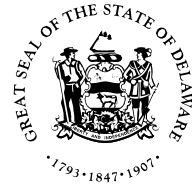
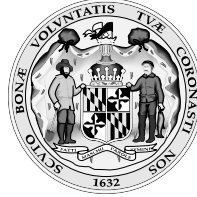
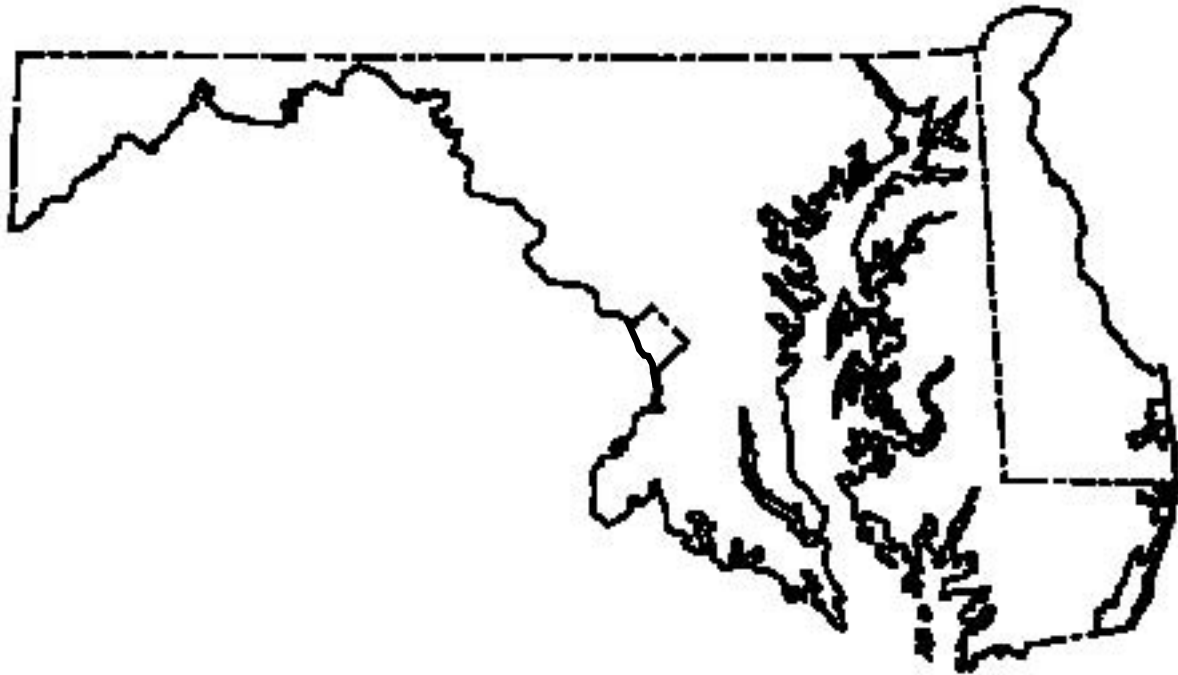


Prepared in cooperation with the
States of Maryland and Delaware,
Washington, D.C. and with other agencies



Water Resources Data Maryland, Delaware, and Washington, D.C. Water Year 2003

Volume 2.
Ground-Water Data



Water-Data Report MD-DE-DC-03-2

CALENDAR FOR WATER YEAR 2003

2002

OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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27	28	29	30	31			24	25	26	27	28	29	30	29	30	31				

2003

JANUARY							FEBRUARY							MARCH						
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26	27	28	29	30	31		23	24	25	26	27	28		23	24	25	26	27	28	29
														30	31					

APRIL							MAY							JUNE						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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27	28	29	30				25	26	27	28	29	30	31	29	30					

JULY							AUGUST							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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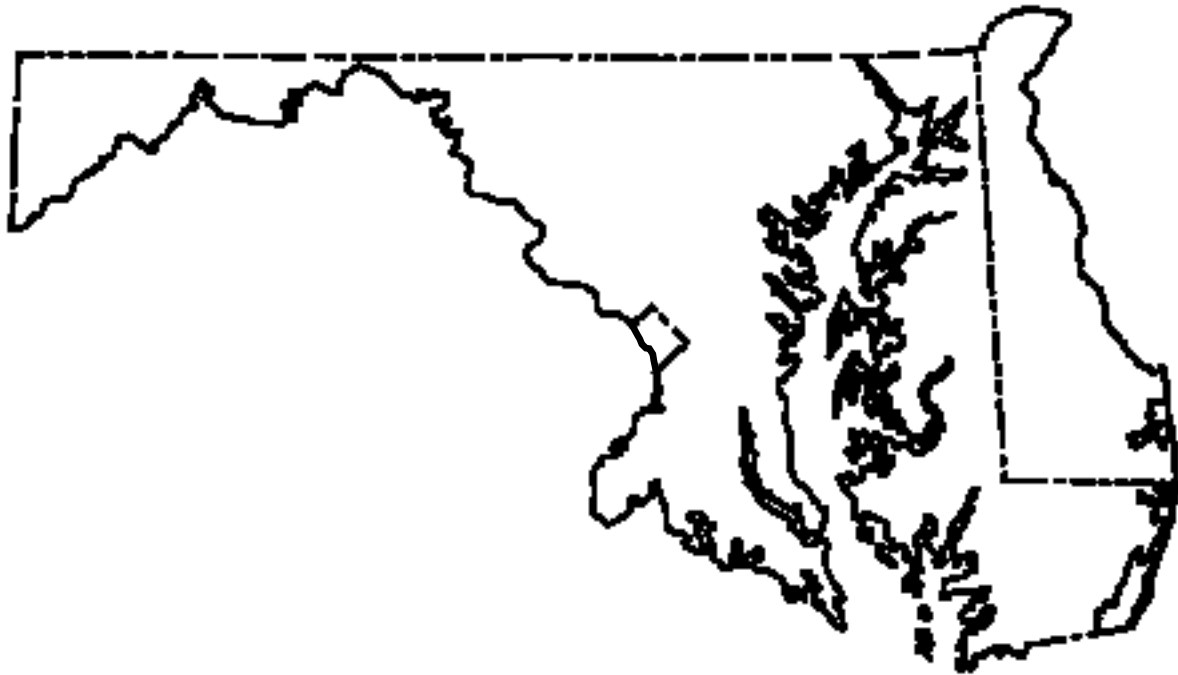
U.S. Department of the Interior
U.S. Geological Survey

Water Resources Data Maryland, Delaware, and Washington, D.C. Water Year 2003

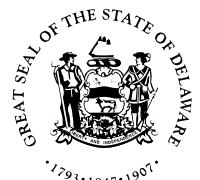
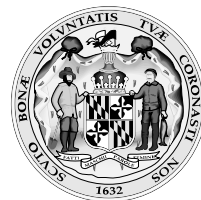
Volume 2. Ground-Water Data

By The Maryland, Delaware and Washington, D.C District

Water-Data Report MD-DE-DC-03-2



Prepared in cooperation with
the States of Maryland, Delaware, Washington, D.C.
and with other agencies



U.S. Department of the Interior

Gale A. Norton, Secretary

U.S. Geological Survey

Charles G. Groat, Director

2004

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Baltimore, MD 21237
410-238-4200

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PREFACE

This volume of the annual hydrologic data report for Maryland, Delaware, and Washington, D.C. 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 streamflow, ground-water-level, and water-quality records provide the hydrologic information needed by State, local, and Federal agencies, and the private sector for developing and managing our Nation's land and water resources. Hydrologic data for Maryland, Delaware, and Washington, D.C. are contained in two volumes:

Volume 1. Surface-Water Data

Volume 2. Ground-Water Data

This report (Volume 2) is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey, Maryland Geological Survey (MGS), and Delaware Geological Survey (DGS), who collected, compiled, analyzed, verified, and organized the data, and who reviewed, 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 U.S. Geological Survey policy and established guidelines, the following individuals contributed significantly to the collection, processing, and tabulation of the data:

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Earl A. Greene, Douglas J. Yeskis, Michael J. Smigaj, and Valerie M. Gainé provided technical and editorial reviews for the Introduction section of this report. Richard W. Saffer, Robert H. Pentz, and Anthony J. Tallman provided invaluable assistance and editing support for this volume. Andrew E. LaMotte produced figures 6 through 8, using a Geographic Information System mapping program.

This report was prepared under the general supervision of James M. Gerhart, District Chief, MD-DE-DC District, and Catherine L. Hill, Regional Hydrologist, Northeast Region, and in cooperation with the States of Maryland and Delaware, Washington, D.C., and other agencies.

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13. ABSTRACT (Maximum 200 words) Water resources data for the 2003 water year for Maryland, Delaware, and Washington, D.C. consist of records of water levels and water quality of ground-water wells. This report (Volume 2. Ground-Water Data) contains water levels at 386 observation wells, discharge records for 4 springs, and water quality at 185 wells. Locations of ground-water level wells are shown on figures 6 and 7. Locations of ground-water-quality sites are shown on figure 8. The data in this report represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State, local, and Federal agencies in Maryland, Delaware, and Washington, D.C.				
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<u>CECIL COUNTY</u>			
Spring 393459076045001	Local number CE Cc 40	30
<u>FREDERICK COUNTY</u>			
Spring 392552077262201	Local number FR Dd 178	.....	31
Spring 391846077370501	Local number FR Fb 12	.....	32
<u>WASHINGTON COUNTY</u>			
Spring 392836077442701	Local number WA Di 103	.....	33
GROUND-WATER LEVELS			
DELAWARE:			
<u>KENT COUNTY</u>			
Well 390607075331501	Local number Jd42-03	.....	34
Well 390224075391601	Local number Kc31-01	35
Well 385041075395601	Local number Mc51-01	36
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Well 385310075331301	Local number Md22-01	39
Well 390733075264802	Local number DM102D	40
Well 390733075264801	Local number DM102F	.....	41
Well 390723075270901	Local number DM103D	.....	42
Well 390734075271402	Local number DM106D	.....	43
Well 390734075271401	Local number DM106S	.....	44
Well 390801075272302	Local number DM108D	.....	45
Well 390801075272301	Local number DM108S	.....	46
Well 390744075270402	Local number DM110D	.....	47
Well 390744075270401	Local number DM110S	.....	48
Well 390833075273601	Local number DM202D	.....	49
Well 390827075290401	Local number DM204D	.....	50
Well 390729075283701	Local number DM310SB	.....	51
Well 390819075292902	Local number DM347D	.....	52
Well 390819075292901	Local number DM347S	53
Well 390815075293402	Local number DM348D	54
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Well 390811075293801	Local number DM349S	57
Well 390707075293401	Local number DM358D	58
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Well 390629075272701	Local number DM412D	61
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Well 390742075300102	Local number GS4D	63
Well 390742075300101	Local number GS4S	64
Well 390654075282202	Local number MW29D	.....	65
Well 390647075283301	Local number MW33D	.....	66
Well 390703075272601	Local number MW48D	.....	67
Well 390651075272001	Local number MW80D	.....	68
<u>NEW CASTLE COUNTY</u>			
Well 393917075401601	Local number Db15-05	.....	69
Well 393856075415602	Local number Db24-17	.....	70
Well 393734075371103	Local number Db33-17	.....	71
Well 393734075371102	Local number Db33-18	.....	72
Well 393734075371101	Local number Db33-19	.....	73
Well 393755075364801	Local number Dc34-05	.....	74
Well 393755075364802	Local number Dc34-06	.....	75
Well 393316075421601	Local number Eb23-22	.....	76
Well 393316075421602	Local number Eb23-23	.....	77
Well 393316075421603	Local number Eb23-24	.....	78
Well 393316075421604	Local number Eb23-25	.....	79
Well 391949075410701	Local number Hb14-01	.....	80
<u>SUSSEX COUNTY</u>			
Well 384639075353101	Local number Nc45-01	.....	81
Well 384955075192801	Local number Ng11-01	.....	82
Well 384558075083501	Local number Ni52-11	.....	83
Well 384558075083502	Local number Ni52-12	84
Well 384438075234801	Local number Of12-13	85-86
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Well 384343075230401	Local number Of22-04	91-92
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Well 384038074970001	Local number Oh54-01	100
Well 384038075110002	Local number Oh54-02	101
Well 384258075063101	Local number Oi24-06	102
Well 383730075213501	Local number Pf24-02	103

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Well 383138075260201	Local number	Qe44-01.....	105
Well 383050075105201	Local number	Qh54-04.....	106
Well 383050075105202	Local number	Qh54-05.....	107
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Well 382808075030501	Local number	Rj22-05.....	111
Well 382808075030502	Local number	Rj22-06.....	112
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Well 391032076385902	Local number	AA Ad 90.....	120-121
Well 391032076385904	Local number	AA Ad 102.....	122
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Well 391032076385907	Local number	AA Ad 110.....	126
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Well 390821076365401	Local number	AA Bd 152.....	128-129
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Well 390922076371001	Local number	AA Bd 156.....	132-133
Well 390737076374401	Local number	AA Bd 157.....	134-135
Well 390744076390001	Local number	AA Bd 158.....	136
Well 390737076374402	Local number	AA Bd 159.....	137
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Well 390945076285601	Local number	AA Bf 3.....	140
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Well 390423076432001	Local number	AA Cc 40.....	143
Well 390126076403001	Local number	AA Cc 135.....	144
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Well 390450076343402	Local number	AA Ce 117.....	146
Well 390150076283003	Local number	AA Cf 98.....	147
Well 390150076283002	Local number	AA Cf 99.....	148
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Well 390123076241602	Local number	AA Cg 23.....	150
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Well 390127076240301	Local number	AA Cg 25.....	152
Well 385808076373502	Local number	AA Dd 42.....	153
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Well 392438076331803	Local number	BA Ee 192.....	181
Well 392458076330301	Local number	BA Ee 198.....	182
Well 391607076312901	Local number	BA Fe 19.....	183
Well 391356076293501	Local number	BA Gf 11.....	184

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Well	384333076394702	Local number	CA Bb	28..... 186
Well	384114076320301	Local Number	CA Bc	25..... 187
Well	383940076314801	Local number	CA Cc	18..... 188
Well	383605076344601	Local number	CA Cc	57..... 189
Well	383239076354201	Local number	CA Db	47..... 190
Well	383216076351401	Local number	CA Db	65..... 191
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Well	382407076260301	Local number	CA Fd	54..... 199
Well	382236076255401	Local number	CA Fd	85..... 200-201
Well	382318076242401	Local number	CA Fe	22..... 202
Well	381952076270901	Local number	CA Gd	6..... 203
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Well	390227075470201	Local number	CO Bd	53..... 205
<u>CARROLL COUNTY</u>				
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Well	393638076510001	Local number	CL Bf	1..... 207
Well	393754076512401	Local number	CL Bf	184..... 208
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<u>CECIL COUNTY</u>				
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Well	393432075593601	Local number	CE Cd	51..... 214
Well	393432075593602	Local number	CE Cd	52..... 215
Well	393216075564201	Local number	CE Cd	53..... 216
Well	393433075544901	Local number	CE Ce	54..... 217
Well	393241075500201	Local number	CE Ce	55..... 218
Well	393026075523101	Local number	CE Ce	56..... 219
Well	393209075541301	Local number	CE Ce	82..... 220
Well	392536075593201	Local number	CE Dd	81..... 221
Well	392403075521801	Local number	CE Ee	29..... 222
<u>CHARLES COUNTY</u>				
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Well	383644077055501	Local number	CH Bc	77..... 225
Well	383645077062402	Local number	CH Bc	80..... 226
Well	383709077061002	Local number	CH Bc	81..... 227
Well	383553077032401	Local number	CH Bd	52..... 228
Well	383819076555501	Local number	CH Be	43..... 229
Well	383706076575601	Local number	CH Be	57..... 230
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Well	383853076532601	Local number	CH Bf	101..... 232
Well	383640076545901	Local number	CH Bf	133..... 233
Well	383728076531701	Local number	CH Bf	134..... 234
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Well	383637076545803	Local number	CH Bf	157..... 237
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WORCESTER COUNTY

Well 382635075030602	Local well number	WO Ah	36	591-601
Well 382638075033001	Local well number	WO Ah	38	591-601
Well 382305075150001	Local well number	WO Bf	88	591-601
Well 382443075033501	Local well number	WO Bh	34	591-601
Well 382215075041901	Local well number	WO Bh	84	591-601
Well 382215075041902	Local well number	WO Bh	85	591-601
Well 382215075041903	Local well number	WO Bh	89	591-601
Well 382127075043802	Local well number	WO Bh	98	591-601
Well 382127075043804	Local well number	WO Bh	101	591-601
Well 381541075271401	Local well number	WO Cc	4	591-601
Well 381938075052001	Local well number	WO Cg	33	591-601
Well 381953075051401	Local well number	WO Cg	87	591-601
Well 380358075292901	Local well number	WO Fe	1	591-601

WATER RESOURCES DATA - MARYLAND, DELAWARE, AND WASHINGTON, D.C., WATER YEAR 2003

VOLUME 2. GROUND-WATER DATA

INTRODUCTION

The Water Resources Discipline of the U.S. Geological Survey, in cooperation with State and local agencies, obtains a large amount of data pertaining to the water resources of Maryland, Delaware, and Washington, D.C. each water year. These data, accumulated during many water years, constitute a valuable data base that can be used to develop an improved understanding of the water resources of the States and Washington, D.C. To make these data readily available to interested parties outside the U.S. Geological Survey, the data are published annually in the report series entitled "**Water Resources Data - Maryland, Delaware, and Washington, D.C.**"

This series of Water Resources Data reports for Maryland, Delaware, and Washington, D.C. began with the 1961 water year report that only contained data relating to the quantity of surface water. For the 1964 water year, a similar report was published, and it contained data relating to surface water, and ground-water quality. Beginning with the 1975 water year, the report was changed to its present format, in one volume, including data on surface-water quantity, surface- and ground-water quality, and ground-water levels. For the 1989 water year, the report format was changed to two volumes. Both volumes contained data on quantities of surface water, surface-water and ground-water quality, and ground-water levels. Volume 1 contained data on the Atlantic Slope Basins (Delaware River through Patuxent River Basins) and Volume 2 contained data on the Monongahela and Potomac River Basins. Since the 1991 water year, Volume 1 has contained information on quantity of surface water and surface-water quality data, and Volume 2 has contained ground-water levels and ground-water quality data.

This report is Volume 2 of the 2003 water year Water Resources Data report series and includes records of water levels and water quality of ground-water wells and springs. It contains discharge data records for 4 springs, water levels at 386 observation wells, and water-quality analyses for 185 wells. The locations of ground-water level wells are shown in figures 6 and 7. The locations of ground-water quality sites are shown in figure 8. These data represent the part of the National Water Data System collected by the U.S. Geological Survey and cooperating local, State, and Federal agencies in Maryland, Delaware, and Washington, D.C.

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

Water Resources Data reports are published annually by the U.S. 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 Resources Data Report MD-DE-DC-03-2.**" For archiving and general distribution, the reports for the 1971-74 water years also are identified as water resources data reports. These water resources data reports are for sale in paper copy or on microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

Additional information, including current prices for ordering specific report, may be obtained from the District Chief at the address given on the bottom of the title page or by telephone at (410)238-4200.

COOPERATION

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

Maryland Geological Survey, Emery T. Cleaves, Director

Delaware Geological Survey, John H. Talley, Director and State Geologist

Delaware Department of Transportation, Nathan Hayward III, Secretary

Delaware Department of Natural Resources and Environmental Control, John A. Hughes, Secretary of Natural Resources and Environmental Control

District of Columbia Department of Health, Environmental Health Administration, Bureau of Environmental Quality, Water Quality Division

Maryland Department of the Environment, Kendl Philbrick, Secretary

Maryland Department of Natural Resources, Power Plant Assessment Program, Peter Dunbar, Director

Anne Arundel County Department of Public Works, Water Operations, Matthew Mirenzi, Regional Manager

Anne Arundel County Land Use and Environmental Office, Betty Dixon, Land Use Officer

Maryland-National Capital Park and Planning Commission, Nazin Baig, Environmental Planning Coordinator

Calvert County Department of Public Works, Dan Williams, Bureau Chief

Charles County Department of Planning and Growth Management, Roy E. Hancock, Director

Interstate Commission on the Potomac Basin, Joseph Hoffman, Executive Director

Town of Ocean City, Maryland Water Department, Ronald Ellis, Superintendent

U.S. Air Force, Dover Air Force Base, 436th Civil Engineer Squadron, Environmental Flight, Jo Anne Deramo, Restoration Program Manager

U.S. Environmental Protection Agency, National Risk Management Laboratory, Subsurface Protection and Remediation Division, Stephen G. Schmelling, Acting Director

U.S. Navy, Naval Air Station Patuxent River, Civil Engineer Corps, Captain Charles C. Miller, Public Works Officer

Organizations and projects that provided data included in this report are acknowledged in the Site Instrumentation and Remarks description in the Ground-Water Levels section.

SUMMARY OF GROUND-WATER HYDROLOGIC CONDITIONS

This report presents spring discharges, well water levels and water-quality analyses from ground-water studies in Maryland, Delaware, and Washington, D.C. The following ground-water hydrologic summary for the 2003 water year includes data collected from the Maryland, Delaware, and Washington, D.C. cooperative water-level monitoring networks.

Ground-water use in Maryland and Delaware continues to increase with population growth, especially with more people living in rural areas. Growth areas in Southern Maryland, and the northern parts of the Delmarva Peninsula of both Maryland and Delaware are causing water users to withdraw ground water from deeper aquifers. As ground-water users' demands increase, water-level data can provide critical information on how to properly evaluate, plan and manage this natural resource. Water-table monitoring wells can alert users during periods of drought and the information they provide can assist with implementing water-use conservation measures. Confined aquifers, mostly used in the Coastal Plain, provide large quantities of water for municipalities, industry, irrigation, and individual dwellings. Water-level monitoring wells provide the means to track ground-water withdrawal effects on Coastal Plain aquifers, and data on how best to manage water use.

The 2003 water year had higher than normal precipitation across Maryland, Delaware, and Washington, D.C., unlike the previous water year. Precipitation totals reported by the National Oceanic and Atmospheric Administration (NOAA) ranged from approximately 64 inches in Maryland to about 63 inches in Delaware. The average annual precipitation in the Maryland, Delaware, and Washington, D.C. area as observed by NOAA from 1961 through 1990 ranged from under 36 to over 52 inches. The six key water-table wells shown in figure 1 give an overview of how ground-water levels responded to precipitation across the region during the 2003 water year. These graphs show the average, minimum, maximum and 2003 water-year monthly water levels for the six key water-table wells.

In general, the 2003 water year monthly water levels were above the long-term average (fig. 1). Generally the monthly water levels reached a low in late fall or early winter. Higher than normal amounts of precipitation during water year 2003, including Tropical Storm Isabel, caused water levels to rise in these key observation wells and stay above the long-term average.

In Southern Maryland and the northern area of the Delmarva Peninsula, where the confined Coastal Plain aquifers are the main source for municipal water supplies, water levels continued to decline (fig. 2). Additional ground-water withdrawal from irrigation wells may compound the amount of drawdown on the Delmarva Peninsula.

Ground-Water Levels and Spring Discharge

The Maryland, Delaware, and Washington, D.C. area is divided into several physiographic provinces that control ground-water movement through geologic processes related to geomorphology, lithology, and structure. Depending on the amount of ground-water movement through fracture and joint systems and sediments, wells can supply small individual households or larger water users, such as communities, towns, industry, and agriculture. Moving from west to east, the five physiographic provinces in the region are the Appalachian Plateau, the Valley and Ridge, the Blue Ridge, the Piedmont, and the Coastal Plain. Ground-water level conditions for water year 2003 are summarized below by physiographic province.

Appalachian Plateau. -- Ground-water level trends closely paralleled precipitation events in the water-table well GA Bc 1, in Garrett County, Maryland (fig. 1). The ground-water levels in this well for the 2003 water year started just above average and fell below to below average in January. Due to spring recharge water levels rose to a high in March that was above average levels. The water levels then dropped to about average values until August and September when due to higher than normal precipitation water levels rose above average levels.

Valley and Ridge. -- Water-table levels were slightly above the average throughout the 2003 water year in Collection of Basic Records (CBR) well WA Be 2 (figs. 1 and 3). Other wells in Washington County, WA Bk 25 and WA Ch 106, showed a similar pattern with increases in water levels during winter to early spring. Spring WA Di 103 increased flows from a low at the start of the water year to a fairly constant flow throughout the 2003 water year.

Blue Ridge. -- The water-level trend as recorded by water-table wells FR Bd 96 and WA Dj 2 showed water levels were low at the start of the water year and increased due to above normal precipitation. Spring FR Fb 12 responded to rain storms in March and April, with an increase in discharge due to heavy rain events in August and September.

Piedmont. -- Water-table levels were below normal at the start of the 2003 water year in the Piedmont Physiographic Province and increased to above normal by the end of the water year. Well MO Eh 20 (fig. 1), reflects the general trend in water levels during the water year 2003. Well CL Bf 1 in Hampstead, Maryland started the water year at a low in October and rose to a high in June.

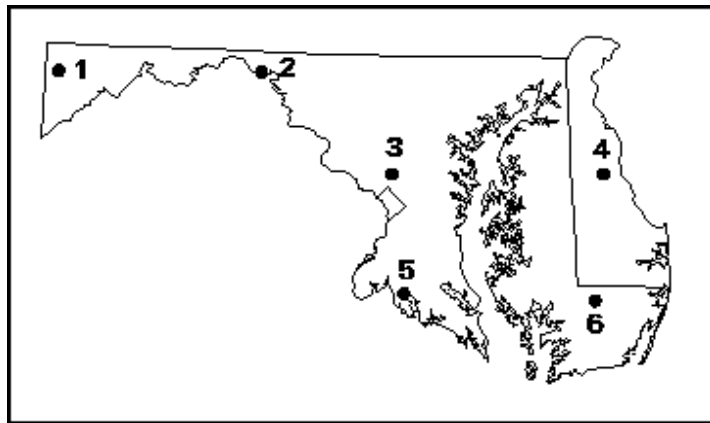
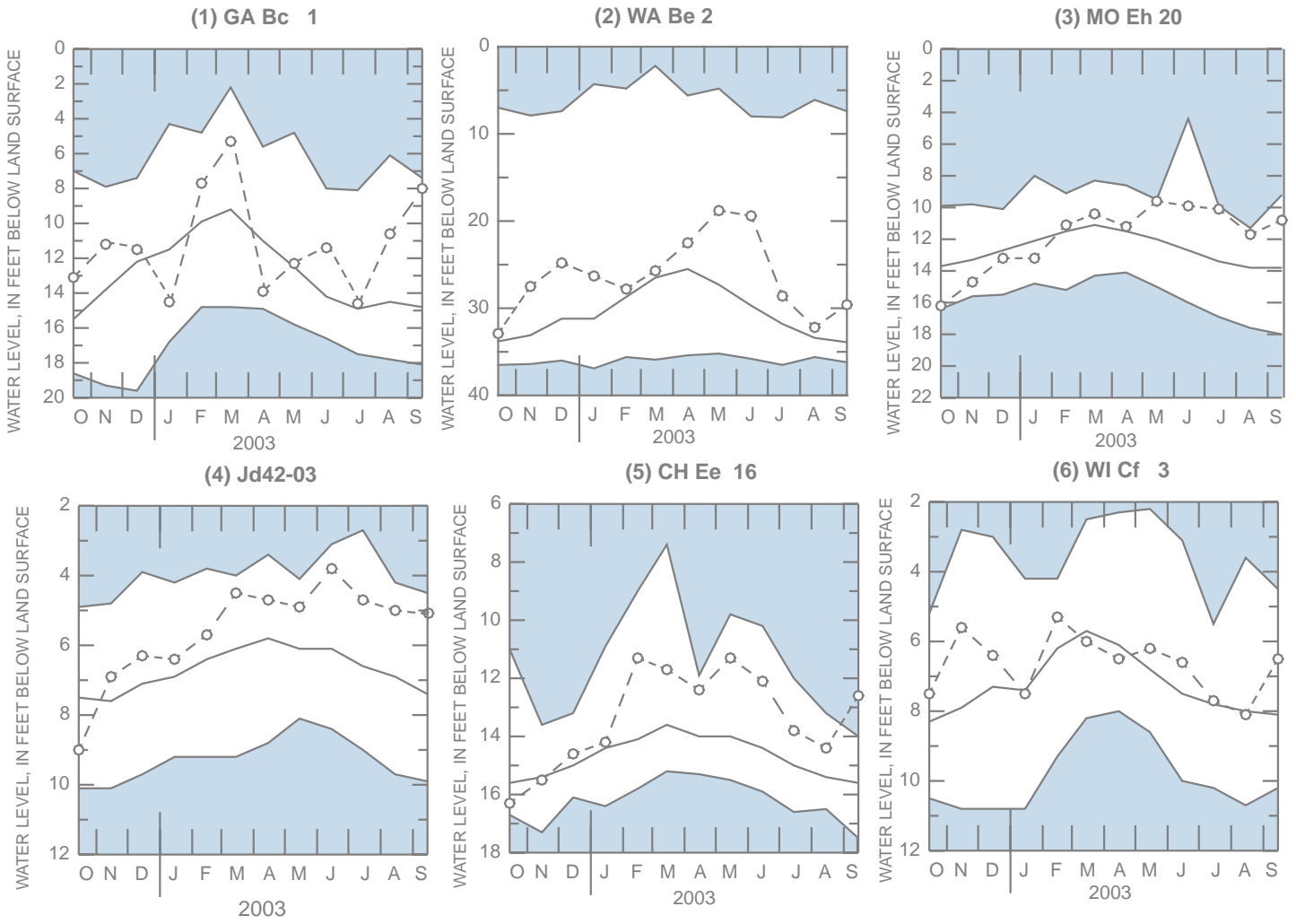
Triassic - Jurassic Gettysburg and Culpeper Basins. -- Monitoring wells in the Triassic Basins include one well in the Gettysburg Basin in northeastern Frederick County, Maryland (FR Af 27), and four wells in the Culpeper Basin in northwestern Montgomery County, Maryland. These wells are in confined aquifers that yield large volumes of water and are used as a municipal sources. The Dickerson well (MO Cb 26) rose from a low in October and remained flowing throughout much of the 2003 water year.

Coastal Plain. -- Water levels in water-table monitoring wells (Jd 42-03, CH Ee 16, and WI Cf 3) were about average to higher than average throughout the 2003 water year (fig. 1). Water-table levels on the western shore of the Chesapeake Bay were at average to above average during the water year. On the eastern Shore of Maryland, water levels were similar to those on the western shore.

Confined aquifers on the western shore of the Chesapeake Bay lie close to their surface-recharge zones in the area near the contact with the Piedmont Physiographic Province. These aquifers receive most of their ground-water recharge from this outcrop belt. This area is heavily populated because of its close proximity to the Baltimore-Washington and Annapolis metropolitan areas. These areas rely exclusively on ground-water supplies, except for the Greater Baltimore area, which is supplied by surface-water reservoirs, and the northwestern part of Prince Georges County, where the Washington Suburban Sanitary Commission supplies surface water from the Potomac and Patuxent Rivers. Water-level monitoring wells in Anne Arundel County, Maryland recorded continued ground-water level declines in the Patuxent aquifer throughout the County. Ground-water level declines continue to occur in the Magothy aquifer near Annapolis, and the Aquia aquifer in southern Anne Arundel County. Water levels in the Aquia aquifer in Calvert County continue to decline (fig. 2, well CA Gd 6). The Magothy, Upper Patapsco, and Lower Patapsco ground-water levels declined in the southeastern part of Prince Georges County. In St. Marys County, Maryland water level declines continued in the Piney Point, Aquia, and Upper Patapsco aquifers.

Water Quality -- Saltwater Intrusion Monitoring Projects

Kent Island Ground-Water Monitoring Project. -- This project is a continuation of ground-water level and chloride monitoring that was started in 1983, to observe chloride changes through ground-water use in the Aquia aquifer on Kent Island, Queen Annes County, Maryland due to saltwater intrusion from Chesapeake Bay. A total of 14 Aquia aquifer monitoring wells are currently in operation along with 3 monitoring wells in the deeper confining aquifers. Chloride and bromide water-quality analyses are collected yearly from 13 of the water-level monitoring wells and approximately 25 domestic wells. Water resources managers have expanded the water-level monitoring network to include at least eight additional wells. With the addition of these wells to the existing Kent Island ground-water monitoring network, a county wide ground-water-level monitoring network will be more effective in managing this natural resource.



EXPLANATION

Unshaded areas show range between highest and lowest month-end water levels of record.

- 2003 Water Year
- Average

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

Ocean City Ground-Water Monitoring Project.--Saltwater intrusion in ground-water supplies for Ocean City is a water-quality concern. Ocean City is a major Atlantic Coast summer beach resort where populations can increase to over 300,000 on any given day during the summer months, in contrast to the 10,000 permanent residents year round. Ocean City exclusively dominates the southern part of the barrier island of Fenwick Island in Maryland. The main water-producing aquifers in this region are the Ocean City and Manokin aquifers, with the Pocomoke aquifer limited to individual domestic wells mostly on the mainland. There are 24 water-level monitoring wells, including 6 that are equipped with digital water-level recorders. Chloride and bromide samples are collected at the end of the summer tourist season so that the highest possible concentrations from six monitoring wells and six water supply wells can be evaluated. The saltwater/freshwater interface is expected to have migrated its farthest distance east due to the increased summer ground-water use.

SPECIAL NETWORKS AND PROGRAMS

The ground-water Collection of Basic Records (CBR) wells include the **Climatic Response Network (CRN)** National network that provides a framework for collecting and disseminating ground-water level data characterizing climatic variability. The network fills a unique National need and can be used for local, regional, and National investigations of ground-water response to droughts and other climatic effects. The five Maryland and Delaware CBR water-table observation wells period-of-record hydrographs are shown in figure 3.

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

Assessment activities are being conducted in more than 50 river basins and aquifer systems that represent a wide range of environmental settings nationwide and account for a large percentage of the Nation's water use. A wide array of chemical constituents are being measured in ground water, surface water, streambed sediments, and fish tissues. The coordinated application of comparative hydrologic studies at a wide range of spatial and temporal scales will provide information for decision-making by water-resources managers and a foundation for aggregation and comparison of findings to address water-quality issues of regional and National interest.

The NAWQA programs in the Maryland, Delaware, and Washington, D.C. District consist of the Potomac River Basin and Delmarva Peninsula study units of the U.S. Geological Survey National Water-Quality Assessment (NAWQA) program were combined into a single project, the Potomac-Delmarva Peninsula (PODL) study in 2001. The NAWQA program emphasizes an understanding of the processes governing water quality, trends in water quality, and the relation of these trends to ecological conditions. The goals will be achieved through integrated assessments of hydrology, geology, and biology. The new project began in 2001 and will complete its current cycle in 2007. During the study period, and afterwards, specific surface-water and ground-water sites will be monitored continuously for analysis of water-quality trends.

EXPLANATION OF THE RECORDS

The ground-water levels and quality-of-ground-water records published in this report are for the 2003 water year that began October 1, 2002 and ended September 30, 2003. A calendar of the water year is provided on the inside of the front cover. The records contain ground-water-level data and water-quality data for ground-water. The locations of the ground-water sites where the data were collected are shown in figures 6, 7, and 8. The following sections of text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

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

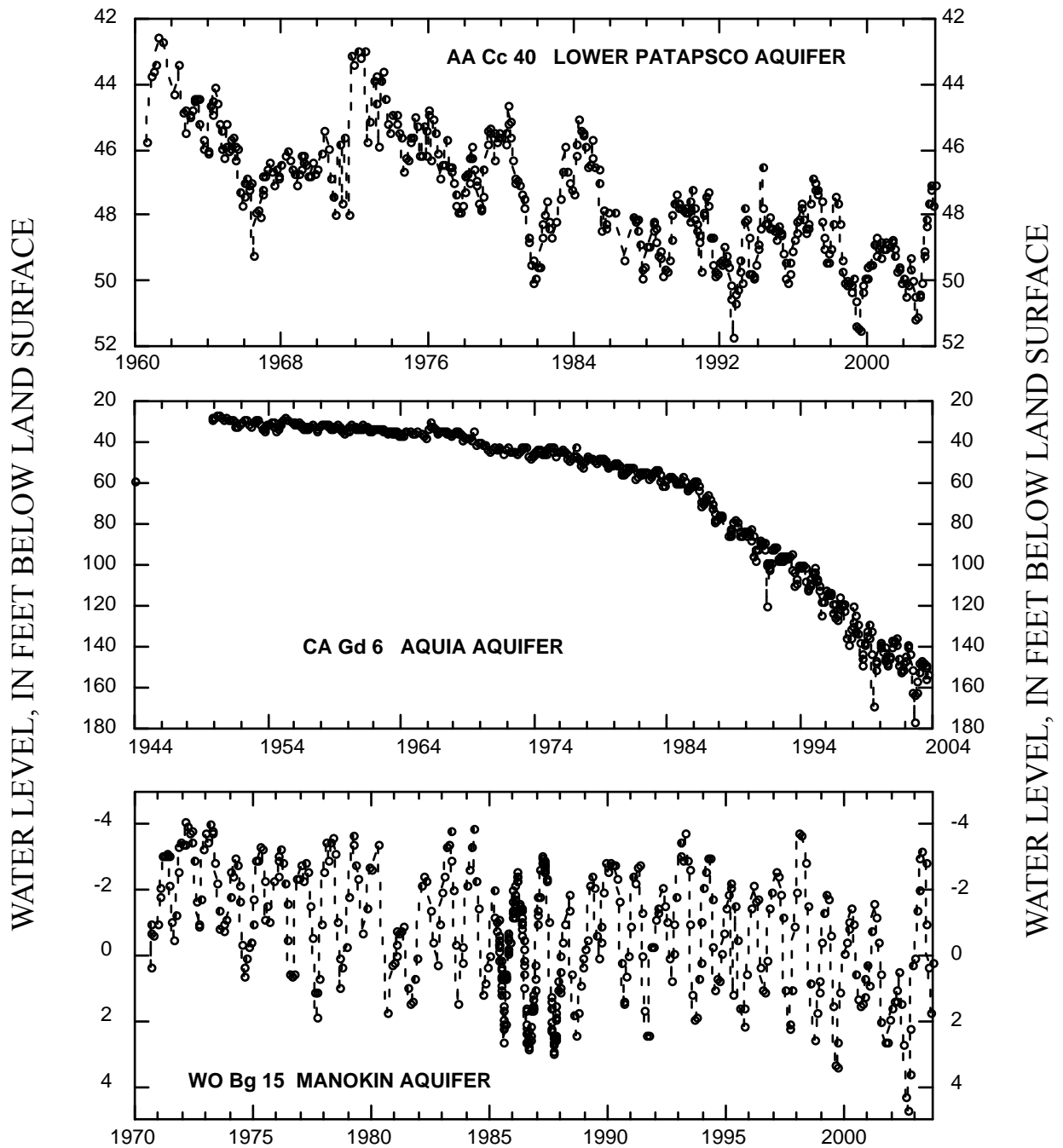
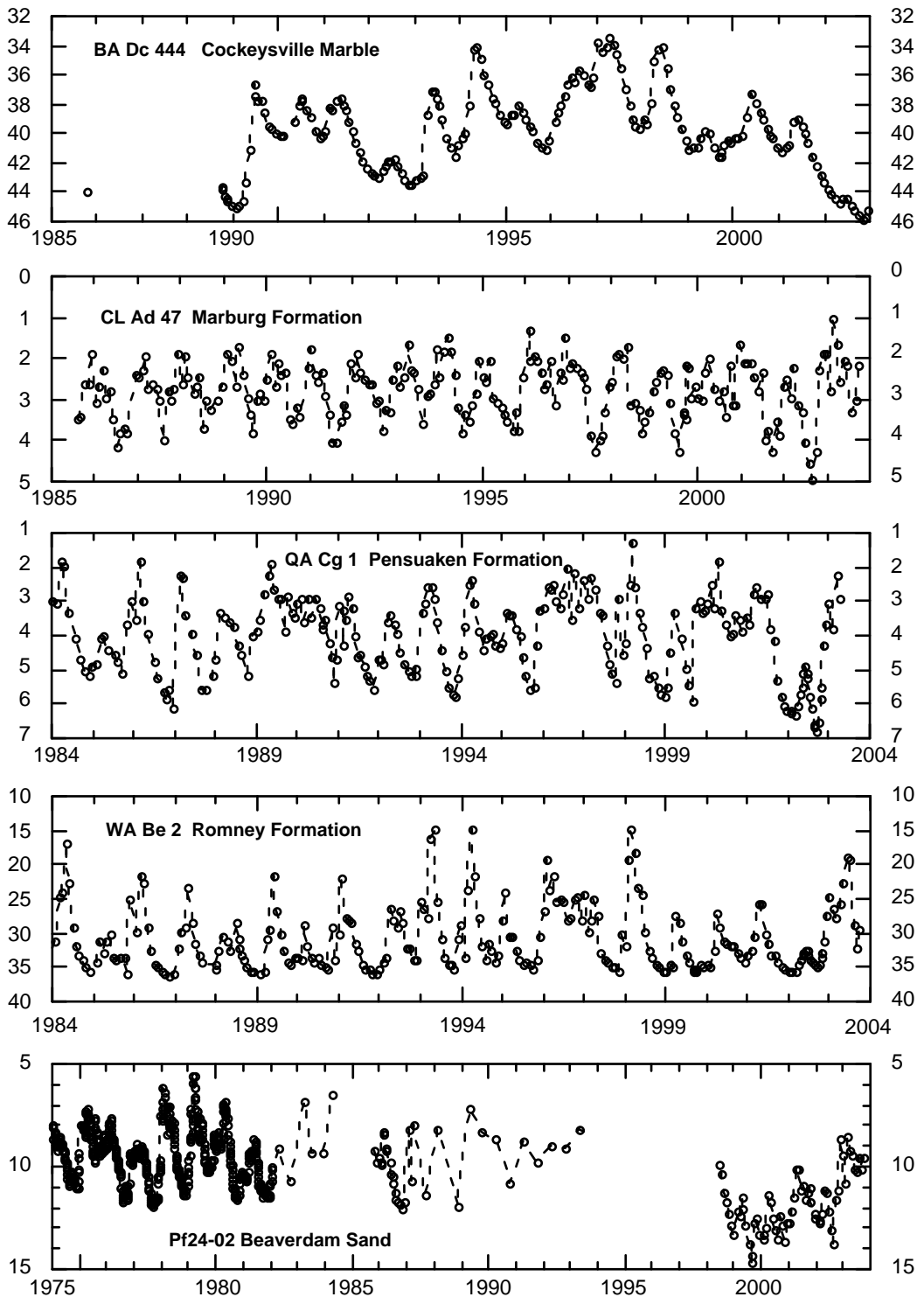


Figure 2. --Ground-water levels in selected observation wells in confined Coastal Plain aquifers in Maryland.

WATER LEVEL, IN FEET BELOW LAND SURFACE



WATER LEVEL, IN FEET BELOW LAND SURFACE

Figure 3. --Ground-water levels for Collection of Basic Records (CBR) network wells in Maryland and Delaware.

Latitude-Longitude System

The identification numbers for wells are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude, the next seven digits denote degrees, minutes, and seconds of longitude, and the last two digits (assigned sequentially) identify the wells (or springs) 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 as the correct latitude and longitude coordinates. (See fig. 4 below.)

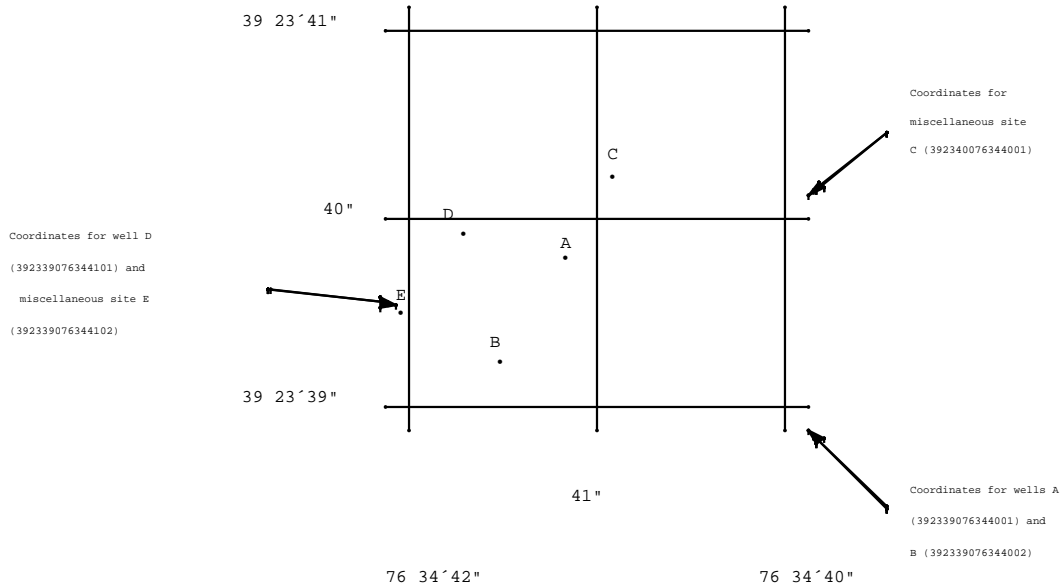


Figure 4.--System for numbering wells and miscellaneous sites (latitude and longitude).

Well-Numbering System

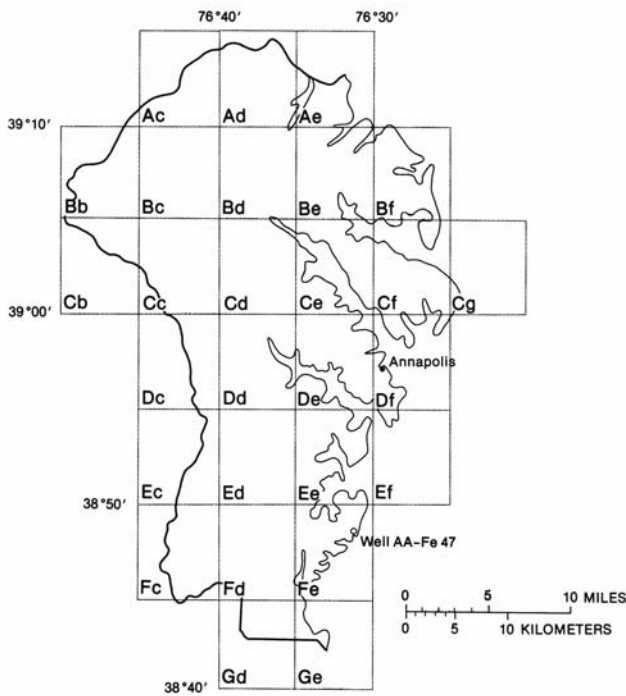
Maryland

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 from north to south, and the second letter (lower case) denotes a 5-minute segment of longitude from west to east. 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 the grid cell 7 miles south and 4 miles east of the Washington Monument, and is the first well inventoried in that grid cell.

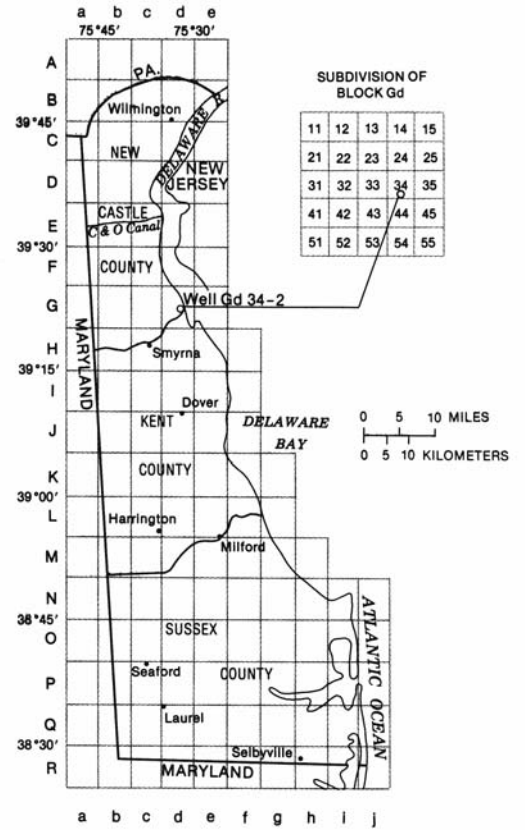
Delaware

Delaware wells 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 and west to east with lower case letters. Each 5-minute quadrangle is further divided into 25 1-minute blocks, which are numbered in sequence from north to south (fig. 5). 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 inventoried in the 1-minute block 41 that has coordinate "Cb41".

ANNE ARUNDEL COUNTY, MARYLAND
(Example, AA Fe 47)



DELAWARE
(Example Gd 34-2)



WELL PREFIXES OF MARYLAND COUNTIES

Allegany	AL	Howard	HO
Anne Arundel	AA	Kent	KE
Baltimore	BA	Montgomery	MO
Calvert	CA	Prince Georges	PG
Caroline	CO	Queen Annes	QA
Carroll	CL	St. Marys	SM
Cecil	CE	Somerset	SO
Charles	CH	Talbot	TA
Dorchester	DO	Washington	WA
Frederick	FR	Wicomico	WI
Harford	HA	Worcester	WO
Garrett	GA		

WASHINGTON, D.C.

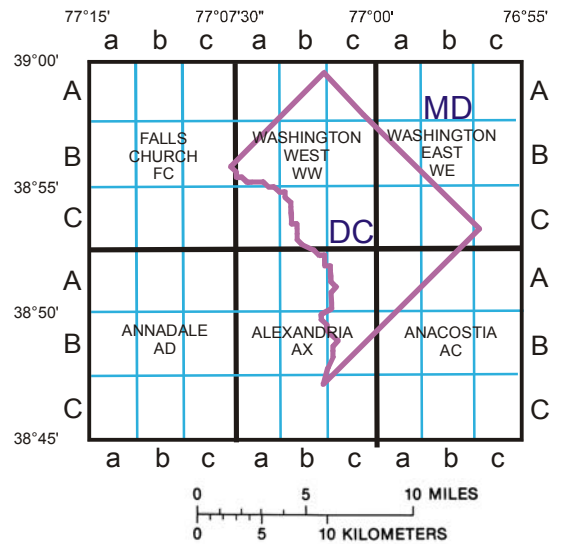


Figure 5. -- Well naming system used in Maryland, Delaware, and Washington, D.C.

Washington, D.C.

Ground-water studies by the U.S. Geological Survey apply a numbering system using the six 7 1/2-minute quadrangle maps that cover parts of Washington, D.C. Each quadrangle is divided into nine rectangles by lines drawn at the 2 1/2-minute intervals. The rectangles are lettered A, B, and C from top to bottom, and a, b, and c from west to east. An upper case single or double letter is designated for the quadrangle name as follows:

FC -----	Falls Church	AN -----	Annandale
WW -----	Washington West	AX -----	Alexandria
WE -----	Washington East	AC -----	Anacostia

The wells and springs are numbered sequentially in each quadrangle. Well WW-Cc 12 is the twelfth well inventoried in the southeastern most rectangle designated as Cc, in the Washington West.

Records of Ground-Water Levels

Water-level data and spring discharges from the Maryland and Delaware Ground-Water-Level Monitoring Networks, and observation wells from 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 and natural climatic stress on the ground-water-flow system. The locations of the State network spring and observation wells in Maryland and Delaware are shown on Figure 6. The locations of project wells are shown on Figure 7.

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 ensure 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. The secondary identification number is the 15-digit site identification number (see Latitude-Longitude System section on page 8).

Water levels are measured manually by steel tape or by an electric tape (meter) approximately every 4 to 6 weeks; some wells are equipped with continuous digital water-level recorders to observe daily fluctuations. The water levels are referenced to the nearest hundredth of a foot below land-surface datum (**lsd**) and/or above 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:

SPRING or WELL NUMBER.--(See **Well-Numbering System** section on page 8.)

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. (See **Latitude-Longitude System** section on page 8.)

PERMIT NUMBER.--The permit number is the State permit number required for drilling wells in Maryland and Delaware. Upon completion of the well, the driller must submit a completion report which documents specific data on the construction of the well. This document also reports the pumpage results in terms of pumping period, yield as gallons per minute, and drawdown.

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, Hydrologic Unit Map-1974 States of Maryland and Delaware). A brief local description of the location is also 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 the U.S. Geological Survey Ground Water Site Inventory (GWSI) data-base aquifer code.

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

INSTRUMENTATION.--This provides information on the frequency of measurement of well water levels and the water-level equipment or spring discharge 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 hundredth or tenth of a foot as determined from surveying. The measuring point (**MP**) is the distance above or below the land surface at the point at which the water-level measurements are made.

REMARKS.--This section gives important miscellaneous data relevant to the spring or 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.--This entry identifies the highest and lowest water levels during the period of record, either as land-surface datum or sea level, and the dates of their occurrence.

Spring Discharge Tables

A table of discharge in gallons per minute follows the station description for each spring. The data appears in a table format showing date and discharge. The discharge measurements are measured volumetrically or by use of a flow meter as indicated in the INSTRUMENTATION section.

Water-Level Tables

A table of water levels follows the station description for each well. Water levels are reported in either of the following table formats:

Hand-held measurements.--If the data are collected by hand-held measurements, the data appear in a table format of date and water level with the datum in reference to land surface or sea level. These values are reported to the nearest hundredth of a foot

Recorder.--Water levels are presented in a two-page 6-month format by water year with columns for daily maximums and minimums. These data are reported in reference to either land surface or sea level datum. The daily maximum column referenced to land-surface data represents the lowest daily water level recorded. The daily minimum column referenced to land surface data represents the highest water level recorded. For data referenced to sea level, the daily maximum column represents the highest daily water level recorded. The daily minimum column represents the lowest daily water level recorded. Missing data are represented by dashes in the table.

Hydrographs

The hydrographs are a graphic display of water-level fluctuations over a period of time. In this report, a 5-year hydrograph is shown starting October 1, 1998 through September 30, 2003. Hydrographs are either referenced to land surface or sea level datum. Each measurement is indicated by a circle and connected with a dashed line to indicate the trend from one measurement to the next. The trend line should be interpreted as a general direction of water-level movement. Actual water levels may deviate from this line. The trend line is not drawn if the measurements are greater than 60 days apart. Recorder data are graphed as a continuous line using the lowest water level recorded for each day. Missing data are indicated by a blank space. Missing data result from recorder malfunctions, battery or clock failures, and mechanical problems related to the response of water-level movement in a well. Spring hydrographs are a graphic display of total volumetric flow at the time of measurement in gallons per minute.

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 slowly; therefore, for most purposes, one annual sampling, or only a few samples taken at infrequent intervals during the year, are 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 or chloride concentrations. In special cases where the quality of ground water may change more rapidly, more frequent measurements are made to identify the nature of the changes. The locations of water-quality wells in Maryland and Delaware are shown in Figure 8.

Data Collection and Computation

The records of ground-water quality in this report were obtained mostly as part of ground-water 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 District-wide. This can be attained only by considering records for this year in context with similar records obtained for these and other springs and wells in earlier years.

Most methods for collecting and analyzing water samples are described in the U.S. Geological Survey Techniques of Water-Resources Investigations (TWRI) publications referred to in the "On-site Measurements and Sample Collection" and the "Laboratory Measurements" sections in this report. In addition, TWRI Book 1, Chapter D2, describes guidelines for the collection and field analysis of ground-water samples for selected unstable constituents. The values reported in this report represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. These methods are consistent with the American Society for Testing and Materials (ASTM) standards and generally follow the standards of the International Organization for Standards (ISO).

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 a well or spring number (**Well Number**). 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. Under the heading **Station Type**, wells are identified by the abbreviation GW for ground water and SP for springs. 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 following remark codes may appear with the water-quality data in this report:

<u>PRINTED OUTPUT</u>	<u>REMARK</u>
E	Estimated value.
>	Actual value is known to be greater than the value shown.
<	Actual value is known to be less than the value shown.
K	Results based on colony count outside the acceptance range (non-ideal colony count).
L	Biological organism count less than 0.5 percent (organism may be observed rather than counted).
D	Biological organism count equal to or greater than 15 percent (dominant).
&	Biological organism estimated as dominant.
V	Analyte was detected in both the environmental sample and the associated blank.
M	Presence of material verified but not quantified.

WATER-QUALITY CONTROL DATA

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

Blank Samples

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

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

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

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

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

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

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

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

Reference Samples

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

Replicate Samples

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

Concurrent sample - a type of replicate sample in which the samples are collected simultaneously with two or more samplers or by using one sampler and alternating collection of samples into two or more compositing containers.

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

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

Spike Samples

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

Concurrent sample - a type of spike sample that is collected at the same time with the same sampling and compositing devices then spiked with the same spike solution containing laboratory-certified concentrations of selected analytes.

Split sample - a type of spike sample in which a sample is split into subsamples contemporaneous in time and space then spiked with the same spike solution containing laboratory-certified concentrations of selected analytes.

ACCESS TO USGS DATA

The U.S. Geological Survey (USGS) is the principal Federal water-data agency and, as such, collects and disseminates about 70 percent of the water data currently being used by numerous State, local, private, and other Federal agencies to develop and manage our water resources. As part of the Geological Survey's program of releasing water data to the public, a large-scale computerized system has been developed for the storage and retrieval of water data collected through its activities. The National Water Information System (NWIS) an updated version of the former National Water Data Storage and Retrieval System (WATSTORE) provides an effective and efficient means for the processing and maintenance of water data collected through the activities of the U.S. Geological Survey and for release of the data to the public. The District computer network system in Baltimore is the main data storage facility for Maryland, Delaware, and Washington, D.C. water data. The following data bases can be accessed for ground-water data:

Ground-Water Site Inventory data base (GWSI) - Contains inventory data for 30,557 ground-water wells, 810 springs, and 2,382 surface water sites. The ground-water data includes site location, geohydrologic characteristics, well construction and manually measured water-level data or spring improvements and discharges, along with other pertinent ground-water information.

Automated Data Processing System (ADAPS) - Contains daily values for 299 observation well water-levels and 726 streamflow stages, along with water temperature, specific conductance, and dissolved oxygen for surface water stations equipped with water-quality monitors.

Quality Water Data base (QWDATA) - Contains analyses of water samples which include environmental and quality control samples that describe the chemical, physical, biological, and radiochemical characteristics of both ground-water sites (4,718 sites, 11,109 analyses), and surface-water stations (958 sites, 39,770 analyses).

State Water Use Data System (SWUDS) - Contains water user consumption information for 2,248 Maryland, and 519 Delaware ground-water use appropriations, and 773 Maryland surface water use appropriations with monthly and daily water use totals.

Some water-quality and ground-water data also are available through the world wide web (WWW). These data may be accessed at:

<http://md.water.usgs.gov/>

Specific ground-water real-time and near real-time water-level observation well data and hydrographs can be accessed on the Maryland, Delaware and Washington, D.C., Water Resources Division district world wide web (WWW) page at:

http://md.water.usgs.gov/groundwater/web_wells/current/water_table/counties/

http://md.water.usgs.gov/groundwater/web_wells/current/confined/counties/

In addition, data can be provided in various machine-readable formats, such as CD. Information about the availability of specific types of data or products, and user charges, can be obtained from the District Office (See address on bottom of the title page).

DEFINITION OF TERMS

Specialized technical terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. Terms such as algae, water level, precipitation are used in their common everyday meanings, definitions of which are given in standard dictionaries. Not all terms defined in this alphabetical list apply to every State. See also table for converting English units to International System (SI) Units on the inside of the back cover.

Acid neutralizing capacity (ANC) is the equivalent sum of all bases or base-producing materials, solutes plus particulates, in an aqueous system that can be titrated with acid to an equivalence point. This term designates titration of an "unfiltered" sample (formerly reported as alkalinity).

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

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.

Alkalinity is the capacity of solutes in an aqueous system to neutralize acid. This term designates titration of a "filtered" 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.

Aroclor is the registered trademark for a group of polychlorinated biphenyls that were manufactured by the Monsanto Company prior to 1976. Aroclors are assigned specific 4-digit reference numbers dependent upon molecular type and degree of substitution of the biphenyl ring hydrogen atoms by chlorine atoms. The first two digits of a numbered aroclor represent the molecular type and the last two digits represent the weight percent of the hydrogen substituted chlorine.

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.

Biochemical oxygen demand (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by microorganisms, such as bacteria.

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

Cells/volume refers to the number of cells of any organism that 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 volume, and are generally reported as cells or units per milliliter (mL) or liter (L).

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

Clostridium perfringens (C. perfringens) is a spore-forming bacterium that is common in the feces of human and other warm-blooded animals. Clostridial spores are being used experimentally as an indicator of past fecal contamination and presence of microorganisms that are resistant to disinfection and environmental stresses. (See also "Bacteria")

Coliphages are viruses that infect and replicate in coliform bacteria. They are indicative of sewage contamination of waters and of the survival and transport of viruses in the environment.

Color unit is produced by 1 milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

Confined aquifer is a term used to describe an aquifer containing water between two relatively impermeable boundaries. The water level in a well tapping a confined aquifer stands above the top of the confined aquifer and can be higher or lower than the water table that may be present in the material above it. In some cases, the water level can rise above the ground surface, yielding a flowing well. (See also "Aquifer")

Continuous-record station is a site where data are collected with sufficient frequency to define daily mean values and variations within a day.

Daily-record station is a site where data are collected with sufficient frequency to develop a record of one or more data values per day. The frequency of data collection can range from continuous recording to periodic sample or data collection on a daily or near-daily basis.

Data logger is a microprocessor-based data acquisition system designed specifically to acquire, process, and store data. Data are usually downloaded from on site data loggers for entry into office data systems.

Datum is a surface or point relative to which measurements of height and/or horizontal position are reported. A vertical datum is a horizontal surface used as the zero point for measurements of gage height, stage, or elevation; a horizontal datum is a reference for positions given in terms of latitude-longitude, State Plane coordinates, or UTM coordinates. (See also "Gage datum," "Land-surface datum," "National Geodetic Vertical Datum of 1929," and "North American Vertical Datum of 1988")

Dissolved refers to that material in a representative water sample that passes through a 0.45-micrometer membrane filter. This is a convenient operational definition used by Federal and State agencies that collect water-quality data. Determinations of "dissolved" constituent concentrations are made on sample water that has been filtered.

Dissolved oxygen (DO) is the molecular oxygen (**oxygen gas**) dissolved in water. The concentration in water is a function of atmospheric pressure, temperature, and dissolved-solids concentration of the water. The ability of water to retain oxygen decreases with increasing temperature or dissolved-solids concentration. Photosynthesis and respiration by plants commonly cause diurnal variations in dissolved-oxygen concentration in water from some streams.

Dissolved-solids concentration in water is the quantity of dissolved material in a sample of water. It 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, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. In the mathematical calculation, the bicarbonate value, in milligrams per liter, is multiplied by 0.4926 to convert it to carbonate. Alternatively, alkalinity concentration (as mg/L CaCO₃) can be converted to carbonate concentration by multiplying by 0.60.

Enterococcus bacteria are commonly found in the feces of humans and other warm-blooded animals. Although some strains are ubiquitous and not related to fecal pollution, the presence of enterococci in water is an indication of fecal pollution and the possible presence of enteric pathogens. Enterococcus bacteria are those bacteria that produce pink to red colonies with black or reddish-brown precipitate after incubation at 41 °C on mE/EIA method and subsequent transfer to EIA medium. Enterococci include *Streptococcus faecalis*, *Streptococcus faecium*, *Streptococcus avium*, and their variants. (See also "Bacteria")

Escherichia coli (E. coli) are bacteria present in the intestine and feces of warm-blooded animals. *E. coli* are a member species of the fecal coliform group of indicator bacteria. In the laboratory, they are defined as those bacteria that produce yellow or yellow-brown colonies on a filter pad saturated with urea substrate broth after primary culturing for 22 to 24 hours at 44.5 °C on mTEC medium. Their concentrations are expressed as number of colonies per 100 mL of sample. (See also "Bacteria")

Estimated (E) value of a concentration is reported when an analyte is detected and all criteria for a positive result are met. If the concentration is less than the method detection limit (MDL), an 'E' code will be reported with the value. If the analyte is qualitatively identified as present, but the quantitative determination is substantially more uncertain, the National Water Quality Laboratory will identify the result with an 'E' code even though the measured value is greater than the MDL. A value reported with an 'E' code should be used with caution. When no analyte is detected in a sample, the default reporting value is the MDL preceded by a less than sign (<).

Extractable organic halides (EOX) are organic compounds that contain halogen atoms such as chlorine. These organic compounds are semi-volatile and extractable by ethyl acetate from air-dried streambed sediments. The ethyl acetate extract is combusted, and the concentration is determined by microcoulometric determination of the halides formed. The concentration is reported as micrograms of chlorine per gram of the dry weight of the streambed sediments.

Fecal coliform bacteria 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. (See also "Bacteria")

Fecal streptococcal bacteria are present in the intestine of warm-blooded animals and are ubiquitous in the environment. They are characterized as gram-positive, cocci bacteria that are capable of growth in brain-heart infusion broth. In the laboratory, they are defined as all the organisms that 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. (See also "Bacteria")

Gas chromatography/flame ionization detector (GC/FID) is a laboratory analytical method used as a screening technique for semi-volatile organic compounds that are extractable from water in methylene chloride.

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 (primarily calcium and magnesium) and is expressed as the equivalent concentration of calcium carbonate (CaCO₃).

Hydrologic benchmark station is one that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a benchmark station may be used to separate effects of natural from human-induced changes in other basins that have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped benchmark basin.

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

Laboratory Reporting Level (LRL) is generally equal to twice the yearly determined long-term method detection level (LT-MDL). The LRL controls false negative error. The probability of falsely reporting a non-detection for a sample that contained an analyte at a concentration equal to or greater than the LRL is predicted to be less than or equal to 1 percent. The value of the LRL will be reported with a "less than" (<) remark code for samples in which the analyte was not detected. The National Water Quality Laboratory collects quality-control data from selected analytical methods on a continuing basis to determine LT-MDLs and to establish LRLs. These values are reevaluated annually based on the most current quality-control data and may, therefore, change. [Note: In several previous NWQL documents (Connor and others, 1998; NWQL Technical Memorandum 98.07, 1998), the LRL was called the non-detection value or NDV—a term that is no longer used.]

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

Lipid is any one of a family of compounds that are insoluble in water and that make up one of the principal components of living cells. Lipids include fats, oils, waxes, and steroids. Many environmental contaminants such as organochlorine pesticides are lipophilic.

Long-Term Method Detection Level (LT-MDL) is a detection level derived by determining the standard deviation of a minimum of 24 method detection limit (MDL) spike sample measurements over an extended period of time. LT-MDL data are collected on a continuous basis to assess year-to-year variations in the LT-MDL. The LT-MDL controls false positive error. The chance of falsely reporting a concentration at or greater than the LT-MDL for a sample that did not contain the analyte is predicted to be less than or equal to 1 percent.

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

Membrane filter is a thin microporous material of specific pore size used to filter bacteria, algae, and other very small particles from water.

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.

Method Detection Limit (MDL) is the minimum concentration of a substance that can be measured and reported with 99-percent confidence that the analyte concentration is greater than zero. It is determined from the analysis of a sample in a given matrix containing the analyte. At the MDL concentration, the risk of a false positive is predicted to be less than or equal to 1 percent.

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

Micrograms per kilogram (UG/KG, $\mu\text{g/kg}$) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the constituent per unit mass (kilogram) of the material analyzed. One microgram per kilogram is equivalent to 1 part per billion.

Micrograms per liter (UG/L, $\mu\text{g/L}$) is a unit expressing the concentration of chemical constituents in water as mass (micrograms) of constituent per unit volume (liter) of water. One thousand micrograms per liter is equivalent to 1 milligram per liter. One microgram per liter is equivalent to 1 part per billion.

Microsiemens per centimeter (US/CM, $\mu\text{S/cm}$) is a unit expressing the amount of electrical conductivity of a solution as measured between opposite faces of a centimeter cube of solution at a specified temperature. Siemens is the International System of Units nomenclature. It is synonymous with mhos and is the reciprocal of resistance in ohms.

Milligrams per liter (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in water as the mass (milligrams) of constituent 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.

Minimum Reporting Level (MRL) is the smallest measured concentration of a constituent that may be reliably reported by using a given analytical method (Timme, 1995).

Most probable number (MPN) is an index of the number of coliform bacteria that, more probably than any other number, would give the results shown by the laboratory examination; it is not an actual enumeration. MPN is determined from the distribution of gas-positive cultures among multiple inoculated tubes.

Nanograms per liter (NG/L, ng/L) is a unit expressing the concentration of chemical constituents in solution as mass (nanograms) of solute per unit volume (liter) of water. One million nanograms per liter is equivalent to 1 milligram per liter.

National Geodetic Vertical Datum of 1929 (NGVD of 1929) is a fixed reference adopted as a standard geodetic datum for elevations determined by leveling. It was formerly called "Sea Level Datum of 1929" or "mean sea level." Although the datum was derived from the mean sea level at 26 tide stations, it does not necessarily represent local mean sea level at any particular place. See NOAA web site: <http://www.ngs.noaa.gov/faq.shtml#WhatVD29VD88> (See "North American Vertical Datum of 1988")

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

North American Vertical Datum of 1988 (NAVD 1988) is a fixed reference adopted as the official civilian vertical datum for elevations determined by Federal surveying and mapping activities in the U.S. This datum was established in 1991 by minimum-constraint adjustment of the Canadian, Mexican, and U.S. first-order terrestrial leveling networks.

Open or screened interval is the length of unscreened opening or of well screen through which water enters a well, in feet below land surface.

Organic carbon (OC) is a measure of organic matter present in aqueous solution, suspension, or bottom sediments. May be reported as dissolved organic carbon (DOC), particulate organic carbon (POC), or total organic carbon (TOC).

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.

Organochlorine compounds are any chemicals that contain carbon and chlorine. Organochlorine compounds that are important in investigations of water, sediment, and biological quality include certain pesticides and industrial compounds.

Parameter Code is a 5-digit number used in the USGS computerized data system, National Water Information System (NWIS), to uniquely identify a specific constituent or property.

Partial-record station is a site where discrete measurements of one or more hydrologic parameters are obtained over a period of time without continuous data being recorded or computed. A common example is a crest-stage gage partial-record station at which only peak stages and flows are recorded.

Particle size is the diameter, in millimeters (mm), of a particle determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine the 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, as 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	0.004 - 0.062	Sedimentation
Sand	0.062 - 2.0	Sedimentation/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 or percent of total 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, weight, 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. Periphyton are useful indicators of water quality.

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

pH of water is the negative logarithm of the hydrogen-ion activity. Solutions at 25 °C with pH less than 7 are termed "acidic," and solutions with a pH greater than 7 are termed "basic." Solutions with a pH of 7 are neutral. The presence and concentration of many dissolved chemical constituents found in water are, in part, influenced by the hydrogen-ion activity of water. Biological processes including growth, distribution of organisms, and toxicity of the water to organisms are also influenced, in part, by the hydrogen-ion activity of water.

Picocurie (PC, pCi) is one trillionth (1×10^{-12}) of the amount of radioactive nuclide represented by a curie (Ci). A curie is the quantity of radioactive nuclide that yields 3.7×10^{10} radioactive disintegrations per second (dps). A picocurie yields 0.037 dps, or 2.22 dpm (**disintegrations per minute**).

Polychlorinated biphenyls (PCBs) are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. They are similar in structure to organochlorine insecticides.

Polychlorinated naphthalenes (PCNs) are industrial chemicals that are mixtures of chlorinated naphthalene compounds. They have properties and applications similar to polychlorinated biphenyls (PCBs) and have been identified in commercial PCB preparations.

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 (**carbon method**) by the plants.

Radioisotopes are isotopic forms of elements that exhibit radioactivity. Isotopes are varieties of a chemical element that differ in atomic weight but are very nearly alike in chemical properties. The difference arises because the atoms of the isotopic forms of an element differ in the number of neutrons in the nucleus; for example, ordinary chlorine is a mixture of isotopes having atomic weights of 35 and 37, and the natural mixture has an atomic weight of about 35.453. Many of the elements similarly exist as mixtures of isotopes, and a great many new isotopes have been produced in the operation of nuclear devices such as the cyclotron. There are 275 isotopes of the 81 stable elements, in addition to more than 800 radioactive isotopes.

Replicate samples are a group of samples collected in a manner such that the samples are thought to be essentially identical in composition.

Sea level, as used in this report, refers to one of the two commonly used national vertical datums, (NGVD 1929 or NAVD 1988). See separate entries for definitions of these datums. See conversion of units page (inside front cover) for identification of the datum used in this report.

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. Sodium hazard in water is an index that can be used to evaluate the suitability of water for irrigating crops.

Specific electrical conductance (conductivity) is a measure of the capacity of water (or other media) to conduct an electrical current. It is expressed in microsiemens per centimeter at 25 °C. Specific electrical conductance is a function of the types and quantity of dissolved substances in water and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (**in milligrams per liter**) is from 55 to 75 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.

Stable isotope ratio (part per MIL) is a unit expressing the ratio of the abundance of two radioactive isotopes. Isotope ratios are used in hydrologic studies to determine the age or source of specific waters, to evaluate mixing of different waters, as an aid in determining reaction rates, and other chemical or hydrologic processes.

Suspended (as used in tables of chemical analyses) refers to the amount (**concentration**) of undissolved material in a water-sediment mixture. It is operationally defined as 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 suspended water-sediment sample that is retained on a 0.45-micrometer 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 directly analyzing the suspended material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent. (See also "Suspended")

Suspended, total is the total amount of a given constituent in the part of a water-sediment sample that is retained on a 0.45-micrometer membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. 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 directly analyzing portions of the suspended material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent. (See also "Suspended")

Synoptic studies are short-term investigations of specific water-quality conditions during selected seasonal or hydrologic periods to provide improved spatial resolution for critical water-quality conditions. For the period and conditions sampled, they assess the spatial distribution of selected water-quality conditions in relation to causative factors, such as land use and contaminant sources.

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

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

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 resulting from the mixing of flow proportionally to the duration of the concentration.

Total is the amount of a given constituent in a representative whole-water (**unfiltered**) 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 at least 95 percent of the constituent in the sample.)

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. This group includes coliforms that inhabit the intestine of warm-blooded animals and those that inhabit soils. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria that 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. (See also "Bacteria")

Total recoverable is the amount of a given constituent in a whole-water sample after a 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 for whole-water samples, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures may produce different analytical results.

Vertical datum (See "Datum")

Volatile organic compounds (VOCs) are organic compounds that can be isolated from the water phase of a sample by purging the water sample with inert gas, such as helium, and subsequently analyzed by gas chromatography. Many VOCs are human-made chemicals that are used and produced in the manufacture of paints, adhesives, petroleum products, pharmaceuticals, and refrigerants. They are often components of fuels, solvents, hydraulic fluids, paint thinners, and dry cleaning agents commonly used in urban settings. VOC contamination of drinking-water supplies is a human health concern because many are toxic and are known or suspected human carcinogens (U.S. Environmental Protection Agency, 1996).

Water table is the level in the saturated zone at which the pressure is equal to the atmospheric pressure.

Water-table aquifer is an unconfined aquifer within which is found the water table.

Water year in USGS Water Resources Discipline reports is the 12-month period starting October 1, and ending September 30 of the following year. Thus, the "2002" water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. "water year" begins October 1, 2001 and ends September 30, 2002.

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.)

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

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

The USGS publishes a series of manuals titled the "Techniques of Water-Resources Investigations" that describe procedures for planning and conducting specialized work in water-resources investigations. The material in these manuals 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. Each chapter is then limited to a narrow field of the section subject matter. This publication format permits flexibility when revision or printing is required.

Manuals in the Techniques of Water-Resources Investigations series, which are listed below, are available online at <http://water.usgs.gov/pubs/twri>. Printed copies are available for sale from the USGS, Information Services Box 25286, Federal Center, Denver Colorado 80225 (an authorized agent of the Superintendent of Documents, Government Printing Office). Please telephone "1-888-ASK-USGS" for current prices, and refer to the title, book number, section number, chapter number, and mention the "U.S. Geological Survey Techniques of Water-Resources Investigations." Other products can be viewed online at <http://www.usgs.gov/sales.html>, or ordered by telephone at (303) 236-4693. Order forms for FAX requests are available online at <http://mac.usgs.gov/isb/pubs/forms>. Prepayment by major credit card, check, or money order payable to the U.S. Geological Survey is required.

Book 1. Collection of Water Data by Direct Measurement**Section D. Water Quality**

1-D1. Water temperature - influential factors, field measurements, and data presentation, by H.H. Stevens Jr., J.F. Ficke, and G.F. Smoot: USGS - WRI 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.

Book 2. Collection of Environmental Data**Section D. Surface Geophysical Methods**

2-D1. Application of surface geophysics to ground-water investigations, by A.A.R. Zohdy, G.P. Easton, 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.

Section E. Subsurface Geophysical Methods

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

2-E2. Borehole geophysics applied to ground-water investigations, by W.S. Keys: USGS - TWRI Book 2, Chapter E2. 1990. 150 pages.

Section F. Drilling and Sample Methods

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

Book 3. Application of Hydraulics**Section A. Surface-Water Techniques**

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. Metthai: 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.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS--Continued

- 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, by T.J. Buchanan and W.P. Somers: USGS - TWRI Book 3, Chapter A7. 1968. 28 pages.
- 3-A8. Discharge measurements at gaging stations, by T.J. Buchanan and W.P. Somers: USGS - TWRI Book 3, Chapter A8. 1969. 65 pages.
- 3-A9. Measurement of time of travel 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, by 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. 34 pages.
- 3-A13. Computation of continuous records of streamflow, by E.J. Kennedy: USGS - TWRI Book 3, Chapter A13. 1983. 53 pages.
- 3-A14. Use of flumes in measuring discharge, by F.A. Kilpatrick and V.R. Schneider: USGS - TWRI Book 3, Chapter A14. 1983. 46 pages.
- 3-A15. Computation of water-surface profiles in open channels, by Jacob Davidian: USGS - TWRI Book 3, Chapter A15. 1984. 48 pages.
- 3-A16. Measurement of discharge using tracers, by F.A. Kilpatrick and E.D. Cobb: USGS - TWRI Book 3, Chapter A16. 1985. 52 pages.
- 3-A17. Acoustic velocity meter systems, by Antonius Laenen: USGS - TWRI Book 3, Chapter A17. 1985. 38 pages.
- 3-A18. Determination of stream reaeration coefficients by use of tracers, by F.A. Kilpatrick, R.E. Rathbun, Nobuhiro Yotskura, G.W. Parker, and L.L. Delong: USGS - TWRI Book 3, Chapter 18. 1989. 52 pages.
- 3-A19. Levels of streamflow gaging stations, by E.J. Kennedy: USGS - TWRI Book 3, Chapter A19. 1990. 31 pages.
- 3-A20. Simulation of soluble waste transport and buildup in surface waters using tracers, by F.A. Kilpatrick: USGS - TWRI Book 3, Chapter A20. 1993. 38 pages.
- 3-A21. Stream-gaging cableways, by C. Russell Wasgner: USGS - TWRI Book 3, Chapter A21. 1995. 56 pages.

Section B. Ground-Water Techniques

- 3-B1. Aquifer-test design, observation, and data analysis, by R.W. Stallman: USGS - TWRI Book 3, Chapter B1. 1971. 26 pages.
- 3-B2. Introduction to ground-water hydraulics, a programmed text for self-instruction, by G.D. Bennett: USGS - TWRI Book 3, Chapter B2. 1976. 172 pages.
- 3-B3. Type curves for selected problems of flow to wells in confined aquifers, by J.E. Reed: USGS - TWRI Book 3, Chapter B3. 1980. 106 pages.
- 3-B4. Regression modeling of ground-water flow, by R.L. Cooley and R.L. Naff: USGS - TWRI Book 3, Chapter B4. 1990. 232 pages.
- 3-B4. Supplement 1. Regression modeling of ground-water flow - Modifications to the computer code for nonlinear regression solution of steady-state ground-water flow problems, by R.L. Cooley: USGS - TWRI Book 3, Chapter B4. 1993. 8 pages.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS--Continued

- 3-B5. Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems - An introduction, by O.L. Franke, T.W. Reilly, and G.D. Bennett: USGS - TWRI Book 3, Chapter B5. 1987. 15 pages.
- 3-B6. The principle of superposition and its application in ground-water hydraulics, by T.E. Reilly, O.L. Franke, and G.D. Bennett: USGS - TWRI Book 3, Chapter B6. 1987. 28 pages.
- 3-B7. Analytical solutions for one-, two-, and three dimensional solute transport in ground-water systems with uniform flow, by E.J. Wexler: USGS - TWRI Book 3, Chapter B7. 1992. 190 pages.
- 3-B8. System and boundary conceptualization in ground-water flow simulation, by T.E. Reilly: USGS - TWRI Book 3, Chapter B8. 2001. 29 pages.

Section C. Sedimentation and Erosion Techniques

- 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.

Book 4. Hydrologic Analysis and Interpretation**Section A. Statistical Analysis**

- 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.

Section B. Surface Water

- 4-A3. Statistical methods in water resources, by D.R. Helsel and R.M. Hirsch: USGS - TWRI Book 4, Chapter A3. 1991. Available only online at [http:// water.usgs.gov/pubs/twri/twri4a3](http://water.usgs.gov/pubs/twri/twri4a3). Accessed July 2004.
- 4-B1. Low-flow investigations, by H.C. Riggs: USGS - TWRI Book 4, Chapter B1. 1972. 18 pages.
- 4-B2. Storage analyses for water supply, by H.C. Riggs and C.H. Hardison: USGS - TWRI Book 4, Chapter B2. 1973. 20 pages.
- 4-B3. Regional analyses of streamflow characteristics, by H.C. Riggs: USGS - TWRI Book 4, Chapter B3. 1973. 15 pages.

Section D. Interrelated phases of the Hydrologic Cycle

- 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.

Book 5. Laboratory Analysis**Section A. Water Analysis**

- 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. Malory, 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,
- 5-A4. Methods for collection and analysis of aquatic biological and microbiological samples, by L.J. Britton and P.E. Greenson, editors: USGS - TWRI Book 5, Chapter A4. 1989. 363 pages.
- 5-A5. Methods for determination of radioactive substances in water and fluvial sediments, by L.L. Thatcher, V.J. Janzer, and K.W. Edwards: USGS - TWRI Book 5, Chapter A5. 1977. 95 pages.
- 5-A6. Quality assurance practices for the chemical and biological analyses of water and fluvial sediments, by L.C. Friedman and D.E. Erdmann: USGS - TWRI Book 5, Chapter A6. 1982. 181 Pages.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS--Continued

Section C. Sediment Analysis

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

Book 6. Modeling Techniques**Section A. Ground Water**

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

6-A2. Documentation of a computer program to simulate aquifer-system compaction using the modular finite-difference ground-water flow model, by S.A. Leake and D.E. Prudic: USGS - TWRI Book 6, Chapter A2. 1991. 68 pages.

6-A3. A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 1: Model Description and User's Manual, by L.J. Torak: USGS - TWRI Book 6, Chapter A3. 1993. 136 pages.

6-A4. A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 2: Derivation of finite-element equations and comparisons with analytical solutions, by R.L. Cooley: USGS - TWRI Book 6, Chapter A4. 1992. 108 pages.

6-A5. A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 3: Design philosophy and programming details, by L.J. Torak: USGS - TWRI Book 6, Chapter A5. 1993. 243 pages.

6-A6. A coupled surface-water and ground-water flow model (MODBRANCH) for simulation of stream-aquifer interaction, by E.D. Swain and E.J. Wexler: USGS - TWRI Book 6, Chapter A6. 1995. 125 pages.

6-A7. User's guide to SEAWAT: A computer program for simulation of three-dimensional variable-density ground-water flow, by Weixing Guo and C.D. Langevin: USGS - TWRI Book 6, Chapter A7. 2002. 77 pages.

Book 7. Automated Data Processing and Computations**Section C. Computer Programs**

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.

Book 8. Instrumentation**Section A. Instruments for Measurement of Water Level**

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

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

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

Section B. Instruments for Measurement of Discharge

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.

Book 9. Handbooks for Water-Resources Investigations**Section A. National Field Manual for the Collection of Water-Quality Data**

9-A1. National Field Manual for the Collection of Water-Quality Data: Preparations for Water Sampling, by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS - TWRI Book 9, Chapter A1. 1998. Variously paginated.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS--Continued

- 9-A2. National Field Manual for the Collection of Water-Quality Data: Selection of Equipment for Water Sampling, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS - TWRI Book 9, Chapter A2. 1998. Variously paginated.
- 9-A3. National Field Manual for the Collection of Water-Quality Data: Cleaning of Equipment for Water Sampling, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS - TWRI Book 9, Chapter A3. 1998. Variously paginated.
- 9-A4. National Field Manual for the Collection of Water-Quality Data: Collection of Water Samples, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS - TWRI Book 9, Chapter A4. 1999. Variously Paginated.
- 9-A5. National Field Manual for the Collection of Water-Quality Data: Processing of Water Samples, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS - TWRI Book 9, Chapter A5. 1999. Variously Paginated.
- 9-A6. National Field Manual for the Collection of Water-Quality Data: Field Measurements, edited by F.D. Wilde and D.B. Radtke: USGS - TWRI Book 9, Chapter A6. 1999. Variously Paginated.
- 9-A7. National Field Manual for the Collection of Water-Quality Data: Biological Indicators, edited by D.N. Myers and F.D. Wilde: USGS - TWRI Book 9, Chapter A7. 1997 and 1999. Variously Paginated.
- 9-A8. National Field Manual for the Collection of Water-Quality Data: Bottom-material samples, edited by D.B. Radtke: USGS - TWRI Book 9, Chapter A8. 1998. Variously Paginated.
- 9-A9. National Field Manual for the Collection of Water-Quality Data: Safety in Field Activities, edited by S.L. Lane and R.G. Fay: USGS - TWRI Book 9, Chapter A9. 1998. Variously Paginated.

SELECTED U.S. GEOLOGICAL SURVEY REPORTS ON GROUND-WATER RESOURCES IN MARYLAND, DELAWARE, AND WASHINGTON, D.C. PUBLISHED DURING THE 2003 WATER YEAR

Listed below is a selection of reports on ground-water resources in Maryland, Delaware, and Washington, D.C. which were published in 2003, and are available through the U.S. Geological Survey, Branch of Information Services, Federal Center, Building 41, Box 25286, Denver, Colorado 80225 or on the internet at: http://mapping.usgs.gov/esic/prices/other_publications.html.

A list of all the published reports by the U.S. Geological Survey for Maryland, Delaware, and Washington, D.C. can be found on the web at <http://md.water.usgs.gov/publications/online.html>.

Water Resources Investigations Report

Ground-Water Contamination from Lead Shot at Prime Hook National Wildlife Refuge, Sussex County, Delaware, by Daniel J. Soeder and Cherie V. Miller: U.S. Geological Survey WRIR 02-4282. 2002. 26 pages.

Open-File Reports

Analytical Results From Ground-Water Sampling Using a Direct-Push Technique at the Dover National Test Site, Dover Air Force Base, Delaware, June-July 2001, by William R. Guertal, Marie Stewart, and Jeffrey R. Barbaro (USGS) and Timothy McHale (Dover National Test Site): U.S. Geological Survey Open-File Report 03-380. 2003. 505 pages.

Potentiometric Surface of the Lower Patapsco Aquifer in Southern Maryland, September 2002, by Steve E. Curtin: U.S. Geological Survey Open-File Report 03-258. 2003. 1 page.

Potentiometric Surface of the Upper Patapsco Aquifer in Southern Maryland, September 2002, by Steve E. Curtin: U.S. Geological Survey Open-File Report 03-257. 2003. 1 page.

Potentiometric Surface of the Magothy Aquifer in Southern Maryland, September 2002, by Steve E. Curtin: U.S. Geological Survey Open-File Report 03-256. 2003. 1 page.

Potentiometric Surface of the Aquia Aquifer in Southern Maryland, September 2002, by Steve E. Curtin: U.S. Geological Survey Open-File Report 03-255. 2003. 1 page.

Water Data Report

Water Resources Data for Maryland, Delaware, and Washington, D.C., Water Year 2002, Volume 2. Ground-Water Data, by Michael J. Smigaj, Richard W. Saffer, and Robert H. Pentz: U.S. Geological Survey WDR-MD-DE-DC-02-2. 572 pages.

References

First Report on the Hydrologic Effects of Underground Coal Mining in Southern Garrett County, Maryland, by Mark T. Duigon and Michael J. Smigaj. Maryland Geological Survey Report of Investigations Number 41. 1985. 99 pages.

Hydrologic and Mining Data from an area of Underground Coal Mining in Garrett County, Maryland, by Steven N. Hiortdahl: Maryland Geological Survey Report of Investigations Number 41-A. 1988. 81 pages.

Hydrology and Ground-Water Quality of the Piney-Point_Nanjemoy and Aquia aquifers, Naval Air Station Patuxent River and Webster Outlying Field, St. Marys County, Maryland, by Cheryl A. Klohe and Erin Feehelly: U.S. Geological Survey Water Resources Investigations Report 01-4029. 2001. 51 pages.

Statistical profiles of States, Counties, Cities, Congressional Districts, and Federal Judicial Districts, available at <http://www.fedstats.gov/qf/states/24000.html>, accessed July 19, 2004.

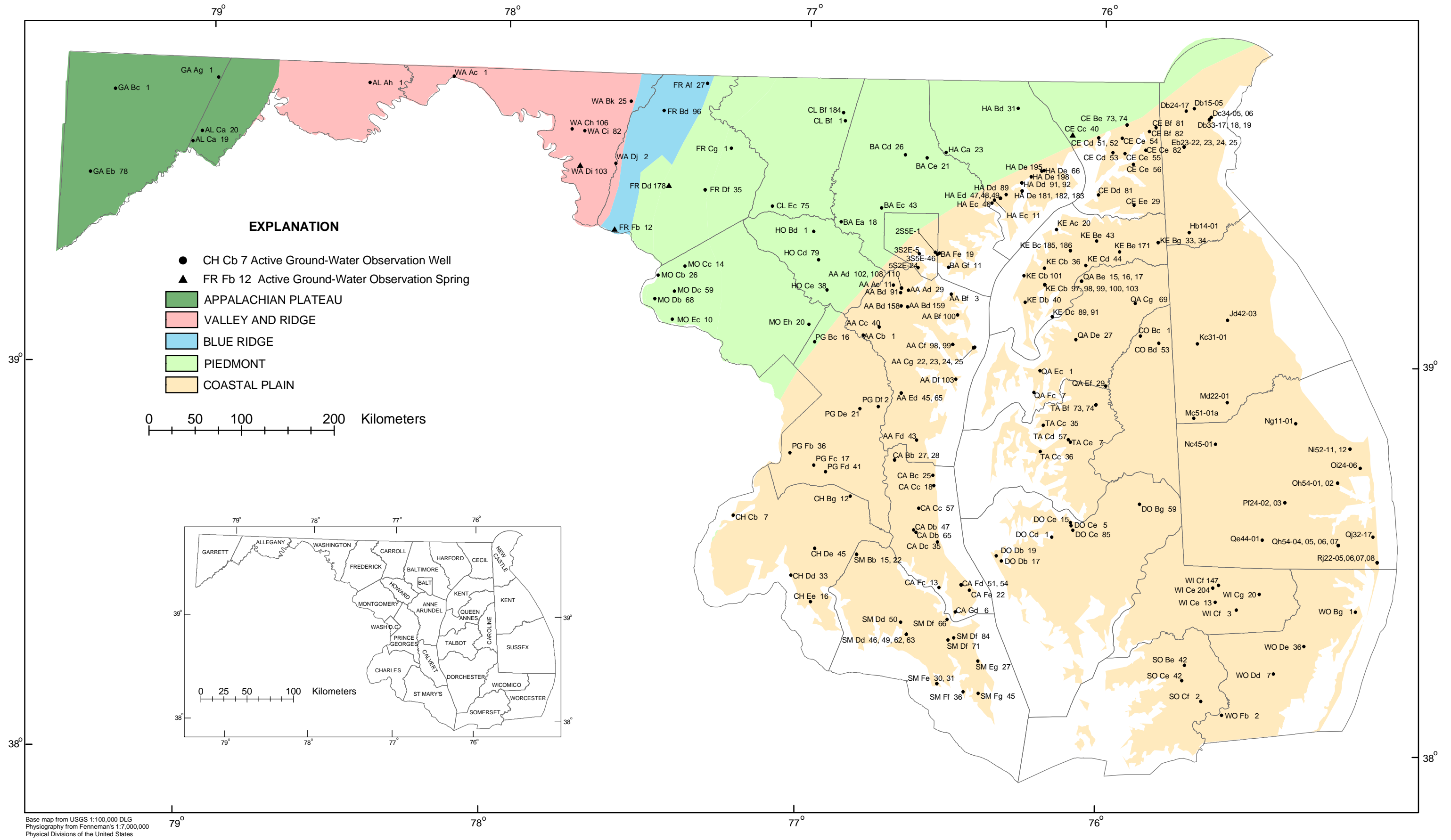


Figure 6. Map of Maryland, Delaware, and Washington D.C. showing location of ground-water network observation wells and springs.

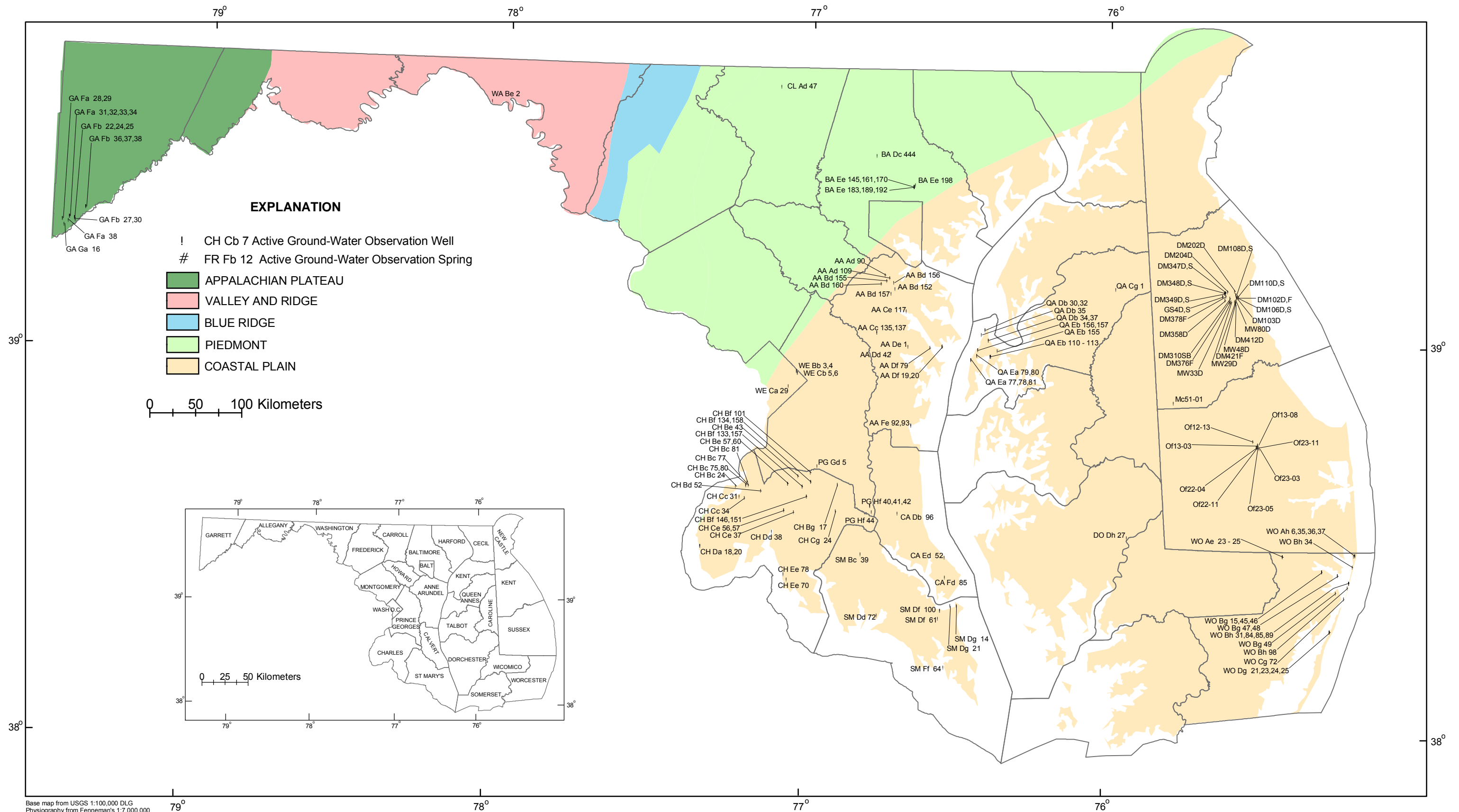


Figure 7. Map of Maryland, Delaware, and Washington D.C. showing location of ground-water project observation wells and springs.

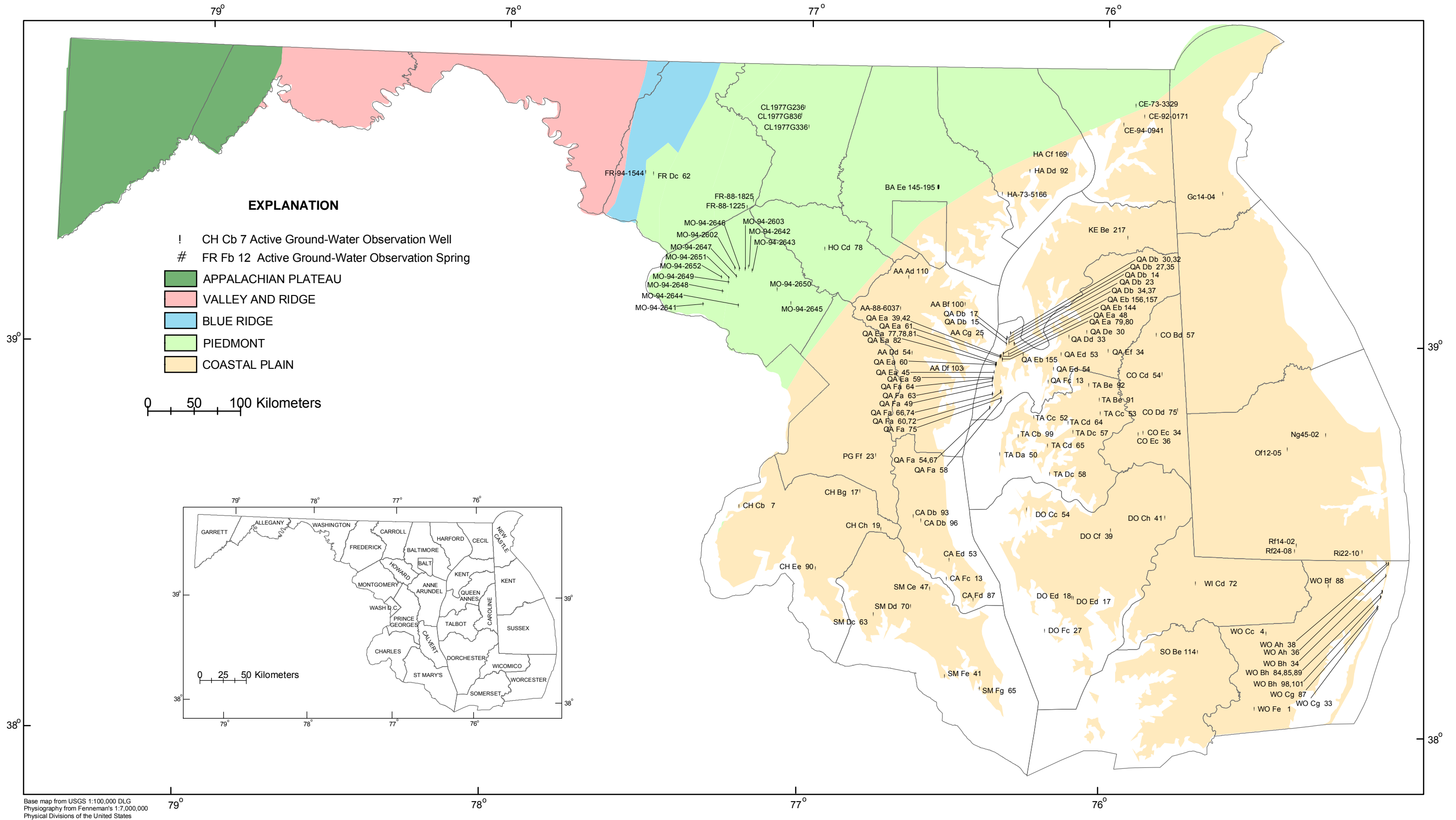


Figure 8. Map of Maryland, Delaware, and Washington D.C. showing location of ground-water-quality observation wells.

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 Roads, 0.8 mi northeast of Perryman. Owner: Private Residence.

AQUIFER.--James Run Formation, Frenchtown Member of Paleozoic age. Aquifer code: 300JMSR.

SPRING IMPROVEMENTS.--2 in. outflow pipe.

INSTRUMENTATION.--Monthly volumetric discharge measurements by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 180 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Maryland Ground-Water Spring Discharge Monitoring Network, and Water Quality Network observation spring. Temperature readings are available.

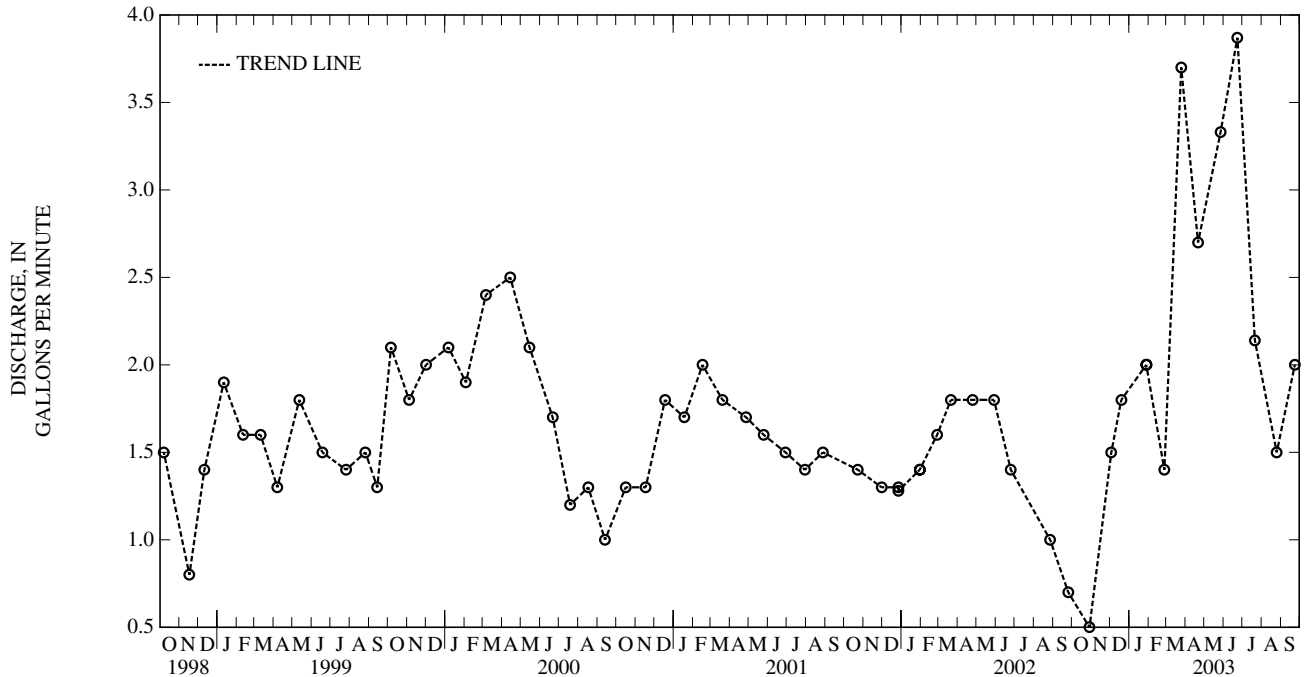
PERIOD OF RECORD.--April 1981, August 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge measured, 5.9 gal/min, June 7, 1980; minimum discharge measured, 0.5 gal/min, October 29, 2002.

DISCHARGE, IN GALLONS PER MINUTE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	DISCHARGE	DATE	DISCHARGE	DATE	DISCHARGE	DATE	DISCHARGE
OCT 29, 2002	0.5	JAN 28, 2003	2.0	APR 21, 2003	2.7	JUL 21, 2003	2.1
DEC 03	1.5	FEB 26	1.4	MAY 27	3.3	AUG 25	1.5
DEC 19	1.8	MAR 25	3.7	JUN 23	3.9	SEP 23	2.0

HIGHEST 3.9 JUN 23, 2003
 LOWEST 1.4 FEB 26, 2003



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

FREDERICK COUNTY

SPRING NUMBER.--FR Dd 178. SITE ID.--392552077262201.

LOCATION.--Lat 39°25'52", long 77°26'22", Hydrologic Unit 02070009, at Frederick County Agricultural Extension Service (formerly Montview State Hospital). Owner: Frederick County.

AQUIFER.--Frederick Limestone of Lower Cambrian age. Aquifer code: 377FDCK.

SPRING IMPROVEMENTS.--Springhouse with discharge pipe.

INSTRUMENTATION.--Monthly current meter discharge measurements by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 315 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Maryland Ground-Water Spring Discharge Monitoring Network, and Water Quality Network observation spring. Temperature readings are available.

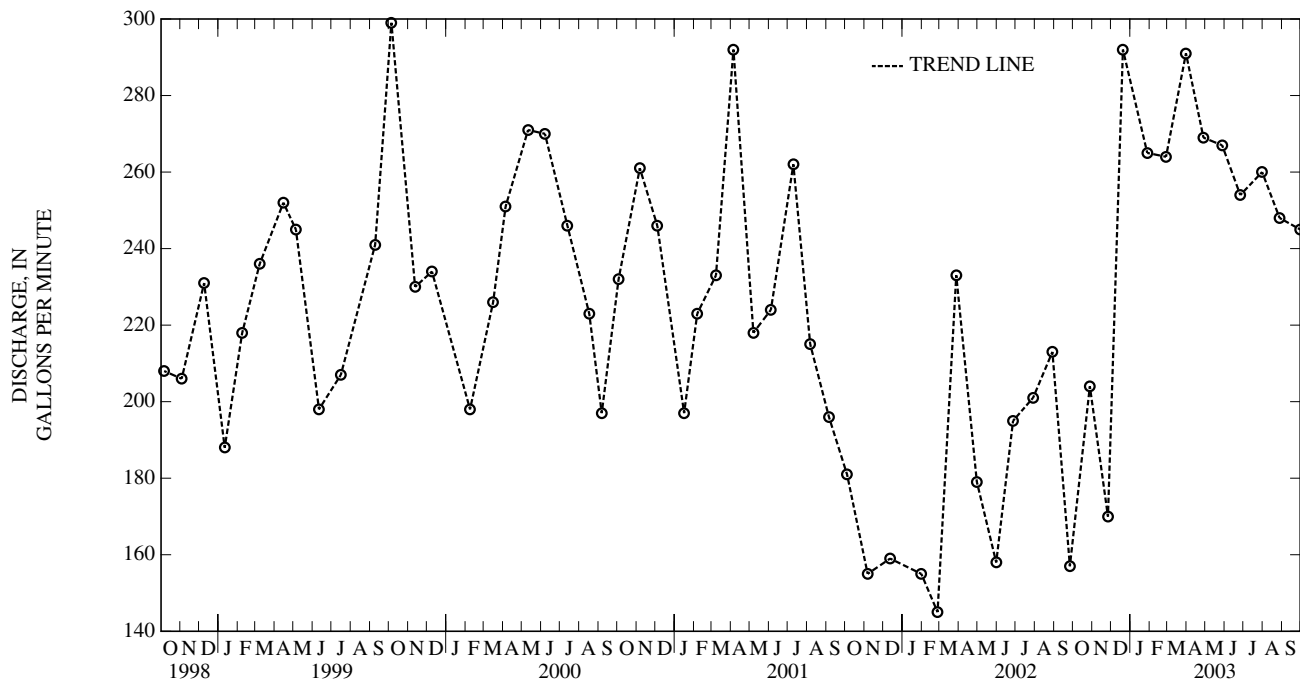
PERIOD OF RECORD.--April 1981, February 1989, September 1989, April 1991, and March 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge measured, 904 gal/min, May 6, 1993; minimum discharge measured, 145 gal/min, February 26, 2002.

DISCHARGE, IN GALLONS PER MINUTE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	DISCHARGE	DATE	DISCHARGE	DATE	DISCHARGE	DATE	DISCHARGE
OCT 28, 2002	204	JAN 28, 2003	265	APR 28, 2003	269	JUL 31, 2003	260
NOV 26	170	FEB 27	264	MAY 28	267	AUG 28	248
DEC 20	292	MAR 31	291	JUN 26	254	SEP 30	245

HIGHEST 292 DEC 20, 2002
 LOWEST 170 NOV 26, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

GROUND-WATER SPRING DISCHARGE IN MARYLAND

FREDERICK COUNTY—Continued

SPRING NUMBER.--FR Fb 12. SITE ID.--391846077370501.

LOCATION.--Lat 39°18'46", long 77°37'05", Hydrologic Unit 02070008, at Brunswick, off Park Ave., 300 ft north of intersection with Potomac St. Owner: Town of Brunswick.

AQUIFER.--Precambrian Erathem of Precambrian age. Aquifer code: 400PCMB.

SPRING IMPROVEMENTS.--2 in. outflow pipe.

INSTRUMENTATION.--Monthly volumetric discharge measurements by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 300 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Maryland Ground-Water Spring Discharge Monitoring Network, and Water Quality Network observation spring. Temperature readings are available.

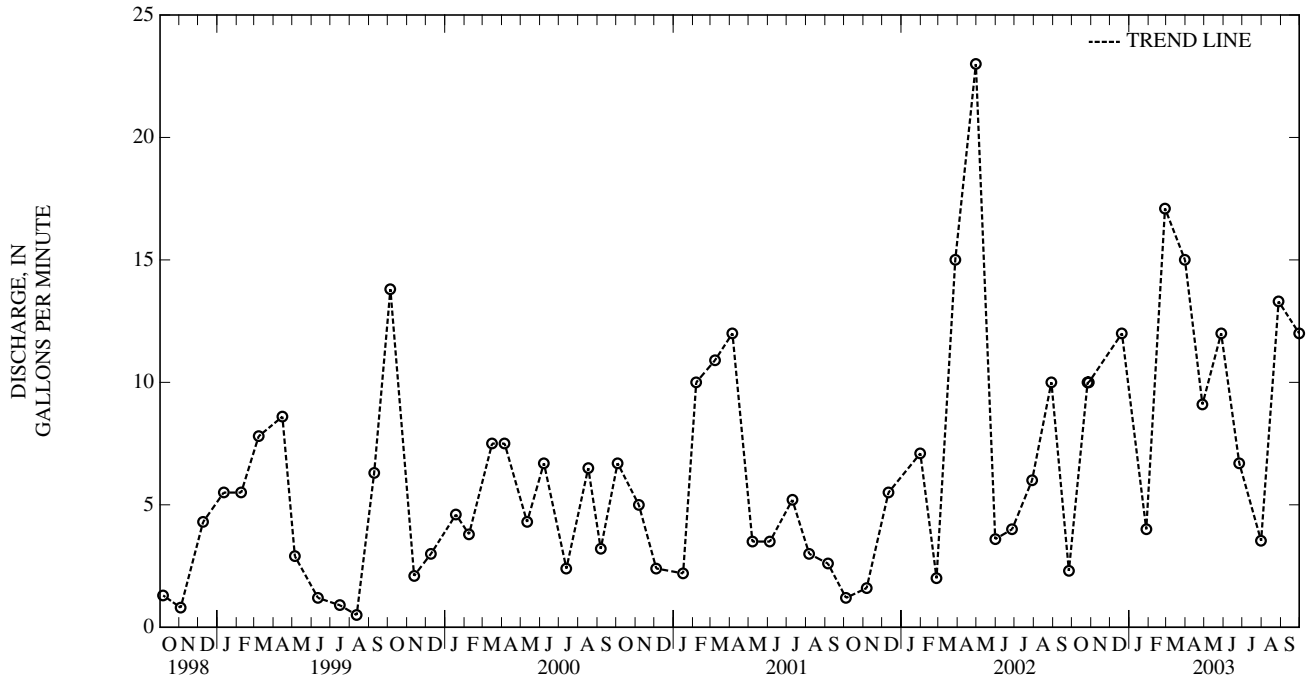
PERIOD OF RECORD.--January 1960 to April 1964, March 1965, August 1967, December 1968, July 1972, and April 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge measured, 36.0 gal/min, April 30, 1964; minimum discharge measured, 0.5 gal/min, August 12, 1999.

DISCHARGE, IN GALLONS PER MINUTE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	DISCHARGE	DATE	DISCHARGE	DATE	DISCHARGE	DATE	DISCHARGE
OCT 28, 2002	10.0	JAN 28, 2003	4.0	APR 28, 2003	9.1	JUL 31, 2003	3.5
NOV 26	10.0	FEB 27	17.1	MAY 28	12.0	AUG 28	13.3
DEC 20	12.0	MAR 31	15.0	JUN 26	6.7	SEP 30	12.0

HIGHEST 17.1 FEB 27, 2003
 LOWEST 3.5 JUL 31, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

WASHINGTON COUNTY

SPRING NUMBER.--WA Di 103. SITE ID.--392836077442701.

LOCATION.--Lat 39°28'36", long 77°44'27", Hydrologic Unit 02070004, 0.2 mi southeast of Smoketown Road and Mummas Lane, 1.0 mi north of Sharpsburg. Owner: National Park Service, Antietam National Battlefield.

AQUIFER.--Conococheague Limestone of Upper Cambrian age. Aquifer code: 371CCCG.

SPRING IMPROVEMENTS.--Springhouse with cement trough.

INSTRUMENTATION.--Monthly volumetric discharge measurements by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 475 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Maryland Ground-Water Spring Discharge Monitoring Network, and Water Quality Network observation spring. Temperature readings are available.

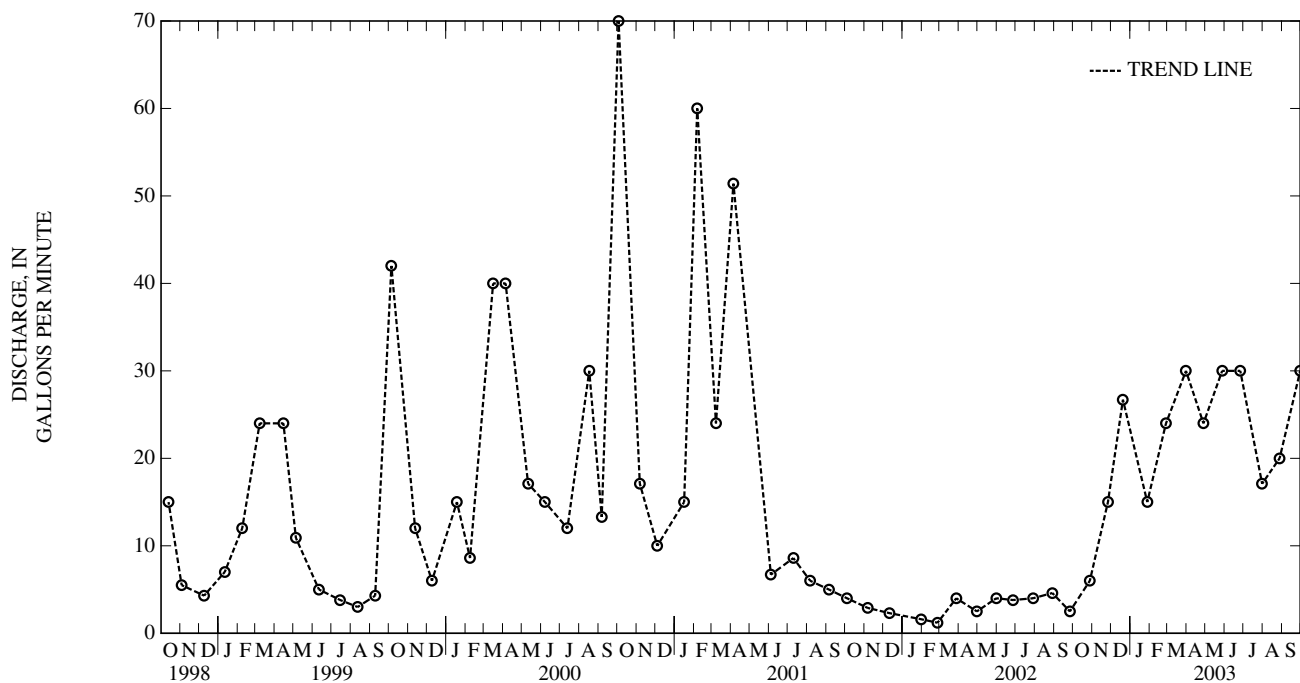
PERIOD OF RECORD.--May 1969, April 1987, and January 1991 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge measured, 95.0 gal/min, May 14, 1998; minimum discharge measured, 0.3 gal/min, October 4, 1991 and November 7, 1991.

DISCHARGE, IN GALLONS PER MINUTE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	DISCHARGE	DATE	DISCHARGE	DATE	DISCHARGE	DATE	DISCHARGE
OCT 28, 2002	6.0	JAN 28, 2003	15.0	APR 28, 2003	24.0	JUL 31, 2003	17.1
NOV 26	15.0	FEB 27	24.0	MAY 28	30.0	AUG 28	20.0
DEC 20	26.7	MAR 31	30.0	JUN 26	30.0	SEP 30	30.0

HIGHEST 30.0 MAR 31, MAY 28, JUN 26, SEP 30, 2003
 LOWEST 6.0 OCT 28, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

GROUND-WATER LEVELS IN DELAWARE

KENT COUNTY

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 Formation 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 water level measurements with electric or chalked steel tape by Delaware Geological Survey or U.S. 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.

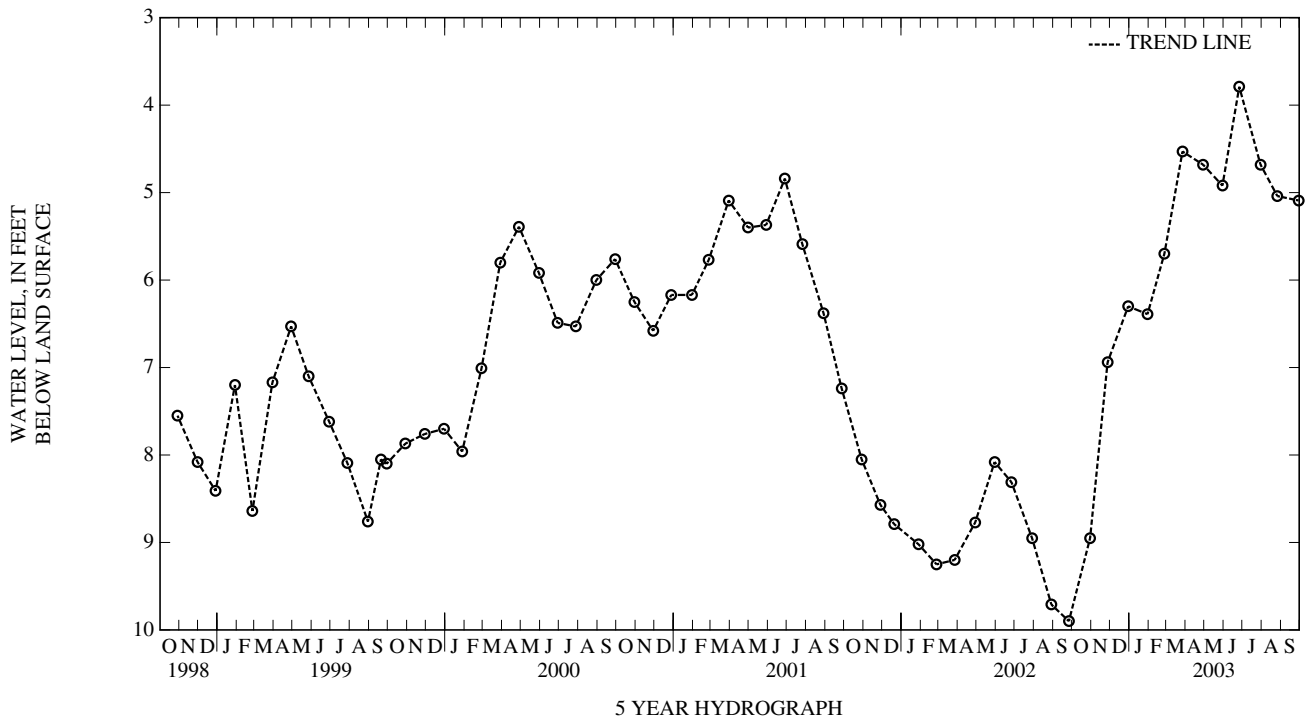
REMARKS.--Delaware Water-Level Monitoring Network observation well.

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, November 28, 1986.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	8.95	JAN 30, 2003	6.39	APR 29, 2003	4.68	JUL 30, 2003	4.68
NOV 27	6.94	FEB 26	5.70	MAY 30	4.92	AUG 26	5.04
DEC 30	6.30	MAR 27	4.53	JUN 26	3.79	SEP 29	5.09
HIGHEST 3.79 JUN 26, 2003							
LOWEST 8.95 OCT 30, 2002							



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

KENT COUNTY—Continued

WELL NUMBER.--Kc31-01. SITE ID.--390224075391601. PERMIT NUMBER.--33610.

LOCATION.--Lat 39°02'24", long 75°39'16", Hydrologic Unit 02060005, 1.1 mi southwest of Petersburg, off Ironmine Rd., at Norman G. Wilder State Wildlife Area. 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 2 in., to 370 ft; screen diameter 2 in., from 370 to 380 ft.

INSTRUMENTATION.--Twice yearly water level measurements with chalked steel tape by Delaware Geological Survey or U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 55 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 0.20 ft above land surface.

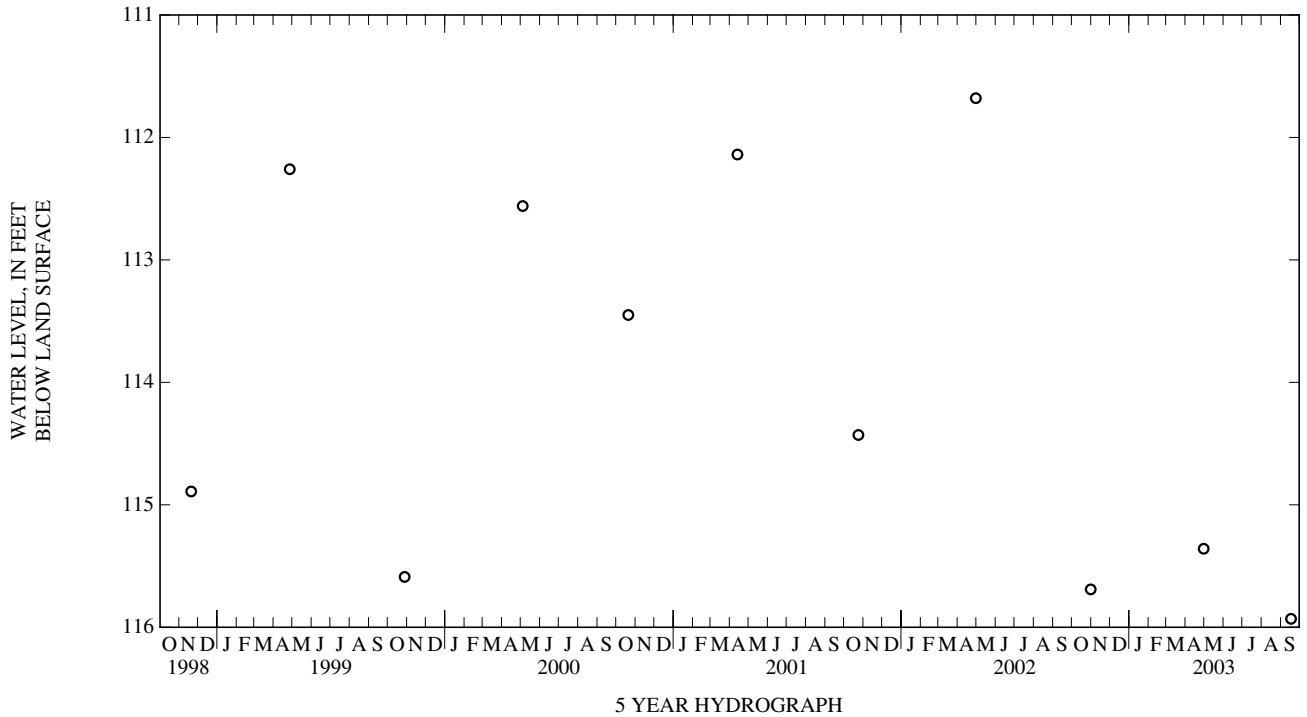
REMARKS.--Delaware Water-Level Monitoring Network observation well. No Spring 1997 water-level measurement.

PERIOD OF RECORD.--February 1975, April 1982, March 1983, and February 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 92.99 ft below land surface, February 20, 1975; lowest measured, 116.77 ft below land surface, October 29, 1991.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	115.69	APR 30, 2003	115.36	SEP 17, 2003	115.93
HIGHEST 115.36 APR 30, 2003					
LOWEST 115.93 SEP 17, 2003					



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

GROUND-WATER LEVELS IN DELAWARE

KENT COUNTY—Continued

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 Formation of Pleistocene age. Aquifer code: 112CLMB.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 18.1 ft; casing diameter 2 in., to 16.1 ft; well point from 16.1 to 18.1 ft.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60 minute recorder interval from October 1999 to July 2001.

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.

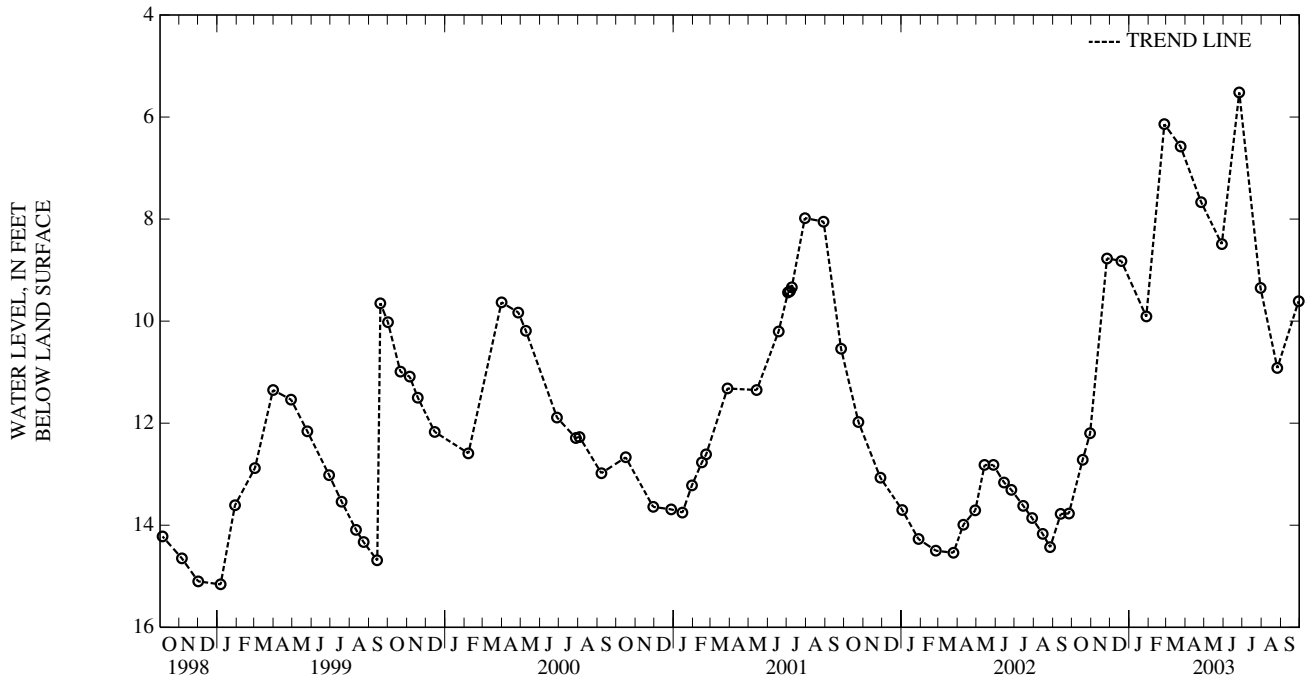
REMARKS.--Delaware Water-Level Monitoring Network observation well.

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, January 19, 1988.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18, 2002	12.72	JAN 28, 2003	9.91	MAY 29, 2003	8.49	SEP 29, 2003	9.61
NOV 30	12.20	FEB 26	6.14	JUN 26	5.52		
NOV 26	8.77	MAR 24	6.58	JUL 30	9.35		
DEC 19	8.82	APR 26	7.67	AUG 26	10.92		
HIGHEST 5.52 JUN 26, 2003							
LOWEST 12.72 OCT 18, 2002							



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

KENT COUNTY—Continued

WELL NUMBER.--Mc51-01a. SITE ID.--385041075395602. PERMIT NUMBER.--178923.

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 Formation of Pleistocene age. Aquifer code: 112CLMB.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 18.2 ft; casing diameter 2 in., to 15 ft; well point from 15 to 19 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape or chalked steel tape by U.S. Geological Survey personnel. Well equipped with water-level telemetry recorder from July 2001 to current year.

DATUM.--Elevation of land surface is 56 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of recorder platform, 3.75 ft above land surface.

REMARKS.--Delaware Water-Level Monitoring Network observation well.

PERIOD OF RECORD.--July 2000 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.65 ft below land surface, March 9, 2003 (recorder); lowest measured, 15.57 ft below land surface, March 18-21, 2002 (recorder).

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
	OCT 30, 2002	13.19	JAN 28, 2003	10.76	APR 29, 2003	8.49	AUG 26, 2003	11.77
	NOV 26	9.68	FEB 26	7.23	MAY 29	9.43	SEP 29	10.60
	DEC 19	9.74	MAR 24	7.48	JUN 26	6.35		
	HIGHEST	6.35	JUN 26, 2003					
	LOWEST	13.19	OCT 30, 2002					

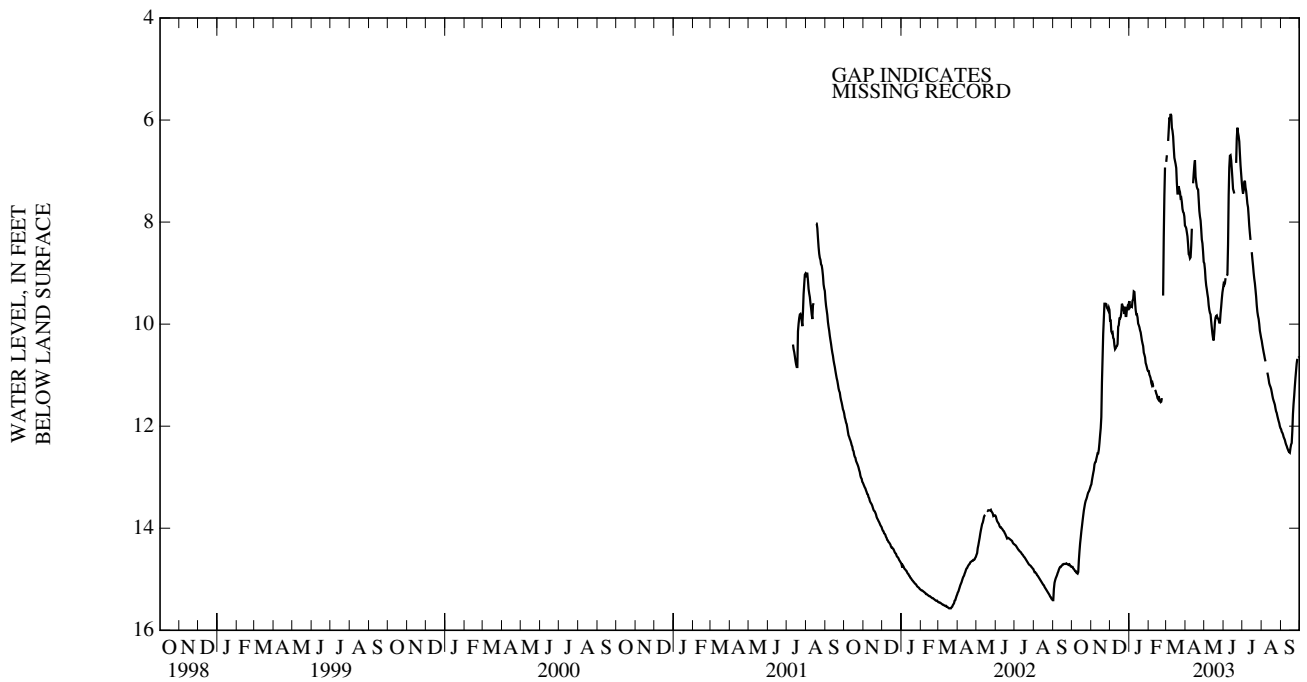
DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	14.76	14.75	13.14	13.06	9.93	9.72	9.55	9.42	10.92	10.88	6.82	6.69
2	14.76	14.76	13.06	12.99	9.93	9.88	9.67	9.50	10.99	10.92	6.69	6.34
3	14.79	14.76	12.99	12.92	10.14	9.91	9.65	9.51	11.02	10.99	---	---
4	14.80	14.79	12.92	12.86	10.17	10.14	9.65	9.52	11.06	10.89	6.41	6.19
5	14.82	14.80	12.86	12.75	10.16	9.98	9.66	9.54	11.15	11.06	6.19	5.88
6	14.84	14.82	12.75	12.69	10.27	10.12	9.54	9.46	11.19	11.13	5.95	5.71
7	14.84	14.83	12.71	12.70	10.29	10.27	9.51	9.36	11.16	11.06	5.98	5.83
8	14.87	14.84	12.70	12.64	10.42	10.29	9.36	9.24	11.22	11.16	5.88	5.69
9	14.88	14.87	12.64	12.59	10.49	10.42	9.37	9.24	11.23	11.21	5.91	5.65
10	14.89	14.86	12.59	12.53	10.47	10.44	9.56	9.36	---	---	6.15	5.91
11	14.86	14.63	12.53	12.51	10.44	10.37	9.72	9.56	11.29	11.22	6.21	6.14
12	14.63	14.45	12.53	12.46	10.43	10.39	9.81	9.72	11.31	11.23	6.32	6.20
13	14.45	14.30	12.46	12.33	10.39	10.05	9.81	9.68	11.36	11.31	6.54	6.31
14	14.30	14.18	12.33	12.18	10.05	9.99	9.87	9.81	11.39	11.36	6.74	6.54
15	14.18	14.06	12.18	12.04	10.02	9.89	9.99	9.87	11.45	11.37	6.80	6.74
16	14.06	13.96	12.04	11.82	9.89	9.85	10.02	9.89	11.47	11.38	6.86	6.80
17	13.96	13.85	11.82	11.14	9.89	9.86	10.06	9.86	11.41	11.34	6.94	6.83
18	13.85	13.75	11.14	10.66	9.86	9.78	10.12	10.06	11.49	11.41	7.23	6.94
19	13.75	13.65	10.66	10.19	9.78	9.60	10.16	10.08	11.51	11.49	7.44	7.23
20	13.65	13.58	10.19	9.89	9.60	9.49	10.24	10.09	11.53	11.49	7.44	7.20
21	13.58	13.51	9.89	9.60	9.64	9.59	10.32	10.24	11.52	11.45	7.30	7.22
22	13.51	13.46	9.60	9.49	9.67	9.59	10.38	10.32	11.45	10.84	7.37	7.30
23	13.46	13.43	9.60	9.50	9.74	9.67	10.43	10.37	---	---	7.41	7.34
24	13.43	13.39	9.60	9.58	9.80	9.66	10.56	10.43	9.44	8.29	7.53	7.38
25	13.39	13.34	9.61	9.56	9.66	9.46	10.60	10.56	8.29	7.49	7.52	7.41
26	13.34	13.30	9.68	9.57	9.84	9.66	10.65	10.58	7.49	6.93	7.61	7.38
27	13.30	13.28	9.70	9.57	9.84	9.71	10.76	10.65	6.93	6.64	7.74	7.61
28	13.28	13.25	9.73	9.66	9.71	9.57	10.80	10.74	---	---	7.80	7.74
29	13.25	13.21	9.68	9.55	9.66	9.56	10.85	10.76	---	---	7.82	7.74
30	13.21	13.17	9.72	9.54	9.68	9.59	10.90	10.85	---	---	7.89	7.77
31	13.17	13.14	---	---	9.59	9.54	10.92	10.90	---	---	8.07	7.87
MONTH	14.89	13.14	13.14	9.49	10.49	9.46	10.92	9.24	11.53	6.64	8.07	5.65

GROUND-WATER LEVELS IN DELAWARE

KENT COUNTY—Continued

DAY	MAX		MIN		MAX		MIN		MAX		MIN		MAX		MIN	
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER					
1	8.09	7.93	8.81	8.73	9.21	9.10	7.35	7.22	10.33	10.27	12.06	12.04				
2	8.12	8.02	8.93	8.81	9.23	9.19	7.44	7.35	10.41	10.33	12.11	12.06				
3	8.20	8.10	9.12	8.93	9.20	9.10	7.38	7.20	10.48	10.41	12.13	12.11				
4	8.28	8.19	9.24	9.12	9.10	9.05	7.22	7.19	10.55	10.48	12.16	12.13				
5	8.44	8.28	9.32	9.24	---	---	7.19	7.17	10.61	10.55	12.21	12.16				
6	8.63	8.44	9.41	9.31	9.05	9.03	7.32	7.18	10.68	10.61	12.24	12.21				
7	8.65	8.57	9.49	9.41	9.03	8.44	7.39	7.29	10.73	10.68	12.27	12.24				
8	8.71	8.62	9.63	9.49	8.44	7.48	7.51	7.39	---	---	12.32	12.27				
9	8.69	8.46	9.72	9.63	7.48	6.93	7.64	7.50	---	---	12.36	12.32				
10	8.46	8.13	9.78	9.72	6.93	6.70	7.71	7.64	10.95	10.88	12.39	12.36				
11	8.13	7.55	9.81	9.76	6.70	6.62	7.88	7.66	11.01	10.95	12.43	12.39				
12	---	---	9.95	9.81	6.69	6.63	8.07	7.88	11.08	11.01	12.46	12.43				
13	7.24	7.05	10.07	9.95	6.79	6.68	8.22	8.06	11.16	11.08	12.49	12.46				
14	7.05	6.88	10.19	10.07	6.96	6.78	8.35	8.22	11.20	11.16	12.51	12.49				
15	6.88	6.71	10.28	10.19	7.15	6.96	---	---	11.23	11.20	12.52	12.43				
16	6.79	6.69	10.32	10.16	7.35	7.15	8.59	8.44	11.27	11.23	12.43	12.36				
17	7.11	6.79	10.16	9.96	7.39	7.35	8.73	8.59	11.33	11.27	12.36	12.33				
18	7.22	7.10	9.96	9.87	7.44	7.38	8.85	8.73	11.40	11.33	12.33	12.10				
19	7.31	7.22	9.87	9.84	---	---	8.99	8.84	11.46	11.40	12.10	11.76				
20	7.35	7.30	9.84	9.81	---	---	9.11	8.99	11.50	11.46	11.76	11.56				
21	7.36	7.29	9.83	9.80	6.84	6.36	9.20	9.11	11.54	11.50	11.56	11.40				
22	7.57	7.34	9.88	9.83	6.36	6.14	9.33	9.20	11.58	11.54	11.40	11.22				
23	7.78	7.57	9.89	9.87	6.15	6.11	9.46	9.32	11.65	11.58	11.22	11.06				
24	7.89	7.78	9.92	9.86	6.25	6.15	9.63	9.46	11.71	11.65	11.06	10.91				
25	7.97	7.89	9.97	9.92	6.32	6.25	9.76	9.63	11.74	11.71	10.91	10.77				
26	8.14	7.94	9.97	9.79	6.42	6.32	9.84	9.76	11.80	11.74	10.77	10.68				
27	8.34	8.14	9.79	9.66	6.66	6.42	9.90	9.84	11.85	11.79	10.68	10.59				
28	8.42	8.34	9.66	9.51	6.89	6.66	10.00	9.89	11.90	11.85	---	---				
29	8.58	8.42	9.51	9.38	7.05	6.88	10.13	10.00	11.94	11.90	10.63	10.56				
30	8.78	8.58	9.38	9.30	7.22	7.05	10.20	10.13	12.00	11.94	10.65	10.63				
31	---	---	9.30	9.11	---	---	10.27	10.20	12.04	12.00	---	---				
MONTH	8.78	6.69	10.32	8.73	9.23	6.11	10.27	7.17	12.04	10.27	12.52	10.56				
YEAR	14.89	5.65														

Daily Low Water Levels



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

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 Formation 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.--Monthly water level measurements with electric or chalked steel tape by U.S. Geological Survey or 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.

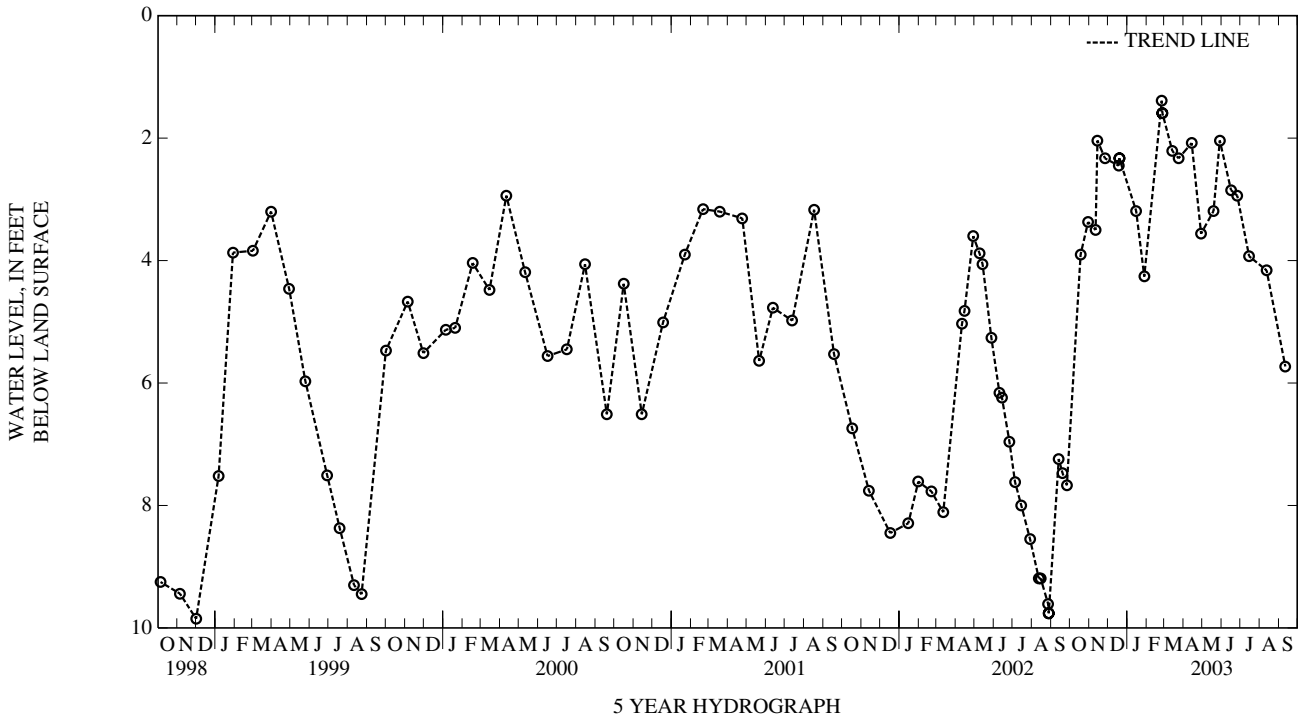
REMARKS.--Delaware Water-Level Monitoring Network observation well.

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, January 6, 1966.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18, 2002	3.90	DEC 19, 2002	2.33	MAR 24, 2003	2.33	JUN 26, 2003	2.94
30	3.37	JAN 15, 2003	3.19	APR 14	2.08	JUL 15	3.93
NOV 11	3.50	28	4.26	29	3.56	AUG 12	4.16
14	2.04	FEB 25	1.39	MAY 19	3.19	SEP 11	5.73
26	2.33	26	1.59	29	2.04		
DEC 18	2.45	MAR 14	2.21	JUN 16	2.85		
HIGHEST 1.39 FEB 25, 2003							
LOWEST 5.73 SEP 11, 2003							



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

GROUND-WATER LEVELS IN DELAWARE

KENT COUNTY—Continued

WELL NUMBER.--DM102D. SITE ID.--390733075264802. PERMIT NUMBER.--95533.

LOCATION.--Lat 39°07'33", long 75°26'48", Hydrologic Unit 2040207, at Dover Air Force Base, Dover. Owner: U.S. Air Force.

AQUIFER.--Columbia Formation of Pleistocene age. Aquifer code: 112CLMB.

WELL CHARACTERISTICS.--Drilled, observaion, water table well, depth 57.97 ft; casing diameter 2 in., to 49.24 ft; screen diameter 2 in., from 49.24 to 59.24 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from August 2001 to September 2002.

DATUM.--Altitude of land surface is 19.12 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.32 ft above land surface.

REMARKS.--Dover Ai Force Base Project observation well.

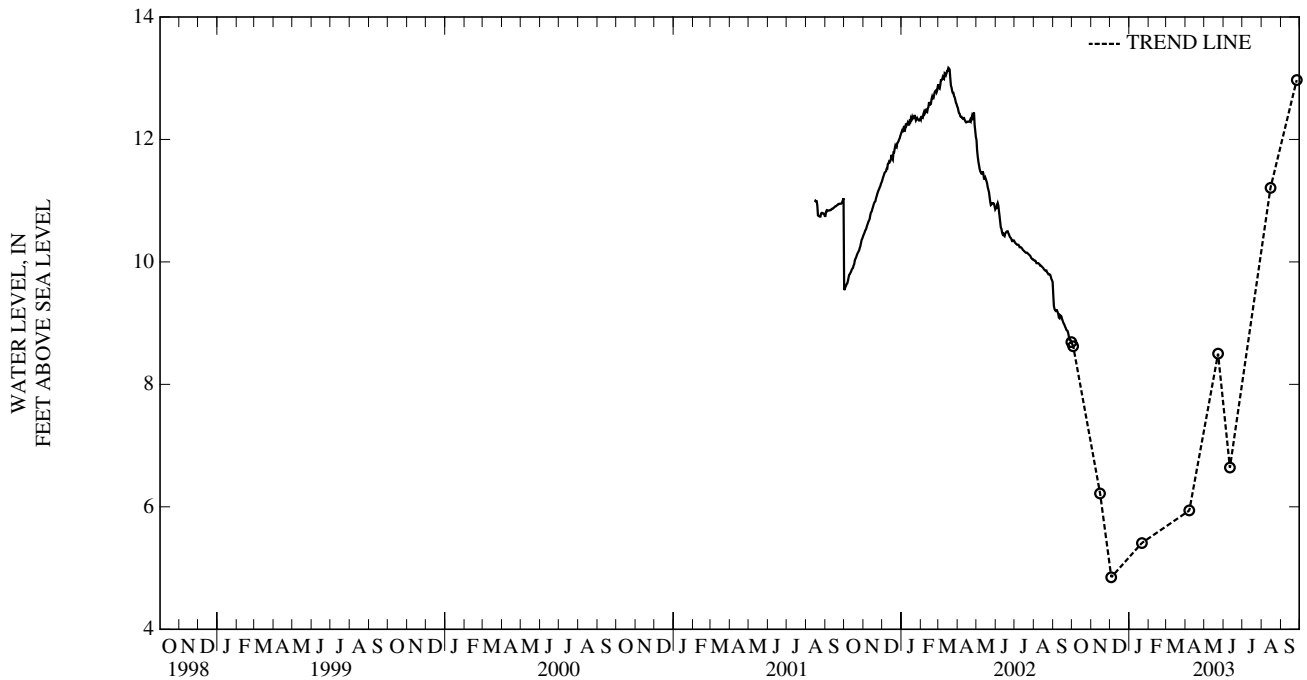
PERIOD OF RECORD.--August 2001 to September 2003.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.79 ft above sea level, October 10, 2002; lowest measured, 4.85 ft above sea level, December 3, 2002.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 03, 2002	8.62	JAN 21, 2003	5.41	JUN 11, 2003	6.64
NOV 15	6.22	APR 07	5.94	AUG 15	11.21
DEC 03	4.85	MAY 23	8.50	SEP 26	12.97

LOWEST 4.85 DEC 03, 2002
 HIGHEST 12.97 SEP 26, 2003



5 YEAR HYDROGRAPH
 OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

KENT COUNTY—Continued

WELL NUMBER.--DM102F. SITE ID.--390733075264801. PERMIT NUMBER.--96950.

LOCATION.--Lat 39°07'33", long 75°26'48", Hydrologic Unit 02040207, at Dover Air Force Base, Dover. Owner: U.S. Air Force.

AQUIFER.--Frederica aquifer in the Calvert Formation of Lower Middle Miocene age. Aquifer code: 122FRDC.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 112.5 ft; casing diameter 3 in., to 102.5 ft; screen diameter 2 in., from 102.5 to 112.5 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from October 1995 to September 2002.

DATUM.--Elevation of land surface is 18.54 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder platform, 2.32 ft above land surface.

REMARKS.--Dover Air Force Base Project observation well. Water levels may be affected by agricultural irrigation.

PERIOD OF RECORD.--September 1995 to September 2003.

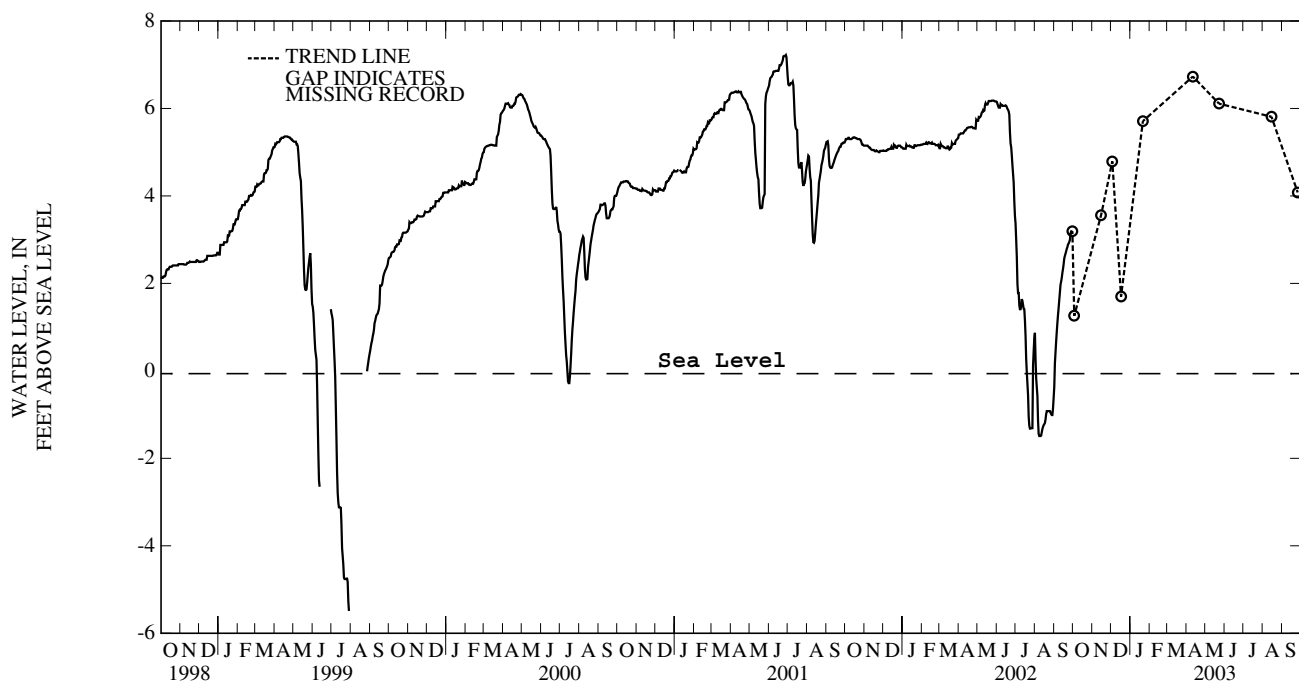
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.24 ft above sea level, June 28 and 29, 2001; lowest measured, 5.49 ft below sea level, July 29, 1999.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 03, 2002	1.26	DEC 17, 2002	1.70	MAY 23, 2003	6.11
NOV 15	3.56	JAN 21, 2003	5.71	AUG 15	5.81
DEC 03	4.79	APR 11	6.73	SEP 26	4.08

LOWEST 1.26 OCT 03, 2002
 HIGHEST 6.73 APR 11, 2003

Daily Low Water Levels



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

GROUND-WATER LEVELS IN DELAWARE

KENT COUNTY—Continued

WELL NUMBER.--DM103D. SITE ID.--390723075270901. PERMIT NUMBER.--95533.

LOCATION.--Lat 39°07'23", long 75°27'09", Hydrologic Unit 02040207, at Dover Air Force Base, Dover. Owner: U.S. Air Force.

AQUIFER.--Columbia Formation of Pleistocene age. Aquifer code: 112CLMB.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 76 ft; protective casing diameter 6 in., from +2.5 to 6 ft, casing diameter 2 in., to 66 ft; screen diameter 2.5 in., from 66 to 75 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 23.82 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of PVC casing at land surface. Prior to July 2000, 2.98 ft above land surface.

REMARKS.--Dover Air Force Base Project observation well. Water levels may be affected by agricultural irrigation.

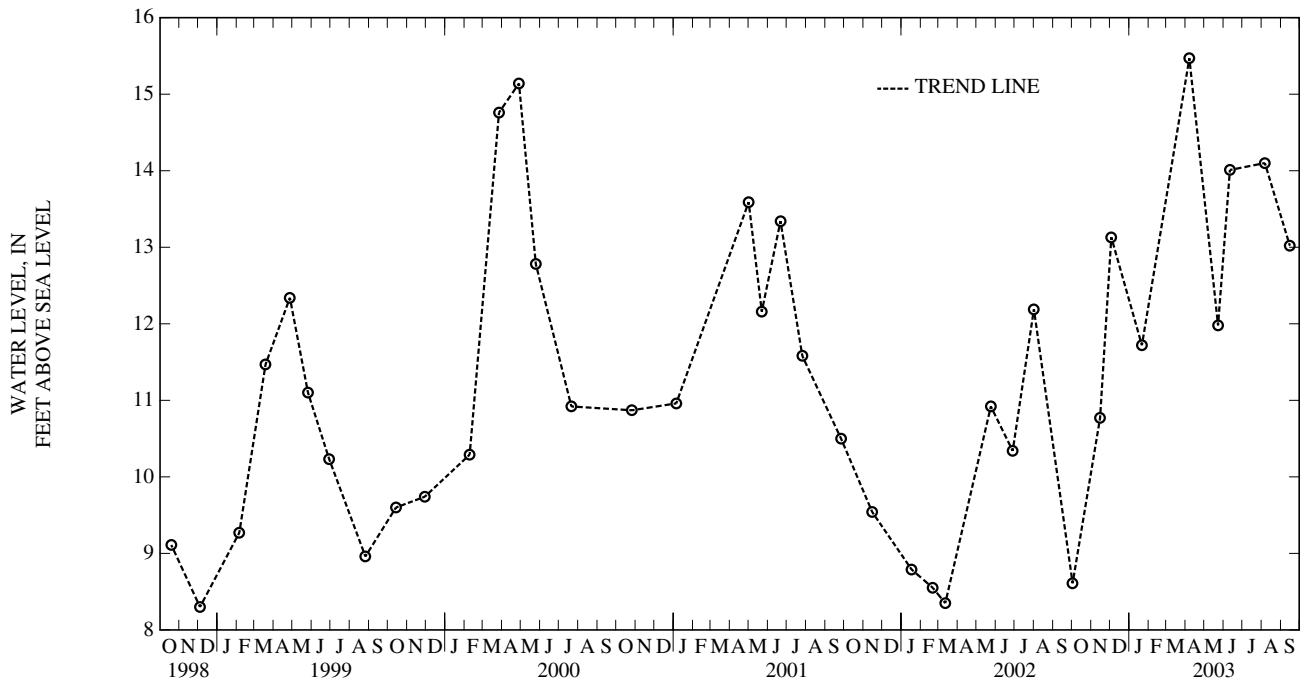
PERIOD OF RECORD.--January 1996 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.75 ft above sea level, March 12, 1998; lowest measured, 8.30 ft above sea level, December 4, 1998.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 2002	8.61	JAN 21, 2003	11.72	JUN 11, 2003	14.01
NOV 15	10.77	APR 07	15.47	AUG 06	14.10
DEC 03	13.13	MAY 23	11.98	SEP 15	13.02

LOWEST 8.61 OCT 02, 2002
 HIGHEST 15.47 APR 07, 2003



5 YEAR HYDROGRAPH
 OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

KENT COUNTY—Continued

WELL NUMBER.--DM106D. SITE ID.--390734075271402. PERMIT NUMBER.--96636.

LOCATION.--Lat 39°07'34", long 75°27'14", Hydrologic Unit 02040207, at Dover Air Force Base, Dover. Owner: U.S. Air Force.

AQUIFER.--Columbia Formation of Pleistocene age. Aquifer code: 112CLMB.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 82.4 ft; casing diameter 2 in., to 72.4 ft; screen diameter 2 in., from 72.4 to 82.4 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from October 1996, to September 2002.

DATUM.--Elevation of land surface is 23.51 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder platform, 3.60 ft above land surface.

REMARKS.--Dover Air Force Base Project observation well.

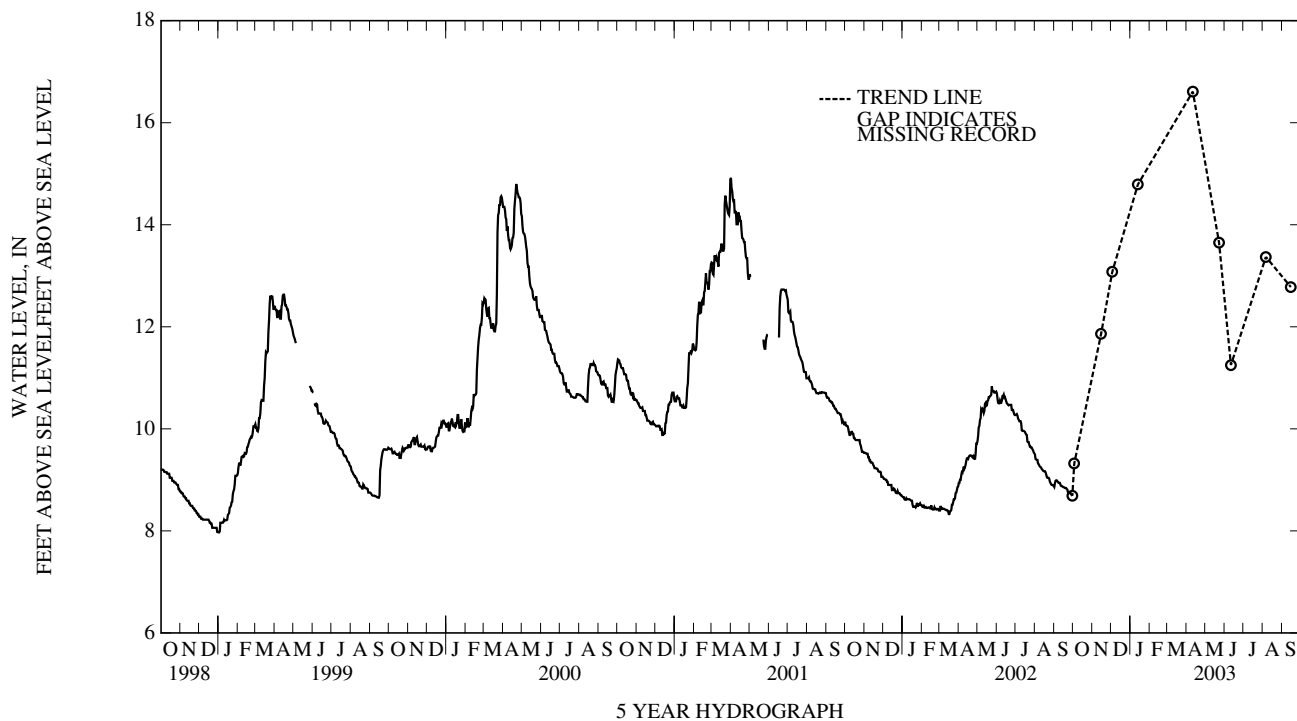
PERIOD OF RECORD.--December 1995 to September 2003.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 17.11 ft above sea level, June 22 and 23, 2003; lowest measured, 7.97 ft above sea level, January 1 and 2, 1999.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 03, 2002	9.32	JAN 13, 2003	14.79	JUN 11, 2003	11.25
NOV 15	11.86	APR 11	16.61	AUG 06	13.37
DEC 03	13.08	MAY 23	13.65	SEP 15	12.78
LOWEST	9.32	OCT 03, 2002			
HIGHEST	16.61	APR 11, 2003			

Daily Low Water Levels



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

GROUND-WATER LEVELS IN DELAWARE

KENT COUNTY—Continued

WELL NUMBER.--DM106S. SITE ID.--390734075271401. PERMIT NUMBER.--95513.

LOCATION.--Lat 39°07'34", long 75°27'14", Hydrologic Unit 02040207, at Dover Air Force Base, Dover. Owner: U.S. Air Force.

AQUIFER.--Columbia Formation of Pleistocene age. Aquifer code: 112CLMB.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 17.4 ft; casing diameter 2 in., to 7.4 ft; screen diameter 2 in., from 7.4 to 17.4 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from December 1995, to September 2002.

DATUM.--Elevation of land surface is 23.31 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder platform, 2.73 ft above land surface.

REMARKS.--Dover Air Force Base Project observation well. Water levels may be affected by agricultural irrigation.

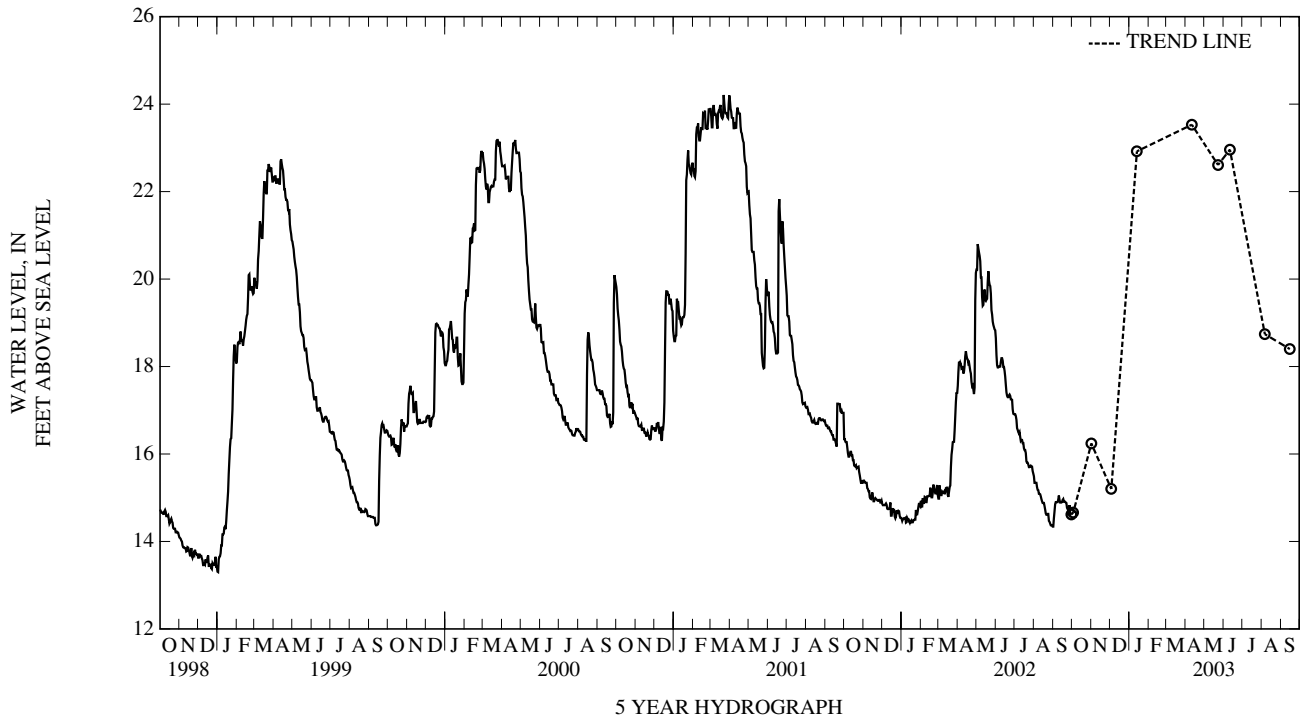
PERIOD OF RECORD.--December 1995 to September 2003.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 24.40 ft above sea level, March 22, 2001; lowest measured, 13.30 ft above sea level, January 2, 2000.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 03, 2002	14.66	JAN 13, 2003	22.92	JUN 11, 2003	22.96
NOV 01	16.24	APR 11	23.53	AUG 06	18.74
DEC 03	15.20	MAY 23	22.61	SEP 15	18.40
LOWEST 14.66 OCT 03, 2002					
HIGHEST 23.53 APR 11, 2003					

Daily Low Water Levels



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

KENT COUNTY—Continued

WELL NUMBER.--DM108D. SITE ID.--390801075272302. PERMIT NUMBER.--95551.

LOCATION.--Lat 39°08'01", long 75°27'23", Hydrologic Unit 02040207, at Dover Air Force Base, Dover. Owner: U.S. Air Force.

AQUIFER.--Columbia Formation of Pleistocene age. Aquifer code: 112CLMB.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 32.8 ft; protective casing from +2 to 2.5 ft, casing diameter 2 in., to 22.8 ft; screen diameter 2 in., from 22.8 to 32.8 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 11.46 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of PVC casing, 2.85 ft above land surface.

REMARKS.--Dover Air Force Base Project observation well. Water levels may be affected by agricultural irrigation.

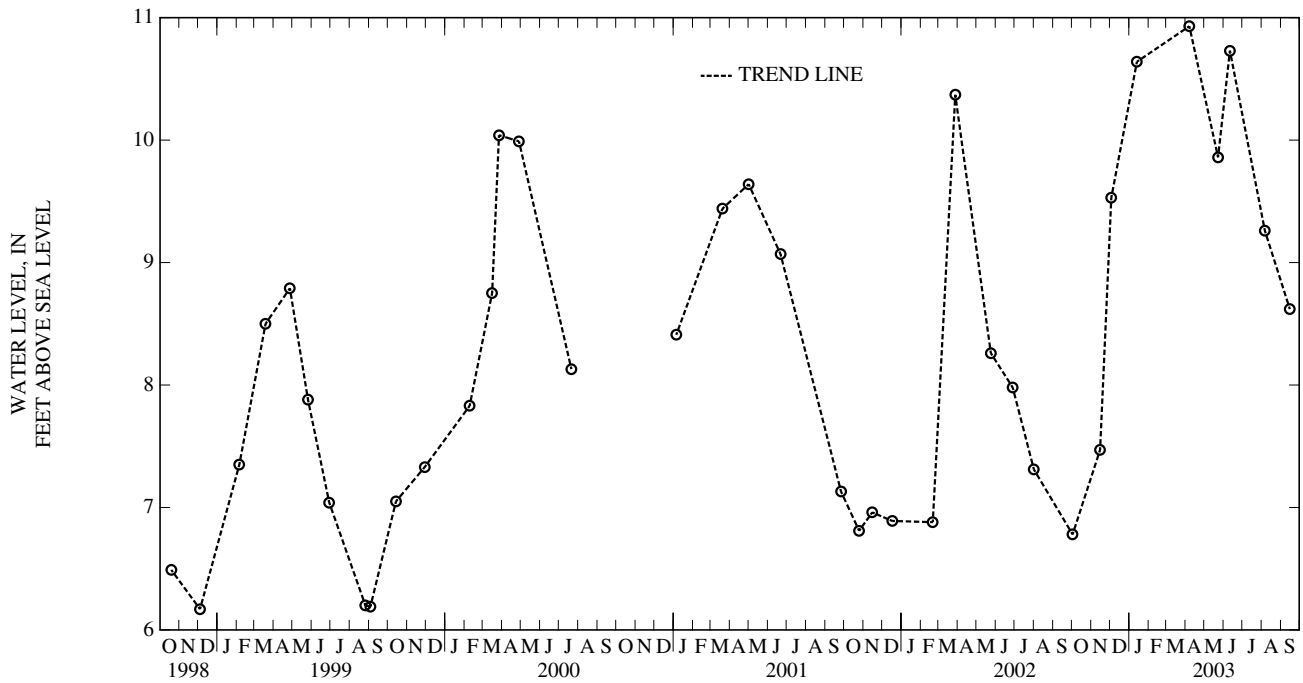
PERIOD OF RECORD.--October 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.86 ft above sea level, March 12, 1998; lowest measured, 6.17 ft above sea level, December 4, 1998.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 2002	6.78	JAN 13, 2003	10.64	JUN 11, 2003	10.73
NOV 15	7.47	APR 07	10.93	AUG 06	9.26
DEC 03	9.53	MAY 23	9.86	SEP 15	8.62

LOWEST 6.78 OCT 02, 2002
 HIGHEST 10.93 APR 07, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

GROUND-WATER LEVELS IN DELAWARE

KENT COUNTY—Continued

WELL NUMBER.--DM108S. SITE ID.--390801075272301. PERMIT NUMBER.--95525.

LOCATION.--Lat 39°08'01", long 75°27'23", Hydrologic Unit 02040207, at Dover Air Force Base, Dover. Owner: U.S. Air Force.

AQUIFER.--Columbia Formation of Pleistocene age. Aquifer code: 112CLMB.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 17 ft; protective casing diameter 6 in., from +2.5 to 2.5 ft, casing diameter 2 in., to 6.9 ft; screen diameter 2 in., from 6.9 to 16.9 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 11.66 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder platform, 2.84 ft above land surface.

REMARKS.--Dover Air Force Base Project observation well. Water levels may be affected by agricultural irrigation.

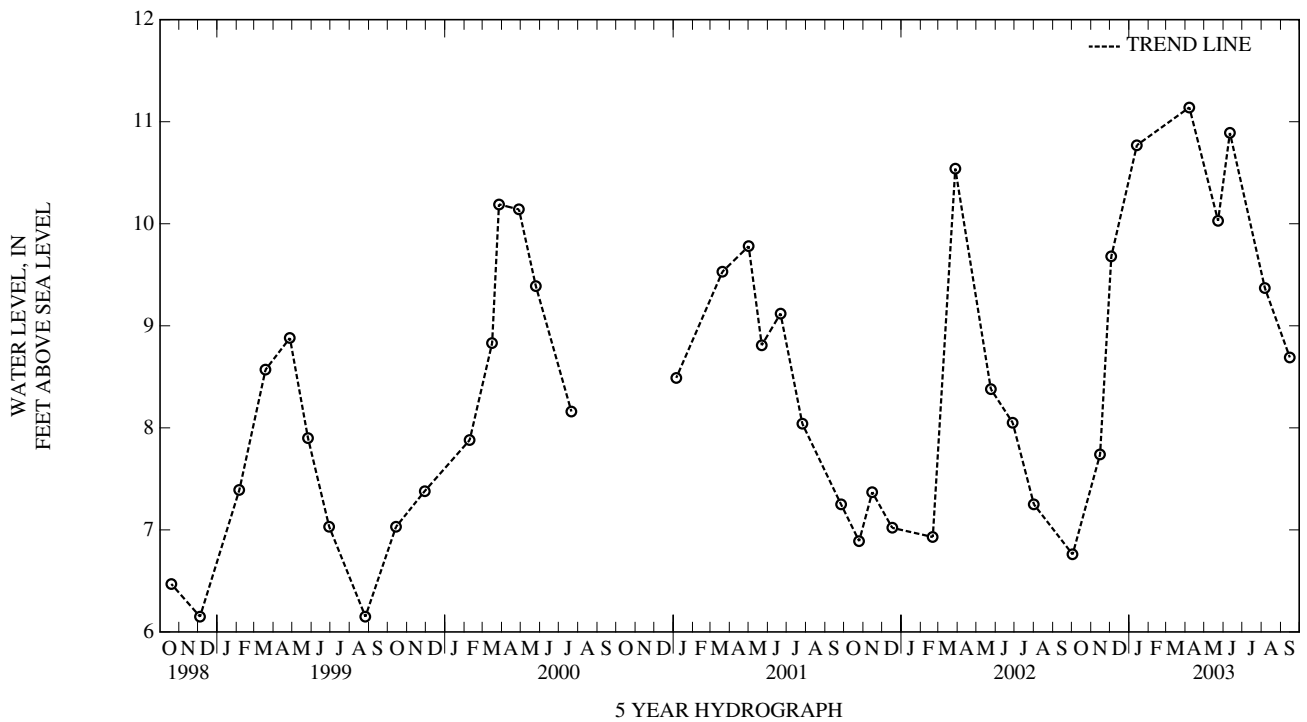
PERIOD OF RECORD.--July 1997 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.14 ft above sea level, April 7, 2003; lowest measured, 6.15 ft above sea level, December 4, 1998, and August 26, 1999.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 2002	6.76	JAN 13, 2003	10.77	JUN 11, 2003	10.89
NOV 15	7.74	APR 07	11.14	AUG 06	9.37
DEC 03	9.68	MAY 23	10.03	SEP 15	8.69

LOWEST 6.76 OCT 02, 2002
 HIGHEST 11.14 APR 07, 2003



KENT COUNTY—Continued

WELL NUMBER.--DM110D. SITE ID.--390744075270402. PERMIT NUMBER.--95553.

LOCATION.--Lat 39°07'44", long 75°27'04", Hydrologic Unit 02040207, at Dover Air Force Base, Dover. Owner: U.S. Air Force.

AQUIFER.--Columbia Formation of Pleistocene age. Aquifer code: 112CLMB.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 74 ft; casing diameter 2 in., to 63.4 ft; screen diameter 2 in., from 63.4 to 73.4 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 25.66 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 4.06 ft above land surface.

REMARKS.--Dover Air Force Base Project observation well.

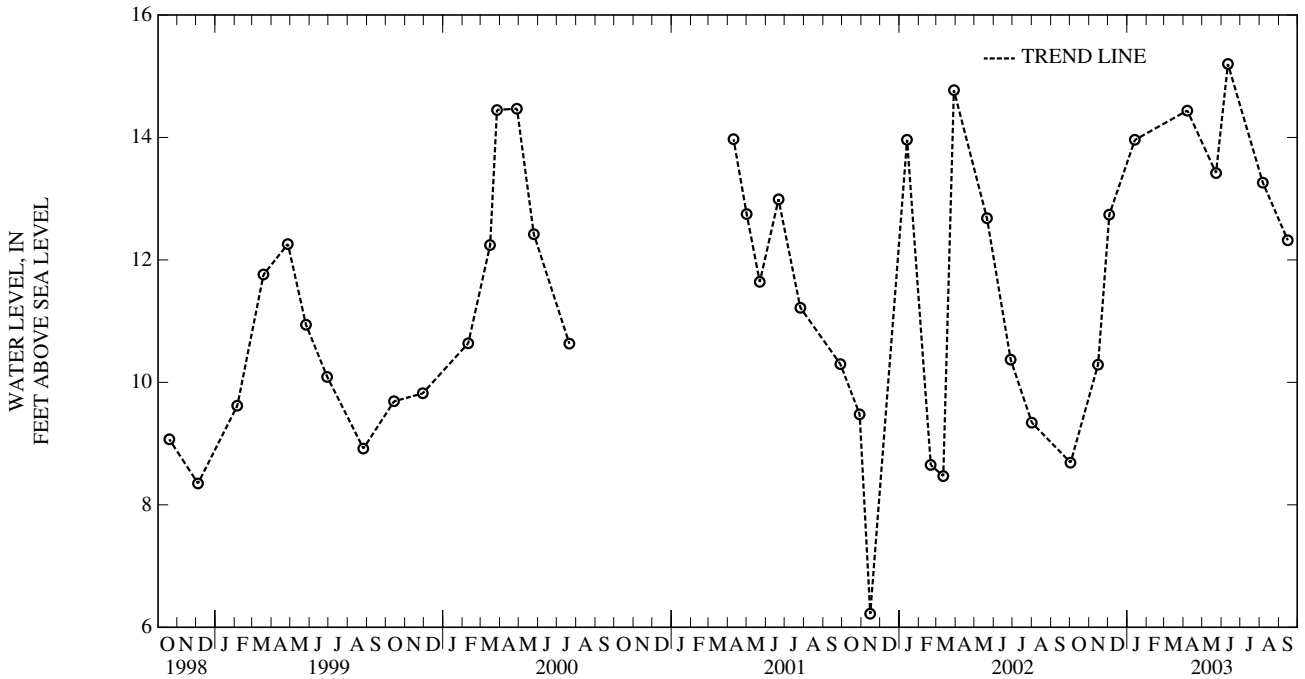
PERIOD OF RECORD.--October 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.12 ft above sea level, March 9, 1998; lowest measured, 6.22 ft above sea level, November 15, 2001.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 2002	8.69	JAN 13, 2003	13.96	JUN 11, 2003	15.20
NOV 15	10.29	APR 07	14.44	AUG 06	13.26
DEC 03	12.74	MAY 23	13.42	SEP 15	12.32

LOWEST 8.69 OCT 02, 2002
 HIGHEST 15.20 JUN 11, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

GROUND-WATER LEVELS IN DELAWARE

KENT COUNTY—Continued

WELL NUMBER.--DM110S. SITE ID.--390744075270401. PERMIT NUMBER.--95528.

LOCATION.--Lat 39°07'44", long 75°27'04", Hydrologic Unit 02040207, at Dover Air Force Base, Dover. Owner: U.S. Air Force.

AQUIFER.--Columbia Formation of Pleistocene age. Aquifer code: 112CLMB.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 19 ft; casing diameter 2 in., to 10.3 ft; screen diameter 2 in., from 10.3 to 20.3 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 25.66 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder platform, 3.70 ft above land surface.

REMARKS.--Dover Air Force Base Project observation well. Water levels may be affected by agricultural irrigation.

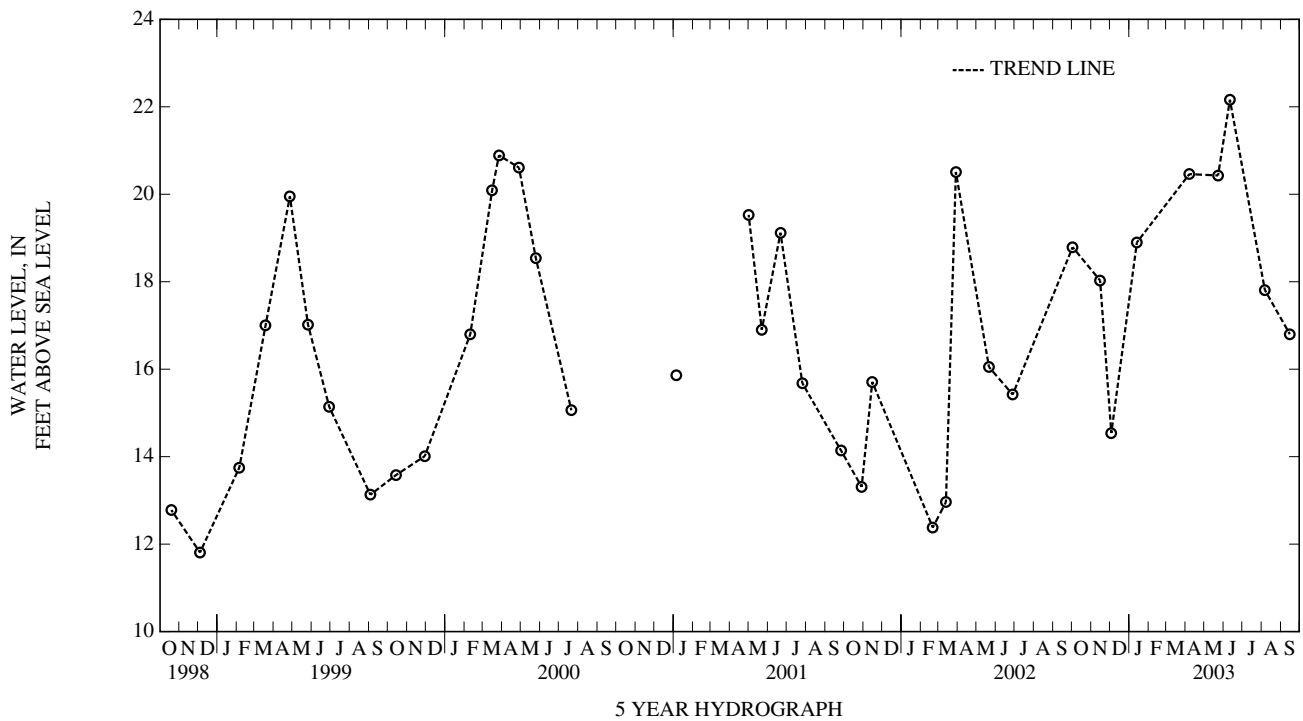
PERIOD OF RECORD.--October 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.16 ft above sea level, June 11, 2003; lowest measured, 11.81 ft above sea level, December 1-2, and 4, 1998.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 2002	18.79	JAN 13, 2003	18.90	JUN 11, 2003	22.16
NOV 15	18.03	APR 07	20.46	AUG 06	17.81
DEC 03	14.54	MAY 23	20.43	SEP 15	16.80

LOWEST 14.54 DEC 03, 2002
 HIGHEST 22.16 JUN 11, 2003



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

KENT COUNTY—Continued

WELL NUMBER.--DM202D. SITE ID.--390833075273601. PERMIT NUMBER.--95544.

LOCATION.--Lat 39°08'33", long 75°27'36", Hydrologic Unit 02040207, at Dover Air Force Base, Dover. Owner: U.S. Air Force.

AQUIFER.--Columbia Formation of Pleistocene age. Aquifer code: 112CLMB.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 28.0 ft; casing diameter 2 in., to 17.6 ft; screen diameter 2 in., from 17.6 to 27.6 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 13.74 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of PVC casing at land surface. Prior to July 2000, 2.23 ft above land surface.

REMARKS.--Dover Air Force Base Project observation well.

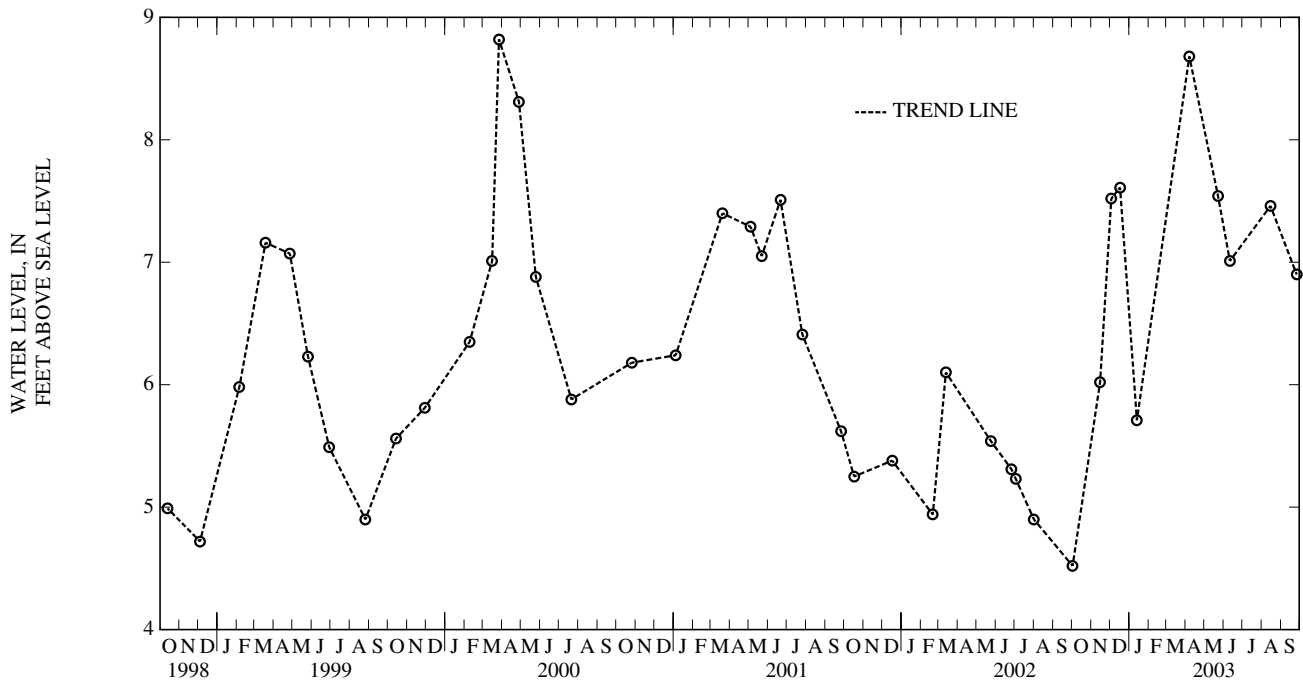
PERIOD OF RECORD.--October 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.00 ft above sea level, March 9, 1998; lowest measured, 4.52 ft above sea level, October 2, 2002.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 2002	4.52	DEC 17, 2002	7.61	MAY 23, 2003	7.54	SEP 26, 2003	6.90
NOV 15	6.02	JAN 13, 2003	5.71	JUN 11	7.01		
DEC 03	7.52	APR 07	8.68	AUG 15	7.46		

LOWEST 4.52 OCT 02, 2002
 HIGHEST 8.68 APR 07, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

GROUND-WATER LEVELS IN DELAWARE

KENT COUNTY—Continued

WELL NUMBER.--DM204D. SITE ID.--390827075290401. PERMIT NUMBER.--95546.

LOCATION.--Lat 39°08'27", long 75°29'04", Hydrologic Unit 02040207, at Dover Air Force Base, Dover. Owner: U.S. Air Force.

AQUIFER.--Columbia Formation of Pleistocene age. Aquifer code: 112CLMB.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 34 ft; casing diameter 2 in., to 24.7 ft; screen diameter 2 in., from 24.7 to 34.7 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 22.28 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of PVC casing at land surface. Prior to October 2000, 2.48 ft above land surface.

REMARKS.--Dover Air Force Base Project observation well.

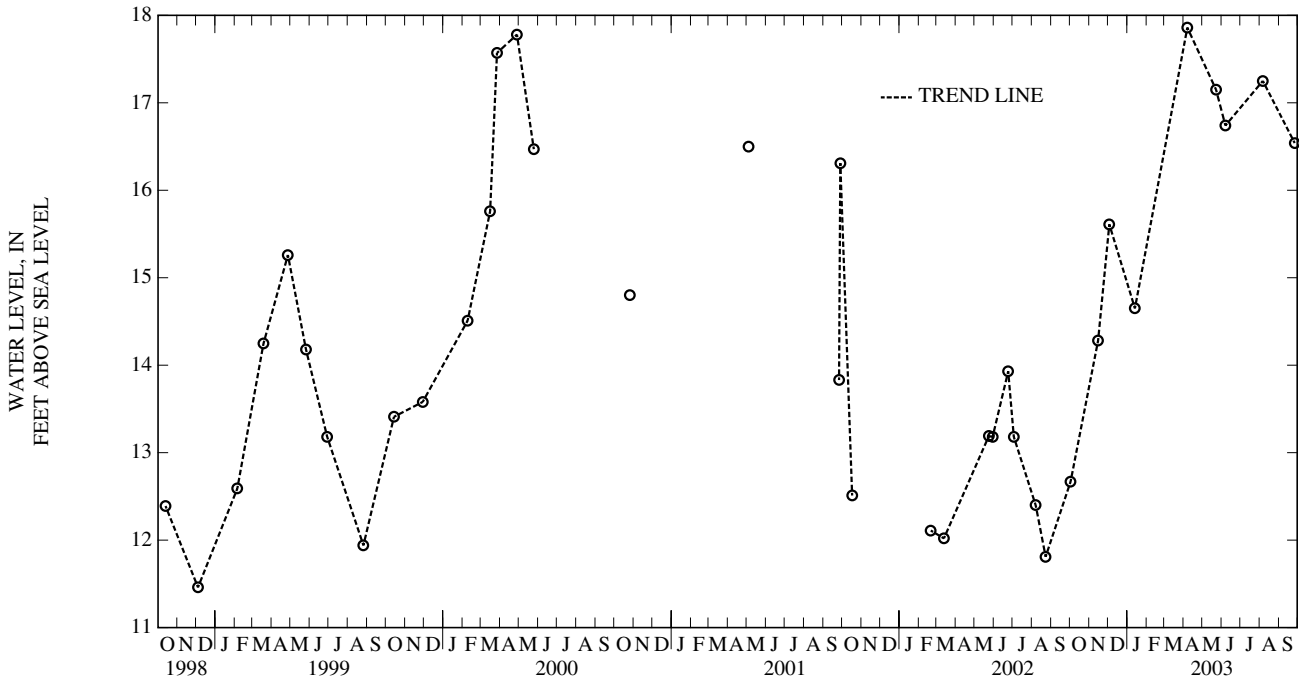
PERIOD OF RECORD.--June 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 18.07 ft above sea level, March 12, 1998; lowest measured, 11.46 ft above sea level, December 4, 1998.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 2002	12.67	JAN 13, 2003	14.65	JUN 07, 2003	16.74
NOV 15	14.28	APR 07	17.86	AUG 06	17.25
DEC 03	15.61	MAY 23	17.15	SEP 26	16.54

LOWEST 12.67 OCT 02, 2002
 HIGHEST 17.86 APR 07, 2003



5 YEAR HYDROGRAPH
 OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

KENT COUNTY—Continued

WELL NUMBER.--DM310SB. SITE ID.--390729075283701. PERMIT NUMBER.--96051.

LOCATION.--Lat 39°07'29", long 75°28'37", Hydrologic Unit 02040207, at Dover Air Force Base, Dover. Owner: U.S. Air Force.

AQUIFER.--Columbia Formation of Pleistocene age. Aquifer code: 112CLMB.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 20 ft; protective casing diameter 4 in., from +2.5 to 2.5 ft, casing diameter 2 in., to 10 ft; screen diameter 2 in., from 10 to 20 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 20.38 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of PVC casing, 0.28 ft below land surface.

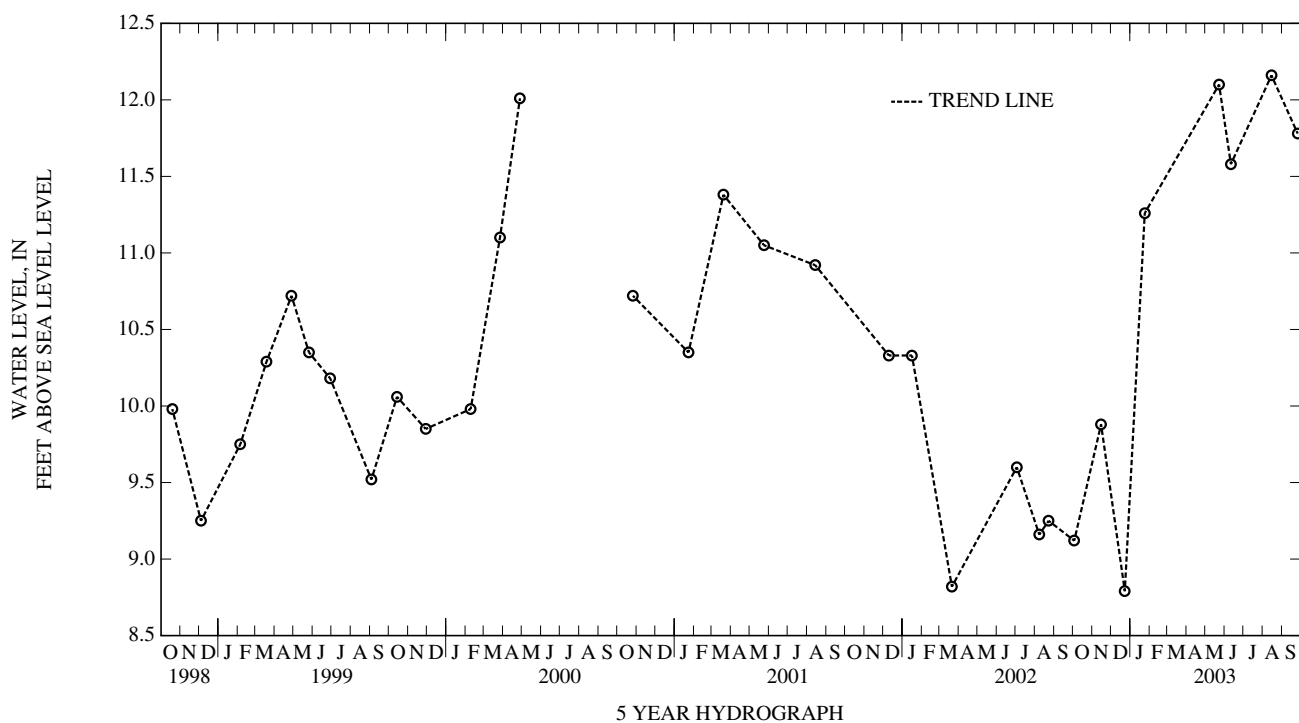
REMARKS.--Dover Air Force Base Project observation well. Water levels may be affected by agricultural irrigation.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.52 ft above sea level, March 12, 1998; lowest measured, 8.79 ft above sea level, December 23, 2002.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 03, 2002	9.12	DEC 23, 2002	8.79	MAY 23, 2003	12.10	AUG 15, 2003	12.16
NOV 15	9.88	JAN 24, 2003	11.26	JUN 11	11.58	SEP 26	11.78
LOWEST 8.79 DEC 23, 2002							
HIGHEST 12.16 AUG 15, 2003							



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

KENT COUNTY—Continued

WELL NUMBER.--DM347D. SITE ID.--390819075292902. PERMIT NUMBER.--96044.

LOCATION.--Lat 39°08'19", long 75°29'29", Hydrologic Unit 02040207, at Dover Air Force Base, Dover. Owner: U.S. Air Force.

AQUIFER.--Columbia Formation of Pleistocene age. Aquifer code: 112CLMB.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 41.1 ft; protective casing diameter 4 in., from +2.5 to 2.5 ft, casing diameter 2 in., to 31.1 ft; screen diameter 2 in., from 31.1 to 41.1 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 25.90 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of PVC casing, 2.84 ft above land surface.

REMARKS.--Dover Air Force Base Project observation well. Water levels may be affected by agricultural irrigation.

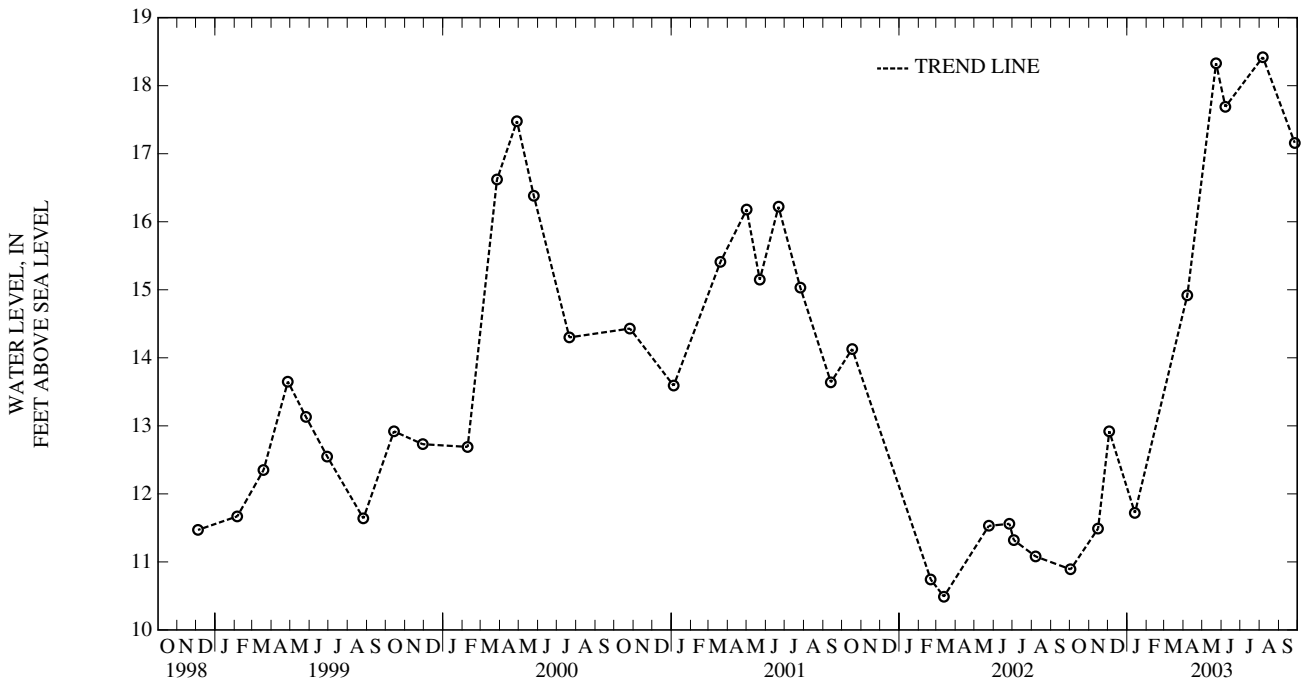
PERIOD OF RECORD.--October 1996 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 18.50 ft above sea level, April 8, 1998; lowest measured, 10.49 ft above sea level, March 13, 2002.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 2002	10.89	JAN 13, 2003	11.72	JUN 07, 2003	17.69
NOV 15	11.49	APR 07	14.92	AUG 06	18.42
DEC 03	12.92	MAY 23	18.33	SEP 26	17.16

LOWEST 10.89 OCT 02, 2002
 HIGHEST 18.42 AUG 06, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

KENT COUNTY—Continued

WELL NUMBER.--DM347S. SITE ID.--390819075292901. PERMIT NUMBER.--95919.

LOCATION.--Lat 39°08'19", long 75°29'29", Hydrologic Unit 02040207, at Dover Air Force Base, Dover. Owner: U.S. Air Force.

AQUIFER.--Columbia Formation of Pleistocene age. Aquifer code: 112CLMB.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 20.3 ft; protective casing diameter 4 in., from +2.5 to 2.5 ft, casing diameter 2 in., to 10.3 ft; screen diameter 2 in., from 10.3 to 20.3 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 25.89 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of PVC casing, 2.84 ft above land surface.

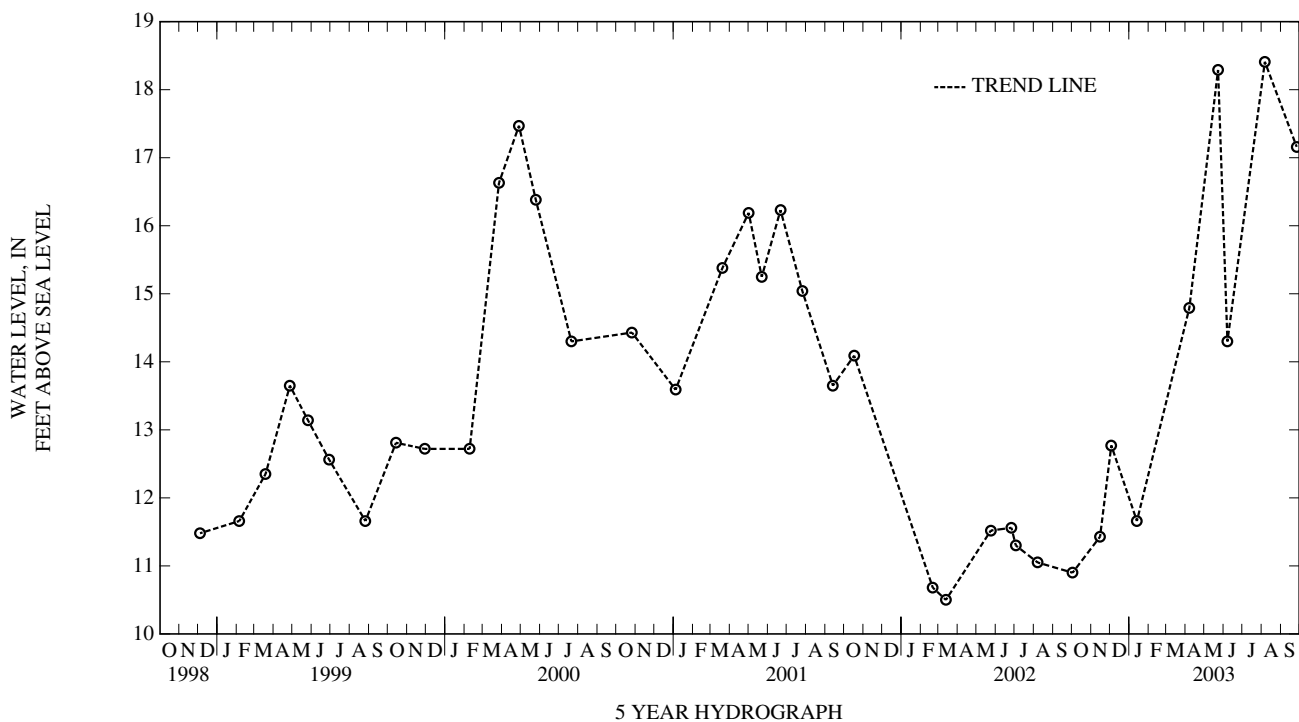
REMARKS.--Dover Air Force Base Project observation well. Water levels may be affected by agricultural irrigation.

PERIOD OF RECORD.--October 1996 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 18.51 ft above sea level, April 8, 1998; lowest measured, 10.50 ft above sea level, March 13, 2002.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 2002	10.90	JAN 13, 2003	11.66	JUN 07, 2003	14.30
NOV 15	11.43	APR 07	14.79	AUG 06	18.41
DEC 03	12.77	MAY 23	18.29	SEP 26	17.16
LOWEST 10.90 OCT 02, 2002					
HIGHEST 18.41 AUG 06, 2003					



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

GROUND-WATER LEVELS IN DELAWARE

KENT COUNTY—Continued

WELL NUMBER.--DM348D. SITE ID.--390815075293402. PERMIT NUMBER.--96041.

LOCATION.--Lat 39°08'15", long 75°29'34", Hydrologic Unit 02040207, at Dover Air Force Base, Dover. Owner: U.S. Air Force.

AQUIFER.--Columbia Formation of Pleistocene age. Aquifer code: 112CLMB.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 36 ft; protective casing diameter 4 in., from +2.5 to 2.5 ft, casing diameter 2 in., to 24 ft; screen diameter 2 in., from 24 to 34 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 26.09 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of PVC casing, 3.04 ft above land surface.

REMARKS.--Dover Air Force Base Project observation well. Water levels may be affected by agricultural irrigation.

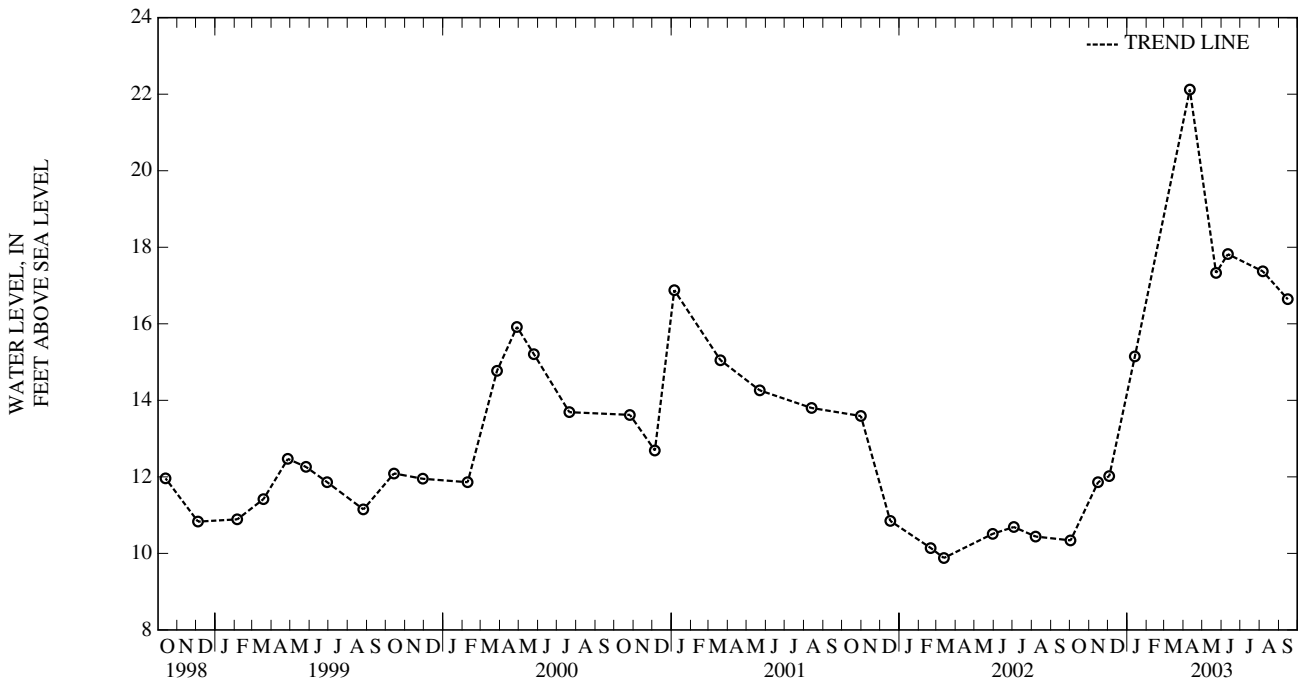
PERIOD OF RECORD.--October 1996 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.12 ft above sea level, April 11, 2003; lowest measured, 10.34 ft below sea level, October 2, 2002.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 2002	10.34	JAN 13, 2003	15.15	JUN 11, 2003	17.82
NOV 15	11.86	APR 11	22.12	AUG 06	17.37
DEC 03	12.02	MAY 23	17.33	SEP 15	16.64

LOWEST 10.34 OCT 02, 2002
 HIGHEST 22.12 APR 11, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

KENT COUNTY—Continued

WELL NUMBER.--DM348S. SITE ID.--390815075293401. PERMIT NUMBER.--95916.

LOCATION.--Lat 39°08'15", long 75°29'34", Hydrologic Unit 02040207, at Dover Air Force Base, Dover. Owner: U.S. Air Force.

AQUIFER.--Columbia Formation of Pleistocene age. Aquifer code: 112CLMB.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 21.2 ft; protective casing diameter 4 in., from +2.5 to 2.5 ft, casing diameter 2 in., to 11.2 ft; screen diameter 2 in., from 11.2 to 21.2 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 26.09 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of PVC casing, 3.12 ft above land surface.

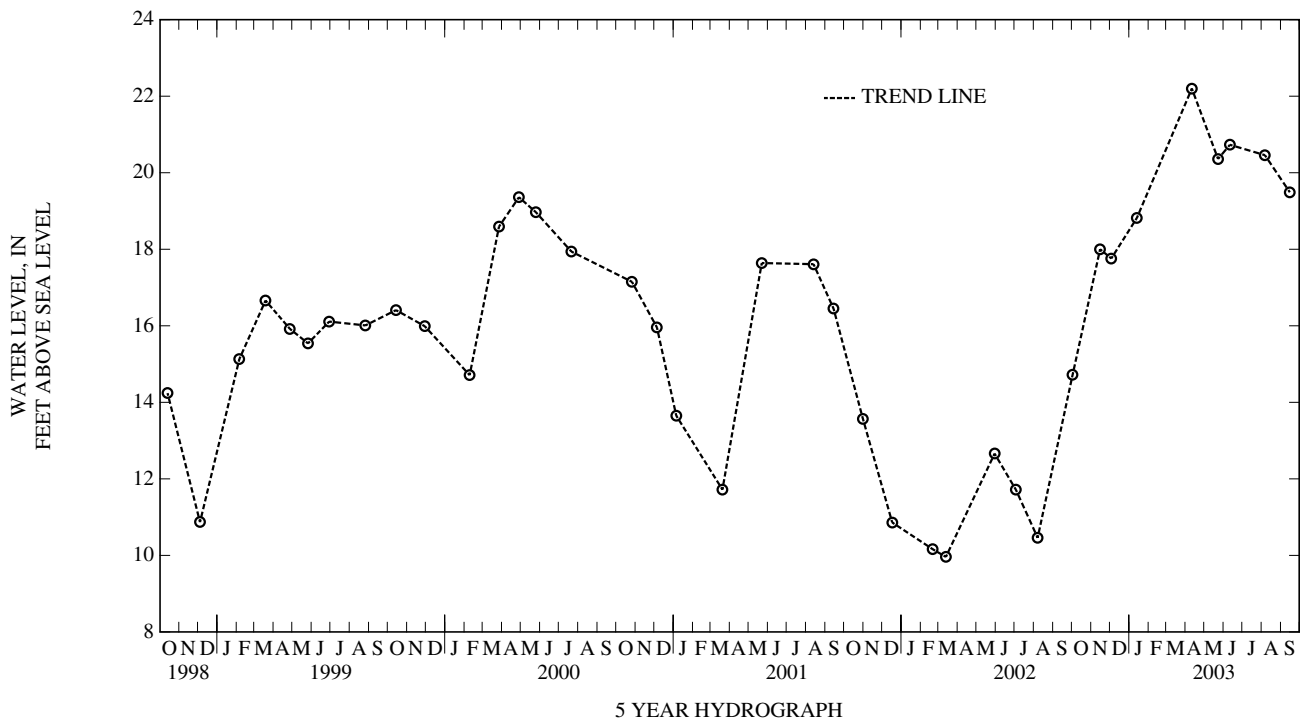
REMARKS.--Dover Air Force Base Project observation well. Water levels may be affected by agricultural irrigation.

PERIOD OF RECORD.--October 1996 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.20 ft above sea level, April 11, 2003; lowest measured, 9.96 ft above sea level, March 13, 2002.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 2002	14.72	JAN 13, 2003	18.82	JUN 11, 2003	20.73
NOV 15	18.00	APR 11	22.20	AUG 06	20.46
DEC 03	17.76	MAY 23	20.36	SEP 15	19.49
LOWEST 14.72 OCT 02, 2002					
HIGHEST 22.20 APR 11, 2003					



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

GROUND-WATER LEVELS IN DELAWARE

KENT COUNTY—Continued

WELL NUMBER.--DM349D. SITE ID.--390811075293802. PERMIT NUMBER.--96042.

LOCATION.--Lat 39°08'11", long 75°29'38", Hydrologic Unit 02040207, at Dover Air Force Base, Dover. Owner: U.S. Air Force.

AQUIFER.--Columbia Formation of Pleistocene age. Aquifer code: 112CLMB.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 34.4 ft; protective casing diameter 4 in., from +2.5 to 2.5 ft, casing diameter 2 in., to 24.4 ft; screen diameter 2 in., from 24.4 to 34.4 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 29.40 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of PVC casing, 2.60 ft above land surface.

REMARKS.--Dover Air Force Base Project observation well. Water levels may be affected by agricultural irrigation.

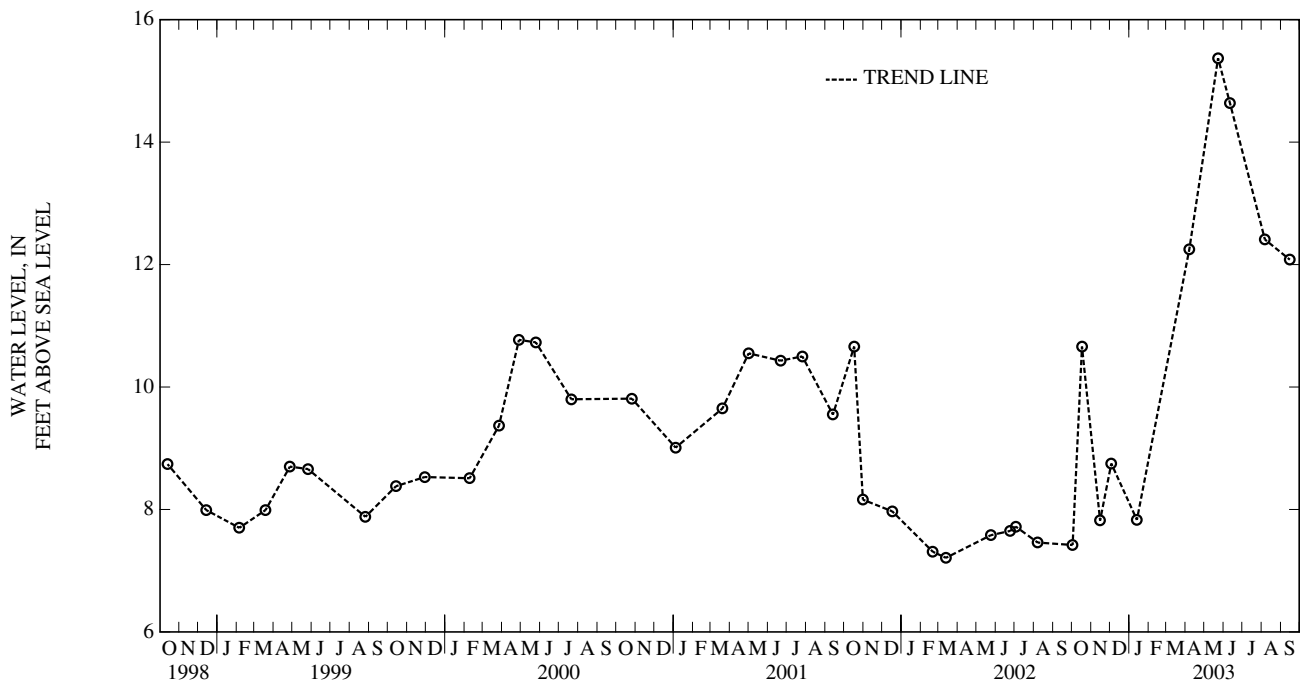
PERIOD OF RECORD.--October 1996 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.37 ft above sea level, May 23, 2003; lowest measured, 7.21 ft above sea level, March 13, 2002.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 2002	7.42	DEC 03, 2002	8.75	MAY 23, 2003	15.37	SEP 15, 2003	12.08
17	10.66	JAN 13, 2003	7.83	JUN 11	14.64		
NOV 15	7.82	APR 07	12.25	AUG 06	12.41		

LOWEST 7.42 OCT 02, 2002
 HIGHEST 15.37 MAY 23, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

KENT COUNTY—Continued

WELL NUMBER.--DM349S. SITE ID.--390811075293801. PERMIT NUMBER.--95917.

LOCATION.--Lat 39°08'11", long 75°29'38", Hydrologic Unit 02040207, at Dover Air Force Base, Dover. Owner: U.S. Air Force.

AQUIFER.--Columbia Formation of Pleistocene age. Aquifer code: 112CLMB.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 27.9 ft; protective casing diameter 4 in., from +2.5 to 2.5 ft, casing diameter 2 in., to 17.9 ft; screen diameter 2 in., from 17.9 to 27.9 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 29.72 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of PVC casing, 2.71 ft above land surface.

REMARKS.--Dover Air Force Base Project observation well. Water levels may be affected by agricultural irrigation.

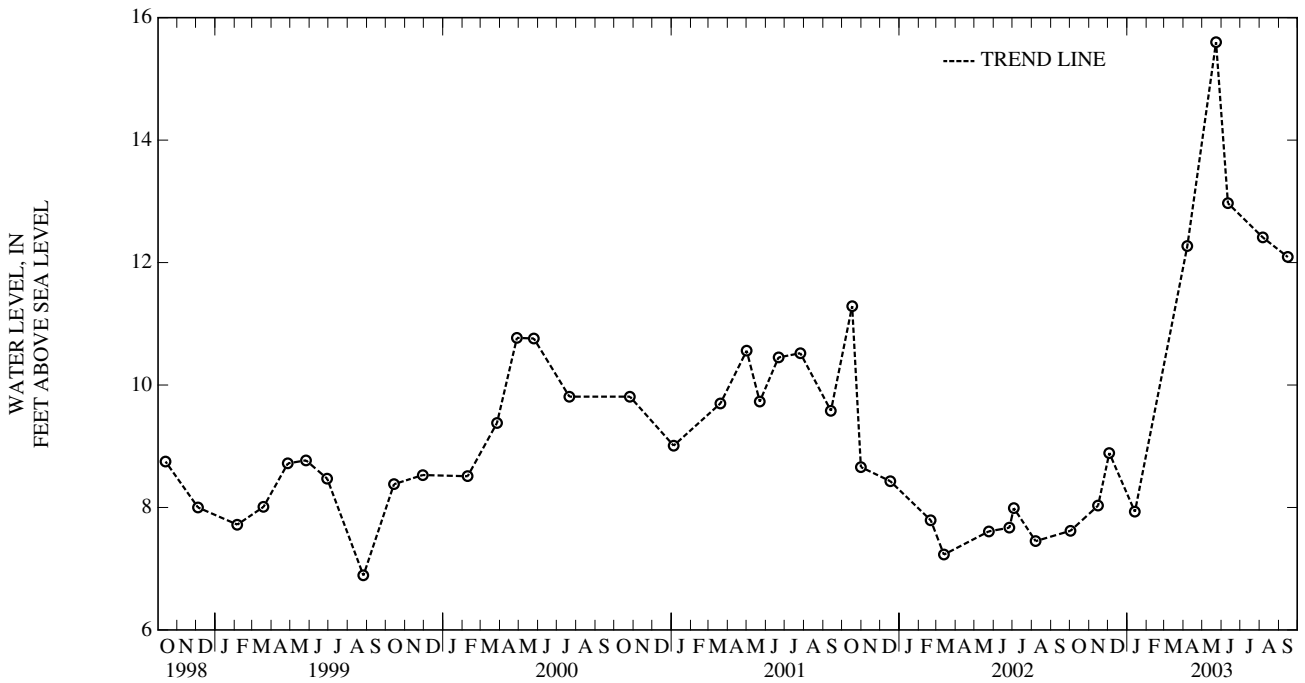
PERIOD OF RECORD.--October 1996 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.60 ft above sea level, May 23, 2003; lowest measured, 6.89 ft above sea level, August 26, 1999.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 2002	7.62	JAN 13, 2003	7.93	JUN 11, 2003	12.97
NOV 15	8.03	APR 07	12.27	AUG 06	12.41
DEC 03	8.89	MAY 23	15.60	SEP 15	12.09

LOWEST 7.62 OCT 02, 2002
 HIGHEST 15.60 MAY 23, 2003



5 YEAR HYDROGRAPH
 OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

KENT COUNTY—Continued

WELL NUMBER.--DM358D. SITE ID.--390707075293401. PERMIT NUMBER.--96066.

LOCATION.--Lat 39°07'07", long 75°29'34", Hydrologic Unit 02040207, at Dover Air Force Base, Dover. Owner: U.S. Air Force.

AQUIFER.--Columbia Formation of Pleistocene age. Aquifer code: 112CLMB.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 22 ft; casing diameter 2 in., to 6.7 ft; screen diameter 2 in., from 6.7 to 21.7 ft.

INSTRUMENTATION.--Periodic water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with pressure transducer water-level recorder--60-minute recorder interval from October 1995 to December 1998.

DATUM.--Elevation of land surface is 12.32 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.85 ft above land surface.

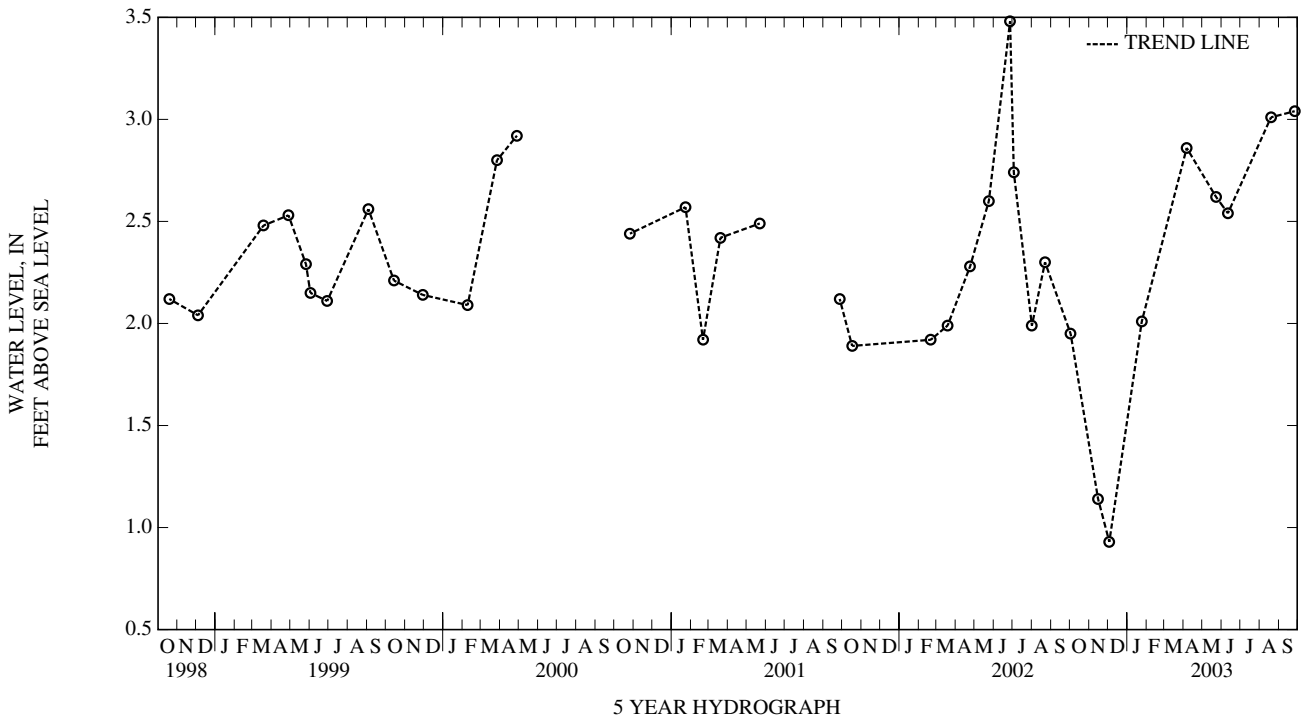
REMARKS.--Dover Air Force Base Project observation well.

PERIOD OF RECORD.--October 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.88 ft above sea level, May 13, 1998; lowest measured, 0.93 ft above sea level, December 3, 2002.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 2002	1.95	JAN 24, 2003	2.01	JUN 11, 2003	2.54
NOV 15	1.14	APR 06	2.86	AUG 19	3.01
DEC 03	.93	MAY 23	2.62	SEP 26	3.04
LOWEST	.93	DEC 03, 2002			
HIGHEST	3.04	SEP 26, 2003			



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

KENT COUNTY—Continued

WELL NUMBER.--DM376F SITE ID.--390653075284501. PERMIT NUMBER.--96949.

LOCATION.--Lat 39°06'53", long 75°28'45", Hydrologic Unit 02040207, at Dover Air Force Base, Dover. Owner: U.S. Air Force.

AQUIFER.--Frederica aquifer in the Calvert Formation of the Lower Middle Miocene age. Aquifer code: 122FRDC.

WELL CHARACTERISTICS.--Drilled, observation, water table well, depth 62 ft; casing diameter 3 in., from 0 to 52 ft; screen diameter 3 in., from 52 to 62 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder from May 2001 to September 2002.

DATUM.--Elevation of land surface is 10 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of PVC casing, 1.93 ft above land surface.

REMARKS.--Dover Air Force Base Project observation well. Water levels may be affected by agricultural irrigation.

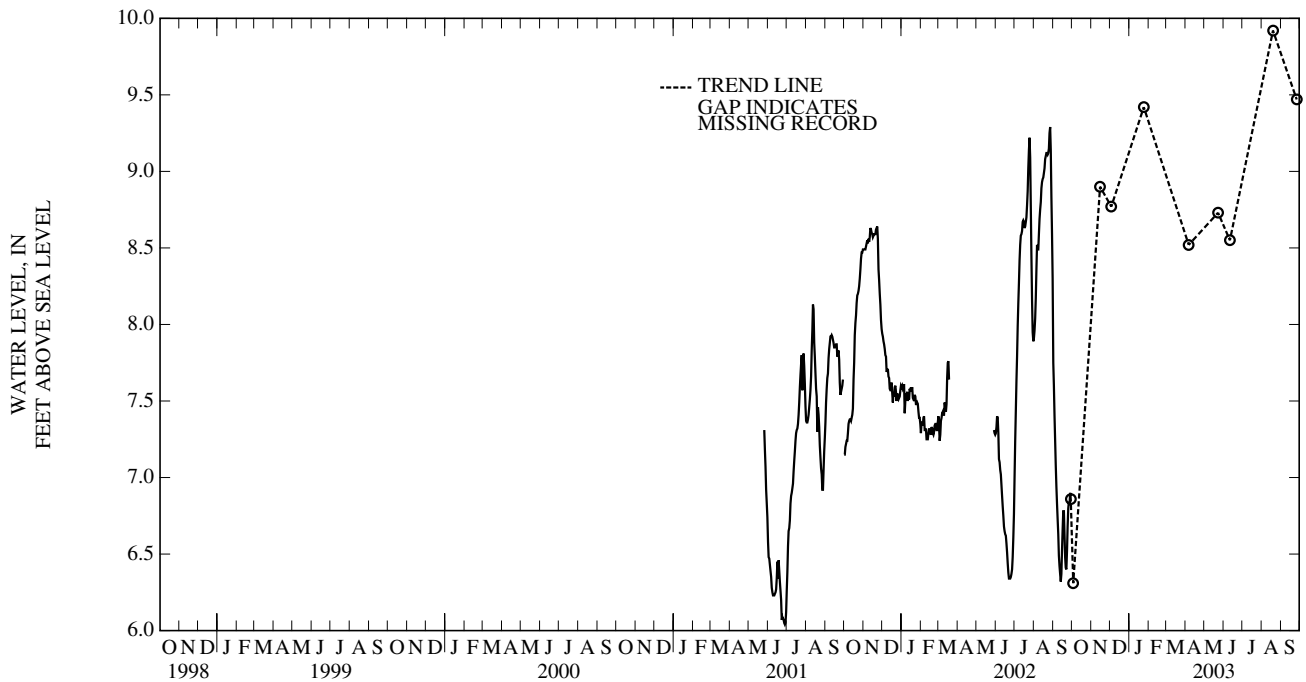
PERIOD OF RECORD.--May 2001 to September 2003.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.07 ft above sea level, September 1, 2002 (recorder); lowest measured, 6.04 ft above sea level, June 28, 2001 (recorder).

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 03, 2002	6.31	JAN 24, 2003	9.42	JUN 11, 2003	8.55
NOV 15	8.90	APR 06	8.52	AUG 19	9.92
DEC 03	8.77	MAY 23	8.73	SEP 26	9.47
LOWEST	6.31	OCT 03, 2002			
HIGHEST	9.92	AUG 19, 2003			

Daily Low Water Levels



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

GROUND-WATER LEVELS IN DELAWARE

KENT COUNTY—Continued

WELL NUMBER.--DM378F. SITE ID.--390747075292601. PERMIT NUMBER.--96947.

LOCATION.--Lat 39°07'47", long 75°29'26", Hydrologic Unit 02040207, at Dover Air Force Base, Dover. Owner: U.S. Air Force.

AQUIFER.--Frederica aquifer in the Calvert Formation of Lower middle Miocene age. Aquifer code: 122FRDC.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 80 ft; casing diameter 8 in., to 50 ft, and casing diameter 3 in., from +1.49 to 69.2 ft; screen diameter 3 in., from 69.2 to 79.2 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 32.40 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of PVC casing, 1.49 ft above land surface.

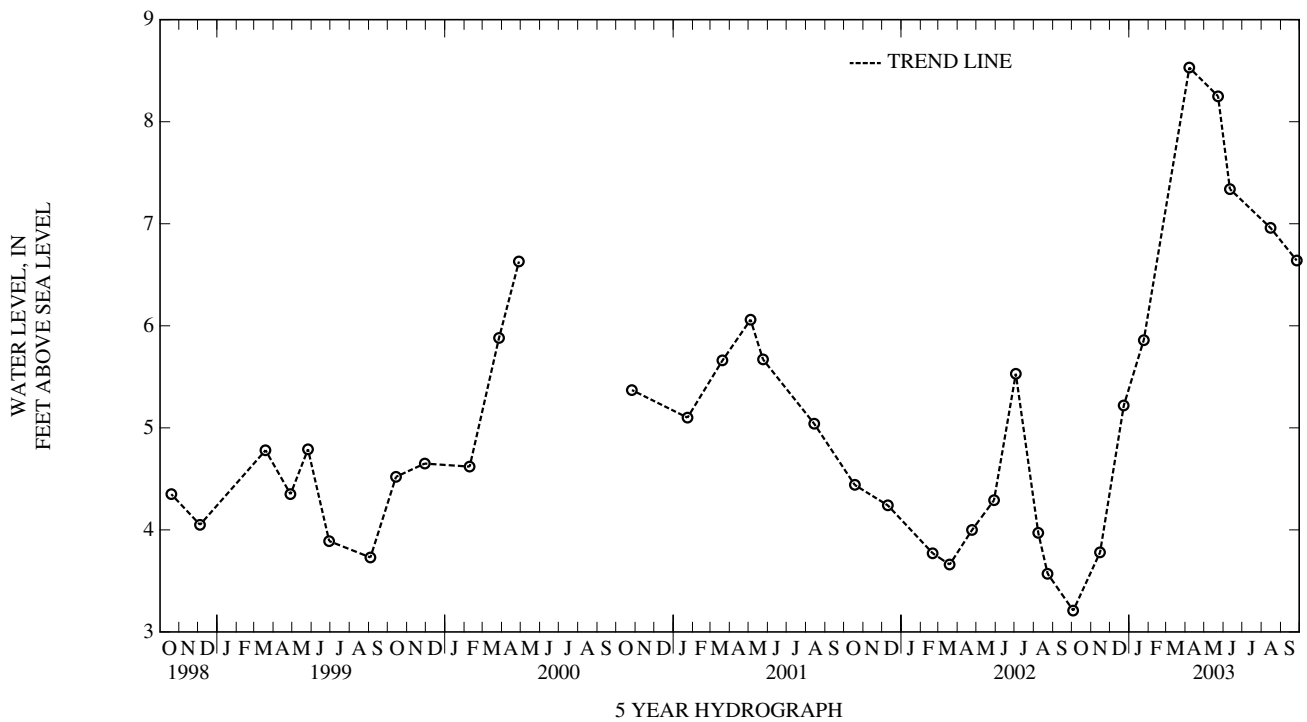
REMARKS.--Dover Air Force Base Project observation well.

PERIOD OF RECORD.--October 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.53 ft above sea level, April 7, 2003; lowest measured, 3.07 ft above sea level, August 16, 1999 (recorder).

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 03, 2002	3.21	JAN 24, 2003	5.86	JUN 11, 2003	7.34
NOV 15	3.78	APR 07	8.53	AUG 15	6.96
DEC 23	5.22	MAY 23	8.25	SEP 26	6.64
LOWEST	3.21	OCT 03, 2002			
HIGHEST	8.53	APR 07, 2003			



5 YEAR HYDROGRAPH
OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

KENT COUNTY—Continued

WELL NUMBER.--DM412D. SITE ID.--390629075272701. PERMIT NUMBER.--95941.

LOCATION.--Lat 39°06'29", long 75°27'27", Hydrologic Unit 02040207, at Dover Air Force Base, Dover. Owner: U.S. Air Force.

AQUIFER.--Columbia Formation of Pleistocene age. Aquifer code: 112CLMB.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 70.0 ft; casing diameter 2 in., to 59.6 ft; screen diameter 2 in., from 59.6 to 69.6 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from October 1995 to September 2002.

DATUM.--Elevation of land surface is 21.19 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.86 ft above land surface.

REMARKS.--Dover Air Force Base Project observation well. Periods of equal maximum and minimum daily values may be questionable due to the float hanging-up in small diameter wells or other construction factors.

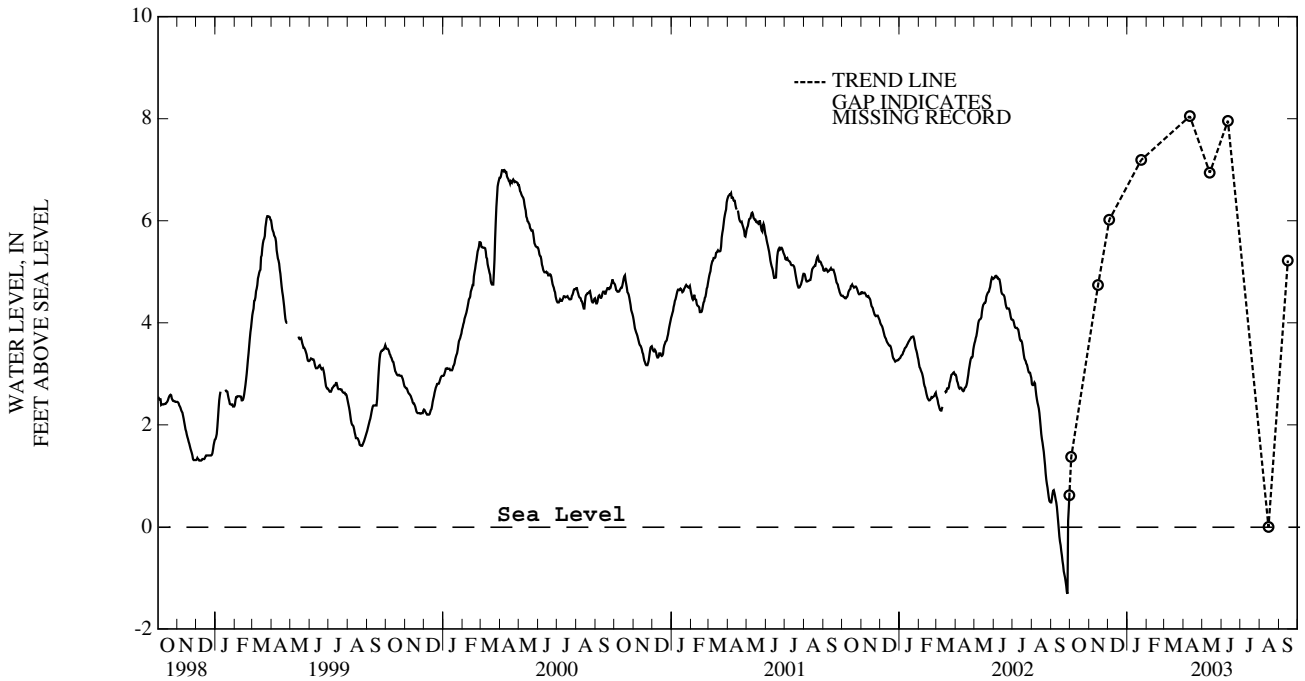
PERIOD OF RECORD.--October 1995 to September 2003.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.77 ft above sea level, February 21, 1997; lowest measured, 1.31 ft below sea level, September 27, 2002 (recorder).

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 03, 2002	1.37	JAN 23, 2003	7.19	JUN 11, 2003	7.96
NOV 15	4.74	APR 11	8.05	AUG 15	.00
DEC 03	6.02	MAY 13	6.94	SEP 15	5.22
LOWEST	.00	AUG 15, 2003			
HIGHEST	8.05	APR 11, 2003			

Daily Low Water Levels



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

GROUND-WATER LEVELS IN DELAWARE

KENT COUNTY—Continued

WELL NUMBER.--DM421F. SITE ID.--390655075273701. PERMIT NUMBER.--96951.

LOCATION.--Lat 39°06'55", long 75°27'37", Hydrologic Unit 02040207, at Dover Air Force Base, Dover. Owner: U.S. Air Force.

AQUIFER.--Frederica aquifer in the Calvert Formation of Lower Middle Miocene age. Aquifer code: 122FRDC.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 100 ft; protective casing diameter 8 in., from +2.5 to 57 ft; casing diameter 3 in., from +2.76 to 88.7 ft, screen diameter 3 in., from 88.7 to 98.7 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from July 1997 to July 2002.

DATUM.--Elevation of land surface is 23.46 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder platform, 2.76 ft above land surface.

REMARKS.--Dover Air Force Base Project observation well. Water levels may be affected by agricultural irrigation. Periods of equal maximum and minimum daily values may be questionable due to the float hanging-up in small diameter wells or other well construction factors.

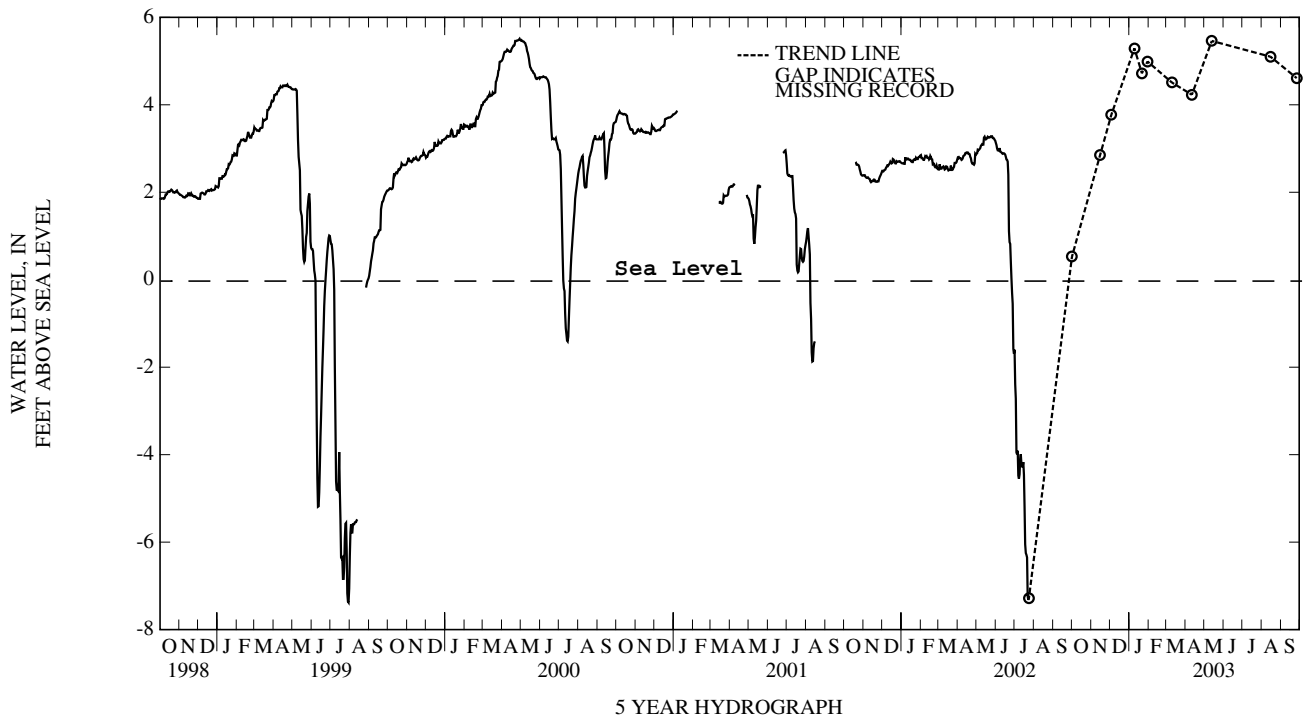
PERIOD OF RECORD.--July 1997 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.20 ft above sea level, April 3, 1998; lowest measured, 7.32 ft below sea level, July 23, 2002 (recorder).

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 2002	.53	JAN 09, 2003	5.29	MAR 10, 2003	4.51	AUG 15, 2003	5.10
NOV 15	2.85	21	4.72	APR 11	4.23	SEP 26	4.61
DEC 03	3.77	30	4.99	MAY 13	5.46		
LOWEST	.53	OCT 01, 2002					
HIGHEST	5.46	MAY 13, 2003					

Daily Low Water Levels



5 YEAR HYDROGRAPH
OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

KENT COUNTY—Continued

WELL NUMBER.--GS4D. SITE ID.--390742075300102. PERMIT NUMBER.--104544.

LOCATION.--Lat 39°07'42", long 75°30'01", Hydrologic Unit 02040207, at Dover Air Force Base, Dover. Owner: U.S. Air Force.

AQUIFER.--Columbia Formation of Pleistocene age. Aquifer code: 112CLMB.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 25 ft; casing diameter 2 in., to 18.2 ft; screen diameter 2 in., from 18.2 to 21.2 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 4.50 ft above sea level. Measuring point: Top of casing, 5.00 ft above land surface.

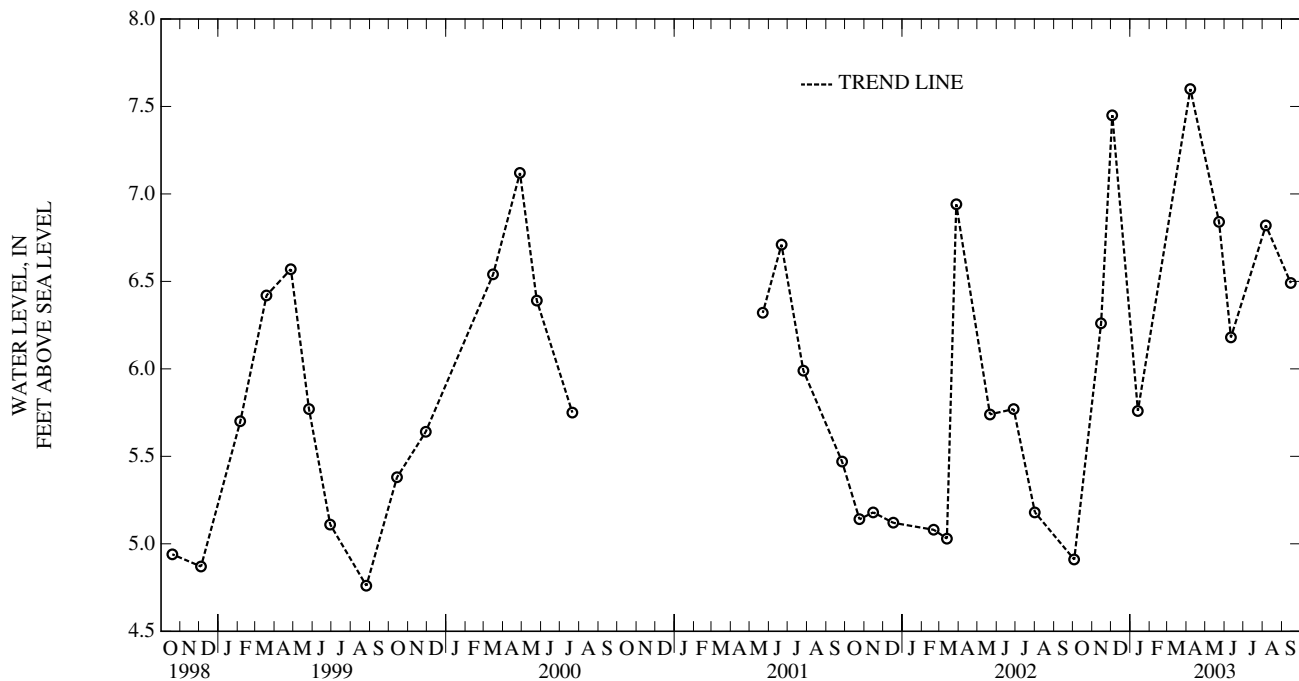
REMARKS.--Dover Air Force Base Project observation well.

PERIOD OF RECORD.--September 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.96 ft above sea level, March 8, 9, and 21, 1998; lowest measured, 4.35 ft above sea level, August 13, 1999.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 03, 2002	4.91	JAN 13, 2003	5.76	JUN 11, 2003	6.18
NOV 15	6.26	APR 07	7.60	AUG 06	6.82
DEC 03	7.45	MAY 23	6.84	SEP 15	6.49
LOWEST	4.91	OCT 03, 2002			
HIGHEST	7.60	APR 07, 2003			



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

GROUND-WATER LEVELS IN DELAWARE

KENT COUNTY—Continued

WELL NUMBER.--GS4S. SITE ID.--390742075300101. PERMIT NUMBER.--104542.

LOCATION.--Lat 39°07'42", long 75°30'01", Hydrologic Unit 02040207, at Dover Air Force Base, Dover. Owner: U.S. Air Force.

AQUIFER.--Columbia Formation of Pleistocene age. Aquifer code: 112CLMB.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 5.0 ft; casing diameter 2 in., to 5.3 ft; screen diameter 2 in., from 5.3 to 5.8 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 3.27 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 7.20 ft above land surface.

REMARKS.--Dover Air Force Base Project observation well. Water levels may be affected by agricultural irrigation.

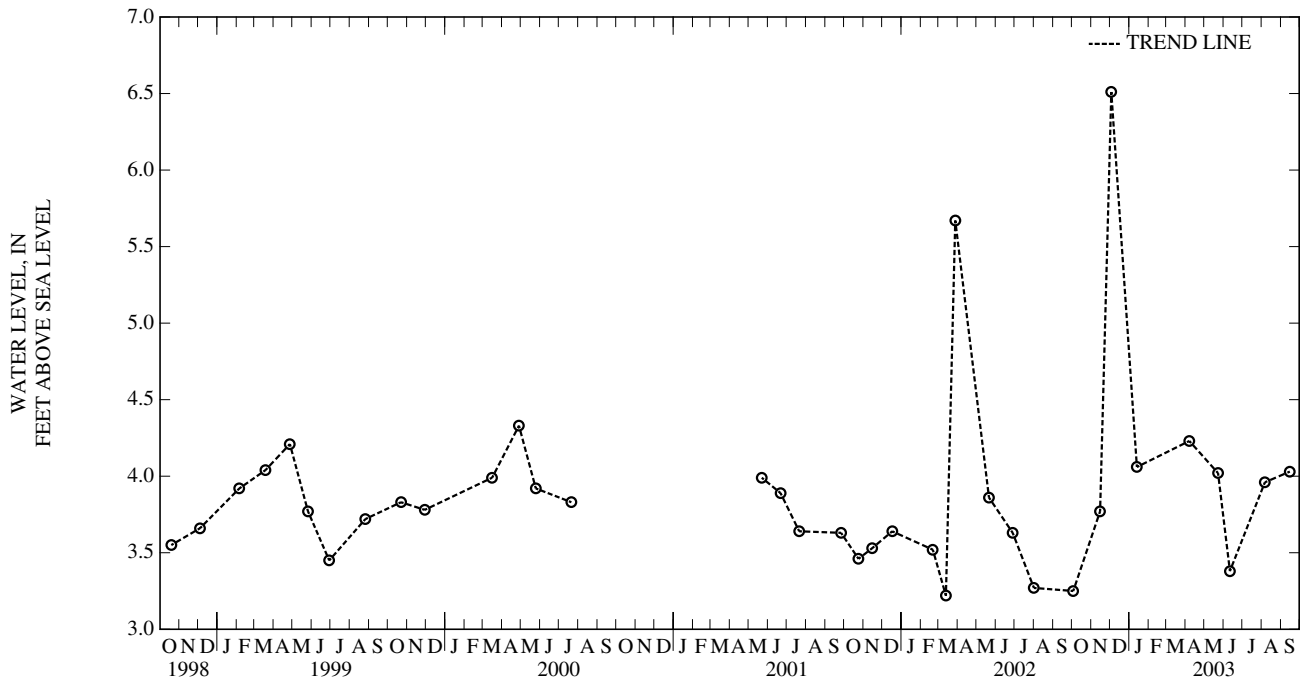
PERIOD OF RECORD.--September 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.87 ft above sea level, September 16, 1999 (recorder); lowest measured, 3.16 ft above sea level, August 6, 1999 (recorder).

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 03, 2002	3.25	JAN 13, 2003	4.06	JUN 11, 2003	3.38
NOV 15	3.77	APR 07	4.23	AUG 06	3.96
DEC 03	6.51	MAY 23	4.02	SEP 15	4.03

LOWEST 3.25 OCT 03, 2002
 HIGHEST 6.51 DEC 03, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

KENT COUNTY—Continued

WELL NUMBER.--MW29D. SITE ID.--390654075282202. PERMIT NUMBER.--73705.

LOCATION.--Lat 39°06'54", long 75°28'22", Hydrologic Unit 02040207, at Dover Air Force Base, Dover. Owner: U.S. Air Force.

AQUIFER.--Columbia Formation of Pleistocene age. Aquifer code: 112CLMB.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 57.97 ft; casing diameter 2 in., to 50.4 ft; screen diameter 2 in., from 50.4 to 55.4 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 17.60 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of PVC casing, 2.60 ft above land surface.

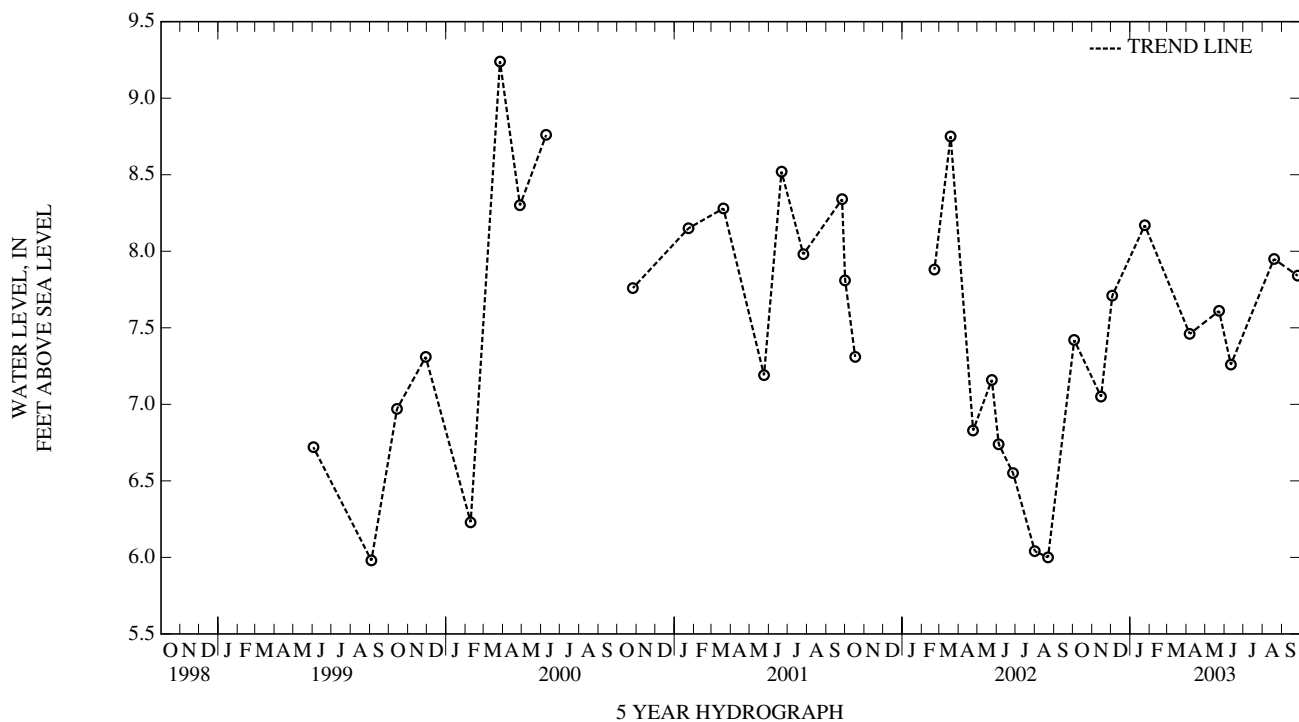
REMARKS.--Dover Air Force Base Project observation well. Water levels may be affected by agricultural irrigation.

PERIOD OF RECORD.--June 1999 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.24 ft above sea level, March 27, 2000; lowest measured, 5.98 ft above sea level, September 3, 1999.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 03, 2002	7.42	JAN 24, 2003	8.17	JUN 11, 2003	7.26
NOV 15	7.05	APR 06	7.46	AUG 19	7.95
DEC 03	7.71	MAY 23	7.61	SEP 26	7.84
LOWEST	7.05	NOV 15, 2002			
HIGHEST	8.17	JAN 24, 2003			



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

KENT COUNTY—Continued

WELL NUMBER.--MW33D. SITE ID.--390647075283301. PERMIT NUMBER.--73713.

LOCATION.--Lat 39°06'47", long 75°28'33", Hydrologic Unit 02040207, at Dover Air Force Base, Dover. Owner: U.S. Air Force.

AQUIFER.--Columbia Formation of Pleistocene age. Aquifer code: 112CLMB.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 50 ft; casing diameter 2 in., to 50.1 ft; screen diameter 2 in., from 50.1 to 55.1 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with pressure transducer water-level recorder--60-minute recorder interval from June 1996 to September 2002.

DATUM.--Elevation of land surface is 8.92 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of PVC casing, 1.77 ft above land surface.

REMARKS.--Dover Air Force Base Project observation well.

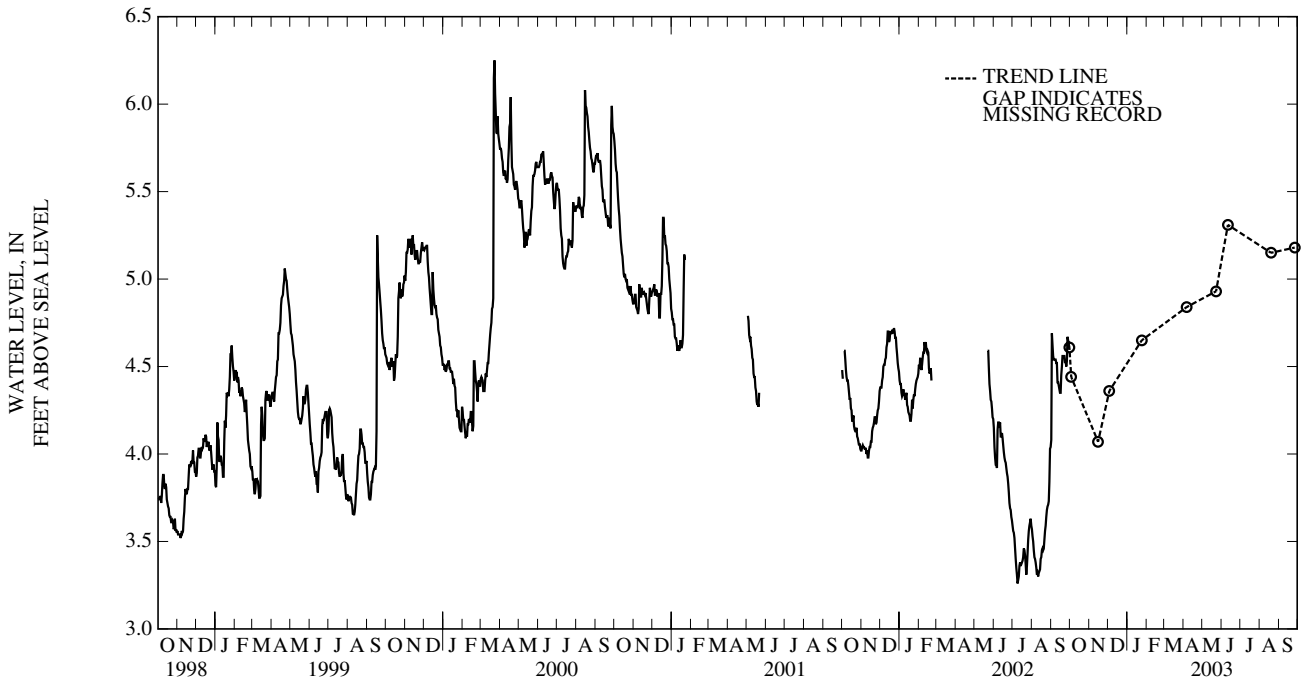
PERIOD OF RECORD.--June 1996 to September 2003.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.96 ft above sea level, March 8, 9, and 21, 1998; lowest measured, 1.60 ft above sea level, May 25, 1997.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 03, 2002	4.44	JAN 24, 2003	4.65	JUN 11, 2003	5.31
NOV 15	4.07	APR 06	4.84	AUG 19	5.15
DEC 03	4.36	MAY 23	4.93	SEP 26	5.18
LOWEST	4.07	NOV 15, 2002			
HIGHEST	5.31	JUN 11, 2003			

Daily Low Water Levels



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

KENT COUNTY—Continued

WELL NUMBER.--MW48D. SITE ID.--390703075272601. PERMIT NUMBER.--73749.

LOCATION.--Lat 39°07'03", long 75°27'26", Hydrologic Unit 02040207, at Dover Air Force Base, Dover. Owner: U.S. Air Force.

AQUIFER.--Columbia Formation of Pleistocene age. Aquifer code: 112CLMB.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 80 ft; casing diameter 2 in., to 73.4 ft; screen diameter 2 in., from 73.4 to 78.4 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from September 1995 to September 2002.

DATUM.--Elevation of land surface is 27.54 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of PVC casing, 1.57 ft above land surface.

REMARKS.--Dover Air Force Base Project. Periods of equal maximum and minimum daily values may be questionable due to the float hanging up in small diameter wells or other well construction factors.

PERIOD OF RECORD.--September 1995 to September 2003.

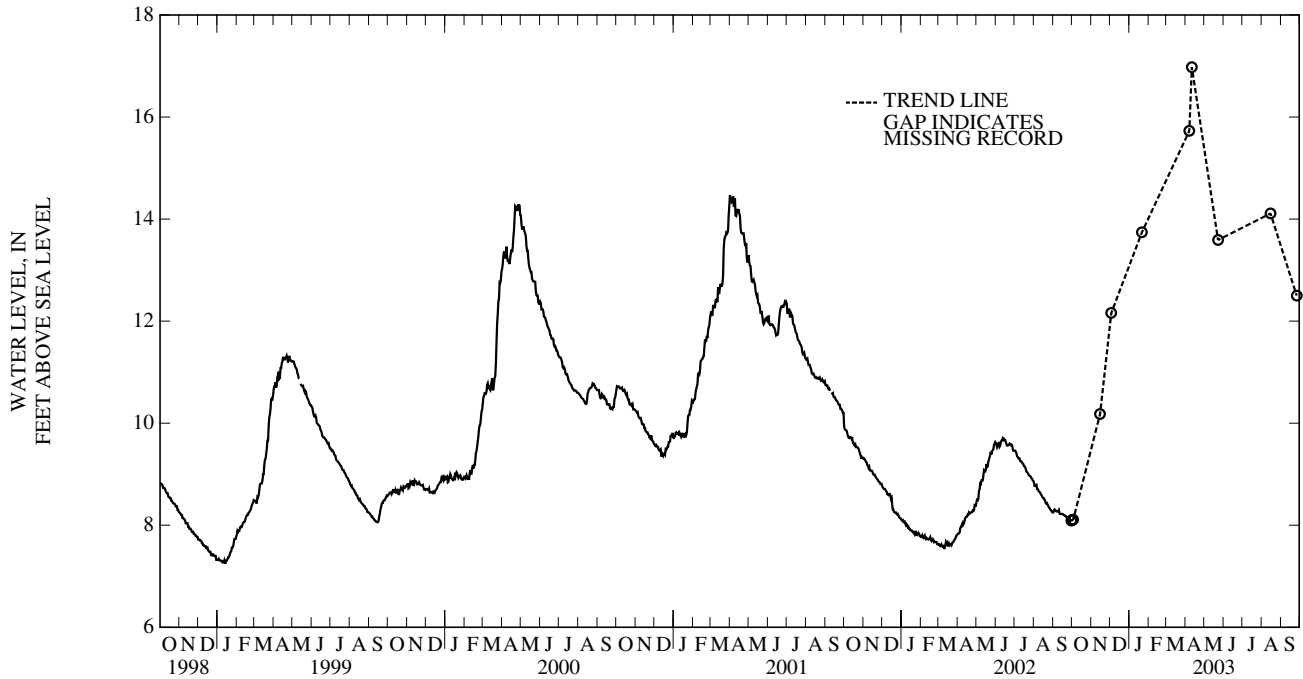
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 18.15 ft above sea level, June 23, 2003; lowest measured, 7.26 ft above sea level, January 13, 14, 1999.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 03, 2002	8.11	JAN 21, 2003	13.74	MAY 23, 2003	13.59
NOV 15	10.18	APR 07	15.73	AUG 15	14.11
DEC 03	12.16	11	16.98	SEP 26	12.50

LOWEST 8.11 OCT 03, 2002
 HIGHEST 16.98 APR 11, 2003

Daily Low Water Levels



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

KENT COUNTY—Continued

WELL NUMBER.--MW80D. SITE ID.--390651075272001. PERMIT NUMBER.--74707.

LOCATION.--Lat 39°06'51", long 75°27'20", Hydrologic Unit 02040207 at Dover Air Force Base, Dover. Owner: U.S. Air Force.

AQUIFER.--Columbia Formation of Pleistocene age. Aquifer code: 112CLMB.

WELL CHARACTERISTICS.--Drilled, observaion, water table well, depth 77.15 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Altitude of land surface is 27.46 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.35 ft above land surface.

REMARKS.--Dover Air Force Base Project observation well. Water levels may be affected by agricultural irrigation.

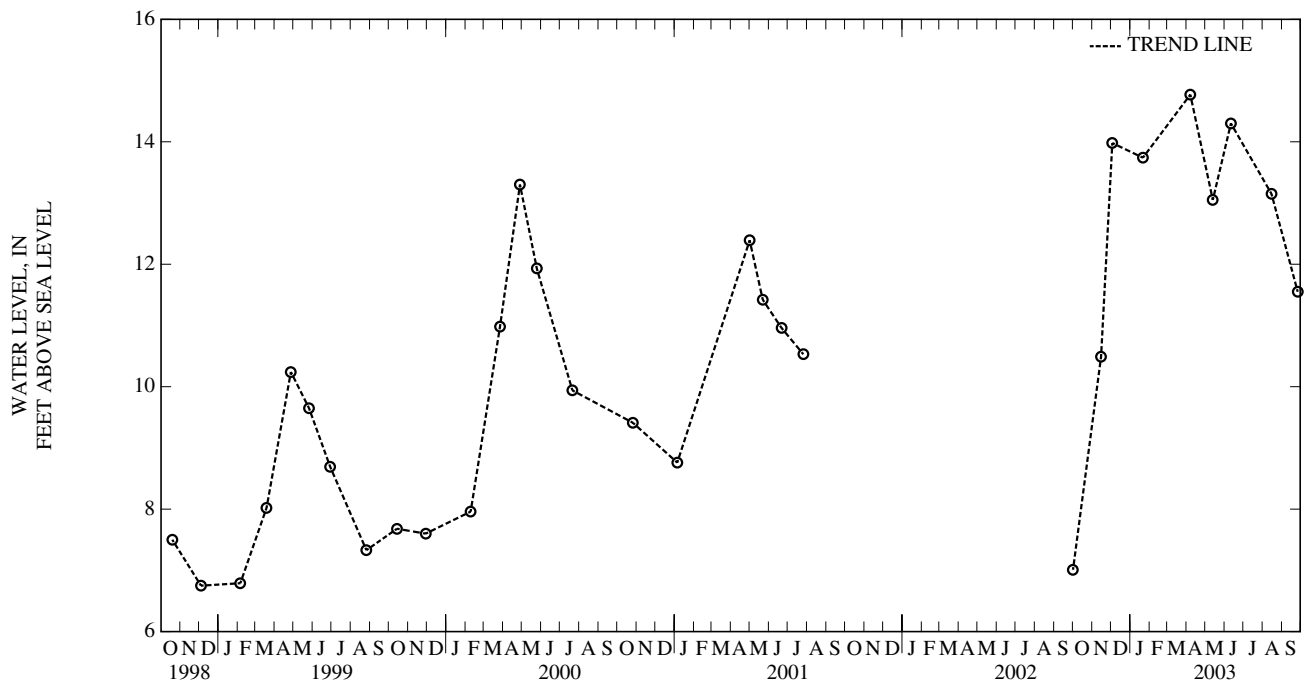
PERIOD OF RECORD.--January 1996 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.18 ft above sea level, March 12, 1998; lowest measured, 6.75 ft above sea level, December 4, 1998.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 2002	7.01	JAN 21, 2003	13.74	JUN 11, 2003	14.30
NOV 15	10.49	APR 07	14.77	AUG 15	13.15
DEC 03	13.98	MAY 13	13.05	SEP 26	11.55

LOWEST 7.01 OCT 01, 2002
 HIGHEST 14.77 APR 07, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

NEW CASTLE COUNTY

WELL NUMBER.--Db15-05. SITE ID.--393917075401601.

LOCATION.--Lat 39°39'17", long 75°40'16", Hydrologic Unit 02040205, Smalley's Dam, at the United Water Delaware plant. Owner: United Water Delaware.

AQUIFER.--Lower Potomac aquifer in the Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 306 ft; casing diameter 12 in., to 215.5 ft, and 238.5 to 273.5 ft, screen diameter 12 in., from 215.5 to 238.5 ft and 273.5 to 306 ft.

INSTRUMENTATION.--Once yearly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with graphic water-level recorder from March 1979 to November 1981.

DATUM.--Elevation of land surface is 20 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of 12 in. casing, 2.27 ft above land surface.

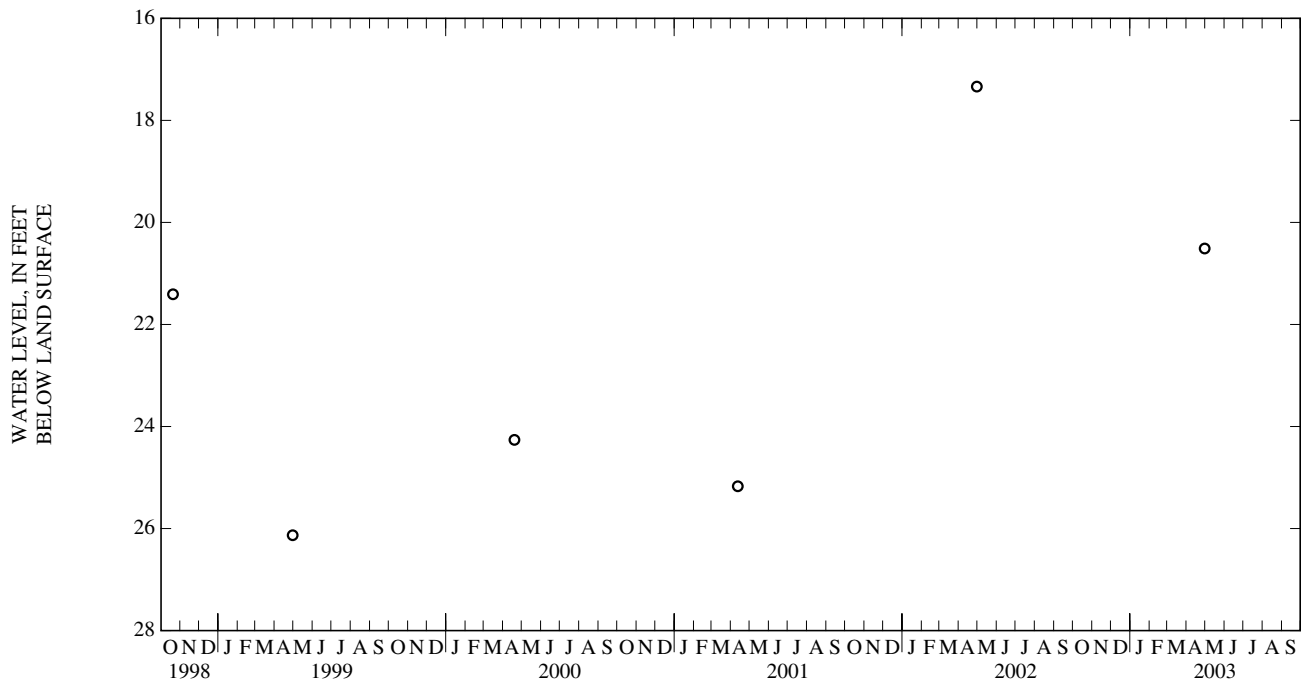
REMARKS.--Delaware Water-Level Monitoring Network observation well. Water levels are affected by local ground-water withdrawal. No fall 2003 water-level measurement was made.

PERIOD OF RECORD.--March 1979 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 17.34 ft below land surface, April 30, 2002; lowest measured, 39.31 ft below land surface, September 30, 1981 (recorder).

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL
APR 30, 2003	20.51



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

NEW CASTLE COUNTY--Continued

WELL NUMBER.--Db24-17. SITE ID.--393856075415602. PERMIT NUMBER.--65430.

LOCATION.--Lat 39°38'55", long 75°41'54", Hydrologic Unit 02040205, 2 mi south of Ogletown. Owner: Delaware Department of Transportation.

AQUIFER.--Columbia Formation of Pleistocene age. Aquifer code: 112CLMB.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 22 ft; casing diameter 2 in., to 17 ft; screen diameter 2 in., from 17 to 22 ft.

INSTRUMENTATION.--Monthly water level 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.--Delaware Water-Level Monitoring Network observation well.

