.03	85.29	85.08	85.29	85.15	85.30	85.26
14	85.14	85.10	85.17	85.10	85.17	85.12	85.34	85.30	85.26	85.16	85.30	85.27
15	85.13	85.10	85.12	84.98	85.17	84.94	85.32	85.25	85.27	85.15	85.33	85.28
16	85.13	85.10	84.98	84.76	85.12	85.04	85.30	85.28	85.14	85.08	85.32	85.26
17	85.12	85.08	85.15	84.99	85.24	85.13	85.30	85.20	85.45	85.09	85.26	85.12
18	85.12	85.09	85.24	85.11	85.25	85.23	85.22	85.13	85.49	85.32	85.28	85.10
19	85.12	85.02	85.28	85.10	85.25	85.15	85.35	85.22	85.32	85.14	85.29	85.21
20	85.02	84.94	85.10	84.76	85.22	85.14	85.33	85.12	85.48	85.25	85.20	85.17
21	85.03	84.98	85.14	84.82	85.25	85.16	85.13	85.00	85.48	85.42	85.34	85.20
22	85.17	85.03	85.20	85.08	85.35	85.25	85.17	85.09	85.42	85.09	85.35	85.28
23	85.25	85.17	85.13	85.01	85.36	85.34	85.24	85.17	85.09	84.99	85.36	85.20
24	85.25	85.23	85.23	85.13	85.35	85.21	85.23	85.13	85.17	84.96	85.42	85.34
25	85.23	85.20	85.23	85.11	85.21	85.10	85.23	84.99	85.55	85.18	85.37	85.30
26	85.23	85.19	85.17	85.01	85.22	84.99	85.26	85.01	85.61	85.56	85.33	85.29
27	85.22	85.19	85.22	85.12	85.25	85.17	85.32	85.27	85.57	85.34	85.42	85.33
28	85.22	85.19	85.12	84.97	85.26	85.13	85.27	85.23	85.39	85.34	85.44	85.37
29	85.21	85.19	85.16	85.12	85.29	85.23	85.27	84.88	---	---	85.46	85.38
30	85.22	85.17	85.16	85.09	85.25	85.19	85.17	84.93	---	---	85.37	85.24
31	85.17	84.96	---	---	85.26	84.93	85.29	85.20	---	---	85.24	85.16
MONTH	85.25	84.91	85.28	84.76	85.37	84.93	85.35	84.86	85.61	84.92	85.60	85.10

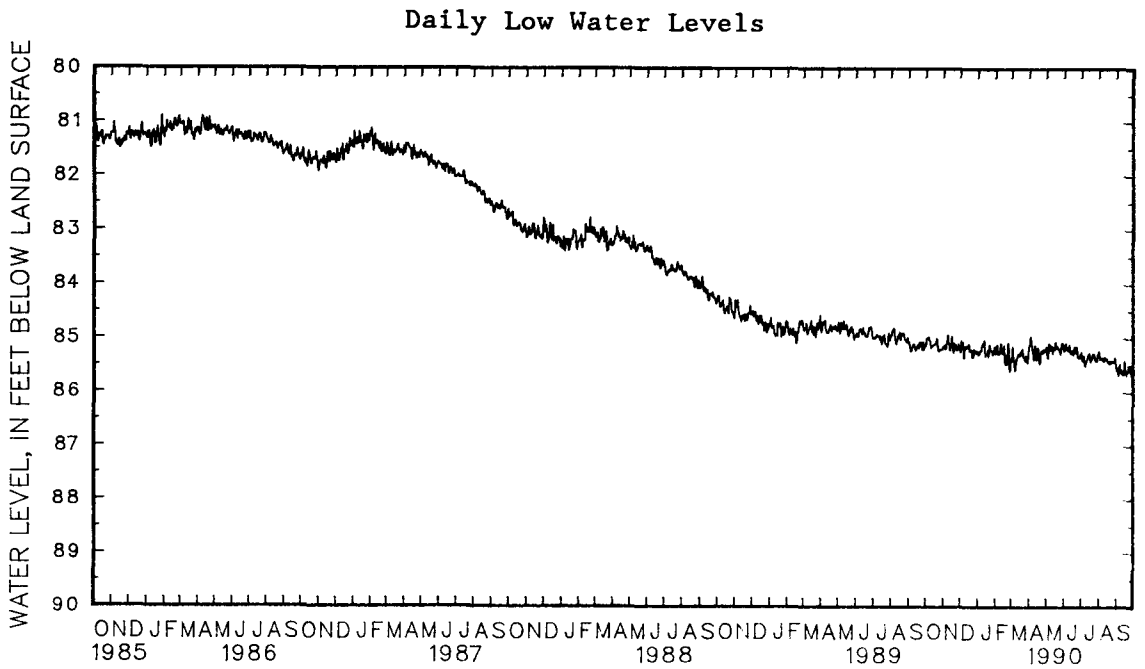
GROUND-WATER LEVELS

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	85.17	85.15	85.17	85.15	85.24	85.20	85.26	85.22	85.25	85.21	85.60	85.55
2	85.13	85.06	85.30	85.15	85.23	85.18	85.37	85.26	85.33	85.26	85.55	85.49
3	85.02	84.94	85.37	85.30	85.18	85.04	85.42	85.36	85.40	85.33	85.63	85.49
4	84.98	84.92	85.37	85.13	85.10	84.99	85.39	85.30	85.39	85.35	85.69	85.63
5	85.11	84.98	85.11	84.92	85.20	85.10	85.33	85.29	85.39	85.36	85.63	85.53
6	85.18	85.11	85.10	84.96	85.21	85.12	85.41	85.30	85.39	85.34	85.53	85.48
7	85.23	85.10	85.17	85.10	85.19	85.10	85.50	85.41	85.36	85.31	85.48	85.44
8	85.33	85.24	85.22	85.15	85.24	85.15	85.52	85.46	85.42	85.32	85.64	85.49
9	85.40	85.30	85.22	85.15	85.17	85.11	85.46	85.36	85.43	85.41	85.65	85.59
10	85.30	85.03	85.15	84.85	85.13	85.11	85.42	85.35	85.42	85.32	85.59	85.58
11	85.14	84.98	85.18	84.97	85.22	85.13	85.39	85.35	85.35	85.32	85.65	85.60
12	85.30	85.15	85.28	85.18	85.28	85.23	85.37	85.22	85.38	85.36	85.68	85.64
13	85.40	85.31	85.17	85.07	85.29	85.25	85.32	85.23	85.39	85.33	85.68	85.65
14	85.36	85.20	85.21	85.09	85.25	85.20	85.31	85.25	85.38	85.35	85.66	85.45
15	85.19	85.12	85.21	85.21	85.23	85.19	85.28	85.25	85.42	85.38	85.43	85.36
16	85.18	85.12	85.20	85.08	85.28	85.23	85.39	85.28	85.45	85.39	85.47	85.43
17	85.24	85.08	85.08	85.00	85.31	85.27	85.44	85.39	85.46	85.42	85.67	85.44
18	85.42	85.25	85.13	85.07	85.26	85.13	85.42	85.35	85.46	85.41	85.69	85.65
19	85.48	85.43	85.19	85.13	85.16	85.12	85.40	85.32	85.42	85.39	85.65	85.50
20	85.46	85.31	85.16	85.10	85.24	85.15	85.33	85.26	85.48	85.42	85.62	85.50
21	85.29	85.14	85.18	85.07	85.24	85.17	85.30	85.27	85.47	85.45	85.62	85.58
22	85.25	85.19	85.21	85.16	85.28	85.15	85.30	85.27	85.45	85.43	85.58	85.42
23	85.23	85.18	85.21	85.15	85.17	85.12	85.30	85.24	85.43	85.42	85.52	85.43
24	85.27	85.21	85.25	85.18	85.25	85.14	85.34	85.31	85.42	85.42	85.59	85.52
25	85.27	85.17	85.30	85.25	85.36	85.27	85.39	85.34	85.45	85.43	85.61	85.57
26	85.21	85.17	85.25	85.04	85.37	85.34	85.43	85.40	85.45	85.44	85.57	85.52
27	85.24	85.18	85.11	85.04	85.34	85.32	85.43	85.43	85.44	85.37	85.65	85.55
28	85.22	85.18	85.13	85.09	85.36	85.32	85.43	85.40	85.39	85.34	85.70	85.65
29	85.24	85.20	85.09	84.84	85.36	85.27	85.39	85.39	85.36	85.34	85.69	85.67
30	85.19	85.17	85.11	84.90	85.30	85.26	85.30	85.30	85.47	85.35	85.67	85.59
31	---	---	85.20	85.11	---	---	85.30	85.24	85.56	85.48	---	---
MONTH	85.48	84.92	85.37	84.84	85.37	84.99	85.52	85.22	85.56	85.21	85.70	85.36

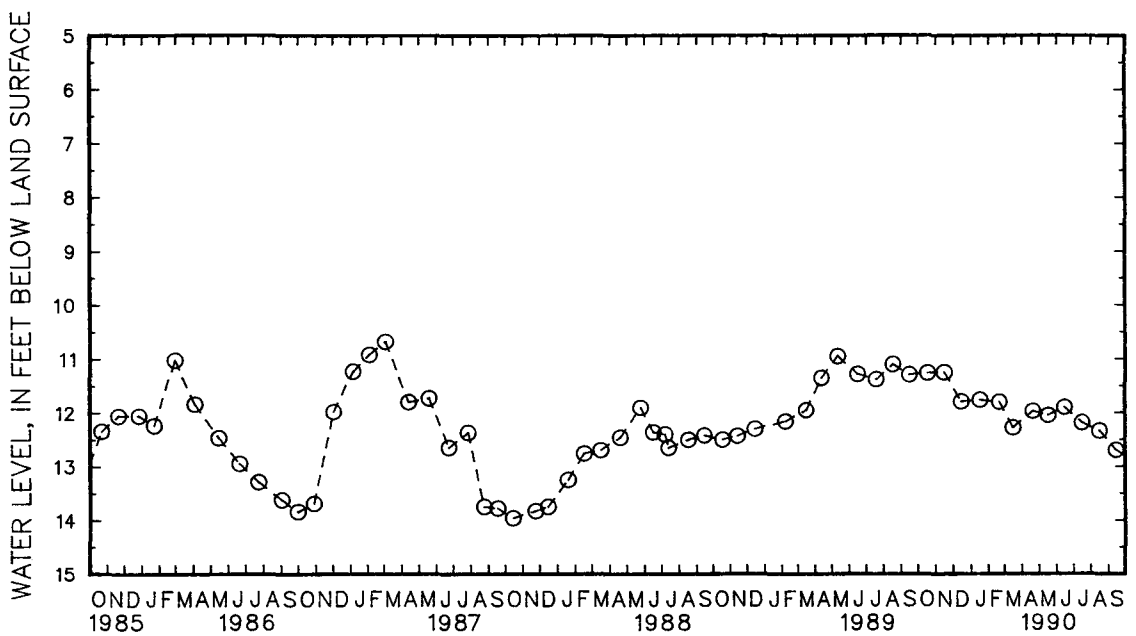


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
PERIOD OF RECORD.--October 1950 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.67 ft below land surface, Jan. 30, 1952; lowest measured, 14.66 ft below land surface, Dec. 11, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17	11.26	DEC 15	11.79	FEB 20	11.80	APR 20	11.97	JUN 15	11.90	AUG 16	12.35
NOV 15	11.26	JAN 17	11.76	MAR 16	12.28	MAY 17	12.05	JUL 16	12.19	SEP 14	12.70

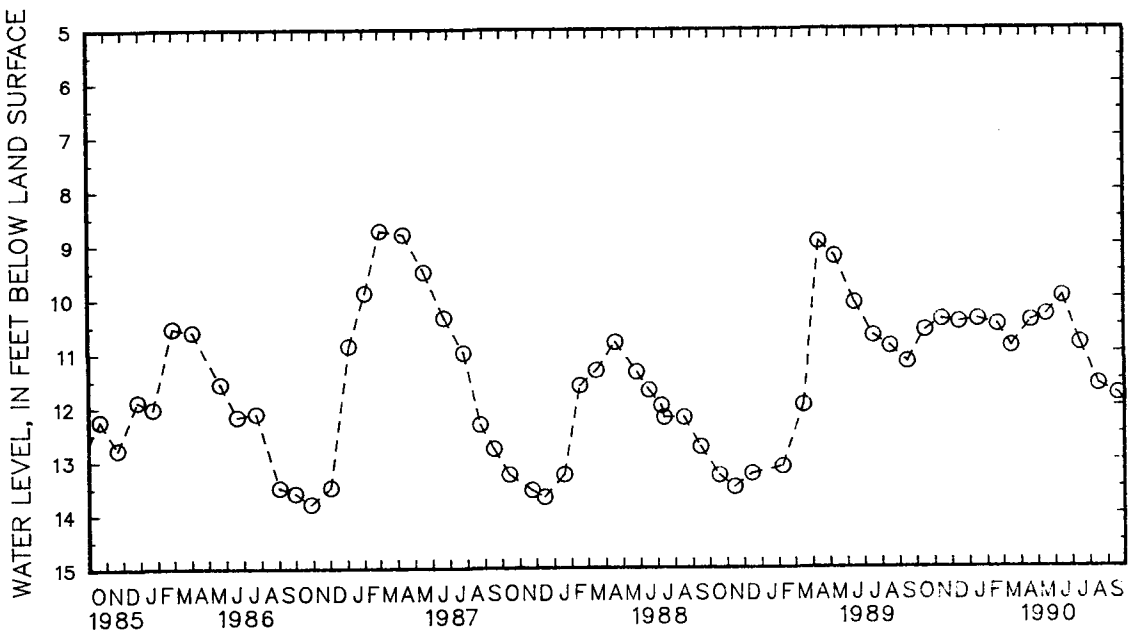


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
PERIOD OF RECORD.--September 1959 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.91 ft below land surface, April 10, 1984; lowest measured, 14.64 ft below land surface, Jan. 7, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17	10.60	DEC 15	10.45	FEB 20	10.50	APR 20	10.43	JUN 15	9.98	AUG 16	11.61
NOV 15	10.40	JAN 17	10.40	MAR 16	10.90	MAY 17	10.32	JUL 16	10.85	SEP 19	11.79



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--National Water Quality Assessment Project observation well.
PERIOD OF RECORD.--April 1985 to 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, 7.74 ft above sea level, March 9, 1987.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	18.55	18.49	17.91	17.81	17.25	17.19	16.62	16.58	16.94	16.89	16.48	16.45
2	19.15	18.49	17.81	17.80	17.30	17.19	16.68	16.59	16.97	16.93	16.50	16.47
3	19.23	19.16	17.81	17.73	17.29	17.17	16.73	16.68	16.92	16.85	16.50	16.45
4	19.18	19.11	17.72	17.69	17.17	17.14	16.82	16.73	17.02	16.92	16.44	16.38
5	19.10	18.99	17.69	17.65	17.16	17.12	16.81	16.76	16.95	16.89	16.38	16.35
6	18.99	18.88	17.66	17.64	17.12	17.10	16.81	16.78	16.95	16.90	16.35	16.31
7	18.88	18.69	17.63	17.60	17.10	16.99	16.83	16.80	16.99	16.95	16.30	16.27
8	18.69	18.58	17.60	17.56	17.03	16.98	16.92	16.83	16.95	16.92	16.28	16.27
9	18.57	18.42	17.68	17.58	17.03	16.99	17.05	16.91	17.00	16.93	16.31	16.28
10	18.42	18.35	17.79	17.69	17.02	16.96	17.10	17.06	17.04	16.93	16.29	16.25
11	18.35	18.23	17.81	17.73	16.96	16.93	17.20	17.08	16.93	16.91	16.25	16.23
12	18.22	18.17	17.81	17.67	16.94	16.92	17.19	17.14	16.91	16.82	16.23	16.22
13	18.16	18.08	17.69	17.65	16.94	16.89	17.14	17.07	16.86	16.82	16.22	16.20
14	18.08	18.02	17.69	17.67	16.89	16.87	17.07	17.06	16.86	16.82	16.20	16.18
15	18.02	17.94	17.70	17.67	16.96	16.85	17.11	17.07	16.84	16.82	16.18	16.16
16	17.93	17.87	17.80	17.63	16.89	16.83	17.09	17.05	16.87	16.84	16.16	16.14
17	17.87	17.81	17.62	17.53	16.83	16.80	17.05	17.04	16.86	16.70	16.17	16.13
18	17.81	17.73	17.53	17.46	16.80	16.78	17.07	17.00	16.76	16.69	16.13	16.11
19	18.01	17.74	17.53	17.44	16.80	16.79	16.99	16.94	16.82	16.76	16.11	16.10
20	18.39	18.02	17.66	17.53	16.80	16.75	16.99	16.94	16.75	16.64	16.12	16.10
21	18.57	18.40	17.57	17.35	16.75	16.69	17.04	16.92	16.64	16.62	16.10	16.05
22	18.56	18.48	17.39	17.33	16.69	16.66	16.92	16.89	16.77	16.63	16.05	16.04
23	18.48	18.43	17.42	17.29	16.66	16.63	16.88	16.83	16.77	16.74	16.05	15.96
24	18.43	18.36	17.29	17.24	16.67	16.64	16.83	16.79	16.74	16.61	16.01	15.93
25	18.36	18.28	17.28	17.24	16.65	16.63	16.87	16.79	16.59	16.49	16.03	16.01
26	18.28	18.20	17.32	17.27	16.66	16.54	16.87	16.81	16.49	16.48	16.03	16.02
27	18.19	18.12	17.34	17.26	16.55	16.53	16.88	16.81	16.56	16.48	16.02	15.98
28	18.12	18.05	17.41	17.30	16.56	16.49	16.91	16.88	16.55	16.48	15.98	15.97
29	18.05	17.98	17.30	17.25	16.49	16.47	17.08	16.91	---	---	15.97	15.95
30	17.98	17.94	17.29	17.25	16.47	16.45	17.05	16.92	---	---	15.99	15.96
31	17.99	17.92	---	---	16.59	16.45	16.92	16.89	---	---	16.05	15.99
MONTH	19.23	17.73	17.91	17.24	17.30	16.45	17.20	16.58	17.04	16.48	16.50	15.93

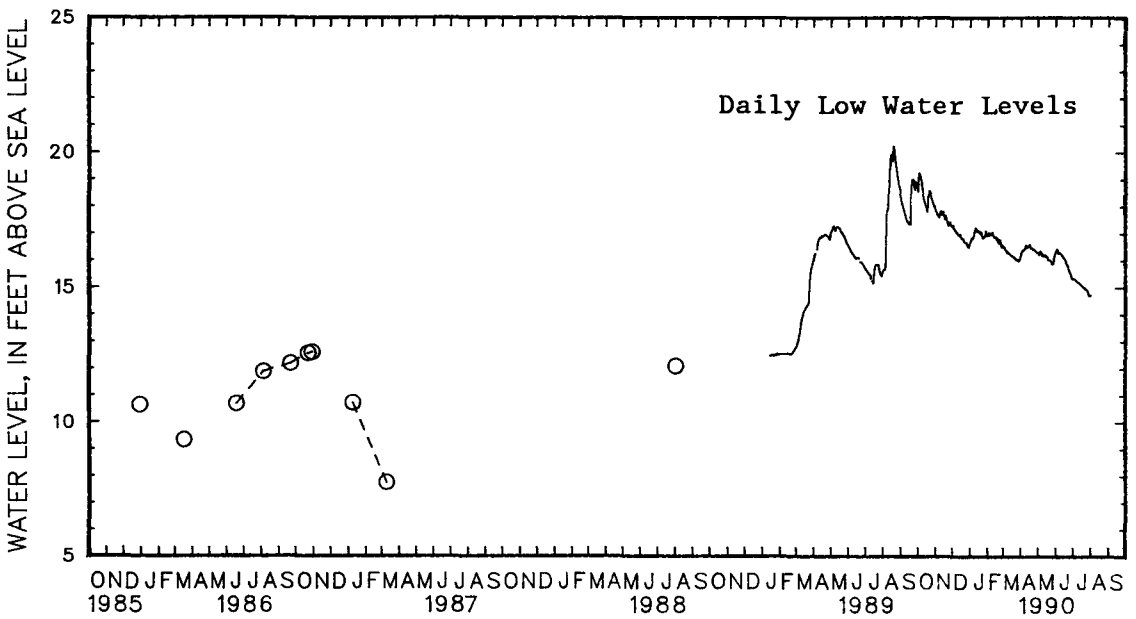
GROUND-WATER LEVELS

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	16.13	16.05	16.27	16.27	16.30	16.25	15.31	15.31	14.70	14.70	---	---
2	16.23	16.16	16.27	16.20	16.35	16.30	15.31	15.29	---	---	---	---
3	16.30	16.24	16.20	16.18	16.39	16.35	15.29	15.28	---	---	---	---
4	16.34	16.30	16.25	16.18	16.40	16.26	15.28	15.27	---	---	---	---
5	16.34	16.34	16.33	16.28	16.25	16.19	15.27	15.24	---	---	---	---
6	16.38	16.34	16.32	16.28	16.28	16.23	15.25	15.23	---	---	---	---
7	16.39	16.38	16.28	16.18	16.28	16.26	15.22	15.20	---	---	---	---
8	16.40	16.39	16.18	16.16	16.26	16.24	15.20	15.19	---	---	---	---
9	16.44	16.41	16.16	16.13	16.26	16.23	15.19	15.18	---	---	---	---
10	16.54	16.45	16.20	16.13	16.23	16.22	15.18	15.15	---	---	---	---
11	16.56	16.51	16.16	16.13	16.22	16.16	15.15	15.14	---	---	---	---
12	16.51	16.48	16.15	16.11	16.15	16.12	15.14	15.11	---	---	---	---
13	16.48	16.46	16.19	16.16	16.12	16.10	15.11	15.09	---	---	---	---
14	16.52	16.46	16.19	16.12	16.10	16.09	15.09	15.09	---	---	---	---
15	16.54	16.53	16.12	16.12	16.09	16.05	15.09	15.07	---	---	---	---
16	16.54	16.54	16.13	16.12	16.05	16.01	15.07	15.03	---	---	---	---
17	16.58	16.48	16.13	16.05	16.01	15.99	15.03	15.02	---	---	---	---
18	16.48	16.43	16.05	16.00	15.99	15.88	15.01	15.00	---	---	---	---
19	16.43	16.36	16.01	16.00	15.88	15.82	14.99	14.98	---	---	---	---
20	16.42	16.36	16.01	16.01	15.83	15.82	14.98	14.97	---	---	---	---
21	16.45	16.41	16.01	16.00	15.83	15.74	14.97	14.93	---	---	---	---
22	16.41	16.40	16.00	15.97	15.74	15.68	14.93	14.93	---	---	---	---
23	16.40	16.40	15.97	15.95	15.68	15.60	14.93	14.92	---	---	---	---
24	16.40	16.36	15.95	15.85	15.60	15.56	14.92	14.89	---	---	---	---
25	16.37	16.36	15.85	15.77	15.56	15.52	14.89	14.87	---	---	---	---
26	16.37	16.35	15.89	15.77	15.51	15.43	14.87	14.79	---	---	---	---
27	16.35	16.32	15.89	15.89	15.43	15.37	14.79	14.71	---	---	---	---
28	16.32	16.29	15.89	15.89	15.37	15.31	14.71	14.67	---	---	---	---
29	16.29	16.26	16.09	15.89	15.31	15.29	14.68	14.68	---	---	---	---
30	16.27	16.26	16.18	16.10	15.31	15.31	14.68	14.68	---	---	---	---
31	---	---	16.25	16.18	---	---	14.70	14.68	---	---	---	---
MONTH	16.58	16.05	16.33	15.77	16.40	15.29	15.31	14.67	14.70	14.70	---	---

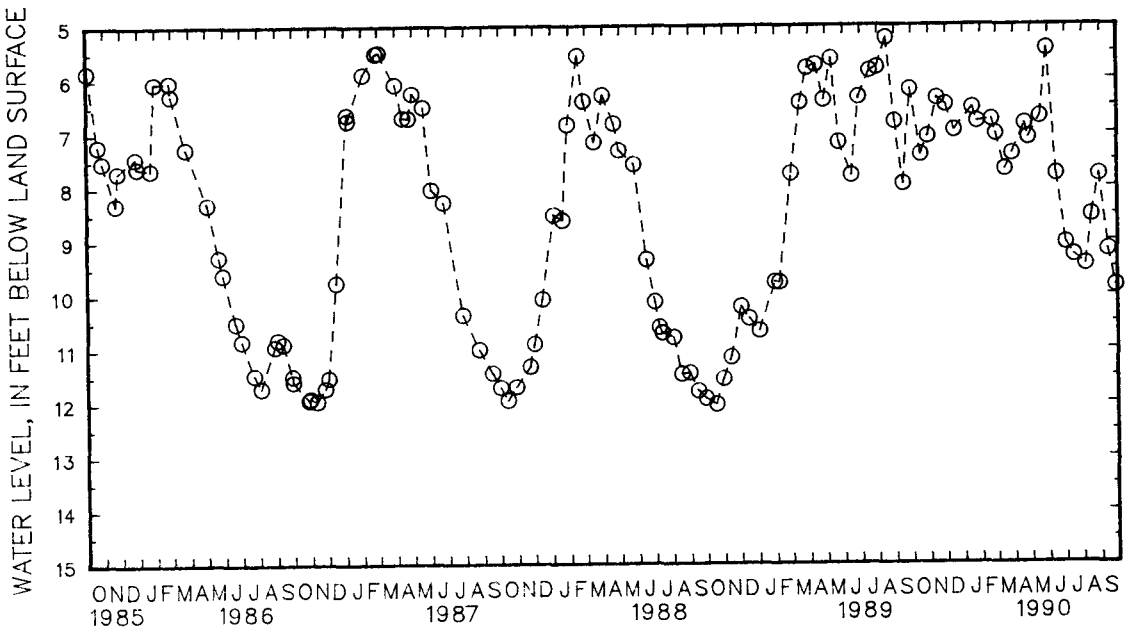


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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 and Delaware Geological Survey 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.
PERIOD OF RECORD.--September 1959 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.92 ft below land surface, Feb. 9, 1973 and March 15, 1984; lowest measured, 12.22 ft below land surface, Dec. 2, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17	7.42	DEC 15	6.97	FEB 27	7.05	APR 26	7.11	JUL 2	9.07	AUG 30	7.80
30	7.08	JAN 17	6.55	MAR 16	7.70	MAY 17	6.72	16	9.30	SEP 14	9.19
NOV 15	6.37	25	6.81	29	7.41	30	5.45	AUG 6	9.47	27	9.86
30	6.49	FEB 20	6.78	APR 20	6.85	JUN 15	7.79	16	8.55		



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

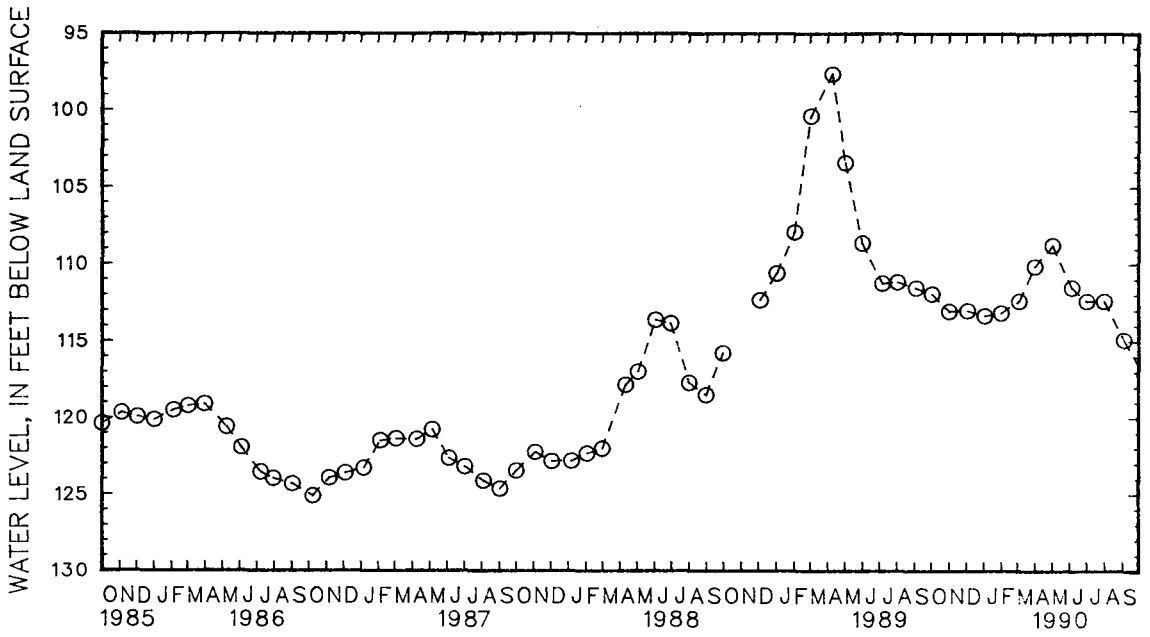
MARYLAND--Continued

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.
REMARKS.--Maryland Water-Level Network observation well. Well used during construction of airport. Water level reported by driller 90 ft below land surface, April 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, March 9, 1965; lowest measured, 125.12 ft below land surface, Oct. 9, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	111.96	DEC 4	113.05	FEB 1	113.20	APR 2	110.17	JUN 6	111.55	AUG 1	112.42
NOV 2	113.09	JAN 3	113.38	MAR 5	112.40	MAY 2	108.78	JUL 2	112.43	SEP 4	114.94



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

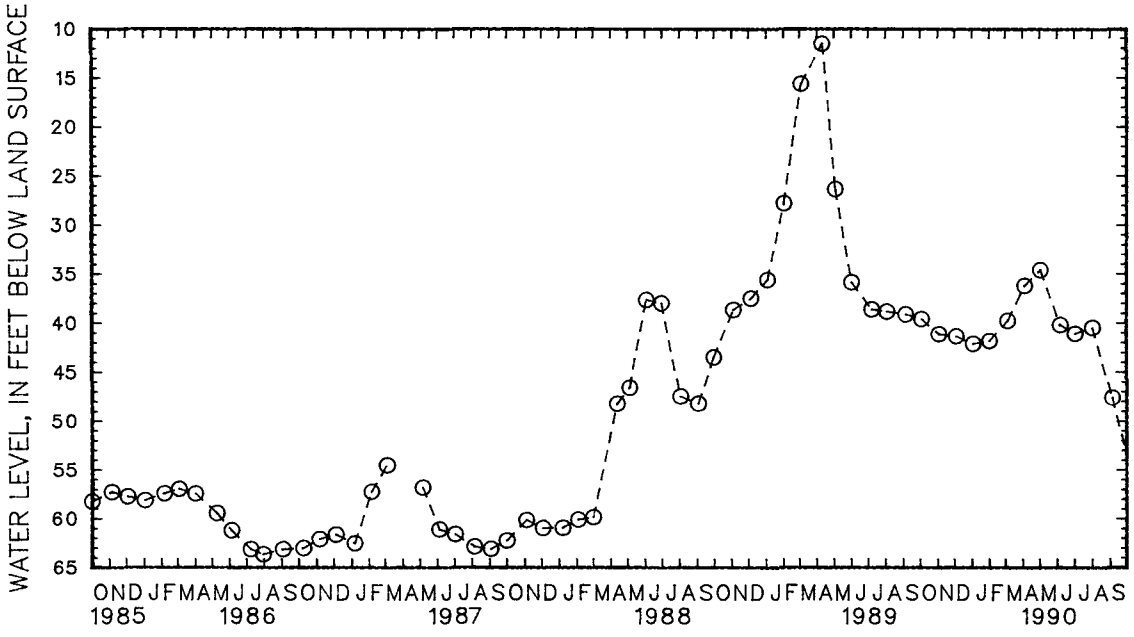
MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

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.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--June 1948 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.52 ft above land surface, Apr. 10, 1989; lowest measured, 63.63 ft below land surface, July 30, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	39.63	DEC 4	41.38	FEB 1	41.87	APR 4	36.25	JUN 6	40.22	AUG 1	40.50
NOV 3	41.18	JAN 3	42.16	MAR 5	39.81	MAY 2	34.64	JUL 2	41.12	SEP 4	47.67



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

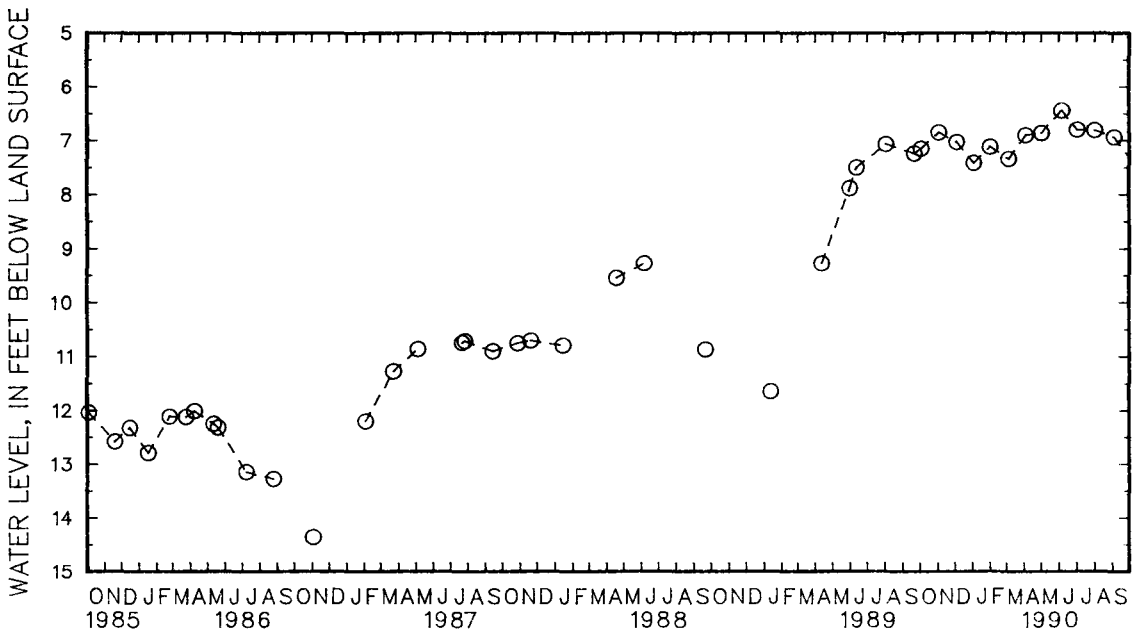
MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

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 Oct. 2, 1990.
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.--Maryland Water-Level Network observation well and 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, 6.44 ft below land surface, June 6 1990; lowest measured, 14.74 ft below land surface, Oct. 31, 1986 and Nov. 1, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1989

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	7.15	DEC 4	7.03	FEB 1	7.12	APR 4	6.90	JUN 6	6.44	AUG 1	6.81
NOV 3	6.85	JAN 3	7.42	MAR 5	7.34	MAY 2	6.86	JUL 2	6.80	SEP 4	6.94



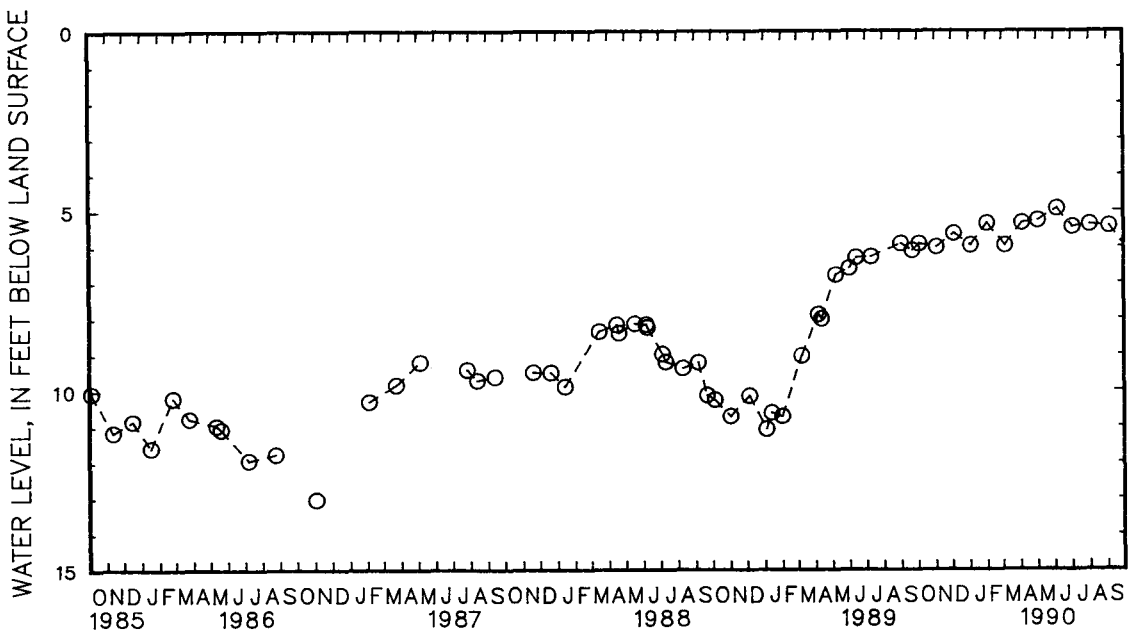
5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

ANNE ARUNDEL COUNTY--Continued

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 Oct 30, 1990.
DATUM.--Elevation of land surface is 80 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring Point: Top of recorder platform, 3.0 ft above land surface.
REMARKS.--Maryland Water-Level Network observation well and 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, 4.95 ft below land surface, June 6, 1990; lowest measured, 13.09 ft below land surface, Oct. 31, and Nov. 1 and 2, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 4	5.64	FEB 1	5.36	APR 4	5.35	JUN 6	4.95	AUG 1	5.39
JAN 3	5.97	MAR 5	5.98	MAY 2	5.28	JUL 2	5.48	SEP 4	5.43

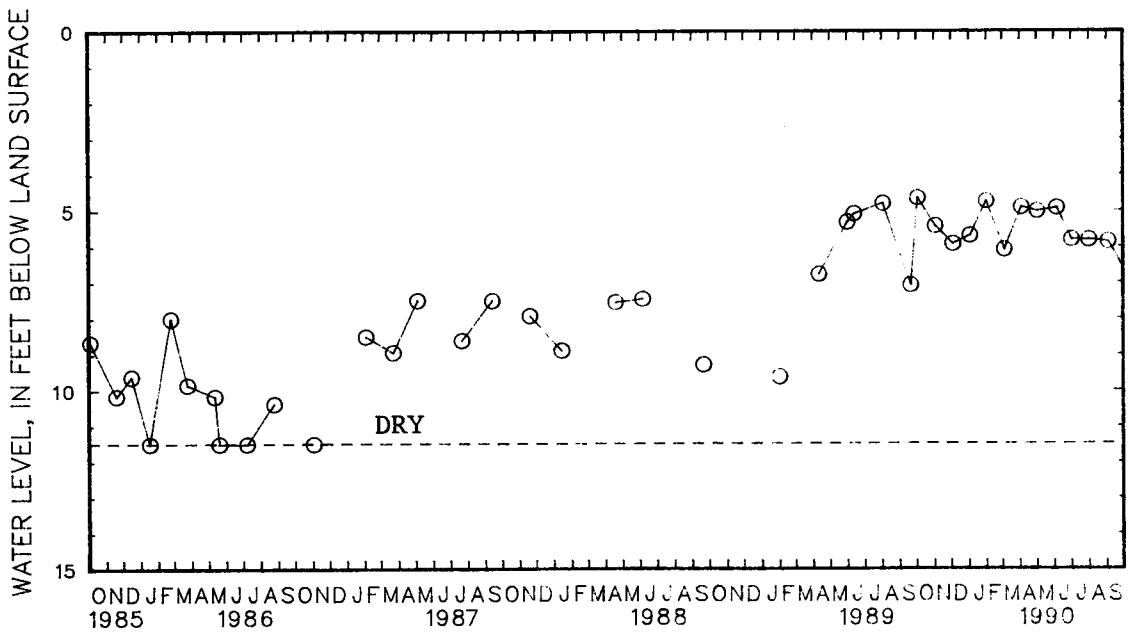


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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 Sept. 30, 1990.
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.
REMARKS.--Maryland Water-Level Network observation well. 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, 4.46 ft below land surface, Aug. 7, 1989; lowest measured, Dry on Aug. 22, 1985; Jan. 17, 1986; May 20, 1986; July 8, 1986 and Nov. 3, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	4.65	DEC 4	5.93	FEB 1	4.74	APR 4	4.91	JUN 6	4.93	AUG 1	5.82
NOV 3	5.43	JAN 3	5.70	MAR 5	6.09	MAY 2	5.02	JUL 2	5.81	SEP 4	5.87



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

WELL NUMBER.--AA Ad 109. SITE ID.--391006076380101. PERMIT NUMBER.--AA-81-4890.
LOCATION.--Lat 39°10'06", long 76°38'01", Hydrologic Unit 02060003, 0.05 mi south of Dorsey Rd., 0.17 mi west of MD Rt. 648.
Owner: U.S. Geological Survey.
AQUIFER.--Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 46 ft; casing diameter 4 in., to 36 ft; screen diameter 4 in. from 36 to 46 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--60-minute recorder interval from October 1985 to current year.
DATUM.--Elevation of land surface is 35 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring Point: Top of recorder platform, 3.0 ft above land surface.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--October 1985 to current year.
REMARKS.--Glen Burnie Project observation well. Water levels before Feb. 23, 1986 are not currently available.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 38.57 ft above sea level, Aug. 10, 1990; lowest measured, 20.20 ft above sea level, Oct. 15, 1987.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	37.19	37.10	37.88	37.71	37.93	37.86	38.15	37.81	37.96	37.74	---	---
2	37.35	37.22	37.83	37.71	38.12	37.86	37.81	37.76	38.03	37.97	---	---
3	37.34	37.25	37.87	37.69	38.12	38.01	37.81	37.79	37.98	37.84	---	---
4	37.24	37.21	37.69	37.64	38.01	37.92	37.99	37.79	38.12	37.95	---	---
5	37.23	37.21	37.77	37.69	38.01	37.97	37.99	37.82	37.99	37.82	---	---
6	37.28	37.24	37.86	37.78	38.01	37.96	37.87	37.81	37.93	37.84	37.92	37.82
7	37.28	37.13	37.88	37.83	37.99	37.69	37.84	37.79	38.00	37.93	37.82	37.77
8	37.21	37.13	37.95	37.87	37.82	37.69	38.00	37.85	37.94	37.86	37.97	37.81
9	37.18	37.08	38.00	37.89	37.90	37.82	38.00	37.86	38.09	37.95	38.10	37.98
10	37.12	37.08	37.89	37.79	37.92	37.90	38.04	37.88	38.22	38.02	38.08	38.02
11	37.13	37.10	37.86	37.79	37.91	37.87	38.08	37.87	38.01	37.99	38.05	38.03
12	37.28	37.10	37.87	37.69	37.92	37.87	38.05	37.85	38.01	37.85	38.08	38.04
13	37.31	37.28	37.82	37.67	37.96	37.87	37.84	37.66	38.02	37.85	38.08	38.04
14	37.35	37.31	37.88	37.82	37.87	37.85	37.68	37.63	38.02	37.92	38.07	38.05
15	37.36	37.35	38.03	37.88	38.05	37.84	37.76	37.69	38.02	37.92	38.06	38.03
16	37.41	37.36	38.25	37.97	38.02	37.84	37.74	37.72	---	---	38.07	38.03
17	37.48	37.41	37.94	37.84	37.84	37.78	37.82	37.73	---	---	38.25	38.07
18	37.48	37.41	37.86	37.77	37.80	37.78	37.86	37.79	---	---	38.21	37.99
19	37.61	36.81	37.92	37.75	37.86	37.78	37.78	36.99	---	---	38.03	37.96
20	37.66	37.39	38.23	37.94	37.86	37.85	37.90	37.60	---	---	38.04	38.03
21	37.65	37.63	38.17	37.85	37.88	37.85	38.00	37.87	---	---	38.04	37.95
22	37.63	37.55	37.89	37.82	37.86	37.76	37.87	37.82	---	---	38.04	37.95
23	37.55	37.50	37.94	37.88	37.77	37.75	37.82	37.74	---	---	38.07	37.94
24	37.59	37.54	37.88	37.81	37.91	37.77	37.82	37.77	---	---	37.94	37.88
25	37.63	37.59	37.97	37.82	38.06	37.92	38.01	37.77	---	---	38.01	37.94
26	37.64	37.63	38.05	37.90	38.11	37.89	38.01	37.76	---	---	38.02	38.01
27	37.67	37.64	37.94	37.86	37.90	37.81	37.77	37.71	---	---	38.00	37.92
28	37.69	37.67	38.09	37.94	37.93	37.81	37.79	37.77	---	---	37.97	37.92
29	37.70	37.69	37.93	37.86	37.81	37.78	38.18	37.77	---	---	37.97	37.92
30	37.75	37.70	38.00	37.86	37.85	37.82	38.18	37.79	---	---	38.03	37.55
31	37.91	37.75	---	---	38.14	37.82	37.79	37.72	---	---	38.13	38.00
MONTH	37.91	36.81	38.25	37.64	38.14	37.69	38.18	36.99	38.03	37.74	38.25	37.55

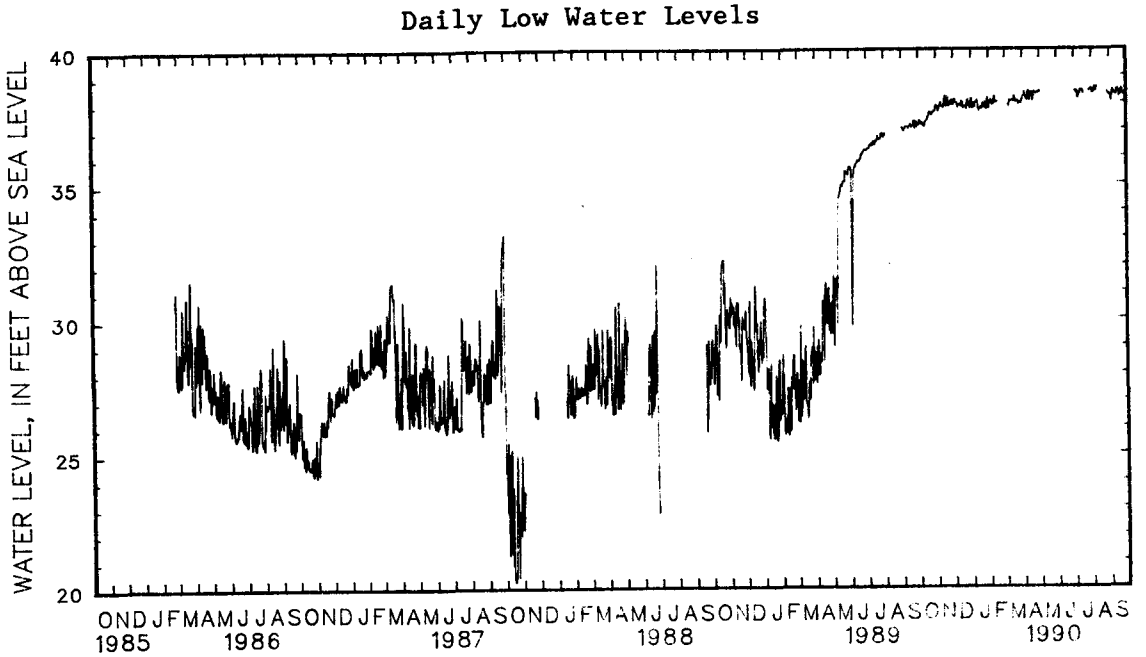
GROUND-WATER LEVELS

MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

AA Ad 109--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	38.14	38.12	38.41	38.39	---	---	---	---	38.46	38.38	38.31	38.25
2	38.25	38.14	---	---	---	---	38.45	38.35	38.37	38.33	38.25	38.21
3	38.29	38.25	---	---	---	---	38.35	38.34	38.37	38.35	38.21	38.08
4	38.40	38.29	---	---	---	---	38.42	38.35	38.39	38.37	38.06	38.00
5	38.34	38.19	---	---	---	---	38.42	38.42	38.48	38.39	38.29	38.06
6	38.19	38.11	---	---	---	---	38.41	38.20	38.56	38.49	38.41	38.30
7	38.17	38.11	---	---	---	---	38.17	38.03	38.56	38.44	38.45	38.41
8	38.10	38.04	---	---	---	---	38.15	38.04	38.43	38.39	38.40	38.22
9	38.09	38.01	---	---	---	---	38.30	38.15	38.55	38.39	38.32	38.21
10	38.41	38.10	---	---	---	---	38.34	38.27	38.57	38.56	38.34	38.31
11	38.43	38.21	---	---	---	---	38.33	38.28	---	---	38.31	38.26
12	38.20	38.06	---	---	---	---	38.45	38.28	---	---	38.28	38.25
13	38.05	38.00	---	---	---	---	38.45	38.37	---	---	38.28	38.27
14	38.24	38.05	---	---	---	---	38.45	38.37	---	---	38.47	38.28
15	38.38	38.26	---	---	---	---	38.45	38.45	---	---	38.51	38.43
16	38.37	38.29	---	---	---	---	38.44	38.34	---	---	38.45	38.39
17	38.37	38.20	---	---	---	---	38.34	38.32	---	---	38.41	38.16
18	38.18	37.75	---	---	---	---	---	---	---	---	38.21	38.15
19	38.06	37.98	---	---	---	---	---	---	---	---	38.40	38.21
20	38.24	38.06	---	---	---	---	---	---	---	---	38.40	38.25
21	38.39	38.26	---	---	---	---	---	---	---	---	38.28	38.22
22	38.35	38.28	---	---	---	---	---	---	---	---	38.48	38.29
23	38.34	38.31	---	---	---	---	---	---	---	---	38.46	38.32
24	38.33	38.27	---	---	---	---	---	---	---	---	38.31	38.23
25	38.35	38.25	---	---	---	---	---	---	---	---	38.29	38.22
26	38.37	38.33	---	---	---	---	---	---	---	---	38.32	38.28
27	38.36	38.31	---	---	---	---	38.40	38.39	38.40	38.38	38.27	38.20
28	38.35	38.34	---	---	---	---	38.44	38.40	38.40	38.37	38.23	38.19
29	38.40	38.32	---	---	---	---	38.47	38.44	38.38	38.33	38.29	38.23
30	38.39	38.38	---	---	---	---	38.51	38.47	38.32	38.20	38.39	38.29
31	---	---	---	---	---	---	38.51	38.47	38.30	38.27	---	---
MONTH	38.43	37.75	38.41	38.39	---	---	38.51	38.03	38.57	38.20	38.51	38.00



5 YEAR HYDROGRAPH

OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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 March 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.
REMARKS.--Maryland Water-Level Network observation well and Glen Burnie Project observation well. Watr 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, 24.40 ft above sea level, Aug. 11, 1990; lowest measured, 19.88 ft above sea level, Aug. 21, 1987.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	23.69	23.47	23.76	23.43	23.08	22.81	23.08	22.62	---	---	---	---
2	23.93	23.62	23.83	23.43	23.28	22.79	22.63	22.50	22.77	22.50	---	---
3	23.76	23.53	23.79	23.53	23.10	22.84	---	---	22.70	22.52	---	---
4	23.73	23.51	23.95	23.51	22.86	22.75	22.89	22.55	22.90	22.64	---	---
5	23.70	23.48	24.10	23.61	22.90	22.76	22.85	22.59	---	---	---	---
6	23.82	23.58	23.95	23.57	22.88	22.75	22.97	22.55	---	---	22.45	22.20
7	23.95	23.61	24.06	23.69	22.79	22.45	22.83	22.50	---	---	22.20	22.13
8	23.84	23.51	23.79	23.63	22.68	22.43	22.64	22.49	---	---	22.37	22.13
9	23.66	23.24	23.69	23.37	22.94	22.65	---	---	---	---	22.53	22.34
10	23.46	23.20	23.39	23.28	22.94	22.78	---	---	---	---	22.48	22.41
11	23.60	23.39	23.37	23.27	22.81	22.70	---	---	---	---	22.45	22.39
12	23.57	23.38	23.34	23.21	22.94	22.70	---	---	---	---	22.50	22.40
13	23.57	23.49	23.45	23.17	22.94	22.80	---	---	---	---	22.79	22.42
14	23.74	23.41	23.42	23.39	23.06	22.93	---	---	---	---	22.72	22.50
15	23.67	23.34	23.48	23.39	23.42	23.03	---	---	---	---	22.50	22.44
16	23.35	23.19	23.60	23.28	23.67	23.28	---	---	---	---	22.55	22.40
17	23.28	23.10	23.24	22.97	23.30	22.96	---	---	---	---	22.78	22.51
18	23.24	23.09	23.31	22.96	23.25	22.89	---	---	---	---	22.81	22.54
19	23.60	23.26	23.27	23.09	22.99	22.89	---	---	---	---	22.54	22.43
20	23.67	23.49	23.54	23.21	22.94	22.77	---	---	---	---	22.59	22.45
21	24.09	23.69	23.42	22.94	23.40	22.77	---	---	---	---	22.47	22.32
22	24.15	24.07	22.94	22.84	23.01	22.81	---	---	---	---	22.42	22.27
23	24.07	23.78	23.01	22.85	22.88	22.66	---	---	---	---	22.50	22.29
24	23.83	23.33	22.98	22.80	22.80	22.66	---	---	---	---	22.52	22.29
25	23.30	23.22	23.24	22.78	22.92	22.70	---	---	---	---	22.63	22.39
26	23.40	23.23	23.20	22.92	23.06	22.66	---	---	---	---	22.52	22.42
27	23.70	23.28	22.91	22.86	22.75	22.65	---	---	---	---	22.41	22.31
28	23.69	23.30	23.14	22.89	22.97	22.65	---	---	---	---	22.41	22.28
29	23.84	23.30	22.98	22.80	22.72	22.62	---	---	---	---	22.61	22.35
30	23.80	23.49	22.98	22.80	22.87	22.62	---	---	---	---	22.78	22.45
31	23.82	23.52	---	---	23.09	22.65	---	---	---	---	22.76	22.61
MONTH	24.15	23.09	24.10	22.78	23.67	22.43	23.08	22.49	22.90	22.50	22.81	22.13

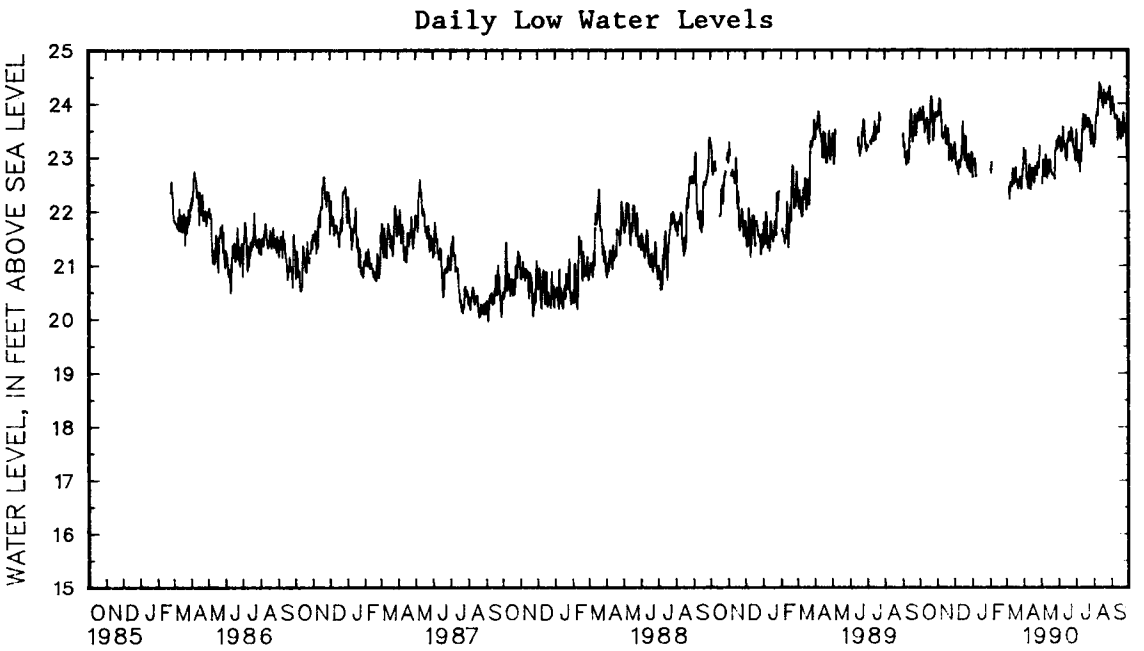
GROUND-WATER LEVELS

MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

AA Bd 152--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	23.18	22.67	---	---	23.40	23.14	23.25	22.79	23.19	22.99	23.97	23.61
2	22.93	22.79	---	---	23.36	23.03	23.52	22.99	23.25	22.96	24.08	23.77
3	23.00	22.82	22.51	22.45	23.39	23.07	23.06	22.78	23.29	23.01	24.13	23.77
4	23.12	22.84	22.69	22.47	23.18	22.94	22.93	22.73	23.36	23.00	23.87	23.70
5	22.87	22.59	22.96	22.70	23.18	22.88	22.89	22.70	23.68	23.13	23.97	23.72
6	22.59	22.49	22.85	22.64	23.10	22.91	23.13	22.76	23.79	23.53	23.98	23.70
7	22.59	22.44	22.63	22.58	23.17	22.90	22.94	22.65	23.85	23.55	23.72	23.52
8	22.43	22.35	22.91	22.58	23.33	23.14	22.72	22.54	23.79	23.60	23.73	23.25
9	22.42	22.31	22.73	22.64	23.58	23.21	23.01	22.61	24.07	23.70	23.76	23.23
10	22.82	22.41	23.05	22.65	23.28	23.03	22.92	22.76	24.08	23.83	23.78	23.46
11	22.86	22.64	22.92	22.62	23.19	22.92	23.14	22.74	24.40	23.98	23.78	23.18
12	22.62	22.41	22.60	22.51	23.24	22.91	23.48	23.05	24.32	23.94	23.30	23.09
13	22.40	22.38	22.94	22.61	22.99	22.84	23.64	23.42	24.34	23.93	23.38	23.13
14	22.57	22.37	22.83	22.64	23.06	22.80	23.81	23.42	24.20	23.91	23.51	23.26
15	22.79	22.58	22.69	22.57	22.93	22.80	23.76	23.31	24.08	23.86	23.72	23.25
16	22.71	22.65	22.92	22.70	23.26	22.79	23.52	23.16	24.02	23.78	23.56	23.20
17	22.79	22.58	22.95	22.81	23.33	22.95	23.55	23.15	23.97	23.74	23.35	23.13
18	22.57	22.41	22.83	22.74	23.30	23.03	23.78	23.45	23.92	23.72	23.33	23.08
19	22.52	22.40	22.75	22.68	23.47	23.12	23.69	23.43	24.26	23.80	23.50	23.19
20	22.56	22.43	22.70	22.66	23.43	23.13	23.58	23.38	24.01	23.84	23.64	23.23
21	22.83	22.57	22.70	22.59	23.47	23.13	23.57	23.37	24.19	23.83	23.39	23.17
22	22.76	22.67	22.66	22.58	23.30	23.04	23.72	23.34	24.05	23.89	23.84	23.22
23	22.74	22.65	22.66	22.61	23.55	23.30	23.73	23.35	24.00	23.84	23.70	23.23
24	22.66	22.59	22.66	22.57	23.52	23.37	23.59	23.32	24.13	23.80	23.59	23.20
25	22.91	22.59	22.59	22.55	23.39	23.15	23.67	23.27	24.12	23.88	23.47	23.28
26	22.87	22.78	23.09	22.56	23.21	23.04	23.40	23.15	24.21	23.90	23.62	23.26
27	22.80	22.70	23.15	22.88	23.18	23.01	23.24	23.06	24.07	23.94	23.48	23.03
28	22.87	22.69	23.14	22.94	23.19	22.96	23.53	23.06	24.24	23.93	22.99	22.77
29	23.21	22.86	23.31	22.98	22.96	22.86	23.60	23.19	24.32	24.00	22.88	22.75
30	---	---	23.16	22.81	22.93	22.80	23.45	23.23	24.08	23.80	23.31	22.78
31	---	---	23.22	22.75	---	---	23.43	23.21	23.79	23.63	---	---
MONTH	23.21	22.31	23.31	22.45	23.58	22.79	23.81	22.54	24.40	22.96	24.13	22.75



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

WELL NUMBER.--AA Bd 155. SITE ID.--390938076383701. PERMIT NUMBER.--AA-81-3460.
LOCATION.--Lat 39°09'38", long 76°38'37", Hydrologic Unit 02060003, 200 ft off MD Rt. 3, 0.4 mi south of MD Rt. 176 intersection.
Owner: U.S. Geological Survey.
AQUIFER.--Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 159 ft; casing diameter 6 in., to 145 ft. screen diameter 4 in. from 145 to 155 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--60-minute recorder interval from Oct. 23, 1984 to current year.
DATUM.--Elevation of land surface is 57 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring Point: Top of recorder platform, 2.5 ft above land surface.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--October 1984 to current year
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 46.07 ft above sea level, August 23, 1990; lowest measured, 31.54 ft above sea level, Oct. 10, 1986.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	39.60	39.51	---	---	45.07	44.99	45.39	45.01	---	---	45.44	45.30
2	39.77	39.60	---	---	45.32	44.98	45.06	44.99	45.38	45.27	45.49	45.39
3	39.74	39.64	---	---	45.26	45.09	45.15	45.07	45.31	45.14	45.50	45.38
4	39.69	39.63	---	---	45.20	45.06	45.31	45.15	45.48	45.25	45.36	45.23
5	39.69	39.64	---	---	45.21	45.13	45.25	45.09	45.24	45.12	45.23	45.18
6	39.71	39.68	---	---	45.21	45.13	45.20	45.07	45.27	45.19	45.21	45.07
7	39.68	39.57	---	---	45.15	44.88	45.17	45.07	45.34	45.21	45.12	45.02
8	39.64	39.56	---	---	45.08	44.88	45.30	45.18	45.29	45.18	45.33	45.12
9	39.59	39.50	---	---	45.17	45.07	45.43	45.15	45.44	45.30	45.52	45.33
10	39.57	39.48	---	---	45.19	45.13	45.49	45.27	45.55	45.28	45.45	45.30
11	39.57	39.49	---	---	45.17	45.10	45.43	45.27	45.34	45.26	45.35	45.30
12	43.02	39.48	44.86	44.67	45.18	45.10	45.32	45.11	45.32	45.16	45.40	45.31
13	43.23	43.03	44.84	44.67	45.21	45.10	45.11	44.92	45.37	45.16	45.36	45.30
14	43.37	43.22	44.91	44.85	45.15	45.09	45.00	44.92	45.35	45.21	45.35	45.30
15	43.43	43.35	45.03	44.89	45.34	45.08	45.06	45.01	45.38	45.21	45.31	45.26
16	43.53	43.41	45.23	44.94	45.23	45.03	---	---	45.43	45.39	45.36	45.28
17	43.63	43.51	44.94	44.86	45.05	45.01	---	---	45.37	45.04	45.51	45.36
18	43.67	43.62	45.15	44.95	45.05	45.02	---	---	45.31	45.03	45.44	45.22
19	43.92	43.68	45.11	44.91	45.19	45.03	---	---	45.44	45.29	45.37	45.21
20	44.06	43.92	45.34	45.12	45.19	45.02	45.22	44.95	45.27	45.13	45.37	45.33
21	44.11	44.03	45.20	44.88	45.15	45.01	45.30	45.12	45.38	45.13	45.37	45.28
22	44.04	44.00	45.03	44.78	45.00	44.96	45.22	45.04	45.62	45.39	45.43	45.28
23	44.08	43.99	45.07	44.96	45.02	44.96	45.07	44.22	45.63	44.96	45.47	45.26
24	44.16	44.08	44.95	44.89	45.15	45.03	---	---	45.48	45.28	45.28	45.19
25	44.23	44.17	45.13	44.95	45.29	45.16	---	---	45.27	44.99	45.36	45.28
26	---	---	45.18	45.01	45.31	45.00	---	---	45.20	44.98	45.37	45.30
27	---	---	45.12	44.96	45.14	44.99	45.12	44.95	45.52	45.22	45.30	45.21
28	---	---	45.25	45.04	45.16	45.00	45.15	45.07	45.51	45.44	45.32	45.22
29	---	---	45.07	44.97	45.07	44.99	45.50	45.09	---	---	45.28	45.21
30	---	---	45.15	45.01	45.13	45.06	45.44	41.99	---	---	45.39	45.29
31	---	---	---	---	45.40	45.07	---	---	---	---	45.47	45.40
MONTH	44.23	39.48	45.34	44.67	45.40	44.88	45.50	41.99	45.63	44.96	45.52	45.02

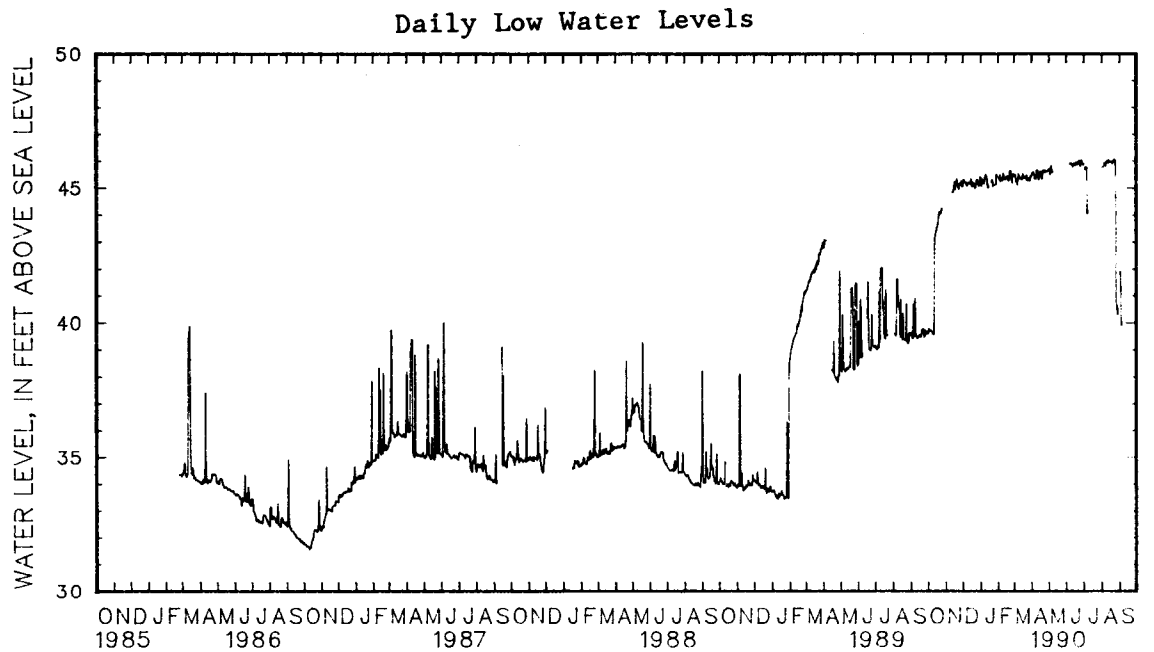
GROUND-WATER LEVELS

MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

AA Bd 155--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	45.46	45.42	45.71	45.67	---	---	45.90	45.83	---	---	---	---
2	45.55	45.45	45.67	45.35	---	---	---	---	45.77	45.72	41.88	40.16
3	45.58	45.55	45.50	45.44	---	---	45.71	45.63	45.78	45.75	41.31	39.93
4	45.58	45.50	45.76	45.52	---	---	45.78	45.70	45.80	45.76	39.90	39.83
5	45.50	45.37	45.83	45.72	---	---	45.78	45.74	45.88	45.78	---	---
6	45.38	45.29	45.71	45.58	---	---	45.76	40.65	45.93	45.86	---	---
7	45.46	45.35	45.61	45.53	45.91	45.79	44.07	40.21	45.90	45.83	---	---
8	45.34	45.26	45.60	45.53	45.90	45.79	---	---	45.83	45.78	---	---
9	45.49	45.25	---	---	45.93	45.88	---	---	45.96	45.79	---	---
10	45.66	45.44	---	---	45.92	45.86	---	---	46.01	45.97	---	---
11	45.66	45.39	---	---	45.86	45.76	---	---	45.99	45.94	---	---
12	45.38	45.24	---	---	45.79	45.74	---	---	45.94	45.92	---	---
13	45.31	45.21	---	---	45.84	45.77	---	---	46.03	45.93	---	---
14	45.48	45.30	---	---	45.91	45.84	---	---	46.00	45.95	---	---
15	45.60	45.51	---	---	45.89	45.85	---	---	45.97	45.93	---	---
16	45.55	45.47	---	---	45.85	45.82	---	---	45.97	45.93	---	---
17	45.60	45.39	---	---	45.87	45.81	---	---	45.97	45.81	---	---
18	45.37	45.27	---	---	45.96	45.34	---	---	45.99	45.93	---	---
19	45.34	45.22	---	---	45.96	45.89	---	---	46.00	45.92	---	---
20	45.56	45.35	---	---	45.88	45.84	---	---	45.93	45.90	---	---
21	45.66	45.57	---	---	45.89	45.82	---	---	45.96	45.92	---	---
22	45.60	45.52	---	---	45.98	45.80	---	---	46.04	45.94	---	---
23	45.66	45.58	---	---	46.03	45.96	---	---	46.07	46.00	---	---
24	45.59	45.53	---	---	45.96	45.83	---	---	46.03	45.97	---	---
25	45.65	45.53	---	---	45.82	45.76	---	---	45.97	40.84	---	---
26	45.64	45.58	---	---	45.97	45.48	---	---	40.80	40.52	---	---
27	45.62	45.55	---	---	46.03	45.88	---	---	40.50	40.40	---	---
28	45.62	45.59	---	---	45.90	45.83	---	---	40.61	40.34	---	---
29	45.67	45.57	---	---	45.92	45.82	---	---	40.32	40.16	---	---
30	45.69	45.67	---	---	45.88	45.85	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	45.69	45.21	45.83	45.35	46.03	45.34	45.90	40.21	46.07	40.16	41.88	39.83



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well and Glen Burnie Project observation well.
PERIOD OF RECORD.--October 1984 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.56 ft above sea level, Aug. 10, 1990; lowest measured, 12.47 ft above sea level, Feb. 10, 1988.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	20.04	19.16	20.00	19.05	19.26	18.39	19.20	18.12	18.46	18.03	18.21	17.83
2	20.02	19.33	19.84	19.08	19.48	18.39	18.58	18.09	18.97	18.43	18.77	18.21
3	19.89	19.14	19.78	19.30	19.13	18.26	18.62	18.09	19.03	18.43	19.16	18.55
4	19.90	19.13	20.28	19.30	18.75	18.26	18.78	18.13	19.11	18.49	18.63	18.26
5	19.78	19.18	20.85	18.94	18.89	18.32	19.01	17.98	18.59	18.19	18.48	18.25
6	19.88	19.26	20.42	19.05	18.83	18.32	18.95	17.82	18.75	18.19	18.87	18.17
7	20.41	19.23	20.32	19.40	18.76	18.03	19.09	17.79	18.96	18.32	18.47	18.17
8	20.07	19.21	19.51	19.32	18.72	18.03	18.49	17.90	18.60	18.31	18.73	18.33
9	19.91	18.60	19.53	18.72	19.04	18.31	18.76	18.49	18.80	18.39	18.90	18.56
10	19.49	18.60	19.24	18.74	19.09	18.32	18.86	17.95	19.20	18.48	18.86	18.43
11	19.90	19.08	19.26	18.79	18.83	18.31	18.07	17.91	18.61	18.43	18.82	18.45
12	19.76	19.08	19.43	18.79	19.02	18.31	19.23	17.88	19.22	18.27	18.86	18.55
13	19.85	19.22	19.54	18.99	18.97	18.50	18.02	17.36	18.60	18.26	19.47	18.63
14	20.14	18.79	19.47	19.31	19.19	18.94	17.36	17.33	18.79	18.32	18.99	18.56
15	19.95	18.66	19.50	18.92	19.77	19.12	17.42	17.33	18.79	18.32	18.85	18.52
16	19.26	18.59	19.72	18.60	20.04	18.95	17.40	17.36	18.98	18.50	18.98	18.59
17	19.14	18.43	18.89	18.38	19.85	18.53	18.63	17.37	19.20	18.12	19.10	18.75
18	18.92	18.45	19.26	18.45	19.42	18.53	18.86	17.97	18.99	18.11	19.23	18.39
19	19.53	18.90	19.46	18.79	19.01	18.59	18.50	17.58	19.30	18.50	18.87	18.45
20	19.35	19.15	19.53	18.82	19.30	18.50	18.73	17.58	18.61	18.15	18.97	18.53
21	19.46	19.15	19.19	18.31	19.50	18.50	18.78	17.84	18.90	18.15	18.75	18.30
22	19.79	19.09	18.76	18.31	19.00	18.61	18.12	17.56	18.82	18.38	18.68	18.31
23	19.27	18.24	18.98	18.40	18.96	18.20	18.20	17.55	19.14	18.73	18.90	18.34
24	18.85	18.20	18.96	18.31	18.88	18.21	18.33	17.60	19.65	18.60	18.90	18.34
25	18.77	18.20	19.29	18.35	18.99	18.36	18.98	18.18	18.61	18.01	18.98	18.50
26	18.98	18.47	19.39	18.40	19.28	18.27	18.95	18.12	18.20	18.01	18.96	18.43
27	19.75	18.60	18.78	18.40	18.82	18.26	18.55	18.11	18.84	18.07	18.78	18.33
28	19.98	18.59	19.23	18.47	19.19	18.27	18.21	18.07	18.74	17.87	18.84	18.34
29	20.25	18.65	18.98	18.30	18.82	18.26	18.62	18.07	---	---	18.66	18.39
30	19.93	19.08	18.98	18.31	19.03	18.29	18.62	18.10	---	---	18.83	18.43
31	20.16	19.18	---	---	19.21	18.30	18.11	18.03	---	---	19.17	18.61
MONTH	20.41	18.20	20.85	18.30	20.04	18.03	19.23	17.33	19.65	17.87	19.47	17.83

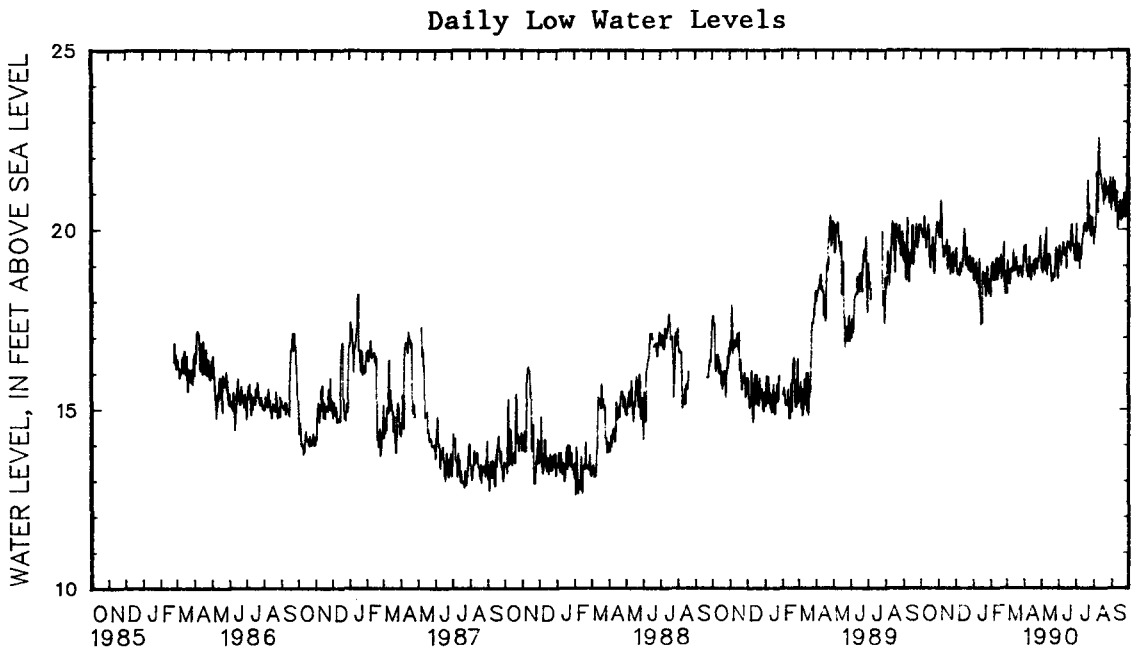
GROUND-WATER LEVELS

MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

AA Bd 156--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	19.55	18.75	19.05	18.73	18.63	18.29	19.79	18.68	19.60	18.92	20.94	20.29
2	19.13	18.83	18.88	18.40	19.41	18.47	20.17	18.83	19.87	18.92	21.16	20.44
3	19.36	18.84	18.93	18.40	19.55	18.61	19.15	18.61	19.94	19.03	21.46	20.42
4	19.57	18.82	18.77	18.44	19.15	18.57	19.18	18.61	20.10	19.04	20.77	20.40
5	19.01	18.03	19.20	18.77	19.26	18.57	19.13	18.63	20.72	19.28	21.33	20.44
6	18.84	18.47	18.92	18.50	18.99	18.58	19.62	18.77	21.59	19.98	21.33	20.12
7	18.86	18.29	19.69	18.50	19.37	18.58	19.45	18.53	20.49	19.95	20.46	20.11
8	18.69	18.27	19.45	18.69	19.31	18.86	18.92	18.53	20.48	19.95	20.59	19.57
9	18.69	18.27	18.84	18.63	19.64	18.82	19.50	18.57	22.13	20.10	21.07	19.65
10	19.23	18.40	20.07	18.63	19.50	18.75	19.19	18.78	22.56	20.62	21.05	19.72
11	19.26	18.58	19.24	18.47	19.30	18.65	19.37	18.78	21.74	20.43	20.02	19.23
12	18.87	18.26	18.72	18.46	19.49	18.63	19.65	18.87	21.60	20.42	20.09	19.25
13	18.58	18.25	19.31	18.58	19.28	18.63	19.86	19.25	21.49	20.44	20.34	19.56
14	18.72	18.26	19.01	18.52	19.36	18.72	19.89	19.24	21.17	20.43	20.51	19.86
15	19.00	18.58	19.31	18.51	18.89	18.72	20.18	19.18	21.11	20.32	20.81	19.49
16	18.92	18.57	19.31	18.97	19.63	18.72	20.03	19.10	21.04	20.31	20.51	19.45
17	19.02	18.52	19.21	18.77	19.66	18.79	20.17	19.10	21.17	20.31	20.24	19.49
18	19.13	18.30	19.04	18.44	19.59	18.84	19.96	19.12	20.68	20.30	20.30	19.63
19	18.91	18.29	18.79	18.29	19.65	18.96	20.02	19.25	21.44	20.40	20.82	19.77
20	18.72	18.32	18.55	18.25	19.49	18.91	19.96	19.25	20.85	20.39	20.65	19.71
21	19.19	18.59	18.72	18.18	19.64	18.82	21.36	19.39	21.33	20.41	20.34	19.71
22	18.95	18.66	18.59	18.17	19.34	18.82	20.58	19.36	20.96	20.62	20.93	19.69
23	19.04	18.60	18.71	18.26	20.07	19.35	20.73	19.35	20.98	20.62	20.72	19.47
24	18.90	18.60	18.77	18.23	20.16	19.79	20.03	19.27	21.17	20.41	20.95	19.51
25	19.18	18.65	18.68	18.21	19.87	18.99	20.37	19.27	21.00	20.36	20.33	19.80
26	19.11	18.76	19.01	18.22	19.53	18.98	19.87	19.14	21.19	20.36	20.82	19.82
27	19.21	18.72	19.41	18.56	19.54	18.92	19.82	19.13	20.73	20.63	21.10	19.97
28	19.29	18.71	19.52	18.64	19.56	18.85	20.35	19.20	20.82	20.63	21.54	21.08
29	19.85	18.92	19.28	18.66	19.16	18.79	20.33	19.28	21.44	20.61	21.74	21.19
30	19.56	18.83	19.06	18.41	19.13	18.68	20.05	19.29	21.19	20.43	22.20	21.32
31	---	---	18.69	18.29	---	---	19.92	19.29	20.51	20.29	---	---
MONTH	19.85	18.03	20.07	18.17	20.16	18.29	21.36	18.53	22.56	18.92	22.20	19.23



5 YEAR HYDROGRAPH

OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well and 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, Oct. 22, 1989; lowest measured, 33.79 ft above sea level, Dec. 12, and 22, 1988.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	36.62	36.51	36.59	36.50	36.21	36.18	36.17	35.89	36.02	35.67	35.70	35.66
2	36.84	36.56	36.68	36.49	36.33	36.18	35.89	35.86	36.02	35.97	35.84	35.71
3	36.76	36.55	36.67	36.51	36.28	36.20	35.87	35.86	35.97	35.95	35.97	35.87
4	36.67	36.54	36.82	36.51	36.20	36.14	36.14	35.87	36.05	35.96	35.81	35.69
5	36.64	36.54	36.90	36.55	36.15	36.00	36.09	35.89	35.96	35.79	35.69	35.63
6	36.78	36.58	36.91	36.66	36.15	36.14	36.18	35.90	35.89	35.80	35.69	35.60
7	36.84	36.56	36.89	36.68	36.14	35.88	36.14	35.91	35.97	35.88	35.59	35.54
8	36.79	36.54	36.69	36.57	35.93	35.88	35.96	35.92	35.88	35.79	35.66	35.56
9	36.56	36.47	36.62	36.54	36.15	35.93	35.95	35.91	35.98	35.88	35.74	35.67
10	36.54	36.43	36.53	36.42	36.15	36.12	36.12	35.89	36.04	35.96	35.72	35.68
11	36.57	36.50	36.42	36.35	36.12	36.09	36.13	35.89	35.96	35.95	35.70	35.68
12	36.54	36.49	36.44	36.30	36.14	36.07	36.20	35.94	36.00	35.88	35.72	35.68
13	36.55	36.49	36.42	36.29	36.14	36.11	35.94	35.81	35.96	35.80	35.79	35.71
14	36.59	36.48	36.37	36.34	36.13	36.11	---	---	35.96	35.86	35.75	35.72
15	36.59	36.50	36.50	36.34	36.22	36.11	---	---	35.92	35.82	35.72	35.69
16	36.49	36.35	36.60	36.50	36.38	36.15	---	---	35.99	35.93	35.74	35.69
17	36.46	36.33	36.49	36.31	36.18	36.13	---	---	35.96	35.73	35.95	35.74
18	36.54	36.32	36.42	36.28	36.22	36.12	---	---	35.85	35.71	35.96	35.74
19	36.58	36.49	36.31	36.26	36.14	36.13	35.92	35.84	36.02	35.89	35.77	35.73
20	36.69	36.53	36.54	36.32	36.14	36.10	36.16	35.84	35.94	35.70	35.79	35.74
21	37.07	36.79	36.52	36.26	36.37	36.10	36.23	36.10	35.88	35.70	35.75	35.69
22	37.08	37.07	36.25	36.21	36.15	35.91	36.10	35.88	35.99	35.77	35.74	35.69
23	37.07	37.05	36.24	36.21	35.94	35.90	35.88	35.85	36.01	35.99	35.76	35.70
24	37.07	36.69	36.22	36.20	35.94	35.90	35.86	35.69	36.22	35.96	35.74	35.69
25	36.83	36.54	36.27	36.20	36.14	35.93	35.98	35.69	35.95	35.60	35.90	35.73
26	36.91	36.68	36.28	36.22	36.15	35.90	35.96	35.85	35.61	35.57	35.87	35.78
27	36.88	36.56	36.21	36.19	35.90	35.88	35.88	35.79	35.80	35.61	35.77	35.73
28	36.76	36.54	36.26	36.21	36.12	35.88	35.85	35.70	35.75	35.71	35.74	35.72
29	36.84	36.53	36.21	36.19	35.88	35.87	35.99	35.70	---	---	36.00	35.73
30	36.80	36.54	36.22	36.19	35.93	35.87	36.01	35.85	---	---	36.22	35.88
31	36.63	36.55	---	---	36.16	35.88	35.85	35.67	---	---	35.99	35.97
MONTH	37.08	36.32	36.91	36.19	36.38	35.87	36.23	35.67	36.22	35.57	36.22	35.54

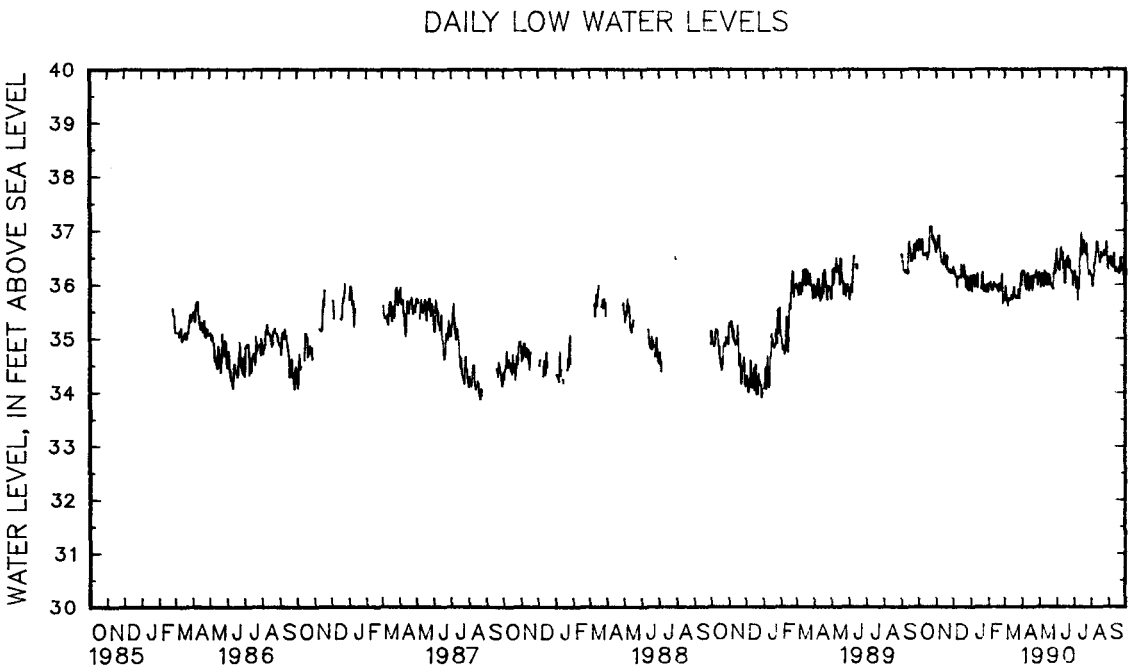
GROUND-WATER LEVELS

MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

AA Bd 157--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	36.26	35.97	36.17	36.15	36.67	36.35	36.22	35.91	36.17	35.91	36.49	36.22
2	36.19	36.01	36.14	35.91	36.44	36.23	36.26	35.95	36.13	35.83	36.50	36.26
3	36.22	36.20	35.91	35.89	36.41	36.23	36.15	35.92	35.96	35.82	36.51	36.24
4	36.25	36.20	36.15	35.91	36.28	36.17	36.01	35.87	35.98	35.69	36.39	36.00
5	36.19	35.97	36.20	36.16	36.26	36.17	35.92	35.86	36.16	35.77	36.49	36.00
6	35.97	35.94	36.17	35.97	36.29	36.21	36.14	35.70	36.23	36.13	36.52	36.31
7	35.97	35.92	35.97	35.94	36.46	36.24	35.86	35.65	36.40	36.16	36.35	36.22
8	35.92	35.88	36.16	35.95	36.66	36.46	35.71	35.58	36.37	36.18	36.34	36.21
9	35.89	35.76	35.96	35.94	36.69	36.42	35.97	35.58	36.49	36.21	36.33	36.19
10	36.21	35.88	36.25	35.96	36.46	36.28	35.92	35.68	36.60	36.35	36.49	36.23
11	36.21	35.99	36.20	35.97	36.60	36.27	36.19	35.88	36.80	36.43	36.58	36.24
12	35.98	35.89	36.01	35.94	36.45	36.22	36.46	36.15	36.73	36.41	36.24	36.17
13	35.88	35.85	36.20	36.15	36.21	35.95	36.53	36.30	36.79	36.41	36.23	36.01
14	35.93	35.87	36.18	35.97	36.04	35.95	36.98	36.53	36.64	36.42	36.25	36.01
15	36.15	35.93	35.98	35.96	36.03	35.99	36.82	36.44	36.53	36.41	36.31	36.21
16	36.14	35.97	36.17	35.98	36.30	36.00	36.56	36.30	36.50	36.38	36.28	36.19
17	36.16	35.94	36.19	36.17	36.44	36.21	36.64	36.30	36.42	36.26	36.24	35.99
18	35.94	35.89	36.17	36.13	36.31	36.23	36.82	36.51	36.48	36.26	36.22	35.98
19	35.89	35.88	36.12	35.96	36.48	36.25	36.81	36.51	36.61	36.31	36.20	36.00
20	35.95	35.89	35.99	35.96	36.51	36.26	36.60	36.52	36.50	36.29	36.31	36.19
21	36.17	35.96	36.02	35.94	36.53	36.23	36.62	36.49	36.56	36.29	36.25	36.02
22	36.16	36.13	35.97	35.94	36.31	36.20	36.57	36.46	36.54	36.46	36.47	36.20
23	36.16	36.14	35.96	35.93	36.46	36.28	36.59	36.39	36.54	36.44	36.46	36.23
24	36.14	35.96	35.93	35.90	36.43	36.23	36.79	36.39	36.62	36.41	36.32	36.22
25	36.27	35.96	35.91	35.90	36.26	36.22	36.57	36.28	36.54	36.43	36.27	36.21
26	36.19	36.14	36.24	35.91	36.25	36.19	36.38	36.15	36.59	36.42	36.31	36.22
27	36.14	35.96	36.24	36.18	36.21	35.99	36.20	35.94	36.55	36.45	36.27	36.04
28	35.97	35.95	36.21	36.18	36.22	35.94	36.25	35.93	36.79	36.47	36.02	35.97
29	36.18	35.95	36.38	36.19	35.97	35.91	36.25	35.94	36.78	36.48	35.98	35.97
30	36.22	36.17	36.26	36.17	36.23	35.91	36.22	35.97	36.52	36.27	36.29	35.98
31	---	---	36.54	36.17	---	---	36.22	36.14	36.28	36.23	---	---
MONTH	36.27	35.76	36.54	35.89	36.69	35.91	36.98	35.58	36.80	35.69	36.58	35.97



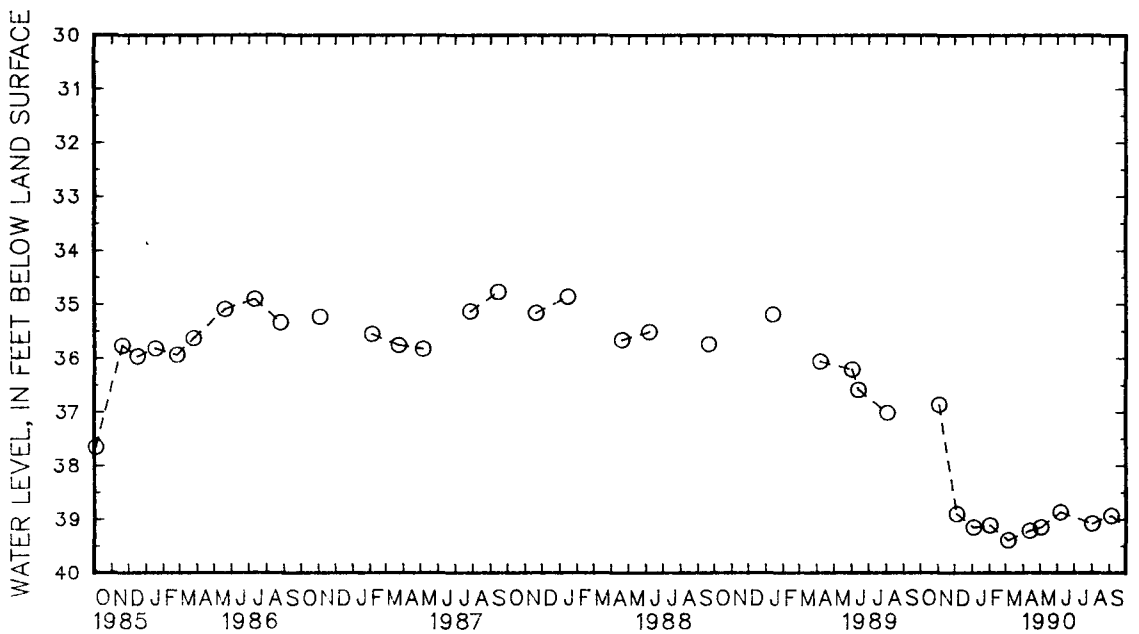
5 YEAR HYDROGRAPH

OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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 Fhrine 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.--Maryland Water-Level Network observation well and Glen Burnie Project observation well.
PERIOD OF RECORD.--March 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 37.92 ft below land surface, July 23 and 24, 1989; lowest measured, 40.37 ft below land surface, Sept. 5, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 4	38.90	FEB 1	39.11	APR 12	39.21	JUN 6	38.87	SEP 4	38.93
JAN 3	39.15	MAR 5	39.39	MAY 2	39.15	AUG 1	39.08		



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well and Glen Burnie Project observation well.
PERIOD OF RECORD.--April 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 74.68 ft above sea level, May 29, 1990; lowest measured, 68.57 ft above sea level, Oct. 7, 1986.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	72.92	72.78	73.13	73.00	73.07	72.98	73.02	72.81	---	---	---	---
2	73.02	72.93	73.12	73.00	73.16	72.98	72.80	72.77	---	---	---	---
3	73.00	72.91	73.17	73.10	73.16	73.08	72.89	72.77	---	---	---	---
4	72.94	72.91	73.09	73.08	73.08	73.07	73.04	72.89	---	---	---	---
5	72.98	72.92	73.17	73.09	73.10	73.08	---	---	---	---	---	---
6	73.00	72.98	73.25	73.13	73.09	73.08	---	---	---	---	72.90	72.83
7	---	---	73.21	73.21	73.09	72.89	---	---	---	---	72.82	72.77
8	72.94	72.88	73.25	73.21	72.95	72.88	---	---	---	---	72.91	72.80
9	72.89	72.81	73.28	73.20	73.01	72.96	---	---	---	---	73.04	72.92
10	72.87	72.81	73.20	73.07	73.05	73.03	---	---	---	---	73.04	72.97
11	72.90	72.82	73.10	73.07	73.03	73.01	---	---	---	---	72.98	72.97
12	72.87	72.82	73.12	72.98	73.03	73.00	---	---	---	---	73.01	72.98
13	72.88	72.80	73.03	72.97	73.05	72.98	---	---	---	---	73.01	72.99
14	72.86	72.80	73.10	73.03	72.98	72.97	---	---	---	---	72.99	72.97
15	72.87	72.79	73.19	73.10	73.09	72.96	---	---	---	---	72.97	72.95
16	72.82	72.79	73.63	73.19	73.09	72.90	---	---	---	---	72.98	72.95
17	72.86	72.80	73.71	73.21	72.91	72.89	---	---	---	---	73.11	72.99
18	72.83	72.77	73.20	73.06	72.92	72.89	---	---	---	---	73.10	72.94
19	72.96	72.82	73.14	73.03	72.95	72.89	---	---	---	---	72.97	72.92
20	73.05	72.96	73.38	73.14	72.95	72.94	---	---	---	---	73.53	72.97
21	73.04	72.99	73.36	73.08	72.95	72.88	---	---	---	---	73.66	73.56
22	72.99	72.87	73.09	73.05	72.87	72.82	---	---	---	---	73.80	73.66
23	72.87	72.86	73.12	73.06	72.82	72.81	---	---	---	---	73.84	73.29
24	72.88	72.86	73.06	72.99	72.87	72.81	---	---	---	---	73.26	73.05
25	72.94	72.89	73.11	72.99	72.98	72.88	---	---	---	---	73.07	73.05
26	72.97	72.95	73.18	73.09	73.04	72.87	---	---	---	---	73.11	73.07
27	72.99	72.97	73.09	73.05	72.86	72.84	---	---	---	---	73.09	73.04
28	73.03	72.99	73.19	73.09	72.89	72.80	---	---	---	---	73.04	73.02
29	73.04	73.00	73.09	73.02	72.79	72.78	---	---	---	---	73.03	72.99
30	73.05	73.03	73.09	73.02	72.83	72.78	---	---	---	---	73.08	73.00
31	73.17	73.06	---	---	73.01	72.81	---	---	---	---	73.17	73.10
MONTH	73.17	72.77	73.71	72.97	73.16	72.78	73.04	72.77	---	---	73.84	72.77

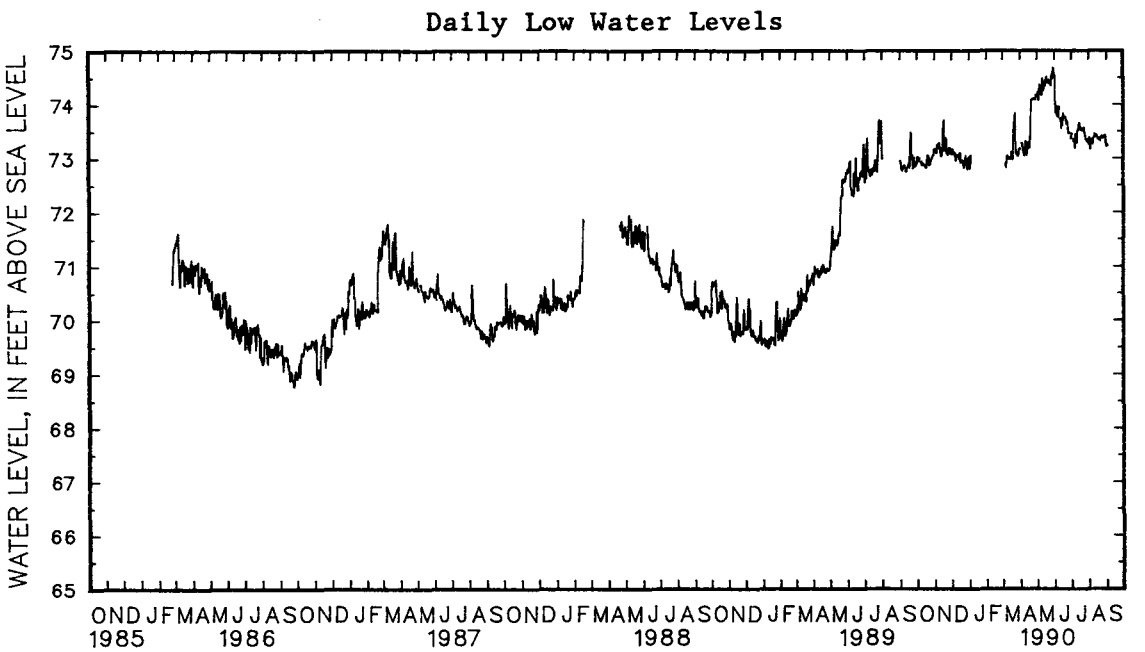
GROUND-WATER LEVELS

MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

AA Bd 160--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	73.17	73.16	---	---	74.54	74.02	73.44	73.23	73.26	73.22	73.22	73.21
2	---	---	74.23	74.08	73.99	73.79	73.45	73.37	73.39	73.21	73.26	73.22
3	73.27	73.23	74.08	74.06	73.84	73.79	---	---	73.26	73.17	73.24	73.15
4	73.28	73.26	74.26	74.07	73.97	73.80	73.35	73.30	73.17	73.16	---	---
5	73.26	73.14	74.36	74.27	73.79	73.71	73.30	73.26	73.27	73.16	---	---
6	73.14	73.07	74.34	74.21	73.78	73.69	73.33	73.22	73.36	73.28	---	---
7	73.11	73.05	74.21	74.18	73.76	73.65	73.22	73.16	73.36	73.27	---	---
8	73.05	73.00	74.18	74.16	73.77	73.65	73.18	73.16	73.27	73.26	---	---
9	73.04	72.99	74.18	74.16	73.96	73.69	73.45	73.18	73.37	73.26	---	---
10	73.28	73.04	74.48	74.18	---	---	73.32	73.25	73.40	73.37	---	---
11	73.31	73.19	74.43	74.25	73.73	73.63	73.28	73.25	73.46	73.40	---	---
12	73.18	73.06	74.26	74.19	73.74	73.56	73.51	73.27	73.41	73.38	---	---
13	73.05	73.00	74.41	74.27	73.55	73.53	73.51	73.50	73.44	73.38	---	---
14	73.17	73.01	74.40	74.32	73.67	73.53	73.61	73.50	73.44	73.42	---	---
15	73.28	73.19	74.35	74.31	73.61	73.59	73.65	73.61	73.42	73.39	---	---
16	---	---	74.45	74.35	73.84	73.59	73.62	73.54	73.39	73.36	---	---
17	73.30	73.20	74.51	74.45	73.80	73.59	73.54	73.47	73.36	73.29	---	---
18	73.19	73.06	74.46	74.40	73.75	73.64	73.52	73.47	73.35	73.29	---	---
19	73.38	73.06	74.40	74.33	73.75	73.68	73.53	73.49	73.38	73.34	---	---
20	73.90	73.43	74.41	74.33	73.76	73.64	73.51	73.49	73.34	73.30	---	---
21	74.08	73.91	74.45	74.39	73.71	73.59	73.55	73.51	73.33	73.30	---	---
22	74.08	74.07	74.39	74.37	73.64	73.57	73.55	73.55	73.39	73.33	---	---
23	74.10	74.08	74.39	74.39	73.68	73.64	73.56	73.49	73.40	73.39	---	---
24	74.09	74.07	74.38	74.35	73.65	73.54	73.48	73.42	73.42	73.40	---	---
25	74.11	74.06	74.35	74.33	73.54	73.47	73.42	73.35	73.41	73.38	---	---
26	74.11	74.11	74.55	74.35	73.46	73.46	73.35	73.34	73.38	73.38	---	---
27	74.11	74.09	74.55	74.49	73.47	73.46	73.34	73.30	73.40	73.38	---	---
28	74.09	74.06	74.49	74.47	73.46	73.32	73.32	73.28	73.42	73.40	---	---
29	74.17	74.06	74.68	74.48	---	---	73.35	73.28	73.43	73.42	---	---
30	---	---	74.67	74.54	73.36	73.21	73.29	73.28	73.43	73.27	---	---
31	---	---	74.54	74.52	---	---	73.35	73.26	73.27	73.21	---	---
MONTH	74.17	72.99	74.68	74.06	74.54	73.21	73.65	73.16	73.46	73.16	73.26	73.15



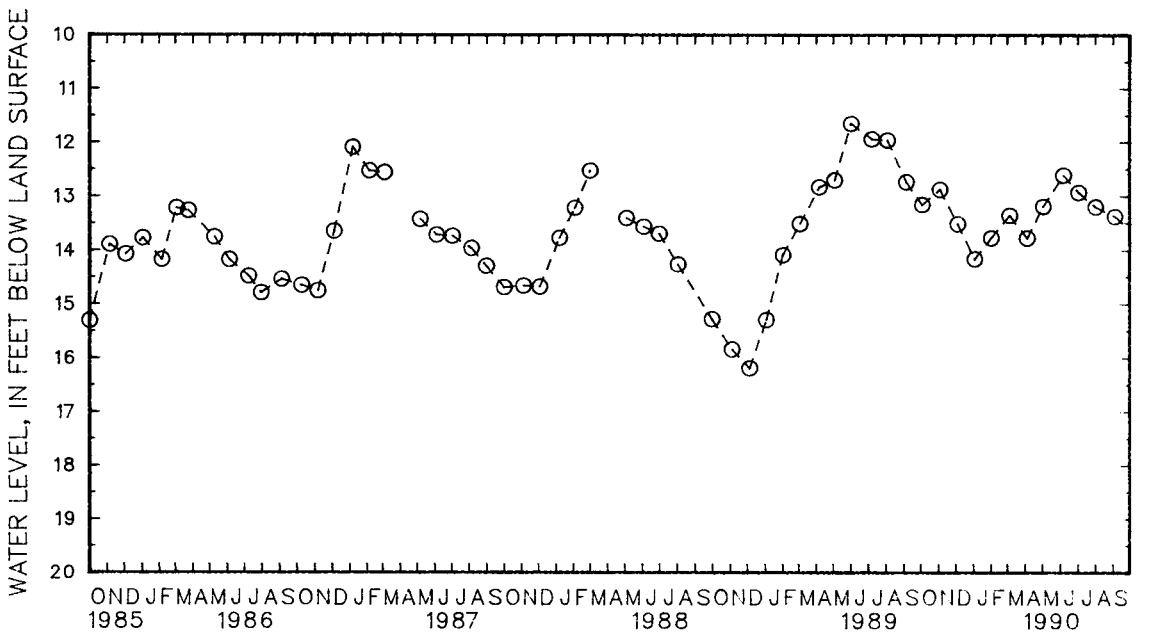
5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

ANNE ARUNDEL COUNTY--Continued

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.
REMARKS.--Maryland Water-Level Network observation well. Water level measured 14.10 ft below land surface, 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, March 31, 1958; lowest measured, 19.09 ft below land surface, Dec. 7, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	13.16	DEC 4	13.52	FEB 1	13.78	APR 4	13.78	JUN 6	12.61	AUG 1	13.20
NOV 3	12.88	JAN 3	14.17	MAR 5	13.36	MAY 2	13.19	JUL 2	12.93	SEP 4	13.38



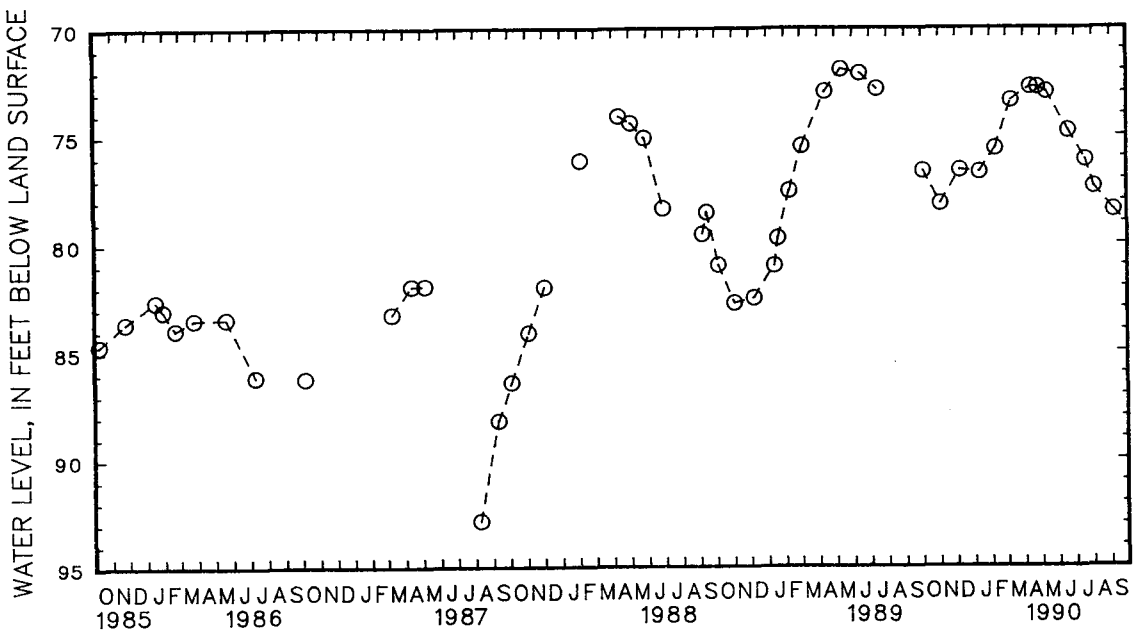
5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

ANNE ARUNDEL COUNTY--Continued

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.
REMARKS.--Maryland Water-Level Network observation well and Glen Burnie Project observation well.
PERIOD OF RECORD.--March 1962 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 40.60 ft below land surface, May 1, 1962; lowest measured, 92.84 ft below land surface, Aug. 10, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	76.65	JAN 12	76.72	MAR 9	73.38	APR 25	72.76	JUN 19	74.80	AUG 3	77.41
NOV 3	78.18	FEB 9	75.62	APR 12	72.75	MAY 11	72.98	JUL 19	76.15	SEP 7	78.49
DEC 8	76.63										

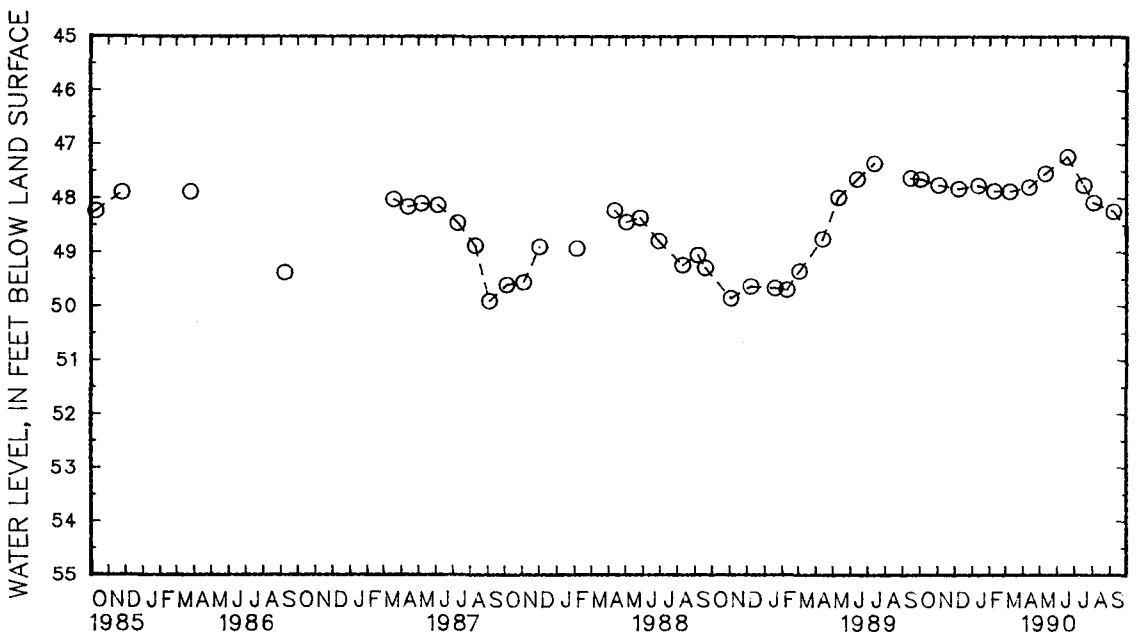


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--December 1959 to current year
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 42.58 ft below land surface, March 25, 1961; lowest measured, 50.09 ft below land surface, Oct. 14, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	47.65	DEC 8	47.83	FEB 9	47.87	APR 12	47.80	JUN 19	47.24	AUG 3	48.09
NOV 3	47.76	JAN 12	47.77	MAR 9	47.88	MAY 11	47.55	JUL 17	47.77	SEP 7	48.25



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
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, March 27, 1978; lowest measured, 3.14 ft above sea level, Sept. 4, 1987.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	15.37	15.08	14.23	14.06	13.82	13.58	14.09	13.69	14.32	14.05	14.75	14.50
2	15.31	14.99	14.10	13.88	14.05	13.65	13.69	13.56	14.41	14.22	14.93	14.68
3	15.08	14.91	14.08	13.88	14.01	13.75	13.71	13.55	14.31	14.11	15.01	14.86
4	15.03	14.88	14.18	13.92	13.87	13.69	13.94	13.61	14.61	14.28	14.86	14.65
5	15.08	14.91	14.14	13.97	13.97	13.82	13.88	13.67	14.38	14.11	14.80	14.69
6	15.08	14.77	14.23	14.00	14.03	13.81	13.96	13.80	14.40	14.16	14.90	14.57
7	15.07	14.76	14.31	14.13	13.98	13.60	13.97	13.75	14.42	14.08	14.72	14.44
8	14.88	14.63	14.19	14.00	13.80	13.56	14.09	13.80	14.38	14.04	14.90	14.58
9	14.86	14.62	14.05	13.89	13.87	13.65	14.15	13.89	14.63	14.29	15.10	14.83
10	14.88	14.59	14.05	13.86	13.94	13.78	14.23	14.03	14.76	14.43	15.06	14.86
11	14.82	14.58	13.88	13.63	13.98	13.76	14.32	13.91	14.58	14.38	15.17	14.95
12	14.80	14.54	13.95	13.75	14.00	13.71	14.27	14.06	14.58	14.34	15.24	15.02
13	14.75	14.54	14.06	13.79	14.08	13.73	14.05	13.79	14.63	14.24	15.25	15.07
14	14.78	14.51	14.33	13.96	14.01	13.86	13.88	13.71	14.61	14.39	15.30	15.10
15	14.77	14.49	14.15	13.76	14.11	13.82	13.95	13.79	14.56	14.29	15.34	15.08
16	14.77	14.53	13.97	13.76	14.02	13.74	13.93	13.79	14.75	14.49	15.40	15.19
17	14.69	14.50	13.76	13.51	13.80	13.50	14.04	13.77	14.63	14.16	15.61	15.31
18	14.88	14.51	14.17	13.77	13.74	13.46	14.12	13.96	14.41	14.10	15.55	15.29
19	14.98	14.72	14.17	13.68	13.93	13.42	13.99	13.75	14.70	14.41	15.44	15.22
20	14.74	14.49	13.76	13.51	13.96	13.70	14.12	13.81	14.46	14.22	15.42	15.29
21	14.52	14.26	13.91	13.66	13.88	13.65	14.30	14.09	14.40	14.17	15.33	15.12
22	14.42	14.26	13.83	13.66	13.64	13.35	14.26	14.02	14.79	14.31	15.50	15.25
23	14.41	14.27	13.99	13.66	13.50	13.25	14.20	14.02	14.94	14.74	15.55	15.29
24	14.39	14.25	14.00	13.83	13.70	13.27	14.27	14.13	14.87	14.59	15.44	15.19
25	14.36	14.18	---	---	13.91	13.56	14.44	14.11	14.60	14.12	15.57	15.36
26	14.37	14.15	---	---	14.01	13.62	14.44	14.09	14.34	14.03	15.57	15.43
27	14.30	14.12	---	---	13.71	13.57	14.17	14.00	14.69	14.24	15.50	15.22
28	14.28	14.07	14.09	13.82	13.77	13.56	14.17	14.08	14.70	14.57	15.57	15.38
29	14.42	14.12	13.93	13.61	13.70	13.44	14.53	14.02	---	---	15.58	15.32
30	14.36	14.09	13.98	13.66	13.73	13.59	14.46	14.25	---	---	15.74	15.47
31	14.15	13.99	---	---	14.11	13.67	14.26	14.07	---	---	15.90	15.67
MONTH	15.37	13.99	14.33	13.51	14.11	13.25	14.53	13.55	14.94	14.03	15.90	14.44

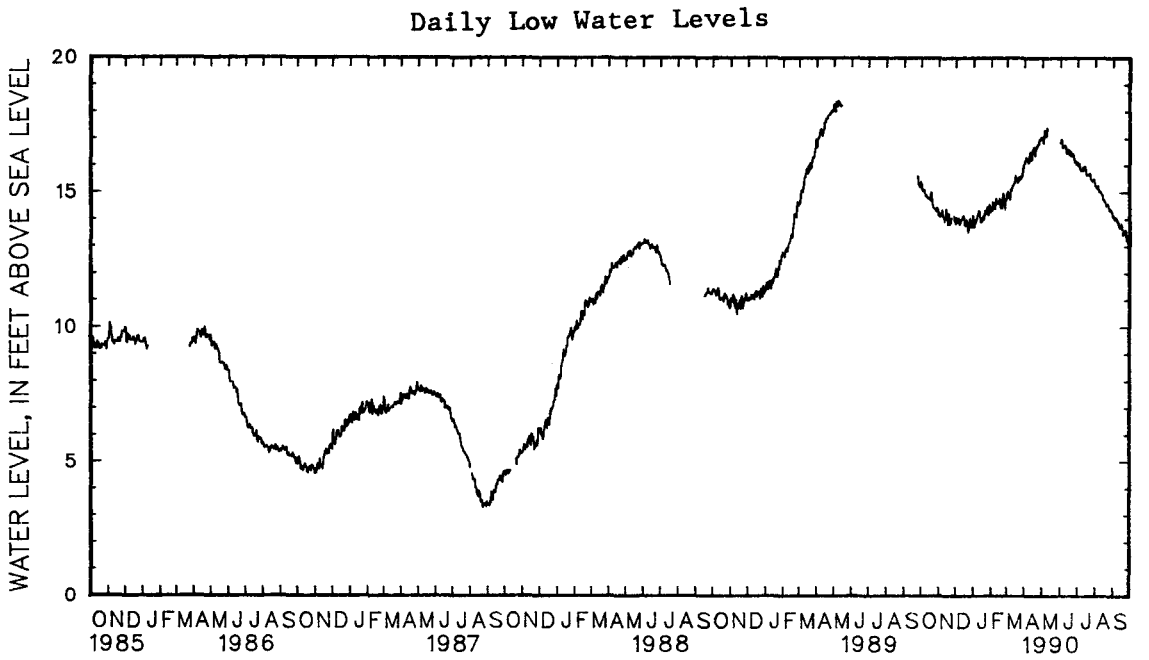
GROUND-WATER LEVELS

MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

AA Ce 117--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	15.99	15.80	17.05	16.86	16.85	16.58	16.09	15.91	15.32	15.17	14.08	14.03
2	16.17	15.87	17.00	16.78	16.87	16.62	16.00	15.77	15.23	15.07	14.11	13.98
3	16.22	16.04	16.84	16.53	16.96	16.69	16.01	15.71	15.18	15.05	14.01	13.83
4	16.29	16.13	17.06	16.71	16.95	16.67	16.04	15.81	15.13	14.99	13.96	13.69
5	16.27	16.07	17.29	17.03	16.66	16.44	15.97	15.79	15.17	15.01	14.05	13.85
7	16.18	16.01	17.12	16.92	16.73	16.52	15.82	15.67	15.15	14.96	14.04	13.91
8	16.08	15.95	17.08	16.83	16.68	16.48	15.79	15.67	15.00	14.85	13.99	13.74
9	16.13	15.95	17.13	16.88	16.74	16.59	15.83	15.65	14.99	14.79	13.87	13.71
10	16.43	16.09	17.39	17.05	16.73	16.55	15.79	15.57	15.03	14.89	13.88	13.81
12	16.25	16.09	---	---	16.44	16.28	15.91	15.60	14.94	14.64	13.72	13.58
13	16.20	16.08	---	---	16.52	16.36	15.85	15.66	14.89	14.70	13.67	13.52
14	16.43	16.17	---	---	16.59	16.34	15.83	15.65	14.87	14.64	13.73	13.58
15	16.56	16.41	---	---	16.58	16.51	15.96	15.67	14.72	14.64	13.83	13.67
17	16.67	16.43	---	---	16.39	16.26	15.65	15.44	14.64	14.57	13.66	13.33
18	16.44	16.13	---	---	16.47	16.27	15.62	15.42	14.66	14.31	13.41	13.16
19	16.36	16.12	---	---	16.51	16.35	15.62	15.46	14.59	14.48	13.55	13.31
20	16.55	16.30	---	---	16.35	16.19	15.64	15.46	14.49	14.35	13.52	13.32
22	16.65	16.50	---	---	16.35	16.15	15.67	15.53	14.54	14.38	13.58	13.37
23	16.76	16.47	---	---	16.42	16.25	15.70	15.51	14.57	14.39	13.54	13.34
24	16.75	16.54	---	---	16.36	16.15	15.58	15.39	14.50	14.38	13.34	13.16
25	16.79	16.57	---	---	16.20	16.05	15.45	15.24	14.42	14.32	13.19	12.95
27	16.97	16.64	---	---	16.14	15.92	15.42	15.15	14.38	14.16	13.12	12.96
28	16.96	16.75	---	---	16.10	15.86	15.39	15.18	14.32	14.15	13.06	12.94
29	17.01	16.77	---	---	16.05	15.80	15.42	15.13	14.34	14.22	13.12	12.94
30	17.05	16.88	---	---	16.11	15.93	15.46	15.34	14.24	14.08	13.06	12.87
31	---	---	---	---	---	---	15.46	15.33	14.14	13.99	---	---
MONTH	17.05	15.80	17.39	16.53	16.96	15.80	16.09	15.13	15.32	13.99	14.11	12.87

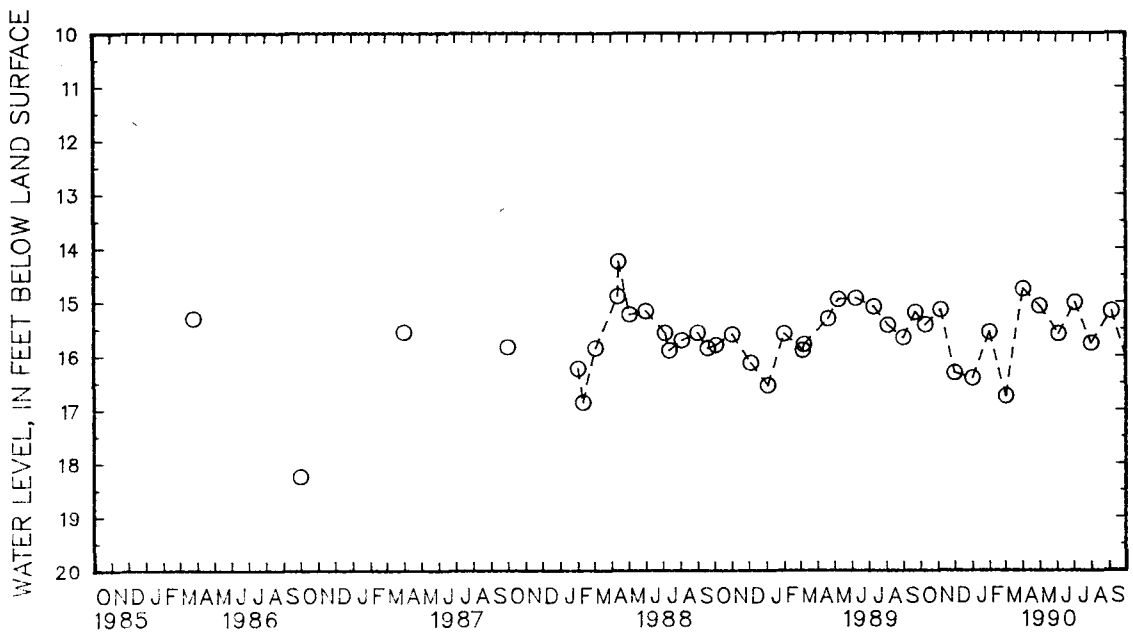


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--April 1981 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.24 ft below land surface, April 13, 1988; lowest measured, 18.25 ft below land surface, Oct. 1, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	15.42	DEC 1	16.32	FEB 1	15.56	APR 2	14.76	JUN 4	15.59	AUG 1	15.77
NOV 6	15.15	JAN 2	16.42	MAR 2	16.75	MAY 1	15.08	JUL 3	15.01	SEP 5	15.17



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

MARYLAND--Continued

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.
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 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	15.96	15.71	16.35	16.30	16.81	16.68	16.68	16.56	17.00	16.91	---	---
2	15.96	15.96	16.41	16.31	16.80	16.62	16.57	16.56	17.00	16.89	---	---
3	15.96	15.91	16.30	16.19	16.72	16.63	16.69	16.57	17.02	16.88	---	---
4	15.96	15.92	16.20	16.19	16.74	16.72	16.74	16.70	17.02	16.81	---	---
5	16.06	15.96	16.30	16.20	16.77	16.63	16.74	16.69	16.85	16.80	---	---
6	16.07	16.00	16.40	16.30	16.62	16.56	16.74	16.68	16.96	16.86	---	---
7	16.01	16.00	16.54	16.40	16.62	16.59	16.77	16.68	16.96	16.93	---	---
8	16.01	15.89	16.61	16.54	16.65	16.62	16.83	16.78	---	---	---	---
9	15.95	15.89	16.58	16.44	16.67	16.65	17.02	16.83	---	---	---	---
10	15.98	15.94	16.44	16.41	16.72	16.67	17.09	17.00	---	---	---	---
11	15.98	15.93	16.44	16.30	16.83	16.72	17.19	17.10	---	---	---	---
12	15.98	15.96	16.35	16.27	16.89	16.83	17.19	17.04	---	---	---	---
13	15.97	15.96	16.47	16.35	---	---	---	---	---	---	---	---
14	15.97	15.93	16.66	16.47	---	---	---	---	---	---	---	---
15	15.97	15.92	16.85	16.66	---	---	17.01	17.01	---	---	---	---
16	16.11	15.97	16.83	16.71	---	---	17.01	17.01	---	---	---	---
17	16.14	16.11	16.73	16.69	---	---	17.05	17.01	---	---	---	---
18	16.42	16.15	16.73	16.66	---	---	17.05	16.86	---	---	---	---
19	16.57	16.43	17.09	16.74	---	---	16.86	16.83	---	---	---	---
20	16.60	16.57	17.09	16.84	17.01	16.94	16.97	16.87	---	---	---	---
21	16.60	16.51	16.84	16.77	16.94	16.79	16.97	16.85	---	---	---	---
22	16.51	16.47	16.86	16.75	16.78	16.64	16.87	16.80	---	---	---	---
23	16.55	16.50	16.75	16.70	16.64	16.56	16.85	16.80	---	---	---	---
24	16.54	16.51	16.83	16.73	16.62	16.58	16.90	16.80	---	---	---	---
25	16.51	16.46	16.84	16.69	16.80	16.62	16.98	16.91	---	---	---	---
26	16.46	16.41	16.82	16.65	16.80	16.61	16.96	16.76	---	---	---	---
27	16.40	16.35	16.85	16.77	16.68	16.61	16.79	16.76	---	---	---	---
28	16.34	16.27	16.77	16.68	16.65	16.60	16.91	16.78	---	---	---	---
29	16.29	16.27	16.73	16.67	16.63	16.60	17.09	16.93	---	---	---	---
30	16.45	16.29	16.68	16.65	16.69	16.61	17.01	16.92	---	---	---	---
31	16.45	16.32	---	---	16.78	16.68	16.92	16.90	---	---	---	---
MONTH	16.60	15.71	17.09	16.19	17.01	16.56	17.19	16.56	17.02	16.80	---	---

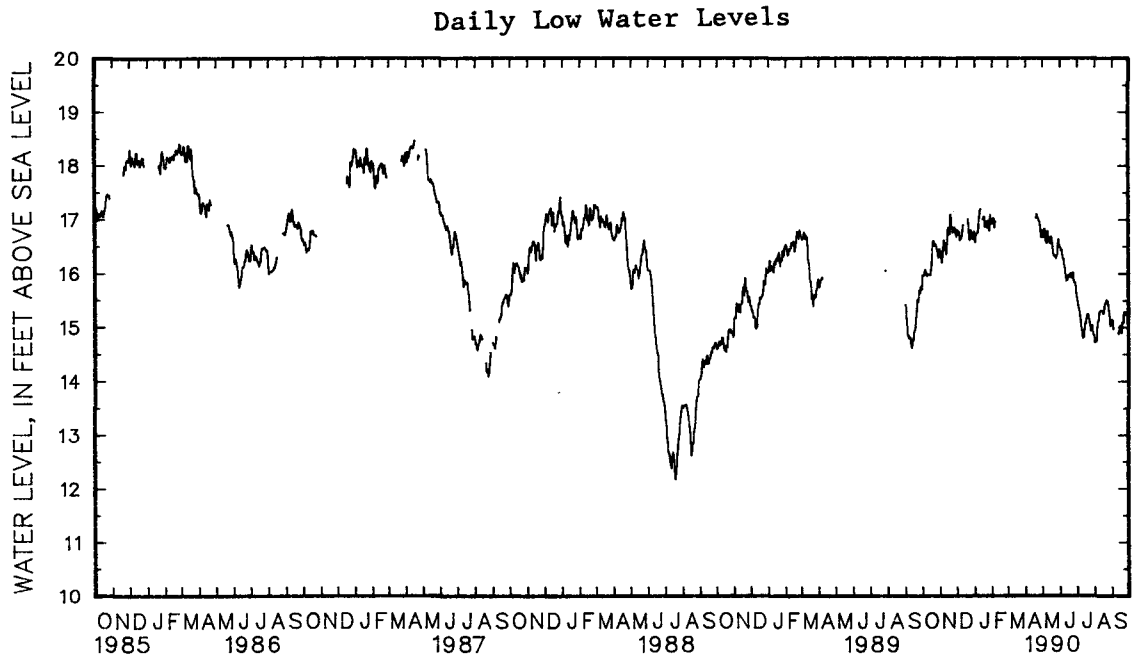
GROUND-WATER LEVELS

MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

AA Dd 42-- 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	---	---	16.79	16.74	16.49	16.47	15.51	15.48	14.71	14.67	15.12	15.09
2	---	---	16.79	16.67	16.47	16.42	15.47	15.38	14.71	14.67	15.11	14.93
3	---	---	16.67	16.61	16.42	16.42	15.38	15.35	14.72	14.71	14.95	14.93
4	---	---	16.71	16.61	16.44	16.35	15.35	15.27	14.72	14.72	14.96	14.94
5	---	---	16.83	16.71	16.35	16.26	15.27	15.20	14.89	14.72	---	---
7	---	---	16.60	16.58	16.28	16.17	15.14	15.03	15.09	15.05	---	---
8	---	---	16.59	16.56	16.16	16.11	15.02	14.99	15.11	15.09	---	---
9	---	---	16.56	16.54	16.11	16.04	14.99	14.88	15.26	15.11	---	---
10	---	---	16.78	16.54	16.04	15.97	14.87	14.80	15.27	15.26	---	---
12	---	---	16.59	16.50	15.86	15.85	14.81	14.77	15.29	15.29	14.89	14.87
13	---	---	16.66	16.52	15.87	15.85	14.81	14.81	15.29	15.28	14.87	14.85
14	---	---	16.66	16.56	15.89	15.87	14.97	14.81	15.28	15.28	14.94	14.85
15	---	---	16.56	16.56	15.96	15.89	15.06	14.97	15.28	15.23	15.02	14.94
17	---	---	16.68	16.64	15.93	15.91	15.15	15.04	15.25	15.20	14.96	14.88
18	---	---	16.64	16.51	15.95	15.91	15.20	15.15	15.32	15.25	14.88	14.86
19	---	---	16.51	16.38	16.00	15.95	15.24	15.20	15.40	15.32	15.08	14.88
20	17.04	16.97	16.38	16.33	16.00	15.93	15.24	15.20	15.43	15.40	15.08	15.02
22	17.09	17.02	16.32	16.28	15.92	15.83	15.14	15.09	15.49	15.43	15.26	15.08
23	17.03	17.01	16.33	16.32	16.01	15.93	15.08	15.02	15.49	15.49	15.28	15.26
24	17.02	16.98	16.33	16.29	16.01	15.90	15.02	14.92	15.49	15.41	15.26	15.19
25	16.98	16.96	16.28	16.19	15.89	15.83	14.92	14.92	15.41	15.31	15.23	15.17
27	16.91	16.81	16.35	16.32	15.83	15.83	15.03	14.97	15.24	15.16	15.28	15.26
28	16.81	16.66	16.37	16.35	15.82	15.71	15.03	14.87	15.16	14.95	15.26	15.24
29	16.67	16.65	16.63	16.37	15.71	15.62	14.86	14.85	15.00	14.94	15.24	15.21
30	16.74	16.67	16.63	16.53	15.61	15.52	14.85	14.83	15.07	15.01	15.21	15.18
31	---	---	16.53	16.49	---	---	14.83	14.71	15.09	15.07	---	---
MONTH	17.10	16.65	16.83	16.19	16.49	15.52	15.51	14.71	15.49	14.67	15.28	14.85



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

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.
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 1989 TO SEPTEMBER 1990
(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	3.87	14.18	1.95	25.36	5.71	23.86	2.75	12.97	---	---	---	---
2	3.58	8.90	7.57	25.37	2.11	13.91	2.84	8.83	---	---	---	---
3	3.81	8.84	6.50	22.75	9.36	13.19	3.12	8.96	---	---	---	---
4	1.53	8.62	7.29	18.22	3.01	9.43	2.89	8.93	---	---	---	---
5	7.08	8.15	3.87	13.85	3.49	9.03	2.82	10.01	---	---	---	---
6	3.57	13.15	1.56	10.96	2.33	9.37	2.18	8.54	---	---	---	---
7	4.39	10.84	5.33	22.33	2.20	9.41	+3.24	8.55	---	---	---	---
8	3.72	11.32	4.48	22.71	1.86	11.79	+4.96	+2.87	---	---	---	---
9	4.17	12.05	5.57	20.83	.43	11.11	+5.93	+4.84	---	---	---	---
10	3.97	12.07	5.55	12.38	+2.56	8.24	+6.67	+5.94	.01	11.93	---	---
11	3.38	6.50	4.71	10.78	+4.50	+2.56	+6.83	+6.03	---	---	---	---
12	4.06	11.55	+.33	10.69	+5.31	+4.50	+7.26	+6.07	---	---	---	---
13	4.30	11.79	+2.01	9.31	+5.76	+5.05	+7.25	+6.01	---	---	---	---
14	3.59	6.95	+2.97	8.66	---	---	+7.19	+6.05	---	---	---	---
15	.82	6.51	+4.31	+2.97	---	---	+7.44	19.19	---	---	---	---
16	+.43	.76	+4.32	5.83	+3.18	+2.84	+.02	20.45	---	---	---	---
17	+1.12	1.39	+4.50	5.22	+3.13	+2.89	+.44	21.91	---	---	---	---
18	+1.15	4.38	+5.00	+4.24	+3.10	9.83	1.78	21.95	---	---	---	---
19	+1.66	+1.17	+5.68	26.73	+.30	20.82	2.48	22.97	---	---	---	---
20	+1.83	+1.05	1.74	22.99	1.28	21.49	.96	22.97	---	---	---	---
21	+1.86	+1.56	1.36	22.69	2.14	22.20	.22	21.84	---	---	---	---
22	+1.87	21.85	1.59	22.73	1.59	22.93	---	---	---	---	---	---
23	---	---	.72	28.48	1.27	22.49	---	---	---	---	---	---
24	---	---	3.85	31.65	3.58	22.95	---	---	---	---	---	---
25	---	---	1.32	21.99	2.59	22.81	---	---	---	---	---	---
26	5.91	27.74	4.28	30.77	.71	11.90	---	---	---	---	---	---
27	5.69	36.19	3.00	12.83	3.59	21.35	---	---	---	---	---	---
28	6.57	34.96	3.81	12.98	3.39	14.01	---	---	---	---	---	---
29	5.98	25.76	4.65	13.09	3.97	15.53	---	---	---	---	---	---
30	5.85	16.45	+.98	22.08	7.27	23.12	---	---	---	---	---	---
31	6.35	15.63	---	---	3.63	13.87	---	---	---	---	---	---
MONTH	+1.87	36.19	+5.68	31.65	+5.76	23.86	+7.56	22.97	.01	11.93	---	---

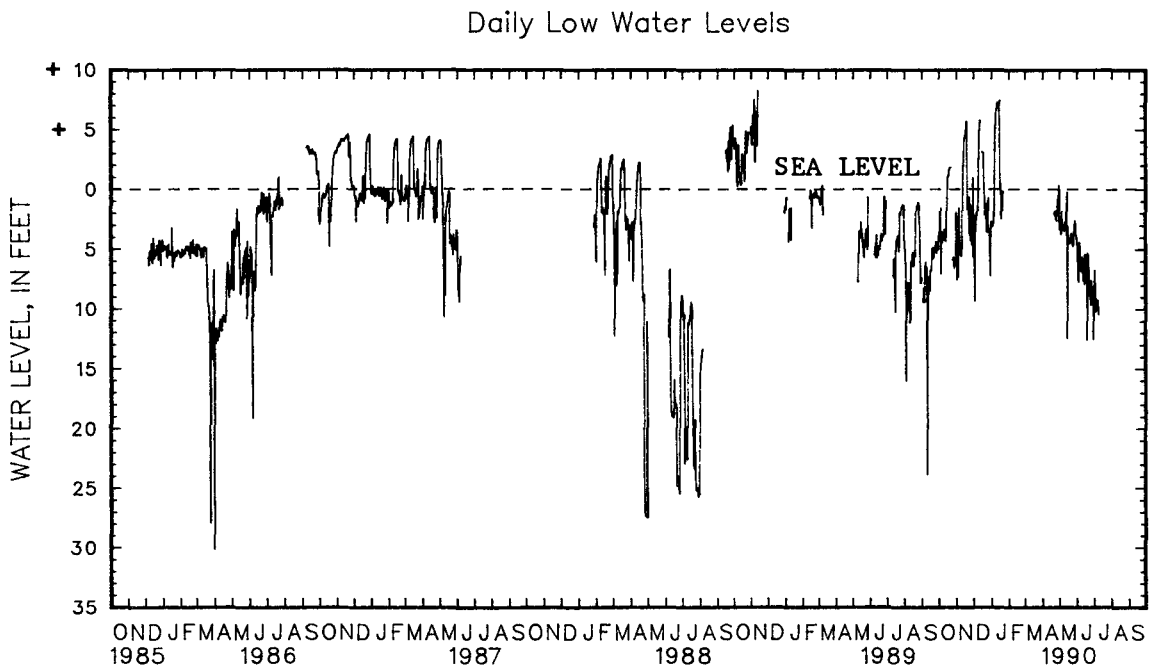
GROUND-WATER LEVELS

MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

AA De 1--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	---	---	2.70	18.84	4.05	19.79	8.35	17.93	---	---	---	---
2	---	---	3.36	18.13	5.42	13.51	6.77	14.93	---	---	---	---
3	---	---	3.39	17.96	7.68	13.81	9.07	15.07	---	---	---	---
4	---	---	3.72	17.91	7.73	9.05	10.22	22.38	---	---	---	---
5	---	---	1.87	13.35	4.44	13.61	9.87	22.66	---	---	---	---
7	---	---	3.39	13.94	5.66	14.83	9.26	15.99	---	---	---	---
8	---	---	3.03	6.27	6.84	16.13	9.81	16.13	---	---	---	---
9	---	---	3.30	6.50	6.52	15.23	10.42	24.04	---	---	---	---
10	---	---	3.48	6.51	5.70	14.17	---	---	---	---	---	---
12	---	---	3.02	6.21	7.64	19.83	---	---	---	---	---	---
13	---	---	2.54	6.03	6.09	19.49	---	---	---	---	---	---
14	---	---	.22	12.95	7.92	19.18	---	---	---	---	---	---
15	---	---	12.48	12.97	5.42	19.28	---	---	---	---	---	---
17	---	---	3.84	19.17	5.70	18.42	---	---	---	---	---	---
18	---	---	4.50	12.91	5.52	18.88	---	---	---	---	---	---
19	---	---	4.17	13.68	12.64	18.76	---	---	---	---	---	---
20	---	---	4.44	13.97	5.34	15.93	---	---	---	---	---	---
22	2.07	21.86	3.65	9.06	6.74	20.93	---	---	---	---	---	---
23	1.84	21.86	3.89	8.94	8.88	22.95	---	---	---	---	---	---
24	2.09	5.30	4.62	12.94	8.16	21.27	---	---	---	---	---	---
25	2.41	5.50	4.73	13.09	9.65	15.97	---	---	---	---	---	---
27	1.07	12.13	3.34	8.96	8.40	15.08	---	---	---	---	---	---
28	.68	10.28	3.07	8.51	8.26	16.70	---	---	---	---	---	---
29	.49	6.39	2.60	5.90	9.05	17.00	---	---	---	---	---	---
30	+.30	16.11	2.89	14.73	12.54	17.95	---	---	---	---	---	---
31	---	---	4.11	12.96	---	---	---	---	---	---	---	---
MONTH	+.30	21.86	.22	19.17	4.05	22.95	6.77	24.04	---	---	---	---



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
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, March 20, 1989; lowest measured, 9.87 ft below sea level, Aug. 28, 1989.

WATER LEVEL, IN FEET BELOW SEA LEVEL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	1.99	2.42	1.84	2.17	.38	1.80	1.18	1.68	2.67	3.27	2.18	2.47
2	1.62	2.15	.91	2.17	.97	1.23	1.51	1.82	2.15	2.78	2.14	2.25
3	1.64	2.01	1.24	1.72	.73	1.20	1.53	1.84	2.09	2.54	1.71	2.19
4	1.72	2.13	1.57	1.81	1.17	1.45	1.41	1.81	1.68	2.28	2.06	2.37
5	1.84	3.52	1.54	1.83	.99	1.46	1.41	1.69	2.13	5.70	2.10	2.40
6	2.32	2.80	1.29	1.76	.82	1.15	1.33	1.69	5.68	7.39	1.94	2.37
7	2.05	2.41	.66	1.61	.84	1.35	1.45	4.05	5.76	7.48	2.34	2.54
8	1.85	2.28	.61	1.32	.88	1.44	4.11	6.31	4.16	6.47	2.16	2.53
9	1.85	2.17	.43	1.00	.80	1.28	---	---	3.16	4.15	1.88	2.26
10	1.79	2.18	.78	1.21	.51	1.18	6.76	8.06	2.53	3.19	1.78	2.13
11	1.66	1.98	1.04	1.33	.91	4.52	7.35	8.29	2.52	2.92	1.65	2.09
12	1.67	2.02	1.15	1.50	4.06	6.12	7.68	8.82	2.62	2.85	1.95	2.09
13	1.72	1.99	1.44	4.79	4.93	6.61	8.16	9.27	2.16	2.88	1.72	2.12
14	1.73	3.62	3.56	5.38	5.95	7.37	8.65	9.50	2.05	2.40	1.66	2.00
15	2.25	4.00	3.75	5.80	6.84	7.79	6.15	9.65	2.34	2.46	1.65	1.98
16	2.88	5.79	5.57	7.06	6.68	8.08	4.69	6.11	1.91	2.40	1.66	2.00
17	5.84	7.16	5.59	7.40	7.66	8.63	3.84	4.69	2.05	4.27	1.28	1.94
18	6.85	7.96	5.95	7.75	5.36	8.85	3.35	3.86	2.62	3.84	1.33	1.75
19	5.67	7.76	7.58	8.35	3.78	5.35	3.05	3.53	2.28	5.49	1.59	4.57
20	6.70	7.71	5.15	8.49	2.97	3.81	2.67	3.24	4.91	6.50	3.07	5.38
21	7.69	8.94	4.04	5.12	2.56	3.07	2.35	2.76	3.31	4.90	3.74	6.74
22	8.31	9.25	3.23	4.03	2.50	2.83	2.34	2.66	2.55	3.33	6.73	7.79
23	6.06	9.51	2.70	3.19	2.35	2.71	2.30	2.62	2.13	2.55	5.53	7.89
24	4.45	6.01	2.47	2.84	2.09	2.49	2.18	2.51	2.01	2.34	4.21	6.54
25	3.53	4.43	2.06	2.53	1.52	2.24	1.15	3.43	2.19	2.65	6.47	8.05
26	2.99	3.57	1.79	2.17	1.34	1.84	2.16	4.47	2.31	3.30	5.21	8.22
27	2.73	3.08	2.01	2.20	1.71	1.96	3.15	6.19	2.48	2.89	3.77	5.15
28	2.47	2.88	1.52	2.00	1.39	1.83	4.52	7.11	2.16	2.55	3.09	3.77
29	2.31	2.64	1.65	1.92	1.58	1.82	4.45	7.48	---	---	2.75	3.22
30	2.13	2.49	1.59	1.84	1.51	1.77	3.57	4.44	---	---	2.21	2.76
31	1.84	2.30	---	---	1.34	1.76	3.17	3.98	---	---	2.13	2.48
MONTH	1.62	9.51	.43	8.49	.38	8.85	1.15	9.65	1.68	7.48	1.28	8.22

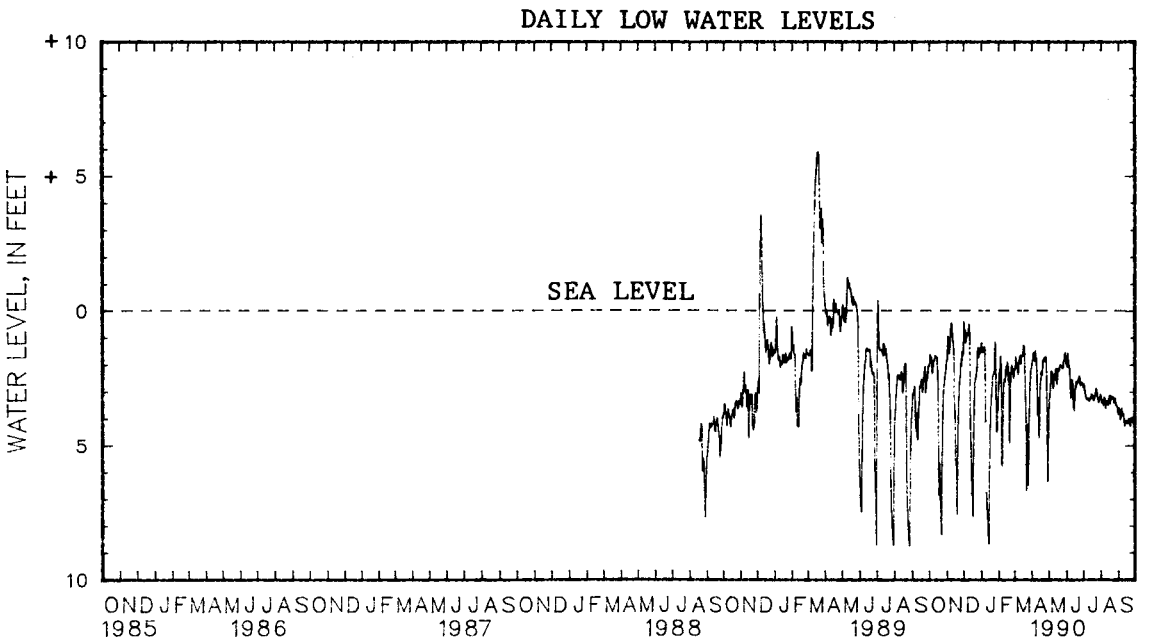
GROUND-WATER LEVELS

MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

AA De 177--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	2.00	2.36	3.52	4.61	1.99	2.30	2.71	2.95	3.19	3.42	3.71	3.94
2	1.85	2.98	3.21	3.55	2.08	2.32	2.79	3.03	3.39	3.56	3.61	3.81
3	1.67	2.01	2.98	3.31	1.58	2.20	2.96	3.12	3.31	3.58	3.71	4.05
4	1.55	1.91	2.68	3.51	1.89	2.25	3.07	3.16	3.38	3.61	4.02	4.11
5	1.67	1.99	2.23	3.05	2.06	2.53	3.19	3.30	3.49	3.70	3.96	4.11
6	1.86	2.07	2.26	2.54	2.18	3.35	3.26	3.44	3.37	3.66	3.81	4.05
7	1.47	2.06	2.32	3.65	2.69	4.09	3.28	3.50	3.22	3.68	3.62	3.96
8	1.80	2.14	2.69	3.96	3.25	4.54	3.28	3.45	3.34	3.60	3.87	4.18
9	1.78	4.03	2.85	4.10	2.88	3.72	3.23	3.41	3.62	3.70	3.85	4.20
10	2.56	5.60	2.51	3.57	2.56	2.98	3.32	3.50	3.34	3.72	3.84	4.05
11	3.87	5.56	2.35	3.06	2.68	4.14	3.33	3.56	3.34	3.64	4.04	4.29
12	3.23	4.39	2.55	3.01	3.53	4.85	3.33	3.61	3.38	3.67	4.26	4.35
13	4.53	7.18	2.17	2.61	3.59	4.52	3.24	3.54	3.48	3.69	4.08	4.38
14	4.71	7.46	2.13	4.00	3.69	4.60	3.24	3.55	3.37	3.67	4.17	4.28
15	3.25	4.67	2.73	3.28	3.21	3.98	3.08	3.40	3.24	3.64	4.14	4.33
16	2.73	3.29	2.32	2.72	2.81	3.20	3.14	3.41	3.13	3.47	4.08	4.33
17	2.29	2.79	2.16	2.48	2.85	3.08	3.22	3.48	3.45	3.64	4.15	4.46
18	2.26	2.59	2.23	2.49	2.62	2.95	3.14	3.47	3.29	3.65	4.16	4.47
19	2.38	2.64	2.18	2.49	2.71	2.94	3.32	3.48	3.22	3.52	4.00	4.33
20	2.10	2.52	2.06	2.38	2.67	3.01	3.25	3.50	3.16	3.52	4.10	4.46
21	1.81	2.27	2.00	2.30	2.65	2.93	3.15	3.38	3.24	3.54	4.20	4.53
22	1.87	2.11	2.03	2.36	2.50	2.98	3.05	3.36	3.19	3.51	4.27	4.54
23	1.73	2.09	2.03	2.26	2.42	2.63	2.87	3.27	3.21	3.46	3.99	4.28
24	1.73	2.04	2.11	2.35	2.49	2.71	3.01	3.29	3.40	3.54	4.08	4.25
25	1.72	2.07	2.12	2.40	2.77	2.99	3.15	3.40	3.38	3.64	3.96	4.26
26	1.70	2.92	1.87	2.36	2.70	3.07	3.22	3.42	3.25	3.51	4.00	4.17
27	2.52	5.21	1.84	2.20	2.65	2.95	3.37	3.54	3.47	3.52	4.15	4.28
28	5.06	6.39	1.81	2.19	2.68	2.95	3.39	3.61	3.49	3.62	4.06	4.33
29	6.33	7.16	1.55	2.05	2.73	2.95	3.30	3.55	3.54	3.65	3.95	4.25
30	4.61	7.40	1.77	2.10	2.81	2.97	3.21	3.49	3.61	3.84	3.74	4.11
31	---	---	1.98	2.28	---	---	3.08	3.36	3.83	3.93	---	---
MONTH	1.47	7.46	1.55	4.61	1.58	4.85	2.71	3.61	3.13	3.93	3.61	4.54



5 YEAR HYDROGRAPH

OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
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 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	9.18	9.66	8.43	8.48	8.17	8.22	7.27	7.36	7.03	7.07	---	---
2	9.13	9.17	8.48	8.52	7.83	8.23	7.37	7.65	7.03	7.06	---	---
3	9.15	9.36	8.50	8.52	7.83	8.04	7.65	7.83	7.03	7.05	---	---
4	9.36	9.45	8.52	8.53	8.05	8.37	7.69	7.86	6.72	7.04	---	---
5	9.42	9.45	8.50	8.52	8.21	8.36	7.63	7.67	6.72	6.88	---	---
6	9.41	9.42	8.41	8.50	7.99	8.21	7.57	7.63	6.77	6.88	---	---
7	9.40	9.43	8.39	8.41	7.97	8.06	7.42	7.57	6.77	6.84	---	---
8	9.22	9.40	8.22	8.39	8.06	8.12	7.34	7.42	6.84	6.90	---	---
9	9.07	9.23	8.07	8.22	8.12	8.18	7.13	7.34	---	---	---	---
10	8.98	9.07	8.08	8.11	8.01	8.18	7.05	7.13	---	---	---	---
11	8.98	8.99	8.11	8.21	7.90	8.01	7.06	7.09	---	---	---	---
12	8.97	8.98	8.21	8.39	7.90	7.92	7.06	7.11	---	---	---	---
13	8.97	8.99	8.39	8.49	7.92	7.97	7.11	7.41	---	---	---	---
14	8.96	8.99	8.46	8.48	7.97	8.02	7.42	7.55	---	---	---	---
15	8.95	8.96	8.40	8.46	8.02	8.19	7.55	7.57	---	---	---	---
16	8.90	8.95	8.07	8.40	8.19	8.50	7.57	7.59	---	---	---	---
17	8.90	8.91	8.07	8.25	8.50	8.69	7.57	7.58	---	---	---	---
18	8.83	8.94	8.25	8.37	8.69	8.72	7.49	7.57	---	---	---	---
19	8.29	8.83	8.38	8.58	8.29	8.72	7.49	7.65	---	---	---	---
20	8.29	8.33	8.38	8.55	8.21	8.27	7.62	7.67	---	---	---	---
21	8.34	8.58	8.38	8.86	8.01	8.21	7.31	7.61	---	---	---	---
22	8.58	8.92	8.80	8.92	8.02	8.32	7.17	7.31	---	---	---	---
23	8.91	8.93	8.63	8.78	8.33	8.46	7.10	7.17	---	---	---	---
24	8.90	8.91	8.24	8.63	8.47	8.54	7.08	7.10	---	---	---	---
25	8.87	8.90	8.03	8.24	7.46	8.53	7.02	7.08	---	---	---	---
26	8.85	8.87	8.03	8.07	7.36	7.45	6.98	7.02	---	---	---	---
27	8.84	8.85	8.08	8.20	7.47	7.85	7.02	7.12	---	---	---	---
28	8.81	8.84	7.93	8.18	7.84	7.86	7.12	7.24	---	---	---	---
29	8.79	8.81	7.93	8.11	7.84	7.86	7.13	7.29	---	---	---	---
30	8.64	8.79	8.12	8.17	7.74	7.84	6.99	7.13	---	---	---	---
31	8.43	8.64	---	---	7.29	7.74	6.99	7.03	---	---	---	---
MONTH	8.29	9.66	7.93	8.92	7.29	8.72	6.98	7.86	6.72	7.07	---	---

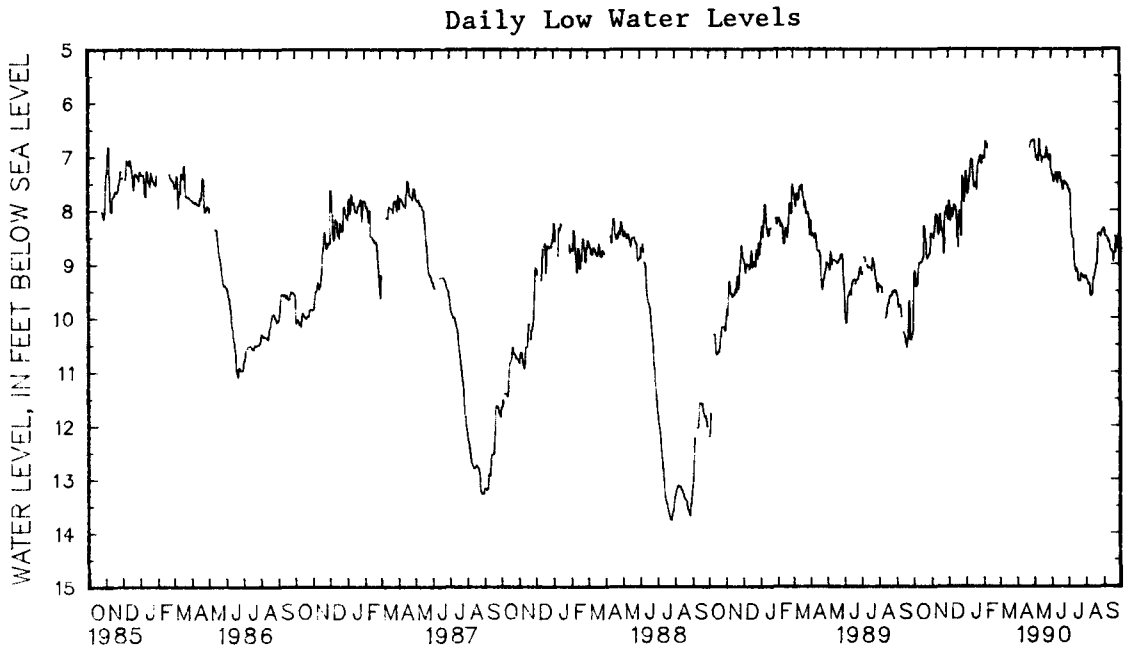
GROUND-WATER LEVELS

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	---	---	6.69	6.71	7.27	7.32	7.59	7.61	9.22	9.27	8.34	8.38
2	---	---	6.71	6.89	7.32	7.36	7.61	7.66	9.27	9.29	8.34	8.36
3	---	---	6.89	7.02	7.36	7.36	7.65	7.66	9.29	9.32	8.36	8.47
4	---	---	7.03	7.05	7.35	7.47	7.63	7.79	9.32	9.37	8.48	8.52
5	---	---	6.99	7.05	7.48	7.67	7.80	8.26	9.37	9.38	8.48	8.51
6	---	---	6.99	7.09	7.41	7.67	8.27	8.45	9.35	9.37	8.48	8.49
7	---	---	7.07	7.09	7.39	7.42	8.45	8.47	9.37	9.48	8.49	8.53
8	---	---	7.07	7.09	7.42	7.45	8.47	8.51	9.49	9.57	8.53	8.71
9	---	---	7.08	7.09	7.30	7.44	8.51	8.61	9.58	9.60	8.60	8.71
10	---	---	6.67	7.08	7.30	7.31	8.62	8.90	9.59	9.60	8.56	8.59
11	---	---	6.67	6.86	7.31	7.49	8.91	9.05	9.57	9.59	8.58	8.69
12	---	---	6.87	7.07	7.49	7.64	9.05	9.09	9.55	9.57	8.69	8.75
13	---	---	6.98	7.07	7.31	7.62	9.09	9.14	9.41	9.55	8.75	8.77
14	---	---	6.98	7.11	7.30	7.31	9.13	9.14	9.25	9.39	8.77	8.77
15	---	---	7.11	7.13	7.30	7.31	9.10	9.13	9.26	9.27	8.75	8.78
16	---	---	7.03	7.12	7.30	7.37	9.09	9.15	9.17	9.26	8.78	8.81
17	---	---	7.01	7.03	7.37	7.46	9.15	9.29	9.16	9.17	8.81	8.95
18	---	---	7.01	7.02	7.46	7.47	9.29	9.32	9.10	9.16	8.96	8.99
19	---	---	7.02	7.03	7.44	7.49	9.31	9.32	9.00	9.10	8.81	8.99
20	---	---	7.03	7.04	7.49	7.62	9.31	9.32	9.00	9.00	8.78	8.81
21	---	---	7.02	7.04	7.61	7.63	9.31	9.32	8.79	9.00	8.79	8.81
22	---	---	6.92	7.03	7.62	7.63	9.31	9.32	8.52	8.79	8.49	8.78
23	6.83	6.95	6.82	6.92	7.47	7.62	9.18	9.31	8.44	8.52	8.49	8.53
24	6.79	6.83	6.87	7.02	7.46	7.47	9.18	9.20	8.42	8.44	8.53	8.69
25	6.75	6.79	7.02	7.10	7.46	7.50	9.20	9.22	8.42	8.43	8.69	8.73
26	6.71	6.75	6.97	7.13	7.50	7.54	9.22	9.24	8.42	8.45	8.71	8.73
27	6.70	6.72	6.97	7.06	7.51	7.54	9.24	9.25	8.45	8.49	8.70	8.76
28	6.70	6.71	7.06	7.07	7.50	7.53	9.25	9.27	8.48	8.49	8.73	8.76
29	6.71	6.71	6.97	7.06	7.53	7.55	9.26	9.27	8.41	8.48	8.71	8.73
30	6.69	6.72	6.97	7.21	7.54	7.59	9.25	9.26	8.38	8.41	8.70	8.71
31	---	---	7.21	7.27	---	---	9.22	9.24	8.38	8.39	---	---
MONTH	6.69	6.95	6.67	7.27	7.27	7.67	7.59	9.32	8.38	9.60	8.34	8.99



5 YEAR HYDROGRAPH

OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
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 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.59	7.94	6.50	6.76	6.00	6.17	5.05	5.50	5.16	5.48	---	---
2	7.68	7.89	6.43	6.67	5.60	6.19	5.53	5.65	5.09	5.33	---	---
3	7.82	8.09	6.45	6.73	5.77	6.32	5.57	5.73	5.17	5.43	---	---
4	7.71	7.99	6.32	6.61	5.97	6.42	5.21	5.66	4.86	5.19	---	---
5	7.64	7.78	6.29	6.48	5.87	6.01	5.25	5.42	5.10	5.42	---	---
6	7.68	7.89	6.21	6.50	5.77	6.02	5.19	5.44	4.93	5.19	---	---
7	7.53	7.72	6.01	6.31	5.84	6.29	5.15	5.44	5.06	5.29	---	---
8	7.53	7.67	6.10	6.56	6.05	6.30	5.04	5.37	5.03	5.36	---	---
9	7.53	7.53	6.32	6.69	6.03	6.34	4.99	5.36	---	---	---	---
10	7.42	7.54	6.26	6.58	5.78	6.16	4.94	5.28	---	---	---	---
11	7.17	7.38	5.65	6.49	5.64	5.97	4.92	5.31	---	---	---	---
12	7.18	7.35	---	---	5.79	6.04	5.04	5.32	---	---	---	---
13	7.16	7.35	---	---	5.88	6.16	5.35	5.72	---	---	---	---
14	7.11	7.34	---	---	5.97	6.18	5.41	5.75	---	---	---	---
15	7.06	7.34	---	---	5.92	6.32	5.34	5.52	---	---	---	---
16	7.08	7.33	---	---	6.15	6.41	5.24	5.49	---	---	---	---
17	7.27	7.34	---	---	6.06	6.36	5.20	5.40	---	---	---	---
18	6.62	7.33	---	---	6.00	6.15	5.08	5.32	---	---	---	---
19	6.63	6.79	---	---	5.51	6.05	5.37	5.60	---	---	---	---
20	6.74	6.94	---	---	5.52	5.67	5.24	5.55	---	---	---	---
21	6.82	7.22	---	---	5.33	5.69	5.06	5.26	---	---	---	---
22	6.74	7.09	---	---	5.73	5.95	5.04	5.36	---	---	---	---
23	6.65	6.81	---	---	5.80	5.96	5.07	5.25	---	---	---	---
24	6.59	6.81	---	---	5.74	5.96	5.11	5.33	---	---	---	---
25	6.54	6.75	---	---	5.03	5.68	5.03	5.35	---	---	---	---
26	6.57	6.80	---	---	4.98	5.70	5.02	5.45	---	---	---	---
27	6.49	6.71	---	---	5.47	5.85	5.33	5.62	---	---	---	---
28	6.48	6.76	---	---	5.46	5.68	5.38	5.57	---	---	---	---
29	6.37	6.66	5.87	6.15	5.42	5.63	4.99	5.60	---	---	---	---
30	6.20	6.54	5.83	6.14	5.34	5.57	4.99	5.25	---	---	---	---
31	6.38	6.63	---	---	5.01	5.47	5.16	5.41	---	---	---	---
MONTH	6.20	8.09	5.65	6.76	4.98	6.42	4.92	5.75	4.86	5.48	---	---

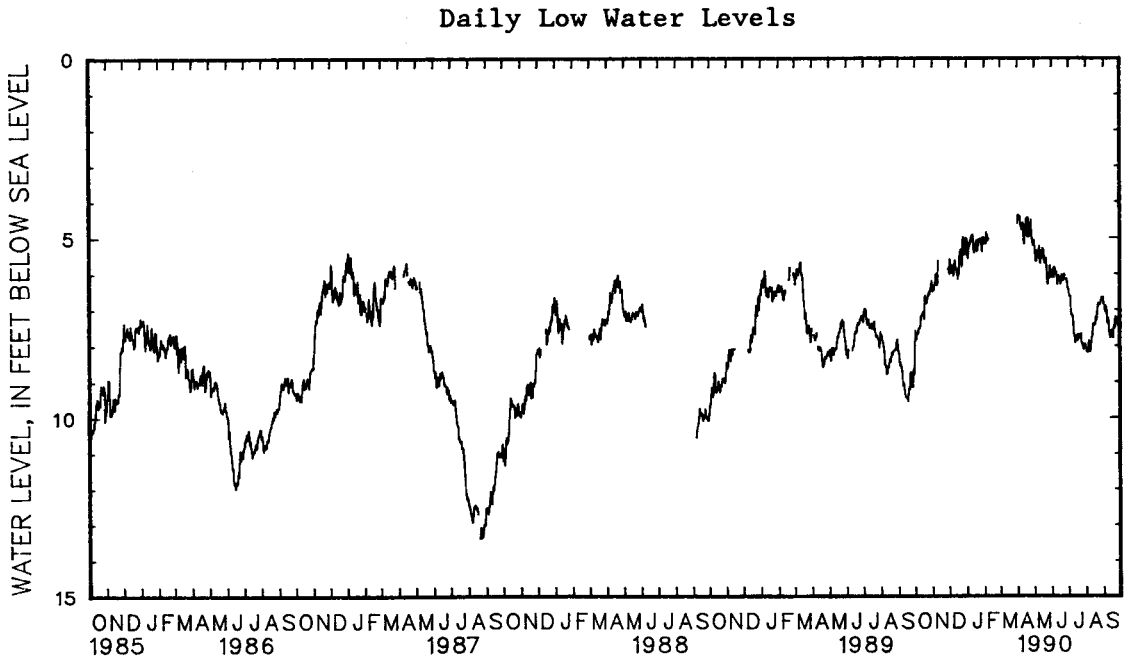
GROUND-WATER LEVELS

MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

AA Df 79--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	4.59	4.87	5.22	5.44	6.10	6.25	6.50	6.74	8.08	8.43	6.85	7.25
2	4.37	4.72	5.32	5.77	6.07	6.23	6.61	6.96	8.18	8.37	6.87	7.24
3	4.41	4.65	5.65	5.84	5.93	6.13	6.63	6.86	8.16	8.41	6.95	7.44
4	4.45	4.67	5.65	5.81	5.85	6.34	6.63	7.19	8.20	8.35	7.06	7.37
5	4.40	4.75	5.36	5.67	6.10	6.36	7.06	7.45	8.04	8.25	6.91	7.29
6	4.64	4.89	5.55	5.83	5.82	6.07	7.14	7.39	7.89	8.30	6.98	7.38
7	4.63	4.96	5.48	5.75	5.85	6.26	7.14	7.39	8.07	8.42	7.08	7.48
8	4.76	4.99	5.55	5.85	6.01	6.27	7.21	7.41	8.19	8.43	7.39	7.82
9	4.78	5.01	5.57	5.84	5.95	6.28	7.20	7.60	8.12	8.38	7.25	7.61
10	4.58	4.88	5.23	5.77	6.07	6.34	7.56	7.82	7.94	8.25	7.31	7.65
11	4.61	5.26	5.46	5.95	6.31	6.60	7.71	8.00	7.79	8.07	7.59	7.93
12	5.11	5.34	5.71	5.99	6.23	6.73	7.78	8.03	7.74	8.03	7.70	8.02
13	5.17	5.40	5.43	5.71	6.06	6.29	7.93	8.24	7.41	7.86	7.80	8.05
14	4.92	5.25	5.56	5.84	6.18	6.34	7.75	8.10	7.46	7.87	7.76	8.06
15	4.74	4.97	5.43	5.74	6.13	6.31	7.75	7.94	7.44	7.70	7.69	8.06
16	4.52	4.91	5.30	5.54	6.18	6.47	7.72	8.19	7.39	7.70	7.59	7.92
17	4.45	4.84	5.34	5.72	6.28	6.45	7.87	8.10	7.42	7.62	7.70	8.15
18	4.88	5.13	5.47	5.83	6.15	6.31	7.79	8.00	7.33	7.53	7.80	7.99
19	4.97	5.08	5.70	5.85	6.04	6.40	7.70	8.00	7.20	7.48	7.53	7.93
20	4.43	5.03	5.66	5.87	6.19	6.52	7.71	8.06	7.29	7.52	7.45	7.91
21	4.87	5.09	5.58	6.04	6.13	6.47	7.80	8.11	7.06	7.48	7.51	7.76
22	4.96	5.20	5.57	5.94	6.17	6.48	7.78	8.06	6.88	7.23	7.22	7.57
23	4.75	5.03	5.83	6.55	6.01	6.37	7.68	8.02	6.82	7.12	7.26	7.46
24	4.77	5.19	6.24	6.62	6.05	6.35	7.93	8.18	6.87	7.07	7.40	7.63
25	4.50	5.18	6.28	6.63	---	---	7.95	8.18	6.85	7.08	7.23	7.55
26	4.88	5.27	6.00	6.55	6.15	6.40	8.01	8.25	6.85	7.09	7.24	7.56
27	5.03	5.37	6.13	6.36	6.14	6.29	8.05	8.23	6.77	7.04	7.45	7.68
28	5.15	5.43	6.01	6.26	6.21	6.45	8.12	8.33	6.67	6.88	7.45	7.63
29	5.21	5.44	5.77	6.15	6.40	6.55	7.98	8.21	6.66	6.89	7.42	7.66
30	5.07	5.40	5.92	6.36	6.39	6.65	7.98	8.17	6.70	7.12	7.36	7.59
31	---	---	6.08	6.23	---	---	7.97	8.18	6.66	7.03	---	---
MONTH	4.37	5.44	5.22	6.63	5.82	6.73	6.50	8.33	6.66	8.43	6.85	8.15



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

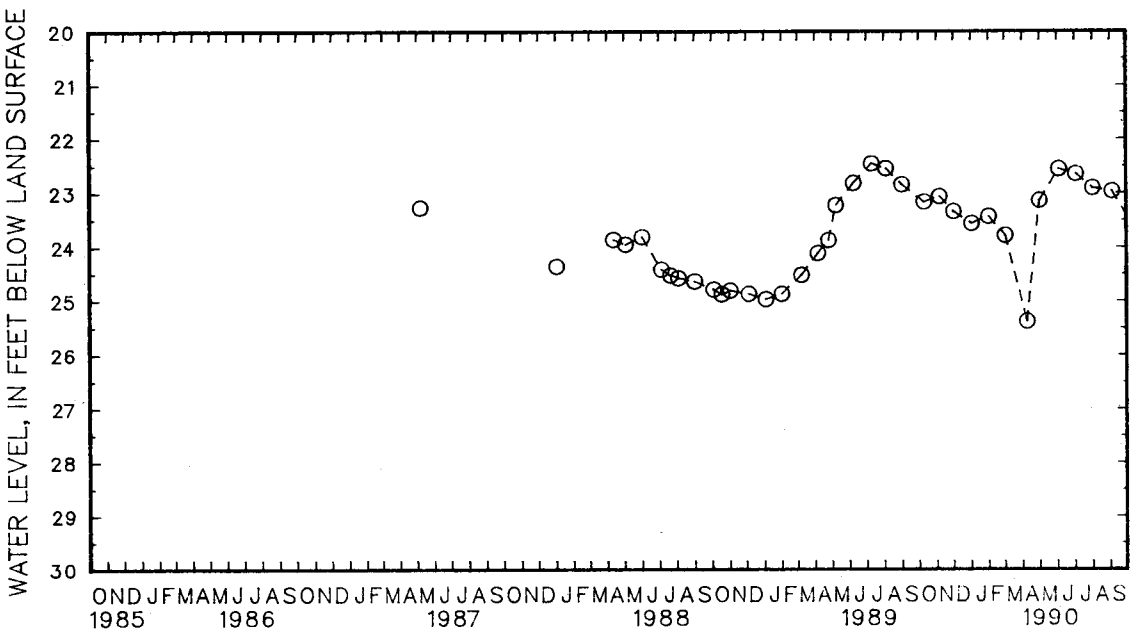
MARYLAND--Continued

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.
REMARKS.--Maryland Water-Level Network observation well.
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, July 10, 1989; lowest measured, 25.39 ft below land surface, April 9, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	23.17	DEC 1	23.35	FEB 1	23.44	APR 9	25.39	JUN 4	22.56	AUG 1	22.91
NOV 6	23.07	JAN 2	23.57	MAR 2	23.79	MAY 1	23.14	JUL 3	22.65	SEP 5	22.97



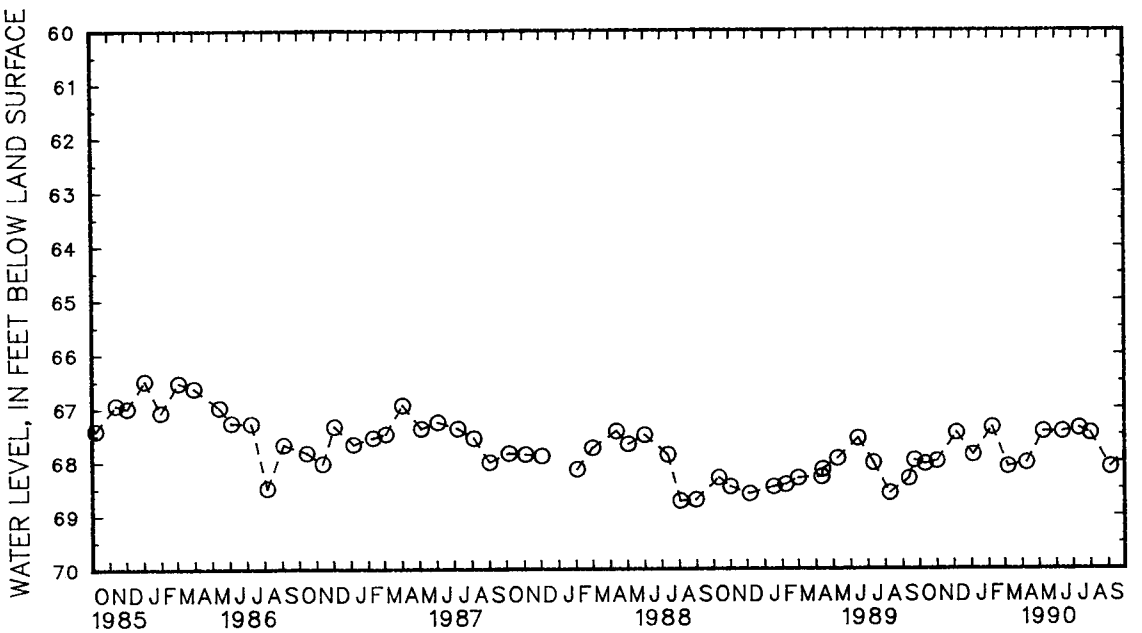
5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

ANNE ARUNDEL COUNTY--Continued

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, .87 ft above land surface.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--August 1979 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 63.51 ft below land surface, May 6, 1980; lowest measured, 68.73 ft below land surface, Aug. 3, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	68.05	DEC 6	67.47	FEB 7	67.37	APR 9	68.03	JUN 12	67.45	AUG 1	67.48
NOV 1	68.00	JAN 4	67.88	MAR 7	68.10	MAY 9	67.45	JUL 12	67.39	SEP 5	68.11



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

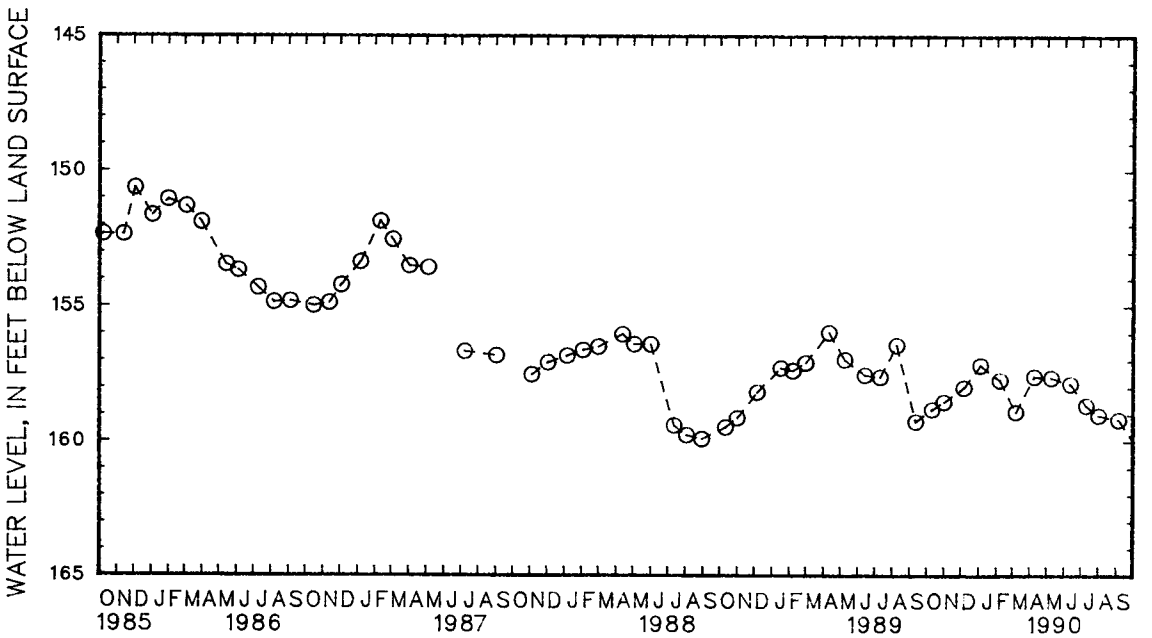
MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

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, .94 ft above land surface.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--August 1979 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 143.90 ft below land surface, May 6, 1980; lowest measured, 160.56 ft below land surface, Oct. 19, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	158.82	DEC 6	158.01	FEB 7	157.73	APR 9	157.59	JUN 12	157.86	AUG 1	159.03
NOV 1	158.54	JAN 4	157.18	MAR 7	158.91	MAY 9	157.63	JUL 10	158.66	SEP 5	159.19



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

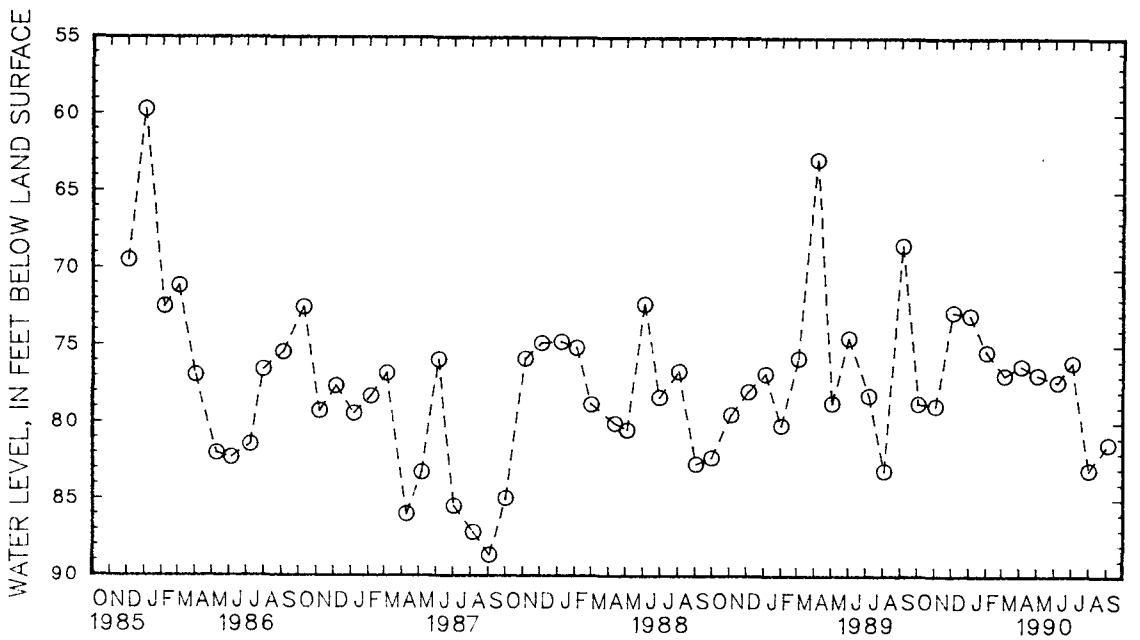
MARYLAND--Continued

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 from April 1943 to April 1966; top of casing extension, 1.8 ft above land surface from April 1966 to current year.
REMARKS.--Maryland Water-Level Network observation well. Water level reported 58 ft below land surface 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, Sept. 27, 1976; lowest measured, 103.70 ft below land surface, Oct. 15, 1948.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	78.70	DEC 4	72.79	FEB 1	75.39	APR 4	76.31	JUN 6	77.36	AUG 1	83.10
NOV 3	78.89	JAN 3	73.01	MAR 5	76.91	MAY 2	76.89	JUL 2	76.10	SEP 4	81.39



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

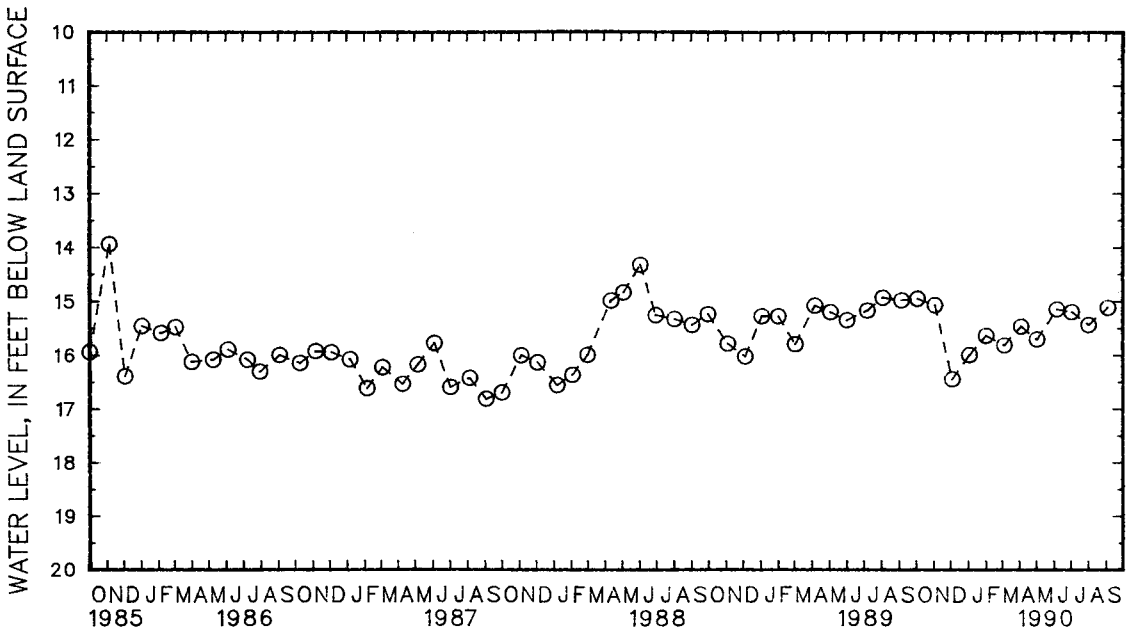
MARYLAND--Continued

BALTIMORE CITY--Continued

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, 0.6 ft above land surface.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--January 1983 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.94 ft below land surface, Nov. 5, 1985; lowest measured, 17.71 ft below land surface, Dec. 30, 1983.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	14.95	DEC 4	16.45	FEB 1	15.64	APR 4	15.47	JUN 6	15.15	AUG 1	15.44
NOV 3	15.07	JAN 3	16.00	MAR 5	15.82	MAY 2	15.71	JUL 2	15.20	SEP 4	15.12

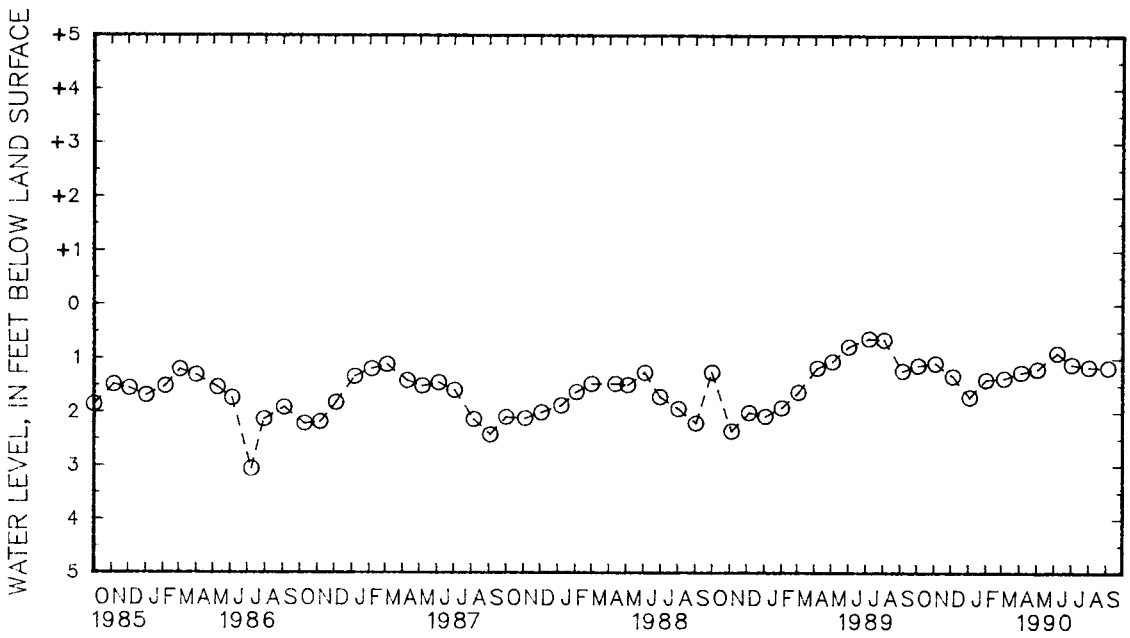


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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, 1.8 ft above land surface.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--January 1983 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, .22 ft above land surface, May 5, 1983; lowest measured, 3.07 ft below land surface, July 8, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	1.13	DEC 4	1.33	FEB 1	1.40	APR 4	1.26	JUN 6	.90	AUG 1	1.16
NOV 3	1.09	JAN 3	1.72	MAR 5	1.37	MAY 2	1.20	JUL 2	1.11	SEP 4	1.17

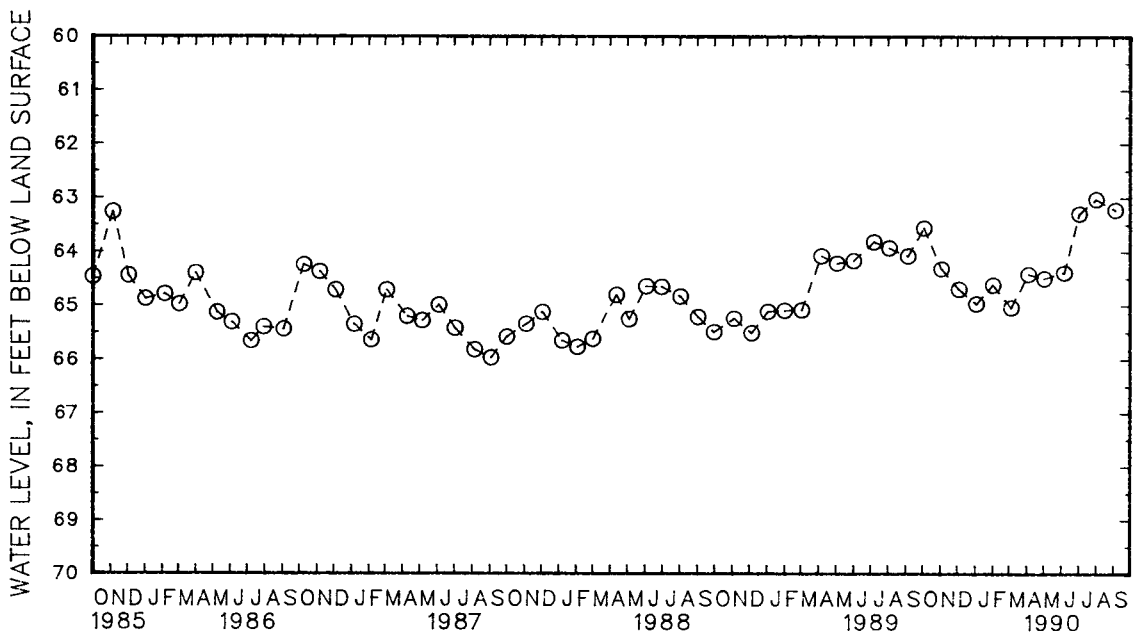


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--January 1983 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 62.74 ft below land surface, Jan. 7, 1985; lowest measured, 66.36 ft below land surface, May 5, 1983.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	63.56	DEC 4	64.70	FEB 1	64.62	APR 4	64.42	JUN 6	64.39	AUG 1	63.02
NOV 3	64.32	JAN 3	64.97	MAR 5	65.04	MAY 2	64.50	JUL 2	63.29	SEP 4	63.22

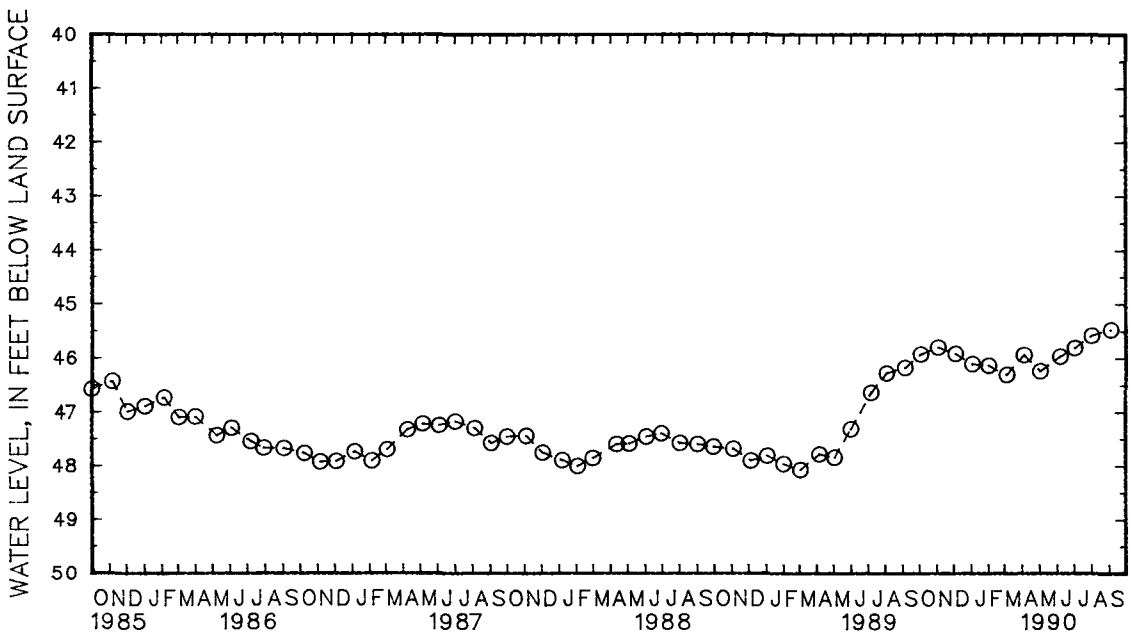


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--January 1983 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 42.58 ft below land surface, May 2, 1984; lowest measured, 48.08 ft below land surface, March 3, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	45.93	DEC 4	45.92	FEB 1	46.14	APR 4	45.94	JUN 6	45.97	AUG 1	45.58
NOV 3	45.80	JAN 3	46.11	MAR 5	46.31	MAY 2	46.24	JUL 2	45.81	SEP 4	45.47

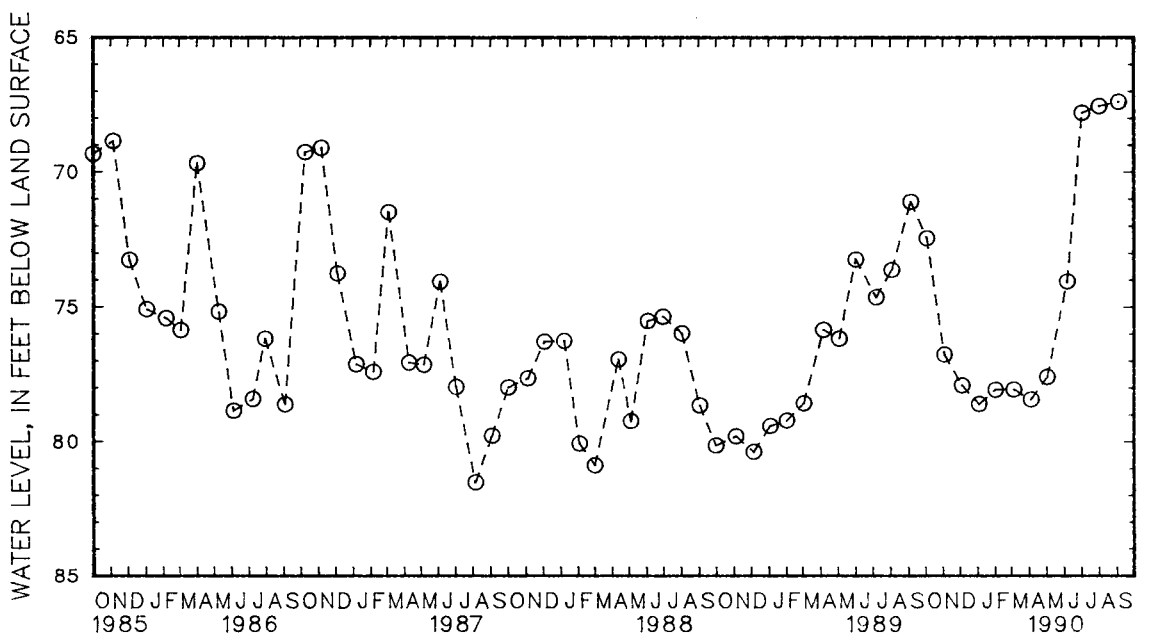


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--September 1957 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 59.94 ft below land surface, Jan. 3, 1983; lowest measured, 98.17 ft below land surface, March 30, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	72.45	DEC 4	77.92	FEB 1	78.08	APR 4	78.44	JUN 6	74.05	AUG 1	67.54
NOV 3	76.78	JAN 3	78.61	MAR 5	78.07	MAY 2	77.60	JUL 2	67.79	SEP 4	67.38



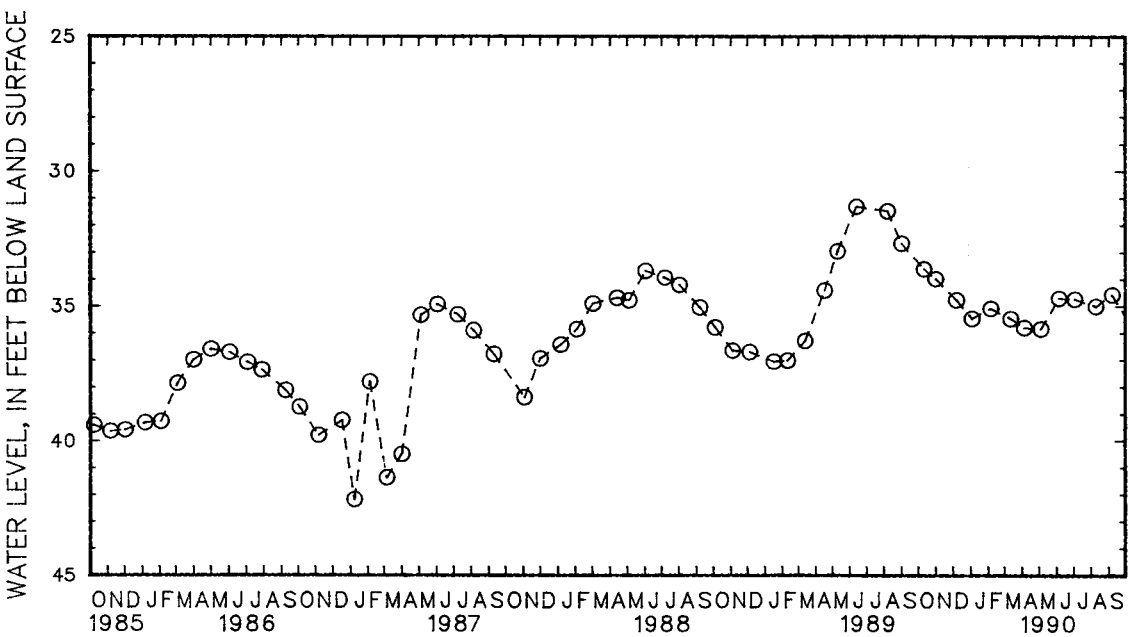
5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--January 1959 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.42 ft below land surface, Sept. 9, 1975; lowest measured, 80.20 ft below land surface, Dec. 23, 1969.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	33.62	DEC 7	34.78	FEB 5	35.10	APR 5	35.81	JUN 5	34.72	AUG 9	35.02
NOV 1	33.99	JAN 3	35.47	MAR 12	35.48	MAY 4	35.86	JUL 3	34.75	SEP 7	34.59

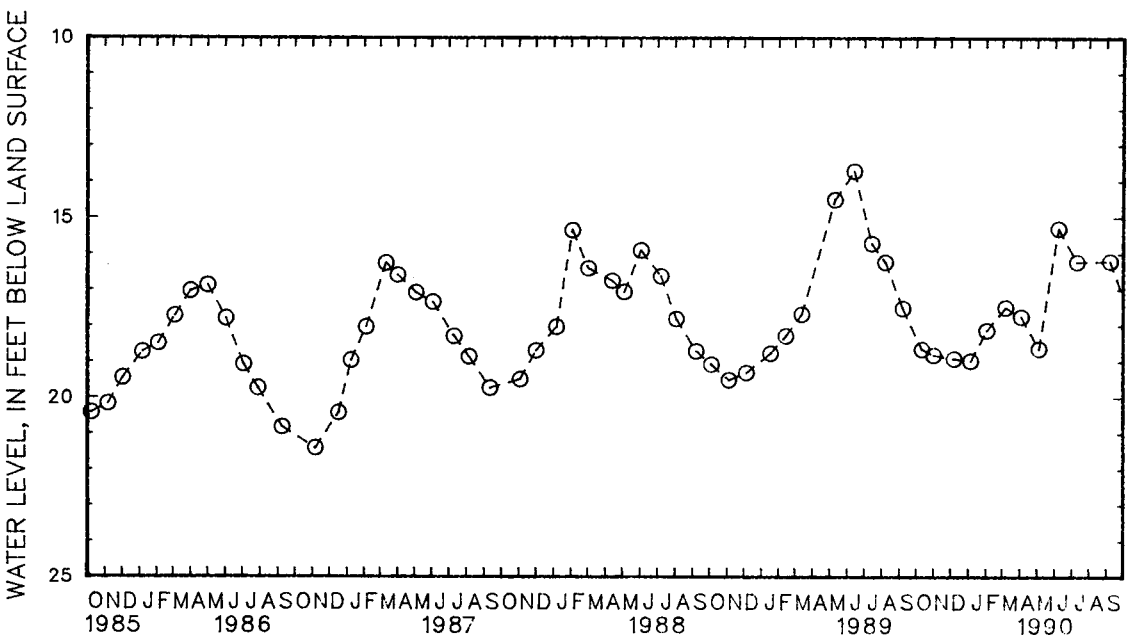


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well.
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, June 23, 1972; lowest measured, 21.54 ft below land surface, Feb. 10, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	18.67	DEC 7	18.93	FEB 2	18.14	APR 3	17.76	JUN 7	15.30	SEP 7	16.21
NOV 1	18.83	JAN 5	18.99	MAR 7	17.50	MAY 4	18.65	JUL 10	16.23		

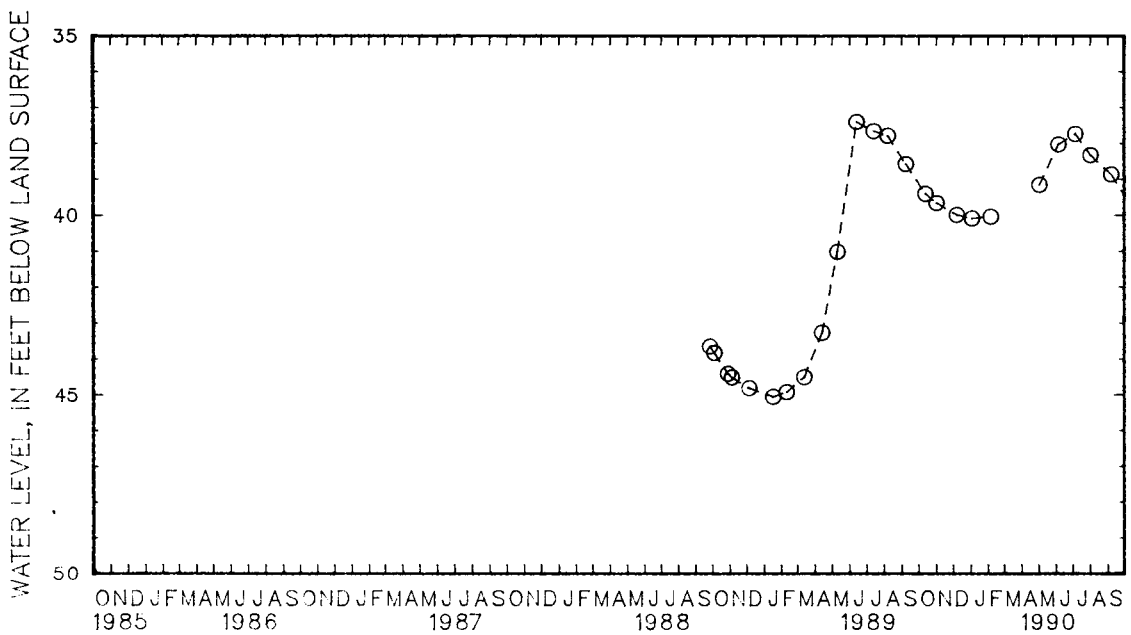


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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, 1.01 ft above land surface.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--September 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 37.40 ft below land surface, June 13, 1989; lowest measured, 45.07 ft below land surface, Jan. 17, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	39.41	DEC 7	40.00	FEB 5	40.05	JUN 5	38.03	AUG 1	38.33
NOV 1	39.67	JAN 3	40.10	MAY 2	39.16	JUL 5	37.74	SEP 7	38.87

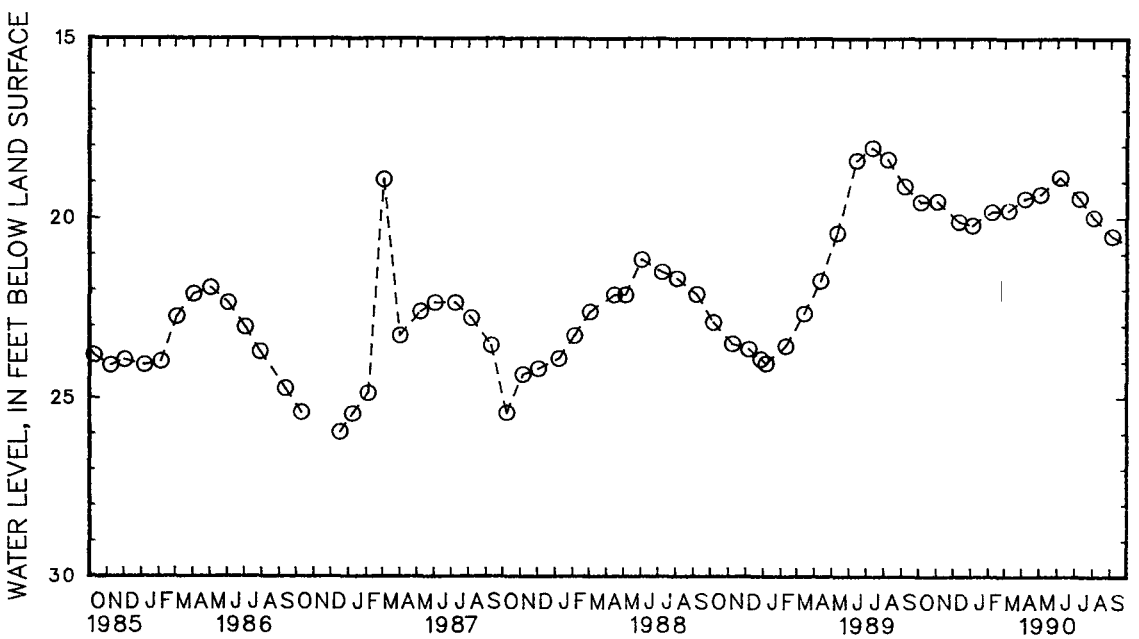


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well. 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, June 24, 1972; lowest measured, 27.57 ft below land surface, Sept. 13, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	19.55	DEC 11	20.10	FEB 6	19.81	APR 6	19.46	JUN 6	18.87	AUG 2	19.98
NOV 2	19.53	JAN 4	20.20	MAR 8	19.79	MAY 3	19.34	JUL 9	19.44	SEP 5	20.51

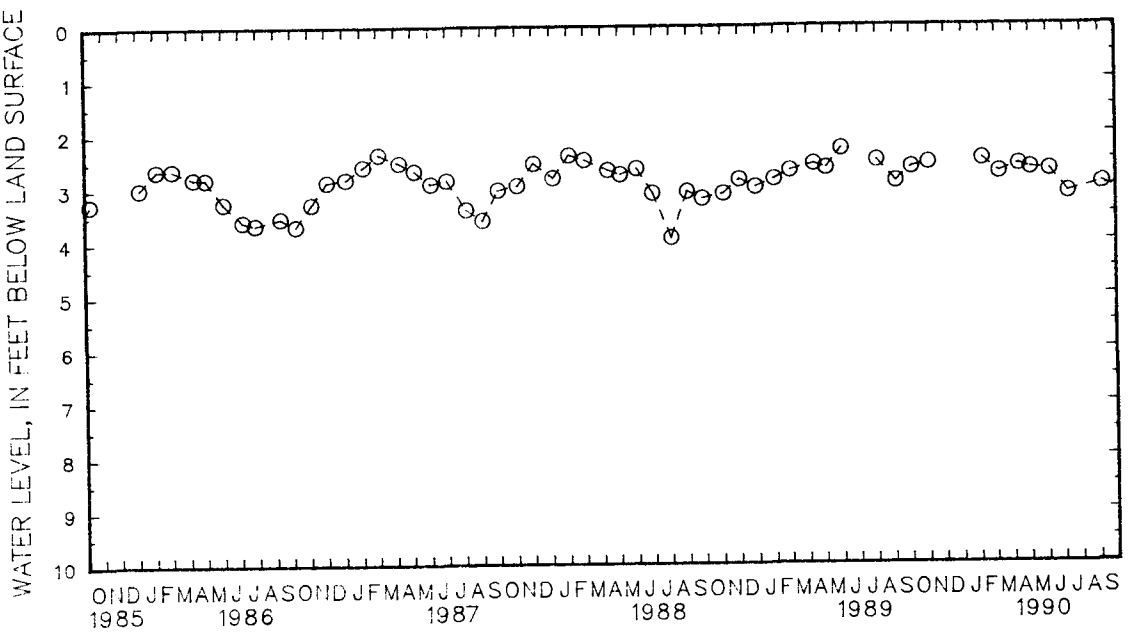


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--March 1956 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.27 ft below land surface, June 24, 1972; lowest measured, 4.69 ft below land surface, Nov. 11, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	2.65	FEB 6	2.50	APR 12	2.61	JUN 6	2.71	SEP 7	2.96
NOV 2	2.57	MAR 8	2.75	MAY 3	2.68	JUL 9	3.13		



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

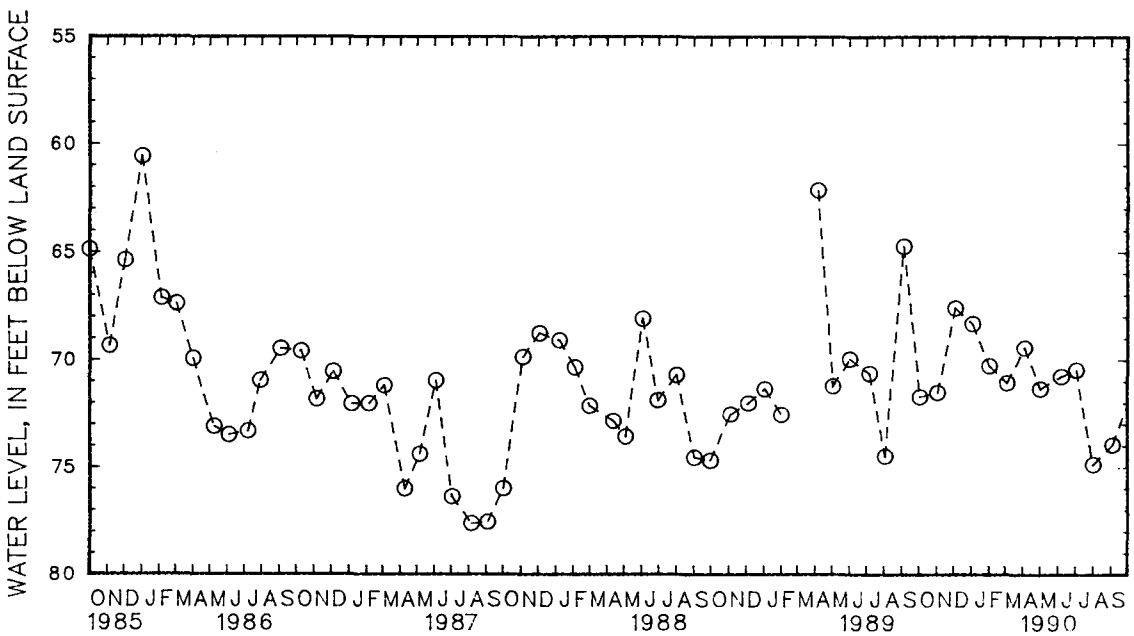
MARYLAND--Continued

BALTIMORE COUNTY--Continued

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.
REMARKS.--Maryland Water-Level Network observation well.
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, Jan. 3, 1983; lowest measured, 95.88 ft below land surface, Oct. 6, 1952.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	71.73	DEC 4	67.60	FEB 1	70.29	APR 4	69.44	JUN 6	70.77	AUG 1	74.88
NOV 3	71.53	JAN 3	68.33	MAR 5	71.08	MAY 2	71.35	JUL 2	70.47	SEP 4	73.96

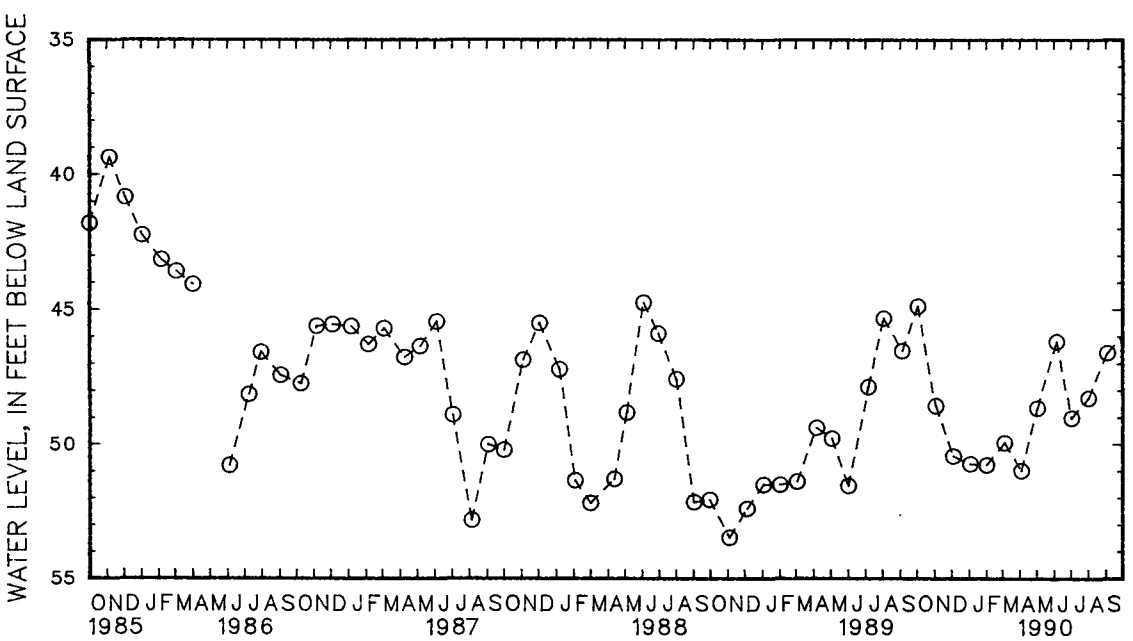


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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 2.55 ft above land surface.
REMARKS.--Maryland Water-Level Network observation well.
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, June 3, 1983; lowest measured, 53.47 ft below land surface, Nov. 4, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	44.88	DEC 4	50.45	FEB 1	50.78	APR 4	50.99	JUN 6	46.18	AUG 1	48.28
NOV 3	48.57	JAN 3	50.74	MAR 5	49.95	MAY 2	48.65	JUL 2	49.02	SEP 4	46.60



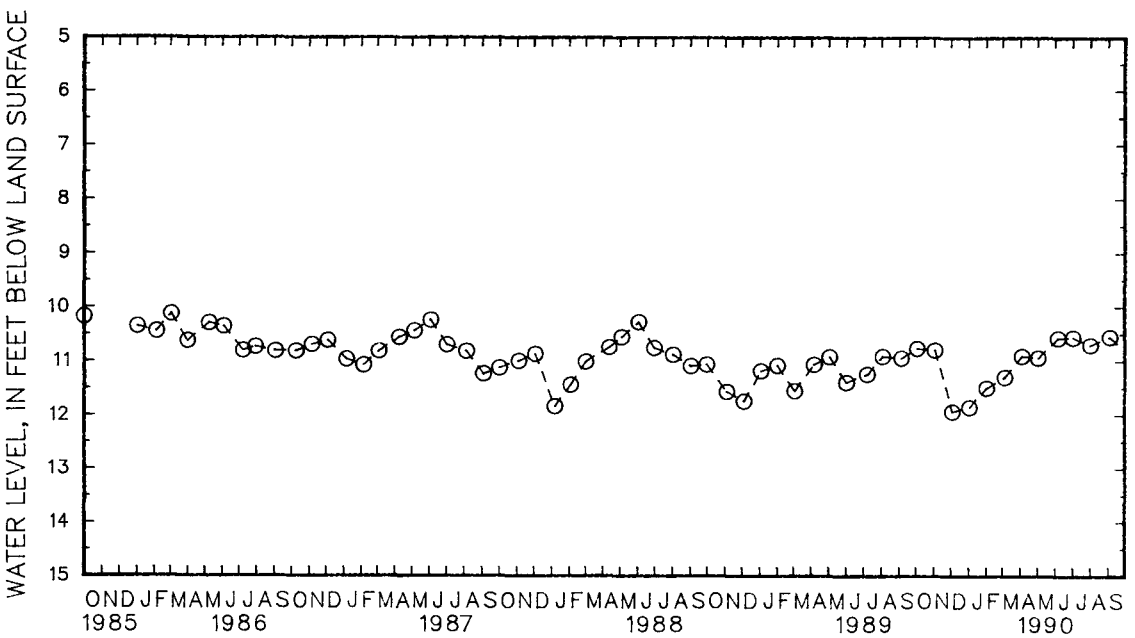
5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

BALTIMORE COUNTY--Continued

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.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--September 1943 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.01 ft below land surface, July 6, 1983; lowest measured, 109.54 ft below land surface, July 18, 1955.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	10.77	DEC 4	11.94	FEB 1	11.50	APR 4	10.91	JUN 6	10.57	AUG 1	10.70
NOV 3	10.80	JAN 3	11.86	MAR 5	11.30	MAY 2	10.94	JUL 2	10.56	SEP 4	10.55

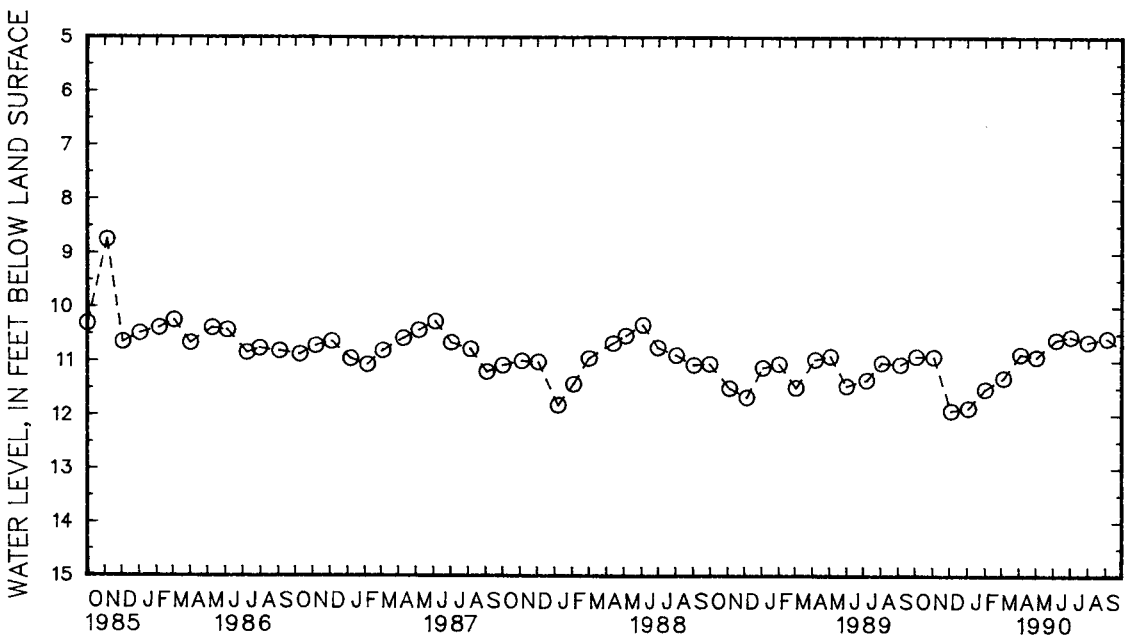


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well.
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, Nov. 5, 1985; lowest measured, 85.19 ft below land surface, Sept. 30, 1957.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	10.92	DEC 4	11.93	FEB 1	11.53	APR 4	10.88	JUN 6	10.61	AUG 1	10.65
NOV 3	10.93	JAN 3	11.88	MAR 5	11.32	MAY 2	10.93	JUL 2	10.55	SEP 4	10.58

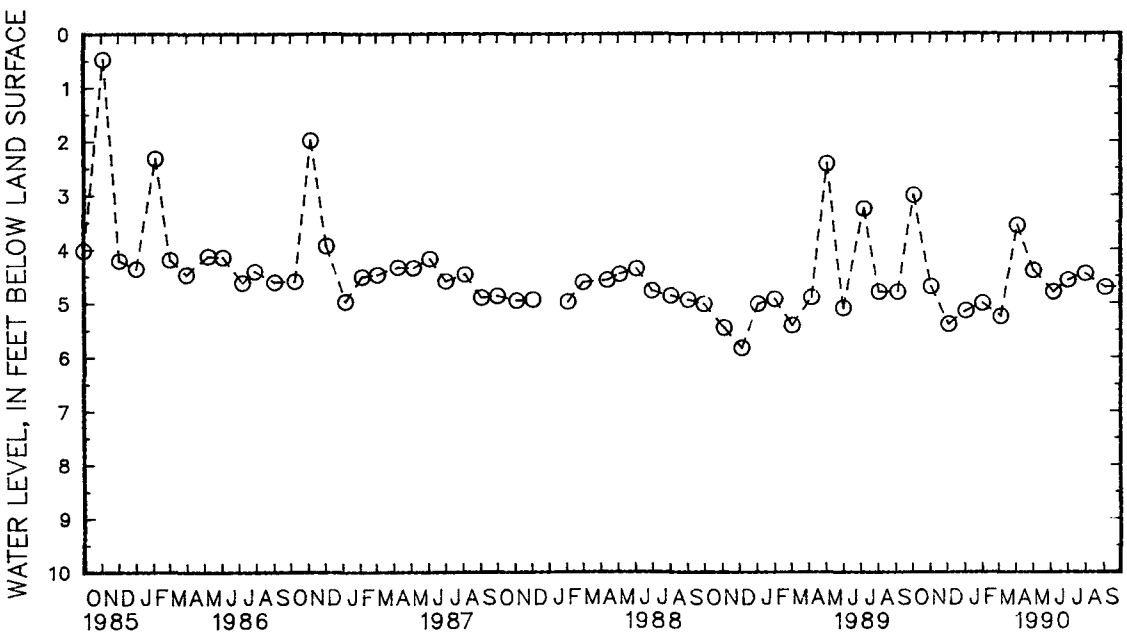


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--October 1945 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, .32 ft below land surface, April 6, 1984; lowest measured, 61.97 ft below land surface, Dec. 2, 1957.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	3.00	DEC 4	5.40	FEB 1	5.01	APR 4	3.56	JUN 6	4.80	AUG 1	4.46
NOV 3	4.70	JAN 3	5.15	MAR 5	5.25	MAY 2	4.40	JUL 2	4.58	SEP 4	4.72



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

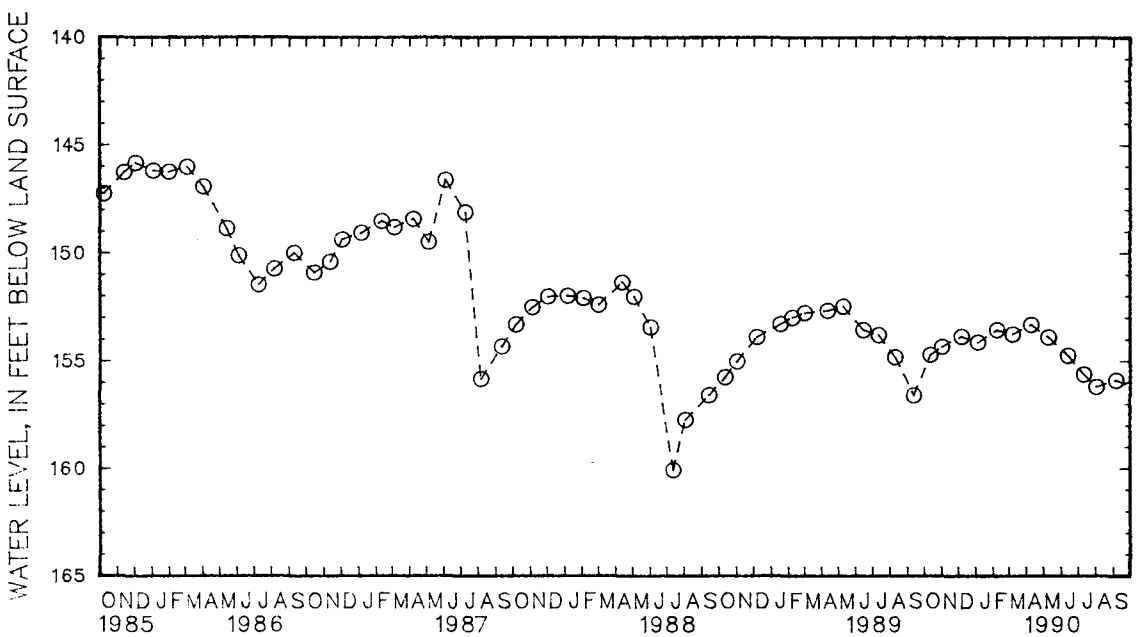
MARYLAND--Continued

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, 1.80 ft above land surface.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--August 1979 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 133.82 ft below land surface, May 6, 1980; lowest measured, 160.09 ft below land surface, July 12, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	154.72	DEC 6	153.86	FEB 7	153.56	APR 9	153.32	JUN 12	154.76	AUG 1	156.21
NOV 1	154.35	JAN 4	154.13	MAR 7	153.76	MAY 9	153.90	JUL 10	155.63	SEP 5	155.90

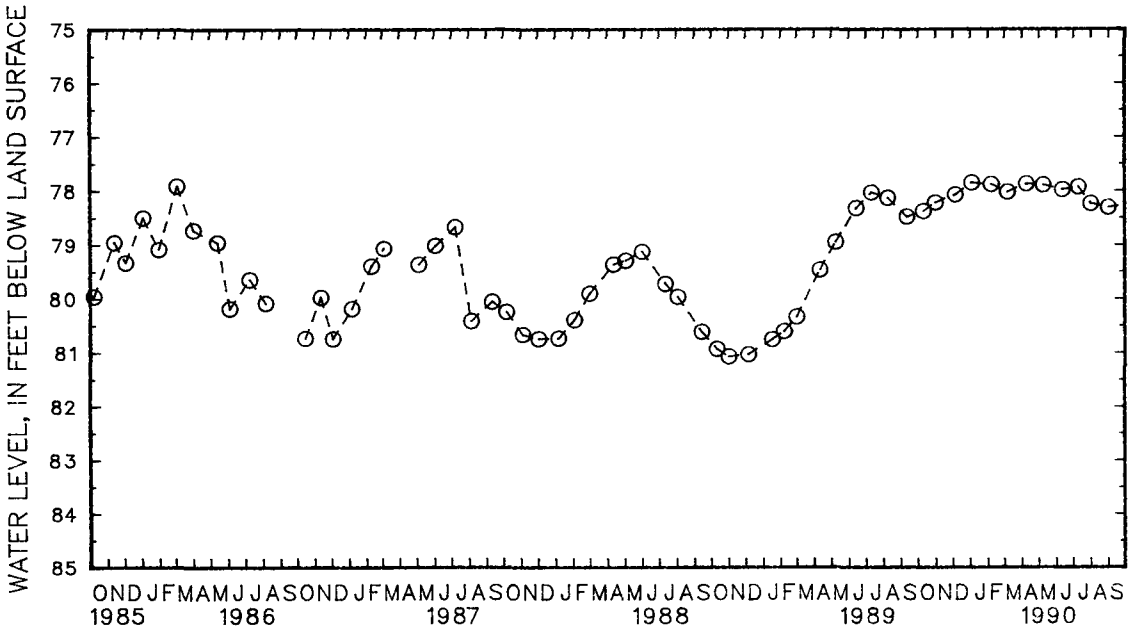


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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, 1.60 ft above land surface.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--July 1980 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 77.60 ft below land surface, June 7, 1983; lowest measured, 81.18 ft below land surface, Jan. 5, 1982.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	78.38	DEC 6	78.07	FEB 7	77.88	APR 9	77.87	JUN 12	77.98	AUG 1	78.24
NOV 1	78.22	JAN 4	77.85	MAR 7	78.02	MAY 9	77.89	JUL 10	77.93	SEP 1	78.31

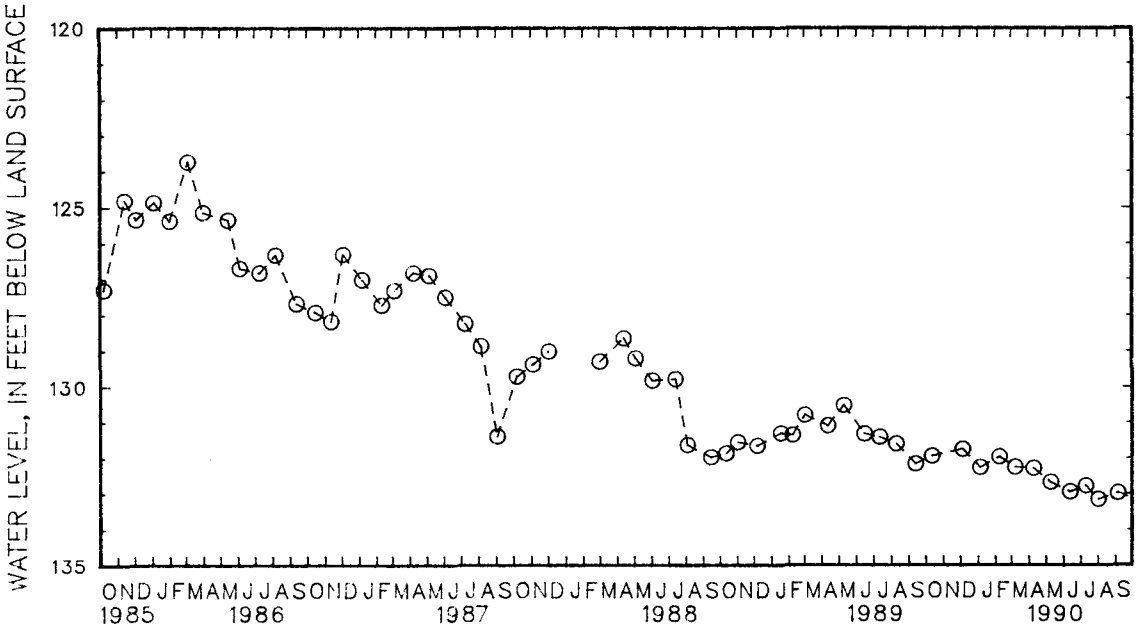


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well. 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, May 14, 1961; lowest measured, 133.16 ft below land surface, Aug. 1, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	131.95	JAN 4	132.27	MAR 7	132.26	MAY 9	132.68	JUL 10	132.78	SEP 5	132.98
DEC 4	131.76	FEB 7	131.97	APR 9	132.29	JUN 12	132.95	AUG 1	133.16		



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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 recorder platform , 1.70 ft above land surface.
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 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	21.23	21.96	21.13	21.99	21.08	21.66	20.79	21.45	20.84	21.37	20.95	21.40
2	20.92	21.57	21.40	22.20	20.73	21.71	21.29	21.65	20.75	21.15	20.78	21.14
3	21.00	23.53	21.54	22.10	20.73	21.64	21.43	21.79	20.76	21.24	20.75	21.13
4	21.63	23.44	21.33	22.03	20.99	21.81	21.16	21.74	20.48	21.00	20.94	21.35
5	21.43	22.20	21.21	21.77	20.83	21.38	21.24	21.62	20.63	21.25	20.90	21.31
6	21.32	21.88	21.06	21.55	20.84	21.76	21.11	21.55	20.76	21.12	20.93	21.31
7	21.28	21.85	21.03	21.49	20.92	21.72	21.08	21.47	20.85	21.28	21.04	21.54
8	21.08	21.66	20.90	21.48	21.03	21.57	20.88	21.34	20.87	21.27	20.91	21.33
9	21.07	21.74	20.67	21.20	20.87	21.51	20.91	21.42	20.57	20.99	20.68	21.13
10	21.09	21.53	20.84	21.23	20.73	21.36	20.70	21.43	20.39	20.75	20.79	21.19
11	21.08	21.51	20.93	21.49	20.61	21.20	20.76	21.42	20.50	21.88	20.68	21.08
12	21.21	21.73	20.95	21.85	20.75	21.45	20.78	21.34	20.74	21.27	20.63	21.24
13	21.06	21.85	21.28	21.86	20.63	21.16	21.08	21.60	20.62	21.19	20.84	21.24
14	21.11	21.83	21.10	21.72	20.65	21.10	21.27	21.65	20.67	21.20	20.70	21.19
15	21.03	21.58	21.09	21.75	20.42	21.19	21.14	21.57	20.75	21.31	20.74	21.42
16	20.96	21.82	20.90	21.75	20.75	21.51	21.21	21.56	20.45	20.87	20.79	21.16
17	20.99	21.40	21.10	22.01	20.94	21.43	21.09	21.54	20.65	21.43	20.45	21.06
18	21.04	21.58	21.26	21.85	20.95	26.05	21.13	21.49	20.88	21.39	20.54	21.10
19	20.45	21.28	21.15	21.96	21.06	22.16	21.25	21.74	20.61	21.12	20.74	21.15
20	20.44	21.40	20.97	22.71	21.02	21.74	21.00	21.60	20.76	21.48	20.71	21.31
21	21.02	21.69	21.27	21.90	20.94	21.82	20.77	21.21	20.99	21.50	21.06	21.44
22	21.19	22.13	21.17	22.17	21.41	22.27	20.84	21.27	20.61	21.21	20.82	21.24
23	21.61	22.11	21.09	21.66	21.94	22.56	20.71	22.02	20.45	20.83	20.71	21.68
24	21.44	22.17	21.00	21.68	21.65	22.09	20.88	22.33	20.49	21.18	20.92	21.50
25	21.55	22.11	20.82	21.50	20.88	21.65	20.69	21.72	21.00	21.70	20.80	21.24
26	21.40	22.22	20.94	21.67	20.95	21.95	20.62	22.09	21.27	21.79	20.76	21.24
27	21.40	22.26	21.01	21.43	21.20	21.73	21.01	21.41	20.86	21.39	20.89	21.31
28	21.16	21.76	20.71	21.14	21.15	21.56	20.97	21.51	20.82	21.36	20.84	21.30
29	21.18	21.80	20.88	21.64	21.17	21.50	20.75	21.43	---	---	20.77	21.28
30	21.16	21.71	21.04	21.48	21.05	21.42	20.73	21.35	---	---	20.70	21.18
31	20.85	21.56	---	---	20.80	21.34	20.94	21.44	---	---	20.55	21.11
MONTH	20.44	23.53	20.67	22.71	20.42	26.05	20.62	22.33	20.39	21.88	20.45	21.68

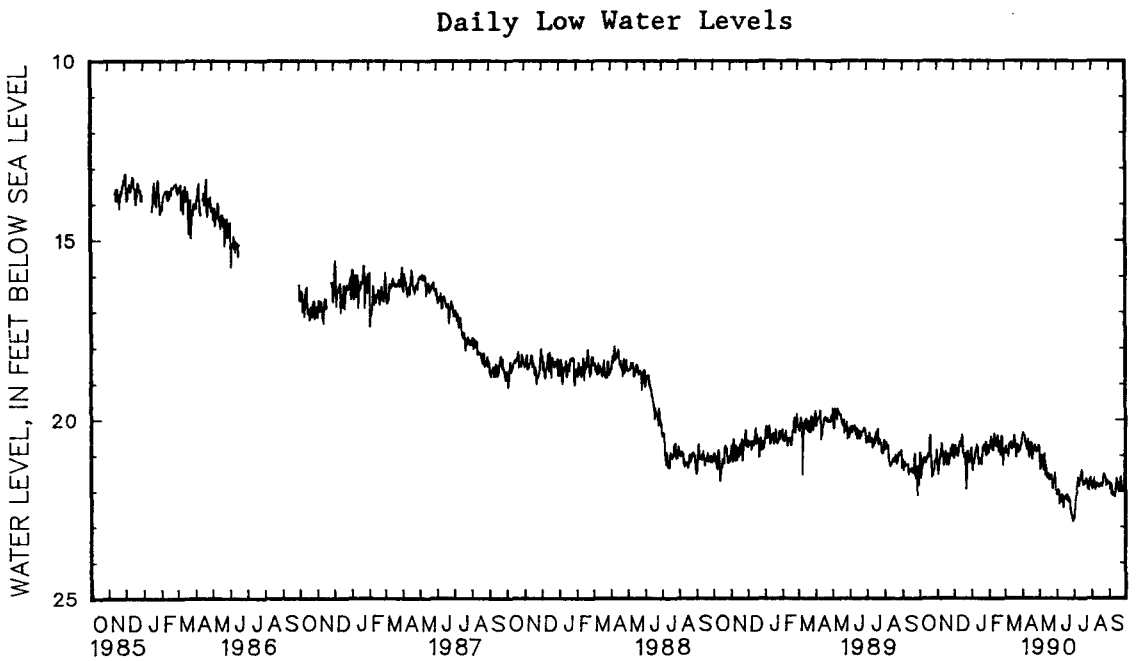
GROUND-WATER LEVELS

MARYLAND--Continued

CALVERT COUNTY--Continued

CA Cc 39--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	20.44	20.92	20.79	21.27	22.06	22.51	22.77	23.13	21.82	22.32	21.78	22.07
2	20.37	20.81	21.12	21.75	22.02	22.48	22.69	23.20	21.89	22.29	21.76	22.10
3	20.44	20.79	21.40	21.78	22.08	22.44	22.47	23.05	21.94	22.31	21.83	22.45
4	20.44	20.79	21.33	21.71	21.96	22.72	22.16	22.54	21.86	22.40	22.09	23.20
5	20.44	21.08	21.00	21.40	22.36	22.81	22.12	22.58	21.75	22.17	21.92	22.47
6	20.64	21.13	21.06	21.71	22.20	22.64	22.06	22.49	21.64	22.08	21.80	23.09
7	20.65	21.11	21.21	21.69	22.30	22.73	21.86	22.24	21.90	22.45	22.04	22.47
8	20.75	21.19	21.26	21.98	22.30	22.64	21.78	22.10	21.96	22.37	22.13	22.65
9	20.84	21.30	21.41	22.11	22.12	22.63	21.63	22.13	21.89	22.33	22.06	23.08
10	20.69	21.21	20.96	21.61	22.10	22.52	21.80	22.17	21.84	22.43	22.14	22.98
11	20.55	21.43	21.15	21.98	22.25	22.69	21.85	22.27	21.78	22.14	22.16	22.50
12	20.95	21.43	21.55	22.00	22.45	22.81	21.67	22.06	21.81	22.36	22.03	22.72
13	21.06	21.49	21.28	21.76	22.23	22.62	21.68	22.16	21.88	22.24	21.97	22.37
14	20.81	21.25	21.45	22.04	22.16	22.55	21.50	21.86	21.82	22.32	21.81	22.19
15	20.66	21.14	21.63	22.00	22.16	22.48	21.42	21.81	21.89	22.29	21.65	22.16
16	20.81	21.19	21.54	21.84	22.13	22.63	21.48	22.15	21.86	22.32	21.77	22.04
17	20.65	21.19	21.51	21.86	22.22	22.64	21.77	22.27	21.86	22.25	21.76	22.56
18	21.10	21.64	21.64	21.98	22.21	22.72	21.83	22.23	21.79	22.11	22.03	22.57
19	21.11	21.51	21.68	22.01	22.09	22.74	21.80	22.30	21.78	22.24	21.96	22.49
20	20.93	21.42	21.65	22.01	22.27	22.82	21.81	22.18	21.87	22.31	21.91	22.47
21	20.79	21.23	21.56	22.04	22.26	22.88	21.76	22.15	21.79	22.21	21.95	22.44
22	20.88	21.32	21.56	22.03	22.18	23.82	21.69	22.05	21.61	21.92	21.61	22.35
23	20.72	21.33	21.58	22.26	22.30	22.85	21.65	22.00	21.52	21.85	21.77	22.22
24	20.79	21.33	21.81	22.68	22.28	22.84	21.74	22.16	21.54	21.91	21.88	22.46
25	20.81	21.65	21.93	22.59	22.54	22.97	21.80	22.29	21.61	21.99	21.96	22.44
26	20.91	21.34	21.72	22.42	22.62	23.18	21.93	22.37	21.65	22.11	21.87	22.27
27	20.86	21.30	21.69	22.21	22.68	23.12	21.97	22.33	21.84	22.72	21.99	22.49
28	20.84	21.22	21.72	22.12	22.76	23.39	21.85	22.30	21.84	22.15	21.95	22.31
29	20.81	21.25	21.50	22.06	22.84	23.21	21.69	22.17	21.70	22.01	21.91	22.33
30	20.72	21.08	21.78	22.50	22.76	23.22	21.67	22.07	21.77	22.21	21.82	22.20
31	---	---	22.10	22.56	---	---	21.62	22.02	21.80	22.09	---	---
MONTH	20.37	21.65	20.79	22.68	21.96	23.82	21.42	23.20	21.52	22.72	21.61	23.20



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

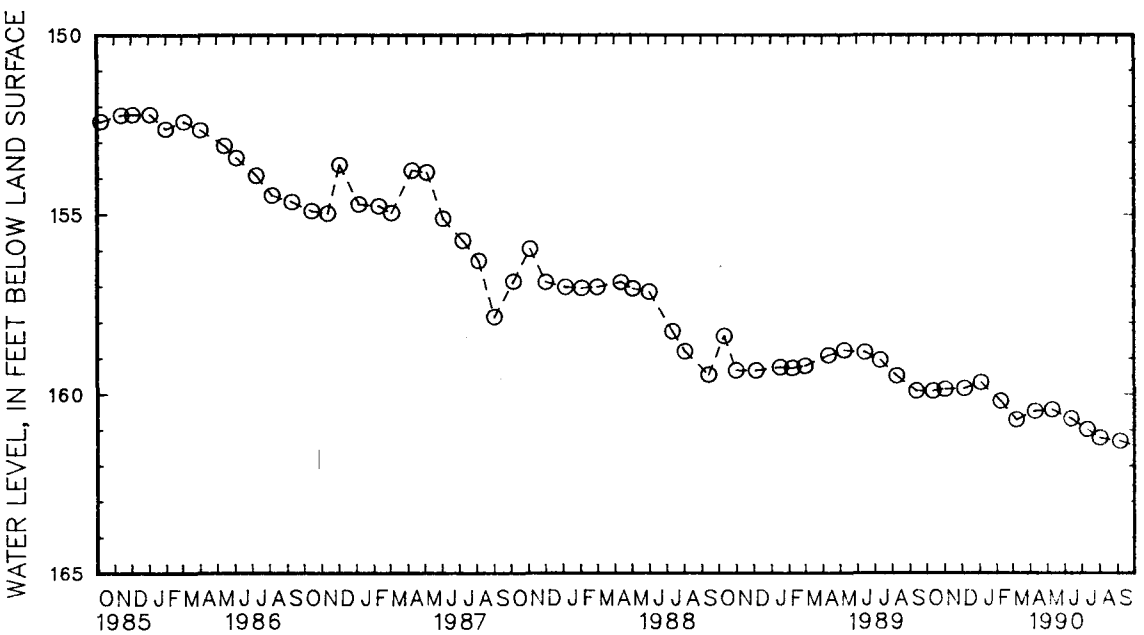
MARYLAND--Continued

CALVERT COUNTY--Continued

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, 1.66 ft above land surface.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--December 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 140.00 ft below land surface, March 7, 1979; lowest measured, 161.32 ft below land surface, Sept. 5, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	159.92	DEC 6	159.85	FEB 7	160.20	APR 9	160.48	JUN 12	160.69	AUG 1	161.23
NOV 1	159.87	JAN 4	159.68	MAR 7	160.72	MAY 9	160.44	JUL 10	160.99	SEP 5	161.32

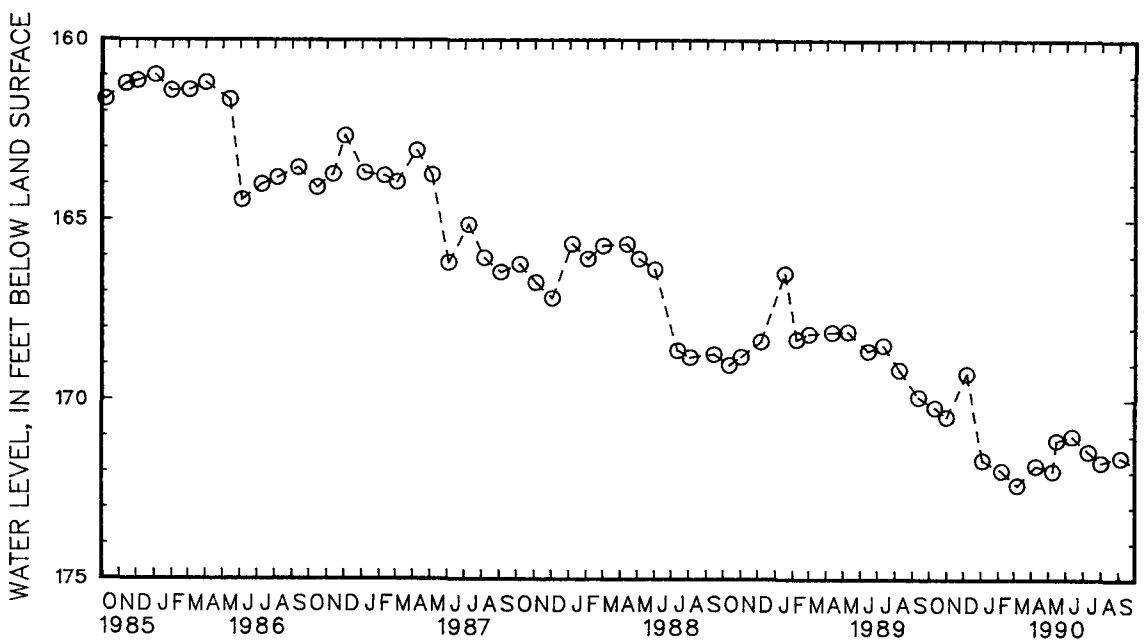


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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, 1.20 ft above land surface.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--July 1979 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 148.54 ft below land surface, July 31, 1979; lowest measured, 172.37 ft below land surface, March 7, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	170.21	JAN 4	171.68	MAR 7	172.37	MAY 9	171.98	JUN 12	171.00	AUG 1	171.74
NOV 1	170.47	FEB 7	171.97	APR 9	171.83	MAY 16	171.12	JUL 10	171.43	SEP 5	171.60
DEC 6	169.27										



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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 April 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.
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 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	37.84	38.90	37.63	38.87	40.95	44.01	38.66	39.80	39.70	41.07	40.70	41.72
2	37.53	39.03	38.11	39.09	38.68	41.16	39.28	40.33	39.95	41.52	41.61	42.55
3	37.93	41.87	38.80	40.21	38.63	39.36	39.53	40.44	39.53	41.31	40.59	42.38
4	40.56	42.85	38.34	39.79	38.89	39.95	38.97	42.51	38.53	39.52	39.74	40.59
5	39.31	40.68	37.97	38.85	38.23	39.60	41.13	42.82	38.97	39.54	39.47	40.76
6	38.79	39.67	37.85	39.12	38.23	39.65	39.37	41.07	38.41	38.95	40.59	41.50
7	38.57	39.33	37.93	39.26	38.50	40.07	38.65	39.51	38.38	40.39	41.50	42.91
8	38.05	39.19	37.84	38.82	38.64	39.60	38.40	39.57	40.21	41.33	42.02	42.78
9	38.29	39.88	37.91	39.99	38.18	39.17	38.53	39.37	40.48	41.35	41.11	42.15
10	38.41	39.65	39.61	42.38	37.93	38.85	38.19	38.92	39.67	41.21	40.03	41.01
11	38.70	39.91	39.87	41.16	37.93	39.36	38.37	39.34	38.81	39.77	39.47	39.97
12	38.51	39.34	39.66	40.38	38.28	39.38	39.34	42.07	38.38	41.13	39.14	40.05
13	38.27	39.18	39.98	40.85	38.13	40.47	39.95	40.75	39.94	40.83	39.27	40.10
14	38.02	39.09	39.70	41.05	39.63	40.63	39.01	40.06	40.53	41.49	39.24	41.04
15	37.81	38.62	39.67	40.64	39.16	40.78	38.79	40.11	39.78	40.73	40.68	41.61
16	37.73	41.37	39.04	40.35	39.09	39.74	39.82	40.79	39.95	41.27	40.33	41.40
17	40.25	42.77	40.01	40.91	38.49	39.35	40.53	43.36	40.22	40.92	39.76	41.02
18	39.15	40.63	39.83	40.60	38.37	39.21	42.16	43.72	39.46	40.64	39.67	40.52
19	37.93	39.28	39.66	40.96	38.12	38.98	41.96	44.33	39.00	39.47	39.46	40.11
20	37.72	38.69	39.40	41.04	38.06	38.72	39.75	41.89	39.19	41.08	39.39	40.71
21	37.77	38.68	39.83	41.86	37.88	38.48	38.99	39.74	40.96	42.02	40.69	41.86
22	37.78	38.76	39.37	41.38	38.48	39.01	38.92	42.91	40.43	41.13	41.35	41.99
23	38.08	49.11	39.08	39.88	38.34	38.91	42.49	44.70	40.13	40.95	40.68	41.44
24	39.95	43.23	38.78	39.66	38.36	41.72	40.22	42.66	40.00	40.59	39.89	41.39
25	39.07	40.24	38.51	39.29	41.37	42.06	39.91	41.05	39.95	40.66	39.41	40.02
26	38.67	39.35	38.67	39.63	41.60	44.27	39.59	41.60	40.02	40.93	39.33	40.87
27	38.57	39.44	38.48	39.47	41.44	44.15	39.76	40.87	40.63	41.86	40.48	41.81
28	38.29	38.91	38.09	38.81	40.51	41.51	39.02	39.70	41.40	42.31	41.28	41.94
29	37.94	38.63	38.39	39.57	39.96	42.05	38.87	39.96	---	---	41.26	42.12
30	37.90	38.97	38.56	42.28	40.02	41.10	38.87	39.59	---	---	40.50	41.86
31	37.77	38.80	---	---	38.84	40.24	38.87	40.14	---	---	40.64	41.86
MONTH	37.53	49.11	37.63	42.38	37.88	44.27	38.19	44.70	38.38	42.31	39.14	42.91

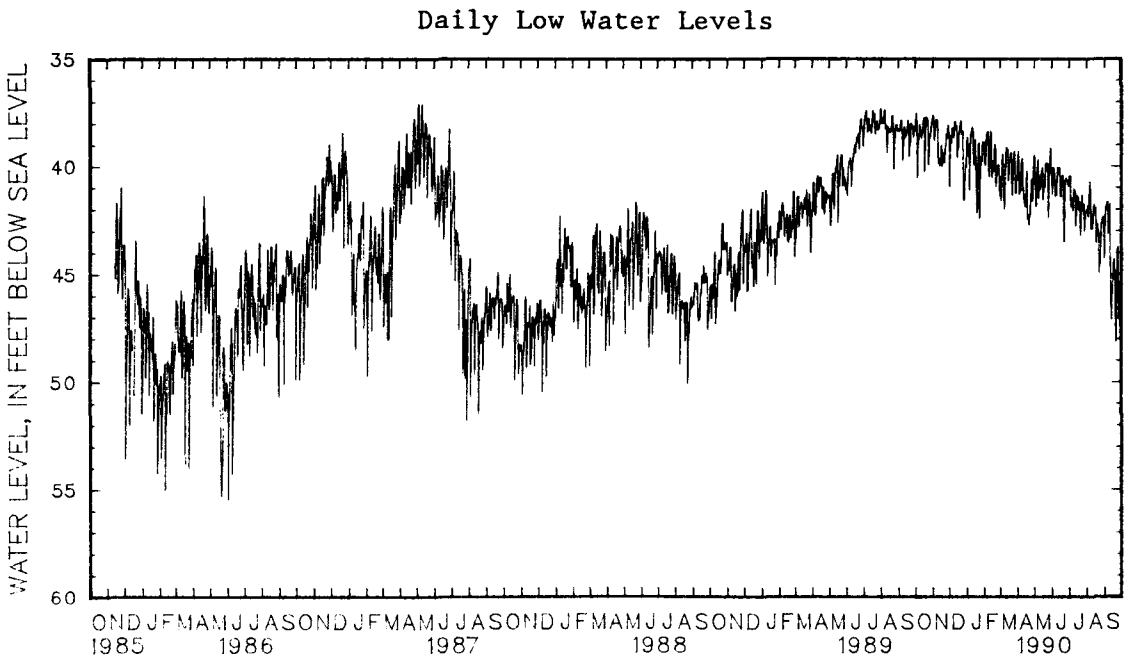
GROUND-WATER LEVELS

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	39.71	40.64	39.68	41.22	41.33	43.78	40.47	41.65	42.03	43.05	42.77	44.34
2	39.31	40.39	40.83	42.05	40.71	41.44	40.47	42.34	41.87	43.23	42.19	42.83
3	40.36	41.76	41.90	43.11	40.08	40.73	41.89	43.42	42.34	43.31	41.87	42.52
4	41.33	42.06	41.83	43.09	40.14	41.36	41.78	42.70	41.88	42.62	41.73	43.32
5	41.14	42.23	40.50	41.73	40.60	45.32	41.50	44.45	41.18	41.88	41.70	42.81
6	41.15	41.73	39.99	40.89	41.40	43.23	41.92	44.31	40.76	42.30	41.68	43.74
7	40.13	41.06	39.72	41.88	41.24	43.09	42.07	43.26	41.73	46.02	43.16	45.86
8	39.74	40.29	41.51	42.65	41.35	42.50	41.54	42.17	42.95	44.64	43.04	45.30
9	39.67	41.37	40.97	42.08	40.70	41.55	41.08	42.30	42.24	43.42	42.02	43.32
10	41.14	41.88	40.48	41.06	40.09	40.84	41.40	42.42	42.90	45.55	41.78	44.80
11	41.04	42.15	41.06	43.79	40.12	41.48	41.17	43.95	42.63	44.41	44.66	46.81
12	41.72	42.67	40.92	42.68	40.37	41.96	42.77	43.94	42.09	42.82	46.36	48.34
13	41.52	42.46	40.32	41.06	40.09	41.00	42.10	43.08	41.82	43.89	47.11	48.68
14	41.91	42.40	40.21	41.65	40.10	41.40	41.38	42.48	42.20	44.05	45.76	48.91
15	41.51	41.88	40.10	41.60	41.41	45.78	41.55	42.53	41.98	43.24	45.22	45.89
16	40.88	41.54	41.58	42.37	41.42	44.48	41.49	43.05	41.95	43.85	44.71	45.66
17	40.24	41.79	41.01	41.72	40.58	41.61	42.03	43.17	43.57	45.83	44.34	46.95
18	41.84	42.86	40.73	42.27	40.46	41.39	42.01	42.96	43.09	44.82	44.83	45.90
19	42.48	43.24	40.96	43.03	40.44	41.66	41.68	43.48	42.72	43.46	45.46	48.22
20	42.26	42.97	39.94	41.30	40.66	42.47	43.21	45.00	42.95	46.05	47.39	50.24
21	42.70	43.25	39.87	41.72	42.50	44.66	42.61	44.33	43.18	45.98	48.15	49.39
22	42.28	42.82	40.11	41.41	43.50	45.66	41.88	42.54	44.99	46.62	45.38	48.36
23	42.23	43.20	39.89	41.91	41.41	43.39	41.38	42.90	44.33	45.21	43.90	45.40
24	41.60	42.45	40.31	43.20	40.71	41.46	42.05	43.04	44.54	45.61	43.77	47.19
25	41.00	41.91	42.40	44.55	40.57	42.18	42.00	42.85	43.31	44.65	47.10	49.16
26	40.61	42.07	40.55	42.26	40.72	42.28	41.79	43.96	42.67	43.59	45.42	48.12
27	41.63	42.90	40.21	40.82	40.65	41.68	43.03	44.66	42.65	43.56	46.66	48.20
28	40.76	41.87	39.67	40.50	40.68	41.84	42.80	43.95	42.42	43.21	46.80	49.88
29	39.85	40.80	39.16	40.80	40.93	42.68	42.20	42.99	42.37	43.65	49.79	52.27
30	39.50	40.39	40.07	41.68	40.82	42.07	42.17	43.15	42.65	46.15	47.03	51.78
31	---	---	40.23	43.16	---	---	42.05	43.27	44.29	47.01	---	---
MONTH	39.31	43.25	39.16	44.55	40.08	45.78	40.47	45.00	40.76	47.01	41.68	52.27



5 YEAR HYDROGRAPH

OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well, Maryland Water Quality Network observation well and Best Management Practices Project observation well.
PERIOD OF RECORD.--October 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 24.39 ft below land surface, July 7, 1990; lowest measured, 30.69 ft below land surface, Feb. 27 and 28, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	26.34	26.34	27.14	27.06	---	---	---	---	27.53	27.43	---	---
2	26.34	26.32	27.14	27.12	---	---	---	---	27.43	27.37	---	---
3	26.40	26.34	27.19	27.10	---	---	---	---	27.42	27.37	---	---
4	26.42	26.40	27.22	27.19	---	---	---	---	27.36	27.26	---	---
5	26.44	26.42	27.22	27.21	---	---	---	---	27.38	27.32	---	---
6	26.45	26.42	27.22	27.19	---	---	---	---	27.38	27.32	---	---
7	26.51	26.45	27.22	27.21	---	---	---	---	27.31	27.27	---	---
8	26.53	26.50	27.24	27.22	---	---	---	---	27.27	27.26	27.04	26.96
9	26.59	26.53	27.27	27.21	---	---	---	---	27.26	27.16	26.95	26.90
10	26.60	26.57	27.35	27.27	---	---	---	---	27.15	27.10	26.97	26.92
11	26.64	26.58	27.36	27.31	---	---	---	---	27.14	27.13	26.97	26.96
12	26.64	26.63	27.41	27.31	---	---	---	---	27.14	27.13	26.97	26.96
13	26.67	26.64	27.43	27.38	---	---	---	---	27.14	27.09	26.99	26.96
14	26.68	26.67	---	---	---	---	---	---	---	---	27.01	26.97
15	26.71	26.68	27.38	27.35	---	---	---	---	---	---	27.04	27.01
16	26.73	26.71	27.39	27.27	---	---	---	---	---	---	27.05	27.02
17	26.74	26.73	27.48	27.40	---	---	---	---	---	---	27.02	26.96
18	26.79	26.74	27.54	27.48	---	---	---	---	---	---	27.13	27.01
19	26.79	26.77	27.56	27.54	---	---	---	---	---	---	27.14	27.09
20	26.82	26.77	27.53	27.39	---	---	---	---	---	---	27.12	27.10
21	26.85	26.82	27.61	27.39	---	---	---	---	---	---	27.19	27.12
22	26.92	26.86	27.64	27.61	---	---	---	---	---	---	27.20	27.15
23	26.95	26.93	---	---	---	---	---	---	---	---	27.23	27.14
24	26.96	26.95	---	---	---	---	---	---	---	---	27.26	27.23
25	26.97	26.96	---	---	---	---	---	---	---	---	27.25	27.24
26	26.99	26.97	---	---	---	---	---	---	---	---	27.25	27.24
27	27.01	26.99	---	---	---	---	---	---	---	---	27.30	27.25
28	27.03	27.01	---	---	---	---	---	---	---	---	27.32	27.30
29	27.05	27.03	---	---	28.13	28.12	---	---	---	---	27.35	27.31
30	27.06	27.05	---	---	28.12	28.10	---	---	---	---	27.32	27.28
31	27.06	27.01	---	---	---	---	27.53	27.53	---	---	27.29	27.28
MONTH	27.06	26.32	27.64	27.06	28.13	28.10	27.53	27.53	27.53	27.09	27.35	26.90

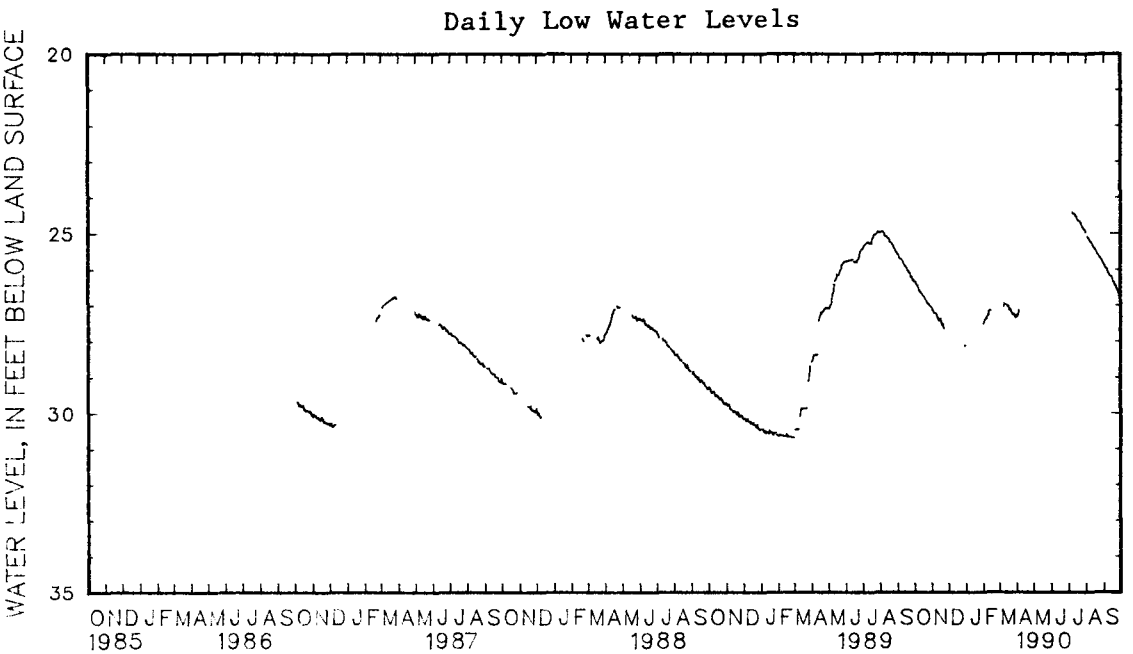
GROUND-WATER LEVELS

MARYLAND--Continued

CALVERT COUNTY--Continued

CA Fc 13--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	27.32	27.28	---	---	---	---	---	---	---	---	25.87	25.85
2	27.30	27.23	---	---	---	---	---	---	---	---	25.88	25.87
3	27.23	27.15	---	---	---	---	---	---	25.10	25.09	25.95	25.88
4	27.15	27.12	---	---	---	---	---	---	25.13	25.10	25.97	25.95
5	---	---	---	---	---	---	---	---	25.14	25.13	---	---
6	---	---	---	---	---	---	---	---	25.17	25.14	25.98	25.97
7	---	---	---	---	---	---	24.42	24.39	25.21	25.17	26.02	25.98
8	---	---	---	---	---	---	24.44	24.42	25.24	25.21	26.09	26.02
9	---	---	---	---	---	---	24.44	24.44	25.25	25.24	26.09	26.08
10	---	---	---	---	---	---	24.45	24.44	25.27	25.25	26.13	26.09
11	---	---	---	---	---	---	24.47	24.45	25.30	25.27	26.16	26.13
12	---	---	---	---	---	---	24.48	24.47	25.33	25.30	26.18	26.16
13	---	---	---	---	---	---	24.53	24.48	25.36	25.32	26.20	26.18
14	---	---	---	---	---	---	24.53	24.53	25.39	25.35	26.20	26.18
15	---	---	---	---	---	---	24.57	24.53	25.40	25.39	26.22	26.16
16	---	---	---	---	---	---	24.61	24.57	25.43	25.40	26.27	26.22
17	---	---	---	---	---	---	24.64	24.61	25.46	25.43	26.35	26.27
18	---	---	---	---	---	---	24.65	24.64	25.48	25.46	26.36	26.35
19	---	---	---	---	---	---	24.66	24.65	25.52	25.47	26.35	26.33
20	---	---	---	---	---	---	24.67	24.66	25.56	25.52	26.43	26.34
21	---	---	---	---	---	---	24.70	24.67	25.58	25.56	26.45	26.43
22	---	---	---	---	---	---	24.71	24.70	25.59	25.56	26.44	26.41
23	---	---	---	---	---	---	24.76	24.71	25.63	25.59	26.51	26.44
24	---	---	---	---	---	---	24.80	24.76	25.65	25.63	26.55	26.52
25	---	---	---	---	---	---	24.83	24.80	25.68	25.65	26.57	26.55
26	---	---	---	---	---	---	24.86	24.83	25.70	25.68	26.60	26.56
27	---	---	---	---	---	---	24.89	24.86	25.71	25.70	26.64	26.60
28	---	---	---	---	---	---	24.89	24.89	25.72	25.70	26.66	26.64
29	---	---	---	---	---	---	24.91	24.89	25.77	25.72	26.67	26.66
30	---	---	---	---	---	---	24.93	24.91	25.82	25.77	26.69	26.67
31	---	---	---	---	---	---	24.97	24.93	25.85	25.82	---	---
MONTH	27.32	27.12	---	---	---	---	24.97	24.39	25.85	25.09	26.69	25.85



5 YEAR HYDROGRAPH

OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

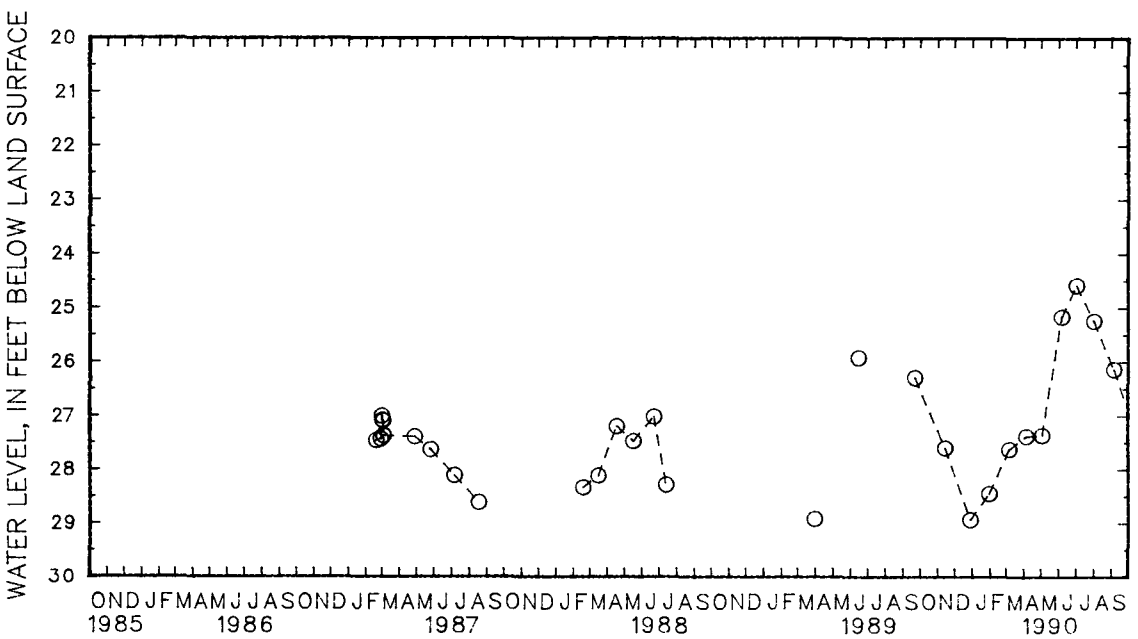
MARYLAND--Continued

CALVERT COUNTY--Continued

WELL NUMBER.--CA Fc 14. SITE ID.--382343076302902. PERMIT NUMBER.--CA-81-2390.
LOCATION.--Lat 38°23'40", long 76°30'29", Hydrologic Unit 02060006, Jefferson Patterson State Park and Museum.
Owner: U.S. Geological Survey.
AQUIFER.--Lowland deposits of Pleistocene age. Aquifer code: 111LLND.
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.
DATUM.--Elevation of land surface is 47.56 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 1.79 ft above land surface.
REMARKS.--Best Management Practices Project observation well.
PERIOD OF RECORD.--October 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 24.58 ft below land surface, July 2, 1990; lowest measured, 28.94 ft below land surface, Dec. 28, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

WATER DATE	LEVEL	WATER DATE	LEVEL	WATER DATE	LEVEL	WATER DATE	LEVEL	WATER DATE	LEVEL
NOV 14	27.60	JAN 30	28.45	APR 5	27.38	JUN 6	25.16	AUG 1	25.24
DEC 28	28.94	MAR 6	27.62	MAY 3	27.36	JUL 2	24.58	SEP 5	26.14



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Best Management Practices Project observation well.
PERIOD OF RECORD.--October 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.88 ft below land surface, May, 29 1990; lowest measured, 18.25 ft below land surface, Feb. 19, 20, and 21, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	14.84	14.83	15.32	15.29	15.68	15.66	15.78	15.45	15.11	15.06	14.96	14.92
2	14.85	14.82	15.32	15.30	15.68	15.60	15.45	15.38	15.09	15.05	14.93	14.91
3	14.88	14.85	15.36	15.30	15.69	15.63	15.39	15.37	15.12	15.05	14.95	14.90
4	14.90	14.87	15.36	15.34	15.70	15.66	15.39	15.35	15.05	14.97	14.99	14.95
5	14.92	14.90	15.37	15.36	15.71	15.66	15.43	15.38	15.06	15.03	15.00	14.98
6	14.93	14.90	15.38	15.36	15.73	15.70	15.45	15.40	15.03	15.00	---	---
7	14.96	14.93	15.38	15.37	15.78	15.73	15.46	15.43	15.03	14.99	---	---
8	14.97	14.95	15.39	15.38	15.78	15.73	15.45	15.39	15.04	15.00	14.99	14.95
9	14.99	14.97	15.40	15.38	15.76	15.73	15.39	15.25	15.00	14.97	14.96	14.93
10	15.00	14.98	15.41	15.36	15.78	15.74	15.30	15.25	14.99	14.93	14.99	14.96
11	15.02	14.99	15.41	15.38	15.79	15.77	15.29	15.22	14.95	14.91	14.99	14.98
12	15.03	15.01	15.45	15.39	15.80	15.78	15.31	15.25	14.95	14.90	15.00	14.98
13	15.04	15.03	15.45	15.42	15.82	15.78	15.36	15.31	14.94	14.89	15.01	14.99
14	15.06	15.04	---	---	15.83	15.80	15.36	15.34	14.93	14.90	15.02	15.00
15	15.07	15.05	15.45	15.43	15.84	15.75	15.34	15.32	14.93	14.89	15.04	15.02
16	15.09	15.07	15.48	15.39	15.86	15.82	15.36	15.34	14.90	14.87	15.04	15.03
17	15.10	15.08	15.50	15.48	15.87	15.85	15.36	15.33	14.98	14.89	15.05	15.01
18	15.12	15.10	15.53	15.49	15.88	15.86	15.37	15.32	14.98	14.90	15.09	15.04
19	15.12	15.10	15.53	15.47	15.88	15.84	15.40	15.37	14.92	14.87	15.09	15.06
20	15.12	15.10	15.47	15.43	15.89	15.85	15.38	15.32	14.95	14.92	15.09	15.08
21	15.14	15.11	15.57	15.47	15.93	15.89	15.37	15.29	14.96	14.92	15.13	15.09
22	15.17	15.14	15.57	15.52	15.95	15.92	15.38	15.34	14.92	14.85	15.13	15.11
23	15.18	15.17	15.59	15.52	15.95	15.93	15.40	15.36	14.88	14.85	15.17	15.11
24	15.19	15.18	15.60	15.59	15.94	15.92	15.39	15.36	14.93	14.87	15.18	15.17
25	15.20	15.19	15.59	15.57	15.95	15.91	15.39	15.29	15.00	14.93	15.18	15.17
26	15.21	15.20	15.62	15.57	16.00	15.91	15.29	15.13	15.00	14.96	15.20	15.18
27	15.23	15.21	15.63	15.59	16.00	15.96	15.13	15.07	14.96	14.90	15.23	15.20
28	15.24	15.23	15.65	15.58	---	---	15.09	15.06	14.95	14.92	15.24	15.21
29	15.26	15.24	15.66	15.64	16.03	16.01	15.07	14.99	---	---	15.25	15.23
30	15.26	15.25	15.66	15.62	16.03	16.00	---	---	---	---	15.24	15.21
31	15.29	15.24	---	---	16.03	15.79	15.12	15.08	---	---	15.24	15.17
MONTH	15.29	14.82	15.66	15.29	16.03	15.60	15.78	14.99	15.12	14.85	15.25	14.90

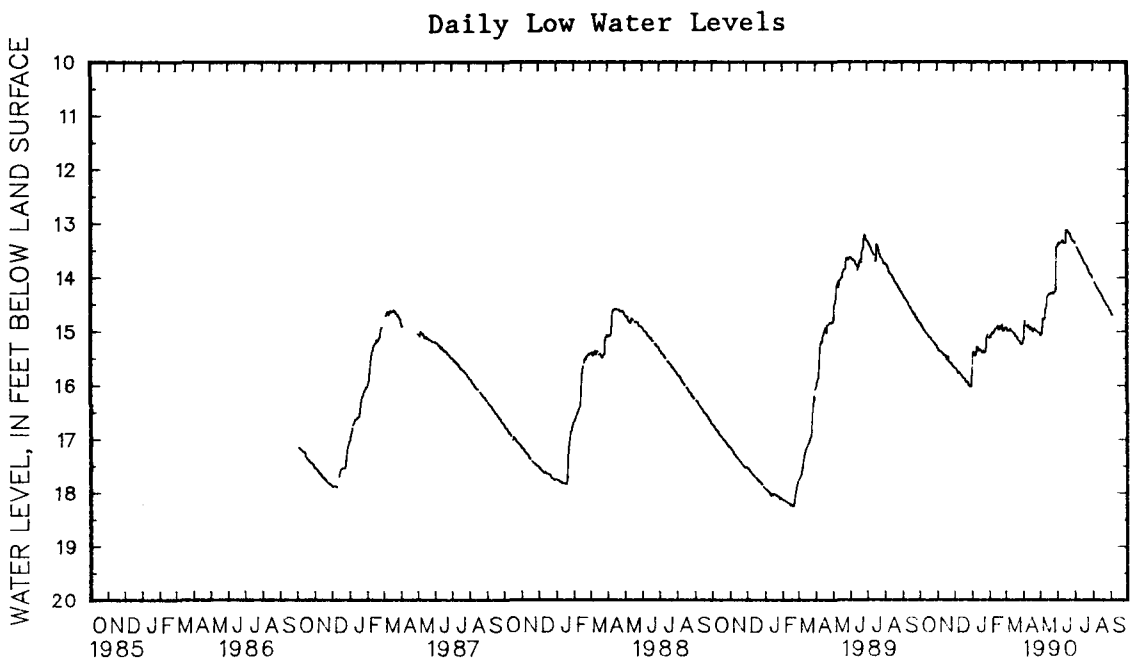
GROUND-WATER LEVELS

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	15.18	15.14	15.04	15.02	13.43	13.39	13.36	13.32	---	---	14.63	14.62
2	15.16	14.90	15.08	15.04	13.39	13.36	---	---	---	---	14.65	14.63
3	14.90	14.81	---	---	13.36	13.32	---	---	14.09	14.07	14.69	14.65
4	14.81	14.79	15.05	14.95	13.35	13.31	13.44	13.42	14.10	14.09	14.70	14.69
5	---	---	14.95	14.75	13.38	13.35	13.45	13.42	14.12	14.10	---	---
6	---	---	14.77	14.75	---	---	13.49	13.45	14.14	14.12	---	---
7	14.90	14.85	14.77	14.75	---	---	13.53	13.49	14.17	14.14	---	---
8	14.91	14.89	14.78	14.76	13.35	13.32	13.54	13.52	14.19	14.17	---	---
9	14.93	14.89	14.78	14.75	13.33	13.31	13.53	13.52	14.20	14.19	---	---
10	14.89	14.83	14.76	14.59	13.31	13.30	13.57	13.53	14.22	14.20	---	---
11	14.92	14.83	14.60	14.56	13.35	13.31	13.59	13.57	14.24	14.22	---	---
12	14.95	14.91	14.58	14.53	13.36	13.35	13.61	13.57	14.26	14.24	---	---
13	14.97	14.94	14.52	14.38	13.37	13.35	13.64	13.61	14.28	14.26	---	---
14	14.95	14.91	14.38	14.35	13.36	13.34	13.64	13.63	14.30	14.28	---	---
15	14.92	14.90	14.35	14.32	13.36	13.10	13.68	13.64	14.31	14.30	---	---
16	14.94	14.92	14.32	14.29	13.13	13.12	13.71	13.68	14.33	14.31	---	---
17	14.98	14.91	14.31	14.27	13.14	13.12	13.73	13.71	14.35	14.33	---	---
18	15.00	14.98	14.31	14.29	13.12	13.09	13.74	13.73	14.36	14.35	---	---
19	15.01	14.99	14.32	14.29	13.14	13.11	13.76	13.74	14.39	14.36	---	---
20	14.99	14.95	14.29	14.26	13.16	13.14	13.77	13.76	14.42	14.40	---	---
21	14.95	14.93	14.30	14.26	13.18	13.15	13.79	13.77	14.44	14.42	---	---
22	14.98	14.95	14.29	14.28	13.19	13.15	13.81	13.79	14.44	14.43	---	---
23	14.97	14.96	14.28	14.27	13.19	13.15	13.85	13.81	14.47	14.44	---	---
24	14.99	14.97	14.29	14.28	13.25	13.19	13.87	13.85	14.49	14.47	---	---
25	15.00	14.97	14.30	14.28	13.28	13.25	13.90	13.87	14.51	14.49	---	---
26	15.00	14.97	14.28	14.23	13.30	13.28	13.92	13.90	14.52	14.51	---	---
27	15.02	15.00	14.27	14.25	13.31	13.29	13.94	13.92	14.53	14.52	---	---
28	15.02	15.00	14.26	14.25	13.33	13.31	13.95	13.94	14.55	14.53	---	---
29	15.03	15.01	14.25	12.88	13.33	13.31	13.96	13.95	14.57	14.55	---	---
30	15.03	15.02	13.44	13.42	13.34	13.33	13.98	13.96	14.60	14.57	---	---
31	---	---	13.44	13.42	---	---	14.00	13.98	14.62	14.60	---	---
MONTH	15.18	14.79	15.08	12.88	13.43	13.09	14.00	13.32	14.62	14.07	14.70	14.62



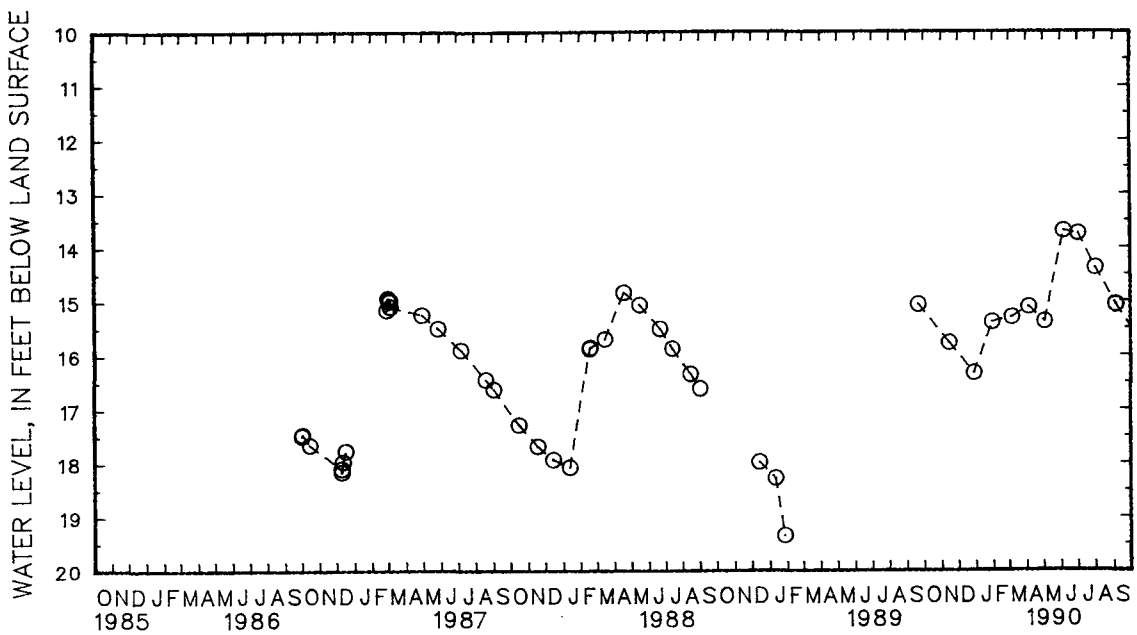
5 YEAR HYDROGRAPH

OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
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, July 17, 1989; lowest measured, 18.51 ft below land surface, Feb. 21, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 14	15.77	JAN 30	15.39	APR 5	15.11	JUN 6	13.70	AUG 1	14.39
DEC 28	16.33	MAR 6	15.30	MAY 3	15.38	JUL 2	13.75	SEP 5	15.07



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

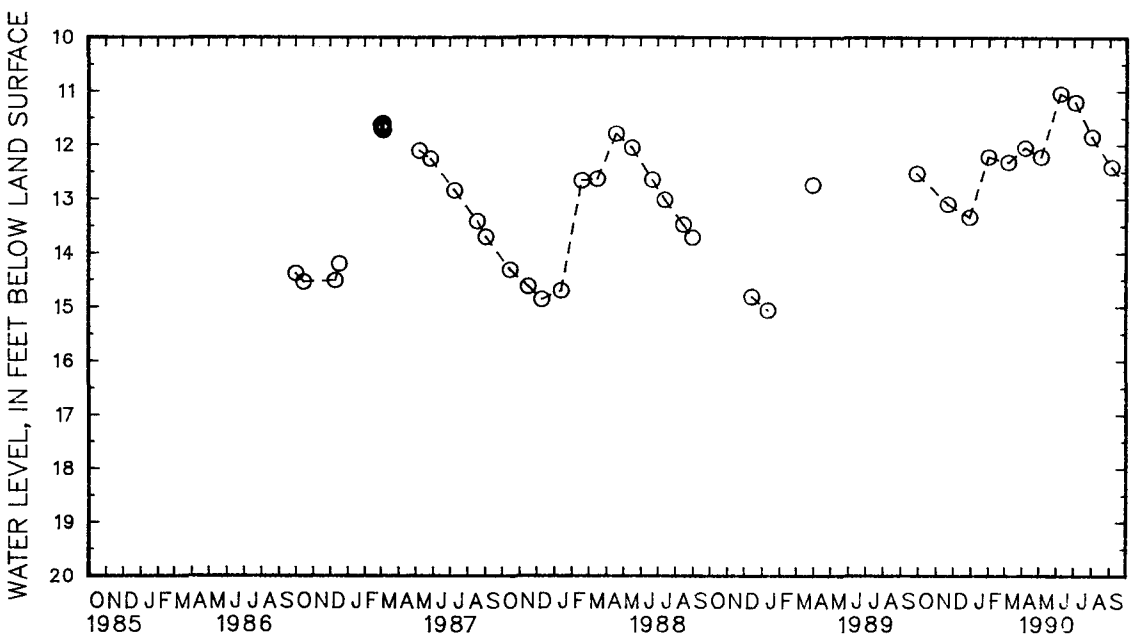
MARYLAND--Continued

CALVERT COUNTY--Continued

WELL NUMBER.--CA Fc 17. SITE ID.--382343076303801. PERMIT NUMBER.--CA-81-2388.
LOCATION.--Lat 38°23'40", long 76°30'39", Hydrologic Unit 02060006, Jefferson Patterson State 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 32 ft; casing diameter 3.5 in., to 27 ft; screen diameter 3.5 in. from 27 to 32 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 22.59 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 2.37 ft above land surface.
REMARKS.--Best Management Practices Project observation well.
PERIOD OF RECORD.--October 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.04 ft below land surface, June 7, 1990; lowest measured, 15.07 ft below land surface, Jan. 11, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 21	13.10	JAN 31	12.22	APR 6	12.05	JUN 7	11.04	AUG 1	11.85
DEC 29	13.34	MAR 7	12.32	MAY 4	12.22	JUL 3	11.20	SEP 4	12.41



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
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, July 16, 1989; lowest measured, 9.58 ft below land surface, Feb. 16, 17, 18, and 19, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.10	7.10	7.48	7.45	7.73	7.71	7.41	6.67	6.77	6.76	6.85	6.84
2	7.10	7.08	7.49	7.48	7.73	7.70	6.88	6.79	6.79	6.77	6.84	6.83
3	7.12	7.09	7.50	7.49	7.74	7.70	6.95	6.88	6.81	6.75	6.87	6.83
4	7.14	7.13	7.52	7.51	7.75	7.74	6.99	6.95	6.75	6.68	6.88	6.87
5	7.16	7.14	7.52	7.51	7.76	7.75	7.05	6.99	6.74	6.71	6.89	6.89
6	7.17	7.16	7.52	7.52	7.76	7.76	7.08	7.05	6.72	6.69	---	---
7	7.20	7.17	7.54	7.52	7.79	7.76	7.10	7.08	6.72	6.70	---	---
8	7.20	7.20	7.54	7.52	7.79	7.79	7.12	6.94	6.73	6.71	6.96	6.95
9	7.23	7.20	7.52	7.48	7.80	7.79	6.94	6.87	6.71	6.69	6.95	6.93
10	7.24	7.23	7.48	7.44	7.81	7.80	6.89	6.87	6.71	6.56	6.97	6.95
11	7.26	7.24	7.46	7.44	7.83	7.81	6.89	6.85	6.58	6.55	6.97	6.97
12	7.27	7.26	7.50	7.44	7.84	7.83	6.92	6.87	6.57	6.55	6.99	6.97
13	7.30	7.27	7.52	7.50	7.85	7.84	6.98	6.92	6.57	6.54	7.00	6.99
14	7.31	7.30	---	---	7.85	7.84	6.98	6.97	6.59	6.55	7.01	7.00
15	7.33	7.31	7.52	7.50	7.86	7.82	7.01	6.98	6.59	6.58	7.01	7.01
16	7.34	7.32	7.53	7.48	7.86	7.84	7.02	7.01	6.58	6.57	7.02	7.01
17	7.35	7.34	7.55	7.53	7.87	7.86	7.03	7.02	6.66	6.58	7.02	7.01
18	7.38	7.35	7.57	7.55	7.87	7.87	7.07	7.03	6.67	6.65	7.01	6.97
19	7.37	7.32	7.58	7.57	7.87	7.86	7.09	7.06	6.66	6.64	6.99	6.98
20	7.32	7.27	7.59	7.57	7.86	7.86	7.09	7.09	6.72	6.66	7.00	6.98
21	7.27	7.27	7.63	7.58	7.87	7.86	7.09	7.08	6.73	6.72	7.03	7.00
22	7.33	7.27	7.64	7.63	7.91	7.87	7.11	7.09	6.73	6.69	7.03	7.02
23	7.35	7.33	7.65	7.63	7.92	7.91	7.12	7.10	6.71	6.69	7.05	7.02
24	7.36	7.35	7.65	7.65	7.92	7.92	7.13	7.11	6.76	6.70	7.06	7.05
25	7.38	7.36	7.65	7.64	7.92	7.89	7.13	6.90	6.83	6.76	7.06	7.05
26	7.40	7.38	7.67	7.64	7.92	7.89	6.90	6.64	6.84	6.83	7.08	7.06
27	7.41	7.40	7.68	7.67	7.94	7.92	6.64	6.59	6.84	6.80	7.10	7.08
28	7.43	7.41	7.67	7.65	---	---	6.62	6.59	6.84	6.81	7.11	7.09
29	7.44	7.43	7.70	7.67	8.00	7.96	6.62	6.59	---	---	7.12	7.10
30	7.45	7.44	7.71	7.70	7.97	7.96	---	---	---	---	7.12	7.10
31	7.45	7.44	---	---	7.97	7.42	6.78	6.73	---	---	7.12	6.89
MONTH	7.45	7.08	7.71	7.44	8.00	7.42	7.41	6.59	6.84	6.54	7.12	6.83

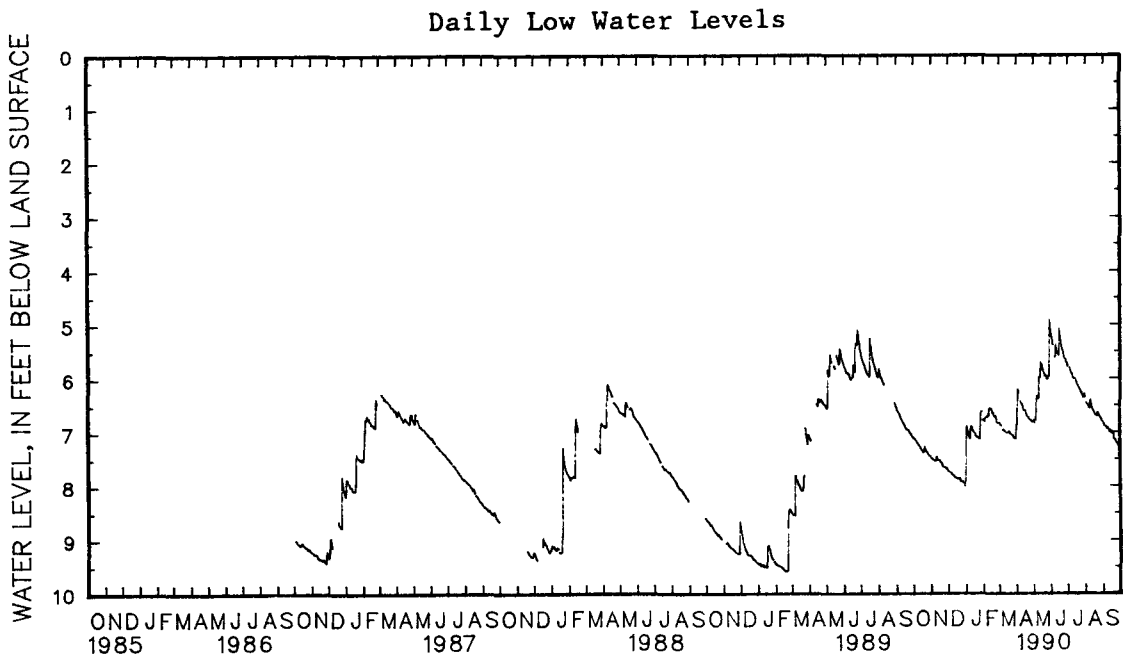
GROUND-WATER LEVELS

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	6.89	6.86	6.79	6.78	5.17	5.09	5.78	5.71	---	---	6.83	6.81
2	6.86	6.12	6.82	6.79	5.23	5.17	---	---	---	---	6.85	6.83
3	6.21	6.11	---	---	5.26	5.23	---	---	6.46	6.43	6.88	6.85
4	6.28	6.21	6.78	6.67	5.34	5.26	5.81	5.78	6.48	6.45	---	---
5	---	---	6.65	6.32	5.38	5.34	5.86	5.81	6.49	6.47	---	---
6	---	---	6.34	6.32	---	---	5.88	5.85	6.51	6.48	6.90	6.89
7	6.43	6.40	6.35	6.33	---	---	5.91	5.88	6.54	6.50	6.92	6.90
8	6.46	6.43	6.37	6.34	5.60	5.58	5.92	5.91	6.56	6.54	6.94	6.92
9	6.48	6.46	6.38	6.36	5.62	5.38	5.94	5.91	6.56	6.41	6.93	6.93
10	6.48	6.46	6.37	5.81	5.38	5.32	5.99	5.94	6.41	6.37	6.94	6.93
11	6.53	6.46	5.98	5.86	5.49	5.38	6.01	5.99	6.46	6.40	6.96	6.94
12	6.58	6.53	5.99	5.98	5.53	5.50	6.01	5.98	6.52	6.46	6.98	6.96
13	6.60	6.58	5.99	5.55	5.54	5.53	6.02	5.99	6.55	6.52	6.97	6.97
14	6.60	6.59	5.71	5.60	5.57	5.54	6.02	6.02	6.58	6.54	6.98	6.97
15	6.60	6.59	5.74	5.70	5.58	4.70	6.04	6.02	6.61	6.58	6.99	6.96
16	6.62	6.60	5.76	5.74	5.08	4.87	6.09	6.05	6.63	6.61	7.02	6.99
17	6.66	6.62	5.83	5.77	5.17	5.08	6.11	6.09	6.65	6.63	7.03	7.00
18	6.69	6.66	5.86	5.83	5.24	5.17	6.13	6.11	6.67	6.65	7.04	7.03
19	6.71	6.69	5.90	5.86	5.33	5.23	6.15	6.13	6.69	6.66	7.04	7.03
20	6.71	6.71	5.92	5.90	5.40	5.33	6.18	6.15	6.70	6.68	7.14	7.03
21	6.72	6.71	5.96	5.92	5.46	5.39	6.20	6.17	6.70	6.69	7.15	7.14
22	6.75	6.72	5.95	5.94	5.48	5.45	6.22	6.19	6.70	6.64	7.15	7.14
23	6.76	6.75	5.97	5.94	5.52	5.46	6.24	6.20	6.64	6.60	7.18	7.15
24	6.77	6.76	6.01	5.97	5.58	5.52	6.27	6.24	6.66	6.63	7.20	7.18
25	6.78	6.77	6.02	6.00	5.63	5.58	6.30	6.27	6.69	6.66	7.21	7.20
26	6.79	6.78	6.02	5.95	5.64	5.63	6.32	6.30	6.72	6.69	7.23	7.21
27	6.80	6.79	5.97	5.95	5.66	5.64	6.34	6.32	6.74	6.72	7.26	7.23
28	6.81	6.80	5.97	5.96	5.71	5.67	6.36	6.34	6.75	6.74	7.27	7.26
29	6.81	6.80	5.96	3.11	5.72	5.71	6.36	6.29	6.77	6.75	7.28	7.27
30	6.80	6.78	4.92	4.30	5.75	5.72	6.30	6.29	6.80	6.76	7.30	7.28
31	---	---	5.09	4.92	---	---	6.35	6.30	6.81	6.80	---	---
MONTH	6.89	6.11	6.82	3.11	5.75	4.70	6.36	5.71	6.81	6.37	7.30	6.81



5 YEAR HYDROGRAPH

OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
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, July 9, 10, and 11, 1989; lowest measured, 19.21 ft below land surface, Feb. 20, 21, 22, 23, 24, and 25, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	16.74	16.73	17.06	17.05	17.36	17.34	17.62	17.62	17.18	17.15	16.70	16.69
2	16.74	16.74	17.07	17.06	17.36	17.36	17.62	17.62	17.15	17.12	16.69	16.68
3	16.76	16.74	17.08	17.07	17.37	17.36	17.61	17.61	17.12	17.10	16.68	16.68
4	16.77	16.76	17.09	17.08	17.38	17.37	17.61	17.58	17.10	17.07	16.68	16.68
5	16.79	16.77	17.10	17.09	17.39	17.38	17.58	17.58	17.07	17.06	16.68	16.68
6	16.79	16.78	17.11	17.10	17.40	17.39	17.58	17.56	17.06	17.03	---	---
7	16.81	16.79	17.11	17.10	17.41	17.40	17.56	17.56	17.03	17.02	---	---
8	16.82	16.81	17.12	17.11	17.41	17.41	17.56	17.54	17.02	16.99	16.68	16.68
9	16.84	16.82	17.12	17.12	17.42	17.41	17.54	17.53	16.99	16.97	16.68	16.68
10	16.85	16.84	17.14	17.12	17.43	17.42	17.53	17.50	16.96	16.94	16.68	16.68
11	16.86	16.85	17.15	17.14	17.44	17.43	17.50	17.49	16.94	16.93	16.68	16.68
12	16.87	16.86	17.16	17.15	17.45	17.44	17.49	17.47	16.93	16.92	16.69	16.68
13	16.88	16.87	17.17	17.16	17.46	17.45	17.47	17.45	16.92	16.89	16.70	16.69
14	16.90	16.88	---	---	17.47	17.46	17.45	17.45	16.89	16.88	16.71	16.70
15	16.91	16.90	17.19	17.18	17.48	17.47	17.45	17.45	16.88	16.86	16.73	16.71
16	16.92	16.91	17.20	17.19	17.48	17.48	17.45	17.45	16.85	16.82	16.73	16.73
17	16.93	16.92	17.21	17.20	17.49	17.48	17.45	17.43	16.82	16.81	16.74	16.73
18	16.94	16.93	17.23	17.21	17.50	17.49	17.43	17.42	16.81	16.81	16.76	16.74
19	16.94	16.94	17.24	17.23	17.50	17.50	17.42	17.42	16.81	16.79	16.77	16.76
20	16.94	16.94	17.25	17.24	17.51	17.50	17.42	17.41	16.79	16.78	16.79	16.77
21	16.95	16.94	17.26	17.25	17.52	17.51	17.41	17.40	16.78	16.77	16.81	16.79
22	16.96	16.94	17.26	17.26	17.53	17.52	17.40	17.38	16.77	16.74	16.82	16.81
23	16.97	16.96	17.28	17.27	17.53	17.53	17.38	17.35	16.74	16.71	16.84	16.82
24	16.98	16.97	17.29	17.28	17.54	17.53	17.35	17.34	16.71	16.71	16.85	16.84
25	16.99	16.98	17.30	17.29	17.54	17.54	17.34	17.31	16.71	16.69	16.86	16.85
26	17.00	16.99	17.31	17.30	17.55	17.54	17.31	17.29	16.70	16.70	16.88	16.86
27	17.01	17.00	17.32	17.31	17.55	17.55	17.29	17.27	16.70	16.70	16.89	16.88
28	17.02	17.01	17.33	17.32	---	---	17.27	17.24	16.70	16.70	16.90	16.89
29	17.03	17.02	17.33	17.33	17.61	17.61	17.24	17.20	---	---	16.91	16.91
30	17.04	17.03	17.34	17.33	17.62	17.61	---	---	---	---	16.92	16.92
31	17.05	17.04	---	---	17.62	17.62	17.20	17.18	---	---	16.92	16.92
MONTH	17.05	16.73	17.34	17.05	17.62	17.34	17.62	17.18	17.18	16.69	16.92	16.68

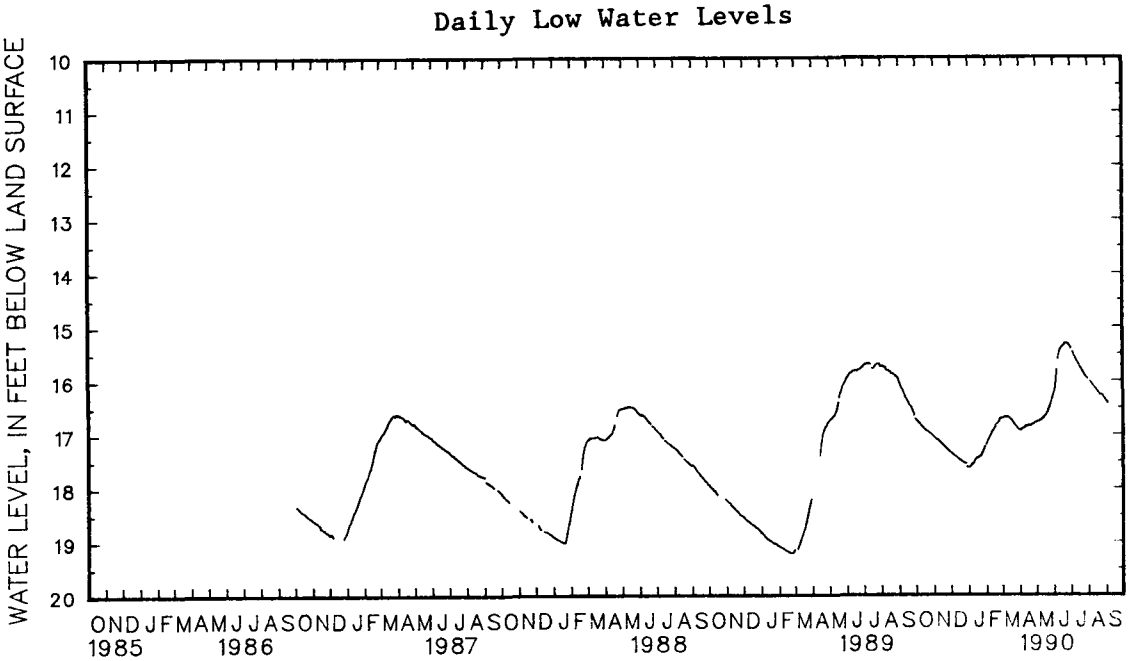
GROUND-WATER LEVELS

MARYLAND--Continued

CALVERT COUNTY--Continued

CA Fc 19--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	16.93	16.92	16.76	16.76	16.19	16.14	15.40	15.38	---	---	16.39	16.38
2	16.93	16.93	16.76	16.76	16.14	16.06	---	---	---	---	16.40	16.39
3	16.93	16.91	---	---	16.05	15.93	---	---	16.02	16.01	16.42	16.40
4	16.91	16.91	16.76	16.75	15.93	15.81	15.47	15.47	16.04	16.02	---	---
5	---	---	16.75	16.74	15.81	15.71	15.49	15.47	16.05	16.04	---	---
6	---	---	16.74	16.74	---	---	15.52	15.49	16.06	16.05	---	---
7	16.89	16.88	16.74	16.74	---	---	15.55	15.52	16.08	16.06	---	---
8	16.88	16.88	16.74	16.73	15.60	15.54	15.56	15.55	16.10	16.08	---	---
9	16.88	16.88	16.73	16.73	15.54	15.48	15.58	15.56	16.11	16.10	---	---
10	16.87	16.86	16.73	16.70	15.48	15.46	15.61	15.58	16.12	16.11	---	---
11	16.85	16.84	16.70	16.70	15.46	15.42	15.63	15.61	16.13	16.12	---	---
12	16.85	16.85	16.70	16.70	15.42	15.41	15.65	15.63	16.15	16.13	---	---
13	16.85	16.85	16.70	16.68	15.41	15.39	15.67	15.65	16.16	16.15	---	---
14	16.85	16.85	16.68	16.67	15.39	15.38	15.68	15.67	16.17	16.16	---	---
15	16.85	16.84	16.67	16.66	15.38	15.37	15.70	15.68	16.19	16.17	---	---
16	16.84	16.83	16.66	16.64	15.37	15.36	15.72	15.70	16.20	16.19	---	---
17	16.83	16.82	16.64	16.62	15.36	15.35	15.75	15.72	16.22	16.20	---	---
18	16.83	16.82	16.62	16.60	15.35	15.34	15.77	15.75	16.23	16.22	---	---
19	16.84	16.83	16.60	16.59	15.34	15.32	15.78	15.77	16.24	16.23	---	---
20	16.84	16.83	16.59	16.55	15.32	15.32	15.80	15.78	16.26	16.24	---	---
21	16.83	16.82	16.55	16.53	15.32	15.31	15.82	15.80	16.26	16.26	---	---
22	16.82	16.82	16.53	16.50	15.31	15.31	15.84	15.82	16.27	16.26	---	---
23	16.82	16.81	16.50	16.47	15.31	15.31	15.85	15.84	16.27	16.27	---	---
24	16.81	16.81	16.47	16.44	15.31	15.31	15.88	15.85	16.27	16.27	---	---
25	16.81	16.80	16.44	16.41	15.32	15.31	15.90	15.88	16.28	16.27	---	---
26	16.80	16.79	16.40	16.37	15.32	15.32	15.91	15.90	16.30	16.28	---	---
27	16.79	16.78	16.36	16.33	15.34	15.33	15.93	15.91	16.31	16.30	---	---
28	16.78	16.78	16.33	16.30	15.35	15.33	15.94	15.93	16.33	16.31	---	---
29	16.78	16.77	16.30	16.21	15.36	15.35	15.95	15.94	16.34	16.33	---	---
30	16.77	16.76	16.26	16.23	15.38	15.36	15.96	15.95	16.36	16.34	---	---
31	---	---	16.23	16.19	---	---	15.97	15.96	16.38	16.36	---	---
MONTH	16.93	16.76	16.76	16.19	16.19	15.31	15.97	15.38	16.38	16.01	16.42	16.38



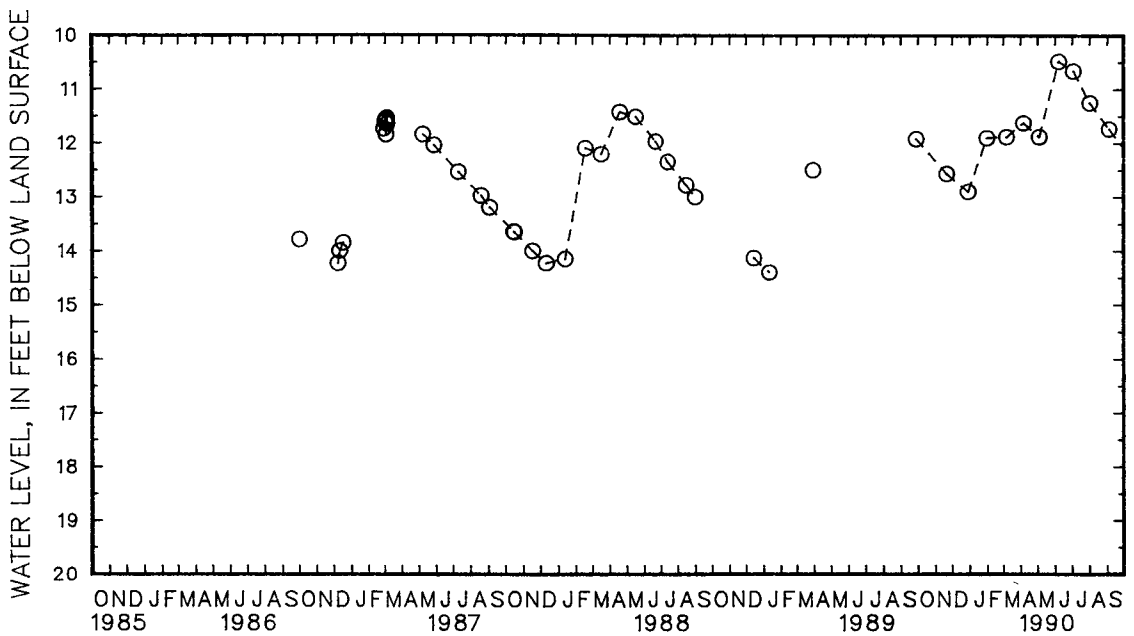
5 YEAR HYDROGRAPH

OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

WELL NUMBER.--CA Fc 20. SITE ID.--382337076303702. PERMIT NUMBER.--CA-81-2385.
LOCATION.--Lat 38°23'38", long 76°30'39", Hydrologic Unit 02060006, Jefferson Patterson State 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 27 ft; casing diameter 3.5 in., to 22 ft; screen diameter 3.5 in. from 22 to 27 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 20.62 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 1.84 ft above land surface.
REMARKS.--Best Management Practices Project observation well.
PERIOD OF RECORD.--October 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.48 ft below land surface, June 7, 1990; lowest measured, 14.41 ft below land surface, Jan. 11, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 21	12.57	JAN 31	11.90	APR 6	11.62	JUN 7	10.48	AUG 1	11.25
DEC 29	12.90	MAR 7	11.88	MAY 4	11.88	JUL 3	10.66	SEP 4	11.74



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

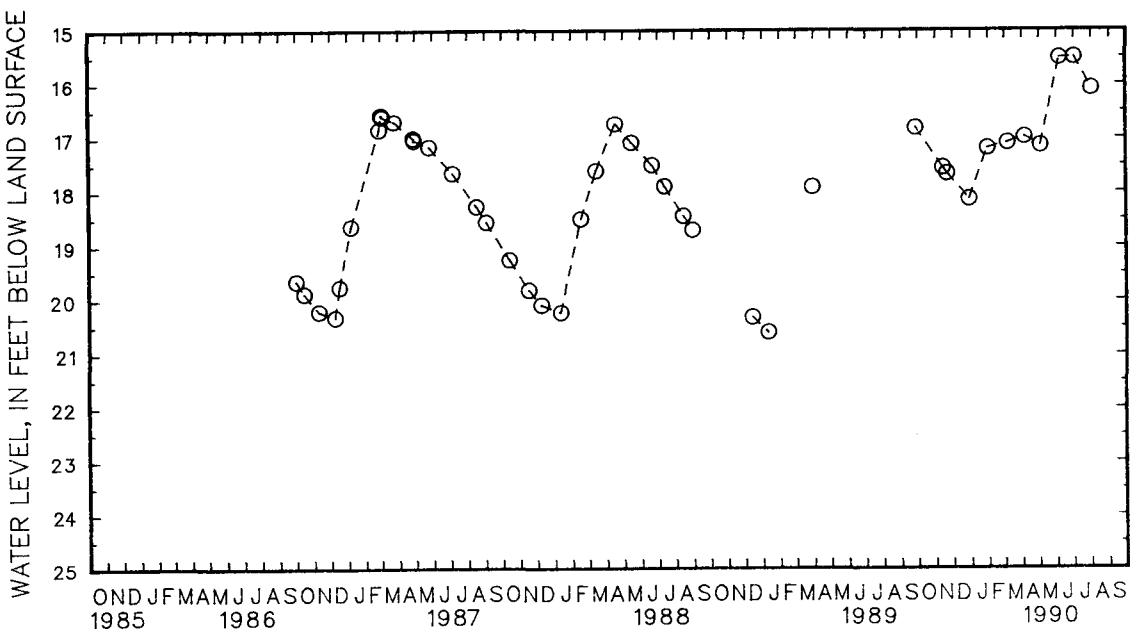
MARYLAND--Continued

CALVERT COUNTY--Continued

WELL NUMBER.--CA Fc 21. SITE ID.--382342076303401. PERMIT NUMBER.--CA-81-2384.
LOCATION.--Lat 38°23'42", long 76°30'33", Hydrologic Unit 02060006, Jefferson Patterson State 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.
DATUM.--Elevation of land surface is 35.51 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 2.14 ft above land surface.
REMARKS.--Best Management Practices Project observation well.
PERIOD OF RECORD.--October 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.51 ft below land surface, July 3, 1990; lowest measured, 20.61 ft below land surface, Jan. 11, 1989.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 14	17.56	DEC 29	18.14	MAR 7	17.10	MAY 4	17.15	JUL 3	15.51
21	17.67	JAN 31	17.20	APR 6	16.99	JUN 7	15.52	AUG 2	16.09