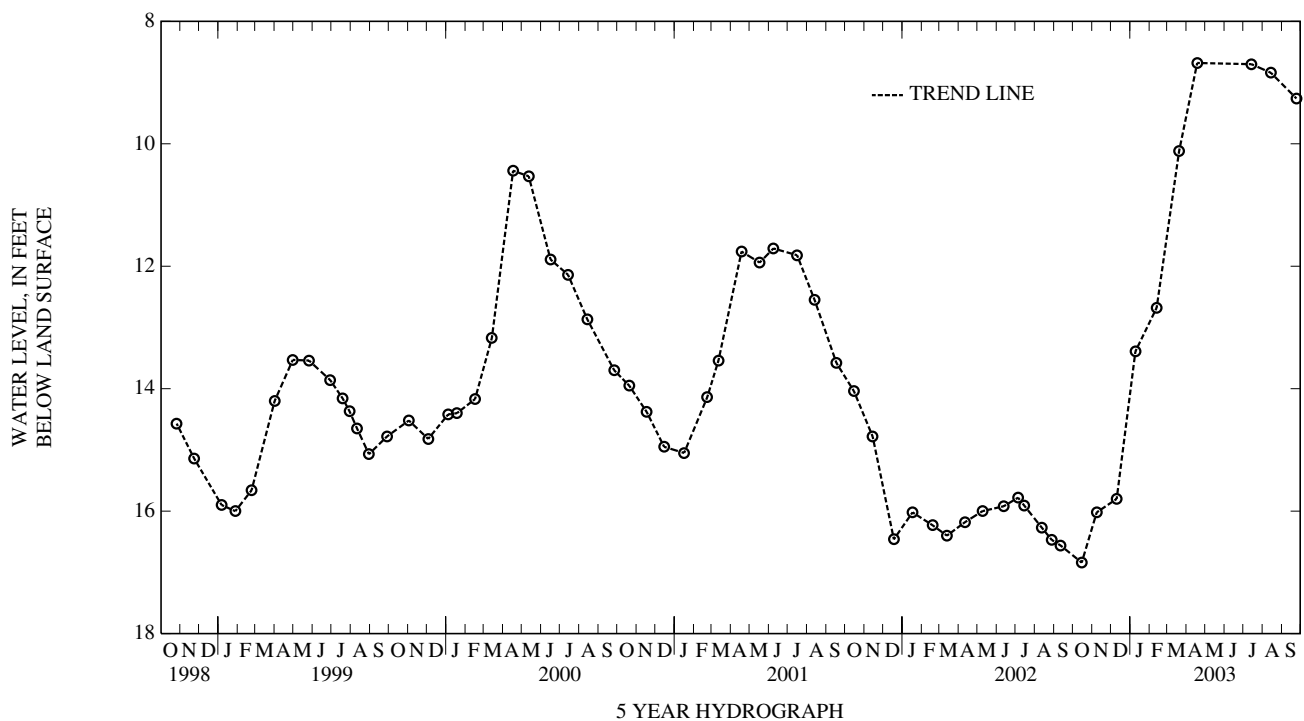
PERIOD OF RECORD.--June 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.42 ft below land surface, April 29, 1993; lowest measured, 16.84 ft below land surface, October 15, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 2002	16.84	JAN 09, 2003	13.39	APR 18, 2003	8.68	SEP 24, 2003	9.26
NOV 08	16.02	FEB 12	12.68	JUL 14	8.70		
DEC 10	15.80	MAR 20	10.12	AUG 14	8.84		

HIGHEST 8.68 APR 18, 2003
 LOWEST 16.84 OCT 15, 2002



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

NEW CASTLE COUNTY--Continued

WELL NUMBER.--Db33-17. SITE ID.--393734075371103. PERMIT NUMBER--44612.

LOCATION.--Lat 39°37'34", long 75°37'11", Hydrologic Unit 02040205, off Salem Church Road, near Beck's Pond. Owner: U.S. Geological Survey.

AQUIFER.--Lower Potomac aquifer in the Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 189 ft; casing diameter 2 in., to 185 ft; screen diameter 2 in., from 185 to 189 ft. Installed in an 8 in. borehole with Db33-18, and Db33-19.

INSTRUMENTATION.--Twice yearly water level measurements with electric tape by U.S. Geological Survey personnel. Monthly water level measurements from October 1980 to November 1981.

DATUM.--Elevation of land surface is 48 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of coupling, 3.26 ft above land surface.

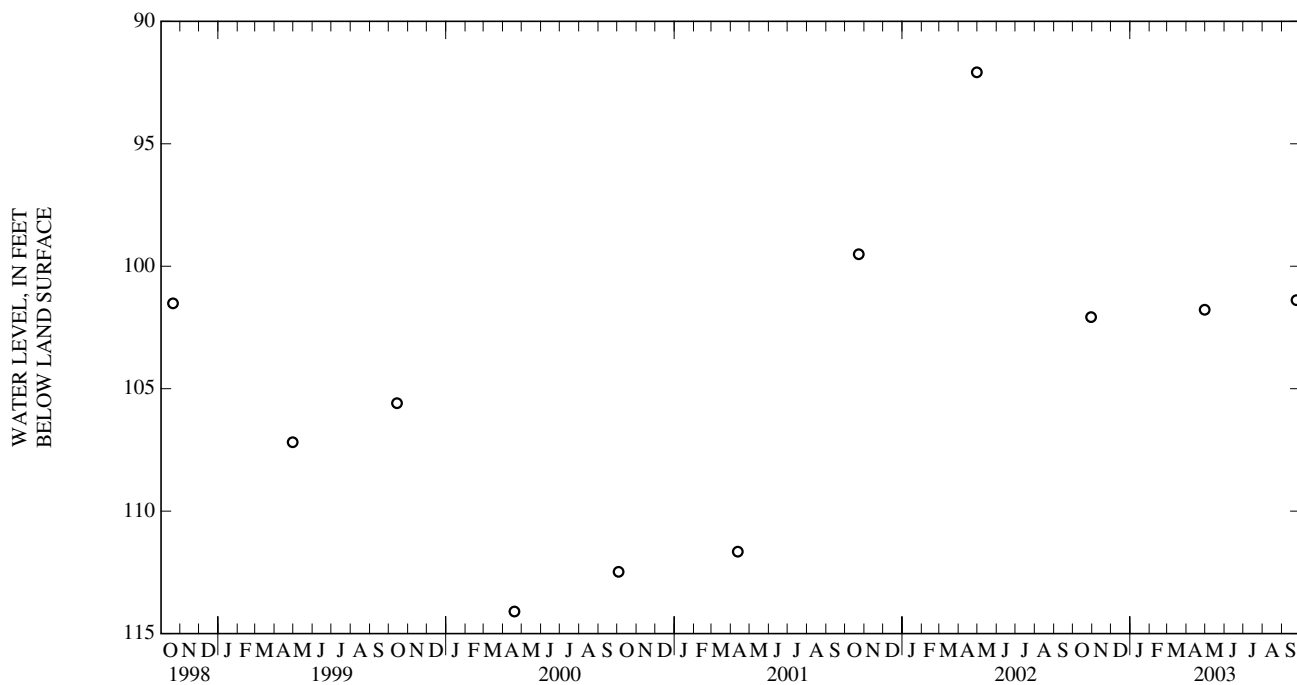
REMARKS.--Delaware Water-Level Monitoring Network observation well. Water levels are affected by regional ground-water withdrawal.

PERIOD OF RECORD.--October 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 90.30 ft below land surface, October 12, 1995; lowest measured, 115.82 ft below land surface, October 15, 1990.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	102.08	APR 30, 2003	101.77	SEP 24, 2003	101.39
HIGHEST 101.39		SEP 24, 2003			
LOWEST 102.08		OCT 30, 2002			



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

NEW CASTLE COUNTY--Continued

WELL NUMBER.--Db33-18. SITE ID.--393734075371102. PERMIT NUMBER--44612.

LOCATION.--Lat 39°37'34", long 75°37'11", Hydrologic Unit 02040205, off Salem Church Road, near Beck's Pond. Owner: U.S. Geological Survey.

AQUIFER.--Lower Potomac aquifer in the Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 143 ft; casing diameter 2 in., to 139 ft; screen diameter 2 in., from 139 to 143 ft. Installed in an 8 in. borehole with Db33-17, and Db33-19.

INSTRUMENTATION.--Twice yearly water level measurements with electric tape by U.S. Geological Survey personnel. Monthly water level measurements from October 1980 to November 1981.

DATUM.--Elevation of land surface is 48 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of coupling, 3.24 ft above land surface.

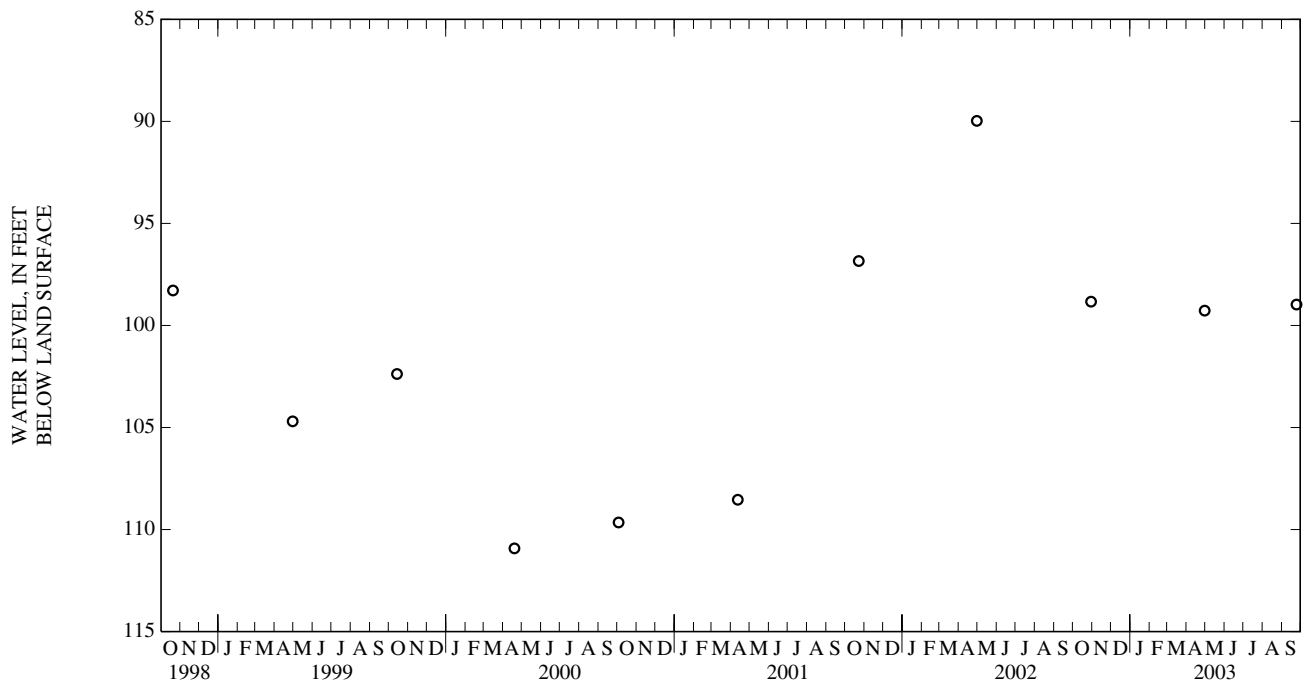
REMARKS.--Delaware Water-Level Monitoring Network observation well.

PERIOD OF RECORD.--October 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 88.31 ft below land surface, October 12, 1995; lowest measured, 113.44 ft below land surface, October 15, 1990.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	98.84	APR 30, 2003	99.27	SEP 24, 2003	98.97
HIGHEST 98.84 OCT 30, 2002					
LOWEST 99.27 APR 30, 2003					



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

NEW CASTLE COUNTY--Continued

WELL NUMBER.--Db33-19. SITE ID.--393734075371101. PERMIT NUMBER--44612.

LOCATION.--Lat 39°37'34", long 75°37'11", Hydrologic Unit 02040205, off Salem Church Road, near Beck's Pond. Owner: U.S. Geological Survey.

AQUIFER.--Columbia Formation of Pleistocene age. Aquifer code: 112CLMB.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 39 ft; casing diameter 2 in.; to 35 ft; screen diameter 2 in., from 35 to 39 ft. Installed in an 8 in. borehole with Db33-17, and Db33-18.

INSTRUMENTATION.--Twice yearly water level measurements with electric tape by U.S. Geological Survey personnel. Monthly water level measurements from October 1980 to November 1981.

DATUM.--Elevation of land surface is 48 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of coupling, 3.29 ft above land surface.

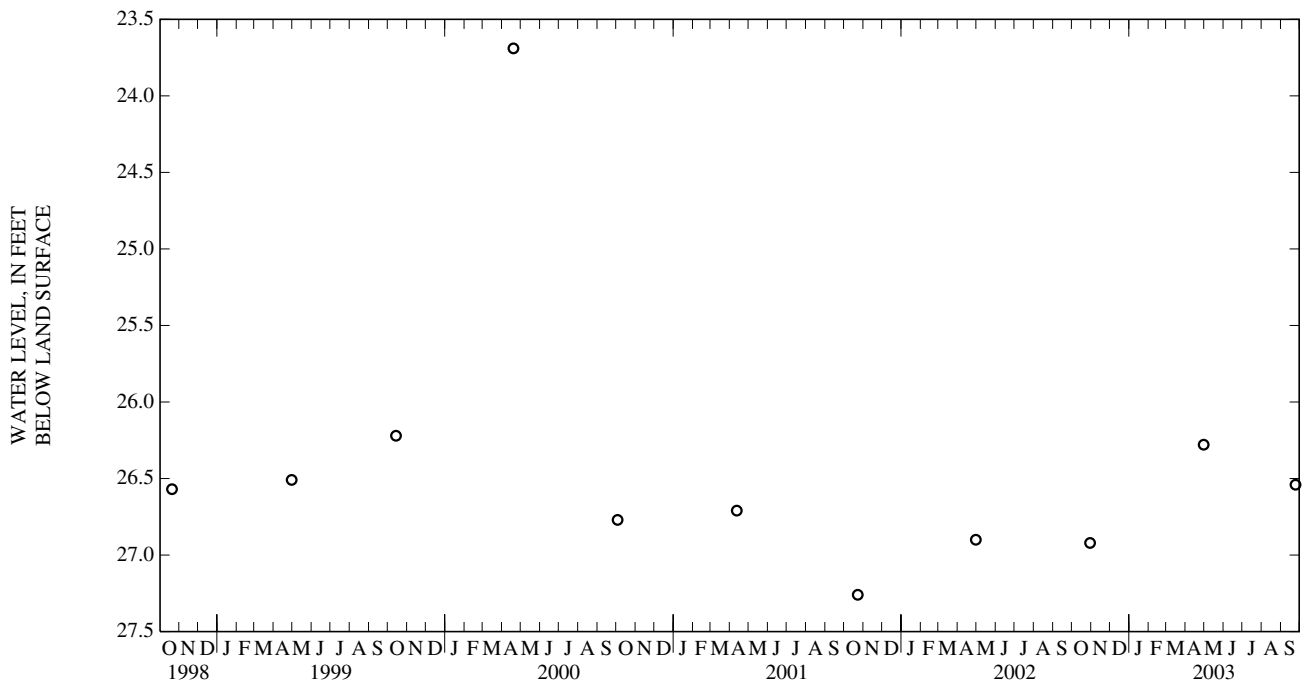
REMARKS.--Delaware Water-Level Monitoring Network observation well.

PERIOD OF RECORD.--October 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 23.69 ft below land surface, April 19, 2000; lowest measured 28.23 ft below land surface, April 3, 1981.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	26.92	APR 30, 2003	26.28	SEP 24, 2003	26.54
HIGHEST 26.28 APR 30, 2003					
LOWEST 26.92 OCT 30, 2002					



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

NEW CASTLE COUNTY--Continued

WELL NUMBER.--Dc34-05. SITE ID.--393755075364801.

LOCATION.--Lat 39°37'55", long 75°36'48", Hydrologic Unit 02040205, east side of Rt. 9, at National Guard Rifle Range. Owner: U.S. Geological Survey.

AQUIFER.--Lower Potomac aquifer in the Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 579 ft; casing diameter 2 in., to 574 ft; screen diameter 2 in., from 574 to 579 ft.

INSTRUMENTATION.--Twice yearly water level measurements with electric tape by U.S. Geological Survey personnel. Monthly water level measurements from November 1975 to November 1981.

DATUM.--Elevation of land surface is 28 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of coupling, 2.10 ft above land surface.

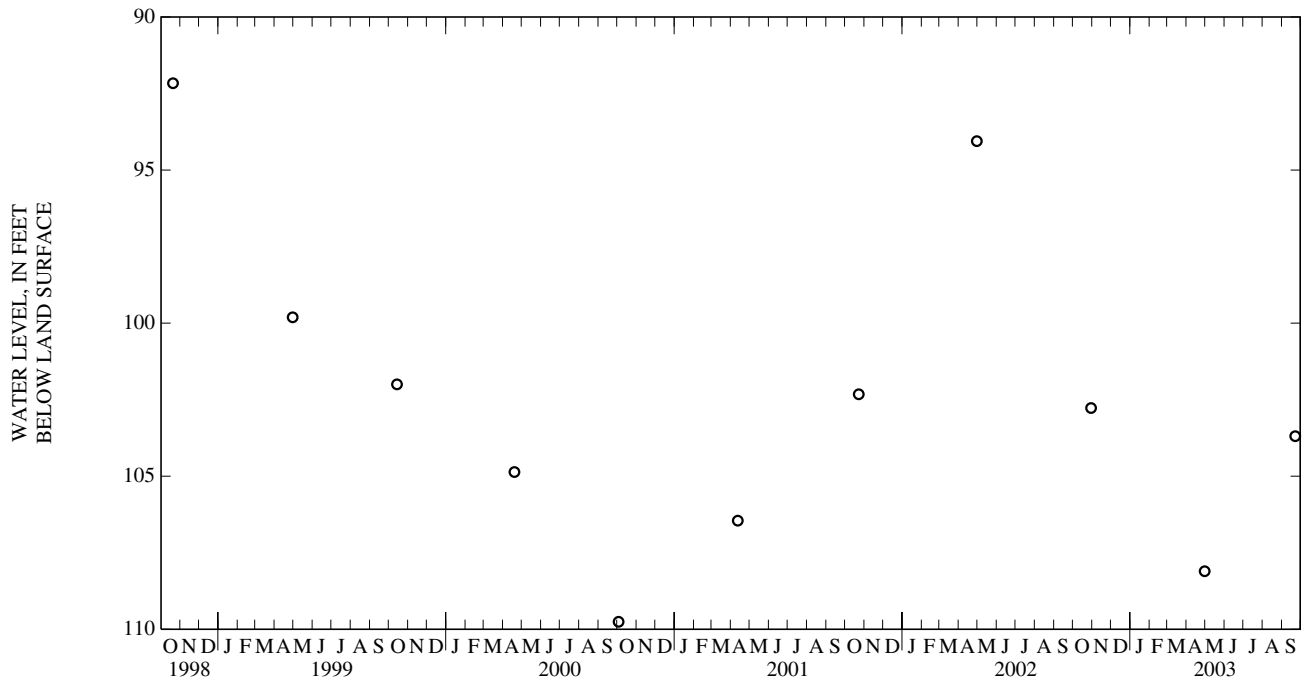
REMARKS.--Delaware Water-Level Monitoring Network observation well.

PERIOD OF RECORD.--November 1975 to curren year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 88.38 ft below land surface, October 10, 1984; lowest measured, 130.62 ft below land surface, May 5, 1978.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	102.77	APR 30, 2003	108.10	SEP 22, 2003	103.69
HIGHEST 102.77 OCT 30, 2002					
LOWEST 108.10 APR 30, 2003					



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

NEW CASTLE COUNTY--Continued

WELL NUMBER.--Dc34-06. SITE ID.--393755075364802.

LOCATION.--Lat 39°37'55", long 75°36'48", Hydrologic Unit 02040205, east side of Rt. 9, at National Guard Rifle Range. Owner: U.S. Geological Survey.

AQUIFER.--Upper Potomac aquifer in the Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 188 ft; casing diameter 2 in., to 183 ft; screened from 183 to 188 ft.

INSTRUMENTATION.--Twice yearly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with graphic water-level recorder from November 1975 to October 1982.

DATUM.--Elevation of land surface is 28 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of 6 in. casing, 2.00 ft above land surface.

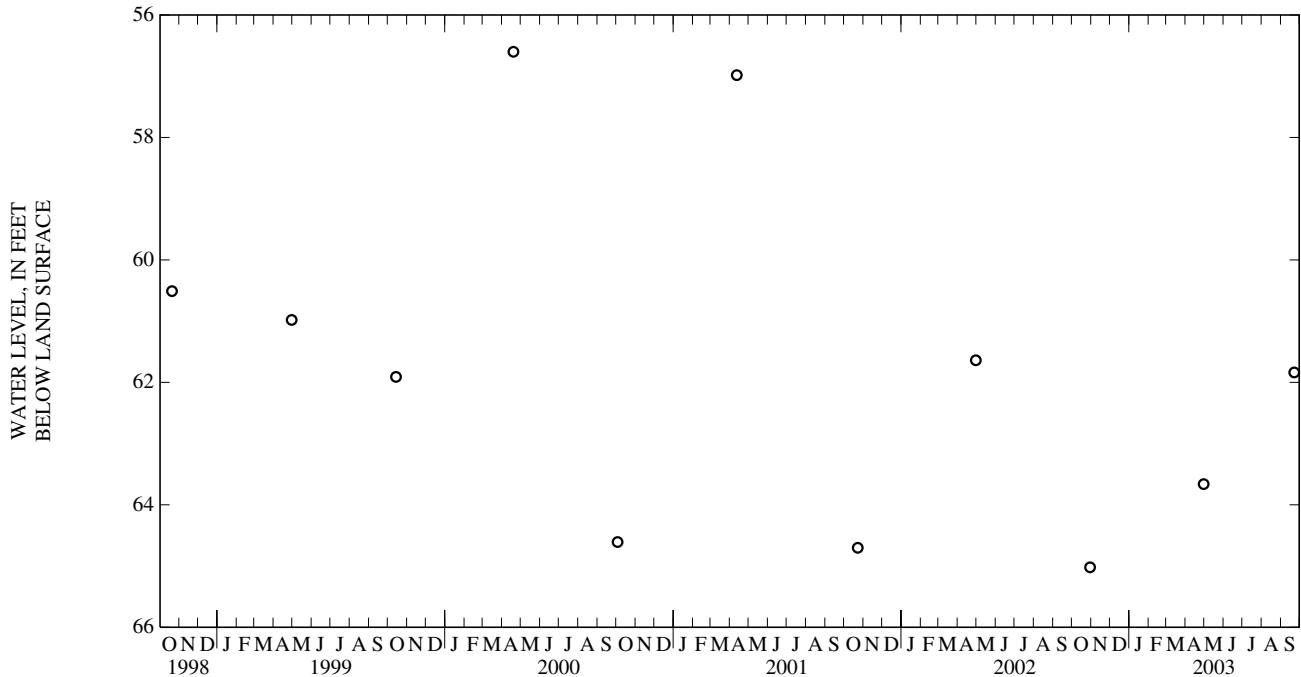
REMARKS.--Delaware Water-Level Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 39.94 ft below land surface, February 15, 1976 (recorder); lowest measured, 65.02 ft below land surface, October 30, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	65.02	APR 30, 2003	63.66	SEP 22, 2003	61.84
HIGHEST 61.84 SEP 22, 2003					
LOWEST 65.02 OCT 30, 2002					



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

NEW CASTLE COUNTY--Continued

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.--Upper Potomac aquifer in the 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 2 in., from 288 to 292 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 60 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.35 ft above land surface.

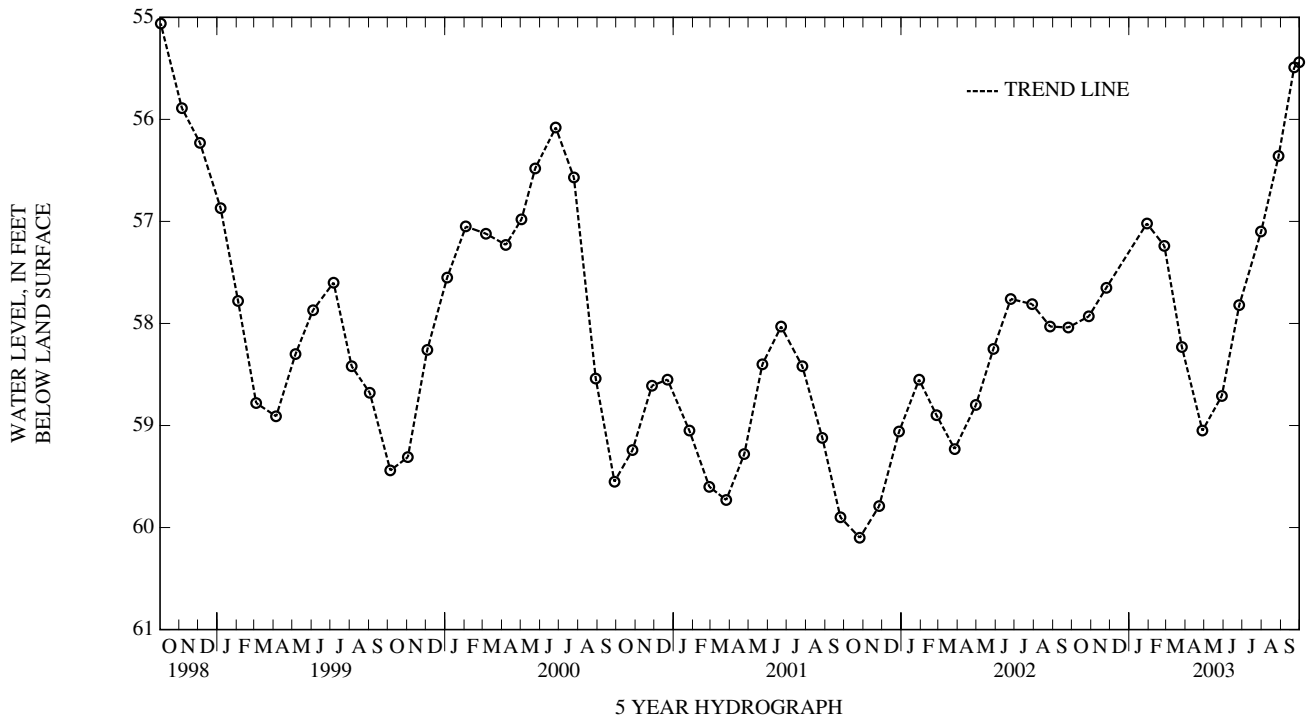
REMARKS.--Delaware Water-Level Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

PERIOD OF RECORD.--November 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 52.38 ft below land surface, October 12, 1982; lowest measured, 60.60 ft below land surface, June 3, 1992.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 2002	57.93	FEB 26, 2003	57.24	MAY 29, 2003	58.71	AUG 28, 2003	56.36
NOV 25	57.65	MAR 26	58.23	JUN 26	57.82	SEP 22	55.49
JAN 29, 2003	57.02	APR 28	59.05	JUL 31	57.10	30	55.44
HIGHEST 55.44 SEP 30, 2003							
LOWEST 59.05 APR 28, 2003							



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

NEW CASTLE COUNTY--Continued

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.--Middle Potomac aquifer in the 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 2 in., from 432 to 436 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 60 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.38 ft above land surface.

REMARKS.--Delaware Water-Level Monitoring Network observation well. Water-levels are affected by local and regional ground-water withdrawal.

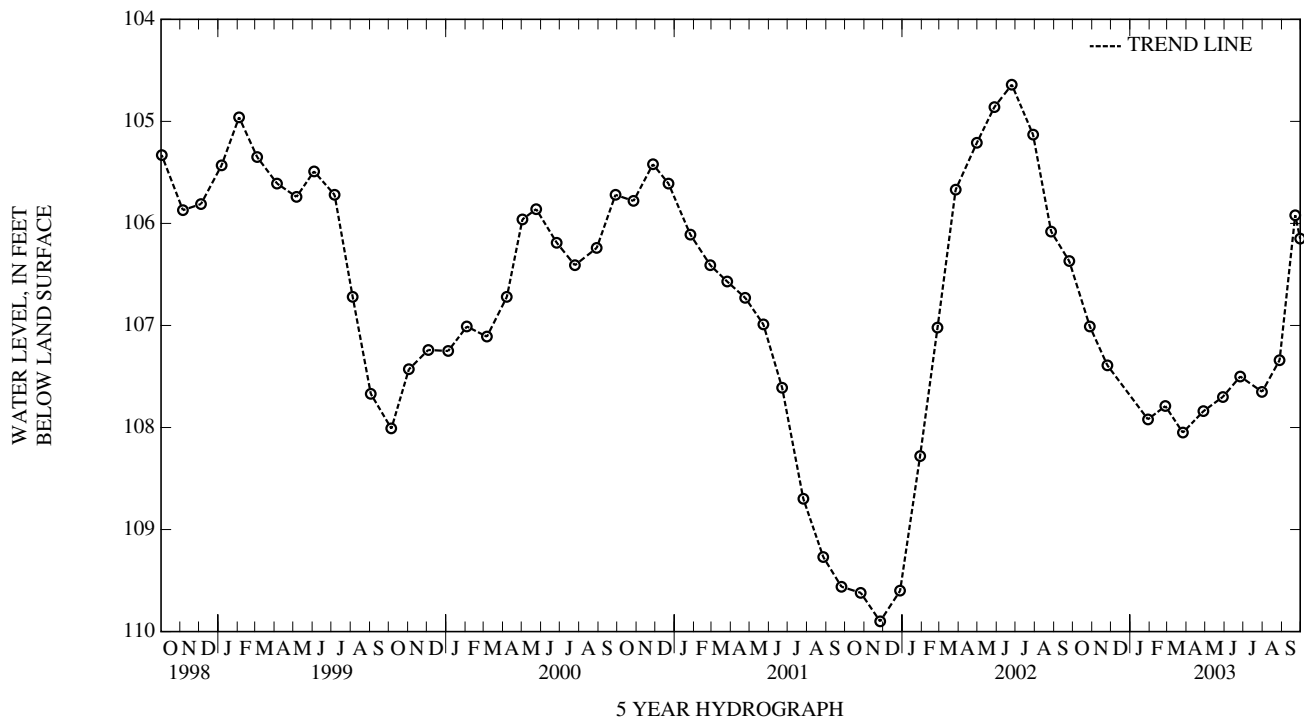
PERIOD OF RECORD.--November 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 88.17 ft below land surface, November 13, 1980; lowest measured, 109.90 ft below land surface, November 26, 2001.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 2002	107.01	FEB 26, 2003	107.79	MAY 29, 2003	107.70	AUG 28, 2003	107.34
NOV 25	107.39	MAR 26	108.05	JUN 26	107.50	SEP 22	105.92
JAN 29, 2003	107.92	APR 28	107.84	JUL 31	107.65	30	106.15

HIGHEST 105.92 SEP 22, 2003
 LOWEST 108.05 MAR 26, 2003



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

NEW CASTLE COUNTY--Continued

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.--Lower Potomac aquifer in the Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 605 ft; casing diameter 2 in., to 600 ft, screened 2 in., from 600 to 604 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by Delaware Geological Survey personnel.

DATUM.--Elevation of land surface is 60 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.00 ft above land surface.

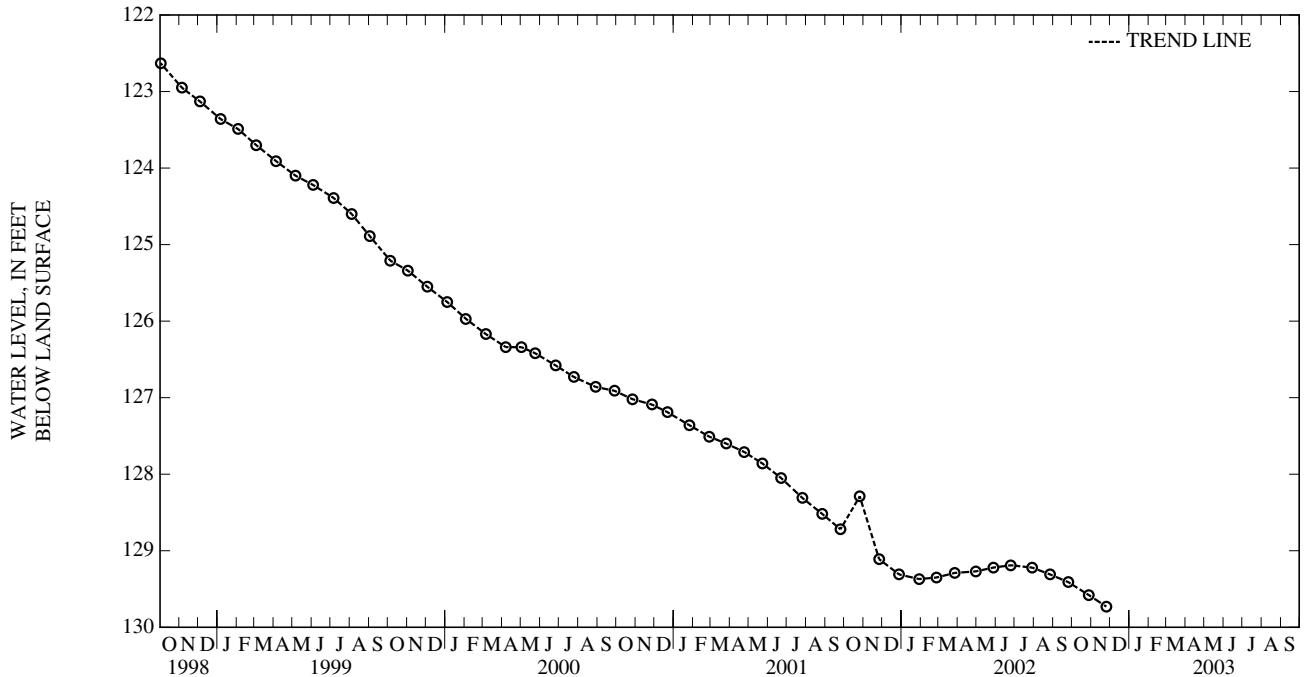
REMARKS.--Delaware Water-Level Monitoring Network observation well. Water-levels are affected by regional ground-water withdrawal. This well has failed due to collapse.

PERIOD OF RECORD.--November 1980 to November 2002.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 100.16 ft below land surface, September 30, 2003; lowest measured, 129.73 ft below land surface, November 25, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 2002	129.58	NOV 25, 2002	129.73
HIGHEST 100.60 SEP 22, 2003		LOWEST 129.73 NOV 25, 2002	



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

NEW CASTLE COUNTY--Continued

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 Formation of Pleistocene age. Aquifer code: 112CLMB

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 19 ft; casing diameter 1 in., to 15.6 ft; well point from 15.6 to 18.6 ft.

INSTRUMENTATION.--Monthly water level measurements with electric or chalked steel tape by U.S. Geological Survey or 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.

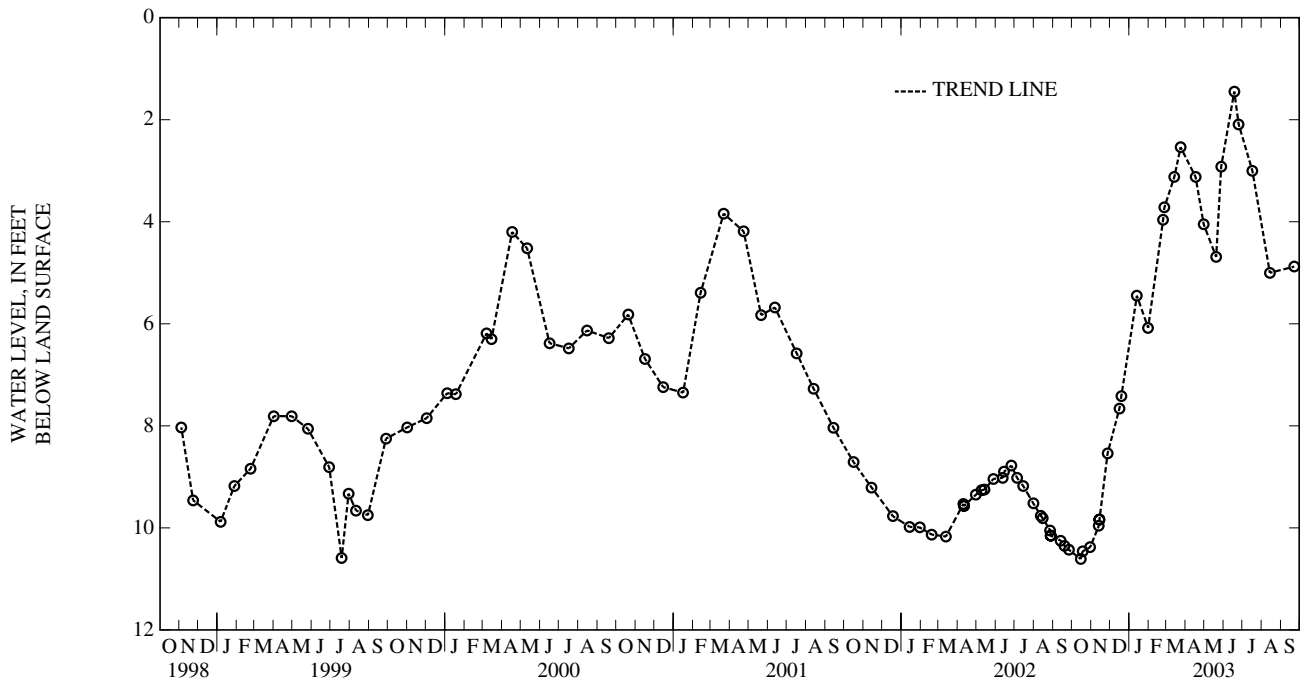
REMARKS.--Delaware Water-Level Monitoring Network observation well.

PERIOD OF RECORD.--October 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.45 ft below land surface, June 18, 2003; lowest measured, 11.95 ft below land surface, August 31, 1966.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 2002	10.61	DEC 16, 2002	7.66	MAR 14, 2003	3.12	JUN 18, 2003	1.45
18	10.46	19	7.42	24	2.54	25	2.09
30	10.38	JAN 13, 2003	5.45	APR 17	3.12	JUL 17	3.00
NOV 13	9.96	31	6.08	30	4.05	AUG 14	5.00
14	9.84	FEB 24	3.96	MAY 20	4.69	SEP 22	4.88
27	8.54	26	3.72	28	2.92		
HIGHEST 1.45 JUN 18, 2003							
LOWEST 10.61 OCT 15, 2002							



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

SUSSEX COUNTY

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: Private Residence.

AQUIFER.--Columbia Formation (Staytonville unit) of Pleistocene age. Aquifer code: 112CLMB.

WELL CHARACTERISTICS.--Driven, observation, water-table well, depth 15.45 ft; casing diameter 1 in., to 12.95 ft; screened from 12.95 to 15.45 ft.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by Delaware Geological Survey personnel.

DATUM.--Elevation of land surface is 43 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.00 ft above land surface.

REMARKS.--Delaware Water-Level Monitoring Network observation well.

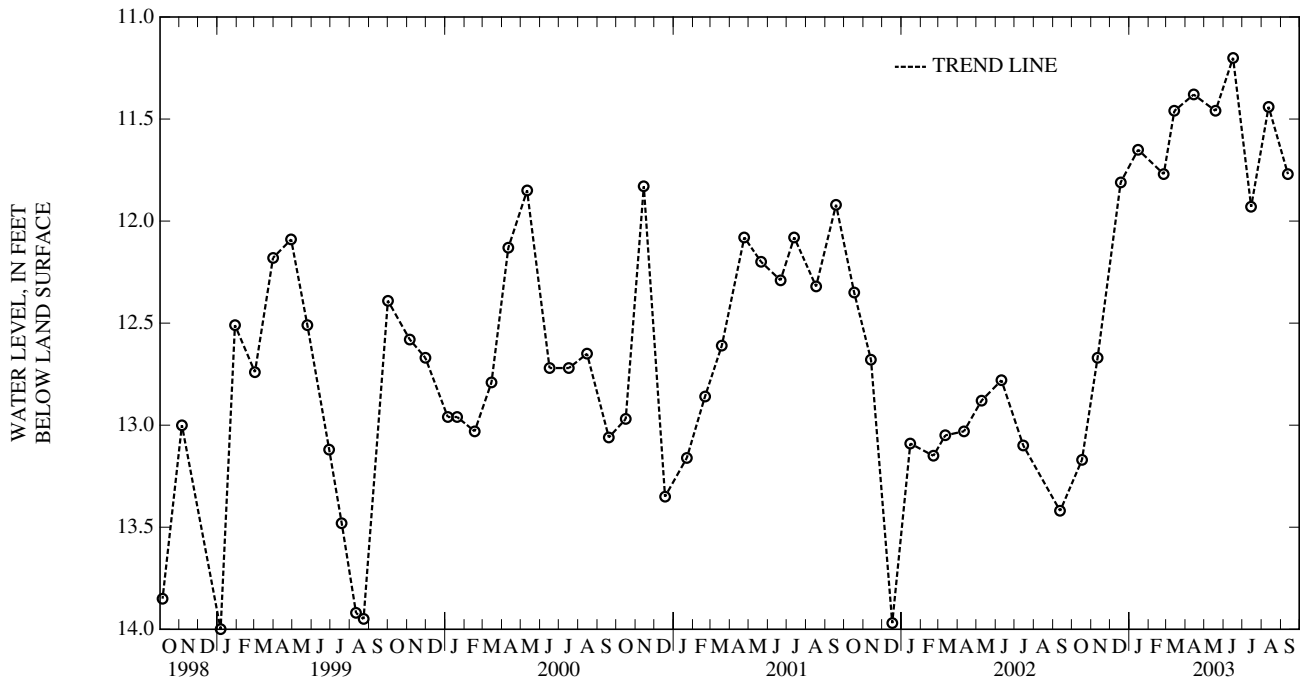
PERIOD OF RECORD.--January 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.82 ft below land surface, April 9, 1958; lowest measured, 14.66 ft below land surface, December 11, 1978.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17, 2002	13.17	JAN 15, 2003	11.65	APR 14, 2003	11.38	JUL 15, 2003	11.93
NOV 11	12.67	FEB 25	11.77	MAY 19	11.46	AUG 12	11.44
DEC 18	11.81	MAR 14	11.46	JUN 16	11.20	SEP 12	11.77

HIGHEST 11.20 JUN 16, 2003
 LOWEST 13.17 OCT 17, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

SUSSEX COUNTY—Continued

WELL NUMBER.--Ng11-01. 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.--Omar Formation of Pleistocene age. Aquifer code: 112OMAR.

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 water level measurements with electric or chalked steel tape by U.S. Geological Survey or Delaware Geological Survey 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.

REMARKS.--Delaware Water-Level Monitoring Network observation well.

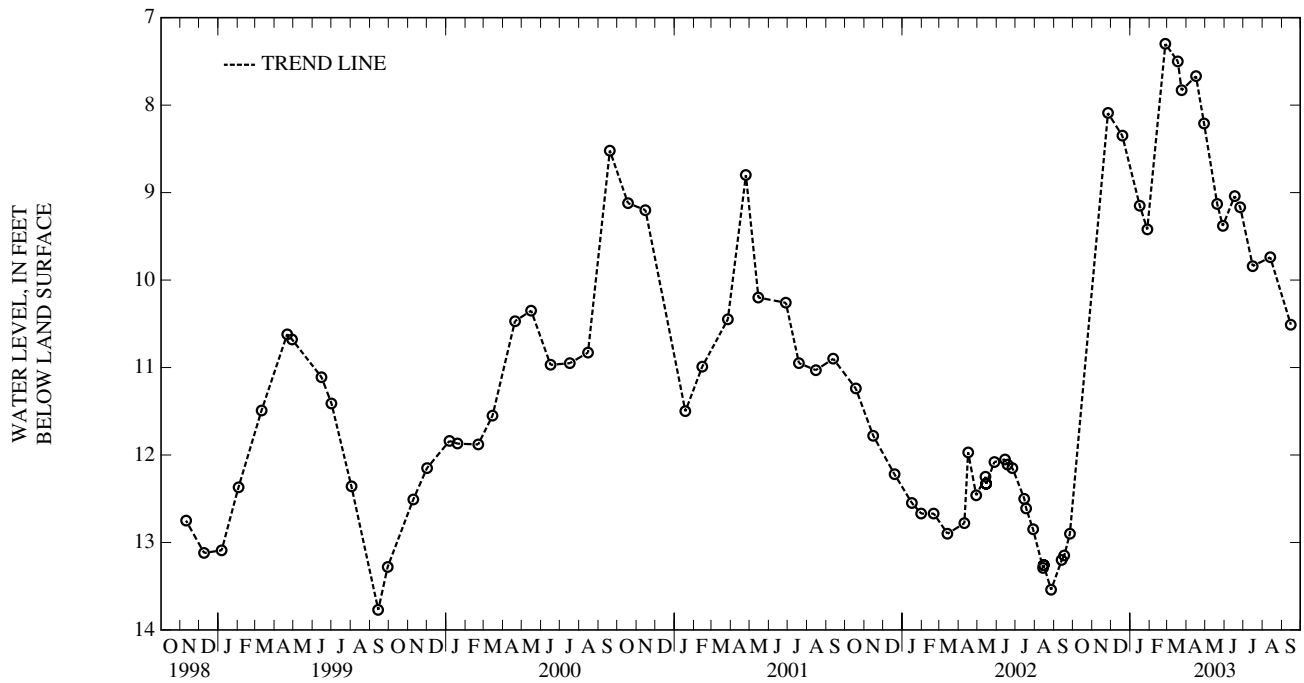
PERIOD OF RECORD.--September 1959 to current year.

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, January 7, 1966.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 26, 2002	8.09	FEB 26, 2003	7.30	APR 29, 2003	8.21	JUN 26, 2003	9.17
DEC 19	8.35	MAR 18	7.50	MAY 20	9.13	JUL 16	9.84
JAN 16, 2003	9.15	24	7.83	29	9.38	AUG 13	9.74
28	9.42	APR 16	7.67	JUN 17	9.04	SEP 15	10.51

HIGHEST 7.30 FEB 26, 2003
 LOWEST 10.51 SEP 15, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

SUSSEX COUNTY--Continued

WELL NUMBER.--Ni52-11. SITE ID.--384558075083501. PERMIT NUMBER.--057363.

LOCATION.--Lat 38°45'58", long 75°08'35", Hydrologic Unit 02040207, in Lewes Library Park, near railroad tracks. Owner: Town of Lewes.

AQUIFER.--Pocomoke aquifer in the Eastover Formation of Upper Miocene age. Aquifer code: 122PCMK.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 155 ft; casing diameter 4 in., to 145 ft; screened from 145 to 155 ft.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by Delaware Geological Survey personnel. Intermittent water level measurements from May 1985 to July 1987. Twice yearly water level measurements from February 1988 to January 1992.

DATUM.--Elevation of land surface is 16 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder platform, 0.5 ft above land surface.

REMARKS.--Delaware Water-Level Monitoring Network observation well.

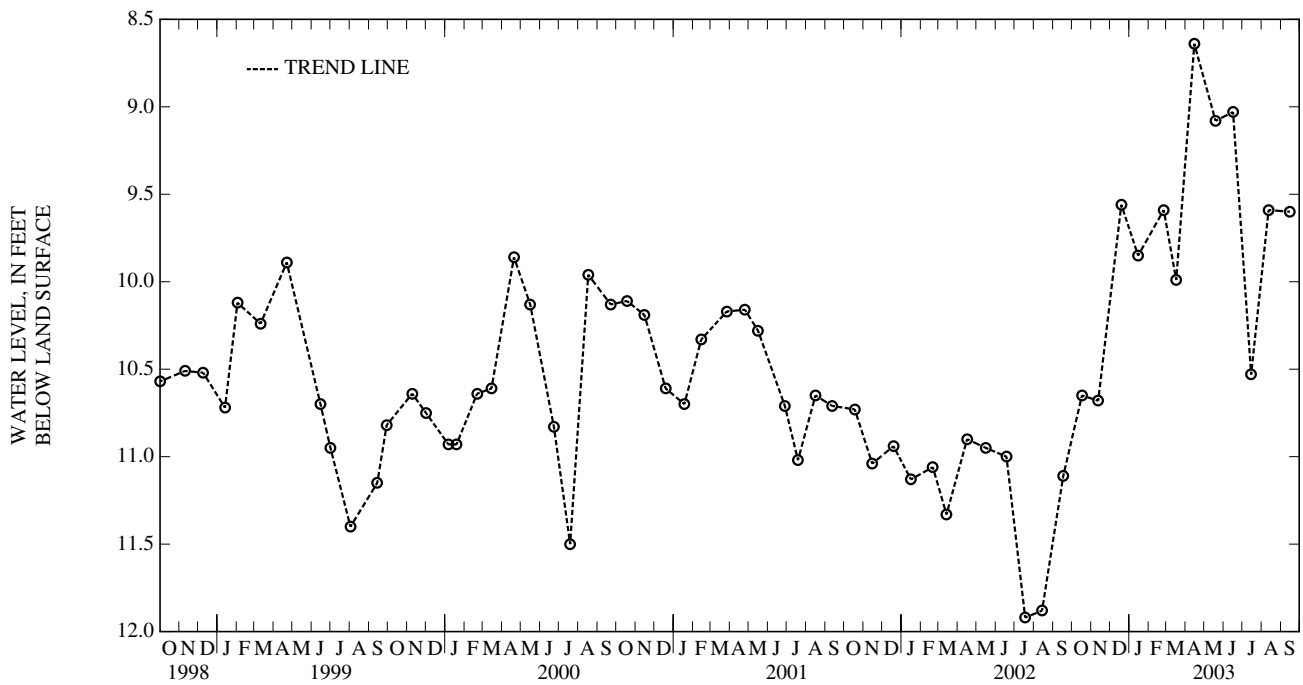
PERIOD OF RECORD.-- May 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.16 ft below land surface, March 4, 1998; lowest measured, 11.92 ft below land surface, July 18, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17, 2002	10.65	JAN 15, 2003	9.85	APR 15, 2003	8.64	JUL 15, 2003	10.53
NOV 12	10.68	FEB 25	9.59	MAY 19	9.08	AUG 12	9.59
DEC 19	9.56	MAR 17	9.99	JUN 16	9.03	SEP 15	9.60

HIGHEST 8.64 APR 15, 2003
 LOWEST 10.68 NOV 12, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

SUSSEX COUNTY—Continued

WELL NUMBER.--Ni52-12. SITE ID.--384558075083502. PERMIT NUMBER.--057365.

LOCATION.--Lat 38°45'58", long 75°08'35", Hydrologic Unit 02040207, in Lewes Library Park, near railroad tracks. Owner: Town of Lewes.

AQUIFER.--Columbia Formation (Delaware Bay deposits) of Pleistocene age. Aquifer code: 112CLMB.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 80 ft; casing diameter 2 in., to 70 ft; screened from 70 to 80 ft.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by Delaware Geological Survey personnel. Intermittent water level measurements from July 1986 to July 1987. Twice yearly water level measurements from February 1988 to January 1992. Water level measurements from 1986 to 1992, measured by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 16 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 6 in. casing at land surface.

REMARKS.--Delaware Water-Level Monitoring Network observation well.

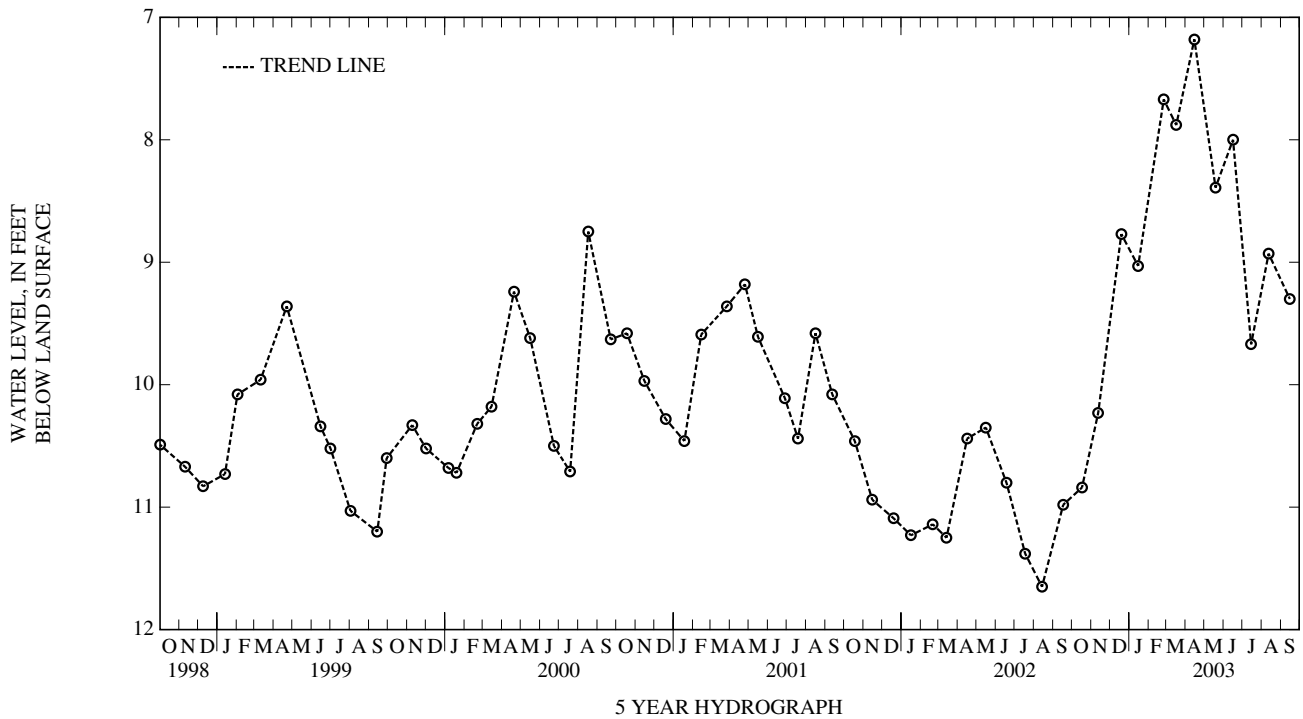
PERIOD OF RECORD.--July 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.57 ft below land surface, March 31, 1994; lowest measured, 11.70 ft below land surface, November 20, 1986.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17, 2002	10.84	JAN 15, 2003	9.03	APR 15, 2003	7.18	JUL 15, 2003	9.67
NOV 12	10.23	FEB 25	7.67	MAY 19	8.39	AUG 12	8.93
DEC 19	8.77	MAR 17	7.88	JUN 16	8.00	SEP 15	9.30

HIGHEST 7.18 APR 15, 2003
 LOWEST 10.84 OCT 17, 2002



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

SUSSEX COUNTY--Continued

WELL NUMBER.--Of 12-13. SITE ID.--384438075234801. PERMIT NUMBER.--07473.

LOCATION.--Lat 38°44'38", long 75°23'48", Hydrologic Unit 02060008, near Redden State Forest. Owner: Delaware Department of Transportation.

AQUIFER.--Beaverdam Sand of Pliocene age. Aquifer code: 121BVDM.

WELL CHARACTERISTICS.--Drilled, 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 water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from December 1993 to current year.

DATUM.--Altitude of land surface is 46.36 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder platform, 2.58 ft above land surface.

REMARKS.--Delaware Department of Transportation Wetlands Project observation well. Periods of equal maximum and minimum daily values may be questionable due to the float hanging up in small diameter wells or other well construction factors.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.06 ft below land surface, March 3, 1994 (recorder); lowest measured, 7.38 ft below land surface, September 1, 2002 (recorder).

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

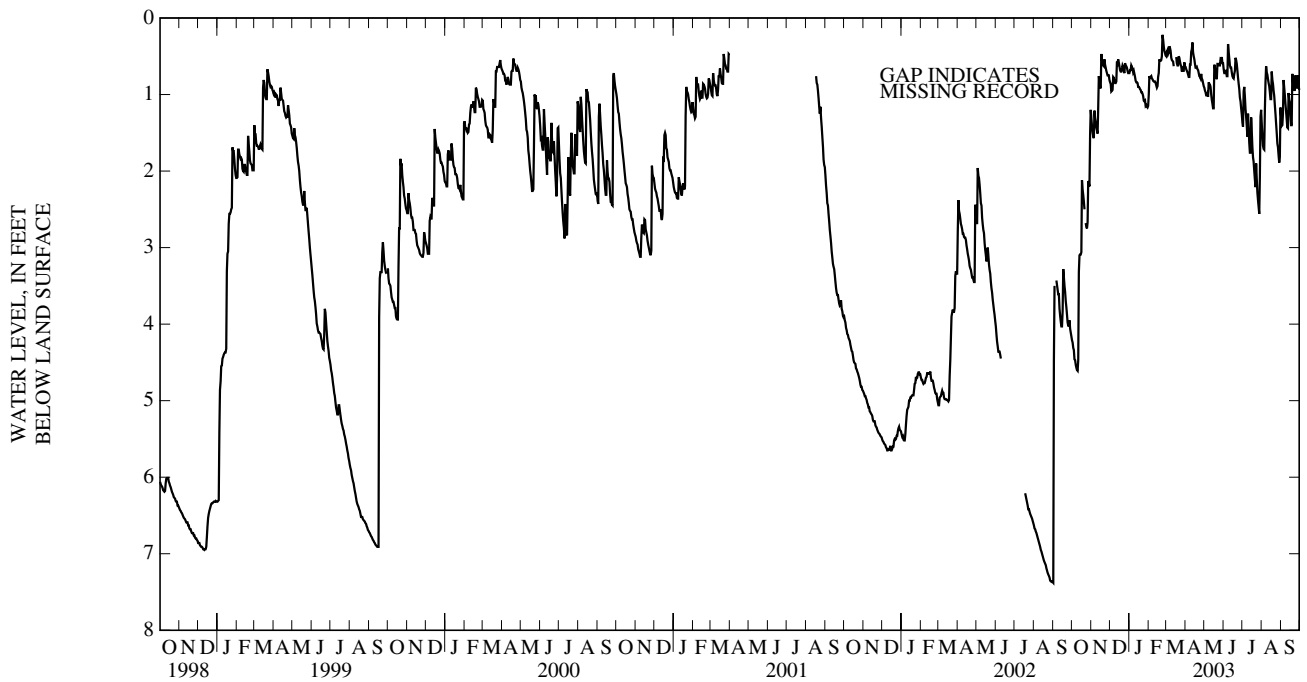
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 2002	2.52	JAN 08, 2003	.65	APR 15, 2003	.52	JUL 21, 2003	2.02
DEC 02	.81	MAR 04	.44	JUN 06	.72	AUG 20	.92
HIGHEST	.44	MAR 04, 2003					
LOWEST	2.52	OCT 22, 2002					

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	4.21	4.16	1.31	1.20	0.84	0.81	0.72	0.61	1.00	0.69	0.50	0.44
2	4.24	4.21	1.41	1.31	0.86	0.81	0.68	0.63	0.76	0.69	0.44	0.30
3	4.31	4.24	1.49	1.41	0.96	0.86	0.68	0.52	0.78	0.76	0.42	0.35
4	4.34	4.31	1.55	1.48	0.95	0.94	0.62	0.53	0.77	0.61	0.47	0.42
5	4.46	4.34	1.57	1.21	0.94	0.71	0.64	0.62	0.76	0.66	0.45	0.33
6	4.47	4.46	1.21	1.05	0.77	0.71	0.66	0.63	0.79	0.76	0.37	0.27
7	4.53	4.46	1.31	1.19	0.78	0.77	0.71	0.66	0.80	0.73	0.39	0.35
8	4.57	4.53	1.36	1.31	0.83	0.78	0.69	0.65	0.82	0.80	0.43	0.39
9	4.60	4.57	1.43	1.36	0.85	0.83	0.73	0.65	0.83	0.82	0.52	0.43
10	4.61	4.47	1.47	1.43	0.85	0.83	0.77	0.73	0.83	0.76	0.55	0.52
11	4.47	3.32	1.51	1.16	0.83	0.46	0.82	0.77	0.83	0.78	0.56	0.54
12	3.32	3.10	1.17	0.75	0.57	0.49	0.84	0.81	0.85	0.79	0.57	0.55
13	3.10	3.02	0.76	0.68	0.59	0.39	0.84	0.79	0.88	0.85	0.63	0.57
14	3.09	3.04	0.83	0.76	0.54	0.39	0.85	0.83	0.91	0.88	---	---
15	3.09	3.06	0.90	0.83	0.58	0.54	0.90	0.84	0.89	0.73	---	---
16	3.06	2.04	0.92	0.43	0.63	0.57	0.90	0.85	0.77	0.72	---	---
17	2.12	2.03	0.47	0.41	0.68	0.63	0.91	0.83	0.72	0.45	0.51	0.45
18	2.24	2.12	0.55	0.42	0.70	0.68	0.93	0.91	0.54	0.48	0.59	0.51
19	2.31	2.23	0.59	0.55	0.70	0.67	0.94	0.90	0.56	0.53	0.62	0.59
20	2.40	2.31	0.62	0.59	0.67	0.51	0.97	0.90	0.56	0.53	0.62	0.44
21	2.50	2.40	0.63	0.46	0.62	0.55	0.97	0.94	0.55	0.50	0.50	0.41
22	---	---	0.54	0.44	0.64	0.62	0.99	0.97	0.50	0.18	0.52	0.44
23	2.68	2.58	0.61	0.54	0.70	0.64	1.02	0.98	0.22	0.12	0.57	0.52
24	2.73	2.68	0.65	0.61	0.72	0.59	1.08	1.02	0.28	0.22	0.61	0.57
25	2.75	2.67	0.69	0.65	0.59	0.43	1.09	1.08	0.37	0.28	0.63	0.61
26	2.67	1.95	0.72	0.69	0.62	0.56	1.08	1.06	0.43	0.37	0.70	0.63
27	2.13	1.99	0.75	0.70	0.63	0.62	1.15	1.08	0.46	0.43	0.67	0.66
28	2.16	2.13	0.75	0.73	0.65	0.63	1.14	1.13	0.49	0.45	0.69	0.67
29	2.20	1.52	0.75	0.71	0.69	0.65	1.16	1.13	---	---	0.69	0.58
30	1.52	1.13	0.81	0.71	0.72	0.69	1.17	1.15	---	---	0.58	0.54
31	1.20	1.13	---	---	0.72	0.71	1.15	1.00	---	---	0.63	0.55
MONTH	4.61	1.13	1.57	0.41	0.96	0.39	1.17	0.52	1.00	0.12	0.70	0.27

SUSSEX COUNTY--Continued

DAY	MAX		MIN		MAX		MIN		MAX		MIN		MAX		MIN	
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER					
1	0.64	0.61	0.91	0.88	0.67	0.58	1.36	1.26	1.38	1.20	1.29	1.17				
2	0.67	0.64	0.95	0.90	0.72	0.67	1.42	0.96	1.54	1.38	1.41	1.29				
3	0.69	0.67	0.97	0.95	0.72	0.69	0.96	0.68	1.67	1.54	1.40	1.25				
4	0.71	0.69	1.01	0.97	0.69	0.62	0.90	0.75	1.71	1.67	1.25	0.63				
5	0.74	0.71	1.01	0.99	0.69	0.62	1.03	0.90	1.72	1.19	0.81	0.65				
6	0.77	0.74	0.99	0.98	0.76	0.69	1.19	1.03	1.20	0.80	0.91	0.81				
7	0.77	0.55	1.03	0.78	0.76	0.21	1.29	1.17	0.84	0.47	1.01	0.91				
8	0.61	0.56	0.84	0.76	0.34	0.21	1.41	1.28	0.63	0.48	1.12	1.01				
9	0.61	0.36	0.86	0.82	0.44	0.34	1.55	1.25	0.71	0.63	1.22	1.12				
10	0.44	0.39	0.87	0.84	0.53	0.44	1.25	1.18	0.74	0.70	1.33	1.22				
11	0.41	0.25	0.90	0.86	0.62	0.53	1.43	1.21	0.80	0.73	1.43	1.33				
12	0.32	0.26	1.00	0.90	0.65	0.59	1.63	1.43	0.85	0.80	1.44	0.96				
13	0.45	0.32	1.07	1.00	0.65	0.60	1.76	1.63	0.89	0.85	0.98	0.93				
14	0.50	0.45	1.12	1.07	0.71	0.65	1.76	1.13	0.97	0.89	1.07	0.98				
15	0.54	0.50	1.18	1.12	0.76	0.71	1.30	1.15	1.06	0.97	1.10	1.07				
16	0.60	0.54	1.18	0.53	0.78	0.76	1.48	1.30	1.06	0.63	1.26	1.10				
17	0.65	0.60	0.61	0.55	0.79	0.73	1.69	1.48	0.70	0.58	1.40	1.26				
18	0.65	0.62	0.65	0.60	0.73	0.68	1.82	1.69	0.81	0.70	1.40	0.59				
19	0.64	0.63	0.70	0.65	0.69	0.42	1.88	1.81	0.86	0.81	0.73	0.56				
20	0.67	0.64	0.76	0.70	0.52	0.45	2.00	1.88	0.95	0.86	0.83	0.73				
21	0.68	0.67	0.80	0.60	0.55	0.45	2.11	2.00	1.02	0.94	0.90	0.83				
22	0.72	0.67	0.60	0.56	0.60	0.55	2.21	1.89	1.14	1.02	0.94	0.90				
23	0.76	0.72	0.60	0.53	0.69	0.60	1.90	1.83	1.25	1.14	0.94	0.57				
24	0.77	0.76	0.60	0.54	0.78	0.69	2.10	1.89	1.38	1.25	0.75	0.65				
25	0.79	0.72	0.62	0.60	0.86	0.78	2.28	2.10	1.50	1.38	0.84	0.75				
26	0.73	0.69	0.62	0.43	0.93	0.85	2.38	2.28	1.64	1.50	0.91	0.84				
27	0.79	0.73	0.54	0.50	1.04	0.92	2.47	2.38	1.69	1.56	0.91	0.66				
28	0.81	0.79	0.55	0.43	1.09	1.03	2.56	2.08	1.80	1.69	0.75	0.67				
29	0.85	0.81	0.51	0.45	1.18	1.08	2.08	1.19	1.89	1.67	0.87	0.75				
30	0.89	0.85	0.59	0.51	1.26	1.16	1.29	1.11	1.82	1.09	0.94	0.87				
31	---	---	0.59	0.57	---	---	1.20	1.11	1.17	1.08	---	---				
MONTH	0.89	0.25	1.18	0.43	1.26	0.21	2.56	0.68	1.89	0.47	1.44	0.56				
YEAR	4.61	0.12														

Daily Low Water Levels



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

SUSSEX COUNTY--Continued

WELL NUMBER.--Of13-03. SITE ID.--384401075224901. PERMIT NUMBER.--95801.

LOCATION.--Lat 38°44'01", long 75°22'49", Hydrologic Unit 02060008, near Redden State Forest. Owner: Delaware Department of Transportation.

AQUIFER.--Beaverdam Sand of Pliocene age. Aquifer code:121BVDM.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 20 ft; casing diameter 2 in., to 17 ft; screen diameter 2 in., from 17 to 20 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from December 1993 to current year.

DATUM.--Altitude of land surface is 48.37 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder platform, 3.28 ft above land surface.

REMARKS.--Delaware Department of Transportation Wetlands Project observation well. Missing data due to recorder malfunction. Periods of equal maximum and minimum daily values may be questionable due to the float hanging up in small diameter wells or other well construction factors.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.06 ft above land surface, March 3, 1994 (recorder); lowest measured, 9.28 ft below land surface, September 1, 2002 (recorder).

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

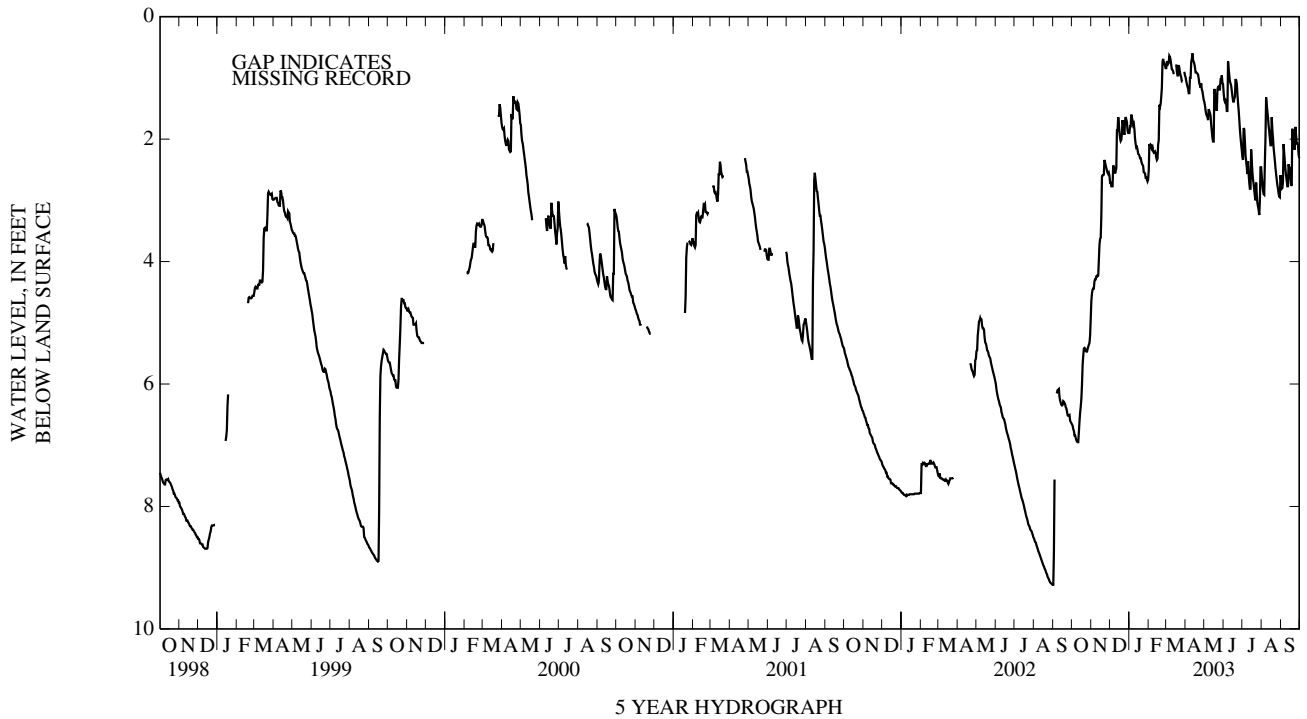
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 2002	5.40	JAN 08, 2003	1.72	APR 15, 2003	.75	JUL 21, 2003	2.83
DEC 02	2.62	MAR 04	.76	JUN 06	1.46	AUG 20	2.00
HIGHEST	.75	APR 15, 2003					
LOWEST	5.40	OCT 22, 2002					

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	6.66	6.64	4.64	4.52	2.71	2.59	1.90	1.64	2.50	2.02	0.84	0.74
2	6.68	6.66	4.52	4.46	2.71	2.62	1.79	1.64	2.08	2.02	0.74	0.58
3	6.74	6.68	4.46	4.44	2.77	2.62	1.79	1.43	2.12	2.08	0.74	0.60
4	6.76	6.74	4.44	4.42	2.77	2.77	1.60	1.43	2.09	1.83	0.77	0.74
5	6.84	6.75	4.44	4.32	2.77	2.39	1.65	1.60	2.10	1.93	0.75	0.58
6	6.84	6.83	4.32	4.28	2.43	2.39	1.69	1.65	2.15	2.10	0.64	0.52
7	6.88	6.83	4.29	4.28	2.45	2.41	1.77	1.69	2.13	2.03	0.66	0.61
8	6.92	6.88	4.29	4.24	2.49	2.42	1.75	1.68	2.20	2.13	0.71	0.66
9	6.94	6.92	4.24	4.23	2.56	2.49	1.84	1.68	2.22	2.19	0.79	0.70
10	6.95	6.94	4.23	4.21	2.53	2.47	1.99	1.84	2.21	2.06	0.86	0.79
11	6.95	6.79	4.24	4.22	2.47	1.82	2.08	1.99	2.20	2.09	0.87	0.86
12	6.79	6.61	4.23	3.99	1.86	1.81	2.14	2.08	2.23	2.13	0.89	0.86
13	6.61	6.47	3.99	3.73	1.86	1.50	2.13	2.05	2.30	2.23	0.94	0.89
14	6.47	6.37	3.73	3.63	1.64	1.48	2.17	2.13	2.34	2.30	---	---
15	6.37	6.24	3.63	3.61	1.73	1.64	2.24	2.17	2.32	2.03	---	---
16	6.24	6.02	3.61	3.26	1.89	1.71	2.25	2.16	2.09	2.02	---	---
17	6.02	5.69	3.26	2.61	1.98	1.89	2.27	2.13	2.02	1.35	0.78	0.73
18	5.69	5.54	2.61	2.59	2.03	1.98	2.31	2.27	1.44	1.35	0.90	0.78
19	5.54	5.42	2.59	2.54	2.01	1.90	2.31	2.28	1.47	1.41	0.96	0.90
20	5.42	5.41	2.59	2.56	1.90	1.53	2.36	2.26	1.43	1.31	0.96	0.73
21	5.41	5.40	2.58	2.34	1.69	1.56	2.40	2.36	1.31	1.16	0.79	0.73
22	5.42	5.40	2.34	2.20	1.78	1.69	2.42	2.40	1.16	0.74	0.84	0.74
23	5.46	5.42	2.38	2.24	1.87	1.78	2.44	2.39	0.74	0.58	0.91	0.84
24	5.47	5.46	2.43	2.38	1.93	1.70	2.54	2.44	0.69	0.65	0.96	0.91
25	5.47	5.43	2.47	2.43	1.70	1.34	2.55	2.54	0.74	0.67	0.99	0.96
26	5.43	5.39	2.51	2.47	1.64	1.43	2.56	2.52	0.77	0.74	1.06	0.99
27	5.39	5.36	2.55	2.47	1.68	1.64	2.63	2.56	0.80	0.77	1.06	1.02
28	5.36	5.33	2.57	2.55	1.72	1.68	2.63	2.61	0.84	0.80	---	---
29	5.33	5.21	2.55	2.45	1.86	1.72	2.66	2.61	---	---	---	---
30	5.21	4.94	2.59	2.47	1.90	1.86	2.69	2.66	---	---	0.90	0.84
31	4.94	4.64	---	---	1.90	1.87	2.66	2.50	---	---	0.96	0.84
MONTH	6.95	4.64	4.64	2.20	2.77	1.34	2.69	1.43	2.50	0.58	1.06	0.52

SUSSEX COUNTY--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	0.99	0.96	1.39	1.36	1.25	1.10	2.29	2.18	2.60	2.46	2.67	2.58
2	1.05	0.99	1.45	1.39	1.36	1.25	2.34	1.82	2.74	2.60	2.81	2.67
3	1.10	1.05	1.53	1.45	1.39	1.36	1.82	1.54	2.84	2.74	2.80	2.70
4	1.14	1.10	1.59	1.53	1.37	1.25	1.84	1.58	2.90	2.84	2.70	1.89
5	1.18	1.14	1.62	1.59	1.40	1.25	2.04	1.84	2.91	2.38	2.08	1.89
6	1.25	1.18	1.64	1.60	1.54	1.40	2.26	2.04	2.38	1.89	2.23	2.08
7	1.25	0.94	1.69	1.40	1.54	0.63	2.36	2.24	1.97	1.16	2.37	2.23
8	1.00	0.94	1.51	1.39	0.73	0.63	2.46	2.36	1.32	1.16	2.50	2.37
9	1.00	0.65	1.54	1.48	0.86	0.73	2.57	2.36	1.44	1.32	2.60	2.50
10	0.74	0.67	1.57	1.52	0.95	0.86	2.36	2.32	1.54	1.44	2.68	2.60
11	0.69	0.50	1.62	1.57	1.06	0.95	2.57	2.35	1.65	1.54	2.77	2.67
12	0.60	0.50	1.77	1.62	1.09	0.99	2.71	2.57	1.78	1.65	2.77	2.41
13	0.71	0.60	1.87	1.77	1.13	1.07	2.81	2.70	1.87	1.78	2.41	2.37
14	0.74	0.71	1.98	1.87	1.21	1.12	2.81	2.00	1.99	1.87	2.47	2.41
15	0.77	0.74	2.04	1.98	1.30	1.21	2.17	2.00	2.10	1.99	2.47	2.46
16	0.83	0.77	2.04	1.12	1.37	1.30	2.36	2.17	2.10	1.54	2.64	2.47
17	0.91	0.83	1.18	1.12	1.40	1.34	2.54	2.36	1.64	1.45	2.75	2.63
18	0.91	0.87	1.24	1.18	1.34	1.29	2.66	2.54	1.85	1.64	2.75	1.72
19	0.92	0.87	1.36	1.24	1.31	0.89	2.73	2.65	1.98	1.85	1.83	1.64
20	0.93	0.92	1.46	1.36	1.02	0.91	2.84	2.73	2.14	1.98	2.01	1.83
21	0.95	0.93	1.54	1.19	1.04	0.91	2.93	2.84	2.25	2.14	2.12	2.01
22	1.01	0.95	1.19	1.12	1.09	1.02	3.00	2.69	2.35	2.24	2.16	2.12
23	1.09	1.01	1.15	1.04	1.26	1.09	2.71	2.66	2.47	2.34	2.16	1.52
24	1.12	1.09	1.14	1.04	1.41	1.26	2.90	2.71	2.57	2.47	1.80	1.61
25	1.16	1.07	1.19	1.14	1.53	1.41	3.04	2.90	2.66	2.57	1.94	1.80
26	1.09	1.02	1.19	0.90	1.68	1.53	3.10	3.04	2.75	2.66	2.07	1.94
27	1.19	1.09	1.04	0.96	1.84	1.68	3.16	3.10	2.81	2.70	2.07	2.03
28	1.22	1.19	1.05	0.86	1.97	1.84	3.24	3.01	2.89	2.81	2.09	1.98
29	1.29	1.22	0.96	0.86	2.08	1.97	3.01	2.40	2.94	2.85	2.25	2.09
30	1.36	1.29	1.08	0.96	2.18	2.07	2.46	2.43	2.95	2.54	2.31	2.25
31	---	---	1.10	1.08	---	---	2.46	2.44	2.59	2.53	---	---
MONTH	1.36	0.50	2.04	0.86	2.18	0.63	3.24	1.54	2.95	1.16	2.81	1.52
YEAR	6.95	0.50										

Daily Low Water Levels



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

SUSSEX COUNTY--Continued

WELL NUMBER.--Of13-08. SITE ID.--384406075224601. PERMIT NUMBER.--97463.

LOCATION.--Lat 38°44'06", long 75°22'46", Hydrologic Unit 02040207, near Redden State Forest. Owner: Delaware Department of Transportation.

AQUIFER.--Beaverdam Sand of Pliocene age. Aquifer code: 121BVDM.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 16 ft; casing diameter 2 in., to 13 ft; screen diameter 2 in., from 13 to 16 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with water-level recorder--60-minute recorder interval from December 1993 to current year.

DATUM.--Altitude of land surface is 48.91 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder platform, 2.63 ft above land surface.

REMARKS.--Delaware Department of Transportation Wetlands Project observation well. Missing data due to recorder malfunction. Periods of equal maximum and minimum daily values may be questionable due to the float hanging up in small diameter wells or other well construction factors.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.40 ft below land surface, March 3, 1994 (recorder); lowest measured, 10.05 ft below land surface, August 31, 2002 (recorder).

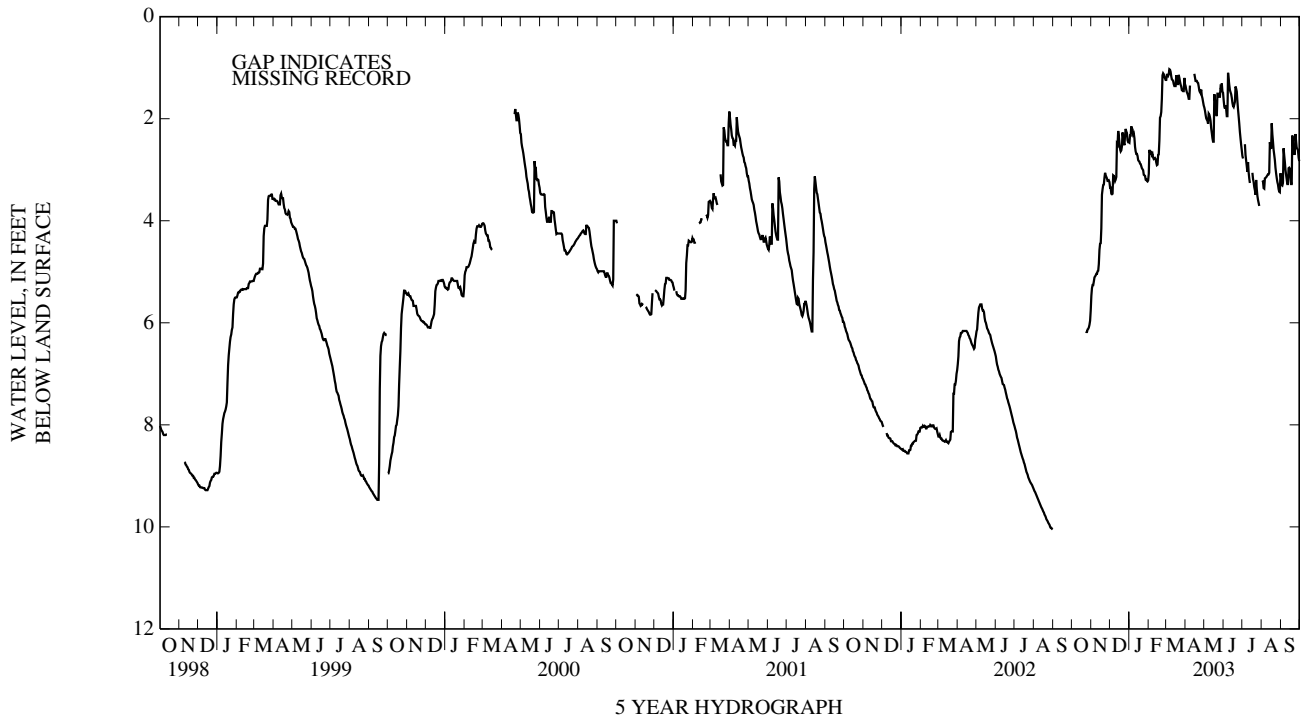
WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 2002	6.13	JAN 08, 2003	2.26	APR 15, 2003	1.11	JUL 21, 2003	3.35
DEC 02	3.32	MAR 04	1.17	JUN 06	1.84	AUG 20	2.47
HIGHEST	1.11	APR 15, 2003					
LOWEST	6.13	OCT 22, 2002					

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	5.47	5.32	3.35	3.24	2.47	2.18	3.08	2.57	1.24	1.14
2	---	---	5.32	5.26	3.35	3.32	2.33	2.20	2.61	2.57	1.14	1.14
3	---	---	5.26	5.26	3.47	3.33	2.33	2.14	2.67	2.61	1.14	1.14
4	---	---	5.26	5.18	3.48	3.47	2.15	2.14	2.65	2.45	1.16	1.13
5	---	---	5.19	5.10	3.47	3.11	2.19	2.15	2.65	2.46	1.13	0.95
6	---	---	5.11	5.06	3.11	3.11	2.21	2.17	2.71	2.65	1.03	0.87
7	---	---	5.09	5.07	3.12	3.10	2.31	2.21	2.69	2.60	1.04	1.00
8	---	---	5.07	5.04	3.17	3.11	2.29	2.21	2.76	2.69	1.08	1.04
9	---	---	5.04	5.04	3.22	3.17	2.38	2.21	2.79	2.76	1.17	1.07
10	---	---	5.04	4.97	3.19	3.14	2.55	2.38	2.78	2.68	1.23	1.17
11	---	---	4.99	4.97	3.14	2.47	2.64	2.55	2.77	2.69	1.24	1.21
12	---	---	4.98	4.85	2.49	2.47	2.69	2.64	2.79	2.72	1.26	1.21
13	---	---	4.85	4.57	2.51	2.13	2.69	2.62	2.86	2.79	1.32	1.25
14	---	---	4.57	4.45	2.24	2.13	2.73	2.69	2.91	2.86	1.36	1.32
15	---	---	4.45	4.44	2.33	2.24	2.81	2.73	2.90	2.70	1.36	1.33
16	---	---	4.44	4.15	2.49	2.32	2.83	2.73	2.71	2.70	1.36	1.03
17	---	---	4.15	3.49	2.59	2.49	2.84	2.70	2.70	2.43	1.15	1.02
18	---	---	3.49	3.38	2.64	2.59	2.88	2.84	2.43	1.89	1.26	1.15
19	---	---	3.38	3.28	2.62	2.54	2.89	2.84	1.98	1.90	1.32	1.26
20	---	---	3.30	3.28	2.54	2.12	2.93	2.84	1.95	1.87	1.32	1.06
21	---	---	3.29	3.16	2.27	2.13	2.97	2.93	1.87	1.61	1.14	1.04
22	---	---	3.16	2.98	2.37	2.27	2.99	2.97	1.61	1.15	1.20	1.09
23	6.17	6.14	3.06	2.98	2.47	2.37	3.01	2.96	1.15	0.95	1.27	1.20
24	6.18	6.17	3.11	3.06	2.52	2.33	3.10	3.01	1.11	1.05	1.33	1.27
25	6.18	6.13	3.14	3.10	2.33	1.89	3.11	3.10	1.13	1.08	1.37	1.33
26	6.13	6.10	3.17	3.14	2.20	1.97	3.12	3.07	1.18	1.13	1.44	1.35
27	6.12	6.09	3.22	3.15	2.25	2.20	3.19	3.12	1.21	1.18	1.44	1.34
28	6.09	6.04	3.22	3.21	2.28	2.25	3.19	3.16	1.24	1.21	1.46	1.44
29	6.04	5.96	3.21	3.18	2.42	2.28	3.22	3.16	---	---	1.46	1.17
30	5.96	5.76	3.24	3.18	2.46	2.42	3.23	3.21	---	---	1.20	1.17
31	5.76	5.47	---	---	2.46	2.44	3.21	3.08	---	---	1.32	1.18
MONTH	6.18	5.47	5.47	2.98	3.48	1.89	3.23	2.14	3.08	0.95	1.46	0.87

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	1.36	1.30	1.78	1.73	1.64	1.46	2.73	2.62	---	---	3.15	3.07
2	1.43	1.36	1.84	1.77	1.76	1.64	2.78	2.32	3.21	3.13	3.30	3.15
3	1.48	1.43	1.92	1.84	1.80	1.74	---	---	3.23	3.21	3.31	3.26
4	1.51	1.48	1.99	1.92	1.74	1.67	---	---	3.36	3.23	3.26	2.44
5	1.55	1.49	2.02	1.99	1.81	1.67	2.50	2.28	3.37	3.17	2.58	2.44
6	1.61	1.49	2.04	1.98	1.95	1.81	2.71	2.50	3.17	3.16	2.72	2.57
7	1.61	1.23	2.10	1.71	1.95	0.90	2.82	2.71	3.16	3.15	2.85	2.72
8	1.35	1.23	1.90	1.71	1.10	0.94	2.93	2.82	3.15	3.13	3.00	2.85
9	---	---	1.92	1.85	1.22	1.10	3.04	2.85	3.13	3.11	3.10	3.00
10	---	---	1.97	1.90	1.34	1.22	2.85	2.80	3.11	3.09	3.19	3.10
11	---	---	2.04	1.97	1.44	1.32	3.05	2.83	3.09	3.09	3.28	3.18
12	---	---	2.19	2.04	1.48	1.34	3.17	3.05	3.09	3.06	3.28	2.97
13	---	---	2.28	2.19	1.52	1.44	3.26	3.17	3.06	2.27	2.97	2.91
14	---	---	2.38	2.28	1.59	1.49	---	---	2.46	2.32	2.96	2.92
15	1.12	1.11	2.45	2.38	1.69	1.59	---	---	2.56	2.46	2.98	2.96
16	1.19	1.12	2.45	1.37	1.75	1.69	---	---	2.59	2.00	3.14	2.97
17	1.26	1.19	1.52	1.42	1.77	1.72	3.06	2.88	2.09	1.89	3.28	3.14
18	1.26	1.22	1.62	1.52	1.72	1.64	3.18	3.06	2.31	2.09	3.28	2.32
19	1.26	1.22	1.76	1.62	1.67	1.17	3.24	3.18	2.45	2.31	2.33	2.15
20	1.29	1.26	1.88	1.76	1.37	1.21	3.34	3.24	2.61	2.45	2.52	2.33
21	1.30	1.28	1.95	1.44	1.41	1.23	3.40	3.32	2.71	2.61	2.63	2.52
22	1.37	1.29	1.51	1.39	1.47	1.35	3.49	3.20	2.81	2.71	2.69	2.63
23	1.45	1.37	1.51	1.35	1.66	1.47	3.20	3.16	2.96	2.81	2.69	2.01
24	1.48	1.45	1.51	1.38	1.82	1.66	3.37	3.19	3.07	2.96	2.30	2.09
25	1.50	1.35	1.57	1.51	1.96	1.82	3.51	3.37	3.16	3.07	2.44	2.30
26	1.43	1.32	1.57	1.20	2.10	1.96	3.59	3.51	3.24	3.16	2.57	2.44
27	1.55	1.43	1.39	1.30	2.26	2.10	3.65	3.59	3.29	3.22	2.59	2.56
28	1.60	1.55	1.41	1.18	2.39	2.26	3.71	3.62	3.38	3.29	2.61	2.53
29	1.67	1.60	1.31	1.20	2.51	2.39	---	---	3.43	3.38	2.76	2.61
30	1.74	1.67	1.47	1.31	2.62	2.51	---	---	3.44	3.05	2.83	2.75
31	---	---	1.49	1.46	---	---	---	---	3.07	3.02	---	---
MONTH	1.74	1.11	2.45	1.18	2.62	0.90	3.71	2.28	3.44	1.89	3.31	2.01
YEAR	6.18	0.87										

Daily Low Water Levels



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

SUSSEX COUNTY--Continued

WELL NUMBER.--Of22-04. SITE ID.--384343075230401. PERMIT NUMBER.--95800.

LOCATION.--Lat 38°43'43", long 75°23'04", Hydrologic Unit 02040207, near Redden State Forest. Owner: Delaware Department of Transportation.

AQUIFER.--Beaverdam Sand of Pliocene age. Aquifer code: 121BVDM.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 15 ft; casing diameter 2 in., to 12 ft; screen diameter 2 in., from 12 to 15 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from December 1993 to current year.

DATUM.--Altitude of land surface is 47.62 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder platform, 2.68 ft above land surface.

REMARKS.--Delaware Department of Transportation Wetlands Project observation well. Missing data due to recorder malfunction. Periods of equal maximum and minimum daily values may be questionable due to the float hanging up in small diameter wells or other well construction factors.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.75 ft above land surface, March 3, 1994 (recorder); lowest measured, 7.71 ft below land surface, August 31, 2002 (recorder).

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
(READINGS ABOVE LAND-SURFACE INDICATED BY "-")

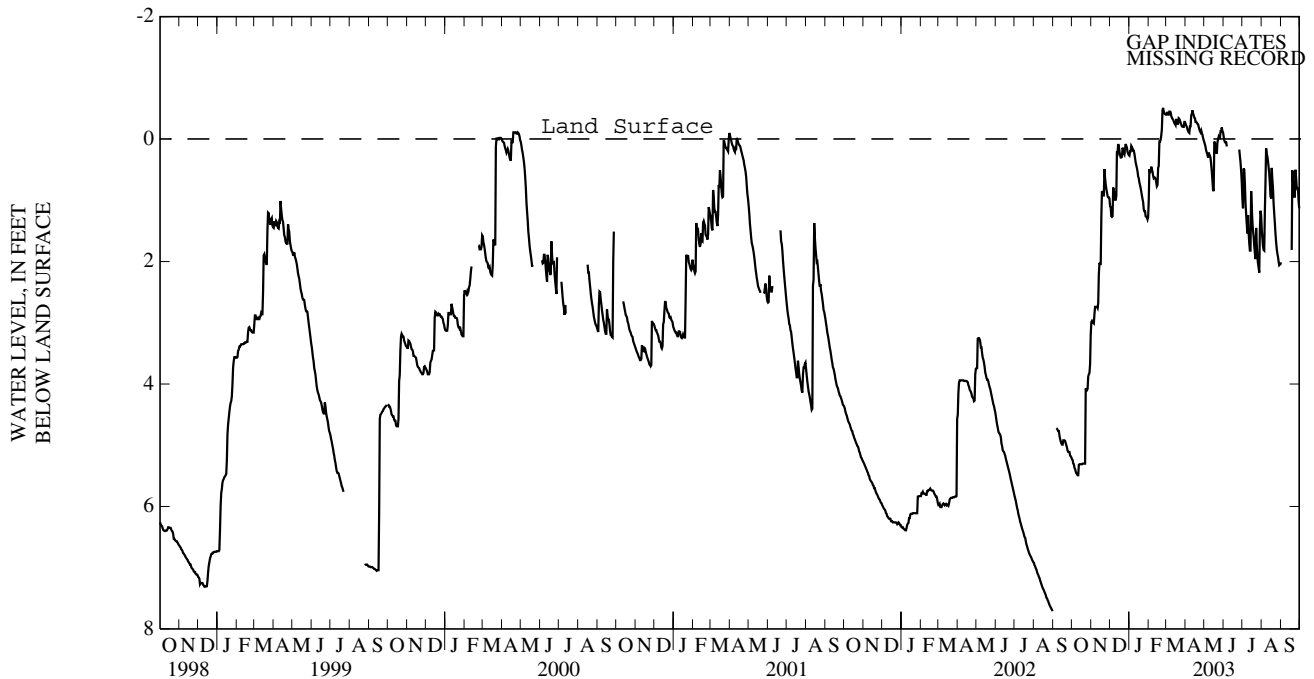
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 2002	4.03	JAN 08, 2003	.17	APR 15, 2003	-.35	JUL 21, 2003	1.76
DEC 02	1.11	MAR 04	-.36	JUN 06	.08	AUG 20	.86
HIGHEST	-.36	MAR 04, 2003					
LOWEST	4.03	OCT 22, 2002					

DAY	MAX		MIN		MAX		MIN		MAX		MIN	
	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH						
1	5.23	5.20	2.99	2.93	1.10	0.97	0.27	0.15	1.01	0.46	-0.36	-0.39
2	5.24	5.23	2.97	2.94	1.11	1.10	0.20	0.15	0.51	0.46	-0.39	-0.46
3	5.30	5.24	2.99	2.97	1.26	1.10	0.20	0.05	0.56	0.51	-0.39	-0.45
4	5.31	5.30	3.00	2.97	1.27	1.26	0.11	0.05	0.55	0.33	-0.36	-0.39
5	5.37	5.31	3.01	2.85	1.26	0.63	0.13	0.11	0.47	0.37	-0.36	-0.44
6	5.39	5.37	2.85	2.67	0.79	0.64	0.15	0.13	0.52	0.47	-0.41	-0.48
7	5.43	5.39	2.74	2.71	0.83	0.79	0.19	0.15	0.55	0.50	-0.41	-0.44
8	5.46	5.43	2.74	2.72	0.89	0.83	0.19	0.17	0.62	0.55	-0.40	-0.41
9	5.47	5.46	2.74	2.74	0.99	0.89	0.24	0.19	0.66	0.62	-0.34	-0.40
10	5.49	5.47	2.74	2.72	0.99	0.93	0.31	0.24	0.65	0.56	-0.31	-0.34
11	5.49	5.32	2.76	2.68	0.93	0.18	0.38	0.31	0.65	0.57	-0.29	-0.31
12	5.32	5.31	2.68	2.21	0.20	0.18	0.44	0.38	0.68	0.62	-0.28	-0.29
13	5.31	5.31	2.21	2.02	0.22	0.05	0.48	0.44	0.74	0.68	-0.25	-0.28
14	5.31	5.31	2.02	2.01	0.08	0.05	0.54	0.48	0.80	0.74	-0.23	-0.25
15	5.31	5.31	2.04	2.01	0.12	0.08	0.62	0.54	0.78	0.46	-0.23	-0.24
16	5.31	5.31	2.04	1.28	0.20	0.12	0.65	0.62	0.50	0.47	-0.21	-0.31
17	5.31	5.30	1.28	0.72	0.26	0.20	0.71	0.64	0.47	0.07	-0.31	-0.33
18	5.30	5.30	0.85	0.72	0.30	0.26	0.75	0.71	0.07	0.07	-0.27	-0.31
19	5.30	5.30	0.87	0.83	0.30	0.29	0.80	0.75	0.07	0.04	-0.23	-0.27
20	5.30	5.30	0.92	0.87	0.29	0.09	0.87	0.80	0.04	-0.02	-0.23	-0.33
21	5.30	5.30	0.92	0.49	0.14	0.10	0.93	0.87	-0.02	-0.12	-0.32	-0.37
22	5.30	4.02	0.49	0.42	0.17	0.14	0.99	0.93	-0.12	-0.43	-0.31	-0.35
23	4.07	4.03	0.63	0.46	0.23	0.17	1.04	0.99	-0.43	-0.56	-0.28	-0.31
24	4.09	4.07	0.74	0.63	0.25	0.16	1.16	1.04	-0.48	-0.52	-0.25	-0.28
25	4.10	4.08	0.81	0.73	0.16	-0.01	1.19	1.16	-0.42	-0.48	-0.22	-0.25
26	4.08	3.88	0.87	0.81	0.08	0.02	1.19	1.18	-0.39	-0.42	-0.19	-0.22
27	3.88	3.84	0.93	0.83	0.11	0.08	1.27	1.19	-0.38	-0.39	-0.19	-0.21
28	3.84	3.81	0.95	0.92	0.14	0.11	1.29	1.27	-0.37	-0.38	-0.18	-0.19
29	3.82	3.67	0.95	0.87	0.21	0.14	1.30	1.27	---	---	-0.18	-0.26
30	3.67	3.19	0.97	0.87	0.24	0.21	1.33	1.29	---	---	-0.26	-0.30
31	3.19	2.99	---	---	0.26	0.24	1.29	1.01	---	---	-0.26	-0.30
MONTH	5.49	2.99	3.01	0.42	1.27	-0.01	1.33	0.05	1.01	-0.56	-0.18	-0.48

SUSSEX COUNTY--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-0.23	-0.26	0.05	0.02	-0.04	-0.11	0.98	0.71	1.47	1.24	2.03	2.02
2	-0.20	-0.23	0.09	0.05	0.02	-0.04	1.13	0.48	1.62	1.47	2.03	2.03
3	-0.18	-0.20	0.13	0.09	0.05	0.02	0.48	0.30	1.75	1.62	---	---
4	-0.15	-0.18	0.19	0.13	0.05	-0.01	0.50	0.32	1.81	1.74	---	---
5	-0.13	-0.16	0.22	0.19	0.05	-0.01	0.73	0.50	1.82	1.10	---	---
6	-0.11	-0.13	0.26	0.22	0.12	0.05	1.05	0.73	1.16	0.53	---	---
7	-0.10	-0.24	0.30	0.16	---	---	1.22	1.01	0.71	0.08	---	---
8	-0.21	-0.23	0.22	0.16	---	---	1.39	1.22	0.15	0.08	---	---
9	-0.21	-0.41	0.25	0.20	---	---	1.54	1.18	0.24	0.15	---	---
10	-0.39	-0.41	0.27	0.23	---	---	1.24	1.16	0.28	0.24	---	---
11	-0.41	-0.52	0.31	0.27	---	---	1.53	1.22	0.36	0.28	---	---
12	-0.47	-0.52	0.42	0.31	---	---	1.70	1.53	0.46	0.36	---	---
13	-0.42	-0.47	0.53	0.42	---	---	1.82	1.70	0.56	0.46	---	---
14	-0.39	-0.42	0.67	0.53	---	---	1.82	0.58	0.73	0.56	---	---
15	-0.35	-0.39	0.83	0.67	---	---	0.85	0.61	0.93	0.73	---	---
16	-0.34	-0.35	0.85	0.04	---	---	1.11	0.85	0.97	0.40	---	---
17	-0.28	-0.34	0.04	0.04	---	---	1.35	1.11	0.47	0.34	---	---
18	-0.28	-0.29	0.06	0.04	---	---	1.50	1.34	0.66	0.47	1.81	0.38
19	-0.27	-0.28	0.12	0.06	---	---	1.59	1.49	0.80	0.66	0.51	0.35
20	-0.25	-0.27	0.19	0.12	---	---	1.75	1.59	1.05	0.80	0.68	0.51
21	-0.24	-0.25	0.24	0.05	---	---	1.86	1.74	1.22	1.05	0.83	0.68
22	-0.20	-0.24	0.05	0.01	---	---	1.96	1.31	1.37	1.22	0.94	0.83
23	-0.16	-0.20	0.01	-0.07	---	---	1.45	1.31	1.54	1.36	0.94	0.32
24	-0.13	-0.16	-0.04	-0.07	---	---	1.72	1.45	1.68	1.54	0.50	0.36
25	-0.11	-0.15	-0.02	-0.04	---	---	1.92	1.72	1.79	1.68	0.63	0.50
26	-0.14	-0.17	-0.02	-0.17	0.17	0.09	2.03	1.92	1.87	1.78	0.78	0.63
27	-0.10	-0.14	-0.13	-0.17	0.28	0.17	2.10	2.02	1.92	1.77	0.81	0.68
28	-0.07	-0.10	-0.13	-0.21	0.38	0.28	2.18	1.50	2.00	1.91	0.79	0.65
29	-0.02	-0.07	-0.19	-0.21	0.52	0.38	1.50	0.94	2.06	1.98	1.01	0.79
30	0.02	-0.02	-0.13	-0.19	0.71	0.52	1.17	1.12	2.05	2.03	1.13	1.01
31	---	---	-0.11	-0.13	---	---	1.24	1.14	2.03	2.02	---	---
MONTH	0.02	-0.52	0.85	-0.21	0.71	-0.11	2.18	0.30	2.06	0.08	2.03	0.32
YEAR	5.49	-0.56										

Daily Low Water Levels



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

SUSSEX COUNTY--Continued

WELL NUMBER.--Of22-11. SITE ID.--384341075230001. PERMIT NUMBER.--95795.

LOCATION.--Lat 38°43'44", long 75°23'01", Hydrologic Unit 02040207, near Redden State Forest. Owner: Delaware Department of Transportation.

AQUIFER.--Beaverdam Sand of Pliocene age. Aquifer code: 121BVDM.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 16 ft; casing diameter 2 in., to 13 ft; screen diameter 2 in., from 13 to 16 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from December 1993 to July 2001.

DATUM.--Altitude of land surface is 47.92 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder platform, 2.70 ft above land surface.

REMARKS.--Delaware Department of Transportation Wetlands Project observation well. Missing data due to recorder malfunction. Periods of equal maximum and minimum daily values may be questionable due to the float hanging up in small diameter wells or other well construction factors.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.53 ft above land surface, March 3, 1994 (recorder); lowest measured, 7.52 ft below land surface, September 15, 1999 (recorder).

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
(READINGS ABOVE LAND-SURFACE INDICATED BY "-")

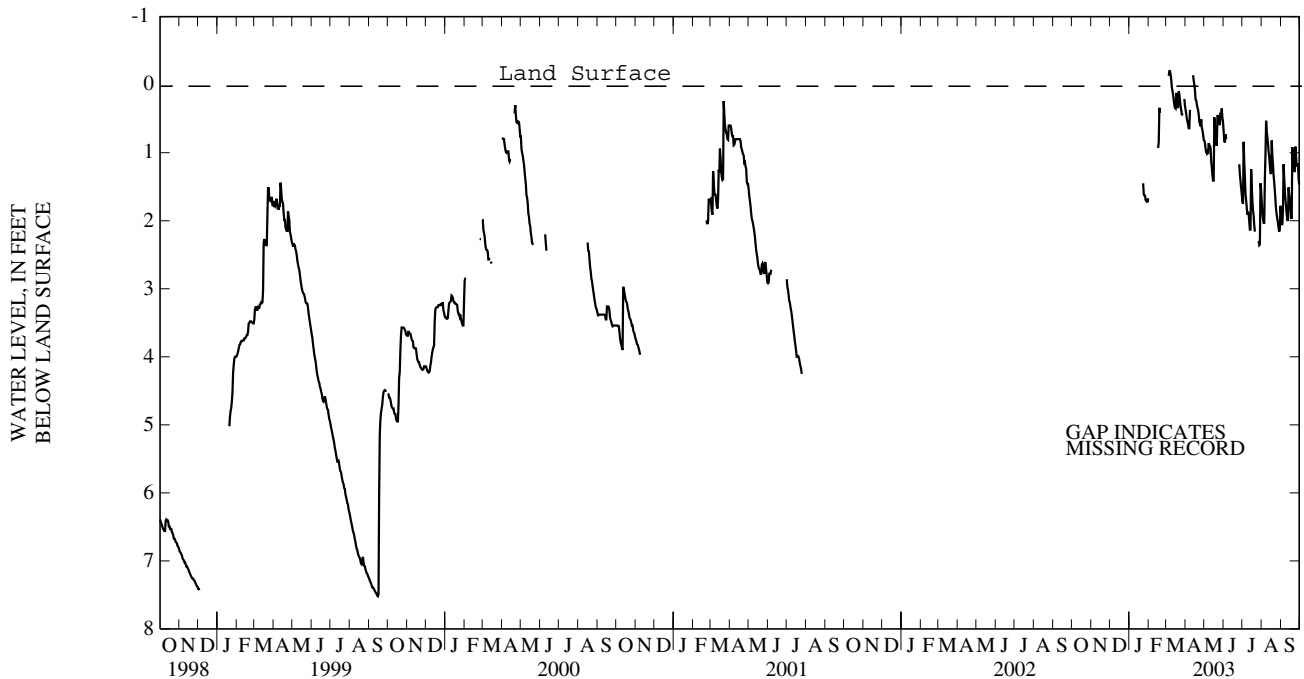
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 04, 2003	-.10	JUN 06, 2003	.85	AUG 20, 2003	1.20
APR 15	-.02	JUL 21	2.05		
HIGHEST	-.10	MAR 04, 2003			
LOWEST	2.05	JUL 21, 2003			

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	-0.13	-0.23
6	---	---	---	---	---	---	---	---	---	---	-0.20	-0.30
7	---	---	---	---	---	---	---	---	---	---	-0.20	-0.24
8	---	---	---	---	---	---	---	---	---	---	-0.15	-0.20
9	---	---	---	---	---	---	---	---	---	---	-0.07	-0.15
10	---	---	---	---	---	---	---	---	---	---	0.04	-0.07
11	---	---	---	---	---	---	---	---	---	---	0.09	0.04
12	---	---	---	---	---	---	---	---	---	---	0.15	0.09
13	---	---	---	---	---	---	---	---	---	---	0.23	0.15
14	---	---	---	---	---	---	---	---	---	---	0.30	0.23
15	---	---	---	---	---	---	---	---	---	---	0.34	0.30
16	---	---	---	---	---	---	---	---	0.93	0.84	0.35	0.02
17	---	---	---	---	---	---	---	---	0.84	0.08	0.12	0.02
18	---	---	---	---	---	---	---	---	0.34	0.16	0.23	0.12
19	---	---	---	---	---	---	---	---	0.41	0.34	0.33	0.23
20	---	---	---	---	---	---	---	---	---	---	0.33	0.00
21	---	---	---	---	---	---	---	---	---	---	0.10	0.02
22	---	---	---	---	---	---	---	---	---	---	0.14	0.06
23	---	---	---	---	---	---	1.45	1.39	---	---	0.23	0.14
24	---	---	---	---	---	---	1.61	1.45	---	---	0.32	0.23
25	---	---	---	---	---	---	1.63	1.61	---	---	0.37	0.32
26	---	---	---	---	---	---	1.63	1.59	---	---	0.45	0.29
27	---	---	---	---	---	---	1.70	1.60	---	---	0.42	0.30
28	---	---	---	---	---	---	1.71	1.64	---	---	---	---
29	---	---	---	---	---	---	1.70	1.64	---	---	---	---
30	---	---	---	---	---	---	1.73	1.67	---	---	0.21	0.13
31	---	---	---	---	---	---	1.67	1.45	---	---	0.31	0.17
MONTH	---	---	---	---	---	---	1.73	1.39	0.93	0.08	0.45	-0.30

SUSSEX COUNTY--Continued

DAY	MAX		MIN		MAX		MIN		MAX		MIN	
	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER						
1	0.37	0.31	0.82	0.78	0.69	0.50	1.72	1.60	1.73	1.54	1.89	1.78
2	0.43	0.37	0.86	0.81	0.83	0.69	1.75	0.84	1.88	1.72	2.05	1.89
3	0.50	0.43	0.94	0.86	0.85	0.73	0.84	0.56	1.97	1.87	2.05	1.85
4	0.54	0.49	0.99	0.94	0.73	0.51	1.14	0.84	2.03	1.97	1.85	0.73
5	0.59	0.47	1.01	0.97	0.80	0.55	1.36	1.14	2.03	1.25	1.17	0.82
6	0.64	0.49	0.99	0.93	---	---	1.61	1.35	1.38	0.64	1.38	1.17
7	0.64	0.17	1.02	0.56	---	---	1.70	1.55	1.02	0.08	1.55	1.38
8	0.37	0.21	0.86	0.56	---	---	1.81	1.70	0.53	0.15	1.69	1.54
9	---	---	0.90	0.73	---	---	1.91	1.80	0.69	0.52	1.80	1.68
10	---	---	0.90	0.83	---	---	1.88	1.87	0.77	0.69	1.91	1.79
11	---	---	0.93	0.90	---	---	1.89	1.83	0.87	0.76	1.99	1.90
12	---	---	1.12	0.93	---	---	2.02	1.89	0.99	0.87	1.99	1.38
13	-0.14	-0.22	1.22	1.12	---	---	2.13	2.01	1.06	0.99	1.51	1.38
14	-0.06	-0.14	1.33	1.22	---	---	2.13	0.78	1.19	1.06	1.63	1.51
15	0.00	-0.06	1.41	1.33	---	---	1.24	0.97	1.30	1.18	1.66	1.60
16	0.08	0.00	1.41	0.10	---	---	1.49	1.24	1.30	0.46	1.82	1.60
17	0.22	0.08	0.48	0.29	---	---	1.71	1.49	0.82	0.43	1.96	1.82
18	0.23	0.22	0.60	0.48	---	---	1.85	1.71	1.05	0.82	1.96	0.43
19	0.29	0.23	0.74	0.60	---	---	1.92	1.84	1.17	1.05	0.92	0.39
20	0.34	0.29	0.84	0.74	---	---	2.07	1.92	1.33	1.16	1.11	0.92
21	0.37	0.34	0.90	0.29	---	---	2.16	2.05	1.44	1.33	1.22	1.11
22	0.44	0.36	0.46	0.29	---	---	---	---	1.56	1.43	1.27	1.22
23	0.54	0.44	0.46	0.31	---	---	---	---	1.70	1.55	1.27	0.36
24	0.58	0.54	0.51	0.34	---	---	---	---	1.84	1.70	0.91	0.66
25	0.61	0.39	0.58	0.51	---	---	---	---	1.91	1.83	1.06	0.91
26	0.51	0.39	0.58	0.27	1.17	1.01	---	---	1.98	1.90	1.19	1.06
27	0.63	0.51	0.41	0.28	1.32	1.12	2.30	2.25	2.03	1.88	1.19	1.07
28	0.67	0.63	0.45	0.27	1.42	1.32	2.36	2.30	2.11	2.03	1.16	1.04
29	0.73	0.66	0.35	0.27	1.52	1.41	2.35	1.13	2.16	1.91	1.38	1.16
30	0.81	0.73	0.49	0.35	1.61	1.48	1.45	1.39	2.12	1.63	1.47	1.38
31	---	---	0.55	0.49	---	---	1.54	1.45	1.78	1.63	---	---
MONTH	0.81	-0.22	1.41	0.10	1.61	0.50	2.36	0.56	2.16	0.08	2.05	0.36
YEAR	2.36	-0.30										

Daily Low Water Levels



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

SUSSEX COUNTY--Continued

WELL NUMBER.--Of23-03. SITE ID.--384333075222901. PERMIT NUMBER.--95793.

LOCATION.--Lat 38°43'33", long 75°22'29", Hydrologic Unit 02040207, near Redden State Forest. Owner: Delaware Department of Transportation.

AQUIFER.--Beaverdam Sand of Pliocene age. Aquifer code: 121BVDM.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 20 ft; casing diameter 2 in., to 17 ft; screen diameter 2 in., from 17 to 20 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from December 1993 to current year.

DATUM.--Altitude of land surface is 51.40 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder platform, 3.20 ft above land surface.

REMARKS.--Delaware Department of Transportation Wetlands Project observation well. Periods of equal maximum and minimum daily values may be questionable due to the float hanging up in small diameter wells or other well construction factors.

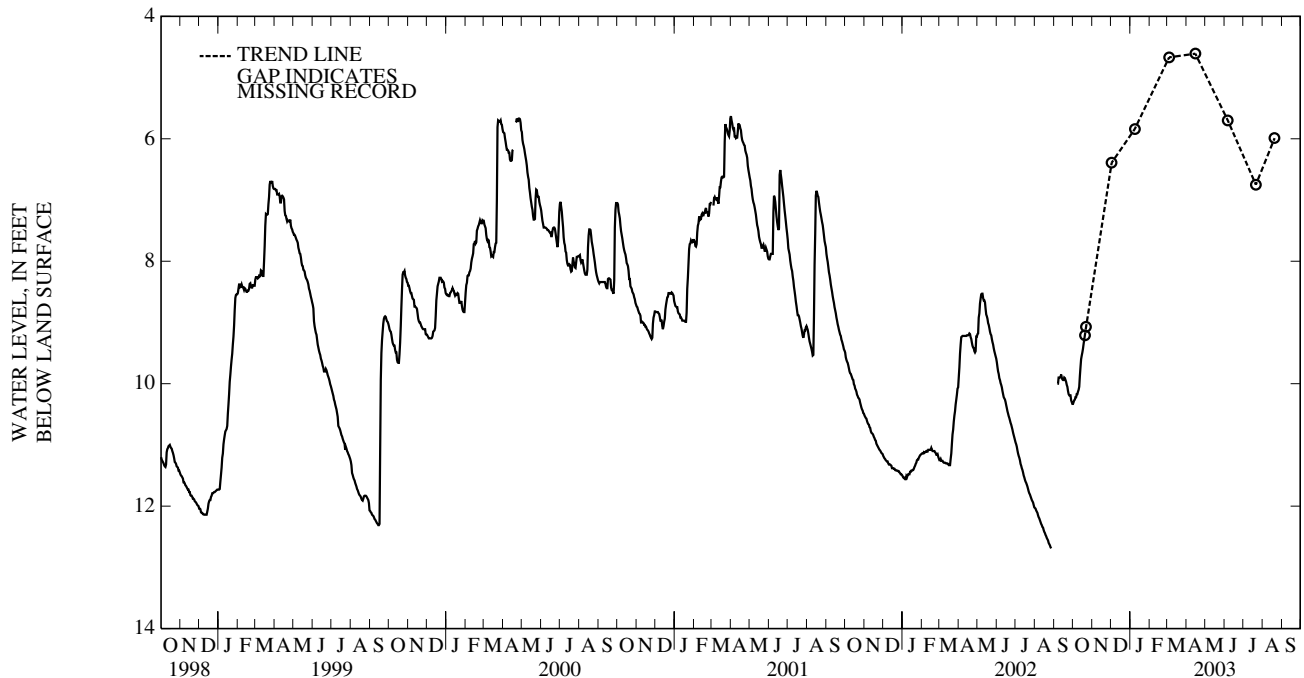
PERIOD OF RECORD.--September 1993 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.34 ft below land surface, April 1, 1994 (recorder); lowest measured, 12.69 ft below land surface, August 27, 2002 (recorder).

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 2002	9.07	JAN 08, 2003	5.84	APR 15, 2003	4.61	JUL 21, 2003	6.75
DEC 02	6.39	MAR 04	4.67	JUN 06	5.70	AUG 20	5.99
HIGHEST	4.61	APR 15, 2003					
LOWEST	9.07	OCT 22, 2002					

Daily Low Water Levels



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

SUSSEX COUNTY--Continued

WELL NUMBER.-- Of23-05. SITE ID.--384341075223801. PERMIT NUMBER.--95794.

LOCATION.--Lat 38°43'41", long 75°22'38", Hydrologic Unit 02060008, near Redden State Forest. Owner: Delaware Department of Transportation

AQUIFER.--Beaverdam Sand of Pliocene age. Aquifer code: 121BVDM.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 18 ft; casing diameter 2 in., to 15 ft; screen diameter 2 in., from 15 to 18 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from October 1998 to current year.

DATUM.--Elevation of land surface is 46.49 ft above National Geodetic Vertical Datum of 1929. Prior to July 2, 1998, (due to excavation of material during construction of artificial wetland), the elevation of land surface was 50.13 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder platform, 3.30 ft above land surface.

REMARKS.--Delaware Department of Transportation Wetlands Project observation well. Periods of equal maximum and minimum daily values may be questionable due to the float hanging up in small diameter wells or other well construction factors.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.60 ft above land surface, April 15, 2003 (recorder); lowest measured, 9.95 ft below land surface, October 19, 1995.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
(READINGS ABOVE LAND-SURFACE INDICATED BY "-")

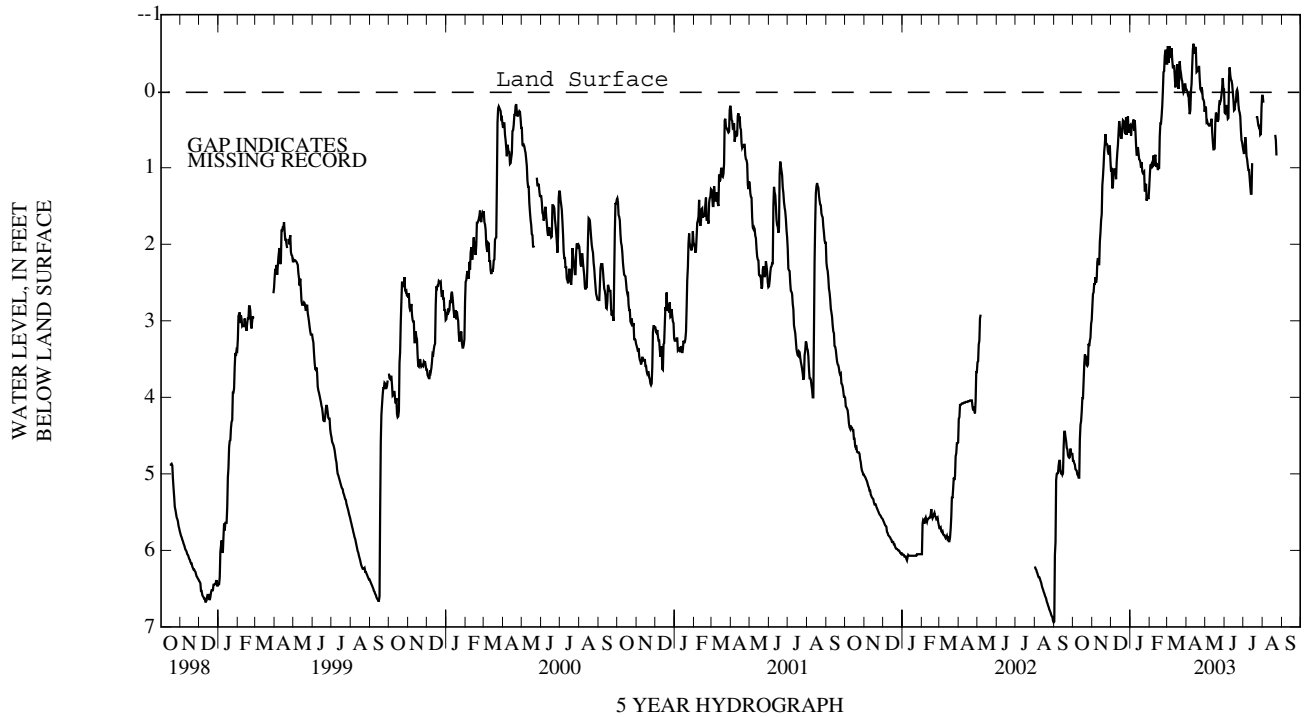
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 2002	3.45	JAN 08, 2003	.27	APR 15, 2003	-.60	JUL 21, 2003	.17
DEC 02	.97	MAR 04	-.45	JUN 06	.33	AUG 20	.50
HIGHEST	-.60	APR 15, 2003					
LOWEST	3.45	OCT 22, 2002					

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	4.83	4.82	2.81	2.59	1.05	0.91	0.44	0.13	1.11	0.95	-0.36	-0.59
2	4.83	4.80	2.65	2.52	1.00	0.90	0.58	0.30	0.97	0.88	-0.59	-0.84
3	4.86	4.81	2.63	2.49	1.27	0.93	0.48	0.18	0.97	0.74	-0.37	-0.64
4	4.88	4.83	2.51	2.41	1.23	1.07	0.45	0.23	0.95	0.60	-0.44	-0.60
5	4.94	4.82	2.53	2.06	1.07	0.73	0.46	0.33	0.99	0.93	-0.59	-0.77
6	4.95	4.92	2.43	2.05	1.02	0.95	0.37	0.31	0.98	0.73	-0.46	-0.76
7	4.96	4.90	2.50	2.43	1.02	0.84	0.52	0.22	0.84	0.55	-0.45	-0.66
8	5.01	4.96	2.45	2.22	1.04	0.85	0.38	0.19	0.97	0.83	-0.56	-0.73
9	5.02	5.01	2.23	2.17	1.15	0.93	0.52	0.19	0.87	0.81	-0.41	-0.78
10	5.05	5.02	2.18	2.16	0.93	0.80	0.70	0.49	0.83	0.51	-0.31	-0.41
11	5.05	4.55	2.26	2.16	0.80	0.64	0.83	0.70	0.99	0.76	-0.31	-0.43
12	4.55	4.36	2.26	1.96	0.70	0.54	0.83	0.73	0.94	0.70	-0.34	-0.43
13	4.36	4.23	1.97	1.85	0.54	0.03	0.73	0.51	0.97	0.83	-0.20	-0.44
14	4.31	4.18	1.85	1.69	0.39	0.03	0.81	0.72	1.03	0.91	-0.05	-0.20
15	4.18	3.93	1.69	1.61	0.46	0.28	0.89	0.76	1.00	0.86	-0.20	-0.32
16	4.01	3.66	1.61	1.23	0.57	0.23	0.90	0.63	1.00	0.59	-0.24	-0.35
17	4.01	3.78	1.23	1.04	0.61	0.54	0.93	0.57	0.59	0.40	-0.35	-0.47
18	3.79	3.58	1.12	0.97	0.61	0.47	1.00	0.83	0.42	0.35	-0.17	-0.44
19	3.58	3.28	0.97	0.70	0.47	0.29	0.93	0.77	0.42	0.24	-0.03	-0.17
20	3.44	3.35	0.79	0.69	0.38	0.14	1.05	0.75	0.32	0.19	-0.14	-0.47
21	3.46	3.43	0.69	0.56	0.39	0.38	1.07	0.95	0.19	0.00	-0.39	-0.50
22	3.47	3.44	0.56	0.38	0.44	0.28	1.06	0.98	0.00	-0.48	-0.28	-0.39
23	3.58	3.47	0.69	0.51	0.54	0.44	1.05	0.90	-0.25	-0.65	-0.23	-0.32
24	3.59	3.52	0.69	0.68	0.56	0.31	1.31	1.05	-0.26	-0.68	-0.16	-0.24
25	3.57	3.25	0.70	0.64	0.34	-0.09	1.29	1.16	-0.46	-0.57	-0.13	-0.27
26	3.30	3.16	0.79	0.57	0.57	0.34	1.21	1.05	-0.53	-0.59	-0.02	-0.27
27	3.33	3.24	0.82	0.57	0.48	0.32	1.43	1.21	-0.53	-0.60	0.02	-0.02
28	3.26	3.18	0.82	0.70	0.33	0.28	1.36	1.19	-0.36	-0.60	0.00	-0.09
29	3.22	3.04	0.71	0.49	0.52	0.30	1.39	1.19	---	---	-0.09	-0.16
30	3.04	2.91	0.91	0.59	0.54	0.39	1.41	1.28	---	---	-0.09	-0.27
31	2.99	2.81	---	---	0.45	0.37	1.28	1.11	---	---	-0.02	-0.25
MONTH	5.05	2.81	2.81	0.38	1.27	-0.09	1.43	0.13	1.11	-0.68	0.02	-0.84

SUSSEX COUNTY--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-0.02	-0.27	0.20	0.10	0.28	-0.17	0.78	0.73	0.06	0.00	---	---
2	0.00	-0.13	0.22	0.05	0.29	0.22	0.82	0.74	0.15	0.06	---	---
3	0.04	-0.08	0.40	0.22	0.27	0.18	0.74	0.53	---	---	---	---
4	0.03	-0.07	0.39	0.36	0.18	0.14	0.60	0.55	---	---	---	---
5	0.18	-0.03	0.43	0.33	0.28	0.14	0.68	0.60	---	---	---	---
6	0.30	0.18	0.43	0.29	0.36	0.28	0.85	0.68	---	---	---	---
7	0.25	-0.10	0.45	0.36	0.35	-0.19	0.89	0.81	---	---	---	---
8	0.00	-0.10	0.45	0.35	-0.19	-0.41	0.97	0.88	---	---	---	---
9	-0.10	-0.34	0.44	0.28	-0.31	-0.48	1.03	0.95	---	---	---	---
10	-0.34	-0.54	0.41	0.29	-0.21	-0.31	1.03	0.92	---	---	---	---
11	-0.54	-0.84	0.36	0.23	-0.15	-0.29	1.13	0.87	---	---	---	---
12	-0.62	-0.84	0.54	0.31	-0.14	-0.21	1.24	1.13	---	---	---	---
13	-0.52	-0.62	0.66	0.53	-0.09	-0.15	1.34	1.23	---	---	---	---
14	-0.49	-0.59	0.76	0.66	0.01	-0.10	1.34	0.94	---	---	---	---
15	-0.58	-0.69	0.76	0.74	0.11	0.01	0.94	0.72	---	---	---	---
16	-0.51	-0.63	0.75	0.41	0.25	0.11	---	---	---	---	---	---
17	-0.25	-0.51	0.41	0.25	0.24	0.15	---	---	---	---	---	---
18	-0.26	-0.32	0.28	0.21	0.15	0.10	---	---	---	---	---	---
19	-0.29	-0.33	0.30	0.25	0.14	-0.03	---	---	---	---	---	---
20	-0.30	-0.33	0.32	0.30	0.00	-0.03	---	---	---	---	---	---
21	-0.33	-0.43	0.40	0.31	-0.02	-0.11	---	---	0.57	0.52	---	---
22	-0.16	-0.40	0.37	0.19	0.02	-0.04	0.35	0.23	0.64	0.56	---	---
23	-0.03	-0.18	0.19	-0.01	0.17	0.01	0.33	0.26	0.84	0.63	---	---
24	-0.01	-0.11	0.12	-0.04	0.25	0.17	0.39	0.26	---	---	---	---
25	-0.05	-0.10	0.14	0.11	0.28	0.21	0.45	0.39	---	---	---	---
26	-0.01	-0.21	0.11	-0.01	0.33	0.27	0.47	0.42	---	---	---	---
27	0.10	-0.02	0.04	-0.05	0.51	0.33	0.44	0.37	---	---	---	---
28	0.11	0.01	-0.05	-0.17	0.64	0.51	0.57	0.42	---	---	---	---
29	0.14	-0.01	-0.17	-0.22	0.67	0.61	0.56	0.22	---	---	---	---
30	0.27	0.14	-0.02	-0.18	0.73	0.65	0.22	0.06	---	---	---	---
31	---	---	-0.02	-0.18	---	---	0.06	0.03	---	---	---	---
MONTH	0.30	-0.84	0.76	-0.22	0.73	-0.48	1.34	0.03	0.84	0.00	---	---
YEAR	5.05	-0.84										

Daily Low Water Levels



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

SUSSEX COUNTY--Continued

WELL NUMBER.--Of23-11. SITE ID.--384345075225101. PERMIT NUMBER.--159964.

LOCATION.--Lat 38°43'45", long 75°22'50", Hydrologic Unit 02040207, near Redden State Forest. Owner: Delaware Department of Transportation.

AQUIFER.--Beaverdam Sand of Pliocene age. Aquifer code: 121BVDM.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 19 ft; casing diameter 2 in., to 16 ft; screen diameter 2 in., from 16 to 19 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from October 1998 to current year.

DATUM.--Altitude of land surface is 46.64 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder platform, 3.60 ft above land surface.

REMARKS.--Delaware Department of Transportation Wetlands Project observation well. Missing data due to recorder malfunction. Periods of equal maximum and minimum daily values may be questionable due to the float hanging up in small diameter wells or other well construction factors.

PERIOD OF RECORD.--August 24, 1998 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.17 ft above land surface April 12, 2003 (recorder); lowest measured, 7.37 ft, August 31, 2002 (recorder).

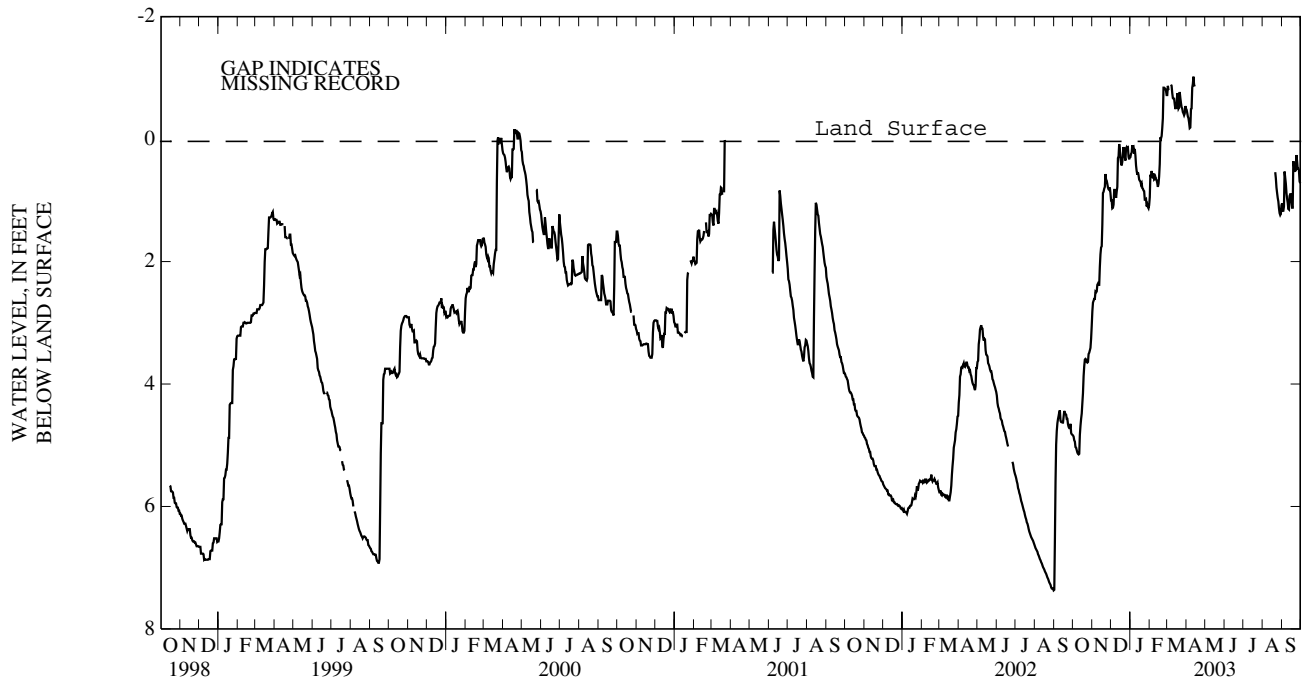
WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
(READINGS ABOVE LAND-SURFACE INDICATED BY "-")

	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL				
	OCT 22, 2002	3.59	JAN 08, 2003	.10	APR 15, 2003	-.87	JUL 21, 2003	1.15				
	DEC 02	.95	MAR 04	-.78	JUN 06	-.04	AUG 20	.39				
	HIGHEST	-.87	APR 15, 2003									
	LOWEST	3.59	OCT 22, 2002									
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	4.84	4.81	2.81	2.65	1.00	0.88	0.29	0.01	0.95	0.58	-0.72	-0.87
2	4.86	4.84	2.67	2.58	1.00	0.90	0.24	0.07	0.58	0.53	-0.87	-1.08
3	4.92	4.86	2.64	2.58	1.13	0.92	0.22	-0.08	0.61	0.52	-0.80	-0.98
4	4.94	4.91	2.61	2.54	1.12	1.07	0.10	-0.08	0.52	0.36	---	---
5	5.03	4.90	2.61	2.35	1.07	0.77	0.14	0.10	0.59	0.48	---	---
6	5.04	5.01	2.49	2.34	0.83	0.78	0.13	0.09	0.64	0.53	---	---
7	5.08	4.99	2.50	2.48	0.83	0.77	0.24	0.07	0.56	0.41	-0.89	-0.94
8	5.12	5.08	2.49	2.37	0.87	0.77	0.16	0.05	0.66	0.56	-0.87	-0.94
9	5.14	5.12	2.38	2.34	0.96	0.86	0.27	0.05	0.65	0.61	-0.75	-0.96
10	5.15	5.14	2.36	2.30	0.86	0.78	0.43	0.27	0.62	0.43	-0.67	-0.75
11	5.14	4.83	2.38	2.31	0.78	0.31	0.52	0.43	0.66	0.55	-0.66	-0.72
12	4.83	4.68	2.38	2.09	0.31	0.27	0.58	0.51	0.67	0.53	-0.66	-0.71
13	4.68	4.56	2.09	1.88	0.28	-0.10	0.54	0.41	0.72	0.64	-0.57	-0.69
14	4.57	4.48	1.88	1.77	0.08	-0.12	0.59	0.53	0.78	0.72	-0.49	-0.57
15	4.48	4.31	1.77	1.74	0.16	0.08	0.66	0.57	0.73	0.58	-0.54	-0.58
16	4.31	4.13	1.75	1.40	0.31	0.08	0.68	0.54	0.61	0.41	-0.53	-0.75
17	4.15	3.87	1.40	0.86	0.39	0.31	0.69	0.49	0.41	-0.08	-0.75	-0.83
18	3.87	3.71	0.88	0.86	0.43	0.37	0.74	0.68	-0.03	-0.09	-0.59	-0.77
19	3.71	3.54	0.86	0.74	0.37	0.23	0.72	0.67	-0.01	-0.08	-0.50	-0.59
20	3.60	3.56	0.81	0.78	0.23	0.02	0.80	0.63	-0.05	-0.18	-0.52	-0.83
21	3.59	3.56	0.78	0.57	0.13	0.04	0.81	0.76	-0.18	-0.34	-0.77	-0.85
22	3.60	3.57	0.57	0.42	0.21	0.09	0.84	0.79	-0.34	-0.84	-0.67	-0.79
23	3.64	3.58	0.66	0.49	0.29	0.21	0.85	0.76	-0.84	-1.02	-0.59	-0.67
24	3.65	3.61	0.68	0.65	0.35	0.15	0.99	0.85	-0.84	-0.98	-0.52	-0.59
25	3.64	3.51	0.73	0.67	0.15	-0.24	0.99	0.95	-0.83	-0.92	-0.50	-0.56
26	3.51	3.45	0.79	0.68	0.13	-0.05	0.98	0.90	-0.82	-0.85	-0.44	-0.54
27	3.49	3.44	0.82	0.68	0.15	0.13	1.10	0.98	-0.79	-0.83	-0.42	-0.46
28	3.45	3.39	0.83	0.77	0.14	0.14	1.07	1.01	-0.72	-0.82	-0.39	-0.42
29	3.41	3.26	0.79	0.66	0.29	0.14	1.11	1.01	---	---	-0.42	-0.54
30	3.26	3.05	0.88	0.70	0.33	0.25	1.13	1.08	---	---	-0.54	-0.68
31	3.05	2.81	---	---	0.29	0.25	1.08	0.95	---	---	-0.50	-0.68
MONTH	5.15	2.81	2.81	0.42	1.13	-0.24	1.13	-0.08	0.95	-1.02	-0.39	-1.08

SUSSEX COUNTY--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	-0.48	-0.58	---	---	---	---	---	---	---	---	1.05	0.99
2	-0.43	-0.50	---	---	---	---	---	---	---	---	1.17	1.05
3	-0.37	-0.44	---	---	---	---	---	---	---	---	1.17	1.10
4	-0.34	-0.40	---	---	---	---	---	---	---	---	1.10	0.44
5	-0.27	-0.35	---	---	---	---	---	---	---	---	0.53	0.43
6	-0.18	-0.27	---	---	---	---	---	---	---	---	0.63	0.53
7	-0.19	-0.56	---	---	---	---	---	---	---	---	0.73	0.63
8	-0.49	-0.56	---	---	---	---	---	---	---	---	0.88	0.73
9	-0.50	-0.91	---	---	---	---	---	---	---	---	0.97	0.88
10	-0.84	-0.90	---	---	---	---	---	---	---	---	1.04	0.97
11	-0.90	-1.16	---	---	---	---	---	---	---	---	1.14	1.04
12	-1.02	-1.17	---	---	---	---	---	---	---	---	1.15	0.93
13	-0.89	-1.02	---	---	---	---	---	---	---	---	0.93	0.86
14	-0.86	-0.89	---	---	---	---	---	---	---	---	0.90	0.87
15	---	---	---	---	---	---	---	---	---	---	0.90	0.87
16	---	---	---	---	---	---	---	---	---	---	1.02	0.88
17	---	---	---	---	---	---	---	---	---	---	1.12	1.02
18	---	---	---	---	---	---	---	---	---	---	1.12	0.36
19	---	---	---	---	---	---	---	---	---	---	0.36	0.26
20	---	---	---	---	---	---	---	---	---	---	0.43	0.34
21	---	---	---	---	---	---	---	---	0.54	0.48	0.52	0.43
22	---	---	---	---	---	---	---	---	0.64	0.54	0.52	0.50
23	---	---	---	---	---	---	---	---	0.79	0.64	0.51	0.13
24	---	---	---	---	---	---	---	---	0.88	0.79	0.26	0.16
25	---	---	---	---	---	---	---	---	0.96	0.88	0.36	0.26
26	---	---	---	---	---	---	---	---	1.02	0.96	0.48	0.36
27	---	---	---	---	---	---	---	---	1.13	1.01	0.48	0.43
28	---	---	---	---	---	---	---	---	1.21	1.13	0.51	0.40
29	---	---	---	---	---	---	---	---	1.24	1.19	0.69	0.51
30	---	---	---	---	---	---	---	---	1.22	1.08	0.72	0.69
31	---	---	---	---	---	---	---	---	1.08	1.00	---	---
MONTH	-0.18	-1.17	---	---	---	---	---	---	1.24	0.48	1.17	0.13
YEAR	5.15	-1.17										

Daily Low Water Levels



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

SUSSEX COUNTY--Continued

WELL NUMBER.--Oh54-01. SITE ID.--384038075110001.

LOCATION.--Lat 38°40'38", long 75°11'00", Hydrologic Unit 02060010, at intersection of DE Rts. 24 and 277, near Angola. Owner: U.S. Geological Survey.

AQUIFER.--Manokin aquifer in the Eastover Formation of Upper Miocene age. Aquifer code: 122MNKN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 290 ft; casing diameter 2 in., to 280 ft; screen diameter 2 in., from 280 to 290 ft.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by Delaware Geological Survey personnel. Monthly water level measurements from November 1977 to December 1979. Twice yearly water level measurements from March 1980 to October 1984. Monthly water level measurements by U.S. Geological Survey and Delaware Geological Survey personnel from February 1985 to July 1987.

DATUM.--Elevation of land surface is 18 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of steel casing, 1.5 ft above land surface.

REMARKS.--Delaware Water-Level Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

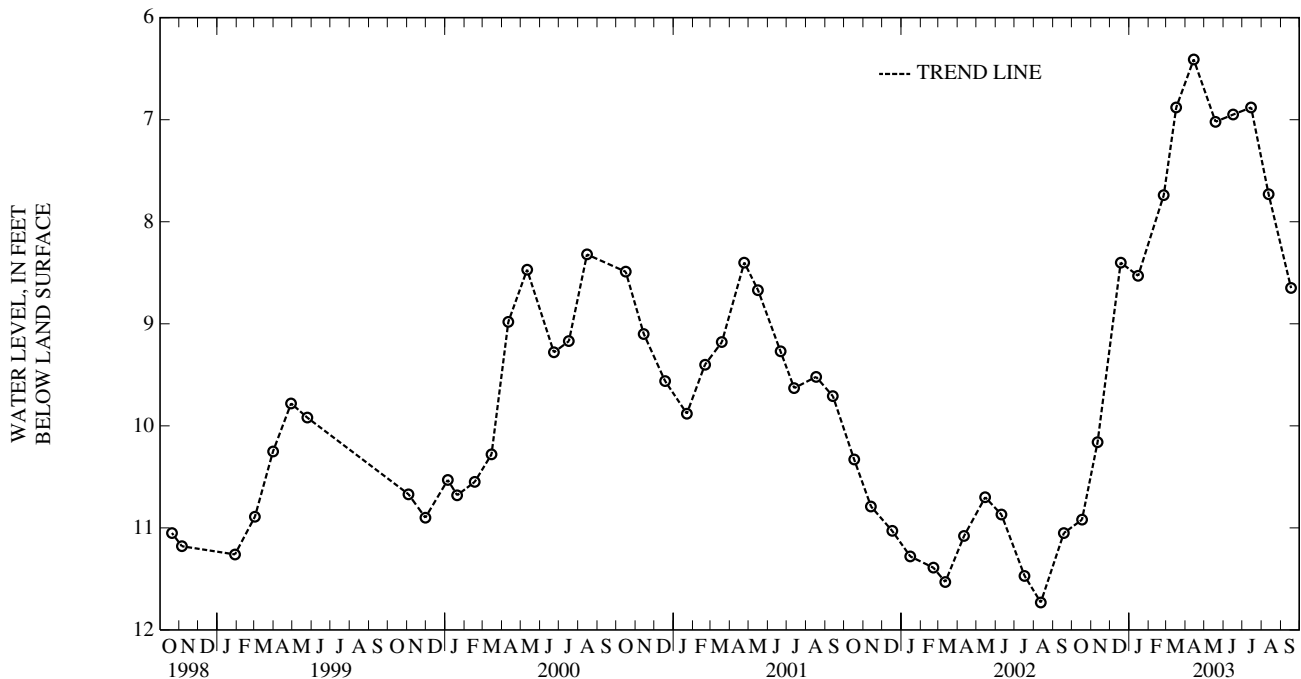
PERIOD OF RECORD.--November 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.35 ft below land surface, April 4, 1984; lowest measured, 12.44 ft below land surface, December 1, 1993.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17, 2002	10.92	JAN 15, 2003	8.53	APR 14, 2003	6.41	JUL 15, 2003	6.88
NOV 11	10.16	FEB 25	7.74	MAY 19	7.02	AUG 12	7.73
DEC 18	8.40	MAR 17	6.88	JUN 16	6.95	SEP 17	8.65

HIGHEST 6.41 APR 14, 2003
 LOWEST 10.92 OCT 17, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

SUSSEX COUNTY--Continued

WELL NUMBER.--Oh54-02. SITE ID.--384038075110002.

LOCATION.--Lat 38°40'38", long 75°11'00", Hydrologic Unit 02060010, at intersection of DE Rts. 24 and 277, near Angola. Owner: U.S. Geological Survey.

AQUIFER.--Pocomoke aquifer in the Eastover Formation of Upper Miocene age. Aquifer code: 122PCMK.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 189 ft; casing diameter 2 in., to 179 ft; screen diameter 2 in., from 179 to 189 ft.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by Delaware Geological Survey personnel. Monthly water level from November 1977 to December 1979. Twice yearly water level measurements from March 1980 to October 1984. Monthly water level measurements by U.S. Geological Survey and Delaware Geological Survey personnel from February 1985 to July 1987.

DATUM.--Elevation of land surface is 18 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of steel casing, 1.5 ft above land surface.

REMARKS.--Delaware Water-Level Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

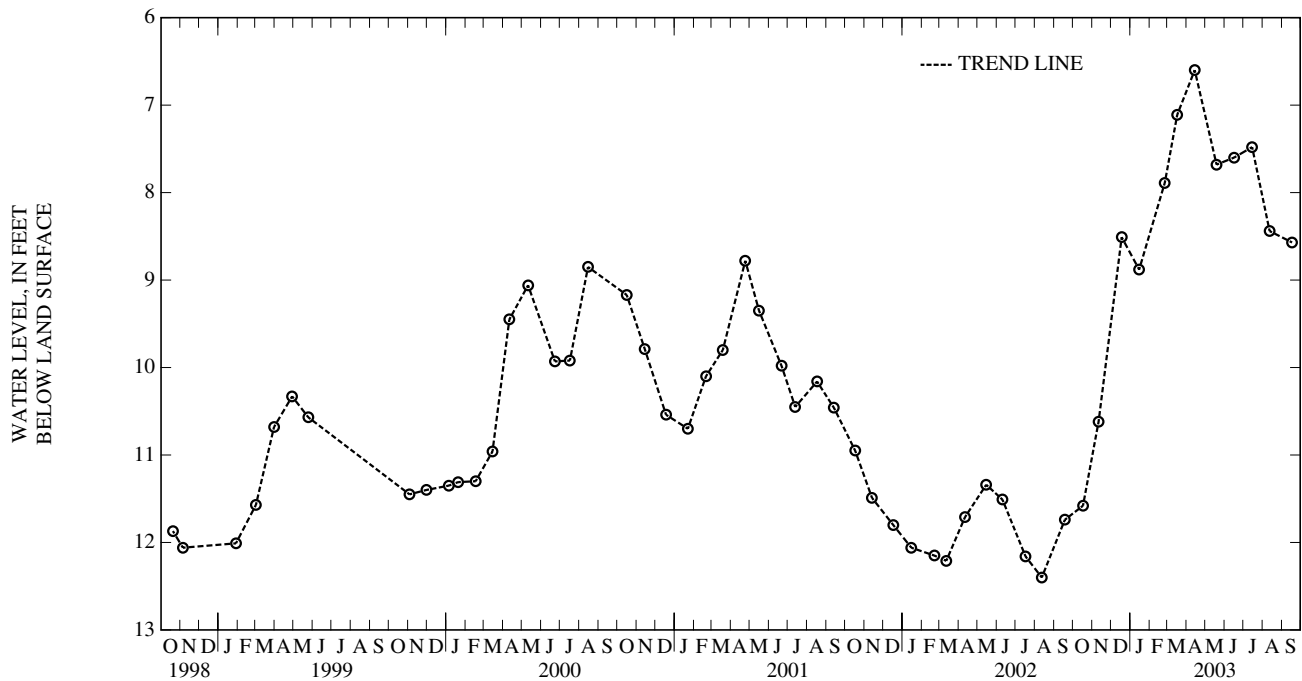
PERIOD OF RECORD.--November 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.44 ft below land surface, April 2, 1979; lowest measured, 13.85 ft below land surface, September 23, 1981.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17, 2002	11.58	JAN 15, 2003	8.88	APR 14, 2003	6.60	JUL 15, 2003	7.48
NOV 11	10.62	FEB 25	7.89	MAY 19	7.68	AUG 12	8.44
DEC 18	8.51	MAR 17	7.11	JUN 16	7.60	SEP 17	8.57

HIGHEST 6.60 APR 14, 2003
 LOWEST 11.58 OCT 17, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

SUSSEX COUNTY—Continued

WELL NUMBER.--O24-06. SITE ID.--384258075063101. PERMIT NUMBER.--03489.

LOCATION.--Lat 38°42'58", long 75°06'31", Hydrologic Unit 02060010, near DE Rt. 1, at Rehobeth Water Pumping Station. Owner: City of Rehobeth.

AQUIFER.--Manokin aquifer in the Eastover Formation of Upper Miocene age. Aquifer code: 122MNKN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 250 ft; casing diameter 4 in., to 230 ft; screened 230 to 250 ft.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by Delaware Geological Survey personnel. Equipped with graphic water-level recorder from June 1976 to December 1979. Monthly water level measurements from January 1980 to December 1981.

DATUM.--Elevation of land surface is 25 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.70 ft above land surface.

REMARKS.--Delaware Water-Level Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

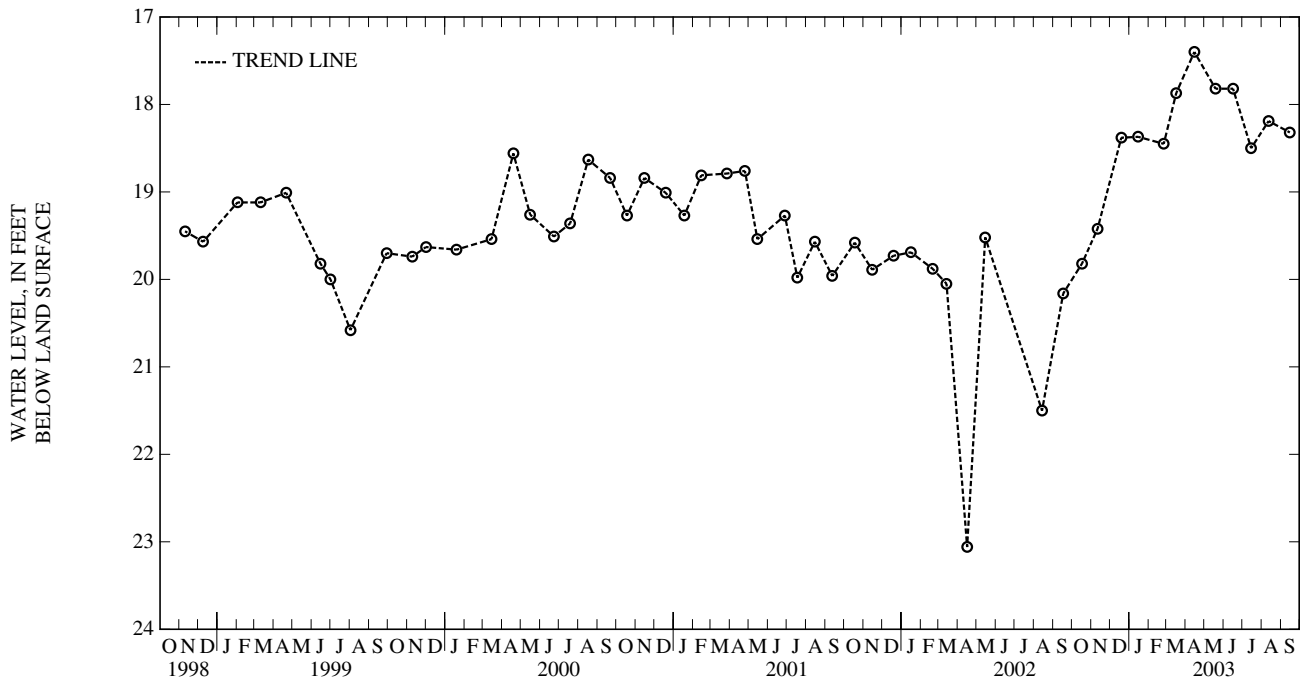
PERIOD OF RECORD.--May 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.90 ft below land surface, March 25, 1979. lowest measured, 23.06 ft below land surface, April 16, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17, 2002	19.82	JAN 15, 2003	18.37	APR 15, 2003	17.40	JUL 15, 2003	18.50
NOV 11	19.42	FEB 25	18.45	MAY 19	17.82	AUG 12	18.19
DEC 19	18.38	MAR 17	17.87	JUN 16	17.82	SEP 15	18.32

HIGHEST 17.40 APR 15, 2003
 LOWEST 19.82 OCT 17, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

SUSSEX COUNTY--Continued

WELL NUMBER.--Pf24-02. SITE ID.--383730075213501.

LOCATION.--Lat 38°37'30", long 75°21'35", Hydrologic Unit 02060010, near DE Rt. 113, near Stockley Hospital. Owner: U.S. Geological Survey.

AQUIFER.--Beaverdam Sand of Pliocene age. Aquifer code: 121BVDM.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 49 ft; casing diameter 4 in., to 46 ft; screen diameter 4 in., from 46 to 49 ft.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape or electric tape by U.S. Geological Survey personnel from June 1998 to current year. Equipped with graphic water-level recorder from January 1970 to January 1982. Intermittent water level measurements from April 1982 to August 1987. Twice yearly water level measurements from February 1988 to April 1993.

DATUM.--Elevation of land surface is 50 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.00 ft above land surface.

REMARKS.--Collection of Basic Records (CBR) observation well.

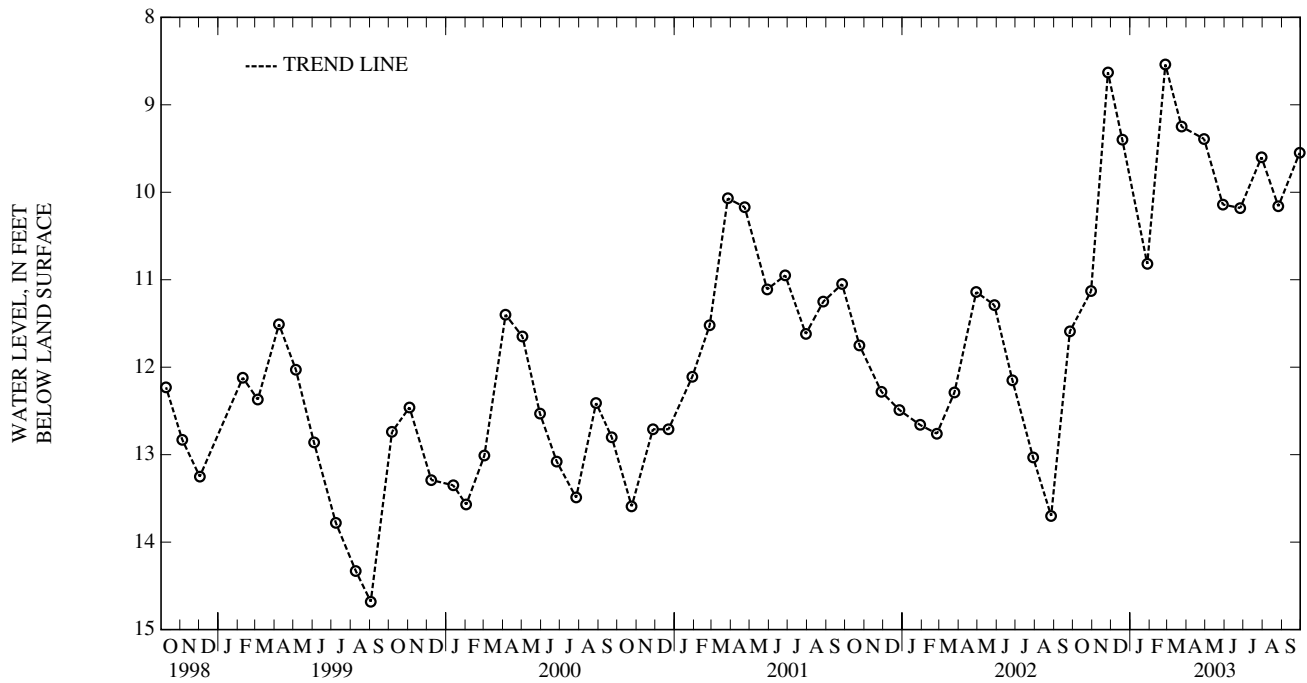
PERIOD OF RECORD.--January 1970 to April 1993, June 1998 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.53 ft below land surface, March 10, 1979. lowest measured, 14.68 ft below land surface, September 2, 1999.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	11.13	JAN 28, 2003	10.82	APR 29, 2003	9.39	JUL 30, 2003	9.60
NOV 26	8.63	FEB 26	8.54	MAY 29	10.14	AUG 26	10.16
DEC 19	9.40	MAR 24	9.25	JUN 26	10.18	SEP 29	9.55

HIGHEST 8.54 FEB 26, 2003
 LOWEST 11.13 OCT 30, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

SUSSEX COUNTY--Continued

WELL NUMBER.--Pf24-03. SITE ID.--383730075213502.

LOCATION.--Lat 38°37'30", long 75°21'35", Hydrologic Unit 02060010, near DE Rt. 113, near Stockley Hospital. Owner: U.S. Geological Survey.

AQUIFER.--Manokin aquifer in the Eastover Formation of Upper Miocene age. Aquifer code: 122MNKN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 178 ft; casing diameter 4 in., to 58 ft; casing diameter 2 in., to 168 ft; screen diameter 2 in., from 168 to 178 ft.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape or electric tape by U.S. Geological Survey personnel from June 1998 to current year. Weekly water level measurements from November 1976 to May 1977. Monthly water level measurements from June 1977 to December 1986. Intermittent water level measurements from February 1987 to November 1988. Twice yearly water level measurements from April 1989 to April 1993.

DATUM.--Elevation of land surface is 50 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.70 ft above land surface.

REMARKS.--Delaware Water-Level Monitoring Network observation well. Water levels are affected by regional ground-water withdrawal.

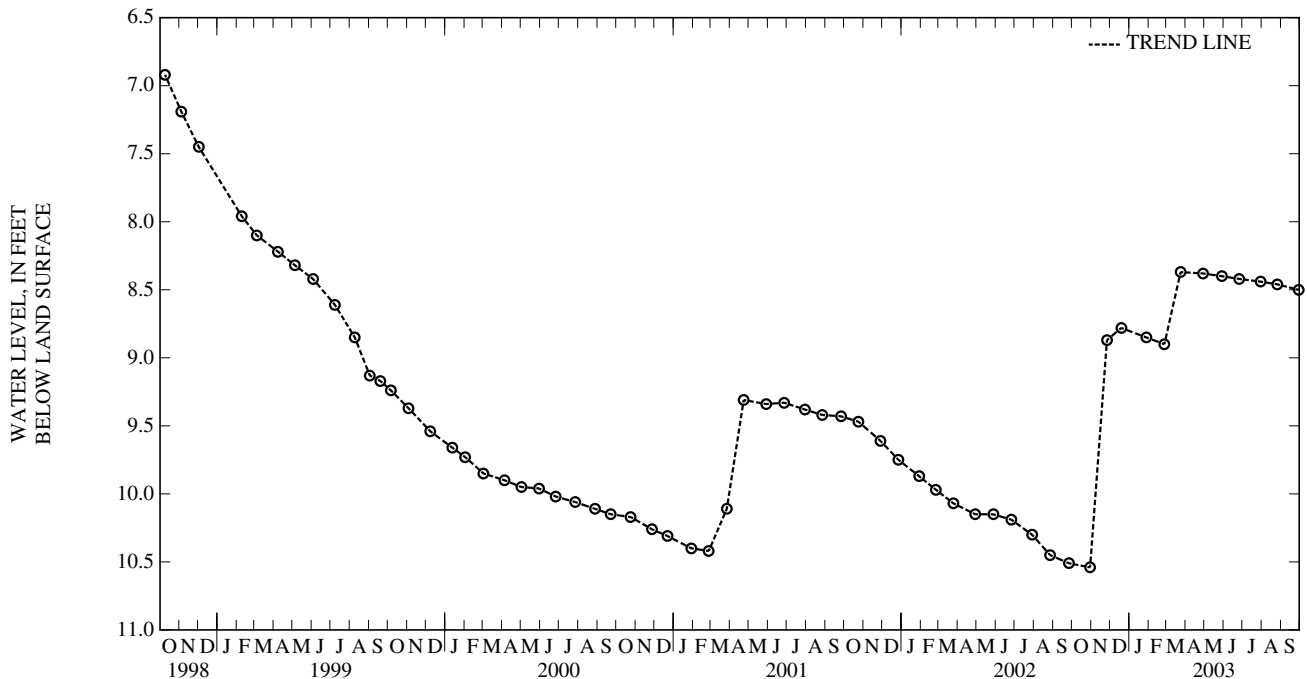
PERIOD OF RECORD.--November 1976 to April 1993, June 1998 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.67 ft below land surface, April 2, 1979. lowest measured, 12.72 ft below land surface, August 28, 1979.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	10.54	JAN 28, 2003	8.85	APR 29, 2003	8.38	JUL 30, 2003	8.44
NOV 26	8.87	FEB 26	8.90	MAY 29	8.40	AUG 26	8.46
DEC 19	8.78	MAR 24	8.37	JUN 26	8.42	SEP 29	8.50

HIGHEST 8.37 MAR 24, 2003
 LOWEST 10.54 OCT 30, 2002



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

SUSSEX COUNTY--Continued

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.--Beaverdam Sand of Pliocene age. Aquifer code: 121BVDM.

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.--Monthly water level measurements with chalked steel tape by 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.

REMARKS.--Delaware Water-Level Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

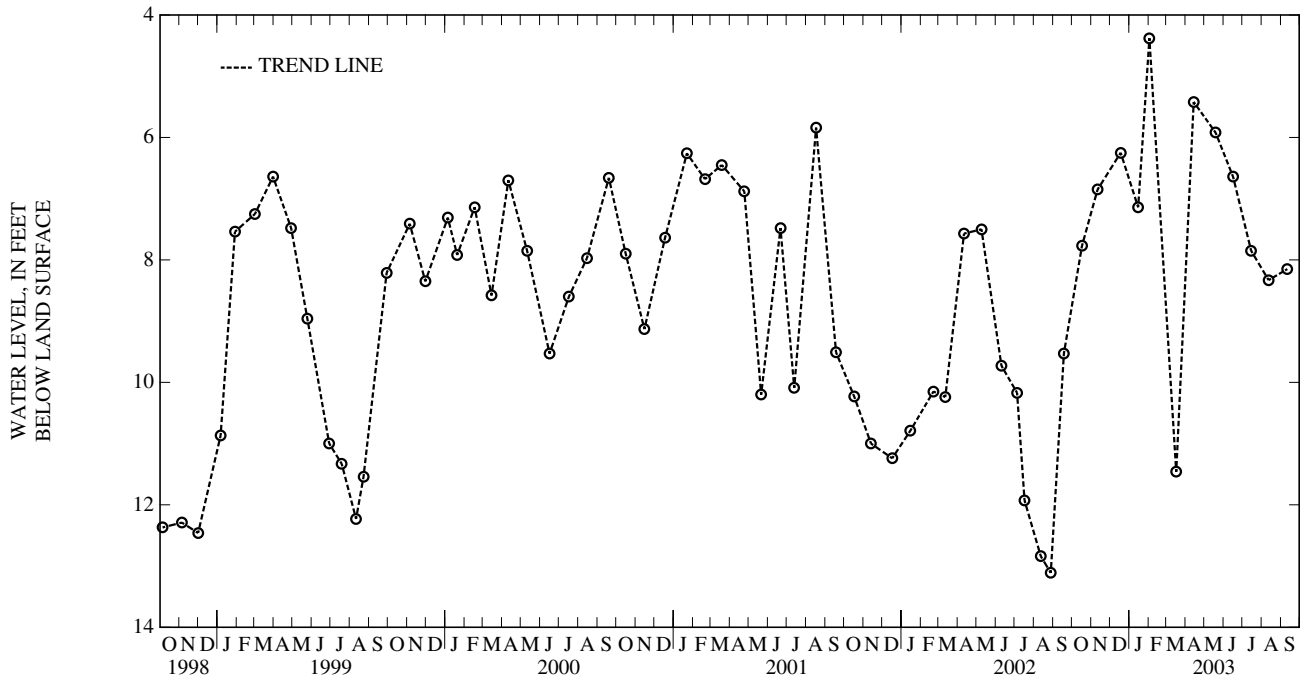
PERIOD OF RECORD.--September 1959 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.66 ft below land surface, January 10, 1994; lowest measured, 13.11 ft below land surface, August 28, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17, 2002	7.77	JAN 15, 2003	7.14	APR 14, 2003	5.42	JUL 15, 2003	7.85
NOV 11	6.85	FEB 02	4.38	MAY 19	5.92	AUG 12	8.33
DEC 18	6.25	MAR 17	11.46	JUN 16	6.64	SEP 11	8.15

HIGHEST 4.38 FEB 02, 2003
 LOWEST 11.46 MAR 17, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

SUSSEX COUNTY--Continued

WELL NUMBER.--Qh54-04. SITE ID.--383050075105201.

LOCATION.--Lat 39°30'50", long 75°10'52", Hydrologic Unit 02060010, at Pyle Center, Omar. Owner: U.S. Geological Survey.

AQUIFER.--Manokin aquifer in the Eastover Formation of Upper Miocene age. Aquifer code: 122MNKN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 328 ft; casing diameter 2 in., to 324 ft; screen diameter 2 in., from 324 to 328 ft.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by Delaware Geological Survey personnel. Monthly water level measurements from November 1978 to December 1979. Intermittent water level measurements from March 1980 to February 1985. Monthly water level measurements from April 1985 to November 1988.

DATUM.--Elevation of land surface is 28 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.00 ft above land surface.

REMARKS.--Delaware Water-Level Network Monitoring observation well.

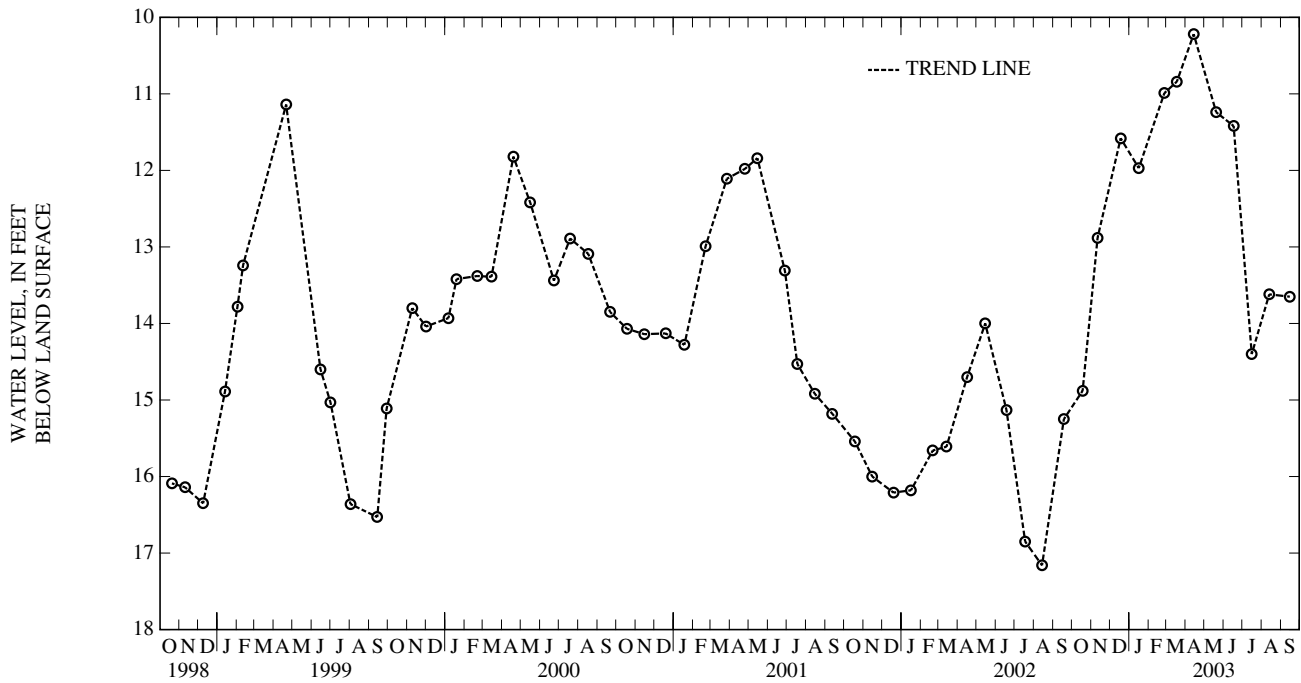
PERIOD OF RECORD.--November 1978 to present.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.07 ft below land surface, April 2, 1979; lowest measured, 17.16 ft below land surface, August 14, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18, 2002	14.88	JAN 16, 2003	11.97	APR 14, 2003	10.22	JUL 16, 2003	14.40
NOV 11	12.88	FEB 26	10.99	MAY 20	11.24	AUG 13	13.62
DEC 18	11.58	MAR 18	10.84	JUN 17	11.42	SEP 15	13.65

HIGHEST 10.22 APR 14, 2003
 LOWEST 14.88 OCT 18, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

SUSSEX COUNTY--Continued

WELL NUMBER.--Qh54-06. SITE ID.--383050075105203.

LOCATION.--Lat 39°30'50", long 75°10'52", Hydrologic Unit 02060010, at Pyle Center, Omar. Owner: U.S. Geological Survey.

AQUIFER.--Pocomoke aquifer in the Eastover Formation of Upper Miocene age. Aquifer code: 122PCMK.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 148 ft; casing diameter 2 in., to 144 ft; screen diameter 2 in., from 144 to 148 ft.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by Delaware Geological Survey personnel. Monthly water level measurements from November 1978 to December 1979. Intermittent water level measurements from March 1980 to February 1985. Monthly water level measurements from April 1985 to November 1988.

DATUM.--Elevation of land surface is 28 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.00 ft above land surface.

REMARKS.--Delaware Water-Level Monitoring Network observation well.

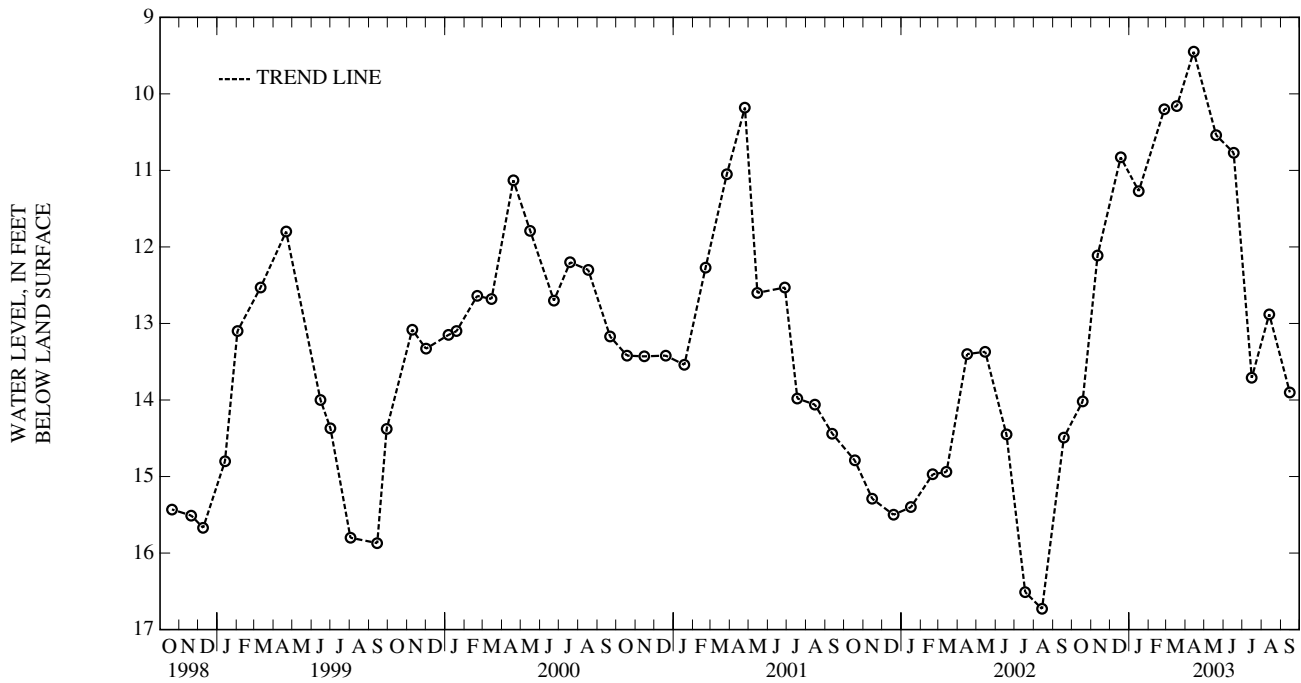
PERIOD OF RECORD.--November 1978 to present.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.95 ft below land surface, March 1, 1979; lowest measured, 17.10 ft below land surface, July 24, 1986.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18, 2002	14.02	JAN 16, 2003	11.27	APR 14, 2003	9.45	JUL 16, 2003	13.71
NOV 11	12.11	FEB 26	10.20	MAY 20	10.54	AUG 13	12.88
DEC 18	10.83	MAR 18	10.16	JUN 17	10.77	SEP 15	13.90

HIGHEST 9.45 APR 14, 2003
 LOWEST 14.02 OCT 18, 2002



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

SUSSEX COUNTY--Continued

WELL NUMBER.--Qh54-07. SITE ID.--383050075105204.

LOCATION.--Lat 39°30'50", long 75°10'52", Hydrologic Unit 02060010, at Pyle Center, Omar. Owner: U.S. Geological Survey.

AQUIFER.--Omar Formation of Pleistocene age. Aquifer code: 112OMAR.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 108 ft; casing diameter 2 in., to 104 ft; screen diameter 2 in., from 104 to 108 ft.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by Delaware Geological Survey personnel. Monthly water level measurements from November 1978 to December 1979, and April 1985 to November 1988. Intermittent water level measurements from March 1980 to February 1985.

DATUM.--Elevation of land surface is 28 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.00 ft above land surface.

REMARKS.--Delaware Water-Level Monitoring Network observation well.

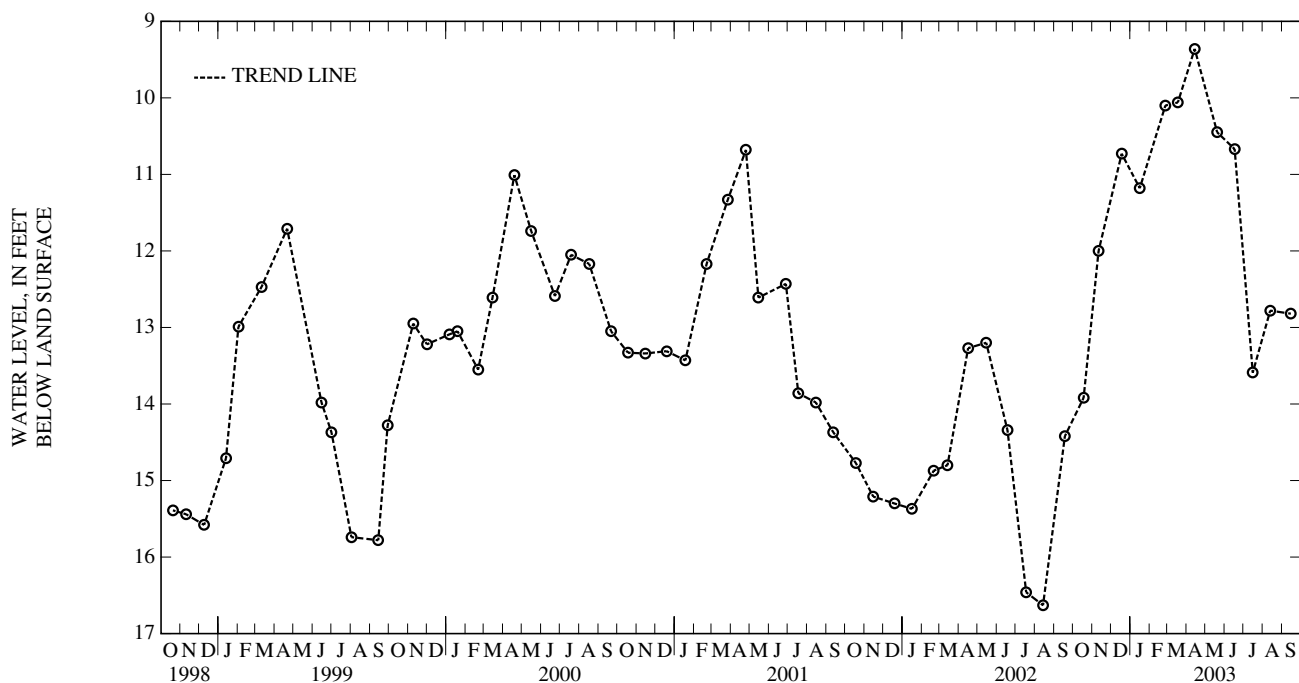
PERIOD OF RECORD.--December 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.83 ft below land surface, March 1, 1979; lowest measured, 16.63 ft below land surface, August 14, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18, 2002	13.92	JAN 16, 2003	11.18	APR 14, 2003	9.36	JUL 16, 2003	13.59
NOV 11	12.00	FEB 26	10.10	MAY 20	10.45	AUG 13	12.78
DEC 18	10.73	MAR 18	10.06	JUN 17	10.67	SEP 15	12.82

HIGHEST 9.36 APR 14, 2003
 LOWEST 13.92 OCT 18, 2002



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

SUSSEX COUNTY--Continued

WELL NUMBER.--Qj32-17. SITE ID.--383210075035802. PERMIT NUMBER.--45428.

LOCATION.--Lat 38°32'10", long 75°03'58", Hydrologic Unit 02060010, 0.5 mi southwest of intersection with DE Rts. 1 and 26, Bethany Beach. Owner: Town of Bethany Beach.

AQUIFER.--Manokin aquifer in the Eastover Formation of Upper Miocene age. Aquifer code: 122MNKN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 400 ft; casing diameter 4 in., to 335 ft; screen diameter 4 in., from 335 to 400 ft.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by Delaware Geological Survey personnel.

DATUM.--Elevation of land surface is 7 ft. above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, at land surface.

REMARKS.--Delaware Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

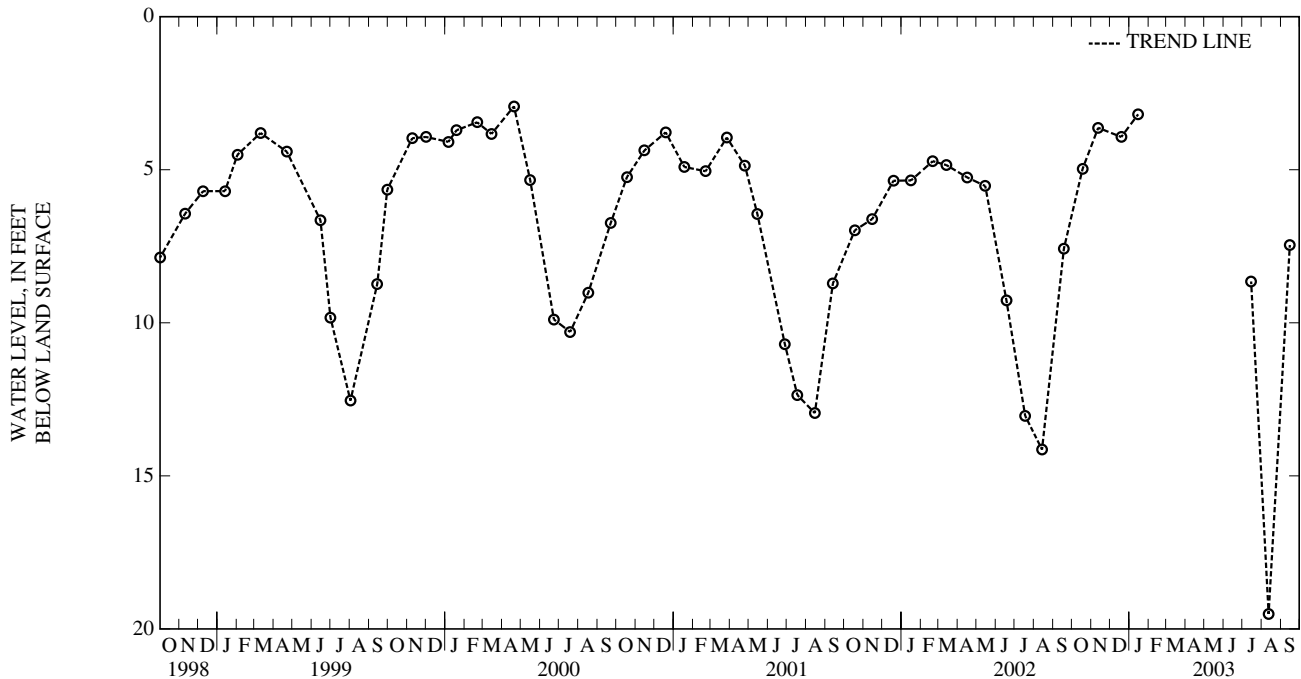
PERIOD OF RECORD.--February 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.12 ft below land surface, April 1, 1993; lowest measured, 19.51 ft below land surface, August 12, 2003.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18, 2002	4.97	DEC 19, 2002	3.93	JUL 15, 2003	8.65	SEP 15, 2003	7.46
NOV 12	3.63	JAN 15, 2003	3.19	AUG 12	19.51		

HIGHEST 3.19 JAN 15, 2003
 LOWEST 19.51 AUG 12, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

SUSSEX COUNTY--Continued

WELL NUMBER.--Rj22-05. SITE ID.--382808075030501.

LOCATION.--Lat 38°28'08", long 75°03'05", Hydrologic Unit 02060010, at Fenwick Island State Park. Owner: U.S. Geological Survey.

AQUIFER.--Manokin aquifer in the Eastover Formation of Upper Miocene age. Aquifer code: 122MNKN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 455 ft; casing diameter 1.25 in., to 450 ft; screen diameter 2 in., from 450 to 455 ft.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by Delaware Geological Survey personnel. Monthly water level measurements from April 1977 to March 1980, and April 1985 to July 1987. Intermittent water level measurements from September 1980 to February 1985.

DATUM.--Elevation of land surface is 5 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.00 ft above land surface.

REMARKS.--Delaware Water-Level Monitoring Network observation well.

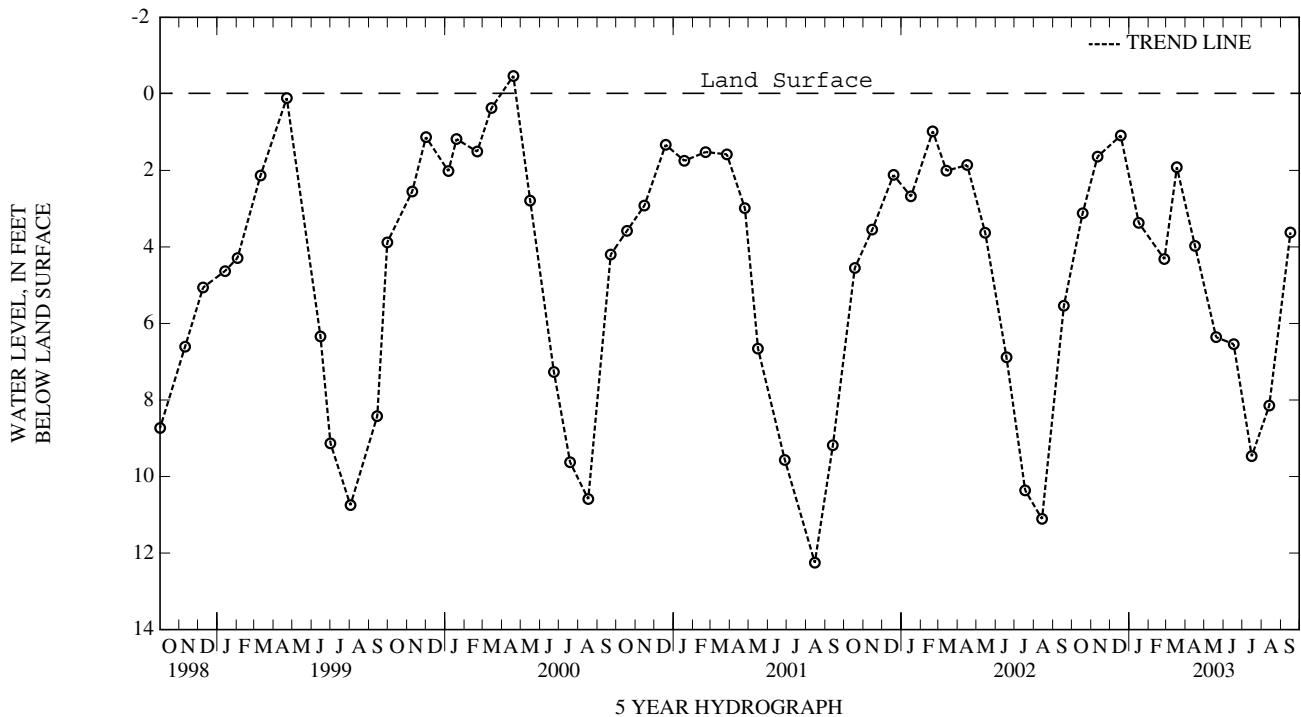
PERIOD OF RECORD.--April 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.00 ft above land surface, March 4, 1997; lowest measured, 13.81 ft below land surface, July 30, 1992.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18, 2002	3.12	JAN 16, 2003	3.37	APR 16, 2003	3.97	JUL 16, 2003	9.47
NOV 11	1.64	FEB 26	4.32	MAY 20	6.36	AUG 13	8.15
DEC 18	1.09	MAR 18	1.92	JUN 17	6.54	SEP 16	3.62

HIGHEST 1.09 DEC 18, 2002
 LOWEST 9.47 JUL 16, 2003



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

SUSSEX COUNTY--Continued

WELL NUMBER.--Rj22-06. SITE ID.--382808075030502.

LOCATION.--Lat 38°28'08", long 75°03'05", Hydrologic Unit 02060010, at Fenwick Island State Park. Owner: U.S. Geological Survey.

AQUIFER.--Ocean City aquifer in the Eastover Formation of Upper Miocene age. Aquifer code: 122OCNC.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 295 ft; casing diameter 1.25 in., to 290 ft; screen diameter 2 in., from 290 to 295 ft.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by Delaware Geological Survey personnel. Monthly water level measurements from April 1977 to March 1980, and April 1985 to July 1987. Intermittent water level measurements from September 1980 to February 1985.

DATUM.--Elevation of land surface is 5 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.00 ft above land surface.

REMARKS.--Delaware Water-Level Monitoring Network observation well.

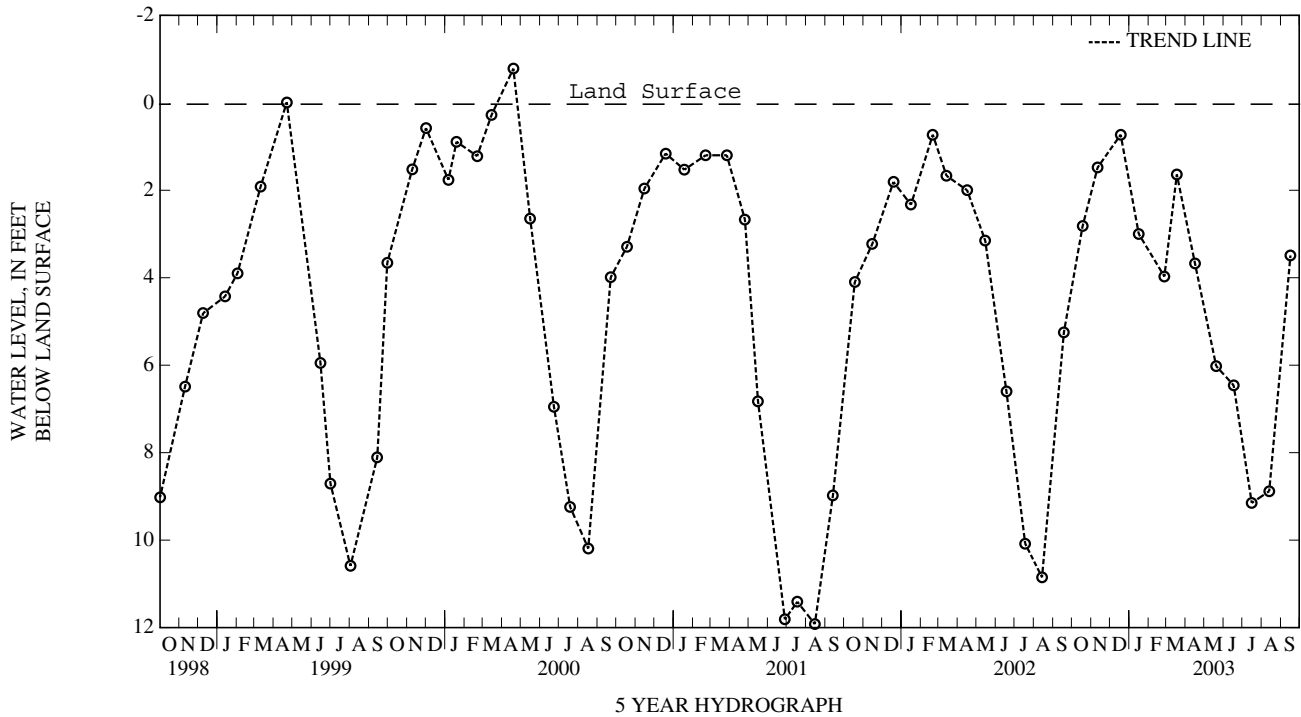
PERIOD OF RECORD.--April 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.00 ft above land surface, April 2, 1979, April 4, 1984, and March 4, 1997; lowest measured, 12.86 ft below land surface, July 30, 1992.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18, 2002	2.82	JAN 16, 2003	3.00	APR 16, 2003	3.67	JUL 16, 2003	9.15
NOV 11	1.48	FEB 26	3.97	MAY 20	6.02	AUG 13	8.88
DEC 18	.73	MAR 18	1.64	JUN 17	6.46	SEP 16	3.49

HIGHEST .73 DEC 18, 2002
 LOWEST 9.15 JUL 16, 2003



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

SUSSEX COUNTY--Continued

WELL NUMBER.--Rj22-07. SITE ID.--382808075030503.

LOCATION.--Lat 38°28'08", long 75°03'05", Hydrologic Unit 02060010, at Fenwick Island State Park. Owner: U.S. Geological Survey.

AQUIFER.--Pocomoke aquifer in the Eastover Formation of Upper Miocene age. Aquifer code: 122PCMK.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 185 ft; casing diameter 1.25 in., to 180 ft; screen diameter 2 in., from 180 to 185 ft.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by Delaware Geological Survey personnel. Monthly water level measurements from April 1977 to March 1980, and April 1985 to July 1987. Intermittent water level measurements were collected from September 1980 to February 1985.

DATUM.--Elevation of land surface is 5 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.00 ft above land surface.

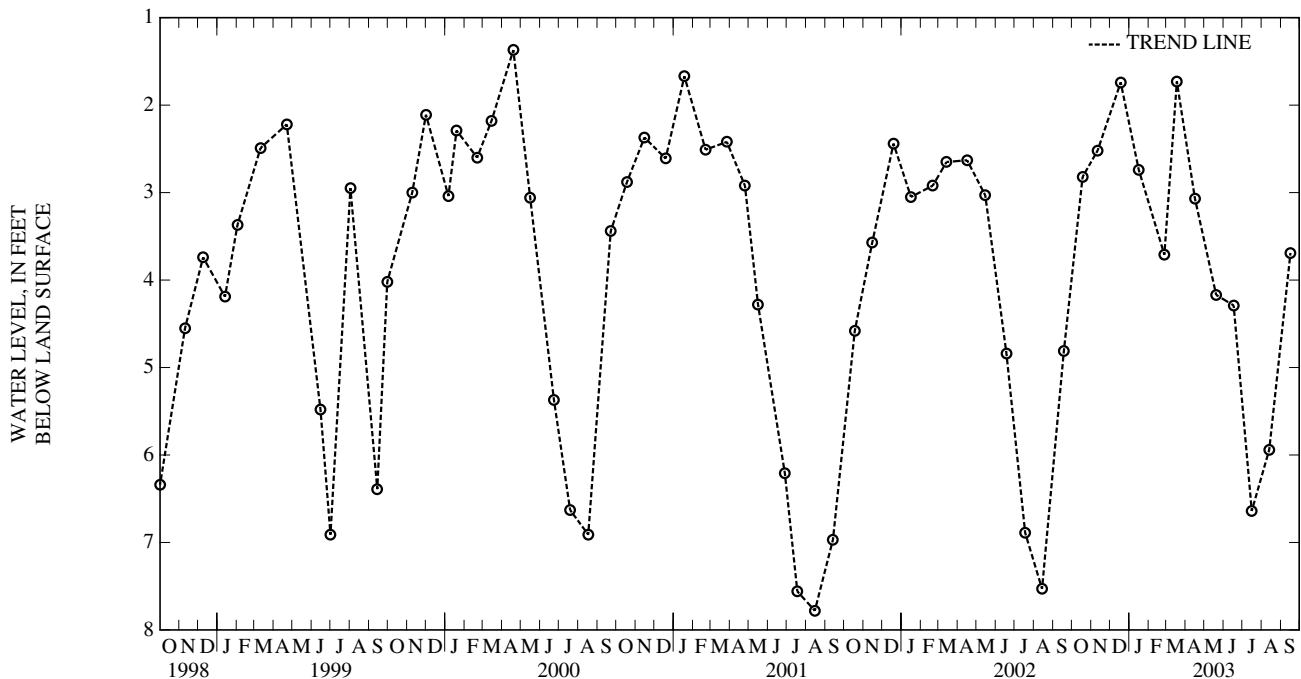
REMARKS.--Delaware Water-Level monitoring Network observation well. Water levels are affect by local ground-water withdrawal.

PERIOD OF RECORD.--April 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.33 ft above land surface, February 20, 1986; lowest measured, 10.00 ft below land surface, August 4, 1993.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18, 2002	2.82	JAN 16, 2003	2.74	APR 16, 2003	3.07	JUL 16, 2003	6.64
NOV 11	2.52	FEB 26	3.71	MAY 20	4.17	AUG 13	5.94
DEC 18	1.74	MAR 18	1.73	JUN 17	4.29	SEP 16	3.69
HIGHEST	1.73	MAR 18, 2003					
LOWEST	6.64	JUL 16, 2003					



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ALLEGANY COUNTY

WELL NUMBER.--AL Ah 1. SITE ID.--394024078273401.

LOCATION.--Lat 39°40'24", long 78°27'34", Hydrologic Unit 02070003, near Fifteen Mile Creek, 2.8 mi southeast of Pratt. Owner: Green Ridge State Forest.

AQUIFER.--Brallier Formation of Upper Devonian Age. Aquifer code: 341BRLR.

WELL CHARACTERISTICS.--Drilled, unused, artesian well, reported depth 300 ft, measured depth 114.5 ft; casing diameter 8 in., to unknown depth; open hole.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 720 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of sanitary seal in casing, 0.25 ft above land surface.

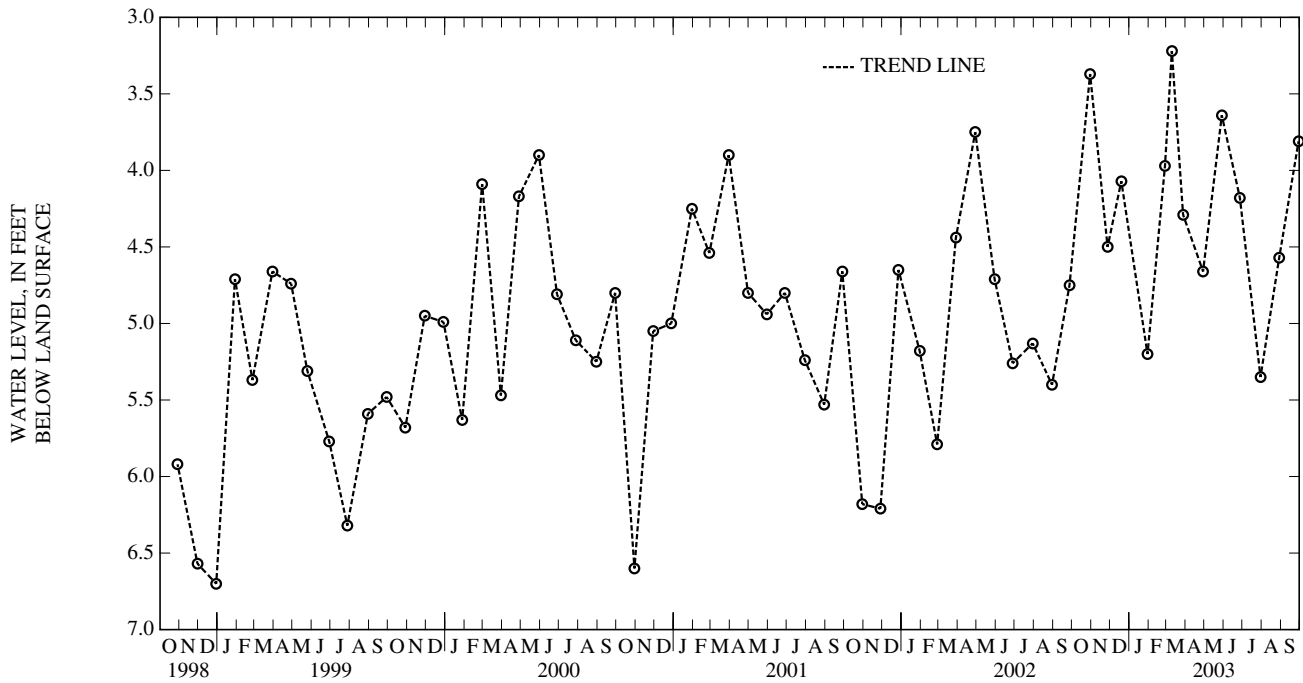
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water level was more than 40 ft below land surface on November 19, 1969, and February 12, 1970, when well was being pumped. Water levels may be affected by local ground-water withdrawal.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.80 ft below land surface, May 18, 1978; lowest measured 19.75 ft below land surface, July 17, 1968.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	3.37	FEB 27, 2003	3.97	MAY 29, 2003	3.64	SEP 29, 2003	3.81
NOV 27	4.50	MAR 10	3.22	JUN 27	4.18		
DEC 19	4.07	28	4.29	JUL 30	5.35		
JAN 30, 2003	5.20	APR 29	4.66	AUG 29	4.57		
HIGHEST	3.22	MAR 10, 2003					
LOWEST	5.35	JUL 30, 2003					



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ALLEGANY COUNTY—Continued

WELL NUMBER.--AL Ca 20. SITE ID.--393148079010601. PERMIT NUMBER.--AL-81-0477.

LOCATION.--Lat 39°31'48", long 79°01'06", Hydrologic Unit 02070002, at Barton Municipal Park. Owner: Town of Barton.

AQUIFER.--Conemaugh Group of Upper Pennsylvanian age. Aquifer code: 321CNMG.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 71 ft; casing diameter 8 in., to 20 ft; open hole.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 1,250 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.70 ft above land surface through June 2003, 4.00 ft above land surface from July 2003 to present.

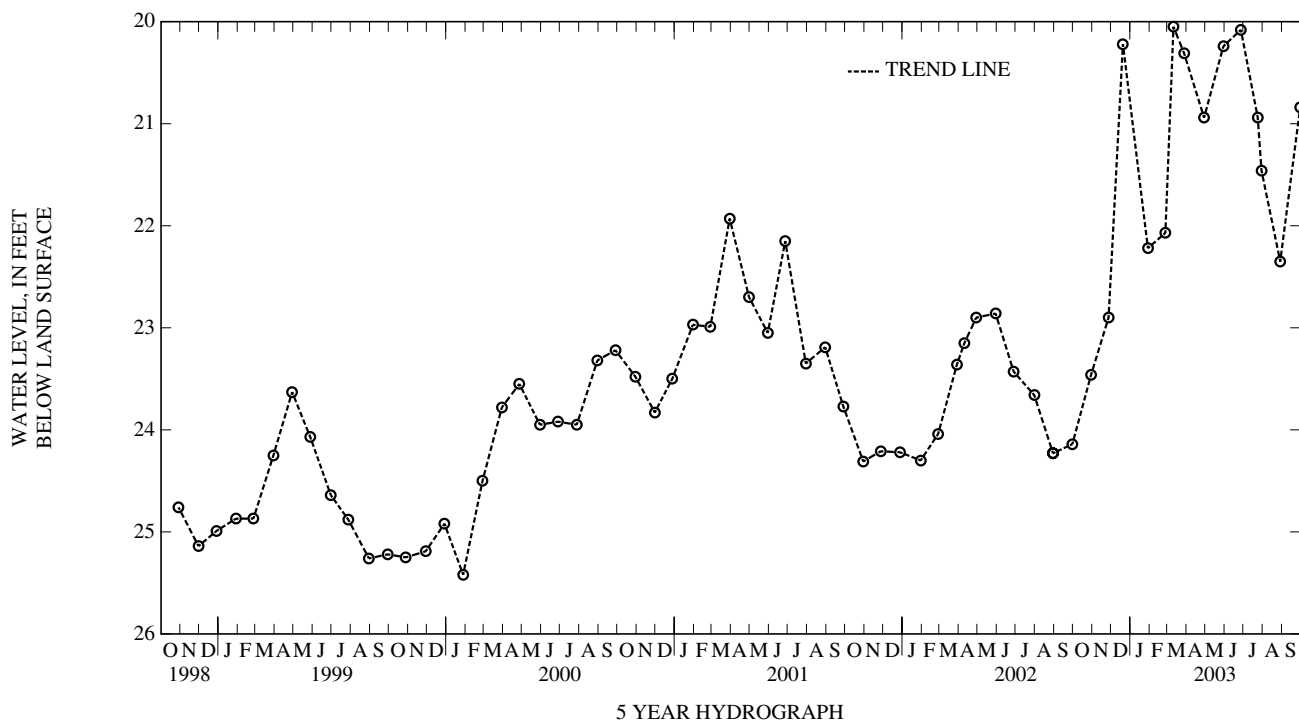
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 20.05 ft below land surface, March 11, 2003; lowest measured, 26.00 ft below land surface, March 17, 1992.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	23.46	FEB 26, 2003	22.07	MAY 30, 2003	20.24	AUG 29, 2003	22.35
NOV 27	22.90	MAR 11	20.05	JUN 27	20.08	SEP 30	20.84
DEC 20	20.22	28	20.31	JUL 24	20.94		
JAN 29, 2003	22.22	APR 29	20.94	30	21.46		
HIGHEST 20.05 MAR 11, 2003							
LOWEST 23.46 OCT 30, 2002							



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

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, 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 water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 136.9 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.00 above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Well used during construction of airport. Water level reported by driller as 90 ft below land surface, April 23, 1948. Water levels are affected by local ground-water withdrawal.

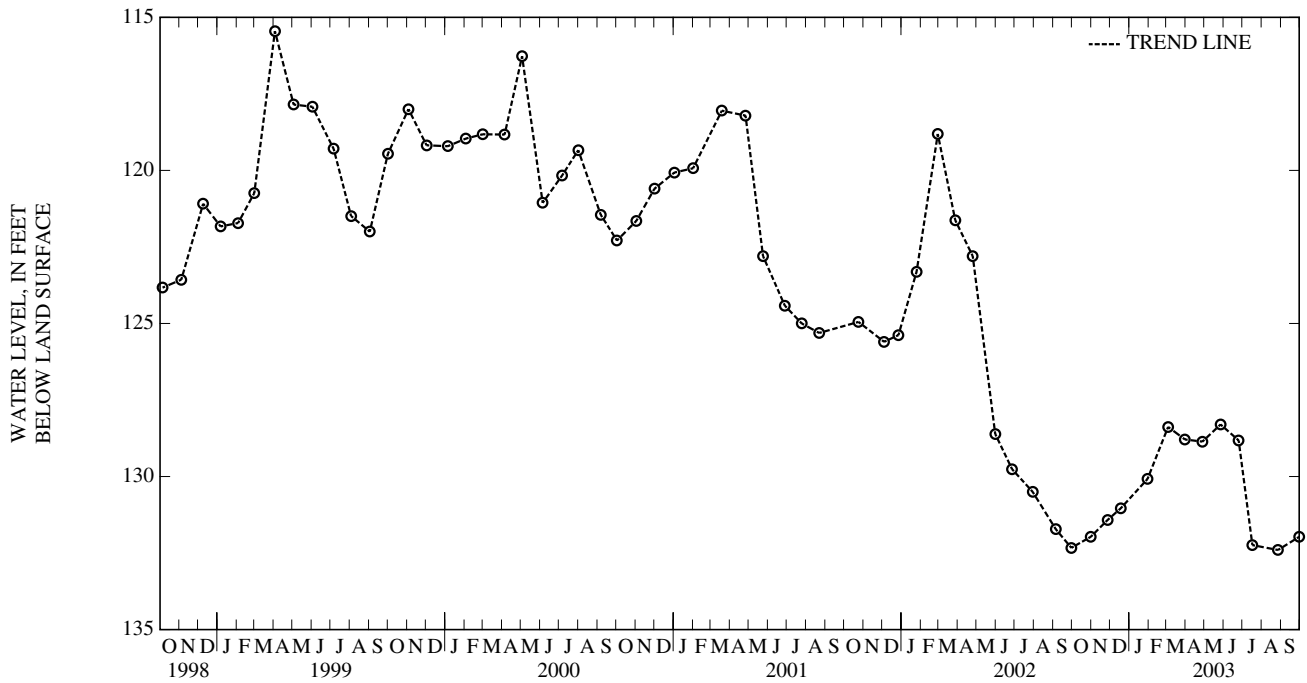
PERIOD OF RECORD.--June 1959 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 86.60 ft below land surface, March 9, 1965; lowest measured, 132.40 ft below land surface, August 27, 2003.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	131.97	JAN 30, 2003	130.08	APR 28, 2003	128.86	JUL 17, 2003	132.24
NOV 27	131.42	MAR 04	128.38	MAY 27	128.30	AUG 27	132.40
DEC 18	131.04	31	128.79	JUN 25	128.82	SEP 30	131.97

HIGHEST 128.30 MAY 27, 2003
 LOWEST 132.40 AUG 27, 2003



5 YEAR HYDROGRAPH
 OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

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 water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel. Equipped with graphic water-level recorder from July 19, 1948 to January 18, 1968.

DATUM.--Elevation of land surface is 37.0 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.85 ft above land surface. Prior to December 5, 1972, measuring point was 16.3 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

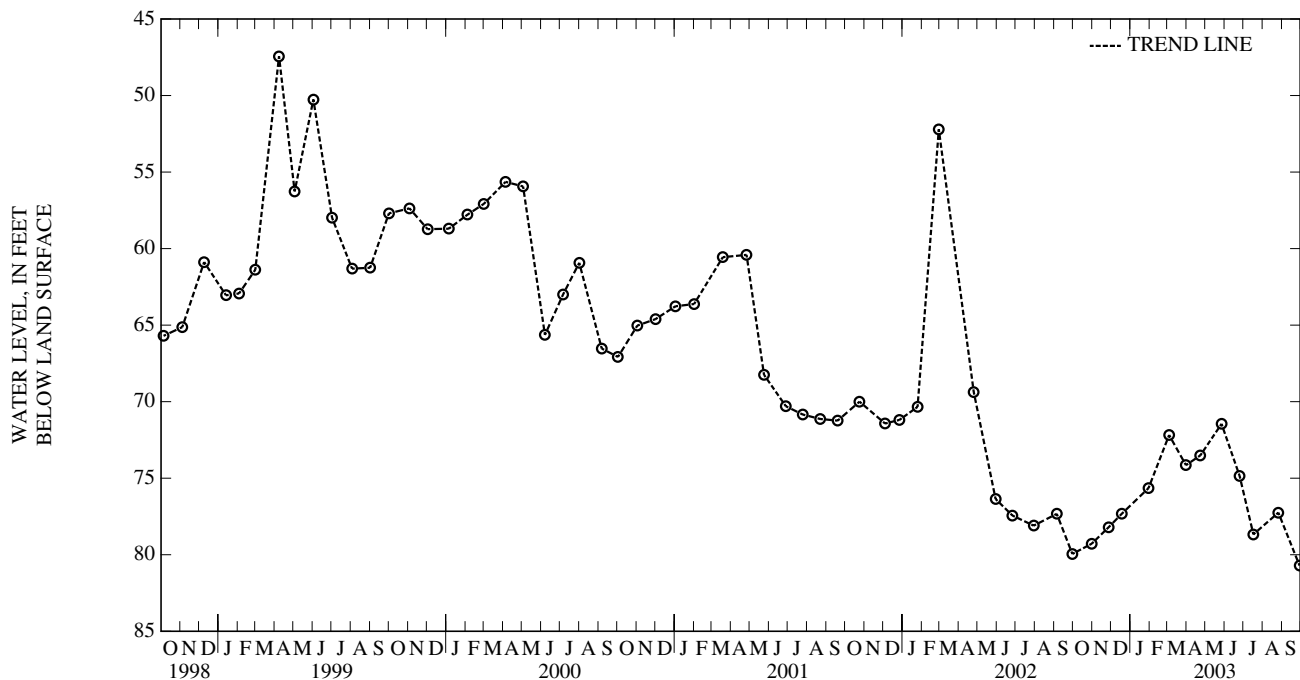
PERIOD OF RECORD.--June 1948 to February 1968, April 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.04 ft above land surface, September 2, 1952; lowest measured, 80.71 ft below land surface, September 29, 2003.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	79.28	JAN 30, 2003	75.65	APR 23, 2003	73.51	JUL 17, 2003	78.67
NOV 27	78.21	MAR 04	72.18	MAY 27	71.45	AUG 26	77.25
DEC 18	77.33	31	74.15	JUN 25	74.86	SEP 29	80.71

HIGHEST 71.45 MAY 27, 2003
 LOWEST 80.71 SEP 29, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Ad 90. SITE ID.--391032076385902. PERMIT NUMBER.--AA-04-0298.

LOCATION.--Lat 39°10'32", long 76°38'59", Hydrologic Unit 02060003, off Aviation Blvd, 0.5 mi north of Dorsey Road intersection. 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 453 ft; casing diameter 6 in., to 443 ft; screen diameter 6 in., from 443 to 453 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel. Equipped with graphic water-level recorder from August 1977 to September 1979. Periodic measurements from September 1979 to March 1980. Equipped with digital water-level recorder--30-minute recorder interval from March 1980 to December 1984, and August 1989 to current year.

DATUM.--Elevation of land surface is 77.85 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of shelter platform, 2.20 ft above land surface.

REMARKS.--Anne Arundel County Ground-Water-Level Monitoring Network observation well. Water levels are affected by local ground-water withdrawal. Missing data due to recorder malfunction.

PERIOD OF RECORD.--April 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.87 ft above sea level, November 20, 1978 (recorder); lowest measured, 82.85 ft below sea level, September 17, 2003 (recorder).

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

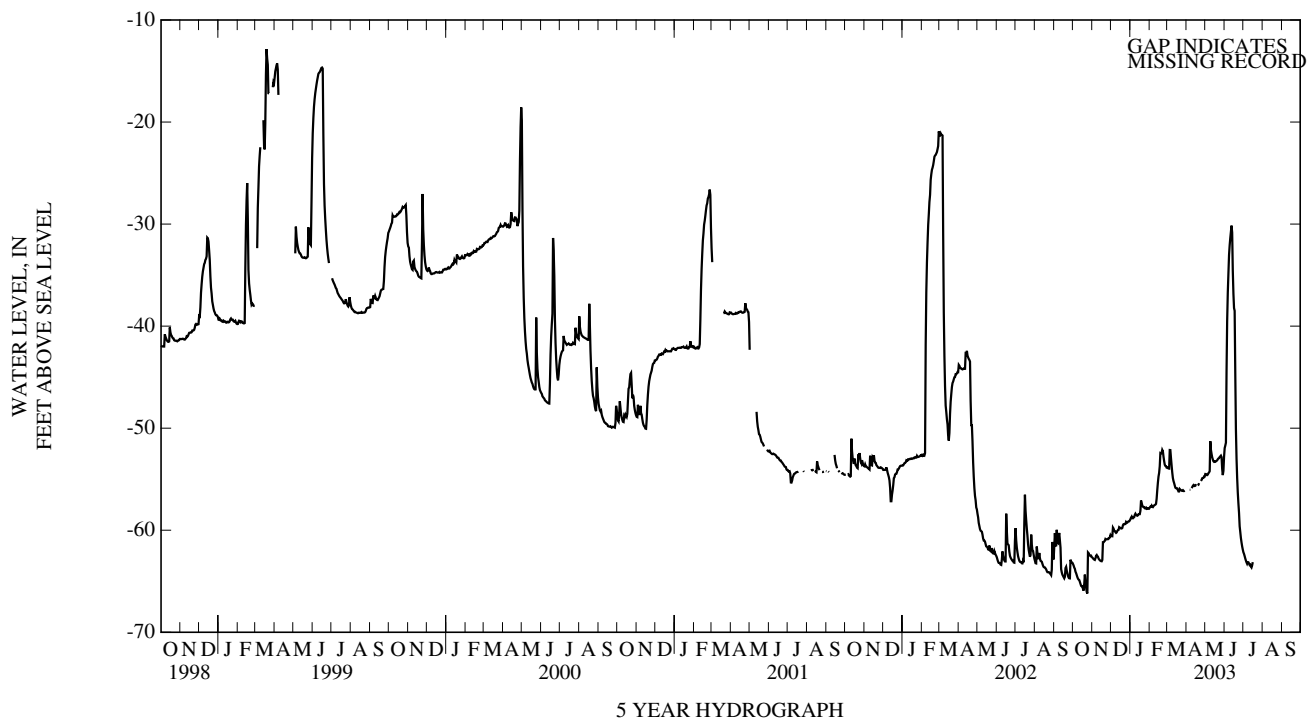
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	-62.02	JAN 30, 2003	-57.87	APR 23, 2003	-55.19	JUL 17, 2003	-62.60
NOV 27	-60.76	MAR 04	-52.09	MAY 27	-52.62	AUG 26	-59.17
DEC 18	-59.80	25	-56.07	JUN 25	-59.35	SEP 29	-68.82
LOWEST -68.82 SEP 29, 2003							
HIGHEST -52.09 MAR 04, 2003							

DAY	MAX		MIN		MAX		MIN		MAX		MIN	
	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH						
1	-63.17	-63.31	-62.61	-62.68	-60.48	-60.59	-58.63	-58.92	-57.64	-57.77	-53.85	-53.88
2	-63.31	-63.46	-62.67	-62.75	-60.44	-60.58	-58.61	-58.77	-57.64	-57.69	-53.65	-53.85
3	-63.46	-63.66	-62.75	-62.83	-58.93	-60.59	-58.59	-58.67	-57.58	-57.70	-53.74	-53.95
4	-63.66	-63.78	-62.79	-62.88	-59.23	-59.74	-58.65	-58.82	-57.42	-57.59	-52.06	-53.96
5	-63.77	-64.06	-62.75	-62.91	-59.68	-59.84	-58.74	-58.83	-57.59	-57.72	-52.12	-52.14
6	-64.06	-64.21	-62.50	-62.75	-59.84	-60.07	-58.67	-58.74	-57.64	-57.74	-52.02	-52.15
7	-64.18	-64.40	-62.24	-62.50	-60.04	-60.08	-58.50	-58.72	-57.48	-57.64	-52.15	-52.95
8	-64.40	-64.60	-62.31	-62.43	-60.07	-60.19	-58.32	-58.50	-57.52	-57.57	-52.95	-53.65
9	-64.60	-64.75	-62.43	-62.55	-60.19	-60.26	-58.30	-58.38	-57.49	-57.53	-53.65	-54.35
10	-64.75	-64.84	-62.55	-62.59	-60.06	-60.21	-58.37	-58.48	-57.29	-57.49	-54.35	-54.88
11	-64.81	-64.88	-62.59	-62.79	-59.84	-60.06	-58.48	-58.55	-56.93	-57.42	-54.88	-55.17
12	-64.88	-65.06	-62.79	-62.86	-59.89	-60.00	-58.54	-58.58	-56.07	-56.93	-55.17	-55.38
13	-65.06	-65.26	-62.84	-62.95	-59.62	-59.97	-58.35	-58.54	-55.35	-56.07	-55.38	-55.61
14	-65.26	-65.45	-62.95	-62.99	-59.57	-59.70	-58.36	-58.43	-54.74	-55.35	-55.61	-55.83
15	-65.43	-65.49	-62.98	-63.03	-59.66	-59.74	-58.34	-58.42	-54.38	-54.74	-55.83	-55.88
16	-65.30	-65.48	-62.91	-63.04	-59.61	-59.78	-58.10	-58.42	-53.73	-54.38	-55.87	-55.89
17	-65.48	-65.76	-60.98	-62.91	-59.78	-59.83	-56.50	-58.10	-51.99	-53.73	-55.87	-55.90
18	-65.29	-65.92	-61.01	-61.18	-59.77	-59.83	-56.68	-57.09	-52.12	-52.44	-55.90	-56.06
19	-62.69	-65.29	-61.08	-61.18	-59.51	-59.78	-57.09	-57.32	-52.43	-52.47	-56.06	-56.20
20	-63.17	-64.35	-61.04	-61.10	-59.30	-59.51	-57.31	-57.57	-51.89	-52.44	-55.92	-56.20
21	-64.35	-65.11	-60.85	-61.04	-59.37	-59.41	-57.57	-57.69	-51.93	-52.13	-55.93	-55.96
22	-65.11	-65.61	-60.75	-60.85	-59.31	-59.42	-57.69	-57.73	-52.13	-52.26	-55.96	-56.03
23	-65.61	-66.05	-60.78	-60.89	-59.34	-59.39	-57.67	-57.73	-52.17	-52.79	-56.03	-56.08
24	-62.02	-66.20	-60.88	-60.89	-59.19	-59.39	-57.70	-57.85	-52.79	-53.21	-56.08	-56.13
25	-62.11	-62.18	-60.83	-60.88	-58.90	-59.19	-57.79	-57.85	-53.21	-53.58	-56.06	-56.13
26	-62.09	-62.25	-60.77	-60.88	-59.07	-59.26	-57.68	-57.79	-53.58	-53.70	-56.00	-56.08
27	-62.25	-62.40	-60.75	-60.78	-59.17	-59.26	-57.77	-57.91	-53.69	-53.72	-56.08	-56.16
28	-62.40	-62.47	-60.69	-60.78	-59.05	-59.17	-57.75	-57.89	-53.72	-53.87	-56.12	-56.16
29	-62.46	-62.53	-60.46	-60.69	-59.03	-59.14	-57.68	-57.85	---	---	-55.99	-56.12
30	-62.46	-62.50	-60.35	-60.48	-59.04	-59.13	-57.85	-57.89	---	---	---	---
31	-62.49	-62.62	---	---	-58.90	-59.04	-57.77	-57.89	---	---	---	---
MONTH	-62.02	-66.20	-60.35	-63.04	-58.90	-60.59	-56.50	-58.92	-51.89	-57.77	-52.02	-56.20

ANNE ARUNDEL COUNTY--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	-54.42	-54.49	-51.71	-51.95	-61.90	-62.16	---	---	---	---
2	-55.90	-55.97	-54.42	-54.50	-51.42	-51.71	-62.16	-62.32	---	---	---	---
3	---	---	-54.50	-54.59	-44.44	-51.42	-62.32	-62.54	---	---	---	---
4	---	---	-54.54	-54.60	-39.49	-44.44	-62.54	-62.77	---	---	---	---
5	---	---	-54.41	-54.54	-36.70	-39.49	-62.77	-62.98	---	---	---	---
6	-55.93	-56.04	-54.33	-54.41	-34.86	-36.70	-62.98	-63.15	---	---	---	---
7	-55.92	-56.04	-54.21	-54.33	-33.01	-34.86	-63.14	-63.29	---	---	---	---
8	---	---	-48.99	-54.21	-32.08	-33.01	-63.01	-63.14	---	---	---	---
9	-55.77	-55.87	-49.59	-51.28	-31.37	-32.08	-63.02	-63.14	---	---	---	---
10	-55.66	-55.78	-51.28	-52.13	-30.74	-31.37	-63.14	-63.26	---	---	---	---
11	-55.51	-55.66	-52.13	-52.52	-30.15	-30.74	-63.26	-63.41	---	---	---	---
12	-55.47	-55.58	-52.52	-52.86	-29.65	-30.15	-63.34	-63.38	---	---	---	---
13	-55.58	-55.66	-52.86	-53.06	-29.43	-30.82	-63.36	-63.56	---	---	---	---
14	-55.63	-55.67	-53.06	-53.24	-30.82	-34.55	-63.38	-63.65	---	---	---	---
15	-55.38	-55.64	-53.24	-53.30	-34.55	-36.83	-63.13	-63.44	---	---	---	---
16	-55.40	-55.48	-53.21	-53.26	-36.83	-38.23	-62.96	-63.13	---	---	---	---
17	---	---	-53.24	-53.29	-37.76	-38.50	---	---	---	---	---	---
18	---	---	-53.20	-53.25	-37.76	-44.76	---	---	---	---	---	---
19	-55.55	-55.62	-53.15	-53.20	-44.76	-50.07	---	---	---	---	---	---
20	-55.39	-55.55	-53.04	-53.15	-50.07	-53.01	---	---	---	---	---	---
21	-55.18	-55.39	-52.95	-53.04	-53.01	-54.88	---	---	---	---	---	---
22	---	---	-52.94	-52.97	-54.88	-56.29	---	---	---	---	---	---
23	---	---	-52.82	-52.94	-56.29	-57.38	---	---	---	---	---	---
24	-55.07	-55.17	-52.76	-52.82	-57.38	-58.29	---	---	---	---	---	---
25	-54.91	-55.07	-52.69	-52.76	-58.29	-59.62	---	---	---	---	---	---
26	-54.81	-54.91	-52.56	-52.69	-59.62	-60.18	---	---	---	---	---	---
27	-54.84	-54.89	-52.59	-52.84	-60.18	-60.76	---	---	---	---	---	---
28	-54.74	-54.87	-52.84	-53.99	-60.76	-61.21	---	---	---	---	---	---
29	-54.67	-54.74	-53.99	-54.60	-61.21	-61.58	---	---	---	---	---	---
30	-54.34	-54.74	-52.84	-54.18	-61.58	-61.90	---	---	---	---	---	---
31	---	---	-51.95	-52.84	---	---	---	---	---	---	---	---
MONTH	-54.34	-56.04	-48.99	-54.60	-29.43	-61.90	-61.90	-63.65	---	---	---	---
YEAR	-29.43	-66.20										

Daily Low Water Levels



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

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 Aviation Blvd., 0.5 mi north of Dorsey Road intersection. Owner: U.S. Geological Survey.

AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.

WELL CHARACTERISTICS.--Drilled, observation, artesian well (semi-confined), depth 95 ft; casing diameter 6 in., to 85 ft; screen diameter 6 in., from 85 to 95 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from December 1983 to October 1990.

DATUM.--Elevation of land surface is 76.72 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 5.27 ft above land surface.

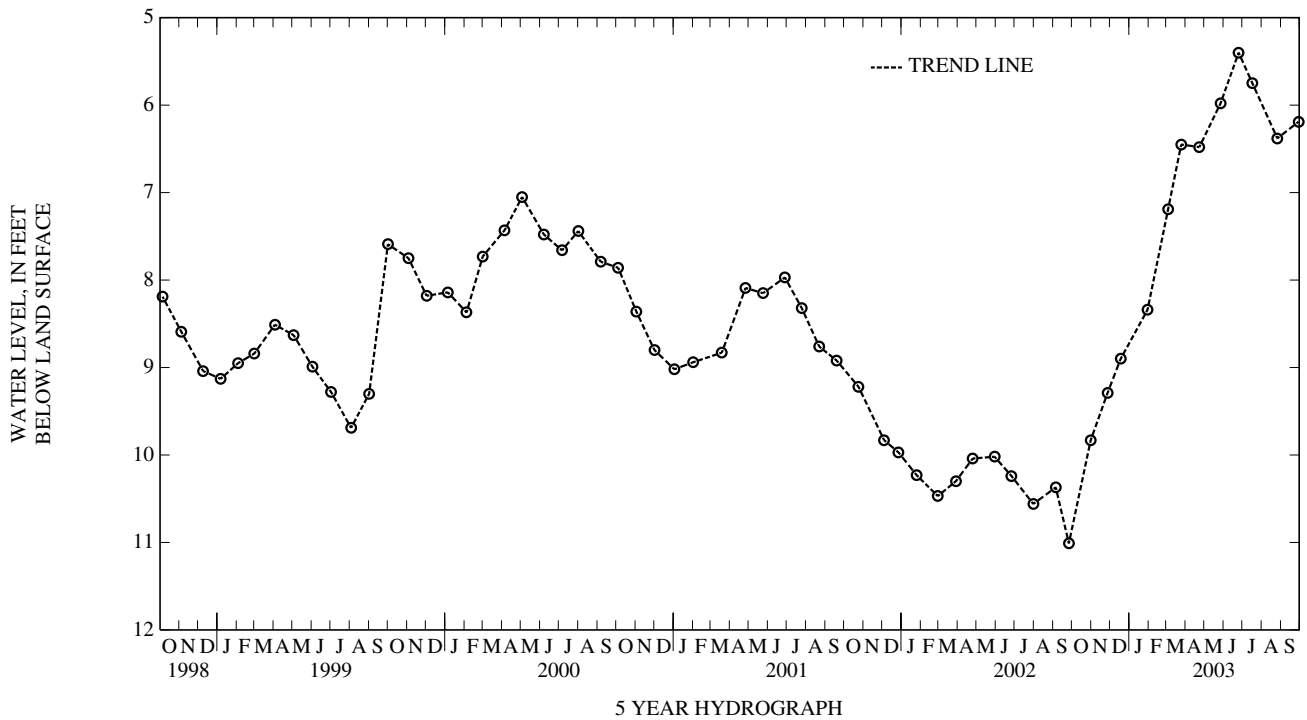
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

PERIOD OF RECORD.--December 1983 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.75 ft below land surface, April 3, 1998; lowest measured, 14.36 ft below land surface, November 3, 1986.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	9.83	JAN 30, 2003	8.34	APR 23, 2003	6.48	JUL 17, 2003	5.75
NOV 27	9.29	MAR 04	7.19	MAY 27	5.98	AUG 26	6.38
DEC 18	8.90	25	6.45	JUN 25	5.40	SEP 29	6.19
HIGHEST	5.40	JUN 25, 2003					
LOWEST	9.83	OCT 31, 2002					



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ANNE ARUNDEL COUNTY--Continued

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 Aviation Blvd., 0.5 mi north of Dorsey Road intersection. Owner: U.S. Geological Survey.

AQUIFER.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 11 ft; casing diameter 4 in., to 6 ft and casing diameter 6 in., to 3 ft; screen diameter 4 in., from 6 to 11 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from February 1986 to September 1990.

DATUM.--Elevation of land surface is 78.31 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 5.50 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

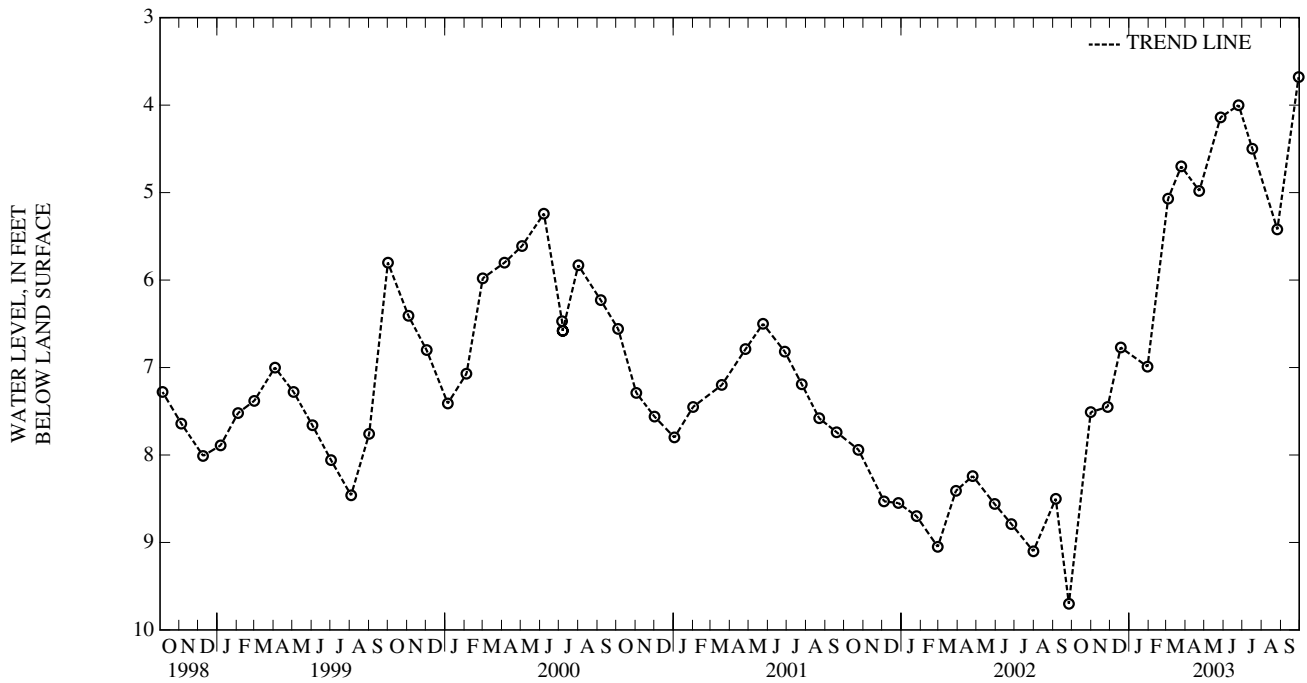
PERIOD OF RECORD.--August 1984 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.68 ft below land surface, September 29, 2003; lowest measured, Dry on August 22, 1985; January 17, 1986; May 20, 1986; July 8, 1986 and November 3, 1986 (recorder).

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	7.51	JAN 30, 2003	6.99	APR 23, 2003	4.98	JUL 17, 2003	4.50
NOV 27	7.45	MAR 04	5.07	MAY 27	4.14	AUG 26	5.42
DEC 18	6.77	25	4.70	JUN 25	4.00	SEP 29	3.68

HIGHEST 3.68 SEP 29, 2003
 LOWEST 7.51 OCT 31, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ANNE ARUNDEL COUNTY--Continued

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 Road, 0.17 mi west of MD Rt. 648, near Robert Pascal Senior Center. Owner: U.S. Geological Survey.

AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.

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 water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from October 1985 to July 1998, and 30-minute recorder interval from July 1998 to current year.

DATUM.--Elevation of land surface is 35.78 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder platform, 7.10 ft above land surface. On August 1, 1996, 1.15 ft of casing was added. The new measuring point height was 5.44 ft. This extended casing was later removed on March 24, 1997. On January 5, 2000 an extension pipe was added to the casing. The new measuring point height is 7.10 ft above land surface.

REMARKS.--Anne Arundel County Ground-Water-Level Monitoring Network observation well. Water levels before February 23, 1986 are not currently available. Water levels are affected by local ground-water withdrawal. Missing data due to recorder malfunction.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, (See Measuring point) 39.17 ft above sea level (flowing, recorder), flowing on numerous days (see hydrograph); with added casing highest level measured, 41.35 ft above sea level July 3, 2003 (recorder); lowest measured, 20.20 ft above sea level, October 15, 1987 (recorder).

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

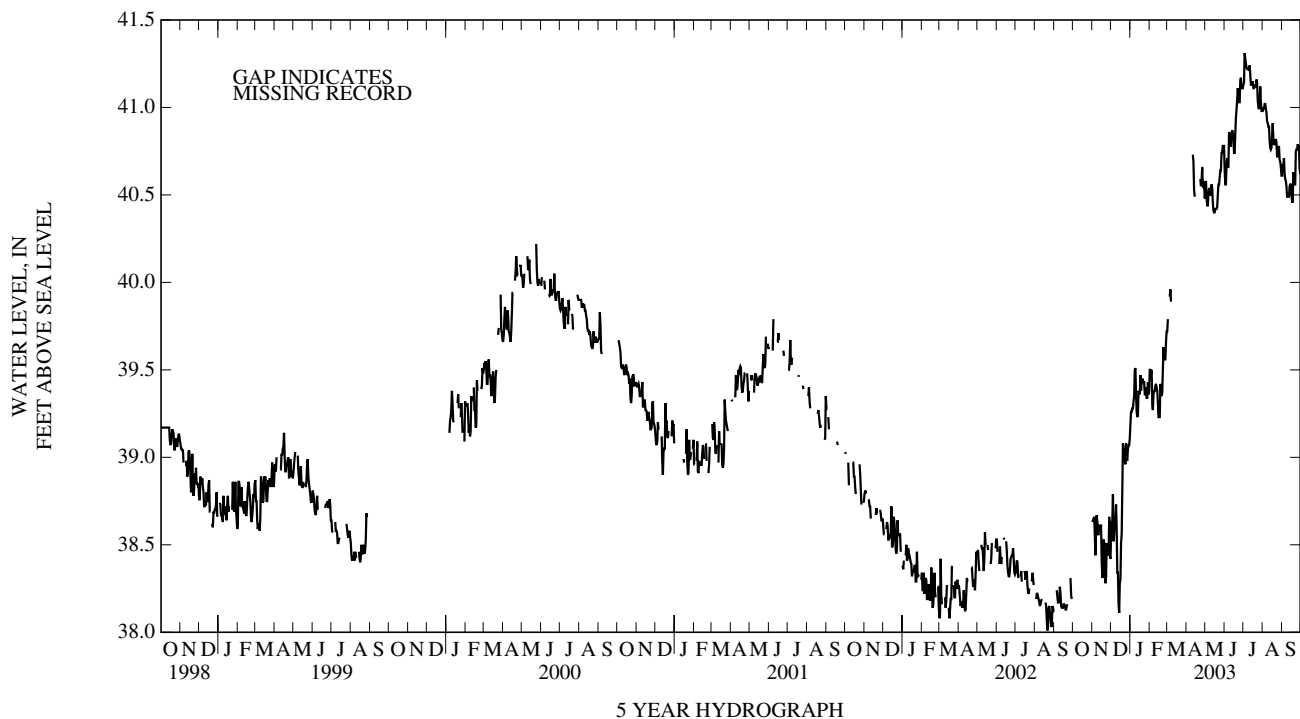
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	38.46	JAN 30, 2003	39.35	APR 23, 2003	40.60	JUL 17, 2003	41.10
NOV 27	38.70	MAR 04	39.85	MAY 29	40.78	AUG 26	40.77
DEC 18	38.77	31	40.59	JUN 25	41.13	SEP 29	40.70
LOWEST 38.46		OCT 31, 2002					
HIGHEST 41.13		JUN 25, 2003					

DAY	MAX		MIN		MAX		MIN		MAX		MIN	
	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH						
1	---	---	38.66	38.63	38.73	38.54	39.47	39.19	39.60	39.50	39.79	39.72
2	---	---	38.66	38.64	38.73	38.63	39.46	39.26	39.59	39.50	40.06	39.79
3	---	---	38.69	38.65	38.83	38.63	39.42	39.26	39.54	39.48	---	---
4	---	---	38.69	38.66	38.83	38.79	39.42	39.28	39.68	39.50	---	---
5	---	---	38.69	38.55	38.79	38.52	39.32	39.28	39.50	39.30	40.11	39.92
6	---	---	38.59	38.44	38.70	38.56	39.39	39.32	39.36	39.27	40.13	39.96
7	---	---	38.71	38.59	38.70	38.66	39.50	39.35	39.50	39.36	39.99	39.89
8	---	---	38.71	38.67	38.73	38.65	39.59	39.50	39.48	39.38	---	---
9	---	---	38.67	38.63	38.81	38.73	39.62	39.51	39.41	39.38	40.24	40.14
10	---	---	38.63	38.56	38.79	38.59	39.51	39.36	39.60	39.41	---	---
11	---	---	38.64	38.56	38.59	38.34	39.36	39.26	39.55	39.42	---	---
12	---	---	38.66	38.61	38.50	38.34	39.26	39.23	39.51	39.40	---	---
13	---	---	38.61	38.61	38.50	38.16	39.45	39.24	39.40	39.38	---	---
14	---	---	38.61	38.61	38.28	38.11	39.42	39.38	39.38	39.31	40.21	40.07
15	---	---	38.61	38.61	38.39	38.28	39.39	39.37	39.38	39.23	---	---
16	---	---	38.61	38.40	38.51	38.30	39.49	39.36	39.23	39.23	---	---
17	---	---	38.40	38.31	38.56	38.51	39.52	39.47	39.53	39.23	---	---
18	---	---	38.59	38.37	38.81	38.56	39.47	39.38	39.53	39.42	---	---
19	---	---	38.59	38.53	39.08	38.81	39.51	39.43	39.42	39.38	---	---
20	---	---	38.53	38.51	39.27	39.08	39.56	39.45	39.39	39.35	---	---
21	---	---	38.51	38.32	39.15	39.05	39.45	39.44	39.50	39.37	---	---
22	---	---	38.32	38.28	39.08	39.04	39.44	39.43	39.99	39.50	---	---
23	---	---	38.51	38.31	39.04	38.98	39.50	39.43	40.04	39.63	---	---
24	---	---	38.51	38.51	39.08	38.96	39.50	39.36	39.63	39.56	---	---
25	---	---	38.51	38.48	39.38	39.08	39.40	39.36	39.63	39.56	---	---
26	---	---	38.53	38.46	39.24	38.99	39.51	39.40	39.66	39.56	40.57	40.50
27	---	---	38.70	38.44	39.05	38.98	39.49	39.34	39.77	39.66	---	---
28	---	---	38.72	38.66	39.14	39.05	39.46	39.34	39.78	39.72	---	---
29	---	---	38.66	38.44	39.15	39.07	39.50	39.43	---	---	40.60	40.47
30	---	---	38.54	38.42	39.11	39.07	39.43	39.36	---	---	---	---
31	---	---	---	---	39.19	39.11	39.50	39.38	---	---	---	---
MONTH	---	---	38.72	38.28	39.38	38.11	39.62	39.19	40.04	39.23	40.60	39.72

ANNE ARUNDEL COUNTY--Continued

DAY	MAX		MIN		MAX		MIN		MAX		MIN		MAX		MIN	
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER					
1	---	---	40.58	40.50	40.89	40.64	41.14	41.13	41.00	40.98	40.68	40.61				
2	---	---	40.66	40.58	40.64	40.56	41.31	41.14	41.00	41.00	40.69	40.67				
3	---	---	40.62	40.48	40.67	40.56	41.35	41.31	41.02	40.99	40.71	40.67				
4	---	---	40.48	40.44	40.72	40.67	41.32	41.28	41.02	41.02	40.75	40.71				
5	---	---	40.51	40.44	40.72	40.71	41.28	41.25	41.02	41.02	40.75	40.62				
6	---	---	40.54	40.51	40.71	40.66	41.25	41.23	41.02	40.99	40.62	40.59				
7	---	---	40.56	40.54	40.91	40.66	41.23	41.22	40.99	40.97	40.59	40.58				
8	---	---	40.56	40.50	40.91	40.86	41.23	41.22	40.97	40.92	40.58	40.55				
9	---	---	40.53	40.50	40.86	40.82	41.22	41.22	40.92	40.91	40.55	40.49				
10	---	---	40.56	40.53	40.82	40.78	41.25	41.21	40.91	40.89	40.49	40.49				
11	40.84	40.73	40.67	40.56	40.85	40.78	41.30	41.24	40.97	40.89	40.50	40.49				
12	40.85	40.69	40.67	40.54	40.87	40.85	41.24	41.19	40.93	40.81	40.55	40.49				
13	40.69	40.53	40.54	40.46	40.88	40.87	41.19	41.13	40.81	40.77	40.61	40.55				
14	40.53	40.49	40.46	40.41	40.88	40.86	41.13	41.13	40.77	40.76	40.59	40.56				
15	---	---	40.41	40.40	40.86	40.82	41.15	41.13	40.84	40.77	40.58	40.56				
16	---	---	40.46	40.40	40.82	40.74	41.19	41.15	40.94	40.84	40.58	40.51				
17	40.73	40.50	40.45	40.42	40.85	40.74	41.17	41.11	40.96	40.91	40.51	40.46				
18	---	---	40.42	40.42	40.94	40.85	41.15	41.11	40.91	40.82	40.90	40.46				
19	---	---	40.43	40.42	41.00	40.94	41.15	41.13	40.82	40.79	40.92	40.63				
20	---	---	40.50	40.43	41.06	40.99	41.13	41.12	40.79	40.79	40.63	40.59				
21	40.76	40.62	40.56	40.50	41.14	41.04	41.18	41.12	40.82	40.79	40.59	40.56				
22	---	---	40.56	40.56	41.14	41.11	41.20	41.16	40.89	40.82	40.75	40.56				
23	40.70	40.59	40.60	40.56	41.11	41.07	41.20	41.14	40.89	40.80	41.11	40.75				
24	40.59	40.55	40.64	40.60	41.07	41.03	41.14	41.04	40.80	40.72	40.85	40.76				
25	40.66	40.58	40.64	40.64	41.15	41.03	41.04	41.00	40.76	40.72	40.79	40.76				
26	40.73	40.66	40.84	40.64	41.20	41.15	41.03	40.99	40.79	40.76	40.79	40.79				
27	40.69	40.55	40.79	40.74	41.20	41.17	41.12	41.03	40.79	40.78	40.80	40.78				
28	40.58	40.54	40.84	40.74	41.17	41.12	41.12	41.12	40.78	40.70	40.82	40.78				
29	40.60	40.58	40.84	40.78	41.12	41.11	41.12	41.03	40.73	40.69	40.78	40.65				
30	40.58	40.48	40.80	40.78	41.13	41.11	41.03	40.98	40.73	40.66	40.65	40.62				
31	---	---	40.89	40.78	---	---	40.98	40.98	40.66	40.61	---	---				
MONTH	40.85	40.48	40.89	40.40	41.20	40.56	41.35	40.98	41.02	40.61	41.11	40.46				
YEAR	41.35	38.11														

Daily Low Water Levels



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Ad 110. SITE ID.--391032076385907. PERMIT NUMBER.--AA-88-8878.

LOCATION.--Lat 39°10'32", long 76°38'59", Hydrologic Unit 02060003, off Aviation Blvd. 0.5 mi of Dorsey Road intersection. Owner:Maryland State Highway Administration.

AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.

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 water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 77.42 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 5.03 ft. above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

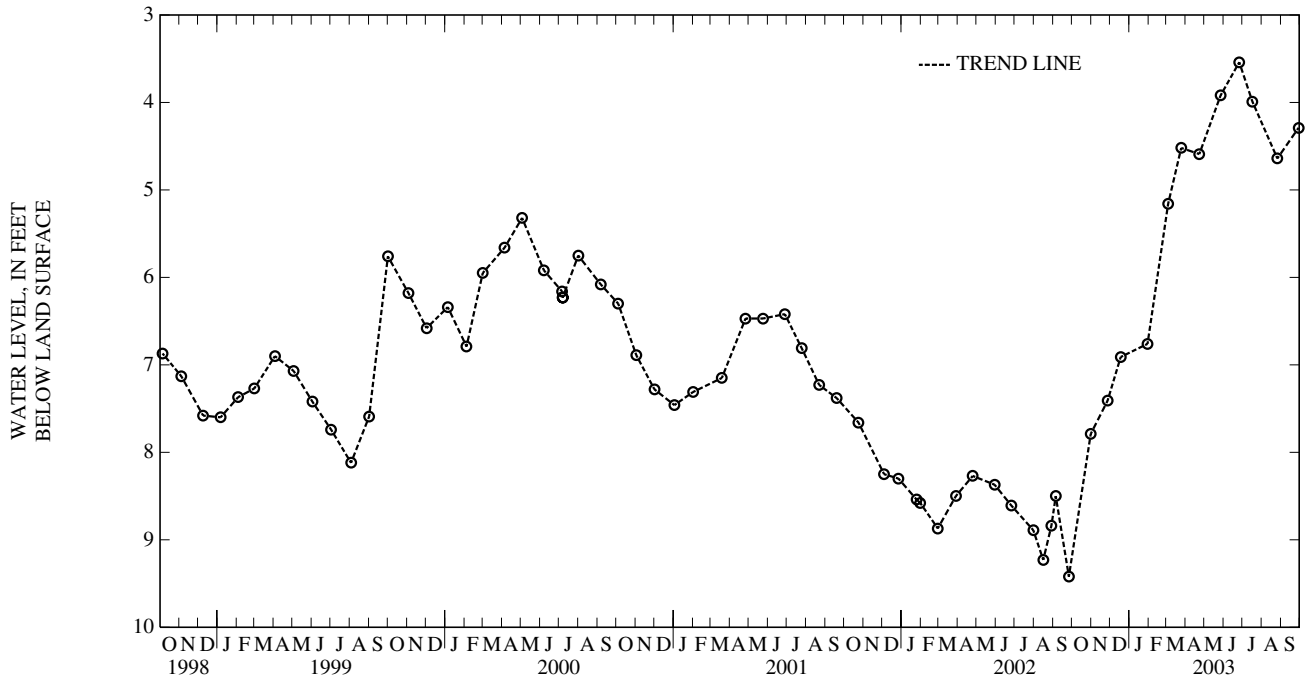
PERIOD OF RECORD.--December 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.29 ft below land surface, April 3, 1998; lowest measured, 9.89 ft below land surface, December 3, 1992.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	7.79	JAN 30, 2003	6.76	APR 23, 2003	4.59	JUL 17, 2003	3.99
NOV 27	7.41	MAR 04	5.16	MAY 27	3.92	AUG 26	4.64
DEC 18	6.91	25	4.52	JUN 26	3.54	SEP 29	4.29

HIGHEST 3.54 JUN 26, 2003
 LOWEST 7.79 OCT 31, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Bd 91. SITE ID.--390950076391101. PERMIT NUMBER.--AA-04-2029.

LOCATION.--Lat 39°09'50", long 76°39'11", Hydrologic Unit 02060003, 0.3 mi southeast of the intersection of Dorsey Road and Baltimore Annapolis Blvd., in the median of MD Rt. 176, Glen Burnie. Owner: Anne Arundel County Department of Public Works.

AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.

WELL CHARACTERISTICS.--Drilled, artesian (semi-confined), observation well, depth 160 ft; casing diameter 6 in., from 119 to 155 ft; screen diameter 2 in., from 155 to 160 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital recorder from April 1981 to March 1986.

DATUM.--Elevation of land surface is 82.63 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.25 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels were affected by local ground-water withdrawal up to May 1995; when the nearby pumping station discontinued ground-water withdrawal from the Patapsco aquifer.

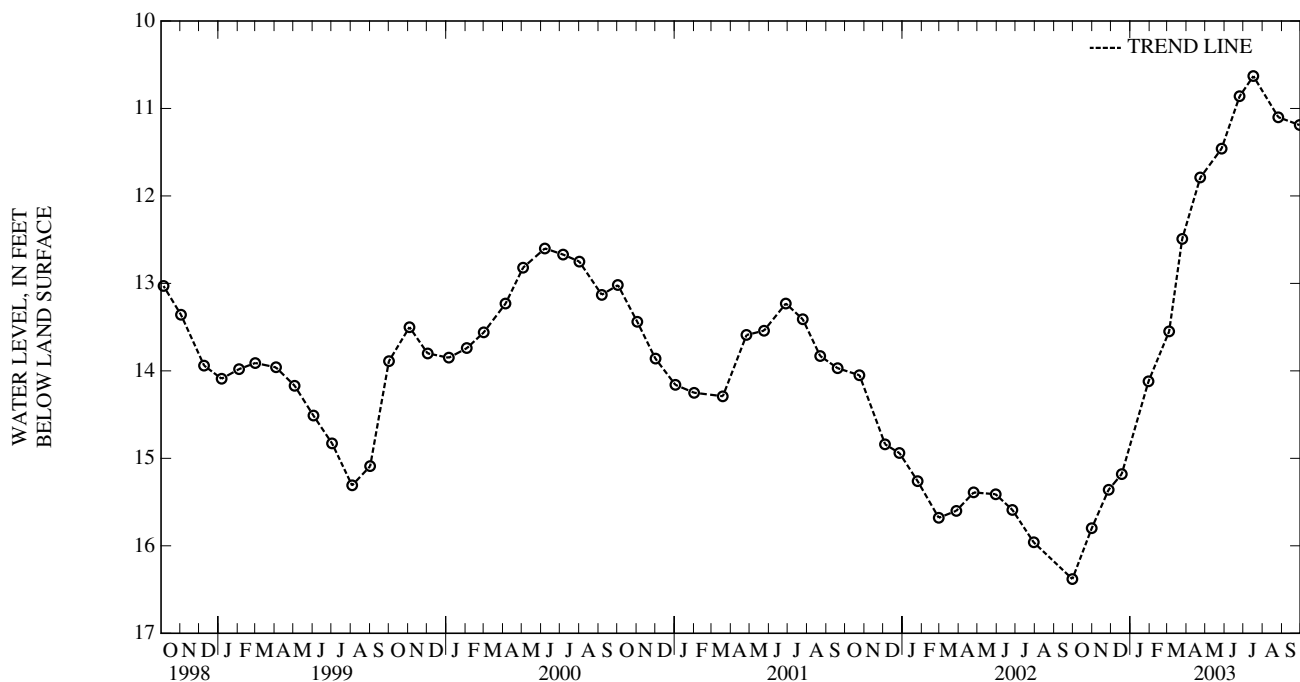
PERIOD OF RECORD.--March 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.60 ft below land surface, May 7, 1998; lowest measured, 75.20 ft below land surface, September 1, 1982.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	15.80	JAN 30, 2003	14.12	APR 23, 2003	11.79	JUL 17, 2003	10.63
NOV 27	15.36	MAR 04	13.55	MAY 27	11.46	AUG 26	11.10
DEC 18	15.18	25	12.49	JUN 25	10.86	SEP 29	11.19

HIGHEST 10.63 JUL 17, 2003
LOWEST 15.80 OCT 31, 2002



ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Bd 152. SITE ID.--390821076365401. PERMIT NUMBER.--AA-81-3463.

LOCATION.--Lat 39°08'21", long 76°36'54", Hydrologic Unit 02060003, 100 ft north of MD Rt. 100, 0.2 mi southeast of the intersection of Oakwood Road and Funke Road, at Woodside Elementary School. Owner: U.S. Geological Survey.

AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 103 ft; casing diameter 6 in., to 90 ft; and casing diameter 4 in., from 100 to 103 ft; screen diameter 4 in., from 90 to 100 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from March 1985 to December 1996, and 30-minute recorder interval from December 1996 to current year.

DATUM.--Elevation of land surface is 53.29 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of shelter platform, 3.00 ft above land surface.

REMARKS.--Anne Arundel County Ground-Water-Level Monitoring Network observation well. Water levels before February 23, 1986 are currently not available. Water levels are affected by local ground-water withdrawal.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 27.61 ft above sea level, September 22, 2003 (recorder); lowest measured, 19.88 ft above sea level, August 21, 1987 (recorder).

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

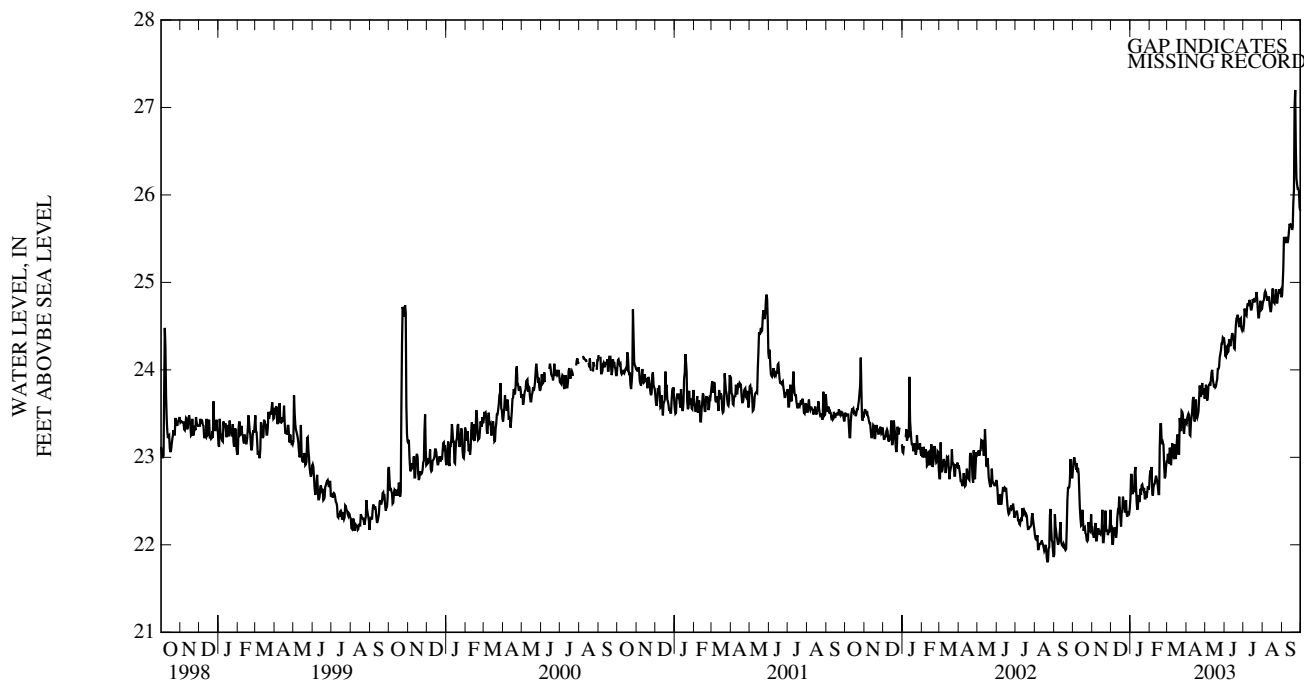
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	22.23	JAN 30, 2003	22.63	APR 28, 2003	23.71	JUL 17, 2003	24.78
NOV 27	22.22	MAR 04	22.95	MAY 27	24.31	AUG 26	24.87
DEC 18	22.51	25	23.68	JUN 25	24.53	SEP 29	25.96
LOWEST	22.22	NOV 27, 2002					
HIGHEST	25.96	SEP 29, 2003					

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	22.98	22.88	22.25	22.20	22.40	22.18	23.17	22.53	22.93	22.79	23.04	22.95
2	23.04	22.96	22.21	22.13	22.31	22.19	23.19	22.80	22.99	22.85	23.34	23.04
3	23.04	23.00	22.13	22.09	22.29	22.01	22.89	22.80	22.89	22.79	23.29	22.98
4	23.08	22.96	22.17	22.09	22.10	22.01	22.84	22.59	23.15	22.89	23.11	22.93
5	23.10	22.92	22.33	22.09	22.36	22.10	22.64	22.59	22.89	22.59	23.28	23.11
6	22.97	22.86	22.48	22.25	22.33	22.19	22.71	22.64	22.66	22.56	23.29	23.08
7	23.04	22.93	22.26	22.05	22.27	22.19	22.83	22.63	22.84	22.66	23.08	22.91
8	22.93	22.83	22.13	22.05	22.29	22.17	23.01	22.83	22.79	22.69	23.19	23.01
9	22.93	22.88	22.18	22.12	22.17	22.08	23.04	22.89	22.75	22.70	23.27	23.16
10	22.98	22.82	22.31	22.18	22.31	22.14	22.89	22.66	22.97	22.75	23.16	23.01
11	22.82	22.62	22.32	22.18	22.54	22.31	22.66	22.49	22.92	22.79	23.06	23.00
12	22.62	22.42	22.23	22.13	22.53	22.39	22.49	22.40	22.91	22.76	23.15	23.05
13	22.42	22.30	22.23	22.13	22.70	22.38	22.69	22.44	22.77	22.72	23.23	23.15
14	22.30	22.22	22.17	22.12	22.77	22.55	22.61	22.57	22.72	22.66	23.15	22.98
15	22.40	22.23	22.19	22.16	22.55	22.43	22.60	22.50	22.77	22.58	23.13	23.01
16	22.68	22.40	22.42	22.18	22.53	22.30	22.68	22.50	23.12	22.58	23.26	23.13
17	22.50	22.28	22.50	22.40	22.38	22.21	22.75	22.64	23.41	23.12	23.35	23.26
18	22.28	22.16	22.40	22.03	22.51	22.38	22.68	22.57	23.47	23.38	23.36	23.23
19	22.31	22.19	22.15	22.03	22.55	22.38	22.74	22.68	23.45	23.38	23.23	23.04
20	22.30	22.20	22.19	22.12	22.77	22.55	22.87	22.69	23.45	23.19	23.49	23.04
21	22.21	22.13	22.39	22.19	22.67	22.50	22.69	22.65	23.19	23.15	23.50	23.45
22	22.15	22.12	22.48	22.39	22.55	22.47	22.66	22.63	23.57	23.17	23.46	23.36
23	22.15	22.05	22.40	22.19	22.47	22.41	22.74	22.65	23.59	23.14	23.56	23.30
24	22.07	22.04	22.20	22.16	22.51	22.37	22.72	22.53	23.14	22.92	23.70	23.53
25	22.26	22.06	22.21	22.16	22.90	22.51	22.61	22.53	22.92	22.76	23.75	23.52
26	22.38	22.26	22.21	22.11	22.75	22.35	22.72	22.61	22.89	22.78	23.72	23.49
27	22.26	22.16	22.25	22.15	22.37	22.32	22.67	22.54	23.03	22.89	23.49	23.31
28	22.19	22.16	22.24	22.15	22.50	22.37	22.68	22.60	23.06	22.95	23.37	23.27
29	22.36	22.15	22.49	22.24	22.51	22.37	22.82	22.67	---	---	23.48	23.37
30	22.38	22.35	22.53	22.40	22.42	22.36	22.67	22.63	---	---	23.53	23.44
31	22.36	22.20	---	---	22.53	22.42	22.80	22.65	---	---	23.53	23.39
MONTH	23.10	22.04	22.53	22.03	22.90	22.01	23.19	22.40	23.59	22.56	23.75	22.91

ANNE ARUNDEL COUNTY--Continued

DAY	MAX		MIN		MAX		MIN		MAX		MIN	
	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER						
1	23.52	23.38	23.83	23.73	24.53	24.30	24.52	24.46	24.82	24.76	24.99	24.85
2	23.52	23.45	23.94	23.83	24.30	24.16	24.70	24.52	24.82	24.79	25.18	24.99
3	23.52	23.48	23.86	23.73	24.26	24.15	24.75	24.70	24.90	24.80	25.52	25.18
4	23.52	23.50	23.73	23.65	24.31	24.26	24.70	24.64	24.91	24.88	25.64	25.52
5	23.54	23.48	23.81	23.69	24.32	24.27	24.66	24.63	24.94	24.90	25.61	25.48
6	23.48	23.26	23.85	23.81	24.27	24.20	24.72	24.62	24.93	24.88	25.50	25.47
7	23.44	23.25	23.89	23.83	24.49	24.21	24.98	24.72	24.90	24.84	25.54	25.50
8	23.46	23.41	23.91	23.84	24.47	24.34	24.85	24.76	24.87	24.80	25.59	25.52
9	23.56	23.46	23.91	23.82	24.41	24.34	24.82	24.73	24.89	24.80	25.52	25.46
10	23.66	23.54	23.97	23.89	24.34	24.27	24.83	24.77	24.87	24.83	25.50	25.46
11	23.79	23.66	24.11	23.97	24.40	24.32	24.88	24.80	24.93	24.83	25.65	25.50
12	23.85	23.69	24.11	24.00	24.45	24.37	24.80	24.74	24.91	24.74	25.67	25.59
13	23.69	23.47	24.01	23.89	24.48	24.42	24.80	24.69	24.74	24.69	25.79	25.67
14	23.48	23.41	23.92	23.85	24.48	24.40	24.74	24.69	24.72	24.66	25.68	25.65
15	23.66	23.48	23.85	23.80	24.45	24.36	24.81	24.73	24.85	24.72	25.75	25.66
16	23.73	23.66	23.94	23.83	24.36	24.25	24.86	24.81	24.96	24.85	25.74	25.65
17	23.70	23.47	23.87	23.80	24.39	24.24	24.83	24.78	24.99	24.93	25.65	25.60
18	23.50	23.45	23.86	23.81	24.52	24.39	24.86	24.78	24.93	24.81	26.10	25.63
19	23.52	23.48	23.89	23.86	24.65	24.52	24.87	24.82	24.81	24.77	26.11	25.91
20	23.66	23.52	24.01	23.89	24.68	24.59	24.82	24.80	24.81	24.76	27.00	26.06
21	23.86	23.66	24.09	24.01	24.67	24.60	24.94	24.82	24.92	24.81	27.44	27.00
22	23.88	23.82	24.09	24.01	24.68	24.63	24.95	24.89	24.97	24.92	27.61	27.20
23	23.82	23.75	24.14	24.03	24.65	24.57	24.91	24.82	24.96	24.85	27.20	26.53
24	23.76	23.69	24.21	24.14	24.57	24.50	24.83	24.70	24.85	24.76	26.53	26.19
25	23.86	23.76	24.22	24.18	24.58	24.50	24.70	24.60	24.91	24.82	26.19	26.12
26	23.96	23.85	24.65	24.22	24.70	24.58	24.69	24.60	24.94	24.87	26.12	26.07
27	23.86	23.75	24.57	24.30	24.71	24.59	24.82	24.69	24.97	24.92	26.10	26.07
28	23.80	23.72	24.39	24.30	24.59	24.47	24.84	24.79	24.94	24.87	26.13	26.04
29	23.83	23.79	24.43	24.37	24.51	24.45	24.87	24.76	25.06	24.91	26.04	25.86
30	23.79	23.67	24.42	24.36	24.51	24.47	24.76	24.69	25.05	24.92	25.86	25.82
31	---	---	24.53	24.36	---	---	24.76	24.70	24.92	24.83	---	---
MONTH	23.96	23.25	24.65	23.65	24.71	24.15	24.98	24.46	25.06	24.66	27.61	24.85
YEAR	27.61	22.01										

Daily Low Water Levels



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ANNE ARUNDEL COUNTY--Continued

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, off Stewart Avenue near bike trail. Owner: U.S. Geological Survey.

AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.

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 water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from October 1984 to June 1998, and 30-minute recorder interval June 1998 to current year.

DATUM.--Elevation of land surface is 57.50 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of shelter platform, 2.50 ft above land surface.

REMARKS.--Anne Arundel County Ground-Water-Level Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

PERIOD OF RECORD.--October 1984 to current year

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 50.45 ft above sea level, July 11, 2003 (recorder); lowest measured, 32.39 ft above sea level, November 3, 1986.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	46.98	JAN 30, 2003	47.96	APR 23, 2003	49.46	JUL 17, 2003	50.23
NOV 27	47.24	MAR 04	48.54	MAY 29	49.75	AUG 26	49.87
DEC 18	47.36	25	49.19	JUN 25	50.18	SEP 29	49.79

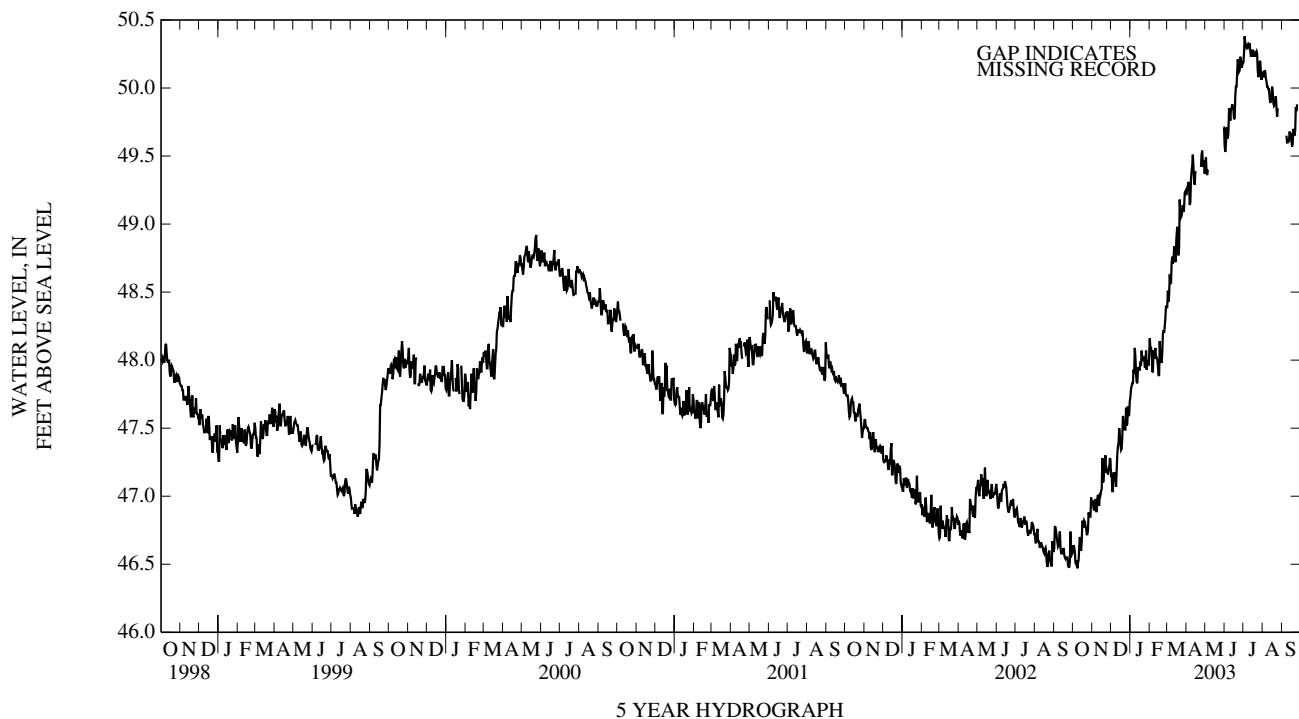
LOWEST 46.98 OCT 31, 2002
 HIGHEST 50.23 JUL 17, 2003

DAY	MAX		MIN		MAX		MIN		MAX		MIN	
	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH						
1	46.68	46.62	47.04	46.97	47.27	47.14	47.98	47.73	48.22	48.16	48.51	48.39
2	46.69	46.64	47.02	46.95	47.30	47.17	47.92	47.79	48.17	48.09	48.73	48.51
3	46.68	46.62	46.96	46.91	47.26	47.03	47.99	47.81	48.19	48.09	48.64	48.43
4	46.70	46.59	47.00	46.90	47.17	47.05	47.96	47.83	48.31	48.06	48.63	48.48
5	46.71	46.51	47.13	46.90	47.39	47.17	47.93	47.83	48.06	47.92	48.76	48.63
6	46.61	46.50	47.23	46.98	47.27	47.17	47.99	47.93	48.07	47.91	48.77	48.57
7	46.65	46.53	46.98	46.89	47.27	47.17	48.13	47.90	48.19	48.07	48.71	48.56
8	46.53	46.47	47.00	46.89	47.26	47.13	48.18	48.09	48.09	48.01	48.89	48.71
9	46.54	46.51	47.02	46.98	47.19	47.07	48.19	48.02	48.09	48.06	48.93	48.76
10	46.63	46.53	47.08	47.01	47.31	47.19	48.03	47.90	48.28	48.09	48.77	48.71
11	46.77	46.63	47.08	46.94	47.49	47.31	47.90	47.84	48.16	48.02	48.83	48.73
12	46.75	46.70	47.06	46.93	47.46	47.37	47.92	47.83	48.19	48.02	48.89	48.83
13	46.73	46.64	47.06	47.02	47.74	47.39	48.10	47.92	48.07	48.00	48.95	48.83
14	46.67	46.60	47.07	47.01	47.77	47.50	48.02	47.95	48.02	47.96	48.83	48.72
15	46.82	46.67	47.08	47.04	47.56	47.45	48.01	47.93	48.08	47.89	48.94	48.83
16	47.04	46.82	47.28	47.05	47.60	47.38	48.13	47.93	48.14	47.89	48.98	48.92
17	46.90	46.81	47.36	47.28	47.40	47.34	48.18	47.99	48.21	48.14	49.02	48.98
18	46.82	46.77	47.28	47.10	47.44	47.35	48.08	47.96	48.14	48.00	49.02	48.86
19	46.94	46.82	47.25	47.11	47.64	47.44	48.14	48.07	48.06	47.99	48.86	48.77
20	46.89	46.81	47.25	47.20	47.78	47.59	48.19	48.00	48.05	47.98	49.25	48.83
21	46.83	46.78	47.38	47.25	47.59	47.54	48.06	48.00	48.19	48.05	49.26	49.18
22	46.82	46.77	47.41	47.30	47.63	47.53	48.06	48.01	48.64	48.19	49.18	49.08
23	46.80	46.72	47.30	47.18	47.55	47.49	48.14	48.03	48.68	48.22	49.11	49.05
24	46.77	46.72	47.22	47.18	47.65	47.49	48.09	47.95	48.35	48.20	49.10	49.06
25	46.96	46.75	47.26	47.20	47.91	47.65	48.07	47.95	48.32	48.25	49.22	49.09
26	47.01	46.88	47.29	47.16	47.70	47.52	48.15	48.07	48.40	48.31	49.26	49.14
27	46.89	46.86	47.30	47.20	47.66	47.53	48.07	47.93	48.49	48.40	49.14	49.09
28	46.90	46.85	47.29	47.19	47.73	47.66	48.12	47.97	48.50	48.39	49.23	49.12
29	46.99	46.85	47.45	47.28	47.74	47.59	48.15	48.00	---	---	49.31	49.23
30	47.03	46.99	47.44	47.27	47.70	47.60	48.03	47.96	---	---	49.33	49.24
31	47.01	46.95	---	---	47.77	47.70	48.16	48.03	---	---	49.32	49.22
MONTH	47.04	46.47	47.45	46.89	47.91	47.03	48.19	47.73	48.68	47.89	49.33	48.39

ANNE ARUNDEL COUNTY--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	49.41	49.22	49.54	49.44	49.84	49.57	50.26	50.19	50.15	50.12	---	---
2	49.37	49.27	49.61	49.49	49.60	49.53	50.39	50.25	50.13	50.09	---	---
3	49.37	49.28	49.49	49.38	49.71	49.59	50.44	50.38	50.14	50.08	---	---
4	49.36	49.31	49.41	49.36	49.75	49.71	50.38	50.33	50.15	50.13	---	---
5	49.39	49.27	49.49	49.40	49.74	49.69	50.35	50.32	50.14	50.12	---	---
6	49.27	49.14	---	---	49.69	49.63	50.34	50.30	50.12	50.07	---	---
7	49.36	49.16	---	---	49.94	49.67	50.37	50.31	50.09	50.05	---	---
8	49.39	49.33	---	---	49.91	49.85	50.35	50.30	50.07	50.01	49.72	49.65
9	49.47	49.39	---	---	49.89	49.82	50.38	50.32	50.05	50.01	49.66	49.60
10	49.51	49.43	---	---	49.84	49.76	50.41	50.31	50.04	49.99	49.66	49.60
11	49.61	49.51	---	---	49.89	49.84	50.45	50.33	50.09	49.99	49.66	49.61
12	49.62	49.42	---	---	49.92	49.85	50.33	50.28	50.03	49.93	49.70	49.61
13	49.42	49.32	---	---	49.95	49.88	50.31	50.23	49.94	49.89	49.77	49.68
14	49.39	49.29	---	---	49.93	49.86	50.29	50.25	49.96	49.91	49.69	49.66
15	49.56	49.39	---	---	49.89	49.84	50.36	50.27	50.01	49.94	49.73	49.67
16	---	---	---	---	49.85	49.77	50.38	50.28	50.08	50.01	49.69	49.61
17	---	---	---	---	49.94	49.78	50.28	50.23	50.07	49.97	49.61	49.57
18	---	---	---	---	50.02	49.94	50.31	50.26	49.97	49.89	49.99	49.59
19	---	---	---	---	50.07	50.01	50.31	50.25	49.90	49.87	49.99	49.70
20	---	---	---	---	50.12	50.01	50.26	50.23	49.92	49.88	49.71	49.67
21	---	---	---	---	50.21	50.11	50.33	50.26	49.95	49.90	49.70	49.65
22	---	---	---	---	50.22	50.21	50.31	50.27	50.00	49.94	49.86	49.69
23	---	---	---	---	50.21	50.16	50.31	50.25	49.97	49.86	50.05	49.86
24	49.51	49.42	---	---	50.16	50.12	50.25	50.13	49.86	49.79	49.93	49.83
25	49.59	49.51	---	---	50.24	50.13	50.13	50.08	49.90	49.85	49.93	49.88
26	49.63	49.54	---	---	50.28	50.23	50.19	50.10	---	---	---	---
27	49.54	49.44	---	---	50.28	50.20	50.28	50.19	---	---	---	---
28	49.53	49.42	---	---	50.20	50.15	50.27	50.20	---	---	---	---
29	49.55	49.47	---	---	50.21	50.16	50.22	50.11	---	---	---	---
30	49.47	49.37	49.77	49.71	50.24	50.19	50.11	50.06	---	---	49.77	49.72
31	---	---	49.87	49.71	---	---	50.13	50.08	---	---	---	---
MONTH	49.63	49.14	49.87	49.36	50.28	49.53	50.45	50.06	50.15	49.79	50.05	49.57
YEAR	50.45	46.47										

Daily Low Water Levels



5 YEAR HYDROGRAPH
OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ANNE ARUNDEL COUNTY--Continued

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 Road, 0.3 mi north of Aquahart Road intersection, next to the Baltimore and Annapolis bike trail. Owner: U.S. Geological Survey.

AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 173 ft; casing diameter 6 in., to 160 ft; casing diameter 4 in., from 170 to 173 ft; screen diameter 4 in., from 160 to 170 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel. Equipped with digital water-level recorder--30-minute recorder interval from October 1984 to June 1998, and 15-minute recorder interval from June 1998 to current year.

DATUM.--Elevation of land surface is 68.99 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of shelter platform, 2.26 ft above land surface.

REMARKS.--Anne Arundel County Ground-Water-Level Monitoring Network observation well. Water levels are affected by local ground-water withdrawal. Missing data due to recorder malfunction.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 30.70 ft above sea level, September 22, 2003 (recorder); lowest measured, 12.76 ft above sea level, September 14, 1987.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

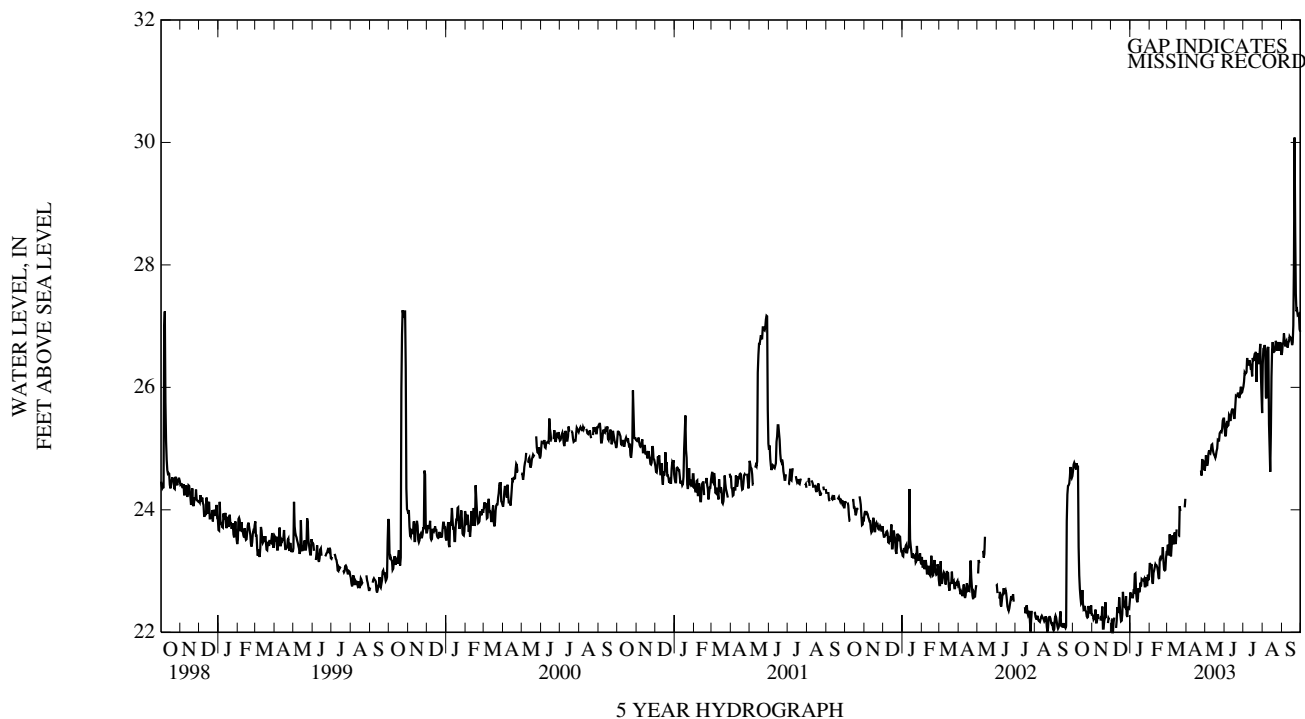
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	22.31	JAN 30, 2003	22.86	APR 23, 2003	24.61	JUL 17, 2003	26.43
NOV 27	22.28	MAR 04	23.32	MAY 29	25.50	AUG 26	26.74
DEC 18	22.21	31	24.09	JUN 25	25.88	SEP 29	27.01
LOWEST	22.21	DEC 18, 2002					
HIGHEST	27.01	SEP 29, 2003					

DAY	MAX		MIN		MAX		MIN		MAX		MIN	
	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH						
1	24.74	24.63	22.37	22.29	22.47	22.21	22.94	22.65	23.27	23.13	23.43	23.31
2	24.80	24.74	22.35	22.27	22.38	22.21	22.89	22.60	23.24	23.11	23.77	23.43
3	24.80	24.77	22.28	22.21	22.37	22.00	22.84	22.60	23.24	23.09	23.66	23.27
4	24.87	24.74	22.29	22.23	22.16	22.00	22.83	22.57	23.42	23.11	23.67	23.27
5	24.88	24.69	22.49	22.23	22.51	22.16	22.67	22.57	23.11	22.83	23.75	23.60
6	24.79	24.66	22.64	22.37	22.43	22.24	22.76	22.67	22.97	22.79	23.69	23.35
7	24.86	24.76	22.37	22.16	---	---	22.95	22.66	23.20	22.97	23.40	23.24
8	24.76	24.69	22.22	22.16	---	---	23.12	22.95	23.15	23.01	23.70	23.40
9	24.77	24.72	22.29	22.22	22.20	22.07	23.16	22.96	23.11	23.06	23.81	23.58
10	24.78	23.39	22.43	22.29	22.41	22.19	22.96	22.69	23.40	23.11	23.58	23.45
11	23.39	22.93	22.43	22.22	22.59	22.41	22.69	22.54	23.31	23.09	23.56	23.45
12	22.93	22.71	---	---	22.52	22.33	22.56	22.49	23.29	23.09	23.67	23.56
13	22.71	22.57	---	---	22.81	22.33	22.94	22.55	23.11	23.06	23.76	23.63
14	22.57	22.47	22.26	22.19	22.89	22.57	22.79	22.72	23.06	23.00	23.63	23.44
15	22.71	22.49	22.26	22.25	22.57	22.43	22.75	22.67	23.13	22.89	23.68	23.49
16	22.91	22.69	22.42	22.25	22.59	22.27	22.91	22.67	23.19	22.87	23.84	23.68
17	22.69	22.47	22.52	22.42	22.27	22.18	23.02	22.81	23.39	23.19	---	---
18	22.47	22.37	22.43	22.06	22.30	22.19	22.87	22.75	23.37	23.22	---	---
19	22.55	22.38	22.20	22.06	22.66	22.30	23.00	22.87	23.27	23.20	23.77	23.57
20	22.55	22.43	22.23	22.18	22.88	22.66	23.10	22.86	23.27	23.23	24.06	23.57
21	22.43	22.35	22.50	22.23	22.66	22.50	22.88	22.85	23.39	23.25	24.12	24.06
22	22.35	22.34	22.58	22.49	22.59	22.49	22.87	22.85	23.76	23.39	24.09	23.98
23	22.34	22.26	22.49	22.23	22.49	22.41	23.01	22.87	23.83	23.15	---	---
24	22.26	22.24	---	---	22.59	22.40	22.99	22.75	23.15	23.02	---	---
25	22.49	22.25	---	---	22.97	22.59	22.90	22.75	23.13	23.01	---	---
26	22.55	22.43	22.29	22.15	22.68	22.28	23.05	22.90	23.21	23.02	24.34	24.07
27	22.43	22.34	22.33	22.23	22.40	22.25	22.99	22.77	23.41	23.21	---	---
28	22.35	22.34	22.29	22.21	22.57	22.40	23.02	22.77	23.43	23.31	---	---
29	22.63	22.31	---	---	22.59	22.40	23.09	22.94	---	---	24.23	24.04
30	22.51	22.44	---	---	22.51	22.39	22.94	22.85	---	---	24.20	24.18
31	22.44	22.29	---	---	22.65	22.51	23.13	22.91	---	---	---	---
MONTH	24.88	22.24	22.64	22.06	22.97	22.00	23.16	22.49	23.83	22.79	24.34	23.24

ANNE ARUNDEL COUNTY--Continued

DAY	MAX		MIN		MAX		MIN		MAX		MIN	
	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER						
1	---	---	24.89	24.72	25.74	25.32	26.09	26.01	26.63	26.38	26.71	26.57
2	---	---	25.03	24.89	25.32	25.20	26.24	26.09	26.65	26.63	26.74	26.71
3	---	---	24.94	24.76	25.40	25.23	26.29	26.24	26.69	26.64	26.88	26.73
4	---	---	24.76	24.72	25.47	25.40	26.26	26.22	26.75	26.69	26.94	26.88
5	---	---	24.92	24.76	25.47	25.45	26.25	26.23	26.78	26.65	26.93	26.76
6	---	---	24.98	24.92	25.45	25.37	26.77	26.25	26.73	25.84	26.76	26.67
7	---	---	25.02	24.97	25.62	25.38	27.51	26.48	26.62	25.82	26.81	26.74
8	---	---	25.02	24.93	25.61	25.55	26.48	26.37	26.65	26.50	26.81	26.76
9	---	---	24.99	24.92	25.58	25.53	26.44	26.37	26.69	26.64	26.76	26.69
10	---	---	25.06	24.98	25.53	25.45	26.47	26.37	26.70	26.66	26.73	26.65
11	---	---	25.27	25.06	25.62	25.52	26.52	26.44	26.71	25.40	26.87	26.73
12	---	---	25.25	25.07	25.66	25.61	26.44	26.38	26.46	25.02	26.84	26.75
13	---	---	25.07	24.98	25.70	25.64	26.38	26.29	26.22	24.62	26.89	26.83
14	---	---	24.98	24.93	25.69	25.64	26.36	26.32	26.24	25.24	26.83	26.81
15	---	---	24.95	24.90	25.67	25.61	26.48	26.18	26.62	26.17	26.90	26.81
16	---	---	24.97	24.88	25.61	25.50	26.54	26.48	26.80	26.62	26.89	26.77
17	---	---	24.89	24.85	25.69	25.50	26.52	26.43	26.80	26.74	26.77	26.69
18	---	---	24.96	24.89	25.86	25.69	26.58	26.48	26.74	26.59	27.21	26.73
19	---	---	25.00	24.96	25.92	25.86	26.58	26.54	26.60	26.58	28.07	27.01
20	---	---	25.14	25.00	25.92	25.85	26.58	26.54	26.65	26.59	30.08	28.07
21	---	---	25.17	25.14	25.91	25.86	26.73	26.58	26.77	26.65	30.54	30.08
22	---	---	25.15	25.13	25.92	25.90	26.72	26.09	26.84	26.76	30.70	28.53
23	---	---	25.25	25.13	25.92	25.90	26.60	26.56	26.83	26.70	28.53	27.53
24	24.73	24.64	25.30	25.25	25.90	25.84	26.60	26.47	26.70	26.60	27.53	27.24
25	24.83	24.56	25.29	25.27	25.93	25.84	26.47	26.38	26.75	26.66	27.28	27.26
26	24.91	24.83	25.36	25.28	26.27	25.93	26.55	26.41	26.78	26.74	27.26	27.18
27	24.84	24.69	25.33	25.27	26.24	26.01	26.74	26.55	26.78	26.66	27.26	27.19
28	24.81	24.68	25.46	25.33	26.01	25.91	26.74	26.71	27.03	26.60	27.29	27.20
29	24.86	24.80	25.54	25.46	25.97	25.92	26.72	26.23	27.03	26.74	27.20	26.95
30	24.80	24.64	25.54	25.49	26.04	25.97	26.48	25.88	26.76	26.62	26.95	26.91
31	---	---	25.66	25.49	---	---	26.46	25.58	26.62	26.53	---	---
MONTH	24.91	24.56	25.66	24.72	26.27	25.20	27.51	25.58	27.03	24.62	30.70	26.57
YEAR	30.70	22.00										

Daily Low Water Levels



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Bd 157. SITE ID.--390737076374401. PERMIT NUMBER.--AA-81-3464.

LOCATION.--Lat 39°07'37", long 76°37'44", Hydrologic Unit 02060003, off Nolfield Dr., 0.14 mi east of Phirme Rd., at Rippling Woods Elementary School.
Owner: U.S. Geological Survey.

AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 180 ft; casing diameter 6 in., to 167 ft; and casing diameter 4 in., from 177 to 180 ft; screen diameter 4 in., from 167 to 177 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel.
Equipped with digital water-level recorder--60-minute recorder interval from March 1985 to December 1996, and 30-minute recorder interval from December 1996 to current year.

DATUM.--Elevation of land surface is 75.75 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of shelter platform, 2.50 ft above land surface.

REMARKS.--Anne Arundel County Ground-Water-Level Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.
Missing data due to recorder malfunction.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 38.88 ft above sea level, September 23, 2003 (recorder); lowest measured, 32.02 ft above sea level, September 4, 1992.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

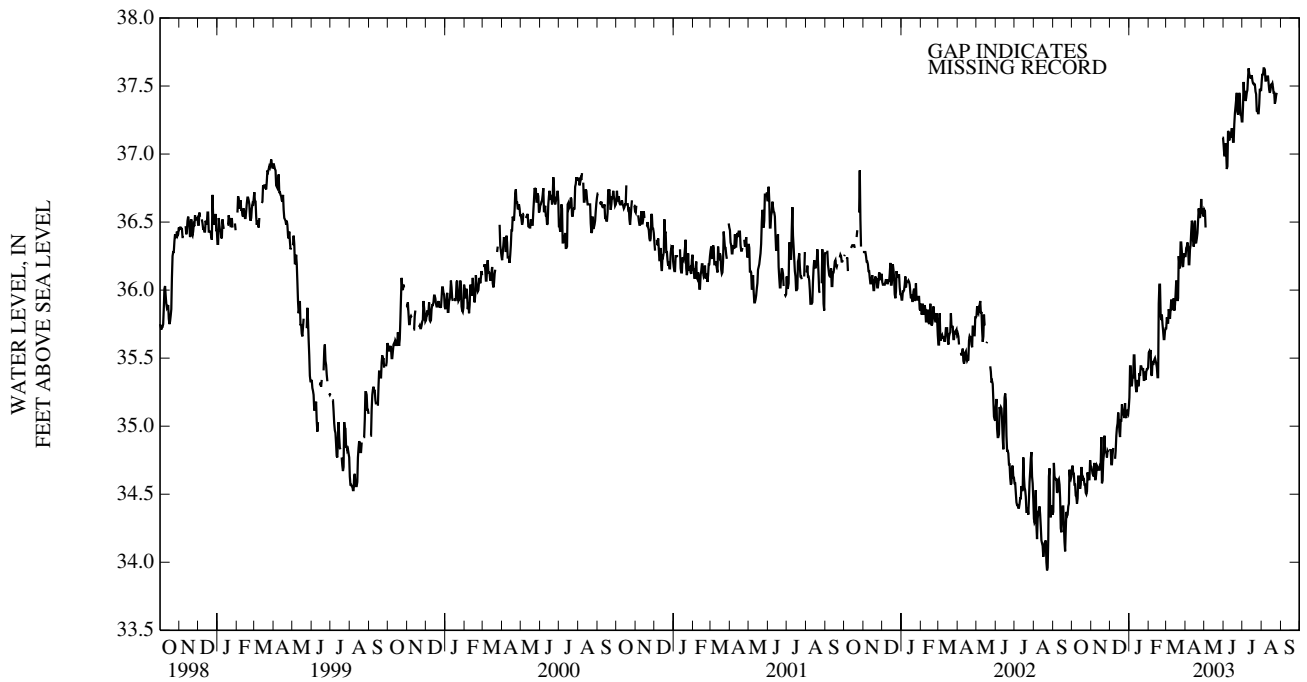
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	34.70	JAN 30, 2003	35.46	APR 28, 2003	36.62	JUL 17, 2003	37.64
NOV 27	34.85	MAR 04	35.78	MAY 29	37.17	AUG 26	37.51
DEC 18	35.17	25	36.59	JUN 25	37.40	SEP 29	38.44
LOWEST	34.70	OCT 31, 2002					
HIGHEST	38.44	SEP 29, 2003					

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	34.71	34.69	34.74	34.70	34.96	34.82	35.75	35.21	35.62	35.54	35.80	35.72
2	34.74	34.71	34.73	34.68	34.94	34.83	35.74	35.44	35.68	35.55	36.02	35.80
3	34.74	34.65	34.68	34.65	34.91	34.72	35.50	35.44	35.60	35.53	35.95	35.76
4	34.73	34.65	34.70	34.64	34.79	34.72	35.46	35.30	35.82	35.56	35.86	35.76
5	34.74	34.57	34.83	34.63	35.00	34.79	35.36	35.30	35.56	35.38	36.00	35.86
6	34.64	34.57	34.93	34.73	34.93	34.84	35.42	35.36	35.48	35.37	36.03	35.83
7	34.68	34.49	34.73	34.61	---	---	35.52	35.36	35.58	35.48	35.86	35.79
8	34.51	34.48	34.66	34.61	---	---	35.61	35.52	35.51	35.45	36.01	35.86
9	34.53	34.43	34.71	34.66	34.82	34.76	35.62	35.52	35.49	35.47	36.05	35.93
10	34.63	34.47	34.78	34.71	34.93	34.82	35.52	35.38	35.66	35.49	35.93	35.86
11	34.74	34.63	34.78	34.70	35.13	34.93	35.38	35.30	35.59	35.50	35.91	35.86
12	34.70	34.63	34.78	34.68	35.14	34.99	35.30	35.25	35.61	35.48	35.97	35.91
13	34.65	34.58	34.78	34.68	35.29	35.02	35.42	35.27	35.51	35.46	36.03	35.94
14	34.58	34.54	34.72	34.68	35.31	35.10	35.37	35.34	35.46	35.43	35.94	35.85
15	34.70	34.57	34.74	34.72	35.10	35.05	35.36	35.30	35.52	35.36	35.99	35.89
16	34.92	34.70	34.96	34.73	35.14	34.96	35.45	35.30	35.90	35.36	36.07	35.97
17	34.77	34.65	35.02	34.92	35.08	34.92	35.50	35.39	36.10	35.90	36.14	36.07
18	34.65	34.60	34.92	34.58	35.21	35.04	35.44	35.37	36.11	36.04	36.15	36.02
19	34.70	34.62	34.74	34.60	35.16	35.04	35.50	35.44	36.12	36.04	36.02	35.92
20	34.67	34.61	34.79	34.74	35.33	35.16	35.56	35.44	36.12	35.82	36.31	35.94
21	34.62	34.57	34.94	34.79	35.20	35.12	35.45	35.42	35.82	35.78	36.29	36.25
22	34.58	34.57	35.00	34.93	35.16	35.11	35.43	35.42	36.17	35.82	36.25	36.19
23	34.57	34.51	34.93	34.81	35.11	35.08	35.48	35.42	36.15	35.75	36.48	36.16
24	34.53	34.50	34.82	34.81	35.17	35.06	35.47	35.34	35.76	35.70	36.56	36.35
25	34.70	34.52	34.84	34.81	35.45	35.17	35.40	35.34	35.72	35.64	36.59	36.35
26	34.76	34.66	34.86	34.77	35.27	35.07	35.48	35.40	35.70	35.64	36.44	36.28
27	34.66	34.61	34.87	34.82	35.12	35.06	35.48	35.34	35.79	35.70	36.28	36.18
28	34.65	34.61	34.87	34.81	35.19	35.12	35.46	35.40	35.82	35.72	36.24	36.17
29	34.75	34.61	---	---	35.20	35.10	35.59	35.42	---	---	36.33	36.24
30	34.78	34.75	---	---	35.14	35.09	35.48	35.42	---	---	36.41	36.27
31	34.77	34.70	---	---	35.22	35.14	35.55	35.43	---	---	36.36	36.25
MONTH	34.92	34.43	35.02	34.58	35.45	34.72	35.75	35.21	36.17	35.36	36.59	35.72

ANNE ARUNDEL COUNTY--Continued

DAY	MAX		MIN		MAX		MIN		MAX		MIN	
	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER						
1	36.40	36.25	36.67	36.59	37.28	37.06	37.35	37.24	37.59	37.54	---	---
2	36.38	36.31	36.70	36.58	37.06	36.99	37.54	37.35	37.59	37.59	---	---
3	36.38	36.32	36.58	36.46	37.08	36.99	37.57	37.53	37.63	37.58	---	---
4	36.38	36.35	---	---	37.11	37.08	37.53	37.43	37.63	37.63	---	---
5	36.41	36.32	---	---	37.11	37.02	37.47	37.44	37.65	37.63	---	---
6	36.32	36.19	---	---	37.02	36.89	37.49	37.39	37.65	37.62	---	---
7	36.34	36.19	---	---	37.24	36.91	37.54	37.41	37.62	37.54	---	---
8	36.34	36.30	---	---	37.21	37.17	37.55	37.45	37.55	37.54	---	---
9	36.45	36.33	---	---	37.21	37.16	37.58	37.47	37.60	37.55	---	---
10	36.51	36.43	---	---	37.16	37.10	37.64	37.56	37.58	37.57	---	---
11	36.63	36.51	---	---	37.21	37.14	37.69	37.63	37.64	37.57	---	---
12	36.65	36.49	---	---	37.23	37.12	37.63	37.59	37.63	37.52	---	---
13	36.49	36.36	---	---	37.23	37.16	37.61	37.57	37.52	37.47	---	---
14	36.36	36.32	---	---	37.25	37.19	37.62	37.56	37.47	37.45	---	---
15	36.51	36.36	---	---	37.22	37.17	37.61	37.56	37.56	37.47	---	---
16	36.57	36.51	---	---	37.17	37.09	37.66	37.58	37.60	37.51	---	---
17	36.52	36.35	---	---	37.22	37.09	37.66	37.54	37.58	37.51	---	---
18	36.39	36.35	---	---	37.30	37.22	37.57	37.52	37.58	37.52	---	---
19	36.43	36.38	---	---	37.39	37.30	37.58	37.52	37.52	37.49	---	---
20	36.51	36.42	---	---	37.43	37.35	37.57	37.51	37.49	37.45	---	---
21	36.64	36.51	---	---	37.47	37.40	37.57	37.51	37.51	37.45	---	---
22	36.65	36.60	---	---	37.47	37.45	37.55	37.46	37.45	37.37	---	---
23	36.60	36.55	---	---	37.47	37.31	37.50	37.44	37.45	37.39	---	---
24	36.58	36.53	---	---	37.33	37.29	37.44	37.32	37.45	37.43	---	---
25	36.67	36.56	---	---	37.45	37.32	37.39	37.32	37.48	37.45	---	---
26	36.75	36.67	---	---	37.51	37.45	37.36	37.30	---	---	---	---
27	36.68	36.58	---	---	37.51	37.41	37.39	37.30	---	---	---	---
28	36.64	36.57	---	---	37.41	37.29	37.48	37.37	---	---	---	---
29	36.66	36.60	---	---	37.35	37.29	37.50	37.48	---	---	---	---
30	36.61	36.54	37.17	37.12	37.36	37.24	37.50	37.47	---	---	---	---
31	---	---	37.28	37.12	---	---	37.54	37.47	---	---	---	---
MONTH	36.75	36.19	37.28	36.46	37.51	36.89	37.69	37.24	37.65	37.37	---	---
YEAR	37.69	34.43										

Daily Low Water Levels



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Bd 158. SITE ID.--390744076390001. PERMIT NUMBER.--AA-81-3459.

LOCATION.--Lat 39°07'44", long 76°39'00", Hydrologic Unit 02060003, 0.05 mi off Stevenson Rd., 0.45 mi west of New Cut Road, at Center for Applied Technology-North. Owner: U.S. Geological Survey.

AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 187 ft; casing diameter 6 in., to 174 ft; screen diameter 4 in., from 174 to 184 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from January 1985 to 1989.

DATUM.--Elevation of land surface is 108.25 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.60 ft above land surface.

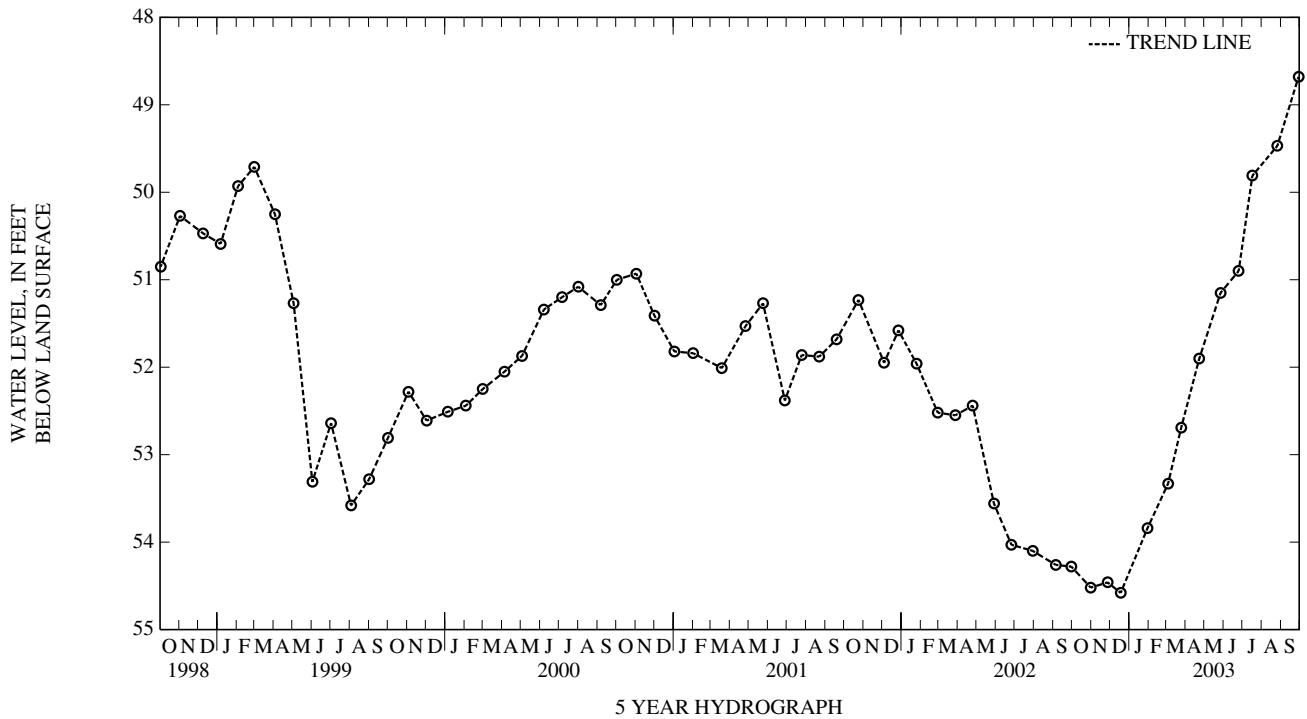
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 48.68 ft below land surface, September 29, 2003; lowest measured, 55.90 ft below land surface, September 14, 1987 and January 15, 1988.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	54.52	JAN 30, 2003	53.84	APR 23, 2003	51.90	JUL 17, 2003	49.81
NOV 27	54.46	MAR 04	53.33	MAY 27	51.15	AUG 26	49.47
DEC 18	54.58	25	52.69	JUN 25	50.90	SEP 29	48.68
HIGHEST 48.68 SEP 29, 2003							
LOWEST 54.58 DEC 18, 2002							



5 YEAR HYDROGRAPH
OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ANNE ARUNDEL COUNTY--Continued

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 Road, 0.41 mi. east of WB & A Road, at Queenstown Park. Owner: U.S. Geological Survey.

AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.

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 water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from April 1985 to December 1996, and 30-minute recorder interval from December 1996 to current year.

DATUM.--Elevation of land surface is 88.0 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of shelter platform, 2.50 ft above land surface.

REMARKS.--Anne Arundel County Ground-Water-Level Network observation well. Water levels are affected by local ground-water withdrawal. Missing data due to recorder malfunction.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 77.12 ft above sea level, July 11, 2003 (recorder); lowest measured, 66.30 ft above sea level, March 20, 1985.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

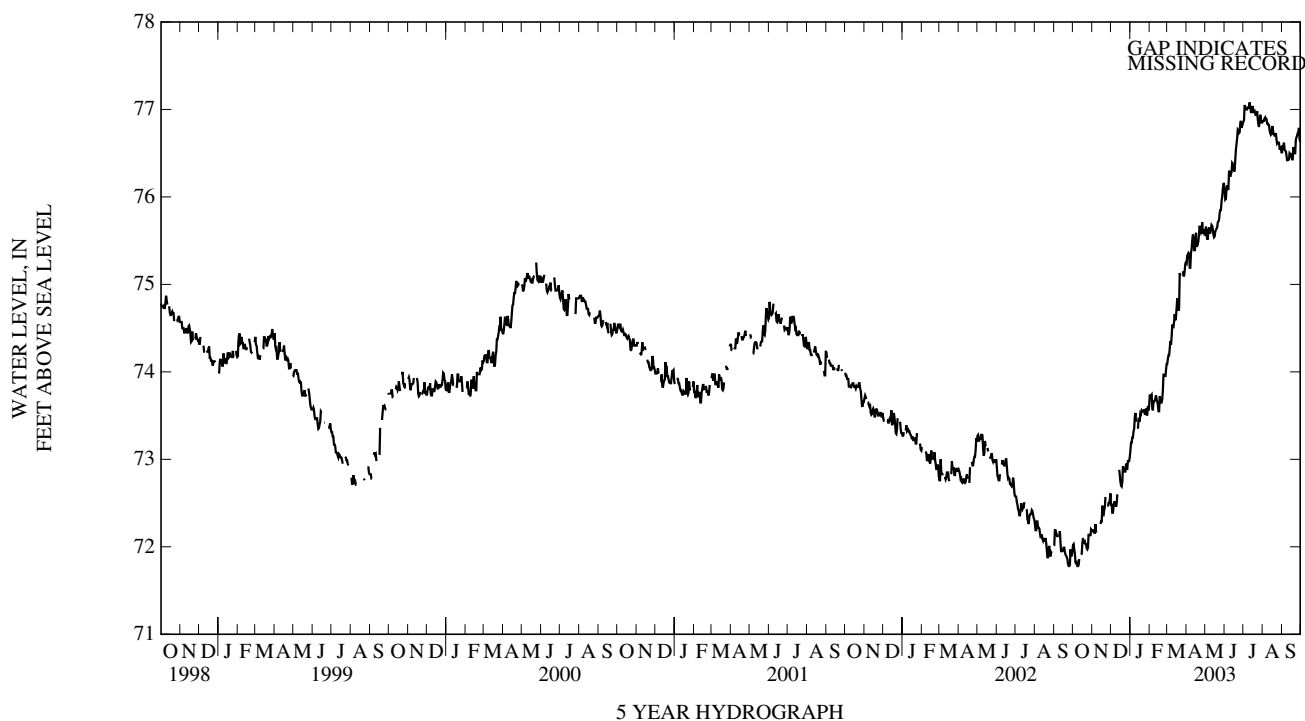
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	72.20	JAN 30, 2003	73.59	APR 28, 2003	75.62	JUL 17, 2003	76.97
NOV 27	72.54	MAR 04	74.20	MAY 29	76.13	AUG 26	76.62
DEC 18	72.69	25	75.12	JUN 25	76.80	SEP 29	76.71
LOWEST	72.20	OCT 31, 2002					
HIGHEST	76.97	JUL 17, 2003					

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	72.09	72.02	72.23	72.19	72.61	72.48	73.34	73.10	73.81	73.73	74.15	74.09
2	72.08	72.03	72.22	72.19	72.57	72.48	73.31	73.19	73.80	73.73	74.37	74.15
3	72.04	71.97	72.19	72.17	72.56	72.39	73.37	73.19	73.78	73.73	74.35	74.19
4	71.97	71.93	72.19	72.16	72.46	72.39	73.36	73.25	73.90	73.74	74.27	74.19
5	71.98	71.82	72.29	72.16	72.64	72.46	73.32	73.25	73.74	73.59	74.44	74.27
6	71.85	71.81	72.40	72.26	72.61	72.51	73.37	73.32	73.66	73.56	74.46	74.35
7	71.90	71.82	72.26	72.16	72.56	72.51	73.48	73.35	73.78	73.66	74.40	74.31
8	71.82	71.78	---	---	72.57	72.49	73.60	73.48	73.76	73.66	74.56	74.40
9	71.80	71.78	---	---	72.49	72.46	73.60	73.53	73.70	73.67	74.61	74.54
10	71.86	71.79	---	---	72.60	72.49	73.53	73.43	73.86	73.70	74.54	74.51
11	71.99	71.86	---	---	72.79	72.60	---	---	73.83	73.73	74.58	74.51
12	---	---	---	---	---	---	---	---	73.80	73.69	74.66	74.58
13	---	---	---	---	---	---	73.52	73.35	73.69	73.66	74.74	74.66
14	71.95	71.91	72.29	72.26	73.03	72.88	73.48	73.45	73.66	73.62	74.68	74.59
15	72.04	71.92	72.31	72.29	72.88	72.82	73.49	73.44	73.69	73.55	74.73	74.63
16	72.27	72.04	72.47	72.29	72.89	72.74	73.58	73.44	73.72	73.55	74.84	74.73
17	72.18	72.10	72.54	72.47	72.74	72.70	73.64	73.53	73.80	73.72	74.92	74.84
18	72.10	72.05	72.50	72.36	72.74	72.69	73.56	73.52	73.77	73.68	74.94	74.81
19	72.13	72.05	72.44	72.36	72.92	72.74	73.61	73.56	73.68	73.65	74.81	74.70
20	72.13	72.06	72.45	72.42	73.06	72.92	73.68	73.55	73.69	73.65	75.13	74.73
21	72.07	72.03	72.57	72.45	72.98	72.89	73.57	73.55	73.79	73.69	75.18	75.13
22	72.04	72.03	72.64	72.57	72.92	72.89	73.57	73.55	74.23	73.79	75.16	75.10
23	72.04	71.98	---	---	72.89	72.86	73.64	73.57	74.30	73.98	---	---
24	71.99	71.97	---	---	72.95	72.86	73.64	73.52	---	---	---	---
25	72.15	71.99	---	---	73.19	72.95	73.58	73.52	---	---	---	---
26	72.21	72.15	72.52	72.46	73.08	72.89	73.64	73.58	74.02	73.94	75.22	75.15
27	---	---	72.54	72.50	72.98	72.89	73.62	73.51	74.14	74.02	75.16	75.10
28	---	---	72.54	72.50	73.03	72.98	73.64	73.51	74.15	74.09	75.16	75.10
29	72.20	72.12	72.68	72.54	73.06	72.98	73.69	73.61	---	---	75.27	75.16
30	72.25	72.20	72.70	72.61	73.03	72.98	73.61	73.56	---	---	75.31	75.24
31	72.24	72.19	---	---	73.11	73.03	73.73	73.61	---	---	75.31	75.25
MONTH	72.27	71.78	72.70	72.16	73.19	72.39	73.73	73.10	74.30	73.55	75.31	74.09

ANNE ARUNDEL COUNTY--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	75.37	75.24	75.66	75.58	76.25	76.05	76.88	76.86	76.91	76.86	76.59	76.51
2	75.37	75.33	75.74	75.66	76.05	75.97	77.05	76.88	76.90	76.87	76.60	76.58
3	75.37	75.34	75.69	75.56	76.10	75.98	77.11	77.05	76.92	76.87	76.62	76.58
4	75.38	75.36	75.56	75.52	76.15	76.10	77.09	77.03	76.93	76.90	76.66	76.62
5	75.40	75.35	75.63	75.52	76.17	76.13	77.04	77.01	76.93	76.91	76.64	76.54
6	75.35	75.19	75.66	75.63	76.13	76.09	77.02	77.00	76.93	76.89	76.54	76.53
7	75.36	75.19	75.68	75.65	76.32	76.09	77.03	77.00	76.90	76.89	76.53	76.52
8	75.40	75.36	75.68	75.59	76.32	76.30	77.05	77.02	76.89	76.84	76.52	76.48
9	75.51	75.40	75.67	75.59	76.32	76.27	77.05	77.02	76.86	76.84	76.49	76.42
10	75.57	75.50	75.68	75.63	76.27	76.23	77.09	77.04	76.86	76.82	76.44	76.42
11	75.70	75.57	75.77	75.68	76.31	76.27	77.12	77.08	76.89	76.82	76.46	76.43
12	75.71	75.55	75.76	75.67	76.39	76.28	77.08	77.04	76.86	76.76	76.50	76.43
13	75.55	75.41	75.68	75.63	76.41	76.39	77.04	76.97	76.76	76.73	76.58	76.50
14	75.44	75.38	75.63	75.57	76.41	76.38	77.00	76.97	76.73	76.71	76.52	76.49
15	75.59	75.44	75.57	75.54	76.41	76.37	77.04	76.97	76.80	76.72	76.54	76.49
16	75.64	75.59	75.67	75.55	76.37	76.30	77.06	77.04	76.85	76.80	76.53	76.46
17	75.62	75.44	75.64	75.61	76.43	76.30	77.04	76.97	76.88	76.80	76.46	76.43
18	75.46	75.44	75.64	75.62	76.54	76.43	77.01	76.97	76.80	76.72	76.72	76.43
19	75.50	75.46	75.65	75.64	76.61	76.54	77.02	76.98	76.72	76.72	76.72	76.57
20	75.59	75.50	75.71	75.65	76.67	76.61	76.98	76.95	76.72	76.70	76.57	76.52
21	75.71	75.59	75.75	75.71	76.77	76.67	77.01	76.96	76.74	76.70	76.52	76.50
22	75.74	75.67	75.74	75.72	76.78	76.77	76.98	76.93	76.78	76.73	76.65	76.50
23	75.67	75.61	75.82	75.74	76.80	76.76	77.02	76.98	76.77	76.66	76.84	76.65
24	75.61	75.59	75.86	75.82	76.76	76.73	77.00	76.89	76.66	76.61	76.75	76.68
25	75.71	75.61	75.86	75.85	76.84	76.74	76.89	76.83	76.65	76.62	76.77	76.70
26	75.77	75.71	76.02	75.85	76.89	76.84	76.88	76.80	76.65	76.62	76.75	76.73
27	75.71	75.59	76.00	75.95	76.92	76.87	76.95	76.88	76.68	76.62	76.82	76.74
28	75.64	75.59	76.09	76.00	76.87	76.79	76.99	76.94	76.62	76.55	76.84	76.79
29	75.68	75.63	76.15	76.09	76.84	76.81	76.99	76.90	76.62	76.55	76.79	76.66
30	75.64	75.56	76.17	76.15	76.87	76.84	76.90	76.85	76.61	76.56	76.66	76.63
31	---	---	76.24	76.15	---	---	76.87	76.85	76.56	76.51	---	---
MONTH	75.77	75.19	76.24	75.52	76.92	75.97	77.12	76.80	76.93	76.51	76.84	76.42
YEAR	77.12	71.78										

Daily Low Water Levels



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

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.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.

WELL CHARACTERISTICS.--Dug, brick-lined, unused, water-table well, diameter 48 in., depth 22.8 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 20.38 ft above National Geodetic Vertical Datum of 1929. Measuring point: Hole in concrete cover at land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water level measured 14.10 ft below land surface, January 27, 1944.

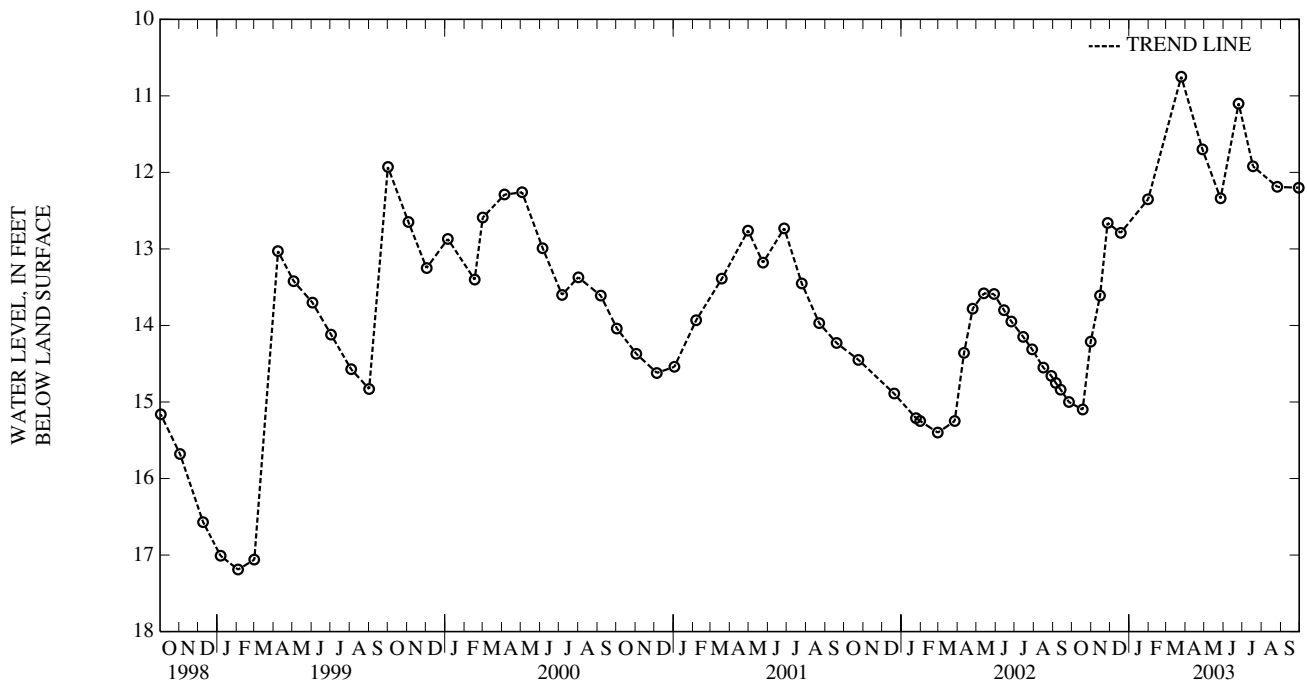
PERIOD OF RECORD.--April 1956 to current year.

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, December 7, 1965.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18, 2002	15.10	DEC 18, 2002	12.79	MAY 27, 2003	12.34	SEP 29, 2003	12.20
31	14.21	JAN 31, 2003	12.35	JUN 25	11.10		
NOV 15	13.61	MAR 25	10.75	JUL 18	11.92		
27	12.66	APR 28	11.70	AUG 26	12.19		

HIGHEST 10.75 MAR 25, 2003
 LOWEST 15.10 OCT 18, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Bf 100. SITE ID.--390629076273601. PERMIT NUMBER.--AA-94-7214.

LOCATION.--Lat 39°06'29", long 76°27'36", Hydrologic Unit 02060003, at Chesapeake High School. Owner: Anne Arundel County School Board.

AQUIFER.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.

WELL CHARACTERISTICS.--Drilled, artesian well, depth 145 ft; casing diameter 2in., to 125 ft; screen diameter 2 in., from 125 to 145 ft;

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 52 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.00 ft above land surface.

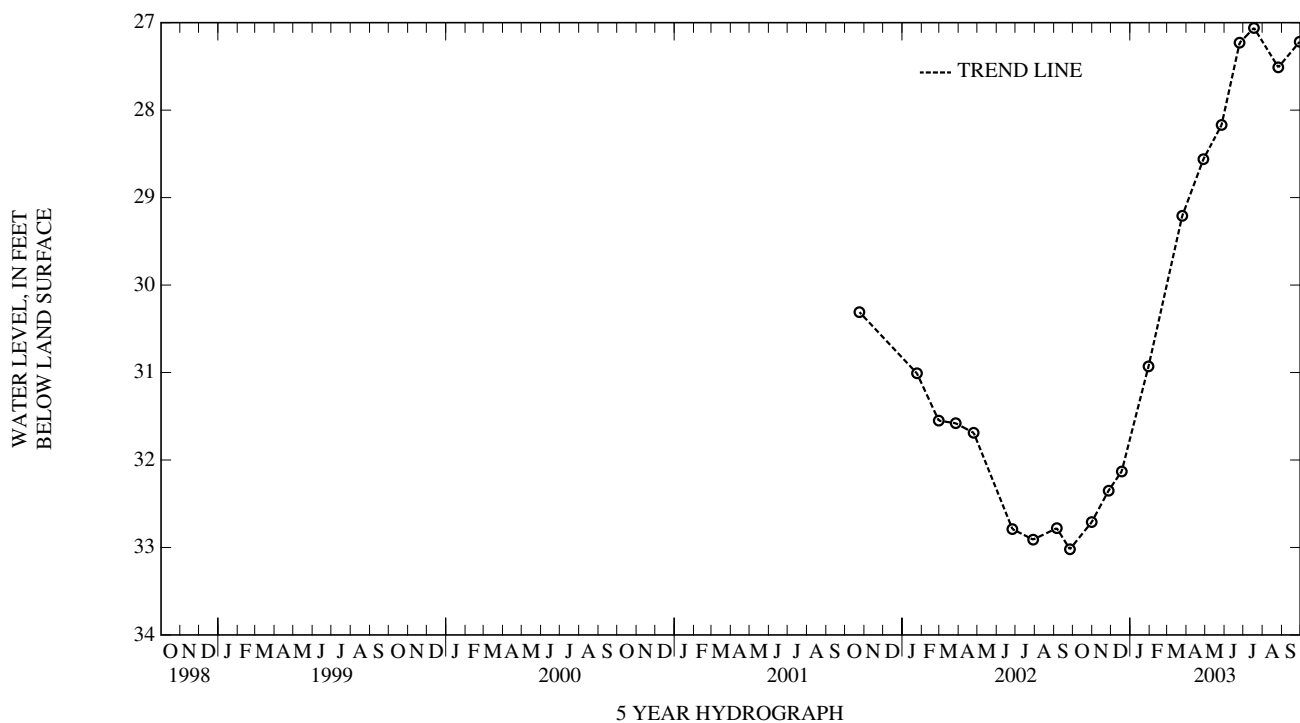
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by regional ground-water withdrawal.

PERIOD OF RECORD.--October 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 27.06 ft below land surface, July 18, 2003; lowest measured, 33.02 ft below land surface, September 26, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	32.71	JAN 30, 2003	30.93	MAY 27, 2003	28.17	AUG 26, 2003	27.51
NOV 27	32.35	MAR 25	29.21	JUN 25	27.23	SEP 29	27.22
DEC 18	32.13	APR 28	28.56	JUL 18	27.06		
HIGHEST	27.06	JUL 18, 2003					
LOWEST	32.71	OCT 31, 2002					



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., Patuxent Wildlife Research Center. Owner: U.S. Fish and Wildlife (formerly 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 water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from July 1984 to current year.

DATUM.--Elevation of land surface is 129.10 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of shelter platform, 3.35 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

PERIOD OF RECORD.--March 1962 to current year.

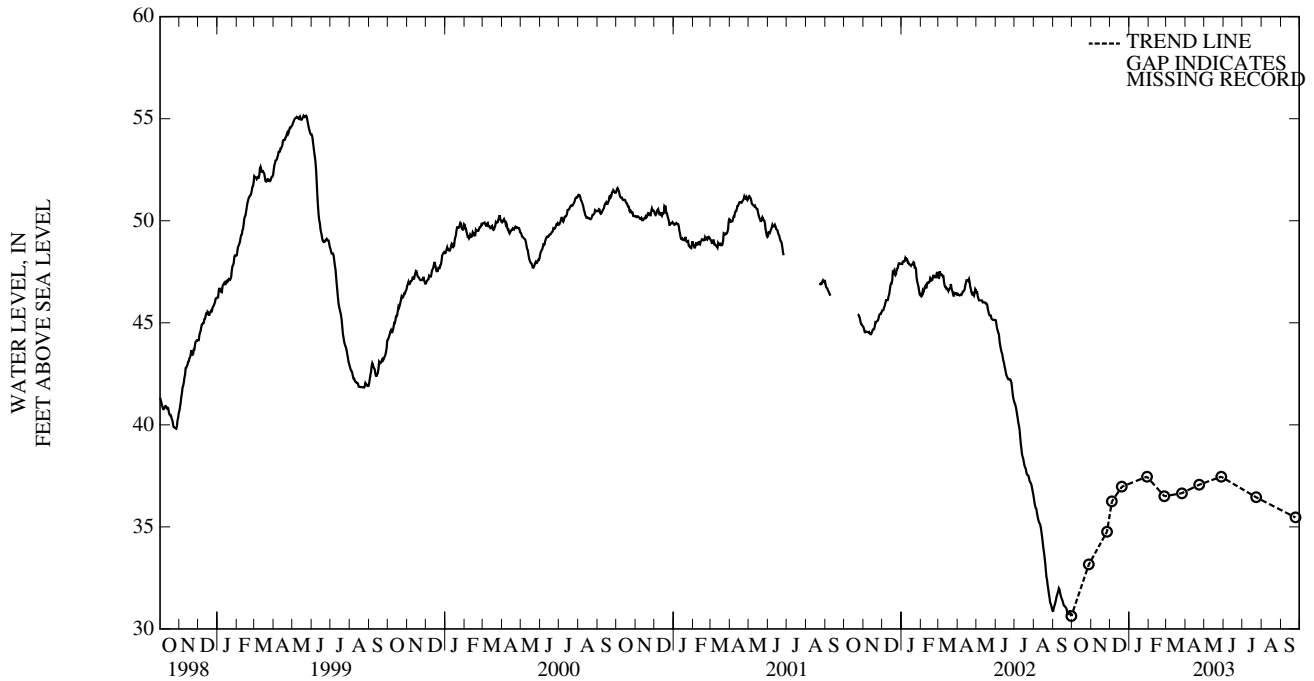
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 88.50 ft above sea level, May 1, 1962; lowest measured, 30.63 ft above sea level, September 30, 2002 (recorder).

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 2002	33.16	DEC 20, 2002	36.97	MAR 26, 2003	36.65	JUL 23, 2003	36.45
NOV 26	34.76	JAN 29, 2003	37.46	APR 23	37.07	SEP 24	35.46
DEC 04	36.25	FEB 26	36.50	MAY 28	37.46		

LOWEST 33.16 OCT 28, 2002
 HIGHEST 37.46 JAN 29, 2002 and MAY 28, 2003

Daily Low Water Levels



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ANNE ARUNDEL COUNTY--Continued

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 Meade. Owner: U.S. Army.

AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 238 ft; casing diameter 6 in., to 208 ft; screened diameter 6 in., from 208 to 238 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with graphic water-level recorder from December 1959 to July 1960 and January 1978 to December 1985.

DATUM.--Elevation of land surface is 136.92 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.60 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Network observation well. Water levels are affected by local and regional ground-water withdrawal.

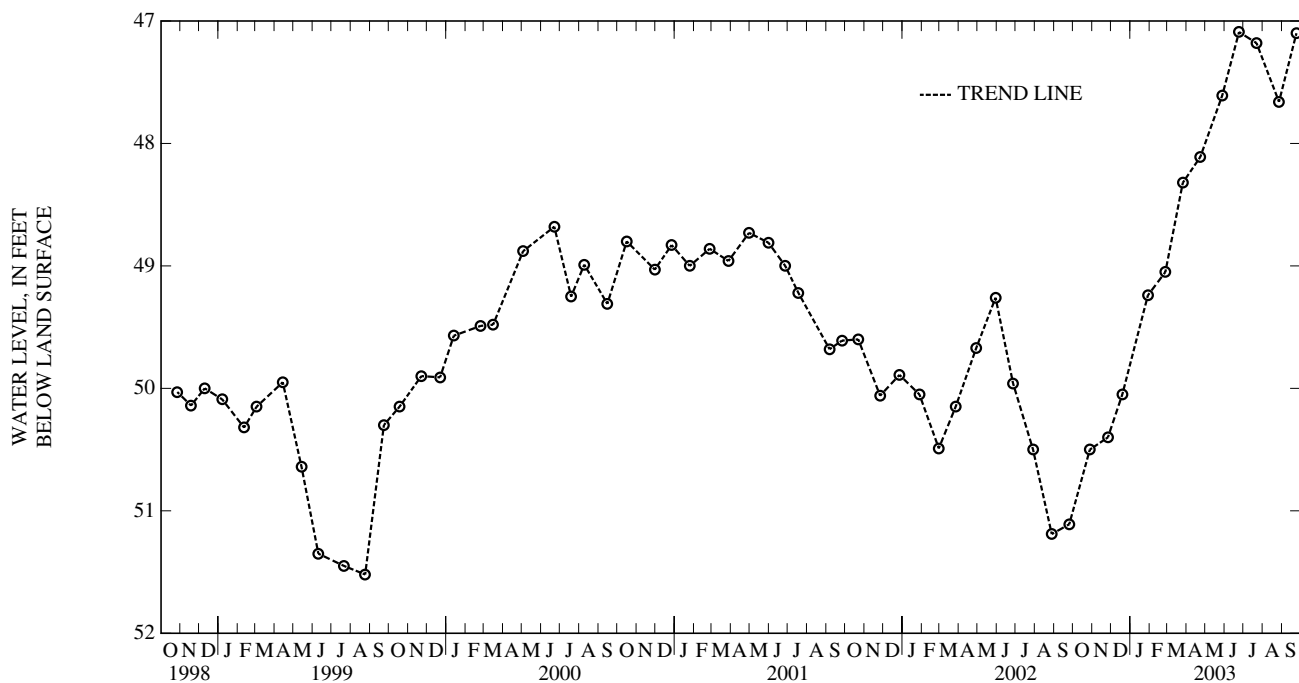
PERIOD OF RECORD.--December 1959 to current year

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 42.58 ft below land surface, March 25, 1961; lowest measured, 51.69 ft below land surface, September 1, 1992.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 2002	50.50	JAN 29, 2003	49.24	APR 23, 2003	48.11	JUL 22, 2003	47.18
NOV 26	50.40	FEB 26	49.05	MAY 28	47.61	AUG 27	47.66
DEC 19	50.05	MAR 26	48.32	JUN 24	47.09	SEP 24	47.10

HIGHEST 47.09 JUN 24, 2003
LOWEST 50.50 OCT 28, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Cc 135. SITE ID.--390126076403001. PERMIT NUMBER.--AA-93-0998.

LOCATION.--Lat 39°01'26", long 76°40'30", Hydrologic Unit 02060006, near Reidel Rd and Johns Hopkins Rd, at Crofton Meadows. Owner: Anne Arundel County.

AQUIFER.--Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 1,100 ft; casing diameter 4 in., to 299 ft, and casing diameter 2 in., from 299 to 985 ft, and 1,035 to 1,070 ft; screen diameter 2 in., from 985 to 1,035 ft, and 1,070 to 1,100 ft.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by Maryland Geological Survey personnel. Equipped with digital water-level recorder--15-minute recorder interval from May 1998 to current year.

DATUM.--Elevation of land surface is 114.81 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder platform, 3.48 ft above land surface.

REMARKS.--Anne Arundel County Ground-Water-Level Monitoring Network observation well. Water levels are affected by local ground-water withdrawal. Missing data due to recorder malfunction.

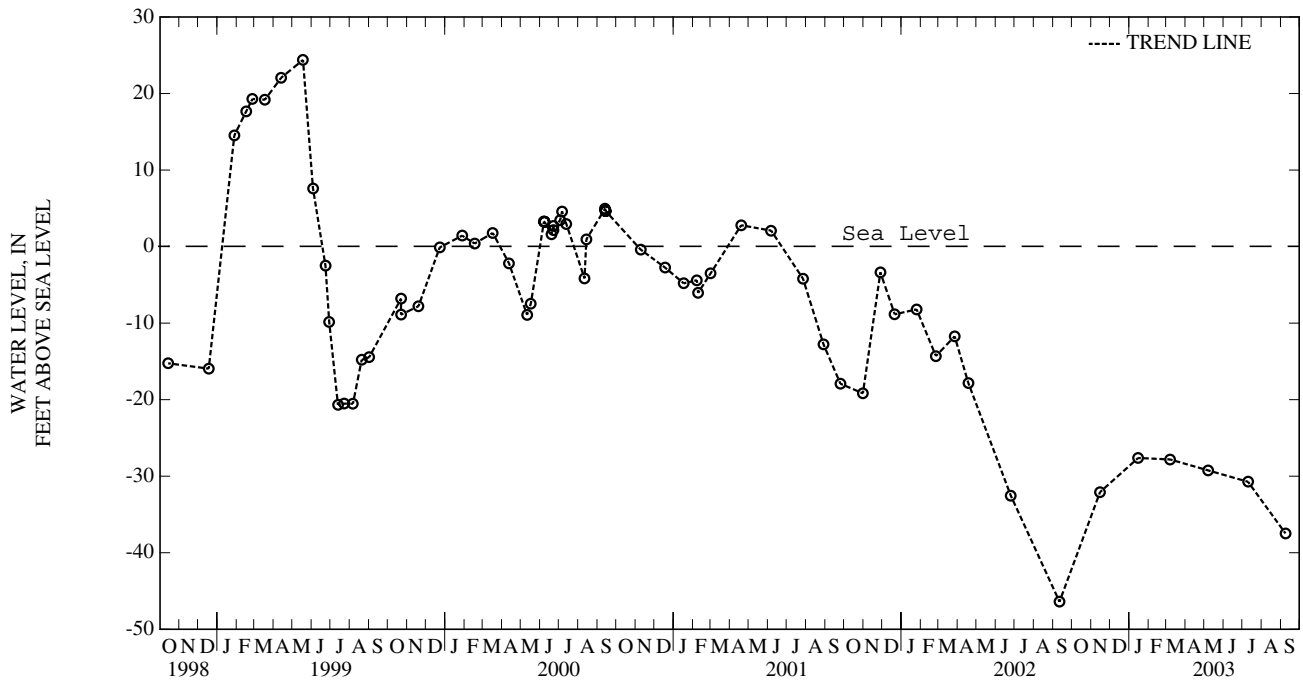
PERIOD OF RECORD.--December 1997 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 23.78 ft above sea level, May 4, 1999 (recorder); lowest measured, 46.40 ft below sea level, September 11, 2002.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 15, 2002	-32.07	MAR 07, 2003	-27.81	JUL 10, 2003	-30.73
JAN 15, 2003	-27.62	MAY 07	-29.24	SEP 08	-37.47

LOWEST -37.47 SEP 08, 2003
 HIGHEST -27.62 JAN 15, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Cc 137. SITE ID.--390126076402901. PERMIT NUMBER.--AA-93-0993.

LOCATION.--Lat 39°01'26", long 76°40'29", Hydrologic Unit 02060006, near Reidel Rd and Johns Hopkins Rd, at Crofton Meadows. Owner: Anne Arundel County.

AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 690 ft; casing diameter 4 in., to 300 ft, and casing diameter 2 in., from 300 to 476 ft, and 506 to 536 ft, 576 to 606 ft, and 686 to 690 ft; screen diameter 2 in., from 476 to 506 ft, and 536 to 576 ft, and 606 to 686 ft.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by Maryland Geological Survey personnel. Equipped with digital water-level recorder--15-minute recorder interval from May 1998 to current year.

DATUM.--Elevation of land surface is 115.34 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of shelter platform, 2.10 ft above land surface.

REMARKS.--Anne Arundel County Ground-Water-Level Monitoring Network observation well. Water levels are affected by local ground-water withdrawal. Missing data due to recorder malfunction.

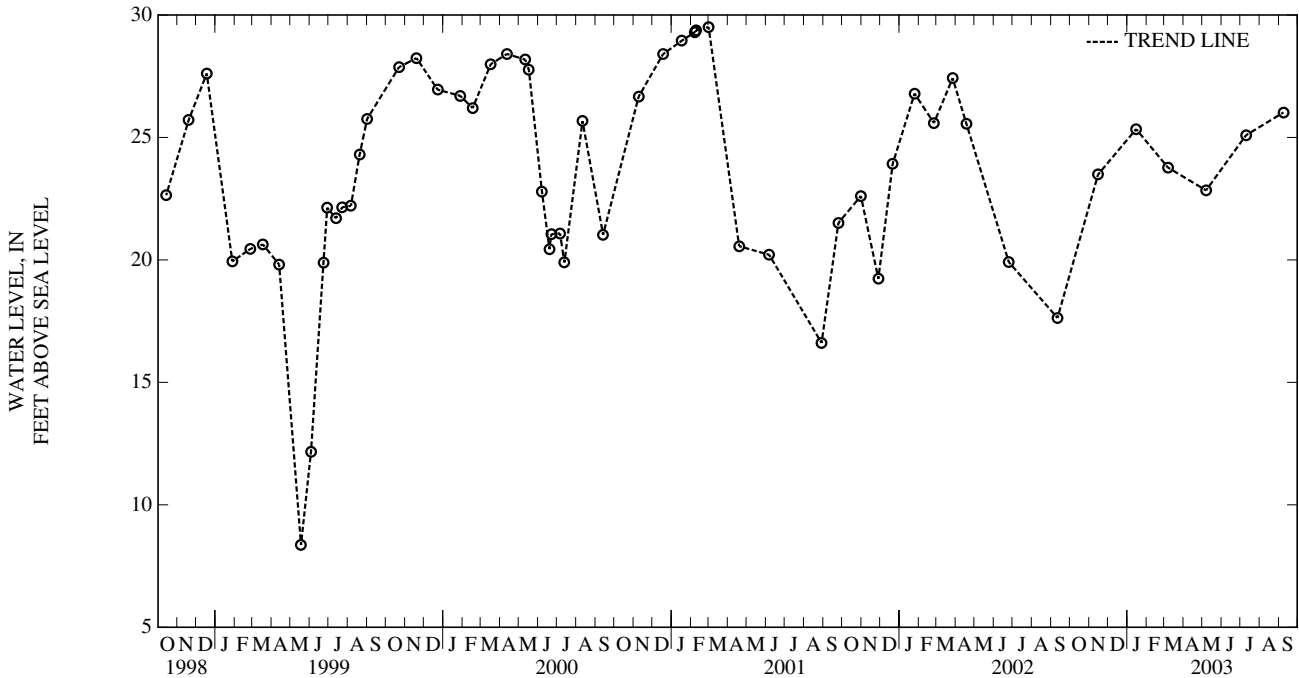
PERIOD OF RECORD.--December 1997 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 30.28 ft above sea level, February 17, 2001 (recorder); lowest measured, 4.49 ft above sea level, June 2, 1999 (recorder).

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 15, 2002	23.49	MAR 07, 2003	23.77	JUL 10, 2003	25.09
JAN 15, 2003	25.34	MAY 07	22.84	SEP 08	26.02

LOWEST 22.84 MAY 07, 2003
 HIGHEST 26.02 SEP 08, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

Daily Low Water Levels

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Ce 117. SITE ID.--390450076343402. PERMIT NUMBER.--AA-73-0172.

LOCATION.--Lat 39°04'50", long 76°34'35", Hydrologic Unit 02060004, 0.1 mi southwest of intersection of Severndale Road and Southway Road. 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 922 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 water level measurements with electric tape by Maryland Geological Survey personnel. Equipped with digital water-level recorder--30-minute recorder interval from August 1977 to April 1980, and August 1983 to September 2002.

DATUM.--Elevation of land surface is 86.0 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of shelter platform, 0.5 ft above land surface.

REMARKS.--Anne Arundel County Ground-Water-Level Monitoring Network observation well. Water levels are affected by local ground-water withdrawal. Missing data due to recorder malfunction.

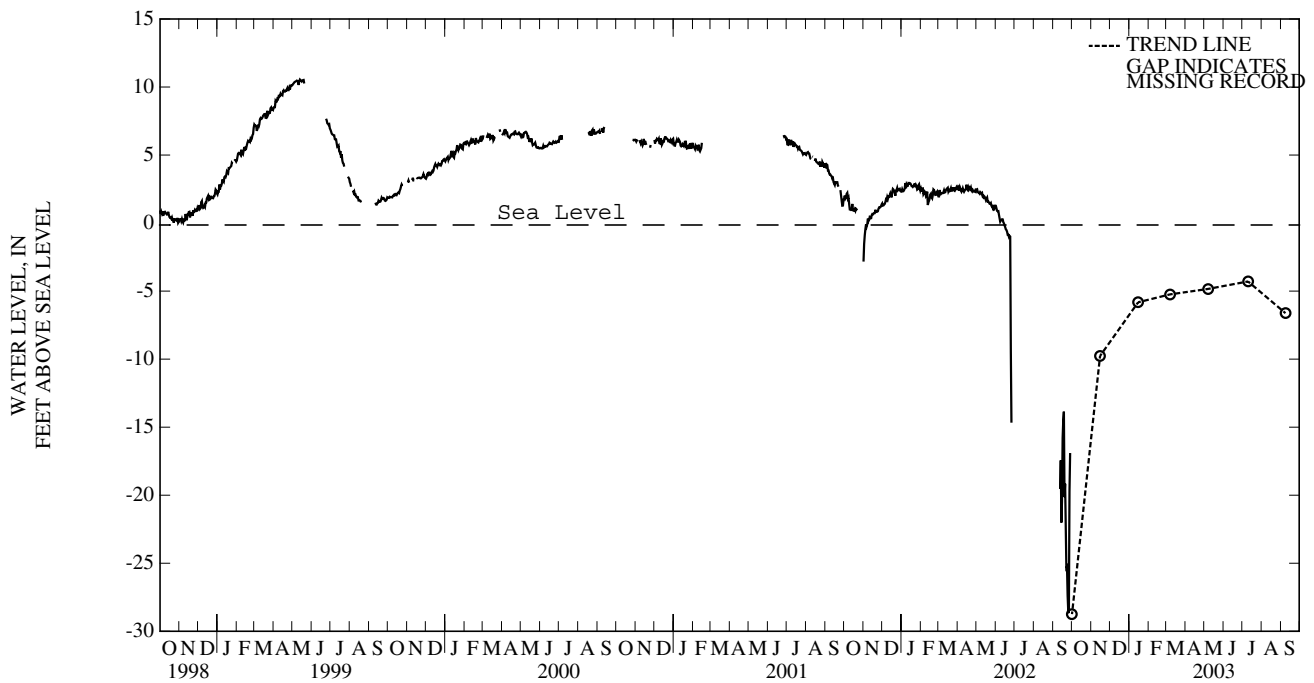
PERIOD OF RECORD.--August 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.58 ft above sea level, March 27, 1978 (recorder); lowest measured, 28.66 ft below sea level, September 26, 2002 (recorder).

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 15, 2002	-9.76	MAR 07, 2003	-5.24	JUL 10, 2003	-4.29
JAN 15, 2003	-5.82	MAY 07	-4.84	SEP 08	-6.62
LOWEST -9.76 NOV 15, 2002					
HIGHEST -4.29 JUL 10, 2003					

Daily Low Water Levels



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Cf 98. SITE ID.--390150076283003. PERMIT NUMBER.--AA-70-0199.

LOCATION.--Lat 39°01'50", long 76°28'30", Hydrologic Unit 02060004, 3.1 mi northeast of Annapolis, near Anne Arundel Co. Traffic Engineering Building, Broad Neck. Owner: Anne Arundel Co. Dept. of Recreation and Parks.

AQUIFER.--Severn Formation (Monmouth aquifer) of Upper Cretaceous age. Aquifer code: 211SVRN.

WELL CHARACTERISTICS.--Drilled, artesian, observation well, depth 100 ft; casing diameter 2 in., to 90 ft; screen diameter 2 in., from 90 to 100 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel. Twice yearly water level measurements from September 1969 to September 1986, and April 1989 to February 1999.

DATUM.--Elevation of land surface is 93.42 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.51 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

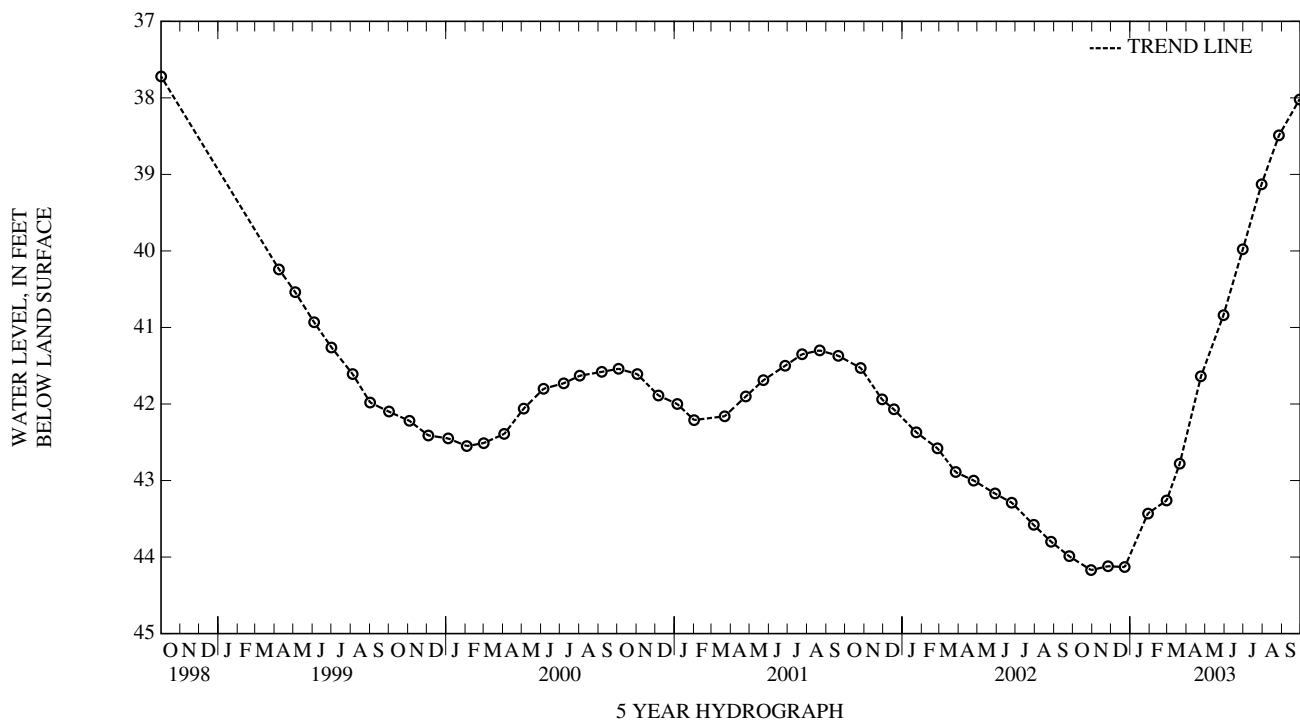
PERIOD OF RECORD.--September 1969 to September 1986, April 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 34.14 ft below land surface, August 3, 1972; lowest measured, 44.39 ft below land surface, November 15, 1988.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	44.17	JAN 29, 2003	43.43	APR 24, 2003	41.64	JUL 30, 2003	39.13
NOV 26	44.12	FEB 28	43.26	MAY 30	40.84	AUG 27	38.49
DEC 23	44.13	MAR 21	42.78	JUN 30	39.98	SEP 29	38.02

HIGHEST 38.02 SEP 29, 2003
LOWEST 44.17 OCT 30, 2002



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Cf 99. SITE ID.--390150076283002. PERMIT NUMBER.--AA-70-0199.

LOCATION.--Lat 39°01'50", long 76°28'30", Hydrologic Unit 02060004, 3.1 mi northeast of Annapolis, near Anne Arundel Co. Traffic Engineering Building, Broad Neck. Owner: Anne Arundel Co. Dept. of Recreation and Parks.

AQUIFER.--Magothy Formation of Upper Cretaceous age. Aquifer code: 211MGTY.

WELL CHARACTERISTICS.--Drilled, artesian, observation well, depth 220 ft; casing diameter 2 in., to 210 ft; screen diameter 2 in., from 210 to 220 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel. Equipped with graphic water-level recorder from September 1969 to July 1971.

DATUM.--Elevation of land surface is 93.70 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.60 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

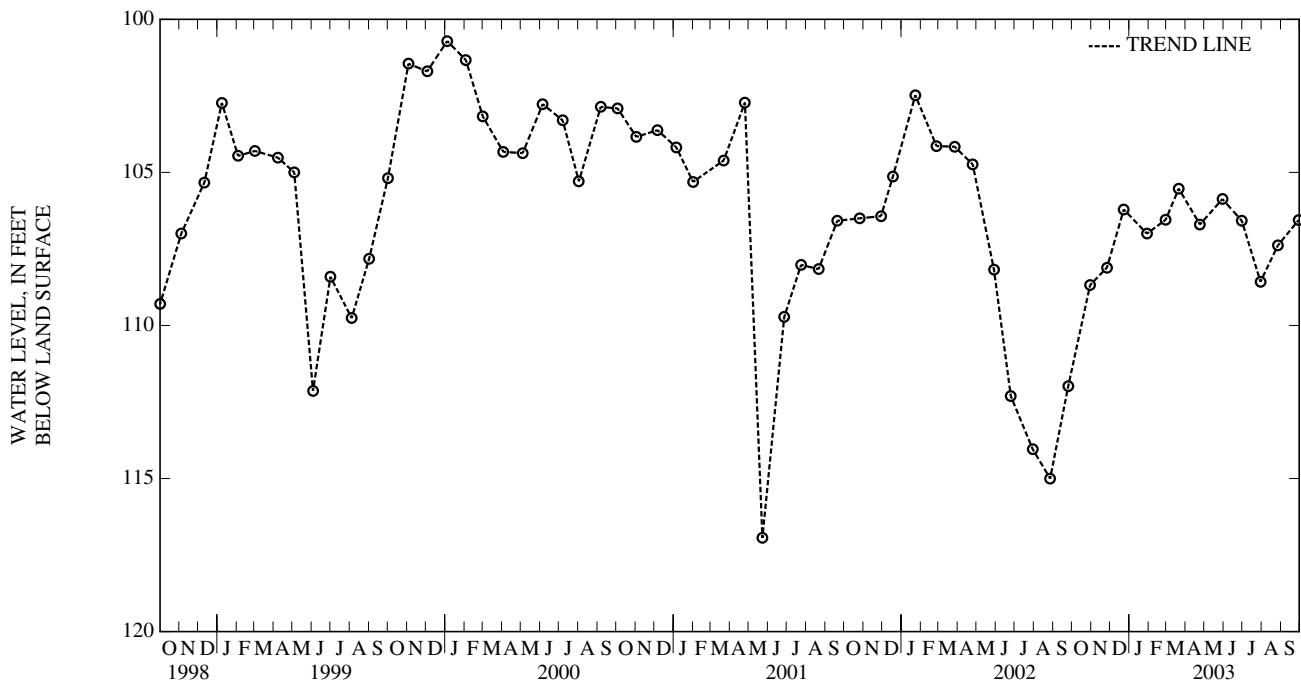
PERIOD OF RECORD.--September 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 89.29 ft below land surface, April 13, 1976; lowest measured, 116.94 ft below land surface, May 23, 2001.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	108.68	JAN 29, 2003	107.00	APR 24, 2003	106.70	JUL 30, 2003	108.57
NOV 26	108.11	FEB 28	106.55	MAY 30	105.87	AUG 27	107.38
DEC 23	106.21	MAR 21	105.53	JUN 30	106.58	SEP 29	106.56

HIGHEST 105.53 MAR 21, 2003
 LOWEST 108.68 OCT 30, 2002



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Cg 22. SITE ID.--390123076241601. PERMIT NUMBER.--AA-73-8606.

LOCATION.--Lat 39°01'23", long 76°24'16", Hydrologic Unit 02060004, 1,500 ft northeast of Oceanic Dr. and South Beach Rd., at Sandy Point State Park.
Owner: U.S. Geological Survey

AQUIFER.--Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 1,760 ft; casing diameter 10 in., to 163 ft; casing diameter 8 in., 0 to 1,760 ft; screen diameter 4 in., from 1,735 to 1,755 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 12.61 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.00 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

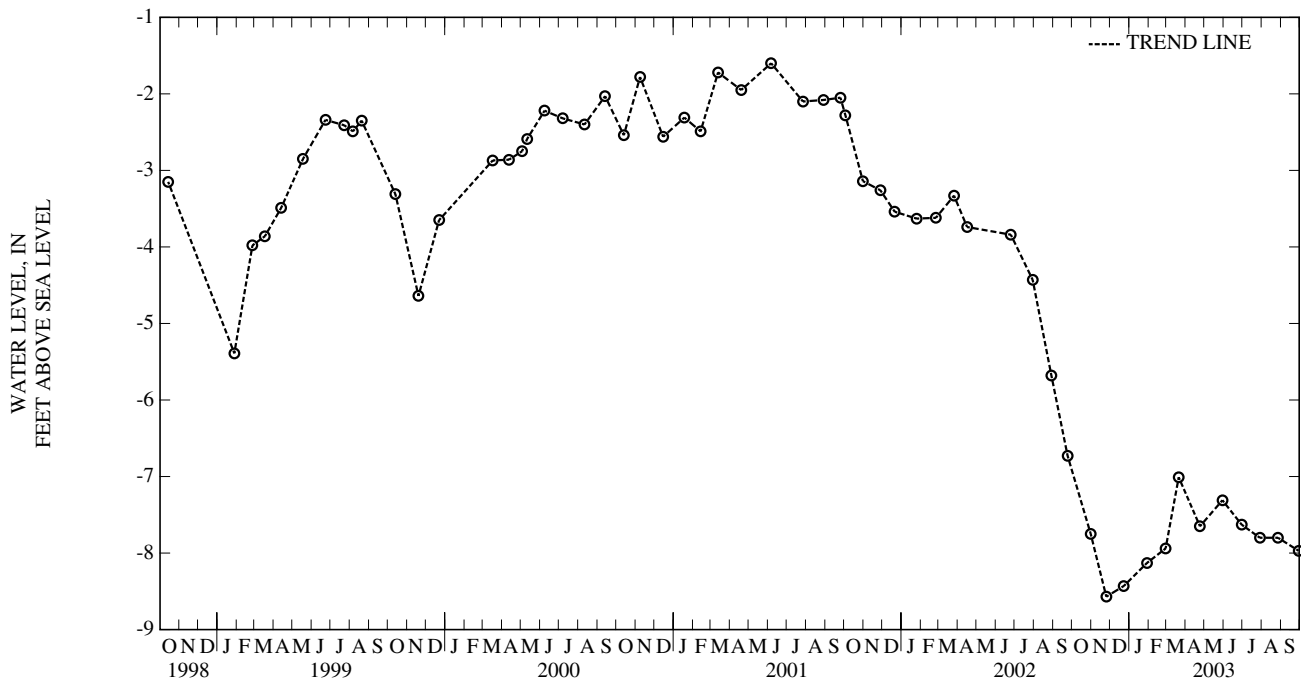
PERIOD OF RECORD.--September 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.47 ft above sea level, September 6, 1979; lowest measured, 8.57 ft below sea level, November 25, 2002.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	-7.75	JAN 29, 2003	-8.13	APR 24, 2003	-7.65	JUL 29, 2003	-7.80
NOV 25	-8.57	FEB 28	-7.94	MAY 30	-7.31	AUG 27	-7.80
DEC 23	-8.43	MAR 21	-7.01	JUN 30	-7.63	SEP 29	-7.97

LOWEST -8.57 NOV 25, 2002
HIGHEST -7.01 MAR 21, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Cg 23. SITE ID.--390123076241602. PERMIT NUMBER.--AA-73-8959.

LOCATION.--Lat 39°01'23", long 76°24'16", Hydrologic Unit 02060004, 1500 ft northeast of Oceanic Dr. and South Beach Rd., at Sandy Point State Park.
 Owner: U.S. Geological Survey

AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 986 ft; casing diameter 4 in., to 968 ft; and 978 to 986 ft; screen diameter 4 in., from 968 to 978 ft.

INSTRUMENTATION.-- Monthly water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel.
 Equipped with a graphic water-level recorder from September 1978 to February 1980. Equipped with digital water-level recorder--60-minute recorder interval from September 1990 to August 2001.

DATUM.--Elevation of land surface is 12.57 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of flange, 3.00 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

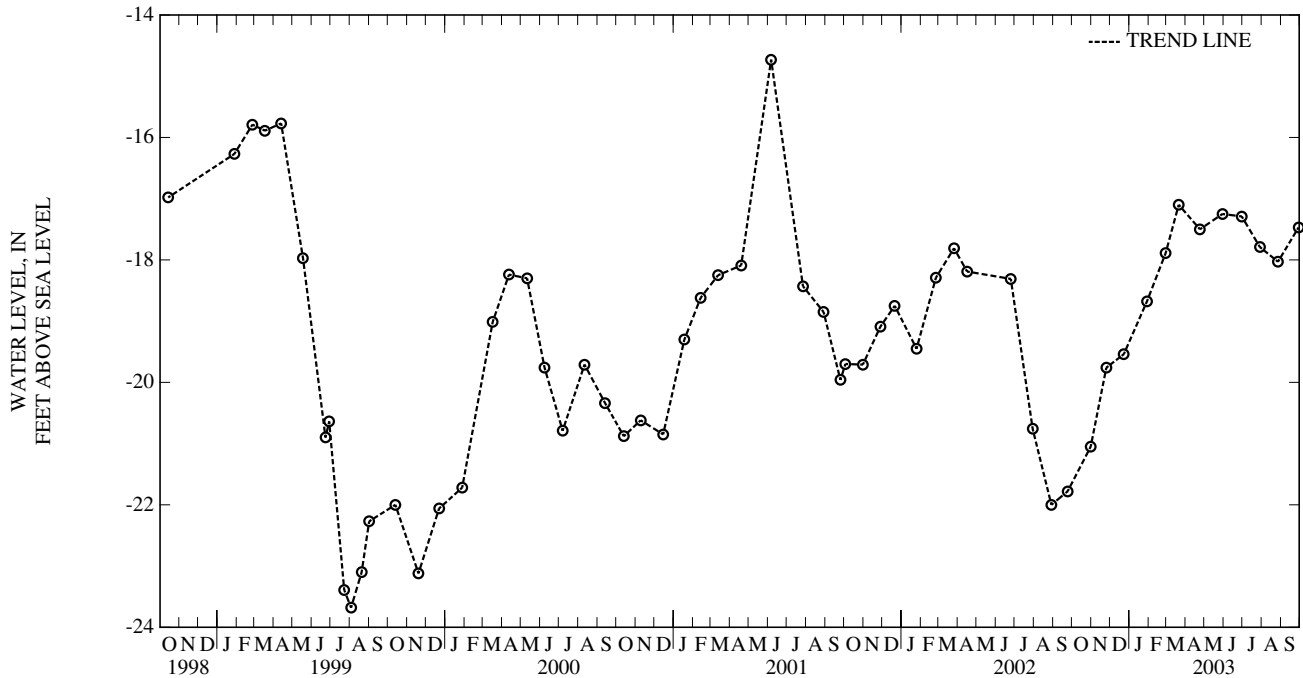
PERIOD OF RECORD.-- September 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.92 ft above sea level, September 6, 1979; lowest measured, 23.93 ft below sea level, August 9, 1999.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	-21.05	JAN 29, 2003	-18.68	APR 24, 2003	-17.50	JUL 29, 2003	-17.79
NOV 25	-19.76	FEB 28	-17.89	MAY 30	-17.25	AUG 27	-18.03
DEC 23	-19.54	MAR 21	-17.10	JUN 30	-17.29	SEP 29	-17.47

LOWEST -21.05 OCT 31, 2002
 HIGHEST -17.10 MAR 21, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Cg 24. SITE ID.--390123076241603 PERMIT NUMBER.--AA-73-8960.

LOCATION.--Lat 39°01'23", long 76°24'16", Hydrologic Unit 02060004, 1500 ft northeast of Oceanic Dr. and South Beach Rd., at Sandy Point State Park.
Owner: U.S. Geological Survey

AQUIFER.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 664 ft; casing diameter 6 in., to 158 ft; casing diameter 4 in., 158 to 605 ft, 615 to 648 ft, and 658 to 664 ft; screen diameter 4 in., from 605 to 615 ft, and 648 to 658 ft.

INSTRUMENTATION.-- Monthly water level measurements with electric tape by Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 12.68 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of flange, 3.16 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by regional ground-water withdrawal.

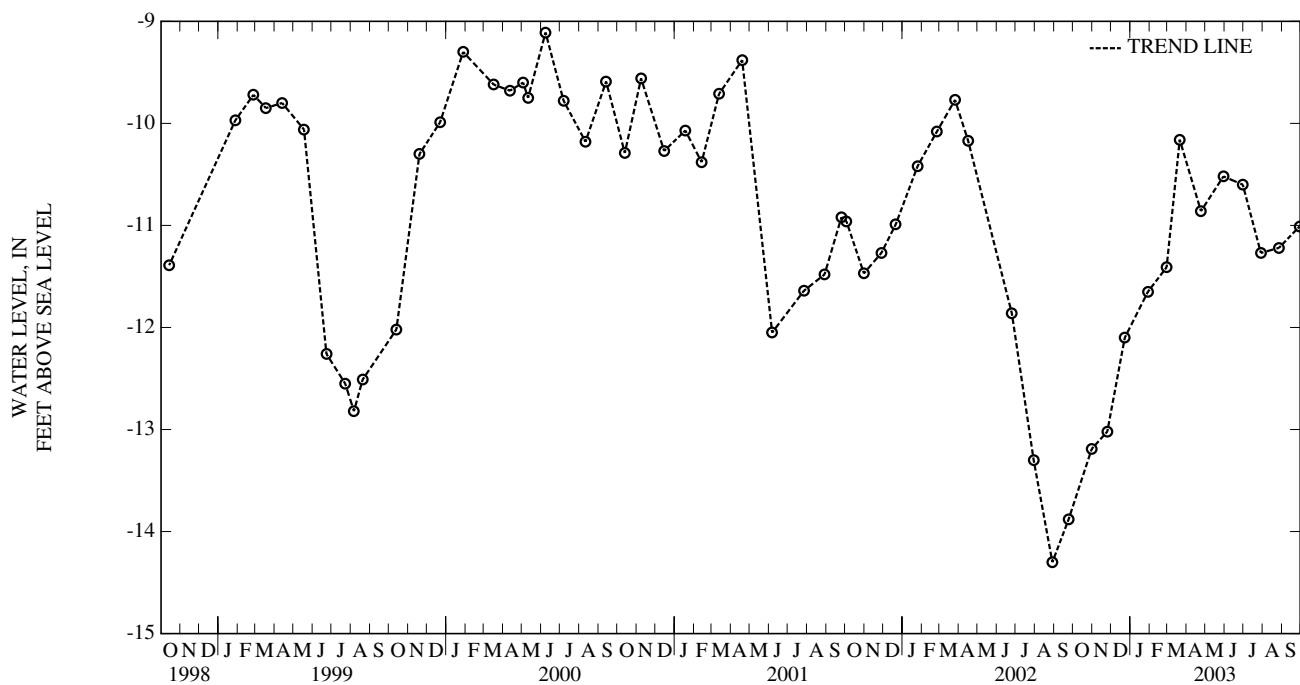
PERIOD OF RECORD.-- September 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.21 ft above sea level, August 15, 1980; lowest measured, 14.30 ft below sea level, August 29, 2002.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	-13.19	JAN 29, 2003	-11.65	APR 24, 2003	-10.86	JUL 29, 2003	-11.27
NOV 25	-13.02	FEB 28	-11.41	MAY 30	-10.52	AUG 27	-11.22
DEC 23	-12.10	MAR 21	-10.16	JUN 30	-10.60	SEP 29	-11.01

LOWEST -13.19 OCT 31, 2002
 HIGHEST -10.16 MAR 21, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Cg 25. SITE ID.--390127076240301. PERMIT NUMBER.--AA-74-1240.

LOCATION.--Lat 39°01'27", long 76°24'03", Hydrologic Unit 02060004, at Sandy Point State Park, near maintenance area. Owner: Maryland Department of Natural Resources.

AQUIFER.--Aquia Formation of Upper 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 water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 17.33 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.43 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

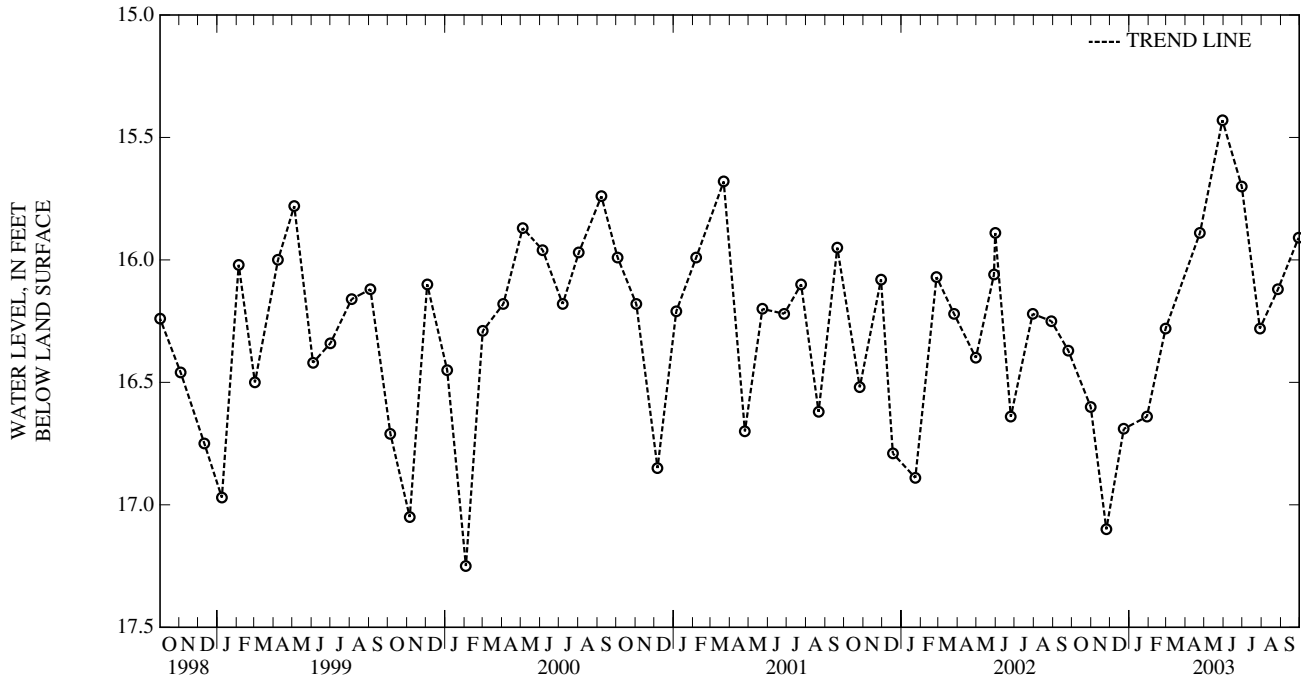
PERIOD OF RECORD.--April 1981 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.40 ft below land surface, March 21, 2003; lowest measured, 18.25 ft below land surface, October 1, 1986.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	16.60	JAN 29, 2003	16.64	MAY 30, 2003	15.43	AUG 27, 2003	16.12
NOV 25	17.10	FEB 28	16.28	JUN 30	15.70	SEP 29	15.91
DEC 23	16.69	APR 24	15.89	JUL 29	16.28		

HIGHEST 15.43 MAY 30, 2003
 LOWEST 17.10 NOV 25, 2002



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Dd 42. SITE ID.--385808076373502. PERMIT NUMBER.--AA-71-0231.

LOCATION.--Lat 38°58'10", 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; casing diameter 2 in., from 200 to 225 ft, and 235 to 265 ft. screen diameter 2 in., from 190 to 200 ft., 225 to 235 ft, and 265 to 275 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel. Equipped with graphic water-level recorder from December 1971 to August 1975 and with a digital water-level recorder--30-minute recorder interval from August 1975 to May 1992.

DATUM.--Elevation of land surface is 105.48 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of shelter platform, 0.72 ft above land surface.

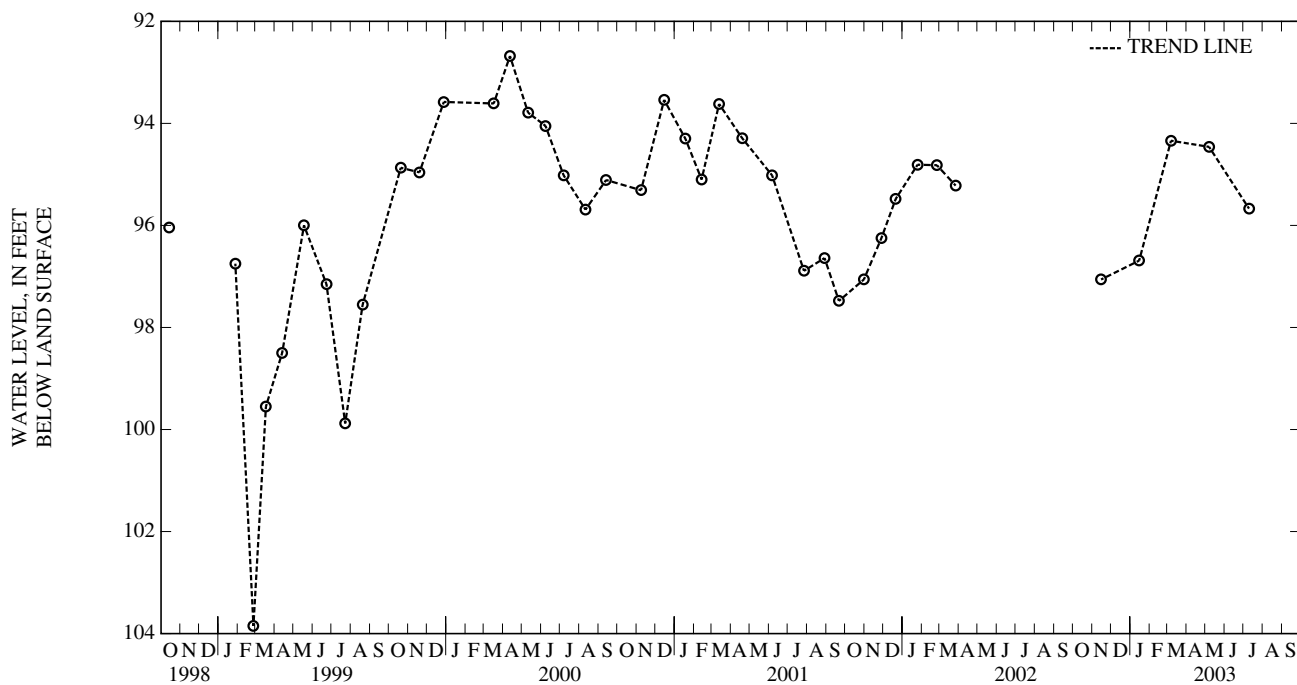
REMARKS.--Southern Maryland Ground-Water-Level Monitoring Network. Water levels are affected by local ground-water withdrawal. Water-level measurements could not be taken from April to October 2002.

PERIOD OF RECORD.--October 1970 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 80.25 ft below land surface May 4, 1973. lowest measured, 103.85 ft below land surface, February 26, 1999.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 15, 2002	97.06	MAR 07, 2003	94.34	JUL 10, 2003	95.67
JAN 15, 2003	96.69	MAY 07	94.46		
HIGHEST	94.34	MAR 07, 2003			
LOWEST	97.06	NOV 15, 2002			



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA De 1. SITE ID.--385915076340401.

LOCATION.--Lat 38°59'15", long 76°34'03", Hydrologic Unit 02060004, 0.07 mi north of MD Rt. 450, 1.1 mi west of Generals Highway. Owner: City of Annapolis.

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 water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel. Equipped with graphic water-level recorder from May 1969 to December 1977 and with a digital water-level recorder--15-minute recorder interval from December 1977 to September 1996.

DATUM.--Elevation of land surface is 13.72 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder platform, 2.00 ft above land surface.

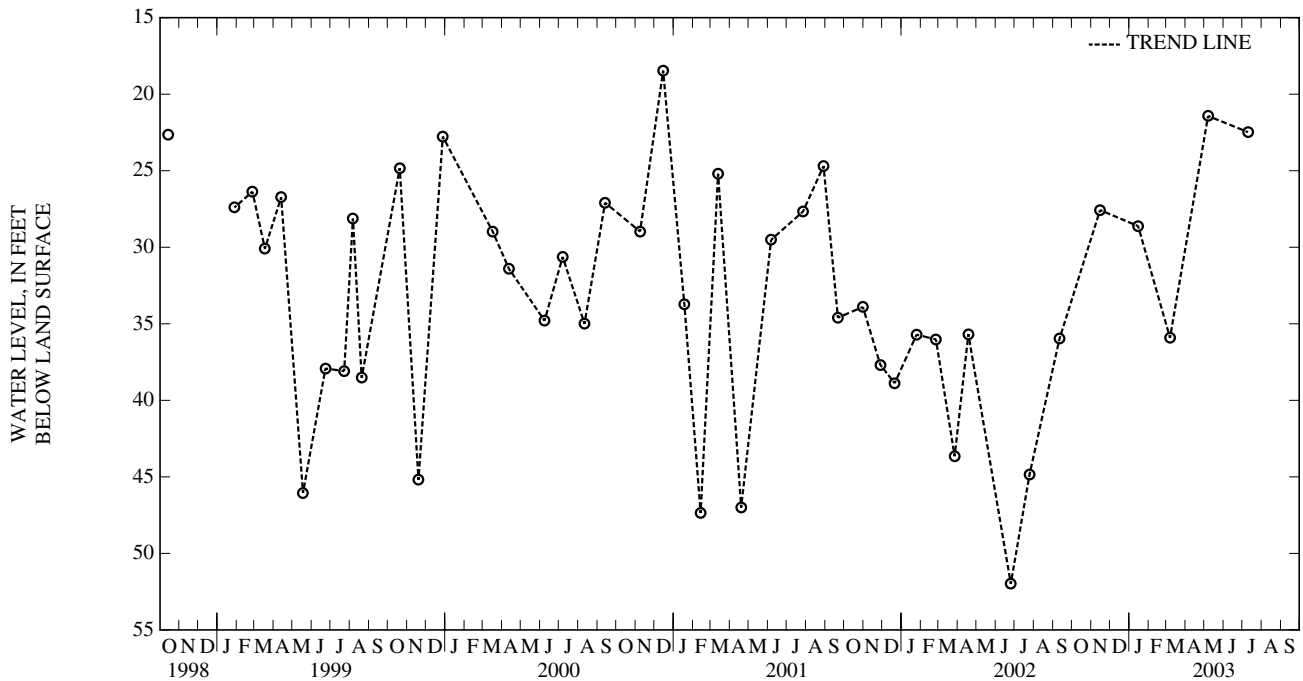
REMARKS.--Southern Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.25 ft below land surface, November 14, 1988 (recorder); lowest measured, 52.90 ft below land surface, May 18, 1997.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 15, 2002	27.57	MAR 07, 2003	35.91	JUL 10, 2003	22.48
JAN 15, 2003	28.62	MAY 07	21.42		
HIGHEST	21.42	MAY 07, 2003			
LOWEST	35.91	MAR 07, 2003			



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Df 19. SITE ID.--385921076270701.

LOCATION.--Lat 38°59'22", long 76°27'04", Hydrologic Unit 02060004, 200 ft east of intersection with McLean and Hooper Rd. Owner: U.S. Navy.

AQUIFER.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 590 ft; casing diameter 10 in., to 151.6 ft; casing diameter 8 in., from 151.6 to 464.3 ft, and casing diameter 6 in., from 0 to 565 ft; screen diameter 10 in., from 565 to 590 ft.

INSTRUMENTATION.--Periodic water level measurements with electric tape by Maryland Geological Survey personnel. Equipped with graphic water-level recorder from November 1979 to April 1980.

DATUM.--Elevation of land surface is 15.84 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of flange, 2.5 ft above land surface.

REMARKS.--Southern Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

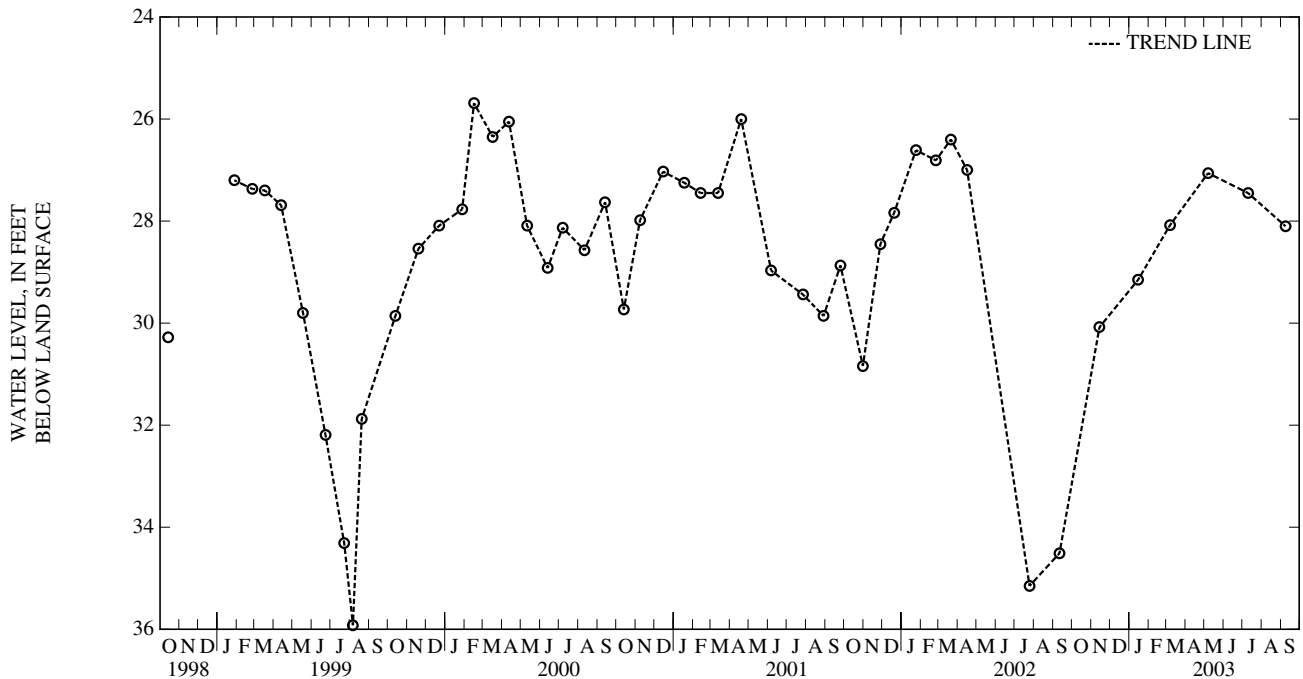
PERIOD OF RECORD.--March 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.34 ft below land surface, March 9, 1977; lowest measured, 35.92 ft below land surface, August 6, 1999.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 14, 2002	30.08	MAR 07, 2003	28.08	JUL 10, 2003	27.45
JAN 15, 2003	29.15	MAY 07	27.06	SEP 08	28.10

HIGHEST 27.06 MAY 07, 2003
 LOWEST 30.08 NOV 14, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Df 20. SITE ID.--385916076270702.

LOCATION.--Lat 38°59'16", long 76°27'07", Hydrologic Unit 02060004, off Hooper Rd., 400 ft from McLean Rd. Owner: U.S. Navy.

AQUIFER.--Magothy Formation of Upper Cretaceous age. Aquifer code: 211MGTY.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 255 ft; casing diameter 10 in., to 150 ft; casing diameter 8 in., from 135 to 233 ft; screen diameter 8 in., from 229.4 to 255 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by Maryland Geological Survey 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 21.87 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of shelter platform, 3.0 ft above land surface.

REMARKS.--Anne Arundel County Ground-Water-Level Monitoring Network observation well. Water levels are affected by local ground-water withdrawal. Missing data due to recorder malfunction.

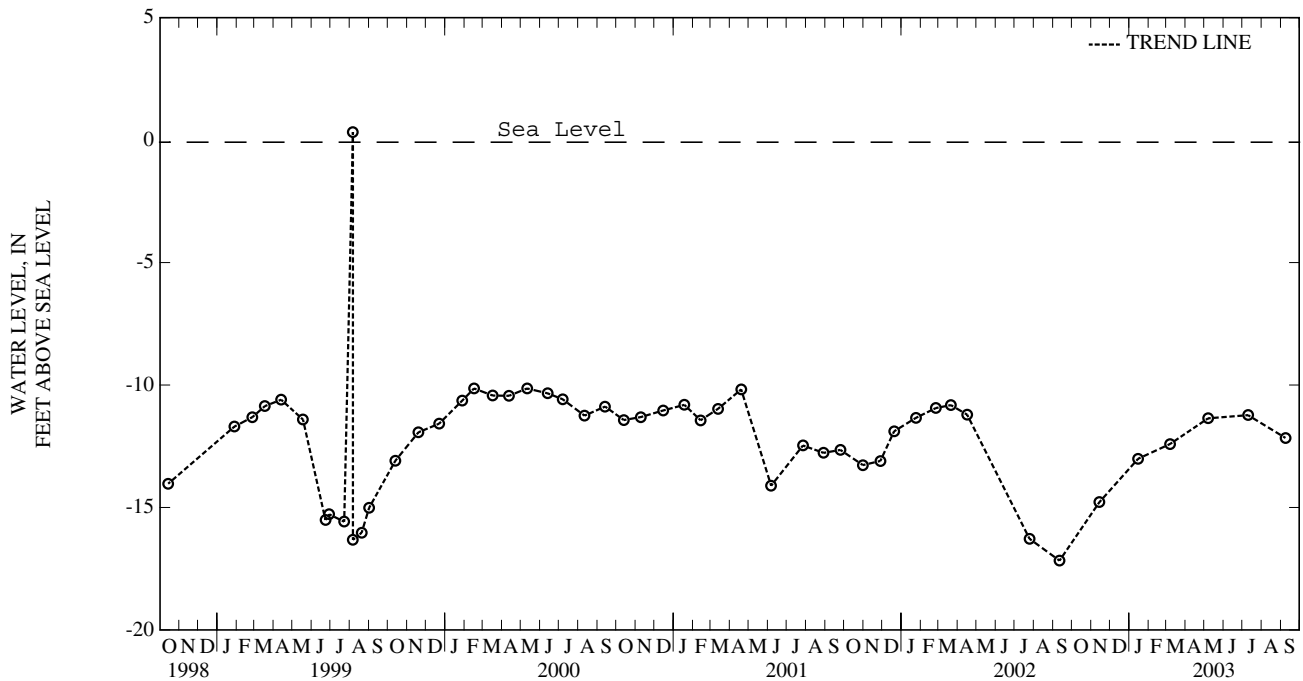
PERIOD OF RECORD.--June 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.91 ft below sea level, June 20, 1980 (recorder); lowest measured, 17.80 ft below sea level, August 31, 2002 (recorder).

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 14, 2002	-14.78	MAR 07, 2003	-12.41	JUL 10, 2003	-11.23
JAN 15, 2003	-13.01	MAY 07	-11.36	SEP 08	-12.16

LOWEST -14.78 NOV 14, 2002
 HIGHEST -11.23 JUL 10, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ANNE ARUNDEL COUNTY--Continued

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 Dorsy Creek Rd., 500 ft north of MD Rt. 450. Owner: U.S.Navy.

AQUIFER.--Magothy Formation of Upper Cretaceous age. Aquifer code: 211MGTY.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 695 ft; casing diameter 6 in., to 300 ft; 320 to 572 ft, and 592 to 675 ft; screen diameter 6 in., from 300 to 320 ft, 572 to 592 ft, and 675 to 695 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel. Equipped with graphic water-level recorder from May 1969 to December 1977. Equipped with digital water-level recorder--60-minute recorder interval from December 1977 to January 2003.

DATUM.--Elevation of land surface is 5.17 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of shelter platform, 2.8 ft above land surface.

REMARKS.--Anne Arundel County Ground-Water-Level Monitoring Network observation. Water levels are affected by local ground-water withdrawal. Missing data due to recorder malfunction.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.65 ft above sea level, February 20, 1974 (recorder); lowest measured, 19.40 ft below sea level, August 25, 2002 (recorder).

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 2002	-15.28	JAN 17, 2003	-12.71	APR 15, 2003	-10.32	AUG 14, 2003	-10.54
NOV 14	-13.43	MAR 05	-10.54	JUL 18	-10.89	SEP 15	-10.67

LOWEST -15.28 OCT 01, 2002
HIGHEST -10.32 APR 15, 2003

DAY	MAX		MIN		MAX		MIN		MAX		MIN	
	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH						
1	-15.18	-15.54	-14.14	-14.47	-12.77	-13.16	-11.04	-11.42	---	---	---	---
2	-15.16	-15.47	-14.08	-14.58	-12.66	-12.94	-11.19	-11.44	---	---	---	---
3	-15.09	-15.48	-14.18	-14.50	-12.60	-13.39	-11.07	-11.35	---	---	---	---
4	-14.80	-15.46	-13.90	-14.38	-12.84	-13.39	-11.27	-11.64	---	---	---	---
5	-14.59	-15.06	-13.80	-14.34	-12.72	-13.07	-11.40	-11.80	---	---	---	---
6	-14.68	-15.30	-13.68	-14.10	-12.66	-13.01	-11.45	-11.67	---	---	---	---
7	-14.63	-15.24	-13.92	-14.30	-12.53	-12.76	-11.64	-12.18	---	---	---	---
8	-14.90	-15.25	-13.66	-14.25	-12.52	-12.88	-11.59	-12.00	---	---	---	---
9	-14.83	-15.30	-13.80	-14.08	-12.69	-13.20	-11.68	-12.02	---	---	---	---
10	-14.97	-15.33	-13.55	-14.14	-12.53	-12.78	-11.85	-12.11	---	---	---	---
11	-14.91	-15.24	-13.52	-13.85	-12.49	-12.68	-11.85	-12.21	---	---	---	---
12	-14.84	-15.22	-13.57	-13.92	-12.34	-12.71	-12.20	-12.74	---	---	---	---
13	-14.87	-15.25	-13.70	-13.94	-12.26	-12.46	-12.18	-12.66	---	---	---	---
14	-15.06	-15.54	-13.47	-13.86	-11.98	-12.45	-12.46	-12.98	---	---	---	---
15	-14.93	-15.18	-13.43	-13.87	-12.10	-12.51	-12.55	-12.99	---	---	---	---
16	-14.65	-14.97	-13.48	-13.81	-12.17	-12.69	-12.56	-13.03	---	---	---	---
17	-14.74	-15.15	-13.07	-13.65	-12.42	-12.72	-12.45	-12.83	---	---	---	---
18	-14.96	-15.20	-13.15	-13.52	-12.35	-12.55	-12.50	-12.85	---	---	---	---
19	-14.51	-15.01	-13.36	-13.70	-12.19	-12.52	-12.36	-12.64	---	---	---	---
20	-14.68	-15.08	-13.40	-13.83	-11.82	-12.26	-12.15	-12.50	---	---	---	---
21	-14.66	-15.08	-13.01	-13.69	-11.86	-12.18	-12.31	-12.62	---	---	---	---
22	-14.57	-14.97	-12.70	-13.35	-11.98	-12.22	---	---	---	---	---	---
23	-14.48	-14.99	-12.91	-13.39	-11.97	-12.19	---	---	---	---	---	---
24	-14.66	-15.00	-13.11	-13.49	-11.77	-12.12	---	---	---	---	---	---
25	-14.48	-14.91	-13.01	-13.46	-11.47	-12.01	---	---	---	---	---	---
26	-14.21	-14.68	-13.06	-13.39	-11.54	-12.18	---	---	---	---	---	---
27	-14.29	-14.59	-12.88	-13.37	-11.62	-12.10	---	---	---	---	---	---
28	-14.38	-14.68	-12.95	-13.26	-11.62	-11.85	---	---	---	---	---	---
29	-14.30	-14.64	-12.51	-13.01	-11.42	-11.81	---	---	---	---	---	---
30	-14.15	-14.52	-12.31	-12.92	-11.32	-11.84	---	---	---	---	---	---
31	-14.34	-14.64	---	---	-11.30	-11.68	---	---	---	---	---	---
MONTH	-14.15	-15.54	-12.31	-14.58	-11.30	-13.39	-11.04	-13.03	---	---	---	---

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: Private Residence.

AQUIFER.--Aquia Formation of Upper 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 water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 26.51 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.57 ft above land surface.

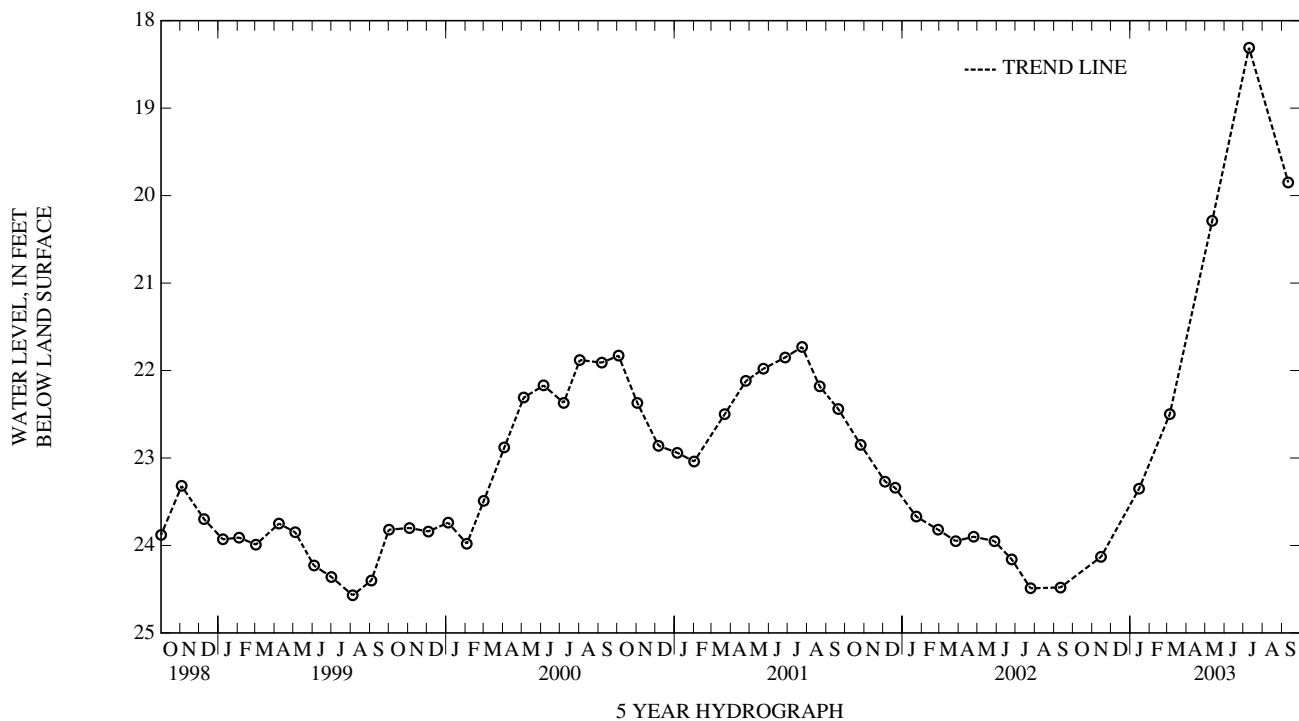
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

PERIOD OF RECORD.--May 1987, January 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 18.31 ft below land surface, July 10, 2003; lowest measured, 25.39 ft below land surface, April 9, 1990.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 15, 2002	24.13	MAR 05, 2003	22.50	JUL 10, 2003	18.31
JAN 15, 2003	23.35	MAY 12	20.29	SEP 11	19.85
HIGHEST 18.31 JUL 10, 2003					
LOWEST 24.13 NOV 15, 2002					



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

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 Upper 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 water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 110 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 0.87 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

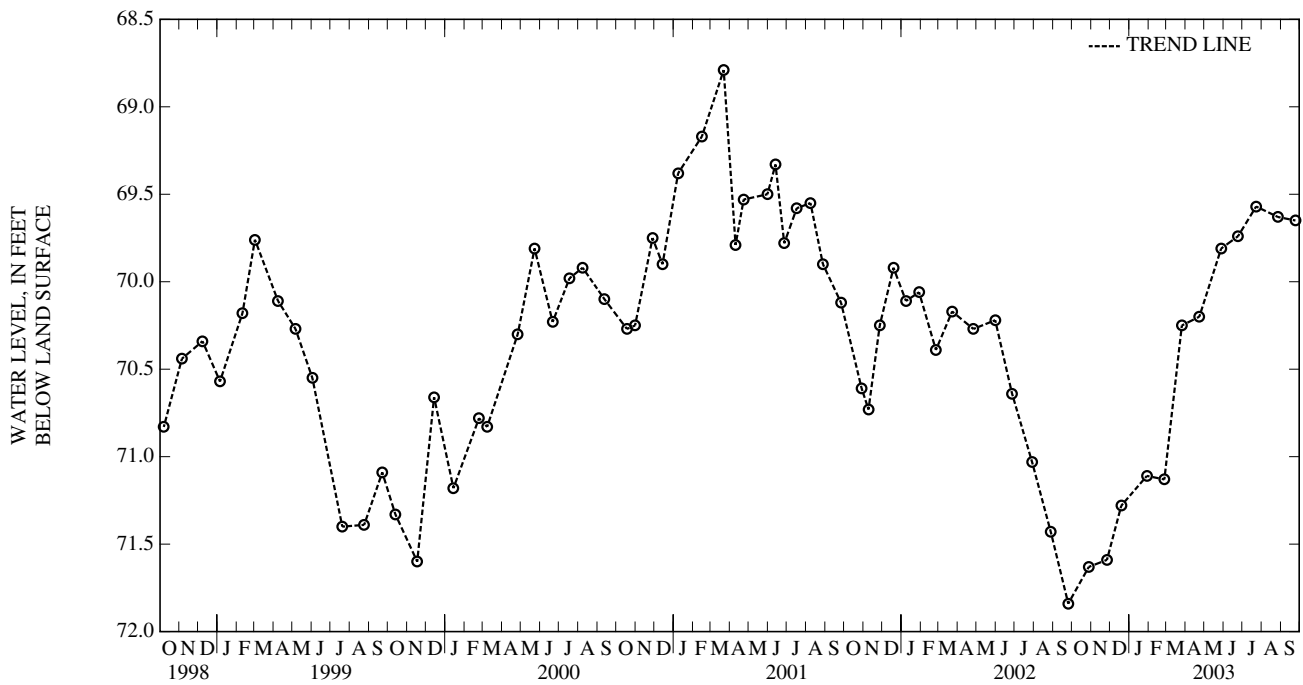
PERIOD OF RECORD.--August 1979 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 63.51 ft below land surface, May 6, 1980; lowest measured, 71.84 ft below land surface, September 25, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 2002	71.63	JAN 29, 2003	71.11	APR 23, 2003	70.20	JUL 23, 2003	69.57
NOV 26	71.59	FEB 26	71.13	MAY 28	69.81	AUG 27	69.63
DEC 19	71.28	MAR 26	70.25	JUN 24	69.74	SEP 24	69.65

HIGHEST 69.57 JUL 23, 2003
 LOWEST 71.63 OCT 28, 2002



5 YEAR HYDROGRAPH
 OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Ed 65. SITE ID.--385406076383902. PERMIT NUMBER.--AA-94-5387.

LOCATION.--Lat 38°54'06", long 76°38'39", Hydrologic Unit 02060006, at Anne Arundel County Police Academy, near Davidsonville. Owner: Maryland Geological Survey.

AQUIFER.--Magothy Formation of Upper Cretaceous age. Aquifer code: 211MGTY.

WELL CHARACTERISTICS.--Drilled, artesian well, depth 310 ft; casing diameter 4.5 in., to 285 ft, and 305 to 310 ft; screen diameter 4.5 in., from 285 to 305 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 110 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.60 ft above land surface.

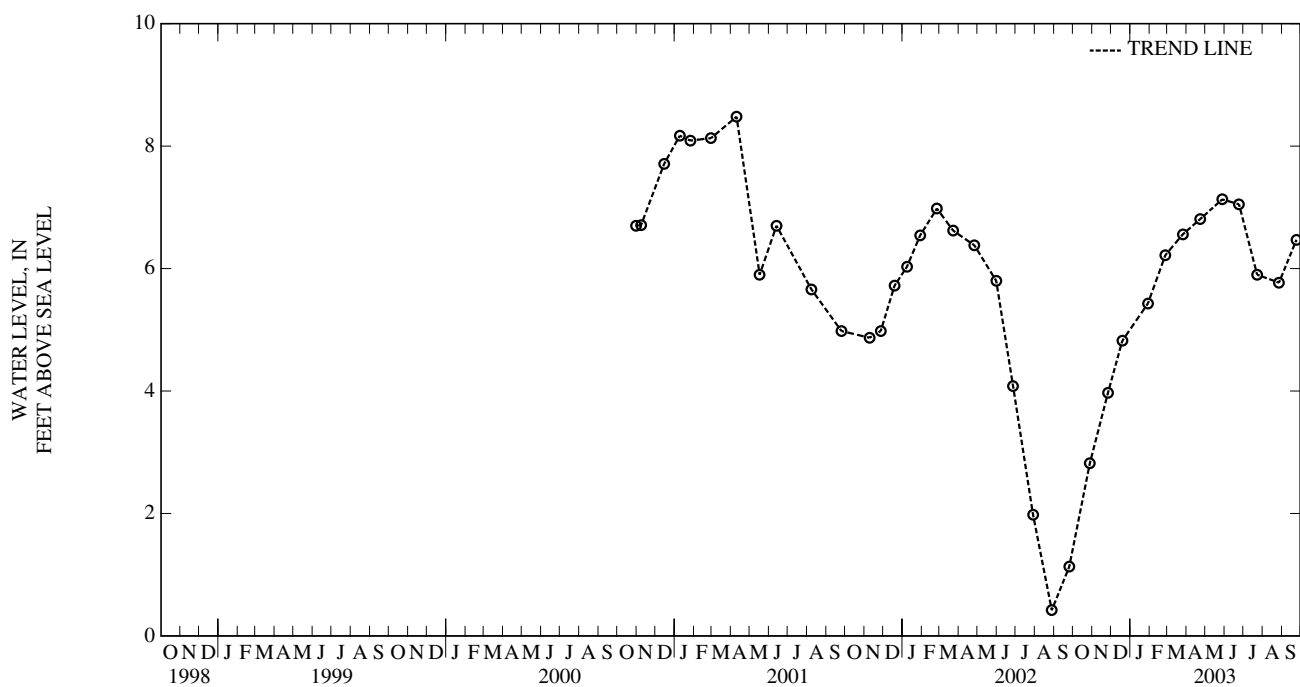
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

PERIOD OF RECORD.--October 2000 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.86 ft above sea level, April 1, 2001 (recorder); lowest measured, 0.42 ft above sea level, August 28, 2002.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 2002	2.82	JAN 29, 2003	5.43	APR 23, 2003	6.81	JUL 23, 2003	5.90
NOV 26	3.97	FEB 26	6.22	MAY 28	7.13	AUG 27	5.77
DEC 19	4.82	MAR 26	6.56	JUN 24	7.05	SEP 24	6.47
LOWEST	2.82	OCT 28, 2002					
HIGHEST	7.13	MAY 28, 2003					



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 Upper 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 water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 150 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 0.94 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by regional ground-water withdrawal.

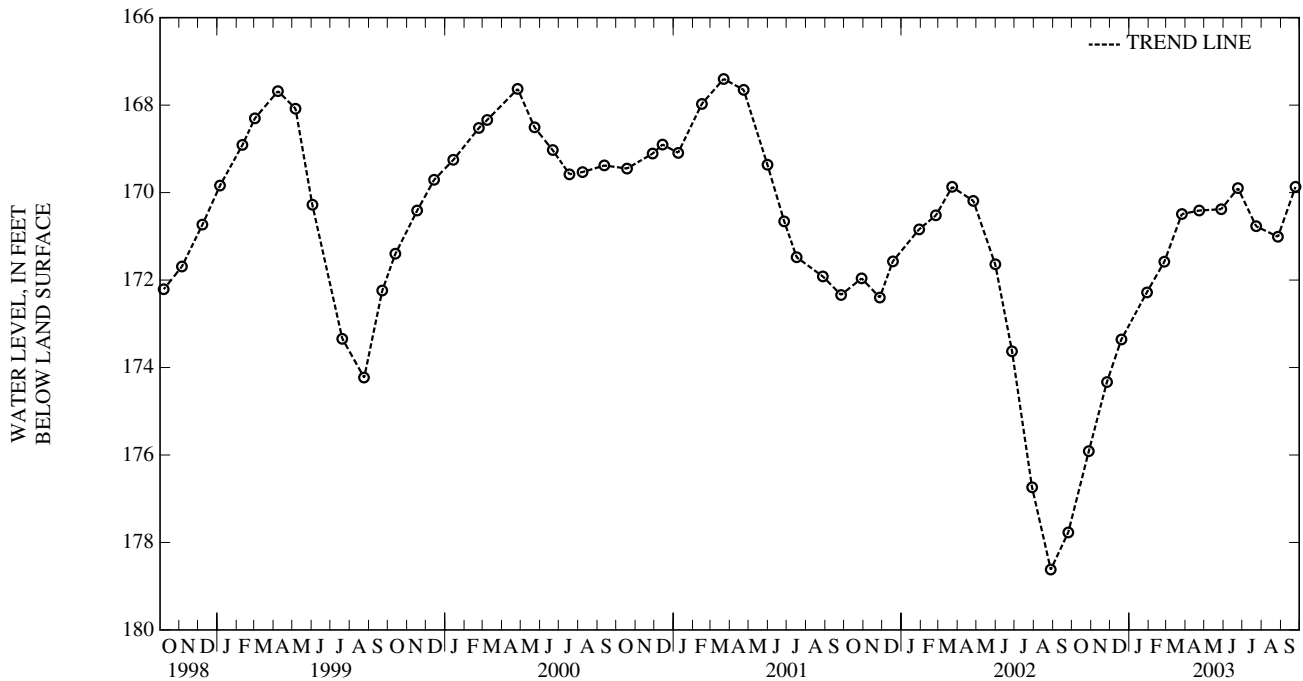
PERIOD OF RECORD.--August 1979 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 143.90 ft below land surface, May 6, 1980; lowest measured, 178.62 ft below land surface, August 28, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 2002	175.91	JAN 29, 2003	172.28	APR 23, 2003	170.41	JUL 23, 2003	170.77
NOV 26	174.33	FEB 26	171.58	MAY 28	170.38	AUG 27	171.01
DEC 19	173.36	MAR 26	170.49	JUN 24	169.90	SEP 24	169.87

HIGHEST 169.87 SEP 24, 2003
 LOWEST 175.91 OCT 28, 2002



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Fe 92. SITE ID.--384644076331201. PERMIT NUMBER.--AA-94-5386.

LOCATION.--Lat 38°46'44", long 76°33'12", Hydrologic Unit 02060004, at Deale. Owner: Maryland Geological Survey.

AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.

WELL CHARACTERISTICS.--Drilled, artesian well, depth 205 ft; casing diameter 4.5 in., to 170 ft, and 200 to 205 ft; screen diameter 4.5 in., from 170 to 200 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 9 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of shelter platform, 3.00 ft above land surface.

REMARKS.--Anne Arundel County Ground-Water-Level Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

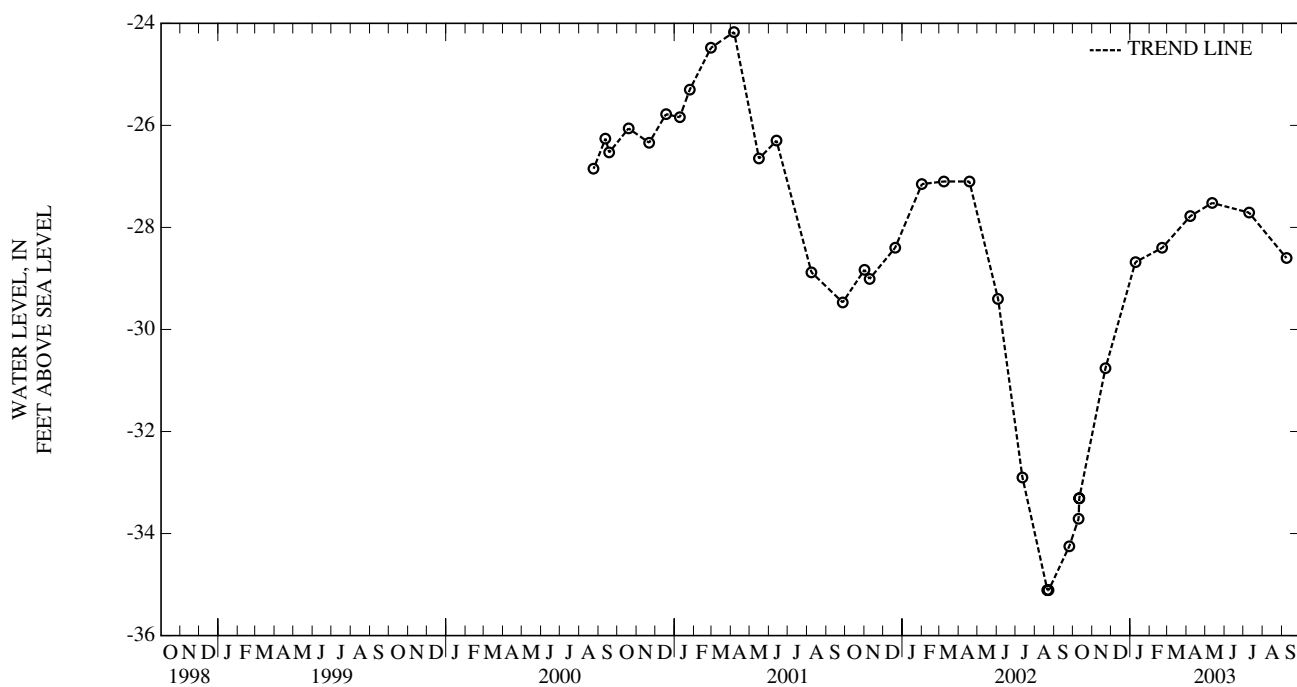
PERIOD OF RECORD.--August 2000 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 23.88 ft below sea level, March 22, 2001 (recorder); lowest measured, 36.20 ft below sea level, August 20, 2002 (recorder).

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10, 2002	-33.71	JAN 09, 2003	-28.68	MAY 12, 2003	-27.52
11	-33.31	FEB 21	-28.40	JUL 10	-27.71
NOV 22	-30.76	APR 07	-27.78	SEP 08	-28.60

LOWEST -33.71 OCT 10, 2002
HIGHEST -27.52 MAY 12, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

Daily Low Water Levels

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Fe 93. SITE ID.--384644076331202. PERMIT NUMBER.--AA-94-5391.

LOCATION.--Lat 38°46'44", long 76°33'12", Hydrologic Unit 02060004, at Deale. Owner: Maryland Geological Survey.

AQUIFER.--Magothy Formation of Upper Cretaceous age. Aquifer code: 211MGTY.

WELL CHARACTERISTICS.--Drilled, artesian well, depth 470 ft; casing diameter 4.5 in., to 429 ft, 449 to 454 ft, and 464 to 470 ft; screen diameter 4.5 in., from 429 to 449 ft, and 454 to 464 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 9 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of shelter platform, 3.35 ft above land surface.

REMARKS.--Anne Arundel County Ground-Water-Level Monitoring Network observation well. Water levels are affected by regional ground-water withdrawal.

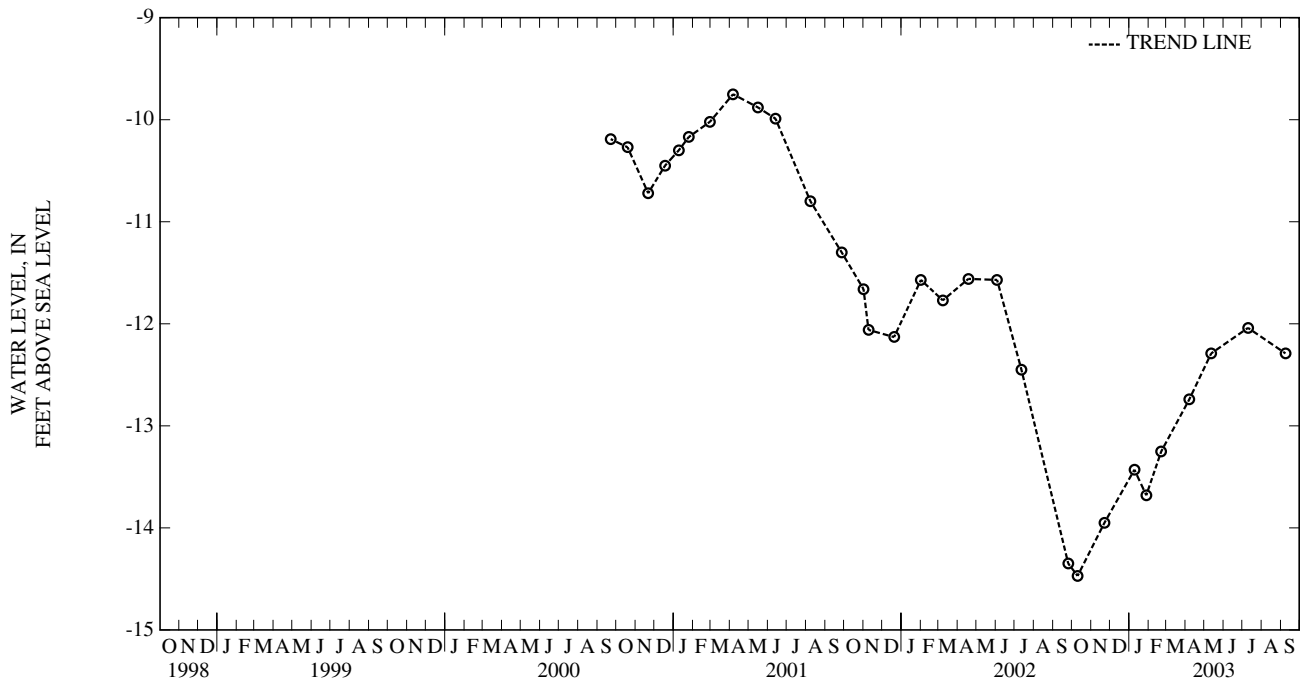
PERIOD OF RECORD.--September 2000 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.55 ft below sea level, March 22, 2001 (recorder); lowest measured, 14.47 ft below sea level, October 16, 2002 (See REMARKS, recorder).

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10, 2002	-14.47	JAN 28, 2003	-13.68	MAY 12, 2003	-12.29
NOV 22	-13.95	FEB 21	-13.25	JUL 10	-12.04
JAN 09, 2003	-13.43	APR 07	-12.74	SEP 08	-12.29

LOWEST -14.47 OCT 10, 2002
 HIGHEST -12.04 JUL 10, 2003



5 YEAR HYDROGRAPH
 OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003
 Daily Low Water Levels

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 Ft. 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 12 in. to unknown depth.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 30 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing extension, 2.35 ft above land surface.

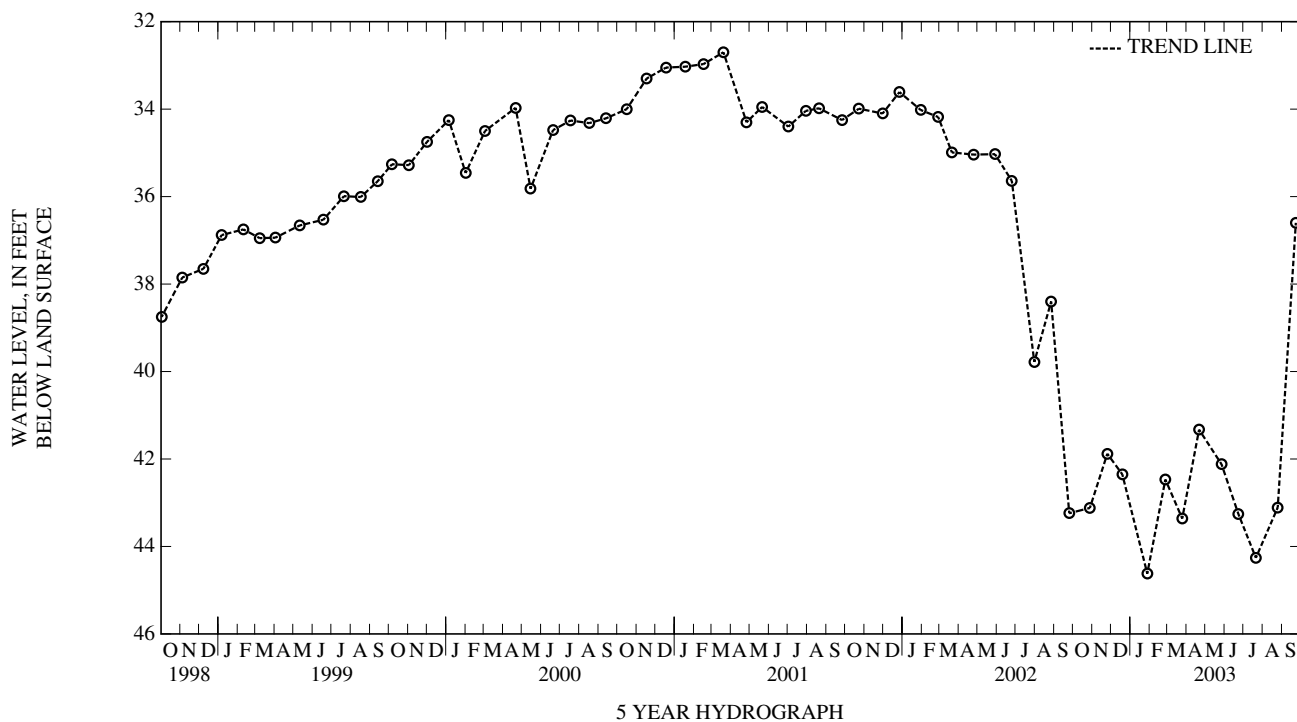
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water level reported 58 ft below land surface in 1934.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 32.70 ft below land surface, March 20, 2001; lowest measured, 103.70 ft below land surface, October 15, 1948.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 2002	43.12	JAN 28, 2003	44.62	APR 21, 2003	41.33	JUL 21, 2003	44.26
NOV 25	41.88	FEB 26	42.47	MAY 27	42.12	AUG 25	43.11
DEC 19	42.35	MAR 25	43.36	JUN 23	43.26	SEP 23	36.60
HIGHEST 36.60		SEP 23, 2003					
LOWEST 44.62		JAN 28, 2003					



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

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 3 in., from 126 to 136 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 14.44 ft. above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.92 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

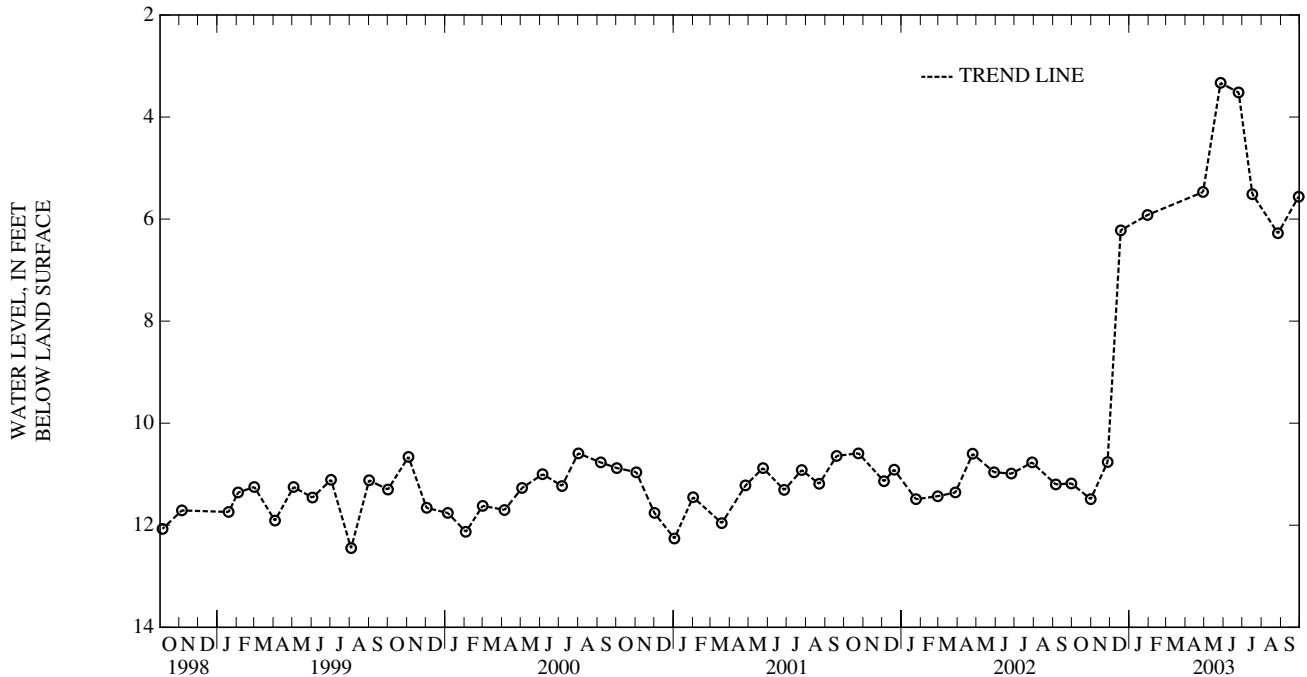
PERIOD OF RECORD.--January 1983 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.33 ft below land surface, May 27, 2003; lowest measured, 17.71 ft below land surface, December 30, 1983.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	11.49	JAN 30, 2003	5.92	JUN 25, 2003	3.52	SEP 29, 2003	5.56
NOV 27	10.76	APR 29	5.47	JUL 17	5.51		
DEC 18	6.22	MAY 27	3.33	AUG 27	6.28		

HIGHEST 3.33 MAY 27, 2003
 LOWEST 11.49 OCT 31, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

BALTIMORE CITY--Continued

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 Ft. Holabird Industrial Park, near Colgate Creek. Owner: U.S. Geological Survey.

AQUIFER.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 73 ft; casing diameter 4 in., to 63 ft; screen diameter 3 in., from 63 to 73 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 10 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.07 ft above land surface.

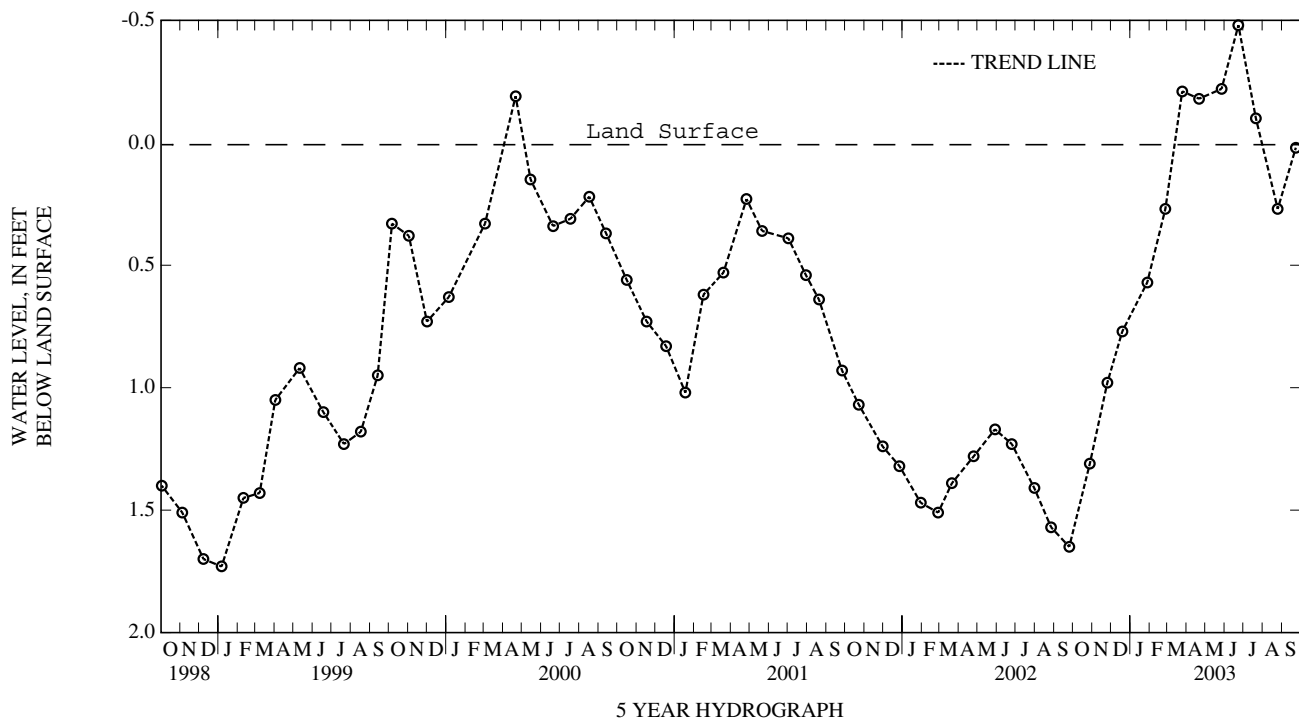
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

PERIOD OF RECORD.--January 1983 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.48 ft above land surface, June 23, 2003; lowest measured, 3.07 ft below land surface, July 8, 1986.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
(READINGS ABOVE LAND SURFACE INDICATED BY "-")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 2002	1.31	JAN 28, 2003	.57	APR 21, 2003	-.18	JUL 21, 2003	-.10
NOV 25	.98	FEB 26	.27	MAY 27	-.22	AUG 25	.27
DEC 19	.77	MAR 25	-.21	JUN 23	-.48	SEP 23	.02
HIGHEST	-.48	JUN 23, 2003					
LOWEST	1.31	OCT 28, 2002					



5 YEAR HYDROGRAPH
OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

BALTIMORE CITY—Continued

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 water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 75 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 0.35 ft above land surface.

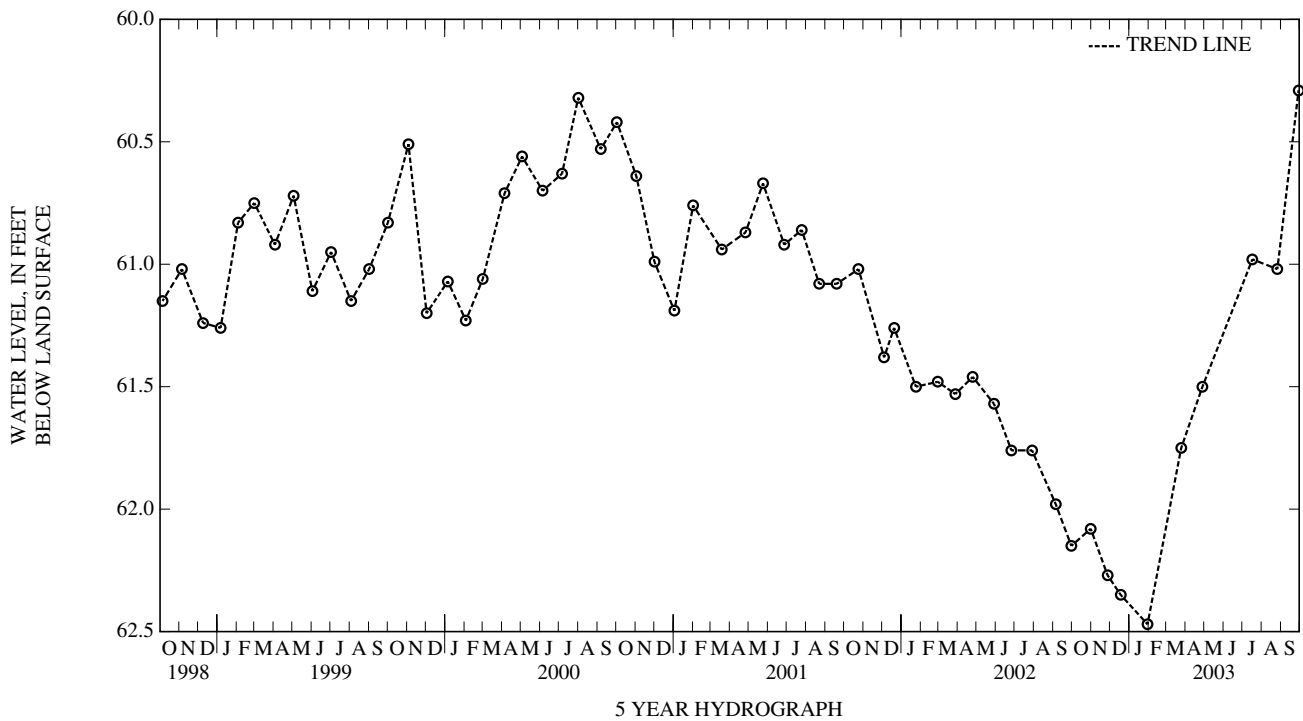
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

PERIOD OF RECORD.--January 1983 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 60.29 ft below land surface, September 29, 2003; lowest measured, 66.36 ft below land surface, May 5, 1983.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	62.08	JAN 30, 2003	62.47	JUL 17, 2003	60.98
NOV 27	62.27	MAR 25	61.75	AUG 26	61.02
DEC 18	62.35	APR 28	61.50	SEP 29	60.29
HIGHEST 60.29 SEP 29, 2003					
LOWEST 62.47 JAN 30, 2003					



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

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 Road. Owner: Diecraft Division, Leica 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 water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 480 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 0.30 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

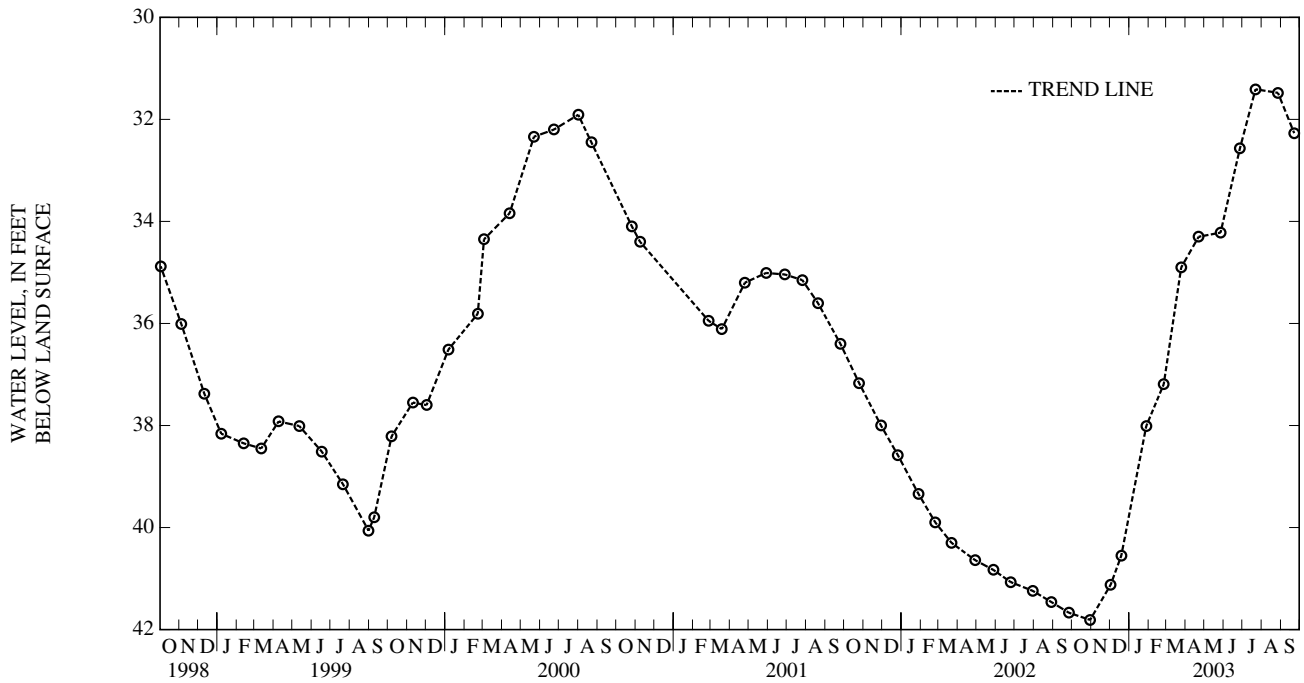
PERIOD OF RECORD.--January 1959 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.42 ft below land surface, September 9, 1975; lowest measured, 80.20 ft below land surface, December 23, 1969.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	41.81	JAN 28, 2003	38.01	APR 22, 2003	34.30	JUL 22, 2003	31.41
DEC 02	41.12	FEB 25	37.19	MAY 27	34.22	AUG 27	31.48
19	40.55	MAR 25	34.90	JUN 27	32.57	SEP 22	32.27

HIGHEST 31.41 JUL 22, 2003
 LOWEST 41.81 OCT 30, 2002



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

BALTIMORE COUNTY--Continued

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 Road, 0.6 mi west of Jacksonville. Owner: Baltimore County.

AQUIFER.--Loch Raven Formation of Cambrian Age. Aquifer code: 370LCRV.

WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 350 ft; casing diameter 10 in., to 12.4 ft; casing diameter 6 in., to 33.2 ft; open hole.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 536 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.00 ft above land surface.

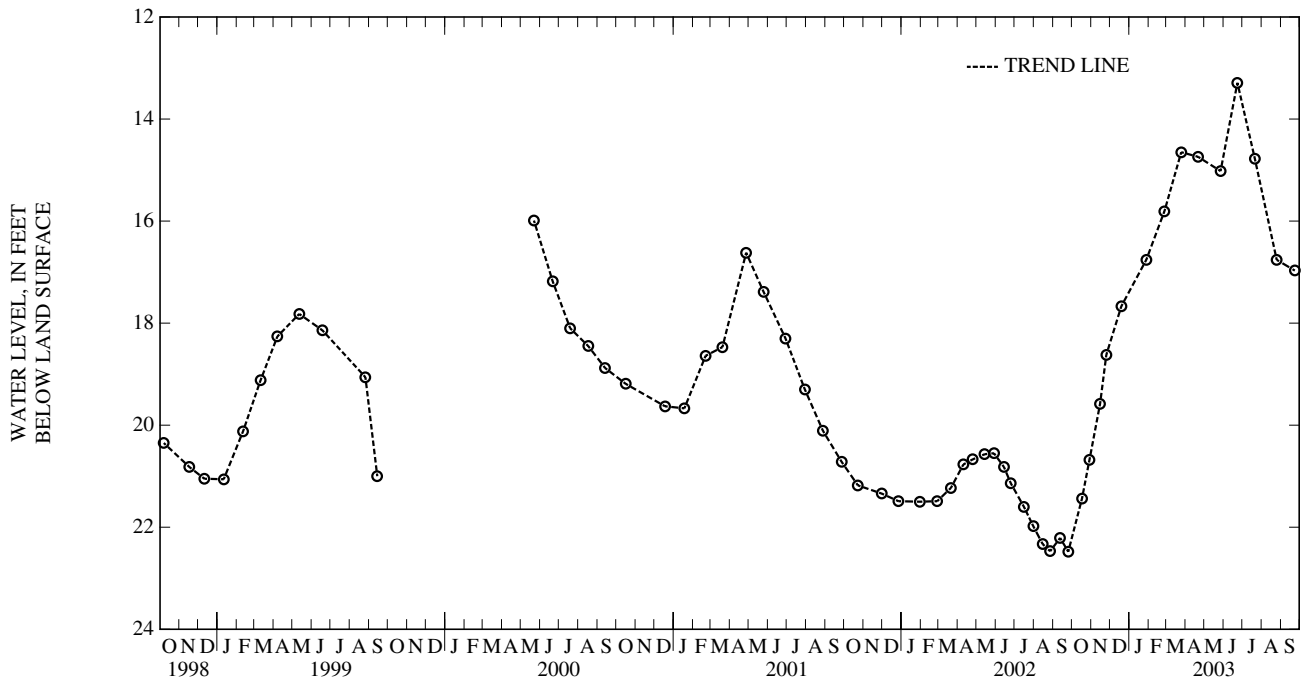
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

PERIOD OF RECORD.--November and December 1955, November 1956 through September 1975, July 1977 through July 1996, November 1996 to September 1999, and May 2000 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.60 ft below land surface, June 23, 1972; lowest measured, 22.48 ft below land surface, September 25, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17, 2002	21.44	DEC 19, 2002	17.67	APR 21, 2003	14.74	AUG 25, 2003	16.76
29	20.68	JAN 28, 2003	16.76	MAY 27	15.02	SEP 23	16.97
NOV 15	19.58	FEB 26	15.81	JUN 23	13.29		
25	18.62	MAR 25	14.65	JUL 21	14.78		
HIGHEST 13.29 JUN 23, 2003							
LOWEST 21.44 OCT 17, 2002							



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

BALTIMORE COUNTY--Continued

WELL NUMBER.-- BA Dc 444. SITE ID.--392931076410301. PERMIT NUMBER.--BA-81-4198.

LOCATION.--Lat 39°29'31", long 76°41'03", Hydrologic Unit 02060003, at Oregon Ridge Park. Owner: Baltimore County Parks and Recreation.

AQUIFER.--Cockeysville Marble of Cambrian age. Aquifer code: 370CCKV.

WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 300 ft; casing diameter 6 in., to 88 ft; open hole.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--15-minute recorder interval from November 1998 to current year.

DATUM.--Elevation of land surface is 390 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of shelter platform, 1.62 ft above land surface.

REMARKS.--Collection of Basic Records (CBR) observation well. Missing data due to recorder malfunction.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 33.46 ft below land surface, April 9, 1997; lowest measured, 45.78 ft below land surface, October 30, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

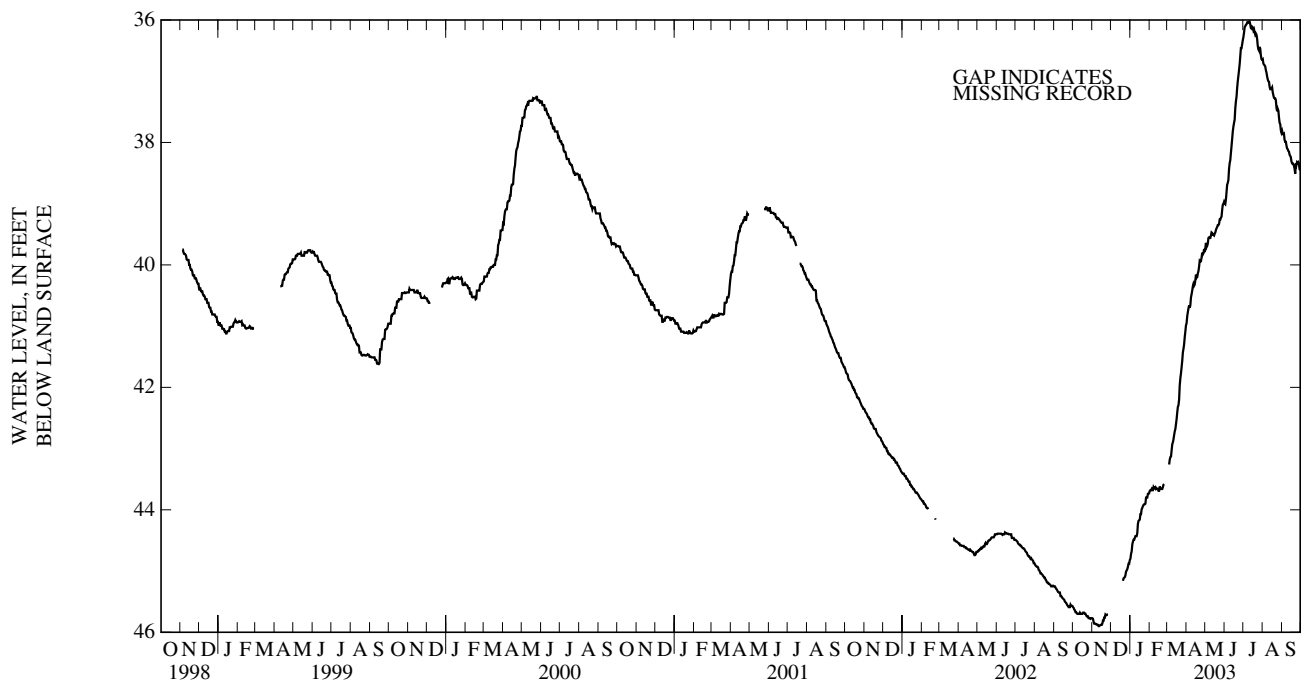
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	45.78	FEB 25, 2003	43.48	MAY 27, 2003	39.17	SEP 22, 2003	38.41
NOV 27	45.68	MAR 03	43.26	JUN 27	36.45		
DEC 19	45.16	25	41.54	JUL 22	36.26		
JAN 28, 2003	43.76	APR 22	39.87	AUG 27	37.51		
HIGHEST 36.26		JUL 22, 2003					
LOWEST 45.78		OCT 30, 2002					

DAY	MAX		MIN		MAX		MIN		MAX		MIN		MAX		MIN	
	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH										
1	45.59	45.57	45.77	45.76	---	---	44.80	44.72	43.69	43.65	---	---	---	---	---	---
2	45.60	45.59	45.78	45.77	---	---	44.72	44.68	43.68	43.66	---	---	---	---	---	---
3	45.63	45.60	45.83	45.78	---	---	44.68	44.57	43.68	43.66	---	---	---	---	---	---
4	45.64	45.63	45.86	45.83	---	---	44.57	44.52	43.66	43.61	43.26	43.18	43.26	43.18	43.18	43.18
5	45.67	45.63	45.86	45.84	---	---	44.52	44.48	43.68	43.65	43.18	43.12	43.18	43.12	43.12	43.12
6	45.67	45.67	45.86	45.84	---	---	44.49	44.48	43.68	43.63	43.14	43.08	43.14	43.08	43.08	43.08
7	45.69	45.67	45.87	45.86	---	---	44.49	44.45	43.63	43.61	43.13	43.03	43.13	43.03	43.03	43.03
8	45.70	45.69	45.87	45.86	---	---	44.46	44.43	43.65	43.63	43.03	42.93	43.03	42.93	42.93	42.93
9	45.70	45.70	45.88	45.86	---	---	44.43	44.43	43.64	43.63	42.93	42.90	42.93	42.90	42.90	42.90
10	45.70	45.70	45.88	45.88	---	---	44.43	44.43	43.63	43.60	42.90	42.85	42.90	42.85	42.85	42.85
11	45.70	45.68	45.90	45.88	---	---	44.43	44.38	43.66	43.61	42.85	42.78	42.85	42.78	42.78	42.78
12	45.68	45.68	45.90	45.88	---	---	44.38	44.23	43.65	43.61	42.78	42.72	42.78	42.72	42.72	42.72
13	45.70	45.68	45.89	45.88	---	---	44.23	44.17	43.66	43.63	42.72	42.66	42.72	42.66	42.66	42.66
14	45.70	45.70	45.88	45.88	---	---	44.18	44.17	43.66	43.65	42.68	42.60	42.68	42.60	42.60	42.60
15	45.70	45.70	45.88	45.88	---	---	44.17	44.16	43.69	43.63	42.60	42.52	42.60	42.52	42.52	42.52
16	45.70	45.66	45.88	45.85	---	---	44.16	44.07	43.69	43.61	42.52	42.41	42.52	42.41	42.41	42.41
17	45.68	45.67	45.86	45.81	---	---	44.07	44.07	43.62	43.61	42.41	42.32	42.41	42.32	42.32	42.32
18	45.68	45.67	45.81	45.81	---	---	44.07	43.99	43.65	43.62	42.32	42.25	42.32	42.25	42.25	42.25
19	45.68	45.67	45.81	45.76	---	---	43.99	43.97	43.66	43.64	42.29	42.20	42.29	42.20	42.20	42.20
20	45.70	45.68	45.76	45.76	45.16	45.10	43.97	43.90	43.66	43.64	42.20	41.97	42.20	41.97	41.97	41.97
21	45.70	45.70	45.76	45.70	45.12	45.11	43.94	43.90	43.66	43.63	41.97	41.85	41.97	41.85	41.85	41.85
22	45.72	45.70	45.71	45.70	45.11	45.10	43.92	43.91	43.63	43.54	41.85	41.77	41.85	41.77	41.77	41.77
23	45.74	45.72	45.72	45.70	45.10	45.07	43.91	43.90	43.59	43.49	41.77	41.67	41.77	41.67	41.67	41.67
24	45.74	45.74	45.72	45.71	45.07	45.01	43.91	43.90	43.58	43.49	41.67	41.57	41.67	41.57	41.57	41.57
25	45.74	45.73	45.71	45.70	45.01	44.93	43.90	43.80	---	---	41.57	41.43	41.57	41.43	41.43	41.43
26	45.77	45.73	45.71	45.70	44.99	44.96	43.80	43.78	---	---	41.43	41.36	41.43	41.36	41.36	41.36
27	45.77	45.77	---	---	44.97	44.93	43.80	43.79	---	---	41.37	41.30	41.37	41.30	41.30	41.30
28	45.77	45.77	---	---	44.93	44.88	43.80	43.73	---	---	41.30	41.18	41.30	41.18	41.18	41.18
29	45.78	45.76	---	---	44.88	44.88	43.74	43.71	---	---	41.18	41.07	41.18	41.07	41.07	41.07
30	45.77	45.77	---	---	44.88	44.82	43.74	43.72	---	---	41.09	40.98	41.09	40.98	40.98	40.98
31	45.77	45.77	---	---	44.82	44.80	43.73	43.69	---	---	40.99	40.93	40.99	40.93	40.93	40.93
MONTH	45.78	45.57	45.90	45.70	45.16	44.80	44.80	43.69	43.69	43.49	43.26	40.93	43.26	40.93	40.93	40.93

BALTIMORE COUNTY--Continued

DAY	MAX		MIN		MAX		MIN		MAX		MIN		MAX		MIN	
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER					
1	40.95	40.80	39.73	39.63	39.00	38.85	36.28	36.21	36.64	36.61	37.81	37.76				
2	40.84	40.76	39.64	39.58	39.01	38.93	36.21	36.12	36.71	36.64	37.86	37.78				
3	40.77	40.70	39.71	39.64	38.93	38.81	36.12	36.07	36.73	36.71	37.87	37.83				
4	40.71	40.66	39.69	39.65	38.81	38.69	36.10	36.06	36.74	36.72	37.86	37.79				
5	40.66	40.60	39.65	39.55	38.69	38.66	36.08	36.05	36.76	36.74	37.96	37.86				
6	40.70	40.66	39.56	39.54	38.66	38.61	36.07	36.02	36.82	36.76	37.99	37.96				
7	40.66	40.53	39.55	39.52	38.61	38.43	36.04	36.01	36.86	36.82	37.99	37.97				
8	40.53	40.48	39.56	39.52	38.43	38.34	36.04	36.01	36.92	36.86	38.05	37.99				
9	40.48	40.42	39.56	39.50	38.34	38.28	36.03	35.99	36.97	36.92	38.10	38.05				
10	40.42	40.35	39.52	39.47	38.29	38.17	36.04	35.97	37.00	36.97	38.11	38.09				
11	40.35	40.26	39.47	39.39	38.17	38.06	36.03	35.96	37.01	36.98	38.14	38.10				
12	40.31	40.24	39.48	39.43	38.06	37.94	36.07	36.03	37.09	37.01	38.15	38.13				
13	40.34	40.30	39.51	39.47	37.94	37.82	36.13	36.07	37.13	37.09	38.20	38.13				
14	40.32	40.25	39.51	39.48	37.82	37.73	36.14	36.10	37.13	37.11	38.22	38.20				
15	40.25	40.15	39.52	39.49	37.74	37.67	36.11	36.05	37.12	37.08	38.24	38.19				
16	40.16	40.12	39.49	39.43	37.68	37.63	36.12	36.04	37.10	37.06	38.31	38.24				
17	40.21	40.15	39.47	39.42	37.63	37.44	36.17	36.12	37.18	37.06	38.34	38.31				
18	40.20	40.14	39.43	39.39	37.44	37.33	36.15	36.13	37.23	37.18	38.34	38.14				
19	40.14	40.09	39.40	39.38	37.33	37.23	36.20	36.13	37.27	37.23	38.36	38.14				
20	40.10	40.03	39.38	39.33	37.25	37.11	36.24	36.20	37.28	37.27	38.38	38.36				
21	40.03	39.93	39.35	39.32	37.11	37.00	36.22	36.18	37.28	37.26	38.43	38.38				
22	39.93	39.89	39.35	39.33	37.00	36.91	36.24	36.21	37.31	37.26	38.51	38.40				
23	39.94	39.91	39.33	39.26	36.91	36.82	36.31	36.24	37.43	37.31	38.34	38.25				
24	39.94	39.88	39.26	39.24	36.82	36.72	36.42	36.31	37.49	37.43	38.37	38.32				
25	39.88	39.80	39.26	39.23	36.72	36.59	36.48	36.42	37.45	37.43	38.32	38.29				
26	39.80	39.75	39.23	39.16	36.59	36.46	36.50	36.44	37.48	37.45	38.33	38.31				
27	39.83	39.79	39.21	39.10	36.46	36.42	36.44	36.38	37.59	37.46	38.32	38.27				
28	39.81	39.73	39.10	39.02	36.46	36.39	36.47	36.39	37.68	37.59	38.35	38.27				
29	39.74	39.71	39.02	38.97	36.40	36.33	36.58	36.47	37.70	37.66	38.44	38.35				
30	39.79	39.73	39.00	38.96	36.33	36.26	36.64	36.58	37.80	37.70	38.45	38.41				
31	---	---	38.97	38.84	---	---	36.65	36.62	37.84	37.80	---	---				
MONTH	40.95	39.71	39.73	38.84	39.01	36.26	36.65	35.96	37.84	36.61	38.51	37.76				
YEAR	45.90	35.96														

Daily Low Water Levels



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

BALTIMORE COUNTY--Continued

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 (U.S. Army).

AQUIFER.--Woodstock Granite of Silurian age. Aquifer code: 350WDCK.

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 water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with water-level digital recorder--60 minute recorder interval from September 1999 to current Year.

DATUM.--Elevation of land surface is 491 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of shelter platform, 1.60 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. U.S. Geological Survey water-level telemeter at well (See MD-DE-DC District WEB page, Real-Time, Ground-Water, Maryland).

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, 28.24 ft below land surface, November 4, 5, 7, and 8, 2002 (recorder).

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

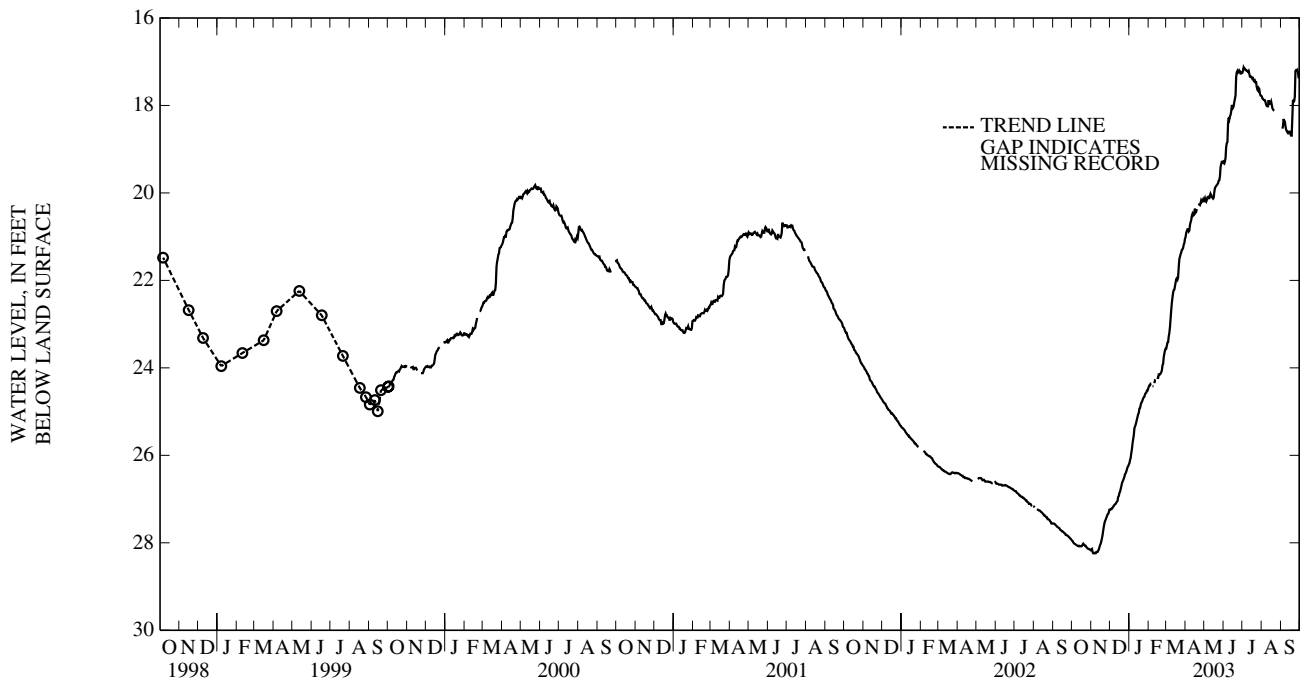
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17, 2002	28.06	NOV 25, 2002	27.39	FEB 27, 2003	23.57	JUL 22, 2003	17.43
30	28.13	DEC 19	26.65	MAY 20	19.83	AUG 27	18.29
NOV 07	28.20	JAN 28, 2003	24.50	JUN 16	18.04	SEP 02	18.50
15	28.02	FEB 13	24.20	27	17.14	30	17.37
HIGHEST	17.14	JUN 27, 2003					
LOWEST	28.20	NOV 07, 2002					

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	27.95	27.93	28.15	28.13	27.24	27.23	26.18	26.09	24.43	24.38	23.56	23.49
2	27.96	27.95	28.14	28.12	27.24	27.20	26.11	26.06	24.40	24.38	23.49	23.41
3	27.99	27.96	28.21	28.11	27.22	27.20	26.06	25.94	24.40	24.34	23.42	23.41
4	28.01	27.99	28.24	28.17	27.22	27.18	25.95	25.85	24.36	24.28	23.41	23.28
5	28.02	28.01	28.24	28.20	27.20	27.13	25.86	25.73	24.36	24.36	23.28	23.20
6	28.03	28.02	28.23	28.19	27.17	27.14	25.73	25.63	---	---	23.20	23.06
7	28.04	28.03	28.24	28.21	27.16	27.11	25.63	25.54	24.42	24.36	23.06	22.87
8	28.05	28.04	28.24	28.19	27.13	27.11	25.54	25.38	---	---	22.87	22.67
9	28.06	28.05	28.21	28.19	27.12	27.11	25.38	25.34	---	---	22.67	22.51
10	28.07	28.06	28.21	28.19	27.11	27.08	25.34	25.30	24.35	24.28	22.51	22.39
11	28.07	28.07	28.21	28.18	27.08	27.04	25.30	25.24	24.28	24.24	22.39	22.28
12	28.08	28.07	28.18	28.15	27.06	27.04	25.24	25.18	24.28	24.18	22.28	22.22
13	28.07	28.06	28.15	28.10	27.04	26.95	25.18	25.10	---	---	22.22	22.13
14	28.08	28.06	28.10	28.05	26.95	26.93	25.12	25.06	24.22	24.19	22.21	22.13
15	28.08	28.07	28.05	28.02	26.93	26.86	25.06	25.02	24.23	24.16	22.13	22.03
16	28.08	28.06	28.02	27.96	26.86	26.83	25.03	24.93	24.23	24.15	22.05	21.96
17	28.07	28.04	27.96	27.90	26.83	26.77	24.93	24.88	24.15	24.11	21.97	21.90
18	28.04	28.02	27.90	27.82	26.77	26.71	24.92	24.85	24.15	24.12	21.95	21.89
19	28.02	28.01	27.82	27.71	26.71	26.64	24.85	24.80	24.15	24.11	21.98	21.92
20	28.04	28.01	27.72	27.63	26.64	26.59	24.80	24.76	24.13	24.10	21.93	21.70
21	28.05	28.03	27.63	27.54	26.60	26.57	24.78	24.73	24.10	24.06	21.70	21.51
22	28.07	28.05	27.55	27.50	26.57	26.51	24.74	24.70	24.06	23.94	21.51	21.46
23	28.07	28.07	27.50	27.46	26.53	26.49	24.70	24.65	23.94	23.88	21.46	21.40
24	28.10	28.07	27.47	27.42	26.49	26.43	24.67	24.65	23.91	23.75	21.40	21.36
25	28.11	28.10	27.43	27.39	26.43	26.37	24.66	24.60	23.75	23.67	21.36	21.27
26	28.13	28.11	27.39	27.35	26.41	26.37	24.60	24.55	23.67	23.60	21.30	21.23
27	28.14	28.13	27.35	27.34	26.37	26.32	24.58	24.56	23.60	23.55	21.29	21.25
28	28.14	28.14	27.34	27.30	26.32	26.27	24.57	24.50	23.56	23.53	21.26	21.18
29	28.15	28.14	27.30	27.24	26.27	26.25	24.52	24.47	---	---	21.18	21.10
30	28.16	28.14	27.24	27.22	26.25	26.21	24.52	24.47	---	---	21.15	21.04
31	28.17	28.14	---	---	26.21	26.17	24.48	24.42	---	---	21.05	20.98
MONTH	28.17	27.93	28.24	27.22	27.24	26.17	26.18	24.42	24.43	23.53	23.56	20.98

BALTIMORE COUNTY--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	21.01	20.86	20.16	20.08	19.32	19.19	17.25	17.19	17.79	17.74	---	---
2	20.91	20.84	20.12	20.05	19.33	19.28	17.20	17.13	17.84	17.79	---	---
3	20.87	20.81	20.18	20.12	19.28	19.20	17.13	17.10	17.85	17.84	18.53	18.48
4	20.83	20.79	20.20	20.16	19.20	18.95	17.16	17.12	17.87	17.85	18.48	18.27
5	20.83	20.75	20.16	20.09	18.95	18.85	17.16	17.14	17.88	17.84	18.31	18.27
6	20.88	20.83	20.10	20.07	18.86	18.84	17.19	17.15	17.88	17.85	18.35	18.31
7	20.86	20.73	20.09	20.07	18.84	18.41	17.19	17.15	17.92	17.88	18.37	18.33
8	20.73	20.67	20.12	20.07	18.41	18.28	17.21	17.17	17.98	17.92	18.47	18.37
9	20.67	20.62	20.12	20.06	18.28	18.25	17.21	17.16	18.01	17.96	18.55	18.47
10	20.62	20.52	20.08	20.01	18.32	18.25	17.23	17.13	18.02	17.97	18.58	18.54
11	20.52	20.41	20.02	19.92	18.25	18.20	17.21	17.12	18.02	17.86	18.61	18.55
12	20.48	20.39	20.05	19.98	18.22	18.14	17.27	17.21	17.88	17.83	18.63	18.59
13	20.52	20.47	20.09	20.02	18.14	17.99	17.34	17.27	17.94	17.88	18.60	18.55
14	20.51	20.43	20.11	20.06	18.01	17.96	17.35	17.30	17.96	17.93	18.60	18.57
15	20.43	20.32	20.13	20.09	18.01	17.97	17.34	17.27	17.95	17.90	18.60	18.55
16	20.36	20.30	20.11	19.98	18.05	17.99	17.35	17.26	17.91	17.88	18.66	18.60
17	20.45	20.35	19.98	19.88	18.02	17.92	17.39	17.35	17.98	17.91	18.69	18.66
18	20.43	20.37	19.89	19.85	17.92	17.85	17.38	17.36	18.06	17.98	18.69	18.29
19	20.37	20.32	19.86	19.84	17.85	17.77	17.43	17.37	18.09	18.06	18.29	17.84
20	---	---	19.84	19.79	17.77	17.35	17.45	17.43	18.11	18.08	17.87	17.84
21	---	---	19.82	19.78	17.35	17.24	17.43	17.38	18.12	18.08	17.92	17.87
22	20.24	20.18	19.80	19.78	17.24	17.18	17.47	17.42	---	---	17.90	17.80
23	20.27	20.23	19.78	19.72	17.21	17.18	17.47	17.44	---	---	17.80	17.15
24	20.28	20.23	19.72	19.70	17.25	17.21	17.58	17.47	---	---	17.21	17.15
25	20.23	20.17	19.71	19.63	17.24	17.18	17.64	17.58	---	---	17.19	17.15
26	20.17	20.13	19.63	19.41	17.20	17.14	17.66	17.59	---	---	17.19	17.16
27	20.20	20.15	19.41	19.34	17.22	17.14	17.60	17.53	---	---	17.18	17.12
28	20.18	20.10	19.34	19.28	17.27	17.22	17.62	17.55	---	---	17.24	17.15
29	20.15	20.10	19.29	19.24	17.27	17.23	17.72	17.62	---	---	17.36	17.24
30	20.21	20.14	19.29	19.25	17.25	17.21	17.77	17.72	---	---	17.37	17.34
31	---	---	19.28	19.18	---	---	17.78	17.75	---	---	---	---
MONTH	21.01	20.10	20.20	19.18	19.33	17.14	17.78	17.10	18.12	17.74	18.69	17.12
YEAR	28.24	17.10										

Daily Low Water Levels



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

BALTIMORE COUNTY--Continued

WELL NUMBER.--BA Ee 145. SITE ID.--392436076332201. PERMIT NUMBER:--BA-94-5859.

LOCATION.--Lat 39°24'36", long 76°33'22", Hydrologic Unit 02060003, at Cromwell Valley Park. Owner: U.S. Environmental Protection Agency.

AQUIFER.--Colluvium of Quaternary age. Aquifer code: 110CLVM.

WELL CHARACTERISTICS.--Cored, observation, water-table well, depth 14.15 ft; casing diameter 2 in., to 8.65 ft., and 13.65 to 14.15 ft; screen diameter 2 in., from 8.65 to 13.65 ft.

INSTRUMENTATION.--Weekly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 223.72 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.85 ft above land surface.

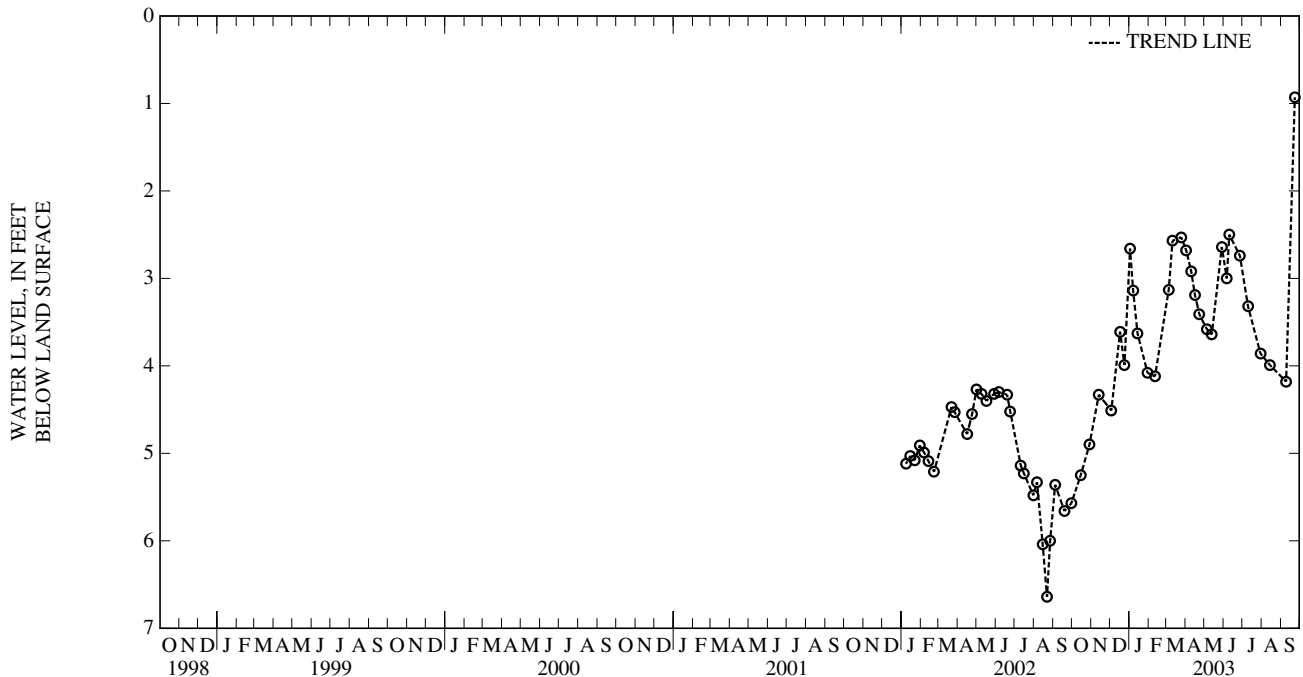
REMARKS.--Minebank Run Project observation well.

PERIOD OF RECORD.--January 2002 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.93 ft below land surface, September 23, 2003; lowest measured, 6.64 ft below land surface, August 22, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 2002	5.25	JAN 14, 2003	3.63	APR 16, 2003	3.19	JUL 10, 2003	3.32
29	4.90	30	4.08	23	3.41	30	3.86
NOV 13	4.33	FEB 11	4.12	MAY 05	3.58	AUG 14	3.99
DEC 03	4.51	MAR 05	3.13	13	3.64	SEP 09	4.18
17	3.61	11	2.57	29	2.64	23	.93
24	3.99	25	2.53	JUN 06	3.00		
JAN 02, 2003	2.66	APR 02	2.68	10	2.50		
07	3.14	10	2.92	27	2.74		
HIGHEST .93 SEP 23, 2003							
LOWEST 5.25 OCT 15, 2002							



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

BALTIMORE COUNTY--Continued

WELL NUMBER.--BA Ee 161. SITE ID.--392437076332301. PERMIT NUMBER.--BA-94-5863.

LOCATION.--Lat 39°24'37", long 76°33'23", Hydrologic Unit 02060003, at Cromwell Valley Park. Owner: U.S. Environmental Protection Agency.

AQUIFER.--Alluvium of Quaternary age. Aquifer code: 110ALVM.

WELL CHARACTERISTICS.--Cored, observation, water-table well, depth 10.80 ft; casing diameter 2 in., to 5.30 ft, and 10.30 to 10.80 ft; screen diameter 2 in., from 5.30 to 10.30 ft.

INSTRUMENTATION.--Weekly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 224.72 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.90 ft above land surface.

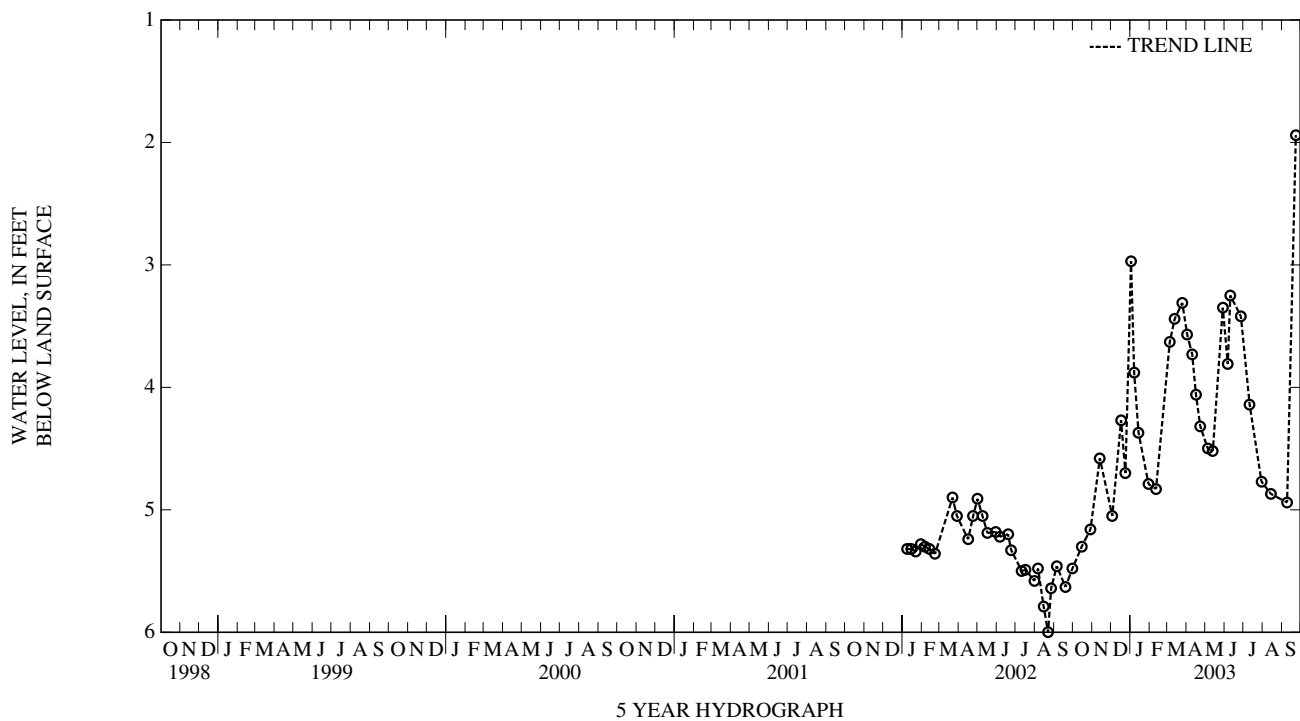
REMARKS.--Minebank Run Project observation well.

PERIOD OF RECORD.--January 2002 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.94 ft below land surface, September 23, 2003; lowest measured, 6.00 ft below land surface, August 22, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 2002	5.30	JAN 14, 2003	4.37	APR 16, 2003	4.06	JUL 11, 2003	4.14
29	5.16	30	4.79	23	4.32	30	4.77
NOV 13	4.58	FEB 11	4.83	MAY 05	4.50	AUG 14	4.87
DEC 03	5.05	MAR 05	3.63	13	4.52	SEP 09	4.94
17	4.27	13	3.44	29	3.35	23	1.94
24	4.70	25	3.31	JUN 06	3.81		
JAN 02, 2003	2.97	APR 02	3.57	10	3.25		
07	3.88	10	3.73	27	3.42		
HIGHEST 1.94 SEP 23, 2003							
LOWEST 5.30 OCT 15, 2002							



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

BALTIMORE COUNTY--Continued

WELL NUMBER.--BA Ee 170. SITE ID.--392438076332201. PERMIT NUMBER.--BA-94-5876.

LOCATION.--Lat 39°24'38", long 76°33'22", Hydrologic Unit 02060003, at Cromwell Valley Park. Owner: U.S. Environmental Protection Agency.

AQUIFER.--Alluvium of Quaternary age. Aquifer code: 110ALVM.

WELL CHARACTERISTICS.--Cored, observation, water-table well, depth 15 ft; casing diameter 2 in., to 9.50 ft, and 14.50 to 15.00 ft; screen diameter 2 in., from 9.50 to 14.50 ft.

INSTRUMENTATION.--Weekly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 228.37 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.22 ft above land surface.

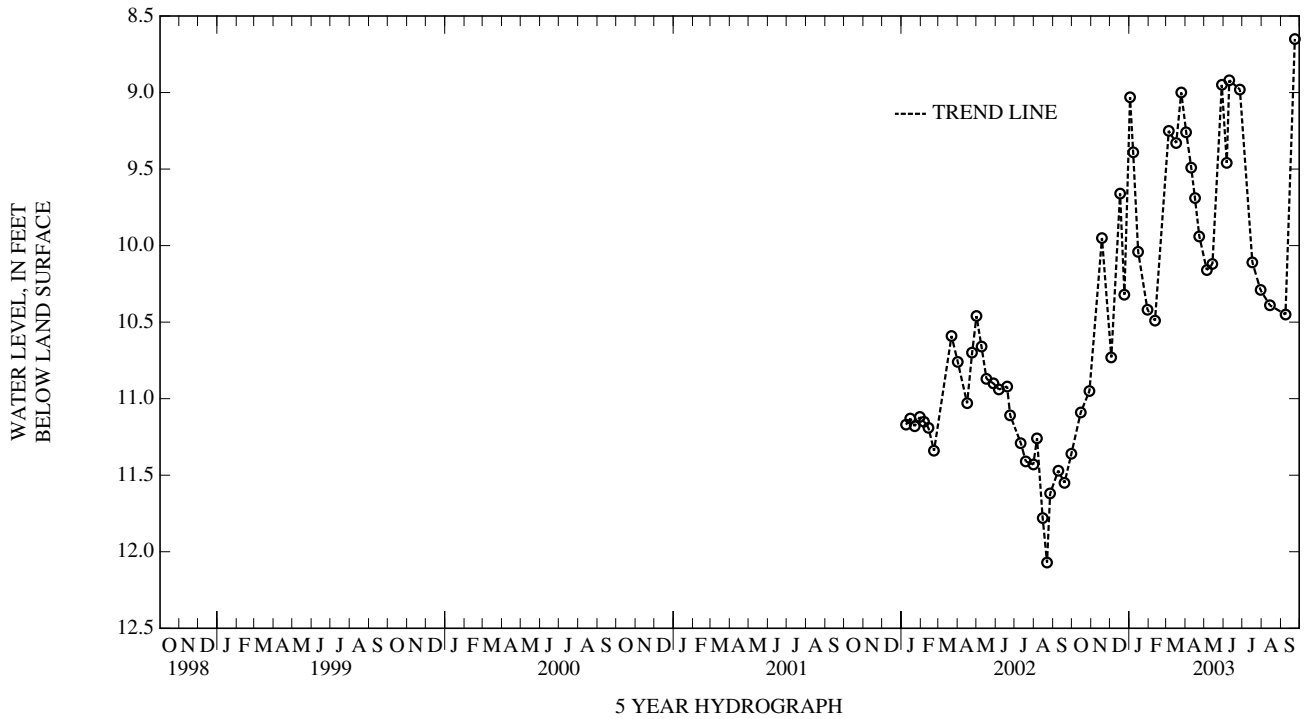
REMARKS.-- Minebank Run Project observation well.

PERIOD OF RECORD.--January 2002 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.65 ft below land surface, September 23, 2003; lowest measured, 12.07 ft below land surface, August 22, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 2002	11.09	JAN 15, 2003	10.04	APR 16, 2003	9.69	JUL 17, 2003	10.11
29	10.95	30	10.42	23	9.94	30	10.29
NOV 18	9.95	FEB 11	10.49	MAY 05	10.16	AUG 14	10.39
DEC 03	10.73	MAR 05	9.25	14	10.12	SEP 08	10.45
17	9.66	17	9.33	29	8.95	23	8.65
24	10.32	25	9.00	JUN 06	9.46		
JAN 02, 2003	9.03	APR 02	9.26	10	8.92		
07	9.39	10	9.49	27	8.98		
HIGHEST 8.65 SEP 23, 2003							
LOWEST 12.07 OCT 22, 2002							



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

BALTIMORE COUNTY--Continued

WELL NUMBER.--BA Ee 183. SITE ID.--392440076332002. PERMIT NUMBER.--BA-94-5897.

LOCATION.--Lat 39°24'40", long 76°33'20", Hydrologic Unit 02060003, at Cromwell Valley Park. Owner: U.S. Environmental Protection Agency.

AQUIFER.--Alluvium of Quaternary age. Aquifer code: 110ALVM.

WELL CHARACTERISTICS.--Cored, observation, water-table well, depth 7.50 ft; casing diameter 2 in., to 2.00 ft, and 7.00 to 7.50 ft; screen diameter 2 in., from 2.00 to 7.00 ft.

INSTRUMENTATION.--Weekly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 221.99 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.80 ft above land surface.

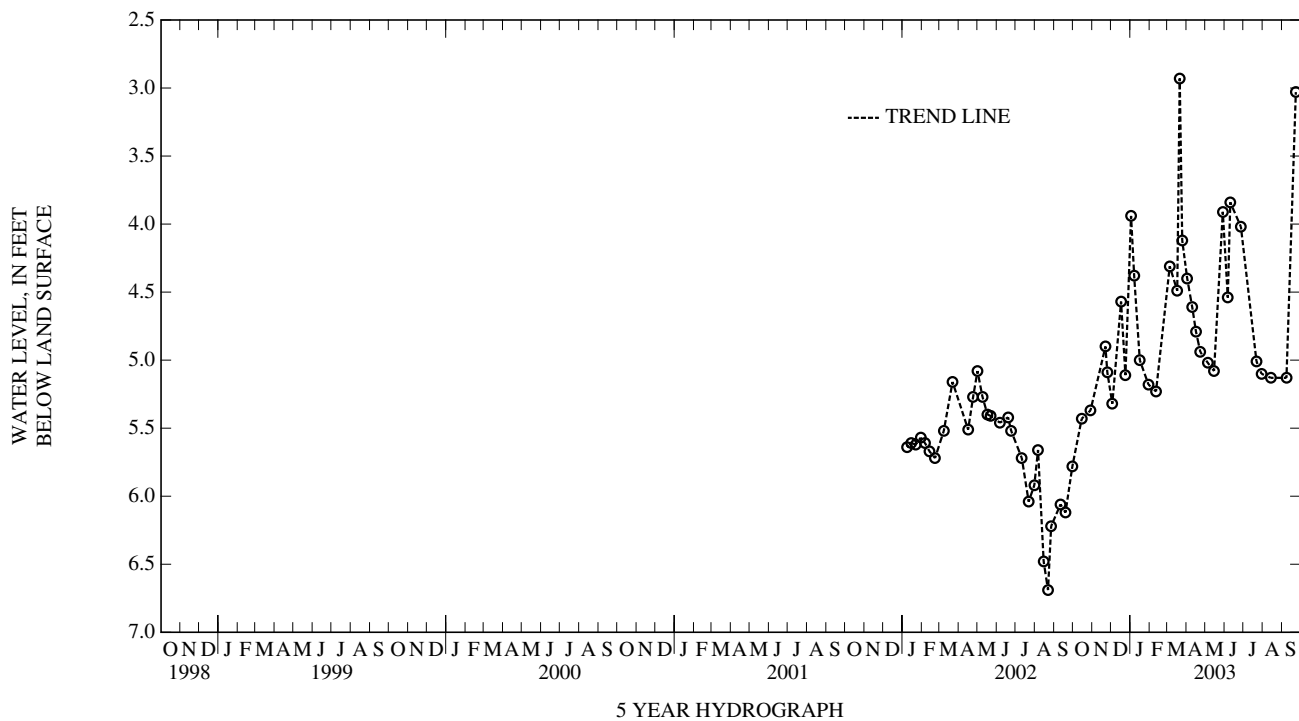
REMARKS.--Minebank Run Project observation well.

PERIOD OF RECORD.--January 2002 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.93 ft below land surface, March 21, 2003; lowest measured, 6.69 ft below land surface, August 22, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 2002	5.43	JAN 07, 2003	4.38	APR 02, 2003	4.40	JUN 10, 2003	3.84
29	5.37	16	5.00	10	4.61	27	4.02
NOV 22	4.90	30	5.18	16	4.79	JUL 22	5.01
25	5.09	FEB 11	5.23	23	4.94	30	5.10
DEC 03	5.32	MAR 05	4.31	MAY 05	5.02	AUG 14	5.13
17	4.57	17	4.49	15	5.08	SEP 08	5.13
24	5.11	21	2.93	29	3.91	23	3.03
JAN 02, 2003	3.94	25	4.12	JUN 06	4.54		
HIGHEST	2.93	MAR 21, 2003					
LOWEST	5.43	OCT 15, 2002					



BALTIMORE COUNTY--Continued

WELL NUMBER.--BA Ee 189. SITE ID.--392436076331901. PERMIT NUMBER.--BA-94-5882.

LOCATION.--Lat 39°24'36", long 76°33'19", Hydrologic Unit 02060003, at Cromwell Valley Park. Owner: U.S. Environmental Protection Agency.

AQUIFER.--Colluvium of Quaternary Age. Aquifer code: 110CLVM.

WELL CHARACTERISTICS.--Cored, observation, water-table well, depth 24.50 ft; casing diameter 2 in., to 19.00 ft, and 24.00 to 24.50 ft; screen diameter 2 in., from 19.00 to 24.00 ft.

INSTRUMENTATION.--Weekly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 223.98 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.99 ft above land surface.

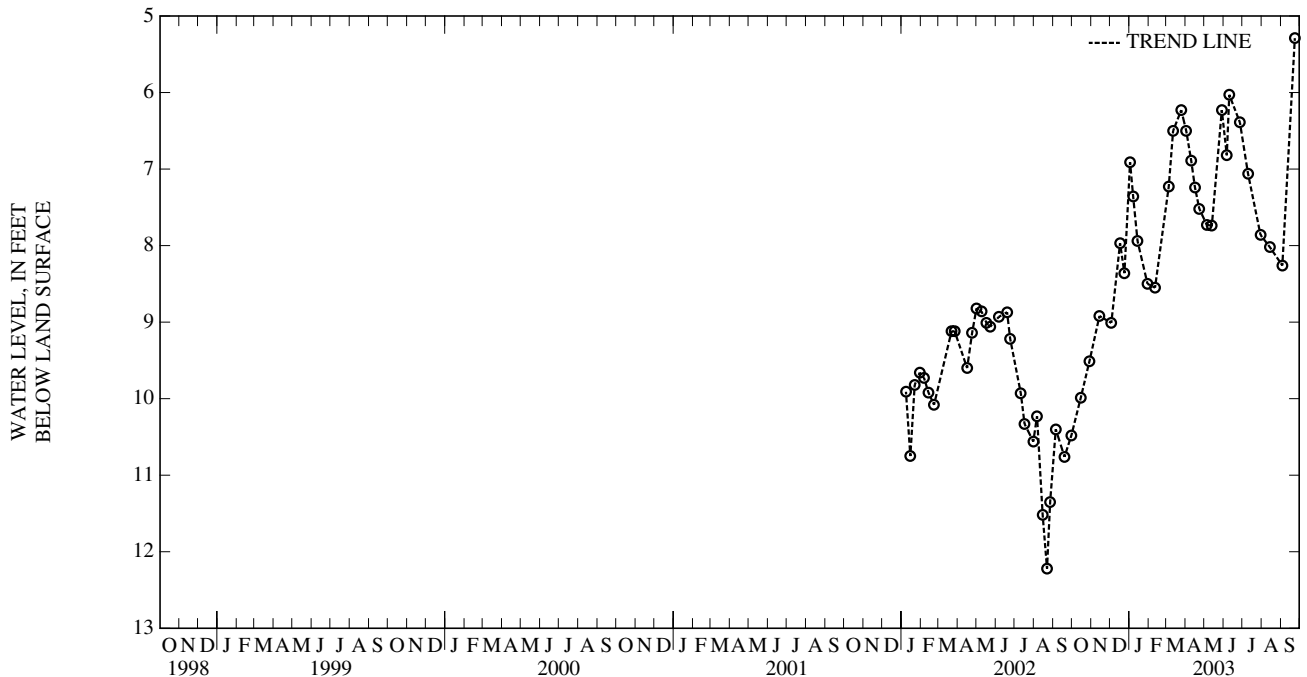
REMARKS.--Minebank Run Project observation well.

PERIOD OF RECORD.--January 2002 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.29 ft below land surface, September 23, 2003; lowest measured, 12.22 ft below land surface, August 22, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 2002	9.99	JAN 14, 2003	7.94	APR 16, 2003	7.24	JUL 10, 2003	7.06
29	9.51	30	8.50	23	7.52	30	7.86
NOV 14	8.92	FEB 11	8.55	MAY 05	7.73	AUG 14	8.02
DEC 03	9.01	MAR 05	7.23	13	7.74	SEP 03	8.26
17	7.97	12	6.50	29	6.23	23	5.29
24	8.36	25	6.23	JUN 06	6.82		
JAN 02, 2003	6.91	APR 02	6.50	10	6.03		
07	7.36	10	6.89	27	6.39		
HIGHEST 5.29 SEP 23, 2003							
LOWEST 9.99 OCT 15, 2002							



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

BALTIMORE COUNTY--Continued

WELL NUMBER.--BA Ee 198. SITE ID.--392458076330301. PERMIT NUMBER.--BA-94-0454.

LOCATION.--Lat 39°24'58", long 76°33'03", Hydrologic Unit 02060003, at Cromwell Valley Park. Owner: Baltimore County.

AQUIFER.--Cockeysville Marble of Cambrian age. Aquifer code: 300CCKV.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 27.00 ft; casing diameter 4 in., to 6.00 ft, and 26.00 to 27.00 ft; screen diameter 4 in., from 6.00 to 26.00 ft.

INSTRUMENTATION.--Weekly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 237.66 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.22 ft above land surface.

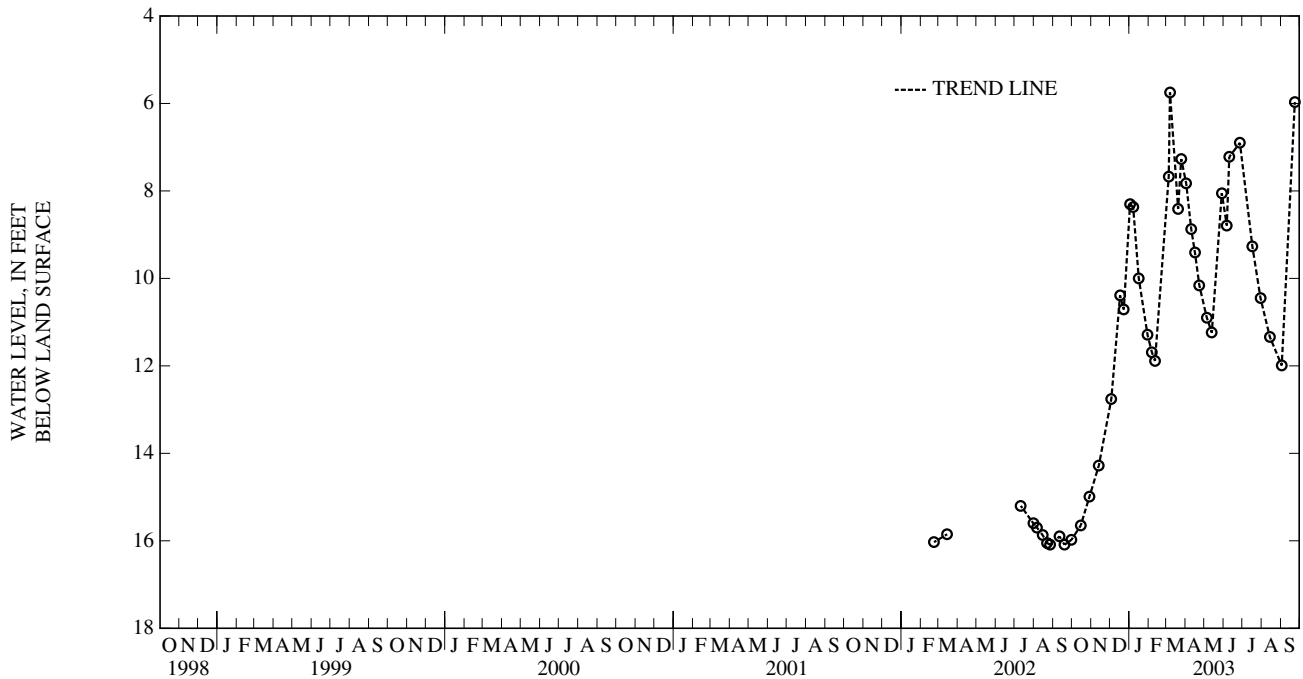
REMARKS.--Minebank Run Project observation well.

PERIOD OF RECORD.--January 2002 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.75 ft below land surface, March 5, 2003; lowest measured, 16.09 ft below land surface, August 27, 2002 and September 19, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 2002	15.65	JAN 16, 2003	10.00	APR 02, 2003	7.83	JUN 10, 2003	7.22
29	14.99	30	11.29	10	8.87	27	6.90
NOV 13	14.28	FEB 06	11.69	16	9.41	JUL 17	9.27
DEC 03	12.76	11	11.89	23	10.16	30	10.45
17	10.39	MAR 05	7.67	MAY 05	10.90	AUG 14	11.34
23	10.71	07	5.75	13	11.24	SEP 02	11.99
JAN 02, 2003	8.30	20	8.41	29	8.05	23	5.97
07	8.37	25	7.27	JUN 06	8.79		
HIGHEST 5.75 MAR 07, 2003							
LOWEST 15.65 OCT 15, 2002							



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

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 Road, at Seagrams warehouse facility, Dundalk.
 Owner: Montebello Brands.

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 water level measurements with electric tape by U.S. Geological Survey 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.

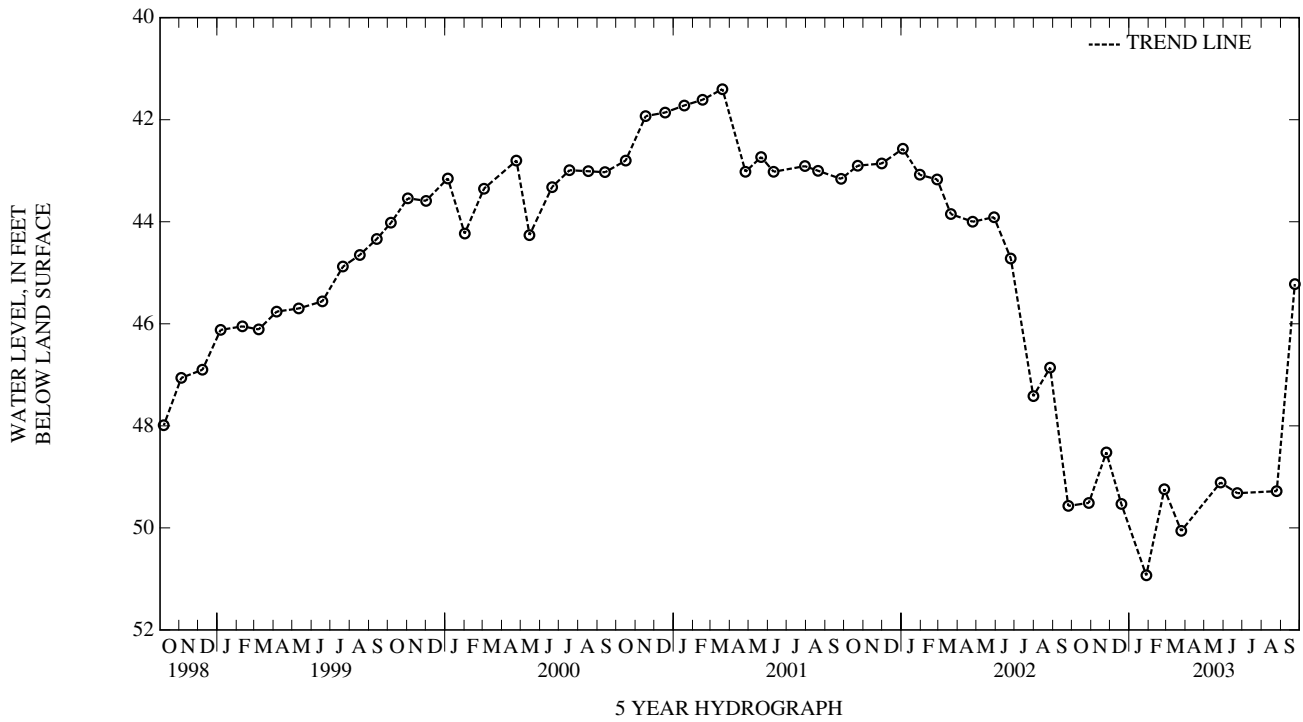
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

PERIOD OF RECORD.--January 1952 to March 1954, January 1983 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 41.40 ft below land surface, March 20, 2001; lowest measured, 95.88 ft below land surface, October 6, 1952.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 2002	49.51	JAN 28, 2003	50.93	MAY 27, 2003	49.11	SEP 23, 2003	45.22
NOV 25	48.52	FEB 26	49.24	JUN 23	49.32		
DEC 19	49.53	MAR 25	50.06	AUG 25	49.28		
HIGHEST 45.22 SEP 23, 2003							
LOWEST 50.93 JAN 28, 2003							



5 YEAR HYDROGRAPH
 OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

BALTIMORE COUNTY--Continued

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 422.70 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 13.57 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.58 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

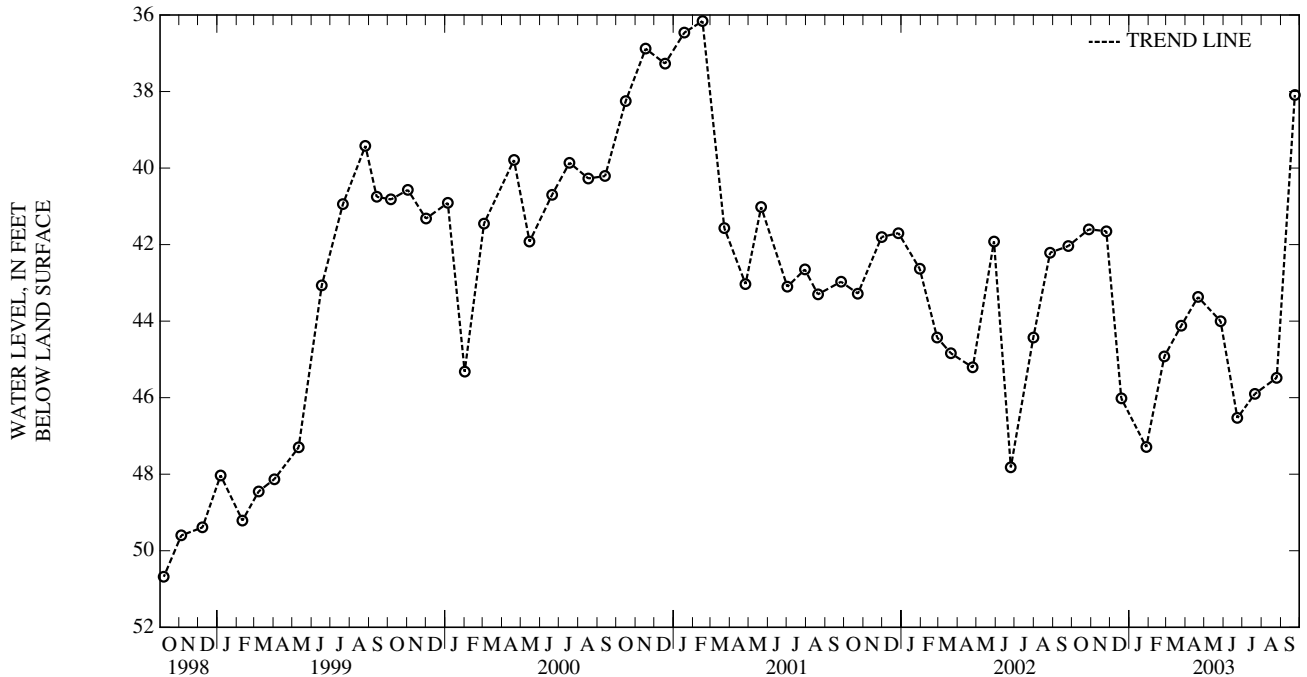
PERIOD OF RECORD.--September 1981, March 1982, September 1982, January 1983 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 31.25 ft below land surface, June 3, 1983; lowest measured, 62.27 ft below land surface, October 20, 1997.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 2002	41.60	JAN 28, 2003	47.29	APR 21, 2003	43.37	JUL 21, 2003	45.90
NOV 25	41.65	FEB 26	44.92	MAY 27	44.00	AUG 25	45.48
DEC 19	46.02	MAR 25	44.12	JUN 23	46.53	SEP 23	38.09

HIGHEST 38.09 SEP 23, 2003
 LOWEST 47.29 JAN 28, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

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 Upper 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 water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 137.87 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.80 ft above land surface.

REMARKS.--Calvert County Ground-Water-Level Monitoring Network observation well. Water levels are affected by regional ground-water withdrawal.

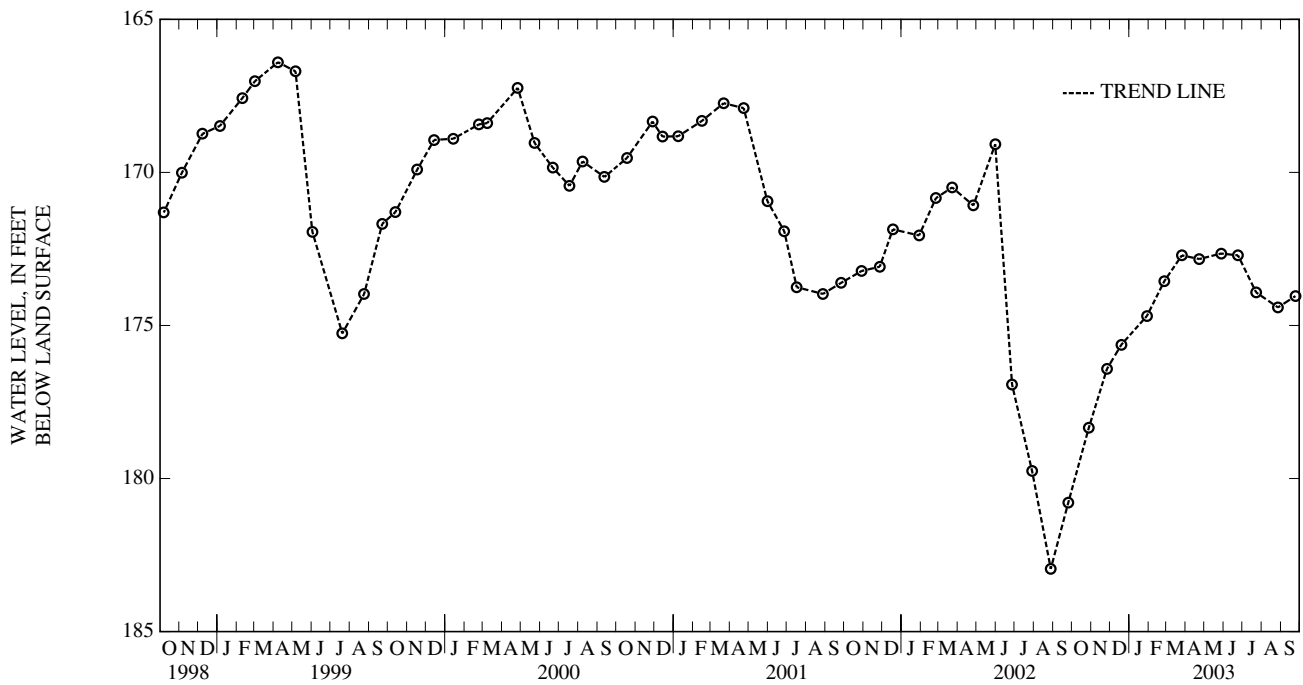
PERIOD OF RECORD.--August 1979 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 133.82 ft below land surface, May 6, 1980; lowest measured, 182.95 ft below land surface, August 28, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 2002	178.34	JAN 29, 2003	174.69	APR 23, 2003	172.83	JUL 23, 2003	173.92
NOV 26	176.42	FEB 26	173.55	MAY 28	172.65	AUG 27	174.41
DEC 19	175.63	MAR 26	172.71	JUN 24	172.71	SEP 24	174.04

HIGHEST 172.65 MAY 28, 2003
 LOWEST 178.34 OCT 28, 2002



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CALVERT COUNTY--Continued

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 Lower 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 water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 138.67 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.60 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

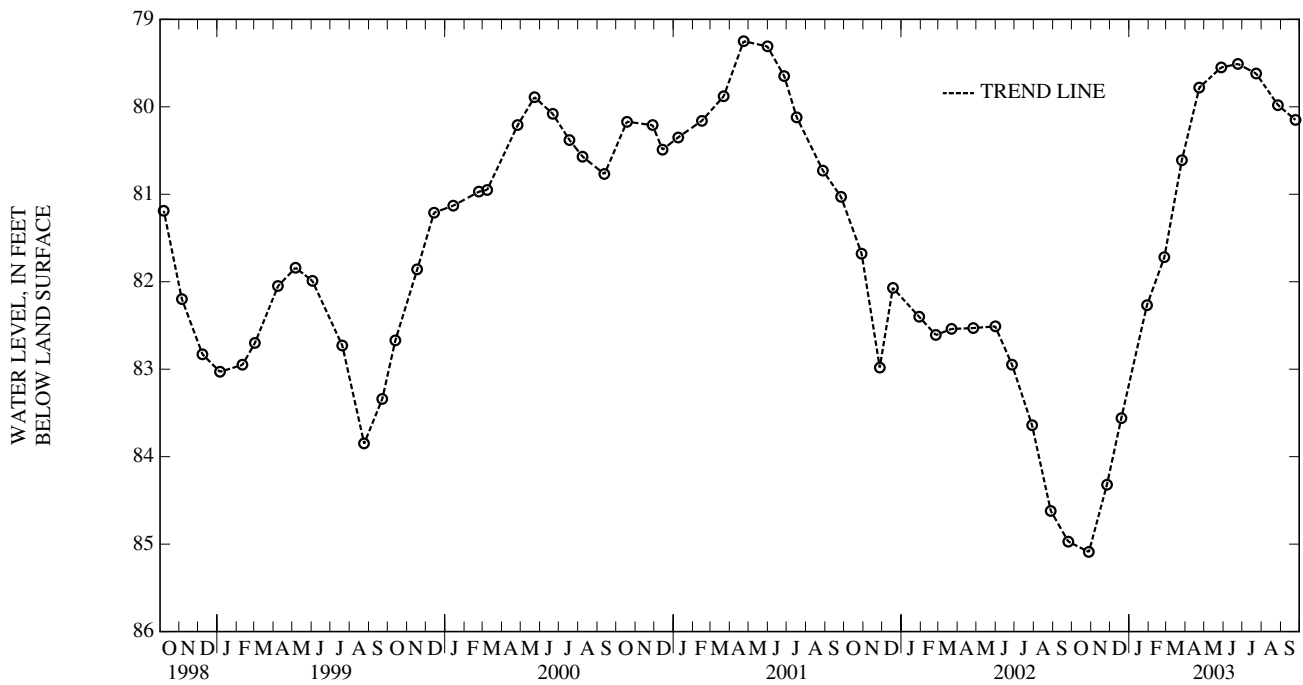
PERIOD OF RECORD.--July 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 76.55 ft below land surface, May 4, 1998; lowest measured, 85.09 ft below land surface, October 28, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 2002	85.09	JAN 29, 2003	82.27	APR 23, 2003	79.78	JUL 23, 2003	79.62
NOV 26	84.32	FEB 26	81.72	MAY 28	79.55	AUG 27	79.98
DEC 19	83.56	MAR 26	80.61	JUN 24	79.51	SEP 24	80.15

HIGHEST 79.51 JUN 24, 2003
 LOWEST 85.09 OCT 28, 2002



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CALVERT COUNTY--Continued

WELL NUMBER.--CA Bc 25. SITE ID.--384114076320301. PERMIT NUMBER.--CA-67-0011.

LOCATION.--Lat 38°41'14", long 76°32'03", Hydrologic Unit 02060004, at Chesapeake Beach Park, Chesapeake Beach. Owner: Chesapeake Beach Park, Inc.

AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 365 ft; casing diameter 8 in., to 333.4 ft; screen diameter 8 in., from 333.4 to 365 ft.

INSTRUMENTATION.--Monthly water level measurements from September 1999 to current year. Twice yearly water level measurements from June 1993 to September 1999 with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 17.77 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of reducer, 3.50 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

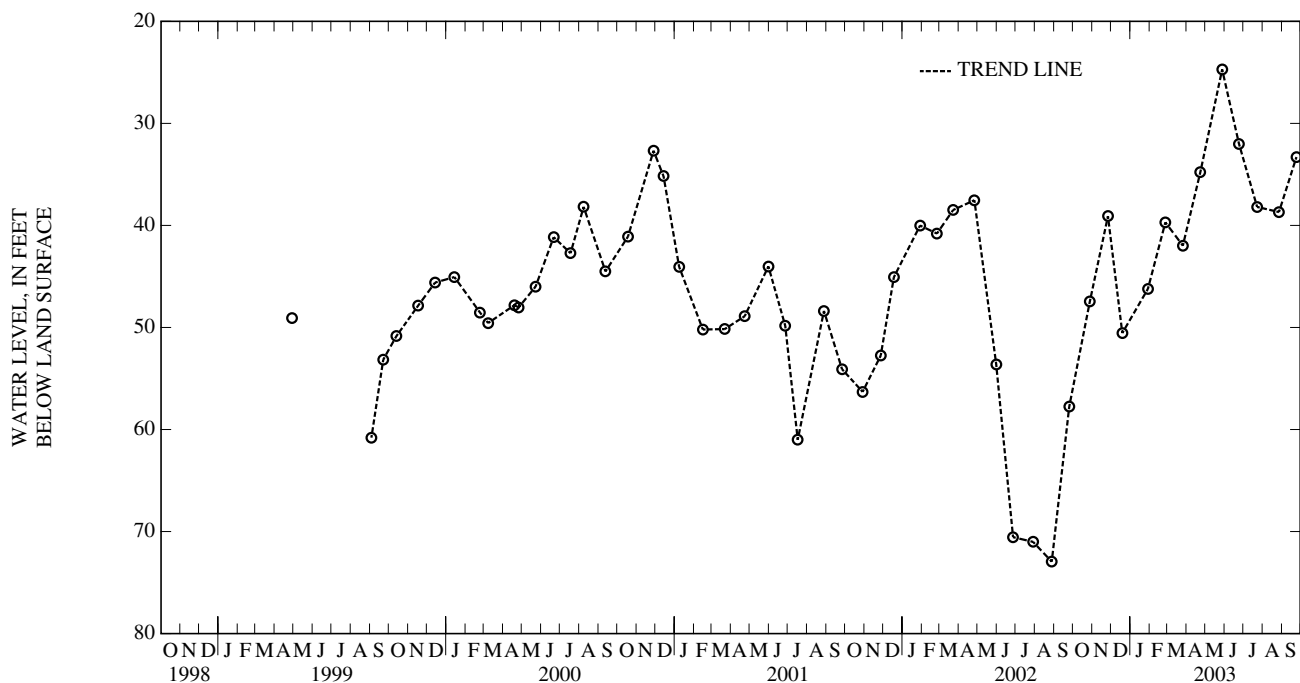
PERIOD OF RECORD.--June 1993 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.00 ft below land surface, July 23, 1966; lowest measured, 72.95 ft below land surface, August 28, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 2002	47.45	JAN 29, 2003	46.22	APR 23, 2003	34.78	JUL 23, 2003	38.19
NOV 26	39.09	FEB 26	39.70	MAY 28	24.72	AUG 27	38.69
DEC 19	50.55	MAR 26	41.98	JUN 24	32.02	SEP 24	33.30

HIGHEST 24.72 MAY 28, 2003
 LOWEST 50.55 DEC 19, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CALVERT COUNTY--Continued

WELL NUMBER.--CA Cc 18. SITE ID.--383940076314801.

LOCATION.--Lat 38°39'40", long 76°31'48", Hydrologic Unit 02060004, at Naval Research Laboratory, Randle Cliff. Owner: U.S.Navy.

AQUIFER.--Aquia Formation of Upper 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 water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with water-level recorder September 1958 to December 1962.

DATUM.--Elevation of land surface is 111.31 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.30 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. A water level measurement of 76.68 ft below land surface, was made on September 10, 1952. Water levels are affected by local and regional ground-water withdrawal.

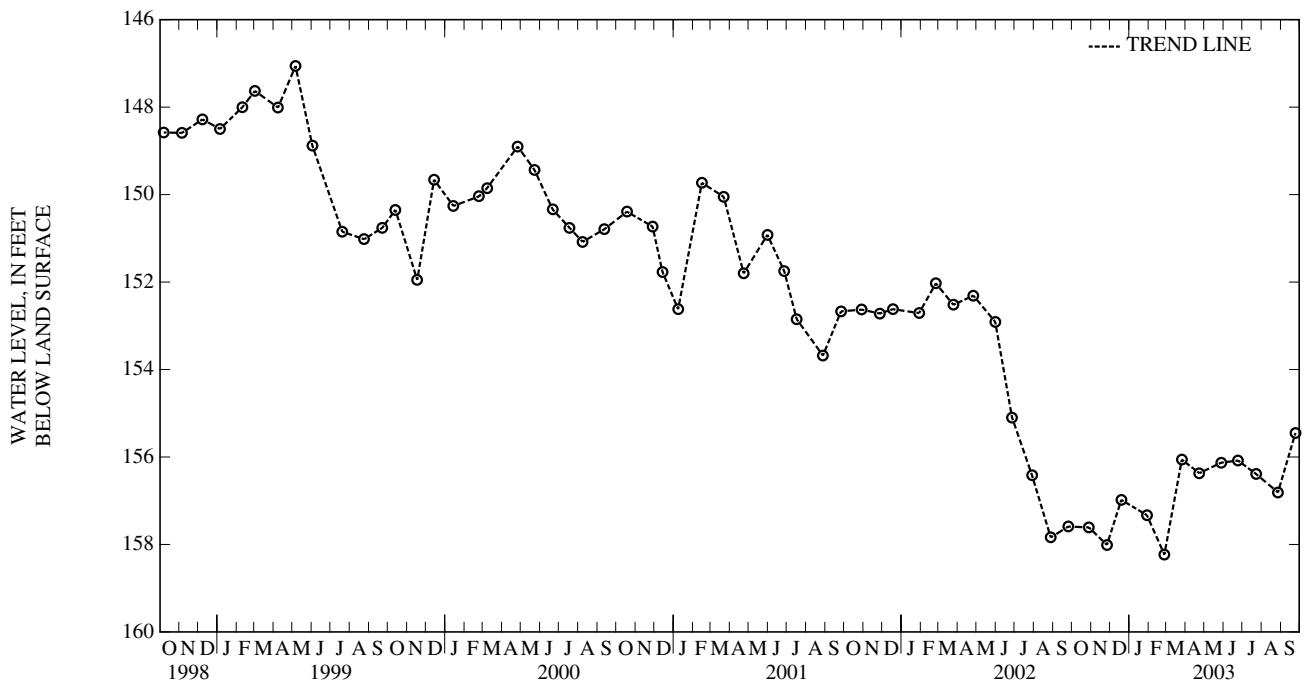
PERIOD OF RECORD.--September 1958 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 103.63 ft below land surface, May 14, 1961; lowest measured, 158.23 ft below land surface, February 26, 2003.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 2002	157.61	JAN 29, 2003	157.33	APR 23, 2003	156.37	JUL 23, 2003	156.39
NOV 26	158.01	FEB 26	158.23	MAY 28	156.13	AUG 27	156.81
DEC 19	156.98	MAR 26	156.06	JUN 24	156.08	SEP 24	155.45

HIGHEST 155.45 SEP 24, 2003
 LOWEST 158.23 FEB 26, 2003



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

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. near MD Rt. 263, Huntingtown. Owner: U.S. Geological Survey.

AQUIFER.--Aquia Formation of Upper 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 water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 138.60 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.66 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

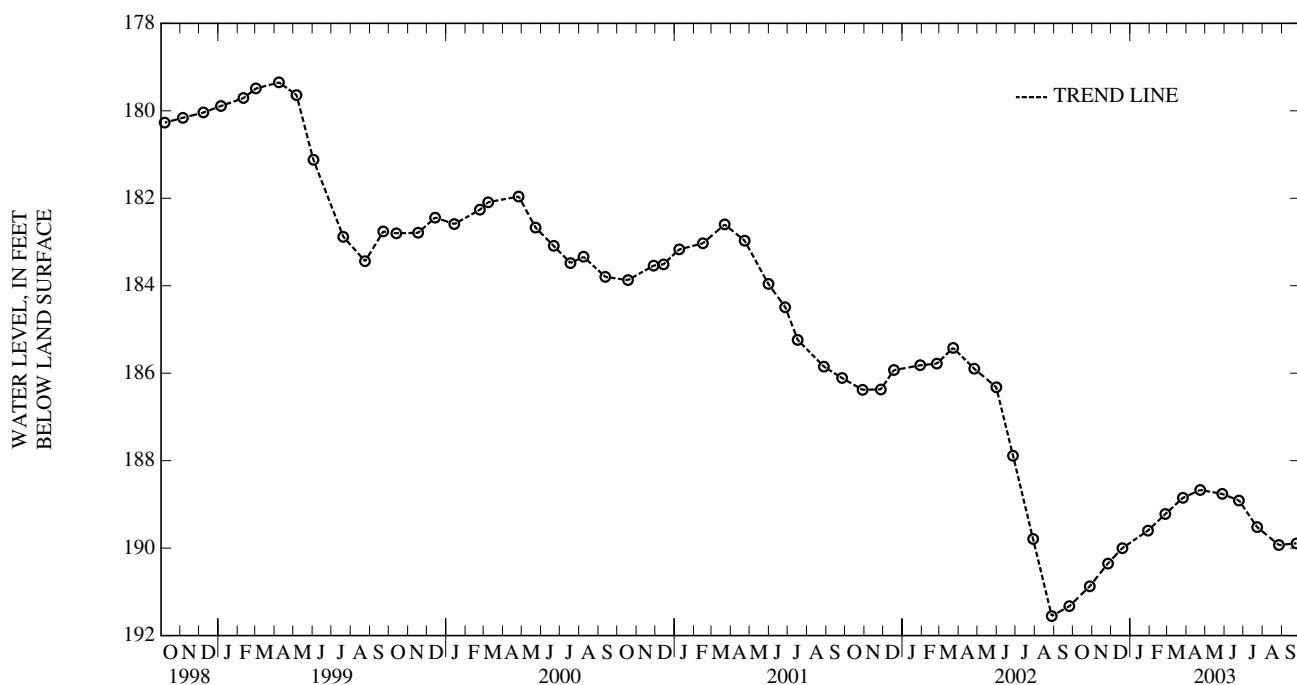
PERIOD OF RECORD.--December 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 140.00 ft below land surface, March 7, 1979; lowest measured, 191.55 ft below land surface, August 28, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 2002	190.87	JAN 29, 2003	189.60	APR 23, 2003	188.67	JUL 23, 2003	189.52
NOV 26	190.35	FEB 26	189.22	MAY 28	188.76	AUG 27	189.93
DEC 19	190.00	MAR 26	188.85	JUN 24	188.91	SEP 24	189.89

HIGHEST 188.67 APR 23, 2003
LOWEST 190.87 OCT 28, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CALVERT COUNTY--Continued

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, Prince Frederick. Owner: U.S. Geological Survey.

AQUIFER.--Aquia Formation of Upper 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 water level measurements with electric tape by U.S. Geological Survey 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.--Calvert County Ground-Water-Level Monitoring Network observation well. Water levels are affected by regional ground-water withdrawal.

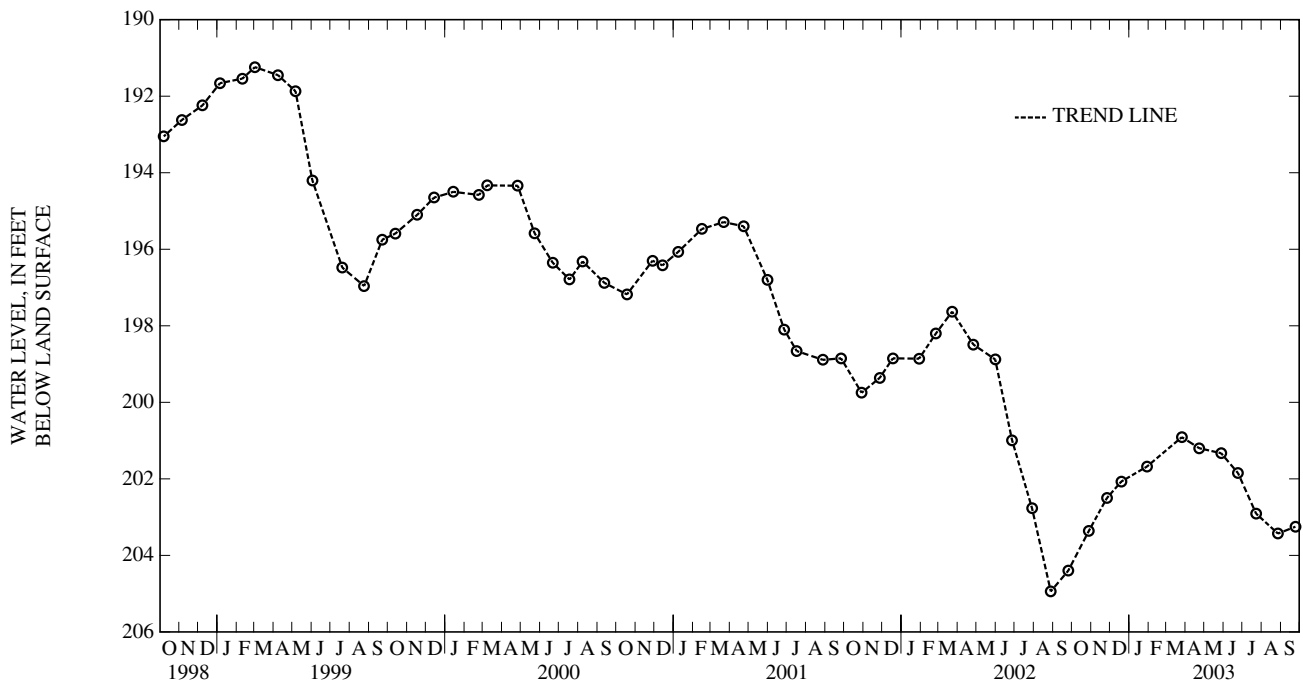
PERIOD OF RECORD.--July 1979 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 148.54 ft below land surface, July 31, 1979; lowest measured, 204.94 ft below land surface, August 28, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 2002	203.36	JAN 29, 2003	201.68	MAY 28, 2003	201.33	AUG 27, 2003	203.43
NOV 26	202.50	MAR 26	200.91	JUN 24	201.85	SEP 24	203.25
DEC 19	202.07	APR 23	201.20	JUL 23	202.91		

HIGHEST 200.91 MAR 26, 2003
 LOWEST 203.43 AUG 27, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CALVERT COUNTY--Continued

WELL NUMBER.--CA Db 65. SITE ID.--383216076351401. PERMIT NUMBER.--CA-81-2415.

LOCATION.--Lat 38°32'16", long 76°35'14", Hydrologic Unit 02060006, at St. Paul's Episcopal Church parking lot, Prince Frederick. Owner: U.S. Geological Survey.

AQUIFER.--Brandywine Formation of Pliocene age. Aquifer code: 112UPLD.

WELL CHARACTERISTICS.--Drilled, water-table, observation well, depth 49 ft; casing diameter 3 in., to 22 ft, and 32 to 49 ft; screen diameter 3 in., from 22 to 32 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 159.33 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of PVC casing, 2.38 ft above land surface.

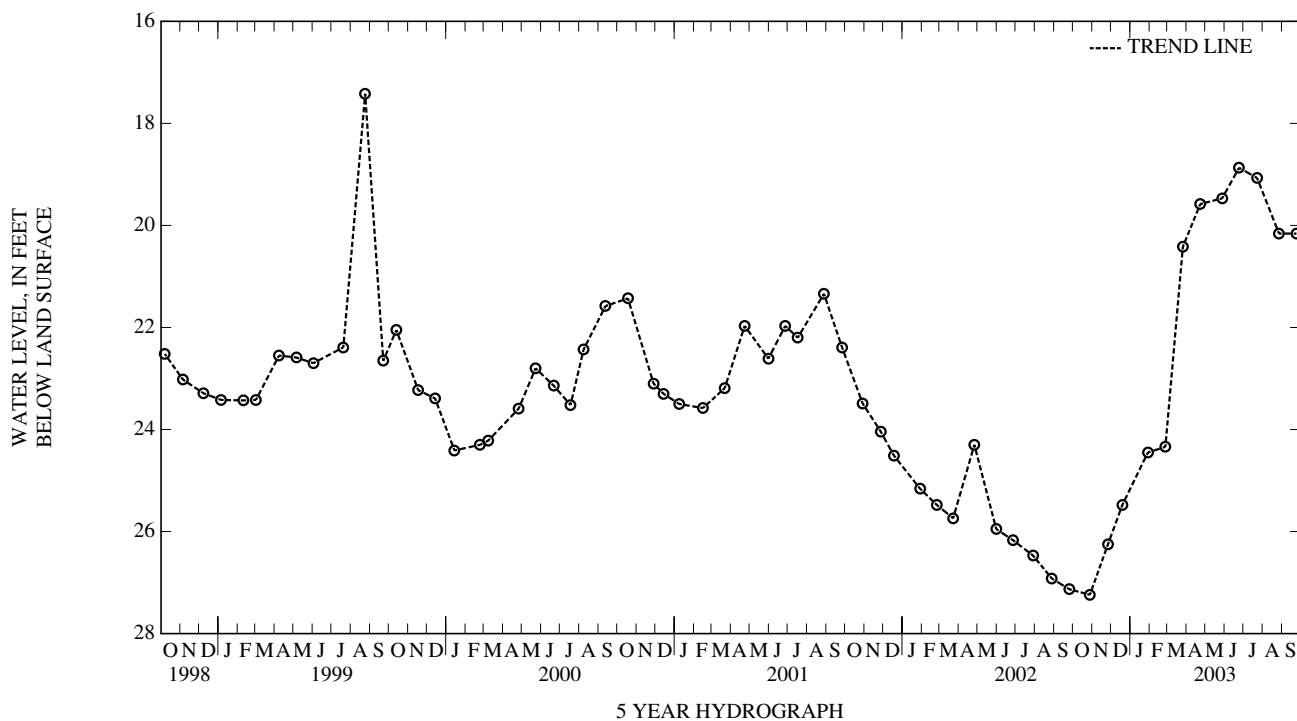
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. The water level measurement of 17.42 ft below land surface, on August 24, 1999, was made after a heavy rain shower earlier in the day.

PERIOD OF RECORD.--July and August 1986, October 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.64 ft below land surface, May 9, 1990; lowest measured, 27.24 ft below land surface, October 28, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 2002	27.24	JAN 29, 2003	24.45	APR 23, 2003	19.58	JUL 23, 2003	19.07
NOV 26	26.25	FEB 26	24.34	MAY 28	19.47	AUG 27	20.16
DEC 19	25.48	MAR 26	20.42	JUN 24	18.87	SEP 24	20.16
HIGHEST	18.87	JUN 24, 2003					
LOWEST	27.24	OCT 28, 2002					



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CALVERT COUNTY--Continued

WELL NUMBER.--CA Db 96. SITE ID.--383244076354201. PERMIT NUMBER.--CA-94-4191.

LOCATION.--Lat 38°32'44", long 76°35'42", Hydrologic Unit 02060006. Owner: Maryland Geological Survey.

AQUIFER.--Upper Patapsco Aquifer Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.

WELL CHARACTERISTICS.--Drilled, confined observation well, depth 970 ft; casing diameter 4 in., to 970 ft. depth.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recording interval, March 2003 to current year.

DATUM.--Elevation of land surface is 151.56 ft above North American Vertical Datum of 1988. Measuring point: Top of shelter platform, 3.00 ft above land surface.

REMARKS.--Southern Maryland Patapsco Aquifer Well Drilling Project observation well. Water levels affected by nearby pumping.

PERIOD OF RECORD.--March 2002 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 35.08 ft below sea level, April 12, 2003 (recorder); lowest measured, 36.16 ft below land surface, Sept. 24, 2003 (recorder).

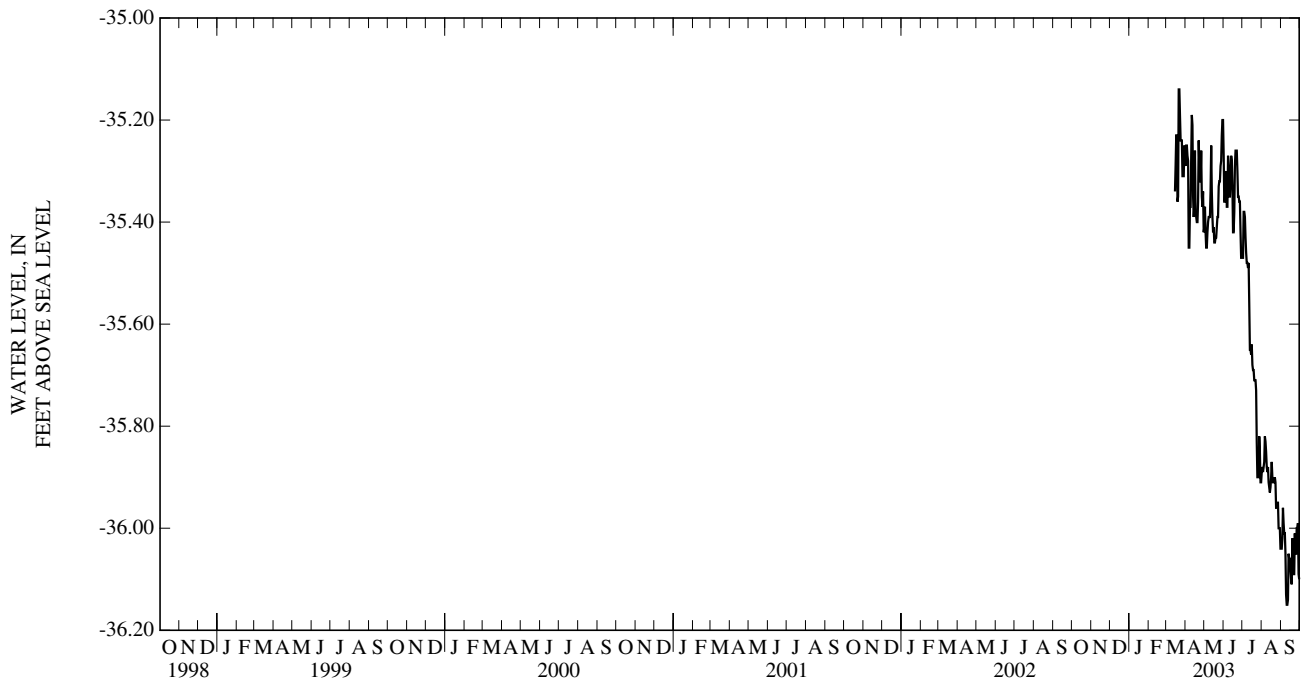
WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
APR 23, 2003	-35.27	JUN 24, 2003	-35.35	AUG 27, 2003	-35.94		
MAY 28	-35.23	JUL 23	-35.72	SEP 24	-36.05		
	LOWEST -36.05	SEP 24, 2003					
	HIGHEST -35.23	MAY 28, 2003					

DAY	MAX		MIN		MAX		MIN		MAX		MIN		MAX		MIN	
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH					
1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	-35.29	-35.34
16	---	---	---	---	---	---	---	---	---	---	---	---	---	---	-35.23	-35.29
17	---	---	---	---	---	---	---	---	---	---	---	---	---	---	-35.18	-35.23
18	---	---	---	---	---	---	---	---	---	---	---	---	---	---	-35.18	-35.23
19	---	---	---	---	---	---	---	---	---	---	---	---	---	---	-35.23	-35.36
20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	-35.14	-35.35
21	---	---	---	---	---	---	---	---	---	---	---	---	---	---	-35.12	-35.14
22	---	---	---	---	---	---	---	---	---	---	---	---	---	---	-35.12	-35.14
23	---	---	---	---	---	---	---	---	---	---	---	---	---	---	-35.14	-35.19
24	---	---	---	---	---	---	---	---	---	---	---	---	---	---	-35.19	-35.24
25	---	---	---	---	---	---	---	---	---	---	---	---	---	---	-35.24	-35.24
26	---	---	---	---	---	---	---	---	---	---	---	---	---	---	-35.19	-35.24
27	---	---	---	---	---	---	---	---	---	---	---	---	---	---	-35.24	-35.31
28	---	---	---	---	---	---	---	---	---	---	---	---	---	---	-35.31	-35.31
29	---	---	---	---	---	---	---	---	---	---	---	---	---	---	-35.25	-35.31
30	---	---	---	---	---	---	---	---	---	---	---	---	---	---	-35.23	-35.25
31	---	---	---	---	---	---	---	---	---	---	---	---	---	---	-35.23	-35.28
MONTH	---	---	---	---	---	---	---	---	---	---	---	---	---	---	-35.12	-35.36

CALVERT COUNTY--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	-35.24	-35.29	-35.37	-35.41	-35.12	-35.27	-35.47	-35.47	-35.88	-35.89	-36.04	-36.04
2	-35.24	-35.25	-35.32	-35.37	-35.27	-35.36	-35.38	-35.47	-35.88	-35.88	-36.01	-36.04
3	-35.25	-35.25	-35.33	-35.42	-35.31	-35.36	-35.36	-35.38	-35.88	-35.89	-35.96	-36.02
4	-35.24	-35.27	-35.42	-35.45	-35.29	-35.31	-35.36	-35.38	-35.87	-35.88	-35.90	-35.96
5	-35.24	-35.28	-35.42	-35.45	-35.30	-35.30	-35.38	-35.39	-35.81	-35.87	-35.90	-35.99
6	-35.28	-35.45	-35.40	-35.42	-35.30	-35.37	-35.39	-35.43	-35.81	-35.82	-35.99	-36.01
7	-35.37	-35.45	-35.36	-35.40	-35.25	-35.37	-35.43	-35.46	-35.82	-35.83	-36.01	-36.01
8	-35.36	-35.37	-35.36	-35.39	-35.25	-35.27	-35.45	-35.48	-35.82	-35.85	-36.01	-36.05
9	-35.27	-35.37	-35.35	-35.39	-35.26	-35.29	-35.45	-35.48	-35.85	-35.88	-36.05	-36.13
10	-35.19	-35.27	-35.34	-35.39	-35.29	-35.35	-35.45	-35.49	-35.86	-35.89	-36.13	-36.15
11	-35.13	-35.19	-35.20	-35.34	-35.32	-35.35	-35.42	-35.48	-35.87	-35.88	-36.14	-36.15
12	-35.09	-35.21	-35.20	-35.25	-35.26	-35.32	-35.48	-35.56	-35.88	-35.91	-36.04	-36.14
13	-35.21	-35.35	-35.25	-35.34	-35.26	-35.27	-35.56	-35.65	-35.91	-35.92	-36.03	-36.05
14	-35.34	-35.39	-35.34	-35.39	-35.26	-35.28	-35.63	-35.65	-35.92	-35.93	-36.05	-36.06
15	-35.26	-35.37	-35.39	-35.42	-35.28	-35.33	-35.64	-35.66	-35.90	-35.92	-36.04	-36.06
16	-35.23	-35.26	-35.39	-35.41	-35.33	-35.42	-35.61	-35.64	-35.86	-35.90	-36.05	-36.08
17	-35.23	-35.38	-35.41	-35.44	-35.38	-35.42	-35.63	-35.68	-35.85	-35.87	-36.08	-36.10
18	-35.38	-35.39	-35.43	-35.44	-35.29	-35.38	-35.68	-35.69	-35.87	-35.90	-35.82	-36.11
19	-35.39	-35.40	-35.43	-35.43	-35.26	-35.29	-35.69	-35.69	-35.90	-35.91	-35.82	-36.02
20	-35.36	-35.40	-35.41	-35.43	-35.26	-35.26	-35.69	-35.71	-35.90	-35.91	-36.02	-36.06
21	-35.24	-35.36	-35.39	-35.41	-35.26	-35.26	-35.70	-35.71	-35.90	-35.91	-36.06	-36.09
22	-35.22	-35.24	-35.39	-35.39	-35.26	-35.26	-35.70	-35.71	-35.89	-35.90	-36.01	-36.09
23	-35.24	-35.29	-35.33	-35.39	-35.26	-35.30	-35.70	-35.73	-35.89	-35.91	-35.95	-36.01
24	-35.29	-35.32	-35.32	-35.33	-35.30	-35.35	-35.73	-35.83	-35.91	-35.96	-35.99	-36.05
25	-35.26	-35.32	-35.32	-35.32	-35.35	-35.35	-35.83	-35.90	-35.94	-35.96	-36.00	-36.05
26	-35.20	-35.26	-35.23	-35.32	-35.35	-35.36	-35.89	-35.90	-35.94	-35.95	-36.00	-36.00
27	-35.24	-35.35	-35.25	-35.29	-35.35	-35.36	-35.82	-35.90	-35.94	-35.95	-35.99	-36.00
28	-35.34	-35.37	-35.23	-35.28	-35.36	-35.42	-35.81	-35.82	-35.95	-36.00	-35.93	-35.99
29	-35.33	-35.34	-35.19	-35.23	-35.42	-35.47	-35.81	-35.85	-35.99	-36.00	-35.97	-36.09
30	-35.34	-35.42	-35.19	-35.20	-35.46	-35.47	-35.85	-35.91	-35.99	-36.00	-36.09	-36.10
31	---	---	-35.12	-35.20	---	---	-35.89	-35.91	-36.00	-36.04	---	---
MONTH	-35.09	-35.45	-35.12	-35.45	-35.12	-35.47	-35.36	-35.91	-35.81	-36.04	-35.82	-36.15
YEAR	-35.09	-36.15										



CALVERT COUNTY--Continued

WELL NUMBER.--CA Dc 35. SITE ID.--383050076305501. PERMIT NUMBER.--CA-73-0718.

LOCATION.--Lat 38°30'50", long 76°30'55", Hydrologic Unit 02060004, 5.1 mi. southeast of Prince Frederick, at Scientist Cliff community. Owner: U.S. Geological Survey.

AQUIFER.--Magothy Formation of Upper Cretaceous age. Aquifer code: 211MGTY.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 760 ft; casing diameter 4 in., to 750 ft; screen diameter 2 in., from 750 to 760 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel from November 1991 to current year. Twice yearly water level measurements from April 1975 to September 1978, and April 1983 to September 1990. Equipped with water-level recorder from February 1976 to January 1980.

DATUM.--Elevation of land surface is 91.60 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.90 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

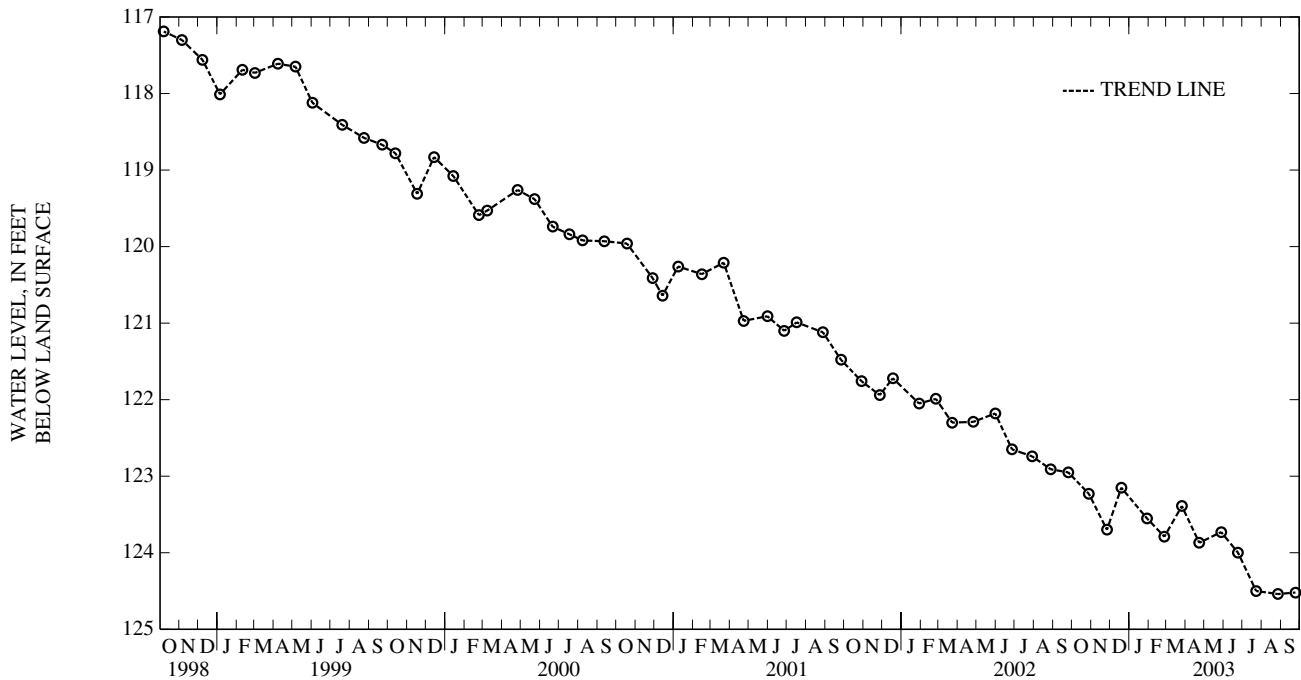
PERIOD OF RECORD.--October 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 82.30 ft below land surface, September 12, 1975. lowest measured, 124.54 ft below land surface, August 27, 2003.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 2002	123.23	JAN 29, 2003	123.55	APR 23, 2003	123.87	JUL 23, 2003	124.50
NOV 26	123.70	FEB 26	123.79	MAY 28	123.73	AUG 27	124.54
DEC 19	123.15	MAR 26	123.39	JUN 24	124.00	SEP 24	124.52

HIGHEST 123.15 DEC 19, 2002
 LOWEST 124.54 AUG 27, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CALVERT COUNTY--Continued

WELL NUMBER.--CA Ed 52. SITE ID.--382549076260101. PERMIT NUMBER.--CA-92-0081.

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 Upper Paleocene age. Aquifer code: 125AQUI.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 590 ft; casing diameter 4.5 in., to 460 ft; casing diameter 2 in., from 455 to 565 ft, and 580 to 590 ft; screen diameter 2 in., from 565 to 580 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--15-minute recorder interval from April 1995 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 shelter platform, 1.40 ft above land surface.

REMARKS.--Southern Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

PERIOD OF RECORD.--April 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 70.66 ft below sea level, May 21, 1995 (recorder); lowest measured, 112.47 ft below sea level, July 9, 2003 (recorder).

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

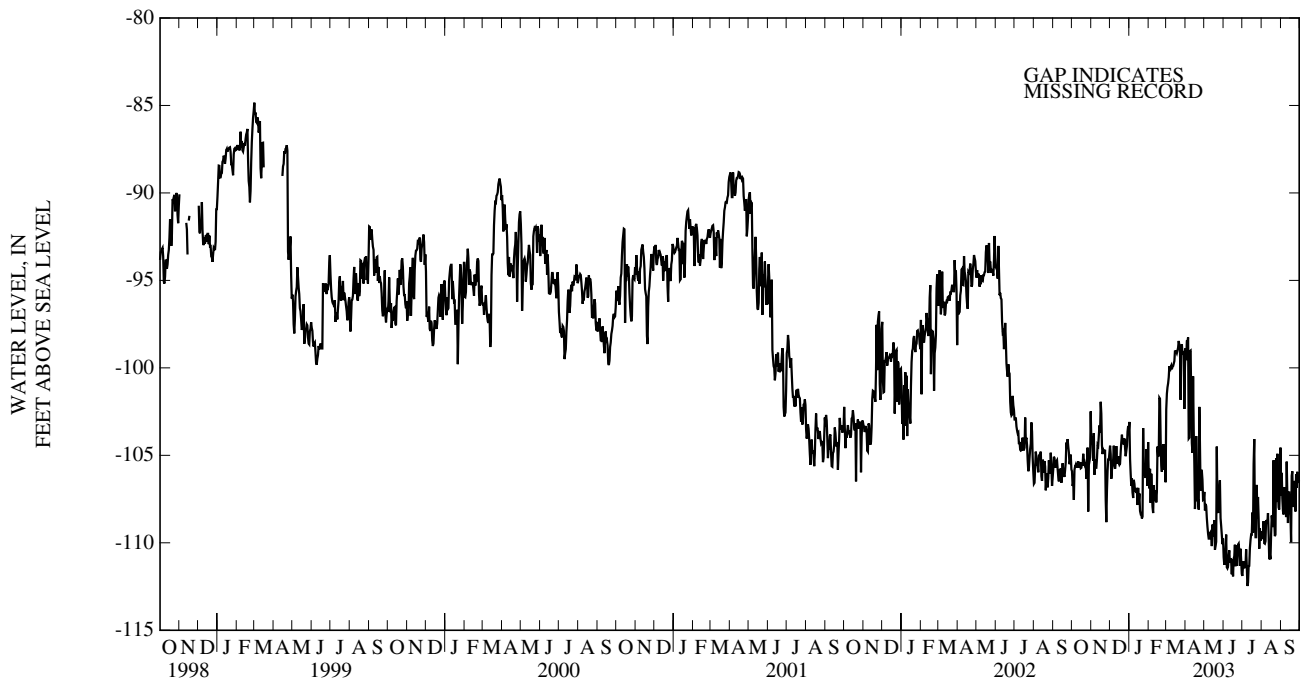
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	-99.21	MAR 31, 2003	-99.99	JUL 30, 2003	-105.55		
JAN 15, 2003	-106.84	MAY 19	-106.56				
LOWEST -106.84 JAN 15, 2003		HIGHEST -99.21 OCT 31, 2002					

DAY	MAX		MIN		MAX		MIN		MAX		MIN	
	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH						
1	-104.5	-105.9	-101.6	-104.3	-104.0	-104.5	-102.0	-103.1	-101.5	-106.3	-100.8	-102.4
2	-104.8	-106.8	-102.8	-103.9	-103.8	-104.9	-102.3	-105.2	-102.3	-106.9	-99.8	-101.5
3	-105.0	-106.6	-103.0	-104.4	-103.8	-106.3	-104.7	-106.0	-102.0	-105.8	-99.8	-101.1
4	-105.2	-107.5	-103.4	-105.3	-104.3	-105.8	-105.3	-106.8	-102.3	-107.7	-99.8	-100.9
5	-104.8	-105.8	-101.6	-103.7	-103.8	-105.6	-104.8	-106.3	-102.6	-106.0	-98.9	-100.5
6	-104.6	-105.6	-101.8	-106.1	-103.7	-105.2	-105.0	-107.1	-101.9	-107.1	-98.7	-99.9
7	-104.2	-105.5	-103.3	-105.2	-103.4	-104.5	-105.9	-107.4	-103.7	-108.0	-99.2	-100.2
8	-104.5	-105.7	-104.2	-105.7	-103.5	-105.3	-104.7	-106.4	-103.4	-108.3	-99.0	-100
9	-104.1	-105.5	-104.3	-105.7	-103.8	-105.8	-104.9	-106.6	-102.9	-106.7	-98.7	-99.9
10	-104.4	-105.5	-102.3	-105.2	-103.7	-105.5	-105.4	-107.1	-103.2	-107.6	-99.0	-100.1
11	-104.0	-105.3	-102.9	-104.4	-103.4	-104.5	-105.7	-107.0	-103.0	-107.5	-98.8	-99.9
12	-103.8	-105.7	-102.4	-104.5	-103.5	-105.3	-106.0	-107.2	-103.2	-107.0	-98.8	-99.9
13	-103.7	-105.4	-101.7	-103.9	-103.5	-105.5	-105.6	-106.9	-103.0	-107.7	-98.7	-99.8
14	-104.0	-105.5	-100.6	-103.3	-103.7	-105.0	-106.0	-107.8	-103.5	-107.1	-98.4	-99.6
15	-103.8	-105.7	-100.5	-103.7	-104.5	-105.4	-105.7	-106.9	-102.2	-104.5	-98.2	-99.0
16	-103.6	-105.7	-100.8	-101.9	-104.5	-105.5	-106.3	-107.6	-101.2	-105.1	-98.0	-99.1
17	-104.1	-105.4	-100.6	-102.6	-104.3	-105.5	-105.8	-107.2	-101.2	-105.0	-98.0	-99.1
18	-104.4	-105.6	-101.3	-104.4	-102.9	-104.8	-105.7	-108.2	-100.6	-101.7	-97.8	-99.2
19	-104.0	-104.9	-102.4	-104.9	-103.3	-104.2	-106.6	-108.3	-100.4	-101.8	-97.9	-99.0
20	-104.5	-105.4	-103.2	-104.7	-103.0	-103.8	-106.7	-108.3	-101.6	-104.1	-97.6	-98.8
21	-104.2	-105.4	-102.5	-104.8	-103.1	-104.3	-107.0	-108.6	-101.2	-105.6	-97.1	-98.5
22	-104.5	-105.5	-102.9	-104.8	-103.2	-104.1	-101.6	-108.5	-101.3	-105.9	-97.5	-98.7
23	-104.4	-105.5	-103.2	-104.7	-103.2	-104.4	-99.8	-103.4	-100.9	-105.1	-97.6	-98.9
24	-104.4	-106.3	-102.6	-107.5	-103.1	-104.0	-103.4	-105.8	-101.6	-104.4	-97.9	-101.8
25	-103.9	-105.4	-105.3	-108.8	-103.0	-104.6	-104.6	-105.5	-101.8	-105.8	-97.6	-99.0
26	-103.7	-104.6	-104.9	-107.0	-103.3	-105.0	-104.6	-106.2	-101.5	-105.3	-97.4	-98.6
27	-103.8	-108.2	-103.9	-105.9	-103.5	-104.8	-102.5	-106.3	-101.5	-104.4	-97.4	-99.2
28	-104.5	-105.5	-104.3	-105.2	-102.8	-104.5	-101.6	-104.7	-102.2	-106.5	-98.0	-99.0
29	-104.1	-105.3	-103.6	-105.3	-102.7	-103.6	-101.6	-105.2	---	---	-98.1	-99.3
30	-101.3	-105.1	-103.6	-104.8	-102.5	-103.3	-101.5	-106.8	---	---	-98.2	-102.3
31	-99.0	-102.5	---	---	-102.4	-103.6	-101.5	-104.2	---	---	-98.8	-100
MONTH	-99.0	-108.2	-100.5	-108.8	-102.4	-106.3	-99.8	-108.6	-100.4	-108.3	-97.1	-102.4

CALVERT COUNTY--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-97.1	-98.9	-102.0	-107.1	-109.0	-110.8	-107.9	-111.9	-106.0	-109.4	-102.8	-107.3
2	-97.9	-99.6	-104.0	-108.2	-107.4	-111.3	-107.3	-111.3	-105.5	-109.4	-103.2	-106.0
3	-96.8	-98.5	-103.9	-107.8	-106.2	-111.1	-106.6	-111.1	-105.1	-109.8	-102.9	-107.5
4	-96.9	-98.5	-104.2	-107.9	-105.7	-110.5	-108.2	-111.5	-105.0	-108.8	-102.5	-108.2
5	-97.1	-98.3	-103.8	-108.6	-104.9	-109.5	-106.9	-111.1	-105.6	-110.0	-104.7	-108.4
6	-97.3	-104.0	-104.5	-109.1	-109.5	-111.4	-106.9	-111.3	-104.8	-110.0	-104.0	-106.8
7	-98.2	-104.0	-104.7	-109.5	-106.9	-111.5	-106.5	-110.4	-105.6	-109.9	-104.8	-108.2
8	-98.1	-99.0	-105.5	-109.8	-106.6	-111.3	-108.0	-111.3	-105.0	-108.7	-103.8	-107.1
9	-97.8	-99.0	-105.4	-109.8	-106.1	-110.8	-108.0	-112.5	-104.9	-108.8	-102.2	-108.5
10	-98.0	-101.6	-104.6	-109.5	-106.1	-110.4	-107.5	-112.3	-104.8	-108.8	-101.9	-105.4
11	-101.1	-104.3	-104.9	-109.4	-106.2	-111.1	-107.3	-111.3	-105.2	-108.3	-101.8	-107.3
12	-100.4	-104.8	-104.8	-109.3	-107.1	-110.9	-107.8	-111.3	-105.7	-109.5	-104.2	-108.9
13	-99.4	-100.5	-105.2	-110.2	-106.5	-111.1	-106.4	-110.3	-106.4	-110.9	-103.2	-107.1
14	-99.4	-103.5	-105.4	-109.0	-110.2	-111.8	-106.1	-109.8	-105.6	-110.7	-103.2	-107.1
15	-100.8	-105.5	-104.5	-109.6	-107.5	-111.0	-106.2	-109.5	-105.9	-110.9	-104.3	-108.2
16	-105.2	-108.1	-105.4	-109.1	-107.6	-111.9	-105.5	-109.5	-106.0	-109.5	-104.0	-108.4
17	-103.2	-107.2	-106.2	-108.7	-106.8	-110.9	-104.7	-108.3	-104.6	-108.4	-106.0	-110.0
18	-101.3	-103.9	-104.8	-110.4	-104.4	-110.8	-104.8	-109.4	-105.1	-108.8	-102.6	-106.2
19	-102.4	-105.9	-106.2	-110.2	-104.5	-110.1	-103.6	-105.5	-104.8	-109.1	-103.3	-105.9
20	-104.7	-107.6	-101.7	-109.9	-107.2	-111.3	-102.9	-104.1	-103.8	-105.3	-103.3	-107.7
21	-103.9	-107.6	-100.3	-104.5	-106.8	-110.1	-102.6	-108.5	-103.5	-108.7	-103.7	-108.0
22	-102.2	-108.1	-104.5	-107.9	-105.9	-111.3	-104.8	-109.7	-105.2	-109.6	-104.0	-107.8
23	-101.1	-102.2	-104.3	-108.3	-105.6	-110.5	-102.3	-109.7	-104.6	-109.5	-103.2	-106.5
24	-100.8	-104.3	-103.3	-107.2	-105.9	-110.1	-100.8	-106.7	-103.4	-105.2	-103.1	-108.2
25	-102.8	-107.0	-103.3	-106.9	-106.3	-110.0	-103.9	-108.6	-103.2	-107.7	-103.5	-106.1
26	-102.0	-105.9	-102.7	-106.4	-106.0	-110.5	-103.7	-107.4	-103.5	-104.9	-102.8	-106.9
27	-101.1	-105.9	-104.7	-108.6	-107.8	-111.3	-104.8	-108.6	-103.0	-107.0	-102.7	-105.9
28	-103.3	-106.4	-105.8	-109.0	-107.0	-110.3	-105.4	-110.3	-104.7	-108.0	-103.2	-106.6
29	-103.6	-107.5	-105.4	-109.5	-107.1	-111.0	-105.4	-109.2	-104.3	-108.1	-102.7	-106.5
30	-102.6	-107.5	-106.0	-110.1	-107.3	-111.8	-105.2	-109.9	-103.7	-106.9	-103.1	-106.4
31	---	---	-105.9	-109.8	---	---	-105.1	-109.6	-103.0	-104.6	---	---
MONTH	-96.8	-108.1	-100.3	-110.4	-104.4	-111.9	-100.8	-112.5	-103.0	-110.9	-101.8	-110.0
YEAR	-96.8	-112.5										

Daily Low Water Levels



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CALVERT COUNTY--Continued

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 State Park and Museum. Owner: U.S. Geological Survey.

AQUIFER.--Choptank-St. Mary's undivided, 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 water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from October 1986 to April 1996.

DATUM.--Elevation of land surface is 47.44 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.00 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well, and Maryland Water Quality Network observation well. Water levels respond to natural climatic affects.

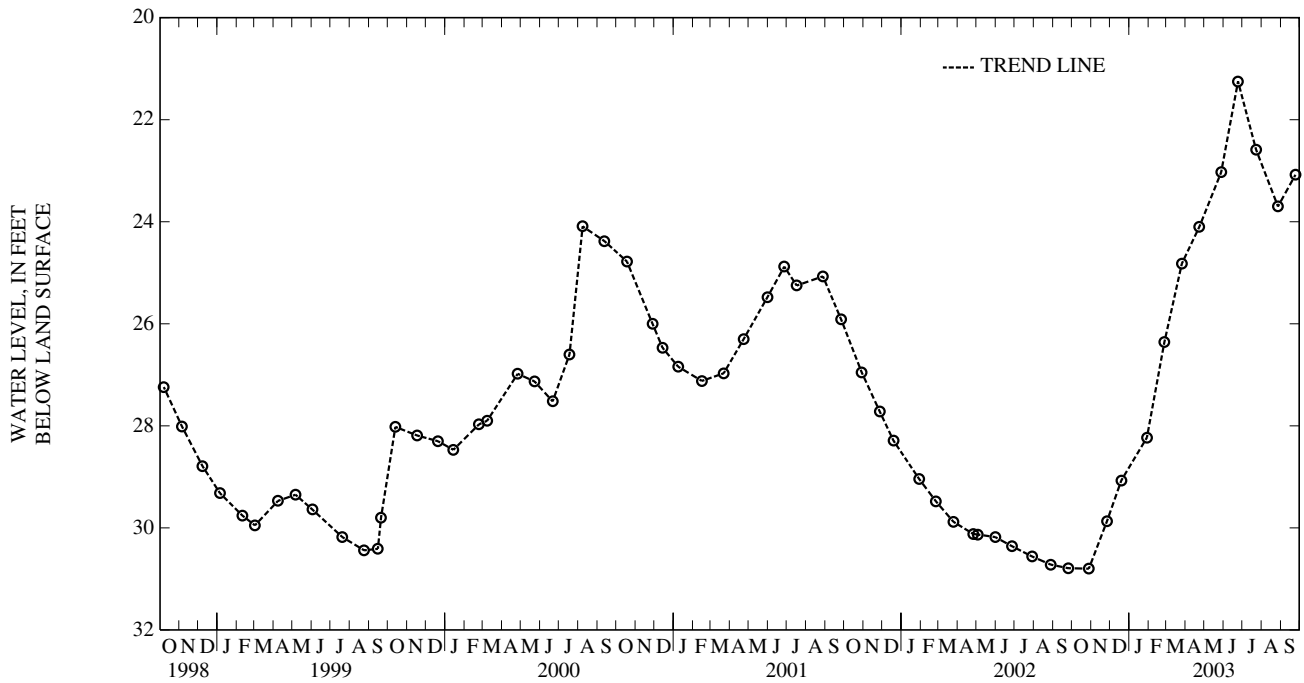
PERIOD OF RECORD.--October 1986 to November 1995, September 1996 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.25 ft below land surface, June 24, 2003; lowest measured, 30.80 ft below land surface, October 28, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 2002	30.80	JAN 29, 2003	28.23	APR 23, 2003	24.10	JUL 23, 2003	22.59
NOV 26	29.87	FEB 26	26.36	MAY 28	23.03	AUG 27	23.70
DEC 19	29.07	MAR 26	24.82	JUN 24	21.25	SEP 24	23.08

HIGHEST 21.25 JUN 24, 2003
 LOWEST 30.80 OCT 28, 2002



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

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 water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 129.40 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of protective casing, 3.63 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

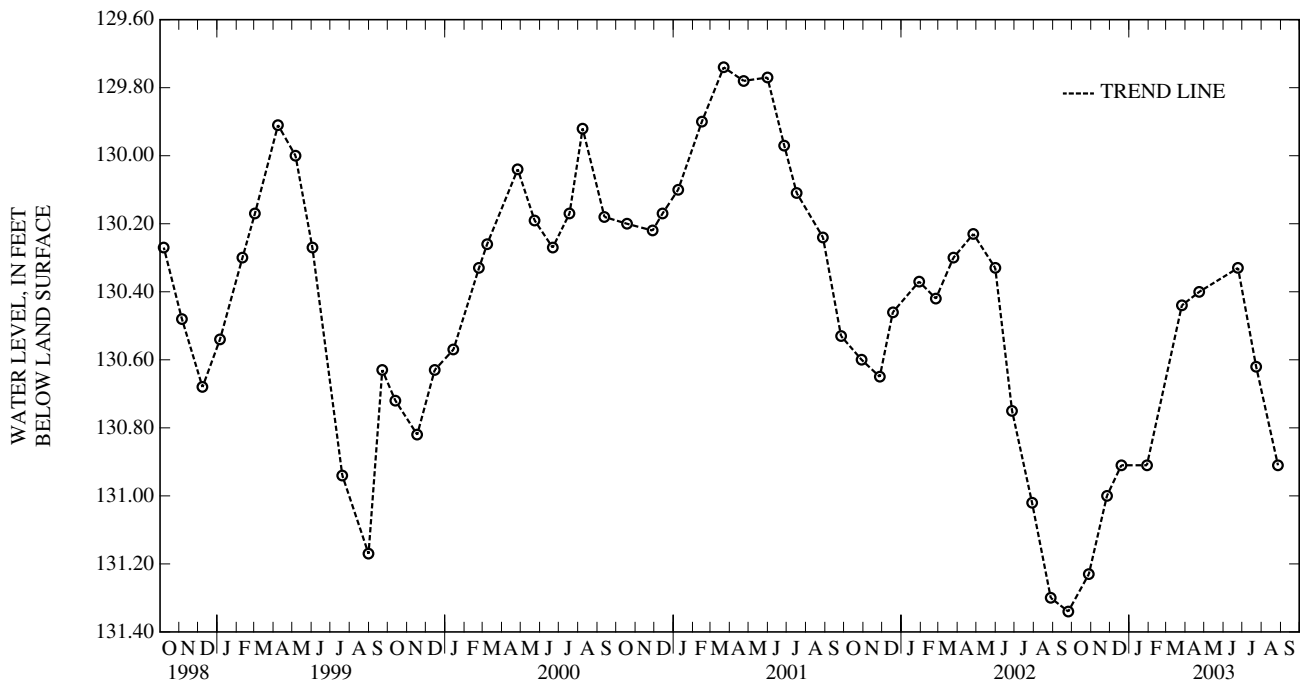
PERIOD OF RECORD.--February 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 116.36 ft below land surface, January 8, 1980; lowest measured, 131.34 ft below land surface, September 25, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 2002	131.23	JAN 29, 2003	130.91	JUN 24, 2003	130.33		
NOV 26	131.00	MAR 26	130.44	JUL 23	130.62		
DEC 19	130.91	APR 23	130.40	AUG 27	130.91		

HIGHEST 130.33 JUN 24, 2003
 LOWEST 131.23 OCT 28, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CALVERT COUNTY--Continued

WELL NUMBER.--CA Fd 54. SITE ID.--382407076260301. PERMIT NUMBER.--CA-73-2892.

LOCATION.--Lat 38°24'07", long 76°26'03", Hydrologic Unit 02060004, at Calvert Cliffs State Park. Owner: U.S. Geological Survey.

AQUIFER.--Aquia Formation of Upper 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 3 in., from 641 to 651 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 129.4 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.92 ft above land surface.

REMARKS.--Calvert County Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

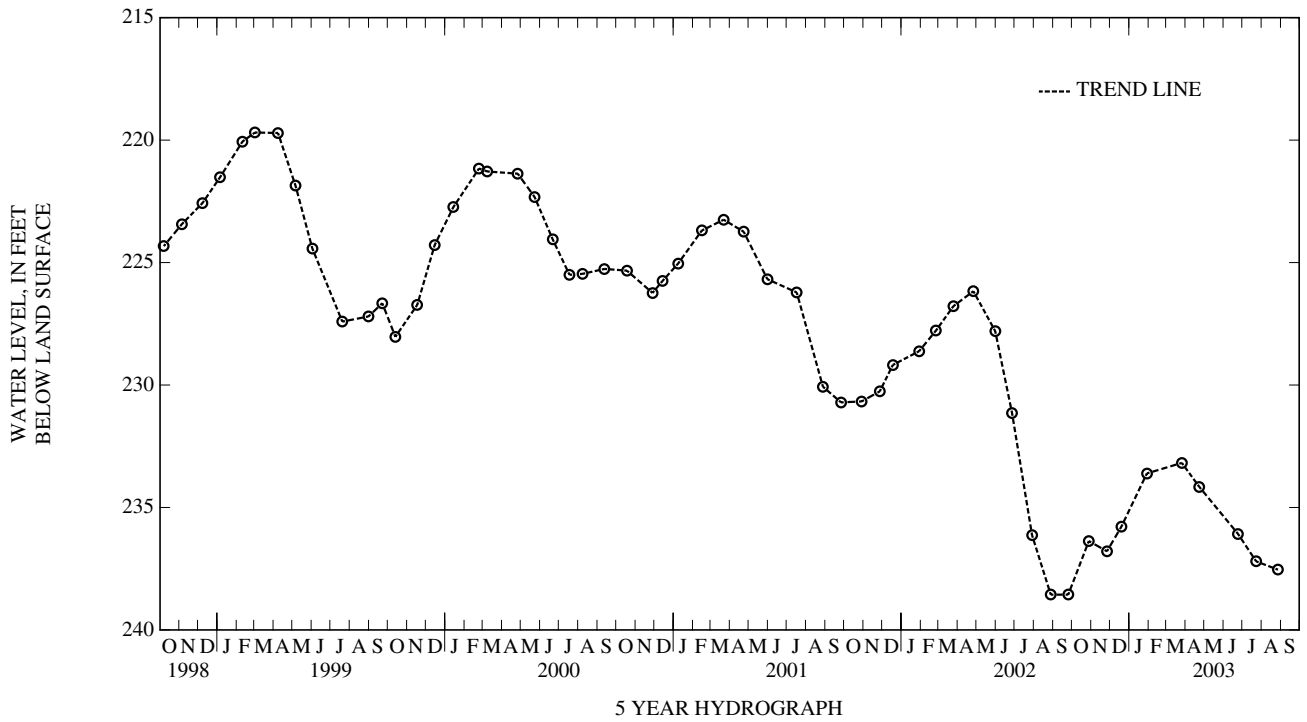
PERIOD OF RECORD.--October 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 142.69 ft below land surface, April 21, 1980; lowest measured, 238.56 ft below land surface, August 28 and September 25, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 2002	236.37	JAN 29, 2003	233.61	JUN 24, 2003	236.08		
NOV 26	236.79	MAR 26	233.18	JUL 23	237.20		
DEC 19	235.79	APR 23	234.16	AUG 27	237.54		

HIGHEST 233.18 MAR 26, 2003
 LOWEST 237.54 AUG 27, 2003



CALVERT COUNTY--Continued

WELL NUMBER.--CA Fd 85. SITE ID.--382236076255401. PERMIT NUMBER.--CA-94-3305.

LOCATION.--Lat 38°22'36", long 76°25'54", Hydrologic Unit 02060004, at Chesapeake Ranch Water Company facility. Owner: Maryland Geological Survey.

AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.

WELL CHARACTERISTICS.--Drilled, artesian well, depth 1,643 ft; casing diameter 12 in., to 54 ft, casing diameter 4 in., from +2.0 to 1,535 ft, 1,545 to 1,560 ft, 1,570 to 1,623 ft, and 1,633 to 1,643 ft; screen diameter 4 in., from 1,535 to 1,545 ft, 1,560 to 1,570 ft, and 1,623 to 1,633 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S.Geological Survey personnel. Equipped with digital water-level recorder--60-minute recording interval, January 2002 to current year.

DATUM.--Elevation of land surface is 105.98 ft above North American Vertical Datum of 1988. Measuring point: Top of casing, 2.00 ft above land surface.

REMARKS.--Southern Maryland Patapsco Aquifer Well Drilling Project observation well. Water levels are affected by regional ground-water withdrawal.

PERIOD OF RECORD.--November 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.34 ft below sea level, February 1, 2002 (recorder); lowest measured, 16.58 ft below sea level, August 24, 31, 2003 (recorder).

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 2002	-15.30	JAN 29, 2003	-15.97	APR 23, 2003	-15.72	JUL 24, 2003	-16.30
NOV 26	-15.77	FEB 26	-15.95	MAY 28	-15.67	AUG 28	-16.53
DEC 19	-15.64	MAR 26	-15.53	JUN 24	-16.01	SEP 25	-16.21

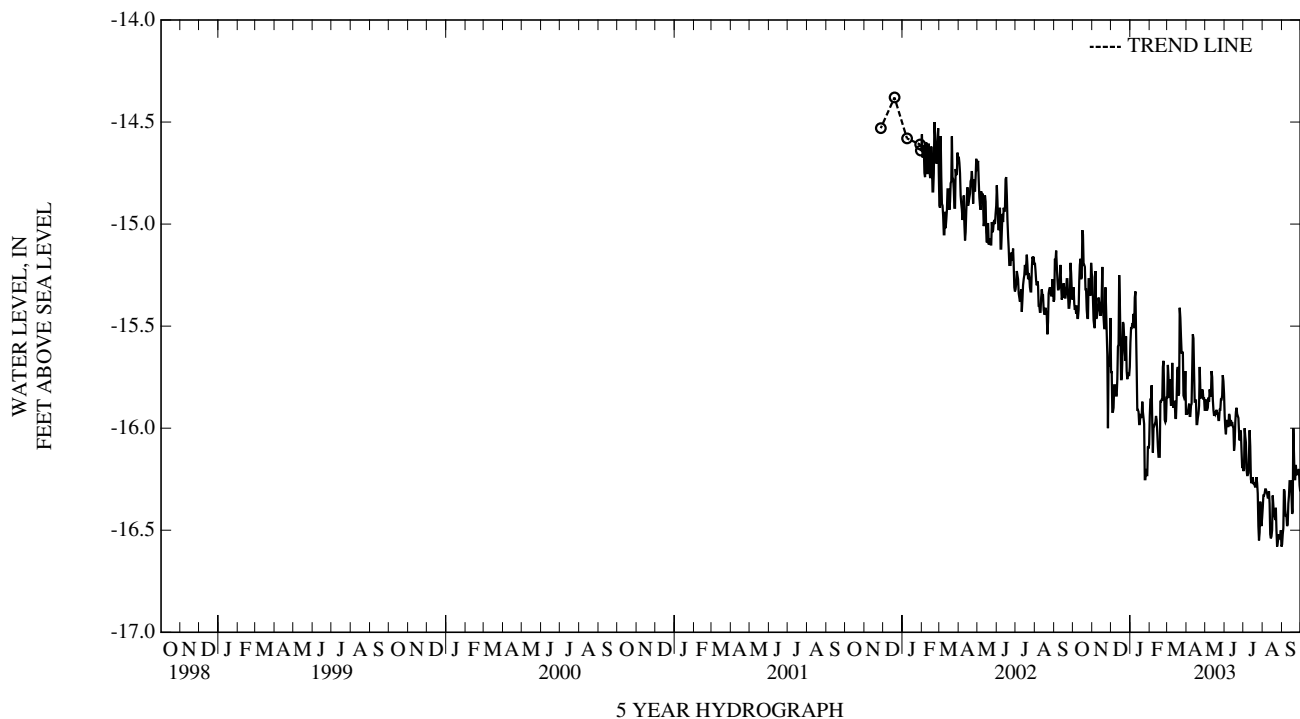
LOWEST -16.53 AUG 28, 2003
 HIGHEST -15.30 OCT 28, 2002

DAY	MAX		MIN		MAX		MIN		MAX		MIN	
	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH						
1	-15.30	-15.36	-15.24	-15.26	-15.46	-15.73	-15.29	-15.58	-15.81	-15.94	-15.69	-15.85
2	-15.30	-15.31	-15.26	-15.37	-15.60	-15.72	-15.35	-15.51	-15.76	-15.86	-15.41	-15.69
3	-15.31	-15.39	-15.37	-15.47	-15.62	-15.92	-15.29	-15.51	-15.78	-15.86	-15.50	-15.75
4	-15.35	-15.42	-15.42	-15.50	-15.90	-15.92	-15.31	-15.49	-15.60	-15.79	-15.75	-15.85
5	-15.28	-15.40	-15.23	-15.51	-15.60	-15.90	-15.43	-15.49	-15.79	-15.98	-15.59	-15.76
6	-15.38	-15.44	-15.11	-15.23	-15.71	-15.79	-15.36	-15.44	-15.98	-16.12	-15.56	-15.84
7	-15.29	-15.40	-15.23	-15.46	-15.65	-15.79	-15.36	-15.51	-15.93	-16.00	-15.84	-15.89
8	-15.36	-15.46	-15.39	-15.46	-15.61	-15.79	-15.26	-15.36	-15.94	-15.99	-15.67	-15.87
9	-15.42	-15.46	-15.38	-15.44	-15.79	-15.84	-15.23	-15.33	-15.97	-15.98	-15.60	-15.68
10	-15.28	-15.42	-15.33	-15.41	-15.76	-15.84	-15.33	-15.52	-15.87	-15.97	-15.68	-15.87
11	-15.20	-15.28	-15.28	-15.36	-15.48	-15.76	-15.52	-15.70	-15.89	-15.94	-15.87	-15.90
12	-15.16	-15.20	-15.29	-15.39	-15.50	-15.60	-15.70	-15.91	-15.89	-15.96	-15.84	-15.87
13	-15.17	-15.17	-15.33	-15.42	-15.20	-15.59	-15.76	-15.91	-15.96	-16.02	-15.84	-15.87
14	-15.17	-15.27	-15.41	-15.45	-15.15	-15.25	-15.87	-15.92	-16.02	-16.09	-15.87	-15.95
15	-15.03	-15.26	-15.34	-15.41	-15.25	-15.37	-15.92	-15.98	-16.04	-16.14	-15.86	-15.95
16	-14.81	-15.03	-15.21	-15.35	-15.31	-15.56	-15.91	-15.98	-16.14	-16.14	-15.72	-15.86
17	-14.90	-15.05	-15.12	-15.21	-15.56	-15.76	-15.86	-15.93	-15.73	-16.14	-15.62	-15.72
18	-15.05	-15.20	-15.17	-15.42	-15.67	-15.76	-15.93	-15.95	-15.75	-15.87	-15.60	-15.70
19	-15.10	-15.20	-15.40	-15.46	-15.48	-15.67	-15.87	-15.94	-15.77	-15.87	-15.70	-15.84
20	-15.10	-15.21	-15.46	-15.51	-15.28	-15.48	-15.69	-15.87	-15.78	-15.86	-15.41	-15.83
21	-15.21	-15.32	-15.31	-15.51	-15.38	-15.49	-15.86	-15.92	-15.70	-15.86	-15.29	-15.41
22	-15.31	-15.32	-15.18	-15.31	-15.45	-15.56	-15.92	-15.95	-15.37	-15.70	-15.30	-15.46
23	-15.31	-15.42	-15.22	-15.41	-15.56	-15.63	-15.94	-15.98	-15.26	-15.67	-15.46	-15.55
24	-15.42	-15.46	-15.41	-15.53	-15.55	-15.67	-15.98	-16.25	-15.67	-15.81	-15.55	-15.63
25	-15.27	-15.46	-15.53	-15.64	-15.23	-15.55	-16.20	-16.25	-15.81	-15.96	-15.62	-15.63
26	-15.18	-15.27	-15.64	-16.00	-15.41	-15.72	-15.99	-16.20	-15.96	-15.97	-15.54	-15.63
27	-15.25	-15.27	-15.59	-15.67	-15.72	-15.76	-16.01	-16.23	-15.82	-15.96	-15.63	-15.84
28	-15.26	-15.27	-15.62	-15.70	-15.65	-15.73	-16.09	-16.23	-15.72	-15.85	-15.84	-15.85
29	-15.19	-15.35	-15.34	-15.62	-15.62	-15.74	-15.97	-16.09	---	---	-15.66	-15.84
30	-15.16	-15.19	-15.25	-15.46	-15.70	-15.74	-16.05	-16.10	---	---	-15.65	-15.72
31	-15.16	-15.24	---	---	-15.57	-15.70	-15.94	-16.08	---	---	-15.72	-15.93
MONTH	-14.81	-15.46	-15.11	-16.00	-15.15	-15.92	-15.23	-16.25	-15.26	-16.14	-15.29	-15.95

CALVERT COUNTY--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-15.88	-15.93	-15.86	-15.91	-15.63	-15.94	-16.15	-16.21	-16.32	-16.39	-16.49	-16.57
2	-15.89	-15.93	-15.82	-15.86	-15.94	-16.00	-16.00	-16.20	-16.32	-16.33	-16.47	-16.52
3	-15.90	-15.92	-15.83	-15.91	-15.97	-16.03	-15.96	-16.00	-16.32	-16.33	-16.30	-16.49
4	-15.88	-15.90	-15.90	-15.91	-15.94	-15.97	-15.96	-16.04	-16.30	-16.32	-16.25	-16.30
5	-15.75	-15.88	-15.85	-15.90	-15.94	-15.96	-16.04	-16.07	-16.29	-16.30	-16.25	-16.31
6	-15.85	-15.94	-15.82	-15.85	-15.96	-15.99	-16.06	-16.20	-16.29	-16.30	-16.31	-16.40
7	-15.88	-15.94	-15.69	-15.87	-15.91	-15.99	-16.19	-16.23	-16.29	-16.31	-16.32	-16.43
8	-15.88	-15.89	-15.69	-15.81	-15.91	-15.93	-16.19	-16.23	-16.29	-16.32	-16.32	-16.43
9	-15.71	-15.88	-15.81	-15.84	-15.92	-15.94	-16.05	-16.22	-16.32	-16.34	-16.36	-16.48
10	-15.54	-15.71	-15.72	-15.84	-15.94	-15.99	-16.01	-16.12	-16.30	-16.34	-16.37	-16.47
11	-15.36	-15.54	-15.60	-15.72	-15.93	-15.96	-15.99	-16.01	-16.30	-16.31	-16.31	-16.37
12	-15.36	-15.56	-15.60	-15.75	-15.94	-15.98	-16.01	-16.09	-16.31	-16.37	-16.25	-16.33
13	-15.56	-15.73	-15.74	-15.86	-15.95	-15.97	-16.09	-16.25	-16.37	-16.52	-16.23	-16.26
14	-15.73	-15.87	-15.86	-15.91	-15.95	-15.99	-16.24	-16.27	-16.52	-16.54	-16.25	-16.26
15	-15.82	-15.87	-15.91	-15.94	-15.96	-16.00	-16.24	-16.26	-16.50	-16.53	-16.23	-16.26
16	-15.79	-15.86	-15.88	-15.92	-15.99	-16.11	-16.19	-16.24	-16.32	-16.50	-16.25	-16.32
17	-15.86	-15.98	-15.91	-15.93	-15.97	-16.08	-16.23	-16.27	-16.32	-16.33	-16.32	-16.42
18	-15.95	-15.98	-15.89	-15.92	-15.92	-15.97	-16.26	-16.27	-16.33	-16.38	-15.98	-16.41
19	-15.93	-15.95	-15.89	-15.91	-15.90	-15.92	-16.27	-16.28	-16.38	-16.43	-15.97	-16.00
20	-15.89	-15.93	-15.91	-15.93	-15.90	-15.90	-16.27	-16.29	-16.43	-16.43	-15.97	-16.12
21	-15.70	-15.89	-15.92	-15.93	-15.90	-15.93	-16.21	-16.27	-16.39	-16.45	-16.12	-16.25
22	-15.66	-15.70	-15.92	-15.96	-15.92	-15.94	-16.20	-16.24	-16.35	-16.39	-16.18	-16.25
23	-15.68	-15.81	-15.91	-15.96	-15.93	-15.95	-16.20	-16.27	-16.35	-16.50	-16.02	-16.18
24	-15.81	-15.85	-15.89	-15.91	-15.95	-16.02	-16.24	-16.32	-16.50	-16.58	-16.07	-16.22
25	-15.81	-15.85	-15.86	-15.91	-15.99	-16.06	-16.32	-16.48	-16.48	-16.56	-16.17	-16.23
26	-15.66	-15.81	-15.68	-15.86	-15.97	-16.01	-16.48	-16.55	-16.48	-16.54	-16.18	-16.21
27	-15.67	-15.82	-15.83	-15.86	-15.95	-16.02	-16.35	-16.51	-16.42	-16.52	-16.11	-16.21
28	-15.82	-15.86	-15.67	-15.84	-16.00	-16.11	-16.34	-16.36	-16.51	-16.54	-16.07	-16.20
29	-15.82	-15.85	-15.73	-15.74	-16.11	-16.19	-16.35	-16.45	-16.49	-16.54	-16.20	-16.28
30	-15.85	-15.91	-15.73	-15.77	-16.14	-16.19	-16.44	-16.48	-16.45	-16.50	-16.28	-16.31
31	---	---	-15.64	-15.83	---	---	-16.39	-16.44	-16.50	-16.58	---	---
MONTH	-15.36	-15.98	-15.60	-15.96	-15.63	-16.19	-15.96	-16.55	-16.29	-16.58	-15.97	-16.57
YEAR	-14.81	-16.58										

Daily Low Water Levels



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

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 Williams 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 water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 113.90 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.82 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

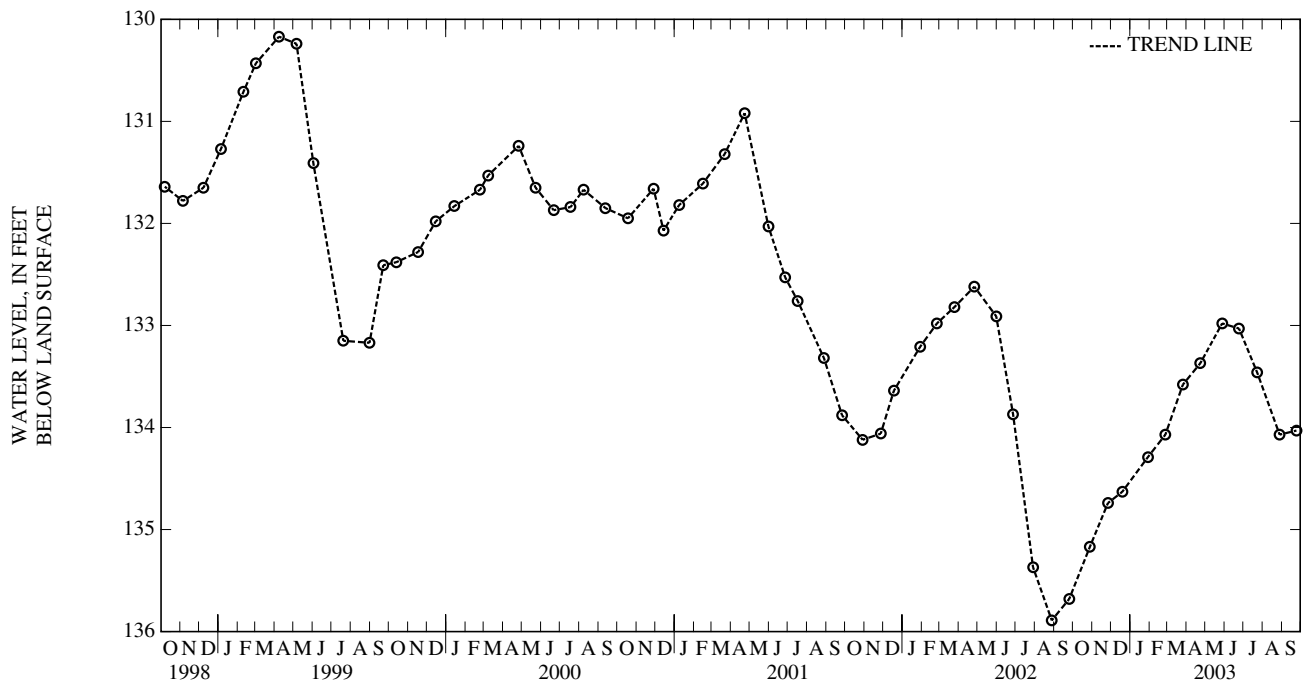
PERIOD OF RECORD.--June 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 111.50 ft below land surface, October 5, 1976; lowest measured, 135.89 ft below land surface, August 28, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 2002	135.17	JAN 29, 2003	134.29	APR 23, 2003	133.37	JUL 23, 2003	133.46
NOV 26	134.74	FEB 26	134.07	MAY 28	132.98	AUG 28	134.07
DEC 19	134.63	MAR 26	133.58	JUN 24	133.03	SEP 24	134.03

HIGHEST 132.98 MAY 28, 2003
 LOWEST 135.17 OCT 28, 2002



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CALVERT COUNTY--Continued

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 Upper Paleocene age. Aquifer code: 125AQUI.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 493 ft; casing diameter 8 in., to 272 ft; casing diameter 6 in., from 272 to 472 ft; screened from 472 to 493 ft.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by U.S. Geological Survey personnel. Equipped with a graphic water-level recorder from October 1949 to February 1960.

DATUM.--Elevation of land surface is 12.73 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of sanitary seal, 1.59 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water level reported at land surface 1942, and the water level measured 58.90 ft below land surface on January 13, 1944. The well was not measured from April through July 1988 during building construction at well site. On July 18, 1991 the water-level measured 119.93 ft below land surface due to an extended period of pumping. Water levels are affected by local and regional ground-water withdrawal.

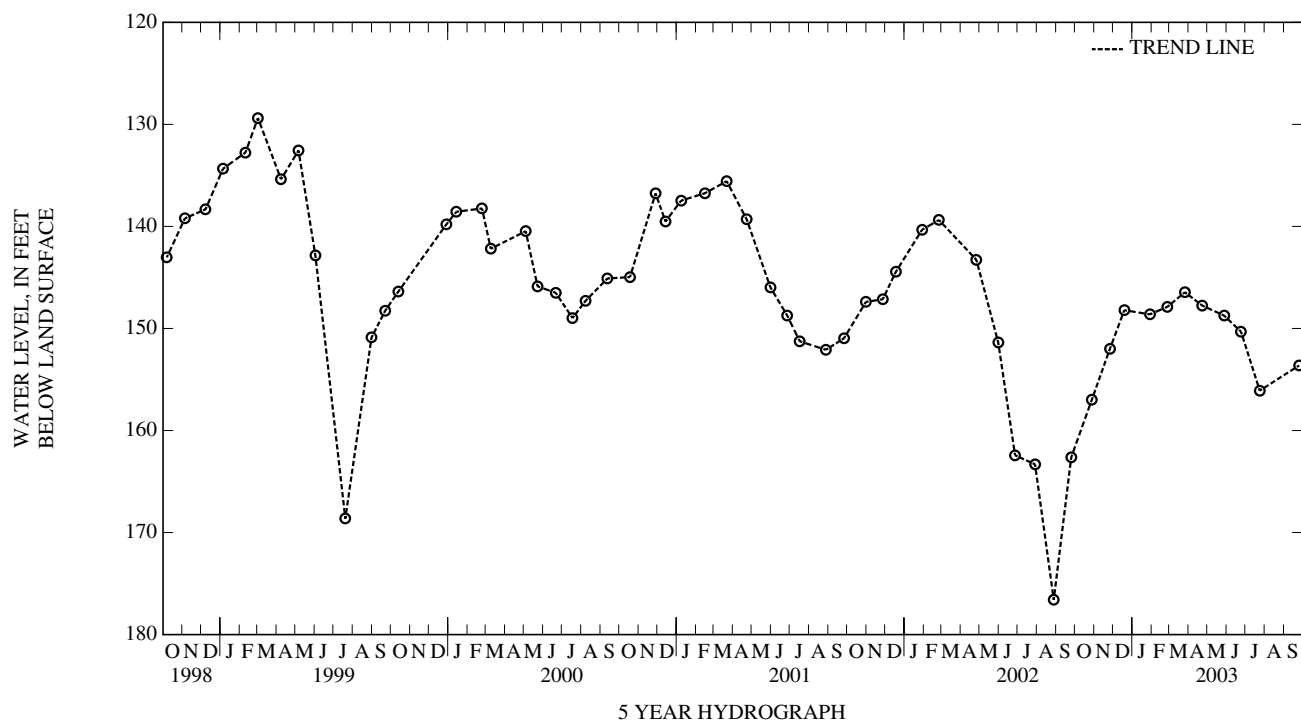
PERIOD OF RECORD.-- October 1949 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.15 ft below land surface, May 18, 1950; lowest measured, 176.59 ft below land surface, August 28, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 2002	156.98	JAN 29, 2003	148.62	APR 23, 2003	147.76	JUL 24, 2003	156.09
NOV 26	151.98	FEB 26	147.88	MAY 28	148.74	SEP 25	153.63
DEC 19	148.21	MAR 26	146.45	JUN 24	150.32		

HIGHEST 146.45 MAR 26, 2003
LOWEST 156.98 OCT 28, 2002



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

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.--Pensauken Formation (fluvial facies) of Upper Miocene age. Aquifer code: 122PNSK.

WELL CHARACTERISTICS.--Driven, observation, water-table well, depth 20.5 ft; well point diameter 1.25 in., to 20.5 ft.

INSTRUMENTATION--Monthly water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 54 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 0.10 ft below land surface.

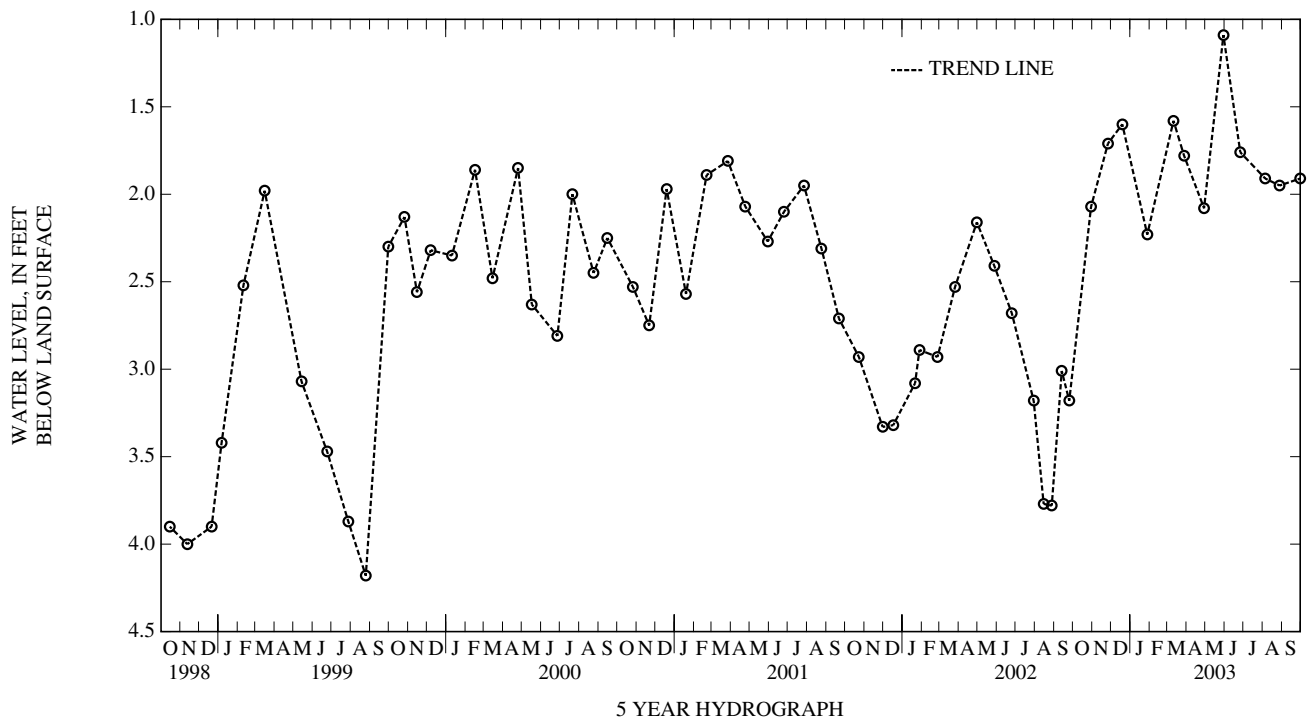
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.25 ft above land surface, November 27, 1951; lowest measured, 4.37 ft below land surface, October 11, 1957.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	2.07	JAN 28, 2003	2.23	APR 29, 2003	2.08	AUG 05, 2003	1.91
NOV 26	1.71	MAR 11	1.58	MAY 30	1.09	28	1.95
DEC 19	1.60	28	1.78	JUN 26	1.76	SEP 30	1.91
HIGHEST	1.09	MAY 30, 2003					
LOWEST	2.23	JAN 28, 2003					



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CAROLINE COUNTY--Continued

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 water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 60 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.45 ft above land surface.

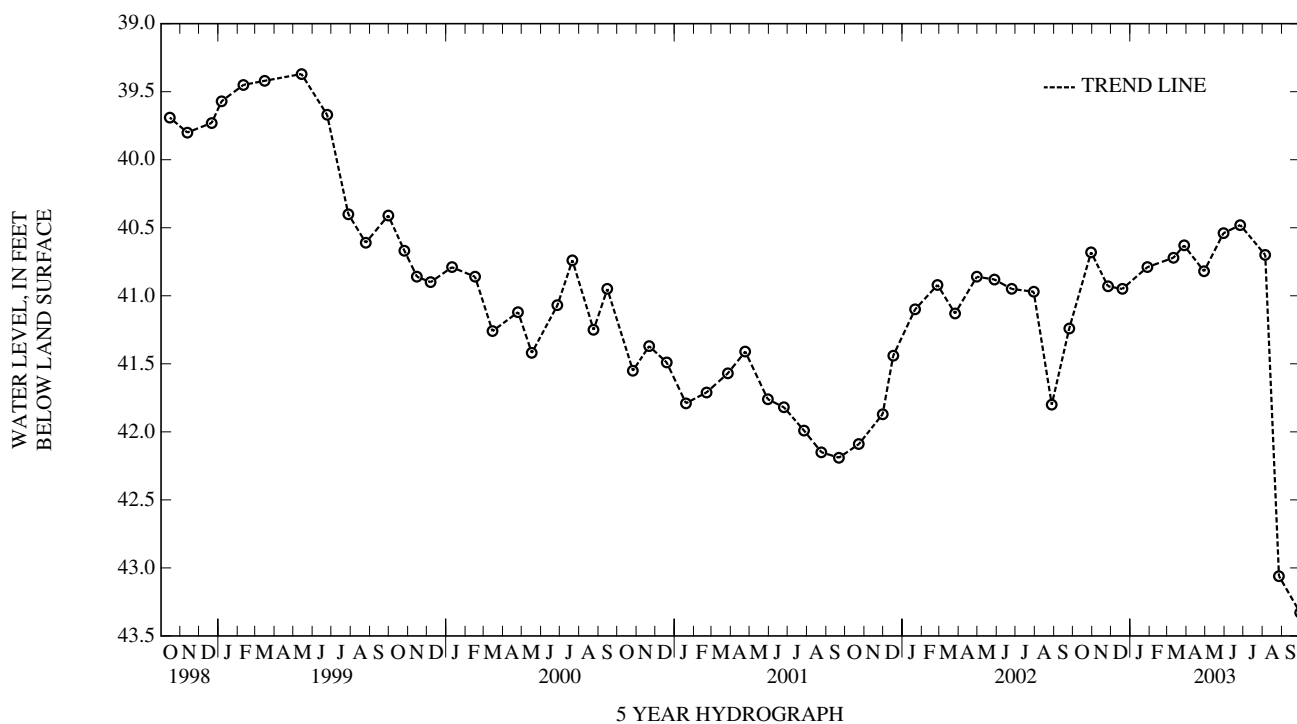
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 28.64 ft below land surface, December 10, 1976; lowest measured, 43.33 ft below land surface, September 30, 2003.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	40.68	JAN 28, 2003	40.79	APR 29, 2003	40.82	AUG 05, 2003	40.70
NOV 26	40.93	MAR 11	40.72	MAY 30	40.54	27	43.06
DEC 19	40.95	28	40.63	JUN 26	40.48	SEP 30	43.33
HIGHEST 40.48 JUN 26, 2003							
LOWEST 43.33 SEP 30, 2003							



CARROLL COUNTY

WELL NUMBER.--CL Ad 47. SITE ID.--394008077005601. PERMIT NUMBER.--CL-73-3178.

LOCATION.--Lat 39°40'08", long 77°00'56", Hydrologic Unit 02070009, at Union Mills Homestead Park. Owner: U.S. Geological Survey.

AQUIFER.--Marburg Formation of Paleozoic age. Aquifer code: 300MRBG.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 310 ft; casing diameter 6 in., to 35 ft.; open hole.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 540 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.97 ft above land surface.

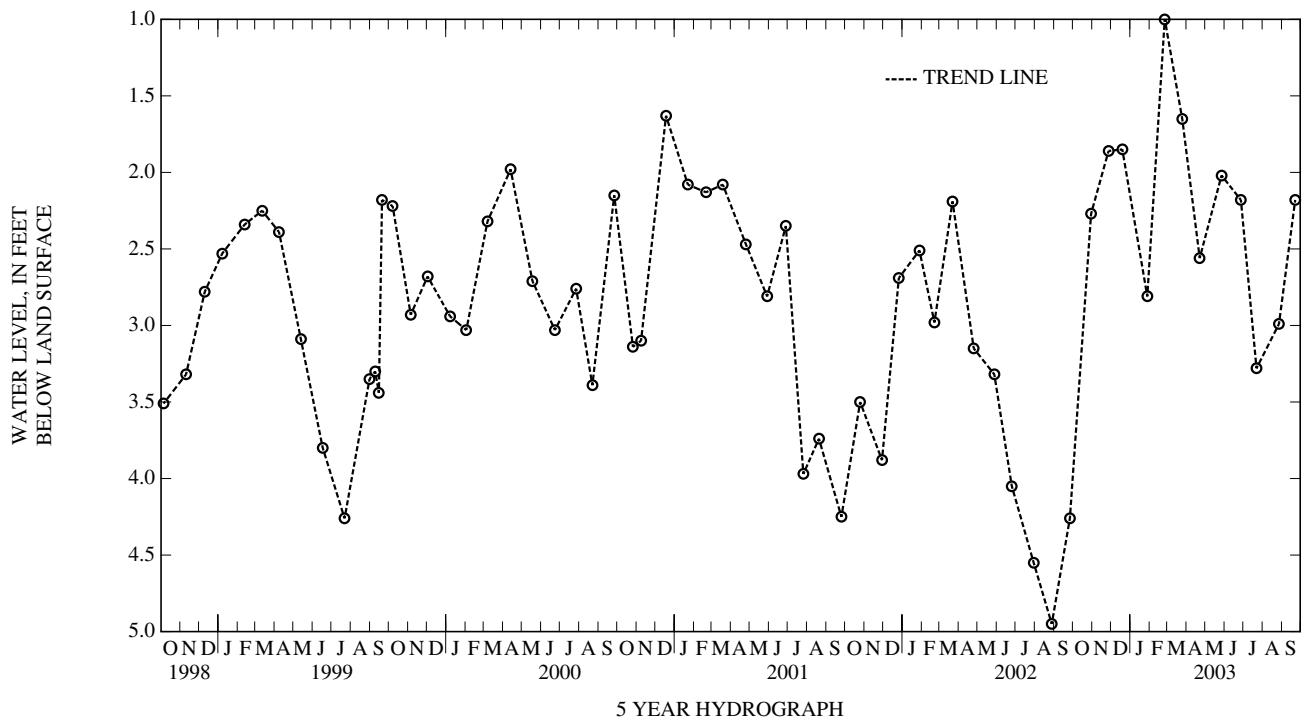
REMARKS.--Collection of Basic Records (CBR) observation well.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.00 ft below land surface, February 25, 2003; lowest measured, 4.95 ft below land surface, August 28, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	2.27	JAN 28, 2003	2.81	APR 22, 2003	2.56	JUL 22, 2003	3.28
NOV 27	1.86	FEB 25	1.00	MAY 27	2.02	AUG 27	2.99
DEC 19	1.85	MAR 25	1.65	JUN 27	2.18	SEP 22	2.18
HIGHEST	1.00	FEB 25, 2003					
LOWEST	3.28	JUL 22, 2003					



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CARROLL COUNTY--Continued

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 water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with water-level recorder from July 1952 to November 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 Ground-Water-Level Monitoring Network observation well.

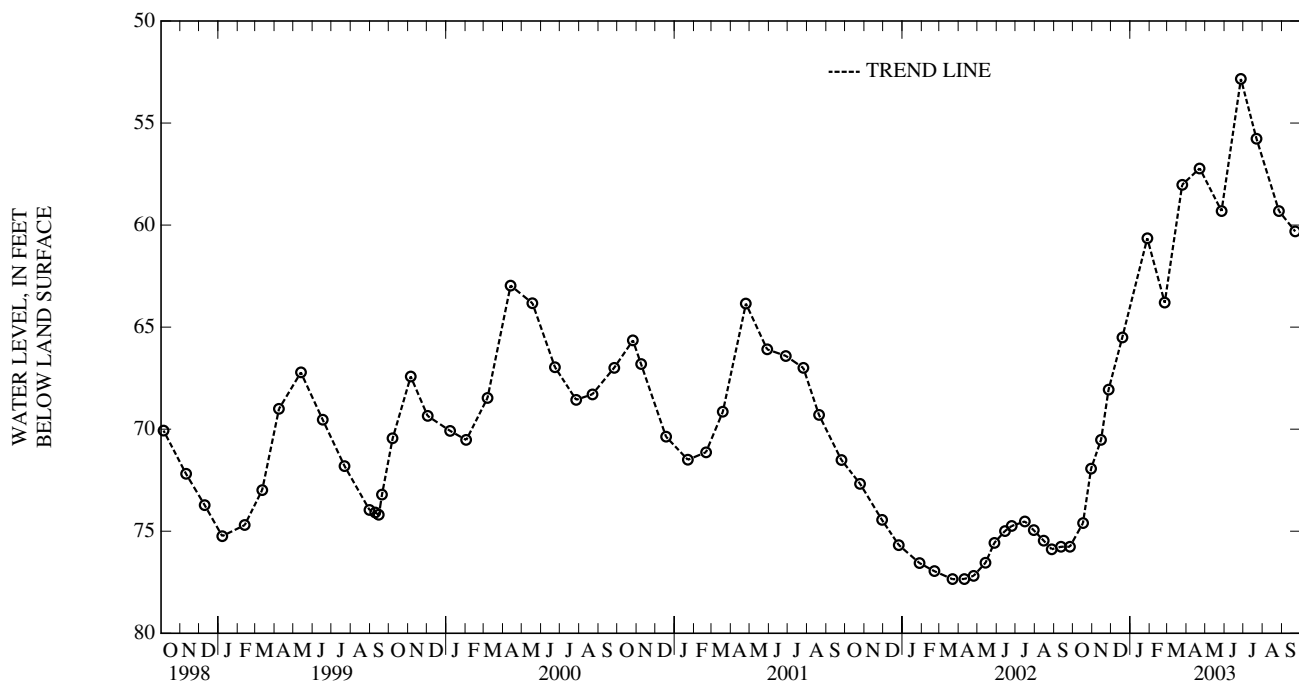
PERIOD OF RECORD.--September 1946 and December 1946, April 1947 and September 1947, February 1949 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 49.10 ft below land surface, June 13, 1989; lowest measured, 77.35 ft below land surface, March 22, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17, 2002	74.60	DEC 19, 2002	65.50	APR 22, 2003	57.22	AUG 27, 2003	59.31
30	71.93	JAN 28, 2003	60.65	MAY 27	59.31	SEP 22	60.31
NOV 15	70.52	FEB 25	63.80	JUN 27	52.84		
27	68.06	MAR 25	58.02	JUL 22	55.77		

HIGHEST 52.84 JUN 27, 2003
LOWEST 74.60 OCT 17, 2002



CARROLL COUNTY--Continued

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 (calcareous zone) of Paleozoic age. Aquifer code: 300PRTB.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 339 ft; casing diameter 6 in., to 50 ft; open hole.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 785 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.81 ft above land surface.

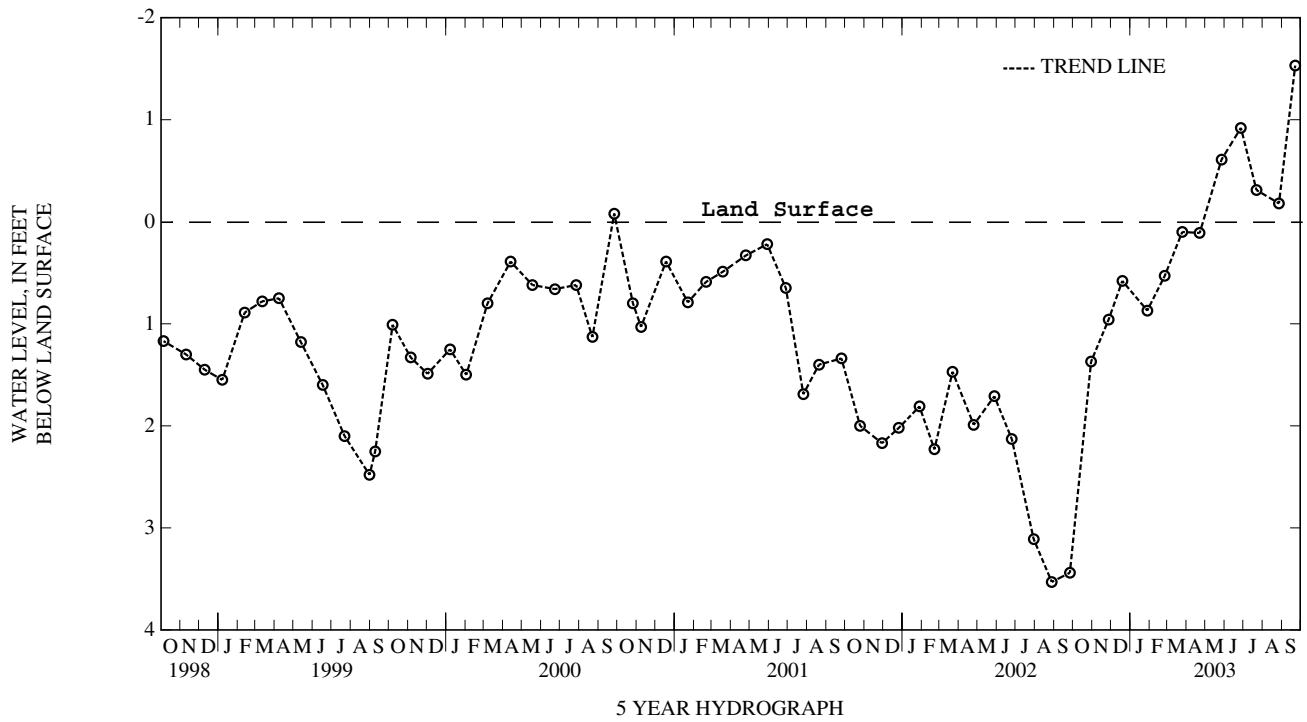
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.81 ft above land surface, December 3, 1996, and January 2, 1997; lowest measured, 3.53 ft below land surface, August 28, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
(READINGS ABOVE LAND SURFACE INDICATED BY "-")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	1.37	JAN 28, 2003	.87	APR 22, 2003	.11	JUL 22, 2003	-.31
NOV 27	.96	FEB 25	.53	MAY 27	-.61	AUG 27	-.18
DEC 19	.58	MAR 25	.10	JUN 27	-.92	SEP 22	-1.53
HIGHEST -1.53		SEP 22, 2003					
LOWEST 1.37		OCT 30, 2002					



CARROLL COUNTY--Continued

WELL NUMBER.--CL Ec 75. SITE ID.--392259077052401. PERMIT NUMBER.--CL-73-2722.

LOCATION.--Lat 39°22'59", long 77°05'24", Hydrologic Unit 02060003, 2.3 mi northwest of Woodbine, at Gillis Falls Park. Owner: U.S. Geological Survey.

AQUIFER.--Gillis Group of Ordovician age. Aquifer code: 300GLLS.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 248 ft; casing diameter 6 in., to 21 ft; open hole.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Twice yearly water level measurements from October 1990 to April 1998. Equipped with graphic recorder December 1974 to July 1980.

DATUM.--Elevation of land surface is 550 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.31 ft above land surface.

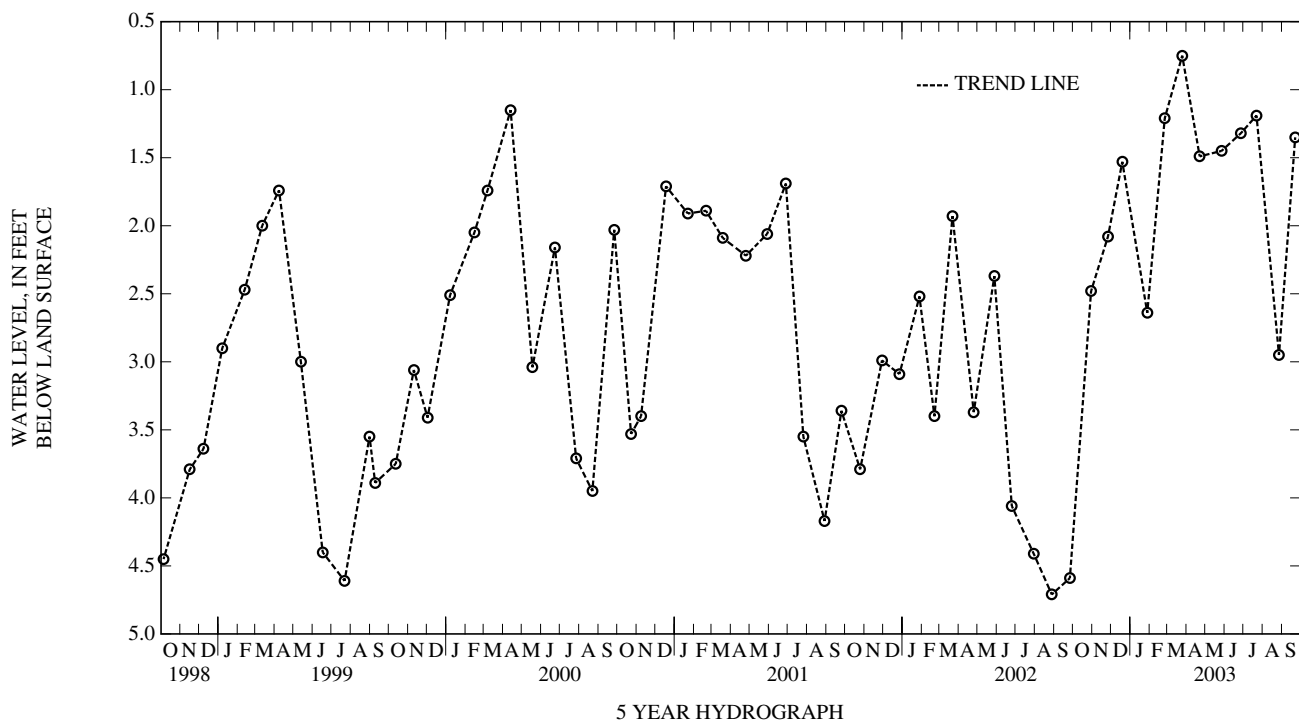
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

PERIOD OF RECORD.--March 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.75 ft below land surface, March 25, 2003; lowest measured, 5.23 ft below land surface, August 7, 1985.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	2.48	JAN 28, 2003	2.64	APR 22, 2003	1.49	JUL 22, 2003	1.19
NOV 26	2.08	FEB 25	1.21	MAY 27	1.45	AUG 27	2.95
DEC 19	1.53	MAR 25	.75	JUN 27	1.32	SEP 22	1.35
HIGHEST	.75	MAR 25, 2003					
LOWEST	2.95	AUG 27, 2003					



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

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 near US Rt. 40. Owner: U.S. Geological Survey.

AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.

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.--Monthly water level measurements with electric tape by U.S. Geological Survey 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.

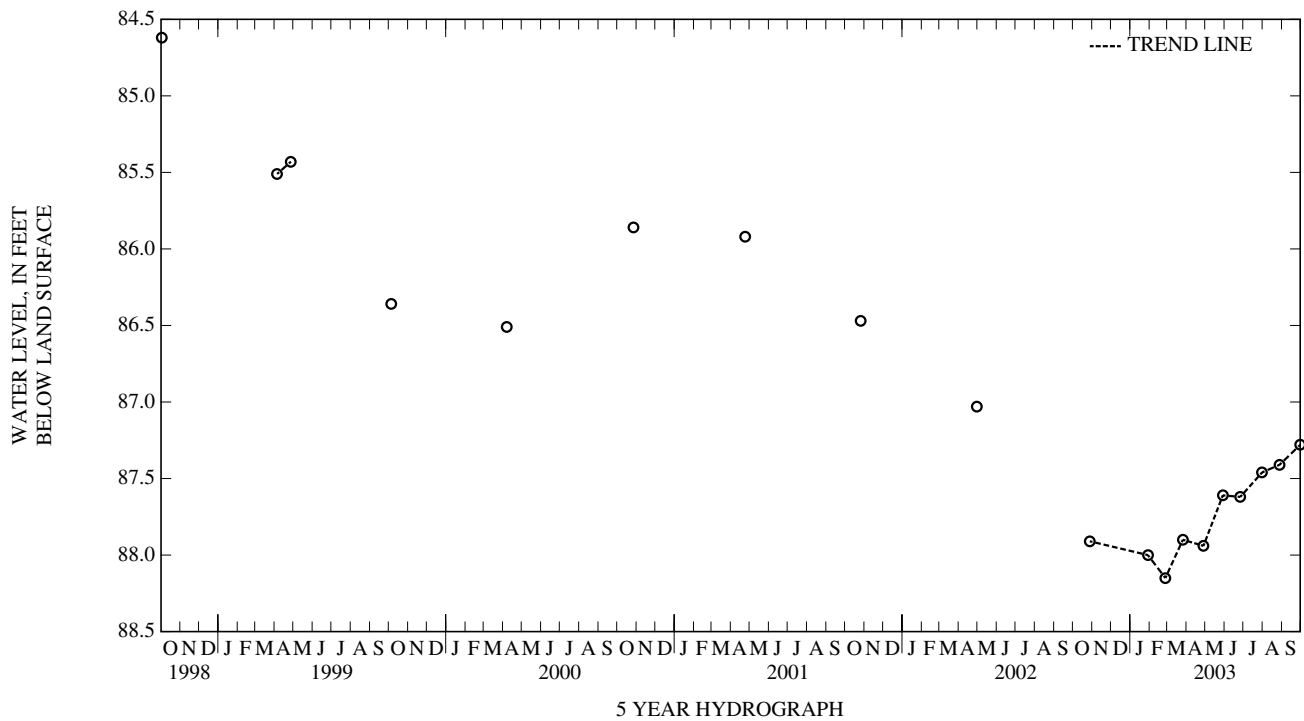
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by regional ground-water withdrawal.

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, 88.15 ft below land surface, February 26, 2003.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 2002	87.91	MAR 26, 2003	87.90	JUN 26, 2003	87.62	SEP 30, 2003	87.28
JAN 29, 2003	88.00	APR 28	87.94	JUL 31	87.46		
FEB 26	88.15	MAY 29	87.61	AUG 28	87.41		
HIGHEST 87.28 SEP 30, 2003							
LOWEST 88.15 FEB 26, 2003							



5 YEAR HYDROGRAPH
OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CECIL COUNTY--Continued

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 near US Rt. 40. Owner: U.S. Geological Survey.

AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation. Aquifer code: 217PPSCL.

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.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Twice yearly water level measurements from April 1988 to January 2003.

DATUM.--Elevation of land surface is 162 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.00 ft above land surface.

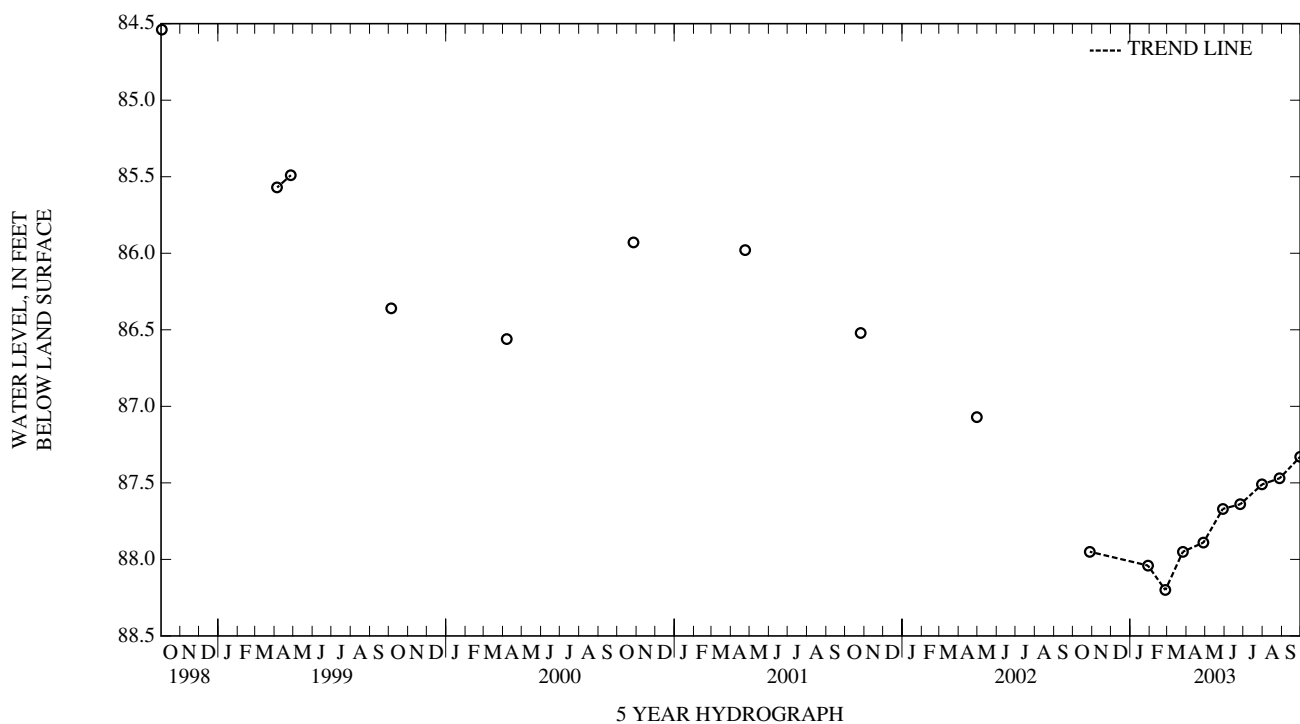
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by regional ground-water withdrawal.

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, 88.20 ft below land surface, February 26, 2003.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 2002	87.95	MAR 26, 2003	87.95	JUN 26, 2003	87.64	SEP 30, 2003	87.33
JAN 29, 2003	88.04	APR 28	87.89	JUL 31	87.51		
FEB 26	88.20	MAY 29	87.67	AUG 28	87.47		
HIGHEST 87.33 SEP 30, 2003							
LOWEST 88.20 FEB 26, 2003							



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

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.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 55.5 ft; casing diameter 4 in., to 50 ft; screen diameter 2 in., from 50 to 55 ft.

INSTRUMENTATION.--Twice yearly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 90 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.00 ft above land surface.

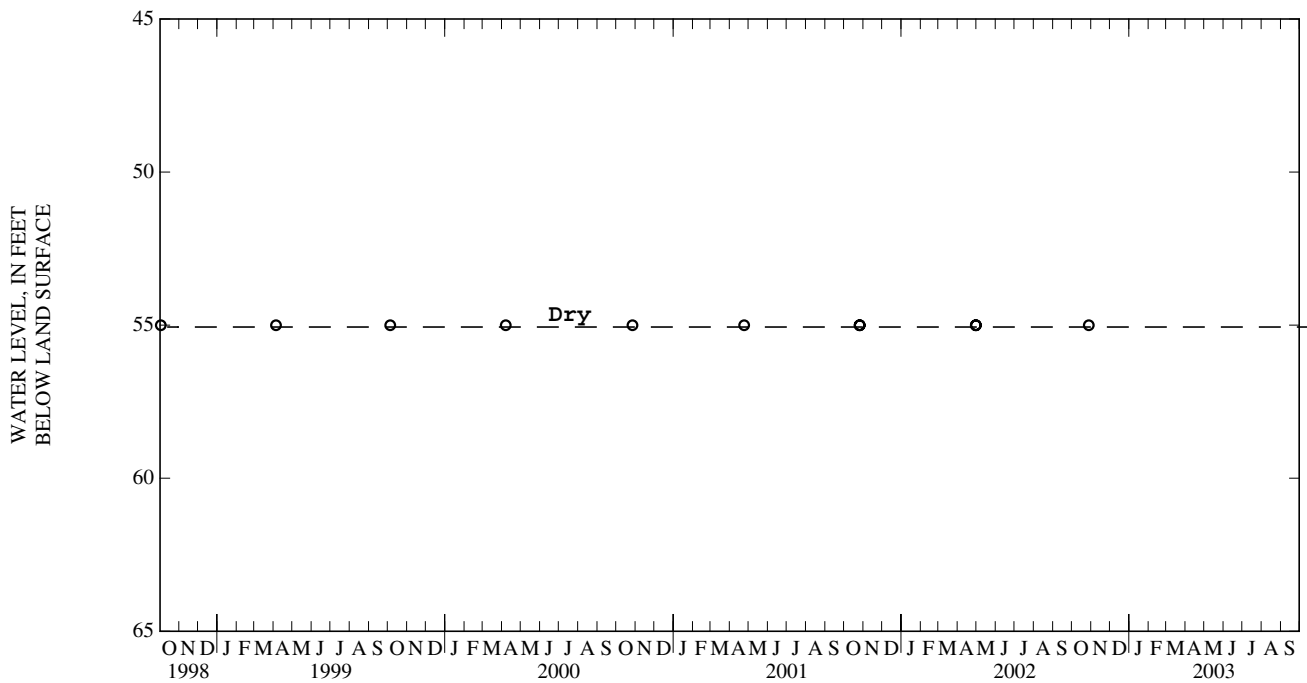
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

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 on many days throughout period of record.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL
OCT 28, 2002	Dry



5 YEAR HYDROGRAPH
OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CECIL COUNTY--Continued

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.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.

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 water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with water-level recorder July 1983 to November 1984.

DATUM.--Elevation of land surface is 70 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.60 ft above land surface.

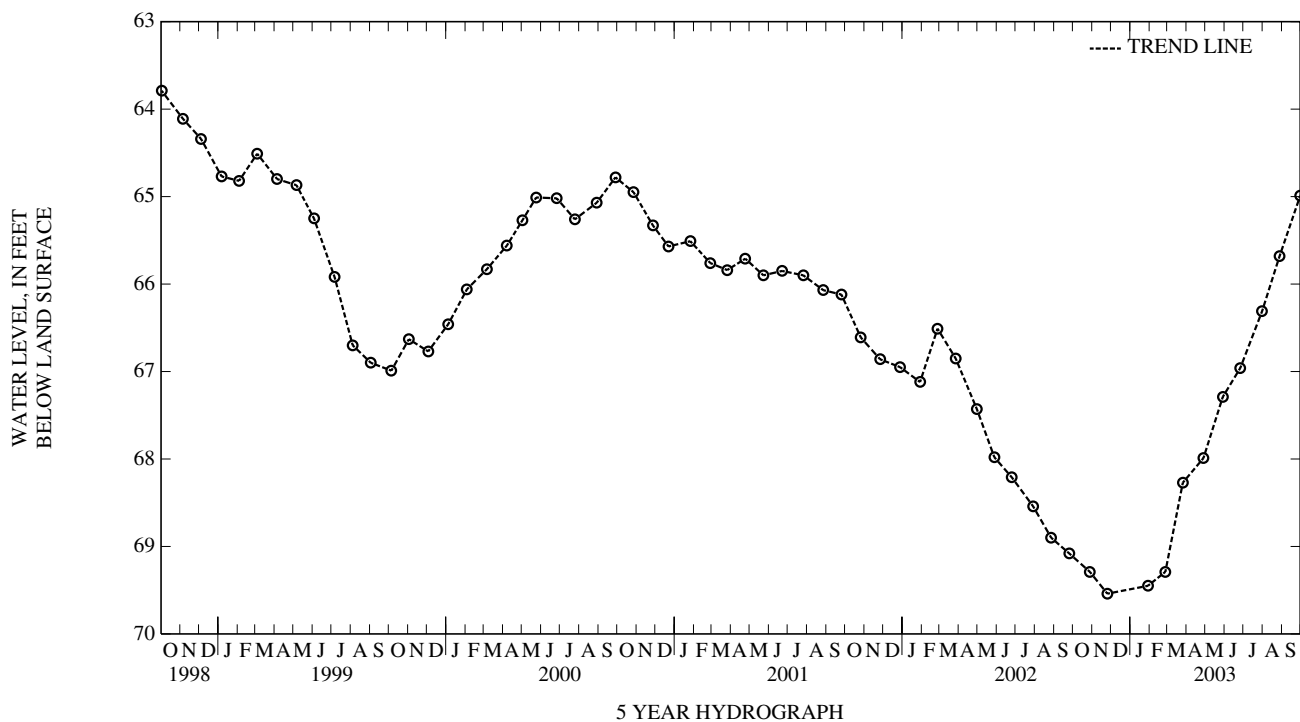
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

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, 69.54 ft below land surface, November 25, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 2002	69.29	FEB 26, 2003	69.29	MAY 29, 2003	67.29	AUG 28, 2003	65.68
NOV 25	69.54	MAR 26	68.27	JUN 26	66.96	SEP 30	64.99
JAN 29, 2003	69.45	APR 28	67.99	JUL 31	66.31		
	HIGHEST 64.99	SEP 30, 2003					
	LOWEST 69.54	NOV 25, 2002					



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, near intersection of MD Rts. 7 and 267, 1 mi west of Charlestown. Owner: U.S. Geological Survey.

AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.

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 water level measurements with electric tape by U.S. Geological Survey personnel. Twice yearly measurements from April 1988 to January 2003.

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.

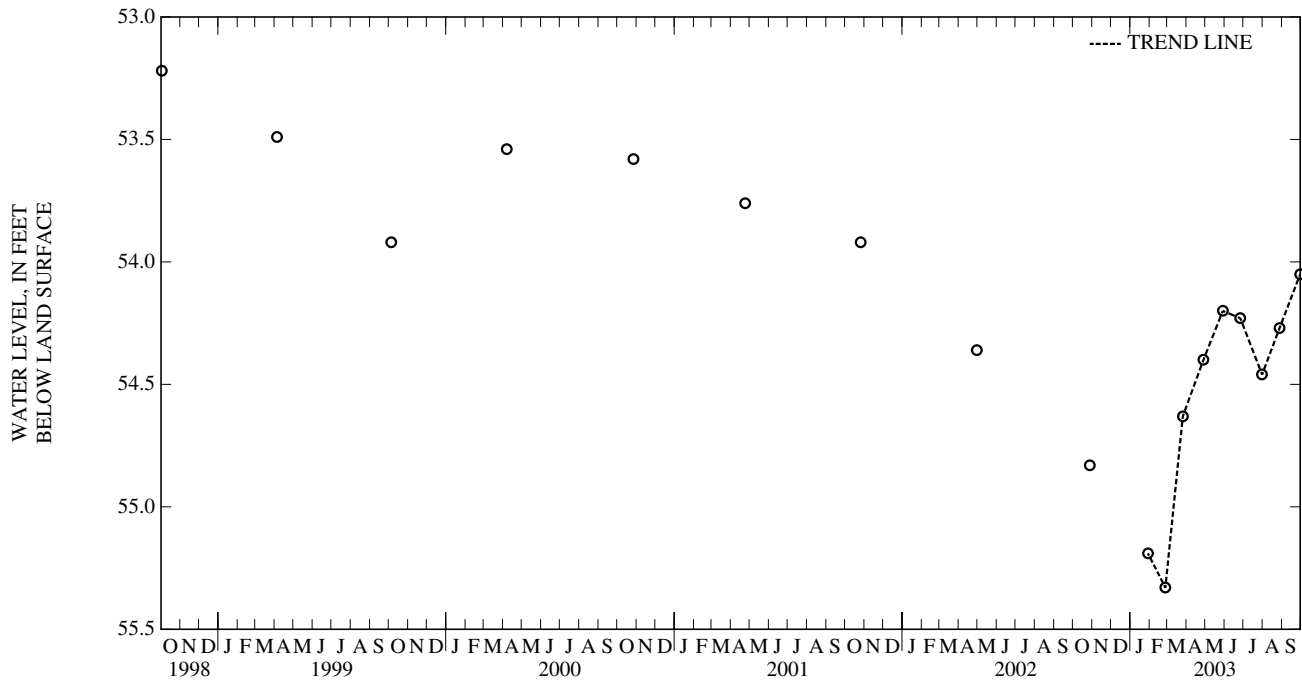
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

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, 55.33 ft below land surface, February 26, 2003.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 2002	54.83	MAR 26, 2003	54.63	JUN 26, 2003	54.23	SEP 30, 2003	54.05
JAN 29, 2003	55.19	APR 28	54.40	JUL 31	54.46		
FEB 26	55.33	MAY 29	54.20	AUG 28	54.27		
HIGHEST 54.05 SEP 30, 2003							
LOWEST 55.33 FEB 26, 2003							



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CECIL COUNTY--Continued

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, near intersection of MD Rts. 7 and 267, 1 mi west of Charlestown. Owner: U.S. Geological Survey.

AQUIFER.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.

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.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 70 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.18 ft above land surface.

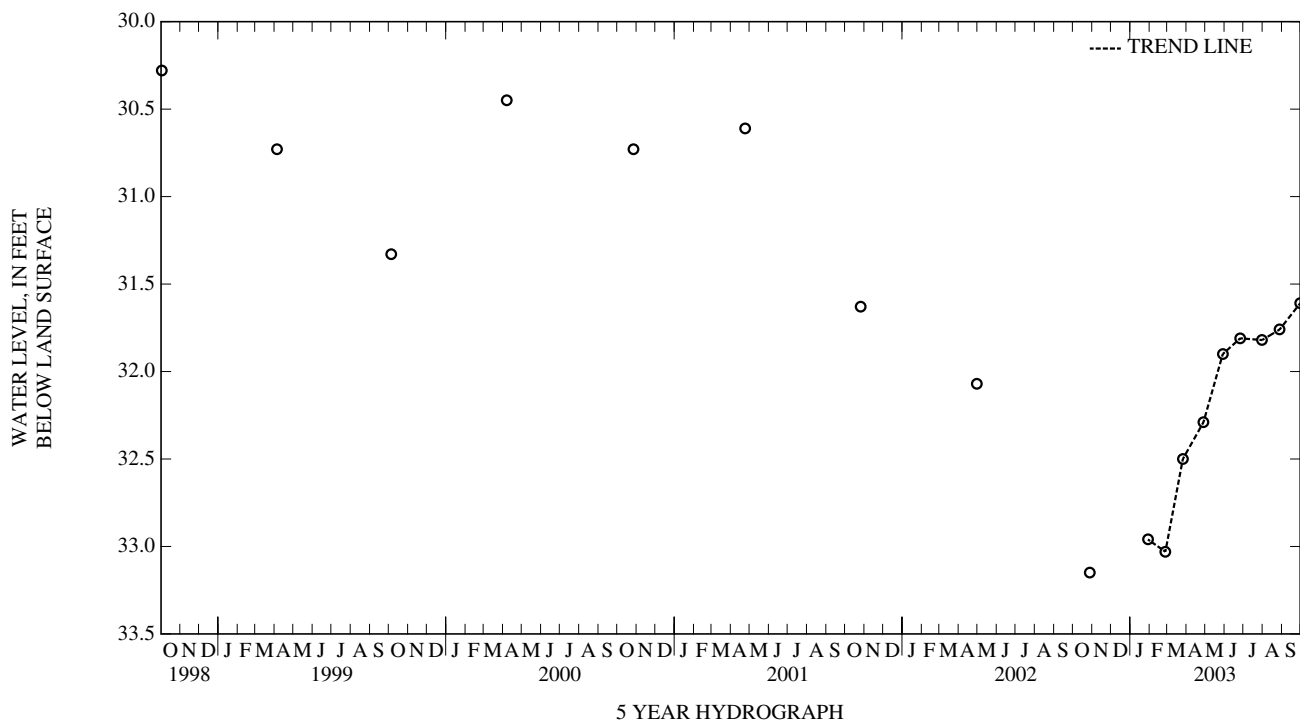
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

PERIOD OF RECORD.--November 1982 to November 1984, April 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 27.75 ft below land surface, July 5, 1983; lowest measured, 33.15 ft below land surface, October 28, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 2002	33.15	MAR 26, 2003	32.50	JUN 26, 2003	31.81	SEP 30, 2003	31.61
JAN 29, 2003	32.96	APR 28	32.29	JUL 31	31.82		
FEB 26	33.03	MAY 29	31.90	AUG 28	31.76		
HIGHEST	31.61	SEP 30, 2003					
LOWEST	33.15	OCT 28, 2002					



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

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.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.

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.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with graphic water-level recorder from July 1983 to October 1984.

DATUM.--Elevation of land surface is 135 ft above , from topographic map. Measuring point: Top of casing, 2.00 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

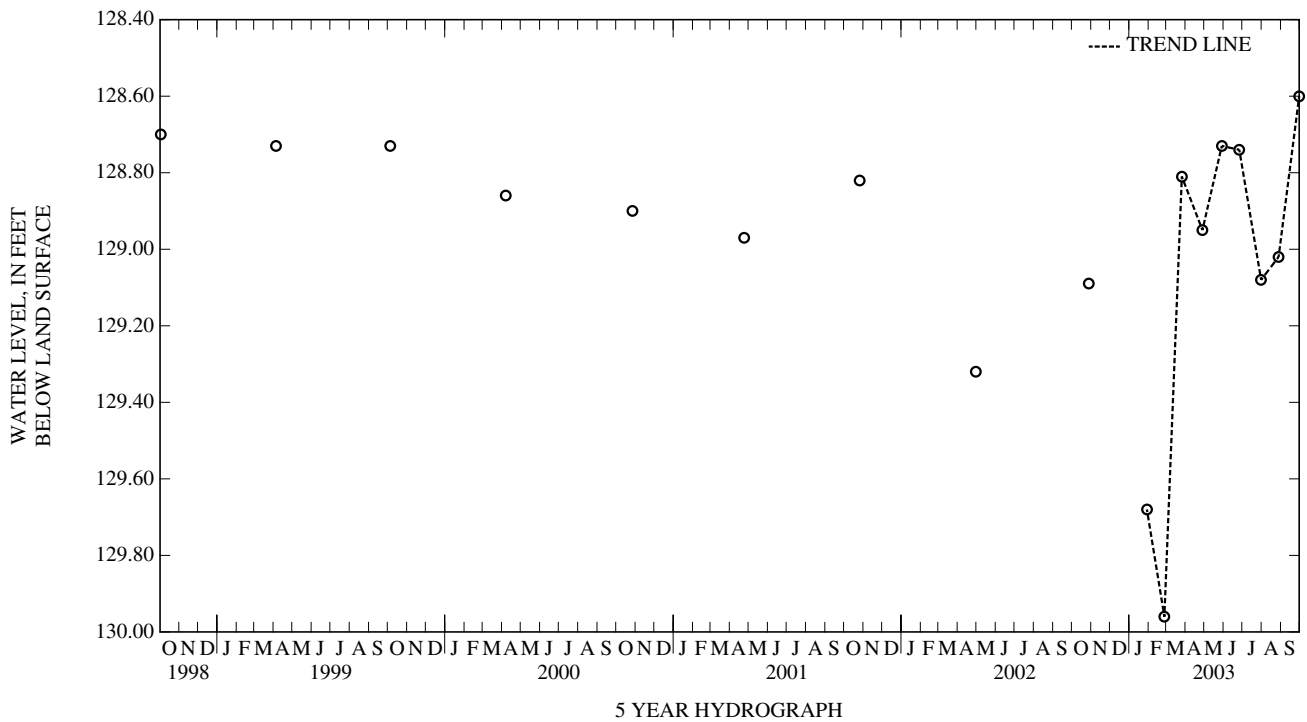
PERIOD OF RECORD.--March 1983 to October 1984, October 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 126.65 ft below land surface, April 6, 1984; lowest measured, 129.96 ft below land surface, February 26, 2003.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 2002	129.09	MAR 26, 2003	128.81	JUN 26, 2003	128.74	SEP 30, 2003	128.60
JAN 29, 2003	129.68	APR 28	128.95	JUL 31	129.08		
FEB 26	129.96	MAY 29	128.73	AUG 28	129.02		

HIGHEST 128.60 SEP 30, 2003
 LOWEST 129.96 FEB 26, 2003



5 YEAR HYDROGRAPH
 OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CECIL COUNTY--Continued

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.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.

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 water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with graphic water-level recorder from July 1983 to November 1984.

DATUM.--Elevation of land surface is 55 ft above , from topographic map. Measuring point: Top of casing, 2.40 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

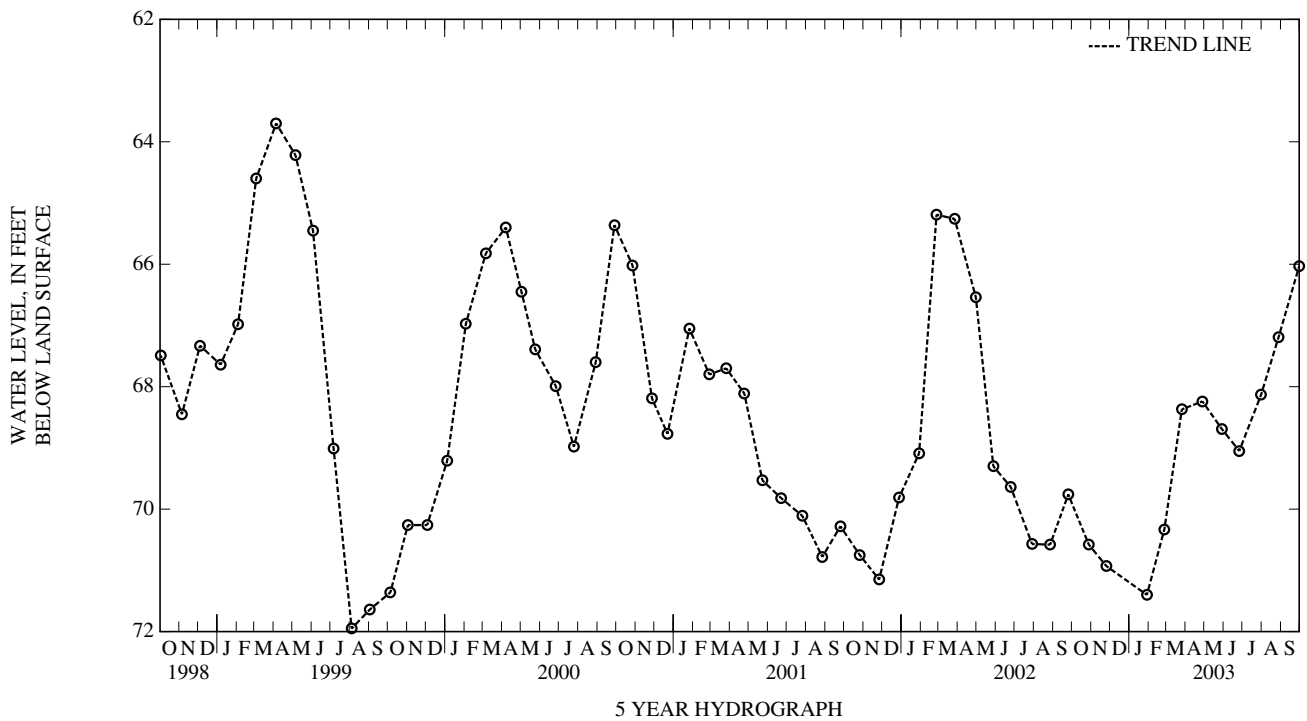
PERIOD OF RECORD.--March 1983 to November 1984, July 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 50.56 ft below land surface, April 17, 1984; lowest measured, 71.95 ft below land surface, August 4, 1999.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 2002	70.58	FEB 26, 2003	70.33	MAY 29, 2003	68.69	AUG 28, 2003	67.19
NOV 25	70.93	MAR 26	68.37	JUN 26	69.05	SEP 30	66.03
JAN 29, 2003	71.40	APR 28	68.24	JUL 31	68.13		

HIGHEST 66.03 SEP 30, 2003
 LOWEST 71.40 JAN 29, 2003



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CECIL COUNTY--Continued

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, 1.2 mi east of Courthouse Point. Owner: U.S. Geological Survey.

AQUIFER.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.

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.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Twice yearly water level measurements from April 1988 to April 1994.

DATUM.--Elevation of land surface is 38 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.00 ft above land surface.

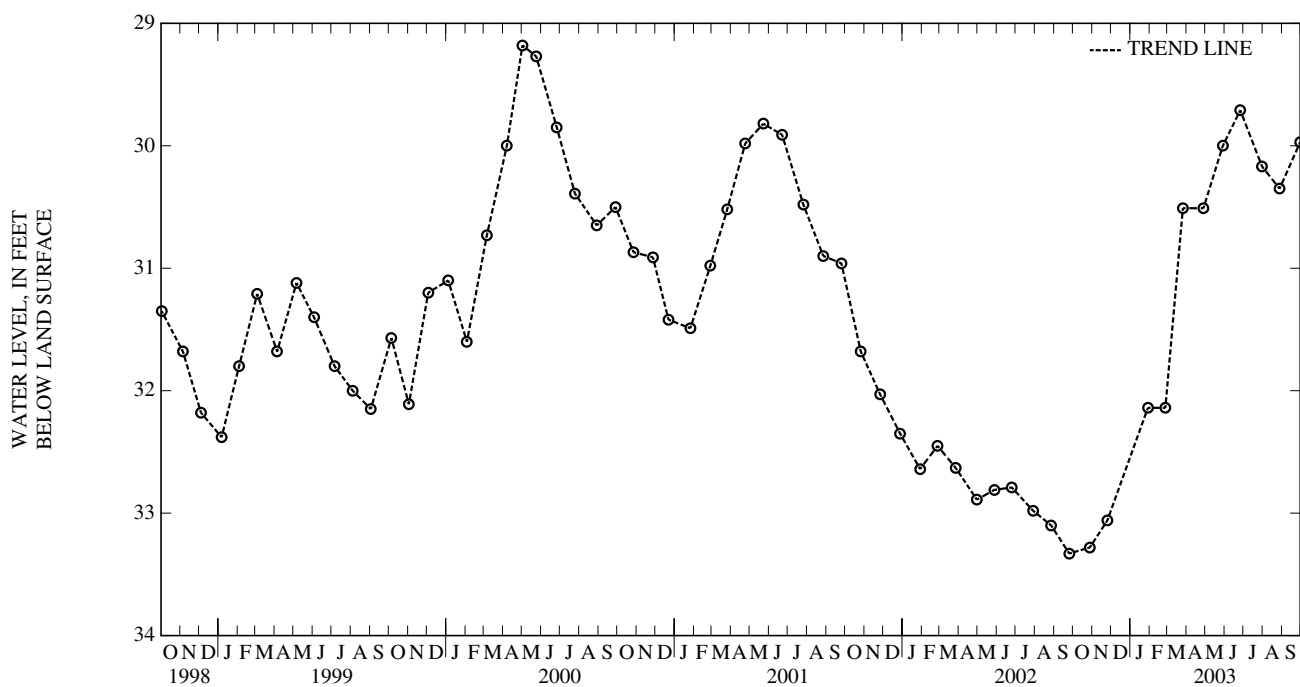
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

PERIOD OF RECORD.--April 1983 to September 1984, April 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 27.42 ft below land surface, April 4, 1997; lowest measured, 34.48 ft below land surface, November 19, 1983.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 2002	33.28	FEB 26, 2003	32.14	MAY 29, 2003	30.00	AUG 28, 2003	30.35
NOV 25	33.06	MAR 26	30.51	JUN 26	29.71	SEP 30	29.97
JAN 29, 2003	32.14	APR 28	30.51	JUL 31	30.17		
HIGHEST	29.71	JUN 26, 2003					
LOWEST	33.28	OCT 28, 2002					



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, near West View Shores. Owner: U.S. Geological Survey.

AQUIFER.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.

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.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Twice yearly measurements from April 1988 to April 1994.

DATUM.--Elevation of land surface is 24 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.80 ft above land surface.

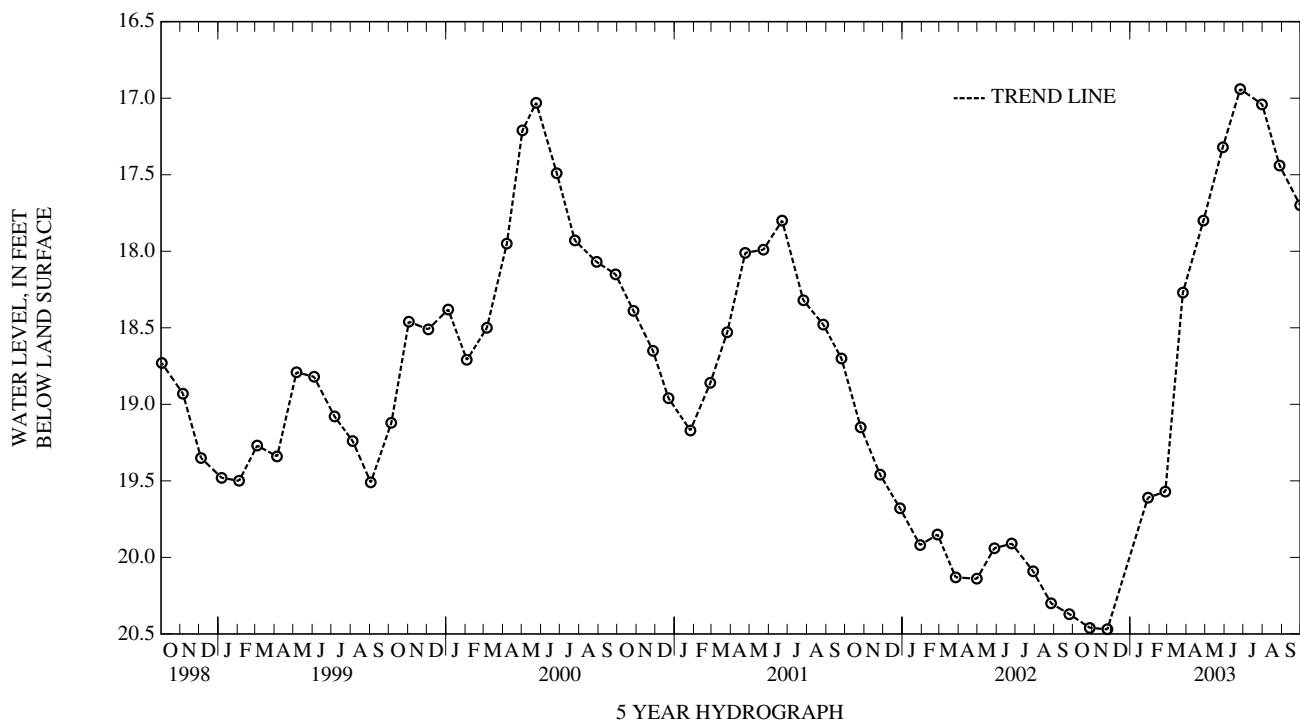
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

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, 20.47 ft below land surface, November 25, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 2002	20.46	FEB 26, 2003	19.57	MAY 29, 2003	17.32	AUG 28, 2003	17.44
NOV 25	20.47	MAR 26	18.27	JUN 26	16.94	SEP 30	17.70
JAN 29, 2003	19.61	APR 28	17.80	JUL 31	17.04		
HIGHEST	16.94	JUN 26, 2003					
LOWEST	20.47	NOV 25, 2002					



CECIL COUNTY--Continued

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.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.

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 water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with a digital water-level recorder from August 1979 to December 1979.

DATUM.--Elevation of land surface is 75 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.35 ft above land surface.

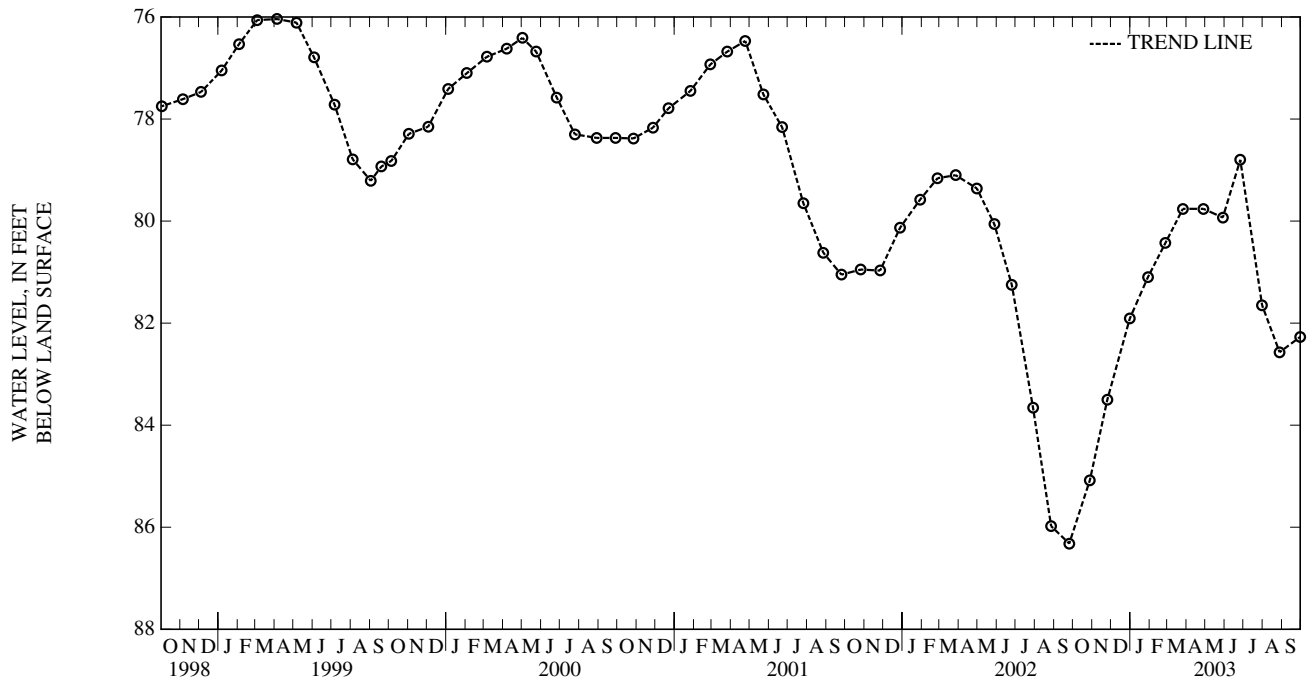
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

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, 86.32 ft below land surface, September 25, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 2002	85.08	JAN 29, 2003	81.10	APR 28, 2003	79.76	JUL 31, 2003	81.65
NOV 25	83.50	FEB 26	80.43	MAY 29	79.93	AUG 28	82.57
DEC 31	81.91	MAR 26	79.76	JUN 26	78.80	SEP 30	82.27
HIGHEST 78.80 JUN 26, 2003							
LOWEST 85.08 OCT 28, 2002							



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CHARLES COUNTY--Continued

WELL NUMBER.--CH Bc 24. SITE ID.--383633077083001. PERMIT NUMBER.--CH-02-0874.

LOCATION.--Lat 38°36'33", long 77°08'30", Hydrologic Unit 0207001, at Cedar Lane, Potomac Heights. Owner: Potomac Heights Mutual Home Owners Association.

AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 435 ft; casing diameter 10 in., to 383.5 ft, and 398.5 to 415 ft; screen diameter 10 in., from 383.5 to 398.5 ft, and 415 to 435 ft.

INSTRUMENTATION.--Periodic water level measurements with electric tape by Maryland Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval, April 1988 to November 1997.

DATUM.--Elevation of land surface is 72 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.55 ft above land surface.

REMARKS.--Charles County Ground-Water-Level Monitoring Network observation. Water levels are affected by local ground-water withdrawal.

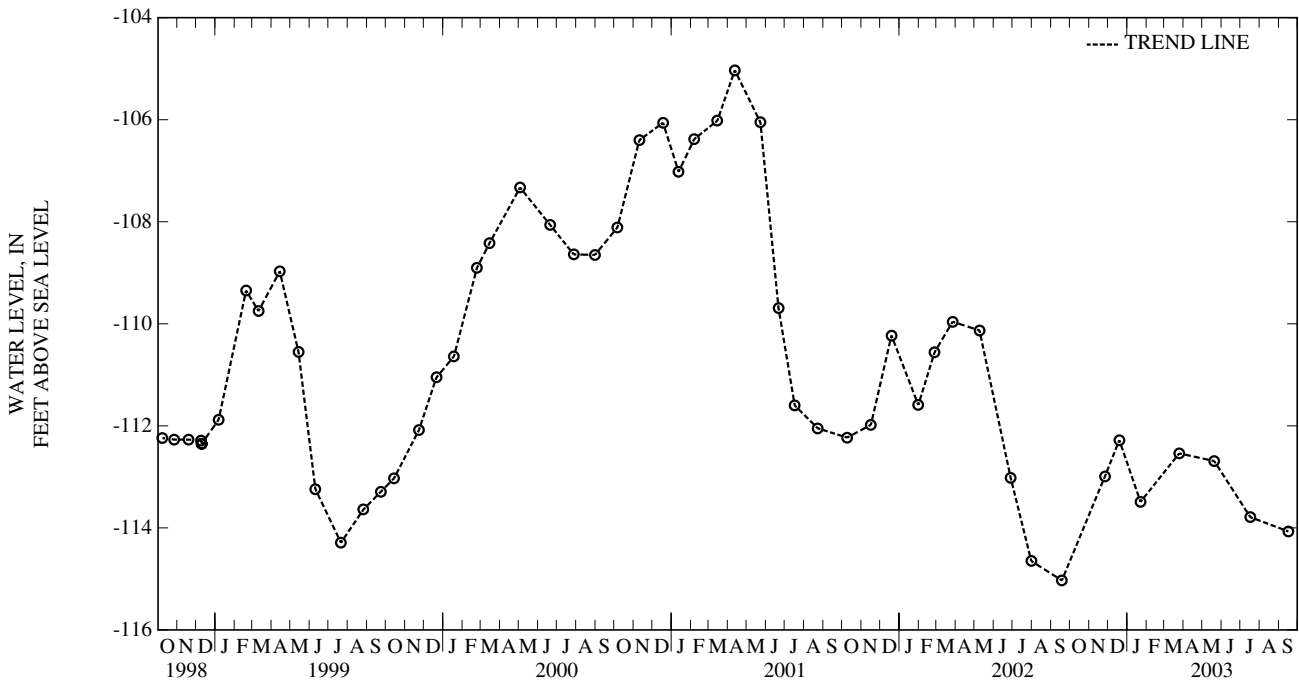
PERIOD OF RECORD.--May 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 70.26 ft below sea level, April 30, 1988; lowest measured, 115.03 ft below sea level, September 18, 2002.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 26, 2002	-112.99	JAN 22, 2003	-113.49	MAY 20, 2003	-112.69	SEP 16, 2003	-114.07
DEC 19	-112.28	MAR 25	-112.54	JUL 17	-113.79		

LOWEST -114.07 SEP 16, 2003
 HIGHEST -112.28 DEC 19, 2002



5 YEAR HYDROGRAPH
 OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CHARLES COUNTY--Continued

WELL NUMBER.--CH Bc 75. SITE ID.--383645077062401. PERMIT NUMBER.--CH-92-0500.

LOCATION.--Lat 38°36'45", long 77°06'24", Hydrologic Unit 02070011, Chapmans Landing. Owner: Maryland Department of Natural Resources.

AQUIFER.--Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 940 ft; casing diameter 8 in., to 820 ft, 825 to 860 ft, 880 to 898 ft, and 923 to 940 ft; screen diameter 8 in., from 820 to 825 ft, 860 to 880 ft, and 898 to 923 ft.

INSTRUMENTATION.--Periodic water level measurements with electric tape by Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 124.59 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.98 ft above land surface.

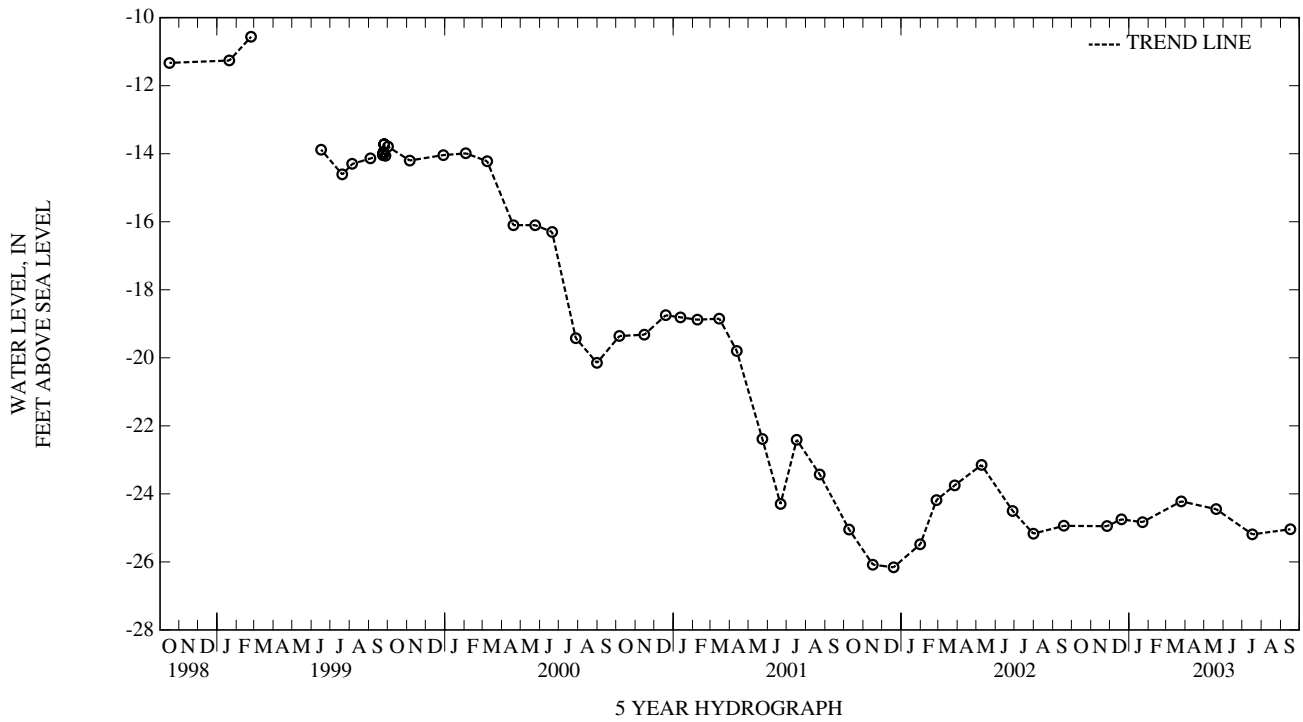
REMARKS.--Charles County Ground-Water-Level Monitoring Network observation well. Water levels are affected by regional ground-water withdrawal. A 48-hour pump test occurred on November 18-20, 1996. The lowest water level measured during this period was 82.53 ft below sea level on November 20, 1996. The land surface was graded on October 16, 1998, and is 12.45 ft below the original land surface.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.64 ft above sea level, September 26, 1994; lowest measured, 26.16 ft below sea level, December 19, 2001 (See REMARKS).

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 26, 2002	-24.95	JAN 22, 2003	-24.83	MAY 20, 2003	-24.45	SEP 16, 2003	-25.04
DEC 19	-24.75	MAR 25	-24.22	JUL 17	-25.19		
LOWEST -25.19 JUL 17, 2003							
HIGHEST -24.22 MAR 25, 2003							



CHARLES COUNTY--Continued

WELL NUMBER.--CH Bc 77. SITE ID.--383644077055501. PERMIT NUMBER.--CH-88-1028.

LOCATION.--Lat 38°36'44", long 77°05'55", Hydrologic Unit 02070011, 2.75 mi southwest of intersection with MD Rts. 210 and 227, 0.25 mi south of MD Rt. 210. Owner: The Arden Group.

AQUIFER.--Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 955 ft; casing diameter 16 in., to 60 ft; casing diameter 8 in., from 0 to 845 ft; and casing diameter 6 in., from 845 to 925 ft; screen diameter 6 in., from 925 to 955 ft.

INSTRUMENTATION.--Periodic water level measurements with electric tape by Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 96.64 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder shelf, 3.38 ft above land surface.

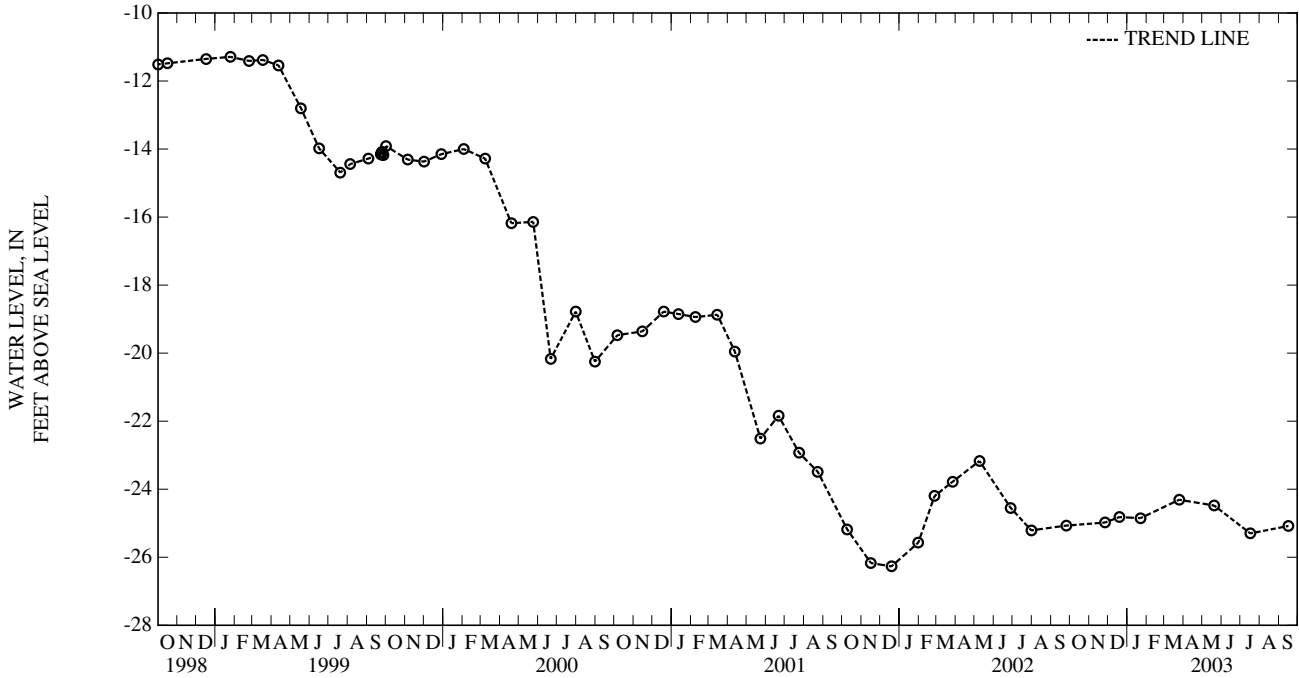
REMARKS.--Charles County Ground-Water-Level Monitoring Network observation well. Water levels are affected by regional ground-water withdrawal. A 48-hour pump test occurred in a nearby well on November 22 and 23, 1996. The lowest water level measured during this period was 15.54 ft below sea level.

PERIOD OF RECORD.--August 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.76 ft above sea level, August 29, 1995; lowest measured, 27.16 ft below sea level, January 2, 2002 (recorder).

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 26, 2002	-24.98	JAN 22, 2003	-24.85	MAY 20, 2003	-24.48	SEP 16, 2003	-25.08
DEC 19	-24.82	MAR 25	-24.31	JUL 17	-25.30		
LOWEST -25.30 JUL 17, 2003							
HIGHEST -24.31 MAR 25, 2003							



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CHARLES COUNTY--Continued

WELL NUMBER.--CH Bc 80. SITE ID.--383645077062402. PERMIT NUMBER.--CH-94-0898.

LOCATION.--Lat 38°36'45", long 77°06'24", Hydrologic Unit 02070011, 2.0 mi southwest of intersection with MD Rts. 210 and 227, 100 ft south of MD Rt. 210. Owner: Maryland Geological Survey.

AQUIFER.--Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 1,120 ft; casing diameter 4 in., to 1,085 ft, and 1,095 to 1,105 ft; screen diameter 4 in., from 1,085 to 1,095 ft, and 1,105 to 1,115 ft.

INSTRUMENTATION.--Periodic water level measurements with electric tape by Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 123.10 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder platform, 2.5 ft above land surface (land graded to 13.6 ft below original elevation).

REMARKS.--Charles County Ground-Water-Level Monitoring Network observation well. Water levels are affected by regional ground-water withdrawal.

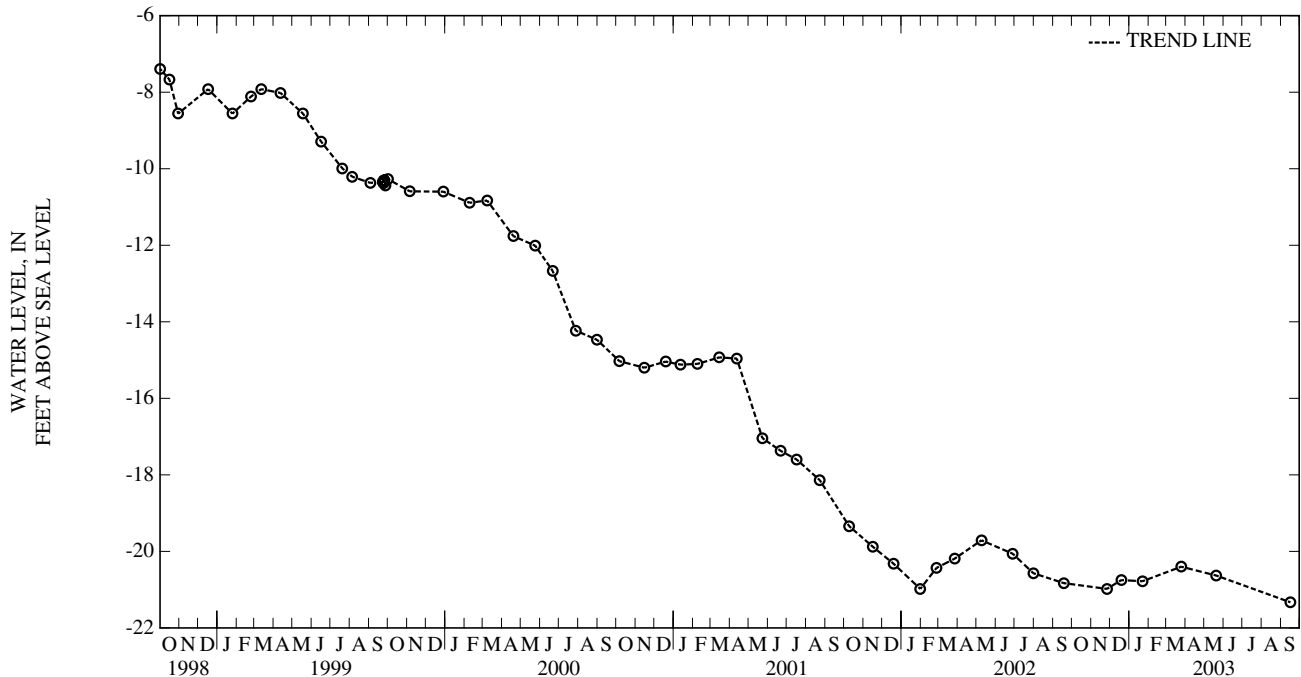
PERIOD OF RECORD.--October 1996 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.90 ft above sea level, October 30, 1996 (recorder); lowest measured, 21.36 ft below sea level, September 16, 2003.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 26, 2002	-20.98	JAN 22, 2003	-20.78	MAY 20, 2003	-20.63
DEC 19	-20.75	MAR 25	-20.40	SEP 16	-21.33

LOWEST -21.33 SEP 16, 2003
 HIGHEST -20.40 MAR 25, 2003



5 YEAR HYDROGRAPH
 OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CHARLES COUNTY--Continued

WELL NUMBER.--CH Bc 81. SITE ID.--383709077061002. PERMIT NUMBER.--CH-88-0482.

LOCATION.--Lat 38°37'09", long 77°06'10", Hydrologic Unit 02070010, 1.7 mi southwest of intersection with MD Rts. 210 and 227, on northwest side of Chapmans Landing Rd. Owner: Montrose Farms.

AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 656 ft; casing diameter 6 in., to 541 ft, casing diameter 4 in., from 531 to 556 ft, 588 to 642 ft, and 646 to 656 ft; screen diameter 4 in., from 556 to 588 ft, and 642 to 646 ft.

INSTRUMENTATION.--Periodic water level measurements with electric tape by Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 156.46 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder shelf, 2.07 ft above land surface.

REMARKS.--Charles County Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

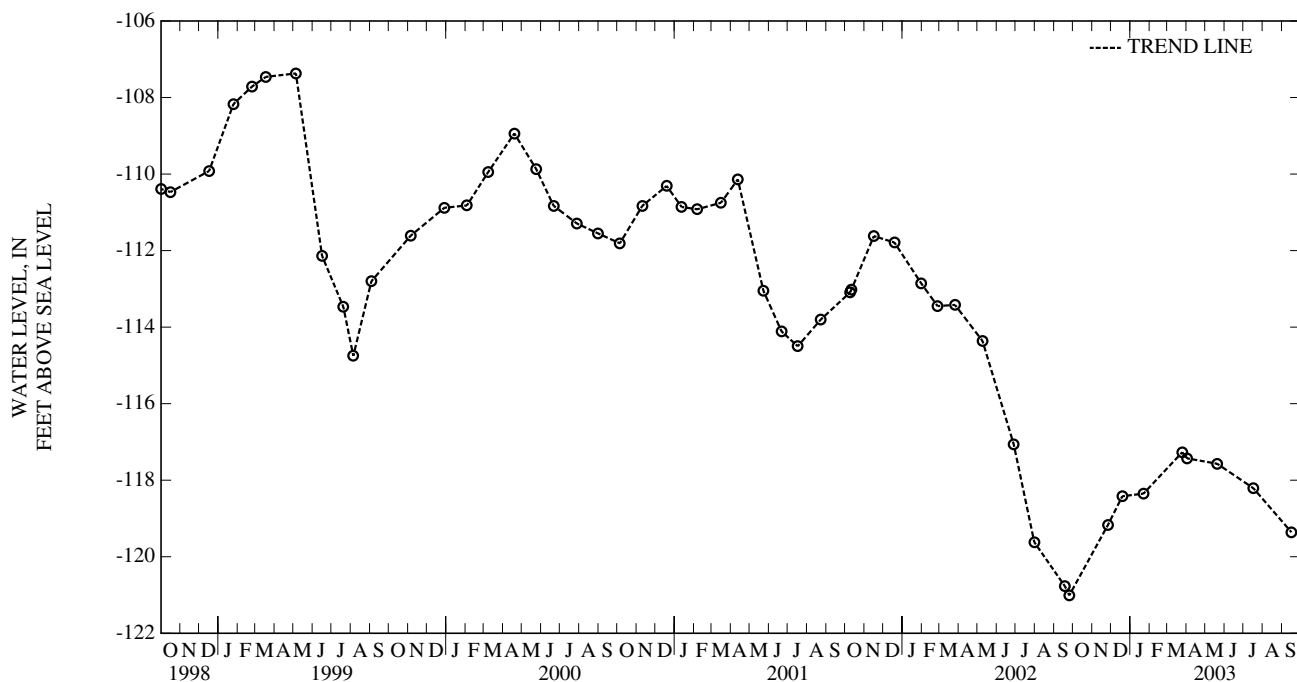
PERIOD OF RECORD.--August 1996 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 97.97 ft below sea level, July 3 and 4, 1997 (recorder); lowest measured, 121.76 ft below sea level, September 12, 2002 (recorder).

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 26, 2002	-119.17	JAN 22, 2003	-118.35	APR 02, 2003	-117.43	JUL 17, 2003	-118.21
DEC 19	-118.42	MAR 25	-117.27	MAY 20	-117.57	SEP 16	-119.36

LOWEST -119.36 SEP 16, 2003
HIGHEST -117.27 MAR 25, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CHARLES COUNTY--Continued

WELL NUMBER.--CH Bd 52. SITE ID.--383553077032401. PERMIT NUMBER.--CH-94-0899.

LOCATION.--Lat 38°35'53", long 77°03'24", Hydrologic Unit 02070011, 2.5 mi southeast of Pomonkey, on east side of MD Rt. 227. Owner: Maryland Geological Survey.

AQUIFER.--Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 1,105 ft; casing diameter 4 in., to 1,040 ft, 1,050 to 1,085 ft, and 1,095 to 1,105 ft; screen diameter 4 in., from 1,040 to 1,050 ft, and 1,085 to 1,095 ft.

INSTRUMENTATION.--Periodic water level measurements with electric tape by Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 47.50 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of flange, 3.00 ft above land surface.

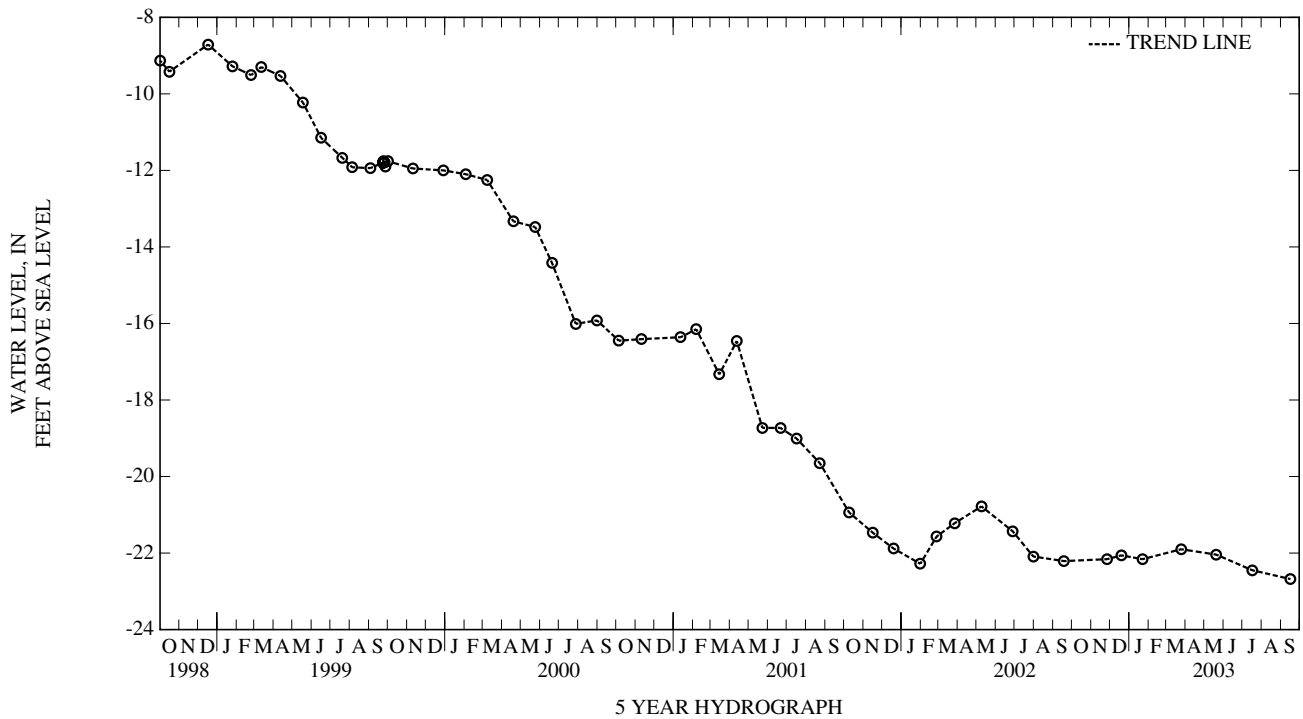
REMARKS.--Charles County Ground-Water-Level Monitoring Network observation well. Water levels are affected by regional ground-water withdrawal.

PERIOD OF RECORD.--October 1996 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.03 ft above sea level, November 9, 1996; lowest measured, 22.68 ft below sea level, September 16, 2003.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 26, 2002	-22.16	JAN 22, 2003	-22.16	MAY 20, 2003	-22.04	SEP 16, 2003	-22.68
DEC 19	-22.06	MAR 25	-21.90	JUL 17	-22.45		
LOWEST -22.68 SEP 16, 2003							
HIGHEST -21.90 MAR 25, 2003							



5 YEAR HYDROGRAPH
OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CHARLES COUNTY--Continued

WELL NUMBER.--CH Be 43. SITE ID.--38381907655501. PERMIT NUMBER.--CH-71-0066.

LOCATION.--Lat 38°38'19", long 76°55'55", Hydrologic Unit 02070011, at northeast end of Joy Lane, 0.2 mi east of Sun Valley Drive, Waldorf. Owner: Private Residence.

AQUIFER.--Magothy Formation of Upper Cretaceous age. Aquifer code: 211MGTY.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 459 ft; casing diameter 6 in., to 428 ft; screen diameter 5 in., from 433 to 459 ft.

INSTRUMENTATION.--Periodic water level measurements with electric tape by Maryland Geological Survey personnel. Equipped with graphic water-level recorder from February 1977 to January 1978.

DATUM.--Elevation of land surface is 216.79 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.0 ft above land surface.

REMARKS.--Charles County Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal. Water levels were discontinued from December 2001 to November 2002, when another means of access to the well was established.

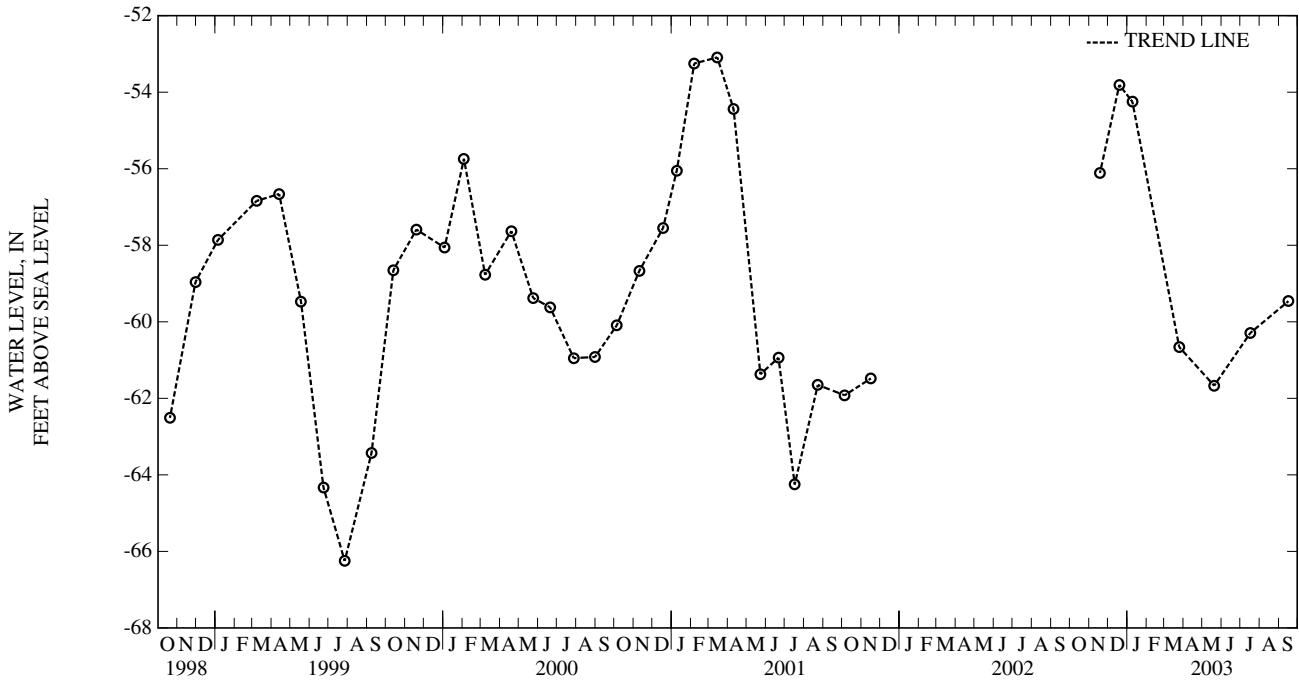
PERIOD OF RECORD.--February 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.05 ft above sea level, February 22, 1977 (recorder); lowest measured, 66.69 ft below sea level.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 18, 2002	-56.11	JAN 09, 2003	-54.25	MAY 20, 2003	-61.67	SEP 16, 2003	-59.46
DEC 19	-53.81	MAR 25	-60.66	JUL 17	-60.29		

LOWEST -61.67 MAY 20, 2003
 HIGHEST -53.81 DEC 19, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CHARLES COUNTY--Continued

WELL NUMBER.--CH Be 57. SITE ID.--383706076575601. PERMIT NUMBER.--CH-81-1194.

LOCATION.--Lat 38°37'06", long 76°57'56", Hydrologic Unit 02070011, St. John's pumping station, St. Charles. Owner: Charles County Department of Public Works.

AQUIFER.--Patuxant Formation of Lower Cretaceous age. Aquifer code: 217PTXNU.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 1,696 ft; casing diameter 6 in., to 400 ft; casing diameter 4 in., from 400 to 1,660 ft, screen diameter 4 in., from 1,660 to 1,696 ft.

INSTRUMENTATION.--Periodic water level measurements with electric tape by Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 212.26 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of flange, 2.00 ft above land surface.

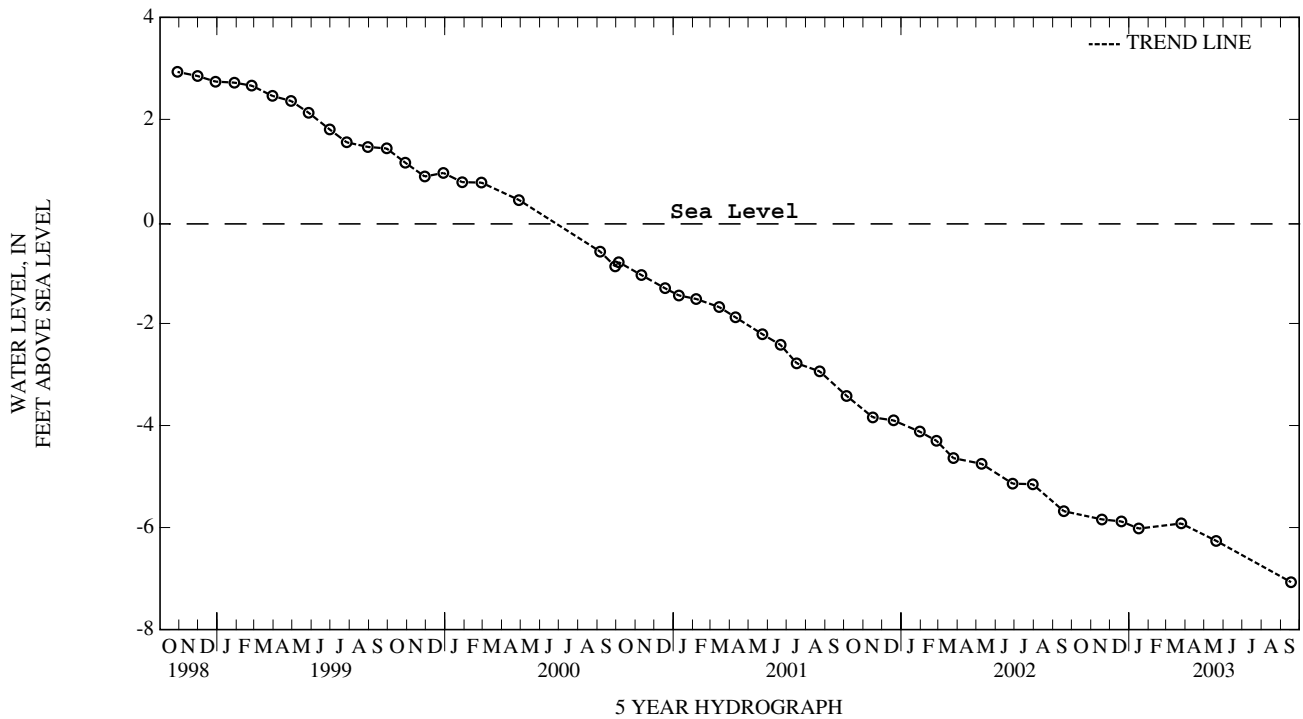
REMARKS.--Charles County Ground-Water-Level Monitoring Network observation well. Water levels are affected by regional ground-water withdrawal.

PERIOD OF RECORD.--April 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 17.16 ft above sea level, April 3, 1986; lowest measured, 7.07 ft below sea level, September 17, 2003.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 18, 2002	-5.84	JAN 16, 2003	-6.02	MAY 20, 2003	-6.26
DEC 19	-5.88	MAR 25	-5.92	SEP 17	-7.07
LOWEST -7.07 SEP 17, 2003					
HIGHEST -5.84 NOV 18, 2002					



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CHARLES COUNTY--Continued

WELL NUMBER.--CH Be 60. SITE ID.--383706076575604. PERMIT NUMBER.--CH-81-1468.

LOCATION.--Lat 38°37'06", long 76°57'56", Hydrologic Unit 02070011, St. John's pumping station, St. Charles. Owner: U.S. Geological Survey.

AQUIFER.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 625 ft; casing diameter 6 in., to 401 ft; casing diameter 4 in., from 401 ft to 610 ft, and 625 to 635 ft; screen diameter 4 in., from 610 to 625 ft.

INSTRUMENTATION.--Periodic water level measurements with electric tape by Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 212.80 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of flange, 2.20 ft above land surface.

REMARKS.--Charles County Ground-Water-Level Monitoring Network observation well. Water levels are affected by regional ground-water withdrawal.

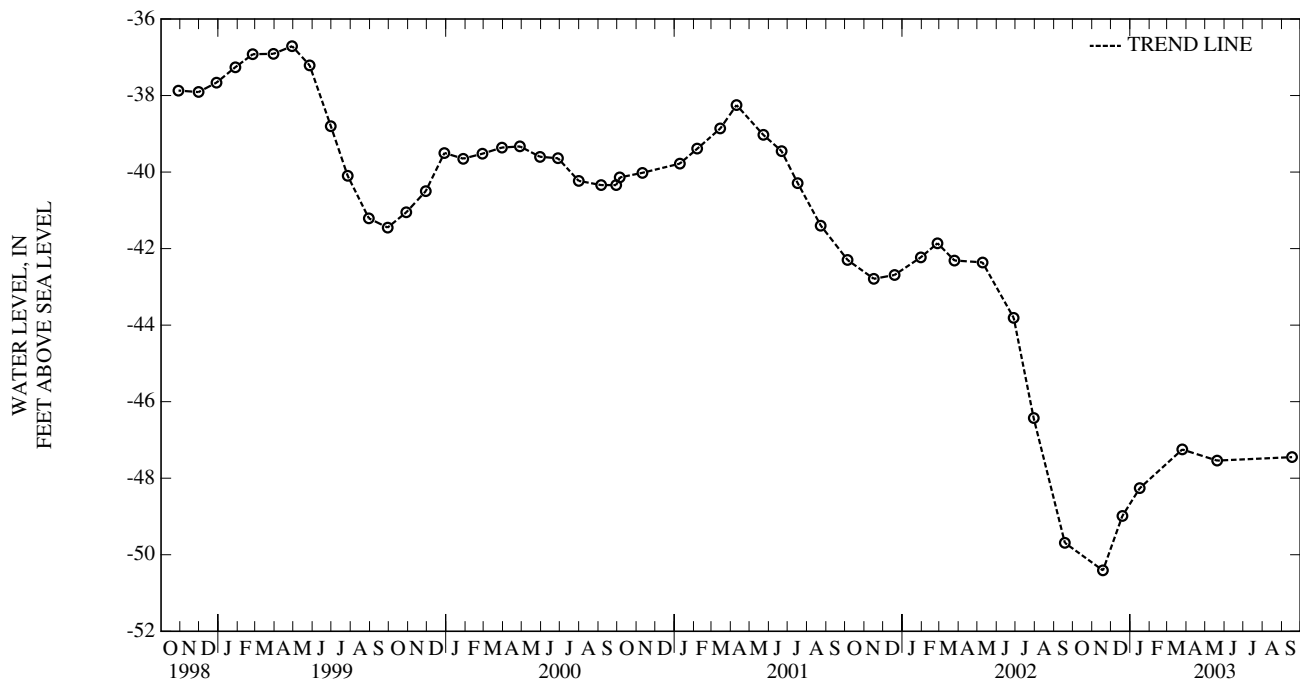
PERIOD OF RECORD.--November 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.30 ft below sea level, April 10, 1987; lowest measured, 50.41 ft below sea level, November 18, 2002.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 18, 2002	-50.41	JAN 16, 2003	-48.26	MAY 20, 2003	-47.54
DEC 19	-48.99	MAR 25	-47.25	SEP 17	-47.45

LOWEST -50.41 NOV 18, 2002
HIGHEST -47.25 MAR 25, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CHARLES COUNTY--Continued

WELL NUMBER.--CH Bf 101. SITE ID.--383853076532601. PERMIT NUMBER.--CH-01-1882.

LOCATION.--Lat 38°38'53", long 76°53'26", Hydrologic Unit 02070011, at Sam's Club, 1.7 mi. northwest of Waldorf. Owner: Sam's Club.

AQUIFER.--Magothy Formation of Upper Cretaceous age. Aquifer code: 211MGTY.

WELL CHARACTERISTICS.--Drilled, artesian well, depth 475 ft; casing diameter 6 in., to 423 ft, and 438 to 449 ft; screen diameter 6 in., from 423 to 438 ft, and 449 to 475 ft.

INSTRUMENTATION.--Periodic water level measurements with electric tape by Maryland Geological Survey personnel. Equipped with graphic water-level recorder from November 1976 to February 1978. Equipped with digital water-level recorder--60-minute recorder interval from February 1978 to May 1991.

DATUM.--Elevation of land surface is 216.45 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of shelter platform, 1.18 ft above land surface.

REMARKS.--Charles County Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

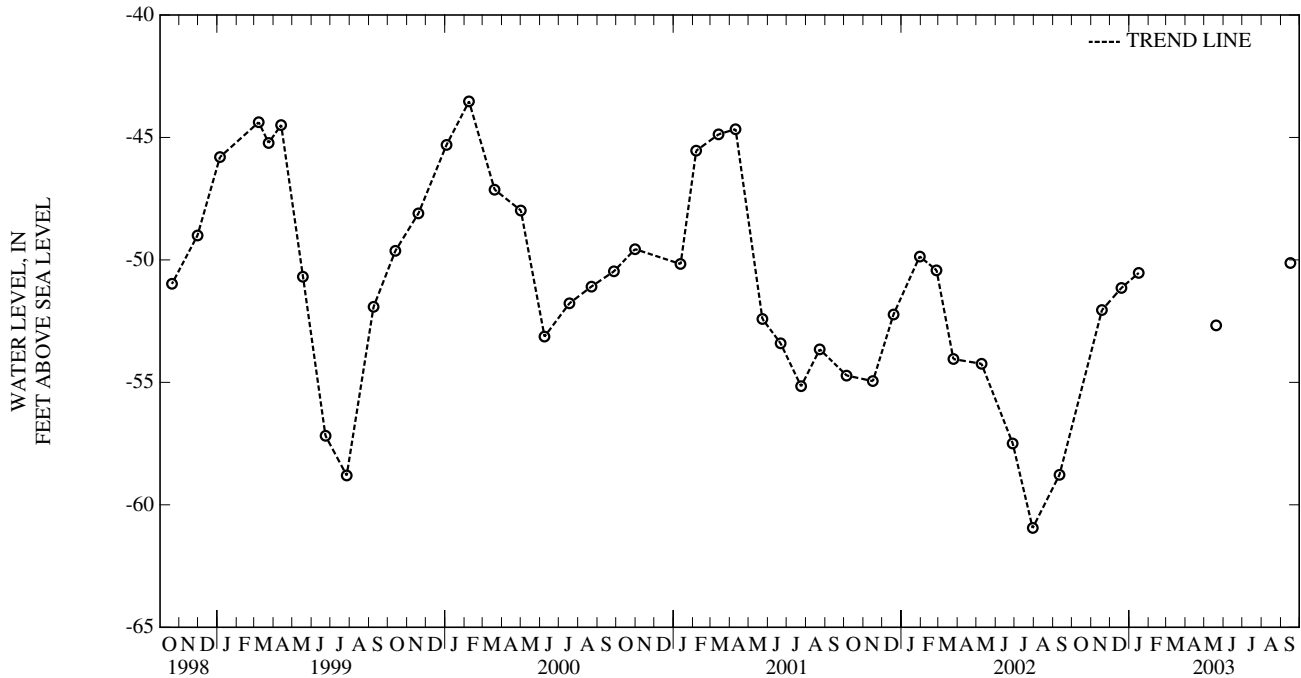
PERIOD OF RECORD.--November 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.60 ft above sea level, January 16, 1977 (recorder); lowest measured, 61.25 ft below sea level, June 14, 1999 (recorder).

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 18, 2002	-52.05	JAN 16, 2003	-50.53	SEP 16, 2003	-50.12
DEC 19	-51.15	MAY 20	-52.67		

LOWEST -52.67 MAY 20, 2003
 HIGHEST -50.12 SEP 16, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CHARLES COUNTY--Continued

WELL NUMBER.--CH Bf 133. SITE ID.--383640076545901. PERMIT NUMBER.--CH-70-0069.

LOCATION.--Lat 38°36'40", long 76°54'59", Hydrologic Unit 02070011, at St. Charles, Copely Rd. pumping station. Owner: Charles County Department of Public Works.

AQUIFER.--Magothy Formation of Upper Cretaceous age. Aquifer code: 211MGTY.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 510 ft; casing diameter 10 in., to 77 ft; casing diameter 6 in., from -2 to 420 ft, casing diameter 4 in., from 420 to 436 ft, and 506 to 510 ft; screen diameter 4 in., from 436 to 506 ft.

INSTRUMENTATION.--Periodic water level measurements with electric tape by Maryland Geological Survey personnel from April 1992 to current year. Twice yearly measurements from April 1974 to April 1992.

DATUM.--Elevation of land surface is 223.50 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.82 ft above land surface.

REMARKS.--Charles County Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

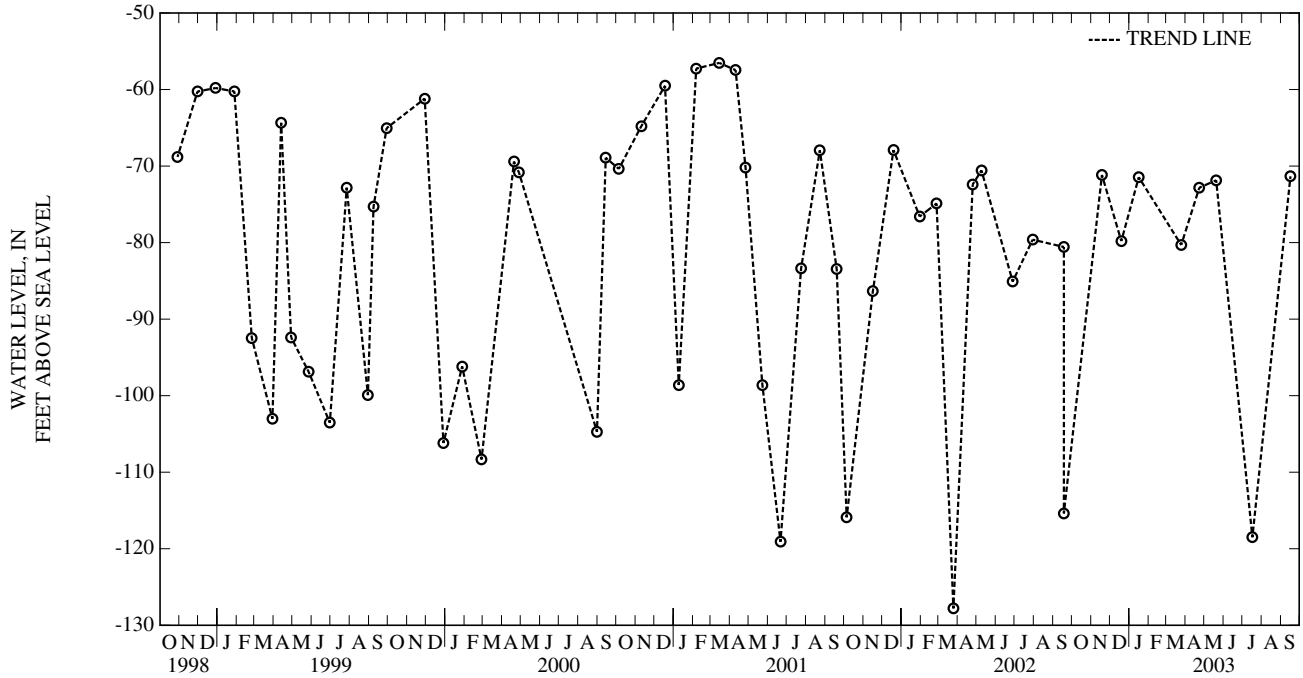
PERIOD OF RECORD.--April 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.82 ft above sea level, April 26, 1974; lowest measured, 127.79 ft below sea level, March 25, 2002.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 18, 2002	-71.16	JAN 16, 2003	-71.46	APR 23, 2003	-72.82	JUL 17, 2003	-118.50
DEC 19	-79.80	MAR 25	-80.31	MAY 20	-71.86	SEP 16	-71.34

LOWEST -118.50 JUL 17, 2003
 HIGHEST -71.16 NOV 18, 2002



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CHARLES COUNTY--Continued

WELL NUMBER.--CH Bf 134. SITE ID.--383728076531701. PERMIT NUMBER.--CH-70-0067.

LOCATION.--Lat 38°37'28", long 76°53'17", Hydrologic Unit 02070011, at John Hansen Middle School parking lot, at Waldorf. Owner: Charles County Department of Public Works.

AQUIFER.--Magothy Formation of Upper Cretaceous age. Aquifer code: 211MGTY.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 546 ft; casing diameter 6 in., to 402 ft; casing diameter 4 in., from 422 to 485 ft; screen diameter 4 in., from 402 to 422 ft, and 485 to 546 ft.

INSTRUMENTATION.--Periodic water level measurements with electric tape by Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 202.09 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.52 ft above land surface.

REMARKS.--Charles County Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

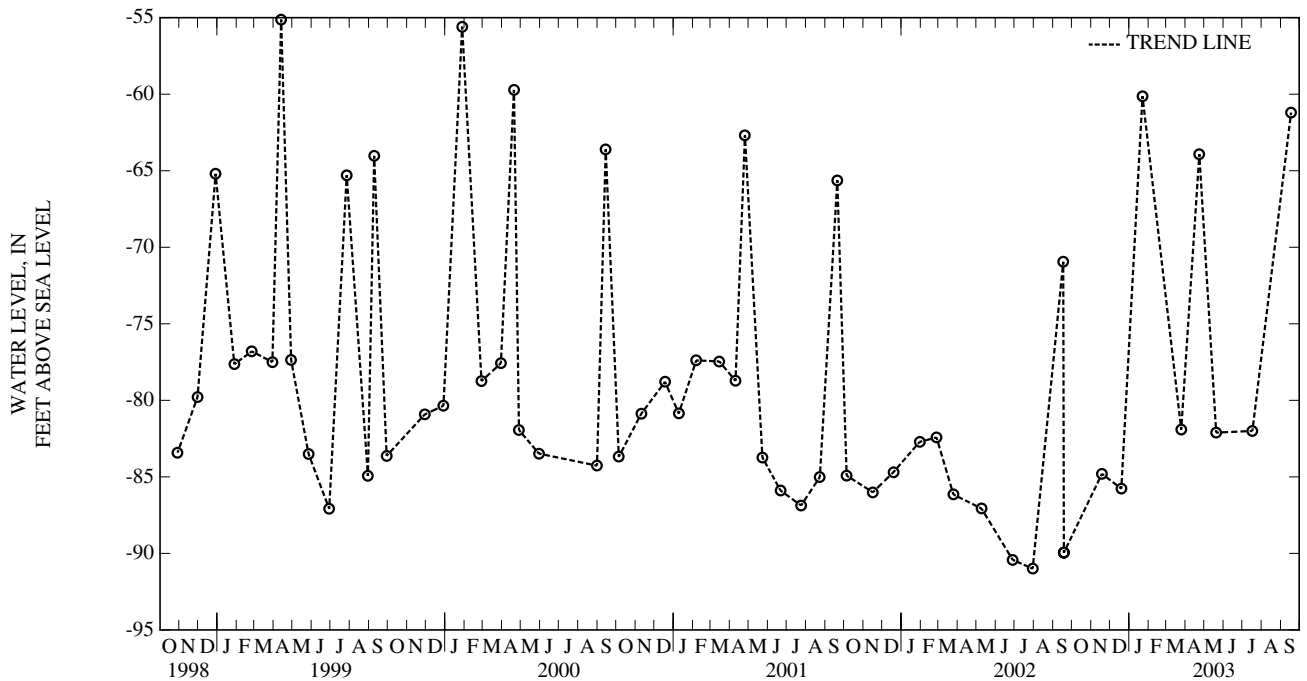
PERIOD OF RECORD.--April 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.22 ft above sea level, April 26, 1974; lowest measured, 91.00 ft below sea level, July 30, 2002.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 18, 2002	-84.80	JAN 22, 2003	-60.14	APR 23, 2003	-63.92	JUL 17, 2003	-82.00
DEC 19	-85.77	MAR 25	-81.91	MAY 20	-82.11	SEP 17	-61.20

LOWEST -85.77 DEC 19, 2002
 HIGHEST -60.14 JAN 22, 2003



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CHARLES COUNTY--Continued

WELL NUMBER.--CH Bf 146. SITE ID.--383508076540701. PERMIT NUMBER.--CH-81-0593.

LOCATION.--Lat 38°35'08", long 76°54'07", Hydrologic Unit 02070011, 0.3 mi south of the intersection of St. Pauls Dr. and Piney Church Rd., St. Charles.
 Owner: Charles County Department of Public Works.

AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 1,427 ft; casing diameter 6 in., to 1,059 ft, 1,069 to 1,073 ft, 1,083 to 1,161 ft, 1,166 to 1,170 ft, 1,180 to 1,184 ft, 1,189 to 1,195 ft, 1,205 to 1,244 ft, 1,249 to 1,252 ft, 1,262 to 1,298 ft, 1,328 to 1,342 ft, and 1,417 to 1,427 ft; screen diameter 10 in. from 1,059 to 1,069 ft, 1,073 to 1,083 ft, 1,161 to 1,166 ft, 1,170 to 1,180 ft, 1,184 to 1,189 ft, 1,195 to 1,205 ft, 1,244 to 1,249 ft, 1,252 to 1,262 ft, 1,298 to 1,328 ft, and 1,342 to 1,417 ft.

INSTRUMENTATION.--Periodic water level measurements with electric tape by Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 192.80 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.50 ft above land surface.

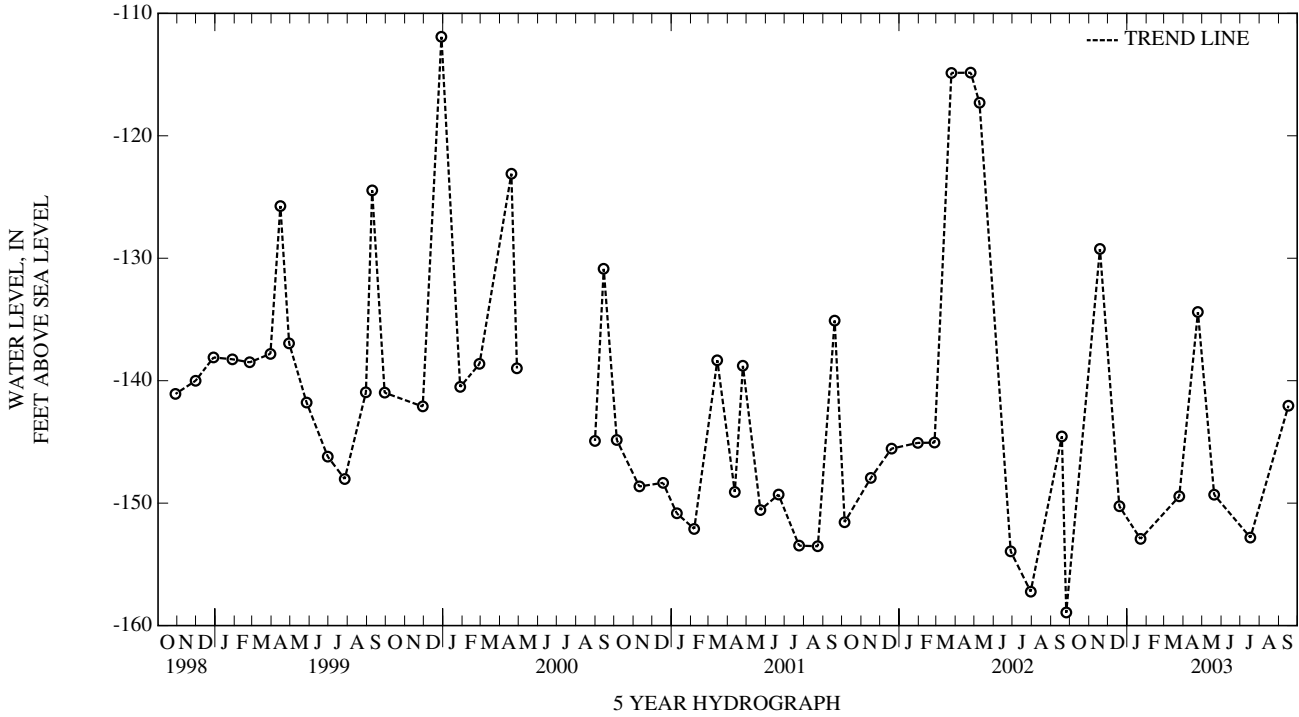
REMARKS.--Charles County Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.02 ft below sea level, April 4, 1985; lowest measured, 158.94 ft below sea level, September 25, 2002.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 18, 2002	-129.25	JAN 22, 2003	-152.92	APR 24, 2003	-134.40	JUL 17, 2003	-152.81
DEC 19	-150.25	MAR 25	-149.45	MAY 20	-149.32	SEP 16	-142.04
LOWEST -152.92		JAN 22, 2003					
HIGHEST -129.25		NOV 18, 2002					



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CHARLES COUNTY--Continued

WELL NUMBER.--CH Bf 151. SITE ID.--383508076540703. PERMIT NUMBER.--CH-81-1265.

LOCATION.--Lat 38°35'08", long 76°54'07", Hydrologic Unit 02070011, 0.3 mi south of the intersection of St. Pauls Dr. and Piney Church Rd., St. Charles. Owner: U.S. Geological Survey.

AQUIFER.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 660 ft; casing diameter 6 in., to 399 ft; casing diameter 4 in., from 399 to 645 ft; screen diameter 4 in., from 645 to 660 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by Maryland Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from August 1987 to current year.

DATUM.--Elevation of land surface is 192.8 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.20 ft above land surface.

REMARKS.--Charles County Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal. Missing data due to recorder malfunction.

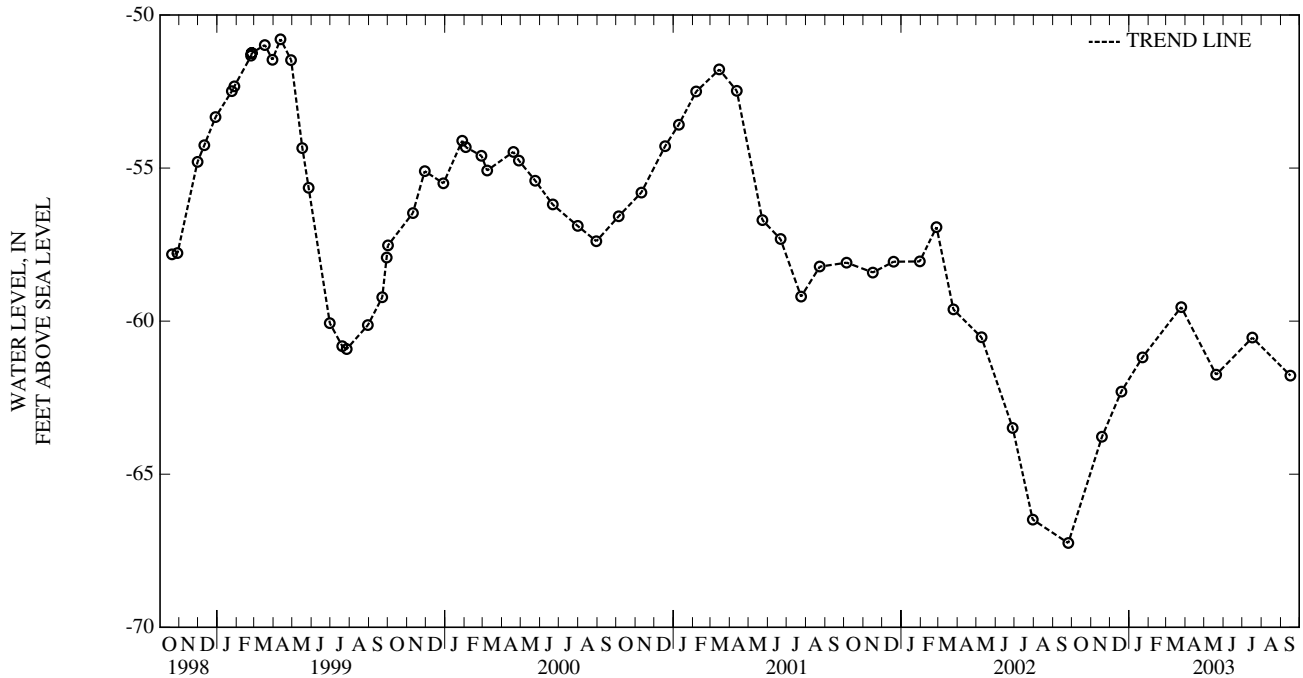
PERIOD OF RECORD.--November 1985 to December 1986, and April 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 32.39 ft below sea level, March 27, 1988 (recorder); lowest measured, 69.64 ft below sea level, August 21, 2002 (recorder).

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 18, 2002	-63.78	JAN 22, 2003	-61.18	MAY 20, 2003	-61.75	SEP 16, 2003	-61.78
DEC 19	-62.30	MAR 25	-59.54	JUL 17	-60.54		

LOWEST -63.78 NOV 18, 2002
 HIGHEST -59.54 MAR 25, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CHARLES COUNTY--Continued

WELL NUMBER.--CH Bf 157. SITE ID.--383637076545803. PERMIT NUMBER.--CH-81-1846.

LOCATION.--Lat 38°36'40", long 76°54'59", Hydrologic Unit 02070011, at St. Charles, Copely Rd. pumping station. Owner: U.S. Geological Survey.

AQUIFER.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 623 ft; casing diameter 6 in., to 396 ft; casing diameter 4 in., from 396 to 608 ft; screen diameter 4 in., from 608 to 623 ft.

INSTRUMENTATION.--Periodic water level measurements with electric tape by Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 225.00 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.70 ft above land surface.

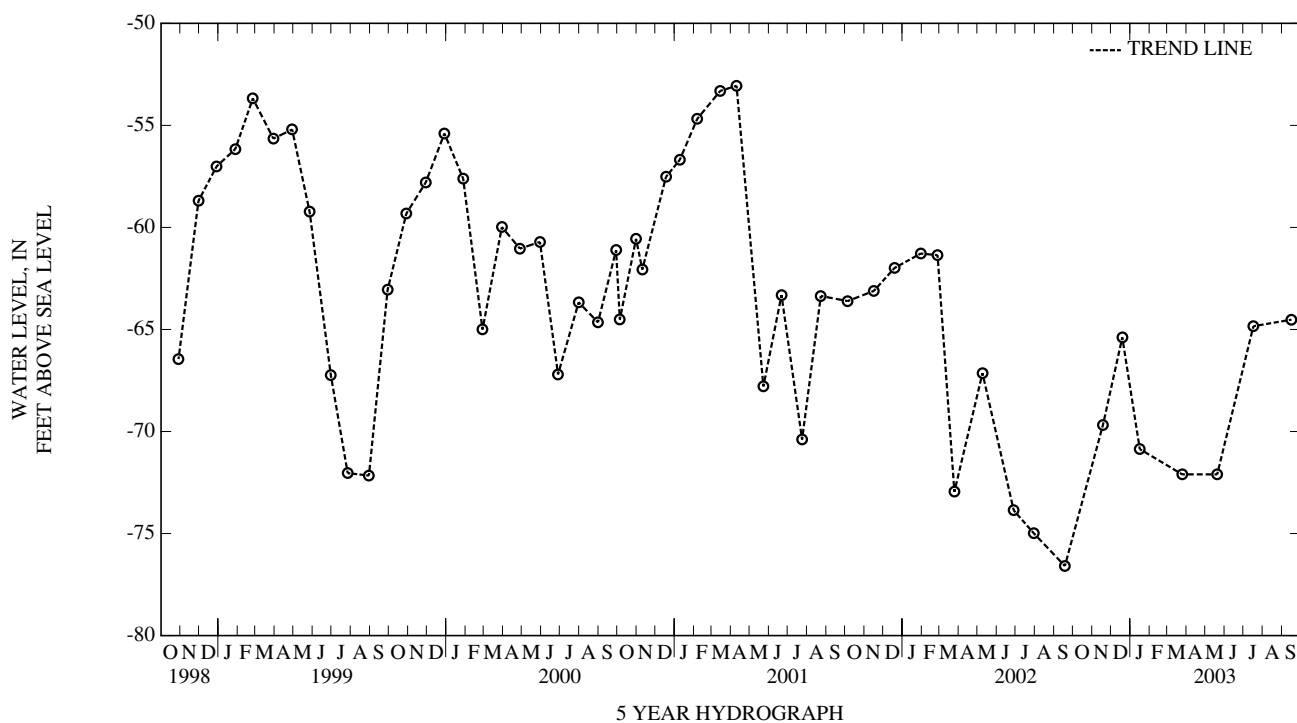
REMARKS.--Charles County Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

PERIOD OF RECORD.--November 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 37.27 ft below sea level, April 5, 1988; lowest measured, 76.59 ft below sea level, September 18, 2002.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 18, 2002	-69.68	JAN 16, 2003	-70.86	MAY 20, 2003	-72.10	SEP 16, 2003	-64.52
DEC 19	-65.39	MAR 25	-72.10	JUL 17	-64.84		
LOWEST -72.10		MAR 25, 2003		MAY 20, 2003			
HIGHEST -64.52		SEP 16, 2003					



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CHARLES COUNTY--Continued

WELL NUMBER.--CH Bf 158. SITE ID.--383732076531902. PERMIT NUMBER.--CH-81-1847.

LOCATION.--Lat 38°37'32", long 76°53'19", Hydrologic Unit 02070011, at John Hansen Middle School pumping station, Waldorf. Owner: U.S. Geological Survey.

AQUIFER.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 645 ft; casing diameter 6 in., to 398 ft; casing diameter 4 in., from 398 to 630 ft; screen diameter 4 in., from 630 to 645 ft.

INSTRUMENTATION.--Periodic water level measurements with electric tape by Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 193 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.0 ft above land surface.

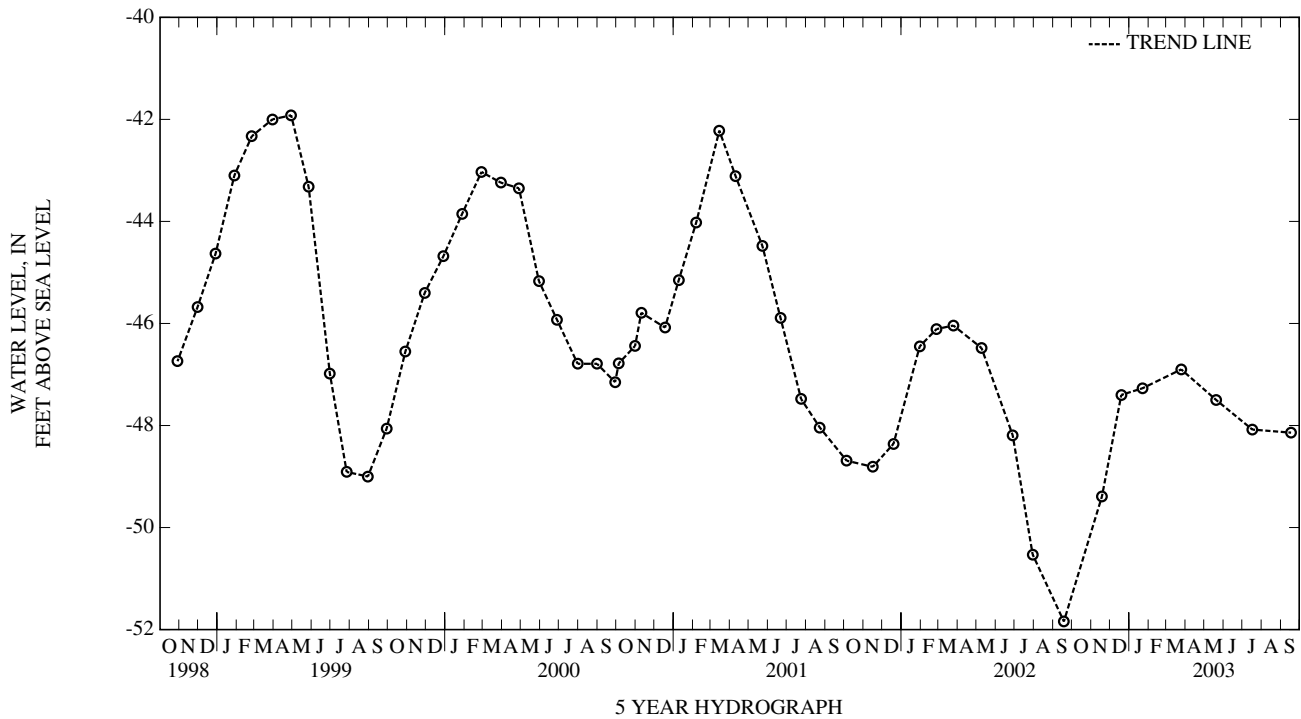
REMARKS.--Charles County Ground-Water-Level Monitoring Network observation well. Water levels are affected by regional ground-water withdrawal.

PERIOD OF RECORD.--April 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 23.70 ft below sea level, April 10, 1987; lowest measured, 51.84 ft below sea level, September 18, 2002.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 18, 2002	-49.39	JAN 22, 2003	-47.27	MAY 20, 2003	-47.50	SEP 17, 2003	-48.14
DEC 19	-47.40	MAR 25	-46.90	JUL 17	-48.08		
LOWEST -49.39 NOV 18, 2002							
HIGHEST -46.90 MAR 25, 2003							



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CHARLES COUNTY--Continued

WELL NUMBER.--CH Bg 12. SITE ID.--383746076482901. PERMIT NUMBER.--CH-81-0600.

LOCATION.--Lat 38°37'46", long 76°48'29", Hydrologic Unit 02070011, Cedarville State Forest, near Forest Rd. Owner: U.S. Geological Survey.

AQUIFER.--Calvert Formation of Lower middle Miocene age. Aquifer code: 122CLVR.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 24.5 ft; casing diameter 4 in., to 13.5 ft; casing diameter 2 in., from 18.5 to 24.5 ft; screen diameter 2 in., from 13.5 to 18.5 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 149.69 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.00 ft above land surface.

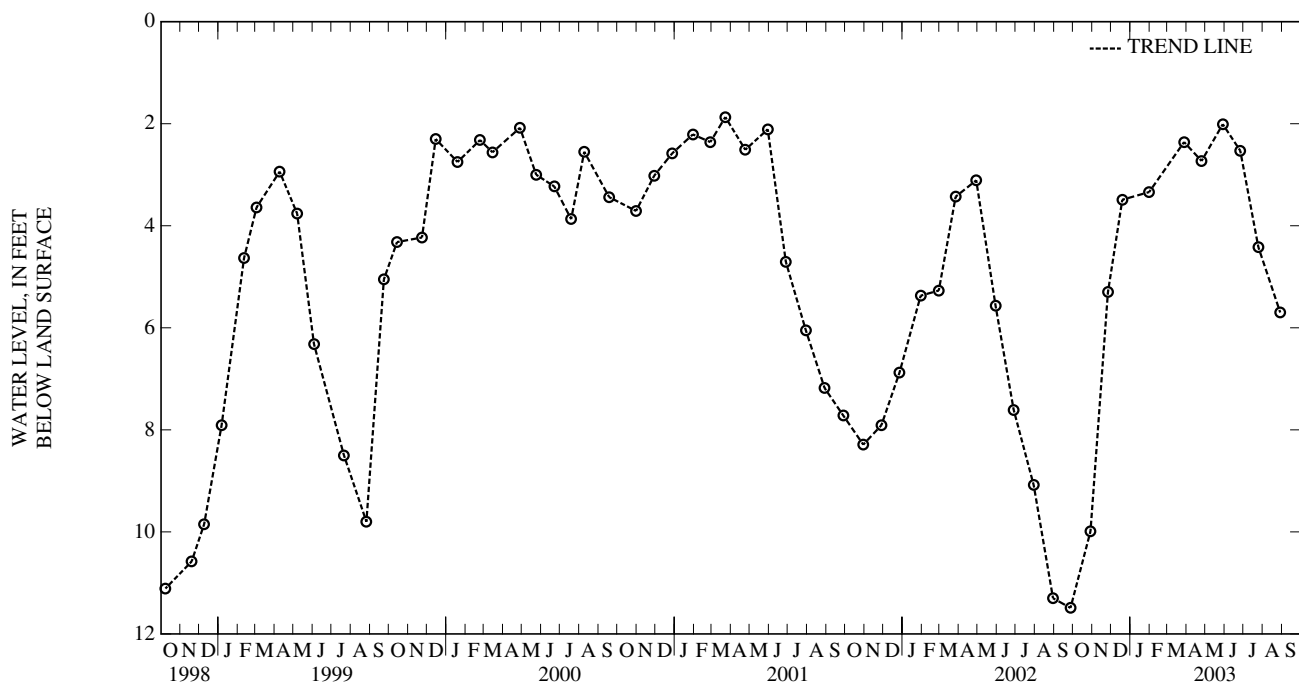
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by natural climatic response. The high water levels from December 1999 through May 2001 is the result of beavers damming nearby Zekiah Swamp Run.

PERIOD OF RECORD.--August 1983 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.87 ft below land surface, March 23, 2001; lowest measured, 11.49 ft below land surface, September 27, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	9.99	JAN 31, 2003	3.34	MAY 29, 2003	2.01	AUG 29, 2003	5.70
NOV 26	5.30	MAR 28	2.36	JUN 26	2.53		
DEC 19	3.49	APR 25	2.73	JUL 25	4.42		
HIGHEST	2.01	MAY 29, 2003					
LOWEST	9.99	OCT 29, 2002					



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CHARLES COUNTY--Continued

WELL NUMBER.--CH Bg 17. SITE ID.--383706076475401. PERMIT NUMBER.--CH-94-5325.

LOCATION.--Lat 38°37'06", long 76°47'54", Hydrologic Unit 02070011. Owner: U.S. Geological Survey.

AQUIFER.--Lower Patapsco Aquifer Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.

WELL CHARACTERISTICS.--Drilled, artesian well, depth 1,353 ft; casing diameter 4 in., to 1,353 ft depth.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 199.16 ft above North American Vertical Datum of 1988. Measuring point: Top of shelter platform, 3.50 ft above land surface.

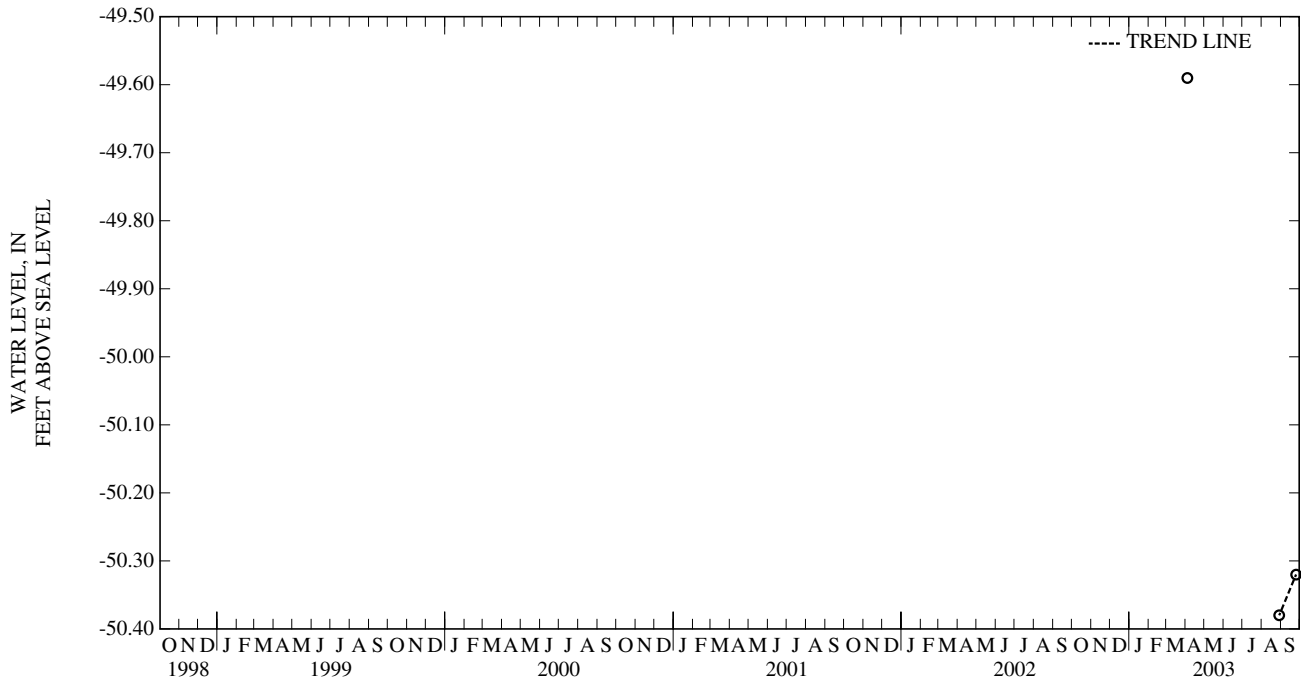
REMARKS.--Southern Maryland Patapsco Aquifer Well Drilling Project observation well. Water levels affected by nearby pumping.

PERIOD OF RECORD.--April 2003 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 39.09 ft below land surface, April 6, 2003; lowest measured, 52.38 ft below land surface, August 29, 2003.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
APR 04, 2003	-49.59	AUG 29, 2003	-50.38	SEP 25, 2003	-50.32
LOWEST -50.38		AUG 29, 2003			
HIGHEST -49.59		APR 04, 2003			



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CHARLES COUNTY--Continued

WELL NUMBER.--CH Cb 7. SITE ID.--383422077114601. PERMIT NUMBER.--CH-01-1908.

LOCATION.--Lat 38°34'22", long 77°11'46", Hydrologic Unit 02070011, at Caffee and Greenslade Rds., U.S. Naval Ordnance Station, about 2.5 mi southwest of Indian Head. Owner: U.S. Navy.

AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 167 ft; casing diameter 8 in., to 144 ft; screen diameter 6 in., from 144 to 167 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with graphic water-level recorder September 1953 to July 1965.

DATUM.--Elevation of land surface is 36.0 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.08 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

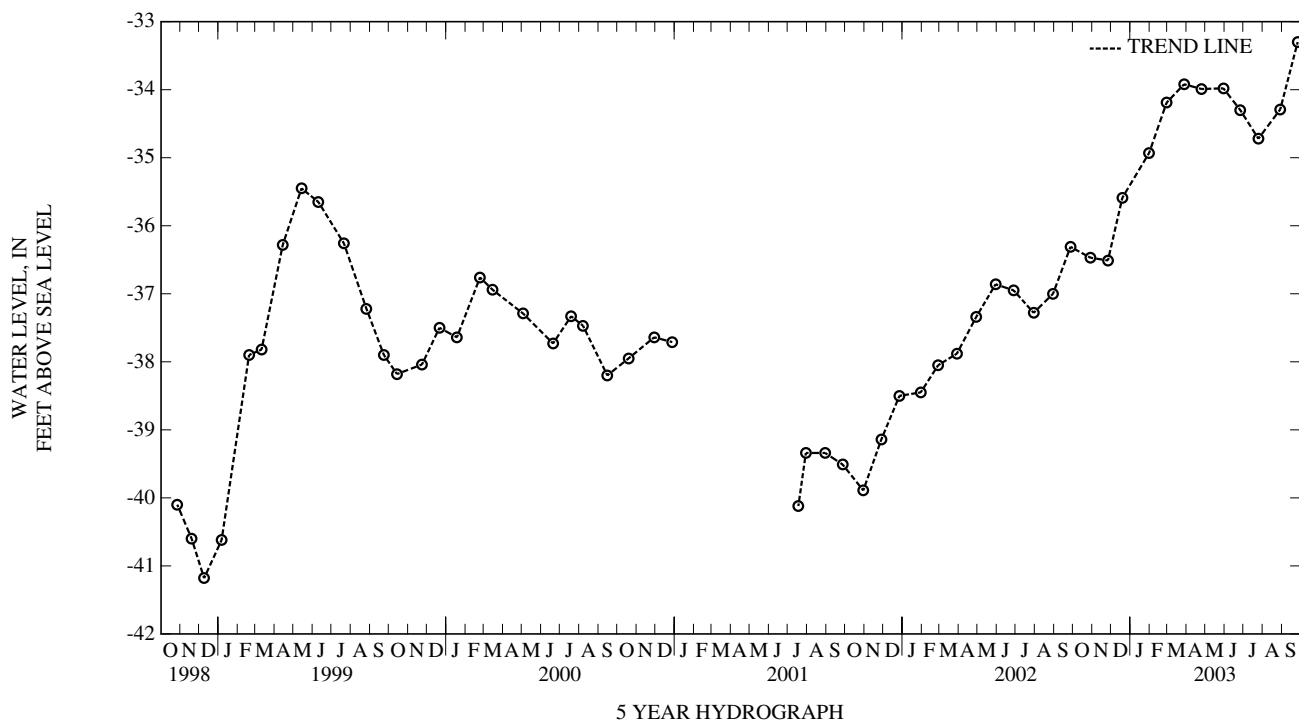
PERIOD OF RECORD.--March and April 1952, August 1953 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.35 ft below sea level, April 18, 1952; lowest measured, 53.33 ft below sea level, August 12, 14, 1989 (recorder).

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	-34.83	JAN 31, 2003	-33.29	APR 25, 2003	-32.35	JUL 25, 2003	-33.08
NOV 26	-34.87	FEB 28	-32.55	MAY 30	-32.34	AUG 29	-32.65
DEC 19	-33.95	MAR 28	-32.28	JUN 26	-32.66	SEP 26	-31.66

LOWEST -34.87 NOV 26, 2002
HIGHEST -31.66 SEP 26, 2003



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CHARLES COUNTY--Continued

WELL NUMBER.--CH Cc 31. SITE ID.--383455077074401. PERMIT NUMBER.--CH-73-1416.

LOCATION.--Lat 38°34'55", long 77°07'44", Hydrologic Unit 02070011, at Mattawoman Natural Environment Area, approximately 2,000 ft west of the intersection of MD Rts. 224 and 425. Owner: Maryland Department of Natural Resources.

AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 559 ft; casing diameter 6 in., to 200 ft; casing diameter 4 in., from 200 to 438 ft., 453 to 480 ft, 505 to 540 ft, and 554 to 559 ft; screen diameter 4 in., from 438 to 453 ft, 480 to 505 ft, and 540 to 554 ft.

INSTRUMENTATION.--Periodic water level measurements with electric tape by Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 35.00 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of shelter platform, 3.75 ft above land surface.

REMARKS.--Charles County Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

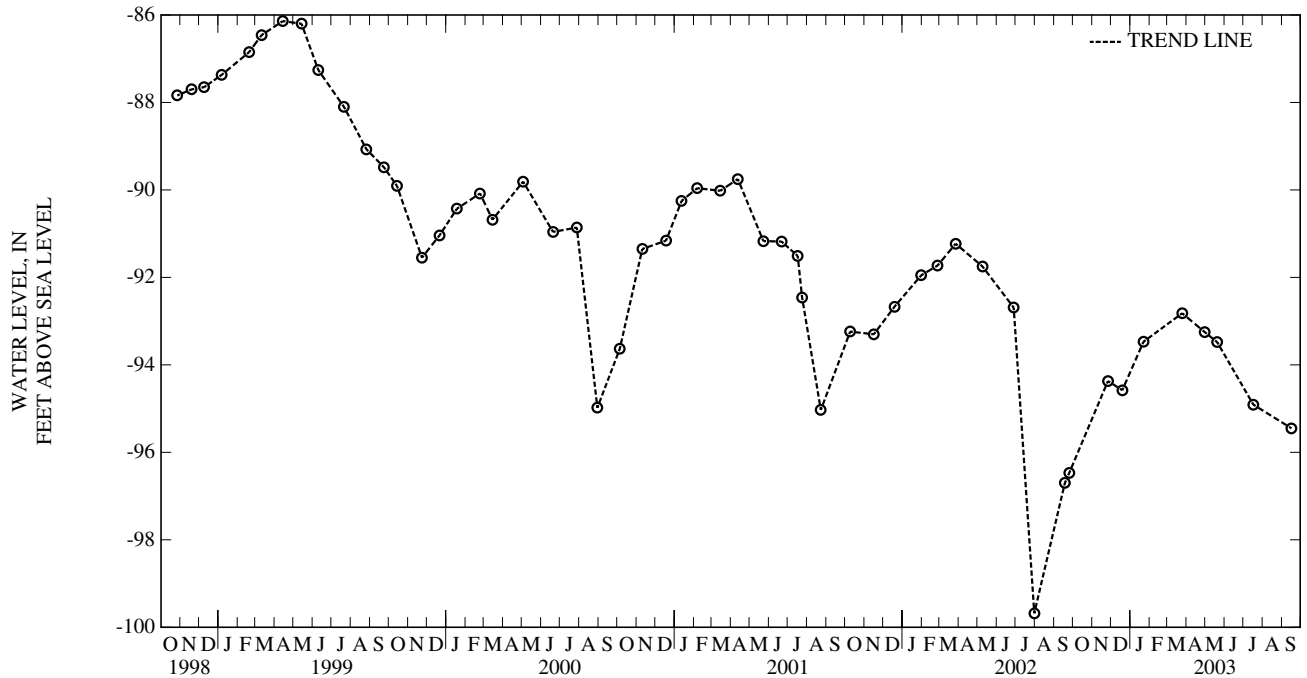
PERIOD OF RECORD.--July 1998 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 84.23 ft below sea level, July 14, 1998; lowest measured, 98.87 ft below sea level, August 9, 2002 (recorder).

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 26, 2002	-92.75	JAN 22, 2003	-91.85	APR 30, 2003	-91.63	JUL 17, 2003	-93.29
DEC 19	-92.96	MAR 25	-91.20	MAY 20	-91.86	SEP 16	-93.83

LOWEST -93.83 SEP 16, 2003
 HIGHEST -91.20 MAR 25, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CHARLES COUNTY--Continued

WELL NUMBER.--CH Cc 34. SITE ID.--383441077063901. PERMIT NUMBER.--CH-94-0897.

LOCATION.--Lat 38°34'41", long 77°06'39", Hydrologic Unit 02070011, at Mattawoman Water Treatment Plant. Owner: Maryland Geological Survey.

AQUIFER.--Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 975 ft; casing diameter 4 in., to 874 ft, 884 to 945 ft, and 965 to 975 ft; screen diameter 4 in., from 874 to 884 ft, and 945 to 955 ft.

INSTRUMENTATION.--Periodic water level measurements with electric tape by Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 41.82 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder shelf, 3.0 ft above land surface.

REMARKS.--Charles County Ground-Water-Level Monitoring Network observation well. Water levels are affected by regional ground-water withdrawal. A ground-water pumping test began on September 21, 1999, at a nearby production well with the deepest drawdown recorded as 24.16 ft below sea level on October 1, 1999.

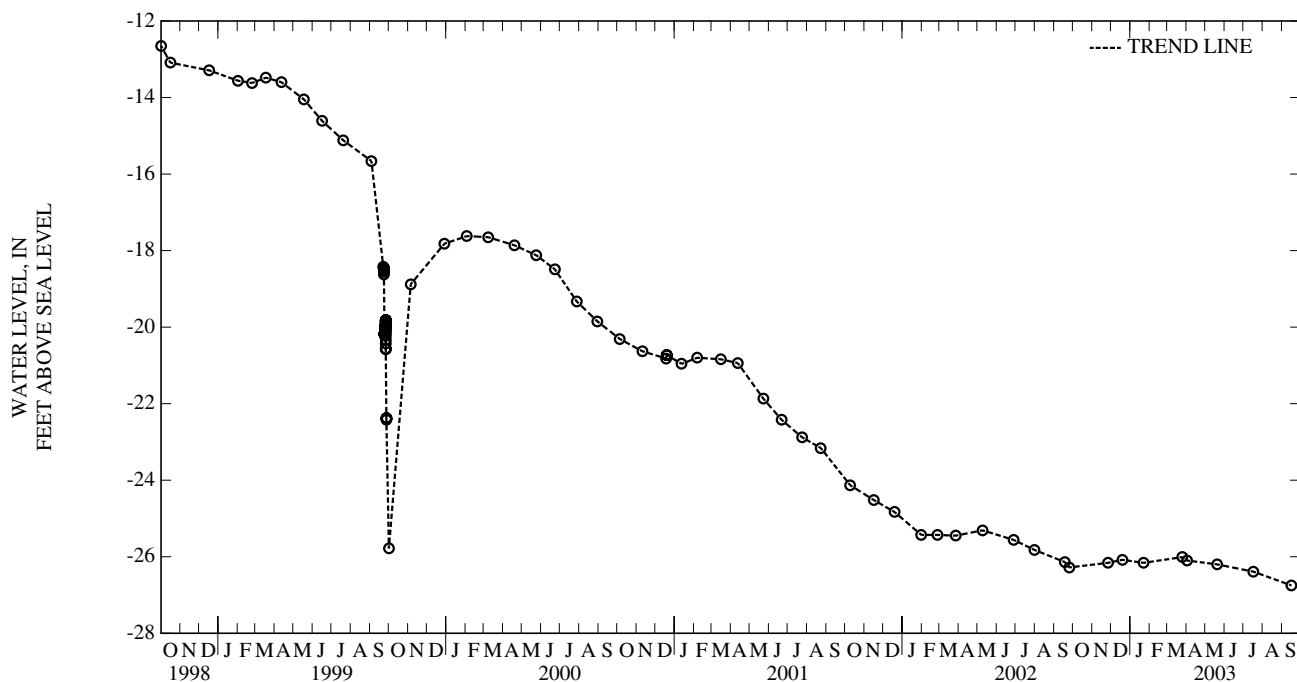
PERIOD OF RECORD.--August 1996 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.80 ft below sea level, October 8, 1996; lowest measured, 25.13 ft below sea level, September 16, 2003.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 26, 2002	-24.54	JAN 22, 2003	-24.54	APR 02, 2003	-24.48	JUL 17, 2003	-24.77
DEC 19	-24.46	MAR 25	-24.39	MAY 20	-24.58	SEP 16	-25.13

LOWEST -25.13 SEP 16, 2003
HIGHEST -24.39 MAR 25, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CHARLES COUNTY--Continued

WELL NUMBER.--CH Ce 37. SITE ID.--383236076563901. PERMIT NUMBER.--CH-73-0219.

LOCATION.--Lat 38°32'36", long 76°56'39", Hydrologic Unit 02070011, at La Plata Water Treatment Plant, 2.0 mi. northeast of La Plata. Owner: U.S. Geological Survey.

AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 1,340 ft; casing diameter 6 in., to 300 ft; casing diameter 4 in., from 300 to 1,174 ft, 1,184 to 1,250 ft, and 1,260 to 1,330 ft; screen diameter 4 in., from 1,174 to 1,184 ft, 1,250 to 1,260 ft, and 1,330 to 1,340 ft.

INSTRUMENTATION.--Periodic water level measurements with electric tape by Maryland Geological Survey personnel. Equipped with graphic water-level recorder from November 1973 to December 1975. Equipped with digital water-level recorder--15-minute recorder interval from July 1976 to October 1998.

DATUM.--Elevation of land surface is 184.95 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.62 ft above land surface.

REMARKS.--Charles County Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

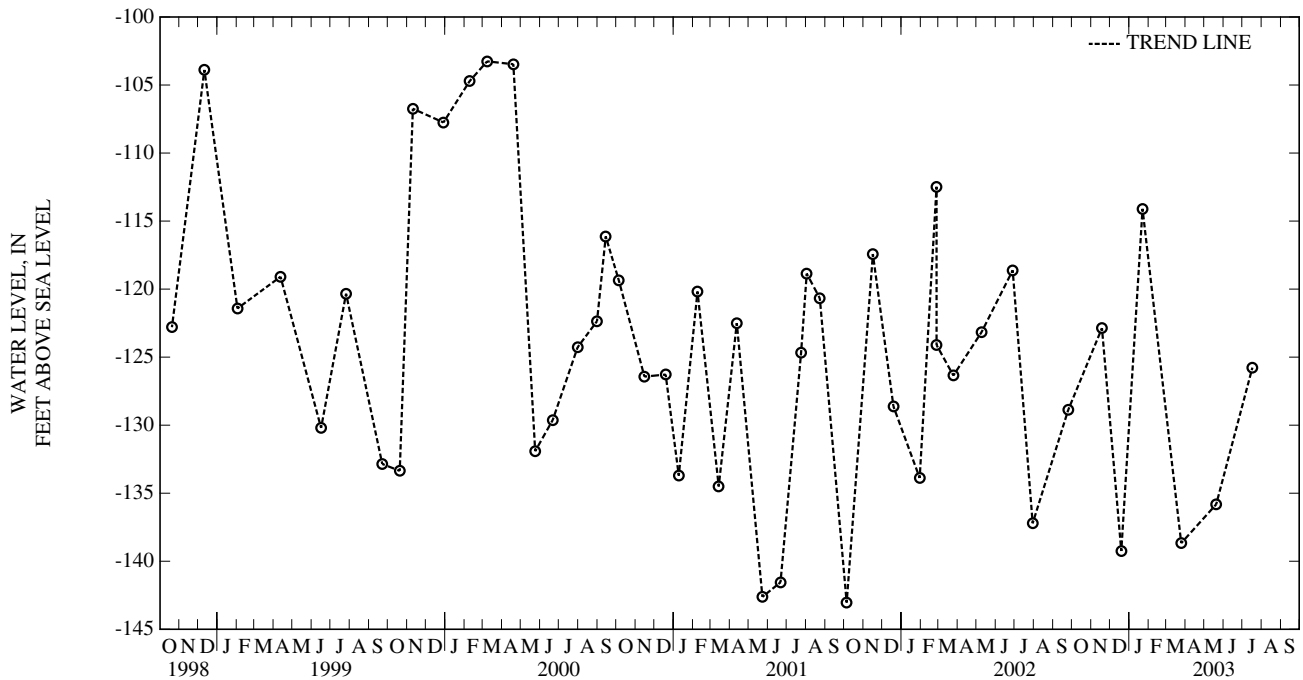
PERIOD OF RECORD.--November 1973 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.19 ft below sea level, November 5, 1973; lowest measured, 147.94 ft below sea level, August 17, 2002 (recorder).

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 18, 2002	-121.33	JAN 22, 2003	-112.56	MAY 20, 2003	-134.28
DEC 19	-137.71	MAR 25	-137.13	JUL 17	-124.23

LOWEST -137.13 MAR 25, 2003
 HIGHEST -112.56 JAN 22, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CHARLES COUNTY--Continued

WELL NUMBER.--CH Ce 56. SITE ID.--383251076583901. PERMIT NUMBER.--CH-94-1111

LOCATION.--Lat 38°32'51", long 76°58'39", Hydrologic Unit 02070011, Heritage Green, LaPlata. Owner: Town of La Plata.

AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 1,268 ft; casing diameter 6 in., to 475 ft; 4 in., from 475 to 896 ft, 906 to 945 ft, 950 to 957 ft, 962 to 993 ft, 1,008 to 1,024 ft, 1,029 to 1,037 ft, 1,042 to 1,094 ft, 1,134 to 1,166 ft, 1,186 to 1,204 ft, 1,214 to 1,248 ft and 1,258 to 1,268 ft; Screen diameter 4 in. from 896 to 906 ft, 945 to 950 ft, 957 to 962 ft, 993 to 1,008 ft, 1,024 to 1,029 ft, 1,037 to 1,042 ft, 1,094 to 1,134 ft, 1,166 to 1,186 ft, 1,204 to 1,214 ft and 1,248 to 1,258 ft.

INSTRUMENTATION.--Periodic water level measurements with electric tape by Maryland Geological Survey personnel. Equipped with digital water-level recorder--15-minute recorder interval, August 1997 to current year.

DATUM.--Elevation of land surface is 196.48 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder platform 2.85 ft above land surface.

REMARKS.--Charles County Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 87.67 ft below sea level, July 15, 1997; lowest measured, 174.15 ft below sea level, August 25, 2001 (recorder).

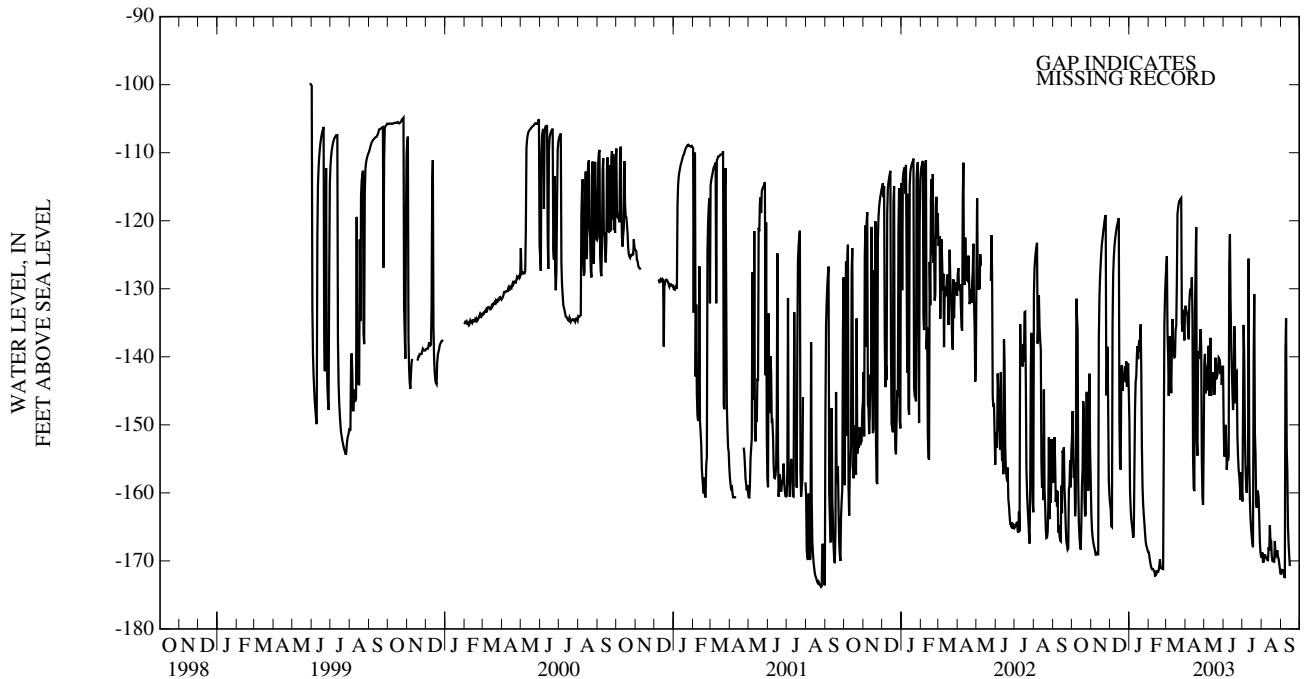
WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL				
	NOV 18, 2002	-123.08	JAN 22, 2003	-154.50	MAY 20, 2003	-137.01	SEP 16, 2003	-171.40				
	DEC 19	-130.14	MAR 25	-116.73	JUL 17	-167.17						
	LOWEST -171.40 SEP 16, 2003		HIGHEST -116.73 MAR 25, 2003									
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	-129.7	-151.8	-139.3	-163.1	-143.7	-161.6	-122.9	-149.5	-152.2	-168.7	-125.2	-126.8
2	-128.2	-148.0	-148.3	-165.3	-140.7	-162.3	-137.5	-159.8	-155.7	-169.4	-123.8	-125.2
3	-128.2	-154.2	-149.6	-166.5	-145.9	-164.9	-143.9	-162.3	-169.2	-170.0	-123.4	-136.4
4	-128.7	-157.8	-147.2	-167.2	-135.3	-165.0	-146.1	-163.9	-169.7	-170.5	-123.9	-139.8
5	-129.3	-155.9	-149.3	-167.7	-127.8	-135.3	-147.2	-164.7	-170.2	-171.0	-124.4	-145.7
6	-140.8	-163.4	-149.5	-168.1	-125.4	-127.8	-146.3	-165.5	-170.7	-171.2	-124.5	-141.1
7	-131.5	-161.2	-149.6	-168.6	-123.8	-125.4	-152.7	-166.6	-170.7	-171.2	-124.4	-137.0
8	-127.8	-131.5	-151.0	-169.1	-122.8	-123.8	-148.1	-166.1	-158.3	-171.2	-123.1	-142.9
9	-126.4	-134.0	-146.6	-169.1	-122.0	-122.8	-133.1	-156.3	-160.9	-171.4	-122.9	-145.3
10	-125.8	-136.3	-147.7	-168.9	-121.4	-122.0	-128.3	-147.7	-161.0	-171.5	-124.1	-138.9
11	-126.5	-158.5	-147.7	-169.0	-120.8	-121.4	-127.7	-143.7	-171.3	-172.2	-122.2	-134.4
12	-143.2	-164.4	-137.3	-169.0	-120.4	-120.8	-126.6	-142.8	-171.6	-172.1	-121.7	-138.3
13	-147.7	-166.5	-131.1	-137.3	-119.8	-120.4	-125.0	-139.7	-159.9	-172.0	-121.8	-139.7
14	-149.8	-167.8	-128.3	-131.1	-119.6	-119.8	-124.5	-138.4	-157.7	-171.5	-123.1	-140.1
15	-148.1	-168.3	-126.3	-128.3	-119.4	-119.6	-124.2	-140.3	-155.2	-171.6	-121.9	-140.0
16	-137.6	-164.4	-124.6	-126.3	-119.3	-149.5	-123.2	-138.3	-156.6	-171.6	-121.6	-136.0
17	-133.8	-158.7	-123.3	-124.6	-136.9	-156.1	-121.7	-137.5	-152.5	-171.4	-121.1	-135.4
18	-132.6	-156.4	-122.5	-123.3	-130.1	-156.6	-121.6	-139.2	-150.7	-170.6	-119.0	-129.1
19	-130.3	-146.5	-121.6	-122.5	-124.9	-141.9	-121.0	-135.2	-154.2	-169.8	-118.2	-119.0
20	-128.7	-148.3	-120.9	-121.6	-123.4	-141.2	-120.6	-141.8	-156.1	-171.0	-117.4	-118.2
21	-129.2	-160.7	-120.1	-120.9	-125.0	-145.0	-122.5	-153.3	-155.5	-171.0	-117.1	-117.4
22	-133.2	-163.4	-119.5	-120.1	-124.3	-142.4	-139.4	-159.1	-154.0	-171.1	-116.9	-117.1
23	-135.7	-163.1	-119.2	-119.5	-124.1	-143.3	-146.0	-161.7	-152.9	-171.2	-116.8	-116.9
24	-131.8	-145.4	-118.8	-119.2	-126.3	-142.5	-144.6	-163.2	-143.5	-171.2	-116.7	-116.8
25	-129.8	-145.2	-118.5	-145.7	-124.3	-141.4	-147.3	-164.5	-135.3	-153.6	-116.5	-116.7
26	-127.5	-151.2	-127.5	-142.8	-124.0	-143.7	-164.5	-165.9	-131.1	-135.3	-116.4	-135.1
27	-127.3	-159.7	-122.5	-138.5	-123.9	-140.7	-165.9	-167.1	-128.6	-131.1	-119.7	-136.3
28	-130.6	-149.2	-122.3	-148.4	-124.0	-144.4	-166.9	-167.7	-126.8	-128.6	-119.5	-133.1
29	-127.7	-142.5	-137.7	-158.2	-123.8	-141.8	-154.7	-168.0	---	---	-118.9	-134.9
30	-126.9	-153.9	-139.1	-160.3	-123.7	-141.0	-154.1	-168.4	---	---	-120.2	-137.6
31	-126.5	-158.1	---	---	-123.7	-145.2	-153.8	-168.7	---	---	-120.8	-133.6
MONTH	-125.8	-168.3	-118.5	-169.1	-119.3	-165.0	-120.6	-168.7	-126.8	-172.2	-116.4	-145.7

CHARLES COUNTY--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-119.4	-132.5	-126.7	-141.0	-127.2	-150.2	-130.1	-161.3	-142.3	-169.4	-148.1	-171.9
2	-118.8	-133.1	-126.9	-139.6	-127.5	-154.7	-125.9	-148.3	-144.6	-168.8	-146.7	-171.3
3	-120.0	-133.6	-129.0	-145.4	-131.1	-153.7	-123.6	-135.3	-168.8	-170.1	-148.9	-171.3
4	-120.0	-133.9	-126.4	-143.0	-134.5	-150.0	-122.3	-140.5	-146.0	-170.1	-147.7	-171.4
5	-119.9	-136.3	-130.4	-144.9	-130.3	-152.3	-125.0	-151.1	-145.7	-169.7	-147.4	-171.7
6	-120.5	-137.4	-126.9	-141.5	-129.1	-156.6	-127.6	-156.3	-147.6	-169.0	-154.2	-172.4
7	-119.7	-132.0	-123.6	-140.9	-137.0	-154.9	-131.6	-158.8	-147.6	-169.4	-139.2	-172.4
8	-118.8	-130.3	-122.8	-138.4	-137.2	-155.2	-129.0	-160.0	-143.4	-169.5	-134.4	-139.2
9	-118.3	-130.0	-124.8	-145.7	-126.5	-154.7	-128.2	-156.2	-144.8	-169.5	-131.8	-134.4
10	-118.1	-131.0	-123.8	-142.6	-122.0	-126.5	-125.6	-156.2	-146.9	-169.9	-131.0	-153.4
11	-117.9	-128.3	-122.6	-137.2	-119.9	-122.0	-122.8	-125.6	-145.9	-169.9	-134.9	-156.9
12	-117.4	-134.1	-124.8	-145.7	-119.1	-131.7	-122.0	-155.0	-145.7	-168.0	-139.3	-164.9
13	-124.1	-155.1	-123.9	-144.1	-120.2	-137.5	-155.0	-161.2	-142.1	-168.5	-141.5	-167.4
14	-155.1	-159.4	-124.3	-144.6	-122.5	-141.6	-161.2	-163.8	-139.2	-164.8	-151.2	-169.3
15	-132.9	-159.7	-123.3	-142.3	-122.2	-145.1	-163.8	-165.3	-143.7	-167.2	-169.3	-170.8
16	-123.2	-132.9	-125.7	-142.9	-123.4	-147.8	-165.3	-166.5	-142.9	-166.9	---	---
17	-120.9	-127.2	-129.5	-145.6	-122.3	-145.9	-166.4	-167.4	-144.7	-169.2	---	---
18	-119.6	-120.9	-124.8	-144.1	-119.9	-135.5	-140.6	-168.0	-146.8	-170.0	---	---
19	-119.2	-152.4	-122.8	-140.1	-119.0	-138.2	-130.7	-140.6	-147.0	-170.1	---	---
20	-125.3	-154.5	-122.7	-143.2	-122.3	-146.8	-127.4	-130.8	-147.9	-170.1	---	---
21	-124.9	-139.2	-123.8	-143.1	-121.0	-142.2	-126.0	-151.1	-145.4	-170.1	---	---
22	-126.4	-139.5	-127.6	-142.7	-120.8	-142.1	-128.9	-154.3	-142.9	-167.1	---	---
23	-125.4	-140.3	-124.8	-141.6	-120.8	-141.6	-133.7	-161.1	-144.9	-168.9	---	---
24	-125.0	-138.3	-122.2	-140.1	-125.5	-154.6	-138.3	-162.2	-145.2	-169.2	---	---
25	-124.0	-135.9	-122.2	-140.3	-127.7	-156.6	-135.8	-159.7	-145.9	-168.8	---	---
26	-123.3	-138.4	-123.6	-140.7	-127.8	-157.5	-136.7	-159.9	-143.9	-168.4	---	---
27	-122.4	-155.0	-125.0	-142.5	-134.9	-159.0	-135.9	-160.7	-145.6	-169.3	---	---
28	-155.0	-160.6	-122.6	-141.3	-131.5	-161.0	-134.9	-163.8	-149.3	-169.7	---	---
29	-141.0	-161.8	-122.4	-144.2	-129.2	-157.0	-163.8	-167.3	-150.9	-170.4	---	---
30	-131.0	-152.4	-123.2	-142.0	-131.6	-159.6	-167.3	-168.8	-147.8	-171.1	---	---
31	---	---	-124.1	-141.3	---	---	-168.7	-169.4	-153.4	-171.9	---	---
MONTH	-117.4	-161.8	-122.2	-145.7	-119.0	-161.0	-122.0	-169.4	-139.2	-171.9	-131.0	-172.4
YEAR	-116.4	-172.4										

Daily Low Water Levels



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CHARLES COUNTY--Continued

WELL NUMBER.--CH Ce 57. SITE ID.--383250076584001. PERMIT NUMBER.--CH-94-1112

LOCATION.--Lat 38°32'50", long 76°58'40", Hydrologic Unit 02070011, Heritage Green, LaPlata. Owner: Town of La Plata.

AQUIFER.--Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.

WELL CHARACTERISTICS.--Drilled, observation,artesian well, depth 1,703 ft; casing diameter 6 in., to 400 ft; 4 in., from 400 to 1,406 ft, 1,421 to 1,500 ft, 1,515 to 1,668 ft, and 1,698 to 1,703 ft. Screen diameter 4 in., from 1,406 to 1,421 ft, 1,500 to 1,515 ft, and 1,668 to 1,698 ft.

INSTRUMENTATION.--Periodic water level measurements with electric tape by Maryland Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval, March 1997 to July 1998.

DATUM.--Elevation of land surface is 193.47 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder platform, 5.0 ft above land surface.

REMARKS.--Charles County Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

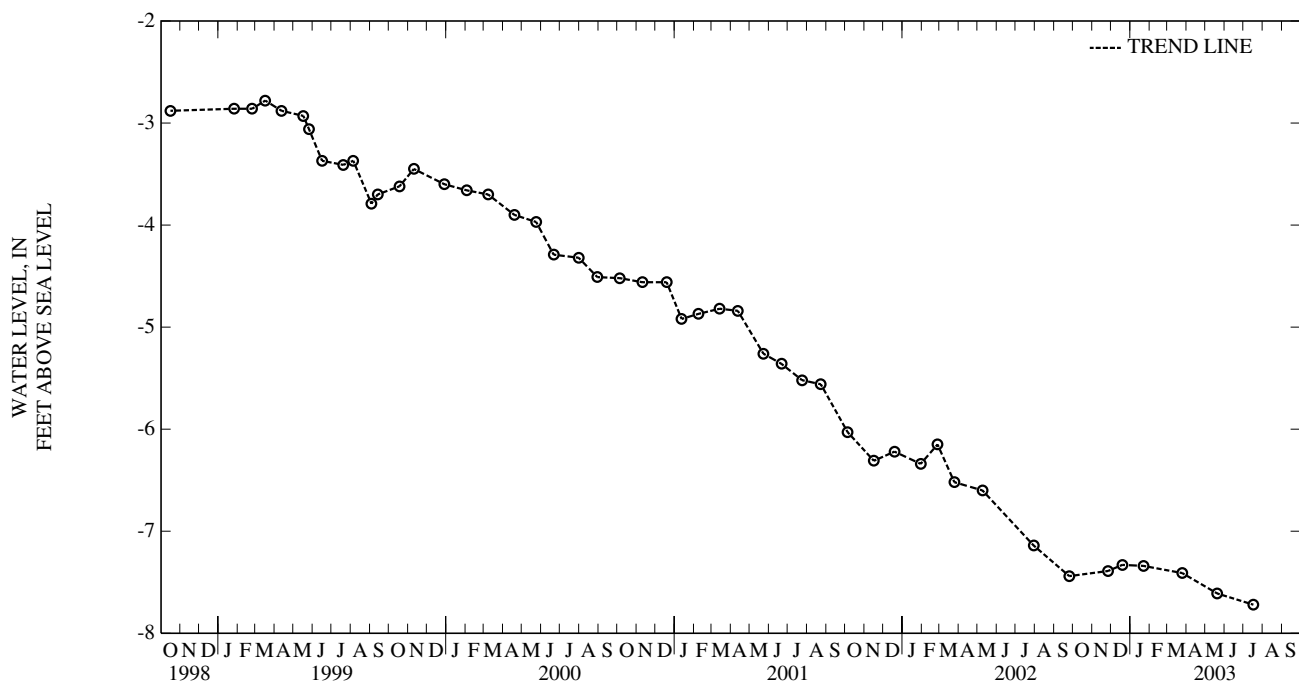
PERIOD OF RECORD.--March 1997 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.13 ft above sea level, May 1, 1997 (recorder); lowest measured, 6.14 ft below sea level, July 17, 2003.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 26, 2002	-5.81	JAN 22, 2003	-5.76	MAY 20, 2003	-6.03
DEC 19	-5.75	MAR 25	-5.83	JUL 17	-6.14

LOWEST -6.14 JUL 17, 2003
HIGHEST -5.75 DEC 19, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CHARLES COUNTY--Continued

WELL NUMBER.--CH Cg 24. SITE ID.--383254076481401. PERMIT NUMBER.--CH-94-4194.

LOCATION.--Lat 38°32'54", long 76°48'14", Hydrologic Unit 02070011, at Hughesville Pond. Owner: Maryland Geological Survey.

AQUIFER.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.

WELL CHARACTERISTICS.--Drilled, artesian well, depth 835 ft; casing diameter 12 in., to 41 ft, casing diameter 4 in., from +3.7 to 795 ft, and 825 to 835 ft; screen diameter 4 in., from 795 to 825 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recording interval, April 2002 to current year.

DATUM.--Elevation of land surface is 171.04 ft above North American Vertical Datum of 1988. Measuring point: Top of 4 in. coupling, 3.75 ft above land surface.

REMARKS.--Southern Maryland Patapsco Aquifer Well Drilling Project observation well. Water levels are affected by regional ground-water withdrawal.

PERIOD OF RECORD.--January 2002 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 46.80 ft below sea level, April 3, 2002 (recorder); lowest measured, 50.19 ft below sea level, September 30, 2002 (recorder).

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

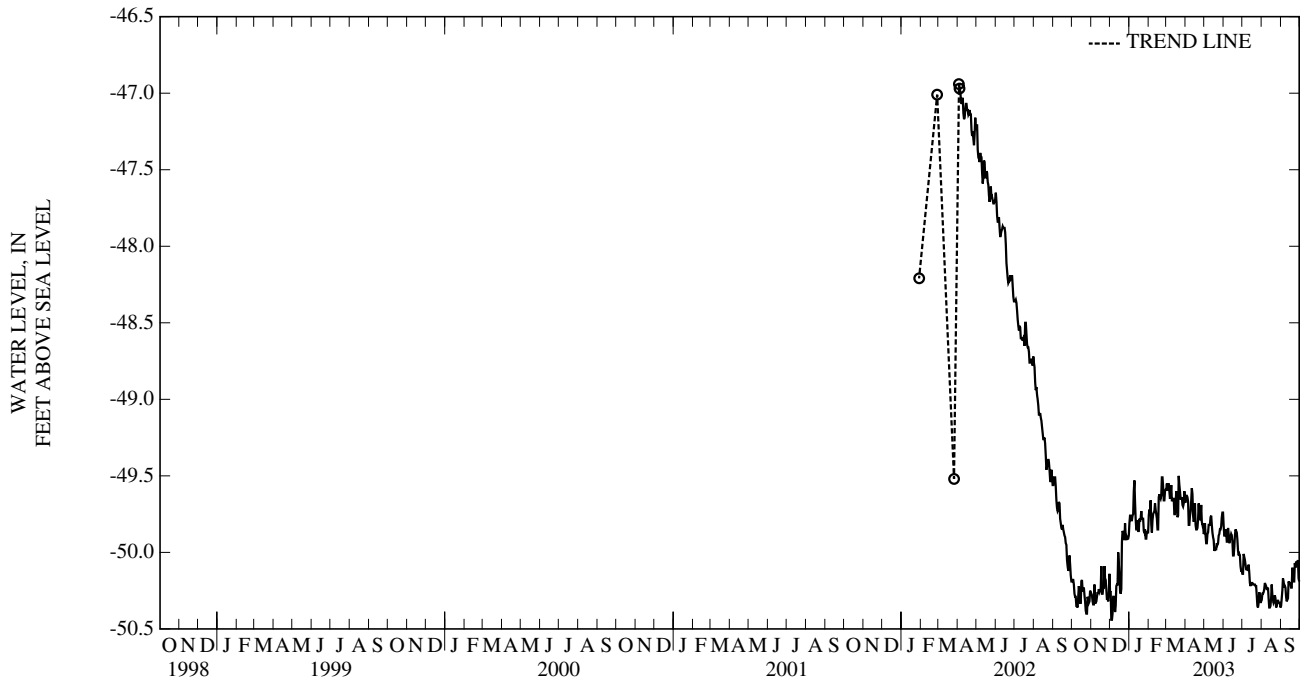
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	-50.29	JAN 30, 2003	-49.87	APR 24, 2003	-49.77	JUL 24, 2003	-50.26
NOV 25	-50.21	FEB 27	-49.55	MAY 29	-49.76	AUG 29	-50.29
DEC 19	-50.00	MAR 27	-49.67	JUN 25	-50.01	SEP 25	-50.04
LOWEST -50.29		OCT 29, 2002		AUG 29, 2003			
HIGHEST -49.55		FEB 27, 2003					

DAY	MAX		MIN		MAX		MIN		MAX		MIN	
	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH						
1	-50.16	-50.19	-50.24	-50.27	-50.14	-50.26	-49.57	-49.81	-49.66	-49.76	-49.55	-49.59
2	-50.16	-50.18	-50.25	-50.28	-50.19	-50.26	-49.65	-49.76	-49.68	-49.72	-49.34	-49.55
3	-50.16	-50.18	-50.28	-50.32	-50.21	-50.44	-49.63	-49.76	-49.66	-49.74	-49.41	-49.59
4	-50.17	-50.21	-50.32	-50.34	-50.40	-50.44	-49.65	-49.79	-49.50	-49.66	-49.54	-49.59
5	-50.16	-50.27	-50.19	-50.34	-50.15	-50.40	-49.76	-49.79	-49.66	-49.82	-49.44	-49.55
6	-50.27	-50.29	-50.08	-50.21	-50.21	-50.29	-49.71	-49.76	-49.79	-49.87	-49.41	-49.60
7	-50.25	-50.29	-50.21	-50.33	-50.25	-50.29	-49.60	-49.75	-49.65	-49.79	-49.60	-49.65
8	-50.28	-50.35	-50.32	-50.33	-50.25	-50.31	-49.47	-49.60	-49.68	-49.75	-49.51	-49.62
9	-50.35	-50.35	-50.29	-50.32	-50.31	-50.39	-49.46	-49.53	-49.73	-49.74	-49.48	-49.56
10	-50.29	-50.36	-50.21	-50.29	-50.22	-50.35	-49.53	-49.67	-49.55	-49.73	-49.56	-49.66
11	-50.22	-50.29	-50.20	-50.26	-50.07	-50.22	-49.67	-49.78	-49.60	-49.68	-49.65	-49.66
12	-50.22	-50.22	-50.21	-50.27	-50.09	-50.21	-49.78	-49.85	-49.59	-49.72	-49.61	-49.65
13	-50.22	-50.27	-50.21	-50.24	-49.93	-50.21	-49.71	-49.85	-49.68	-49.75	-49.55	-49.65
14	-50.27	-50.33	-50.24	-50.26	-49.88	-50.00	-49.76	-49.79	-49.75	-49.78	-49.65	-49.75
15	-50.19	-50.33	-50.24	-50.25	-50.00	-50.07	-49.79	-49.86	-49.69	-49.85	-49.68	-49.75
16	-50.00	-50.19	-50.09	-50.24	-49.98	-50.15	-49.78	-49.86	-49.64	-49.85	-49.60	-49.69
17	-50.07	-50.18	-50.04	-50.09	-50.15	-50.25	-49.68	-49.78	-49.52	-49.64	-49.54	-49.60
18	-50.18	-50.25	-50.08	-50.27	-50.24	-50.27	-49.78	-49.80	-49.54	-49.62	-49.54	-49.65
19	-50.18	-50.25	-50.22	-50.27	-49.93	-50.24	-49.72	-49.78	-49.61	-49.64	-49.65	-49.77
20	-50.18	-50.23	-50.23	-50.23	-49.71	-49.93	-49.65	-49.73	-49.61	-49.65	-49.49	-49.76
21	-50.23	-50.28	-50.09	-50.23	-49.80	-49.86	-49.73	-49.78	-49.51	-49.63	-49.48	-49.50
22	-50.28	-50.32	-50.01	-50.09	-49.81	-49.87	-49.77	-49.78	-49.23	-49.51	-49.50	-49.56
23	-50.32	-50.38	-50.06	-50.17	-49.85	-49.88	-49.74	-49.78	-49.19	-49.51	-49.56	-49.60
24	-50.38	-50.40	-50.17	-50.18	-49.81	-49.92	-49.74	-49.86	-49.51	-49.57	-49.60	-49.65
25	-50.29	-50.40	-50.18	-50.24	-49.57	-49.81	-49.85	-49.87	-49.57	-49.66	-49.61	-49.65
26	-50.24	-50.29	-50.24	-50.31	-49.70	-49.89	-49.75	-49.85	-49.60	-49.66	-49.55	-49.64
27	-50.27	-50.31	-50.25	-50.30	-49.89	-49.92	-49.79	-49.91	-49.53	-49.60	-49.64	-49.69
28	-50.30	-50.33	-50.27	-50.32	-49.83	-49.90	-49.83	-49.91	-49.50	-49.59	-49.68	-49.70
29	-50.25	-50.32	-50.09	-50.27	-49.82	-49.91	-49.77	-49.86	---	---	-49.58	-49.68
30	-50.18	-50.25	-50.02	-50.14	-49.89	-49.91	-49.86	-49.87	---	---	-49.56	-49.60
31	-50.19	-50.26	---	---	-49.80	-49.89	-49.76	-49.87	---	---	-49.57	-49.67
MONTH	-50.00	-50.40	-50.01	-50.34	-49.57	-50.44	-49.46	-49.91	-49.19	-49.87	-49.34	-49.77

CHARLES COUNTY--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	-49.57	-49.67	-49.81	-49.87	-49.64	-49.83	-50.12	-50.14	-50.27	-50.31	-50.30	-50.35
2	-49.58	-49.63	-49.76	-49.81	-49.83	-49.89	-50.01	-50.14	-50.27	-50.27	-50.24	-50.30
3	-49.59	-49.63	-49.78	-49.89	-49.85	-49.89	-49.98	-50.01	-50.26	-50.27	-50.17	-50.25
4	-49.59	-49.64	-49.89	-49.94	-49.84	-49.85	-49.99	-50.03	-50.24	-50.26	-50.10	-50.17
5	-49.60	-49.67	-49.88	-49.94	-49.84	-49.87	-50.03	-50.05	-50.18	-50.24	-50.11	-50.19
6	-49.67	-49.82	-49.86	-49.88	-49.87	-49.93	-50.05	-50.08	-50.18	-50.20	-50.19	-50.23
7	-49.75	-49.82	-49.78	-49.87	-49.80	-49.93	-50.08	-50.11	-50.18	-50.21	-50.20	-50.22
8	-49.73	-49.76	-49.78	-49.82	-49.81	-49.84	-50.08	-50.11	-50.18	-50.22	-50.20	-50.23
9	-49.65	-49.73	-49.77	-49.82	-49.82	-49.88	-50.07	-50.11	-50.21	-50.24	-50.23	-50.29
10	-49.58	-49.66	-49.77	-49.82	-49.88	-49.94	-50.05	-50.12	-50.22	-50.24	-50.28	-50.32
11	-49.51	-49.58	-49.67	-49.77	-49.88	-49.92	-50.03	-50.08	-50.21	-50.23	-50.27	-50.31
12	-49.49	-49.62	-49.67	-49.76	-49.83	-49.90	-50.08	-50.13	-50.23	-50.30	-50.18	-50.30
13	-49.62	-49.76	-49.75	-49.82	-49.84	-49.88	-50.13	-50.20	-50.30	-50.36	-50.16	-50.19
14	-49.76	-49.80	-49.82	-49.87	-49.85	-49.89	-50.18	-50.22	-50.35	-50.36	-50.19	-50.20
15	-49.68	-49.78	-49.87	-49.90	-49.87	-49.93	-50.20	-50.20	-50.30	-50.35	-50.14	-50.20
16	-49.63	-49.68	-49.86	-49.92	-49.92	-50.02	-50.20	-50.20	-50.19	-50.30	-50.15	-50.20
17	-49.66	-49.82	-49.92	-49.99	-49.97	-50.02	-50.20	-50.20	-50.19	-50.21	-50.20	-50.23
18	-49.81	-49.85	-49.95	-49.98	-49.89	-49.97	-50.20	-50.21	-50.21	-50.28	-49.87	-50.23
19	-49.83	-49.85	-49.95	-49.98	-49.83	-49.89	-50.21	-50.21	-50.28	-50.31	-49.87	-50.10
20	-49.78	-49.84	-49.94	-49.98	-49.83	-49.85	-50.21	-50.21	-50.31	-50.33	-50.10	-50.15
21	-49.65	-49.78	-49.92	-49.94	-49.85	-49.86	-50.21	-50.21	-50.28	-50.32	-50.15	-50.19
22	-49.63	-49.68	-49.92	-49.95	-49.86	-49.87	-50.21	-50.22	-50.24	-50.28	-50.07	-50.19
23	-49.68	-49.76	-49.89	-49.94	-49.87	-49.92	-50.22	-50.22	-50.24	-50.30	-49.94	-50.07
24	-49.76	-49.79	-49.86	-49.89	-49.92	-49.99	-50.22	-50.28	-50.30	-50.36	-50.03	-50.10
25	-49.69	-49.77	-49.85	-49.88	-49.99	-50.02	-50.28	-50.35	-50.32	-50.35	-50.03	-50.06
26	-49.64	-49.69	-49.76	-49.85	-49.98	-50.01	-50.33	-50.36	-50.26	-50.33	-50.06	-50.07
27	-49.69	-49.80	-49.82	-49.85	-49.97	-50.02	-50.26	-50.33	-50.25	-50.31	-50.01	-50.07
28	-49.78	-49.82	-49.77	-49.83	-50.02	-50.09	-50.23	-50.26	-50.28	-50.33	-50.00	-50.05
29	-49.77	-49.81	-49.73	-49.77	-50.09	-50.12	-50.23	-50.28	-50.28	-50.33	-50.05	-50.17
30	-49.81	-49.88	-49.73	-49.74	-50.11	-50.12	-50.28	-50.33	-50.28	-50.33	-50.17	-50.19
31	---	---	-49.64	-49.74	---	---	-50.31	-50.32	-50.33	-50.36	---	---
MONTH	-49.49	-49.88	-49.64	-49.99	-49.64	-50.12	-49.98	-50.36	-50.18	-50.36	-49.87	-50.35
YEAR	-49.19	-50.44										

Daily Low Water Levels



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CHARLES COUNTY--Continued

WELL NUMBER.--CH Da 18. SITE ID.--382654077152501.

LOCATION.--Lat 38°26'54", long 77°15'25", Hydrologic Unit 02070011, near Douglas Point. Owner: U.S. Bureau of Land Management.

AQUIFER.--Upper Patuxent aquifer in the Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.

WELL CHARACTERISTICS.--Drilled observation, artesian well, depth 740 ft; casing diameter 8 in., to 684 ft; and 694 to 730 ft; screen diameter 8 in., from 684 to 694 ft, and 730 to 740 ft.

INSTRUMENTATION.--Periodic water level measurements with electric tape by Maryland Geological Survey personnel. Twice yearly water level measurements from September 1976 to April 1996. Equipped with digital water-level recorder--60-minute recorder interval from April 1996 to June 1998.

DATUM.--Elevation of land surface is 89.90 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of recorder shelf, 3.10 ft above land surface.

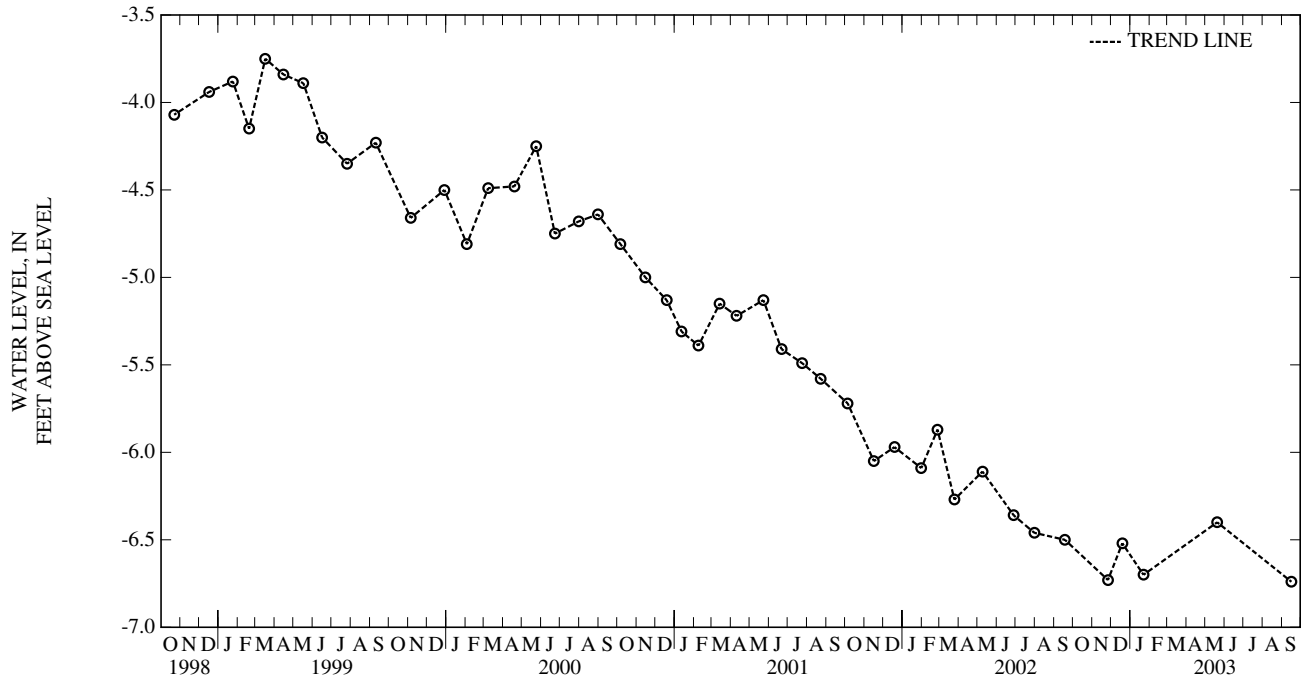
REMARKS.--Charles County Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.79 ft above sea level, September 21, 1976; lowest measured, 5.14 ft below sea level, September 16, 2003.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 26, 2002	-5.13	JAN 22, 2003	-5.10	SEP 16, 2003	-5.14		
DEC 19	-4.92	MAY 20	-4.80				
	LOWEST -5.14	SEP 16, 2003					
	HIGHEST -4.80	MAY 20, 2003					



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CHARLES COUNTY--Continued

WELL NUMBER.--CH Da 20. SITE ID.--382654077152701. PERMIT NUMBER.--CH-73-0590.

LOCATION.--Lat 38°26'54", long 77°15'27", Hydrologic Unit 02070011, near Douglas Point. Owner: U.S. Bureau of Land Management.

AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 522 ft; casing diameter 6 in., to 420 ft; 425 to 444 ft; 449 to 481 ft, and 486 to 517 ft; screen diameter 6 in., from 420 to 425 ft, 444 to 449 ft, 481 to 486 ft, and 517 to 522 ft.

INSTRUMENTATION.--Periodic water level measurements with electric tape by Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 90 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.00 ft above land surface.

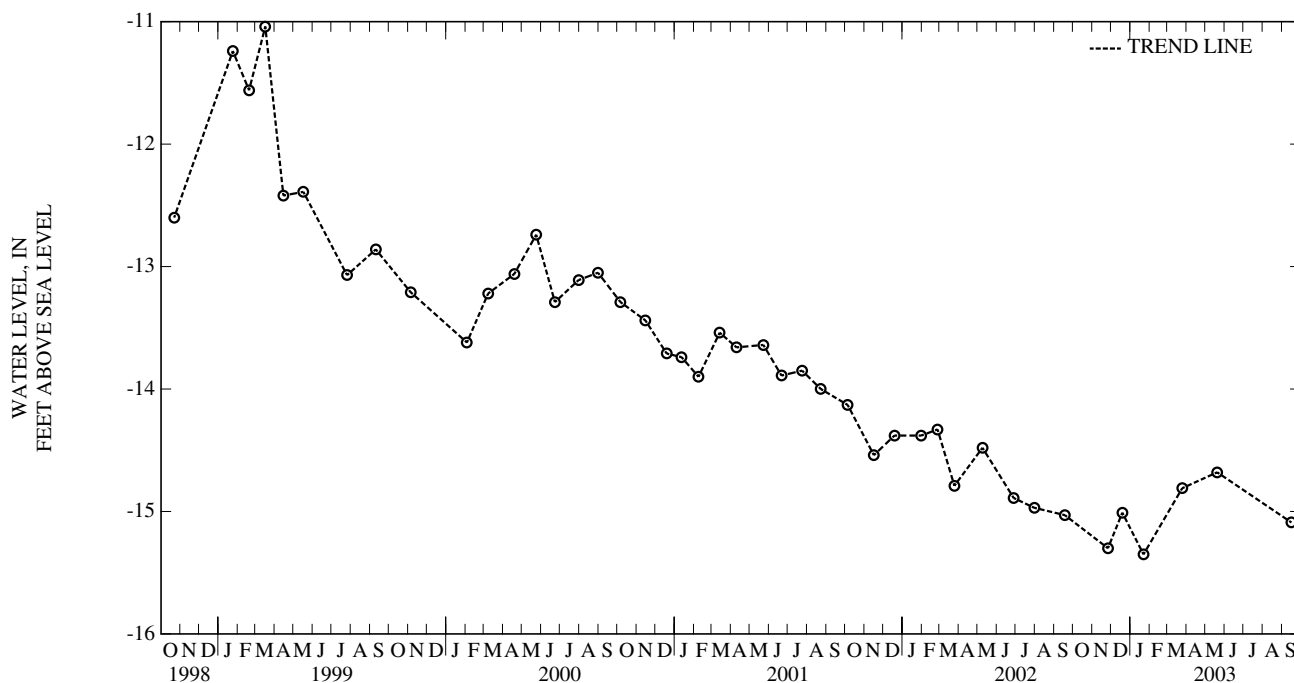
REMARKS.--Charles County Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

PERIOD OF RECORD.--September 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured 0.86 ft below sea level, March 22, 1979 and March 25, 1980; lowest measured, 13.75 ft below sea level, January 22, 2003.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 26, 2002	-13.70	JAN 22, 2003	-13.75	MAY 20, 2003	-13.08		
DEC 19	-13.41	MAR 25	-13.21	SEP 16	-13.49		
LOWEST -13.75 JAN 22, 2003							
HIGHEST -13.08 MAY 20, 2003							



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CHARLES COUNTY--Continued

WELL NUMBER.--CH Dd 33. SITE ID.--382607077002601. PERMIT NUMBER.--CH-02-6769.

LOCATION.--Lat 38°25'09", long 77°00'00", Hydrologic Unit 02070011, 1.8 mi southwest of Faulkner off Popes Creek Rd. Owner: Jesuit Order (Loyola Retreat House).

AQUIFER.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.

WELL CHARACTERISTICS.--Drilled, institution, artesian well, depth 694 ft; casing diameter 6 in., to 564 ft; casing diameter 4 in., from 532 to 688 ft; screen diameter 4 in., from 687 to 694 ft.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 99.8 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.00 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation and production well. Water level reported 104 ft below land surface, June 27, 1957. Water levels are affected by local and regional ground-water withdrawal. The May 30, 2001, water level of 134.17 ft below land surface resulted from an extended period of ground-water withdrawal from this well.

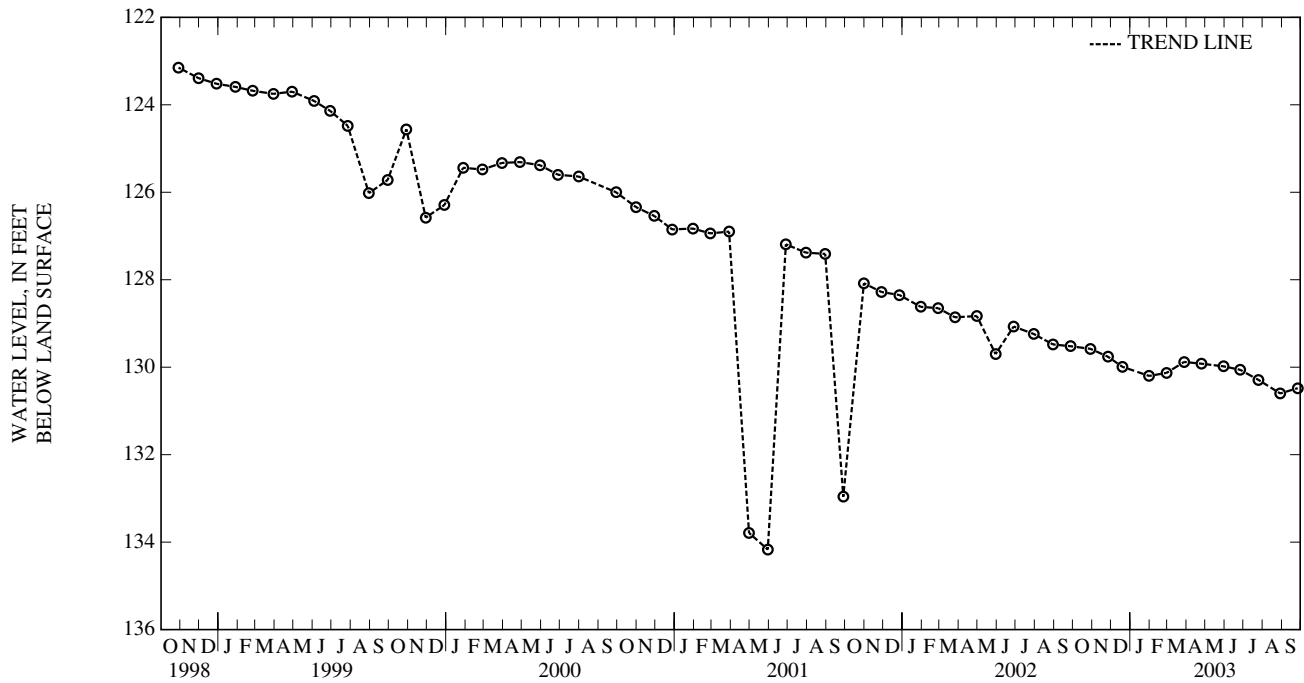
PERIOD OF RECORD.--March 1962 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 88.28 ft below land surface, March 14, 1962; lowest measured, 130.60 ft below land surface, August 29, 2003 (See REMARKS).

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	129.58	JAN 31, 2003	130.20	APR 25, 2003	129.92	JUL 25, 2003	130.29
NOV 26	129.76	FEB 28	130.13	MAY 30	129.98	AUG 29	130.60
DEC 19	129.99	MAR 28	129.88	JUN 26	130.06	SEP 26	130.48

HIGHEST 129.58 OCT 29, 2002
 LOWEST 130.60 AUG 29, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CHARLES COUNTY--Continued

WELL NUMBER.--CH Dd 38. SITE ID.--382925077010101. PERMIT NUMBER.--CH-81-0358.

LOCATION.--Lat 38°29'25", long 77°01'01", Hydrologic Unit 02070011, 0.8 mi south of Port Tobacco. Owner: Private Residence.

AQUIFER.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.

WELL CHARACTERISTICS.--Drilled, domestic, artesian well, depth 597 ft; casing diameter 4 in., to 297 ft; casing diameter 2 in., from 297 to 429 ft, 434 to 575 ft, 580 to 585 ft, and 590 to 597 ft; screen diameter 2 in., from 429 to 434 ft, 575 to 580 ft, and 585 to 590 ft.

INSTRUMENTATION.--Periodic water level measurements with chalked steel tape from April 1993 to December 1999, and October 2000 to current year by U.S. Geological Survey and Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 60 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.00 ft above land surface.

REMARKS.--Charles County Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground water withdrawal.

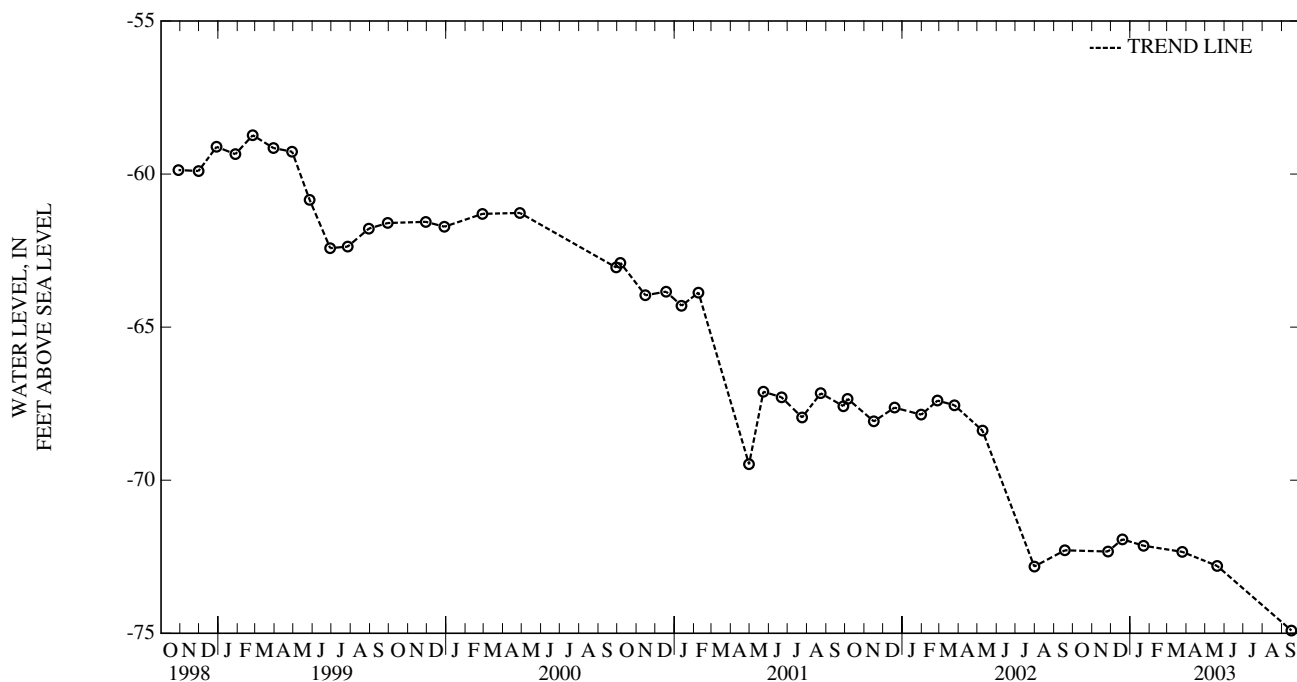
PERIOD OF RECORD.--April 1993 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 42.97 ft below sea level, May 5, 1993; lowest measured, 73.31 ft below sea level, September 16, 2003.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 26, 2002	-70.73	JAN 22, 2003	-70.54	MAY 20, 2003	-71.20		
DEC 19	-70.33	MAR 25	-70.74	SEP 16	-73.31		

LOWEST -73.31 SEP 16, 2003
HIGHEST -70.33 DEC 19, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CHARLES COUNTY--Continued

WELL NUMBER.--CH Ee 70. SITE ID.--382154076574801. PERMIT NUMBER.--CH-67-0081.

LOCATION.--Lat 38°21'54", long 76°57'48", Hydrologic Unit 02070011, at the Morgantown Power Plant, 1.5 mi. north of Morgantown. Owner: Mirant.

AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 1,132 ft; casing diameter 2 in., to 1,090 ft, 1,100 to 1,105 ft, and 1,115 to 1,132 ft; screen diameter 2 in., from 1,090 to 1,100 ft, and 1,105 to 1,115 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel. Twice yearly water level measurements from April 1993 to May 1995. Equipped with graphic water-level recorder from May 1982 to January 1983. Equipped with digital water-level recorder--15 and 30-minute recorder intervals from June 1978 to October 1986. Equipped with electronic water level recorder (transducer)--15-minute recorder interval from October 1986 to October 1992, and from May 1995 to current year.

DATUM.--Elevation of land surface is 22.83 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.43 ft above land surface.

REMARKS.--Southern Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 49.74 ft below sea level, April 14, 1981; lowest measured, 131.69 ft below sea level, December 12, 2002.

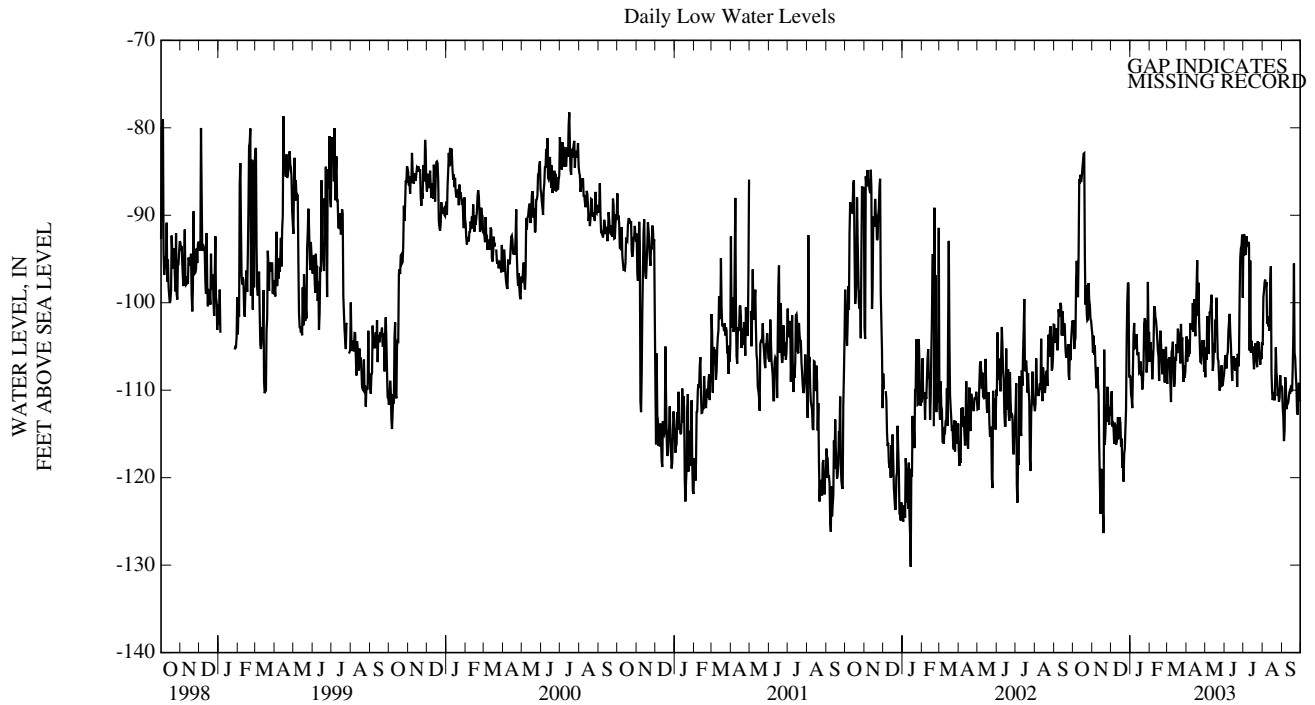
WATER LEVELS IN FEET ABOVE SEA LEVEL WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04, 2002	-98.52	MAR 04, 2003	-94.92	JUL 02, 2003	-89.98
DEC 12	-108.86	APR 14	-92.45	AUG 11	-98.10
JAN 22, 2003	-97.01	MAY 22	-97.30	SEP 16	-100.50

LOWEST -108.86 DEC 12, 2002
HIGHEST -89.98 JUL 02, 2003

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-88.82	-102.45	-89.20	-103.69	-98.31	-111.51	-94.37	-108.43	-91.32	-106.76	-94.37	-109.29
2	-88.77	-102.02	-91.67	-105.70	-97.19	-110.13	-96.27	-110.47	-90.63	-104.49	-92.19	-106.52
3	-88.45	-105.30	-89.37	-103.77	-97.99	-114.15	-97.45	-110.96	-92.22	-105.50	-92.65	-106.79
4	-92.79	-104.43	-93.65	-105.96	-99.43	-113.60	-97.71	-112.05	-92.36	-105.99	-91.50	-106.22
5	-87.39	-104.03	-93.85	-104.86	-98.02	-114.38	-94.52	-107.74	-96.01	-108.75	-92.93	-106.71
6	-87.61	-97.16	-93.97	-107.28	-100.01	-116.14	-92.36	-103.74	-93.77	-106.93	-90.72	-109.26
7	-84.77	-95.21	-95.58	-108.86	-100.96	-113.72	-90.72	-102.31	-91.32	-105.12	-98.45	-111.36
8	-83.30	-97.07	-96.27	-109.78	-100.29	-114.04	-92.22	-105.21	-89.06	-100.50	-93.31	-105.58
9	-87.47	-99.37	-92.91	-107.34	-102.08	-116.22	-92.30	-105.18	-86.67	-100.50	-92.01	-105.44
10	-84.83	-94.23	-94.86	-109.29	-101.56	-115.88	-88.94	-104.95	-91.32	-101.65	-92.85	-104.46
11	-85.06	-85.89	-95.29	-110.50	-102.51	-115.50	-91.47	-103.60	-86.78	-102.04	-90.23	-107.68
12	-84.85	-86.35	-97.99	-116.38	-100.58	-113.09	-90.63	-105.99	-89.10	-102.91	-97.59	-109.61
13	-83.85	-85.37	-105.93	-120.13	-99.11	-115.50	-91.38	-105.81	-87.79	-104.20	-96.27	-109.15
14	-85.37	-86.21	-108.89	-124.13	-98.68	-115.48	-92.13	-105.79	-92.62	-105.53	-92.13	-106.19
15	-83.27	-85.66	-107.48	-121.11	-99.49	-113.12	-94.83	-108.03	-90.60	-106.10	-93.68	-106.65
16	-82.21	-84.71	-105.93	-119.13	-99.72	-113.82	-92.33	-107.94	-92.70	-108.95	-90.89	-104.72
17	-81.95	-83.85	-104.92	-119.18	-102.51	-116.48	-92.13	-106.71	-91.67	-104.98	-92.50	-105.76
18	-81.26	-82.96	-105.35	-124.07	-99.86	-115.53	-92.93	-108.32	-90.37	-103.20	-91.47	-102.97
19	-80.40	-82.90	-105.37	-126.34	-106.71	-118.89	-92.22	-107.91	-89.80	-104.55	-90.52	-103.46
20	-80.00	-94.75	-98.58	-105.37	-105.96	-117.80	-92.65	-109.92	-92.44	-106.27	-92.45	-105.30
21	-81.98	-100.21	-97.07	-116.25	-106.91	-120.45	-93.74	-109.28	-90.75	-108.17	-90.52	-105.07
22	-84.45	-97.99	-101.13	-114.61	-102.42	-117.31	-92.04	-107.20	-91.38	-106.02	-91.73	-106.93
23	-84.42	-101.24	-99.49	-112.94	-102.28	-116.65	-89.45	-102.39	-92.45	-105.35	-87.61	-102.42
24	-87.33	-102.02	-100.06	-113.63	-101.16	-114.38	-89.74	-101.76	-96.12	-107.31	-89.92	-105.07
25	-86.35	-101.90	-97.94	-109.61	-98.20	-112.22	-91.04	-102.10	-94.17	-109.12	-92.96	-103.97
26	-86.21	-97.76	-97.68	-110.30	-97.16	-104.23	-89.97	-105.32	-91.93	-106.16	-95.95	-107.19
27	-86.38	-99.69	-97.16	-112.98	-94.66	-99.86	-91.30	-107.97	-93.51	-105.04	-93.48	-109.03
28	-87.50	-100.27	-98.22	-113.95	-93.08	-97.70	-90.92	-106.71	-96.30	-108.26	-92.70	-107.19
29	-88.16	-101.82	-96.44	-112.02	-94.40	-97.85	-90.20	-97.62	---	---	-95.35	-108.60
30	-86.98	-102.08	-96.21	-112.86	-93.48	-108.40	-91.64	-103.77	---	---	-93.91	-107.83
31	-90.17	-102.91	---	---	-95.32	-108.37	-91.84	-103.34	---	---	-92.62	-105.79
MONTH	-80.00	-105.30	-89.20	-126.34	-93.08	-120.45	-88.94	-112.05	-86.67	-109.12	-87.61	-111.36

DAY	MAX		MIN		MAX		MIN		MAX		MIN		MAX		MIN	
	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER										
1	-90.81	-103.86	-95.29	-108.52	-91.93	-107.19	-89.77	-92.99	-94.57	-104.69	-95.29	-109.67				
2	-93.08	-106.73	-92.99	-105.12	-92.99	-106.02	-88.91	-92.16	-87.87	-99.37	-100.55	-112.00				
3	-89.83	-104.23	-90.81	-106.53	-93.54	-106.27	-88.25	-92.39	-86.24	-98.68	-97.25	-113.15				
4	-89.28	-106.16	-90.40	-101.56	-94.63	-107.51	-90.75	-94.46	-85.20	-97.62	-102.02	-115.82				
5	-93.54	-105.55	-90.20	-103.17	-94.31	-105.99	-89.02	-94.43	-86.81	-97.36	-96.96	-114.64				
6	-94.34	-105.84	-87.07	-105.87	-92.13	-105.67	-89.14	-92.39	-86.67	-98.22	-97.05	-108.52				
7	-88.65	-102.36	-88.88	-103.11	-90.06	-103.25	-89.11	-93.31	-84.14	-97.65	-95.49	-109.49				
8	-87.82	-103.08	-88.85	-101.01	-88.97	-102.13	-89.83	-93.42	-87.01	-102.42	-100.61	-112.17				
9	-87.70	-102.45	-87.30	-101.16	-88.19	-101.27	-89.63	-93.05	-88.22	-101.53	-97.33	-111.71				
10	-89.86	-102.97	-87.01	-100.15	-89.40	-103.34	-88.71	-93.28	-90.63	-102.71	-98.17	-111.56				
11	-90.17	-100.04	-85.11	-99.09	-91.73	-104.92	-87.87	-105.47	-88.51	-102.34	-98.45	-111.36				
12	-91.27	-103.34	-86.06	-103.02	-91.61	-106.96	-90.63	-95.18	-91.61	-103.23	-97.68	-110.61				
13	-87.30	-99.60	-94.03	-107.80	-96.59	-108.95	-91.55	-105.70	-89.92	-97.88	-96.27	-110.21				
14	-86.38	-102.59	-93.14	-106.85	-92.45	-106.96	-91.41	-104.35	-89.89	-95.84	-96.01	-110.39				
15	-91.96	-103.83	-89.77	-104.66	-91.18	-106.10	-92.88	-105.35	-88.77	-107.91	-96.96	-109.70				
16	-86.35	-101.18	-89.97	-105.70	-90.86	-107.11	-93.60	-105.01	-96.47	-110.24	-96.76	-109.81				
17	-85.34	-98.28	-90.09	-101.93	-92.01	-107.51	-94.54	-106.33	-94.97	-111.13	-96.70	-110.13				
18	-85.23	-95.15	-87.18	-103.17	-92.82	-107.77	-94.97	-107.60	-93.82	-110.44	-95.55	-107.54				
19	-90.00	-101.50	-86.32	-99.43	-93.77	-106.33	-95.00	-106.22	-95.75	-110.53	-93.65	-103.80				
20	-85.40	-97.71	-85.66	-103.20	-95.03	-106.53	-92.22	-104.66	-97.68	-111.16	-92.13	-95.52				
21	-86.41	-101.99	-94.14	-106.39	-97.97	-109.64	-91.30	-105.50	-96.15	-108.66	-93.60	-105.70				
22	-92.07	-104.43	-93.14	-106.68	-93.16	-105.84	-94.52	-106.50	-96.84	-105.12	-95.61	-106.39				
23	-92.88	-106.73	-96.01	-108.60	-92.62	-107.28	-94.52	-107.37	-94.54	-107.91	-95.90	-108.23				
24	-90.69	-106.82	-97.36	-110.04	-93.05	-105.90	-92.76	-104.41	-95.49	-108.83	-95.78	-109.64				
25	-92.67	-106.02	-95.09	-108.92	-91.52	-98.91	-91.84	-105.21	-97.65	-110.67	-100.32	-112.51				
26	-91.98	-104.32	-96.90	-108.34	-91.24	-94.77	-91.01	-104.52	-95.23	-109.75	-98.86	-112.80				
27	-89.94	-106.07	-94.43	-107.16	-90.69	-93.77	-92.76	-106.16	-99.95	-111.33	-97.82	-110.39				
28	-89.89	-104.26	-93.57	-109.47	-88.10	-93.48	-95.64	-107.08	-94.75	-110.85	-97.73	-109.15				
29	-94.20	-107.91	-95.87	-109.41	-88.10	-92.22	-92.79	-105.70	-97.27	-108.29	-97.05	-111.02				
30	-92.59	-106.73	-95.32	-108.72	-88.94	-99.43	-93.39	-106.45	-95.49	-109.98	-96.70	-111.25				
31	---	---	-94.11	-108.23	---	---	-92.04	-104.66	-96.64	-109.49	---	---				
MONTH	-85.23	-107.91	-85.11	-110.04	-88.10	-109.64	-87.87	-107.60	-84.14	-111.33	-92.13	-115.82				
YEAR	-80.00	-126.34														



5 YEAR HYDROGRAPH
OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

CHARLES COUNTY--Continued

WELL NUMBER.--CH Ee 78. SITE ID.--382240076582801. PERMIT NUMBER.--CH-73-1965.

LOCATION.--Lat 38°22'40", long 76°58'28", Hydrologic Unit 02070011, at Clifton on the Potomac, on the east side of Ingleside Road, 0.3 mi north of Clifton Drive. Owner: Charles County Department of Public Works.

AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.

WELL CHARACTERISTICS.--Drilled, used, artesian well, depth 1,220 ft; casing diameter 7 in., to 1,148 ft, and 1,168 to 1,189 ft, and 1,199 to 1,220 ft; screen diameter 7 in., from 1,148 to 1,168 ft, and 1,189 to 1,199 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from August 1993 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, 2.60 ft above land surface.

REMARKS.--Southern Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

PERIOD OF RECORD.--August 5, 1993 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 43.87 ft below sea level, April 3, 1986; lowest measured, 90.74 ft below sea level, January 14 and 15, 2002 (recorder).

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

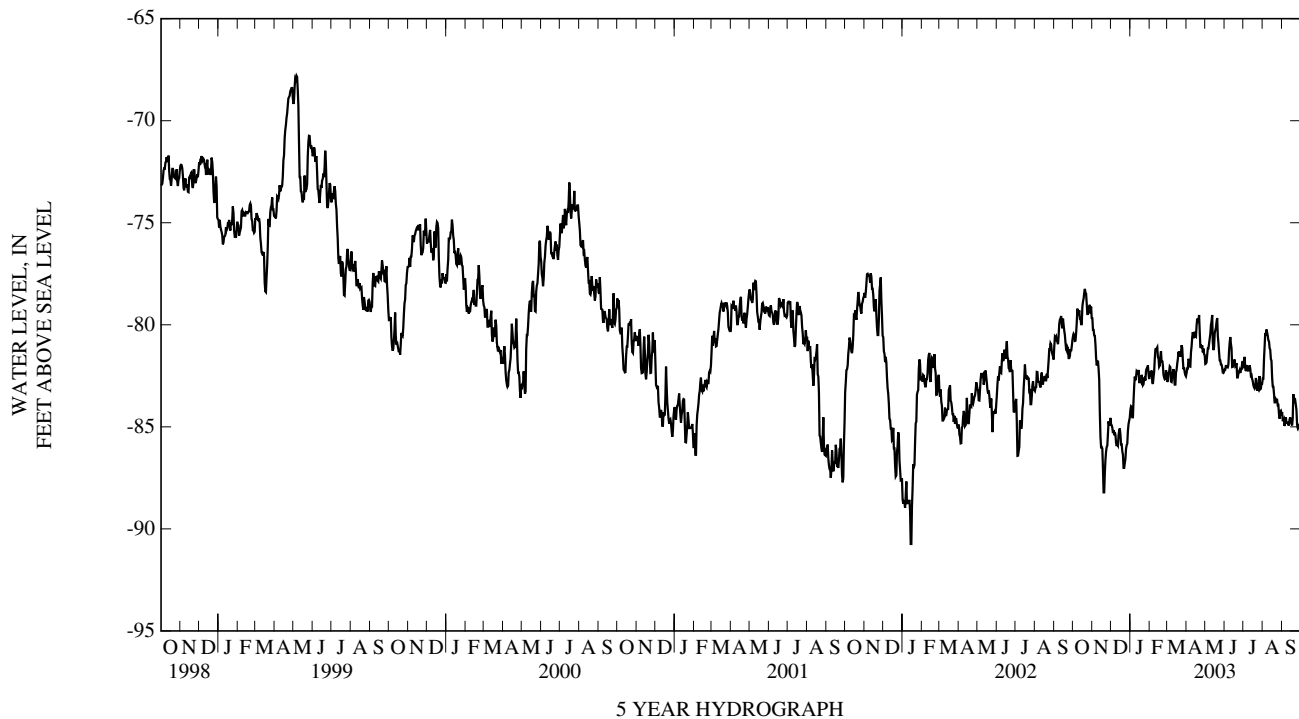
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04, 2002	-80.46	MAR 04, 2003	-82.07	JUL 02, 2003	-81.72
DEC 12	-85.63	APR 14	-80.17	AUG 11	-80.71
JAN 22, 2003	-82.91	MAY 22	-80.86	SEP 16	-84.55
LOWEST -85.63 DEC 12, 2002					
HIGHEST -80.17 APR 14, 2003					

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-80.35	-80.56	-79.39	-79.68	-84.56	-84.88	-83.45	-84.16	-82.16	-82.40	-82.44	-82.80
2	-80.21	-80.44	-79.68	-80.25	-84.46	-84.92	-83.65	-83.99	-82.06	-82.44	-81.90	-82.72
3	-80.21	-80.49	-79.92	-80.25	-84.56	-85.04	-83.79	-84.02	-82.16	-82.34	-82.01	-82.36
4	-80.49	-80.79	-80.00	-80.52	-85.04	-85.30	-83.97	-84.53	-81.98	-82.24	-81.78	-82.30
5	-80.41	-80.78	-80.36	-80.54	-84.55	-85.16	-83.61	-84.53	-82.20	-82.81	-81.86	-82.04
6	-79.84	-80.41	-80.32	-80.98	-84.94	-85.41	-83.01	-83.71	-82.57	-82.90	-81.60	-82.08
7	-79.15	-79.92	-80.98	-81.62	-84.94	-85.26	-82.53	-83.02	-82.31	-82.58	-82.08	-82.78
8	-78.62	-79.21	-81.62	-81.99	-85.04	-85.39	-82.36	-82.54	-81.68	-82.31	-82.26	-82.80
9	-78.98	-79.51	-81.51	-81.89	-85.39	-85.78	-82.38	-82.72	-80.88	-81.68	-82.26	-82.39
10	-78.92	-79.51	-81.61	-81.76	-85.64	-85.94	-81.94	-82.55	-81.01	-81.21	-82.17	-82.34
11	-78.99	-79.29	-81.74	-82.17	-85.65	-85.85	-82.01	-82.27	-80.62	-81.21	-81.65	-82.17
12	-79.29	-79.69	-82.17	-82.70	-85.40	-85.91	-82.13	-82.31	-80.63	-81.16	-81.83	-82.58
13	-79.29	-79.69	-82.70	-84.31	-85.07	-85.40	-82.13	-82.43	-80.63	-81.10	-82.58	-82.93
14	-79.42	-79.97	-84.31	-85.50	-85.07	-85.19	-82.13	-82.21	-80.93	-81.58	-82.32	-82.93
15	-79.12	-79.97	-85.50	-86.00	-85.07	-85.08	-82.17	-82.81	-81.24	-81.65	-82.16	-82.34
16	-78.71	-79.12	-85.80	-85.99	-85.07	-85.38	-82.23	-82.81	-81.65	-82.05	-81.70	-82.20
17	-78.59	-78.86	-85.74	-86.06	-85.38	-85.86	-82.41	-82.73	-81.38	-81.99	-81.64	-81.90
18	-78.43	-78.72	-86.06	-87.01	-85.33	-85.86	-82.43	-82.79	-81.19	-81.54	-81.28	-81.68
19	-77.98	-78.43	-87.01	-88.21	-85.61	-86.20	-82.21	-82.45	-80.96	-81.30	-81.02	-81.32
20	-77.92	-78.24	-87.24	-88.21	-86.09	-86.37	-82.31	-82.71	-81.22	-81.85	-81.11	-81.50
21	-77.77	-78.43	-86.45	-87.24	-86.37	-87.01	-82.69	-82.96	-81.34	-81.76	-80.96	-81.31
22	-78.33	-78.47	-86.08	-86.61	-86.48	-87.01	-82.62	-82.91	-81.55	-81.98	-81.31	-81.56
23	-78.47	-78.97	-85.84	-86.21	-86.40	-86.77	-82.19	-82.62	-81.75	-82.45	-80.76	-81.39
24	-78.97	-79.47	-85.84	-85.98	-86.07	-86.57	-82.36	-82.59	-82.45	-82.58	-80.78	-81.00
25	-79.06	-79.47	-85.32	-85.92	-85.32	-86.07	-82.24	-82.73	-82.45	-82.67	-81.00	-81.13
26	-79.08	-79.27	-84.73	-85.32	-85.49	-85.90	-81.68	-82.24	-82.22	-82.65	-81.09	-81.75
27	-78.85	-79.11	-84.45	-84.73	-85.18	-85.82	-81.72	-82.15	-81.90	-82.22	-81.75	-82.18
28	-78.85	-79.02	-84.46	-84.95	-84.57	-85.18	-81.81	-82.14	-82.00	-82.44	-81.88	-82.10
29	-79.02	-79.44	-84.44	-84.80	-84.66	-84.86	-81.71	-81.99	---	---	-82.02	-82.34
30	-78.78	-79.11	-84.05	-84.56	-84.37	-84.69	-81.96	-82.38	---	---	-82.25	-82.46
31	-79.11	-79.67	---	---	-84.16	-84.54	-82.36	-82.66	---	---	-82.36	-82.52
MONTH	-77.77	-80.79	-79.39	-88.21	-84.16	-87.01	-81.68	-84.53	-80.62	-82.90	-80.76	-82.93

CHARLES COUNTY--Continued

DAY	MAX		MIN		MAX		MIN		MAX		MIN		MAX		MIN									
	APRIL				MAY				JUNE				JULY				AUGUST				SEPTEMBER			
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN		
1	-81.62	-82.36	-81.44	-81.92	-81.66	-82.19	-81.78	-82.04	-82.50	-82.64	-83.91	-84.27												
2	-81.72	-82.14	-81.44	-81.90	-81.90	-82.19	-81.57	-81.99	-81.68	-82.64	-84.02	-84.68												
3	-81.62	-82.14	-81.47	-81.83	-81.87	-81.98	-81.27	-81.57	-81.06	-81.69	-84.20	-84.68												
4	-81.22	-81.67	-80.94	-81.47	-81.88	-82.06	-81.53	-82.14	-80.20	-81.06	-84.20	-84.62												
5	-81.53	-81.74	-80.99	-81.16	-82.00	-82.08	-82.02	-82.27	-80.26	-80.40	-84.62	-84.96												
6	-81.73	-82.04	-80.49	-81.16	-81.87	-82.09	-81.83	-82.02	-80.17	-80.51	-84.43	-84.74												
7	-81.02	-82.05	-80.58	-80.92	-81.23	-81.94	-81.85	-82.02	-79.74	-80.23	-84.06	-84.53												
8	-81.06	-81.35	-80.39	-80.68	-80.88	-81.28	-82.02	-82.24	-79.94	-80.37	-84.10	-84.80												
9	-80.42	-81.06	-79.90	-80.46	-80.42	-80.88	-82.02	-82.24	-80.28	-80.53	-84.59	-84.80												
10	-80.36	-80.61	-79.83	-80.01	-80.50	-80.60	-81.99	-82.22	-80.50	-80.76	-84.58	-84.80												
11	-80.11	-80.36	-79.22	-79.83	-80.57	-80.93	-81.42	-81.99	-80.60	-80.81	-84.64	-84.90												
12	-80.16	-80.61	-79.27	-79.52	-80.93	-81.16	-81.60	-82.15	-80.81	-81.15	-84.46	-84.90												
13	-80.22	-80.61	-79.52	-80.87	-81.15	-82.07	-82.06	-82.49	-81.08	-81.22	-84.46	-84.63												
14	-79.76	-80.34	-80.86	-81.24	-81.60	-82.06	-81.97	-82.46	-81.22	-81.68	-84.21	-84.54												
15	-79.90	-80.55	-80.41	-81.10	-81.70	-81.95	-82.18	-82.66	-81.37	-81.76	-84.50	-84.72												
16	-80.05	-80.58	-80.24	-80.42	-81.39	-81.79	-82.50	-82.76	-81.76	-82.58	-84.58	-84.82												
17	-79.62	-80.05	-79.94	-80.27	-81.43	-81.70	-82.76	-82.97	-82.58	-83.02	-84.58	-84.93												
18	-79.18	-79.70	-79.85	-80.14	-81.57	-82.02	-82.97	-83.06	-82.72	-83.03	-83.40	-84.62												
19	-79.21	-79.83	-79.52	-79.85	-81.60	-81.98	-82.97	-83.12	-82.88	-83.37	-83.23	-83.40												
20	-79.41	-79.85	-79.27	-79.67	-81.76	-81.88	-82.61	-83.04	-83.37	-83.80	-83.25	-83.57												
21	-79.23	-79.52	-79.67	-80.53	-81.88	-82.58	-82.26	-82.61	-83.51	-83.80	-83.40	-83.74												
22	-79.49	-80.34	-80.53	-80.90	-82.28	-82.58	-82.46	-82.75	-83.51	-83.64	-83.43	-83.70												
23	-80.34	-81.05	-80.90	-81.33	-82.19	-82.39	-82.75	-83.23	-83.49	-83.69	-83.40	-83.92												
24	-80.72	-81.03	-81.33	-81.74	-82.16	-82.31	-82.90	-83.10	-83.50	-83.68	-83.92	-84.17												
25	-80.88	-81.15	-81.60	-81.75	-82.00	-82.22	-82.70	-83.16	-83.52	-83.94	-84.17	-84.89												
26	-80.76	-81.01	-81.66	-81.94	-82.12	-82.36	-82.51	-82.83	-83.66	-83.93	-84.87	-85.04												
27	-80.76	-81.35	-81.81	-81.95	-82.15	-82.22	-82.33	-82.51	-83.81	-84.37	-84.65	-84.96												
28	-80.65	-81.16	-81.60	-82.09	-81.87	-82.18	-82.42	-83.16	-84.24	-84.60	-84.60	-84.86												
29	-80.76	-81.44	-82.09	-82.34	-81.38	-81.87	-82.53	-83.13	-83.70	-84.24	-84.86	-85.14												
30	-81.23	-81.48	-82.19	-82.36	-81.60	-81.78	-82.58	-82.88	-83.82	-84.21	-84.96	-85.24												
31	---	---	-81.89	-82.30	---	---	-82.43	-82.88	-84.20	-84.43	---	---												
MONTH	-79.18	-82.36	-79.22	-82.36	-80.42	-82.58	-81.27	-83.23	-79.74	-84.60	-83.23	-85.24												
YEAR	-77.77	-88.21																						

Daily Low Water Levels



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

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 water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 25 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 0.60 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Prior to the November 20, 2000 water-level measurement, the Hurlock Water Municipality increased their ground-water withdrawal for a 3 month period. Water levels are affected by local and regional ground-water withdrawal.

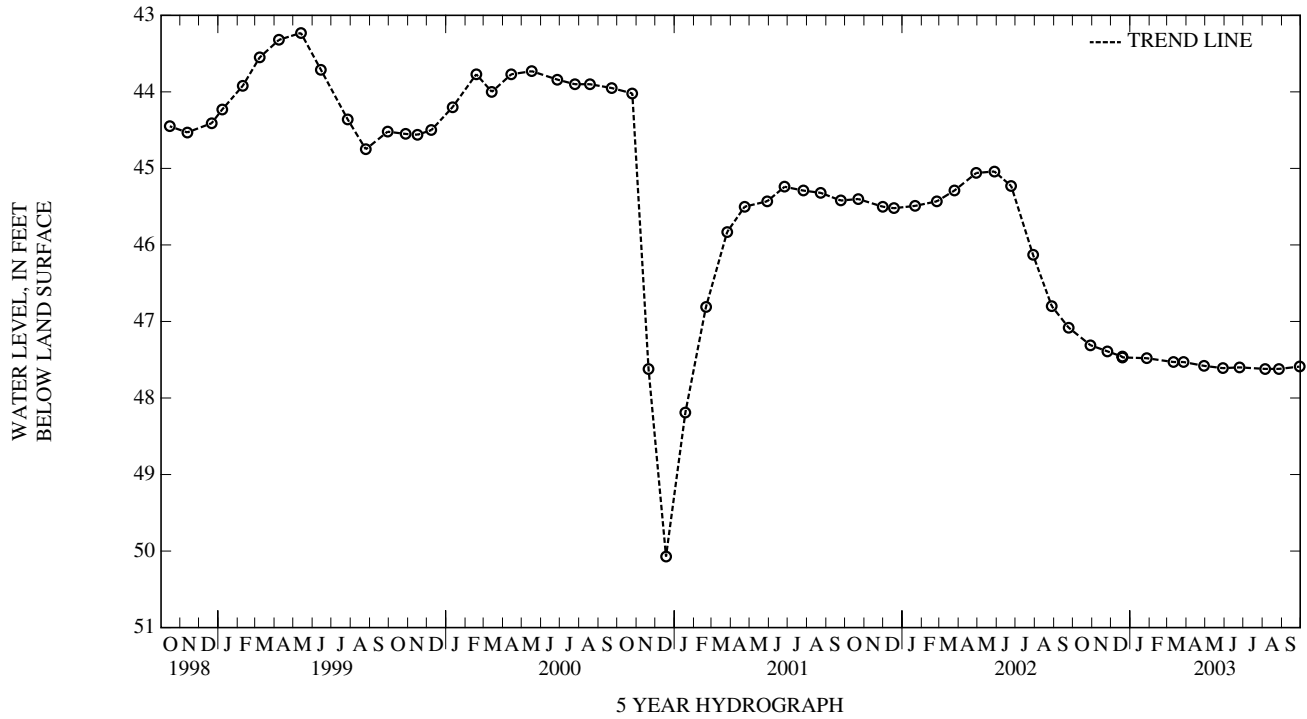
PERIOD OF RECORD.--October 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 31.79 ft below land surface, August 2, 1978; lowest measured, 47.62 ft below land surface, August 5, and 27, 2003 (See REMARKS).

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	47.31	JAN 27, 2003	47.48	MAY 29, 2003	47.61	SEP 29, 2003	47.59
NOV 25	47.39	MAR 11	47.53	JUN 25	47.60		
DEC 19	47.46	27	47.53	AUG 05	47.62		
19	47.47	APR 29	47.58	27	47.62		

HIGHEST 47.31 OCT 29, 2002
 LOWEST 47.62 AUG 05, 2003 AUG 27, 2003



DORCHESTER COUNTY--Continued

WELL NUMBER.--DO Cd 1. SITE ID.--383151076080801.

LOCATION.--Lat 38°31'51", long 76°08'08", Hydrologic Unit 02060005, near Christs Rock, off Pigs Neck Rd. Owner: Private Residence.