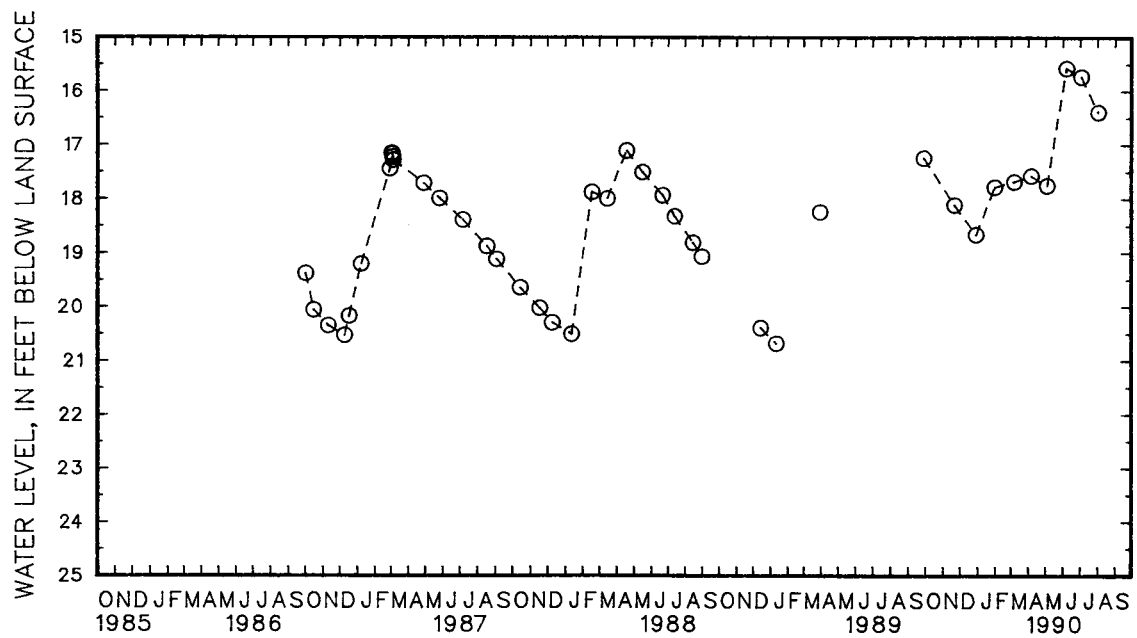


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

WELL NUMBER.--CA Fc 22. SITE ID.--382340076303201. PERMIT NUMBER.--CA-81-2383.
LOCATION.--Lat 38°23'39", long 76°30'33", Hydrologic Unit 02060006, Jefferson Patterson State 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 35 ft; casing diameter 3.5 in., to 30 ft; screen diameter 3.5 in. from 30 to 35 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 36.52 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 3.02 ft above land surface.
REMARKS.--Best Management Practices Project observation well.
PERIOD OF RECORD.--October 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.57 ft below land surface, June 7, 1990; lowest measured, 20.69 ft below land surface, Jan. 11, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 21	18.11	JAN 31	17.78	APR 6	17.57	JUN 7	15.57	AUG 2	16.39
DEC 29	18.66	MAR 7	17.68	MAY 4	17.75	JUL 3	15.73		



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

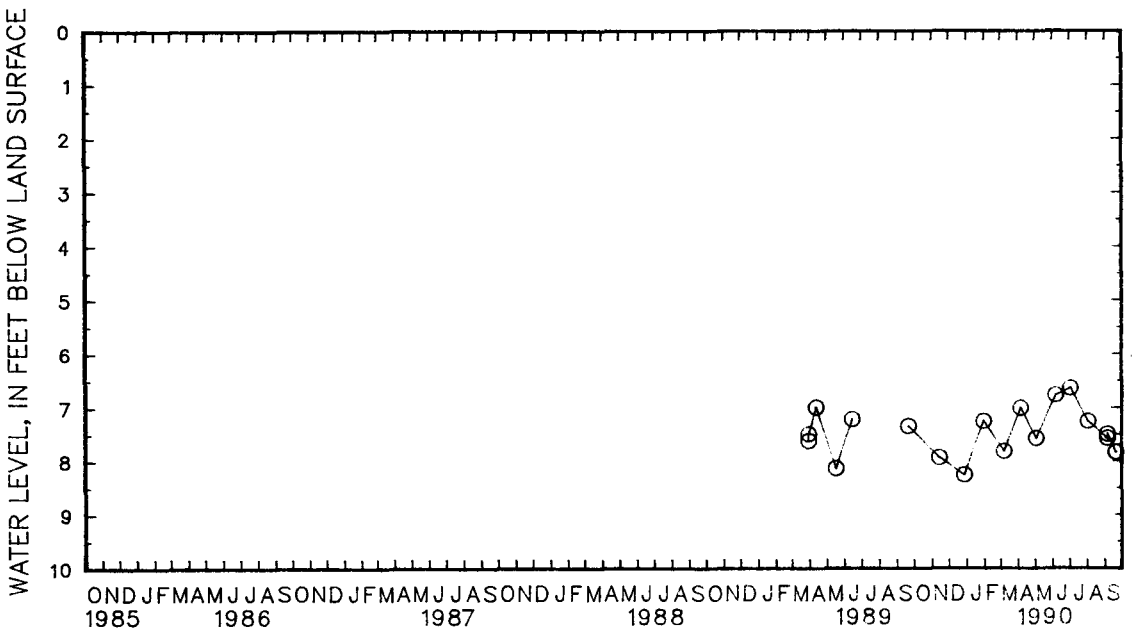
MARYLAND-Continued

CALVERT COUNTY--Continued

WELL NUMBER.--CA Fc 33. SITE ID.--382339076304201.
LOCATION.--Lat 38°23'39", long 76°30'41", Hydrologic Unit 02060006, Jefferson Patterson State Park and Museum.
Owner: U.S. Geological Survey.
AQUIFER.--Lowland deposits of Pleistocene age. Aquifer code: 111LLND.
WELL CHARACTERISTICS.--Driven, observation, water-table well, depth 14 ft; casing diameter 2 in., to 12 ft; screen diameter 2 in. from 12 to 14 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water level recorder--1-hour recorder interval from September 1990 to current year.
DATUM.--Elevation of land surface is 12.17 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of recorder platform, 3.31 ft above land surface.
REMARKS.--Best Management Practices Project observation well.
PERIOD OF RECORD.--March 1989 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.64 ft below land surface, July 2, 1990; lowest measured, 8.26 ft below land surface, Dec. 28, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 14	7.94	JAN 30	7.26	APR 5	7.01	JUN 6	6.77	AUG 2	7.26	SEP 20	7.84
DEC 28	8.26	MAR 7	7.82	MAY 3	7.58	JUL 2	6.64	SEP 5	7.58		

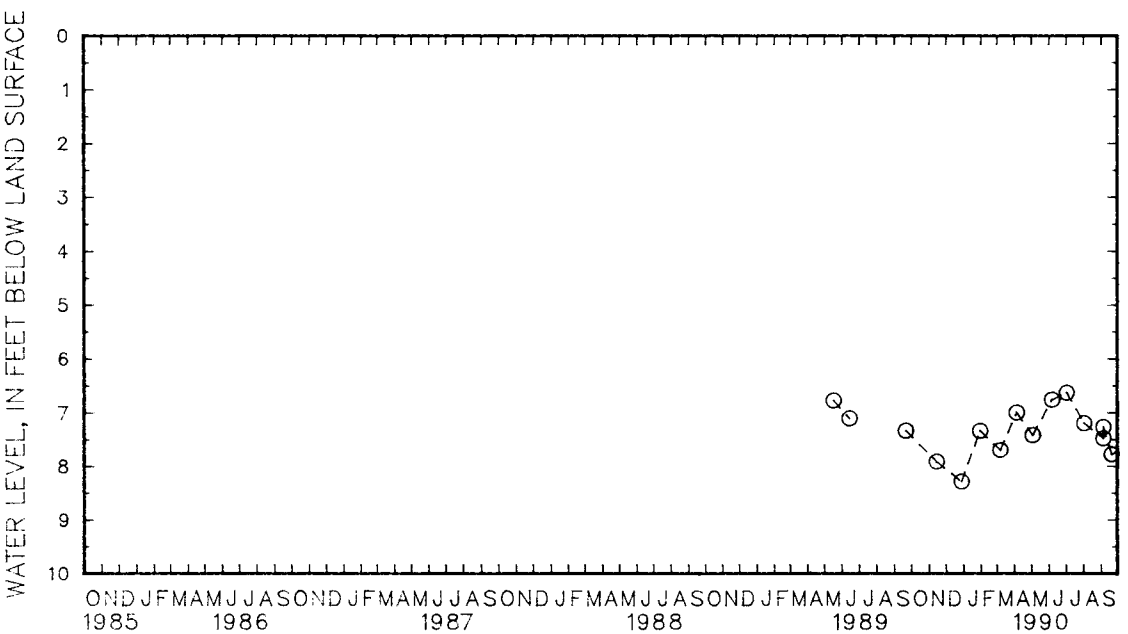


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

WELL NUMBER.--CA Fc 34. SITE ID.--382339076304202.
LOCATION.--Lat 38°23'39", long 76°30'41", Hydrologic Unit 02060006, Jefferson Patterson State Park and Museum.
Owner: U.S. Geological Survey.
AQUIFER.--Lowland deposits of Pleistocene age. Aquifer code: 111LLND.
WELL CHARACTERISTICS.--Driven, observation, water-table well, depth 18 ft; casing diameter 2 in., to 16 ft; screen diameter 2 in. from 16 to 18 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital water level recorder--1-hour recorder interval from September 1990 to current year.
DATUM.--Elevation of land surface is 12.01 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of recorder platform, 3.54 ft above land surface.
REMARKS.--Best Management Practices Project observation well.
PERIOD OF RECORD.--May 1989 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.63 ft below land surface, July 2, 1990; lowest measured, 8.29 ft below land surface, Dec. 28, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 14	7.92	JAN 30	7.34	APR 5	7.00	JUN 6	6.76	AUG 2	7.20
DEC 28	8.29	MAR 7	7.70	MAY 3	7.42	JUL 2	6.63	SEP 5	7.48



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

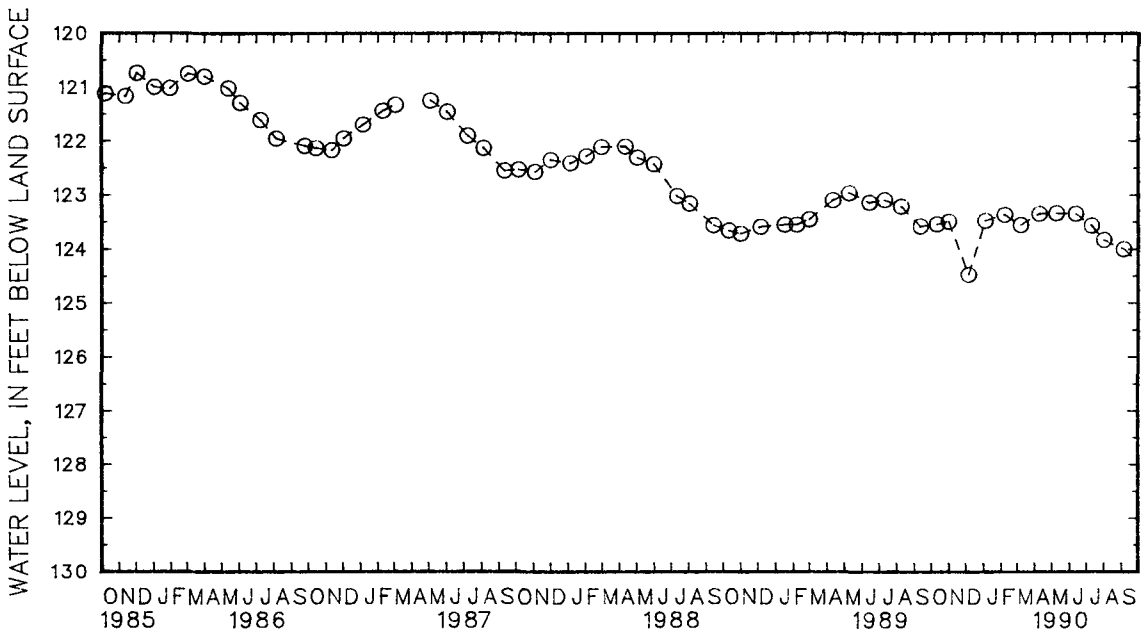
MARYLAND--Continued

CALVERT COUNTY--Continued

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 protective casing, 3.63 ft above land surface.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--February 1977 to current year.
EXTREMES FOR PERIODOF RECORD.--Highest water level measured, 116.36 ft below land surface, Jan. 8, 1980; lowest measured, 124.49 ft below land surface, Dec. 6, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	123.55	DEC 6	124.49	FEB 7	123.37	APR 9	123.35	JUN 12	123.35	AUG 1	123.84
NOV 1	123.50	JAN 4	123.48	MAR 7	123.56	MAY 9	123.34	JUL 10	123.57	SEP 5	124.01

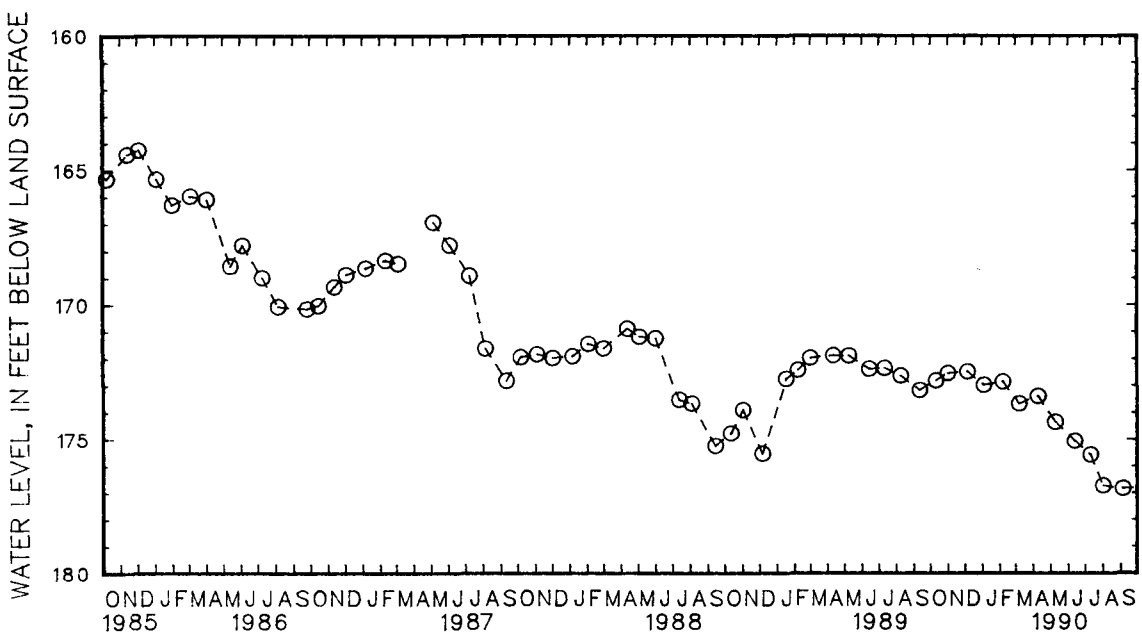


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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 120 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing, 1.92 ft above land surface.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--October 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 142.69 ft below land surface, April 21, 1980; lowest measured, 176.85 ft below land surface, Sept. 5, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	172.82	DEC 6	172.49	FEB 7	172.86	APR 9	173.40	JUN 12	175.07	AUG 1	176.74
NOV 1	172.55	JAN 4	172.99	MAR 7	173.68	MAY 9	174.36	JUL 10	175.59	SEP 5	176.85



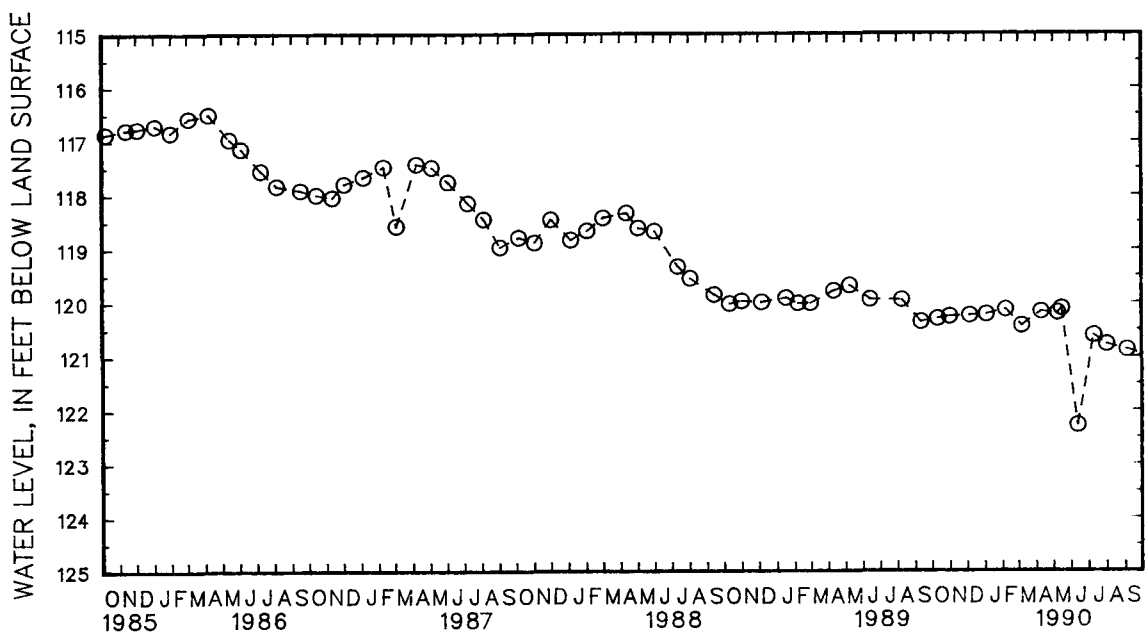
5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

CALVERT COUNTY--Continued

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, 2.82 ft above land surface.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--October 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 111.50 ft below land surface, Oct. 5, 1976; lowest measured, 122.29 ft below land surface, June 12, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	120.31	JAN 4	120.23	MAR 7	120.44	MAY 9	120.20	JUN 12	122.29	AUG 1	120.78
NOV 1	120.27	FEB 7	120.14	APR 10	120.18	16	120.12	JUL 10	120.61	SEP 5	120.88
DEC 6	120.25										

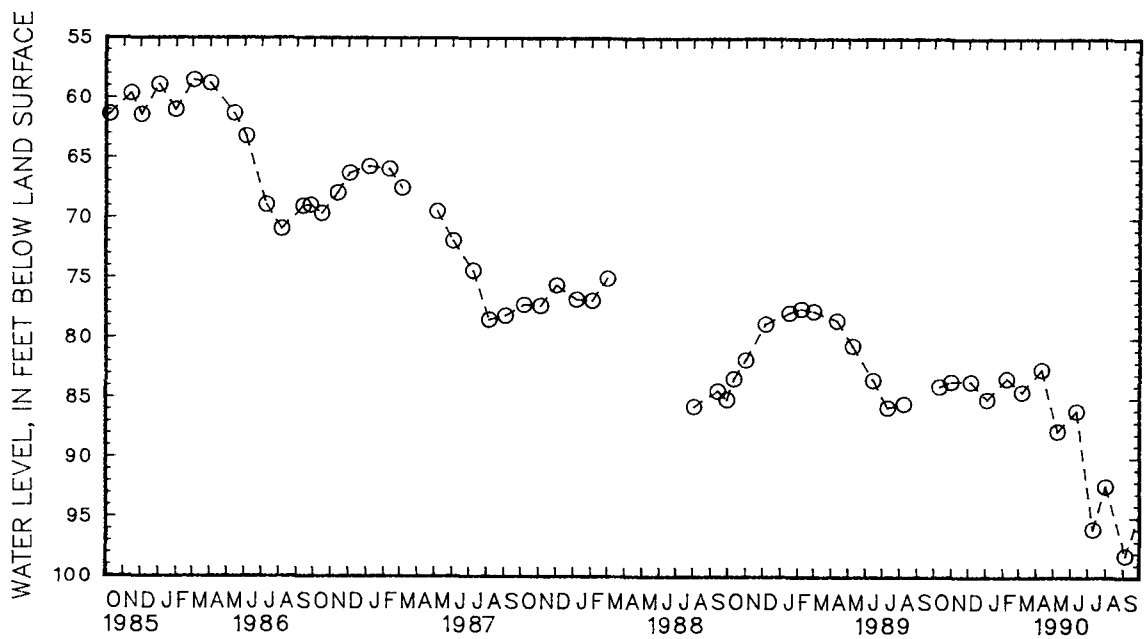


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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: Top of sanitary seal 1.59 ft above land surface.
REMARKS.--Maryland Water-Level Network observation well. Water level reported at land surface 1942; water level measured 58.9 ft below land surface, Jan. 13, 1944. Well not measured from April through July 1988 during building construction at well site. Water levels may be affected by pumping.
PERIOD OF RECORD.-- October 1949 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.15 ft below land surface, May 18, 1950; lowest measured, 98.17 ft below land surface, Sept. 5, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	84.04	DEC 6	83.65	FEB 7	83.38	APR 10	82.62	JUN 12	86.08	AUG 1	92.34
NOV 1	83.66	JAN 4	85.13	MAR 7	84.51	MAY 9	87.76	JUL 10	95.95	SEP 5	98.17



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

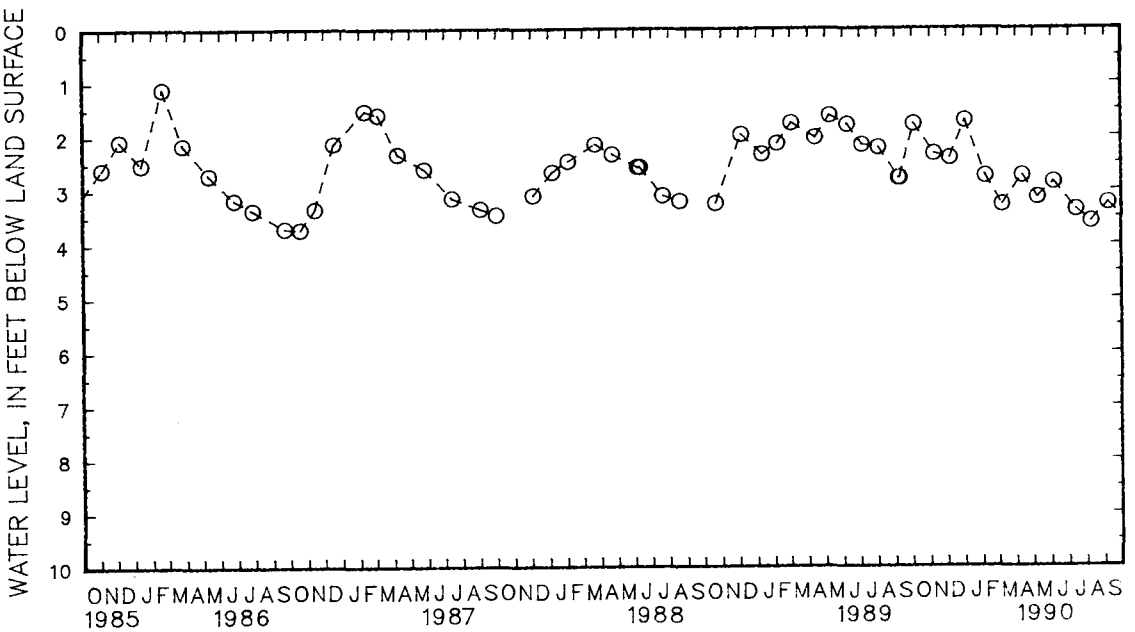
MARYLAND--Continued

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, 0.10 above land surface.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--August 1949 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, .25 ft above land surface, Nov. 27, 1951; lowest measured, 4.37 ft below land surface, Oct. 11, 1957.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	1.78	DEC 6	2.42	FEB 6	2.76	APR 12	2.75	JUN 5	2.87	AUG 8	3.60
NOV 8	2.34	JAN 2	1.72	MAR 7	3.28	MAY 8	3.15	JUL 13	3.38	SEP 7	3.26

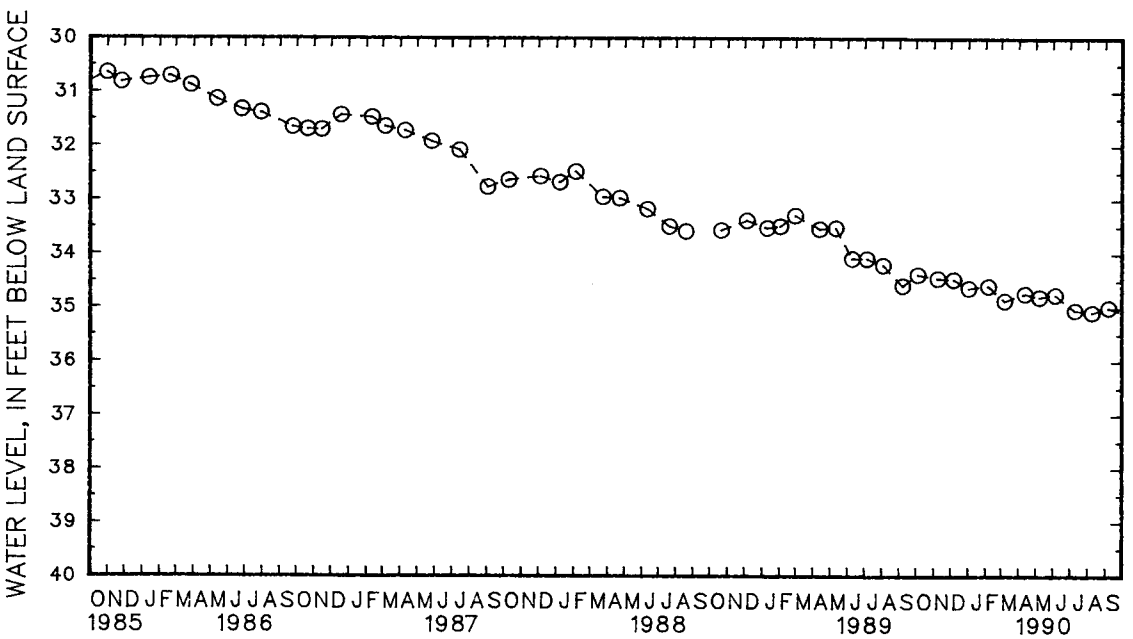


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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, 2.20 ft above land surface.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--February 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 28.64 ft below land surface, Dec. 10, 1976; lowest measured, 35.09 ft below land surface, Aug. 9, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	34.39	DEC 6	34.48	FEB 6	34.60	APR 12	34.74	JUN 5	34.76	AUG 9	35.09
NOV 8	34.46	JAN 2	34.64	MAR 7	34.87	MAY 8	34.80	JUL 10	35.05	SEP 7	35.00

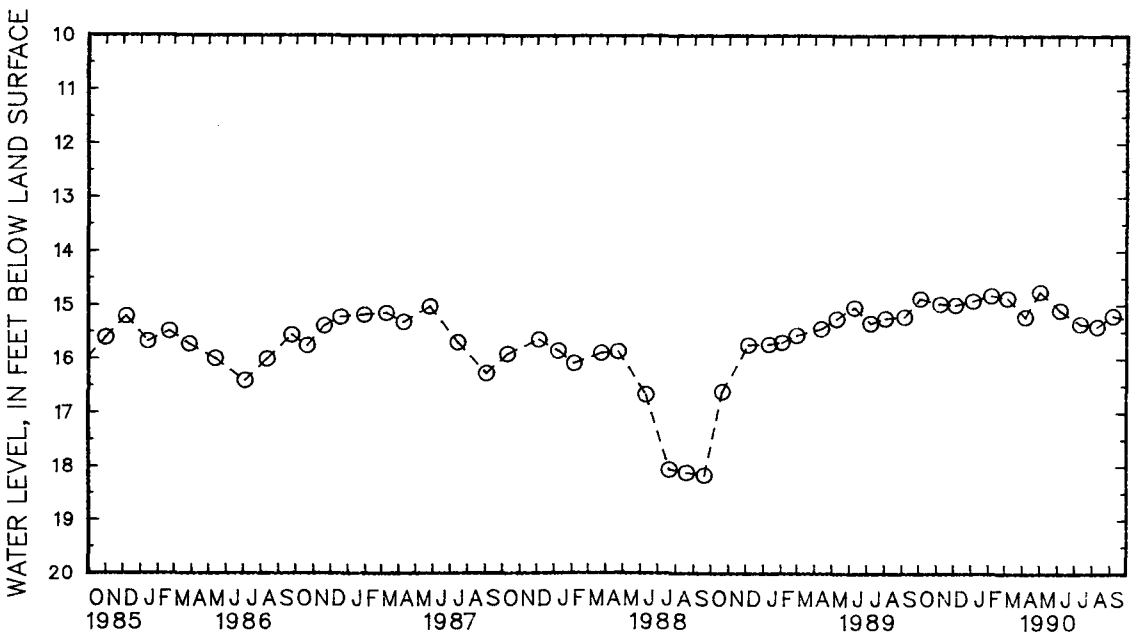


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well. 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, April 5, 1973; lowest measured, 56.09 ft below land surface, Nov. 5, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	14.88	DEC 4	15.00	FEB 5	14.82	APR 5	15.22	JUN 5	15.10	AUG 9	15.40
NOV 7	14.98	JAN 4	14.92	MAR 5	14.88	MAY 1	14.75	JUL 10	15.35	SEP 6	15.20

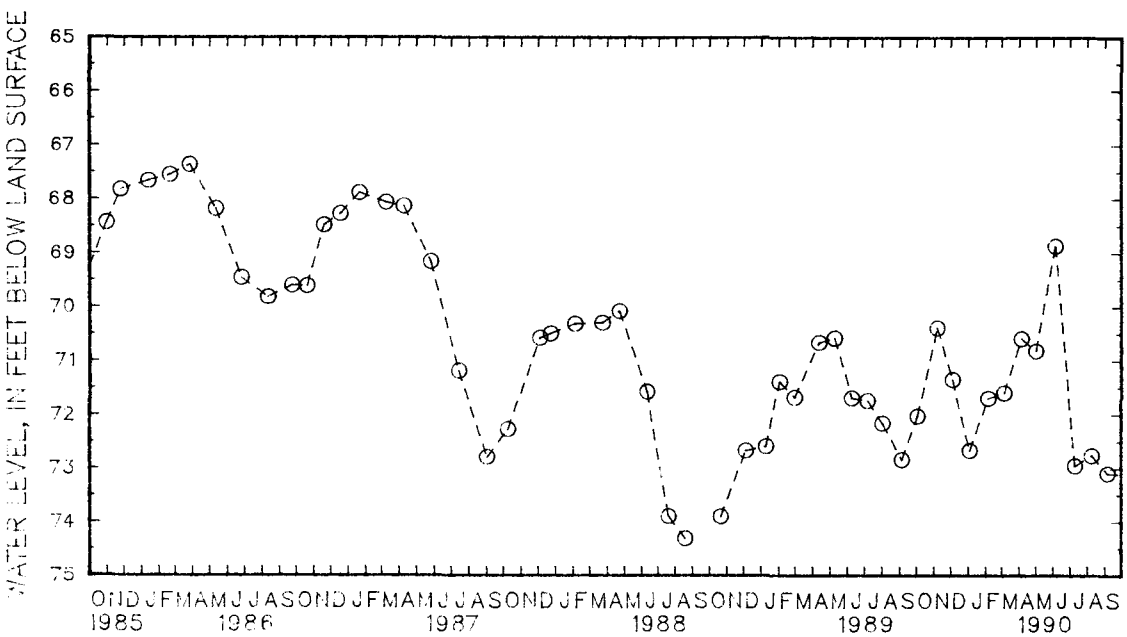


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--April 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 62.78 ft below land surface, May 27, 1976; lowest measured, 74.31 ft below land surface, Aug. 19, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	72.03	DEC 4	71.35	FEB 5	71.70	APR 5	70.59	JUN 5	68.87	AUG 9	72.77
NOV 7	70.39	JAN 4	72.67	MAR 5	71.60	MAY 1	70.82	JUL 10	72.96	SEP 6	73.10



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

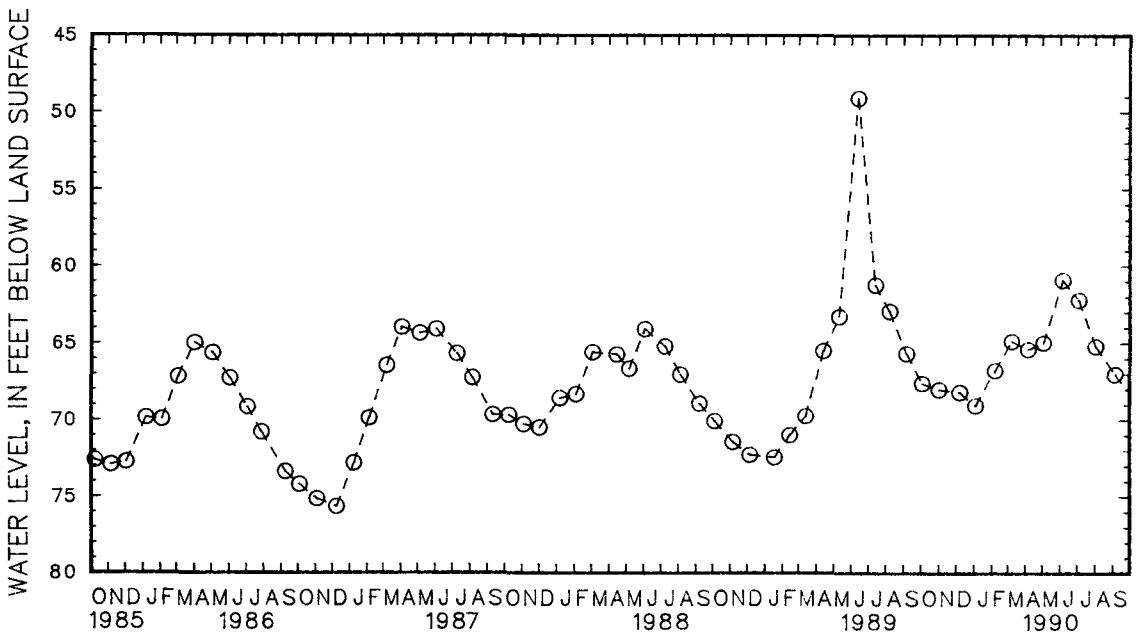
MARYLAND--Continued

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.
REMARKS.--Maryland Water-Level Network observation well.
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, June 13, 1989; lowest measured, 76.26 ft below land surface, Feb. 10, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	67.66	DEC 7	68.22	FEB 5	66.80	APR 5	65.43	JUN 5	60.92	AUG 1	65.23
NOV 1	68.06	JAN 3	69.09	MAR 7	64.90	MAY 2	65.00	JUL 3	62.21	SEP 4	67.05

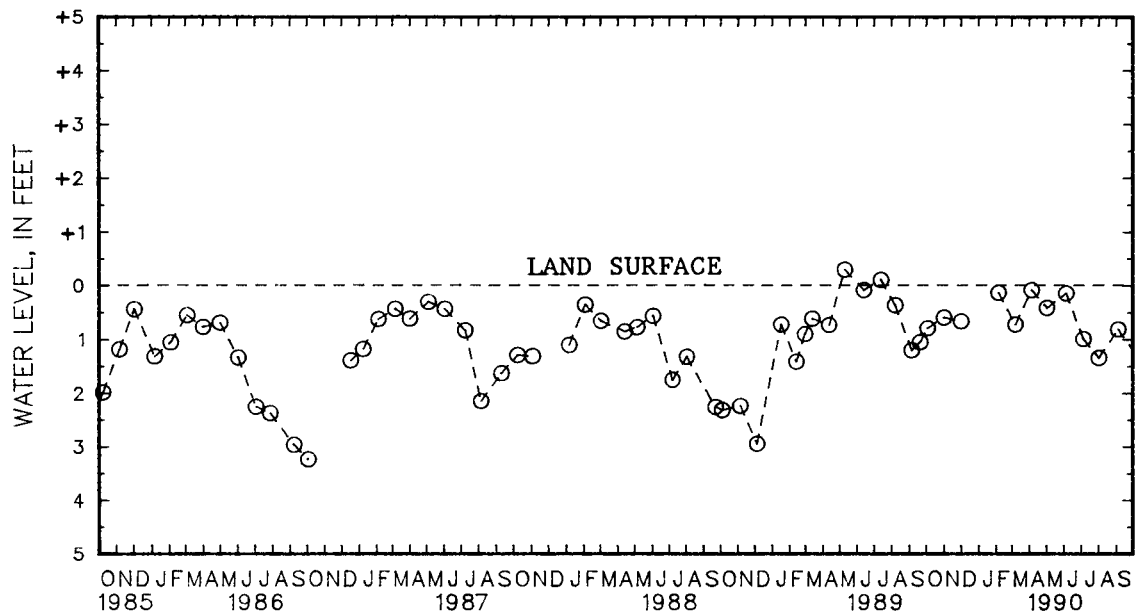


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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, 1.81 ft above land surface.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--August 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, .30 ft above land surface, May 10, 1989; lowest measured, 3.24 ft below land surface, Oct. 3, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	.79	DEC 1	.66	MAR 7	.72	MAY 2	.41	JUL 5	.99	SEP 4	.81
NOV 1	.59	FEB 5	.13	APR 5	.08	JUN 5	.14	AUG 1	1.34		



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

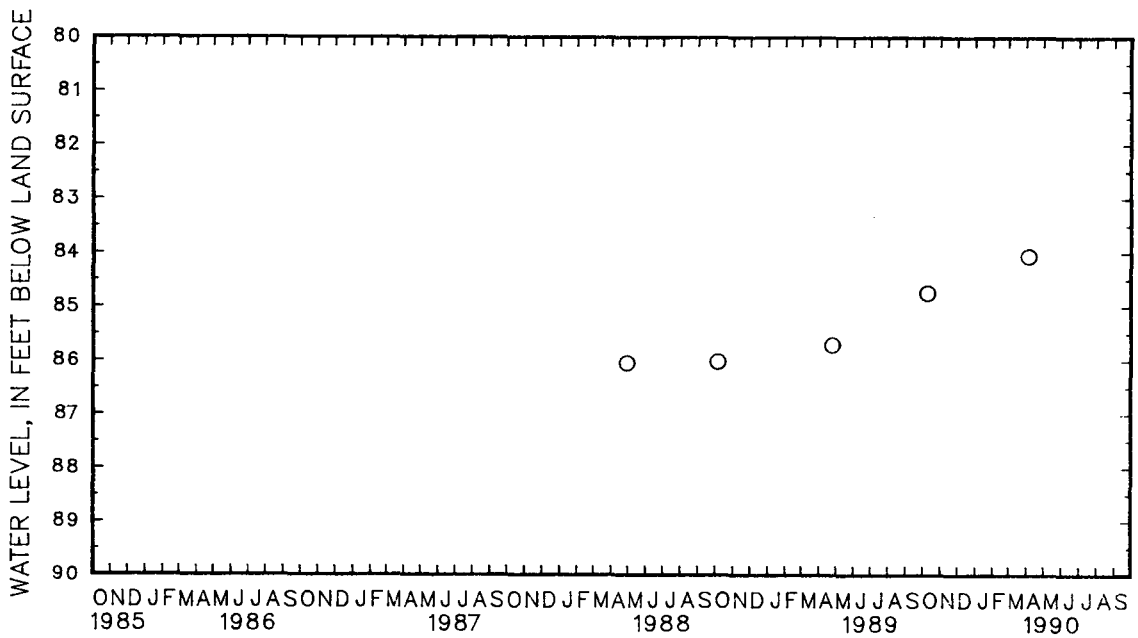
MARYLAND--Continued

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.
REMARKS.--Maryland Water-Level Network observation well. 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, July 31, 1984; lowest measured, 86.06 ft below land surface, April 29, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	84.75	APR 5	84.06

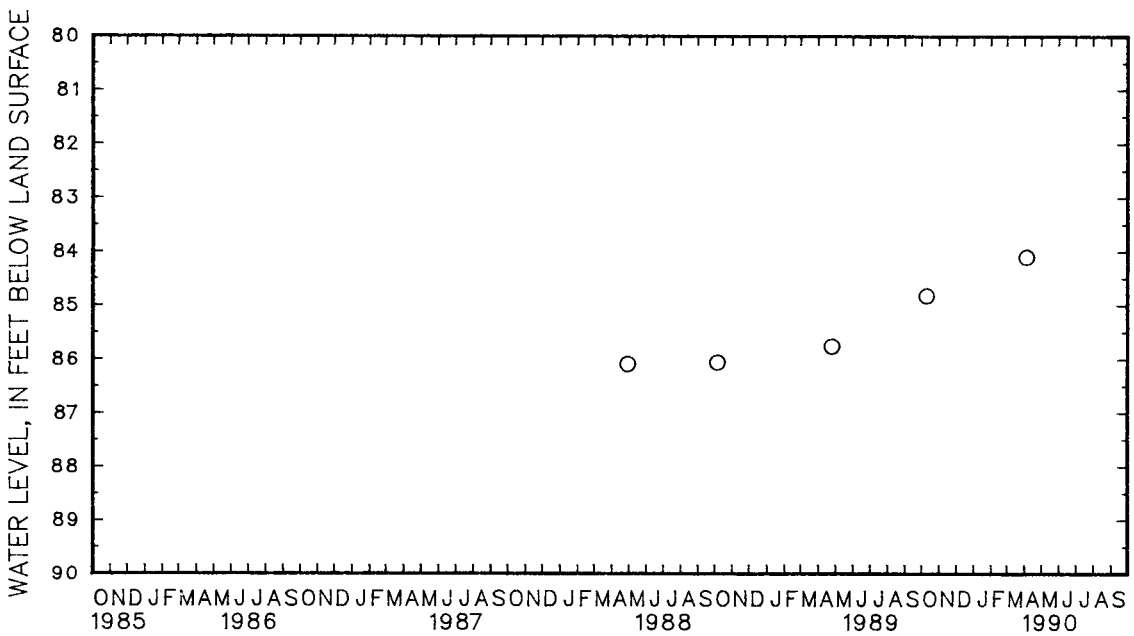


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.--Maryland Water-Level Network observation well. 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, July 31, 1984; lowest measured, 86.10 ft below land surface, April 29, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	84.83	APR 5	84.10



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

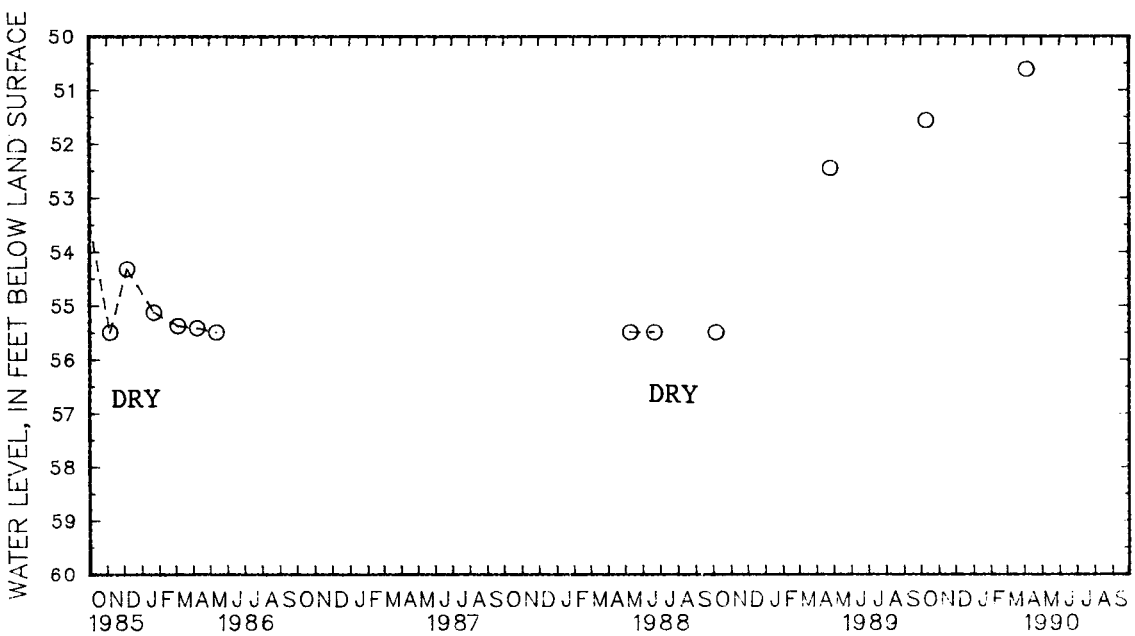
MARYLAND--Continued

CECIL COUNTY--Continued

WELL NUMBER.--CE Bf 81. SITE ID.--393615075475901. PERMIT NUMBER.--CE-81-0537.
LOCATION.--Lat 39°36'15", long 75°47'59", Hydrologic Unit 02060002, at Thompson Estates 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 55.5 ft; casing diameter 4 in., to 50 ft; screen diameter 2 in. from 50 to 55 ft.
INSTRUMENTATION.--Twice yearly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land-surface is 90 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 2.0 ft above land surface.
REMARKS.--Maryland Water-Level Network observation well. Measured twice yearly starting October 1988.
PERIOD OF RECORD.--March 1983 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 31.26 ft below land surface, July 9, 1983; lowest measured, dry, Nov. 6, 1985, May 12, 1986, May 10, 1988, June 21, 1988 and Oct. 6, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	51.56	APR 5	50.61

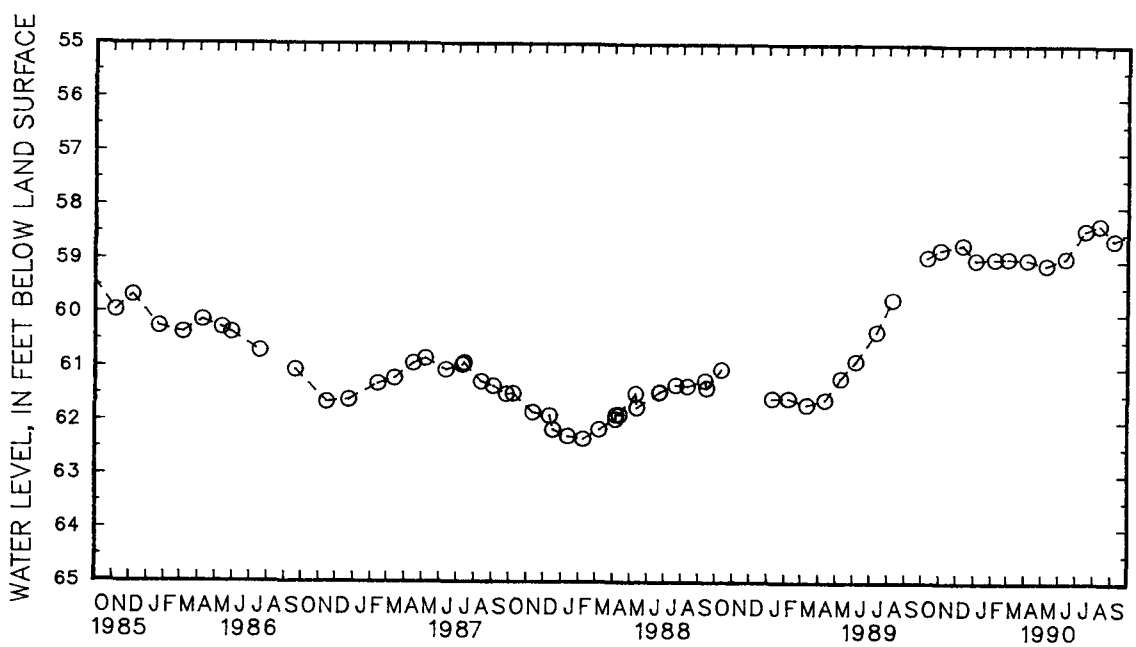


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--February 1983 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 53.13 ft below land surface, July 1, 1983; lowest measured, 62.34 ft below land surface, Feb. 8, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	58.92	DEC 11	58.70	FEB 6	58.96	APR 5	58.97	JUN 12	58.94	AUG 10	58.33
NOV 2	58.79	JAN 3	58.98	MAR 2	58.95	MAY 9	59.07	JUL 16	58.42	SEP 5	58.60



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

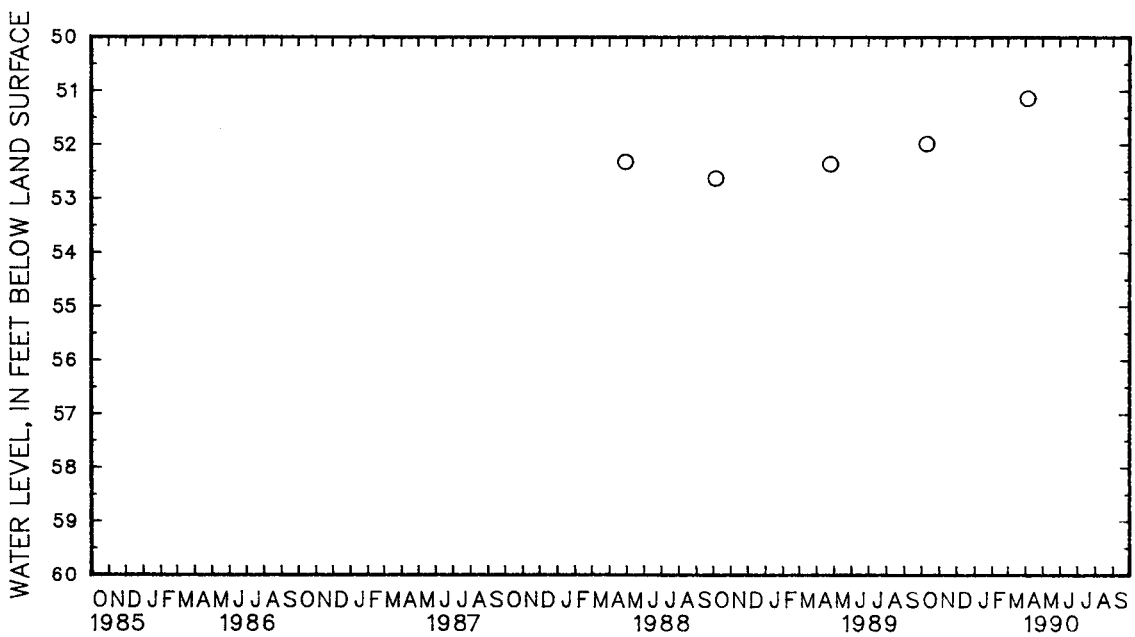
MARYLAND--Continued

CECIL COUNTY--Continued

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 and 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.
REMARKS.--Maryland Water-Level Network observation well. 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, April 6, 1984; lowest measured, 53.17 ft below land surface, Dec. 8, 1982.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	51.99	APR 5	51.14

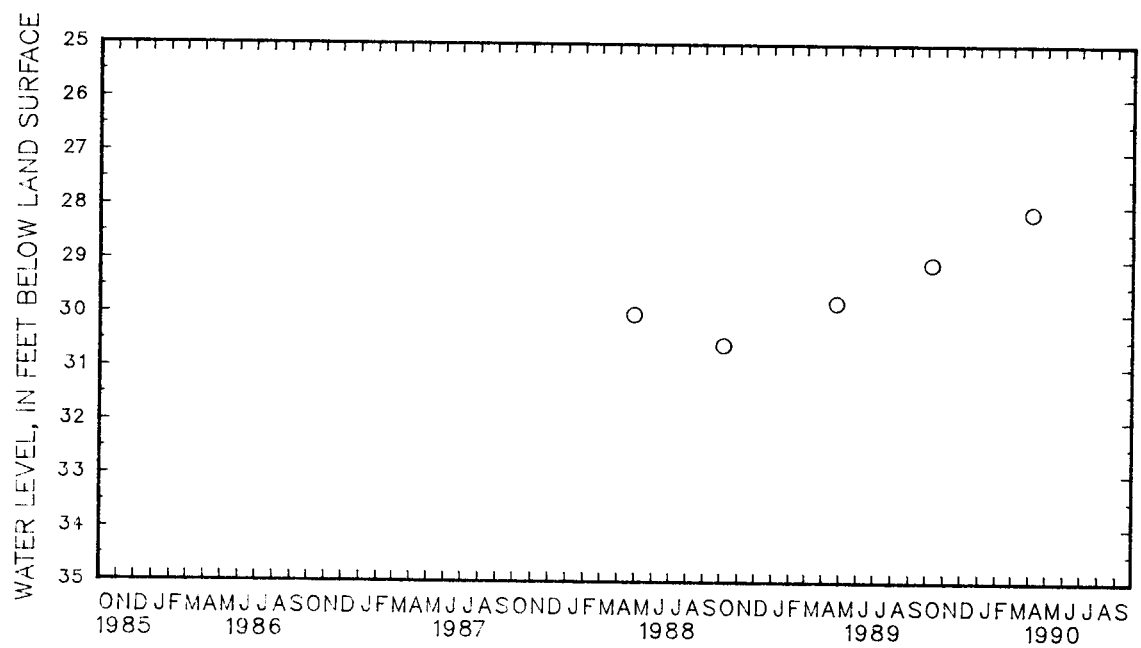


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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 and 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.
REMARKS.--Maryland Water-Level Network observation well. 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, July 5, 1983; lowest measured, 30.60 ft below land surface, Oct. 6, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	29.08	APR 5	28.12



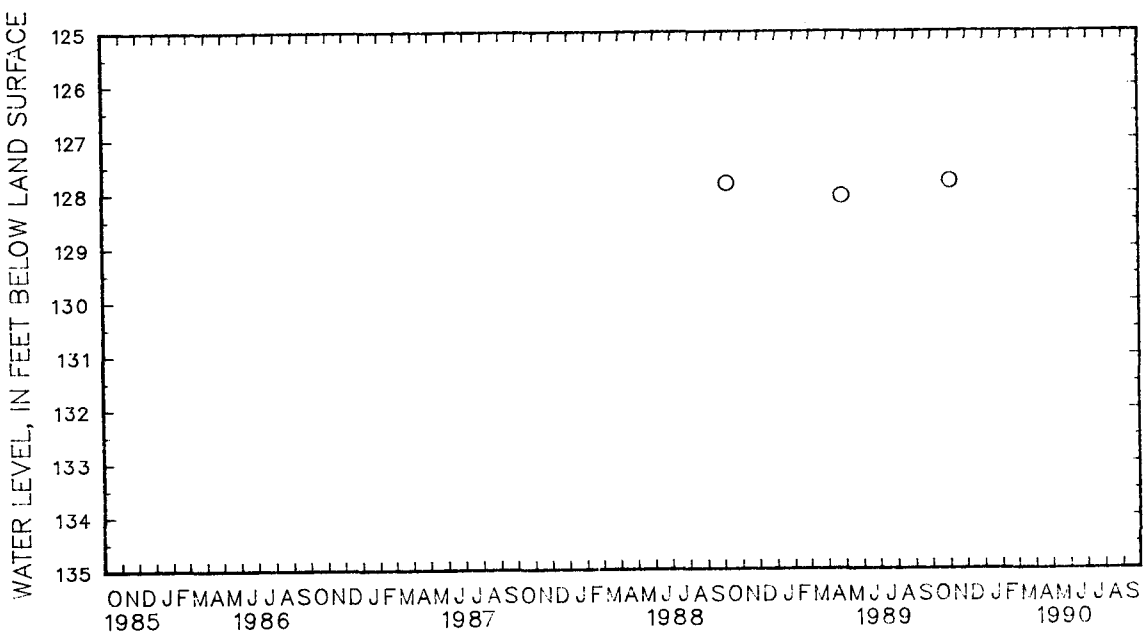
5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

CECIL COUNTY--Continued

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.
REMARKS.--Maryland Water-Level Network observation well. 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, April 6, 1984; lowest measured, 128.07 ft below land surface, April 25, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL
NOV 2	127.80



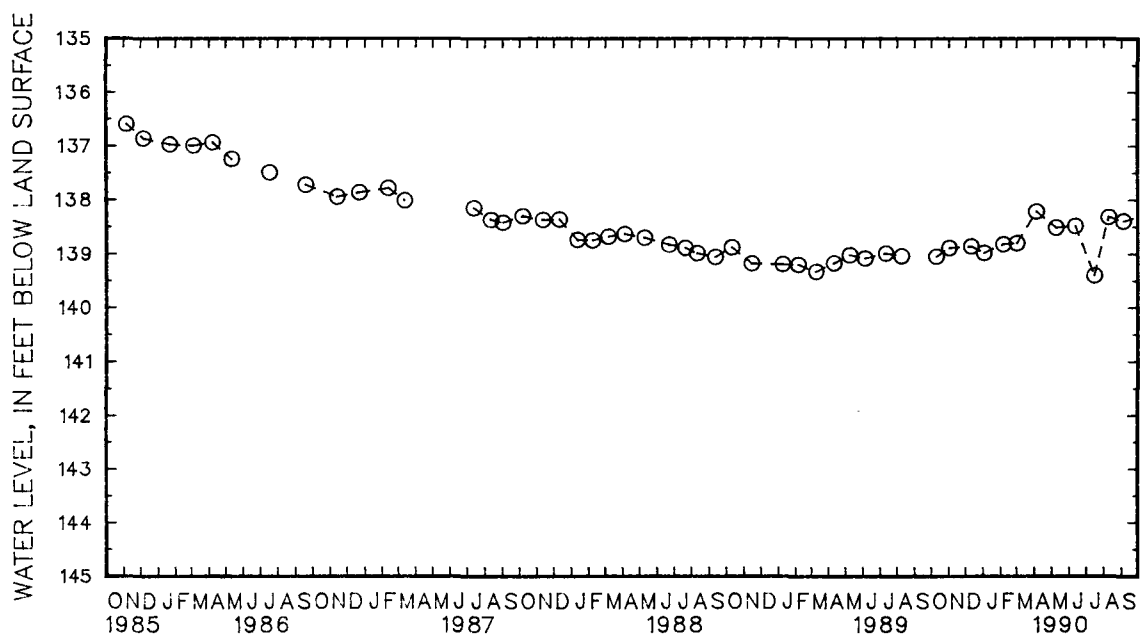
5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

CECIL COUNTY--Continued

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.
REMARKS.--Maryland Water-Level Network observation well.
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, March 29, 1984, April 6, 1984 and Nov. 6, 1984; lowest measured, 139.41 ft below land surface, July 16, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	139.06	DEC 11	138.87	FEB 6	138.83	APR 5	138.22	JUN 12	138.49	AUG 10	138.31
NOV 2	138.90	JAN 3	138.99	MAR 2	138.81	MAY 9	138.52	JUL 16	139.41	SEP 5	138.40

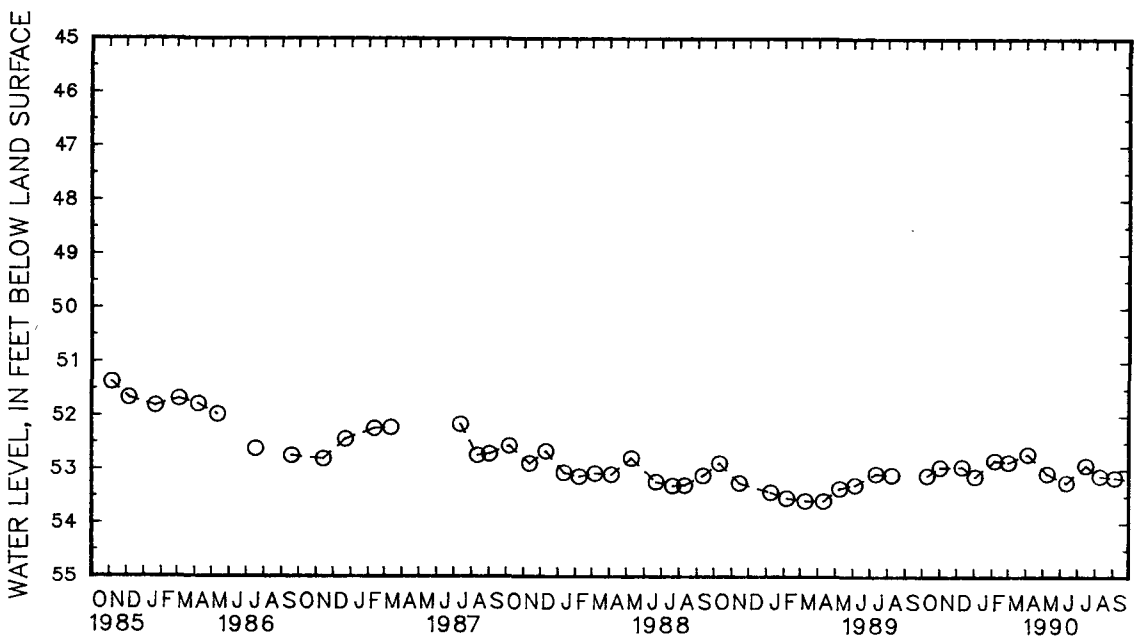


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well.
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, April 17, 1984; lowest measured, 53.59 ft below land surface, April 11, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	53.11	DEC 11	52.95	FEB 6	52.83	APR 5	52.71	JUN 12	53.24	AUG 10	53.12
NOV 2	52.96	JAN 3	53.13	MAR 2	52.86	MAY 9	53.07	JUL 16	52.92	SEP 5	53.15

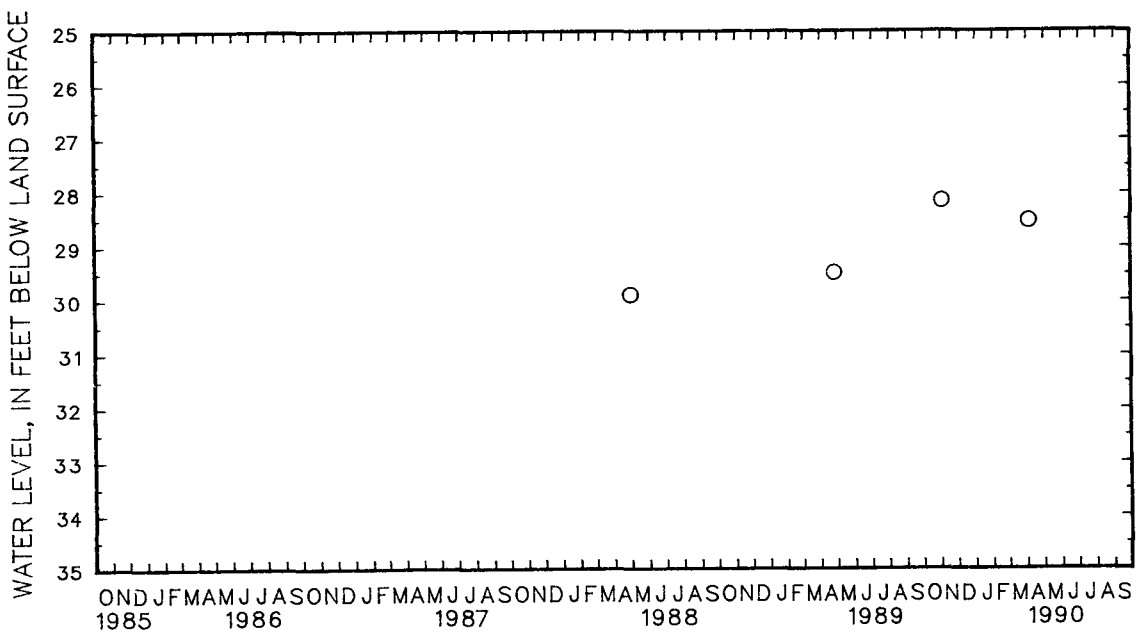


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well. 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, 28.16 ft below land surface, Nov. 2, 1989; lowest measured, 34.48 ft below land surface, Nov. 19, 1983.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 2	28.16	APR 5	28.53



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

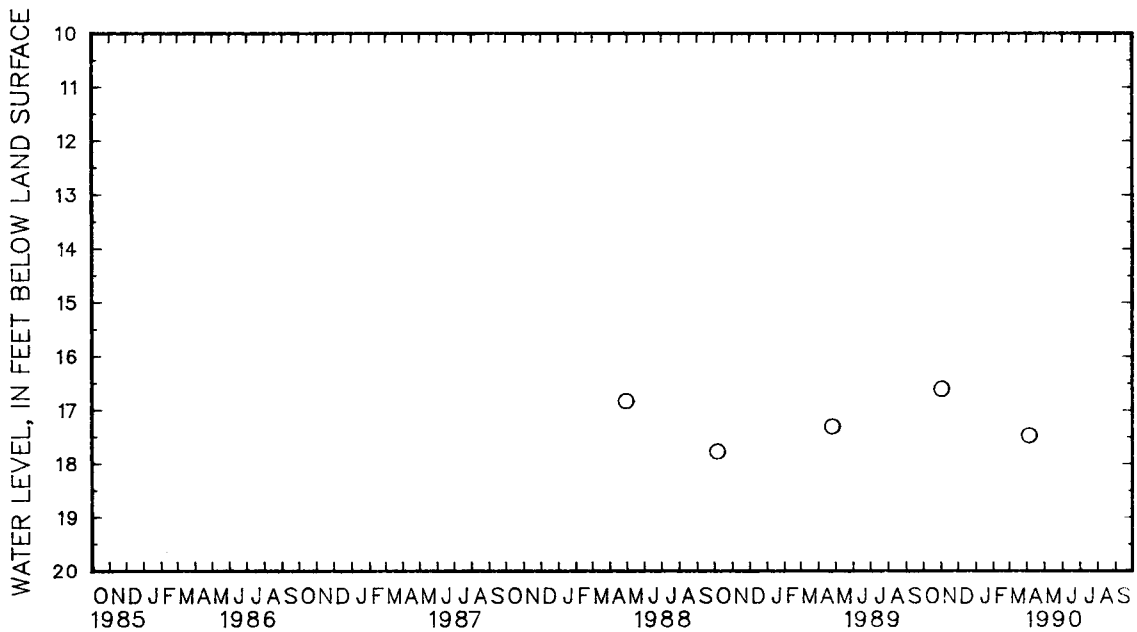
MARYLAND--Continued

CECIL COUNTY--Continued

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.
REMARKS.--Maryland Water-Level Network observation well. 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, July 1, 1983; lowest measured, 17.78 ft below land surface, Oct. 6, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 2	16.61	APR 5	17.48

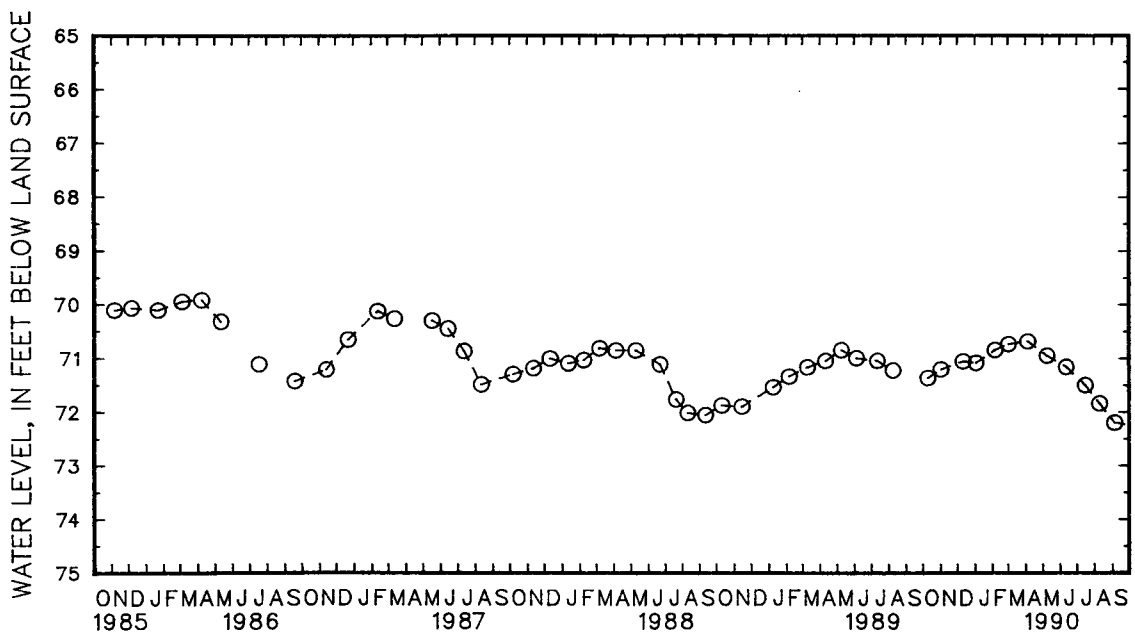


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--August 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 67.99 ft below land surface, March 25, 1979; lowest measured, 72.21 ft below land surface, Sept. 5, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	71.37	DEC 11	71.06	FEB 6	70.85	APR 5	70.69	JUN 12	71.17	AUG 10	71.85
NOV 2	71.21	JAN 3	71.09	MAR 2	70.74	MAY 9	70.96	JUL 16	71.51	SEP 5	72.21



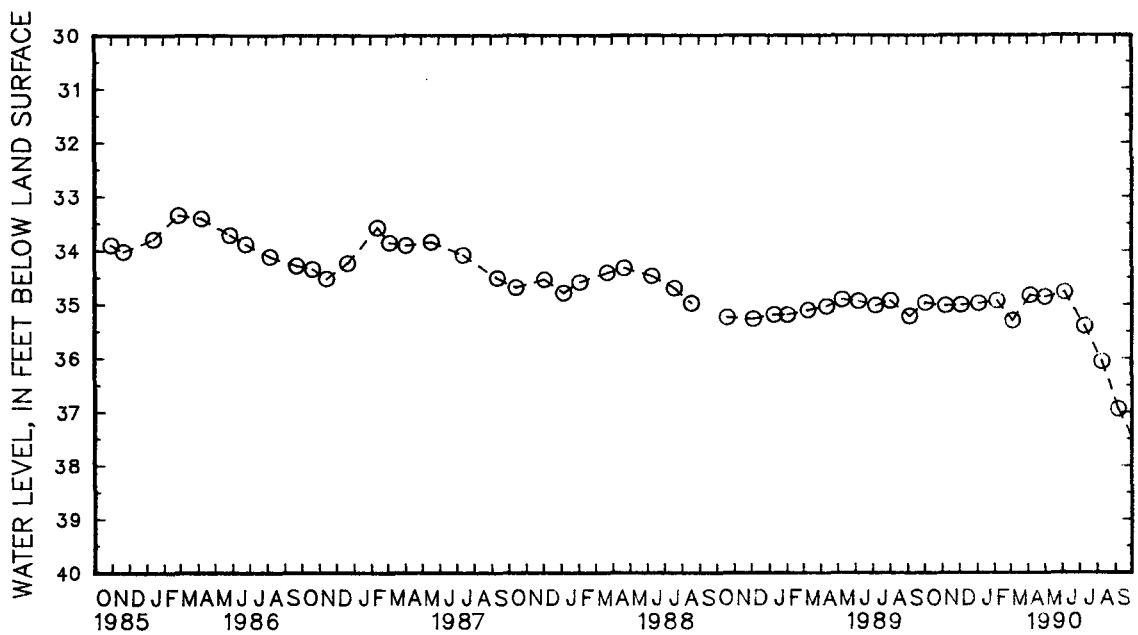
5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--October 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 31.79 ft below land surface, Aug. 2, 1978; lowest measured, 36.95 ft below land surface, Sept. 6, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	34.98	DEC 4	35.02	FEB 5	34.94	APR 5	34.84	JUN 5	34.78	AUG 9	36.07
NOV 7	35.03	JAN 4	34.99	MAR 5	35.31	MAY 1	34.87	JUL 10	35.41	SEP 6	36.95

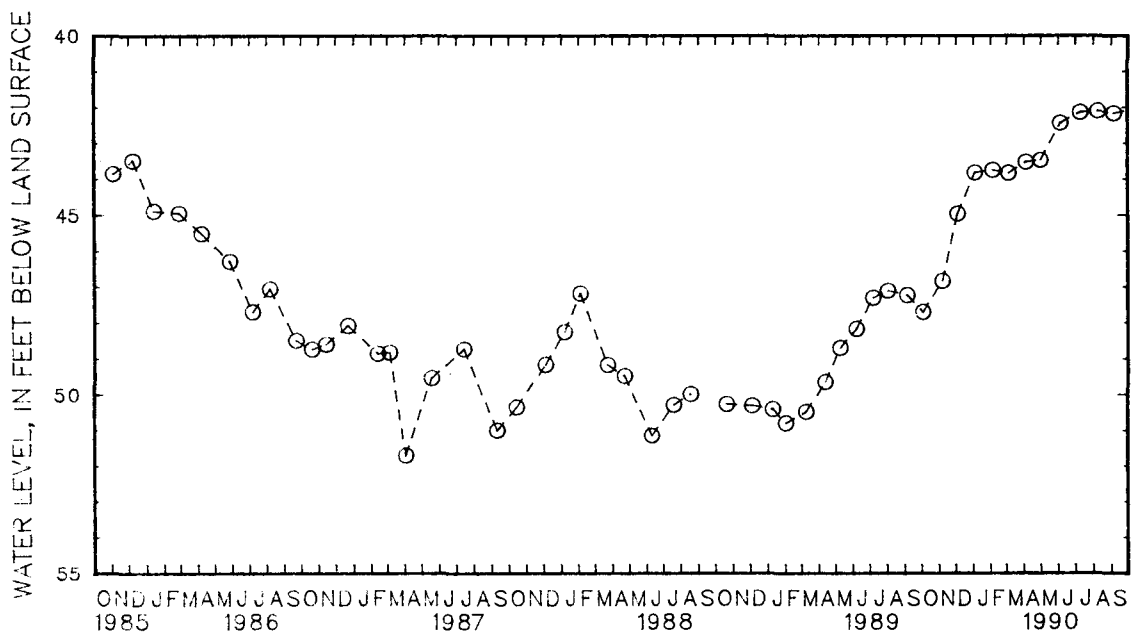


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--October 1966 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 42.09 ft below land surface, Aug. 9, 1990; lowest measured, 80.32 ft below land surface, Oct. 16, 1970.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	47.70	DEC 4	44.96	FEB 5	43.75	APR 5	43.52	JUN 5	42.43	AUG 9	42.09
NOV 7	46.83	JAN 4	43.82	MAR 5	43.83	MAY 1	43.47	JUL 10	42.13	SEP 6	42.16

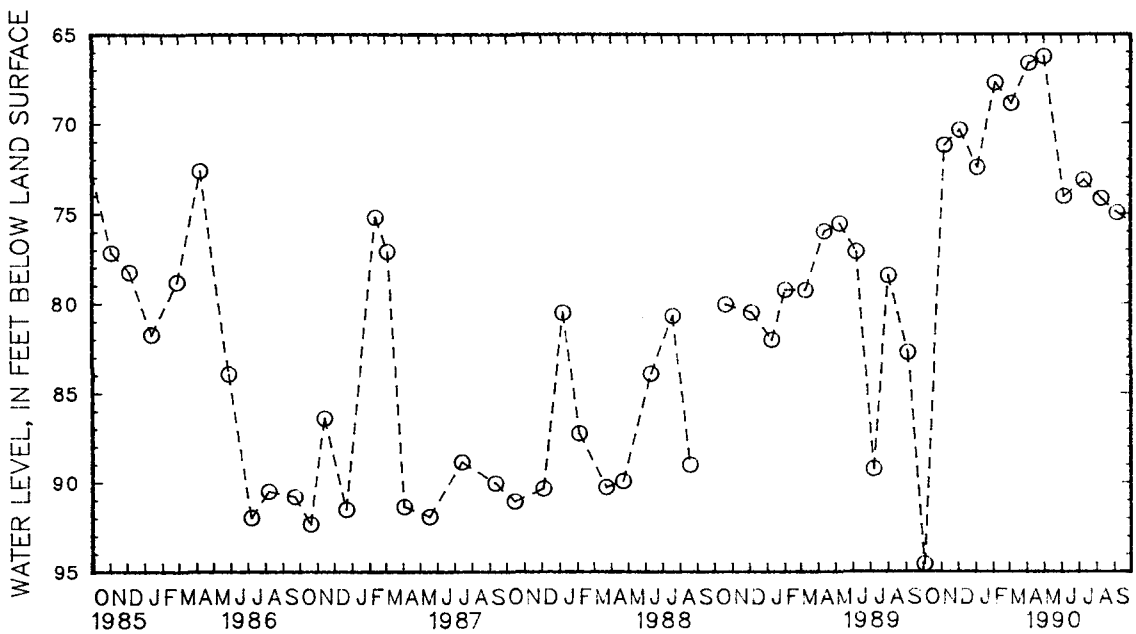


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
PERIOD OF RECORD.--October 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured 66.23 ft below land surface, May 1, 1990; lowest measured, 115.06 ft below land surface, Aug. 29, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	94.55	DEC 4	70.35	FEB 5	67.71	APR 5	66.61	JUN 5	74.07	AUG 9	74.18
NOV 7	71.20	JAN 4	72.43	MAR 5	68.85	MAY 1	66.23	JUL 10	73.16	SEP 6	74.98

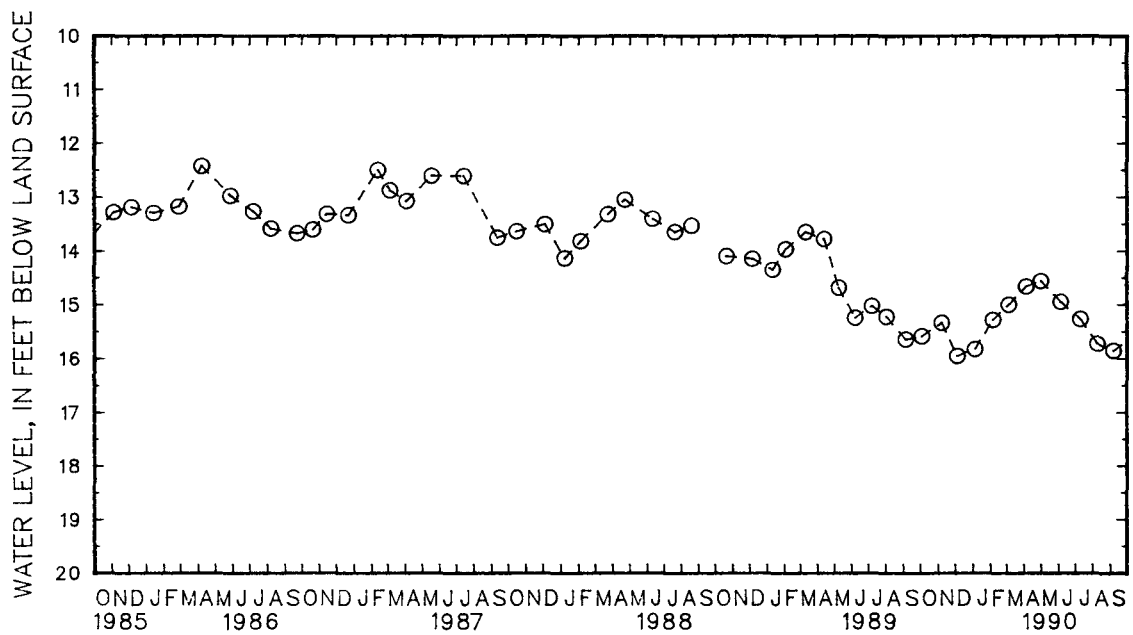


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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, nr 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.
REMARKS.--Maryland Water-Level Network observation well. 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, March 1, 1960; lowest measured, 41.12 ft below land surface, Aug. 7, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	15.59	DEC 4	15.96	FEB 5	15.28	APR 5	14.66	JUN 5	14.95	AUG 9	15.73
NOV 7	15.34	JAN 4	15.83	MAR 5	15.00	MAY 1	14.56	JUL 10	15.27	SEP 6	15.86

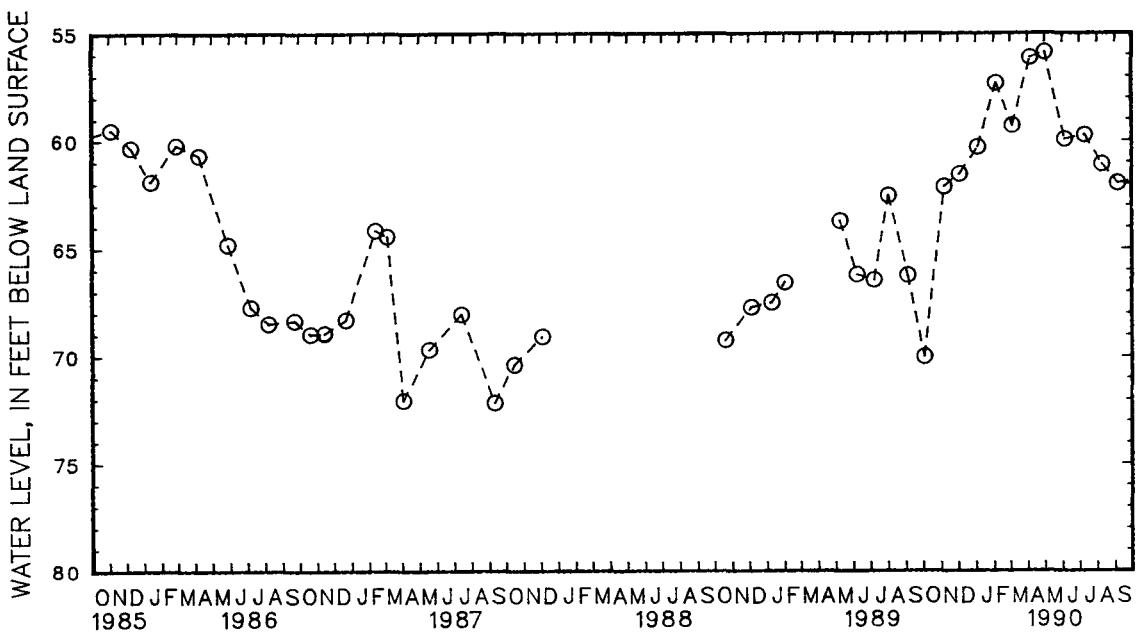


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well. Water level measured 73.77 ft below land surface, 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, August 1914; highest water level measured, 55.88 ft below land surface, May 1, 1990; lowest measured, 132.95 ft, below land surface, Sept. 6, 1956.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	70.04	DEC 4	61.55	FEB 5	57.32	APR 5	56.13	JUN 5	59.95	AUG 9	61.12
NOV 7	62.12	JAN 4	60.30	MAR 5	59.30	MAY 1	55.88	JUL 10	59.75	SEP 6	62.00

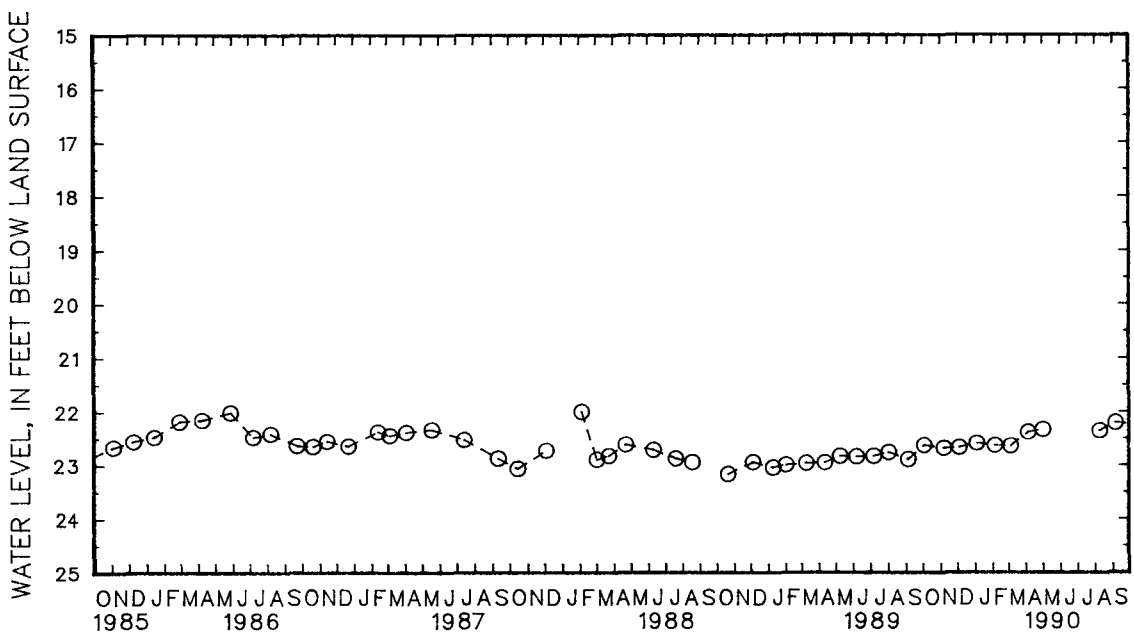


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--October 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.00 ft below land surface, Feb. 4, 1988; lowest measured, 26.39 ft below land surface, Oct. 4, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	22.65	DEC 4	22.68	FEB 5	22.64	APR 5	22.39	AUG 9	22.36
NOV 7	22.70	JAN 4	22.60	MAR 5	22.65	MAY 1	22.34	SEP 6	22.20

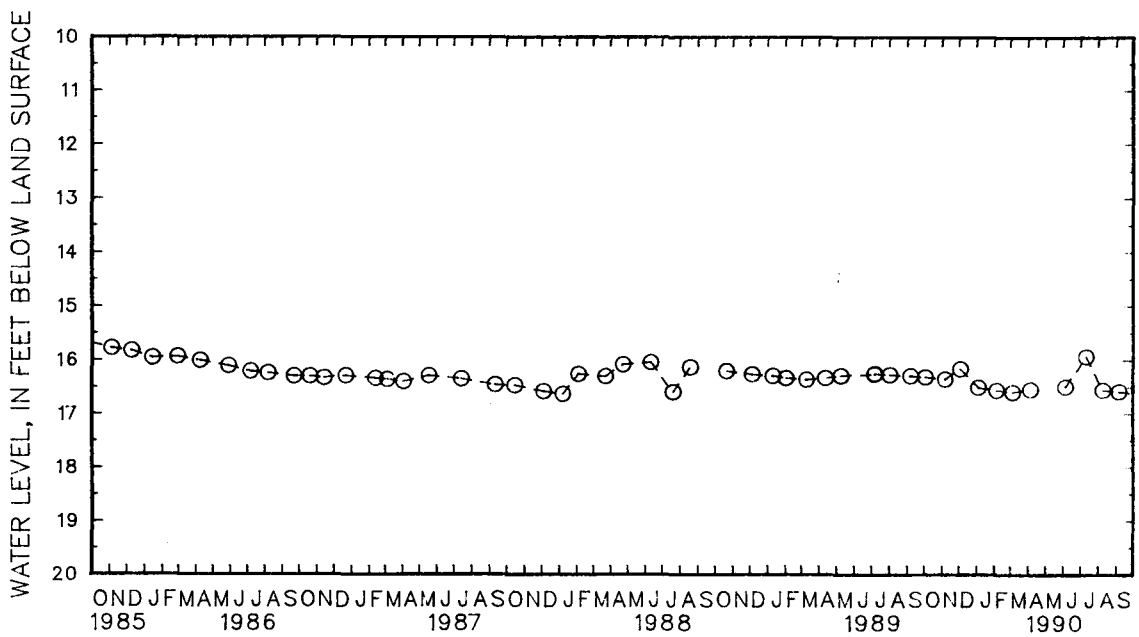


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--October 1981 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.51 ft below land surface, July 20, 1983; lowest measured, 22.22 ft below land surface, Nov. 13, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	16.32	DEC 4	16.17	FEB 5	16.56	APR 5	16.55	JUL 10	15.94	SEP 6	16.59
NOV 7	16.36	JAN 4	16.50	MAR 5	16.60	JUN 5	16.50	AUG 9	16.56		



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

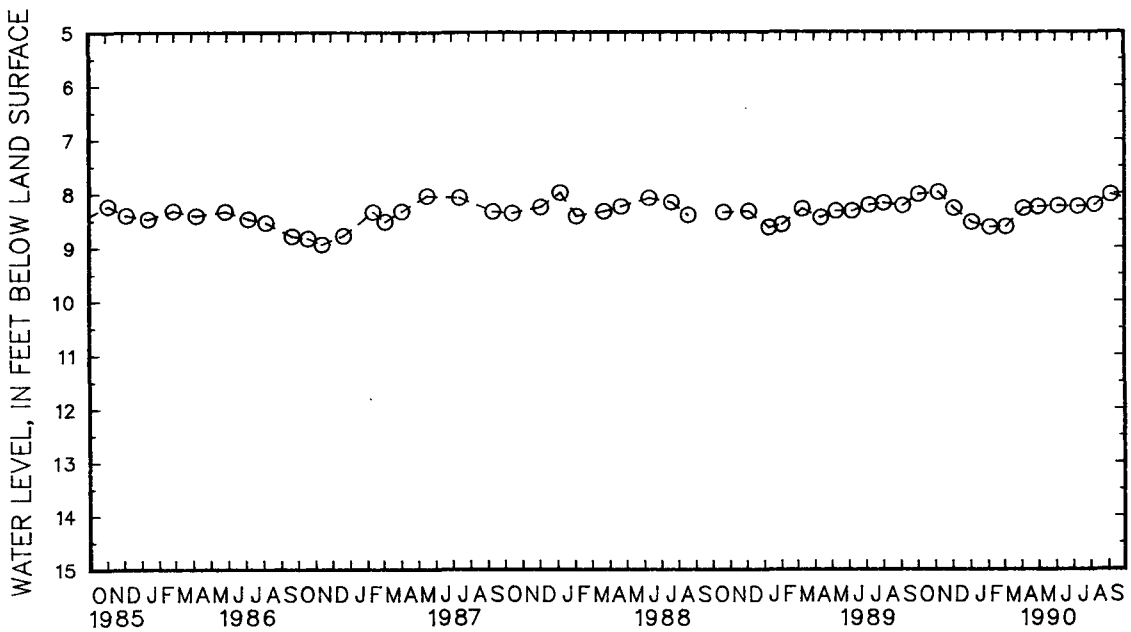
MARYLAND--Continued

DORCHESTER COUNTY--Continued

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, 2.2 ft above land surface.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--April 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.77 ft below land surface, Oct. 4, 1979; lowest measured, 9.10 ft below land surface, Nov. 19, 1984.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	8.03	DEC 4	8.29	FEB 5	8.64	APR 5	8.29	JUN 5	8.24	AUG 9	8.22
NOV 7	7.99	JAN 4	8.55	MAR 5	8.63	MAY 1	8.26	JUL 10	8.25	SEP 6	8.03



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

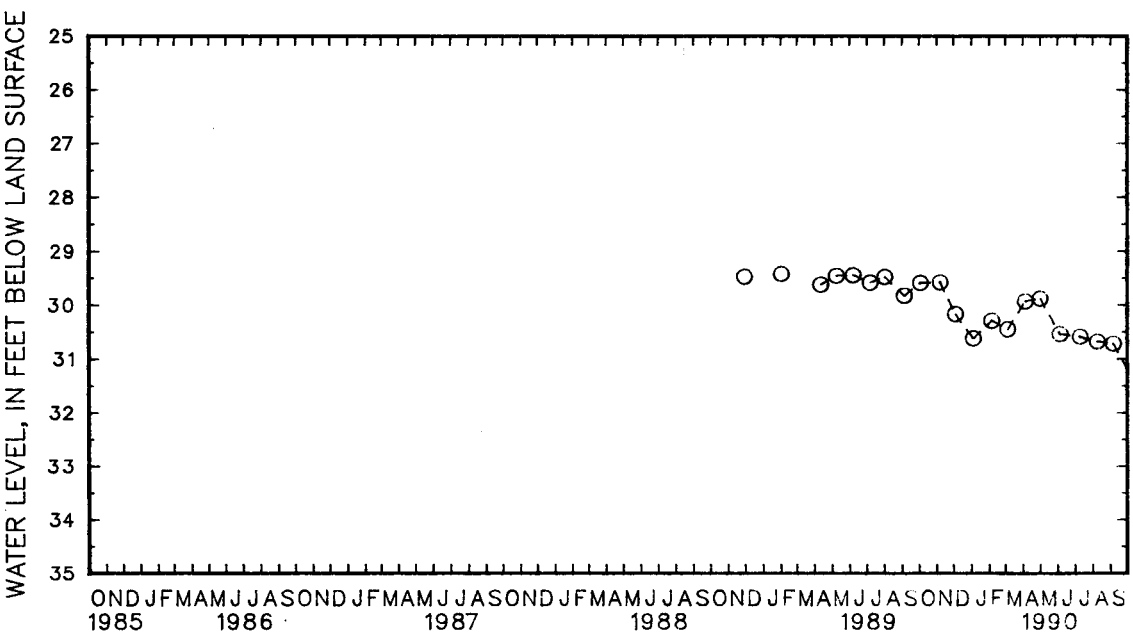
MARYLAND--Continued

DORCHESTER COUNTY--Continued

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.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--November 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 29.44 ft below land surface, Feb. 2, 1989; lowest measured, 30.73 ft below land surface, Sept. 6, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	29.60	DEC 4	30.18	FEB 5	30.30	APR 5	29.94	JUN 5	30.55	AUG 9	30.69
NOV 7	29.59	JAN 4	30.63	MAR 5	30.46	MAY 1	29.89	JUL 10	30.60	SEP 6	30.73

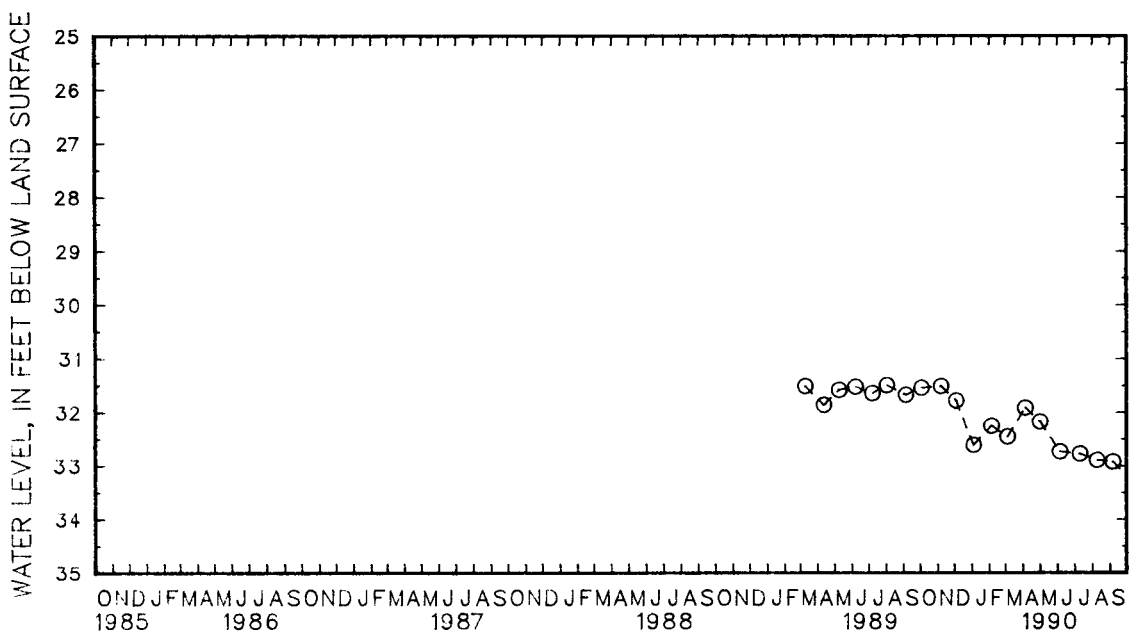


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--November 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 31.50 ft below land surface, Aug. 2, 1989; lowest measured, 32.93 ft below land surface, Sept. 6, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	31.55	DEC 4	31.79	FEB 5	32.26	APR 5	31.92	JUN 5	32.74	AUG 9	32.90
NOV 7	31.52	JAN 4	32.62	MAR 5	32.46	MAY 1	32.18	JUL 10	32.78	SEP 6	32.93



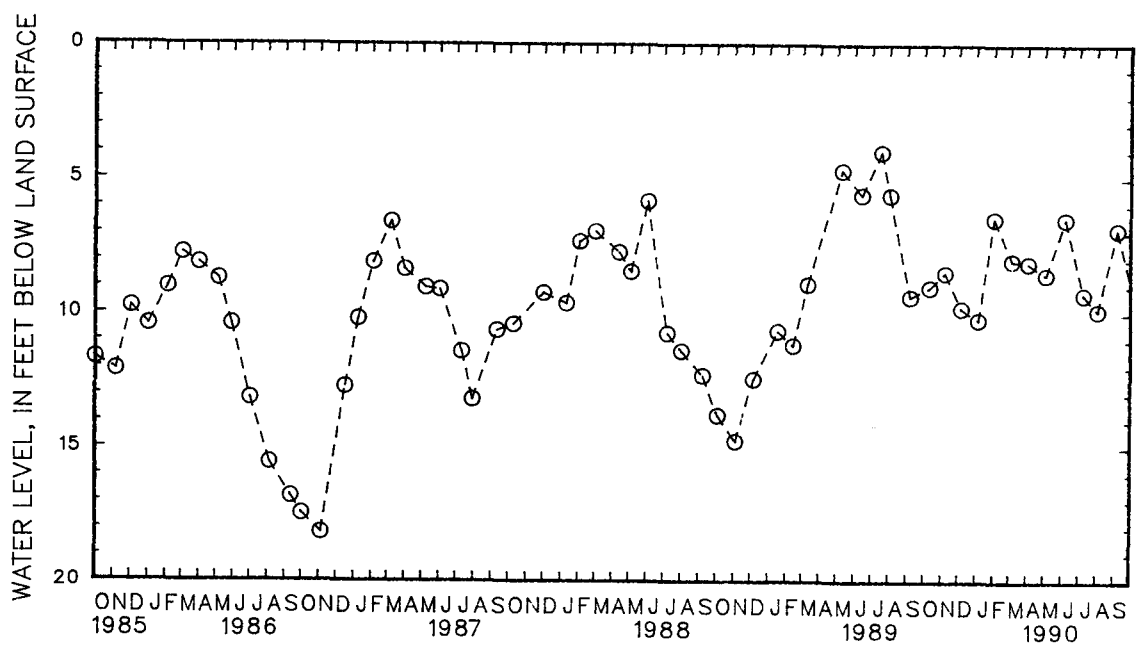
5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--May 1954 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.00 ft below land surface, March 8, 1979; lowest measured, 19.59 ft below land surface, Feb. 7, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	9.04	DEC 6	9.81	FEB 2	6.46	APR 3	8.11	JUN 7	6.48	AUG 3	9.89
NOV 7	8.49	JAN 5	10.24	MAR 5	8.02	MAY 4	8.55	JUL 9	9.29	SEP 7	6.87

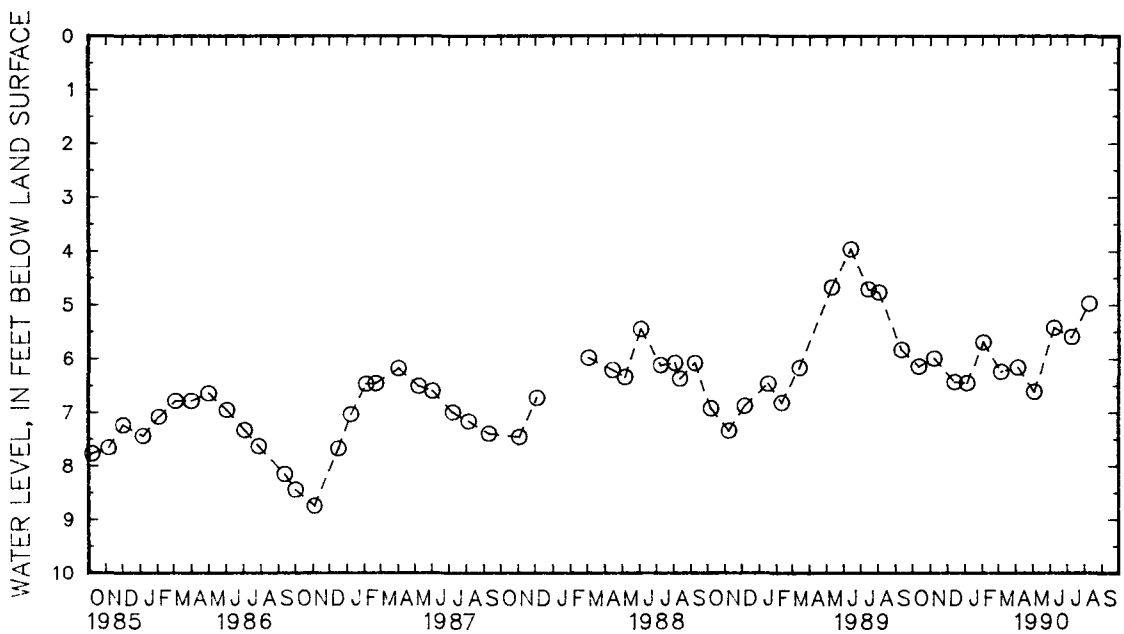


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--July 1974 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.59 ft below land surface, Sept. 27, 1975; lowest measured, 9.03 ft below land surface, Dec. 15, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	6.15	DEC 14	6.44	FEB 2	5.70	APR 4	6.17	JUN 7	5.43	AUG 9	4.98
NOV 7	6.00	JAN 5	6.46	MAR 5	6.25	MAY 4	6.62	JUL 9	5.60		

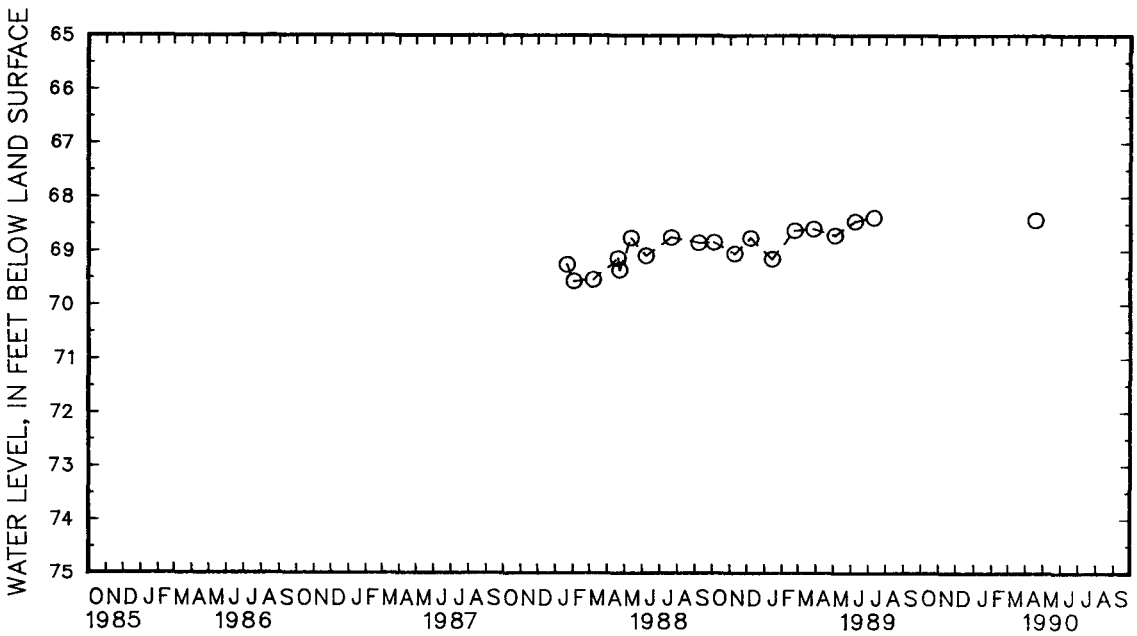


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.--Twice yearly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from Jan. 1, 1988 to July 11, 1989.
DATUM.--Elevation of land surface is 99.05 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of recorder platform, 1.80 ft above land surface.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--January 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 68.19 ft below land surface, March 31, 1989; lowest measured, 69.86 ft below land surface, Jan. 29, 1988.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL
APR 18	68.43

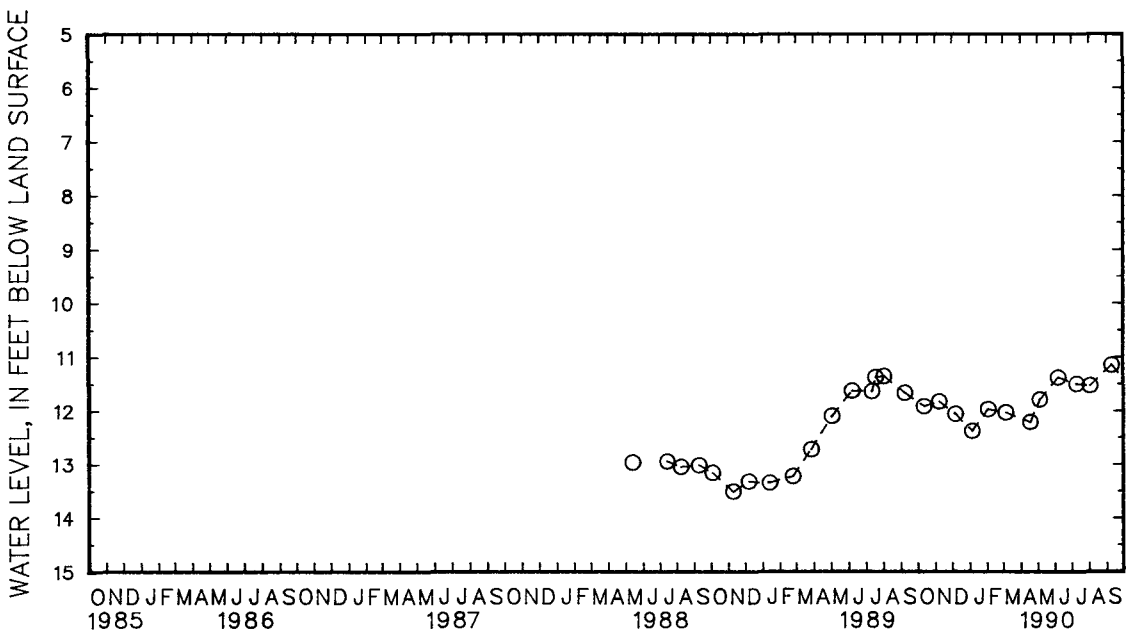


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

WELL NUMBER.--HA Dd 91. SITE ID.--392721076150301. PERMIT NUMBER.--HA-81-4136.
LOCATION.--Lat 39°27'21", long 76°15'03", Hydrologic Unit 02060003, at William Longley Park, near 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 78 ft; casing diameter 4 in., to 58 ft, and 68 to 78 ft; screen diameter 4 in. from 58 to 68 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 19.73 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 1.90 ft above land surface.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--May 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.15 ft below land surface, Sept .10, 1990; lowest measured, 13.51 ft below land surface, Nov. 9, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	11.92	DEC 6	12.06	FEB 2	11.97	APR 17	12.21	JUN 7	11.38	AUG 3	11.52
NOV 7	11.83	JAN 5	12.38	MAR 5	12.03	MAY 4	11.79	JUL 10	11.50	SEP 10	11.15



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

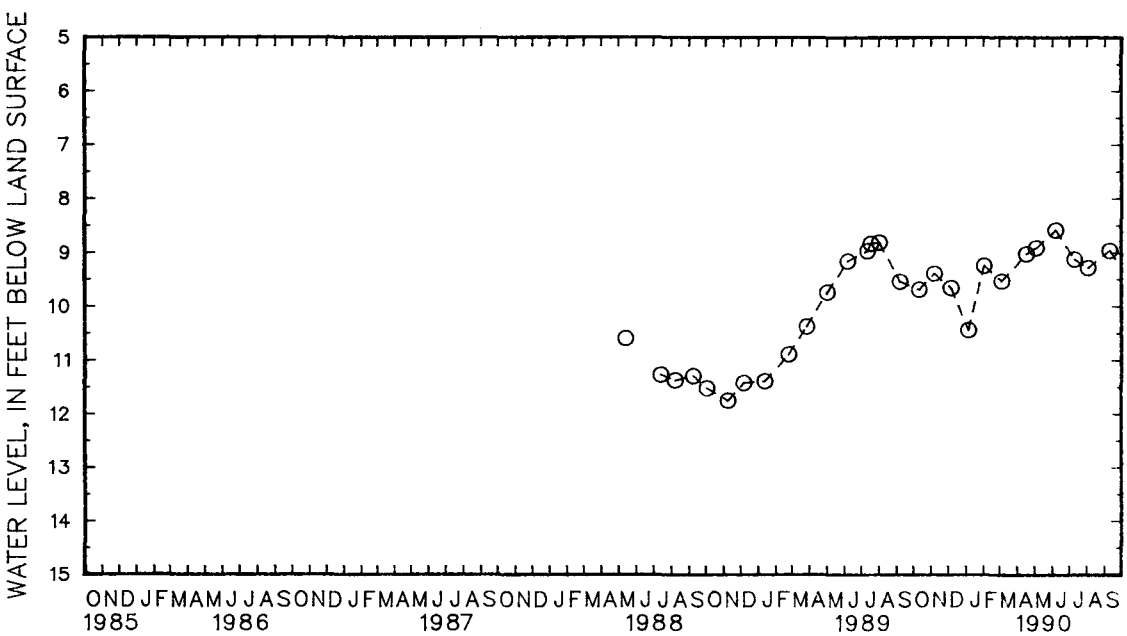
MARYLAND--Continued

HARFORD COUNTY--Continued

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.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--May 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.58 ft below land surface, June 7, 1990; lowest measured, 11.76 ft below land surface, Nov. 9, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	9.69	DEC 6	9.66	FEB 2	9.24	APR 17	9.02	JUN 7	8.58	AUG 3	9.28
NOV 7	9.39	JAN 5	10.44	MAR 5	9.53	MAY 4	8.91	JUL 10	9.12	SEP 10	8.96

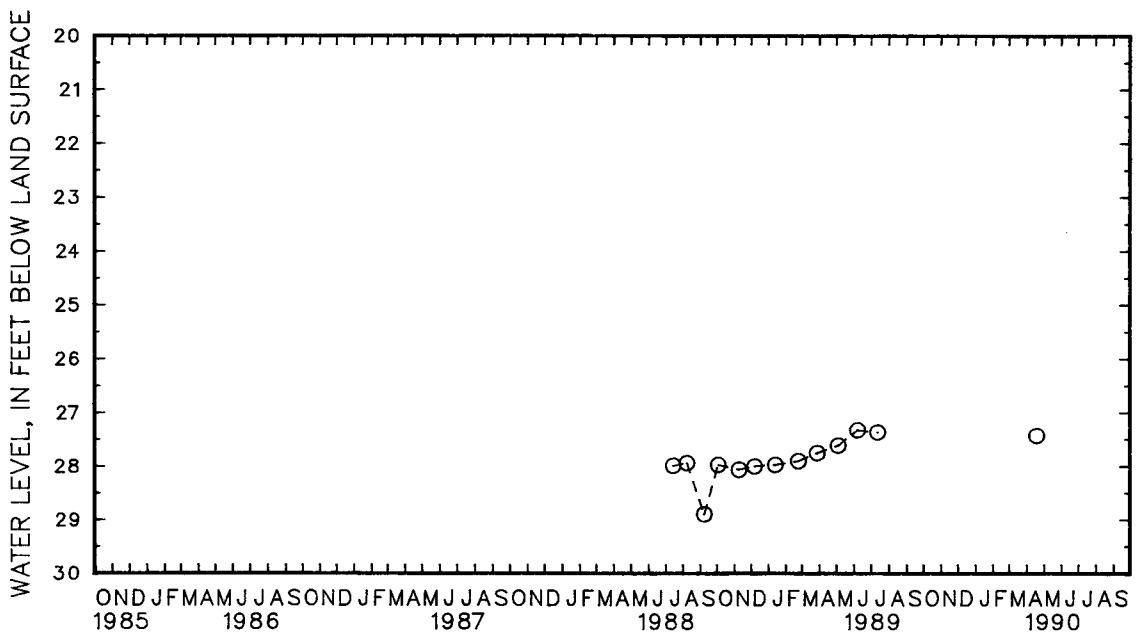


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

WELL NUMBER.--HA Dd 106. SITE ID.--392557076161601. PERMIT NUMBER.--HA-81-4522.
LOCATION.--Lat 39°25'57", long 76°16'16", Hydrologic Unit 02060003, .1 mi SE of intersection of Freys and Willoughby Beach Rds, behind Willoughby Beach Swim Club, Edgewood.
Owner: U.S. Geological Survey.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 210 ft; casing diameter 4 in., to 190 ft, and 200 to 210 ft; screen diameter 4 in. from 190 to 200 ft.
INSTRUMENTATION.--Twice yearly measurements with chalked steel tape by USGS personnel. Measured monthly from May 1988 to July 1989.
DATUM.--Elevation of land surface is 33.89 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 2.95 ft above land surface.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--May 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 27.25 ft below land surface, Oct. 12, 1990; lowest measured, 28.90 ft below land surface, Sept. 8, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL
APR 18	27.43

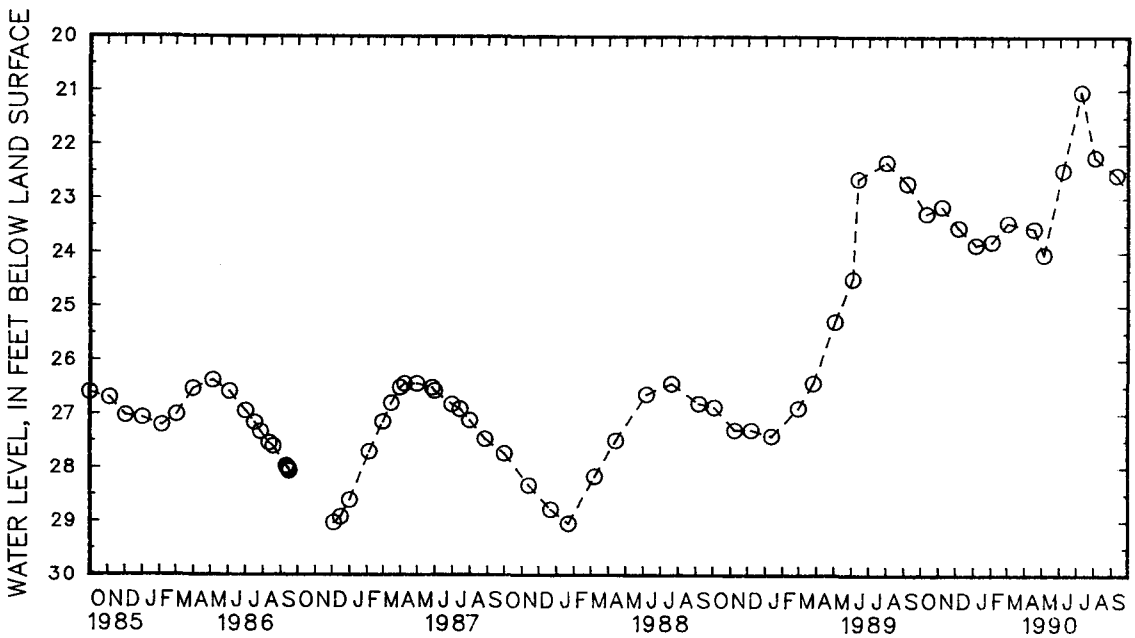


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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, 1.61 ft above land surface.
PERIOD OF RECORD.--October 1973 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 18.31 ft below land surface, July 28, 1975; lowest measured, 29.07 ft below land surface, Jan. 21, 1988.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	23.28	DEC 6	23.54	FEB 2	23.80	APR 17	23.56	JUN 7	22.48	AUG 3	22.24
NOV 7	23.15	JAN 5	23.86	MAR 2	23.45	MAY 4	24.04	JUL 10	21.02	SEP 10	22.57

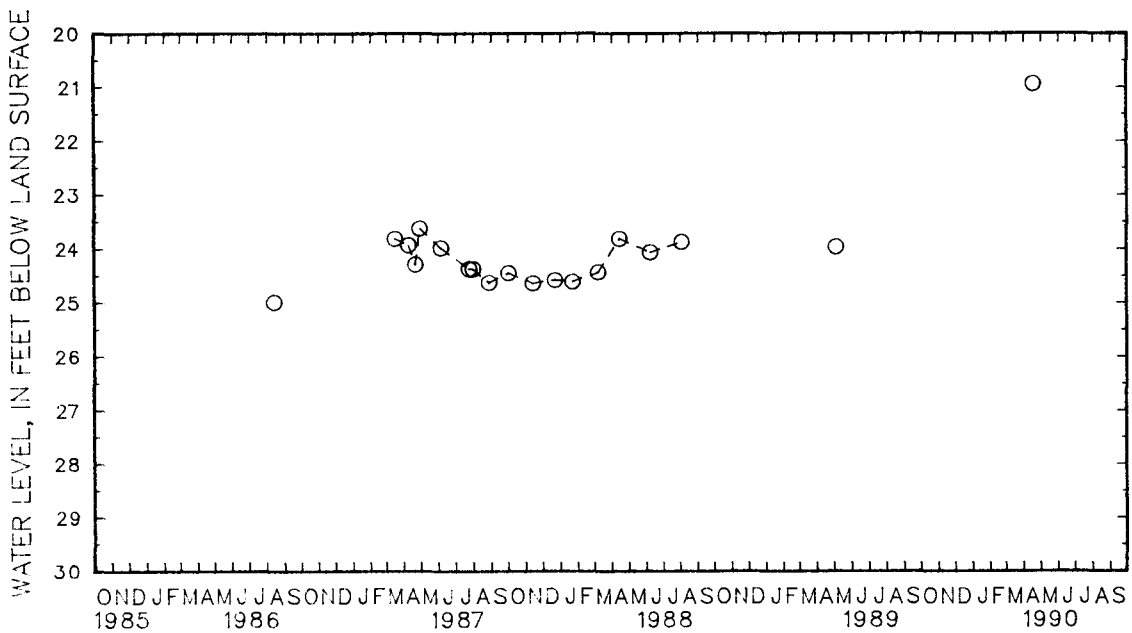


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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, 0.5 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.--Twice yearly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from Mar. 1, 1987 to July 11, 1989.
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.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--March 1987 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 20.94 ft below land surface, April 18, 1990; lowest measured, 25.00 ft below land surface, Aug. 15, 1986.

WATER LEVELS IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL
APR 18	20.94



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

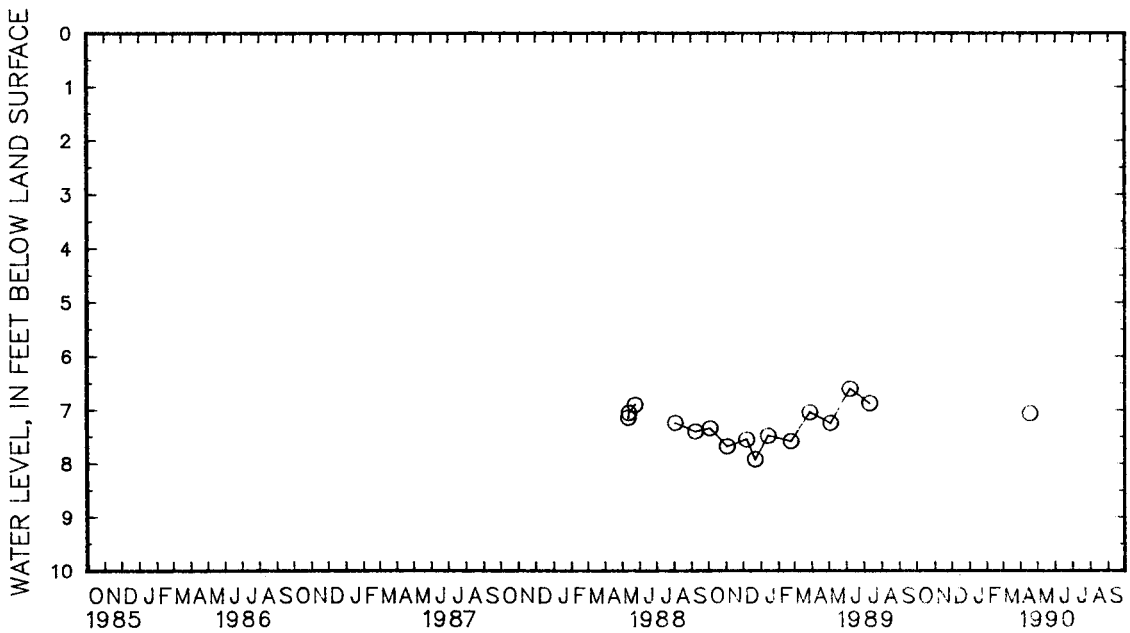
MARYLAND--Continued

HARFORD COUNTY--Continued

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.
REMARKS.--Maryland Water-Level Network observation well. Harford County Coastal Plain Project observation well.
PERIOD OF RECORD.--May 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.41 ft below land surface, July 5, 1989; lowest measured, 8.15 ft below land surface, Feb. 24, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL
APR 18	7.07



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND WATER LEVELS

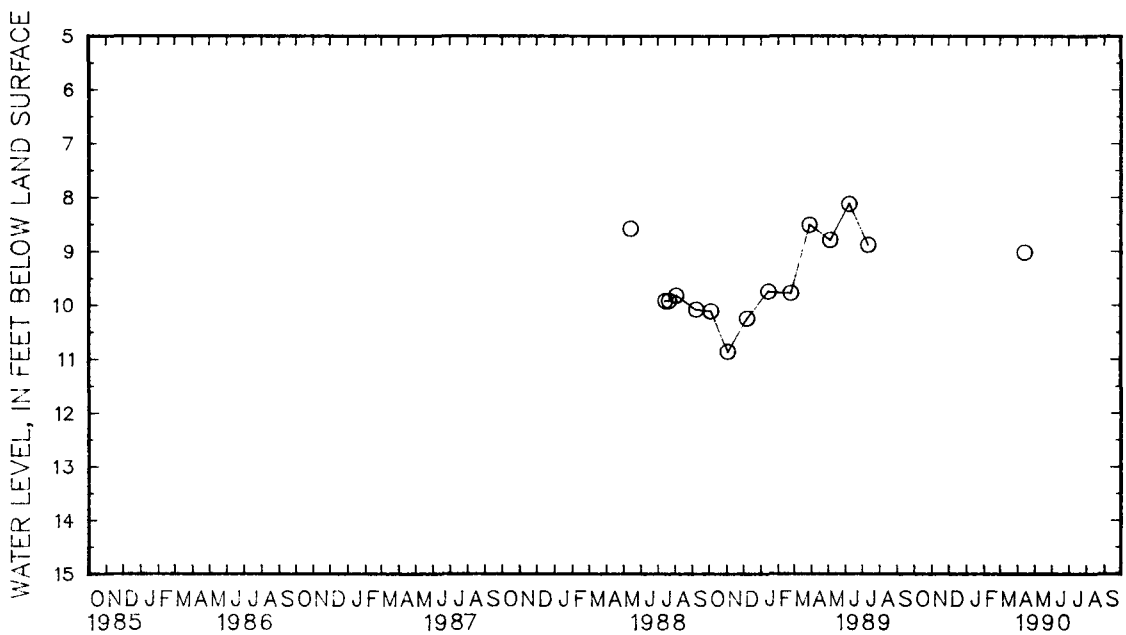
MARYLAND--Continued

HARFORD COUNTY--Continued

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, 2.52 ft above land surface.
REMARKS.--Maryland Water-Level Network observation well. Harford County Coastal Plain Project observation well.
PERIOD OF RECORD.--May 1988 to July 1989.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.41 ft below labd surface, May 26, 1989; lowest measured, 11.18 ft below land surface, Dec. 4, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL
APR 13	9.02



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

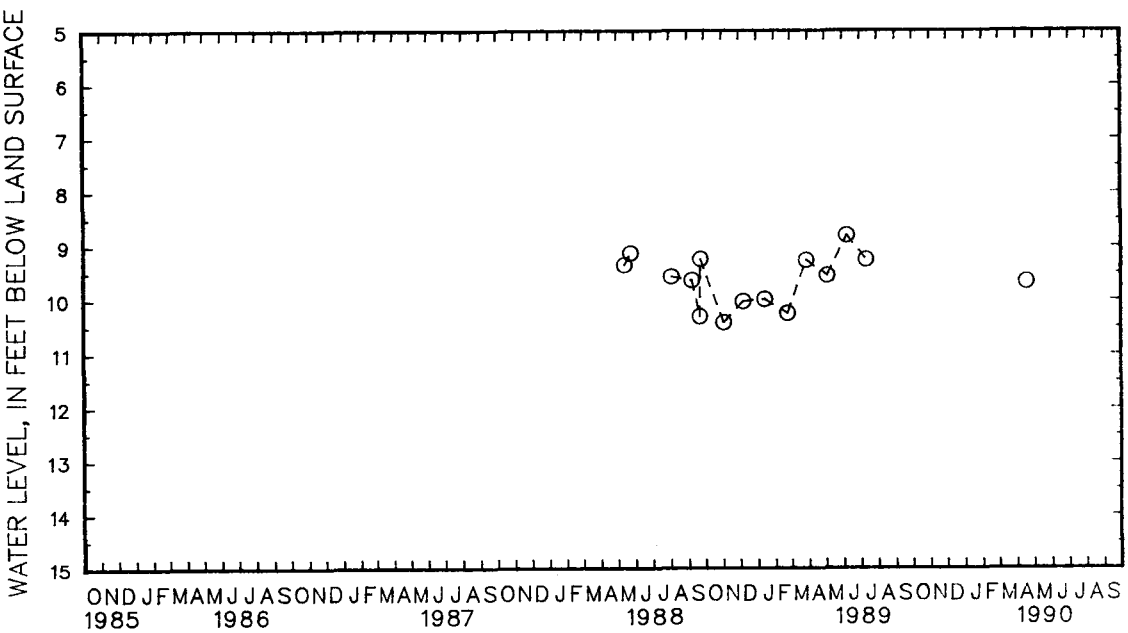
MARYLAND--Continued

HARFORD COUNTY--Continued

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.--Twice yearly measurements with chalked steel tape by USGS personnel. Equipped with digital water-level recorder--15-minute recorder interval from May 24, 1988 to July 11, 1989.
DATUM.--Elevation of land surface is 12.53 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 2.54 ft above land surface.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--May 1988 to July 1989, April 1990 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.29 ft below land surface, July 5, 1989; lowest measured, 11.45 ft below land surface, Feb. 24, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL
APR 18	9.68

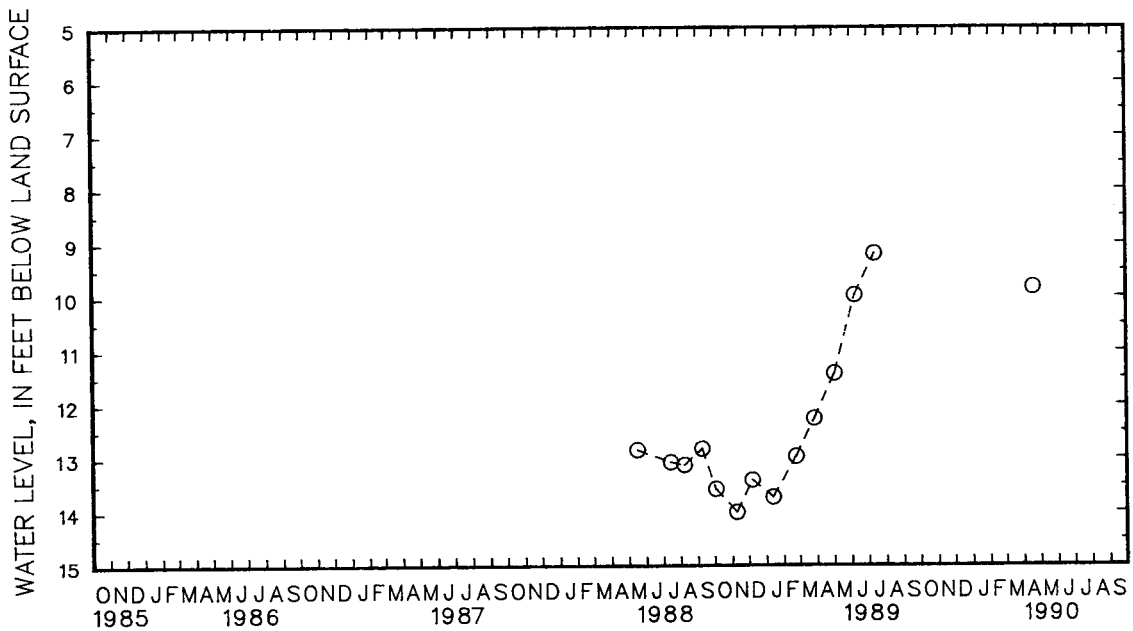


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

WELL NUMBER.--HA De 195. SITE ID.--392914076110301. PERMIT NUMBER.--HA-81-4142.
LOCATION.--Lat 39°29'14", long 76°11'03", Hydrologic Unit 02060003, .2 mi on Cranberry Run Dr., nr Perryman.
Owner: U.S. Geological Survey.
AQUIFER.--Talbot Formation of Pleistocene age. Aquifer code: 112TBLT.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 45 ft; casing diameter 4 in., to 35 ft; and 45 to 55 ft; screen diameter 4 in. from 35 to 45 ft.
INSTRUMENTATION.--Twice yearly measurements with chalked steel tape by USGS personnel. Measured monthly from May 1988 to July 1989.
DATUM.--Elevation of land surface is 52.70 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 1.38 ft above land surface.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--May 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.20 ft below land surface, July 12, 1989; lowest measured, 14.01 ft below land surface, Nov. 9, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL
APR 18	9.83	OCT 12	10.12



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND WATER LEVELS

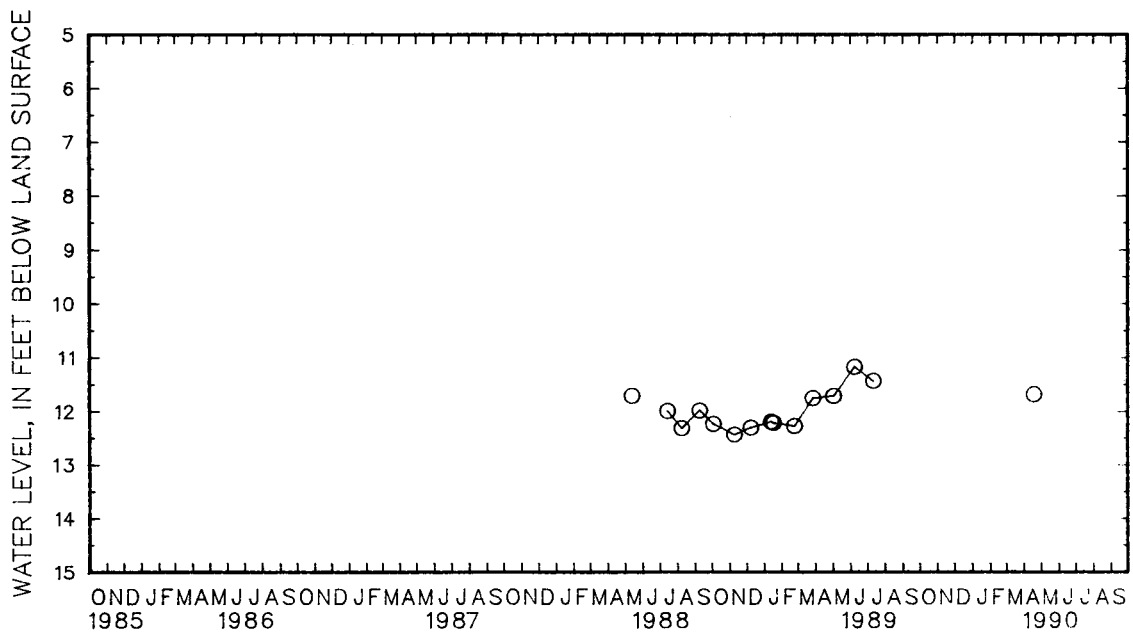
MARYLAND--Continued

HARFORD COUNTY--Continued

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.
REMARKS.--Maryland Water-Level Network observation well. Harford County Coastal Plain Project observation well.
PERIOD OF RECORD.--May 1988 to July 1989.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.65 ft below land surface, July 5, 1989; lowest measured, 12.44 ft below land surface, Nov. 9, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL
APR 18	11.69

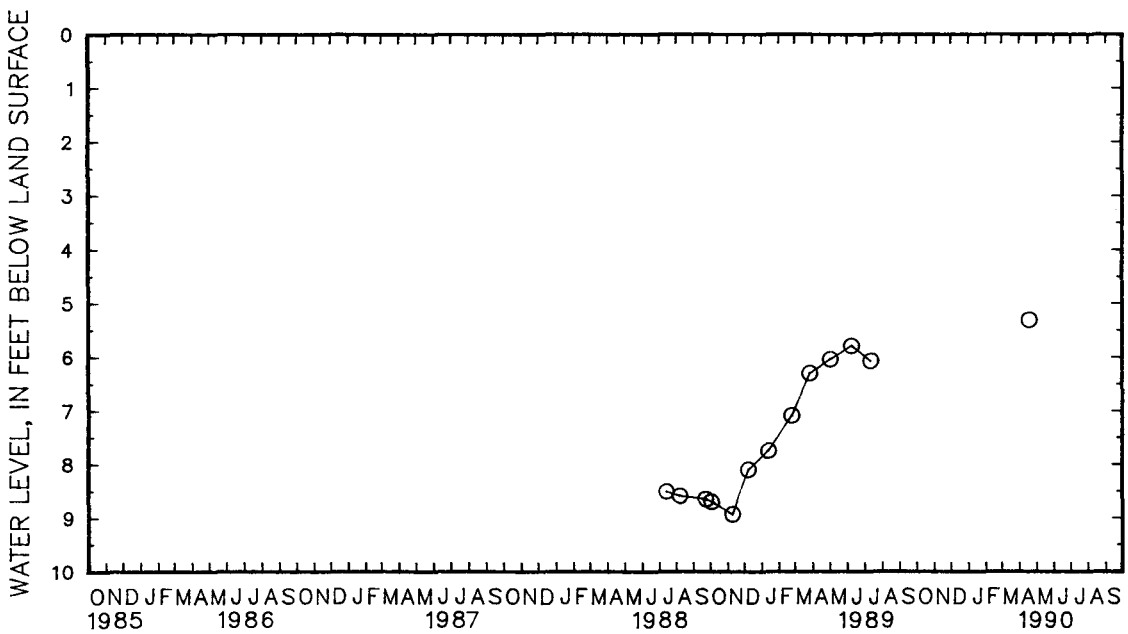


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

WELL NUMBER.--HA De 199. SITE ID.--392819076130903. PERMIT NUMBER.--HA-81-4576.
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.--Twice yearly measurements with chalked steel tape by USGS personnel. Measured monthly from July 1988 to July 1989.
DATUM.--Elevation of land surface is 19.13 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, .93 ft above land surface.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--May 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.31 ft below land surface, April 18, 1990; lowest measured, 8.93 ft below land surface, Nov. 9, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL
APR 18	5.31

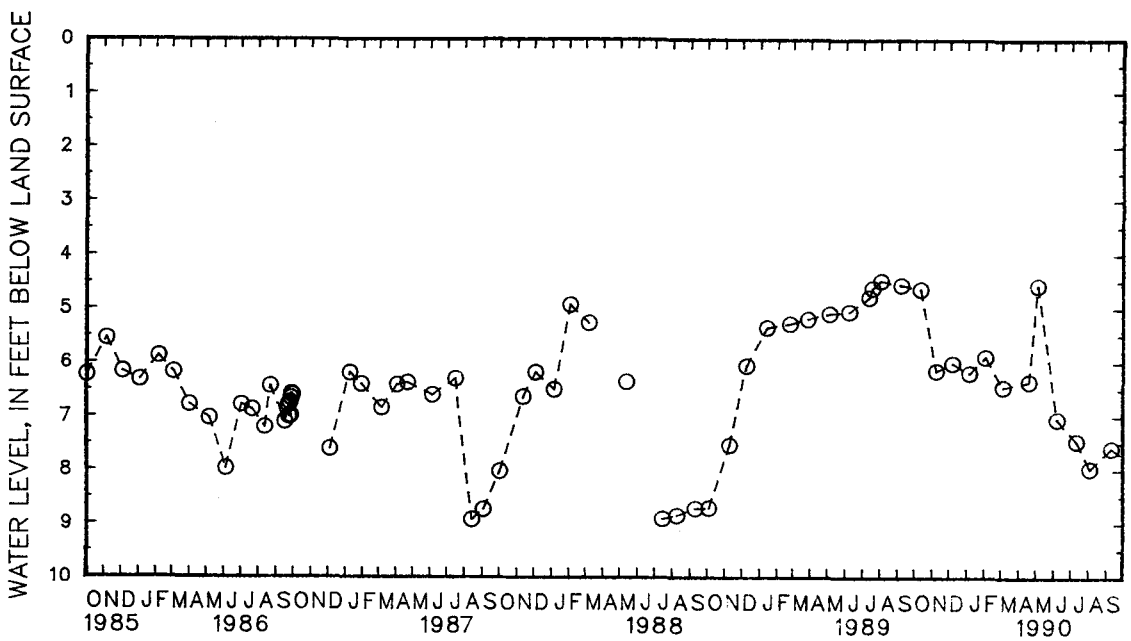


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--May 1962 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, at land surface, May 24, 1962; lowest measured, 12.80 ft below land surface, May 26, 1972.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	4.63	DEC 6	6.01	FEB 2	5.89	APR 18	6.35	JUN 7	7.05	AUG 3	7.97
NOV 7	6.15	JAN 5	6.19	MAR 5	6.45	MAY 4	4.56	JUL 11	7.46	SEP 10	7.59

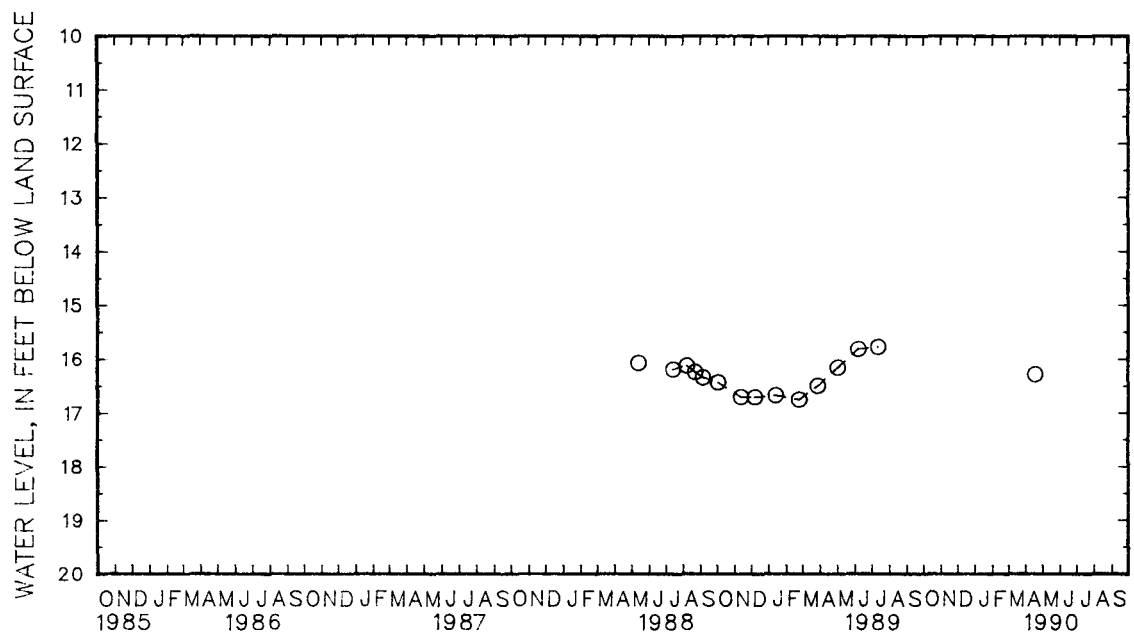


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

WELL NUMBER.--HA Ec 46. SITE ID.--392408076210101. PERMIT NUMBER.--HA-81-4124.
LOCATION.--Lat 39°24'33", long 76°20'33", Hydrologic Unit 02060003, at end of Kearney Dr. in boat launch park, nr Joppatowne.
Owner: U.S. Geological Survey.
AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
WELL CHARACTERISTICS.--Drilled, observation well, depth 85 ft; diameter of casing 4 in., to 65 ft, and 75 to 85 ft; screen diameter 4 in. from 65 to 75 ft.
INSTRUMENTATION.--Twice yearly measurements with chalked steel tape by USGS personnel. Measured monthly from May 1988 to July 1989.
DATUM.--Elevation of land surface is 23.16 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing, 2.17 ft above land surface.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--May 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.78 ft below land surface, July 12, 1989; lowest measured, 16.76 ft below land surface, Feb. 23, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL
APR 18	16.29	OCT 12	15.82

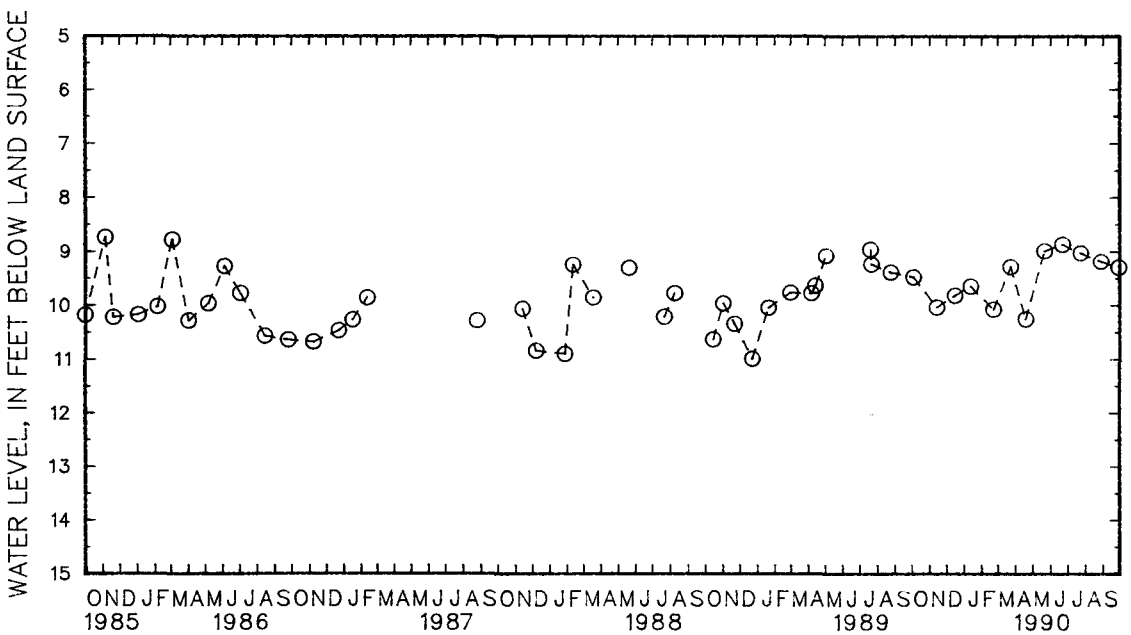


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well. 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, Sept. 17, 1984; lowest measured, 42.55 ft below land surface, June 26, 1955.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	9.48	DEC 15	9.82	FEB 21	10.08	APR 18	10.26	JUN 21	8.87	AUG 28	9.19
NOV 13	10.04	JAN 12	9.65	MAR 23	9.29	MAY 21	8.99	JUL 23	9.03	SEP 28	9.30



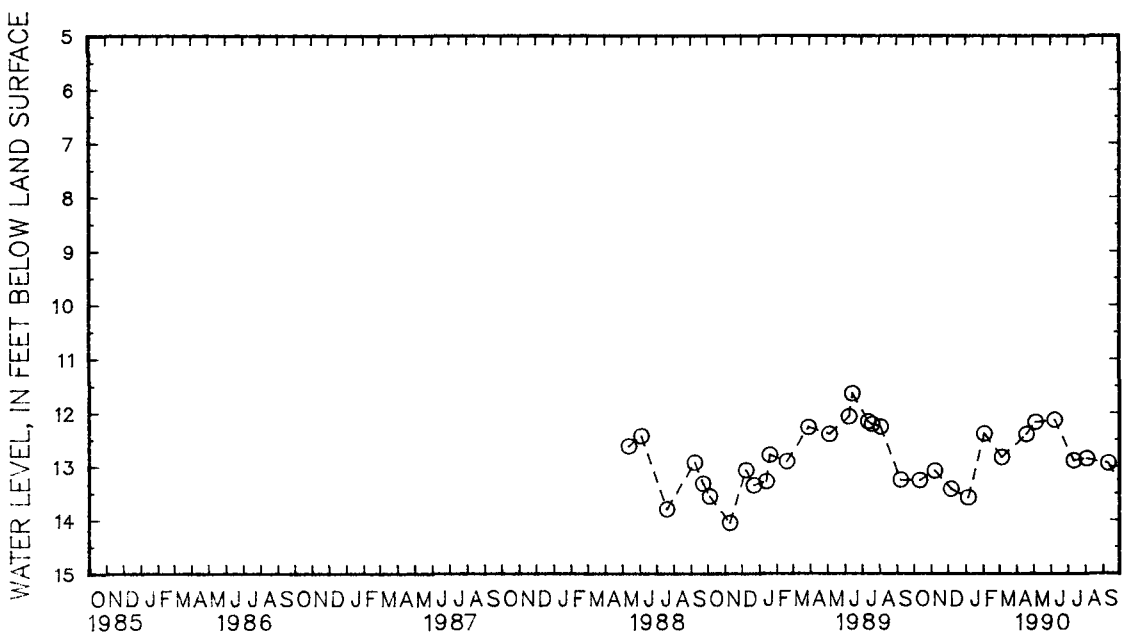
5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

HARFORD COUNTY--Continued

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.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--June 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.64 ft below land surface, June 13, 1989; lowest measured, 14.05 ft below land surface, Nov. 9, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	13.26	DEC 6	13.42	FEB 2	12.39	APR 18	12.40	JUN 7	12.13	AUG 3	12.85
NOV 7	13.08	JAN 5	13.58	MAR 5	12.83	MAY 4	12.17	JUL 11	12.89	SEP 10	12.94



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
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, 9.60 ft above sea level, March 17, 1990.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	10.61	10.59	10.70	10.65	10.25	10.22	10.06	9.93	10.07	10.05	9.81	9.80
2	10.96	10.62	10.66	10.66	10.23	10.22	9.94	9.87	10.05	10.01	9.81	9.80
3	10.89	10.75	10.68	10.62	10.22	10.18	9.87	9.82	10.02	9.99	9.81	9.76
4	10.75	10.69	10.63	10.62	10.18	10.16	9.82	9.80	10.06	10.02	9.76	9.74
5	10.69	10.66	10.62	10.61	10.16	10.14	9.80	9.77	10.04	10.01	9.74	9.74
6	10.67	10.65	10.63	10.61	10.14	10.12	9.77	9.75	10.01	10.01	9.74	9.72
7	10.65	10.62	10.61	10.60	10.12	10.08	9.75	9.74	10.01	9.98	9.72	9.71
8	10.63	10.61	10.66	10.60	10.08	10.08	9.94	9.74	9.98	9.96	9.71	9.71
9	10.61	10.59	10.72	10.65	10.08	10.06	9.94	9.90	9.98	9.97	9.72	9.71
10	10.60	10.59	10.67	10.61	10.06	10.04	9.91	9.85	10.08	9.98	9.73	9.72
11	10.60	10.57	10.61	10.60	10.04	10.02	9.85	9.83	10.06	10.04	9.72	9.71
12	10.57	10.56	10.61	10.57	10.02	9.99	9.83	9.78	10.04	10.00	9.71	9.70
13	10.56	10.54	10.58	10.57	9.99	9.98	9.78	9.74	10.01	9.99	9.70	9.69
14	10.54	10.53	10.58	10.57	9.98	9.97	9.74	9.73	10.01	9.97	9.69	9.68
15	10.54	10.52	10.59	10.57	9.97	9.96	9.73	9.73	9.97	9.96	9.68	9.62
16	10.53	10.51	10.66	10.59	9.96	9.93	9.73	9.71	9.98	9.96	9.62	9.62
17	10.67	10.52	10.59	10.57	9.93	9.92	9.71	9.71	9.96	9.90	9.80	9.60
18	10.64	10.59	10.57	10.54	9.92	9.90	9.71	9.69	9.91	9.90	9.89	9.81
19	10.92	10.64	10.56	10.53	9.90	9.90	9.69	9.68	9.92	9.89	9.82	9.79
20	11.16	10.91	10.59	10.56	9.90	9.88	9.69	9.67	9.89	9.87	9.79	9.77
21	11.02	10.90	10.56	10.52	9.88	9.86	9.69	9.67	9.87	9.86	9.77	9.73
22	10.90	10.82	10.61	10.56	9.86	9.83	9.67	9.66	9.92	9.86	9.73	9.72
23	10.82	10.78	10.58	10.49	9.83	9.82	9.66	9.65	9.93	9.91	9.72	9.70
24	10.78	10.76	10.49	10.45	9.82	9.81	9.65	9.64	9.92	9.89	9.70	9.69
25	10.76	10.74	10.45	10.43	9.81	9.80	10.22	9.64	9.89	9.84	9.72	9.70
26	10.74	10.71	10.43	10.37	9.81	9.78	10.33	10.14	9.84	9.83	9.72	9.69
27	10.71	10.69	10.37	10.35	9.78	9.77	10.14	10.03	9.85	9.83	9.69	9.68
28	10.69	10.68	10.35	10.31	9.77	9.75	10.03	9.96	9.84	9.81	9.68	9.67
29	10.68	10.66	10.31	10.28	9.75	9.75	10.36	9.96	---	---	9.67	9.66
30	10.66	10.66	10.28	10.25	9.75	9.74	10.36	10.14	---	---	9.70	9.67
31	10.73	10.66	---	---	9.92	9.74	10.13	10.07	---	---	9.83	9.70
MONTH	11.16	10.51	10.72	10.25	10.25	9.74	10.36	9.64	10.08	9.81	9.89	9.60

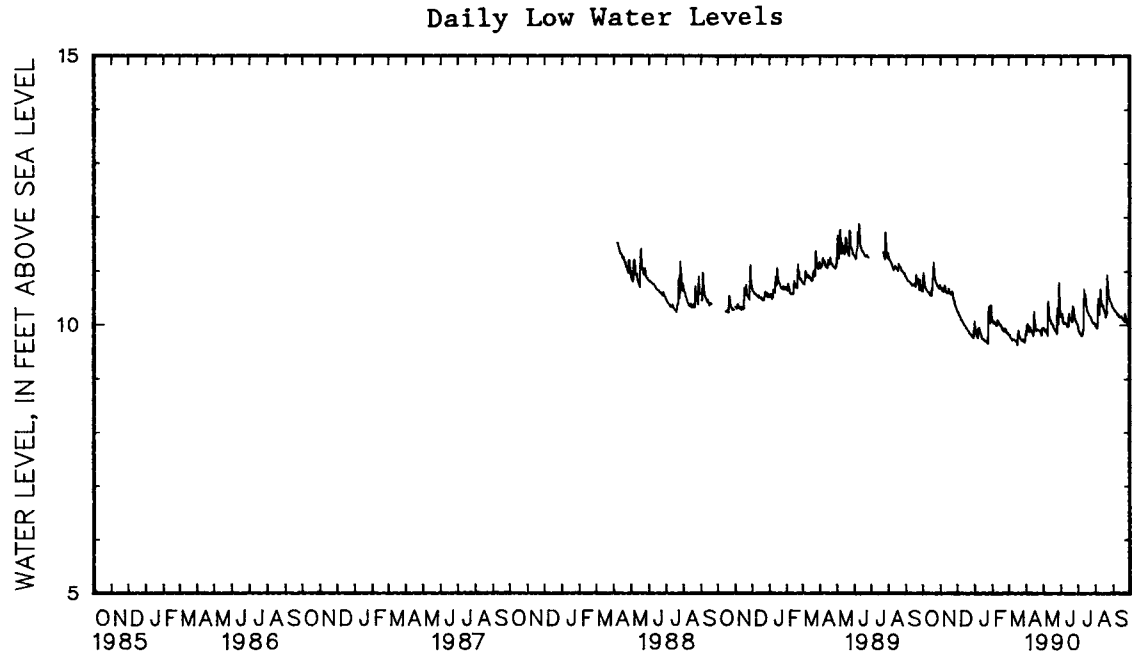
GROUND-WATER LEVELS

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	9.81	9.78	9.94	9.94	10.17	10.13	9.98	9.90	9.98	9.95	10.31	10.28
2	9.95	9.78	9.94	9.90	10.14	10.11	9.90	9.85	9.96	9.92	10.29	10.27
3	10.01	9.96	9.90	9.87	10.20	10.10	9.86	9.83	9.95	9.90	10.28	10.24
4	9.99	9.93	9.88	9.87	10.17	10.05	9.86	9.81	9.93	9.89	10.25	10.22
5	9.93	9.87	9.91	9.88	10.05	10.02	9.83	9.79	10.04	9.90	10.25	10.22
6	9.87	9.85	9.91	9.86	10.02	10.01	9.82	9.78	10.48	10.05	10.24	10.21
7	9.97	9.87	9.86	9.83	10.04	10.01	9.79	9.77	10.37	10.19	10.23	10.19
8	9.94	9.88	9.83	9.80	10.02	10.00	9.79	9.76	10.19	10.13	10.20	10.16
9	9.89	9.86	9.80	9.80	10.03	10.00	9.80	9.76	10.37	10.13	10.18	10.16
10	9.86	9.85	10.43	9.80	10.02	9.99	9.91	9.80	10.66	10.36	10.19	10.14
11	9.88	9.84	10.31	10.10	9.99	9.96	9.90	9.85	10.44	10.35	10.15	10.12
12	9.85	9.80	10.10	10.05	9.97	9.94	10.66	9.85	10.40	10.33	10.14	10.11
13	9.80	9.79	10.10	10.04	9.96	9.94	10.58	10.38	10.35	10.29	10.14	10.12
14	9.81	9.79	10.10	10.03	9.96	9.95	10.55	10.33	10.36	10.29	10.15	10.13
15	10.24	9.83	10.03	10.01	10.21	9.96	10.49	10.35	10.30	10.27	10.16	10.11
16	10.05	9.98	10.02	10.01	10.14	10.09	10.35	10.28	10.28	10.25	10.13	10.10
17	9.98	9.92	10.01	10.00	10.10	10.07	10.28	10.24	10.25	10.21	10.12	10.08
18	9.91	9.89	10.00	9.95	10.10	10.03	10.25	10.22	10.21	10.13	10.09	10.07
19	9.89	9.87	9.95	9.92	10.11	10.07	10.23	10.18	10.14	10.11	10.10	10.08
20	9.90	9.87	9.92	9.91	10.07	10.03	10.20	10.16	10.19	10.11	10.10	10.06
21	9.91	9.88	9.91	9.89	10.05	10.00	10.17	10.14	10.19	10.18	10.06	10.04
22	9.91	9.90	9.89	9.88	10.34	9.98	10.16	10.13	10.92	10.19	10.20	10.05
23	9.90	9.89	9.88	9.86	10.32	10.19	10.15	10.10	10.69	10.57	10.14	10.06
24	9.89	9.89	9.86	9.83	10.21	10.14	10.12	10.08	10.57	10.50	10.06	10.03
25	9.89	9.89	9.83	9.82	10.14	10.09	10.09	10.05	10.50	10.46	10.04	10.00
26	9.89	9.84	10.30	9.82	10.10	10.07	10.06	10.03	10.47	10.43	10.00	9.98
27	9.84	9.80	10.10	10.01	10.08	10.05	10.04	10.01	10.44	10.40	9.98	9.96
28	9.80	9.78	10.01	9.97	10.05	10.01	10.03	10.00	10.42	10.37	9.96	9.95
29	9.93	9.79	10.78	9.97	10.02	9.99	10.02	10.01	10.40	10.35	9.95	9.94
30	9.94	9.93	10.44	10.24	10.01	9.96	10.03	10.00	10.36	10.32	9.95	9.94
31	---	---	10.24	10.17	---	---	10.02	9.98	10.33	10.29	---	---
MONTH	10.24	9.78	10.78	9.80	10.34	9.94	10.66	9.76	10.92	9.89	10.31	9.94