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 water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 4 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 0.35 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

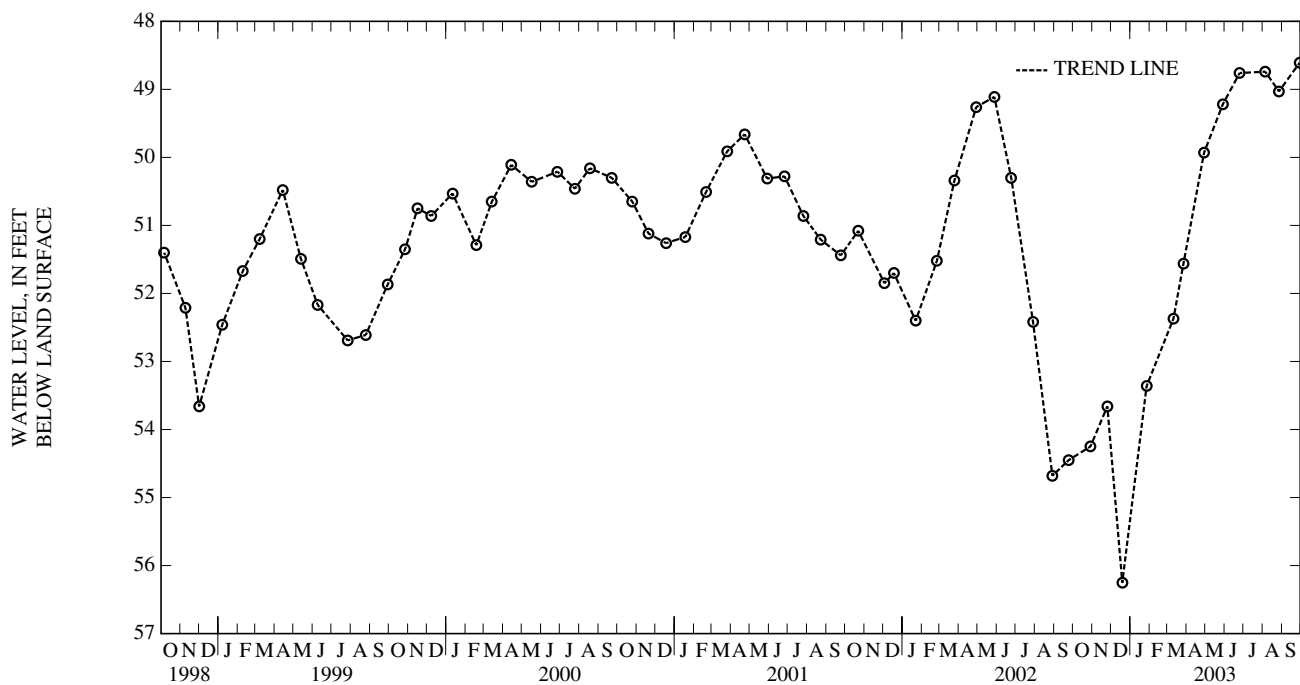
PERIOD OF RECORD.--October 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 42.07 ft below land surface, October 2, 1990; lowest measured, 80.32 ft below land surface, October 16, 1970.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	54.25	JAN 27, 2003	53.36	APR 29, 2003	49.93	AUG 05, 2003	48.74
NOV 25	53.66	MAR 11	52.37	MAY 29	49.22	27	49.03
DEC 19	56.25	27	51.56	JUN 25	48.76	SEP 29	48.61

HIGHEST 48.61 SEP 29, 2003
 LOWEST 56.25 DEC 19, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

DORCHESTER COUNTY—Continued

WELL NUMBER.--DO Ce 5. SITE ID.--383340076041601.

LOCATION.--Lat 38°33'40", long 76°04'16", Hydrologic Unit 02060005, at Cambridge Pumping Station, off Lake St. 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 2 in., to land surface; casing diameter 12 in., from 0 to 385 ft; open hole.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 18 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 4.00 ft above land surface.

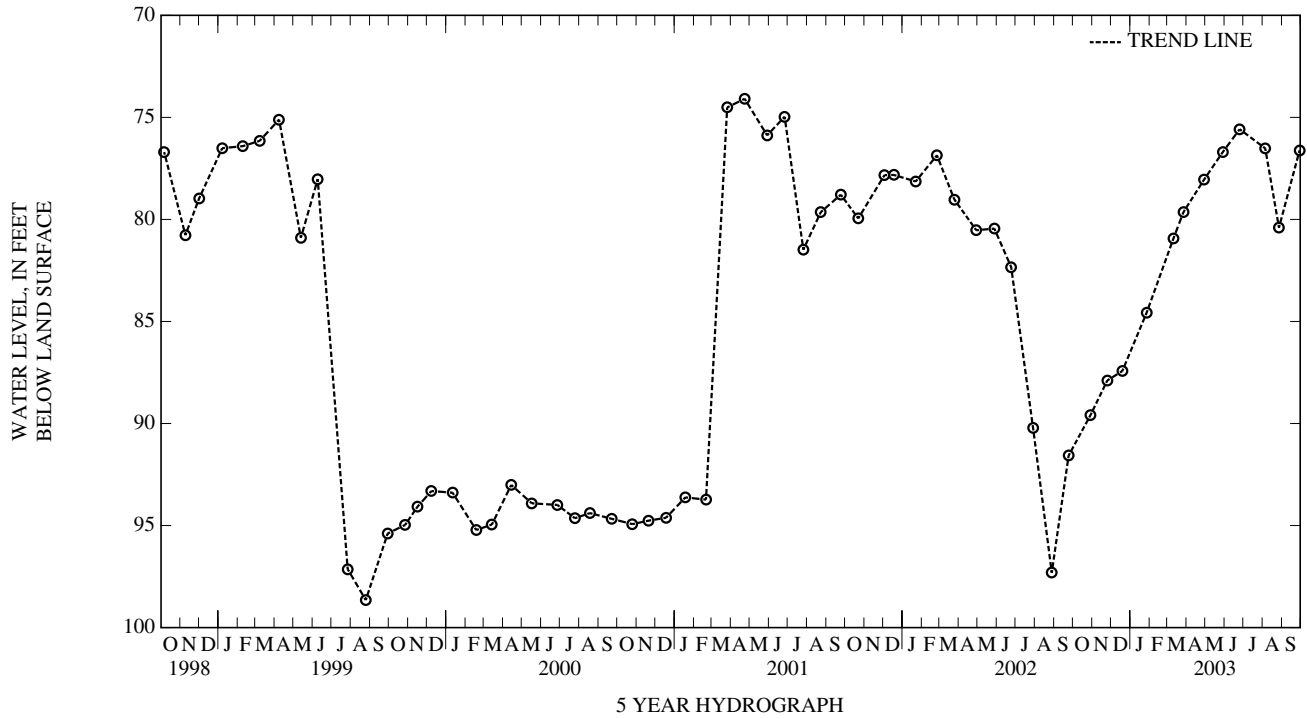
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. The drop in water levels in July of 1999 is the result of using the municipal production well at Lake Street, just prior to March of 2001. Water levels are affected by local and regional ground-water withdrawal.

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, August 29, 1978.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	89.59	JAN 27, 2003	84.57	APR 29, 2003	78.05	AUG 05, 2003	76.52
NOV 25	87.89	MAR 11	80.93	MAY 29	76.70	27	80.40
DEC 19	87.43	27	79.64	JUN 25	75.58	SEP 29	76.62
HIGHEST 75.58 JUN 25, 2003							
LOWEST 89.59 OCT 29, 2002							



DORCHESTER COUNTY--Continued

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, near 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 970.5 ft; casing diameter 10 in., to 25 ft.; casing diameter 8 in., from +1.5 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 902.3 to 950.5 ft; screen diameter 3 in., from 950.5 to 970.5 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 6 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.50 ft above land surface.

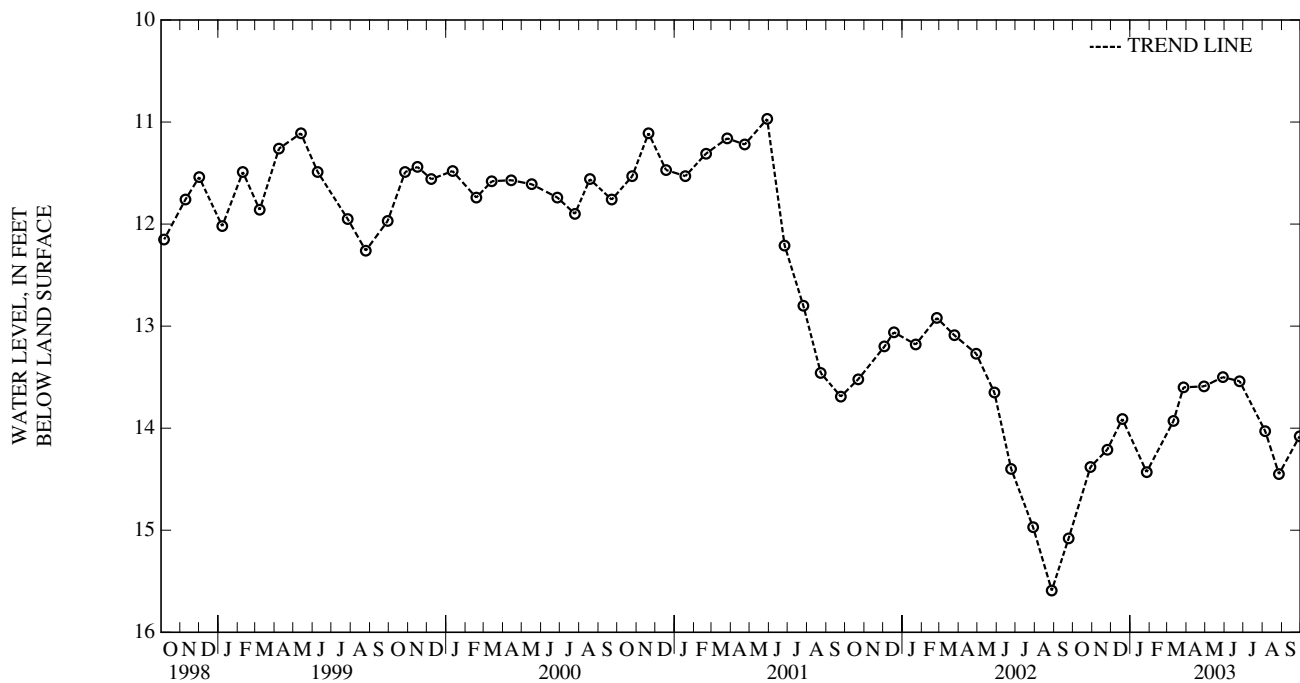
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water level reported 68 ft below land surface Aug. 30, 1947. The drop in water level in June 2001 is the result of increased ground-water withdrawal by Municipal Utilities. Water levels are affected by local ground-water withdrawal.

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, August 7, 1959.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	14.38	JAN 27, 2003	14.43	APR 29, 2003	13.59	AUG 05, 2003	14.03
NOV 25	14.21	MAR 11	13.93	MAY 29	13.50	27	14.45
DEC 19	13.91	27	13.60	JUN 25	13.54	SEP 29	14.08
HIGHEST 13.50 MAY 29, 2003							
LOWEST 14.43 JAN 27, 2003							



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

DORCHESTER COUNTY--Continued

WELL NUMBER.--DO Db 17. SITE ID.--382800076180701. PERMIT NUMBER.--DO-73-0557.

LOCATION.--Lat 38°28'00", long 76°18'07", Hydrologic Unit 02060005, off MD Rt. 16, near Old Taylors Island School, Taylor 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 water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 4 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.65 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by regional ground-water withdrawal.

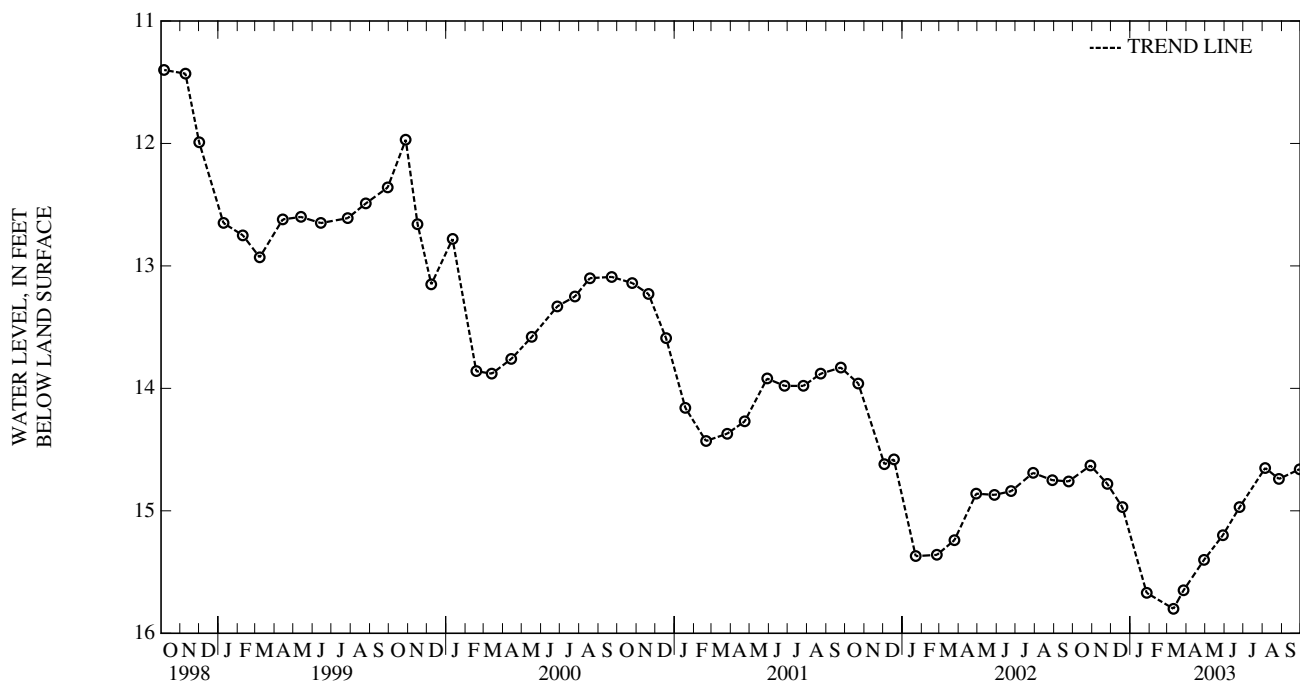
PERIOD OF RECORD.--April 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.77 ft below land surface, October 4, 1979; lowest measured, 15.80 ft below land surface, March 11, 2003.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	14.63	JAN 27, 2003	15.67	APR 29, 2003	15.40	AUG 05, 2003	14.65
NOV 25	14.78	MAR 11	15.80	MAY 29	15.20	27	14.74
DEC 19	14.97	27	15.65	JUN 25	14.97	SEP 29	14.66

HIGHEST 14.63 OCT 29, 2002
 LOWEST 15.80 MAR 11, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

DORCHESTER COUNTY--Continued

WELL NUMBER.--DO Dh 27. SITE ID.--382916075491702. PERMIT NUMBER.--DO-71-0001.

LOCATION.--Lat 38°29'16", long 75°49'17", Hydrologic Unit 02060008, Vienna power plant. Owner: Vienna Power LLC.

AQUIFER.--Beaverdam Sand of Pliocene age. Aquifer code: 121BVDM.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 63 ft; casing diameter 12 in., to 20 ft; casing diameter 8 in., to 33 ft; screen diameter 6 in., from 33 to 63 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by Maryland Geological Survey personnel. Equipped with digital water-level recorder--30-minute recorder interval from May 1990 to current year.

DATUM.--Elevation of land surface is 9.10 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of shelter platform, 2.69 ft above land surface.

REMARKS.-- Southern Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local ground-water withdrawal at the Vienna power plant. The April 1, 1997 low water level is due to an extended period of pumping to fill the storage tank, which was drained for maintenance. Missing data due to recorder malfunction.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.34 ft above sea level, February 7, 1998 (recorder) (See REMARKS); lowest measured, 11.11 ft below sea level, April 1, 1997 (recorder).

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

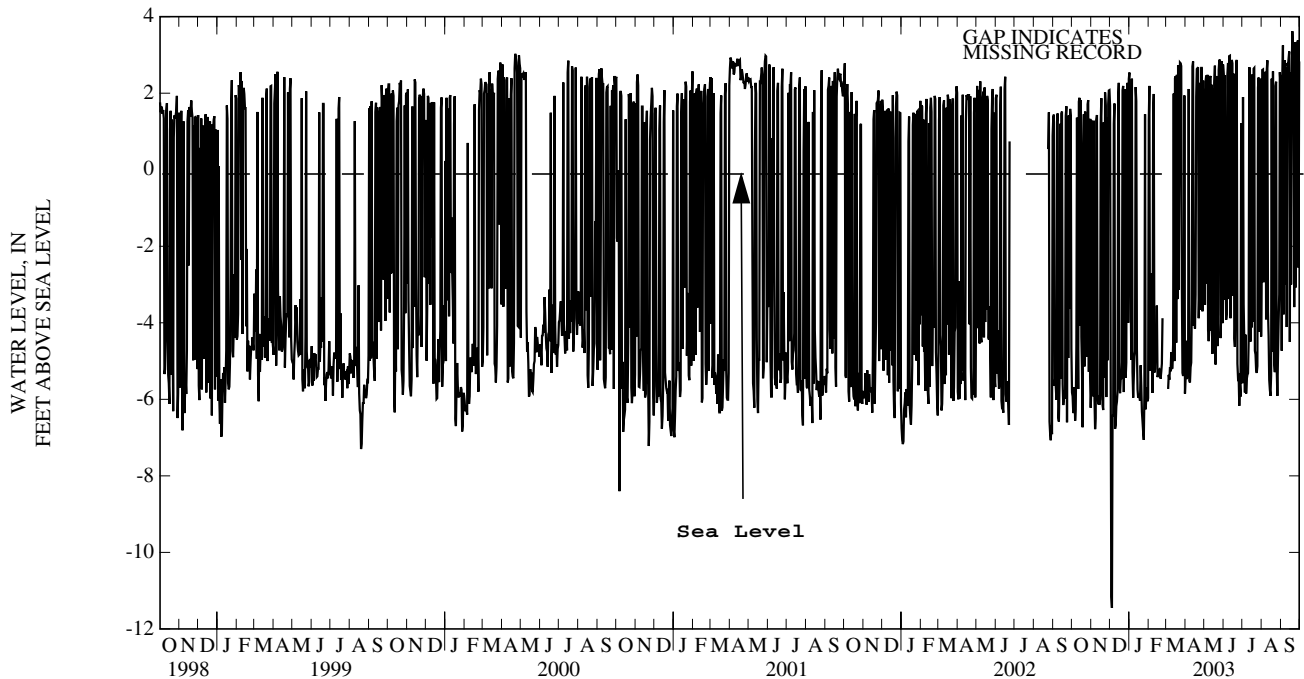
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	1.63	MAR 03, 2003	-2.00	APR 29, 2003	2.70	AUG 27, 2003	-4.01
NOV 25	-5.11	11	-4.72	MAY 29	3.01	SEP 29	-2.52
DEC 19	-5.34	27	-4.11	JUN 25	-4.41		
JAN 27, 2003	-5.74	APR 15	.12	AUG 05	2.85		
LOWEST		-5.74	JAN 27, 2003				

DAY	MAX		MIN		MAX		MIN		MAX		MIN		MAX		MIN	
	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH										
1	2.00	-5.82	1.59	-5.71	2.38	1.67	3.15	2.54	2.54	1.29	---	---	---	---		
2	1.68	-5.92	1.78	1.26	2.11	-5.41	3.13	-2.90	2.73	2.19	---	---	---	---		
3	1.54	-6.36	1.82	1.24	2.02	-11.16	3.30	-3.10	2.61	-5.25	---	---	---	---		
4	1.44	-6.29	1.84	-5.92	0.40	-11.45	3.26	-4.97	2.29	-4.87	2.49	-5.73	---	---		
5	1.95	-5.68	2.11	1.28	1.22	-6.41	3.09	2.38	2.04	-2.70	2.57	-5.36	---	---		
6	1.60	-6.56	2.34	-5.98	1.59	-6.44	3.07	-5.28	1.95	-4.35	2.75	-5.49	---	---		
7	1.77	-6.26	1.46	-6.78	2.28	1.20	2.42	-5.96	1.78	-5.83	2.35	-5.16	---	---		
8	1.70	-4.61	1.51	-6.50	2.20	1.73	2.36	-5.44	2.23	1.49	2.79	-5.27	---	---		
9	2.09	1.36	1.87	1.30	1.90	-6.77	2.61	-4.88	2.36	1.98	3.08	-4.77	---	---		
10	2.08	-3.95	2.14	1.43	1.28	-6.68	2.41	-4.74	2.18	-5.30	2.06	-5.19	---	---		
11	2.20	-5.73	2.13	-5.87	1.72	-6.18	2.55	2.16	1.96	-5.21	2.27	-5.18	---	---		
12	2.26	1.78	1.67	-6.13	1.77	-6.06	2.54	1.79	2.11	-4.38	2.24	-4.57	---	---		
13	2.48	1.88	1.40	-5.90	1.92	-5.78	2.10	-4.69	1.85	-4.67	2.56	1.99	---	---		
14	2.47	-4.07	1.48	-6.14	2.88	1.87	2.03	-5.74	1.78	-3.55	2.48	-5.00	---	---		
15	2.35	1.82	1.82	-6.00	2.74	2.27	1.74	-5.96	2.01	-5.42	3.01	2.39	---	---		
16	2.57	-4.37	1.87	1.23	2.67	-5.55	1.55	-5.92	1.68	-5.36	2.96	2.44	---	---		
17	2.29	-5.16	2.54	1.87	1.75	-5.84	1.84	-5.90	2.15	-5.24	3.08	-4.52	---	---		
18	2.16	-6.73	2.72	-5.52	1.99	-5.48	1.71	-6.04	2.47	-5.22	3.18	2.48	---	---		
19	2.21	0.58	1.88	-6.15	2.22	-5.46	2.23	-5.11	2.59	-5.27	3.27	-3.38	---	---		
20	2.23	1.45	1.53	-6.28	2.52	-5.03	2.58	-5.63	2.51	-5.46	3.71	2.73	---	---		
21	1.87	-5.14	2.48	1.24	2.85	2.08	1.85	-6.32	2.31	-5.28	3.93	-3.14	---	---		
22	2.12	1.52	2.67	-5.44	2.68	2.19	1.61	-6.58	2.49	-5.07	3.48	-0.19	---	---		
23	2.10	-4.89	2.40	2.02	2.43	-5.81	1.29	-6.85	2.85	-3.88	3.29	-2.80	---	---		
24	1.86	1.28	2.14	1.67	2.44	1.61	0.82	-7.06	---	---	3.28	2.78	---	---		
25	1.88	-4.89	1.99	-5.94	3.13	2.10	1.45	-5.89	---	---	3.26	2.71	---	---		
26	2.25	1.71	2.12	1.36	3.06	-5.44	2.15	1.45	---	---	3.48	-3.07	---	---		
27	2.30	1.82	2.19	-4.98	2.18	-5.04	2.15	-6.26	---	---	2.85	-5.31	---	---		
28	2.12	-5.28	2.49	1.72	2.67	1.95	1.36	-5.98	---	---	2.38	-5.39	---	---		
29	1.99	1.33	2.77	2.07	2.77	2.27	1.75	-5.70	---	---	2.39	-5.29	---	---		
30	1.99	-5.42	2.86	2.08	2.70	-4.00	1.73	-6.05	---	---	2.55	1.94	---	---		
31	1.78	-6.22	---	---	2.96	2.37	1.83	-5.97	---	---	2.41	-5.85	---	---		
MONTH	2.57	-6.73	2.86	-6.78	3.13	-11.45	3.30	-7.06	2.85	-5.83	3.93	-5.85	---	---		

DORCHESTER COUNTY--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	2.15	-5.42	2.93	2.11	3.59	2.49	2.56	-5.58	2.99	-2.25	3.18	2.47
2	2.26	-4.47	3.12	-3.53	3.02	-3.40	2.92	1.90	3.05	2.61	3.11	-4.73
3	2.52	-5.47	2.83	2.31	3.01	2.47	3.18	-3.51	3.11	2.62	3.37	2.37
4	2.40	-5.40	2.96	2.46	3.18	-2.68	3.06	-4.45	3.05	-2.94	3.57	3.25
5	2.48	-5.14	2.93	-2.98	3.00	-3.92	2.88	-5.82	3.07	2.52	3.56	-3.78
6	2.72	2.11	3.00	2.48	2.77	-3.75	2.61	-4.31	3.07	-2.44	3.04	2.57
7	2.56	-5.51	2.75	-4.20	3.36	2.47	2.14	-5.85	3.03	2.56	3.24	2.86
8	2.07	-5.56	2.53	-4.48	3.36	2.79	2.24	-5.47	3.13	-3.91	3.37	-3.01
9	2.23	-5.16	2.69	-4.16	3.37	-3.38	2.41	-5.36	3.04	2.59	3.12	2.67
10	2.42	-5.04	2.84	2.41	3.45	2.97	2.61	-5.32	3.35	2.86	3.21	-4.11
11	2.80	-3.51	2.94	2.45	3.50	2.98	2.84	-4.48	3.37	-3.71	3.33	2.79
12	3.30	2.70	3.06	-4.21	3.49	-3.88	3.19	2.68	3.13	-4.35	3.15	2.71
13	3.43	2.83	2.84	2.22	3.31	-0.07	3.23	2.60	2.97	-5.49	3.65	2.90
14	3.26	-4.08	2.76	-4.81	3.44	2.87	3.22	-4.49	2.67	-5.75	3.57	3.09
15	2.93	-2.10	2.76	2.13	3.43	2.78	3.10	2.36	2.45	-5.91	3.26	-4.50
16	3.13	-4.15	2.95	-3.12	3.33	-3.29	3.31	-4.12	2.47	-5.37	3.01	2.55
17	2.67	-3.26	3.06	2.26	3.19	2.51	2.98	2.49	2.97	2.38	2.92	-3.00
18	3.01	1.91	3.33	2.72	3.28	-4.41	2.95	-3.97	2.88	-4.75	3.62	2.51
19	3.20	2.63	3.06	-5.09	2.85	-4.63	3.06	2.64	3.11	2.57	4.94	3.62
20	3.19	2.65	2.84	2.11	3.08	-3.13	3.17	2.66	3.10	-3.86	4.39	3.13
21	3.30	2.68	3.01	2.45	3.34	2.79	3.17	-4.73	2.80	-5.05	3.59	3.08
22	3.18	-3.88	2.81	-4.61	3.35	2.87	2.98	-4.83	2.59	-5.29	3.58	-3.59
23	2.67	-3.15	2.84	-3.79	3.38	-5.07	2.74	-5.23	2.57	2.19	3.82	3.33
24	2.74	2.27	3.08	2.61	2.55	-5.44	2.68	-5.31	2.71	2.30	3.64	-3.08
25	2.77	-3.66	3.21	2.85	2.60	-5.41	2.33	-5.13	2.95	-5.21	3.65	-0.78
26	3.14	2.66	3.36	2.88	2.63	-6.17	2.63	2.15	2.58	-5.91	3.77	3.31
27	3.14	2.66	3.25	-4.40	2.19	-5.62	2.89	2.41	2.45	-4.90	3.86	3.31
28	3.09	-3.70	3.28	-3.79	2.37	-5.93	2.95	-4.23	2.72	-3.99	3.86	3.38
29	2.88	2.33	3.26	2.83	2.67	1.21	2.77	2.10	2.81	-3.25	3.62	-2.56
30	2.83	-2.99	3.33	-4.01	2.95	-5.47	2.98	2.38	3.09	2.55	3.36	2.83
31	---	---	3.43	2.75	---	---	2.92	-4.36	2.86	2.22	---	---
MONTH	3.43	-5.56	3.43	-5.09	3.59	-6.17	3.31	-5.85	3.37	-5.91	4.94	-4.73
YEAR	4.94	-11.45										

Daily Low Water Levels



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

FREDERICK COUNTY

WELL NUMBER.--FR Af 27. SITE ID.--394200077190701. PERMIT NUMBER.--FR-73-7155.

LOCATION.--Lat 39 42'00", long 77 19'07", Hydrologic Unit 02070009, 0.3 mi southwest of U.S. Rt. 15 and MD Rt. 140, Emmitsburg. Owner: City of Emmitsburg.

AQUIFER.--Gettysburg Shale of Upper Triassic age. Aquifer code: 231GBRG.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 365 ft; casing diameter 6 in., to 41 ft; open hole.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 385 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 0.81 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

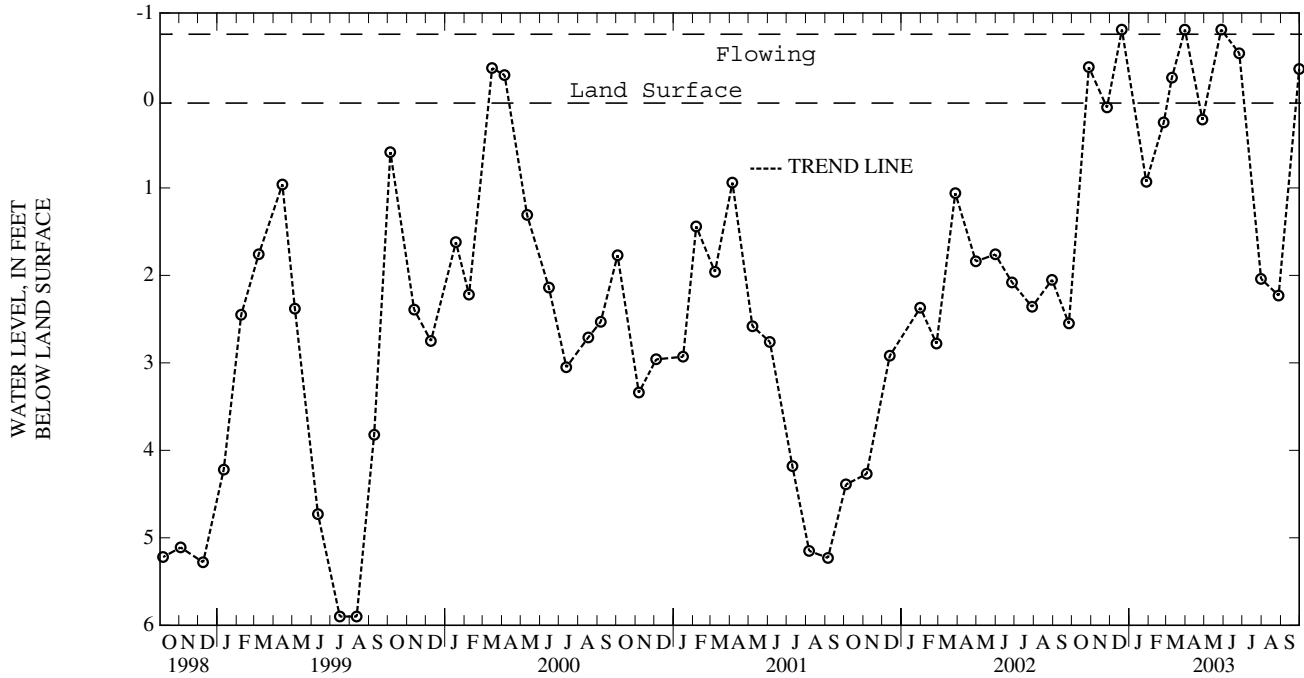
PERIOD OF RECORD.--April 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, flowing on Dec. 20, 2002, March 31, May, 28, 2003; lowest measured, 5.90 ft below land surface, July 16, 1999, and August 12, 1999.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
(READINGS ABOVE LAND SURFACE INDICATED BY "--")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 2002	-.38	FEB 25, 2003	.25	MAY 28, 2003	Flowing	SEP 30, 2003	-.36
NOV 26	.08	MAR 10	-.26	JUN 26	-.54		
DEC 20	Flowing	31	Flowing	JUL 31	2.04		
JAN 28, 2003	.93	APR 28	.22	AUG 28	2.23		

HIGHEST Flowing DEC 20, 2002, MAR 31, MAY 28, 2003
LOWEST 2.23 AUG 28, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

FREDERICK COUNTY—Continued

WELL NUMBER.--FR Bd 96. SITE ID.--393733077274801.

LOCATION.--Lat 39 37'33", long 77 27'48", Hydrologic Unit 02070009, 0.4 mi west of Hunting Creek Lake, Cunningham Falls State Park. Owner: State of Maryland.

AQUIFER.--Catoctin Metabasalt of Precambrian age. Aquifer code: 400CTCN.

WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 189 ft; casing diameter 6 in., to 22 ft; open hole.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with water-level recorder April 1982 to February 1984. Equipped with a digital water-level recorder--15-minute recorder interval from June 1991 to May 1993.

DATUM--Elevation of land surface is 1,150 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing at land surface previous to July 2003, when the casing was extended for an instrumentation shelter. Current measuring point is 3.00 ft above land surface.

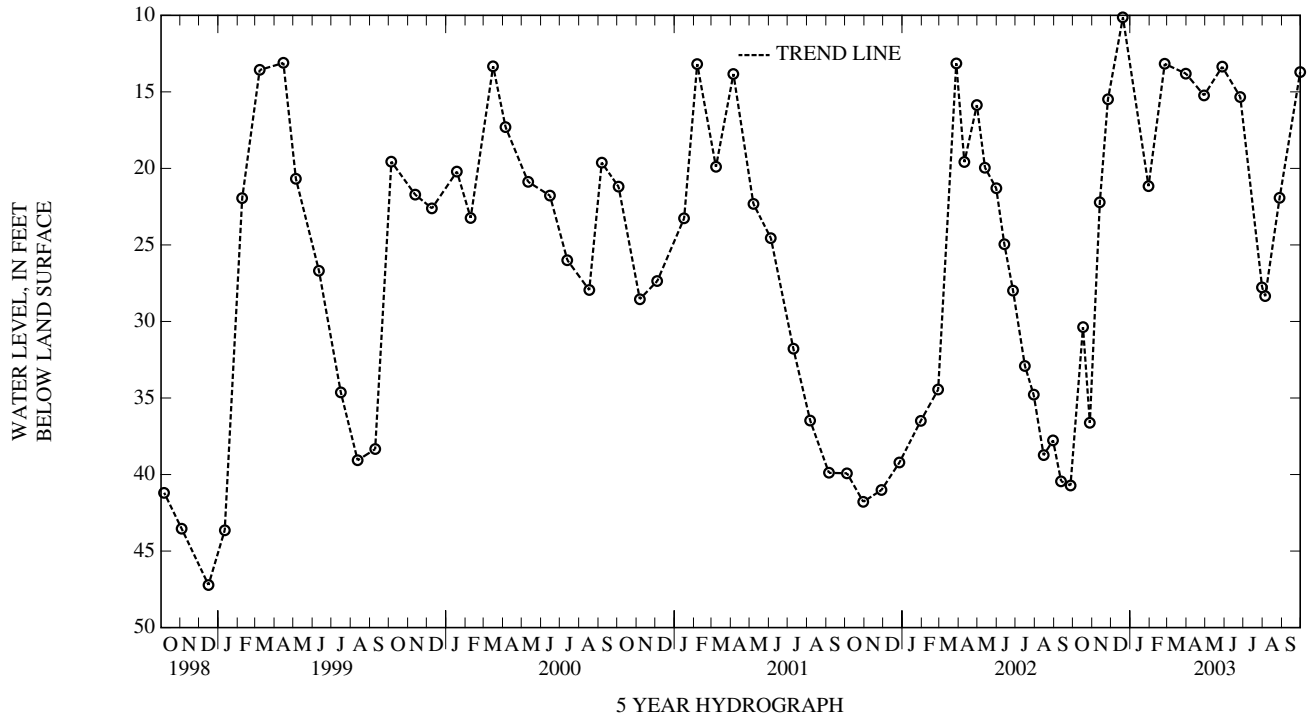
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.54 ft below land surface, May 11, 1989; lowest measured, 47.21 ft below land surface, December 16, 1998.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17, 2002	30.37	DEC 20, 2002	10.14	APR 29, 2003	15.23	AUG 05, 2003	28.35
28	36.63	JAN 30, 2003	21.16	MAY 28	13.36	28	21.93
NOV 13	22.22	FEB 25	13.17	JUN 26	15.33	SEP 30	13.70
26	15.48	MAR 31	13.81	JUL 31	27.77		
HIGHEST 10.14 DEC 20, 2002							
LOWEST 36.63 OCT 28, 2002							



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

FREDERICK COUNTY--Continued

WELL NUMBER.--FR Cg 1. SITE ID.--393156077135701.

LOCATION.--Lat 39 31'56", long 77 13'57", Hydrologic Unit 02070009, at Johnsville. Owner: Private Residence.

AQUIFER.--Ijamsville Formation (saprolite) of Paleozoic age. Aquifer code: 300IJMV.

WELL CHARACTERISTICS.--Dug, stone-lined, domestic, water-table well, depth 42.5 ft; diameter 36 in.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 600 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of wooden well cover, 0.60 ft above land surface.

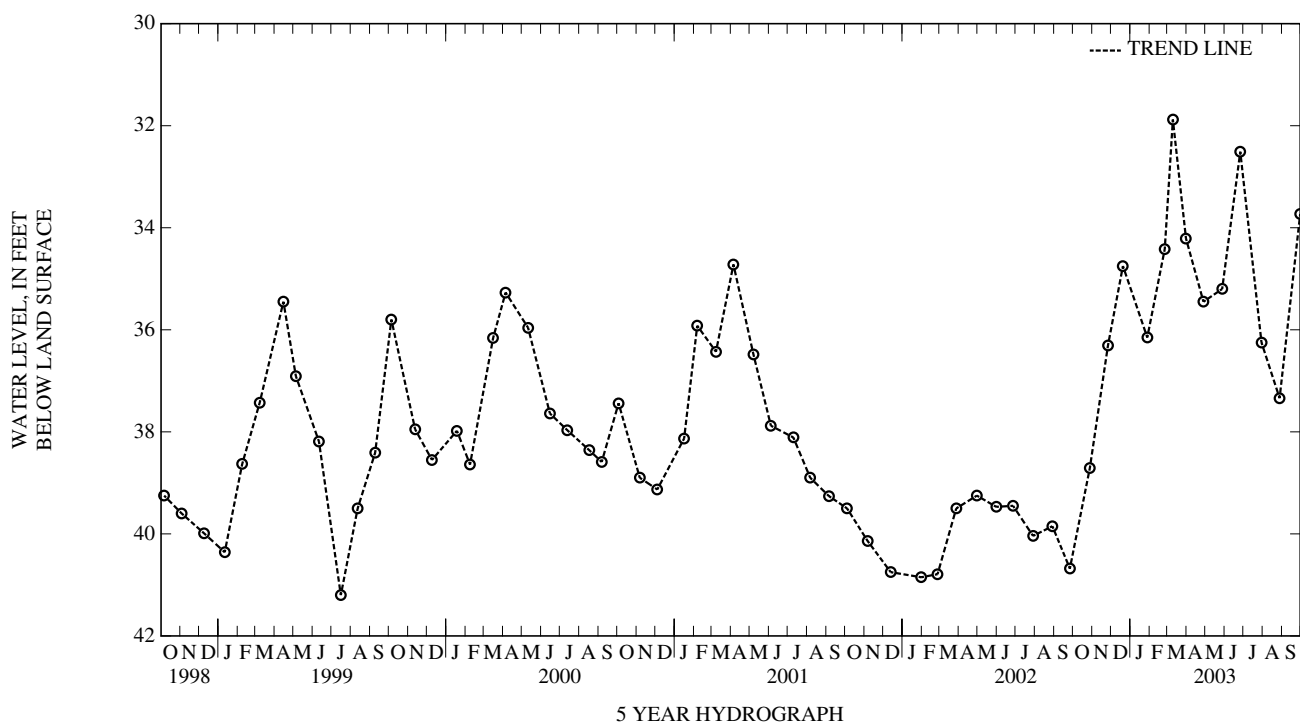
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Well drilled nearby in 2002, for domestic water use.

PERIOD OF RECORD.--July 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 28.63 ft below land surface, September 29, 1975; lowest measured, 42.02 ft below land surface, October 5, 1982.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 2002	38.71	FEB 25, 2003	34.42	MAY 28, 2003	35.20	SEP 30, 2003	33.73
NOV 26	36.31	MAR 10	31.88	JUN 26	32.51		
DEC 20	34.75	31	34.21	JUL 30	36.25		
JAN 28, 2003	36.15	APR 28	35.45	AUG 28	37.34		
	HIGHEST 31.88	MAR 10, 2003					
	LOWEST 38.71	OCT 28, 2002					



FREDERICK COUNTY—Continued

WELL NUMBER.--FR Df 35. SITE ID.--392517077190401. PERMIT NUMBER.--FR-73-0852.

LOCATION.--Lat 39 25'17",long 77 19'04",Hydrologic Unit 02070009, north of Eaglehead Drive, near Lake Linganore. Owner: Lake Linganore Association. AQUIFER.--Urbana Formation of Paleozoic age. Aquifer code: 300URBN.

WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 302 ft, casing diameter 6 in., to 26 ft; open hole.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 570 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.00 ft above land surface previous to July 2003, when the casing was extended for an instrumentation shelter. Current measuring point is 3.25 ft above land surface.

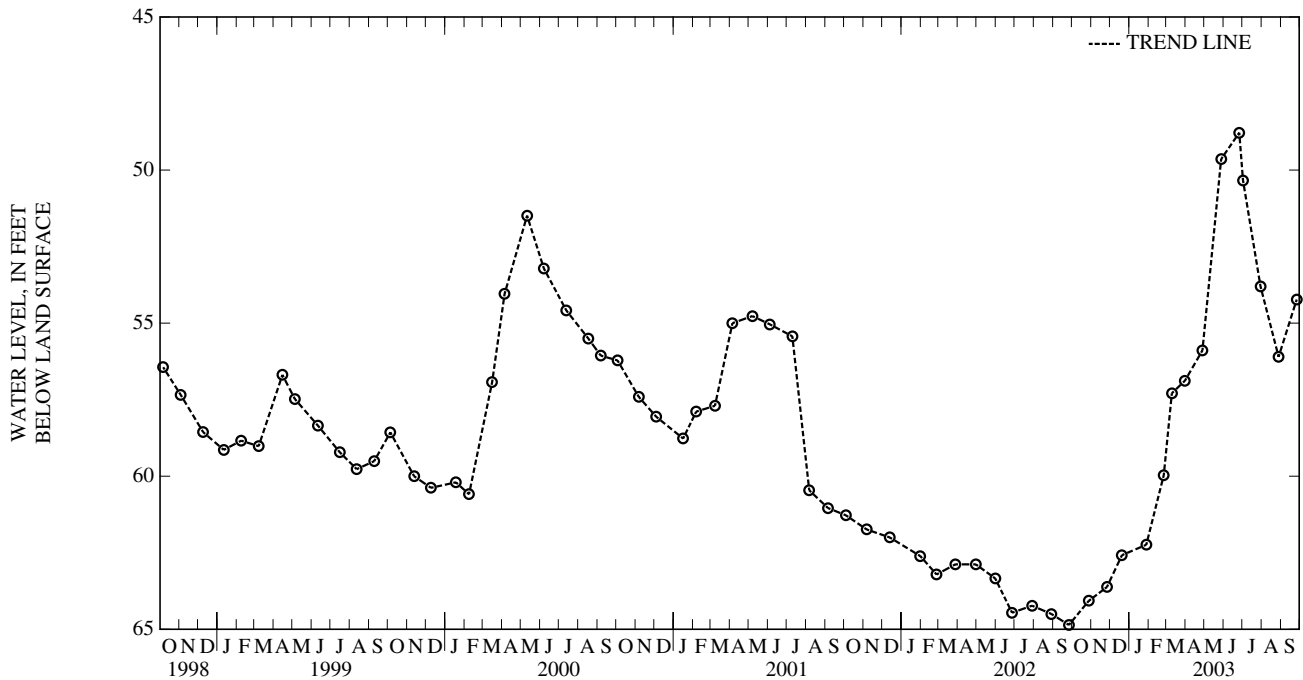
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 44.09 ft below land surface, May 14, 1998; lowest measured, 64.86 ft below land surface, September 26, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 2002	64.07	FEB 25, 2003	59.97	MAY 28, 2003	49.64	AUG 28, 2003	56.10
NOV 26	63.62	MAR 10	57.29	JUN 26	48.78	SEP 26	54.23
DEC 20	62.58	31	56.88	JUL 02	50.34		
JAN 28, 2003	62.24	APR 28	55.89	30	53.80		
HIGHEST 48.78 JUN 26, 2003							
LOWEST 64.07 OCT 28, 2002							



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

GARRETT COUNTY

WELL NUMBER.--GA Ag 1. SITE ID.--394017078581701.

LOCATION.--Lat 39°40'17", long 78°58'17", Hydrologic Unit 02070002, in the Savage River Valley, 2.5 mi northwest of Frostburg. Owner: Town of Frostburg.

AQUIFER.--Greenbrier Formation of Upper Mississippian age. Aquifer code: 331GRBR.

WELL CHARACTERISTICS.--Drilled, unused, water-table well, Reported depth 30 ft, measured depth 14 ft; casing diameter 8 in., to unknown depth; open hole.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 2,530 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing at land surface.

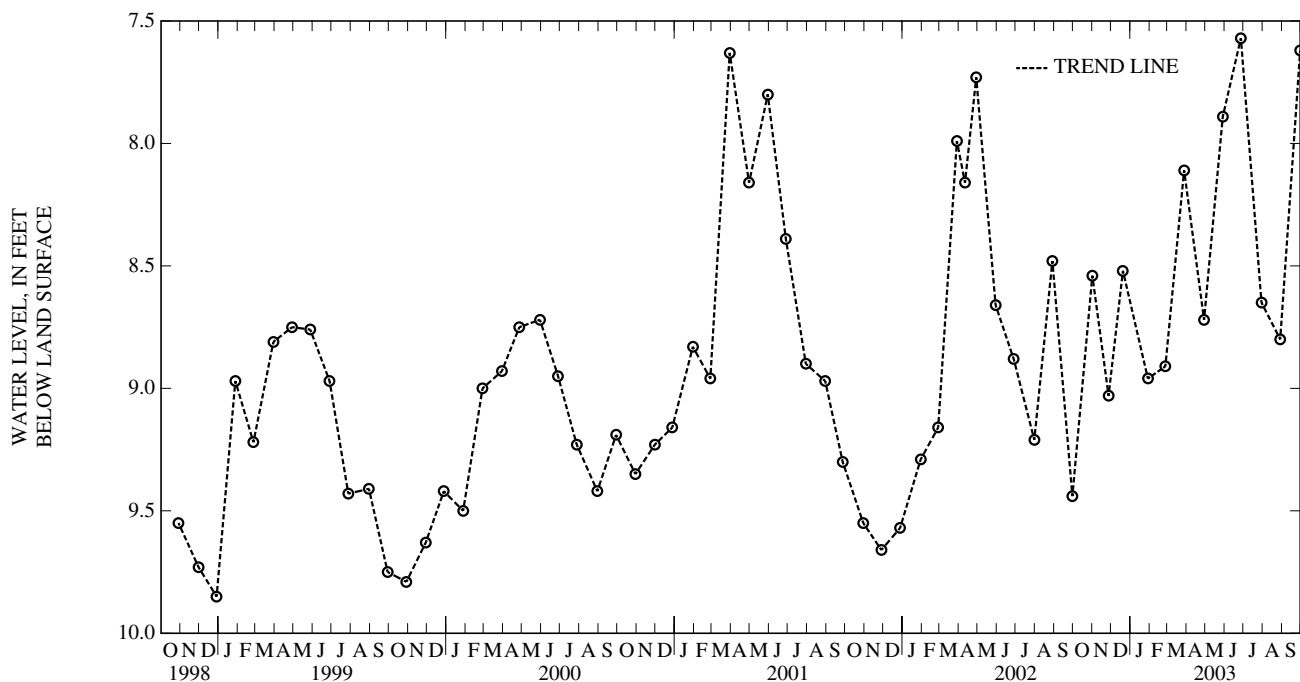
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by nearby ground-water withdrawal.

PERIOD OF RECORD.--October 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.71 ft below land surface, January 14, 1950; lowest measured, 14.59 ft below land surface, January 28, 1985.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 01, 2002	8.54	JAN 29, 2003	8.96	APR 29, 2003	8.72	JUL 30, 2003	8.65
27	9.03	FEB 26	8.91	MAY 29	7.89	AUG 29	8.80
DEC 20	8.52	MAR 28	8.11	JUN 27	7.57	SEP 30	7.62
HIGHEST 7.57 JUN 27, 2003							
LOWEST 9.03 NOV 27, 2002							



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

GARRETT COUNTY--Continued

WELL NUMBER.--GA Bc 1. SITE ID.--393749079190301.

LOCATION.--Lat 39°37'49", long 79°19'03", Hydrologic Unit 05020006, at Accident. Owner: Private Residence.

AQUIFER.--Hampshire Formation of Upper Devonian age. Aquifer code: 341HMPR.

WELL CHARACTERISTICS.--Dug, stone-lined, domestic, water-table well, depth 20 ft; diameter 36 in.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 2,415 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of 1 in. board cover, 2.30 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

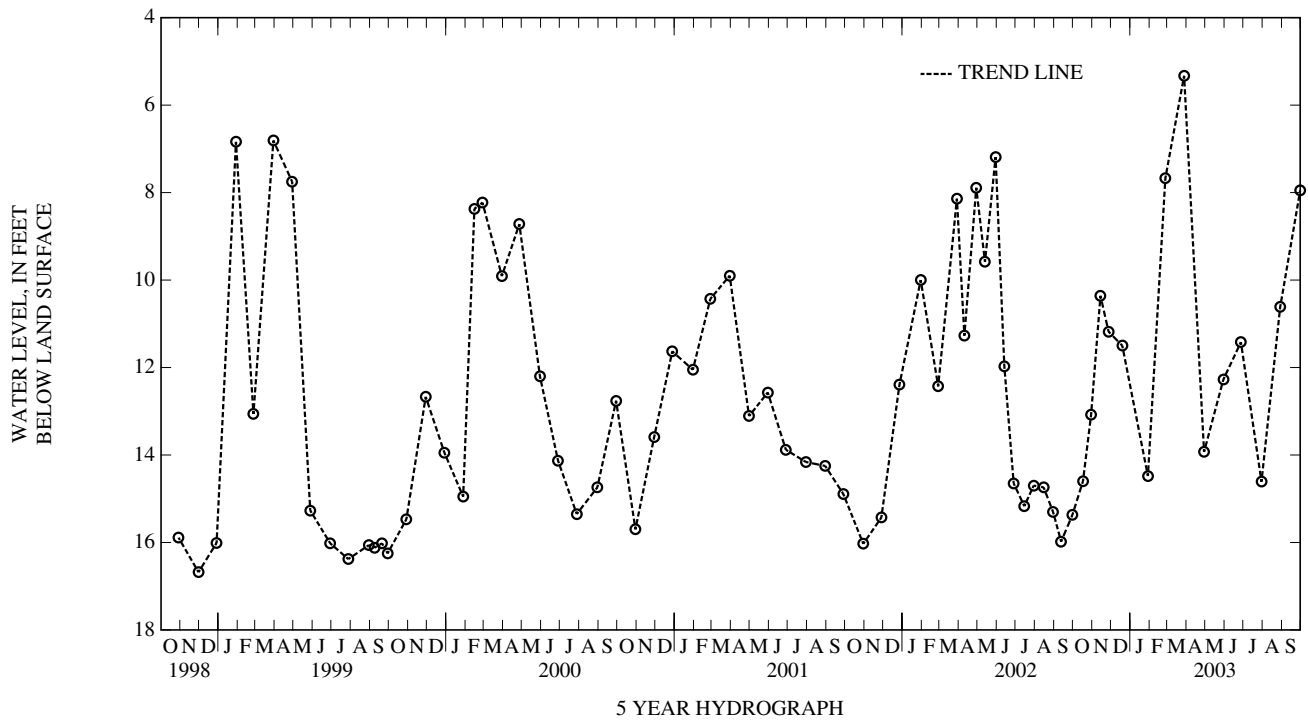
PERIOD OF RECORD.--August 1949 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.25 ft below land surface, March 6, 1979; lowest measured, 19.65 ft below land surface, December 9, 1953.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17, 2002	14.60	DEC 19, 2002	11.50	APR 29, 2003	13.93	AUG 29, 2003	10.61
30	13.08	JAN 29, 2003	14.48	MAY 30	12.27	SEP 30	7.95
NOV 14	10.36	FEB 26	7.67	JUN 27	11.42		
27	11.18	MAR 28	5.33	JUL 30	14.61		

HIGHEST 5.33 MAR 28, 2003
 LOWEST 14.61 JUL 30, 2003



5 YEAR HYDROGRAPH
 OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

GARRETT COUNTY--Continued

WELL NUMBER.--GA Eb 78. SITE ID.--392439079231801. PERMIT NUMBER.--GA-88-0611.

LOCATION.--Lat 39°24'39", long 79°23'18", Hydrologic Unit 05020006, at Southern Pines, near Broadford Road, and Southern Pines Drive, Mountain Lake Park. Owner: Private Residence.

AQUIFER.--Foreknobs Formation of Upper Devonian age. Aquifer code: (code in review).

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 307 ft; casing diameter 6 in., to 40 ft; open hole.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 2,500 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.00 ft above land surface.

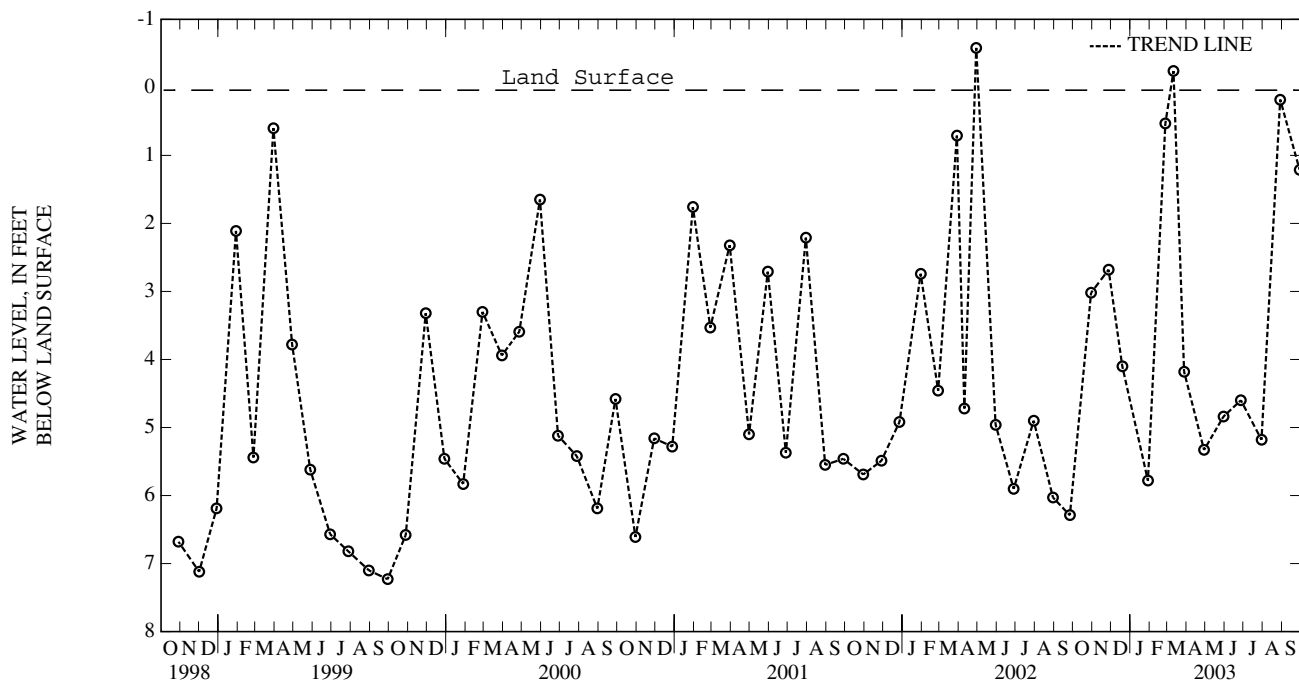
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, flowing on March 29, 1993, and March 30, 1994; lowest measured, 9.12 ft below land surface, August 30, 1993.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
(READINGS ABOVE LAND SURFACE INDICATED BY "-")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	3.02	FEB 26, 2003	.53	MAY 30, 2003	4.84	SEP 29, 2003	1.21
NOV 27	2.68	MAR 11	-.24	JUN 27	4.60		
DEC 19	4.10	28	4.18	JUL 30	5.18		
JAN 29, 2003	5.78	APR 29	5.33	AUG 29	.18		
HIGHEST	-.24	MAR 11, 2003					
LOWEST	5.78	JAN 29, 2003					



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

GARRETT COUNTY--Continued

WELL NUMBER.--GA Fa 28. SITE ID.--391512079270901. PERMIT NUMBER.--GA-73-1697.

LOCATION.--Lat 39°15'12", long 79°27'09", Hydrologic Unit 02070002, on south side of Red Oak Road, 0.6 mi west from the intersection with Kempton Road, 2.6 mi west of Wilson. Owner: Mettiki Coal Corp.

AQUIFER.--Conemaugh Formation of Upper Pennsylvanian age. Aquifer code: 321CNMG.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 341 ft; casing diameter 6 in., to 317 ft; open hole.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 2,890 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.50 ft above land surface.

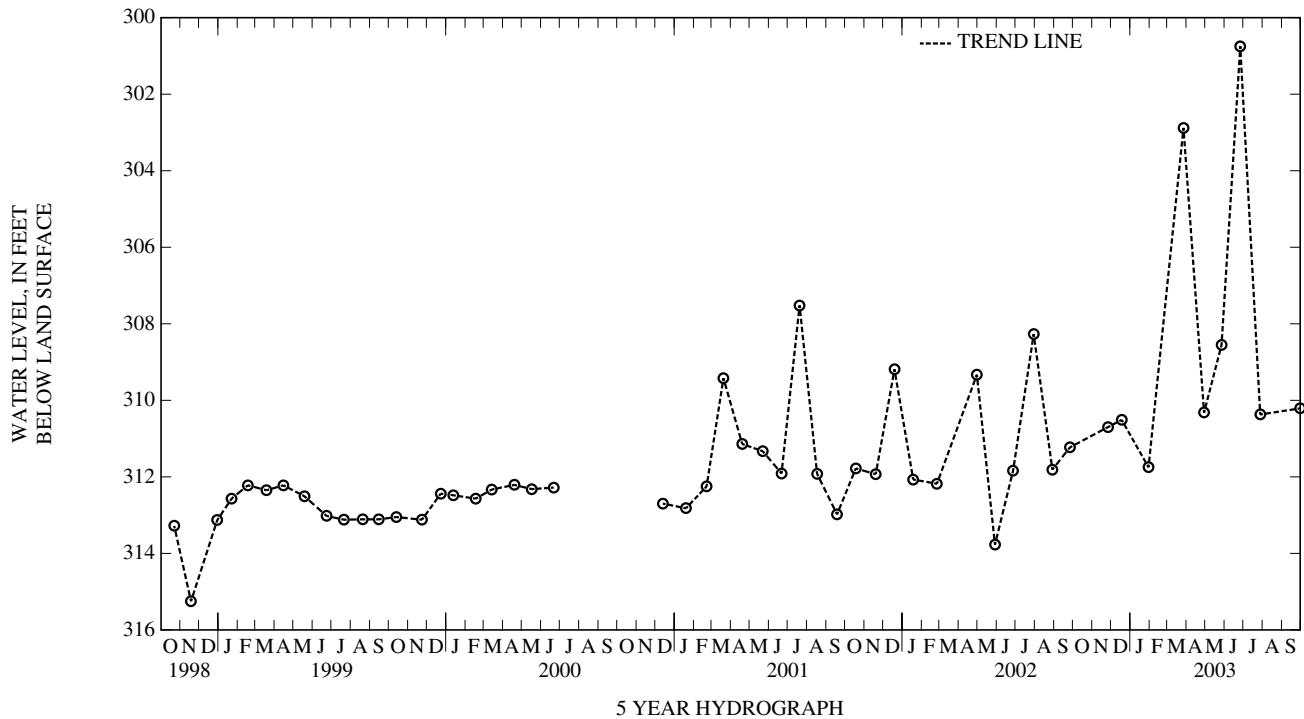
REMARKS.--Hydrologic Effects of Mining, Phase III Project observation well. Water levels are affected by coal mining operations. Water level measurements could not be measured from July 2000 through November 2000, and March 27, 2002 because of an obstruction in the well. A well depth of 337.35 ft below land surface was measured on April 30, 2002.

PERIOD OF RECORD.--June 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 100.60 ft below land surface, December 14, 1978; lowest measured dry at 341.00 ft below land surface, May 16, 1985.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 26, 2002	310.70	MAR 27, 2003	302.88	JUN 26, 2003	300.75
DEC 18	310.51	APR 29	310.32	JUL 28	310.37
JAN 30, 2003	311.75	MAY 27	308.55	SEP 30	310.21
HIGHEST 300.75 JUN 26, 2003					
LOWEST 311.75 JAN 30, 2003					



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

GARRETT COUNTY--Continued

WELL NUMBER.--GA Fa 29. SITE ID.--391512079270902. PERMIT NUMBER.--GA-73-1698.

LOCATION.--Lat 39°15'12", long 79°27'09", Hydrologic Unit 02070002, on south side of Red Oak Road, 0.9 mi west from intersection with Kempton Road, 2.6 mi west of Wilson. Owner: Mettiki Coal Corp.

AQUIFER.--Conemaugh Formation of Upper Pennsylvanian age. Aquifer code: 321CNMG.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 226 ft; casing diameter 6 in., to 203 ft; open hole.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 2,890 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.00 ft above land surface.

REMARKS.--Hydrologic Effects of Mining, Phase III Project observation well. Water levels are affected by coal mining operations. A well depth of 211.0 ft below land surface was measured on April 30, 2002.

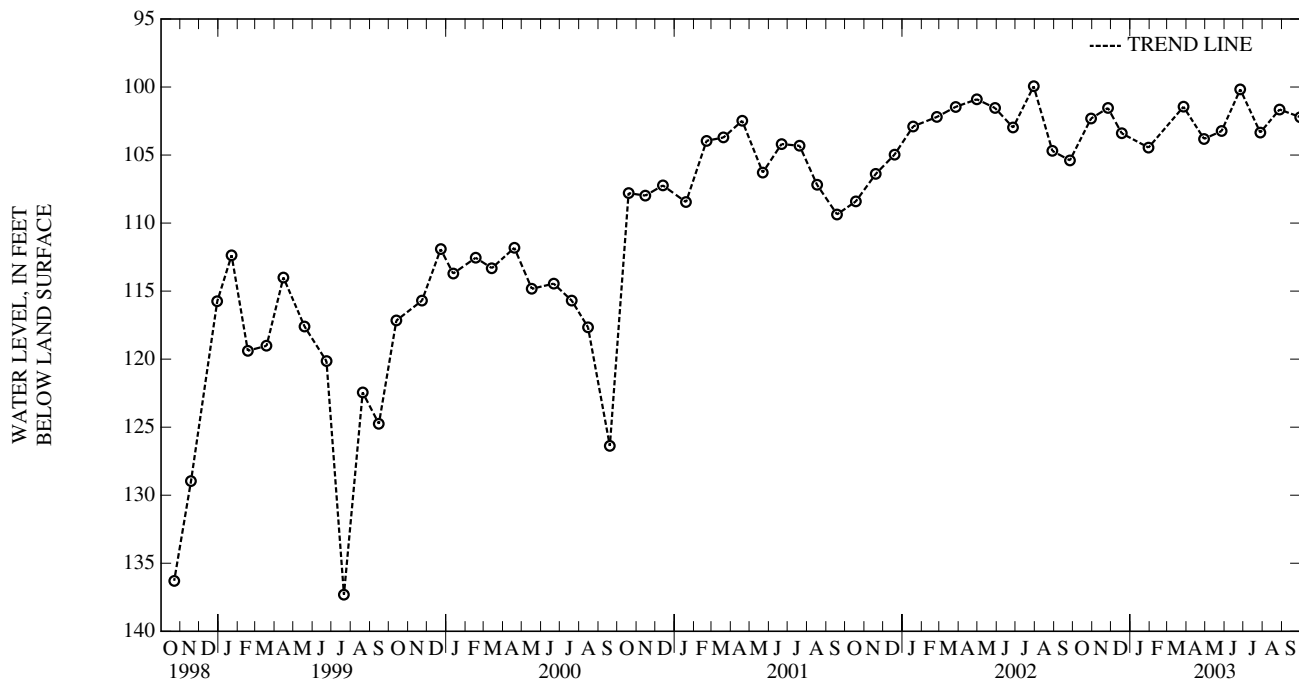
PERIOD OF RECORD.--June 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 99.95 ft below land surface, July 30, 2002; lowest water level measured, dry on November 17, 18, 1982, December 28, 1982, February 18, 1983.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	102.31	JAN 30, 2003	104.45	MAY 27, 2003	103.24	AUG 28, 2003	101.65
NOV 26	101.54	MAR 27	101.45	JUN 26	100.18	SEP 30	102.21
DEC 18	103.40	APR 29	103.81	JUL 28	103.34		

HIGHEST 100.18 JUN 26, 2003
 LOWEST 104.45 JAN 30, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

GARRETT COUNTY--Continued

WELL NUMBER.--GA Fa 31. SITE ID.--391539079254601. PERMIT NUMBER.--GA-73-2142.

LOCATION.--Lat 39°15'37", long 79°25'45", Hydrologic Unit 02070002, on north side of coal conveyor belt, 450 ft west of Table Rock Road, 1.7 mi west of Wilson. Owner: U.S. Geological Survey.

AQUIFER.--Allegheny Formation of Middle Pennsylvanian age. Aquifer code: 324ALGN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 606 ft; casing diameter 8 in., to 25.5 ft; casing diameter 4 in., to 470 ft; open hole.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval.

DATUM.--Elevation of land surface is 2,618 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.60 ft above land surface.

REMARKS.--Hydrologic Effects of Mining, Phase III Project observation well. Water levels are affected by coal mining operations.

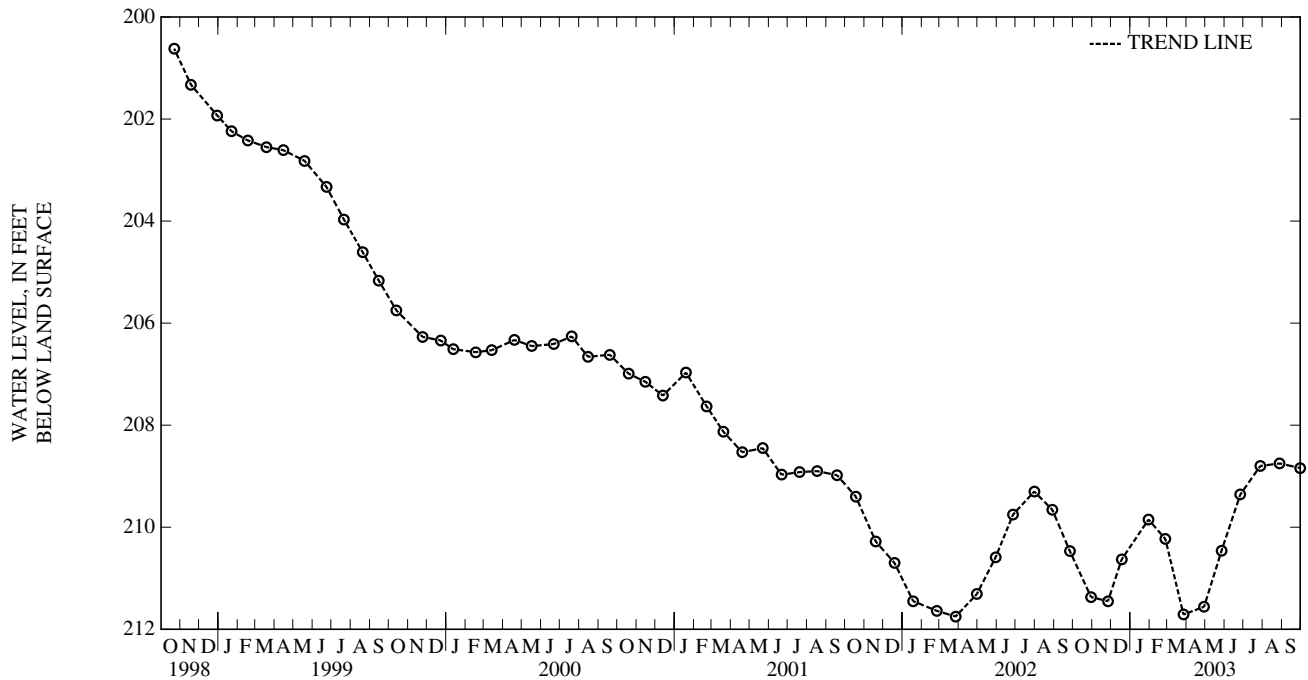
PERIOD OF RECORD.--April 1980 to to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.31 ft below land surface, April 8, 1980; lowest measured, 211.75 ft below land surface, March 27, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	211.37	JAN 30, 2003	209.85	APR 29, 2003	211.56	JUL 28, 2003	208.80
NOV 26	211.45	FEB 26	210.23	MAY 27	210.46	AUG 28	208.75
DEC 18	210.63	MAR 27	211.71	JUN 26	209.36	SEP 30	208.84

HIGHEST 208.75 AUG 28, 2003
 LOWEST 211.71 MAR 27, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

GARRETT COUNTY--Continued

WELL NUMBER.--GA Fa 32. SITE ID.--391539079254602. PERMIT NUMBER.--GA-73-2143.

LOCATION.--Lat 39°15'39", long 79°25'46", Hydrologic Unit 02070002, on north side of coal conveyor belt, 450 ft west of Table Rock Road, 1.7 mi west of Wilson. Owner: U.S. Geological Survey.

AQUIFER.--Conemaugh Formation of Upper Pennsylvanian age. Aquifer code: 321CNMG.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 473 ft; casing diameter 8 in., to 23 ft; casing diameter 4 in., to 430 ft; open hole.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from July 1980 to April 1981.

DATUM.--Elevation of land surface is 2,618 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.15 ft above land surface.

REMARKS.--Hydrologic Effects of Mining, Phase III Project observation well. Water levels are affected by coal mining operations. A well depth of 470.35 ft below land surface was measured on April 30, 2002.

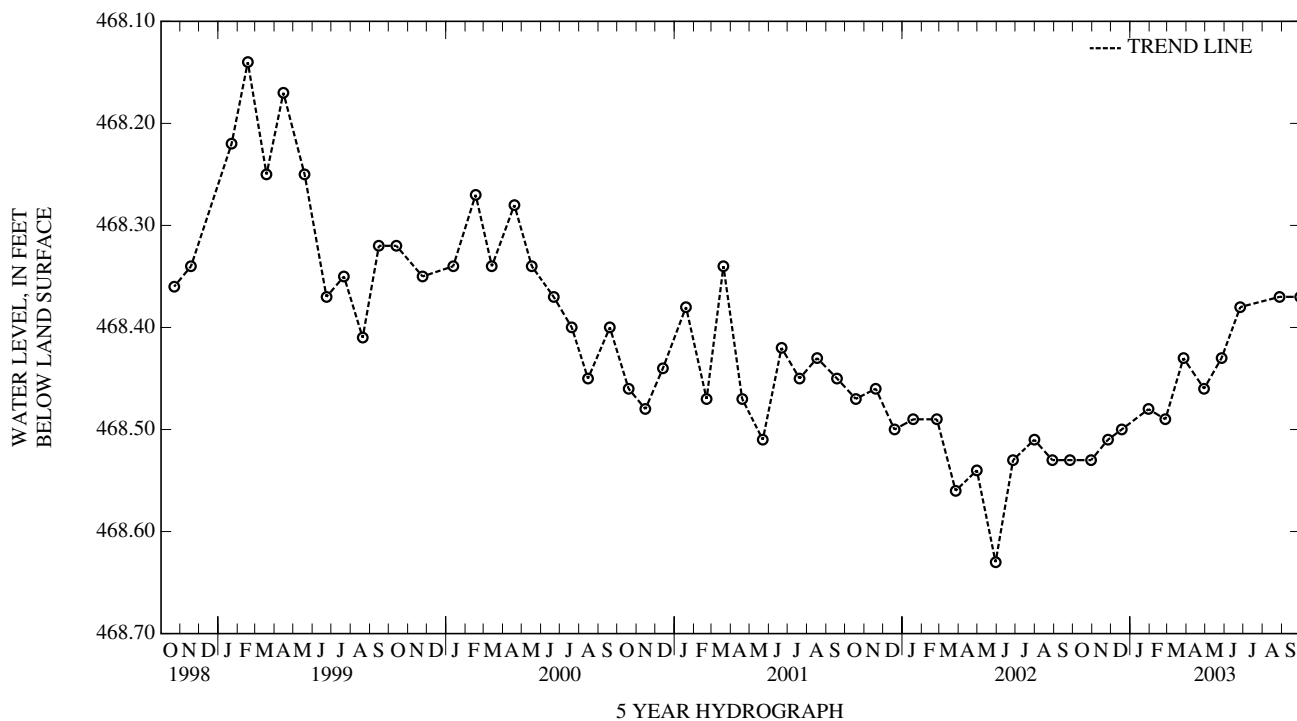
PERIOD OF RECORD.--February 1980 to to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.55 ft below land surface, February 27, 1980; lowest measured, 474.80 ft below land surface, July 16, 1992.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	468.53	JAN 30, 2003	468.48	APR 29, 2003	468.46	AUG 28, 2003	468.37
NOV 26	468.51	FEB 26	468.49	MAY 27	468.43	SEP 30	468.37
DEC 18	468.50	MAR 27	468.43	JUN 26	468.38		

HIGHEST 468.37 AUG 28, 2003 SEP 30, 2003
 LOWEST 468.53 OCT 30, 2002



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

GARRETT COUNTY--Continued

WELL NUMBER.--GA Fa 33. SITE ID.--391539079254603. PERMIT NUMBER.--GA-73-2144.

LOCATION.--Lat 39°15'39", long 79°25'46", Hydrologic Unit 02070002, on north side of coal conveyor belt, 450 ft west of Table Rock Road, 1.7 mi west of Wilson. Owner: U.S. Geological Survey.

AQUIFER.--Conemaugh Formation of Upper Pennsylvanian age. Aquifer code: 321CNMG.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 391 ft; measured depth, 324 ft on December 15, 1995, (see REMARKS); casing diameter 8 in., to 23 ft; casing diameter 4 in., to 318 ft; open hole.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by U.S. Geological Survey personnel. Equipped with digital recorder--60-minute recorder interval from July 1980 to October 1982.

DATUM.--Elevation of land surface is 2,618 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.00 ft above land surface.

REMARKS.--Hydrologic Effects of Mining, Phase III Project observation well. Water levels are affected by coal mining operations. Prior to December 15, 1995, the well was undermined and collapsed, the depth of the well is now 324 ft.

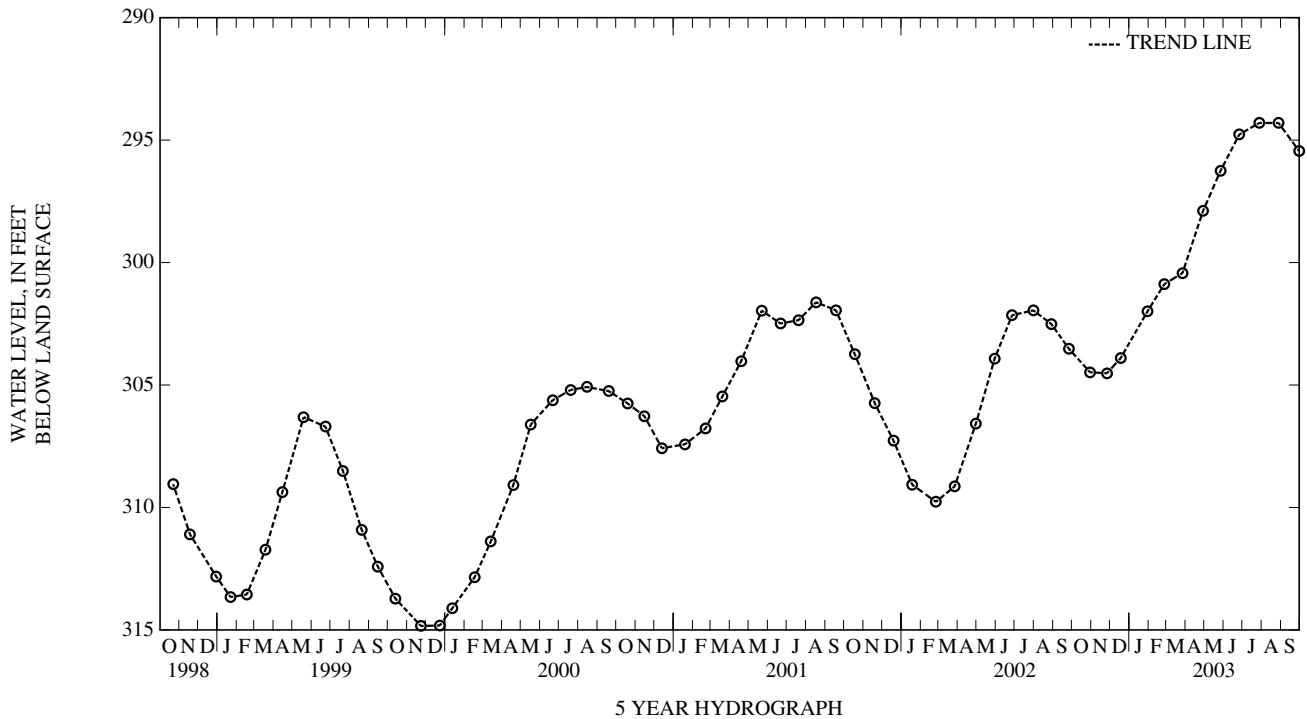
PERIOD OF RECORD.--February 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.31 ft below land surface, February 27, 1978; lowest measured, dry at 324 ft below land surface on December 15, 1995, January 18 and June 13, 1996.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	304.48	JAN 30, 2003	301.99	APR 29, 2003	297.89	JUL 28, 2003	294.30
NOV 26	304.52	FEB 26	300.88	MAY 27	296.25	AUG 28	294.30
DEC 18	303.90	MAR 27	300.43	JUN 26	294.77	SEP 30	295.45

HIGHEST 294.30 JUL 28, 2003 AUG 28, 2003
 LOWEST 304.52 NOV 26, 2002



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

GARRETT COUNTY--Continued

WELL NUMBER.--GA Fa 34. SITE ID.--391539079254604. PERMIT NUMBER.--GA-73-2145.

LOCATION.--Lat 39°15'39", long 79°25'46", Hydrologic Unit 02070002, on north side of coal conveyor belt, 450 ft west of Table Rock Road, 1.7 mi west of Wilson. Owner: U.S. Geological Survey.

AQUIFER.--Conemaugh Formation of Upper Pennsylvanian age. Aquifer code: 321CNMG.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 115 ft; casing diameter 8 in., to 23.5 ft; casing diameter 4 in., to 96 ft; open hole.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval, from July 1980 to October 1990.

DATUM.--Elevation of land surface is 2,618 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.00 ft above land surface.

REMARKS.--Hydrologic Effects of Mining, Phase III Project observation well.

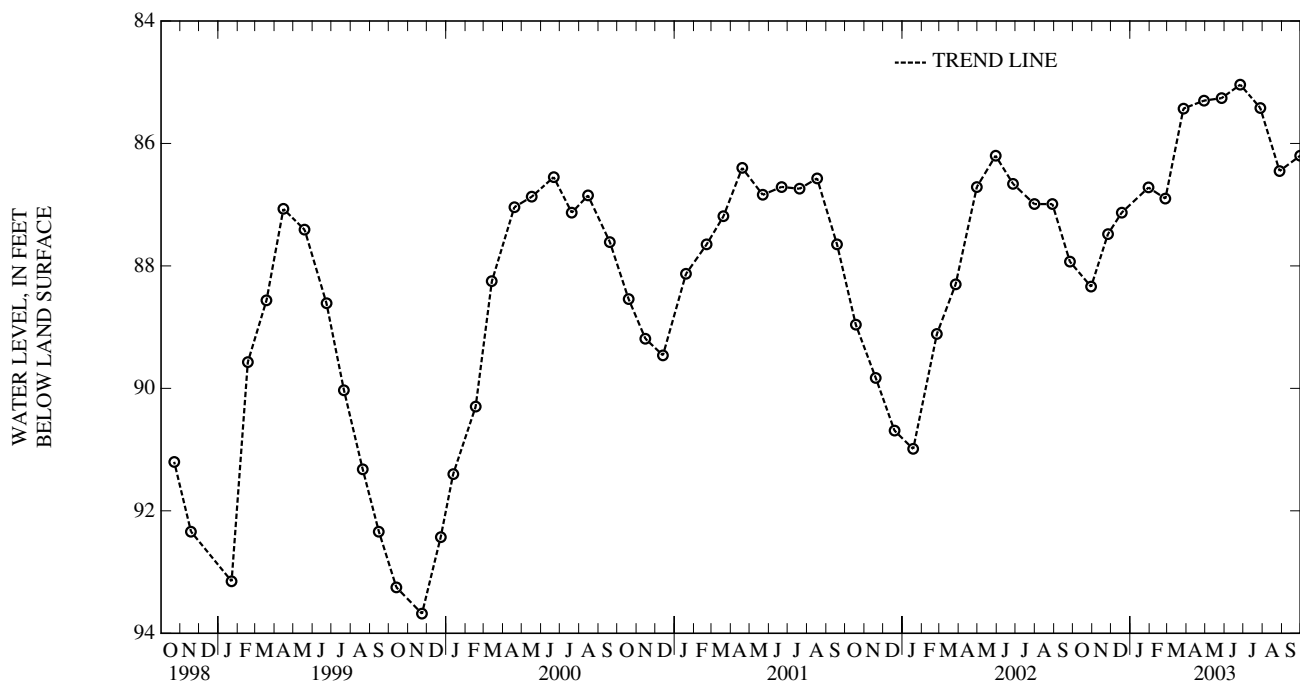
PERIOD OF RECORD.--February 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.05 ft below land surface, February 26, 1980; lowest measured, 95.25 ft below land surface, December 11, 1991.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	88.34	JAN 30, 2003	86.72	APR 29, 2003	85.30	JUL 28, 2003	85.42
NOV 26	87.48	FEB 26	86.90	MAY 27	85.26	AUG 28	86.45
DEC 18	87.13	MAR 27	85.43	JUN 26	85.04	SEP 30	86.20

HIGHEST 85.04 JUN 26, 2003
LOWEST 88.34 OCT 30, 2002



GARRETT COUNTY--Continued

WELL NUMBER.--GA Fa 38. SITE ID.--391501079260001. PERMIT NUMBER.--GA-73-2125.

LOCATION.--Lat 39°15'01", long 79°26'00", Hydrologic Unit 02070002, at intersection of Kempton Road and Dobbin Road, 3.6 mi south of Table Rock.
 Owner: Private Residence.

AQUIFER.--Conemaugh Formation of Upper Pennsylvanian age. Aquifer code: 321CNMG.

WELL CHARACTERISTICS.--Drilled, domestic, water-table well, depth 118 ft, casing diameter 6 in., to 39 ft; open hole.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 2,680 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.00 ft above land surface.

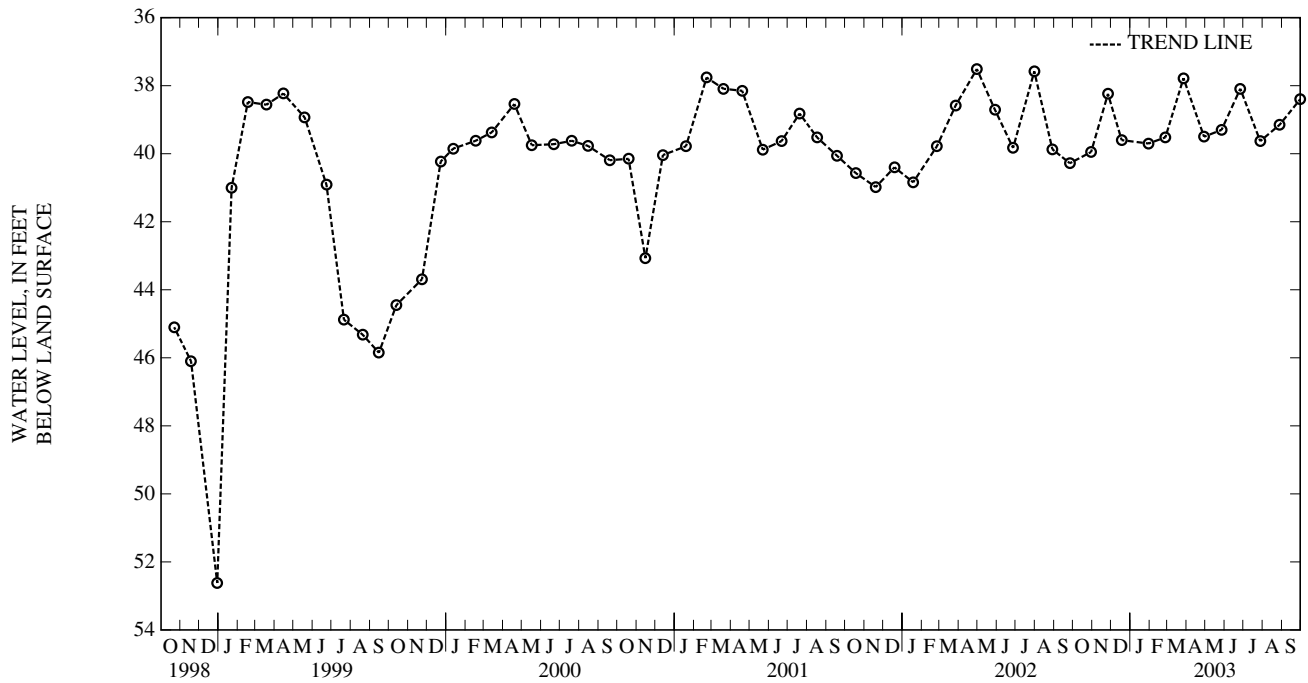
REMARKS.--Hydrologic Effects of Mining, Phase III Project observation well. Water levels are affected by nearby coal mining operations.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 35.46 ft below land surface, March 30, 1993; lowest measured, 59.72 ft below land surface, October 14, 1992.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	39.95	JAN 30, 2003	39.70	APR 29, 2003	39.50	JUL 28, 2003	39.63
NOV 26	38.24	FEB 26	39.52	MAY 27	39.30	AUG 28	39.15
DEC 18	39.60	MAR 27	37.78	JUN 26	38.09	SEP 30	38.40
HIGHEST 37.78 MAR 27, 2003							
LOWEST 39.95 OCT 30, 2002							



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

GARRETT COUNTY--Continued

WELL NUMBER.--GA Fb 22. SITE ID.--391530079244401. PERMIT NUMBER.--GA-73-2146.

LOCATION.--Lat 39°15'30", long 79°24'44", Hydrologic Unit 02070002, south side of Wilson Road, 500 ft west of the intersection with Wilson-Coronna Road, 0.4 mi northwest of Wilson. Owner: U.S. Geological Survey.

AQUIFER.--Allegheny Formation of Middle Pennsylvanian age. Aquifer code: 324ALGN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 640 ft; casing diameter 4 in., to 517 ft; open hole.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval, from May 1980 to October 1990.

DATUM.--Elevation of land surface is 2,530 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.0 ft above land surface.

REMARKS.--Hydrologic Effects of Mining, Phase III Project observation well. Water levels are affected by coal mining operations. A well depth of 530 ft below land surface was measured on April 30, 2002.

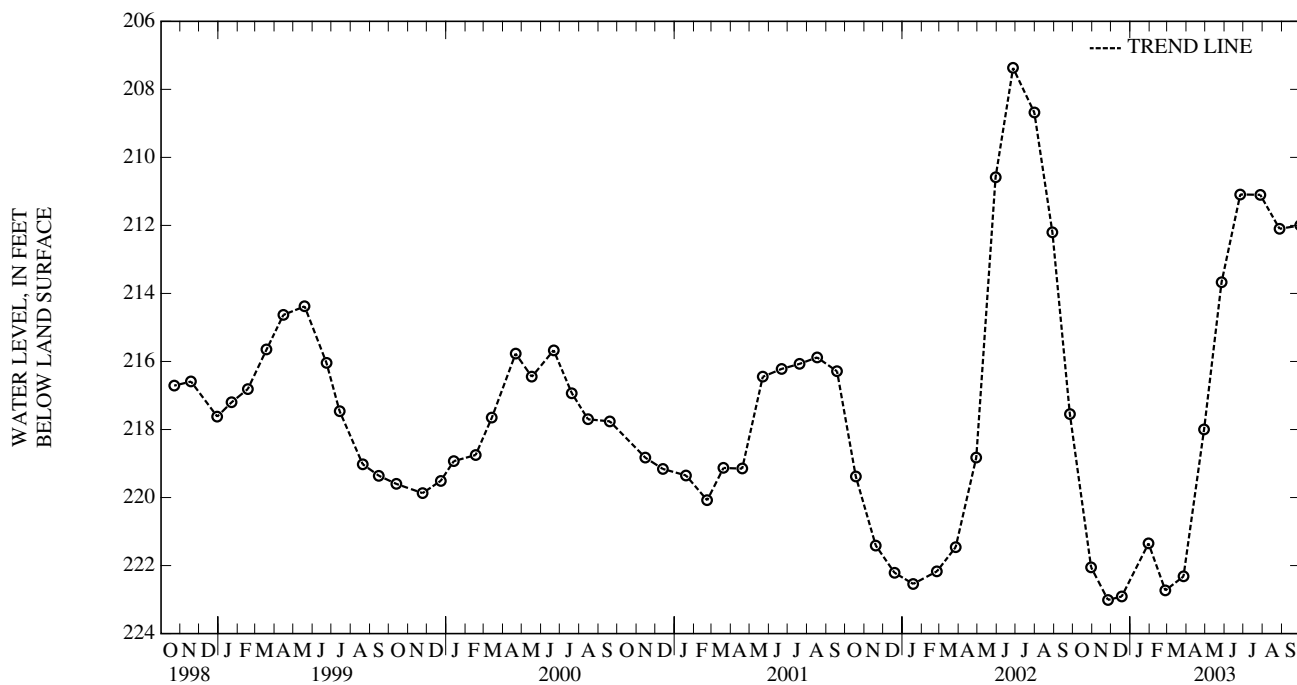
PERIOD OF RECORD.--April 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 63.59 ft below land surface, April 8, 1980; lowest measured, 253.17 ft below land surface, October 16, 1995.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	222.05	JAN 30, 2003	221.35	APR 29, 2003	218.00	JUL 28, 2003	211.10
NOV 26	223.01	FEB 26	222.73	MAY 27	213.67	AUG 28	212.10
DEC 18	222.91	MAR 27	222.32	JUN 26	211.09	SEP 30	212.00

HIGHEST 211.09 JUN 26, 2003
 LOWEST 223.01 NOV 26, 2002



GARRETT COUNTY--Continued

WELL NUMBER.--GA Fb 24. SITE ID.--391530079244403. PERMIT NUMBER.--GA-73-2177.

LOCATION.--Lat 39°15'30", long 79°24'44", Hydrologic Unit 02070002, south side of Wilson Road, 500 ft west of the intersection with Wilson-Coronna Road, 0.4 mi northwest of Wilson. Owner: U.S. Geological Survey.

AQUIFER.--Conemaugh Formation of Upper Pennsylvanian age. Aquifer code: 321CNMG.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 400 ft; casing diameter 4 in., to 340 ft; open hole.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval, from May 1980 to October 1990.

DATUM.--Elevation of land surface is 2,530 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.00 ft above land surface.

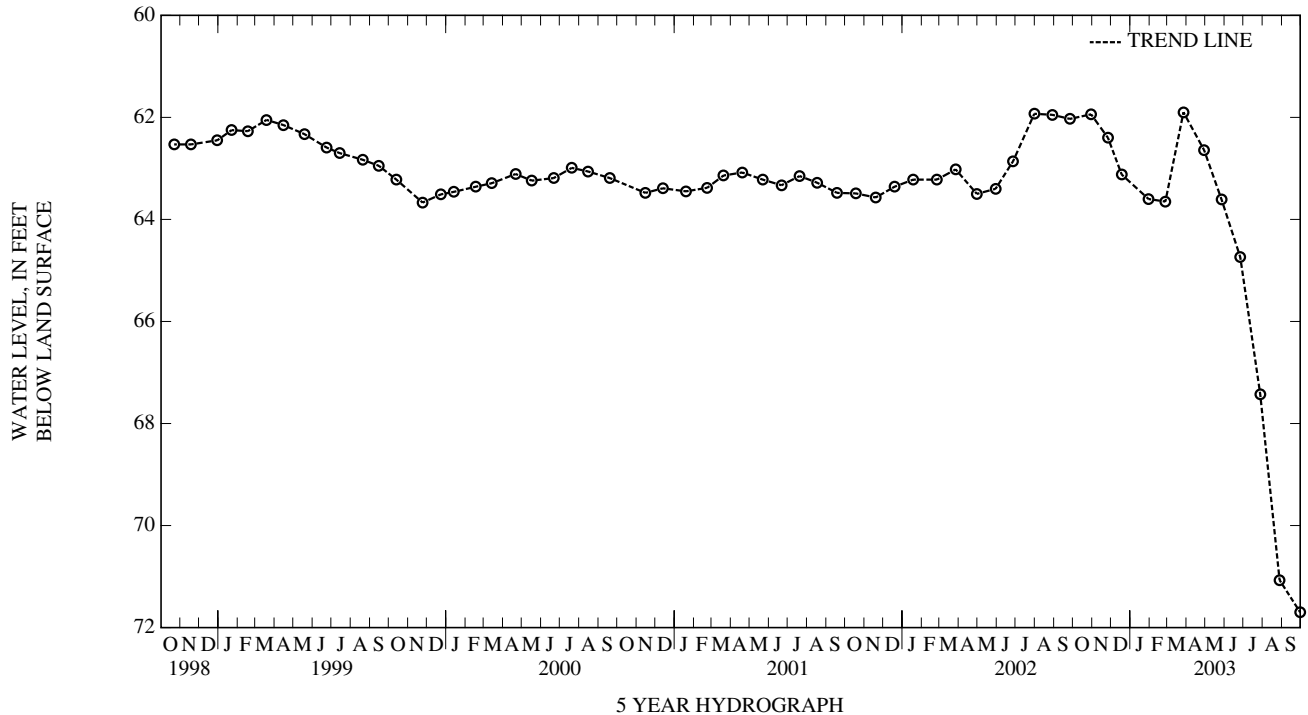
REMARKS.--Hydrologic Effects of Mining, Phase III Project observation well. Water levels are affected by coal mining operations. A well depth of 394 ft below land surface was measured on April 30, 2002.

PERIOD OF RECORD.--April 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 18.08 ft below land surface, January 12, 1981; lowest measured, 92.29 ft below land surface, April 28, 1981.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	61.94	JAN 30, 2003	63.60	APR 29, 2003	62.64	JUL 28, 2003	67.43
NOV 26	62.40	FEB 26	63.65	MAY 27	63.61	AUG 28	71.07
DEC 18	63.12	MAR 27	61.90	JUN 26	64.74	SEP 30	71.70
HIGHEST 61.90 MAR 27, 2003							
LOWEST 71.70 SEP 30, 2003							



5 YEAR HYDROGRAPH
OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

GARRETT COUNTY--Continued

WELL NUMBER.--GA Fb 25. SITE ID.--391530079244404. PERMIT NUMBER.--GA-73-2178.

LOCATION.--Lat 39°15'30", long 79°24'44", Hydrologic Unit 02070002, south side of Wilson Road, 500 ft west of the intersection with Wilson-Coronna Road, 0.4 mi northwest of Wilson. Owner: U.S. Geological Survey.

AQUIFER.--Conemaugh Formation of Upper Pennsylvanian age. Aquifer code: 321CNMG.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 180 ft; casing diameter 4 in., to 120 ft; open hole.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from June 1980 to October 1990.

DATUM.--Elevation of land surface is 2,530 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.00 ft above land surface.

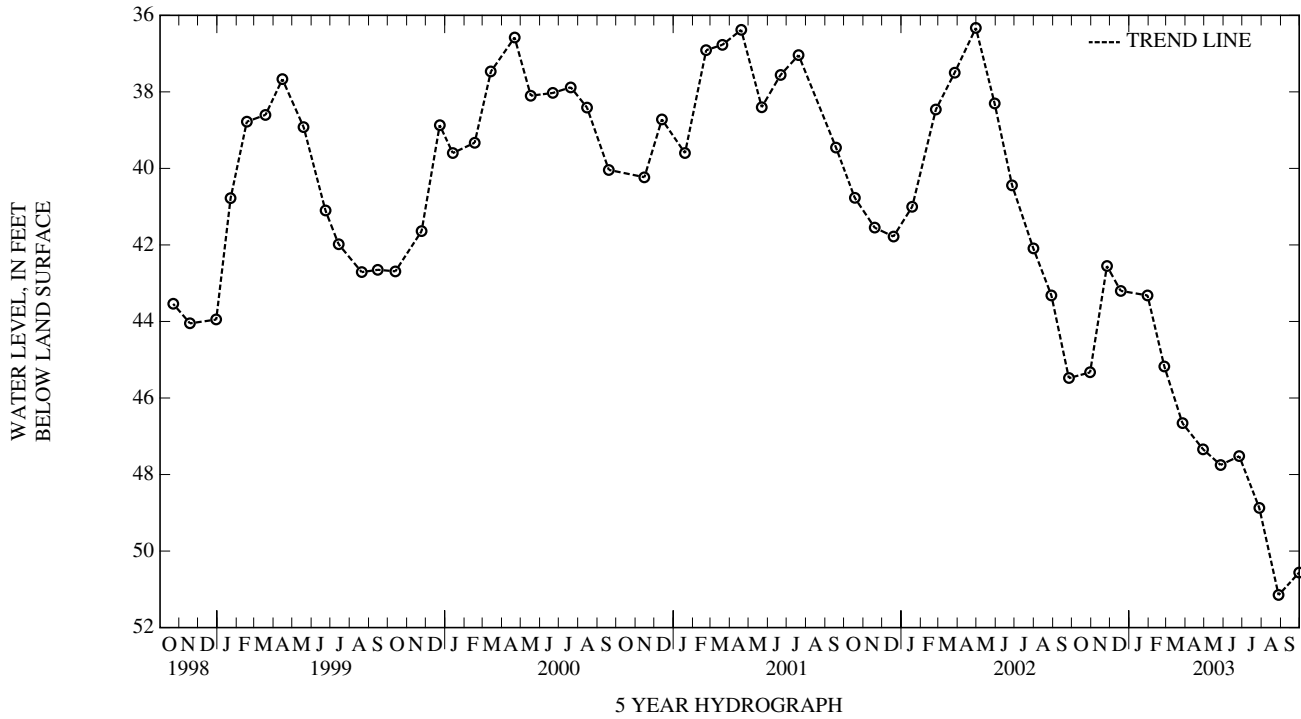
REMARKS.--Hydrologic Effects of Mining, Phase III Project observation well. Water levels are affected by coal mining operations. A well depth of 121 ft below land surface was measured on April 30, 2002.

PERIOD OF RECORD.--April 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 27.89 ft below land surface, May 11, 1981; lowest measured, 54.18 ft below land surface, May 14, 1985.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	45.33	JAN 30, 2003	43.32	APR 29, 2003	47.34	JUL 28, 2003	48.87
NOV 26	42.55	FEB 26	45.18	MAY 27	47.75	AUG 28	51.15
DEC 18	43.20	MAR 27	46.66	JUN 26	47.52	SEP 30	50.56
HIGHEST 42.55 NOV 26, 2002							
LOWEST 51.15 AUG 28, 2003							



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

GARRETT COUNTY--Continued

WELL NUMBER.--GA Fb 27. SITE ID.--391513079243602. PERMIT NUMBER.--GA-73-2182.

LOCATION.--Lat 39°15'13", long 79°24'36", Hydrologic Unit 02070002, 0.6 mi west of Wilson. Owner: U.S. Geological Survey.

AQUIFER.--Conemaugh Formation of Upper Pennsylvanian age. Aquifer code: 321CNMG.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 656 ft; casing diameter 4 in., to 590 ft; open hole.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval, from June 1980 to July 1990.

DATUM.--Elevation of land surface is 2,755 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.00 ft above land surface.

REMARKS.--Hydrologic Effects of Mining, Phase III Project observation well. Water levels are affected by coal mining operations. A well depth of 610 ft below land surface was measured on April 30, 2002.

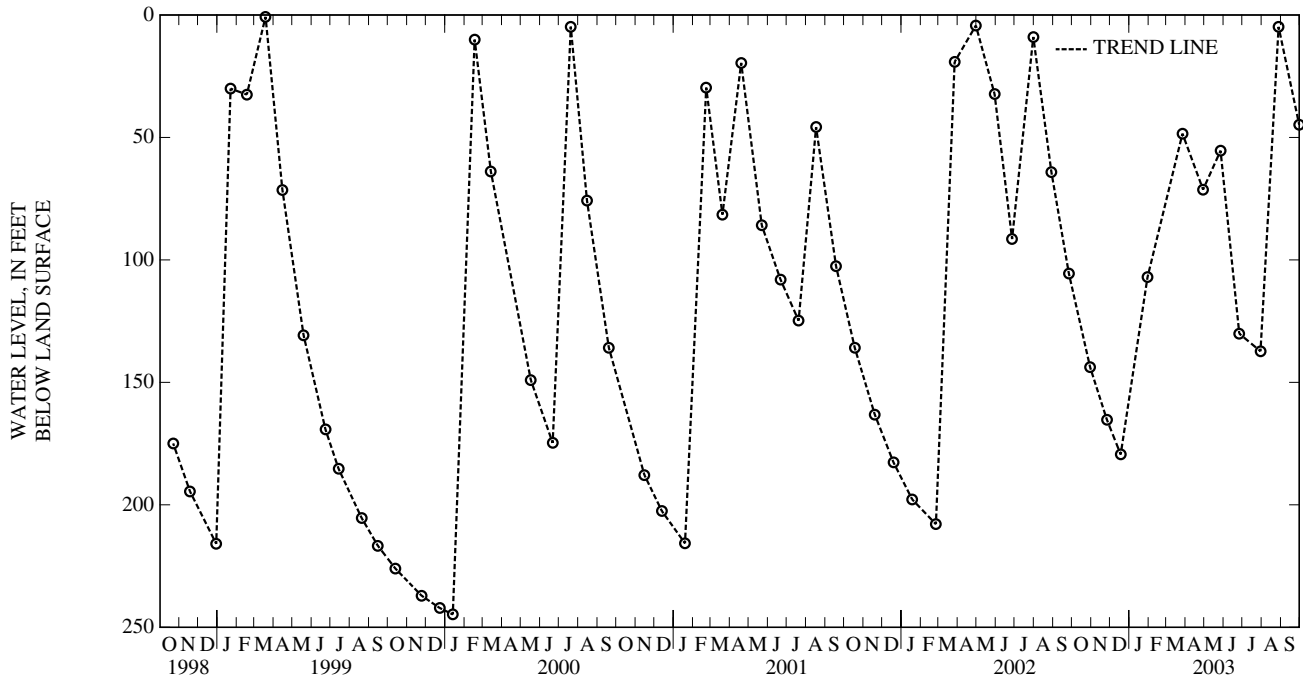
PERIOD OF RECORD.--June 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.27 ft below land surface, February 9, 1994; lowest measured, 274.12 ft below land surface, December 1, 1993.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	143.79	JAN 30, 2003	107.05	MAY 27, 2003	55.40	AUG 28, 2003	4.85
NOV 26	165.31	MAR 27	48.44	JUN 26	130.11	SEP 30	44.80
DEC 18	179.44	APR 29	71.29	JUL 30	137.30		

HIGHEST 4.85 AUG 28, 2003
 LOWEST 179.44 DEC 18, 2002



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

GARRETT COUNTY--Continued

WELL NUMBER.--GA Fb 30. SITE ID.--391513079243605. PERMIT NUMBER.--GA-73-2185.

LOCATION.--Lat 39°15'13", long 79°24'36", Hydrologic Unit 02070002, 0.6 mi west of Wilson. Owner: U.S. Geological Survey.

AQUIFER.--Conemaugh Formation of Upper Pennsylvanian age. Aquifer code: 321CNMG.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 85 ft; casing diameter 4 in., to 82 ft, casing perforated from 77 to 82 ft; open hole.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from June 1980 to October 1980.

DATUM.--Elevation of land surface is 2,755 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.00 ft above land surface.

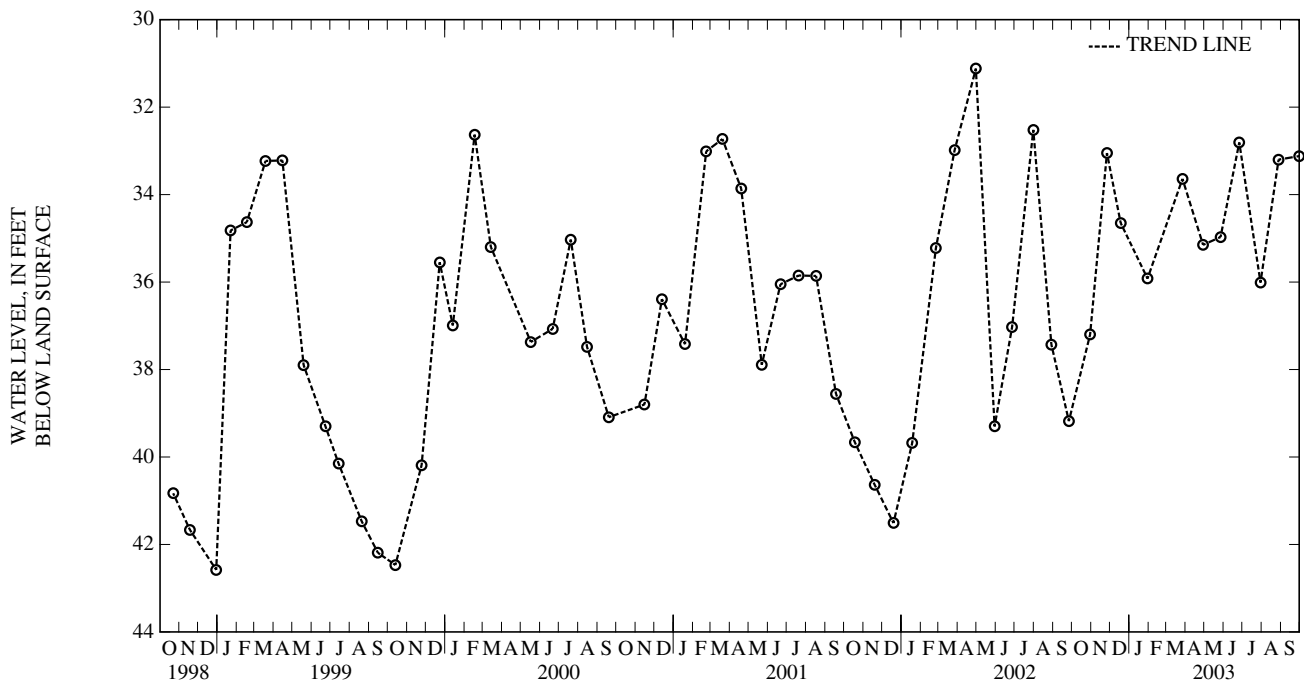
REMARKS.--Hydrologic Effects of Mining, Phase III Project observation well. Water levels are affected by coal mining operations.

PERIOD OF RECORD.--June 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.58 ft below land surface, April 16, 1981 (recorder); lowest measured, 45.00 ft below land surface, November 6, 1991.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	37.20	JAN 30, 2003	35.92	MAY 27, 2003	34.97	AUG 28, 2003	33.20
NOV 26	33.05	MAR 27	33.64	JUN 26	32.81	SEP 30	33.12
DEC 18	34.65	APR 29	35.15	JUL 30	36.01		
HIGHEST	32.81	JUN 26, 2003					
LOWEST	37.20	OCT 30, 2002					



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

GARRETT COUNTY--Continued

WELL NUMBER.--GA Fb 36. SITE ID.--391715079223102. PERMIT NUMBER.--GA-81-1342.

LOCATION.--Lat 39°17'15", long 79°22'31", Hydrologic Unit 02070002. Owner: Mettiki Coal Co.

AQUIFER.--Conemaugh Formation Formation of Upper Pennsylvanian age. Aquifer code: 321CNMG.

WELL CHARACTERISTICS.--Drilled, confined aquifer well, depth 631 ft; casing diameter 6 in., to 620 ft depth; open hole.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 2,565 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.60 ft above land surface.

REMARKS.--Hydrologic Effects of Mining, Phase III Project observation well. Water levels affected by nearby pumping.

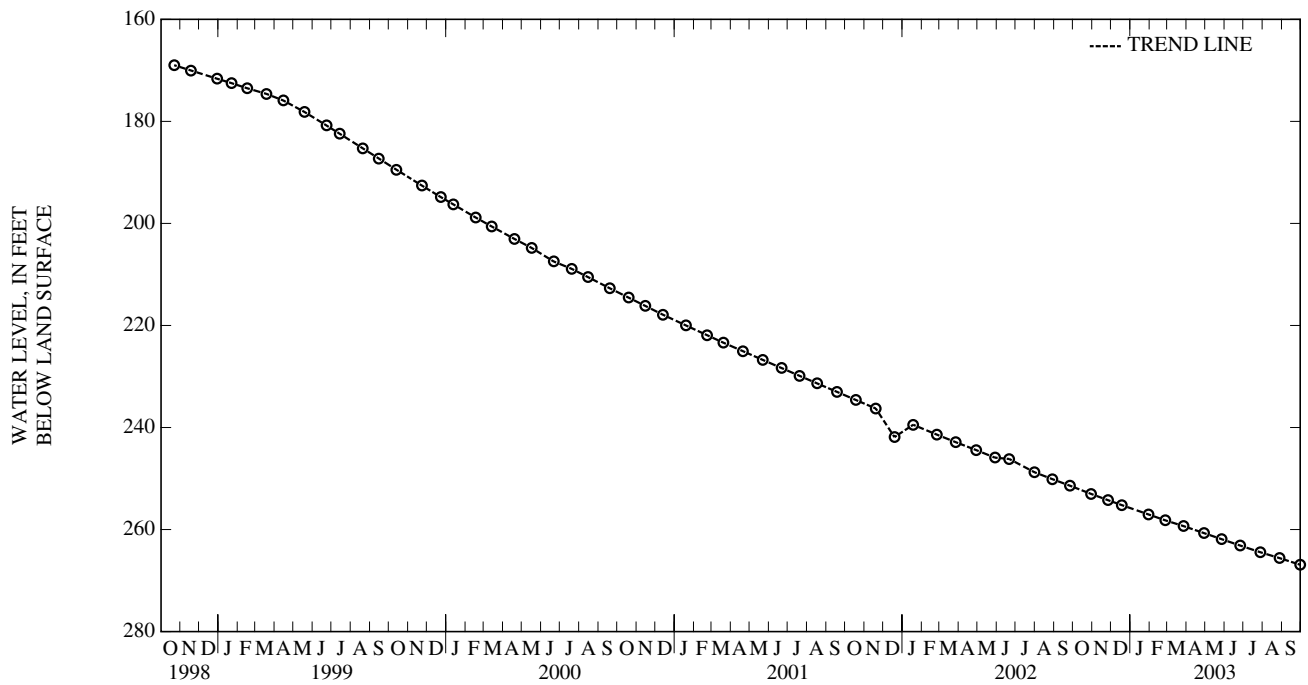
PERIOD OF RECORD.--April 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 17.95 ft below land surface, June 3, 1988; lowest measured, 266.90 ft below land surface, September 30, 2003.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	253.01	JAN 30, 2003	257.04	APR 29, 2003	260.70	JUL 28, 2003	264.44
NOV 26	254.24	FEB 26	258.20	MAY 27	261.88	AUG 28	265.60
DEC 18	255.20	MAR 27	259.32	JUN 26	263.14	SEP 30	266.90

HIGHEST 253.01 OCT 30, 2002
 LOWEST 266.90 SEP 30, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

GARRETT COUNTY--Continued

WELL NUMBER.--GA Fb 37. SITE ID.--391715079223103. PERMIT NUMBER.--GA-81-1341.

LOCATION.--Lat 39°17'15", long 79°22'31", Hydrologic Unit 02070002. Owner: Mettiki Coal Co.

AQUIFER.--Conemaugh Formation of Upper Pennsylvanian age. Aquifer code: 321CNMG.

WELL CHARACTERISTICS.--Drilled, confined aquifer well, depth 470 ft; casing diameter 6 in., to 430 ft; open hole.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 2,565 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.20 ft above land surface.

REMARKS.--Hydrologic Effects of Mining, Phase III Project observation well. Water levels affected by nearby pumping.

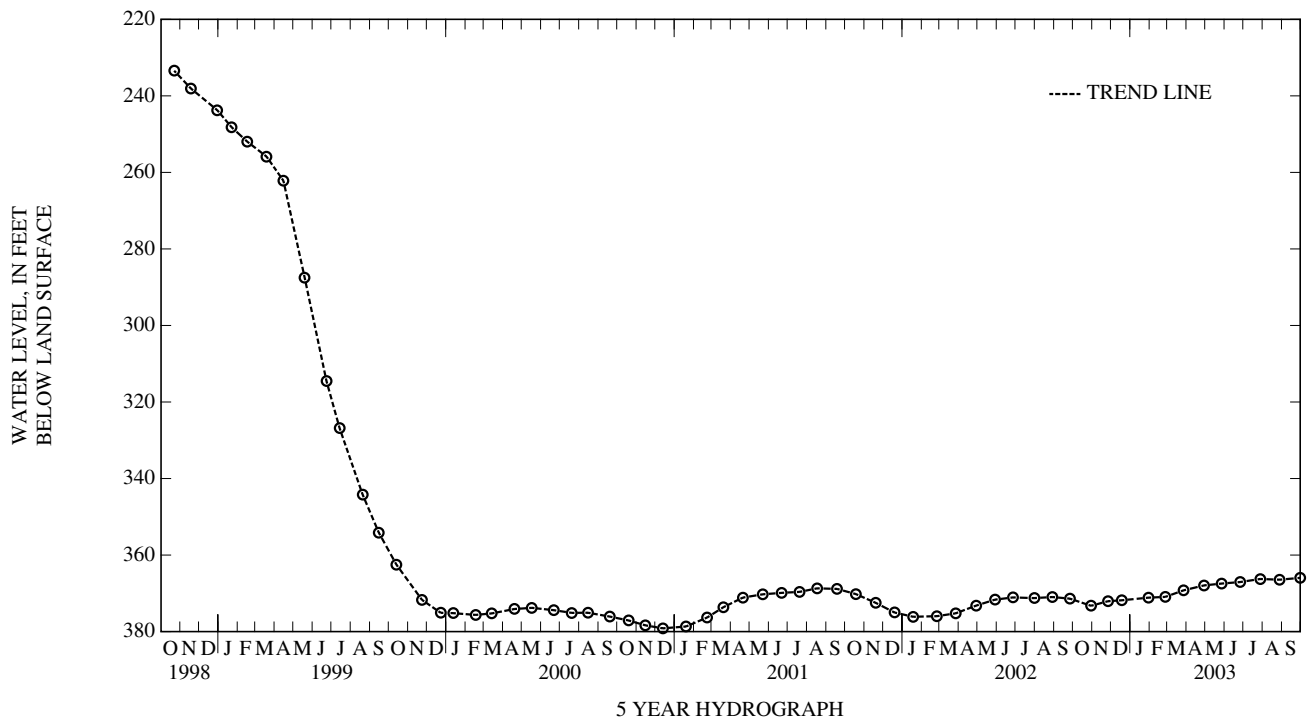
PERIOD OF RECORD.--April 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 132.70 ft below land surface, November 7, 1989; lowest measured, 379.15 ft below land surface, December 13, 2000.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	373.26	JAN 30, 2003	371.13	APR 29, 2003	367.93	JUL 28, 2003	366.25
NOV 26	372.06	FEB 26	370.93	MAY 27	367.45	AUG 28	366.44
DEC 18	371.82	MAR 27	369.23	JUN 26	367.05	SEP 30	365.96

HIGHEST 365.96 SEP 30, 2003
 LOWEST 373.26 OCT 30, 2002



GARRETT COUNTY--Continued

WELL NUMBER.--GA Fb 38. SITE ID.--391715079223104. PERMIT NUMBER.--GA-81-1340.

LOCATION.--Lat 39°17'15", long 79°22'31", Hydrologic Unit 02070002. Owner: Mettiki Coal Co.

AQUIFER.--Conemaugh Formation of Upper Pennsylvanian age. Aquifer code: 321CNMG.

WELL CHARACTERISTICS.--Drilled, confined aquifer well, depth 230 ft., casing diameter 6 in., to 215 ft; open hole.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 2,565 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.20 ft above land surface.

REMARKS.--Hydrologic Effects of Mining, Phase III Project observation well. Water levels affected by nearby pumping.

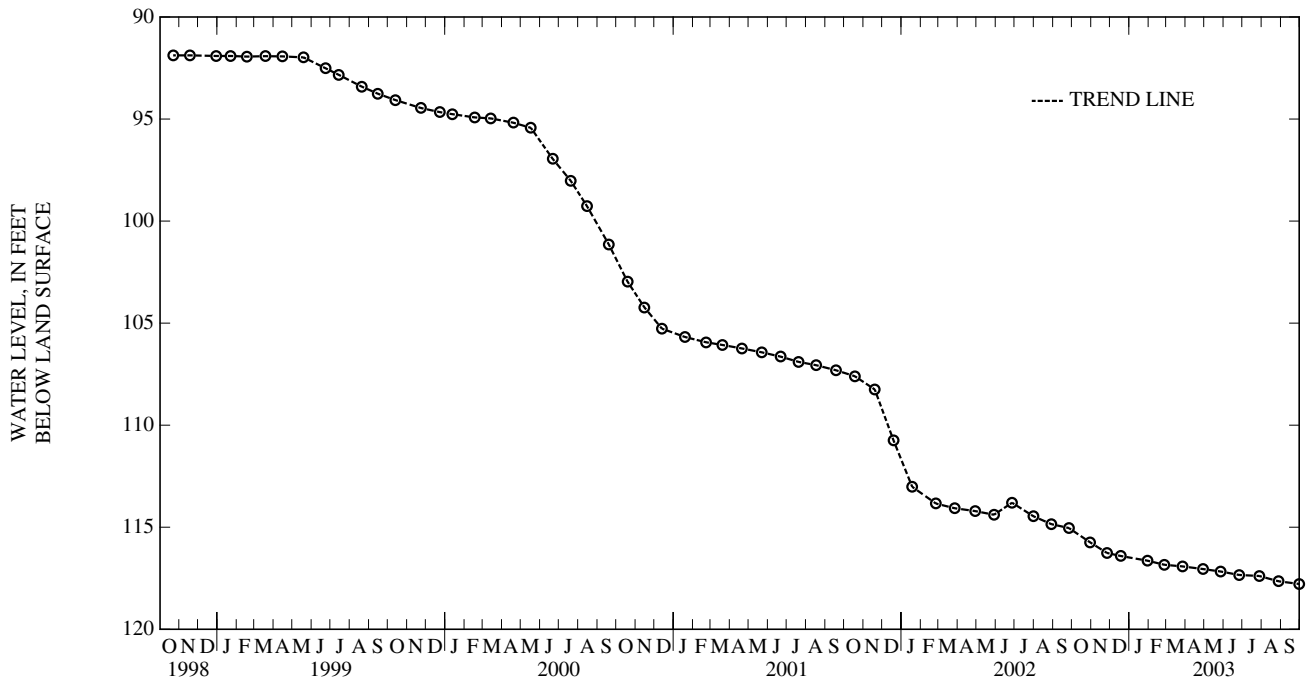
PERIOD OF RECORD.--April 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 91.79 ft below land surface, March 19, 1997; lowest measured, 117.78 ft below land surface, September 30, 2003.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	115.74	JAN 30, 2003	116.64	APR 29, 2003	117.05	JUL 28, 2003	117.39
NOV 26	116.26	FEB 26	116.84	MAY 27	117.17	AUG 28	117.65
DEC 18	116.41	MAR 27	116.92	JUN 26	117.34	SEP 30	117.78

HIGHEST 115.74 OCT 30, 2002
 LOWEST 117.78 SEP 30, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

GARRETT COUNTY--Continued

WELL NUMBER.--GA Ga 16. SITE ID.--391420079264901. PERMIT NUMBER.--GA-81-0953.

LOCATION.--Lat 39°14'20", long 79°26'49", Hydrologic Unit 02070002, east of Kempton Road, 100 ft north of Laurel Run, 2.8 mi southwest of Wilson.
Owner: Mettiki Coal Corp.

AQUIFER.--Conemaugh Formation of Upper Pennsylvanian age. Aquifer code: 321CNMG.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 147 ft; casing diameter 6 in., to 110 ft, open hole.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from March 1988 to current year.

DATUM.--Elevation of land surface is 2,690 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of shelter floor, 3.20 ft above land surface.

REMARKS.--Hydrologic Effects of Mining, Phase III Project observation well. Water levels are affected by coal mining operations.

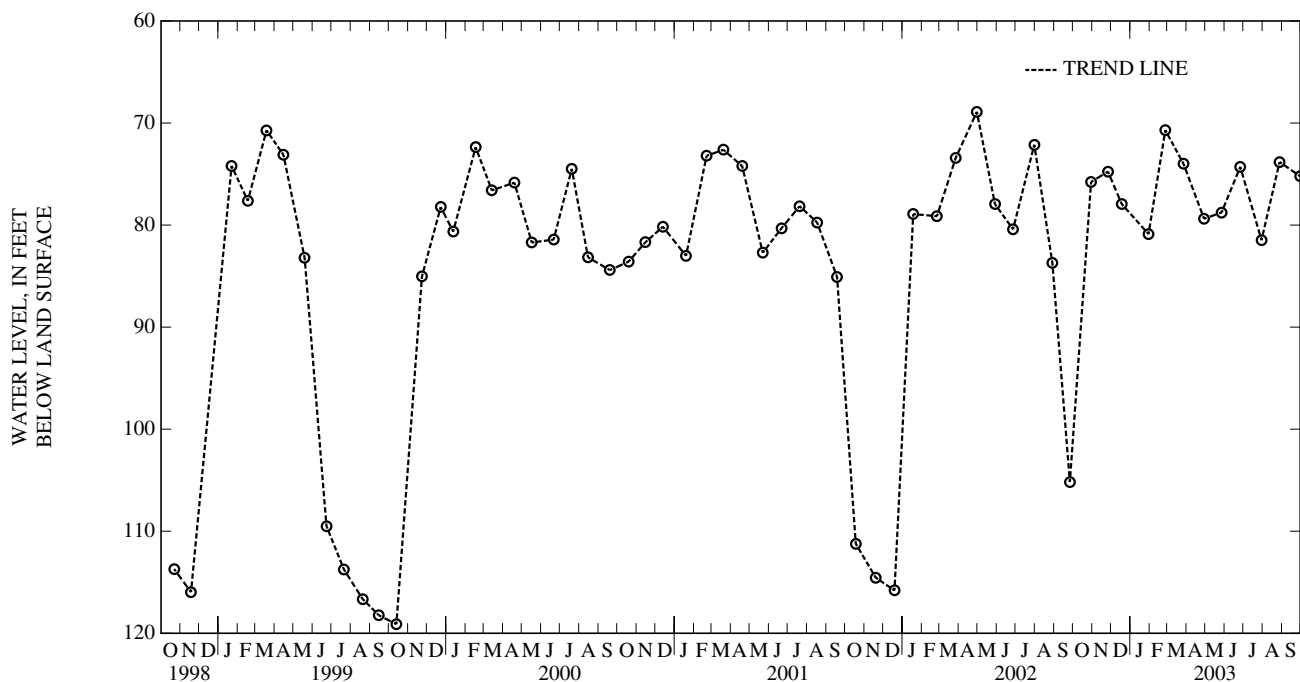
PERIOD OF RECORD.--November 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 68.90 ft below land surface, April 30, 2002; lowest measured, 145.05 ft below land surface, September 22, 1988.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	75.77	JAN 30, 2003	80.88	APR 29, 2003	79.38	JUL 30, 2003	81.48
NOV 26	74.76	FEB 26	70.70	MAY 27	78.77	AUG 28	73.82
DEC 18	77.93	MAR 27	73.99	JUN 26	74.29	SEP 30	75.22

HIGHEST 70.70 FEB 26, 2003
LOWEST 81.48 JUL 30, 2003



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: Private Residence.

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 water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with water-level recorder from July 1954 to August 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, 0.10 ft above land surface.

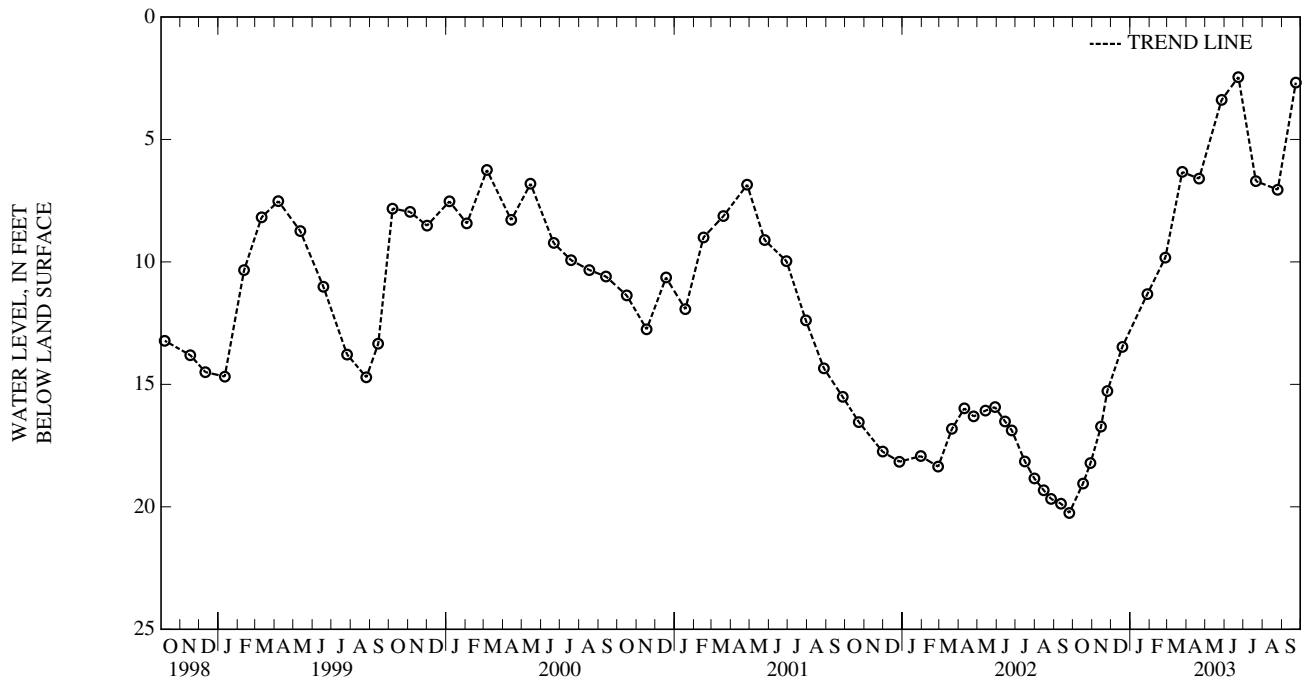
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

PERIOD OF RECORD.--May 1954 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.00 ft below land surface, May 7, 1958; lowest measured, 20.25 ft below land surface, September 25, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17, 2002	19.05	DEC 19, 2002	13.47	APR 21, 2003	6.60	AUG 25, 2003	7.05
29	18.22	JAN 28, 2003	11.32	MAY 27	3.39	SEP 23	2.68
NOV 15	16.72	FEB 26	9.82	JUN 23	2.45		
25	15.27	MAR 25	6.33	JUL 21	6.70		
HIGHEST 2.45 JUN 23, 2003							
LOWEST 19.05 OCT 17, 2002							



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

HARFORD COUNTY--Continued

WELL NUMBER.--HA Ca 23. SITE ID.--393158076302601. PERMIT NUMBER.--HA-73-1630.

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 Formation of Cambrian age. Aquifer code: 370LCRV.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 200 ft; casing diameter 6 in., to 24 ft; open hole.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with graphic water-level recorder from July 1974 to September 1976.

DATUM.--Elevation of land surface is 470 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.60 ft above land surface.

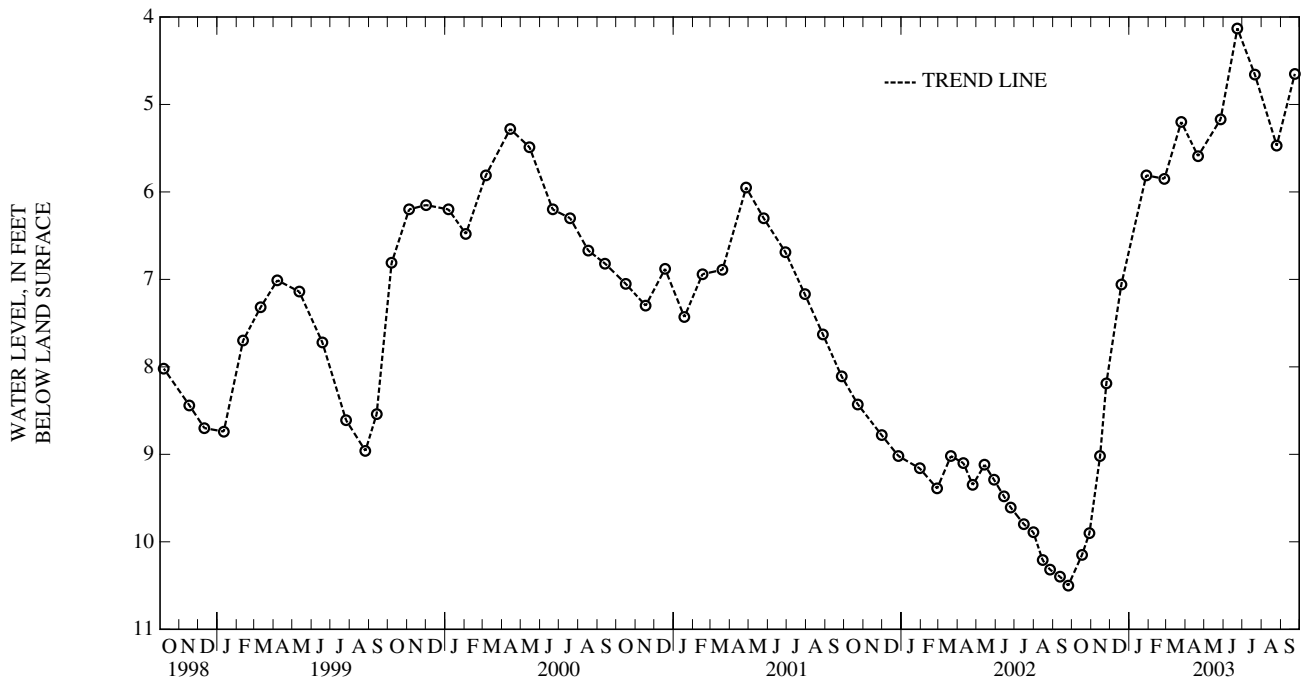
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.59 ft below land surface, September 27, 1975; lowest measured, 10.50 ft below land surface, September 25, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17, 2002	10.15	DEC 19, 2002	7.06	APR 21, 2003	5.59	AUG 25, 2003	5.47
29	9.90	JAN 28, 2003	5.81	MAY 27	5.17	SEP 23	4.65
NOV 15	9.02	FEB 26	5.85	JUN 23	4.13		
25	8.19	MAR 25	5.20	JUL 21	4.66		
HIGHEST 4.13 JUN 23, 2003							
LOWEST 10.15 OCT 17, 2002							



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

HARFORD COUNTY--Continued

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: Maryland Geological Survey.

AQUIFER.--Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 140 ft; casing diameter 4 in., to 96 ft, and 130 to 140 ft; screen diameter 4 in., from 96 to 106 ft, and 120 to 130 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Twice yearly water level measurements with chalked steel tape from October 1990 to January 1996 by U.S. Geological Survey personnel. Equipped with digital water-level recorder--15-minute recorder interval from January 1988 to July 1989.

DATUM.--Elevation of land surface is 99.05 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.80 ft above land surface.

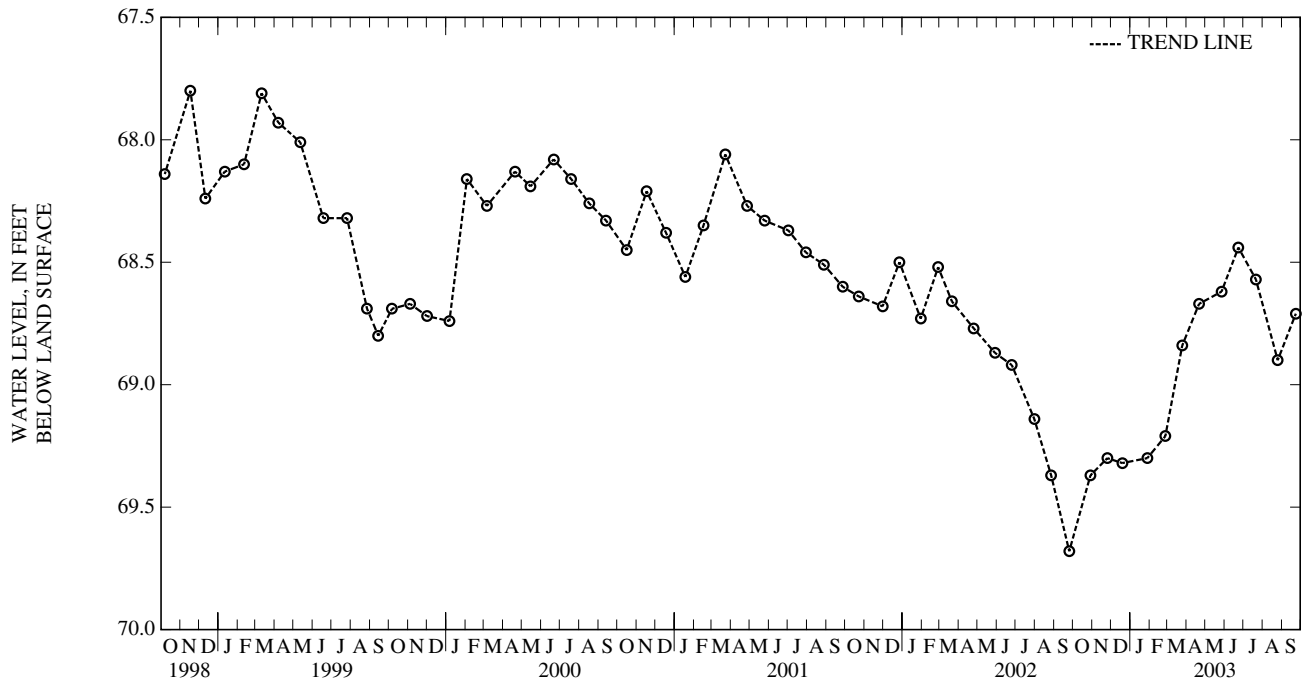
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 67.28 ft below land surface, April 9, 1998; lowest measured, 69.68 ft below land surface, September 25, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	69.37	JAN 28, 2003	69.30	APR 21, 2003	68.67	JUL 21, 2003	68.57
NOV 25	69.30	FEB 26	69.21	MAY 27	68.62	AUG 25	68.90
DEC 19	69.32	MAR 25	68.84	JUN 23	68.44	SEP 23	68.71
HIGHEST 68.57 JUL 21, 2003							
LOWEST 69.37 OCT 29, 2002							



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

HARFORD COUNTY--Continued

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 Roads, Long Bar Harbor. Owner: Maryland Geological Survey.

AQUIFER.--Talbot Formation of Pleistocene age. Aquifer code: 112TLBT.

WELL CHARACTERISTICS.--Drilled, observation, water-table well (semi-confined), 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 water level measurements with electric tape by U.S. Geological Survey 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.

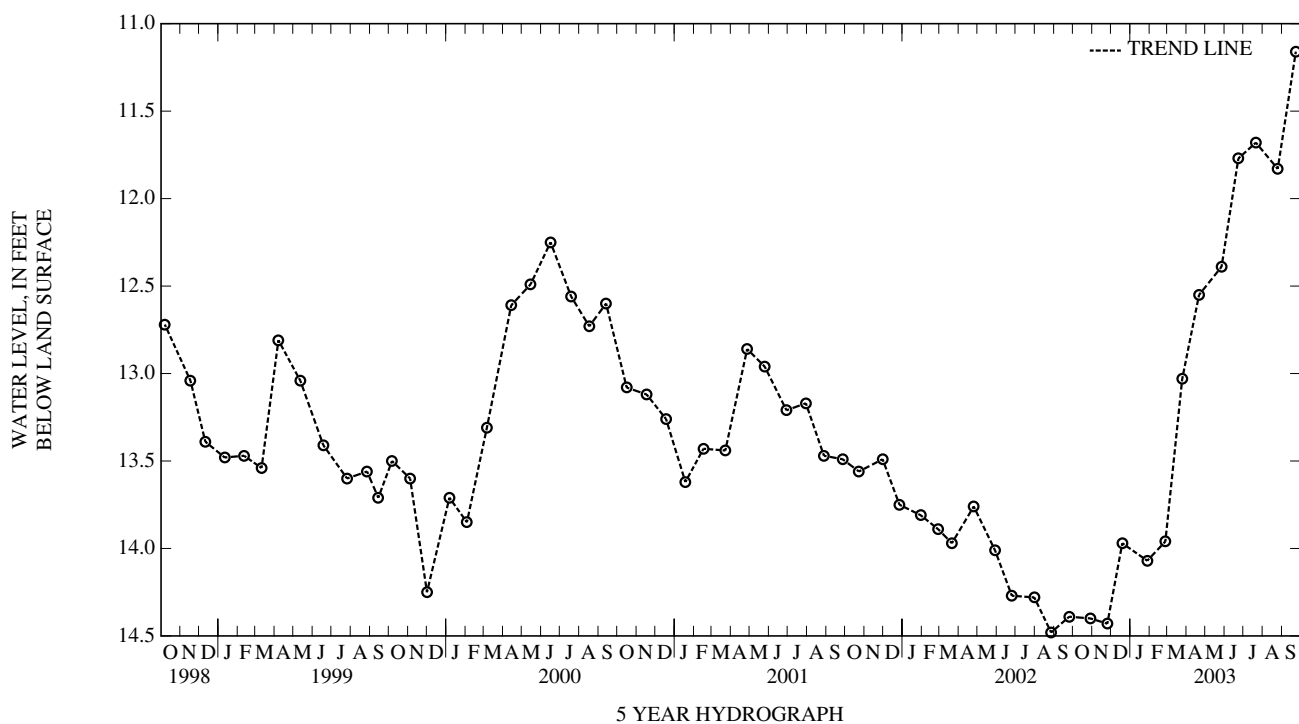
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.34 ft below land surface, May 6, 1997; lowest measured, 14.48 ft below land surface, August 27, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	14.40	JAN 28, 2003	14.07	APR 21, 2003	12.55	JUL 21, 2003	11.68
NOV 25	14.43	FEB 26	13.96	MAY 27	12.39	AUG 25	11.83
DEC 19	13.97	MAR 25	13.03	JUN 23	11.77	SEP 23	11.16
HIGHEST	11.16	SEP 23, 2003					
LOWEST	14.43	NOV 25, 2002					



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

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, near intersection of Long Bar Harbor and Longley Roads, Long Bar Harbor. Owner: Maryland Geological Survey.

AQUIFER.--Talbot Formation of Pleistocene age. Aquifer code: 112TLBT.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 38 ft; casing diameter 4 in., to 28 ft; screen diameter 4 in., from 28 to 38 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 20.06 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.12 ft above land surface.

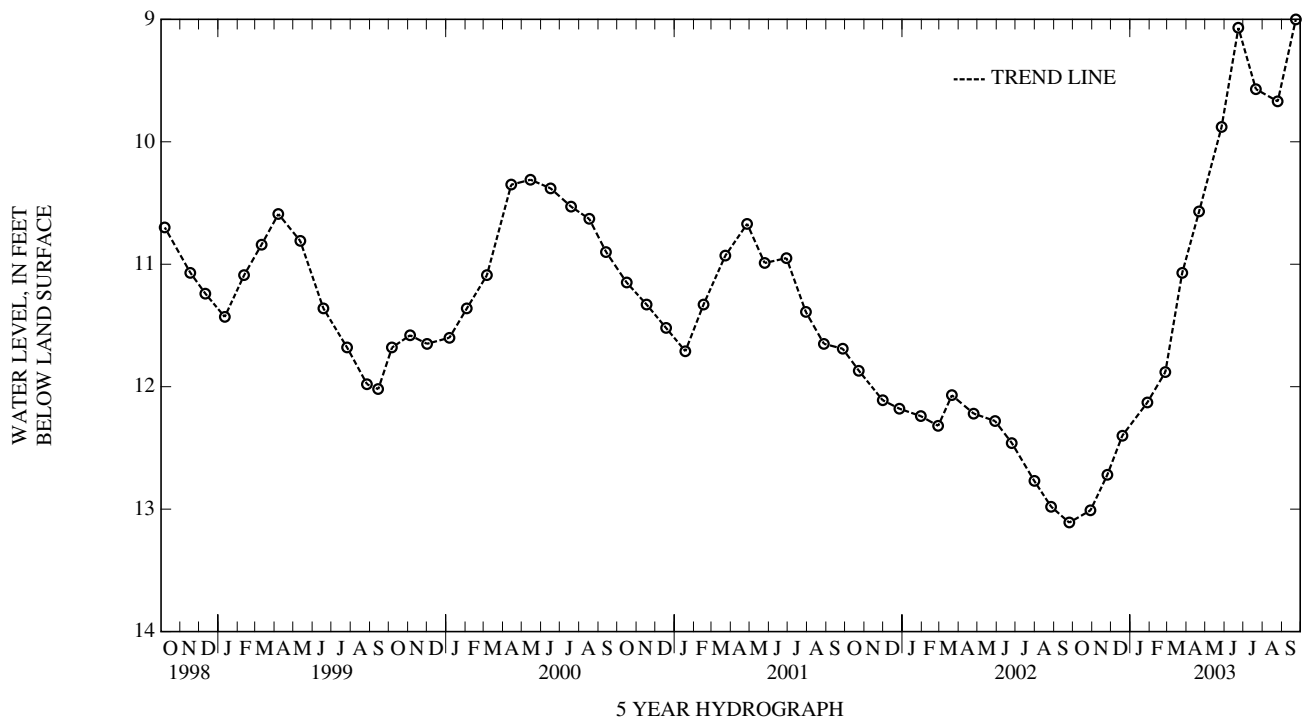
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.35 ft below land surface, April 8, 1997. lowest measured, 13.11 ft below land surface, September 25, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	13.01	JAN 28, 2003	12.13	APR 21, 2003	10.57	JUL 21, 2003	9.57
NOV 25	12.72	FEB 26	11.88	MAY 27	9.88	AUG 25	9.67
DEC 19	12.40	MAR 25	11.07	JUN 23	9.07	SEP 23	9.00
HIGHEST 9.00 SEP 23, 2003							
LOWEST 13.01 OCT 29, 2002							



HARFORD COUNTY--Continued

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 Department of Public Works.

AQUIFER.--Talbot Formation of Pleistocene age. Aquifer code: 112TLBT.

WELL CHARACTERISTICS.--Drilled, unused, water-table well (semi-confined), depth 66 ft; casing diameter 4 in., to 45 ft; screen diameter 4 in., from 45 to 66 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from December 1986 to July 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.

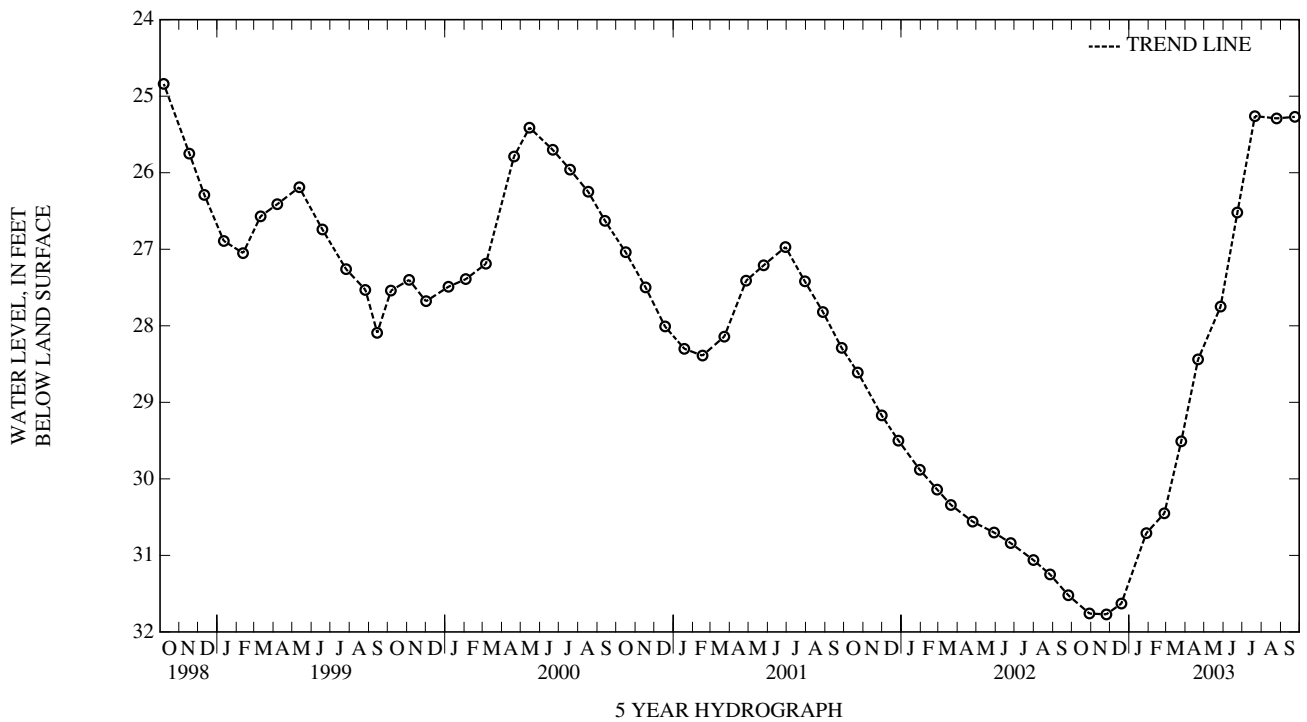
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

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, 31.77 ft below land surface, November 25, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	31.76	JAN 28, 2003	30.71	APR 21, 2003	28.44	JUL 21, 2003	25.26
NOV 25	31.77	FEB 26	30.45	MAY 27	27.75	AUG 25	25.29
DEC 19	31.63	MAR 25	29.51	JUN 23	26.52	SEP 23	25.27
HIGHEST 25.26 JUL 21, 2003							
LOWEST 31.77 NOV 25, 2002							



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

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: Maryland Geological Survey.

AQUIFER.--Patuxent aquifer in the Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 290 ft; casing diameter 4 in., to 264 ft, 269 to 275 ft, and 280 to 290 ft; screen diameter 4 in., from 264 to 269 ft, and 275 to 280 ft.

INSTRUMENTATION.--Twice yearly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--15-minute recorder interval from May 1988 to July 1989.

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.

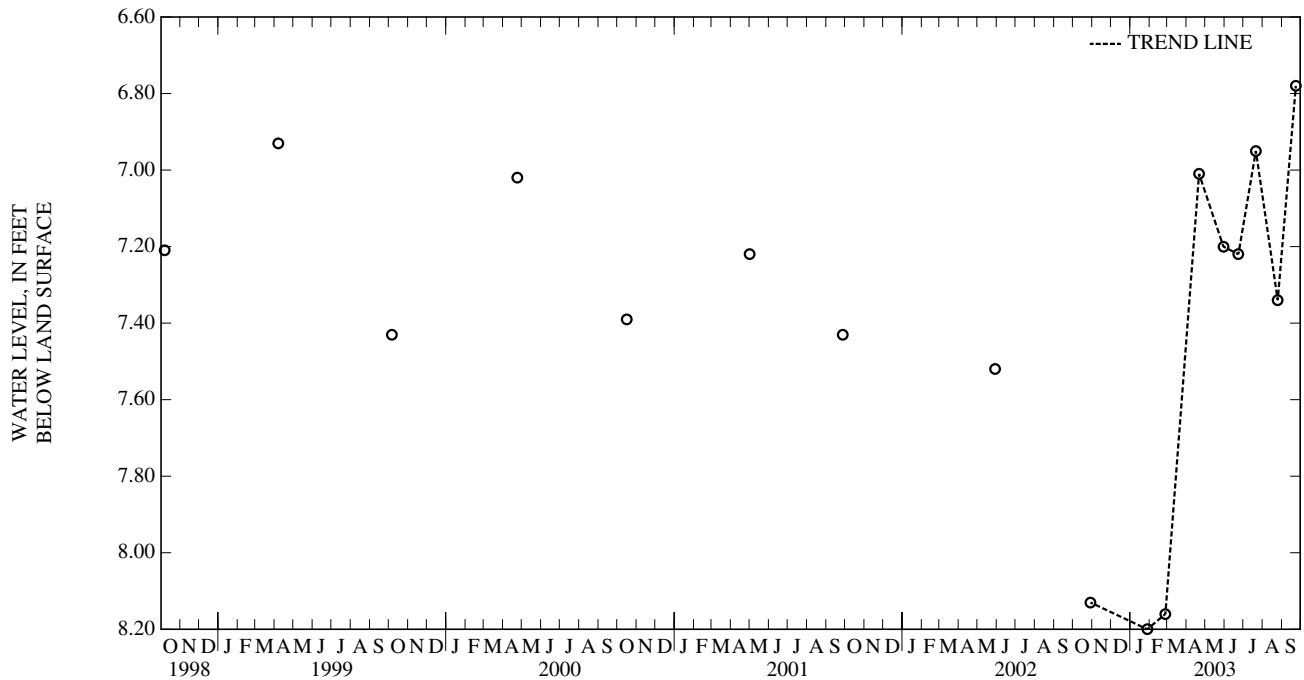
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by regional ground-water withdrawal.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.42 ft below land surface, April 8, 1997; lowest measured, 8.20 ft below land surface, January 28, 2003.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	8.13	APR 21, 2003	7.01	JUL 21, 2003	6.95
JAN 28, 2003	8.20	MAY 30	7.20	AUG 25	7.34
FEB 26	8.16	JUN 23	7.22	SEP 23	6.78
HIGHEST 6.78 SEP 23, 2003					
LOWEST 8.20 JAN 28, 2003					



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

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: Maryland Geological Survey.

AQUIFER.--Talbot Formation of Pleistocene age. Aquifer code: 112TLBT.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 50 ft; casing diameter 4 in., to 30 ft, and 40 to 50 ft; screen diameter 4 in., from 30 to 40 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--15-minute recorder interval from July 1988 to July 1989. Twice yearly water level measurements from May 1988 to January 2003.

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 Ground-Water-Level Monitoring Network observation well.

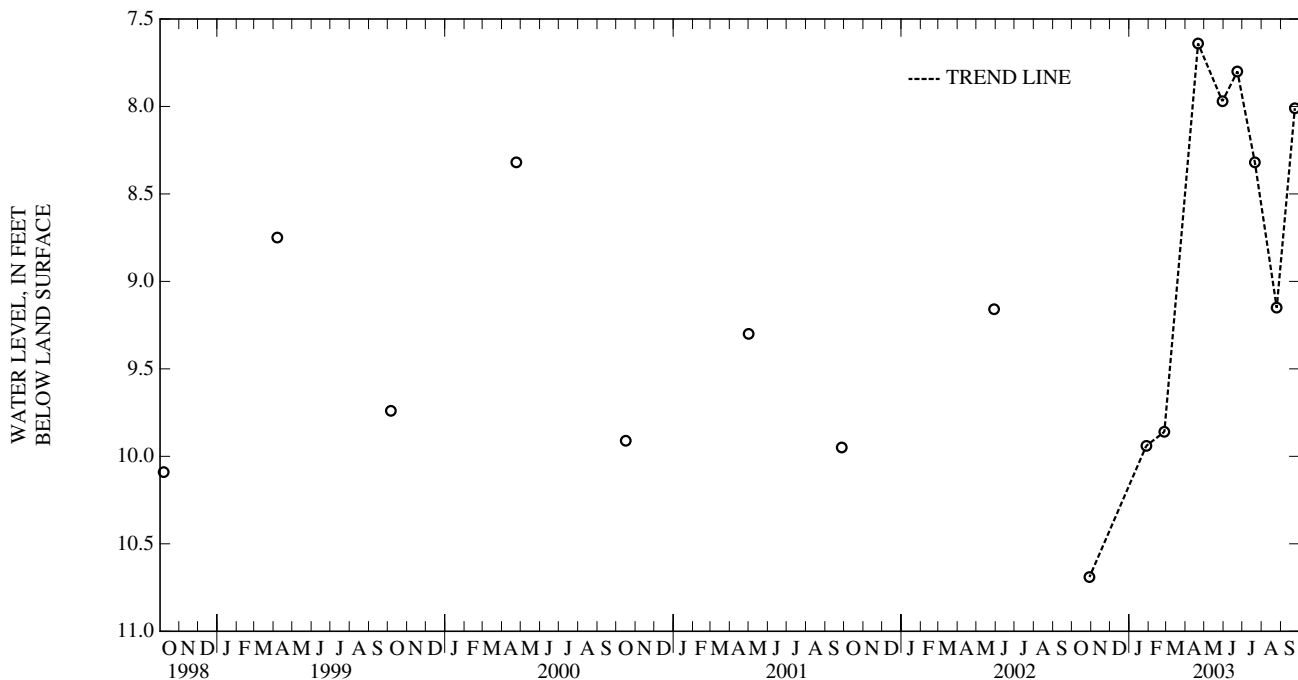
PERIOD OF RECORD.--May 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.64 ft below land surface, April 21, 2003; lowest measured, 11.04 ft below land surface, October 5, 1993.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	10.69	APR 21, 2003	7.64	JUL 21, 2003	8.32
JAN 28, 2003	9.94	MAY 30	7.97	AUG 25	9.15
FEB 26	9.86	JUN 23	7.80	SEP 23	8.01

HIGHEST 7.64 APR 21, 2003
 LOWEST 10.69 OCT 29, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

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: Maryland Geological Survey.

AQUIFER.--Patuxent aquifer in the Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.

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.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--15-minute recorder interval from May 1988 to July 1989. Twice yearly water level measurements from May 1988 to July 1989, and April 1990 to January 2003.

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.

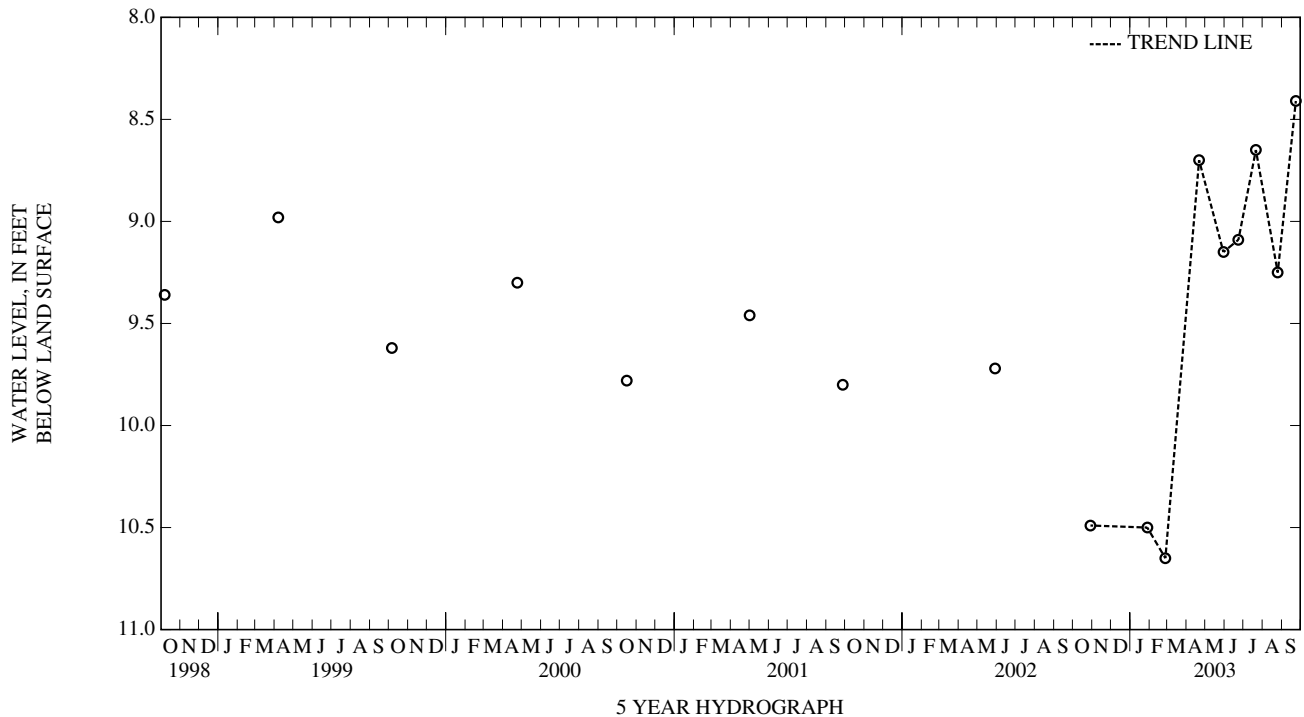
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by regional ground-water withdrawal.

PERIOD OF RECORD.--May 1988 to July 1989, April 1990 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.41 ft below land surface, September 23, 2003; lowest measured, 10.65 ft below land surface, February 26, 2003.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	10.49	APR 21, 2003	8.70	JUL 21, 2003	8.65
JAN 28, 2003	10.50	MAY 30	9.15	AUG 25	9.25
FEB 26	10.65	JUN 23	9.09	SEP 23	8.41
HIGHEST 8.41 SEP 23, 2003					
LOWEST 10.65 FEB 26, 2003					



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

HARFORD COUNTY--Continued

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, 0.2 mi east on Cranberry Run Dr., near Perryman. Owner: Maryland Geological Survey.

AQUIFER.--Talbot Formation of Pleistocene age. Aquifer code: 112TBLT.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 55 ft; casing diameter 4 in., to 35 ft; and 45 to 55 ft; screen diameter 4 in., from 35 to 45 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Monthly water level measurements from May 1988 to July 1989. Twice yearly water level measurements from May 1988 to January 2003.

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 Ground-Water-Level Monitoring Network observation well.

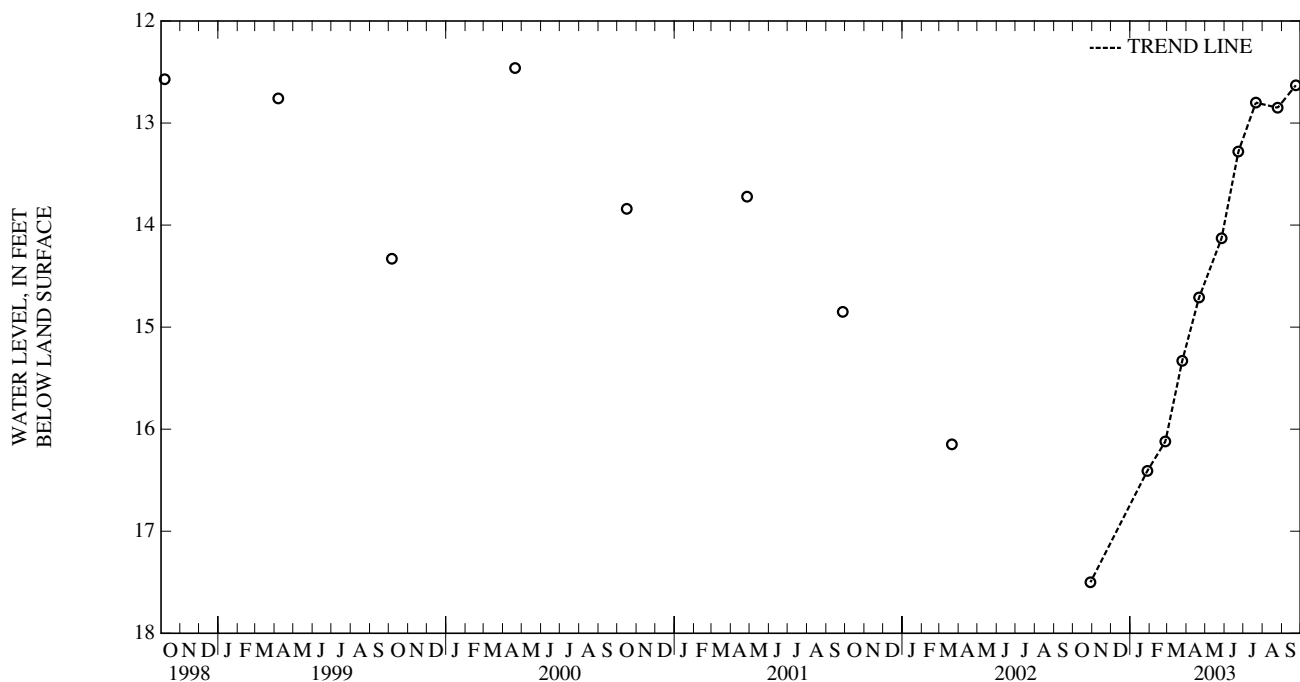
PERIOD OF RECORD.--May 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.96 ft below land surface, April 8, 1997; lowest measured, 17.50 ft below land surface, October 29, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	17.50	MAR 25, 2003	15.33	JUN 23, 2003	13.28	SEP 23, 2003	12.63
JAN 28, 2003	16.41	APR 21	14.71	JUL 21	12.80		
FEB 26	16.12	MAY 27	14.13	AUG 25	12.85		

HIGHEST 12.63 SEP 23, 2003
LOWEST 17.50 OCT 29, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

HARFORD COUNTY--Continued

WELL NUMBER.--HA De 198. SITE ID.--392819076130902. PERMIT NUMBER.--HA-81-4141.

LOCATION.--Lat 39°28'19", long 76°13'09", Hydrologic Unit 02060003, northwest end of Fords Lane, Perryman. Owner: Private Residence (formerly Maryland Geological Survey).

AQUIFER.--Talbot Formation of Pleistocene age. Aquifer code: 112TLBT.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 19 ft; casing diameter 4 in., to 9 ft; screen diameter 4 in. from 9 to 19 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--30-minute recorder interval from January 1989 to July 1989, and from January 1991 to February 2003.

DATUM.--Elevation of land surface is 18.92 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.50 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

PERIOD OF RECORD.--May 1988 to August 1989, July 1991 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.57 ft above sea level, September 16, 1999 (recorder); lowest measured, 7.62 ft above sea level, September 26, 2002 (recorder).

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

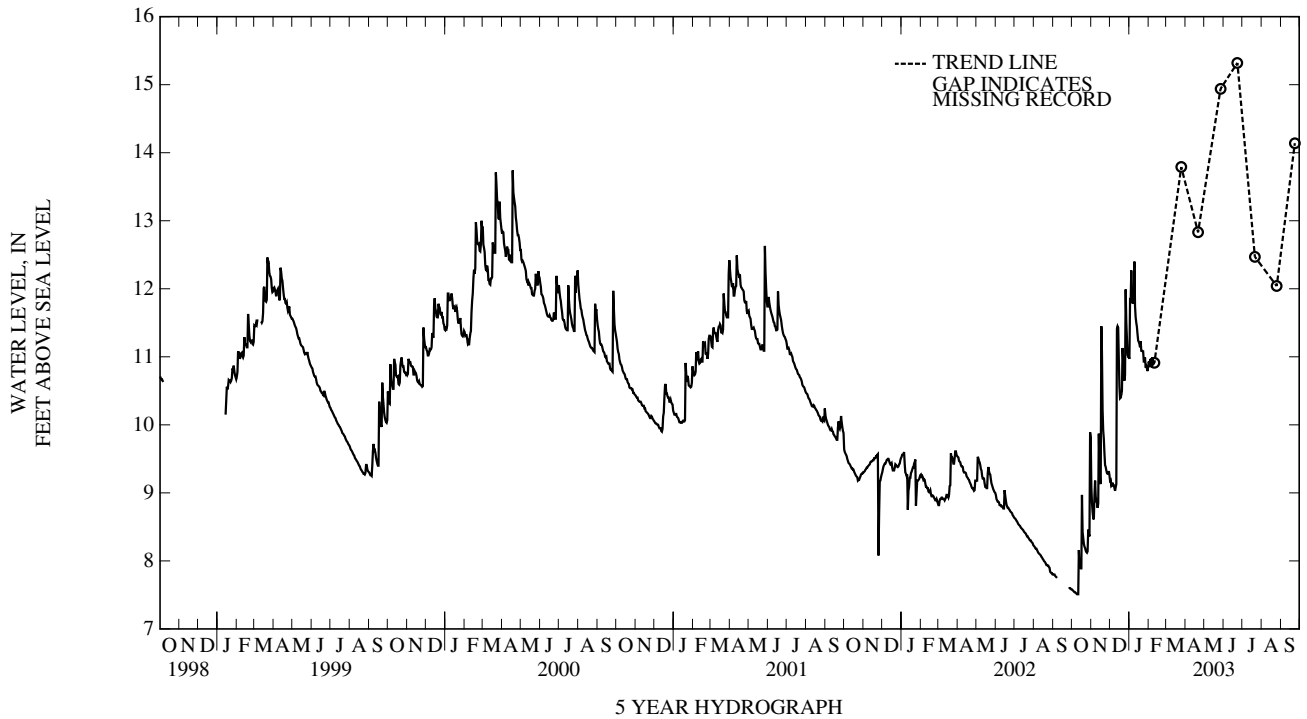
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	8.37	FEB 11, 2003	10.81	MAY 27, 2003	14.94	SEP 23, 2003	14.14
NOV 25	9.36	26	13.39	JUN 23	15.32		
DEC 19	10.45	MAR 25	13.79	JUL 21	12.47		
JAN 28, 2003	10.92	APR 21	12.83	AUG 25	12.04		
LOWEST	8.37	OCT 29, 2002					
HIGHEST	15.32	JUN 23, 2003					

DAY	MAX		MIN		MAX		MIN		MAX		MIN	
	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH						
1	7.58	7.58	9.81	9.08	9.26	9.18	12.03	10.97	10.98	10.93	---	---
2	7.58	7.57	9.08	8.86	9.25	9.19	12.04	11.83	10.95	10.88	---	---
3	7.57	7.56	8.86	8.72	9.22	9.10	12.47	11.82	10.97	10.85	---	---
4	7.56	7.55	8.73	8.63	9.16	9.11	12.47	12.27	11.16	10.97	---	---
5	7.55	7.54	8.97	8.61	9.25	9.15	12.27	11.89	11.07	10.88	---	---
6	7.54	7.54	10.84	8.97	9.18	9.11	11.93	11.82	11.01	10.87	---	---
7	7.54	7.53	10.11	9.18	9.15	9.11	11.93	11.78	11.13	10.99	---	---
8	7.53	7.52	9.18	8.95	9.15	9.07	12.59	11.81	10.99	10.89	---	---
9	7.52	7.51	8.95	8.87	9.08	9.03	12.61	12.40	10.93	10.90	---	---
10	7.51	7.51	8.87	8.86	9.13	9.08	12.40	11.74	11.11	10.91	---	---
11	11.06	7.51	8.86	8.78	11.51	9.13	11.74	11.58	---	---	---	---
12	10.70	8.16	10.89	8.84	11.53	11.41	11.58	11.50	---	---	---	---
13	8.16	7.93	10.88	9.87	12.00	11.45	11.64	11.44	---	---	---	---
14	7.93	7.90	9.87	9.41	11.99	11.43	11.44	11.33	---	---	---	---
15	7.90	7.89	9.41	9.16	11.43	10.98	11.38	11.24	---	---	---	---
16	10.95	7.89	11.71	9.13	10.99	10.56	11.40	11.22	---	---	---	---
17	10.26	8.97	11.71	11.45	10.56	10.39	11.44	11.19	---	---	---	---
18	8.97	8.42	11.59	11.07	10.49	10.40	11.27	11.14	---	---	---	---
19	8.42	8.34	11.12	10.22	10.50	10.44	11.31	11.23	---	---	---	---
20	8.34	8.25	10.22	9.92	11.59	10.50	11.35	11.09	---	---	---	---
21	8.25	8.21	9.92	9.79	11.62	11.13	11.16	11.09	---	---	---	---
22	8.21	8.19	9.79	9.58	11.13	10.94	11.13	11.08	---	---	---	---
23	8.19	8.15	9.58	9.41	10.94	10.74	11.18	11.08	---	---	---	---
24	8.15	8.13	9.45	9.38	10.74	10.65	11.09	10.93	---	---	---	---
25	8.14	8.12	9.38	9.33	12.39	10.73	11.03	10.93	---	---	---	---
26	9.77	8.14	9.35	9.29	12.21	11.99	11.09	10.99	---	---	---	---
27	8.93	8.46	9.35	9.28	11.99	11.51	10.99	10.84	---	---	---	---
28	8.46	8.40	9.34	9.28	11.51	11.27	10.99	10.86	---	---	---	---
29	10.31	8.36	9.42	9.32	11.27	11.03	10.99	10.83	---	---	---	---
30	10.51	9.89	9.38	9.26	11.04	11.00	10.85	10.79	---	---	---	---
31	10.51	9.81	---	---	11.06	11.00	10.93	10.85	---	---	---	---
MONTH	11.06	7.51	11.71	8.61	12.39	9.03	12.61	10.79	11.16	10.85	---	---

HARFORD COUNTY--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---
YEAR	12.61	7.51										

Daily Low Water Levels



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

HARFORD COUNTY--Continued

WELL NUMBER.--HA Ec 11. SITE ID.--392435076203301. PERMIT NUMBER.--HA-04-7211.

LOCATION.--Lat 39°24'35", long 76°20'33", Hydrologic Unit 02060003, off Trimble Road, Joppatowne. Owner: Harford County Department of Public Works.

AQUIFER.--Patuxent aquifer in the 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 water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with water-level recorder from May 1962 to December 1983.

DATUM.--Elevation of land surface is 11.7 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.50 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

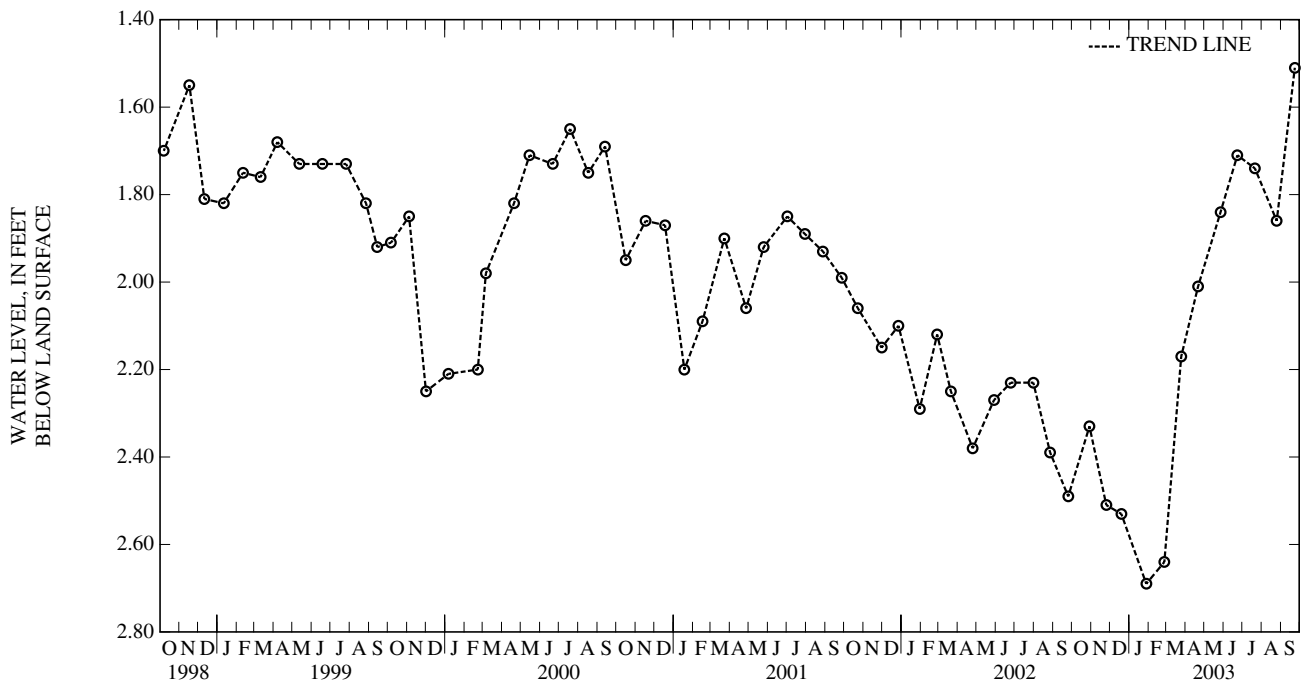
PERIOD OF RECORD.--May 1962 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.13 ft below land surface, May 24, 1962; lowest measured, 12.80 ft below land surface, May 26, 1972.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	2.33	JAN 28, 2003	2.69	APR 21, 2003	2.01	JUL 21, 2003	1.74
NOV 25	2.51	FEB 26	2.64	MAY 27	1.84	AUG 25	1.86
DEC 19	2.53	MAR 25	2.17	JUN 23	1.71	SEP 23	1.51

HIGHEST 1.51 SEP 23, 2003
 LOWEST 2.69 JAN 28, 2003



5 YEAR HYDROGRAPH
 OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

HARFORD COUNTY--Continued

WELL NUMBER.--HA Ec 46. SITE ID.--392408076210101. PERMIT NUMBER.--HA-81-4124.

LOCATION.--Lat 39°24'08", long 76°21'01", Hydrologic Unit 02060003, at end of Kearney Dr., at Copenhaven Park, near Joppatowne. Owner: Maryland Geological Survey.

AQUIFER.--Patuxent aquifer in the Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.

WELL CHARACTERISTICS.--Drilled, observation, artesian 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.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Twice yearly water level measurements from October 1989 to October 1995.

DATUM.--Elevation of land surface is 23.16 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.17 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

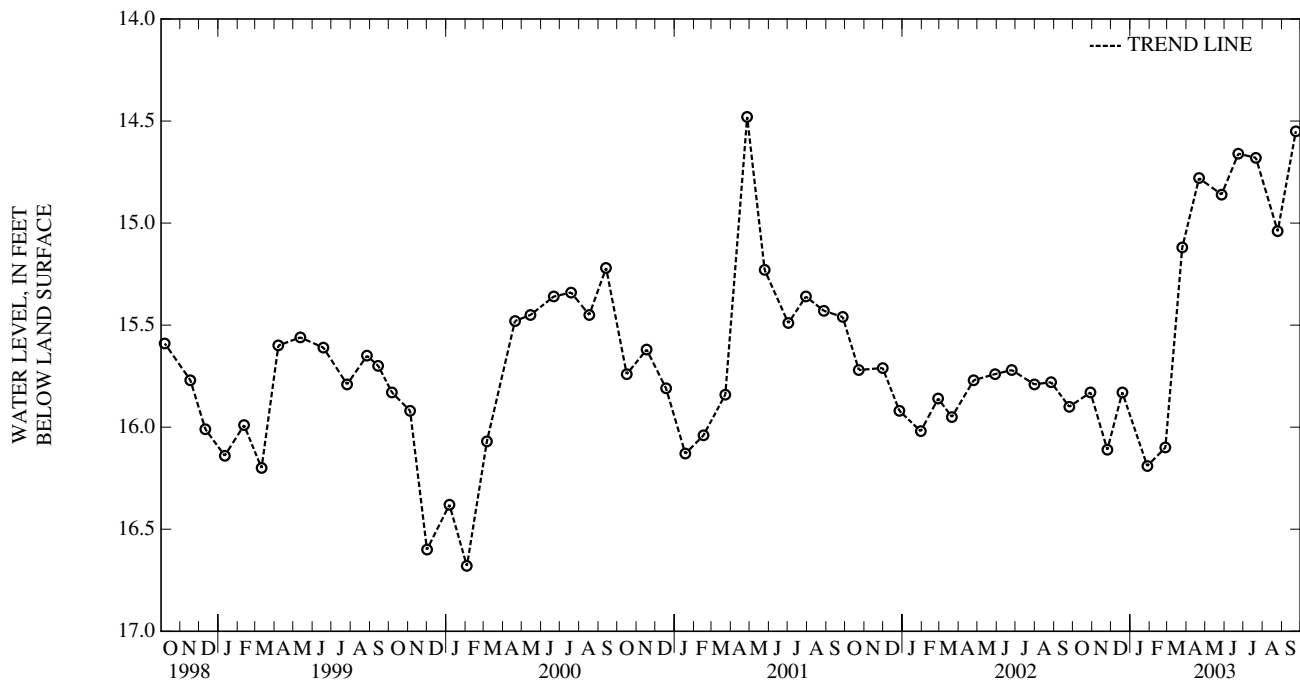
PERIOD OF RECORD.--May 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.48 ft below land surface, April 27, 2001; lowest measured, 16.76 ft below land surface, February 23, 1989.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	15.83	JAN 28, 2003	16.19	APR 21, 2003	14.78	JUL 21, 2003	14.68
NOV 25	16.11	FEB 26	16.10	MAY 27	14.86	AUG 25	15.04
DEC 19	15.83	MAR 25	15.12	JUN 23	14.66	SEP 23	14.55

HIGHEST 14.55 SEP 23, 2003
 LOWEST 16.19 JAN 28, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

HARFORD COUNTY--Continued

WELL NUMBER.--HA Ed 48. SITE ID.--392455076192102. PERMIT NUMBER.--HA-81-4578.

LOCATION.--Lat 39°24'55", long 76°19'21", Hydrologic Unit 02060003, 0.2 mi east of intersection of MD Rt. 152 and Trimble Road, Edgewood Park.
Owner: Maryland Geological Survey.

AQUIFER.--Patuxent aquifer in the Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 133 ft; casing diameter 4 in., to 118 ft, and 128 to 133 ft; screen diameter 4 in., from 118 to 128 ft.

INSTRUMENTATION.--Monthly water level measurement with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 91.20 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.58 ft above land surface.

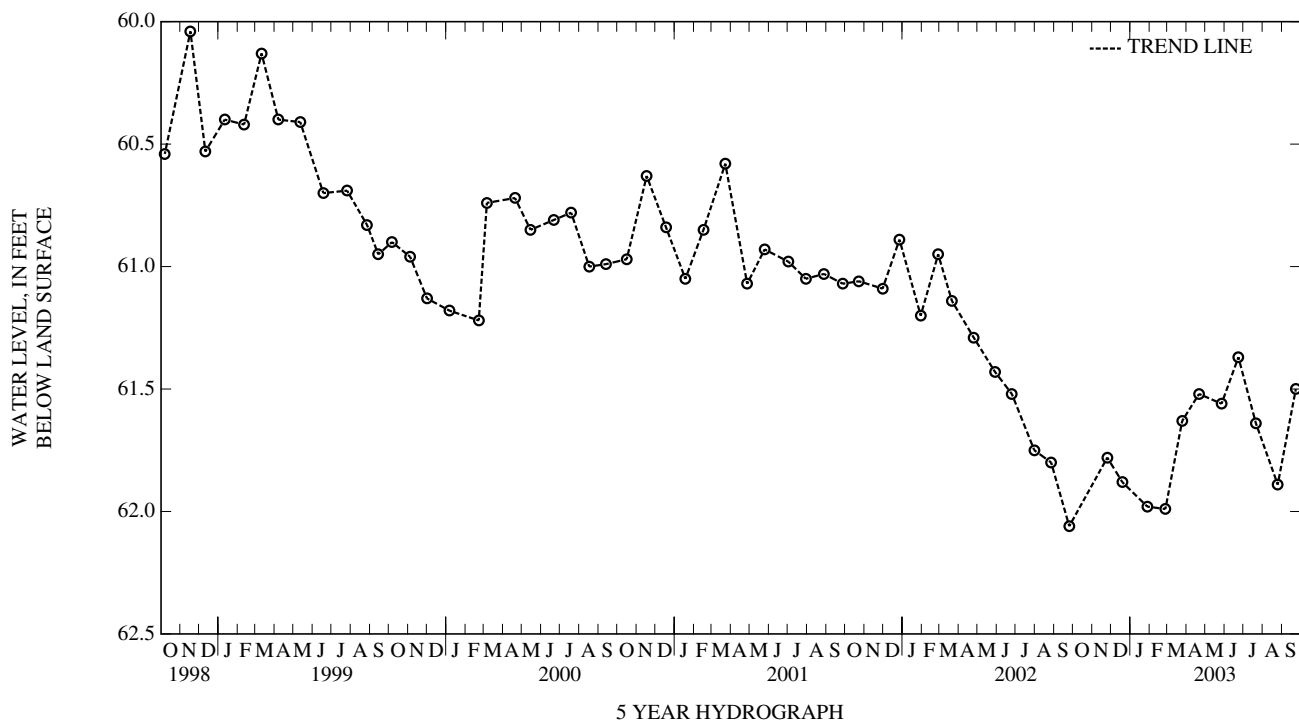
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 59.70 ft below land surface, April 9, 1998; lowest measured, 63.00 ft below land surface, May 12, 1988.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 25, 2002	61.78	FEB 26, 2003	61.99	MAY 27, 2003	61.56	AUG 25, 2003	61.89
DEC 19	61.88	MAR 25	61.63	JUN 23	61.37	SEP 23	61.50
JAN 28, 2003	61.98	APR 21	61.52	JUL 21	61.64		
HIGHEST	61.37	JUN 23, 2003					
LOWEST	61.99	FEB 26, 2003					



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 the intersection of MD Rt. 152 and Trimble Road, Edgewood Park. Owner: Maryland 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, and 23 to 28 ft; screen diameter 4 in., from 13 to 23 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--15-minute recorder interval from June 1988 to July 1989.

DATUM.--Elevation of land surface is 91.89 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.19 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

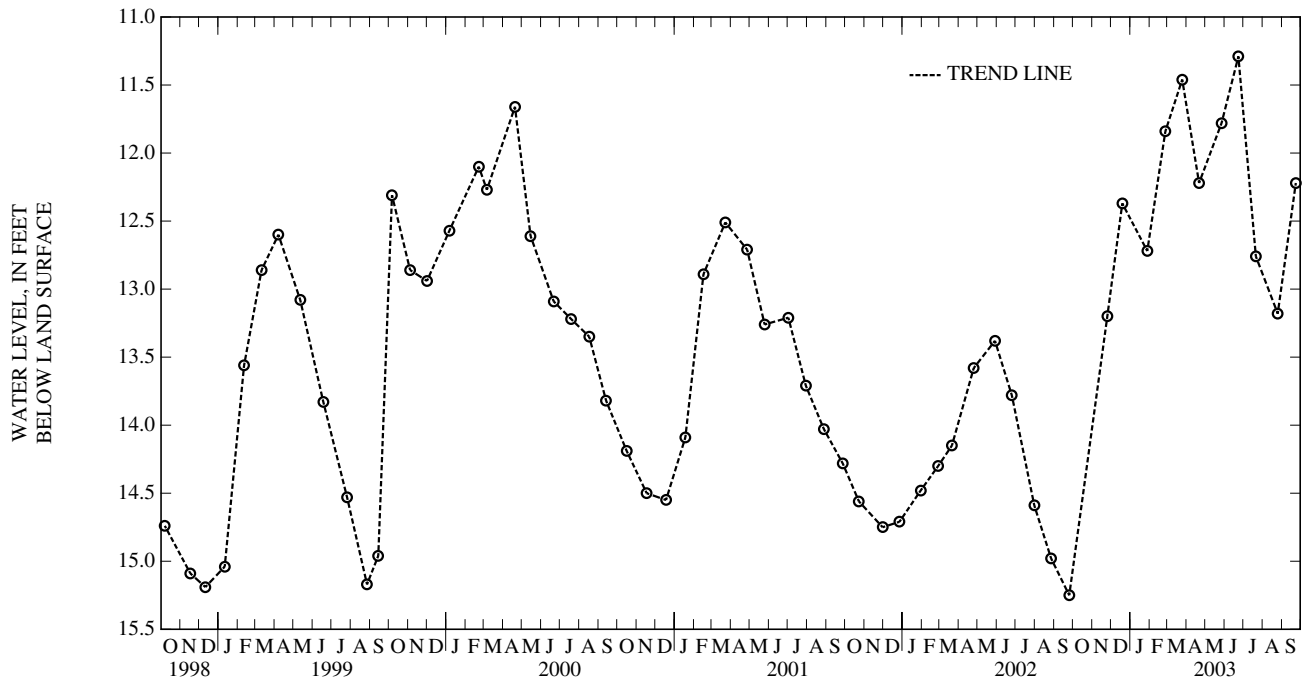
PERIOD OF RECORD.--May 1988 to July 1995, January 1996 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.29 ft below land surface, June 23, 2003; lowest measured, 15.25 ft below land surface, September 25, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 25, 2002	13.20	FEB 26, 2003	11.84	MAY 27, 2003	11.78	AUG 25, 2003	13.18
DEC 19	12.37	MAR 25	11.46	JUN 23	11.29	SEP 23	12.22
JAN 28, 2003	12.72	APR 21	12.22	JUL 21	12.76		

HIGHEST 11.29 JUN 23, 2003
 LOWEST 15.25 SEP 25, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

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.--Morgan Run Formation of Ordovician age. Aquifer code: 360MRGR.

WELL CHARACTERISTICS.--Dug, stone-lined, observation, water-table well, measured depth 48 ft; diameter 60 in.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey 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, 0.40 ft above land surface.

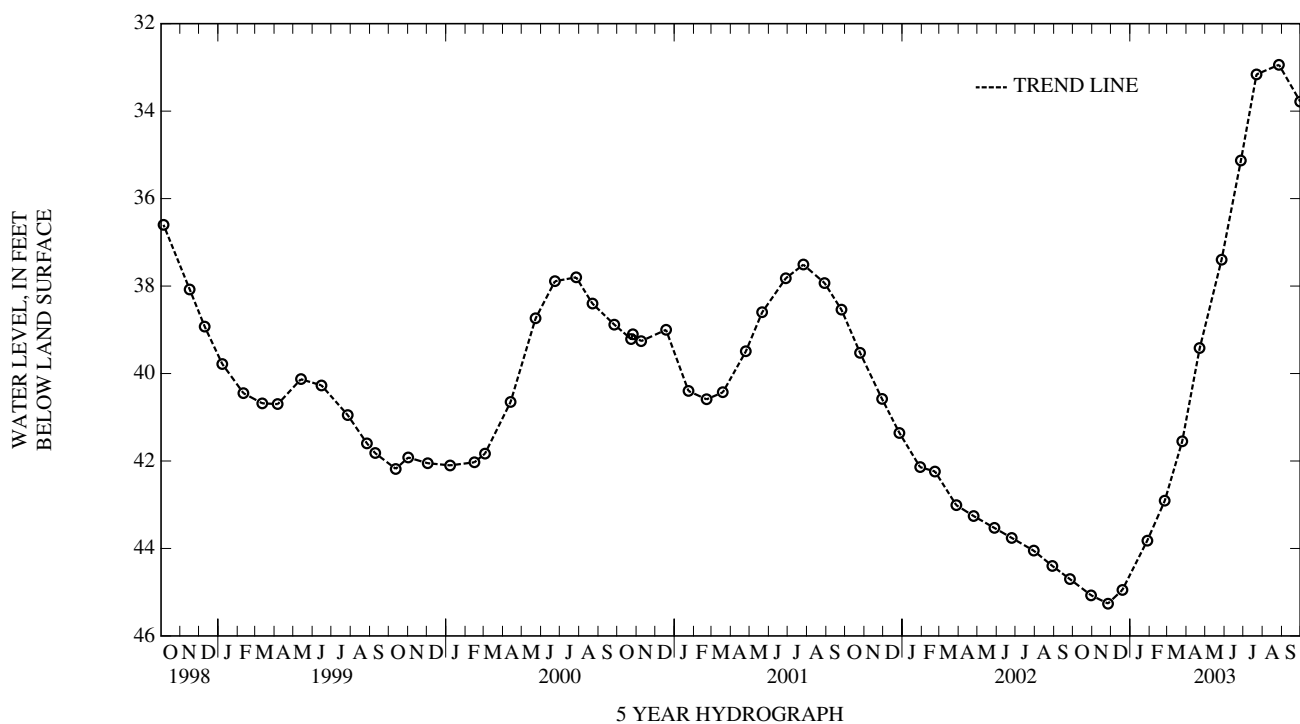
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

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, September 10, 1966.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	45.07	JAN 28, 2003	43.82	APR 22, 2003	39.42	JUL 22, 2003	33.16
NOV 26	45.26	FEB 25	42.91	MAY 27	37.40	AUG 27	32.94
DEC 19	44.95	MAR 25	41.55	JUN 27	35.13	SEP 30	33.78
HIGHEST 32.94		AUG 27, 2003					
LOWEST 45.26		NOV 26, 2002					



HOWARD COUNTY--Continued

WELL NUMBER.--HO Cd 79. SITE ID.--391445076555101. PERMIT NUMBER.--HO-81-2387.

LOCATION.--Lat 39°14'45", long 76°55'51", Hydrologic Unit 02060006, at University of Maryland Central Farm. Owner: U.S. Geological Survey.

AQUIFER.--Loch Raven Formation (saprolite) of Cambrian age. Aquifer code: 370LCRV.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 54 ft; casing diameter 3 in., to 44 ft; screen diameter 3 in., from 44 to 54 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey 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.--Maryland Ground-Water-Level Monitoring Network observation well.

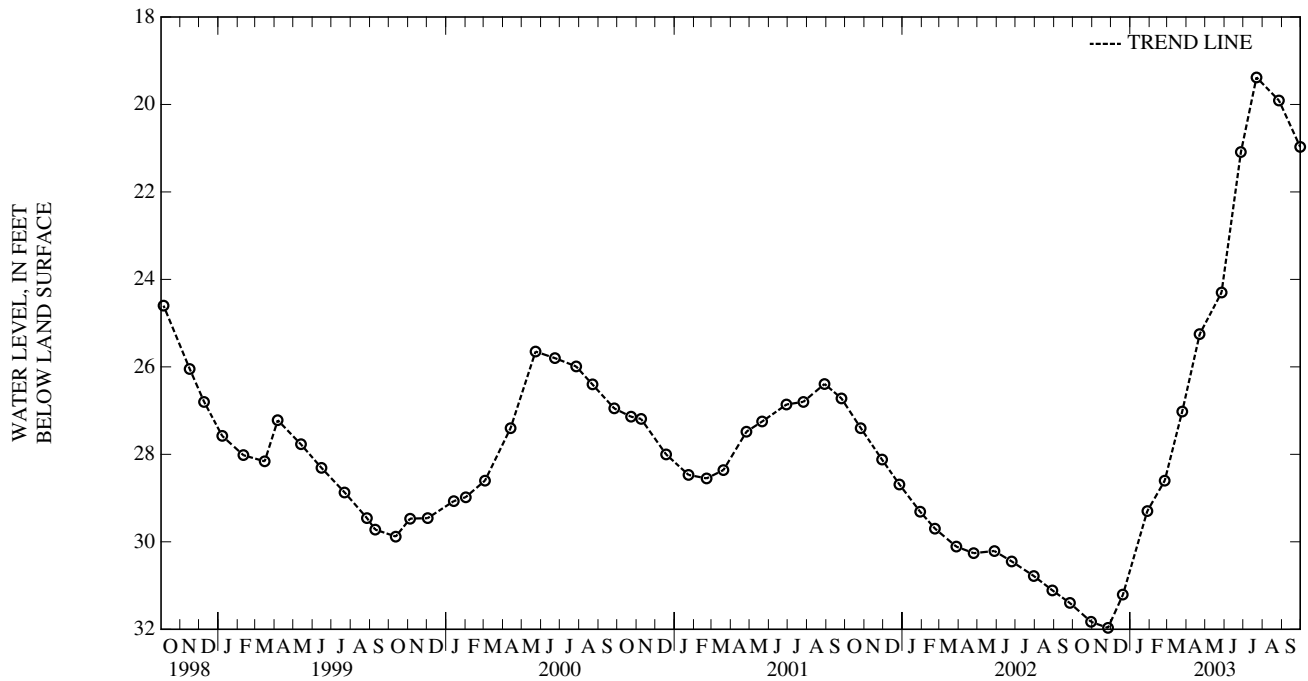
PERIOD OF RECORD.--January 1988 to May 1993, November 1995, January 1996 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 19.20 ft below land surface, April 10, 1997; lowest measured, 31.97 ft below land surface, November 26, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	31.83	JAN 28, 2003	29.30	APR 22, 2003	25.25	JUL 22, 2003	19.38
NOV 26	31.97	FEB 25	28.60	MAY 27	24.30	AUG 27	19.91
DEC 20	31.21	MAR 25	27.02	JUN 27	21.09	SEP 30	20.97

HIGHEST 19.38 JUL 22, 2003
 LOWEST 31.97 NOV 26, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

HOWARD COUNTY--Continued

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 (Sykesville Schist Member) of Ordovician age. Aquifer code: 360SKVL.

WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 125 ft; casing diameter 6 in., to 51.4 ft; open hole.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with graphic water-level recorder from December 1987 to April 1990.

DATUM.--Elevation of land surface is 430 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.45 ft below land surface.

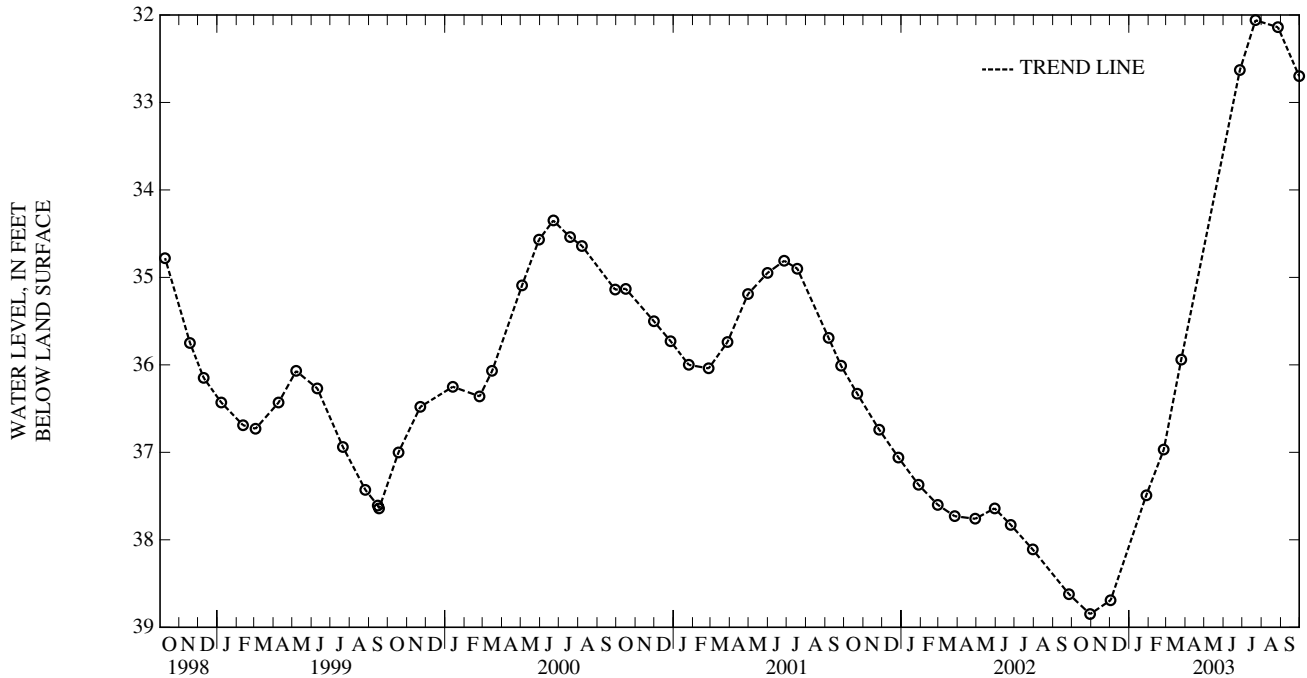
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

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, 38.85 ft below land surface, October 30, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	38.85	FEB 25, 2003	36.97	JUL 22, 2003	32.06
DEC 02	38.69	MAR 25	35.94	AUG 27	32.14
JAN 28, 2003	37.49	JUN 27	32.63	SEP 30	32.70
HIGHEST 32.06 JUL 22, 2003					
LOWEST 38.85 OCT 30, 2002					



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

KENT COUNTY

WELL NUMBER.--KE Ac 20. SITE ID.--392007076075501. PERMIT NUMBER.--KE-73-0658.

LOCATION.--Lat 39°20'07", long 76°07'55", Hydrologic Unit 02060001, at U.S. Coast Guard Station at end of Still Pond Neck Road. Owner: U.S. Geological Survey.

AQUIFER.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.

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.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Twice yearly measurements from October 1986 to April 1991.

DATUM.--Elevation of land surface is 7 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.30 ft above land surface.

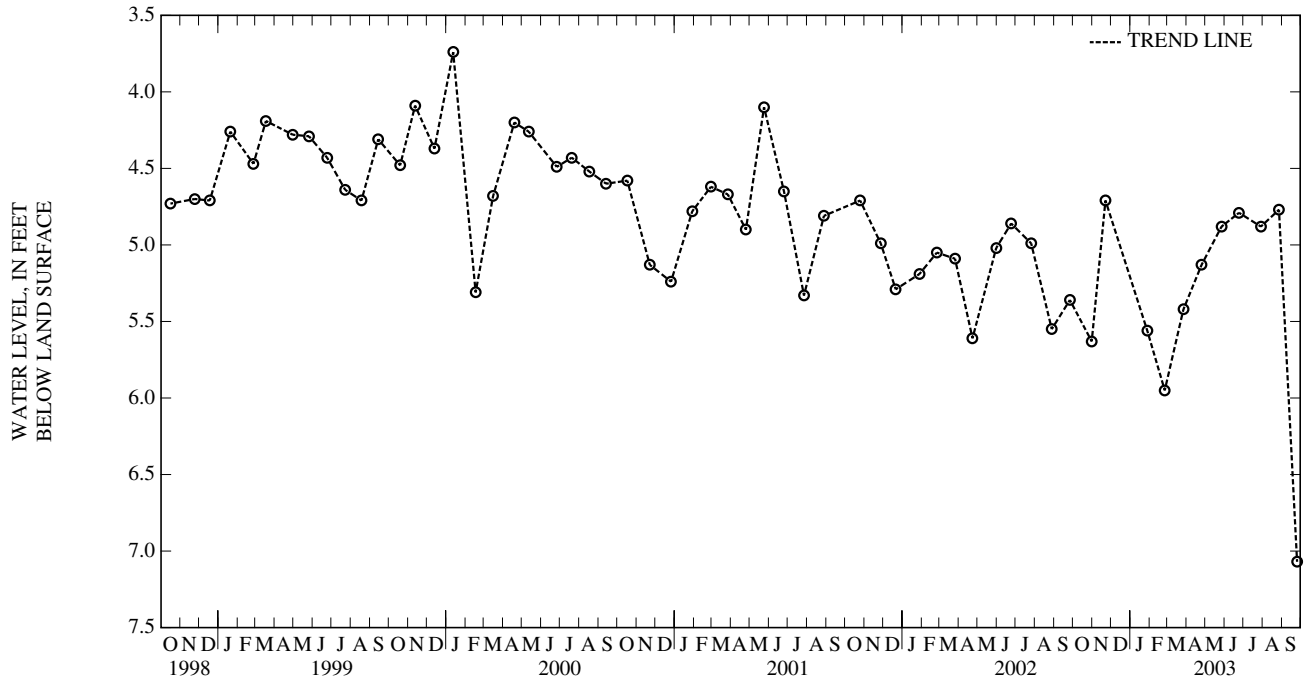
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

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 December 11, 1985; lowest measured, 7.07 ft below land surface, September 25, 2003.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	5.63	FEB 25, 2003	5.95	MAY 27, 2003	4.88	AUG 27, 2003	4.77
NOV 22	4.71	MAR 27	5.42	JUN 24	4.79	SEP 25	7.07
JAN 28, 2003	5.56	APR 25	5.13	JUL 29	4.88		
HIGHEST	4.71	NOV 22, 2002					
LOWEST	7.07	SEP 25, 2003					



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

KENT COUNTY—Continued

WELL NUMBER.--KE Bc 185. SITE ID.--391650076050402. PERMIT NUMBER.--KE-88-0255.

LOCATION.--Lat 39°16'50", long 76°05'04", Hydrologic Unit 02060002, at Worton Regional Park, Worton. Owner: Maryland Geological Survey.

AQUIFER.--Pensauken Formation (Columbia aquifer) of Upper Miocene age. Aquifer code: 122PNSK.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 55 ft; casing diameter 4 in., to 40 ft, and 50 to 55 ft; screen diameter 4 in., from 40 to 50 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from February 1992 to October 1993.

DATUM.--Elevation of land surface is 82.09 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.41 ft above land surface.

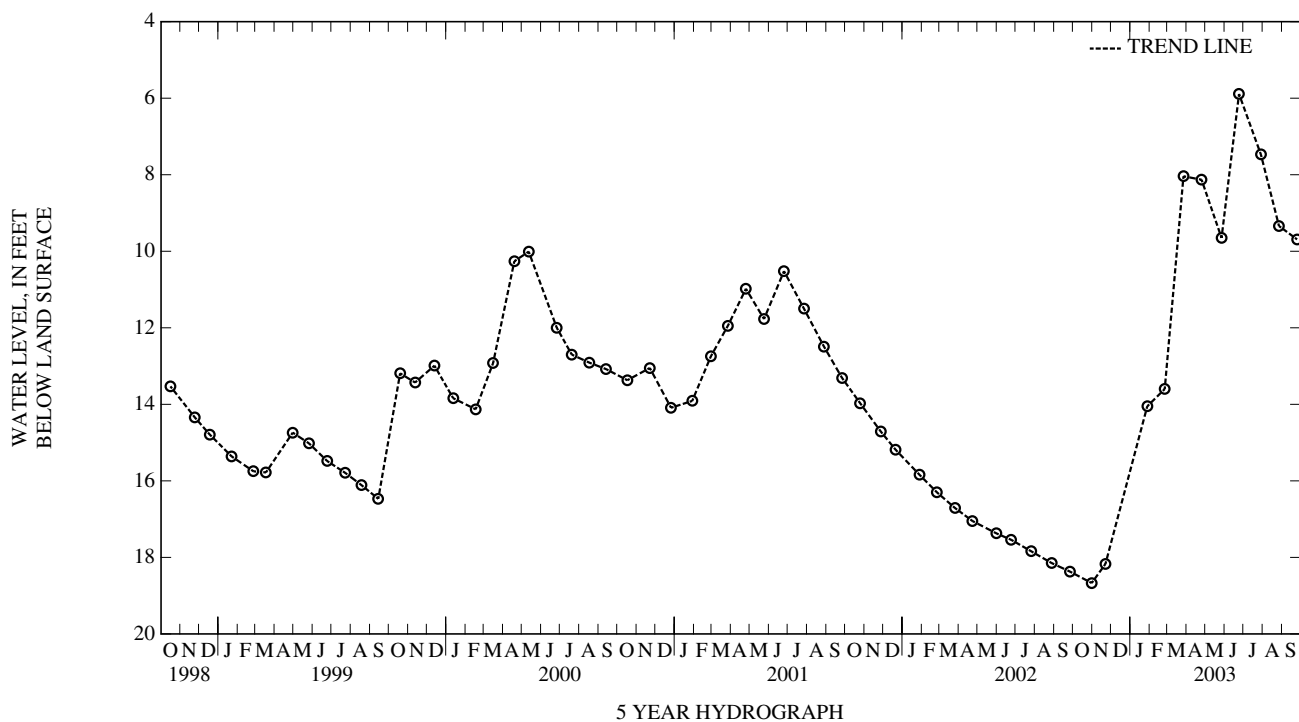
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.89 ft below land surface, June 24, 2003; lowest measured, 20.23 ft below land surface, December 12-14, 1992 (recorder).

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	18.67	FEB 25, 2003	13.60	MAY 27, 2003	9.65	AUG 27, 2003	9.34
NOV 22	18.17	MAR 27	8.04	JUN 24	5.89	SEP 25	9.69
JAN 28, 2003	14.05	APR 25	8.13	JUL 29	7.47		
HIGHEST	5.89	JUN 24, 2003					
LOWEST	20.23	DEC 12-14, 1992					



KENT COUNTY—Continued

WELL NUMBER.--KE Bc 186. SITE ID.--391650076050403. PERMIT NUMBER.--KE-88-0286.

LOCATION.--Lat 39°16'50", long 76°05'04", Hydrologic Unit 02060002, at Worton Regional Park, Worton. Owner: Maryland Geological Survey.

AQUIFER.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 270 ft; casing diameter 4 in., to 255 ft, and 265 to 270 ft; screen diameter 4 in., from 255 to 265 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Twice yearly water level measurements from October 1993 to September 1999. Equipped with digital water-level recorder--60-minute recorder interval from February 1992 to October 1993.

DATUM.--Elevation of land surface is 82 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of metal sleeve, 2.76 ft above land surface.

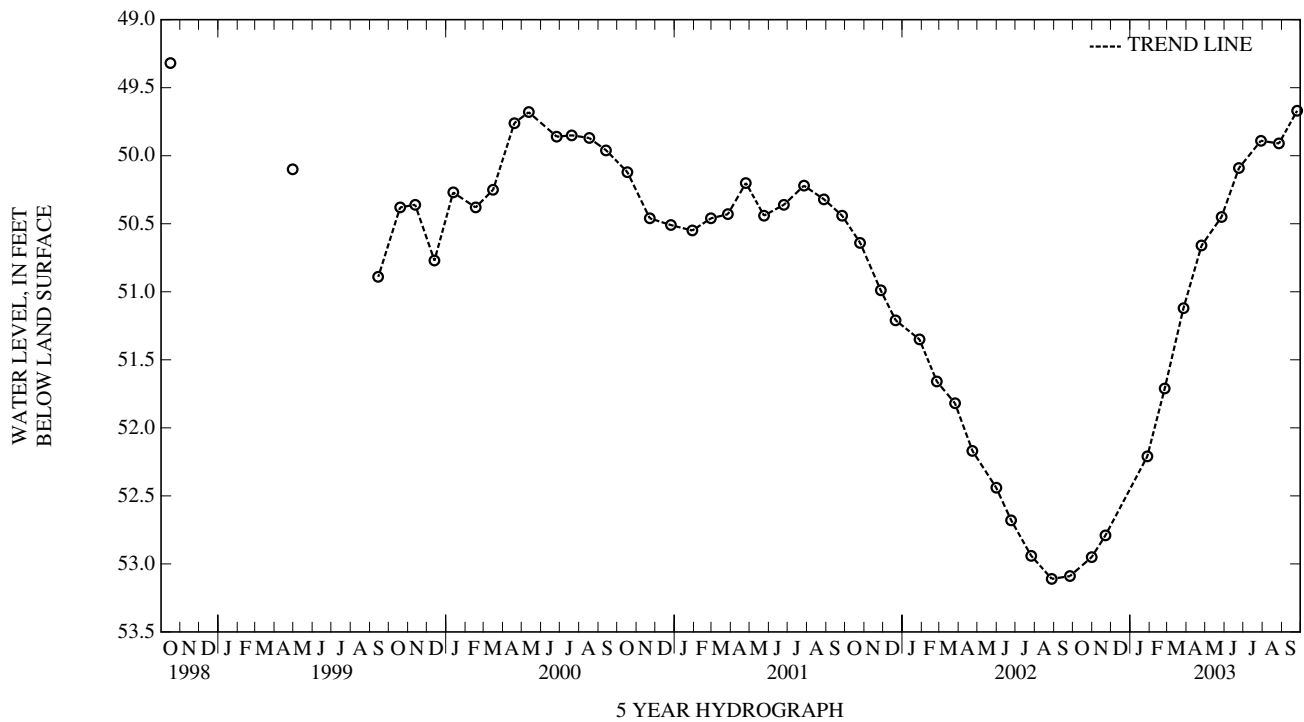
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 47.27 below land surface, April 15, 1997; lowest measured, 53.11 ft below land surface, August 28, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	52.95	FEB 25, 2003	51.71	MAY 27, 2003	50.45	AUG 27, 2003	49.91
NOV 22	52.79	MAR 27	51.12	JUN 24	50.09	SEP 25	49.67
JAN 28, 2003	52.21	APR 25	50.66	JUL 29	49.89		
HIGHEST 49.67 SEP 25, 2003							
LOWEST 52.95 OCT 31, 2002							



KENT COUNTY--Continued

WELL NUMBER.--KE Be 43. SITE ID.--391823075594701. PERMIT NUMBER.--KE-73-0659.

LOCATION.--Lat 39°18'23", long 75°59'45", 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.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Twice yearly water level measurements from October 1986 to April 1991.

DATUM.--Elevation of land surface is 65 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.60 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

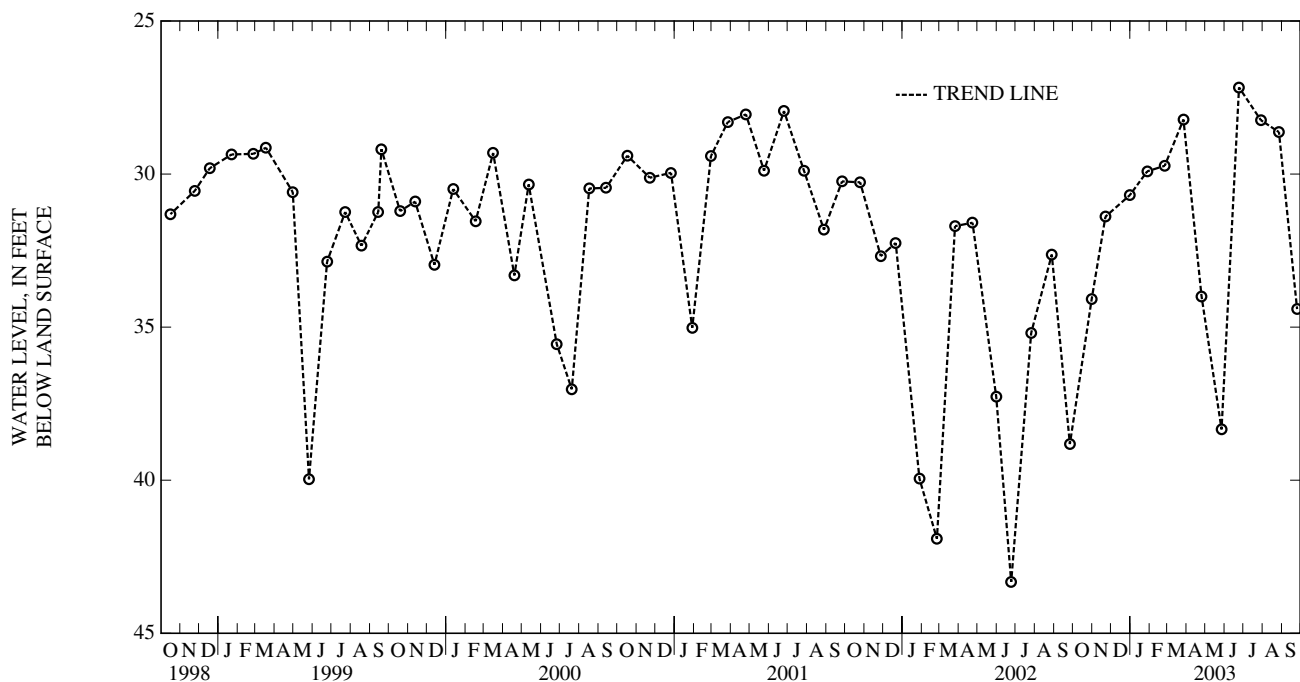
PERIOD OF RECORD.--February 1979 to July 1979, December 1985, October 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.31 ft below land surface, June 5, 1979; lowest measured, 43.32 ft below land surface, June 24, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	34.08	JAN 28, 2003	29.91	APR 25, 2003	34.00	JUL 29, 2003	28.24
NOV 22	31.39	FEB 25	29.73	MAY 27	38.34	AUG 27	28.63
DEC 31	30.69	MAR 27	28.22	JUN 24	27.17	SEP 25	34.41

HIGHEST 27.17 JUN 24, 2003
LOWEST 38.34 MAY 27, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

KENT COUNTY—Continued

WELL NUMBER.--KE Be 171. SITE ID.--391643075550901. PERMIT NUMBER.--KE-88-0257.

LOCATION.--Lat 39°16'43", long 75°55'06", Hydrologic Unit 02060002, 0.9 mi south of Chesterville on Rt. 290, at Angelica Nursery. Owner: Maryland Geological Survey.

AQUIFER.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 440 ft; casing diameter 4 in., to 425 ft; screen diameter 4 in., from 425 to 435 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from April 1992 to October 1993. Twice yearly water level measurements from October 1991 to October 2002. Monthly water level measurements from January 2003 to present.

DATUM.--Elevation of land surface is 41.41 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.30 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water Levels are affected by regional ground-water withdrawal.

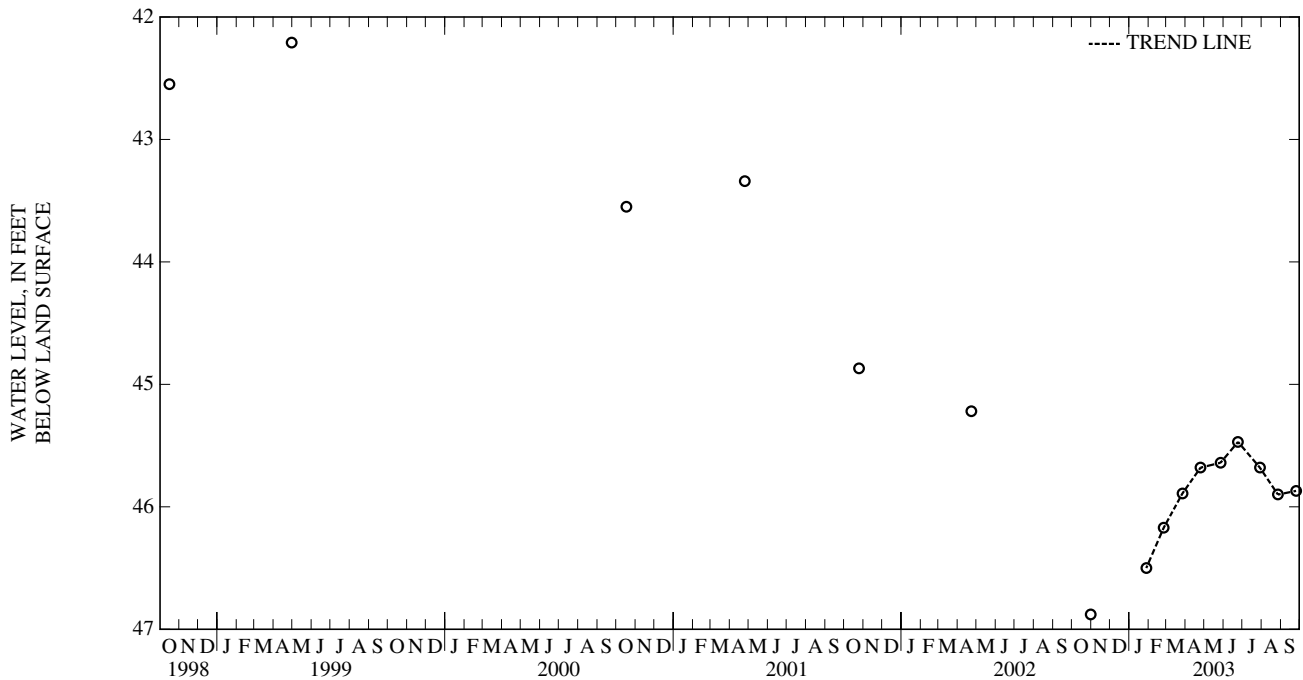
PERIOD OF RECORD.--October 1991 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 38.76 ft below land surface, April 2, 1992; lowest measured, 46.88 ft below land surface, October 31, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	46.88	MAR 27, 2003	45.89	JUN 24, 2003	45.47	SEP 25, 2003	45.87
JAN 28, 2003	46.50	APR 25	45.68	JUL 29	45.68		
FEB 25	46.17	MAY 27	45.64	AUG 27	45.90		

HIGHEST 45.47 JUN 24, 2003
 LOWEST 46.88 OCT 31, 2002



OCTOBER 1, 1995 THROUGH SEPTEMBER 30, 2000

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 east of Massey, at Millington Wildlife Management Area. Owner: U.S. Geological Survey.

AQUIFER.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.

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.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Twice yearly water level measurements from October 1986 to April 1994.

DATUM.--Elevation of land surface is 65 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.50 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by regional ground-water withdrawal.

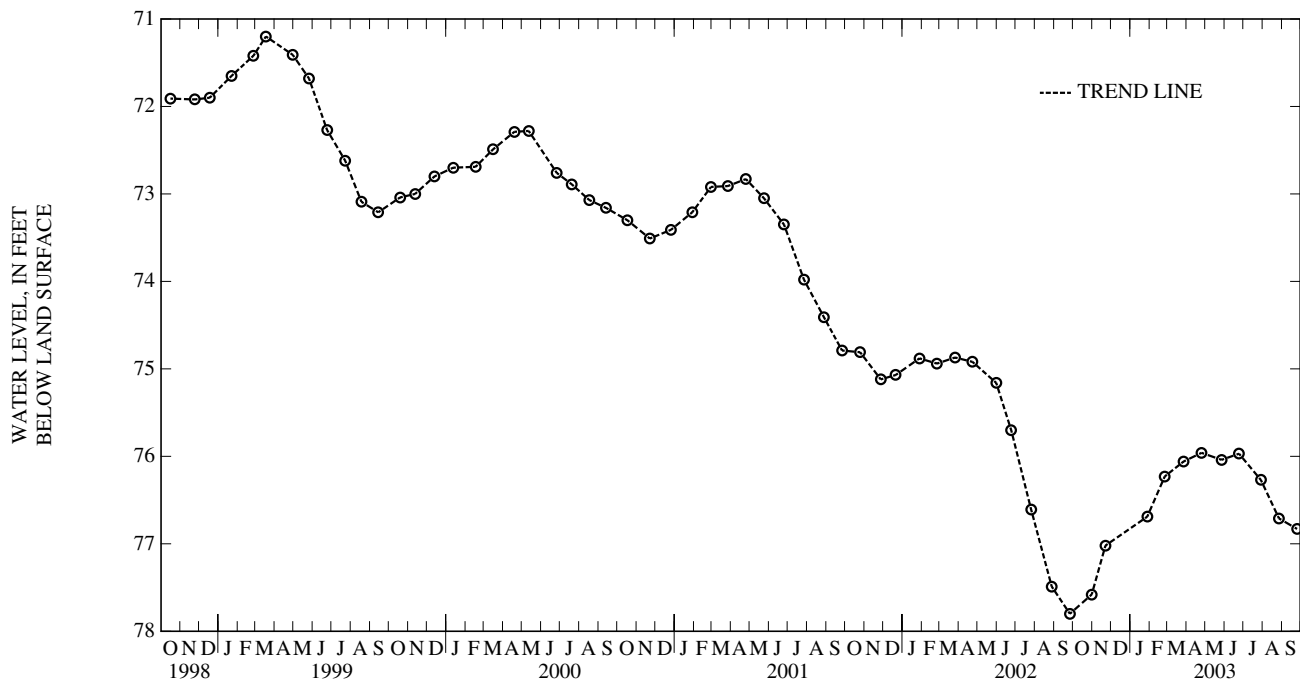
PERIOD OF RECORD.--March 1979 to July 1979, December 1985, October 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 61.62 ft below land surface, June 5, 1979; lowest measured, 77.80 ft below land surface, September 26, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	77.58	FEB 25, 2003	76.23	MAY 27, 2003	76.04	AUG 27, 2003	76.71
NOV 22	77.02	MAR 27	76.06	JUN 24	75.97	SEP 25	76.83
JAN 28, 2003	76.69	APR 25	75.96	JUL 29	76.27		

HIGHEST 75.96 APR 25, 2003
LOWEST 77.58 OCT 31, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

KENT COUNTY—Continued

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 east of Massey, at Millington Wildlife Management Area. Owner: U.S. Geological Survey.

AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 186 ft; casing diameter 6 in., to 124 ft; screen diameter 6 in., from 124 to 186 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Twice yearly water level measurements from October 1986 to October 1994.

DATUM.--Elevation of land surface is 65 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.00 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water-levels are affected by local and regional ground-water withdrawal.

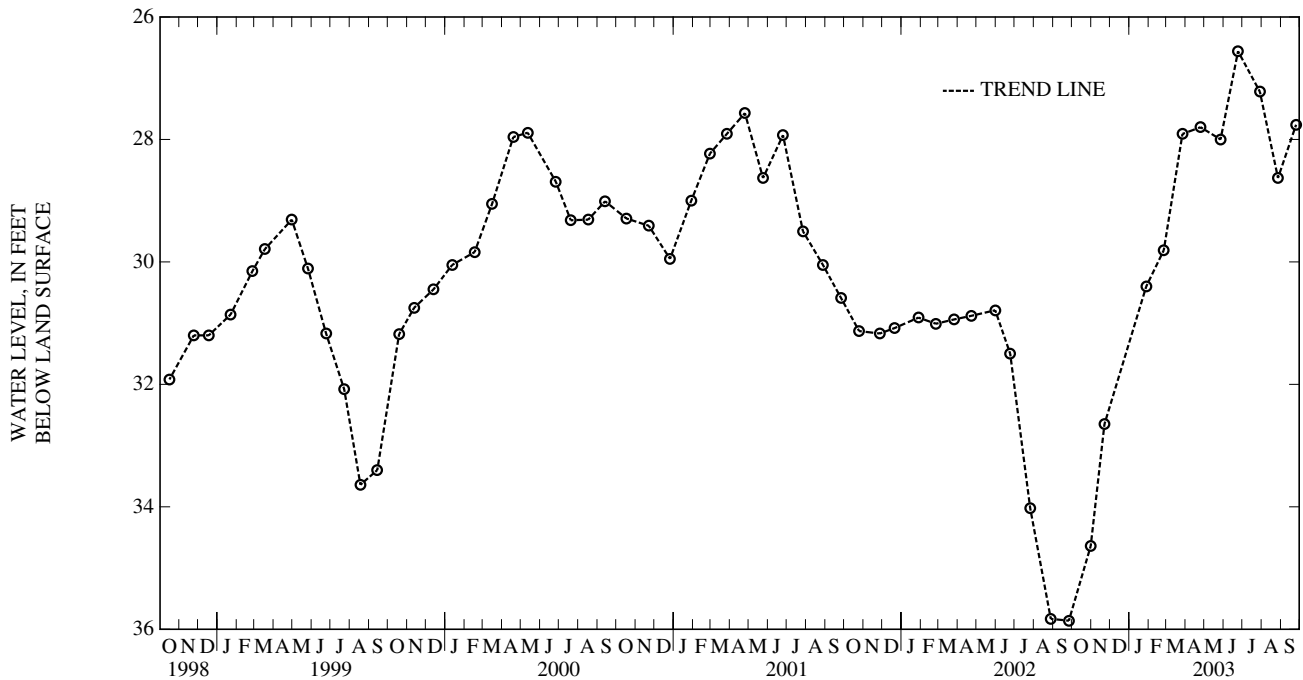
PERIOD OF RECORD.--April 1979 to July 1979, December 1985, October 1986 to current year.

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, September 2, 1981.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	34.64	FEB 25, 2003	29.81	MAY 27, 2003	28.00	AUG 27, 2003	28.63
NOV 22	32.65	MAR 27	27.91	JUN 24	26.56	SEP 25	27.76
JAN 28, 2003	30.40	APR 25	27.80	JUL 29	27.22		

HIGHEST 26.56 JUN 24, 2003
 LOWEST 34.64 OCT 31, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

KENT COUNTY—Continued

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, 0.75 mi north of Fairlee. Owner: U.S. Geological Survey.

AQUIFER.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.

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.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Measured twice yearly from October 1986 to April 1991. Equipped with digital water-level recorder--30-minute recorder interval from July 1991 to October 1993. Measured twice yearly from October 1993 to January 2002. Monthly water level measurements from January 2003 to present.

DATUM.--Elevation of land surface is 40 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 4.38 ft above land surface.

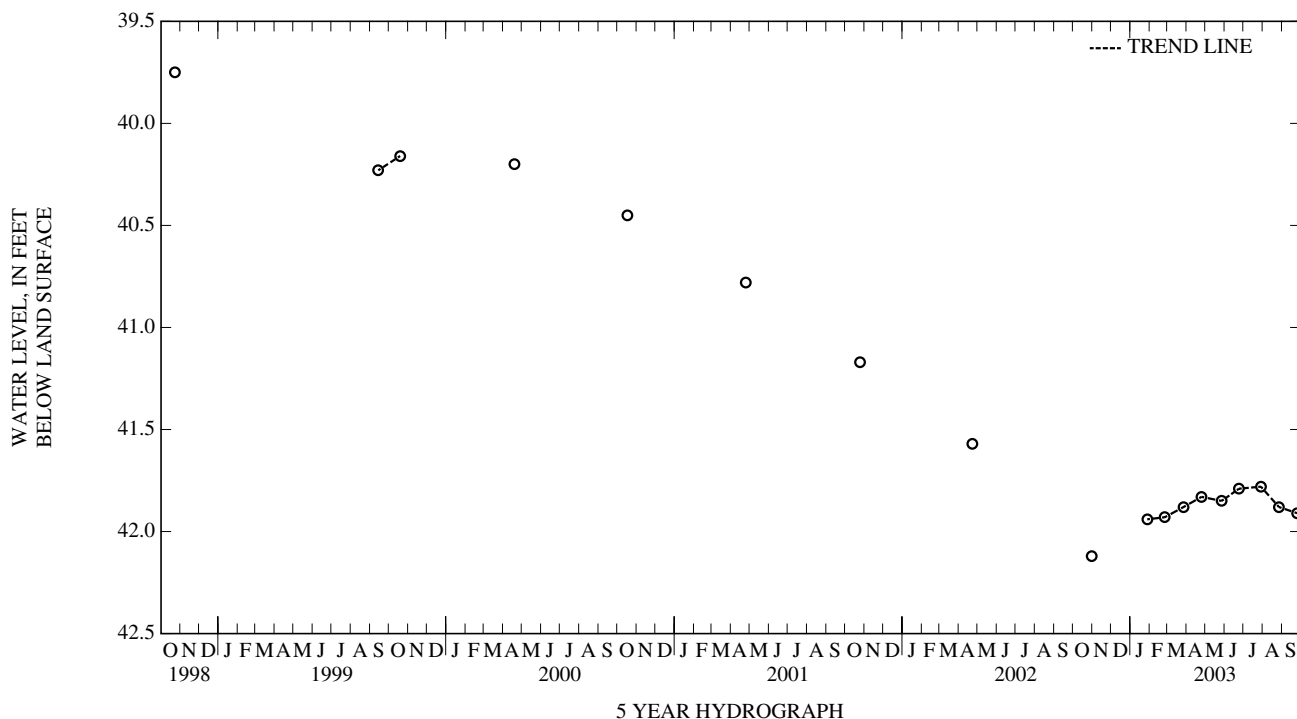
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by regional ground-water withdrawal.

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, September 15, 1982; lowest measured, 42.12 ft below land surface, October 31, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	42.12	MAR 27, 2003	41.88	JUN 24, 2003	41.79	SEP 25, 2003	41.91
JAN 28, 2003	41.94	APR 25	41.83	JUL 29	41.78		
FEB 25	41.93	MAY 27	41.85	AUG 27	41.88		
HIGHEST 41.78 JUL 29, 2003							
LOWEST 42.12 OCT 31, 2002							



KENT COUNTY—Continued

WELL NUMBER.--KE Cb 97. SITE ID.--391124076101001. PERMIT NUMBER.--KE-88-0251.

LOCATION.--Lat 39°11'24", long 76°10'10", Hydrologic Unit 02060002, 1.3 mi southeast of McCleans Corner, at Remington Farms. Owner: Maryland Geological Survey.

AQUIFER.--Magothy Formation of the Upper Cretaceous age. Aquifer code: 211MGTY.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 285 ft; casing diameter 4 in., to 270 ft; screen diameter 4 in., from 270 to 280 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from February 1992 to October 1993.

DATUM.--Elevation of land surface is 65.84 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.30 ft above land surface.

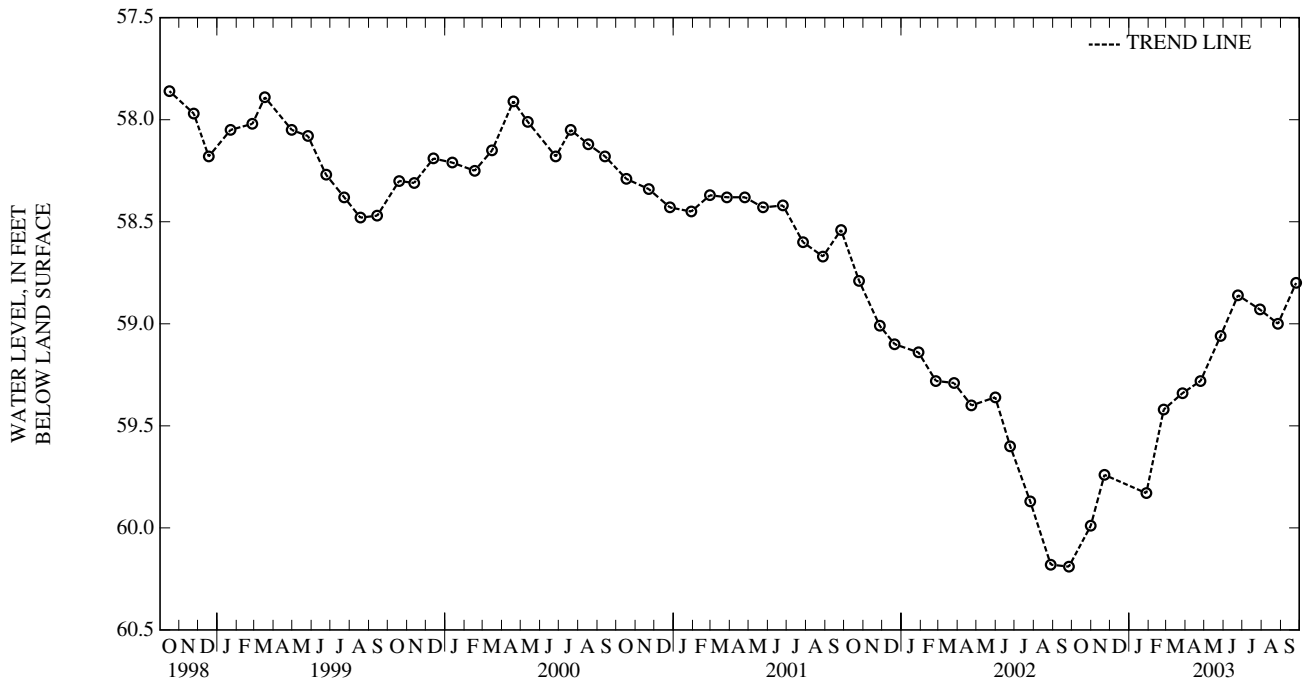
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 56.40 ft below land surface, October 24, 1991; lowest measured, 60.19 ft below land surface, September 26, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	59.99	FEB 25, 2003	59.42	MAY 27, 2003	59.06	AUG 27, 2003	59.00
NOV 22	59.74	MAR 27	59.34	JUN 24	58.86	SEP 25	58.80
JAN 28, 2003	59.83	APR 25	59.28	JUL 29	58.93		
HIGHEST 58.80 SEP 25, 2003							
LOWEST 59.99 OCT 31, 2002							



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

KENT COUNTY--Continued

WELL NUMBER.--KE Cb 98. SITE ID.--391124076101002. PERMIT NUMBER.--KE-88-0254.

LOCATION.--Lat 39°11'24", long 76°10'10", Hydrologic Unit 02060002, 1.3 mi southeast of McCleans Corner, at Remington Farms. Owner: Maryland Geological Survey.

AQUIFER.--Mount Laurel Formation (Monmouth aquifer) of Upper Cretaceous age. Aquifer code: 211MLRL.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 225 ft; casing diameter 4 in., to 210 ft, and 220 to 225 ft; screen diameter 4 in., from 210 to 220 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from February 1992 to October 1993.

DATUM.--Elevation of land surface is 65.78 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.54 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

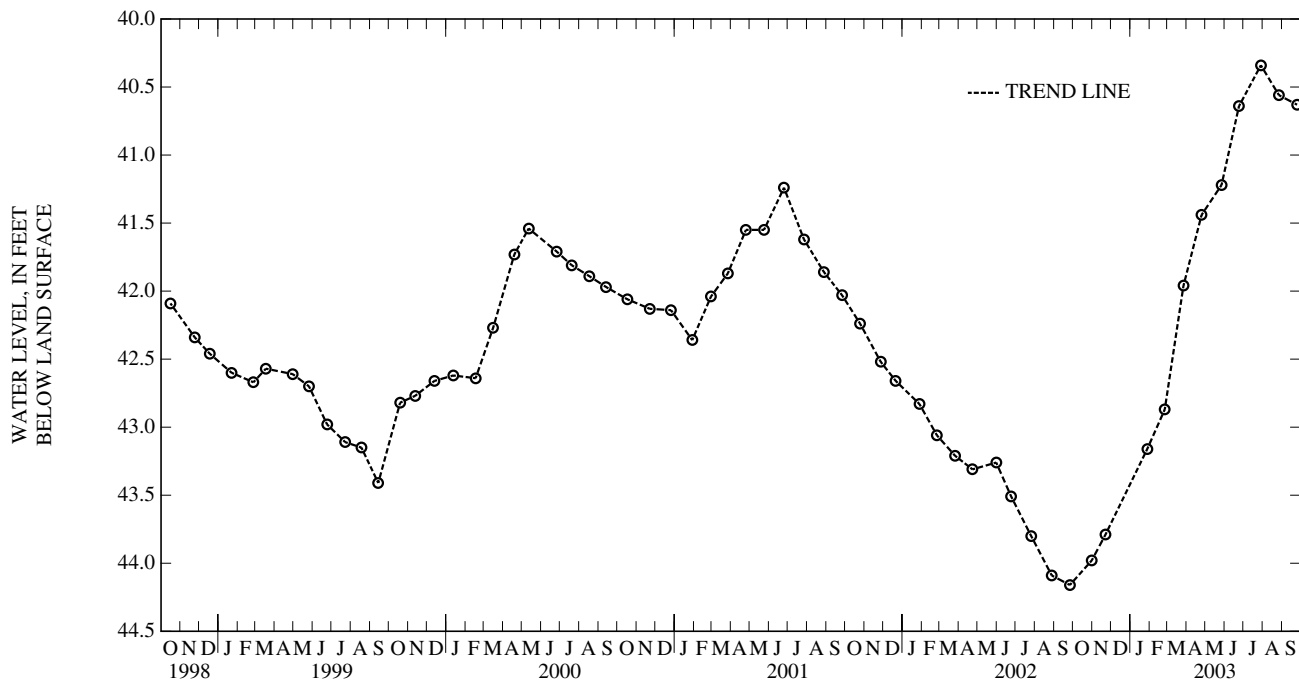
PERIOD OF RECORD.--October 1991 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 39.96 ft below land surface, April 15, 1997, and May 15, 1997; lowest measured, 44.23 ft below land surface, September 19, 1995.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	43.98	FEB 25, 2003	42.87	MAY 27, 2003	41.22	AUG 27, 2003	40.56
NOV 22	43.79	MAR 27	41.96	JUN 24	40.64	SEP 25	40.63
JAN 28, 2003	43.16	APR 25	41.44	JUL 29	40.34		

HIGHEST 40.34 JUL 29, 2003
LOWEST 43.98 OCT 31, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

KENT COUNTY—Continued

WELL NUMBER.--KE Cb 99. SITE ID.--391124076101003. PERMIT NUMBER.--KE-88-0252.

LOCATION.--Lat 39°11'24", long 76°10'10", Hydrologic Unit 02060002, 1.3 mi southeast of McCleans Corner, at Remington Farms. Owner: Maryland Geological Survey.

AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 134 ft; casing diameter 4 in., to 118 ft, and 128 to 134 ft; screen diameter 4 in., from 118 to 128 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from February 1992 to October 1993.

DATUM.--Elevation of land surface is 65.78 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.53 ft above land surface.

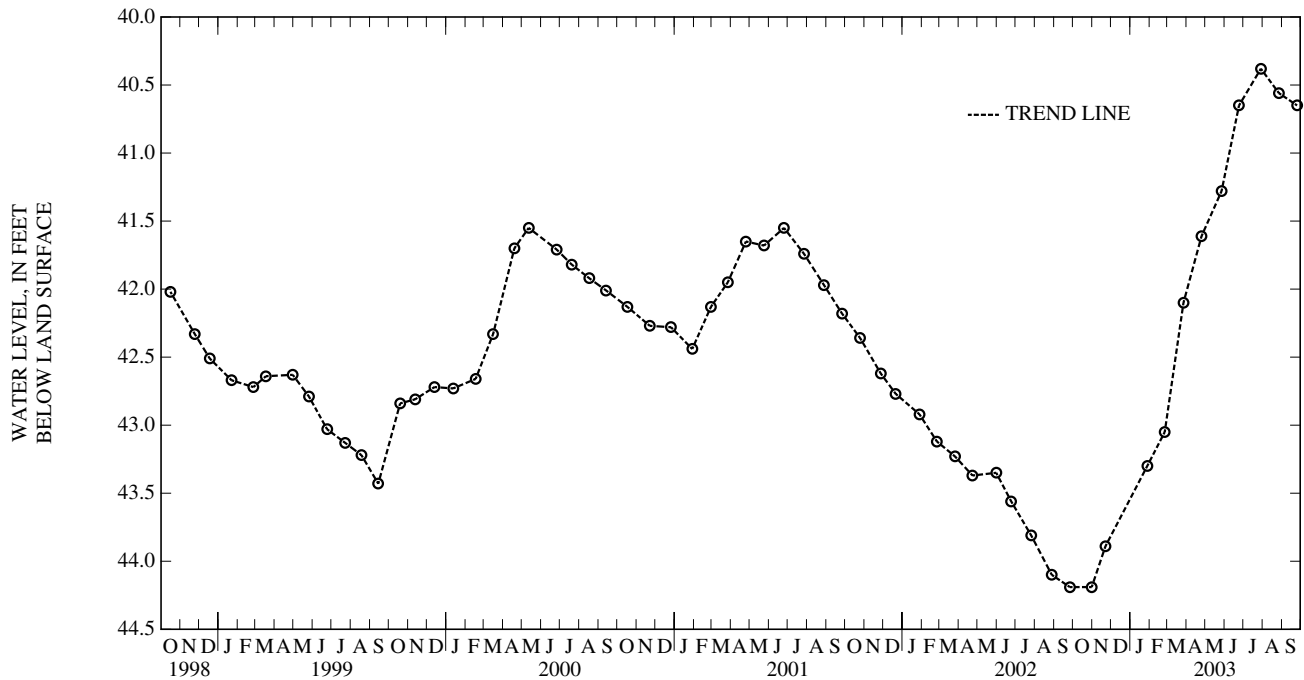
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 39.74 ft below land surface, May 15, 1997; lowest measured, 44.19 ft below land surface, September 26, 2002 and October 31, 2002..

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	44.19	FEB 25, 2003	43.05	MAY 27, 2003	41.28	AUG 27, 2003	40.56
NOV 22	43.89	MAR 27	42.10	JUN 24	40.65	SEP 25	40.65
JAN 28, 2003	43.30	APR 25	41.61	JUL 29	40.38		
HIGHEST 40.38 JUL 29, 2003							
LOWEST 44.19 OCT 31, 2002							



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

KENT COUNTY—Continued

WELL NUMBER.--KE Cb 100. SITE ID.--391124076101004. PERMIT NUMBER.--KE-88-0253.

LOCATION.--Lat 39°11'24", long 76°10'10", Hydrologic Unit 02060002, 1.3 mi southeast of McCleans Corners, at Remington Farms. Owner: Maryland Geological Survey.

AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 67 ft; casing diameter 4 in., to 52 ft, and 62 to 67 ft; screen diameter 4 in., from 52 to 62 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Twice yearly water level measurements from October 1993 to October 1999. Equipped with digital water-level recorder--60-minute recorder interval from February 1992 to October 1993.

DATUM.--Elevation of land surface is 65.69 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.56 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

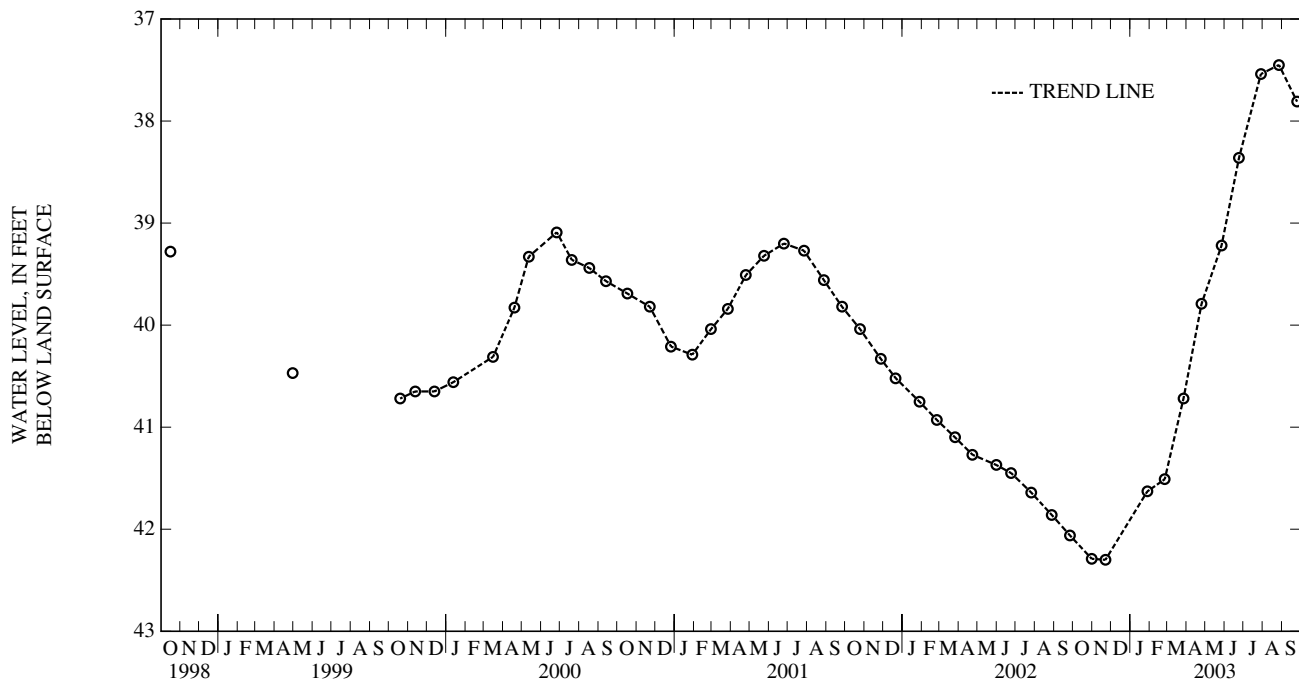
PERIOD OF RECORD.--October 1991 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 36.63 ft below land surface, April 15, 1997; lowest measured, 42.30 ft below land surface, November 22, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	42.29	FEB 25, 2003	41.51	MAY 27, 2003	39.22	AUG 27, 2003	37.45
NOV 22	42.30	MAR 27	40.72	JUN 24	38.36	SEP 25	37.81
JAN 28, 2003	41.63	APR 25	39.79	JUL 29	37.54		

HIGHEST 37.45 AUG 27, 2003
LOWEST 42.30 NOV 22, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

KENT COUNTY—Continued

WELL NUMBER.--KE Cb 101. SITE ID.--391251076142201. PERMIT NUMBER.--KE-88-0250.

LOCATION.--Lat 39°12'48", long 76°14'22", Hydrologic Unit 02060002, 0.4 mi east of Tolchester Beach, south of MD Rt. 21. Owner: Maryland Geological Survey.

AQUIFER.--Kent Island Formation (Columbia aquifer) of Pleistocene age. Aquifer code: 112KILD.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 73 ft; casing diameter 4 in., to 58 ft, and 68 to 73 ft; screen diameter 4 in., from 58 to 68 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Twice yearly water level measurements from October 1995 to February 2001. Equipped with digital water-level recorder--60-minute recorder interval from February 1992 to October 1993.

DATUM.--Elevation of land surface is 31.12 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.60 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

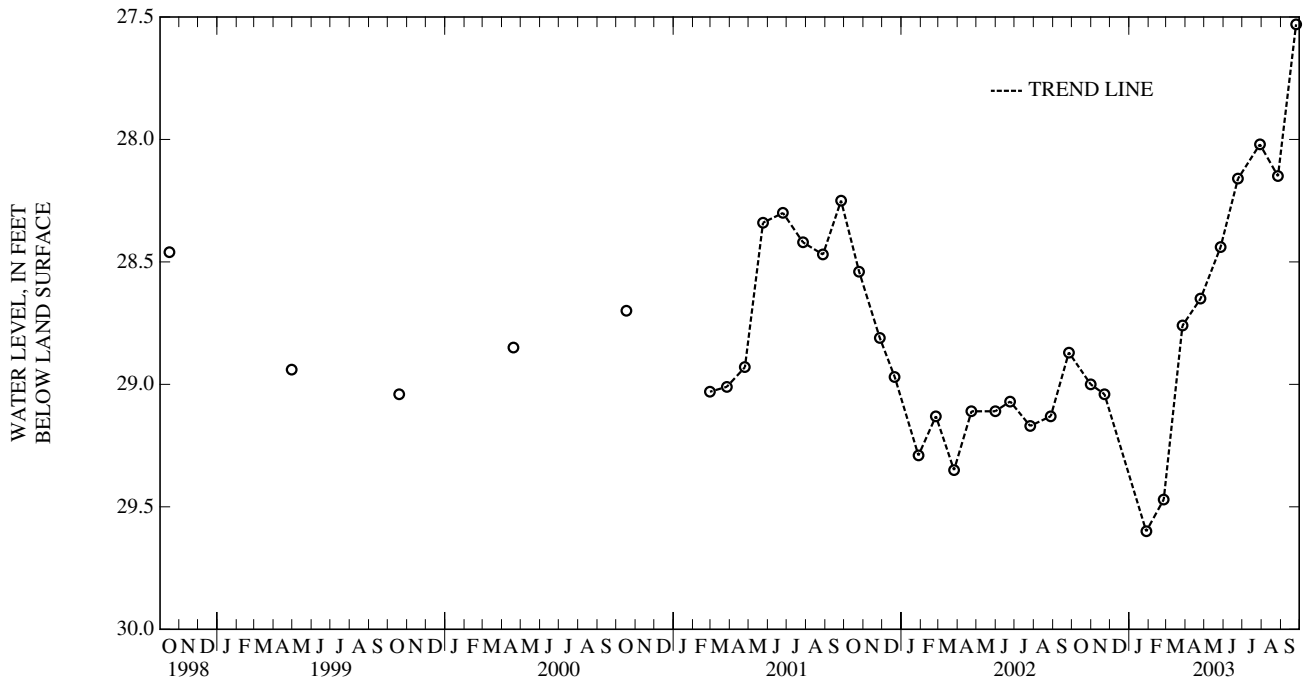
PERIOD OF RECORD.--October 1991 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 27.53 ft below land surface, September 25, 2003; lowest measured, 29.60 ft below land surface, January 28, 2003.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	29.00	FEB 25, 2003	29.47	MAY 27, 2003	28.44	AUG 27, 2003	28.15
NOV 22	29.04	MAR 27	28.76	JUN 24	28.16	SEP 25	27.53
JAN 28, 2003	29.60	APR 25	28.65	JUL 29	28.02		

HIGHEST 27.53 SEP 25, 2003
 LOWEST 29.60 JAN 28, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

KENT COUNTY--Continued

WELL NUMBER.--KE Cb 103. SITE ID.--391124076101005. PERMIT NUMBER.--KE-88-0288.

LOCATION.--Lat 39°11'24", long 76°10'10", Hydrologic Unit 02060002, 1.3 mi southeast of McCleans Corner, at Remington Farms. Owner: Maryland Geological Survey.

AQUIFER.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 404 ft; casing diameter 4 in., to 389 ft, and 399 to 404 ft; screen diameter 4 in., from 389 to 399 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from February 1992 to October 1993.

DATUM.--Elevation of land surface is 65.60 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.54 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by regional ground-water withdrawal.

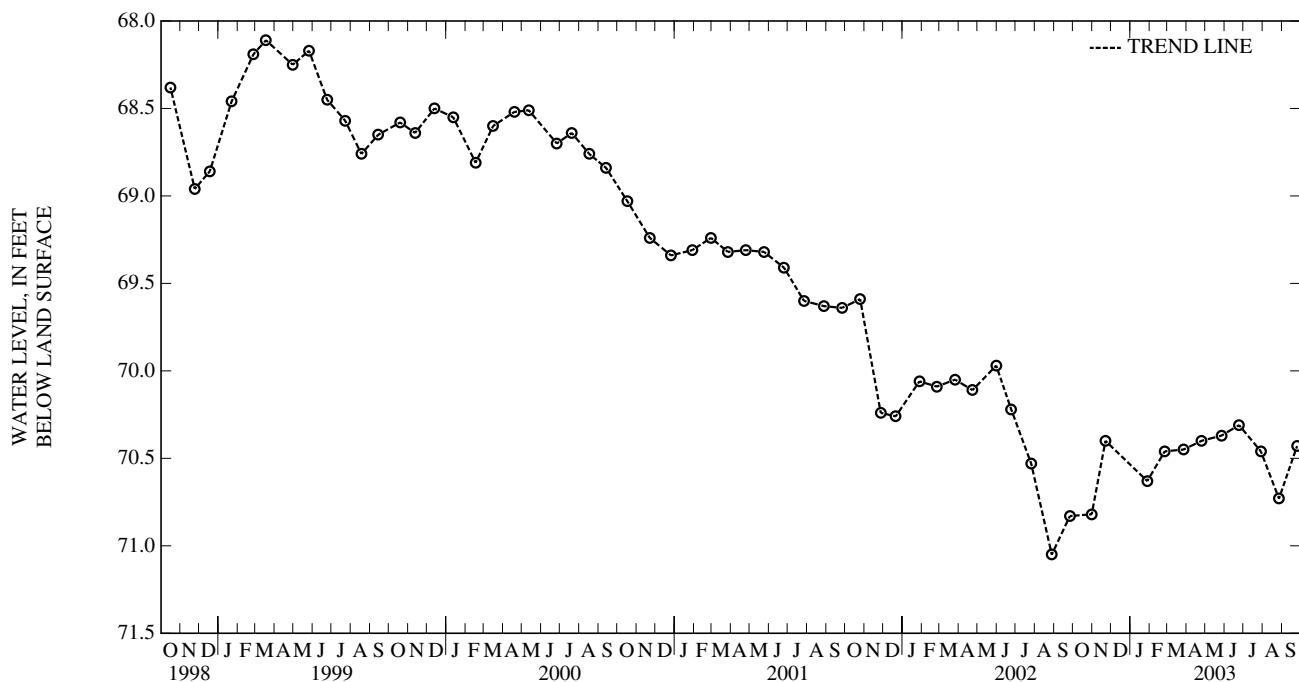
PERIOD OF RECORD.--February 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 65.64 ft below land surface, April 2, 1992; lowest measured, 71.05 ft below land surface, August 28, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	70.82	FEB 25, 2003	70.46	MAY 27, 2003	70.37	AUG 27, 2003	70.73
NOV 22	70.40	MAR 27	70.45	JUN 24	70.31	SEP 25	70.43
JAN 28, 2003	70.63	APR 25	70.40	JUL 29	70.46		

HIGHEST 70.31 JUN 24, 2003
LOWEST 70.82 OCT 31, 2002



KENT COUNTY--Continued

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: Chestertown Foods.

AQUIFER.--Aquia Formation of Upper 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 water level measurements with electric tape by U.S. 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, 0.20 ft above land surface.

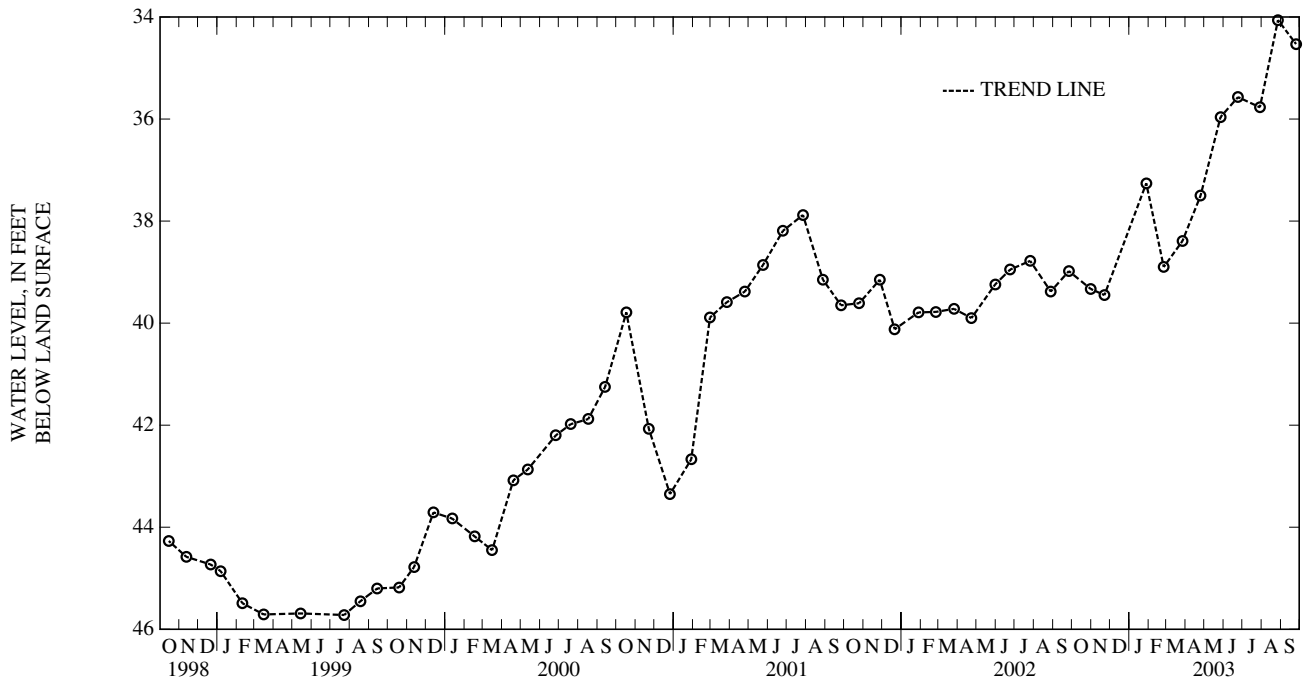
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels measured by plant personnel with an electric tape, September 18, 1959 to April 18, 1963. Food processing plant closed from August 31, 1995 to September 30, 1996. Water levels are affected by local and regional ground-water withdrawal.

PERIOD OF RECORD.--September 1959 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 25.00 ft below land surface, September 18, 1959; lowest measured, 54.46 ft below land surface, August 4, 1966.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	39.33	FEB 25, 2003	38.90	MAY 27, 2003	35.96	AUG 27, 2003	34.06
NOV 22	39.45	MAR 27	38.39	JUN 24	35.57	SEP 25	34.53
JAN 28, 2003	37.26	APR 25	37.50	JUL 29	35.77		
HIGHEST 34.06		AUG 27, 2003					
LOWEST 39.45		NOV 22, 2002					



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

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, near Rock Hall. Owner: U.S. Geological Survey.

AQUIFER.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 1,030 ft; casing diameter 4 in., to 1,019 ft; screen diameter 4 in., from 1,019 to 1,030 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Twice monthly measurements prior to January 2003.

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 Ground-Water-Level Monitoring Network observation well. Water levels are affected by regional ground-water withdrawal.

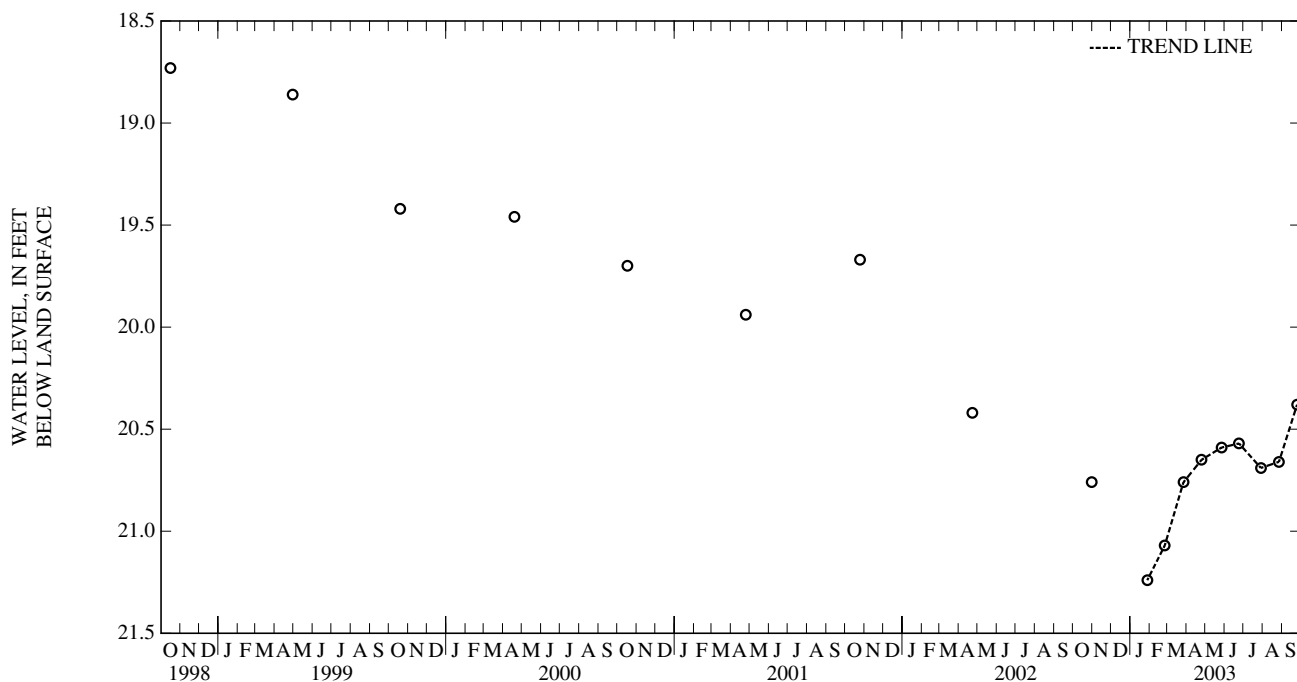
PERIOD OF RECORD.--December 1978 to July 1979, October 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.08 ft below land surface, October 30, 1980; lowest measured, 21.24 ft below land surface, January 28, 2003.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	20.76	MAR 27, 2003	20.76	JUN 24, 2003	20.57	SEP 25, 2003	20.38
JAN 28, 2003	21.24	APR 25	20.65	JUL 29	20.69		
FEB 25	21.07	MAY 27	20.59	AUG 27	20.66		

HIGHEST 20.38 SEP 25, 2003
LOWEST 21.24 JAN 28, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

KENT COUNTY—Continued

WELL NUMBER.--KE Dc 89. SITE ID.--390626076083301. PERMIT NUMBER.--KE-88-0246.

LOCATION.--Lat 39°06'26", long 76°08'33", Hydrologic Unit 02060002, at the end of Cliffs City Rd. Owner: Maryland Geological Survey.

AQUIFER.--Kent Island Formation (Columbia aquifer) of Pleistocene age. Aquifer code: 112KILD.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 29 ft; casing diameter 4 in., to 14 ft, and 24 to 29 ft; screen diameter 4 in., from 14 to 24 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from February 1992 to October 1993.

DATUM.--Elevation of land surface is 4.52 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.44 ft above land surface.

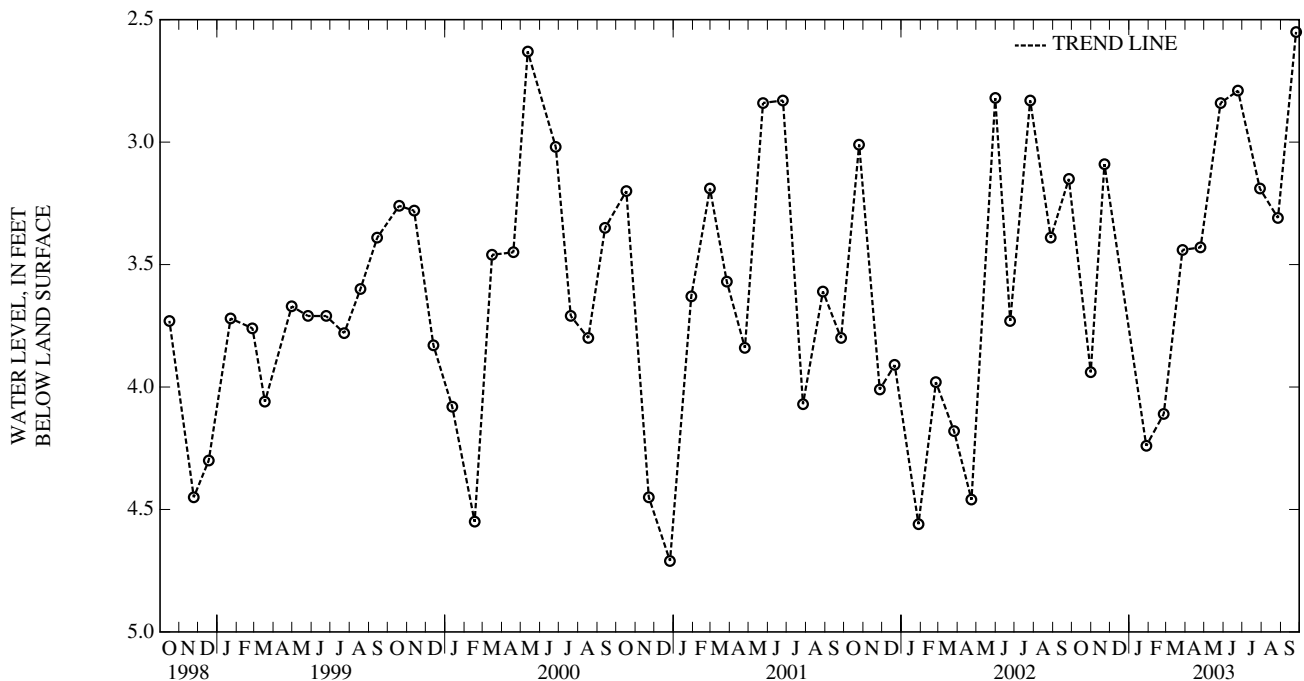
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.40 ft below land surface, October 21, 1996; lowest measured, 5.14 ft below land surface, January 20, 1993.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	3.94	FEB 25, 2003	4.11	MAY 27, 2003	2.84	AUG 27, 2003	3.31
NOV 22	3.09	MAR 27	3.44	JUN 24	2.79	SEP 25	2.55
JAN 28, 2003	4.24	APR 25	3.43	JUL 29	3.19		
HIGHEST	2.55	SEP 25, 2003					
LOWEST	4.24	JAN 28, 2003					



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

KENT COUNTY--Continued

WELL NUMBER.--KE Dc 91. SITE ID.--390626076083302. PERMIT NUMBER.--KE-88-0247.

LOCATION.--Lat 39°06'26", long 76°08'33", Hydrologic Unit 02060002, 1.0 mi south of Cliffs City, at Cliffs Wharf. Owner: Maryland Geological Survey.

AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 155 ft; casing diameter 4 in., to 140 ft, and 150 to 155 ft; screen diameter 4 in., from 140 to 150 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from February 1992 to October 1993.

DATUM.--Elevation of land surface is 4.64 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.46 ft above land surface.

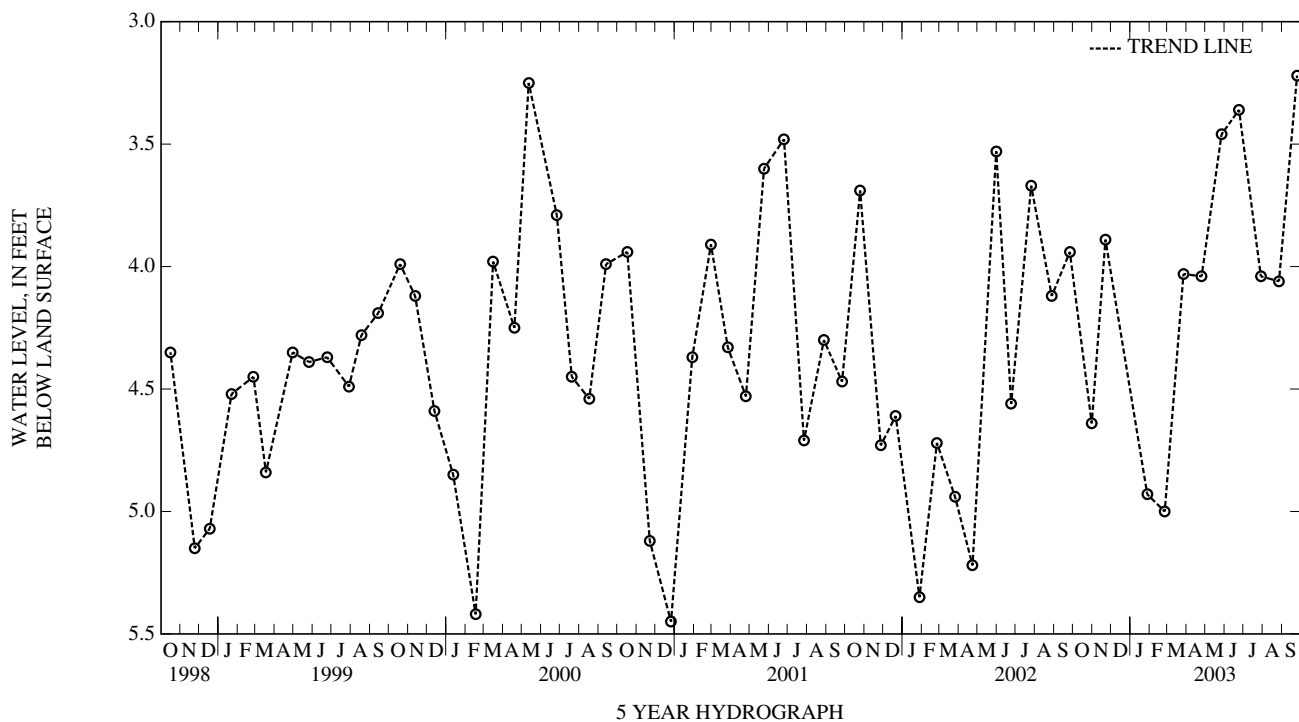
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.01 ft below land surface, October 21, 1996; lowest measured, 5.81 ft below land surface, December 13, 1994.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	4.64	FEB 25, 2003	5.00	MAY 27, 2003	3.46	AUG 27, 2003	4.06
NOV 22	3.89	MAR 27	4.03	JUN 24	3.36	SEP 25	3.22
JAN 28, 2003	4.93	APR 25	4.04	JUL 29	4.04		
HIGHEST	3.22	SEP 25, 2003					
LOWEST	5.00	FEB 25, 2003					



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

MONTGOMERY COUNTY

WELL NUMBER.--MO Cb 26. SITE ID.--391142077280601. PERMIT NUMBER.--MO-72-0191.

LOCATION.--Lat 39°11'42", long 77°28'06", Hydrologic Unit 02070008, 2 mi southwest of Dickerson, at Dickerson Regional Park. Owner: U.S. Geological Survey.

AQUIFER.--Manassas Sandstone, Poolsville Member of Upper Triassic age. Aquifer code: 231MNSS.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 885 ft; casing diameter 6 in., to 38 ft; open hole.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 220 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 8.60 ft above land surface.

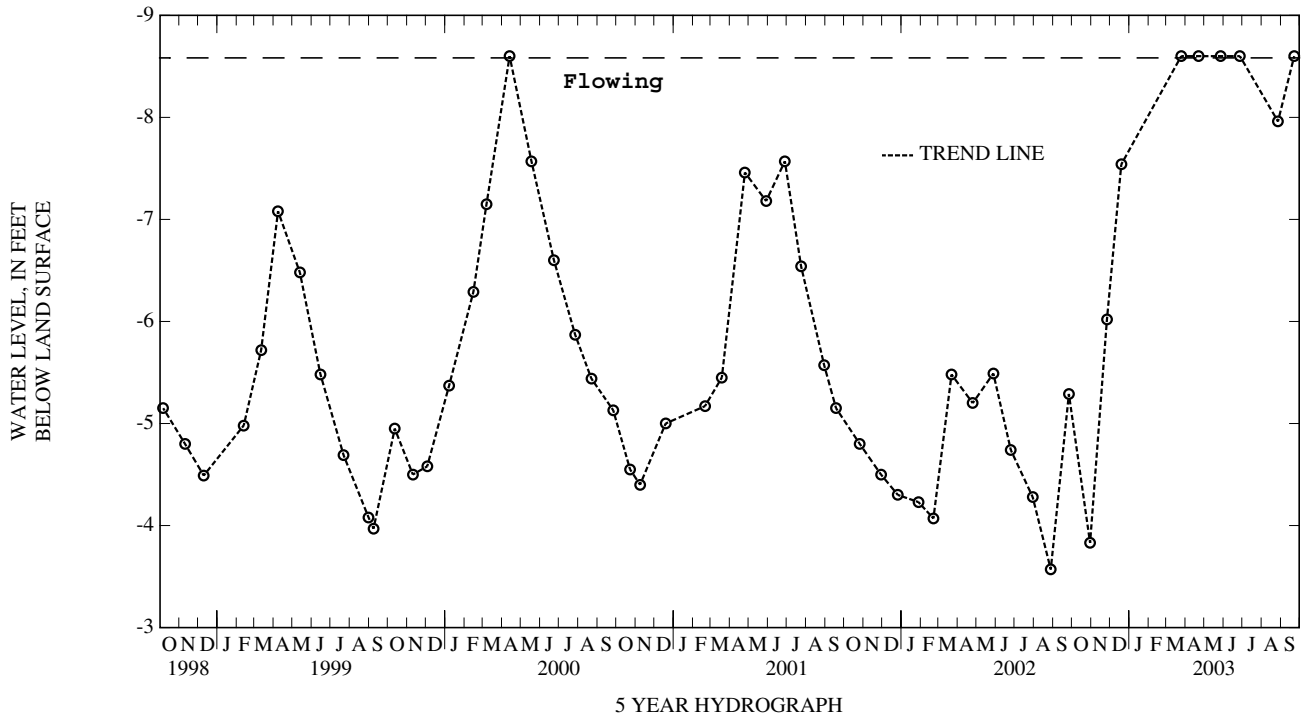
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, flowing on January 3, 1991, April 3, 1991, April 5, 1993, May 3, 1993, March 7, 1994, April 5, 1994, May 10, 1994, January 29, February 15, March 12, April 11, May 6, June 5, July 2, August 1, October 10, November 4, December 3, 1996, January 2, February 3, March 13, April 10, 1997, February 3, March 2, April 2, May 11, 1998, April 13, 2000, March 25, April 22, May 27, June 27, September 22, 2003 ; lowest measured, 3.57 ft above land surface, August 28, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
(READINGS ABOVE LAND SURFACE INDICATED BY "-")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	-3.83	MAR 25, 2003	Flowing	JUN 27, 2003	Flowing
NOV 26	-6.02	APR 22	Flowing	AUG 27	-7.96
DEC 19	-7.54	MAY 27	Flowing	SEP 22	Flowing
HIGHEST	-7.96	AUG 27, 2003			
LOWEST	-3.83	OCT 30, 2002			



5 YEAR HYDROGRAPH
OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

MONTGOMERY COUNTY--Continued

WELL NUMBER.--MO Cc 14. SITE ID.--391314077224201.