5 YEAR HYDROGRAPH

OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
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 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	6.91	6.83	7.36	7.09	---	---	6.98	6.61	7.33	7.13	7.05	6.89
2	7.21	6.91	7.20	7.09	---	---	6.61	6.53	7.45	7.33	7.28	7.05
3	7.24	7.15	7.26	7.09	---	---	6.65	6.59	7.33	7.15	7.35	7.22
4	7.16	7.11	7.09	6.98	---	---	6.90	6.65	7.56	7.31	7.22	6.94
5	7.13	7.09	7.07	7.02	---	---	6.87	6.69	7.37	7.17	6.94	6.84
6	7.20	7.14	7.23	7.08	---	---	6.81	6.69	7.29	7.19	6.90	6.71
7	7.19	7.01	7.27	7.18	---	---	6.79	6.68	7.38	7.26	6.71	6.59
8	7.07	7.00	7.37	7.24	---	---	6.99	6.79	7.27	7.17	6.89	6.67
9	7.02	6.85	7.48	7.36	---	---	7.09	6.87	7.52	7.28	7.08	6.89
10	6.93	6.82	7.36	7.18	---	---	7.17	7.02	7.68	7.45	7.07	6.97
11	6.95	6.87	7.28	7.14	---	---	7.31	7.00	7.45	7.39	7.04	6.98
12	6.94	6.86	7.29	6.98	---	---	7.28	7.05	7.45	7.21	7.10	7.02
13	---	---	7.07	6.91	---	---	7.04	6.67	7.40	7.20	7.09	7.04
14	6.93	6.87	7.15	7.07	---	---	6.67	6.61	7.40	7.22	7.09	7.05
15	6.94	6.89	7.35	6.85	---	---	6.76	6.66	7.37	7.22	7.05	6.99
16	6.94	6.88	7.01	6.70	6.97	6.69	6.73	6.68	7.51	7.38	7.10	7.01
17	7.01	6.93	---	---	6.69	6.61	6.86	6.70	7.48	6.93	7.32	7.11
18	6.98	6.87	---	---	6.62	6.54	6.94	6.81	7.13	6.87	7.28	7.04
19	7.19	6.90	---	---	6.72	6.54	6.80	6.62	7.37	7.13	7.15	7.02
20	7.38	7.19	---	---	6.73	6.63	6.96	6.64	7.21	6.90	7.19	7.14
21	7.41	7.32	---	---	6.68	6.54	7.10	6.96	6.97	6.87	7.17	6.96
22	7.32	7.09	---	---	6.54	6.42	6.97	6.90	7.47	6.97	7.11	6.94
23	7.09	7.00	---	---	6.43	6.38	6.90	6.77	7.58	7.48	7.16	6.94
24	7.06	7.01	---	---	6.60	6.43	6.92	6.84	7.56	7.29	6.94	6.84
25	7.12	7.06	---	---	6.84	6.60	7.22	6.84	7.28	6.71	7.01	6.91
26	7.12	7.08	---	---	6.90	6.61	7.26	7.06	6.70	6.60	7.07	6.99
27	7.12	7.07	---	---	6.66	6.52	7.08	6.96	6.98	6.70	6.99	6.89
28	7.13	7.10	---	---	6.68	6.50	7.12	7.05	7.02	6.97	6.94	6.86
29	7.11	7.08	---	---	6.52	6.45	7.63	7.07	---	---	6.92	6.85
30	7.16	7.09	---	---	6.57	6.51	7.60	7.27	---	---	7.11	6.93
31	7.40	7.16	---	---	6.98	6.51	7.27	7.13	---	---	7.26	7.12
MONTH	7.41	6.82	7.48	6.70	6.98	6.38	7.63	6.53	7.68	6.60	7.35	6.59

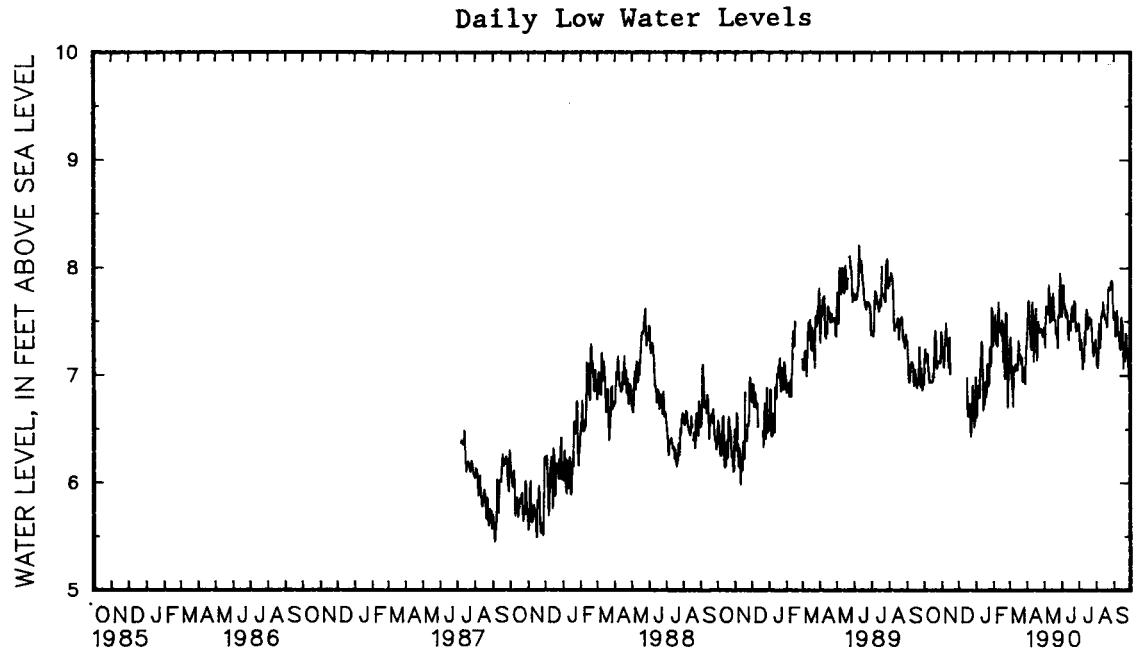
GROUND-WATER LEVELS

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	7.33	7.26	7.44	7.38	7.54	7.49	7.48	7.39	7.24	7.11	7.52	7.46
2	7.49	7.32	7.41	7.26	7.59	7.52	7.39	7.24	7.10	7.04	7.59	7.52
3	7.64	7.49	7.26	7.24	7.84	7.59	7.24	7.19	7.08	7.04	7.57	7.36
4	7.69	7.62	7.55	7.24	7.84	7.67	7.33	7.23	7.07	7.05	7.36	7.28
5	7.62	7.44	7.64	7.56	7.67	7.54	7.33	7.27	7.21	7.05	7.51	7.36
6	7.43	7.30	7.62	7.61	7.62	7.52	7.27	7.11	7.48	7.20	7.57	7.50
7	7.38	7.26	7.61	7.58	7.64	7.50	7.10	6.98	7.31	7.27	7.60	7.52
8	7.26	7.15	7.58	7.57	7.54	7.45	7.06	6.97	7.26	7.21	7.52	7.25
9	7.24	7.10	7.57	7.56	7.60	7.55	7.23	7.06	7.34	7.21	7.37	7.25
10	7.65	7.24	7.84	7.56	7.58	7.53	7.24	7.12	7.55	7.34	7.39	7.32
11	7.68	7.41	7.75	7.50	7.53	7.36	7.13	7.09	7.58	7.52	7.32	7.25
12	7.41	7.13	7.49	7.37	7.36	7.27	7.41	7.10	7.55	7.53	7.25	7.22
13	7.13	7.03	7.72	7.49	7.33	7.25	7.29	7.20	7.68	7.54	7.24	7.21
14	7.35	7.08	7.66	7.49	7.44	7.34	7.60	7.29	7.63	7.57	7.46	7.24
15	7.55	7.36	7.51	7.45	7.50	7.41	7.61	7.52	7.57	7.53	7.54	7.40
16	7.53	7.47	7.66	7.50	7.44	7.39	7.56	7.43	7.55	7.52	7.46	7.35
17	7.62	7.38	7.76	7.65	7.42	7.36	7.43	7.39	7.52	7.48	7.36	7.03
18	7.37	7.14	7.64	7.52	7.60	7.42	7.46	7.41	7.52	7.47	7.06	6.99
19	7.14	7.05	7.52	7.42	7.64	7.56	7.47	7.43	7.53	7.44	7.28	7.06
20	7.34	7.10	7.51	7.45	7.56	7.47	7.54	7.46	7.45	7.39	7.27	7.08
21	7.50	7.34	7.51	7.36	7.50	7.42	7.52	7.49	7.46	7.41	7.13	7.03
22	7.45	7.37	7.38	7.33	7.66	7.39	7.50	7.47	7.70	7.46	7.38	7.13
23	7.43	7.39	7.38	7.35	7.69	7.54	7.52	7.42	7.82	7.70	7.38	7.23
24	7.40	7.31	7.35	7.25	7.67	7.52	7.42	7.32	7.82	7.80	7.23	7.10
25	7.42	7.30	7.25	7.20	7.51	7.37	7.32	7.23	7.80	7.75	7.16	7.07
26	7.43	7.39	7.55	7.24	7.41	7.36	7.23	7.17	7.80	7.77	7.19	7.11
27	7.40	7.34	7.56	7.53	7.44	7.40	7.18	7.16	7.87	7.79	7.11	6.97
28	7.39	7.36	7.54	7.50	7.42	7.36	7.21	7.17	7.88	7.82	6.97	6.91
29	7.36	7.31	7.95	7.54	7.47	7.36	7.24	7.20	7.87	7.79	6.99	6.95
30	7.38	7.34	7.88	7.65	7.45	7.42	7.31	7.23	7.79	7.60	7.08	6.99
31	---	---	7.65	7.54	---	---	7.33	7.24	7.60	7.49	---	---
MONTH	7.69	7.03	7.95	7.20	7.84	7.25	7.61	6.97	7.88	7.04	7.60	6.91



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
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, 7.54 ft above sea level, May 29, 1990; lowest measured, 5.89 ft above sea level, Sept. 28, 1987.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.09	7.06	7.19	7.12	7.13	7.05	7.19	7.06	7.16	7.11	7.04	6.99
2	7.24	7.09	7.13	7.10	7.19	7.05	7.06	7.02	7.22	7.16	7.15	7.04
3	7.26	7.20	7.15	7.10	7.23	7.17	7.02	6.99	7.20	7.14	7.18	7.15
4	7.20	7.15	7.10	7.06	7.17	7.13	7.06	6.99	7.31	7.20	7.15	7.03
5	7.15	7.14	7.09	7.07	7.14	7.12	7.06	7.01	7.25	7.16	7.03	6.99
6	7.17	7.14	7.17	7.09	7.16	7.12	7.07	7.02	7.23	7.16	7.03	6.95
7	7.16	7.10	7.21	7.17	7.16	6.99	7.06	7.02	7.28	7.22	6.95	6.88
8	7.11	7.08	7.29	7.21	7.03	6.99	7.18	7.06	7.22	7.20	6.95	6.88
9	7.09	7.02	7.37	7.29	7.05	7.03	7.19	7.14	7.35	7.22	7.04	6.95
10	7.08	7.02	7.33	7.27	7.06	7.03	7.25	7.19	7.45	7.35	7.04	6.99
11	7.11	7.07	7.29	7.26	7.08	7.03	7.32	7.20	7.37	7.35	7.02	7.00
12	7.11	7.07	7.30	7.17	7.11	7.06	7.31	7.22	7.35	7.26	7.05	7.00
13	7.12	7.09	7.17	7.14	7.13	7.08	7.22	7.07	7.33	7.25	7.04	7.03
14	7.10	7.08	7.22	7.15	7.11	7.08	7.07	7.02	7.34	7.28	7.04	7.02
15	7.11	7.09	7.30	7.21	7.20	7.09	7.05	7.02	7.30	7.27	7.03	7.00
16	7.12	7.08	7.45	7.30	7.17	7.10	7.04	7.02	7.39	7.30	7.07	7.02
17	7.20	7.11	7.36	7.27	7.10	7.01	7.08	7.02	7.38	7.18	7.17	7.07
18	7.18	7.14	7.27	7.19	7.01	6.94	7.12	7.08	7.18	7.12	7.18	7.03
19	7.20	7.14	7.20	7.15	6.98	6.94	7.08	6.98	7.27	7.18	7.04	6.99
20	7.32	7.20	7.40	7.20	6.99	6.97	7.08	6.98	7.22	7.08	7.05	6.99
21	7.30	7.27	7.36	7.16	7.00	6.97	7.14	7.08	7.08	7.02	7.02	6.89
22	7.27	7.14	7.16	7.07	6.97	6.91	7.13	7.10	7.24	7.04	6.93	6.88
23	7.14	7.06	7.12	7.05	6.91	6.83	7.13	7.09	7.33	7.24	6.97	6.89
24	7.07	7.02	7.05	7.02	6.86	6.83	7.17	7.12	7.34	7.24	6.89	6.86
25	7.09	7.07	7.16	7.03	6.95	6.85	7.31	7.14	7.24	7.00	6.92	6.86
26	7.09	7.08	7.22	7.15	7.05	6.95	7.30	7.17	7.00	6.88	6.94	6.89
27	7.09	7.07	7.15	7.11	6.98	6.96	7.16	7.12	6.99	6.88	6.90	6.85
28	7.08	7.07	7.24	7.14	6.98	6.92	7.15	7.12	7.02	6.99	6.87	6.83
29	7.08	7.06	7.18	7.11	6.94	6.92	7.32	7.11	---	---	6.88	6.84
30	7.09	7.06	7.17	7.11	6.97	6.94	7.29	7.16	---	---	6.95	6.88
31	7.22	7.08	---	---	7.19	6.96	7.16	7.11	---	---	7.00	6.95
MONTH	7.32	7.02	7.45	7.02	7.23	6.83	7.32	6.98	7.45	6.88	7.18	6.83

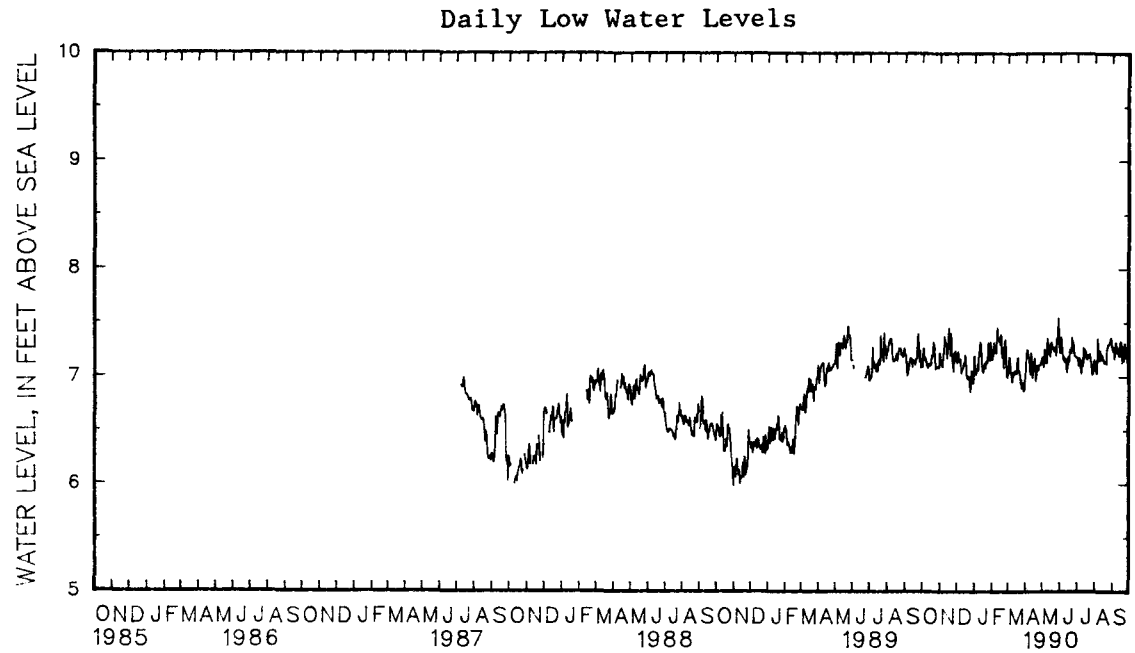
GROUND-WATER LEVELS

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	7.05	7.00	7.18	7.17	7.22	7.20	7.18	7.15	7.13	7.06	7.24	7.22
2	7.17	7.05	7.18	7.09	7.22	7.20	7.15	7.08	7.06	7.02	7.27	7.24
3	7.23	7.17	7.09	7.03	7.36	7.22	7.10	7.06	7.04	7.02	7.26	7.17
4	7.25	7.23	7.16	7.04	7.34	7.25	7.17	7.10	7.03	7.01	7.17	7.12
5	7.23	7.18	7.25	7.16	7.25	7.14	7.17	7.14	7.17	7.02	7.24	7.16
6	7.18	7.13	7.24	7.15	7.17	7.12	7.14	7.02	7.35	7.18	7.30	7.24
7	7.16	7.08	7.15	7.11	7.19	7.14	7.05	6.99	7.24	7.17	7.32	7.29
8	7.07	7.01	7.13	7.10	7.14	7.09	7.03	6.99	7.17	7.11	7.29	7.17
9	7.02	6.98	7.13	7.10	7.17	7.14	7.13	7.03	7.15	7.10	7.22	7.16
10	7.19	7.01	7.36	7.13	7.17	7.15	7.15	7.08	7.24	7.14	7.26	7.22
11	7.22	7.14	7.33	7.22	7.15	7.06	7.10	7.07	7.17	7.14	7.24	7.20
12	7.14	6.99	7.21	7.13	7.06	6.98	7.27	7.07	7.16	7.14	7.20	7.18
13	6.99	6.93	7.29	7.16	7.04	6.97	7.17	7.12	7.20	7.14	7.19	7.17
14	7.05	6.94	7.29	7.19	7.10	7.04	7.25	7.12	7.19	7.16	7.28	7.19
15	7.13	7.07	7.19	7.17	7.18	7.10	7.24	7.19	7.16	7.12	7.32	7.29
16	7.13	7.11	7.27	7.18	7.16	7.14	7.23	7.19	7.14	7.12	7.33	7.27
17	7.17	7.10	7.32	7.27	7.14	7.11	7.19	7.15	7.13	7.11	7.30	7.14
18	7.10	6.96	7.30	7.26	7.23	7.13	7.16	7.14	7.13	7.10	7.13	7.10
19	6.96	6.91	7.26	7.22	7.25	7.23	7.17	7.14	7.14	7.12	7.20	7.11
20	7.00	6.91	7.26	7.23	7.23	7.18	7.20	7.16	7.14	7.11	7.21	7.15
21	7.10	7.00	7.27	7.22	7.22	7.20	7.20	7.18	7.12	7.10	7.15	7.13
22	7.08	7.04	7.24	7.20	7.36	7.18	7.20	7.17	7.26	7.12	7.31	7.15
23	7.07	7.04	7.26	7.24	7.32	7.28	7.21	7.17	7.27	7.22	7.31	7.25
24	7.06	7.03	7.25	7.20	7.32	7.26	7.17	7.12	7.30	7.27	7.25	7.18
25	7.10	7.04	7.20	7.16	7.26	7.19	7.12	7.06	7.30	7.28	7.18	7.16
26	7.11	7.10	7.35	7.18	7.19	7.17	7.06	7.02	7.30	7.29	7.20	7.18
27	7.11	7.08	7.35	7.30	7.19	7.18	7.02	7.00	7.31	7.29	7.19	7.12
28	7.11	7.10	7.31	7.28	7.19	7.17	7.02	7.00	7.34	7.29	7.12	7.08
29	7.14	7.09	7.54	7.31	7.18	7.15	7.05	7.02	7.36	7.34	7.12	7.11
30	7.17	7.14	7.43	7.28	7.18	7.16	7.10	7.05	7.34	7.27	7.16	7.12
31	---	---	7.28	7.22	---	---	7.15	7.10	7.27	7.23	---	---
MONTH	7.25	6.91	7.54	7.03	7.36	6.97	7.27	6.99	7.36	7.01	7.33	7.08



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
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, 6.76 ft above sea level, May 29, 1990; lowest measured, 4.63 ft above sea level, Sept. 4, 1987.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	5.94	5.71	6.26	5.91	---	---	6.01	5.38	5.85	5.57	5.88	5.62
2	6.18	5.94	6.07	5.84	---	---	5.38	5.21	6.06	5.84	6.13	5.88
3	6.17	5.95	6.11	5.92	---	---	5.29	5.23	5.87	5.66	6.24	6.05
4	5.95	5.84	5.93	5.76	---	---	5.65	5.30	6.28	5.88	6.04	5.74
5	5.99	5.82	5.98	5.84	---	---	5.64	5.41	5.92	5.65	5.81	5.65
6	6.07	5.99	6.19	5.99	---	---	5.65	5.46	5.97	5.75	5.74	5.46
7	6.07	5.81	6.21	6.05	---	---	5.67	5.46	5.97	5.82	5.45	5.28
8	5.98	5.82	6.36	6.15	---	---	5.88	5.62	5.93	5.74	5.71	5.43
9	5.92	5.68	6.53	6.28	---	---	5.92	5.63	6.26	5.93	5.99	5.71
10	5.90	5.69	6.32	6.07	---	---	6.03	5.79	6.48	6.11	5.91	5.80
11	5.95	5.72	6.23	5.98	---	---	6.20	5.75	6.16	6.00	5.95	5.84
12	5.95	5.72	6.18	5.78	---	---	6.12	5.86	6.15	5.82	6.02	5.90
13	5.89	5.80	5.97	5.70	---	---	5.86	5.38	6.16	5.77	6.00	5.96
14	5.95	5.79	6.10	5.91	---	---	5.41	5.30	6.16	5.82	6.01	5.96
15	5.93	5.85	6.70	5.84	---	---	5.50	5.40	6.07	5.81	5.99	5.94
16	---	---	5.84	5.65	6.02	5.58	5.48	5.40	6.31	6.08	6.09	5.96
17	6.01	5.91	5.84	5.65	5.58	5.43	5.69	5.43	6.24	5.49	6.40	6.09
18	6.00	5.71	6.08	5.84	5.46	5.31	5.82	5.59	5.80	5.41	6.25	5.86
19	6.14	5.79	6.05	5.68	5.63	5.32	5.58	5.30	6.15	5.81	5.97	5.79
20	6.22	6.05	6.19	5.68	5.64	5.48	5.78	5.35	5.87	5.48	5.97	5.88
21	6.13	5.97	---	---	5.63	5.36	5.99	5.78	5.71	5.48	5.88	5.67
22	5.98	5.62	---	---	5.36	5.13	5.94	5.73	6.31	5.67	5.97	5.67
23	5.64	5.52	---	---	5.13	5.05	5.78	5.64	6.53	6.31	6.06	5.76
24	5.73	5.61	---	---	5.32	5.11	5.83	5.74	6.43	6.07	5.79	5.62
25	5.83	5.67	---	---	5.80	5.33	6.10	5.72	6.06	5.28	5.93	5.76
26	5.85	5.74	---	---	5.88	5.48	6.06	5.61	5.31	5.11	5.91	5.81
27	5.87	5.75	---	---	5.54	5.32	5.63	5.45	5.77	5.32	5.80	5.72
28	5.91	5.81	---	---	5.54	5.33	5.63	5.51	5.76	5.72	5.83	5.69
29	5.92	5.83	---	---	5.40	5.27	6.25	5.54	---	---	5.81	5.73
30	6.02	5.84	---	---	5.44	5.39	6.22	5.74	---	---	5.97	5.78
31	6.32	5.98	---	---	6.02	5.43	5.78	5.56	---	---	6.15	5.97
MONTH	6.32	5.52	6.53	5.40	6.02	5.05	6.25	5.21	6.53	5.11	6.40	5.28

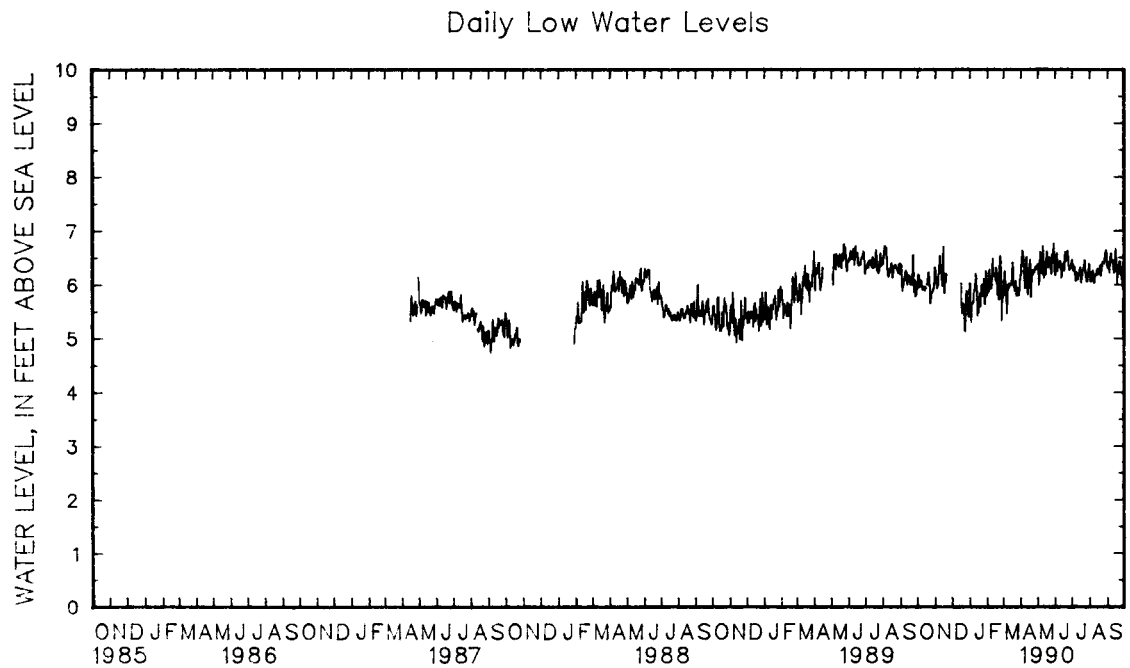
GROUND-WATER LEVELS

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	6.22	6.10	6.38	6.22	6.17	6.06	6.46	6.29	6.20	6.01	6.30	6.19
2	6.43	6.20	6.28	5.96	6.24	6.12	6.34	6.13	6.06	5.96	6.41	6.26
3	6.53	6.41	5.99	5.86	6.53	6.21	6.26	6.12	6.06	5.97	6.34	6.06
4	6.63	6.48	6.28	5.90	6.58	6.25	6.34	6.20	6.06	5.98	6.21	6.03
5	6.53	6.24	6.61	6.29	6.25	6.11	6.32	6.19	6.22	6.02	6.43	6.17
6	6.22	6.06	6.46	6.24	6.38	6.17	6.20	6.04	6.26	6.15	6.51	6.37
7	6.17	5.93	6.28	6.19	6.37	6.18	6.06	5.94	6.18	6.02	6.58	6.46
8	5.93	5.79	6.20	6.12	6.32	6.16	6.10	5.93	6.02	5.95	6.47	6.10
9	5.94	5.77	6.29	6.13	6.42	6.32	6.22	6.09	6.04	5.96	6.42	6.15
10	6.48	5.94	6.72	6.26	6.43	6.34	6.16	6.08	6.17	6.03	6.44	6.23
11	6.51	6.12	6.53	6.05	6.34	6.07	6.09	6.01	6.17	6.09	6.28	6.12
12	6.11	5.81	6.12	5.91	6.12	6.00	6.19	6.04	6.17	6.03	6.21	6.09
13	5.81	5.72	6.40	6.13	6.24	6.09	6.17	5.94	6.26	6.09	6.23	6.10
14	6.16	5.81	6.33	6.06	6.34	6.24	6.25	6.00	6.29	6.07	6.44	6.15
15	6.30	6.16	6.18	6.06	6.39	6.26	6.31	6.21	6.18	6.07	6.66	6.36
16	6.25	6.17	6.42	6.18	6.32	6.16	6.24	5.95	6.25	6.10	6.48	6.35
17	6.46	6.03	6.61	6.40	6.26	6.13	6.03	5.93	6.21	6.10	6.34	5.90
18	6.02	5.74	6.45	6.29	6.51	6.22	6.09	5.95	6.26	6.11	6.02	5.87
19	5.76	5.64	6.32	6.21	6.60	6.38	6.19	6.05	6.35	6.15	6.35	5.97
20	6.05	5.74	6.39	6.27	6.43	6.30	6.28	6.11	6.15	6.05	6.32	6.03
21	6.26	6.03	6.50	6.19	6.49	6.27	6.30	6.20	6.24	6.07	6.19	5.96
22	6.18	6.06	6.37	6.18	6.51	6.25	6.35	6.22	6.33	6.20	6.42	6.19
23	6.25	6.14	6.39	6.23	6.62	6.46	6.45	6.27	6.42	6.27	6.42	6.24
24	6.22	6.10	6.29	6.13	6.53	6.33	6.26	6.12	6.42	6.32	6.24	6.02
25	6.27	6.08	6.20	6.09	6.32	6.14	6.16	6.04	6.39	6.28	6.16	5.96
26	6.32	6.24	6.55	6.17	6.26	6.10	6.06	5.97	6.39	6.30	6.20	6.05
27	6.28	6.22	6.42	6.31	6.31	6.23	6.05	5.98	6.49	6.34	6.06	5.89
28	6.33	6.24	6.42	6.31	6.30	6.17	6.08	6.00	6.59	6.47	5.95	5.84
29	6.29	6.17	6.76	6.43	6.35	6.19	6.17	6.07	6.64	6.51	5.97	5.89
30	6.35	6.21	6.60	6.23	6.40	6.29	6.27	6.17	6.57	6.28	6.10	5.93
31	---	---	6.23	6.09	---	---	6.38	6.18	6.34	6.21	---	---
MONTH	6.63	5.64	6.76	5.86	6.62	6.00	6.46	5.93	6.64	5.95	6.66	5.84



5 YEAR HYDROGRAPH

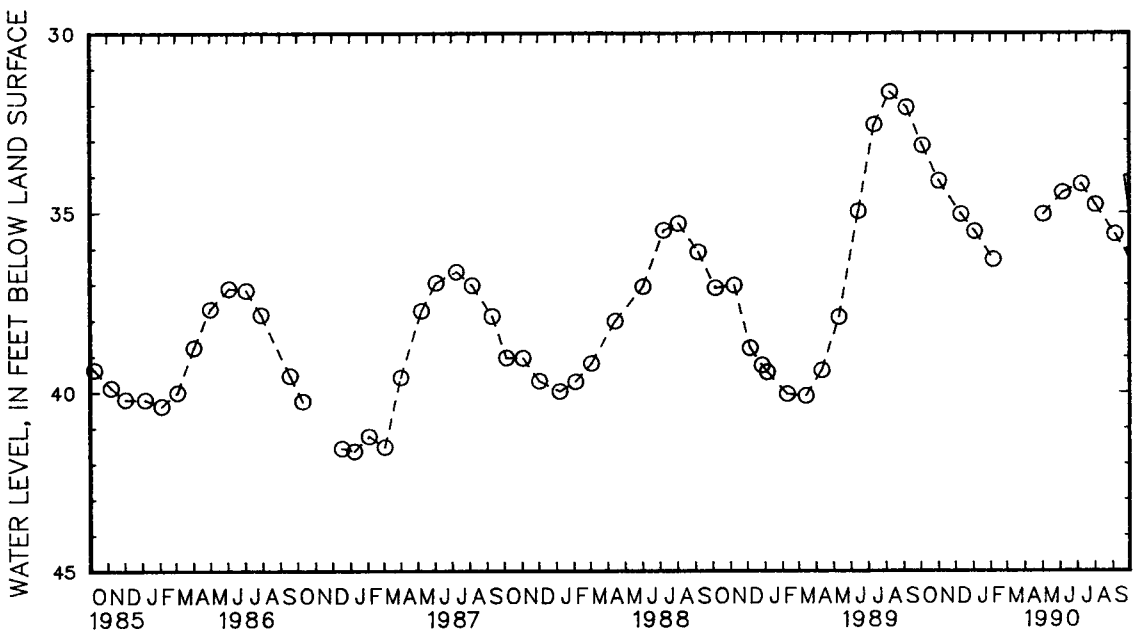
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

HOWARD COUNTY

WELL NUMBER.--HO Bd 1. SITE ID.--391910076565701.
LOCATION.--Lat 39°19'10", long 76°56'57", Hydrologic Unit 02060006, Slacks Corner near MD Rt. 32 and MD Rt. 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.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--October 1946 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 27.76 ft below land surface, July 3, 1972; lowest measured, 46.88 ft below land surface, Sept. 10, 1966.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	33.14	DEC 11	35.06	FEB 6	36.32	JUN 6	34.45	AUG 2	34.79
NOV 2	34.13	JAN 4	35.54	MAY 3	35.06	JUL 9	34.22	SEP 5	35.61



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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 April 9, 1990.
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.
REMARKS.--Howard County Project observation well.
PERIOD OF RECORD.--October 1988 to April 1990.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.81 ft below land surface, April 4, 1990; lowest measured, 25.19 ft below land surface, Nov. 3, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL
APR 27	21.62

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	18.16	18.04	17.46	17.08	17.35	17.09	17.95	17.14	12.21	11.89	13.33	13.09
2	18.01	17.65	---	---	17.35	16.81	17.13	16.27	12.00	11.77	13.08	12.90
3	17.66	17.58	---	---	17.15	16.84	16.27	15.89	12.34	12.02	13.26	12.90
4	17.70	17.62	17.72	17.63	17.25	17.07	15.88	15.56	12.19	11.85	13.76	13.28
5	17.74	17.66	17.71	17.61	17.25	17.06	15.84	15.66	12.42	12.20	13.99	13.76
6	17.75	17.64	17.61	17.52	17.29	17.16	15.85	15.64	12.31	12.18	14.55	13.99
7	18.04	17.76	17.64	17.54	17.92	17.34	15.85	15.70	12.36	12.09	14.72	14.56
8	18.15	18.02	17.62	17.49	17.92	17.64	15.74	15.57	12.50	12.36	14.68	14.40
9	18.40	18.16	17.69	17.42	17.67	17.50	15.77	15.16	12.42	12.12	14.39	14.26
10	18.45	18.34	17.97	17.69	17.59	17.49	15.15	14.98	12.27	12.01	14.57	14.35
11	18.52	18.34	17.97	17.88	17.70	17.58	14.97	14.31	12.27	12.00	14.63	14.53
12	18.52	18.44	18.23	17.88	17.74	17.65	14.75	14.32	12.27	11.98	14.66	14.59
13	---	---	18.29	18.03	17.82	17.62	15.25	14.75	12.28	12.01	14.76	14.65
14	---	---	18.03	17.97	17.90	17.81	15.34	15.26	12.37	12.01	14.84	14.74
15	---	---	17.97	17.71	17.96	17.52	15.42	15.24	12.40	12.24	14.97	14.84
16	---	---	17.71	16.51	18.06	17.70	15.56	15.43	12.39	12.19	15.02	14.92
17	---	---	16.49	15.62	18.17	18.07	15.61	15.42	13.32	12.42	14.91	14.58
18	---	---	---	---	18.23	18.13	15.89	15.42	13.43	13.16	14.57	14.09
19	---	---	---	---	18.22	17.96	16.08	15.90	13.32	12.99	14.08	13.24
20	---	---	---	---	18.15	17.96	16.02	15.61	13.89	13.35	13.22	12.88
21	---	---	---	---	18.34	18.10	15.92	15.58	14.01	13.90	12.95	12.88
22	---	---	---	---	18.47	18.36	16.22	15.93	13.96	13.36	12.93	12.61
23	---	---	---	---	18.52	18.43	16.35	16.19	13.37	13.25	12.94	12.60
24	---	---	---	---	18.43	18.18	16.40	16.21	13.36	13.23	13.12	12.94
25	---	---	---	---	18.17	17.92	16.33	15.33	13.85	13.37	13.14	13.01
26	---	---	---	---	18.39	17.86	15.31	14.59	13.89	13.62	13.01	12.93
27	---	---	---	---	18.50	18.26	14.58	13.63	13.60	13.12	13.12	12.99
28	---	---	---	---	18.63	18.25	13.62	13.28	13.19	13.11	13.12	12.96
29	---	---	---	---	18.67	18.49	---	---	---	---	13.13	12.97
30	---	---	---	---	18.61	18.48	---	---	---	---	12.96	12.71
31	17.09	16.89	---	---	18.50	17.95	12.34	12.22	---	---	12.68	11.86
MONTH	18.52	16.89	18.29	15.62	18.67	16.81	17.95	12.22	14.01	11.77	15.02	11.86

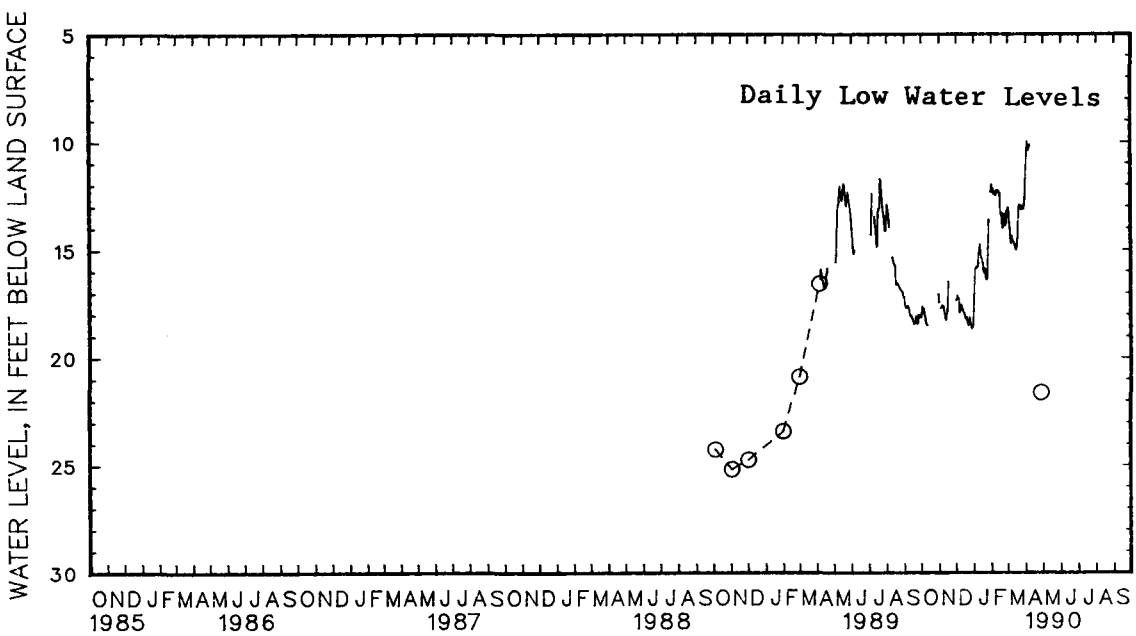
GROUND-WATER LEVELS

MARYLAND--Continued

HOWARD COUNTY--Continued

HO Bf 67--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	11.85	11.28	---	---	---	---	---	---	---	---	---	---
2	11.26	10.67	---	---	---	---	---	---	---	---	---	---
3	10.66	10.00	---	---	---	---	---	---	---	---	---	---
4	9.98	9.81	---	---	---	---	---	---	---	---	---	---
5	10.21	9.87	---	---	---	---	---	---	---	---	---	---
6	10.40	10.22	---	---	---	---	---	---	---	---	---	---
7	10.33	10.23	---	---	---	---	---	---	---	---	---	---
8	10.24	10.08	---	---	---	---	---	---	---	---	---	---
9	10.16	9.84	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	11.85	9.81	---	---	---	---	---	---	---	---	---	---

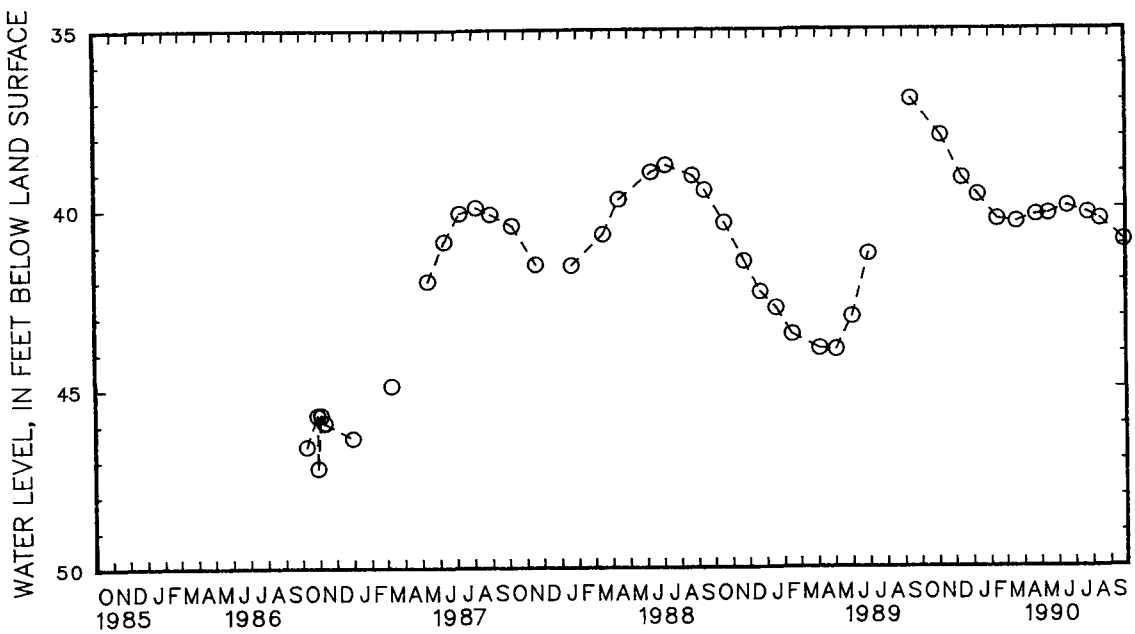


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
PERIOD OF RECORD.--August 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 36.96 ft below land surface, Sep. 14, 1989; lowest measured, 47.21 ft below land surface, Oct. 29, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 6	37.99	JAN 11	39.65	MAR 20	40.40	MAY 16	40.18	JUL 25	40.16	SEP 27	40.92
DEC 14	39.18	FEB 14	40.33	APR 24	40.21	JUN 19	39.97	AUG 16	40.33		



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

MARYLAND--Continued

HOWARD COUNTY--Continued

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.
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, Aug. 6 and 7, 1989 and Sept. 1, 1989; lowest measured, 32.03 ft below land surface, Dec. 13 and 14, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	24.43	24.36	25.17	24.95	25.79	25.66	26.42	26.04	26.76	26.59	26.45	26.34
2	24.36	24.28	---	---	25.79	25.49	26.47	26.41	26.58	26.50	26.33	26.20
3	24.45	24.31	---	---	25.67	25.50	26.42	26.38	26.71	26.58	26.24	26.17
4	24.49	24.45	---	---	25.73	25.63	26.38	26.21	26.59	26.42	26.39	26.26
5	24.51	24.45	---	---	25.72	25.62	26.40	26.24	26.72	26.58	26.44	26.39
6	24.44	24.41	---	---	25.74	25.69	26.43	26.33	26.70	26.61	26.50	26.39
7	24.59	24.44	25.12	25.07	26.02	25.74	26.45	26.38	26.63	26.54	26.57	26.50
8	24.60	24.53	25.10	25.04	26.02	25.86	26.37	26.28	26.68	26.58	26.49	26.33
9	24.70	24.58	25.13	24.99	25.86	25.79	26.42	26.32	26.57	26.42	26.32	26.21
10	24.71	24.63	25.30	25.14	25.83	25.79	26.44	26.27	26.53	26.32	26.31	26.24
11	24.72	24.63	25.32	25.20	25.87	25.83	---	---	26.57	26.52	26.30	26.27
12	24.73	24.66	25.43	25.20	25.89	25.87	---	---	26.67	26.52	26.28	26.23
13	24.74	24.68	25.46	25.31	25.95	25.85	---	---	---	---	26.28	26.24
14	24.76	24.72	25.31	25.27	---	---	---	---	---	---	26.26	26.23
15	24.77	24.72	25.27	25.16	---	---	---	---	26.56	26.45	26.29	26.25
16	24.79	24.75	25.29	24.99	26.01	25.79	---	---	26.44	26.36	26.28	26.22
17	24.78	24.75	25.46	25.30	26.06	26.01	---	---	26.72	26.39	26.22	26.12
18	24.90	24.79	25.57	25.44	26.08	26.04	---	---	26.73	26.51	26.37	26.17
19	24.88	24.82	25.59	25.37	26.08	25.95	---	---	26.49	26.35	---	---
20	24.84	24.67	25.35	25.06	26.06	25.95	26.63	26.41	26.62	26.46	---	---
21	24.92	24.84	25.51	25.14	26.15	26.04	26.47	26.34	26.62	26.51	---	---
22	25.08	24.93	25.58	25.47	26.20	26.15	26.53	26.47	26.51	26.19	26.39	26.27
23	25.12	25.08	25.58	25.43	26.22	26.19	26.64	26.54	26.19	26.16	26.40	26.25
24	25.08	25.05	25.67	25.59	26.19	26.07	26.60	26.53	26.36	26.18	26.46	26.40
25	25.06	25.03	25.65	25.49	26.06	25.95	26.61	26.44	26.69	26.38	26.40	26.34
26	25.07	25.03	25.61	25.44	26.18	25.93	26.73	26.46	26.72	26.60	26.36	26.33
27	25.08	25.04	25.69	25.57	26.26	26.15	26.79	26.69	26.59	26.38	26.44	26.37
28	25.06	25.04	25.61	25.44	26.29	26.14	26.72	26.67	26.41	26.38	26.45	26.38
29	25.08	25.05	25.74	25.62	26.32	26.26	26.71	26.34	---	---	26.45	26.40
30	25.09	25.04	25.72	25.59	26.29	26.23	26.66	26.34	---	---	26.40	26.30
31	25.04	24.91	---	---	26.30	26.04	26.76	26.66	---	---	26.30	26.26
MONTH	25.12	24.28	27.74	24.94	26.32	25.49	26.79	26.04	26.76	26.16	26.57	26.12

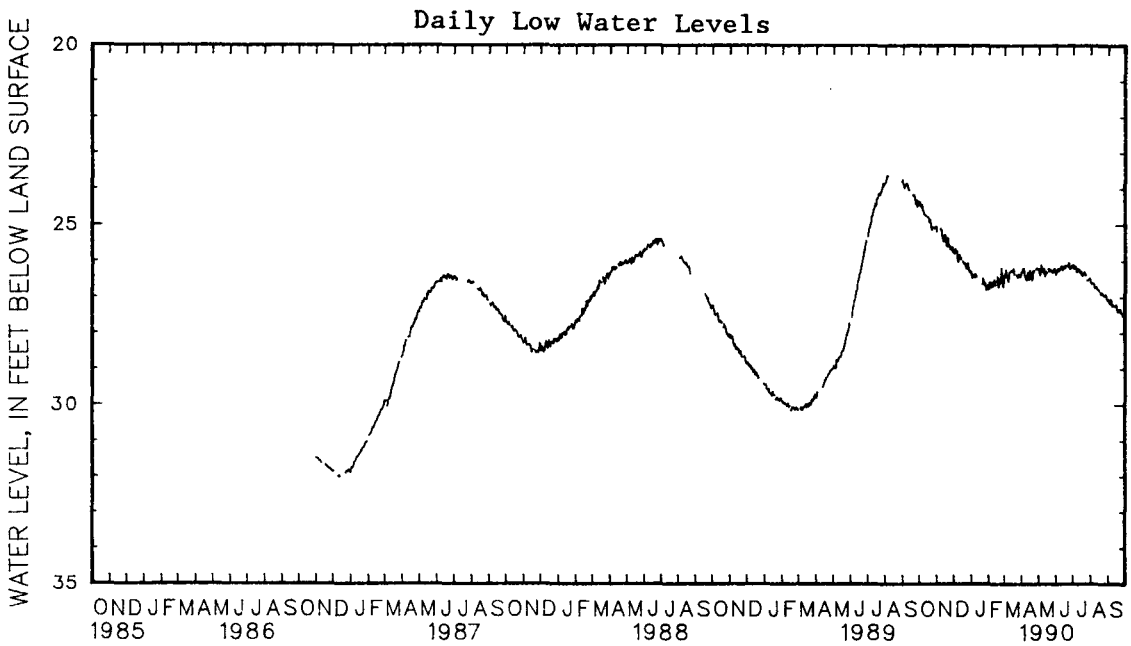
GROUND-WATER LEVELS

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	26.29	26.26	26.22	26.19	26.35	26.30	26.11	26.07	26.59	26.53	27.11	27.07
2	26.27	26.20	26.34	26.21	26.30	26.23	26.19	26.11	26.64	26.60	27.07	27.03
3	26.20	26.18	26.38	26.34	26.23	26.10	26.22	26.19	26.62	26.60	27.16	27.04
4	26.21	26.15	26.34	26.12	26.21	26.10	26.19	26.12	26.62	26.60	27.19	27.13
5	26.33	26.21	26.11	26.04	26.28	26.22	26.15	26.12	26.62	26.60	27.13	27.05
6	26.42	26.34	26.22	26.10	26.24	26.16	26.21	26.15	26.63	26.60	27.06	27.04
7	26.46	26.35	26.27	26.23	26.22	26.15	26.30	26.23	26.71	26.63	27.10	27.04
8	26.51	26.46	26.29	26.25	26.23	26.16	26.30	26.23	26.75	26.71	27.24	27.12
9	26.53	26.41	26.27	26.20	26.15	26.12	26.23	26.16	26.75	26.72	27.24	27.17
10	26.41	26.14	26.20	26.02	26.14	26.12	26.22	26.18	26.72	26.69	27.22	27.16
11	26.33	26.13	26.36	26.13	26.21	26.15	26.25	26.23	26.75	26.70	27.26	27.23
12	26.48	26.34	26.42	26.29	26.25	26.21	26.24	26.19	26.79	26.75	27.27	27.24
13	26.52	26.46	26.28	26.16	26.22	26.16	26.32	26.22	26.78	26.72	27.27	27.25
14	26.45	26.28	26.32	26.21	26.15	26.08	26.31	26.23	26.81	26.75	27.26	27.13
15	26.27	26.22	26.32	26.27	26.15	26.09	26.29	26.22	26.82	26.80	27.21	27.10
16	26.31	26.25	---	---	26.18	26.15	26.39	26.30	---	---	27.25	27.21
17	26.37	26.21	---	---	26.19	26.13	26.41	26.38	---	---	27.41	27.26
18	26.50	26.39	26.22	26.18	26.13	26.02	26.38	26.34	26.87	26.82	27.42	27.36
19	26.53	26.46	26.28	26.22	---	---	26.36	26.33	26.87	26.82	27.36	27.24
20	26.46	26.28	26.22	26.16	---	---	26.33	26.29	26.93	26.88	27.39	27.24
21	26.27	26.20	26.26	26.15	26.13	26.09	26.31	26.30	26.93	26.90	27.42	27.35
22	26.30	26.25	26.27	26.24	26.14	26.05	26.34	26.31	26.91	26.89	27.35	27.24
23	26.27	26.24	26.26	26.24	26.05	26.02	26.39	26.30	26.92	26.90	27.41	27.28
24	---	---	26.29	26.26	26.14	26.04	---	---	26.95	26.92	27.47	27.41
25	---	---	26.32	26.28	26.21	26.15	---	---	26.98	26.95	27.47	27.41
26	26.22	26.19	26.28	26.15	26.21	26.15	26.54	26.51	26.98	26.96	27.47	27.40
27	26.23	26.19	26.23	26.17	26.15	26.13	26.53	26.51	26.96	26.92	27.54	27.48
28	26.19	26.17	26.25	26.21	26.18	26.14	26.52	26.49	26.94	26.92	27.56	27.53
29	26.22	26.19	26.21	26.06	26.16	26.08	26.49	26.47	26.97	26.92	27.54	27.52
30	26.22	26.21	26.30	26.14	26.12	26.09	26.48	26.45	27.06	26.98	27.54	27.49
31	---	---	26.37	26.31	---	---	26.52	26.45	27.10	27.07	---	---
MONTH	26.53	26.15	26.38	26.02	26.35	26.02	26.54	26.07	27.10	26.53	27.56	27.03



5 YEAR HYDROGRAPH

OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
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 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	41.05	40.95	41.97	41.72	42.82	42.67	43.58	43.13	43.94	43.78	44.04	43.90
2	40.94	40.85	---	---	42.82	42.48	43.62	43.55	43.81	43.70	43.90	43.78
3	41.05	40.90	---	---	42.68	42.50	43.55	43.51	43.95	43.81	43.86	43.75
4	41.10	41.04	---	---	42.74	42.63	43.50	43.30	43.84	43.64	44.02	43.88
5	41.12	41.04	---	---	42.72	42.62	43.53	43.36	43.99	43.85	44.08	44.02
6	41.04	40.99	---	---	42.74	42.67	43.57	43.44	43.94	43.87	44.16	44.02
7	41.21	41.03	42.01	41.93	43.09	42.77	43.58	43.49	43.93	43.82	44.23	44.14
8	41.21	41.13	41.98	41.89	43.09	42.91	43.48	43.38	43.98	43.87	44.13	43.96
9	41.34	41.21	42.03	41.84	42.92	42.81	43.55	43.40	43.86	43.71	43.94	43.84
10	41.35	41.26	42.23	42.04	42.87	42.81	43.57	43.36	43.85	43.61	43.96	43.88
11	41.36	41.25	42.25	42.10	42.94	42.87	---	---	43.90	43.84	43.93	43.90
12	41.36	41.28	42.40	42.10	42.96	42.90	---	---	44.03	43.85	43.92	43.87
13	41.37	41.32	42.43	42.26	43.01	42.88	---	---	---	---	43.93	43.89
14	41.38	41.33	42.26	42.21	---	---	---	---	---	---	43.91	43.87
15	41.40	41.33	42.21	42.05	---	---	---	---	44.00	43.84	43.94	43.90
16	41.42	41.37	42.23	41.85	43.17	42.93	---	---	43.83	43.77	43.93	43.86
17	41.41	41.36	42.42	42.25	43.22	43.17	---	---	44.18	43.84	43.85	43.75
18	41.55	41.41	42.56	42.39	43.24	43.19	---	---	44.18	43.93	44.04	43.82
19	41.51	41.43	42.58	42.30	43.24	43.08	---	---	43.93	43.79	---	---
20	41.48	41.35	42.28	41.94	43.20	43.08	43.77	43.54	44.11	43.94	---	---
21	41.60	41.48	42.50	42.08	43.32	43.17	43.62	43.46	44.12	44.00	---	---
22	41.82	41.61	42.57	42.43	43.39	43.32	43.70	43.61	44.00	43.67	44.04	43.91
23	41.87	41.82	42.58	42.40	43.40	43.34	43.80	43.71	43.70	43.64	44.05	43.89
24	41.84	41.79	42.67	42.58	43.33	43.19	43.77	43.68	43.90	43.68	44.11	44.04
25	41.80	41.76	42.63	42.46	43.18	43.03	43.77	43.60	44.25	43.92	44.03	43.98
26	41.83	41.77	42.62	42.41	43.33	43.00	43.91	43.64	44.27	44.14	44.01	43.97
27	41.84	41.79	42.70	42.53	43.40	43.25	43.97	43.85	44.13	43.93	44.08	44.02
28	41.83	41.80	42.62	42.41	43.44	43.24	43.91	43.83	43.98	43.94	44.08	44.01
29	41.86	41.83	42.75	42.63	43.47	43.39	43.87	43.49	---	---	44.08	44.02
30	41.87	41.80	42.71	42.59	43.44	43.36	43.86	43.55	---	---	44.01	43.91
31	41.80	41.64	---	---	43.42	43.11	43.96	43.85	---	---	43.90	43.86
MONTH	41.87	40.85	42.75	41.72	43.47	42.48	43.97	43.13	44.18	43.61	44.23	43.75

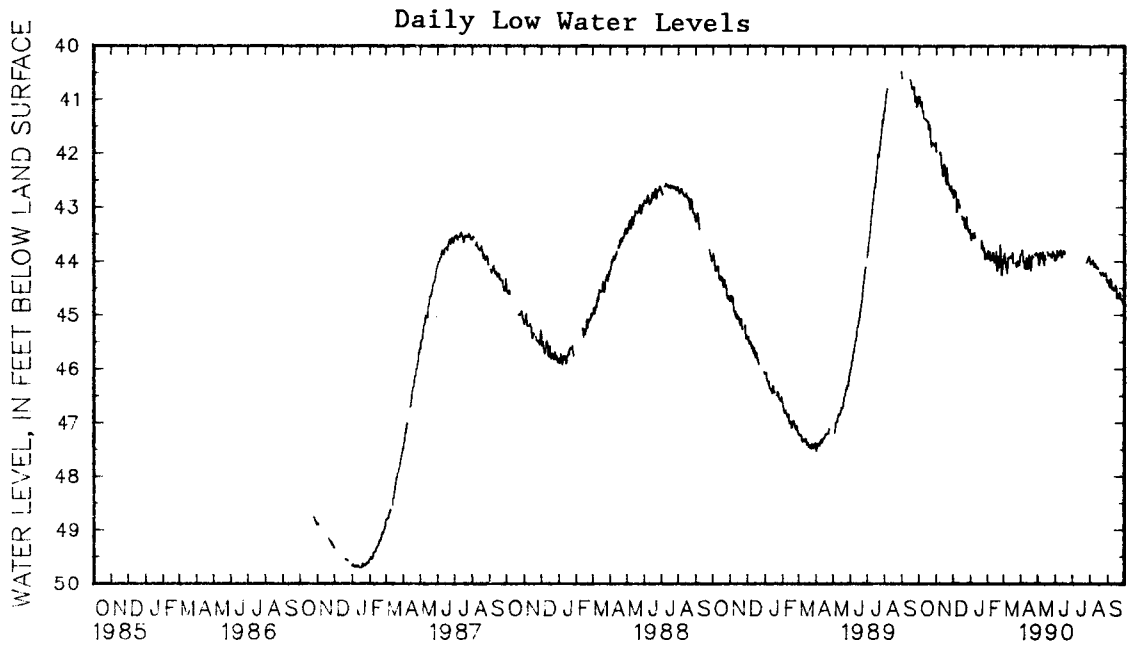
GROUND-WATER LEVELS

MARYLAND--Continued

HOWARD COUNTY--Continued

HO Cd 29--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	43.88	43.85	43.88	43.85	43.99	43.94	---	---	44.02	43.96	44.41	44.36
2	43.87	43.79	43.99	43.85	43.98	43.91	---	---	44.06	44.01	44.36	44.31
3	43.80	43.77	44.08	43.98	43.93	43.80	---	---	44.03	44.00	44.46	44.33
4	43.81	43.75	44.03	43.87	43.81	43.72	---	---	44.03	43.99	44.49	44.41
5	43.94	43.81	43.85	43.69	43.92	43.80	---	---	44.00	43.96	44.41	44.32
6	44.02	43.95	43.85	43.69	43.88	43.80	---	---	43.99	43.96	44.34	44.30
7	44.07	43.94	43.93	43.84	43.85	43.79	---	---	44.07	43.99	44.37	44.29
8	44.13	44.07	43.95	43.89	43.89	43.81	---	---	44.11	44.07	44.52	44.37
9	44.15	44.02	43.92	43.84	43.82	43.77	---	---	44.11	44.07	44.53	44.43
10	44.01	43.74	43.84	43.65	43.80	43.77	---	---	44.06	44.02	44.50	44.42
11	43.95	43.73	44.00	43.78	43.85	43.79	---	---	44.10	44.03	44.54	44.50
12	44.11	43.96	44.08	43.91	43.93	43.85	---	---	44.13	44.09	44.55	44.51
13	44.15	44.08	43.90	43.79	43.91	43.86	---	---	44.12	44.03	44.55	44.52
14	44.08	43.90	43.97	43.88	43.85	43.76	---	---	44.13	44.08	44.52	44.36
15	43.89	43.84	43.97	43.90	43.82	43.76	---	---	44.15	44.12	44.46	44.33
16	43.93	43.88	---	---	43.86	43.82	---	---	---	---	44.51	44.44
17	44.02	43.83	---	---	43.88	43.85	---	---	---	---	44.69	44.51
18	44.14	44.04	43.83	43.78	43.84	43.70	---	---	44.22	44.22	44.69	44.62
19	44.18	44.10	43.90	43.84	---	---	---	---	44.22	44.22	44.62	44.48
20	44.09	43.92	43.87	43.80	---	---	---	---	44.26	44.22	44.65	44.49
21	43.90	43.85	43.87	43.78	---	---	---	---	44.26	44.21	44.68	44.60
22	43.94	43.89	43.90	43.86	---	---	---	---	44.23	44.20	44.59	44.48
23	43.92	43.88	43.88	43.86	---	---	---	---	44.22	44.20	44.64	44.52
24	---	---	43.90	43.86	---	---	---	---	44.25	44.22	44.72	44.65
25	---	---	43.94	43.89	---	---	---	---	44.28	44.25	44.72	44.65
26	43.88	43.84	43.91	43.77	---	---	44.03	43.98	44.28	44.25	44.71	44.63
27	43.89	43.84	43.83	43.77	---	---	44.00	43.97	44.25	44.20	44.76	44.71
28	43.85	43.83	43.86	43.83	---	---	43.98	43.94	44.23	44.18	44.79	44.75
29	43.89	43.84	43.86	43.67	---	---	43.94	43.91	44.26	44.20	44.77	44.74
30	43.89	43.86	43.87	43.67	---	---	43.92	43.87	44.36	44.26	44.76	44.69
31	---	---	43.99	43.87	---	---	43.95	43.86	44.40	44.36	---	---
MONTH	44.18	43.73	44.08	43.65	43.99	43.70	44.03	43.86	44.40	43.96	44.79	44.29



5 YEAR HYDROGRAPH

OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
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, May 17, 1989; lowest measured, 9.87 ft below land surface, Nov. 12, 15, and 16, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.23	8.20	8.04	7.98	8.33	8.28	8.44	7.51	7.55	7.45	8.05	8.00
2	8.20	7.85	---	---	8.33	8.20	7.77	7.55	7.69	7.55	7.99	7.97
3	7.92	7.83	---	---	8.32	8.24	7.98	7.77	7.77	7.69	8.05	7.97
4	8.00	7.92	---	---	8.33	8.29	8.02	7.97	7.83	7.64	8.09	8.05
5	8.04	8.00	---	---	8.34	8.29	8.07	8.02	7.87	7.83	8.11	8.08
6	8.07	8.03	---	---	8.36	8.30	8.11	8.01	7.85	7.82	8.14	8.09
7	8.15	8.07	8.11	8.07	8.42	8.36	8.11	8.08	7.89	7.82	8.16	8.14
8	8.16	8.13	8.11	8.07	8.42	8.36	8.15	8.08	7.91	7.86	8.14	8.08
9	8.22	8.16	8.13	8.06	8.39	8.34	8.17	8.09	7.87	7.83	8.10	8.06
10	8.23	8.21	8.18	8.12	8.39	8.35	---	---	7.86	7.77	8.14	8.10
11	8.26	8.22	8.18	8.13	8.41	8.38	---	---	7.81	7.73	8.13	8.12
12	8.26	8.23	8.22	8.14	8.42	8.38	---	---	7.83	7.75	8.13	8.11
13	8.28	8.26	8.22	8.17	8.43	8.39	---	---	---	---	8.15	8.13
14	8.29	8.28	8.18	8.16	---	---	---	---	---	---	8.16	8.14
15	8.31	8.29	8.18	8.13	---	---	---	---	7.85	7.81	8.18	8.15
16	8.31	8.30	8.13	7.77	8.50	8.44	---	---	7.87	7.80	8.19	8.17
17	8.31	8.30	7.91	7.77	8.51	8.50	---	---	7.98	7.88	8.18	8.12
18	8.34	8.31	8.04	7.91	8.54	8.50	---	---	7.98	7.89	8.24	8.17
19	8.32	7.49	8.06	7.99	8.53	8.49	---	---	7.96	7.86	---	---
20	7.47	6.52	8.04	7.92	8.53	8.49	8.33	8.26	8.01	7.96	---	---
21	7.31	6.80	8.15	8.02	8.57	8.53	8.34	8.25	8.01	7.97	---	---
22	7.59	7.32	8.17	8.12	8.59	8.57	8.37	8.33	7.98	7.84	8.27	8.22
23	7.70	7.60	8.20	8.11	8.59	8.58	8.40	8.35	7.93	7.85	8.30	8.23
24	7.77	7.70	8.22	8.20	8.58	8.53	8.40	8.35	8.00	7.89	8.32	8.28
25	7.82	7.77	8.22	8.16	8.54	8.52	8.40	7.83	8.09	8.01	8.29	8.26
26	7.87	7.82	8.25	8.16	8.62	8.52	7.82	6.99	8.09	8.04	8.29	8.26
27	7.91	7.87	8.26	8.19	8.62	8.58	7.55	7.24	8.03	7.97	8.31	8.29
28	7.94	7.91	8.27	8.16	8.64	8.58	7.77	7.55	8.02	7.99	8.31	8.28
29	7.96	7.94	8.30	8.27	8.64	8.61	7.77	6.96	---	---	8.33	8.30
30	7.98	7.96	8.28	8.24	8.64	8.61	7.18	6.89	---	---	8.31	8.25
31	7.97	7.93	---	---	8.64	8.50	7.46	7.18	---	---	8.26	8.04
MONTH	8.34	6.52	8.30	7.77	8.64	8.20	8.44	6.89	8.09	7.45	8.33	7.97

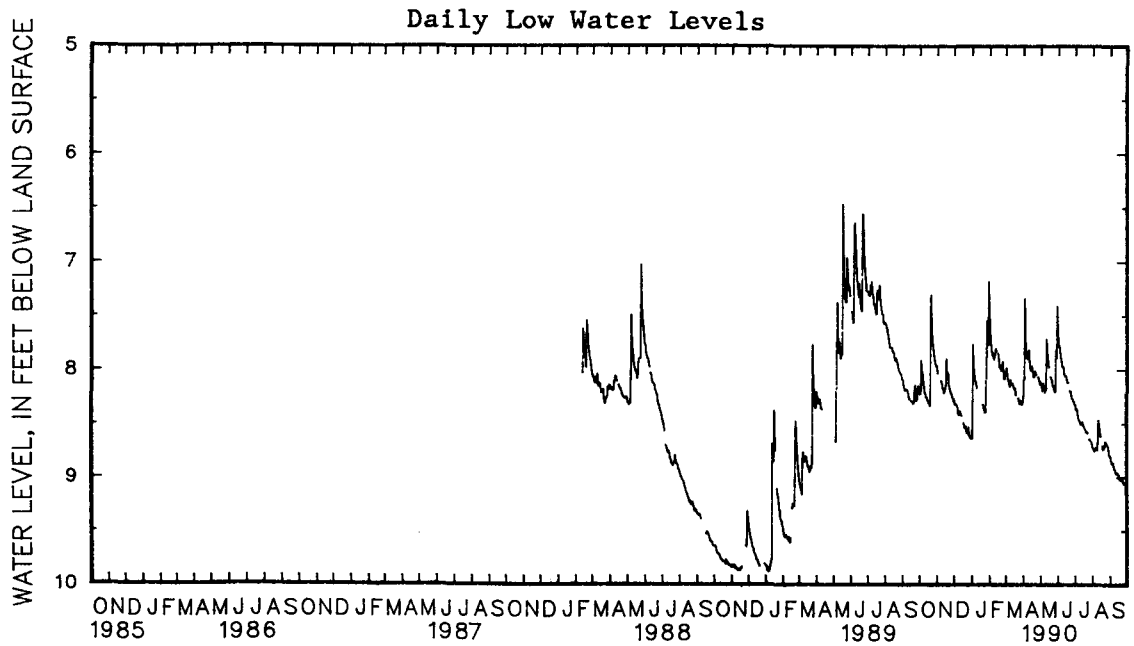
GROUND-WATER LEVELS

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	8.09	8.04	8.13	8.10	7.72	7.63	8.33	8.28	8.73	8.70	8.81	8.81
2	8.09	7.38	8.17	8.13	7.79	7.72	8.37	8.33	8.74	8.73	8.83	8.81
3	7.34	7.19	8.20	8.16	7.79	7.76	8.37	8.36	8.75	8.74	8.87	8.83
4	7.66	7.35	8.16	8.06	7.84	7.72	8.37	8.36	8.76	8.75	8.88	8.87
5	7.83	7.67	8.13	8.05	7.89	7.84	8.40	8.36	8.76	8.73	8.88	8.86
6	7.89	7.84	8.19	8.14	7.91	7.88	8.44	8.39	8.73	8.70	8.87	8.86
7	7.90	7.78	8.21	8.18	7.97	7.90	8.47	8.43	8.74	8.70	8.90	8.86
8	7.86	7.81	8.21	8.19	7.97	7.95	8.47	8.46	8.75	8.74	8.93	8.90
9	7.87	7.80	8.20	8.18	7.97	7.94	8.48	8.44	8.75	8.66	8.93	8.92
10	7.82	7.74	8.18	7.48	8.00	7.97	8.50	8.47	8.66	8.46	8.95	8.92
11	7.92	7.77	7.72	7.39	8.05	8.00	8.51	8.48	8.47	8.44	8.97	8.95
12	7.99	7.92	7.79	7.73	8.06	8.05	8.50	8.48	8.52	8.47	8.97	8.97
13	8.01	7.98	7.88	7.78	8.06	8.06	8.51	8.49	8.55	8.52	8.97	8.96
14	8.00	7.95	7.95	7.88	8.06	8.04	8.49	8.45	8.60	8.55	8.96	8.92
15	7.97	7.91	7.98	7.95	8.09	8.06	8.51	8.45	8.62	8.60	8.98	8.91
16	8.00	7.97	---	---	8.12	8.09	8.53	8.51	---	---	8.98	8.96
17	8.05	7.94	---	---	8.12	8.11	8.54	8.53	---	---	9.02	8.97
18	8.07	8.04	8.07	8.04	8.12	8.08	8.55	8.54	8.71	8.70	9.02	9.00
19	8.07	8.04	8.09	8.07	---	---	8.56	8.55	8.74	8.71	9.01	8.96
20	8.05	7.98	8.10	8.08	---	---	8.58	8.56	8.74	8.73	9.03	8.96
21	8.02	7.97	8.15	8.09	8.20	8.15	8.58	8.57	8.73	8.72	9.03	9.02
22	8.04	8.02	8.15	8.14	8.20	8.15	8.58	8.57	8.72	8.68	9.02	8.97
23	8.05	8.03	8.17	8.15	8.20	8.14	8.59	8.55	8.67	8.64	9.04	8.99
24	---	---	8.20	8.17	8.24	8.20	---	---	8.67	8.65	9.06	9.04
25	---	---	8.21	8.20	8.27	8.24	---	---	8.69	8.67	9.06	9.05
26	8.07	8.05	8.20	7.67	8.27	8.26	8.65	8.63	8.70	8.69	---	---
27	8.09	8.07	7.82	7.67	8.28	8.26	8.66	8.63	8.71	8.70	---	---
28	8.11	8.08	7.89	7.82	8.30	8.28	8.66	8.65	8.72	8.70	9.12	9.10
29	8.14	8.10	7.89	6.78	8.30	8.29	8.67	8.66	8.76	8.72	9.12	9.11
30	8.12	8.10	7.41	6.87	8.32	8.30	8.67	8.67	8.80	8.76	9.12	9.11
31	---	---	7.62	7.42	---	---	8.70	8.67	8.81	8.80	---	---
MONTH	8.14	7.19	8.21	6.78	8.32	7.63	8.70	8.28	8.81	8.44	9.12	8.81



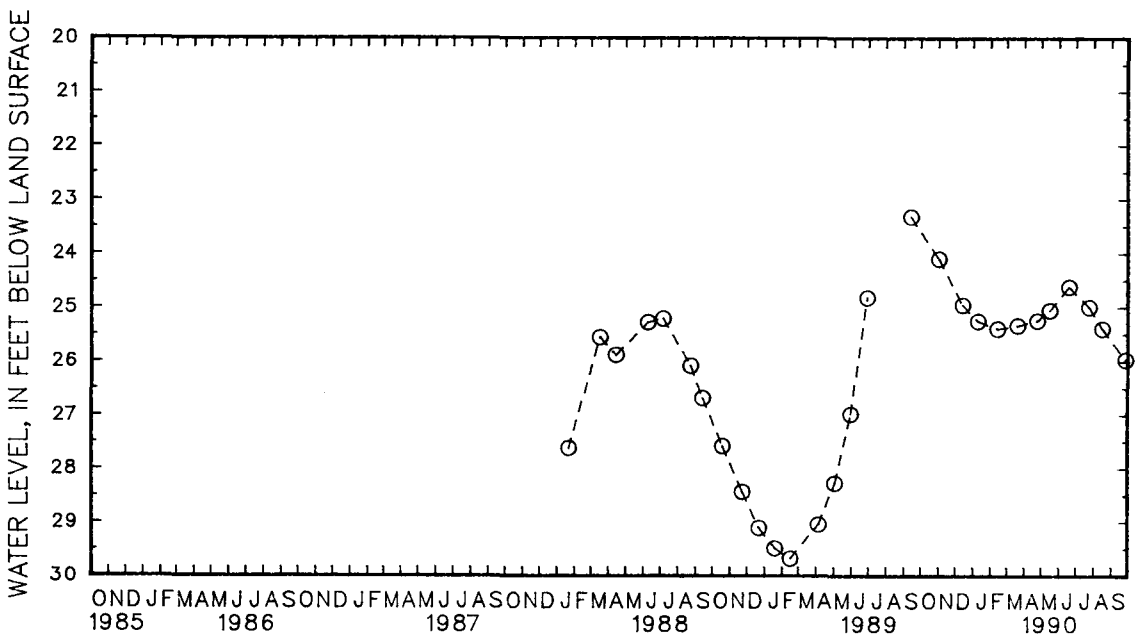
5 YEAR HYDROGRAPH

OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

WELL NUMBER.--HO Cd 79. SITE ID.--391445076555101. PERMIT NUMBER.--HO-81-2387.
LOCATION.--Lat 39°14'45", 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 Formation of Paleozoic age. Aquifer code: 300LCRV.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 53 ft; casing diameter 3.5 in., to 43 ft; screen diameter 3.5 in. from 43 to 53 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 452.37 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 2.05 ft above land surface.
REMARKS.--Best Management Practices Project observation well.
PERIOD OF RECORD.--January 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 23.32 ft below land surface, Sept. 14, 1989; lowest measured, 29.68 ft below land surface, Feb. 15, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 2	24.10	JAN 10	25.26	MAR 20	25.34	MAY 16	25.06	JUL 24	25.00	SEP 26	25.98
DEC 14	24.96	FEB 13	25.40	APR 24	25.25	JUN 19	24.62	AUG 16	25.40		



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
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 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	24.36	24.29	25.08	24.88	25.71	25.59	26.43	26.05	---	---	26.40	26.28
2	24.29	24.22	---	---	25.71	25.42	26.46	26.41	---	---	26.27	26.17
3	24.39	24.26	---	---	25.60	25.44	26.41	26.37	---	---	26.24	26.14
4	24.42	24.37	---	---	25.65	25.55	26.37	26.20	---	---	26.35	26.26
5	24.43	24.37	---	---	25.64	25.54	26.40	26.25	---	---	26.39	26.33
6	24.37	24.33	---	---	25.66	25.59	26.43	26.32	---	---	26.45	26.33
7	24.51	24.36	25.07	25.00	25.93	25.69	26.43	26.36	---	---	26.50	26.42
8	24.51	24.44	25.05	24.97	25.94	25.78	26.35	26.26	---	---	26.42	26.26
9	24.61	24.51	25.09	24.92	25.80	25.70	26.41	26.27	---	---	26.25	26.16
10	24.62	24.54	25.24	25.09	25.76	25.70	26.42	26.25	26.46	26.27	26.26	26.20
11	24.65	24.55	25.25	25.14	25.82	25.76	---	---	26.49	26.43	26.24	26.21
12	24.65	24.58	25.37	25.13	25.85	25.79	---	---	26.59	26.45	26.22	26.18
13	24.65	24.62	25.39	25.24	25.89	25.78	---	---	---	---	26.22	26.18
14	24.67	24.63	25.25	25.21	---	---	---	---	---	---	26.20	26.17
15	24.68	24.63	25.21	25.08	---	---	---	---	26.56	26.42	26.23	26.19
16	24.70	24.66	25.24	24.91	---	---	---	---	26.41	26.33	26.21	26.16
17	24.70	24.66	25.39	25.25	---	---	---	---	26.67	26.40	26.15	26.04
18	24.81	24.70	25.51	25.36	---	---	---	---	26.68	26.46	26.30	26.12
19	24.77	24.71	25.52	25.27	---	---	---	---	26.44	26.33	---	---
20	24.76	24.65	25.26	24.98	---	---	---	---	26.56	26.46	---	---
21	24.85	24.75	25.45	25.11	---	---	---	---	26.56	26.46	---	---
22	25.00	24.85	25.51	25.38	26.24	26.19	---	---	26.46	26.17	26.31	26.19
23	25.04	24.99	25.51	25.35	26.26	26.21	---	---	26.19	26.14	26.33	26.17
24	25.01	24.96	25.58	25.52	26.20	26.10	---	---	26.34	26.17	26.37	26.31
25	24.97	24.93	25.55	25.41	26.08	25.96	---	---	26.63	26.36	26.31	26.26
26	24.98	24.94	25.55	25.37	26.24	25.95	---	---	26.64	26.52	26.29	26.25
27	24.99	24.95	25.62	25.46	26.28	26.16	---	---	26.51	26.34	26.36	26.29
28	24.98	24.94	25.55	25.37	26.32	26.15	---	---	26.37	26.34	26.36	26.29
29	25.00	24.98	25.66	25.56	26.34	26.27	---	---	---	---	26.36	26.32
30	25.00	24.95	25.61	25.51	26.32	26.25	---	---	---	---	26.31	26.23
31	24.95	24.82	---	---	26.31	26.04	---	---	---	---	26.22	26.19
MONTH	25.04	24.22	25.66	24.88	25.94	25.42	26.46	26.05	26.68	26.14	26.50	26.04

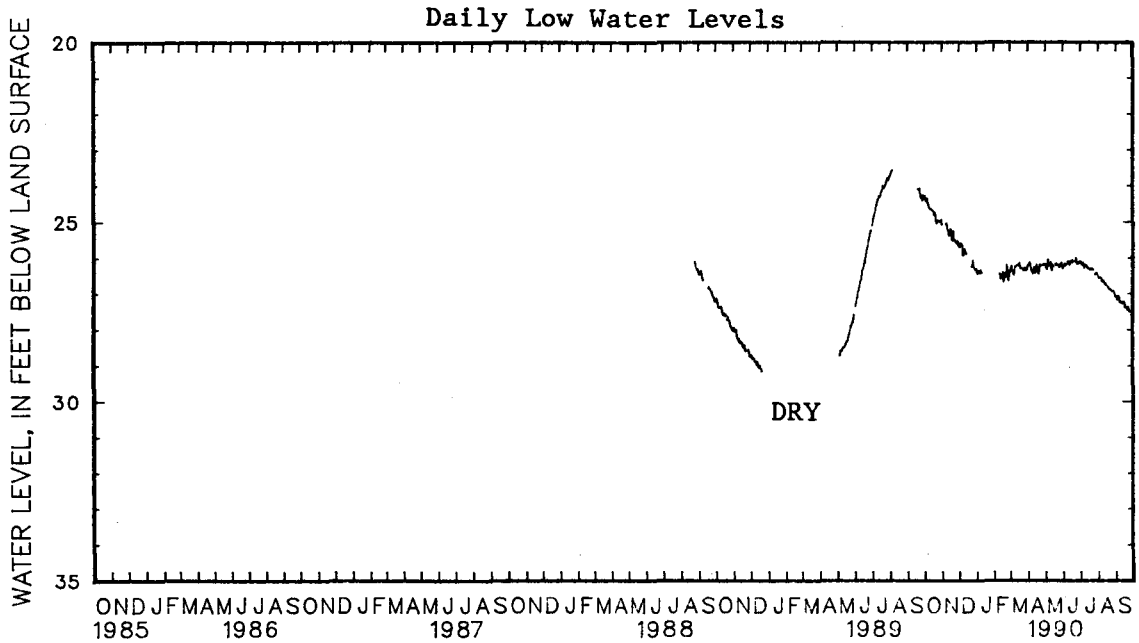
GROUND-WATER LEVELS

MARYLAND--Continued

HOWARD COUNTY--Continued

HO Cd 341--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	26.22	26.19	26.19	26.17	26.29	26.24	26.10	26.05	26.54	26.48	27.10	27.07
2	26.21	26.13	26.29	26.18	26.24	26.19	26.17	26.10	26.57	26.54	27.07	27.04
3	26.14	26.11	26.33	26.29	26.18	26.05	26.20	26.16	26.56	26.54	27.17	27.05
4	26.16	26.09	26.27	26.06	26.17	26.05	26.16	26.10	26.56	26.55	27.19	27.14
5	26.27	26.16	26.06	26.01	26.23	26.18	26.14	26.10	26.55	26.53	27.14	27.06
6	26.35	26.29	26.17	26.07	26.20	26.11	26.21	26.14	26.56	26.53	27.09	27.06
7	26.38	26.27	26.22	26.17	26.19	26.10	26.28	26.22	26.64	26.57	27.13	27.05
8	26.43	26.38	26.23	26.20	26.19	26.10	26.28	26.22	26.67	26.64	27.25	27.13
9	26.45	26.33	26.21	26.15	26.11	26.07	26.21	26.15	26.68	26.65	27.25	27.18
10	26.32	26.07	26.14	25.97	26.10	26.08	26.22	26.17	26.65	26.62	27.25	27.18
11	26.27	26.07	26.30	26.10	26.17	26.10	26.24	26.22	26.69	26.64	27.27	27.25
12	26.40	26.28	26.35	26.20	26.20	26.17	26.23	26.18	26.73	26.69	27.28	27.26
13	26.43	26.37	26.19	26.08	26.17	26.11	26.29	26.23	26.72	26.65	27.30	27.27
14	26.37	26.21	26.24	26.17	26.10	26.04	26.29	26.23	26.74	26.69	27.29	27.16
15	26.20	26.16	26.25	26.19	26.11	26.05	26.29	26.22	26.76	26.74	27.24	27.13
16	26.25	26.20	---	---	26.13	26.11	26.33	26.29	---	---	27.30	27.24
17	26.34	26.15	---	---	26.14	26.08	26.33	26.33	---	---	27.40	27.30
18	26.42	26.35	26.18	26.13	26.08	25.97	26.33	26.31	26.82	26.78	27.40	27.39
19	26.45	26.39	26.22	26.17	---	---	26.33	26.31	26.85	26.78	27.39	27.28
20	26.38	26.21	26.16	26.11	---	---	26.31	26.28	26.89	26.85	27.41	27.29
21	26.20	26.15	26.21	26.10	26.10	26.05	26.31	26.30	26.89	26.86	27.46	27.39
22	26.24	26.19	26.22	26.19	26.10	26.00	26.32	26.31	26.88	26.86	27.39	27.30
23	26.22	26.18	26.20	26.19	26.02	25.99	26.34	26.30	26.90	26.88	27.45	27.33
24	---	---	26.24	26.20	26.13	26.02	---	---	26.93	26.90	27.51	27.45
25	---	---	26.27	26.22	26.18	26.13	---	---	26.95	26.93	27.52	27.47
26	26.20	26.19	26.21	26.11	26.18	26.12	26.47	26.45	26.96	26.94	---	---
27	26.21	26.19	26.18	26.12	26.13	26.10	26.46	26.45	26.95	26.91	---	---
28	26.19	26.17	26.20	26.16	26.16	26.12	26.46	26.43	26.93	26.90	27.61	27.59
29	26.20	26.18	26.15	25.98	26.13	26.05	26.43	26.42	26.97	26.91	27.61	27.59
30	26.19	26.18	26.26	26.11	26.10	26.07	26.43	26.40	27.06	26.97	27.61	27.55
31	---	---	26.31	26.26	---	---	26.48	26.41	27.10	27.06	---	---
MONTH	26.45	26.07	26.35	25.97	26.29	25.97	26.48	26.05	27.10	26.48	27.61	27.04



5 YEAR HYDROGRAPH

OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
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, June 27 and 28, 1989; lowest measured, 23.86 ft below land surface, Feb. 16 and 17, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	20.44	20.42	---	---	20.56	20.53	21.07	20.99	---	---	20.15	20.11
2	20.45	20.44	---	---	20.55	20.53	21.07	21.01	---	---	20.11	20.04
3	20.45	20.45	---	---	20.56	20.55	21.01	20.97	---	---	20.07	20.03
4	20.50	20.45	---	---	20.70	20.56	20.97	20.90	---	---	20.13	20.07
5	20.51	20.47	---	---	20.71	20.68	20.96	20.91	---	---	20.15	20.13
6	20.47	20.37	---	---	20.68	20.65	20.97	20.93	---	---	20.21	20.14
7	20.37	20.30	20.18	20.13	20.67	20.65	20.97	20.95	---	---	20.24	20.21
8	20.34	20.30	20.29	20.19	20.69	20.67	20.95	20.91	---	---	20.23	20.17
9	20.38	20.34	20.30	20.23	20.70	20.69	20.96	20.92	---	---	20.16	20.12
10	20.37	20.35	20.37	20.30	20.71	20.68	20.96	20.91	---	---	20.16	20.13
11	20.35	20.32	20.33	20.31	---	---	---	---	---	---	20.16	20.15
12	20.32	20.31	20.31	20.27	---	---	---	---	---	---	20.16	20.14
13	20.31	20.29	20.28	20.18	---	---	---	---	---	---	20.16	20.15
14	20.29	20.26	20.34	20.28	---	---	---	---	---	---	20.17	20.16
15	20.26	20.25	20.39	20.33	---	---	---	---	20.14	20.09	20.19	20.17
16	20.25	20.23	20.42	20.35	20.82	20.73	---	---	20.09	20.05	20.19	20.18
17	20.23	20.16	20.34	20.19	20.85	20.82	---	---	20.18	20.06	20.17	20.13
18	20.22	20.15	20.37	20.21	20.88	20.85	---	---	20.19	20.11	20.25	20.16
19	---	---	20.42	20.37	20.89	20.85	---	---	20.11	20.05	---	---
20	---	---	20.43	20.38	20.90	20.85	---	---	20.15	20.09	---	---
21	---	---	20.48	20.43	20.93	20.90	---	---	20.15	20.12	---	---
22	---	---	20.48	20.43	20.98	20.93	---	---	20.12	20.00	---	---
23	---	---	20.46	20.40	20.99	20.98	---	---	20.00	19.98	---	---
24	---	---	20.50	20.46	20.99	20.96	---	---	20.06	19.99	---	---
25	---	---	20.47	20.41	20.96	20.91	---	---	20.20	20.06	19.10	19.09
26	---	---	20.54	20.47	21.00	20.90	---	---	20.23	20.20	19.11	19.09
27	---	---	20.53	20.48	21.02	20.99	---	---	20.20	20.12	19.14	19.11
28	---	---	20.57	20.50	21.05	20.99	---	---	20.13	20.12	19.15	19.13
29	---	---	20.57	20.46	21.07	21.06	---	---	---	---	19.12	19.09
30	---	---	20.53	20.46	21.08	21.06	20.72	20.68	---	---	19.08	19.07
31	---	---	---	---	21.08	20.99	---	---	---	---	19.07	19.03
MONTH	20.51	20.15	20.57	20.13	21.08	20.53	21.07	20.68	20.23	19.98	20.25	20.03

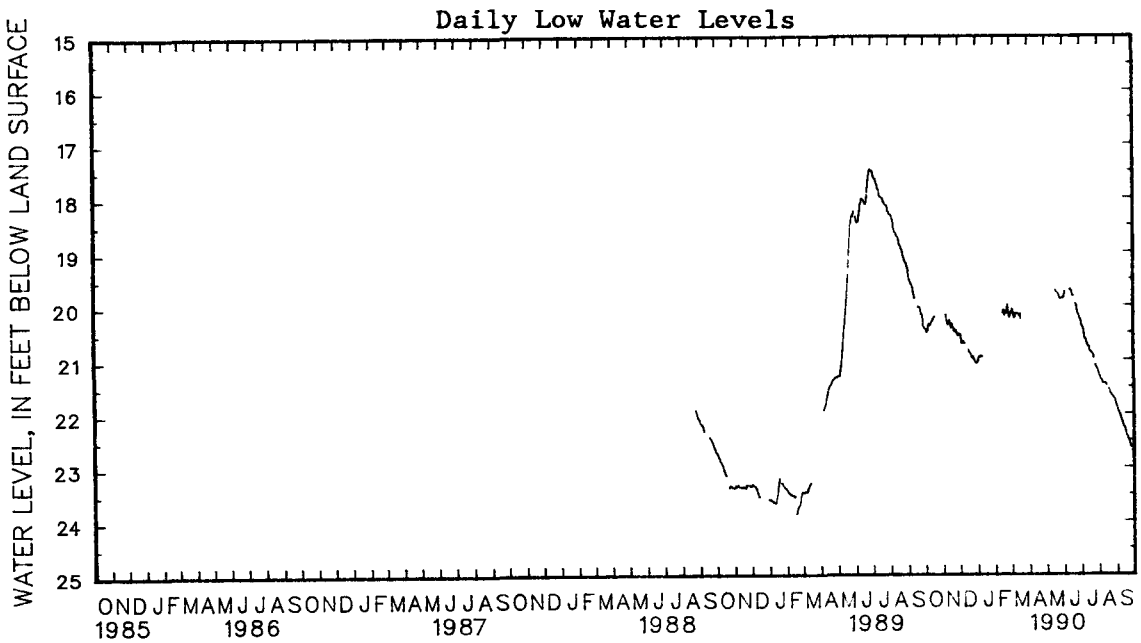
GROUND-WATER LEVELS

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	19.03	18.96	---	---	19.86	19.81	20.31	20.28	21.28	21.23	21.90	21.88
2	18.96	18.89	---	---	19.81	19.76	20.39	20.31	21.31	21.28	21.93	21.90
3	18.92	18.88	---	---	19.76	19.68	20.41	20.39	21.33	21.31	21.98	21.93
4	18.95	18.92	---	---	---	---	20.42	20.41	21.36	21.33	22.00	21.98
5	18.95	18.91	---	---	---	---	20.47	20.42	21.38	21.36	22.02	22.00
6	18.95	18.92	---	---	---	---	20.54	20.47	21.39	21.38	22.04	22.02
7	18.96	18.94	---	---	---	---	20.62	20.54	21.42	21.39	22.07	22.04
8	18.94	18.84	---	---	---	---	20.63	20.62	21.45	21.42	22.12	22.07
9	18.83	18.75	---	---	---	---	20.63	20.63	21.46	21.45	22.14	22.12
10	18.82	18.78	---	---	---	---	20.67	20.63	21.46	21.45	22.17	22.14
11	18.85	18.82	---	---	---	---	20.72	20.67	21.45	21.44	22.21	22.17
12	18.84	18.76	---	---	19.71	19.68	20.72	20.72	21.46	21.44	22.25	22.21
13	18.75	18.68	---	---	19.73	19.71	20.77	20.72	21.46	21.45	22.27	22.25
14	18.68	18.67	---	---	19.73	19.73	20.77	20.77	21.48	21.46	22.28	22.27
15	18.68	18.61	---	---	19.77	19.73	20.78	20.77	21.49	21.48	22.31	22.26
16	18.72	18.62	---	---	19.81	19.77	20.85	20.78	---	---	22.35	22.31
17	18.72	18.71	---	---	19.83	19.81	20.87	20.85	---	---	22.41	22.35
18	18.71	18.63	19.73	19.70	19.83	19.83	20.87	20.87	21.56	21.54	22.43	22.41
19	18.63	18.56	19.76	19.73	---	---	20.89	20.87	21.59	21.56	22.45	22.43
20	18.57	18.55	19.76	19.76	---	---	20.90	20.89	21.63	21.59	22.49	22.44
21	18.56	18.54	19.78	19.76	19.98	19.97	20.92	20.90	21.64	21.63	22.52	22.49
22	---	---	19.79	19.78	19.99	19.98	20.93	20.92	21.66	21.64	22.54	22.52
23	---	---	19.81	19.79	20.00	19.99	20.98	20.93	21.68	21.66	22.58	22.54
24	---	---	19.85	19.81	20.08	20.00	---	---	21.69	21.68	22.61	22.58
25	---	---	19.88	19.85	20.16	20.08	---	---	21.71	21.69	22.64	22.61
26	---	---	19.88	19.88	20.17	20.16	21.12	21.09	21.73	21.71	---	---
27	---	---	19.88	19.88	20.20	20.17	21.15	21.12	21.74	21.73	---	---
28	---	---	19.88	19.88	20.25	20.20	21.16	21.15	21.76	21.74	22.71	22.69
29	---	---	19.88	19.87	20.25	20.25	21.19	21.17	21.79	21.76	22.72	22.71
30	---	---	19.87	19.87	20.28	20.25	21.20	21.19	21.84	21.79	22.73	22.72
31	---	---	19.87	19.86	---	---	21.23	21.20	21.88	21.84	---	---
MONTH	19.03	18.54	19.88	19.70	20.28	19.68	21.23	20.28	21.88	21.23	22.73	21.88



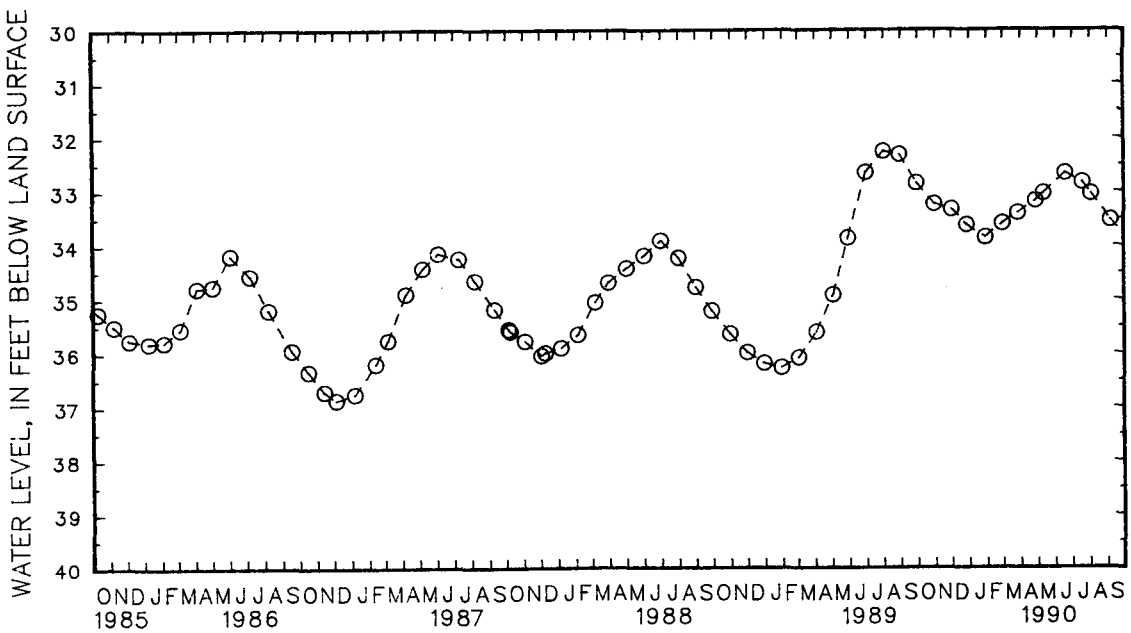
5 YEAR HYDROGRAPH

OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.--Sykesville Formation of Paleozoic age. Aquifer code: 300SKVL.
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.
REMARKS.--Maryland Water-Level Network 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, May 5, 1972; lowest measured, 36.87 ft below land surface, Dec. 5, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	33.24	DEC 28	33.63	MAR 1	33.60	APR 27	33.18	JUN 19	32.67	AUG 3	33.05
NOV 30	33.34	JAN 30	33.86	28	33.41	MAY 11	33.04	JUL 19	32.84	SEP 7	33.54



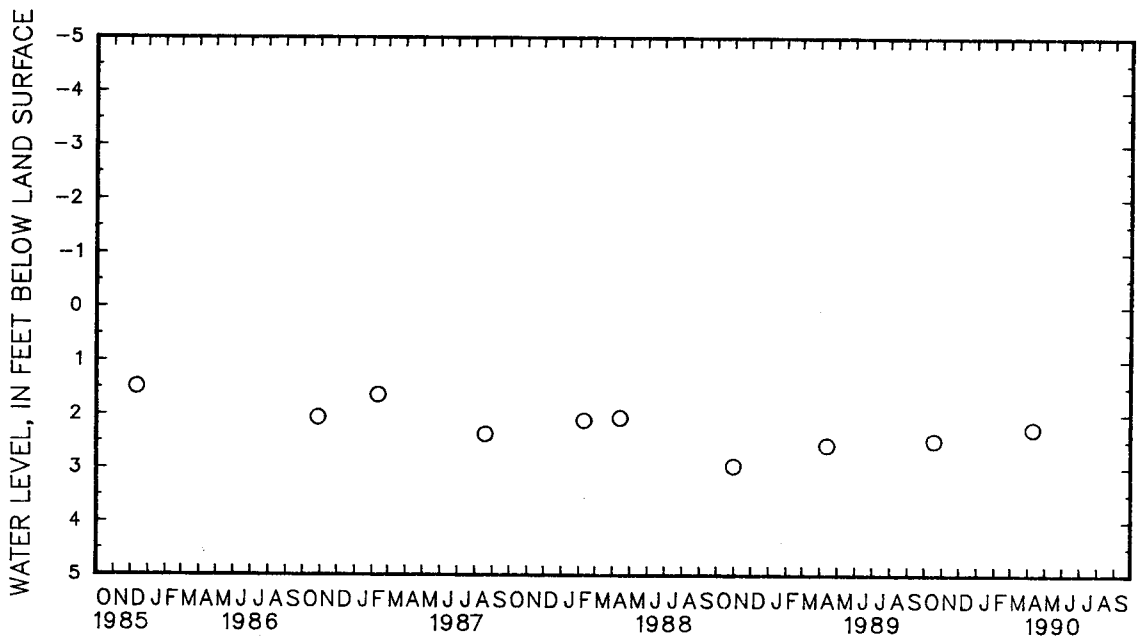
5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well. 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, April 13, 1978, May 5, 1978, and Dec. 11, 1985; lowest measured, 2.97 ft below land surface, Oct. 31, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	2.49	APR 10	2.27

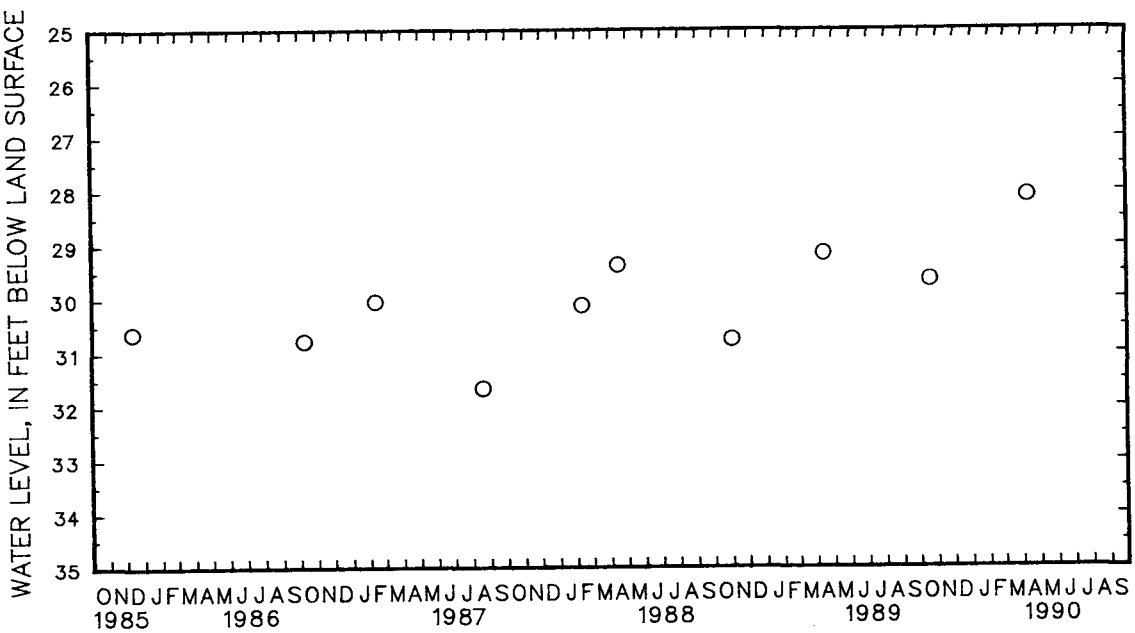


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well. 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, June 5, 1979; lowest measured, 33.63 ft below land surface, Aug. 5, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	29.66	APR 10	28.10



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

WELL NUMBER.--Ke Be 55. SITE ID.-- 391846075561701. PERMIT NUMBER.--KE-81-1228.
LOCATION.--Lat 39°18'46", long 75°56'17", Hydrologic Unit 0206002, near Locust Grove.
Owner: U. S. Geological Survey.
AQUIFER.-- Pliestocene-Pliocene Formation. Aquifer code: 112PCPC.
WELL CHARACTERISTICS.--Driven, observation, water-table well, depth 20.0 ft, casing diameter 2 in., to 17 ft; screen diameter 2 in. from 17 ft to 20 ft.
INSTRUMENTATION.--Measurements with chalked steel tape by USGS personnel. Equipped with water-level recorder Januray 26, 1989 to current year.
DATUM.--Elevation of land surface is 66.45 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 2.89 ft above land surface.
REMARKS.--National Water Quality Assessment Project observation well.
PERIOD OF RECORD.--January 1989 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 62.93 ft above sea level, June 25, 1989; lowest measured, 56.19 ft above sea level, Feb. 14, 1989.

WATER LEVEL, IN FEET ABOVE SEA LEVEL WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	60.29	60.27	61.33	61.14	60.84	60.70	60.31	60.11	61.67	61.56	60.78	60.71
2	60.87	60.30	61.15	61.11	60.89	60.69	60.37	60.31	61.74	61.68	60.84	60.73
3	60.99	60.89	61.20	61.13	60.90	60.81	60.43	60.37	61.68	61.49	60.87	60.84
4	60.97	60.93	61.12	61.02	60.80	60.71	60.56	60.43	61.76	61.55	60.85	60.61
5	60.92	60.88	61.03	61.01	60.73	60.69	60.56	60.49	61.68	61.45	60.61	60.54
6	60.88	60.87	61.11	61.02	60.69	60.66	60.53	60.49	61.47	61.45	60.54	60.48
7	60.87	60.73	61.10	61.06	60.68	60.43	60.51	60.48	---	---	60.48	60.40
8	60.73	60.72	61.15	61.06	60.49	60.42	60.58	60.50	61.46	61.34	60.49	60.40
9	60.71	60.59	61.35	61.16	60.55	60.50	60.75	60.58	61.52	61.38	60.59	60.49
10	60.59	60.56	61.39	61.35	60.56	60.54	60.90	60.75	61.62	61.51	60.59	60.52
11	60.60	60.54	61.39	61.31	60.54	60.49	61.01	60.88	61.50	61.41	60.52	60.51
12	60.55	60.52	61.41	61.24	60.49	60.46	61.01	60.91	61.42	61.26	60.51	60.50
13	60.55	60.51	61.24	61.17	60.48	60.44	60.90	60.67	61.33	61.23	60.51	60.48
14	60.51	60.49	61.29	61.25	60.44	60.40	60.67	60.62	61.34	61.24	60.48	60.45
15	60.49	60.48	61.37	61.29	60.50	60.37	60.68	60.62	61.23	61.20	60.45	60.39
16	60.47	60.46	61.51	61.36	60.50	60.35	60.68	60.67	61.32	61.23	60.39	60.38
17	60.47	60.46	61.34	61.12	60.35	60.28	60.70	60.67	61.32	60.99	60.48	60.38
18	60.49	60.47	61.12	61.03	60.28	60.23	60.75	60.71	61.02	60.92	60.59	60.48
19	60.91	60.49	61.09	60.98	60.25	60.22	60.72	60.56	61.21	61.03	60.59	60.56
20	61.49	60.93	61.40	61.10	60.29	60.24	60.70	60.56	61.17	60.90	60.62	60.59
21	61.63	61.51	61.39	61.02	60.25	60.20	60.78	60.71	60.90	60.87	60.62	60.54
22	61.61	61.43	61.00	60.91	60.2	60.08	60.74	60.68	61.15	60.89	60.53	60.47
23	61.42	61.33	60.99	60.93	60.08	60.04	60.67	60.57	61.22	61.16	60.54	60.50
24	61.33	61.31	60.92	60.83	60.10	60.04	60.59	60.57	61.22	61.04	60.49	60.35
25	61.32	61.31	60.94	60.83	60.16	60.10	60.97	60.56	61.03	60.70	60.39	60.35
26	61.31	61.27	61.02	60.95	60.19	60.07	61.89	61.12	60.68	60.60	60.42	60.39
27	61.27	61.24	60.95	60.87	60.07	59.97	61.86	61.77	60.79	60.63	60.42	60.34
28	61.24	61.22	61.03	60.90	60.02	59.95	61.77	61.69	60.80	60.78	60.34	60.30
29	61.22	61.18	60.96	60.80	59.95	59.91	61.93	61.68	---	---	60.31	60.28
30	61.18	61.16	60.85	60.80	59.94	59.92	61.94	61.68	---	---	60.36	60.28
31	61.33	61.18	---	---	60.11	59.93	61.67	61.56	---	---	60.47	60.36
MONTH	61.63	60.27	61.51	60.80	60.90	59.91	61.94	60.11	61.76	60.60	60.87	60.28

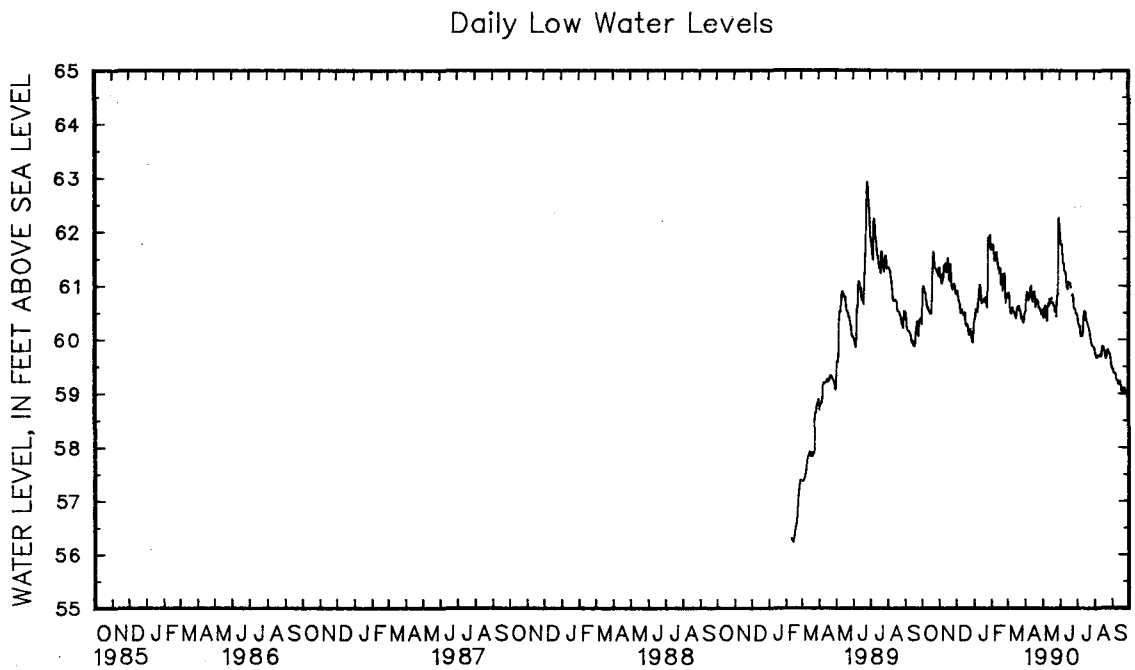
GROUND-WATER LEVELS

MARYLAND--Continued

KENT COUNTY--Continued

KE Be 55--Cotinued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	60.51	60.47	60.55	60.51	61.87	61.77	60.46	60.41	59.82	59.76	59.47	59.45
2	60.53	60.51	60.55	60.40	61.77	61.74	60.41	60.31	59.75	59.71	59.45	59.45
3	60.78	60.53	60.40	60.34	61.77	61.74	60.31	60.27	59.71	59.69	59.45	59.37
4	60.88	60.79	60.48	60.34	61.77	61.61	60.27	60.27	59.69	59.66	59.37	59.34
5	60.87	60.75	60.63	60.49	61.59	61.44	60.27	60.23	59.66	59.65	59.37	59.34
6	60.75	60.65	60.62	60.49	61.43	61.40	60.23	60.15	59.67	59.65	59.37	59.37
7	60.73	60.64	60.49	60.41	61.42	61.30	60.14	60.07	59.70	59.67	59.37	59.34
8	60.76	60.74	60.41	60.33	61.29	61.24	60.06	60.05	59.70	59.69	59.33	59.23
9	60.78	60.74	60.35	60.31	61.27	61.25	60.08	60.04	59.69	59.68	59.24	59.23
10	60.95	60.77	60.60	60.32	61.25	61.19	60.08	60.06	59.70	59.68	59.24	59.22
11	61.00	60.89	60.65	60.60	61.18	61.05	60.07	60.06	59.72	59.70	59.22	59.18
12	60.88	60.72	60.63	60.58	61.05	60.97	60.21	60.07	59.71	59.66	59.18	59.16
13	60.73	60.61	60.75	60.63	60.97	60.93	60.48	60.24	59.68	59.66	59.16	59.14
14	60.70	60.61	60.75	60.67	60.94	60.93	60.53	60.48	59.85	59.69	59.19	59.14
15	60.87	60.70	60.67	60.65	61.07	60.94	60.53	60.51	59.87	59.85	59.22	59.17
16	60.88	60.87	60.73	60.66	61.07	61.04	60.51	60.40	59.87	59.85	59.16	59.12
17	60.89	60.80	60.77	60.73	61.03	60.99	60.39	60.34	59.85	59.81	59.11	59.02
18	60.80	60.60	---	---	61.04	60.99	60.34	60.32	59.80	59.78	59.02	59.01
19	60.60	60.55	60.69	60.64	61.04	60.98	60.32	60.28	59.78	59.72	59.09	59.02
20	60.67	60.55	60.64	60.63	60.97	60.87	60.28	60.26	59.72	59.57	59.09	59.03
21	60.74	60.67	60.63	60.55	---	---	60.26	60.21	59.65	59.64	59.02	59.00
22	60.74	60.71	60.55	60.52	60.82	60.80	60.21	60.16	59.66	59.64	59.08	59.01
23	60.71	60.68	60.52	60.49	60.84	60.82	60.16	60.10	59.74	59.66	59.09	59.06
24	60.68	60.58	---	---	60.82	60.70	60.09	60.02	59.79	59.74	59.06	59.01
25	60.59	60.56	60.43	60.39	60.69	60.59	60.01	59.96	59.81	59.76	59.01	58.99
26	60.59	60.57	60.76	60.39	60.58	60.56	59.95	59.91	59.76	59.74	59.02	58.99
27	60.56	60.52	60.83	60.76	60.57	60.55	59.91	59.88	59.74	59.73	58.99	58.93
28	60.52	60.48	60.83	60.82	60.55	60.49	59.88	59.87	59.73	59.70	58.93	58.91
29	60.47	60.43	62.25	60.82	60.49	60.48	59.87	59.86	59.69	59.63	58.91	58.91
30	60.51	60.43	62.26	62.07	60.49	60.46	59.86	59.85	59.62	59.53	58.92	58.91
31	---	---	62.05	61.87	---	---	59.85	59.82	59.52	59.47	---	---
MONTH	61.00	60.43	62.26	60.31	61.87	60.46	60.53	59.82	59.87	59.47	59.47	58.91



5 YEAR HYDROGRAPH

OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

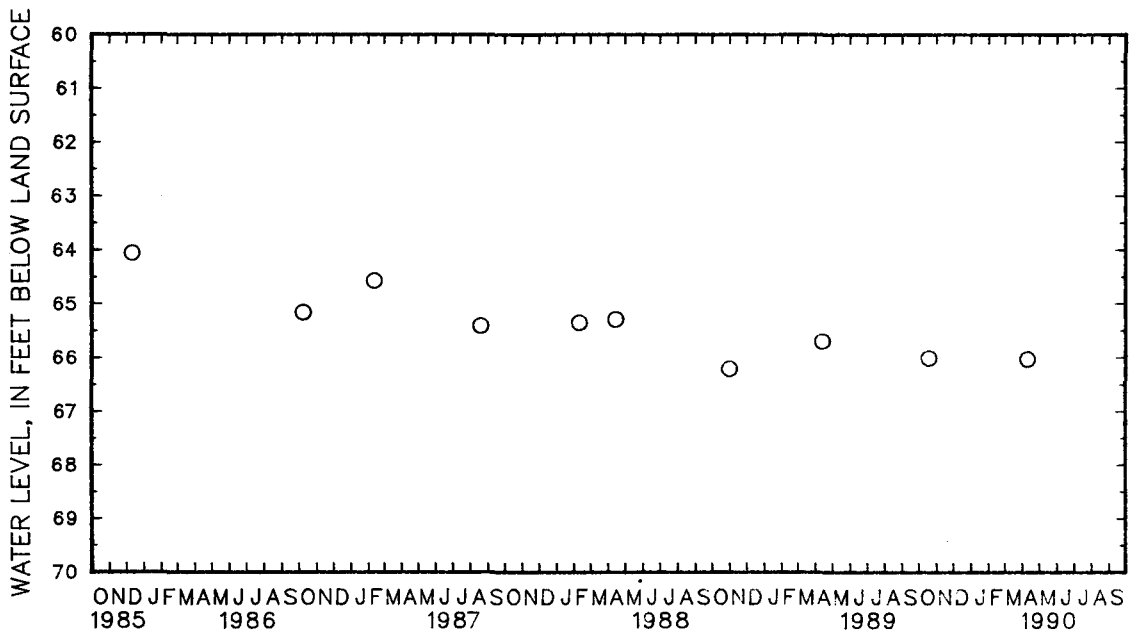
MARYLAND--Continued

KENT COUNTY-Continued

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.
REMARKS.--Maryland Water-Level Network observation well. 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, June 5, 1979; lowest measured, 66.22 ft below land surface, Oct. 31, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	66.02	APR 10	66.04

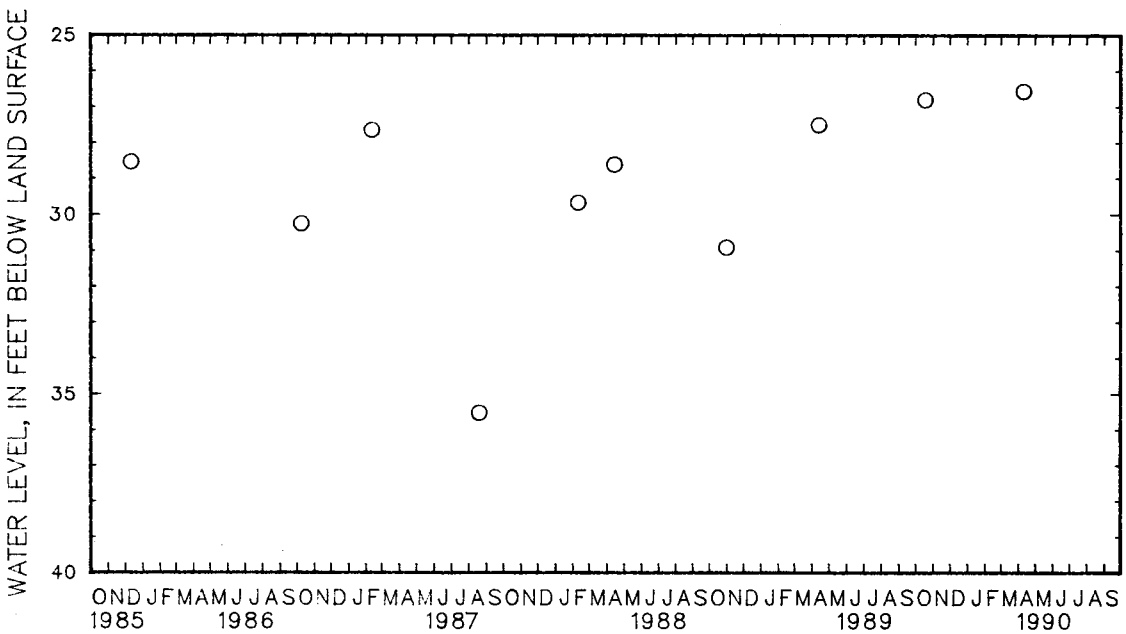


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well. 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, April 11, 1979; lowest measured, 36.23 ft below land-surface datum, Sept. 2, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	26.80	APR 10	26.56

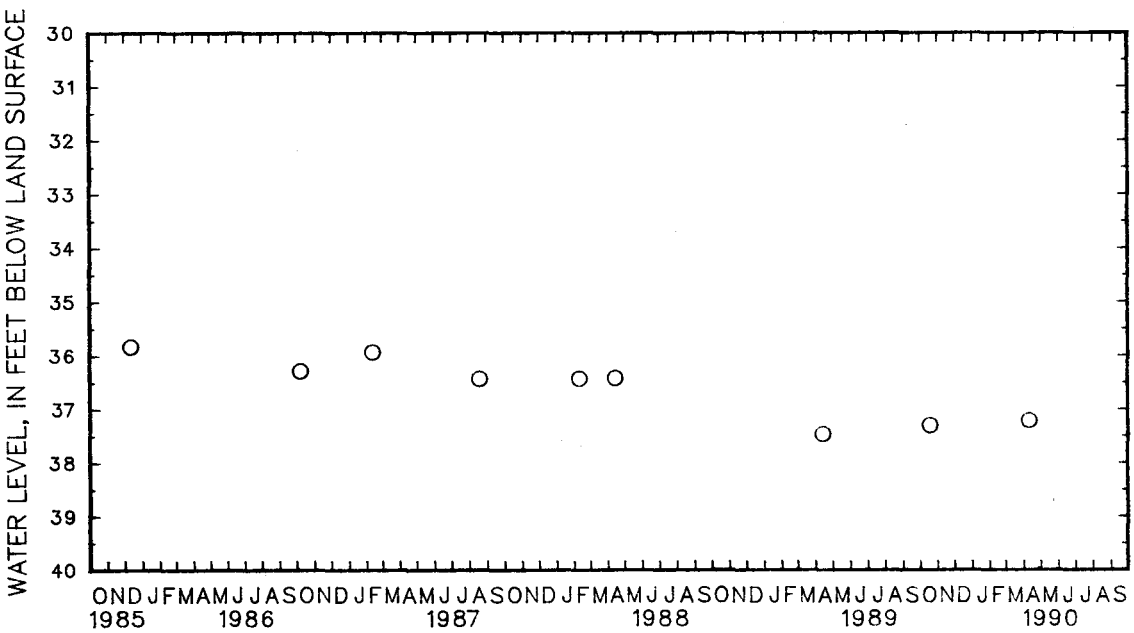


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well. 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, 34.84 ft below land surface, Sept. 15, 1982; lowest measured, 37.47 ft below land surface, June 5, 1978 and April 13, 1989.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	37.31	APR 10	37.22

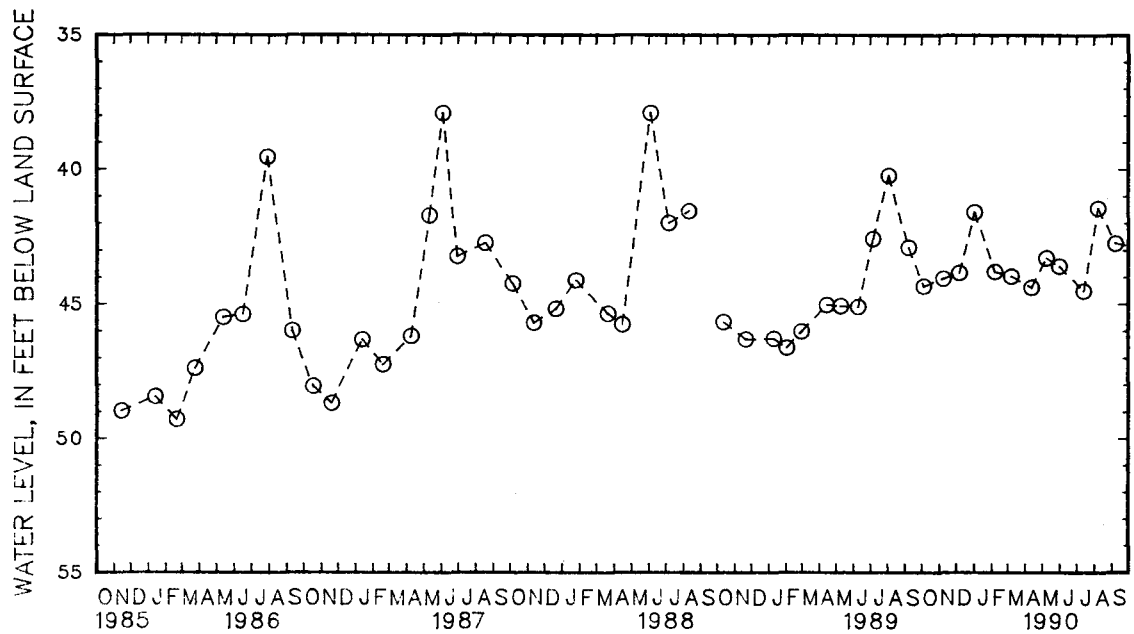


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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, 0.20 ft above land-surface datum.
REMARKS.--Maryland Water-Level Network observation well. Water levels measured by plant personnel with an electric tape, Sept. 18, 1959 to April 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, Sept. 18, 1959; lowest measured, 54.46 ft below land surface, Aug. 4, 1966.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	44.35	DEC 6	43.85	FEB 6	43.81	APR 12	44.40	MAY 31	43.60	AUG 8	41.44
NOV 8	44.07	JAN 2	41.59	MAR 7	43.98	MAY 8	43.29	JUL 13	44.53	SEP 7	42.75



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

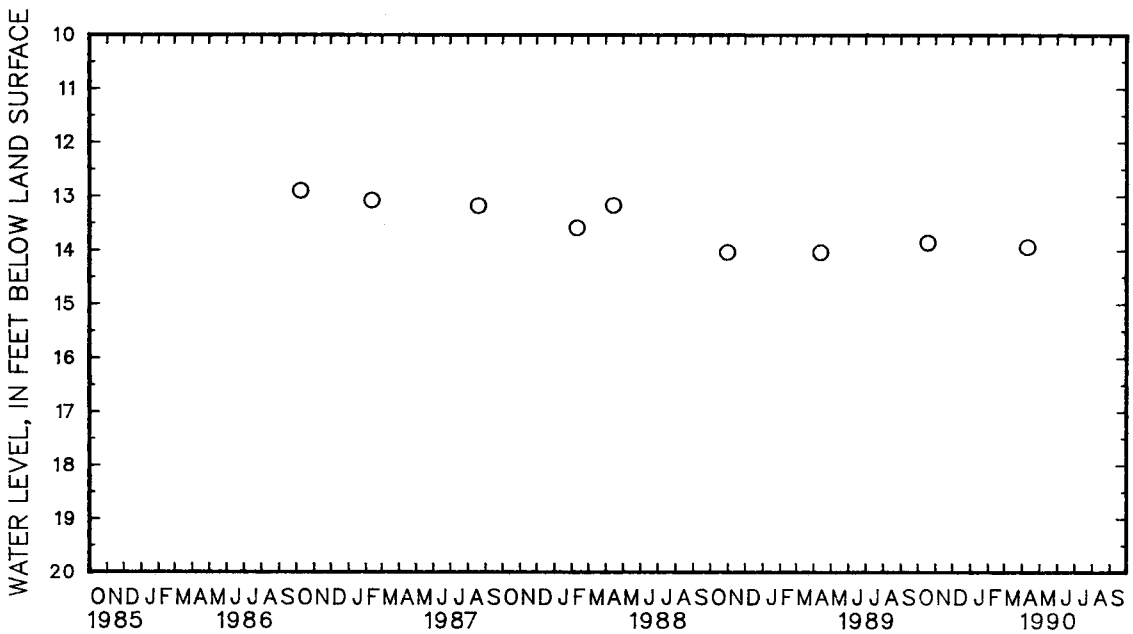
MARYLAND--Continued

KENT COUNTY--Continued

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.
REMARKS.--Maryland Water-Level Network observation well. 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, 11.08 ft below land surface, Oct. 30, 1980; lowest measured, 14.05 ft below land surface, Oct. 31, 1988 and April 13, 1989.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	13.87	APR 10	13.95



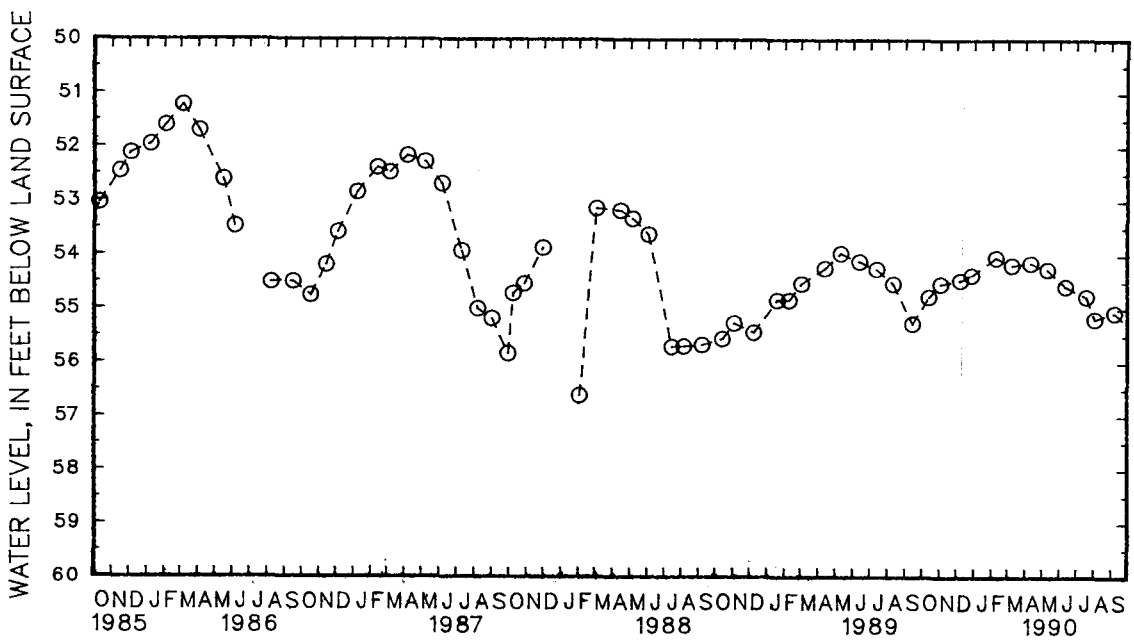
5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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 and 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.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--May 1958 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 38.39 ft below land surface, May 29, 1958; lowest measured, 56.63 ft below land surface, Feb. 3, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13	54.77	DEC 8	54.47	FEB 9	54.04	APR 11	54.14	JUN 12	54.58	AUG 3	55.18
NOV 3	54.54	28	54.37	MAR 9	54.18	MAY 11	54.26	JUL 19	54.77	SEP 7	55.07

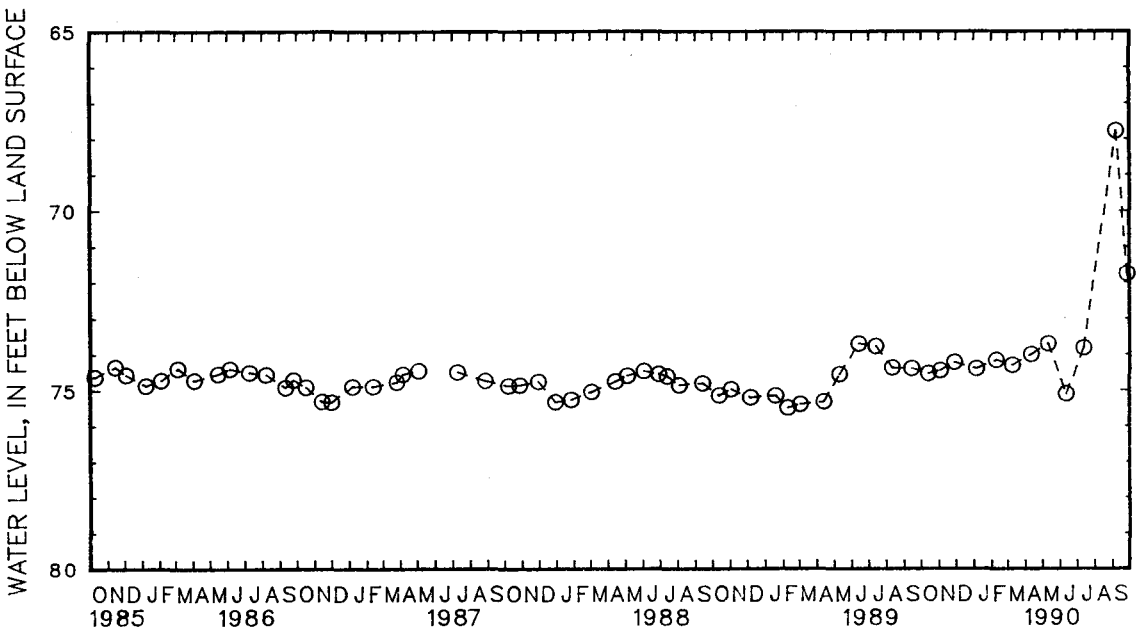


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--November 1948 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured 67.78 ft below land surface, Sept. 7, 1990; lowest measured, 75.96 ft below land surface, Nov. 19, 1951.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13	74.54	NOV 28	74.23	FEB 9	74.17	APR 11	74.01	JUN 12	75.11	SEP 7	67.78
NOV 3	74.46	JAN 5	74.41	MAR 9	74.31	MAY 11	73.71	JUL 12	73.83	26	71.77



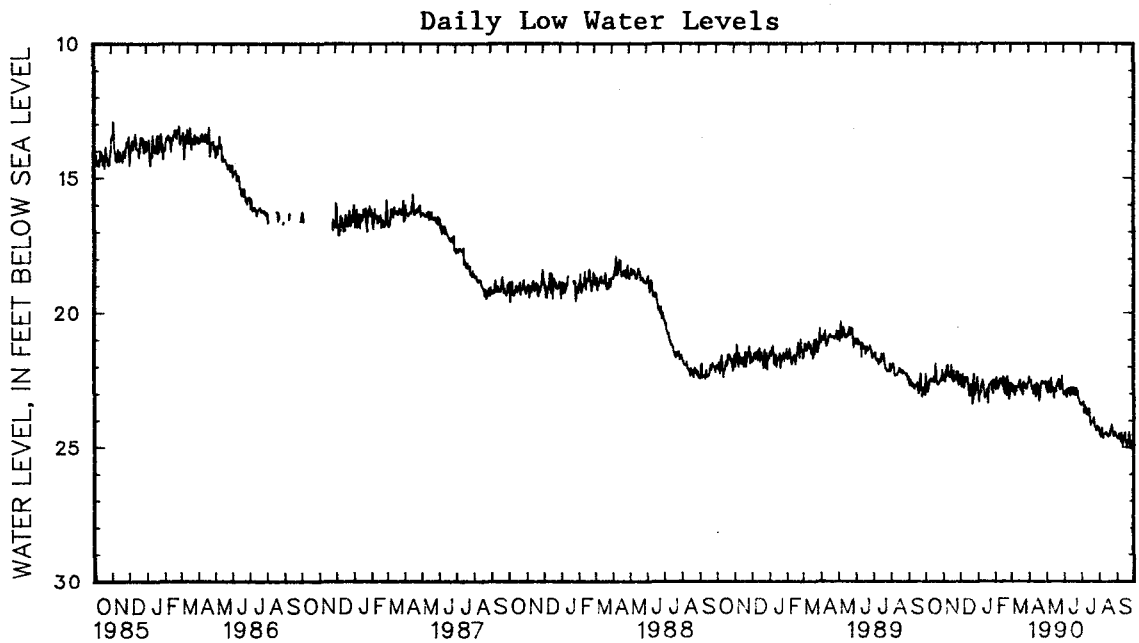
5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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 Paleocene 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.
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, 25.67 ft below sea level, Sept. 17, 1990.

WATER LEVEL, IN FEET BELOW SEA LEVEL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	22.72	23.47	22.41	22.99	22.63	23.20	22.38	23.57	22.79	23.60	22.91	23.39
2	22.28	23.05	22.52	23.07	22.30	23.12	23.21	23.69	22.77	23.30	22.64	23.33
3	22.57	23.27	22.34	22.81	22.45	23.47	23.31	23.78	22.86	23.35	22.75	23.21
4	22.96	23.50	22.39	22.97	22.77	23.60	22.90	23.72	22.41	23.06	22.96	23.40
5	22.87	23.40	22.55	23.04	22.50	22.87	22.96	23.43	22.69	23.32	22.71	23.21
6	22.70	23.14	22.21	22.79	22.28	22.96	22.98	23.57	22.59	23.11	22.90	23.38
7	22.84	23.27	22.38	22.84	22.56	23.35	22.92	23.51	22.84	23.34	23.07	23.56
8	22.51	22.98	22.04	22.72	22.79	23.31	22.71	23.39	22.73	23.39	22.87	23.41
9	22.58	23.29	21.96	22.43	22.75	23.29	22.67	23.45	22.53	23.05	22.76	23.37
10	22.50	23.07	21.96	22.64	22.45	23.14	22.51	23.23	22.47	23.16	22.92	23.55
11	22.45	23.22	22.34	22.97	22.40	23.07	22.58	23.29	22.64	23.26	22.76	23.35
12	22.53	23.18	22.35	23.15	22.56	23.24	22.73	23.42	22.55	23.25	22.77	23.32
13	22.56	23.18	22.40	23.16	22.48	23.17	23.17	23.81	22.49	23.22	22.79	23.34
14	22.57	23.21	22.28	22.99	22.40	23.06	23.13	23.70	22.64	23.36	22.78	23.27
15	22.47	23.16	22.24	22.93	22.45	23.14	23.07	23.58	22.70	23.36	22.66	23.20
16	22.38	23.09	21.93	22.68	22.84	23.61	23.10	23.53	22.39	22.90	22.58	23.11
17	22.48	23.14	22.44	23.05	23.10	23.63	22.99	23.48	22.86	23.64	22.51	23.12
18	22.58	23.26	22.47	23.03	23.05	23.51	22.87	23.36	23.02	23.81	22.88	23.25
19	21.89	22.92	22.56	23.25	22.70	23.47	23.38	23.79	22.46	22.97	22.72	23.27
20	22.10	22.54	22.16	22.65	22.84	23.16	22.93	23.69	22.95	23.59	22.98	23.46
21	22.50	22.98	22.55	23.46	22.66	23.25	22.79	23.14	23.08	23.62	23.05	23.66
22	22.61	23.40	22.48	23.35	23.39	23.75	22.69	23.34	22.64	23.26	22.65	23.16
23	22.68	23.38	22.48	22.80	23.35	23.75	22.66	23.19	22.37	22.91	22.57	23.34
24	22.60	23.07	22.40	22.90	23.16	23.58	22.65	23.29	22.59	23.39	22.80	23.38
25	22.67	23.10	22.19	22.80	22.35	23.14	22.65	23.30	23.24	24.09	22.65	23.19
26	22.59	23.11	22.47	23.13	22.26	23.40	22.55	23.48	23.18	23.95	22.72	23.38
27	22.55	23.17	22.54	23.26	23.05	23.67	22.91	23.61	22.64	23.23	22.80	23.41
28	22.49	23.09	22.19	22.89	22.80	23.37	23.02	23.63	22.63	23.33	22.85	23.44
29	22.53	23.14	22.70	23.29	22.89	23.37	22.51	23.54	---	---	22.82	23.41
30	22.38	22.99	22.51	23.17	22.85	23.35	22.51	23.21	---	---	22.65	23.27
31	22.13	22.80	---	---	22.43	23.15	22.80	23.57	---	---	22.61	23.33
MONTH	21.89	23.50	21.93	23.46	22.26	23.75	22.38	23.81	22.37	24.09	22.51	23.66

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	22.63	23.13	22.70	23.18	23.05	23.42	23.43	23.84	24.34	25.07	24.62	25.30
2	22.39	23.08	22.91	23.45	23.05	23.56	23.41	23.95	24.54	25.04	24.68	25.12
3	22.56	23.03	22.99	23.52	23.03	23.37	23.36	23.76	24.50	25.11	24.70	25.40
4	22.53	23.04	22.87	23.38	22.92	23.65	23.31	24.08	24.62	25.10	24.69	25.15
5	22.53	23.12	22.56	23.10	23.14	23.78	23.74	24.20	24.52	24.94	24.50	25.19
6	22.80	23.24	22.75	23.37	22.93	23.32	23.66	24.07	24.29	25.07	24.65	25.25
7	22.77	23.34	22.75	23.40	22.85	23.65	23.46	24.03	24.54	25.29	24.64	25.25
8	23.03	23.49	22.97	23.47	22.98	23.39	23.62	23.99	24.66	25.20	24.81	25.52
9	23.00	23.51	22.74	23.23	22.83	23.47	23.54	24.19	24.59	25.17	24.47	25.16
10	22.86	23.30	22.44	23.05	22.85	23.41	23.78	24.35	24.52	25.11	24.62	25.19
11	22.69	23.58	22.72	23.55	23.10	23.61	23.78	24.24	24.50	25.05	25.01	25.54
12	23.13	23.59	22.91	23.56	23.04	23.65	23.67	24.29	24.49	25.06	24.83	25.37
13	23.08	23.60	22.78	23.27	22.79	23.28	23.81	24.32	24.46	25.04	24.74	25.30
14	22.76	23.42	23.18	23.59	22.92	23.39	23.58	24.18	24.57	25.18	24.59	25.20
15	22.64	23.07	22.90	23.39	22.80	23.28	23.70	24.16	24.58	25.08	24.47	25.16
16	22.69	23.14	22.84	23.25	23.04	23.54	23.91	24.65	24.58	25.16	24.70	25.30
17	22.69	23.26	22.85	23.18	23.02	23.51	24.18	24.67	24.62	25.10	24.78	25.67
18	23.32	23.67	22.93	23.31	22.80	23.37	24.12	24.65	24.53	25.18	25.02	25.57
19	23.18	23.47	22.76	23.32	22.78	23.55	24.07	24.60	24.52	25.10	24.75	25.38
20	22.90	23.36	22.66	23.20	23.07	23.72	24.02	24.65	24.58	25.24	24.77	25.52
21	22.87	23.38	22.63	23.26	22.99	23.65	24.04	24.72	24.37	25.05	24.86	25.52
22	22.80	23.39	22.54	23.05	23.04	23.56	23.99	24.55	24.29	24.83	24.39	25.21
23	22.63	23.13	22.47	23.36	22.82	23.53	23.88	24.53	24.17	24.80	24.78	25.20
24	22.56	23.16	22.82	23.52	22.90	23.68	24.22	24.83	24.30	24.86	25.05	25.52
25	22.63	23.19	22.87	23.44	23.17	23.82	24.24	24.85	24.45	25.02	24.86	25.33
26	22.59	23.25	22.54	23.30	23.21	23.87	24.37	24.92	24.58	25.05	24.78	25.13
27	22.62	23.22	22.67	23.22	23.25	23.71	24.35	24.88	24.61	25.06	24.92	25.36
28	22.58	23.21	22.57	23.22	23.39	23.87	24.37	24.93	24.43	24.92	24.84	25.17
29	22.65	23.25	22.35	23.06	23.36	23.87	24.22	24.68	24.48	24.84	24.84	25.31
30	22.57	23.11	23.03	23.48	23.44	23.92	24.25	24.65	24.47	25.11	24.92	25.31
31	---	---	22.90	23.37	---	---	24.26	24.76	24.61	24.95	---	---
MONTH	22.39	23.67	22.35	23.59	22.78	23.92	23.31	24.93	24.17	25.29	24.39	25.67



5 YEAR HYDROGRAPH

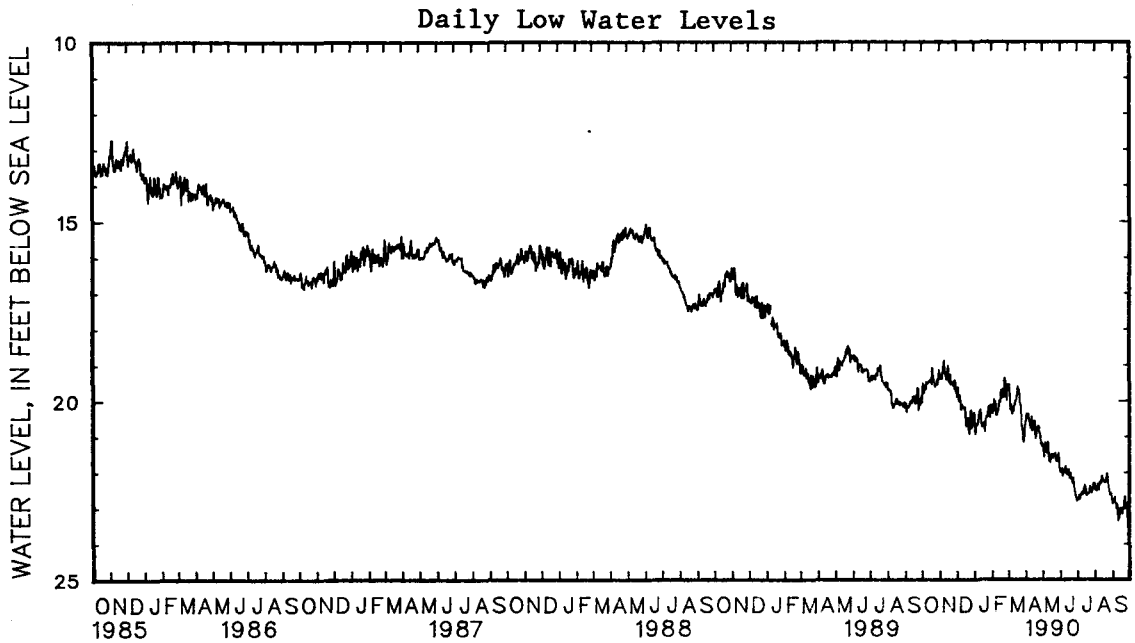
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
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, 23.67 ft below sea level, Sept. 11, 1990.

WATER LEVEL, IN FEET BELOW SEA LEVEL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	19.82	20.36	19.29	19.69	19.90	20.20	20.38	21.08	20.35	20.78	19.68	19.99
2	19.51	19.99	19.40	19.73	19.62	20.18	20.92	21.18	20.25	20.58	19.56	20.00
3	19.62	19.99	19.29	19.56	19.76	20.35	20.94	21.21	20.29	20.61	19.88	20.31
4	19.79	20.08	19.40	19.69	20.02	20.41	20.65	21.17	19.96	20.38	20.24	20.47
5	19.72	20.04	19.40	19.63	19.89	20.11	20.70	20.93	20.17	20.53	20.11	20.38
6	19.58	19.83	19.24	19.51	19.85	20.17	20.67	20.93	20.03	20.37	20.12	20.52
7	19.67	19.92	19.23	19.47	20.00	20.56	20.65	20.94	20.14	20.55	20.38	20.69
8	19.49	19.81	19.00	19.41	20.26	20.57	20.51	20.88	20.41	20.74	20.37	20.64
9	19.52	19.89	18.88	19.28	20.23	20.54	20.40	20.85	20.41	20.75	20.21	20.56
10	19.48	19.78	19.09	19.41	20.13	20.47	20.29	20.76	20.32	20.68	20.30	20.68
11	19.48	19.84	19.25	19.60	20.11	20.54	20.26	20.76	20.26	20.68	20.16	20.53
12	19.49	19.81	19.25	19.78	20.21	20.61	20.36	20.80	20.17	20.59	20.11	20.45
13	19.48	19.87	19.42	19.84	20.20	20.58	20.64	21.10	20.01	20.59	20.03	20.35
14	19.47	19.87	19.30	19.69	20.21	20.60	20.74	21.10	20.04	20.42	19.99	20.29
15	19.45	19.82	19.25	19.62	20.19	20.66	20.73	21.01	19.96	20.43	19.89	20.25
16	19.42	19.82	19.03	19.51	20.46	20.92	20.74	21.05	19.71	20.04	19.83	20.14
17	19.43	19.77	19.48	19.78	20.70	20.94	20.69	20.99	19.90	20.39	19.61	20.04
18	19.55	19.87	19.49	19.86	20.73	20.92	20.60	20.87	19.92	20.46	19.74	20.01
19	19.09	19.73	19.55	20.00	20.49	20.92	20.88	21.16	19.69	19.97	19.69	20.08
20	19.14	19.41	19.27	19.62	20.57	20.76	20.60	21.09	19.81	20.24	19.82	20.11
21	19.35	19.60	19.46	20.06	20.49	20.86	20.46	20.67	19.90	20.21	20.07	20.26
22	19.46	19.94	19.54	20.07	20.87	21.14	20.47	20.78	19.50	19.99	20.13	20.38
23	19.61	19.93	19.54	19.79	20.94	21.16	20.44	20.67	19.37	19.71	20.20	20.82
24	19.58	19.82	19.58	19.83	20.80	21.06	20.40	20.66	19.42	19.88	20.69	21.03
25	19.55	19.80	19.48	19.77	20.31	20.79	20.22	20.60	19.85	20.43	20.74	21.19
26	19.54	19.80	19.58	20.00	20.27	20.91	20.16	20.68	19.99	20.41	20.92	21.43
27	19.55	19.85	19.68	20.06	20.77	21.13	20.44	20.82	19.57	20.03	21.15	21.60
28	19.44	19.76	19.43	19.90	20.65	20.93	20.47	20.79	19.57	19.96	21.17	21.56
29	19.45	19.78	19.77	20.14	20.70	20.96	20.13	20.79	---	---	21.08	21.42
30	19.36	19.72	19.76	20.14	20.63	20.92	20.12	20.57	---	---	20.87	21.28
31	19.14	19.59	---	---	20.34	20.89	20.33	20.76	---	---	20.61	21.15
MONTH	19.09	20.36	18.88	20.14	19.62	21.16	20.12	21.21	19.37	20.78	19.56	21.60

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	20.57	20.85	21.27	21.51	22.00	22.28	22.79	23.09	22.36	22.77	22.89	23.19
2	20.37	20.83	21.39	21.80	22.01	22.30	22.77	23.11	22.50	22.76	22.86	23.13
3	20.44	20.65	21.58	21.85	21.96	22.21	22.67	22.95	22.49	22.79	22.81	23.25
4	20.39	20.66	21.36	21.80	21.90	22.39	22.64	23.02	22.52	22.79	22.78	23.08
5	20.39	20.78	21.18	21.47	22.12	22.47	22.75	23.03	22.43	22.67	22.69	23.14
6	20.55	20.84	21.32	21.70	22.00	22.25	22.68	22.95	22.33	22.74	22.84	23.22
7	20.55	20.91	21.39	21.67	21.96	22.37	22.61	22.93	22.43	22.84	22.86	23.22
8	20.70	21.06	21.44	21.80	22.00	22.32	22.64	22.91	22.49	22.84	23.02	23.44
9	20.78	21.14	21.47	21.75	21.90	22.26	22.56	22.89	22.37	22.77	22.90	23.29
10	20.58	20.90	21.16	21.66	21.84	22.26	22.63	22.96	22.27	22.64	22.99	23.36
11	20.46	21.03	21.37	22.00	22.02	22.35	22.62	22.90	22.24	22.56	23.35	23.67
12	20.85	21.13	21.70	22.06	22.06	22.36	22.47	22.89	22.29	22.60	23.30	23.61
13	20.85	21.13	21.54	21.88	21.95	22.23	22.57	22.90	22.10	22.50	23.26	23.59
14	20.69	21.07	21.74	22.02	22.00	22.30	22.36	22.76	22.16	22.59	23.06	23.47
15	20.58	20.85	21.64	21.97	21.93	22.24	22.41	22.68	22.22	22.52	23.01	23.36
16	20.65	20.86	21.54	21.81	22.11	22.42	22.53	22.97	22.22	22.54	23.00	23.32
17	20.59	21.02	21.50	21.73	22.16	22.49	22.65	22.98	22.27	22.58	23.05	23.53
18	21.07	21.27	21.62	21.86	22.03	22.40	22.60	22.93	22.28	22.59	23.16	23.51
19	21.01	21.23	21.59	21.89	22.03	22.48	22.58	22.94	22.25	22.60	23.03	23.39
20	20.85	21.15	21.52	21.85	22.19	22.61	22.61	22.96	22.28	22.64	22.99	23.43
21	20.77	21.01	21.50	21.91	22.22	22.62	22.60	23.00	22.18	22.54	22.98	23.43
22	20.81	21.13	21.49	21.80	22.29	22.62	22.54	22.89	22.04	22.43	22.68	23.20
23	20.71	21.07	21.47	22.00	22.16	22.59	22.40	22.80	22.05	22.46	22.84	23.07
24	20.75	21.21	21.66	22.10	22.26	22.72	22.54	22.91	22.25	22.60	22.97	23.24
25	20.91	21.32	21.71	22.09	22.45	22.86	22.56	22.89	22.38	22.68	22.90	23.18
26	20.92	21.39	21.55	22.04	22.55	22.89	22.57	22.90	22.51	22.83	22.89	23.13
27	21.06	21.55	21.63	22.02	22.57	22.89	22.50	22.82	22.63	22.91	23.16	23.52
28	21.20	21.57	21.66	22.01	22.69	23.06	22.47	22.79	22.58	22.85	23.36	23.57
29	21.26	21.57	21.48	21.94	22.75	23.07	22.32	22.67	22.60	22.86	23.36	23.60
30	21.20	21.51	21.81	22.17	22.84	23.15	22.30	22.56	22.62	23.03	23.29	23.54
31	---	---	21.93	22.19	---	---	22.30	22.59	22.79	23.09	---	---
MONTH	20.37	21.57	21.16	22.19	21.84	23.15	22.30	23.11	22.04	23.09	22.68	23.67



5 YEAR HYDROGRAPH

OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
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 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	28.81	29.72	25.94	26.41	30.24	30.69	31.57	33.15	32.62	32.94	29.77	30.30
2	28.22	28.94	25.98	26.43	29.81	30.54	33.24	33.99	32.47	32.96	29.89	30.34
3	28.35	28.76	25.81	26.17	29.99	30.86	34.10	34.86	32.38	32.87	29.95	30.33
4	28.50	28.93	25.79	26.25	30.33	30.97	34.88	35.24	32.00	32.55	29.95	30.37
5	28.34	28.71	25.63	26.01	30.16	30.48	35.31	35.73	31.86	32.51	29.75	30.12
6	28.14	28.53	25.40	25.80	30.15	30.59	35.21	35.66	31.47	31.98	29.79	30.13
7	28.04	28.39	25.48	25.93	30.29	30.89	34.90	35.67	31.38	31.81	29.83	30.29
8	27.84	28.25	25.27	25.84	30.36	30.81	34.11	34.96	31.03	31.62	29.67	30.05
9	27.89	28.37	25.12	25.54	30.24	30.67	33.43	34.24	30.50	31.04	29.44	29.87
10	27.83	28.16	25.33	25.79	30.18	30.61	32.96	33.42	30.26	30.73	29.49	29.95
11	27.80	28.33	25.66	26.15	30.15	30.67	32.84	33.38	30.14	30.71	29.14	29.61
12	27.90	28.33	25.69	26.34	30.28	30.79	33.17	34.19	30.07	30.70	28.96	29.40
13	27.86	28.32	25.92	26.45	30.20	30.69	34.06	34.61	30.35	30.80	28.85	29.26
14	27.69	28.21	25.96	26.46	30.38	31.24	34.27	34.67	30.60	31.04	28.71	29.15
15	27.67	28.17	25.88	26.40	31.11	31.64	34.37	34.77	30.39	31.08	28.48	29.02
16	27.39	28.08	25.58	26.15	31.60	32.39	34.59	34.96	30.02	30.51	28.38	28.78
17	27.41	27.92	26.02	26.45	31.79	32.41	34.75	35.08	30.20	30.69	28.23	28.69
18	27.42	27.87	26.03	26.51	31.70	32.02	34.91	35.33	29.91	30.76	28.41	28.71
19	26.59	27.62	26.29	26.78	31.87	32.21	35.43	36.00	29.64	29.99	28.15	28.68
20	26.58	26.93	26.13	26.44	31.98	32.28	34.81	35.84	29.85	30.35	28.32	28.77
21	26.87	27.28	26.41	27.38	31.63	32.13	34.15	34.80	29.76	30.22	28.40	28.85
22	27.05	27.73	26.95	27.47	31.91	32.20	33.31	34.21	29.22	29.82	28.14	28.51
23	26.99	27.61	26.94	27.23	31.81	32.10	32.96	33.41	28.94	29.40	28.11	28.82
24	26.81	27.16	26.80	27.18	31.66	32.01	32.59	33.07	28.99	29.52	28.59	28.98
25	26.64	27.02	26.60	27.07	31.07	31.60	32.11	32.69	29.40	29.94	28.50	29.17
26	26.48	26.86	26.96	28.13	31.00	31.91	31.86	32.26	29.47	29.90	28.82	29.37
27	26.38	26.81	28.10	29.26	31.56	32.10	31.55	32.15	29.42	29.84	28.93	29.55
28	26.24	26.68	29.07	30.00	31.11	31.53	31.31	31.74	29.51	30.03	29.15	29.80
29	26.19	26.67	29.92	30.63	30.95	31.33	30.92	31.69	---	---	29.40	29.97
30	26.00	26.49	30.14	30.60	30.91	31.32	30.91	31.73	---	---	29.45	30.13
31	25.77	26.32	---	---	31.11	31.61	31.64	32.76	---	---	30.01	31.21
MONTH	25.77	29.72	25.12	30.63	29.81	32.41	30.91	36.00	28.94	32.96	28.11	31.21

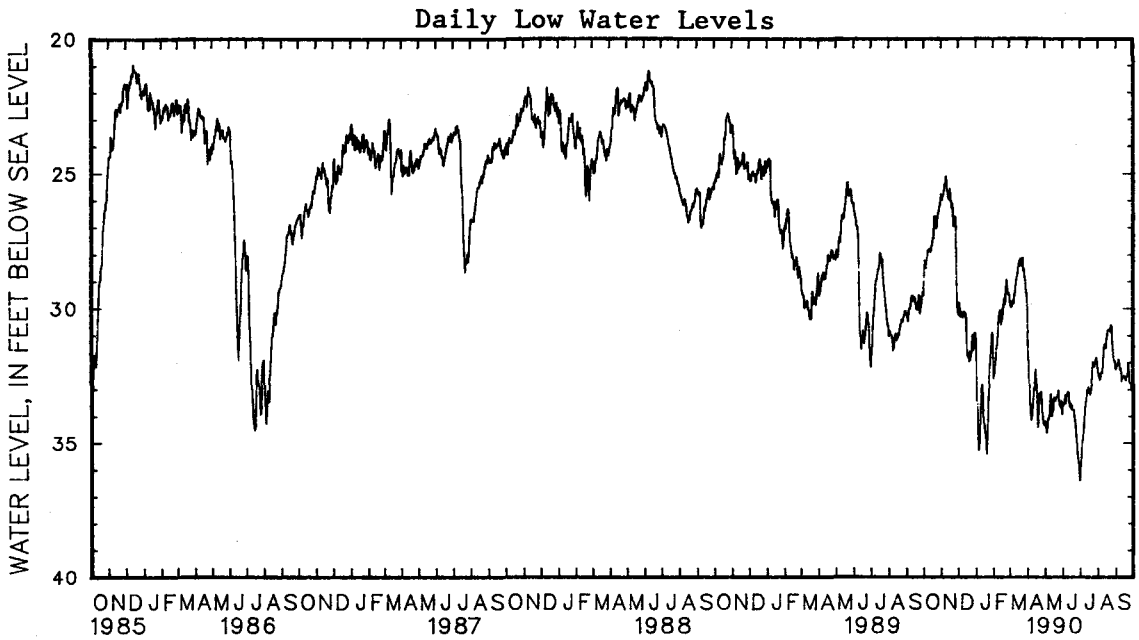
GROUND-WATER LEVELS

MARYLAND--Continued

PRINCE GEORGES COUNTY--Continued

PG Hf 41--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	31.29	31.83	34.32	34.68	33.58	33.88	35.93	36.57	32.36	32.88	32.23	32.59
2	31.85	32.41	34.45	34.98	33.58	34.00	35.55	36.04	32.50	32.87	32.15	32.50
3	32.53	33.65	34.63	34.99	33.41	33.79	35.04	35.55	32.50	32.97	32.13	32.64
4	33.58	33.90	34.49	34.87	33.23	33.75	34.91	35.27	32.65	33.07	32.01	32.38
5	33.58	34.33	34.12	34.45	33.52	33.86	34.87	35.16	32.63	32.96	31.89	32.38
6	34.12	34.57	34.13	34.49	33.27	33.55	34.50	34.82	32.39	32.77	31.98	32.47
7	34.16	34.54	33.99	34.41	33.14	33.68	34.19	34.54	32.37	32.89	32.03	32.51
8	34.01	34.43	33.99	34.34	33.18	33.60	33.95	34.40	32.40	32.80	32.27	32.79
9	33.66	34.12	33.45	34.00	33.10	33.57	33.68	34.14	32.21	32.73	32.23	32.66
10	33.28	33.72	33.20	33.70	33.18	33.72	33.47	33.94	31.79	32.50	32.37	32.86
11	32.95	33.47	33.55	34.27	33.51	33.98	33.28	33.72	31.41	32.06	32.73	33.15
12	33.04	33.45	34.01	34.41	33.67	34.06	33.03	33.60	31.32	31.73	32.55	32.99
13	32.78	33.33	33.86	34.30	33.53	33.87	33.13	33.57	31.37	31.78	32.54	32.91
14	32.33	32.98	33.79	34.15	33.73	34.12	32.94	33.44	31.47	31.90	32.53	32.95
15	32.28	33.04	33.40	33.85	33.61	34.00	32.99	33.34	31.16	31.69	32.50	33.02
16	33.16	33.95	33.32	33.61	33.77	34.17	33.09	33.66	31.01	31.45	32.58	32.97
17	33.98	34.55	33.33	33.58	33.78	34.15	33.20	33.62	30.85	31.23	32.63	33.24
18	34.45	34.97	33.44	33.76	33.77	34.17	33.10	33.49	30.77	31.25	32.67	33.12
19	33.79	34.50	33.33	33.76	33.78	34.43	32.98	33.35	30.76	31.20	32.52	32.97
20	33.26	33.82	33.30	33.66	34.08	34.71	32.86	33.23	30.77	31.29	32.50	33.07
21	33.18	33.56	33.28	33.83	34.17	34.81	32.64	33.07	30.83	31.25	32.43	33.01
22	33.31	33.69	33.20	33.58	34.36	35.12	32.19	32.76	30.79	31.20	32.01	32.65
23	33.12	33.74	33.06	33.80	34.67	35.34	31.98	32.47	30.62	31.13	32.34	32.74
24	33.39	34.12	33.42	34.06	34.91	35.54	32.12	32.60	30.69	31.37	32.73	33.09
25	33.76	34.43	33.61	34.14	35.21	35.71	32.16	32.59	31.20	31.64	32.78	33.09
26	34.00	34.75	33.49	34.11	35.47	35.99	32.04	32.51	31.52	31.90	32.79	33.08
27	34.30	34.79	33.61	34.10	35.69	36.06	31.92	32.34	31.75	32.13	33.03	33.34
28	34.31	34.83	33.72	34.26	35.79	36.31	31.91	32.32	31.90	32.26	32.98	33.27
29	34.35	34.76	33.45	34.43	36.38	36.93	31.83	32.21	31.96	32.27	33.00	33.33
30	34.20	34.67	33.95	34.45	36.39	36.91	31.98	32.50	31.96	32.59	32.85	33.25
31	---	---	33.59	34.10	---	---	32.20	32.64	32.26	32.55	---	---
MONTH	31.29	34.97	33.06	34.99	33.10	36.93	31.83	36.57	30.62	33.07	31.89	33.34



5 YEAR HYDROGRAPH

OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
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, April 22, 1975; lowest measured, 23.84 ft below sea level, Sept. 17, 1990.

WATER LEVEL, IN FEET BELOW SEA LEVEL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

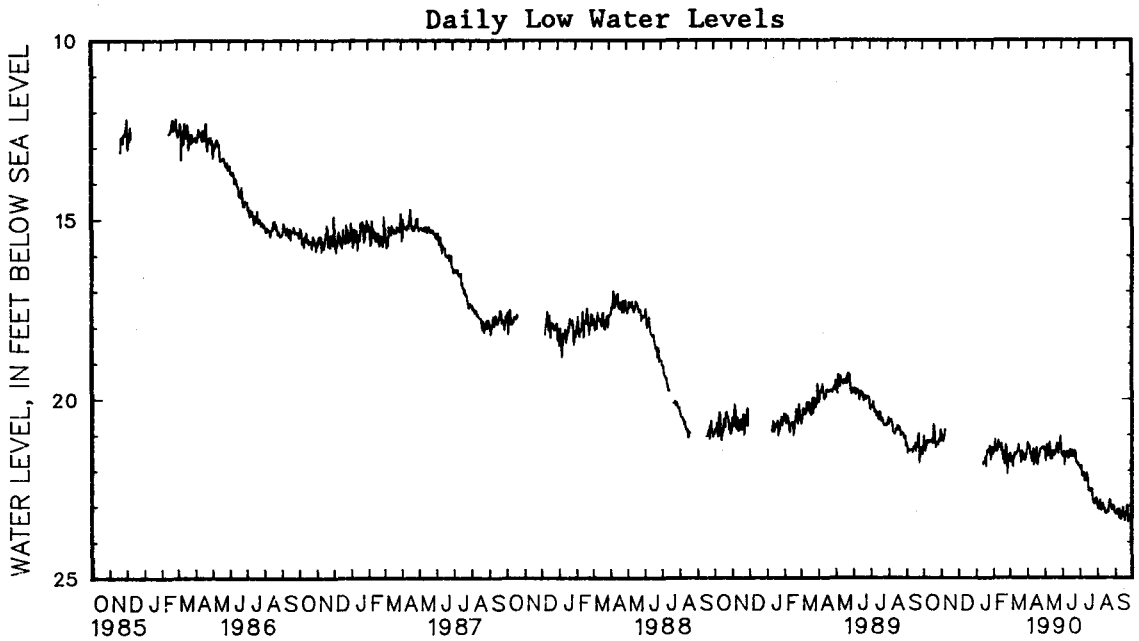
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	21.32	21.90	20.99	21.41	---	---	---	---	21.52	21.98	21.75	22.05
2	21.03	21.58	21.17	21.51	---	---	---	---	21.44	21.75	21.55	21.93
3	21.18	21.55	21.01	21.32	---	---	---	---	21.48	21.82	21.55	21.84
4	21.48	21.79	21.17	21.47	---	---	---	---	21.14	21.55	21.78	21.99
5	21.40	21.75	21.19	21.46	---	---	---	---	21.38	21.79	21.65	21.92
6	21.24	21.48	21.02	21.33	---	---	---	---	21.33	21.67	21.67	21.99
7	21.30	21.64	21.03	21.32	---	---	---	---	21.47	21.79	21.91	22.20
8	21.17	21.51	20.86	21.21	---	---	---	---	21.46	21.87	21.73	22.05
9	21.16	21.64	---	---	---	---	---	---	21.23	21.62	21.59	21.93
10	21.24	21.48	---	---	---	---	---	---	21.17	21.68	21.64	22.01
11	21.17	21.61	---	---	---	---	---	---	21.36	21.79	21.53	21.87
12	21.21	21.57	---	---	---	---	---	---	21.29	21.85	21.54	21.88
13	21.19	21.65	---	---	---	---	21.78	22.24	21.28	21.86	21.56	21.88
14	21.20	21.64	---	---	---	---	21.85	22.24	21.37	21.84	21.51	21.84
15	21.16	21.56	---	---	---	---	21.80	22.08	21.46	21.90	21.48	21.80
16	21.14	21.55	---	---	---	---	21.78	22.10	21.26	21.55	21.44	21.74
17	21.12	21.48	---	---	---	---	21.71	22.03	21.45	22.11	21.28	21.68
18	21.26	21.63	---	---	---	---	21.62	21.88	21.70	22.24	21.45	21.73
19	20.71	21.44	---	---	---	---	21.90	22.19	21.48	21.75	21.47	21.81
20	20.76	21.04	---	---	---	---	21.61	22.08	21.66	22.24	21.56	22.00
21	20.92	21.36	---	---	---	---	21.44	21.68	21.84	22.16	21.79	22.10
22	21.15	21.77	---	---	---	---	21.48	21.79	21.52	21.95	21.54	21.83
23	21.37	21.70	---	---	---	---	21.47	21.75	21.28	21.63	21.47	21.91
24	21.26	21.54	---	---	---	---	21.50	21.79	21.37	21.90	21.70	22.04
25	21.25	21.51	---	---	---	---	21.36	21.76	21.90	22.61	21.54	21.87
26	21.23	21.53	---	---	---	---	21.32	21.90	22.12	22.61	21.59	22.05
27	21.29	21.60	---	---	---	---	21.69	22.07	21.59	22.18	21.71	22.11
28	21.15	21.48	---	---	---	---	21.72	22.07	21.61	22.02	21.74	22.09
29	21.19	21.52	---	---	---	---	21.37	22.08	---	---	21.69	22.08
30	21.09	21.49	---	---	---	---	21.35	21.76	---	---	21.61	22.03
31	20.85	21.35	---	---	---	---	21.55	21.92	---	---	21.46	21.98
MONTH	20.71	21.90	20.86	21.51	---	---	21.32	22.24	21.14	22.61	21.28	22.20

MARYLAND--Continued

PRINCE GEORGES COUNTY--Continued

PG Hf 42--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	21.41	21.71	21.43	21.68	21.57	21.89	21.92	22.17	22.88	23.33	23.15	23.48
2	21.23	21.69	21.49	21.97	21.62	21.88	21.91	22.31	23.07	23.31	23.23	23.50
3	21.29	21.61	21.75	21.98	21.56	21.77	21.97	22.16	23.05	23.38	23.22	23.72
4	21.36	21.63	21.57	21.93	21.48	22.07	21.88	22.40	23.10	23.37	23.23	23.60
5	21.35	21.79	21.28	21.59	21.87	22.15	22.16	22.50	22.91	23.20	23.10	23.42
6	21.55	21.88	21.45	21.92	21.55	21.81	22.17	22.43	22.83	23.29	23.10	23.47
7	21.52	21.96	21.55	21.86	21.52	22.01	22.07	22.41	23.01	23.45	23.13	23.48
8	21.68	22.04	21.60	21.99	21.62	21.96	22.12	22.41	23.12	23.46	23.33	23.72
9	21.76	22.13	21.59	21.91	21.48	21.77	22.07	22.50	23.01	23.38	23.08	23.54
10	21.56	21.90	21.21	21.84	21.47	21.86	22.29	22.66	22.93	23.26	23.15	23.48
11	21.41	22.07	21.40	22.04	21.67	22.03	22.31	22.62	22.93	23.29	23.39	23.69
12	21.86	22.10	21.70	22.07	21.67	22.04	22.19	22.59	23.10	23.45	23.35	23.63
13	21.82	22.13	21.47	21.83	21.49	21.79	22.30	22.66	23.07	23.38	23.30	23.59
14	21.58	22.01	21.70	22.02	21.53	21.82	22.08	22.49	23.07	23.55	23.15	23.46
15	21.46	21.74	21.62	21.95	21.42	21.72	22.16	22.45	23.20	23.47	23.04	23.49
16	21.50	21.75	21.48	21.76	21.53	21.88	22.27	22.85	23.17	23.52	23.18	23.49
17	21.38	21.72	21.46	21.68	21.63	21.91	22.59	22.89	23.21	23.52	23.27	23.84
18	21.81	22.10	21.59	21.84	21.54	21.84	22.58	22.87	23.19	23.48	23.42	23.82
19	21.86	22.05	21.55	21.82	21.45	21.90	22.52	22.91	23.13	23.52	23.21	23.63
20	21.69	21.95	21.52	21.78	21.61	22.03	22.60	22.96	23.18	23.57	23.17	23.64
21	21.59	21.84	21.42	21.83	21.57	22.01	22.60	23.03	23.06	23.49	23.25	23.65
22	21.62	21.96	21.31	21.61	21.64	21.99	22.62	22.96	22.86	23.29	22.97	23.45
23	21.45	21.78	21.26	21.87	21.45	21.86	22.53	22.97	22.81	23.14	23.22	23.47
24	21.41	21.78	21.50	21.93	21.52	21.99	22.79	23.17	22.88	23.22	23.45	23.70
25	21.41	21.77	21.54	21.89	21.75	22.11	22.89	23.20	23.01	23.32	23.29	23.60
26	21.37	21.74	21.26	21.86	21.80	22.15	22.93	23.27	23.09	23.39	23.25	23.44
27	21.36	21.75	21.35	21.74	21.78	22.07	22.93	23.22	23.11	23.41	23.35	23.58
28	21.39	21.78	21.32	21.69	21.86	22.18	22.95	23.24	22.99	23.26	23.28	23.48
29	21.41	21.74	21.04	21.55	21.83	22.18	22.81	23.13	22.98	23.24	23.27	23.51
30	21.35	21.67	21.37	21.83	21.87	22.22	22.79	23.01	23.01	23.47	23.25	23.51
31	---	---	21.56	21.81	---	---	22.77	23.06	23.19	23.38	---	---
MONTH	21.23	22.13	21.04	22.07	21.42	22.22	21.88	23.27	22.81	23.57	22.97	23.84



5 YEAR HYDROGRAPH

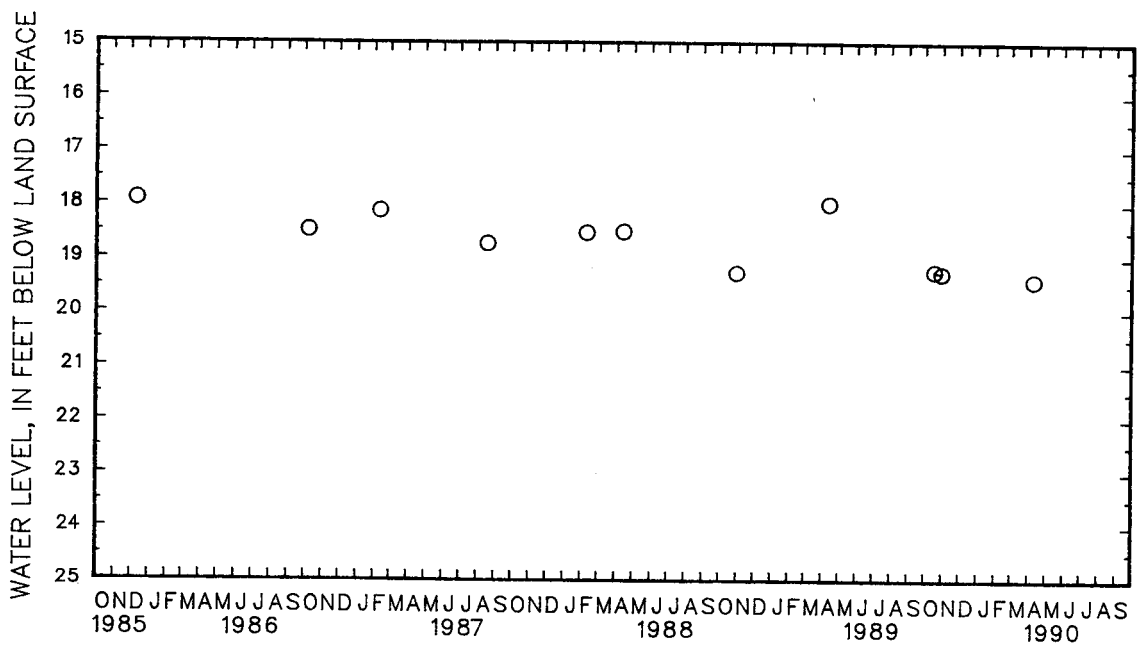
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

QUEEN ANNES COUNTY

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.
REMARKS.--Maryland Water-Level Network observation well. 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, Oct. 10, 1971; lowest measured, 19.41 ft below land surface, April 10, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	19.24	OCT 31	19.28	APR 10	19.41

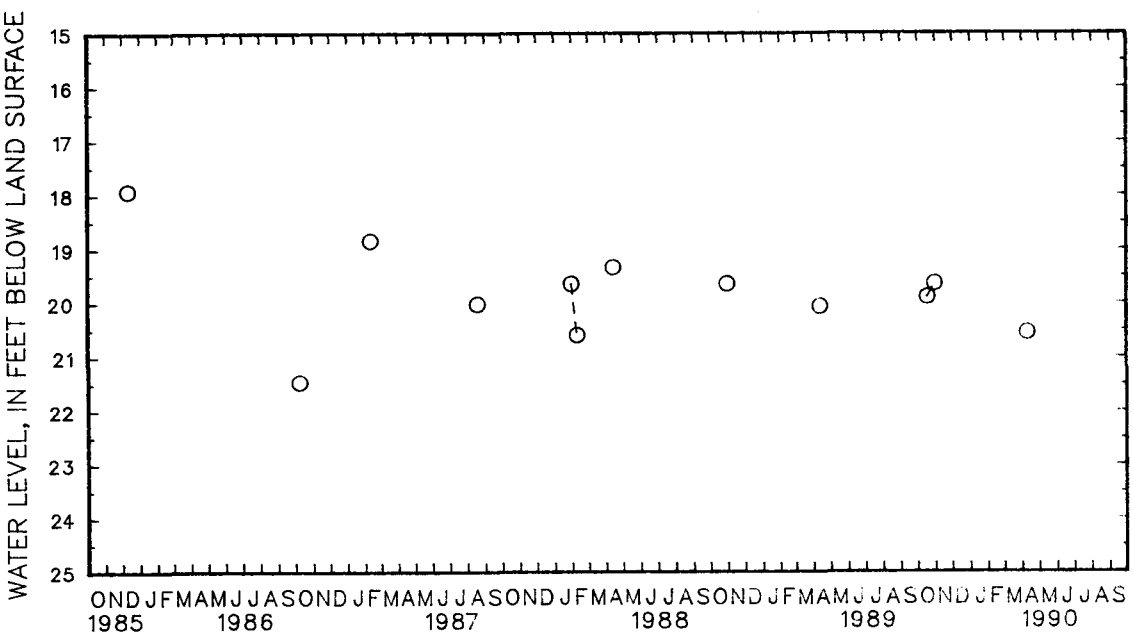


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well. 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, Sept. 11, 1971; lowest measured, 21.47 ft below land surface, Oct. 8, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	19.90	OCT 31	19.65	APR 10	20.56

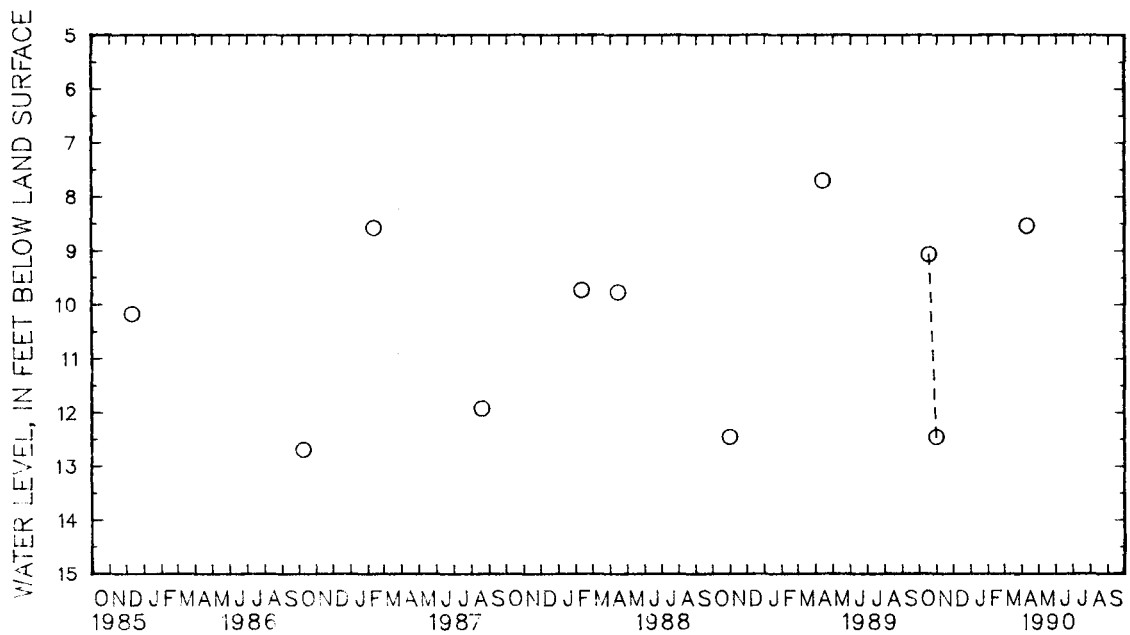


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well. 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, March 6, 1979; lowest measured, 13.00 ft below land surface, Sept. 30, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	9.07	OCT 31	12.46	APR 10	8.53

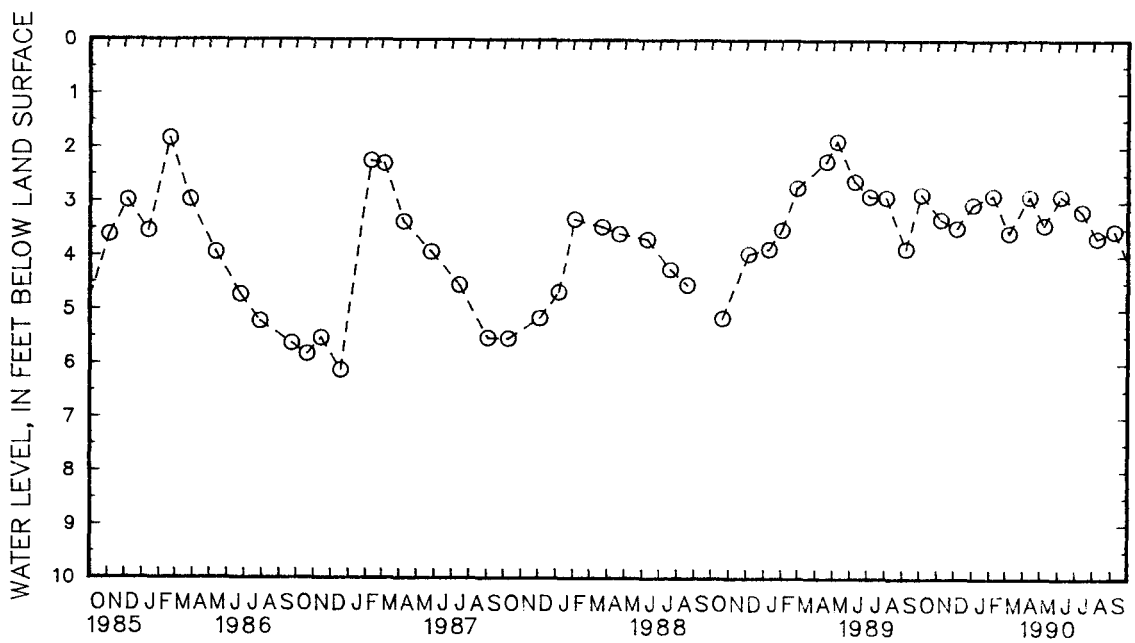


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well. Reported water level 4.0 ft below land surface, 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, Feb. 8, 1973; lowest measured, 6.47 ft below land surface, Jan. 3, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	2.86	DEC 6	3.48	FEB 6	2.88	APR 12	2.90	JUN 5	2.89	AUG 8	3.67
NOV 8	3.32	JAN 2	3.04	MAR 7	3.57	MAY 8	3.43	JUL 13	3.17	SEP 7	3.54



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

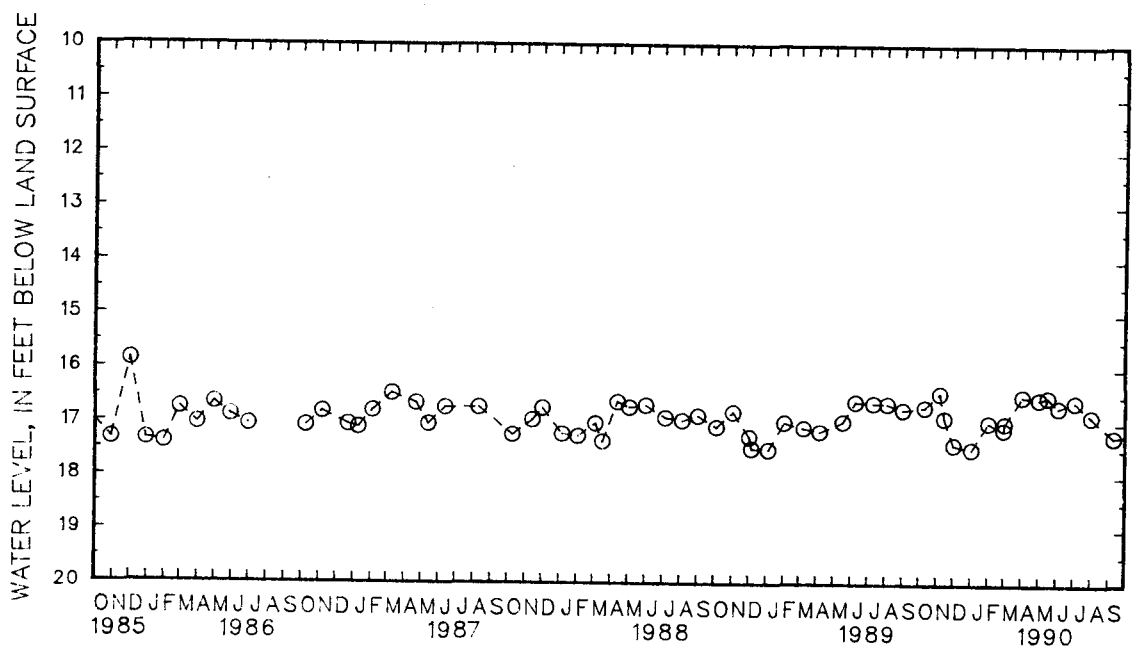
MARYLAND--Continued

QUEEN ANNES COUNTY--Continued

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.
REMARKS.--Kent Island ground-water monitoring network well.
PERIOD OF RECORD.--April 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.87 ft below land surface, Dec. 2, 1985; lowest measured, 17.51 ft below land surface, Jan. 4, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	16.70	DEC 1	17.40	FEB 28	17.11	MAY 1	16.54	JUL 3	16.59
NOV 6	16.44	JAN 2	17.48	MAR 2	16.99	16	16.50	AUG 1	16.86
14	16.90	FEB 1	16.98	APR 2	16.49	JUN 4	16.69	SEP 10	17.25



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

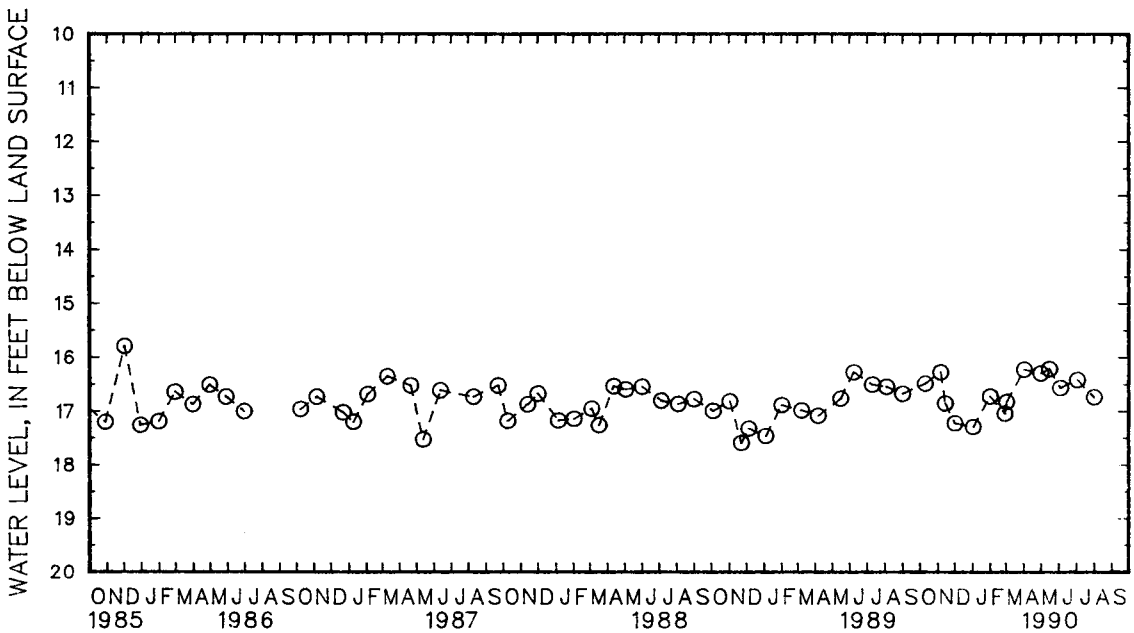
MARYLAND--Continued

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.
REMARKS.--Kent Island ground-water monitoring network well.
PERIOD OF RECORD.--May 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.80 ft below land surface, Dec. 2, 1985; lowest measured, 17.60 ft below land surface, Nov. 22, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	16.49	DEC 1	17.23	FEB 27	17.05	MAY 1	16.30	JUL 3	16.42
NOV 6	16.28	JAN 2	17.30	MAR 2	16.83	16	16.22	AUG 1	16.74
14	16.86	FEB 1	16.73	APR 2	16.23	JUN 4	16.57		

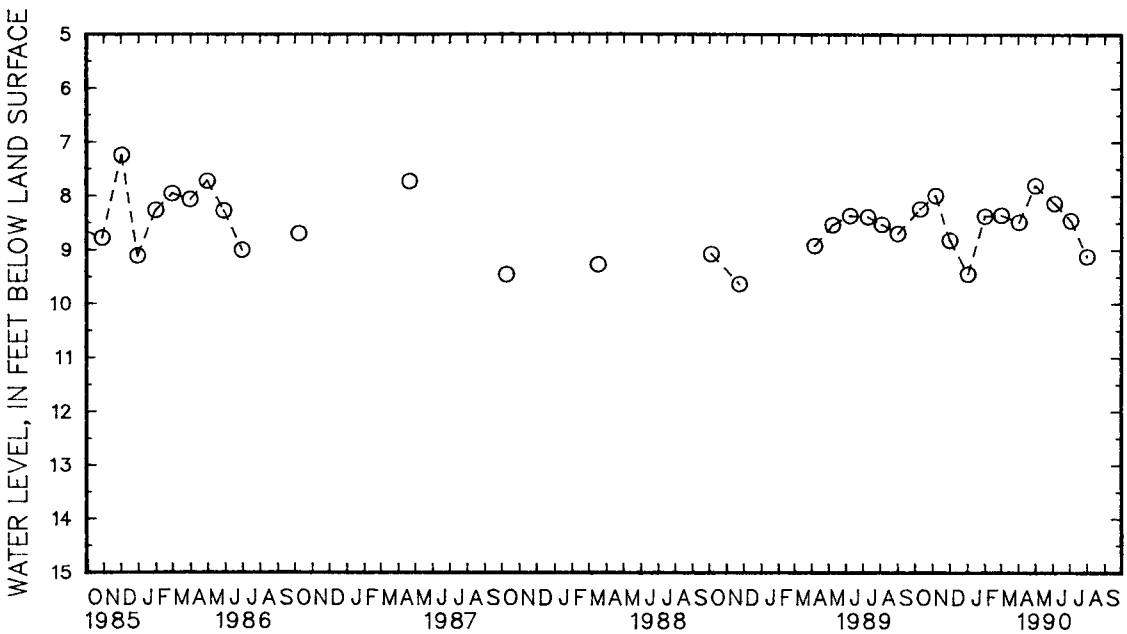


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Kent Island ground-water monitoring network well. 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, Dec. 2, 1985; lowest measured, 9.65 ft below land surface, Nov. 23, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	8.25	DEC 1	8.83	FEB 1	8.38	APR 2	8.49	JUN 4	8.14	AUG 1	9.13
NOV 6	8.00	JAN 2	9.46	MAR 2	8.36	MAY 1	7.81	JUL 3	8.46		



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

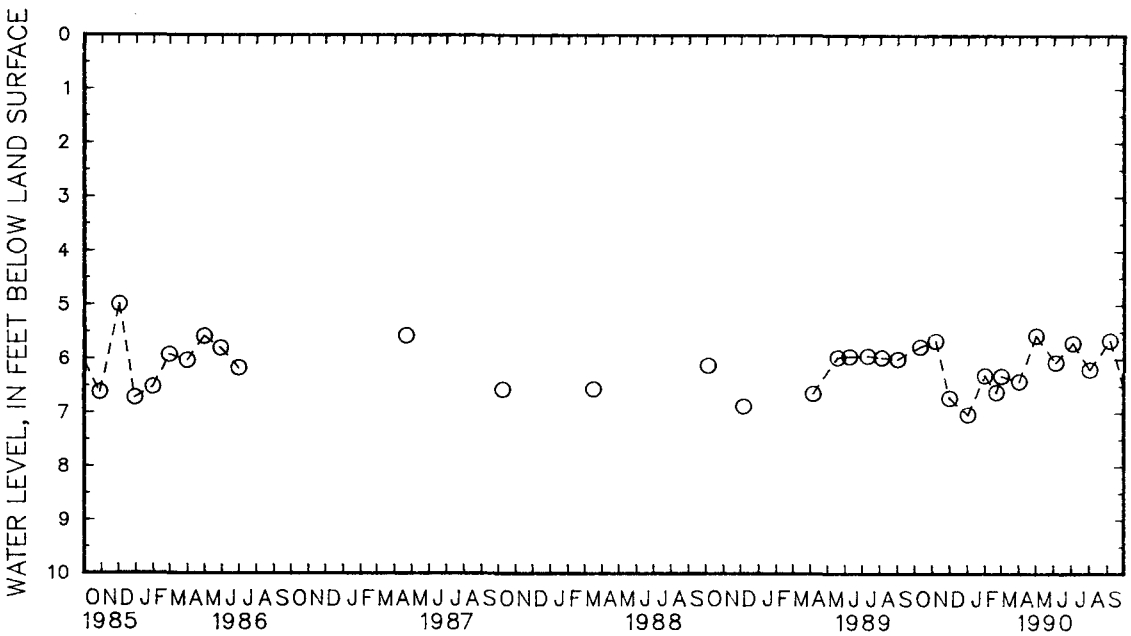
MARYLAND--Continued

QUEEN ANNES COUNTY--Continued

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.
REMARKS.--Kent Island ground-water monitoring network well. 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, Dec. 2, 1985; lowest measured, 7.04 ft below land surface, Jan. 2, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	5.78	JAN 2	7.04	MAR 2	6.32	JUN 4	6.07	SEP 5	5.66
NOV 6	5.67	FEB 1	6.31	APR 2	6.42	JUL 3	5.71		
DEC 1	6.73	21	6.62	MAY 1	5.57	AUG 1	6.20		



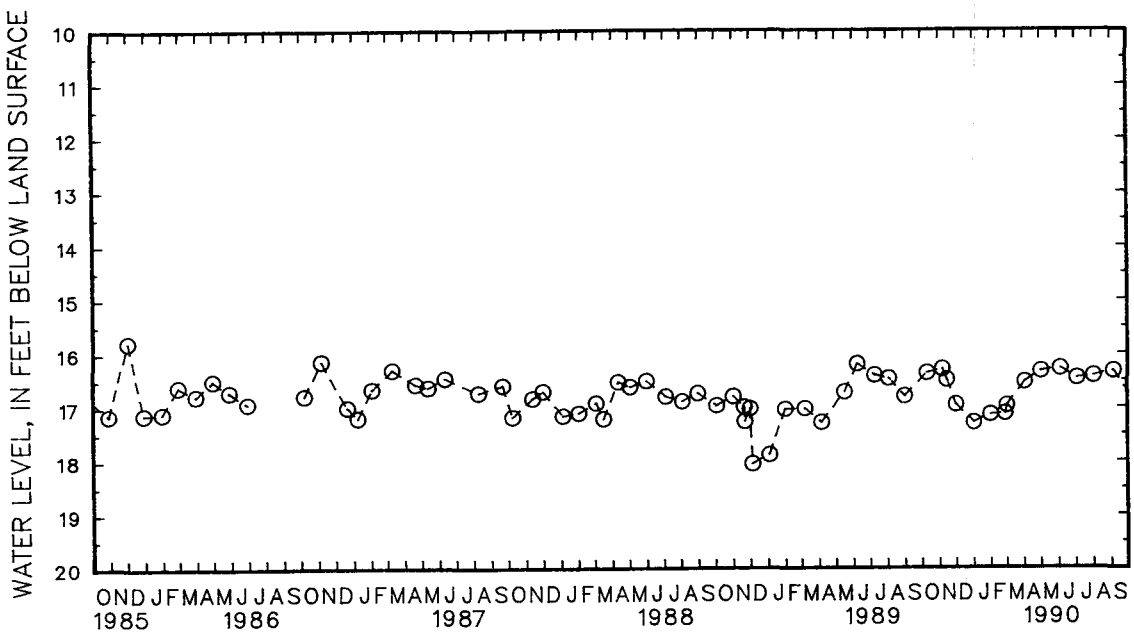
5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

QUEEN ANNES COUNTY--Continued

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.
REMARKS.--Kent Island ground-water monitoring network well.
PERIOD OF RECORD.--April 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.78 ft below land surface, Dec. 2, 1985; lowest measured, 18.06 ft below land surface, Dec. 5, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	16.37	DEC 1	16.96	FEB 27	17.13	MAY 1	16.34	AUG 1	16.43
NOV 6	16.30	JAN 2	17.30	MAR 2	16.98	JUN 4	16.29	SEP 5	16.34
14	16.50	FEB 1	17.15	APR 2	16.54	JUL 3	16.47		

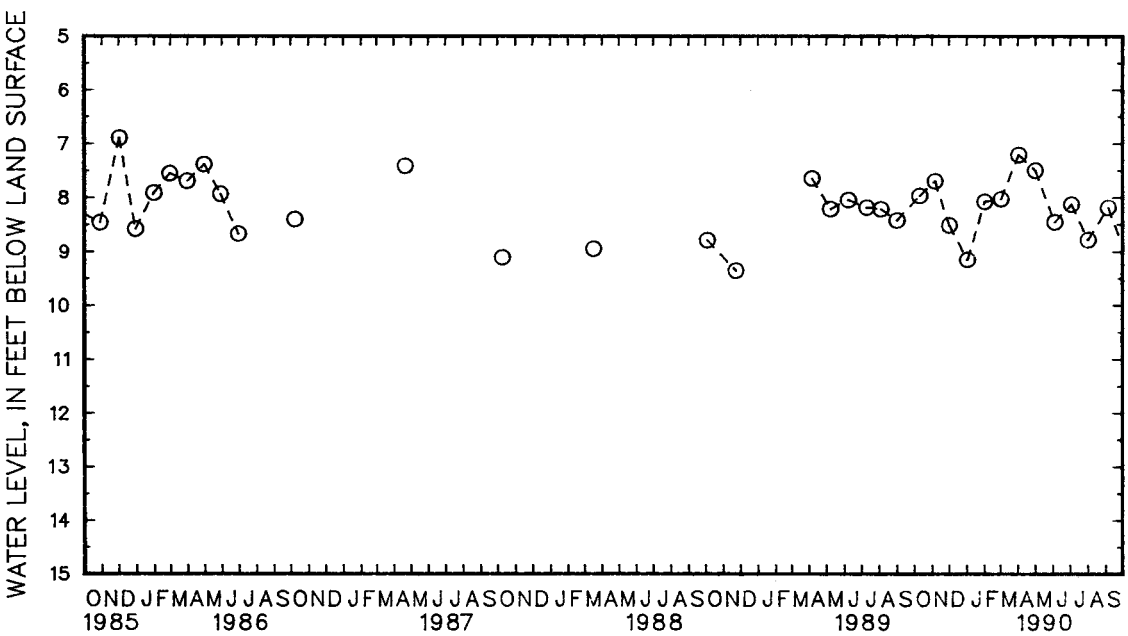


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Kent Island ground-water monitoring network well.
PERIOD OF RECORD.--April 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.90 ft below land surface, Dec.2, 1985; lowest measured, 9.37 ft below land surface, Nov. 23, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	7.97	DEC 1	8.52	FEB 1	8.08	APR 2	7.21	JUN 4	8.46	AUG 1	8.79
NOV 6	7.70	JAN 2	9.16	MAR 2	8.03	MAY 1	7.50	JUL 3	8.13	SEP 5	8.19

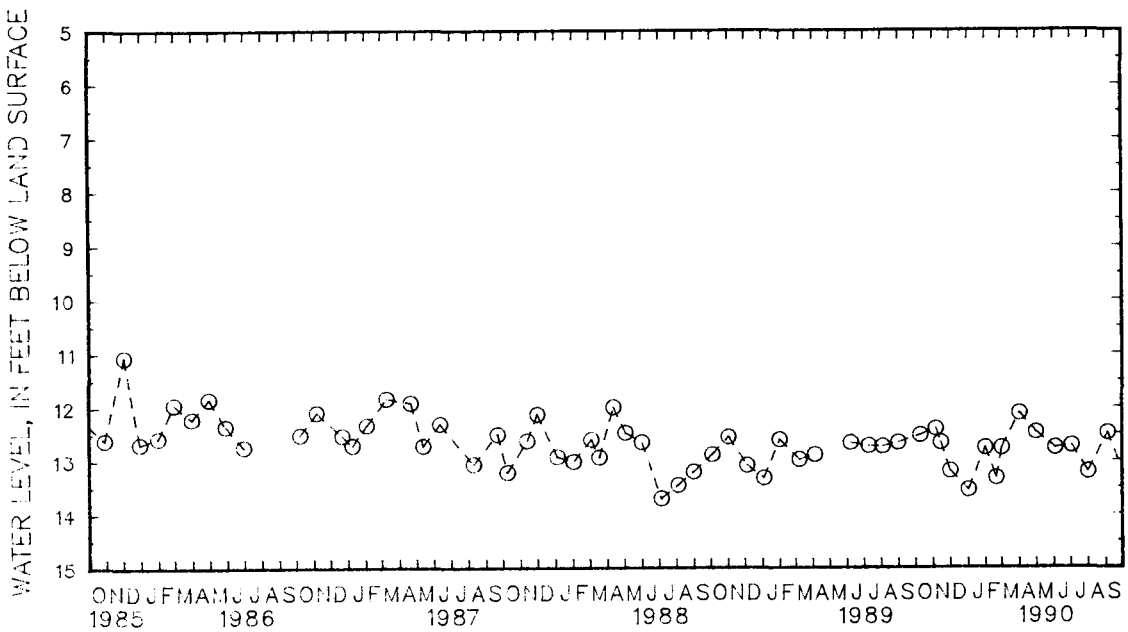


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Kent Island ground-water monitoring network well.
PERIOD OF RECORD.--April 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.07 ft below land surface, Dec. 2, 1985; lowest measured, 13.71 ft below land surface, July 5, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	12.53	DEC 1	13.20	FEB 20	13.33	MAY 1	12.48	AUG 1	13.22
NOV 6	12.41	JAN 2	13.55	MAR 2	12.77	JUN 4	12.77	SEP 5	12.49
15	12.67	FEB 1	12.77	APR 2	12.12	JUL 3	12.73		

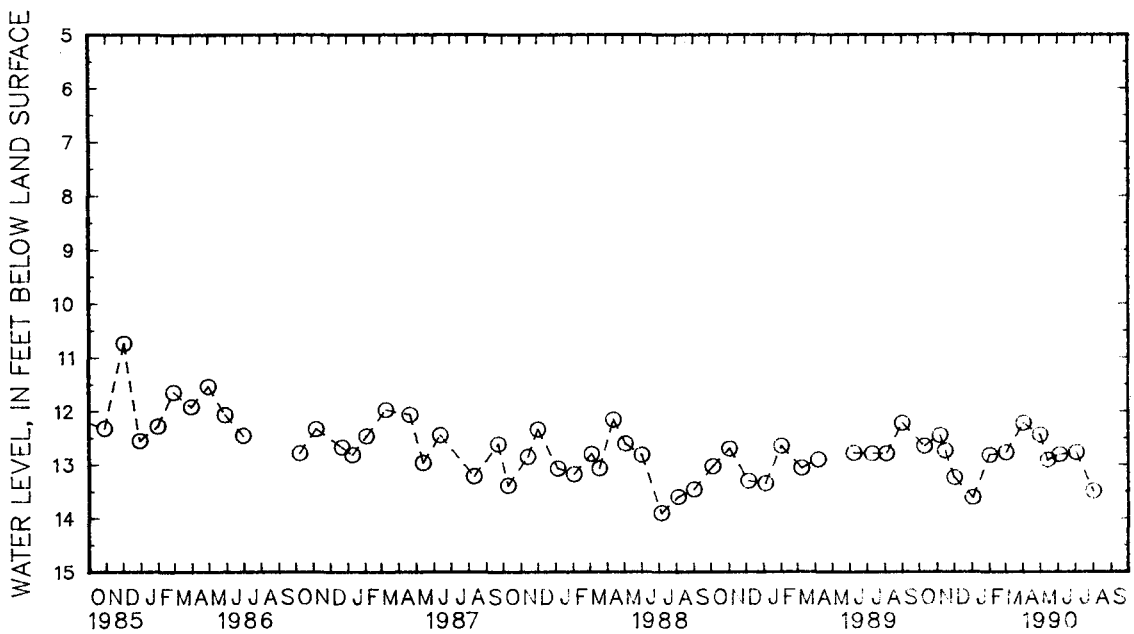


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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, 1.90 ft above land surface.
REMARKS.--Kent Island ground-water monitoring network well.
PERIOD OF RECORD.--April 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.74 ft below land surface, Dec. 2, 1985; lowest measured, 13.90 ft below land surface, July 5, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	12.65	DEC 1	13.24	MAR 2	12.77	MAY 14	12.91	AUG 1	13.49
NOV 6	12.45	JAN 2	13.61	APR 2	12.22	JUN 4	12.81		
15	12.74	FEB 1	12.82	MAY 1	12.44	JUL 3	12.77		

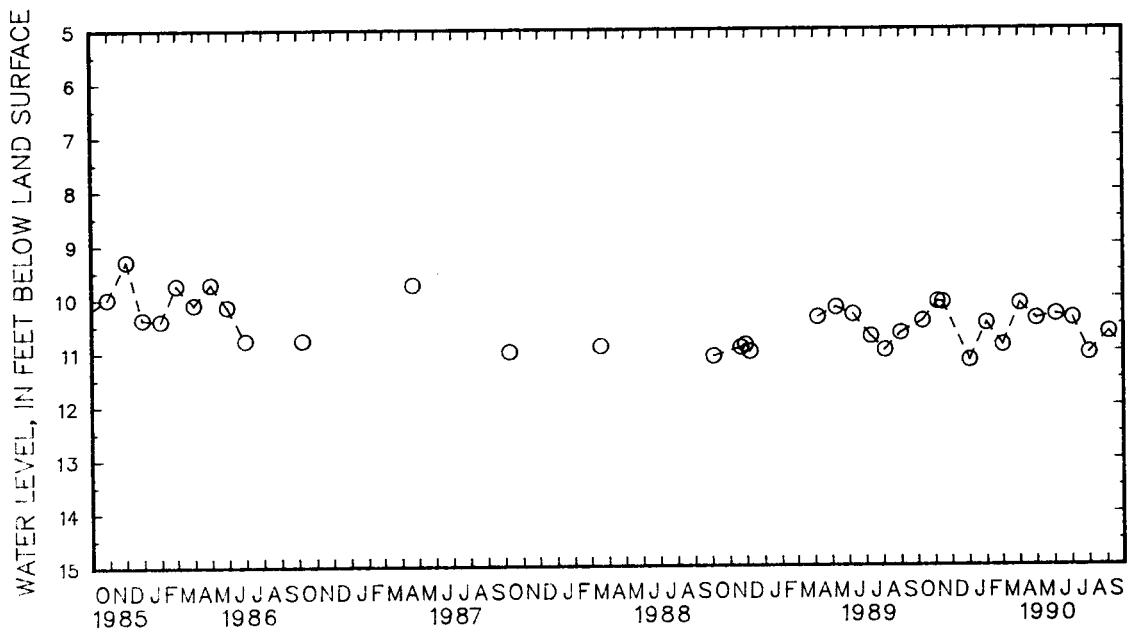


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Kent Island ground-water monitoring network well. 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, Dec. 2, 1985; lowest measured, 11.18 ft below land surface, Jan. 2, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	10.45	NOV 15	10.10	FEB 1	10.49	APR 2	10.13	JUN 4	10.33	AUG 1	11.05
NOV 6	10.09	JAN 2	11.18	MAR 2	10.90	MAY 1	10.41	JUL 3	10.40	SEP 5	10.66

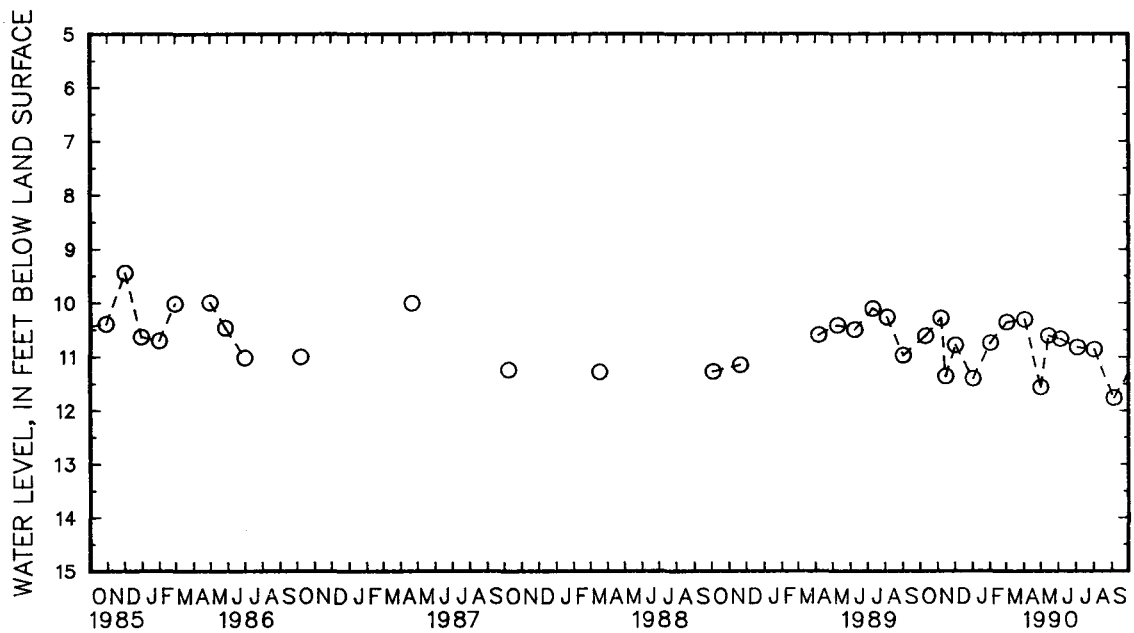


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Kent Island ground-water monitoring network well. 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, Dec. 2, 1985; lowest measured, 11.77 ft below land surface, Sept. 5, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	10.62	DEC 1	10.79	MAR 2	10.36	MAY 14	10.61	AUG 1	10.87
NOV 6	10.29	JAN 2	11.41	APR 2	10.31	JUN 4	10.67	SEP 5	11.77
15	11.37	FEB 1	10.75	MAY 1	11.57	JUL 3	10.83		

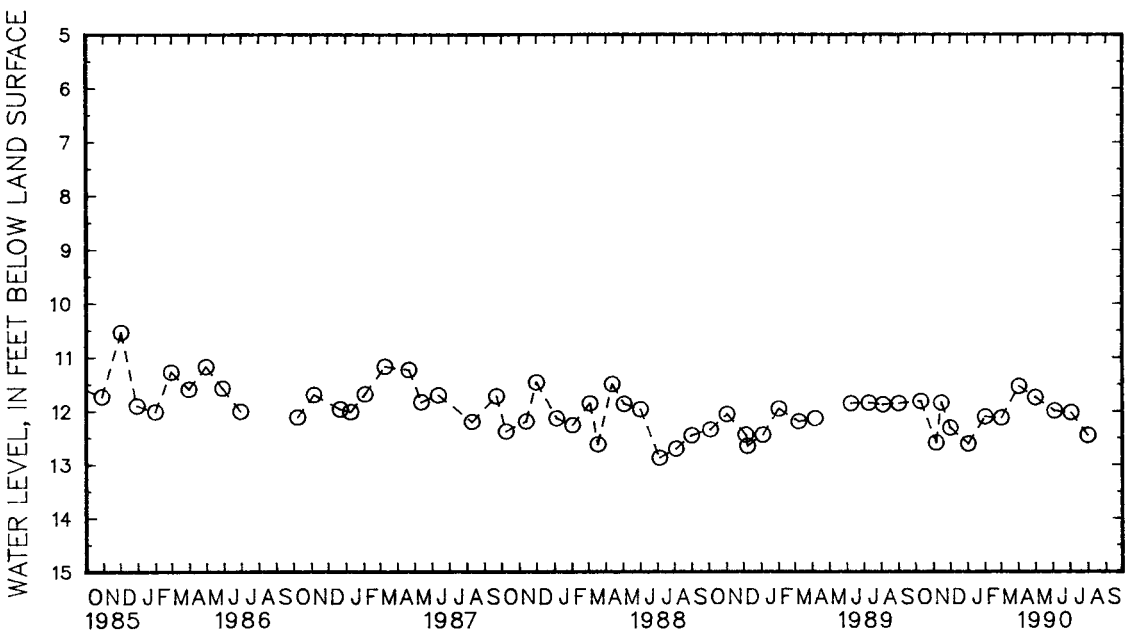


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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, 2.15 ft above land-surface datum.
REMARKS.--Maryland Water-Level Network observation well.
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 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	11.82	NOV 15	11.85	JAN 2	12.62	MAR 2	12.13	MAY 1	11.75	JUL 3	12.03
NOV 6	12.60	DEC 1	12.32	FEB 1	12.11	APR 2	11.54	JUN 4	12.00	AUG 1	12.46

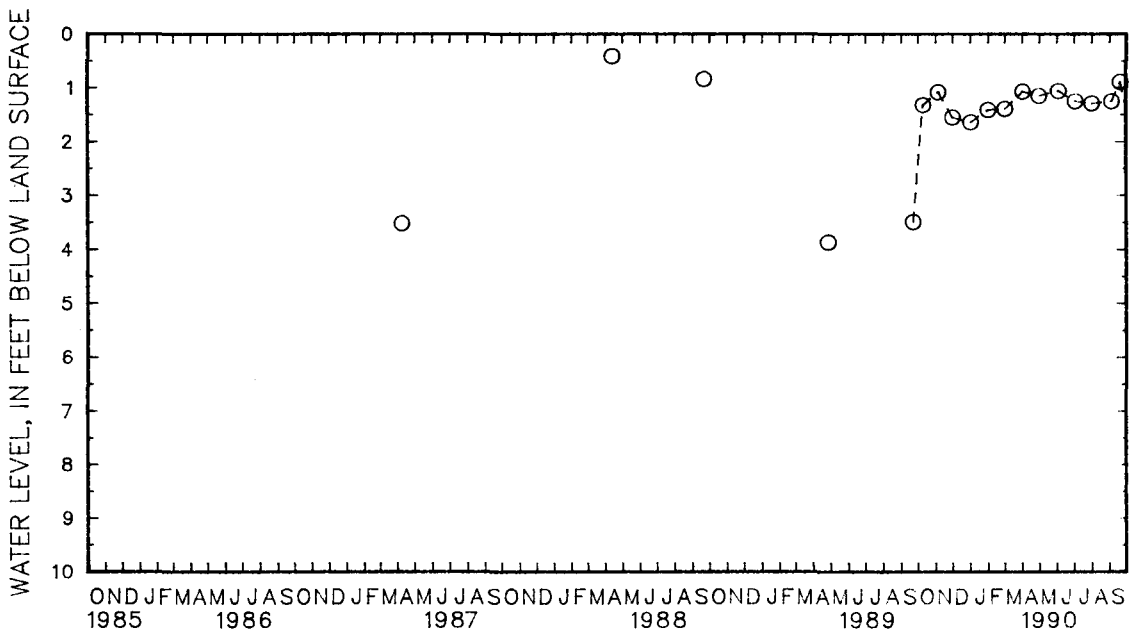


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

WELL NUMBER.--QA Eb 110. SITE ID.--385751076171603. PERMIT NUMBER.--QA-73-2979.
LOCATION.--Lat 38°57'51", long 76°17'16", Hydrologic Unit 02060002, near Chester, Kent Island.
Owner: U.S. Geological Survey.
AQUIFER.--Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 2,485; casing diameter 6 in., to 2,413 ft, 2,423 to 2,465 ft and 2,475 to 2,485 ft; screen diameter 4 in., from 2,413 to 2,423 ft, and 2,465 to 2,475 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 14 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of casing, 3.36 ft above land surface.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--January, April, May, and October to December 1980; March, September, and November 1981; January to May, August 1982; October 1982 to April 1983, August 1983; April 1984, September 1985, April 1987, April and September 1988; October 1989 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.99 ft above land surface, Jan 21, 1980; lowest measured, 3.53 ft below land surface, April 9, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	1.32	DEC 1	1.55	FEB 1	1.41	APR 2	1.07	JUN 4	1.06	AUG 1	1.29
NOV 6	1.08	JAN 2	1.64	MAR 2	1.39	MAY 1	1.15	JUL 3	1.25	SEP 5	1.25

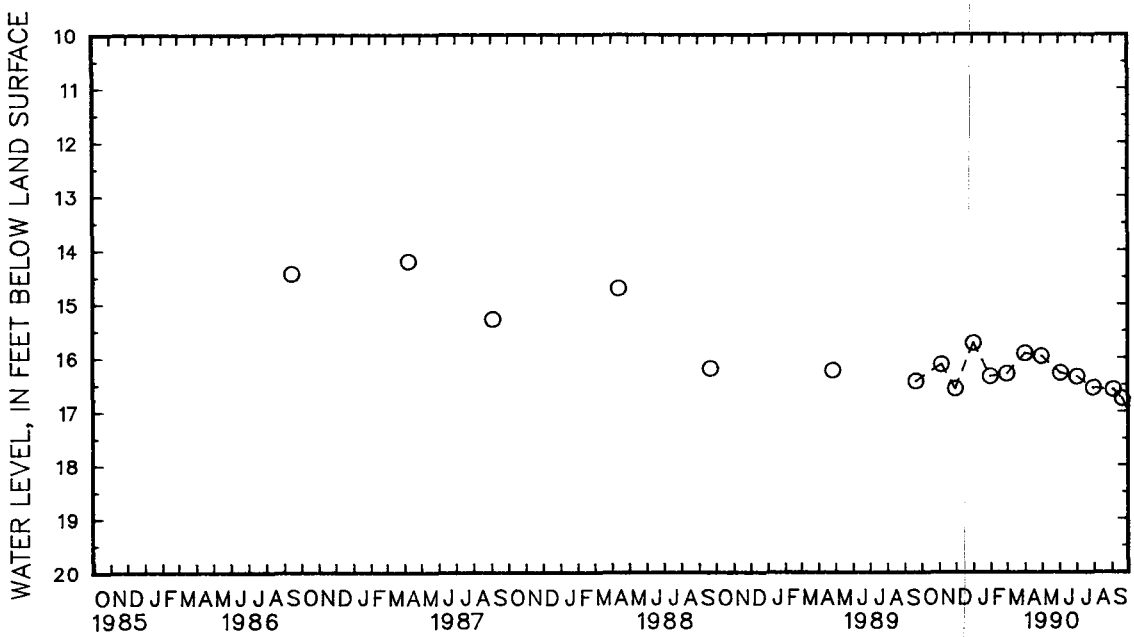


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

WELL NUMBER.--QA Eb 111. SITE ID.--385751076171601. PERMIT NUMBER.--QA-73-3122.
LOCATION.--Lat 38°57'51", long 76°17'16", Hydrologic Unit 02060002, near Chester, Kent Island.
Owner: U.S. Geological Survey.
AQUIFER.--Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 985 ft; casing diameter 4 in., to 955 ft, and 965 to 975 ft; screen diameter 4 in., from 955 to 965 ft, and 975 to 985 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 14 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of casing, 1.41 ft above land surface.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--April 1984, March and September 1985, September 1986, April and September 1987, April and September 1988, November 1989 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.59 ft below land surface, March 22, 1985; lowest measured, 16.60 ft below land surface, Sept. 5, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 6	16.14	JAN 2	15.74	MAR 2	16.31	MAY 1	15.98	JUL 3	16.36	SEP 5	16.60
DEC 1	16.59	FEB 1	16.36	APR 2	15.93	JUN 4	16.29	AUG 1	16.57		



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

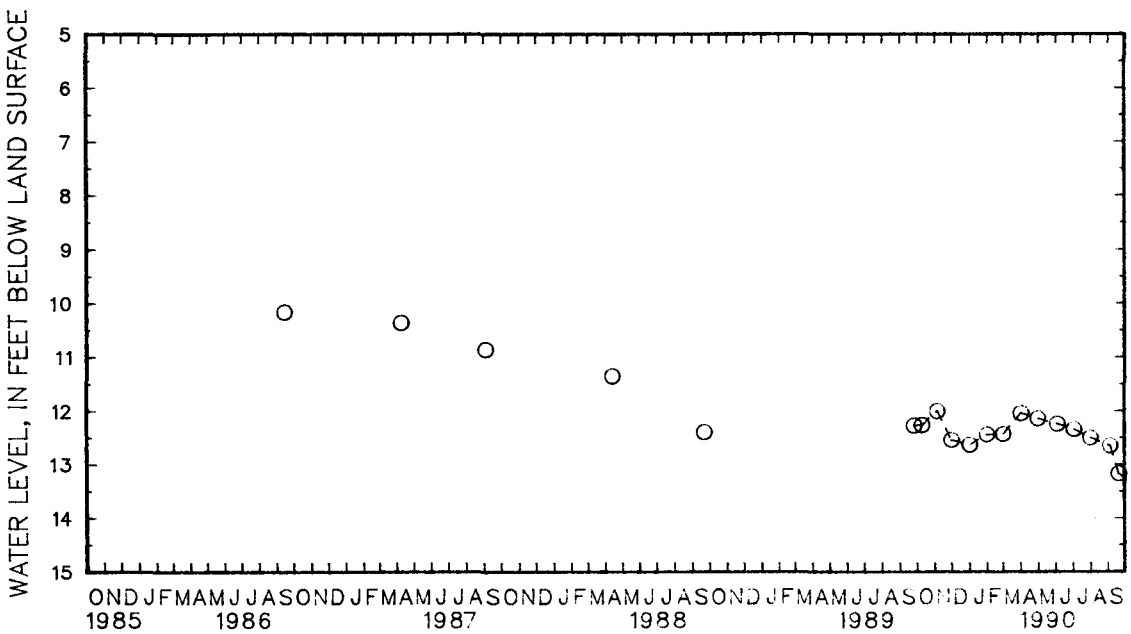
MARYLAND--Continued

QUEEN ANNES COUNTY--Continued

WELL NUMBER.--QA Eb 112. SITE ID.--385751076171602. PERMIT NUMBER.--QA-73-3123.
LOCATION.--Lat 38°57'51", long 76°17'16", Hydrologic Unit 02060002, near Chester, Kent Island.
Owner: U.S. Geological Survey.
AQUIFER.--Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 1,679 ft; casing diameter 4 in., to 1,652 ft, and 1,662 to 1,669 ft; screen diameter 4 in., from 1,652 to 1,662 ft, and 1,669 to 1,679 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel.
DATUM.--Elevation of land surface is 14 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring Point: Top of casing, 1.35 ft above land surface.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--September 1985, September 1986, April and September 1987, September 1988, September 1989 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.21 ft below land surface, Sept. 13, 1985; lowest measured, 12.66 ft below land surface, Sept. 5, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	12.27	DEC 1	12.55	FEB 1	12.45	APR 2	12.05	JUN 4	12.25	AUG 1	12.51
NOV 6	12.01	JAN 2	12.64	MAR 2	12.44	MAY 1	12.15	JUL 3	12.35	SEP 5	12.66



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Kent Island ground-water monitoring network well.
PERIOD OF RECORD.--April 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.05 ft below land surface, April 18, 1989; lowest measured, 19.47 ft below land surface, Aug. 13 and 16, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	17.58	17.08	16.93	16.83	17.03	16.99	17.47	17.14	17.06	16.93	16.94	16.84
2	17.67	17.57	16.97	16.90	17.03	16.72	17.50	17.47	16.96	16.83	16.84	16.73
3	---	---	16.95	16.81	17.01	16.73	17.52	17.48	17.03	16.89	16.88	16.70
4	---	---	17.01	16.95	17.07	16.95	17.51	17.32	16.91	16.73	17.02	16.88
5	17.68	17.54	17.00	16.93	16.95	16.88	17.43	17.34	17.06	16.91	17.01	16.91
6	17.59	17.54	16.93	16.79	16.92	16.82	17.44	17.29	16.90	16.79	17.06	16.90
7	---	---	16.80	16.75	17.15	16.83	17.40	17.29	16.93	16.79	17.13	17.02
8	---	---	16.77	16.55	17.13	17.03	17.52	17.26	16.94	16.79	17.01	16.89
9	---	---	16.62	16.46	17.07	17.03	17.27	17.08	---	---	16.89	16.75
10	---	---	16.73	16.55	17.04	16.97	17.14	17.00	---	---	16.91	16.80
11	17.29	17.09	---	---	17.02	16.90	17.14	16.89	16.80	16.74	16.91	16.77
12	17.28	17.16	17.03	16.70	17.04	16.93	17.10	16.95	16.95	16.75	16.87	16.76
13	17.25	17.16	17.01	16.86	17.00	16.92	17.38	17.09	---	---	16.84	16.74
14	17.22	17.15	16.89	16.77	16.99	16.87	17.38	17.30	---	---	16.79	16.72
15	17.23	17.13	16.82	16.65	16.95	16.72	17.35	17.23	---	---	16.77	16.70
16	17.24	17.15	16.77	16.46	17.18	16.84	17.32	17.26	---	---	16.73	16.66
17	17.24	17.15	16.86	16.77	17.27	17.18	17.27	17.14	---	---	16.68	16.54
18	17.28	17.18	17.08	16.79	17.33	17.27	17.23	17.07	17.06	16.78	16.80	16.58
19	17.26	16.87	17.09	16.90	17.34	17.17	17.34	17.24	---	---	16.80	16.68
20	16.87	16.74	16.90	16.70	17.22	17.17	17.30	17.06	17.04	16.82	16.78	16.68
21	16.90	16.77	17.19	16.79	17.30	17.11	17.12	17.00	17.00	16.86	16.92	16.78
22	---	---	17.22	17.03	17.51	17.31	17.13	17.00	---	---	16.87	16.70
23	---	---	17.14	17.03	17.65	17.51	17.06	16.97	---	---	16.87	16.64
24	17.15	17.05	17.09	17.01	17.63	17.59	17.00	16.91	---	---	16.92	16.86
25	17.07	17.00	17.00	16.83	17.58	17.24	16.97	16.74	17.28	16.85	16.88	16.75
26	17.12	16.99	17.09	16.82	17.51	17.18	17.02	16.73	17.30	17.12	16.86	16.73
27	17.14	17.04	17.12	16.96	17.55	17.44	17.09	16.99	17.10	16.86	16.90	16.79
28	17.08	16.99	16.96	16.75	17.55	17.42	17.19	17.01	16.95	16.83	16.89	16.75
29	17.10	17.03	17.04	16.90	17.54	17.48	17.12	16.80	---	---	16.80	16.74
30	17.10	17.01	17.04	16.89	17.50	17.42	17.00	16.87	---	---	16.79	16.63
31	17.07	16.80	---	---	17.48	17.13	17.07	16.94	---	---	16.66	16.54
MONTH	17.68	16.74	17.22	16.46	17.65	16.72	17.52	16.73	17.30	16.73	17.13	16.54

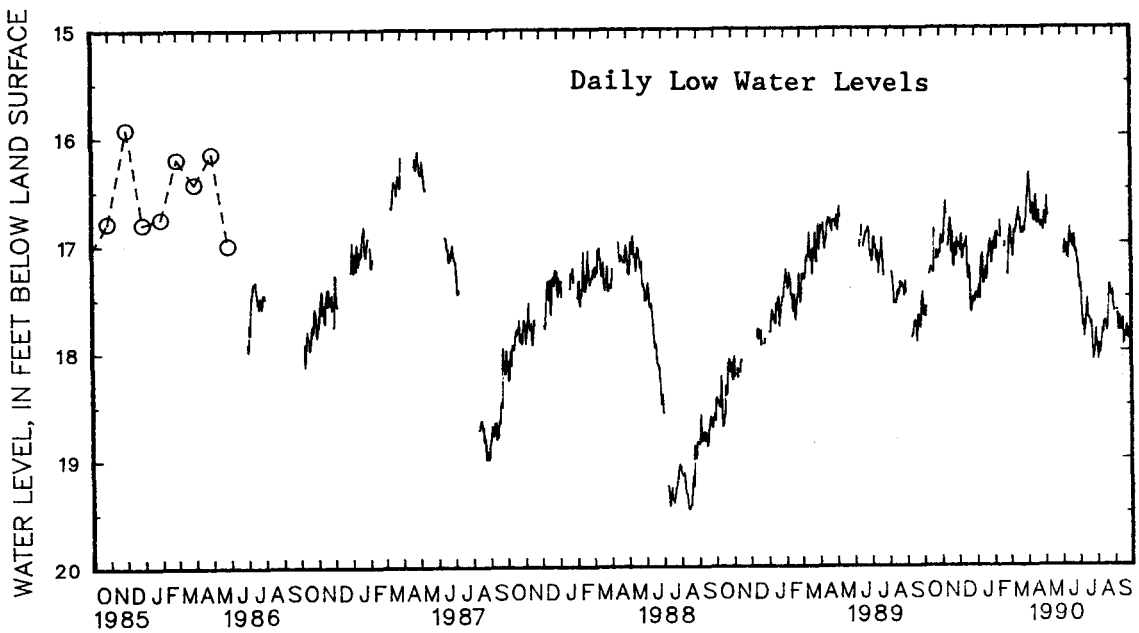
GROUND-WATER LEVELS

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	16.58	16.50	16.71	16.63	---	---	17.35	17.30	17.95	17.80	17.64	17.54
2	16.53	16.32	16.82	16.65	---	---	17.43	17.30	17.94	17.85	---	---
3	16.38	16.30	16.83	16.77	---	---	17.39	17.32	17.99	17.85	---	---
4	16.35	16.29	16.77	16.57	---	---	17.47	17.32	18.09	17.90	---	---
5	16.47	16.29	16.57	16.43	17.11	16.99	17.60	17.42	18.04	17.96	---	---
6	16.53	16.44	16.75	16.53	16.98	16.90	17.69	17.50	17.95	17.84	17.63	17.52
7	16.63	16.41	16.73	16.63	17.10	16.89	17.78	17.57	18.03	17.86	17.66	17.52
8	16.74	16.56	---	---	17.06	16.93	17.78	17.61	18.01	17.95	17.82	17.65
9	16.72	16.62	---	---	17.03	16.86	17.74	17.55	17.95	17.87	17.80	17.61
10	16.65	16.41	---	---	17.02	16.90	17.88	17.68	17.87	17.78	17.69	17.59
11	16.64	16.34	---	---	17.15	16.98	17.82	17.71	17.81	17.72	17.80	17.70
12	16.79	16.60	---	---	17.13	17.05	17.78	17.58	17.84	17.75	17.82	17.79
13	16.80	16.74	---	---	17.04	16.94	17.69	17.61	17.80	17.64	17.80	17.74
14	16.77	16.61	---	---	16.94	16.87	17.63	17.49	17.75	17.65	17.73	17.53
15	16.60	16.48	---	---	16.86	16.81	17.52	17.41	17.73	17.66	17.71	17.50
16	16.56	16.52	---	---	16.96	16.85	17.69	17.50	17.74	17.66	17.71	17.61
17	16.67	16.41	---	---	17.01	16.94	17.71	17.63	17.74	17.65	17.95	17.68
18	16.82	16.69	---	---	16.95	16.82	17.70	17.59	17.77	17.65	17.93	17.79
19	16.82	16.78	---	---	16.94	16.82	17.72	17.57	17.82	17.65	17.84	17.65
20	16.77	16.64	---	---	17.03	16.89	17.73	17.58	17.79	17.67	17.88	17.66
21	16.70	16.57	---	---	17.05	16.88	17.77	17.59	17.69	17.50	17.88	17.77
22	16.81	16.67	---	---	17.01	16.79	17.74	17.63	17.51	17.42	17.77	17.59
23	16.81	16.70	---	---	16.93	16.78	17.78	17.58	17.40	17.33	17.80	17.64
24	16.84	16.70	---	---	17.04	16.81	17.91	17.73	17.39	17.32	17.89	17.80
25	16.85	16.71	---	---	17.09	16.96	17.99	17.82	17.44	17.36	17.89	17.81
26	16.80	16.67	---	---	17.07	17.02	18.09	17.93	17.49	17.39	17.81	17.75
27	16.81	16.71	---	---	17.11	17.02	18.02	17.95	17.50	17.48	17.90	17.81
28	16.85	16.73	---	---	17.20	17.11	18.03	17.91	17.49	17.43	17.85	17.79
29	16.88	16.76	---	---	17.21	17.17	17.98	17.86	17.45	17.42	17.86	17.78
30	16.80	16.68	---	---	17.34	17.19	17.86	17.76	17.58	17.43	17.88	17.74
31	---	---	---	---	---	---	17.81	17.71	17.61	17.54	---	---
MONTH	16.88	16.29	16.83	16.43	17.34	16.78	18.09	17.30	18.09	17.32	17.95	17.50



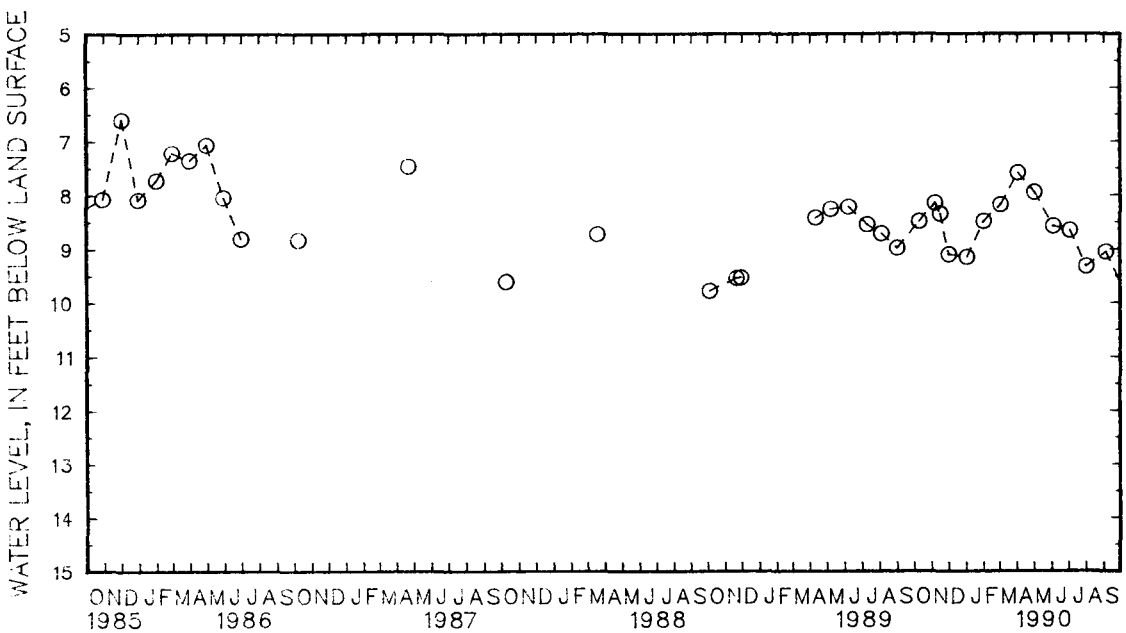
5 YEAR HYDROGRAPH

OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Kent Island ground-water monitoring network well. 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, Dec. 2, 1985; lowest measured, 9.79 ft below land surface, Oct. 4, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	8.49	DEC 1	9.11	MAR 2	8.18	JUN 4	8.58	SEP 5	9.06
NOV 6	8.14	JAN 2	9.16	APR 2	7.59	JUL 3	8.66		
15	8.35	FEB 1	8.49	MAY 1	7.95	AUG 1	9.33		



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

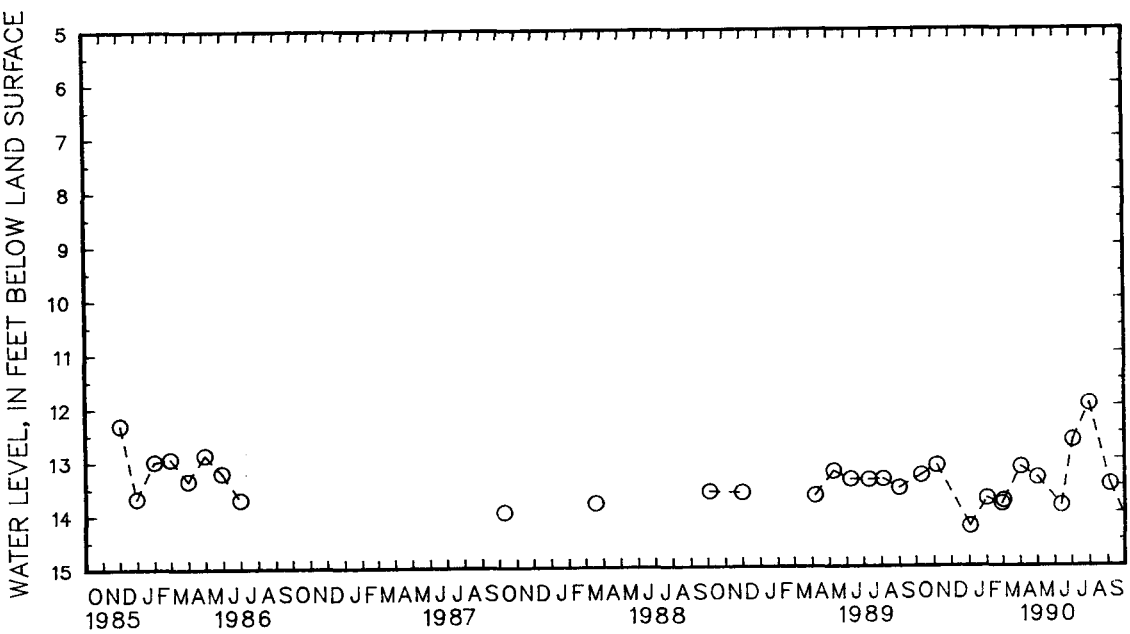
MARYLAND--Continued

QUEEN ANNES COUNTY--Continued

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.
REMARKS.--Kent Island ground-water monitoring network well. 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, 11.97 ft below land surface, Aug. 1, 1990; lowest measured, 14.26 ft below land surface, Jan. 2, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	13.30	JAN 2	14.26	FEB 27	13.84	APR 2	13.15	JUN 12	13.87	AUG 1	11.97
NOV 6	13.12	FEB 1	13.73	MAR 2	13.78	MAY 1	13.35	JUL 3	12.65	SEP 5	13.48

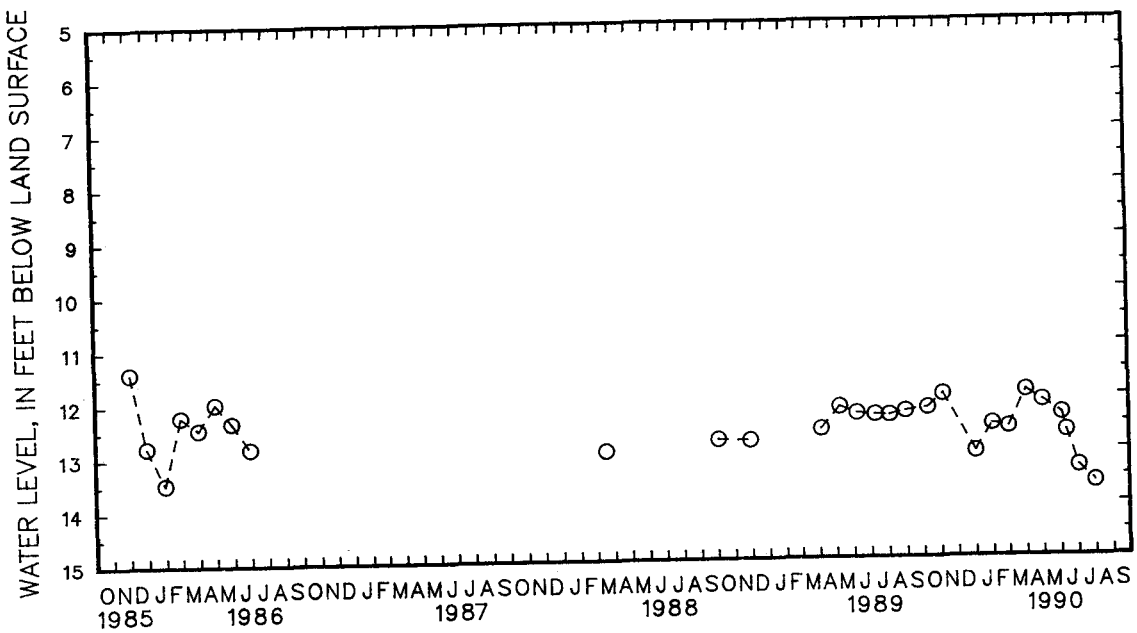


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Kent Island ground-water monitoring network well. 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, Dec. 2, 1985; lowest measured, 13.63 ft below land surface, Aug. 1, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	12.22	JAN 2	13.05	MAR 2	12.60	MAY 1	12.11	JUN 12	12.68	AUG 1	13.63
NOV 6	11.97	FEB 1	12.54	APR 2	11.92	JUN 4	12.35	JUL 3	13.34		

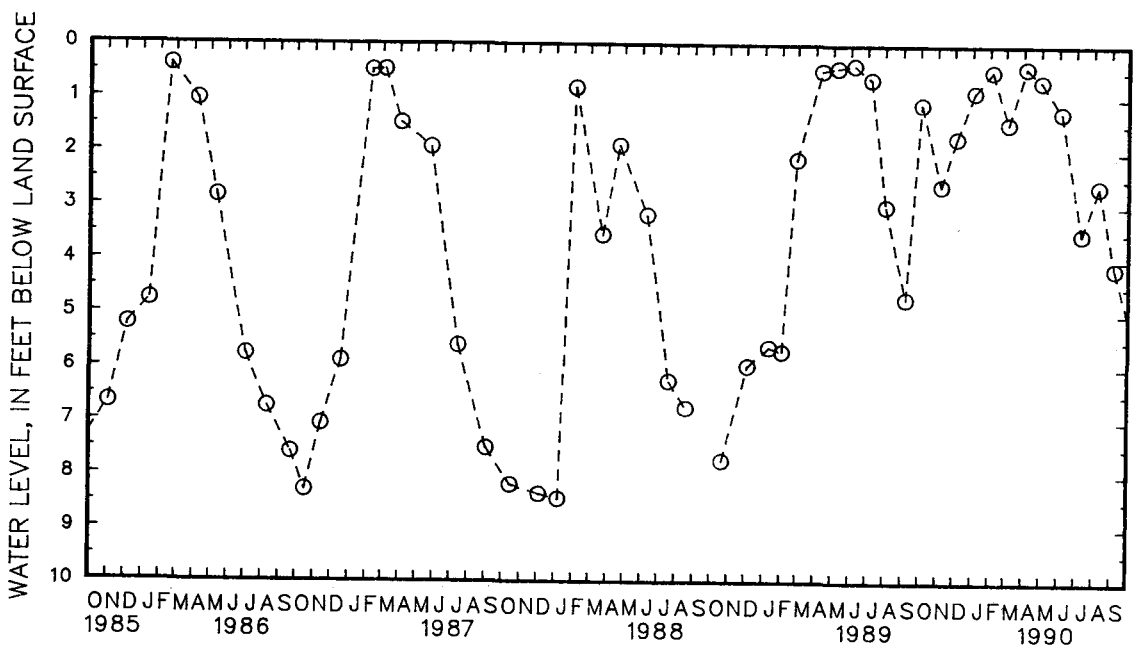


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--September 1949 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, .04 ft below land surface, May 8, 1958; lowest measured, 8.46 ft below land surface, Jan. 7, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	1.09	DEC 4	1.72	FEB 5	.47	APR 5	.40	JUN 5	1.24	AUG 9	2.62
NOV 7	2.61	JAN 4	.86	MAR 5	1.45	MAY 1	.66	JUL 10	3.51	SEP 6	4.15

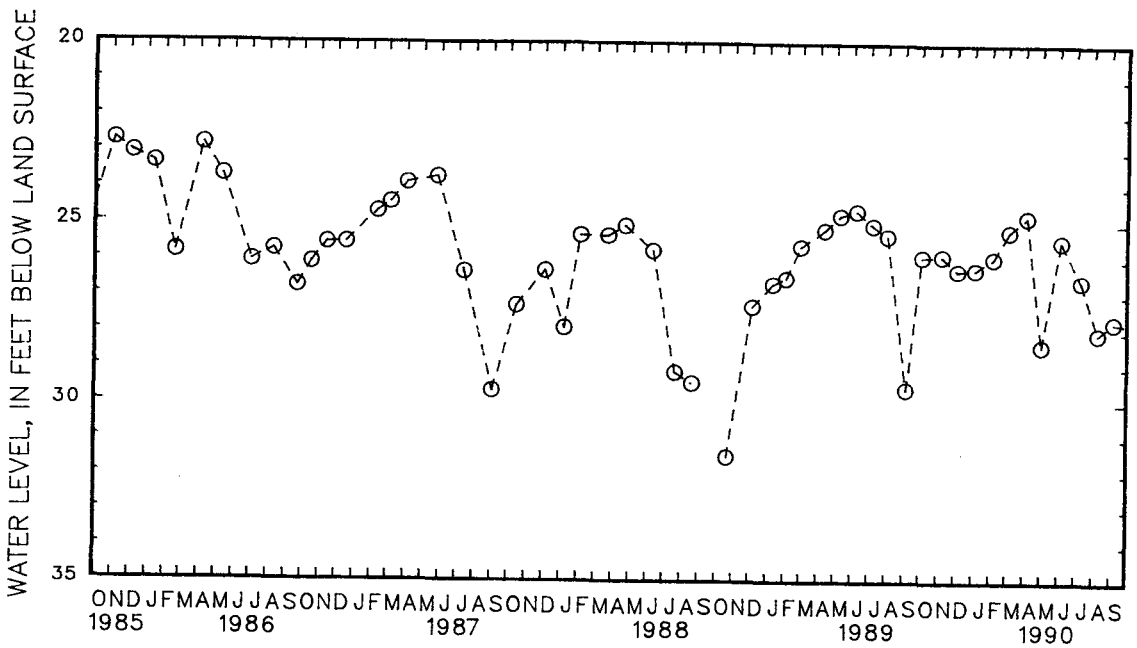


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--September 1980 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 19.77 ft below land surface, March 3, 1983; lowest measured, 31.53 ft below land surface, Oct. 21, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	25.91	DEC 4	26.29	FEB 5	25.94	APR 5	24.79	JUN 5	25.47	AUG 9	28.04
NOV 7	25.89	JAN 4	26.26	MAR 5	25.19	MAY 1	28.39	JUL 10	26.57	SEP 6	27.72



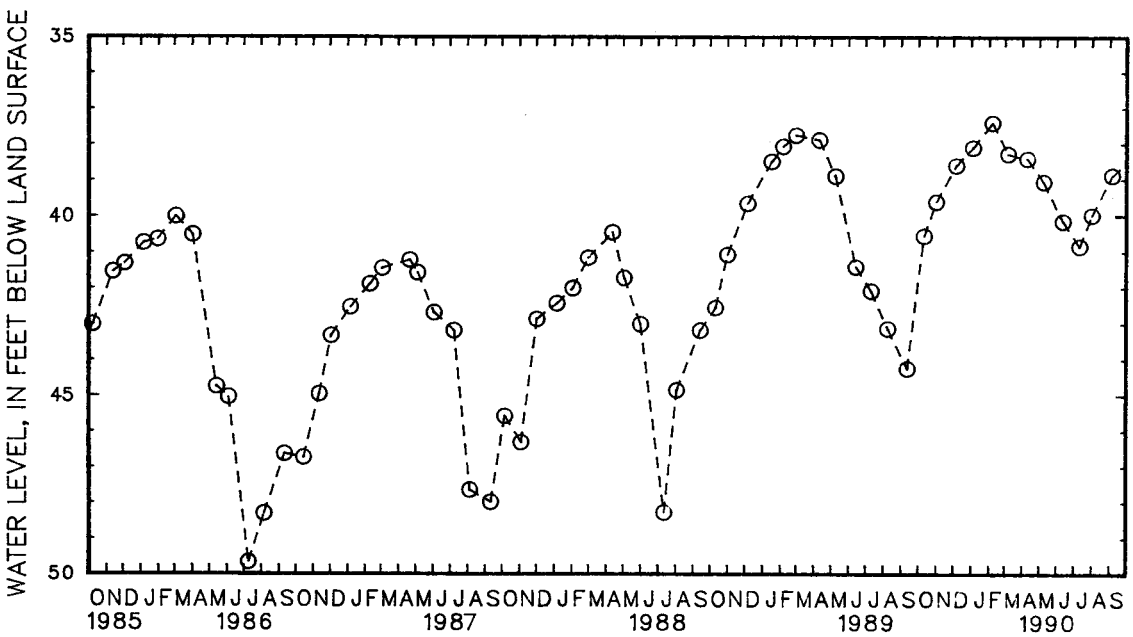
5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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, 3.0 ft above land surface.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--July 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 30.79 ft below land surface, April 5, 1979; lowest measured, 49.66 ft below land surface, July 9, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	40.55	DEC 6	38.59	FEB 7	37.40	APR 10	38.40	JUN 12	40.15	AUG 1	39.98
NOV 1	39.60	JAN 4	38.09	MAR 7	38.27	MAY 9	39.05	JUL 11	40.85	SEP 5	38.87



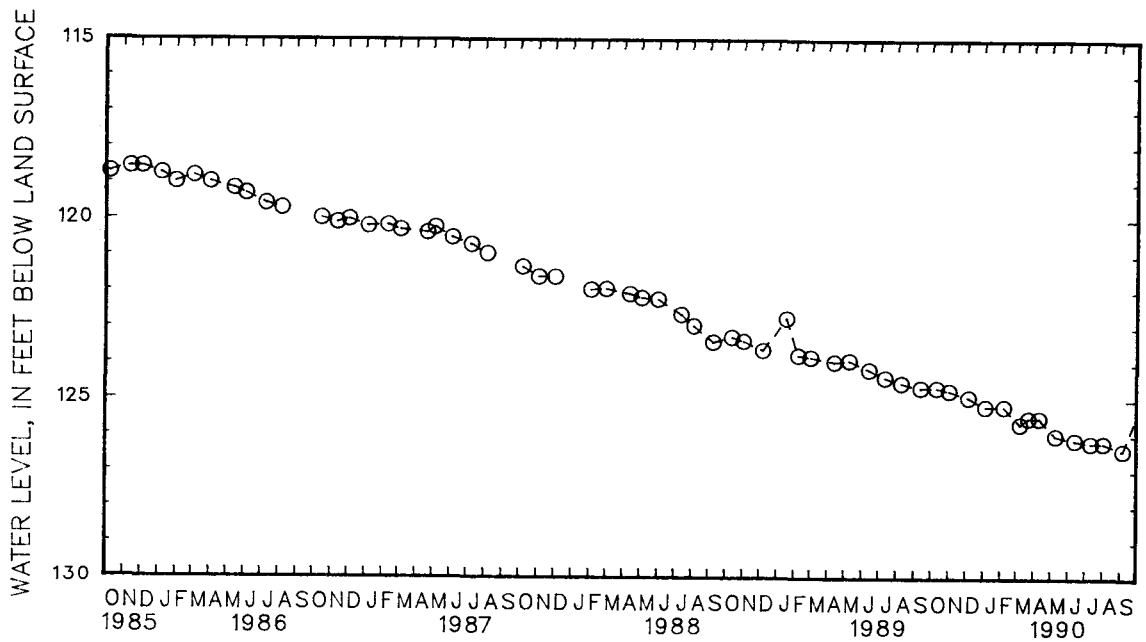
5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

ST. MARYS COUNTY--Continued

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 2.8 ft above land surface.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--June 1984 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 117.27 ft below land surface, June 11, 1984; lowest measured, 126.41 ft below land surface, Sept. 6, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	124.68	JAN 5	125.20	MAR 23	125.52	JUN 13	126.13	SEP 6	126.41
NOV 2	124.76	FEB 7	125.20	APR 11	125.52	JUL 11	126.21		
DEC 6	124.94	MAR 8	125.69	MAY 10	126.01	AUG 2	126.21		



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

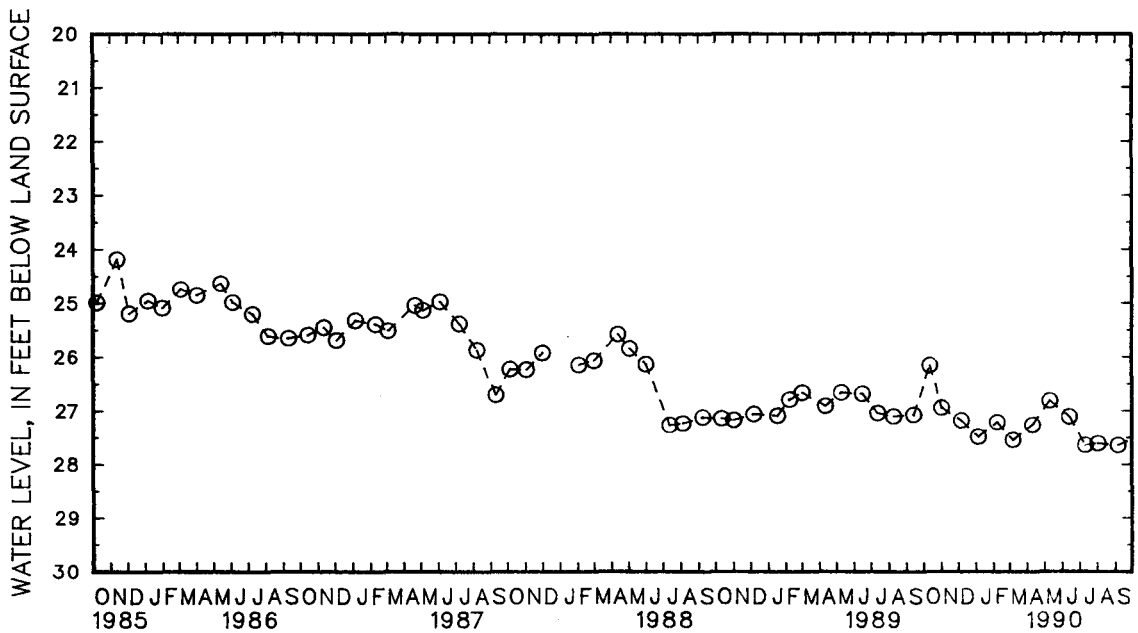
MARYLAND--Continued

ST. MARYS COUNTY--Continued

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, 2.5 ft above land surface.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--August 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 19.84 ft below land surface, May 12, 1978; lowest measured, 27.65 ft below land surface, July 11, 1990 and Sept. 6, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	26.16	DEC 6	27.19	FEB 7	27.22	APR 10	27.27	JUN 13	27.12	AUG 2	27.62
NOV 1	26.95	JAN 5	27.49	MAR 7	27.55	MAY 10	26.82	JUL 11	27.65	SEP 6	27.65



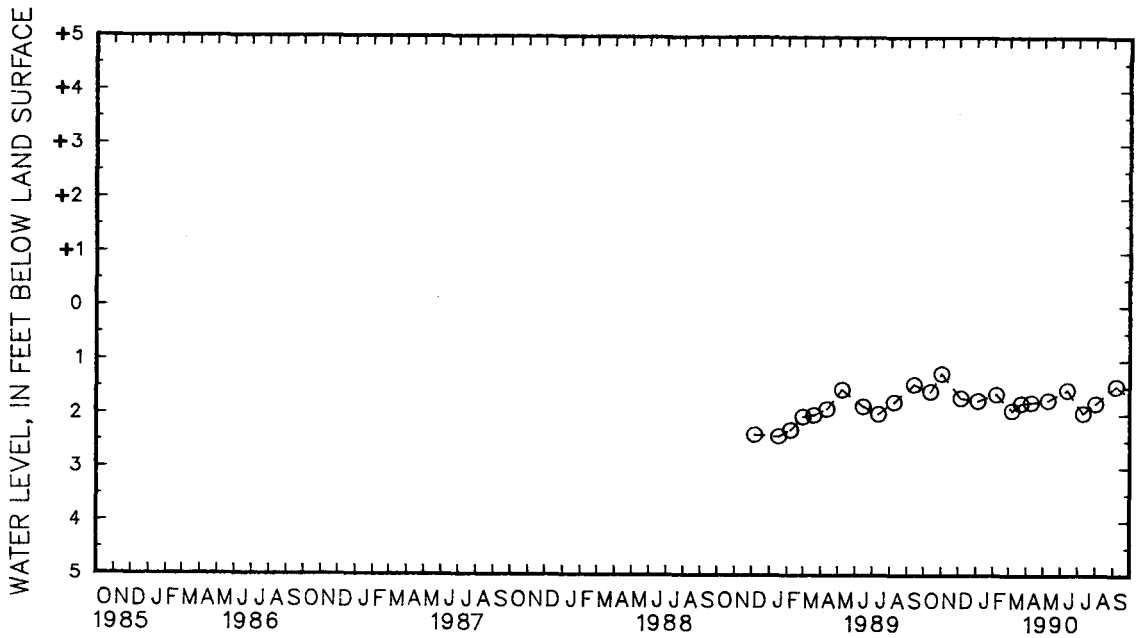
5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

ST. MARYS COUNTY--Continued

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.--Holocene Series of Recent age. Aquifer code: 111HLCN.
WELL CHARACTERISTICS.--Drilled, unused domestic, water-table well, measured depth 22.4 ft;
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.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--December 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.25 ft below land surface, Nov. 1, 1989;
lowest measured, 2.41 ft below land surface, Jan. 9, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	1.58	JAN 5	1.75	MAR 23	1.80	JUN 13	1.55	SEP 6	1.48
NOV 1	1.25	FEB 7	1.63	APR 10	1.78	JUL 11	1.98		
DEC 6	1.70	MAR 7	1.93	MAY 10	1.74	AUG 2	1.80		



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

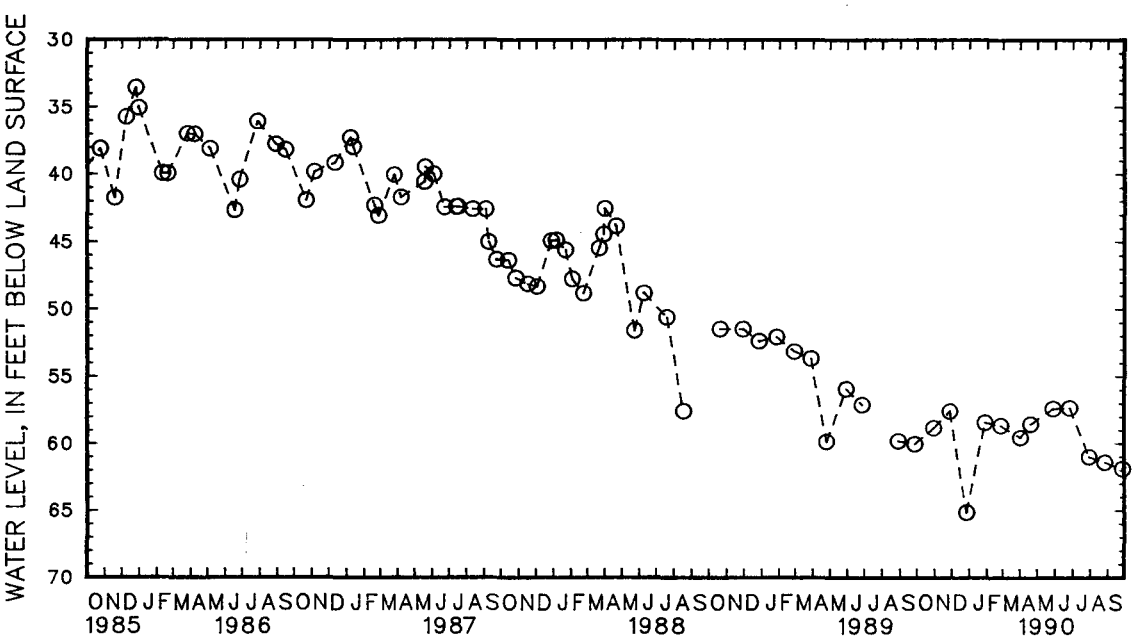
MARYLAND--Continued

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, 1.8 ft above land surface.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--August 1952 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.15 ft below land surface May 1, 1953; lowest measured 65.17 ft below land surface, Dec. 27, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	58.87	DEC 27	65.17	FEB 26	58.67	APR 20	58.56	JUN 26	57.34	AUG 27	61.42
NOV 28	57.62	JAN 29	58.40	APR 2	59.58	MAY 29	57.39	JUL 30	61.01	SEP 27	61.90



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Water levels affected by nearby pumping. No record from Oct. 1, 1989 to Jan. 24, 1990, due to the drilling of a nearby well.
PERIOD OF RECORD.--January 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 20.97 ft below land surface, Feb. 21, 1986; lowest measured, 49.32 ft below land surface, Sept. 13, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	---	---	---	---	---	---	44.93	44.86	44.14	44.06
2	---	---	---	---	---	---	---	---	44.90	44.81	44.20	44.07
3	---	---	---	---	---	---	---	---	44.97	44.82	44.31	44.18
4	---	---	---	---	---	---	---	---	44.82	44.63	44.46	44.33
5	---	---	---	---	---	---	---	---	44.80	44.71	44.52	44.44
6	---	---	---	---	---	---	---	---	44.72	44.53	44.62	44.48
7	---	---	---	---	---	---	---	---	44.68	44.56	44.64	44.54
8	---	---	---	---	---	---	---	---	44.70	44.59	44.55	44.44
9	---	---	---	---	---	---	---	---	44.67	44.51	44.41	44.26
10	---	---	---	---	---	---	---	---	44.63	44.47	44.27	44.16
11	---	---	---	---	---	---	---	---	44.64	44.50	44.18	44.04
12	---	---	---	---	---	---	---	---	44.56	44.43	44.10	43.98
13	---	---	---	---	---	---	---	---	44.55	44.36	44.06	43.94
14	---	---	---	---	---	---	---	---	44.49	44.35	44.19	44.00
15	---	---	---	---	---	---	---	---	44.49	44.40	44.35	44.14
16	---	---	---	---	---	---	---	---	44.43	44.32	44.46	44.28
17	---	---	---	---	---	---	---	---	44.61	44.41	44.48	44.37
18	---	---	---	---	---	---	---	---	44.62	44.53	44.67	44.49
19	---	---	---	---	---	---	---	---	44.53	44.37	44.74	44.69
20	---	---	---	---	---	---	---	---	44.50	44.40	44.80	44.70
21	---	---	---	---	---	---	---	---	44.51	44.47	44.91	44.80
22	---	---	---	---	---	---	---	---	44.48	44.30	44.94	44.88
23	---	---	---	---	---	---	---	---	44.31	44.20	45.02	44.88
24	---	---	---	---	---	---	---	---	44.32	44.22	45.10	45.02
25	---	---	---	---	---	---	44.97	44.85	44.40	44.22	45.07	44.98
26	---	---	---	---	---	---	45.01	44.86	44.40	44.24	45.03	44.94
27	---	---	---	---	---	---	45.04	44.93	44.22	43.98	45.05	44.93
28	---	---	---	---	---	---	44.97	44.89	44.10	43.99	45.06	44.95
29	---	---	---	---	---	---	44.91	44.71	---	---	45.10	44.97
30	---	---	---	---	---	---	44.85	44.58	---	---	45.08	44.96
31	---	---	---	---	---	---	44.92	44.80	---	---	45.02	44.88
MONTH	---	---	---	---	---	---	45.04	44.58	44.97	43.98	45.10	43.94

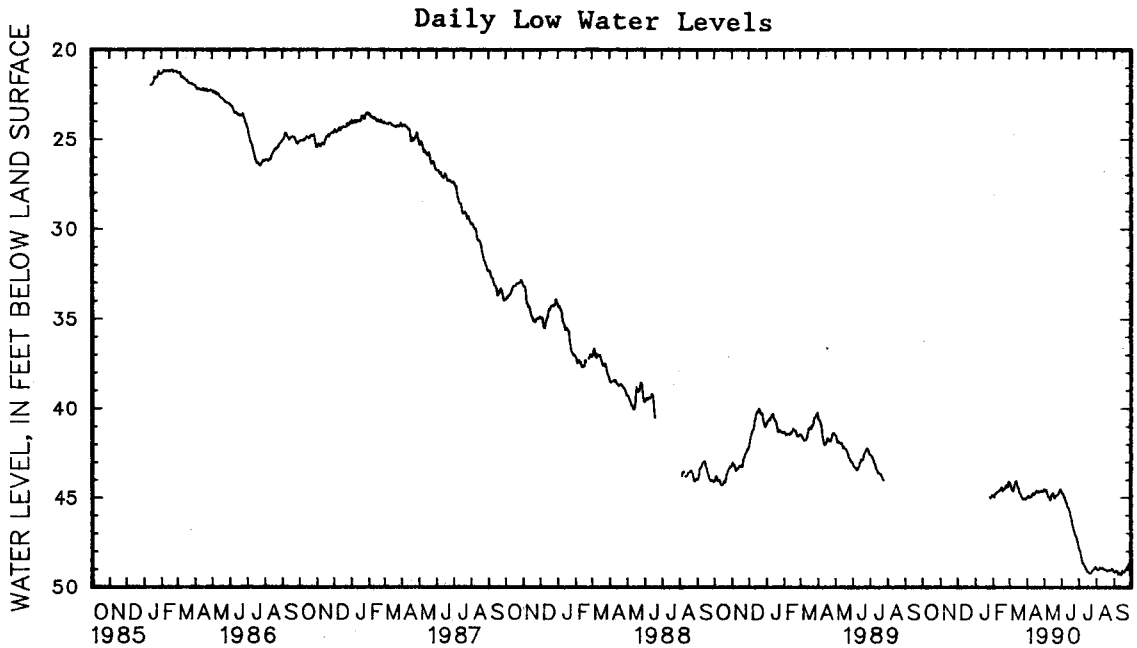
GROUND-WATER LEVELS

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	44.99	44.86	44.52	44.42	44.66	44.54	47.79	47.60	48.95	48.76	49.16	49.04
2	44.97	44.83	44.58	44.47	44.74	44.61	47.91	47.72	48.99	48.88	49.14	49.07
3	44.90	44.78	44.63	44.54	44.76	44.70	47.95	47.82	49.00	48.90	49.14	49.00
4	44.91	44.80	44.62	44.51	44.85	44.68	48.12	47.82	49.03	48.92	49.12	48.99
5	44.99	44.88	44.56	44.43	44.94	44.84	48.27	48.07	49.02	48.90	49.08	48.92
6	44.99	44.93	44.74	44.49	45.00	44.89	48.47	48.24	48.97	48.81	49.09	48.93
7	44.95	44.86	44.82	44.64	45.14	44.93	48.63	48.40	48.90	48.68	49.14	48.98
8	44.96	44.86	44.93	44.72	45.20	45.09	48.67	48.53	48.93	48.81	49.29	49.13
9	44.92	44.84	44.97	44.83	45.29	45.07	48.63	48.48	48.95	48.81	49.28	49.07
10	44.83	44.68	44.98	44.80	45.38	45.19	48.71	48.54	48.93	48.80	49.21	49.08
11	44.75	44.54	45.11	44.87	45.50	45.34	48.81	48.65	48.91	48.80	49.26	49.17
12	44.81	44.73	45.14	45.05	45.55	45.47	48.81	48.70	48.96	48.86	49.29	49.19
13	44.84	44.77	45.04	44.79	45.59	45.42	48.95	48.77	48.95	48.80	49.32	49.18
14	44.81	44.72	44.88	44.80	45.70	45.57	49.00	48.88	49.00	48.84	49.23	48.98
15	44.73	44.60	44.83	44.72	45.77	45.63	49.02	48.91	49.02	48.91	49.08	48.94
16	44.66	44.58	44.75	44.65	45.97	45.77	49.13	48.94	49.02	48.91	49.11	48.98
17	44.61	44.52	44.75	44.66	46.08	45.94	49.13	49.04	49.03	48.92	49.16	48.96
18	44.69	44.62	44.88	44.77	46.15	46.00	49.16	49.04	49.04	48.92	49.16	49.02
19	44.69	44.66	45.03	44.89	46.32	46.03	49.21	49.07	49.06	48.91	49.09	48.90
20	44.66	44.57	45.03	44.88	46.54	46.25	49.23	49.09	49.11	48.96	49.03	48.88
21	44.62	44.56	44.94	44.84	46.68	46.42	49.24	49.11	49.10	48.94	49.04	48.90
22	44.69	44.60	44.90	44.77	46.81	46.58	49.22	49.11	49.07	48.89	48.98	48.72
23	44.66	44.57	44.86	44.65	46.89	46.63	49.16	48.97	49.07	48.90	48.87	48.75
24	44.65	44.52	44.86	44.69	47.03	46.75	49.11	48.99	49.06	48.92	48.85	48.77
25	44.64	44.52	44.85	44.69	47.12	46.93	49.08	48.96	49.08	48.96	48.81	48.68
26	44.61	44.45	44.81	44.56	47.16	47.03	49.03	48.94	49.05	48.94	48.70	48.59
27	44.65	44.47	44.69	44.49	47.20	47.06	48.98	48.88	49.02	48.89	48.66	48.61
28	44.67	44.52	44.65	44.46	47.32	47.17	48.98	48.87	48.96	48.85	48.65	48.59
29	44.67	44.56	44.56	44.20	47.46	47.35	48.92	48.81	49.00	48.88	48.68	48.60
30	44.58	44.43	44.52	44.29	47.64	47.44	48.87	48.76	49.09	48.90	48.71	48.63
31	---	---	44.58	44.49	---	---	48.84	48.75	49.13	49.04	---	---
MONTH	44.99	44.43	45.14	44.20	47.64	44.54	49.24	47.60	49.13	48.68	49.32	48.59



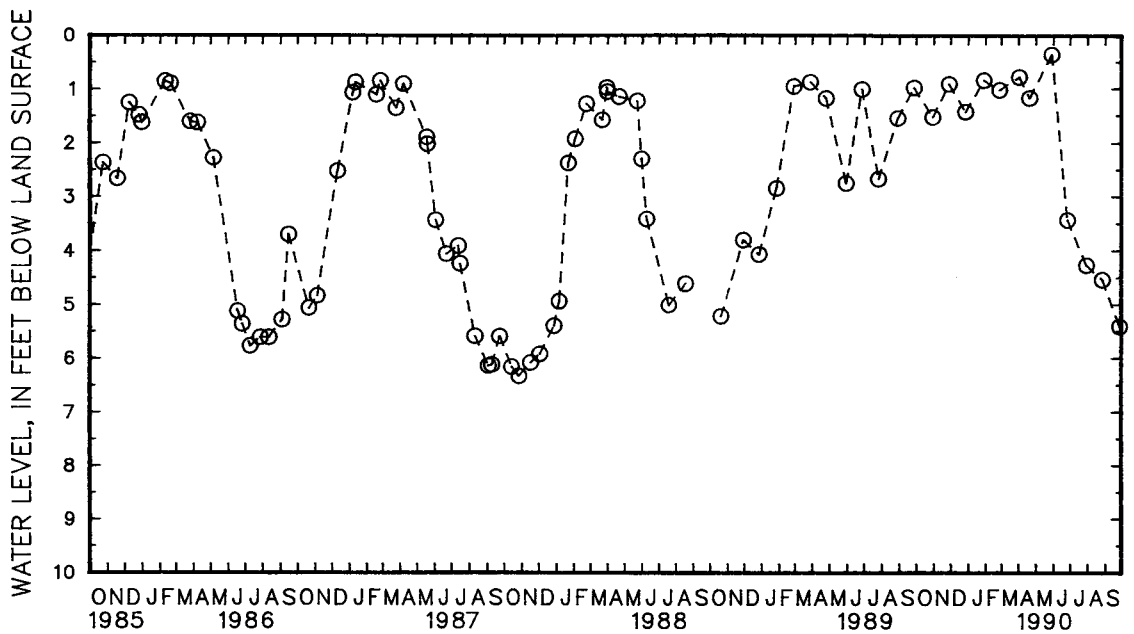
5 YEAR HYDROGRAPH

OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--August 1949 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, .28 ft below land surface, May 9, 1958; lowest measured, 6.34 ft below land surface, Oct. 27, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	1.52	DEC 27	1.42	FEB 26	1.01	APR 20	1.16	JUN 26	3.44	AUG 27	4.55
NOV 28	.90	JAN 29	.83	APR 02	.77	MAY 29	.35	JUL 30	4.28	SEP 27	5.42



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

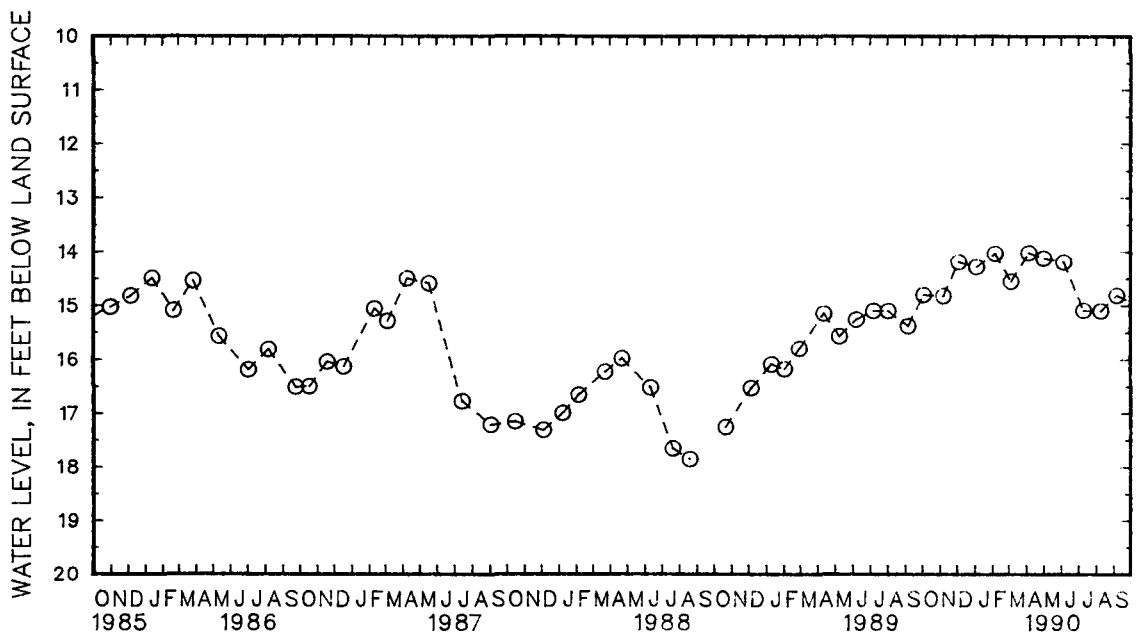
MARYLAND--Continued

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.
REMARKS.--Maryland Water-Level Network observation well. Water level reported by driller, 26 ft below land-surface Dec. 16, 1955; water level measured 26.64 ft below land surface March 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, May 4, 1961; lowest measured, 76.57 ft below land surface, Dec. 6, 1974.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	14.80	DEC 4	14.19	FEB 5	14.03	APR 5	14.02	JUN 5	14.19	AUG 9	15.10
NOV 7	14.82	JAN 4	14.28	MAR 5	14.55	MAY 1	14.12	JUL 10	15.09	SEP 6	14.81

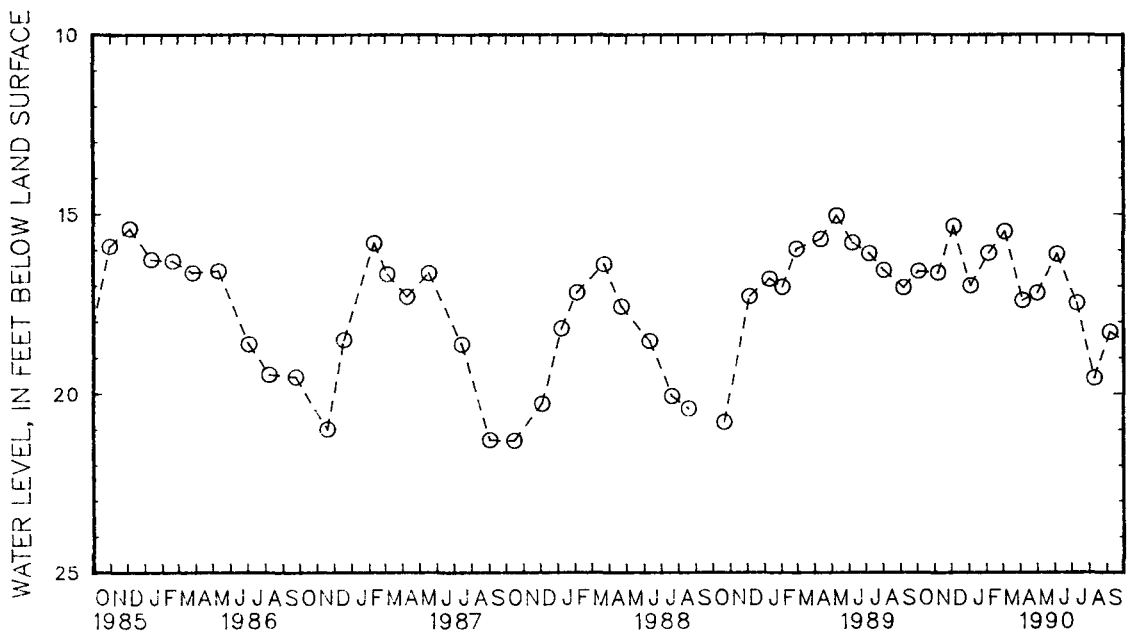


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--April 1956 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.48 ft below land surface, Dec. 14, 1971; lowest measured, 21.32 ft below land surface, Oct. 15, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	16.59	DEC 4	15.33	FEB 5	16.08	APR 5	17.41	JUN 5	16.11	AUG 9	19.58
NOV 7	16.63	JAN 4	16.99	MAR 5	15.48	MAY 1	17.20	JUL 10	17.48	SEP 6	18.29



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

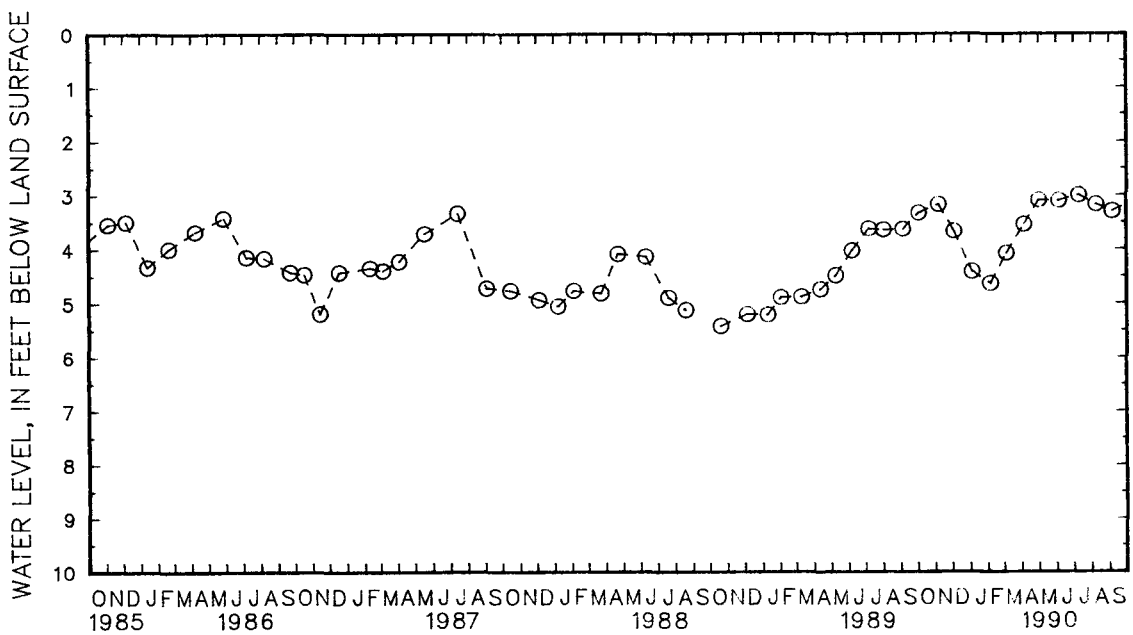
MARYLAND--Continued

TALBOT COUNTY--Continued

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.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--August 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, .97 ft below land surface, April 2, 1980; lowest measured, 5.43 ft below land surface, Oct. 20, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	3.33	DEC 4	3.67	FEB 5	4.64	APR 5	3.54	JUN 5	3.10	AUG 9	3.17
NOV 7	3.17	JAN 4	4.42	MAR 5	4.08	MAY 1	3.09	JUL 10	3.00	SEP 6	3.30

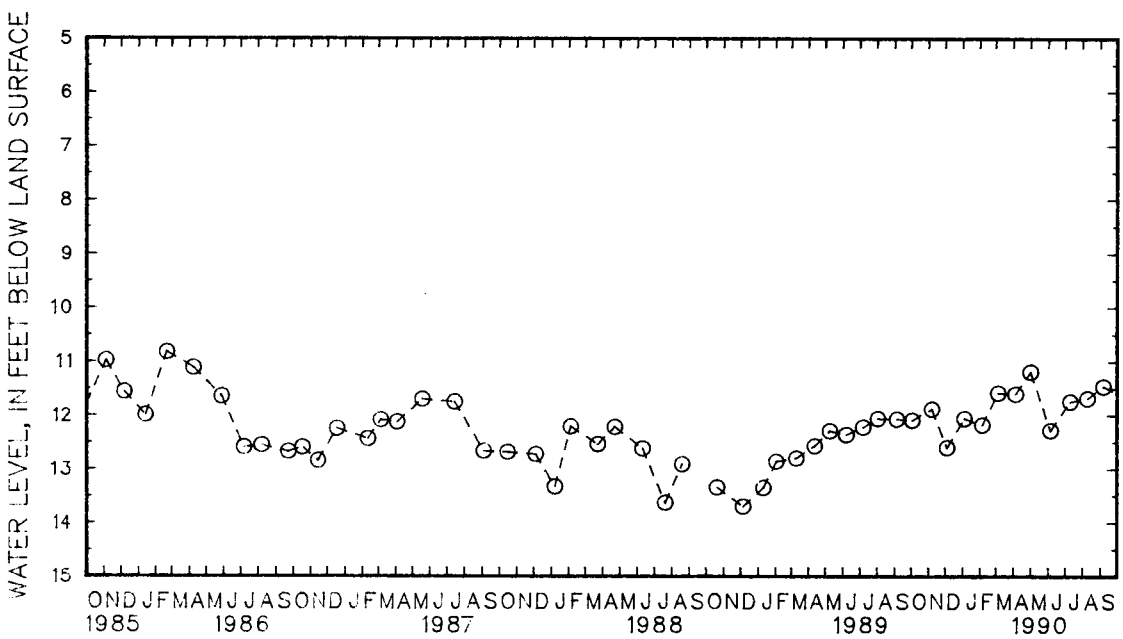


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

WELL NUMBER.--TA Cc 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.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--October 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.89 ft below land surface, April 2, 1980; lowest measured, 13.70 ft below land surface, Dec. 5, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	12.09	DEC 4	12.60	FEB 5	12.18	APR 5	11.60	JUN 5	12.28	AUG 9	11.68
NOV 7	11.88	JAN 4	12.06	MAR 5	11.58	MAY 1	11.19	JUL 10	11.74	SEP 6	11.46

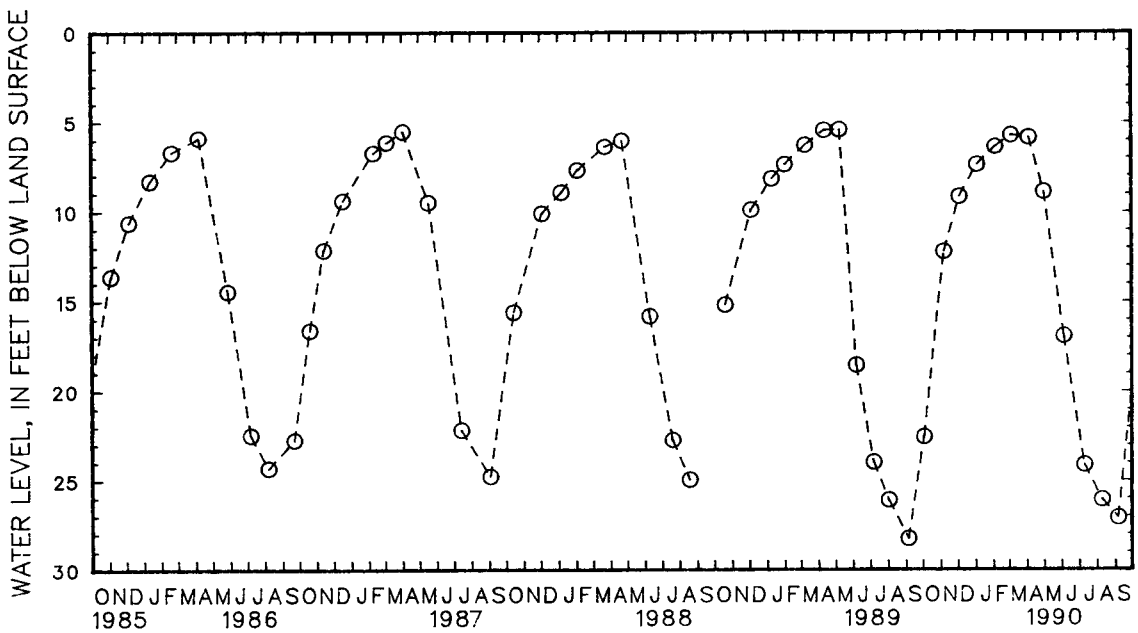


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well. 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, April 16, 1984; lowest measured 75.36 ft below land surface, Aug. 2, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	22.55	DEC 4	9.17	FEB 5	6.39	APR 5	5.86	JUN 5	16.96	AUG 9	26.10
NOV 7	12.23	JAN 4	7.40	MAR 5	5.74	MAY 1	8.91	JUL 10	24.16	SEP 6	27.11



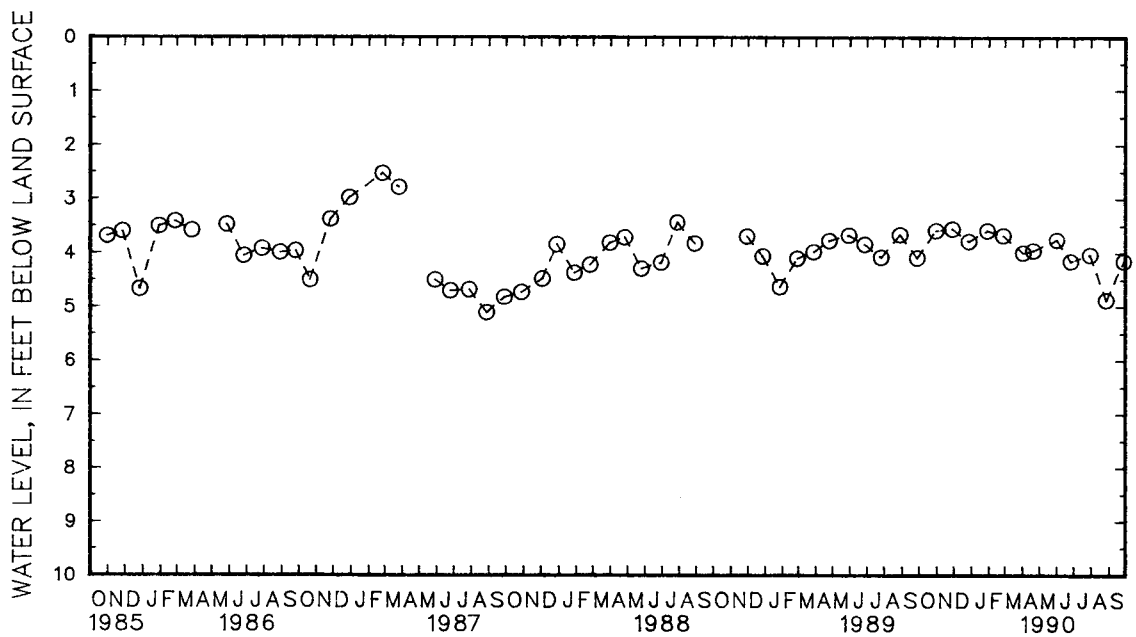
5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--July 1947 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.07 ft below land surface, Aug. 5, 1948; lowest measured, 10.72 ft below land surface, Aug. 30, 1947.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	3.59	DEC 27	3.79	FEB 26	3.68	JUN 26	4.16	AUG 27	4.88
NOV 28	3.56	JAN 29	3.59	APR 20	3.96	JUL 30	4.04	SEP 27	4.16



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

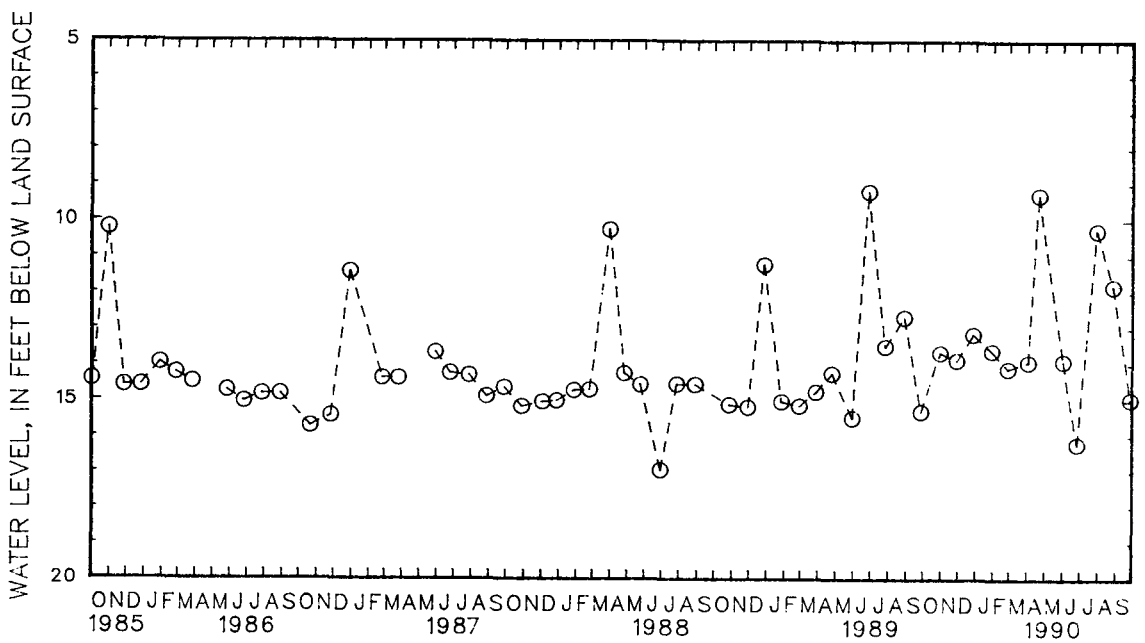
MARYLAND--Continued

WICOMICO COUNTY--Continued

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.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--April 1967 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.35 ft below land surface, April 27, 1967; lowest measured, 16.96 ft below land surface, June 29, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	13.68	DEC 27	13.16	FEB 26	14.12	APR 20	9.28	JUN 26	16.22	AUG 27	11.82
NOV 28	13.89	JAN 29	13.62	APR 2	13.94	JUN 1	13.92	JUL 30	10.26	SEP 27	14.98

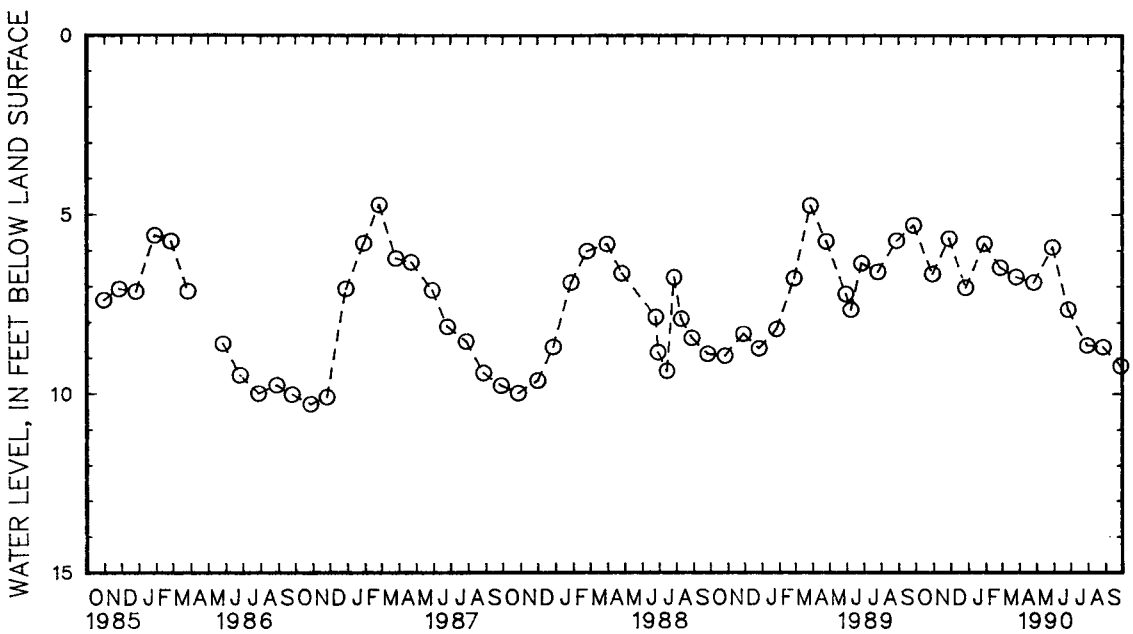


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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 April 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.
REMARKS.--Maryland Water-Level Network observation well. Water level reported 7.2 ft below land surface, 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, May 7, 1958; lowest measured, 13.44 ft below land surface, Sept. 18, 1947.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	6.65	DEC 27	7.03	FEB 26	6.47	APR 26	6.88	JUN 26	7.64	AUG 27	8.70
NOV 28	5.66	JAN 29	5.80	MAR 26	6.73	MAY 29	5.90	JUL 30	8.65	SEP 27	9.23



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

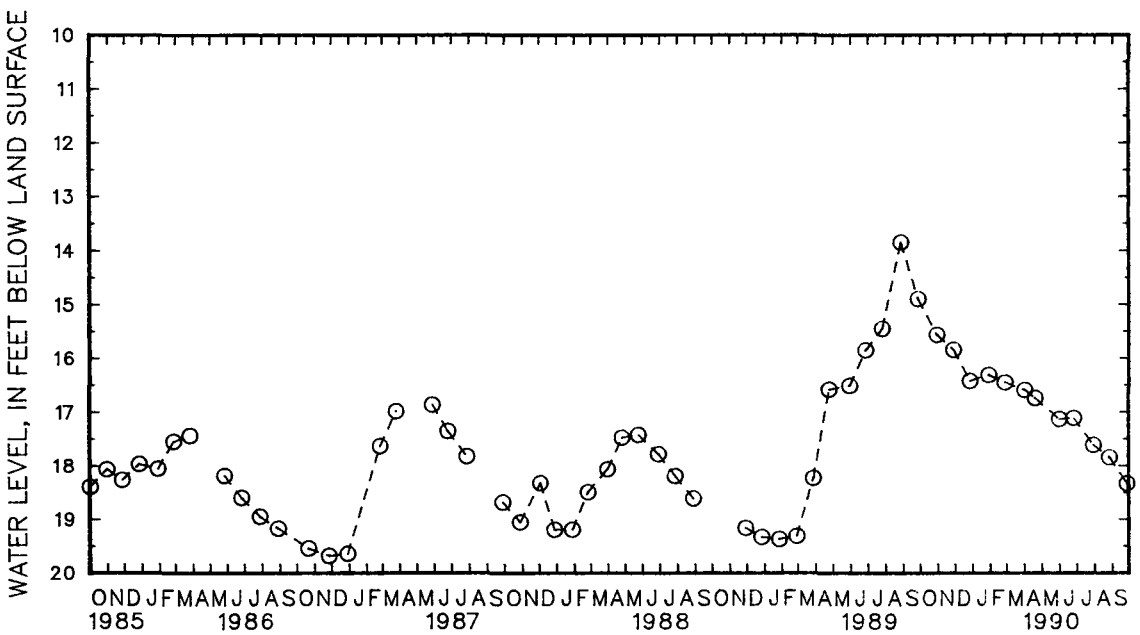
MARYLAND--Continued

WICOMICO COUNTY--Continued

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., nr 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.
REMARKS.--Maryland Water-Level Network observation well.
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, June 18, 1979; lowest measured, 19.68 ft below land surface, Nov. 26, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	15.57	DEC 27	16.43	FEB 26	16.46	APR 20	16.75	JUN 26	17.12	AUG 27	17.85
NOV 28	15.85	JAN 29	16.32	APR 2	16.60	JUN 1	17.14	JUL 30	17.62	SEP 27	18.34

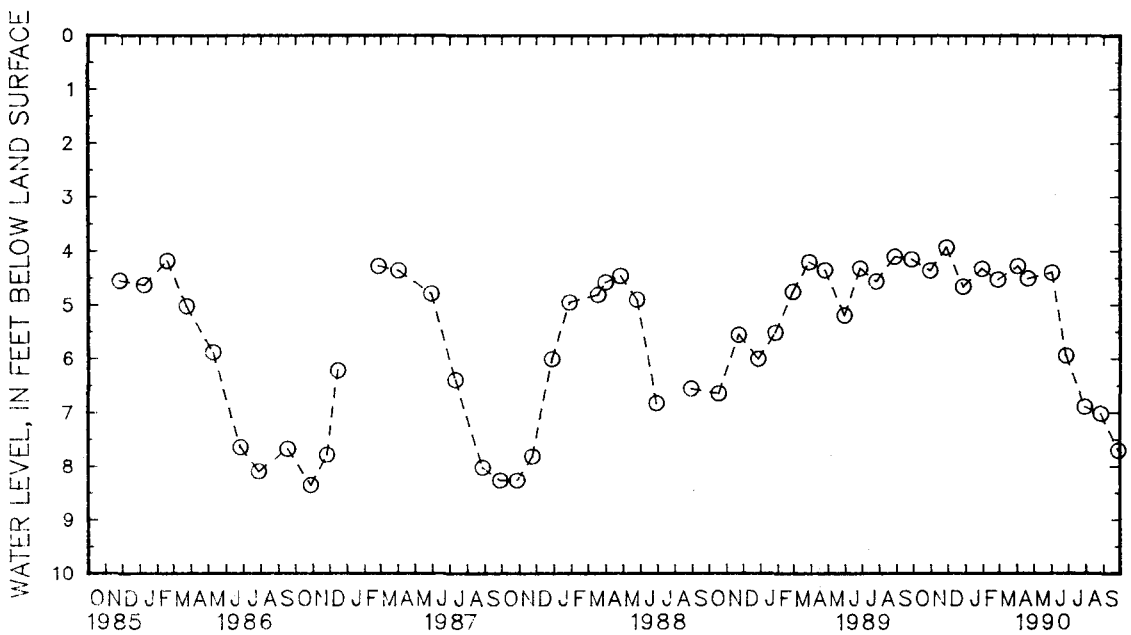


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--August 1949 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.84 ft below land surface, Jan. 31, 1950; lowest measured, 8.68 ft below land surface, Oct. 10, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	4.36	DEC 27	4.66	FEB 26	4.53	APR 20	4.51	JUN 26	5.95	AUG 27	7.03
NOV 28	3.93	JAN 29	4.33	APR 2	4.28	JUN 1	4.40	JUL 30	6.90	SEP 27	7.71



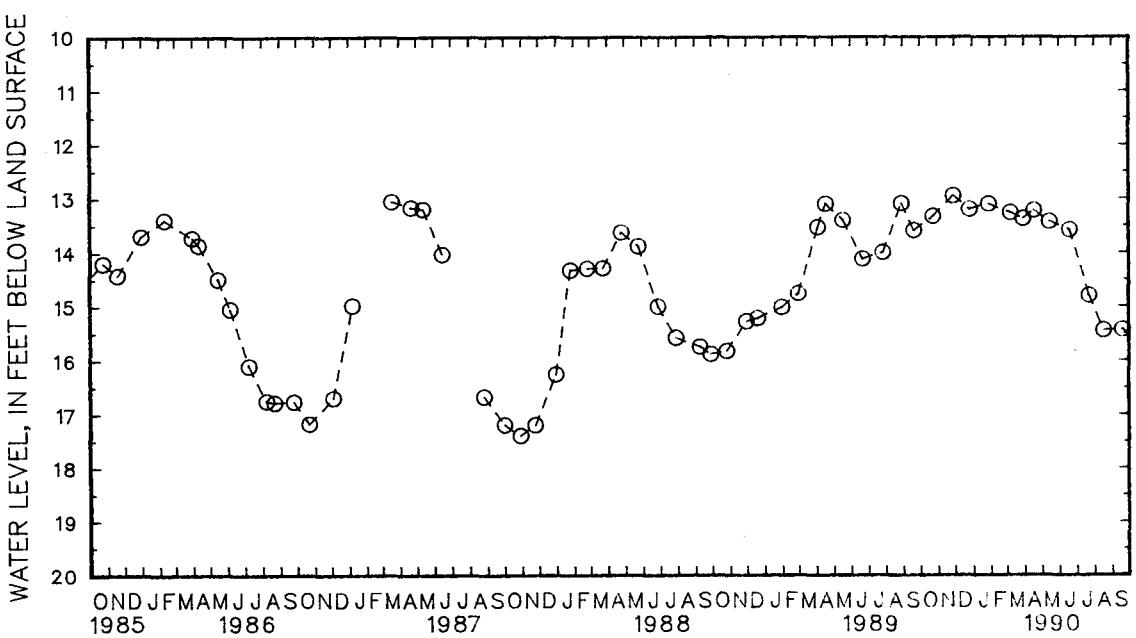
5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Ocean City ground-water monitoring network well.
PERIOD OF RECORD.--October 1975 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.85 ft below land surface, Dec. 16, 1975; lowest measured, 17.40 ft below land surface, Oct. 29, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM,

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	13.33	DEC 27	13.19	MAR 8	13.26	MAY 15	13.43	JUL 23	14.80	SEP 19	15.44
NOV 28	12.95	JAN 29	13.10	APR 18	13.22	JUN 19	13.58	AUG 17	15.45		

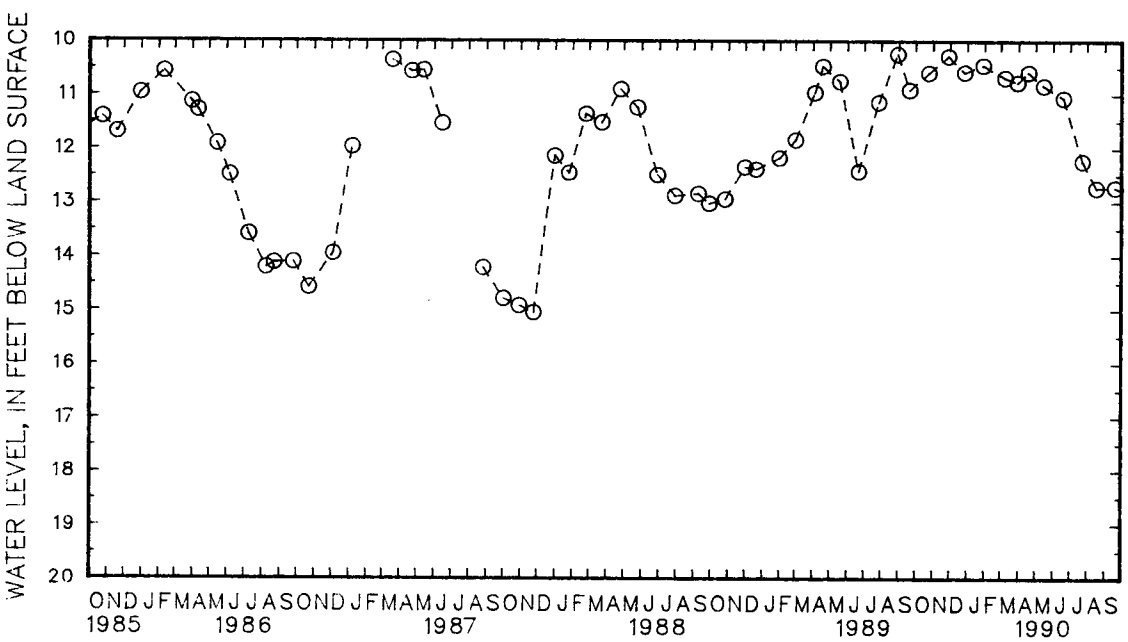


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Ocean City ground-water monitoring network well.
PERIOD OF RECORD.--October 1975 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.49 ft below land surface, May 31, 1978; lowest measured, 15.06 ft below land surface, Nov. 24, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	10.59	DEC 27	10.58	MAR 8	10.68	MAY 15	10.83	JUL 23	12.24	SEP 19	12.73
NOV 28	10.28	JAN 29	10.45	APR 18	10.58	JUN 19	11.06	AUG 17	12.74		



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

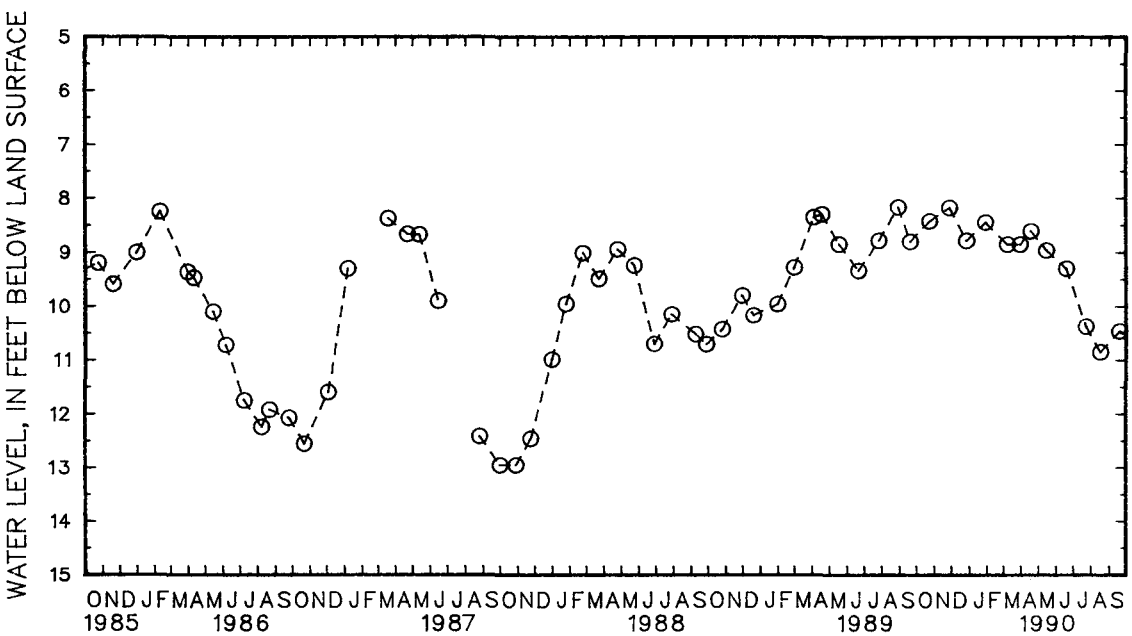
MARYLAND--Continued

WORCESTER COUNTY--Continued

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.
REMARKS.--Ocean City ground-water monitoring network well.
PERIOD OF RECORD.--October 1975 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.79 ft below land surface, Nov. 20, 1975; lowest measured, 12.96 ft below land surface, Oct. 1 and 29, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	8.42	DEC 27	8.78	MAR 8	8.85	MAY 15	8.96	JUL 23	10.38	SEP 19	10.47
NOV 28	8.17	JAN 29	8.44	APR 18	8.60	JUN 19	9.30	AUG 17	10.86		