LOCATION.--Lat 39°13'14", long 77°22'42", Hydrologic Unit 02070008, at Barnesville. Owner: Private owner.

AQUIFER.--Ijamsville Formation of Paleozoic age. Aquifer code: 300IJMV.

WELL CHARACTERISTICS.--Dug, stone-lined, unused, water-table well, depth 46 ft; casing diameter 60 in.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 560 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of wooden well cover, 3.00 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

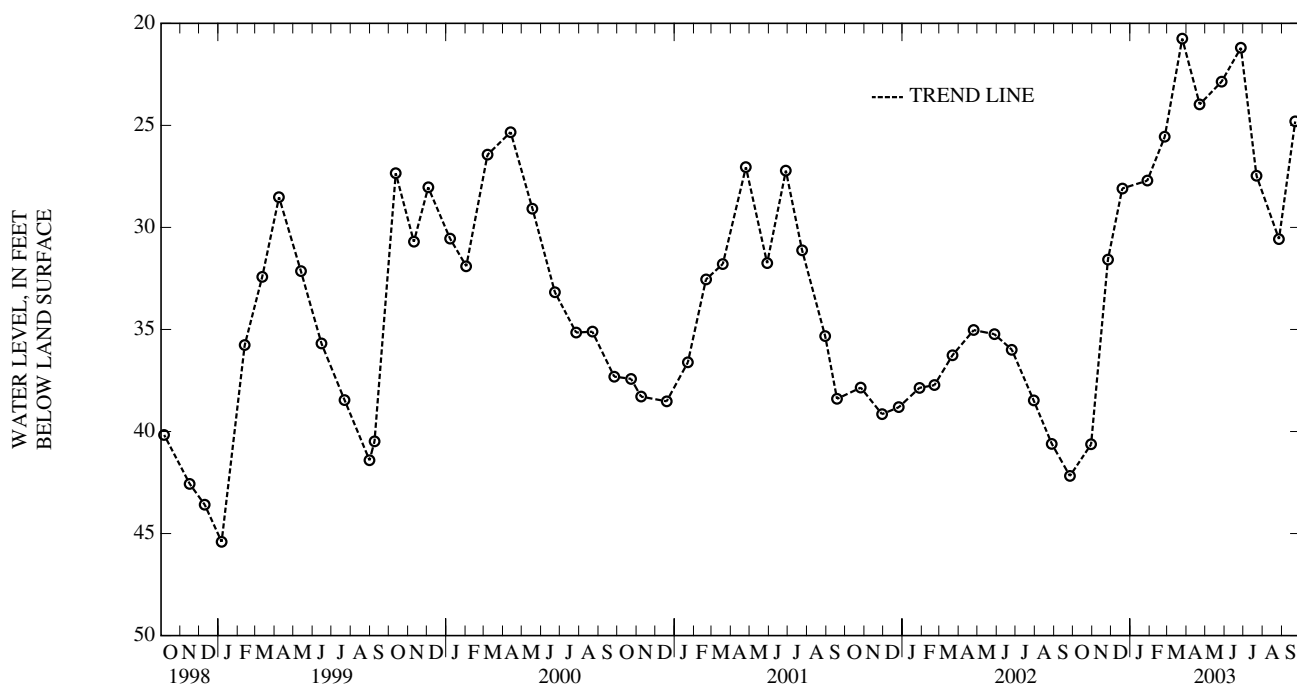
PERIOD OF RECORD.--November 1952 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 18.00 ft below land surface, April 5, 1993; lowest measured, dry, on December 2, 1957, December 7, 1964, December 6, 1965, January 3, 1966, February 2, 1966.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	40.63	JAN 28, 2003	27.71	APR 22, 2003	23.97	JUL 22, 2003	27.47
NOV 26	31.57	FEB 25	25.56	MAY 27	22.86	AUG 27	30.57
DEC 19	28.09	MAR 25	20.75	JUN 27	21.20	SEP 22	24.81

HIGHEST 20.75 MAR 25, 2003
 LOWEST 40.63 OCT 30, 2002



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

MONTGOMERY COUNTRY --Continued

WELL NUMBER.--MO Db 68. SITE ID.--390802077283801. PERMIT NUMBER.--MO-73-1869.

LOCATION.--Lat 39°08'02", long 77°28'38", Hydrologic Unit 0207008, south of Club Hollow Road, at the National Institutes of Health, Animal Center.
Owner: U.S. Geological Survey.

AQUIFER.--Balls Bluff Siltstone of Upper Triassic age. Aquifer code: 231BLBF.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 250 ft; casing diameter 6 in., to 40 ft; open hole.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--15-minute recorder interval from December 1998 to current year.

DATUM.--Elevation of land surface is 260 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of shelter platform, 2.02 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local ground-water withdrawal. Missing data due to recorder malfunction.

PERIOD OF RECORD.--May 1978 to August 1980, June 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.12 ft below land surface, May 12, 1989; lowest measured, 41.76 ft below land surface, September 9, 1999.

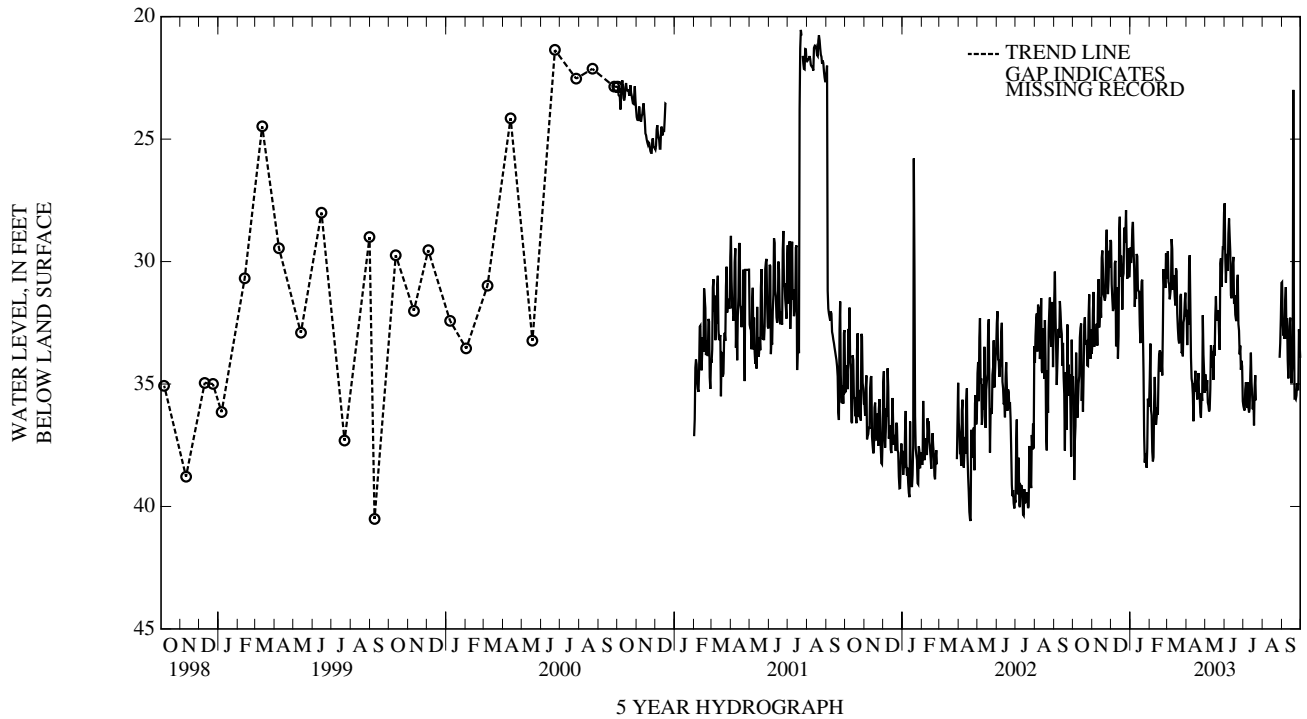
WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	32.74	JAN 28, 2003	37.15	APR 22, 2003	34.81	JUL 22, 2003	35.50
NOV 26	25.09	FEB 25	23.47	MAY 27	30.40	AUG 27	33.99
DEC 19	26.61	MAR 25	33.32	JUN 27	33.50	SEP 22	33.72
HIGHEST	23.47	FEB 25, 2003					
LOWEST	37.15	JAN 28, 2003					

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	34.69	25.48	33.40	23.36	29.19	21.43	29.43	21.32	34.75	25.83	30.30	22.33
2	35.61	24.91	31.96	23.04	30.93	21.61	30.06	20.73	33.35	25.60	29.57	21.97
3	38.92	25.57	31.24	22.61	31.52	21.93	29.70	21.19	36.06	25.99	30.83	21.93
4	37.35	26.12	33.48	22.40	32.02	22.51	28.70	20.73	36.28	27.85	30.93	22.03
5	36.72	25.87	33.32	23.28	31.91	22.83	28.38	20.59	37.76	28.72	31.54	22.22
6	33.72	25.00	33.25	22.92	31.77	22.69	29.47	20.39	38.16	29.85	31.29	22.52
7	35.00	24.59	33.27	23.35	30.06	22.13	30.28	21.02	37.99	28.74	31.01	21.86
8	36.38	25.10	32.54	23.39	29.97	22.16	31.85	21.34	35.76	27.46	29.08	21.45
9	35.79	25.99	33.43	22.92	33.46	22.29	31.07	21.96	34.71	26.83	29.49	21.33
10	34.98	25.35	31.40	22.61	33.09	22.80	31.53	21.98	35.80	26.54	31.16	21.00
11	34.68	25.01	30.72	22.30	31.05	21.45	29.69	21.78	36.66	27.73	30.55	20.05
12	33.10	24.22	32.69	22.30	33.96	21.33	29.78	21.65	36.37	27.36	30.88	21.84
13	32.71	23.87	32.18	22.58	33.05	23.64	31.14	21.52	35.95	26.62	31.45	22.14
14	32.53	23.85	31.48	22.38	28.80	21.55	31.20	22.07	36.26	26.98	31.79	22.53
15	35.69	23.80	32.29	22.27	28.17	20.62	31.24	22.12	34.58	26.10	30.28	22.55
16	34.67	24.95	29.85	21.76	30.61	20.22	32.59	22.36	33.77	26.05	30.39	22.74
17	36.13	24.54	29.55	21.33	29.76	21.01	33.33	22.80	33.63	25.58	32.12	22.81
18	34.57	24.54	30.30	21.05	30.36	20.83	31.54	22.93	33.71	25.47	32.71	23.41
19	32.63	23.68	31.35	21.23	31.96	21.48	30.80	22.67	34.51	25.59	33.18	23.64
20	32.28	23.61	31.46	21.58	30.64	21.29	30.74	22.48	34.02	24.63	33.34	24.00
21	33.40	23.21	31.59	21.88	30.48	21.49	32.75	22.46	34.65	25.74	33.07	23.40
22	33.30	23.88	31.43	21.72	28.62	20.97	34.54	23.22	32.80	23.13	31.42	23.16
23	33.27	23.66	29.42	21.51	29.24	20.89	37.10	26.99	30.31	22.12	31.32	23.30
24	34.24	23.87	28.70	21.36	28.83	20.43	38.21	29.09	30.97	22.25	33.74	23.20
25	34.26	24.00	30.06	21.21	27.90	20.02	37.82	29.96	30.34	21.73	33.65	23.81
26	32.20	23.49	31.33	21.84	29.44	20.13	37.99	29.06	31.08	21.70	33.87	23.48
27	31.34	23.20	30.75	22.04	30.70	21.23	38.42	28.57	29.67	21.51	32.49	22.40
28	33.31	23.07	29.56	21.81	29.47	21.49	37.61	27.30	30.69	21.06	32.34	23.44
29	33.97	23.53	30.24	21.69	29.56	21.68	35.60	26.40	---	---	31.69	23.64
30	32.78	23.37	29.12	21.57	30.64	21.47	35.93	26.46	---	---	31.27	22.33
31	33.76	23.32	---	---	30.19	21.98	35.82	26.85	---	---	32.24	21.79
MONTH	38.92	23.07	33.48	21.05	33.96	20.02	38.42	20.39	38.16	21.06	33.87	20.05

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	31.97	22.15	34.60	23.74	27.62	19.94	35.90	26.80	---	---	30.84	21.80
2	33.41	23.11	35.07	24.77	29.82	20.47	36.01	28.30	---	---	32.43	22.39
3	32.22	22.69	35.28	24.92	30.86	21.19	36.08	28.82	---	---	33.02	22.48
4	32.58	22.71	34.84	25.11	29.78	20.76	35.22	25.36	---	---	32.55	22.15
5	30.09	21.91	35.76	25.17	29.82	20.35	34.93	25.28	---	---	33.16	22.62
6	29.74	21.69	35.88	25.97	30.37	20.88	35.15	26.66	---	---	31.60	22.04
7	31.73	21.55	36.12	25.72	28.86	20.03	35.98	26.53	---	---	31.04	22.02
8	33.91	23.66	36.03	26.38	28.24	20.03	34.92	26.42	---	---	33.14	22.38
9	34.78	24.39	35.22	25.77	28.96	19.67	35.93	26.48	---	---	32.31	22.12
10	34.95	26.34	33.42	25.70	29.59	20.26	36.16	26.80	---	---	34.02	23.02
11	35.43	25.70	33.69	25.24	31.38	20.85	36.01	26.26	---	---	34.77	23.80
12	36.52	27.50	34.32	25.25	31.50	20.87	34.69	25.44	---	---	33.90	23.44
13	34.98	25.44	33.67	24.70	31.28	20.48	33.72	25.21	---	---	32.64	23.50
14	35.11	24.55	34.83	24.79	30.08	20.38	34.92	24.90	---	---	32.29	23.23
15	34.46	25.41	33.43	24.55	29.81	20.73	35.44	25.31	---	---	33.96	22.26
16	35.32	25.52	33.84	24.47	31.71	20.56	36.03	25.57	---	---	34.97	23.62
17	35.10	25.61	32.18	23.30	31.38	21.11	35.55	26.23	---	---	34.34	24.27
18	35.63	25.88	31.42	22.54	32.17	21.29	36.69	26.67	---	---	34.08	22.99
19	34.95	26.06	32.42	22.08	32.36	22.42	35.17	26.53	---	---	22.99	19.54
20	34.55	25.40	31.98	22.05	32.43	22.13	34.64	25.65	---	---	32.64	18.52
21	35.47	26.90	32.26	22.28	30.94	21.64	35.67	26.02	---	---	35.58	24.00
22	35.54	25.83	32.00	22.06	30.54	21.16	---	---	---	---	35.57	22.60
23	36.16	26.45	32.97	22.06	32.55	21.07	---	---	---	---	35.62	25.75
24	36.37	27.22	33.61	22.79	32.82	22.38	---	---	---	---	35.47	26.38
25	35.37	25.01	30.08	21.47	33.79	23.07	---	---	---	---	34.97	34.46
26	35.69	24.38	29.87	21.40	33.43	23.07	---	---	---	---	35.22	34.97
27	32.19	23.39	31.03	20.93	34.42	24.58	---	---	---	---	35.22	24.26
28	33.80	23.24	30.20	20.15	34.05	24.74	---	---	33.93	24.39	32.77	22.47
29	34.48	23.02	29.43	19.83	34.28	24.68	---	---	33.34	23.30	33.27	21.92
30	35.36	23.90	29.44	19.77	35.70	25.36	---	---	32.32	22.88	33.93	22.56
31	---	---	27.99	20.34	---	---	---	---	30.87	21.98	---	---
MONTH	36.52	21.55	36.12	19.77	35.70	19.67	36.69	24.90	33.93	21.98	35.62	18.52
YEAR	38.92	18.52										

Daily Low Water Levels



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

MONTGOMERY COUNTY—Continued

WELL NUMBER.--MO Dc 59. SITE ID.--390917077244401. PERMIT NUMBER.--MO-73-1896.

LOCATION.--Lat 39°09'17", long 77°24'44", Hydrologic Unit 02070008, 1 mi north of Poolesville, near Jerusalem Road. Owner: U.S. Geological Survey.

AQUIFER.--Manassas Sandstone, Poolesville Member of Upper Triassic age. Aquifer code: 231MNSS.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 260 ft; casing diameter 6 in., to 42 ft; open hole.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 370 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.94 ft above land surface.

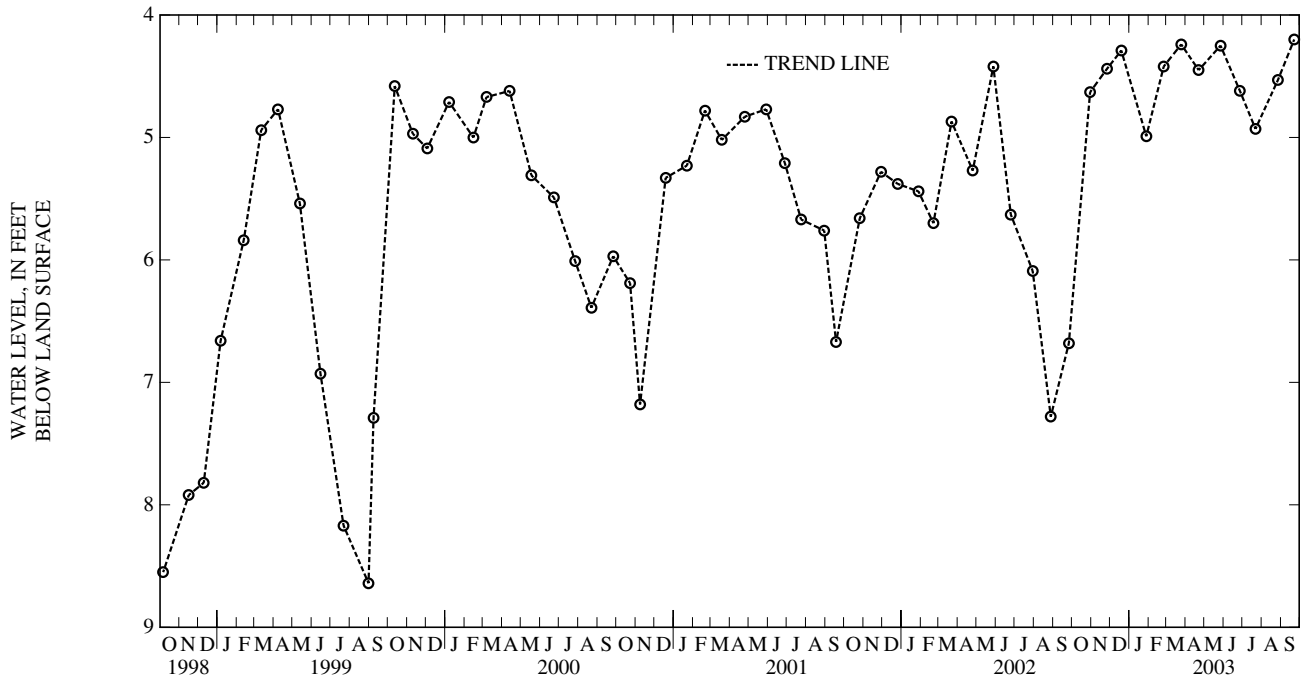
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.10 ft below land surface, March 7, 1994; lowest measured, 10.70 ft below land surface, September 8, 1993.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	4.63	JAN 28, 2003	4.99	APR 22, 2003	4.45	JUL 22, 2003	4.93
NOV 26	4.44	FEB 25	4.42	MAY 27	4.25	AUG 27	4.53
DEC 19	4.29	MAR 25	4.24	JUN 27	4.62	SEP 22	4.20
HIGHEST 4.20 SEP 22, 2003							
LOWEST 4.99 JAN 28, 2003							



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

MONTGOMERY COUNTY--Continued

WELL NUMBER.--MO Ec 10. SITE ID.--390451077245901. PERMIT NUMBER.--MO-73-2833.

LOCATION.--Lat 39°04'51", long 77°24'59", Hydrologic Unit 02070008, 3 mi southeast of Poolesville near Sycamore Landing Road, at McKee Beshler Wildlife Management Area. Owner: U.S. Geological Survey.

AQUIFER.--Balls Bluff Siltstone of Upper Triassic age. Aquifer code: 231BLBF.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 855 ft; casing diameter 8 in., to 26 ft; open hole.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 200 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.70 ft above land surface.

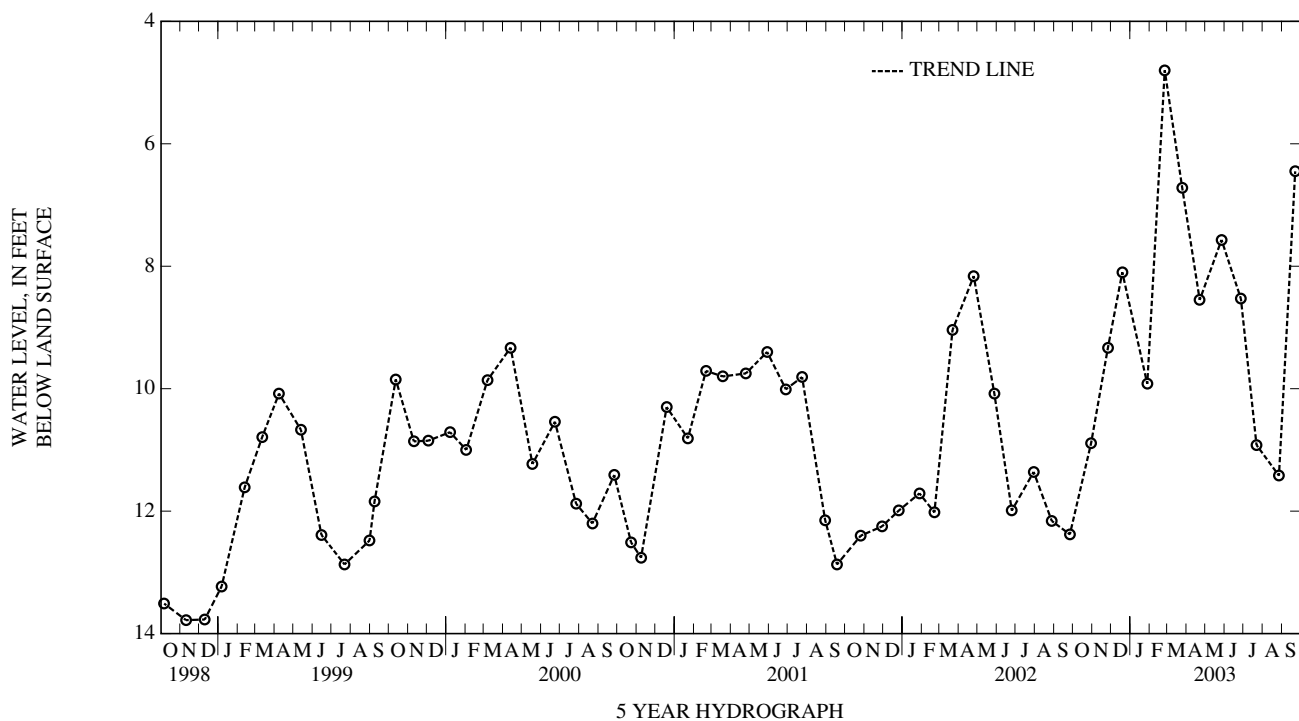
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.70 ft below land surface, January 29, 1996. lowest measured, 14.52 ft below land surface, July 8, 1992.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	10.89	JAN 28, 2003	9.92	APR 22, 2003	8.55	JUL 22, 2003	10.92
NOV 26	9.33	FEB 25	4.80	MAY 27	7.57	AUG 27	11.42
DEC 19	8.10	MAR 25	6.72	JUN 27	8.53	SEP 22	6.45
HIGHEST 4.80 FEB 25, 2003							
LOWEST 11.42 AUG 27, 2003							



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

MONTGOMERY COUNTY—Continued

WELL NUMBER.--MO Eh 20. SITE ID.--390434076573002.

LOCATION.--Lat 39°04'34", long 76°57'30", Hydrologic Unit 02070010, at MD Rt. 196 and Fairland Rd., Fairland. Owner: Liberty, Fairland Auto Service.

AQUIFER.--Loch Raven Formation of Cambrian age. Aquifer code: 370LCRV.

WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 102.9 ft; casing diameter 6 in., to 50 ft; open hole.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 405 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing at land-surface datum.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

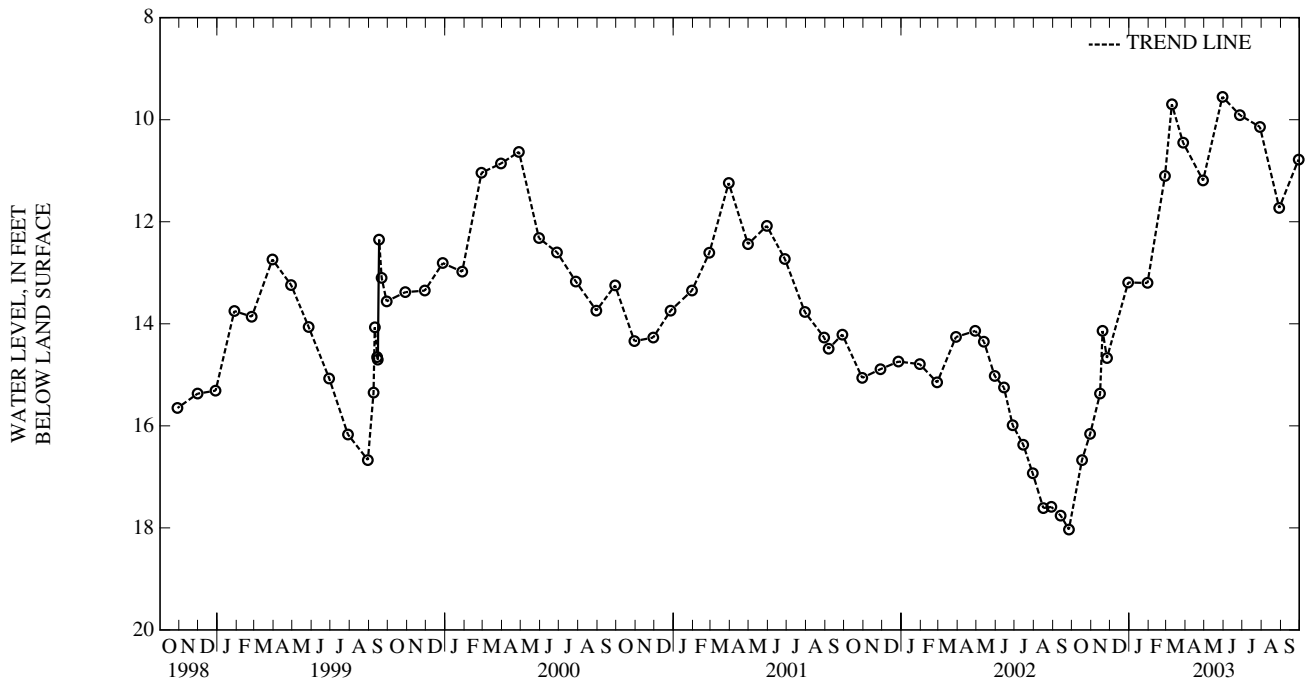
PERIOD OF RECORD.--March 1955 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.39 ft below land surface, June 25, 1972; lowest measured, 18.03 ft below land surface, September 26, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17, 2002	16.67	NOV 26, 2002	14.67	MAR 10, 2003	9.70	JUN 27, 2003	9.91
30	16.16	DEC 30	13.19	28	10.45	JUL 29	10.14
NOV 15	15.37	JAN 30, 2003	13.20	APR 29	11.19	AUG 29	11.73
19	14.14	FEB 27	11.10	MAY 30	9.55	SEP 29	10.78

HIGHEST 11.10 FEB 27, 2003
 LOWEST 16.67 OCT 17, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

PRINCE GEORGES COUNTY

WELL NUMBER.--PG Bc 16. SITE ID.--390151076561501.

LOCATION.--Lat 39°01'51", long 76°56'15", Hydrologic Unit 02070010, at National Agricultural Research Center, Beltsville. Owner: U.S. Department of Agriculture.

AQUIFER.--Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.

WELL CHARACTERISTICS.--Dug, brick-lined, unused, water-table well, measured depth 27.4 ft; casing diameter 40 in.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with water-level recorder from October 1962 to February 1965.

DATUM.--Elevation of land surface is 190 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of steel cover, 0.10 ft above land surface.

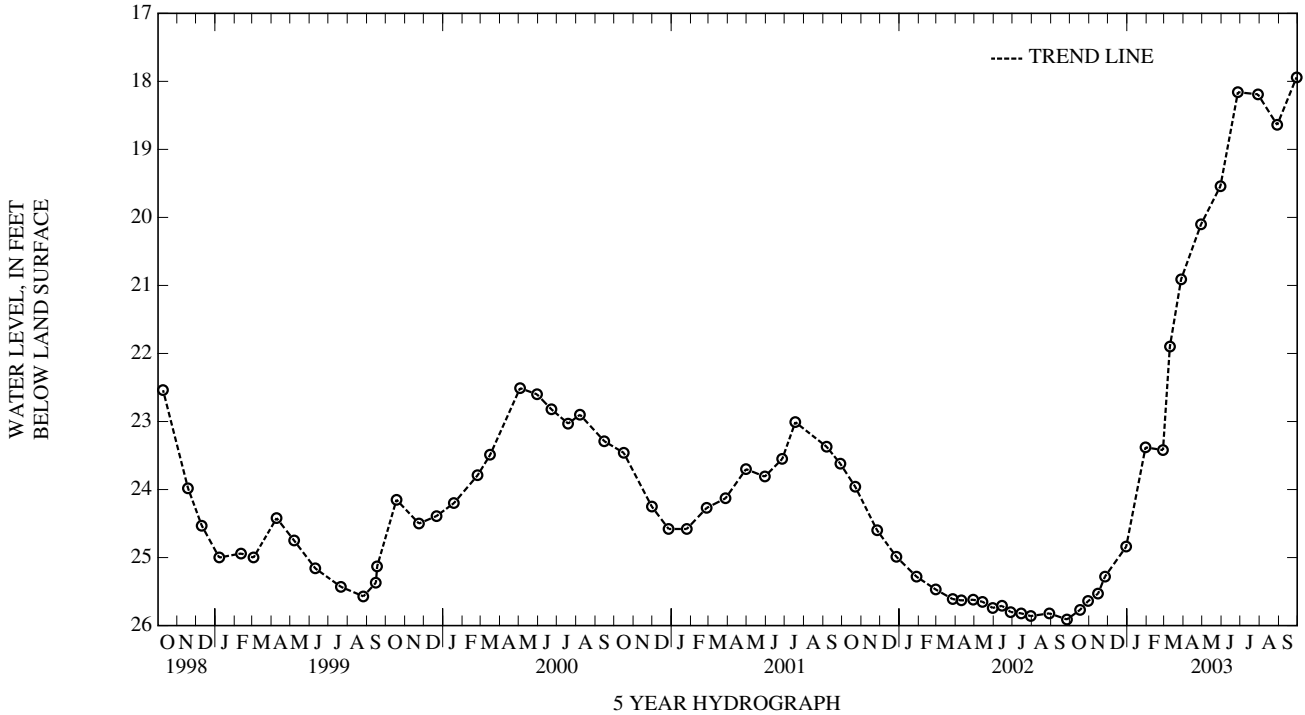
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

PERIOD OF RECORD.--September 1962 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 17.26 ft below land surface, July 6, 1972; lowest measured, 26.46 ft below land surface, July 8, 1981.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17, 2002	25.77	DEC 30, 2002	24.84	MAR 28, 2003	20.91	JUL 29, 2003	18.19
30	25.64	JAN 30, 2003	23.38	APR 29	20.10	AUG 29	18.64
NOV 15	25.53	FEB 27	23.42	MAY 30	19.54	SEP 29	17.94
26	25.28	MAR 10	21.90	JUN 27	18.16		
HIGHEST 23.38 JAN 30, 2003							
LOWEST 25.77 OCT 17, 2002							



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

PRINCE GEORGES COUNTY—Continued

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 water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with graphic water-level recorder from May 1958 to January 1965.

DATUM.--Elevation of land surface is 95.76 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.90 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

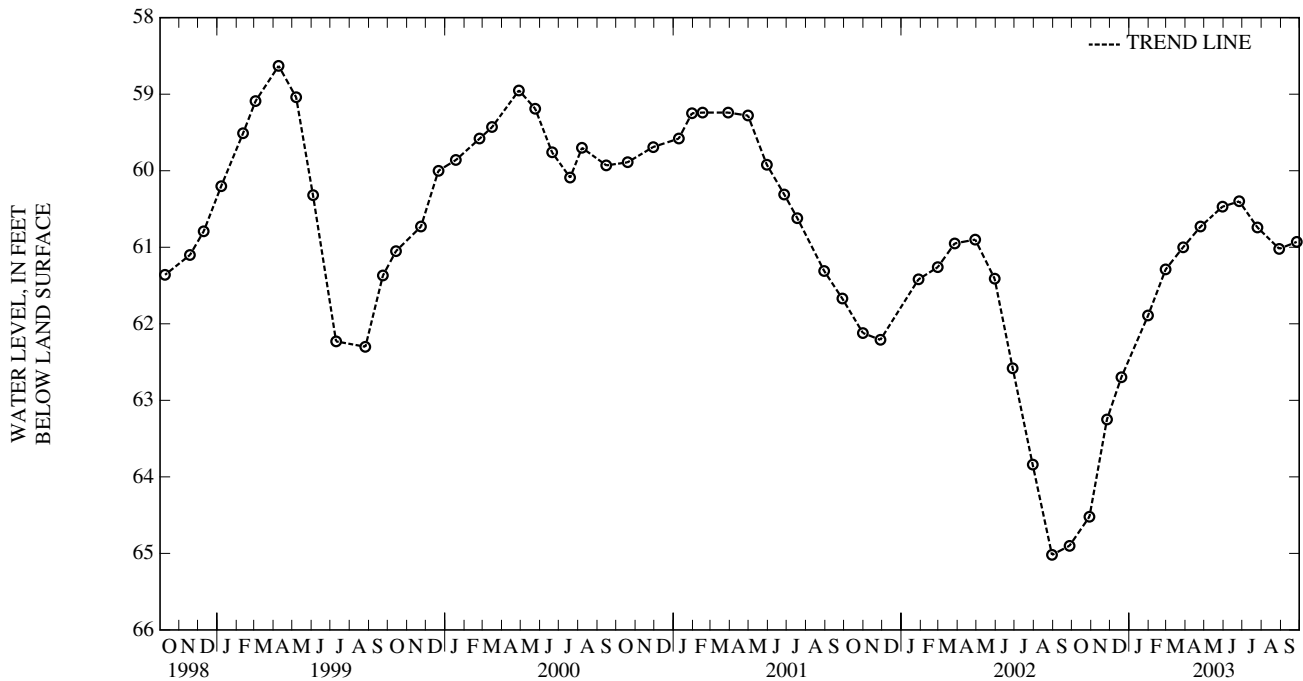
PERIOD OF RECORD.--May 1958 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 38.39 ft below land surface, May 26 and 29, 1958; lowest measured, 65.02 ft below land surface, August 30, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	64.52	JAN 31, 2003	61.89	APR 25, 2003	60.73	JUL 25, 2003	60.74
NOV 26	63.25	FEB 28	61.29	MAY 30	60.47	AUG 29	61.02
DEC 19	62.70	MAR 28	61.00	JUN 26	60.40	SEP 26	60.93

HIGHEST 60.40 JUN 26, 2003
 LOWEST 64.52 OCT 29, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

PRINCE GEORGES COUNTY--Continued

WELL NUMBER.--PG Fb 36. SITE ID.--384423077004501. PERMIT NUMBER.--PG-02-4834.

LOCATION.--Lat 38°44'23", long 77°00'45", Hydrologic Unit 02070010, at Broadwater Estates. Owner: Broadwater Citizens Association.

AQUIFER.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.

WELL CHARACTERISTICS.--Drilled, unused, artesian well, depth 284 ft; casing diameter 8 in., to 272 ft; screen diameter 8 in., from 272 to 284 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 78 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.46 ft above land surface.

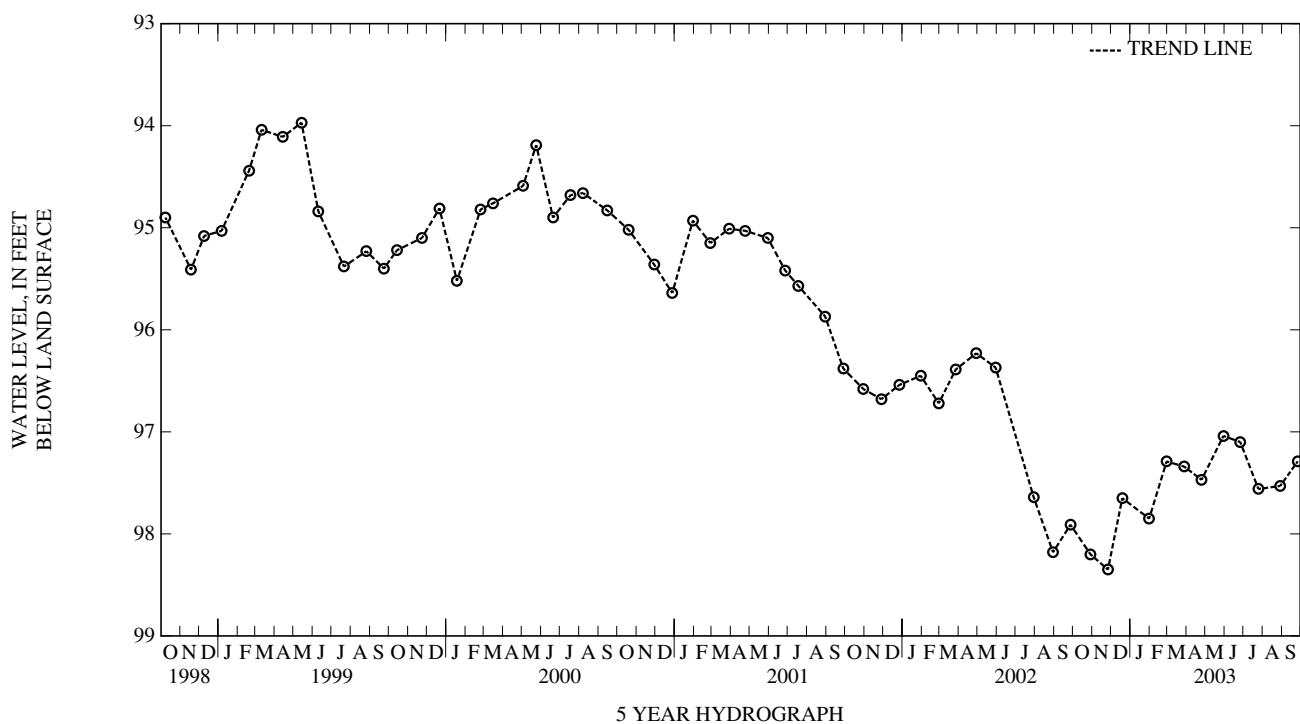
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal. A water level was reported 62 ft below land surface, on May 29, 1957.

PERIOD OF RECORD.--July 1961, March 1962 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 68.99 ft below land surface, October 3, 1979; lowest measured, 98.35 ft below land surface, November 26, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	98.20	JAN 31, 2003	97.85	APR 25, 2003	97.47	JUL 25, 2003	97.56
NOV 26	98.35	FEB 28	97.29	MAY 30	97.04	AUG 29	97.53
DEC 19	97.65	MAR 28	97.34	JUN 26	97.10	SEP 26	97.29
HIGHEST 97.04		MAY 30, 2003					
LOWEST 98.35		NOV 26, 2002					



PRINCE GEORGES COUNTY—Continued

WELL NUMBER.--PG Fc 17. SITE ID.--384230076555501.

LOCATION.--Lat 38°42'30", long 76°55'55", Hydrologic Unit 02070010, 75 ft south of Floral Park Rd., 3 mi west of the intersection with MD Rt. 5, Piscataway. Owner: Potomac Edison Power Company, formerly Washington Gas Light Co.

AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 750 ft; casing diameter 5.6 in.; casing perforated from 712 to 716 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with water-level recorder from October 1955 to September 1956.

DATUM.--Elevation of land surface is 58.6 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.50 ft above land surface.

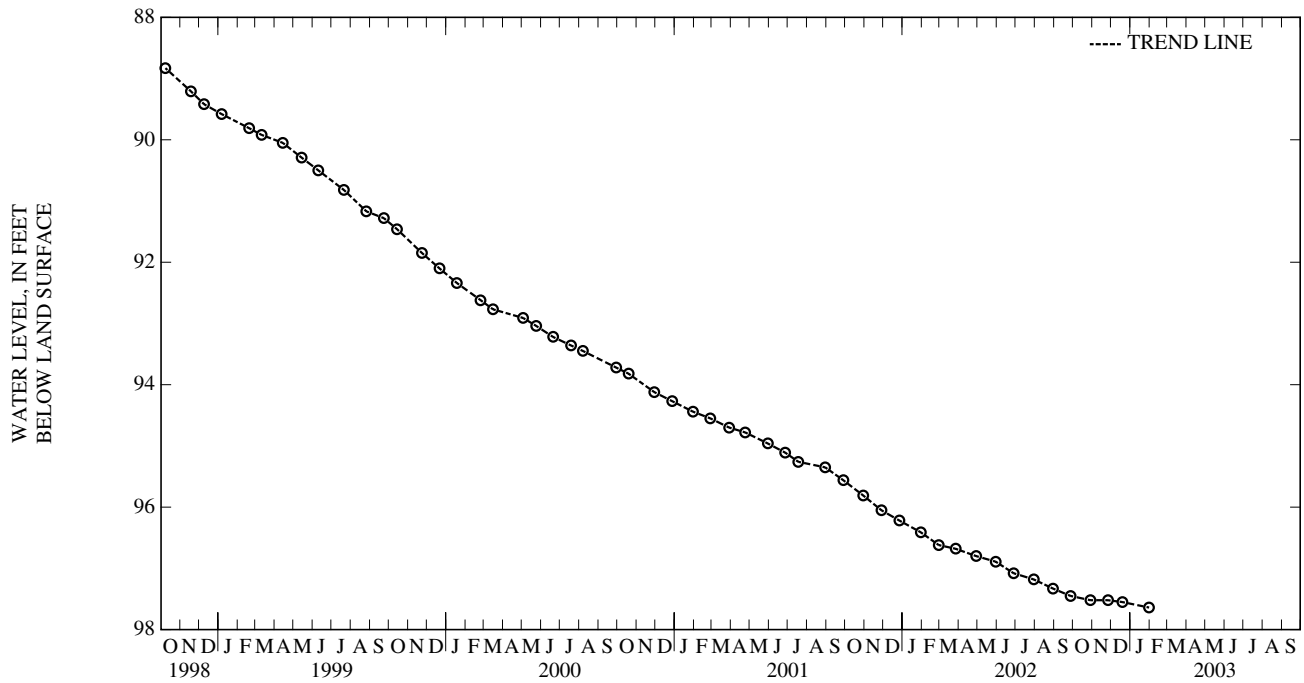
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by regional ground-water withdrawal. This well has failed due to collapse and has been discontinued.

PERIOD OF RECORD.--October 1955 to February 2003.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 28.62 ft below land surface, October 27, 1955; lowest measured, 97.64 ft below land surface, January 31, 2003.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	97.52	NOV 26, 2002	97.52	DEC 19, 2002	97.55	JAN 31, 2003	97.64
HIGHEST 97.52		OCT 29, 2002		NOV 26, 2002			
LOWEST 97.64		JAN 31, 2003					



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

PRINCE GEORGES COUNTY--Continued

WELL NUMBER.--PG Fd 41. SITE ID.--384131076533301. PERMIT NUMBER.--PG-01-8058.

LOCATION.--Lat 38°41'31", long. 76°53'33", Hydrologic Unit 02070010, south side of MD Rt. 373, 1.14 mi west of intersection with MD Rt. 5. Owner: Colonial Investment Corp.

AQUIFER.--Magothy Formation of Upper Cretaceous age. Aquifer code: 211MGTY.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 362 ft; casing diameter 4 in., to 352 ft; screen diameter 2.5 in., from 352 to 362 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 196.92 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.80 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. A water level was reported as 146 ft below land surface on March 11, 1955. Water levels are affected by local and regional ground-water withdrawal.

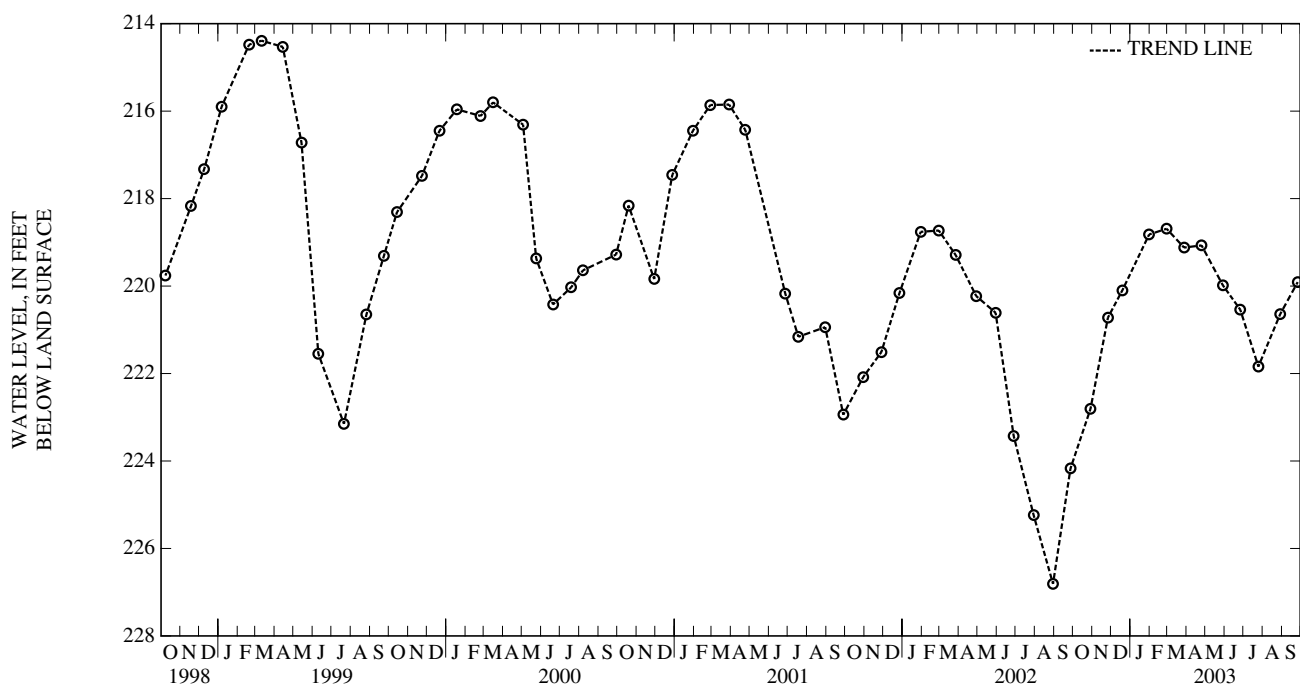
PERIOD OF RECORD.--May 1967 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 157.24 ft below land surface, March 4, 1968; lowest measured, 226.81 ft below land surface, August 30, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	222.81	JAN 31, 2003	218.82	APR 25, 2003	219.07	JUL 25, 2003	221.84
NOV 26	220.72	FEB 28	218.69	MAY 29	219.98	AUG 29	220.64
DEC 19	220.10	MAR 28	219.12	JUN 26	220.54	SEP 26	219.91

HIGHEST 218.69 FEB 28, 2003
 LOWEST 222.81 OCT 29, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

PRINCE GEORGES COUNTY--Continued

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: Maryland Geological Survey.

AQUIFER.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.

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.--Periodic water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with graphic water-level recorder from December 1974 to July 1976. Equipped with digital water-level recorder--60-minute recorder interval from July 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, 2.59 ft above land surface.

REMARKS.--Southern Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal. Missing data due to recorder malfunction.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.64 ft below sea level, January 11, 1975 (recorder); lowest measured, 41.51 ft below sea level, August 31, 2003 (recorder).

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

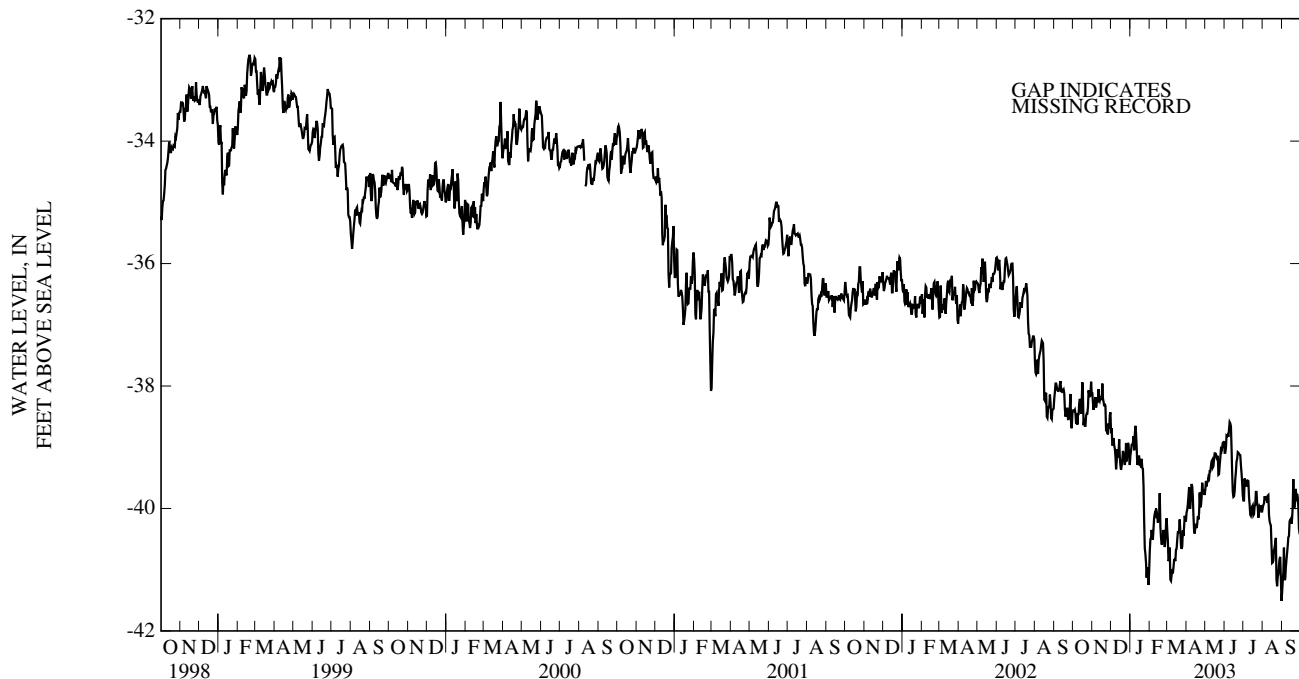
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04, 2002	-37.96	MAR 04, 2003	-40.52	JUL 02, 2003	-39.68
DEC 12	-39.17	APR 14	-40.11	AUG 11	-39.84
JAN 22, 2003	-39.59	MAY 27	-38.97	SEP 17	-40.11
LOWEST -40.52 MAR 04, 2003					
HIGHEST -37.96 NOV 04, 2002					

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-38.19	-38.40	-37.94	-38.12	-38.42	-38.77	-38.73	-39.13	-40.27	-40.70	-39.94	-40.35
2	-38.19	-38.40	-37.97	-38.28	-38.34	-38.69	-38.78	-39.06	-40.19	-40.50	-40.18	-40.53
3	-38.19	-38.41	-38.12	-38.39	-38.41	-38.96	-38.51	-38.96	-40.19	-40.48	-40.39	-40.86
4	-38.10	-38.39	-37.96	-38.24	-38.71	-38.96	-38.67	-38.95	-40.03	-40.35	-40.43	-40.83
5	-37.99	-38.45	-37.98	-38.31	-38.35	-38.85	-38.63	-38.93	-40.22	-40.45	-40.36	-40.64
6	-38.23	-38.62	-37.73	-38.18	-38.55	-38.97	-38.57	-38.82	-40.28	-40.51	-40.45	-41.16
7	-38.11	-38.45	-38.12	-38.35	-38.75	-39.02	-38.76	-39.05	-39.97	-40.33	-40.99	-41.18
8	-38.29	-38.63	-37.97	-38.28	-38.84	-39.15	-38.49	-38.79	-39.97	-40.15	-40.76	-41.09
9	-38.20	-38.47	-38.05	-38.23	-39.13	-39.36	-38.42	-38.65	-39.91	-40.09	-40.65	-40.99
10	-38.18	-38.46	-37.91	-38.24	-38.92	-39.24	-38.54	-38.77	-39.71	-40.11	-40.81	-41.06
11	-37.98	-38.28	-37.90	-38.05	-38.88	-39.03	-38.65	-38.99	-39.71	-40.00	-40.68	-40.96
12	-38.05	-38.21	-37.99	-38.21	-38.96	-39.17	-38.88	-39.29	-39.71	-40.04	-40.63	-40.84
13	-38.08	-38.28	-38.07	-38.24	-38.72	-39.08	-38.83	-39.19	-39.89	-40.11	-40.63	-40.83
14	-38.08	-38.45	-37.95	-38.19	-38.69	-38.87	-38.93	-39.15	-39.91	-40.23	-40.55	-40.86
15	-37.94	-38.24	-37.91	-38.18	-38.87	-39.16	-38.93	-39.15	-39.78	-40.15	-40.40	-40.67
16	-37.72	-37.94	-37.93	-38.23	-38.85	-39.30	-38.95	-39.30	-39.65	-40.15	-40.43	-40.66
17	-37.88	-38.18	-37.77	-37.96	-39.16	-39.37	-38.78	-39.19	-39.42	-39.75	-40.21	-40.51
18	-38.13	-38.64	-37.80	-38.20	-39.01	-39.30	-39.08	-39.33	-39.53	-40.30	-40.17	-40.39
19	-38.23	-38.53	-38.07	-38.26	-38.89	-39.21	-38.94	-39.19	-40.15	-40.47	-40.15	-40.39
20	-38.32	-38.65	-38.10	-38.33	-38.71	-39.06	-38.90	-39.34	-40.27	-40.59	-39.67	-40.35
21	-38.29	-38.65	-38.09	-38.29	-38.87	-39.11	-39.17	-39.35	-40.32	-40.56	-39.68	-40.18
22	-38.18	-38.48	-38.10	-38.33	-38.97	-39.19	-39.30	-39.63	-40.01	-40.53	-40.01	-40.38
23	-38.17	-38.45	-38.33	-38.72	-38.96	-39.29	-39.63	-40.19	-39.71	-40.35	-40.34	-40.61
24	-38.19	-38.45	-38.52	-38.74	-38.88	-39.20	-40.19	-40.65	-40.35	-40.51	-40.41	-40.66
25	-38.00	-38.34	-38.49	-38.71	-38.51	-38.93	-40.57	-40.74	-40.36	-40.63	-40.26	-40.62
26	-37.86	-38.07	-38.49	-38.79	-38.77	-39.23	-40.65	-40.89	-40.27	-40.52	-40.11	-40.36
27	-37.93	-38.14	-38.40	-38.61	-38.81	-39.11	-40.69	-41.13	-39.96	-40.27	-40.22	-40.45
28	-38.01	-38.18	-38.32	-38.69	-38.75	-38.93	-40.55	-40.96	-39.93	-40.16	-40.07	-40.30
29	-37.86	-38.14	-38.11	-38.47	-38.73	-38.95	-40.55	-41.08	---	---	-39.81	-40.12
30	-37.86	-37.93	-38.11	-38.43	-38.81	-39.16	-40.96	-41.25	---	---	-39.79	-40.20
31	-37.89	-38.12	---	---	-38.98	-39.29	-40.59	-41.03	---	---	-39.93	-40.20
MONTH	-37.72	-38.65	-37.73	-38.79	-38.34	-39.37	-38.42	-41.25	-39.42	-40.70	-39.67	-41.18

PRINCE GEORGES COUNTY--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-39.70	-40.06	-39.39	-39.69	-38.55	-39.09	-39.57	-39.87	-39.59	-39.99	-40.98	-41.38
2	-39.67	-40.02	-39.32	-39.55	-38.83	-39.09	-39.47	-39.87	-39.60	-39.94	-40.82	-41.19
3	-39.58	-39.93	-39.35	-39.64	-38.74	-39.01	-39.23	-39.51	-39.56	-39.92	-40.51	-41.05
4	-39.52	-39.80	-39.35	-39.57	-38.52	-38.81	-39.39	-39.60	-39.53	-39.80	-40.40	-40.64
5	-39.41	-39.65	-39.34	-39.56	-38.62	-38.82	-39.37	-39.55	-39.54	-39.83	-40.40	-41.17
6	-39.60	-39.99	-39.29	-39.49	-38.65	-38.80	-39.41	-39.64	-39.54	-39.86	-40.80	-41.15
7	-39.59	-39.99	-39.31	-39.51	-38.44	-38.83	-39.35	-39.53	-39.54	-39.80	-40.69	-40.96
8	-39.56	-39.77	-39.27	-39.39	-38.45	-38.70	-39.33	-39.56	-39.53	-39.91	-40.58	-40.84
9	-39.47	-39.60	-39.14	-39.39	-38.39	-38.59	-39.33	-39.56	-39.53	-39.79	-40.47	-40.73
10	-39.35	-39.64	-39.11	-39.31	-38.39	-38.61	-39.35	-39.82	-39.49	-39.78	-40.31	-40.61
11	-39.36	-39.81	-38.98	-39.23	-38.38	-38.66	-39.56	-39.94	-39.53	-40.11	-40.23	-40.47
12	-39.81	-40.12	-38.91	-39.21	-38.43	-39.00	-39.65	-40.10	-39.80	-40.21	-40.14	-40.45
13	-39.96	-40.36	-39.00	-39.33	-38.78	-39.42	-39.70	-40.12	-39.94	-40.25	-39.75	-40.21
14	-40.15	-40.41	-39.05	-39.31	-39.26	-39.73	-39.75	-40.07	-39.99	-40.28	-39.90	-40.19
15	-39.98	-40.31	-38.91	-39.19	-39.47	-39.81	-39.64	-39.97	-40.10	-40.59	-39.78	-40.17
16	-39.93	-40.25	-38.80	-39.10	-39.47	-39.80	-39.57	-39.95	-40.53	-40.89	-39.94	-40.25
17	-39.99	-40.32	-38.83	-39.10	-39.37	-39.72	-39.79	-40.11	-40.59	-40.88	-39.91	-40.17
18	-39.84	-40.26	-38.80	-39.11	-39.21	-39.52	-39.67	-40.09	-40.51	-40.85	-38.79	-39.97
19	-39.76	-40.13	-38.89	-39.17	-39.09	-39.40	-39.71	-39.96	-40.44	-40.68	-38.76	-39.52
20	-39.90	-40.18	-38.92	-39.21	-39.02	-39.23	-39.63	-39.94	-40.40	-40.64	-39.52	-39.97
21	-39.56	-40.07	-38.83	-39.14	-38.94	-39.19	-39.53	-39.73	-40.31	-40.56	-39.70	-39.98
22	-39.50	-39.74	-39.05	-39.45	-38.86	-39.08	-39.53	-39.73	-40.31	-40.48	-39.51	-39.87
23	-39.67	-39.98	-39.15	-39.44	-38.86	-39.09	-39.63	-39.92	-40.35	-41.15	-39.38	-39.68
24	-39.70	-39.95	-39.05	-39.29	-38.89	-39.11	-39.64	-39.97	-41.02	-41.27	-39.53	-39.88
25	-39.48	-39.83	-38.91	-39.18	-38.93	-39.12	-39.85	-40.15	-40.89	-41.12	-39.48	-39.76
26	-39.37	-39.58	-38.86	-39.04	-38.90	-39.13	-39.87	-40.07	-40.83	-41.07	-39.49	-39.81
27	-39.40	-39.71	-38.89	-39.06	-38.94	-39.29	-39.72	-39.97	-40.56	-40.92	-39.51	-39.98
28	-39.51	-39.73	-38.78	-39.00	-39.09	-39.42	-39.67	-39.99	-40.52	-40.82	-39.76	-40.33
29	-39.47	-39.69	-38.74	-38.93	-39.20	-39.57	-39.66	-39.95	-40.43	-40.79	-40.13	-40.41
30	-39.53	-39.78	-38.76	-38.93	-39.46	-39.79	-39.62	-40.05	-40.49	-41.12	-40.14	-40.43
31	---	---	-38.57	-38.90	---	---	-39.70	-40.05	-41.12	-41.51	---	---
MONTH	-39.35	-40.41	-38.57	-39.69	-38.38	-39.81	-39.23	-40.15	-39.49	-41.51	-38.76	-41.38
YEAR	-37.72	-41.51										

Daily Low Water Levels



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

PRINCE GEORGES COUNTY--Continued

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: Maryland Geological Survey.

AQUIFER.--Magothy Formation of Upper Cretaceous age. Aquifer code: 211MGTY.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 654 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.--Periodic water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with graphic water-level recorder from December 1974 to July 1976. Equipped with digital water-level recorder--60-minute recorder interval from July 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, 2.65 ft above land surface.

REMARKS.--Southern Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal. Missing data due to recorder malfunction.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.85 ft below sea level, January 1, 1975 (recorder); lowest measured, 50.99 ft below sea level, May 28, 1999 (recorder).

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

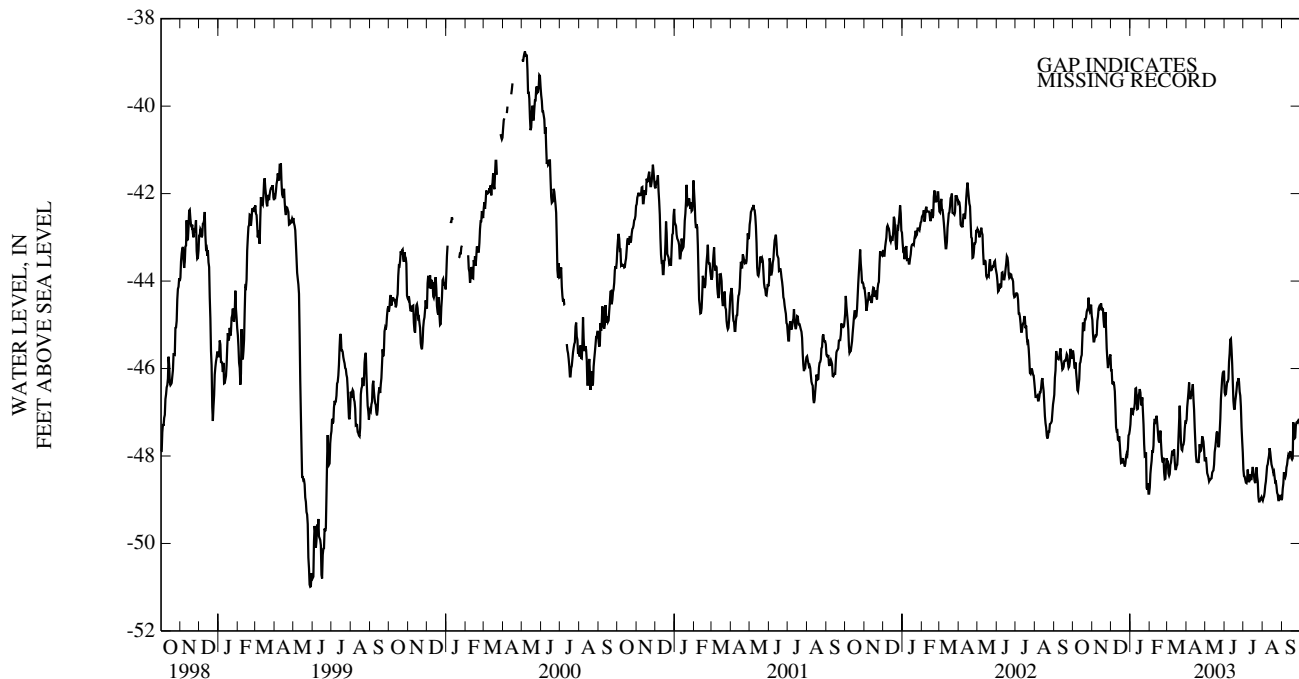
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04, 2002	-45.25	MAR 04, 2003	-48.44	JUL 02, 2003	-48.44
DEC 12	-47.60	APR 14	-47.19	AUG 11	-47.89
JAN 22, 2003	-47.23	MAY 27	-46.34	SEP 17	-48.06
LOWEST -48.44		MAR 04, 2003		JUL 02, 2003	
HIGHEST -45.25		NOV 04, 2002			

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-45.55	-45.59	-44.78	-44.89	-45.68	-46.04	-47.00	-47.28	-48.41	-48.72	-48.04	-48.13
2	-45.55	-45.69	-44.89	-45.20	-45.90	-46.04	-46.89	-47.00	-48.23	-48.41	-48.02	-48.13
3	-45.69	-45.92	-45.20	-45.38	-45.90	-46.34	-46.72	-46.90	-48.11	-48.24	-48.06	-48.40
4	-45.86	-46.00	-45.22	-45.38	-46.30	-46.35	-46.76	-47.03	-47.79	-48.11	-48.40	-48.45
5	-45.65	-45.86	-45.23	-45.30	-46.19	-46.30	-46.93	-47.04	-47.79	-47.87	-48.19	-48.41
6	-45.80	-46.09	-44.95	-45.25	-46.23	-46.38	-46.71	-46.93	-47.76	-47.92	-48.06	-48.20
7	-46.07	-46.25	-45.06	-45.26	-46.38	-46.52	-46.72	-46.92	-47.26	-47.76	-48.01	-48.15
8	-46.25	-46.49	-44.90	-45.23	-46.52	-46.91	-46.46	-46.80	-47.06	-47.26	-47.88	-48.01
9	-46.37	-46.52	-44.80	-44.91	-46.91	-47.34	-46.35	-46.46	-47.05	-47.15	-47.78	-47.88
10	-46.25	-46.38	-44.63	-44.81	-47.34	-47.43	-46.35	-46.45	-47.15	-47.23	-47.88	-47.98
11	-45.89	-46.25	-44.48	-44.63	-47.42	-47.42	-46.44	-46.63	-47.08	-47.21	-47.78	-47.91
12	-45.82	-45.89	-44.48	-44.59	-47.42	-47.63	-46.63	-46.93	-46.95	-47.08	-47.78	-47.85
13	-45.63	-45.85	-44.58	-44.63	-47.55	-47.64	-46.60	-46.92	-47.05	-47.26	-47.85	-48.12
14	-45.62	-45.74	-44.42	-44.61	-47.37	-47.55	-46.57	-46.63	-47.26	-47.44	-48.12	-48.30
15	-45.31	-45.69	-44.38	-44.51	-47.44	-47.74	-46.45	-46.57	-47.42	-47.63	-48.17	-48.30
16	-44.91	-45.31	-44.51	-44.64	-47.73	-47.98	-46.37	-46.47	-47.63	-47.69	-48.20	-48.23
17	-44.91	-44.95	-44.42	-44.63	-47.98	-48.16	-46.28	-46.55	-47.31	-47.64	-47.97	-48.20
18	-44.95	-45.12	-44.39	-44.64	-48.04	-48.15	-46.55	-46.82	-47.32	-47.42	-47.58	-47.97
19	-44.81	-45.12	-44.64	-44.90	-48.03	-48.09	-46.60	-46.82	-47.42	-47.70	-47.22	-47.58
20	-44.76	-44.88	-44.90	-45.06	-47.94	-48.05	-46.56	-46.66	-47.70	-47.96	-46.72	-47.22
21	-44.80	-44.88	-44.71	-44.99	-48.01	-48.16	-46.66	-46.97	-47.96	-48.10	-46.61	-46.85
22	-44.69	-44.83	-44.53	-44.71	-48.13	-48.17	-46.97	-47.28	-47.92	-48.15	-46.85	-47.27
23	-44.56	-44.70	-44.54	-45.10	-48.17	-48.24	-47.28	-47.73	-47.80	-48.04	-47.27	-47.70
24	-44.58	-44.65	-45.10	-45.54	-48.02	-48.17	-47.73	-48.01	-48.04	-48.37	-47.70	-47.85
25	-44.35	-44.62	-45.54	-45.78	-47.59	-48.02	-47.81	-48.00	-48.37	-48.53	-47.75	-47.87
26	-44.23	-44.38	-45.77	-45.99	-47.59	-47.95	-47.81	-47.92	-48.23	-48.52	-47.60	-47.75
27	-44.38	-44.65	-45.77	-45.90	-47.81	-47.98	-47.92	-48.73	-48.05	-48.23	-47.64	-47.74
28	-44.60	-44.70	-45.72	-45.82	-47.53	-47.81	-48.61	-48.77	-47.97	-48.05	-47.38	-47.65
29	-44.54	-44.66	-45.55	-45.72	-47.41	-47.53	-48.52	-48.62	---	---	-47.12	-47.38
30	-44.48	-44.54	-45.52	-45.68	-47.41	-47.50	-48.62	-48.86	---	---	-47.00	-47.22
31	-44.52	-44.79	---	---	-47.28	-47.41	-48.72	-48.86	---	---	-47.17	-47.23
MONTH	-44.23	-46.52	-44.38	-45.99	-45.68	-48.24	-46.28	-48.86	-46.95	-48.72	-46.61	-48.45

PRINCE GEORGES COUNTY--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-46.88	-47.17	-48.03	-48.10	-46.06	-46.55	-47.92	-48.31	-48.88	-49.02	-48.74	-48.97
2	-46.70	-46.88	-47.90	-48.03	-46.55	-46.60	-48.31	-48.46	-48.89	-48.96	-48.62	-48.75
3	-46.54	-46.71	-47.97	-48.20	-46.43	-46.58	-48.38	-48.47	-48.83	-48.93	-48.37	-48.63
4	-46.30	-46.54	-48.20	-48.39	-46.28	-46.43	-48.43	-48.54	-48.66	-48.83	-48.17	-48.37
5	-46.24	-46.32	-48.39	-48.44	-46.28	-46.31	-48.54	-48.61	-48.58	-48.68	-48.17	-48.46
6	-46.28	-46.65	-48.38	-48.49	-46.23	-46.30	-48.52	-48.62	-48.41	-48.58	-48.43	-48.49
7	-46.62	-46.70	-48.49	-48.58	-45.84	-46.24	-48.29	-48.52	-48.23	-48.41	-48.26	-48.43
8	-46.54	-46.63	-48.49	-48.55	-45.65	-45.84	-48.23	-48.31	-48.19	-48.23	-48.16	-48.26
9	-46.36	-46.54	-48.44	-48.54	-45.34	-45.65	-48.29	-48.49	-48.05	-48.19	-48.05	-48.20
10	-46.32	-46.48	-48.44	-48.52	-45.29	-45.34	-48.48	-48.60	-47.97	-48.08	-47.94	-48.07
11	-46.22	-46.36	-48.38	-48.51	-45.21	-45.32	-48.31	-48.55	-47.81	-47.99	-47.88	-47.98
12	-46.36	-46.69	-48.31	-48.38	-45.28	-45.56	-48.24	-48.42	-47.72	-47.82	-47.93	-48.01
13	-46.67	-46.95	-48.27	-48.35	-45.54	-45.89	-48.40	-48.53	-47.78	-47.91	-47.74	-47.94
14	-46.95	-47.35	-48.20	-48.33	-45.89	-46.31	-48.35	-48.53	-47.91	-48.06	-47.75	-47.89
15	-47.35	-47.69	-47.91	-48.20	-46.31	-46.74	-48.23	-48.36	-48.06	-48.19	-47.88	-47.96
16	-47.69	-47.99	-47.71	-47.91	-46.74	-46.91	-48.14	-48.25	-48.19	-48.25	-47.88	-48.05
17	-47.98	-48.13	-47.65	-47.80	-46.71	-46.94	-48.16	-48.37	-48.22	-48.30	-48.04	-48.08
18	-48.01	-48.13	-47.42	-47.66	-46.61	-46.74	-48.37	-48.46	-48.30	-48.39	-47.23	-48.05
19	-48.02	-48.12	-47.37	-47.47	-46.49	-46.63	-48.44	-48.58	-48.32	-48.36	-46.77	-47.23
20	-48.00	-48.16	-47.36	-47.44	-46.30	-46.49	-48.44	-48.62	-48.36	-48.48	-47.00	-47.58
21	-47.72	-48.01	-47.43	-47.61	-46.30	-46.32	-48.22	-48.44	-48.47	-48.60	-47.56	-47.60
22	-47.62	-47.73	-47.61	-47.80	-46.22	-46.30	-48.21	-48.26	-48.54	-48.59	-47.31	-47.58
23	-47.66	-47.89	-47.44	-47.75	-46.13	-46.22	-48.26	-48.47	-48.52	-48.69	-47.05	-47.31
24	-47.78	-47.88	-47.15	-47.44	-46.14	-46.30	-48.44	-48.58	-48.69	-48.84	-47.10	-47.24
25	-47.55	-47.78	-46.70	-47.15	-46.30	-46.53	-48.58	-48.93	-48.77	-48.88	-47.11	-47.24
26	-47.43	-47.55	-46.46	-46.70	-46.53	-46.62	-48.93	-49.04	-48.86	-49.01	-47.10	-47.21
27	-47.47	-47.60	-46.23	-46.46	-46.60	-46.87	-49.00	-49.04	-48.85	-49.01	-47.10	-47.22
28	-47.56	-47.67	-46.08	-46.23	-46.87	-47.34	-48.90	-49.00	-48.79	-48.91	-47.08	-47.15
29	-47.63	-47.85	-46.04	-46.10	-47.34	-47.64	-48.90	-48.97	-48.85	-48.91	-47.09	-47.22
30	-47.85	-48.10	-46.04	-46.07	-47.64	-47.92	-48.84	-48.94	-48.86	-48.91	-47.22	-47.33
31	---	---	-46.04	-46.07	---	---	-48.94	-48.99	-48.90	-49.01	---	---
MONTH	-46.22	-48.16	-46.04	-48.58	-45.21	-47.92	-47.92	-49.04	-47.72	-49.02	-46.77	-48.97
YEAR	-44.23	-49.04										

Daily Low Water Levels



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

PRINCE GEORGES COUNTY—Continued

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: Maryland Geological Survey.

AQUIFER.--Aquia Formation of Upper Paleocene 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.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Periodic water level measurements from January 1975 to October 1999. Equipped with graphic water-level recorder from January 1975 to July 1976. Equipped with digital water-level recorder--60-minute recorder interval from July 1976 to September 1999.

DATUM.--Elevation of land surface is 27.76 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.71 ft above land surface.

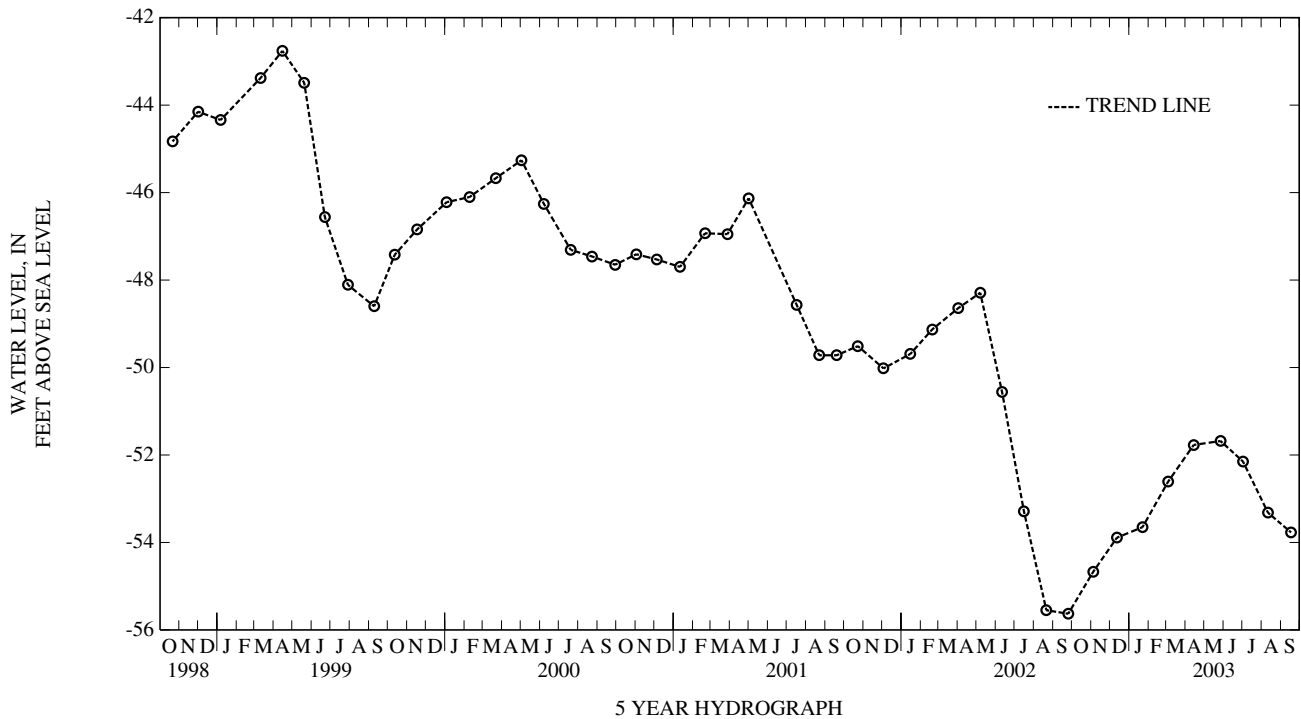
REMARKS.--Southern Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

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, 55.63 ft below sea level, September 25, 2002.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04, 2002	-54.67	MAR 04, 2003	-52.61	JUL 02, 2003	-52.15
DEC 12	-53.89	APR 14	-51.77	AUG 11	-53.32
JAN 22, 2003	-53.65	MAY 27	-51.68	SEP 17	-53.77
LOWEST -54.67 NOV 04, 2002					
HIGHEST -51.68 MAY 27, 2003					



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

PRINCE GEORGES COUNTY--Continued

WELL NUMBER.--PG Hf 44. SITE ID.--383250076405304. PERMIT NUMBER.--PG-73-0065.

LOCATION.--Lat 38°32'50", long 76°40'53", Hydrologic Unit 02060006, at Chalk Point Power Plant, on east side of canal. Owner: Mirant Corp.

AQUIFER.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 1,545 ft; casing diameter 3 in., to 1,025 ft; screen diameter 3 in., from 1,025 to 1,030 ft.

INSTRUMENTATION.--Periodic water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--15-minute recorder interval from June 1995 to current year.

DATUM.--Elevation of land surface is 10.48 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 5.10 ft above land surface.

REMARKS.--Southern Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal. This well has a 1 in. diameter well inside the 3 in. casing, separated by a packer and screened in the Lower Patapsco Formation as well PG Hf 32.

PERIOD OF RECORD.--June 1973, July 1975 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.85 ft above sea level, June 24, 1973; lowest measured, 59.87 ft below sea level, January 24, 2003 (recorder).

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04, 2002	-51.27	MAR 04, 2003	-56.43	JUL 02, 2003	-47.14
DEC 12	-51.53	APR 14	-52.61	AUG 11	-54.48
JAN 22, 2003	-57.47	MAY 27	-53.48	SEP 17	-53.52

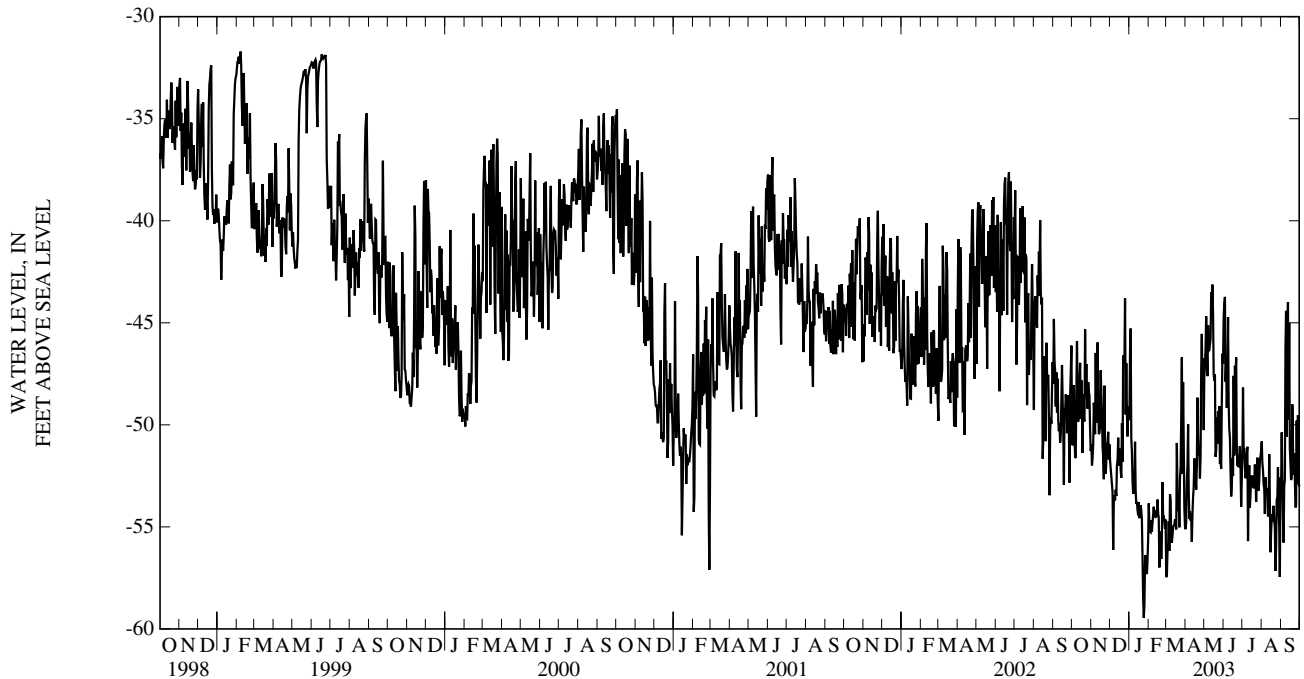
LOWEST -57.47 JAN 22, 2003
HIGHEST -47.14 JUL 02, 2003

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-48.3	-50.9	-49.5	-51.8	-49.8	-52.7	-45.6	-52.6	-51.3	-55.2	-55.6	-58.7
2	-49.0	-51.6	-51.1	-52.5	-50.6	-52.8	-43.5	-50.7	-54.0	-55.8	-55.8	-58.7
3	-46.9	-51.2	-48.3	-52.8	-51.1	-53.4	-42.5	-49.3	-54.1	-55.9	-55.0	-56.9
4	-45.2	-50.1	-47.9	-52.2	-52.2	-53.5	-49.2	-51.9	-54.4	-55.8	-54.8	-56.7
5	-49.5	-51.5	-44.7	-52.2	-51.9	-56.5	-49.3	-52.1	-52.7	-55.6	-51.6	-57.5
6	-50.9	-52.2	-47.9	-50.8	-54.0	-58.2	-52.1	-53.5	-54.3	-55.8	-51.9	-57.6
7	-50.7	-52.3	-49.0	-51.2	-52.9	-54.5	-52.6	-53.8	-53.9	-55.8	-49.2	-57.1
8	-45.1	-52.4	-43.8	-50.4	-52.8	-53.9	-52.3	-53.6	-53.9	-54.8	-52.2	-55.0
9	-43.8	-49.4	-45.2	-51.2	-53.1	-54.2	-52.0	-53.5	-52.5	-54.7	-55.0	-56.0
10	-46.5	-50.6	-45.6	-51.7	-51.1	-55.7	-47.4	-52.9	-53.4	-55.1	-54.8	-56.4
11	-46.5	-51.0	-43.2	-48.9	-50.1	-56.6	-51.9	-53.9	-53.6	-54.9	-54.7	-56.0
12	-44.7	-51.4	-45.6	-50.6	-50.0	-53.4	-53.2	-54.4	-53.6	-54.7	-54.5	-55.7
13	-44.5	-50.1	-48.8	-51.2	-49.1	-52.8	-53.1	-54.2	-54.0	-54.9	-53.9	-56.0
14	-45.1	-49.7	-47.7	-51.8	-48.0	-52.1	-53.5	-54.5	-53.9	-55.1	-53.0	-55.7
15	-47.0	-50.8	-46.9	-51.5	-50.4	-52.9	-53.6	-54.8	-51.5	-54.8	-53.7	-55.4
16	-44.7	-51.1	-43.8	-51.6	-49.7	-52.8	-53.0	-54.4	-53.6	-55.1	-54.1	-55.5
17	-43.8	-53.6	-45.3	-50.0	-49.1	-53.0	-52.9	-56.7	-53.5	-56.5	-51.6	-55.9
18	-48.2	-53.9	-45.4	-51.3	-51.3	-52.8	-53.2	-55.0	-56.0	-57.8	-49.5	-52.9
19	-44.6	-52.1	-49.3	-51.9	-52.0	-53.2	-52.9	-54.6	-54.7	-57.0	-51.6	-54.1
20	-47.8	-51.1	-50.2	-53.6	-46.0	-52.8	-53.1	-54.8	-54.4	-56.4	-53.4	-55.1
21	-46.5	-51.5	-47.9	-55.1	-49.6	-52.9	-53.5	-56.2	-55.4	-57.4	-52.9	-54.2
22	-43.4	-47.6	-45.6	-50.8	-44.5	-52.2	-55.5	-57.6	-54.4	-56.6	-53.4	-56.8
23	-45.5	-50.6	-50.7	-52.4	-44.6	-50.0	-57.2	-59.4	-49.4	-55.1	-48.4	-56.8
24	-44.0	-49.5	-51.8	-52.9	-43.6	-50.5	-58.6	-59.9	-51.8	-55.3	-48.1	-53.8
25	-45.6	-50.5	-49.5	-52.9	-42.0	-48.3	-57.4	-59.4	-52.5	-55.6	-46.8	-54.5
26	-46.5	-50.4	-48.0	-52.5	-47.2	-50.9	-55.7	-57.8	-54.1	-55.1	-45.3	-48.9
27	-44.5	-51.0	-47.7	-52.1	-43.3	-51.5	-55.3	-56.9	-54.4	-55.5	-48.9	-53.7
28	-44.6	-50.4	-46.9	-52.4	-46.6	-50.6	-55.5	-58.3	-53.9	-55.6	-45.6	-52.8
29	-44.9	-50.6	-50.7	-52.2	-48.8	-51.5	-55.2	-58.9	---	---	-45.6	-52.5
30	-48.1	-51.2	-47.3	-52.5	-47.2	-50.7	-55.5	-57.1	---	---	-52.3	-54.9
31	-49.6	-52.0	---	---	-45.9	-51.7	-54.6	-56.3	---	---	-54.1	-55.3
MONTH	-43.4	-53.9	-43.2	-55.1	-42.0	-58.2	-42.5	-59.9	-49.4	-57.8	-45.3	-58.7

PRINCE GEORGES COUNTY--Continued

DAY	MAX		MIN		MAX		MIN		MAX		MIN	
	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER						
1	-54.5	-55.5	-46.5	-49.2	-44.1	-45.4	-50.5	-52.5	-49.3	-52.6	-50.4	-54.5
2	-53.6	-55.4	-45.5	-48.3	-43.1	-45.0	-47.0	-50.5	-50.0	-53.3	-47.1	-53.9
3	-49.7	-55.3	-44.8	-47.5	-42.7	-44.6	-49.7	-52.2	-50.3	-53.4	-50.0	-54.2
4	-50.1	-53.1	-43.2	-46.9	-43.6	-50.1	-50.5	-51.9	-51.1	-54.1	-53.2	-56.6
5	-47.0	-53.3	-45.1	-49.5	-44.6	-50.8	-50.4	-52.7	-51.9	-53.9	-52.2	-58.1
6	-52.1	-54.5	-45.7	-49.6	-44.7	-51.7	-51.5	-53.5	-53.2	-55.0	-48.4	-56.1
7	-53.9	-54.9	-43.5	-47.2	-45.0	-51.7	-51.1	-53.1	-48.8	-54.9	-48.1	-54.7
8	-53.0	-55.0	-44.3	-47.5	-43.8	-46.2	-50.7	-52.1	-52.3	-54.0	-44.6	-48.1
9	-54.1	-55.3	-44.2	-47.9	-46.2	-50.2	-49.4	-53.4	-51.8	-54.1	-43.6	-46.3
10	-53.6	-55.4	-45.3	-46.5	-49.2	-51.4	-53.4	-56.9	-49.2	-55.6	-46.3	-52.3
11	-54.0	-56.9	-44.5	-46.3	-49.5	-52.0	-51.1	-55.2	-53.0	-55.9	-44.3	-49.1
12	-52.1	-55.3	-42.5	-44.8	-51.0	-53.4	-50.2	-53.9	-53.3	-55.2	-43.2	-46.6
13	-53.0	-54.4	-43.4	-46.7	-52.7	-54.3	-52.4	-54.8	-48.9	-54.7	-46.6	-51.7
14	-52.0	-54.2	-42.2	-44.4	-52.4	-53.5	-51.7	-55.0	-52.2	-55.7	-43.5	-47.6
15	-49.5	-52.9	-41.9	-47.4	-48.6	-54.0	-50.9	-53.7	-54.1	-58.0	-47.6	-53.1
16	-49.7	-53.4	-44.7	-50.4	-50.2	-53.5	-51.9	-54.1	-52.6	-58.0	-47.7	-54.0
17	-52.1	-53.2	-45.1	-50.7	-45.9	-52.0	-51.6	-54.0	-53.4	-55.3	-49.9	-53.5
18	-51.9	-54.4	-44.9	-50.9	-48.1	-53.1	-51.9	-53.5	-53.2	-55.3	-50.0	-53.9
19	-48.8	-54.3	-50.9	-52.4	-45.0	-52.9	-51.5	-54.2	-53.2	-55.6	-45.8	-51.9
20	-47.6	-51.0	-49.7	-52.7	-44.9	-50.2	-49.4	-54.6	-50.7	-55.6	-48.0	-52.5
21	-48.5	-52.6	-46.3	-55.7	-44.6	-48.7	-49.9	-53.0	-53.5	-55.4	-49.4	-53.2
22	-48.5	-53.5	-47.3	-55.9	-46.5	-52.2	-51.4	-53.7	-53.8	-56.5	-47.4	-53.4
23	-48.3	-54.1	-46.0	-52.4	-51.0	-52.9	-52.1	-54.7	-56.0	-58.1	-49.9	-53.9
24	-50.3	-53.9	-48.7	-51.3	-51.0	-52.3	-51.4	-54.4	-55.0	-56.8	-53.4	-54.6
25	-48.8	-53.0	-45.8	-51.7	-50.2	-53.4	-50.2	-52.5	-49.2	-56.5	-53.3	-54.6
26	-45.1	-49.9	-49.3	-53.0	-50.2	-53.1	-51.2	-53.9	-51.1	-54.7	-45.9	-54.5
27	-44.4	-48.1	-48.1	-53.4	-50.4	-51.5	-52.0	-54.4	-48.8	-53.9	-46.1	-55.8
28	-47.2	-49.2	-49.7	-53.3	-51.0	-52.7	-49.0	-54.6	-53.5	-55.3	-46.5	-52.9
29	-44.9	-49.1	-45.9	-53.1	-52.2	-55.1	-49.4	-53.5	-53.6	-56.0	-49.7	-54.1
30	-47.1	-52.0	-44.6	-48.9	-51.9	-53.4	-49.8	-52.7	-56.0	-58.6	-50.4	-54.5
31	---	---	-44.9	-49.7	---	---	-48.6	-54.0	-48.3	-57.8	---	---
MONTH	-44.4	-56.9	-41.9	-55.9	-42.7	-55.1	-47.0	-56.9	-48.3	-58.6	-43.2	-58.1
YEAR	-41.9	-59.9										

Daily Low Water Levels



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

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.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.

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.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Twice yearly water level measurements from February 1988 to April 1991.

DATUM.--Elevation of land surface is 25 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.52 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by regional ground-water withdrawal.

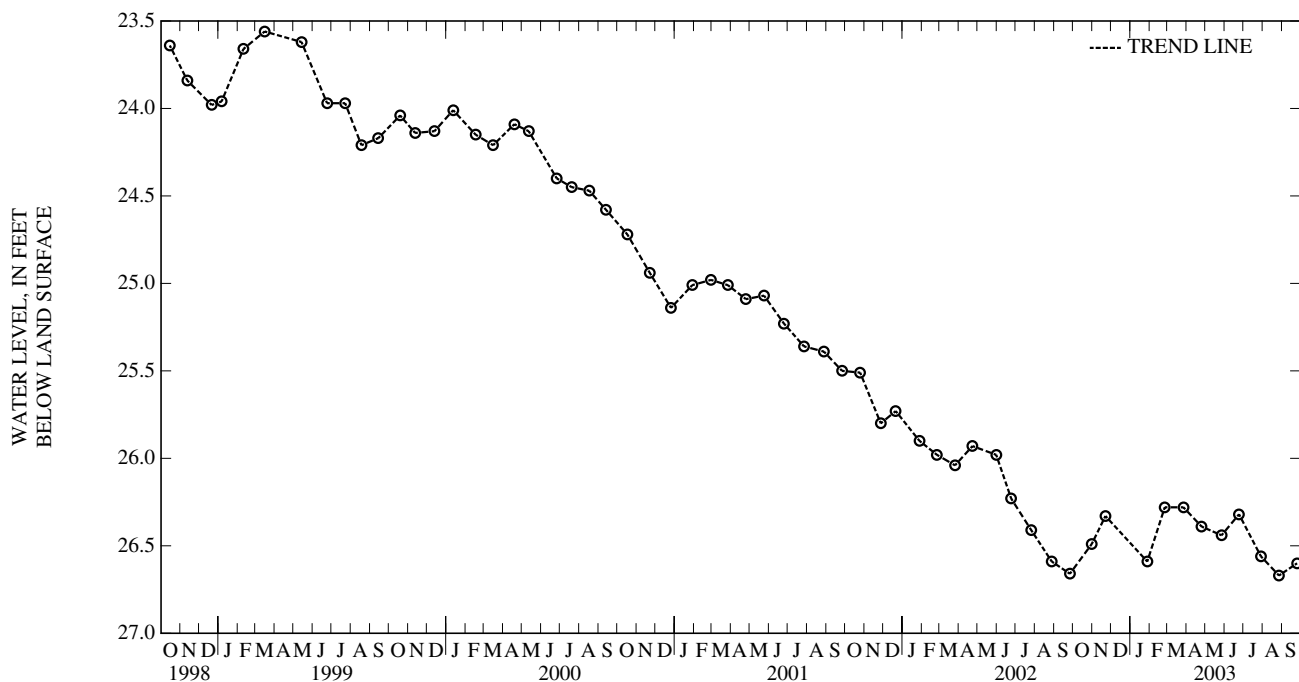
PERIOD OF RECORD.--March 1971 to October 1972, July 1977 to December 1978, March 1981 to September 1982, and October 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.52 ft below land surface, October 10, 1971; lowest measured, 26.67 ft below land surface, August 27, 2003.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	26.49	FEB 25, 2003	26.28	MAY 27, 2003	26.44	AUG 27, 2003	26.67
NOV 22	26.33	MAR 27	26.28	JUN 24	26.32	SEP 25	26.60
JAN 28, 2003	26.59	APR 25	26.39	JUL 29	26.56		

HIGHEST 26.28 FEB 25, 2003 MAR 27, 2003
 LOWEST 26.67 AUG 27, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

QUEEN ANNES COUNTY--Continued

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.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 495 ft; casing diameter 6 in., to 475 ft; screen diameter 6 in., from 475 to 495 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Twice yearly water level measurements from February 1988 to April 1991.

DATUM.--Elevation of land surface is 25 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.70 ft above land surface.

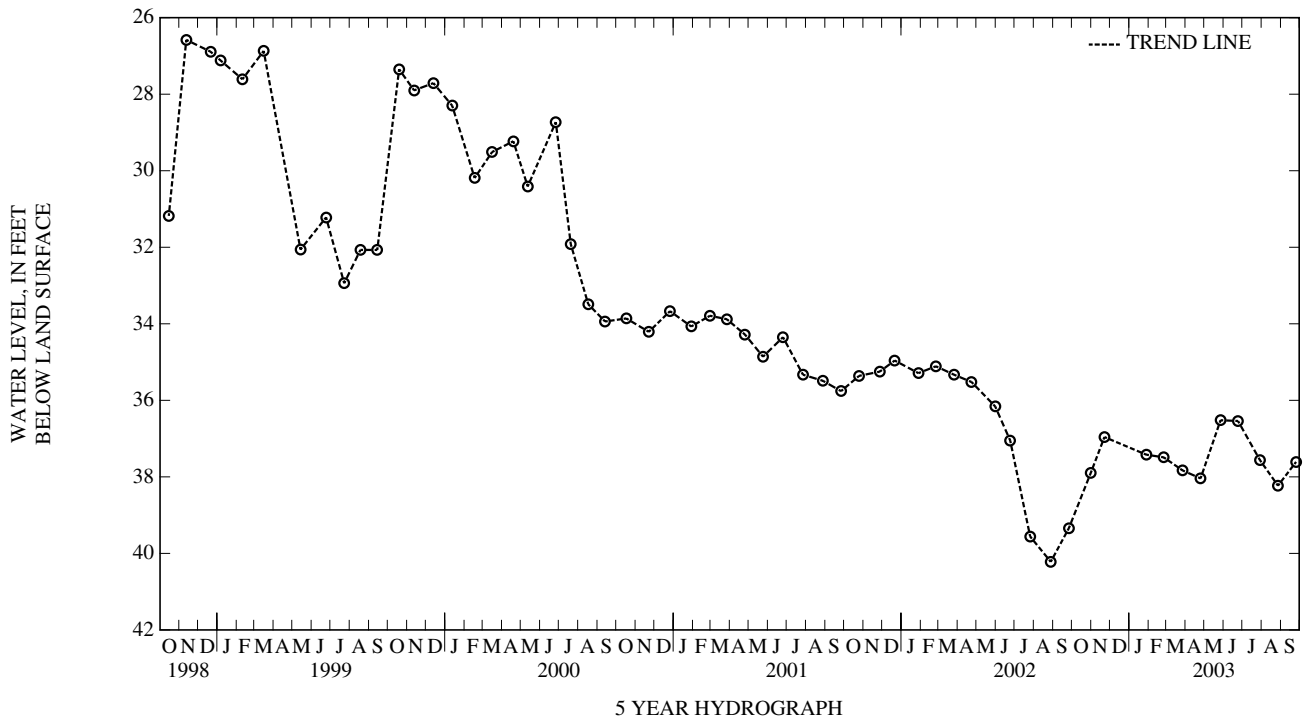
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

PERIOD OF RECORD.--March 1971 to September 1972, July 1977 to May 1979, January 1981 to September 1982, and October 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.41 ft below land surface, September 11, 1971; lowest measured, 40.22 ft below land surface, August 28, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	37.90	FEB 25, 2003	37.49	MAY 27, 2003	36.52	AUG 27, 2003	38.23
NOV 22	36.96	MAR 27	37.83	JUN 24	36.54	SEP 25	37.61
JAN 28, 2003	37.42	APR 25	38.04	JUL 29	37.56		
HIGHEST 36.52 MAY 27, 2003							
LOWEST 38.23 AUG 27, 2003							



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

QUEEN ANNES COUNTY--Continued

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 Upper Paleocene age. Aquifer code: 125AQUI.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 120 ft; casing diameter 6 in., to 100 ft; screen diameter 6 in., from 100 to 120 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Twice yearly water level measurements from February 1988 to April 1991.

DATUM.--Elevation of land surface is 25 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.50 ft above land surface.

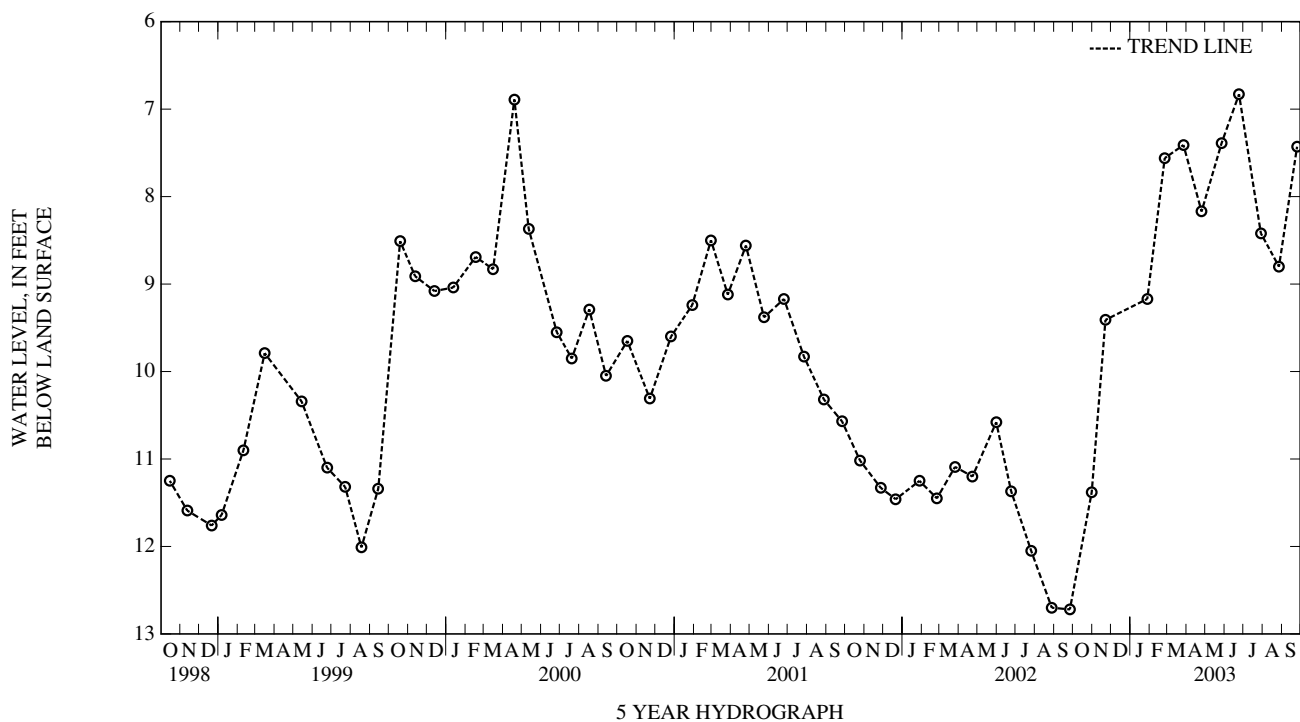
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

PERIOD OF RECORD.--July 1977 to July 1979, March 1981 to January 1982, and October 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.83 ft below land surface, June 24, 2003; lowest measured, 13.00 ft below land surface, September 30, 1977.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	11.38	FEB 25, 2003	7.56	MAY 27, 2003	7.39	AUG 27, 2003	8.80
NOV 22	9.41	MAR 27	7.41	JUN 24	6.83	SEP 25	7.43
JAN 28, 2003	9.17	APR 25	8.17	JUL 29	8.42		
HIGHEST	6.83	JUN 24, 2003					
LOWEST	11.38	OCT 31, 2002					



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

QUEEN ANNES COUNTY—Continued

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 (Columbia aquifer) of Upper Miocene age. Aquifer code: 122PNSK.

WELL CHARACTERISTICS.--Drilled, unused, water-table well, reported depth 60 ft; casing diameter 4 in., to 50 ft; screened from 50 to 60 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey 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, 1.90 ft above land surface.

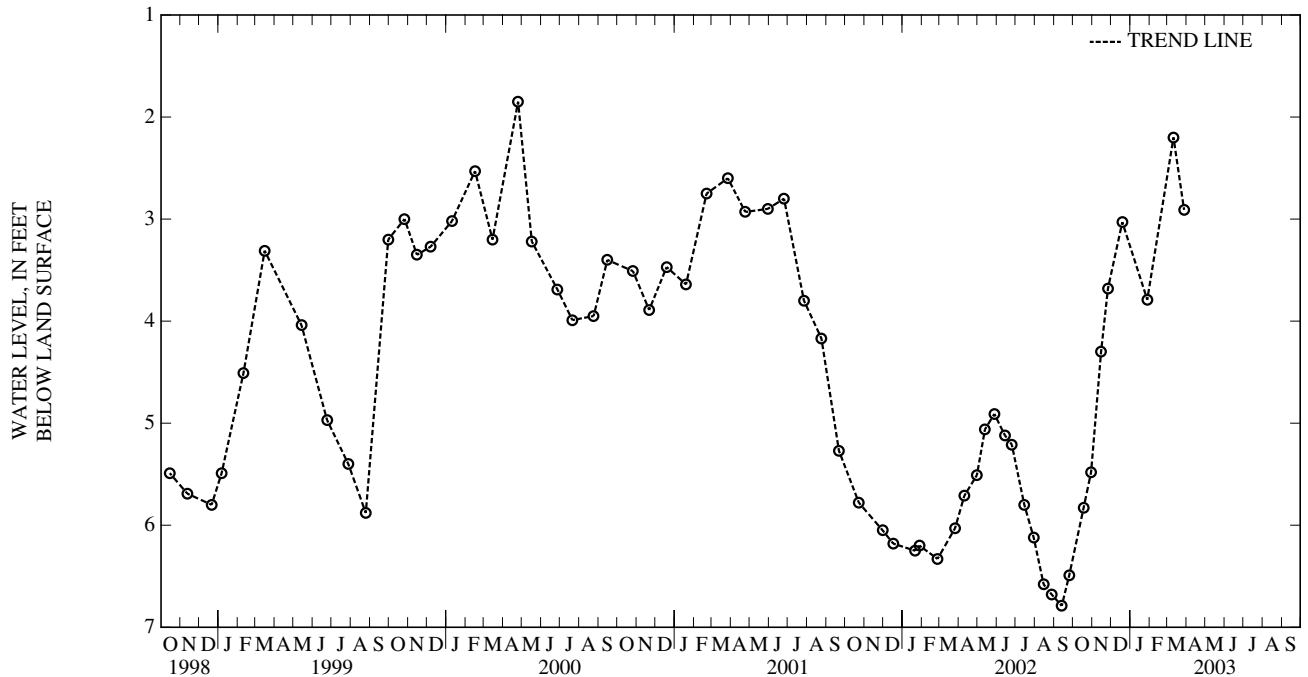
REMARKS.--Collection of Basic Records (CBR) observation well. Reported water level 4.0 ft below land surface, June 10, 1949. Well has been destroyed.

PERIOD OF RECORD.--July 1953, May 1956 to March 2003.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.30 ft below land surface, March 10, 1998; lowest measured, 6.79 ft below land surface, September 13, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18, 2002	5.83	NOV 15, 2002	4.30	DEC 19, 2002	3.03	MAR 11, 2003	2.20
30	5.48	26	3.68	JAN 28, 2003	3.79	28	2.91
HIGHEST 2.20 MAR 11, 2003							
LOWEST 5.83 OCT 18, 2002							



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

QUEEN ANNE'S COUNTY—Continued

WELL NUMBER.--QA Cg 69. SITE ID.--390839075515001. PERMIT NUMBER.--QA-94-2072.

LOCATION.--Lat 39°08'39", long 75°51'50", Hydrologic Unit 02060002. Owner: Town of Barclay.

AQUIFER.--Pensauken Formation of upper Miocene age. Aquifer code: 122PNSK.

WELL CHARACTERISTICS.--Drilled, water table well, depth 69 ft; casing diameter 6 in., to 29 ft; screen diameter 4 in., from 29 to 69 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 65.00 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of elbow pipe, 2.70 ft above land surface.

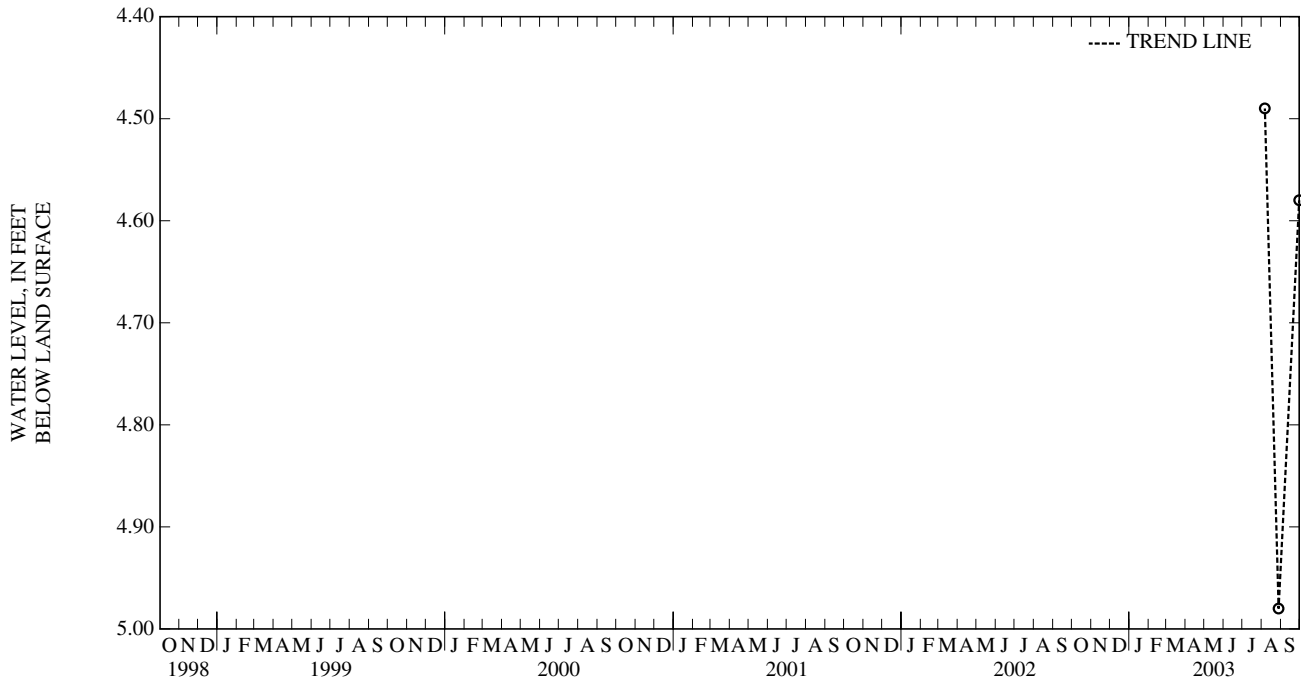
REMARKS.--Maryland Water-Level Network observation well.

PERIOD OF RECORD.--August 2003 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.49 ft below land surface, August 6, 2003; lowest measured, 4.98 ft below land surface, August 28, 2003.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
AUG 06, 2003	4.49	AUG 28, 2003	4.98	SEP 30, 2003	4.58
HIGHEST	4.49	AUG 06, 2003			
LOWEST	4.98	AUG 28, 2003			



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

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 Upper Paleocene age. Aquifer code: 125AQUI.

WELL CHARACTERISTICS.--Drilled, observation, water-table well (semi-confined), depth 220 ft; casing diameter 4 in., to 210 ft; screen diameter 4 in., from 210 to 220 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 17.80 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.40 ft above land surface.

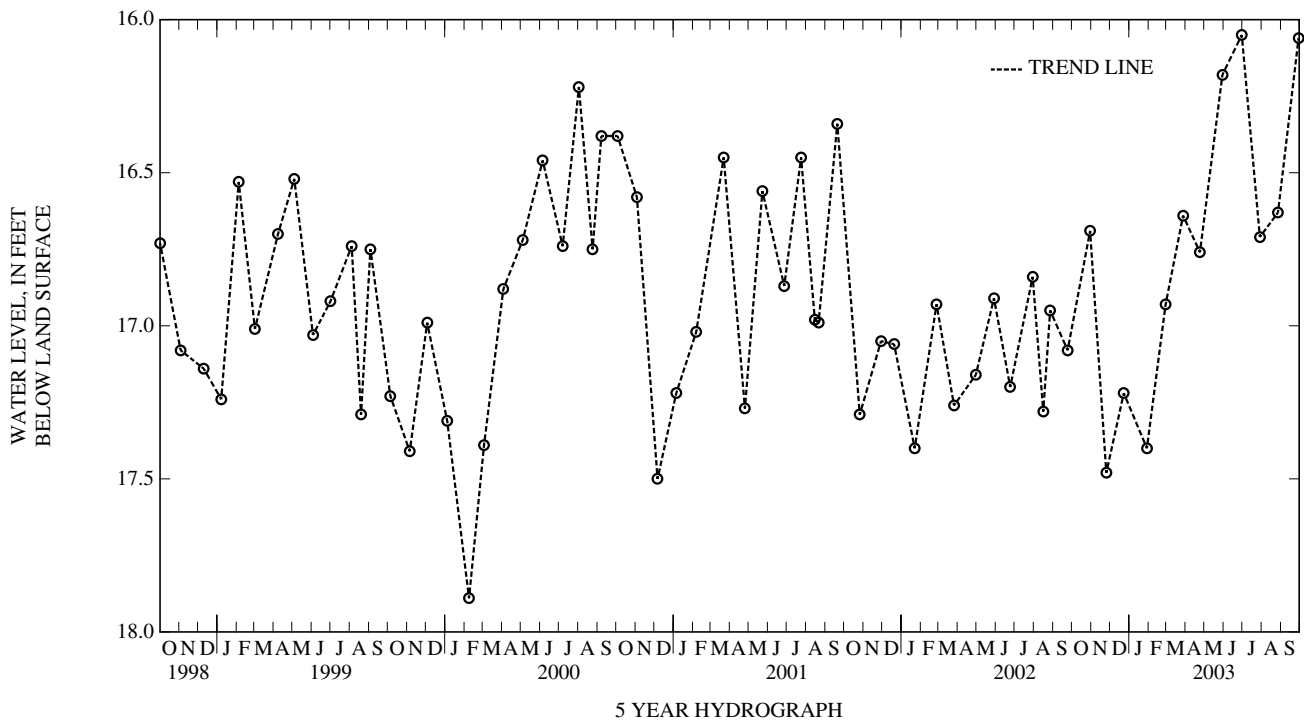
REMARKS.--Kent Island Ground-Water Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.59 ft below land surface, April 9, 1993; lowest measured, 18.37 ft below land surface, March 3, 1995.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	16.69	JAN 29, 2003	17.40	APR 24, 2003	16.76	JUL 29, 2003	16.71
NOV 25	17.48	FEB 28	16.93	MAY 30	16.18	AUG 27	16.63
DEC 23	17.22	MAR 28	16.64	JUN 30	16.05	SEP 29	16.06
HIGHEST 16.05 JUN 30, 2003							
LOWEST 17.48 NOV 25, 2002							



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

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 Upper Paleocene age. Aquifer code: 125AQUI.

WELL CHARACTERISTICS.--Drilled, observation, water-table well (semi-confined), depth 116 ft; casing diameter 4 in., to 106 ft; screen diameter 4 in., from 106 to 116 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel. Twice yearly water level measurements from May 1985 to February 1999.

DATUM.--Elevation of land surface is 18.00 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.10 ft above land surface.

REMARKS.--Kent Island Ground-Water Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

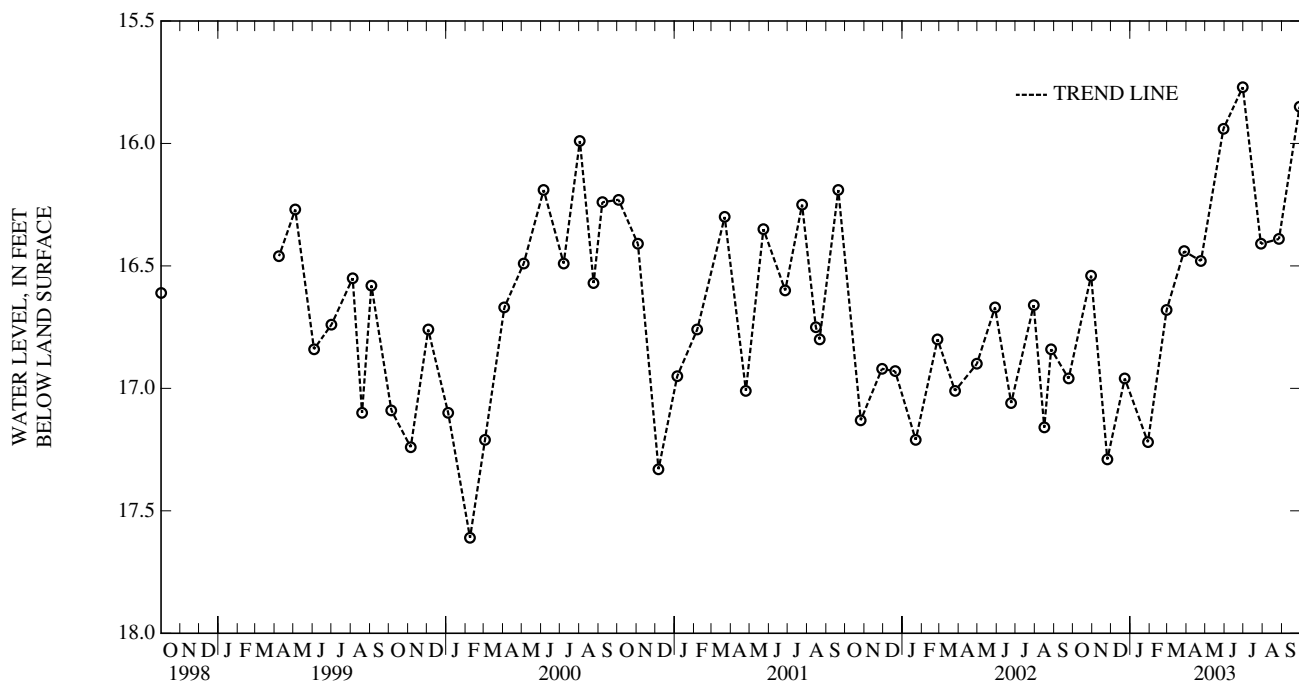
PERIOD OF RECORD.--May 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.77 ft below land surface, June 30, 2003; lowest measured, 17.83 ft below land surface, December 8, 1992.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	16.54	JAN 29, 2003	17.22	APR 24, 2003	16.48	JUL 29, 2003	16.41
NOV 25	17.29	FEB 28	16.68	MAY 30	15.94	AUG 27	16.39
DEC 23	16.96	MAR 28	16.44	JUN 30	15.77	SEP 29	15.85

HIGHEST 15.77 JUN 30, 2003
LOWEST 17.29 NOV 25, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

QUEEN ANNES COUNTY--Continued

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, near Cloverfields community park, Kent Island. Owner: Maryland Geological Survey.

AQUIFER.--Aquia Formation of Upper 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 water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel. Twice yearly water level measurements from April 1985 to February 1999.

DATUM.--Elevation of land surface is 7.40 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.50 ft above land surface.

REMARKS.--Kent Island Ground-Water Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

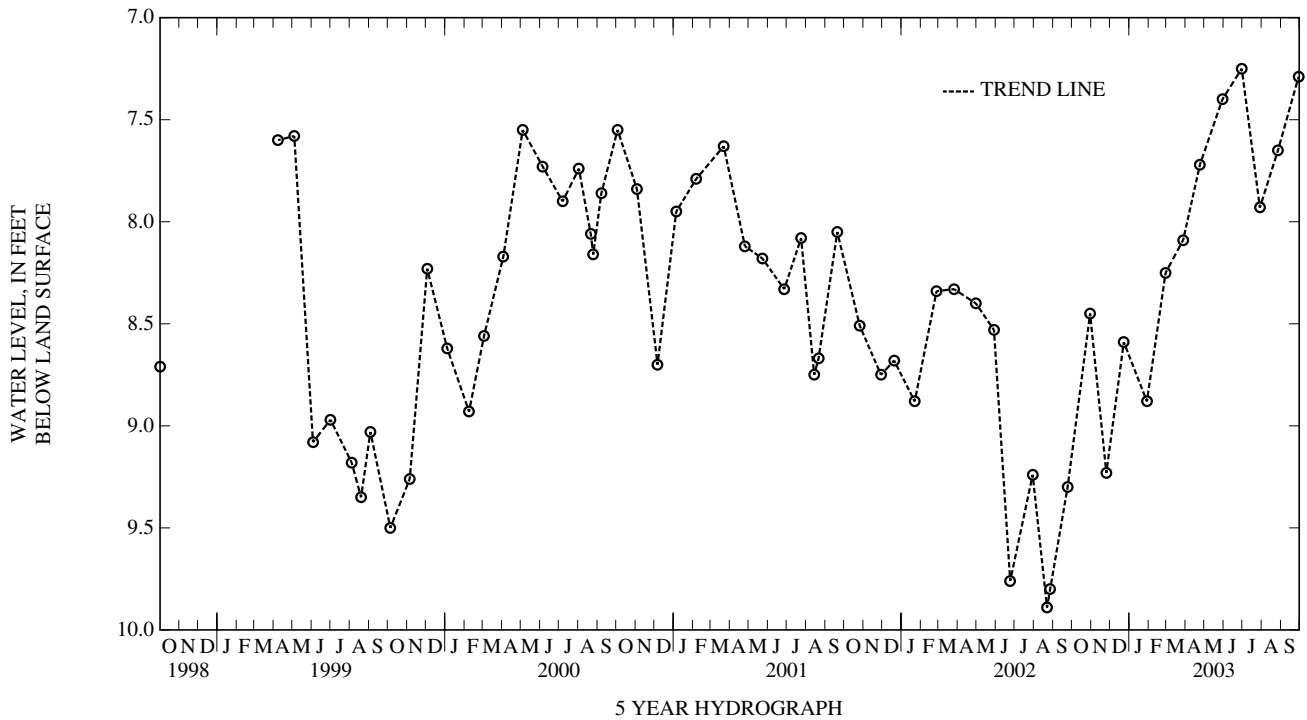
PERIOD OF RECORD.--April 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.15 ft below land surface, April 7, 1997; lowest measured, 9.89 ft below land surface, August 22, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	8.45	JAN 29, 2003	8.88	APR 24, 2003	7.72	JUL 29, 2003	7.93
NOV 25	9.23	FEB 28	8.25	MAY 30	7.40	AUG 27	7.65
DEC 23	8.59	MAR 28	8.09	JUN 30	7.25	SEP 29	7.29

HIGHEST 7.25 JUN 30, 2003
 LOWEST 9.23 NOV 25, 2002



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

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 Upper 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 water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel. Twice yearly water level measurements from April 1987 to April 1989.

DATUM.--Elevation of land surface is 7.50 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.20 ft above land surface.

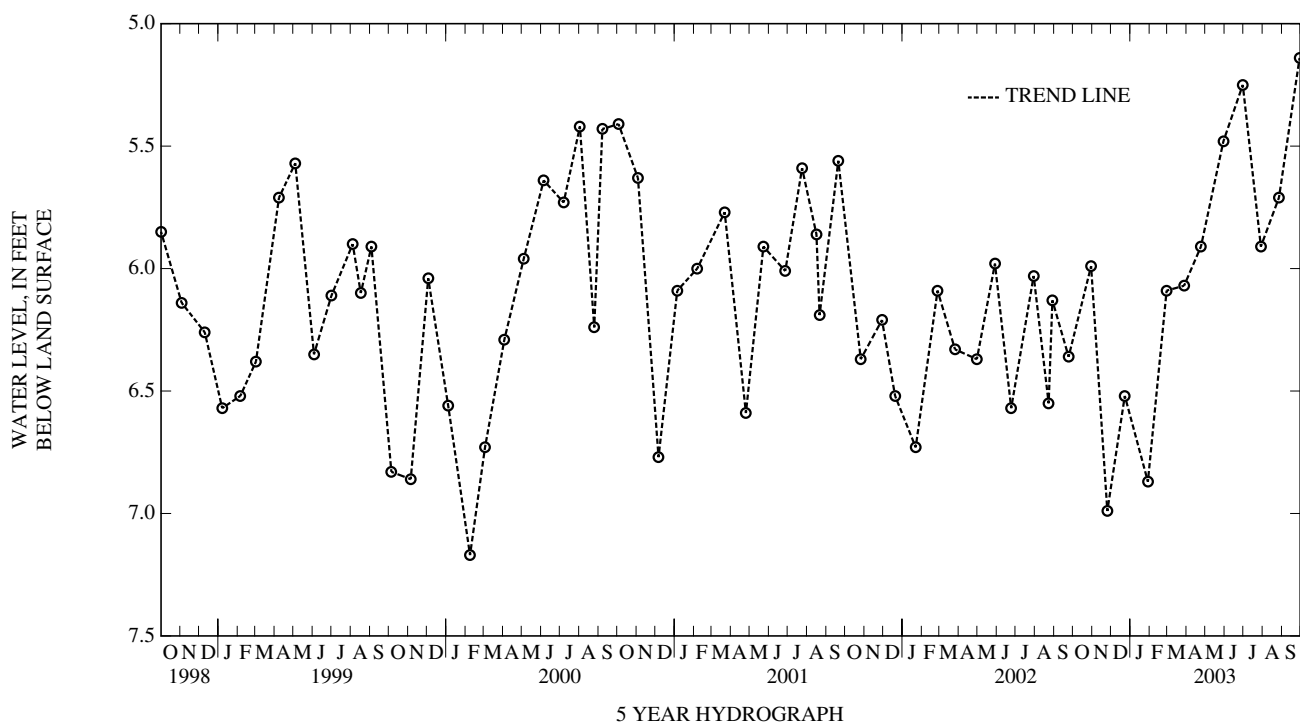
REMARKS.--Kent Island Ground-Water Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.93 ft below land surface, December 16, 1996; lowest measured, 7.65 ft below land surface, December 8, 1992.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	5.99	JAN 29, 2003	6.87	APR 24, 2003	5.91	JUL 29, 2003	5.91
NOV 25	6.99	FEB 28	6.09	MAY 30	5.48	AUG 27	5.71
DEC 23	6.52	MAR 28	6.07	JUN 30	5.25	SEP 29	5.14
HIGHEST	5.14	SEP 29, 2003					
LOWEST	6.99	NOV 25, 2002					



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

QUEEN ANNES COUNTY—Continued

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, near Cloverfield community park, Kent Island. Owner: Maryland Geological Survey.

AQUIFER.--Aquia Formation of Upper 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 water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 7.10 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.50 ft above land surface.

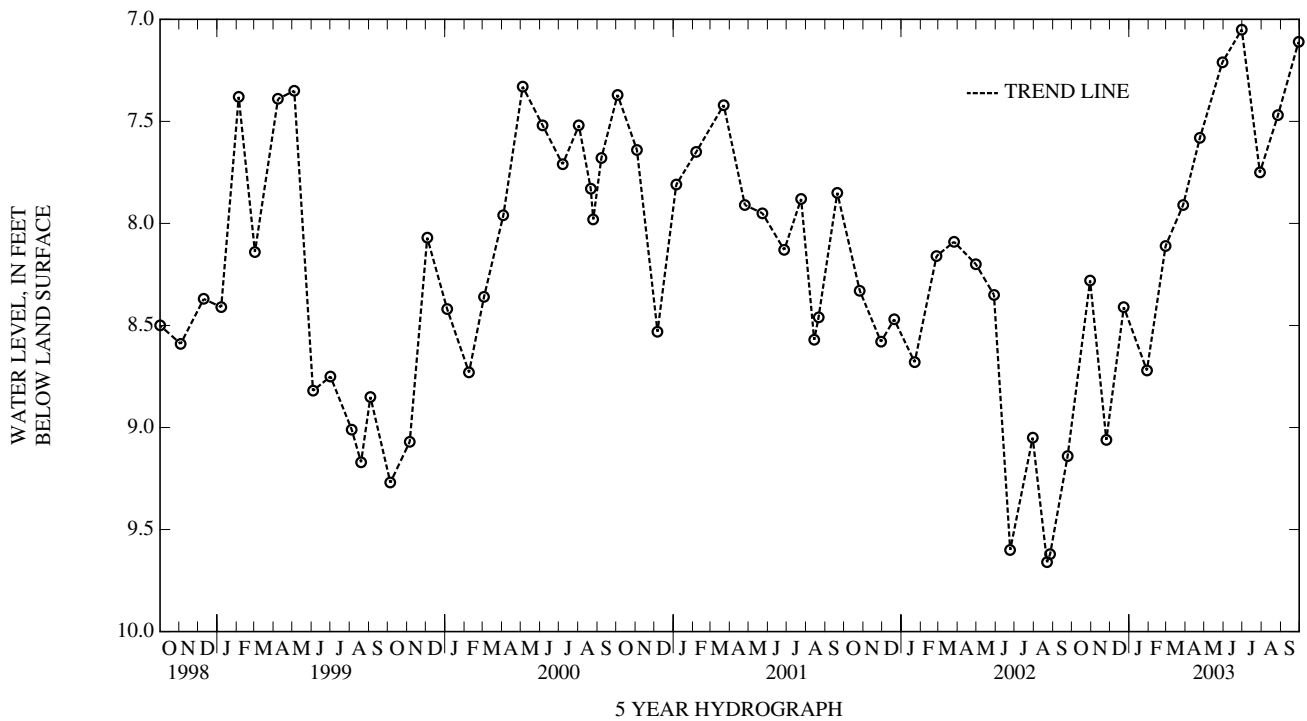
REMARKS.--Kent Island Ground-Water Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.28 ft below land surface, April 9, 1993, and December 16, 1996; lowest measured, 9.74 ft below land surface, January 11, 1994.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	8.28	JAN 29, 2003	8.72	APR 24, 2003	7.58	JUL 29, 2003	7.75
NOV 25	9.06	FEB 28	8.11	MAY 30	7.21	AUG 27	7.47
DEC 23	8.41	MAR 28	7.91	JUN 30	7.05	SEP 29	7.11
HIGHEST	7.05	JUN 30, 2003					
LOWEST	9.06	NOV 25, 2002					



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

QUEEN ANNES COUNTY—Continued

WELL NUMBER.--QA De 27. SITE ID.--390251076034401. PERMIT NUMBER.--QA-94-1853.

LOCATION.--Lat 39°02'51", long 76°03'44", Hydrologic Unit 02060002, at Sheriff's Office, Centreville. Owner: Town of Centreville.

AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.

WELL CHARACTERISTICS.--Drilled, artesian well, drilled depth 665 ft, measured depth 370 ft; casing diameter 4 in., to 315 ft; screen diameter 4 in., from 315 to 365 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel. Equipped with digital water-level recorder--15-minute recording interval, September 1999 to July 2000.

DATUM.--Elevation of land surface is 10.19 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of concrete base, 1.49 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

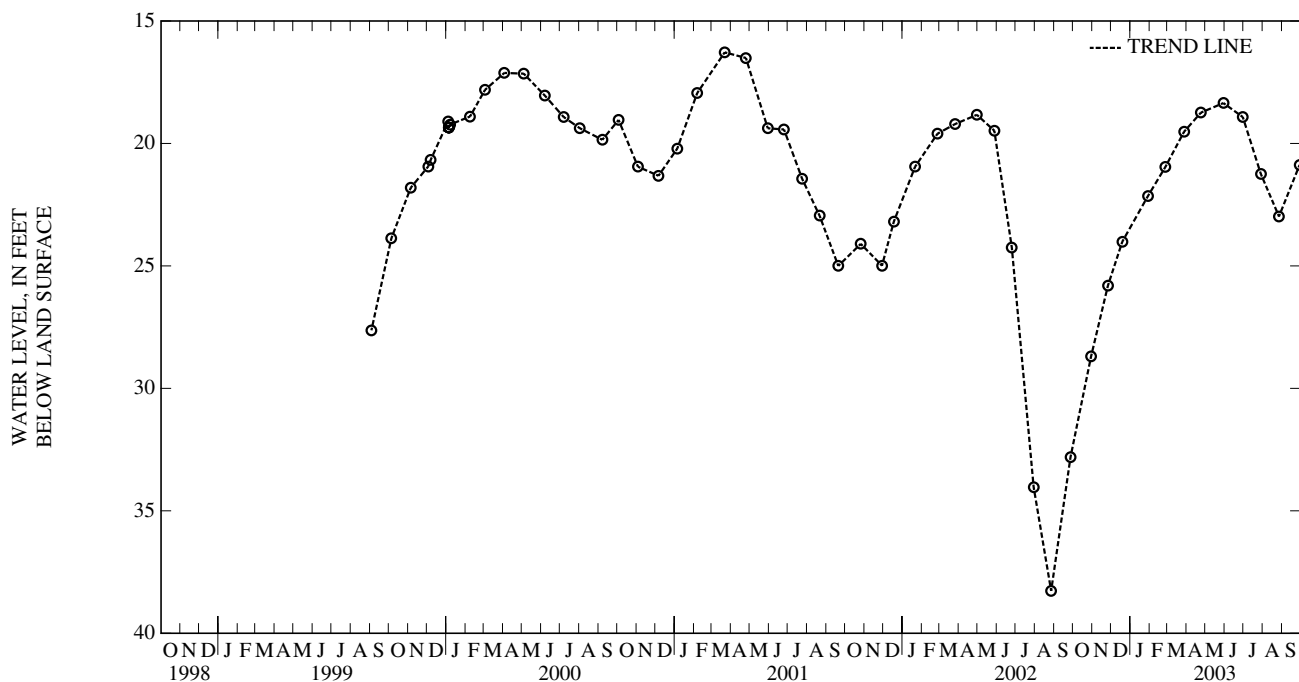
PERIOD OF RECORD.--September 1999 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.28 ft below land surface, March 22, 2001; lowest measured, 38.27 ft below land surface, August 27, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	28.69	JAN 29, 2003	22.15	APR 24, 2003	18.74	JUL 29, 2003	21.25
NOV 26	25.80	FEB 26	20.96	MAY 30	18.35	AUG 27	22.98
DEC 19	24.01	MAR 28	19.52	JUN 30	18.92	SEP 29	20.88

HIGHEST 18.35 MAY 30, 2003
LOWEST 28.69 OCT 30, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

QUEEN ANNES COUNTY--Continued

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 Upper 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 water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel. Twice yearly water level measurements from April 1985 to February 1999.

DATUM.--Elevation of land surface is 10.80 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 observation well. Water levels are affected by local ground-water withdrawal.

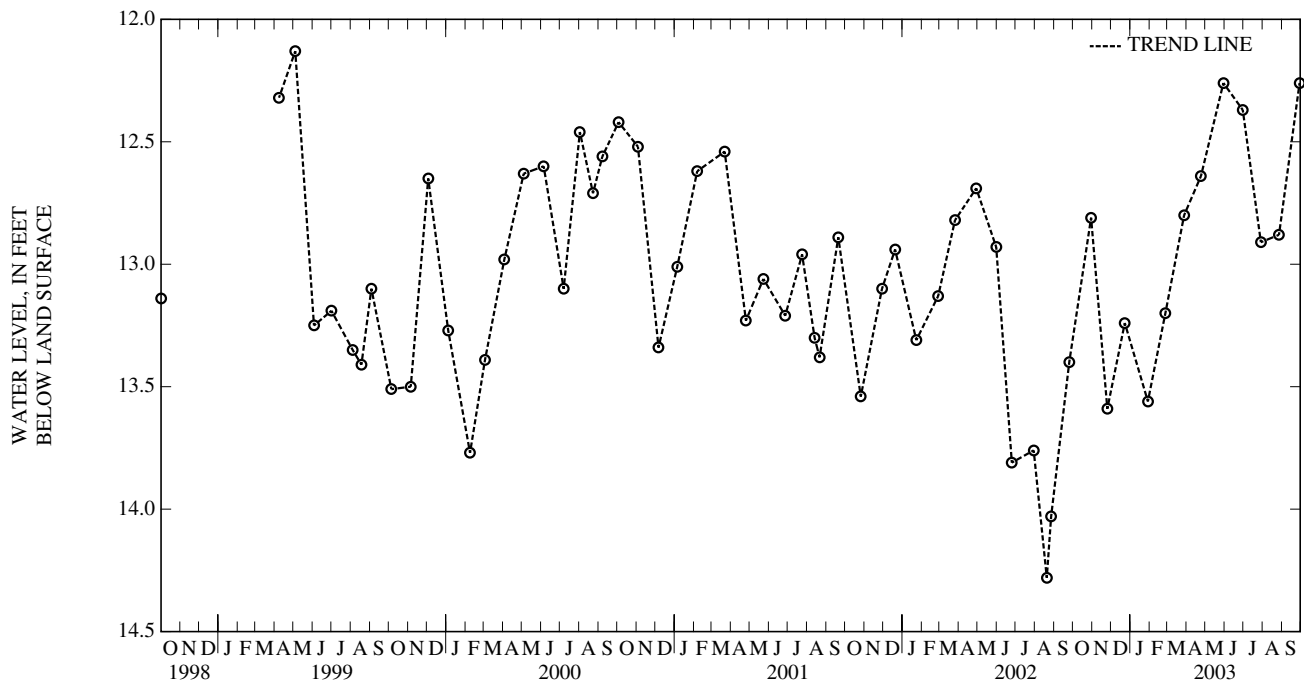
PERIOD OF RECORD.--April 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.07 ft below land surface, December 2, 1985; lowest measured, 14.28 ft below land surface, August 20, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	12.81	JAN 29, 2003	13.56	APR 24, 2003	12.64	JUL 29, 2003	12.91
NOV 25	13.59	FEB 26	13.20	MAY 30	12.26	AUG 27	12.88
DEC 23	13.24	MAR 28	12.80	JUN 30	12.37	SEP 29	12.26

HIGHEST 12.26 MAY 30, 2003
 LOWEST 13.59 NOV 25, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

QUEEN ANNES COUNTY--Continued

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 Upper 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 water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 11.80 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.91 ft above land surface.

REMARKS.--Kent Island Ground-Water Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

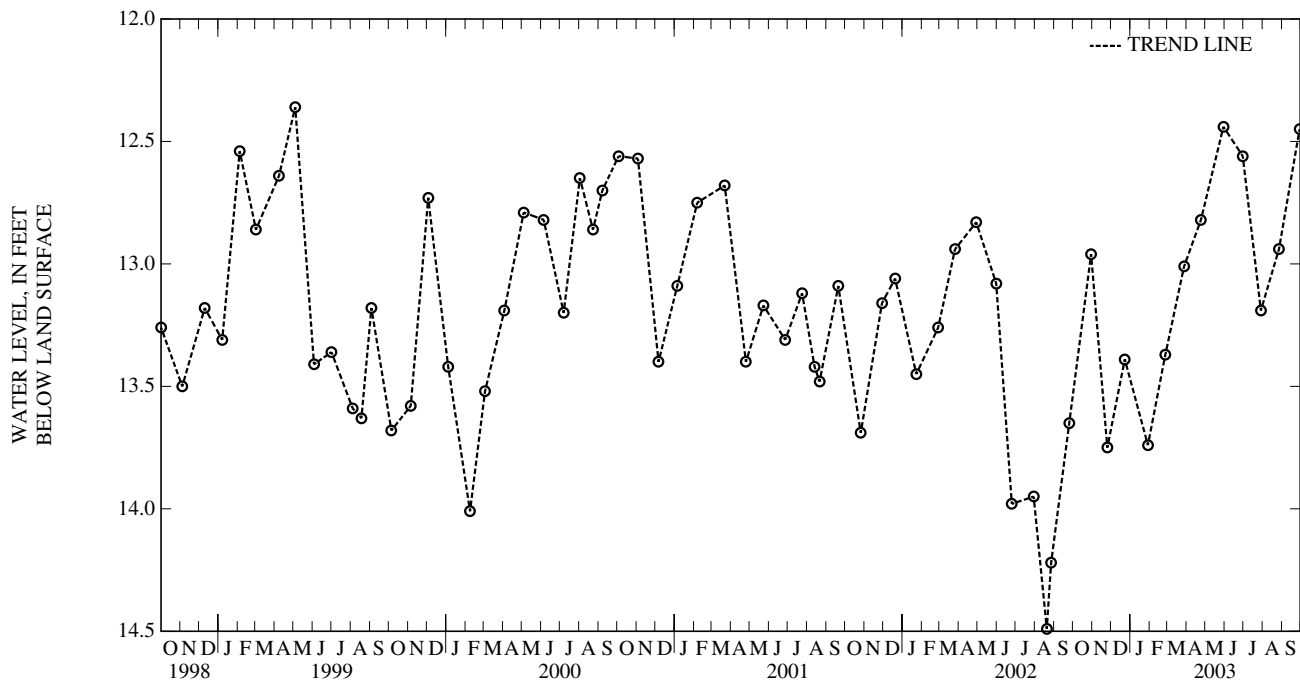
PERIOD OF RECORD.--April 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.45 ft below land surface, June 4, 1992; lowest measured, 14.49 ft below land surface, August 20, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	12.96	JAN 29, 2003	13.74	APR 24, 2003	12.82	JUL 29, 2003	13.19
NOV 25	13.75	FEB 26	13.37	MAY 30	12.44	AUG 27	12.94
DEC 23	13.39	MAR 28	13.01	JUN 30	12.56	SEP 29	12.45

HIGHEST 12.44 MAY 30, 2003
 LOWEST 13.75 NOV 25, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

QUEEN ANNES COUNTY—Continued

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 Upper 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 electric tape by U.S. Geological Survey or Maryland Geological Survey personnel. Measured twice yearly from October 1986 to April 1989.

DATUM.--Elevation of land surface is 8.30 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.30 ft above land surface.

REMARKS.--Kent Island ground-water monitoring network observation well. Water levels are affected by local ground-water withdrawal.

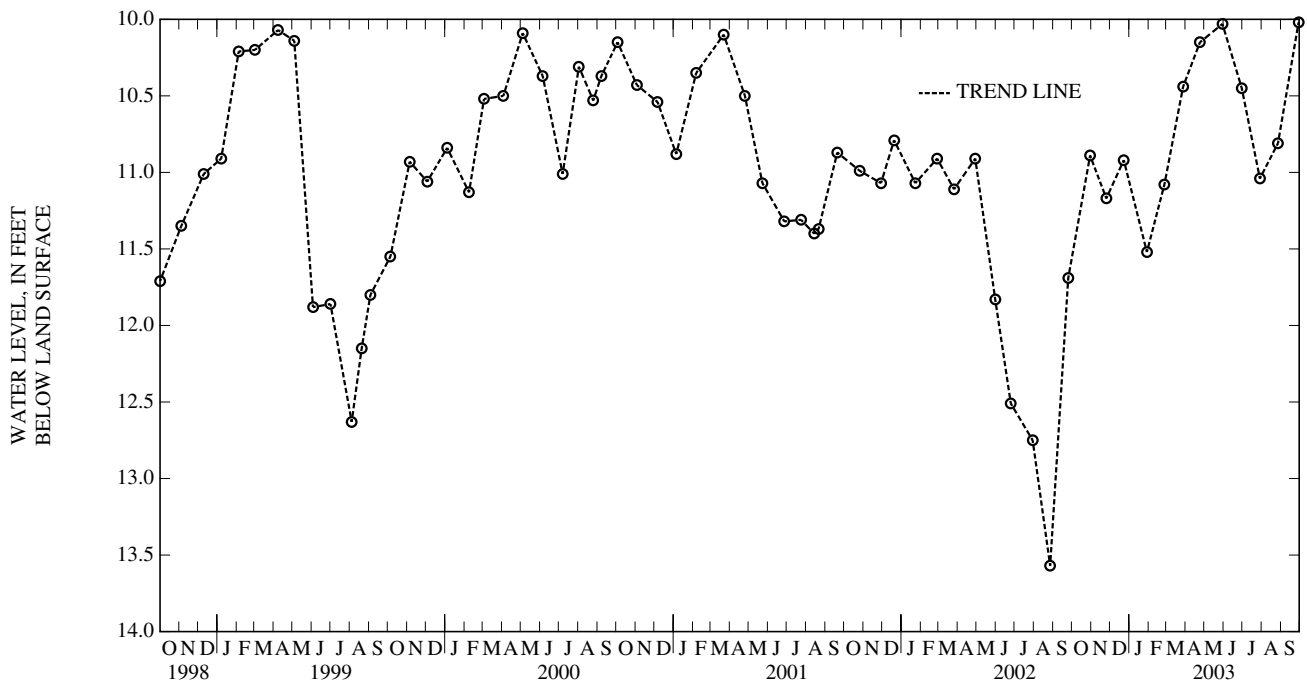
PERIOD OF RECORD.--April 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.30 ft below land surface, December 2, 1985; lowest measured, 13.57 ft below land surface, August 27, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	10.89	JAN 29, 2003	11.52	APR 24, 2003	10.15	JUL 29, 2003	11.04
NOV 25	11.17	FEB 26	11.08	MAY 30	10.03	AUG 27	10.81
DEC 23	10.92	MAR 28	10.44	JUN 30	10.45	SEP 29	10.02

HIGHEST 10.02 SEP 29, 2003
 LOWEST 11.52 JAN 29, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

QUEEN ANNES COUNTY--Continued

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 Upper 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 electric tape by U.S. Geological Survey or Maryland Geological Survey personnel. Measured twice yearly from October 1986 to February 1999.

DATUM.--Elevation of land surface is 8.50 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.51 ft above land surface.

REMARKS.--Kent Island ground-water monitoring network observation well. Water levels are affected by local ground-water withdrawal.

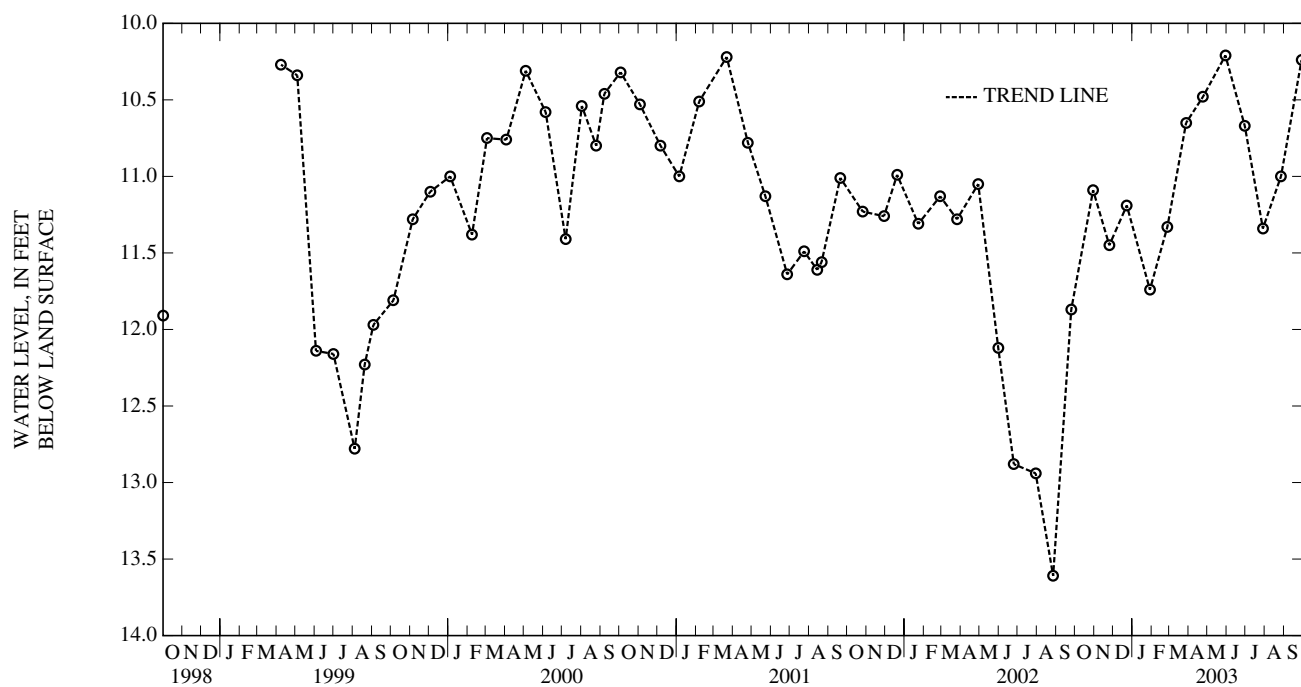
PERIOD OF RECORD.--April 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.45 ft below land surface, December 2, 1985; lowest measured, 13.61 ft below land surface, August 27, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	11.09	JAN 29, 2003	11.74	APR 24, 2003	10.48	JUL 29, 2003	11.34
NOV 25	11.45	FEB 26	11.33	MAY 30	10.21	AUG 27	11.00
DEC 23	11.19	MAR 28	10.65	JUN 30	10.67	SEP 29	10.24

HIGHEST 10.21 MAY 30, 2003
LOWEST 11.74 JAN 29, 2003



QUEEN ANNES COUNTY—Continued

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 Upper Paleocene 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 water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 12.40 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.16 ft above land surface.

REMARKS.--Kent Island Ground-Water Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

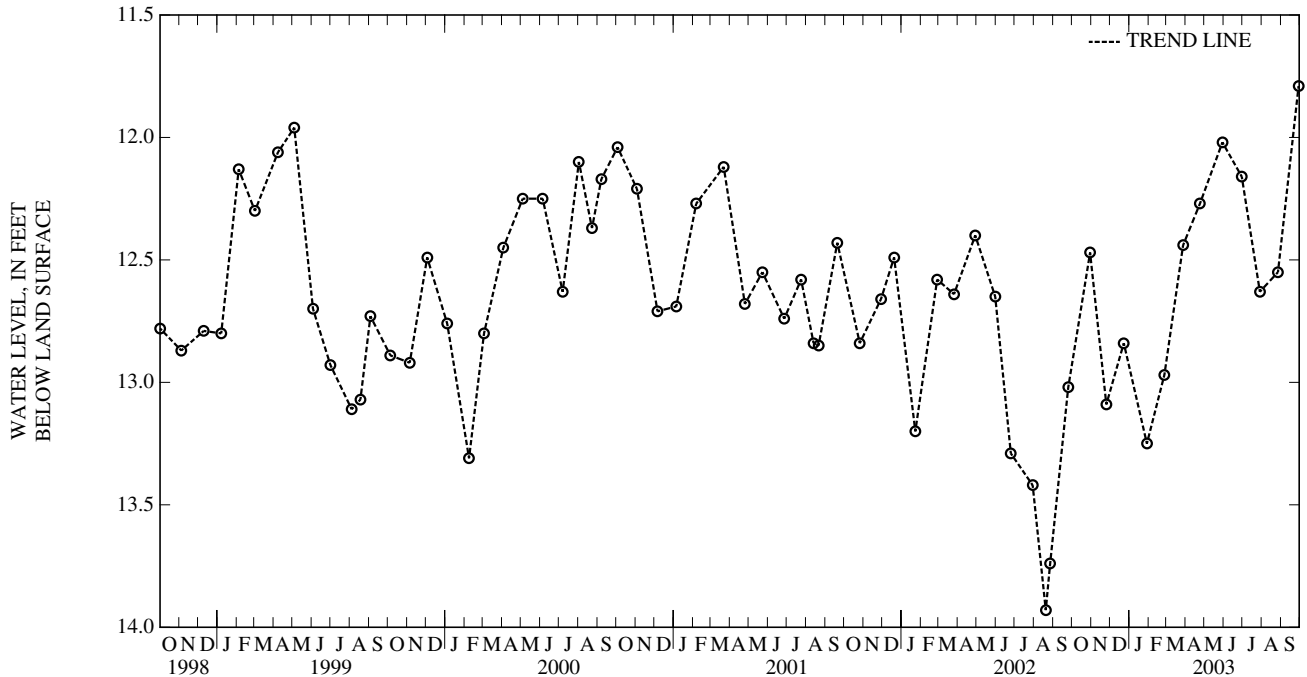
PERIOD OF RECORD.--April 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.54 ft below land surface, December 2, 1985; lowest measured, 13.93 ft below land surface, August 20, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	12.47	JAN 29, 2003	13.25	APR 24, 2003	12.27	JUL 29, 2003	12.63
NOV 25	13.09	FEB 26	12.97	MAY 30	12.02	AUG 27	12.55
DEC 23	12.84	MAR 28	12.44	JUN 30	12.16	SEP 29	11.79

HIGHEST 11.79 SEP 29, 2003
 LOWEST 13.25 JAN 29, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

QUEEN ANNES COUNTY--Continued

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 ft; casing diameter 4 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 water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel. Twice yearly water level measurements from January 1980 to October 1989.

DATUM.--Elevation of land surface is 13.98 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.36 ft above land surface.

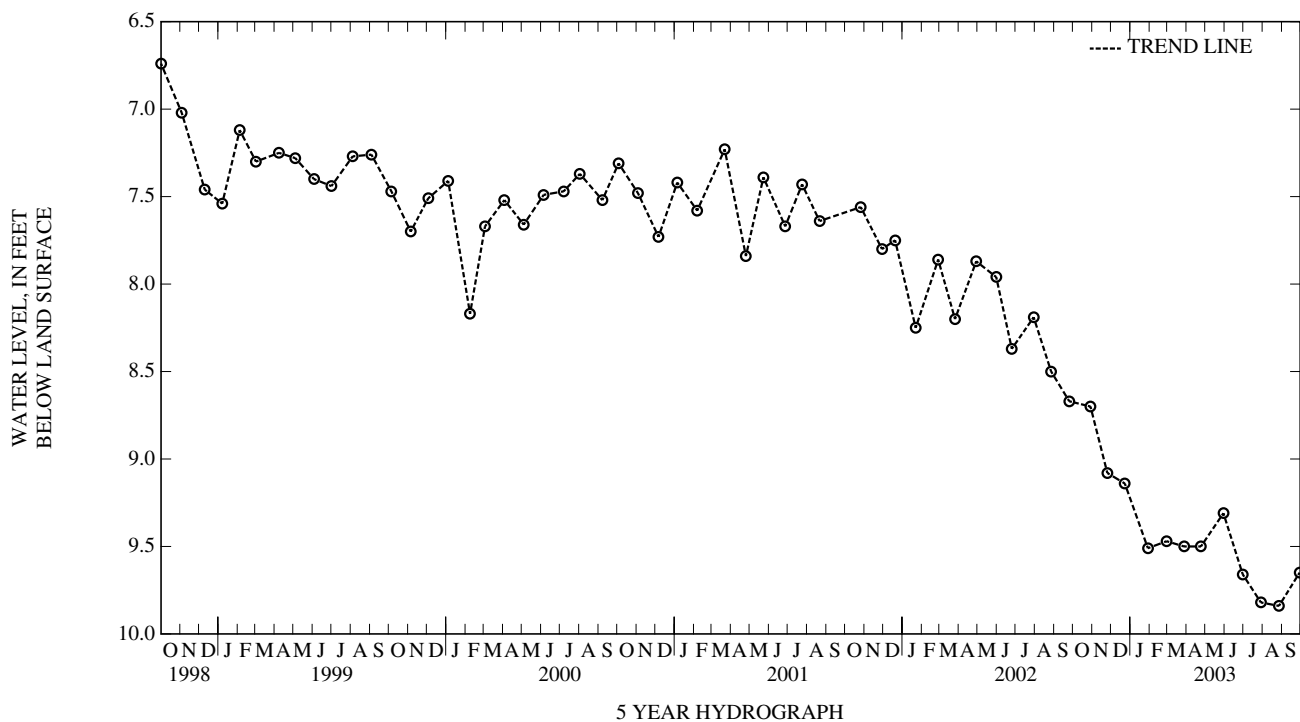
REMARKS.--Kent Island Ground-Water Monitoring Network observation well. Water levels are affected by regional ground-water withdrawal.

PERIOD OF RECORD.--January 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.99 ft above land surface, January 21, 1980; lowest measured, 9.84 ft below land surface, August 27, 2003.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	8.70	JAN 29, 2003	9.51	APR 24, 2003	9.50	JUL 29, 2003	9.82
NOV 25	9.08	FEB 28	9.47	MAY 30	9.31	AUG 27	9.84
DEC 23	9.14	MAR 28	9.50	JUN 30	9.66	SEP 29	9.65
HIGHEST	8.70	OCT 29, 2002					
LOWEST	9.84	AUG 27, 2003					



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

QUEEN ANNES COUNTY—Continued

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.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.

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 water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel. Twice yearly water level measurements from April 1984 to September 1989.

DATUM.--Elevation of land surface is 14.03 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.41 ft above land surface.

REMARKS.--Kent Island Ground-Water Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

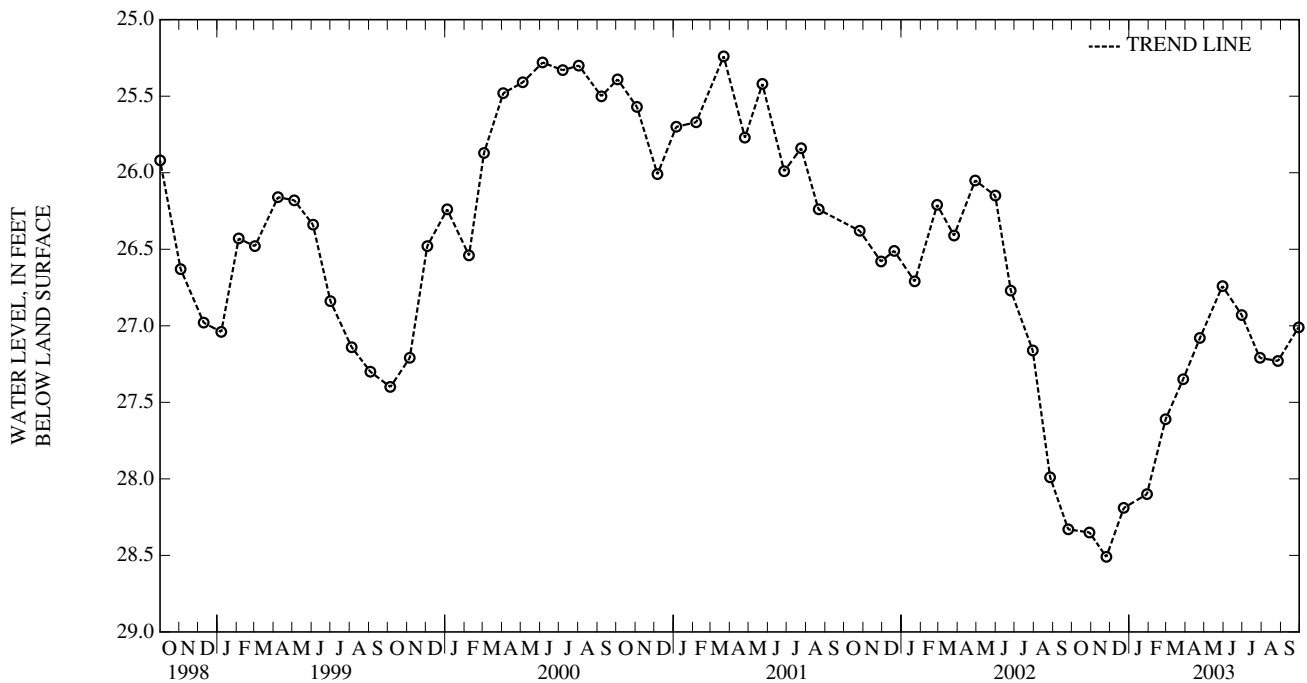
PERIOD OF RECORD.--December 1979 to April 1984, March 1985 to April 1989, and September 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.02 ft below land surface, January 21, 1980; lowest measured, 28.51 ft below land surface, November 25, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	28.35	JAN 29, 2003	28.10	APR 24, 2003	27.08	JUL 29, 2003	27.21
NOV 25	28.51	FEB 28	27.61	MAY 30	26.74	AUG 27	27.23
DEC 23	28.19	MAR 28	27.35	JUN 30	26.93	SEP 29	27.01

HIGHEST 26.74 MAY 30, 2003
 LOWEST 28.51 NOV 25, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

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.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.

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 water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel. Twice yearly water level measurements from January 1980 to September 1980.

DATUM.--Elevation of land surface is 13.92 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.36 ft above land surface.

REMARKS.--Kent Island Ground-Water Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawals.

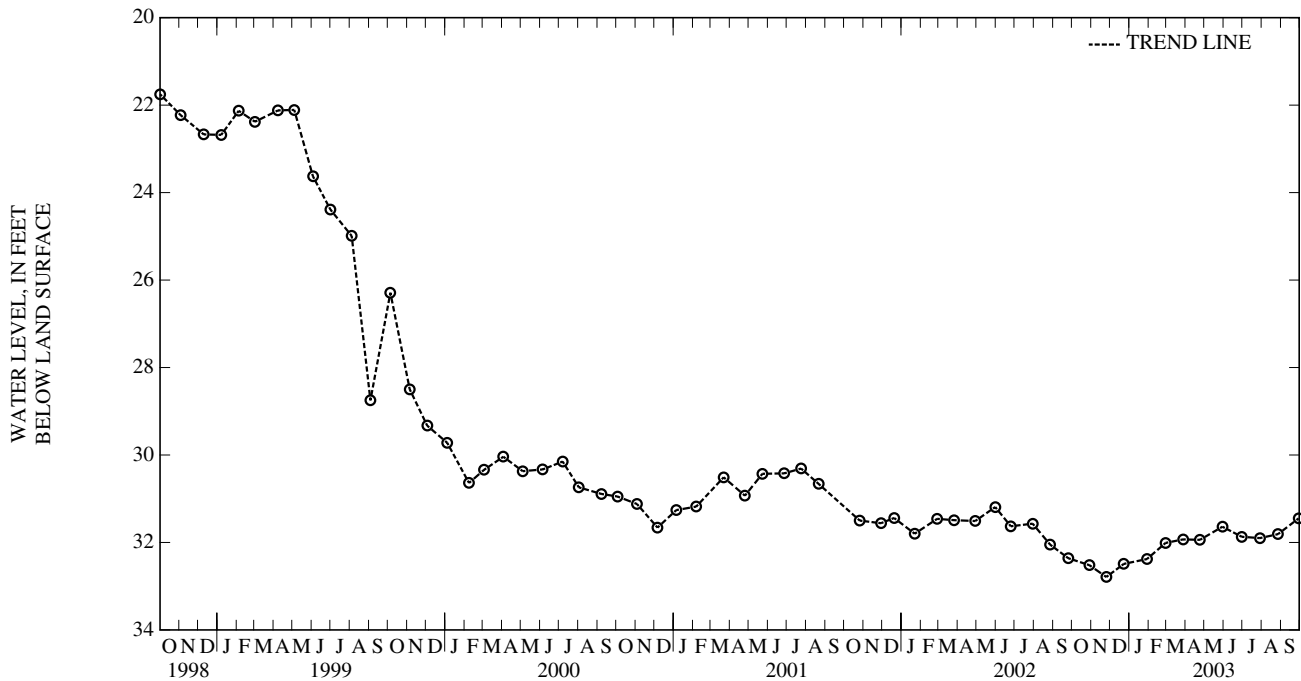
PERIOD OF RECORD.--January 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.69 ft below land surface, January 21, 1980; lowest measured, 32.79 ft below land surface, November 25, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	32.52	JAN 29, 2003	32.38	APR 24, 2003	31.94	JUL 29, 2003	31.90
NOV 25	32.79	FEB 28	32.01	MAY 30	31.64	AUG 27	31.81
DEC 23	32.49	MAR 28	31.93	JUN 30	31.87	SEP 29	31.45

HIGHEST 31.45 SEP 29, 2003
 LOWEST 32.79 NOV 25, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

QUEEN ANNES COUNTY—Continued

WELL NUMBER.--QA Eb 113. SITE ID.--385748076172001. PERMIT NUMBER.--QA-73-3172.

LOCATION.--Lat 38°57'48", long 76°17'20", Hydrologic Unit 02060001, near Chester, Kent Island. Owner: U.S. Geological Survey.

AQUIFER.--Aquia Formation of Upper 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 water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel. Equipped with graphic water-level recorder from June 1986 to October 1994.

DATUM.--Elevation of land surface is 11.34 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of shelter platform, 1.65 ft above land surface.

REMARKS.--Kent Island Ground-Water Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

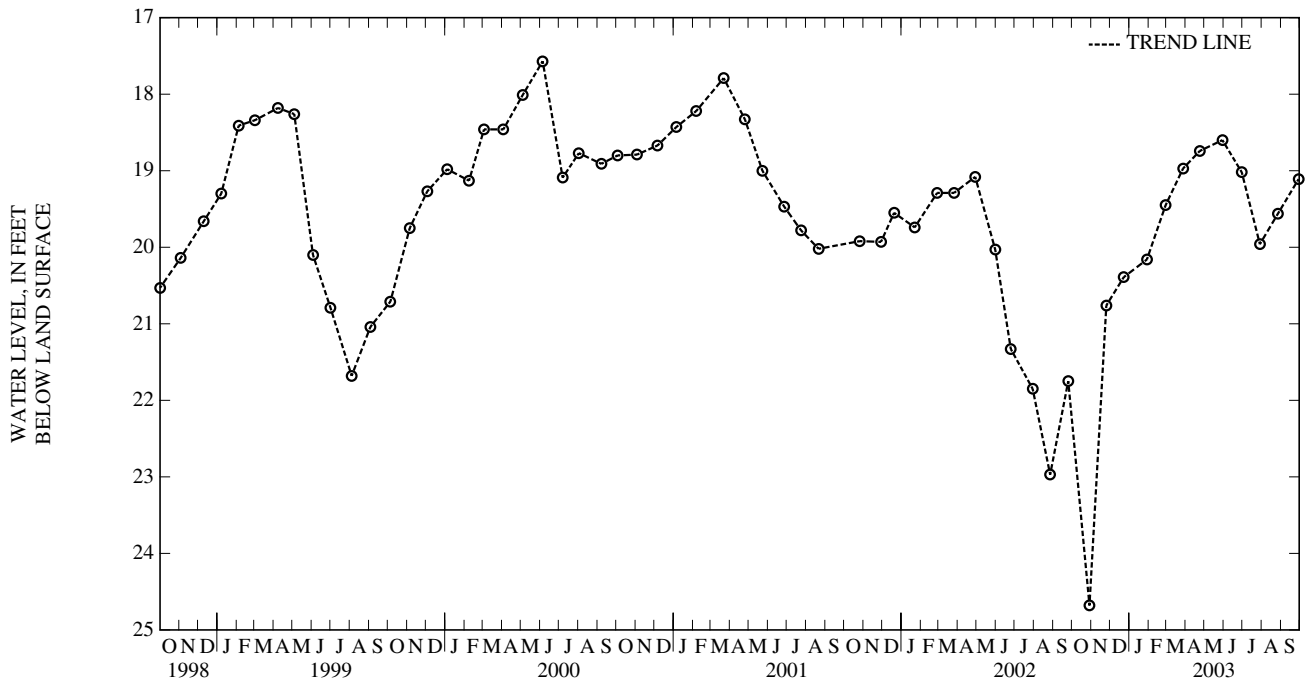
PERIOD OF RECORD.--October 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.28 ft below land surface, April 1, 1983; lowest measured, 24.68 ft below land surface, October 29, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	24.68	JAN 29, 2003	20.16	APR 24, 2003	18.74	JUL 29, 2003	19.96
NOV 25	20.76	FEB 28	19.45	MAY 30	18.60	AUG 27	19.56
DEC 23	20.39	MAR 28	18.97	JUN 30	19.02	SEP 29	19.11

HIGHEST 18.60 MAY 30, 2003
 LOWEST 24.68 OCT 29, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

QUEEN ANNES COUNTY--Continued

WELL NUMBER.--QA Eb 157. SITE ID.--385852076195202. PERMIT NUMBER.--QA-81-0475.

LOCATION.--Lat 38°58'52", long 76°19'52", Hydrologic Unit 02060002, north of US Rt. 50, Terrapin Beach Park, Kent Island. Owner: Maryland Geological Survey.

AQUIFER.--Aquia Formation of Upper 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 water level measurements with electric tape by U.S. Geological Survey personnel from May 1989 to November 1991, March 1999 to current year. Twice yearly water level measurements from March 1988 to April 1989, April 1992 to February 1999.

DATUM.--Elevation of land surface is 11.92 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.50 ft above land surface.

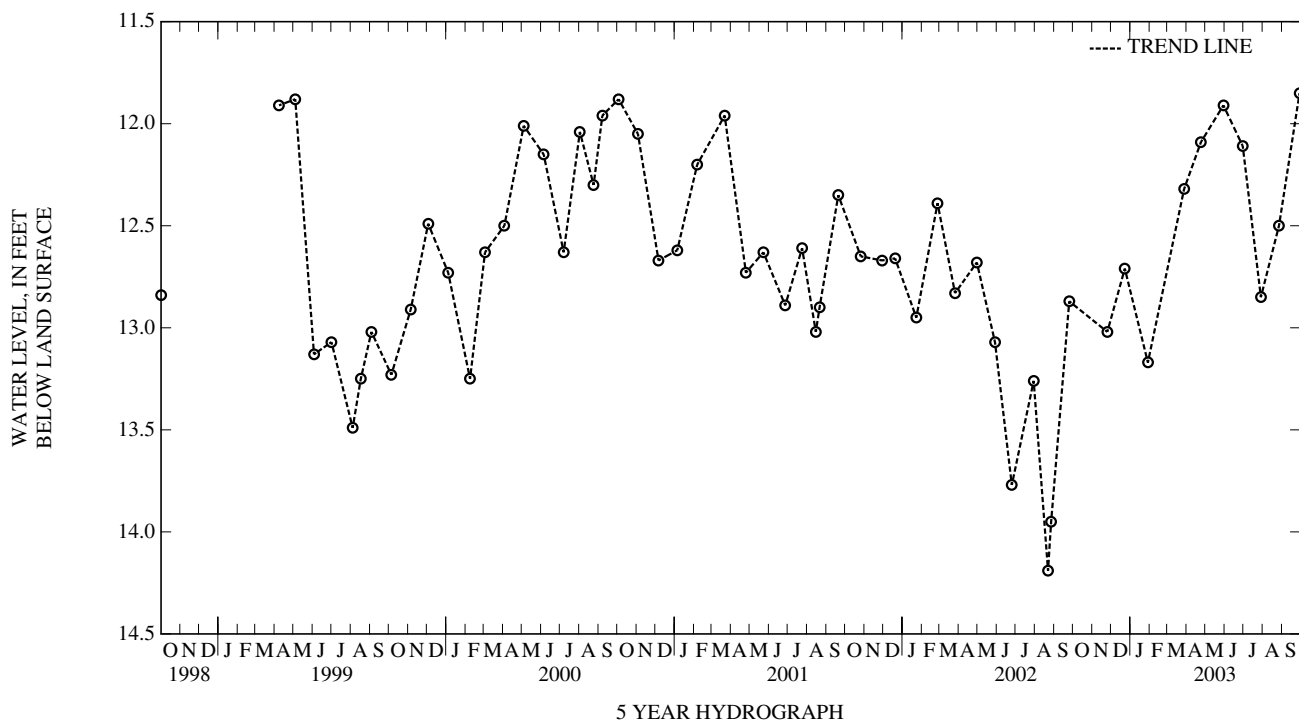
REMARKS.--Kent Island Ground-Water Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

PERIOD OF RECORD.--October 1984, 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, December 2, 1985; lowest measured, 14.19 ft below land surface, August 22, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 25, 2002	13.02	MAR 28, 2003	12.32	JUN 30, 2003	12.11	SEP 29, 2003	11.85
DEC 23	12.71	APR 24	12.09	JUL 29	12.85		
JAN 29, 2003	13.17	MAY 30	11.91	AUG 27	12.50		
HIGHEST	11.85	SEP 29, 2003					
LOWEST	13.17	JAN 29, 2003					



QUEEN ANNES COUNTY—Continued

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 MD Rt. 18, 0.1 mi. northeast of intersection with Nesbit Rd. Owner: Maryland State Highway Administration.

AQUIFER.--Kent Island Formation (Columbia aquifer) of Pleistocene age. Aquifer code: 112KILD.

WELL CHARACTERISTICS.--Drilled, unused, water-table driven well, depth 21 ft; casing diameter 1.25 in., to 21 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey 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. coupling, 0.27 ft above land surface.

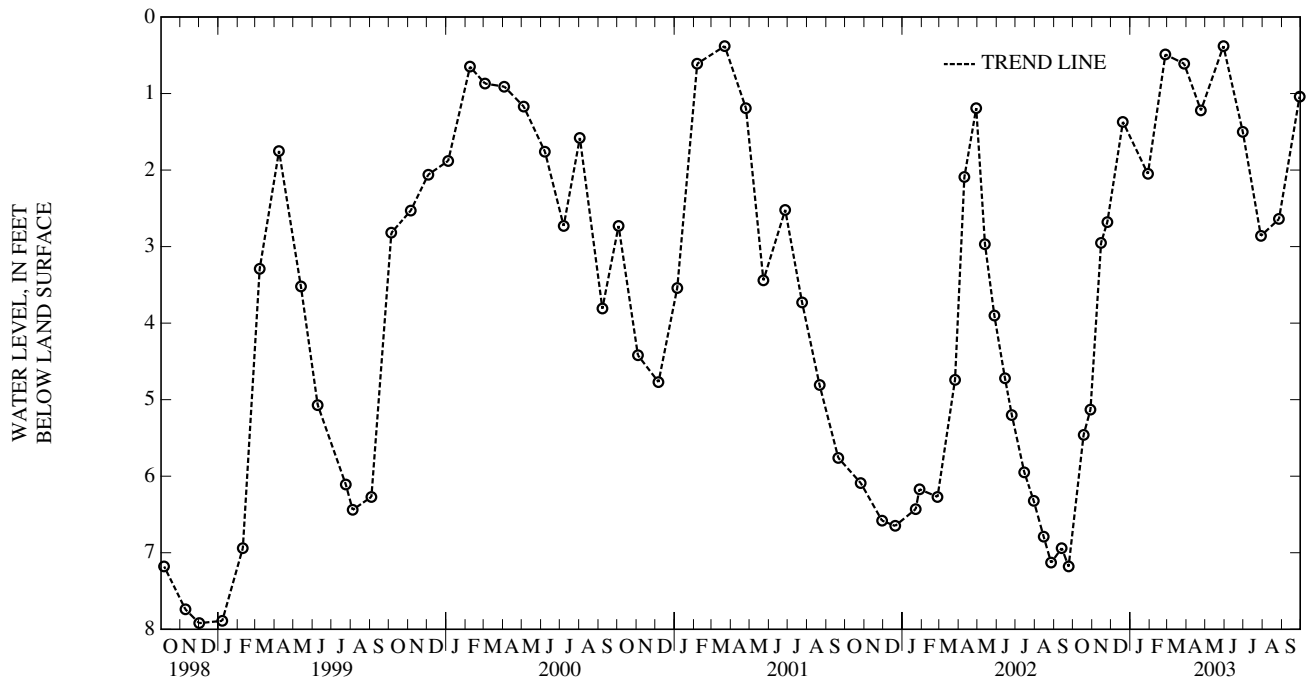
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by natural climatic response.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.03 ft below land surface, August 2, 1996; lowest measured, 8.46 ft below land surface, January 7, 1988.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18, 2002	5.46	DEC 20, 2002	1.37	APR 24, 2003	1.22	AUG 27, 2003	2.64
29	5.13	JAN 29, 2003	2.05	MAY 30	.38	SEP 29	1.04
NOV 15	2.95	FEB 26	.49	JUN 30	1.50		
25	2.68	MAR 28	.61	JUL 29	2.86		
HIGHEST .38 MAY 30, 2003							
LOWEST 5.46 OCT 18, 2002							



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

QUEEN ANNES COUNTY--Continued

WELL NUMBER.--QA Ef 29. SITE ID.--385534075573601. PERMIT NUMBER.--QA-81-1593.

LOCATION.--Lat 38°55'38", long 75°57'40", Hydrologic Unit 02060005, off east side of MD Rt. 309, 0.2 mi. north of intersection with MD Rt. 404, Tuckahoe State Park. Owner: Md. Dept. of Natural Resources, Fisheries Division.

AQUIFER.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 1,325 ft; casing diameter 14 in., to 500 ft, and 8 in., from 500 to 1,110 ft, 1,120 to 1,135 ft, 1,180 to 1,195 ft, 1,210 to 1,230 ft, 1,270 to 1,285 ft, and 1,315 to 1,325 ft; screen diameter 8 in., from 1,110 to 1,120 ft, 1,135 to 1,180 ft, 1,195 to 1,210 ft, 1,230 to 1,270 ft, and 1,285 to 1,315 ft.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by U.S. Geological Survey or Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 61.69 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 2 in. pipe, 3.80 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by regional ground-water withdrawal.

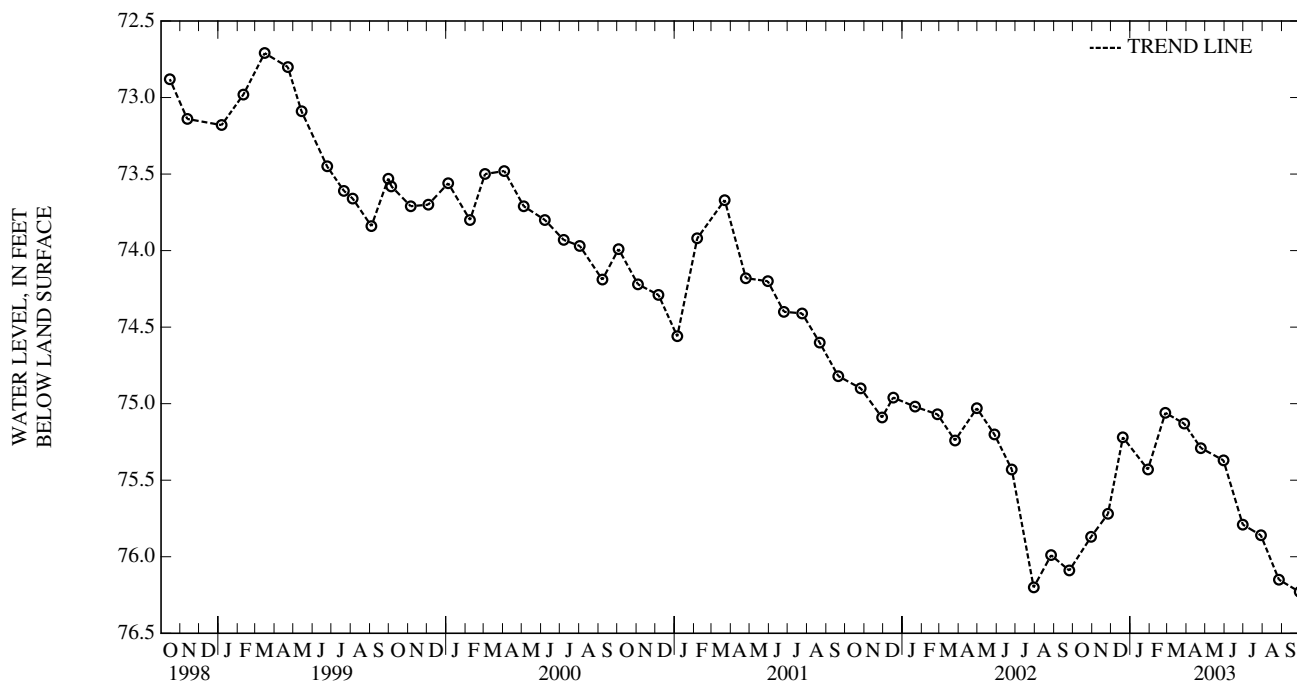
PERIOD OF RECORD.-- June 1986 to December 1986, November 1990 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 62.30 ft below land surface, August 27, 1986; lowest measured, 76.23 ft below land surface, September 29, 2003.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	75.87	JAN 29, 2003	75.43	APR 24, 2003	75.29	JUL 29, 2003	75.86
NOV 26	75.72	FEB 26	75.06	MAY 30	75.37	AUG 27	76.15
DEC 20	75.22	MAR 28	75.13	JUN 30	75.79	SEP 29	76.23

HIGHEST 75.06 FEB 26, 2003
LOWEST 76.23 SEP 29, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

QUEEN ANNES COUNTY—Continued

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, off Greenwood Shoals, at Prospect Plantation. Owner: Maryland Community Developers Incorporated.

AQUIFER.--Aquia Formation of Upper 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 water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey 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.

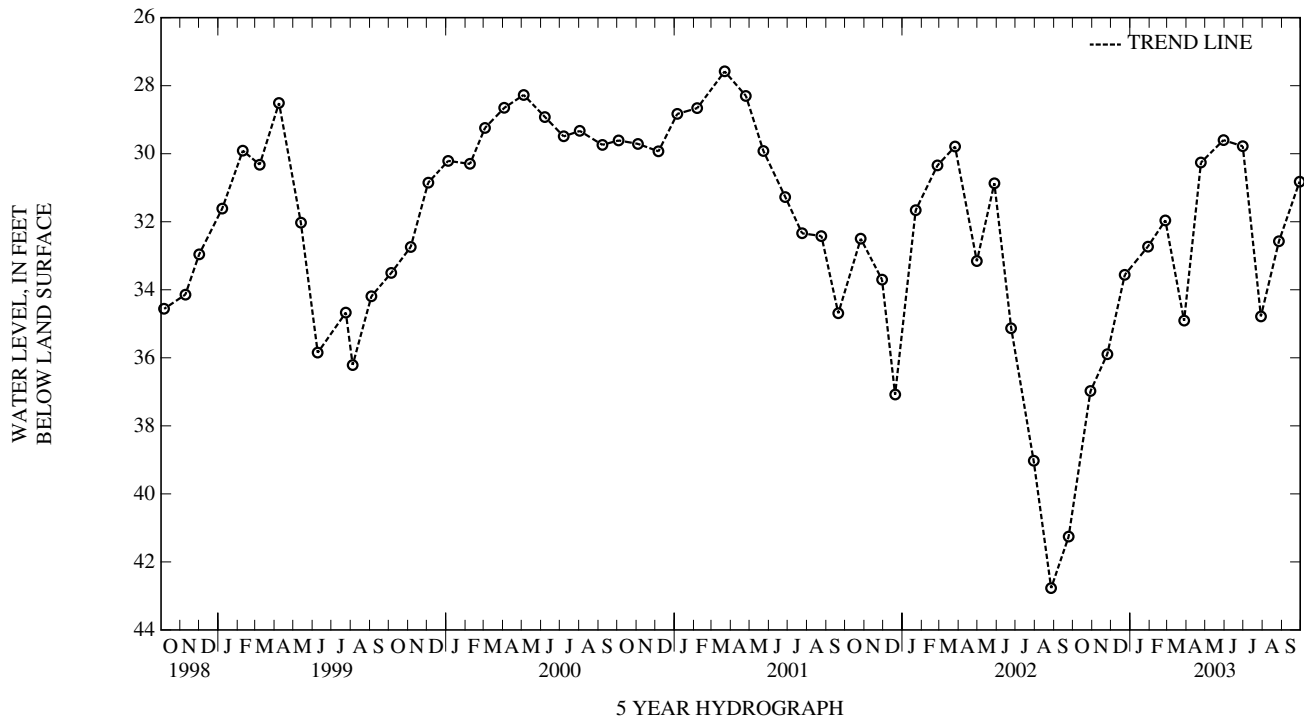
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawals.

PERIOD OF RECORD.--February 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 19.77 ft below land surface, March 3, 1983; lowest measured, 42.77 ft below land surface, August 27, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	36.98	JAN 29, 2003	32.73	APR 24, 2003	30.26	JUL 29, 2003	34.78
NOV 25	35.89	FEB 26	31.96	MAY 30	29.60	AUG 27	32.57
DEC 23	33.56	MAR 28	34.91	JUN 30	29.78	SEP 29	30.82
HIGHEST 29.60		MAY 30, 2003					
LOWEST 36.98		OCT 29, 2002					



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ST. MARYS COUNTY

WELL NUMBER.--SM Bb 15. SITE ID.--382838076470101. PERMIT NUMBER.--SM-73-3430.

LOCATION.--Lat 38°28'38", long 76°47'01", Hydrologic Unit 02070011, at Charlotte Hall Veterans Home. Owner: U.S. Geological Survey.

AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 460 ft; casing diameter 4 in., to 441 ft; casing diameter 2 in., from 441 to 450 ft; screen diameter 2 in., from 450 to 460 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 165.40 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.10 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

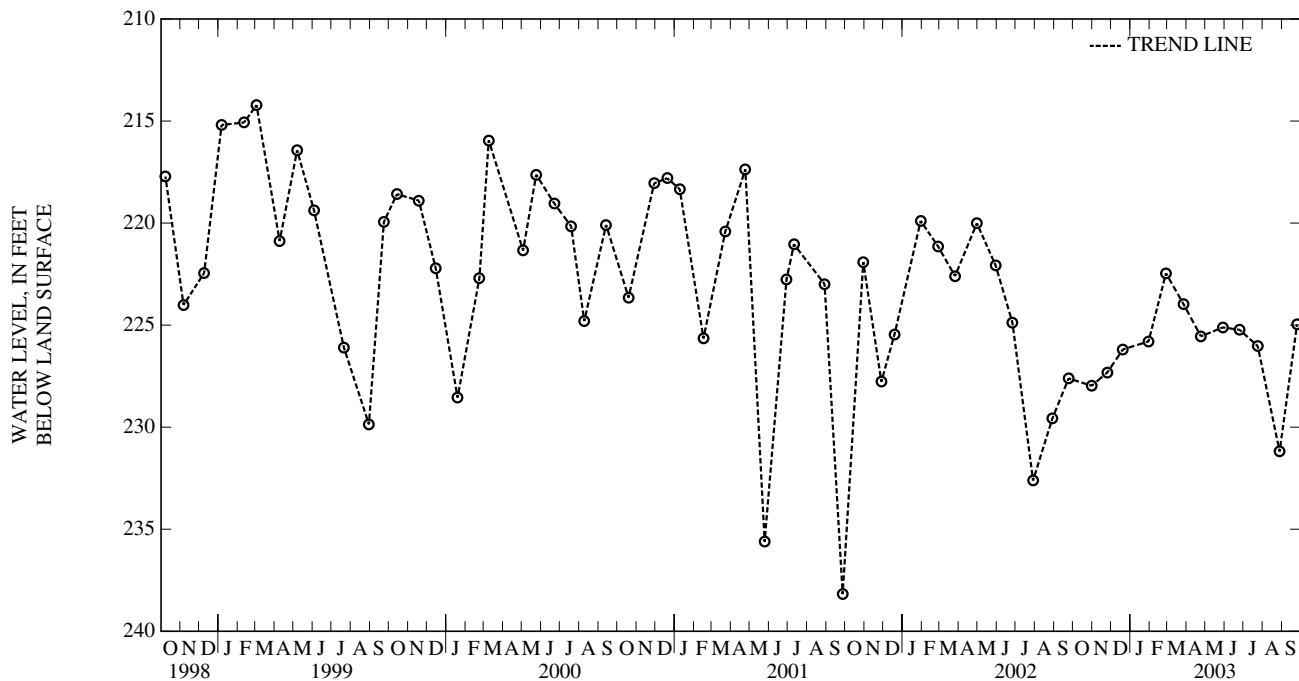
PERIOD OF RECORD.--August 1979 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 159.76 ft below land surface, August 10, 1979, and Aug. 31, 1979; lowest measured, 238.18 ft below land surface, September 27, 2001.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	227.97	JAN 30, 2003	225.80	APR 24, 2003	225.55	JUL 24, 2003	226.03
NOV 25	227.32	FEB 27	222.46	MAY 29	225.11	AUG 28	231.19
DEC 20	226.19	MAR 27	223.97	JUN 25	225.23	SEP 25	224.96

HIGHEST 222.46 FEB 27, 2003
LOWEST 231.19 AUG 28, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ST. MARYS COUNTY--Continued

WELL NUMBER.--SM Bb 22. SITE ID.--382838076470102. PERMIT NUMBER.--SM-73-3787.

LOCATION.--Lat 38°28'38", long 76°47'01", Hydrologic Unit 02070011, at Charlotte Hall Veterans Home. Owner: U.S. Geological Survey.

AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 218 ft; casing diameter 4 in., to 210 ft; screen diameter 2 in., from 210 to 218 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 165.21 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.55 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local ground-water withdrawal. On July 12, 1989, the water-level measured 27.95 ft below land surface; this decline was due to a nearby production well pump test.

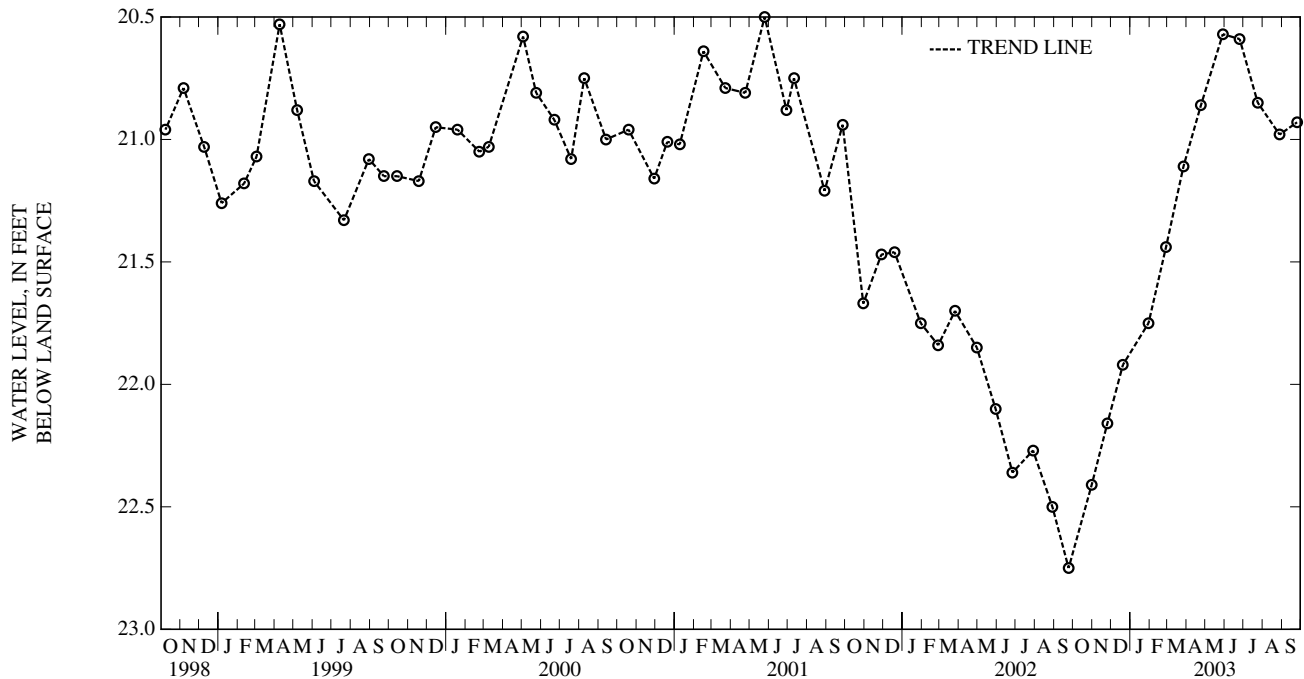
PERIOD OF RECORD.--July 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.27 ft below land surface, July 9, 1980; lowest measured, 22.75 ft below land surface, September 24, 2002--See REMARKS.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	22.41	JAN 30, 2003	21.75	APR 24, 2003	20.86	JUL 24, 2003	20.85
NOV 25	22.16	FEB 27	21.44	MAY 29	20.57	AUG 28	20.98
DEC 20	21.92	MAR 27	21.11	JUN 25	20.59	SEP 25	20.93

HIGHEST 20.57 MAY 29, 2003
 LOWEST 22.41 OCT 31, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ST. MARYS COUNTY--Continued

WELL NUMBER.--SM Bc 39. SITE ID.--382605076430201. PERMIT NUMBER.--SM-94-3921.

LOCATION.--Lat 38°26'05", long 76°43'02", Hydrologic Unit 02060006, at Persimmon Hills Estate. Owner: Maryland Geological Survey.

AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.

WELL CHARACTERISTICS.--Drilled, artesian well, depth 1,532 ft; casing diameter 12 in., 39 ft, casing diameter 4 in., from +2.5 to 1,492, 1,512 to 1,522 ft, and 1,532 to 1,542 ft; screen diameter 4 in., from 1,492 to 1,512 ft, and 1,522 to 1,532 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recording interval, April 2002 to current year.

DATUM.--Elevation of land surface is 161.54 ft above North American Vertical Datum of 1988. Measuring point: Top of shelter platform, 2.50 ft above land surface.

REMARKS.--Southern Maryland Patapsco Aquifer Well Drilling Project observation well. Water levels are affected by regional ground-water withdrawal.

PERIOD OF RECORD.--March 2002 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 28.99 ft below sea level, May 2, 2002 (recorder); lowest measured, 30.12 ft below sea level, September 24, 25, and 26, 2002 (recorder).

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

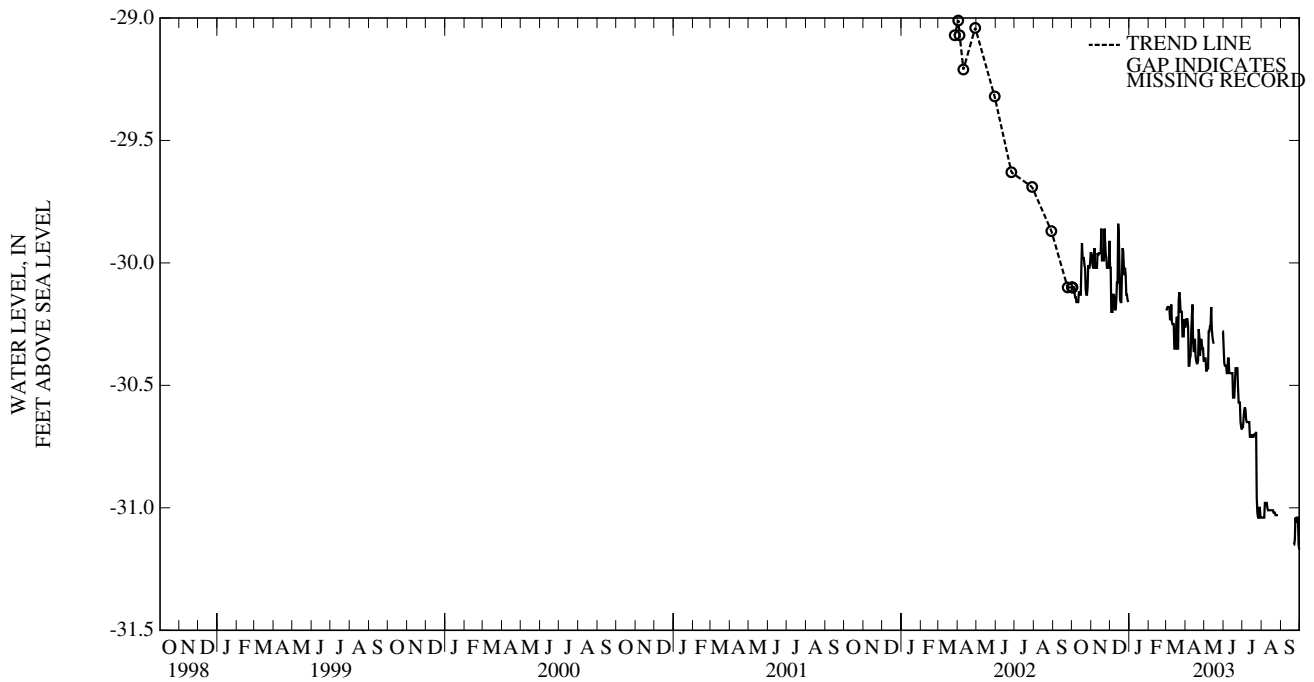
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	-29.99	JAN 30, 2003	-30.40	APR 24, 2003	-30.34	JUL 24, 2003	-30.96
NOV 25	-29.98	FEB 27	-30.17	MAY 29	-30.29	AUG 28	-31.18
DEC 20	-29.84	MAR 27	-30.27	JUN 25	-30.56	SEP 25	-31.04
LOWEST -31.18		AUG 28, 2003					
HIGHEST -29.84		DEC 20, 2002					

DAY	MAX		MIN		MAX		MIN		MAX		MIN	
	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH						
1	-30.10	-30.10	-29.96	-29.96	-29.86	-30.02	---	---	---	---	-30.19	-30.19
2	-30.10	-30.10	-29.96	-29.97	-30.00	-30.02	---	---	---	---	-29.98	-30.19
3	-30.10	-30.10	-29.97	-30.01	-30.00	-30.20	---	---	---	---	-29.98	-30.18
4	-30.10	-30.10	-30.01	-30.02	-30.20	-30.20	---	---	---	---	-30.18	-30.18
5	-30.10	-30.12	-29.94	-30.02	-30.03	-30.20	---	---	---	---	-30.11	-30.18
6	-30.12	-30.14	-29.81	-29.94	-30.03	-30.13	---	---	---	---	-30.04	-30.18
7	-30.14	-30.14	-29.88	-30.02	-30.13	-30.13	---	---	---	---	-30.18	-30.23
8	-30.14	-30.16	-30.02	-30.02	-30.13	-30.14	---	---	---	---	-30.17	-30.23
9	-30.16	-30.16	-30.02	-30.02	-30.14	-30.19	---	---	---	---	-30.15	-30.17
10	-30.16	-30.16	-29.96	-30.02	-30.15	-30.19	---	---	---	---	-30.16	-30.24
11	-30.12	-30.16	-29.95	-29.96	-30.03	-30.15	---	---	---	---	-30.24	-30.25
12	-30.12	-30.12	-29.96	-29.97	-30.03	-30.08	---	---	---	---	-30.25	-30.25
13	-30.12	-30.12	-29.96	-29.96	-29.83	-30.08	---	---	---	---	-30.20	-30.25
14	-30.12	-30.13	-29.96	-29.96	-29.80	-29.84	---	---	---	---	-30.23	-30.35
15	-30.02	-30.13	-29.96	-29.96	-29.84	-29.88	---	---	---	---	-30.35	-30.35
16	-29.79	-30.02	-29.86	-29.96	-29.88	-30.02	---	---	---	---	-30.26	-30.35
17	-29.80	-29.92	-29.79	-29.86	-30.02	-30.15	---	---	---	---	-30.18	-30.26
18	-29.92	-29.98	-29.79	-29.99	-30.15	-30.16	---	---	---	---	-30.18	-30.22
19	-29.98	-29.98	-29.99	-29.99	-30.05	-30.16	---	---	---	---	-30.22	-30.35
20	-29.98	-29.98	-29.99	-29.99	-29.83	-30.05	---	---	---	---	-30.15	-30.35
21	-29.98	-30.01	-29.86	-29.99	-29.88	-29.94	---	---	---	---	-30.12	-30.15
22	-30.01	-30.02	-29.80	-29.86	-29.94	-29.95	---	---	---	---	-30.12	-30.12
23	-30.02	-30.11	-29.80	-29.91	-29.95	-30.01	---	---	---	---	-30.12	-30.15
24	-30.11	-30.13	-29.91	-29.96	-30.01	-30.05	---	---	---	---	-30.15	-30.20
25	-30.10	-30.13	-29.96	-29.98	-29.80	-30.02	---	---	---	---	-30.20	-30.20
26	-30.01	-30.10	-29.98	-30.02	-29.85	-30.05	---	---	---	---	-30.19	-30.20
27	-30.01	-30.01	-30.02	-30.02	-30.05	-30.13	---	---	---	---	-30.20	-30.30
28	-30.01	-30.02	-30.02	-30.02	-30.13	-30.13	---	---	-30.17	-30.19	-30.30	-30.30
29	-30.00	-30.02	-29.91	-30.02	-30.12	-30.15	---	---	---	---	-30.23	-30.30
30	-29.92	-30.00	-29.83	-29.91	-30.15	-30.16	---	---	---	---	-30.22	-30.23
31	-29.92	-29.96	---	---	-30.13	-30.16	---	---	---	---	-30.21	-30.26
MONTH	-29.79	-30.16	-29.79	-30.02	-29.80	-30.20	---	---	-30.17	-30.19	-29.98	-30.35

ST. MARYS COUNTY--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-30.23	-30.26	-30.39	-30.40	-30.20	-30.35	-30.67	-30.67	-31.04	-31.04	-31.20	-31.20
2	-30.23	-30.23	-30.34	-30.39	-30.35	-30.41	-30.63	-30.67	-31.04	-31.04	-31.20	-31.20
3	-30.23	-30.23	-30.34	-30.39	-30.41	-30.42	-30.60	-30.63	-31.04	-31.04	-31.20	-31.20
4	-30.23	-30.23	-30.38	-30.44	-30.42	-30.42	-30.59	-30.60	-31.04	-31.04	-31.20	-31.20
5	-30.23	-30.26	-30.43	-30.44	-30.42	-30.42	-30.59	-30.59	-30.98	-31.04	-31.20	-31.20
6	-30.26	-30.42	-30.43	-30.43	-30.42	-30.45	-30.59	-30.60	-30.98	-30.98	-31.20	-31.20
7	-30.39	-30.42	-30.28	-30.43	-30.39	-30.45	-30.60	-30.64	-30.98	-30.98	-31.20	-31.20
8	-30.38	-30.39	-30.28	-30.28	-30.39	-30.39	-30.63	-30.65	-30.98	-30.98	-31.20	-31.20
9	-30.28	-30.38	-30.24	-30.28	-30.39	-30.39	-30.65	-30.65	-30.98	-30.98	-31.20	-31.20
10	-30.22	-30.28	-30.24	-30.26	-30.39	-30.45	-30.65	-30.65	-30.98	-31.00	-31.20	-31.20
11	-30.14	-30.22	-30.17	-30.26	-30.45	-30.45	-30.63	-30.65	-31.00	-31.01	-31.20	-31.20
12	-30.13	-30.17	-30.16	-30.18	-30.45	-30.45	-30.63	-30.65	-31.01	-31.01	-31.20	-31.20
13	-30.17	-30.32	-30.18	-30.27	-30.45	-30.45	-30.65	-30.71	-31.01	-31.01	-31.20	-31.20
14	-30.32	-30.36	-30.26	-30.30	-30.45	-30.45	-30.71	-30.71	-31.01	-31.01	-31.20	-31.20
15	-30.31	-30.36	-30.30	-30.32	-30.45	-30.45	-30.70	-30.71	-31.01	-31.01	-31.20	-31.20
16	-30.25	-30.31	-30.31	-30.33	-30.45	-30.55	-30.70	-30.70	-31.01	-31.01	-31.20	-31.20
17	-30.25	-30.38	-30.33	-30.40	-30.55	-30.55	-30.70	-30.71	-31.01	-31.01	-31.20	-31.20
18	-30.38	-30.40	-30.39	-30.40	-30.49	-30.55	-30.71	-30.71	-31.01	-31.01	-31.20	-31.20
19	-30.40	-30.41	-30.39	-30.39	-30.43	-30.49	-30.70	-30.71	-31.01	-31.01	-31.20	-31.20
20	-30.40	-30.41	-30.38	-30.39	-30.43	-30.43	-30.70	-30.70	-31.01	-31.02	-31.15	-31.20
21	-30.27	-30.40	-30.38	-30.38	-30.43	-30.43	-30.70	-30.70	-31.01	-31.02	-31.15	-31.15
22	-30.26	-30.27	-30.37	-30.38	-30.43	-30.43	-30.69	-30.70	-31.01	-31.02	-31.13	-31.15
23	-30.26	-30.30	-30.37	-30.37	-30.43	-30.43	-30.69	-30.69	-31.02	-31.03	-31.03	-31.13
24	-30.30	-30.38	-30.31	-30.37	-30.43	-30.51	-30.69	-30.96	-31.03	-31.03	-31.03	-31.04
25	-30.31	-30.35	-30.31	-30.31	-30.51	-30.57	-30.96	-31.02	-31.03	-31.03	-31.04	-31.06
26	-30.25	-30.31	-30.30	-30.31	-30.57	-30.57	-31.02	-31.04	-31.02	-31.03	-31.04	-31.04
27	-30.25	-30.33	-30.30	-30.30	-30.56	-30.57	-31.00	-31.04	-31.02	-31.03	-31.04	-31.04
28	-30.33	-30.35	-30.29	-30.30	-30.56	-30.65	-31.00	-31.00	-31.00	-31.18	-31.04	-31.04
29	-30.34	-30.35	-30.28	-30.29	-30.65	-30.67	-31.00	-31.00	-31.18	-31.18	-31.04	-31.15
30	-30.34	-30.40	-30.28	-30.28	-30.67	-30.68	-31.00	-31.04	-31.18	-31.18	-31.15	-31.17
31	---	---	-30.20	-30.28	---	---	-31.04	-31.04	-31.18	-31.20	---	---
MONTH	-30.13	-30.42	-30.16	-30.44	-30.20	-30.68	-30.59	-31.04	-30.98	-31.20	-31.03	-31.20
YEAR	-29.79	-31.20										

Daily Low Water Levels



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ST. MARYS COUNTY--Continued

WELL NUMBER.--SM Dd 46. SITE ID.--381616076364701. PERMIT NUMBER.--SM-73-1990.

LOCATION.--Lat 38°16'16", long 76°36'47", Hydrologic Unit 02070011, at Leonardtown Senior High School, Redgate. Owner: U.S. Geological Survey.

AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 296 ft; casing diameter 6 in., to 150 ft; casing diameter 2 in., from 150 to 286 ft; screen diameter 2 in., from 286 to 296 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 118.84 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.90 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

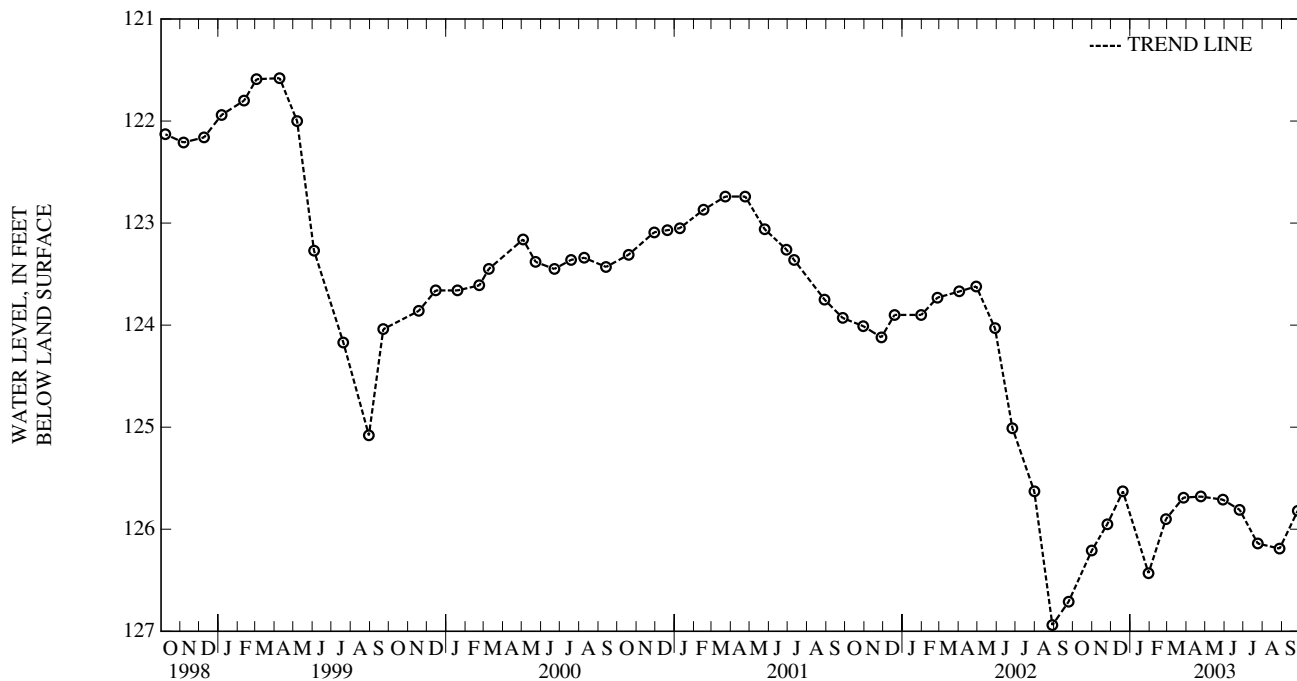
PERIOD OF RECORD.--October 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 109.36 ft below land surface, July 9, 1979; lowest measured, 126.94 ft below land surface, August 29, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	126.21	JAN 30, 2003	126.43	APR 24, 2003	125.68	JUL 24, 2003	126.14
NOV 25	125.95	FEB 27	125.90	MAY 29	125.71	AUG 28	126.19
DEC 20	125.63	MAR 27	125.69	JUN 25	125.81	SEP 26	125.82

HIGHEST 125.63 DEC 20, 2002
LOWEST 126.43 JAN 30, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ST. MARYS COUNTY--Continued

WELL NUMBER.--SM Dd 49. SITE ID.--381616076364702. PERMIT NUMBER.--SM-73-3081.

LOCATION.--Lat 38°16'16", long 76°36'47", Hydrologic Unit 02070011, at Leonardtown Senior High School, Redgate. Owner: U.S. Geological Survey.

AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 619 ft; casing diameter 6 in., to 46 ft; casing diameter 4 in., to 279 ft; casing diameter 1.5 in., from 279 to 534 ft, and 544 to 619 ft; screen diameter 3 in., from 534 to 544 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 118.94 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.40 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal. The November 29, 2000, water level measured at 205.21 ft below land surface was the result of a nearby production well pumping for more than 24 hours.

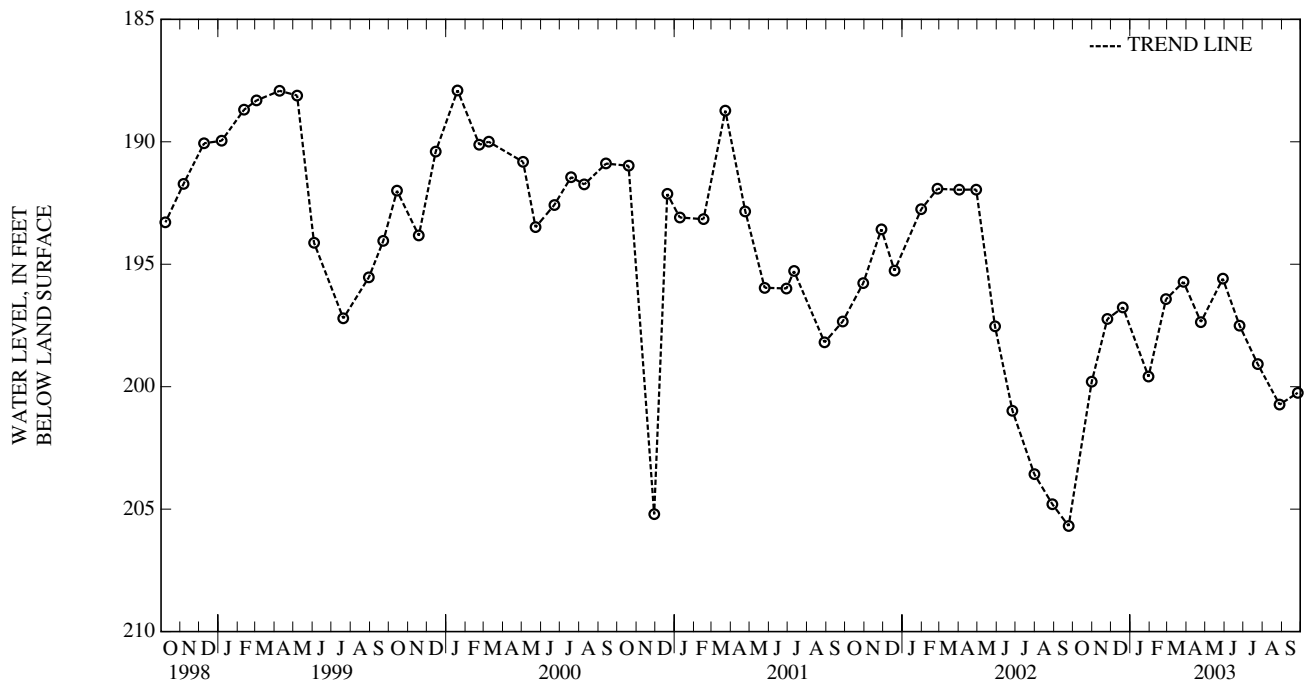
PERIOD OF RECORD.--December 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 138.95 ft below land surface, April 5, 1979; lowest measured, 205.69 ft below land surface, September 24, 2002 (See REMARKS).

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	199.80	JAN 30, 2003	199.59	APR 24, 2003	197.36	JUL 24, 2003	199.08
NOV 25	197.24	FEB 27	196.43	MAY 29	195.59	AUG 28	200.73
DEC 20	196.76	MAR 27	195.72	JUN 25	197.51	SEP 26	200.25

HIGHEST 195.59 MAY 29, 2003
 LOWEST 200.73 AUG 28, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ST. MARYS COUNTY--Continued

WELL NUMBER.--SM Dd 50. SITE ID.--381807076380001. PERMIT NUMBER.--SM-73-3082.

LOCATION.--Lat 38°18'07", long 76°38'00", Hydrologic Unit 02070011, at Leonard Hall Junior Naval Academy, Leonardtown. Owner: U.S. Geological Survey.

AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 515 ft; casing diameter 4 in., to 270 ft; casing diameter 2 in., from 270 to 505 ft; screen diameter 3 in., from 505 to 515 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 99.40 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.86 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

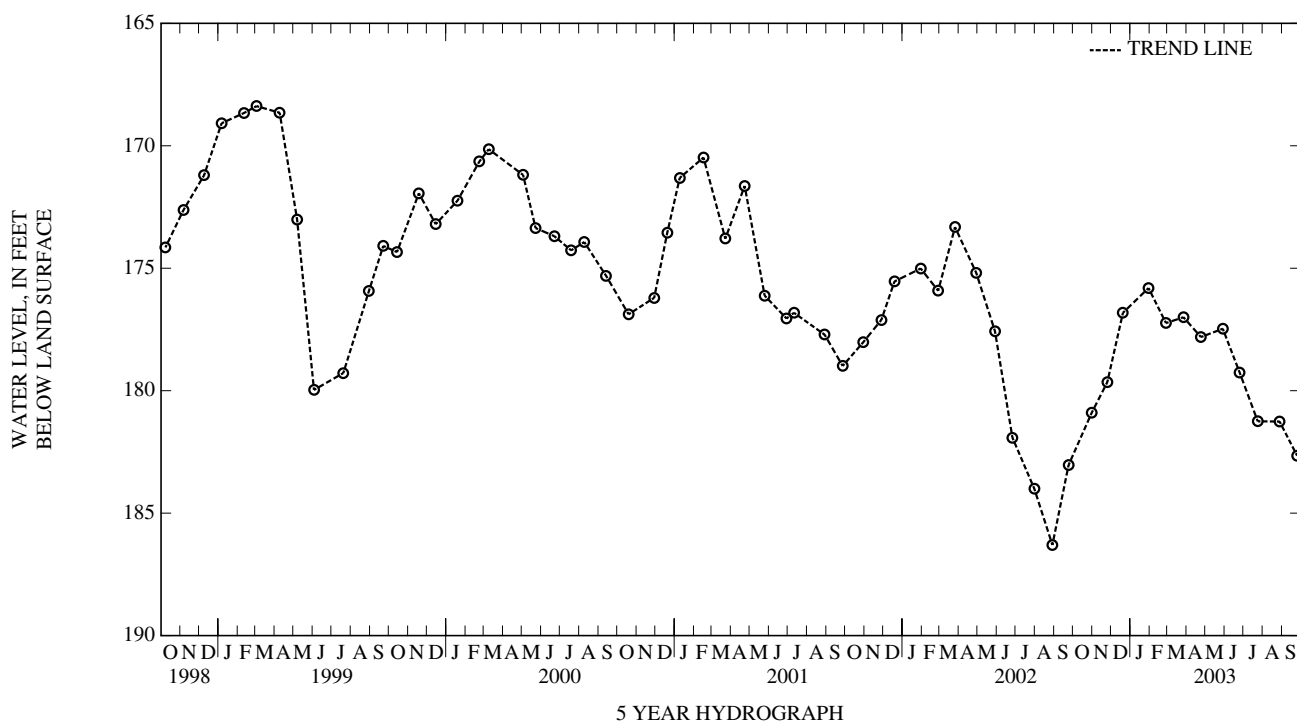
PERIOD OF RECORD.--December 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 119.05 ft below land surface, February 2, 1979; lowest measured, 186.30 ft below land surface, August 29, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	180.90	JAN 30, 2003	175.81	APR 24, 2003	177.81	JUL 24, 2003	181.25
NOV 25	179.65	FEB 27	177.24	MAY 29	177.47	AUG 28	181.26
DEC 20	176.82	MAR 27	177.00	JUN 25	179.26	SEP 25	182.65

HIGHEST 175.81 JAN 30, 2003
LOWEST 182.65 SEP 25, 2003



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ST. MARYS COUNTY--Continued

WELL NUMBER.--SM Dd 62. SITE ID.--381616076364703. PERMIT NUMBER.--SM-73-3786.

LOCATION.--Lat 38°16'16", 76°36'47", Hydrologic Unit 02070011, at Leonardtown Senior High School, Redgate. Owner: U.S. Geological Survey.

AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 358 ft; casing diameter 4 in., to 210 ft; casing diameter 2 in., from 210 to 348 ft; screen diameter 2 in., from 348 to 358 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 119.30 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.70 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

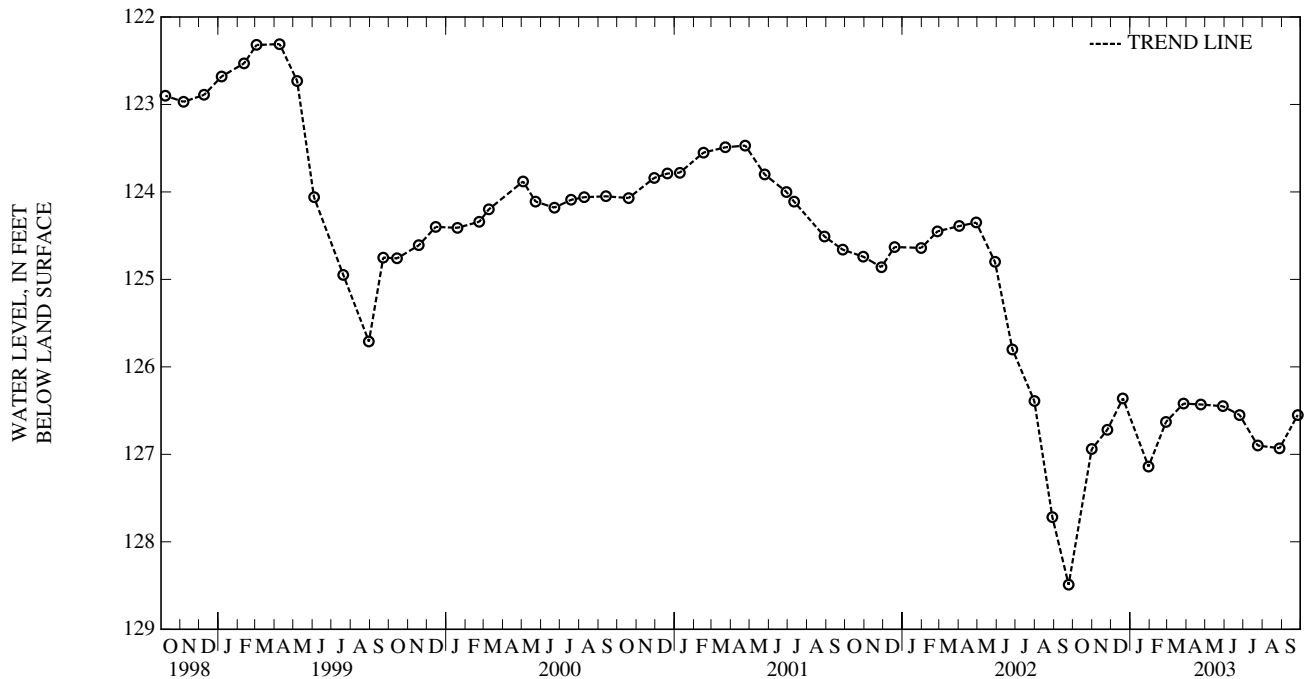
PERIOD OF RECORD.--July 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 111.06 ft below land surface, October 30, 1980; lowest measured, 128.49 ft below land surface, September 24, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	126.94	JAN 30, 2003	127.14	APR 24, 2003	126.43	JUL 24, 2003	126.90
NOV 25	126.72	FEB 27	126.63	MAY 29	126.45	AUG 28	126.93
DEC 20	126.36	MAR 27	126.42	JUN 25	126.55	SEP 26	126.55

HIGHEST 126.36 DEC 20, 2002
 LOWEST 127.14 JAN 30, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ST. MARYS COUNTY--Continued

WELL NUMBER.--SM Dd 63. SITE ID.--381615076364701. PERMIT NUMBER.--SM-73-3785.

LOCATION.--Lat 38°16'15", long 76°36'47", Hydrologic Unit 02070011, at Leonardtown Senior High School, Redgate. Owner: U.S. Geological Survey.

AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.

WELL CHARACTERISTICS.--Drilled, unused, artesian well, depth 356 ft; casing diameter 4 in., to 327 ft; casing diameter 2 in., from 327 to 346 ft; screen diameter 2 in., from 346 to 356 ft.

INSTRUMENTATION.--Twice yearly water level measurements with electric tape by U.S. Geological Survey personnel. Monthly water level measurements from October 1977 to October 1986.

DATUM.--Elevation of land surface is 119.72 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.00 ft above land surface.

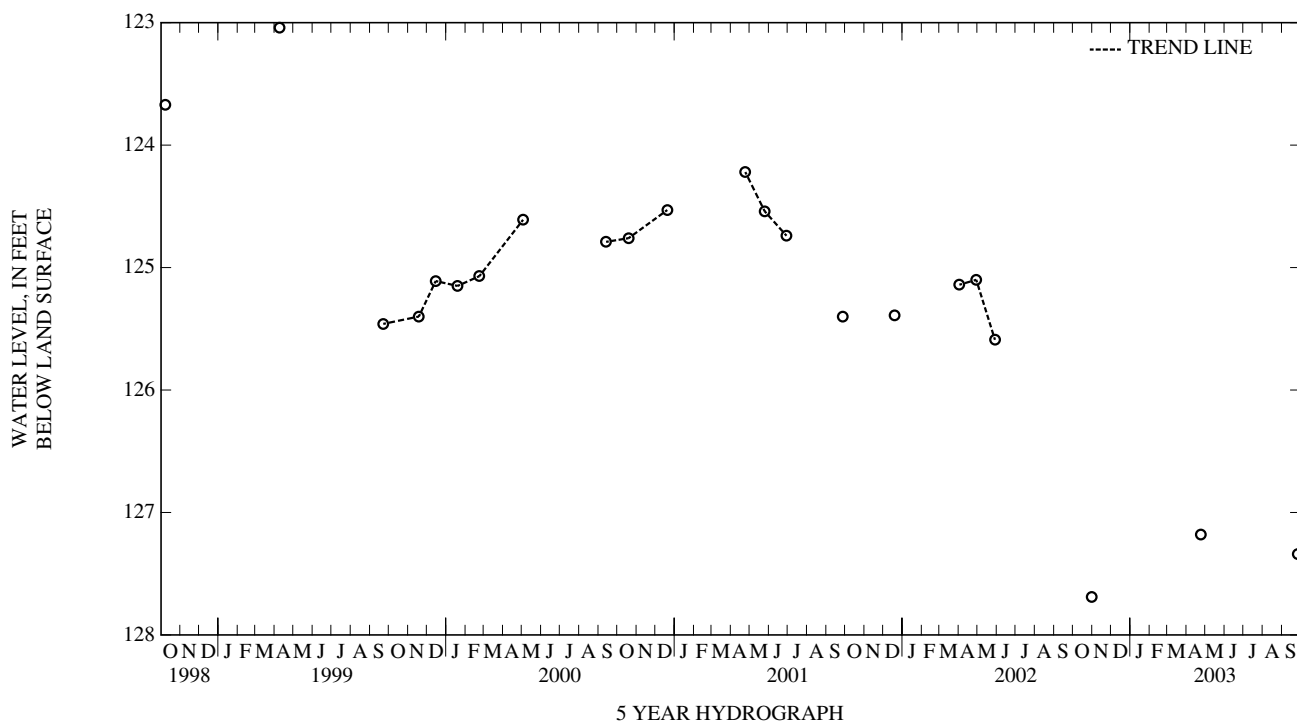
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

PERIOD OF RECORD.--July 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 113.15 ft below land surface, March 2, 1981; lowest measured, 127.69 ft below land surface, October 31, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	127.69	APR 24, 2003	127.18	SEP 26, 2003	127.34
HIGHEST 127.18 APR 24, 2003					
LOWEST 127.69 OCT 31, 2002					



ST. MARYS COUNTY--Continued

WELL NUMBER.--SM Dd 72. SITE ID.--381626076393401. PERMIT NUMBER.--SM-94-3616.

LOCATION.--Lat 38°16'26", long 76°39'34", Hydrologic Unit 02070011, at Paw Paw Hollow Lane, 1.5 mi southwest of Leonardtown. Owner: U.S. Geological Survey.

AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 1,340 ft; casing diameter 8 in., to 60 ft; casing diameter 4 in., from +2.52 to 1,300 ft, and 1,330 to 1,340 ft; screen diameter 4 in., from 1,300 to 1,330 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from July 2001 to current year.

DATUM.--Elevation of land surface is 109.99 ft above North American Vertical Datum of 1988. Measuring point: Top of shelter platform, 2.69 ft above land surface.

REMARKS.--Southern Maryland Patapsco Aquifer Well Drilling Project observation well. Water levels are affected by regional ground-water withdrawal.

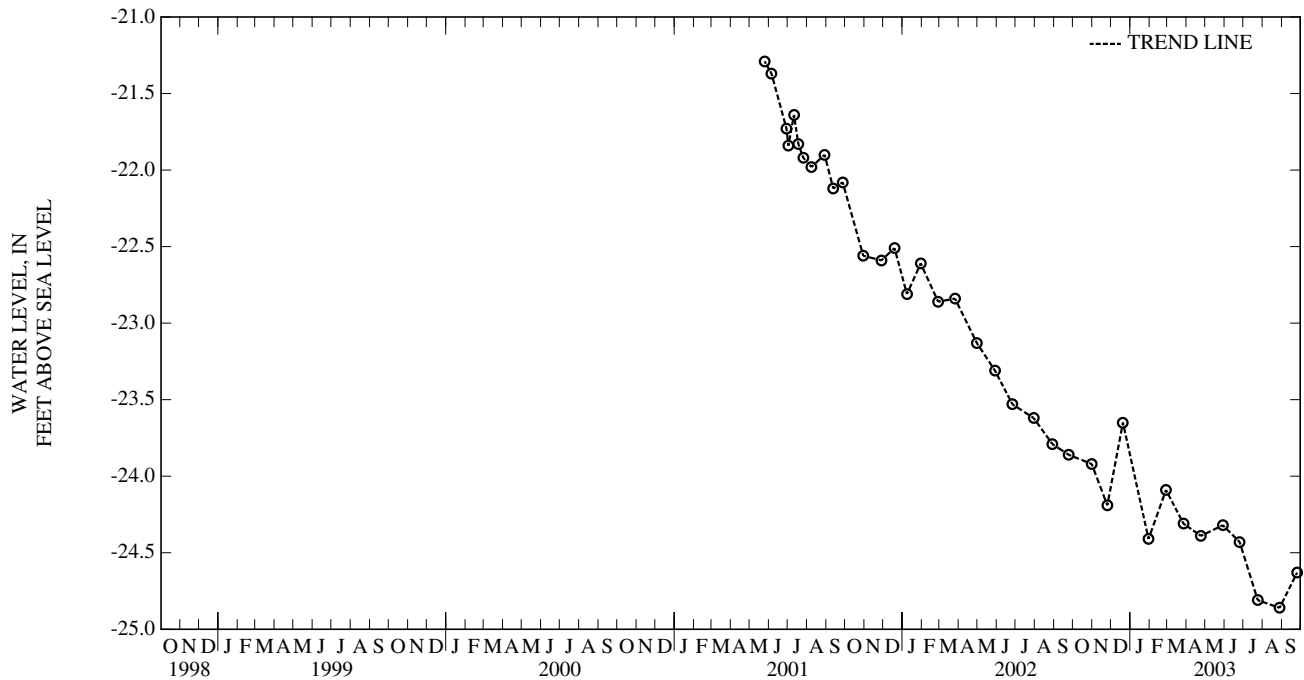
PERIOD OF RECORD.--May 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 19.43 ft below sea level, May 25, 2001; lowest measured, 23.93 ft below sea level, August 28, 2003.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	-23.92	JAN 30, 2003	-24.41	APR 24, 2003	-24.39	JUL 24, 2003	-24.81
NOV 25	-24.19	FEB 27	-24.09	MAY 29	-24.32	AUG 28	-24.86
DEC 20	-23.65	MAR 27	-24.31	JUN 25	-24.43	SEP 25	-24.63

LOWEST -24.86 AUG 28, 2003
 HIGHEST -23.65 DEC 20, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ST. MARYS COUNTY--Continued

WELL NUMBER.--SM Df 61. PERMIT NUMBER.--SM-05-5823.

LOCATION.-- Hydrologic Unit 02060006, at Patuxent River Naval Air Test Station. Owner: U.S. Navy.

AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.

WELL CHARACTERISTICS.--Drilled, artesian well, depth 600 ft; casing diameter 8 in., to 559 ft; casing diameter 6 in., from 540 to 580 ft; screen diameter 6 in., from 580 to 600 ft.

INSTRUMENTATION.--Monthly water level measurements with steel tape by U.S. Geological Survey personnel. Periodic water level measurements from September 1984 to September 1999. Equipped with digital water-level recorder--15-minute recording interval, September 1999 to current year.

DATUM.--Elevation of land surface is 108.86 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of shelter platform, 1.70 ft above land surface.

REMARKS.--Naval Air Station Patuxent River Ground Water Hydrogeology project observation/production well. The water-level on March 3, 1964 was reported as 47 ft below sea level. Water levels are affected by well being pumped and regional ground-water withdrawal. Missing data due to recorder malfunction.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 66.77 ft below sea level, September 21, 1984; lowest measured, 200.40 ft below sea level, August 16 and 22, 2002 (recorder).

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	-152.47	MAY 28, 2003	-145.24	JUL 24, 2003	-148.05
MAR 31, 2003	-139.76	JUN 24	-147.74	AUG 28	-141.60

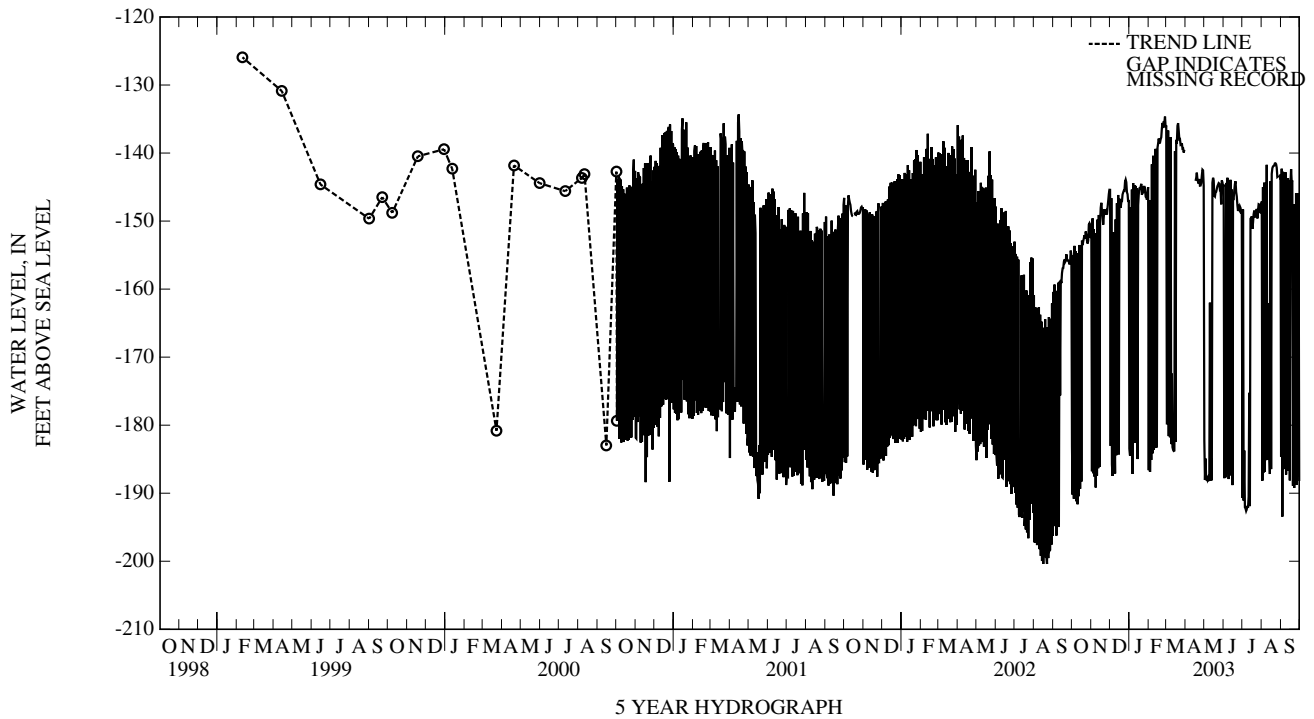
LOWEST -152.47 OCT 31, 2002
 HIGHEST -139.76 MAR 31, 2003

DAY	MAX		MIN		MAX		MIN		MAX		MIN	
	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH						
1	-153.47	-183.14	-149.42	-152.18	-144.49	-145.41	-146.17	-183.45	-141.97	-186.62	-135.21	-135.94
2	-154.99	-190.22	-148.66	-186.78	-145.27	-183.05	-146.15	-184.48	-142.39	-146.90	-135.14	-179.75
3	-153.82	-155.01	-148.57	-149.60	-144.09	-146.62	-145.18	-147.99	-142.60	-186.88	-135.36	-179.76
4	-153.64	-190.82	-149.06	-187.07	-146.62	-185.78	-145.25	-183.03	-140.76	-177.76	-135.40	-136.69
5	-152.55	-153.64	-150.14	-151.17	-149.07	-187.46	-143.90	-145.37	-141.59	-185.11	-136.62	-181.61
6	-152.72	-189.47	-149.95	-187.56	-148.67	-151.63	-144.02	-187.15	-139.89	-141.65	-136.22	-137.82
7	-153.70	-154.45	-150.63	-151.77	-148.52	-186.45	-142.87	-144.40	-140.16	-184.15	-136.76	-181.78
8	-153.61	-191.19	-151.04	-189.16	-147.73	-180.61	-142.92	-182.43	-139.11	-140.40	-136.99	-137.68
9	-153.53	-154.76	-149.71	-152.16	-149.75	-187.10	-143.55	-144.70	-139.50	-183.61	-137.56	-182.78
10	-154.26	-191.63	-149.59	-187.42	-147.08	-149.75	-143.50	-182.58	-139.57	-183.02	-138.06	-172.43
11	-153.33	-154.86	-148.34	-149.77	-146.78	-184.42	-143.13	-144.83	-139.14	-182.94	-140.09	-183.22
12	-153.43	-190.44	-148.40	-186.33	-146.11	-147.37	-143.25	-182.28	-138.37	-139.38	-139.43	-183.64
13	-151.96	-153.51	-148.08	-149.10	-146.08	-183.90	-143.46	-145.15	-138.43	-183.31	-139.41	-183.79
14	-151.71	-189.35	-148.42	-186.13	-144.79	-146.16	-145.14	-184.98	-138.81	-182.93	-139.72	-183.74
15	-151.51	-153.66	-148.05	-150.39	-145.94	-184.30	-144.92	-147.66	-137.91	-139.20	-137.71	-139.72
16	-151.31	-188.30	-147.22	-148.05	-145.86	-146.73	-144.90	-146.04	-137.81	-138.58	-137.64	-182.43
17	-152.21	-152.87	-146.29	-147.31	-146.01	-147.03	-144.02	-145.20	-136.62	-137.87	-137.52	-138.05
18	-152.27	-153.54	-146.70	-148.48	-146.86	-148.04	-144.04	-145.19	-137.19	-138.50	-135.93	-138.61
19	-151.73	-152.95	-147.90	-149.04	-145.98	-147.20	-143.71	-144.95	-137.31	-138.48	-132.47	-135.99
20	-151.82	-152.53	-149.02	-150.53	-146.07	-147.10	-143.32	-144.52	-136.95	-137.98	-132.32	-135.61
21	-151.20	-152.09	-147.57	-149.26	-144.96	-146.09	-144.27	-146.13	-136.37	-137.69	-134.83	-136.75
22	-151.43	-152.61	-147.35	-148.26	-144.91	-145.79	-144.54	-145.85	-134.89	-136.37	-136.72	-138.00
23	-150.82	-151.53	-147.41	-148.89	-144.22	-145.53	-144.38	-145.39	-134.12	-135.57	-136.69	-137.96
24	-150.90	-152.08	-147.61	-148.90	-144.23	-145.55	-143.85	-144.83	-135.32	-136.32	-137.37	-138.82
25	-151.11	-152.85	-147.76	-148.65	-142.77	-144.23	-144.15	-145.49	-134.34	-135.32	-137.68	-138.79
26	-152.45	-153.30	-147.73	-149.03	-142.69	-143.91	-143.90	-145.32	-134.38	-135.52	-137.73	-138.56
27	-149.43	-152.89	-146.40	-147.96	-143.78	-144.28	-144.72	-146.36	-133.68	-134.64	-138.00	-139.35
28	-149.44	-150.51	-145.28	-147.04	-144.22	-145.77	-145.71	-146.37	-134.54	-136.23	-138.22	-139.31
29	-149.03	-150.32	-145.13	-146.04	-145.60	-146.04	-145.79	-146.85	---	---	-139.09	-139.92
30	-149.21	-150.56	-144.28	-145.40	-145.86	-147.19	-144.93	-145.83	---	---	-137.78	-139.53
31	-150.56	-152.48	---	---	-145.71	-146.89	-143.21	-145.00	---	---	---	---
MONTH	-149.03	-144.28	-189.16	-142.69	-187.46	-142.87	-187.15	-133.68	-186.88	-132.32	-183.79	

ST. MARYS COUNTY--Continued

DAY	MAX		MIN		MAX		MIN		MAX		MIN		MAX		MIN									
	APRIL				MAY				JUNE				JULY				AUGUST				SEPTEMBER			
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN		
1	---	---	-142.90	-182.19	-143.42	-144.62	-148.29	-190.67	-145.71	-147.12	-141.75	-184.65												
2	---	---	-145.46	-188.06	-144.56	-187.79	-146.90	-148.29	-145.00	-188.16	-141.17	-142.30												
3	---	---	-144.43	-184.91	-144.46	-171.68	-147.90	-191.09	-143.21	-145.00	-142.11	-193.44												
4	---	---	-143.44	-188.10	-144.39	-187.67	-148.52	-183.72	-144.08	-186.96	-140.88	-142.75												
5	---	---	-142.90	-187.77	-143.02	-144.39	-149.97	-192.08	-142.25	-144.35	-141.75	-186.46												
6	---	---	-144.90	-188.06	-142.97	-187.06	-149.08	-192.24	-143.36	-186.82	-141.36	-168.58												
7	---	---	-144.43	-187.77	-143.11	-143.63	-150.05	-192.60	-141.19	-144.45	-142.35	-185.37												
8	---	---	-142.90	-188.10	-143.38	-182.11	-149.47	-192.34	-141.10	-185.14	-141.71	-142.82												
9	---	---	-143.02	-188.06	-145.41	-187.92	-148.51	-191.86	-139.54	-141.73	-142.77	-187.25												
10	---	---	-144.43	-161.99	-143.97	-145.41	-148.33	-192.16	-141.72	-185.03	-142.63	-144.29												
11	---	---	-144.45	-188.10	-143.93	-187.38	-147.72	-190.49	-140.59	-162.11	-143.15	-186.69												
12	---	---	-144.43	-184.91	-142.76	-143.93	-148.23	-175.24	-142.54	-184.87	-142.43	-143.71												
13	---	---	-144.74	-188.10	-142.85	-186.01	-149.58	-191.90	-141.98	-183.56	-142.92	-186.23												
14	---	---	-142.79	-144.37	-144.30	-145.36	-148.61	-149.65	-144.11	-187.18	-142.81	-144.02												
15	---	---	-142.51	-143.63	-145.34	-188.81	-148.98	-149.51	-142.24	-144.15	-144.02	-188.12												
16	---	---	-142.37	-144.01	-146.16	-146.65	-148.76	-149.33	-142.29	-186.46	-140.61	-144.52												
17	-143.25	-144.09	-144.01	-146.27	-145.49	-146.70	-149.26	-151.15	-141.32	-143.06	-139.64	-142.35												
18	-142.30	-143.66	-145.64	-146.38	-143.87	-145.49	-148.47	-150.26	-141.59	-142.22	-141.01	-144.22												
19	-141.36	-142.88	-144.83	-145.75	-143.78	-144.55	-148.07	-149.00	-140.46	-141.97	-141.40	-144.02												
20	-142.85	-143.92	-144.60	-145.69	-143.08	-144.15	-147.51	-148.46	-141.29	-141.89	-143.82	-188.91												
21	-142.88	-144.20	-144.08	-145.29	-144.13	-145.71	-148.34	-149.21	-139.11	-141.84	-145.79	-148.04												
22	-143.81	-144.50	-143.39	-144.86	-145.32	-146.37	-148.71	-149.46	-139.12	-141.53	-146.85	-189.23												
23	-141.49	-143.81	-143.04	-144.66	-146.36	-147.70	-147.22	-148.72	-139.83	-141.51	-143.33	-147.50												
24	-142.05	-144.79	-142.93	-144.42	-147.21	-148.51	-147.75	-148.21	-140.79	-141.64	-143.37	-187.41												
25	-144.21	-144.77	-143.29	-144.50	-147.17	-148.04	-147.55	-149.61	-140.75	-142.14	-144.56	-145.91												
26	-143.35	-144.42	-144.27	-145.38	-147.19	-148.28	-146.77	-148.45	-142.10	-143.52	-145.27	-188.79												
27	-141.57	-143.35	-144.41	-145.31	-146.89	-145.84	-146.68	-147.52	-141.55	-143.45	-144.82	-146.93												
28	-141.69	-142.45	-144.02	-147.54	-147.32	-148.07	-146.64	-147.57	---	---	-144.74	-187.51												
29	-141.09	-142.55	-142.36	-144.02	-147.43	-148.76	-147.05	-148.69	-142.25	-143.28	-143.92	-145.88												
30	-142.42	-144.83	-142.30	-144.30	-147.93	-148.75	-147.55	-148.72	-142.89	-143.50	-145.62	-188.20												
31	---	---	-143.51	-144.88	---	---	-147.12	-148.09	-140.95	-143.18	---	---												
MONTH	-141.09	-144.83	-142.30	-188.10	-142.76	-188.81	-146.64	-192.60	-139.11	-188.16	-139.64	-193.44												
YEAR	-132.32	-193.44																						

Daily Low Water Levels



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 water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 15 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.00 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

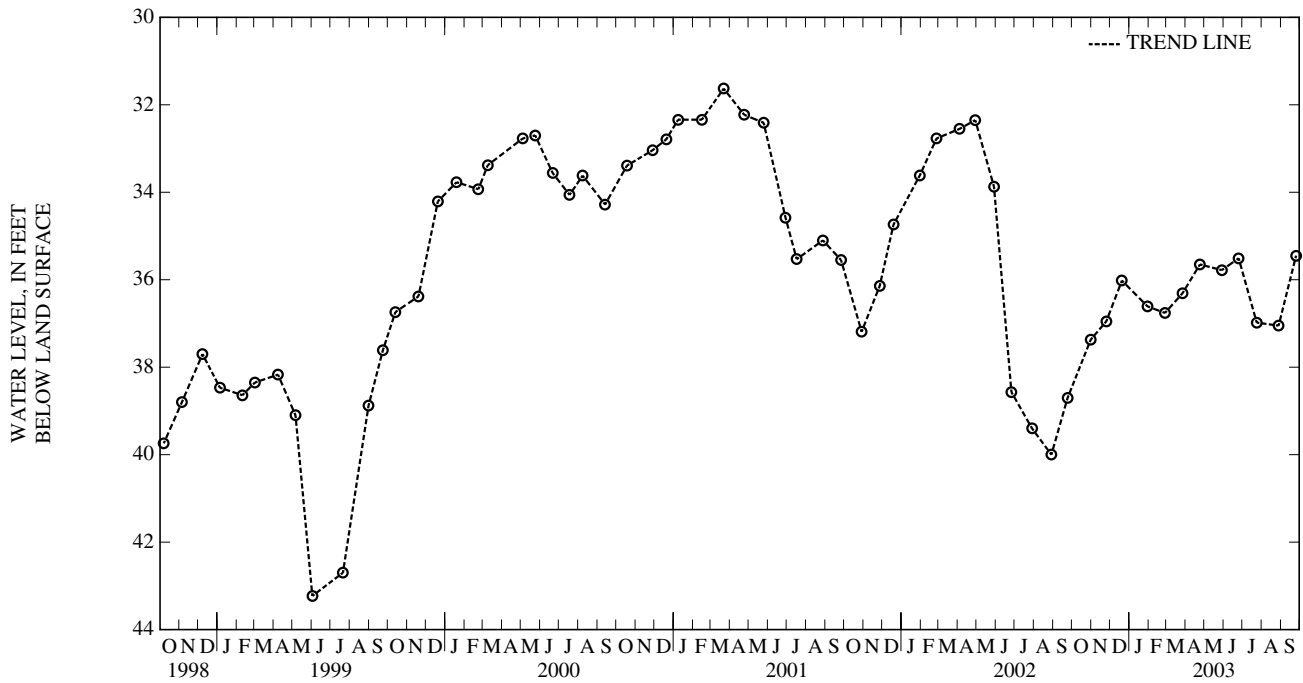
PERIOD OF RECORD.--July 1976 to current year.

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 LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	37.37	JAN 30, 2003	36.61	APR 24, 2003	35.65	JUL 24, 2003	36.98
NOV 25	36.95	FEB 27	36.76	MAY 29	35.78	AUG 28	37.05
DEC 20	36.02	MAR 27	36.31	JUN 25	35.51	SEP 25	35.45

HIGHEST 35.45 SEP 25, 2003
 LOWEST 37.37 OCT 31, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ST. MARYS COUNTY--Continued

WELL NUMBER.--SM Df 71. SITE ID.--381527076283101. PERMIT NUMBER.--SM-73-3431.

LOCATION.--Lat 38°15'27", long 76°28'31", Hydrologic Unit 02070011, at Cheryl Dr. and Great Mills Rd., Lexington Park. Owner: U.S. Geological Survey.

AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 560 ft; casing diameter 4 in., to 420 ft; casing diameter 2 in., from 420 to 550 ft; screen diameter 2 in., from 550 to 560 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 69.15 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.80 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

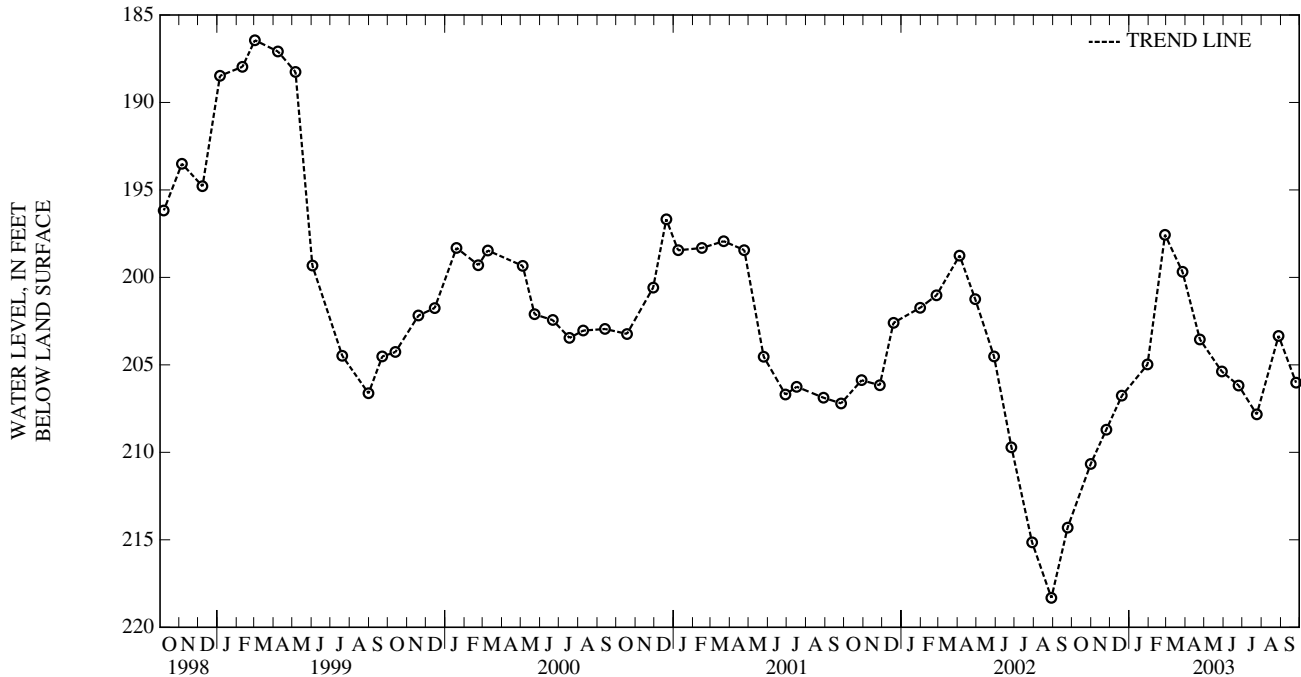
PERIOD OF RECORD.--August 1979 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 119.19 ft below land surface, May 1, 1980; lowest measured, 218.32 ft below land surface, August 29, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	210.66	JAN 30, 2003	204.98	APR 24, 2003	203.55	JUL 24, 2003	207.83
NOV 25	208.70	FEB 27	197.56	MAY 29	205.38	AUG 28	203.34
DEC 20	206.76	MAR 27	199.68	JUN 25	206.18	SEP 25	206.02

HIGHEST 197.56 FEB 27, 2003
 LOWEST 210.66 OCT 31, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

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 0207011, at Lexington Park. Owner: Maryland Geological Survey.

AQUIFER.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 912 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 ft; screen diameter 4 in., from 831 to 856 ft, 862 to 867 ft, and 897 to 912 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60 minute recorder interval from February 2000 to current year.

DATUM.--Elevation of land surface is 108.39 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.80 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network and Naval Air Station Patuxent River Ground Water Hydrology project observation well. Water levels are affected by regional ground-water withdrawal. Missing data due to recorder malfunction.

PERIOD OF RECORD.--January 1983 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.29 ft below sea level, February 3, 1983; lowest measured, 43.38 ft below sea level, August 28, 2003.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

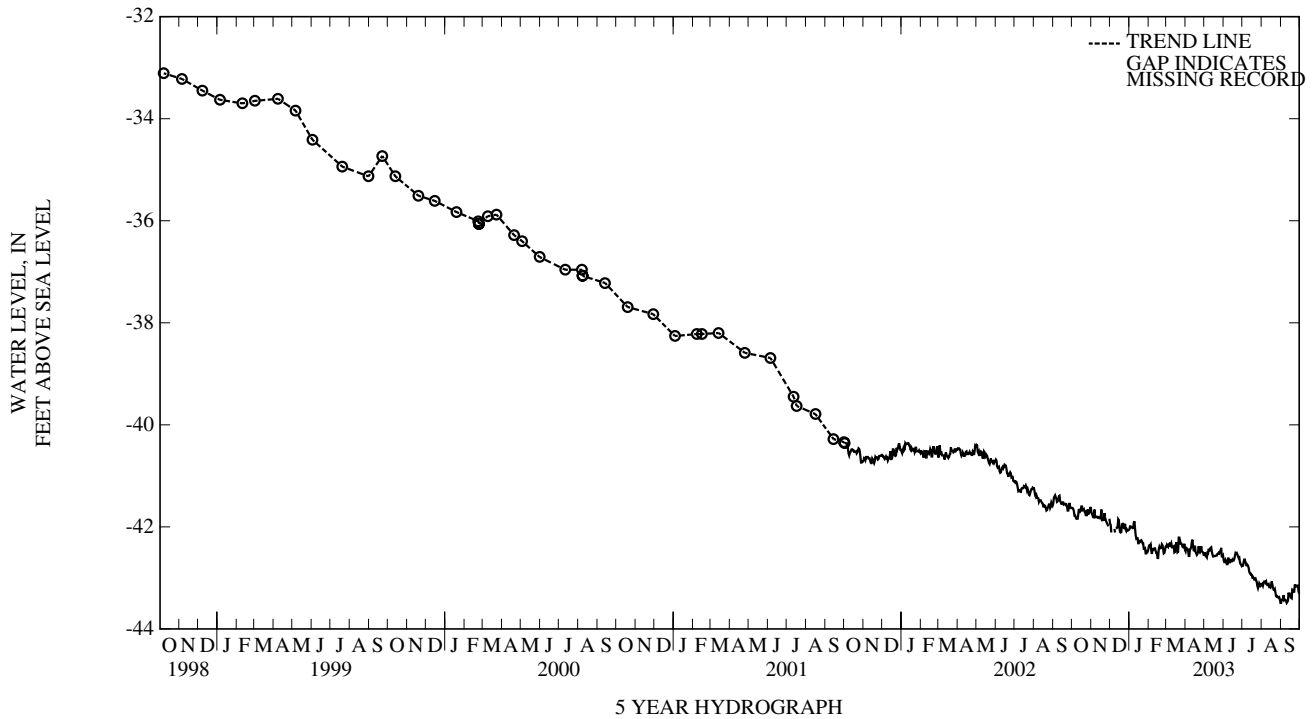
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	-41.61	JAN 30, 2003	-42.49	MAY 07, 2003	-42.53	AUG 28, 2003	-43.38
NOV 25	-41.84	FEB 27	-42.44	29	-42.36	SEP 25	-43.17
DEC 10	-42.05	MAR 27	-42.34	JUN 25	-42.61		
20	-41.75	APR 22	-42.36	JUL 23	-43.00		
JAN 15, 2003	-42.26	24	-42.44	24	-43.08		
	LOWEST	-43.38	AUG 28, 2003				
	HIGHEST	-41.61	OCT 31, 2002				

DAY	MAX		MIN		MAX		MIN		MAX		MIN	
	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH						
1	-41.62	-41.63	-41.58	-41.71	-41.84	-41.94	-41.86	-42.05	-42.28	-42.39	-42.35	-42.39
2	-41.59	-41.63	-41.68	-41.74	-41.92	-41.96	-41.91	-41.99	-42.29	-42.36	-42.17	-42.35
3	-41.59	-41.65	-41.72	-41.78	-41.92	-42.11	-41.91	-41.99	-42.33	-42.36	-42.25	-42.37
4	-41.65	-41.69	-41.72	-41.77	---	---	-41.92	-42.01	-42.21	-42.34	-42.34	-42.39
5	-41.66	-41.78	-41.66	-41.83	-41.86	-42.10	-42.00	-42.01	-42.34	-42.47	-42.22	-42.34
6	-41.74	-41.78	-41.53	-41.66	---	---	-41.97	-42.01	-42.44	-42.53	-42.22	-42.33
7	-41.72	-41.81	-41.65	-41.81	---	---	-41.92	-42.04	-42.31	-42.44	-42.33	-42.39
8	-41.81	-41.84	-41.77	-41.81	-41.98	-42.04	-41.79	-41.92	-42.37	-42.45	-42.29	-42.35
9	-41.84	-41.84	-41.79	-41.80	-42.04	-42.11	-41.79	-41.89	-42.42	-42.44	-42.24	-42.32
10	-41.76	-41.84	-41.72	-41.80	---	---	-41.89	-42.03	-42.31	-42.42	-42.32	-42.40
11	-41.65	-41.76	-41.73	-41.82	-41.87	-42.00	-42.03	-42.16	-42.36	-42.42	-42.39	-42.40
12	-41.64	-41.65	-41.74	-41.82	-41.92	-42.02	-42.16	-42.23	-42.38	-42.47	-42.33	-42.39
13	-41.65	-41.68	-41.76	-41.81	-41.77	-42.01	-42.11	-42.22	-42.45	-42.51	-42.28	-42.38
14	-41.67	-41.70	-41.80	-41.83	-41.74	-41.85	-42.15	-42.22	-42.51	-42.51	-42.38	-42.50
15	-41.60	-41.68	-41.78	-41.83	-41.85	-41.87	-42.21	-42.32	-42.47	-42.61	-42.42	-42.49
16	-41.42	-41.60	-41.64	-41.83	-41.83	-42.01	-42.25	-42.32	-42.44	-42.61	-42.30	-42.43
17	-41.50	-41.60	-41.56	-41.66	-42.01	-42.10	-42.15	-42.28	-42.32	-42.44	-42.27	-42.30
18	-41.60	-41.67	-41.66	-41.87	-42.10	-42.11	-42.27	-42.29	-42.33	-42.39	-42.25	-42.35
19	-41.58	-41.66	-41.78	-41.87	-41.95	-42.10	-42.24	-42.27	-42.36	-42.42	-42.34	-42.50
20	-41.58	-41.65	-41.82	-41.86	-41.78	-41.95	-42.16	-42.26	-42.37	-42.42	-42.17	-42.49
21	-41.64	-41.70	-41.73	-41.86	-41.90	-41.94	-42.25	-42.28	-42.34	-42.40	-42.14	-42.21
22	-41.67	-41.70	-41.56	-41.73	-41.89	-41.94	-42.28	-42.32	-42.12	-42.34	-42.16	-42.21
23	-41.69	-41.77	-41.71	-41.82	-41.93	-42.01	-42.27	-42.32	-42.08	-42.36	-42.21	-42.26
24	-41.76	-41.77	-41.82	-41.86	-41.94	-42.04	-42.29	-42.43	-42.36	-42.43	-42.25	-42.33
25	-41.66	-41.77	-41.86	-41.90	-41.76	-41.94	-42.42	-42.43	-42.43	-42.52	-42.29	-42.33
26	-41.59	-41.66	-41.90	-41.93	-41.90	-42.05	-42.35	-42.42	-42.46	-42.51	-42.26	-42.34
27	-41.65	-41.74	-41.92	-41.95	-42.05	-42.08	-42.36	-42.52	-42.34	-42.46	-42.33	-42.39
28	-41.66	-41.74	-41.95	-41.99	-41.97	-42.05	-42.42	-42.52	-42.32	-42.39	-42.39	-42.40
29	-41.63	-41.71	---	---	-41.95	-42.07	-42.39	-42.48	---	---	-42.28	-42.39
30	-41.55	-41.64	-41.74	-41.84	-42.04	-42.07	-42.45	-42.49	---	---	-42.27	-42.33
31	-41.56	-41.61	---	---	-42.03	-42.06	-42.39	-42.46	---	---	-42.30	-42.45
MONTH	-41.42	-41.84	-41.53	-41.99	-41.74	-42.11	-41.79	-42.52	-42.08	-42.61	-42.14	-42.50

ST. MARYS COUNTY--Continued

DAY	MAX		MIN		MAX		MIN		MAX		MIN		MAX		MIN									
	APRIL				MAY				JUNE				JULY				AUGUST				SEPTEMBER			
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN						
1	-42.32	-42.48	-42.45	-42.55	-42.48	-42.65	-42.73	-42.76	-43.08	-43.12	-43.41	-43.49												
2	-42.33	-42.41	-42.41	-42.50	-42.65	-42.69	-42.68	-42.76	-43.08	-43.11	-43.37	-43.43												
3	-42.35	-42.42	-42.47	-42.57	-42.65	-42.69	-42.59	-42.68	-43.06	-43.15	-43.35	-43.43												
4	-42.37	-42.43	-42.57	-42.58	-42.63	-42.65	-42.60	-42.64	-43.04	-43.10	-43.30	-43.41												
5	-42.36	-42.46	-42.50	-42.60	-42.63	-42.68	-42.63	-42.64	-43.01	-43.07	-43.30	-43.34												
6	-42.46	-42.57	-42.47	-42.51	-42.67	-42.73	-42.64	-42.70	-43.01	-43.07	-43.34	-43.44												
7	-42.41	-42.57	-42.40	-42.52	-42.58	-42.73	-42.69	-42.74	-43.03	-43.09	-43.39	-43.43												
8	-42.41	-42.44	-42.38	-42.43	-42.58	-42.62	-42.70	-42.73	-43.04	-43.07	-43.38	-43.43												
9	-42.36	-42.43	-42.40	-42.46	-42.58	-42.62	-42.73	-42.76	-43.05	-43.13	-43.41	-43.45												
10	-42.29	-42.39	-42.40	-42.46	-42.62	-42.68	-42.73	-42.76	-43.06	-43.14	-43.45	-43.49												
11	-42.17	-42.29	-42.30	-42.41	-42.61	-42.66	-42.72	-42.80	-43.07	-43.13	-43.43	-43.47												
12	-42.17	-42.25	-42.32	-42.40	-42.62	-42.68	-42.80	-42.88	-43.08	-43.12	-43.29	-43.45												
13	-42.25	-42.39	-42.40	-42.48	-42.62	-42.66	-42.84	-42.91	-43.10	-43.18	-43.28	-43.29												
14	-42.39	-42.46	-42.47	-42.54	-42.61	-42.67	-42.88	-42.91	-43.15	-43.18	-43.29	-43.33												
15	-42.35	-42.46	-42.52	-42.58	-42.59	-42.64	-42.89	-42.94	-43.13	-43.19	-43.26	-43.32												
16	-42.31	-42.37	-42.52	-42.58	-42.62	-42.66	-42.92	-42.94	-43.01	-43.14	-43.28	-43.37												
17	-42.36	-42.49	-42.55	-42.57	-42.63	-42.66	-42.94	-42.99	-43.02	-43.07	-43.34	-43.39												
18	-42.45	-42.52	-42.57	-42.57	-42.57	-42.63	-42.97	-42.98	-43.07	-43.13	-43.05	-43.40												
19	-42.52	-42.55	-42.55	-42.57	-42.50	-42.57	-42.98	-43.00	-43.13	-43.19	-43.14	-43.23												
20	-42.47	-42.53	-42.55	-42.56	-42.49	-42.51	-42.99	-43.03	-43.19	-43.23	-43.18	-43.24												
21	-42.32	-42.49	-42.51	-42.56	-42.48	-42.52	-42.95	-43.02	-43.20	-43.24	-43.19	-43.27												
22	-42.29	-42.38	-42.50	-42.53	-42.48	-42.51	-42.95	-43.01	-43.16	-43.22	-43.12	-43.27												
23	-42.38	-42.48	-42.50	-42.53	-42.50	-42.54	-42.99	-43.05	-43.17	-43.29	-43.07	-43.13												
24	-42.43	-42.50	-42.48	-42.51	-42.51	-42.58	-43.04	-43.08	-43.25	-43.36	-43.12	-43.17												
25	-42.38	-42.47	-42.48	-42.52	-42.58	-42.61	-43.08	-43.16	-43.31	-43.37	-43.14	-43.17												
26	-42.31	-42.38	-42.39	-42.48	-42.60	-42.60	-43.14	-43.20	-43.31	-43.36	-43.14	-43.15												
27	-42.36	-42.48	-42.38	-42.47	-42.60	-42.69	-43.07	-43.15	-43.32	-43.38	-43.09	-43.15												
28	-42.46	-42.49	-42.34	-42.41	-42.69	-42.73	-43.06	-43.10	-43.36	-43.39	-43.08	-43.15												
29	-42.44	-42.50	-42.33	-42.58	-42.71	-42.74	-43.06	-43.12	-43.37	-43.38	-43.15	-43.27												
30	-42.49	-42.55	-42.53	-42.58	-42.72	-42.77	-43.12	-43.16	-43.37	-43.42	-43.27	-43.31												
31	---	---	-42.47	-42.56	---	---	-43.12	-43.15	-43.40	-43.49	---	---												
MONTH	-42.17	-42.57	-42.30	-42.60	-42.48	-42.77	-42.59	-43.20	-43.01	-43.49	-43.05	-43.49												
YEAR	-41.42	-43.49																						

Daily Low Water Levels



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ST. MARYS COUNTY--Continued

WELL NUMBER.--SM Df 100. PERMIT NUMBER.--SM-94-3113.

LOCATION.-- Hydrologic Unit 0206006, at Patuxent River Naval Air Test Station. Owner: U.S. Navy.

AQUIFER.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 910 ft; casing diameter 10 in., to 706 ft; casing diameter 8 in., from 716 ft to 744 ft, 754 to 835 ft, 860 to 882 ft, 892 to 900 ft, and 905 to 910 ft; screen diameter 8 in., from 706 to 716 ft, 744 to 754 ft, 835 to 860 ft, 882 to 892 ft, and 900 to 905 ft.

INSTRUMENTATION.--Monthly water level measurements with steel tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--15-minute recording interval, February 2001 to current year.

DATUM.--Elevation of land surface is 21 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of sanitary cap, 2.05 ft above land surface.

REMARKS.--Naval Air Station Patuxent River Ground Water Hydrology project observation/production well. Water levels are affected by this well being pumped as a production well, and regional ground-water withdrawal. Missing data due to recorder malfunction. A pump test was performed from April 5, 2003 to April 7, 2003, and on April 13, 2003.

PERIOD OF RECORD.--September 2000 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 36.10 ft below sea level, March 5, 2001 (recorder); lowest measured, 115.50 ft below sea level, April 13, 2003 (recorder - see REMARKS).