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Ocean City ground-water monitoring network well. Water levels affected by nearby pumping. No record from July 26,1990 to Aug. 17, 1990 due to recorder malfunction.
PERIOD OF RECORD.--June 1972 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.32 ft below land surface, April 8, 1988; lowest recorded, 52.46 ft below land surface, July 24, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	19.04	17.49	19.02	10.60	10.47	7.84	25.25	13.88	17.56	8.12	14.40	7.66
2	18.50	16.33	12.38	10.51	18.72	7.82	23.04	12.70	17.66	7.71	15.58	12.41
3	16.52	14.22	12.66	9.90	12.92	8.53	21.13	10.80	14.40	12.38	14.62	9.10
4	15.61	13.63	24.09	10.56	11.51	8.34	13.59	9.13	14.73	11.15	14.98	13.57
5	15.15	13.30	22.86	12.05	13.73	9.32	14.26	9.95	14.43	7.95	15.71	12.42
6	15.13	12.79	22.29	11.64	16.67	8.96	12.66	9.70	14.43	7.10	15.23	8.19
7	16.24	13.69	16.05	10.77	17.34	7.77	15.67	9.41	14.10	7.18	14.42	7.77
8	17.67	15.41	16.36	10.09	18.58	9.20	10.68	9.09	26.13	6.99	15.39	7.95
9	16.62	14.62	19.33	9.02	11.22	8.97	17.08	7.31	23.85	8.10	16.04	8.89
10	15.20	13.37	18.95	8.76	14.83	8.28	15.21	8.20	14.36	7.91	16.10	11.92
11	15.54	13.49	18.46	10.71	10.48	8.70	16.95	8.23	15.06	8.37	16.73	13.43
12	16.64	13.72	21.93	11.58	18.06	7.98	15.99	8.37	14.96	12.42	15.96	9.07
13	16.64	13.44	15.25	10.68	17.04	7.83	16.52	8.83	18.77	7.50	15.29	7.64
14	17.92	14.22	25.10	11.51	16.14	8.44	21.34	9.88	14.86	8.81	15.22	11.55
15	18.47	16.22	21.46	10.92	16.73	8.88	20.53	9.34	14.05	8.40	15.58	8.45
16	17.98	15.43	19.50	10.21	15.14	9.20	20.84	7.92	14.24	11.42	15.06	7.71
17	16.08	13.66	15.35	10.33	10.46	9.42	17.04	7.65	14.88	11.60	17.22	14.33
18	15.06	12.40	18.47	10.35	10.30	9.34	15.45	8.77	16.02	14.39	17.31	15.86
19	12.76	11.57	18.30	10.56	16.86	8.63	18.57	9.25	16.74	15.45	16.34	14.61
20	12.30	11.22	14.69	9.90	14.70	8.89	18.02	9.75	16.55	15.73	15.95	13.14
21	12.66	11.74	15.24	10.38	16.07	8.51	18.97	9.72	16.21	8.64	15.48	12.33
22	12.78	11.95	13.48	9.50	10.12	9.15	16.18	9.20	15.23	12.07	15.31	7.99
23	12.32	11.51	13.40	8.79	10.01	7.37	11.87	7.45	15.15	7.64	16.36	13.50
24	12.09	8.70	19.57	8.72	7.36	5.76	16.99	6.94	15.34	11.87	16.36	13.50
25	9.96	8.07	22.55	11.11	6.09	5.08	17.94	8.05	15.94	13.04	16.96	15.40
26	10.71	8.40	24.75	11.46	17.86	4.88	15.76	6.86	16.12	13.39	16.82	14.98
27	23.94	10.17	18.17	10.07	21.11	10.31	14.60	8.68	15.30	11.17	16.30	12.89
28	24.41	11.10	14.96	9.87	12.61	8.09	18.65	9.69	15.05	8.54	15.95	12.72
29	26.30	13.40	10.77	9.61	23.03	9.58	13.24	8.53	---	---	15.52	8.88
30	19.13	11.66	16.38	7.73	23.40	10.96	10.57	7.24	---	---	15.96	12.88
31	24.19	10.59	---	---	23.82	11.98	13.74	7.22	---	---	16.18	14.13
MONTH	26.30	8.07	25.10	7.73	23.82	4.88	25.25	6.86	26.13	6.99	17.31	7.64

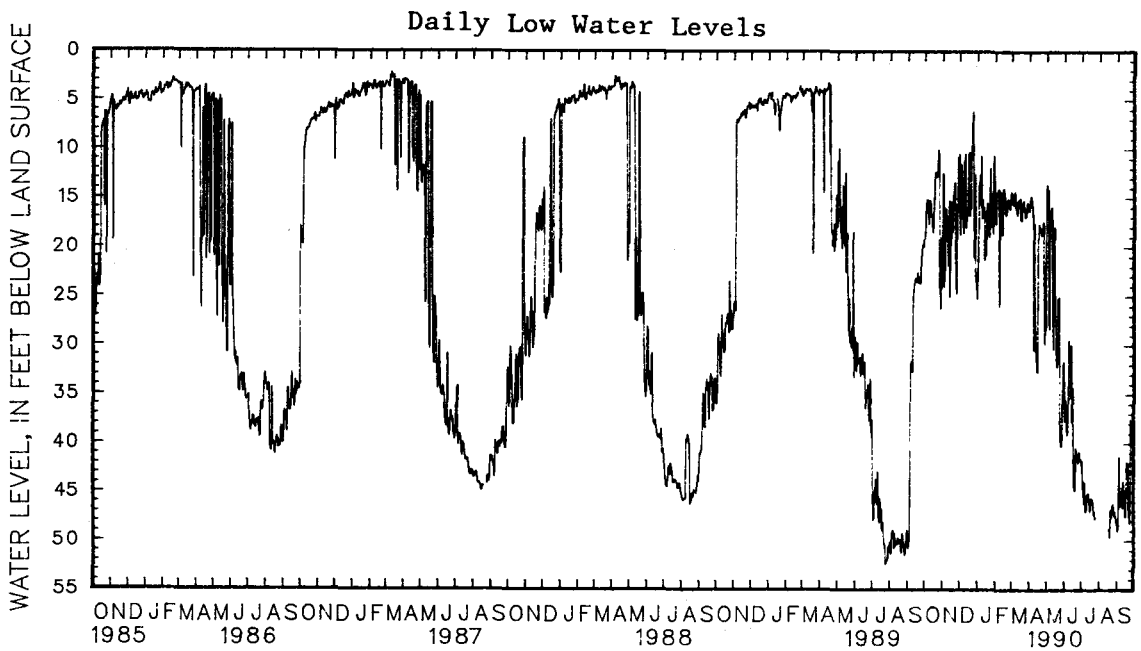
GROUND-WATER LEVELS

MARYLAND--Continued

WORCESTER COUNTY--Continued

WO Ah 6--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	16.33	14.92	14.92	13.53	35.39	17.70	42.17	39.41	---	---	48.67	31.29
2	15.82	15.02	13.56	12.49	37.72	21.98	41.82	39.14	---	---	49.00	43.00
3	15.15	10.81	14.29	12.79	35.70	25.02	43.98	38.79	---	---	48.45	31.48
4	14.84	9.64	14.15	11.79	37.31	19.44	45.20	39.10	---	---	44.60	28.98
5	15.18	10.28	27.61	12.74	36.12	19.34	46.17	25.91	---	---	41.38	25.59
6	15.77	11.31	28.36	15.11	39.18	31.64	43.99	38.69	---	---	45.07	32.61
7	16.62	11.95	16.41	13.79	39.04	27.78	46.16	27.89	---	---	46.49	32.65
8	17.54	15.91	16.25	13.71	35.48	23.87	47.07	28.86	---	---	45.81	41.92
9	30.55	16.19	17.83	14.18	29.49	23.68	46.94	40.70	---	---	46.02	31.35
10	17.64	16.37	15.96	13.94	30.57	23.05	46.52	28.24	---	---	44.56	28.44
11	27.89	16.24	17.63	14.22	30.09	23.12	45.30	39.44	---	---	46.60	32.03
12	30.29	17.44	24.38	14.80	35.32	21.38	45.79	24.88	---	---	43.92	26.72
13	31.16	19.02	30.49	15.36	29.97	22.09	45.11	39.89	---	---	45.71	31.09
14	32.72	20.22	18.29	14.80	37.85	22.08	45.79	31.13	---	---	45.32	27.79
15	32.75	20.55	17.96	15.10	34.37	22.94	46.31	39.24	---	---	47.49	32.73
16	26.15	17.01	25.39	14.84	36.93	22.67	47.02	27.75	---	---	47.57	36.23
17	18.13	16.93	27.48	15.17	41.71	22.77	45.69	39.30	---	---	45.02	32.43
18	17.63	16.63	31.60	16.80	44.43	36.14	45.87	38.84	48.77	32.54	41.88	25.51
19	17.92	16.53	32.24	18.18	44.83	40.43	45.71	38.43	49.67	47.12	42.06	29.97
20	18.30	16.57	31.54	19.93	44.81	39.89	45.99	38.84	48.30	43.84	42.35	29.98
21	18.21	17.00	25.23	18.43	40.47	35.81	46.45	41.56	46.84	31.23	46.22	31.78
22	18.79	17.78	25.55	17.43	40.78	34.90	47.28	42.94	47.61	27.38	47.43	34.69
23	18.55	16.96	25.14	17.59	41.11	36.46	47.02	42.84	46.83	28.94	48.24	37.93
24	18.05	16.62	37.16	18.01	41.72	38.68	47.76	42.00	46.48	28.07	45.17	30.87
25	17.47	14.42	39.41	34.71	41.97	37.29	47.69	41.62	46.25	41.67	37.47	26.54
26	17.76	11.42	40.29	21.84	41.60	36.94	---	---	47.20	42.38	39.09	25.73
27	26.48	11.66	40.34	30.27	40.88	36.66	---	---	47.41	41.67	37.66	24.05
28	29.95	13.58	39.58	35.28	41.71	37.37	---	---	47.01	40.82	37.92	25.84
29	21.84	14.35	35.43	18.85	41.64	37.17	---	---	47.41	36.16	40.25	27.28
30	28.36	13.97	32.15	17.61	41.74	38.06	---	---	47.82	30.44	43.39	28.66
31	---	---	31.73	17.82	---	---	---	---	48.06	28.60	---	---
MONTH	32.75	9.64	40.34	11.79	44.83	17.70	47.76	24.88	49.67	28.07	49.00	24.05

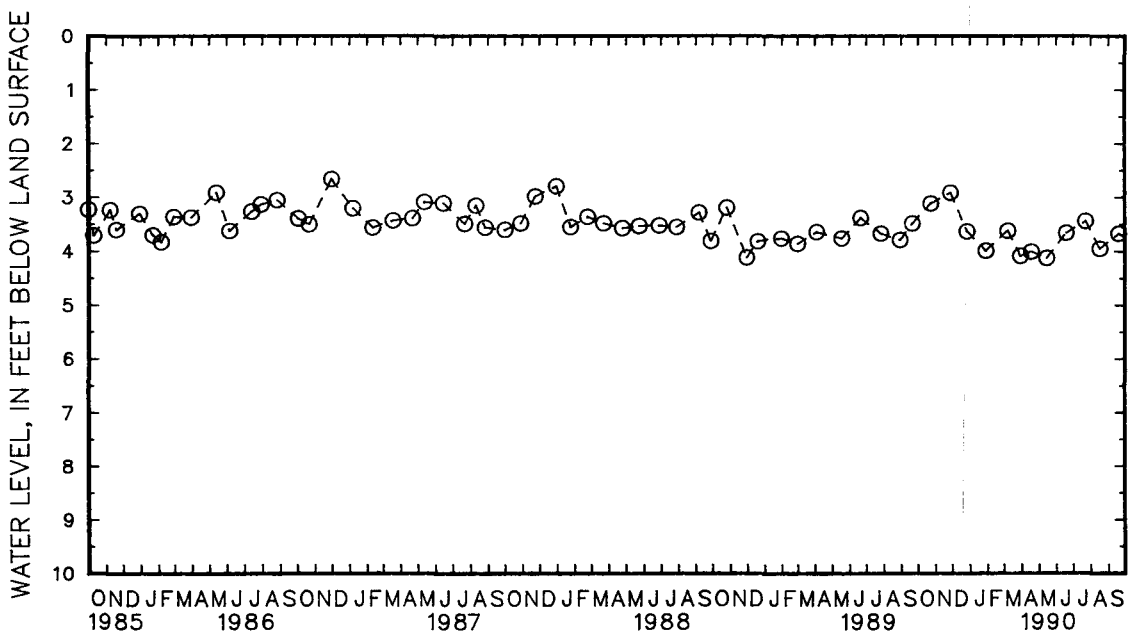


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Ocean City ground-water monitoring network well. Water levels may be affected by nearby pumping.
PERIOD OF RECORD.--October 1975 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.90 ft below land surface, March 10, 1976; lowest measured, 10.26 ft below land surface, Oct. 28, 1975.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	3.12	DEC 27	3.64	MAR 8	3.63	MAY 15	4.14	JUL 23	3.45	SEP 19	3.68
NOV 28	2.92	JAN 29	4.00	APR 18	4.02	JUN 19	3.67	AUG 17	3.96		

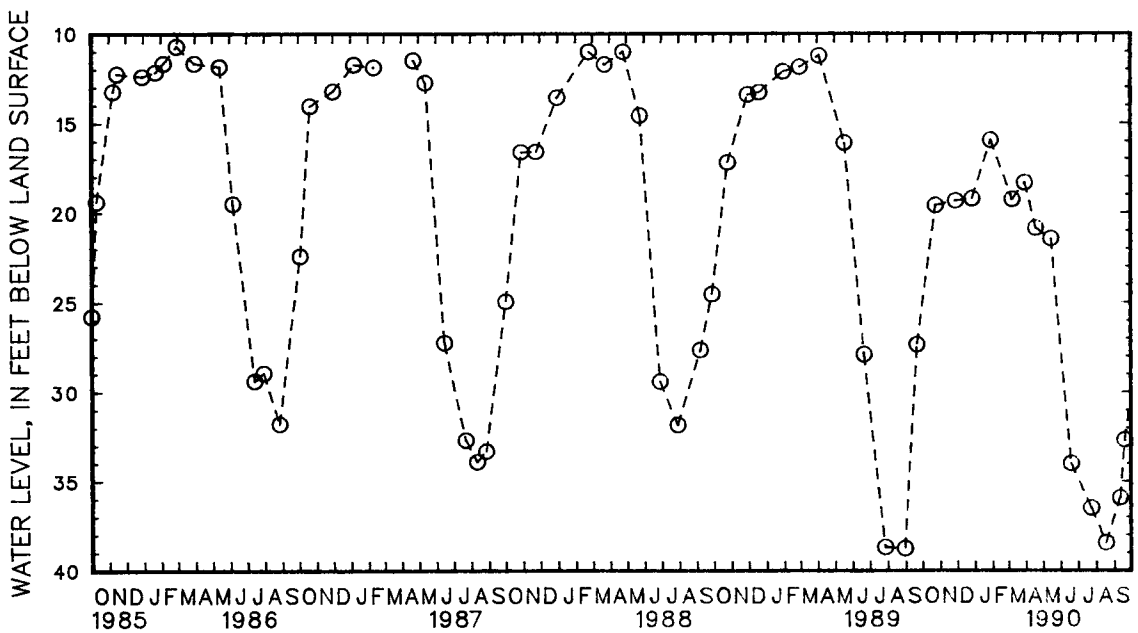


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

WELL NUMBER.--WO Ah 36. SITE ID.--382635075030602. PERMIT NUMBER.--WO-73-0518.
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.
REMARKS.--Ocean City ground-water monitoring network well. 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, April 18, 1984; lowest measured, 38.75 ft below land surface, Aug. 30, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	19.59	DEC 27	19.22	MAR 8	19.27	MAY 15	21.46	JUL 23	36.50	SEP 19	32.67
NOV 28	19.34	JAN 29	15.95	APR 18	20.87	JUN 19	34.02	AUG 17	38.44		

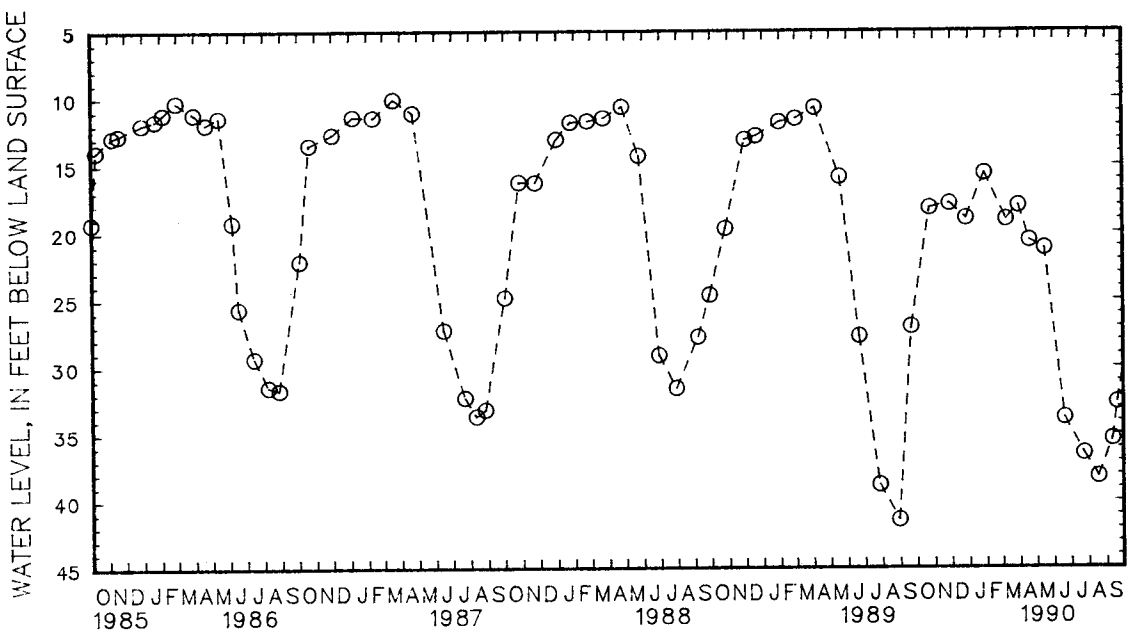


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Ocean City ground-water monitoring network well. 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, Feb. 10, 1977; lowest measured, 41.42 ft below land surface, Aug. 30, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	18.19	DEC 27	18.96	MAR 8	19.05	MAY 15	21.20	JUL 23	36.50	SEP 19	32.68
NOV 28	17.87	JAN 29	15.63	APR 18	20.62	JUN 19	33.84	AUG 17	38.25		



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

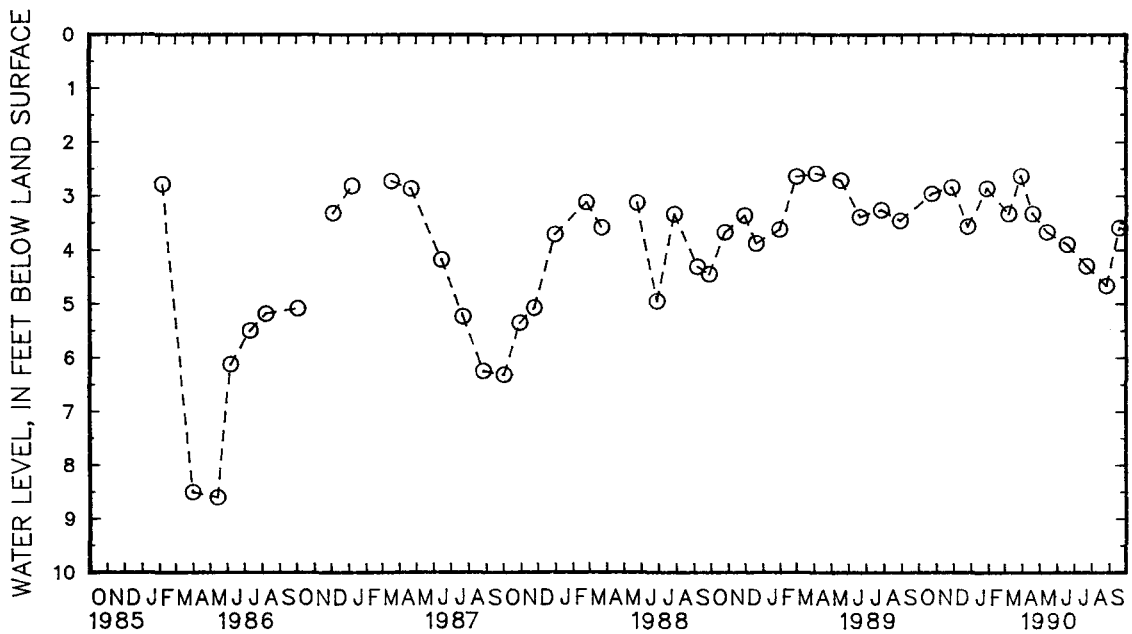
MARYLAND--Continued

WORCESTER COUNTY--Continued

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.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--August 1949 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.41 ft below land surface, March 8, 1962; lowest measured, 8.61 ft below land surface, May 14, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	2.96	DEC 27	3.57	MAR 8	3.33	MAY 15	3.67	JUL 23	4.30	SEP 19	3.59
NOV 28	2.84	JAN 29	2.86	APR 19	3.33	JUN 19	3.90	AUG 27	4.67		

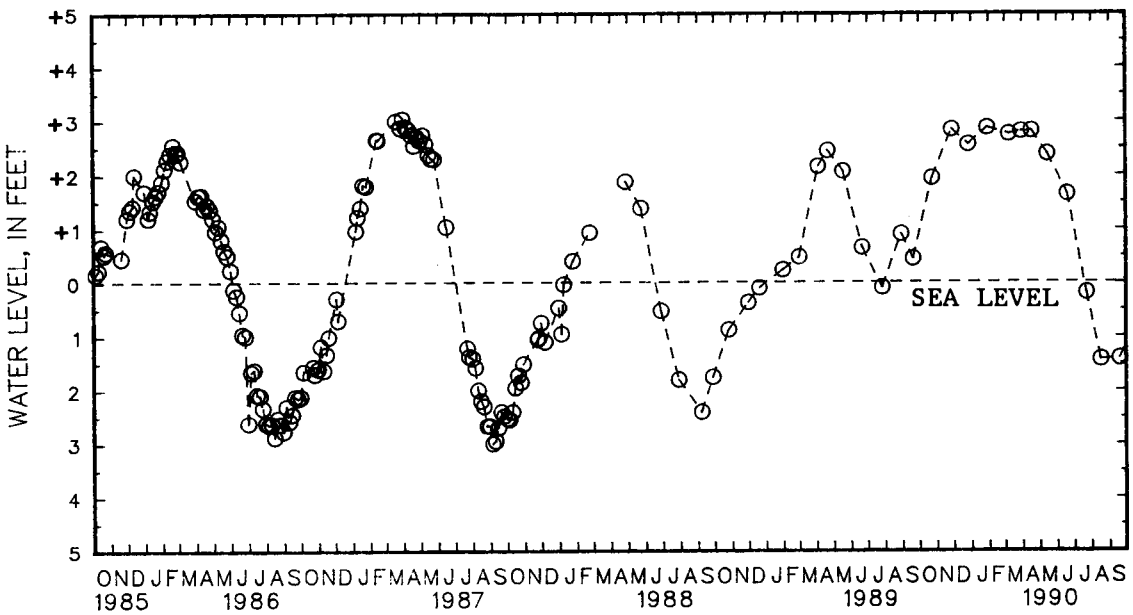


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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 personnel.
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.
REMARKS.--Ocean City ground-water monitoring network well. Water levels may be affected by nearby pumping.
PERIOD OF RECORD.--September 1970 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.13 ft above land surface, Feb. 29, 1972; lowest measured, 3.0 ft below land surface, Sept. 5, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
(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 24	+1.94	DEC 27	+2.56	MAR 8	+2.75	MAY 15	+2.38	JUL 23	.20	SEP 19	1.42
NOV 28	+2.84	JAN 29	+2.87	APR 17	+2.81	JUN 19	+1.64	AUG 17	1.44		

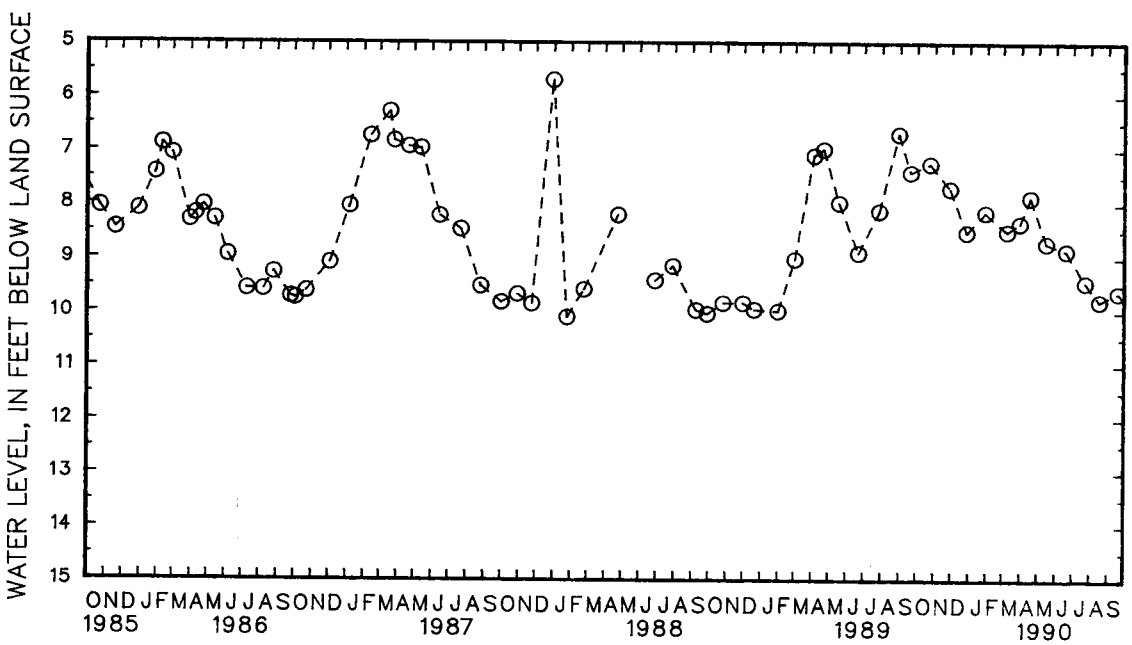


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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 personnel.
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.
REMARKS.--Ocean City ground-water monitoring network well.
PERIOD OF RECORD.--May 1971 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.22 ft below land surface, Jan. 8, 1971; lowest measured, 10.12 ft below land surface, Jan. 25, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	7.25	DEC 27	8.52	MAR 8	8.50	MAY 15	8.72	JUL 23	9.45	SEP 19	9.64
NOV 28	7.71	JAN 29	8.15	APR 17	7.87	JUN 19	8.86	AUG 17	9.80		

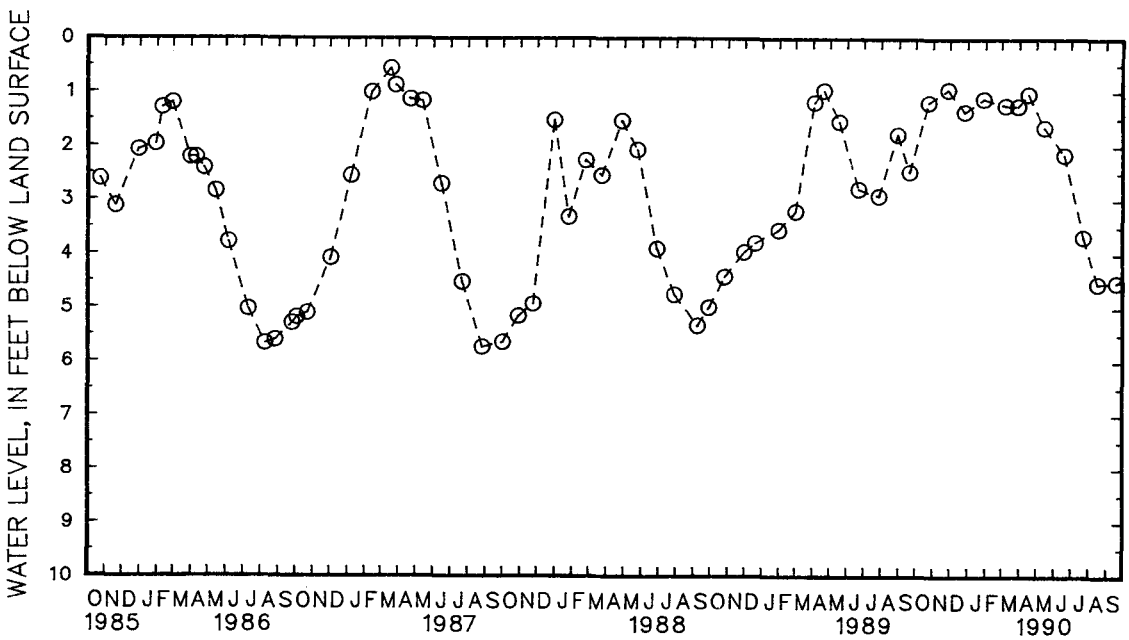


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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 personnel.
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.
REMARKS.--Ocean City ground-water monitoring network well. Water levels maybe affected by nearby pumping.
PERIOD OF RECORD.--October 1970 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, .22 ft above land surface, April 27, 1983; lowest measured, 5.74 ft below land surface, Aug. 26, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	1.18	DEC 27	1.35	MAR 8	1.23	MAY 15	1.64	JUL 23	3.68	SEP 19	4.53
NOV 28	.94	JAN 29	1.11	APR 17	1.02	JUN 19	2.15	AUG 17	4.55		



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Ocean City ground-water monitoring network well. Water levels affected by nearby pumping.
PERIOD OF RECORD.--September 1975 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 3.16 ft below land surface, April 4, 1990; lowest recorded, 12.72 ft below land surface, Aug. 26, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.97	7.22	5.77	5.08	5.61	4.92	5.20	4.24	4.58	4.04	4.55	3.90
2	7.55	6.86	6.01	5.13	5.13	4.17	5.61	4.99	4.61	3.88	4.77	3.93
3	7.67	7.03	5.51	4.73	5.11	4.26	5.57	5.04	4.37	3.94	4.50	4.09
4	7.78	7.17	5.69	5.11	5.47	4.86	5.12	4.57	4.01	3.34	4.40	3.70
5	7.97	7.24	5.81	5.15	5.29	4.64	5.09	4.46	4.18	3.24	4.41	3.79
6	7.77	7.06	5.58	4.92	4.93	4.42	4.99	4.37	4.52	3.56	4.36	3.72
7	7.42	6.80	5.56	4.85	5.15	4.36	4.91	4.23	4.65	3.80	4.37	3.71
8	7.31	6.59	5.40	4.67	5.17	4.67	4.95	4.12	4.47	3.65	4.49	3.89
9	7.24	6.56	5.13	4.53	5.07	4.22	4.75	3.77	4.33	3.65	4.49	3.92
10	7.30	6.56	5.32	4.55	4.70	3.88	4.58	3.68	4.29	3.58	4.41	3.75
11	7.23	6.55	5.61	4.90	4.86	4.08	4.86	4.06	4.31	3.66	4.26	3.75
12	7.12	6.45	5.75	5.06	4.96	4.03	4.65	3.82	4.26	3.67	4.34	3.78
13	7.09	6.45	5.83	4.95	4.58	3.53	4.90	4.28	4.25	3.68	4.29	3.78
14	6.95	6.18	5.66	4.79	4.68	3.89	5.09	4.53	4.49	3.85	4.30	3.68
15	6.83	6.00	5.60	4.70	4.89	4.15	4.99	4.37	4.23	3.61	4.22	3.61
16	6.70	5.85	5.18	4.17	5.15	4.30	4.82	4.26	4.19	3.34	4.31	3.71
17	6.72	5.92	5.49	4.83	5.43	4.94	4.76	4.32	4.73	3.76	4.30	3.70
18	6.66	5.63	5.71	5.05	5.35	4.78	4.87	4.17	4.54	4.12	4.43	3.86
19	5.59	4.58	5.71	5.04	4.94	4.24	5.03	4.47	4.66	3.83	4.39	4.01
20	5.76	4.83	5.57	5.03	4.70	4.10	4.91	4.39	4.84	4.27	4.40	3.76
21	6.33	5.62	6.00	5.38	4.97	4.25	4.62	3.99	4.86	4.23	4.56	3.95
22	6.70	6.07	5.89	4.98	5.19	4.67	4.42	3.74	4.77	4.09	4.62	4.10
23	6.51	5.79	5.16	4.27	5.20	4.46	4.52	3.77	4.44	3.88	4.43	3.85
24	6.39	5.82	4.89	4.13	4.71	3.92	4.64	3.86	4.46	3.76	4.53	3.87
25	6.26	5.78	5.33	4.67	4.54	3.75	4.61	3.78	4.81	3.97	4.41	3.84
26	6.29	5.77	5.59	5.02	5.15	4.26	4.40	3.76	4.82	3.97	4.47	3.85
27	6.28	5.68	5.38	4.58	5.40	4.74	4.91	4.33	4.45	3.89	4.50	3.87
28	6.12	5.57	5.09	4.27	5.38	4.64	5.02	4.35	4.55	3.92	4.59	3.88
29	6.14	5.48	5.29	4.63	5.34	4.67	4.79	3.57	---	---	4.67	3.95
30	5.99	5.24	5.44	4.71	5.11	4.27	4.57	3.53	---	---	4.06	3.49
31	5.78	4.93	---	---	4.90	4.03	4.71	4.15	---	---	4.15	3.32
MONTH	7.97	4.58	6.01	4.13	5.61	3.53	5.61	3.53	4.86	3.24	4.77	3.32

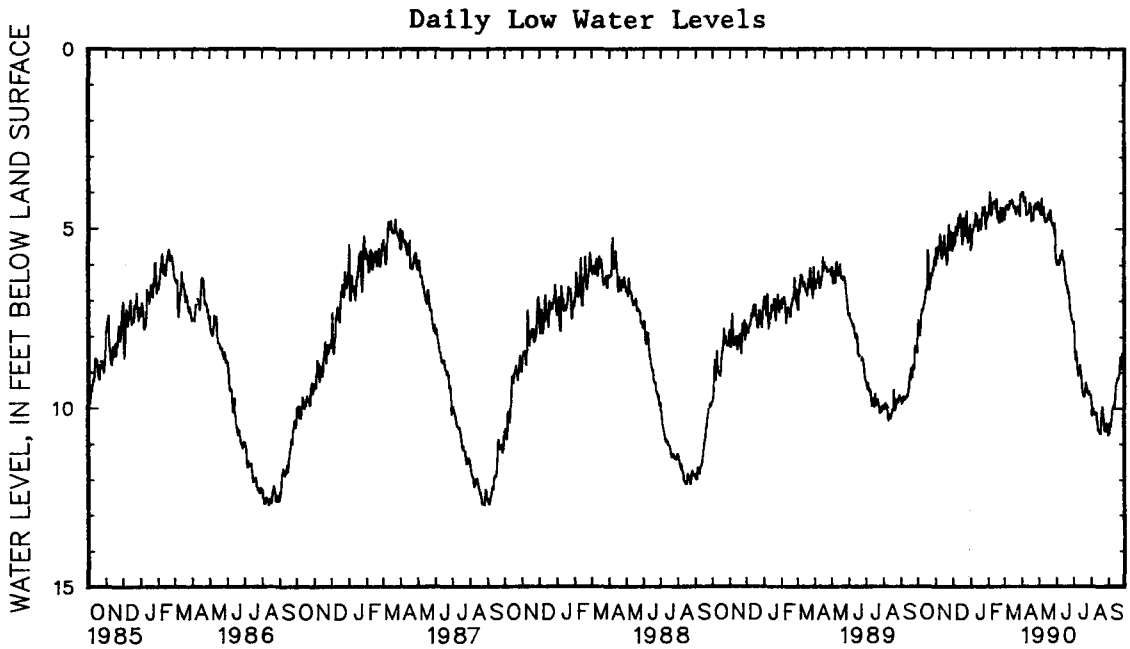
GROUND-WATER LEVELS

MARYLAND--Continued

WORCESTER COUNTY--Continued

WO Bg 47--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	4.09	3.53	4.36	3.65	5.86	5.35	7.65	6.98	9.73	9.07	10.77	10.07
2	4.01	3.35	4.53	3.75	5.96	5.43	7.61	7.00	9.95	9.26	10.76	10.04
3	4.00	3.17	4.55	4.00	6.03	5.48	7.89	7.35	10.23	9.53	10.72	9.84
4	4.02	3.16	4.63	3.96	6.02	5.44	8.56	7.85	10.17	9.43	10.42	9.68
5	4.26	3.76	4.35	3.61	5.91	5.30	8.67	7.94	10.05	9.31	10.45	9.78
7	4.16	3.50	4.47	3.82	5.98	5.25	8.64	7.74	10.18	9.48	10.36	9.66
8	4.36	3.62	4.63	3.87	5.88	5.09	8.87	8.03	10.20	9.49	10.29	9.42
9	4.64	3.94	4.56	3.84	5.77	5.07	9.08	8.21	10.19	9.56	9.96	9.17
10	4.58	4.01	4.42	3.75	5.81	5.05	9.12	8.45	10.13	9.54	9.94	9.17
12	4.58	4.04	4.84	4.17	5.63	4.97	8.93	8.32	10.36	9.74	9.87	9.06
13	4.58	4.02	4.75	4.13	5.87	4.90	8.82	8.25	10.45	9.75	9.76	8.94
14	4.48	3.96	4.83	4.09	5.90	5.35	8.99	8.30	10.63	9.83	9.49	8.67
15	4.31	3.82	4.81	4.20	5.99	5.29	9.12	8.54	10.63	9.85	9.34	8.64
17	4.45	3.73	4.63	4.14	6.31	5.77	9.57	8.85	10.72	9.88	9.18	8.56
18	4.81	4.00	4.60	4.07	6.51	5.87	9.65	8.88	10.70	9.90	9.23	8.65
19	4.78	4.32	4.69	4.11	6.57	5.80	9.70	8.85	10.73	9.83	9.19	8.52
20	4.79	4.26	4.77	3.99	6.61	5.79	9.70	8.84	10.29	9.29	9.10	8.49
22	4.65	3.84	4.53	3.81	6.81	5.88	9.38	8.56	10.06	9.25	8.81	8.07
23	4.40	3.69	4.85	3.95	6.77	5.92	9.31	8.54	10.15	9.41	8.59	7.92
24	4.38	3.60	4.87	3.99	6.92	5.91	9.44	8.61	10.32	9.70	8.86	8.23
25	4.36	3.49	4.94	4.04	7.22	6.16	9.54	8.80	10.47	9.88	8.91	8.20
27	4.46	3.50	4.93	3.97	7.39	6.74	9.63	9.01	10.66	9.96	8.49	7.85
28	4.49	3.65	5.15	4.18	7.53	6.89	9.64	9.02	10.55	9.87	8.49	7.85
29	4.29	3.70	4.88	4.28	7.55	7.04	9.56	8.96	10.44	9.80	8.54	7.88
30	4.28	3.34	5.32	4.36	7.63	7.09	9.65	8.97	10.52	9.86	8.45	7.76
31	---	---	5.69	4.91	---	---	9.64	8.96	10.59	9.91	---	---
MONTH	4.81	3.16	5.69	3.56	7.63	4.90	9.70	6.98	10.73	9.07	10.77	7.76



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

MARYLAND--Continued

WORCESTER COUNTY--Continued

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.
REMARKS.--Ocean City ground-water monitoring network well. Water levels affected by nearby pumping. No record from Sept. 8 to 11, 1990 due to recorder malfunction.
PERIOD OF RECORD.--September 1975 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.92 ft below land surface, Jan. 30 1976; lowest recorded, 14.29 ft below land surface, Aug. 26, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.76	8.05	6.02	5.45	5.58	5.01	5.09	4.21	4.44	4.01	4.31	3.78
2	8.30	7.69	6.24	5.49	5.17	4.32	5.51	4.96	4.43	3.84	4.48	3.80
3	8.35	7.84	5.77	5.09	5.08	4.35	5.52	5.06	4.39	3.90	4.25	3.92
4	8.46	7.96	5.90	5.43	5.42	4.92	5.36	4.60	4.11	3.32	4.19	3.58
5	8.63	8.01	6.01	5.46	5.26	4.71	4.94	4.50	3.93	3.24	4.19	3.67
6	8.38	7.79	5.79	5.21	4.93	4.49	5.03	4.42	4.23	3.54	4.19	3.61
7	8.03	7.49	5.75	5.13	5.13	4.44	4.87	4.29	4.46	3.76	4.18	3.63
8	7.91	7.26	5.58	4.95	5.14	4.71	4.89	4.17	4.33	3.64	4.28	3.78
9	7.82	7.22	5.34	4.80	5.05	4.30	4.69	3.88	4.18	3.60	4.27	3.79
10	7.84	7.19	5.53	4.84	4.67	3.98	4.51	3.78	4.13	3.51	4.21	3.62
11	7.75	7.18	5.75	5.17	4.80	4.15	4.79	4.13	4.15	3.61	4.06	3.62
12	7.65	7.07	5.87	5.30	4.91	4.12	4.57	3.88	4.09	3.61	4.13	3.66
13	7.58	7.05	5.96	5.21	4.54	3.65	4.83	4.27	4.11	3.64	4.11	3.66
14	7.45	6.80	5.78	5.04	4.64	3.99	4.99	4.53	4.32	3.76	4.11	3.55
15	7.28	6.60	5.69	4.93	4.84	4.22	4.89	4.36	4.09	3.65	4.07	3.52
16	7.14	6.41	5.28	4.40	5.07	4.33	4.70	4.26	4.00	3.29	4.14	3.62
17	7.12	6.45	5.58	4.98	5.33	4.91	4.67	4.28	4.54	3.66	4.13	3.61
18	7.06	6.13	5.79	5.24	5.26	4.78	4.70	4.15	4.50	4.05	4.27	3.74
19	6.06	5.16	5.80	5.23	4.88	4.27	4.87	4.40	4.38	3.74	4.25	3.92
20	6.17	5.36	5.61	5.14	4.60	4.12	4.90	4.30	4.60	4.13	4.25	3.68
21	6.72	6.06	5.98	5.42	4.86	4.24	4.51	3.94	4.64	4.13	4.45	3.87
22	7.03	6.53	5.92	5.12	5.08	4.61	4.31	3.72	4.53	3.94	4.46	4.03
23	6.89	6.25	5.24	4.44	5.08	4.43	4.26	3.74	4.21	3.74	4.30	3.79
24	6.72	6.22	4.98	4.32	4.61	3.93	4.48	3.84	4.20	3.64	4.38	3.81
25	6.59	6.16	5.36	4.78	4.38	3.74	4.46	3.77	4.55	3.74	4.26	3.78
26	6.58	6.14	5.56	5.10	4.99	4.16	4.26	3.72	4.60	3.89	4.32	3.81
27	6.58	6.04	5.41	4.73	5.19	4.65	4.74	4.16	4.25	3.78	4.36	3.84
28	6.41	5.95	5.12	4.41	5.16	4.56	4.85	4.34	4.31	3.77	4.45	3.87
29	6.42	5.86	5.29	4.74	5.16	4.62	4.64	3.76	---	---	4.54	3.83
30	6.25	5.63	5.43	4.82	5.00	4.28	4.40	3.51	---	---	3.98	3.46
31	6.03	5.30	---	---	4.81	4.06	4.53	4.08	---	---	4.03	3.32
MONTH	8.76	5.16	6.24	4.32	5.58	3.65	5.52	3.51	4.64	3.24	4.54	3.32

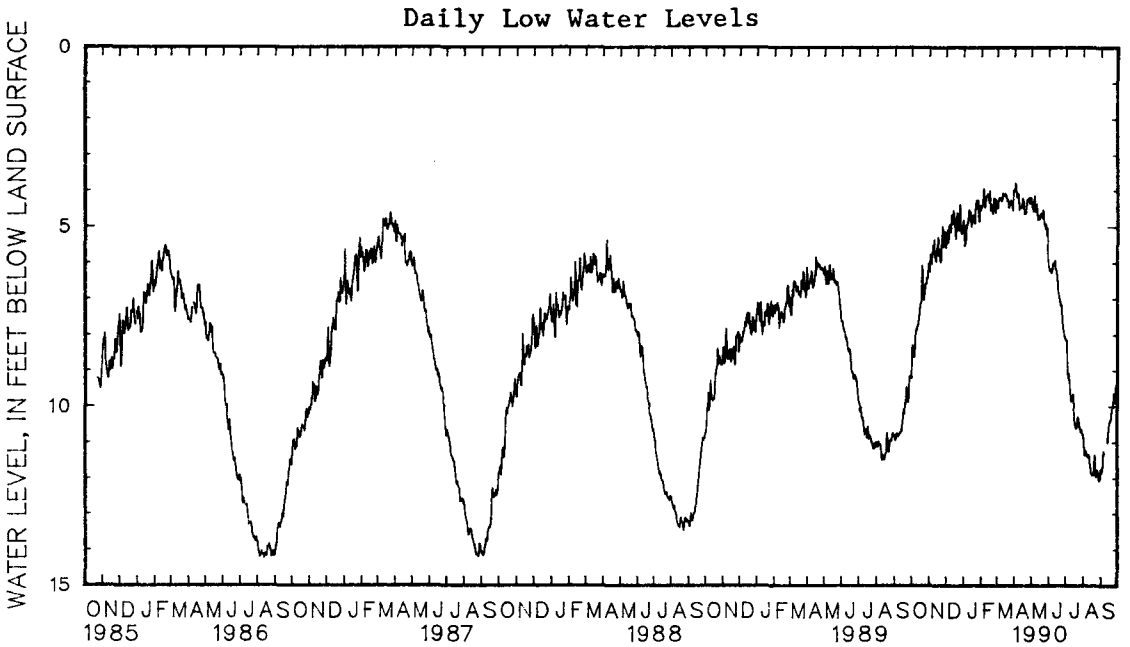
GROUND-WATER LEVELS

MARYLAND--Continued

WORCESTER COUNTY--Continued

WO Bg 48--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	4.00	3.50	4.28	3.66	6.11	5.69	8.16	7.61	10.88	10.34	11.79	11.24
2	3.92	3.36	4.46	3.78	6.21	5.78	8.17	7.67	11.11	10.55	11.86	11.29
3	3.78	3.19	4.50	4.04	6.24	5.78	8.46	8.00	11.38	10.82	11.74	11.14
4	4.00	3.17	4.56	3.99	6.23	5.77	9.12	8.45	11.35	10.74	11.67	10.93
5	4.17	3.73	4.29	3.64	6.17	5.67	9.26	8.68	11.24	10.63	11.35	10.67
6	4.16	3.69	4.14	3.61	6.29	5.69	9.11	8.45	11.30	10.73	11.26	10.63
7	4.08	3.51	4.40	3.87	6.25	5.67	9.30	8.52	11.37	10.78	11.33	10.69
8	4.27	3.76	4.58	3.95	6.15	5.48	9.56	8.84	11.41	10.83	---	---
9	4.52	4.02	4.51	3.92	6.02	5.42	9.80	9.04	11.42	10.90	---	---
10	4.44	3.92	4.37	3.81	6.04	5.42	9.88	9.29	11.37	10.89	---	---
11	4.47	3.93	4.68	3.87	6.02	5.46	9.81	9.30	11.40	10.89	---	---
12	4.47	4.02	4.80	4.25	5.94	5.37	9.75	9.24	11.61	11.09	10.89	10.47
13	4.47	4.01	4.69	4.21	6.16	5.31	9.67	9.22	11.72	11.12	11.02	10.32
14	4.37	3.95	4.80	4.15	6.22	5.74	9.88	9.27	11.87	11.21	10.77	10.02
15	4.21	3.80	4.79	4.28	6.31	5.73	10.04	9.53	11.90	11.24	10.55	9.96
16	4.24	3.71	4.72	4.29	6.50	5.95	10.34	9.83	11.93	11.24	10.49	9.83
17	4.36	3.72	4.64	4.24	6.64	6.17	10.48	9.89	11.92	11.22	10.40	9.87
18	4.64	3.99	4.62	4.19	6.84	6.29	10.57	9.94	11.89	11.22	10.42	9.93
19	4.62	4.25	4.72	4.22	6.93	6.28	10.62	9.91	11.93	11.18	10.36	9.73
20	4.63	4.19	4.76	4.11	7.00	6.31	10.62	9.91	11.57	10.71	10.20	9.69
21	4.60	4.09	4.53	3.82	7.08	6.40	10.55	9.79	11.37	10.68	10.06	9.48
22	4.46	3.79	4.58	3.98	7.19	6.42	10.36	9.67	11.89	11.51	9.88	9.23
23	4.24	3.66	4.90	4.16	7.16	6.46	10.31	9.67	11.98	11.40	9.63	9.06
24	4.23	3.58	4.97	4.24	7.34	6.45	10.45	9.74	11.87	11.29	9.87	9.34
25	4.23	3.49	5.05	4.30	7.67	6.74	10.57	9.93	11.77	11.22	9.90	9.30
26	4.20	3.53	4.93	4.31	7.84	7.14	10.62	10.10	11.84	11.28	9.74	9.15
27	4.31	3.50	5.01	4.19	7.90	7.32	10.70	10.17	11.92	11.36	9.45	8.92
28	4.34	3.65	5.25	4.40	8.04	7.48	10.73	10.21	12.08	11.51	9.42	8.89
29	4.19	3.70	5.05	4.53	8.07	7.65	10.67	10.17	12.06	11.48	9.43	8.89
30	4.18	3.37	5.56	4.65	8.14	7.71	10.76	10.20	12.03	11.29	9.31	8.73
31	---	---	5.95	5.23	---	---	10.78	10.20	11.76	11.12	---	---
MONTH	4.64	3.17	5.95	3.61	8.14	5.31	10.78	7.61	12.08	10.34	11.86	8.73



5 YEAR HYDROGRAPH

OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Ocean City ground-water monitoring network. Water levels affected by nearby pumping.
PERIOD OF RECORD.--October 1975 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 2.91 ft below land surface, April 4, 1990; lowest recorded, 24.84 ft below land surface, Aug. 16, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH			
1	10.26	9.86	6.64	6.52	5.48	5.38	5.35	5.13	4.09	4.00	3.78	3.72		
2	9.85	9.57	6.72	6.48	5.38	5.00	5.55	5.36	4.04	3.94	3.85	3.70		
3	9.61	9.49	6.45	6.23	5.06	4.91	5.56	5.44	4.01	3.84	3.79	3.70		
4	9.58	9.45	6.40	6.30	5.25	5.06	5.42	5.15	3.80	3.56	3.70	3.60		
5	9.59	9.42	6.44	6.33	5.24	5.13	5.12	5.06	3.70	3.51	3.70	3.62		
6	9.43	9.20	6.34	6.16	5.14	4.97	5.07	4.87	3.87	3.64	3.70	3.57		
7	9.18	9.00	6.21	6.05	5.09	4.94	4.93	4.80	3.89	3.77	3.66	3.55		
8	9.00	8.78	6.07	5.88	5.09	4.96	4.85	4.53	3.88	3.75	3.68	3.62		
9	8.81	8.67	5.90	5.70	4.99	4.72	4.65	4.45	3.80	3.71	3.68	3.60		
10	8.73	8.57	5.87	5.69	4.74	4.59	4.49	4.32	3.76	3.64	3.65	3.52		
11	8.59	8.49	5.94	5.85	4.75	4.64	4.56	4.41	3.75	3.67	3.56	3.50		
12	8.52	8.37	6.05	5.93	4.79	4.54	4.46	4.32	3.73	3.67	3.57	3.50		
13	8.41	8.29	6.10	5.94	4.57	4.30	4.60	4.44	3.74	3.68	3.54	3.49		
14	8.31	8.10	6.00	5.83	4.52	4.42	4.71	4.60	3.86	3.71	3.54	3.44		
15	8.13	7.93	5.91	5.69	4.63	4.50	4.69	4.55	3.80	3.58	3.49	3.43		
16	7.96	7.78	5.69	5.45	4.81	4.53	4.55	4.49	3.60	3.51	3.52	3.42		
17	7.85	7.70	5.73	5.52	5.01	4.81	4.52	4.44	3.88	3.58	3.53	3.42		
18	7.75	7.32	5.83	5.73	5.03	4.92	4.47	4.38	3.88	3.84	3.57	3.42		
19	7.27	6.72	5.88	5.76	4.92	4.63	4.60	4.46	3.85	3.70	3.58	3.53		
20	6.78	6.59	5.77	5.63	4.63	4.53	4.58	4.39	4.02	3.84	3.55	3.41		
21	7.11	6.79	5.91	5.65	4.67	4.54	4.38	4.19	4.03	3.96	3.64	3.46		
22	7.29	7.12	5.92	5.62	4.84	4.67	4.22	4.00	4.01	3.84	3.65	3.61		
23	7.28	7.13	5.61	5.21	4.84	4.65	4.15	3.99	3.87	3.74	3.63	3.52		
24	7.16	7.07	5.24	5.12	4.65	4.35	4.17	4.05	3.77	3.67	3.63	3.48		
25	7.14	7.08	5.43	5.25	4.70	4.38	4.15	3.97	3.91	3.69	3.54	3.46		
26	7.20	7.15	5.50	5.43	5.44	4.70	4.08	3.89	3.99	3.85	3.55	3.49		
27	7.22	7.10	5.51	5.31	5.78	5.44	4.29	4.11	3.85	3.72	3.57	3.49		
28	7.12	7.04	5.32	5.13	5.89	5.82	4.37	4.27	3.80	3.72	3.64	3.51		
29	7.09	6.95	5.35	5.23	5.93	5.74	4.28	3.85	---	---	3.69	3.51		
30	6.96	6.77	5.41	5.29	5.74	5.46	4.04	3.85	---	---	3.49	3.23		
31	6.78	6.52	---	---	5.46	5.13	4.15	4.03	---	---	3.26	3.16		
MONTH	10.26	6.52	6.72	5.12	5.93	4.30	5.56	3.85	4.09	3.51	3.85	3.16		

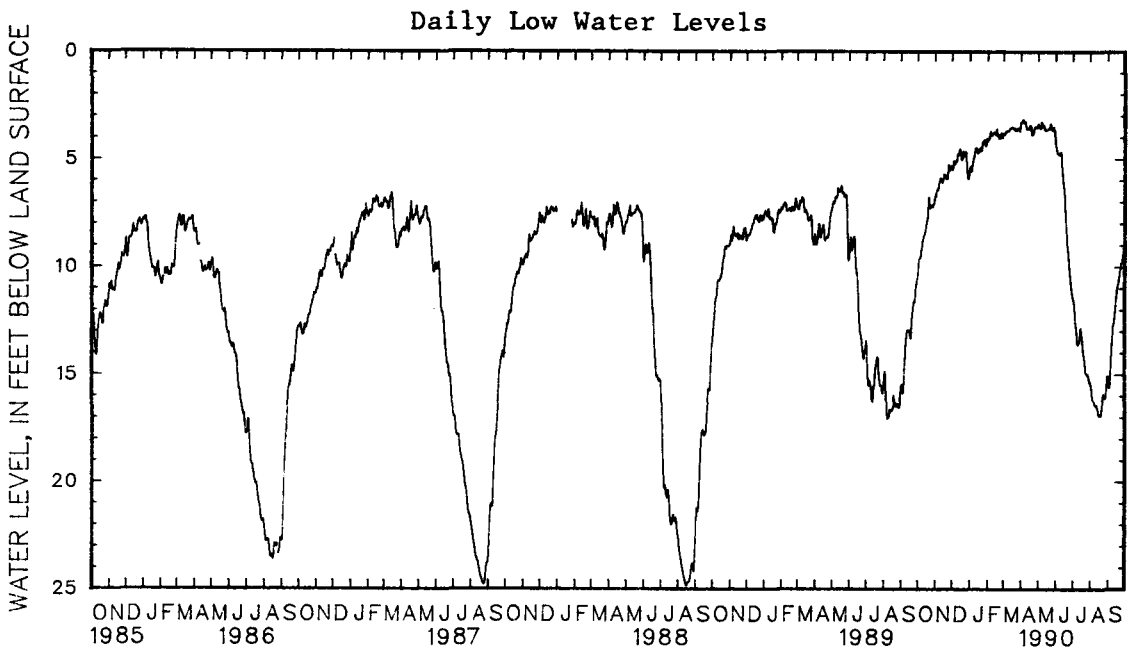
GROUND-WATER LEVELS

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	3.27	3.18	3.41	3.26	4.49	4.29	11.54	11.38	15.38	15.27	15.08	14.89
2	3.24	3.12	3.50	3.32	4.59	4.50	11.61	11.51	15.54	15.36	15.37	15.10
3	3.15	2.96	3.55	3.46	4.72	4.60	11.82	11.64	15.70	15.53	15.63	15.39
4	3.15	2.91	3.56	3.42	4.72	4.66	12.21	11.86	15.98	15.71	15.60	15.05
5	3.29	3.16	3.42	3.19	4.71	4.64	12.65	12.24	16.18	15.97	15.04	14.58
6	3.31	3.22	3.26	3.17	4.79	4.64	12.81	12.68	16.28	16.11	14.57	14.05
7	3.25	3.17	3.35	3.19	4.80	4.69	13.09	12.75	16.31	16.23	14.04	13.56
8	3.36	3.19	3.50	3.34	4.78	4.64	13.43	13.10	16.42	16.29	13.55	13.10
9	3.57	3.38	3.48	3.36	4.68	4.58	13.60	13.43	16.46	16.34	13.08	12.71
10	3.59	3.51	3.41	3.28	4.83	4.57	13.65	13.56	16.45	16.33	12.71	12.53
11	3.56	3.50	3.52	3.28	5.52	4.85	13.59	13.47	16.44	16.32	12.62	12.43
12	3.58	3.52	3.63	3.50	5.71	5.52	13.54	13.41	16.56	16.42	12.41	12.14
13	3.61	3.53	3.60	3.53	6.06	5.70	13.38	12.94	16.66	16.52	12.13	11.84
14	3.55	3.47	3.65	3.50	6.28	6.06	12.91	12.73	16.83	16.67	11.84	11.40
15	3.45	3.38	3.66	3.57	6.35	6.15	12.87	12.74	16.93	16.80	11.39	11.17
16	3.44	3.32	3.62	3.57	6.77	6.37	13.17	12.88	16.93	16.77	11.19	10.94
17	3.45	3.33	3.60	3.52	7.38	6.79	13.35	13.19	16.88	16.75	10.96	10.78
18	3.63	3.43	3.56	3.47	7.78	7.42	13.61	13.38	16.93	16.78	10.82	10.68
19	3.85	3.61	3.56	3.48	8.19	7.89	13.94	13.65	16.90	16.65	10.70	10.45
20	3.85	3.78	3.57	3.44	8.59	8.23	14.15	13.92	16.71	16.47	10.48	10.32
21	3.84	3.69	3.45	3.22	9.06	8.63	14.31	14.11	16.50	16.19	10.33	10.09
22	3.73	3.56	3.33	3.22	9.29	9.09	14.57	14.23	16.28	16.07	10.10	9.84
23	3.58	3.46	3.49	3.27	9.63	9.23	14.89	14.54	16.07	15.83	9.83	9.67
24	3.53	3.39	3.60	3.42	10.00	9.61	14.96	14.85	15.93	15.74	9.82	9.71
25	3.48	3.36	3.64	3.48	10.30	9.99	14.99	14.90	15.99	15.81	9.79	9.64
26	3.48	3.36	3.56	3.39	10.59	10.30	15.04	14.91	16.09	15.96	9.63	9.47
27	3.51	3.37	3.51	3.32	10.85	10.59	15.01	14.90	16.14	15.97	9.46	9.25
28	3.53	3.39	3.67	3.41	11.03	10.85	15.07	14.98	16.06	15.74	9.28	9.13
29	3.45	3.32	3.63	3.47	11.23	11.04	15.15	15.03	15.73	15.41	9.17	9.06
30	3.35	3.21	3.95	3.58	11.44	11.24	15.29	15.16	15.41	15.08	9.07	8.93
31	---	---	4.28	3.96	---	---	15.42	15.23	15.08	14.86	---	---
MONTH	3.85	2.91	4.28	3.17	11.44	4.29	15.42	11.38	16.93	14.86	15.63	8.93



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Ocean City ground-water monitoring network well. Water levels affected by nearby pumping.
PERIOD OF RECORD.--September 1970 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 4.53 ft below land surface, April 4, 1990. lowest recorded, 51.03 ft below land surface, July 27, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	20.72	19.56	11.53	10.50	10.46	9.28	8.65	7.38	6.91	5.84	6.71	5.59
2	20.25	19.03	11.78	10.46	9.91	8.58	9.03	8.12	6.93	5.76	6.98	5.63
3	20.09	19.06	11.10	9.92	9.73	8.40	8.83	7.76	6.58	5.85	6.60	5.55
4	20.12	19.16	11.20	10.37	10.14	8.79	8.14	7.25	6.14	5.19	6.44	5.33
5	20.26	19.18	11.34	10.38	9.11	7.97	8.05	7.08	6.43	4.92	6.49	5.47
6	20.02	18.99	11.04	10.05	8.36	7.53	7.76	6.86	6.96	5.36	6.29	5.40
7	19.57	18.60	10.94	9.88	13.52	7.26	7.80	6.65	6.95	5.60	6.51	5.19
8	19.38	18.37	10.74	9.59	8.51	7.55	7.72	6.40	6.78	5.42	6.58	5.51
9	19.19	18.15	10.51	9.46	8.17	6.84	7.47	5.95	6.72	5.46	6.61	5.57
10	19.13	15.40	11.03	9.38	7.95	6.39	7.42	5.84	6.73	5.38	6.51	5.29
11	15.80	14.05	11.09	9.73	7.98	6.59	7.68	6.26	6.72	5.45	6.35	5.30
12	14.93	13.37	11.28	9.93	8.05	6.43	7.45	5.90	6.64	5.49	6.40	5.34
13	14.46	12.99	11.34	9.72	7.51	5.73	7.64	6.37	6.59	5.67	6.28	5.34
14	14.02	12.55	11.19	9.54	7.66	6.23	7.89	6.85	6.78	5.77	6.31	5.15
15	13.73	12.11	11.06	9.41	7.86	6.59	7.74	6.56	6.36	5.20	6.16	5.21
16	13.35	11.76	10.53	8.95	8.04	6.89	7.42	6.55	6.33	5.19	6.25	5.27
17	13.19	11.68	10.67	9.54	8.37	7.45	7.32	6.57	6.85	5.62	6.34	5.28
18	12.93	10.93	10.88	9.77	8.23	7.22	7.41	6.48	6.73	6.03	6.40	5.51
19	11.42	10.04	10.81	9.80	7.54	6.68	7.60	6.73	6.92	5.79	6.34	5.66
20	14.43	10.30	10.67	9.82	7.37	6.51	7.21	6.70	7.12	6.25	6.18	5.29
21	16.28	14.32	10.96	9.96	7.63	6.64	6.93	6.23	7.09	6.16	6.51	5.44
22	16.89	16.01	10.84	9.66	7.97	7.01	6.72	5.83	7.09	6.07	6.45	5.71
23	16.89	16.00	10.04	8.78	9.89	6.95	7.04	5.78	6.83	5.72	6.50	5.47
24	17.06	16.15	9.98	8.66	11.44	9.09	7.06	5.85	6.78	5.50	6.51	5.35
25	17.20	16.30	10.52	9.24	13.03	10.83	7.05	5.73	7.07	5.78	6.44	5.35
26	17.25	13.57	10.66	9.66	14.21	12.34	7.05	5.59	7.09	5.71	6.54	5.33
27	14.04	12.41	12.89	9.06	14.40	13.39	7.53	6.32	6.74	5.59	6.58	5.29
28	13.08	12.01	10.17	8.62	14.58	10.15	7.69	6.44	6.75	5.52	6.76	5.43
29	12.74	11.54	10.23	8.96	10.67	8.81	7.29	5.41	---	---	6.76	5.08
30	12.28	11.05	10.30	9.10	9.40	7.88	6.97	5.52	---	---	6.00	4.75
31	11.87	10.52	---	---	8.67	7.21	7.14	5.96	---	---	6.11	4.73
MONTH	20.72	10.04	12.89	8.62	14.58	5.73	9.03	5.41	7.12	4.92	6.98	4.73

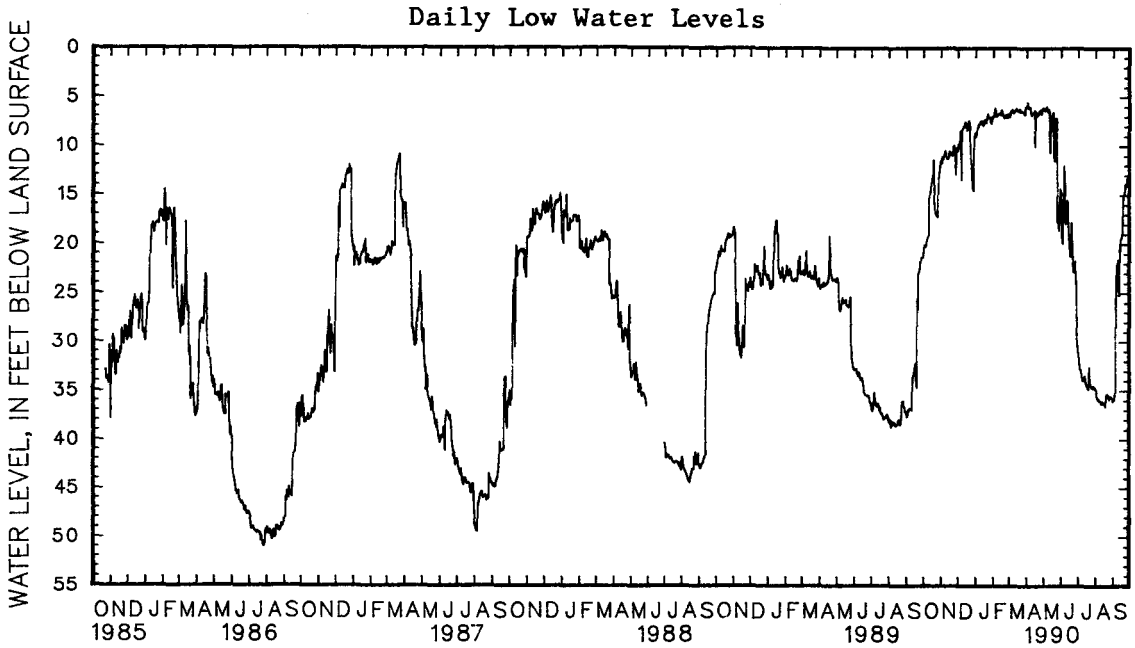
GROUND-WATER LEVELS

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	5.97	5.01	6.08	5.01	14.87	14.03	30.73	28.46	34.92	33.85	36.10	35.12
2	5.86	4.82	6.30	5.07	18.96	14.18	31.15	29.82	35.01	29.15	36.08	35.18
3	5.52	4.57	6.37	5.40	19.85	18.59	31.99	30.52	35.26	29.67	36.05	34.89
4	6.03	4.53	6.34	5.39	19.98	15.92	32.76	31.83	35.66	34.63	35.72	28.75
5	6.11	5.22	6.13	5.02	16.30	11.55	32.93	27.36	35.84	34.56	35.02	25.30
6	6.12	5.15	5.96	5.00	11.99	10.05	32.89	31.93	35.96	34.77	25.72	23.24
7	5.99	5.00	6.26	5.30	13.34	10.01	33.31	32.06	35.86	34.81	23.93	22.29
8	6.38	5.47	6.49	5.25	14.30	13.20	33.66	32.50	36.08	34.83	23.06	21.40
9	6.82	5.71	6.38	5.17	17.97	13.42	34.00	32.84	36.12	34.87	22.00	20.76
10	6.83	5.72	6.26	5.07	17.94	16.67	34.06	32.95	36.11	34.79	21.58	20.35
11	6.69	5.69	6.51	5.35	17.72	14.57	33.94	32.78	36.11	34.91	25.15	20.37
12	6.64	5.65	9.48	5.64	15.56	14.41	33.74	32.68	36.41	35.11	25.26	19.95
13	6.63	5.61	10.70	7.65	15.70	14.37	33.51	32.63	36.26	35.23	20.63	19.37
14	6.57	5.53	8.24	6.58	18.79	14.75	34.02	32.92	36.16	35.14	20.12	18.72
15	6.35	5.49	7.19	6.34	20.05	18.28	34.30	33.18	36.37	34.52	19.55	18.45
16	10.05	5.41	6.88	6.15	20.81	19.42	34.48	33.50	36.38	30.29	19.44	18.14
17	6.44	5.45	6.66	5.97	21.30	20.11	34.61	33.61	36.27	34.84	19.08	18.03
18	6.78	5.61	6.56	5.77	21.32	17.79	34.80	33.79	36.39	34.71	19.05	15.61
19	6.82	5.98	10.88	5.75	18.39	16.77	34.86	33.37	36.68	35.37	16.31	14.62
20	6.86	5.95	11.50	10.36	17.83	16.39	34.18	29.63	36.08	34.41	15.48	14.16
21	6.85	5.84	11.54	6.09	20.23	16.60	32.66	29.57	35.52	29.66	14.92	13.75
22	6.68	5.38	7.14	5.75	21.79	20.34	34.24	32.73	35.39	29.25	14.50	13.39
23	6.45	5.15	7.20	5.65	22.30	20.97	34.54	31.60	35.41	34.04	13.95	12.97
24	6.41	4.95	7.15	5.61	22.92	21.26	34.57	32.90	35.49	30.79	14.12	13.16
25	6.35	4.76	17.77	6.05	22.87	18.85	34.73	33.42	35.81	30.70	14.00	13.07
26	6.25	4.78	16.43	13.75	21.79	18.65	34.63	33.56	35.95	34.99	13.80	12.87
27	6.74	4.92	17.68	15.45	22.81	20.93	34.79	33.57	35.64	34.82	13.31	12.46
28	6.49	5.01	18.64	16.68	23.74	21.70	34.60	33.77	35.69	34.44	13.24	12.38
29	6.19	4.90	17.55	13.56	28.86	21.52	34.75	33.54	35.65	29.69	13.26	12.36
30	6.11	4.73	14.40	13.35	30.28	28.71	34.67	33.72	35.70	34.87	13.19	12.13
31	---	---	14.69	13.61	---	---	34.75	33.70	35.76	29.86	---	---
MONTH	10.05	4.53	18.64	5.00	30.28	10.01	34.86	27.36	36.68	29.15	36.10	12.13



5 YEAR HYDROGRAPH

OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

MARYLAND--Continued

WORCESTER COUNTY--Continued

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.
REMARKS.--Ocean City ground-water monitoring network well. 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, March 27, 1973; lowest recorded, 18.11 ft below land surface, Aug. 19, 1990.

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	12.59	11.60	8.89	8.00	7.97	6.95	7.58	6.28	6.52	5.45	6.05	4.96
2	12.27	11.23	9.13	7.96	7.30	6.08	8.29	7.26	6.27	5.41	6.17	5.00
3	12.23	11.23	8.50	7.44	7.21	6.06	8.24	7.36	5.92	5.22	5.90	4.94
4	12.08	11.19	8.65	7.90	7.57	6.69	7.72	6.89	5.48	4.57	5.74	4.77
5	12.08	11.06	8.86	8.08	7.45	6.55	7.56	6.64	5.70	4.40	5.87	4.87
6	11.70	10.74	8.73	7.93	7.11	6.40	7.31	6.49	6.10	4.73	5.73	4.94
7	11.25	10.41	8.71	7.77	7.40	6.33	7.33	6.29	6.04	4.86	5.83	4.77
8	11.14	10.31	8.43	7.39	7.32	6.56	7.14	6.12	5.88	4.62	5.93	4.85
9	11.20	10.31	8.11	7.24	7.11	6.05	6.94	5.66	5.88	4.73	5.95	4.96
10	11.27	10.27	8.48	6.95	7.17	5.69	6.83	5.34	5.83	4.63	5.93	4.90
11	11.19	10.11	8.61	7.32	7.20	5.95	7.10	5.83	5.80	4.72	5.84	4.85
12	11.12	10.05	8.87	7.61	7.31	5.81	6.80	5.40	5.77	4.78	6.07	5.10
13	11.23	10.08	9.00	7.56	6.71	5.11	7.06	5.94	5.77	4.98	5.96	5.05
14	11.12	9.85	8.87	7.41	6.91	5.63	7.31	6.38	5.95	5.06	5.83	4.81
15	11.13	9.73	8.84	7.40	7.08	5.94	7.30	6.24	5.54	4.46	5.71	4.86
16	11.09	9.67	8.35	6.91	7.41	6.32	6.95	6.13	5.43	4.45	5.72	4.87
17	11.15	9.81	8.59	7.55	7.78	6.93	6.72	5.95	5.96	4.84	5.86	4.86
18	10.97	9.11	8.69	7.72	7.58	6.73	6.76	5.88	5.94	5.32	6.28	5.33
19	9.53	8.17	8.58	7.71	6.97	6.19	6.99	6.22	6.37	5.23	6.22	5.73
20	9.57	8.38	8.40	7.62	6.79	6.00	6.67	6.23	6.74	5.89	6.07	5.32
21	10.02	9.11	8.57	7.79	7.06	6.19	6.48	5.88	6.59	5.89	6.28	5.43
22	10.20	9.39	8.44	7.33	7.35	6.53	6.36	5.63	6.53	5.57	6.20	5.54
23	9.87	8.99	7.60	6.50	7.27	6.35	6.59	5.63	6.22	5.23	6.20	5.12
24	9.67	8.62	7.50	6.36	6.55	5.32	6.58	5.51	6.10	4.99	6.21	5.22
25	9.15	8.02	8.08	6.84	5.75	4.75	6.51	5.38	6.55	5.33	6.24	5.19
26	8.71	7.95	8.19	7.36	6.01	4.82	6.43	5.20	6.55	5.29	6.53	5.36
27	8.74	7.93	8.06	6.97	6.34	5.25	6.96	5.84	6.27	5.19	6.51	5.27
28	8.96	8.03	7.81	6.66	6.54	5.46	7.14	6.04	6.21	5.00	6.54	5.32
29	9.06	8.16	7.97	6.92	6.67	5.67	6.93	5.17	---	---	6.54	4.89
30	9.14	8.17	8.03	6.86	6.69	5.58	6.70	5.43	---	---	5.68	4.61
31	9.02	7.89	---	---	6.78	5.66	6.70	5.64	---	---	5.91	4.59
MONTH	12.59	7.89	9.13	6.36	7.97	4.75	8.29	5.17	6.74	4.40	6.54	4.59

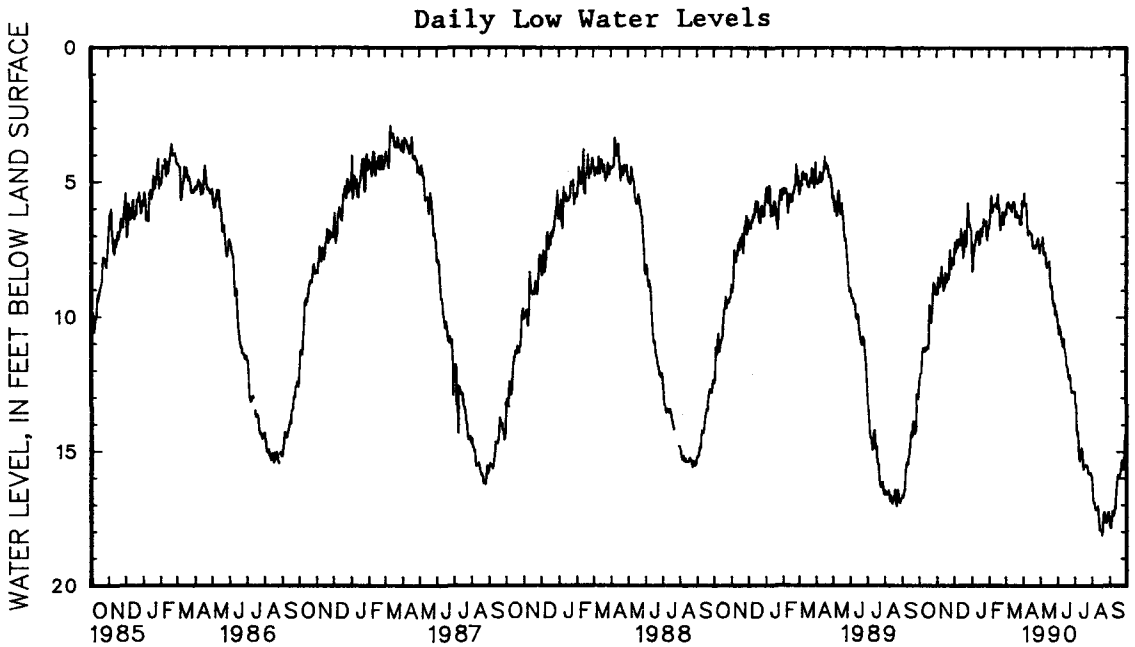
GROUND-WATER LEVELS

MARYLAND--Continued

WORCESTER COUNTY--Continued

WO Bh 34--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	5.88	4.93	7.50	6.67	10.13	9.39	12.78	11.91	16.06	15.29	17.77	16.87
2	5.79	4.90	7.32	6.48	10.33	9.54	12.80	11.99	16.46	15.59	17.84	16.92
3	5.40	4.66	7.31	6.51	10.61	9.89	13.37	12.42	16.85	15.94	17.86	16.70
4	5.82	4.53	7.24	6.41	10.64	9.69	14.05	13.28	16.92	15.89	17.55	16.28
5	5.85	5.09	7.02	6.07	10.35	9.45	14.35	13.32	16.90	15.86	17.24	16.27
6	5.86	5.01	7.19	6.40	10.51	9.57	14.25	13.19	17.10	16.06	17.32	16.26
7	5.78	4.91	7.65	6.72	10.64	9.73	14.54	13.63	17.18	16.10	17.24	16.12
8	6.31	5.48	7.66	6.57	10.81	9.83	14.97	14.01	17.16	16.12	17.40	16.08
9	6.84	5.92	7.58	6.62	10.96	9.99	15.27	14.31	17.11	16.12	17.21	16.03
10	6.94	5.94	7.59	6.49	11.09	10.01	15.35	14.35	17.06	16.12	17.14	15.97
11	6.86	5.93	7.78	6.95	10.91	9.95	15.23	14.19	17.03	16.04	16.87	15.81
12	6.79	5.93	8.03	7.09	10.81	9.87	15.11	14.18	17.36	16.38	16.58	15.49
13	6.86	5.98	8.13	7.17	11.17	9.85	14.87	13.89	17.62	16.65	16.25	15.19
14	6.88	6.03	8.06	7.29	11.29	10.43	14.99	13.97	17.92	16.83	16.00	14.88
15	6.87	6.01	8.05	7.27	11.33	10.40	15.28	14.36	17.91	16.83	15.88	14.86
16	6.93	6.10	7.98	7.26	11.55	10.66	15.67	14.69	17.93	16.77	15.99	14.87
17	7.13	6.16	7.92	7.25	11.80	10.94	15.63	14.49	17.92	16.71	15.97	15.00
18	7.34	6.41	8.21	7.22	11.83	10.84	15.53	14.32	17.99	16.77	15.98	15.01
19	7.42	6.68	8.78	7.63	11.94	10.75	15.52	14.23	18.11	16.85	15.83	14.71
20	7.41	6.67	8.88	7.96	12.15	10.89	15.50	14.22	17.69	16.23	15.63	14.62
21	7.35	6.59	8.83	7.61	12.27	10.88	15.56	14.19	17.31	16.15	15.35	14.36
22	7.35	6.33	9.00	7.78	12.29	10.76	15.52	14.25	17.26	16.22	15.32	14.38
23	7.42	6.20	9.35	7.92	12.17	10.75	15.55	14.43	17.32	16.32	15.31	14.39
24	7.36	6.03	9.47	8.06	12.28	11.07	15.67	14.65	17.44	16.55	15.67	14.91
25	7.29	5.74	9.56	8.18	12.61	11.27	15.82	14.75	17.56	16.73	15.65	14.74
26	7.14	5.71	9.49	8.12	12.79	11.58	15.84	14.92	17.67	16.86	15.19	14.30
27	7.06	5.75	9.53	8.22	12.80	11.88	15.82	14.99	17.57	16.69	14.61	13.81
28	7.28	5.86	9.91	8.40	12.76	11.91	15.82	14.96	17.47	16.68	14.41	13.62
29	7.41	6.22	9.79	8.89	12.80	12.01	15.81	15.04	17.27	16.47	14.32	13.53
30	7.60	6.25	9.77	8.79	12.80	12.04	15.89	15.07	17.26	16.48	14.28	13.38
31	---	---	10.02	9.11	---	---	15.91	15.06	17.51	16.69	---	---
MONTH	7.60	4.53	10.02	6.07	12.80	9.39	15.91	11.91	18.11	15.29	17.86	13.38



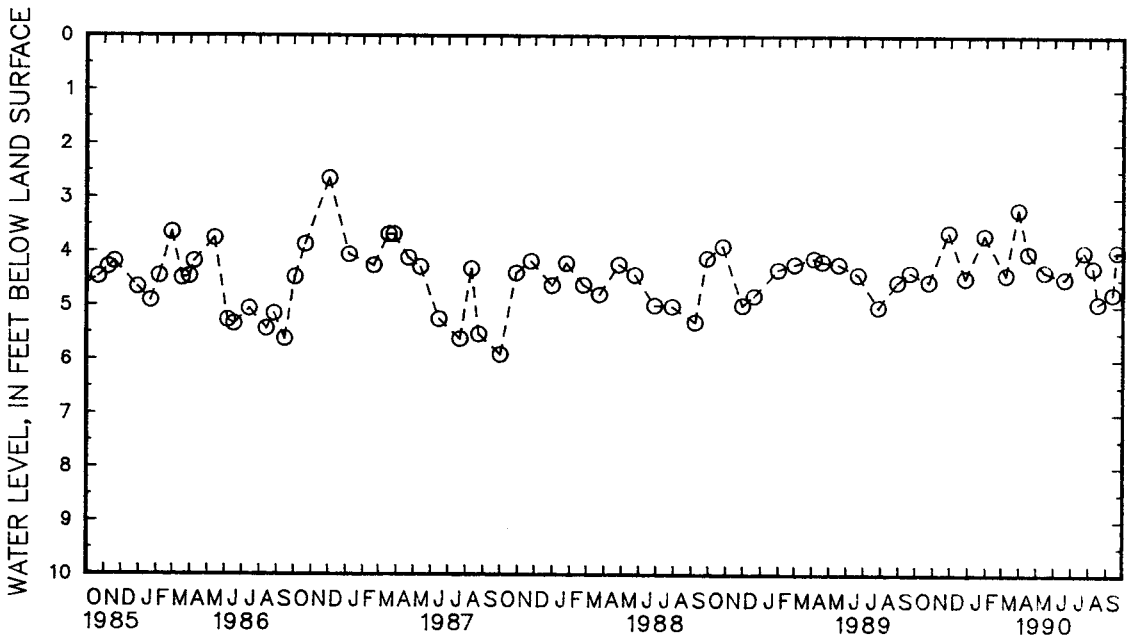
5 YEAR HYDROGRAPH

OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

WELL NUMBER.--WO Bh 84. SITE ID.--382215075041901. 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.--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 personnel.
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.
REMARKS.--Ocean City ground-water monitoring network well.
PERIOD OF RECORD.--April 1973 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.65 ft below land surface, Dec. 3, 1986, lowest measured, 5.92 ft below land surface, Oct. 1, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	4.55	DEC 27	4.48	MAR 8	4.42	MAY 15	4.36	JUL 23	3.99	SEP 12	4.77
NOV 28	3.63	JAN 29	3.69	APR 16	4.02	JUN 19	4.49	AUG 08	4.28		

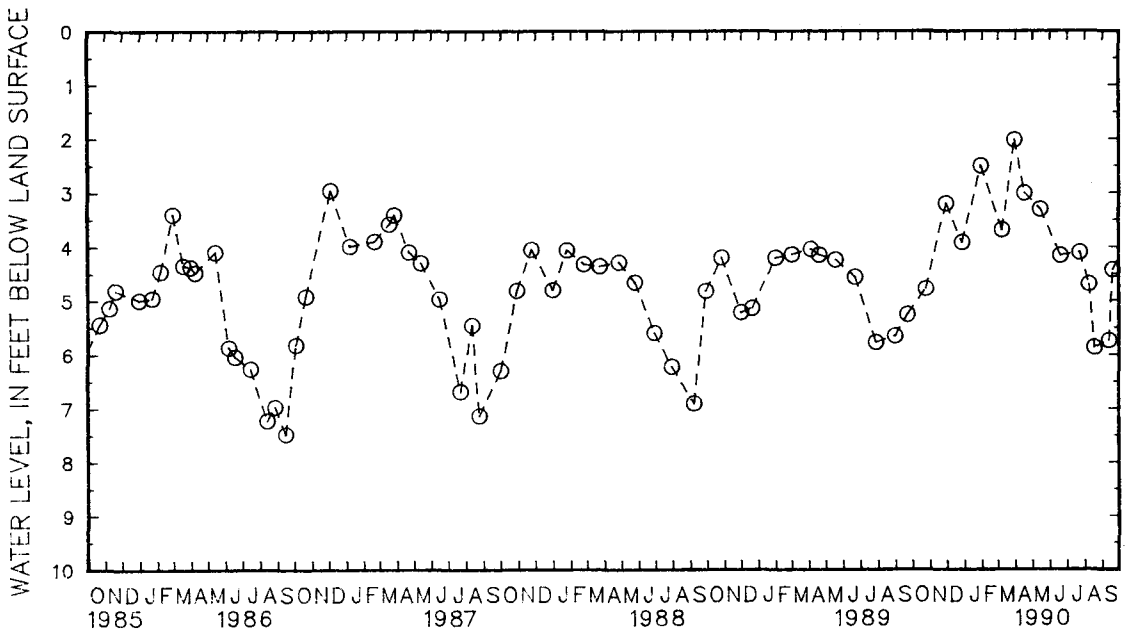


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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 personnel.
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.
REMARKS.--Ocean City ground-water monitoring network well. Water levels maybe affected by seasonal pumping.
PERIOD OF RECORD.--April 1973 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.00 ft below land surface, April 26, 1973; lowest measured, 7.48 ft below land surface, Sept. 15, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	4.78	DEC 27	3.92	MAR 08	3.69	MAY 15	3.31	JUL 23	4.11	SEP 12	5.75
NOV 28	3.20	JAN 29	2.50	APR 16	3.01	JUN 19	4.17	AUG 08	4.70		



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

MARYLAND--Continued

WORCESTER COUNTY--Continued

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.
REMARKS.--Ocean City ground-water monitoring network well. Water levels affected by nearby pumping. No record from Sept. 8 to 12, 1990 due to recorder malfunction.
PERIOD OF RECORD.--October 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 4.38 ft below land surface, April 4, 1990; lowest recorded, 39.83 ft below land surface, Aug. 6, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	19.01	17.96	11.15	10.26	10.11	9.05	8.39	7.23	6.70	5.78	6.43	5.38
2	18.56	17.46	11.39	10.17	9.58	8.37	8.76	7.91	6.69	5.65	6.67	5.45
3	18.41	17.47	10.73	9.66	9.39	8.20	8.61	7.70	6.39	5.72	6.31	5.45
4	18.42	17.54	10.83	10.08	9.79	8.78	7.96	7.14	5.93	5.08	6.16	5.17
5	18.56	17.58	10.96	10.09	9.06	8.02	7.84	6.98	6.20	4.82	6.20	5.28
6	18.31	17.37	10.67	9.80	8.34	7.59	7.56	6.78	6.69	5.24	6.02	5.21
7	17.85	16.97	10.58	9.64	9.15	7.37	7.58	6.56	6.69	5.46	6.20	5.01
8	17.66	16.72	10.39	9.35	8.49	7.60	7.56	6.33	6.53	5.30	6.24	5.31
9	17.45	16.52	10.12	9.23	8.16	6.94	7.28	5.88	6.46	5.33	6.30	5.38
10	17.45	15.05	10.57	9.14	7.89	6.52	7.13	5.76	6.45	5.26	6.21	5.13
11	15.40	13.79	10.66	9.48	7.95	6.70	7.43	6.18	6.43	5.33	6.03	5.12
12	14.55	13.16	10.83	9.68	8.01	6.56	7.22	5.82	6.37	5.35	6.11	5.15
13	14.12	12.78	10.92	9.48	7.48	5.87	7.42	6.29	6.32	5.48	5.99	5.16
14	13.66	12.35	10.76	9.33	7.61	6.36	7.65	6.72	6.52	5.63	6.01	4.97
15	13.35	11.93	10.64	9.21	7.82	6.69	7.51	6.46	6.14	5.10	5.88	5.00
16	13.01	11.58	10.15	8.74	8.02	6.98	7.22	6.44	6.09	5.05	5.96	5.08
17	12.85	11.51	10.31	9.31	8.32	7.53	7.12	6.49	6.57	5.45	6.04	5.09
18	12.59	10.81	10.49	9.52	8.20	7.33	7.19	6.35	6.45	5.85	6.09	5.32
19	11.18	9.90	10.43	9.55	7.57	6.79	7.37	6.60	6.62	5.60	6.04	5.45
20	12.78	10.14	10.29	9.56	7.29	6.61	7.08	6.56	6.83	6.05	5.89	5.10
21	14.51	12.71	10.57	9.69	7.43	6.88	6.79	6.10	6.81	5.98	6.21	5.25
22	15.09	14.30	10.52	9.43	7.44	7.39	6.58	5.73	6.82	5.90	6.17	5.51
23	15.10	14.32	9.75	8.58	8.74	7.39	6.81	5.68	6.54	5.57	6.18	5.27
24	15.26	14.45	9.60	8.46	9.76	8.57	6.84	5.74	6.50	5.35	6.21	5.17
25	15.32	14.56	10.10	8.98	11.20	9.35	6.81	5.62	6.76	5.61	6.12	5.16
26	15.42	13.13	10.26	9.39	11.68	10.68	6.73	5.52	6.78	5.55	6.22	5.15
27	13.53	12.04	9.96	8.84	12.45	11.58	7.26	6.21	6.46	5.45	6.26	5.12
28	12.62	11.66	9.80	8.54	12.68	9.84	7.42	6.32	6.47	5.37	6.43	5.26
29	12.28	11.22	9.86	8.75	10.28	8.60	7.06	5.29	---	---	6.44	4.92
30	11.85	10.77	9.95	8.88	9.11	7.73	6.75	5.34	---	---	5.73	4.61
31	11.46	10.28	---	---	8.40	7.09	6.90	5.86	---	---	5.81	4.58
MONTH	19.01	9.90	11.39	8.46	12.68	5.87	8.76	5.29	6.83	4.82	6.67	4.58

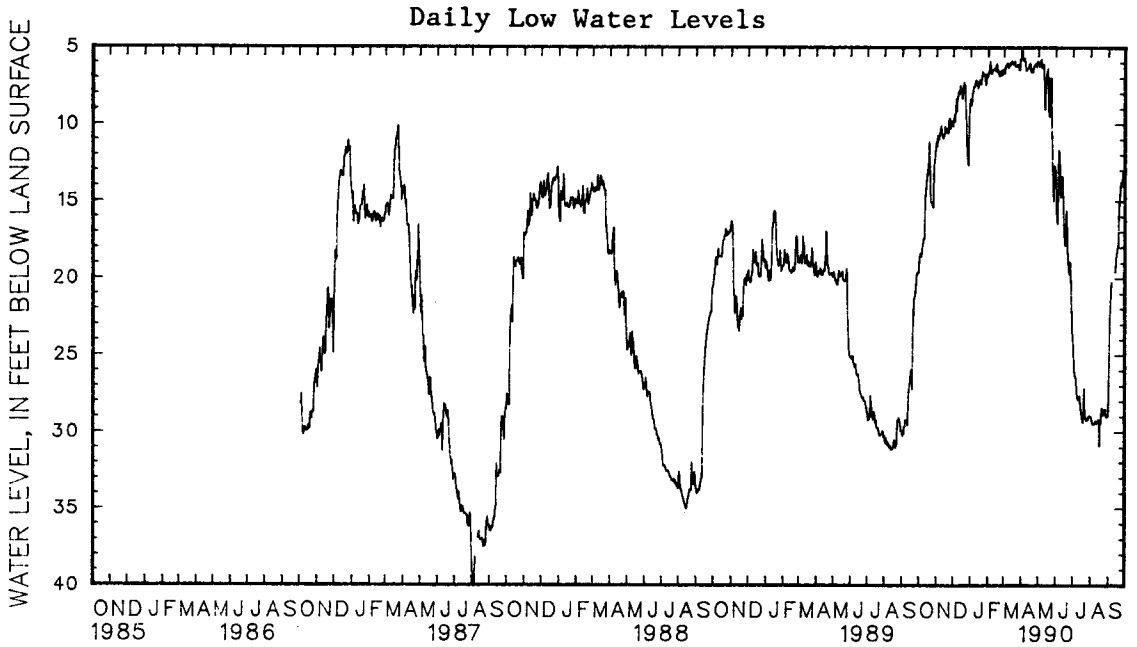
GROUND-WATER LEVELS

MARYLAND--Continued

WORCESTER COUNTY--Continued

WO Bh 89--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	5.68	4.82	5.92	4.93	13.17	12.43	23.96	23.08	29.00	28.23	28.66	26.16
2	5.58	4.66	6.11	5.00	15.41	12.60	24.51	23.57	29.04	27.59	26.96	22.92
3	5.22	4.41	6.22	5.33	16.27	15.19	25.40	24.29	29.23	27.98	23.46	21.44
4	5.75	4.38	6.21	5.30	16.50	14.28	26.13	25.43	29.45	28.52	22.17	20.42
5	5.81	5.03	5.96	4.93	14.59	11.35	26.38	25.09	29.44	28.51	21.19	19.77
6	5.84	4.97	5.77	4.93	11.72	9.93	26.47	25.55	29.53	28.53	20.58	19.41
7	5.72	4.81	6.09	5.24	11.77	9.89	26.94	25.92	29.44	28.44	20.28	19.31
8	6.08	5.27	6.31	5.20	12.67	11.56	27.37	26.32	29.48	28.43	---	---
9	6.48	5.51	6.21	5.15	14.46	11.79	27.77	26.57	29.41	28.46	---	---
10	6.50	5.51	6.11	5.07	14.76	13.55	27.90	26.90	29.32	28.30	---	---
11	6.38	5.50	6.36	5.24	14.66	12.61	27.89	26.87	29.30	28.37	---	---
12	6.35	5.47	7.91	5.55	13.43	12.45	27.80	26.84	29.45	28.46	---	---
13	6.35	5.44	9.04	7.24	13.61	12.39	27.69	26.87	29.37	28.43	19.57	18.44
14	6.27	5.39	7.84	6.52	15.37	12.79	28.15	27.09	29.37	28.33	19.09	17.80
15	6.07	5.31	7.02	6.30	16.61	14.95	28.51	27.50	29.22	28.31	18.50	17.49
16	6.02	5.23	6.73	6.07	17.31	16.05	28.77	27.88	29.24	27.78	18.34	17.17
17	6.20	5.27	6.54	5.90	17.84	16.74	29.01	28.01	30.92	28.14	18.02	17.04
18	6.53	5.45	6.41	5.72	17.91	15.60	29.25	28.19	29.28	28.20	17.95	15.45
19	6.57	5.82	8.76	5.70	16.18	14.65	29.39	28.07	29.44	28.31	16.03	14.50
20	6.62	5.80	9.41	8.35	15.67	14.37	28.94	25.90	28.98	27.51	15.25	14.04
21	6.62	5.70	9.50	6.05	16.88	14.71	27.14	25.86	28.48	26.97	14.68	13.65
22	6.43	5.26	6.99	5.73	18.46	16.98	28.72	27.22	28.73	26.81	14.30	13.27
23	6.23	5.04	7.06	5.65	19.03	17.73	29.12	27.50	28.88	28.12	13.76	12.87
24	6.19	4.87	7.01	5.62	19.62	17.99	29.15	27.69	28.60	27.96	13.90	13.05
25	6.15	4.68	10.72	5.94	19.75	17.13	29.26	28.17	28.56	27.09	13.81	12.96
26	6.05	4.69	12.90	10.29	18.98	16.98	29.17	28.31	28.63	27.57	13.60	12.75
27	6.19	4.77	14.07	11.91	19.89	18.22	29.21	28.31	28.54	27.24	13.13	12.36
28	6.25	4.88	15.03	13.13	20.34	19.02	29.09	28.25	29.01	27.83	13.04	12.28
29	6.00	4.86	14.13	12.01	22.20	19.41	29.00	28.26	29.01	28.17	13.04	12.23
30	5.92	4.66	12.71	11.74	23.56	22.04	28.94	28.23	29.02	28.20	12.95	12.01
31	---	---	13.00	12.01	---	---	28.97	28.23	28.99	27.85	---	---
MONTH	6.62	4.38	15.03	4.93	23.56	9.89	29.39	23.08	30.92	26.81	28.66	12.01



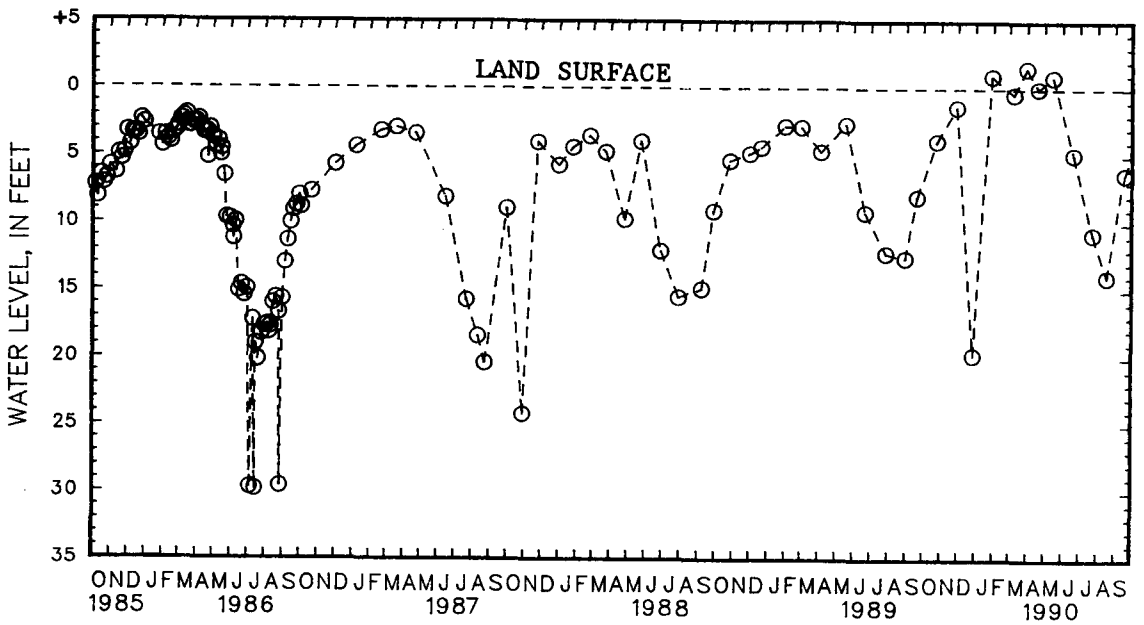
5 YEAR HYDROGRAPH

OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Ocean City ground-water monitoring network well. Water levels affected by nearby pumping.
PERIOD OF RECORD.--January 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.58 ft above land surface, March 30, 1990, lowest measured, 29.85 ft below land surface, July 14, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
(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 24	3.90	DEC 27	19.80	MAR 8	.35	APR 19	+.07	JUN 19	4.88	AUG 17	13.99
NOV 28	1.35	JAN 29	+.97	MAR 30	+1.58	MAY 15	+.92	JUL 23	10.80	SEP 17	6.34

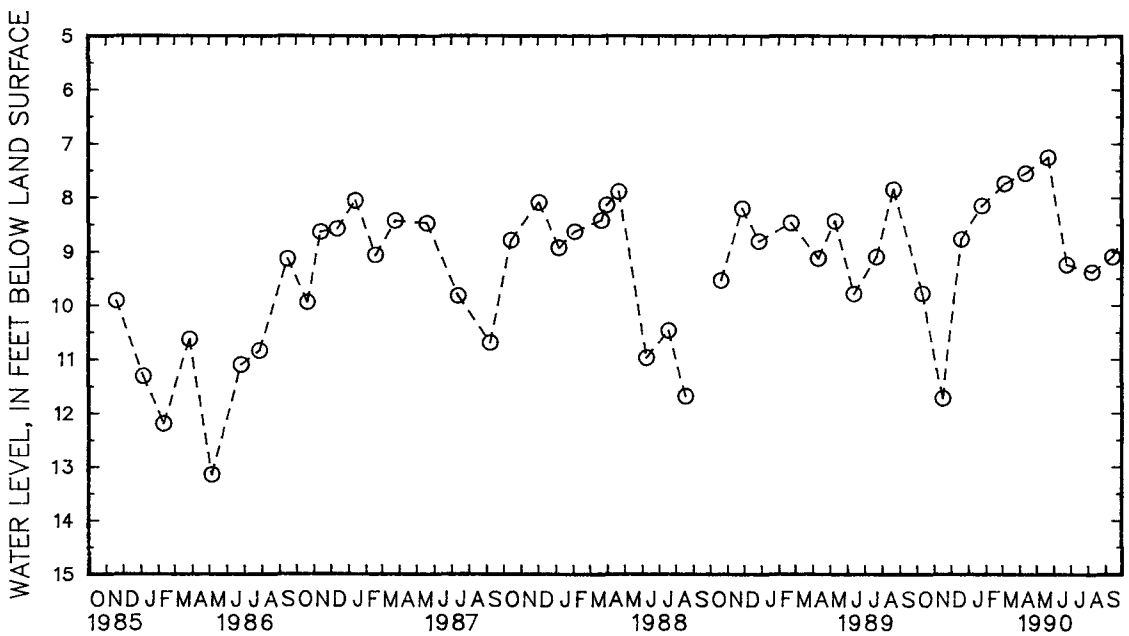


5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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, 0.40 ft below land-surface datum.
REMARKS.--Maryland Water-Level Network observation well. 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 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	9.78	DEC 19	8.77	MAR 6	7.74	MAY 22	7.25	AUG 8	9.38
NOV 16	11.73	JAN 25	8.15	APR 12	7.55	JUN 24	9.24	SEP 13	9.10



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

GROUND-WATER LEVELS

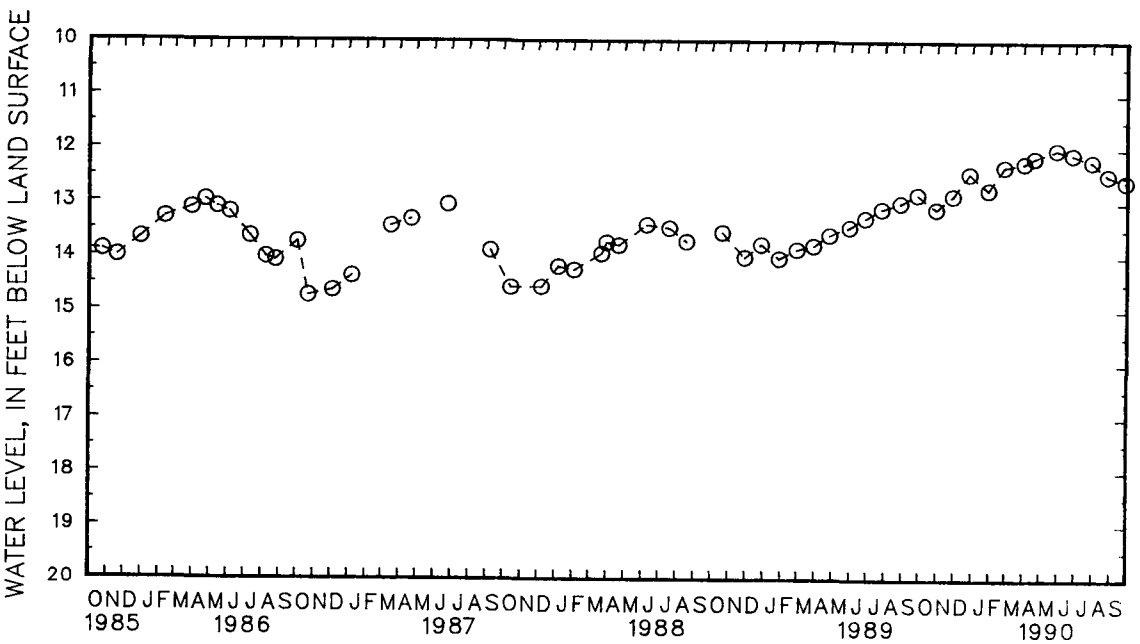
MARYLAND--Continued

WORCESTER COUNTY--Continued

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.
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 personnel.
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.
REMARKS.--Maryland Water-Level Network observation well.
PERIOD OF RECORD.--September 1975 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.62 ft below land surface, May 20, 1976, lowest measured, 14.75 ft below land surface, Oct. 22, 1975.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	13.11	DEC 27	12.45	FEB 26	12.32	APR 20	12.15	JUN 26	12.09	AUG 27	12.48
NOV 28	12.86	JAN 29	12.75	APR 2	12.25	MAY 29	12.00	JUL 30	12.22	SEP 27	12.60



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Ocean City ground-water monitoring network well. Water levels affected by nearby pumping. No record from April 24 to June 18, 1990 due to recorder malfunction.
PERIOD OF RECORD.--October 1975 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 1.13 ft above land surface, April 3, 1990; lowest recorded, 5.25 ft below land surface, Aug. 25, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
(READINGS ABOVE LAND SURFACE INDICATED BY "-")

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	2.60	2.13	1.65	1.22	1.56	1.22	.69	.20	.45	.01	.26	-.15
2	2.34	1.88	1.83	1.41	1.47	.89	1.10	.68	.33	.02	.30	-.09
3	2.21	1.90	1.59	1.18	1.13	.71	1.15	.84	.29	-.08	.16	-.21
4	2.34	1.96	1.62	1.37	1.29	.97	1.02	.66	-.09	-.37	.10	-.23
5	2.53	2.21	1.74	1.45	1.36	1.03	.93	.59	-.03	-.51	.10	-.21
6	2.51	2.20	1.67	1.34	1.18	.90	.77	.46	.15	-.42	.06	-.27
7	2.39	2.06	1.65	1.21	1.30	.84	.74	.37	.16	-.27	.15	-.29
8	2.32	1.98	1.53	1.11	1.31	.98	.60	.17	.16	-.27	.10	-.21
9	2.27	1.95	1.29	.93	1.11	.73	.51	.03	.12	-.32	.10	-.29
10	2.32	1.96	1.54	.93	1.01	.51	.45	-.15	.08	-.44	.05	-.39
11	2.32	1.94	1.66	1.12	1.03	.53	.48	.00	.07	-.35	-.05	-.44
12	2.36	1.93	1.86	1.24	1.05	.49	.42	-.11	.04	-.32	-.08	-.44
13	2.41	1.97	1.92	1.37	.85	.16	.58	.14	.06	-.26	-.12	-.45
14	2.39	1.88	1.88	1.30	.81	.30	.80	.44	.14	-.13	-.14	-.55
15	2.36	1.81	1.81	1.21	.89	.47	.82	.41	.09	-.39	-.23	-.58
16	2.28	1.72	1.51	.74	1.05	.64	.71	.45	-.12	-.38	-.25	-.59
17	2.24	1.62	1.58	1.21	1.37	.96	.68	.33	.20	-.34	-.37	-.64
18	2.22	1.58	1.74	1.36	1.43	1.09	.63	.34	.27	.03	-.25	-.64
19	1.75	1.10	1.82	1.50	1.22	.80	.83	.43	.23	-.04	-.17	-.43
20	1.36	.83	1.72	1.39	.96	.71	.71	.52	.52	.10	-.26	-.51
21	1.74	1.25	1.88	1.38	1.04	.73	.45	.24	.54	.22	-.09	-.49
22	2.08	1.70	1.89	1.55	1.25	.85	.26	-.01	.48	.06	-.08	-.31
23	2.13	1.84	1.54	1.04	1.18	.89	.34	-.05	.24	-.12	-.06	-.49
24	2.12	1.81	1.26	.93	.95	.48	.33	-.04	.16	-.27	-.08	-.46
25	2.01	1.74	1.46	1.00	.72	.29	.34	-.11	.33	-.17	-.08	-.54
26	2.00	1.71	1.52	1.17	.98	.37	.38	-.22	.47	.02	-.11	-.57
27	1.99	1.65	1.53	1.10	1.02	.67	.58	.14	.36	-.13	-.06	-.54
28	1.92	1.59	1.38	.89	1.04	.63	.69	.27	.28	-.15	-.01	-.48
29	1.94	1.58	1.38	.97	1.06	.65	.67	-.16	---	---	.06	-.54
30	1.88	1.49	1.49	1.06	.92	.41	.35	-.03	---	---	-.24	-.82
31	1.75	1.26	---	---	.73	.18	.49	.11	---	---	-.47	-.85
MONTH	2.60	.83	1.92	.74	1.56	.16	1.15	-.22	.54	-.51	.30	-.85

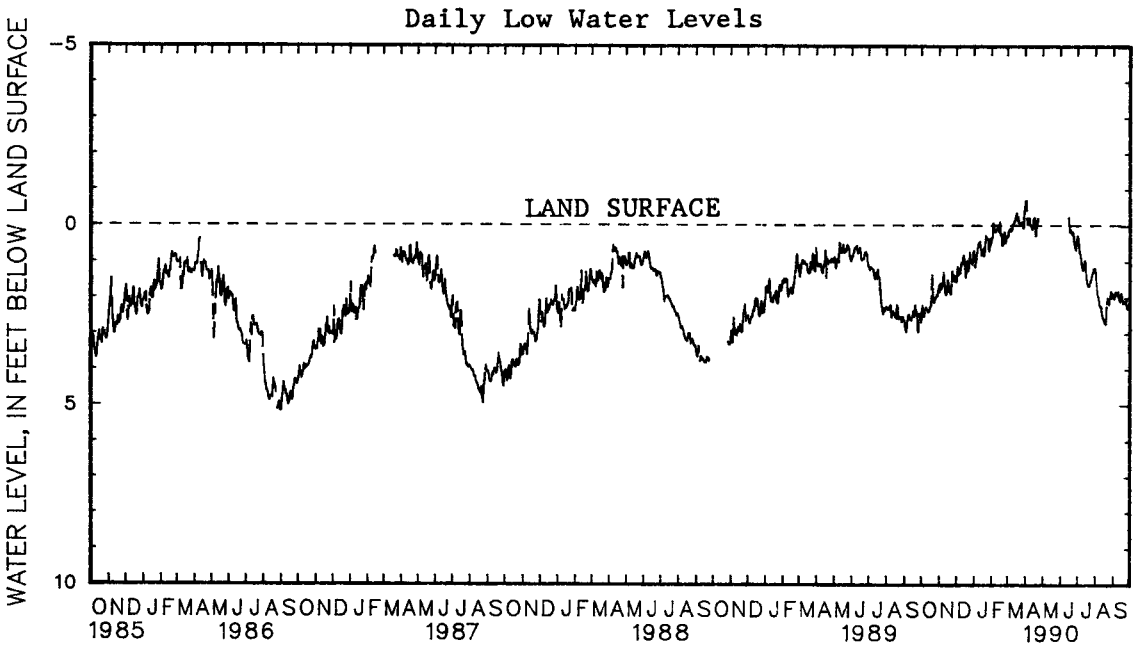
GROUND-WATER LEVELS

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	-.55	-.89	---	---	---	---	.27	-.10	1.19	.90	1.99	1.64
2	-.70	-.96	---	---	---	---	.34	-.04	1.32	1.02	1.99	1.60
3	-.71	-1.13	---	---	---	---	.49	.21	1.58	1.21	2.02	1.59
4	-.22	-.91	---	---	---	---	.65	.27	1.79	1.48	1.93	1.45
5	-.04	-.36	---	---	---	---	.76	.41	1.92	1.56	1.83	1.45
6	-.07	-.48	---	---	---	---	.78	.43	1.96	1.61	1.86	1.46
7	-.22	-.70	---	---	---	---	.92	.62	2.06	1.72	1.83	1.40
8	-.23	-.55	---	---	---	---	1.07	.72	2.17	1.80	1.92	1.45
9	-.04	-.38	---	---	---	---	1.14	.82	2.25	1.87	1.89	1.45
10	-.01	-.40	---	---	---	---	1.22	.89	2.27	1.84	1.83	1.44
11	-.01	-.37	---	---	---	---	1.22	.77	2.25	1.85	1.98	1.62
12	.05	-.24	---	---	---	---	1.06	.68	2.41	1.99	2.06	1.74
13	.09	-.23	---	---	---	---	.98	.58	2.50	2.06	2.11	1.74
14	.02	-.34	---	---	---	---	.95	.58	2.57	2.12	1.92	1.54
15	-.17	-.47	---	---	-.25	-.60	1.08	.68	2.59	2.18	1.87	1.48
16	-.22	-.49	---	---	-.03	-.47	1.33	.94	2.64	2.22	1.95	1.51
17	-.24	-.53	---	---	.15	-.21	1.49	1.10	2.69	2.25	2.05	1.61
18	-.06	-.51	---	---	.17	-.26	1.60	1.16	2.71	2.25	2.15	1.73
19	.27	-.26	---	---	.10	-.33	1.66	1.19	2.74	2.26	2.10	1.72
20	.03	-.22	---	---	.14	-.37	1.66	1.14	2.53	1.82	2.14	1.78
21	-.06	-.40	---	---	.15	-.34	1.67	1.15	2.15	1.57	2.11	1.78
22	-.11	-.56	---	---	.23	-.30	1.60	1.11	2.00	1.58	2.09	1.71
23	-.21	-.74	---	---	.17	-.33	1.53	1.09	2.02	1.61	2.08	1.64
24	---	---	---	---	.25	-.15	1.54	1.09	2.11	1.76	2.20	1.89
25	---	---	---	---	.43	.03	1.44	1.05	2.19	1.81	2.30	2.03
26	---	---	---	---	.55	.18	1.37	1.01	2.02	1.72	2.29	2.00
27	---	---	---	---	.60	.26	1.32	1.01	1.92	1.60	2.22	1.96
28	---	---	---	---	.67	.31	1.30	.97	1.81	1.50	2.21	1.96
29	---	---	---	---	.47	.12	1.19	.90	2.00	1.74	2.25	1.98
30	---	---	---	---	.34	.04	1.20	.89	1.92	1.61	2.27	1.91
31	---	---	---	---	---	---	1.17	.88	1.88	1.58	---	---
MONTH	.27	-1.13	---	---	.67	-.60	1.67	-.10	2.74	.90	2.30	1.40



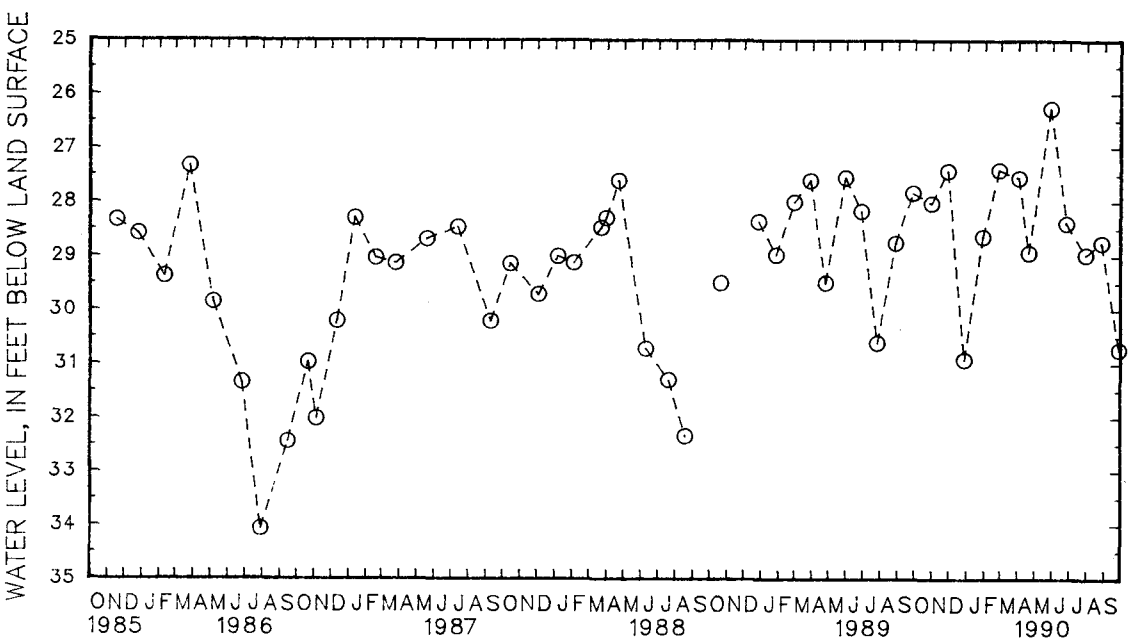
5 YEAR HYDROGRAPH

OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.
REMARKS.--Maryland Water-Level Network observation well. Water level reported 30 ft below land surface, Oct. 3, 1947; water levels 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, Feb. 20, 1953; lowest measured, 49.70 ft below land surface, July 1, 1954.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	28.02	DEC 27	30.93	FEB 26	27.40	APR 20	28.94	JUN 26	28.40	AUG 27	28.76
NOV 28	27.42	JAN 29	28.64	APR 2	27.55	MAY 29	26.26	JUL 30	28.98	SEP 27	30.74



5 YEAR HYDROGRAPH
OCTOBER 1, 1985 THROUGH SEPTEMBER 30, 1990

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.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

KENT COUNTY, DELAWARE

LOCAL IDENT-I-FIER	DATE	TIME	STATION NUMBER	GEO-LOGIC UNIT	Sam-pling method, codes	Depth below land surface (water level) (ft)	Depth of well, total (ft)	Depth to top of sample inter-val (ft)	Depth to bot-tom of sample inter-val (ft)
Ib32-06	10-18-89	1600	391238075431201	122CSLD	4040	3.88	50.00	47	50
Ib52-01	10-18-89	1300	391011075425501	122FDBG	4040	1.08	40.00	38	40
Jc55-03	07-11-90	1330	390503075354001	112PCPC	4090	--	30.00	25	30
Kc44-02	11-15-89	1000	390115075365801	122CSLD	4040	--	295.00	255	295
Mc31-05	05-16-90	1100	385207075392801	122FDBG	4040	--	320.00	300	320

LOCAL IDENT-I-FIER	DATE	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)
Ib32-06	10-18-89	63.0	25	1.2	179	7.40	14.0	0.3	39	0.64
Ib52-01	10-18-89	65.0	25	1.0	264	7.31	14.5	0.4	41	4.0
Jc55-03	07-11-90	65.0	20	2.0	180	5.11	16.5	5.1	8.9	4.5
Kc44-02	11-15-89	58.0	72	7.5	324	7.83	18.0	0.1	33	14
Mc31-05	05-16-90	43.0	25	16	314	7.79	16.5	0	31	14

LOCAL IDENT-I-FIER	DATE	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	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)
Ib32-06	10-18-89	5.2	0.60	105	127	8.0	3.0	0.20	0.040	36
Ib52-01	10-18-89	6.2	1.1	165	168	<1.0	3.0	0.20	0.040	59
Ic55-03	07-11-90	14	2.5	5	6	8.2	27	<0.10	0.040	18
Kc44-02	11-15-89	16	6.4	175	213	<1.0	1.0	0.10	<0.010	63
Mc31-05	05-16-90	19	8.3	178	217	<1.0	3.4	0.20	<0.010	63

LOCAL IDENT-I-FIER	DATE	Solids, sum of consti-tuents, dis-solved (mg/L)	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)
Ib32-06	10-18-89	161	0.010	<0.100	0.140	0.30	0.400	<10	<1	<1
Ib52-01	10-18-89	--	<0.010	<0.100	0.640	0.70	0.010	<10	<1	<1
Jc55-03	07-11-90	121	<0.010	7.70	0.030	0.70	0.030	<10	<1	<1
Kc44-02	11-15-89	--	<0.010	<0.100	0.290	0.80	0.010	<10	<1	<1
Mc31-05	05-16-90	--	<0.010	<0.100	0.410	0.30	<0.010	<10	<1	<1

LOCAL IDENT-I-FIER	DATE	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)	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)
Ib32-06	10-18-89	33	<0.5	80	<1	<5	<3	<10	3600	<10
Ib52-01	10-18-89	35	<0.5	10	<1	<5	<3	<10	5200	<10
Jc55-03	07-11-90	250	<0.5	<10	<1	<5	4	20	15	<10
Kc44-02	11-15-89	<2	<0.5	140	<1	<5	<3	<10	28	<10
Mc31-05	05-16-90	<2	<0.5	200	<1	<5	<3	<10	15	<10

Geologic unit (aquifer): 112PCPC - Pleistocene-Pliocene Series
122CLSD - Cheswold Aquifer
122FDBG - Federalsburg Aquifer

Sampling method: 4040 - Submersible pump
4090 - Jet pump

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

KENT COUNTY, DELAWARE--Continued

LOCAL IDENTIFIER	DATE	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)
Ib32-06	10-18-89	<4	72	<0.1	<10	<10	<1	<1.0	280	<6
Ib52-01	10-18-89	6	360	<0.1	<10	<10	<1	<1.0	230	<6
Jc55-03	07-11-90	5	24	<0.1	<10	<10	3	<1.0	240	<6
Kc44-02	11-15-89	18	3	<0.1	<10	<10	<1	<1.0	370	<6
Mc31-05	05-16-90	17	<1	<0.1	<10	<10	<1	<1.0	370	<6

LOCAL IDENTIFIER	DATE	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 (pCi/L)	Gross beta, dissolved (pCi/L as SR/Yt-90)	Tritium total (pCi/L)	Carbon, organic dissolved (mg/L as C)	Bromoform, total (ug/L)	Benzene total (ug/L)
Ib32-06	10-18-89	5	2.8	1.6	290	1.3	--	0.7	<0.20	<0.20
Ib52-01	10-18-89	6	1.9	1.9	330	1.6	<0.3	1.2	<0.20	<0.20
Jc55-03	07-11-90	47	--	--	210	--	--	1.3	<0.20	<0.20
Kc44-02	11-15-89	<3	1.5	7.9	550	6.8	--	1.3	--	--
Mc31-05	05-16-90	<3	--	--	560	--	--	1.3	--	--

LOCAL IDENTIFIER	DATE	Carbon-tetrachloride, total (ug/L)	Chlorobenzene total (ug/L)	Chlorodibromomethane total (ug/L)	Chloroform, total (ug/L)	Chloroethane, total (ug/L)	Cis 1,3-dichloropropene total (ug/L)	Dibromomethane water, whole, recover (ug/L)	Dichlorobromomethane total (ug/L)	Dichlorodifluoromethane total (ug/L)
Ib32-06	10-18-89	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Ib52-01	10-18-89	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Jc55-03	07-11-90	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Kc44-02	11-15-89	--	--	--	--	--	--	--	--	--
Mc31-05	05-16-90	--	--	--	--	--	--	--	--	--

LOCAL IDENTIFIER	DATE	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)	Toluene total (ug/L)	Trans-1,3-dichloropropene total (ug/L)
Ib32-06	10-18-89	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20
Ib52-01	10-18-89	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20
Jc55-03	07-11-90	<0.2	<0.20	<0.20	<0.20	<0.2	0.30	<0.20	<0.20	<0.20
Kc44-02	11-15-89	--	--	--	--	--	--	--	--	--
Mc31-05	05-16-90	--	--	--	--	--	--	--	--	--

LOCAL IDENTIFIER	DATE	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)	1,1,2,2 Tetrachloroethane, total (ug/L)
Ib32-06	10-18-89	<0.2	--	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20
Ib52-01	10-18-89	<0.2	--	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20
Jc55-03	07-11-90	0.2	<0.10	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20
Kc44-02	11-15-89	--	<0.10	--	--	--	--	--	--	--
Mc31-05	05-16-90	--	<0.10	--	--	--	--	--	--	--

LOCAL IDENTIFIER	DATE	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)	123-trichloropropane water whole total (ug/L)	1,3-Dichlorobenzene total (ug/L)	1,4-Dichlorobenzene total (ug/L)
Ib32-06	10-18-89	<0.1	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Ib52-01	10-18-89	<0.1	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Jc55-03	07-11-90	<0.1	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Kc44-02	11-15-89	--	--	--	--	--	--	--
Mc31-05	05-16-90	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

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) (ft)	Depth of well, total (ft)	Depth to top of sample inter-val (ft)	Depth to bot-tom of sample inter-val (ft)
Bb33-11	08-23-90	1400	394705075420401	300CCKV	--	--	312.00	54	312
Bb33-12	08-23-90	1515	394707075421001	300CCKV	--	--	332.00	52	332
Bb33-13	08-14-90	1245	394706075420601	300CCKV	4040	--	164.00	0.0	40
Bb33-14	08-13-90	1245	394720075422501	300CCKV	4040	9.41	298.00	45	298
Bb33-15	08-14-90	1600	394709075421601	300CCKV	4040	--	298.00	61	298
Bb33-26	09-27-90	1530	394732075420202	300CCKV	4040	43.40	340.00	--	--
Bb33-27	08-30-90	1130	394745075420701	300CCKV	4030	9.16	360.00	--	--
Bb33-28	08-23-90	1215	394701075422201	300CCKV	4040	--	--	--	--
Bb33-29	09-05-90	1030	394757075421901	300WSCK	4040	--	40.00	39	40
Bb33-32	09-25-90	1505	394728075425401	300WSCK	4040	--	150.00	--	--
Bb33-34	09-26-90	1220	394731075423201	300WSCK	4040	--	--	--	--
Bb34-27	09-24-90	1430	394726075415501	300CCKV	4040	--	93.00	82	93
Bb34-29	09-04-90	1200	394722075414501	300CCKV	--	--	273.00	42	273
Bb34-31	08-29-90	1530	394710075420201	300CCKV	--	42.00	--	--	--
Bb34-33	09-04-90	1345	394704075415601	300CCKV	--	--	305.00	--	305
Bb34-34	08-22-90	1245	394714075414501	300CCKV	4040	41.70	298.00	145	298
Bb34-36	08-29-90	1230	394717075412701	300CCKV	4040	32.65	248.00	445	0.43
Bb34-40	09-25-90	1315	394716075415801	300CCKV	4040	--	59.60	45	60
Bb34-50	08-30-90	1415	394740075415801	300CCKV	4030	7.67	340.00	--	--
Bb34-58	09-26-90	1430	394715075410601	300WSCK	4040	--	60.00	--	--
Bb35-14	09-24-90	1145	394758075402701	300WSCK	4040	--	500.00	--	--
Bb35-15	09-05-90	1305	394759075403501	300CCKV	4040	--	--	--	--
Bb43-13	09-27-90	1140	394656075422001	300CCKV	4040	28.72	287.00	--	--
Bb44-13	09-04-90	1030	394656075415801	300CCKV	--	--	190.00	130	190
Bb44-22	08-21-90	1515	394638075413701	300CCKV	4040	1.00	--	--	--
Cd31-19	07-12-90	0900	394224075340501	217PTMC	4040	53.80	75.00	72	75
Ec42-15	07-19-90	1430	393122075383201	112PCPC	4040	--	38.00	38	38
Fb33-24	01-31-90	1100	392708075425701	217NNMR	4040	--	536.00	460	536
Fb33-25	01-31-90	1300	392708075425702	217NNMR	4040	--	846.00	800	846
Gb41-09	01-30-90	1230	392120075441901	112clmb	4040	4.96	15.00	12	15
Gb41-10	01-31-90	1300	392120075441501	112CLMB	4040	3.68	15.00	12	15
Gb41-11	01-23-90	1400	392119075441301	112PCPC	4040	2.60	13.00	10	13
Gb41-12	01-30-90	1420	392120075441001	112clmb	4020	1.66	18.00	15	18
Gb41-20	01-31-90	1200	392128075441201	112PCPC	4040	2.98	11.50	9.0	12
Gb41-21	01-23-90	1130	392127075441401	112PCPC	4040	2.41	11.50	9.0	12
Gb41-22	01-30-90	1115	392120075441902	112CLMB	4040	5.32	25.00	20	25
Gb41-23	01-15-90	1115	392120075441002	112CLMB	4040	3.92	30.00	27	30
Gb41-24	01-23-90	1300	392128075441202	112CLMB	4040	3.44	30.00	27	30
Gb41-25	01-30-90	1330	392129075441001	112CLMB	4040	4.65	13.00	10	13
Gb42-03	01-23-90	1000	392131075440801	112PCPC	4040	6.80	23.00	20	23
Gb51-04	06-08-90	1200	392045075443401	112PCPC	4040	1.42	10.35	7.9	10

Geologic unit (aquifer): 112CLMB - Columbia Formation
112PCPC - Pleistocene-Pliocene Series
217NNMR - Nonmarine Cretaceous Aquifer
300CCKV - Cockeysville Marble
300WSCK - Wissahickon Formation

Sampling method: 4030 - Suction pump
4040 - Submersible pump

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

NEW CASTLE COUNTY, DELAWARE--Continued

LOCAL IDENT-I-FIER	DATE	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)
Bb33-11	08-23-90	252	45	--	495	7.17	13.0	5.5	56	27
Bb33-12	08-23-90	260	20	--	660	7.06	12.5	3.7	80	36
Bb33-13	08-14-90	0	65	--	451	7.64	15.5	--	57	28
Bb33-14	08-13-90	300	115	7.5	181	7.16	14.5	0.5	12	7.6
Bb33-15	08-14-90	300	--	--	409	7.50	15.0	5.0	57	18
Bb33-26	09-27-90	280	90	8.1	355	7.47	13.0	3.0	49	14
Bb33-27	08-30-90	300	80	60	273	8.01	13.5	5.7	30	16
Bb33-28	08-23-90	260	--	--	603	7.31	13.0	1.8	74	32
Bb33-29	09-05-90	345	75	2.0	174	5.86	14.5	8.0	12	4.6
Bb33-32	09-25-90	362	30	1.0	230	5.98	16.0	6.3	24	8.9
Bb33-34	09-26-90	280	45	1.0	215	5.85	14.0	6.4	21	6.9
Bb34-27	09-24-90	260	40	1.0	645	6.99	16.5	3.1	78	40
Bb34-29	09-04-90	265	--	480	548	7.34	14.5	2.8	61	31
Bb34-31	08-29-90	250	--	250	560	7.56	13.0	--	66	32
Bb34-33	09-04-90	255	--	175	480	7.58	13.5	5.8	52	29
Bb34-34	08-22-90	260	--	--	591	7.51	14.0	3.7	68	37
Bb34-36	08-29-90	260	105	8.0	445	7.21	13.0	0.4	55	27
Bb34-40	09-25-90	253	180	--	489	7.42	13.5	3.6	58	30
Bb34-50	08-30-90	300	75	30	273	6.36	14.0	5.0	31	6.7
Bb34-58	09-26-90	325	30	1.0	215	5.70	14.5	4.1	20	8.0
Bb35-14	09-24-90	320	40	1.0	169	7.28	14.5	2.9	20	3.8
Bb35-15	09-05-90	228	60	2.0	276	6.53	13.5	4.6	41	8.2
Bb43-13	09-27-90	260	100	8.1	434	7.52	12.5	4.2	54	28
Bb44-13	09-04-90	245	--	180	383	7.66	15.5	5.4	46	18
Bb44-22	08-21-90	250	--	--	216	7.16	13.0	2.3	18	7.9
Cd31-19	07-12-90	68.0	20	0.8	128	5.02	13.5	6.1	7.5	3.4
Ec42-15	07-19-90	53.0	40	7.0	275	5.97	13.0	10.1	16	12
Fb33-24	01-31-90	60.0	15	270	174	6.97	15.5	0.5	15	3.4
Fb33-25	01-31-90	60.0	15	270	177	7.18	18.5	1.2	2.1	0.41
Gb41-09	01-30-90	84.2	30	0.5	230	5.67	12.5	9.2	--	--
Gb41-10	01-31-90	82.8	30	1.0	154	5.21	13.5	9.3	--	--
Gb41-11	01-23-90	80.3	25	0.8	234	6.14	12.0	5.4	--	--
Gb41-12	01-30-90	80.8	30	0.5	220	5.56	--	--	--	--
Gb41-20	01-31-90	80.0	30	1.0	135	5.50	9.5	0.5	--	--
Gb41-21	01-23-90	80.7	21	1.0	91	5.36	11.5	0.5	6.4	3.1
Gb41-22	01-30-90	80.0	45	0.5	114	5.54	13.5	9.6	7.0	3.5
Gb41-23	01-15-90	80.0	50	1.0	120	5.65	14.5	9.1	8.8	3.9
Gb41-24	01-23-90	80.0	15	1.0	59	5.47	12.5	0	2.5	0.92
Gb41-25	01-30-90	80.0	30	1.0	137	4.61	12.0	10.4	4.8	4.6
Gb42-03	01-23-90	84.9	20	0.6	92	4.96	14.5	4.3	3.4	2.8
Gb51-04	06-08-90	80.0	10	0.8	38	4.61	12.5	1.5	1.1	1.5

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

NEW CASTLE COUNTY, DELAWARE--Continued

LOCAL IDENTIFIER	DATE	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	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)
Bb33-11	08-23-90	9.1	3.0	200	--	--	25	17	0.10	--
Bb33-12	08-23-90	10	3.4	262	--	--	45	24	<0.10	--
Bb33-13	08-14-90	6.0	2.2	209	--	--	35	18	<0.10	--
Bb33-14	08-13-90	7.1	3.2	55	--	--	31	5.5	<0.10	--
Bb33-15	08-14-90	5.1	2.5	190	--	--	17	18	0.30	--
Bb33-26	09-27-90	7.0	2.2	130	--	--	22	15	<0.10	--
Bb33-27	08-30-90	3.9	1.6	124	--	--	1.9	7.2	<0.10	--
Bb33-28	08-23-90	8.5	4.0	260	--	--	35	19	0.10	--
Bb33-29	09-05-90	10	2.1	23	--	--	15	9.2	<0.10	--
Bb33-32	09-25-90	4.0	3.4	45	--	--	35	7.6	<0.10	--
Bb33-34	09-26-90	8.3	2.4	34	--	--	17	33	<0.10	--
Bb34-27	09-24-90	7.3	1.8	276	--	--	36	37	<0.10	--
Bb34-29	09-04-90	8.3	2.1	230	--	--	27	21	0.10	--
Bb34-31	08-29-90	7.5	2.2	240	--	--	33	19	<0.10	--
Bb34-33	09-04-90	5.0	1.6	196	--	--	28	21	0.20	--
Bb34-34	08-22-90	5.8	0.90	208	--	--	70	30	<0.10	--
Bb34-36	08-29-90	6.3	1.0	206	--	--	19	15	<0.10	--
Bb34-40	09-25-90	6.7	2.3	--	--	--	30	12	<0.10	--
Bb34-50	08-30-90	11	3.3	55	--	--	27	12	<0.10	--
Bb34-58	09-26-90	9.1	2.0	33	--	--	36	7.7	<0.10	--
Bb35-14	09-24-90	7.0	1.9	54	--	--	26	5.3	0.20	--
Bb35-15	09-05-90	7.7	2.1	90	--	--	23	14	<0.10	--
Bb43-13	09-27-90	4.9	1.5	210	--	--	20	9.6	<0.10	--
Bb44-13	09-04-90	5.3	3.3	152	--	--	18	13	0.20	--
Bb44-22	08-21-90	4.2	1.6	61	--	--	10	11	<0.10	--
Cd31-19	07-12-90	9.3	1.3	--	6	7	2.0	28	<0.10	0.18
Ec42-15	07-19-90	6.1	2.0	--	7	9	10	23	<0.10	0.050
Fb33-24	01-31-90	14	5.5	--	88	107	7.0	1.2	0.20	0.16
Fb33-25	01-31-90	39	2.2	--	82	99	8.0	1.3	0.20	0.020
Gb41-09	01-30-90	--	--	--	12	--	--	--	--	--
Gb41-10	01-31-90	--	--	--	7	--	--	--	--	--
Gb41-11	01-23-90	--	--	--	40	48	--	--	--	--
Gb41-12	01-30-90	--	--	--	5	--	--	--	--	--
Gb41-20	01-31-90	--	--	--	22	72000	--	--	--	--
Gb41-21	01-23-90	2.8	1.7	--	17	21	4.0	11	<0.10	--
Gb41-22	01-30-90	5.5	1.5	--	8	--	2.0	9.0	<0.10	--
Gb41-23	01-15-90	4.9	0.90	--	6	--	5.0	6.9	<0.10	--
Gb41-24	01-23-90	7.2	1.2	--	10	8	<1.0	8.1	<0.10	--
Gb41-25	01-30-90	9.8	1.5	--	1	--	3.0	12	0.10	--
Gb42-03	01-23-90	5.6	1.3	--	1	0	<1.0	11	<0.10	--
Gb51-04	06-08-90	2.4	0.70	--	2	2	11	2.7	<0.10	<0.010

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

NEW CASTLE COUNTY, DELAWARE--Continued

LOCAL IDENTIFIER	DATE	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)
Bb33-11	08-23-90	17	292	--	<0.010	3.90	0.010	0.50	0.020	<10
Bb33-12	08-23-90	21	402	--	<0.010	5.70	<0.010	0.90	0.010	<10
Bb33-13	08-14-90	16	305	--	<0.010	4.00	<0.010	0.60	<0.010	<10
Bb33-14	08-13-90	27	128	--	<0.010	<0.100	0.020	<0.20	<0.010	<10
Bb33-15	08-14-90	24	271	--	<0.010	3.40	<0.010	0.40	<0.010	<10
Bb33-26	09-27-90	26	230	--	<0.010	3.80	0.020	0.60	0.030	<10
Bb33-27	08-30-90	21	175	--	<0.010	4.20	<0.010	0.40	0.030	<10
Bb33-28	08-23-90	22	351	--	--	--	--	--	--	<10
Bb33-29	09-05-90	21	115	--	<0.010	6.20	0.020	0.50	0.020	<10
Bb33-32	09-25-90	14	146	--	<0.010	5.10	<0.010	1.0	<0.010	<10
Bb33-34	09-26-90	22	138	--	<0.010	1.40	0.020	<0.20	0.030	<10
Bb34-27	09-24-90	24	411	--	<0.010	4.70	<0.010	0.80	<0.010	<10
Bb34-29	09-04-90	21	322	--	<0.010	2.70	0.030	0.40	0.030	<10
Bb34-31	08-29-90	18	340	--	<0.010	4.20	0.020	0.30	0.040	<10
Bb34-33	09-04-90	17	289	--	<0.010	3.90	0.020	0.70	<0.010	<10
Bb34-34	08-22-90	16	353	--	--	--	--	--	--	<10
Bb34-36	08-29-90	16	269	--	<0.010	1.00	0.010	<0.20	<0.010	<10
Bb34-40	09-25-90	19	297	--	<0.010	3.10	<0.010	0.50	<0.010	10
Bb34-50	08-30-90	24	176	6.02	0.080	6.10	0.010	0.40	0.020	<10
Bb34-58	09-26-90	22	149	--	<0.010	5.60	0.010	0.70	0.020	<10
Bb35-14	09-24-90	20	118	0.380	0.020	0.400	<0.010	<0.20	<0.010	<10
Bb35-15	09-05-90	26	197	--	<0.010	4.80	0.010	0.40	<0.010	<10
Bb43-13	09-27-90	16	272	--	<0.010	2.80	0.010	1.8	0.010	<10
Bb44-13	09-04-90	21	228	--	<0.010	2.70	0.020	0.30	0.020	<10
Bb44-22	08-21-90	21	110	--	--	--	--	--	--	<10
Cd31-19	07-12-90	13	83	--	<0.010	3.30	0.010	0.40	0.030	<10
Ec42-15	07-19-90	14	155	--	<0.010	15.0	0.020	0.60	0.060	<10
Fb33-24	01-31-90	8.5	112	--	<0.010	<0.100	0.140	0.50	0.330	<10
Fb33-25	01-31-90	9.1	113	--	<0.010	<0.100	0.100	<0.20	0.130	<10
Gb41-09	01-30-90	--	--	--	--	--	--	--	--	--
Gb41-10	01-31-90	--	--	--	--	--	--	--	--	--
Gb41-11	01-23-90	--	--	--	<0.010	2.50	0.140	0.70	0.020	--
Gb41-12	01-30-90	--	--	--	--	--	--	--	--	--
Gb41-20	01-31-90	--	--	--	--	--	--	--	--	--
Gb41-21	01-23-90	5.8	47	--	<0.010	<0.100	0.020	0.70	0.010	20
Gb41-22	01-30-90	22	84	--	<0.010	6.60	0.020	0.30	<0.010	--
Gb41-23	01-15-90	19	89	--	<0.010	8.20	0.020	0.70	<0.010	--
Gb41-24	01-23-90	24	--	--	<0.010	1.30	0.010	<0.20	0.030	--
Gb41-25	01-30-90	14	--	--	<0.010	9.30	0.020	<0.20	<0.010	--
Gb42-03	01-23-90	15	--	--	<0.010	4.40	0.010	0.50	0.010	20
Gb51-04	06-08-90	5.8	28	--	<0.010	<0.100	0.060	0.80	<0.010	870

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

NEW CASTLE COUNTY, DELAWARE--Continued

LOCAL IDENTIFIER	DATE	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)	Cadmium dissolved (ug/L as Cd)	Chromium, dissolved (ug/L as CR)	Cobalt, dissolved (ug/L as CO)	Copper, dissolved (ug/L as Cu)
Bb33-11	08-23-90	<1	<1	37	<0.5	<10	<1	<5	<3	<10
Bb33-12	08-23-90	<1	<1	45	<0.5	<10	<1	<5	<3	<10
Bb33-13	08-14-90	<1	<1	32	<0.5	<10	<1	<5	<3	<10
Bb33-14	08-13-90	<1	<1	37	<0.5	<10	<1	<5	<3	<10
Bb33-15	08-14-90	<1	<1	28	<0.5	<10	<1	<5	<3	<10
Bb33-26	09-27-90	<1	<1	24	<0.5	<10	<1	<5	<3	<10
Bb33-27	08-30-90	<1	<1	23	<0.5	<10	<1	<5	<3	<10
Bb33-28	08-23-90	<1	<1	48	<0.5	<10	<1	<5	<3	<10
Bb33-29	09-05-90	<1	<1	120	<0.5	<10	2	<5	<3	90
Bb33-32	09-25-90	<1	<1	90	<0.5	40	1	<5	<3	30
Bb33-34	09-26-90	<1	<1	49	0.6	<10	2	<5	<3	120
Bb34-27	09-24-90	<1	<1	170	<0.5	<10	<1	<5	<3	10
Bb34-29	09-04-90	<1	<1	43	<0.5	<10	<1	<5	<3	<10
Bb34-31	08-29-90	<1	<1	33	<0.5	10	2	<5	<3	<10
Bb34-33	09-04-90	<1	<1	33	<0.5	<10	<1	<5	<3	<10
Bb34-34	08-22-90	<1	<1	11	<0.5	20	<1	<5	<3	<10
Bb34-36	08-29-90	<1	<1	280	<0.5	<10	<1	<5	<3	<10
Bb34-40	09-25-90	<1	<1	26	<0.5	20	<1	<5	<3	<10
Bb34-50	08-30-90	<1	<1	110	<0.5	20	2	<5	<3	<10
Bb34-58	09-26-90	<1	<1	39	<0.5	<10	3	<5	<3	100
Bb35-14	09-24-90	<1	<1	11	<0.5	<10	<1	<5	<3	20
Bb35-15	09-05-90	<1	<1	23	<0.5	<10	<1	<5	<3	<10
Bb43-13	09-27-90	<1	<1	33	<0.5	10	<1	<5	<3	<10
Bb44-13	09-04-90	<1	<1	31	<0.5	<10	<1	<5	<3	<10
Bb44-22	08-21-90	<1	<1	21	<0.5	10	<1	<5	<3	<10
Cd31-19	07-12-90	<1	<1	83	<0.5	<10	1	<5	4	<10
Ec42-15	07-19-90	<1	<1	120	<0.5	<10	<1	<5	<3	50
Fb33-24	01-31-90	<1	<1	150	<0.5	70	<1	<5	<3	<10
Fb33-25	01-31-90	<1	<1	15	<0.5	50	<1	<5	7	<10
Gb41-09	01-30-90	--	--	--	--	--	--	--	--	--
Gb41-10	01-31-90	--	--	--	--	--	--	--	--	--
Gb41-11	01-23-90	--	--	--	--	--	--	--	--	--
Gb41-12	01-30-90	--	--	--	--	--	--	--	--	--
Gb41-20	01-31-90	--	--	--	--	--	--	--	--	--
Gb41-21	01-23-90	<1	<1	120	<0.5	<10	1	<5	8	<10
Gb41-22	01-30-90	--	--	--	--	--	--	--	--	--
Gb41-23	01-15-90	--	--	--	--	--	--	--	--	--
Gb41-24	01-23-90	--	--	--	--	--	--	--	--	--
Gb41-25	01-30-90	--	--	--	--	--	--	--	--	--
Gb42-03	01-23-90	<1	<1	120	0.7	<10	1	<5	<3	<10
Gb51-04	06-08-90	<1	<1	36	<0.5	10	<1	<5	<3	<10

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

NEW CASTLE COUNTY, DELAWARE--Continued

LOCAL IDENTIFIER	DATE	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)	Nickel, dissolved (ug/L as Ni)	Selenium, dissolved (ug/L as SE)	Silver, dissolved (ug/L as Ag)
Bb33-11	08-23-90	12	<10	<4	1	--	<10	<10	<1	<1.0
Bb33-12	08-23-90	3	<10	8	2	--	<10	<10	<1	<1.0
Bb33-13	08-14-90	3	<10	8	2	--	<10	<10	<1	<1.0
Bb33-14	08-13-90	1000	<10	9	80	--	<10	<10	<1	<1.0
Bb33-15	08-14-90	5	<10	8	2	--	<10	<10	<1	<1.0
Bb33-26	09-27-90	6	<10	6	2	--	<10	<10	<1	<1.0
Bb33-27	08-30-90	6	<10	<4	5	--	<10	<10	<1	<1.0
Bb33-28	08-23-90	190	<10	8	23	--	<10	<10	<1	<1.0
Bb33-29	09-05-90	12	<10	<4	2	--	<10	<10	2	<1.0
Bb33-32	09-25-90	7	<10	<4	8	--	<10	<10	2	<1.0
Bb33-34	09-26-90	4	<10	<4	2	--	<10	<10	2	<1.0
Bb34-27	09-24-90	4	<10	8	2	--	<10	<10	<1	<1.0
Bb34-29	09-04-90	<3	<10	7	<1	--	<10	<10	<1	<1.0
Bb34-31	08-29-90	3	<10	7	3	--	<10	<10	<1	<1.0
Bb34-33	09-04-90	<3	<10	5	<1	--	<10	<10	<1	<1.0
Bb34-34	08-22-90	39	<10	9	3	--	<10	<10	<1	<1.0
Bb34-36	08-29-90	230	<10	<4	1000	--	<10	<10	<1	<1.0
Bb34-40	09-25-90	<3	<10	6	6	--	<10	<10	<1	<1.0
Bb34-50	08-30-90	36	<10	5	10	--	<10	<10	2	2.0
Bb34-58	09-26-90	12	<10	<4	12	--	<10	<10	<1	<1.0
Bb35-14	09-24-90	<3	<10	<4	2	--	<10	<10	1	<1.0
Bb35-15	09-05-90	<3	<10	<4	<1	--	<10	<10	<1	<1.0
Bb43-13	09-27-90	9	<10	5	4	--	<10	<10	<1	<1.0
Bb44-13	09-04-90	4	<10	5	<1	--	<10	<10	<1	1.0
Bb44-22	08-21-90	90	<10	5	27	--	<10	<10	<1	<1.0
Cd31-19	07-12-90	8	10	5	22	0.2	<10	<10	<1	<1.0
Ec42-15	07-19-90	<4	<10	<4	4	<0.1	<10	<10	7	1.0
Fb33-24	01-31-90	2400	<10	<4	50	<0.1	<10	10	<1	<1.0
Fb33-25	01-31-90	950	<10	<4	21	<0.1	<10	<10	<1	<1.0
Gb41-09	01-30-90	--	--	--	--	--	--	--	--	--
Gb41-10	01-31-90	--	--	--	--	--	--	--	--	--
Gb41-11	01-23-90	680	--	--	--	--	--	--	--	--
Gb41-12	01-30-90	--	--	--	--	--	--	--	--	--
Gb41-20	01-31-90	--	--	--	--	--	--	--	--	--
Gb41-21	01-23-90	1000	<10	<4	160	--	<10	<10	<1	1.0
Gb41-22	01-30-90	9	--	--	100	--	--	--	--	--
Gb41-23	01-15-90	9	--	--	7	--	--	--	--	--
Gb41-24	01-23-90	120	--	--	44	--	--	--	--	--
Gb41-25	01-30-90	15	--	--	40	--	--	--	--	--
Gb42-03	01-23-90	<7	10	<4	34	--	<10	<10	<1	<1.0
Gb51-04	06-08-90	500	<10	<4	64	--	<10	<10	<1	<1.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

NEW CASTLE COUNTY, DELAWARE--Continued

LOCAL IDENTIFIER	DATE	Strontium, dissolved (ug/L as Sr)	Vanadium, dissolved (ug/L as V)	Zinc, dissolved (ug/L as Zn)	Radon 222, total (pCi/L)	Carbon, organic dissolved (mg/L as C)	Methylene blue active substance (mg/L)	Bromoform, total (ug/L)	Benzene total (ug/L)	Carbontetrachloride, total (ug/L)
Bb33-11	08-23-90	69	<6	6	380	--	--	--	--	--
Bb33-12	08-23-90	85	<6	18	260	--	--	--	--	--
Bb33-13	08-14-90	53	<6	17	410	--	--	--	--	--
Bb33-14	08-13-90	97	<6	12	420	--	--	--	--	--
Bb33-15	08-14-90	66	<6	11	89	--	--	--	--	--
Bb33-26	09-27-90	97	<6	10	<80	--	--	--	--	--
Bb33-27	08-30-90	31	<6	<3	98	--	--	--	--	--
Bb33-28	08-23-90	94	<6	120	--	--	--	--	--	--
Bb33-29	09-05-90	95	<6	67	1800	--	--	--	--	--
Bb33-32	09-25-90	110	<6	30	2500	--	--	--	--	--
Bb33-34	09-26-90	160	<6	18	320	--	--	--	--	--
Bb34-27	09-24-90	58	<6	39	88	--	--	--	--	--
Bb34-29	09-04-90	59	<6	15	260	--	--	--	--	--
Bb34-31	08-29-90	69	<6	15	270	--	--	--	--	--
Bb34-33	09-04-90	22	<6	17	170	--	--	--	--	--
Bb34-34	08-22-90	44	<6	8	95	--	--	--	--	--
Bb34-36	08-29-90	51	<6	120	190	--	--	--	--	--
Bb34-40	09-25-90	47	<6	8	<80	--	--	--	--	--
Bb34-50	08-30-90	140	<6	19	1800	--	--	--	--	--
Bb34-58	09-26-90	160	<6	22	420	--	--	--	--	--
Bb35-14	09-24-90	99	<6	17	310	--	--	--	--	--
Bb35-15	09-05-90	120	<6	7	530	--	--	--	--	--
Bb43-13	09-27-90	38	<6	16	330	--	--	--	--	--
Bb44-13	09-04-90	53	<6	11	230	--	--	--	--	--
Bb44-22	08-21-90	46	<6	7	330	--	--	--	--	--
Cd31-19	07-12-90	59	<6	10	190	0.7	--	<0.20	<0.20	<0.20
Ec42-15	07-19-90	200	<6	9	--	1.0	--	--	--	--
Fb33-24	01-31-90	580	<6	5	190	0.7	--	--	--	--
Fb33-25	01-31-90	110	<6	<3	110	0.7	--	--	--	--
Gb41-09	01-30-90	--	--	--	--	--	--	--	--	--
Gb41-10	01-31-90	--	--	--	--	--	--	--	--	--
Gb41-11	01-23-90	--	--	--	360	1.2	--	--	--	--
Gb41-12	01-30-90	--	--	--	--	--	--	--	--	--
Gb41-20	01-31-90	--	--	--	--	--	--	--	--	--
Gb41-21	01-23-90	64	<6	11	320	1.6	--	--	--	--
Gb41-22	01-30-90	--	--	--	--	--	0.09	--	--	--
Gb41-23	01-15-90	--	--	--	--	--	0.03	--	--	--
Gb41-24	01-23-90	--	--	--	--	--	--	--	--	--
Gb41-25	01-30-90	--	--	--	--	--	0.11	--	--	--
Gb42-03	01-23-90	90	<6	<3	460	0.4	--	--	--	--
Gb51-04	06-08-90	5	<6	6	--	5.2	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

NEW CASTLE COUNTY, DELAWARE--Continued

LOCAL IDENT-I-FIER	DATE	Chloro-benzene total (ug/L)	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)
Cd31-19	07-12-90	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Ec42-15	07-19-90	--	--	--	--	--	--	--	--	--
Fb33-24	01-31-90	--	--	--	--	--	--	--	--	--
Gb41-11	01-23-90	--	--	--	--	--	--	--	--	--
Gb41-21	01-23-90	--	--	--	--	--	--	--	--	--
Gb42-03	01-23-90	--	--	--	--	--	--	--	--	--
Gb51-04	06-08-90	--	--	--	--	--	--	--	--	--

LOCAL IDENT-I-FIER	DATE	Methyl-bromide total (ug/L)	Methyl-chlo-ride, total (ug/L)	Methyl-ene chlo-ride, 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)
Cd31-19	07-12-90	<0.2	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.2
Ec42-15	07-19-90	--	--	--	--	--	--	--	--	--
Fb33-24	01-31-90	--	--	--	--	--	--	--	--	--
Gb41-11	01-23-90	--	--	--	--	--	--	--	--	--
Gb41-21	01-23-90	--	--	--	--	--	--	--	--	--
Gb42-03	01-23-90	--	--	--	--	--	--	--	--	--
Gb51-04	06-08-90	--	--	--	--	--	--	--	--	--

LOCAL IDENT-I-FIER	DATE	Tri-flura-lin, total recover (ug/L)	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)	1,1,1-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)	1,2-Dibromo ethane, water, whole, total (ug/L)
Cd31-19	07-12-90	<0.10	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2
Ec42-15	07-19-90	<0.10	--	--	--	--	--	--	--	--
Fb33-24	01-31-90	<0.10	--	--	--	--	--	--	--	--
Gb41-11	01-23-90	<0.10	--	--	--	--	--	--	--	--
Gb41-21	01-23-90	<0.10	--	--	--	--	--	--	--	--
Gb42-03	01-23-90	<0.10	--	--	--	--	--	--	--	--
Gb51-04	06-08-90	<0.10	--	--	--	--	--	--	--	--

LOCAL IDENT-I-FIER	DATE	1,2-Di-chloro-benzene total (ug/L)	1,2-Di-chloro-ethane, total (ug/L)	1,2-Di-chloro-propane total (ug/L)	123-tri chloro-propane water whole total (ug/L)	1,3-Di-chloro-benzene total (ug/L)	1,4-Di-chloro-benzene total (ug/L)	Gross Alpha, Dis-Solved (Ug/L As U-nat)	Gross Beta, Dis-Solved (Pci/L As Sr/Yt-90)	Gross Beta, Dis-Solved (Pci/L As Cs-137)
Cd31-19	07-12-90	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	--
Ec42-15	07-19-90	--	--	--	--	--	--	--	--	--
Fb33-24	01-31-90	--	--	--	--	--	--	8.4	7.1	8.5
Fb33-25	01-31-90	--	--	--	--	--	--	0.6	2.2	2.7
Gb41-11	01-23-90	--	--	--	--	--	--	--	--	--
Gb41-21	01-23-90	--	--	--	--	--	--	--	--	--
Gb42-03	01-23-90	--	--	--	--	--	--	--	--	--
Gb51-04	06-08-90	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