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

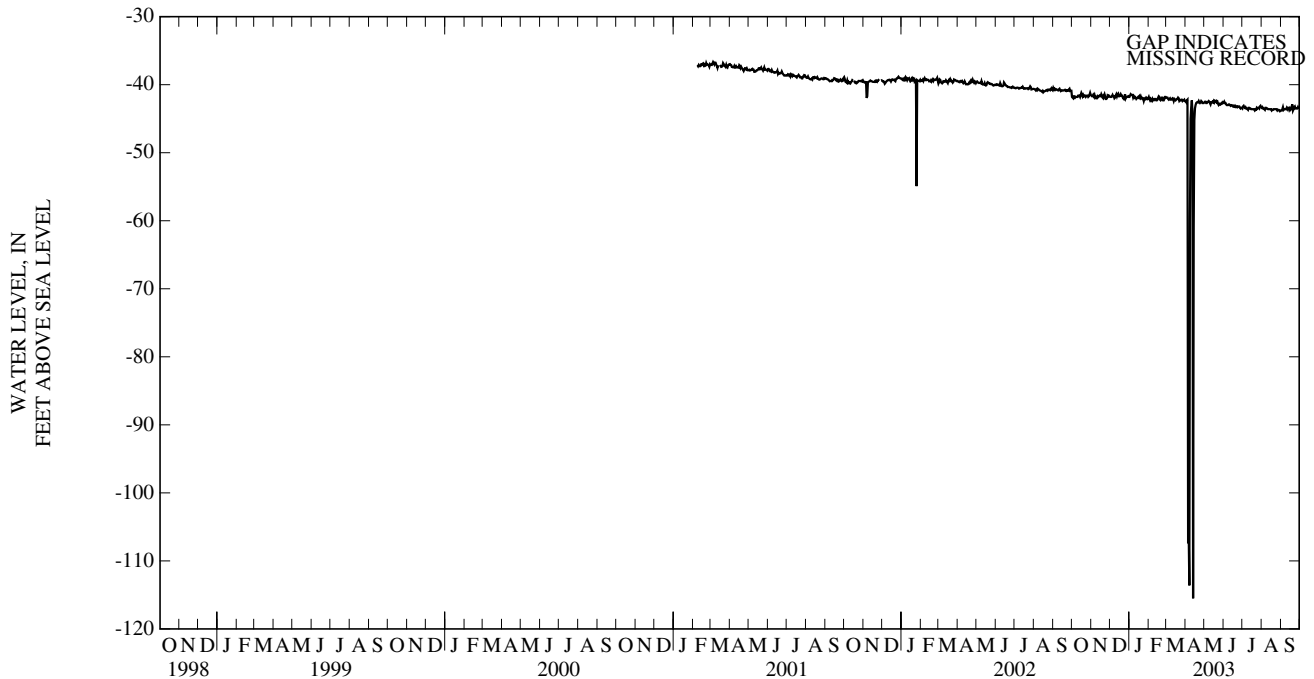
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	-41.47	FEB 21, 2003	-42.07	MAY 28, 2003	-41.93	JUL 24, 2003	-42.40
JAN 15, 2003	-41.88	APR 21	-41.96	JUN 23	-42.28	AUG 28	-43.03
LOWEST -43.03		AUG 28, 2003					
HIGHEST -41.47		OCT 31, 2002					

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-41.2	-41.8	-41.1	-41.6	-41.2	-41.8	-41.2	-41.8	-41.4	-41.8	-41.5	-41.9
2	-41.3	-41.9	-41.1	-41.7	-41.2	-41.8	-41.2	-41.6	-41.5	-42.1	-41.5	-41.9
3	-41.4	-42.0	-41.2	-41.7	-41.4	-41.8	-41.0	-41.4	-41.5	-42.3	-41.4	-41.9
4	-41.2	-41.7	-41.2	-41.5	-41.4	-41.7	-41.0	-41.5	-41.6	-42.1	-41.5	-42.1
5	-41.2	-41.7	-41.2	-41.7	-41.0	-41.5	-41.1	-41.5	-41.6	-42.3	-41.7	-42.2
6	-41.4	-41.9	-41.0	-41.5	-41.1	-41.7	-41.1	-41.5	-41.8	-42.4	-41.5	-42.1
7	-41.3	-41.8	-41.4	-41.9	-40.8	-41.7	-41.2	-41.9	-41.6	-42.1	-41.5	-42.0
8	-41.3	-41.8	-41.2	-41.8	-41.1	-42.0	-41.1	-41.7	-41.6	-42.3	-41.4	-42.2
9	-41.2	-41.8	-41.4	-42.0	-41.4	-41.9	-41.2	-41.9	-41.4	-42.3	-41.6	-42.2
10	-41.3	-41.8	-41.4	-42.0	-41.2	-41.6	-41.3	-41.8	-41.7	-42.1	-41.7	-42.1
11	-41.1	-41.6	-41.4	-41.7	-41.1	-41.4	-41.4	-41.9	-41.6	-42.1	-41.6	-42.0
12	-41.1	-41.6	-41.4	-41.8	-41.2	-41.7	-41.5	-42.1	-41.6	-42.1	-41.7	-42.1
13	-41.1	-41.6	-41.3	-41.7	-41.0	-41.4	-41.5	-42.0	-41.7	-42.3	-41.9	-42.4
14	-41.3	-41.8	-41.2	-41.6	-41.0	-41.3	-41.5	-41.9	-42.0	-42.3	-41.6	-42.1
15	-41.0	-41.5	-41.2	-41.7	-41.2	-41.7	-41.5	-41.8	-41.8	-42.2	-41.6	-42.2
16	-40.7	-41.2	-41.3	-41.7	-41.2	-41.7	-41.5	-41.9	-41.4	-41.9	-41.8	-42.3
17	-41.0	-41.4	-40.9	-41.4	-41.3	-41.6	-41.4	-41.7	-41.3	-41.7	-41.8	-42.2
18	-41.1	-41.7	-40.9	-41.6	-41.2	-41.4	-41.3	-41.9	-41.4	-41.8	-41.7	-42.1
19	-41.1	-41.5	-41.2	-41.9	-41.2	-41.6	-41.1	-41.7	-41.3	-42.2	-41.5	-42.1
20	-41.3	-41.7	-41.5	-42.0	-41.2	-41.6	-41.3	-42.0	-41.6	-42.3	-41.4	-41.9
21	-41.3	-41.6	-41.2	-41.6	-41.1	-41.8	-41.4	-41.9	-41.6	-42.2	-41.3	-42.0
22	-41.2	-41.6	-41.0	-41.4	-41.4	-42.0	-41.4	-42.0	-41.3	-41.9	-41.6	-42.4
23	-41.1	-41.8	-41.1	-41.8	-41.5	-42.1	-41.4	-42.0	-41.4	-41.9	-41.6	-42.3
24	-41.3	-41.7	-41.4	-42.1	-41.2	-41.8	-41.8	-42.4	-41.6	-42.3	-41.7	-42.3
25	-41.3	-41.6	-41.5	-42.1	-41.0	-41.4	-41.5	-42.1	-42.0	-42.3	-41.8	-42.2
26	-41.0	-41.6	-41.4	-42.0	-41.4	-42.0	-41.3	-42.0	-41.6	-42.1	-41.9	-42.2
27	-41.2	-41.8	-41.2	-41.6	-41.2	-41.8	-41.6	-42.1	-41.5	-41.8	-41.9	-42.4
28	-41.2	-41.7	-41.0	-41.7	-41.1	-41.8	-41.5	-41.9	-41.5	-41.8	-41.9	-42.3
29	-40.9	-41.5	-41.1	-41.6	-41.2	-41.8	-41.6	-42.0	---	---	-41.9	-42.3
30	-40.9	-41.2	-41.3	-41.7	-41.3	-41.7	-41.7	-42.1	---	---	-41.8	-42.2
31	-41.1	-41.5	---	---	-41.4	-41.8	-41.5	-42.0	---	---	-41.9	-42.4
MONTH	-40.7	-42.0	-40.9	-42.1	-40.8	-42.1	-41.0	-42.4	-41.3	-42.4	-41.3	-42.4

ST. MARYS COUNTY--Continued

DAY	MAX		MIN		MAX		MIN		MAX		MIN	
	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER						
1	-42.1	-42.5	-42.1	-42.6	-42.2	-42.7	-42.9	-43.5	-42.8	-43.4	-43.2	-43.8
2	-42.1	-42.6	-42.1	-42.5	-42.2	-42.5	-42.8	-43.2	-42.8	-43.3	-43.1	-43.8
3	-42.1	-42.3	-42.2	-42.5	-42.2	-42.7	-42.7	-43.1	-42.8	-43.5	-42.9	-43.6
4	-41.8	-42.2	-42.2	-42.7	-42.3	-42.7	-42.8	-43.3	-42.9	-43.5	-43.0	-43.3
5	-41.8	-107.4	-42.1	-42.7	-42.3	-42.9	-42.8	-43.4	-43.0	-43.6	-43.0	-43.7
6	-44.8	-106.2	-42.1	-42.6	-42.3	-43.0	-42.8	-43.3	-43.0	-43.7	-43.0	-43.6
7	-43.4	-113.6	-42.0	-42.5	-42.3	-43.0	-42.8	-43.5	-42.7	-43.4	-43.0	-43.6
8	-45.0	-59.9	-42.0	-42.4	-42.4	-43.0	-42.9	-43.5	-42.7	-43.4	-43.0	-43.6
9	-43.1	-45.0	-41.9	-42.5	-42.3	-42.9	-43.0	-43.6	-43.0	-43.5	-43.1	-43.6
10	-42.2	-43.3	-42.1	-42.7	-42.4	-42.9	-43.0	-43.7	-42.9	-43.5	-43.0	-43.4
11	-41.7	-42.3	-42.1	-42.9	-42.4	-43.0	-42.7	-43.4	-43.0	-43.6	-42.8	-43.6
12	-41.7	-43.9	-42.2	-42.6	-42.5	-43.1	-42.7	-43.4	-43.1	-43.6	-42.9	-43.4
13	-42.1	-115.5	-42.2	-42.6	-42.4	-43.0	-43.0	-43.5	-43.1	-43.6	-42.9	-43.4
14	-45.0	-60.9	-42.1	-42.5	-42.4	-43.0	-42.9	-43.5	-43.1	-43.6	-42.9	-43.7
15	-43.4	-45.2	-42.1	-42.6	-42.4	-43.1	-43.0	-43.6	-43.0	-43.6	-43.0	-43.5
16	-42.3	-43.5	-42.0	-42.4	-42.5	-43.2	-43.1	-43.6	-42.9	-43.6	-43.1	-43.7
17	-42.5	-43.0	-42.1	-42.6	-42.6	-43.1	-43.1	-43.6	-43.1	-43.8	-43.2	-43.6
18	-42.1	-42.7	-41.9	-42.4	-42.6	-43.2	-43.1	-43.6	-43.1	-43.7	-42.2	-43.2
19	-42.2	-42.6	-42.0	-42.5	-42.5	-43.1	-43.0	-43.6	-43.0	-43.7	-42.2	-42.9
20	-42.2	-42.6	-42.0	-42.4	-42.8	-43.3	-42.9	-43.6	-43.0	-43.6	-42.9	-43.8
21	-42.1	-42.6	-42.0	-42.6	-42.7	-43.3	-43.1	-43.8	-43.1	-43.6	-43.1	-43.6
22	-41.9	-42.4	-42.0	-42.5	-42.7	-43.2	-43.1	-43.7	-43.1	-43.6	-42.8	-43.3
23	-42.3	-42.6	-42.2	-42.8	-42.8	-43.3	-42.8	-43.7	-43.1	-43.6	-42.7	-43.2
24	-42.4	-42.7	-42.3	-43.0	-42.7	-43.2	-42.8	-43.4	-43.0	-43.6	-42.9	-43.5
25	-42.1	-42.6	-42.3	-42.9	-42.6	-43.2	-42.8	-43.5	-42.9	-43.6	-42.9	-43.5
26	-42.1	-42.4	-42.3	-42.8	-42.7	-43.2	-42.9	-43.4	-43.1	-43.8	-42.8	-43.5
27	-42.2	-42.5	-42.3	-42.9	-42.8	-43.4	-42.8	-43.4	-43.1	-43.7	-42.9	-43.5
28	-42.3	-42.7	-42.2	-42.8	-42.8	-43.5	-42.9	-43.5	-43.0	-43.7	-42.8	-43.3
29	-42.3	-42.7	-42.2	-42.8	-42.9	-43.4	-42.8	-43.2	-43.2	-43.8	-42.9	-43.5
30	-42.4	-42.7	-42.1	-42.6	-42.8	-43.4	-42.7	-43.1	-43.2	-43.9	---	---
31	---	---	-42.2	-42.7	---	---	-42.8	-43.3	-43.3	-43.8	---	---
MONTH	-41.7	-115.5	-41.9	-43.0	-42.2	-43.5	-42.7	-43.8	-42.7	-43.9	-42.2	-43.8
YEAR	-40.7	-115.5										

Daily Low Water Levels



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ST. MARYS COUNTY--Continued

WELL NUMBER.--SM Dg 14. PERMIT NUMBER.--SM-92-0370.

LOCATION.-- Hydrologic Unit 02060006, at Patuxent River Naval Air Test Station. Owner: U.S. Navy.

AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.

WELL CHARACTERISTICS.--Drilled, artesian well, depth 542 ft; casing diameter 8 in., to 490 ft, and casing diameter 6 in., from 540 to 542 ft; screen diameter 6 in., from 490 to 540 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--15-minute recording interval, September 1999 to current year.

DATUM.--Elevation of land surface is 19.00 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of shelter platform, 2.20 ft above land surface.

REMARKS.--Naval Air Station Patuxent River Ground Water Hydrogeology project observation/production well. The water-level on April 22, 1994 was reported at 71 ft below sea level. Water levels are affected by this well being pumped as a production well and regional ground-water withdrawal. Missing data due to recorder malfunction.

PERIOD OF RECORD.--September 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 95.30 ft below sea level, April 29, 1996; lowest measured, 196.61 ft below sea level, January 29, 2003 (recorder).

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 10, 2002	-129.50	MAY 28, 2003	-124.56	JUL 24, 2003	-129.72
FEB 21, 2003	-125.98	JUN 24	-124.70	AUG 28	-127.46

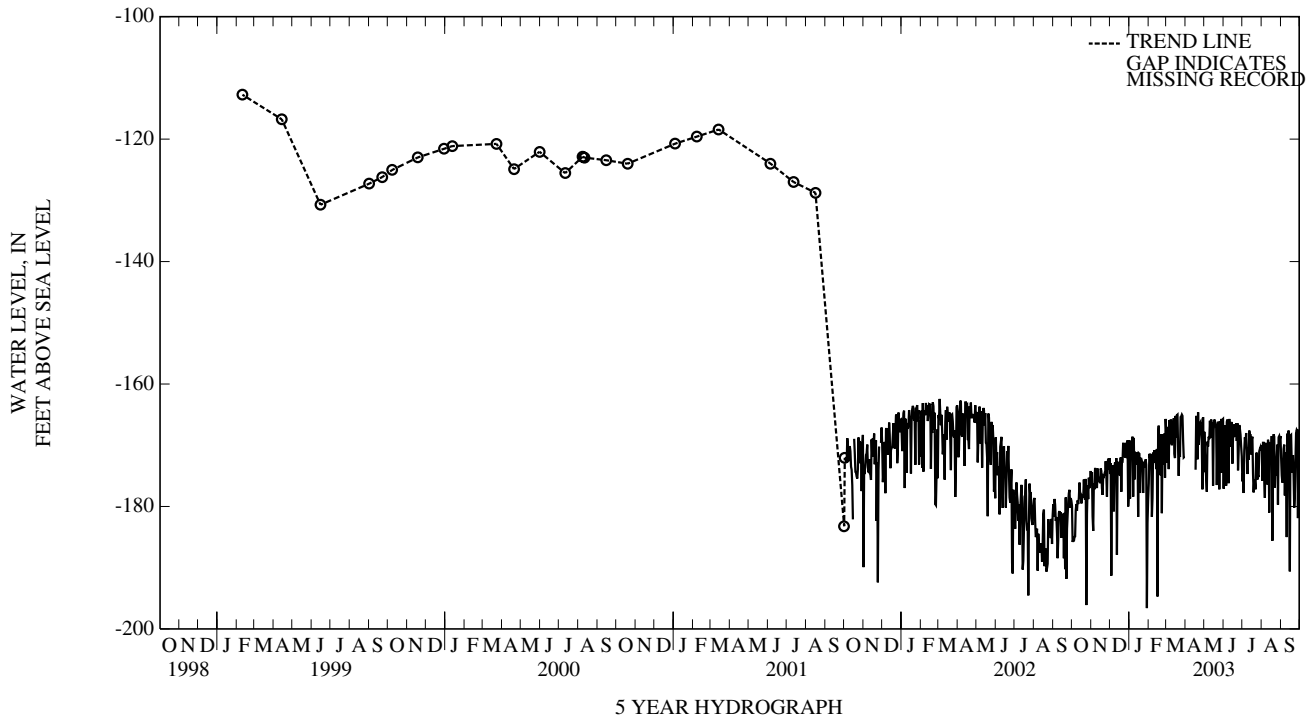
LOWEST -129.72 JUL 24, 2003
 HIGHEST -124.56 MAY 28, 2003

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-136.2	-179.9	-132.9	-176.6	-130.4	-174.7	-127.2	-169.2	-127.2	-176.2	-124.0	-167.8
2	-136.3	-185.8	-132.9	-174.4	-130.2	-172.9	-127.3	-178.7	-127.1	-171.4	-123.8	-172.8
3	-142.2	-185.4	-132.8	-181.6	-130.1	-191.3	-126.8	-170.5	-127.1	-172.1	-123.7	-167.0
4	-143.9	-185.7	-132.6	-184.0	-130.1	-175.1	-127.0	-171.0	-127.2	-171.4	-123.9	-168.6
5	-144.2	-185.0	-132.2	-176.2	-129.3	-173.3	-127.1	-169.7	-127.4	-173.0	-124.0	-173.9
6	-138.9	-184.9	-131.8	-177.2	-129.3	-176.9	-127.0	-168.6	-127.8	-181.7	-123.8	-165.9
7	-137.7	-180.6	-132.3	-173.7	-129.0	-180.8	-127.2	-178.4	-127.6	-178.6	-123.8	-169.8
8	-137.1	-179.6	-131.9	-175.7	-129.0	-173.5	-127.2	-168.8	-127.4	-171.2	-123.7	-165.8
9	-136.6	-180.7	-132.0	-176.3	-129.5	-172.8	-127.1	-175.6	-127.3	-172.9	-123.6	-166.1
10	-136.3	-179.0	-132.3	-177.0	-129.1	-174.6	-127.3	-171.2	-127.4	-170.8	-123.6	-170.0
11	-135.7	-179.6	-132.0	-173.8	-128.8	-172.1	-127.5	-171.3	-127.0	-171.8	-123.5	-166.7
12	-135.4	-178.6	-132.1	-176.0	-129.1	-187.9	-127.6	-171.6	-127.0	-171.4	-123.5	-168.1
13	-135.0	-176.1	-132.0	-175.7	-128.8	-173.3	-127.6	-173.2	-127.1	-173.9	-123.6	-165.6
14	-135.1	-177.8	-131.7	-175.2	-128.5	-172.7	-127.5	-171.2	-126.7	-170.6	-123.2	-171.4
15	-134.6	-177.9	-131.7	-176.2	-128.8	-173.3	-127.5	-181.7	-126.4	-194.7	-123.2	-172.1
16	-134.3	-179.5	-131.6	-173.8	-128.8	-174.5	-127.4	-171.3	-125.5	-167.9	-123.2	-165.2
17	-134.6	-178.9	-131.1	-174.2	-128.8	-175.0	-127.2	-171.4	-125.2	-166.8	-123.2	-168.8
18	-134.8	-178.0	-131.1	-177.0	-128.5	-172.0	-127.3	-177.8	-125.3	-171.3	-123.0	-165.1
19	-134.5	-178.6	-131.5	-178.1	-128.4	-177.6	-126.8	-172.2	-125.3	-174.1	-122.8	-165.0
20	-134.5	-175.6	-131.5	-175.0	-128.1	-172.4	-126.8	-172.2	-125.5	-174.9	-122.7	-170.7
21	-134.4	-177.9	-131.1	-175.1	-128.2	-172.5	-127.3	-172.6	-125.2	-168.2	-122.4	-175.0
22	-134.2	-178.9	-130.5	-174.7	-128.5	-169.6	-127.3	-173.1	-124.9	-181.1	-122.8	-170.3
23	-134.0	-175.5	-130.8	-174.9	-128.5	-171.6	-127.6	-177.8	-124.5	-168.2	-122.9	-171.9
24	-134.2	-196.1	-131.1	-172.6	-128.2	-170.0	-128.1	-172.7	-125.0	-173.2	-122.9	-165.4
25	-133.8	-181.2	-131.0	-174.8	-127.8	-172.0	-127.8	-172.9	-125.3	-169.2	-122.8	-165.3
26	-133.4	-176.6	-130.9	-178.4	-128.2	-169.6	-127.5	-173.6	-124.7	-168.1	-122.7	-165.0
27	-133.8	-178.8	-130.5	-173.0	-128.2	-171.4	-127.8	-172.3	-124.2	-175.3	-122.6	-165.2
28	-133.8	-175.3	-130.2	-172.2	-128.0	-172.1	-127.7	-173.2	-124.1	-165.7	-122.6	-169.1
29	-133.2	-177.0	-130.2	-174.0	-128.0	-169.2	-127.7	-196.6	---	---	-122.5	-172.0
30	-133.0	-176.5	-130.2	-172.1	-127.9	-180.0	-127.8	-182.7	---	---	-122.4	-171.9
31	-132.9	-174.2	---	---	-127.9	-177.8	-127.4	-179.0	---	---	---	---
MONTH	-132.9	-196.1	-130.2	-184.0	-127.8	-191.3	-126.8	-196.6	-124.1	-194.7	-122.4	-175.0

ST. MARYS COUNTY--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	-123.4	-167.8	-123.5	-177.1	-131.1	-175.9	-128.2	-170.0	-126.5	-171.9
2	---	---	-123.3	-171.4	-124.3	-168.8	-132.9	-174.6	-128.2	-175.8	-132.4	-174.9
3	---	---	-126.5	-173.3	-124.0	-166.7	-128.3	-177.8	-128.0	-169.6	-134.2	-176.1
4	---	---	-125.9	-175.4	-123.8	-170.2	-127.3	-170.9	-127.8	-169.6	-128.9	-175.6
5	---	---	-125.1	-177.6	-123.9	-176.6	-126.8	-168.7	-127.8	-175.4	-128.4	-170.6
6	---	---	-124.6	-169.4	-124.0	-166.2	-126.6	-169.9	-127.8	-178.6	-127.8	-169.9
7	---	---	-124.5	-170.2	-123.8	-165.8	-126.2	-168.0	-127.7	-169.6	-127.4	-178.2
8	---	---	-124.3	-168.6	-123.9	-166.2	-126.2	-171.1	-127.8	-173.0	-127.2	-172.5
9	---	---	-124.2	-169.0	-123.6	-176.2	-126.1	-174.7	-127.8	-172.6	-127.0	-171.2
10	---	---	-124.1	-166.0	-123.7	-165.7	-126.0	-170.3	-127.7	-176.4	-126.6	-185.0
11	---	---	-124.0	-168.8	-123.8	-170.1	-126.0	-172.4	-127.7	-169.1	-126.4	-168.1
12	---	---	-124.0	-165.8	-124.9	-170.1	-125.9	-167.6	-127.5	-169.8	-126.3	-173.1
13	---	---	-124.2	-168.3	-124.5	-166.6	-126.1	-168.4	-127.5	-181.0	-126.0	-167.6
14	---	---	-124.3	-166.2	-124.4	-166.2	-126.3	-168.2	-127.5	-169.6	-126.0	-176.8
15	---	---	-124.3	-176.6	-124.2	-173.0	-126.3	-171.5	-127.4	-170.8	-126.1	-190.6
16	---	---	-124.2	-167.5	-124.3	-168.7	-126.2	-169.1	-126.8	-172.6	-126.2	-168.4
17	-122.5	-174.0	-124.2	-165.8	-124.2	-168.6	-126.5	-168.6	-126.7	-168.5	-126.3	-168.3
18	-122.5	-165.2	-123.9	-166.1	-124.2	-166.6	-126.8	-174.6	-126.7	-185.6	-124.8	-172.8
19	-122.4	-167.2	-124.2	-166.4	-124.3	-168.6	-133.7	-177.7	-126.7	-170.2	-124.5	-174.5
20	-122.6	-172.3	-124.3	-167.2	-124.3	-168.2	-129.2	-175.8	-126.7	-168.2	-125.5	-171.6
21	-122.4	-164.6	-124.2	-176.5	-124.4	-166.4	-129.1	-175.9	-126.8	-168.6	-126.1	-174.7
22	-122.1	-169.9	-124.3	-168.6	-124.5	-169.3	-130.2	-177.2	-126.8	-176.9	-125.7	-180.2
23	-122.5	-167.2	-124.1	-166.3	-124.5	-166.4	-129.3	-171.6	-126.8	-172.5	-125.4	-178.4
24	-123.1	-166.4	-123.9	-166.3	-124.6	-174.1	-129.1	-171.2	-128.6	-175.0	-125.6	-172.7
25	-122.7	-166.2	-123.6	-177.2	-124.7	-170.9	-129.1	-175.6	-127.7	-171.9	-125.6	-168.0
26	-122.7	-167.9	-123.7	-166.1	-124.7	-166.7	-129.7	-174.9	-127.4	-169.9	-125.4	-167.5
27	-123.0	-169.7	-123.6	-167.5	-124.7	-167.3	-129.6	-175.2	-127.2	-179.7	-125.4	-167.7
28	-123.4	-177.2	-123.6	-165.7	-124.8	-168.3	-129.2	-171.0	-127.0	-168.7	-125.2	-181.9
29	-123.3	-165.4	-123.8	-174.5	-124.9	-170.2	-128.8	-170.6	-127.0	-168.5	-125.3	-167.4
30	-123.5	-174.4	-123.8	-165.8	-125.0	-171.8	-128.5	-170.3	-126.8	-169.1	---	---
31	---	---	-123.7	-165.7	---	---	-128.5	-170.8	-126.8	-168.5	---	---
MONTH	-122.1	-177.2	-123.3	-177.6	-123.5	-177.1	-125.9	-177.8	-126.7	-185.6	-124.5	-190.6
YEAR	-122.1	-196.6										

Daily Low Water Levels



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ST. MARYS COUNTY--Continued

WELL NUMBER.--SM Dg 21. PERMIT NUMBER.--SM-94-0074.

LOCATION.-- Hydrologic Unit 02060006, at Patuxent River Naval Air Test Station. Owner: U.S. Navy.

AQUIFER.--Piney Point Formation of Upper Eocene age and the Nanjemoy Formation of Lower Eocene age. Aquifer code: 124PNPN, 124NNJM.

WELL CHARACTERISTICS.--Drilled, artesian well, depth 315 ft; casing diameter 4 in., to 295 ft; screen diameter 4 in., from 295 to 315 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--15-minute recording interval, February 2000 to current year.

DATUM.--Elevation of land surface is 3 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of shelter platform, 1.70 ft above land surface.

REMARKS.--Naval Air Station Patuxent River Ground Water Hydrogeology project observation/production well. Water levels are affected by this well being used as a production well, and regional ground-water withdrawal. Missing data due to recorder malfunction.

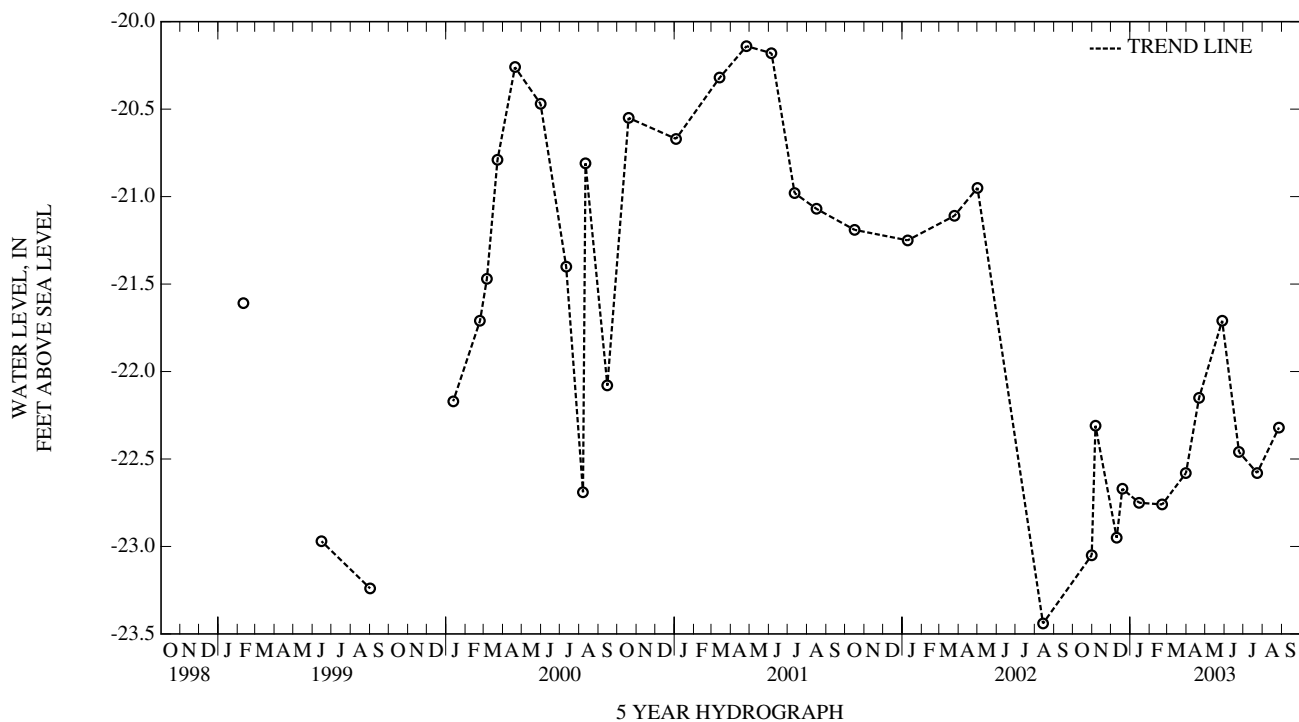
PERIOD OF RECORD.--February 1998 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 17.14 ft below sea level, March 5, 2001 (recorder); lowest measured, 27.71 ft below sea level, July 28, 2002 (recorder).

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	-21.35	DEC 19, 2002	-20.97	MAR 31, 2003	-20.88	JUN 24, 2003	-20.76
NOV 06	-20.61	JAN 15, 2003	-21.05	APR 21	-20.45	JUL 23	-20.88
DEC 10	-21.25	FEB 21	-21.06	MAY 28	-20.01	AUG 27	-20.62

LOWEST -21.35 OCT 31, 2002
HIGHEST -20.01 MAY 28, 2003



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

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 02060004, 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 water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 10 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.50 ft above land surface.

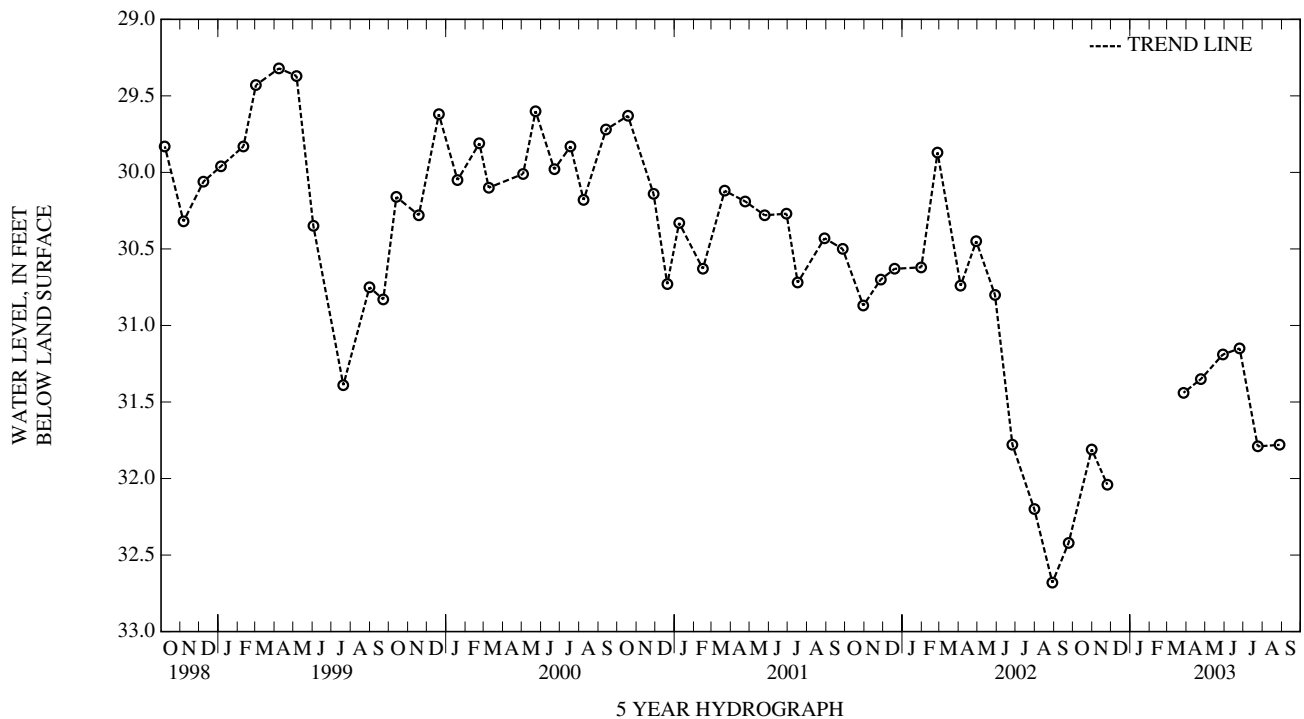
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

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, 32.68 ft below land surface, August 29, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	31.81	MAR 27, 2003	31.44	MAY 29, 2003	31.19	JUL 24, 2003	31.79
NOV 25	32.04	APR 24	31.35	JUN 25	31.15	AUG 28	31.78
HIGHEST 31.15 JUN 25, 2003							
LOWEST 32.04 NOV 25, 2002							



ST. MARYS COUNTY--Continued

WELL NUMBER.--SM Fe 30. SITE ID.--380834076303401. PERMIT NUMBER.--SM-73-1917.

LOCATION.--Lat 38°08'34", long 76°30'34", Hydrologic Unit 02070011, St. Mary's Co. Metropolitan Commission Facility, Piney Point. Owner: U.S. Geological Survey.

AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 270 ft; casing diameter 6 in., to 67 ft; casing diameter 2 in., from 67 to 260 ft; screen diameter 2 in., from 260 to 270 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with graphic water-level recorder from October 1988 to October 1994.

DATUM.--Elevation of land surface is 9 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.7 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

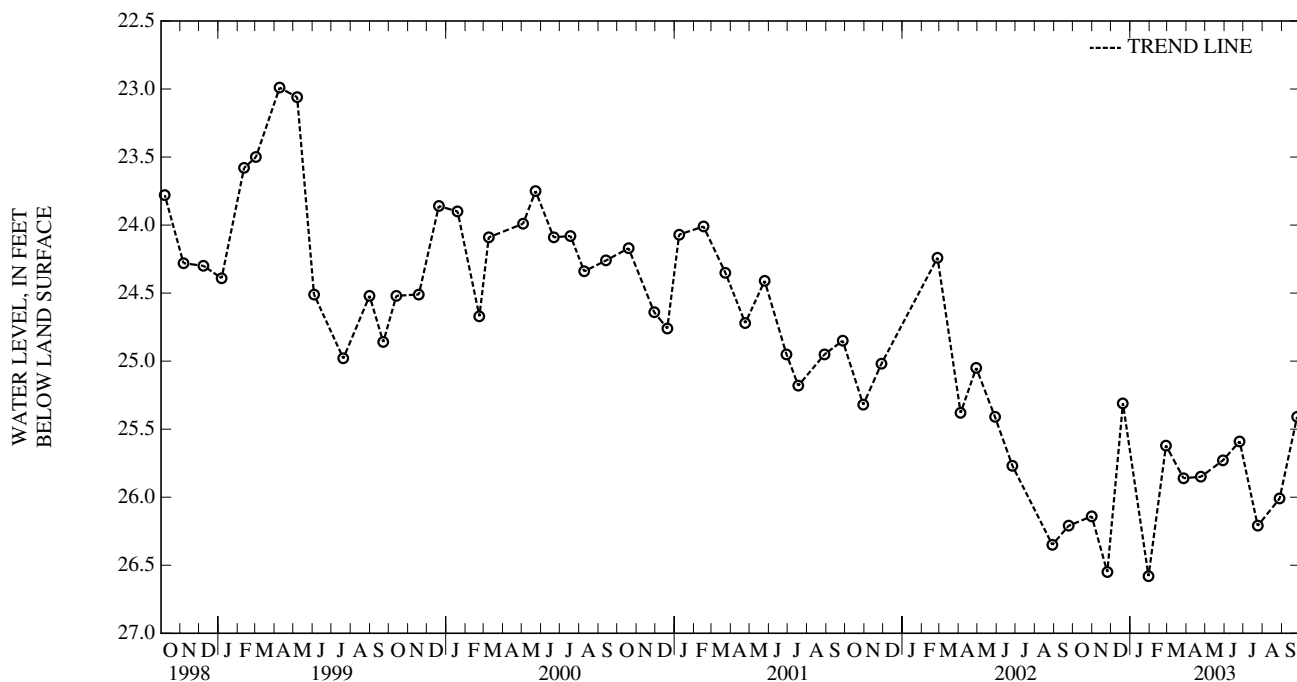
PERIOD OF RECORD.--August 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.24 ft below land surface, October 6, 1976; lowest measured, 26.58 ft below land surface, January 30, 2003.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	26.14	JAN 30, 2003	26.58	APR 24, 2003	25.85	JUL 24, 2003	26.21
NOV 25	26.55	FEB 27	25.62	MAY 29	25.73	AUG 28	26.01
DEC 20	25.31	MAR 27	25.86	JUN 25	25.59	SEP 25	25.41

HIGHEST 25.31 DEC 20, 2002
LOWEST 26.58 JAN 30, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ST. MARYS COUNTY--Continued

WELL NUMBER.--SM Fe 31. SITE ID.--380834076303402. PERMIT NUMBER.--SM-73-3088.

LOCATION.--Lat 38°08'34", long 76°30'34", Hydrologic Unit 02070011, St. Mary's Co. Metropolitan Commission Facility, Piney Point. Owner: U.S. Geological Survey.

AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 639 ft; casing diameter 4 in., to 171 ft; casing diameter 2 in., from 171 to 451 ft; screen diameter 3 in., from 451 to 461 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 8 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.60 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

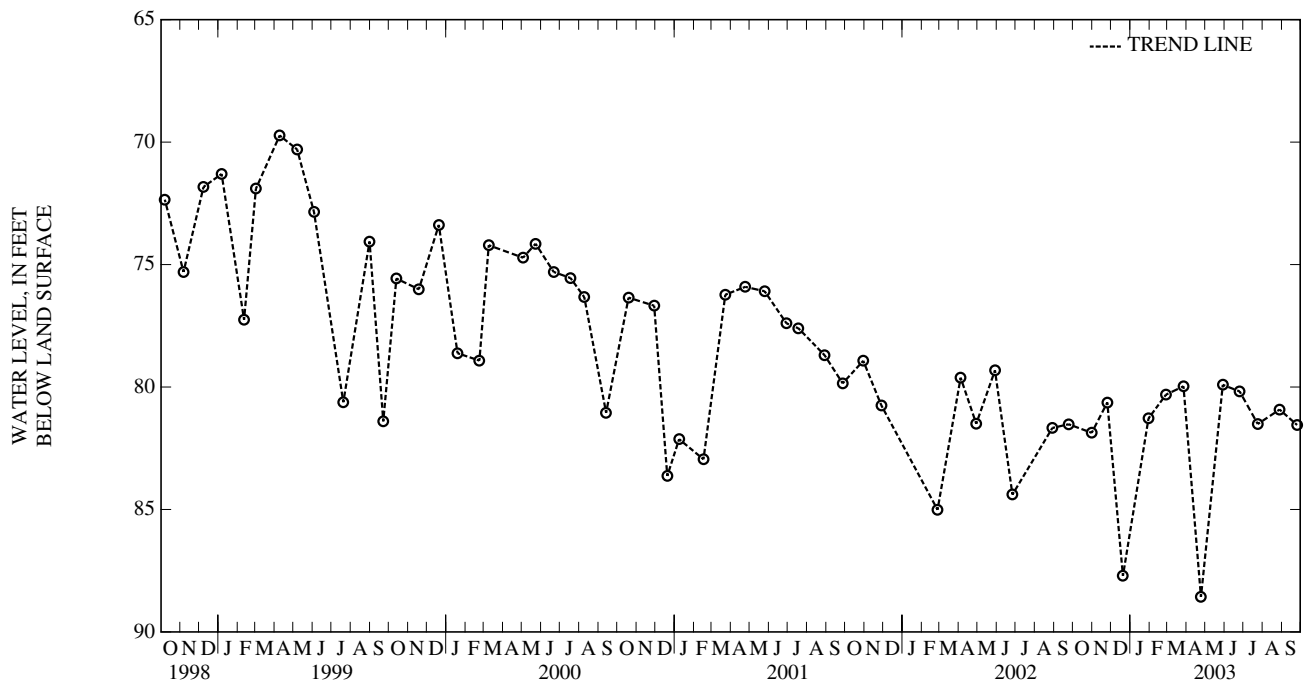
PERIOD OF RECORD.--October 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 29.77 ft below land surface, December 5, 1978; lowest measured, 88.57 ft below land surface, April 24, 2003.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	81.87	JAN 30, 2003	81.28	APR 24, 2003	88.57	JUL 24, 2003	81.51
NOV 25	80.63	FEB 27	80.31	MAY 29	79.91	AUG 28	80.92
DEC 20	87.71	MAR 27	79.97	JUN 25	80.18	SEP 25	81.55

HIGHEST 79.91 MAY 29, 2003
 LOWEST 88.57 APR 24, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ST. MARYS COUNTY--Continued

WELL NUMBER.--SM Ff 36. SITE ID.--380724076251901. PERMIT NUMBER.--SM-73-1478.

LOCATION.--Lat 38°07'23", long 76°25'20", Hydrologic Unit 02070011, near Kitts Point. Owner: Jesuit Order.

AQUIFER.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.

WELL CHARACTERISTICS.--Drilled, irrigation, artesian well, depth 618 ft; casing diameter 8 in., to 545 ft, and casing diameter 6 in., from 545 to 594 ft; screen diameter 6 in., from 594 to 618 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Twice yearly water level measurements from September 1982 to September 1996.

DATUM.--Elevation of land surface is 5.50 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.5 ft above land surface.

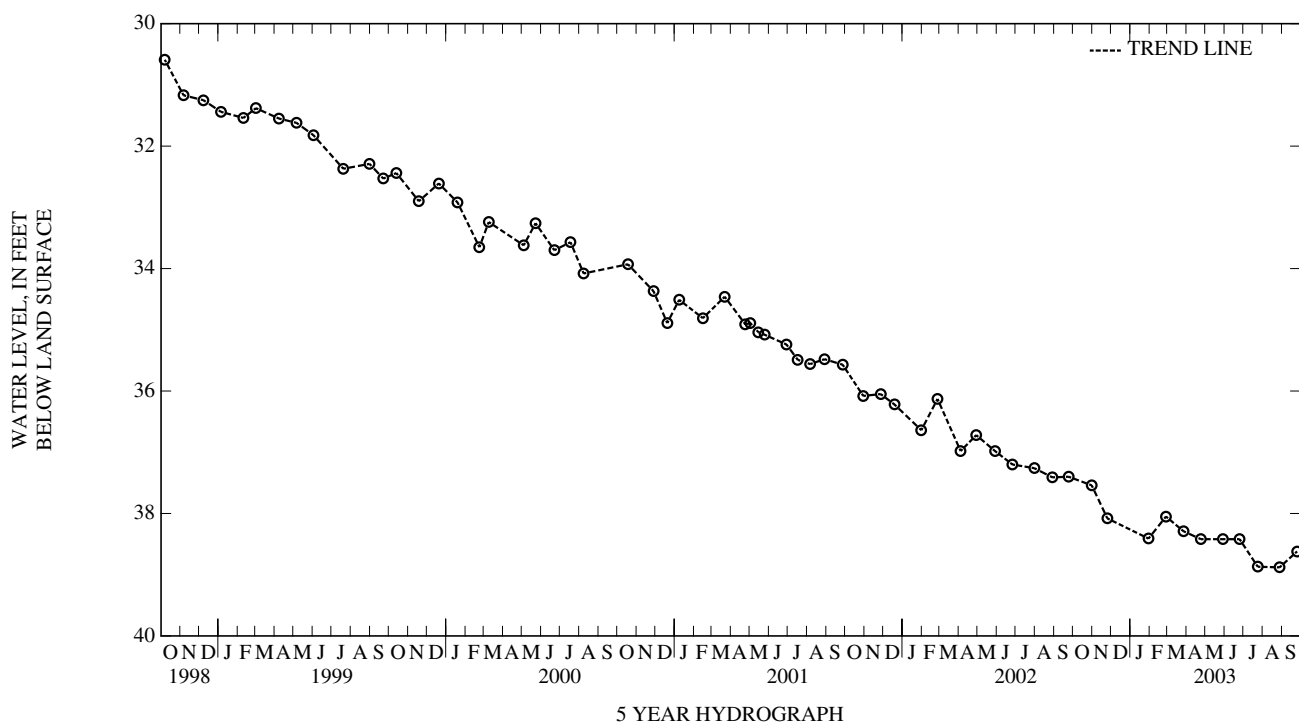
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by regional ground-water withdrawal.

PERIOD OF RECORD.--November 1978, September 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.80 ft below land surface, November 14, 1978; lowest measured, 38.88 ft below land surface, August 28, 2003.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	37.54	FEB 27, 2003	38.05	MAY 29, 2003	38.42	AUG 28, 2003	38.88
NOV 25	38.08	MAR 27	38.29	JUN 25	38.42	SEP 25	38.62
JAN 30, 2003	38.41	APR 24	38.42	JUL 24	38.87		
HIGHEST	37.54	OCT 31, 2002					
LOWEST	38.88	AUG 28, 2003					



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

ST. MARYS COUNTY--Continued

WELL NUMBER.--SM Ff 64.

LOCATION.-- Hydrologic Unit 02070007, at Webster Field. Owner: U.S. Navy.

AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.

WELL CHARACTERISTICS.--Drilled, artesian well, depth 534 ft; casing depth unknown.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--30-minute recording interval, September 1999 to current year.

DATUM.--Elevation of land surface is 10 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of shelter platform, 3.00 ft above land surface.

REMARKS.--Naval Air Station Patuxent River Ground Water Hydrogeology project observation well. Water levels are affected by nearby production well and regional ground-water withdrawal. Missing data due to recorder malfunction.

PERIOD OF RECORD.--September 1998 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 76.64 ft below sea level, September 3, 1998; lowest measured, 160.20 ft below sea level, November 15, 2002.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	-83.74	MAR 31, 2003	-81.75	JUN 23, 2003	-80.83
DEC 10	-83.62	APR 21	-81.29	JUL 23	-81.41
JAN 15, 2003	-82.75	MAY 28	-80.86	AUG 27	-81.76

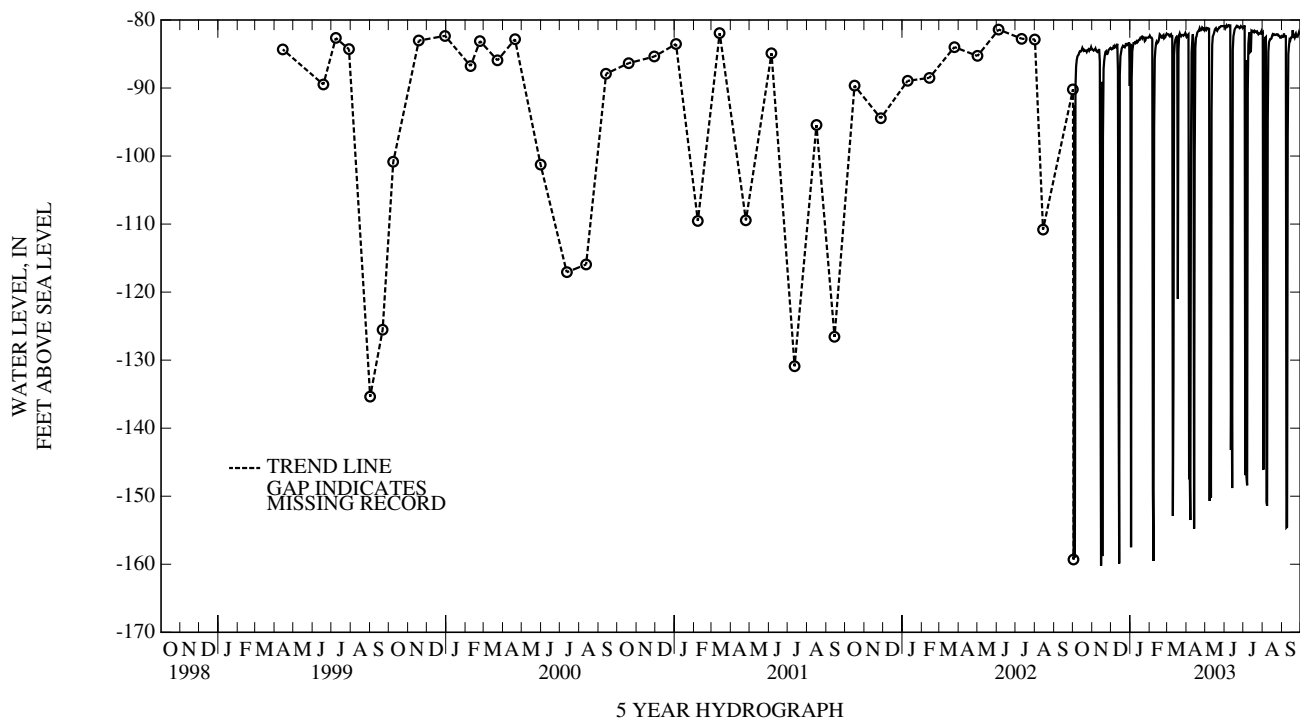
LOWEST -83.74 OCT 31, 2002
 HIGHEST -80.83 JUN 23, 2003

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-86.2	-90.2	-83.6	-84.3	-83.8	-84.2	-82.9	-83.5	-81.9	-82.3	-81.8	-82.1
2	-86.0	-159.3	-83.8	-84.4	-83.8	-84.3	-82.8	-157.5	-82.0	-82.5	-81.6	-82.1
3	-87.1	-92.6	-84.0	-84.5	-83.9	-84.2	-84.6	-88.7	-82.0	-82.6	-81.7	-82.1
4	-86.9	-159.0	-83.9	-84.4	-83.7	-84.2	-83.8	-84.6	-82.0	-82.6	-81.5	-82.3
5	-86.7	-89.8	-84.0	-84.4	-83.3	-83.9	-83.2	-83.9	-81.9	-82.8	-81.8	-82.4
6	-85.8	-86.8	-83.5	-84.2	-83.3	-84.0	-83.0	-83.4	-82.4	-149.2	-81.7	-82.2
7	-85.3	-85.9	-84.0	-84.5	-83.1	-83.8	-83.0	-83.4	-84.5	-159.5	-81.7	-82.1
8	-85.0	-85.4	-83.9	-84.6	-83.3	-84.0	-82.8	-83.3	-85.6	-95.8	-81.5	-82.4
9	-84.7	-85.2	-83.9	-84.7	-83.5	-84.0	-82.4	-83.4	-84.1	-85.7	-81.7	-82.4
10	-84.6	-85.1	-84.2	-84.6	-83.4	-83.8	-82.6	-83.2	-83.4	-84.3	-81.8	-152.9
11	-84.3	-84.8	-84.0	-84.4	-83.0	-83.5	-82.5	-83.1	-83.0	-83.5	-85.1	-132.9
12	-84.2	-84.6	-83.8	-84.4	-83.2	-87.4	-82.6	-83.3	-82.7	-83.2	-83.2	-85.1
13	-84.1	-84.6	-84.1	-86.1	-83.5	-131.8	-82.7	-83.2	-82.5	-83.4	-82.8	-83.5
14	-84.2	-84.6	-84.0	-128.4	-88.1	-159.9	-82.6	-83.0	-82.8	-83.3	-82.3	-82.9
15	-83.8	-84.4	-86.7	-160.2	-85.3	-88.1	-82.4	-82.9	-82.5	-83.1	-81.9	-82.6
16	-83.5	-84.1	-86.0	-89.1	-84.7	-85.3	-82.3	-82.9	-82.0	-82.7	-82.1	-82.6
17	-83.6	-84.3	-85.0	-158.8	-84.2	-84.8	-82.1	-82.6	-81.8	-82.1	-82.0	-82.3
18	-83.9	-84.5	-87.2	-97.3	-83.6	-84.2	-82.0	-82.6	-81.7	-82.2	-81.9	-121.0
19	-84.1	-84.4	-85.8	-87.2	-83.7	-84.0	-82.0	-82.5	-81.8	-82.5	-82.3	-84.5
20	-84.1	-84.5	-85.2	-86.0	-83.2	-83.8	-82.1	-82.7	-82.0	-82.6	-81.7	-82.3
21	-84.1	-84.5	-84.6	-85.2	-83.3	-83.9	-82.2	-82.5	-82.1	-82.6	-81.5	-82.0
22	-84.1	-84.5	-84.0	-84.7	-83.5	-83.9	-82.0	-82.6	-81.8	-82.3	-81.7	-82.3
23	-84.0	-84.7	-84.1	-84.6	-83.5	-84.0	-82.1	-82.6	-81.8	-82.2	-81.7	-82.4
24	-84.2	-84.5	-84.4	-85.0	-83.2	-83.8	-82.4	-83.1	-82.0	-82.7	-81.7	-82.2
25	-84.0	-84.4	-84.2	-85.0	-82.8	-83.4	-82.3	-83.0	-82.2	-82.6	-81.7	-82.2
26	-83.8	-84.3	-84.2	-84.8	-83.1	-83.7	-82.0	-82.6	-82.0	-82.5	-81.7	-82.2
27	-83.9	-84.5	-83.9	-84.4	-83.0	-83.7	-82.1	-82.6	-81.8	-82.2	-81.8	-82.3
28	-83.8	-84.3	-83.7	-84.3	-82.9	-83.5	-82.2	-82.6	-81.6	-82.0	-81.5	-82.2
29	-83.7	-84.3	-83.5	-84.2	-82.8	-83.5	-82.0	-82.6	---	---	-81.7	-82.1
30	-83.5	-84.0	-83.8	-84.1	-82.8	-83.3	-82.0	-82.6	---	---	-81.5	-81.9
31	-83.7	-84.3	---	---	-83.0	-89.7	-82.1	-82.5	---	---	-81.6	-82.2
MONTH	-83.5	-159.3	-83.5	-160.2	-82.8	-159.9	-82.0	-157.5	-81.6	-159.5	-81.5	-152.9

ST. MARYS COUNTY--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-82.0	-82.5	-81.0	-81.3	-80.0	-80.9	-80.6	-81.1	-81.3	-81.8	-81.9	-82.5
2	-81.8	-82.4	-80.9	-81.2	-80.6	-81.2	-80.5	-81.0	-81.5	-146.1	-81.7	-82.5
3	-82.0	-82.2	-80.9	-81.4	-80.5	-81.0	-80.2	-80.8	-83.3	-86.3	-81.7	-82.4
4	-81.7	-82.1	-80.9	-81.2	-80.2	-80.8	-80.5	-146.9	-82.4	-83.3	-81.6	-82.0
5	-81.6	-147.5	-80.9	-81.2	-80.4	-81.0	-82.5	-85.9	-82.1	-82.6	-81.8	-82.4
6	-84.7	-146.3	-80.6	-81.3	-80.4	-80.9	-82.5	-147.3	-81.9	-82.5	-81.9	-82.4
7	-83.2	-153.5	-80.9	-81.3	-80.2	-80.8	-83.5	-148.4	-81.9	-150.9	-81.8	-82.4
8	-84.8	-99.7	-80.9	-150.7	-80.4	-80.9	-83.5	-90.2	-85.0	-151.4	-81.9	-154.6
9	-83.0	-84.8	-83.9	-116.3	-80.2	-80.8	-82.0	-83.5	-84.7	-94.9	-85.2	-154.5
10	-82.0	-83.1	-82.7	-150.2	-80.3	-80.8	-81.6	-82.3	-83.2	-84.7	-85.0	-97.0
11	-81.6	-82.1	-83.7	-93.5	-80.4	-143.2	-81.2	-81.8	-82.6	-83.3	-83.7	-85.0
12	-81.7	-83.9	-82.3	-83.7	-82.7	-124.9	-81.1	-84.7	-82.3	-83.0	-82.8	-83.8
13	-82.1	-154.8	-81.8	-82.4	-84.4	-148.8	-81.1	-84.6	-82.1	-82.8	-82.5	-82.9
14	-84.1	-100.2	-81.5	-82.2	-82.3	-84.4	-81.2	-81.6	-82.2	-82.8	-82.3	-83.0
15	-82.5	-84.1	-81.1	-81.9	-81.7	-82.4	-81.1	-81.7	-81.8	-82.7	-82.1	-82.6
16	-81.5	-82.6	-81.1	-81.5	-81.2	-81.9	-81.0	-81.6	-81.6	-82.3	-82.1	-82.6
17	-81.7	-82.4	-80.7	-81.3	-80.9	-81.4	-81.1	-81.7	-81.4	-82.1	-81.4	-82.5
18	-81.5	-81.9	-80.8	-81.2	-80.6	-81.2	-81.1	-81.8	-81.7	-82.2	-81.0	-81.5
19	-81.2	-81.7	-80.9	-81.5	-80.5	-81.1	-81.1	-81.6	-81.6	-82.1	-81.4	-82.2
20	-81.1	-81.6	-80.9	-81.6	-80.4	-80.9	-81.1	-81.7	-81.6	-82.2	-81.8	-82.4
21	-81.1	-81.6	-80.9	-81.4	-80.5	-81.0	-81.1	-81.7	-81.4	-82.2	-82.0	-82.6
22	-80.6	-81.2	-80.9	-81.3	-80.4	-80.9	-81.1	-81.8	-81.6	-82.2	-81.7	-82.2
23	-80.8	-81.4	-80.5	-81.1	-80.5	-81.0	-81.1	-81.7	-81.5	-82.1	-81.4	-82.0
24	-81.1	-81.5	-80.7	-81.1	-80.4	-81.1	-81.3	-81.9	-81.5	-82.1	-81.6	-82.4
25	-81.0	-81.4	-80.5	-81.0	-80.5	-81.2	-81.4	-82.1	-81.5	-82.1	-81.6	-82.3
26	-80.7	-81.1	-80.5	-80.9	-80.3	-81.1	-81.5	-82.0	-81.6	-82.3	-81.7	-82.4
27	-80.9	-81.2	-80.3	-80.9	-80.3	-80.9	-81.5	-82.0	-81.8	-82.3	-81.6	-82.1
28	-80.8	-81.4	-80.2	-80.9	-80.5	-81.0	-81.5	-82.0	-81.8	-82.4	-81.4	-81.8
29	-81.0	-81.3	-80.3	-80.9	-80.5	-81.1	-81.4	-81.8	-81.9	-82.6	-81.5	-82.1
30	-81.1	-81.5	-80.4	-80.9	-80.4	-81.1	-81.1	-81.6	-81.9	-82.6	---	---
31	---	---	-80.1	-80.9	---	---	-81.3	-81.9	-82.0	-82.4	---	---
MONTH	-80.6	-154.8	-80.1	-150.7	-80.0	-148.8	-80.2	-148.4	-81.3	-151.4	-81.0	-154.6
YEAR	-80.0	-160.2										

Daily Low Water Levels



ST. MARYS COUNTY--Continued

WELL NUMBER.--SM Fg 45. SITE ID.--380711076222201. PERMIT NUMBER.--SM-04-5190.

LOCATION.--Lat 38°07'11", long 76°22'22", Hydrologic Unit 02070011, in Ridge Volunteer Fire Department pumphouse, at Ridge. Owner: Ridge Volunteer Fire Department.

AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 436 ft; casing diameter 6 in., to 386 ft; casing diameter 4 in., from 415 to 436 ft; screen diameter 5 in., from 386 to 415 ft.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 65 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Hole in sanitary seal, 0.55 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

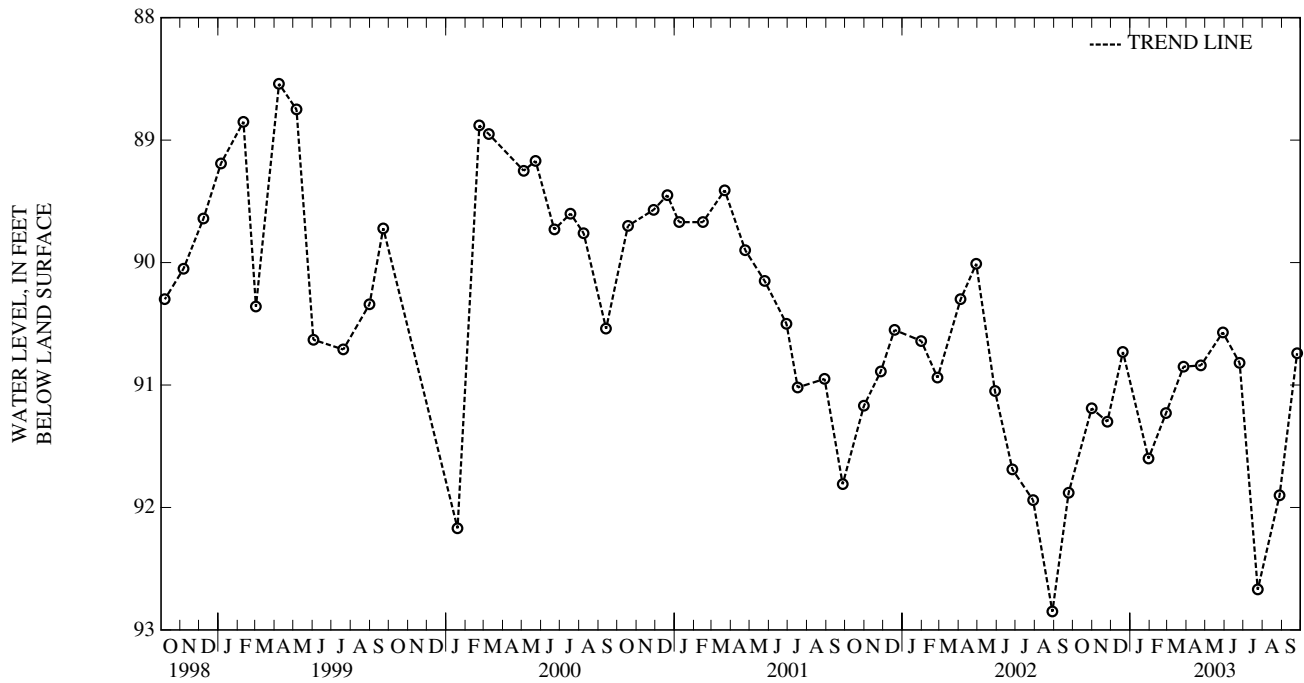
PERIOD OF RECORD.--May 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 74.83 ft below land surface, May 16, 1967; lowest measured, 92.85 ft below land surface, August 29, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	91.19	JAN 30, 2003	91.60	APR 24, 2003	90.84	JUL 24, 2003	92.67
NOV 25	91.30	FEB 27	91.23	MAY 29	90.57	AUG 28	91.90
DEC 20	90.73	MAR 27	90.85	JUN 25	90.82	SEP 25	90.74

HIGHEST 90.57 MAY 29, 2003
 LOWEST 92.67 JUL 24, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

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 Hampton Ave., Princess Anne. Owner: Private Residence.

AQUIFER.--Manokin aquifer in the Eastover Formation of Upper Miocene age. Aquifer code: 122MNKN.

WELL CHARACTERISTICS.--Drilled, unused, artesian well, measured depth 184 ft; casing diameter 2 in., to unknown depth.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 17 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.28 ft above land surface.

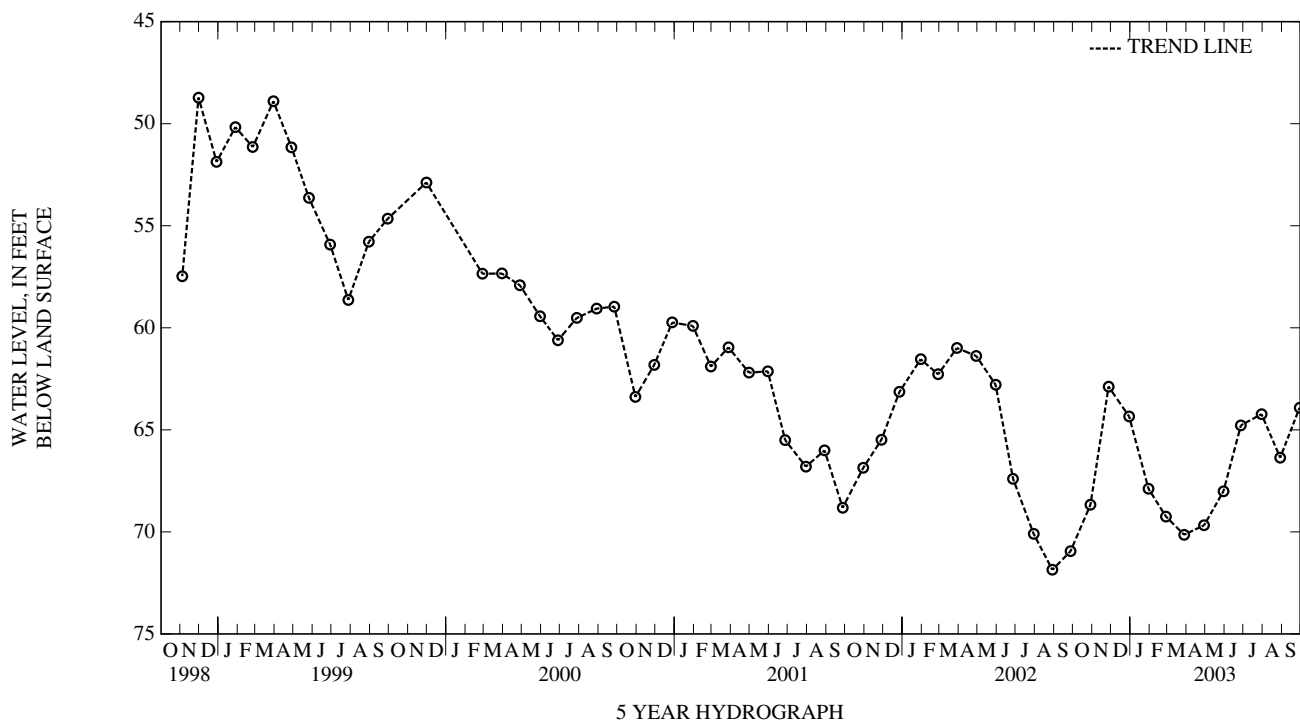
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

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, 71.86 ft below land surface, August 29, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	68.67	JAN 30, 2003	67.89	APR 29, 2003	69.68	JUL 30, 2003	64.23
NOV 27	62.88	FEB 27	69.25	MAY 30	68.01	AUG 29	66.36
DEC 30	64.35	MAR 28	70.14	JUN 27	64.78	SEP 29	63.92
HIGHEST 62.88 NOV 27, 2002							
LOWEST 70.14 MAR 28, 2003							



SOMERSET COUNTY--Continued

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 in the Eastover Formation of Upper 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 water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recording interval, from January 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, 2.10 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal. Missing data due to recorder malfunction.

PERIOD OF RECORD.--January 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 20.32 ft below land surface, August 27, 1984; lowest measured, 51.90 ft below land surface, August 7, 1991 (recorder).

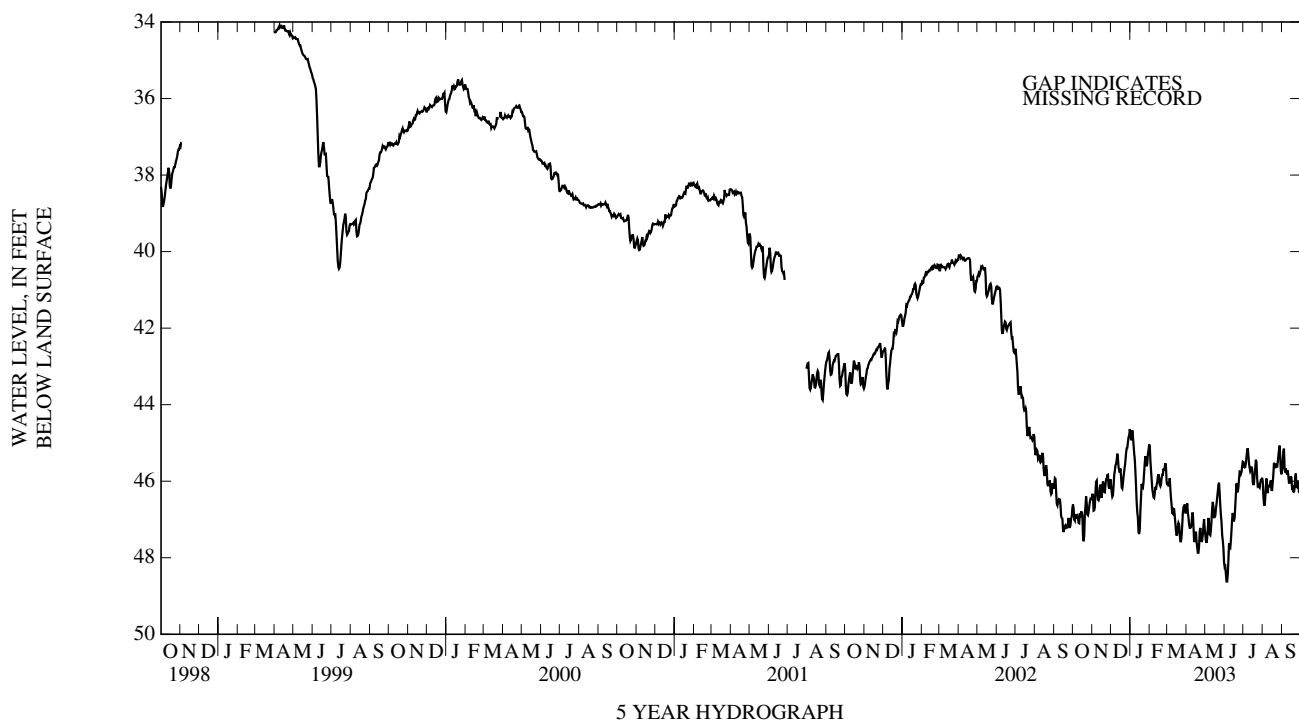
WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	46.43	JAN 30, 2003	45.15	APR 29, 2003	46.87	JUL 30, 2003	45.97
NOV 27	45.94	FEB 27	45.49	MAY 30	47.59	AUG 29	45.18
DEC 30	44.67	MAR 28	46.57	JUN 27	45.75	SEP 29	46.29
HIGHEST 44.67 DEC 30, 2002							
LOWEST 47.59 MAY 30, 2003							

DAY	MAX		MIN		MAX		MIN		MAX		MIN	
	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH						
1	46.61	46.44	46.33	46.15	46.10	45.82	44.75	44.55	45.08	44.81	46.10	45.94
2	46.71	46.44	46.37	46.16	46.29	46.08	44.93	44.71	45.46	45.03	46.03	45.78
3	47.00	46.68	46.77	46.35	46.40	46.27	44.89	44.52	45.72	45.44	46.11	45.90
4	47.03	46.81	46.76	46.58	46.36	46.14	44.67	44.49	45.95	45.70	46.10	45.89
5	46.86	46.69	46.68	46.27	46.14	45.74	44.83	44.60	46.19	45.95	45.92	45.74
6	46.95	46.76	46.27	45.86	45.84	45.63	45.04	44.77	46.31	46.18	46.21	45.83
7	46.94	46.71	46.02	45.89	45.73	45.47	45.27	45.04	46.42	46.30	46.45	46.20
8	46.91	46.70	45.99	45.80	45.59	45.47	45.43	45.25	46.44	46.32	46.62	46.39
9	46.97	46.67	46.29	45.99	45.55	45.44	45.76	45.43	46.32	46.14	46.83	46.52
10	47.09	46.78	46.48	46.29	45.45	45.26	46.13	45.76	46.15	46.07	46.85	46.72
11	47.10	46.77	46.50	46.37	45.28	45.08	46.54	46.13	46.22	46.10	46.72	46.55
12	46.84	46.65	46.44	46.17	45.40	45.13	46.81	46.54	46.10	45.98	46.73	46.57
13	46.94	46.69	46.18	45.98	45.64	45.40	46.96	46.76	46.03	45.88	46.90	46.73
14	46.81	46.68	46.09	45.95	45.71	45.51	47.33	46.96	45.88	45.69	47.11	46.90
15	46.81	46.63	46.39	46.01	45.78	45.62	47.38	47.25	45.82	45.64	47.30	47.06
16	46.89	46.59	46.43	46.16	45.67	45.54	47.25	46.76	45.92	45.80	47.42	47.27
17	47.40	46.89	46.16	45.89	45.88	45.64	46.76	46.42	46.09	45.83	47.36	47.16
18	47.57	47.36	46.01	45.82	46.16	45.87	46.42	46.07	46.13	45.91	47.18	46.92
19	47.42	46.86	46.07	45.92	46.19	46.01	46.07	45.85	46.08	45.82	47.09	46.86
20	46.86	46.65	46.28	46.06	46.05	45.73	46.15	45.88	45.91	45.72	47.13	46.91
21	46.65	46.38	46.29	46.09	45.88	45.67	46.17	46.01	45.83	45.68	47.39	46.94
22	46.40	46.18	46.10	45.80	45.75	45.57	46.02	45.76	45.83	45.62	47.57	47.29
23	46.58	46.26	45.96	45.86	45.62	45.43	45.77	45.50	45.67	45.45	47.57	47.39
24	46.87	46.58	45.96	45.81	45.47	45.26	45.51	45.35	45.72	45.60	47.42	47.12
25	46.89	46.76	45.84	45.67	45.27	44.87	45.35	45.26	45.63	45.53	47.15	46.82
26	46.80	46.54	45.83	45.71	45.14	44.97	45.51	45.33	45.53	45.44	46.82	46.58
27	46.67	46.42	46.12	45.83	45.13	44.94	45.61	45.51	45.66	45.44	46.68	46.59
28	46.54	46.37	46.20	46.06	44.98	44.79	45.55	45.29	46.01	45.63	46.68	46.52
29	46.46	46.36	46.13	45.81	44.85	44.75	45.29	45.15	---	---	46.61	46.44
30	46.47	46.34	45.95	45.81	44.81	44.59	45.19	45.04	---	---	46.82	46.51
31	46.46	46.24	---	---	44.64	44.48	45.04	44.87	---	---	46.82	46.73
MONTH	47.57	46.18	46.77	45.67	46.40	44.48	47.38	44.49	46.44	44.81	47.57	45.74

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	46.73	46.50	47.40	47.13	48.25	47.97	45.50	45.26	46.01	45.67	45.71	45.37
2	46.58	46.42	47.56	47.28	48.23	48.13	45.62	45.40	46.38	45.98	45.47	45.14
3	46.82	46.52	47.61	47.45	48.43	48.13	45.64	45.44	46.60	46.38	45.23	44.89
4	46.95	46.73	47.48	47.23	48.62	48.37	45.63	45.46	46.64	46.38	45.15	44.91
5	47.13	46.83	47.23	46.94	48.62	48.40	45.52	45.30	46.45	46.10	45.67	45.15
6	47.22	47.06	46.96	46.74	48.42	48.06	45.36	45.15	46.13	45.82	45.77	45.58
7	47.22	47.12	47.13	46.91	48.06	47.51	45.20	44.97	45.93	45.82	45.66	45.48
8	47.20	47.08	47.39	47.12	47.62	47.52	45.14	44.99	46.26	45.84	45.77	45.45
9	47.10	46.82	47.41	47.19	47.72	47.53	45.33	45.04	46.31	46.10	45.83	45.68
10	46.84	46.69	47.25	46.97	47.74	47.49	45.54	45.23	46.12	45.95	45.72	45.55
11	46.84	46.57	47.01	46.62	47.55	47.21	45.65	45.34	46.12	45.87	45.87	45.45
12	47.17	46.84	46.70	46.45	47.27	46.98	45.74	45.50	46.13	45.99	46.04	45.81
13	47.55	47.10	46.54	46.38	46.98	46.77	45.70	45.54	46.05	45.83	46.04	45.86
14	47.59	47.40	46.67	46.40	46.83	46.61	45.62	45.37	45.98	45.74	46.03	45.77
15	47.40	47.19	46.94	46.58	47.03	46.69	45.69	45.34	46.23	45.94	45.87	45.55
16	47.32	47.09	46.94	46.78	47.03	46.87	46.03	45.63	46.23	45.94	45.91	45.62
17	47.58	47.24	46.90	46.66	46.95	46.59	46.10	45.99	46.03	45.76	46.20	45.91
18	47.73	47.45	46.72	46.48	46.63	46.29	46.04	45.75	45.82	45.47	46.23	45.80
19	47.87	47.61	46.58	46.38	46.34	45.96	45.81	45.60	45.52	45.30	46.10	45.61
20	47.87	47.64	46.43	46.23	46.06	45.90	45.65	45.40	45.56	45.35	46.29	46.10
21	47.69	47.29	46.27	46.05	46.24	46.03	45.44	45.20	45.66	45.54	46.18	45.87
22	47.32	47.03	46.09	45.94	46.29	46.09	45.51	45.22	45.57	45.36	45.91	45.55
23	47.22	47.04	46.04	45.90	46.15	45.87	45.92	45.51	45.56	45.36	45.80	45.50
24	47.42	47.22	46.33	46.02	45.95	45.69	46.12	45.89	45.64	45.48	46.15	45.73
25	47.59	47.42	46.65	46.30	45.75	45.54	46.10	45.94	45.51	45.35	46.16	45.97
26	47.54	47.33	46.89	46.57	45.76	45.53	46.15	45.94	45.35	45.19	46.03	45.79
27	47.40	47.13	47.08	46.85	45.81	45.65	46.17	46.04	45.19	45.04	45.99	45.74
28	47.17	46.89	47.41	46.99	45.76	45.61	46.04	45.87	45.07	44.94	46.28	45.89
29	46.99	46.81	47.55	47.35	45.61	45.49	45.97	45.79	45.36	44.97	46.29	46.09
30	47.24	46.93	47.75	47.41	45.49	45.34	45.97	45.84	45.73	45.31	46.23	45.89
31	---	---	48.11	47.70	---	---	45.91	45.70	45.82	45.66	---	---
MONTH	47.87	46.42	48.11	45.90	48.62	45.34	46.17	44.97	46.64	44.94	46.29	44.89
YEAR	48.62	44.48										

Daily Low Water Levels



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

SOMERSET COUNTY--Continued

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 (Columbia aquifer) 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 water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 20 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.00 ft above land surface.

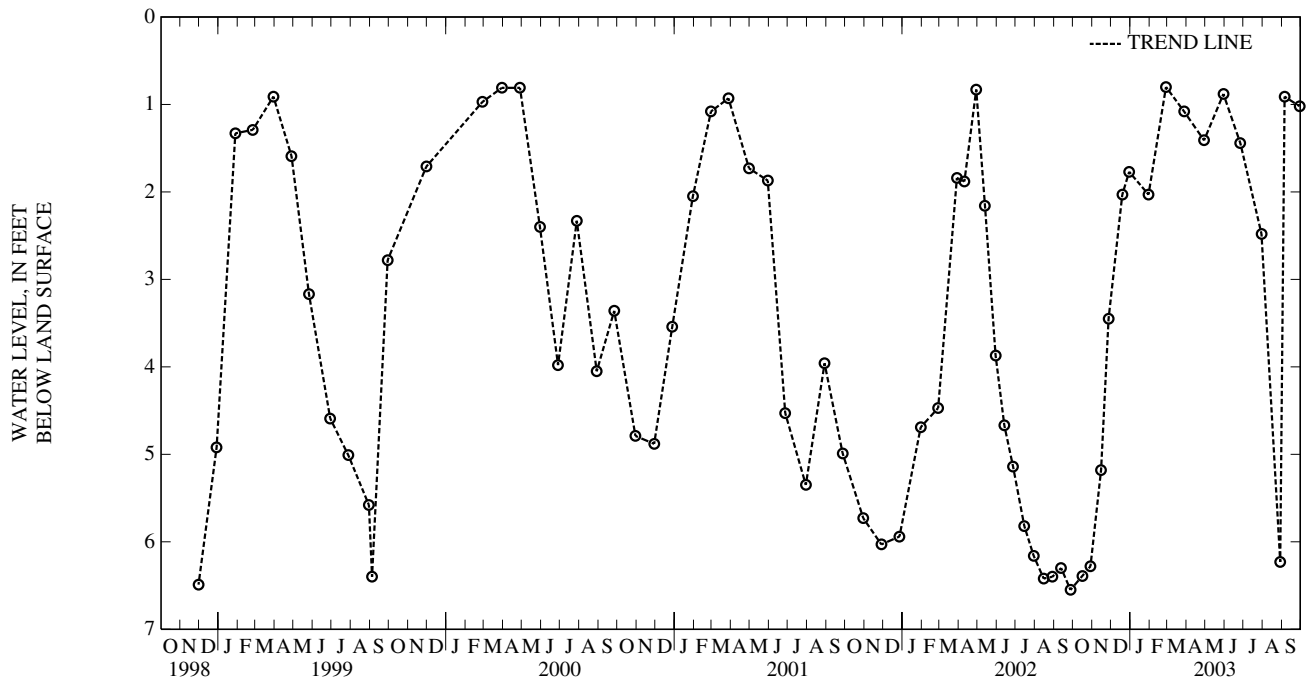
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by natural climatic response.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.28 ft below land surface, May 9, 1958; lowest measured, 6.55 ft below land surface, September 27, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16, 2002	6.39	DEC 19, 2002	2.03	MAR 28, 2003	1.08	JUL 30, 2003	2.48
29	6.28	30	1.77	APR 29	1.41	AUG 29	6.23
NOV 15	5.18	JAN 30, 2003	2.03	MAY 30	.88	SEP 05	.91
27	3.45	FEB 27	.80	JUN 26	1.44	29	1.02
HIGHEST .80 FEB 27, 2003							
LOWEST 6.39 OCT 16, 2002							



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

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, in Cordova. Owner: Allen Foods.

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 water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 42 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 0.50 ft above land surface.

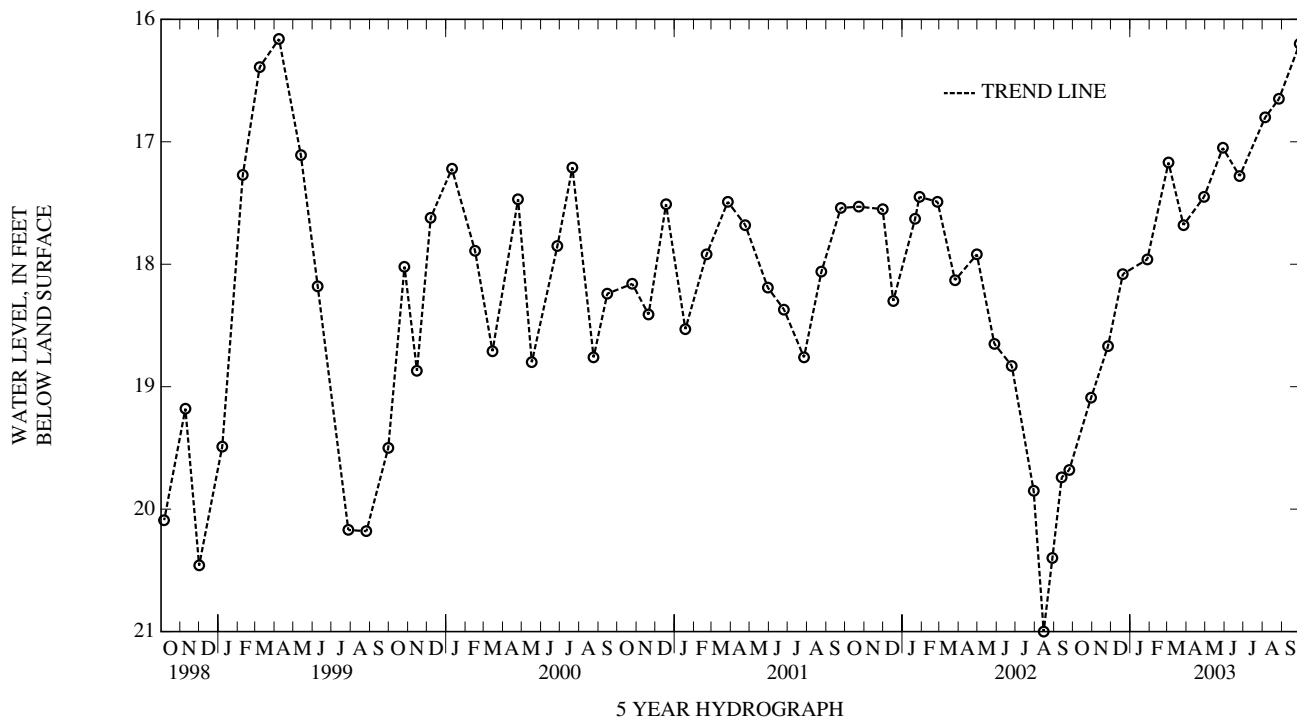
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. A water level was reported by the driller as 26 ft below land surface on December 16, 1955. A water level was measured at 26.64 ft below land surface on March 10, 1956. Water levels are affected by local ground-water withdrawal.

PERIOD OF RECORD.--March 1956, 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, December 6, 1974.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	19.09	JAN 28, 2003	17.96	APR 29, 2003	17.45	AUG 05, 2003	16.80
NOV 26	18.67	MAR 03	17.17	MAY 29	17.05	27	16.65
DEC 20	18.08	27	17.68	JUN 25	17.28	SEP 29	16.20
HIGHEST 16.20 SEP 29, 2003							
LOWEST 19.09 OCT 30, 2002							



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

TALBOT COUNTY--Continued

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, in Cordova. Owner: Allen Foods.

AQUIFER.--Pensauken Formation (Columbia aquifer) of Upper Miocene age. Aquifer code: 122PNSK.

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 water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 42 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.96 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

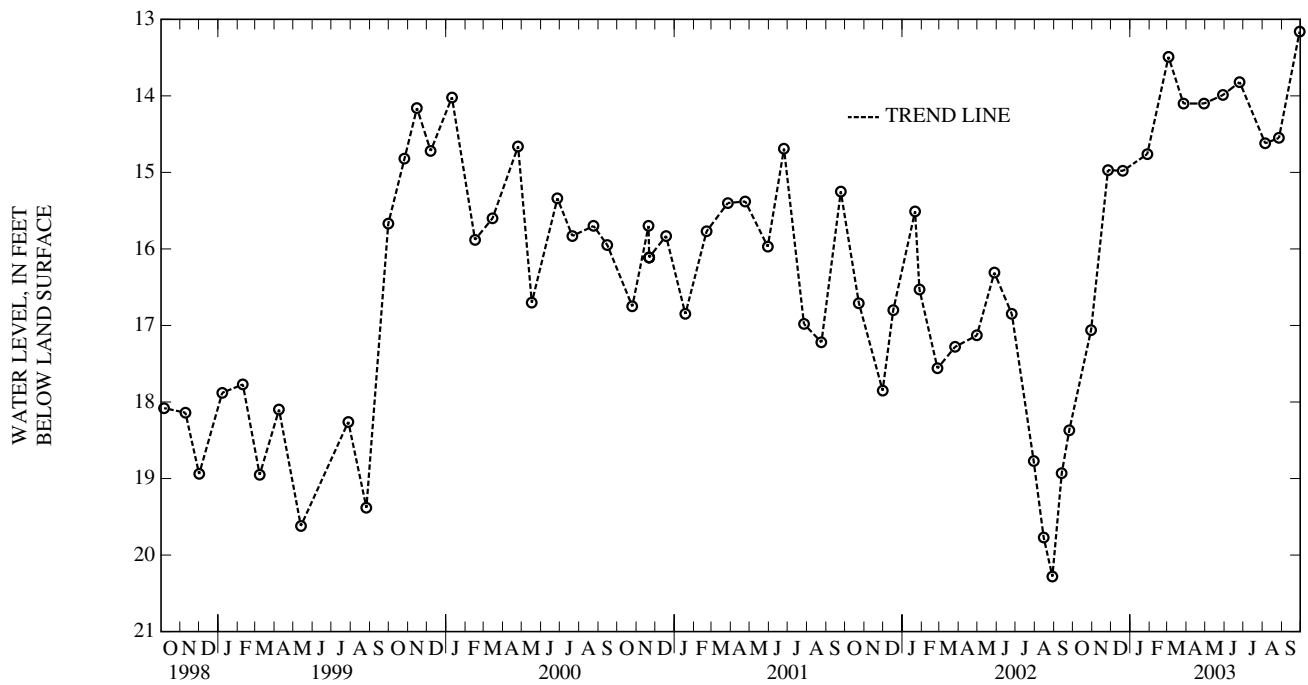
PERIOD OF RECORD.--April 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.48 ft below land surface, December 14, 1971; lowest measured, 21.36 ft below land surface, November 2, 1993.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	17.06	JAN 28, 2003	14.76	APR 29, 2003	14.10	AUG 05, 2003	14.62
NOV 26	14.97	MAR 03	13.49	MAY 29	13.99	27	14.55
DEC 20	14.98	27	14.10	JUN 25	13.82	SEP 29	13.16

HIGHEST 13.16 SEP 29, 2003
 LOWEST 17.06 OCT 30, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

TALBOT COUNTY--Continued

WELL NUMBER.--TA Cc 36. SITE ID.--384514076103701. PERMIT NUMBER.--TA-73-0751.

LOCATION.--Lat 38°45'14", long 76°10'37", Hydrologic Unit 02060002, in 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 51 ft; casing diameter 2 in., from 51 to 231 ft; screen diameter 2 in., from 231 to 241 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 7 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 4.40 ft above land surface.

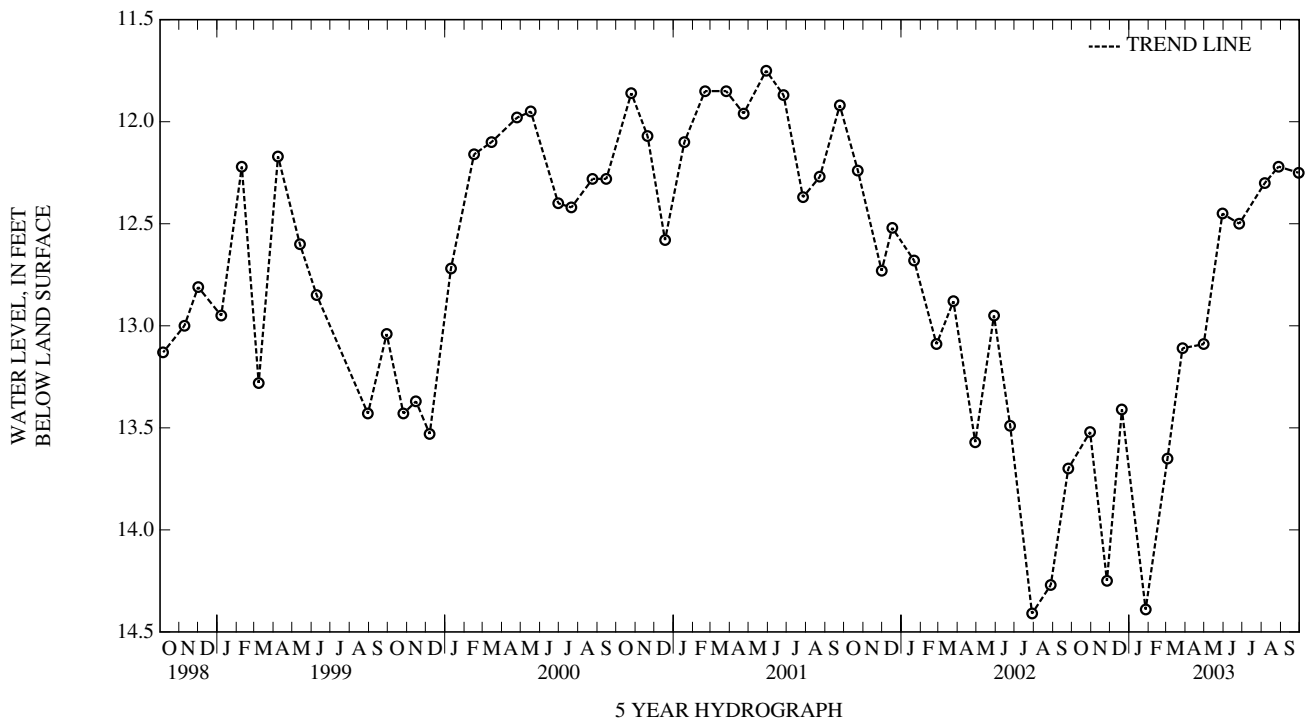
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

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, 14.41 ft below land surface, July 29, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	13.52	JAN 27, 2003	14.39	APR 30, 2003	13.09	AUG 06, 2003	12.30
NOV 26	14.25	MAR 03	13.65	MAY 30	12.45	28	12.22
DEC 20	13.41	27	13.11	JUN 26	12.50	SEP 29	12.25
HIGHEST 12.22		AUG 28, 2003					
LOWEST 14.39		JAN 27, 2003					



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

TALBOT COUNTY—Continued

WELL NUMBER.--TA Ce 7. SITE ID.--384643076043801.

LOCATION.--Lat 38°46'43", long 76°04'38", Hydrologic Unit 02060005, off Washington St., in Easton. Owner: Easton Utilities Commission.

AQUIFER.--Cheswold aquifer in the Calvert Formation of Lower Miocene age. Aquifer code: 122CSLD.

WELL CHARACTERISTICS.--Drilled, unused, artesian well, measured depth 104 ft; casing diameter 4 in., to 95 ft; screen diameter 4 in., from 95 to 102 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey or Maryland Geological Survey personnel.

DATUM.--Elevation of land surface is 13 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.40 ft above land surface.

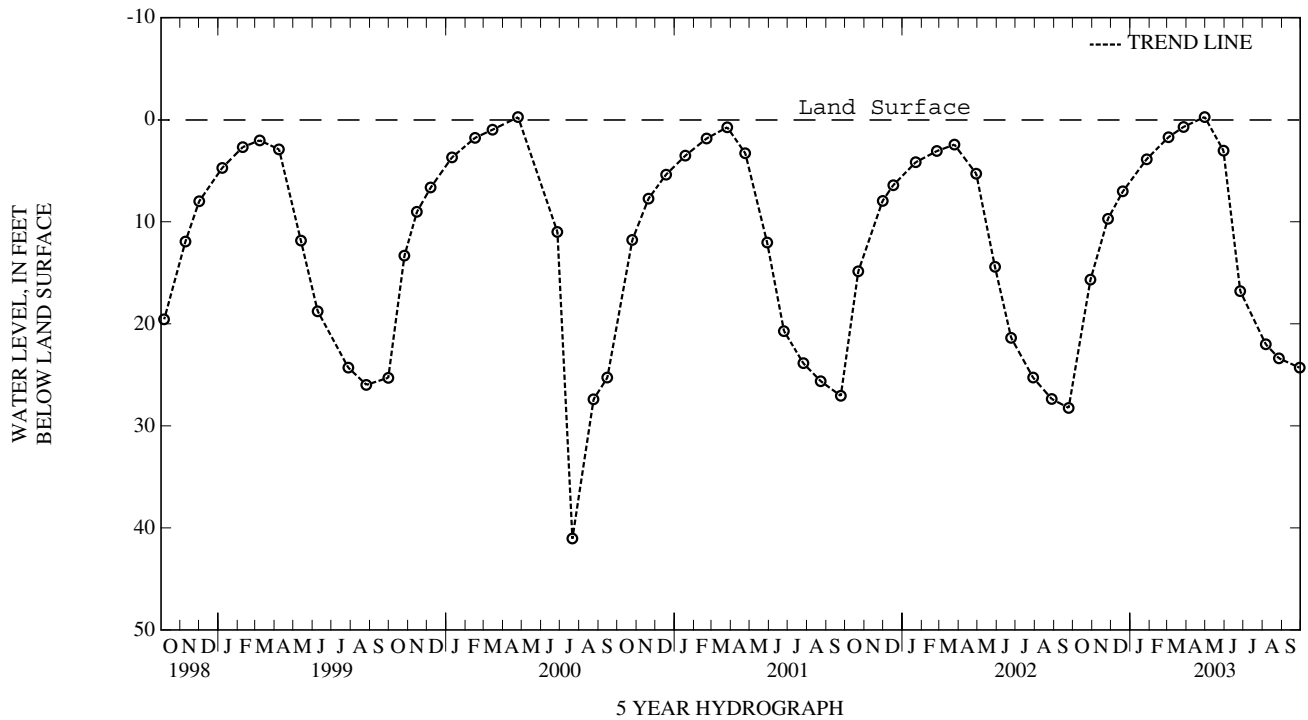
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. A water level was reported as 43.43 ft below land surface on October 7, 1948. Water levels are occasionally affected by local ground-water withdrawal.

PERIOD OF RECORDS.--April 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, +.27 ft above land surface, April 30, 2003; lowest measured 75.36 ft below land surface, August 2, 1966.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
(READINGS ABOVE LAND SURFACE INDICATED BY "-")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	15.68	JAN 27, 2003	3.87	APR 30, 2003	-.27	AUG 06, 2003	22.02
NOV 26	9.71	MAR 03	1.71	MAY 30	3.02	27	23.38
DEC 20	7.02	27	.71	JUN 26	16.81	SEP 29	24.30
HIGHEST	+ .27	APRIL 30, 2003					
LOWEST	24.30	SEP 29, 2003					



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

WASHINGTON COUNTY

WELL NUMBER.--WA Ac 1. SITE ID.--394154078103501.

LOCATION.--Lat 39°41'54", long 78°10'35", Hydrologic Unit 02070004, in Hancock. Owner: Private Residence.

AQUIFER.--Mahantango Formation of Middle-Lower Devonian age. Aquifer code: 344MNNG.

WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 83 ft; casing diameter 4 in., to unknown depth; open hole.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land-surface is 440 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Removeable plug in base of hand pump, 0.60 ft above land surface.

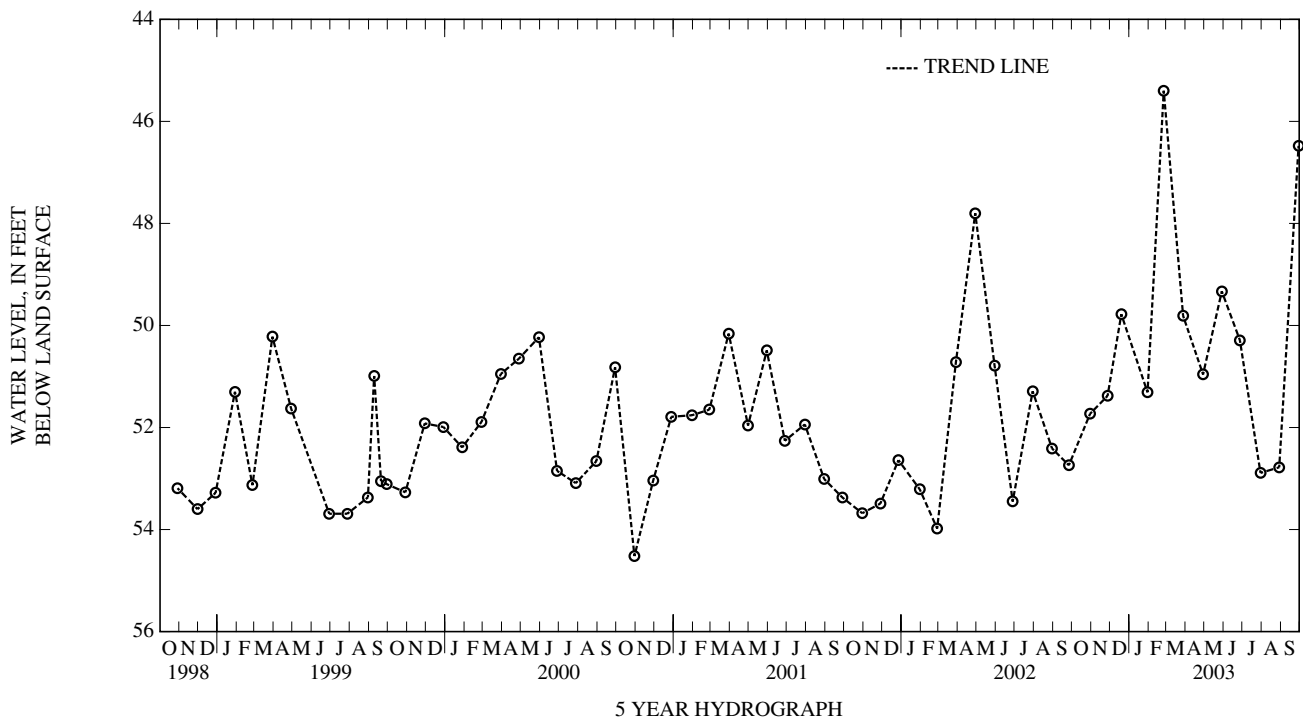
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

PERIOD OF RECORD.--October 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 35.65 ft below land surface, January 2, 1976; lowest measured, 58.18 ft below land surface, November 23, 1992.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 2002	51.73	JAN 30, 2003	51.31	APR 29, 2003	50.96	JUL 30, 2003	52.89
NOV 27	51.38	FEB 25	45.40	MAY 29	49.33	AUG 29	52.78
DEC 19	49.78	MAR 28	49.81	JUN 27	50.29	SEP 29	46.48
HIGHEST 45.40 FEB 25, 2003							
LOWEST 52.89 JUL 30, 2003							



5 YEAR HYDROGRAPH
OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

WASHINGTON COUNTY—Continued

WELL NUMBER.--WA Be 2. SITE ID.--393638078001301.

LOCATION.--Lat 39°36'38", long 78°00'13", Hydrologic Unit 02070004, about 1.2 mi southeast of Big Pool, at Fort Frederick State Park. Owner: State of Maryland.

AQUIFER.--Marcelles-Needmore Shale of Middle Devonian age. Aquifer code: 344MRCL and 344NDRM.

WELL CHARACTERISTICS.--Dug, stone-lined, unused, water-table well, depth 41 ft; casing diameter 42 in.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 470 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of inside edge of wooden access hatch, 0.90 ft above land surface.

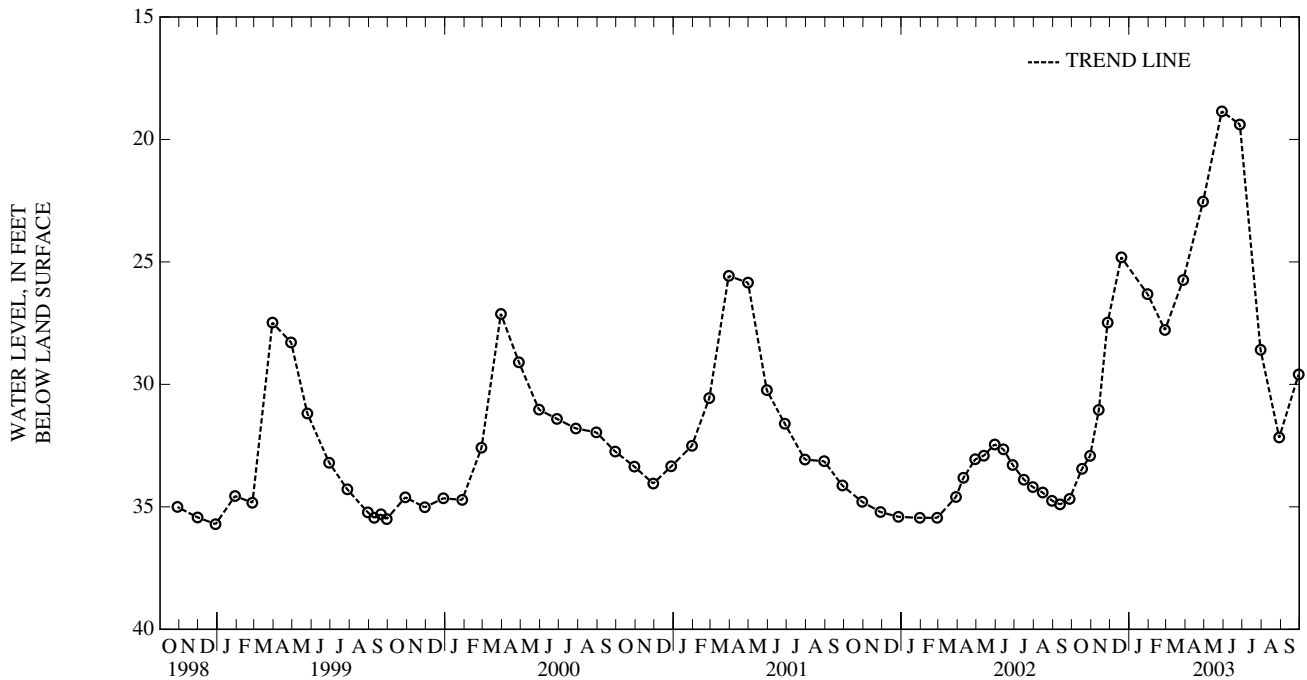
REMARKS.--Collection of Basic Records (CBR) observation well.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.72 ft below land surface, April 28, 1993; lowest measured, 36.92 ft below land surface, January 11, 1965.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17, 2002	33.45	DEC 19, 2002	24.81	APR 29, 2003	22.54	AUG 29, 2003	32.17
30	32.92	JAN 30, 2003	26.31	MAY 29	18.85	SEP 29	29.60
NOV 13	31.05	FEB 27	27.78	JUN 27	19.30		
27	27.48	MAR 28	25.74	JUL 30	28.59		
HIGHEST 18.85 MAY 29, 2003							
LOWEST 33.45 OCT 17, 2002							



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

WASHINGTON COUNTY--Continued

WELL NUMBER.--WA Bk 25. SITE ID.--393851077343001. PERMIT NUMBER.--WA-70-0235.

LOCATION.--Lat 39°38'51", long 77°34'30", Hydrologic Unit 02070004, 0.5 mi south of Smithsburg, at William M. Breichner Water Treatment Plant. Owner: U.S. Geological Survey.

AQUIFER.--Tomstown Formation of Lower Cambrian age. Aquifer code: 377TMSN.

WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 200 ft; casing diameter 6 in., to 128 ft; open hole.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by U.S. Geological Survey personnel. Equipped with graphic water-level recorder from April 27, 1970 to current year.

DATUM.--Elevation of land surface is 790 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of shelter platform, 3.50 ft above land surface.

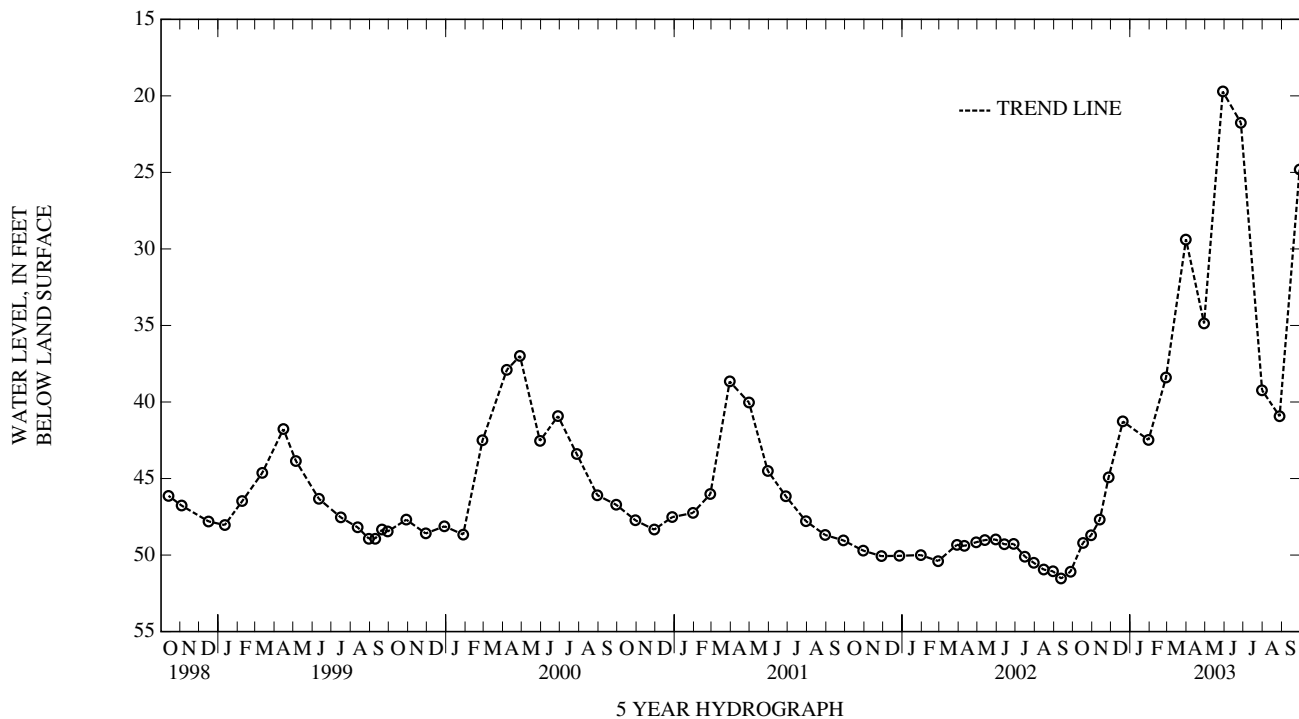
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

PERIOD OF RECORD.--April 1970 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.74 ft below land surface, April 6, 1993; lowest measured, 51.53 ft below land surface September 12, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17, 2002	49.20	DEC 20, 2002	41.27	APR 29, 2003	34.86	AUG 28, 2003	40.93
30	48.71	JAN 30, 2003	42.48	MAY 29	19.72	SEP 29	24.82
NOV 13	47.68	FEB 27	38.40	JUN 27	21.76		
27	44.93	MAR 31	29.38	JUL 31	39.24		
HIGHEST 19.72 MAY 29, 2003							
LOWEST 49.20 OCT 17, 2002							



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

WASHINGTON COUNTY--Continued

WELL NUMBER.--WA Ch 106. SITE ID.--393414077461801. PERMIT NUMBER.--WA-73-2095.

LOCATION.--Lat 39°34'14", long 77°46'18", Hydrologic Unit 02070004, at Fountain Rock School. Owner: U.S. Geological Survey.

AQUIFER.--Conococheague Limestone (middle member) of Upper Cambrian age. Aquifer code: 371CCCG.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 69 ft; casing diameter 6 in., to 41 ft; open hole.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by U.S. Geological Survey personnel. Equipped with graphic water-level recorder from March 1978 to June 1981, November 1985 to May 1987, and July 1987 to June 1994.

DATUM.--Elevation of land surface is 520 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.45 ft above land surface.

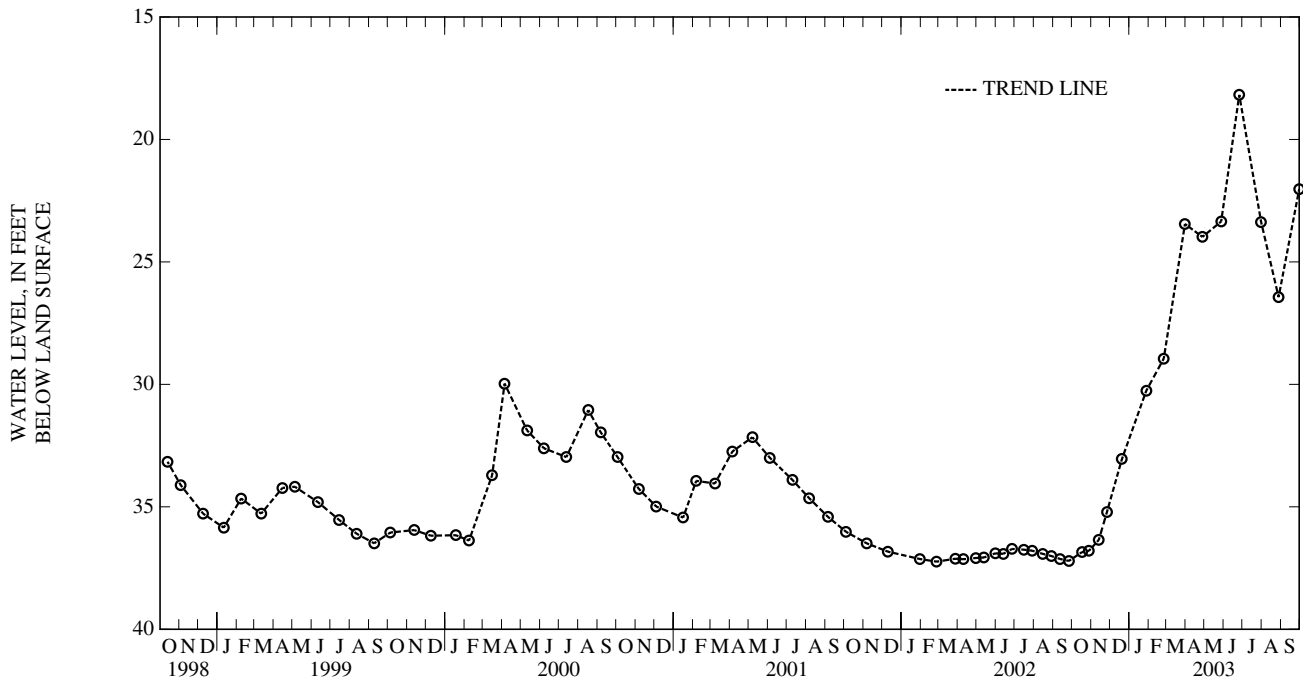
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

PERIOD OF RECORD.--February 1978 to June 1981, April 1984 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.12 ft below land surface, May 4, 1993; lowest measured, 37.24 ft below land surface, February 26, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17, 2002	36.85	DEC 20, 2002	33.05	APR 28, 2003	23.98	AUG 28, 2003	26.44
28	36.80	JAN 28, 2003	30.26	MAY 28	23.35	SEP 30	22.03
NOV 13	36.35	FEB 25	28.95	JUN 26	18.18		
26	35.21	MAR 31	23.45	JUL 31	23.37		
HIGHEST 18.18 JUN 26, 2003							
LOWEST 36.85 OCT 17, 2002							



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

WASHINGTON COUNTY--Continued

WELL NUMBER.--WA Ci 82. SITE ID.--393402077434201. PERMIT NUMBER.--WA-73-2101.

LOCATION.--Lat 39°34'02", long 77°43'42", Hydrologic Unit 02070004, at Maryland Correction Institution, near Lappans. Owner: U.S. Geological Survey.

AQUIFER.--Conococheague Limestone (middle member) of Upper Cambrian age. Aquifer code: 371CCCG.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 84 ft; casing diameter 6 in., to 32 ft; open hole.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from April 1978 to June 1981.

DATUM.--Elevation of land surface is 500 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.30 ft above land surface.

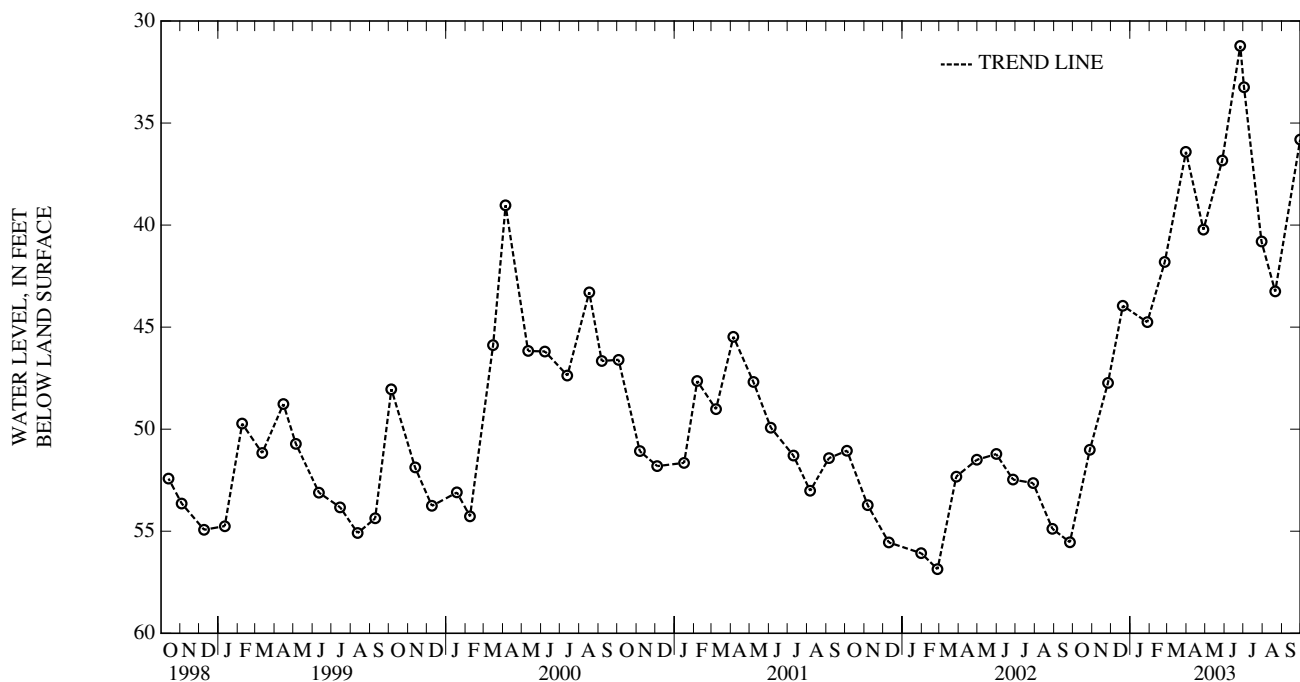
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

PERIOD OF RECORD.--February 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 27.95 ft below land surface, April 6, 1993; lowest measured, 59.28 ft below land surface, February 1, 1981.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 2002	51.01	FEB 25, 2003	41.81	JUN 26, 2003	31.22	SEP 30, 2003	35.81
NOV 26	47.73	MAR 31	36.41	JUL 02	33.25		
DEC 20	43.95	APR 28	40.22	30	40.81		
JAN 28, 2003	44.76	MAY 28	36.84	AUG 21	43.25		
HIGHEST 31.22 JUN 26, 2003							
LOWEST 51.01 OCT 28, 2002							



WASHINGTON COUNTY—Continued

WELL NUMBER.--WA Dj 2. SITE ID.--392904077371501.

LOCATION.--Lat 39°29'04", long 77°37'15", Hydrologic Unit 02070004, at Turner's Gap on Alt. U.S. 40. Owner: Russell Schwartz.

AQUIFER.--Weverton Formation (Buzzard Knob member) of Lower Cambrian age. Aquifer code: 377WVRN.

WELL CHARACTERISTICS.--Dug, stone-lined, observation, water-table well, depth 61.3 ft; casing diameter 48 in.

INSTRUMENTATION.--Monthly water level measurements with chalked steel tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 1,070 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of concrete cover, 0.25 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

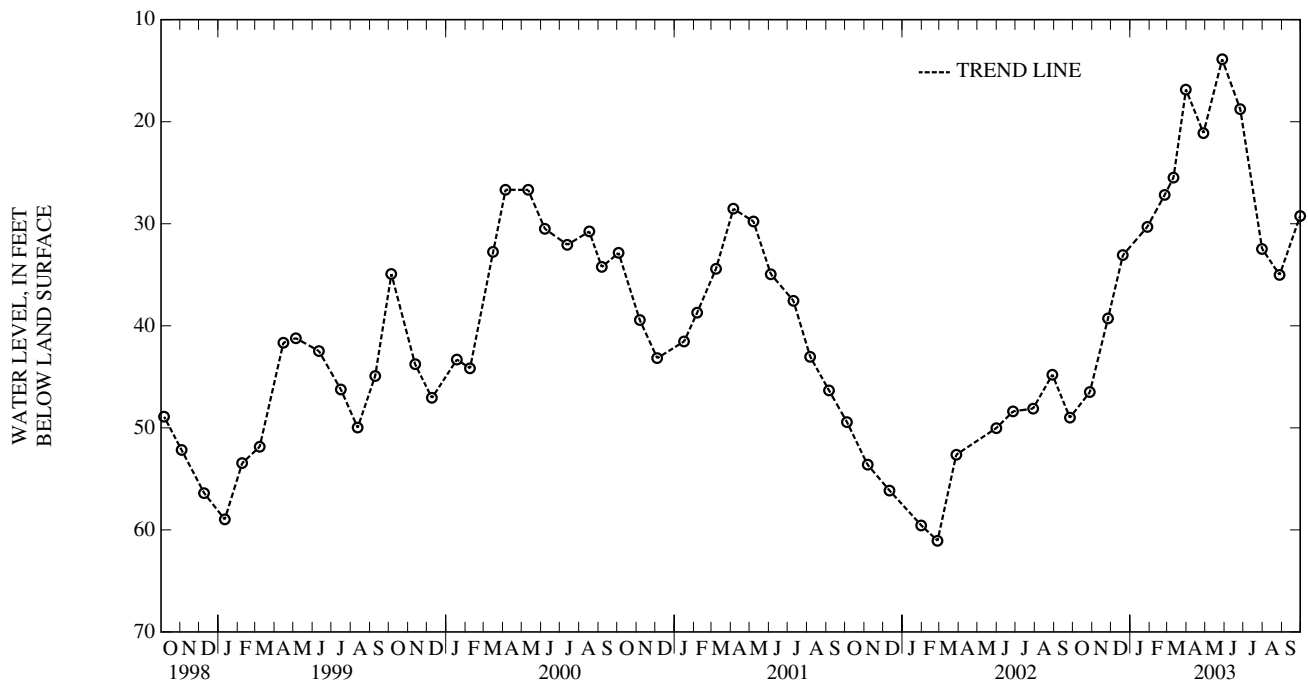
PERIOD OF RECORD.--December 1956 to current year.

EXTREMES FOR PERIOD FOR RECORD.--Highest water level measured, 11.92 ft below land surface, May 14, 1998; lowest measured, 61.06 ft below land surface, February 26, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 2002	46.50	FEB 25, 2003	27.16	MAY 28, 2003	13.89	SEP 30, 2003	29.23
NOV 26	39.29	MAR 11	25.48	JUN 26	18.78		
DEC 20	33.08	31	16.85	JUL 31	32.46		
JAN 28, 2003	30.31	APR 28	21.11	AUG 28	35.01		

HIGHEST 13.89 MAY 28, 2003
 LOWEST 46.50 OCT 28, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

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.--Pensauken Formation (Salisbury aquifer) of Upper Miocene age. Aquifer code: 122PNSK.

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 water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with water-level recorder from July 1947 to January 1955, and August 1962 to August 1968.

DATUM.--Elevation of land surface is 7 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 0.22 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

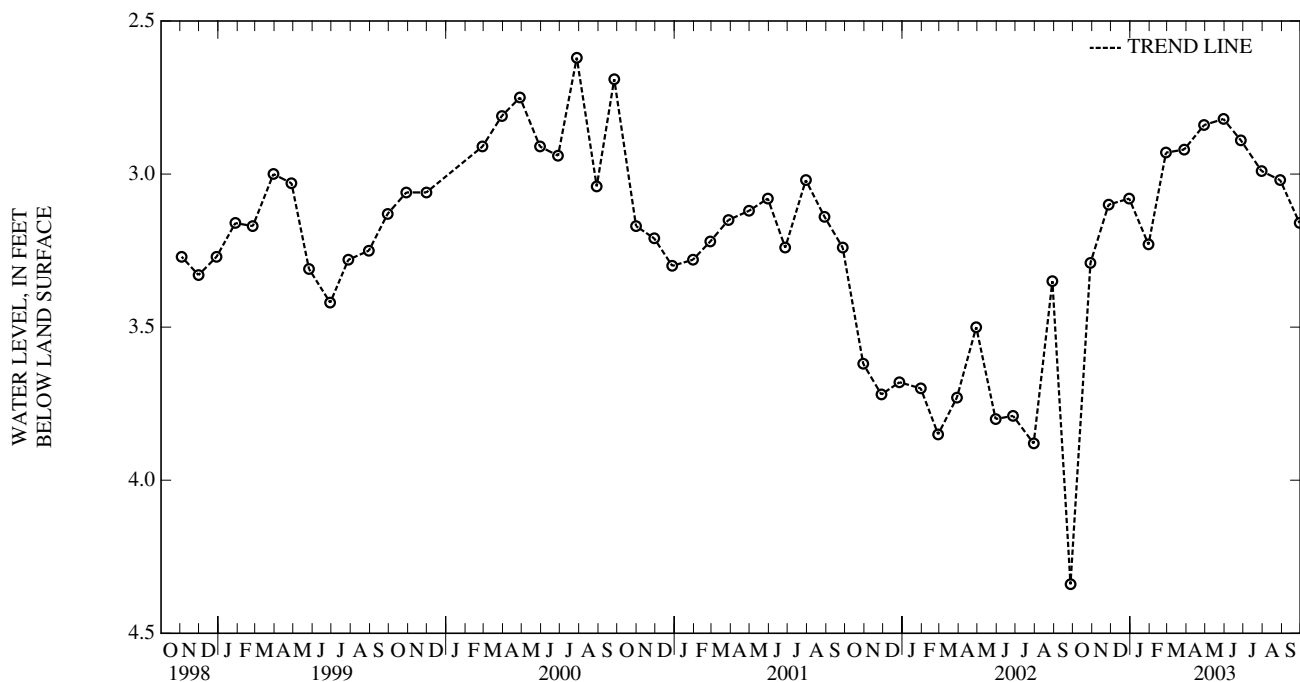
PERIOD OF RECORD.--July 1947 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.25 ft below land surface, August 30, 1979; lowest measured, 10.72 ft below land surface, August 30, 1947.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	3.29	JAN 30, 2003	3.23	APR 29, 2003	2.84	JUL 30, 2003	2.99
NOV 27	3.10	FEB 27	2.93	MAY 30	2.82	AUG 29	3.02
DEC 30	3.08	MAR 28	2.92	JUN 27	2.89	SEP 29	3.16

HIGHEST 2.82 MAY 30, 2003
LOWEST 3.29 OCT 29, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

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., Salisbury. Owner: City of Salisbury.

AQUIFER.--Pensauken Formation (Salisbury aquifer) of Upper Miocene age. Aquifer code: 122PNSK.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 113 ft; casing diameter 8 in., to 109 ft; screen diameter 3 in., from 109 to 113 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 28 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of shelter floor on cross-brace, 3.14 ft above land surface.

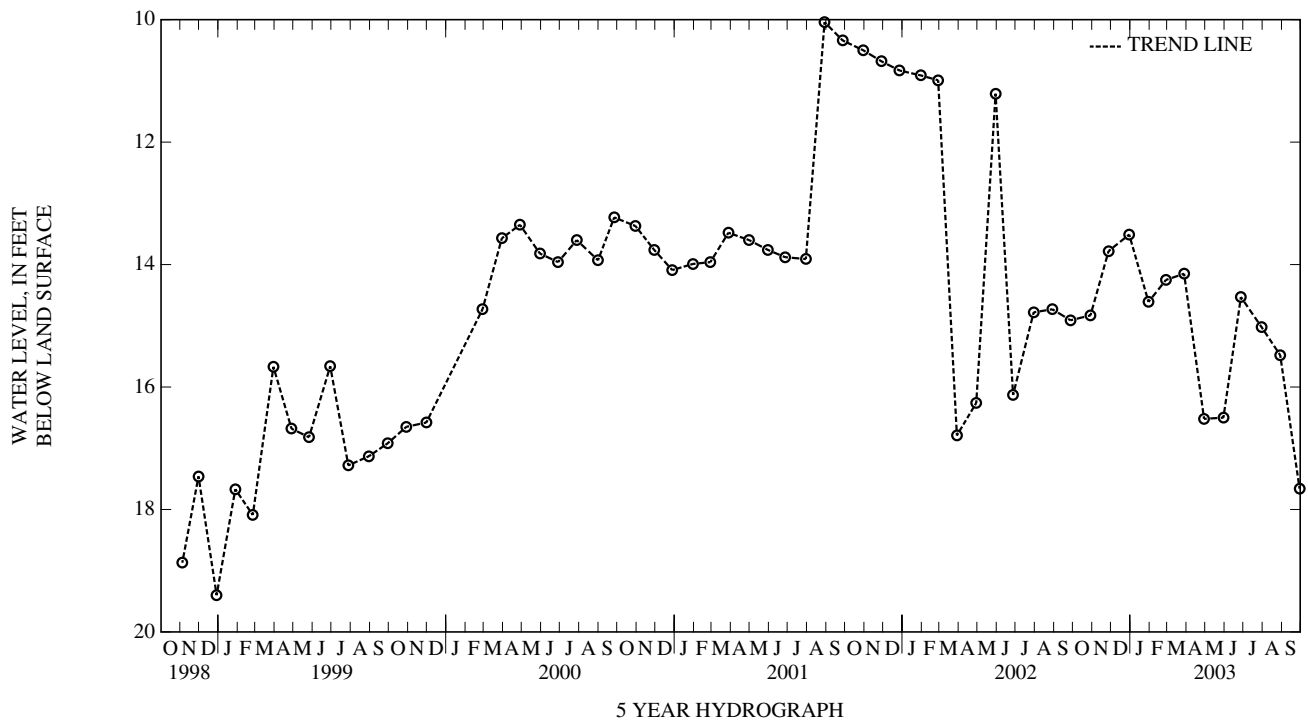
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local ground-water withdrawal. The nearby production well was not in use from approximately September 2001 through February 2002, and for some period in May 2002.

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, 19.40 ft below land surface, December 29, 1998.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	14.83	JAN 30, 2003	14.61	APR 29, 2003	16.52	JUL 30, 2003	15.02
NOV 27	13.78	FEB 27	14.25	MAY 30	16.50	AUG 29	15.48
DEC 30	13.51	MAR 28	14.15	JUN 27	14.53	SEP 29	17.66
HIGHEST	13.51	DEC 30, 2002					
LOWEST	17.66	SEP 29, 2003					



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

WICOMICO COUNTY--Continued

WELL NUMBER.--WI Cf 3. SITE ID.--382037075310801.

LOCATION.--Lat 38°20'37", long 75°31'08", Hydrologic Unit 02060007, on Airport Rd., at Salisbury-Wicomico County Regional Airport, Mt. Hermon.
Owner: Salisbury-Wicomico County Regional Airport.

AQUIFER.--Beaverdam Sand (Salisbury aquifer) of Pliocene age. Aquifer code: 121BVDM.

WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 110 ft; casing diameter 16 in., to 90 ft; screened from 90 to 110 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. Equipped with graphic water-level recorder from March 1948 to July 1948, August 1949 to April 1960, and August 1963 to August 1968.

DATUM.--Elevation of land surface is 44.79 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.00 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. A water level was reported as 7.2 ft below land surface on October 26, 1942. Water levels are affected by local and regional ground-water withdrawal.

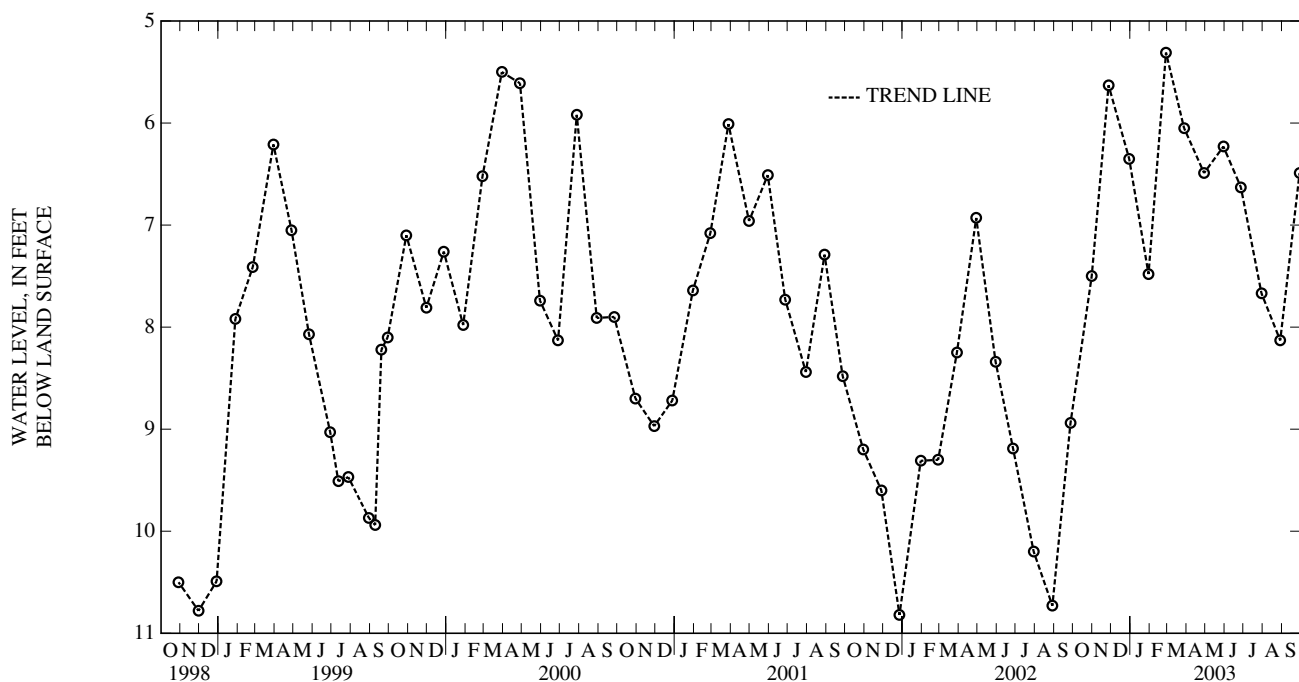
PERIOD OF RECORD.--September 1947 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.18 ft below land surface, May 8, 1958; lowest measured, 13.44 ft below land surface, September 18, 1947.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 2002	7.50	JAN 30, 2003	7.48	APR 29, 2003	6.49	JUL 30, 2003	7.67
NOV 27	5.63	FEB 27	5.31	MAY 30	6.23	AUG 29	8.13
DEC 30	6.35	MAR 28	6.05	JUN 27	6.63	SEP 29	6.49

HIGHEST 5.31 FEB 27, 2003
LOWEST 8.13 AUG 29, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

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., Salisbury. Owner: A.S. Abell Co.

AQUIFER.--Pensauken Formation (Salisbury aquifer) of Upper Miocene age. Aquifer code: 122PNSK.

WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 80 ft; casing diameter 2 in., to 80 ft; perforated casing from 60 to 80 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey 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 Ground-Water-Level Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

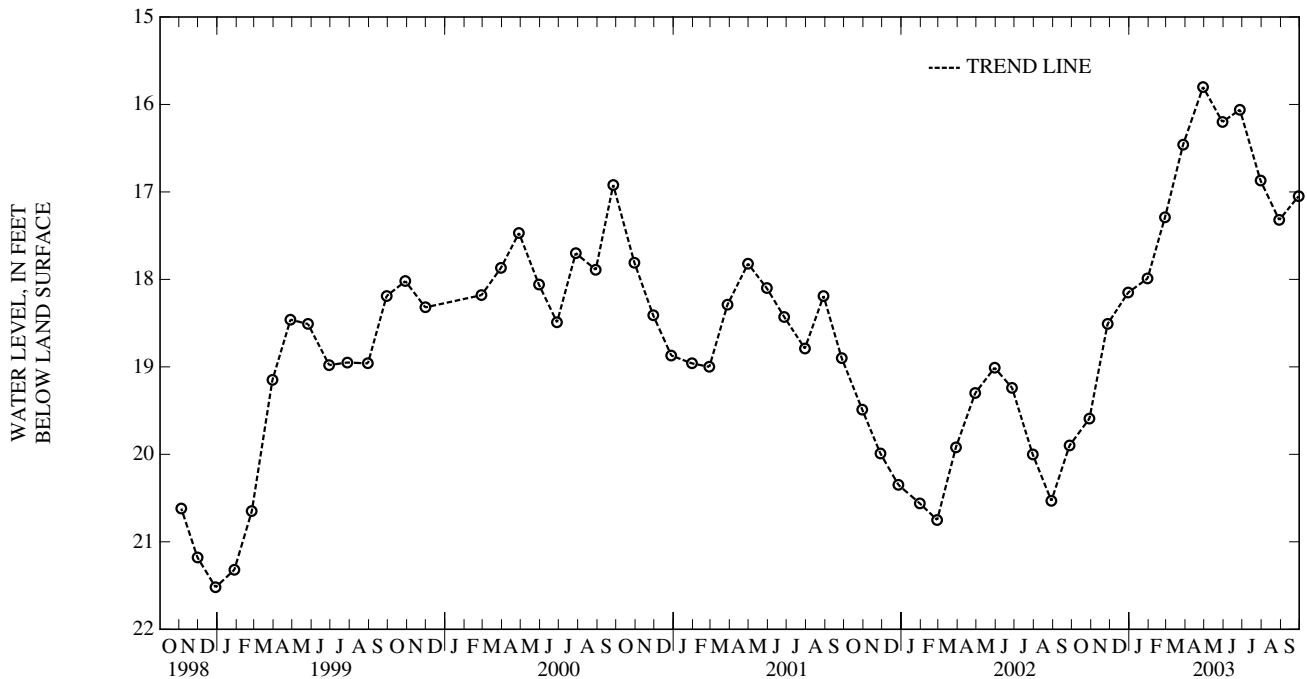
PERIOD OF RECORD.--November 1964; March 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.78 ft below land surface, June 18, 1979; lowest measured, 21.52 ft below land surface, December 29, 1998.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	19.59	JAN 30, 2003	17.99	APR 29, 2003	15.80	JUL 30, 2003	16.87
NOV 27	18.51	FEB 27	17.29	MAY 30	16.20	AUG 29	17.32
DEC 30	18.15	MAR 28	16.46	JUN 27	16.06	SEP 29	17.05

HIGHEST 15.80 APR 29, 2003
 LOWEST 19.59 OCT 29, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

WICOMICO COUNTY--Continued

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, south of MD Rt. 346. Owner: Maryland State Highway Administration.

AQUIFER.--Parsonsburg Sand (Columbia aquifer) 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 water level measurements with electric tape by U.S. Geological Survey 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.

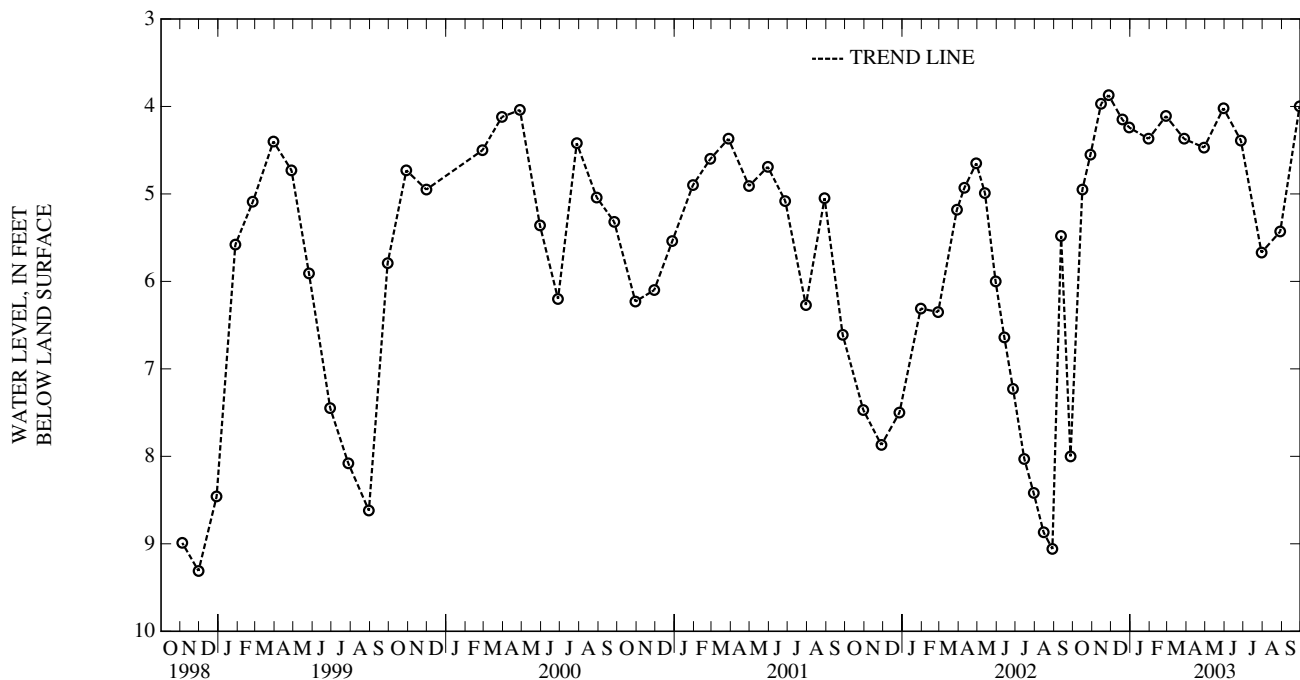
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.84 ft below land surface, January 31, 1950; lowest measured, 9.31 ft below land surface, November 30, 1998.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16, 2002	4.95	DEC 19, 2002	4.15	MAR 28, 2003	4.37	JUL 30, 2003	5.67
29	4.55	30	4.24	APR 29	4.47	AUG 29	5.43
NOV 15	3.97	JAN 30, 2003	4.37	MAY 30	4.02	SEP 29	4.00
27	3.87	FEB 27	4.11	JUN 27	4.39		
HIGHEST 3.87 NOV 27, 2002							
LOWEST 5.67 JUL 30, 2003							



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

WORCESTER COUNTY

WELL NUMBER.--WO Ae 23. SITE ID.--382621075174201. PERMIT NUMBER.--WO-73-0513.

LOCATION.--Lat 38°26'21", long 75°17'42", Hydrologic Unit 02060009, 2.75 mi north of Whaleyville. Owner: U.S. Geological Survey.

AQUIFER.--Manokin aquifer in the Eastover Formation of Upper Miocene age. Aquifer code: 122MNKN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 280 ft; casing diameter 4 in., to 270 ft; screen diameter 2 in., from 270 to 280 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey 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. casing, 3.52 ft above land surface.

REMARKS.--Ocean City Ground-Water Monitoring Network observation well. Water levels are affected by regional ground-water withdrawal.

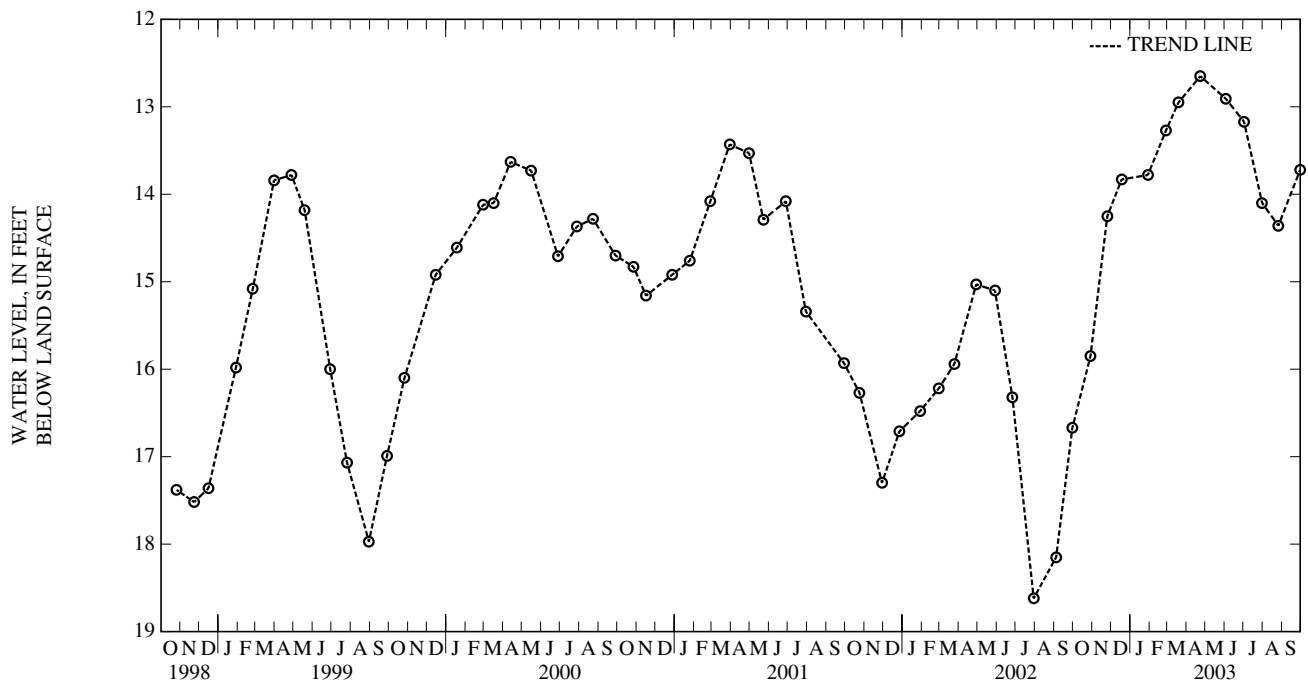
PERIOD OF RECORD.--October 1975 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.85 ft below land surface, December 16, 1975; lowest measured, 20.18 ft below land surface, September 28, 1995.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	15.85	JAN 29, 2003	13.78	APR 23, 2003	12.65	JUL 31, 2003	14.10
NOV 25	14.25	FEB 27	13.27	JUN 03	12.91	AUG 26	14.36
DEC 18	13.83	MAR 19	12.95	JUL 02	13.17	SEP 30	13.72

HIGHEST 12.65 APR 23, 2003
 LOWEST 15.85 OCT 29, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

WORCESTER COUNTY--Continued

WELL NUMBER.--WO Ae 24. SITE ID.--382621075174202. PERMIT NUMBER.--WO-73-0512.

LOCATION.--Lat 38°26'21", long 75°17'42", Hydrologic Unit 02060009, 2.75 mi north of Whaleyville. Owner: U.S. Geological Survey.

AQUIFER.--Ocean City aquifer in the Eastover Formation of Upper Miocene age. Aquifer code: 122OCNC.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 200 ft; casing diameter 4 in., to 190 ft; screen diameter 2 in., from 190 to 200 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey 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. casing, 4.00 ft above land surface.

REMARKS.--Ocean City Ground-Water Monitoring Network observation well. Water levels are affected by local and regional ground-water withdrawal.

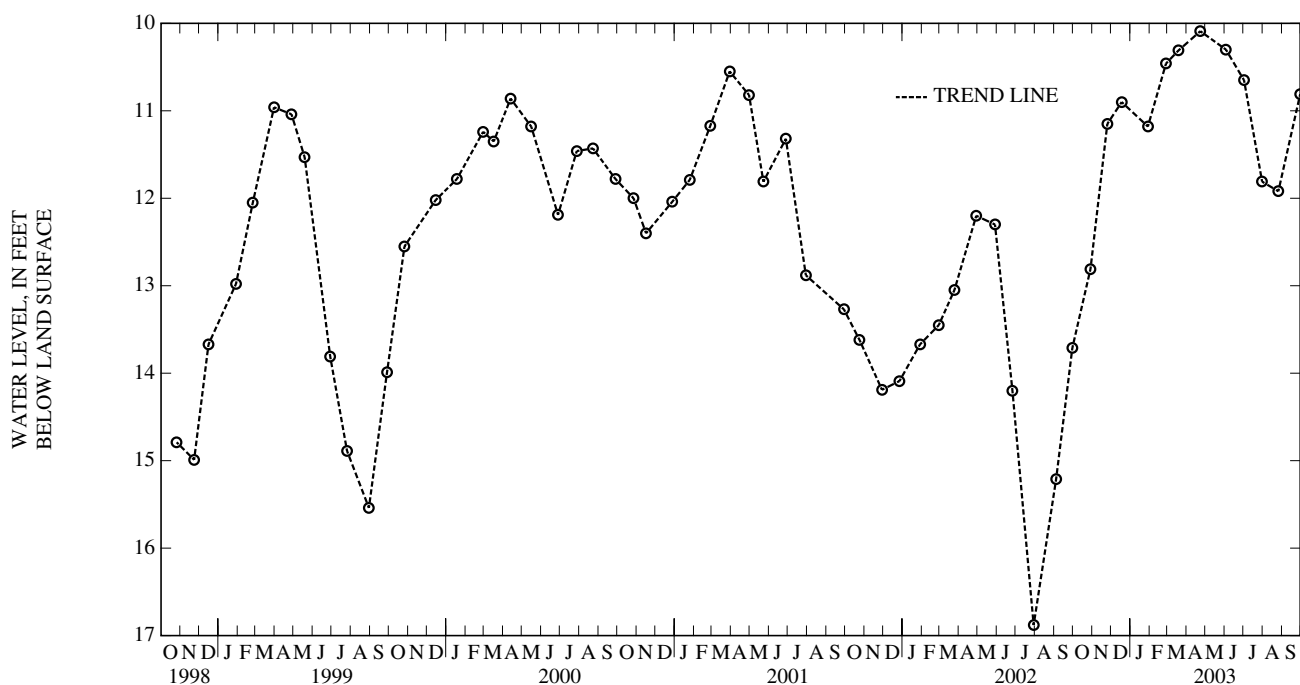
PERIOD OF RECORD.--October 1975 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.49 ft below land surface, May 31, 1978; lowest measured, 16.88 ft below land surface, July 30, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	12.81	JAN 29, 2003	11.18	APR 23, 2003	10.09	JUL 31, 2003	11.81
NOV 25	11.15	FEB 27	10.46	JUN 03	10.30	AUG 26	11.92
DEC 18	10.90	MAR 19	10.31	JUL 02	10.65	SEP 30	10.81

HIGHEST 10.09 APR 23, 2003
LOWEST 12.81 OCT 29, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

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 02060009, 2.75 mi north of Whaleyville. Owner: U.S. Geological Survey.

AQUIFER.--Beaverdam Sand of Pliocene age. Aquifer code: 121BVDM.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 118 ft; casing diameter 4 in., to 108 ft; screened diameter 2 in., from 108 to 118 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 40 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.20 ft above land surface.

REMARKS.--Ocean City Ground-Water Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

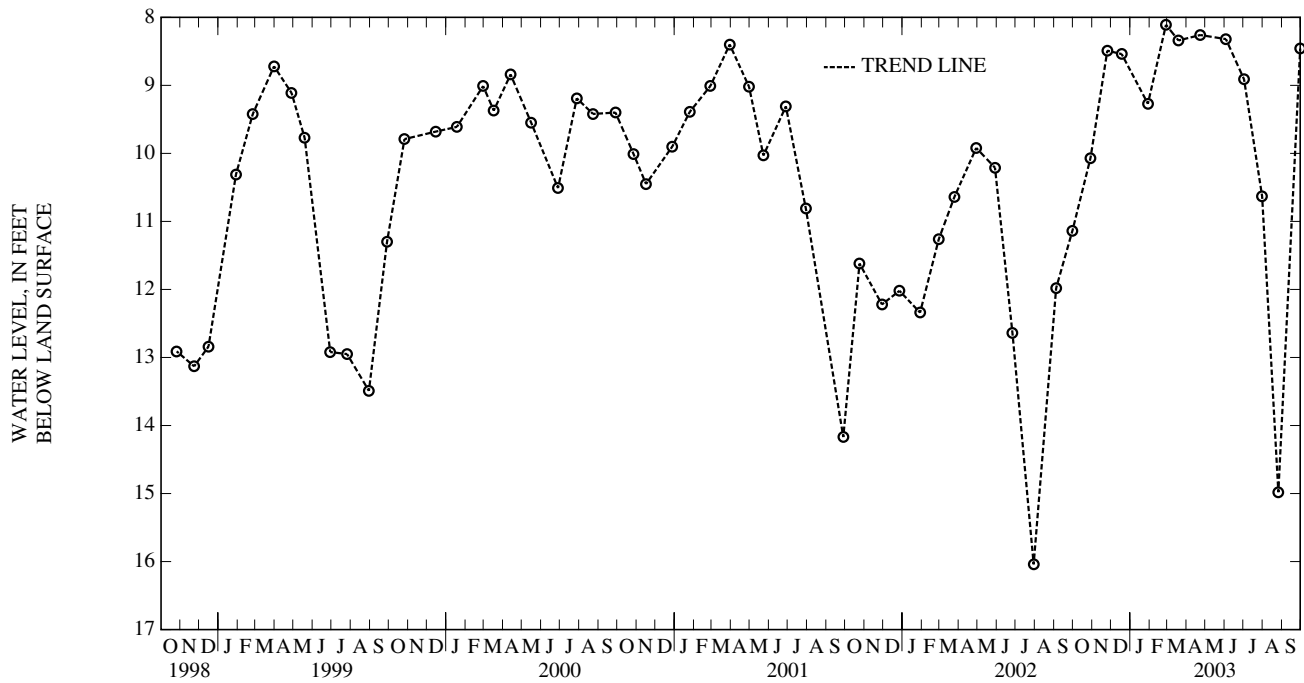
PERIOD OF RECORD.--October 1975 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.78 ft below land surface, February 20, 1998; lowest measured, 16.04 ft below land surface, July 30, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	10.07	JAN 29, 2003	9.27	APR 23, 2003	8.26	JUL 31, 2003	10.63
NOV 25	8.49	FEB 27	8.11	JUN 03	8.32	AUG 26	14.98
DEC 18	8.54	MAR 19	8.34	JUL 02	8.91	SEP 30	8.46

HIGHEST 8.11 FEB 27, 2003
 LOWEST 14.98 AUG 26, 2003



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

WORCESTER COUNTY--Continued

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 in the Eastover Formation of Upper Miocene age. Aquifer code: 122MNKN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 357 ft; casing diameter 6 in., to 347 ft; casing diameter 4 in., from 327 to 347 ft; screen diameter 4 in., from 347 to 357 ft.

INSTRUMENTATION.--Monthly water level measurements with an electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--15-minute recording interval, March 1985 to February 1994.

DATUM.--Elevation of land surface is 6.35 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.27 ft above land surface.

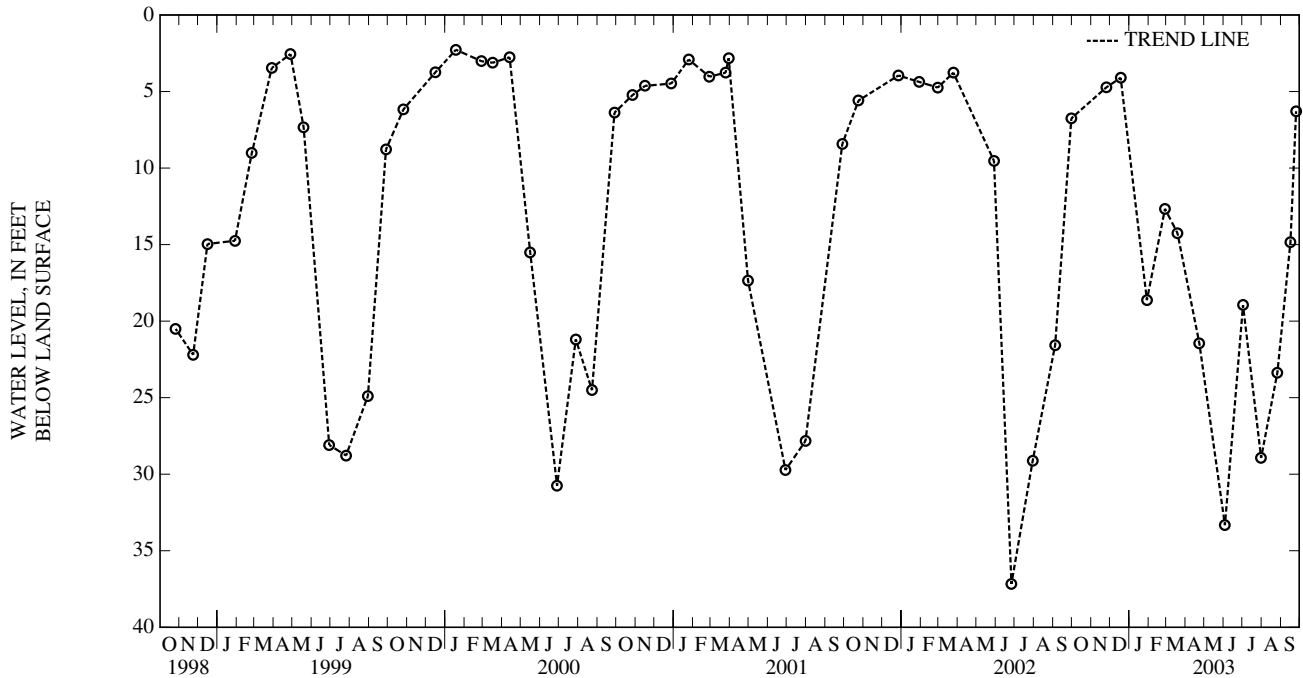
REMARKS.--Ocean City Ground-Water Monitoring Network observation well. Water levels are affected by local ground-water withdrawal, especially during summer peak demands.

PERIOD OF RECORD.--September 1970 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.48 ft above land surface, March 27, 1973; lowest measured, 52.46 ft below land surface, July 24, 1989 (recorder).

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 25, 2002	4.73	FEB 27, 2003	12.66	JUN 03, 2003	33.33	AUG 26, 2003	23.38
DEC 18	4.10	MAR 19	14.25	JUL 02	18.95	SEP 16	14.84
JAN 29, 2003	18.63	APR 23	21.44	31	28.93	25	6.29
HIGHEST 4.10 DEC 18, 2002							
LOWEST 33.33 JUN 03, 2003							



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

WORCESTER COUNTY--Continued

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.--St. Marys Formation of Middle-Upper Miocene age. Aquifer code: 122SMRS.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 726 ft; casing diameter 4 in., to 716 ft; screen diameter 2 in., from 716 to 726 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 13.99 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 4 in. casing, 3.30 ft above land surface.

REMARKS.--Ocean City Ground-Water Monitoring Network observation well.

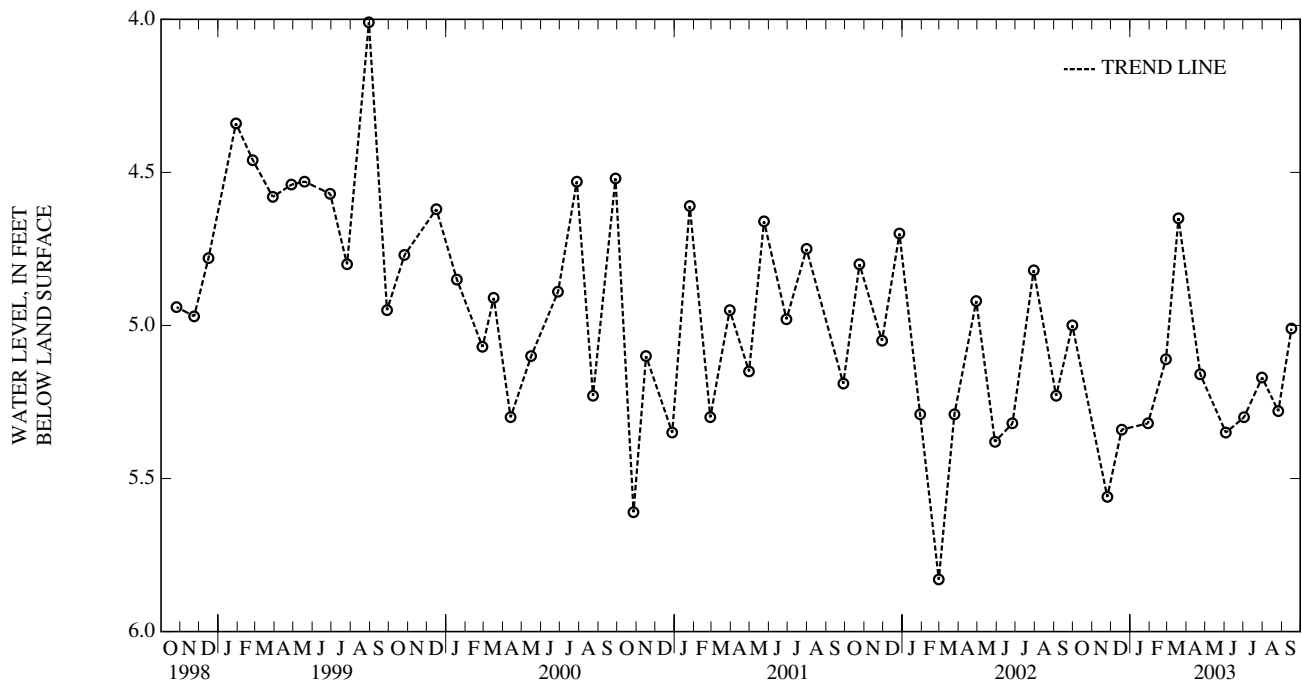
PERIOD OF RECORD.--October 1975 to current year.

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, October 28, 1975.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 25, 2002	5.56	FEB 27, 2003	5.11	JUN 03, 2003	5.35	AUG 26, 2003	5.28
DEC 18	5.34	MAR 19	4.65	JUL 02	5.30	SEP 16	5.01
JAN 29, 2003	5.32	APR 23	5.16	31	5.17		

HIGHEST 4.65 MAR 19, 2003
 LOWEST 5.56 NOV 25, 2002



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

WORCESTER COUNTY--Continued

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 in the Eastover Formation of Upper 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 water level measurements with an electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recording interval from May 1994 to May 1997.

DATUM.--Elevation of land surface is 14.32 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 4 in. casing, 4.09 ft above land surface.

REMARKS.--Ocean City Ground-Water Monitoring Network observation well. Water levels are affected by local ground-water withdrawal, especially during summer peak demands.

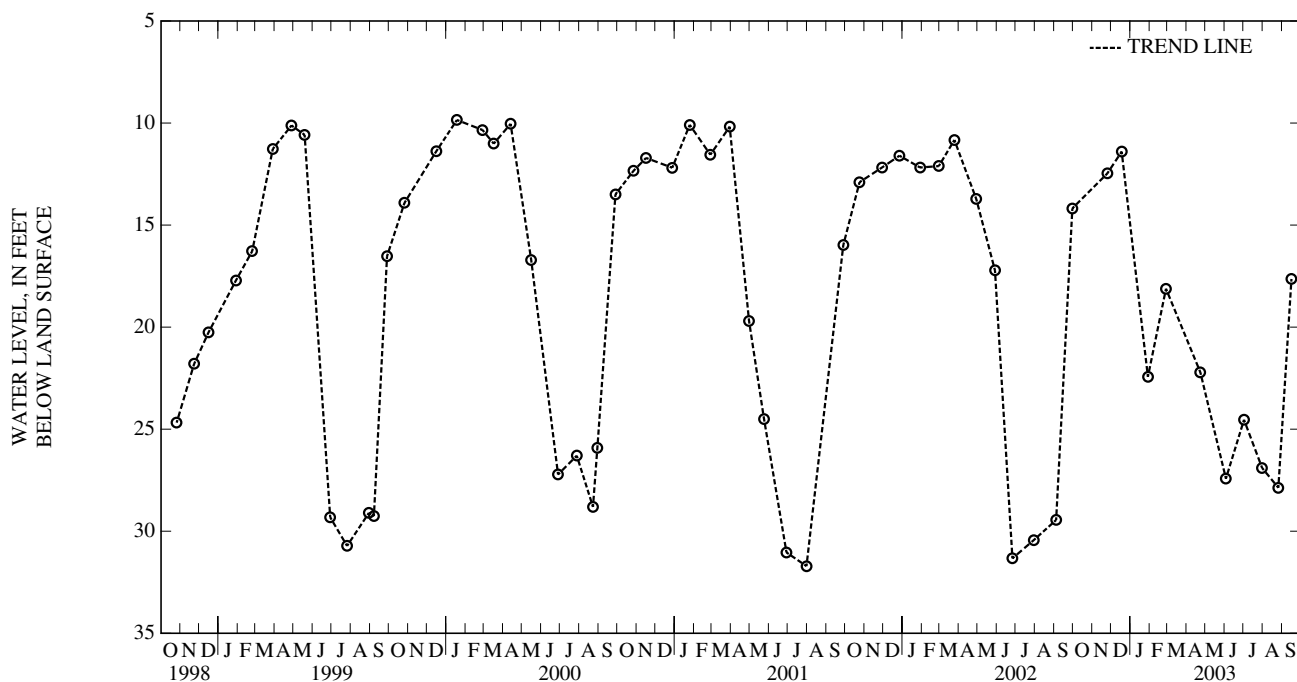
PERIOD OF RECORD.--October 1975 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.23 ft below land surface, February 9, 1997; lowest measured, 38.75 ft below land surface, August 30, 1989.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 25, 2002	12.47	FEB 27, 2003	18.12	JUL 02, 2003	24.54	SEP 16, 2003	17.64
DEC 18	11.40	APR 23	22.21	31	26.90		
JAN 29, 2003	22.43	JUN 03	27.42	AUG 26	27.87		

HIGHEST 11.40 DEC 18, 2002
LOWEST 27.87 AUG 26, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

WORCESTER COUNTY--Continued

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 in the Eastover Formation of Upper 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 water level measurements with an electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recording interval from May 1997 to current year.

DATUM.--Elevation of land surface is 13.89 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 4 in. casing, 3.10 ft above land surface.

REMARKS.--Ocean City Ground-Water Monitoring Network observation well. Water levels are affected by local ground-water withdrawal, especially during summer peak demands. Missing data due to recorder malfunction.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.58 ft below land surface, February 10, 1977; lowest measured, 41.42 ft below land surface, August 30, 1989.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

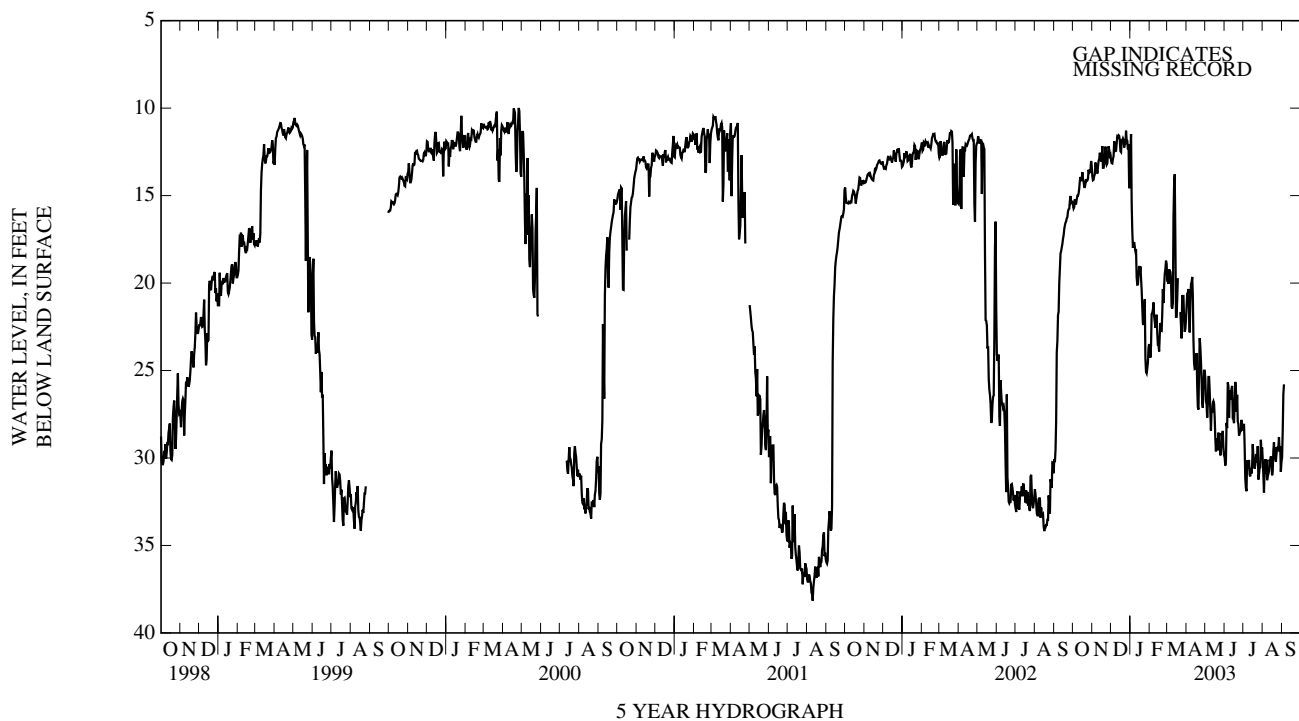
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 25, 2002	12.45	FEB 27, 2003	18.25	JUN 03, 2003	27.77	AUG 26, 2003	28.11
DEC 18	11.54	MAR 21	18.26	JUL 02	24.86	SEP 16	18.87
JAN 29, 2003	22.81	APR 23	22.57	31	27.15	30	12.87
HIGHEST 11.54 DEC 18, 2002							
LOWEST 28.11 AUG 26, 2003							

DAY	MAX		MIN		MAX		MIN		MAX		MIN	
	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH						
1	15.52	14.33	13.92	12.24	13.00	11.26	12.65	10.36	23.66	21.63	19.80	17.28
2	15.73	14.33	14.12	12.47	13.14	11.33	11.48	9.48	24.26	20.98	19.76	17.69
3	15.65	13.97	14.09	12.29	13.16	11.13	15.40	9.08	23.58	20.54	20.05	17.27
4	15.21	13.37	13.88	11.89	12.89	10.86	17.01	12.72	21.78	19.05	19.22	17.21
5	15.46	13.63	13.77	11.62	12.76	10.24	17.99	15.13	21.70	19.16	19.31	16.74
6	15.46	13.48	13.11	11.12	11.90	10.10	17.78	14.45	21.53	19.85	19.36	16.73
7	15.22	13.17	13.37	11.60	12.18	10.60	17.66	14.45	21.11	19.87	19.81	17.05
8	15.01	13.10	13.43	11.76	12.45	11.07	17.93	14.98	21.88	20.13	21.35	18.91
9	15.01	13.18	13.74	12.29	12.44	11.09	18.16	15.05	22.20	20.98	21.46	20.50
10	14.87	13.20	13.36	11.97	12.01	10.93	18.07	15.05	22.55	19.87	21.14	16.29
11	14.60	13.03	13.01	11.92	11.61	10.36	19.66	15.37	22.19	19.87	16.29	14.25
12	14.15	12.76	12.91	11.69	11.64	10.56	20.09	17.64	21.81	17.94	14.38	13.62
13	13.94	12.69	12.55	11.42	11.55	10.44	20.08	17.02	22.86	19.27	13.78	12.81
14	14.18	13.06	12.77	11.65	11.59	9.96	19.53	16.83	23.52	21.39	17.60	11.83
15	14.02	12.76	13.05	11.93	11.85	10.67	19.02	17.10	23.52	21.24	21.93	17.28
16	13.66	12.34	12.90	11.38	12.46	10.62	19.45	16.85	23.91	21.47	21.93	19.56
17	14.05	12.80	12.17	10.64	12.51	10.45	19.05	16.92	23.00	19.89	20.85	17.45
18	14.19	12.96	13.41	11.27	11.85	10.27	19.72	17.76	22.28	20.31	19.72	16.42
19	14.51	13.12	13.41	12.17	11.84	10.35	20.40	18.08	22.71	19.86	---	---
20	14.51	13.19	13.20	11.63	11.73	10.08	21.38	19.30	22.73	17.39	---	---
21	14.31	12.92	12.67	11.13	11.82	10.12	22.31	20.56	21.77	16.79	---	---
22	14.06	12.75	12.20	10.64	12.25	10.50	22.39	20.49	20.35	17.12	21.66	18.47
23	14.17	12.85	12.99	11.46	11.99	10.45	21.74	19.77	21.14	19.24	22.37	20.01
24	14.14	12.86	13.23	12.02	12.07	10.43	20.93	19.55	20.18	18.12	23.16	19.85
25	14.03	12.71	13.16	11.86	11.29	9.33	24.28	19.70	19.49	17.84	20.69	19.80
26	13.52	12.26	12.63	11.21	11.85	10.37	25.08	23.38	19.21	17.70	20.79	19.21
27	13.69	12.51	12.18	10.98	11.87	10.69	25.16	23.62	18.72	17.23	20.77	19.14
28	13.66	12.53	12.37	11.09	12.35	10.57	24.89	22.96	18.90	16.72	22.13	19.21
29	13.54	12.29	12.72	11.25	12.07	10.41	24.55	22.55	---	---	22.79	20.21
30	13.02	11.84	12.66	11.13	14.58	10.35	23.69	20.57	---	---	22.62	20.22
31	13.29	11.93	---	---	14.36	10.59	23.49	20.17	---	---	22.12	19.73
MONTH	15.73	11.84	14.12	10.64	14.58	9.33	25.16	9.08	24.26	16.72	23.16	11.83

WORCESTER COUNTY—Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	21.34	18.99	25.45	23.13	29.97	28.05	28.15	25.37	30.13	26.51	29.97	28.42
2	20.60	18.99	26.75	23.82	30.43	27.63	28.05	24.72	30.98	28.16	28.42	26.01
3	20.55	19.12	26.93	25.41	30.11	27.37	29.34	25.35	31.97	28.37	26.37	24.43
4	20.34	18.82	27.70	25.84	27.99	25.66	31.17	27.06	30.59	28.64	25.79	21.36
5	21.80	19.08	26.96	23.47	28.29	23.99	31.71	27.80	30.07	27.96	---	---
6	22.82	20.58	25.37	22.42	25.68	22.79	31.90	28.41	30.91	28.14	---	---
7	21.16	18.05	25.37	22.38	25.89	23.37	30.12	27.00	30.10	27.89	---	---
8	20.07	17.92	26.14	22.86	27.71	24.08	30.47	26.11	31.27	28.43	---	---
9	19.95	18.33	27.31	22.96	26.44	24.34	30.58	26.36	31.02	29.07	---	---
10	19.65	18.73	28.43	24.58	26.15	23.38	30.11	26.77	30.92	28.81	---	---
11	20.75	18.79	27.23	24.33	26.65	23.48	30.95	26.01	30.76	28.51	---	---
12	23.27	19.38	27.40	23.58	26.02	23.39	31.05	28.73	30.09	28.18	---	---
13	24.58	21.91	26.86	24.56	25.88	23.47	30.57	27.10	30.28	28.17	---	---
14	24.91	22.22	26.76	23.68	27.75	24.20	30.89	27.85	29.91	28.39	---	---
15	24.89	21.28	26.90	24.31	27.78	25.48	30.40	27.69	30.43	28.67	---	---
16	24.65	20.97	27.65	25.00	28.01	25.15	29.21	26.01	30.99	29.03	---	---
17	24.01	20.79	28.88	26.63	26.71	24.50	29.98	27.48	30.76	28.50	---	---
18	25.91	21.99	29.62	27.51	25.65	23.22	30.12	28.49	29.54	27.22	---	---
19	27.09	23.80	28.88	26.17	26.07	23.22	30.61	27.60	29.11	27.11	---	---
20	27.23	23.10	29.22	27.13	27.36	24.56	30.41	28.07	30.10	28.04	---	---
21	24.97	21.74	29.56	27.25	26.39	25.04	29.85	26.58	29.39	27.91	---	---
22	23.15	21.54	28.55	27.09	27.91	24.90	29.87	26.65	30.21	28.27	---	---
23	23.65	21.27	29.12	26.48	28.07	24.99	30.28	27.43	29.78	28.07	---	---
24	24.46	21.32	29.17	28.02	28.72	25.15	29.32	26.83	29.46	27.85	---	---
25	25.60	22.59	29.85	27.38	28.59	26.59	31.23	27.08	29.38	27.79	---	---
26	26.81	23.77	29.68	27.46	28.49	26.11	30.97	28.33	29.38	27.31	---	---
27	27.13	23.28	28.57	25.17	28.36	26.03	30.52	27.25	28.80	26.93	---	---
28	25.82	22.12	28.84	25.94	27.82	25.47	30.52	28.24	29.64	27.11	---	---
29	25.01	22.22	28.45	25.84	28.39	24.63	28.96	26.63	29.33	27.25	---	---
30	25.01	22.07	29.41	26.71	28.37	25.57	29.73	26.41	30.79	27.33	---	---
31	---	---	29.84	27.70	---	---	29.40	26.21	30.21	27.26	---	---
MONTH	27.23	17.92	29.85	22.38	30.43	22.79	31.90	24.72	31.97	26.51	29.97	21.36
YEAR	31.97	9.08										

Daily Low Water Levels



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

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 (Columbia aquifer) 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 water level measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 10 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 0.25 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.

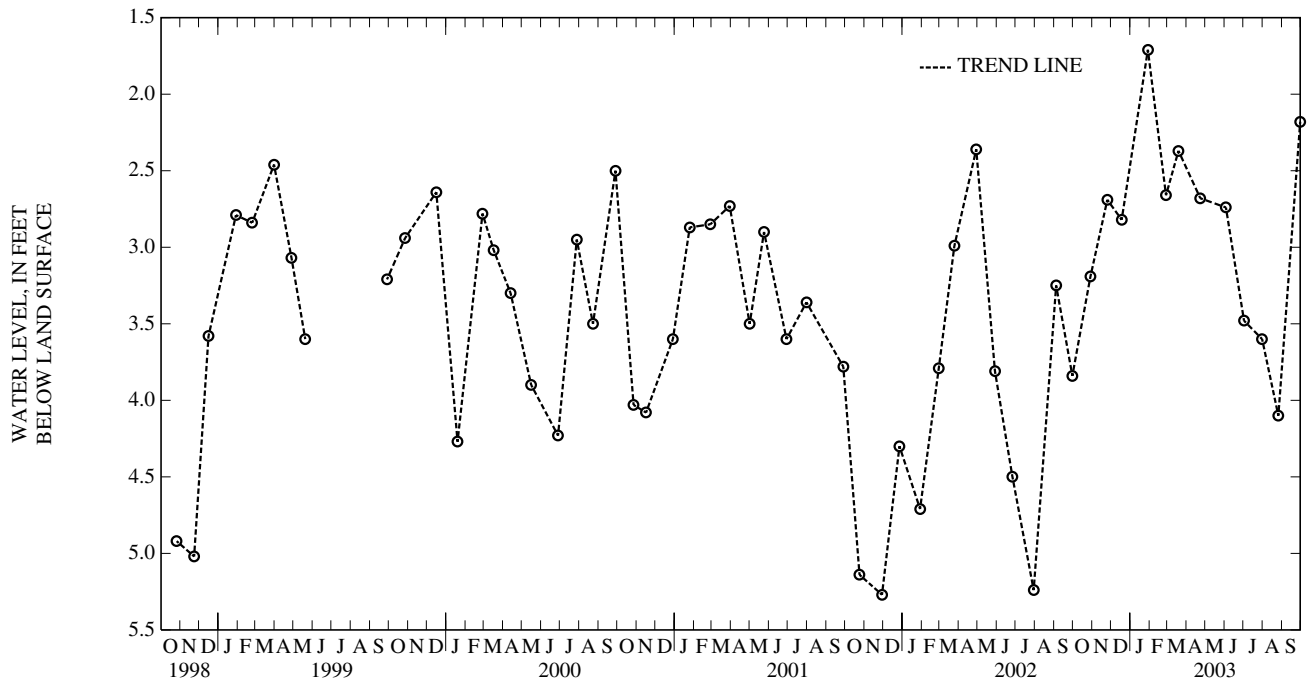
PERIOD OF RECORD.--August 1949 to current year.

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 LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	3.19	JAN 29, 2003	1.71	APR 23, 2003	2.68	JUL 31, 2003	3.60
NOV 25	2.69	FEB 27	2.66	JUN 03	2.74	AUG 26	4.10
DEC 18	2.82	MAR 19	2.37	JUL 02	3.48	SEP 30	2.18

HIGHEST 1.71 JAN 29, 2003
 LOWEST 4.10 AUG 26, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

WORCESTER COUNTY--Continued

WELL NUMBER.--WO Bg 15. SITE ID.--382359075094501. PERMIT NUMBER.--WO-68-0066.

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 in the Eastover Formation of Upper 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 water level measurements with an electric tape by U.S. Geological Survey 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, 5.50 ft above land surface.

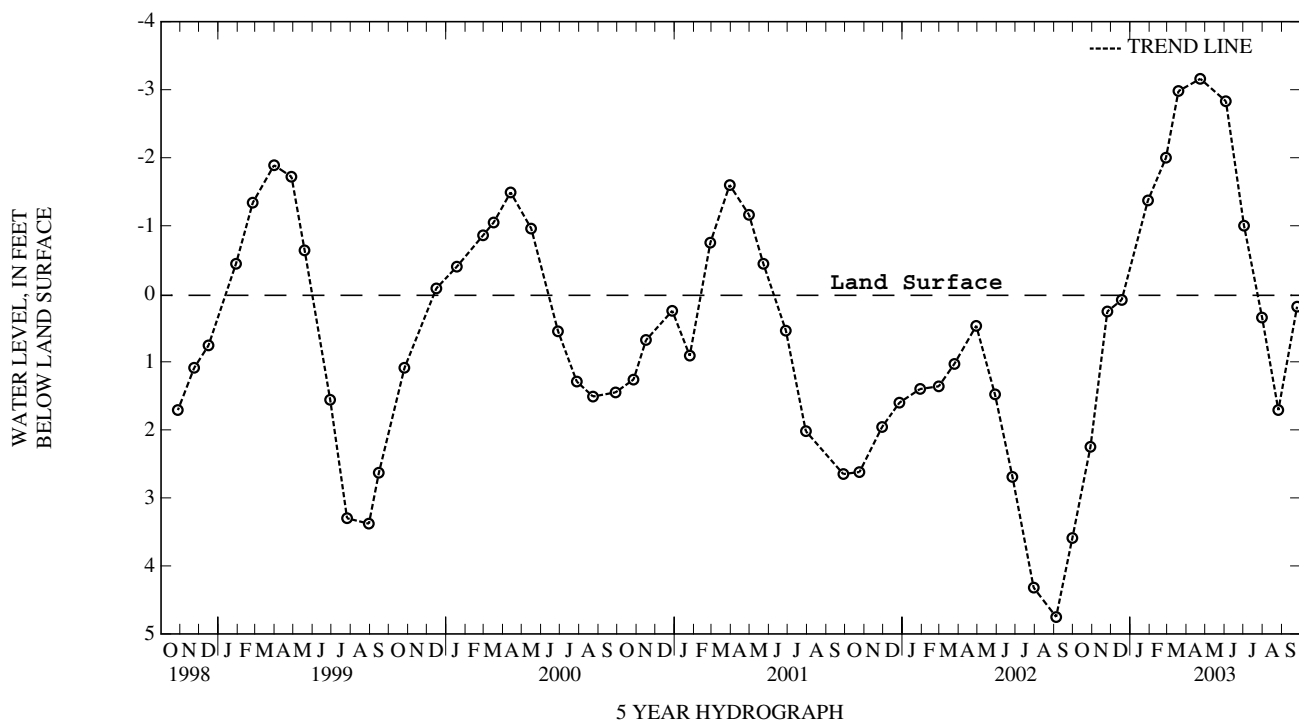
REMARKS.--Ocean City Ground-Water Monitoring Network observation well. Water levels are affected by local ground-water withdrawal, especially during summer peak demands.

PERIOD OF RECORD.--September 1970 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.13 ft above land surface, February 29, 1972; lowest measured, 4.75 ft below land surface, September 4, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
(READINGS ABOVE LAND-SURFACE INDICATED BY "-")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	2.25	JAN 29, 2003	-1.37	APR 23, 2003	-3.16	JUL 31, 2003	.35
NOV 25	.26	FEB 27	-2.00	JUN 03	-2.83	AUG 26	1.71
DEC 18	.09	MAR 19	-2.98	JUL 02	-1.00	SEP 25	.19
HIGHEST	-3.16	APR 23, 2003					
LOWEST	2.25	OCT 29, 2002					



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

WORCESTER COUNTY--Continued

WELL NUMBER.--WO Bg 45. SITE ID.--382358075094501. PERMIT NUMBER.--WO-68-0066.

LOCATION.--Lat 38°23'58", long 75°09'45", Hydrologic Unit 02060010, south side of Beauchamp Rd. at Ocean Pines. Owner: Ocean Pines.

AQUIFER.--Beaverdam Sand of Pliocene age. Aquifer code: 121BVDM.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 77 ft; casing diameter 2 in., to 56 ft; screen diameter 3 in., from 56 to 77 ft.

INSTRUMENTATION.--Monthly water level measurements with an electric tape by U.S. Geological Survey 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, 1.60 ft above land surface. Measuring point changed to top of casing, 0.69 on June 3, 2003, when the casing was cut lower.

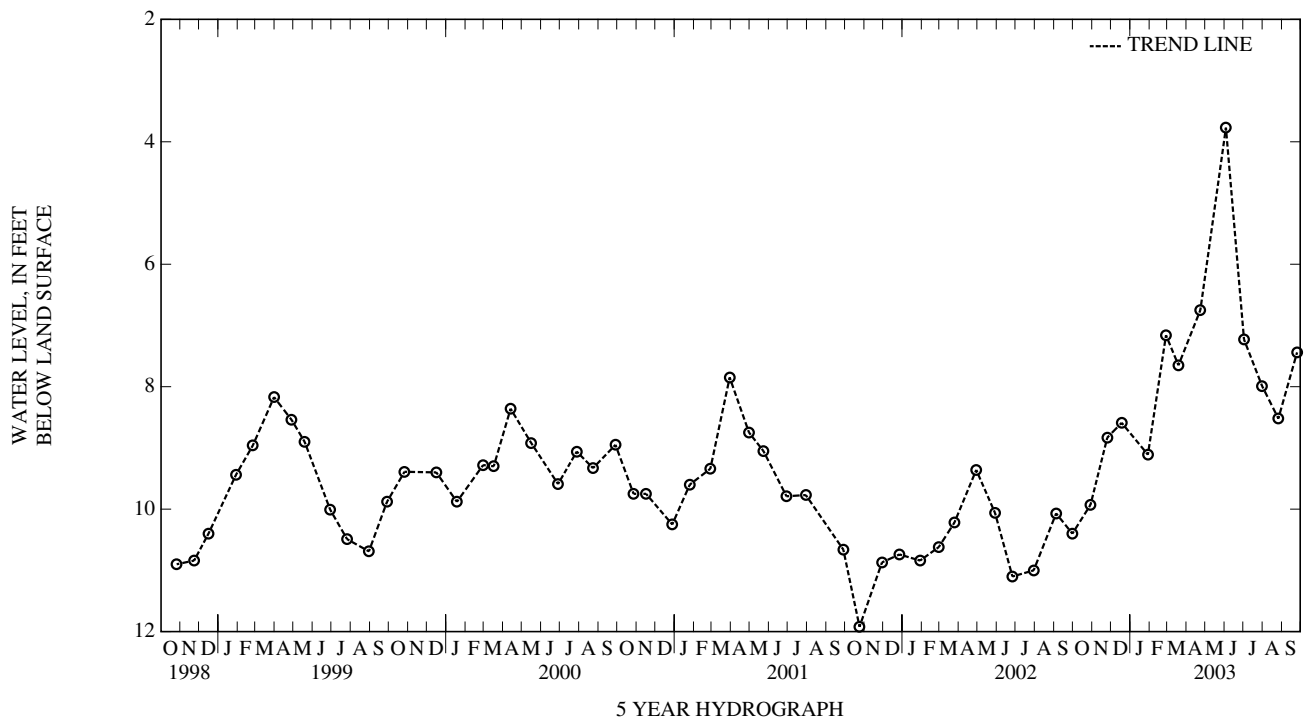
REMARKS.--Ocean City Ground-Water Monitoring Network observation well. Water levels may be affected by local ground-water withdrawal.

PERIOD OF RECORD.--October 1970 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.77 ft below land surface, June 3, 2003; lowest measured, 11.92 ft below land surface, October 24, 2001.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	9.93	JAN 29, 2003	9.11	APR 23, 2003	6.75	JUL 31, 2003	7.99
NOV 25	8.83	FEB 27	7.16	JUN 03	3.77	AUG 26	8.52
DEC 18	8.59	MAR 19	7.65	JUL 02	7.23	SEP 25	7.44
HIGHEST	3.77	JUN 03, 2003					
LOWEST	9.93	OCT 29, 2002					



WORCESTER COUNTY--Continued

WELL NUMBER.--WO Bg 46. SITE ID.--382358075094502 PERMIT NUMBER.--WO-68-0066

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 in the Eastover Formation of Upper Miocene age. Aquifer code: 122PCMK.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 199.5 ft; casing diameter 6 in., to 53.7 ft; casing diameter 4 in., from 53.7 to 164.2 ft, and 194.5 to 199.5 ft; screen diameter 6 in., from 164.2 to 194.5 ft.

INSTRUMENTATION.--Monthly water level measurements with an electric tape by U.S. Geological Survey 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, 2.50 ft above land surface.

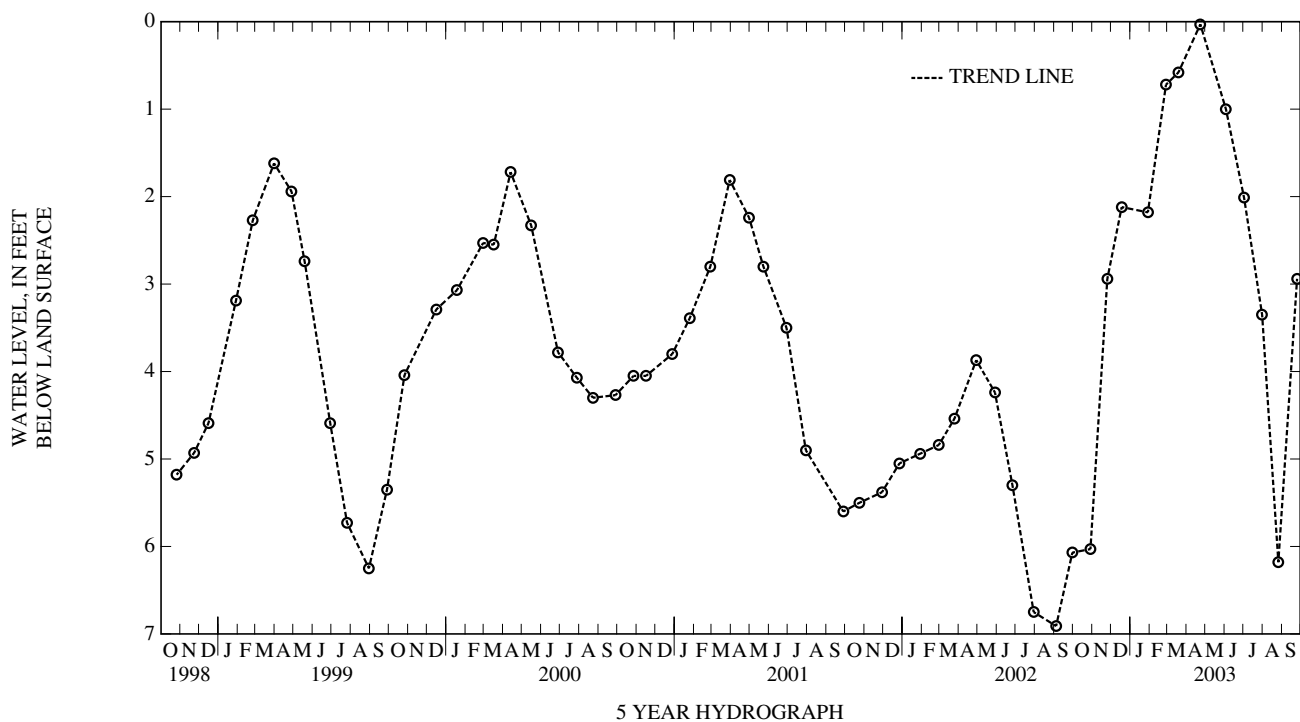
REMARKS.--Ocean City Ground-Water Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

PERIOD OF RECORD.--October 1970 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.03 ft above land surface, April 23, 2003; lowest measured, 6.91 ft below land surface, September 4, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	6.03	JAN 29, 2003	2.18	APR 23, 2003	.03	JUL 31, 2003	3.35
NOV 25	2.94	FEB 27	.72	JUN 03	1.00	AUG 26	6.18
DEC 18	2.12	MAR 19	.58	JUL 02	2.01	SEP 25	2.94
HIGHEST	.03	APR 23, 2003					
LOWEST	6.18	AUG 26, 2003					



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

WORCESTER COUNTY--Continued

WELL NUMBER.--WO Bg 47. SITE ID.--382325075063301. 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.--Ocean City aquifer in the Eastover Formation of Upper Miocene age. Aquifer code: 122OCNC.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 268 ft; casing diameter 4 in., to 258 ft; screen diameter 2 in., from 258 to 268 ft.

INSTRUMENTATION.--Monthly water level measurements with electric tape by U.S. Geological Survey personnel. 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 observation well. Water levels are affected by local ground-water withdrawal, especially during summer peak demands.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.71 ft below land surface, February 5, 1998 (recorder); lowest measured, 15.42 ft below land surface, April 11, 2002 (recorder).

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

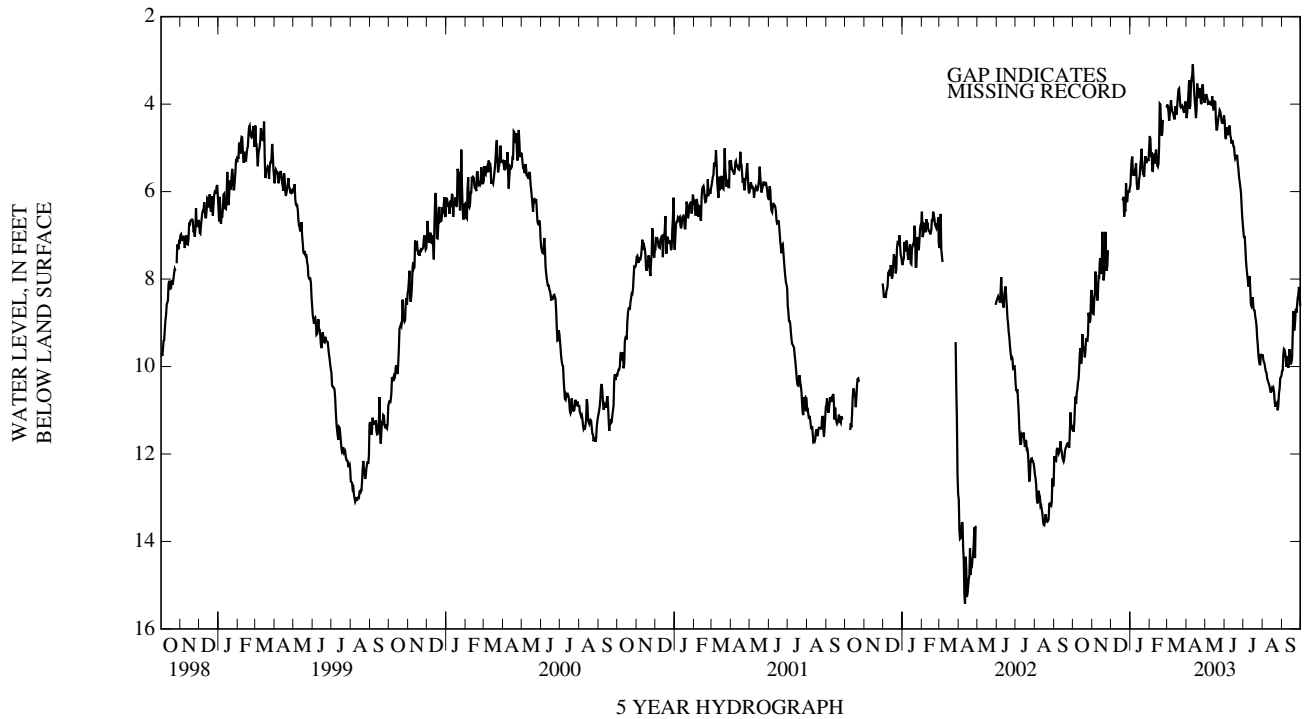
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	8.88	JAN 29, 2003	4.70	APR 23, 2003	3.63	JUL 31, 2003	9.30
NOV 25	7.53	FEB 27	3.94	JUN 03	4.52	AUG 26	10.60
DEC 18	5.45	MAR 21	3.51	JUL 02	6.69	SEP 30	8.45
HIGHEST	3.51	MAR 21, 2003					
LOWEST	10.60	AUG 26, 2003					

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	11.41	10.81	8.47	8.04	---	---	5.86	5.08	4.73	3.92	4.01	3.46
2	11.49	10.89	8.79	8.37	---	---	5.51	4.61	4.79	4.14	4.06	3.31
3	11.32	10.58	8.80	8.15	---	---	5.28	4.31	5.21	4.66	4.18	3.47
4	10.95	9.88	8.47	7.80	---	---	5.20	4.42	5.10	4.40	4.38	3.90
5	10.69	10.01	8.36	7.53	---	---	5.63	5.00	5.51	4.72	4.26	3.64
6	10.85	10.12	7.83	7.08	---	---	5.52	4.93	5.55	5.16	4.05	3.35
7	10.61	9.82	8.11	7.48	---	---	5.64	5.09	5.16	4.58	3.91	3.30
8	10.52	9.71	8.13	7.48	---	---	5.52	5.12	5.15	4.64	4.06	3.41
9	10.36	9.61	8.49	7.98	---	---	5.47	5.09	5.34	4.81	4.17	3.59
10	10.28	9.48	8.29	7.56	---	---	5.35	4.86	5.34	4.75	4.19	3.70
11	10.00	9.21	7.95	7.43	---	---	5.76	5.02	5.04	4.57	4.24	3.78
12	9.69	9.02	7.96	7.24	---	---	5.94	5.51	5.22	4.58	4.33	3.77
13	9.58	8.93	7.59	7.05	---	---	5.94	5.38	5.40	5.00	4.33	3.78
14	9.94	9.40	7.52	7.17	---	---	5.93	5.44	5.43	4.81	4.05	3.32
15	9.83	9.03	7.83	7.42	---	---	5.71	5.00	5.36	4.51	4.10	3.57
16	9.26	8.51	7.88	6.87	---	---	5.63	5.02	4.95	3.81	4.24	3.59
17	9.49	8.92	6.92	6.14	---	---	5.38	4.66	3.99	2.89	4.03	3.27
18	9.59	9.18	7.69	6.45	---	---	5.25	4.50	4.01	3.24	3.83	3.05
19	9.64	9.20	8.03	7.69	6.20	5.53	5.02	4.29	4.48	3.75	3.66	2.99
20	9.79	9.29	7.91	7.12	6.17	5.34	5.43	4.72	4.72	4.04	3.64	2.97
21	9.62	9.01	7.36	6.61	6.12	5.45	5.55	4.91	4.67	4.24	3.83	2.96
22	9.35	8.80	6.92	6.12	6.57	5.93	5.52	4.97	4.36	3.83	4.05	3.25
23	9.39	8.92	7.51	6.51	6.40	5.78	5.66	5.19	---	---	4.08	3.41
24	9.43	8.87	7.81	7.38	6.45	5.75	5.35	4.74	---	---	4.07	3.44
25	9.27	8.66	7.70	7.15	5.81	4.77	5.19	4.59	---	---	4.04	3.42
26	8.77	8.22	7.34	6.51	6.22	5.63	5.33	4.67	---	---	4.08	3.40
27	8.90	8.36	---	---	6.22	5.60	5.33	4.72	---	---	4.16	3.52
28	9.00	8.38	---	---	6.03	5.59	5.27	4.56	4.08	3.33	4.20	3.60
29	8.90	8.10	---	---	5.97	5.45	5.26	4.65	---	---	4.08	3.48
30	8.31	7.64	---	---	6.02	5.42	5.30	4.51	---	---	3.94	3.35
31	8.25	7.76	---	---	5.91	5.17	5.02	4.27	---	---	4.04	3.43
MONTH	11.49	7.64	8.80	6.12	6.57	4.77	5.94	4.27	5.55	2.89	4.38	2.96

WORCESTER COUNTY—Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	4.32	3.71	3.80	3.24	4.39	3.48	6.91	6.18	9.74	9.14	10.10	9.52
2	4.20	3.53	3.79	3.16	4.74	3.73	7.06	6.32	9.85	9.24	10.09	9.44
3	3.99	3.21	3.79	3.16	4.80	4.20	7.02	6.28	9.90	9.41	9.72	9.03
4	3.74	3.06	3.86	3.23	4.53	4.08	7.24	6.46	9.94	9.48	9.60	8.85
5	3.46	3.02	3.97	3.29	4.58	3.89	7.55	6.81	10.04	9.50	9.62	8.95
6	4.11	3.00	3.95	3.34	4.71	4.04	7.74	7.19	10.12	9.53	9.68	9.03
7	4.02	3.27	4.01	3.38	4.59	4.23	7.89	7.39	10.14	9.48	9.85	9.24
8	3.54	3.09	3.94	3.37	4.54	4.08	8.01	7.53	10.26	9.65	10.01	9.30
9	3.42	2.93	3.99	3.35	4.49	3.98	8.17	7.54	10.32	9.64	9.76	9.08
10	3.33	2.86	4.01	3.49	4.71	4.15	8.03	7.31	10.36	9.77	9.83	9.09
11	3.09	2.43	4.01	3.44	4.77	4.21	7.93	7.29	10.41	9.77	10.03	9.33
12	3.39	2.53	3.82	3.26	4.90	4.21	8.22	7.50	10.46	9.77	9.80	8.87
13	3.69	3.11	4.03	3.46	4.85	4.07	8.57	7.65	10.54	9.92	9.60	8.87
14	3.91	3.38	4.12	3.47	4.85	4.11	8.62	7.93	10.60	10.01	9.88	9.32
15	4.09	3.55	4.11	3.35	4.97	4.16	8.58	7.93	10.54	10.12	9.95	9.43
16	4.32	3.66	3.94	2.94	4.98	4.30	8.42	7.91	10.49	10.04	9.90	9.38
17	4.12	2.76	3.95	2.94	5.16	4.30	8.66	8.10	10.52	10.08	9.80	9.15
18	3.53	2.76	4.38	3.30	5.25	4.58	8.71	8.24	10.49	10.00	9.28	7.70
19	3.80	2.89	4.60	3.74	5.22	4.72	8.72	8.31	10.57	10.16	8.73	7.66
20	3.82	3.06	4.57	3.97	5.19	4.74	8.86	8.41	10.77	10.42	9.18	8.64
21	3.75	3.11	4.43	3.95	5.16	4.77	8.94	8.64	10.92	10.38	9.15	8.47
22	3.63	2.98	4.30	3.78	5.36	4.79	9.07	8.68	10.84	10.27	8.94	8.25
23	3.81	3.07	4.25	3.72	5.48	5.13	9.33	8.86	10.84	10.23	8.68	8.17
24	3.98	3.31	4.14	3.59	5.67	5.24	9.50	9.06	10.82	10.28	8.77	8.20
25	3.98	3.34	4.17	3.69	5.77	5.28	9.72	9.20	11.00	10.44	8.61	8.04
26	3.60	3.01	4.26	3.81	5.89	5.34	9.87	9.29	10.88	10.12	8.43	7.90
27	3.55	2.99	4.39	3.95	6.00	5.46	9.95	9.36	10.61	9.92	8.36	7.72
28	3.84	3.38	4.43	3.85	6.28	5.56	9.95	9.17	10.51	9.83	8.18	7.59
29	3.90	3.43	4.43	3.79	6.55	5.71	9.71	9.01	10.27	9.66	8.33	7.70
30	3.97	3.36	4.36	3.75	6.74	5.94	9.80	9.01	10.24	9.66	8.62	8.07
31	---	---	4.26	3.48	---	---	9.74	9.14	10.21	9.59	---	---
MONTH	4.32	2.43	4.60	2.94	6.74	3.48	9.95	6.18	11.00	9.14	10.10	7.59
YEAR	11.49	2.43										

Daily Low Water Levels



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

WORCESTER COUNTY--Continued

WELL NUMBER.--WO Bg 48. SITE ID.--382325075063302. 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.--Manokin aquifer in the Eastover Formation of Upper Miocene age. Aquifer code: 122MNKN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 420 ft; casing diameter 4 in., to 410 ft; screen diameter 2 in., from 410 to 420 ft.

INSTRUMENTATION.--Monthly water level measurements with an electric tape by U.S. Geological Survey personnel. 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 observation well. Water levels are affected by local ground-water withdrawal, especially during summer peak demands.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.54 ft below land surface, February 24, 1998 (recorder); lowest measured, 15.06 ft below land surface, August 16, 2002 (recorder).

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

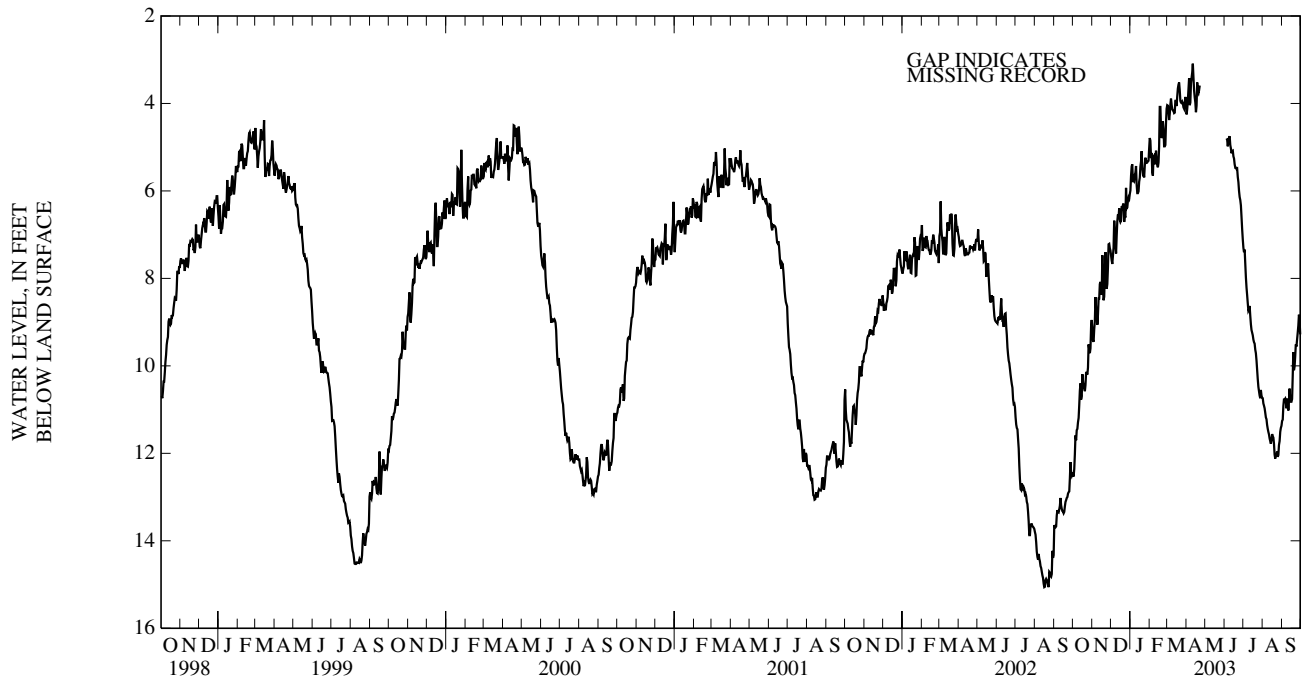
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	9.53	JAN 29, 2003	4.84	APR 23, 2003	3.62	JUL 31, 2003	10.30
NOV 25	7.94	FEB 27	4.04	JUN 03	4.73	AUG 26	11.79
DEC 18	5.73	MAR 21	3.41	JUL 02	7.05	SEP 30	8.99
HIGHEST	3.41	MAR 21, 2003					
LOWEST	11.79	AUG 26, 2003					

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	12.47	11.91	9.20	8.68	7.48	7.00	5.99	5.23	4.79	4.04	4.04	3.55
2	12.53	11.97	9.42	8.99	7.59	7.11	5.65	4.84	4.85	4.24	4.05	3.38
3	12.36	11.70	9.45	8.78	7.67	7.10	5.44	4.53	5.25	4.76	4.18	3.57
4	12.02	10.98	9.16	8.45	7.48	6.81	5.39	4.65	5.13	4.50	4.38	3.96
5	11.59	11.01	8.98	8.16	7.30	6.26	5.80	5.23	5.58	4.81	4.24	3.69
6	11.70	11.03	8.43	7.71	6.68	6.00	5.73	5.11	5.65	5.21	4.03	3.40
7	11.47	10.78	8.69	8.08	6.91	6.36	5.76	5.26	5.21	4.68	3.89	3.37
8	11.44	10.73	8.72	8.09	7.23	6.76	5.63	5.27	5.19	4.74	4.03	3.45
9	11.29	10.62	9.06	8.53	7.43	6.84	5.58	5.24	5.37	4.88	4.13	3.59
10	11.19	10.46	8.83	8.12	7.03	6.44	5.43	5.03	5.37	4.81	4.16	3.71
11	10.90	10.19	8.46	7.96	6.69	5.90	5.86	5.18	5.08	4.67	4.17	3.78
12	10.57	9.92	8.46	7.78	6.54	6.00	6.05	5.64	5.26	4.64	4.22	3.74
13	10.40	9.81	8.13	7.58	6.61	5.94	6.05	5.53	5.41	5.04	4.21	3.72
14	10.77	10.28	8.08	7.68	6.40	5.51	6.01	5.56	5.46	4.89	3.94	3.27
15	10.69	9.96	8.33	7.90	6.66	6.20	5.79	5.14	5.35	4.58	3.94	3.46
16	10.19	9.42	8.37	7.39	6.71	6.21	5.70	5.16	4.98	3.92	4.06	3.46
17	10.34	9.85	7.47	6.70	6.68	5.96	5.44	4.77	4.08	3.04	3.84	3.17
18	10.48	10.09	8.22	7.04	6.35	5.73	5.33	4.67	4.08	3.36	3.66	3.00
19	10.46	10.10	8.50	8.15	6.38	5.78	5.09	4.45	4.55	3.84	3.57	2.97
20	10.58	10.12	8.42	7.62	6.32	5.56	5.46	4.84	4.79	4.14	3.52	2.93
21	10.44	9.84	7.85	7.13	6.29	5.69	5.60	5.04	4.75	4.32	3.69	2.93
22	10.16	9.64	7.40	6.65	6.71	6.13	5.57	5.08	4.41	3.90	3.94	3.20
23	10.16	9.71	7.96	6.98	6.57	5.99	5.69	5.27	4.57	3.45	3.98	3.39
24	10.20	9.66	8.24	7.81	6.61	5.93	5.42	4.88	4.98	4.37	3.99	3.42
25	10.04	9.32	8.13	7.57	5.93	5.01	5.24	4.73	4.98	4.54	3.96	3.41
26	9.51	8.96	7.74	6.97	6.40	5.76	5.36	4.77	4.95	4.18	4.00	3.37
27	9.62	9.07	7.22	6.71	6.38	5.81	5.36	4.85	4.44	3.73	4.09	3.52
28	9.71	9.10	7.21	6.74	6.22	5.76	5.35	4.71	4.12	3.43	4.12	3.59
29	9.60	8.80	7.31	6.86	6.15	5.63	5.32	4.77	---	---	3.99	3.47
30	9.09	8.33	7.36	6.90	6.18	5.63	5.31	4.60	---	---	3.85	3.33
31	8.95	8.42	---	---	6.07	5.37	5.04	4.37	---	---	3.97	3.41
MONTH	12.53	8.33	9.45	6.65	7.67	5.01	6.05	4.37	5.65	3.04	4.38	2.93

WORCESTER COUNTY--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	4.25	3.72	---	---	---	---	7.30	6.55	10.74	10.17	11.26	10.74
2	4.13	3.53	---	---	---	---	7.40	6.68	10.86	10.27	11.23	10.66
3	3.93	3.23	---	---	---	---	7.34	6.66	10.91	10.45	10.92	10.28
4	3.68	3.06	---	---	4.80	4.33	7.66	6.85	10.97	10.52	10.77	10.07
5	3.42	3.02	---	---	4.83	4.19	7.98	7.24	11.07	10.56	10.77	10.12
6	4.04	3.00	---	---	4.98	4.34	8.21	7.61	11.18	10.62	10.75	10.14
7	3.98	3.26	---	---	4.84	4.49	8.38	7.85	11.22	10.59	10.83	10.28
8	3.54	3.11	---	---	4.78	4.36	8.57	8.07	11.35	10.77	10.97	10.34
9	3.41	2.95	---	---	4.75	4.26	8.74	8.16	11.44	10.78	10.75	10.12
10	3.29	2.88	---	---	4.95	4.41	8.71	8.01	11.51	10.93	10.81	10.18
11	3.09	2.47	---	---	5.03	4.46	8.63	7.99	11.57	10.95	11.02	10.38
12	3.40	2.56	---	---	5.14	4.48	8.85	8.16	11.66	10.97	10.81	9.89
13	3.70	3.13	---	---	5.09	4.36	9.05	8.31	11.72	11.11	10.52	9.89
14	3.86	3.41	---	---	5.08	4.42	9.18	8.45	11.78	11.21	10.77	10.26
15	3.98	3.51	---	---	5.21	4.46	9.24	8.57	11.70	11.25	10.82	10.35
16	4.20	3.66	---	---	5.26	4.55	9.30	8.62	11.56	11.17	10.82	10.36
17	4.05	2.82	---	---	5.39	4.56	9.40	8.82	11.61	11.17	10.76	10.16
18	3.52	2.82	---	---	5.47	4.81	9.46	8.96	11.64	11.23	10.25	8.73
19	3.74	2.92	---	---	5.47	4.95	9.49	9.04	11.78	11.40	9.69	8.65
20	3.77	3.10	---	---	5.50	4.99	9.63	9.15	12.03	11.65	10.10	9.55
21	3.70	3.13	---	---	5.49	5.06	9.71	9.33	12.12	11.63	10.02	9.37
22	3.59	3.00	---	---	5.68	5.09	9.88	9.50	12.03	11.50	9.78	9.10
23	---	---	---	---	5.80	5.40	10.09	9.68	12.03	11.47	9.51	9.00
24	---	---	---	---	6.00	5.57	10.30	9.90	11.96	11.44	9.56	9.00
25	---	---	---	---	6.14	5.62	10.48	10.00	12.08	11.59	9.40	8.81
26	---	---	---	---	6.21	5.69	10.58	10.06	12.04	11.38	9.25	8.64
27	---	---	---	---	6.33	5.81	10.68	10.17	11.81	11.22	9.08	8.40
28	---	---	---	---	6.60	5.99	10.74	10.06	11.72	11.13	8.83	8.23
29	---	---	---	---	6.87	6.15	10.55	9.97	11.51	10.94	8.96	8.34
30	---	---	---	---	7.11	6.35	10.68	9.97	11.42	10.94	9.28	8.73
31	---	---	---	---	---	---	10.73	10.12	11.37	10.82	---	---
MONTH	4.25	2.47	---	---	7.11	4.19	10.74	6.55	12.12	10.17	11.26	8.23
YEAR	12.53	2.47										

Daily Low Water Levels



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

WORCESTER COUNTY--Continued

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 in the Eastover Formation of Upper Miocene age. Aquifer code: 122OCNC.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 243 ft; casing diameter 4 in., to 233 ft; screen diameter 2 in., from 233 to 243 ft.

INSTRUMENTATION.--Monthly water level measurements with an electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recording interval, May 1985 to current year. Periodic water level measurements with chalked steel tape October 1975 to May 1985.

DATUM.--Elevation of land surface is 10 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of recorder shelf, 2.13 ft above land surface.

REMARKS.--Ocean City Ground-Water Monitoring Network observation well. Water levels are affected by local ground-water withdrawal, especially during summer peak demands. Missing data due to recorder malfunction.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.42 ft below land surface, March 12, 1993 (recorder); lowest measured, 31.69 ft below land surface, August 21, 2002 (recorder).

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

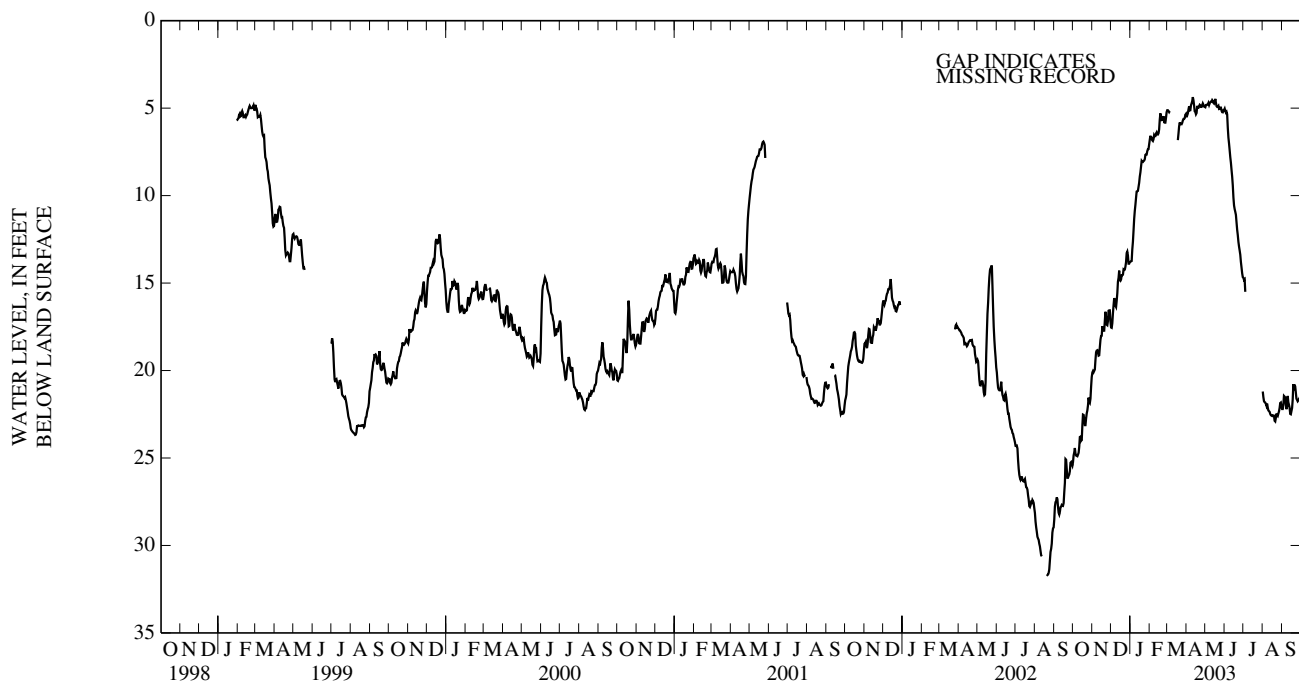
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	21.31	JAN 29, 2003	7.24	APR 23, 2003	4.74	JUL 31, 2003	20.85
NOV 25	17.27	FEB 27	5.27	JUN 03	5.22	AUG 26	22.40
DEC 18	14.41	MAR 21	5.77	JUL 02	14.76	SEP 30	21.29
HIGHEST		4.74 APR 23, 2003					
LOWEST		22.40 AUG 26, 2003					

DAY	MAX		MIN		MAX		MIN		MAX		MIN	
	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH						
1	25.24	24.83	20.11	19.80	17.54	17.18	13.78	13.59	6.81	6.50	5.12	5.07
2	24.85	24.66	20.03	19.87	17.56	17.30	13.76	13.54	6.58	6.48	5.12	4.94
3	24.68	24.43	20.10	20.02	17.30	16.71	13.74	13.09	6.71	6.58	5.17	4.95
4	24.43	24.27	20.02	19.88	16.72	16.27	13.09	12.63	6.70	6.55	5.23	5.16
5	24.74	24.32	19.94	19.38	16.27	15.77	12.64	12.01	6.84	6.62	5.17	5.02
6	24.86	24.74	19.38	18.86	15.86	15.66	12.01	11.33	6.88	6.78	---	---
7	24.88	24.74	18.95	18.84	15.99	15.75	11.33	10.88	6.78	6.49	---	---
8	24.90	24.67	18.86	18.53	16.30	15.99	10.88	10.52	6.54	6.47	---	---
9	24.81	24.64	18.84	18.62	16.37	16.02	10.52	10.13	6.60	6.47	---	---
10	24.70	24.36	18.97	18.79	16.02	15.58	10.13	9.77	6.60	6.42	---	---
11	24.36	23.80	19.15	18.97	15.58	14.89	9.77	9.71	6.46	6.37	---	---
12	23.80	23.62	19.13	18.66	14.92	14.68	9.75	9.69	6.39	6.23	---	---
13	23.78	23.61	18.67	18.23	14.70	14.29	9.73	9.49	6.50	6.36	---	---
14	24.02	23.78	18.24	18.01	14.29	14.02	9.50	9.25	6.51	6.39	---	---
15	23.97	23.15	18.03	17.92	14.83	14.29	9.27	8.89	6.44	6.19	---	---
16	23.15	22.46	18.01	17.47	14.87	14.75	8.92	8.67	6.22	5.67	---	---
17	22.52	22.44	17.47	16.99	14.80	14.42	8.67	8.32	5.67	5.15	---	---
18	22.54	22.44	17.59	17.00	14.55	14.43	8.35	8.02	5.30	5.16	6.83	6.45
19	22.80	22.49	17.72	17.59	14.55	14.32	8.02	7.87	5.57	5.30	6.45	6.05
20	23.12	22.80	17.72	17.15	14.52	14.17	8.07	7.87	5.68	5.51	6.05	5.79
21	23.12	22.74	17.15	16.64	14.22	14.03	8.08	7.95	5.67	5.58	5.82	5.75
22	22.74	22.44	16.64	16.33	14.25	14.12	8.02	7.91	5.58	5.34	5.92	5.82
23	22.45	22.28	16.95	16.33	14.23	14.01	8.00	7.90	5.46	5.16	5.91	5.80
24	22.28	21.99	17.38	16.95	14.06	13.81	7.92	7.67	5.81	5.46	5.92	5.75
25	21.99	21.55	17.41	17.17	13.81	13.09	7.67	7.52	5.83	5.74	5.84	5.68
26	21.55	21.26	17.17	16.51	13.28	13.16	7.65	7.43	5.83	5.55	5.70	5.52
27	21.79	21.31	16.58	16.38	13.20	12.90	7.65	7.43	5.55	5.23	5.62	5.50
28	21.85	21.61	16.56	16.34	13.42	13.01	7.46	7.33	5.23	5.07	5.62	5.53
29	21.61	20.93	16.56	16.34	13.89	13.42	7.35	7.20	---	---	5.57	5.38
30	20.93	20.38	17.19	16.56	13.89	13.72	7.34	7.06	---	---	5.38	5.18
31	20.38	20.08	---	---	13.80	13.53	7.08	6.77	---	---	5.33	5.17
MONTH	25.24	20.08	20.11	16.33	17.56	12.90	13.78	6.77	6.88	5.07	6.83	4.94

WORCESTER COUNTY—Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	5.52	5.33	4.95	4.79	5.03	4.87	14.70	14.62	21.20	20.86	22.20	22.07
2	5.41	5.28	4.82	4.71	5.17	4.92	14.82	14.61	21.52	21.19	22.20	21.95
3	5.30	5.08	4.81	4.71	5.26	5.14	14.78	14.67	21.75	21.50	21.96	21.45
4	5.08	4.90	4.81	4.71	5.21	5.10	15.50	14.78	21.81	21.66	21.45	21.00
5	4.90	4.79	4.78	4.68	5.35	5.05	---	---	21.83	21.68	21.49	21.10
6	5.13	4.78	4.70	4.62	6.13	5.35	---	---	21.91	21.79	21.55	21.47
7	5.12	4.81	4.82	4.58	6.68	6.13	---	---	22.02	21.70	21.96	21.55
8	4.84	4.73	4.72	4.59	7.03	6.68	---	---	21.89	21.73	22.21	21.96
9	4.73	4.56	4.67	4.54	7.41	6.99	---	---	22.11	21.87	22.05	21.45
10	4.60	4.37	4.63	4.53	7.80	7.41	---	---	22.28	22.04	21.45	21.33
11	4.37	4.19	4.63	4.52	8.13	7.80	---	---	22.32	22.19	21.81	21.45
12	4.55	4.20	4.54	4.43	8.53	8.13	---	---	22.36	22.19	21.96	21.81
13	4.85	4.55	4.59	4.46	8.92	8.53	---	---	22.48	22.27	22.12	21.93
14	5.18	4.85	4.70	4.59	9.41	8.92	---	---	22.55	22.41	22.48	22.12
15	5.22	5.18	4.74	4.59	10.11	9.41	---	---	22.58	22.41	22.50	22.21
16	5.35	5.22	4.64	4.31	10.56	10.11	---	---	22.60	22.45	22.32	22.14
17	5.28	4.87	4.47	4.30	10.77	10.50	---	---	22.56	22.37	22.14	21.66
18	4.87	4.78	4.70	4.41	10.93	10.73	---	---	22.57	22.39	21.66	20.33
19	4.97	4.78	4.89	4.62	11.10	10.93	---	---	22.58	22.46	20.78	20.29
20	4.98	4.86	4.93	4.78	11.54	11.10	---	---	22.87	22.56	21.12	20.78
21	4.91	4.79	4.92	4.82	11.95	11.54	---	---	22.91	22.67	20.81	20.62
22	4.81	4.69	4.87	4.75	12.25	11.95	---	---	22.71	22.46	20.91	20.64
23	4.84	4.67	5.05	4.75	12.64	12.25	---	---	22.46	22.35	21.25	20.91
24	4.93	4.77	5.04	4.87	12.91	12.64	---	---	22.56	22.40	21.61	21.25
25	4.93	4.83	4.97	4.85	13.14	12.91	---	---	22.60	22.43	21.68	21.54
26	4.84	4.59	4.97	4.83	13.38	13.14	---	---	22.46	22.32	21.76	21.61
27	4.73	4.57	5.15	4.97	13.79	13.38	---	---	22.34	22.14	21.71	21.61
28	4.81	4.73	5.23	5.15	14.11	13.79	---	---	22.14	21.84	21.62	21.50
29	4.91	4.79	5.24	5.10	14.43	14.10	---	---	21.86	21.66	21.62	21.45
30	4.93	4.83	5.12	5.05	14.66	14.42	---	---	21.83	21.65	21.45	21.15
31	---	---	5.11	4.88	---	---	---	---	22.07	21.83	---	---
MONTH	5.52	4.19	5.24	4.30	14.66	4.87	15.50	14.61	22.91	20.86	22.50	20.29
YEAR	25.24	4.19										

Daily Low Water Levels



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

WORCESTER COUNTY--Continued

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 in the Eastover Formation of Upper Miocene age. Aquifer code: 122OCNC.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 278 ft; casing diameter 4 in., to 263 ft; screen diameter 3 in., from 263 to 278 ft.

INSTRUMENTATION.--Monthly water level measurements with an electric tape by U.S. Geological Survey personnel. Periodic water level 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 shelter platform, 2.49 ft above land surface.

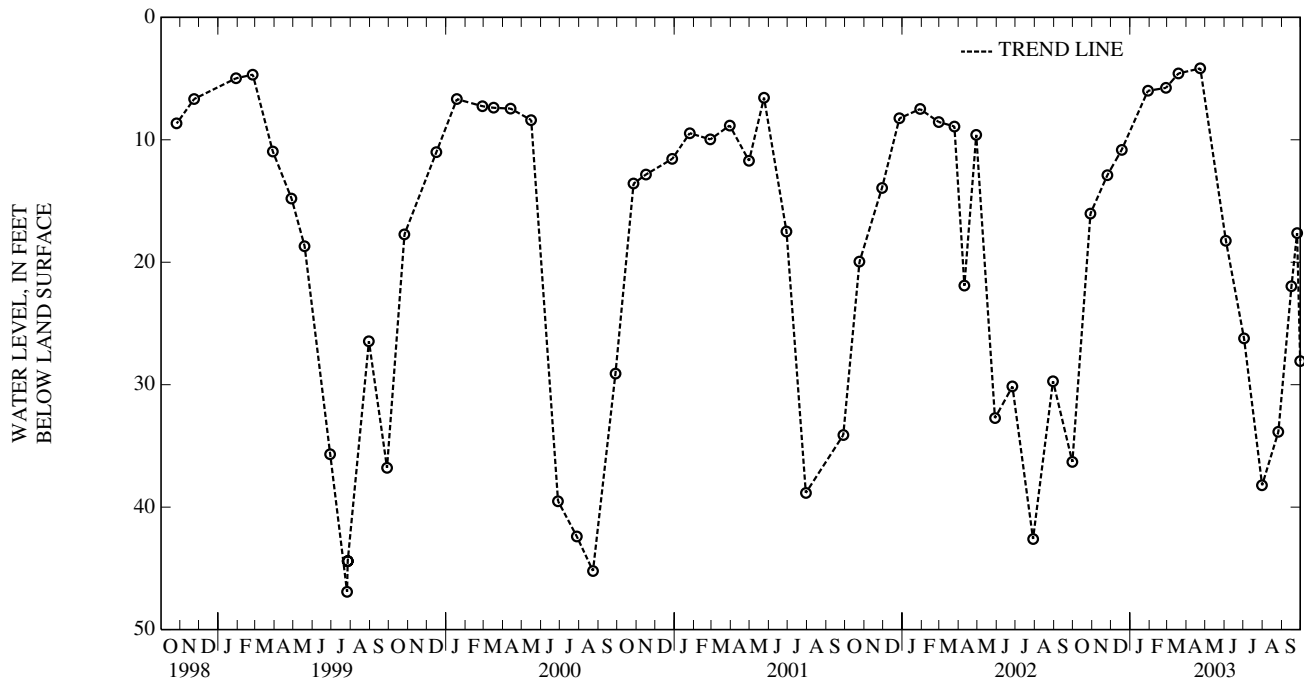
REMARKS.--Ocean City Ground-Water Monitoring Network observation well. Water levels are affected by local ground-water withdrawal, especially during summer peak demands. Missing data due to recorder malfunction.

PERIOD OF RECORD.--September 1970 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.55 ft below land surface, March 13, 1993; lowest measured, 51.44 ft below land surface, August 16, 1998 (recorder).

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	16.02	FEB 27, 2003	5.76	JUL 02, 2003	26.22	SEP 25, 2003	17.62
NOV 25	12.90	MAR 19	4.58	31	38.21	30	28.07
DEC 18	10.82	APR 23	4.17	AUG 26	33.86		
JAN 29, 2003	6.00	JUN 03	18.25	SEP 16	21.97		
HIGHEST 4.17 APR 23, 2003							
LOWEST 38.21 JUL 31, 2003							



5 YEAR HYDROGRAPH
 OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003
 Daily Low Water Levels

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 in the Eastover Formation of Upper Miocene age. Aquifer code: 122MNKN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 353 ft; casing diameter 4 in., to 316.2 ft, casing diameter 2.5 in., from 316.2 to 337 ft; screen diameter 3 in., from 337 to 353 ft.

INSTRUMENTATION.--Monthly water level measurements with an electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recording interval April 1985 to current year. Prior to April 1985, periodic water level measurements with chalked steel tape were collected.

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 observation well. Water levels are affected by local ground-water withdrawal, especially during summer peak demands. Missing data due to recorder malfunction.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.54 ft above land surface, March 27, 1973; lowest measured, 19.04 ft below land surface, September 5, 1995 (recorder).

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

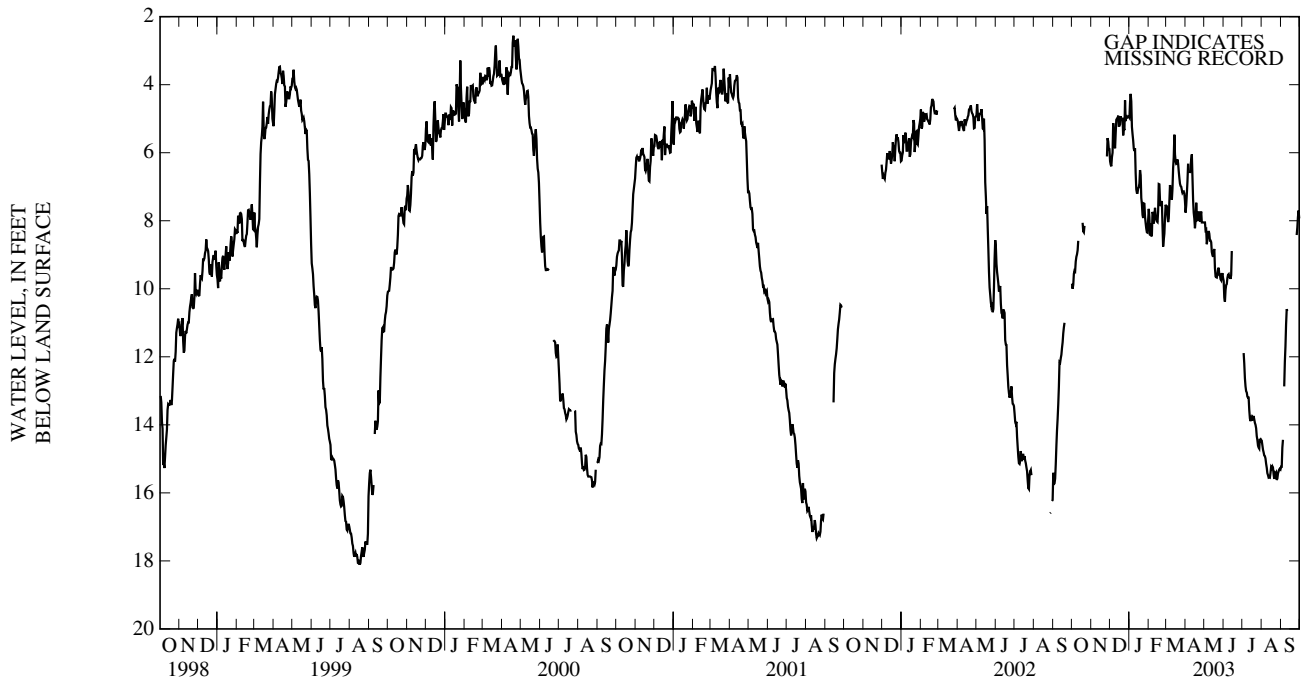
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 25, 2002	5.84	MAR 21, 2003	5.73	JUL 31, 2003	13.68	SEP 25, 2003	7.86
DEC 18	4.84	APR 23	7.66	AUG 26	15.21		
JAN 29, 2003	7.77	JUN 03	9.65	SEP 05	13.58		
FEB 27	7.60	JUL 02	11.22	16	9.03		
HIGHEST	4.84	DEC 18, 2002					
LOWEST	15.21	AUG 26, 2003					

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	9.85	8.98	---	---	6.25	5.07	4.97	3.74	7.65	6.45	7.58	6.58
2	10.00	9.05	---	---	6.35	5.20	4.51	3.10	7.90	6.79	7.58	6.38
3	9.88	8.74	---	---	6.40	5.11	4.27	2.74	8.43	7.50	7.86	6.86
4	9.56	8.05	---	---	6.13	4.80	4.49	3.08	8.09	7.00	8.04	7.13
5	9.47	8.23	---	---	6.00	4.28	5.24	4.21	8.46	7.39	7.93	6.81
6	9.49	8.15	---	---	5.13	3.96	5.45	4.45	8.41	7.50	7.44	6.40
7	9.20	7.80	---	---	5.42	4.41	5.64	4.84	7.74	6.98	6.95	6.14
8	9.06	7.73	---	---	5.76	4.87	5.88	5.15	7.80	7.06	7.12	6.14
9	8.99	7.73	---	---	5.87	4.95	5.95	5.29	8.08	7.30	7.25	6.72
10	8.87	7.68	---	---	5.43	4.65	5.87	5.25	7.86	7.28	7.38	6.66
11	8.59	7.42	---	---	5.03	4.06	6.59	5.53	7.62	7.11	7.06	6.44
12	---	---	---	---	5.00	4.17	7.08	6.24	7.83	6.97	6.45	6.07
13	---	---	---	---	5.00	4.14	7.18	6.36	7.96	7.28	6.14	5.39
14	8.11	7.35	---	---	4.91	3.65	7.18	6.47	8.02	7.06	5.47	4.56
15	---	---	---	---	5.21	4.37	7.05	6.03	8.04	6.86	6.05	4.72
16	---	---	---	---	5.21	4.37	7.02	6.11	7.72	6.32	6.25	5.12
17	---	---	---	---	5.17	4.13	6.90	5.70	6.92	5.23	6.33	5.15
18	8.06	7.30	---	---	4.93	3.95	6.51	5.62	6.93	5.58	6.32	5.03
19	8.31	7.37	---	---	5.05	4.04	6.66	5.48	7.41	6.30	6.20	4.99
20	8.34	7.44	---	---	5.00	3.84	7.33	6.26	7.57	6.49	6.31	5.10
21	8.15	7.27	---	---	5.00	3.90	7.51	6.79	7.51	6.55	6.54	5.20
22	---	---	---	---	5.49	4.36	7.83	6.79	7.42	6.49	6.74	5.43
23	---	---	---	---	5.28	4.26	7.92	6.95	8.15	6.27	6.91	5.73
24	---	---	---	---	5.34	4.19	7.49	6.66	8.76	7.63	6.98	5.98
25	---	---	---	---	4.46	3.12	7.50	6.54	8.56	7.70	7.00	6.11
26	---	---	6.11	5.06	5.07	4.08	7.89	6.72	8.38	7.40	7.10	6.13
27	---	---	5.57	4.77	4.95	4.12	8.07	6.95	7.91	6.82	7.18	6.54
28	---	---	5.67	4.84	4.93	4.15	8.23	7.09	7.53	6.38	7.15	6.29
29	---	---	5.90	5.00	4.96	3.98	8.34	7.24	---	---	7.14	6.24
30	---	---	5.90	4.97	4.95	3.98	8.35	7.15	---	---	7.20	6.21
31	---	---	---	---	4.94	3.74	7.98	6.78	---	---	7.42	6.34
MONTH	10.00	7.27	6.11	4.77	6.40	3.12	8.35	2.74	8.76	5.23	8.04	4.56

WORCESTER COUNTY--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	7.76	6.71	8.05	7.26	9.77	8.83	---	---	14.47	13.43	15.23	14.24
2	7.55	6.42	8.05	7.24	10.26	9.04	---	---	14.60	13.52	15.23	14.13
3	7.20	6.05	8.28	7.41	10.38	9.33	11.89	10.85	14.73	13.79	14.67	13.51
4	6.84	5.79	8.26	7.54	10.04	8.98	12.20	10.90	14.81	13.95	14.44	13.26
5	6.32	5.79	8.69	7.62	9.89	8.98	12.63	11.47	14.90	13.90	---	---
6	---	---	8.52	7.64	9.86	9.01	12.87	11.92	14.92	13.92	12.87	11.42
7	---	---	8.44	7.61	9.68	8.98	13.01	12.16	14.99	13.89	12.15	10.87
8	6.60	5.92	8.30	7.55	9.59	8.86	13.05	12.12	15.14	14.00	11.69	10.33
9	6.38	5.79	8.38	7.49	9.57	8.62	13.17	12.09	15.26	14.03	11.05	9.61
10	6.21	5.62	8.58	7.65	9.68	8.67	13.20	11.95	15.42	14.23	10.60	9.58
11	6.05	5.15	8.58	7.81	9.61	8.51	13.20	11.97	15.48	14.25	10.65	9.57
12	6.71	5.25	8.63	7.62	9.71	8.40	13.56	12.29	15.55	14.38	---	---
13	7.38	6.06	8.92	7.87	9.60	8.17	13.81	12.53	15.54	14.48	---	---
14	7.76	7.05	9.01	7.81	8.89	8.32	13.89	12.60	15.55	14.57	---	---
15	7.94	6.86	9.06	7.68	---	---	13.82	12.62	15.42	14.46	---	---
16	8.22	6.93	8.90	7.22	---	---	13.88	12.74	15.24	14.46	---	---
17	8.01	6.14	8.83	7.67	---	---	13.77	12.82	15.27	14.50	---	---
18	7.47	6.28	9.39	7.91	---	---	13.80	12.90	15.22	14.52	---	---
19	7.87	6.47	9.64	8.27	---	---	13.74	13.00	15.26	14.62	---	---
20	7.98	6.71	9.66	8.55	---	---	13.84	13.10	15.45	14.84	---	---
21	7.97	6.90	9.67	8.72	---	---	13.94	13.28	15.59	14.80	---	---
22	7.73	6.84	9.57	8.76	---	---	14.00	13.31	15.41	14.63	---	---
23	7.83	6.85	9.43	8.77	---	---	14.10	13.41	15.43	14.55	---	---
24	8.03	7.09	9.38	8.65	---	---	14.33	13.58	15.40	14.55	---	---
25	7.87	7.20	9.58	8.83	---	---	14.45	13.57	15.62	14.67	---	---
26	7.73	6.88	9.58	8.86	---	---	14.61	13.69	15.58	14.43	8.42	7.19
27	8.05	6.98	9.72	8.93	---	---	14.67	13.66	15.43	14.29	8.20	6.91
28	8.05	7.53	9.75	8.71	---	---	14.70	13.54	15.37	14.22	7.89	6.57
29	8.05	7.48	9.60	8.60	---	---	14.41	13.30	15.31	14.24	7.70	6.48
30	8.05	7.36	9.54	8.65	---	---	14.50	13.38	15.29	14.37	7.93	6.85
31	---	---	9.68	8.63	---	---	14.44	13.36	15.31	14.26	---	---
MONTH	8.22	5.15	9.75	7.22	10.38	8.17	14.70	10.85	15.62	13.43	15.23	6.48
YEAR	15.62	2.74										

Daily Low Water Levels



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

WORCESTER COUNTY--Continued

WELL NUMBER.--WO Bh 84. SITE ID.--382215075041901. PERMIT NUMBER.--WO-73-0095.

LOCATION.--Lat 38°22'15", long 75°04'20", Hydrologic Unit 02060010, west end of 44th St., Ocean City. Owner: U.S. Geological Survey.

AQUIFER.--Beaverdam Sand of Pliocene age. Aquifer code: 121BVDM.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 89 ft; casing diameter 4 in., to 84 ft; screen diameter 4 in., from 84 to 89 ft.

INSTRUMENTATION.--Monthly water level measurements with an electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 5 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.55 ft above land surface.

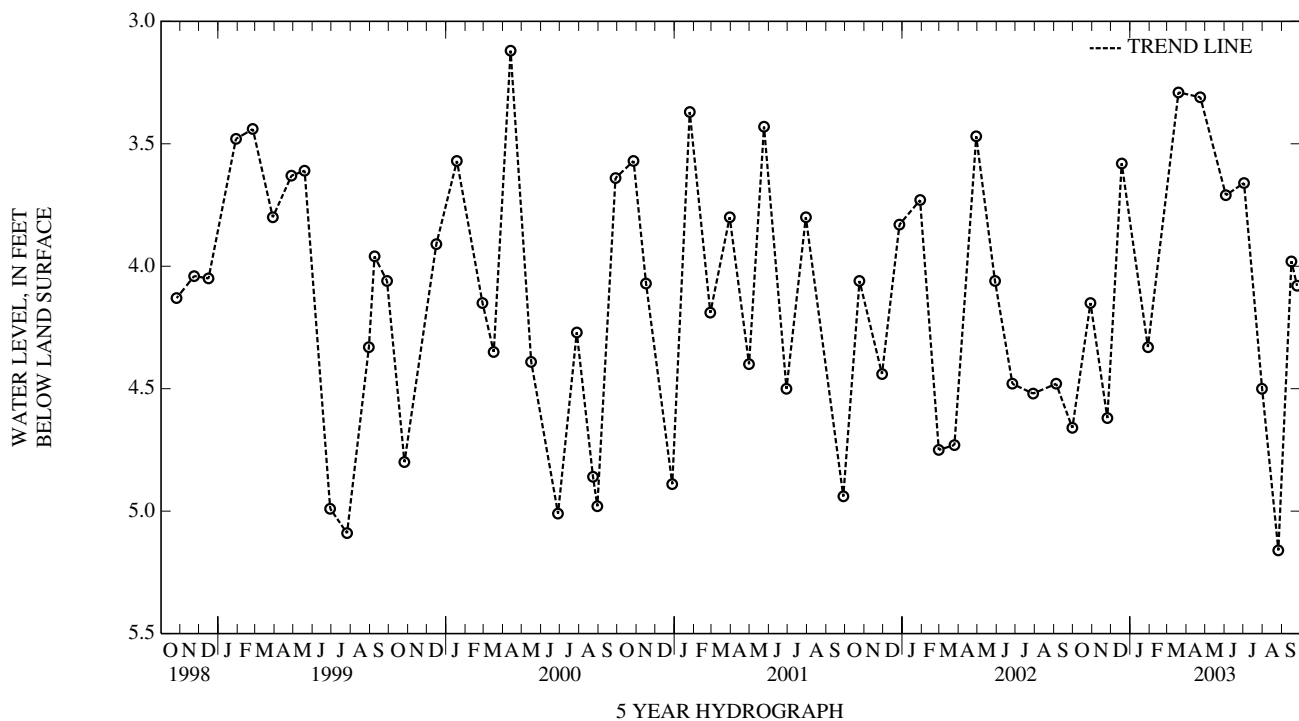
REMARKS.--Ocean City Ground-Water Monitoring Network observation well.

PERIOD OF RECORD.--April 1973 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.47 ft below land surface, April 29, 2002; lowest measured, 6.34 ft below land surface, September 17, 1991.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	4.15	JAN 29, 2003	4.33	JUN 03, 2003	3.71	AUG 26, 2003	5.16
NOV 25	4.62	MAR 19	3.29	JUL 02	3.66	SEP 16	3.98
DEC 18	3.58	APR 23	3.31	31	4.50	25	4.08
HIGHEST	3.29	MAR 19, 2003					
LOWEST	5.16	AUG 26, 2003					



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

WORCESTER COUNTY--Continued

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 in the Eastover Formation of Upper 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 water level measurements with an electric tape by U.S. Geological Survey 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. casing, 1.78 ft above land surface.

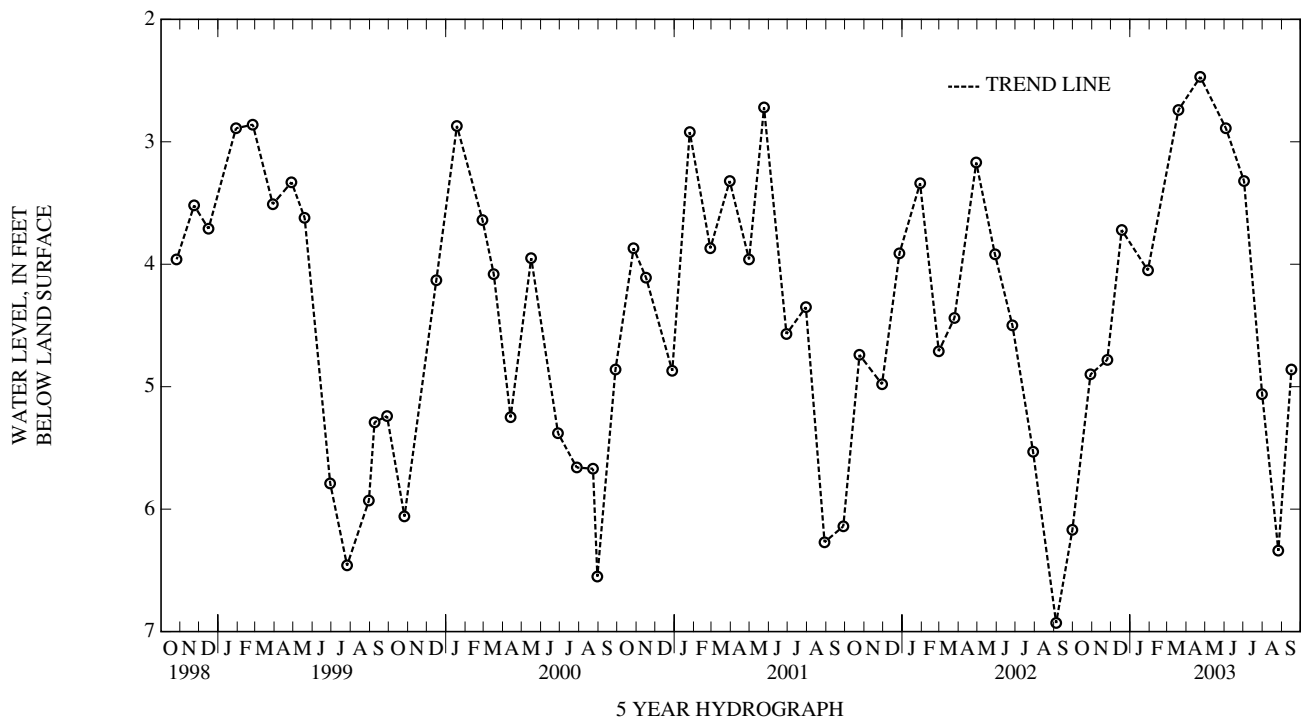
REMARKS.--Ocean City Ground-Water Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

PERIOD OF RECORD.--April 1973 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.43 ft below land surface, January 11, 1993; lowest measured, 7.53 ft below land surface, August 26, 1997.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	4.90	JAN 29, 2003	4.05	JUN 03, 2003	2.89	AUG 26, 2003	6.34
NOV 25	4.78	MAR 19	2.74	JUL 02	3.32	SEP 16	4.86
DEC 18	3.72	APR 23	2.47	JUL 31	5.06		
HIGHEST	2.47	APR 23, 2003					
LOWEST	6.34	AUG 26, 2003					



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

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 in the Eastover Formation of Upper Miocene age. Aquifer code: 122MNKN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 510 ft; casing diameter 4 in., to 388 ft, 408 to 413 ft, 423 to 433 ft, 443 to 464 ft, and 474 to 495 ft; screen diameter 4 in., from 388 to 408 ft, 413 to 423 ft, 433 to 443 ft, 464 to 474 ft, and 495 to 510 ft.

INSTRUMENTATION.--Monthly water level measurements with an electric tape by U.S. Geological Survey personnel. 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, 2.84 ft above land surface.

REMARKS.--Ocean City Ground-Water Monitoring Network observation well. Water levels are affected by local ground-water withdrawal, especially during summer peak demands. Missing data due to recorder malfunction.

PERIOD OF RECORD.--October 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.42 ft below land surface, October 8, 1993 (recorder); lowest recorded, 40.65 ft below land surface, August 17, 1998 (recorder).

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

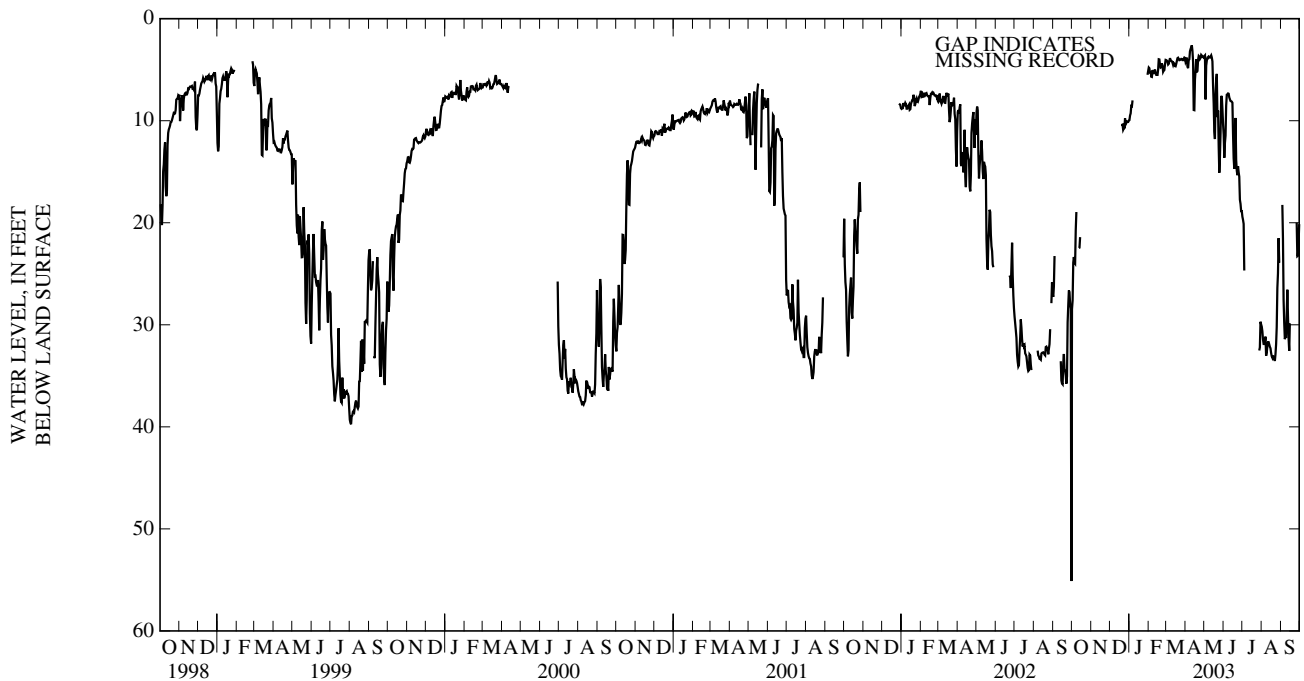
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	13.78	FEB 27, 2003	4.09	JUL 02, 2003	18.18	SEP 25, 2003	16.27
NOV 25	11.90	MAR 21	3.17	31	28.26		
DEC 18	9.66	APR 23	3.51	AUG 26	25.76		
JAN 29, 2003	5.09	JUN 03	9.43	SEP 16	20.72		
HIGHEST	3.17	MAR 21, 2003					
LOWEST	28.26	JUL 31, 2003					

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	28.47	24.28	---	---	---	---	9.95	8.69	4.79	3.55	4.06	3.13
2	27.62	23.91	---	---	---	---	9.49	8.11	4.86	3.76	4.11	2.95
3	23.91	20.71	---	---	---	---	9.28	7.80	5.36	4.48	4.21	3.23
4	23.36	19.69	---	---	---	---	8.55	7.32	5.17	4.10	4.49	3.63
5	23.91	19.30	---	---	---	---	8.58	7.41	5.69	4.53	4.42	3.39
6	24.00	19.24	---	---	---	---	8.01	6.88	5.71	4.85	4.14	2.95
7	20.75	18.27	---	---	---	---	---	---	5.04	4.30	3.87	2.95
8	18.95	17.49	---	---	---	---	---	---	5.18	4.42	4.07	3.08
9	---	---	---	---	---	---	---	---	5.42	4.63	4.12	3.38
10	---	---	---	---	---	---	---	---	5.20	4.56	4.18	3.43
11	---	---	---	---	---	---	---	---	4.99	4.38	4.31	3.59
12	22.48	19.72	---	---	---	---	---	---	5.29	4.34	4.53	3.66
13	22.44	19.26	---	---	---	---	---	---	5.51	4.79	4.34	3.77
14	21.41	18.62	---	---	---	---	---	---	5.51	4.55	4.41	3.21
15	---	---	---	---	---	---	---	---	5.51	4.17	4.65	3.63
16	---	---	---	---	---	---	---	---	5.00	3.44	4.67	3.58
17	---	---	---	---	---	---	---	---	3.98	2.33	4.43	3.15
18	---	---	---	---	---	---	---	---	4.00	2.76	4.15	2.80
19	---	---	---	---	10.43	9.41	---	---	4.54	3.48	3.87	2.67
20	---	---	---	---	10.41	9.25	---	---	4.79	3.65	3.83	2.67
21	---	---	---	---	10.38	9.28	---	---	4.75	3.69	3.95	2.74
22	---	---	---	---	10.89	9.79	---	---	4.38	3.32	4.07	2.86
23	---	---	---	---	10.75	9.67	---	---	4.61	3.02	4.05	3.03
24	---	---	---	---	10.72	9.53	---	---	5.20	4.09	3.99	3.07
25	---	---	---	---	9.77	8.41	---	---	5.07	4.26	3.94	3.03
26	---	---	---	---	10.35	9.35	---	---	5.03	3.95	3.96	3.02
27	---	---	---	---	10.22	9.37	---	---	4.47	3.33	4.06	3.01
28	---	---	---	---	10.09	9.33	---	---	4.04	2.91	4.06	3.14
29	---	---	---	---	10.12	9.13	---	---	---	---	3.92	3.01
30	---	---	---	---	10.12	9.12	5.50	4.25	---	---	3.81	2.73
31	---	---	---	---	9.99	8.79	5.14	3.92	---	---	3.85	2.80
MONTH	28.47	17.49	---	---	10.89	8.41	9.95	3.92	5.71	2.33	4.67	2.67

WORCESTER COUNTY--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	4.24	3.26	3.67	2.75	11.37	7.12	19.41	16.09	30.18	23.53	---	---
2	4.09	3.03	3.60	2.56	13.63	7.61	19.71	16.05	30.63	23.99	---	---
3	3.82	2.67	7.91	2.78	12.16	7.94	20.11	16.80	31.44	25.62	18.25	16.95
4	4.71	2.77	4.61	3.24	11.46	6.91	24.68	17.44	31.88	25.79	21.56	16.87
5	4.85	2.83	4.10	3.08	8.52	6.57	---	---	31.88	25.70	27.57	19.42
6	4.05	2.85	3.84	3.00	7.45	6.49	---	---	31.62	25.60	29.79	22.09
7	3.98	2.58	3.86	2.98	7.42	6.66	---	---	31.16	24.73	31.41	29.79
8	3.20	2.55	3.71	2.93	7.33	6.57	---	---	33.04	28.48	31.10	25.72
9	2.98	2.39	3.75	2.86	7.36	6.51	---	---	32.72	26.16	31.29	28.34
10	2.79	2.19	3.80	2.95	7.72	6.76	---	---	32.11	25.82	28.94	24.98
11	2.61	1.74	3.72	2.94	7.90	6.83	---	---	31.70	26.36	26.56	23.36
12	3.16	1.84	3.60	2.63	8.07	6.86	---	---	31.70	26.21	29.11	22.99
13	4.24	2.50	3.81	2.88	8.10	6.76	---	---	31.91	25.60	31.32	26.80
14	8.95	4.24	4.19	3.03	8.13	6.85	---	---	32.16	26.38	32.56	28.68
15	8.97	5.22	6.58	3.32	8.24	7.00	---	---	32.30	26.80	29.86	22.90
16	5.96	4.23	8.30	3.53	11.31	7.20	---	---	32.76	28.07	---	---
17	5.08	2.76	11.06	4.65	13.68	8.28	---	---	33.08	28.03	---	---
18	4.00	2.76	11.80	7.30	14.71	9.84	---	---	33.23	27.53	---	---
19	5.25	2.87	7.45	5.35	11.83	9.32	---	---	33.01	28.06	---	---
20	5.12	3.13	6.03	4.80	9.73	8.96	---	---	33.42	28.08	---	---
21	4.03	2.95	5.41	4.51	13.84	8.65	---	---	33.22	27.66	---	---
22	3.66	2.80	9.65	4.23	14.89	10.90	---	---	33.55	27.68	---	---
23	3.73	2.77	9.02	5.23	15.34	11.40	---	---	32.90	27.88	---	---
24	3.95	2.95	12.51	4.56	14.46	10.49	---	---	31.91	26.55	---	---
25	3.84	3.06	15.10	9.59	15.07	11.05	---	---	30.24	24.64	---	---
26	3.55	2.62	13.59	8.94	15.49	11.77	---	---	26.40	22.69	19.99	15.85
27	3.62	2.53	11.17	7.31	17.74	12.58	---	---	24.97	21.16	23.28	16.27
28	3.72	2.96	7.69	5.93	18.15	13.94	32.52	27.66	21.51	19.33	23.23	19.65
29	3.77	2.97	7.57	5.46	18.86	15.58	32.21	25.75	23.92	19.33	21.94	18.16
30	3.82	2.87	8.86	5.25	18.86	15.98	29.70	24.05	---	---	20.14	17.63
31	---	---	10.30	5.53	---	---	29.96	23.24	---	---	---	---
MONTH	8.97	1.74	15.10	2.56	18.86	6.49	32.52	16.05	33.55	19.33	32.56	15.85
YEAR	33.55	1.74										

Daily Low Water Levels



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

WORCESTER COUNTY--Continued

WELL NUMBER.--WO Bh 98. SITE ID.--382127075043802. PERMIT NUMBER.--WO-81-1822.

LOCATION.--Lat 38°21'27", long 75°04'38", Hydrologic Unit 02060010, at 28th Street Park, Ocean City. Owner: Town of Ocean City.

AQUIFER.--Ocean City aquifer in the Eastover Formation of Upper Miocene age. Aquifer code: 122OCNC.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 310 ft; casing diameter 4 in., to 255 ft, 275 to 285 ft, and 290 to 305 ft; screen diameter 4 in., from 255 to 275 ft, 285 to 290 ft, and 305 to 310 ft.

INSTRUMENTATION.--Monthly water level measurements with an electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 5 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.52 ft above land surface.

REMARKS.--Ocean City Ground-Water Monitoring Network observation well. Water levels are affected by local ground-water withdrawal, especially during summer peak demand.

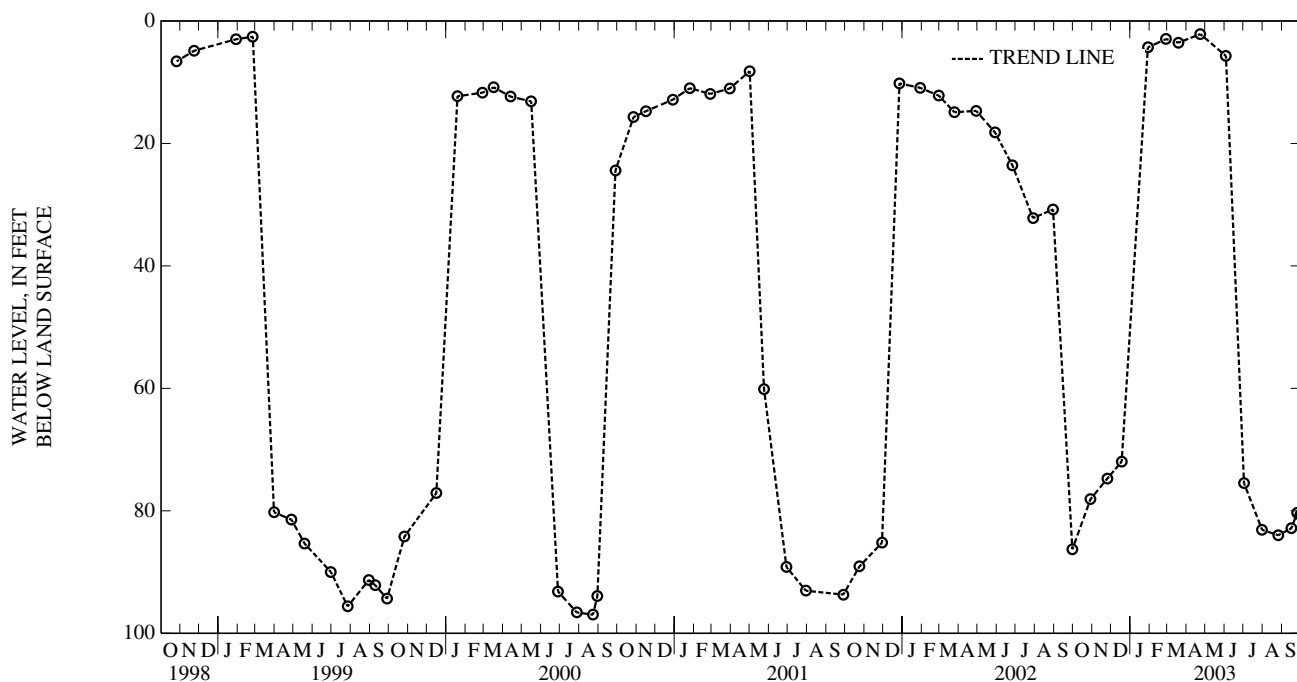
PERIOD OF RECORD.--January 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.89 ft above land surface, April 2, 1993 (recorder); lowest measured, 100.27 ft below land surface, September 16, 2002 (recorder).

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	78.10	FEB 27, 2003	2.95	JUL 02, 2003	75.49	SEP 25, 2003	80.34
NOV 25	74.73	MAR 19	3.54	31	83.11	30	80.71
DEC 18	71.96	APR 23	2.14	AUG 26	83.99		
JAN 29, 2003	4.31	JUN 03	5.71	SEP 16	82.85		

HIGHEST 2.14 APR 23, 2003
 LOWEST 83.99 AUG 26, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

Daily Low Water Levels

WORCESTER COUNTY--Continued

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 in the Eastover Formation of Upper Miocene age. Aquifer code: 122MNKN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 450 ft; casing diameter 4 in., to 384 ft, 394 to 404 ft, and 424 to 445 ft; screen diameter 4 in., from 384 to 394 ft, 404 to 424 ft, and 445 to 450 ft.

INSTRUMENTATION.--Monthly water level measurements with an electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 5 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.00 ft above land surface.

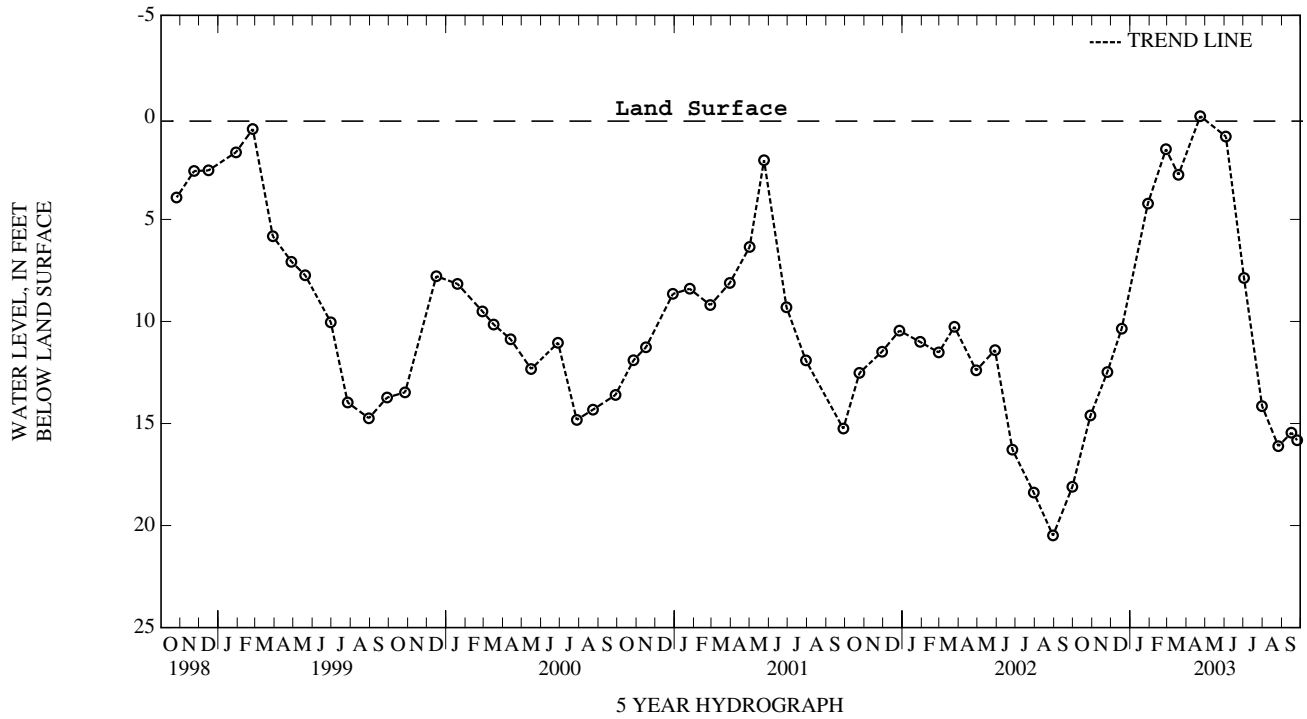
REMARKS.--Ocean City Ground-Water Monitoring Network observation well. Water levels are affected by local ground-water withdrawal, especially during summer peak demands.

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, 32.49 ft below land surface, September 25, 1996.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
(READINGS ABOVE LAND-SURFACE INDICATED BY "-")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	14.61	FEB 27, 2003	1.56	JUL 02, 2003	7.87	SEP 25, 2003	15.82
NOV 25	12.48	MAR 19	2.81	31	14.15		
DEC 18	10.35	APR 23	-.06	AUG 26	16.11		
JAN 29, 2003	4.22	JUN 03	.94	SEP 16	15.45		
HIGHEST -.06 APR 23, 2003							
LOWEST 16.11 AUG 26, 2003							



5 YEAR HYDROGRAPH
OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

WORCESTER COUNTY—Continued

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 in the Eastover Formation of Upper Miocene age. Aquifer code: 122MNKN.

WELL CHARACTERISTICS.-Drilled, unused, artesian well, depth 290 ft; casing diameter 6 in.; casing length unknown.

INSTRUMENTATION.--Monthly water level measurements with an electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 13 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of coupling, 0.40 ft below land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

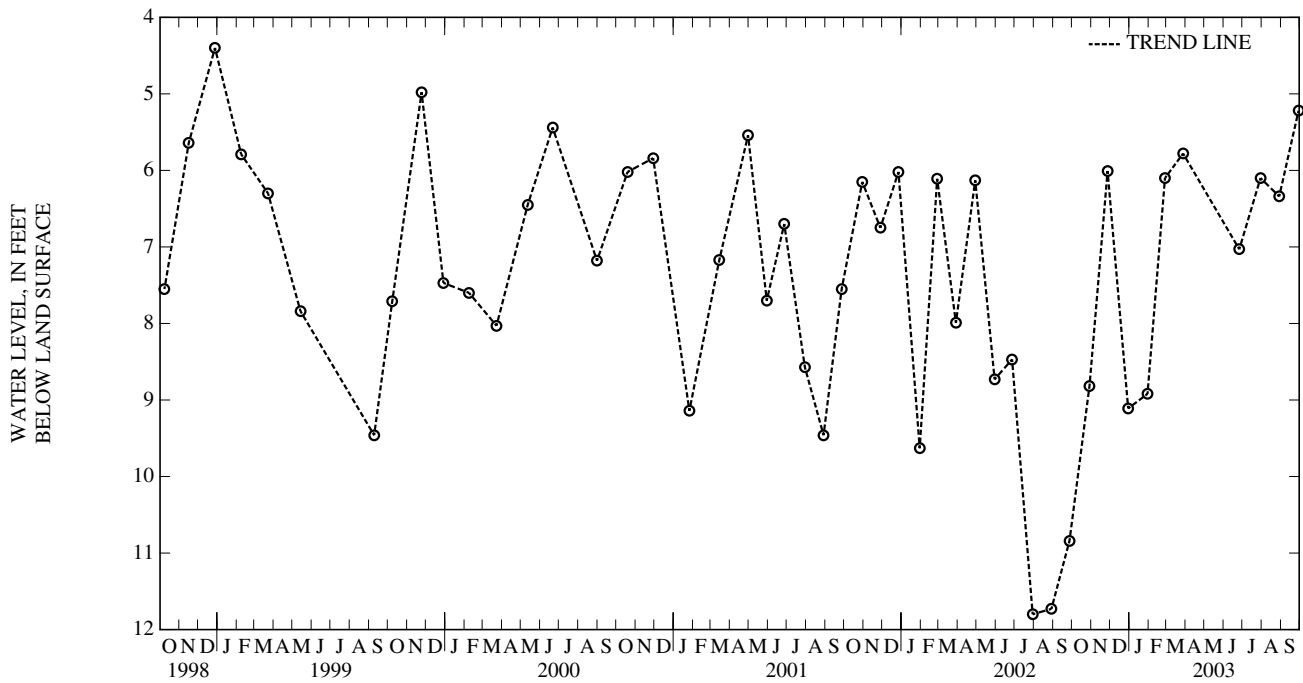
PERIOD OF RECORD.--July 1958 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.63 ft below land surface, March 8, 1962; lowest measured, 38.02 ft below land surface, September 17, 1970.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	8.82	JAN 30, 2003	8.92	JUN 26, 2003	7.03	SEP 29, 2003	5.22
NOV 27	6.01	FEB 27	6.10	JUL 30	6.10		
DEC 30	9.11	MAR 28	5.78	AUG 29	6.34		

HIGHEST 5.22 SEP 29, 2003
 LOWEST 9.11 DEC 30, 2002



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

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 in the Eastover Formation of Upper Miocene age. Aquifer code: 122MNKN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 330 ft; casing diameter 4 in., to 320 ft; screen diameter 2 in., from 320 to 330 ft.

INSTRUMENTATION.--Monthly water level measurements with an electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 30 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.84 ft above land surface.

REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. Water levels are affected by regional ground-water withdrawal.

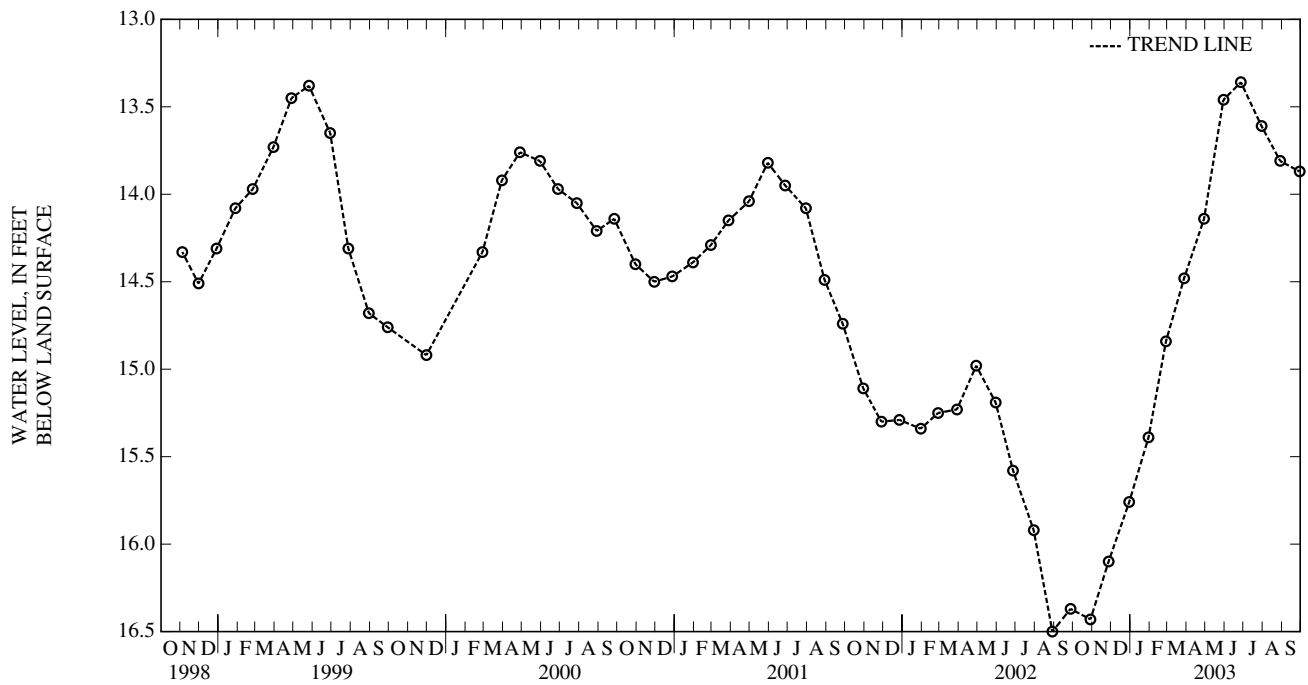
PERIOD OF RECORD.--September 1975 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.62 ft below land surface, May 20, 1976, lowest measured, 16.50 ft below land surface, August 29, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	16.43	JAN 30, 2003	15.39	APR 29, 2003	14.14	JUL 30, 2003	13.61
NOV 27	16.10	FEB 27	14.84	MAY 30	13.46	AUG 29	13.81
DEC 30	15.76	MAR 28	14.48	JUN 27	13.36	SEP 29	13.87

HIGHEST 13.36 JUN 27, 2003
 LOWEST 16.43 OCT 29, 2002



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

WORCESTER COUNTY--Continued

WELL NUMBER.--WO Dg 21. SITE ID.--381427075081102. PERMIT NUMBER.--WO-73-0519.