SUSSEX COUNTY, DELAWARE

LOCAL IDENTIFIER	DATE	TIME	STATION NUMBER	GEOLOGIC UNIT	Sampling method, codes	Depth below land surface (water level) (ft)	Depth of well, total (ft)	Depth to top of sample interval (ft)	Depth to bottom of sample interval (ft)
Me14-22	01-24-90	1025	385403075262601	122CSLD	4040	52.30	336.00	317	336
Nd25-03	10-03-89	1530	384819075304601	122MNKN	4040	4.80	117.00	112	117
Nf34-02	10-18-89	0930	384702075213001	122MNKN	4040	10.40	121.00	116	121
Oh54-01	12-13-89	1800	384038075110001	122MNKN	4040	7.77	290.00	290	290
Oi51-07	07-11-90	1000	384032075093801	112CLMB	4040	25.20	33.00	30	33
Ph12-05	01-03-90	1545	383906075130301	112CLMB	4040	14.99	68.00	65	68
Ph12-06	01-03-90	1430	383906075130302	112CLMB	4040	15.06	23.00	20	23
Ph13-04	11-29-89	1515	383903075123005	112CLMB	4040	4.62	25.00	20	25
Ph13-16	01-03-90	0940	383907075124103	112CLMB	4040	8.18	45.00	40	45
Ph13-17	11-27-89	1130	383907075124102	112CLMB	4040	7.21	60.00	55	60
Ph13-18	11-27-89	1330	383907075124101	112CLMB	4040	7.85	85.00	80	85
Ph13-23	11-29-89	1445	383903075123004	112CLMB	4040	4.74	45.00	40	45
Ph13-29	11-29-89	1035	383939075120101	112CLMB	4040	3.07	78.00	75	78
Ph13-30	11-30-89	1210	383939075120102	112CLMB	4040	3.33	15.00	12	15
Ph13-31	11-30-89	1130	383939075120104	112CLMB	4080	--	39.00	--	--
Ph14-13	01-12-90	1500	383932075112601	112CLMB	4090	--	65.00	55	65
Ph21-07	11-30-89	1330	383853075141201	112CLMB	4040	4.26	15.00	12	15
Ph22-10	11-30-89	1530	383845075132102	112CLMB	4040	5.33	13.00	10	13
Ph22-11	01-03-90	1145	383855075135701	112CLMB	4040	4.62	54.00	51	54
Ph22-12	01-03-90	1100	383855075135702	112CLMB	4040	5.05	15.00	12	15
Ph22-13	11-30-89	1500	383845075132103	112CLMB	4040	5.35	36.00	33	36
Ph22-15	01-03-90	1245	383855075135704	112CLMB	4080	4.88	88.00	83	88
Ph22-21	12-07-89	1330	383845075132104	112CLMB	4030	5.45	93.00	90	93
Ph23-08	11-27-89	1430	383854075124801	112CLMB	4040	--	25.00	20	25
Ph23-10	11-29-89	1215	383854075122004	112CLMB	4040	4.65	25.00	20	25
Ph23-12	11-29-89	1140	383854075122003	112CLMB	4040	4.66	45.00	40	45
Ph23-13	11-29-89	1115	383854075122002	112CLMB	4040	4.56	65.00	60	65
Ph23-14	11-29-89	1015	383854075122001	112CLMB	4040	5.01	83.00	78	83
Ph23-18	12-07-89	1015	383854075124802	112CLMB	4020	7.81	56.00	53	56
Ph23-19	12-07-89	1035	383854075124803	112CLMB	4030	--	87.00	84	87

LOCAL IDENTIFIER	DATE	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)
Me14-22	01-24-90	38.0	85	8.0	334	7.63	15.0	0.5	48	11
Nd25-03	10-03-89	50.0	45	1.2	70	6.20	14.0	0.7	2.8	0.70
Nf34-02	10-18-89	40.0	55	1.0	71	5.59	13.5	6.4	5.0	1.3
Oh54-01	12-13-89	20.0	150	0.9	319	8.02	13.5	0.5	1.4	1.3
Oi51-07	07-11-90	31.0	20	0.3	251	4.69	15.5	7.9	8.4	12
Ph12-05	01-03-90	31.9	30	0.8	113	5.38	13.5	8.3	--	--
Ph12-06	01-03-90	32.1	25	0.8	103	5.07	15.5	8.7	3.0	4.3
Ph13-04	11-29-89	19.3	2	1.0	359	4.74	13.5	9.5	--	--
Ph13-16	01-03-90	22.5	30	0.8	308	5.35	13.0	9.8	17	15
Ph13-17	11-27-89	22.5	50	0.5	324	5.00	13.5	7.1	--	--
Ph13-18	11-27-89	22.5	45	0.8	176	5.56	14.0	5.0	--	--
Ph13-23	11-29-89	19.3	35	1.0	377	4.86	12.5	9.7	--	--
Ph13-29	11-29-89	11.3	40	1.0	79	5.70	13.5	5.0	--	--
Ph13-30	11-30-89	11.3	15	1.0	92	5.05	15.0	3.0	--	--
Ph13-31	11-30-89	11.0	50	0.1	251	5.50	13.0	8.3	--	--
Ph14-13	01-12-90	10.0	25	4.0	150	5.80	13.0	5.5	8.3	2.3
Ph21-07	11-30-89	31.3	20	1.0	108	4.90	16.0	10.0	--	--
Ph22-10	11-30-89	26.6	20	1.0	346	4.86	15.0	10.3	--	--
Ph22-11	01-03-90	28.7	25	0.8	169	5.10	13.5	8.0	--	--
Ph22-12	01-03-90	28.6	15	0.8	434	4.35	13.5	5.1	16	23
Ph22-13	11-30-89	26.7	30	1.0	460	4.96	13.5	3.9	--	--
Ph22-15	01-03-90	28.2	65	0.1	118	5.65	13.0	7.4	--	--
Ph22-21	12-07-89	30.0	20	4.0	74	6.08	13.5	--	--	--
Ph23-08	11-27-89	24.7	55	0.8	188	5.07	15.5	9.1	--	--
Ph23-10	11-29-89	19.1	25	1.0	389	4.95	13.5	0.5	--	--
Ph23-12	11-29-89	19.0	25	1.0	370	5.44	12.5	7.0	--	--
Ph23-13	11-29-89	19.2	30	1.0	271	5.76	12.5	7.2	--	--
Ph23-14	11-29-89	19.2	40	1.0	353	5.48	12.5	3.5	--	--
Ph23-18	12-07-89	25.7	20	5.0	317	5.66	14.0	--	--	--
Ph23-19	12-07-89	25.2	30	4.0	178	5.20	14.0	5.2	11	4.4

Geologic unit (aquifer): 112CLMB - Columbia Formation
122CLSD - Cheswold Aquifer
122MNKN - Manokin Aquifer

Sampling method: 4040 - Submersible pump
4080 - Peristaltic pump

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

SUSSEX COUNTY, DELAWARE--Continued

LOCAL IDENTIFIER	DATE	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	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)
Me14-22	01-24-90	9.9	5.0	--	183	223	<1.0	1.7	0.10	<0.010
Nd25-03	10-03-89	7.3	0.90	--	27	32	<1.0	4.2	0.10	0.040
Nf34-02	10-18-89	7.3	2.1	--	10	12	<1.0	9.3	<0.10	0.020
Oh54-01	12-13-89	75	6.1	--	149	181	3.0	8.2	0.50	0.030
Oi51-07	07-11-90	11	5.2	--	1	1	3.3	63	<0.10	0.070
Ph12-05	01-03-90	--	--	--	8	--	--	--	--	--
Ph12-06	01-03-90	4.5	4.1	--	4	5	9.0	5.6	<0.10	0.030
Ph13-04	11-29-89	--	--	--	2	--	--	--	--	--
Ph13-16	01-03-90	8.1	4.2	--	4	4	15	20	<0.10	0.040
Ph13-17	11-27-89	--	--	--	2	--	--	--	--	--
Ph13-18	11-27-89	--	--	--	7	--	--	--	--	--
Ph13-23	11-29-89	--	--	--	2	--	--	--	--	--
Ph13-29	11-29-89	--	--	--	7	--	--	--	--	--
Ph13-30	11-30-89	--	--	--	4	--	--	--	--	--
Ph13-31	11-30-89	--	--	--	5	--	--	--	--	--
Ph14-13	01-12-90	13	1.6	--	7	--	3.0	13	<0.10	--
Ph21-07	11-30-89	--	--	--	--	--	--	--	--	--
Ph22-10	11-30-89	--	--	--	0	--	--	--	--	--
Ph22-11	01-03-90	--	--	--	5	--	--	--	--	--
Ph22-12	01-03-90	12	7.0	--	0	0	37	28	0.20	0.030
Ph22-13	11-30-89	--	--	--	4	--	--	--	--	--
Ph22-15	01-03-90	--	--	--	8	--	--	--	--	--
Ph22-21	12-07-89	--	--	9	--	--	--	--	--	--
Ph23-08	11-27-89	--	--	--	1	--	--	--	--	--
Ph23-10	11-29-89	--	--	--	9	--	--	--	--	--
Ph23-12	11-29-89	--	--	--	8	--	--	--	--	--
Ph23-13	11-29-89	--	--	--	8	--	--	--	--	--
Ph23-14	11-29-89	--	--	--	5	--	--	--	--	--
Ph23-18	12-07-89	--	--	--	6	--	--	--	--	--
Ph23-19	12-07-89	14	2.5	--	6	--	<1.0	19	<0.10	--

LOCAL IDENTIFIER	DATE	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)
Me14-22	01-24-90	61	--	--	<0.010	<0.100	0.200	0.30	0.030	<10
Nd25-03	10-03-89	36	--	--	<0.010	<0.100	0.020	0.20	<0.010	<10
Nf34-02	10-18-89	16	--	--	<0.010	4.80	0.010	0.30	<0.010	<10
Oh54-01	12-13-89	15	203	--	<0.010	<0.100	0.130	0.50	0.970	20
Oi51-07	07-11-90	9.4	131	--	<0.010	4.00	0.030	0.50	0.040	100
Ph12-05	01-03-90	--	--	--	--	--	--	--	--	--
Ph12-06	01-03-90	11	70	--	<0.010	5.60	0.350	1.0	0.030	30
Ph13-04	11-29-89	--	--	--	<0.010	26.0	0.010	0.40	<0.010	--
Ph13-16	01-03-90	17	197	--	<0.010	22.0	0.010	0.60	<0.010	20
Ph13-17	11-27-89	--	--	--	<0.010	22.0	<0.010	0.70	0.010	--
Ph13-18	11-27-89	--	--	--	<0.010	12.0	<0.010	<0.20	<0.010	--
Ph13-23	11-29-89	--	--	--	<0.010	29.0	<0.010	0.40	<0.010	--
Ph13-29	11-29-89	--	--	--	<0.010	1.50	0.010	0.30	<0.010	--
Ph13-30	11-30-89	--	--	--	--	--	--	--	--	--
Ph13-31	11-30-89	--	--	--	--	--	--	--	--	--
Ph14-13	01-12-90	19	107	--	<0.010	9.40	<0.010	0.40	<0.020	--
Ph21-07	11-30-89	--	--	--	<0.010	7.00	0.020	0.20	<0.010	--
Ph22-10	11-30-89	--	--	--	<0.010	19.0	0.020	0.80	<0.010	--
Ph22-11	01-03-90	--	--	--	<0.010	11.0	0.020	0.70	<0.010	--
Ph22-12	01-03-90	14	264	--	<0.010	28.0	0.020	1.2	<0.010	1000
Ph22-13	11-30-89	--	--	--	<0.010	28.0	0.070	1.3	<0.010	--
Ph22-15	01-03-90	--	--	--	<0.010	6.80	0.040	0.70	0.080	--
Ph22-21	12-07-89	--	--	--	--	--	--	--	--	--
Ph23-08	11-27-89	--	--	--	<0.010	9.80	<0.010	0.50	<0.010	--
Ph23-10	11-29-89	--	--	22.0	0.010	22.0	0.030	0.80	0.010	--
Ph23-12	11-29-89	--	--	--	<0.010	30.0	<0.010	0.80	<0.010	--
Ph23-13	11-29-89	--	--	--	<0.010	18.0	0.020	0.80	<0.010	--
Ph23-14	11-29-89	--	--	27.0	0.010	27.0	0.020	0.60	<0.010	--
Ph23-18	12-07-89	--	--	--	<0.010	21.0	0.010	1.0	<0.010	--
Ph23-19	12-07-89	18	--	--	<0.010	14.0	<0.010	0.30	<0.010	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

SUSSEX COUNTY, DELAWARE--Continued

LOCAL IDENTIFIER	DATE	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)	Cadmium dissolved (ug/L as Cd)	Chromium, dissolved (ug/L as CR)	Cobalt, dissolved (ug/L as CO)	Copper, dissolved (ug/L as Cu)
Me14-22	01-24-90	<1	<1	3	<0.5	70	<1	<5	<3	<10
Nd25-03	10-03-89	2	14	24	<0.5	<10	<1	<5	20	<10
Nf34-02	10-18-89	<1	<1	87	<0.5	20	<1	<5	<3	<10
Oh54-01	12-13-89	<1	<1	2	<0.5	280	<1	<5	<3	<10
Oi51-07	07-11-90	<1	<1	200	<0.5	20	<1	<5	<3	<10
Ph12-05	01-03-90	--	--	--	--	--	--	--	--	--
Ph12-06	01-03-90	<1	<1	210	<0.5	<10	<1	<5	<3	<10
Ph13-04	11-29-89	--	--	--	--	--	--	--	--	--
Ph13-16	01-03-90	<1	<1	360	0.5	<10	<1	<5	5	<10
Ph13-17	11-27-89	--	--	--	--	--	--	--	--	--
Ph13-18	11-27-89	--	--	--	--	--	--	--	--	--
Ph13-23	11-29-89	--	--	--	--	--	--	--	--	--
Ph13-29	11-29-89	--	--	--	--	--	--	--	--	--
Ph13-30	11-30-89	--	--	--	--	--	--	--	--	--
Ph13-31	11-30-89	--	--	--	--	--	--	--	--	--
Ph14-13	01-12-90	--	--	--	--	--	--	--	--	--
Ph21-07	11-30-89	--	--	--	--	--	--	--	--	--
Ph22-10	11-30-89	--	--	--	--	--	--	--	--	--
Ph22-11	01-03-90	--	--	--	--	--	--	--	--	--
Ph22-12	01-03-90	<1	<1	420	2	20	1	<5	5	<10
Ph22-13	11-30-89	--	--	--	--	--	--	--	--	--
Ph22-15	01-03-90	--	--	--	--	--	--	--	--	--
Ph22-21	12-07-89	--	--	--	--	--	--	--	--	--
Ph23-08	11-27-89	--	--	--	--	--	--	--	--	--
Ph23-10	11-29-89	--	--	--	--	--	--	--	--	--
Ph23-12	11-29-89	--	--	--	--	--	--	--	--	--
Ph23-13	11-29-89	--	--	--	--	--	--	--	--	--
Ph23-14	11-29-89	--	--	--	--	--	--	--	--	--
Ph23-18	12-07-89	--	--	--	--	--	--	--	--	--
Ph23-19	12-07-89	--	--	--	--	--	--	--	--	--

LOCAL IDENTIFIER	DATE	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)	Nickel, dissolved (ug/L as Ni)	Selenium, dissolved (ug/L as SE)	Silver, dissolved (ug/L as Ag)
Me14-22	01-24-90	21	<10	13	2	<0.1	<10	<10	<1	<1.0
Nd25-03	10-03-89	3600	20	<4	180	<0.1	<10	10	<1	2.0
Nf34-02	10-18-89	<6	<10	<4	1	<0.1	<10	<10	<1	<1.0
Oh54-01	12-13-89	150	<10	4	10	<0.1	<10	<10	<1	<1.0
Oi51-07	07-11-90	9	<10	4	21	<0.1	<10	<10	<1	<1.0
Ph12-05	01-03-90	--	--	--	--	--	--	--	--	--
Ph12-06	01-03-90	98	<10	<4	24	--	<10	<10	<1	<1.0
Ph13-04	11-29-89	--	--	--	--	--	--	--	--	--
Ph13-16	01-03-90	8	<10	5	64	--	<10	<10	1	<1.0
Ph13-17	11-27-89	--	--	--	--	--	--	--	--	--
Ph13-18	11-27-89	--	--	--	--	--	--	--	--	--
Ph13-23	11-29-89	--	--	--	--	--	--	--	--	--
Ph13-29	11-29-89	--	--	--	--	--	--	--	--	--
Ph13-30	11-30-89	--	--	--	--	--	--	--	--	--
Ph13-31	11-30-89	--	--	--	--	--	--	--	--	--
Ph14-13	01-12-90	16	--	--	16	--	--	--	--	--
Ph21-07	11-30-89	--	--	--	--	--	--	--	--	--
Ph22-10	11-30-89	--	--	--	--	--	--	--	--	--
Ph22-11	01-03-90	--	--	--	--	--	--	--	--	--
Ph22-12	01-03-90	<10	<10	<4	180	--	<10	<10	<1	<1.0
Ph22-13	11-30-89	--	--	--	--	--	--	--	--	--
Ph22-15	01-03-90	--	--	--	--	--	--	--	--	--
Ph22-21	12-07-89	--	--	--	--	--	--	--	--	--
Ph23-08	11-27-89	--	--	--	--	--	--	--	--	--
Ph23-10	11-29-89	--	--	--	--	--	--	--	--	--
Ph23-12	11-29-89	--	--	--	--	--	--	--	--	--
Ph23-13	11-29-89	--	--	--	--	--	--	--	--	--
Ph23-14	11-29-89	--	--	--	--	--	--	--	--	--
Ph23-18	12-07-89	--	--	--	--	--	--	--	--	--
Ph23-19	12-07-89	62	--	--	18	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

SUSSEX COUNTY, DELAWARE--Continued

LOCAL IDENT-I-FIER	DATE	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 (pCi/L)	Gross beta, dis-solved (pCi/L as SR/Yt-90)	Tritium total (pCi/L)	Carbon, organic dis-solved (mg/L as C)
Me14-22	01-24-90	510	<6	<3	--	--	240	--	--	1.2
Nd25-03	10-03-89	50	<6	12	2.2	1.5	240	1.1	<0.3	0.5
Nf34-02	10-18-89	120	<6	<3	4.6	2.7	190	2.2	100	0.4
Oh54-01	12-13-89	21	<6	7	2.3	7.3	240	6.3	--	1.4
Oi51-07	07-11-90	190	<6	12	--	--	460	--	--	0.9
Ph12-05	01-03-90	--	--	--	--	--	--	--	--	--
Ph12-06	01-03-90	70	<6	20	--	--	--	--	--	--
Ph13-04	11-29-89	--	--	--	--	--	--	--	--	--
Ph13-16	01-03-90	440	<6	18	--	--	--	--	--	--
Ph13-17	11-27-89	--	--	--	--	--	--	--	--	--
Ph13-18	11-27-89	--	--	--	--	--	--	--	--	--
Ph13-23	11-29-89	--	--	--	--	--	--	--	--	--
Ph13-29	11-29-89	--	--	--	--	--	--	--	--	--
Ph13-30	11-30-89	--	--	--	--	--	--	--	--	--
Ph13-31	11-30-89	--	--	--	--	--	--	--	--	--
Ph14-13	01-12-90	--	--	--	--	--	--	--	--	--
Ph21-07	11-30-89	--	--	--	--	--	--	--	--	--
Ph22-10	11-30-89	--	--	--	--	--	--	--	--	--
Ph22-11	01-03-90	--	--	--	--	--	--	--	--	--
Ph22-12	01-03-90	310	<6	12	--	--	--	--	--	--
Ph22-13	11-30-89	--	--	--	--	--	--	--	--	--
Ph22-15	01-03-90	--	--	--	--	--	--	--	--	--
Ph22-21	12-07-89	--	--	--	--	--	--	--	--	--
Ph23-08	11-27-89	--	--	--	--	--	--	--	--	--
Ph23-10	11-29-89	--	--	--	--	--	--	--	--	--
Ph23-12	11-29-89	--	--	--	--	--	--	--	--	--
Ph23-13	11-29-89	--	--	--	--	--	--	--	--	--
Ph23-14	11-29-89	--	--	--	--	--	--	--	--	--
Ph23-18	12-07-89	--	--	--	--	--	--	--	--	--
Ph23-19	12-07-89	--	--	--	--	--	--	--	--	--

LOCAL IDENT-I-FIER	DATE	Methy-lene blue active sub-stance (mg/L)	Bromo-form, total (ug/L)	Benzene total (ug/L)	Carbon-tetra-chlo-ride, total (ug/L)	Chloro-benzene total (ug/L)	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)
Me14-22	01-24-90	--	--	--	--	--	--	--	--	--
Nd25-03	10-03-89	--	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Nf34-02	10-18-89	--	--	--	--	--	--	--	--	--
Oh54-01	12-13-89	--	--	--	--	--	--	--	--	--
Oi51-07	07-11-90	--	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Ph12-05	01-03-90	--	--	--	--	--	--	--	--	--
Ph12-06	01-03-90	0.07	--	--	--	--	--	--	--	--
Ph13-04	11-29-89	0.26	--	--	--	--	--	--	--	--
Ph13-16	01-03-90	0.23	--	--	--	--	--	--	--	--
Ph13-17	11-27-89	0.22	--	--	--	--	--	--	--	--
Ph13-18	11-27-89	0.13	--	--	--	--	--	--	--	--
Ph13-23	11-29-89	0.28	--	--	--	--	--	--	--	--
Ph13-29	11-29-89	0.03	--	--	--	--	--	--	--	--
Ph13-30	11-30-89	--	--	--	--	--	--	--	--	--
Ph13-31	11-30-89	--	--	--	--	--	--	--	--	--
Ph14-13	01-12-90	0.09	--	--	--	--	--	--	--	--
Ph21-07	11-30-89	0.06	--	--	--	--	--	--	--	--
Ph22-10	11-30-89	0.29	--	--	--	--	--	--	--	--
Ph22-11	01-03-90	0.14	--	--	--	--	--	--	--	--
Ph22-12	01-03-90	0.30	--	--	--	--	--	--	--	--
Ph22-13	11-30-89	0.17	--	--	--	--	--	--	--	--
Ph22-15	01-03-90	0.09	--	--	--	--	--	--	--	--
Ph22-21	12-07-89	--	--	--	--	--	--	--	--	--
Ph23-08	11-27-89	0.10	--	--	--	--	--	--	--	--
Ph23-10	11-29-89	0.24	--	--	--	--	--	--	--	--
Ph23-12	11-29-89	0.28	--	--	--	--	--	--	--	--
Ph23-13	11-29-89	0.18	--	--	--	--	--	--	--	--
Ph23-14	11-29-89	0.25	--	--	--	--	--	--	--	--
Ph23-18	12-07-89	0.17	--	--	--	--	--	--	--	--
Ph23-19	12-07-89	0.11	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

SUSSEX COUNTY, DELAWARE--Continued

LOCAL IDENT-I-FIER	DATE	Dibromomethane water, whole, recover (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)
Me14-22	01-24-90	--	--	--	--	--	--	--	--
Nd25-03	10-03-89	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2
Oi51-07	07-11-90	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2
Ph12-06	01-03-90	--	--	--	--	--	--	--	--
Ph13-16	01-03-90	--	--	--	--	--	--	--	--
Ph13-29	11-29-89	--	--	--	--	--	--	--	--
Ph21-07	11-30-89	--	--	--	--	--	--	--	--
Ph22-12	01-03-90	--	--	--	--	--	--	--	--
Ph23-12	11-29-89	--	--	--	--	--	--	--	--
Ph23-13	11-29-89	--	--	--	--	--	--	--	--
Ph23-18	12-07-89	--	--	--	--	--	--	--	--
Ph23-19	12-07-89	--	--	--	--	--	--	--	--

LOCAL IDENT-I-FIER	DATE	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)
Me14-22	01-24-90	--	--	--	--	--	<0.10	--	--
Nd25-03	10-03-89	<0.20	<0.20	<0.20	<0.20	<0.2	<0.10	<0.20	<0.2
Nf34-02	10-18-89	--	--	--	--	--	--	--	--
Oi51-07	07-11-90	<0.20	<0.20	<0.20	<0.20	<0.2	<0.10	<0.20	<0.2
Ph12-06	01-03-90	--	--	--	--	--	<0.10	--	--
Ph13-16	01-03-90	--	--	--	--	--	<0.10	--	--
Ph13-23	11-29-89	--	--	--	--	--	<0.10	--	--
Ph21-07	11-30-89	--	--	--	--	--	<0.10	--	--
Ph22-12	01-03-90	--	--	--	--	--	<0.10	--	--
Ph23-12	11-29-89	--	--	--	--	--	<0.10	--	--
Ph23-13	11-29-89	--	--	--	--	--	<0.10	--	--
Ph23-18	12-07-89	--	--	--	--	--	<0.10	--	--
Ph23-19	12-07-89	--	--	--	--	--	<0.10	--	--

LOCAL IDENT-I-FIER	DATE	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)	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)
Me14-22	01-24-90	--	--	--	--	--	--	--	--
Nd25-03	10-03-89	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20
Oi51-07	07-11-90	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20
Ph12-06	01-03-90	--	--	--	--	--	--	--	--
Ph13-16	01-03-90	--	--	--	--	--	--	--	--
Ph13-23	11-29-89	--	--	--	--	--	--	--	--
Ph21-07	11-30-89	--	--	--	--	--	--	--	--
Ph22-11	01-03-90	--	--	--	--	--	--	--	--
Ph23-12	11-29-89	--	--	--	--	--	--	--	--
Ph23-13	11-29-89	--	--	--	--	--	--	--	--
Ph23-18	12-07-89	--	--	--	--	--	--	--	--
Ph23-19	12-07-89	--	--	--	--	--	--	--	--

LOCAL IDENT-I-FIER	DATE	1,2-Dichloropropane total (ug/L)	123-trichloropropane water whole total (ug/L)	1,3-Dichlorobenzene total (ug/L)	1,4-Dichlorobenzene total (ug/L)	Gross Alpha, Dis-Solved (Ug/L As U-nat)	Gross Beta, Dis-Solved (Pci/L As Sr/Yt-90)	Gross Beta, Dis-Solved (Pci/L As Cs-137)
Me14-22	01-24-90	--	--	--	--	0.5	3.1	4.0
Me14-22	01-25-90	--	--	--	--	<0.4	9.7	12
Nd25-03	10-03-89	<0.20	<0.20	<0.20	<0.20	--	--	--
Oi51-07	07-11-90	<0.20	<0.20	<0.20	<0.20	--	--	--
Ph12-06	01-03-90	--	--	--	--	--	--	--
Ph13-16	01-03-90	--	--	--	--	--	--	--
Ph13-23	11-29-89	--	--	--	--	--	--	--
Ph21-07	11-30-89	--	--	--	--	--	--	--
Ph22-12	01-03-90	--	--	--	--	--	--	--
Ph23-12	11-29-89	--	--	--	--	--	--	--
Ph23-13	11-29-89	--	--	--	--	--	--	--
Ph23-18	12-07-89	--	--	--	--	--	--	--
Ph23-19	12-07-89	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

ANNE ARUNDEL COUNTY, MARYLAND

LOCAL IDENT-I-FIER	DATE	TIME	STATION NUMBER	GEO-LOGIC UNIT	Sam-pling method, codes	Depth below land surface (water level) (ft)	Depth of well, total (ft)	Depth to top of sample inter-val (ft)	Depth to bot-tom of sample inter-val (ft)
AA Ad 104	12-26-89	1145	391032076385905	217PPSC	4040	7.17	28.00	19	28
	07-19-90	1030		217PPSC	4040	5.53	28.00	19	29
AA Ce 130	05-04-90	1130	390148076325202	211MGTY	4040	6.40	103.00	88	98
AA Ce 133	08-28-90	1300	390410076302401	211MGTY	--	--	117.00	--	--
AA Ce 134	08-27-90	1300	390410076302402	211MGTY	4040	15.00	77.00	62	72
AA Cg 25	05-24-90	1630	390127076240301	112PLSC	4040	15.64	107.00	100	107
AA De 189	04-20-90	1400	385559076303303	125AQUI	4040	41.00	95.00	80	90
AA De 196	04-19-90	1515	385559076303301	211MNMT	4040	41.39	145.00	130	140
AA De 197	04-26-90	1050	385559076303302	125AQUI	4040	42.00	105.00	100	110
AA De 200	04-27-90	1410	385559076303304	211MNMT	4040	42.00	205.00	190	200
AA De 201	06-01-90	1315	385559076303305	211MNMT	--	--	230.00	--	--
AA Df 103	05-24-90	1130	385623076274401	125AQUI	4040	23.27	46.00	39	46
AA Df 155	05-02-90	1315	385622076271101	211MNMT	4040	39.00	199.00	184	194
AA Ef 36	05-25-90	0900	385459076274001	125AQUI	4040	6.15	95.00	88	95

LOCAL IDENT-I-FIER	DATE	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)	Color (plat-inum-cobalt units)	Calcium dis-solved (mg/L as Ca)	Magne-sium, dis-solved (mg/L as Mg)
AA Ad 104	12-26-89	80.0	60	1.0	384	5.92	14.5	--	27	5.3
	07-19-90	80.0	90	1.2	630	6.12	15.0	--	35	6.1
AA Ce 130	05-04-90	8.0	210	34	65	3.75	14.0	<1	2.3	0.86
AA Ce 133	08-28-90	15.0	--	--	--	--	--	5	2.7	1.3
AA Ce 134	08-27-90	15.0	120	10	83	4.72	15.5	<1	3.7	1.3
AA Cg 25	05-24-90	10.0	150	1.3	133	6.23	13.5	--	8.7	2.4
AA De 189	04-20-90	42.0	180	11	415	7.09	--	6	86	3.3
AA De 196	04-19-90	41.0	195	9.3	3000	6.60	15.0	110	1300	61
AA De 197	04-26-90	42.0	70	10	417	7.08	15.0	16	85	2.0
AA De 200	04-27-90	42.0	190	3.5	16400	6.21	18.0	14	1900	130
AA De 201	06-01-90	41.0	--	--	--	--	--	2	1000	120
AA Df 103	05-24-90	26.5	90	1.2	258	5.38	13.5	--	15	6.0
AA Df 155	05-02-90	40.0	180	11	10000	6.05	15.5	<1	2600	490
AA Ef 36	05-25-90	7.0	15	20	--	7.05	--	--	--	--

LOCAL IDENT-I-FIER	DATE	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	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)
AA Ad 104	12-26-89	38	3.0	77	94	12	65	0.10	--	6.0
	07-19-90	82	3.2	99	121	13	100	<0.10	--	4.2
AA Ce 130	05-04-90	1.5	1.4	--	--	17	2.0	0.10	0.020	13
AA Ce 133	08-28-90	1.7	1.4	--	--	35	1.2	<0.10	--	10
AA Ce 134	08-27-90	2.1	1.5	--	--	37	1.3	<0.10	--	10
AA Cg 25	05-24-90	3.7	3.2	50	61	3.8	5.1	0.30	0.060	27
AA De 189	04-20-90	4.0	3.3	--	--	4.7	5.0	0.30	0.020	31
AA De 196	04-19-90	760	22	--	--	490	3400	1.0	12	32
AA De 197	04-26-90	2.0	3.6	--	--	9.6	2.8	0.30	0.020	30
AA De 200	04-27-90	1600	25	--	--	770	6400	0.20	22	31
AA De 201	06-01-90	940	18	--	--	560	3700	<0.10	14	11
AA Df 103	05-24-90	21	3.6	17	21	9.3	56	<0.10	0.060	17
AA Df 155	05-02-90	1000	35	--	--	790	6500	<0.10	26	25
AA Ef 36	05-25-90	--	--	--	--	--	480	--	1.8	--

Geologic unit (aquifer): 112PLSC - Pleistocene Series
125AQUI - Aquia Formation
211MGTY - Magothy Formation
211MNMT - Monmouth Formation
217PPSC - Patapsco Formation

Sampling method: 4040 - Submersible pump

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

ANNE ARUNDEL COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	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)	Aluminum, total recoverable (ug/L as Al)	Aluminum, dissolved (ug/L as Al)	Arsenic, dissolved (ug/L as As)	Barium, dissolved (ug/L as BA)	Beryllium, dissolved (ug/L as BE)
AA Ad 104	12-26-89	--	204	<0.100	0.070	270	--	--	--	--
	07-19-90	--	305	<0.100	0.020	220	--	--	--	--
AA Ce 130	05-04-90	21	--	<0.100	0.080	--	--	--	--	--
AA Ce 133	08-28-90	59	--	<0.100	<0.010	--	--	--	--	--
AA Ce 134	08-27-90	73	--	<0.100	<0.010	--	--	--	--	--
AA Cg 25	05-24-90	--	100	<0.100	1.70	<10	<10	1	29	<0.5
AA De 189	04-20-90	276	278	<0.100	0.090	--	--	--	--	--
AA De 196	04-19-90	7830	6150	<0.100	<0.010	--	--	--	--	--
AA De 197	04-26-90	270	257	<0.100	0.010	--	--	--	--	--
AA De 200	04-27-90	12200	--	<0.100	0.040	--	--	--	--	--
AA De 201	06-01-90	10000	--	<0.100	0.060	--	--	--	--	--
AA Df 103	05-24-90	--	139	1.50	0.050	110	<10	<1	31	<0.5
AA Df 155	05-02-90	14500	11600	<0.100	0.030	--	--	--	--	--
AA Ef 36	05-25-90	--	--	--	--	--	--	--	--	--

LOCAL IDENTIFIER	DATE	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)	Lithium dissolved (ug/L as Li)
AA Ad 104	12-26-89	40	--	--	--	--	2600	1500	--	--
	07-19-90	<10	--	--	--	--	1900	1800	--	--
AA Ce 130	05-04-90	--	--	--	--	--	3500	3400	--	--
AA Ce 133	08-28-90	--	--	--	--	--	9100	8900	--	--
AA Ce 134	08-27-90	--	--	--	--	--	15000	15000	--	--
AA Cg 25	05-24-90	20	<1	<1	1	1	16000	15000	<1	8
AA De 189	04-20-90	--	--	--	--	--	340	220	--	--
AA De 196	04-19-90	--	--	--	--	--	16000	16000	--	--
AA De 197	04-26-90	--	--	--	--	--	1000	900	--	--
AA De 200	04-27-90	--	--	--	--	--	110000	10000	--	--
AA De 201	06-01-90	--	--	--	--	--	220000	240000	--	--
AA Df 103	05-24-90	20	<1	5	<1	5	650	19	<1	<4
AA Df 155	05-02-90	--	--	--	--	--	140000	100000	--	--
AA Ef 36	05-25-90	--	--	--	--	--	--	--	--	--

LOCAL IDENTIFIER	DATE	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)	Vanadium, dissolved (ug/L as V)	Zinc, total recoverable (ug/L as Zn)	Zinc, dissolved (ug/L as Zn)
AA Ad 104	12-26-89	190	170	--	--	--	--	--	20	--
	07-19-90	220	220	--	--	--	--	--	--	--
AA Ce 130	05-04-90	60	64	--	--	--	--	--	--	--
AA Ce 133	08-28-90	120	120	--	--	--	--	--	--	--
AA Ce 134	08-27-90	110	110	--	--	--	--	--	--	--
AA Cg 25	05-24-90	380	400	0.3	<1	1	<2	<1	--	4
AA De 189	04-20-90	50	37	--	--	--	--	--	--	--
AA De 196	04-19-90	280	230	--	--	--	--	--	--	--
AA De 197	04-26-90	30	26	--	--	--	--	--	--	--
AA De 200	04-27-90	990	820	--	--	--	--	--	--	--
AA De 201	06-01-90	2200	2500	--	--	--	--	--	--	--
AA Df 103	05-24-90	10	12	<0.1	<1	3	<1	<1	--	13
AA Df 155	05-02-90	570	600	--	--	--	--	--	--	--
AA Ef 36	05-25-90	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

ANNE ARUNDEL COUNTY, MARYLAND--Continued

LOCAL IDENT-I-FIER	DATE	Radon 222, total (pCi/L)	Carbon, organic total (mg/L as C)	Pcn, dissolv (ug/L)	Bromo-form, total (ug/L)	Benzene total (ug/L)	Carbon-tetra-chlo-ride, total (ug/L)	Chloro-benzene total (ug/L)	Chloro-di-bromo-methane total (ug/L)	Chloro-form, total (ug/L)
AA Ad 104	12-26-89	--	12	--	--	--	--	--	--	--
	07-19-90	<80	13	--	--	--	--	--	--	--
AA Cg 25	05-24-90	100	--	<0.10	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
AA Df 103	05-24-90	300	0.5	<0.10	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0

LOCAL IDENT-I-FIER	DATE	Chloro-ethane, total (ug/L)	Cis 1,3-di-chloro-propene total (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)	Methyl-ene chlo-ride, total (ug/L)	Styrene total (ug/L)
AA Ad 104	12-26-89	--	--	--	--	--	--	--	--	--
	07-19-90	--	--	--	--	--	--	--	--	--
AA Cg 25	05-24-90	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
AA Df 103	05-24-90	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0

LOCAL IDENT-I-FIER	DATE	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)	Vinyl chlo-ride, total (ug/L)	Xylene, total water, whole, tot rec (ug/L)	1,1-Di-chloro-ethane, total (ug/L)
AA Ad 104	12-26-89	--	--	--	--	--	--	--	--	--
	07-19-90	--	--	--	--	--	--	--	--	--
AA Cg 25	05-24-90	<3.0	<3.0	<3.0	<3.0	<3.0	<0.10	1.4	<3.0	<3.0
AA Df 103	05-24-90	<3.0	<3.0	<3.0	<3.0	<3.0	<0.10	<1.0	<3.0	<3.0

LOCAL IDENT-I-FIER	DATE	1,1-Di-chloro-ethyl-ene, 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)	1,2-Dibromo ethane, water, whole, total (ug/L)	1,2-Di-chloro-benzene total (ug/L)	1,2-Di-chloro-ethane, total (ug/L)	1,2-Di-chloro-propane total (ug/L)	1,2-Transdi chloro-ethene, total (ug/L)
AA Ad 104	12-26-89	--	--	--	--	--	--	--	--	--
	07-19-90	--	--	--	--	--	--	--	--	--
AA Cg 25	05-24-90	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
AA Df 103	05-24-90	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0

LOCAL IDENT-I-FIER	DATE	1,3-Di-chloro-propene total (ug/L)	1,3-Di-chloro-benzene total (ug/L)	1,4-Di-chloro-benzene total (ug/L)	2-Chloro-ethyl-vinyl-ether, total (ug/L)	PCB, dis-solved (ug/L)	Ala-chlor, total recover (ug/L)	Aldrin, dis-solved (ug/L)	Ame-tryne, total	Atra-zine, total (ug/L)
AA Ad 104	12-26-89	--	--	--	--	--	--	--	--	--
	07-19-90	--	--	--	--	--	--	--	--	--
AA Cg 25	05-24-90	<3.0	<3.0	<3.0	<3.0	<0.1	<0.10	<0.01	<0.10	<0.10
AA Df 103	05-24-90	<3.0	<3.0	<3.0	<3.0	<0.1	<0.10	<0.01	<0.10	<0.10

LOCAL IDENT-I-FIER	DATE	Chlor-dane, dis-solved (ug/L)	Cyan-azine, total (ug/L)	DDD, dis-solved (ug/L)	DDE, dis-solved (ug/L)	DDT, dis-solved (ug/L)	Di-azinon, dis-solved (ug/L)	Di-eldrin, dis-solved (ug/L)	Endo-sulfan, dissolv (ug/L)	Endrin, dis-solved (ug/L)
AA Ad 104	12-26-89	--	--	--	--	--	--	--	--	--
	07-19-90	--	--	--	--	--	--	--	--	--
AA Cg 25	05-24-90	<0.1	<0.10	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
AA Df 103	05-24-90	<0.1	<0.10	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

ANNE ARUNDEL COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	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)	Methyl parathion, dissolved (ug/L)	Methyltrithion dissolv (ug/L)
AA Cg 25	05-24-90	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
AA Df 103	05-24-90	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

LOCAL IDENTIFIER	DATE	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)	Propazine, total (ug/L)
AA Cg 25	05-24-90	<0.1	<0.1	<0.01	<0.01	<0.10	<0.1	<0.1	<0.10
AA Df 103	05-24-90	<0.1	<0.1	<0.01	<0.01	<0.10	<0.1	<0.1	<0.10

LOCAL IDENTIFIER	DATE	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)
AA Cg 25	05-24-90	<1.0	<0.01	<0.01	<0.01	<0.01	<0.01	<0.10	<0.1
AA Df 103	05-24-90	<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

BALTIMORE COUNTY, MARYLAND

LOCAL IDENTIFIER	DATE	TIME	STATION NUMBER	GEOLOGIC UNIT	Sampling method, codes	Depth below land surface (water level) (ft)	Depth of well, total (ft)	Depth to top of sample interval (ft)	Depth to bottom of sample interval (ft)
BA Dc 444	10-12-89	1305	392931076410301	300CCKV	4040	39.41	300.00	88	300
	06-20-90	1146		300CCKV	4040	37.62	300.00	88	300

DATE	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)
10-12-89	390	160	7.5	259	7.66	12.0	32	14	1.7
06-20-90	390	145	8.8	261	7.85	12.5	32	15	1.6

DATE	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)
10-12-89	1.5	137	167	<1.0	3.3	0.10	9.1	--	0.300
06-20-90	1.5	137	166	1.3	4.8	0.20	9.1	147	0.300

DATE	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)
10-12-89	<0.01	<10	<10	180	6	<10	<1	10	0.4
06-20-90	<0.01	<10	<10	290	15	<10	<1	--	0.1

Geologic unit (aquifer): 300CCKV - Cockeysville Marble

Sampling method: 4040 - Submersible pump

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

CALVERT COUNTY, MARYLAND

LOCAL IDENTIFIER	DATE	TIME	STATION NUMBER	GEOLOGIC UNIT	Sampling method, codes	Depth below land surface (water level) (ft)	Depth of well, total (ft)	Depth to top of sample interval (ft)	Depth to bottom of sample interval (ft)
CA Fc 13	11-14-89	0823	382343076302901	122CSPK	4040	27.38	34.00	29	34
	12-28-89	0835		122CSPK	4040	28.11	34.00	29	34
	01-30-90	0850		122CSPK	4040	27.52	34.00	29	34
	03-06-90	0835		122CSPK	4040	27.02	34.00	29	34
	04-05-90	0835		122CSPK	4040	27.17	34.00	29	34
	05-03-90	0840		122CSPK	4040	27.15	34.00	29	34
	06-06-90	0845		122CSPK	4040	24.93	34.00	29	34
	07-02-90	0827		122CSPK	4040	24.38	34.00	29	34
	07-02-90	0830		122CSPK	4040	24.38	34.00	29	34
	08-01-90	0840		122CSPK	4040	25.04	34.00	29	34
	09-05-90	1325		122CSPK	4040	25.96	34.00	29	34

DATE	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)
11-14-89	47.4	6	1.0	608	7.14	15.5	7.5	--	--
12-28-89	47.4	8	1.0	587	7.32	14.0	6.6	--	--
01-30-90	47.4	18	0.4	616	7.31	14.0	5.2	--	--
03-06-90	47.4	9	0.8	533	7.13	16.5	5.7	--	--
04-05-90	47.4	10	1	621	7.11	14.5	6.5	--	--
05-03-90	47.4	10	0.9	622	7.25	15.0	6.1	--	--
06-06-90	47.4	12	0.9	604	7.10	15.5	6.3	--	--
07-02-90	47.4	12	0.9	571	7.11	15.5	5.2	--	--
07-02-90	47.4	15	0.9	531	7.05	16.5	--	94	8.3
08-01-90	47.4	10	0.9	557	7.12	15.5	6.8	--	--
09-05-90	47.4	10	1.0	580	7.09	15.5	6.4	--	--

DATE	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)	Silica, dissolved (mg/L as SiO2)
11-14-89	--	--	--	--	--	--	--	--
12-28-89	--	--	--	--	--	--	--	--
01-30-90	--	--	--	--	--	--	--	--
03-06-90	--	--	--	--	--	--	--	--
04-05-90	--	--	--	--	--	--	--	--
05-03-90	--	--	--	--	--	--	--	--
06-06-90	--	--	--	--	--	--	--	--
07-02-90	--	--	--	--	--	--	--	--
07-02-90	8.7	4.0	237	289	12	14	<0.10	19
08-01-90	--	--	--	--	--	--	--	--
09-05-90	--	--	--	--	--	--	--	--

Geologic Unit (aquifer): 122CSPK - Chesapeake Group

Sampling method: 4040 - Submersible pump

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

CALVERT COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	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)	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)
CA Fc 13	11-14-89	--	--	<0.010	--	8.20	0.010	<0.20	--
	12-28-89	--	--	<0.010	--	8.00	0.030	<0.20	--
	01-30-90	--	--	--	--	--	--	--	--
	03-06-90	--	8.19	0.010	--	8.20	0.010	0.70	--
	04-05-90	--	--	<0.010	--	8.30	<0.010	0.60	--
	05-03-90	--	--	<0.010	--	7.90	0.010	0.20	--
	06-06-90	--	--	<0.010	--	8.10	<0.010	1.1	--
	07-02-90	--	7.78	0.020	--	7.80	<0.010	0.60	--
	07-02-90	302	--	--	7.50	--	--	--	0.130
	08-01-90	--	--	<0.010	--	7.80	<0.010	0.60	--
	09-05-90	--	--	<0.010	--	7.60	<0.010	0.60	--

DATE	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)
11-14-89	--	--	--	--	--	--	--	--
12-28-89	--	--	--	--	--	--	--	--
01-30-90	--	--	--	--	--	--	--	--
03-06-90	--	--	--	--	--	--	--	--
04-05-90	--	--	--	--	--	--	--	--
05-03-90	--	--	--	--	--	--	--	--
06-06-90	--	--	--	--	--	--	--	--
07-02-90	--	--	--	--	--	--	--	--
07-02-90	20	20	<10	6	<10	2	<10	0.4
08-01-90	--	--	--	--	--	--	--	--
09-05-90	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

CALVERT COUNTY, MARYLAND

LOCAL IDENTIFIER	DATE	TIME	STATION NUMBER	GEOLOGIC UNIT	Sampling method, codes	Depth below land surface (water level) (ft)	Depth of well, total (ft)	Depth to top of sample interval (ft)	Depth to bottom of sample interval (ft)
CA Fc 14	11-14-89	0855	382343076302902	111LLND	4040	27.60	30.00	25	30
	01-30-90	0915		111LLND	4040	28.45	30.00	25	30
	03-06-90	0855		111LLND	4040	27.62	30.00	25	30
	04-05-90	0900		111LLND	4040	27.38	30.00	25	30
	05-03-90	0900		111LLND	4040	27.36	30.00	25	30
	06-06-90	0855		111LLND	4040	25.16	30.00	25	30
	07-02-90	0810		111LLND	4040	24.58	30.00	25	30
	08-01-90	0825		111LLND	4040	25.24	30.00	25	30
	09-05-90	1310		111LLND	4040	26.14	30.00	25	30
CA Fc 15	11-14-89	0950	382340076303001	122CSPK	4040	15.46	36.00	31	36
	12-28-89	0930		122CSPK	4040	16.00	36.00	31	36
	01-30-90	0950		122CSPK	4040	15.11	36.00	31	36
	03-06-90	0945		122CSPK	4040	15.00	36.00	31	36
	04-05-90	0950		122CSPK	4040	14.86	36.00	31	36
	05-03-90	0930		122CSPK	4040	15.05	36.00	31	36
	06-06-90	1010		122CSPK	4040	13.36	36.00	31	36
	07-02-90	0940		122CSPK	4040	13.40	36.00	31	36
	08-01-90	0945		122CSPK	4040	14.04	36.00	31	36
	09-05-90	1240		122CSPK	4040	14.71	36.00	31	36
CA Fc 16	11-14-89	0925	382340076303002	122CSPK	4040	15.77	23.00	18	23
	12-28-89	0945		122CSPK	4040	16.33	23.00	18	23
	01-30-90	0935		122CSPK	4040	15.39	23.00	18	23
	03-06-90	0915		122CSPK	4040	15.30	23.00	18	23
	04-05-90	0920		122CSPK	4040	15.11	23.00	18	23
	05-03-90	0945		122CSPK	4040	15.28	23.00	18	23
	06-06-90	0940		122CSPK	4040	13.70	23.00	18	23
	07-02-90	0920		122CSPK	4040	13.75	23.00	18	23
	08-01-90	0915		122CSPK	4040	14.39	23.00	18	23
	09-05-90	1210		122CSPK	4040	15.07	23.00	18	23
CA Fc 17	11-21-89	0955	382343076303801	122CSPK	4040	13.10	32.00	27	32
	12-29-89	0940		122CSPK	4040	13.34	32.00	27	32
	01-31-90	0950		122CSPK	4040	12.22	32.00	27	32
	03-07-90	0955		122CSPK	4040	12.32	32.00	27	32
	04-06-90	0940		122CSPK	4040	12.05	32.00	27	32
	05-04-90	0935		122CSPK	4040	12.22	32.00	27	32
	06-07-90	0950		122CSPK	4040	11.04	32.00	27	32
	07-03-90	0955		122CSPK	4040	11.20	32.00	27	32
	08-01-90	1210		122CSPK	4040	11.85	32.00	27	32
	09-04-90	1245		122CSPK	4040	12.41	32.00	27	32
CA Fc 18	11-14-89	1120	382340076303801	122CSPK	4040	7.54	23.00	18	23
	12-28-89	1100		122CSPK	4040	7.94	23.00	18	23
	01-30-90	1055		122CSPK	4040	6.66	23.00	18	23
	03-06-90	1055		122CSPK	4040	6.90	23.00	18	23
	04-05-90	1115		122CSPK	4040	6.33	23.00	18	23
	05-03-90	1105		122CSPK	4040	6.84	23.00	18	23
	06-06-90	1125		122CSPK	4040	5.57	23.00	18	23
	07-02-90	1110		122CSPK	4040	5.74	23.00	18	23
	08-01-90	1140		122CSPK	4040	6.41	23.00	18	23
	09-04-90	1110		122CSPK	4040	6.88	23.00	18	23
CA Fc 19	11-14-89	1040	382337076303701	122CSPK	4040	17.19	33.00	28	33
	12-28-89	1030		122CSPK	4040	17.58	33.00	28	33
	01-30-90	1020		122CSPK	4040	17.19	33.00	28	33
	03-06-90	1025		122CSPK	4040	16.67	33.00	28	33
	04-05-90	1030		122CSPK	4040	16.91	33.00	28	33
	05-03-90	1025		122CSPK	4040	16.76	33.00	28	33
	06-06-90	1045		122CSPK	4040	15.67	33.00	28	33
	07-02-90	1025		122CSPK	4040	15.42	33.00	28	33
	08-01-90	1030		122CSPK	4040	15.99	33.00	28	33
	09-04-90	1145		122CSPK	4040	16.45	33.00	28	33
CA Fc 20	11-21-89	0925	382337076303702	122CSPK	4040	12.57	27.00	22	27
	12-29-89	0910		122CSPK	4040	12.90	27.00	22	27
	01-31-90	0915		122CSPK	4040	11.90	27.00	22	27
	03-07-90	0920		122CSPK	4040	11.88	27.00	22	27
	04-06-90	0915		122CSPK	4040	11.62	27.00	22	27
	05-04-90	0910		122CSPK	4040	11.88	27.00	22	27
	06-07-90	0920		122CSPK	4040	10.48	27.00	22	27
	07-03-90	0920		122CSPK	4040	10.66	27.00	22	27
	08-01-90	1100		122CSPK	4040	11.25	27.00	22	27
	09-04-90	1215		122CSPK	4040	11.74	27.00	22	27

Geologic Unit (aquifer): 111LLND - Lowland Deposits
122CSPK - Chesapeake Group

Sampling method: 4040 -Submersible pump

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

CALVERT COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	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)
CA Fc 14	11-14-89	47.6	4	1.0	621	7.23	18.0	6.1
	01-30-90	47.6	6	0.5	560	7.34	12.5	6.5
	03-06-90	47.6	4	0.8	570	7.12	14.0	8.5
	04-05-90	47.6	5	1.0	592	7.13	14.5	8.4
	05-03-90	47.6	3	0.9	578	7.21	15.0	7.0
	06-06-90	47.6	6	0.9	589	7.14	15.5	8.0
	07-02-90	47.6	8	1.0	566	7.06	16.0	5.7
	08-01-90	47.6	5	0.8	559	7.06	16.5	9.5
	09-05-90	47.6	5	1.0	514	6.87	17.5	7.4
CA Fc 15	11-14-89	30.6	20	1.0	531	7.39	16.0	6.8
	12-28-89	30.6	20	1.0	530	7.54	14.5	7.0
	01-30-90	30.6	15	0.7	531	7.57	14.0	4.9
	03-06-90	30.6	25	0.9	526	7.46	14.0	5.0
	04-05-90	30.6	25	1.0	534	7.51	13.0	7.8
	05-03-90	30.6	20	1.0	527	7.56	13.5	6.8
	06-06-90	30.6	25	1.0	511	7.33	14.0	7.0
	07-02-90	30.6	15	1.0	511	7.29	14.5	5.2
	08-01-90	30.6	25	1.0	512	7.38	14.5	7.2
	09-05-90	30.6	25	1.0	512	7.24	16.0	6.9
CA Fc 16	11-14-89	30.8	10	1.0	553	7.34	16.0	7.4
	12-28-89	30.8	10	1.0	549	7.55	14.5	7.3
	01-30-90	30.8	10	0.7	556	7.53	13.5	5.4
	03-06-90	30.8	10	0.9	532	7.39	13.5	5.6
	04-05-90	30.8	15	1.0	542	7.38	13.0	7.2
	05-03-90	30.8	10	1.0	535	7.64	13.5	7.6
	06-06-90	30.8	10	1.0	538	7.31	14.0	7.2
	07-02-90	30.8	11	1.0	534	7.28	14.0	5.2
	08-01-90	30.8	10	1.0	526	7.35	14.5	8.1
	09-05-90	30.8	10	1.0	526	7.21	16.0	7.0
CA Fc 17	11-21-89	22.6	20	1.0	586	7.31	14.0	6.3
	12-29-89	22.6	20	1.0	576	7.41	14.5	6.0
	01-31-90	22.6	25	0.7	580	7.51	14.5	6.2
	03-07-90	22.6	25	0.9	574	7.38	13.0	6.3
	04-06-90	22.6	20	1.0	570	7.42	13.5	5.3
	05-04-90	22.6	20	1.0	568	--	13.5	7.1
	06-07-90	22.6	25	1.0	565	7.08	14.5	6.2
	07-03-90	22.6	25	0.9	556	6.32	14.0	6.4
	08-01-90	22.6	20	1.0	563	7.26	15.5	6.5
	09-04-90	22.6	20	1.0	569	7.20	16.0	7.1
CA Fc 18	11-14-89	15.6	20	1.0	630	7.02	17.5	6.0
	12-28-89	15.6	16	1.0	606	7.37	15.5	7.3
	01-30-90	15.6	10	0.8	592	7.33	12.0	5.7
	03-06-90	15.6	16	1.0	552	7.24	12.5	6.1
	04-05-90	15.6	20	1.0	540	7.26	11.5	9.0
	05-03-90	15.6	20	1.0	554	7.63	13.0	7.6
	06-06-90	15.6	20	1.0	541	7.07	14.5	7.9
	07-02-90	15.6	20	1.0	542	7.08	15.0	5.5
	08-01-90	15.6	20	1.0	558	7.15	16.5	7.3
	09-04-90	15.6	25	1.0	491	7.09	19.5	7.8
CA Fc 19	11-14-89	25.5	20	1.0	567	7.22	16.0	5.8
	12-28-89	25.5	15	1.0	586	7.49	15.5	7.3
	01-30-90	25.5	10	0.7	537	7.45	14.0	2.6
	03-06-90	25.5	30	0.6	563	7.30	14.0	4.1
	04-05-90	25.5	20	1.0	568	7.33	13.5	5.9
	05-03-90	25.5	20	1.0	561	7.60	13.5	5.5
	06-06-90	25.5	20	1.0	551	7.13	14.0	5.6
	07-02-90	25.5	20	1.0	541	7.13	16.0	4.5
	08-01-90	25.5	20	1.0	549	7.19	15.0	6.6
	09-04-90	25.5	20	1.0	568	7.14	15.0	6.9
CA Fc 20	11-21-89	20.6	15	1.0	531	7.30	13.5	7.0
	12-29-89	20.6	20	1.0	571	7.41	13.5	6.6
	01-31-90	20.6	20	0.7	586	7.75	14.5	6.9
	03-07-90	20.6	20	1.0	588	7.22	12.0	6.8
	04-06-90	20.6	20	1.0	574	7.27	13.0	5.8
	05-04-90	20.6	20	1.0	585	7.92	13.0	7.6
	06-07-90	20.6	20	1.0	574	6.96	13.5	7.6
	07-03-90	20.6	20	0.9	591	6.65	13.5	7.3
	08-01-90	20.6	20	1.0	589	7.14	15.0	7.6
	09-04-90	20.6	20	1.0	574	7.08	16.5	7.8

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

CALVERT COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	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 + organics DIS. (mg/L as N)
CA Fc 14	11-14-89	--	<0.010	7.80	0.010	0.70
	01-30-90	--	--	--	--	--
	03-06-90	8.07	0.030	8.10	0.010	2.3
	04-05-90	--	<0.010	8.20	<0.010	0.30
	05-03-90	--	<0.010	7.60	0.010	0.60
	06-06-90	--	<0.010	8.50	<0.010	0.60
	07-02-90	8.29	0.010	8.30	<0.010	0.30
	08-01-90	--	<0.010	8.10	<0.010	0.50
	09-05-90	--	<0.010	8.20	<0.010	0.70
CA Fc 15	11-14-89	--	<0.010	9.50	0.010	0.20
	12-28-89	--	<0.010	9.40	0.030	0.70
	01-30-90	--	--	--	--	--
	03-06-90	9.77	0.030	9.80	0.020	0.90
	04-05-90	--	<0.010	9.70	<0.010	0.60
	05-03-90	--	<0.010	9.40	<0.010	0.30
	06-06-90	--	<0.010	9.40	<0.010	1.1
	07-02-90	--	<0.010	10.0	<0.010	0.40
	08-01-90	--	<0.010	10.0	<0.010	0.20
	09-05-90	--	<0.010	9.80	<0.010	0.50
CA Fc 16	11-14-89	--	<0.010	9.70	0.010	<0.20
	12-28-89	--	<0.010	9.50	0.020	0.40
	01-30-90	--	--	--	--	--
	03-06-90	9.58	0.020	9.60	<0.010	0.40
	04-05-90	--	<0.010	9.80	<0.010	0.60
	05-03-90	--	<0.010	9.40	<0.010	0.40
	06-06-90	--	<0.010	9.40	<0.010	0.50
	07-02-90	--	<0.010	9.80	<0.010	0.30
	08-01-90	--	<0.010	10.0	<0.010	0.50
	09-05-90	--	<0.010	9.60	<0.010	0.60
CA Fc 17	11-21-89	--	<0.010	7.90	0.020	0.30
	12-29-89	--	<0.010	7.70	0.040	<0.20
	01-31-90	--	--	--	--	--
	03-07-90	8.17	0.030	8.20	<0.010	0.40
	04-06-90	--	<0.010	8.20	<0.010	0.50
	05-04-90	--	<0.010	8.00	0.010	<0.20
	06-07-90	--	<0.010	8.00	<0.010	0.50
	07-03-90	--	<0.010	8.00	<0.010	0.20
	08-01-90	--	<0.010	8.10	<0.010	0.80
	09-04-90	--	<0.010	8.10	<0.010	0.30
CA Fc 18	11-14-89	--	<0.010	7.60	0.020	0.50
	12-28-89	--	<0.010	7.70	0.050	<0.20
	01-30-90	--	--	--	--	--
	03-06-90	7.48	0.020	7.50	<0.010	0.30
	04-05-90	--	<0.010	7.80	<0.010	0.90
	05-03-90	--	<0.010	8.30	0.010	0.20
	06-06-90	--	<0.010	9.20	<0.010	0.90
	07-02-90	--	<0.010	11.0	<0.010	0.50
	08-01-90	--	<0.010	9.20	<0.010	0.60
	09-04-90	--	<0.010	8.20	<0.010	0.50
CA Fc 19	11-14-89	--	<0.010	6.80	0.010	0.30
	12-28-89	--	<0.010	6.50	0.030	<0.20
	01-30-90	--	--	--	--	--
	03-06-90	7.07	0.030	7.10	0.010	<0.20
	04-05-90	--	<0.010	9.90	<0.010	0.50
	05-03-90	--	<0.010	6.40	<0.010	<0.20
	06-06-90	--	<0.010	6.30	<0.010	0.60
	07-02-90	--	<0.010	7.00	0.010	0.30
	08-01-90	--	<0.010	7.20	<0.010	1.2
	09-04-90	--	<0.010	7.20	<0.010	0.70
CA Fc 20	11-21-89	--	<0.010	8.30	0.020	0.30
	12-29-89	--	<0.010	8.40	0.030	0.70
	01-31-90	--	--	--	--	--
	03-07-90	9.98	0.020	10.0	<0.010	0.60
	04-06-90	--	<0.010	9.20	<0.010	0.50
	05-04-90	--	<0.010	8.80	0.010	0.40
	06-07-90	--	<0.010	9.10	0.010	0.60
	07-03-90	--	<0.010	9.10	<0.010	0.20
	08-01-90	--	<0.010	9.30	<0.010	0.60
	09-04-90	--	<0.010	9.20	<0.010	0.60

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

CALVERT COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	TIME	STATION NUMBER	GEOLOGIC UNIT	SITE	Sampling method, codes	Depth below land surface (water level) (ft)	Depth of well, total (ft)
CA Fc 21	11-21-89	0830	382342076303401	122CSPK	GW	4040	17.67	33.00
	12-29-89	0805		122CSPK	GW	4040	18.14	33.00
	01-31-90	0810		122CSPK	GW	4040	17.20	33.00
	03-07-90	0815		122CSPK	GW	4040	17.10	33.00
	04-06-90	0815		122CSPK	GW	4040	16.99	33.00
	05-04-90	0810		122CSPK	GW	4040	17.15	33.00
	06-07-90	0820		122CSPK	GW	4040	15.52	33.00
	07-03-90	0810		122CSPK	GW	4040	15.51	33.00
	08-02-90	0800		122CSPK	GW	4040	16.09	33.00
CA Fc 22	11-21-89	0900	382340076303201	122CSPK	GW	4040	18.11	35.00
	12-29-89	0835		122CSPK	GW	4040	18.66	35.00
	01-31-90	0845		122CSPK	GW	4040	17.78	35.00
	03-07-90	0845		122CSPK	GW	4040	17.68	35.00
	04-06-90	0845		122CSPK	GW	4040	17.57	35.00
	05-04-90	0840		122CSPK	GW	4040	17.75	35.00
	06-07-90	0850		122CSPK	GW	4040	15.57	35.00
	07-03-90	0845		122CSPK	GW	4040	15.73	35.00
	08-02-90	0830		122CSPK	GW	4040	16.39	35.00
CA Fc 28	11-21-89	1030	382340076303401	111LLND	LYS	4030	--	3.56
	01-31-90	1055		111LLND	LYS	4030	--	3.56
	03-07-90	1035		111LLND	LYS	4030	--	3.56
	04-06-90	1010		111LLND	LYS	4030	--	3.56
	05-04-90	0955		111LLND	LYS	4030	--	3.56
	06-07-90	1010		111LLND	LYS	4030	--	3.56
	07-03-90	1015		111LLND	LYS	4030	--	3.56
	08-02-90	1000		111LLND	LYS	4030	--	3.56
	09-05-90	1130		111LLND	LYS	4030	--	3.56
CA Fc 29	11-21-89	1030	382340076303402	111LLND	LYS	4030	--	8.52
	01-31-90	1100		111LLND	LYS	4030	--	8.52
	03-07-90	1040		111LLND	LYS	4030	--	8.52
	04-06-90	1015		111LLND	LYS	4030	--	8.52
	05-04-90	1000		111LLND	LYS	4030	--	8.52
	06-07-90	1015		111LLND	LYS	4030	--	8.52
	07-03-90	1020		111LLND	LYS	4030	--	8.52
	08-02-90	1005		111LLND	LYS	4030	--	8.52
	09-05-90	1135		111LLND	LYS	4030	--	8.52
CA Fc 30	11-21-89	1030	382340076303403	111LLND	LYS	4030	--	13.70
	01-31-90	1105		111LLND	LYS	4030	--	13.70
	03-07-90	1050		111LLND	LYS	4030	--	13.70
	04-06-90	1025		111LLND	LYS	4030	--	13.70
	05-04-90	1010		111LLND	LYS	4030	--	13.70
	06-07-90	1025		111LLND	LYS	4030	--	13.70
	07-03-90	1025		111LLND	LYS	4030	--	13.70
	08-02-90	1010		111LLND	LYS	4030	--	13.70
	09-05-90	1140		111LLND	LYS	4030	--	13.70
CA Fc 31	11-21-89	1110	382340076303802	111LLND	LYS	4030	--	2.50
	01-31-90	1025		111LLND	LYS	4030	--	2.50
	03-07-90	1055		111LLND	LYS	4030	--	2.50
	04-06-90	1030		111LLND	LYS	4030	--	2.50
	05-04-90	0900		111LLND	LYS	4030	--	2.50
	06-07-90	0940		111LLND	LYS	4030	--	2.50
	07-03-90	0940		111LLND	LYS	4030	--	2.50
CA Fc 32	11-21-89	1110	382340076303803	111LLND	LYS	4030	--	5.00
	01-31-90	1030		111LLND	LYS	4030	--	5.00
	03-07-90	1100		111LLND	LYS	4030	--	5.00
	04-06-90	1040		111LLND	LYS	4030	--	5.00
	05-04-90	0905		111LLND	LYS	4030	--	5.00
	06-07-90	0945		111LLND	LYS	4030	--	5.00
	07-03-90	0945		111LLND	LYS	4030	--	5.00
	08-02-90	1025		111LLND	LYS	4030	--	5.00
	09-05-90	0950		111LLND	LYS	4030	--	5.00
CA Fc 33	11-14-89	1330	382339076304201	111LLND	GW	4040	7.94	13.70
	12-28-89	1245		111LLND	GW	4030	8.26	13.70
	01-30-90	1200		111LLND	GW	4030	7.26	13.70
	03-07-90	1145		111LLND	GW	4030	7.82	13.70
	04-05-90	1200		111LLND	GW	4030	7.01	13.70
	05-03-90	1120		111LLND	GW	4030	7.58	13.70
	06-06-90	1200		111LLND	GW	4030	6.77	13.70
	07-02-90	1215		111LLND	GW	4030	6.64	13.70
	08-02-90	0900		111LLND	GW	4030	7.26	13.70
	09-05-90	1015		111LLND	GW	4030	7.58	13.70

Geologic unit (aquifer): 112UPLD - Upland Deposits
122CSPK - Chesapeake Group

Sampling method: 4030 - Suction pump
4040 - Submersible pump

Site type: GW - Groundwater
LYS - Lysimeter

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

CALVERT COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	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 21	11-21-89	28	33	35.5	15	1.0	429	7.26
	12-29-89	28	33	35.5	15	1.0	447	7.37
	01-31-90	28	33	35.5	20	0.6	448	7.43
	03-07-90	28	33	35.5	15	1.0	441	7.27
	04-06-90	28	33	35.5	20	1.0	434	7.29
	05-04-90	28	33	35.5	20	1.0	440	7.66
	06-07-90	28	33	35.5	20	1.0	443	7.15
	07-03-90	28	33	35.5	20	0.9	426	7.22
	08-02-90	28	33	35.5	20	0.9	427	7.22
CA Fc 22	11-21-89	30	35	36.5	15	1.0	561	7.31
	12-29-89	30	35	36.5	20	1.0	569	7.43
	01-31-90	30	35	36.5	25	0.6	551	7.44
	03-07-90	30	35	36.5	20	1.0	549	7.33
	04-06-90	30	35	36.5	20	1.0	543	7.35
	05-04-90	30	35	36.5	20	1.0	558	7.86
	06-07-90	30	35	36.5	20	1.0	516	7.07
	07-03-90	30	35	36.5	25	0.9	506	7.18
	08-02-90	30	35	36.5	20	1.0	492	7.25
CA Fc 28	11-21-89	3.6	3.6	31.4	--	--	--	--
	01-31-90	3.6	3.6	31.4	--	--	213	--
	03-07-90	3.6	3.6	31.4	--	--	217	--
	04-06-90	3.6	3.6	31.4	--	--	224	--
	05-04-90	3.6	3.6	31.4	--	--	203	--
	06-07-90	3.6	3.6	31.4	--	--	192	--
	07-03-90	3.6	3.6	31.4	--	--	184	--
	08-02-90	3.6	3.6	31.4	--	--	198	--
	09-05-90	3.6	3.6	31.4	--	--	221	--
CA Fc 29	11-21-89	8.5	8.5	31.4	--	--	481	--
	01-31-90	8.5	8.5	31.4	--	--	578	--
	03-07-90	8.5	8.5	31.4	--	--	605	--
	04-06-90	8.5	8.5	31.4	--	--	682	--
	05-04-90	8.5	8.5	31.4	--	--	588	--
	06-07-90	8.5	8.5	31.4	--	--	557	--
	07-03-90	8.5	8.5	31.4	--	--	595	--
	08-02-90	8.5	8.5	31.4	--	--	471	--
	09-05-90	8.5	8.5	31.4	--	--	438	--
CA Fc 30	11-21-89	14	14	31.4	--	--	588	--
	01-31-90	14	14	31.4	--	--	512	--
	03-07-90	14	14	31.4	--	--	545	--
	04-06-90	14	14	31.4	--	--	528	--
	05-04-90	14	14	31.4	--	--	567	--
	06-07-90	14	14	31.4	--	--	446	--
	07-03-90	14	14	31.4	--	--	512	--
	08-02-90	14	14	31.4	--	--	587	--
	09-05-90	14	14	31.4	--	--	611	--
CA Fc 31	11-21-89	2.5	2.5	15.5	--	--	2120	--
	01-31-90	2.5	2.5	15.5	--	--	1780	--
	03-07-90	2.5	2.5	15.5	--	--	2150	--
	04-06-90	2.5	2.5	15.5	--	--	1400	--
	05-04-90	2.5	2.5	15.5	--	--	1390	--
	06-07-90	2.5	2.5	15.5	--	--	846	--
	07-03-90	2.5	2.5	15.5	--	--	778	--
CA Fc 32	11-21-89	5.0	5.0	15.5	--	--	1120	--
	01-31-90	5.0	5.0	15.5	--	--	1300	--
	03-07-90	5.0	5.0	15.5	--	--	1290	--
	04-06-90	5.0	5.0	15.5	--	--	1030	--
	05-04-90	5.0	5.0	15.5	--	--	799	--
	06-07-90	5.0	5.0	15.5	--	--	517	--
	07-03-90	5.0	5.0	15.5	--	--	445	--
	08-02-90	5.0	5.0	15.5	--	--	382	--
	09-05-90	5.0	5.0	15.5	--	--	379	--
CA Fc 33	11-14-89	12	14	12.2	1	0.2	713	7.15
	12-28-89	12	14	12.2	--	--	722	7.40
	01-30-90	12	14	12.2	--	--	717	7.66
	03-07-90	12	14	12.2	--	--	810	--
	04-05-90	12	14	12.2	--	--	696	7.52
	05-03-90	12	14	12.2	--	--	736	--
	06-06-90	12	14	12.2	--	--	672	7.24
	07-02-90	12	14	12.2	--	--	668	7.08
	08-02-90	12	14	12.2	--	--	624	7.28
	09-05-90	12	14	12.2	--	--	654	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

CALVERT COUNTY, MARYLAND--Continued

LOCAL IDENT-I-FIER	DATE	Temper-ature, water (deg C)	Oxygen, 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 dis-solved (mg/L as N)	Nitro-gen, am-monia + organic DIS. (mg/L as N)
CA Fc 21	11-21-89	13.5	6.7	--	<0.010	8.80	<0.010	0.60
	12-29-89	13.5	6.1	--	<0.010	8.90	0.020	0.50
	01-31-90	14.5	6.0	--	--	--	--	--
	03-07-90	13.5	6.3	9.28	0.020	9.30	<0.010	0.40
	04-06-90	14.0	5.0	--	<0.010	9.40	<0.010	0.50
	05-04-90	13.5	6.5	--	<0.010	9.10	<0.010	0.60
	06-07-90	14.5	6.2	--	<0.010	9.40	<0.010	0.60
	07-03-90	15.5	6.9	--	<0.010	9.40	0.010	0.30
	08-02-90	14.0	7.8	--	<0.010	9.40	<0.010	0.40
CA Fc 22	11-21-89	13.5	6.6	--	<0.010	9.50	0.010	0.30
	12-29-89	14.0	5.9	--	<0.010	9.20	0.030	0.50
	01-31-90	15.5	6.1	--	--	--	--	--
	03-07-90	13.5	6.1	9.28	0.020	9.30	<0.010	0.30
	04-06-90	14.0	5.4	--	<0.010	9.70	<0.010	0.80
	05-04-90	13.5	6.8	--	<0.010	9.00	0.010	0.30
	06-07-90	14.0	6.5	--	<0.010	9.10	<0.010	0.60
	07-03-90	14.5	6.8	--	<0.010	9.30	<0.010	0.70
	08-02-90	14.5	6.5	--	<0.010	9.40	<0.010	1.0
CA Fc 28	11-21-89	--	--	--	<0.010	0.410	0.020	0.20
	01-31-90	--	--	--	--	--	--	--
	03-07-90	--	--	3.68	0.020	3.70	0.030	0.40
	04-06-90	--	--	--	<0.010	3.50	0.020	0.40
	05-04-90	--	--	--	<0.010	2.70	0.010	<0.20
	06-07-90	--	--	--	<0.010	1.30	0.020	0.30
	07-03-90	--	--	--	<0.010	0.100	<0.010	<0.20
	08-02-90	--	--	--	<0.010	<0.100	0.040	<0.20
	09-05-90	--	--	--	<0.010	0.100	0.020	0.30
CA Fc 29	11-21-89	--	--	--	<0.010	0.380	0.020	0.30
	01-31-90	--	--	--	--	--	--	--
	03-07-90	--	--	0.480	0.020	0.500	0.020	0.30
	04-06-90	--	--	--	<0.010	0.600	<0.010	0.40
	05-04-90	--	--	--	<0.010	<0.100	0.010	0.30
	06-07-90	--	--	--	<0.010	<0.100	<0.010	0.20
	07-03-90	--	--	--	<0.010	<0.100	<0.010	<0.20
	08-02-90	--	--	--	<0.010	<0.100	0.020	0.20
	09-05-90	--	--	--	<0.010	<0.100	0.010	<0.20
CA Fc 30	11-21-89	--	--	--	<0.010	4.90	0.040	0.40
	01-31-90	--	--	--	--	--	--	--
	03-07-90	--	--	3.29	0.010	3.30	0.060	0.50
	04-06-90	--	--	--	<0.010	1.10	<0.010	0.60
	05-04-90	--	--	--	<0.010	1.20	0.030	0.20
	06-07-90	--	--	--	<0.010	0.600	<0.010	0.30
	07-03-90	--	--	--	<0.010	2.20	<0.010	0.50
	08-02-90	--	--	--	<0.010	4.40	0.010	0.60
	09-05-90	--	--	--	<0.010	1.60	<0.010	0.50
CA Fc 31	11-21-89	--	--	--	<0.010	6.10	0.110	0.30
	01-31-90	--	--	--	--	--	--	--
	03-07-90	--	--	18.0	0.020	18.0	0.010	0.40
	04-06-90	--	--	--	<0.010	7.10	<0.010	1.1
	05-04-90	--	--	--	<0.010	0.100	0.020	0.40
	06-07-90	--	--	--	<0.010	0.100	0.010	1.3
	07-03-90	--	--	--	<0.010	<0.100	<0.010	0.40
CA Fc 32	11-21-89	--	--	4.87	0.030	4.90	0.060	0.20
	01-31-90	--	--	--	--	--	--	--
	03-07-90	--	--	11.0	0.020	11.0	0.030	0.40
	04-06-90	--	--	--	<0.010	13.0	<0.010	0.50
	05-04-90	--	--	--	<0.010	0.200	0.020	0.50
	06-07-90	--	--	--	<0.010	0.100	0.010	0.20
	07-03-90	--	--	--	<0.010	0.400	0.010	0.20
	08-02-90	--	--	--	<0.010	0.200	<0.010	0.30
	09-05-90	--	--	--	<0.010	0.600	<0.010	0.30
CA Fc 33	11-14-89	18.5	5.0	0.100	0.010	0.110	0.030	0.20
	12-28-89	14.5	3.1	0.270	0.040	0.310	0.070	<0.20
	01-30-90	9.0	1.2	--	--	--	--	--
	03-07-90	8.0	1.0	2.13	0.070	2.20	0.010	<0.20
	04-05-90	7.0	2.0	2.37	0.030	2.40	<0.010	<0.20
	05-03-90	7.5	2.2	3.43	0.070	3.50	0.010	0.30
	06-06-90	8.5	1.4	3.73	0.070	3.80	<0.010	0.90
	07-02-90	13.0	0.7	3.36	0.140	3.50	<0.010	0.60
	08-02-90	7.5	2.3	3.38	0.120	3.50	0.020	0.40
	09-05-90	--	--	2.37	0.230	2.60	<0.010	0.30

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

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) (ft)	Depth of well, total (ft)
CA Fc 34	11-14-89	1225	382339076304202	111LLND	4040	7.92	17.80
	12-28-89	1130		111LLND	4030	8.29	17.80
	01-30-90	1215		111LLND	4030	7.34	17.80
	03-07-90	1150		111LLND	4030	7.70	17.80
	04-05-90	1215		111LLND	4030	7.00	17.80
	05-03-90	1130		111LLND	4030	7.42	17.80
	06-06-90	1210		111LLND	4030	6.76	17.80
	07-02-90	1220		111LLND	4030	6.63	17.80
	08-02-90	0905		111LLND	4030	7.20	17.80
	09-05-90	1030		111LLND	4030	7.48	17.80

DATE	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)	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)
11-14-89	16	18	12.0	10	0.2	568	7.28
12-28-89	16	18	12.0	--	--	649	7.65
01-30-90	16	18	12.0	--	--	686	7.51
03-07-90	16	18	12.0	--	--	735	--
04-05-90	16	18	12.0	--	--	678	7.50
05-03-90	16	18	12.0	--	--	699	--
06-06-90	16	18	12.0	--	--	663	7.09
07-02-90	16	18	12.0	--	--	655	7.19
08-02-90	16	18	12.0	--	--	662	7.25
09-05-90	16	18	12.0	--	--	646	--

DATE	Temper-ature, water (deg C)	Oxygen, 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 dis-solved (mg/L as N)	Nitro-gen, am-monia + organic DIS. (mg/L as N)
11-14-89	18.5	6.0	--	<0.010	1.20	0.160	0.50
12-28-89	12.5	3.1	--	<0.010	3.60	0.060	<0.20
01-30-90	10.5	1.1	--	--	--	--	--
03-07-90	8.0	3.0	5.28	0.020	5.30	<0.010	<0.20
04-05-90	8.0	3.7	--	<0.010	5.60	<0.010	0.30
05-03-90	7.5	3.9	--	<0.010	5.60	0.010	0.20
06-06-90	8.0	4.2	--	<0.010	5.30	0.010	0.80
07-02-90	8.0	4.9	--	<0.010	5.20	<0.010	0.50
08-02-90	7.0	3.4	--	<0.010	5.20	0.040	0.50
09-05-90	--	--	--	<0.010	5.40	0.020	0.60

Geologic unit (aquifer): 111LLND - Lowland Deposits

Sampling method: 4030 - Suction pump
4040 - Submersible pump

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

CAROLINE COUNTY, MARYLAND

LOCAL IDENTIFIER	DATE	TIME	STATION NUMBER	GEOLOGIC UNIT	Sampling method, codes	Depth below land surface (water level) (ft)	Depth of well, total (ft)	Depth to top of sample interval (ft)	Depth to bottom of sample interval (ft)
CO Cc 100	10-05-89	1230	385632075522101	122FRDC	4040	--	75.00	64	75
CO Dd 65	10-19-89	1500	385219075472001	112PCPC	4040	9.73	19.00	16	19
CO Dd 66	10-25-89	1100	385228075472801	112PCPC	4040	6.05	15.00	12	15
CO Dd 74	10-19-89	1100	385208075460801	112PCPC	4040	1.03	15.00	12	15
CO Fd 36	11-15-89	1600	384157075454301	122FRDC	4040	32.10	140.00	138	140
CO Fd 38	12-14-89	1030	384233075460601	122FDBG	4040	--	301.00	245	301

LOCAL IDENTIFIER	DATE	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)
CO Cc 100	10-05-89	55.0	38	4.0	250	7.21	15.0	0.7	41	3.5
CO Dd 65	10-19-89	45.0	24	0.5	260	5.92	16.0	9.0	23	10
CO Dd 66	10-25-89	40.0	15	1.1	117	5.21	16.0	6.5	5.7	4.7
CO Dd 74	10-19-89	56.0	20	0.6	225	4.72	16.5	9.4	24	4.6
CO Fd 36	11-15-89	30.0	50	1.0	300	7.86	15.0	0.2	32	13
CO Fd 38	12-14-89	30.0	15	265	291	7.81	14.5	1.4	31	13

LOCAL IDENTIFIER	DATE	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)
CO Cc 100	10-05-89	5.2	2.0	99	120	10	5.1	0.10	0.020	45
CO Dd 65	10-19-89	2.9	1.4	7	9	16	19	<0.10	0.020	6.0
CO Dd 66	10-25-89	3.8	3.6	6	7	5.0	11	0.10	0.020	10
CO Dd 74	10-19-89	2.8	3.4	2	2	15	26	0.20	0.020	9.0
CO Fd 36	11-15-89	15	6.1	156	190	4.0	1.8	0.20	0.010	60
CO Fd 38	12-14-89	9.4	7.9	147	179	4.0	1.9	0.20	0.010	59

LOCAL IDENTIFIER	DATE	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)	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)
CO Cc 100	10-05-89	172	<0.010	<0.100	0.020	0.30	0.140	<10	<1	<1
CO Dd 65	10-19-89	154	<0.010	16.0	0.010	0.40	<0.010	10	<1	<1
CO Dd 66	10-25-89	72	<0.010	5.40	<0.010	0.20	<0.010	50	<1	<1
CO Dd 74	10-19-89	131	<0.010	9.90	0.040	0.40	<0.010	320	<1	<1
CO Fd 36	11-15-89	226	--	<0.100	--	--	--	<10	<1	<1
CO Fd 38	12-14-89	215	<0.010	<0.100	0.190	0.70	0.010	<10	<1	<1

Geologic unit (aquifer): 112PCPC - Pleistocene-Pliocene series
122FDBG - Federalsburg Aquifer
122FRDC - Frederica Aquifer

Sampling method: 4040 - Submersible pump

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

CAROLINE COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	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)	Iron, dissolved (ug/L as Fe)	Lead, dissolved (ug/L as Pb)
CO Cc 100	10-05-89	48	<0.5	30	<1	<5	<3	<10	19	20
CO Dd 65	10-19-89	32	<0.5	<10	3	<5	<3	<10	24	<10
CO Dd 66	10-25-89	300	<0.5	20	<1	<5	<3	<10	<5	<10
CO Dd 74	10-19-89	380	0.7	<10	3	<5	<3	<10	170	<10
CO Fd 36	11-15-89	62	<0.5	110	<1	<5	<3	<10	90	<10
CO Fd 38	12-14-89	<2	0.7	130	<1	<5	<3	<10	11	<10

LOCAL IDENTIFIER	DATE	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)
CO Cc 100	10-05-89	12	140	<0.1	10	<10	<1	<1.0	260	<6
CO Dd 65	10-19-89	<4	7	<0.1	<10	10	<1	<1.0	180	<6
CO Dd 66	10-25-89	<4	94	<0.1	<10	<10	<1	<1.0	74	<6
CO Dd 74	10-19-89	<4	62	<0.1	<10	10	<1	<1.0	89	<6
CO Fd 36	11-15-89	17	17	<0.1	<10	<10	<1	<1.0	460	<6
CO Fd 38	12-14-89	13	<1	<0.1	<10	<10	<1	<1.0	360	<6

LOCAL IDENTIFIER	DATE	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 (pCi/L)	Gross beta, dissolved (pCi/L as SR/Yt-90)	Tritium total (pCi/L)	Carbon, organic dissolved (mg/L as C)	Bromoform, total (ug/L)	Benzene total (ug/L)
CO Cc 100	10-05-89	5	1.1	2.3	170	1.8	4.7	0.6	<0.20	<0.20
CO Dd 65	10-19-89	<3	--	--	--	--	--	0.6	--	--
CO Dd 66	10-25-89	9	5.6	7.0	1300	5.6	--	0.8	--	--
CO Dd 74	10-19-89	4	2.5	5.5	--	4.4	--	1.3	--	--
CO Fd 36	11-15-89	<3	2.2	7.4	430	6.4	--	0.8	--	--
CO Fd 38	12-14-89	3	0.6	7.0	160	6.0	--	0.7	--	--

LOCAL IDENTIFIER	DATE	Carbon-tetrachloride, total (ug/L)	Chlorobenzene total (ug/L)	Chlorodibromomethane total (ug/L)	Chloroform, total (ug/L)	Chloroethane, total (ug/L)	Cis 1,3-dichloropropene total (ug/L)	Dibromomethane water, whole, recover (ug/L)	Dichlorobromomethane total (ug/L)	Dichlorodifluoromethane total (ug/L)
CO Cc 100	10-05-89	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
CO Dd 65	10-19-89	--	--	--	--	--	--	--	--	--
CO Dd 66	10-19-89	--	--	--	--	--	--	--	--	--
CO Dd 74	10-19-89	--	--	--	--	--	--	--	--	--
CO Fd 36	11-15-89	--	--	--	--	--	--	--	--	--
CO Fd 38	12-14-89	--	--	--	--	--	--	--	--	--

LOCAL IDENTIFIER	DATE	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)	Toluene total (ug/L)	Trans-1,3-dichloropropene total (ug/L)
CO Cc 100	10-05-89	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20
CO Dd 65	10-19-89	--	--	--	--	--	--	--	--	--
CO Dd 66	10-25-89	--	--	--	--	--	--	--	--	--
CO Dd 74	10-19-89	--	--	--	--	--	--	--	--	--
CO Fd 36	11-15-89	--	--	--	--	--	--	--	--	--
CO Fd 38	12-14-89	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

CAROLINE COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	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)	1,1,2,2 Tetrachloroethane, total (ug/L)
CO Cc 100	10-05-89	<0.2	<0.10	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20
CO Dd 65	10-19-89	--	--	--	--	--	--	--	--	--
CO Dd 66	10-25-89	--	--	--	--	--	--	--	--	--
CO Dd 74	10-19-89	--	--	--	--	--	--	--	--	--
CO Fd 36	11-15-89	--	<0.10	--	--	--	--	--	--	--
CO Fd 38	12-14-89	--	--	--	--	--	--	--	--	--

LOCAL IDENTIFIER	DATE	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)	123-trichloropropane water whole total (ug/L)	1,3-Dichlorobenzene total (ug/L)	1,4-Dichlorobenzene total (ug/L)	Gross Alpha, Dissolved (Ug/L As U-nat)	Gross Beta, Dissolved (Pci/L As Sr/Yt-90)	Gross Beta, Dissolved (Pci/L As Cs-137)
CO Cc 100	10-05-89	<0.2	<0.20	0.20	<0.20	<0.20	<0.20	<0.20	--	--	--
CO Dd 65	10-19-89	--	--	--	--	--	--	--	--	--	--
CO Dd 66	10-25-89	--	--	--	--	--	--	--	5.6	5.6	7.0
CO Dd 74	10-19-89	--	--	--	--	--	--	--	2.5	4.4	5.5
CO Fd 36	11-15-89	--	--	--	--	--	--	--	--	--	--
CO Fd 38	12-14-89	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

CARROLL COUNTY, MARYLAND

LOCAL IDENT-I-FIER	DATE	TIME	STATION	NUMBER	GEO-LOGIC UNIT	Sam-pling method, codes	Depth below land surface (water level) (ft)	Depth of well, total (ft)	Depth to top of sample inter-val (ft)	Depth to bot-tom of sample inter-val (ft)
CL Bd 175	11-28-89	1500	390020077005301		300SMCK	4040	9.50	241.00	55	241
CL Bf 184	06-19-90	1240	393754076512401		300PRTB	4030	0.37	340.00	50	340
	06-19-90	1310			300PRTB	4030	0.37	340.00	50	340

LOCAL IDENT-I-FIER	DATE	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)	Calcium dis-solved (mg/L as Ca)	Magne-sium, dis-solved (mg/L as Mg)	Sodium, dis-solved (mg/L as Na)
CL Bd 175	11-28-89	698	330	250	435	7.08	12.0	58	10	5.3
CL Bf 184	06-19-90	785	70	34	181	6.67	12.0	25	5.3	3.9
	06-19-90	785	--	--	--	--	--	--	--	--

LOCAL IDENT-I-FIER	DATE	Potas-sium, dis-solved (mg/L as K)	Alka-linity, wat wh tot fet field mg/L as CaCO3	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)	Silica, dis-solved (mg/L as SiO2)	Solids, residue at 180 deg. C dis-solved (mg/L)
CL Bd 175	11-28-89	1.5	73	--	--	25	47	0.10	11	286
CL Bf 184	06-19-90	0.5	37	35	43	21	16	<0.10	10	--
	06-19-90	--	--	--	--	--	--	--	--	--

LOCAL IDENT-I-FIER	DATE	Solids, sum of consti-tuents, dis-solved (mg/L)	Nitro-gen, NO2+NO3 total (mg/L as N)	Nitro-gen, NO2+NO3 dis-solved (mg/L as N)	Nitro-gen, ammonia + organic DIS. (mg/L as N)	Phos-phorous total (mg/L as P)	Phos-phorous ortho, dis-solved (mg/L as P)	Alum-inum, total recov-erable (ug/L as Al)	Boron, total recov-erable (ug/L as B)	Iron, total recov-erable (ug/L as Fe)
CL Bd 175	11-28-89	250	--	11.0	0.80	--	0.020	--	--	--
CL Bf 184	06-19-90	103	9.90	--	--	0.030	--	<10	<10	760
	06-19-90	--	--	--	--	--	--	--	--	--

LOCAL IDENT-I-FIER	DATE	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)	Carbon, organic dis-solved (mg/L as C)	Pcn, dissolv (ug/L)	Tri-flura-lin, total recover (ug/L)	PCB, dis-solved (ug/L)	Ala-chlor, total recover (ug/L)
CL Bd 175	11-28-89	5	--	3	--	0.5	--	--	--	--
CL Bf 184	06-19-90	18	10	5	<0.1	--	<0.10	<0.10	<0.1	<0.10
	06-19-90	--	--	--	--	--	--	<0.10	--	<0.10

Geologic unit (aquifer): 300PRTB - Prettyboy Schist
300SMCK - Sams Creek Metabasalt

Sampling method: 4030 - Suction pump
4040 - Submersible pump

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

CARROLL COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	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)
CL Bd 175	11-28-89	--	--	--	--	--	--	--	--
CL Bf 184	06-19-90	<0.01	<0.10	0.10	<0.1	<0.10	<0.01	<0.01	<0.01
	06-19-90	--	<0.10	<0.10	--	<0.10	--	--	--

LOCAL IDENTIFIER	DATE	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)
CL Bd 175	11-28-89	--	--	--	--	--	--	--	--
CL Bf 184	06-19-90	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	06-19-90	--	--	--	--	--	--	--	--

LOCAL IDENTIFIER	DATE	Malathion, dissolved (ug/L)	Methoxychlor, dissolv (ug/L)	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)
CL Bd 175	11-28-89	--	--	--	--	--	--	--	--
CL Bf 184	06-19-90	<0.01	<0.01	<0.01	<0.01	<0.1	<0.1	<0.01	<0.01
	06-19-90	--	--	--	--	<0.1	<0.1	--	--

LOCAL IDENTIFIER	DATE	Perthane, dissolv (ug/L)	Prometryne, total (ug/L)	Prometone, total (ug/L)	Propazine, total (ug/L)	Toxaphene, dissolved (ug/L)	Trithion, dissolv (ug/L)	Simazine, total (ug/L)	Simetryne, total (ug/L)
CL Bd 175	11-28-89	--	--	--	--	--	--	--	--
CL Bf 184	06-19-90	<0.10	<0.1	<0.1	<0.10	<1.0	<0.01	<0.10	<0.1
	06-19-90	--	<0.1	<0.1	<0.10	--	--	<0.10	<0.1

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

CECIL COUNTY, MARYLAND

LOCAL IDENTIFIER	DATE	TIME	STATION NUMBER	GEOLOGIC UNIT	SITE TYPE	Sampling method, codes	Elev. of land surface datum (ft above ngvd)	Flow rate, instantaneous (g/M)	Specific conductance (US/CM)	Ph (standard units)
CE Cc 40	05-07-90	1015	393459076045001	300LFPF	SPRING	4010	180	5.0	306	5.45
	05-07-90	1105		300LFPF		4010	180	5.0	--	--

DATE	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 it field mg/L as CaCO3	Sulfate dissolved (mg/L as SO4)	Chloride, dissolved (mg/L as Cl)
05-07-90	11.9	17	9.5	20	0.80	8	1.0	82
05-07-90	--	--	--	--	--	--	--	--

DATE	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)	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)
05-07-90	0.60	23	161	1.00	<0.010	<10	<10	50
05-07-90	--	--	--	--	--	--	--	--

DATE	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)	Pcn, dissolv (ug/L)	PCB, dissolved (ug/L)	Aldrin, dissolved (ug/L)	Chlordane, dissolved (ug/L)
05-07-90	9	<10	7	<0.1	<0.10	<0.1	<0.01	<0.1
05-07-90	--	--	--	--	<0.10	<0.1	<0.01	<0.1

DATE	DDD, dissolved (ug/L)	DDE, dissolved (ug/L)	DDT, dissolved (ug/L)	Diazinon, dissolved (ug/L)	Dieldrin, dissolved (ug/L)	Endosulfan, dissolv (ug/L)	Endrin, dissolved (ug/L)	Ethion, dissolv (ug/L)
05-07-90	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
05-07-90	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

DATE	Heptachlor, dissolved (ug/L)	Heptachlor epoxide dissolved (ug/L)	Lindane dissolved (ug/L)	Malathion, dissolved (ug/L)	Methoxychlor, dissolv (ug/L)	Methyl parathion, dissolved (ug/L)	Methyltrithion dissolv (ug/L)	Mirex, dissolved (ug/L)
05-07-90	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
05-07-90	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

DATE	Parathion, dissolved (ug/L)	Perthane, dissolv (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)
05-07-90	<0.01	<0.10	<1.0	<0.01	<0.01	<0.01	<0.01	<0.01
05-07-90	<0.01	<0.10	<1.0	<0.01	--	--	--	--

Geologic unit (aquifer): 300LFPF - Little Northeast Creek, Frenchtown, Principio Furnace Members, James Run Formation

Sampling method: 4010 - Thief sampler

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DORCHESTER COUNTY, MARYLAND

LOCAL IDENT-I-FIER	DATE	TIME	STATION NUMBER	GEO-LOGIC UNIT	Sam-pling method, codes	Depth below land surface (water level) (ft)	Depth of well, total (ft)	Depth to top of sample inter-val (ft)
DO Ce 21	05-15-90	1500	383346076030301	124PNPN	4040	57.77	370.00	370

Depth to bot-tom of sample inter-val (ft)	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)
415	10.0	190	10	727	7.22	19.0	0

Calcium dis-solved (mg/L as Ca)	Magne-sium, dis-solved (mg/L as Mg)	Sodium, dis-solved (mg/L as Na)	Potas-sium, dis-solved (mg/L as K)	Alka-linity, 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)
54	30	110	12	424	517	<1.0	50

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)	Nitro-gen, am-monia + organic DIS. (mg/L as N)	Phos-phorous ortho, dis-solved (mg/L as P)
0.20	0.080	72	<0.010	<0.100	0.470	0.80	0.020

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)
<10	<1	<1	4	<0.5	330	<1	<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)
<3	<10	130	<10	43	6	0.2	<10

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)	Radon 222, total (pCi/L)	Carbon, organic dis-solved (mg/L as C)
<10	<1	<1.0	640	<6	<3	550	4.2

Geologic unit (aquifer): 124PNPN - Piney Point Formation

Sampling method: 4040 - Submersible pump

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

HARFORD COUNTY, MARYLAND

LOCAL IDENTIFIER	DATE	TIME	STATION NUMBER	GEOLOGIC UNIT	SITE TYPE	Sampling method, codes	Depth below land surface (water level) (ft)	Depth of well, total (ft)	Depth to top of sample interval (ft)	Depth to bottom of sample interval (ft)
HA Aa 9	04-24-90	1115	394153076325701	300WSCK	SP	4010	--	--	--	--
HA Bc 30	04-24-90	1400	393757076240101	300WSCK	SP	4010	--	--	--	--
HA Ca 23	06-20-90	1538	393158076302601	300LCRV	GW	4040	5.26	200.00	24	200
HA Dd 92	07-10-90	1005	392721076150302	112TLBT	GW	4040	11.10	38.00	18	28
HA Ed 49	07-10-90	1200	392455076192103	112TLBT	GW	4040	12.89	28.00	13	23
	09-19-90	1300		112TLBT	GW	4040	13.13	28.00	13	23

LOCAL IDENTIFIER	DATE	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)
HA Aa 9	04-24-90	660	--	12	153	5.52	11.0	--	8.7	6.7
HA Bc 30	04-24-90	290	--	4.0	27	5.64	11.5	5.6	1.4	1.0
HA Ca 23	06-20-90	470	88	0.8	117	6.03	13.0	--	7.6	4.0
HA Dd 92	07-10-90	19.0	60	1.2	427	5.94	15.0	--	14	12
HA Ed 49	07-10-90	91.9	45	0.9	282	4.41	15.0	--	14	12
	09-19-90	91.9	69	1.0	155	4.39	17.0	--	--	--

LOCAL IDENTIFIER	DATE	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)	Silica, dissolved (mg/L as SiO2)	Solids, residue at 180 deg. C dissolved (mg/L)
HA Aa 9	04-24-90	5.5	1.6	4	--	2.5	12	<0.10	11	109
HA Bc 30	04-24-90	2.1	0.60	9	--	<1.0	3.2	<0.10	10	16
HA Ca 23	06-20-90	6.6	2.0	17	21	1.1	9.6	0.20	22	--
HA Dd 92	07-10-90	46	0.80	48	59	27	84	0.10	33	--
HA Ed 49	07-10-90	7.4	2.2	1	--	100	8.8	1.3	9.7	--
	09-19-90	--	--	1	1	--	--	--	--	--

LOCAL IDENTIFIER	DATE	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)	Aluminum, dissolved (ug/L as Al)	Arsenic, dissolved (ug/L as As)	Barium, dissolved (ug/L as BA)	Beryllium, dissolved (ug/L as BE)	Boron, total recoverable (ug/L as B)
HA Aa 9	04-24-90	52	11.0	0.010	40	--	--	--	--	<10
HA Bc 30	04-24-90	--	0.100	0.030	300	--	--	--	--	<10
HA Ca 23	06-20-90	63	6.30	0.020	30	--	--	--	--	<10
HA Dd 92	07-10-90	250	<0.100	0.010	<10	--	--	--	--	20
HA Ed 49	07-10-90	159	1.40	0.030	2700	--	--	--	--	<10
	09-19-90	--	--	--	--	990	<1	47	2	--

LOCAL IDENTIFIER	DATE	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)	Lithium dissolved (ug/L as Li)	Manganese, total recoverable (ug/L as Mn)
HA Aa 9	04-24-90	--	--	--	--	30	<3	--	--	10
HA Bc 30	04-24-90	--	--	--	--	200	16	--	--	<10
HA Ca 23	06-20-90	--	--	--	--	5700	30	--	--	30
HA Dd 92	07-10-90	--	--	--	--	4000	4300	--	--	170
HA Ed 49	07-10-90	--	--	--	--	60	44	--	--	2500
	09-19-90	1	<1	20	8	--	--	1	<4	--

Geologic unit (aquifer): 112TLBT - Talbot Formation
300LCRV - Loch Raven Schist
300WSCK - Wissahickon Formation

Sampling method: 4010 - Thief sample
4040 - Submersible pump

Site Type: GW - Groundwater SP - Spring

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

HARFORD COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	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)	Vanadium, dissolved (ug/L as V)	Zinc, total recoverable (ug/L as Zn)	Zinc, dissolved (ug/L as Zn)	Radon 222, total (pCi/L)
HA Aa 9	04-24-90	13	--	--	--	--	--	20	--	2800
HA Bc 30	04-24-90	3	--	--	--	--	--	<10	--	--
HA Ca 23	06-20-90	18	--	--	--	--	--	--	--	2700
HA Dd 92	07-10-90	200	--	--	--	--	--	--	--	140
HA Ed 49	07-10-90	2500	--	--	--	--	--	--	--	310
	09-19-90	970	<0.1	1	16	<1	<1	--	80	--

LOCAL IDENTIFIER	DATE	Carbon, organic total (mg/L as C)	Bromoform, total (ug/L)	Benzene total (ug/L)	Carbontetrachloride, total (ug/L)	Chlorobenzene total (ug/L)	Chlorodibromomethane total (ug/L)	Chloroform, total (ug/L)	Chloroethane, total (ug/L)	Cis 1,3-dichloropropene total (ug/L)
HA Aa 9	04-24-90	--	--	--	--	--	--	--	--	--
HA Bc 30	04-24-90	0.2	--	--	--	--	--	--	--	--
HA Ca 23	06-20-90	<0.1	--	--	--	--	--	--	--	--
HA Dd 92	07-10-90	1.5	--	--	--	--	--	--	--	--
HA Ed 49	07-10-90	1.4	--	--	--	--	--	--	--	--
	09-19-90	--	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0

LOCAL IDENTIFIER	DATE	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)
HA Aa 9	04-24-90	--	--	--	--	--	--	--	--	--
HA Bc 30	04-24-90	--	--	--	--	--	--	--	--	--
HA Ca 23	06-20-90	--	--	--	--	--	--	--	--	--
HA Dd 92	07-10-90	--	--	--	--	--	--	--	--	--
HA Ed 49	07-10-90	--	--	--	--	--	--	--	--	--
	09-19-90	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0

LOCAL IDENTIFIER	DATE	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)
HA Aa 9	04-24-90	--	--	--	<0.10	--	--	--	--	--
HA Bc 30	04-24-90	--	--	--	--	--	--	--	--	--
HA Ca 23	06-20-90	--	--	--	--	--	--	--	--	--
HA Dd 92	07-10-90	--	--	--	--	--	--	--	--	--
HA Ed 49	07-10-90	--	--	--	--	--	--	--	--	--
	09-19-90	<3.0	<3.0	<3.0	--	<1.0	<3.0	<3.0	<3.0	<3.0

LOCAL IDENTIFIER	DATE	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)	1,3-Dichloropropene total (ug/L)	1,3-Dichlorobenzene total (ug/L)
HA Aa 9	04-24-90	--	--	--	--	--	--	--	--	--
HA Bc 30	04-24-90	--	--	--	--	--	--	--	--	--
HA Ca 23	06-20-90	--	--	--	--	--	--	--	--	--
HA Dd 92	07-10-90	--	--	--	--	--	--	--	--	--
HA Ed 49	07-10-90	--	--	--	--	--	--	--	--	--
	09-19-90	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

HARFORD COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	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)	Metolachlor, water, whole, Tot.Rec (ug/L)	Metribuzin, water, whole, Tot.Rec (ug/L)	Prometryne, total (ug/L)
HA Aa 9	04-24-90	--	--	<0.10	<0.10	<0.10	<0.10	<0.1	<0.1	<0.1
HA Bc 30	04-24-90	--	--	--	--	--	--	--	--	--
HA Ca 23	06-20-90	--	--	--	--	--	--	--	--	--
HA Dd 92	07-10-90	--	--	--	--	--	--	--	--	--
HA Ed 49	07-10-90	--	--	--	--	--	--	--	--	--
	09-19-90	<3.0	<3.0	--	--	--	--	--	--	--

LOCAL IDENTIFIER	DATE	Prometone, total (ug/L)	Propazine, total (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)
HA Aa 9	04-24-90	<0.1	<0.10	0.11	0.01	<0.01	<0.01	<0.10	<0.1
HA Bc 30	04-24-90	--	--	--	--	--	--	--	--
HA Ca 23	06-20-90	--	--	--	--	--	--	--	--
HA Dd 92	07-10-90	--	--	--	--	--	--	--	--
HA Ed 49	07-10-90	--	--	--	--	--	--	--	--
	09-19-90	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

HOWARD COUNTY, MARYLAND

LOCAL IDENTIFIER	DATE	TIME	STATION NUMBER	GEOLOGIC UNIT	SITE TYPE	Sampling method, codes	Depth below land surface (water level) (ft)	Depth of well, total (ft)	Depth to top of sample interval (ft)	Depth to bottom of sample interval (ft)
HO Ac 92	05-15-90	1130	392003077040501	300MRGR	GW	4040	--	200.00	19	200
	05-15-90	1140		300MRGR	GW	4040	--	200.00	19	200
HO Ad 34	05-10-90	1015	392032076593801	300SKVL	GW	4040	--	120.00	31	120
HO Bb 59	11-01-89	1015	391850077093301	300GLLS	GW	4040	--	300.00	49	300
HO Bb 66	04-11-90	1315	391817077082401	300GLLS	GW	4040	--	105.00	19	105
HO Bb 73	04-26-90	1330	391956077084501	300GLLS	GW	4040	--	300.00	19	300
HO Bb 88	05-01-90	1130	391851077063301	300PLGV	GW	4040	--	240.00	48	240
HO Bb 155	05-08-90	1400	391627077064401	300MRGR	GW	4040	--	203.00	112	203
HO Bb 160	04-11-90	1000	391844077055501	300PLGV	GW	4040	--	64.00	22	64
HO Bc 25	05-31-90	1100	391910077034501	300MRGR	GW	4040	--	200.00	38	200
HO Bc 157	11-08-89	1100	391720077040101	300MRGR	GW	4040	--	100.00	40	100
HO Bc 172	11-29-89	1115	391645077041601	300MRGR	GW	4040	--	225.00	61	225
HO Bc 176	04-17-90	1245	391841077001601	300SKVL	SP	--	--	--	--	--
HO Bc 203	04-26-90	1030	391953077004701	300SKVL	GW	4040	--	300.00	42	300
	04-26-90	1040			GW	4040	--	300.00	42	300
HO Bc 264	10-25-89	1000	391534077021701	300SKVL	SP	4100	--	--	--	--
HO Bc 294	05-03-90	1400	391506077013401	300SKVL	GW	4040	--	140.00	30	140
HO Bc 304	01-09-90	1100	391647077005801	300SKVL	GW	4040	--	103.00	--	--
HO Bd 150	05-15-90	1430	391927076554101	300LCRV	GW	4040	--	400.00	61	400
HO Bd 401	11-20-89	1030	391543076564901	400BLMR	GW	4040	--	180.00	30	180
HO Bd 402	01-24-90	1415	391813076554701	300LCRV	GW	4040	--	145.00	36	145
HO Bd 403	02-06-90	1100	391813076555601	300LCRV	GW	4040	--	410.00	20	410
HO Bd 404	02-06-90	1400	391815076595401	300SKVL	GW	4040	--	165.00	43	165
HO Bd 405	02-27-90	1120	391626076572301	300LCRV	GW	4040	--	58.00	52	58
HO Bd 406	02-27-90	1340	391726076565802	300LCRV	GW	4040	--	85.00	46	85
HO Be 33	05-01-90	1500	391922076540801	300CCKV	GW	4040	--	350.00	20	350
HO Be 112	05-31-90	1430	391714076543801	300LCRV	GW	4040	--	453.00	62	453
HO Be 140	02-13-90	1400	391825076510202	300OELL	GW	4040	--	202.00	73	202
HO Bf 68	05-17-90	1300	391516076475801	300MWSG	GW	4040	--	300.00	80	300
HO Bf 81	05-29-90	1245	391621076474201	300OELL	GW	4040	--	200.00	45	200
HO Cc 12	04-24-90	1100	391338077013001	300SKVL	GW	4040	--	140.00	48	140
HO Cd 20	01-10-90	1325	391440076555401	300LCRV	GW	4040	5.56	96.00	30	96
HO Cd 21	01-10-90	1200	391442076555301	300LCRV	GW	4040	12.97	96.00	55	96
HO Cd 25	01-11-90	1045	391444076554701	300LCRV	GW	4040	39.65	97.00	60	97
HO Cd 26	01-11-90	1330	391442076554701	300LCRV	GW	4040	44.98	143.00	106	143
HO Cd 28	11-02-89	0945	391447076554702	300LCRV	GW	4040	25.16	46.00	41	46
	12-14-89	1205		300LCRV	GW	4040	25.99	46.00	41	46
	01-11-90	1235		300LCRV	GW	4040	26.42	46.00	41	46
	02-13-90	0950		300LCRV	GW	4040	26.65	46.00	41	46
	03-19-90	1240		300LCRV	GW	4040	26.38	46.00	41	46
	04-24-90	0910		300LCRV	GW	4040	26.27	46.00	41	46
	05-16-90	0855		300LCRV	GW	4040	26.23	46.00	41	46
	06-19-90	0830		300LCRV	GW	4040	26.02	46.00	41	46
	07-24-90	0837		300LCRV	GW	4040	26.43	46.00	41	46
	08-16-90	0835		300LCRV	GW	4040	26.82	46.00	41	46
HO Cd 29	11-02-89	1045	391442076554702	300LCRV	GW	4040	41.96	68.00	63	68
	12-14-89	1300		300LCRV	GW	4040	43.03	68.00	63	68
	01-18-90	0940		300LCRV	GW	4040	43.64	68.00	63	68
	02-13-90	1035		300LCRV	GW	4040	44.01	68.00	63	68
	03-19-90	1415		300LCRV	GW	4040	44.00	68.00	63	68
	04-24-90	0955		300LCRV	GW	4040	43.93	68.00	63	68
	05-16-90	0950		300LCRV	GW	4040	43.86	68.00	63	68
	06-19-90	0935		300LCRV	GW	4040	43.71	68.00	63	68
	07-24-90	0940		300LCRV	GW	4040	43.94	68.00	63	68
	08-16-90	0930		300LCRV	GW	4040	44.15	68.00	63	68
HO Cd 78	11-02-89	1145	391440076555402	300LCRV	GW	4040	8.04	19.00	9.0	19
	12-14-89	1352		300LCRV	GW	4040	8.41	19.00	9.0	19
	01-10-90	1350		300LCRV	GW	4040	8.05	19.00	9.0	19
	02-13-90	1110		300LCRV	GW	4040	7.78	19.00	9.0	19
	03-19-90	1505		300LCRV	GW	4040	8.19	19.00	9.0	19
	04-24-90	1130		300LCRV	GW	4040	8.08	19.00	9.0	19
	05-16-90	1115		300LCRV	GW	4040	7.97	19.00	9.0	19
	06-19-90	1110		300LCRV	GW	4040	8.10	19.00	9.0	19
	07-24-90	1140		300LCRV	GW	4040	8.60	19.00	9.0	19
	08-16-90	1035		300LCRV	GW	4040	8.63	19.00	9.0	19
	09-26-90	1145		300LCRV	GW	4040	9.05	19.00	9.0	19

Geologic unit (aquifer): 300GLLS - Gillis Formation
300LCRV - Loch Raven Schist
300MRGR - Morgan Run Formation
300MWSG - Mount Washington Amphibolite
300OELL - Oella Formation
300PLGV - Pleasant Grove Schist
300SKLV - Sykesville Formation
400BLMR - Baltimore Gneiss

Sampling method: 4040 - Submersible pump
4100 - Flowing well

Site type: GW - Groundwater
SP - Spring

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

HOWARD COUNTY, MARYLAND--Continued

	LOCAL IDENT-I-FIER	DATE	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)
HO Ac 92		05-15-90	550	75	6.0	132	6.42	13.5	7.8	8.7	6.8
		05-15-90	550	75	6.0	132	6.42	13.5	7.8	9.8	6.8
HO Ad 34		05-10-90	585	30	--	48	4.98	13.0	10.1	1.8	1.6
HO Bb 59		11-01-89	725	22	6.0	32	5.36	12.5	9.3	1.6	1.4
HO Bb 66		04-11-90	660	50	6.0	103	5.10	12.5	8.1	4.9	2.2
HO Bb 73		04-26-90	805	60	7.5	70	5.11	13.0	10.9	3.5	3.0
HO Bb 88		05-01-90	645	60	7.5	155	6.74	12.0	6.0	20	3.2
HO Bb 155		05-08-90	565	60	6.0	89	5.95	13.0	8.2	5.2	3.7
HO Bb 160		04-11-90	580	30	7.0	103	5.75	12.0	9.4	6.5	3.5
HO Bc 25		05-31-90	535	60	4.5	240	4.97	13.5	8.2	12	7.3
HO Bc 157		11-08-89	545	45	6.5	60	5.55	13.0	8.2	3.4	2.5
HO Bc 172		11-29-89	540	75	8.0	28	6.13	12.0	10.0	1.7	1.0
HO Bc 176		04-17-90	540	--	0.5	187	6.69	13.5	--	28	3.9
HO Bc 203		04-26-90	620	60	7.5	103	5.79	13.0	5.5	9.3	3.9
		04-26-90	620	60	7.5	103	5.79	13.0	5.5	9.3	3.9
HO Bc 264		10-25-89	450	--	3.5	334	5.42	12.0	9.0	16	8.5
HO Bc 294		05-03-90	565	30	6.0	33	4.92	12.5	10.1	1.6	1.1
HO Bc 304		01-09-90	565	60	6.5	153	5.81	13.0	9.0	8.1	5.8
HO Bd 150		05-15-90	625	110	3.0	85	5.79	14.5	8.2	6.5	2.4
HO Bd 401		11-20-89	515	50	6.0	109	5.51	12.5	6.6	8.3	3.0
HO Bd 402		01-24-90	550	60	6.0	--	5.66	12.5	2.3	31	11
HO Bd 403		02-06-90	560	80	3.5	92	4.69	13.0	8.3	52	29
HO Bd 404		02-06-90	540	75	7.5	82	5.57	12.0	9.2	4.7	2.8
HO Bd 405		02-27-90	590	30	10	16	5.36	12.5	9.4	8.6	5.0
HO Bd 406		02-27-90	545	30	7.5	35	5.57	12.5	7.7	18	12
HO Be 33		05-01-90	480	100	8.5	308	7.78	14.0	5.1	45	9.6
HO Be 112		05-31-90	465	120	5.0	167	7.96	14.5	0.8	17	4.2
HO Be 140		02-13-90	415	60	6.0	93	6.59	10.5	7.6	7.9	3.4
HO Bf 68		05-17-90	370	65	6.5	345	6.52	14.5	0.8	36	14
HO Bf 81		05-29-90	330	60	8.0	306	5.14	12.5	8.3	28	7.0
HO Cc 12		04-24-90	470	60	5.0	84	6.20	13.0	7.5	6.8	2.8
HO Cd 20		01-10-90	426	30	1.0	103	--	12.0	0.3	--	--
HO Cd 21		01-10-90	434	40	1.0	67	7.14	13.5	0.4	--	--
HO Cd 25		01-11-90	471	35	0.8	79	7.92	12.0	2.5	--	--
HO Cd 26		01-11-90	470	45	1.0	85	--	12.5	1.7	--	--
HO Cd 28		11-02-89	453	30	0.5	39	6.02	14.0	6.4	--	--
		12-14-89	453	25	0.6	42	5.77	--	7.9	--	--
		01-11-90	453	20	1.0	32	6.07	12.0	5.8	--	--
		02-13-90	453	15	1.0	30	5.78	12.5	7.5	--	--
		03-19-90	453	25	0.9	29	6.01	13.0	10.9	--	--
		04-24-90	453	25	0.9	28	5.77	15.0	6.4	--	--
		05-16-90	453	20	0.8	28	--	13.0	5.9	--	--
		06-19-90	453	20	0.7	29	5.63	14.5	7.3	--	--
		07-24-90	453	25	0.7	26	5.57	15.5	6.9	--	--
		08-16-90	453	25	0.8	30	5.86	14.5	6.8	--	--
HO Cd 29		11-02-89	470	30	0.7	23	5.87	13.0	8.9	--	--
		12-14-89	470	45	0.4	24	5.79	11.5	7.7	--	--
		01-18-90	470	45	0.5	23	5.98	13.0	6.6	--	--
		02-13-90	470	30	0.8	24	5.71	12.5	8.0	--	--
		03-19-90	470	25	0.9	23	5.94	12.5	9.8	--	--
		04-24-90	470	30	0.8	23	5.66	13.0	8.3	--	--
		05-16-90	470	40	0.6	23	--	12.0	5.7	--	--
		06-19-90	470	35	0.7	23	5.67	13.5	7.5	--	--
		07-24-90	470	30	0.7	23	5.68	13.5	8.1	--	--
		08-16-90	470	30	0.6	23	5.81	13.0	7.9	--	--
HO Cd 78		11-02-89	426	11	1.0	92	5.66	14.5	9.2	--	--
		12-14-89	426	12	1.0	94	5.62	13.0	8.5	--	--
		01-10-90	426	12	1.0	98	5.44	12.0	8.4	--	--
		02-13-90	426	10	1.0	97	5.54	11.0	8.8	--	--
		03-19-90	426	10	1.2	100	5.63	10.5	--	--	--
		04-24-90	426	10	1.1	97	5.61	11.0	8.6	--	--
		05-16-90	426	15	1.1	95	--	11.0	6.5	--	--
		06-19-90	426	15	1.0	94	5.17	13.0	8.2	--	--
		07-24-90	426	15	1.0	95	5.35	14.0	8.9	--	--
		08-16-90	426	15	1.0	98	5.54	14.0	8.0	--	--
		09-26-90	426	10	1.0	100	5.39	14.5	8.6	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

HOWARD COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	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	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)
HO Ac 92	05-15-90	6.3	0.60	--	39	<1.0	6.4	0.20	19	85
	05-15-90	5.9	0.40	--	39	7.8	5.9	<0.10	20	87
HO Ad 34	05-10-90	3.0	0.60	--	4	<1.0	3.8	<0.10	7.9	34
HO Bb 59	11-01-89	1.6	0.40	--	5	<1.0	2.8	<0.10	5.9	2
HO Bb 66	04-11-90	8.7	0.60	--	4	<1.0	11	0.10	9.3	82
HO Bb 73	04-26-90	3.3	0.80	--	--	<1.0	5.3	<0.10	7.3	49
HO Bb 88	05-01-90	4.4	0.30	--	55	3.2	11	<0.10	12	96
HO Bb 155	05-08-90	7.3	0.50	--	29	<1.0	4.0	0.10	27	66
HO Bb 160	04-11-90	5.8	0.80	--	10	2.3	7.8	0.20	14	87
HO Bc 25	05-31-90	11	1.9	--	8	<1.0	45	<0.10	11	186
HO Bc 157	11-08-89	3.1	0.60	--	11	<1.0	3.2	<0.10	9.2	30
HO Bc 172	11-29-89	2.3	0.40	--	12	<1.0	0.80	<0.10	13	31
HO Bc 176	04-17-90	5.2	1.1	--	80	2.5	5.7	<0.10	16	109
HO Bc 203	04-26-90	3.9	1.5	--	--	7.6	4.4	<0.10	16	64
	04-26-90	3.9	1.5	--	--	7.7	4.5	<0.10	16	63
HO Bc 264	10-25-89	28	1.6	--	11	5.0	76	<0.10	17	197
HO Bc 294	05-03-90	2.8	0.60	--	4	<1.0	3.0	<0.10	10	27
HO Bc 304	01-09-90	8.0	1.8	--	14	<1.0	22	<0.10	15	120
HO Bd 150	05-15-90	5.5	1.5	--	17	<1.0	4.3	<0.10	16	66
HO Bd 401	11-20-89	7.7	2.0	--	35	2.0	4.4	<0.10	28	79
HO Bd 402	01-24-90	11	3.9	--	55	3.0	61	<0.10	25	232
HO Bd 403	02-06-90	56	6.4	--	8	6.0	250	0.10	16	554
HO Bd 404	02-06-90	4.5	1.4	--	12	8.0	6.4	0.10	13	62
HO Bd 405	02-27-90	9.2	2.1	--	6	<1.0	23	0.30	13	121
HO Bd 406	02-27-90	16	4.1	--	10	10	67	<0.10	16	244
HO Be 33	05-01-90	2.5	3.9	--	133	17	7.9	<0.10	13	187
HO Be 112	05-31-90	5.4	2.8	--	71	8.8	1.0	<0.10	16	101
HO Be 140	02-13-90	5.9	1.7	--	43	<1.0	2.5	0.10	28	73
HO Bf 68	05-17-90	12	2.6	--	130	33	11	0.50	30	207
HO Bf 81	05-29-90	15	2.9	--	19	51	24	<0.10	25	212
HO Cc 12	04-24-90	5.5	1.1	21	21	<1.0	5.9	<0.10	21	55
HO Cd 20	01-10-90	--	--	--	--	--	--	--	--	--
HO Cd 21	01-10-90	--	--	--	--	--	--	--	--	--
HO Cd 25	01-11-90	--	--	--	--	--	--	--	--	--
HO Cd 26	01-11-90	--	--	--	--	--	--	--	--	--
HO Cd 28	11-02-89	--	--	--	--	--	--	--	--	--
	12-14-89	--	--	--	--	--	--	--	--	--
	01-11-90	--	--	--	--	--	--	--	--	--
	02-13-90	--	--	--	--	--	--	--	--	--
	03-19-90	--	--	--	--	--	--	--	--	--
	04-24-90	--	--	--	--	--	--	--	--	--
	05-16-90	--	--	--	--	--	--	--	--	--
	06-19-90	--	--	--	--	--	--	--	--	--
	07-24-90	--	--	--	--	--	--	--	--	--
	08-16-90	--	--	--	--	--	--	--	--	--
HO Cd 29	11-02-89	--	--	--	--	--	--	--	--	--
	12-14-89	--	--	--	--	--	--	--	--	--
	01-18-90	--	--	--	--	--	--	--	--	--
	02-13-90	--	--	--	--	--	--	--	--	--
	03-19-90	--	--	--	--	--	--	--	--	--
	04-24-90	--	--	--	--	--	--	--	--	--
	05-16-90	--	--	--	--	--	--	--	--	--
	06-19-90	--	--	--	--	--	--	--	--	--
	07-24-90	--	--	--	--	--	--	--	--	--
	08-16-90	--	--	--	--	--	--	--	--	--
HO Cd 78	11-02-89	--	--	--	--	--	--	--	--	--
	12-14-89	--	--	--	--	--	--	--	--	--
	01-10-90	--	--	--	--	--	--	--	--	--
	02-13-90	--	--	--	--	--	--	--	--	--
	03-19-90	--	--	--	--	--	--	--	--	--
	04-24-90	--	--	--	--	--	--	--	--	--
	05-16-90	--	--	--	--	--	--	--	--	--
	06-19-90	--	--	--	--	--	--	--	--	--
	07-24-90	--	--	--	--	--	--	--	--	--
	08-16-90	--	--	--	--	--	--	--	--	--
	09-26-90	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

HOWARD COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	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)	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 Ac 92	05-15-90	--	--	--	4.80	--	0.020	--	--	0.030
	05-15-90	79	--	--	4.60	--	<0.010	--	--	0.030
HO Ad 34	05-10-90	--	--	--	2.90	--	<0.010	--	--	<0.010
HO Bb 59	11-01-89	--	--	--	1.50	--	0.010	--	--	0.010
HO Bb 66	04-11-90	--	--	--	6.60	--	<0.010	--	--	<0.010
HO Bb 73	04-26-90	--	--	--	4.90	--	<0.010	--	--	0.040
HO Bb 88	05-01-90	87	--	--	1.20	--	<0.010	--	--	<0.010
HO Bb 155	05-08-90	--	--	--	2.60	--	<0.010	--	--	0.050
HO Bb 160	04-11-90	47	--	--	6.10	--	<0.010	--	--	0.030
HO Bc 25	05-31-90	--	--	--	8.00	--	<0.010	--	--	<0.010
HO Bc 157	11-08-89	--	--	--	3.90	--	<0.010	--	--	0.030
HO Bc 172	11-29-89	--	--	--	<0.100	--	<0.010	--	--	0.050
HO Bc 176	04-17-90	109	--	--	2.20	--	<0.010	--	--	<0.010
HO Bc 203	04-26-90	62	--	--	2.00	--	<0.010	--	--	0.040
	04-26-90	63	--	--	2.00	--	<0.010	--	--	0.040
HO Bc 264	10-25-89	158	--	--	6.20	--	0.020	--	--	0.030
HO Bc 294	05-03-90	--	--	--	1.60	--	<0.010	--	--	0.020
HO Bc 304	01-09-90	--	--	--	6.90	--	<0.010	--	--	0.010
HO Bd 150	05-15-90	--	--	--	4.60	--	0.020	--	--	0.040
HO Bd 401	11-20-89	77	--	--	2.50	--	0.020	--	--	0.090
HO Bd 402	01-24-90	179	--	--	2.20	--	0.030	--	--	0.010
HO Bd 403	02-06-90	421	--	--	1.20	--	<0.010	--	--	<0.010
HO Bd 404	02-06-90	45	--	--	2.90	--	<0.010	--	--	0.020
HO Bd 405	02-27-90	--	--	--	7.30	--	<0.010	--	--	0.020
HO Bd 406	02-27-90	150	--	--	9.40	--	0.010	--	--	0.030
HO Be 33	05-01-90	177	--	--	1.60	--	<0.010	--	--	<0.010
HO Be 112	05-31-90	100	--	--	0.400	--	<0.010	--	--	0.010
HO Be 140	02-13-90	--	--	--	--	--	--	--	--	--
HO Bf 68	05-17-90	215	--	--	0.600	--	<0.010	--	--	0.010
HO Bf 81	05-29-90	168	--	--	7.70	--	<0.010	--	--	0.040
HO Cc 12	04-24-90	--	--	--	2.80	--	<0.010	--	--	0.190
HO Cd 20	01-10-90	--	--	<0.010	--	<0.100	--	0.070	<0.20	--
HO Cd 21	01-10-90	--	--	<0.010	--	<0.100	--	0.020	<0.20	--
HO Cd 25	01-11-90	--	--	<0.010	--	<0.100	--	0.050	0.20	--
HO Cd 26	01-11-90	--	--	<0.010	--	<0.100	--	0.030	<0.20	--
HO Cd 28	11-02-89	--	--	<0.010	--	0.650	--	0.020	<0.20	--
	12-14-89	--	0.640	0.010	--	0.650	--	0.040	<0.20	--
	01-11-90	--	--	<0.010	--	0.620	--	<0.010	0.40	--
	02-13-90	--	--	<0.010	--	0.500	--	0.010	<0.20	--
	03-19-90	--	--	<0.010	--	0.600	--	0.010	0.20	--
	04-24-90	--	--	<0.010	--	0.600	--	<0.010	<0.20	--
	05-16-90	--	--	<0.010	--	0.600	--	<0.010	0.40	--
	06-19-90	--	0.680	0.020	--	0.700	--	0.050	1.0	--
	07-24-90	--	--	<0.010	--	0.600	--	0.030	<0.20	--
	08-16-90	--	--	<0.010	--	0.700	--	0.020	<0.20	--
HO Cd 29	11-02-89	--	--	<0.010	--	0.690	--	<0.010	0.50	--
	12-14-89	--	--	<0.010	--	0.690	--	<0.010	<0.20	--
	01-18-90	--	--	<0.010	--	0.650	--	<0.010	<0.20	--
	02-13-90	--	--	<0.010	--	0.600	--	<0.010	<0.20	--
	03-19-90	--	--	<0.010	--	0.700	--	<0.010	0.30	--
	04-24-90	--	--	<0.010	--	0.700	--	<0.010	<0.20	--
	05-16-90	--	--	<0.010	--	0.700	--	<0.010	<0.20	--
	06-19-90	--	--	<0.010	--	0.700	--	<0.010	<0.20	--
	07-24-90	--	--	<0.010	--	0.700	--	0.020	0.30	--
	08-16-90	--	--	<0.010	--	0.700	--	<0.010	<0.20	--
HO Cd 78	11-02-89	--	--	<0.010	--	3.50	--	<0.010	<0.20	--
	12-14-89	--	--	<0.010	--	3.70	--	<0.010	0.90	--
	01-10-90	--	--	<0.010	--	3.90	--	0.010	0.40	--
	02-13-90	--	--	<0.010	--	3.30	--	<0.010	<0.20	--
	03-19-90	--	--	<0.010	--	3.60	--	<0.010	0.60	--
	04-24-90	--	--	<0.010	--	3.70	--	<0.010	<0.20	--
	05-16-90	--	--	<0.010	--	3.60	--	<0.010	0.30	--
	06-19-90	--	--	<0.010	--	3.50	--	<0.010	<0.20	--
	07-24-90	--	--	<0.010	--	3.60	--	0.020	0.70	--
	08-16-90	--	--	<0.010	--	3.60	--	<0.010	0.20	--
	09-26-90	--	--	<0.010	--	3.50	--	<0.010	0.90	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

HOWARD COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	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)	Iron, dissolved (ug/L as Fe)
HO Ac 92	05-15-90	20	5	<0.5	<1	<5	<3	30	<3
	05-15-90	<10	4	<0.5	<1	<5	<3	30	5
HO Ad 34	05-10-90	<10	19	<0.5	2	<5	<3	10	6
HO Bb 59	11-01-89	10	11	<0.5	<1	<5	<3	40	8
HO Bb 66	04-11-90	20	29	<0.5	<1	<5	<3	170	9
HO Bb 73	04-26-90	40	30	<0.5	3	<5	<3	40	6
HO Bb 88	05-01-90	<10	<2	<0.5	<1	<5	<3	<10	8
HO Bb 155	05-08-90	<10	<2	<0.5	<1	<5	<3	<10	6
HO Bb 160	04-11-90	<10	13	<0.5	<1	<5	<3	50	10
HO Bc 25	05-31-90	<10	47	<0.5	<1	<5	<3	80	10
HO Bc 157	11-08-89	<10	11	<0.5	<1	<5	<3	50	12
HO Bc 172	11-29-89	<10	<2	<0.5	<1	<5	<3	20	<3
HO Bc 176	04-17-90	<10	19	<0.5	2	<5	<3	<10	6
HO Bc 203	04-26-90	<10	10	<0.5	<1	<5	<3	30	29
	04-26-90	<10	10	<0.5	<1	<5	<3	30	30
HO Bc 264	10-25-89	20	94	<0.5	<1	<5	<3	10	8
HO Bc 294	05-03-90	<10	7	<0.5	2	<5	<3	<10	6
HO Bc 304	01-09-90	10	43	<0.5	<1	<5	<3	20	3
HO Bd 150	05-15-90	20	18	<0.5	<1	<5	<3	40	<3
HO Bd 401	11-20-89	<10	55	<0.5	<1	<5	<3	50	34
HO Bd 402	01-24-90	<10	55	<0.5	2	<5	<3	40	49
HO Bd 403	02-06-90	50	310	<0.5	<1	<5	<3	70	36
HO Bd 404	02-06-90	20	24	<0.5	1	<5	<3	20	16
HO Bd 405	02-27-90	30	88	0.7	3	<5	<3	20	19
HO Bd 406	02-27-90	20	130	<0.5	<1	<5	<3	40	8
HO Be 33	05-01-90	<10	64	<0.5	4	<5	<3	<10	5
HO Be 112	05-31-90	<10	10	<0.5	<1	<5	<3	<10	<3
HO Be 140	02-13-90	<10	21	<0.5	<1	<5	<3	10	19
HO Bf 68	05-17-90	<10	<2	<0.5	<1	<5	<3	<10	5
HO Bf 81	05-29-90	<10	190	<0.5	<1	<5	<3	50	6
HO Cc 12	04-24-90	<10	10	<0.5	<1	<5	<3	20	6

LOCAL IDENTIFIER	DATE	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)	Zinc, dissolved (ug/L as Zn)
HO Ac 92	05-15-90	<10	<4	<1	<10	<10	<1.0	48	<6	<3
	05-15-90	<10	<4	<1	<10	<10	<1.0	48	<6	<3
HO Ad 34	05-10-90	<10	<4	4	<10	<10	<1.0	19	<6	6
HO Bb 59	11-01-89	<10	<4	8	<10	<10	1.0	8	<6	11
HO Bb 66	04-11-90	<10	<4	19	<10	<10	<1.0	33	<6	18
HO Bb 73	04-26-90	10	<4	41	<10	<10	1.0	15	<6	12
HO Bb 88	05-01-90	<10	5	13	<10	<10	<1.0	150	<6	<3
HO Bb 155	05-08-90	<10	7	5	<10	<10	<1.0	66	<6	<3
HO Bb 160	04-11-90	<10	<4	1	<10	<10	<1.0	55	<6	7
HO Bc 25	05-31-90	20	10	11	<10	<10	<1.0	190	<6	28
HO Bc 157	11-08-89	<10	<4	1	<10	<10	<1.0	36	<6	18
HO Bc 172	11-29-89	<10	<4	1	<10	<10	<1.0	22	<6	<3
HO Bc 176	04-17-90	<10	<4	4	<10	<10	<1.0	55	<6	<3
HO Bc 203	04-26-90	10	<4	4	<10	<10	<1.0	58	<6	4
	04-26-90	10	<4	4	<10	<10	<1.0	58	<6	5
HO Bc 264	10-25-89	<10	<4	9	<10	<10	<1.0	160	<6	10
HO Bc 294	05-03-90	<10	<4	3	<10	<10	<1.0	17	<6	4
HO Bc 304	01-09-90	<10	<4	8	<10	<10	<1.0	100	<6	12
HO Bd 150	05-15-90	<10	9	8	<10	<10	<1.0	57	<6	4
HO Bd 401	11-20-89	20	<4	200	<10	<10	4.0	87	<6	9
HO Bd 402	01-24-90	<10	15	3	<10	20	<1.0	240	<6	<3
HO Bd 403	02-06-90	10	4	74	<10	<10	<1.0	670	<6	18
HO Bd 404	02-06-90	<10	<4	3	<10	<10	<1.0	49	<6	8
HO Bd 405	02-27-90	<10	<4	10	<10	10	<1.0	97	<6	20
HO Bd 406	02-27-90	10	<4	16	<10	10	<1.0	250	<6	10
HO Be 33	05-01-90	<10	4	<1	<10	<10	<1.0	220	<6	5
HO Be 112	05-31-90	<10	12	4	<10	<10	<1.0	100	<6	<3
HO Be 140	02-13-90	20	<4	6	<10	<10	2.0	71	<6	21
HO Bf 68	05-17-90	<10	8	4	<10	<10	<1.0	110	<6	5
HO Bf 81	05-29-90	10	5	4	<10	<10	2.0	620	<6	6
HO Cc 12	04-24-90	20	<4	1	<10	<10	<1.0	53	<6	4

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

HOWARD COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	Radon 222, total (pCi/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)	Chloroethane, total (ug/L)
HO Ac 92	05-15-90	3200	0.3	--	--	--	--	--	--	--
	05-15-90	--	<0.1	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
HO Ad 34	05-10-90	2600	<0.1	--	--	--	--	--	--	--
HO Bb 59	11-01-89	2400	0.2	--	--	--	--	--	--	--
HO Bb 66	04-11-90	2500	<0.1	--	--	--	--	--	--	--
HO Bb 73	04-26-90	3300	--	--	--	--	--	--	--	--
HO Bb 88	05-01-90	1700	0.3	--	--	--	--	--	--	--
HO Bb 155	05-08-90	6900	<0.1	--	--	--	--	--	--	--
HO Bb 160	04-11-90	1800	0.2	--	--	--	--	--	--	--
HO Bc 25	05-31-90	3800	0.2	--	--	--	--	--	--	--
HO Bc 157	11-08-89	2700	<0.1	--	--	--	--	--	--	--
HO Bc 172	11-29-89	--	0.1	--	--	--	--	--	--	--
HO Bc 176	04-17-90	--	0.2	--	--	--	--	--	--	--
HO Bc 203	04-26-90	1500	--	--	--	--	--	--	--	--
	04-26-90	1400	--	--	--	--	--	--	--	--
HO Bc 264	10-25-89	--	0.5	--	--	--	--	--	--	--
HO Bc 294	05-03-90	3700	<0.1	--	--	--	--	--	--	--
HO Bc 304	01-09-90	3200	0.2	--	--	--	--	--	--	--
HO Bd 150	05-15-90	4800	0.3	--	--	--	--	--	--	--
HO Bd 401	11-20-89	3300	0.7	--	--	--	--	--	--	--
HO Bd 402	01-24-90	5200	--	--	--	--	--	--	--	--
HO Bd 403	02-06-90	--	0.6	--	--	--	--	--	--	--
HO Bd 404	02-06-90	--	0.3	--	--	--	--	--	--	--
HO Bd 405	02-27-90	15000	0.3	--	--	--	--	--	--	--
HO Bd 406	02-27-90	4100	0.6	--	--	--	--	--	--	--
HO Be 33	05-01-90	1400	0.4	--	--	--	--	--	--	--
HO Be 112	05-31-90	860	0.2	--	--	--	--	--	--	--
HO Be 140	02-13-90	--	0.3	--	--	--	--	--	--	--
HO Bf 68	05-17-90	3400	0.3	--	--	--	--	--	--	--
HO Bf 81	05-29-90	1600	0.9	--	--	--	--	--	--	--
HO Cc 12	04-24-90	2600	<0.1	--	--	--	--	--	--	--

LOCAL IDENTIFIER	DATE	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)
HO Ac 92	05-15-90	--	--	--	--	--	--	--	--	--
	05-15-90	<0.2	<0.20	0.20	<0.20	<0.20	<0.20	<0.20	<0.2	<0.20
HO Ad 34	05-10-90	--	--	--	--	--	--	--	--	--
HO Bb 59	11-01-89	--	--	--	--	--	--	--	--	--
HO Bb 66	04-11-90	--	--	--	--	--	--	--	--	--
HO Bb 73	04-26-90	--	--	--	--	--	--	--	--	--
HO Bb 88	05-01-90	--	--	--	--	--	--	--	--	--
HO Bb 155	05-08-90	--	--	--	--	--	--	--	--	--
HO Bb 160	04-11-90	--	--	--	--	--	--	--	--	--
HO Bc 25	05-31-90	--	--	--	--	--	--	--	--	--
HO Bc 157	11-08-89	--	--	--	--	--	--	--	--	--
HO Bc 172	11-29-89	--	--	--	--	--	--	--	--	--
HO Bc 176	04-17-90	--	--	--	--	--	--	--	--	--
HO Bc 203	04-26-90	--	--	--	--	--	--	--	--	--
	04-26-90	--	--	--	--	--	--	--	--	--
HO Bc 264	10-25-89	--	--	--	--	--	--	--	--	--
HO Bc 294	05-03-90	--	--	--	--	--	--	--	--	--
HO Bc 304	01-09-90	--	--	--	--	--	--	--	--	--
HO Bd 150	05-15-90	--	--	--	--	--	--	--	--	--
HO Bd 401	11-20-89	--	--	--	--	--	--	--	--	--
HO Bd 402	01-24-90	--	--	--	--	--	--	--	--	--
HO Bd 403	02-06-90	--	--	--	--	--	--	--	--	--
HO Bd 404	02-06-90	--	--	--	--	--	--	--	--	--
HO Bd 405	02-27-90	--	--	--	--	--	--	--	--	--
HO Bd 406	02-27-90	--	--	--	--	--	--	--	--	--
HO Be 33	05-01-90	--	--	--	--	--	--	--	--	--
HO Be 112	05-31-90	--	--	--	--	--	--	--	--	--
HO Be 140	02-13-90	--	--	--	--	--	--	--	--	--
HO Bf 68	05-17-90	--	--	--	--	--	--	--	--	--
HO Bf 81	05-29-90	--	--	--	--	--	--	--	--	--
HO Cc 12	04-24-90	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

HOWARD COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	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)	1,1-Dichloroethylene, total (ug/L)
HO Ac 92	05-15-90	--	--	--	--	<0.10	--	--	--	--
	05-15-90	<0.2	<0.20	<0.20	<0.2	--	<0.20	<0.2	<0.20	<0.20
HO Ad 34	05-10-90	--	--	--	--	<0.10	--	--	--	--
HO Bb 59	11-01-89	--	--	--	--	<0.10	--	--	--	--
HO Bb 66	04-11-90	--	--	--	--	<0.10	--	--	--	--
HO Bb 73	04-26-90	--	--	--	--	<0.10	--	--	--	--
HO Bb 88	05-01-90	--	--	--	--	<0.10	--	--	--	--
HO Bb 155	05-08-90	--	--	--	--	<0.10	--	--	--	--
HO Bb 160	04-11-90	--	--	--	--	<0.10	--	--	--	--
HO Bc 25	05-31-90	--	--	--	--	--	--	--	--	--
HO Bc 157	11-08-89	--	--	--	--	--	--	--	--	--
HO Bc 172	11-29-89	--	--	--	--	--	--	--	--	--
HO Bc 176	04-17-90	--	--	--	--	<0.10	--	--	--	--
HO Bc 203	04-26-90	--	--	--	--	<0.10	--	--	--	--
	04-26-90	--	--	--	--	<0.10	--	--	--	--
HO Bc 264	10-25-89	--	--	--	--	<0.10	--	--	--	--
HO Bc 294	05-03-90	--	--	--	--	<0.10	--	--	--	--
HO Bc 304	01-09-90	--	--	--	--	<0.10	--	--	--	--
HO Bd 150	05-15-90	--	--	--	--	<0.10	--	--	--	--
HO Bd 401	11-20-89	--	--	--	--	--	--	--	--	--
HO Bd 402	01-24-90	--	--	--	--	<0.10	--	--	--	--
HO Bd 403	02-06-90	--	--	--	--	<0.10	--	--	--	--
HO Bd 404	02-06-90	--	--	--	--	<0.10	--	--	--	--
HO Bd 405	02-27-90	--	--	--	--	<0.10	--	--	--	--
HO Bd 406	02-27-90	--	--	--	--	<0.10	--	--	--	--
HO Be 33	05-01-90	--	--	--	--	<0.10	--	--	--	--
HO Be 112	05-31-90	--	--	--	--	--	--	--	--	--
HO Be 140	02-13-90	--	--	--	--	--	--	--	--	--
HO Bf 68	05-17-90	--	--	--	--	<0.10	--	--	--	--
HO Bf 81	05-29-90	--	--	--	--	<0.10	--	--	--	--
HO Cc 12	04-24-90	--	--	--	--	<0.10	--	--	--	--

LOCAL IDENTIFIER	DATE	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)	1,3-Dichloropropene total (ug/L)
HO Ac 92	05-15-90	--	--	--	--	--	--	--	--	--
	05-15-90	<0.2	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20
HO Ad 34	05-10-90	--	--	--	--	--	--	--	--	--
HO Bb 59	11-01-89	--	--	--	--	--	--	--	--	--
HO Bb 66	04-11-90	--	--	--	--	--	--	--	--	--
HO Bb 73	04-26-90	--	--	--	--	--	--	--	--	--
HO Bb 88	05-01-90	--	--	--	--	--	--	--	--	--
HO Bb 155	05-08-90	--	--	--	--	--	--	--	--	--
HO Bb 160	04-11-90	--	--	--	--	--	--	--	--	--
HO Bc 25	05-31-90	--	--	--	--	--	--	--	--	--
HO Bc 157	11-08-89	--	--	--	--	--	--	--	--	--
HO Bc 172	11-29-89	--	--	--	--	--	--	--	--	--
HO Bc 176	04-17-90	--	--	--	--	--	--	--	--	--
HO Bc 203	04-26-90	--	--	--	--	--	--	--	--	--
	04-26-90	--	--	--	--	--	--	--	--	--
HO Bc 264	10-25-89	--	--	--	--	--	--	--	--	--
HO Bc 294	05-03-90	--	--	--	--	--	--	--	--	--
HO Bc 304	01-09-90	--	--	--	--	--	--	--	--	--
HO Bd 150	05-15-90	--	--	--	--	--	--	--	--	--
HO Bd 401	11-20-89	--	--	--	--	--	--	--	--	--
HO Bd 402	01-24-90	--	--	--	--	--	--	--	--	--
HO Bd 403	02-06-90	--	--	--	--	--	--	--	--	--
HO Bd 404	02-06-90	--	--	--	--	--	--	--	--	--
HO Bd 405	02-27-90	--	--	--	--	--	--	--	--	--
HO Bd 406	02-27-90	--	--	--	--	--	--	--	--	--
HO Be 33	05-01-90	--	--	--	--	--	--	--	--	--
HO Be 112	05-31-90	--	--	--	--	--	--	--	--	--
HO Be 140	02-13-90	--	--	--	--	--	--	--	--	--
HO Bf 68	05-17-90	--	--	--	--	--	--	--	--	--
HO Bf 81	05-29-90	--	--	--	--	--	--	--	--	--
HO Cc 12	04-24-90	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

HOWARD COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	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)	Metolachlor, water, whole, Tot.Rec (ug/L)
HO Ac 92	05-15-90	--	--	--	<0.10	<0.10	<0.10	<0.10	<0.5	<0.1
	05-15-90	<0.2	<0.20	<0.20	--	--	--	--	--	--
HO Ad 34	05-10-90	--	--	--	<0.10	<0.10	<0.10	<0.10	<0.5	<0.1
HO Bb 59	11-01-89	--	--	--	<0.10	<0.10	<0.10	<0.10	<0.5	<0.1
HO Bb 66	04-11-90	--	--	--	<0.10	<0.10	0.20	<0.10	<0.5	<0.1
HO Bb 73	04-26-90	--	--	--	<0.10	<0.10	<0.10	<0.10	<0.5	<0.1
HO Bb 88	05-01-90	--	--	--	<0.10	<0.10	0.10	<0.10	<0.5	1.8
HO Bb 155	05-08-90	--	--	--	<0.10	<0.10	<0.10	<0.10	<0.5	<0.1
HO Bb 160	04-11-90	--	--	--	<0.10	<0.10	<0.10	<0.10	<0.5	<0.1
HO Bc 25	05-31-90	--	--	--	--	--	--	--	--	--
HO Bc 157	11-08-89	--	--	--	--	--	--	--	<0.5	--
HO Bc 172	11-29-89	--	--	--	--	--	--	--	<0.5	--
HO Bc 176	04-17-90	--	--	--	<0.10	<0.10	<0.10	<0.10	<0.5	<0.1
HO Bc 203	04-26-90	--	--	--	<0.10	<0.10	0.10	<0.10	<0.5	<0.1
	04-26-90	--	--	--	<0.10	<0.10	0.10	<0.10	<0.5	<0.1
HO Bc 264	10-25-89	--	--	--	<0.10	<0.10	0.20	<0.10	<0.5	0.2
HO Bc 294	05-03-90	--	--	--	<0.10	<0.10	<0.10	<0.10	<0.5	<0.1
HO Bc 304	01-09-90	--	--	--	<0.10	<0.10	<0.10	<0.10	<0.5	<0.1
HO Bd 150	05-15-90	--	--	--	<0.10	<0.10	<0.10	<0.10	<0.5	<0.1
HO Bd 401	11-20-89	--	--	--	--	--	--	--	--	--
HO Bd 402	01-24-90	--	--	--	<0.10	<0.10	<0.10	<0.10	<0.5	<0.1
HO Bd 403	02-06-90	--	--	--	<0.10	<0.10	<0.10	<0.10	--	<0.1
HO Bd 404	02-06-90	--	--	--	<0.10	<0.10	<0.10	<0.10	--	<0.1
HO Bd 405	02-27-90	--	--	--	<0.10	<0.10	<0.10	<0.10	<0.5	<0.1
HO Bd 406	02-27-90	--	--	--	<0.10	<0.10	<0.10	<0.10	<0.5	<0.1
HO Be 33	05-01-90	--	--	--	<0.10	<0.10	<0.10	<0.10	<0.5	<0.1
HO Be 112	05-31-90	--	--	--	--	--	--	--	--	--
HO Be 140	02-13-90	--	--	--	--	--	--	--	<0.5	--
HO Bf 68	05-17-90	--	--	--	<0.10	<0.10	<0.10	<0.10	<0.5	<0.1
HO Bf 81	05-29-90	--	--	--	<0.10	<0.10	<0.10	<0.10	<0.5	<0.1
HO Cc 12	04-24-90	--	--	--	<0.10	<0.10	<0.10	<0.10	<0.5	<0.1

LOCAL IDENTIFIER	DATE	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 Ac 92	05-15-90	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
	05-15-90	--	--	--	--	--	--	--	--
HO Ad 34	05-10-90	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Bb 59	11-01-89	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Bb 66	04-11-90	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Bb 73	04-26-90	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Bb 88	05-01-90	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Bb 155	05-08-90	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Bb 160	04-11-90	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Bc 25	05-31-90	--	--	--	--	--	--	--	--
HO Bc 157	11-08-89	--	--	--	--	<0.5	<0.50	--	--
HO Bc 172	11-29-89	--	--	--	--	<0.5	<0.50	--	--
HO Bc 176	04-17-90	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Bc 203	04-26-90	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
	04-26-90	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Bc 264	10-25-89	<0.1	<0.1	0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Bc 294	05-03-90	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Bc 304	01-09-90	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Bd 150	05-15-90	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Bd 401	11-20-89	--	--	--	--	--	--	--	--
HO Bd 402	01-24-90	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Bd 403	02-06-90	<0.1	<0.1	<0.1	<0.10	--	--	<0.10	<0.1
HO Bd 404	02-06-90	<0.1	<0.1	<0.1	<0.10	--	--	<0.10	<0.1
HO Bd 405	02-27-90	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Bd 406	02-27-90	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Be 33	05-01-90	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Be 112	05-31-90	--	--	--	--	--	--	--	--
HO Be 140	02-13-90	--	--	--	--	<0.5	<0.50	--	--
HO Bf 68	05-17-90	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Bf 81	05-29-90	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Cc 12	04-24-90	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

HOWARD COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	TIME	STATION NUMBER	GEOLOGIC UNIT	SITE TYPE	Sampling method, codes	Depth below land surface (water level) (ft)	Depth of well, total (ft)	Depth to top of sample interval (ft)	Depth to bottom of sample interval (ft)
HO Cd 79	11-02-89	1425	391445076555101	300LCRV	GW	4040	24.10	53.00	43	53
	01-10-90	1110		300LCRV	GW	4040	25.26	53.00	43	53
	02-13-90	1215		300LCRV	GW	4040	25.40	53.00	43	53
	03-20-90	1155		300LCRV	GW	4040	25.34	53.00	43	53
	04-24-90	1215		300LCRV	GW	4040	25.25	53.00	43	53
	05-16-90	1155		300LCRV	GW	4040	25.06	53.00	43	53
	06-19-90	1155		300LCRV	GW	4040	24.62	53.00	43	53
	07-24-90	1225		300LCRV	GW	4040	25.00	53.00	43	53
	08-16-90	1115		300LCRV	GW	4040	25.40	53.00	43	53
	09-26-90	1235		300LCRV	GW	4040	25.98	53.00	43	53
HO Cd 80	11-02-89	1335	391439076555601	300LCRV	SP	4040	--	2.00	0.0	2.0
	12-15-89	1010		300LCRV	SP	4040	--	2.00	0.0	2.0
	01-19-90	0930		300LCRV	SP	4030	--	2.00	0.0	2.0
	02-13-90	1150		300LCRV	SP	4030	--	2.00	0.0	2.0
	02-13-90	1155		300LCRV	SP	4030	--	2.00	0.0	2.0
	03-20-90	1350		300LCRV	SP	4030	--	2.00	0.0	2.0
	04-24-90	1210		300LCRV	SP	4030	--	2.00	0.0	2.0
	05-16-90	1100		300LCRV	SP	4030	--	2.00	0.0	2.0
	06-19-90	1120		300LCRV	SP	4030	--	2.00	0.0	2.0
	07-24-90	1130		300LCRV	SP	4030	--	2.00	0.0	2.0
	08-16-90	1115		300LCRV	SP	4030	--	2.00	0.0	2.0
	09-26-90	1330		300LCRV	SP	4030	--	2.00	0.0	2.0
HO Cd 81	11-02-89	1235	391439076555602	300LCRV	SP	4040	--	2.00	0.0	2.0
	12-15-89	1020		300LCRV	SP	4040	--	2.00	0.0	2.0
	01-19-90	0945		300LCRV	SP	4030	--	2.00	0.0	2.0
	02-13-90	1200		300LCRV	SP	4030	--	2.00	0.0	2.0
	03-20-90	1400		300LCRV	SP	4030	--	2.00	0.0	2.0
	04-24-90	1220		300LCRV	SP	4030	--	2.00	0.0	2.0
	05-16-90	1120		300LCRV	SP	4030	--	2.00	0.0	2.0
	06-19-90	1135		300LCRV	SP	4030	--	2.00	0.0	2.0
	07-24-90	1140		300LCRV	SP	4030	--	2.00	0.0	2.0
	08-16-90	1125		300LCRV	SP	4030	--	2.00	0.0	2.0
	09-26-90	1335		300LCRV	SP	4030	--	2.00	0.0	2.0
HO Cd 102	10-25-89	1500	391220076563301	400BLMR	GW	4040	--	150.00	51	150
HO Cd 240	10-25-89	1055	391054076575801	400BLMR	SP	4100	--	--	--	--
HO Cd 249	05-24-90	1140	391042076572601	400BLMR	GW	4040	--	205.00	61	205
HO Cd 253	10-13-89	1015	391447076554703	300LCRV	LYS	4030	--	1.00	1.0	1.0
	01-11-90	1220		300LCRV	LYS	4030	--	1.00	1.0	1.0
	02-14-90	0845		300LCRV	LYS	4030	--	1.00	1.0	1.0
	03-20-90	1245		300LCRV	LYS	4030	--	1.00	1.0	1.0
	04-25-90	0745		300LCRV	LYS	4030	--	1.00	1.0	1.0
	05-17-90	0745		300LCRV	LYS	4030	--	1.00	1.0	1.0
	08-17-90	0720		300LCRV	LYS	4030	--	1.00	1.0	1.0
HO Cd 290	10-13-89	1050	391447076554704	300LCRV	LYS	4030	--	5.00	5.0	5.0
	11-06-89	1250		300LCRV	LYS	4030	--	5.00	5.0	5.0
	12-15-89	1045		300LCRV	LYS	4030	--	5.00	5.0	5.0
	01-11-90	1225		300LCRV	LYS	4030	--	5.00	5.0	5.0
	02-14-90	0850		300LCRV	LYS	4030	--	5.00	5.0	5.0
	03-20-90	1250		300LCRV	LYS	4030	--	5.00	5.0	5.0
	04-25-90	0750		300LCRV	LYS	4030	--	5.00	5.0	5.0
	05-17-90	0750		300LCRV	LYS	4030	--	5.00	5.0	5.0
	06-20-90	0735		300LCRV	LYS	4030	--	5.00	5.0	5.0
	07-25-90	0725		300LCRV	LYS	4030	--	5.00	5.0	5.0
	08-17-90	0725		300LCRV	LYS	4030	--	5.00	5.0	5.0
	09-27-90	1200		300LCRV	LYS	4030	--	5.00	5.0	5.0
HO Cd 291	10-13-89	1045	391447076554705	300LCRV	LYS	4030	--	9.80	9.8	9.8
	11-06-89	1250		300LCRV	LYS	4030	--	9.80	9.8	9.8
	01-11-90	1425		300LCRV	LYS	4030	--	9.80	9.8	9.8
	02-14-90	0855		300LCRV	LYS	4030	--	9.80	9.8	9.8
	03-20-90	1255		300LCRV	LYS	4030	--	9.80	9.8	9.8
	04-25-90	0755		300LCRV	LYS	4030	--	9.80	9.8	9.8
	05-17-90	0800		300LCRV	LYS	4030	--	9.80	9.8	9.8
	06-20-90	0740		300LCRV	LYS	4030	--	9.80	9.8	9.8
	07-25-90	0730		300LCRV	LYS	4030	--	9.80	9.8	9.8
	08-17-90	0730		300LCRV	LYS	4030	--	9.80	9.8	9.8
	09-27-90	1205		300LCRV	LYS	4030	--	9.80	9.8	9.8

Geologic unit (aquifer): 300LCRV - Loch Raven Schist
400BLMR - Baltimore Gneiss
300WSCK - Wissahickon Formation
400BLMR - Baltimore Gneiss

Sampling method: 4030 - Suction pump
4040 - Submersible pump
4100 - Flowing well

Site type: GW - Groundwater
LYS - Lysimeter
SP - Spring

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

HOWARD COUNTY, MARYLAND--Continued

LOCAL IDENT-I-FIER	DATE	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)
HO Cd 79	11-02-89	452	25	0.8	38	5.82	12.5	7.9	--	--
	01-10-90	452	40	0.8	39	5.55	13.0	6.9	--	--
	02-13-90	452	30	1.0	40	5.76	13.0	7.4	--	--
	03-20-90	452	30	1	39	5.65	12.5	9.0	--	--
	04-24-90	452	30	0.9	40	5.83	13.5	7.4	--	--
	05-16-90	452	30	0.9	33	--	11.0	4.9	--	--
	06-19-90	452	30	0.9	37	5.23	14.0	6.7	--	--
	07-24-90	452	30	0.9	37	5.44	13.5	8.4	--	--
	08-16-90	452	30	0.9	39	5.60	13.5	7.4	--	--
	09-26-90	452	30	0.8	37	5.48	13.0	9.0	--	--
HO Cd 80	11-02-89	415	--	--	128	5.94	12.5	9.4	--	--
	12-15-89	415	--	--	122	5.87	--	--	--	--
	01-19-90	415	--	--	131	6.12	10.5	--	--	--
	02-13-90	415	--	--	117	5.96	9.0	10.4	--	--
	02-13-90	415	--	--	117	5.96	9.0	10.4	--	--
	03-20-90	415	--	--	--	--	6.5	13.0	--	--
	04-24-90	415	--	--	121	6.04	11.0	7.5	--	--
	05-16-90	415	--	--	123	--	--	--	--	--
	06-19-90	415	--	--	125	5.77	7.0	10.1	--	--
	07-24-90	415	--	--	112	5.60	6.5	9.0	--	--
	08-16-90	415	--	--	125	5.84	5.0	13.8	--	--
	09-26-90	415	--	--	109	5.68	--	--	--	--
HO Cd 81	11-02-89	414	--	--	101	6.24	13.0	9.3	--	--
	12-15-89	414	--	--	105	6.25	--	--	--	--
	01-19-90	414	--	--	99	6.16	10.0	--	--	--
	02-13-90	414	--	--	98	5.72	7.5	10.2	--	--
	03-20-90	414	--	--	--	--	6.0	11.9	--	--
	04-24-90	414	--	--	101	6.06	8.0	9.1	--	--
	05-16-90	414	--	--	97	--	--	--	--	--
	06-19-90	414	--	--	106	5.63	8.0	9.8	--	--
	07-24-90	414	--	--	104	5.67	7.0	8.0	--	--
	08-16-90	414	--	--	128	6.18	6.0	10.9	--	--
	09-26-90	414	--	--	95	5.80	--	--	--	--
HO Cd 102	10-25-89	485	80	7.0	245	5.79	13.5	6.2	16	7.0
HO Cd 240	10-25-89	500	--	4.3	78	5.66	13.0	6.2	4.4	2.4
HO Cd 249	05-24-90	510	50	8.0	192	6.68	14.0	0.8	3.6	5.0
HO Cd 253	10-13-89	457	--	--	--	--	--	--	--	--
	01-11-90	457	--	--	--	--	--	--	--	--
	02-14-90	457	--	--	--	--	--	--	--	--
	03-20-90	457	--	--	--	--	--	--	--	--
	04-25-90	457	--	--	184	--	--	--	--	--
	05-17-90	457	--	--	199	--	--	--	--	--
	08-17-90	457	--	--	602	--	--	--	--	--
HO Cd 290	10-13-89	457	--	--	--	--	--	--	--	--
	11-06-89	457	--	--	179	--	--	--	--	--
	12-15-89	457	--	--	238	--	--	--	--	--
	01-11-90	457	--	--	--	--	--	--	--	--
	02-14-90	457	--	--	158	--	--	--	--	--
	03-20-90	457	--	--	--	--	--	--	--	--
	04-25-90	457	--	--	247	--	--	--	--	--
	05-17-90	457	--	--	228	--	--	--	--	--
	06-20-90	457	--	--	320	--	--	--	--	--
	07-25-90	457	--	--	429	--	--	--	--	--
	08-17-90	457	--	--	415	--	--	--	--	--
	09-27-90	457	--	--	488	--	--	--	--	--
HO Cd 291	10-13-89	457	--	--	--	--	--	--	--	--
	11-06-89	457	--	--	155	--	--	--	--	--
	01-11-90	457	--	--	--	--	--	--	--	--
	02-14-90	457	--	--	150	--	--	--	--	--
	03-20-90	457	--	--	--	--	--	--	--	--
	04-25-90	457	--	--	182	--	--	--	--	--
	05-17-90	457	--	--	175	--	--	--	--	--
	06-20-90	457	--	--	156	--	--	--	--	--
	07-25-90	457	--	--	158	--	--	--	--	--
	08-17-90	457	--	--	--	--	--	--	--	--
	09-27-90	457	--	--	149	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

HOWARD COUNTY, MARYLAND--Continued

LOCAL IDENT-I-FIER	DATE	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)	Solids, sum of consti-tuents, dis-solved (mg/L)
HO Cd 79	11-02-89	--	--	--	--	--	--	--	--	--
	01-10-90	--	--	--	--	--	--	--	--	--
	02-13-90	--	--	--	--	--	--	--	--	--
	03-20-90	--	--	--	--	--	--	--	--	--
	04-24-90	--	--	--	--	--	--	--	--	--
	05-16-90	--	--	--	--	--	--	--	--	--
	06-19-90	--	--	--	--	--	--	--	--	--
	07-24-90	--	--	--	--	--	--	--	--	--
	08-16-90	--	--	--	--	--	--	--	--	--
	09-26-90	--	--	--	--	--	--	--	--	--
HO Cd 80	11-02-89	--	--	--	--	--	--	--	--	--
	12-15-89	--	--	--	--	--	--	--	--	--
	01-19-90	--	--	--	--	--	--	--	--	--
	02-13-90	--	--	--	--	--	--	--	--	--
	02-13-90	--	--	--	--	--	--	--	--	--
	03-20-90	--	--	--	--	--	--	--	--	--
	04-24-90	--	--	--	--	--	--	--	--	--
	05-16-90	--	--	--	--	--	--	--	--	--
	06-19-90	--	--	--	--	--	--	--	--	--
	07-24-90	--	--	--	--	--	--	--	--	--
	08-16-90	--	--	--	--	--	--	--	--	--
	09-26-90	--	--	--	--	--	--	--	--	--
HO Cd 81	11-02-89	--	--	--	--	--	--	--	--	--
	12-15-89	--	--	--	--	--	--	--	--	--
	01-19-90	--	--	--	--	--	--	--	--	--
	02-13-90	--	--	--	--	--	--	--	--	--
	03-20-90	--	--	--	--	--	--	--	--	--
	04-24-90	--	--	--	--	--	--	--	--	--
	05-16-90	--	--	--	--	--	--	--	--	--
	06-19-90	--	--	--	--	--	--	--	--	--
	07-24-90	--	--	--	--	--	--	--	--	--
	08-16-90	--	--	--	--	--	--	--	--	--
	09-26-90	--	--	--	--	--	--	--	--	--
HO Cd 102	10-25-89	14	4.1	36	2.0	34	<0.10	32	155	132
HO Cd 240	10-25-89	4.2	2.1	8	2.0	6.8	<0.10	15	36	42
HO Cd 249	05-24-90	4.7	1.2	66	2.1	6.0	<0.10	15	51	51
HO Cd 253	10-13-89	--	--	--	--	--	--	--	--	--
	01-11-90	--	--	--	--	--	--	--	--	--
	02-14-90	--	--	--	--	--	--	--	--	--
	03-20-90	--	--	--	--	--	--	--	--	--
	04-25-90	--	--	--	--	--	--	--	--	--
	05-17-90	--	--	--	--	--	--	--	--	--
	08-17-90	--	--	--	--	--	--	--	--	--
HO Cd 290	10-13-89	--	--	--	--	--	--	--	--	--
	11-06-89	--	--	--	--	--	--	--	--	--
	12-15-89	--	--	--	--	--	--	--	--	--
	01-11-90	--	--	--	--	--	--	--	--	--
	02-14-90	--	--	--	--	--	--	--	--	--
	03-20-90	--	--	--	--	--	--	--	--	--
	04-25-90	--	--	--	--	--	--	--	--	--
	05-17-90	--	--	--	--	--	--	--	--	--
	06-20-90	--	--	--	--	--	--	--	--	--
	07-25-90	--	--	--	--	--	--	--	--	--
	08-17-90	--	--	--	--	--	--	--	--	--
	09-27-90	--	--	--	--	--	--	--	--	--
HO Cd 291	10-13-89	--	--	--	--	--	--	--	--	--
	11-06-89	--	--	--	--	--	--	--	--	--
	01-11-90	--	--	--	--	--	--	--	--	--
	02-14-90	--	--	--	--	--	--	--	--	--
	03-20-90	--	--	--	--	--	--	--	--	--
	04-25-90	--	--	--	--	--	--	--	--	--
	05-17-90	--	--	--	--	--	--	--	--	--
	06-20-90	--	--	--	--	--	--	--	--	--
	07-25-90	--	--	--	--	--	--	--	--	--
	08-17-90	--	--	--	--	--	--	--	--	--
	09-27-90	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

HOWARD COUNTY, MARYLAND--Continued

LOCAL IDENT-I-FIER	DATE	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)	Phosphorous ortho, dissolved (mg/L as P)	Aluminum, dissolved (ug/L as Al)
HO Cd 79	11-02-89	<0.010	--	1.70	--	<0.010	0.40	--	--	--
	01-10-90	<0.010	--	1.70	--	0.010	<0.20	--	--	--
	02-13-90	<0.010	--	1.50	--	<0.010	<0.20	--	--	--
	03-20-90	<0.010	--	1.70	--	<0.010	0.50	--	--	--
	04-24-90	<0.010	--	1.70	--	<0.010	<0.20	--	--	--
	05-16-90	<0.010	--	1.70	--	<0.010	<0.20	--	--	--
	06-19-90	<0.010	--	1.70	--	<0.010	0.20	--	--	--
	07-24-90	<0.010	--	1.70	--	0.020	0.30	--	--	--
	08-16-90	<0.010	--	1.80	--	0.050	<0.20	--	--	--
	09-26-90	<0.010	--	1.70	--	<0.010	<0.20	--	<0.010	--
HO Cd 80	11-02-89	<0.010	--	4.70	--	<0.010	<0.20	--	--	--
	12-15-89	<0.010	--	4.30	--	0.010	0.60	--	--	--
	01-19-90	<0.010	--	3.90	--	0.010	0.30	--	--	--
	02-13-90	<0.010	--	3.40	--	<0.010	<0.20	--	--	--
	02-13-90	<0.010	--	3.50	--	<0.010	<0.20	--	--	--
	03-20-90	<0.010	--	4.00	--	<0.010	0.50	--	--	--
	04-24-90	<0.010	--	3.60	--	<0.010	<0.20	--	--	--
	05-16-90	<0.010	--	3.50	--	0.010	0.20	--	--	--
	06-19-90	<0.010	--	3.40	--	0.010	0.70	--	--	--
	07-24-90	<0.010	--	3.50	--	0.020	0.50	--	--	--
	08-16-90	<0.010	--	3.50	--	0.010	0.60	--	--	--
	09-26-90	<0.010	--	3.20	--	0.010	0.80	--	<0.010	--
HO Cd 81	11-02-89	<0.010	--	4.20	--	<0.010	<0.20	--	--	--
	12-15-89	<0.010	--	4.10	--	<0.010	0.30	--	--	--
	01-19-90	<0.010	--	3.90	--	0.020	0.40	--	--	--
	02-13-90	<0.010	--	3.40	--	<0.010	0.30	--	--	--
	03-20-90	<0.010	--	4.00	--	0.010	0.60	--	--	--
	04-24-90	<0.010	--	3.90	--	<0.010	<0.20	--	--	--
	05-16-90	<0.010	--	3.70	--	<0.010	<0.20	--	--	--
	06-19-90	<0.010	--	3.80	--	0.010	0.60	--	--	--
	07-24-90	<0.010	--	4.00	--	0.030	0.60	--	--	--
	08-16-90	<0.010	--	3.90	--	<0.010	0.80	--	--	--
	09-26-90	<0.010	--	3.60	--	<0.010	0.70	--	0.010	--
HO Cd 102	10-25-89	--	5.30	--	0.020	--	--	0.040	--	<10
HO Cd 240	10-25-89	--	4.10	--	0.020	--	--	0.020	--	20
HO Cd 249	05-24-90	--	2.60	--	<0.010	--	--	0.020	--	<10
HO Cd 253	10-13-89	<0.010	--	0.320	--	0.010	0.40	--	--	--
	01-11-90	<0.010	--	3.10	--	0.090	0.60	--	--	--
	02-14-90	<0.010	--	0.290	--	<0.010	0.30	--	--	--
	03-20-90	<0.010	--	<0.100	--	0.020	0.60	--	--	--
	04-25-90	<0.010	--	<0.100	--	<0.010	0.40	--	--	--
	05-17-90	<0.010	--	0.100	--	<0.010	0.30	--	--	--
	08-17-90	<0.010	--	0.400	--	0.050	1.0	--	--	--
HO Cd 290	10-13-89	<0.010	--	0.670	--	<0.010	<0.20	--	--	--
	11-06-89	<0.010	--	0.980	--	<0.010	0.50	--	--	--
	12-15-89	<0.010	--	1.10	--	0.020	0.20	--	--	--
	01-11-90	<0.010	--	1.60	--	0.010	<0.20	--	--	--
	02-14-90	<0.010	--	2.60	--	<0.010	<0.20	--	--	--
	03-20-90	<0.010	--	2.00	--	<0.010	0.30	--	--	--
	04-25-90	<0.010	--	0.800	--	<0.010	0.30	--	--	--
	05-17-90	<0.010	--	0.600	--	<0.010	<0.20	--	--	--
	06-20-90	<0.010	--	2.20	--	0.010	0.50	--	--	--
	07-25-90	<0.010	--	0.600	--	0.040	0.30	--	--	--
	08-17-90	<0.010	--	1.30	--	0.010	0.40	--	--	--
	09-27-90	<0.010	--	0.700	--	0.020	0.80	--	<0.010	--
HO Cd 291	10-13-89	<0.010	--	17.0	--	<0.010	0.30	--	--	--
	11-06-89	<0.010	--	15.0	--	<0.010	0.40	--	--	--
	01-11-90	<0.010	--	15.0	--	0.020	0.60	--	--	--
	02-14-90	<0.010	--	14.0	--	<0.010	0.40	--	--	--
	03-20-90	<0.010	--	14.0	--	0.010	0.60	--	--	--
	04-25-90	<0.010	--	14.0	--	<0.010	0.50	--	--	--
	05-17-90	<0.010	--	12.0	--	<0.010	0.30	--	--	--
	06-20-90	<0.010	--	5.70	--	0.040	0.30	--	--	--
	07-25-90	<0.010	--	9.70	--	0.030	0.70	--	--	--
	08-17-90	<0.010	--	10.0	--	<0.010	0.60	--	--	--
	09-27-90	<0.010	--	9.70	--	0.090	1.5	--	0.050	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

HOWARD COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	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)
HO Cd 102	10-25-89	110	<0.5	<1	<5	<3	40	55	20	9
HO Cd 240	10-25-89	53	<0.5	<1	<5	<3	<10	5	<10	<4
HO Cd 249	05-24-90	10	<0.5	<1	5	<3	10	5	<10	<4

LOCAL IDENTIFIER	DATE	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)	Zinc, dissolved (ug/L as Zn)	Radon 222, total (pCi/L)	Carbon, organic total (mg/L as C)
HO Cd 102	10-25-89	4	<10	<10	<1.0	170	<6	49	13000	0.2
HO Cd 240	10-25-89	3	<10	<10	<1.0	34	<6	4	--	<0.1
HO Cd 249	05-24-90	1	<10	<10	<1.0	23	<6	<3	5000	<0.1

LOCAL IDENTIFIER	DATE	Bromoform, total (ug/L)	Benzene total (ug/L)	Carbontetrachloride, total (ug/L)	Chlorobenzene total (ug/L)	Chlorodibromomethane total (ug/L)	Chloroform, total (ug/L)	Chloroethane, total (ug/L)	Cis 1,3-dichloropropene total (ug/L)	Dichlorobromomethane total (ug/L)
HO Cd 102	10-25-89	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
HO Cd 240	10-25-89	--	--	--	--	--	--	--	--	--
HO Cd 249	05-24-90	--	--	--	--	--	--	--	--	--

LOCAL IDENTIFIER	DATE	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)	Toluene total (ug/L)
HO Cd 102	10-25-89	<0.2	<0.20	<0.20	<0.20	0.20	<0.2	<0.20	<0.20	<0.20
HO Cd 240	10-25-89	--	--	--	--	--	--	--	--	--
HO Cd 249	05-24-90	--	--	--	--	--	--	--	--	--

LOCAL IDENTIFIER	DATE	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)
HO Cd 102	10-25-89	<0.2	<0.2	--	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20
HO Cd 240	10-25-89	--	--	<0.10	--	--	--	--	--	--
HO Cd 249	05-24-90	--	--	<0.10	--	--	--	--	--	--

LOCAL IDENTIFIER	DATE	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)
HO Cd 102	10-25-89	<0.20	<0.2	<0.20	0.30	<0.20	<0.20	<0.20	<0.20
HO Cd 240	10-25-89	--	--	--	--	--	--	--	--
HO Cd 249	05-24-90	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

HOWARD COUNTY, MARYLAND--Continued

LOCAL IDENT-I-FIER	DATE	1,4-Di-chloro-benzene total (ug/L)	2-Chloro-ethyl-vinyl-ether, total (ug/L)	Ala-chlor, total recover (ug/L)	Ame-tryne, total	Atra-zine, total (ug/L)	Cyan-azine, total (ug/L)	Metho-myl, total (ug/L)	Metola-chlor, water, whole, Tot.Rec (ug/L)
HO Cd 102	10-25-89	<0.20	<0.20	--	--	--	--	--	--
HO Cd 240	10-25-89	--	--	<0.10	<0.10	<0.10	<0.10	<0.5	<0.1
HO Cd 249	05-24-90	--	--	<0.10	<0.10	<0.10	<0.10	<0.5	<0.1

LOCAL IDENT-I-FIER	DATE	Metri-buzin, water, whole, Tot.Rec (ug/L)	Prome-tryne, total (ug/L)	Prome-tone, total (ug/L)	Pro-pazine, total (ug/L)	Propham total (ug/L)	Sevin, total (ug/L)	Sima-zine, total (ug/L)	Sime-tryne, total (ug/L)
HO Cd 102	10-25-89	--	--	--	--	--	--	--	--
HO Cd 240	10-25-89	<0.1	<0.1	0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Cd 249	05-24-90	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

HOWARD COUNTY, MARYLAND--Continued

LOCAL IDENT-I-FIER	DATE	TIME	STATION NUMBER	GEO-LOGIC UNIT	SITE TYPE	Sam-pling method, codes	Depth below land surface (water level) (ft)	Depth of well, total (ft)	Depth to top of sample inter-val (ft)	Depth to bot-tom of sample inter-val (ft)
HO Cd 292	10-13-89	1100	391447076554706	300LCRV	LYS	4030	--	13.80	14	14
	11-06-89	1250		300LCRV	LYS	4030	--	13.80	14	14
	12-15-89	1245		300LCRV	LYS	4030	--	13.80	14	14
	01-11-90	1430		300LCRV	LYS	4030	--	13.80	14	14
	02-14-90	0930		300LCRV	LYS	4030	--	13.80	14	14
	03-20-90	1300		300LCRV	LYS	4030	--	13.80	14	14
	04-25-90	0805		300LCRV	LYS	4030	--	13.80	14	14
	05-17-90	0805		300LCRV	LYS	4030	--	13.80	14	14
	06-20-90	0745		300LCRV	LYS	4030	--	13.80	14	14
	07-25-90	0735		300LCRV	LYS	4030	--	13.80	14	14
	08-17-90	0735		300LCRV	LYS	4030	--	13.80	14	14
	09-27-90	1210		300LCRV	LYS	4030	--	13.80	14	14
HO Cd 341	11-02-89	1000	391447076554707	300LCRV	GW	4040	25.07	30.00	25	30
	12-14-89	1126		300LCRV	GW	4040	25.91	30.00	25	30
	01-11-90	1115		300LCRV	GW	4040	26.41	30.00	25	30
	02-13-90	0920		300LCRV	GW	4040	26.56	30.00	25	30
	03-19-90	1155		300LCRV	GW	4040	26.20	30.00	25	30
	04-24-90	0845		300LCRV	GW	4040	26.22	30.00	25	30
	05-16-90	0837		300LCRV	GW	4040	26.16	30.00	25	30
	06-19-90	0815		300LCRV	GW	4040	25.98	30.00	25	30
	07-24-90	0830		300LCRV	GW	4040	26.36	30.00	25	30
	08-16-90	0828		300LCRV	GW	4040	26.76	30.00	25	30
	09-26-90	0940		300LCRV	GW	4040	27.45	30.00	25	30
HO Cd 342	11-02-89	1115	391438076555001	300LCRV	GW	4040	20.22	25.00	20	25
	11-02-89	1120		300LCRV	GW	4040	20.22	25.00	20	25
	12-14-89	1323		300LCRV	GW	4040	20.73	25.00	20	25
	01-18-90	1010		300LCRV	GW	4040	21.00	25.00	20	25
	02-13-90	1050		300LCRV	GW	4040	20.16	25.00	20	25
	03-19-90	1500		300LCRV	GW	4040	20.24	25.00	20	25
	04-24-90	1020		300LCRV	GW	4040	19.78	25.00	20	25
	05-16-90	1025		300LCRV	GW	4040	19.77	25.00	20	25
	06-19-90	1025		300LCRV	GW	4040	19.88	25.00	20	25
	07-24-90	1040		300LCRV	GW	4040	21.04	25.00	20	25
	08-16-90	1000		300LCRV	GW	4040	21.51	25.00	20	25
	09-26-90	1030		300LCRV	GW	4040	22.65	25.00	20	25
HO Cd 344	05-22-90	1100	391448076575501	300STRS	GW	4040	--	245.00	45	245
HO Cd 384	11-20-89	1600	391135076571701	400BLMR	GW	4040	--	305.00	43	305
HO Cd 385	11-29-89	1400	391146076570701	300PGMT	GW	4040	--	100.00	19	100
HO Cd 386	02-13-90	1100	391214076573601	300LCRV	GW	4040	--	125.00	47	125
HO Cd 387	05-17-90	1030	391130076555901	400BLMR	GW	4040	--	400.00	46	400
HO Cd 388	05-08-90	1100	391441076551201	400BLMR	GW	4040	--	400.00	33	400
HO Cd 389	05-24-90	1400	391426076595701	300MRGR	GW	4040	--	165.00	53	165
HO Cd 390	01-11-90	1535	391441076555301	300LCRV	LYS	4030	--	--	3.5	3.5
	02-16-90	1145		300LCRV	LYS	4030	--	--	3.5	3.5
	03-20-90	1330		300LCRV	LYS	4030	--	--	3.5	3.5
	04-25-90	0815		300LCRV	LYS	4030	--	--	3.5	3.5
	05-17-90	0810		300LCRV	LYS	4030	--	--	3.5	3.5
	06-20-90	0755		300LCRV	LYS	4030	--	--	3.5	3.5
	07-25-90	0745		300LCRV	LYS	4030	--	--	3.5	3.5
	08-17-90	0750		300LCRV	LYS	4030	--	--	3.5	3.5
	09-27-90	1130		300LCRV	LYS	4030	--	--	3.5	3.5
HO Cd 391	10-13-89	1145	391441076555302	300LCRV	LYS	4030	--	--	7.0	7.0
	11-06-89	1330		300LCRV	LYS	4030	--	--	7.0	7.0
	12-15-89	1035		300LCRV	LYS	4030	--	--	7.0	7.0
	01-11-90	1545		300LCRV	LYS	4030	--	--	7.0	7.0
	02-14-90	0810		300LCRV	LYS	4030	--	--	7.0	7.0
	03-20-90	1335		300LCRV	LYS	4030	--	--	7.0	7.0
	04-25-90	0820		300LCRV	LYS	4030	--	--	7.0	7.0
	05-17-90	0815		300LCRV	LYS	4030	--	--	7.0	7.0
	06-02-90	0800		300LCRV	LYS	4030	--	--	7.0	7.0
	07-25-90	0750		300LCRV	LYS	4030	--	--	7.0	7.0
	08-17-90	0755		300LCRV	LYS	4030	--	--	7.0	7.0
	09-27-90	1135		300LCRV	LYS	4030	--	--	7.0	7.0

Geologic unit (aquifer): 300LCRV - Loch Raven Schist
300MRGR - Morgan Run Formation
300PGMT - Pegmatite Dikes
300STRS - Setters Formation
400BLMR - Baltimore Gneiss

Sampling method: 4030 - Suction pump
4040 - Submersible pump

Site type: GW - Groundwater
LYS - Lysimeter

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

HOWARD COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	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)
HO Cd 292	10-13-89	457	--	--	--	--	--	--	--	--
	11-06-89	457	--	--	141	--	--	--	--	--
	12-15-89	457	--	--	--	--	--	--	--	--
	01-11-90	457	--	--	--	--	--	--	--	--
	02-14-90	457	--	--	145	--	--	--	--	--
	03-20-90	457	--	--	--	--	--	--	--	--
	04-25-90	457	--	--	198	--	--	--	--	--
	05-17-90	457	--	--	147	--	--	--	--	--
	06-20-90	457	--	--	157	--	--	--	--	--
	07-25-90	457	--	--	178	--	--	--	--	--
	08-17-90	457	--	--	--	--	--	--	--	--
	09-27-90	457	--	--	177	--	--	--	--	--
HO Cd 341	11-02-89	453	15	0.5	46	5.75	13.5	4.3	--	--
	12-14-89	453	6	0.6	54	5.53	12.0	8.5	--	--
	01-11-90	453	15	1.0	58	5.67	12.0	8.3	--	--
	02-13-90	453	5	1.0	48	5.46	13.0	9.0	--	--
	03-19-90	453	10	0.9	64	4.13	13.0	15.7	--	--
	04-24-90	453	5	0.9	69	5.37	13.0	8.5	--	--
	05-16-90	453	5	0.8	66	--	12.5	6.9	--	--
	06-19-90	453	10	0.7	63	5.38	13.5	8.2	--	--
	07-24-90	453	5	0.8	55	5.29	15.0	10.3	--	--
	08-16-90	453	10	0.9	49	5.57	15.5	8.9	--	--
	09-26-90	453	5	1.0	32	5.45	15.5	9.1	--	--
HO Cd 342	11-02-89	434	6	1.0	75	6.02	12.0	5.7	--	--
	11-02-89	434	6	1.0	75	6.02	12.0	5.7	--	--
	12-14-89	434	8	0.8	76	5.95	11.5	7.3	--	--
	01-18-90	434	8	0.8	76	6.25	12.5	6.5	--	--
	02-13-90	434	5	1.0	80	6.00	12.0	8.6	--	--
	03-19-90	434	5	1.0	80	6.11	12.5	9.0	--	--
	04-24-90	434	10	1.0	78	6.10	12.5	7.8	--	--
	05-16-90	434	10	1	78	--	11.0	5.0	--	--
	06-19-90	434	10	1	76	5.81	12.5	7.9	--	--
	07-24-90	434	8	0.9	78	5.78	12.0	8.1	--	--
	08-16-90	434	5	0.9	80	6.01	12.0	7.9	--	--
	09-26-90	434	5	1.0	70	5.95	12.0	8.0	--	--
HO Cd 344	05-22-90	505	75	4.0	179	5.65	13.0	7.4	13	4.4
HO Cd 384	11-20-89	450	90	7.0	204	7.41	14.0	0.3	23	5.7
HO Cd 385	11-29-89	395	40	7.5	181	5.87	14.0	6.6	13	5.8
HO Cd 386	02-13-90	445	90	5.0	47	6.25	12.5	8.7	4.7	0.96
HO Cd 387	05-17-90	415	60	5.0	637	5.54	14.0	6.2	53	23
HO Cd 388	05-08-90	555	90	4.5	286	6.17	14.0	5.9	17	9.0
HO Cd 389	05-24-90	565	50	5.0	88	5.80	13.5	9.4	14	5.7
HO Cd 390	01-11-90	428	--	--	--	--	--	--	--	--
	02-16-90	428	--	--	135	--	--	--	--	--
	03-20-90	428	--	--	--	--	--	--	--	--
	04-25-90	428	--	--	170	--	--	--	--	--
	05-17-90	428	--	--	160	--	--	--	--	--
	06-20-90	428	--	--	319	--	--	--	--	--
	07-25-90	428	--	--	199	--	--	--	--	--
	08-17-90	428	--	--	--	--	--	--	--	--
	09-27-90	428	--	--	198	--	--	--	--	--
HO Cd 391	10-13-89	428	--	--	--	--	--	--	--	--
	11-06-89	428	--	--	142	--	--	--	--	--
	12-15-89	428	--	--	196	--	--	--	--	--
	01-11-90	428	--	--	--	--	--	--	--	--
	02-14-90	428	--	--	124	--	--	--	--	--
	03-20-90	428	--	--	--	--	--	--	--	--
	04-25-90	428	--	--	155	--	--	--	--	--
	05-17-90	428	--	--	144	--	--	--	--	--
	06-02-90	428	--	--	286	--	--	--	--	--
	07-25-90	428	--	--	299	--	--	--	--	--
	08-17-90	428	--	--	--	--	--	--	--	--
	09-27-90	428	--	--	272	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

HOWARD COUNTY, MARYLAND--Continued

LOCAL IDENT-I-FIER	DATE	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)	Solids, sum of consti-tuents, dis-solved (mg/L)
HO Cd 292	10-13-89	--	--	--	--	--	--	--	--	--
	11-06-89	--	--	--	--	--	--	--	--	--
	12-15-89	--	--	--	--	--	--	--	--	--
	01-11-90	--	--	--	--	--	--	--	--	--
	02-14-90	--	--	--	--	--	--	--	--	--
	03-20-90	--	--	--	--	--	--	--	--	--
	04-25-90	--	--	--	--	--	--	--	--	--
	05-17-90	--	--	--	--	--	--	--	--	--
	06-20-90	--	--	--	--	--	--	--	--	--
	07-25-90	--	--	--	--	--	--	--	--	--
	08-17-90	--	--	--	--	--	--	--	--	--
	09-27-90	--	--	--	--	--	--	--	--	--
HO Cd 341	11-02-89	--	--	--	--	--	--	--	--	--
	12-14-89	--	--	--	--	--	--	--	--	--
	01-11-90	--	--	--	--	--	--	--	--	--
	02-13-90	--	--	--	--	--	--	--	--	--
	03-19-90	--	--	--	--	--	--	--	--	--
	04-24-90	--	--	--	--	--	--	--	--	--
	05-16-90	--	--	--	--	--	--	--	--	--
	06-19-90	--	--	--	--	--	--	--	--	--
	07-24-90	--	--	--	--	--	--	--	--	--
	08-16-90	--	--	--	--	--	--	--	--	--
	09-26-90	--	--	--	--	--	--	--	--	--
HO Cd 342	11-02-89	--	--	--	--	--	--	--	--	--
	11-02-89	--	--	--	--	--	--	--	--	--
	12-14-89	--	--	--	--	--	--	--	--	--
	01-18-90	--	--	--	--	--	--	--	--	--
	02-13-90	--	--	--	--	--	--	--	--	--
	03-19-90	--	--	--	--	--	--	--	--	--
	04-24-90	--	--	--	--	--	--	--	--	--
	05-16-90	--	--	--	--	--	--	--	--	--
	06-19-90	--	--	--	--	--	--	--	--	--
	07-24-90	--	--	--	--	--	--	--	--	--
	08-16-90	--	--	--	--	--	--	--	--	--
	09-26-90	--	--	--	--	--	--	--	--	--
HO Cd 344	05-22-90	8.6	2.4	12	2.6	30	<0.10	21	123	90
HO Cd 384	11-20-89	6.4	4.5	90	14	3.3	0.10	30	133	136
HO Cd 385	11-29-89	11	1.9	26	32	8.8	0.10	28	122	117
HO Cd 386	02-13-90	2.8	1.2	23	1.0	2.0	0.10	13	40	35
HO Cd 387	05-17-90	17	5.4	33	1.3	160	0.20	27	446	308
HO Cd 388	05-08-90	13	3.1	37	2.5	36	0.10	28	190	131
HO Cd 389	05-24-90	8.1	4.6	24	9.4	11	<0.10	23	115	115
HO Cd 390	01-11-90	--	--	--	--	--	--	--	--	--
	02-16-90	--	--	--	--	--	--	--	--	--
	03-20-90	--	--	--	--	--	--	--	--	--
	04-25-90	--	--	--	--	--	--	--	--	--
	05-17-90	--	--	--	--	--	--	--	--	--
	06-20-90	--	--	--	--	--	--	--	--	--
	07-25-90	--	--	--	--	--	--	--	--	--
	08-17-90	--	--	--	--	--	--	--	--	--
	09-27-90	--	--	--	--	--	--	--	--	--
HO Cd 391	10-13-89	--	--	--	--	--	--	--	--	--
	11-06-89	--	--	--	--	--	--	--	--	--
	12-15-89	--	--	--	--	--	--	--	--	--
	01-11-90	--	--	--	--	--	--	--	--	--
	02-14-90	--	--	--	--	--	--	--	--	--
	03-20-90	--	--	--	--	--	--	--	--	--
	04-25-90	--	--	--	--	--	--	--	--	--
	05-17-90	--	--	--	--	--	--	--	--	--
	06-02-90	--	--	--	--	--	--	--	--	--
	07-25-90	--	--	--	--	--	--	--	--	--
	08-17-90	--	--	--	--	--	--	--	--	--
	09-27-90	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

HOWARD COUNTY, MARYLAND--Continued

LOCAL IDENT-I-FIER	DATE	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)	Phosphorous ortho, dissolved (mg/L as P)	Aluminum, dissolved (ug/L as Al)
HO Cd 292	10-13-89	<0.010	--	19.0	--	<0.010	0.30	--	--	--
	11-06-89	<0.010	--	17.0	--	<0.010	0.30	--	--	--
	12-15-89	<0.010	--	17.0	--	0.020	0.70	--	--	--
	01-11-90	<0.010	--	19.0	--	0.010	0.40	--	--	--
	02-14-90	<0.010	--	17.0	--	<0.010	1.2	--	--	--
	03-20-90	<0.010	--	19.0	--	<0.010	0.70	--	--	--
	04-25-90	<0.010	--	19.0	--	<0.010	0.70	--	--	--
	05-17-90	<0.010	--	14.0	--	<0.010	0.20	--	--	--
	06-20-90	<0.010	--	5.70	--	<0.010	<0.20	--	--	--
	07-25-90	<0.010	--	17.0	--	0.120	0.90	--	--	--
	08-17-90	<0.010	--	18.0	--	<0.010	0.40	--	--	--
	09-27-90	<0.010	--	17.0	--	0.010	0.70	--	<0.010	--
HO Cd 341	11-02-89	<0.010	--	2.20	--	<0.010	<0.20	--	--	--
	12-14-89	<0.010	--	2.80	--	<0.010	<0.20	--	--	--
	01-11-90	<0.010	--	2.20	--	<0.010	<0.20	--	--	--
	02-13-90	<0.010	--	2.00	--	<0.010	<0.20	--	--	--
	03-19-90	<0.010	--	2.20	--	<0.010	0.30	--	--	--
	04-24-90	<0.010	--	2.10	--	<0.010	<0.20	--	--	--
	05-16-90	<0.010	--	1.90	--	<0.010	<0.20	--	--	--
	06-19-90	<0.010	--	2.20	--	0.010	<0.20	--	--	--
	07-24-90	<0.010	--	2.00	--	0.020	0.20	--	--	--
	08-16-90	<0.010	--	2.20	--	<0.010	0.80	--	--	--
	09-26-90	<0.010	--	2.00	--	<0.010	<0.20	--	<0.010	--
HO Cd 342	11-02-89	<0.010	--	2.50	--	<0.010	<0.20	--	--	--
	11-02-89	<0.010	--	2.50	--	<0.010	0.20	--	--	--
	12-14-89	<0.010	--	3.00	--	<0.010	0.30	--	--	--
	01-18-90	<0.010	--	2.80	--	0.010	0.40	--	--	--
	02-13-90	<0.010	--	2.70	--	<0.010	<0.20	--	--	--
	03-19-90	<0.010	--	2.80	--	<0.010	<0.20	--	--	--
	04-24-90	<0.010	--	2.80	--	<0.010	<0.20	--	--	--
	05-16-90	<0.010	--	2.60	--	<0.010	<0.20	--	--	--
	06-19-90	<0.010	--	2.70	--	<0.010	0.50	--	--	--
	07-24-90	<0.010	--	3.10	--	0.020	0.40	--	--	--
	08-16-90	<0.010	--	3.30	--	<0.010	0.60	--	--	--
	09-26-90	<0.010	--	3.50	--	<0.010	0.60	--	0.020	--
HO Cd 344	05-22-90	--	5.00	--	<0.010	--	--	0.030	--	10
HO Cd 384	11-20-89	--	<0.100	--	0.020	--	--	<0.010	--	<10
HO Cd 385	11-29-89	--	2.00	--	<0.010	--	--	0.050	--	<10
HO Cd 386	02-13-90	--	--	--	--	--	--	--	--	<10
HO Cd 387	05-17-90	--	7.50	--	<0.010	--	--	0.020	--	<10
HO Cd 388	05-08-90	--	7.30	--	<0.010	--	--	0.030	--	<10
HO Cd 389	05-24-90	--	1.50	--	<0.010	--	--	<0.010	--	<10
HO Cd 390	01-11-90	<0.010	--	0.140	--	0.010	<0.20	--	--	--
	02-16-90	<0.010	--	0.180	--	<0.010	<0.20	--	--	--
	03-20-90	<0.010	--	0.100	--	<0.010	0.40	--	--	--
	04-25-90	<0.010	--	<0.100	--	<0.010	<0.20	--	--	--
	05-17-90	<0.010	--	<0.100	--	<0.010	<0.20	--	--	--
	06-20-90	<0.010	--	3.60	--	0.010	0.40	--	--	--
	07-25-90	<0.010	--	0.300	--	0.030	0.30	--	--	--
	08-17-90	<0.010	--	<0.100	--	0.020	0.30	--	--	--
	09-27-90	<0.010	--	<0.100	--	0.010	0.20	--	<0.010	--
HO Cd 391	10-13-89	<0.010	--	1.80	--	<0.010	0.30	--	--	--
	11-06-89	<0.010	--	1.60	--	0.050	0.20	--	--	--
	12-15-89	<0.010	--	2.50	--	0.030	0.30	--	--	--
	01-11-90	<0.010	--	1.80	--	0.020	0.40	--	--	--
	02-14-90	<0.010	--	1.30	--	<0.010	<0.20	--	--	--
	03-20-90	<0.010	--	2.20	--	<0.010	0.20	--	--	--
	04-25-90	<0.010	--	1.50	--	<0.010	<0.20	--	--	--
	05-17-90	<0.010	--	0.900	--	<0.010	0.50	--	--	--
	06-02-90	<0.010	--	5.30	--	0.030	0.40	--	--	--
	07-25-90	<0.010	--	4.80	--	0.020	0.50	--	--	--
	08-17-90	<0.010	--	2.60	--	0.010	0.50	--	--	--
	09-27-90	<0.010	--	2.70	--	0.020	0.80	--	<0.010	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

HOWARD COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	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)
HO Cd 344	05-22-90	81	<0.5	<1	<5	<3	30	11	<10	<4
HO Cd 384	11-20-89	29	<0.5	<1	<5	<3	<10	120	<10	4
HO Cd 385	11-29-89	71	<0.5	<1	<5	<3	20	14	<10	<4
HO Cd 386	02-13-90	11	<0.5	<1	<5	<3	30	12	<10	<4
HO Cd 387	05-17-90	380	<0.5	2	<5	<3	20	12	10	13
HO Cd 388	05-08-90	96	<0.5	<1	<5	<3	20	7	<10	8
HO Cd 389	05-24-90	28	<0.5	1	<5	<3	<10	19	<10	9

LOCAL IDENTIFIER	DATE	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)	Zinc, dissolved (ug/L as Zn)	Radon 222, total (pCi/L)	Carbon, organic total (mg/L as C)
HO Cd 344	05-22-90	3	<10	<10	2.0	110	<6	8	15000	0.1
HO Cd 384	11-20-89	110	<10	<10	<1.0	93	<6	5	19000	0.1
HO Cd 385	11-29-89	<1	<10	<10	<1.0	140	<6	4	--	0.5
HO Cd 386	02-13-90	3	<10	<10	1.0	21	<6	8	--	0.3
HO Cd 387	05-17-90	9	<10	20	<1.0	490	<6	10	9900	<0.1
HO Cd 388	05-08-90	13	<10	<10	<1.0	270	<6	<3	9300	<0.1
HO Cd 389	05-24-90	92	<10	<10	2.0	61	<6	47	2900	<0.1

LOCAL IDENTIFIER	DATE	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)
HO Cd 344	05-22-90	--	--	<0.10	--	--	--	--	--	--
HO Cd 384	11-20-89	--	--	<0.10	--	--	--	--	--	--
HO Cd 385	11-29-89	--	--	<0.10	--	--	--	--	--	--
HO Cd 386	02-13-90	--	--	<0.10	--	--	--	--	--	--
HO Cd 387	05-17-90	--	--	<0.10	--	--	--	--	--	--
HO Cd 388	05-08-90	--	--	<0.10	--	--	--	--	--	--
HO Cd 389	05-24-90	--	--	<0.10	--	--	--	--	--	--

LOCAL IDENTIFIER	DATE	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)	Metolachlor, water, whole, Tot.Rec (ug/L)
HO Cd 344	05-22-90	--	--	<0.10	<0.10	<0.10	<0.10	<0.5	<0.1
HO Cd 384	11-20-89	--	--	<0.10	<0.10	<0.10	<0.10	<0.5	<0.1
HO Cd 385	11-29-89	--	--	<0.10	<0.10	<0.10	<0.10	<0.5	<0.1
HO Cd 386	02-13-90	--	--	<0.10	<0.10	<0.10	<0.10	--	<0.1
HO Cd 387	05-17-90	--	--	<0.10	<0.10	<0.10	<0.10	<0.5	0.2
HO Cd 388	05-08-90	--	--	<0.10	<0.10	<0.10	<0.10	<0.5	<0.1
HO Cd 389	05-24-90	--	--	<0.10	<0.10	<0.10	<0.10	<0.5	<0.1

LOCAL IDENTIFIER	DATE	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 344	05-22-90	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Cd 384	11-20-89	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Cd 385	11-29-89	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Cd 386	02-13-90	<0.1	<0.1	<0.1	<0.10	--	--	<0.10	<0.1
HO Cd 387	05-17-90	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Cd 388	05-08-90	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Cd 389	05-24-90	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

HOWARD COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	TIME	STATION NUMBER	GEOLOGIC UNIT	Sampling method, codes	Depth below land surface (water level) (ft)	Depth of well, total (ft)	Depth to top of sample interval (ft)	Depth to bottom of sample interval (ft)
HO Ce 83	11-08-89	1415	391001076542401	300OELL	4040	--	165.00	68	165
HO Ce 117	11-01-89	1430	391149076540101	300OELL	4040	--	500.00	28	500
HO Ce 126	04-05-90	0930	391138076532401	300GLFD	4040	--	120.00	62	120
	04-05-90	0940		300GLFD	4040	--	120.00	62	120
HO Ce 163	05-03-90	1010	391438076505801	300OELL	4040	--	160.00	65	160
HO Ce 183	04-17-90	1000	391004076540301	300GLFD	4040	--	340.00	71	340
HO Cf 79	04-05-90	1215	391428076455201	300MWSG	4040	--	178.00	63	178
HO Cf 105	04-17-90	1500	391424076473001	300MWSG	4040	--	100.00	86	100
HO Cf 112	04-10-90	1530	391216076480101	300MWSG	4040	--	150.00	27	150
HO Cf 121	01-24-90	1100	391339076461001	300MWSG	4040	--	360.00	50	360
HO Cf 122	04-24-90	1400	391047076451301	300RELY	4040	--	175.00	22	175
HO Cg 34	05-10-90	1300	391153076433401	300RELY	4040	--	300.00	96	300
HO Dd 40	05-29-90	1000	390849076563201	300LCRV	4040	--	240.00	29	240
HO Dd 97	01-09-90	1430	390936076581702	300LCRV	4040	--	300.00	--	300
HO De 85	05-22-90	1430	390800076541601	300OELL	4040	--	225.00	61	225

LOCAL IDENTIFIER	DATE	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)
HO Ce 83	11-08-89	455	90	5.0	42	5.98	14.0	8.9	2.6	1.7
HO Ce 117	11-01-89	275	90	10	245	7.58	15.0	1.7	25	4.5
HO Ce 126	04-05-90	350	40	4.5	90	6.40	13.5	5.6	7.8	2.6
	04-05-90	350	40	4.5	90	6.40	13.5	5.6	8.0	2.7
HO Ce 163	05-03-90	365	40	9.0	95	5.46	13.0	9.1	8.1	2.1
HO Ce 183	04-17-90	425	15	5.5	115	6.90	13.5	5.6	8.2	4.4
HO Cf 79	04-05-90	400	55	2.0	83	6.13	12.0	7.2	7.3	2.9
HO Cf 105	04-17-90	465	35	6.0	96	6.06	12.5	5.2	7.8	3.8
HO Cf 112	04-10-90	375	30	4.0	166	7.14	13.5	1.8	18	6.2
HO Cf 121	01-24-90	405	70	6.0	24	7.13	13.0	0.1	33	6.2
HO Cf 122	04-24-90	135	80	6.0	174	6.10	13.0	0.1	7.2	4.5
HO Cg 34	05-10-90	170	75	5.5	367	6.80	14.0	0.1	15	5.9
HO Dd 40	05-29-90	430	120	5.0	77	5.75	14.0	5.1	8.7	1.5
HO Dd 97	01-09-90	400	90	6.0	161	6.51	13.0	5.1	17	3.1
HO De 85	05-22-90	345	100	5.0	78	5.70	13.5	8.4	4.9	2.4

LOCAL IDENTIFIER	DATE	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)	Solids, sum of constituents, dissolved (mg/L)
HO Ce 83	11-08-89	2.7	0.80	20	<1.0	1.6	0.10	20	32	--
HO Ce 117	11-01-89	18	1.5	75	33	7.8	0.40	25	151	160
HO Ce 126	04-05-90	5.4	1.3	28	<1.0	5.1	<0.10	28	79	--
	04-05-90	5.5	1.2	28	<1.0	5.2	<0.10	29	78	--
HO Ce 163	05-03-90	6.6	2.0	39	<1.0	6.5	<0.10	23	66	--
HO Ce 183	04-17-90	7.7	2.2	48	7.0	1.6	<0.10	26	85	86
HO Cf 79	04-05-90	5.2	0.70	33	2.7	2.0	<0.10	32	78	73
HO Cf 105	04-17-90	4.8	1.1	38	1.4	4.6	<0.10	30	75	75
HO Cf 112	04-10-90	3.8	2.8	56	5.2	11	0.10	33	112	115
HO Cf 121	01-24-90	4.2	2.7	115	12	3.5	0.20	45	170	170
HO Cf 122	04-24-90	7.7	2.5	75	7.9	7.5	0.20	38	84	118
HO Cg 34	05-10-90	49	3.5	150	41	5.1	0.50	25	226	232
HO Dd 40	05-29-90	3.2	1.5	27	2.8	2.0	0.10	18	56	55
HO Dd 97	01-09-90	4.2	1.4	57	4.0	3.1	<0.10	15	86	81
HO De 85	05-22-90	4.3	1.2	11	<1.0	8.5	<0.10	15	50	--

Geologic unit (aquifer): 300GLFD - Guilford Quartz Monzonite
300LCRV - Loch Raven Schist
300MWSG - Mount Washington Amphibolite
300OELL - Oella Formation
300RELY - Relat Gneiss Member of James Run Formation

Sampling method: 4040 - Submersible pump

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

HOWARD COUNTY, MARYLAND--Continued

LOCAL IDENT-I-FIER	DATE	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)	Phosphorous ortho, dissolved (mg/L as P)	Aluminum, dissolved (ug/L as Al)
HO Ce 83	11-08-89	--	0.900	--	<0.010	--	--	0.060	--	<10
HO Ce 117	11-01-89	--	<0.100	--	<0.010	--	--	0.010	--	10
HO Ce 126	04-05-90	--	2.50	--	<0.010	--	--	0.040	--	<10
	04-05-90	--	2.50	--	<0.010	--	--	0.040	--	<10
HO Ce 163	05-03-90	--	1.40	--	<0.010	--	--	1.30	--	<10
HO Ce 183	04-17-90	--	<0.100	--	<0.010	--	--	0.040	--	<10
HO Cf 79	04-05-90	--	1.10	--	<0.010	--	--	0.020	--	<10
HO Cf 105	04-17-90	--	1.10	--	<0.010	--	--	0.030	--	<10
HO Cf 112	04-10-90	--	0.800	--	<0.010	--	--	1.80	--	<10
HO Cf 121	01-24-90	--	<0.100	--	0.050	--	--	0.020	--	20
HO Cf 122	04-24-90	--	<0.100	--	0.010	--	--	0.090	--	<10
HO Cg 34	05-10-90	--	<0.100	--	0.050	--	--	0.020	--	<10
HO Dd 40	05-29-90	--	1.00	--	<0.010	--	--	0.030	--	<10
HO Dd 97	01-09-90	--	1.10	--	0.010	--	--	0.030	--	<10
HO De 85	05-22-90	--	3.50	--	0.030	--	--	<0.010	--	<10

LOCAL IDENT-I-FIER	DATE	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)
HO Ce 83	11-08-89	17	<0.5	<1	20	<3	20	31	10	<4
HO Ce 117	11-01-89	27	<0.5	<1	<5	<3	<10	9	<10	17
HO Ce 126	04-05-90	3	<0.5	<1	<5	<3	<10	9	10	<4
	04-05-90	3	<0.5	<1	<5	<3	<10	7	10	<4
HO Ce 163	05-03-90	61	<0.5	<1	<5	<3	<10	7	<10	<4
HO Ce 183	04-17-90	36	<0.5	1	<5	<3	20	19	<10	26
HO Cf 79	04-05-90	3	<0.5	<1	<5	<3	<10	20	<10	<4
HO Cf 105	04-17-90	28	<0.5	1	<5	<3	10	24	<10	<4
HO Cf 112	04-10-90	120	<0.5	<1	<5	<3	<10	81	<10	12
HO Cf 121	01-24-90	66	<0.5	<1	<5	20	<10	2000	<10	11
HO Cf 122	04-24-90	320	<0.5	3	<5	30	<10	18000	10	8
HO Cg 34	05-10-90	52	<0.5	2	<5	<3	<10	19	<10	12
HO Dd 40	05-29-90	8	<0.5	<1	<5	<3	<10	57	<10	5
HO Dd 97	01-09-90	12	<0.5	<1	<5	<3	60	24	<10	<4
HO De 85	05-22-90	29	<0.5	<1	<5	<3	20	44	<10	<4

LOCAL IDENT-I-FIER	DATE	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)	Zinc, dissolved (ug/L as Zn)	Radon 222, total (pCi/L)	Carbon, organic total (mg/L as C)
HO Ce 83	11-08-89	8	<10	<10	2.0	21	<6	8	1900	<0.1
HO Ce 117	11-01-89	14	<10	<10	<1.0	150	<6	<3	7100	0.2
HO Ce 126	04-05-90	25	<10	<10	<1.0	42	<6	<3	--	1.2
	04-05-90	27	<10	<10	<1.0	45	<6	5	3600	<0.1
HO Ce 163	05-03-90	3	<10	<10	<1.0	97	<6	<3	2000	0.1
HO Ce 183	04-17-90	14	<10	<10	1.0	84	<6	11	5100	<0.1
HO Cf 79	04-05-90	4	<10	<10	<1.0	32	<6	8	2500	<0.1
HO Cf 105	04-17-90	5	<10	<10	<1.0	81	<6	21	4600	<0.1
HO Cf 112	04-10-90	110	<10	<10	<1.0	110	<6	16	6000	<0.1
HO Cf 121	01-24-90	340	<10	<10	<1.0	160	<6	<3	2400	--
HO Cf 122	04-24-90	2400	<10	50	<1.0	45	<6	120	1600	<0.1
HO Cg 34	05-10-90	22	<10	<10	<1.0	150	<6	<3	2700	<0.1
HO Dd 40	05-29-90	2	<10	<10	<1.0	32	<6	6	2400	0.2
HO Dd 97	01-09-90	15	<10	<10	<1.0	82	<6	9	2100	0.3
HO De 85	05-22-90	16	<10	<10	<1.0	40	<6	21	6300	0.2

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

HOWARD COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	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)	Cis 1,3-dichloropropene total (ug/L)	Dichlorobromomethane total (ug/L)
HO Ce 83	11-08-89	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
HO Ce 117	11-01-89	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
HO Ce 126	04-05-90	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
	04-05-90	--	--	--	--	--	--	--	--	--
HO Ce 163	05-03-90	--	--	--	--	--	--	--	--	--
HO Ce 183	04-17-90	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
HO Cf 79	04-05-90	--	--	--	--	--	--	--	--	--
HO Cf 105	04-17-90	--	--	--	--	--	--	--	--	--
HO Cf 112	04-10-90	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
HO Cf 121	01-24-90	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
HO Cf 122	04-24-90	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
HO Cg 34	05-10-90	--	--	--	--	--	--	--	--	--
HO Dd 40	05-29-90	--	--	--	--	--	--	--	--	--
HO Dd 97	01-09-90	--	--	--	--	--	--	--	--	--
HO De 85	05-22-90	--	--	--	--	--	--	--	--	--

LOCAL IDENTIFIER	DATE	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)	Toluene total (ug/L)
HO Ce 83	11-08-89	<0.2	<0.20	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20
HO Ce 117	11-01-89	3.4	<0.20	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20
HO Ce 126	04-05-90	<0.2	<0.20	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20
	04-05-90	--	--	--	--	--	--	--	--	--
HO Ce 163	05-03-90	--	--	--	--	--	--	--	--	--
HO Ce 183	04-17-90	<0.2	<0.20	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20
HO Cf 79	04-05-90	--	--	--	--	--	--	--	--	--
HO Cf 105	04-17-90	--	--	--	--	--	--	--	--	--
HO Cf 112	04-10-90	<0.2	<0.20	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20
HO Cf 121	01-24-90	<0.2	<0.20	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20
HO Cf 122	04-24-90	<0.2	<0.20	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20
HO Cg 34	05-10-90	--	--	--	--	--	--	--	--	--
HO Dd 40	05-29-90	--	--	--	--	--	--	--	--	--
HO Dd 97	01-09-90	--	--	--	--	--	--	--	--	--
HO De 85	05-22-90	--	--	--	--	--	--	--	--	--

LOCAL IDENTIFIER	DATE	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)
HO Ce 83	11-08-89	<0.2	<0.2	--	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20
HO Ce 117	11-01-89	<0.2	<0.2	--	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20
HO Ce 126	04-05-90	<0.2	<0.2	--	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20
	04-05-90	--	--	<0.10	--	--	--	--	--	--
HO Ce 163	05-03-90	--	--	<0.10	--	--	--	--	--	--
HO Ce 183	04-17-90	<0.2	<0.2	--	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20
HO Cf 79	04-05-90	--	--	<0.10	--	--	--	--	--	--
HO Cf 105	04-17-90	--	--	<0.10	--	--	--	--	--	--
HO Cf 112	04-10-90	<0.2	<0.2	--	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20
HO Cf 121	01-24-90	<0.2	<0.2	--	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20
HO Cf 122	04-24-90	<0.2	<0.2	--	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20
HO Cg 34	05-10-90	--	--	<0.10	--	--	--	--	--	--
HO Dd 40	05-29-90	--	--	<0.10	--	--	--	--	--	--
HO Dd 97	01-09-90	--	--	--	--	--	--	--	--	--
HO De 85	05-22-90	--	--	<0.10	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

HOWARD COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	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)
HO Ce 83	11-08-89	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
HO Ce 117	11-01-89	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
HO Ce 126	04-05-90	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
	04-05-90	--	--	--	--	--	--	--	--
HO Ce 163	05-03-90	--	--	--	--	--	--	--	--
HO Ce 183	04-17-90	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
HO Cf 79	04-05-90	--	--	--	--	--	--	--	--
HO Cf 105	04-17-90	--	--	--	--	--	--	--	--
HO Cf 112	04-10-90	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
HO Cf 121	01-24-90	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
HO Cf 122	04-24-90	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
HO Cg 34	05-10-90	--	--	--	--	--	--	--	--
HO Dd 40	05-29-90	--	--	--	--	--	--	--	--
HO Dd 97	01-09-90	--	--	--	--	--	--	--	--
HO De 85	05-22-90	--	--	--	--	--	--	--	--

LOCAL IDENTIFIER	DATE	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)	Metolachlor, water, whole, Tot.Rec (ug/L)
HO Ce 83	11-08-89	<0.20	<0.20	--	--	--	--	--	--
HO Ce 117	11-01-89	<0.20	<0.20	--	--	--	--	--	--
HO Ce 126	04-05-90	<0.20	<0.20	--	--	--	--	--	--
	04-05-90	--	--	<0.10	<0.10	<0.10	<0.10	<0.5	<0.1
HO Ce 163	05-03-90	--	--	<0.10	<0.10	<0.10	<0.10	<0.5	<0.1
HO Ce 183	04-17-90	<0.20	<0.20	--	--	--	--	--	--
HO Cf 79	04-05-90	--	--	<0.10	<0.10	<0.10	<0.10	<0.5	<0.1
HO Cf 105	04-17-90	--	--	<0.10	<0.10	<0.10	<0.10	<0.5	<0.1
HO Cf 112	04-10-90	<0.20	<0.20	--	--	--	--	--	--
HO Cf 121	01-24-90	<0.20	<0.20	--	--	--	--	--	--
HO Cf 122	04-24-90	<0.20	<0.20	--	--	--	--	--	--
HO Cg 34	05-10-90	--	--	<0.10	<0.10	<0.10	<0.10	<0.5	<0.1
HO Dd 40	05-29-90	--	--	<0.10	<0.10	<0.10	<0.10	<0.5	<0.1
HO Dd 97	01-09-90	--	--	--	--	--	--	<0.5	--
HO De 85	05-22-90	--	--	<0.10	<0.10	<0.10	<0.10	<0.5	<0.1

LOCAL IDENTIFIER	DATE	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 83	11-08-89	--	--	--	--	--	--	--	--
HO Ce 117	11-01-89	--	--	--	--	--	--	--	--
HO Ce 126	04-05-90	--	--	--	--	--	--	--	--
	04-05-90	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Ce 163	05-03-90	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Ce 183	04-17-90	--	--	--	--	--	--	--	--
HO Cf 79	04-05-90	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Cf 105	04-17-90	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Cf 112	04-10-90	--	--	--	--	--	--	--	--
HO Cf 121	01-24-90	--	--	--	--	--	--	--	--
HO Cf 122	04-24-90	--	--	--	--	--	--	--	--
HO Cg 34	05-10-90	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Dd 40	05-29-90	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
HO Dd 97	01-09-90	--	--	--	--	<0.5	<0.50	--	--
HO De 85	05-22-90	<0.1	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

KENT COUNTY, MARYLAND

LOCAL IDENTIFIER	DATE	TIME	STATION NUMBER	GEOLOGIC UNIT	Sampling method, codes	Depth below land surface (water level) (ft)	Depth of well, total (ft)	Depth to top of sample interval (ft)	Depth to bottom of sample interval (ft)
KE Be 49	06-04-90	1100	391923075564301	112PCPC	4040	10.25	25.00	22	25
KE Be 50	06-05-90	1600	391851075561801	112PCPC	4040	8.36	22.00	20	22
KE Be 51	06-04-90	1600	391851075554401	112PCPC	4040	11.10	27.00	24	27
KE Be 52	06-05-90	1300	391810075555801	112PCPC	4040	16.18	36.00	33	36
KE Be 53	06-05-90	1400	391810075555802	112PCPC	4040	16.15	22.00	20	22
KE Be 59	06-04-90	1400	391832075560803	125AQUI	4040	10.17	26.50	24	27
KE Be 60	06-07-90	1200	391811075564901	125AQUI	4040	17.00	26.50	25	27
KE Be 61	06-05-90	1100	391810075555803	125AQUI	4040	16.13	50.50	48	51
KE Be 62	06-06-90	1500	391742075554801	125AQUI	4040	5.74	25.50	23	26
KE Be 63	06-06-90	1200	391721075554501	125AQUI	4040	3.51	39.40	37	40
KE Be 64	06-06-90	1400	391721075554502	125AQUI	4040	3.68	16.00	13	16

LOCAL IDENTIFIER	DATE	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)
KE Be 49	06-04-90	73.6	20	0.8	251	5.45	13.5	8.4	19	14
KE Be 50	06-05-90	70.2	25	0.3	--	4.99	13.5	10.6	31	22
KE Be 51	06-04-90	70.0	10	1.0	168	4.73	13.5	9.8	11	5.9
KE Be 52	06-05-90	74.7	10	1.0	--	5.04	14.0	9.4	11	7.2
KE Be 53	06-05-90	74.6	15	0.5	--	5.50	13.5	8.6	4.2	3.3
KE Be 59	06-04-90	71.4	15	0.8	276	5.99	13.5	8.0	23	14
KE Be 60	06-07-90	78.1	10	0.5	96	4.99	16.0	10.0	7.3	3.1
KE Be 61	06-05-90	74.6	35	0.5	--	5.09	14.0	10.8	8.1	2.4
KE Be 62	06-06-90	60.7	20	0.5	--	5.72	14.0	8.4	19	13
KE Be 63	06-06-90	45.1	20	1.0	--	5.26	14.0	10.5	4.4	1.4
KE Be 64	06-06-90	45.1	15	0.8	--	5.28	15.0	9.0	9.1	8.3

LOCAL IDENTIFIER	DATE	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)
KE Be 49	06-04-90	3.8	2.0	10	12	25	19	0.40	0.030	10
KE Be 50	06-05-90	10	1.5	5	6	100	46	0.40	0.040	16
KE Be 51	06-04-90	8.1	2.4	3	3	<1.0	16	<0.10	0.030	12
KE Be 52	06-05-90	4.5	3.0	5	6	<1.0	18	<0.10	0.030	12
KE Be 53	06-05-90	4.0	1.5	10	12	4.3	7.4	<0.10	0.050	8.8
KE Be 59	06-04-90	8.8	2.2	22	27	18	32	0.40	0.020	10
KE Be 60	06-07-90	3.4	2.2	12	14	<1.0	8.2	<0.10	0.040	10
KE Be 61	06-05-90	5.0	2.4	3	4	<1.0	11	<0.10	0.030	11
KE Be 62	06-06-90	3.9	2.6	10	12	20	11	<0.10	0.020	7.5
KE Be 63	06-06-90	4.5	1.8	4	5	<1.0	5.7	<0.10	<0.010	11
KE Be 64	06-06-90	5.2	2.6	4	5	3.1	17	<0.10	0.020	11

Geologic unit (aquifer): 112PCPC - Pleistocene-Pliocene Series
125AQUI - Aquia Formation

Sampling method: 4040 - Submersible pump

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

KENT COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	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)
KE Be 49	06-04-90	162	--	<0.010	14.0	0.070	0.40	<0.010	<10	<1
KE Be 50	06-05-90	390	--	<0.010	36.0	<0.010	0.50	0.020	30	<1
KE Be 51	06-04-90	--	--	<0.010	13.0	<0.010	0.30	<0.010	<10	<1
KE Be 52	06-05-90	--	--	<0.010	13.0	<0.010	1.0	0.020	10	<1
KE Be 53	06-05-90	53	3.08	0.020	3.10	<0.010	<0.20	<0.010	<10	<1
KE Be 59	06-04-90	175	--	<0.010	12.0	0.010	0.60	<0.010	<10	<1
KE Be 60	06-07-90	--	--	<0.010	5.60	<0.010	0.90	<0.010	<10	<1
KE Be 61	06-05-90	--	--	<0.010	7.40	<0.010	0.60	<0.010	10	<1
KE Be 62	06-06-90	150	--	<0.010	15.0	<0.010	0.80	<0.010	<10	<1
KE Be 63	06-06-90	--	--	<0.010	5.00	<0.010	0.50	<0.010	<10	<1
KE Be 64	06-06-90	112	--	<0.010	12.0	<0.010	0.50	<0.010	30	<1

LOCAL IDENTIFIER	DATE	Arsenic, dissolved (ug/L as As)	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)	Iron, dissolved (ug/L as Fe)
KE Be 49	06-04-90	<1	120	<0.5	<10	<1	<5	3	<10	200
KE Be 50	06-05-90	<1	140	<0.5	<10	<1	<5	4	<10	<4
KE Be 51	06-04-90	<1	140	<0.5	<10	<1	<5	<3	<10	<5
KE Be 52	06-05-90	<1	160	<0.5	<10	<1	<5	6	<10	<5
KE Be 53	06-05-90	<1	35	<0.5	<10	<1	<5	<3	<10	<3
KE Be 59	06-04-90	<1	78	<0.5	<10	<1	<5	<3	<10	<7
KE Be 60	06-07-90	<1	58	<0.5	<10	<1	<5	<3	<10	<3
KE Be 61	06-05-90	<1	69	<0.5	<10	<1	<5	<3	<10	<7
KE Be 62	06-06-90	<1	79	<0.5	<10	<1	<5	<3	<10	<4
KE Be 63	06-06-90	<1	60	<0.5	<10	<1	<5	<3	<10	<3
KE Be 64	06-06-90	<1	170	0.5	<10	<1	<5	<3	<10	61

LOCAL IDENTIFIER	DATE	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)	Selenium, dissolved (ug/L as SE)	Silver, dissolved (ug/L as Ag)	Strontium, dissolved (ug/L as Sr)	Vanadium, dissolved (ug/L as V)
KE Be 49	06-04-90	<10	<4	310	<10	<10	12	1.0	190	<6
KE Be 50	06-05-90	10	<4	74	<10	<10	<1	1.0	320	<6
KE Be 51	06-04-90	<10	<4	24	<10	<10	<1	<1.0	120	<6
KE Be 52	06-05-90	10	<4	92	<10	<10	<1	1.0	120	<6
KE Be 53	06-05-90	10	<4	4	<10	<10	1	1.0	31	<6
KE Be 59	06-04-90	10	<4	21	<10	<10	8	1.0	170	<6
KE Be 60	06-07-90	<10	<4	16	<10	<10	<1	<1.0	74	<6
KE Be 61	06-05-90	<10	<4	27	<10	<10	<1	<1.0	25	<6
KE Be 62	06-06-90	<10	<4	2	<10	<10	1	<1.0	120	<6
KE Be 63	06-06-90	<10	<4	15	<10	<10	<1	<1.0	27	<6
KE Be 64	06-06-90	<10	<4	30	<10	<10	<1	<1.0	97	<6

LOCAL IDENTIFIER	DATE	Zinc, dissolved (ug/L as Zn)	Radon 222, total (pCi/L)	Carbon, organic dissolved (mg/L as C)	Trifluralin, total , recover (ug/L))
KE Be 49	06-04-90	8	--	2.2	<0.10
KE Be 50	06-05-90	5	480	0.7	<0.10
KE Be 51	06-04-90	6	350	--	<0.10
KE Be 52	06-05-90	12	950	0.6	<0.10
KE Be 53	06-05-90	<3	420	0.5	<0.10
KE Be 59	06-04-90	5	490	--	<0.10
KE Be 60	06-07-90	3	260	0.9	<0.10
KE Be 61	06-05-90	13	250	0.5	<0.10
KE Be 62	06-06-90	7	580	0.7	<0.10
KE Be 63	06-06-90	7	280	0.6	<0.10
KE Be 64	06-06-90	14	370	--	<0.10

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

QUEEN ANNES COUNTY, MARYLAND

LOCAL IDENTIFIER	DATE	TIME	STATION NUMBER	GEOLOGIC UNIT	Sampling method, codes	Depth below land surface (water level) (ft)	Depth of well, total (ft)	Depth to top of sample interval (ft)	Depth to bottom of sample interval (ft)
QA Be 20	07-11-90	1730	391042076011702	112CLMB	4040	3.70	22.00	19	22
QA Cg 1	06-26-90	1120	390841075515201	112WCML	4030	4.64	60.00	50	60
	08-16-90	1515		112WCML	4030	3.78	60.00	50	60
QA Db 14	05-16-90	1215	390055076184501	125AQUI	4010	--	165.00	145	165
QA Db 17	05-16-90	1100	390059076191801	125AQUI	4010	--	--	--	--
QA Db 19	11-14-89	1115	390211076183401	112PLSC	4040	23.00	60.00	55	60
QA Db 27	11-30-89	1310	390117076191301	125AQUI	4040	--	145.00	110	145
	02-21-90	1330		125AQUI	4040	--	145.00	110	145
	06-08-90	1425		125AQUI	4010	--	145.00	110	145
QA Db 30	11-14-89	1545	390201076182701	125AQUI	4040	16.90	220.00	210	220
	02-28-90	1430		125AQUI	4040	17.11	220.00	210	220
	05-16-90	1055		125AQUI	4040	18.90	220.00	210	220
	08-29-90	1140		125AQUI	4020	16.33	220.00	210	220
QA Db 32	11-14-89	1530	390201076182703	125AQUI	4040	16.86	116.00	106	116
	02-27-90	1240		125AQUI	4040	17.05	116.00	106	116
	05-16-90	1315		125AQUI	4040	16.22	116.00	106	116
	08-29-90	1205		125AQUI	4020	16.34	116.00	106	116
QA Db 34	12-01-89	1040	390023076174301	125AQUI	4040	8.83	180.00	170	180
	08-07-90	1230		125AQUI	4030	--	180.00	170	180
QA Db 35	11-30-89	1455	390119076191001	125AQUI	4040	8.79	200.00	190	200
	02-21-90	1515		125AQUI	4030	6.62	200.00	190	200
	06-08-90	1450		125AQUI	4040	7.20	200.00	190	200
	08-17-90	1300		125AQUI	4020	6.10	200.00	190	200
QA Db 36	11-14-89	1530	390201076182704	125AQUI	4030	16.50	180.00	170	180
	02-27-90	1215		125AQUI	4030	17.13	180.00	170	180
	08-29-90	1210		125AQUI	4020	16.21	180.00	170	180
QA Db 37	12-01-89	1200	390023076174302	125AQUI	4040	8.52	250.00	240	250
	06-08-90	1310		125AQUI	4040	8.09	250.00	240	250
	08-07-90	1445		125AQUI	4030	--	250.00	240	250
QA De 30	11-14-89	1100	390221076031401	125AQUI	4040	--	481.00	270	481
QA Ea 39	05-17-90	1015	385825076202901	125AQUI	4010	--	95.00	80	95
QA Ea 45	05-17-90	1245	385554076213801	125AQUI	4010	--	210.00	200	210
QA Ea 48	05-16-90	1345	385825076201201	125AQUI	4010	--	160.00	129	160
QA Ea 53	05-17-90	1030	385810076204101	125AQUI	4010	--	90.00	80	90
QA Ea 57	05-18-90	1030	385705076212301	125AQUI	4010	--	194.00	165	194
QA Ea 59	05-15-90	1245	385505076215001	125AQUI	4010	--	215.00	195	215
QA Ea 60	05-17-90	1200	385701076212501	125AQUI	4010	--	185.00	165	185
QA Ea 61	06-12-90	0950	385812076202801	125AQUI	4010	--	170.00	150	170
QA Ea 71	05-17-90	1115	385742076205801	125AQUI	4010	--	135.00	115	135
QA Ea 77	11-15-89	1232	385718076211501	125AQUI	4030	12.67	205.00	195	205
	02-20-90	1405		125AQUI	4030	13.33	205.00	195	205
	05-14-90	1340		125AQUI	4030	12.75	205.00	195	205
	08-24-90	1300		125AQUI	4020	12.65	205.00	195	205
QA Ea 78	11-15-89	1325	385718076211502	125AQUI	4030	12.74	135.00	125	135
	05-14-90	1335		125AQUI	4040	12.91	135.00	125	135
	06-12-90	1135		125AQUI	4040	13.10	135.00	125	135
	06-12-90	1158		125AQUI	4040	13.10	135.00	125	135
	08-13-90	1300		125AQUI	4030	12.97	135.00	125	135
QA Ea 79	11-15-89	1700	385757076200101	125AQUI	4030	10.10	298.00	288	298
	11-30-89	1215		125AQUI	4040	10.78	298.00	288	298
	05-14-90	1500		125AQUI	4040	13.11	298.00	288	298
	08-13-90	1330		125AQUI	4020	--	298.00	288	298
QA Ea 80	11-15-89	1615	385757076200102	125AQUI	4030	11.37	130.00	120	130
	08-13-90	1015		125AQUI	4030	11.10	130.00	120	130
QA Ea 81	11-15-89	1600	385718076211503	125AQUI	4040	11.85	310.00	300	310
	08-24-90	1145		125AQUI	4020	11.66	310.00	300	310
QA Eb 155	11-15-89	0955	385843076155302	125AQUI	4030	8.35	245.00	235	245
QA Eb 156	12-01-89	1525	385852076195201	125AQUI	4040	13.58	220.00	210	220
	02-27-90	1650		125AQUI	4030	13.84	220.00	210	220
	06-12-90	1315		125AQUI	4030	13.87	220.00	210	220
	08-07-90	1100		125AQUI	4030	--	220.00	210	220
QA Eb 157	12-01-89	1430	385852076195202	125AQUI	4040	12.75	120.00	110	120
	06-13-90	1100		125AQUI	4030	12.17	120.00	110	120
	08-07-90	1000		125AQUI	4030	--	120.00	110	120
QA Eb 163	01-04-90	1300	385834076172001	211MGTY	4040	--	714.00	690	714
	01-04-90	1305		211MGTY	--	--	714.00	--	--
QA Fa 49	05-15-90	1100	385354076212701	125AQUI	4010	--	210.00	185	210
QA Fa 64	05-15-90	1305	385454076214901	125AQUI	4010	--	231.00	191	231
QA Fa 72	09-20-90	0930	385254076201301	125AQUI	4010	--	220.00	200	220
QA Fc 7	01-25-90	1200	385429076120201	125AQUI	4040	26.10	356.00	336	356
	01-25-90	1205		125AQUI	--	--	356.00	--	--

Geologic unit (aquifer): 112CLMB - Columbia Formation
112PLSC - Pleistocene Series
112WCML - Wicomico Formation
125AQUI - Aquia Formation
211MGTY - Magothy Formation

Sampling method: 4010 - Thief sampler
4020 - Bailer
4030 - Suction pump
4040 - Submersible pump

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

QUEEN ANNES COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	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)	Calcium dissolved (mg/L as Ca)
QA Be 20	07-11-90	20.0	20	0.7	194	4.14	13.5	--	6.7	1.2
QA Cg 1	06-26-90	69.0	30	8.0	214	5.82	15.5	--	--	10
	08-16-90	69.0	25	8.9	204	5.63	16.0	--	--	11
QA Db 14	05-16-90	15.0	--	--	430	7.27	15.0	--	--	--
QA Db 17	05-16-90	20.0	--	--	590	7.28	15.0	--	--	--
QA Db 19	11-14-89	23.0	25	10	--	6.30	15.0	--	--	--
QA Db 27	11-30-89	15.0	25	10	--	7.19	14.0	--	--	--
	02-21-90	15.0	25	10	1310	7.25	14.5	--	--	--
	06-08-90	15.0	20	10	1250	7.08	15.0	--	--	--
QA Db 30	11-14-89	23.4	80	7.5	--	6.12	15.0	--	--	--
	02-28-90	23.4	270	1.5	14600	6.53	15.0	--	--	--
	05-16-90	23.4	45	10	15900	6.06	16.0	--	--	--
	08-29-90	23.4	50	9.0	18000	6.28	17.0	--	--	--
QA Db 32	11-14-89	21.2	130	1.5	--	6.70	14.0	--	--	--
	02-27-90	21.2	150	1.3	6920	6.76	13.5	--	--	--
	05-16-90	21.2	30	10	7200	6.69	15.0	--	6.7	--
	08-29-90	21.2	25	9.0	8000	6.81	16.0	--	--	--
QA Db 34	12-01-89	7.4	40	9.2	--	7.28	15.5	--	--	--
	08-07-90	7.4	90	4.0	500	7.30	17.0	--	--	--
QA Db 35	11-30-89	7.5	45	9.2	--	6.85	14.0	--	--	--
	02-21-90	7.5	220	2.3	15700	6.99	16.5	--	--	--
	06-08-90	7.5	45	8.0	14700	6.81	15.5	--	--	--
	08-17-90	7.5	120	4.0	19000	6.61	17.0	--	--	--
QA Db 36	11-14-89	21.3	225	4.4	--	6.60	16.0	--	--	--
	02-27-90	21.3	106	3.0	18300	6.73	16.0	--	--	--
	08-29-90	21.3	160	2.0	4800	8.78	17.0	--	--	--
QA Db 37	12-01-89	7.1	60	9.2	--	7.47	15.5	--	--	--
	06-08-90	7.1	60	8.0	558	7.56	16.5	--	--	--
	08-07-90	7.1	120	4.0	560	7.26	17.0	--	--	--
QA De 30	11-14-89	60.0	105	500	296	8.02	15.5	--	0.5	29
QA Ea 39	05-17-90	15.0	15	--	390	7.63	15.0	--	--	--
QA Ea 45	05-17-90	15.0	15	--	340	7.70	16.0	--	--	--
QA Ea 48	05-16-90	5.0	15	--	940	7.42	15.0	--	--	--
QA Ea 53	05-17-90	17.0	15	--	390	7.71	15.0	--	--	--
QA Ea 57	05-18-90	10.0	15	--	950	7.80	15.0	--	--	--
QA Ea 59	05-15-90	10.0	15	--	520	8.02	16.0	--	--	--
QA Ea 60	05-17-90	7.0	15	--	960	7.65	16.0	--	--	--
QA Ea 61	06-12-90	18.0	15	--	2300	7.26	16.0	--	--	--
QA Ea 71	05-17-90	20.0	15	--	490	7.74	16.0	--	--	--
QA Ea 77	11-15-89	11.0	62	6.5	--	6.91	16.0	--	--	--
	02-20-90	11.0	95	4.0	15400	7.25	16.0	--	--	--
	05-14-90	11.0	95	4.0	--	--	15.5	--	--	--
	08-24-90	11.0	45	10	17500	6.90	16.5	--	--	--
QA Ea 78	11-15-89	11.9	55	6.5	--	7.43	16.0	--	--	--
	05-14-90	11.9	35	10	--	--	15.5	--	--	--
	06-12-90	11.9	50	1.2	309	7.64	16.0	2	--	44
	06-12-90	11.9	50	1.2	--	--	--	--	--	--
	08-13-90	11.9	60	8.0	310	7.59	17.0	--	--	--
QA Ea 79	11-15-89	8.3	35	1.0	--	11.43	15.0	--	--	--
	11-30-89	8.3	45	9.2	--	9.97	15.0	--	--	--
	05-14-90	8.3	55	10	--	--	15.5	7	--	34
	08-13-90	8.3	60	8.0	330	9.40	17.0	--	--	--
QA Ea 80	11-15-89	8.5	75	5.0	--	7.70	15.0	--	--	--
	08-13-90	8.5	30	8.0	340	7.78	17.0	--	--	--
QA Ea 81	11-15-89	12.4	180	1.5	--	7.43	15.0	--	--	--
	08-24-90	12.4	60	10	410	7.81	17.5	--	--	--
QA Eb 155	11-15-89	3.9	60	7.5	--	7.74	15.0	--	--	--
QA Eb 156	12-01-89	7.5	45	9.2	--	6.71	15.0	--	--	--
	02-27-90	7.5	140	3.0	14500	7.24	16.0	--	--	--
	06-12-90	7.5	240	1.7	18000	6.89	19.0	--	--	--
	08-07-90	7.5	60	2.0	17500	6.70	17.0	--	--	--
QA Eb 157	12-01-89	11.9	30	9.2	--	7.19	15.0	--	--	--
	06-13-90	11.9	90	2.4	330	7.35	19.0	--	--	--
	08-07-90	11.9	40	8.0	330	7.18	16.0	--	--	--
QA Eb 163	01-04-90	15.0	260	12	218	6.48	17.5	--	1.7	0.04
QA Fa 49	05-15-90	8.0	15	--	790	7.58	16.0	--	--	--
QA Fa 64	05-15-90	5.0	15	--	800	7.84	17.0	--	--	--
QA Fa 72	09-20-90	12.0	15	--	440	6.88	16.5	--	--	--
QA Fc 7	01-25-90	10.0	91	8.0	306	7.79	16.0	--	0.3	16

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

QUEEN ANNES COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	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	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)
QA Be 20	07-11-90	11	2.6	4.3	0	0	<1.0	20	0.10	0.040
QA Cg 1	06-26-90	5.4	14	6.4	13	16	7.0	19	0.10	--
	08-16-90	5.0	14	6.2	12	15	14	19	<0.10	--
QA Db 14	05-16-90	--	--	--	--	--	--	14	--	0.050
QA Db 17	05-16-90	--	--	--	--	--	--	64	--	0.21
QA Db 19	11-14-89	--	--	--	--	--	--	340	--	1.2
QA Db 27	11-30-89	--	--	--	--	--	--	300	--	1.1
	02-21-90	--	--	--	--	--	--	300	--	1.0
	06-08-90	--	--	--	--	--	--	300	--	1.3
QA Db 30	11-14-89	--	--	--	--	--	--	6500	--	24
	02-28-90	--	--	--	--	--	--	5900	--	21
	05-16-90	--	--	--	--	--	--	6400	--	0.20
	08-29-90	--	--	--	--	--	--	5800	--	21
QA Db 32	11-14-89	--	--	--	--	--	--	2600	--	8.8
	02-27-90	--	--	--	--	--	--	2200	--	8.1
	05-16-90	--	--	--	--	--	--	2400	--	8.5
	08-29-90	--	--	--	--	--	--	2300	--	8.3
QA Db 34	12-01-89	--	--	--	--	--	--	9.4	--	0.080
	08-07-90	--	--	--	--	--	--	15	--	0.040
QA Db 35	11-30-89	--	--	--	--	--	--	5900	--	18
	02-21-90	--	--	--	--	--	--	6400	--	21
	06-08-90	--	--	--	--	--	--	6900	--	23
	08-17-90	--	--	--	--	--	--	6400	--	0.24
QA Db 36	11-14-89	--	--	--	--	--	--	--	--	--
	02-27-90	--	--	--	--	--	--	6900	--	24
	08-29-90	--	--	--	--	--	--	1300	--	4.6
QA Db 37	12-01-89	--	--	--	--	--	--	11	--	0.040
	06-08-90	--	--	--	--	--	--	15	--	0.020
	08-07-90	--	--	--	--	--	--	13	--	0.030
QA De 30	11-14-89	10	17	13	151	184	5.0	0.90	0.50	0.010
QA Ea 39	05-17-90	--	--	--	--	--	--	25	--	0.070
QA Ea 45	05-17-90	--	--	--	--	--	--	6.6	--	<0.010
QA Ea 48	05-16-90	--	--	--	--	--	--	210	--	0.72
QA Ea 53	05-17-90	--	--	--	--	--	--	14	--	0.040
QA Ea 57	05-18-90	--	--	--	--	--	--	240	--	0.80
QA Ea 59	05-15-90	--	--	--	--	--	--	100	--	0.30
QA Ea 60	05-17-90	--	--	--	--	--	--	220	--	0.60
QA Ea 61	06-12-90	--	--	--	--	--	--	650	--	--
QA Ea 71	05-17-90	--	--	--	--	--	--	45	--	0.16
QA Ea 77	11-15-89	--	--	--	--	--	--	5500	--	18
	02-20-90	--	--	--	--	--	--	5300	--	18
	05-14-90	--	--	--	--	--	--	5900	--	20
	08-24-90	--	--	--	--	--	--	5700	--	20
QA Ea 78	11-15-89	--	--	--	--	--	--	3.6	--	0.030
	05-14-90	--	--	--	--	--	--	5.6	--	0.010
	06-12-90	7.3	12	3.5	164	200	<1.0	7.9	0.20	--
	08-13-90	--	--	--	--	--	--	7.1	--	0.020
QA Ea 79	11-15-89	--	--	--	--	--	--	1.9	--	<0.010
	11-30-89	--	--	--	--	--	--	1.9	--	<0.010
	05-14-90	6.6	27	4.4	--	--	<1.0	<0.10	<0.10	<0.010
	08-13-90	--	--	--	--	--	--	6.0	--	0.010
QA Ea 80	11-15-89	--	--	--	--	--	--	2.0	--	0.030
	08-13-90	--	--	--	--	--	--	6.8	--	0.020
QA Ea 81	11-15-89	--	--	--	--	--	--	3.9	--	0.030
	08-24-90	--	--	--	--	--	--	26	--	0.090
QA Eb 155	11-15-89	--	--	--	--	--	--	4.5	--	0.030
QA Eb 156	12-01-89	--	--	--	--	--	--	5200	--	17
	02-27-90	--	--	--	--	--	--	5500	--	19
	06-12-90	--	--	--	--	--	--	7700	--	--
	08-07-90	--	--	--	--	--	--	6400	--	0.43
QA Eb 157	12-01-89	--	--	--	--	--	--	3.2	--	0.040
	06-13-90	--	--	--	--	--	--	5.6	--	--
	08-07-90	--	--	--	--	--	--	50	--	0.16
QA Eb 163	01-04-90	0.04	49	0.40	41	50	49	2.5	0.30	<0.010
QA Fa 49	05-15-90	--	--	--	--	--	--	120	--	0.41
QA Fa 64	05-15-90	--	--	--	--	--	--	190	--	0.56
QA Fa 72	09-20-90	--	--	--	--	--	9.2	15	1.0	0.060
QA Fc 7	01-25-90	9.0	32	13	161	196	4.0	1.4	1.1	<0.010

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

QUEEN ANNES COUNTY, MARYLAND--Continued

LOCAL IDENT-I-FIER	DATE	Silica, dissolved (mg/L as SiO2)	Solids, residue at 180 deg. C dissolved (mg/L)	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)	Nitrogen, NO2+NO3 dissolved (mg/L as N)	Nitrogen, ammonia dissolved (mg/L as N)	Nitrogen, ammonia + organic DIS. (mg/L as N)
QA Be 20	07-11-90	14	--	--	13.0	0.020	--	13.0	0.070	0.80
QA Cg 1	06-26-90	18	--	89	--	--	12.0	--	--	--
	08-16-90	19	--	96	--	--	11.0	--	--	--
QA De 30	11-14-89	18	--	187	--	<0.010	--	<0.100	0.600	0.80
QA Ea 78	06-12-90	24	186	--	--	--	<0.100	--	--	--
QA Ea 79	05-14-90	19	189	--	--	--	<0.100	--	--	--
QA Eb 163	01-04-90	9.0	--	137	--	<0.010	--	<0.100	<0.010	0.30
QA Fc 7	01-25-90	14	--	191	--	<0.010	--	0.500	0.370	0.40

LOCAL IDENT-I-FIER	DATE	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)	Beryllium, dissolved (ug/L as BE)	Boron, dissolved (ug/L as B)
QA Be 20	07-11-90	--	0.030	--	2200	<1	<1	560	6	<10
QA Cg 1	06-26-90	0.02	--	<10	<10	--	<1	210	0.8	--
	08-16-90	<0.01	--	<10	10	--	<1	210	0.9	--
QA De 30	11-14-89	--	0.020	--	<10	4	21	87	<0.5	150
QA Ea 78	06-12-90	0.04	--	<10	<10	--	5	67	<0.5	--
QA Ea 79	05-14-90	0.06	--	--	--	--	--	--	--	--
QA Eb 163	01-04-90	--	0.520	--	20	<1	<1	<2	<0.5	10
QA Fc 7	01-25-90	--	0.030	--	<10	<1	16	2	<0.5	320

LOCAL IDENT-I-FIER	DATE	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)	Lithium dissolved (ug/L as Li)
QA Be 20	07-11-90	--	<1	<5	9	<10	--	6	<10	6
QA Cg 1	06-26-90	40	<1	<1	<1	260	1000	230	<1	<4
	08-16-90	30	2	<1	1	150	270	73	<1	4
QA De 30	11-14-89	--	<1	<5	<3	<10	--	210	<10	14
QA Ea 78	06-12-90	40	<1	<1	1	1	1600	1100	<1	15
QA Ea 79	05-14-90	--	--	--	--	--	590	310	--	--
QA Eb 163	01-04-90	--	1	<5	<3	20	--	56	<10	<4
QA Fc 7	01-25-90	--	<1	<5	<3	<10	--	140	<10	17

LOCAL IDENT-I-FIER	DATE	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)
QA Be 20	07-11-90	--	270	<0.1	<10	10	<1	<1.0	56	<6
QA Cg 1	06-26-90	80	66	<0.1	<1	5	<1	--	--	<1
	08-16-90	60	65	<0.1	<1	4	<1	--	--	<1
QA De 30	11-14-89	--	3	<0.1	<10	<10	<1	<1.0	1300	<6
QA Ea 78	06-12-90	30	31	0.1	<1	<1	<1	--	--	<1
QA Ea 79	05-14-90	<10	3	--	--	--	--	--	--	--
QA Eb 163	01-04-90	--	<1	<0.1	<10	<10	<1	4.0	<1	<6
QA Fc 7	01-25-90	--	3	<0.1	<10	<10	<1	<1.0	750	<6

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

QUEEN ANNES COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	Zinc, dissolved (ug/L as Zn)	Radon 222, total (pCi/L)	Carbon, organic total (mg/L as C)	Carbon, organic dissolved (mg/L as C)	Pcn, dissolv (ug/L)	Bromoform, total (ug/L)	Benzene total (ug/L)	Carbon-tetrachloride, total (ug/L)	Chlorobenzene total (ug/L)
QA Be 20	07-11-90	110	--	--	0.8	--	--	--	--	--
QA Cg 1	06-26-90	79	--	0.4	--	<0.10	<3.0	<3.0	<3.0	<3.0
	08-16-90	79	--	0.5	--	<0.10	<3.0	<3.0	<3.0	<3.0
QA De 30	11-14-89	<3	220	--	0.6	--	--	--	--	--
QA Ea 78	06-12-90	<3	<80	0.9	--	<0.10	<3.0	<3.0	<3.0	<3.0
QA Ea 79	05-14-90	--	--	2.9	--	--	--	--	--	--
QA Eb 163	01-04-90	51	190	--	0.9	--	--	--	--	--
QA Fc 7	01-25-90	120	240	--	1.1	--	--	--	--	--

LOCAL IDENTIFIER	DATE	Chlorodibromomethane total (ug/L)	Chloroform, total (ug/L)	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)
QA Be 20	07-11-90	--	--	--	--	--	--	--	--	--
QA Cg 1	06-26-90	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	08-16-90	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
QA De 30	11-14-89	--	--	--	--	--	--	--	--	--
QA Ea 78	06-12-90	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
QA Ea 79	05-14-90	--	--	--	--	--	--	--	--	--
QA Eb 163	01-04-90	--	--	--	--	--	--	--	--	--
QA Fc 7	01-25-90	--	--	--	--	--	--	--	--	--

LOCAL IDENTIFIER	DATE	Methylene chloride, total (ug/L)	Styrene total (ug/L)	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)
QA Be 20	07-11-90	--	--	--	--	--	--	--	<0.10	--
QA Cg 1	06-26-90	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<0.10	<1.0
	08-16-90	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<0.10	<1.0
QA De 30	11-14-89	--	--	--	--	--	--	--	<0.10	--
QA Ea 78	06-12-90	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<0.10	<1.0
QA Ea 79	05-14-90	--	--	--	--	--	--	--	--	--
QA Eb 163	01-04-90	--	--	--	--	--	--	--	<0.10	--
QA Fc 7	01-25-90	--	--	--	--	--	--	--	<0.10	--

LOCAL IDENTIFIER	DATE	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)	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)
QA Be 20	07-11-90	--	--	--	--	--	--	--	--	--
QA Cg 1	06-26-90	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	08-16-90	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
QA De 30	11-14-89	--	--	--	--	--	--	--	--	--
QA Ea 78	05-14-90	--	--	--	--	--	--	--	--	--
QA EA 79	06-12-90	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
QA Eb 163	01-04-90	--	--	--	--	--	--	--	--	--
QA Fc 7	01-25-90	--	--	--	--	--	--	--	--	--

LOCAL IDENTIFIER	DATE	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)	PCB, dissolved (ug/L)	Gross Alpha, Dis-Solved (Ug/L As U-nat)	Gross Beta, Dis-Solved (Pci/L As Sr/Yt-90)	Gross Beta, Dis-Solved (Pci/L As Cs-137)
QA Be 20	07-11-90	--	--	--	--	--	--	--	--	--	--
QA Cg 1	06-26-90	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<0.01	--	--	--
	08-16-90	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<0.01	--	--	--
QA De 30	11-14-89	--	--	--	--	--	--	--	--	--	--
QA Ea 78	06-12-90	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<0.01	--	--	--
QA Ea 79	05-14-90	--	--	--	--	--	--	--	--	--	--
QA Eb 163	01-04-90	--	--	--	--	--	--	--	<0.4	0.5	0.6
QA Fc 7	01-25-90	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

SOMERSET COUNTY, MARYLAND

LOCAL IDENTIFIER	DATE	TIME	STATION NUMBER	GEOLOGIC UNIT	Sampling method, codes	Depth below land surface (water level) (ft)	Depth of well, total (ft)	Depth to top of sample interval (ft)	Depth to bottom of sample interval (ft)
SO Ce 95	10-02-89	1600	380921075423201	217PTMC	4010	7.15	1210	1140	1200

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)	Turbidity (ntu)	Calcium dissolved (mg/L as Ca)
13.0	330	395	1390	8.20	27.5	10	27	1.7

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)
1.0	330	7.7	654	800	37	40	3.6	0.13

Silica, dissolved (mg/L as SiO2)	Solids, residue at 180 deg. C dissolved (mg/L)	Solids, sum of constituents, dissolved (mg/L)	Phosphorous ortho, dissolved (mg/L as P)	Iron, total recoverable (ug/L as Fe)	Iron, dissolved (ug/L as Fe)	Manganese, dissolved (ug/L as Mn)	Carbon, organic total (mg/L as C)
12	829	828	0.370	120	110	9	1.0

Geologic unit (aquifer): 217PTMC - Potomac Group

Sampling method: 4010 - Thief sampler

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

TALBOT COUNTY, MARYLAND

LOCAL IDENTIFIER	DATE	TIME	STATION NUMBER	GEOLOGIC UNIT	Sampling method, codes	Depth below land surface (water level) (ft)	Depth of well, total (ft)	Depth to top of sample interval (ft)	Depth to bottom of sample interval (ft)
TA Bf 73	01-24-90	1700	385242075593101	124PNPN	4040	14.86	288.00	283	288
TA Ce 7	06-13-90	1125	384643076043801	122CLVR	4040	15.88	104.00	--	--
	08-16-90	1215		122CLVR	4040	25.94	104.00	--	--
TA Ce 70	01-30-90	1200	384717076044301	211MGTY	4040	--	1184	1140	1180

LOCAL IDENTIFIER	DATE	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)	Calcium dissolved (mg/L as Ca)
TA Bf 73	01-24-90	42.0	76	8.0	365	7.78	15.5	--	0.4	16
TA Ce 7	06-13-90	13.0	119	1.2	340	7.74	17.5	4	--	42
	08-16-90	13.0	30	10	340	7.74	16.5	--	--	41
TA Ce 70	01-30-90	25.0	28	1000	167	6.93	25.0	--	1.2	3.1

LOCAL IDENTIFIER	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	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)
TA Bf 73	01-24-90	10	49	12	207	252	2.0	2.4	0.30	0.010
TA Ce 7	06-13-90	12	16	5.2	184	225	3.1	4.7	0.30	--
	08-16-90	12	15	5.3	187	228	4.0	4.4	0.20	--
TA Ce 70	01-30-90	1.7	27	6.5	70	85	14	2.3	0.20	0.020

LOCAL IDENTIFIER	DATE	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)	Nitrogen, ammonia + organic DIS. (mg/L as N)	Phosphorous total (mg/L as P)
TA Bf 73	01-24-90	54	--	271	<0.010	--	<0.100	0.610	0.70	--
TA Ce 7	06-13-90	56	239	250	--	<0.100	--	--	--	<0.010
		58	--	252	--	<0.100	--	--	--	<0.010
TA Ce 70	01-30-90	11	--	109	<0.010	--	<0.100	0.210	<0.20	--

LOCAL IDENTIFIER	DATE	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)	Beryllium, dissolved (ug/L as BE)	Boron, dissolved (ug/L as B)	Boron, total recoverable (ug/L as B)
TA Bf 73	01-24-90	0.02	--	<10	<1	<1	<2	<0.5	140	--
TA Ce 7	06-13-90	--	<10	10	--	<1	3	<0.5	--	90
	08-16-90	--	30	<10	--	<1	7	<0.5	--	160
TA Ce 70	01-30-90	0.02	--	<10	<1	<1	77	<0.5	80	--

Geologic unit (aquifer): 122CLVR - Calvert Formation
124PNPN - Piney Point Formation
211MGTY - Magothy Formation

Sampling method: 4040 - Submersible pump

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

TALBOT COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	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)	Lithium dissolved (ug/L as Li)	Manganese, total recoverable (ug/L as Mn)
TA Bf 73	01-24-90	1	<5	<3	<10	--	110	<10	24	--
TA Ce 7	06-13-90	<1	<1	<1	3	2200	46	1	19	<10
	08-16-90	<1	<1	<1	4	240	61	<1	15	<10
TA Ce 70	01-30-90	<1	<5	8	<10	--	980	<10	<4	--

LOCAL IDENTIFIER	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)
TA Bf 73	01-24-90	17	<0.1	<10	<10	<1	<1.0	250	<6	<3
TA Ce 7	06-13-90	2	<0.1	<1	1	<1	--	--	<1	3
	08-16-90	2	<0.1	<1	<1	<1	--	--	<1	7
TA Ce 70	01-30-90	31	<0.1	<10	<10	<1	<1.0	160	<6	4

LOCAL IDENTIFIER	DATE	Radon 222, total (pCi/L)	Carbon, organic total (mg/L as C)	Carbon, organic dissolved (mg/L as C)	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)
TA Bf 73	01-24-90	470	--	0.7	--	--	--	--	--	--
TA Ce 7	06-13-90	280	0.3	--	<0.10	<3.0	<3.0	<3.0	<3.0	<3.0
	08-16-90	--	10	--	<0.10	<3.0	<3.0	<3.0	<3.0	<3.0
TA Ce 70	01-30-90	<80	--	0.7	--	--	--	--	--	--

LOCAL IDENTIFIER	DATE	Chloroform, total (ug/L)	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)
TA Bf 73	01-24-90	--	--	--	--	--	--	--	--	--
TA Ce 7	06-13-90	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	08-16-90	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
TA Ce 70	01-30-90	--	--	--	--	--	--	--	--	--

LOCAL IDENTIFIER	DATE	Styrene total (ug/L)	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)
TA Bf 73	01-24-90	--	--	--	--	--	--	<0.10	--	--
TA Ce 7	06-13-90	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<0.10	<1.0	<3.0
	08-16-90	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<0.10	<1.0	<3.0
TA Ce 70	01-30-90	--	--	--	--	--	--	--	--	--

LOCAL IDENTIFIER	DATE	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)	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)
TA Bf 73	01-24-90	--	--	--	--	--	--	--	--	--
TA Ce 7	06-13-90	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	08-16-90	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
TA Ce 70	01-30-90	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

TALBOT COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	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)	PCB, dissolve (ug/L
TA Bf 73	01-24-90	--	--	--	--	--	--
TA Ce 7	06-13-90	<3.0	<3.0	<3.0	<3.0	<3.0	<0.1
	08-16-90	<3.0	<3.0	<3.0	<3.0	<3.0	<0.1
TA Ce 70	01-30-90	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

WICOMICO COUNTY, MARYLAND

LOCAL IDENTIFIER	DATE	TIME	STATION NUMBER	GEOLOGIC UNIT	Sampling method, codes	Depth below land surface (water level) (ft)	Depth of well, total (ft)	Depth to top of sample interval (ft)	Depth to bottom of sample interval (ft)
WI Bd 68	10-04-89	1500	382748075441201	122MNKN	4040	3.72	100.00	98	100
WI Bh 2	06-12-90	1700	382511075203601	112PCPC	4040	3.69	11.00	9.0	11
WI Bh 4	06-13-90	1000	382543075212201	112PCPC	4040	5.05	12.00	10	12
WI Bh 5	06-13-90	1100	382543075212202	112PCPC	4040	6.65	33.00	30	33
WI Bh 8	06-11-90	1500	382609075210501	112PCPC	4040	6.50	13.00	11	13
WI Bh 9	06-11-90	1600	382609075210502	112PCPC	4040	4.30	41.00	38	41
WI Bh 11	06-13-90	1600	382626075201801	112PCPC	4040	1.60	34.00	31	34
WI Ce 13	05-30-90	1623	382150075352101	112BVDM	4040	3.72	65.00	45	65
	08-16-90	0930		112BVDM	4040	5.19	65.00	45	65
WI Cg 58	01-16-90	1530	382446075265701	122PCMK	4040	14.82	135.00	45	135
WI Ch 47	10-17-89	1330	382454075200701	122CSLD	4040	12.33	149.00	147	149
WI Ch 51	07-12-90	1400	382403075233202	112CLMB	4040	5.80	20.00	17	20
WI Ch 52	06-12-90	1100	382459075200301	112PCPC	4040	5.50	19.00	17	19
WI Ch 53	06-12-90	0900	382459075200302	112PCPC	4040	14.30	48.00	45	48
WI Ch 55	06-12-90	1400	382451075211902	112PCPC	4040	3.20	45.00	42	45
WI Ch 56	06-12-90	1300	382452075202901	112PCPC	4040	8.74	17.00	15	17
WI Ch 57	06-13-90	1300	382452075202902	112PCPC	4040	8.78	50.00	47	50

LOCAL IDENTIFIER	DATE	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)
WI Bd 68	10-04-89	25.0	--	1.3	89	6.28	15.5	0.6	6.9	1.3
WI Bh 2	06-12-90	38.0	10	0.5	170	5.69	15.0	0.3	19	6.6
WI Bh 4	06-13-90	40.0	10	0.5	125	5.07	16.0	0.3	10	3.9
WI Bh 5	06-13-90	40.0	35	0.5	88	5.55	18.5	0.4	2.7	1.1
WI Bh 8	06-11-90	38.0	15	0.5	284	5.96	14.5	0	6.7	3.5
WI Bh 9	06-11-90	38.0	20	0.8	158	6.26	14.0	0	4.7	1.7
WI Bh 11	06-13-90	40.0	20	0.8	135	6.04	14.0	0.4	9.8	1.5
WI Ce 13	05-30-90	7.0	68	1.2	131	5.75	16.0	--	8.1	1.9
	08-16-90	7.0	65	1.0	139	5.79	16.5	--	8.7	2.0
WI Cg 58	01-16-90	62.0	30	8.0	122	6.04	14.5	0.6	4.7	1.5
WI Ch 47	10-17-89	42.0	60	1.1	160	6.55	14.0	0.4	11	3.6
WI Ch 51	07-12-90	44.0	20	1.2	154	4.83	15.0	0.5	8.3	2.1
WI Ch 52	06-12-90	40.0	10	1.0	146	4.31	14.0	4.1	12	3.6
WI Ch 53	06-12-90	40.0	25	0.8	309	6.98	14.5	0.4	53	2.2
WI Ch 55	06-12-90	38.0	20	1.0	155	6.18	15.5	0.4	5.6	1.6
WI Ch 56	06-12-90	40.0	10	0.8	164	4.56	13.5	0.6	7.9	4.4
WI Ch 57	06-13-90	40.0	20	1.0	258	5.54	14.5	0.5	18	12

LOCAL IDENTIFIER	DATE	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)
WI Bd 68	10-04-89	5.8	1.1	28	34	4.0	4.0	0.10	0.020	27
WI Bh 2	06-12-90	2.8	1.7	66	80	24	6.2	0.20	<0.010	5.1
WI Bh 4	06-13-90	2.6	6.9	3	4	11	4.8	0.20	0.030	4.7
WI Bh 5	06-13-90	10	1.8	21	27	9.5	6.0	0.10	0.030	39
WI Bh 8	06-11-90	5.3	1.9	145	177	2.8	4.6	0.20	<0.010	44
WI Bh 9	06-11-90	8.8	0.90	76	93	<1.0	7.3	<0.10	<0.010	45
WI Bh 11	06-13-90	8.4	1.3	74	90	1.8	6.9	0.20	0.040	50
WI Ce 13	05-30-90	12	1.7	14	17	2.7	17	<0.10	--	25
	08-16-90	13	1.8	14	17	2.3	17	<0.10	--	26
WI Cg 58	01-16-90	9.5	1.2	50	60	<1.0	10	0.10	0.51	49
WI Ch 47	10-17-89	9.0	1.5	90	109	<1.0	6.4	0.10	0.010	31
WI Ch 51	07-12-90	12	4.2	2	3	<1.0	14	0.10	0.030	22
WI Ch 52	06-12-90	6.3	1.8	<1	<1	12	9.2	<0.10	0.020	8.0
WI Ch 53	06-12-90	6.5	0.90	147	179	<1.0	8.3	<0.10	0.030	55
WI Ch 55	06-12-90	10	1.7	76	93	<1.0	7.1	0.20	0.050	37
WI Ch 56	06-12-90	8.9	1.6	5	6	34	21	0.30	<0.010	12
WI Ch 57	06-13-90	19	3.1	45	55	30	33	0.10	--	7.8

Geologic unit (aquifer): 112BVDM - Beaverdam Sand
112CLMB - Columbia Formation
112PRBG - Parsonsburg Formation

Sampling method: 4040 - Submersible pump

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

WICOMICO COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	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)	Phosphorous total (mg/L as P)	Phosphorous ortho, dissolved (mg/L as P)	Aluminum, total recoverable (ug/L as Al)
WI Bd 68	10-04-89	70	<0.010	--	<0.100	0.020	0.20	--	0.040	--
WI Bh 2	06-12-90	118	<0.010	--	2.70	0.080	0.50	--	0.010	--
WI Bh 4	06-13-90	90	<0.010	--	9.80	0.030	0.60	--	<0.010	--
WI Bh 5	06-13-90	86	<0.010	--	<0.100	0.320	0.90	--	0.010	--
WI Bh 8	06-11-90	224	<0.010	--	1.50	<0.010	0.40	--	<0.010	--
WI Bh 9	06-11-90	--	<0.010	--	0.200	0.240	0.90	--	0.160	--
WI Bh 11	06-13-90	137	0.010	--	<0.100	2.00	2.6	--	0.170	--
WI Ce 13	05-30-90	77	--	6.20	--	--	--	0.010	--	<10
	08-16-90	80	--	6.70	--	--	--	<0.010	--	30
WI Cg 58	01-16-90	--	<0.010	--	<0.100	0.660	0.80	--	0.200	--
WI Ch 47	10-17-89	--	0.010	--	<0.100	0.520	0.70	--	<0.010	--
WI Ch 51	07-12-90	--	<0.010	--	5.70	<0.010	0.60	--	<0.010	--
WI Ch 52	06-12-90	--	<0.010	--	<0.100	3.40	3.8	--	0.120	--
WI Ch 53	06-12-90	--	<0.010	--	<0.100	2.90	3.5	--	0.480	--
WI Ch 55	06-12-90	--	0.010	--	<0.100	0.300	1.0	--	0.410	--
WI Ch 56	06-12-90	101	<0.010	--	1.20	0.020	0.70	--	<0.010	--
WI Ch 57	06-13-90	160	<0.010	--	2.00	0.050	0.80	--	<0.010	--

LOCAL IDENTIFIER	DATE	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)	Boron, total recoverable (ug/L as B)	Cadmium dissolved (ug/L as Cd)	Chromium, dissolved (ug/L as CR)
WI Bd 68	10-04-89	<10	<1	1	11	<0.5	10	--	<1	<5
WI Bh 2	06-12-90	30	<1	4	110	<0.5	30	--	<1	<5
WI Bh 4	06-13-90	40	<1	<1	88	<0.5	20	--	<1	<5
WI Bh 5	06-13-90	<10	<1	5	55	<0.5	10	--	1	<5
WI Bh 8	06-11-90	10	<1	<1	100	<0.5	20	--	6	<5
WI Bh 9	06-11-90	10	<1	5	38	<0.5	10	--	4	<5
WI Bh 11	06-13-90	210	<1	<1	21	<0.5	20	--	2	<5
WI Ce 13	05-30-90	<10	--	<1	61	<0.5	--	<10	1	<1
	08-16-90	<10	--	<1	63	<0.5	--	60	1	<1
WI Cg 58	01-16-90	<10	<1	<1	40	<0.5	<10	--	<1	<5
WI Ch 47	10-17-89	<10	<1	1	31	<0.5	20	--	2	<5
WI Ch 51	07-12-90	10	<1	<1	410	3	10	--	<1	<5
WI Ch 52	06-12-90	1600	<1	<1	240	0.7	20	--	<1	<5
WI Ch 53	06-12-90	20	<1	<1	9	<0.5	20	--	<1	<5
WI Ch 55	06-12-90	<10	<1	6	75	<0.5	<10	--	3	<5
WI Ch 56	06-12-90	2800	<1	<1	76	<0.5	20	--	3	<5
WI Ch 57	06-13-90	40	<1	<1	100	0.6	10	--	<1	<5

LOCAL IDENTIFIER	DATE	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)	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)
WI Bd 68	10-04-89	<3	<10	--	2400	10	<4	--	110	<0.1
WI Bh 2	06-12-90	<3	<10	--	940	<10	<4	--	49	--
WI Bh 4	06-13-90	<3	<10	--	6	<10	<4	--	30	--
WI Bh 5	06-13-90	20	<10	--	2200	<10	<4	--	44	--
WI Bh 8	06-11-90	<3	<10	--	61000	30	<4	--	290	--
WI Bh 9	06-11-90	3	<10	--	28000	<10	<4	--	260	--
WI Bh 11	06-13-90	<3	<10	--	9600	20	6	--	130	--
WI Ce 13	05-30-90	<1	240	1300	76	2	<4	<10	11	<0.1
	08-16-90	<1	230	3000	50	1	<4	<10	9	<0.1
WI Cg 58	01-16-90	98	<10	--	16000	<10	5	--	180	<0.1
WI Ch 47	10-17-89	<3	<10	--	27000	<10	<4	--	250	<0.1
WI Ch 51	07-12-90	130	<10	--	<3	<10	<4	--	100	<0.1
WI Ch 52	06-12-90	4	<10	--	36	<10	<4	--	110	--
WI Ch 53	06-12-90	<3	<10	--	1400	<10	7	--	84	--
WI Ch 55	06-12-90	5	<10	--	24000	10	<4	--	170	--
WI Ch 56	06-12-90	17	<10	--	320	<10	<4	--	4	--
WI Ch 57	06-13-90	23	<10	--	83	10	<4	--	98	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

WICOMICO COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	Molybdenum, dissolved (ug/L as Mo)	Nickel, dissolved (ug/L as Ni)	Selenium, dissolved (ug/L as SE)	Silver, dissolved (ug/L as Ag)	Strontium, dissolved (ug/L as Sr)	Vanadium, dissolved (ug/L as V)	Zinc, dissolved (ug/L as Zn)	Gross alpha, dissolved (ug/L AS U-nat)	Gross beta, dissolved (pCi/L AS CS-137)
WI Bd 68	10-04-89	<10	<10	<1	1.0	66	<6	<3	2.9	2.0
WI Bh 2	06-12-90	<10	<10	<1	<1.0	94	<6	<3	--	--
WI Bh 4	06-13-90	<10	<10	<1	<1.0	47	<6	4	--	--
WI Bh 5	06-13-90	<10	10	<1	<1.0	27	<6	62	--	--
WI Bh 8	06-11-90	<10	<10	<1	<1.0	95	7	<3	--	--
WI Bh 9	06-11-90	<10	<10	<1	<1.0	75	<6	<3	--	--
WI Bh 11	06-13-90	<10	<10	<1	2.0	54	<6	16	--	--
WI Ce 13	05-30-90	<1	1	<1	--	--	<1	280	--	--
	08-16-90	<1	<1	<1	--	--	<1	310	--	--
WI Cg 58	01-16-90	<10	<10	<1	<1.0	64	<6	5	--	--
WI Ch 47	10-17-89	<10	<10	<1	<1.0	140	<6	<3	1.9	1.8
WI Ch 51	07-12-90	<10	70	<1	<1.0	190	<6	450	--	--
WI Ch 52	06-12-90	<10	<10	<1	<1.0	91	<6	10	--	--
WI Ch 53	06-12-90	<10	<10	<1	2.0	180	<6	<3	--	--
WI Ch 55	06-12-90	<10	<10	<1	<1.0	82	<6	<3	--	--
WI Ch 56	06-12-90	<10	30	<1	1.0	16	<6	160	--	--
WI Ch 57	06-13-90	<10	20	<1	<1.0	190	<6	27	--	--

LOCAL IDENTIFIER	DATE	Radon 222, total (pCi/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)	Pcn, dissolv (ug/L)	Bromoform, total (ug/L)	Benzene total (ug/L)	Carbon tetrachloride, total (ug/L)
WI Bd 68	10-04-89	<80	1.6	<0.3	--	0.5	--	--	--	--
WI Bh 2	06-12-90	--	--	--	--	7.0	--	--	--	--
WI Bh 4	06-13-90	--	--	--	--	1.7	--	--	--	--
WI Bh 5	06-13-90	--	--	--	--	6.3	--	--	--	--
WI Bh 8	06-11-90	--	--	--	--	2.1	--	--	--	--
WI Bh 9	06-11-90	<80	--	--	--	9.1	--	--	--	--
WI Bh 11	06-13-90	130	--	--	--	6.8	--	--	--	--
WI Ce 13	05-30-90	200	--	--	0.2	--	<0.10	<3.0	<3.0	<3.0
	08-16-90	--	--	--	0.2	--	<0.10	<3.0	<3.0	<3.0
WI Cg 58	01-16-90	<80	--	--	--	3.2	--	<0.20	<0.20	<0.20
WI Ch 47	10-17-89	230	1.4	<0.3	--	4.3	--	--	--	--
WI Ch 51	07-12-90	--	--	--	--	0.7	--	<0.20	<0.20	<0.20
WI Ch 52	06-12-90	--	--	--	--	8.7	--	--	--	--
WI Ch 53	06-12-90	<80	--	--	--	7.2	--	--	--	--
WI Ch 55	06-12-90	--	--	--	--	13	--	--	--	--
WI Ch 56	06-12-90	120	--	--	--	5.4	--	--	--	--
WI Ch 57	06-13-90	170	--	--	--	6.1	--	--	--	--

LOCAL IDENTIFIER	DATE	Chlorobenzene total (ug/L)	Chlorodibromomethane total (ug/L)	Chloroform, total (ug/L)	Chloroethane, total (ug/L)	Cis 1,3-dichloropropene total (ug/L)	Dibromomethane water, whole, recover (ug/L)	Dichlorobromomethane total (ug/L)	Dichlorodifluoromethane total (ug/L)	Ethylbenzene total (ug/L)
WI Bd 68	10-04-89	--	--	--	--	--	--	--	--	--
WI Bh 2	06-12-90	--	--	--	--	--	--	--	--	--
WI Bh 4	06-13-90	--	--	--	--	--	--	--	--	--
WI Bh 5	06-13-90	--	--	--	--	--	--	--	--	--
WI Bh 8	06-11-90	--	--	--	--	--	--	--	--	--
WI Bh 9	06-11-90	--	--	--	--	--	--	--	--	--
WI Bh 11	06-13-90	--	--	--	--	--	--	--	--	--
WI Ce 13	05-30-90	<3.0	<3.0	<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0
	08-16-90	<3.0	<3.0	<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0
WI Cg 58	01-16-90	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
WI Ch 47	10-17-89	--	--	--	--	--	--	--	--	--
WI Ch 51	07-12-90	<0.2	<0.20	0.40	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
WI Ch 52	06-12-90	--	--	--	--	--	--	--	--	--
WI Ch 53	06-12-90	--	--	--	--	--	--	--	--	--
WI Ch 55	06-12-90	--	--	--	--	--	--	--	--	--
WI Ch 56	06-12-90	--	--	--	--	--	--	--	--	--
WI Ch 57	06-13-90	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

WICOMICO COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	Methyl-bromide total (ug/L)	Methyl-chloride, total (ug/L)	Methylene chloride, total (ug/L)	Styrene total (ug/L)	Tetrachloroethylene, total (ug/L)	Trichlorofluoromethane total (ug/L)	Toluene total (ug/L)	Trans-1,3-dichloropropene total (ug/L)	Trichloroethylene, total (ug/L)
WI Bd 68	10-04-89	--	--	--	--	--	--	--	--	--
WI Bh 2	06-12-90	--	--	--	--	--	--	--	--	--
WI Bh 4	06-13-90	--	--	--	--	--	--	--	--	--
WI Bh 5	06-13-90	--	--	--	--	--	--	--	--	--
WI Bh 8	06-11-90	--	--	--	--	--	--	--	--	--
WI Bh 9	06-11-90	--	--	--	--	--	--	--	--	--
WI Bh 11	06-13-90	--	--	--	--	--	--	--	--	--
WI Ce 13	05-30-90	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	08-16-90	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
WI Cg 58	01-16-90	<0.2	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.2
WI Ch 47	10-17-89	--	--	--	--	--	--	--	--	--
WI Ch 51	07-12-90	<0.2	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.2
WI Ch 52	06-12-90	--	--	--	--	--	--	--	--	--
WI Ch 53	06-12-90	--	--	--	--	--	--	--	--	--
WI Ch 55	06-12-90	--	--	--	--	--	--	--	--	--
WI Ch 56	06-12-90	--	--	--	--	--	--	--	--	--
WI Ch 57	06-13-90	--	--	--	--	--	--	--	--	--

LOCAL IDENTIFIER	DATE	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)	1,1,2,2 Tetrachloroethane, total (ug/L)	1,2-Dibromo ethane, water, whole, total (ug/L)
WI Bd 68	10-04-89	<0.10	--	--	--	--	--	--	--	--
WI Bh 2	06-12-90	<0.10	--	--	--	--	--	--	--	--
WI Bh 4	06-13-90	<0.10	--	--	--	--	--	--	--	--
WI Bh 5	06-13-90	<0.10	--	--	--	--	--	--	--	--
WI Bh 8	06-11-90	<0.10	--	--	--	--	--	--	--	--
WI Bh 9	06-11-90	<0.10	--	--	--	--	--	--	--	--
WI Bh 11	06-13-90	<0.10	--	--	--	--	--	--	--	--
WI Ce 13	05-30-90	<0.10	<1.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	08-16-90	<0.10	<1.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
WI Cg 58	01-16-90	<0.10	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
WI Ch 47	10-17-89	--	--	--	--	--	--	--	--	--
WI Ch 51	07-12-90	--	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
WI Ch 52	06-12-90	<0.10	--	--	--	--	--	--	--	--
WI Ch 53	06-12-90	<0.10	--	--	--	--	--	--	--	--
WI Ch 55	06-12-90	<0.10	--	--	--	--	--	--	--	--
WI Ch 56	06-12-90	<0.10	--	--	--	--	--	--	--	--
WI Ch 57	06-13-90	<0.10	--	--	--	--	--	--	--	--

LOCAL IDENTIFIER	DATE	1,2-Dichlorobenzene total (ug/L)	1,2-Dichloroethane, total (ug/L)	1,2-Dichloropropane total (ug/L)	123-trichloropropane water whole 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)
WI Bd 68	10-04-89	--	--	--	--	--	--	--	--	--
WI Bh 2	06-12-90	--	--	--	--	--	--	--	--	--
WI Bh 4	06-13-90	--	--	--	--	--	--	--	--	--
WI Bh 5	06-13-90	--	--	--	--	--	--	--	--	--
WI Bh 8	06-11-90	--	--	--	--	--	--	--	--	--
WI Bh 9	06-11-90	--	--	--	--	--	--	--	--	--
WI Bh 11	06-13-90	--	--	--	--	--	--	--	--	--
WI Ce 13	05-30-90	<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0	<3.0	<3.0
	08-16-90	<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0	<3.0	<3.0
WI Cg 58	01-16-90	<0.2	<0.20	<0.20	<0.20	--	--	<0.20	<0.20	--
WI Ch 47	10-17-89	--	--	--	--	--	--	--	--	--
WI Ch 51	07-12-90	<0.2	<0.20	<0.20	<0.20	--	--	<0.20	0.50	--
WI Ch 52	06-12-90	--	--	--	--	--	--	--	--	--
WI Ch 53	06-12-90	--	--	--	--	--	--	--	--	--
WI Ch 55	06-12-90	--	--	--	--	--	--	--	--	--
WI Ch 56	06-12-90	--	--	--	--	--	--	--	--	--
WI Ch 57	06-13-90	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

WICOMICO COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	PCB, dissolved (ug/L)
WI Bd 68	10-04-89	--
WI Bh 2	06-12-90	--
WI Bh 4	06-13-90	--
WI Bh 5	06-13-90	--
WI Bh 8	06-11-90	--
WI Bh 9	06-11-90	--
WI Bh 11	06-13-90	--
WI Ce 13	05-30-90	<0.1
	08-16-90	<0.1
WI Cg 58	01-16-90	--
WI Ch 47	10-17-89	--
WI Ch 51	07-12-90	--
WI Ch 52	06-12-90	--
WI Ch 53	06-12-90	--
WI Ch 55	06-12-90	--
WI Ch 56	06-12-90	--
WI Ch 57	06-13-90	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

WORCESTER COUNTY, MARYLAND

LOCAL IDENT-I-FIER	DATE	TIME	STATION NUMBER	GEO-LOGIC UNIT	Sam-pling method, codes	Depth below land surface (water level) (ft)	Depth of well, total (ft)	Depth to top of sample inter-val (ft)	Depth to bot-tom of sample inter-val (ft)
WO Ae 23	01-17-90	1530	382621075174201	122MNKN	4040	13.10	280.00	270	280
	04-18-90	1040		122MNKN	4030	13.22	280.00	270	280
WO Ae 24	01-17-90	1030	382621075174202	122OCNC	4040	10.53	200.00	190	200
	04-18-90	1100		122OCNC	4030	10.58	200.00	190	200
WO Ae 25	04-18-90	1115	382621075174203	122PCMK	4030	8.60	118.00	108	118
WO Af 30	12-06-89	1300	382639075114001	122PCMK	4040	5.22	220.00	218	220
WO Ah 34	04-16-90	0940	382632075031901	122MNKN	4040	--	450.00	350	450
	09-11-90	1130		122MNKN	4040	--	450.00	350	450
WO Ah 36	09-11-90	1700	382635075030602	122MNKN	4040	35.92	430.00	420	440
WO Ah 37	01-18-90	1130	382635075030603	122MNKN	4040	18.90	478.00	468	478
	07-26-90	1130		122MNKN	4040	37.40	478.00	--	--
	09-11-90	1515		122MNKN	4040	35.41	488.00	468	488
WO Bg 15	04-17-90	1100	382359075094501	122MNKN	4030	-2.81	318.00	288	318
WO Bg 45	04-17-90	1310	382358075094501	112CLMB	4030	7.87	77.00	56	77
WO Bg 46	04-17-90	1215	382358075094502	122PCMK	4030	1.02	194.00	164	194
WO Bg 47	04-18-90	--	382325075063301	122OCNC	4030	4.44	268.00	258	268
WO Bg 48	04-18-90	1255	382325075063302	122MNKN	4030	4.33	420.00	410	420
WO Bg 49	04-19-90	1220	382038075065901	122OCNC	4030	3.68	243.00	233	243
WO Bh 28	12-07-89	0830	382214075041901	122OCNC	4040	--	294.00	249	294
	04-16-90	1130		122OCNC	4040	--	294.00	248	294
	09-12-90	1050		122OCNC	4040	--	294.00	248	294
WO Bh 34	04-19-90	1045	382443075033501	122MNKN	4030	7.24	353.00	337	353
	09-11-90	0935		122MNKN	4030	16.84	353.00	337	353
WO Bh 84	04-16-90	--	382215075041901	112CLMB	4030	4.02	86.00	81	86
	09-12-90	0950		112CLMB	4040	4.77	86.00	81	86
WO Bh 85	04-16-90	--	382215075041902	122PCMK	4030	3.01	195.00	190	195
	09-12-90	0925		122PCMK	4050	5.75	195.00	190	195
WO Bh 89	04-16-90	1300	382215075041903	122MNKN	4030	5.63	500.00	388	500
	09-12-90	1100		122MNKN	4040	20.55	500.00	388	500
WO Bh 91	09-10-90	1200	382235075040901	122MNKN	4030	20.00	385.00	340	380
WO Bh 93	09-10-90	0940	382304075040601	122MNKN	4030	13.95	435.00	335	430
WO Bh 94	09-11-90	1100	382447075033702	122OCNC	4030	16.90	315.00	285	310
WO Bh 95	09-10-90	1030	382304075040602	122OCNC	4030	12.04	295.00	275	295
WO Bh 96	09-10-90	1145	382235075041902	122OCNC	4030	21.69	300.00	255	295
WO Bh 97	07-26-90	1300	382127075043803	122MNKN	4030	19.60	445.00	--	--
	09-10-90	1340		122MNKN	4030	15.89	445.00	370	440
WO Bh 98	07-25-90	1600	382127075043802	122OCNC	4030	22.60	310.00	--	--
	09-10-90	1355		122OCNC	4030	16.00	310.00	255	310
WO Cg 32	04-16-90	1040	381941075052201	122OCNC	4040	--	280.00	245	280
	09-10-90	1500		122OCNC	4040	--	280.00	245	280
WO Cg 75	04-16-90	1045	381939075052102	122MNKN	4040	--	427.00	367	427
	09-10-90	1445		122MNKN	4040	40.25	427.00	367	427
WO Dc 30	10-04-89	1000	381217075281401	122PCMK	4090	--	70.00	60	70
WO Dg 21	04-19-90	1420	381427075081102	122MNKN	4030	3.96	310.00	300	310
	09-12-90	1345		122MNKN	4030	1.82	310.00	300	310
WO Ed 46	12-06-89	0900	380537075234201	122PCMK	4090	--	210.00	180	210

Geologic unit (aquifer): 112CLMB - Columbia Formation
122MNKN - Manokin Aquifer
122OCNC - Ocean City Aquifer
122PCMK - Pocomoke Aquifer

Sampling method: 4030 - Suction pump
4040 - Submersible pump
4050 - Squeeze pump
4090 - Jet pump

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

WORCESTER COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	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)	Calcium dissolved (mg/L as Ca)
WO Ae 23	01-17-90	40.0	65	8.0	141	5.81	14.0	--	0.4	8.7
	04-18-90	40.0	40	40	139	6.27	14.0	--	--	--
WO Ae 24	01-17-90	40.0	65	6.1	448	6.35	14.0	--	0.2	80
	04-18-90	40.0	45	30	456	6.43	14.0	--	--	--
WO Ae 25	04-18-90	40.0	30	40	479	6.45	14.0	--	--	--
WO Af 30	12-06-89	22.0	115	0.8	79	5.74	15.5	--	0.8	2.5
WO Ah 34	04-16-90	5.0	20	--	436	6.34	16.5	--	--	--
	09-11-90	5.0	--	--	507	6.45	17.5	48	--	22
WO Ah 36	09-11-90	15.4	70	10	756	6.48	17.0	33	--	24
WO Ah 37	01-18-90	10.0	150	8.0	1320	6.84	19.0	--	0.5	19
	07-26-90	12.0	120	10	1470	6.95	16.5	42	--	20
	09-11-90	16.6	80	8.5	1450	6.93	17.0	22	--	20
WO Bg 15	04-17-90	7.0	30	20	271	7.07	15.5	--	--	--
WO Bg 45	04-17-90	10.0	45	15	743	6.26	14.0	--	--	--
WO Bg 46	04-17-90	10.0	60	20	268	7.18	14.5	--	--	--
WO Bg 47	04-18-90	5.0	--	40	343	6.79	16.0	--	--	--
WO Bg 48	04-18-90	5.0	40	50	403	6.60	17.0	--	--	--
WO Bg 49	04-19-90	10.0	30	26	403	7.37	15.0	--	--	--
WO Bh 28	12-07-89	5.0	35	750	594	7.82	16.0	--	2.0	16
	04-16-90	5.0	20	--	492	7.45	17.0	--	4.5	--
	09-12-90	5.0	--	--	855	6.97	17.0	32	--	18
WO Bh 34	04-19-90	4.0	30	40	221	6.70	16.0	--	--	--
	09-11-90	4.0	30	35	222	6.70	17.0	25	--	15
WO Bh 84	04-16-90	5.0	45	50	352	6.99	16.0	--	--	--
	09-12-90	5.0	60	40	365	6.76	16.0	--	--	--
WO Bh 85	04-16-90	5.0	110	3.0	410	6.83	16.0	--	--	--
	09-12-90	5.0	55	16	406	6.80	16.5	43	--	15
WO Bh 89	04-16-90	5.0	90	10	1680	7.01	17.0	--	--	26
	09-12-90	5.0	120	10	1890	6.98	17.5	6	--	28
WO Bh 91	09-10-90	10.0	1	35	1060	6.73	17.0	47	--	13
WO Bh 93	09-10-90	4.0	55	30	878	6.65	17.0	12	--	24
WO Bh 94	09-11-90	4.0	110	3.0	397	7.53	18.5	14	--	43
WO Bh 95	09-10-90	4.0	70	3.0	489	6.58	17.0	2	--	16
WO Bh 96	09-10-90	10.0	30	30	482	6.84	16.5	75	6.8	12
WO Bh 97	07-26-90	6.0	60	35	426	6.90	17.0	68	--	17
	09-10-90	6.0	30	35	379	6.85	17.0	43	--	17
WO Bh 98	07-25-90	5.0	60	30	402	7.40	17.0	27	--	39
	09-10-90	5.0	45	30	405	6.79	16.5	12	--	38
WO Cg 32	04-16-90	4.0	100	--	426	7.35	16.5	--	--	--
	09-10-90	44.0	45	--	424	6.83	17.0	55	--	34
WO Cg 75	04-16-90	5.0	15	--	446	6.78	17.0	--	--	--
	09-10-90	0.5	1440	--	376	6.87	17.5	65	--	11
WO Dc 30	10-04-89	24.0	10	7.5	46	5.83	13.5	--	5.8	1.8
WO Dg 21	04-19-90	6.0	60	8.0	465	7.91	16.0	--	--	--
	09-12-90	6.0	70	10	485	7.80	17.0	2	--	38
WO Ed 46	12-06-89	36.0	25	5.0	370	7.98	14.5	--	0.8	16

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

WORCESTER COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	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	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)
WO Ae 23	01-17-90	3.5	9.2	3.5	--	51	62	<1.0	7.4	0.10
	04-18-90	--	--	--	63	--	--	--	12	--
WO Ae 24	01-17-90	3.1	7.7	1.1	--	200	243	<1.0	10	0.10
	04-18-90	--	--	--	247	--	--	--	10	--
WO Ae 25	04-18-90	--	--	--	246	--	--	--	12	--
WO Af 30	12-06-89	0.7	6.5	1.3	--	23	27	<1.0	9.3	<0.10
WO Ah 34	04-16-90	--	--	--	104	--	--	--	78	--
	09-11-90	5.4	60	4.4	99	--	--	<1.0	83	0.20
WO Ah 36	09-11-90	6.4	110	5.7	129	--	--	<1.0	140	0.10
WO Ah 37	01-18-90	17	230	11	--	164	199	8.0	320	0.20
	07-26-90	18	240	11	--	195	238	9.4	350	0.20
	09-11-90	18	240	12	169	--	--	16	300	0.20
WO Bg 15	04-17-90	--	--	--	105	--	--	--	31	--
WO Bg 45	04-17-90	--	--	--	14	--	--	--	16	--
WO Bg 46	04-17-90	--	--	--	13	--	--	--	13	--
WO Bg 47	04-18-90	--	--	--	116	--	--	--	45	--
WO Bg 48	04-18-90	--	--	--	113	--	--	--	67	--
WO Bg 49	04-19-90	--	--	--	193	--	--	--	18	--
WO Bh 28	12-07-89	14	89	9.7	--	174	212	<1.0	99	0.20
	04-16-90	--	--	--	160	--	--	--	65	--
	09-12-90	16	120	12	145	--	--	<1.0	180	0.50
WO Bh 34	04-19-90	--	--	--	96	--	--	--	17	--
	09-11-90	5.9	12	4.7	97	--	--	<1.0	15	<0.10
WO Bh 84	04-16-90	--	--	--	121	--	--	--	33	--
	09-12-90	--	--	--	120	--	--	--	--	--
WO Bh 85	04-16-90	--	--	--	137	--	--	--	46	--
	09-12-90	13	38	12	143	--	--	<1.0	42	0.30
WO Bh 89	04-16-90	37	260	16	204	--	--	1.2	460	0.20
	09-12-90	41	290	20	202	--	--	3.4	460	0.60
WO Bh 91	09-10-90	17	180	14	181	--	--	<1.0	250	<0.10
WO Bh 93	09-10-90	10	140	9.3	153	--	--	<1.0	230	<0.10
WO Bh 94	09-11-90	11	17	16	165	--	--	<1.0	13	0.10
WO Bh 95	09-10-90	9.6	61	7.1	128	--	--	<1.0	83	0.30
WO Bh 96	09-10-90	11	68	8.3	142	--	--	<1.0	69	0.40
WO Bh 97	07-26-90	10	40	10	--	108	132	<1.0	66	0.20
	09-10-90	11	37	8.7	118	--	--	<1.0	59	<0.10
WO Bh 98	07-25-90	15	22	12	--	185	226	<1.0	29	0.20
	09-10-90	15	23	11	180	--	--	<1.0	23	0.30
WO Cg 32	04-16-90	--	--	--	170	--	--	--	35	--
	09-10-90	12	38	9.1	164	--	--	<1.0	44	<0.10
WO Cg 75	04-16-90	--	--	--	120	--	--	--	69	--
	09-10-90	9.0	69	7.2	115	--	--	<1.0	80	<0.10
WO Dc 30	10-04-89	0.5	5.8	0.70	--	10	13	2.0	4.2	<0.10
WO Dg 21	04-19-90	--	--	--	216	--	--	--	27	--
	09-12-90	13	44	12	215	--	--	<1.0	26	0.50
WO Ed 46	12-06-89	9.8	47	9.7	--	153	187	<1.0	23	0.10

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

WORCESTER COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	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 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)
WO Ae 23	01-17-90	0.32	29	--	--	<0.010	<0.100	0.330	0.40	0.110
	04-18-90	--	--	--	--	--	--	--	--	--
WO Ae 24	01-17-90	0.07	30	--	--	<0.010	<0.100	1.50	1.7	0.040
	04-18-90	--	--	--	--	--	--	--	--	--
WO Ae 25	04-18-90	--	--	--	--	--	--	--	--	--
WO Af 30	12-06-89	0.04	22	--	--	<0.010	<0.100	0.220	0.60	0.070
WO Ah 34	04-16-90	--	--	--	--	--	--	--	--	--
	09-11-90	0.33	33	285	--	--	<0.100	--	--	0.190
WO Ah 36	09-11-90	0.44	31	402	--	--	<0.100	--	--	0.150
WO Ah 37	01-18-90	1.0	29	--	740	<0.010	<0.100	0.810	1.0	0.070
	07-26-90	1.3	29	744	799	--	--	--	--	0.020
	09-11-90	0.46	29	764	742	--	<0.100	--	--	0.130
WO Bg 15	04-17-90	--	--	--	--	--	--	--	--	--
WO Bg 45	04-17-90	--	--	--	--	--	--	--	--	--
WO Bg 46	04-17-90	--	--	--	--	--	--	--	--	--
WO Bg 47	04-18-90	--	--	--	--	--	--	--	--	--
WO Bg 48	04-18-90	--	--	--	--	--	--	--	--	--
WO Bg 49	04-19-90	--	--	--	--	--	--	--	--	--
WO Bh 28	12-07-89	0.28	25	--	--	<0.010	<0.100	0.560	0.70	0.400
	04-16-90	--	--	--	--	--	--	--	--	--
	09-12-90	0.71	32	450	--	--	<0.100	--	--	0.270
WO Bh 34	04-19-90	--	--	--	--	--	--	--	--	--
	09-11-90	0.07	33	120	--	--	<0.100	--	--	0.110
WO Bh 84	04-16-90	--	--	--	--	--	--	--	--	--
	09-12-90	--	--	--	--	--	--	--	--	--
WO Bh 85	04-16-90	--	--	--	--	--	--	--	--	--
	09-12-90	0.14	32	226	--	--	<0.100	--	--	0.260
WO Bh 89	04-16-90	--	29	972	961	--	<0.100	--	--	<0.010
	09-12-90	1.7	27	1000	1000	--	<0.100	--	--	0.010
WO Bh 91	09-10-90	0.78	27	586	--	--	<0.100	--	--	0.220
WO Bh 93	09-10-90	1.7	26	478	--	--	<0.100	--	--	<0.010
WO Bh 94	09-11-90	0.03	24	227	--	--	<0.100	--	--	0.050
WO Bh 95	09-10-90	0.35	27	255	--	--	<0.100	--	--	<0.010
WO Bh 96	09-10-90	0.22	30	278	--	--	<0.100	--	--	0.320
WO Bh 97	07-26-90	0.23	30	225	--	--	--	--	--	0.010
	09-10-90	0.25	32	196	--	--	<0.100	--	--	0.060
WO Bh 98	07-25-90	0.09	28	238	--	--	--	--	--	0.090
	09-10-90	0.07	28	236	--	--	<0.100	--	--	0.100
WO Cg 32	04-16-90	--	--	--	--	--	--	--	--	--
	09-10-90	0.11	26	256	--	--	<0.100	--	--	0.120
WO Cg 75	04-16-90	--	--	--	--	--	--	--	--	--
	09-10-90	0.25	29	258	--	--	<0.100	--	--	0.280
WO Dc 30	10-04-89	0.02	21	--	45	<0.010	0.480	<0.010	0.30	<0.010
WO Dg 21	04-19-90	--	--	--	--	--	--	--	--	--
	09-12-90	0.07	21	269	--	--	<0.100	--	--	0.190
WO Ed 46	12-06-89	0.05	27	--	--	<0.010	<0.100	0.350	0.50	0.350

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

WORCESTER COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	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)	Cadmium dissolved (ug/L as Cd)	Chromium, dissolved (ug/L as CR)	Cobalt, dissolved (ug/L as CO)
WO Ae 23	01-17-90	<10	<1	<1	31	<0.5	20	<1	<5	50
	04-18-90	--	--	--	--	--	--	--	--	--
WO Ae 24	01-17-90	<10	<1	<1	33	<0.5	20	5	<5	100
	04-18-90	--	--	--	--	--	--	--	--	--
WO Ae 25	04-18-90	--	--	--	--	--	--	--	--	--
WO Af 30	12-06-89	30	<1	<1	21	<0.5	<10	<1	<5	<3
WO Ah 34	04-16-90	--	--	--	--	--	--	--	--	--
	09-11-90	--	--	--	--	--	--	--	--	--
WO Ah 36	09-11-90	--	--	--	--	--	--	--	--	--
WO Ah 37	01-18-90	<10	<1	<1	31	<0.5	370	2	<5	30
	07-26-90	--	--	--	--	--	--	--	--	--
	09-11-90	--	--	--	--	--	--	--	--	--
WO Bg 15	04-17-90	--	--	--	--	--	--	--	--	--
WO Bg 45	04-17-90	--	--	--	--	--	--	--	--	--
WO Bg 46	04-17-90	--	--	--	--	--	--	--	--	--
WO Bg 47	04-18-90	--	--	--	--	--	--	--	--	--
WO Bg 48	04-18-90	--	--	--	--	--	--	--	--	--
WO Bg 49	04-19-90	--	--	--	--	--	--	--	--	--
WO Bh 28	12-07-89	20	<1	<1	16	<0.5	130	<1	<5	<3
	04-16-90	--	--	--	--	--	--	--	--	--
	09-12-90	--	--	--	--	--	--	--	--	--
WO Bh 34	04-19-90	--	--	--	--	--	--	--	--	--
	09-11-90	--	--	--	--	--	--	--	--	--
WO Bh 84	04-16-90	--	--	--	--	--	--	--	--	--
	09-12-90	--	--	--	--	--	--	--	--	--
WO Bh 85	04-16-90	--	--	--	--	--	--	--	--	--
	09-12-90	--	--	--	--	--	--	--	--	--
WO Bh 89	04-16-90	--	--	--	--	--	--	--	--	--
	09-12-90	--	--	--	--	--	--	--	--	--
WO Bh 91	09-10-90	--	--	--	--	--	--	--	--	--
WO Bh 93	09-10-90	--	--	--	--	--	--	--	--	--
WO Bh 94	09-11-90	--	--	--	--	--	--	--	--	--
WO Bh 95	09-10-90	--	--	--	--	--	--	--	--	--
WO Bh 96	09-10-90	--	--	--	--	--	--	--	--	--
WO Bh 97	07-26-90	--	--	--	--	--	--	--	--	--
	09-10-90	--	--	--	--	--	--	--	--	--
WO Bh 98	07-25-90	--	--	--	--	--	--	--	--	--
	09-10-90	--	--	--	--	--	--	--	--	--
WO Cg 32	04-16-90	--	--	--	--	--	--	--	--	--
	09-10-90	--	--	--	--	--	--	--	--	--
WO Cg 75	04-16-90	--	--	--	--	--	--	--	--	--
	09-10-90	--	--	--	--	--	--	--	--	--
WO Dc 30	10-04-89	<10	<1	<1	10	<0.5	<10	<1	<5	<3
WO Dg 21	04-19-90	--	--	--	--	--	--	--	--	--
	09-12-90	--	--	--	--	--	--	--	--	--
WO Ed 46	12-06-89	<10	<1	<1	3	<0.5	100	<1	<5	<3

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

WORCESTER COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	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)	Nickel, dissolved (ug/L as Ni)	Selenium, dissolved (ug/L as SE)
WO Ae 23	01-17-90	<10	6900	<10	6	140	<0.1	<10	<10	<1
	04-18-90	--	--	--	--	--	--	--	--	--
WO Ae 24	01-17-90	<10	15000	<10	8	150	<0.1	<10	<10	<1
	04-18-90	--	--	--	--	--	--	--	--	--
WO Ae 25	04-18-90	--	--	--	--	--	--	--	--	--
WO Af 30	12-06-89	<10	7000	<10	6	41	<0.1	<10	<10	<1
WO Ah 34	04-16-90	--	--	--	--	--	--	--	--	--
	09-11-90	--	12000	--	--	140	--	--	--	--
WO Ah 36	09-11-90	--	13000	--	--	130	--	--	--	--
WO Ah 37	01-18-90	<10	5300	<10	10	110	<0.1	<10	<10	<1
	07-26-90	--	3000	--	--	86	--	--	--	--
	09-11-90	--	4600	--	--	90	--	--	--	--
WO Bg 15	04-17-90	--	--	--	--	--	--	--	--	--
WO Bg 45	04-17-90	--	--	--	--	--	--	--	--	--
WO Bg 46	04-17-90	--	--	--	--	--	--	--	--	--
WO Bg 47	04-18-90	--	--	--	--	--	--	--	--	--
WO Bg 48	04-18-90	--	--	--	--	--	--	--	--	--
WO Bg 49	04-19-90	--	--	--	--	--	--	--	--	--
WO Bh 28	12-07-89	<10	340	<10	6	36	<0.1	<10	<10	<1
	04-16-90	--	--	--	--	--	--	--	--	--
	09-12-90	--	6200	--	--	120	--	--	--	--
WO Bh 34	04-19-90	--	--	--	--	--	--	--	--	--
	09-11-90	--	15000	--	--	120	--	--	--	--
WO Bh 84	04-16-90	--	--	--	--	--	--	--	--	--
	09-12-90	--	--	--	--	--	--	--	--	--
WO Bh 85	04-16-90	--	--	--	--	--	--	--	--	--
	09-12-90	--	4700	--	--	85	--	--	--	--
WO Bh 89	04-16-90	--	8700	--	--	130	--	--	--	--
	09-12-90	--	7600	--	--	120	--	--	--	--
WO Bh 91	09-10-90	--	7200	--	--	66	--	--	--	--
WO Bh 93	09-10-90	--	15000	--	--	140	--	--	--	--
WO Bh 94	09-11-90	--	1800	--	--	43	--	--	--	--
WO Bh 95	09-10-90	--	18000	--	--	300	--	--	--	--
WO Bh 96	09-10-90	--	6600	--	--	78	--	--	--	--
WO Bh 97	07-26-90	--	7200	--	--	160	--	--	--	--
	09-10-90	--	7900	--	--	160	--	--	--	--
WO Bh 98	07-25-90	--	1900	--	--	43	--	--	--	--
	09-10-90	--	1900	--	--	42	--	--	--	--
WO Cg 32	04-16-90	--	--	--	--	--	--	--	--	--
	09-10-90	--	1400	--	--	90	--	--	--	--
WO Cg 75	04-16-90	--	--	--	--	--	--	--	--	--
	09-10-90	--	6000	--	--	180	--	--	--	--
WO Dc 30	10-04-89	<10	<8	<10	<4	1	<0.1	10	<10	<1
WO Dg 21	04-19-90	--	--	--	--	--	--	--	--	--
	09-12-90	--	320	--	--	45	--	--	--	--
WO Ed 46	12-06-89	<10	200	<10	6	60	<0.1	<10	<10	<1

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

WORCESTER COUNTY, MARYLAND--Continued

LOCAL IDENT-I-FIER	DATE	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 (pCi/L)	Gross beta, dissolved (pCi/L as SR/Yt-90)	Tritium total (pCi/L)
WO Ae 23	01-17-90	<1.0	89	<6	<3	--	--	<80	--	--
WO Ae 24	01-17-90	<1.0	240	<6	<3	--	--	<80	--	--
WO Af 30	12-06-89	<1.0	29	<6	3	1.4	2.1	<80	1.7	--
WO Ah 37	01-18-90	<1.0	250	<6	<3	--	--	87	--	--
WO Bh 28	12-07-89	2.0	150	<6	11	1.8	12	95	11	--
WO Dc 30	10-04-89	1.0	42	<6	48	2.4	1.1	210	0.9	46
WO Ed 46	12-06-89	<1.0	140	<6	50	1.2	12	190	11	--

LOCAL IDENT-I-FIER	DATE	Carbon, organic dissolved (mg/L as C)	Bromoform, total (ug/L)	Benzene total (ug/L)	Carbontetrachloride, total (ug/L)	Chlorobenzene total (ug/L)	Chlorodibromomethane total (ug/L)	Chloroform, total (ug/L)	Chloroethane, total (ug/L)
WO Ae 23	01-17-90	2.3	--	--	--	--	--	--	--
WO Ae 24	01-17-90	11	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
WO Af 30	12-06-89	7.4	--	--	--	--	--	--	--
WO Ah 37	01-18-90	3.6	--	--	--	--	--	--	--
WO Bh 28	12-07-89	2.4	--	--	--	--	--	--	--
WO Dc 30	10-04-89	0.4	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
WO Ed 46	12-06-89	1.4	--	--	--	--	--	--	--

LOCAL IDENT-I-FIER	DATE	Cis 1,3-dichloropropene total (ug/L)	Dibromomethane water, whole, recover (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)
WO Ae 23	01-17-90	--	--	--	--	--	--	--	--	--
WO Ae 24	01-17-90	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2
WO Af 30	12-06-89	--	--	--	--	--	--	--	--	--
WO Ah 37	01-18-90	--	--	--	--	--	--	--	--	--
WO Bh 28	12-07-89	--	--	--	--	--	--	--	--	--
WO Dc 30	10-04-89	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2
WO Ed 46	12-06-89	--	--	--	--	--	--	--	--	--

LOCAL IDENT-I-FIER	DATE	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)
WO Ae 23	01-17-90	--	--	--	--	--	<0.10	--	--
WO Ae 24	01-17-90	<0.20	<0.20	<0.20	<0.20	<0.2	<0.10	<0.20	<0.2
WO Af 30	12-06-89	--	--	--	--	--	--	--	--
WO Ah 37	01-18-90	--	--	--	--	--	--	--	--
WO Bh 28	12-07-89	--	--	--	--	--	<0.10	--	--
WO Dc 30	10-04-89	<0.20	<0.20	<0.20	<0.20	<0.2	<0.10	<0.20	<0.2
WO Ed 46	12-06-89	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

WORCESTER COUNTY, MARYLAND--Continued

LOCAL IDENTIFIER	DATE	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)	1,1,2,2 Tetrachloroethane, total (ug/L)	1,2-Dibromo ethane, water, whole, total (ug/L)	1,2-Dichlorobenzene total (ug/L)	1,2-Dichloroethane, total (ug/L)
WO Ae 24	01-17-90	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20
WO Dc 30	10-04-89	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20

LOCAL IDENTIFIER	DATE	1,2-Dichloropropane total (ug/L)	123-trichloropropane water whole total (ug/L)	1,3-Dichlorobenzene total (ug/L)	1,4-Dichlorobenzene total (ug/L)
WO Ae 24	01-17-90	<0.20	<0.20	<0.20	<0.20
WO Dc 30	10-04-89	<0.20	<0.20	<0.20	<0.20

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October 1, 1978

FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI).

Multiply inch-pound units	By	To obtain SI units
	Length	
inches (in)	2.54×10^{1}	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^{0}	kilometers (km)
	Area	
acres	4.047×10^{3}	square meters (m^2)
	4.047×10^{-1}	square hectometers (hm^2)
	4.047×10^{-3}	square kilometers (km^2)
square miles (mi^2)	2.590×10^{0}	square kilometers (km^2)
	Volume	
gallons (gal)	3.785×10^{0}	liters (L)
	3.785×10^{0}	cubic decimeters (dm^3)
	3.785×10^{-3}	cubic meters (m^3)
million gallons	3.785×10^{3}	cubic meters (m^3)
	3.785×10^{-3}	cubic hectometers (hm^3)
cubic feet (ft^3)	2.832×10^{1}	cubic decimeters (dm^3)
	2.832×10^{-2}	cubic meters (m^3)
cfs-days	2.447×10^{3}	cubic meters (m^3)
	2.447×10^{-3}	cubic hectometers (hm^3)
acre-feet (acre-ft)	1.233×10^{3}	cubic meters (m^3)
	1.233×10^{-3}	cubic hectometers (hm^3)
	1.233×10^{-6}	cubic kilometers (km^3)
	Flow	
cubic feet per second (ft^3/s)	2.832×10^{1}	liters per second (L/s)
	2.832×10^{1}	cubic decimeters per second (dm^3/s)
	2.832×10^{-2}	cubic meters per second (m^3/s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm^3/s)
	6.309×10^{-5}	cubic meters per second (m^3/s)
million gallons per day	4.381×10^{1}	cubic decimeters per second (dm^3/s)
	4.381×10^{-2}	cubic meters per second (m^3/s)
	Mass	
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

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208 Carroll Building, 8600 LaSalle Road
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Print Plant, U.S. Penitentiary, Lompoc, CA