LOCATION.--Lat 38°14'26", long 75°08'11", Hydrologic Unit 020060010, at Assateague Island State Park. Owner: U.S. Geological Survey.

AQUIFER.--Manokin aquifer in the Eastover Formation of Upper Miocene age. Aquifer code: 122MNKN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 310 ft; casing diameter 4 in., to 300 ft; screen diameter 2 in., from 300 to 310 ft.

INSTRUMENTATION.--Monthly water level measurements with an electric tape by U.S. Geological Survey personnel from November 1990, to current year. Periodic water level measurements with chalked steel tape from October 1975 to April 1985. Equipped with digital water-level recorder--60-minute recording interval from April 1985 to October 1990.

DATUM.--Elevation of land surface is 5.66 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.98 ft above land surface.

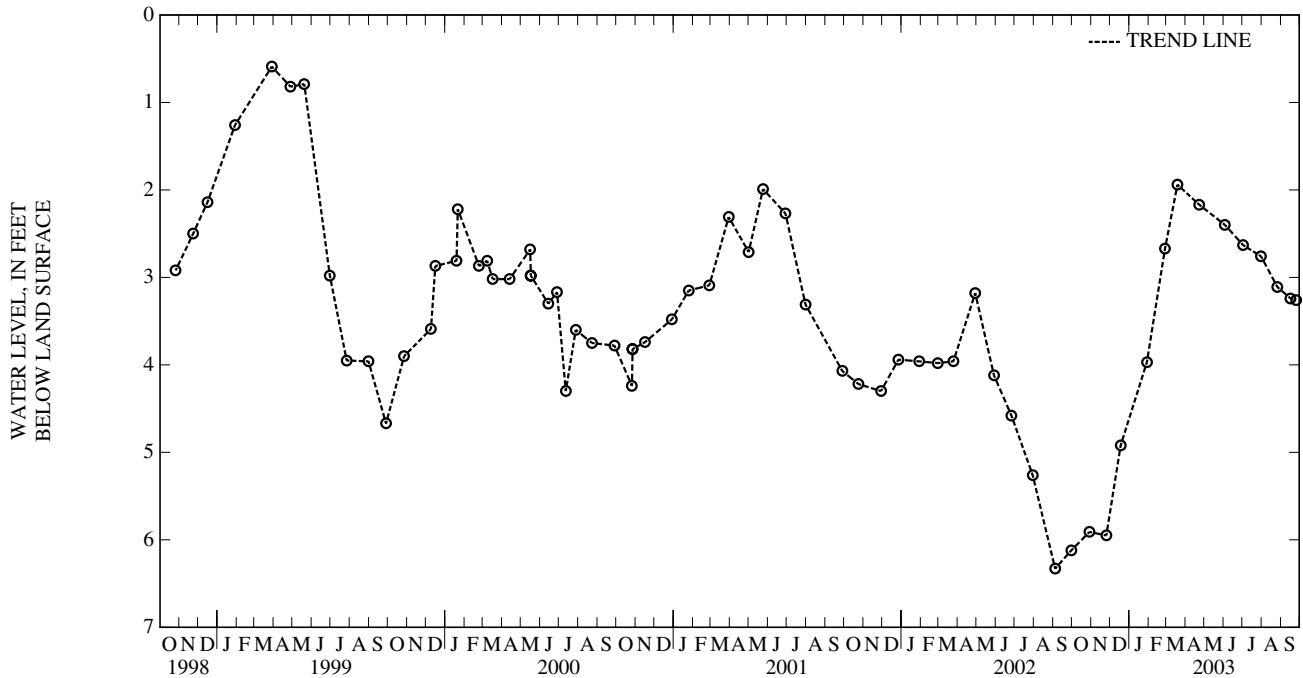
REMARKS.--Ocean City Ground-Water Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 1.37 ft above land surface, April 22, 1991; lowest recorded, 5.95 ft below land surface, November 25, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	5.91	FEB 27, 2003	2.67	JUL 02, 2003	2.63	SEP 25, 2003	3.26
NOV 25	5.95	MAR 19	1.94	31	2.76		
DEC 18	4.92	APR 23	2.17	AUG 26	3.11		
JAN 29, 2003	3.97	JUN 03	2.40	SEP 16	3.24		
HIGHEST	1.94	MAR 19, 2003					
LOWEST	5.95	NOV 25, 2002					



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

WORCESTER COUNTY--Continued

WELL NUMBER.--WO Dg 23. SITE ID.--381428075081401. PERMIT NUMBER.--WO-94-1412.

LOCATION.--Lat 38°14'28", long 75°08'10", Hydrologic Unit 020060010, at Assateague Island State Park. Owner: U.S. Geological Survey.

AQUIFER.--Beaverdam Sands of Plesitocene age. Aquifer code: 121BVDM.

WELL CHARACTERISTICS.--Drilled, observation, water table well, depth 85 ft; casing diameter 2 in., to 82 ft; screen diameter 2 in., from 82 to 85 ft.

INSTRUMENTATION.--Monthly water level measurements with an electric tape by U.S. Geological Survey personnel from October 1999, to current year.

DATUM.--Elevation of land surface is 5.18 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.10 ft above land surface.

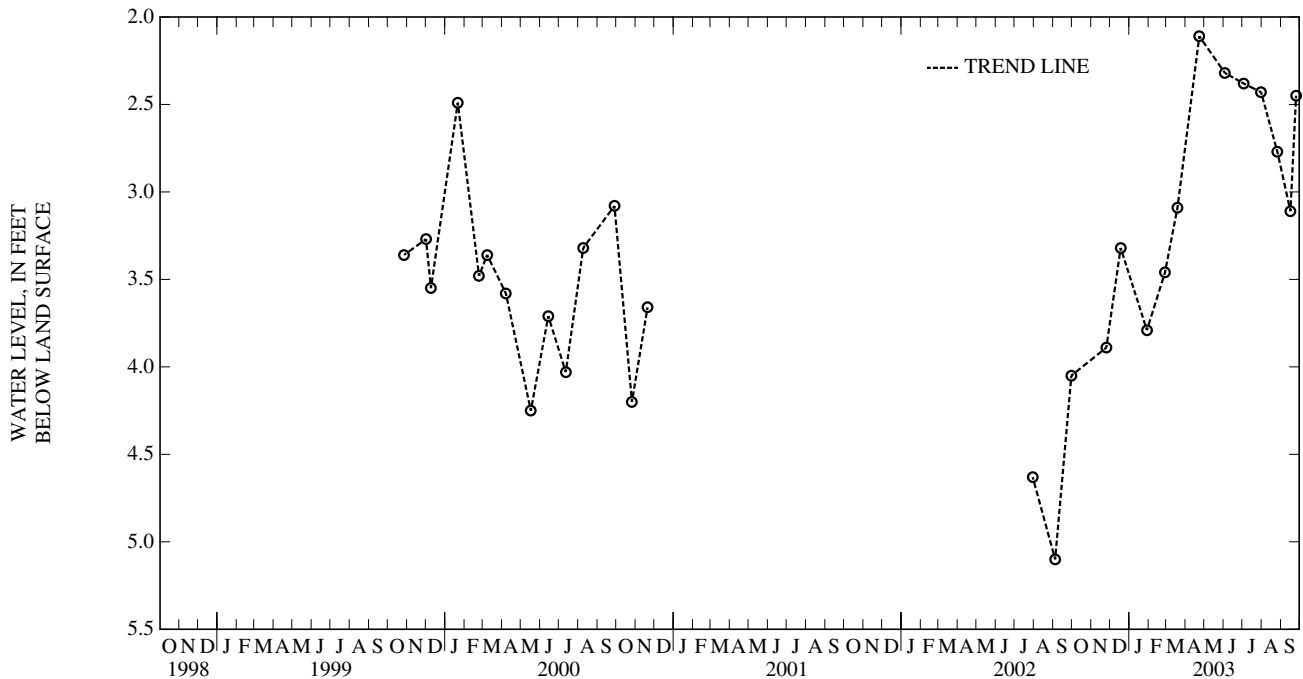
REMARKS.--Ocean City Ground-Water Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

PERIOD OF RECORD.--October 1999 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 2.11 ft above land surface, April 23, 2003; lowest recorded, 5.10 ft below land surface, September 4, 2002.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 25, 2002	3.89	FEB 27, 2003	3.46	JUN 03, 2003	2.32	AUG 26, 2003	2.77
DEC 18	3.32	MAR 19	3.09	JUL 03	2.38	SEP 16	3.11
JAN 29, 2003	3.79	APR 23	2.11	31	2.43	25	2.45
HIGHEST 2.11 APR 23, 2003							
LOWEST 3.89 NOV 25, 2002							



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

WORCESTER COUNTY--Continued

WELL NUMBER.--WO Dg 24. SITE ID.--381428075081402. PERMIT NUMBER.--WO-94-1411.

LOCATION.--Lat 38°14'28", long 75°08'10", Hydrologic Unit 020060010, at Assateague Island State Park. Owner: U.S. Geological Survey.

AQUIFER.--Sinepuxent Formation of Plesitocene age. Aquifer code: 112SNPX.

WELL CHARACTERISTICS.--Drilled, observation, water table well, depth 35 ft; casing diameter 2 in., to 32 ft; screen diameter 2 in., from 32 to 35 ft.

INSTRUMENTATION.--Monthly water level measurements with an electric tape by U.S. Geological Survey personnel from October 1999, to current year.

DATUM.--Elevation of land surface is 5.08 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.70 ft above land surface.

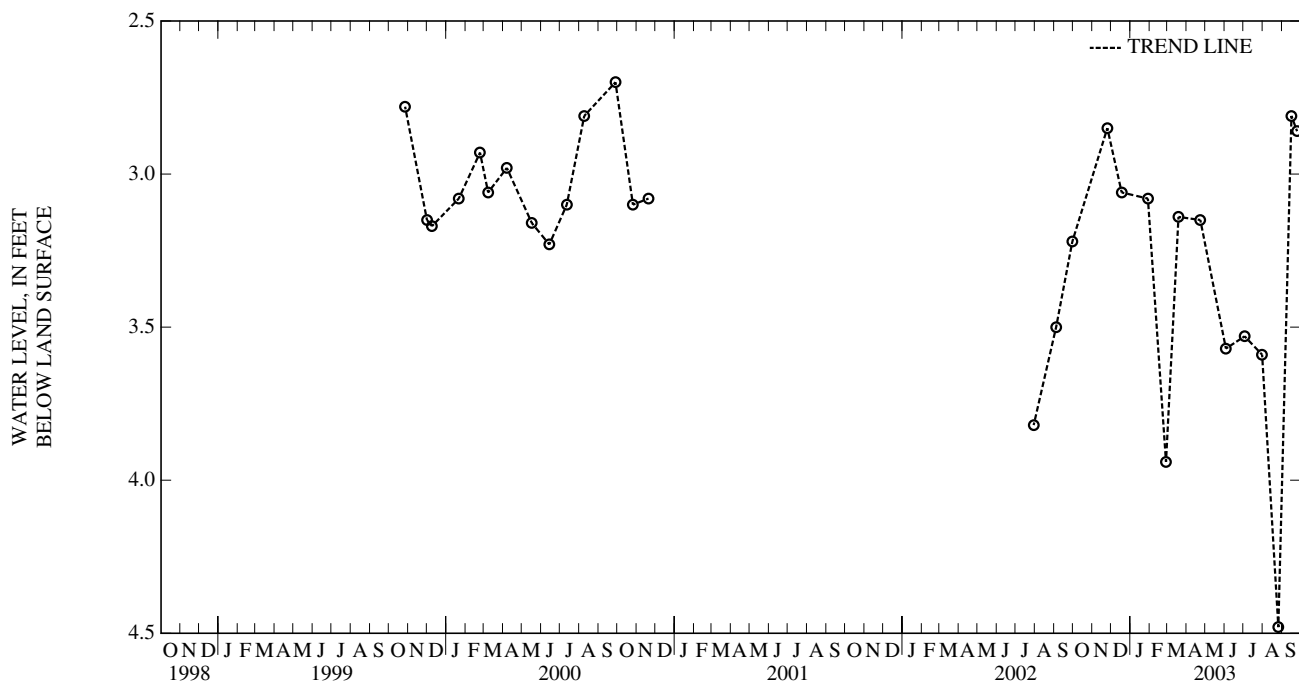
REMARKS.--Ocean City Ground-Water Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

PERIOD OF RECORD.--October 1999 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 2.70 ft above land surface, September 28, 2000; lowest recorded, 4.48 ft below land surface, August 26, 2003.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 25, 2002	2.85	FEB 27, 2003	3.94	JUN 03, 2003	3.57	AUG 26, 2003	4.48
DEC 18	3.06	MAR 19	3.14	JUL 03	3.53	SEP 16	2.81
JAN 29, 2003	3.08	APR 23	3.15	31	3.59	25	2.86
HIGHEST 2.81 SEP 16, 2003							
LOWEST 4.48 AUG 26, 2003							



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

WORCESTER COUNTY--Continued

WELL NUMBER.--WO Dg 25. SITE ID.--381428075081403. PERMIT NUMBER.--WO-94-1410.

LOCATION.--Lat 38°14'28", long 75°08'10", Hydrologic Unit 020060010, at Assateague Island State Park. Owner: U.S. Geological Survey.

AQUIFER.--Tidal Marsh Deposit of Plesitocene age. Aquifer code: 111BRRR.

WELL CHARACTERISTICS.--Drilled, observation, water table well, depth 15 ft; casing diameter 2 in., to 12 ft; screen diameter 2 in., from 12 to 15 ft.

INSTRUMENTATION.--Monthly water level measurements with an electric tape by U.S. Geological Survey personnel from October 1999, to current year.

DATUM.--Elevation of land surface is 4.99 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.30 ft above land surface.

REMARKS.--Ocean City Ground-Water Monitoring Network observation well. Water levels are affected by local ground-water withdrawal.

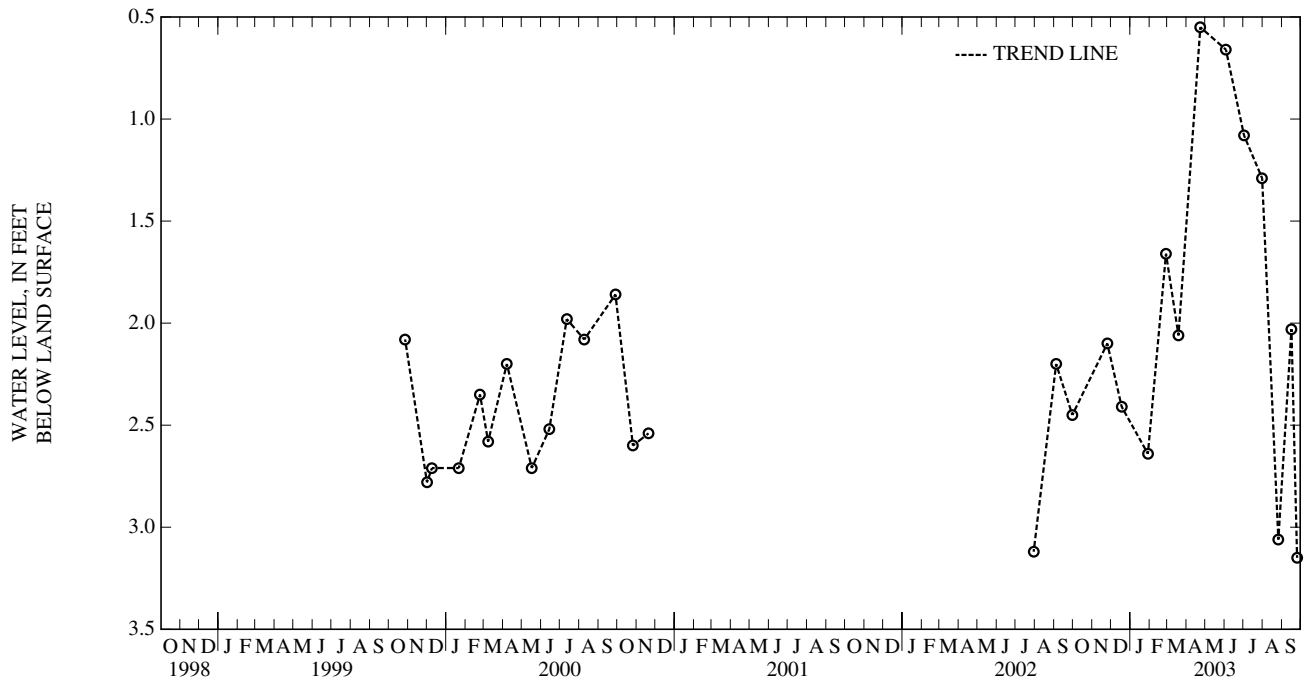
PERIOD OF RECORD.--October 1999 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.55 ft below land surface, March 19, 2003 and April 23, 2003; lowest recorded, 3.15 ft below land surface, September 25, 2003.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 25, 2002	2.10	FEB 27, 2003	1.66	JUN 03, 2003	.66	AUG 26, 2003	3.06
DEC 18	2.41	MAR 19	2.06	JUL 02	1.08	SEP 16	2.03
JAN 29, 2003	2.64	APR 23	.55	31	1.29	25	3.15

HIGHEST .55 APR 23, 2003
 LOWEST 3.15 SEP 25, 2003



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

WORCESTER COUNTY--Continued

WELL NUMBER.--WO Fb 2. SITE ID.--380408075335701. PERMIT NUMBER.--WO-00-1633.

LOCATION.--Lat 38°04'08", long 75°33'57", Hydrologic Unit 02060009, near 7th and Young St., Pocomoke City. Owner: Pocomoke City.

AQUIFER.--Pocomoke aquifer in the Eastover Formation or Yorktown Formation of Upper Miocene-Pliocene 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 water level measurements with an electric tape by U.S. Geological Survey 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, 3.30 ft above land surface.

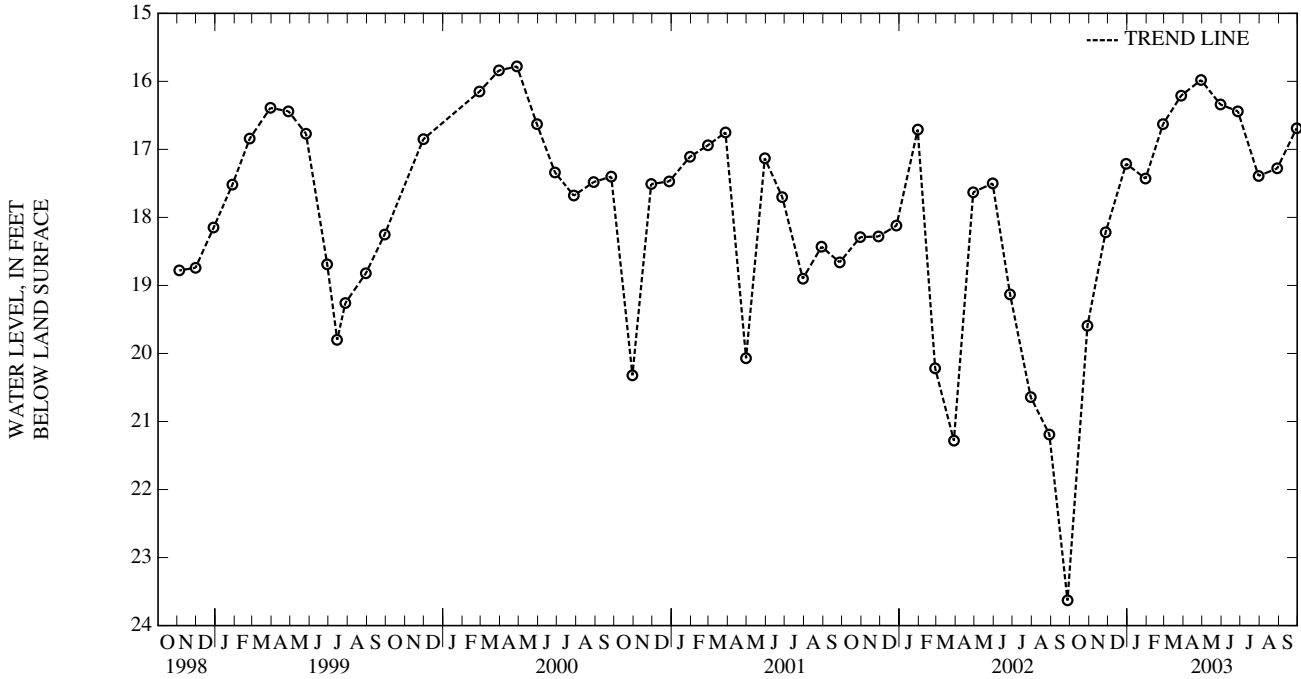
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well. A water level was reported at 30 ft below land surface on October 3, 1947. The well was inaccessible from January 1997 through July 1997 due to construction equipment being parked over the well. Water levels are affected by local ground-water withdrawal.

PERIOD OF RECORD.--January 1953 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.20 ft below land surface, February 25, 1998; lowest measured, 49.70 ft below land surface, July 1, 1954.

WATER LEVELS, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 2002	19.59	JAN 30, 2003	17.43	APR 29, 2003	15.98	JUL 30, 2003	17.39
NOV 27	18.22	FEB 27	16.63	MAY 30	16.34	AUG 29	17.28
DEC 30	17.21	MAR 28	16.21	JUN 27	16.44	SEP 29	16.69
HIGHEST 15.98 APR 29, 2003							
LOWEST 19.59 OCT 29, 2002							



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

DISTRICT OF COLUMBIA

WELL NUMBER.--WE Bb 3. SITE ID.--385504076563801. PERMIT NUMBER.--DCMW001-02.

LOCATION.--Lat 38°55'03.6", long 76°56'37.7", Hydrologic Unit 02070010. Owner: District of Columbia Department of Health, Water Quality Division.

AQUIFER.--Quaternary Alluvium Formation of Quaternary age. Aquifer code: 110ALVM.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 25 ft; casing diameter 2 in., to 15 ft depth; screen diameter 2 in., from 15 to 25 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--30-minute recording interval, June 2003 to current year.

DATUM.--Elevation of land surface is 12.30 ft above North American Vertical Datum of 1988. Measuring point: Top of PVC casing, 3.60 ft above land surface.

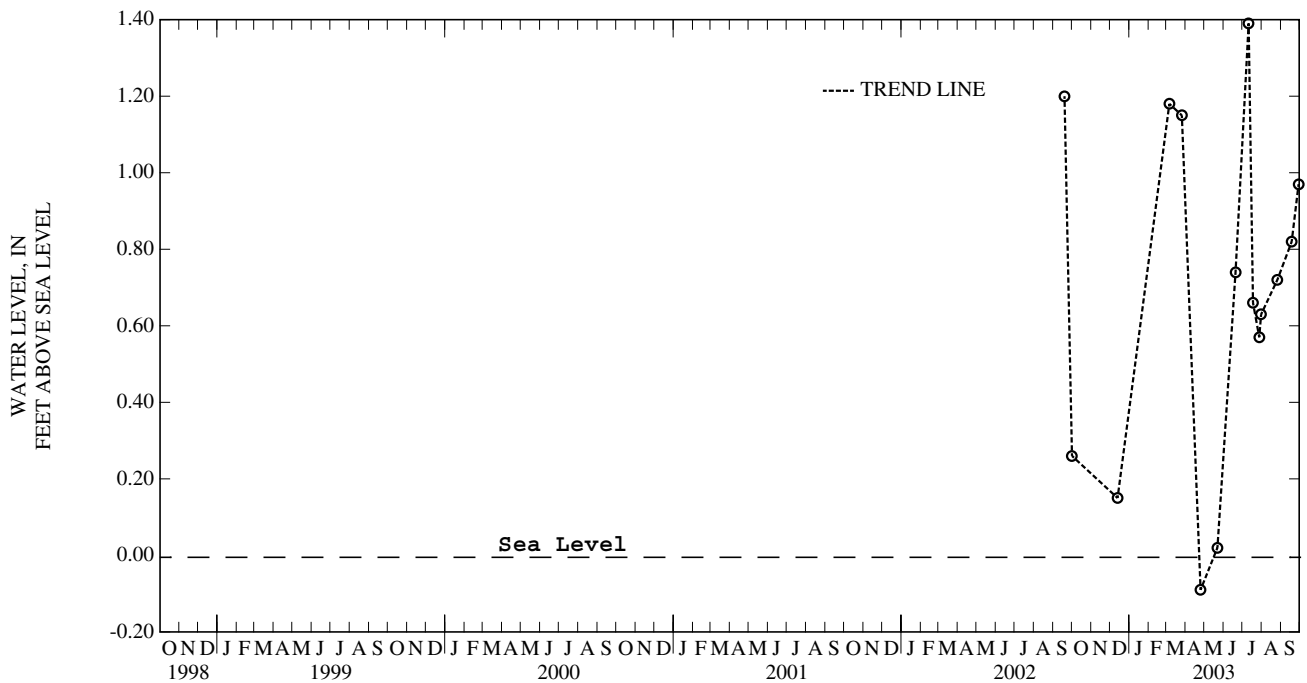
REMARKS.--Anacostia River Watershed Ground-Water-Level Monitoring Network observation well. Water levels affected by tides.

PERIOD OF RECORD.--September 2002 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.39 ft above sea level, July 11, 2003; lowest measured, 0.09 ft below sea level, April 25, 2003.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 2002	.26	APR 25, 2003	-.09	JUL 18, 2003	.66	SEP 18, 2003	.82
DEC 13	.15	MAY 22	.02	28	.57	29	.97
MAR 06, 2003	1.18	JUN 20	.74	31	.63		
26	1.15	JUL 11	1.39	AUG 26	.72		
	LOWEST	-.09	APR 25, 2003				
	HIGHEST	1.39	JUL 11, 2003				



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

DISTRICT OF COLUMBIA—Continued

WELL NUMBER.--WE Bb 4. SITE ID.--385504076563802. PERMIT NUMBER.--DCMW004-02.

LOCATION.--Lat 38°55'03.6", long 76°56'37.7", Hydrologic Unit 02070010. Owner: District of Columbia Department of Health, Water Quality Division.

AQUIFER.--Quaternary Alluvium Formation of Quaternary age. Aquifer code: 110ALVM.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 32 ft; casing diameter 2 in., to 32 ft depth; screen diameter 2 in., from 22 to 32 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--30-minute recording interval, June 2003 to current year.

DATUM.--Elevation of land surface is 12.37 ft above North American Vertical Datum of 1988. Measuring point: Top of PVC casing, 3.00 ft above land surface.

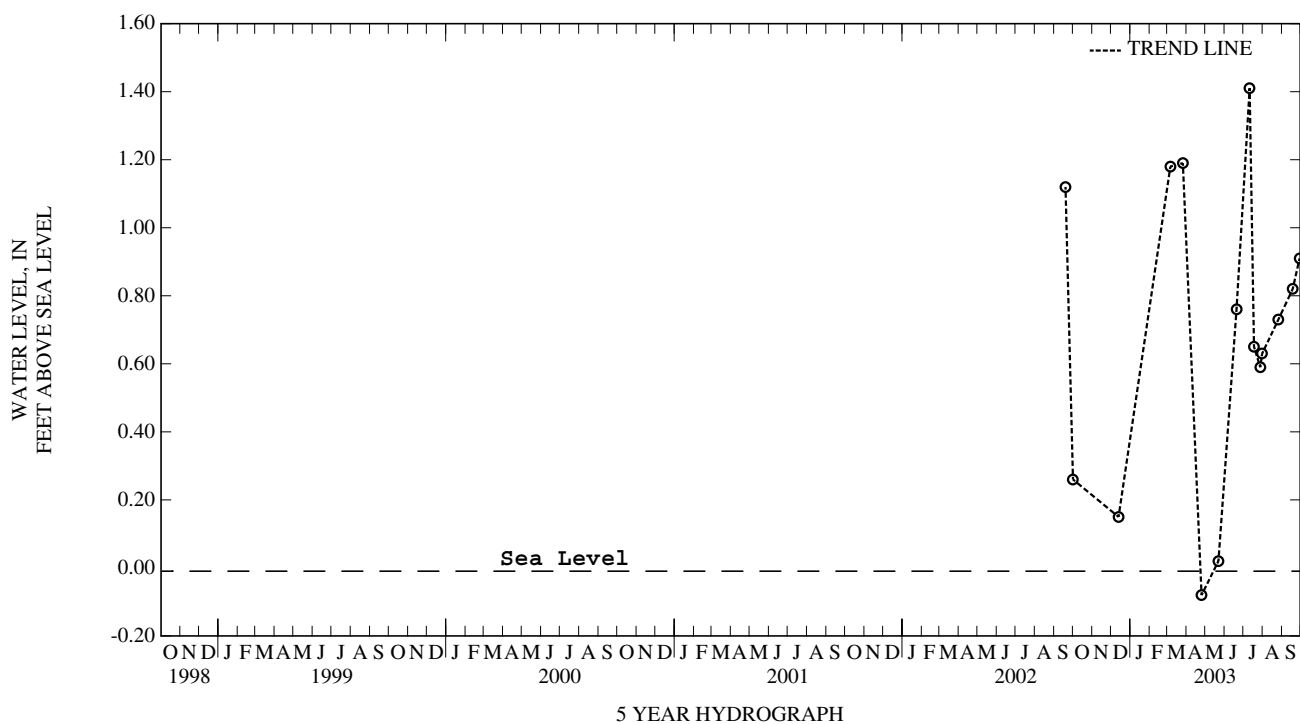
REMARKS.--Anacostia River Watershed Ground-Water-Level Monitoring Network observation well. Water levels affected by tides.

PERIOD OF RECORD.--September 2002 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.41 ft above sea level, July 11, 2003; lowest measured, 0.08 ft below sea level, April 25, 2003.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 2002	.26	APR 25, 2003	-.08	JUL 18, 2003	.65	SEP 18, 2003	.82
DEC 13	.15	MAY 22	.02	28	.59	29	.91
MAR 06, 2003	1.18	JUN 20	.76	31	.63		
26	1.19	JUL 11	1.41	AUG 26	.73		
LOWEST	-.08	APR 25, 2003					
HIGHEST	1.41	JUL 11, 2003					



DISTRICT OF COLUMBIA—Continued

WELL NUMBER.--WE Ca 29. SITE ID.--385238076581501. PERMIT NUMBER.--DCMW005-02.

LOCATION.--Lat 38°52'38.4", long 76°58'15.3", Hydrologic Unit 02070010. Owner: District of Columbia Department of Health, Water Quality Division.

AQUIFER.--Quaternary Alluvium Formation of Quaternary age. Aquifer code: 110ALVM.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 48.5 ft; casing diameter 2 in., to 38.5 ft depth; screen diameter 2 in., from 38.5 to 48.5 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 13.38 ft above North American Vertical Datum of 1988. Measuring point: Top of PVC casing, 0.15 ft below land surface.

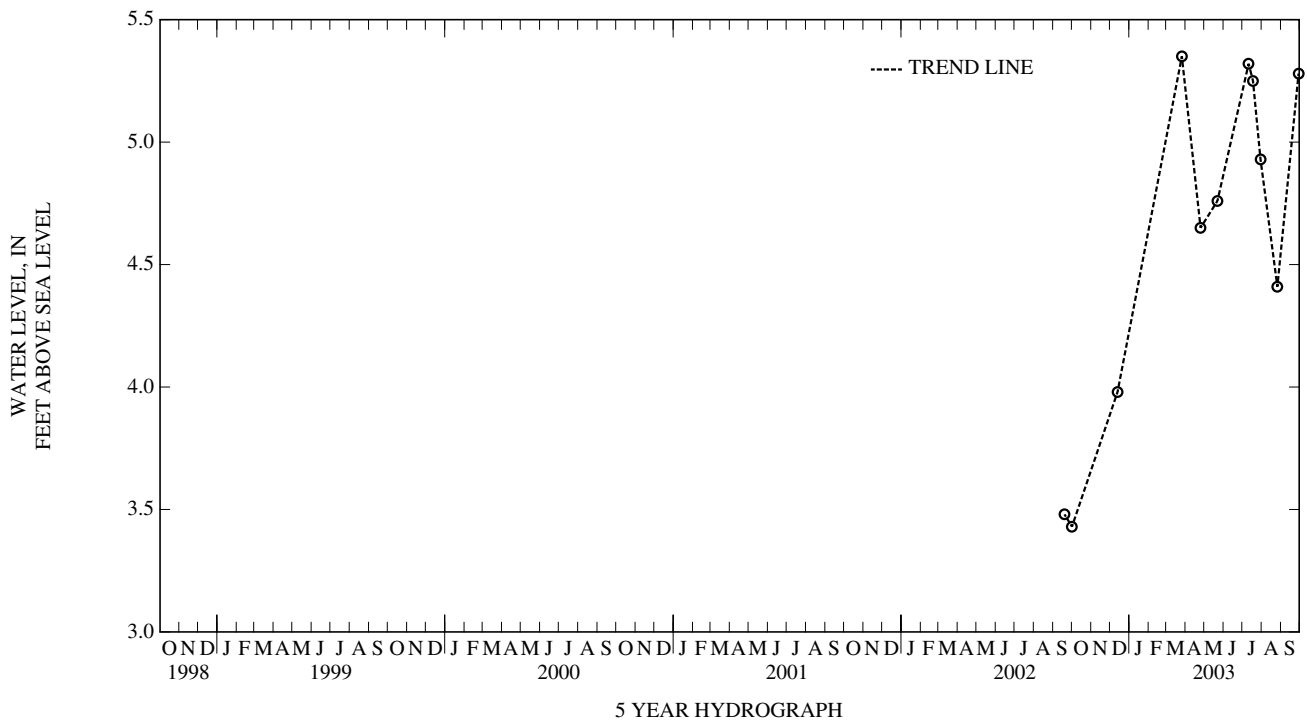
REMARKS.--Anacostia River Watershed Ground-Water-Level Monitoring Network observation well.

PERIOD OF RECORD.--September 2002 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.35 ft above sea level, March 26, 2003; lowest measured, 3.43 ft above sea level, October 1, 2002.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 2002	3.43	APR 25, 2003	4.65	JUL 18, 2003	5.25	SEP 29, 2003	5.28
DEC 13	3.98	MAY 22	4.76	30	4.93		
MAR 26, 2003	5.35	JUL 11	5.32	AUG 26	4.41		
LOWEST	3.43	OCT 01, 2002					
HIGHEST	5.35	MAR 26, 2003					



OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

DISTRICT OF COLUMBIA—Continued

WELL NUMBER.--WE Cb 5. SITE ID.--385443076562801. PERMIT NUMBER.--DCMW002-02.

LOCATION.--Lat 38°54'43.5", long 76°56'28.4", Hydrologic Unit 00002070010. Owner: District of Columbia Department of Health, Water Quality Division.

AQUIFER.--Terrace Deposits of Quaternary age. Aquifer code: 110TRRC.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 22.6 ft; casing diameter 2 in., to 12.6 ft depth; screen diameter 2 in., from 12.6 to 22.6 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--30-minute recording interval, July 2003 to current year.

DATUM.--Elevation of land surface is 18.53 ft above North American Vertical Datum of 1988. Measuring point: Top of PVC casing, 0.20 ft below land surface.

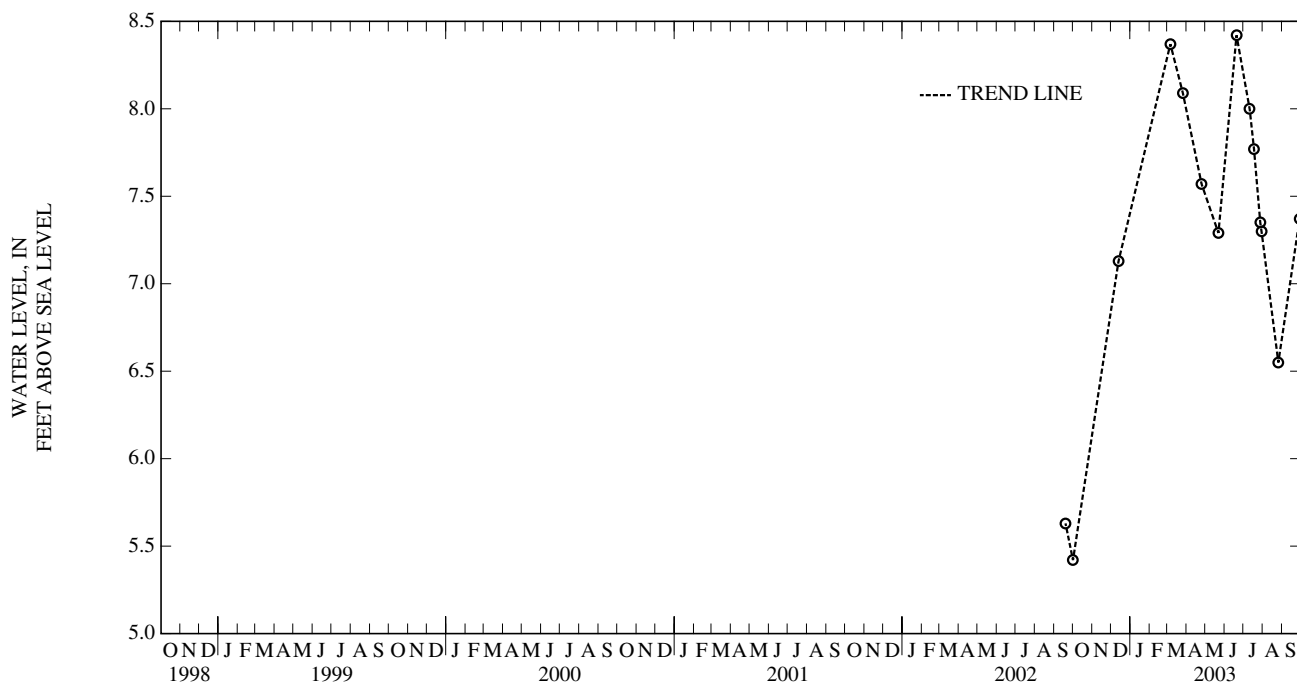
REMARKS.--Anacostia River Watershed Ground-Water-Level Monitoring Network observation well.

PERIOD OF RECORD.--September 2002 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.42 ft above sea level, June 20, 2003; lowest measured, 5.42 ft above sea level, October 1, 2002.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 2002	5.42	APR 25, 2003	7.57	JUL 18, 2003	7.77	SEP 29, 2003	7.37
DEC 13	7.13	MAY 22	7.29	28	7.35		
MAR 06, 2003	8.37	JUN 20	8.42	30	7.30		
26	8.09	JUL 11	8.00	AUG 26	6.55		
LOWEST	5.42	OCT 01, 2002					
HIGHEST	8.42	JUN 20, 2003					



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

DISTRICT OF COLUMBIA—Continued

WELL NUMBER.--WE Cb 6. SITE ID.--385443076562802. PERMIT NUMBER.--DCMW003-02.

LOCATION.--Lat 38°54'43.5", long 76°56'28.4", Hydrologic Unit 02070010. Owner: District of Columbia Department of Health, Water Quality Division.

AQUIFER.--Terrace Deposits of Quaternary age. Aquifer code: 110TRRC.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 46.3 ft; casing diameter 2 in., to 36.3 ft depth; screen diameter 0.75 in., from 36.3 to 46.3 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--30-minute recording interval, July 2003 to current year.

DATUM.--Elevation of land surface is 18.79 ft above North American Vertical Datum of 1988. Measuring point: Top of PVC casing, 0.20 ft below land surface.

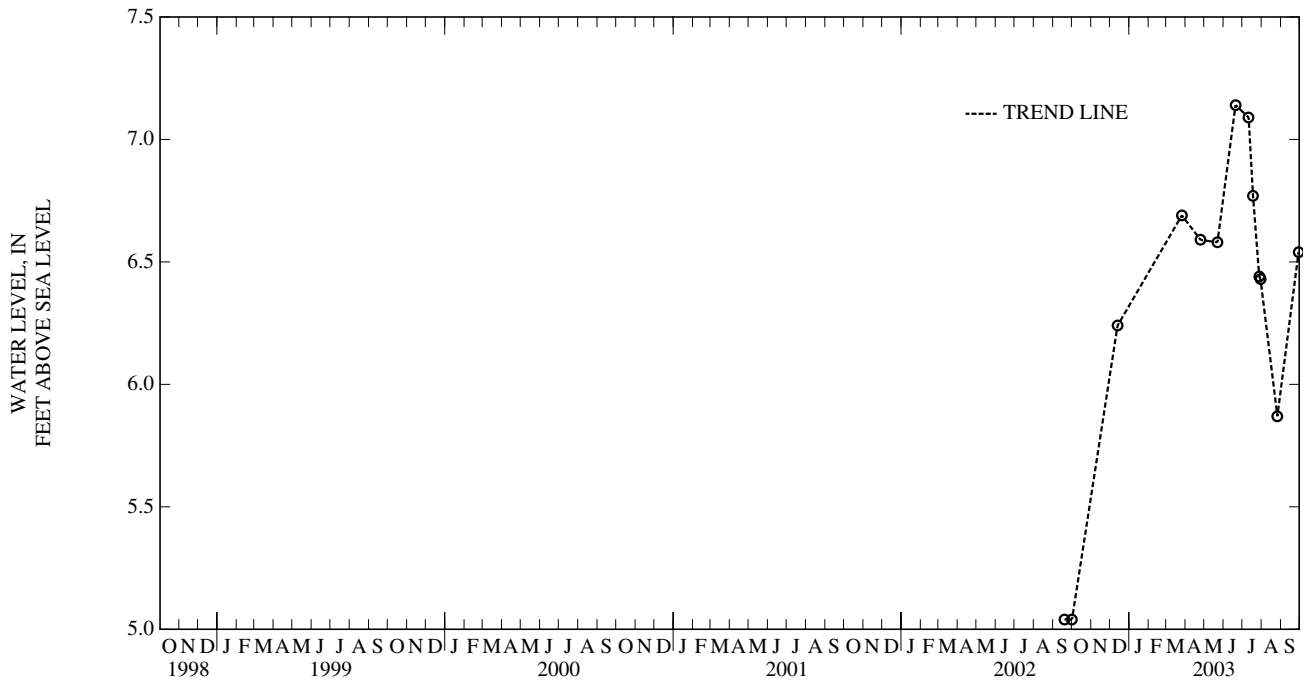
REMARKS.--Anacostia River Watershed Ground-Water-Level Monitoring Network observation well.

PERIOD OF RECORD.--September 2002 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.14 ft above sea level, June 20, 2003; lowest measured, 5.04 ft above sea level, October 1, 2002.

WATER LEVELS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 2002	5.04	APR 25, 2003	6.59	JUL 11, 2003	7.09	JUL 30, 2003	6.43
DEC 13	6.24	MAY 22	6.58	18	6.77	AUG 26	5.87
MAR 26, 2003	6.69	JUN 20	7.14	28	6.44	SEP 29	6.54
LOWEST	5.04	OCT 01, 2002					
HIGHEST	7.14	JUN 20, 2003					



5 YEAR HYDROGRAPH

OCTOBER 1, 1998 THROUGH SEPTEMBER 30, 2003

GROUND-WATER-QUALITY RECORDS

REMARK CODES

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

<u>PRINTED OUTPUT</u>	<u>REMARK</u>
E	Estimated value
>	Actual value is known to be greater than the value shown.
<	Actual value is known to be less than the value shown.
K	Results based on colony count outside the acceptance range (non-ideal colony count).
L	Biological organism count less than 0.5 percent (organism may be observed rather than counted).
D	Biological organism count equal to or greater than 15 percent (dominant).
&	Biological organism estimated as dominant.
V	Analyte was detected in both the environmental sample and the associated blank.
M	Presence of material verified but not quantified.

Dissolved Trace-Element Concentrations

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

Change in National Trends Network Procedures

NOTE--Sample handling procedures at all national Trends Network stations were changed substantially on January 11, 1994, in order to reduce contamination from the sample shipping container. The data for samples before and after that date are different and not directly comparable. A tabular summary of the differences based on a special intercomparison study, is available from the NADP/NTN Coordination Office, Colorado State University, Fort Collins, CO 80523 (Telephone: 303-491-5643).

QUALITY OF GROUND WATER DATA
NEW CASTLE COUNTY, DELAWARE

Well Number	Date	Time	Station number			Sample type		Geologic unit	Station type	Depth of well, feet below LSD (72008)	Depth to bot sample intrval feet below LSD (72016)	Depth to top sample intrval feet below LSD (72015)
Gc14-04	12-09-02	1200	392403075362101			Environmental		112CLMB	GW	34.00	34	31
	12-09-02	1205				Replicate		112CLMB	GW	34.00	34	31
			Depth to water level, feet below LSD (72019)	Altitude of land surface feet (72000)	Flow rate, instantaneous gal/min (00059)	Pump or flow period prior to sampling, minutes (72004)	Sampling method, code (82398)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)
	12-09-02	11.99	5.00	0.24	90	4040	781	3.7	33	5.8	196	
	12-09-02	11.99	5.00	0.24	90	4040	--	--	--	--	--	
			Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incm. titr., field, mg/L (00453)	Bromide water, fltrd, mg/L (71870)
	12-09-02	-1.0	12.0	68	15.1	7.22	1.99	5.47	8	10	0.03	
	12-09-02	--	--	69	15.3	7.35	1.96	5.61	--	--	0.03	
			Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)
	12-09-02	6.87	<0.17	9.15	19.9	120	116	E.08	<0.04	11.1	<0.008	
	12-09-02	6.99	<0.17	9.32	19.9	--	122	E.07	<0.04	10.8	<0.008	
			Orthophosphate, water, fltrd, mg/L as P (00671)	Organic carbon, water, fltrd, mg/L (00681)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)
	12-09-02	<0.02	0.3	17	<0.30	<0.3	71	0.07	13	1.09	0.8	
	12-09-02	<0.02	0.3	18	<0.30	<0.3	70	0.10	14	1.08	0.8	

Geologic Unit (aquifer): 112CLMB - Columbia aquifer

Station Type: GW - Ground Water

Sampling Method: 4040 - Submersible pump

QUALITY OF GROUND WATER DATA

NEW CASTLE COUNTY, DELAWARE—Continued

Well Number	Date	Cobalt water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Lithium water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)
Gc14-04	12-09-02	0.587	2.2	E10	0.23	0.6	23.2	<0.3	2.74	<0.5	<0.2
	12-09-02	0.592	1.8	E6	0.22	0.6	22.9	<0.3	2.73	<0.5	<0.2
							2,4,5-T surrog, water, fltrd, percent recovery (99958)	2,4-D methyl ester, water, fltrd, ug/L (50470)	2,4-DB water, fltrd, 0.7u GF ug/L (38746)	2,6-Diethyl-aniline water fltrd 0.7u GF ug/L (82660)	CIAT, water, fltrd, ug/L (04040)
	12-09-02	155	E.02	0.6	5	80.9	<0.009	<0.02	<0.02	<0.006	E.270
	12-09-02	153	E.02	0.9	4	93.9	<0.009	<0.02	<0.02	<0.006	E.303
							Aceto-chlor, water, fltrd, ug/L (49260)	Ala-chlor, water, fltrd, ug/L (46342)	Aldi-carb sulfone water, fltrd, 0.7u GF ug/L (49313)	Aldi-carb sulf-oxide, wat flt 0.7u GF ug/L (49314)	Aldi-carb, water, fltrd, 0.7u GF ug/L (49312)
	12-09-02	E.03	E.042	<0.006	<2	<0.006	<0.007	<0.004	<0.02	<0.008	<0.04
	12-09-02	E.06	E.008	<0.006	<2	<0.006	<0.007	<0.004	<0.02	<0.008	<0.04
							Barban, surrog, Sched. 2060/9060, wat flt pct rcv (90640)	Bendio-carb, water, fltrd, ug/L (50299)	Benomyl water, fltrd, ug/L (50300)	Bensul-furan, water, fltrd, ug/L (61693)	Ben-tazon, water, fltrd, 0.7u GF ug/L (38711)
	12-09-02	<0.005	88.5	0.274	<0.050	123	<0.03	<0.010	<0.004	<0.02	<0.01
	12-09-02	<0.005	88.8	0.281	<0.050	113	<0.03	<0.010	<0.004	<0.02	<0.01
							Caf-feine-13C, surrog, wat flt percent recovery (99959)	Car-baryl, water, fltrd, ug/L (49310)	Car-baryl, water, fltrd, ug/L (82680)	Carbo-furan, water, fltrd, 0.7u GF ug/L (49309)	Carbo-furan, water, fltrd, 0.7u GF ug/L (82674)	Chlor-amben methyl ester, water, fltrd, ug/L (61188)
12-09-02	<0.03	<0.02	<0.002	<0.010	96.3	<0.03	<0.041	<0.006	<0.020	<0.02	
12-09-02	<0.03	<0.02	<0.002	<0.010	102	<0.03	<0.041	<0.006	<0.020	<0.02	

QUALITY OF GROUND WATER DATA
NEW CASTLE COUNTY, DELAWARE—Continued

Well Number	Date	Chlorimuron, water, fltrd, ug/L (50306)	Chloro-di-amino-s-triazine, wat flt ug/L (04039)	Chloro-thalonil, water, fltrd 0.7u GF ug/L (49306)	Chlorpyrifos, water, fltrd, ug/L (38933)	cis-Permethrin, water, fltrd 0.7u GF ug/L (82687)	Clopyralid, water, fltrd 0.7u GF ug/L (49305)	Cyanazine, water, fltrd, ug/L (04041)	Cycloate, water, fltrd, ug/L (04031)	Dacthal mono-acid, water, fltrd 0.7u GF ug/L (49304)	DCPA, water, fltrd 0.7u GF ug/L (82682)
Gc14-04	12-09-02	<0.010	<0.01	<0.04	<0.005	<0.006	<0.01	<0.018	<0.01	<0.01	<0.003
	12-09-02	<0.010	<0.0036	<0.04	<0.005	<0.006	<0.01	<0.018	<0.01	<0.01	<0.003
		Diazinon, water, fltrd, ug/L (39572)	Diazinon-d10, water, fltrd, percent recovry (91063)	Dichloroprop, water, fltrd 0.7u GF ug/L (49302)	Dieldrin, water, fltrd, ug/L (39381)	Dinoseb, water, fltrd 0.7u GF ug/L (49301)	Diphenamid, water, fltrd, ug/L (04033)	Disulfoton, water, fltrd 0.7u GF ug/L (82677)	Diuron, water, fltrd 0.7u GF ug/L (49300)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethalfluralin, water, fltrd, ug/L (82663)
	12-09-02	<0.005	112	<0.01	<0.005	<0.01	<0.03	<0.02	<0.01	<0.002	<0.009
	12-09-02	<0.005	113	<0.01	<0.005	<0.01	<0.03	<0.02	<0.01	<0.002	<0.009
		Ethoprop, water, fltrd 0.7u GF ug/L (82672)	Fenuron, water, fltrd 0.7u GF ug/L (49297)	Flumetsulam, water, fltrd, ug/L (61694)	Fluometuron, water, fltrd 0.7u GF ug/L (38811)	Fonofos, water, fltrd, ug/L (04095)	Imazaquin, water, fltrd, ug/L (50356)	Imazethapyr, water, fltrd, ug/L (50407)	Imidacloprid, water, fltrd, ug/L (61695)	Lindane, water, fltrd, ug/L (39341)	Linuron, water, fltrd 0.7u GF ug/L (38478)
	12-09-02	<0.005	<0.03	<0.01	<0.03	<0.003	<0.02	<0.02	<0.007	<0.004	<0.01
	12-09-02	<0.005	<0.03	<0.01	<0.03	<0.003	<0.02	<0.02	<0.007	<0.004	<0.01
		Linuron, water, fltrd 0.7u GF ug/L (82666)	Malathion, water, fltrd, ug/L (39532)	MCPA, water, fltrd 0.7u GF ug/L (38482)	MCPB, water, fltrd 0.7u GF ug/L (38487)	Metaxyl, water, fltrd, ug/L (50359)	Methiocarb, water, fltrd 0.7u GF ug/L (38501)	Methomyl, water, fltrd 0.7u GF ug/L (49296)	Methyl parathion, water, fltrd 0.7u GF ug/L (82667)	Metolachlor, water, fltrd, ug/L (39415)	Metribuzin, water, fltrd, ug/L (82630)
	12-09-02	<0.035	<0.027	<0.02	<0.01	<0.02	<0.008	<0.004	<0.006	<0.013	<0.006
	12-09-02	<0.035	<0.027	<0.02	<0.01	<0.02	<0.008	<0.004	<0.006	<0.013	<0.006
		Metsulfuron, water, fltrd, ug/L (61697)	Molinate, water, fltrd 0.7u GF ug/L (82671)	N-(4-Chlorophenyl)-N'-methylurea, ug/L (61692)	Napropamide, water, fltrd 0.7u GF ug/L (82684)	Neburon, water, fltrd 0.7u GF ug/L (49294)	Nicosulfuron, water, fltrd, ug/L (50364)	Norflurazon, water, fltrd 0.7u GF ug/L (49293)	Oryzalin, water, fltrd 0.7u GF ug/L (49292)	Oxamyl, water, fltrd 0.7u GF ug/L (38866)	p,p'-DDE, water, fltrd, ug/L (34653)
	12-09-02	<0.03	<0.002	<0.02	<0.007	<0.01	<0.01	<0.02	<0.02	<0.01	<0.003
	12-09-02	<0.03	<0.002	<0.02	<0.007	<0.01	<0.01	<0.02	<0.02	<0.01	<0.003

QUALITY OF GROUND WATER DATA

NEW CASTLE COUNTY, DELAWARE—Continued

Well Number	Date	Para- thion, water, fltrd, ug/L (39542)	Peb- ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi- meth- alin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)	Pic- loram, water, fltrd 0.7u GF ug/L (49291)	Prome- ton, water, fltrd, ug/L (04037)	Pron- amide, water, fltrd 0.7u GF ug/L (82676)	Propa- chlor, water, fltrd, ug/L (04024)	Pro- panil, water, fltrd 0.7u GF ug/L (82679)	Propar- gite, water, fltrd 0.7u GF ug/L (82685)
Gc14-04	12-09-02	<0.010	<0.004	<0.022	<0.011	<0.02	<0.01	<0.004	<0.010	<0.011	<0.02
	12-09-02	<0.010	<0.004	<0.022	<0.011	<0.02	<0.01	<0.004	<0.010	<0.011	<0.02
		Propham water fltrd 0.7u GF ug/L (49236)	Propi- cona- zole, water, fltrd, ug/L (50471)	Pro- poxur, water, fltrd 0.7u GF ug/L (38538)	Siduron water, fltrd, ug/L (38548)	Sima- zine, water, fltrd, ug/L (04035)	Sulfo- met- ruron, water, fltrd, ug/L (50337)	Tebu- thiuron water fltrd 0.7u GF ug/L (82670)	Terba- cil, water, fltrd 0.7u GF ug/L (82665)	Terba- cil, water, fltrd, ug/L (04032)	Terbu- fos, water, fltrd 0.7u GF ug/L (82675)
	12-09-02	<0.010	<0.02	<0.008	<0.02	<0.005	<0.009	<0.02	<0.034	<0.010	<0.02
	12-09-02	<0.010	<0.02	<0.008	<0.02	<0.005	<0.009	<0.02	<0.034	<0.010	<0.02
		Thio- bencarb water fltrd 0.7u GF ug/L (82681)	Tri- allate, water, fltrd 0.7u GF ug/L (82678)	Tri- clopyr, water, fltrd 0.7u GF ug/L (49235)	Tri- flur- alin, water, fltrd 0.7u GF ug/L (82661)	Rn-222 2-sigma water unfltrd pCi/L (76002)	Rn-222, water, unfltrd pCi/L (82303)	Uranium natural water, fltrd, ug/L (22703)			
	12-09-02	<0.005	<0.002	<0.02	<0.009	25	510	E.01			
	12-09-02	<0.005	<0.002	<0.02	<0.009	--	--	E.01			

Remark codes used in this table:

< -- Less than

E -- Estimated value

QUALITY OF GROUND WATER DATA
SUSSEX COUNTY, DELAWARE

Well Number	Date	Time	Station number			Sample type	Geologic unit	Station type	Depth of well, feet below LSD (72008)	Depth to bot sample intrval feet below LSD (72016)	Depth to top sample intrval feet below LSD (72015)	
Ng45-02	12-19-02	1100	384637075153201			Environmental	112BVDM	GW	22.00	22	19	
	12-19-02	1105				Replicate	112BVDM	GW	22.00	22	19	
	12-19-02	1300				Blank	--	GW	--	--	--	
Of12-05	01-22-03	1130	384418075231101			Environmental	112BVDM	GW	13.00	13	10	
Rf24-08	01-16-03	1400	382833075213701			Environmental	112BVDM	GW	19.00	19	16	
Ri22-10	01-14-03	1400	382824075081502			Environmental	112CLMB	GW	23.00	23	20	
			Depth to water level, feet below LSD (72019)	Altitude of land surface feet (72000)	Flow rate, instantaneous gal/min (00059)	Pump or flow period prior to sampling, minutes (72004)	Sampling method, code (82398)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unfltrd uS/cm 25 degC (00095)	
Ng45-02	12-19-02	7.10	16.00	0.30	120	4040	771	7.7	76	6.3	251	
	12-19-02	7.10	16.00	0.30	120	4040	--	--	--	--	--	
	12-19-02	--	--	--	--	4040	--	--	--	--	--	
Of12-05	01-22-03	3.45	49.13	0.23	60	4040	766	4.6	41	4.9	47	
Rf24-08	01-16-03	1.60	35.00	0.36	60	4040	770	0.1	0.0	5.4	130	
Ri22-10	01-14-03	9.06	15.00	0.44	60	4040	767	2.3	23	5.0	397	
			Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt inc tit mg/L as CaCO3 (39086)	Bicarbonate, wat flt incm. titr., field, mg/L (00453)	Bromide water, fltrd, mg/L (71870)
Ng45-02	12-19-02	--	15.7	94	27.4	6.21	1.44	5.21	4	5	0.05	
	12-19-02	--	--	92	26.9	6.06	1.49	5.06	--	--	0.04	
	12-19-02	--	--	--	0.04	<0.008	<0.10	0.11	--	--	<0.02	
Of12-05	01-22-03	-5.0	10.0	9	1.37	1.35	0.55	3.41	--	--	E.01	
Rf24-08	01-16-03	2.0	13.0	10	2.60	0.791	2.28	14.8	15	18	0.04	
Ri22-10	01-14-03	2.0	15.0	97	19.9	11.3	2.46	29.1	9	11	0.11	
			Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)
Ng45-02	12-19-02	22.1	<0.17	12.3	30.9	160	159	0.13	<0.04	11.6	<0.008	
	12-19-02	19.6	<0.17	12.1	30.9	--	161	0.12	<0.04	11.1	<0.008	
	12-19-02	<0.20	<0.17	0.40	<0.2	--	<10	<0.10	<0.04	<0.06	<0.008	
Of12-05	01-22-03	4.53	<0.17	6.93	7.8	--	27	E.06	<0.04	<0.06	<0.008	
Rf24-08	01-16-03	17.7	<0.17	25.9	13.7	93	103	0.20	0.06	<0.06	<0.008	
Ri22-10	01-14-03	36.5	<0.17	35.1	113	263	277	0.17	0.12	<0.06	<0.008	

Geologic Unit (aquifer): 112BVDM - Beaverdam Sand
112CLMB - Columbia aquifer

Station Type: GW - Ground Water

Sampling Method: 4040 - Submersible pump

QUALITY OF GROUND WATER DATA
SUSSEX COUNTY, DELAWARE—Continued

Well# Number	Date	Aldi- carb sulf- oxide, wat flt 0.7u GF ug/L (49314)	Aldi- carb, water, fltrd 0.7u GF ug/L (49312)	alpha- HCH, water, fltrd, ug/L (34253)	alpha- HCH-d6, surrog, wat flt 0.7u GF percent recovery (91065)	Atra- zine, water, fltrd, ug/L (39632)	Azin- phos- methyl, water, fltrd 0.7u GF ug/L (82686)	Barban, surrog, Sched. 2060/ 9060, wat flt pct rcv (90640)	Bendio- carb, water, fltrd, ug/L (50299)	Ben- flur- alin, water, fltrd 0.7u GF ug/L (82673)	Benomyl water, fltrd, ug/L (50300)
		Ng45-02	12-19-02	<0.008	<0.04	<0.005	93.6	0.057	<0.050	E123	<0.03	<0.010	<0.004
	12-19-02	<0.008	<0.04	<0.005	97.4	0.055	<0.050	E134	<0.03	<0.010	<0.004
	12-19-02	<0.008	<0.04	<0.005	99.2	<0.007	<0.050	72.7	<0.03	<0.010	<0.004
Of12-05	01-22-03	<0.008	<0.04	<0.005	104	<0.007	<0.050	80.3	<0.03	<0.010	<0.004
Rf24-08	01-16-03	<0.008	<0.04	<0.005	87.7	<0.007	<0.050	137	<0.03	<0.010	<0.004
Ri22-10	01-14-03	<0.008	<0.04	<0.005	107	<0.007	<0.050	96.6	<0.03	<0.010	<0.004
		Bensul- furon, water, fltrd, ug/L (61693)	Ben- tazon, water, fltrd 0.7u GF ug/L (38711)	Broma- cil, water, fltrd, ug/L (04029)	Brom- oxynil, water, fltrd 0.7u GF ug/L (49311)	Butyl- ate, water, fltrd, ug/L (04028)	Caf- feine, water, fltrd, ug/L (50305)	Caf- feine- 13C, surrog, wat flt percent recovery (99959)	Car- baryl, water, fltrd 0.7u GF ug/L (49310)	Car- baryl, water, fltrd 0.7u GF ug/L (82680)	Carbo- furan, water, fltrd 0.7u GF ug/L (49309)
Ng45-02	12-19-02	<0.02	<0.01	<0.03	<0.02	<0.002	<0.010	137	<0.03	<0.041	<0.006
	12-19-02	<0.02	<0.01	<0.03	<0.02	<0.002	<0.010	140	<0.03	<0.041	<0.006
	12-19-02	<0.02	<0.01	<0.03	<0.02	<0.002	<0.010	137	<0.03	<0.041	<0.006
Of12-05	01-22-03	<0.02	<0.01	<0.03	<0.02	<0.002	0.028	96.9	<0.03	<0.041	<0.006
Rf24-08	01-16-03	<0.02	<0.01	E.03	<0.02	<0.002	<0.010	E84.9	<0.03	<0.041	0.012
Ri22-10	01-14-03	<0.02	<0.01	E2.52	<0.02	<0.002	<0.010	60.8	<0.03	<0.041	<0.006
		Carbo- furan, water, fltrd 0.7u GF ug/L (82674)	Chlor- amben methyl ester, water, fltrd, ug/L (61188)	Chlori- muron, water, fltrd, ug/L (50306)	Chloro- di- amino- s-tri- azine, wat flt ug/L (04039)	Chloro- thalo- nil, water, fltrd 0.7u GF ug/L (49306)	Chlor- pyrifos water, fltrd, ug/L (38933)	cis- Per- methrin water fltrd 0.7u GF ug/L (82687)	Clopyr- alid, water, fltrd, ug/L (49305)	Cyana- zine, water, fltrd, ug/L (04041)	Cyclo- ate, water, fltrd, ug/L (04031)
Ng45-02	12-19-02	<0.020	<0.02	<0.010	E.01	<0.04	<0.005	<0.006	<0.01	<0.018	<0.01
	12-19-02	<0.020	<0.02	<0.010	E.01	<0.04	<0.005	<0.006	<0.01	<0.018	<0.01
	12-19-02	<0.020	<0.02	<0.010	<0.01	<0.04	<0.005	<0.006	<0.01	<0.018	<0.01
Of12-05	01-22-03	<0.020	<0.02	<0.010	<0.01	<0.04	<0.005	<0.006	<0.01	<0.018	<0.01
Rf24-08	01-16-03	E.017	<0.02	<0.010	<0.01	<0.04	<0.005	<0.006	<0.01	<0.018	<0.01
Ri22-10	01-14-03	<0.020	<0.02	<0.010	<0.01	<0.04	<0.005	<0.006	<0.01	<0.018	<0.01
		Dacthal mono- acid, water, fltrd 0.7u GF ug/L (49304)	DCPA, water fltrd 0.7u GF ug/L (82682)	Diazi- non, water, fltrd, ug/L (39572)	Diazi- non-d10 surrog, wat flt 0.7u GF percent recovery (91063)	Dicamba water fltrd 0.7u GF ug/L (38442)	Di- chlor- prop, water, fltrd 0.7u GF ug/L (49302)	Diel- drin, water, fltrd, ug/L (39381)	Dinoseb water, fltrd 0.7u GF ug/L (49301)	Diphen- amid, water, fltrd, ug/L (04033)	Disul- foton, water, fltrd 0.7u GF ug/L (82677)
Ng45-02	12-19-02	<0.01	<0.003	<0.005	101	<0.01	<0.01	<0.005	<0.01	<0.03	<0.02
	12-19-02	<0.01	<0.003	<0.005	104	<0.01	<0.01	<0.005	<0.01	<0.03	<0.02
	12-19-02	<0.01	<0.003	<0.005	91.8	<0.01	<0.01	<0.005	<0.01	<0.03	<0.02
Of12-05	01-22-03	<0.01	<0.003	<0.005	113	<0.01	<0.01	<0.005	<0.01	<0.03	<0.02
Rf24-08	01-16-03	<0.01	<0.003	<0.005	95.5	<0.01	<0.01	<0.005	<0.01	<0.03	<0.02
Ri22-10	01-14-03	<0.01	<0.003	<0.005	104	<0.01	<0.01	<0.005	<0.01	<0.03	<0.02

QUALITY OF GROUND WATER DATA

SUSSEX COUNTY, DELAWARE—Continued

Well Number	Date	Diuron, water, fltrd 0.7u GF ug/L (49300)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethal-fluralin, water, fltrd 0.7u GF ug/L (82663)	Etho-prop, water, fltrd 0.7u GF ug/L (82672)	Fenuron water, fltrd 0.7u GF ug/L (49297)	Flumet-sulam, water, fltrd, ug/L (61694)	Fluo-meturon water fltrd 0.7u GF ug/L (38811)	Fonofos water, fltrd, ug/L (04095)	Imaza-quin, water, fltrd, ug/L (50356)	Imaze-thapyr, water, fltrd, ug/L (50407)
Ng45-02	12-19-02	<0.01	<0.002	<0.009	<0.005	<0.03	<0.01	<0.03	<0.003	<0.02	<0.02
	12-19-02	<0.01	<0.002	<0.009	<0.005	<0.03	<0.01	<0.03	<0.003	<0.02	<0.02
	12-19-02	<0.01	<0.002	<0.009	<0.005	<0.03	<0.01	<0.03	<0.003	<0.02	<0.02
Of12-05	01-22-03	<0.01	<0.002	<0.009	<0.005	<0.03	<0.01	<0.03	<0.003	<0.02	<0.02
Rf24-08	01-16-03	<0.01	<0.002	<0.009	<0.005	<0.03	<0.01	<0.03	<0.003	<0.02	E.04
Ri22-10	01-14-03	<0.01	<0.002	<0.009	<0.005	<0.03	<0.01	<0.03	<0.003	<0.02	<0.02
		Imida-cloprid water, fltrd, ug/L (61695)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (38478)	Linuron water fltrd 0.7u GF ug/L (82666)	Mala-thion, water, fltrd, ug/L (39532)	MCPA, water, fltrd 0.7u GF ug/L (38482)	MCPB, water, fltrd 0.7u GF ug/L (38487)	Meta-laxyl, water, fltrd, ug/L (50359)	Methio-carb, water, fltrd 0.7u GF ug/L (38501)	Meth-omyl, water, fltrd 0.7u GF ug/L (49296)
Ng45-02	12-19-02	<0.007	<0.004	<0.01	<0.035	<0.027	<0.02	<0.01	<0.02	<0.008	<0.004
	12-19-02	<0.007	<0.004	<0.01	<0.035	<0.027	<0.02	<0.01	<0.02	<0.008	<0.004
	12-19-02	<0.007	<0.004	<0.01	<0.035	<0.027	<0.02	<0.01	<0.02	<0.008	<0.004
Of12-05	01-22-03	<0.007	<0.004	<0.01	<0.035	<0.027	<0.02	<0.01	<0.02	<0.008	<0.004
Rf24-08	01-16-03	<0.007	<0.004	<0.01	<0.035	<0.027	<0.02	<0.01	<0.02	<0.008	<0.004
Ri22-10	01-14-03	<0.007	<0.004	<0.01	<0.035	<0.027	<0.02	<0.01	<0.02	<0.008	<0.004
		Methyl parathion, water, fltrd 0.7u GF ug/L (82667)	Metola-chlor, water, fltrd, ug/L (39415)	Metri-buzin, water, fltrd, ug/L (82630)	Metsul-furon, water, fltrd, ug/L (61697)	Moli-nate, water, fltrd 0.7u GF ug/L (82671)	N-(4-Chloro-phenyl)-N-methyl-urea, ug/L (61692)	Naprop-amide, water, fltrd 0.7u GF ug/L (82684)	Neburon water, fltrd 0.7u GF ug/L (49294)	Nico-sul-furon, water, fltrd, ug/L (50364)	Norflur-azon, water, fltrd 0.7u GF ug/L (49293)
Ng45-02	12-19-02	<0.006	E.005	<0.006	<0.03	<0.002	<0.02	<0.007	<0.01	<0.01	<0.02
	12-19-02	<0.006	E.001	<0.006	<0.03	<0.002	<0.02	<0.007	<0.01	<0.01	<0.02
	12-19-02	<0.006	<0.013	<0.006	<0.03	<0.002	<0.02	<0.007	<0.01	<0.01	<0.02
Of12-05	01-22-03	<0.006	<0.013	<0.006	<0.03	<0.002	<0.02	<0.007	<0.01	<0.01	<0.02
Rf24-08	01-16-03	<0.006	<0.013	<0.006	<0.03	<0.002	<0.02	<0.007	<0.01	<0.01	<0.02
Ri22-10	01-14-03	<0.006	<0.013	<0.006	<0.03	<0.002	<0.02	<0.007	<0.01	<0.01	<0.02
		Ory-zalin, water, fltrd 0.7u GF ug/L (49292)	Oxamyl, water, fltrd 0.7u GF ug/L (38866)	p,p'-DDE, water, fltrd, ug/L (34653)	Para-thion, water, fltrd, ug/L (39542)	Peb-ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi-meth-alin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)	Pic-loram, water, fltrd 0.7u GF ug/L (49291)	Prome-ton, water, fltrd, ug/L (04037)	Pron-amide, water, fltrd 0.7u GF ug/L (82676)
Ng45-02	12-19-02	<0.02	<0.01	<0.003	<0.010	<0.004	<0.022	<0.011	<0.02	<0.01	<0.004
	12-19-02	<0.02	<0.01	<0.003	<0.010	<0.004	<0.022	<0.011	<0.02	<0.01	<0.004
	12-19-02	<0.02	<0.01	<0.003	<0.010	<0.004	<0.022	<0.011	<0.02	<0.01	<0.004
Of12-05	01-22-03	<0.02	<0.01	<0.003	<0.010	<0.004	<0.022	<0.011	<0.02	<0.01	<0.004
Rf24-08	01-16-03	<0.02	<0.01	<0.003	<0.010	<0.004	<0.022	<0.011	<0.02	<0.01	<0.004
Ri22-10	01-14-03	<0.02	<0.01	<0.003	<0.010	<0.004	<0.022	<0.011	<0.02	<0.01	<0.004

Remark codes used in this table:
 < -- Less than
 E -- Estimated value

QUALITY OF GROUND WATER DATA
ANNE ARUNDEL COUNTY, MARYLAND

Well Number	Date	Time	Station number	Sample type	Geologic unit	Station type	Depth of well, feet below LSD (72008)	Depth to bot sample intrval feet below LSD (72016)	Depth to top sample intrval feet below LSD (72015)
AA Ad 110	10-15-02	1500	391032076385907	Environmental	217PPSC	GW	28.00	28	18
AA Bf 100	10-16-02	1500	390629076273601	Environmental	217PPSCU	GW	142	--	--
AA Cg 25	10-07-02	1100	390127076240301	Environmental	125AQUI	GW	107.00	107	100
AA Dd 54	10-23-02	1100	385844076380301	Environmental	125AQUI	GW	80.00	80	73
AA Df 103	10-07-02	1155	385623076274401	Blank	125AQUI	GW	--	--	--
	10-08-02	1400		Environmental	125AQUI	GW	46.00	46	39
AA Bc 253	08-19-03	1400	390503076405401	Environmental	211MGTY	GW	79	79	74

		Depth to water level, feet below LSD (72019)	Altitude of land surface feet (72000)	Flow rate, instantaneous gal/min (00059)	Pump or flow period prior to sampling, minutes (72004)	Color, water, fltrd, Pt-Co units (00080)	Sampling method, code (82398)	Barometric pressure, mm Hg (00025)	Dis-solved oxygen, mg/L (00300)	Dis-solved oxygen, percent of saturation (00301)	pH, water, unfltrd, std units (00400)
AA Ad 110	10-15-02	8.62	77.4	1.4	41	200	4040	--	<1.0	--	6.3
AA Bf 100	10-16-02	32.60	52.0	0.70	65	175	4040	--	<1.0	--	5.5
AA Cg 25	10-07-02	15.92	17.3	2.4	68	E62	4040	--	--	--	6.2
AA Dd 54	10-23-02	--	110	3.2	32	25	8030	--	--	--	6.1
AA Df 103	10-07-02	--	--	--	--	E8	4040	--	--	--	--
	10-08-02	26.55	26.5	1.6	52	E15	4040	--	7.2	--	5.3
AA Bc 253	08-19-03	--	152	1.0	127	--	4040	767	9.1	92	4.4

		Specif. conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat fltr inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat fltr incrm. titr., field, mg/L (00453)
AA Ad 110	10-15-02	715	--	17.4	91	27.6	5.37	4.06	112	86	105
AA Bf 100	10-16-02	133	--	15.2	10	2.02	1.14	1.44	2.35	10	12
AA Cg 25	10-07-02	129	--	14.0	29	7.68	2.34	3.15	3.36	50	61
AA Dd 54	10-23-02	114	--	15.3	29	7.39	2.57	3.06	1.29	45	54
AA Df 103	10-07-02	--	--	--	--	0.06	<0.008	<0.10	E.06	--	--
	10-08-02	188	--	14.6	37	8.77	3.72	2.68	17.1	15	19
AA Bc 253	08-19-03	95	24.5	16.2	14	2.40	2.04	1.37	8.66	--	--

Geologic Unit (aquifer): 125AQUI - Aquia Formation
211MGTY - Magothy Formation
217PPSC - Patapsco Formation
217PPSCU - Upper Patapsco Aquifer in the Patapsco Formation

Station Type: GW - Ground Water

Sampling Method: 4040 - Submersible pump
8030 - Grab sample at water-supply tap

QUALITY OF GROUND WATER DATA
ANNE ARUNDEL COUNTY, MARYLAND—Continued

Well Number	Date	Zinc, water, fltrd, ug/L (01090)	2,6-Di- ethyl- aniline water fltrd, 0.7u GF ug/L (82660)	CIAT, water, fltrd, ug/L (04040)	CEAT, water, fltrd, ug/L (04038)	Aceto- chlor, water, fltrd, ug/L (49260)	Ala- chlor, water, fltrd, ug/L (46342)	alpha- HCH, water, fltrd, ug/L (34253)	alpha- HCH-d6 surrog, Sch1379 wat flt percent recovery (90505)	alpha- HCH-d6, surrog, wat flt 0.7u GF percent recovery (91065)	Ametryn, water, fltrd, ug/L (38401)
		AA Ad 110	10-15-02	--	<0.006	<0.05	<0.05	<0.006	<0.004	<0.005	82.3	97.2	<0.05
AA Bf 100	10-16-02	--	<0.006	<0.05	<0.05	<0.006	<0.004	<0.005	83.5	96.3	<0.05
AA Cg 25	10-07-02	--	<0.006	<0.05	<0.05	<0.006	<0.004	<0.005	79.9	106	<0.05
AA Dd 54	10-23-02	--	<0.006	<0.05	<0.05	<0.006	<0.004	<0.005	78.9	91.8	<0.05
AA Df 103	10-07-02	--	--	--	--	--	--	--	--	--	--
	10-08-02	--	<0.006	<0.05	<0.05	<0.006	<0.004	<0.005	75.8	100	<0.05
AA Bc 253	08-19-03	40	<0.006	<0.006	--	<0.006	<0.004	<0.005	--	91.2	--
Well Number	Date	Atra- zine, water, fltrd, ug/L (39632)	Azin- phos- methyl, water, fltrd, 0.7u GF ug/L (82686)	Ben- flur- alin, water, fltrd, 0.7u GF ug/L (82673)	Broma- cil, water, fltrd, ug/L (04029)	Buta- chlor, water, fltrd, ug/L (04026)	Butyl- ate, water, fltrd, ug/L (04028)	Car- baryl, water, fltrd, 0.7u GF ug/L (82680)	Carbo- furan, water, fltrd, 0.7u GF ug/L (82674)	Car- boxin, water, fltrd, ug/L (04027)	Chlor- pyrifos water, fltrd, ug/L (38933)
		AA Ad 110	10-15-02	<0.007	<0.050	<0.010	<0.20	<0.05	<0.002	<0.041	<0.020	<0.05	<0.005
AA Bf 100	10-16-02	<0.007	<0.050	<0.010	<0.20	<0.05	<0.002	<0.041	<0.020	<0.05	<0.005
AA Cg 25	10-07-02	<0.007	<0.050	<0.010	<0.20	<0.05	<0.002	E.004	<0.020	<0.05	<0.005
AA Dd 54	10-23-02	<0.007	<0.050	<0.010	<0.05	<0.05	<0.002	<0.041	<0.020	<0.05	<0.005
AA Df 103	10-07-02	--	--	--	--	--	--	--	--	--	--
	10-07-02	--	--	--	--	--	--	--	--	--	--
	10-08-02	<0.007	<0.050	<0.010	<0.20	<0.05	<0.002	E.004	<0.020	<0.05	<0.005
AA Bc 253	08-19-03	<0.007	<0.050	<0.010	--	--	<0.002	<0.041	<0.020	--	<0.005
Well Number	Date	cis- Per- methrin water fltrd 0.7u GF ug/L (82687)	Cyana- zine, water, fltrd, ug/L (04041)	Cyclo- ate, water, fltrd, ug/L (04031)	DCPA, water, fltrd, 0.7u GF ug/L (82682)	Diazi- non, water, fltrd, ug/L (39572)	Diazi- non-d10 sur Sch 1379, wat flt pct rcv (90670)	Diazi- non-d10 surrog, wat flt 0.7u GF percent recovery (91063)	Diel- drin, water, fltrd, ug/L (39381)	Diphen- amid, water, fltrd, ug/L (04033)	Disul- foton, water, fltrd 0.7u GF ug/L (82677)
		AA Ad 110	10-15-02	<0.006	<0.018	<0.05	<0.003	<0.005	92.5	110	<0.005	<0.05	<0.02
AA Bf 100	10-16-02	<0.006	<0.018	<0.05	<0.003	<0.005	88.3	102	<0.005	<0.05	<0.02
AA Cg 25	10-07-02	<0.006	<0.018	<0.05	<0.003	<0.005	73.9	119	<0.005	<0.05	<0.02
AA Dd 54	10-23-02	<0.006	<0.018	<0.05	<0.003	<0.005	84.1	97.2	<0.005	<0.05	<0.02
AA Df 103	10-07-02	--	--	--	--	--	--	--	--	--	--
	10-08-02	<0.006	<0.018	<0.05	<0.003	<0.005	74.4	108	<0.005	<0.05	<0.02
AA Bc 253	08-19-03	<0.006	<0.018	--	<0.003	<0.005	--	117	0.005	--	<0.02
Well Number	Date	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethal- flur- alin, water, fltrd 0.7u GF ug/L (82663)	Etho- prop, water, fltrd 0.7u GF ug/L (82672)	Fonofos water, fltrd, ug/L (04095)	Hexa- zinone, water, fltrd, ug/L (04025)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (82666)	Mala- thion, water, fltrd, ug/L (39532)	Methyl para- thion, water, fltrd 0.7u GF ug/L (82667)	Metola- chlor, water, fltrd, ug/L (39415)
		AA Ad 110	10-15-02	<0.002	<0.009	<0.005	<0.003	<0.05	<0.004	<0.035	<0.027	<0.006	<0.013
AA Bf 100	10-16-02	<0.002	<0.009	<0.005	<0.003	<0.05	<0.004	<0.035	<0.027	<0.006	<0.013
AA Cg 25	10-07-02	<0.002	<0.009	<0.005	<0.003	<0.05	<0.004	<0.035	<0.027	<0.006	<0.013
AA Dd 54	10-23-02	<0.002	<0.009	<0.005	<0.003	<0.05	<0.004	<0.035	<0.027	<0.006	<0.013
AA Df 103	10-07-02	--	--	--	--	--	--	--	--	--	--
	10-08-02	<0.002	<0.009	<0.005	<0.003	<0.05	<0.004	<0.035	<0.027	<0.006	<0.013
AA Bc 253	08-19-03	<0.007	<0.009	<0.005	<0.003	--	<0.004	<0.035	<0.027	<0.006	E.005

QUALITY OF GROUND WATER DATA

ANNE ARUNDEL COUNTY, MARYLAND—Continued

Well Number	Date	Metri-	Moli-	Naprop-	p,p'-	Para-	Peb-	Pendi-	Phorate	Prome-	Prome-
		buzin, water, fltrd, ug/L (82630)	ate, water, fltrd 0.7u GF ug/L (82671)	amide, water, fltrd 0.7u GF ug/L (82684)	DDE, water, fltrd, ug/L (34653)	thion, water, fltrd, ug/L (39542)	ulate, water, fltrd 0.7u GF ug/L (82669)	meth- alin, water, fltrd 0.7u GF ug/L (82683)	water fltrd 0.7u GF ug/L (82664)	ton, water, fltrd, ug/L (04037)	tryn, water, fltrd, ug/L (04036)
AA Ad 110	10-15-02	<0.006	<0.002	<0.007	<0.003	<0.010	<0.004	<0.022	<0.011	0.02	<0.05
AA Bf 100	10-16-02	<0.006	<0.002	<0.007	<0.003	<0.010	<0.004	<0.022	<0.011	<0.01	<0.05
AA Cg 25	10-07-02	<0.006	<0.002	<0.007	<0.003	<0.010	<0.004	<0.022	<0.011	<0.01	<0.05
AA Dd 54	10-23-02	<0.006	<0.002	<0.007	<0.003	<0.010	<0.004	<0.022	<0.011	<0.01	<0.05
AA Df 103	10-07-02	--	--	--	--	--	--	--	--	--	--
	10-08-02	<0.006	<0.002	<0.007	<0.003	<0.010	<0.004	<0.022	<0.011	<0.01	<0.05
AA Bc 253	08-19-03	<0.006	<0.002	<0.007	<0.003	<0.010	<0.004	<0.022	<0.011	<0.01	--
		Pro-	Pro-	Pro-	Propa-	Pro-	Sima-	Sima-	Tebu-	Terba-	Terba-
		namide, water, fltrd 0.7u GF ug/L (82676)	panil, water, fltrd 0.7u GF ug/L (04024)	panil, water, fltrd 0.7u GF ug/L (82679)	panil, water, fltrd 0.7u GF ug/L (82685)	panil, water, fltrd 0.7u GF ug/L (38535)	zine, water, fltrd, ug/L (04035)	zine, water, fltrd, ug/L (04030)	thiuron water fltrd 0.7u GF ug/L (82670)	cil, water, fltrd 0.7u GF ug/L (82665)	cil, water, fltrd, ug/L (04032)
AA Ad 110	10-15-02	<0.004	<0.010	<0.011	<0.02	<0.05	<0.005	<0.05	<0.02	<0.034	<0.05
AA Bf 100	10-16-02	<0.004	<0.010	<0.011	<0.02	<0.05	<0.005	<0.05	<0.02	<0.034	<0.05
AA Cg 25	10-07-02	<0.004	<0.010	<0.011	<0.02	<0.05	<0.005	<0.05	<0.02	<0.034	<0.05
AA Dd 54	10-23-02	<0.004	<0.010	<0.011	<0.02	<0.05	<0.005	<0.05	<0.02	<0.034	<0.05
AA Df 103	10-07-02	--	--	--	--	--	--	--	--	--	--
	10-08-02	<0.004	<0.010	<0.011	<0.02	<0.05	<0.005	<0.05	<0.02	<0.034	<0.05
AA Bc 253	08-19-03	<0.004	<0.010	<0.011	<0.02	--	--	--	<0.02	<0.034	--
		Terbu-	Thio-	Tri-	Tri-	Tri-	Vernol-	Xylenes	1,1,1,2-	1,1,1-	1,1,2,2-
		fos, water, fltrd 0.7u GF ug/L (82675)	bencarb water fltrd 0.7u GF ug/L (82681)	allate, water, fltrd 0.7u GF ug/L (82678)	flur- alin, water, fltrd 0.7u GF ug/L (82661)	flur- alin, water, fltrd, ug/L (04023)	ate, water, fltrd, ug/L (04034)	water unfltrd ug/L (81551)	-Tetra- chloro- ethane, water, unfltrd ug/L (77562)	Tri- chloro- ethane, water, unfltrd ug/L (34506)	-Tetra- chloro- ethane, water, unfltrd ug/L (34516)
AA Ad 110	10-15-02	<0.02	<0.005	<0.002	<0.009	<0.05	<0.05	<0.2	--	--	--
AA Bf 100	10-16-02	<0.02	<0.005	<0.002	<0.009	<0.05	<0.05	<0.2	--	--	--
AA Cg 25	10-07-02	<0.02	<0.005	<0.002	<0.009	<0.05	<0.05	<0.2	--	--	--
AA Dd 54	10-23-02	<0.02	<0.005	<0.002	<0.009	<0.05	<0.05	<0.2	--	--	--
AA Df 103	10-07-02	--	--	--	--	--	--	<0.2	--	--	--
	10-08-02	<0.02	<0.005	<0.002	<0.009	<0.05	<0.05	<0.2	--	--	--
AA Bc 253	08-19-03	<0.02	<0.005	<0.002	<0.009	--	--	--	<0.03	E.03	<0.09
		CFC-113	1,1,2-	1,1-Di-	1,1-Di-	1,1-Di-	1,2,3,4	1,2,3,5	1,2,3-	1,2,3-	1,2,3-
		water unfltrd ug/L (77652)	Tri- chloro- ethane, water, unfltrd ug/L (34511)	chloro- ethane, water, unfltrd ug/L (34496)	chloro- ethene, water, unfltrd ug/L (34501)	chloro- propene water unfltrd ug/L (77168)	Tetra- methyl- benzene water unfltrd ug/L (49999)	Tetra- methyl- benzene water unfltrd ug/L (50000)	Tri- chloro- benzene water unfltrd ug/L (77613)	Tri- chloro- propane water unfltrd ug/L (77443)	Tri- methyl- benzene water unfltrd ug/L (77221)
AA Ad 110	10-15-02	--	--	--	--	--	--	--	--	--	--
AA Bf 100	10-16-02	--	--	--	--	--	--	--	--	--	--
AA Cg 25	10-07-02	--	--	--	--	--	--	--	--	--	--
AA Dd 54	10-23-02	--	--	--	--	--	--	--	--	--	--
AA Df 103	10-07-02	--	--	--	--	--	--	--	--	--	--
	10-07-02	--	--	--	--	--	--	--	--	--	--
	10-08-02	--	--	--	--	--	--	--	--	--	--
AA Bc 253	08-19-03	<0.06	<0.06	<0.04	E.01	<0.05	<0.2	<0.2	<0.3	<0.16	<0.1

QUALITY OF GROUND WATER DATA

ANNE ARUNDEL COUNTY, MARYLAND—Continued

		1,2,4-Tri-chloro-benzene water unfltrd ug/L (34551)	1,2,4-Tri-methyl-benzene water unfltrd ug/L (77222)	Dibromo-chloro-propane water unfltrd ug/L (82625)	1,2-Di-bromo-ethane, water, unfltrd ug/L (77651)	1,2-Di-chloro-benzene water unfltrd ug/L (34536)	1,2-Di-chloro-ethane, water, unfltrd ug/L (32103)	1,2-Di-chloro-ethane-d4, sur Sch2090 wat unf pct rcv (99832)	1,2-Di-chloro-propane water unfltrd ug/L (34541)	1,3,5-Tri-methyl-benzene water unfltrd ug/L (77226)	1,3-Di-chloro-benzene water unfltrd ug/L (34566)
AA Ad 110	10-15-02	--	--	--	--	--	--	108	--	--	--
AA Bf 100	10-16-02	--	--	--	--	--	--	105	--	--	--
AA Cg 25	10-07-02	--	--	--	--	--	--	106	--	--	--
AA Dd 54	10-23-02	--	--	--	--	--	--	119	--	--	--
AA Df 103	10-07-02	--	--	--	--	--	--	109	--	--	--
	10-08-02	--	--	--	--	--	--	104	--	--	--
AA Bc 253	08-19-03	<0.1	<0.06	<0.5	<0.04	<0.03	<0.1	116	<0.03	<0.04	<0.03

		1,3-Di-chloro-propane water unfltrd ug/L (77173)	1,4-Di-chloro-benzene water unfltrd ug/L (34571)	14Bromo fluoro-benzene surrog. VOC Sch wat unf pct rcv (99834)	2,2-Di-chloro-propane water unfltrd ug/L (77170)	2-Chloro-toluene water unfltrd ug/L (77275)	2-Ethyl-toluene water unfltrd ug/L (77220)	3-Chloro-propene water unfltrd ug/L (78109)	4-Chloro-toluene water unfltrd ug/L (77277)	4-Iso-propyl-toluene water unfltrd ug/L (77356)	Acetone water unfltrd ug/L (81552)
AA Ad 110	10-15-02	--	--	87.7	--	--	--	--	--	--	--
AA Bf 100	10-16-02	--	--	100	--	--	--	--	--	--	--
AA Cg 25	10-07-02	--	--	101	--	--	--	--	--	--	--
AA Dd 54	10-23-02	--	--	99.1	--	--	--	--	--	--	--
AA Df 103	10-07-02	--	--	104	--	--	--	--	--	--	--
	10-08-02	--	--	106	--	--	--	--	--	--	--
AA Bc 253	08-19-03	<0.1	<0.05	78.7	<0.05	<0.04	<0.06	<0.12	<0.05	<0.12	<7

Well Number	Date	Acrylo-nitrile water unfltrd ug/L (34215)	Benzene water unfltrd ug/L (34030)	Bromo-benzene water unfltrd ug/L (81555)	Bromo-chloro-methane water unfltrd ug/L (77297)	Bromo-di-chloro-methane water unfltrd ug/L (32101)	Bromo-ethene, water, unfltrd ug/L (50002)	Bromo-methane water unfltrd ug/L (34413)	Carbon di-sulfide water unfltrd ug/L (77041)	Chloro-benzene water unfltrd ug/L (34301)	Chloro-ethane, water, unfltrd ug/L (34311)
AA Ad 110	10-15-02	--	<0.2	--	--	--	--	--	--	--	--
AA Bf 100	10-16-02	--	<0.2	--	--	--	--	--	--	--	--
AA Cg 25	10-07-02	--	<0.2	--	--	--	--	--	--	--	--
AA Dd 54	10-23-02	--	<0.2	--	--	--	--	--	--	--	--
AA Df 103	10-07-02	--	<0.2	--	--	--	--	--	--	--	--
	10-08-02	--	<0.2	--	--	--	--	--	--	--	--
AA Bc 253	08-19-03	<1	<0.04	<0.04	<0.12	<0.05	<0.1	<0.3	<0.07	<0.03	<0.1

		Chloro-methane water unfltrd ug/L (34418)	cis-1,2-Di-chloro-ethene, water, unfltrd ug/L (77093)	cis-1,3-Di-chloro-propene water unfltrd ug/L (34704)	Di-bromo-chloro-methane water unfltrd ug/L (32105)	Di-bromo-methane water unfltrd ug/L (30217)	Di-chloro-di-fluoro-methane wat unf ug/L (34668)	Di-chloro-methane water unfltrd ug/L (34423)	Di-ethyl ether, water, unfltrd ug/L (81576)	Diiso-propyl ether, water, unfltrd ug/L (81577)	Ethyl methac-rylate, water, unfltrd ug/L (73570)
AA Ad 110	10-15-02	--	--	--	--	--	--	--	--	--	--
AA Bf 100	10-16-02	--	--	--	--	--	--	--	--	--	--
AA Cg 25	10-07-02	--	--	--	--	--	--	--	--	--	--
AA Dd 54	10-23-02	--	--	--	--	--	--	--	--	--	--
AA Df 103	10-07-02	--	--	--	--	--	--	--	--	--	--
	10-08-02	--	--	--	--	--	--	--	--	--	--
AA Bc 253	08-19-03	<0.2	<0.04	<0.09	<0.2	<0.05	<0.18	<0.2	<0.2	<0.10	<0.2

QUALITY OF GROUND WATER DATA

ANNE ARUNDEL COUNTY, MARYLAND—Continued

Well Number	Date	Ethyl methyl ketone, water, unfltrd ug/L (81595)	Ethyl-benzene water unfltrd ug/L (34371)	Hexa-chloro-butadiene, water, unfltrd ug/L (39702)	Hexa-chloro-ethane, water, unfltrd ug/L (34396)	Iodo-methane water unfltrd ug/L (77424)	Iso-butyl methyl ketone, water, unfltrd ug/L (78133)	Iso-propyl-benzene water unfltrd ug/L (77223)	Methyl acrylo-nitrile water unfltrd ug/L (81593)	Methyl acrylate, water, unfltrd ug/L (49991)	Methyl methacrylate, water, unfltrd ug/L (81597)
AA Ad 110	10-15-02	--	<0.2	--	--	--	--	--	--	--	--
AA Bf 100	10-16-02	--	<0.2	--	--	--	--	--	--	--	--
AA Cg 25	10-07-02	--	<0.2	--	--	--	--	--	--	--	--
AA Dd 54	10-23-02	--	<0.2	--	--	--	--	--	--	--	--
AA Df 103	10-07-02	--	<0.2	--	--	--	--	--	--	--	--
	10-07-02	--	--	--	--	--	--	--	--	--	--
	10-08-02	--	<0.2	--	--	--	--	--	--	--	--
AA Bc 253	08-19-03	<5.0	<0.03	<0.1	<0.2	<0.35	<0.4	<0.06	<0.6	<2.0	<0.3

Well Number	Date	Methyl tert-pentyl ether, water, unfltrd ug/L (50005)	meta-Xylene, water, unfltrd ug/L (85795)	Naphthalene, water, unfltrd ug/L (34696)	Methyl n-butyl ketone, water, unfltrd ug/L (77103)	n-Butyl benzene water unfltrd ug/L (77342)	n-propyl-benzene water unfltrd ug/L (77224)	o-Xylene, water, unfltrd ug/L (77135)	sec-Butyl-benzene water unfltrd ug/L (77350)	Styrene water unfltrd ug/L (77128)	t-Butyl ether, water, unfltrd ug/L (50004)
AA Ad 110	10-15-02	--	<0.2	--	--	--	--	<0.2	--	--	--
AA Bf 100	10-16-02	--	<0.2	--	--	--	--	<0.2	--	--	--
AA Cg 25	10-07-02	--	<0.2	--	--	--	--	<0.2	--	--	--
AA Dd 54	10-23-02	--	<0.2	--	--	--	--	<0.2	--	--	--
AA Df 103	10-07-02	--	<0.2	--	--	--	--	<0.2	--	--	--
	10-08-02	--	<0.2	--	--	--	--	<0.2	--	--	--
AA Bc 253	08-19-03	<0.08	<0.06	<0.5	<0.7	<0.2	<0.04	<0.07	<0.06	<0.04	<0.05

Well Number	Date	Methyl t-butyl ether, water, unfltrd ug/L (78032)	tert-Butyl-benzene water unfltrd ug/L (77353)	Tetra-chloro-ethene, water, unfltrd ug/L (34475)	Tetra-chloro-methane water unfltrd ug/L (32102)	Tetra-hydro-furan, water, unfltrd ug/L (81607)	Toluene water unfltrd ug/L (34010)	Toluene -d8, surrog, Sch2090 wat unf percent recovry (99833)	trans-1,2-Di-chloro-ethene, water, unfltrd ug/L (34546)	trans-1,3-Di-chloro-propene water unfltrd ug/L (34699)	trans-1,4-Di-chloro-2-butene, wat unf ug/L (73547)
AA Ad 110	10-15-02	<0.2	--	--	--	--	<0.2	94.3	--	--	--
AA Bf 100	10-16-02	<0.2	--	--	--	--	<0.2	100	--	--	--
AA Cg 25	10-07-02	<0.2	--	--	--	--	<0.2	96.4	--	--	--
AA Dd 54	10-23-02	<0.2	--	--	--	--	<0.2	102	--	--	--
AA Df 103	10-07-02	<0.2	--	--	--	--	<0.2	97.6	--	--	--
	10-08-02	<0.2	--	--	--	--	<0.2	94.9	--	--	--
AA Bc 253	08-19-03	<0.2	<0.10	E.07	<0.06	<2	E.04	96.3	<0.03	<0.09	<0.7

Well Number	Date	Tri-bromo-methane water unfltrd ug/L (32104)	Tri-chloro-ethene, water, unfltrd ug/L (39180)	Tri-chloro-methane water unfltrd ug/L (34488)	Tri-chloro-methane water unfltrd ug/L (32106)	Vinyl chloride, water, unfltrd ug/L (39175)	Alpha radio-activity 2-sigma wat flt Th-230, pCi/L (75987)	Alpha radio-activity water, fltrd, Th-230, pCi/L (04126)	Beta radio-activity 2-sigma wat flt CS-137, pCi/L (75989)	Gross beta radioac water, fltrd, Cs-137, pCi/L (03515)	Ra-228, water, fltrd, pCi/L (81366)
AA Ad 110	10-15-02	--	--	--	--	--	3.7	6	4.4	12	--
AA Bf 100	10-16-02	--	--	--	--	--	1.1	3	1.4	9	--
AA Cg 25	10-07-02	--	--	--	--	--	0.50	M	0.95	4	--
AA Dd 54	10-23-02	--	--	--	--	--	0.57	M	1.0	<5	--
AA Df 103	10-07-02	--	--	--	--	--	0.25	M	0.62	M	--
	10-08-02	--	--	--	--	--	0.68	M	1.1	4	--
AA Bc 253	08-19-03	<0.10	E.03	<0.09	0.16	<0.1	--	--	--	--	6

QUALITY OF GROUND WATER DATA
ANNE ARUNDEL COUNTY, MARYLAND—Continued

Well Number	Date	Rn-222 2-sigma water unfltrd pCi/L (76002)	Rn-222, water, unfltrd pCi/L (82303)	Uranium natural water, fltrd, ug/L (22703)
AA Ad 110	10-15-02	15	50	--
AA Bf 100	10-16-02	20	250	--
AA Cg 25	10-07-02	25	510	--
AA Dd 54	10-23-02	25	500	--
AA Df 103	10-07-02	--	--	--
	10-08-02	20	370	--
AA Bc 253	08-19-03	19	130	0.09

Remark codes used in this table:

< -- Less than

E -- Estimated value

M-- Presence verified, not quantified

QUALITY OF GROUND WATER DATA

BALTIMORE COUNTY, MARYLAND

Well Number	Date	Time	Station number	Sample type	Geologic unit	Station type	Depth of well, feet below LSD (72008)	Depth to water level, feet below LSD (72019)	Altitude of land surface feet (72000)
BA Ee 145	11-13-02	1125	392436076332201	Environmental	110CLVM	GW	14.15	4.33	224
	01-14-03	1050		Environmental	110CLVM	GW	14.15	3.63	224
	03-11-03	1055		Environmental	110CLVM	GW	14.15	2.57	224
	05-13-03	0940		Environmental	110CLVM	GW	14.15	3.64	224
	07-10-03	0950		Environmental	110CLVM	GW	14.15	3.32	224
BA Ee 146	09-09-03	0950	392437076332201	Environmental	110CLVM	GW	14.15	4.18	224
	11-08-02	1210		Environmental	110ALVM	GW	6.00	-0.02	219
	03-12-03	1250		Environmental	110ALVM	GW	6.00	-0.31	219
BA Ee 147	07-08-03	1000	392437076332202	Environmental	110ALVM	GW	6.00	-0.17	219
	11-08-02	1240		Environmental	110ALVM	GW	4.00	0.02	219
BA Ee 148	03-12-03	1315	392437076332203	Environmental	110ALVM	GW	4.00	-0.32	219
	04-08-03	1107		Environmental	110ALVM	GW	4.00	--	219
	07-08-03	1110		Environmental	110ALVM	GW	4.00	-0.14	219
	11-08-02	1300		Environmental	110ALVM	GW	2.00	0.09	220
	03-12-03	1335		Environmental	110ALVM	GW	2.00	-0.24	220
	<i>03-12-03</i>	<i>1336</i>		<i>Replicate</i>	<i>110ALVM</i>	<i>GW</i>	<i>2.00</i>	<i>-0.24</i>	<i>220</i>
BA Ee 149	07-08-03	1135	392438076332101	Environmental	110ALVM	GW	2.00	-0.06	220
	11-19-02	1030		Environmental	110ALVM	GW	6.00	-0.53	216
	03-14-03	1332		Environmental	110ALVM	GW	6.00	-0.79	216
	07-08-03	1230		Environmental	110ALVM	GW	6.00	-0.56	216
BA Ee 150	11-19-02	1050	392438076332102	Environmental	110ALVM	GW	4.00	-0.23	217
	03-14-03	1405		Environmental	110ALVM	GW	4.00	-0.55	217
	04-08-03	1016		Environmental	110ALVM	GW	4.00	--	217
	07-08-03	1300		Environmental	110ALVM	GW	4.00	-0.22	217
BA Ee 151	11-19-02	1110	392438076332103	Environmental	110ALVM	GW	2.00	0.05	217
	03-14-03	1440		Environmental	110ALVM	GW	2.00	-0.21	217
	<i>03-14-03</i>	<i>1442</i>		<i>Blank</i>	<i>--</i>	<i>GW</i>	<i>--</i>	<i>--</i>	<i>--</i>
BA Ee 152	07-08-03	1340	392436076332202	Environmental	110ALVM	GW	2.00	-0.04	217
	11-13-02	1155		Environmental	110CLVM	GW	19.20	4.54	223
	01-14-03	1130		Environmental	110CLVM	GW	19.20	4.10	223
	03-11-03	1155		Environmental	110CLVM	GW	19.20	3.38	223
	05-13-03	1025		Environmental	110CLVM	GW	19.20	4.06	223
BA Ee 153	07-10-03	1030	392439076331901	Environmental	110CLVM	GW	19.20	3.80	223
	09-09-03	1040		Environmental	110CLVM	GW	19.20	4.40	223
	11-22-02	1010		Environmental	110ALVM	GW	6.00	0.71	216

**Geologic Unit (aquifer):110ALVM - Quaternary Alluvium
110CLVM - Colluvium**

Station Type: GW - Ground Water

QUALITY OF GROUND WATER DATA
BALTIMORE COUNTY, MARYLAND—Continued

Well Number	Date	Sam- pling method, code (82398)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfl uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)
BA Ee 145	11-13-02	4080	4.8	7.2	575	14.5	260	58.0	28.9	--	16.8
	01-14-03	4080	5.1	6.7	534	10.0	--	--	--	--	--
	03-11-03	4080	5.4	7.0	527	8.1	240	52.5	26.9	1.69	14.6
	05-13-03	4080	4.1	6.8	574	12.5	--	--	--	--	--
	07-10-03	4080	3.8	6.7	584	16.0	250	53.5	27.7	2.01	15.8
BA Ee 146	09-09-03	4080	3.7	6.6	609	16.4	--	--	--	--	--
	11-08-02	4080	0.9	7.5	659	13.9	280	67.0	26.3	--	27.4
	03-12-03	4080	1.9	6.8	773	8.3	300	69.4	30.6	2.43	40.6
BA Ee 147	07-08-03	4080	0.8	6.6	703	19.0	330	73.7	34.6	2.72	22.7
	11-08-02	4080	2.4	7.4	696	12.5	270	64.6	26.1	--	26.9
BA Ee 148	03-12-03	4080	3.8	6.8	984	8.5	310	74.7	30.5	2.87	84.2
	04-08-03	4080	--	--	--	--	--	--	--	--	--
	07-08-03	4080	1.0	6.8	733	20.6	330	76.9	32.8	2.96	29.2
	11-08-02	4080	6.0	7.9	702	11.9	270	69.4	23.6	--	31.8
	03-12-03	4080	8.9	7.4	1,200	7.1	230	60.0	20.1	3.39	136
	03-12-03	4080	--	--	--	--	230	60.2	20.3	3.33	130
BA Ee 149	07-08-03	4080	2.8	7.2	741	25.1	320	82.2	27.6	3.83	42.6
	11-19-02	4080	2.4	7.5	674	12.4	240	60.1	21.2	--	41.8
	03-14-03	4080	4.4	7.0	1,670	7.8	380	93.7	35.4	3.41	181
	07-08-03	4080	1.3	6.8	861	22.6	270	67.7	24.1	3.74	75.9
BA Ee 150	11-19-02	4080	1.9	7.3	660	12.2	230	57.1	20.6	--	43.9
	03-14-03	4080	3.7	6.8	1,630	7.3	420	103	40.2	3.29	166
	04-08-03	4080	--	--	--	--	--	--	--	--	--
BA Ee 151	07-08-03	4080	0.9	6.8	950	22.3	260	65.6	23.8	3.79	91.0
	11-19-02	4080	--	--	--	--	230	58.7	20.6	--	36.0
BA Ee 152	03-14-03	4080	--	--	--	--	530	130	50.4	4.07	266
	03-14-03	--	--	--	--	--	--	<0.01	<0.008	<0.10	<0.09
	07-08-03	4080	1.1	7.0	797	27.9	230	59.2	20.8	3.81	93.3
	11-13-02	4080	2.0	7.1	776	15.3	290	68.5	29.3	--	45.1
	01-14-03	4080	3.7	6.8	646	11.6	--	--	--	--	--
	03-11-03	4080	4.1	6.9	587	10.3	250	57.1	26.1	1.88	22.2
BA Ee 153	05-13-03	4080	3.9	6.8	585	11.1	--	--	--	--	--
	07-10-03	4080	3.2	6.7	591	15.1	270	59.9	28.5	1.87	18.4
	09-09-03	4080	2.6	6.6	617	15.3	--	--	--	--	--
	11-22-02	4080	2.8	8.1	555	14.5	270	64.5	25.5	--	29.7

Sampling Method: 4080 - Peristaltic pump

QUALITY OF GROUND WATER DATA

BALTIMORE COUNTY, MARYLAND—Continued

Well Number	Date	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phosphate, water, fltrd, mg/L as P (00671)
BA Ee 145	11-13-02	52.3	--	11.9	12.9	--	<0.10	<0.04	1.70	<0.008	<0.02
	01-14-03	--	--	--	--	--	E.05	<0.04	1.92	<0.008	<0.02
	03-11-03	45.1	<0.17	10.4	13.3	293	<0.10	<0.04	1.80	<0.008	<0.02
	05-13-03	--	--	--	--	--	E.05	<0.04	1.60	<0.008	<0.02
	07-10-03	53.5	<0.2	12.3	13.9	313	0.11	<0.04	1.72	<0.008	<0.02
BA Ee 146	09-09-03	--	--	--	--	--	E.09	<0.04	1.58	<0.008	<0.18
	11-08-02	79.1	--	10.2	17.9	--	--	--	--	--	--
	03-12-03	91.3	<0.17	11.0	18.7	413	--	--	--	--	--
BA Ee 147	07-08-03	64.4	<0.2	12.1	17.3	379	--	--	--	--	--
	11-08-02	83.9	--	10.3	18.9	--	--	--	--	--	--
BA Ee 148	03-12-03	187	<0.17	10.3	22.1	549	--	--	--	--	--
	04-08-03	--	--	--	--	--	E.05	<0.04	1.63	<0.008	<0.02
	07-08-03	77.7	<0.2	12.0	18.5	398	--	--	--	--	--
	11-08-02	103	--	8.9	22.3	--	--	--	--	--	--
	03-12-03	222	<0.17	9.6	25.8	600	--	--	--	--	--
BA Ee 149	03-12-03	210	<0.17	9.9	25.5	595	--	--	--	--	--
	07-08-03	117	<0.2	11.7	21.1	432	--	--	--	--	--
	11-19-02	101	--	7.8	20.2	--	--	--	--	--	--
	03-14-03	432	<0.17	6.8	22.6	878	--	--	--	--	--
BA Ee 150	07-08-03	146	<0.2	9.6	21.1	466	--	--	--	--	--
	11-19-02	101	--	8.1	20.2	--	--	--	--	--	--
	03-14-03	423	<0.17	6.9	22.6	858	--	--	--	--	--
BA Ee 151	04-08-03	--	--	--	--	--	E.07	<0.04	1.27	<0.008	<0.02
	07-08-03	169	<0.2	9.6	21.9	499	--	--	--	--	--
BA Ee 152	11-19-02	91.0	--	8.5	20.0	--	--	--	--	--	--
	03-14-03	687	<0.17	7.5	24.7	1,270	--	--	--	--	--
	03-14-03	<0.20	<0.17	<0.2	<0.2	--	--	--	--	--	--
	07-08-03	136	<0.2	10.8	21.5	472	--	--	--	--	--
	11-13-02	112	--	11.1	21.0	--	E.05	<0.04	0.78	<0.008	<0.02
BA Ee 153	01-14-03	--	--	--	--	--	<0.10	<0.04	1.17	<0.008	<0.02
	03-11-03	58.8	<0.17	9.7	14.3	347	<0.10	<0.04	1.31	<0.008	<0.02
	05-13-03	--	--	--	--	--	<0.10	<0.04	1.31	<0.008	<0.02
	07-10-03	56.6	<0.2	10.1	13.7	381	<0.10	<0.04	1.40	<0.008	<0.02
	09-09-03	--	--	--	--	--	0.41	<0.04	1.12	<0.008	<0.18
BA Ee 153	11-22-02	87.9	--	8.6	19.1	--	--	--	--	--	

QUALITY OF GROUND WATER DATA
BALTIMORE COUNTY, MARYLAND—Continued

Well Number	Date	Total nitro- gen, water, fltrd, mg/L (00602)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)
BA Ee 145	11-13-02	--	<10	E2.0
	01-14-03	--	--	--
	03-11-03	--	<10	E.8
	05-13-03	--	--	--
	07-10-03	1.8	<8	0.5
BA Ee 146	09-09-03	--	--	--
	11-08-02	--	<10	E1.0
	03-12-03	--	<10	E1.1
	07-08-03	--	<8	1.9
BA Ee 147	11-08-02	--	50	18.9
	03-12-03	--	3,010	254
	04-08-03	--	--	--
	07-08-03	--	301	40.8
BA Ee 148	11-08-02	--	<10	E.8
	03-12-03	--	<10	3.5
	<i>03-12-03</i>	--	<10	2.4
BA Ee 149	07-08-03	--	<8	<0.4
	11-19-02	--	60	25.3
	03-14-03	--	<10	3.0
	07-08-03	--	<8	9.5
BA Ee 150	11-19-02	--	11	10.2
	03-14-03	--	38	5.0
	04-08-03	--	--	--
BA Ee 151	07-08-03	--	208	49.3
	11-19-02	--	<10	E1.0
BA Ee 152	03-14-03	--	<10	4.8
	<i>03-14-03</i>	--	<10	<2.0
	07-08-03	--	<8	23.8
	11-13-02	--	<10	<2.0
	01-14-03	--	--	--
BA Ee 153	03-11-03	--	<10	<2.0
	05-13-03	--	--	--
	07-10-03	--	<8	8.0
	09-09-03	1.5	--	--
	11-22-02	--	1,500	325

QUALITY OF GROUND WATER DATA
BALTIMORE COUNTY, MARYLAND—Continued

485

Well Number	Date	Time	Station number	Sample type	Geologic unit	Station type	Depth of well, feet below LSD (72008)	Depth to water level, feet below LSD (72019)	Altitude of land surface feet (72000)		
BA Ee 153	03-19-03	1100	392439076331901	Environmental	110ALVM	GW	6.00	0.32	216		
	07-09-03	0950		Environmental	110ALVM	GW	6.00	0.46	216		
BA Ee 154	07-09-03	0951	392439076331902	Replicate	110ALVM	GW	6.00	0.46	216		
	11-22-02	1045		Environmental	110ALVM	GW	4.00	0.80	216		
	03-19-03	1145		Environmental	110ALVM	GW	4.00	0.41	216		
BA Ee 155	04-08-03	1210	392439076331903	Environmental	110ALVM	GW	4.00	--	216		
	07-09-03	1220		Environmental	110ALVM	GW	4.00	0.55	216		
	11-22-02	1105		Environmental	110ALVM	GW	2.00	0.78	216		
	03-19-03	1215		Environmental	110ALVM	GW	2.00	0.43	216		
BA Ee 156	11-13-02	1245	392436076332203	Environmental	110CLVM	GW	12.00	4.39	223		
	01-14-03	1200		Environmental	110CLVM	GW	12.00	4.04	223		
	03-11-03	1230		Environmental	110CLVM	GW	12.00	3.47	223		
	05-13-03	1050		Environmental	110CLVM	GW	12.00	3.99	223		
	07-10-03	1055		Environmental	110CLVM	GW	12.00	3.80	223		
	09-09-03	1110		Environmental	110CLVM	GW	12.00	4.29	223		
	BA Ee 157	11-08-02		1018	392437076332204	Environmental	110ALVM	GW	9.96	4.07	223
		03-11-03		1335		Environmental	110ALVM	GW	9.96	3.74	223
07-10-03		1140	Environmental	110ALVM		GW	9.96	3.85	223		
BA Ee 158	11-08-02	1050	392437076332205	Environmental	110ALVM	GW	7.96	4.03	223		
	03-11-03	1410		Environmental	110ALVM	GW	7.96	3.72	223		
BA Ee 159	07-10-03	1235	392437076332206	Environmental	110ALVM	GW	7.96	3.77	223		
	11-08-02	1120		Environmental	110ALVM	GW	5.96	4.22	224		
	03-11-03	1440		Environmental	110ALVM	GW	5.96	3.91	224		
BA Ee 160	07-10-03	1315	392438076332301	Environmental	110ALVM	GW	5.96	4.03	224		
	11-14-02	1020		Environmental	110ALVM	GW	12.00	8.73	229		
	01-14-03	1420		Environmental	110ALVM	GW	12.00	4.15	229		
	01-14-03	1421		Replicate	110ALVM	GW	12.00	4.15	229		
	01-14-03	1422		Blank	--	GW	--	--	--		
	03-13-03	1125		Environmental	110ALVM	GW	12.00	6.66	229		
	05-13-03	1330		Environmental	110ALVM	GW	12.00	8.12	229		
	05-13-03	1331		Replicate	110ALVM	GW	12.00	8.12	229		
	05-13-03	1332		Blank	--	GW	--	--	--		
	07-11-03	1100		Environmental	110ALVM	GW	12.00	7.61	229		
	07-11-03	1101		Replicate	110ALVM	GW	12.00	7.61	229		
09-09-03	1330	Environmental	110ALVM	GW	12.00	8.72	229				

Geologic Unit (aquifer):110ALVM - Quaternary System
110CLVM - Colluvium

Station Type: GW - Ground Water

QUALITY OF GROUND WATER DATA
BALTIMORE COUNTY, MARYLAND—Continued

Well Number	Date	Sam- pling method, code (82398)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)
BA Ee 153	03-19-03	4080	7.9	6.8	915	8.8	270	65.2	25.0	3.22	122
	07-09-03	4080	2.0	6.5	630	21.1	300	70.0	31.2	2.97	27.0
	07-09-03	4080	--	--	--	--	300	70.1	31.3	2.98	26.6
BA Ee 154	11-22-02	4080	8.0	8.1	486	11.3	340	90.5	27.4	--	44.6
	03-19-03	4080	9.2	7.4	1,040	8.5	300	79.8	24.2	3.84	93.2
BA Ee 155	04-08-03	4080	--	--	--	--	--	--	--	--	--
	07-09-03	4080	3.2	6.6	713	21.6	380	84.4	40.5	2.36	13.2
	11-22-02	4080	9.1	8.1	893	10.4	320	85.7	25.7	--	41.7
BA Ee 156	03-19-03	4080	8.8	7.5	1,020	8.8	300	80.2	23.9	3.89	89.4
	11-13-02	4080	6.6	7.5	744	14.9	270	70.0	23.3	--	42.2
BA Ee 157	01-14-03	4080	5.1	6.8	796	9.3	--	--	--	--	--
	03-11-03	4080	6.8	6.8	762	6.3	270	67.1	25.5	2.61	43.6
	05-13-03	4080	6.9	6.9	645	10.9	--	--	--	--	--
	07-10-03	4080	4.6	6.9	621	16.2	250	60.7	23.6	2.60	25.1
	09-09-03	4080	5.0	6.6	720	17.9	--	--	--	--	--
BA Ee 158	11-08-02	4080	5.9	7.8	686	14.8	250	64.2	21.2	--	32.9
	03-11-03	4080	6.7	6.8	2,930	5.2	430	109	39.8	4.64	409
	07-10-03	4080	0.8	7.1	764	16.7	240	61.1	21.7	3.10	57.9
BA Ee 159	11-08-02	4080	5.8	7.7	668	14.4	260	65.5	22.3	--	33.6
	03-11-03	4080	6.2	7.0	2,620	4.5	390	96.3	36.2	4.23	374
BA Ee 160	07-10-03	4080	0.8	7.0	756	17.3	250	64.1	22.5	3.19	50.1
	11-08-02	4080	5.4	7.6	645	15.5	260	66.4	22.2	--	33.2
	03-11-03	4080	5.4	7.2	1,450	4.2	200	50.6	18.6	3.00	223
BA Ee 160	07-10-03	4080	1.1	6.9	729	18.1	280	70.7	25.5	2.89	33.4
	11-14-02	4080	6.1	7.4	891	14.1	430	100	42.7	--	20.0
	01-14-03	4080	7.0	6.8	779	8.8	--	--	--	--	--
	01-14-03	4080	--	--	--	--	--	--	--	--	--
	01-14-03	--	--	--	--	--	--	--	--	--	--
	03-13-03	4080	8.2	6.3	674	8.4	300	66.0	32.7	0.92	11.5
	05-13-03	4080	5.6	6.6	875	11.1	--	--	--	--	--
	05-13-03	4080	--	--	--	--	--	--	--	--	--
	05-13-03	--	--	--	--	--	--	--	--	--	--
	07-11-03	4080	5.4	6.4	810	15.7	360	83.0	36.8	1.61	12.1
07-11-03	4080	--	--	--	--	350	81.3	36.5	1.52	11.9	
09-09-03	4080	4.2	6.5	908	17.3	--	--	--	--	--	

Sampling Method: 4080 - Peristaltic pump

QUALITY OF GROUND WATER DATA

BALTIMORE COUNTY, MARYLAND—Continued

Well Number	Date	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitrogen, water, fltrd, mg/L (00607)
BA Ee 153	03-19-03	243	0.10	9.0	23.7	611	--	--	--	--	--
	07-09-03	68.3	<0.2	10.7	17.9	384	--	--	--	--	--
	07-09-03	67.5	<0.2	10.8	17.4	366	--	--	--	--	--
BA Ee 154	11-22-02	134	--	10.9	30.2	--	--	--	--	--	--
	03-19-03	214	0.14	7.8	26.6	561	--	--	--	--	--
BA Ee 155	04-08-03	--	--	--	--	--	0.12	<0.04	1.69	<0.008	--
	07-09-03	58.4	<0.2	11.9	21.4	397	--	--	--	--	--
	11-22-02	138	--	11.0	30.2	--	--	--	--	--	--
BA Ee 156	03-19-03	211	0.14	7.7	26.5	555	--	--	--	--	--
	11-13-02	115	--	9.5	20.7	--	0.20	0.10	0.70	E.007	0.10
BA Ee 157	01-14-03	--	--	--	--	--	0.46	<0.04	0.58	<0.008	--
	03-11-03	101	<0.17	8.7	18.7	395	E.09	E.03	0.74	<0.008	--
	05-13-03	--	--	--	--	--	0.10	E.02	0.82	<0.008	--
	07-10-03	57.2	<0.2	10.8	13.5	331	0.15	<0.04	0.75	<0.008	--
	09-09-03	--	--	--	--	--	0.19	E.03	0.52	<0.008	--
BA Ee 158	11-08-02	105	--	8.3	22.3	--	--	--	--	--	--
	03-11-03	791	<0.17	7.2	35.1	1,520	--	--	--	--	--
	07-10-03	93.6	<0.2	10.2	18.6	409	--	--	--	--	--
BA Ee 159	11-08-02	106	--	7.6	22.3	--	--	--	--	--	--
	03-11-03	711	<0.17	7.3	35.5	1,390	--	--	--	--	--
BA Ee 160	07-10-03	89.8	<0.2	10.7	18.4	402	--	--	--	--	--
	11-08-02	103	--	7.3	22.1	--	--	--	--	--	--
	03-11-03	290	<0.17	8.1	33.7	776	--	--	--	--	--
BA Ee 160	07-10-03	84.5	<0.2	11.3	17.8	387	--	--	--	--	--
	11-14-02	85.7	--	12.0	26.6	--	E.08	<0.04	2.89	<0.008	--
	01-14-03	--	--	--	--	--	E.08	<0.04	21.1	<0.008	--
	01-14-03	--	--	--	--	--	E.07	<0.04	20.6	<0.008	--
	01-14-03	--	--	--	--	--	<0.10	<0.04	<0.06	<0.008	--
	03-13-03	38.1	<0.17	8.7	19.9	395	E.05	<0.04	29.2	<0.008	--
	05-13-03	--	--	--	--	--	E.07	<0.04	8.17	<0.008	--
	05-13-03	--	--	--	--	--	E.07	<0.04	9.91	<0.008	--
	05-13-03	--	--	--	--	--	<0.10	<0.04	<0.06	<0.008	--
	07-11-03	63.6	<0.2	11.7	25.6	454	E.09	<0.04	13.1	<0.008	--
	07-11-03	61.4	<0.2	11.6	26.0	448	E.09	<0.04	13.1	<0.008	--
	09-09-03	--	--	--	--	--	0.18	<0.04	5.93	<0.008	--

QUALITY OF GROUND WATER DATA
BALTIMORE COUNTY, MARYLAND—Continued

Well Number	Date	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Total nitrogen, water, fltrd, mg/L (00602)	Iron, water, fltrd, ug/L (01046)	Manganese, water, fltrd, ug/L (01056)
BA Ee 153	03-19-03	--	--	3,360	1,610
	07-09-03	--	--	<8	74.2
	07-09-03	--	--	14	76.6
BA Ee 154	11-22-02	--	--	<10	E2.2
	03-19-03	--	--	E8	E1.6
BA Ee 155	04-08-03	E.01	1.8	--	--
	07-09-03	--	--	65	10.7
	11-22-02	--	--	<10	E1.1
BA Ee 156	03-19-03	--	--	<10	<2.0
	11-13-02	<0.02	0.90	361	452
	01-14-03	<0.02	1.0	--	--
	03-11-03	<0.02	--	101	185
	05-13-03	<0.02	0.93	--	--
	07-10-03	<0.02	0.90	112	170
	09-09-03	<0.18	0.71	--	--
	11-08-02	--	--	<10	3.2
BA Ee 157	03-11-03	--	--	244	132
	07-10-03	--	--	<8	7.1
BA Ee 158	11-08-02	--	--	E7	4.3
	03-11-03	--	--	E27	5.9
BA Ee 159	07-10-03	--	--	<8	2.2
	11-08-02	--	--	<10	E.9
	03-11-03	--	--	<10	E1.4
BA Ee 160	07-10-03	--	--	<8	3.9
	11-14-02	<0.02	--	<10	<2.0
	01-14-03	<0.02	--	--	--
	01-14-03	<0.02	--	--	--
	01-14-03	<0.02	--	--	--
	03-13-03	<0.02	--	<10	E1.1
	05-13-03	<0.02	--	--	--
	05-13-03	<0.02	--	--	--
	05-13-03	<0.02	--	--	--
	07-11-03	<0.02	--	<8	0.4
	07-11-03	<0.02	--	<8	E.4
	09-09-03	<0.18	6.1	--	--

QUALITY OF GROUND WATER DATA
BALTIMORE COUNTY, MARYLAND—Continued

Well Number	Date	Time	Station number	Sample type	Geologic unit	Station type	Depth of well, feet below LSD (72008)	Depth to water level, feet below LSD (72019)	Altitude of land surface feet (72000)
BA Ee 160	09-09-03	1331	392438076332301	Replicate	110ALVM	GW	12.00	8.72	229
	09-09-03	1332		Blank	--	GW	--	--	--
BA Ee 161	11-13-02	1430	392437076332301	Environmental	110ALVM	GW	10.80	4.58	225
	11-13-02	1431		Replicate	110ALVM	GW	10.80	4.58	225
	01-14-03	1330		Environmental	110ALVM	GW	10.80	4.37	225
	03-13-03	1045		Environmental	110ALVM	GW	10.80	3.44	225
	05-13-03	1300		Environmental	110ALVM	GW	10.80	4.52	225
	07-11-03	1020		Environmental	110ALVM	GW	10.80	4.14	225
	09-09-03	1256		Environmental	110ALVM	GW	10.80	4.94	225
BA Ee 162	11-08-02	1340	392437076332207	Environmental	110ALVM	GW	9.69	3.44	223
	03-12-03	1058		Environmental	110ALVM	GW	9.69	3.27	223
	07-10-03	1345		Environmental	110ALVM	GW	9.69	3.31	223
BA Ee 163	11-08-02	1410	392437076332208	Environmental	110ALVM	GW	7.69	3.13	223
	03-12-03	1125		Environmental	110ALVM	GW	7.69	2.94	223
	07-10-03	1400		Environmental	110ALVM	GW	7.69	2.98	223
BA Ee 164	11-08-02	1435	392437076332209	Environmental	110ALVM	GW	5.69	3.61	223
	03-12-03	1150		Environmental	110ALVM	GW	5.69	3.42	223
	07-10-03	1420		Environmental	110ALVM	GW	5.69	3.44	223
BA Ee 165	11-13-02	1350	392437076332302	Environmental	110ALVM	GW	9.00	5.12	225
	01-14-03	1250		Environmental	110ALVM	GW	9.00	5.12	225
	03-12-03	1435		Environmental	110ALVM	GW	9.00	4.94	225
	03-12-03	1437		Blank	--	GW	--	--	--
	05-13-03	1210		Environmental	110ALVM	GW	9.00	5.19	225
	07-11-03	0950		Environmental	110ALVM	GW	9.00	5.04	225
	09-09-03	1210		Environmental	110ALVM	GW	9.00	5.32	225
BA Ee 167	11-19-02	1340	392438076332104	Environmental	110ALVM	GW	11.26	4.56	222
	03-17-03	1140		Environmental	110ALVM	GW	11.26	4.62	222
	07-17-03	0955		Environmental	110ALVM	GW	11.26	4.89	222
BA Ee 168	11-19-02	1400	392438076332105	Environmental	110ALVM	GW	9.26	4.66	222
	03-17-03	1210		Environmental	110ALVM	GW	9.26	4.68	222
	07-17-03	1025		Environmental	100ALVM	GW	9.26	5.01	222
BA Ee 169	11-20-02	1250	392438076332106	Environmental	110ALVM	GW	7.26	4.12	222
	11-20-02	1252		Blank	--	GW	--	--	--
	03-17-03	1230		Environmental	110ALVM	GW	7.26	4.62	222
	07-17-03	1335		Environmental	110ALVM	GW	7.26	5.20	222

Geologic Unit (aquifer): 110ALVM - Quaternary Alluvium

Station Type: GW - Ground Water

QUALITY OF GROUND WATER DATA
BALTIMORE COUNTY, MARYLAND—Continued

Well Number	Date	Sam- pling method, code (82398)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)
<i>BA Ee 160</i>	<i>09-09-03</i>	<i>4080</i>	--	--	--	--	--	--	--	--	--
	<i>09-09-03</i>	--	--	--	--	--	--	--	--	--	--
BA Ee 161	11-13-02	4080	3.0	7.1	869	13.2	430	100	44.2	--	15.0
	<i>11-13-02</i>	<i>4080</i>	--	--	--	--	<i>430</i>	<i>100</i>	<i>44.1</i>	--	<i>15.5</i>
	01-14-03	4080	2.9	6.9	894	8.1	--	--	--	--	--
	03-13-03	4080	2.9	6.6	874	8.9	440	99.2	45.7	1.47	10.9
	05-13-03	4080	4.0	6.7	819	11.2	--	--	--	--	--
	07-11-03	4080	2.9	6.5	856	16.1	390	91.2	40.3	1.74	14.4
	09-09-03	4080	3.4	6.6	891	17.3	--	--	--	--	--
BA Ee 162	11-08-02	4080	2.2	7.4	661	17.2	280	62.9	30.2	--	22.0
	03-12-03	4080	3.2	6.6	675	12.2	310	67.1	33.7	2.40	20.2
	07-10-03	4080	2.4	6.8	677	16.2	290	61.8	32.1	2.35	20.5
BA Ee 163	11-08-02	4080	1.5	7.4	665	17.8	270	59.8	28.4	--	22.5
	03-12-03	4080	3.2	6.7	675	12.1	300	65.6	33.6	2.37	20.1
	07-10-03	4080	2.2	6.8	674	16.6	290	62.2	32.4	2.39	20.7
BA Ee 164	11-08-02	4080	1.2	7.4	708	18.1	290	68.8	28.2	--	28.7
	03-12-03	4080	2.0	6.7	784	11.3	320	71.7	33.1	2.48	36.3
	07-10-03	4080	0.6	6.8	689	18.1	300	67.3	31.9	2.40	22.5
BA Ee 165	11-13-02	4080	2.2	7.0	812	12.9	350	82.7	35.2	--	30.4
	01-14-03	4080	2.1	6.6	740	8.6	--	--	--	--	--
	03-12-03	4080	3.3	6.7	712	8.3	330	75.4	34.4	1.75	17.3
	<i>03-12-03</i>	--	--	--	--	--	--	<i>0.02</i>	<i><0.008</i>	<i><0.10</i>	<i><0.09</i>
	05-13-03	4080	2.5	6.8	666	12.0	--	--	--	--	--
	07-11-03	4080	1.4	6.5	656	18.0	310	70.6	32.4	1.78	14.0
	09-09-03	4080	1.2	6.5	754	17.2	--	--	--	--	--
BA Ee 167	11-19-02	4080	0.8	7.4	696	15.2	290	67.3	29.3	--	27.2
	03-17-03	4080	2.3	6.8	686	11.0	290	66.7	30.5	2.70	25.3
	07-17-03	4080	2.1	6.3	787	19.4	330	75.3	33.6	3.60	36.4
BA Ee 168	11-19-02	4080	2.6	7.2	692	14.4	330	78.5	32.2	--	14.6
	03-17-03	4080	4.9	6.7	640	9.8	310	73.7	30.8	2.05	9.36
	07-17-03	4080	2.6	6.5	715	20.2	360	83.4	35.9	2.96	11.8
BA Ee 169	11-20-02	4020	--	--	--	--	990	235	98.6	--	43.7
	<i>11-20-02</i>	--	--	--	--	--	--	<i>E.01</i>	<i><0.008</i>	--	<i><0.09</i>
	03-17-03	4080	--	--	--	--	480	105	52.9	3.68	14.0
	07-17-03	4080	--	--	--	24.1	340	80.0	34.0	4.23	15.4

Sampling Method: 4020 - Open-top bailer
4080 - Peristaltic pump

QUALITY OF GROUND WATER DATA

BALTIMORE COUNTY, MARYLAND—Continued

Well Number	Date	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phosphate, water, fltrd, mg/L as P (00671)
BA Ee 160	09-09-03	--	--	--	--	--	0.22	<0.04	5.73	<0.008	<0.18
	09-09-03	--	--	--	--	--	<0.10	<0.04	<0.06	<0.008	<0.36
BA Ee 161	11-13-02	81.9	--	10.5	25.5	--	E.07	<0.04	1.84	E.005	<0.02
	11-13-02	83.3	--	10.8	25.3	--	E.07	<0.04	1.83	E.005	<0.02
	01-14-03	--	--	--	--	--	E.07	<0.04	2.16	<0.008	<0.02
	03-13-03	82.8	<0.17	9.8	26.9	459	<0.10	<0.04	2.70	<0.008	<0.02
	05-13-03	--	--	--	--	--	E.08	<0.04	4.85	<0.008	<0.02
	07-11-03	69.0	<0.2	11.3	23.9	462	0.27	<0.04	5.27	<0.008	<0.02
	09-09-03	--	--	--	--	--	0.15	<0.04	5.30	<0.008	<0.18
BA Ee 162	11-08-02	73.4	--	11.2	15.9	--	--	--	--	--	--
	03-12-03	63.4	<0.17	11.6	16.2	358	--	--	--	--	--
	07-10-03	64.7	<0.2	12.0	16.2	353	--	--	--	--	--
BA Ee 163	11-08-02	74.5	--	11.1	16.2	--	--	--	--	--	--
	03-12-03	62.5	<0.17	11.6	16.2	356	--	--	--	--	--
	07-10-03	64.4	<0.2	12.1	16.3	354	--	--	--	--	--
BA Ee 164	11-08-02	87.7	--	11.2	18.5	--	--	--	--	--	--
	03-12-03	83.2	<0.17	11.3	20.9	415	--	--	--	--	--
	07-10-03	66.0	<0.2	12.1	17.2	372	--	--	--	--	--
BA Ee 165	11-13-02	101	--	10.2	20.5	--	E.07	<0.04	0.47	<0.008	<0.02
	01-14-03	--	--	--	--	--	<0.10	<0.04	1.04	<0.008	<0.02
	03-12-03	66.2	<0.17	9.0	21.6	384	<0.10	<0.04	1.51	<0.008	<0.02
	03-12-03	<0.20	<0.17	<0.2	<0.2	--	E.05	<0.04	<0.06	<0.008	<0.02
	05-13-03	--	--	--	--	--	E.07	<0.04	1.74	<0.008	<0.02
	07-11-03	44.7	<0.2	10.4	22.3	364	E.07	<0.04	1.36	<0.008	<0.02
	09-09-03	--	--	--	--	--	0.18	<0.04	3.09	E.005	<0.36
BA Ee 167	11-19-02	82.9	--	10.6	18.5	--	--	--	--	--	--
	03-17-03	79.3	<0.17	9.0	16.9	360	--	--	--	--	--
	07-17-03	117	<0.2	10.4	17.9	422	--	--	--	--	--
BA Ee 168	11-19-02	57.3	--	10.3	23.3	--	--	--	--	--	--
	03-17-03	46.8	<0.17	8.8	20.4	328	--	--	--	--	--
BA Ee 169	07-17-03	50.4	<0.2	11.3	23.9	375	--	--	--	--	--
	11-20-02	278	--	9.4	150	--	--	--	--	--	--
	11-20-02	<0.20	--	<0.2	<0.2	--	--	--	--	--	--
	03-17-03	38.5	<0.17	6.4	51.9	519	--	--	--	--	--
	07-17-03	49.1	<0.2	9.0	9.1	379	--	--	--	--	--

QUALITY OF GROUND WATER DATA
BALTIMORE COUNTY, MARYLAND—Continued

Well Number	Date	Total nitrogen, water, fltrd, mg/L (00602)	Iron, water, fltrd, ug/L (01046)	Manganese, water, fltrd, ug/L (01056)
<i>BA Ee 160</i>	<i>09-09-03</i>	<i>6.0</i>	--	--
	<i>09-09-03</i>	--	--	--
BA Ee 161	11-13-02	--	<10	19.7
	<i>11-13-02</i>	--	<10	21.0
	01-14-03	--	--	--
	03-13-03	--	<10	2.2
	05-13-03	--	--	--
	07-11-03	5.5	<8	1.7
	09-09-03	5.5	--	--
BA Ee 162	11-08-02	--	29	12.3
	03-12-03	--	95	22.5
	07-10-03	--	31	12.5
BA Ee 163	11-08-02	--	23	5.1
	03-12-03	--	<10	16.4
	07-10-03	--	E8	4.5
BA Ee 164	11-08-02	--	<10	86.4
	03-12-03	--	12	2.4
	07-10-03	--	<8	1.2
BA Ee 165	11-13-02	--	15	23.9
	01-14-03	--	--	--
	03-12-03	--	<10	E.8
	<i>03-12-03</i>	--	<10	<2.0
	05-13-03	--	--	--
	07-11-03	--	<8	1.0
	09-09-03	3.3	--	--
BA Ee 167	11-19-02	--	46	18.9
	03-17-03	--	<10	29.2
	07-17-03	--	105	24.3
BA Ee 168	11-19-02	--	E9	E2.4
	03-17-03	--	<10	E.8
	07-17-03	--	<8	0.7
BA Ee 169	11-20-02	--	123	3,500
	<i>11-20-02</i>	--	<10	<2.0
	03-17-03	--	<10	2,390
	07-17-03	--	1,250	2,450

QUALITY OF GROUND WATER DATA
BALTIMORE COUNTY, MARYLAND—Continued

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Well Number	Date	Time	Station number	Sample type	Geologic unit	Station type	Depth of well, feet below LSD (72008)	Depth to water level, feet below LSD (72019)	Altitude of land surface feet (72000)
BA Ee 170	11-19-02	1150	392438076332201	Environmental	110ALVM	GW	15.00	9.95	228
	01-15-03	1400		Environmental	110ALVM	GW	15.00	10.04	228
	01-15-03	1402		Blank	--	GW	--	--	--
	03-17-03	1500		Environmental	110ALVM	GW	15.00	9.33	228
	03-17-03	1501		Replicate	110ALVM	GW	15.00	9.33	228
	05-14-03	1055		Environmental	110ALVM	GW	15.00	10.12	228
	05-14-03	1056		Replicate	110ALVM	GW	15.00	10.12	228
	05-14-03	1057		Blank	--	GW	--	--	--
	07-17-03	1300		Environmental	110ALVM	GW	15.00	10.11	228
	07-17-03	1301		Replicate	110ALVM	GW	15.00	10.11	228
	09-08-03	1325		Environmental	110ALVM	GW	15.00	10.45	228
	09-08-03	1326		Replicate	110ALVM	GW	15.00	10.45	228
	09-08-03	1327		Blank	--	GW	--	--	--
	BA Ee 171	11-15-02		1312	392437076332101	Environmental	110ALVM	GW	7.75	1.68	219
03-14-03		1044	Environmental	110ALVM		GW	7.75	1.32	219
BA Ee 172	07-14-03	1150	392437076332102	Environmental	110ALVM	GW	7.75	1.59	219
	11-15-02	1335		Environmental	110ALVM	GW	5.75	1.89	219
	03-14-03	1115		Environmental	110ALVM	GW	5.75	1.53	219
	07-14-03	1220		Environmental	110ALVM	GW	5.75	1.92	219
BA Ee 173	11-15-02	1435	392437076332103	Environmental	110ALVM	GW	3.75	1.33	219
	03-14-03	1245		Environmental	110ALVM	GW	3.75	1.17	219
BA Ee 174	07-14-03	1315	392438076332107	Environmental	110ALVM	GW	3.75	1.31	219
	11-19-02	1220		Environmental	110ALVM	GW	28.10	4.43	222
	11-19-02	1221		Replicate	110ALVM	GW	28.10	4.43	222
	01-15-03	1305		Environmental	110ALVM	GW	28.10	4.77	222
	03-17-03	1320		Environmental	110ALVM	GW	28.10	4.25	222
	05-14-03	0950		Environmental	110ALVM	GW	28.10	4.72	222
	07-17-03	1135		Environmental	110ALVM	GW	28.10	4.70	222
BA Ee 175	09-08-03	1215	392438076332108	Environmental	110ALVM	GW	28.10	4.96	222
	11-19-02	1310		Environmental	110ALVM	GW	15.50	4.39	222
	01-15-03	1325		Environmental	110ALVM	GW	15.50	4.92	222
	01-15-03	1326		Replicate	110ALVM	GW	15.50	4.92	222
	03-17-03	1425		Environmental	110ALVM	GW	15.50	4.39	222
	05-14-03	1025		Environmental	110ALVM	GW	15.50	4.70	222
	07-17-03	1215		Environmental	110ALVM	GW	15.50	4.74	222
	07-17-03	1215		Environmental	110ALVM	GW	15.50	4.74	222

Geologic Unit (aquifer): 110ALVM - Quaternary Alluvium

Station Type: GW - Ground Water

QUALITY OF GROUND WATER DATA
BALTIMORE COUNTY, MARYLAND—Continued

Well Number	Date	Sam- pling method, code (82398)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfl uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)
BA Ee 170	11-19-02	4080	5.2	7.1	841	12.9	410	95.7	40.9	--	16.4
	01-15-03	4080	6.3	6.9	790	9.5	--	--	--	--	--
	01-15-03	--	--	--	--	--	--	--	--	--	--
	03-17-03	4080	7.2	6.7	744	10.6	360	85.0	36.9	1.61	11.9
	03-17-03	4080	--	--	--	--	360	85.0	37.0	1.49	11.7
	05-14-03	4080	5.9	6.7	840	11.1	--	--	--	--	--
	05-14-03	4080	--	--	--	--	--	--	--	--	--
	05-14-03	--	--	--	--	--	--	--	--	--	--
	07-17-03	4080	4.5	6.3	815	16.2	420	95.0	43.7	1.78	13.0
	07-17-03	4080	--	--	--	--	420	94.7	43.6	1.76	12.9
	09-08-03	4080	4.1	6.5	880	16.5	--	--	--	--	--
	09-08-03	4080	--	--	--	--	--	--	--	--	--
	09-08-03	--	--	--	--	--	--	--	--	--	--
	BA Ee 171	11-15-02	4080	0.5	7.4	--	19.9	250	61.8	23.9	--	57.4
03-14-03		4080	0.6	6.5	844	6.7	270	64.3	26.3	2.25	62.2
BA Ee 172	07-14-03	4080	0.4	6.5	803	20.8	270	65.2	24.9	3.28	61.9
	11-15-02	4080	4.7	7.6	701	19.6	240	60.1	22.5	--	57.2
	03-14-03	4080	2.1	6.4	762	7.2	270	63.8	25.9	2.83	64.3
	07-14-03	4080	2.7	6.2	753	23.8	280	68.4	25.4	3.43	66.9
BA Ee 173	11-15-02	4080	--	7.8	610	14.9	290	75.3	25.2	--	34.0
	03-14-03	4080	--	--	--	--	220	55.3	18.9	3.32	152
BA Ee 174	07-14-03	4080	1.9	6.8	746	23.7	280	74.0	23.4	3.61	48.8
	11-19-02	4080	2.8	7.3	689	15.0	320	71.0	33.8	--	18.3
	11-19-02	4080	--	--	--	--	310	70.5	33.6	--	18.2
	01-15-03	4080	2.6	7.0	698	11.6	--	--	--	--	--
	03-17-03	4080	2.8	6.9	698	12.6	320	70.8	33.8	2.36	17.5
	05-14-03	4080	3.2	6.9	671	13.0	--	--	--	--	--
BA Ee 175	07-17-03	4080	3.0	6.5	661	15.2	310	68.1	33.8	2.32	17.0
	09-08-03	4080	2.7	6.8	649	16.5	--	--	--	--	--
	11-19-02	4080	3.0	7.4	676	15.1	320	71.4	33.3	--	15.3
	01-15-03	4080	3.9	7.1	729	8.5	--	--	--	--	--
	01-15-03	4080	--	--	--	--	--	--	--	--	--
	03-17-03	4080	3.4	7.0	657	11.6	310	68.0	33.0	2.36	14.6
	05-14-03	4080	3.6	7.0	641	12.3	--	--	--	--	--
07-17-03	4080	3.0	6.6	640	16.7	310	67.6	33.9	2.27	14.4	

Sampling Method: 4080 - Peristaltic pump

QUALITY OF GROUND WATER DATA
BALTIMORE COUNTY, MARYLAND—Continued

Well Number	Date	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue water, sum of constituents mg/L (70301)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	
BA Ee 170	11-19-02	74.9	--	11.3	26.6	--	E.08	<0.04	3.57	<0.008	<0.02	
	01-15-03	--	--	--	--	--	E.06	<0.04	6.26	<0.008	<0.02	
	01-15-03	--	--	--	--	--	<0.10	<0.04	<0.06	<0.008	<0.02	
	03-17-03	51.3	<0.17	10.2	22.7	428	E.09	<0.04	11.4	<0.008	<0.02	
	03-17-03	50.5	<0.17	10.3	22.9	429	E.07	<0.04	11.7	<0.008	<0.02	
	05-14-03	--	--	--	--	--	E.08	<0.04	8.68	<0.008	<0.02	
	05-14-03	--	--	--	--	--	E.08	<0.04	8.73	<0.008	<0.02	
	05-14-03	--	--	--	--	--	<0.10	<0.04	<0.06	<0.008	<0.02	
	07-17-03	59.2	<0.2	12.0	24.9	472	0.10	<0.04	9.11	<0.008	<0.09	
	07-17-03	60.7	<0.2	11.9	25.0	473	0.23	<0.04	8.95	<0.008	<0.09	
	09-08-03	--	--	--	--	--	0.30	<0.04	7.09	<0.008	<0.18	
	09-08-03	--	--	--	--	--	0.11	<0.41	7.12	<0.080	<0.18	
	09-08-03	--	--	--	--	--	<0.10	<0.04	<0.06	<0.008	<0.18	
	BA Ee 171	11-15-02	141	--	9.9	21.1	--	--	--	--	--	--
		03-14-03	175	<0.17	7.8	20.6	449	--	--	--	--	--
BA Ee 172	07-14-03	171	<0.2	10.9	20.0	456	--	--	--	--	--	
	11-15-02	168	--	8.5	21.6	--	--	--	--	--	--	
	03-14-03	192	<0.17	7.2	19.6	461	--	--	--	--	--	
BA Ee 173	07-14-03	225	<0.2	9.9	21.5	483	--	--	--	--	--	
	11-15-02	101	--	9.6	23.5	--	--	--	--	--	--	
BA Ee 174	03-14-03	235	<0.17	9.0	24.8	594	--	--	--	--	--	
	07-14-03	126	<0.2	11.4	20.8	416	--	--	--	--	--	
	11-19-02	69.2	--	11.3	16.9	--	E.05	<0.04	1.42	<0.008	E.01	
	11-19-02	70.5	--	11.2	16.9	--	<0.10	<0.04	1.44	<0.008	E.01	
	01-15-03	--	--	--	--	--	<0.10	<0.04	1.38	<0.008	<0.02	
BA Ee 175	03-17-03	69.5	<0.17	10.7	17.7	383	E.05	<0.04	1.51	<0.008	<0.02	
	05-14-03	--	--	--	--	--	<0.10	<0.04	1.65	<0.008	<0.02	
	07-17-03	60.9	<0.2	10.6	17.7	360	E.09	<0.04	1.78	<0.008	<0.02	
	09-08-03	--	--	--	--	--	E.08	<0.04	1.72	<0.008	<0.18	
	11-19-02	64.6	--	10.9	17.8	--	E.06	<0.04	1.60	<0.008	E.01	
	01-15-03	--	--	--	--	--	<0.10	<0.04	1.70	<0.008	<0.02	
	01-15-03	--	--	--	--	--	<0.10	<0.04	1.70	<0.008	<0.02	
	03-17-03	60.4	<0.17	10.1	17.5	354	E.08	<0.04	1.74	<0.008	<0.02	
	05-14-03	--	--	--	--	--	<0.10	<0.04	1.84	<0.008	<0.02	
	07-17-03	53.2	<0.2	11.1	19.4	355	0.38	<0.04	2.30	<0.008	<0.02	

QUALITY OF GROUND WATER DATA
BALTIMORE COUNTY, MARYLAND—Continued

Well Number	Date	Total nitro- gen, water, fltrd, mg/L (00602)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)	
BA Ee 170	11-19-02	--	<10	51.9	
	01-15-03	--	--	--	
	<i>01-15-03</i>	--	--	--	
	03-17-03	--	<10	15.4	
	<i>03-17-03</i>	--	<10	21.2	
	05-14-03	--	--	--	
	<i>05-14-03</i>	--	--	--	
	<i>05-14-03</i>	--	--	--	
	07-17-03	9.2	9	5.7	
	<i>07-17-03</i>	9.2	<8	5.4	
	09-08-03	7.4	--	--	
	<i>09-08-03</i>	7.2	--	--	
	<i>09-08-03</i>	--	--	--	
	BA Ee 171	11-15-02	--	265	543
		03-14-03	--	989	586
BA Ee 172	07-14-03	--	450	493	
	11-15-02	--	14,200	1,450	
	03-14-03	--	13,900	1,450	
	07-14-03	--	14,300	1,780	
BA Ee 173	11-15-02	--	61	52.6	
	03-14-03	--	18	13.5	
BA Ee 174	07-14-03	--	278	39.7	
	11-19-02	--	<10	<2.0	
	<i>11-19-02</i>	--	<10	<2.0	
	01-15-03	--	--	--	
	03-17-03	--	<10	<2.0	
	05-14-03	--	--	--	
BA Ee 175	07-17-03	--	<8	<0.4	
	09-08-03	--	--	--	
	11-19-02	--	<10	<2.0	
	01-15-03	--	--	--	
	<i>01-15-03</i>	--	--	--	
	03-17-03	--	<10	<2.0	
	05-14-03	--	--	--	
	07-17-03	2.7	<8	<0.4	

QUALITY OF GROUND WATER DATA
BALTIMORE COUNTY, MARYLAND—Continued

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Well Number	Date	Time	Station number	Sample type	Geologic unit	Station type	Depth of well, feet below LSD (72008)	Depth to water level, feet below LSD (72019)	Altitude of land surface feet (72000)
BA Ee 175	09-08-03	1238	392438076332108	Environmental	110ALVM	GW	15.50	4.93	222
BA Ee 176	11-25-02	1200	392439076331904	Environmental	110ALVM	GW	11.85	6.16	221
	11-25-02	1202		Blank	--	GW	--	--	--
	03-21-03	1055		Environmental	110ALVM	GW	11.85	5.19	221
	07-23-03	1220		Environmental	110ALVM	GW	11.85	5.76	221
	07-23-03	1222		Blank	--	GW	--	--	--
BA Ee 177	11-25-02	1055	392439076331905	Environmental	110ALVM	GW	9.85	6.46	221
	03-21-03	1215		Environmental	110ALVM	GW	9.85	4.66	221
	07-23-03	1125		Environmental	110ALVM	GW	9.85	6.07	221
BA Ee 178	11-25-02	1135	392439076331906	Environmental	110ALVM	GW	7.85	5.66	221
	03-21-03	1240		Environmental	110ALVM	GW	7.85	4.19	221
BA Ee 179	03-21-03	1242	392439076331907	Blank	--	GW	--	--	--
	07-23-03	1145		Environmental	110ALVM	GW	7.85	5.55	221
	11-20-02	1315		Environmental	110ALVM	GW	9.91	3.98	219
	03-18-03	1252		Environmental	110ALVM	GW	9.91	3.66	219
	07-21-03	1240		Environmental	110ALVM	GW	9.91	3.86	219
BA Ee 180	07-21-03	1242	392434076331908	Blank	--	GW	--	--	--
	11-20-02	1345		Environmental	110ALVM	GW	7.91	3.94	219
	03-18-03	1325		Environmental	110ALVM	GW	7.91	3.76	219
	07-22-03	1000		Environmental	110ALVM	GW	7.91	3.77	219
BA Ee 181	11-20-02	1405	392434076331909	Environmental	110ALVM	GW	5.91	3.99	219
	03-18-03	1400		Environmental	110ALVM	GW	5.91	3.80	219
BA Ee 182	07-22-03	1050	392440076332001	Environmental	110ALVM	GW	5.91	3.83	219
	11-25-02	1305		Environmental	110ALVM	GW	10.70	9.68	227
	01-16-03	1330		Environmental	110ALVM	GW	10.70	9.47	227
	01-16-03	1331		Replicate	110ALVM	GW	10.70	9.47	227
	01-16-03	1332		Blank	--	GW	--	--	--
	03-21-03	1035		Environmental	110ALVM	GW	10.70	8.80	227
	05-15-03	1155		Environmental	110ALVM	GW	10.70	9.67	227
	05-15-03	1157		Blank	--	GW	--	--	--
	07-23-03	1000		Environmental	110ALVM	GW	10.70	9.58	227
BA Ee 183	09-08-03	1100	392440076332002	Environmental	110ALVM	GW	10.70	9.75	227
	09-08-03	1101		Replicate	110ALVM	GW	10.70	9.75	227
	11-25-02	1235		Environmental	110ALVM	GW	7.50	5.09	222
	01-16-03	1300		Environmental	110ALVM	GW	7.50	5.00	222

Geologic Unit (aquifer): 110ALVM - Quaternary Alluvium

Station Type: GW - Ground Water

QUALITY OF GROUND WATER DATA
BALTIMORE COUNTY, MARYLAND—Continued

Well Number	Date	Sam- pling method, code (82398)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)
BA Ee 175	09-08-03	4080	3.0	6.9	663	16.0	--	--	--	--	--
BA Ee 176	11-25-02	4020	--	--	--	--	270	59.7	30.1	--	22.7
	11-25-02	--	--	--	--	--	--	<i>E.01</i>	<0.008	--	<0.09
	03-21-03	4080	--	--	--	--	280	59.6	32.5	1.94	23.1
	07-23-03	4080	--	--	--	--	310	67.0	35.5	2.31	27.7
	07-23-03	--	--	--	--	--	--	<i>0.02</i>	<i>E.004</i>	<0.16	<0.10
BA Ee 177	11-25-02	4080	--	--	--	--	350	80.2	36.7	--	11.3
	03-21-03	4080	4.0	6.7	517	13.8	340	76.2	35.3	1.08	7.58
	07-23-03	4080	3.8	6.4	763	18.7	400	91.7	42.0	1.73	9.02
BA Ee 178	11-25-02	4080	--	--	--	--	370	84.0	38.9	--	7.10
	03-21-03	4080	6.6	7.0	577	12.5	330	76.1	34.8	0.74	5.20
	03-21-03	--	--	--	--	--	--	<i>0.01</i>	<0.008	<0.10	<0.09
	07-23-03	4080	--	--	--	--	400	92.0	40.5	1.67	7.05
BA Ee 179	11-20-02	4080	0.9	7.7	593	18.5	290	74.6	26.0	--	47.9
	03-18-03	4080	0.4	6.7	744	11.5	280	67.4	25.9	2.61	35.2
	07-21-03	4080	--	--	--	--	250	59.8	24.3	2.74	34.6
	07-21-03	--	--	--	--	--	--	<i>0.01</i>	<0.008	<i>E.09</i>	<i>0.13</i>
BA Ee 180	11-20-02	4080	1.3	7.7	464	16.3	270	71.2	23.0	--	33.7
	03-18-03	4080	3.0	7.1	1,040	11.6	200	54.0	16.7	3.64	122
	07-22-03	4080	0.2	6.5	684	22.1	280	72.8	23.4	3.72	33.3
BA Ee 181	11-20-02	4080	2.5	8.0	431	16.7	260	67.5	22.0	--	31.6
	03-18-03	4080	4.1	7.4	1,030	13.8	230	62.9	16.8	4.06	119
	07-22-03	4080	0.4	6.7	747	21.6	300	80.4	24.3	4.18	31.3
BA Ee 182	11-25-02	4080	--	--	--	--	410	92.4	43.1	--	5.09
	01-16-03	4080	5.5	6.8	828	7.1	--	--	--	--	--
	01-16-03	4080	--	--	--	--	--	--	--	--	--
	01-16-03	--	--	--	--	--	--	--	--	--	--
	03-21-03	4080	6.2	6.6	500	14.6	320	70.1	34.1	0.70	3.91
	05-15-03	4080	--	--	--	--	--	--	--	--	--
	05-15-03	--	--	--	--	--	--	--	--	--	--
	07-23-03	4080	--	--	--	--	420	96.4	44.7	1.45	7.20
	09-08-03	4080	--	--	--	--	--	--	--	--	--
	09-08-03	4080	--	--	--	--	--	--	--	--	--
BA Ee 183	11-25-02	4080	--	--	--	--	380	85.1	39.6	--	5.79
	01-16-03	4080	6.0	6.8	582	7.9	--	--	--	--	--

Sampling Method: 4020 - Open-top bailer
4080 - Peristaltic pump

QUALITY OF GROUND WATER DATA
BALTIMORE COUNTY, MARYLAND—Continued

Well Number	Date	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitrogen, water, fltrd, mg/L (00607)
BA Ee 175	09-08-03	--	--	--	--	--	E.08	<0.04	1.83	<0.008	--
BA Ee 176	11-25-02	68.3	--	12.2	19.3	--	--	--	--	--	--
	11-25-02	<0.20	--	<0.2	<0.2	--	--	--	--	--	--
	03-21-03	60.7	<0.17	10.7	19.4	343	--	--	--	--	--
	07-23-03	49.6	<0.2	12.1	20.1	368	--	--	--	--	--
	07-23-03	<0.20	<0.2	<0.2	<0.2	--	--	--	--	--	--
BA Ee 177	11-25-02	37.6	--	11.1	24.9	--	--	--	--	--	--
	03-21-03	42.0	<0.17	9.6	22.8	356	--	--	--	--	--
	07-23-03	55.7	<0.2	12.9	24.8	419	--	--	--	--	--
BA Ee 178	11-25-02	33.4	--	10.5	25.6	--	--	--	--	--	--
	03-21-03	36.1	<0.17	8.9	23.2	348	--	--	--	--	--
BA Ee 179	03-21-03	E.12	<0.17	<0.2	<0.2	--	--	--	--	--	--
	07-23-03	67.8	<0.2	12.0	27.6	408	--	--	--	--	--
	11-20-02	153	--	9.8	22.4	--	--	--	--	--	--
	03-18-03	121	0.10	8.6	18.3	394	--	--	--	--	--
BA Ee 180	07-21-03	125	<0.2	8.3	17.9	522	--	--	--	--	--
	07-21-03	<0.20	<0.2	<0.2	<0.2	--	--	--	--	--	--
	11-20-02	81.6	--	9.4	30.5	--	--	--	--	--	--
	03-18-03	203	0.11	9.2	24.6	544	--	--	--	--	--
BA Ee 181	07-22-03	75.1	<0.2	11.9	15.5	376	--	--	--	--	--
	11-20-02	95.4	--	9.0	25.9	--	--	--	--	--	--
BA Ee 182	03-18-03	214	0.12	9.3	25.2	550	--	--	--	--	--
	07-22-03	84.3	<0.2	13.5	16.8	403	--	--	--	--	--
	11-25-02	45.9	--	11.4	25.7	--	0.18	E.04	3.56	E.004	--
	01-16-03	--	--	--	--	--	<0.10	<0.04	3.41	<0.008	--
	01-16-03	--	--	--	--	--	E.07	<0.04	3.40	<0.008	--
	01-16-03	--	--	--	--	--	<0.10	<0.04	<0.06	<0.008	--
	03-21-03	27.4	<0.17	8.2	17.9	334	<0.10	<0.04	3.14	<0.008	--
	05-15-03	--	--	--	--	--	0.30	<0.04	3.56	<0.008	--
05-15-03	--	--	--	--	--	<0.10	<0.04	<0.06	<0.008	--	
BA Ee 183	07-23-03	46.5	<0.2	10.7	21.6	435	0.59	<0.04	3.35	<0.008	--
	09-08-03	--	--	--	--	--	0.47	<0.04	3.48	<0.008	--
	09-08-03	--	--	--	--	--	0.45	<0.04	3.63	<0.008	--
	11-25-02	36.4	--	12.4	25.5	--	0.10	0.05	2.75	E.005	0.05
	01-16-03	--	--	--	--	--	E.08	<0.04	2.27	<0.008	--
	01-16-03	--	--	--	--	--	E.08	<0.04	2.27	<0.008	--

QUALITY OF GROUND WATER DATA
BALTIMORE COUNTY, MARYLAND—Continued

Well Number	Date	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Total nitrogen, water, fltrd, mg/L (00602)	Iron, water, fltrd, ug/L (01046)	Manganese, water, fltrd, ug/L (01056)
BA Ee 175	09-08-03	<0.18	--	--	--
BA Ee 176	11-25-02	--	--	E10	69.5
	11-25-02	--	--	<10	<2.0
	03-21-03	--	--	<10	3.7
	07-23-03	--	--	<8	20.9
	07-23-03	--	--	<8	<0.4
BA Ee 177	11-25-02	--	--	<10	41.1
	03-21-03	--	--	110	20.1
	07-23-03	--	--	128	148
	11-25-02	--	--	<10	20.6
BA Ee 178	03-21-03	--	--	332	37.8
	03-21-03	--	--	E6	<2.0
	07-23-03	--	--	2,770	194
	11-20-02	--	--	3,240	1,360
	03-18-03	--	--	8,690	1,660
	07-21-03	--	--	904	397
BA Ee 180	07-21-03	--	--	E5	<0.4
	11-20-02	--	--	75	10.8
	03-18-03	--	--	<10	<2.0
	07-22-03	--	--	149	50.2
BA Ee 181	11-20-02	--	--	107	11.5
	03-18-03	--	--	47	4.0
	07-22-03	--	--	1,140	197
BA Ee 182	11-25-02	E.01	3.7	<10	<2.0
	01-16-03	<0.02	--	--	--
BA Ee 183	01-16-03	<0.02	--	--	--
	01-16-03	<0.02	--	--	--
	03-21-03	<0.02	--	<10	<2.0
	05-15-03	<0.02	3.9	--	--
	05-15-03	<0.02	--	--	--
	07-23-03	<0.02	3.9	<8	E.3
	09-08-03	<0.18	4.0	--	--
	09-08-03	<0.18	4.1	--	--
	11-25-02	<0.02	2.8	<10	141
	01-16-03	<0.02	--	--	--

QUALITY OF GROUND WATER DATA
BALTIMORE COUNTY, MARYLAND—Continued

Well Number	Date	Time	Station number	Sample type	Geologic unit	Station type	Depth of well, feet below LSD (72008)	Depth to water level, feet below LSD (72019)	Altitude of land surface feet (72000)
BA Ee 183	03-21-03	1115	392440076332002	Environmental	110ALVM	GW	7.50	4.49	222
	05-15-03	1140		Environmental	110ALVM	GW	7.50	5.08	222
	07-22-03	1200		Environmental	110ALVM	GW	7.50	5.01	222
	09-08-03	1026		Environmental	110ALVM	GW	7.50	5.13	222
BA Ee 184	11-22-02	1130	392439076331801	Environmental	110ALVM	GW	6.00	-0.16	214
	03-19-03	1310		Environmental	110ALVM	GW	6.00	-0.36	214
BA Ee 185	07-09-03	1210	392439076331802	Environmental	110ALVM	GW	6.00	-0.07	214
	11-22-02	1150		Environmental	110ALVM	GW	4.00	-0.29	214
	03-19-03	1350		Environmental	110ALVM	GW	4.00	-0.43	214
	07-09-03	1240		Environmental	110ALVM	GW	4.00	-0.28	214
BA Ee 186	11-22-02	1225	392439076331803	Environmental	110ALVM	GW	2.00	-0.41	214
	11-22-02	1226		<i>Replicate</i>	110ALVM	GW	2.00	0.41	214
	03-19-03	1420		Environmental	110ALVM	GW	2.00	-0.52	214
	07-09-03	1310		Environmental	110ALVM	GW	2.00	-0.46	214
	07-09-03	1312		<i>Blank</i>	--	GW	--	--	--
BA Ee 187	11-14-02	1145	392436076332001	Environmental	110CLVM	GW	20.50	8.68	224
	01-15-03	1110		Environmental	110CLVM	GW	20.50	7.83	224
	03-13-03	1245		Environmental	110CLVM	GW	20.50	6.46	224
	05-14-03	0830		Environmental	110CLVM	GW	20.50	7.58	224
	07-11-03	1320		Environmental	110CLVM	GW	20.50	7.02	224
	07-11-03	1322		<i>Blank</i>	--	GW	--	--	--
BA Ee 188	09-05-03	1305	392436076332002	Environmental	110CLVM	GW	20.50	7.89	224
	11-14-02	1245		Environmental	110CLVM	GW	13.50	7.50	224
	01-15-03	1130		Environmental	110CLVM	GW	13.50	6.71	224
	03-13-03	1310		Environmental	110CLVM	GW	13.50	4.64	224
	05-14-03	0850		Environmental	110CLVM	GW	13.50	6.61	224
	07-11-03	1230		Environmental	110CLVM	GW	13.50	6.21	224
	09-05-03	1330		Environmental	110CLVM	GW	13.50	7.06	224
	09-05-03	1332		<i>Blank</i>	--	GW	13.50	--	--
BA Ee 189	11-14-02	1430	392436076331901	Environmental	110CLVM	GW	24.50	8.92	224
	11-14-02	1432		<i>Blank</i>	--	GW	--	--	--
	01-15-03	1035		Environmental	110CLVM	GW	24.50	7.94	224
	03-13-03	1215		Environmental	110CLVM	GW	24.50	6.50	224
	05-14-03	0810		Environmental	110CLVM	GW	24.50	7.74	224
	07-11-03	1210		Environmental	110CLVM	GW	24.50	7.06	224

**Geologic Unit (aquifer): 110ALVM - Quaternary System
110CLVM - Colluvium**

Station Type: GW - Ground Water

QUALITY OF GROUND WATER DATA
BALTIMORE COUNTY, MARYLAND—Continued

Well Number	Date	Sam- pling method, code (82398)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfl uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)
BA Ee 183	03-21-03	4080	6.6	6.5	502	12.6	160	37.3	17.2	1.69	3.37
	05-15-03	4080	4.4	6.6	789	13.6	--	--	--	--	--
	07-22-03	4080	3.5	6.2	809	17.4	420	93.6	44.5	2.03	7.41
BA Ee 184	09-08-03	4080	4.1	6.6	852	20.6	--	--	--	--	--
	11-22-02	4080	2.2	7.6	683	10.8	230	60.0	19.5	--	34.9
	03-19-03	4080	1.5	7.1	860	10.5	250	64.6	21.3	2.95	86.8
BA Ee 185	07-09-03	4080	2.5	6.8	766	25.1	260	63.9	23.8	4.02	61.3
	11-22-02	4080	6.2	8.0	746	10.8	290	73.5	24.9	--	35.3
	03-19-03	4080	4.6	7.5	1,610	11.3	270	66.6	24.2	3.73	204
	07-09-03	4080	4.3	7.1	870	25.0	320	84.7	26.7	4.46	57.5
BA Ee 186	11-22-02	4080	7.4	8.0	819	11.0	300	77.5	25.9	--	37.2
	11-22-02	4080	--	--	--	--	320	83.6	27.6	--	39.6
	03-19-03	4080	6.0	7.6	1,570	10.3	240	62.7	21.0	3.82	177
	07-09-03	4080	5.0	7.2	860	27.2	340	88.4	27.9	4.47	56.5
	07-09-03	--	--	--	--	--	--	0.02	E.004	<0.16	<0.10
BA Ee 187	11-14-02	4080	0.9	7.4	590	19.9	300	65.2	32.5	--	19.8
	01-15-03	4080	1.1	6.9	667	11.8	--	--	--	--	--
	03-13-03	4080	1.4	6.8	672	9.9	300	65.8	32.8	2.03	19.9
	05-14-03	4080	1.9	6.7	679	10.8	--	--	--	--	--
	07-11-03	4080	1.3	6.8	654	16.2	280	60.7	31.3	1.92	20.4
	07-11-03	--	--	--	--	--	--	0.10	E.005	<0.16	<0.10
BA Ee 188	09-05-03	4080	1.1	6.9	606	20.9	--	--	--	--	--
	11-14-02	4080	--	--	--	--	280	61.5	30.2	--	23.9
	01-15-03	4080	6.6	6.4	539	8.9	--	--	--	--	--
	03-13-03	4080	5.0	6.1	665	8.2	190	41.6	20.4	2.33	46.5
	05-14-03	4080	5.8	6.2	567	11.1	--	--	--	--	--
BA Ee 189	07-11-03	4080	5.3	6.5	569	18.8	130	28.8	14.8	2.32	47.4
	09-05-03	4080	0.4	6.1	591	19.6	--	--	--	--	--
	09-05-03	--	--	--	--	--	--	--	--	--	--
	11-14-02	4020	--	--	--	--	340	74.1	38.1	--	34.1
	11-14-02	--	--	--	--	--	--	<0.01	<0.008	--	<0.09
	01-15-03	4080	3.3	6.9	795	11.5	--	--	--	--	--
	03-13-03	4080	4.6	7.1	791	7.9	310	68.6	34.0	2.79	35.7
05-14-03	4080	5.1	6.9	744	10.0	--	--	--	--	--	
07-11-03	4080	3.4	7.3	709	18.0	260	56.3	28.9	2.83	36.9	

Sampling Method: 4020 - Open-top bailer
4080 - Peristaltic pump

QUALITY OF GROUND WATER DATA

BALTIMORE COUNTY, MARYLAND—Continued

Well Number	Date	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue water, sum of constituents mg/L (70301)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phosphate, water, fltrd, mg/L as P (00671)
BA Ee 183	03-21-03	19.1	<0.17	5.8	18.9	197	<0.10	<0.04	1.50	<0.008	<0.02
	05-15-03	--	--	--	--	--	0.10	<0.04	2.67	<0.008	<0.02
	07-22-03	59.9	<0.2	12.6	25.4	453	0.65	<0.04	2.55	<0.008	<0.02
	09-08-03	--	--	--	--	--	0.27	<0.04	2.59	<0.008	<0.18
BA Ee 184	11-22-02	103	--	9.2	21.6	--	--	--	--	--	--
	03-19-03	202	0.11	8.6	22.4	509	--	--	--	--	--
BA Ee 185	07-09-03	137	<0.2	10.9	22.0	431	--	--	--	--	--
	11-22-02	113	--	8.3	26.4	--	--	--	--	--	--
	03-19-03	391	0.13	7.9	25.4	831	--	--	--	--	--
	07-09-03	143	<0.2	11.3	23.4	472	--	--	--	--	--
BA Ee 186	11-22-02	124	--	9.5	28.7	--	--	--	--	--	--
	11-22-02	123	--	9.5	28.8	--	--	--	--	--	--
	03-19-03	339	0.13	8.4	26.8	749	--	--	--	--	--
	07-09-03	144	<0.2	11.7	23.6	481	--	--	--	--	--
	07-09-03	<0.20	<0.2	<0.2	<0.2	--	--	--	--	--	--
BA Ee 187	11-14-02	70.4	--	10.5	13.2	--	E.08	<0.04	0.80	<0.008	E.01
	01-15-03	--	--	--	--	--	E.07	<0.04	0.67	<0.008	E.01
	03-13-03	69.5	<0.17	10.5	14.1	355	<0.10	<0.04	0.70	<0.008	E.01
	05-14-03	--	--	--	--	--	E.05	<0.04	0.82	<0.008	<0.02
	07-11-03	76.9	<0.2	10.2	13.0	351	E.07	<0.04	0.78	<0.008	<0.02
	07-11-03	<0.20	<0.2	<0.2	<0.2	--	0.16	<0.04	<0.06	<0.008	<0.02
	09-05-03	--	--	--	--	--	E.09	<0.04	0.75	<0.008	<0.02
BA Ee 188	11-14-02	80.5	--	11.6	9.5	--	0.16	E.04	0.18	E.004	<0.02
	01-15-03	--	--	--	--	--	0.12	<0.04	0.09	<0.008	<0.02
	03-13-03	145	<0.17	6.1	11.1	322	E.07	<0.04	1.54	E.005	<0.02
	05-14-03	--	--	--	--	--	0.14	<0.04	E.05	<0.008	<0.02
	07-11-03	85.2	<0.2	10.5	9.6	292	0.18	<0.04	<0.06	<0.008	<0.02
	09-05-03	--	--	--	--	--	0.25	<0.04	<0.06	<0.008	<0.02
BA Ee 189	09-05-03	--	--	--	--	--	<0.10	<0.04	<0.06	<0.008	<0.02
	11-14-02	108	--	8.9	15.9	--	0.27	E.04	1.25	<0.008	<0.02
	11-14-02	0.20	--	0.2	0.2	--	<0.10	<0.04	<0.06	<0.008	<0.02
	01-15-03	--	--	--	--	--	E.06	<0.04	1.35	<0.008	<0.02
	03-13-03	98.0	<0.17	8.4	15.9	411	<0.10	<0.04	1.81	<0.008	<0.02
	05-14-03	--	--	--	--	--	E.07	<0.04	1.99	<0.008	<0.02
	07-11-03	94.5	<0.2	8.0	14.6	377	0.14	<0.04	1.90	<0.008	<0.02

QUALITY OF GROUND WATER DATA
BALTIMORE COUNTY, MARYLAND—Continued

Well Numberer	Date	Total nitro- gen, water, fltrd, mg/L (00602)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)
BA Ee 183	03-21-03	--	<10	14.3
	05-15-03	2.8	--	--
	07-22-03	3.2	19	120
	09-08-03	2.9	--	--
BA Ee 184	11-22-02	--	<10	225
	03-19-03	--	<10	365
BA Ee 185	07-09-03	--	<8	321
	11-22-02	--	<10	E2.2
	03-19-03	--	<10	9.0
	07-09-03	--	11	2.4
BA Ee 186	11-22-02	--	<10	<2.0
	<i>11-22-02</i>	--	<10	<2.0
	03-19-03	--	<10	<2.0
	07-09-03	--	<8	0.8
	<i>07-09-03</i>	--	<8	<0.4
BA Ee 187	11-14-02	--	<10	104
	01-15-03	--	--	--
	03-13-03	--	<10	7.9
	05-14-03	--	--	--
	07-11-03	--	<8	4.3
	<i>07-11-03</i>	--	<8	<0.4
BA Ee 188	09-05-03	--	--	--
	11-14-02	0.34	428	768
	01-15-03	0.22	--	--
	03-13-03	--	17	82.4
	05-14-03	--	--	--
	07-11-03	--	4,980	2,170
BA Ee 189	09-05-03	--	--	--
	<i>09-05-03</i>	--	--	--
	11-14-02	1.5	<10	3.8
	<i>11-14-02</i>	--	<10	<2.0
	01-15-03	--	--	--
	03-13-03	--	<10	<2.0
	05-14-03	--	--	--
07-11-03	2.0	<8	0.6	

QUALITY OF GROUND WATER DATA
BALTIMORE COUNTY, MARYLAND—Continued

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Well Number	Date	Time	Station number	Sample type	Geologic unit	Station type	Depth of well, feet below LSD (72008)	Depth to water level, feet below LSD (72019)	Altitude of land surface feet (72000)
BA Ee 189	09-05-03	1225	392436076331901	Environmental	110CLVM	GW	24.50	8.26	224
BA Ee 190	11-20-02	1110	392438076331801	Environmental	110CLVM	GW	26.00	4.91	220
	01-16-03	1040		Environmental	110CLVM	GW	26.00	5.12	220
	03-18-03	1200		Environmental	110CLVM	GW	26.00	4.25	220
	05-15-03	1010		Environmental	110CLVM	GW	26.00	4.96	220
	05-15-03	1011		<i>Replicate</i>	<i>110CLVM</i>	<i>GW</i>	<i>26.00</i>	<i>4.96</i>	<i>220</i>
BA Ee 191	07-21-03	1110	392438076331802	Environmental	110CLVM	GW	26.00	4.82	220
	09-05-03	1055		Environmental	110CLVM	GW	26.00	5.34	220
	11-20-02	1145		Environmental	110CLVM	GW	14.00	4.78	220
	01-16-03	1120		Environmental	110CLVM	GW	14.00	5.25	220
	03-18-03	1125		Environmental	110CLVM	GW	14.00	4.52	220
	03-18-03	1126		<i>Replicate</i>	<i>110CLVM</i>	<i>GW</i>	<i>14.00</i>	<i>4.52</i>	<i>220</i>
	05-15-03	1035		Environmental	110CLVM	GW	14.00	5.06	220
	07-21-03	1150		Environmental	110CLVM	GW	14.00	4.42	220
	09-05-03	1135		Environmental	110CLVM	GW	14.00	5.25	220
	BA Ee 192	11-20-02		1040	392438076331803	Environmental	110CLVM	GW	24.70	4.37	219
01-16-03		1205	Environmental	110CLVM		GW	24.70	4.32	219
03-18-03		1050	Environmental	110CLVM		GW	24.70	3.26	219
05-15-03		1105	Environmental	110CLVM		GW	24.70	4.16	219
07-21-03		1025	Environmental	110CLVM		GW	24.70	4.05	219
BA Ee 193	09-05-03	1005	392437076332104	Environmental	110CLVM	GW	24.70	4.52	219
	11-15-02	1025		Environmental	110ALVM	GW	9.25	2.49	220
	03-13-03	1335		Environmental	110ALVM	GW	9.25	1.86	220
BA Ee 194	07-14-03	1005	392437076332105	Environmental	110ALVM	GW	9.25	2.13	220
	11-15-02	1155		Environmental	110ALVM	GW	7.25	2.59	220
BA Ee 195	03-13-03	1415	392437076332106	Environmental	110ALVM	GW	7.25	2.11	220
	07-14-03	1040		Environmental	110ALVM	GW	7.25	2.38	220
	11-15-02	1220		Environmental	110ALVM	GW	5.25	2.43	220
	03-13-03	1440		Environmental	110ALVM	GW	5.25	1.95	220
	07-14-03	1105		Environmental	110ALVM	GW	5.25	2.19	220

**Geologic Unit (aquifer): 110ALVM - Quaternary System
110CLVM - Colluvium**

Station Type: GW - Ground Water

QUALITY OF GROUND WATER DATA
BALTIMORE COUNTY, MARYLAND—Continued

Well Number	Date	Sam- pling method, code (82398)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfl uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)
BA Ee 189	09-05-03	4080	3.4	7.2	693	19.4	--	--	--	--	--
BA Ee 190	11-20-02	4080	2.2	7.7	859	20.2	280	69.7	26.6	--	61.4
	01-16-03	4080	3.3	7.2	860	9.3	--	--	--	--	--
	03-18-03	4080	2.9	7.1	822	12.6	270	67.0	25.5	3.14	55.2
	05-15-03	4080	2.7	7.1	855	16.3	--	--	--	--	--
	<i>05-15-03</i>	<i>4080</i>	--	--	--	--	--	--	--	--	--
	07-21-03	4080	3.5	6.8	872	18.4	280	67.3	26.3	3.38	59.2
	09-05-03	4080	3.2	7.1	770	20.6	--	--	--	--	--
BA Ee 191	11-20-02	4080	2.3	7.2	737	22.5	300	74.7	28.0	--	58.7
	01-16-03	4080	1.6	6.8	870	10.3	--	--	--	--	--
	03-18-03	4080	4.2	6.7	991	11.3	350	85.7	32.1	2.53	58.7
	<i>03-18-03</i>	<i>4080</i>	--	--	--	--	<i>350</i>	<i>85.7</i>	<i>32.3</i>	<i>2.56</i>	<i>57.7</i>
	05-15-03	4080	1.1	6.6	868	13.7	--	--	--	--	--
	07-21-03	4080	1.1	6.4	792	19.2	260	66.2	24.2	3.00	54.7
	09-05-03	4080	0.4	6.6	776	19.9	--	--	--	--	--
BA Ee 192	11-20-02	4080	1.6	7.6	715	19.4	240	60.4	22.2	--	60.8
	01-16-03	4080	2.3	7.2	798	11.3	--	--	--	--	--
	03-18-03	4080	2.8	7.1	934	12.6	320	80.8	29.7	3.65	61.1
	05-15-03	4080	3.3	6.9	1,100	13.8	--	--	--	--	--
	07-21-03	4080	2.9	6.7	1,020	20.1	310	77.3	28.8	3.70	72.0
BA Ee 193	09-05-03	4080	1.8	6.9	820	18.5	--	--	--	--	--
	11-15-02	4080	1.6	7.8	644	17.0	250	63.3	22.0	--	39.6
	03-13-03	4080	--	--	--	--	390	95.7	36.7	2.89	89.7
	07-14-03	4080	2.4	6.2	817	19.6	270	65.5	25.5	3.22	67.8
BA Ee 194	11-15-02	4080	3.6	7.9	629	17.5	250	64.8	22.1	--	33.3
	03-13-03	4080	4.6	7.0	1,790	7.8	460	114	42.2	3.53	175
	07-14-03	4080	0.8	6.7	940	21.3	260	64.4	23.2	3.65	83.7
BA Ee 195	11-15-02	4080	4.2	7.8	490	17.1	260	68.9	22.6	--	33.3
	03-13-03	4080	5.7	7.2	2,070	8.7	340	85.6	30.9	3.50	247
	07-14-03	4080	1.4	7.0	826	23.9	260	68.5	22.4	3.80	66.4

Sampling Method: 4080 - Peristaltic pump

QUALITY OF GROUND WATER DATA

BALTIMORE COUNTY, MARYLAND—Continued

Well Number	Date	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phosphate, water, fltrd, mg/L as P (00671)
BA Ee 189	09-05-03	--	--	--	--	--	0.14	<0.04	1.73	<0.008	<0.02
BA Ee 190	11-20-02	134	--	10.1	20.6	--	<0.10	<0.04	0.64	<0.008	<0.02
	01-16-03	--	--	--	--	--	E.05	<0.04	0.71	<0.008	<0.02
BA Ee 191	03-18-03	130	0.11	10.2	19.8	436	<0.10	<0.04	0.87	<0.008	<0.02
	05-15-03	--	--	--	--	--	E.06	<0.04	1.09	<0.008	<0.02
	05-15-03	--	--	--	--	--	E.06	<0.04	1.09	<0.008	<0.02
	07-21-03	144	<0.2	10.6	19.6	457	<0.10	<0.04	1.29	<0.008	<0.02
	09-05-03	--	--	--	--	--	0.12	<0.04	1.36	<0.008	<0.02
	11-20-02	124	--	11.3	23.6	--	E.06	<0.04	0.07	<0.008	E.01
	01-16-03	--	--	--	--	--	E.05	<0.04	0.16	<0.008	E.01
BA Ee 192	03-18-03	175	0.11	8.9	21.2	516	E.09	<0.04	0.72	<0.008	<0.02
	03-18-03	179	0.11	8.9	21.2	519	E.07	<0.04	0.73	<0.008	<0.02
	05-15-03	--	--	--	--	--	<0.10	<0.04	0.20	<0.008	<0.02
	07-21-03	107	<0.2	10.4	18.1	425	<0.10	<0.04	0.33	<0.008	E.01
	09-05-03	--	--	--	--	--	0.12	<0.04	0.29	<0.008	<0.02
BA Ee 193	11-20-02	116	--	10.3	21.4	--	<0.10	<0.04	0.72	<0.008	<0.02
	01-16-03	--	--	--	--	--	<0.10	<0.04	0.85	<0.008	<0.02
	03-18-03	182	0.11	9.9	19.9	505	E.07	<0.04	1.07	<0.008	<0.02
	05-15-03	--	--	--	--	--	<0.10	<0.04	1.56	<0.008	<0.02
	07-21-03	191	<0.2	10.3	21.1	536	<0.10	<0.04	1.58	<0.008	<0.02
BA Ee 194	09-05-03	--	--	--	--	--	0.11	<0.04	1.26	<0.008	<0.02
	11-15-02	104	--	8.6	21.1	--	--	--	--	--	--
	03-13-03	295	<0.17	7.2	22.7	634	--	--	--	--	--
BA Ee 195	07-14-03	177	<0.2	8.6	22.6	433	--	--	--	--	--
	11-15-02	92.2	--	8.3	21.5	--	--	--	--	--	--
BA Ee 195	03-13-03	433	<0.17	7.7	23.8	902	--	--	--	--	--
	07-14-03	170	<0.2	9.9	22.2	484	--	--	--	--	--
	11-15-02	96.5	--	8.8	23.0	--	--	--	--	--	--
	03-13-03	488	<0.17	8.3	25.6	1,010	--	--	--	--	--
	07-14-03	137	<0.2	11.2	21.1	445	--	--	--	--	--

QUALITY OF GROUND WATER DATA
BALTIMORE COUNTY, MARYLAND—Continued

Well Number	Date	Total nitrogen, water, fltrd, mg/L (00602)	Iron, water, fltrd, ug/L (01046)	Manganese, water, fltrd, ug/L (01056)
BA Ee 189	09-05-03	1.9	--	--
BA Ee 190	11-20-02	--	<10	<2.0
	01-16-03	--	--	--
	03-18-03	--	<10	<2.0
	05-15-03	--	--	--
	<i>05-15-03</i>	--	--	--
	07-21-03	--	<8	<0.4
	09-05-03	1.5	--	--
BA Ee 191	11-20-02	--	<10	E3.1
	01-16-03	--	--	--
	03-18-03	--	<10	<2.0
	<i>03-18-03</i>	--	<10	<2.0
	05-15-03	--	--	--
	07-21-03	--	E6	1.3
	09-05-03	0.41	--	--
BA Ee 192	11-20-02	--	<10	<2.0
	01-16-03	--	--	--
	03-18-03	--	<10	<2.0
	05-15-03	--	--	--
	07-21-03	--	164	18.2
	09-05-03	1.4	--	--
BA Ee 193	11-15-02	--	413	142
	03-13-03	--	134	2,590
	07-14-03	--	2,020	959
BA Ee 194	11-15-02	--	203	37.8
	03-13-03	--	242	31.9
	07-14-03	--	975	43.3
BA Ee 195	11-15-02	--	58	11.3
	03-13-03	--	133	10.9
	07-14-03	--	78	10.4

Remark codes used in this table:

< -- Less than

E -- Estimated value

CALVERT COUNTY, MARYLAND

Well Number	Date	Time	Station number	Sample type	Geologic unit	Station type	Depth of well, feet below LSD (72008)	Depth to bot sample intrval feet below LSD (72016)	Depth to top sample intrval feet below LSD (72015)
CA Db 93	12-02-02	1300	383323076371201	Environmental	125AQUI	GW	480.00	480	470
CA Db 96	12-11-02	1730	383244076354201	Environmental	217PPSCU	GW	970.00	960	930
	02-04-03	1600		Environmental	217PPSCU	GW	970.00	960	930
CA Ed 53	12-02-02	1030	382638076295901	Environmental	124PNPN	GW	380.00	380	370
CA Fc 13	10-09-02	1400	382343076302901	Environmental	122CSPK	GW	34.00	34	29
	10-09-02	1405		Replicate	122CSPK	GW	34	--	--
CA Fd 87	12-10-02	1000	382032076250701	Environmental	125AQUI	GW	660.00	640	560

			Depth to water level, feet below LSD (72019)	Altitude of land surface feet (72000)	Flow rate, instantaneous gal/min (00059)	Pump or flow period prior to sampling, minutes (72004)	Color, water, fltrd, Pt-Co units (00080)	Sampling method, code (82398)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)
CA Db 93	12-02-02	--	100		4.0	27	--	8030	--	7.9	273	--
CA Db 96	12-11-02	--	151.56		73.2	--	50	4040	--	6.6	211	1.3
	02-04-03	--	151.56		4.0	300	125	4040	--	7.0	240	9.0
CA Ed 53	12-02-02	--	110		5.0	25	--	8030	--	8.0	246	--
CA Fc 13	10-09-02	30.85	47.44		1.1	40	E10	4040	5.0	6.9	709	--
	10-09-02	--	47.44		--	--	E8	--	--	--	--	--
CA Fd 87	12-10-02	--	80.0		40.0	--	--	8030	--	--	266	--

			Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., mg/L (00453)	Bromide water, fltrd, mg/L (71870)	Chloride, water, fltrd, mg/L (00940)
CA Db 93	12-02-02	16.7	--	--	--	--	--	142	173	--	--	--
CA Db 96	12-11-02	20.6	74	14.3	9.35	10.1	12.5	112	137	--	--	--
	02-04-03	18.5	72	13.9	9.13	10.4	12.1	107	131	0.03	0.94	--
CA Ed 53	12-02-02	15.5	--	--	--	--	--	118	143	--	--	--
CA Fc 13	10-09-02	16.5	370	138	7.10	3.58	9.32	329	401	--	16.5	--
	10-09-02	--	370	138	7.11	3.70	9.36	--	--	--	16.1	--
CA Fd 87	12-10-02	18.5	--	--	--	--	--	133	162	--	--	--

Geologic Unit (aquifer): 125AQUI - Aquia Formation
 217PPSCU - Upper Aquifer In the Patapsco Formation
 124PNPN - Pleistocene-Pliocene Series
 122CSPK - Chesapeake Group

Station Type: GW - Ground Water

Sampling Method: 4040 - Submersible pump

8030 - Grab sample at water-supply tap

QUALITY OF GROUND WATER DATA
 CALVERT COUNTY, MARYLAND—Continued

Well Number	Date	Terbacil, water, fltrd 0.7u GF (82665)	Terbacil, water, fltrd, ug/L (04032)	Terbufos, water, fltrd 0.7u GF (82675)	Thio-bencarb water fltrd 0.7u GF (82681)	Tri-allate, water, fltrd 0.7u GF (82678)	Tri-fluralin, water, fltrd 0.7u GF (82661)	Tri-fluralin, water, fltrd, ug/L (04023)	Vernolate, water, fltrd, ug/L (04034)	Xylenes water unfltrd ug/L (81551)	1,2-Dichloro-ethane-d4, sur Sch2090 wat unfltrd pct rcv (99832)
CA Db 93	12-02-02	--	--	--	--	--	--	--	--	--	--
CA Db 96	12-11-02	--	--	--	--	--	--	--	--	--	--
	02-04-03	--	--	--	--	--	--	--	--	--	--
CA Ed 53	12-02-02	--	--	--	--	--	--	--	--	--	--
CA Fc 13	10-09-02	<0.034	<0.05	<0.02	<0.005	<0.002	<0.009	<0.05	<0.05	<0.2	127
	10-09-02	<0.034	<0.05	<0.02	<0.005	<0.002	<0.009	<0.05	<0.05	<0.2	125
CA Fd 87	12-10-02	--	--	--	--	--	--	--	--	--	--
		14Bromo fluoro-benzene surrog. VOC Sch wat unfltrd pct rcv (99834)	Benzene water unfltrd ug/L (34030)	Ethyl-benzene water unfltrd ug/L (34371)	meta- + para-Xylene, water, unfltrd ug/L (85795)	o-Xylene, water, unfltrd ug/L (77135)	Methyl t-butyl ether, water, unfltrd ug/L (78032)	Toluene water unfltrd ug/L (34010)	Toluene -d8, surrog, Sch2090 wat unfltrd percent recovery (99833)	Alpha radio-activity wat flt Th-230, pCi/L (75987)	Alpha radio-activity water, fltrd, Th-230, pCi/L (04126)
CA Db 93	12-02-02	--	--	--	--	--	--	--	--	--	--
CA Db 96	12-11-02	--	--	--	--	--	--	--	--	1.8	12
	02-04-03	--	--	--	--	--	--	--	--	2.0	7
CA Ed 53	12-02-02	--	--	--	--	--	--	--	--	--	--
CA Fc 13	10-09-02	83.6	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	102	4.4	M
	10-09-02	83.7	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	102	3.8	3
CA Fd 87	12-10-02	--	--	--	--	--	--	--	--	--	--
					Beta radio-activity 2-sigma wat flt CS-137, pCi/L (75989)	Gross beta radioac water, fltrd, Cs-137, pCi/L (03515)	Rn-222 2-sigma water unfltrd pCi/L (76002)	Rn-222, water, unfltrd pCi/L (82303)			
CA Db 93	12-02-02			--	--	--	--	--			
CA Db 96	12-11-02			2.2	19	17	140				
	02-04-03			2.0	17	18	150				
CA Ed 53	12-02-02			--	--	--	--				
CA Fc 13	10-09-02			3.9	<5	34	1,110				
	10-09-02			3.3	8	34	1,100				
CA Fd 87	12-10-02			--	--	--	--				

Remark codes used in this table:
 < -- Less than
 E -- Estimated value
 M-- Presence verified, not quantified

QUALITY OF GROUND WATER DATA

CAROLINE COUNTY, MARYLAND

Well Number	Date	Time	Station number	Sample type	Geologic unit	Station type	Depth of well, feet below LSD (72008)	Depth to bot sample intrval feet below LSD (72016)	Depth to top sample intrval feet below LSD (72015)
CO Bd 57	12-18-02	1100	390204075492301	Environmental	124PNPN	GW	300	300	285
CO Cd 54	09-16-03	1200	385557075481201	Environmental	112CLMB	GW	55	55	45
CO Dd 75	09-08-03	1400	385022075450201	Environmental	112CLMB	GW	40	40	35
CO Ec 34	11-18-02	1100	384648075515201	Environmental	124PNPN	GW	440	440	420
CO Ec 36	12-10-02	1100	384631075524901	Environmental	122PNSK	GW	22	22	19

			Depth to water level, feet below LSD (72019)	Altitude of land surface feet (72000)	Flow rate, instantaneous gal/min (00059)	Pump or flow period prior to sampling, minutes (72004)	Color, water, fltrd, Pt-Co units (00080)	Sampling method, code (82398)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)
CO Bd 57	12-18-02	--	60.0	4.0	21	--	8030	--	--	--	--	8.4
CO Cd 54	09-16-03	--	50.0	3.2	25	<1	8030	--	--	--	--	5.1
CO Dd 75	09-08-03	--	55.0	4.0	17	2	8030	--	--	--	--	5.2
CO Ec 34	11-18-02	--	50.0	4.6	29	--	8030	--	--	--	--	8.1
CO Ec 36	12-10-02	6.45	50.00	0.33	60	--	4040	772	7.5	73	--	5.0

											Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)
CO Bd 57	12-18-02	634	--	15.3	--	--	--	--	--	--	370	452
CO Cd 54	09-16-03	37	--	15.0	3	0.62	0.446	1.68	4.31	5	5	6
CO Dd 75	09-08-03	125	--	15.7	25	5.24	2.86	3.28	9.94	7	7	8
CO Ec 34	11-18-02	439	--	16.7	--	--	--	--	--	--	235	287
CO Ec 36	12-10-02	153	2.0	15.0	50	7.48	7.43	3.09	3.39	1	1	1

								Residue water, fltrd, sum of constituents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
CO Bd 57	12-18-02	E.01	--	--	--	--	--	--	--	--	--	--
CO Cd 54	09-16-03	--	6.35	<0.2	11.2	<0.2	--	25	--	--	<0.04	E.06
CO Dd 75	09-08-03	--	11.8	<0.2	17.2	1.4	61	83	--	--	<0.04	1.20
CO Ec 34	11-18-02	--	--	--	--	--	--	--	--	--	--	--
CO Ec 36	12-10-02	0.03	12.8	<0.17	10.7	3.0	95	99	E.06	<0.04	<0.04	10.3

Geologic Unit (aquifer): 112CLMB - Columbia Formation
 122PNSK - Pensauken Formation
 124PNPN - Piney Point Formation

Station Type: GW - Ground Water

Sampling Method: 4040 - Submersible pump
 8030 - Grab sample at water-supply tap

QUALITY OF GROUND WATER DATA
CAROLINE COUNTY, MARYLAND—Continued

Well Number	Date	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Organic carbon, water, fltrd, mg/L (00681)	Organic carbon, water, unfltrd, mg/L (00680)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
		CO Bd 57	12-18-02	--	--	--	--	--	--	--	--
CO Cd 54	09-16-03	<0.008	<0.18	<0.04	--	2.7	--	--	<0.3	--	0.19
CO Dd 75	09-08-03	<0.008	<0.18	<0.04	--	0.7	--	--	<0.3	--	0.31
CO Ec 34	11-18-02	--	--	--	--	--	--	--	--	--	--
CO Ec 36	12-10-02	<0.008	<0.02	--	0.4	--	73	<0.30	<0.3	491	2.05
		Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Cobalt water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lithium water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)
CO Bd 57	12-18-02	--	--	--	--	--	--	--	--	--	--
CO Cd 54	09-16-03	--	--	--	--	--	E4	M	0.47	--	5.7
CO Dd 75	09-08-03	--	--	--	--	--	27	30	0.35	--	21.7
CO Ec 34	11-18-02	--	--	--	--	--	--	--	--	--	--
CO Ec 36	12-10-02	7	1.13	<0.8	9.47	0.7	E9	--	2.41	1.5	102
		Manganese, water, unfltrd recover-able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Strontium, water, fltrd, ug/L (01080)	Thallium, water, fltrd, ug/L (01057)	Vanadium, water, fltrd, ug/L (01085)	Zinc, water, fltrd, ug/L (01090)
CO Bd 57	12-18-02	--	--	--	--	--	--	--	--	--	--
CO Cd 54	09-16-03	5.0	<0.02	--	--	--	--	--	E.04	--	--
CO Dd 75	09-08-03	19.8	<0.02	--	--	--	--	--	E.02	--	--
CO Ec 34	11-18-02	--	--	--	--	--	--	--	--	--	--
CO Ec 36	12-10-02	--	--	<0.3	6.10	0.5	<0.2	80.3	0.10	<0.1	26
		2,4,5-T surrog, water, fltrd, percent recovery (99958)	2,4-D methyl ester, water, fltrd, ug/L (50470)	2,4-D water, fltrd, ug/L (39732)	2,4-DB water, fltrd, 0.7u GF (38746)	2,6-Di-ethyl-aniline water fltrd, 0.7u GF (82660)	CIAT, water, fltrd, ug/L (04040)	CEAT, water, fltrd, ug/L (04038)	OIET, water, fltrd, ug/L (50355)	3-Hydroxy-carbo-furan, wat flt, 0.7u GF (49308)	3-Keto-carbo-furan, water, fltrd, ug/L (50295)
CO Bd 57	12-18-02	--	--	--	--	--	--	--	--	--	--
CO Cd 54	09-16-03	--	--	--	--	--	<0.05	<0.05	--	--	--
CO Dd 75	09-08-03	--	--	--	--	--	<0.05	<0.05	--	--	--
CO Ec 34	11-18-02	--	--	--	--	--	--	--	--	--	--
CO Ec 36	12-10-02	87.8	<0.009	<0.02	<0.02	<0.006	E.023	E.01	<0.008	<0.006	<2

QUALITY OF GROUND WATER DATA

CAROLINE COUNTY, MARYLAND—Continued

Well Number	Date	Aceto-chlor, water, fltrd, ug/L (49260)	Acifluorfen, water, fltrd, 0.7u GF ug/L (49315)	Alachlor, water, fltrd, ug/L (46342)	Aldi-carb sulfone water, fltrd, 0.7u GF ug/L (49313)	Aldi-carb sulf-oxide, wat flt 0.7u GF ug/L (49314)	Aldi-carb, water, fltrd, 0.7u GF ug/L (49312)	alpha-HCH, water, fltrd, ug/L (34253)	alpha-HCH-d6 surrog, Sch1379 wat flt percent recovry (90505)	alpha-HCH-d6, surrog, wat flt 0.7u GF percent recovry (91065)	Ametryn water, fltrd, ug/L (38401)	
CO Bd 57	12-18-02	--	--	--	--	--	--	--	--	--	--	
CO Cd 54	09-16-03	<0.05	--	<0.05	--	--	--	--	67.5	--	<0.05	
CO Dd 75	09-08-03	<0.05	--	<0.05	--	--	--	--	67.1	--	<0.05	
CO Ec 34	11-18-02	--	--	--	--	--	--	--	--	--	--	
CO Ec 36	12-10-02	<0.006	<0.007	<0.004	<0.02	<0.008	<0.04	<0.005	--	88.6	--	
			Azin-phos-methyl, water, fltrd, 0.7u GF ug/L (39632)	Barban, surrog, Sched. 2060/9060, wat flt pct rev (90640)	Bendio-carb, water, fltrd, ug/L (50299)	Ben-fluralin, water, fltrd, 0.7u GF ug/L (82673)	Benomyl water, fltrd, ug/L (50300)	Bensulfuron, water, fltrd, ug/L (61693)	Ben-tazon, water, fltrd, 0.7u GF (38711)	Broma-cil, water, fltrd, ug/L (04029)	Brom-oxynil, water, fltrd, 0.7u GF ug/L (49311)	
CO Bd 57	12-18-02	--	--	--	--	--	--	--	--	--	--	
CO Cd 54	09-16-03	<0.05	--	--	--	--	--	--	--	<1.00	--	
CO Dd 75	09-08-03	<0.05	--	--	--	--	--	--	--	<1.00	--	
CO Ec 34	11-18-02	--	--	--	--	--	--	--	--	--	--	
CO Ec 36	12-10-02	0.038	<0.050	104	<0.03	<0.010	<0.004	<0.02	<0.01	<0.03	<0.02	
			Buta-chlor, water, fltrd, ug/L (04026)	Butyl-ate, water, fltrd, ug/L (04028)	Caf-feine, water, fltrd, percent recovry (99959)	Caf-feine-13C, surrog, wat flt 0.7u GF (49310)	Car-baryl, water, fltrd, 0.7u GF (82680)	Car-baryl, water, fltrd, 0.7u GF (49309)	Carbo-furan, water, fltrd, 0.7u GF (82674)	Car-boxin, water, fltrd, ug/L (04027)	Chlor-amben methyl ester, water, fltrd, ug/L (61188)	
CO Bd 57	12-18-02	--	--	--	--	--	--	--	--	--	--	
CO Cd 54	09-16-03	<0.05	<0.05	--	--	--	--	--	--	<0.05	--	
CO Dd 75	09-08-03	<0.05	<0.05	--	--	--	--	--	--	<0.05	--	
CO Ec 34	11-18-02	--	--	--	--	--	--	--	--	--	--	
CO Ec 36	12-10-02	--	<0.002	<0.010	95.8	<0.03	<0.041	<0.006	<0.020	--	<0.02	
			Chlori-muron, water, fltrd, ug/L (50306)	Chloro-di-amino-s-tri-azine, wat flt ug/L (04039)	Chloro-thalonil, water, fltrd, 0.7u GF ug/L (49306)	Chlor-pyrifos water, fltrd, ug/L (38933)	cis-Per-methrin water fltrd, 0.7u GF ug/L (82687)	Clopyr-alid, water, fltrd, 0.7u GF ug/L (49305)	Cyana-zine, water, fltrd, ug/L (04041)	Cyclo-ate, water, fltrd, ug/L (04031)	Dacthal mono-acid, water, fltrd, 0.7u GF ug/L (49304)	DCPA, water fltrd, ug/L (82682)
CO Bd 57	12-18-02	--	--	--	--	--	--	--	--	--	--	
CO Cd 54	09-16-03	--	--	--	--	--	--	<0.02	<0.05	--	--	
CO Dd 75	09-08-03	--	--	--	--	--	--	<0.02	<0.05	--	--	
CO Ec 34	11-18-02	--	--	--	--	--	--	--	--	--	--	
CO Ec 36	12-10-02	<0.010	<0.01	<0.04	<0.005	<0.006	<0.01	<0.018	<0.01	<0.01	<0.003	

QUALITY OF GROUND WATER DATA
CAROLINE COUNTY, MARYLAND—Continued

Well Number	Date	Diazinon, water, fltrd, ug/L (39572)	Diazinon-d10 sur Sch 1379, wat flt pct rcv (90670)	Diazinon-d10 surrog. wat flt 0.7u GF percent recovry (91063)	Dichloroprop, water, fltrd 0.7u GF ug/L (49302)	Dieldrin, water, fltrd, ug/L (39381)	Dinoseb water, fltrd 0.7u GF ug/L (49301)	Diphenamid, water, fltrd, ug/L (04033)	Disulfoton, water, fltrd 0.7u GF ug/L (82677)	Diuron, water, fltrd 0.7u GF ug/L (49300)	EPTC, water, fltrd 0.7u GF ug/L (82668)
CO Bd 57	12-18-02	--	--	--	--	--	--	--	--	--	--
CO Cd 54	09-16-03	--	82.0	--	--	--	--	<0.05	--	--	--
CO Dd 75	09-08-03	--	81.3	--	--	--	--	<0.05	--	--	--
CO Ec 34	11-18-02	--	--	--	--	--	--	--	--	--	--
CO Ec 36	12-10-02	<0.005	--	117	<0.01	<0.005	<0.01	<0.03	<0.02	<0.01	<0.002
		Ethalfluralin, water, fltrd 0.7u GF ug/L (82663)	Ethoprop, water, fltrd 0.7u GF ug/L (82672)	Fenuron water, fltrd 0.7u GF ug/L (49297)	Flumetsulam, water, fltrd, ug/L (61694)	Fluometuron water fltrd 0.7u GF ug/L (38811)	Fonofos water, fltrd, ug/L (04095)	Hexazinone, water, fltrd, ug/L (04025)	Imazaquin, water, fltrd, ug/L (50356)	Imazethapyr, water, fltrd, ug/L (50407)	Imidacloprid water, fltrd, ug/L (61695)
CO Bd 57	12-18-02	--	--	--	--	--	--	--	--	--	--
CO Cd 54	09-16-03	--	--	--	--	--	--	<0.05	--	--	--
CO Dd 75	09-08-03	--	--	--	--	--	--	<0.05	--	--	--
CO Ec 34	11-18-02	--	--	--	--	--	--	--	--	--	--
CO Ec 36	12-10-02	<0.009	<0.005	<0.03	<0.01	<0.03	<0.003	--	<0.02	<0.02	<0.007
		Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF (38478)	Linuron water fltrd 0.7u GF (82666)	Malathion, water, fltrd, ug/L (39532)	MCPA, water, fltrd 0.7u GF (38482)	MCPB, water, fltrd 0.7u GF (38487)	Metaxyl, water, fltrd, ug/L (50359)	Methiocarb, water, fltrd 0.7u GF (38501)	Methomyl, water, fltrd 0.7u GF (49296)	Methyl parathion, water, fltrd 0.7u GF (82667)
CO Bd 57	12-18-02	--	--	--	--	--	--	--	--	--	--
CO Cd 54	09-16-03	--	--	--	--	--	--	--	--	--	--
CO Dd 75	09-08-03	--	--	--	--	--	--	--	--	--	--
CO Ec 34	11-18-02	--	--	--	--	--	--	--	--	--	--
CO Ec 36	12-10-02	<0.004	<0.01	<0.035	<0.027	<0.02	<0.01	<0.02	<0.008	<0.004	<0.006
		Metolachlor, water, fltrd, ug/L (39415)	Metribuzin, water, fltrd, ug/L (82630)	Metsulfuron, water, fltrd, ug/L (61697)	Molinate, water, fltrd 0.7u GF (82671)	N-(4-Chlorophenyl)-N'-methylurea, ug/L (61692)	Napropamide, water, fltrd 0.7u GF (82684)	Neburon water, fltrd 0.7u GF (49294)	Nicosulfuron, water, fltrd, ug/L (50364)	Norflurazon, water, fltrd 0.7u GF (49293)	Oryzalin, water, fltrd 0.7u GF (49292)
CO Bd 57	12-18-02	--	--	--	--	--	--	--	--	--	--
CO Cd 54	09-16-03	<0.05	<0.05	--	--	--	--	--	--	--	--
CO Dd 75	09-08-03	<0.05	<0.05	--	--	--	--	--	--	--	--
CO Ec 34	11-18-02	--	--	--	--	--	--	--	--	--	--
CO Ec 36	12-10-02	E.005	<0.006	<0.03	<0.002	<0.02	<0.007	<0.01	<0.01	<0.02	<0.02

QUALITY OF GROUND WATER DATA
CAROLINE COUNTY, MARYLAND—Continued

Well Number	Date	Toluene -d8, Sch2090 wat unf percent recovry (99833)	Alpha radio- activity 2-sigma Th-230, pCi/L (75987)	Alpha radio- activity water, fltrd, Th-230, pCi/L (04126)	Beta radio- activity 2-sigma wat flt CS-137, pCi/L (75989)	Gross beta radioac water, fltrd, Cs-137, pCi/L (03515)	Rn-222 2-sigma water unfltrd pCi/L (76002)	Rn-222, water, unfltrd pCi/L (82303)	Uranium natural water, fltrd, ug/L (22703)
CO Bd 57	12-18-02	--	--	--	--	--	--	--	--
CO Cd 54	09-16-03	102	0.53	M	0.90	2	23	360	--
CO Dd 75	09-08-03	98.0	0.70	M	0.99	3	20	220	--
CO Ec 34	11-18-02	--	--	--	--	--	--	--	--
CO Ec 36	12-10-02	--	--	--	--	--	24	420	0.03

Remark codes used in this table:

< -- Less than

E -- Estimated value

M-- Presence verified, not quantified

QUALITY OF GROUND WATER DATA

CARROLL COUNTY, MARYLAND

Well Number	Date	Time	Station number	Sample type	Geologic unit	Station type	Depth of well, feet below LSD (72008)	Depth to bot sample intrval feet below LSD (72016)	Depth to top sample intrval feet below LSD (72015)
CL Ce 205	08-21-03	1330	393520077005101	Environmental	300SMCK	GW	241.00	241	57
	08-21-03	1331		Replicate	300SMCK	GW	241.00	241	57
CL Bd 179	08-21-03	1030	393338076593501	Environmental	300SMCK	GW	623.00	--	118
	08-21-03	1031		Replicate	300SMCK	GW	623.00	--	118
CL Bd 180	08-20-03	1600	393641077002801	Environmental	300WSCK	GW	300.00	300	258
	08-20-03	1601		Replicate	300WSCK	GW	300.00	300	258

		Altitude of land surface feet (72000)	Flow rate, instantaneous gal/min (00059)	Pump or flow period prior to sampling, minutes (72004)	Sampling method, code (82398)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unfltrd 25 degC (00095)	Temperature, air, deg C (00020)
CL Ce 205	08-21-03	740	38.0	45	4040	766	7.2	70	6.1	678	34.5
	08-21-03	740	--	45	8010	--	--	--	--	--	--
CL Bd 179	08-21-03	740	63.0	40	4040	766	6.9	68	6.2	687	28.5
	08-21-03	740	--	40	8010	--	--	--	--	--	--
CL Bd 180	08-20-03	770	65.0	55	4040	766	6.2	61	6.0	418	31.0
	08-20-03	770	--	55	8010	--	--	--	--	--	--

		Temperature, water, deg C (00010)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incm. titr., field, mg/L (00453)	Organic carbon, water, fltrd, mg/L (00681)	E coli, MI MF, water, col/ 100 mL (90901)	Total coliform, MI MF, water, col/ 100 mL (90900)	2,4,5-T surrog, water, fltrd, percent recovery (99958)	2,4-D methyl ester, water, fltrd, ug/L (50470)	2,4-D water, fltrd, ug/L (39732)	2,4-DB water, fltrd, ug/L (38746)
CL Ce 205	08-21-03	14.5	121	147	0.4	<1	<1	--	--	--	--
	08-21-03	--	--	--	--	<1	<1	--	--	--	--
CL Bd 179	08-21-03	15.0	80	97	E.3	<1	<1	--	--	--	--
	08-21-03	--	--	--	--	<1	<1	--	--	--	--
CL Bd 180	08-20-03	14.5	59	71	0.4	<1	<1	94.2	<0.009	<0.02	<0.02
	08-20-03	--	--	--	--	<1	<1	--	--	--	--

		2,6-Diethyl-aniline water fltrd 0.7u GF (82660)	CIAT, water, fltrd, ug/L (04040)	CEAT, water, fltrd, ug/L (04038)	OIET, water, fltrd, ug/L (50355)	3-Hydroxy carbo-furan, wat flt 0.7u GF (49308)	3-Keto-carbo-furan, water, fltrd, ug/L (50295)	Aceto-chlor ESA, water, fltrd, ug/L (61029)	Aceto-chlor OA, water, fltrd, ug/L (61030)	Aceto-chlor, water, fltrd, ug/L (49260)	Acifluor-fen, water, fltrd, ug/L (49315)
CL Ce 205	08-21-03	<0.006	E.276	--	--	--	--	<0.05	<0.05	<0.006	--
	08-21-03	--	--	--	--	--	--	--	--	--	--
CL Bd 179	08-21-03	<0.006	E.082	--	--	--	--	<0.05	<0.05	<0.006	--
	08-21-03	--	--	--	--	--	--	--	--	--	--
CL Bd 180	08-20-03	<0.006	E.006	<0.04	<0.008	<0.006	<2	<0.05	<0.05	<0.006	<0.007
	08-20-03	--	--	--	--	--	--	--	--	--	--

Geologic Unit (aquifer): 300SMCK - Sams Creek Metabalsalt
300WSCK - Wissahickon Formation

Station Type: GW - Ground Water

Sampling Method: 4040 - Submersible pump
8010 - Other

QUALITY OF GROUND WATER DATA
CARROLL COUNTY, MARYLAND—Continued

Well Number	Date	tert-Butylbenzene water unfltrd ug/L (77353)	Tetra-chloro-ethene, water, unfltrd ug/L (34475)	Tetra-chloro-methane water unfltrd ug/L (32102)	Tetra-hydro-furan, water, unfltrd ug/L (81607)	Toluene water unfltrd ug/L (34010)	Toluene -d8, surrog, Sch2090 wat unfltrd percent recovry (99833)	trans-1,2-Di-chloro-ethene, water, unfltrd ug/L (34546)	trans-1,3-Di-chloro-propene water unfltrd ug/L (34699)	trans-1,4-Di-chloro-2-butene, wat unfltrd ug/L (73547)	Tri-bromo-methane water unfltrd ug/L (32104)
CL Ce 205	08-21-03	<0.10	<0.03	<0.06	<2	E.01	99.4	<0.03	<0.09	<0.7	<0.10
	08-21-03	--	--	--	--	--	--	--	--	--	--
CL Bd 179	08-21-03	<0.10	E.01	<0.06	<2	E.02	97.0	<0.03	<0.09	<0.7	<0.10
	08-21-03	--	--	--	--	--	--	--	--	--	--
CL Bd 180	08-20-03	<0.10	<0.03	E.02	<2	<0.05	95.8	<0.03	<0.09	<0.7	<0.10
	08-20-03	--	--	--	--	--	--	--	--	--	--
					Tri-chloro-ethene, water, unfltrd ug/L (39180)	Tri-chloro-fluoro-methane water unfltrd ug/L (34488)	Tri-chloro-methane water unfltrd ug/L (32106)	Vinyl chloride, water, unfltrd ug/L (39175)			
	CL Ce 205		08-21-03	<0.04	<0.09	E.04	<0.1				
			08-21-03	--	--	--	--				
	CL Bd 179		08-21-03	<0.04	E.05	1.32	<0.1				
			08-21-03	--	--	--	--				
	CL Bd 180		08-20-03	<0.04	<0.09	E.08	<0.1				
			08-20-03	--	--	--	--				

Remark codes used in this table:

< -- Less than

E -- Estimated value

M -- Presence verified, not quantified

QUALITY OF GROUND WATER DATA

CECIL COUNTY, MARYLAND

Well Number	Date	Time	Station number	Sample type	Geologic unit	Station type	Depth of well, feet below LSD (72008)	Depth to water level, feet below LSD (72019)	Altitude of land surface feet (72000)		
CE Be 124	09-25-03	1030	393741075535501	Environmental	211MGTY	GW	78	50.20	126		
	09-25-03	1031		Replicate	211MGTY	GW	78	50.20	126		
CE Be 123	09-24-03	1450	393600075520601	Environmental	211MGTY	GW	70	36.19	62.0		
	09-24-03	1451		Replicate	211MGTY	GW	70	36.19	62.0		
CE Cd 90	09-29-03	1345	393441075561601	Environmental	211MGTY	GW	117	29.82	39.0		
	09-29-03	1346		Replicate	211MGTY	GW	117	29.82	39.0		
		Flow rate, instantaneous gal/min (00059)	Sampling method, code (82398)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)
CE Be 124	09-25-03	0.52	4040	759	4.8	47	4.8	134	24.0	14.6	13
	09-25-03	--	8010	--	--	--	--	--	--	--	--
CE Be 123	09-24-03	0.65	4040	765	8.3	84	5.1	48	23.5	16.2	10
	09-24-03	--	8010	--	--	--	--	--	--	--	--
CE Cd 90	09-29-03	0.79	4040	762	4.1	42	4.2	17	21.0	16.7	2
	09-29-03	--	8010	--	--	--	--	--	--	--	--
		Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Bromide water, fltrd, mg/L (71870)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
CE Be 124	09-25-03	2.89	1.47	0.38	16.4	3	4	E.05	27.4	<0.2	8.89
	09-25-03	--	--	--	--	--	--	--	--	--	--
CE Be 123	09-24-03	1.63	1.48	0.46	4.72	7	8	0.05	7.18	<0.2	8.45
	09-24-03	--	--	--	--	--	--	--	--	--	--
CE Cd 90	09-29-03	0.37	0.209	0.35	1.31	--	--	0.02	1.51	<0.2	7.45
	09-29-03	--	--	--	--	--	--	--	--	--	--
		Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Organic carbon, water, fltrd, mg/L (00681)	E coli, MI MF, water, col/ 100 mL (90901)
CE Be 124	09-25-03	1.1	75	85	E.07	E.03	2.97	<0.008	<0.02	0.3	<1
	09-25-03	--	--	--	--	--	--	--	--	--	<1
CE Be 123	09-24-03	1.6	32	34	<0.10	<0.04	0.61	<0.008	E.01	0.4	<1
	09-24-03	--	--	--	--	--	--	--	--	--	<1
CE Cd 90	09-29-03	1.9	--	19	<0.10	<0.04	<0.06	<0.008	<0.02	<0.3	<1
	09-29-03	--	--	--	--	--	--	--	--	--	<1

Geologic Unit (aquifer): 211MGTY - Magothy Formation
 Station Type: GW - Ground Water

Sampling Method: 4040 - Submersible pump
 8010 - Other

QUALITY OF GROUND WATER DATA
 CECIL COUNTY, MARYLAND—Continued

Well Number	Date	Ra-228, water, fltrd, pCi/L (81366)	Rn-222 2-sigma water unfltrd pCi/L (76002)	Rn-222, water, unfltrd pCi/L (82303)	Uranium natural water, fltrd, ug/L (22703)
CE Be 124	09-25-03	4	21	270	0.04
	<i>09-25-03</i>	--	--	--	--
CE Be 123	09-24-03	1	17	120	0.03
	<i>09-24-03</i>	--	--	--	--
CE Cd 90	09-29-03	M	21	90	0.06
	<i>09-29-03</i>	--	--	--	--

Remark codes used in this table:

< -- Less than

E -- Estimated value

M-- Presence verified, not quantified

QUALITY OF GROUND WATER DATA

CHARLES COUNTY, MARYLAND

Well Number	Date	Time	Station number	Sample type	Geologic unit	Station type	Depth of well, feet below LSD (72008)	Depth to bot sample intrval below LSD (72016)	Depth to top sample intrval below LSD (72015)
CH Bg 17	03-04-03	1500	383706076475401	Environmental	217PPSCL	GW	1,353	--	--
CH Cb 7	10-21-02	1300	383422077114601	Environmental	217PPSC	GW	400	167	154
CH Ch 19	11-25-02	1300	383118076433501	Environmental	125AQUI	GW	420	420	400
CH Ee 90	10-09-02	1100	382456076562201	Environmental	124NNJM	GW	21	16	11

		Depth to water level, feet below LSD (72019)	Altitude of land surface feet (72000)	Flow rate, instantaneous gal/min (00059)	Pump or flow period prior to sampling, minutes (72004)	Color, water, fltrd, Pt-Co units (00080)	Sampling method, code (82398)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unfltrd 25 degC (00095)	Temperature, water, deg C (00010)
CH Bg 17	03-04-03	--	199.16	60.0	300	E15	4040	<1.0	8.0	240	20.6
CH Cb 7	10-21-02	--	36.0	6.7	114	8	4040	<1.0	7.5	322	15.5
CH Ch 19	11-25-02	--	120	3.3	28	--	8030	--	8.0	--	17.4
CH Ee 90	10-09-02	6.73	6.8	--	--	E12	4040	--	5.3	206	19.2

		Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat fltr inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat fltr incrm. titr., field, mg/L (00453)	Bromide water, fltrd, mg/L (71870)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)
CH Bg 17	03-04-03	5	1.09	0.512	3.21	54.2	115	140	0.02	0.78	1.26
CH Cb 7	10-21-02	15	3.03	1.81	3.01	68.2	133	162	--	19.6	0.82
CH Ch 19	11-25-02	--	--	--	--	--	116	141	--	--	--
CH Ee 90	10-09-02	61	16.9	4.44	5.46	8.64	12	15	--	10.7	<0.17

		Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue on evap. at 180degC wat fltr mg/L (70300)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as PO4 (00660)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)
CH Bg 17	03-04-03	10.2	5.8	146	152	--	<0.06	--	--	--	--
CH Cb 7	10-21-02	32.8	5.8	221	216	0.75	<0.06	<0.008	4.85	1.58	1.49
CH Ch 19	11-25-02	--	--	--	--	--	--	--	--	--	--
CH Ee 90	10-09-02	13.9	34.1	131	130	0.05	6.59	E.004	--	E.01	<0.04

Geologic Unit (aquifer): 124NNJM - Nanjemoy Formation
 125AQUI - Aquia Formation
 217PPSC - Patapsco Formation
 217PPSCL - Lower Patapsco Aquifer In The Patapsco Formation

Station Type: GW - Ground Water

Sampling Method: 4040 - Submersible pump
 8030 - Grab sample at water-supply tap

QUALITY OF GROUND WATER DATA
CHARLES COUNTY, MARYLAND—Continued

Well Number	Date	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, unfltrd mg/L (00680)	Arsenate, water, fltrd, ug/L as As (62453)	Arsenic water, fltrd, ug/L (01000)	Arsenite, water, fltrd, ug/L as As (62452)	Beryllium, water, fltrd, ug/L (01010)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)
CH Bg 17	03-04-03	0.18	E.3	--	<0.3	--	--	204	320	--	13.9
CH Cb 7	10-21-02	--	1.1	--	<0.3	--	<0.06	740	890	<0.08	47.7
CH Ch 19	11-25-02	--	--	2.1	--	3.5	--	--	--	--	--
CH Ee 90	10-09-02	--	1.7	--	E.2	--	E.06	E6	1,010	0.69	17.1
		Manganese, water, unfltrd recover-able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Thallium, water, fltrd, ug/L (01057)	2,6-Diethyl-aniline water fltrd 0.7u GF (82660)	CIAT, water, fltrd, ug/L (04040)	CEAT, water, fltrd, ug/L (04038)	Aceto-chlor, water, fltrd, ug/L (49260)	Ala-chlor, water, fltrd, ug/L (46342)	alpha-HCH, water, fltrd, ug/L (34253)	alpha-HCH-d6 surrog, Sch1379 wat flt percent recovry (90505)
CH Bg 17	03-04-03	12.0	--	--	--	--	--	--	--	--	--
CH Cb 7	10-21-02	46.0	<0.02	<0.04	<0.006	<0.05	<0.05	<0.006	<0.004	<0.005	76.9
CH Ch 19	11-25-02	--	--	--	--	--	--	--	--	--	--
CH Ee 90	10-09-02	27.6	<0.02	E.03	<0.006	<0.05	<0.05	<0.006	<0.004	<0.005	81.5
		alpha-HCH-d6, surrog, wat flt 0.7u GF percent recovry (91065)	Ametryn water, fltrd, ug/L (38401)	Atra-zine, water, fltrd, ug/L (39632)	Azin-phos-methyl, water, fltrd 0.7u GF (82686)	Ben-flur-alin, water, fltrd 0.7u GF (82673)	Broma-cil, water, fltrd, ug/L (04029)	Buta-chlor, water, fltrd, ug/L (04026)	Butyl-ate, water, fltrd, ug/L (04028)	Car-baryl, water, fltrd 0.7u GF (82680)	Carbo-furan, water, fltrd 0.7u GF (82674)
CH Bg 17	03-04-03	--	--	--	--	--	--	--	--	--	--
CH Cb 7	10-21-02	58.2	<0.05	<0.007	<0.050	<0.010	<0.05	<0.05	<0.002	<0.041	<0.020
CH Ch 19	11-25-02	--	--	--	--	--	--	--	--	--	--
CH Ee 90	10-09-02	98.1	<0.05	<0.007	<0.050	<0.010	<0.20	<0.05	<0.002	E.004	<0.020
		Car-boxin, water, fltrd, ug/L (04027)	Chlor-pyri-fos water, fltrd, ug/L (38933)	cis-Per-methrin water fltrd 0.7u GF (82687)	Cyana-zine, water, fltrd, ug/L (04041)	Cyclo-ate, water, fltrd, ug/L (04031)	DCPA, water fltrd 0.7u GF (82682)	Diazi-non, water, fltrd, ug/L (39572)	Diazi-non-d10 sur Sch 1379, wat flt pct rcv (90670)	Diazi-non-d10 surrog, wat flt 0.7u GF percent recovry (91063)	Diel-drin, water, fltrd, ug/L (39381)
CH Bg 17	03-04-03	--	--	--	--	--	--	--	--	--	--
CH Cb 7	10-21-02	<0.05	<0.005	<0.006	<0.018	<0.05	<0.003	<0.005	78.8	69.4	<0.005
CH Ch 19	11-25-02	--	--	--	--	--	--	--	--	--	--
CH Ee 90	10-09-02	<0.05	<0.005	<0.006	<0.018	<0.05	<0.003	<0.005	86.5	115	<0.005

QUALITY OF GROUND WATER DATA

CHARLES COUNTY, MARYLAND—Continued

Well Number	Date	Di-methyl-arsinate, wat flt ug/L as As (62455)	Diphen-amid, water, fltrd, ug/L (04033)	Disulfoton, water, fltrd, 0.7u GF ug/L (82677)	EPTC, water, fltrd, 0.7u GF ug/L (82668)	Ethal-flur-alin, water, fltrd, 0.7u GF ug/L (82663)	Etho-prop, water, fltrd, 0.7u GF ug/L (82672)	Fonofos, water, fltrd, ug/L (04095)	Hexa-zinone, water, fltrd, ug/L (04025)	Lindane, water, fltrd, ug/L (39341)	Linuron, water, fltrd, 0.7u GF ug/L (82666)	
CH Bg 17	03-04-03	--	--	--	--	--	--	--	--	--	--	
CH Cb 7	10-21-02	--	<0.05	<0.02	<0.002	<0.009	<0.005	<0.003	<0.05	<0.004	<0.035	
CH Ch 19	11-25-02	<0.1	--	--	--	--	--	--	--	--	--	
CH Ee 90	10-09-02	--	<0.05	<0.02	<0.002	<0.009	<0.005	<0.003	<0.05	<0.004	<0.035	
			Methyl para-thion, water, fltrd, 0.7u GF (39532)	Metola-chlor, water, fltrd, ug/L (39415)	Metri-buzin, water, fltrd, ug/L (82630)	Moli-nate, water, fltrd, 0.7u GF (82671)	Mono-methyl-arson-ate, wat flt as As (62454)	Naprop-amide, water, fltrd, 0.7u GF (82684)	p,p'-DDE, water, fltrd, ug/L (34653)	Para-thion, water, fltrd, ug/L (39542)	Peb-ulate, water, fltrd, 0.7u GF (82669)	
CH Bg 17	03-04-03	--	--	--	--	--	--	--	--	--	--	
CH Cb 7	10-21-02	<0.027	<0.006	<0.013	<0.006	<0.002	--	<0.007	<0.003	<0.010	<0.004	
CH Ch 19	11-25-02	--	--	--	--	--	<0.1	--	--	--	--	
CH Ee 90	10-09-02	<0.027	<0.006	<0.013	<0.006	<0.002	--	<0.007	<0.003	<0.010	<0.004	
			Pendi-meth-alin, water, fltrd, 0.7u GF (82683)	Phorate, water, fltrd, 0.7u GF (82664)	Prome-ton, water, fltrd, ug/L (04037)	Prome-tryn, water, fltrd, ug/L (04036)	Pron-amide, water, fltrd, 0.7u GF (82676)	Propa-chlor, water, fltrd, ug/L (04024)	Pro-panil, water, fltrd, 0.7u GF (82679)	Propar-gite, water, fltrd, 0.7u GF (82685)	Propa-zine, water, fltrd, ug/L (38535)	Sim-a-zine, water, fltrd, ug/L (04035)
CH Bg 17	03-04-03	--	--	--	--	--	--	--	--	--	--	
CH Cb 7	10-21-02	<0.022	<0.011	<0.01	<0.05	<0.004	<0.010	<0.011	<0.02	<0.05	<0.005	
CH Ch 19	11-25-02	--	--	--	--	--	--	--	--	--	--	
CH Ee 90	10-09-02	<0.022	<0.011	<0.01	<0.05	<0.004	<0.010	<0.011	<0.02	<0.05	<0.005	
			Sim-a-tryn, water, fltrd, ug/L (04030)	Tebu-thiuron, water, fltrd, 0.7u GF (82670)	Terba-cil, water, fltrd, ug/L (82665)	Terba-cil, water, fltrd, ug/L (04032)	Terbu-fos, water, fltrd, 0.7u GF (82675)	Thio-bencarb, water, fltrd, ug/L (82681)	Tri-allate, water, fltrd, ug/L (82678)	Tri-flur-alin, water, fltrd, ug/L (82661)	Tri-flur-alin, water, fltrd, ug/L (04023)	Vernol-ate, water, fltrd, ug/L (04034)
CH Bg 17	03-04-03	--	--	--	--	--	--	--	--	--	--	
CH Cb 7	10-21-02	<0.05	<0.02	<0.034	<0.05	<0.02	<0.005	<0.002	<0.009	<0.05	<0.05	
CH Ch 19	11-25-02	--	--	--	--	--	--	--	--	--	--	
CH Ee 90	10-09-02	<0.05	<0.02	<0.034	<0.05	<0.02	<0.005	<0.002	<0.009	<0.05	<0.05	

QUALITY OF GROUND WATER DATA
CHARLES COUNTY, MARYLAND—Continued

Well Number	Date	Xylenes water unfltrd ug/L (81551)	1,2-Dichloroethane-d4, sur Sch2090 wat unfltrd pct rcv (99832)	14Bromo-fluorobenzene surrog. VOC Sch wat unfltrd pct rcv (99834)	Benzene water unfltrd ug/L (34030)	Ethylbenzene water unfltrd ug/L (34371)	meta+ para-Xylene, water, unfltrd ug/L (85795)	o-Xylene, water, unfltrd ug/L (77135)	Methyl t-butyl ether, water, unfltrd ug/L (78032)	Toluene water unfltrd ug/L (34010)	Toluene -d8, surrog, Sch2090 wat unfltrd percent recovery (99833)
CH Bg 17	03-04-03	--	--	--	--	--	--	--	--	--	--
CH Cb 7	10-21-02	0.4	103	100	<0.2	0.1	0.2	0.2	<0.2	0.2	106
CH Ch 19	11-25-02	--	--	--	--	--	--	--	--	--	--
CH Ee 90	10-09-02	<0.2	123	83.9	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	101
				Alpha radio-activity 2-sigma wat flt Th-230, pCi/L (75987)	Alpha radio-activity fltrd, Th-230, pCi/L (04126)	Beta radio-activity 2-sigma wat flt CS-137, pCi/L (75989)	Gross beta radioac fltrd, Cs-137, pCi/L (03515)	Rn-222 2-sigma water unfltrd pCi/L (76002)	Rn-222, water, unfltrd pCi/L (82303)		
CH Bg 17	03-04-03		0.88	M	1.0	4	23	330			
CH Cb 7	10-21-02		0.72	1	2.2	3	20	220			
CH Ch 19	11-25-02		--	--	--	--	--	--			
CH Ee 90	10-09-02		1.6	3	1.5	9	--	--			

Remark codes used in this table:

< -- Less than

E -- Estimated value

M-- Presence verified, not quantified

QUALITY OF GROUND WATER DATA

DORCHESTER COUNTY, MARYLAND

Well Number	Date	Time	Station number	Sample type	Geologic unit	Station type	Depth of well, feet below LSD (72008)	Depth to bot sample intrval feet below LSD (72016)	Depth to top sample intrval feet below LSD (72015)
DO Cc 54	10-29-02	1300	383440076144701	Environmental	125AQUI	GW	525	525	505
	11-21-02	1500		Environmental	125AQUI	GW	525	525	495
DO Cf 39	10-30-02	1400	383133075580501	Environmental	124PNPN	GW	481	481	461
	11-21-02	1100		Environmental	124PNPN	GW	481	481	461
DO Ch 41	09-09-03	1400	383338075472301	Environmental	112CLMB	GW	83	83	73
DO Ed 17	11-13-02	1230	382058076052001	Environmental	124PNPN	GW	480	480	460
	11-21-02	1200		Environmental	124PNPN	GW	480	480	460
DO Ed 18	11-13-02	1130	382102076053801	Environmental	124PNPN	GW	480	450	435
DO Fc 27	10-30-02	1000	381551076105601	Environmental	124PNPN	GW	440	440	420
	11-21-02	1230		Environmental	124PNPN	GW	440	440	420

		Altitude of land surface feet (72000)	Flow rate, instantaneous gal/min (00059)	Pump or flow period prior to sampling, minutes (72004)	Color, water, fltrd, Pt-Co units (00080)	Sampling method, code (82398)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)
DO Cc 54	10-29-02	5.0	4.0	48	--	8030	--	8.5	310	18.6	--
	11-21-02	5.0	6.0	20	--	8030	--	--	307	19.0	--
DO Cf 39	10-30-02	15.0	6.0	27	--	8030	--	7.9	--	17.9	--
	11-21-02	15.0	5.0	--	--	8030	--	--	--	--	--
DO Ch 41	09-09-03	25.0	3.0	32	2	8030	--	4.7	329	16.7	100
DO Ed 17	11-13-02	5.0	5.0	33	--	8030	--	8.1	--	18.4	--
	11-21-02	5.0	--	20	--	8030	--	--	--	--	--
DO Ed 18	11-13-02	3.0	3.0	1	--	8030	<1.0	8.1	--	--	--
DO Fc 27	10-30-02	10.0	4.1	38	--	8030	--	8.0	--	18.4	--
	11-21-02	10.0	4.0	22	--	8030	--	--	--	--	--

		Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., mg/L (00453)	Bromide water, fltrd, mg/L (71870)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
DO Cc 54	10-29-02	--	--	--	--	127	154	--	--	--	--
	11-21-02	--	--	--	--	--	--	--	--	--	--
DO Cf 39	10-30-02	--	--	--	--	608	741	--	--	--	--
	11-21-02	--	--	--	--	--	--	--	--	--	--
DO Ch 41	09-09-03	23.8	10.1	3.54	8.36	0.5	0.6	--	18.7	<0.2	12.4
DO Ed 17	11-13-02	--	--	--	--	506	617	0.25	--	--	--
	11-21-02	--	--	--	--	--	--	--	--	--	--
DO Ed 18	11-13-02	--	--	--	--	--	--	--	--	--	--
DO Fc 27	10-30-02	--	--	--	--	456	556	--	--	--	--
	11-21-02	--	--	--	--	--	--	--	--	--	--

Geologic Unit (aquifer): 112CLMB - Columbia Formation
 124PNPN - Piney Point Formation
 125AQUI - Aquia Formation

Station Type: GW - Ground Water

Sampling Method: 8030 - Grab sample at water-supply tap

QUALITY OF GROUND WATER DATA
DORCHESTER COUNTY, MARYLAND—Continued

Well Number	Date	Alpha radio- activity water, fltrd, Th-230, pCi/L (04126)	Beta radio- activity wat flt CS-137, pCi/L (75989)	Gross beta radioac water, fltrd, Cs-137, pCi/L (03515)	Rn-222 2-sigma water unfltrd pCi/L (76002)	Rn-222, water, unfltrd pCi/L (82303)
DO Cc 54	10-29-02	--	--	--	--	--
	11-21-02	--	--	--	--	--
DO Cf 39	10-30-02	--	--	--	--	--
	11-21-02	--	--	--	--	--
DO Ch 41	09-09-03	2	1.5	5	21	220
DO Ed 17	11-13-02	--	--	--	--	--
	11-21-02	--	--	--	--	--
DO Ed 18	11-13-02	--	--	--	--	--
DO Fc 27	10-30-02	--	--	--	--	--
	11-21-02	--	--	--	--	--

Remark codes used in this table:

< -- Less than

M-- Presence verified, not quantified

QUALITY OF GROUND WATER DATA

FREDERICK COUNTY, MARYLAND

Well Number	Date	Time	Station number	Sample type	Geologic unit	Station type	Depth of well, feet below LSD (72008)	Depth to bot sample intrval feet below LSD (72016)	Depth to top sample intrval feet below LSD (72015)
FR Dc 62	08-27-03	0915	392545077303201	Environmental	400CTCN	GW	642	642	106
	08-27-03	0916		Replicate	400CTCN	GW	642	642	106
FR Eg 37	09-04-03	0900	392053077113601	Environmental	300MRBG	GW	95	95	55
	09-04-03	0905		Replicate	300MRBG	GW	95	95	55
FR Eg 36	09-03-03	1100	392157077102101	Environmental	300MRBG	GW	182	182	43
	09-03-03	1105		Replicate	300MRBG	GW	182	182	43
FR Dc 69	08-26-03	1150	392554077320501	Environmental	400CTCN	GW	500	500	58
	08-26-03	1155		Replicate	400CTCN	GW	500	500	58

		Altitude of land surface feet (72000)	Flow rate, instantaneous gal/min (00059)	Pump or flow period prior to sampling, minutes (72004)	Sampling method, code (82398)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unfiltered, uS/cm 25 degC (00095)	Temperature, air, deg C (00020)
FR Dc 62	08-27-03	700	17.0	40	4040	761	7.0	67	6.1	508	20.0
	08-27-03	700	--	40	8030	--	--	--	--	--	--
FR Eg 37	09-04-03	760	37.5	50	4040	760	8.4	84	4.7	154	22.0
	09-04-03	760	37.5	50	4040	--	--	--	--	--	--
FR Eg 36	09-03-03	700	269	30	4040	762	8.0	75	5.5	303	24.0
	09-03-03	700	269	30	4040	--	--	--	--	--	--
FR Dc 69	08-26-03	520	66.0	40	4040	762	1.3	15	8.2	292	28.0
	08-26-03	520	--	40	8030	--	--	--	--	--	--

		Temperature, water, deg C (00010)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incm. titr., field, mg/L (00453)	Organic carbon, water, fltrd, mg/L (00681)	E coli, MI MF, water, col/100 mL (90901)	Total coliform, MI MF, water, col/100 mL (90900)	2,4,5-T surrog, water, fltrd, percent recovry (99958)	2,4-D methyl ester, water, fltrd, ug/L (50470)	2,4-D water, fltrd, ug/L (39732)	2,4-DB water, fltrd, ug/L (38746)
FR Dc 62	08-27-03	13.5	80	97	0.3	<1	<1	101	<0.009	<0.02	<0.02
	08-27-03	--	--	--	--	<1	<1	--	--	--	--
FR Eg 37	09-04-03	15.0	10	13	E.2	<1	E4	84.0	<0.009	<0.02	<0.02
	09-04-03	--	--	--	--	<1	E3	103	<0.009	<0.02	<0.02
FR Eg 36	09-03-03	12.5	33	40	0.4	<1	<1	108	<0.009	<0.02	<0.02
	09-03-03	--	--	--	--	<1	<1	--	--	--	--
FR Dc 69	08-26-03	23.0	109	133	1.8	<1	E8	95.6	<0.009	<0.02	<0.02
	08-26-03	--	--	--	1.8	<1	E16	--	--	--	--

Geologic Unit (aquifer): 300MRBG - Marburg Formation
400CTCN - Catocin Metabasalt

Station Type: GW - Ground Water

Sampling Method: 4040 - Submersible pump
8030 - Grab sample at water-supply tap

QUALITY OF GROUND WATER DATA
 FREDERICK COUNTY, MARYLAND—Continued

Well Number	Date	Tri-chloro-ethene, water, unfltrd ug/L (39180)	Tri-chloro-fluoro-methane water unfltrd ug/L (34488)	Tri-chloro-methane water unfltrd ug/L (32106)	Vinyl chloride, water, unfltrd ug/L (39175)
FR Dc 62	08-27-03	<0.04	E.06	1.42	<0.1
	08-27-03	--	--	--	--
FR Eg 37	09-04-03	<0.04	<0.09	0.25	<0.1
	09-04-03	--	--	--	--
FR Eg 36	09-03-03	<0.04	<0.09	E.02	<0.1
	09-03-03	<0.04	<0.09	E.02	<0.1
FR Dc 69	08-26-03	<0.04	<0.09	13.5	<0.1
	08-26-03	--	--	--	--
	08-26-03	--	--	--	--

Remark codes used in this table:

< -- Less than

E -- Estimated value

M-- Presence verified, not quantified

QUALITY OF GROUND WATER DATA

HARFORD COUNTY, MARYLAND

Well Number	Date	Time	Station number	Sample type	Geologic unit	Station type	Depth of well, feet below LSD (72008)	Depth to bot sample intrval below LSD (72016)	Depth to top sample intrval below LSD (72015)
HA Cf 169	09-30-03	1045	393000076072701	Environmental	217PTMC	GW	62	62	52
	09-30-03	1050		Replicate	217PTMC	GW	62	62	52
HA Dd 92	10-07-02	1200	392721076150302	Environmental	112TLBT	GW	38	28	16
HA Ec 49	09-17-03	1405	392340076203001	Environmental	217PTMC	GW	93	93	88
	09-17-03	1406		Replicate	217PTMC	GW	93	93	88

		Depth to water level, feet below LSD (72019)	Altitude of land surface feet (72000)	Flow rate, instantaneous gal/min (00059)	Pump or flow period prior to sampling, minutes (72004)	Color, water, fltrd, Pt-Co units (00080)	Sampling method, code (82398)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)
HA Cf 169	09-30-03	36.90	43	0.75	155	--	4040	767	5.8	58	5.4
	09-30-03	36.90	43	0.75	155	--	4040	--	--	--	--
HA Dd 92	10-07-02	13.20	20.1	1.5	70	E20	4040	--	<1.0	--	5.9
HA Ec 49	09-17-03	35.50	21.0	1.2	97	--	4040	769	3.1	31	4.0
	09-17-03	35.50	21.0	--	97	--	4040	--	--	--	--

		Specif. conductance, wat unfiltered, 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)
HA Cf 169	09-30-03	346	19.5	15.6	110	24.4	12.5	1.94	14.2	17	20
	09-30-03	--	--	--	110	24.5	12.5	1.92	14.3	17	21
HA Dd 92	10-07-02	551	--	17.5	100	18.2	13.2	0.74	67.4	51	62
HA Ec 49	09-17-03	38	25.0	15.8	4	0.83	0.415	0.51	2.39	--	--
	09-17-03	--	--	--	--	--	--	--	--	--	--

		Bromide water, fltrd, mg/L (71870)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
HA Cf 169	09-30-03	0.08	68.1	<0.2	20.3	E.1	--	214	<0.10	<0.04	8.44
	09-30-03	0.08	67.9	<0.2	20.4	E.1	--	216	<0.10	<0.04	8.61
HA Dd 92	10-07-02	--	101	<0.17	34.1	55.2	326	333	--	0.14	E.04
HA Ec 49	09-17-03	E.01	2.64	<0.2	7.82	4.6	--	32	<0.10	<0.04	0.62
	09-17-03	--	--	--	--	--	--	--	--	--	--

Geologic Unit (aquifer): 112TLBT - Talbot Formation

217PTMC - Potomac Group

Station Type: GW - Ground Water

Sampling Method: 4040 - Submersible pump

QUALITY OF GROUND WATER DATA
HARFORD COUNTY, MARYLAND—Continued

Well Number	Date	Methyl methacrylate, water, unfltrd ug/L (81597)	Methyl tert-pentyl ether, water, unfltrd ug/L (50005)	meta- + para-Xylene, water, unfltrd ug/L (85795)	Naphthalene, water, unfltrd ug/L (34696)	Methyl n-butyl ketone, water, unfltrd ug/L (77103)	n-Butyl benzene water unfltrd ug/L (77342)	n-propyl-benzene water unfltrd ug/L (77224)	o-Xylene, water, unfltrd ug/L (77135)	sec-Butyl-benzene water unfltrd ug/L (77350)	Styrene water unfltrd ug/L (77128)
HA Cf 169	09-30-03	<0.3	<0.08	<0.06	<0.5	<0.7	<0.2	<0.04	<0.07	<0.06	<0.04
	09-30-03	<0.3	<0.08	<0.06	<0.5	<0.7	<0.2	<0.04	<0.07	<0.06	<0.04
HA Dd 92	10-07-02	--	--	<0.2	--	--	--	--	<0.2	--	--
HA Ec 49	09-17-03	<0.3	<0.08	<0.06	<0.5	<0.7	<0.2	<0.04	<0.07	<0.06	<0.04
	09-17-03	--	--	--	--	--	--	--	--	--	--
		t-Butyl ethyl ether, water, unfltrd ug/L (50004)	Methyl t-butyl ether, water, unfltrd ug/L (78032)	tert-Butyl-benzene water unfltrd ug/L (77353)	Tetra-chloro-ethene, water, unfltrd ug/L (34475)	Tetra-chloro-methane water unfltrd ug/L (32102)	Tetra-hydro-furan, water, unfltrd ug/L (81607)	Toluene water unfltrd ug/L (34010)	Toluene -d8, surrog, Sch2090 wat unfltrd percent recovry (99833)	trans-1,2-Di-chloro-ethene, water, unfltrd ug/L (34546)	trans-1,3-Di-chloro-propene water unfltrd ug/L (34699)
HA Cf 169	09-30-03	<0.05	<0.2	<0.10	<0.03	<0.06	<2	E.01	97.2	<0.03	<0.09
	09-30-03	<0.05	<0.2	<0.10	<0.03	<0.06	<2	E.01	98.0	<0.03	<0.09
HA Dd 92	10-07-02	--	<0.2	--	--	--	--	<0.2	95.5	--	--
HA Ec 49	09-17-03	<0.05	<0.2	<0.10	<0.03	<0.06	<2	<0.05	100	<0.03	<0.09
	09-17-03	--	--	--	--	--	--	--	--	--	--
		trans-1,4-Di-chloro-2-butene, wat unfltrd ug/L (73547)	Tri-bromo-methane water unfltrd ug/L (32104)	Tri-chloro-ethene, water, unfltrd ug/L (39180)	Tri-chloro-fluoro-methane water unfltrd ug/L (34488)	Tri-chloro-methane water unfltrd ug/L (32106)	Vinyl chloride, water, unfltrd ug/L (39175)	Alpha radio-activty 2-sigma wat flt Th-230, pCi/L (75987)	Alpha radio-activty water, fltrd, Th-230, pCi/L (04126)	Beta radio-activty 2-sigma wat flt CS-137, pCi/L (75989)	Gross beta radioac water, fltrd, Cs-137, pCi/L (03515)
HA Cf 169	09-30-03	<0.7	<0.10	<0.04	<0.09	0.11	<0.1	--	--	--	--
	09-30-03	<0.7	<0.10	<0.04	<0.09	0.11	<0.1	--	--	--	--
HA Dd 92	10-07-02	--	--	--	--	--	--	1.4	1	2.9	1
HA Ec 49	09-17-03	<0.7	<0.10	<0.04	<0.09	E.06	<0.1	--	--	--	--
	09-17-03	--	--	--	--	--	--	--	--	--	--
					Ra-228, water, fltrd, pCi/L (81366)	Rn-222 2-sigma water unfltrd pCi/L (76002)	Rn-222, water, unfltrd pCi/L (82303)	Uranium natural water, fltrd, ug/L (22703)			
HA Cf 169	09-30-03			M		28	660	<0.02			
	09-30-03			M		--	--	<0.02			
HA Dd 92	10-07-02			--		18	180	--			
HA Ec 49	09-17-03			2		17	140	0.07			
	09-17-03			--		--	--	--			

Remark codes used in this table:
 < -- Less than
 E -- Estimated value
 M-- Presence verified, not quantified

QUALITY OF GROUND WATER DATA

HOWARD COUNTY, MARYLAND

Well Number	Date	Time	Station number		Sample type		Geologic unit	Station type	Depth of well, feet below LSD (72008)	Depth to bot sample intrval feet below LSD (72016)	Depth to top sample intrval feet below LSD (72015)
HO Cd 78	10-15-02	1100	391440076555402		Environmental		370LCRV	GW	19.00	19	9.0
	Date	Depth to water level, feet below LSD (72019)	Altitude of land surface feet (72000)	Flow rate, instantaneous gal/min (00059)	Pump or flow period prior to sampling, minutes (72004)	Color, water, fltrd, Pt-Co units (00080)	Sampling method, code (82398)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unfiltered uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
	10-15-02	11.66	426	1.5	48	2	4040	9.7	5.4	75	14.6
	Date	Hardness, water, unfiltered mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)		
	10-15-02	23	4.04	3.18	1.66	3.55	7.59	<0.17	13.9		
	Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Organic carbon, water, unfiltered mg/L (00680)	Arsenic water, fltrd, ug/L (01000)
	10-15-02	2.6	56	53	<0.04	3.60	<0.008	E.01	E.02	<0.4	E.1
	Date	Beryllium, water, fltrd, ug/L (01010)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfiltered recoverable, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfiltered recoverable, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Thallium, water, fltrd, ug/L (01057)	2,6-Diethyl-aniline water fltrd 0.7u GF (82660)	CIAT, water, fltrd, ug/L (04040)
	10-15-02	0.14	<10	210	0.11	E3.0	6.5	<0.02	E.04	<0.006	0.97

Geologic Unit (aquifer): 370LCRV-Loch Raven Schist

Station Type: GW - Ground Water

Sampling Method: 4040 - Submersible pump

QUALITY OF GROUND WATER DATA
HOWARD COUNTY, MARYLAND—Continued

Well Number	Date	CEAT, water, fltrd, ug/L (04038)	Aceto-chlor, water, fltrd, ug/L (49260)	Ala-chlor, water, fltrd, ug/L (46342)	alpha-HCH, water, fltrd, ug/L (34253)	alpha-HCH-d6 surrog, Sch1379, wat flt percent recovry (90505)	alpha-HCH-d6, surrog, wat flt percent recovry (91065)	Ametryn water, fltrd, ug/L (38401)	Atra-zine, water, fltrd, ug/L (39632)	Azin-phos-methyl, water, fltrd, 0.7u GF ug/L (82686)	Ben-flur-alin, water, fltrd, 0.7u GF ug/L (82673)
HO Cd 78	10-15-02	0.06	<0.006	<0.004	<0.005	75.1	89.1	<0.05	0.110	<0.050	<0.010
	Date	Broma-cil, water, fltrd, ug/L (04029)	Buta-chlor, water, fltrd, ug/L (04026)	Butyl-ate, water, fltrd, ug/L (04028)	Car-baryl, water, fltrd, 0.7u GF ug/L (82680)	Carbo-furan, water, fltrd, 0.7u GF ug/L (82674)	Car-boxin, water, fltrd, ug/L (04027)	Chlor-pyrifos water, fltrd, ug/L (38933)	cis-Per-methrin fltrd, 0.7u GF ug/L (82687)	Cyana-zine, water, fltrd, ug/L (04041)	Cyclo-ate, water, fltrd, ug/L (04031)
	10-15-02	<0.05	<0.05	<0.002	<0.041	E.006	<0.05	<0.005	<0.006	<0.018	<0.05
	Date	DCPA, water fltrd, 0.7u GF ug/L (82682)	Diazi-non, water, fltrd, ug/L (39572)	Diazi-non-d10 sur Sch 1379, wat flt pct rev (90670)	Diazi-non-d10 surrog, wat flt 0.7u GF percent recovry (91063)	Diel-drin, water, fltrd, ug/L (39381)	Diphen-amid, water, fltrd, ug/L (04033)	Disul-foton, water, fltrd, 0.7u GF ug/L (82677)	EPTC, water, fltrd, 0.7u GF ug/L (82668)	Ethal-flur-alin, water, fltrd, 0.7u GF ug/L (82663)	Etho-prop, water, fltrd, 0.7u GF ug/L (82672)
	10-15-02	<0.003	<0.005	77.9	97.1	<0.005	<0.05	<0.02	<0.002	<0.009	<0.005
	Date	Fonofos water, fltrd, ug/L (04095)	Hexa-zinone, water, fltrd, ug/L (04025)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd, 0.7u GF ug/L (82666)	Malathion, water, fltrd, ug/L (39532)	Methyl para-thion, water, fltrd, 0.7u GF ug/L (82667)	Metola-chlor, water, fltrd, ug/L (39415)	Metri-buzin, water, fltrd, ug/L (82630)	Moli-nate, water, fltrd, 0.7u GF ug/L (82671)	Naprop-amide, water, fltrd, 0.7u GF ug/L (82684)
	10-15-02	<0.003	<0.05	<0.004	<0.035	<0.027	<0.006	0.019	<0.006	<0.002	<0.007
	Date	p,p'-DDE, water, fltrd, ug/L (34653)	Para-thion, water, fltrd, ug/L (39542)	Peb-ulate, water, fltrd, 0.7u GF ug/L (82669)	Pendi-meth-alin, water, fltrd, 0.7u GF ug/L (82683)	Phorate water fltrd, 0.7u GF ug/L (82664)	Prome-ton, water, fltrd, ug/L (04037)	Prome-tryn, water, fltrd, ug/L (04036)	Pron-amide, water, fltrd, 0.7u GF ug/L (82676)	Propa-chlor, water, fltrd, ug/L (04024)	Pro-panil, water, fltrd, 0.7u GF ug/L (82679)
	10-15-02	<0.003	<0.010	<0.004	<0.022	<0.011	<0.01	<0.05	<0.004	<0.010	<0.011
	Date	Propar-gite, water, fltrd, 0.7u GF ug/L (82685)	Propa-zine, water, fltrd, ug/L (38535)	Sima-zine, water, fltrd, ug/L (04035)	Sima-tryn, water, fltrd, ug/L (04030)	Tebu-thiuron water fltrd, 0.7u GF ug/L (82670)	Terba-cil, water, fltrd, 0.7u GF ug/L (82665)	Terba-cil, water, fltrd, ug/L (04032)	Terbu-fos, water, fltrd, 0.7u GF ug/L (82675)	Thio-bencarb water, fltrd, 0.7u GF ug/L (82681)	Tri-allate, water, fltrd, 0.7u GF ug/L (82678)
	10-15-02	<0.02	<0.05	<0.005	<0.05	<0.02	<0.034	<0.05	<0.02	<0.005	<0.002

QUALITY OF GROUND WATER DATA
HOWARD COUNTY, MARYLAND—Continued

Well Number	Date	Tri-fluor-alin, water, fltrd 0.7u GF (82661)	Tri-fluor-alin, water, fltrd, ug/L (04023)	Vernol-ate, water, fltrd, ug/L (04034)	Xylenes water unfltrd ug/L (81551)	1,2-Di-chloro-ethane-d4, sur Sch2090 wat unf pct rcv (99832)	14Bromo-fluoro-benzene surrog. VOC Sch wat unf pct rcv (99834)	Benzene water unfltrd ug/L (34030)	Ethyl-benzene water unfltrd ug/L (34371)	meta-+ para-Xylene, water, unfltrd ug/L (85795)	o-Xylene, water, unfltrd ug/L (77135)
HO Cd 78	10-15-02	<0.009	<0.05	<0.05	<0.2	104	83.2	<0.2	<0.2	<0.2	<0.2
	Date	Methyl t-butyl ether, water, unfltrd ug/L (78032)	Toluene water unfltrd ug/L (34010)	Toluene -d8, surrog, Sch2090 wat unf percent recovry (99833)	Alpha radio-activty 2-sigma wat flt Th-230, pCi/L (75987)	Alpha radio-activty water, fltrd, Th-230, pCi/L (04126)	Beta radio-activty 2-sigma wat flt CS-137, pCi/L (75989)	Gross beta radioac water, fltrd, Cs-137, pCi/L (03515)	Rn-222 2-sigma water unfltrd pCi/L (76002)	Rn-222, water, unfltrd pCi/L (82303)	County
	10-15-02	<0.2	<0.2	94.9	0.43	M	0.87	3	26	670	027

Remark codes used in this table

< -- Less than

E -- Estimated value

M-- Presence verified, not quantified

QUALITY OF GROUND WATER DATA
KENT COUNTY, MARYLAND

Well Number	Date	Time	Station number	Sample type	Geologic unit	Station type	Depth of well, feet below LSD (72008)	Altitude of land surface feet (72000)	Color, water, fltrd, Pt-Co units (00080)				
KE Be 217	09-15-03	1300	391706075551701	Environmental	112CLMB	GW	95	60	<1				
									Residue water, fltrd, sum of constituents mg/L (70301)				
				Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	
		12	3.78	0.679	1.82	3.28	3.21	<0.2	14.3	0.9	44		
				Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Organic carbon, water, unfltrd mg/L (00680)	Arsenic water, fltrd, mg/L (01000)	Beryllium, water, fltrd, mg/L (01010)	Iron, water, fltrd, mg/L (01046)
		52	<0.04	2.60	<0.008	<0.18	E.02	<0.4	<0.3	0.10	<8		
				Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recover-able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Thallium, water, fltrd, ug/L (01057)	CIAT, water, fltrd, ug/L (04040)	CEAT, water, fltrd, ug/L (04038)	Aceto-chlor, water, fltrd, ug/L (49260)	Ala-chlor, water, fltrd, ug/L (46342)
		M	6.00	3.9	3.7	0.02	<0.04	<0.05	<0.05	<0.05	<0.05	<0.05	
				alpha-HCH-d6 surrog, Sch1379 wat flt percent recovery (90505)	Ametryn water, fltrd, ug/L (38401)	Atrazine, water, fltrd, ug/L (39632)	Bromacil, water, fltrd, ug/L (04029)	Butachlor, water, fltrd, ug/L (04026)	Butylate, water, fltrd, ug/L (04028)	Carboxin, water, fltrd, ug/L (04027)	Cyanazine, water, fltrd, ug/L (04041)	Cycloate, water, fltrd, ug/L (04031)	Diazinon-d10 sur Sch 1379, wat flt pct rcv (90670)
		73.4	<0.05	<0.05	<1.00	<0.05	<0.05	<0.05	<0.02	<0.05	90.3		

Geologic Unit (aquifer): 112CLMB - Columbia Formation

Station Type: GW - Ground Water

QUALITY OF GROUND WATER DATA

KENT COUNTY, MARYLAND—Continued

Well Number	Date	Diphen- amid, water, fltrd, ug/L (04033)	Hexa- zinone, water, fltrd, ug/L (04025)	Metola- chlor, water, fltrd, ug/L (39415)	Metri- buzin, water, fltrd, ug/L (82630)	Prome- ton, water, fltrd, ug/L (04037)	Prome- tryn, water, fltrd, ug/L (04036)	Propa- chlor, water, fltrd, ug/L (04024)	Propa- zine, water, fltrd, ug/L (38535)	Sima- zine, water, fltrd, ug/L (04035)	Sima- tryn, water, fltrd, ug/L (04030)
KE Be 217	09-15-03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
		Terba- cil, water, fltrd, ug/L (04032)	Tri- flur- alin, water, fltrd, ug/L (04023)	Vernol- ate, water, fltrd, ug/L (04034)	Xylenes water unfltrd ug/L (81551)	1,2-Di- chloro- ethane- d4, sur Sch2090 wat unf pct rcv (99832)	14Bromo fluoro- benzene surrog. VOC Sch wat unf pct rcv (99834)	Benzene water unfltrd ug/L (34030)	Ethyl- benzene water unfltrd ug/L (34371)	meta- + para- Xylene, water, unfltrd ug/L (85795)	o- Xylene, water, unfltrd ug/L (77135)
		<0.05	<0.05	<0.05	<0.2	99.7	81.0	<0.2	<0.2	<0.2	<0.2
		Methyl t-butyl ether, water, unfltrd ug/L (78032)	Toluene water unfltrd ug/L (34010)	Toluene -d8, surrog, Sch2090 wat unf percent recovry (99833)	Alpha radio- activity 2-sigma wat flt Th-230, pCi/L (75987)	Alpha radio- activity water, fltrd, Th-230, pCi/L (04126)	Beta radio- activity 2-sigma wat flt CS-137, pCi/L (75989)	Gross beta radioac water, fltrd, Cs-137, pCi/L (03515)	Rn-222 2-sigma water unfltrd pCi/L (76002)	Rn-222, water, unfltrd pCi/L (82303)	
		<0.2	<0.2	95.7	0.52	M	0.92	2	27	600	

Remark codes used in this table:
 < -- Less than
 E -- Estimated value
 M-- Presence verified, not quantified

QUALITY OF GROUND WATER DATA
MONTGOMERY COUNTY, MARYLAND

Well Number	Date	Time	Station number	Sample type	Geologic unit	Station type	Depth of well, feet below LSD (72008)	Depth to water level, feet below LSD (72019)	Altitude of land surface feet (72000)
MO Df 61	06-30-03	1420	390812077051001	Environmental	300BLDR	GW	58.53	18.78	455
MO Ce 25	06-23-03	1430	391119077134601	Environmental	300UPPC	GW	44.83	8.60	390
MO Dd 26	06-24-03	1105	390951077162301	Environmental	300UPPC	GW	65.38	23.40	405
MO Ce 26	06-19-03	1100	391004077132601	Environmental	300UPPC	GW	59.77	29.55	374
MO Ce 21	06-17-03	1715	391113077125101	Environmental	300UPPC	GW	49.18	5.55	405
MO Ce 34	06-25-03	1335	390606077022201	Environmental	300KNSG	GW	45.13	6.03	322
MO Ce 24	06-18-03	1630	391102077101901	Environmental	300UPPC	GW	68.83	15.25	482
MO Ce 22	06-18-03	1130	391114077114201	Environmental	300UPPC	GW	44.93	22.24	420
MO Ce 23	08-13-03	0900	391138077110101	Blank	300UPPC	GW	--	--	--
	08-13-03	1245		Environmental	300UPPC	GW	57.78	31.60	500
MO Dd 28	07-01-03	1720	390538077195701	Environmental	300IJVM	GW	200.29	0.00	261
MO De 51	06-12-03	1400	390906077145601	Environmental	300UPPC	GW	64.84	41.59	390
MO Dd 27	06-26-03	1030	390743077160601	Environmental	300UPPC	GW	76.98	28.04	393
MO De 52	07-02-03	0915	390533077125201	Environmental	300UPPC	GW	43.23	14.05	489
MO De 50	06-24-03	1455	390948077145401	Environmental	300UPPC	GW	74.13	18.98	402

		Flow rate, instantaneous gal/min (00059)	Pump or flow period prior to sampling, minutes (72004)	Sampling method, code (82398)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfiltered, uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)
MO Df 61	06-30-03	0.40	180	4040	757	5.9	61	5.8	588	31.0	17.0
MO Ce 25	06-23-03	0.70	165	4040	754	5.0	51	6.0	309	31.0	16.0
MO Dd 26	06-24-03	0.40	155	4040	757	4.4	45	5.9	548	30.5	16.5
MO Ce 26	06-19-03	0.40	150	4040	752	7.7	80	5.6	89	25.5	16.5
MO Ce 21	06-17-03	0.86	100	4040	758	4.8	46	5.5	327	17.5	13.0
MO Ce 34	06-25-03	0.32	315	4040	761	8.5	91	6.1	310	34.5	18.5
MO Ce 24	06-18-03	0.13	155	4040	747	6.8	70	6.6	91	24.5	15.5
MO Ce 22	06-18-03	0.50	95	4040	750	2.9	30	5.7	372	22.5	16.5
MO Ce 23	08-13-03	--	--	4040	--	--	--	--	--	--	--
	08-13-03	0.50	185	4040	760	11.1	114	5.3	69	34.0	16.5
MO Dd 28	07-01-03	0.25	405	4040	761	4.4	49	7.8	167	27.5	20.5
MO De 51	06-12-03	0.50	175	4040	760	3.9	40	5.4	538	29.5	16.0
MO Dd 27	06-26-03	0.40	180	4040	753	8.2	84	5.7	115	30.0	16.0
MO De 52	07-02-03	0.40	70	4040	752	1.2	13	7.2	832	24.5	16.0
MO De 50	06-24-03	0.50	110	4040	757	6.7	67	6.1	348	31.5	15.0

Geologic Unit (aquifer): 300BLDR - Boulder Gneiss
300IJMV - Ijamsville Formation
300KNSG - Kensington Quartz Diorite
300UPPC - Upper Pelitic Schist Of Wissahickon Formation

Station Type: GW - Ground Water

Sampling Method: 4040 - Submersible pump

QUALITY OF GROUND WATER DATA

MONTGOMERY COUNTY, MARYLAND—Continued

Well Number	Date	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Bromide water, fltrd, mg/L (71870)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)
MO Df 61	06-30-03	180	36.7	20.7	3.34	30.0	26	31	0.04	146	<0.2
MO Ce 25	06-23-03	110	21.3	14.0	1.48	8.99	73	89	0.04	18.9	<0.2
MO Dd 26	06-24-03	160	35.7	17.7	2.62	39.4	44	54	0.04	128	<0.2
MO Ce 26	06-19-03	26	5.41	3.12	0.98	5.41	14	17	0.02	8.97	<0.2
MO Ce 21	06-17-03	98	21.4	10.7	1.82	20.0	24	29	0.06	72.4	<0.2
MO Ce 34	06-25-03	110	30.2	7.75	4.23	11.6	44	54	0.02	40.3	<0.2
MO Ce 24	06-18-03	30	5.67	3.90	0.61	5.43	24	30	0.05	5.72	<0.2
MO Ce 22	06-18-03	110	26.3	11.7	3.09	11.8	52	63	0.15	51.7	<0.2
MO Ce 23	08-13-03	--	0.02	<0.008	<0.16	E.08	--	--	<0.02	<0.20	<0.2
	08-13-03	19	2.03	3.35	1.10	5.22	3	4	0.02	11.7	<0.2
MO Dd 28	07-01-03	73	24.8	2.66	0.83	6.28	78	95	E.01	1.80	<0.2
MO De 51	06-12-03	200	46.5	21.0	2.11	9.26	25	31	0.02	125	<0.2
MO Dd 27	06-26-03	36	7.41	4.31	0.92	6.66	19	23	0.04	11.5	<0.2
MO De 52	07-02-03	450	15.7	99.1	1.49	18.6	347	423	0.10	42.8	<0.2
MO De 50	06-24-03	140	27.7	18.3	1.72	9.61	46	56	0.02	48.3	<0.2
		Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitrogen, water, fltrd, mg/L (00607)
MO Df 61	06-30-03	17.6	15.9	294	317	E.07	<0.04	--	1.16	E.007	--
MO Ce 25	06-23-03	27.7	42.3	184	199	E.06	<0.04	--	1.20	<0.008	--
MO Dd 26	06-24-03	16.4	7.4	286	338	E.06	<0.04	--	2.61	<0.008	--
MO Ce 26	06-19-03	16.3	1.8	61	59	<0.10	<0.04	--	2.40	<0.008	--
MO Ce 21	06-17-03	14.9	6.2	169	203	<0.10	<0.04	--	1.50	<0.008	--
MO Ce 34	06-25-03	23.3	24.8	183	194	<0.10	E.03	--	3.07	<0.008	--
MO Ce 24	06-18-03	25.4	0.6	75	77	E.09	0.05	--	2.76	<0.008	--
MO Ce 22	06-18-03	17.7	6.9	221	230	0.63	0.56	9.88	9.91	0.037	0.07
MO Ce 23	08-13-03	0.06	<0.2	--	<10	<0.10	<0.04	--	<0.06	<0.008	--
	08-13-03	7.35	<0.2	--	52	<0.10	<0.04	--	2.59	<0.008	--
MO Dd 28	07-01-03	13.5	7.3	104	120	<0.10	<0.04	--	<0.06	<0.008	--
MO De 51	06-12-03	16.9	24.7	261	277	<0.10	<0.04	--	E.05	<0.008	--
MO Dd 27	06-26-03	19.3	0.2	82	82	<0.10	<0.04	--	4.64	<0.008	--
MO De 52	07-02-03	47.3	32.5	475	521	0.16	<0.04	--	2.16	<0.008	--
MO De 50	06-24-03	32.6	28.0	216	241	0.24	<0.04	--	4.85	<0.008	--

QUALITY OF GROUND WATER DATA
MONTGOMERY COUNTY, MARYLAND—Continued

Well Number	Date	Ortho-phosphate, water, fltrd, mg/L (00660)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Total nitrogen, water, fltrd, mg/L (00602)	Organic carbon, water, fltrd, mg/L (00681)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic, water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)
MO Df 61	06-30-03	--	<0.02	--	E.3	E1	<0.30	<0.3	176	0.06	<7
MO Ce 25	06-23-03	--	<0.02	--	0.7	<2	<0.30	<0.3	18	<0.06	E4
MO Dd 26	06-24-03	--	E.01	--	E.2	<2	<0.30	<0.3	23	<0.06	<7
MO Ce 26	06-19-03	0.074	0.02	--	E.3	M	<0.30	<0.3	16	<0.06	<7
MO Ce 21	06-17-03	--	<0.02	--	E.3	E2	<0.30	<0.3	29	E.04	<7
MO Ce 34	06-25-03	--	<0.02	--	0.4	<2	<0.30	<0.3	109	<0.06	E6
MO Ce 24	06-18-03	0.061	0.02	--	E.2	<2	<0.30	<0.3	52	<0.06	7
MO Ce 22	06-18-03	--	<0.02	11	0.5	E1	<0.30	<0.3	120	0.08	<7
MO Ce 23	08-13-03	--	<0.18	--	E.2	<2	<0.30	<0.3	M	<0.06	<7
	08-13-03	--	<0.18	--	E.2	E2	<0.30	<0.3	29	0.08	<7
MO Dd 28	07-01-03	--	<0.02	--	<0.3	2	<0.30	1.3	30	<0.06	E4
MO De 51	06-12-03	0.067	0.02	--	<0.3	E2	<0.30	<0.3	19	E.04	<7
MO Dd 27	06-26-03	0.089	0.03	--	<0.3	E2	<0.30	<0.3	19	E.05	<7
MO De 52	07-02-03	0.055	0.02	2.3	2.5	<2	<0.30	0.6	19	<0.06	15
MO De 50	06-24-03	0.080	0.03	5.1	1.8	<2	<0.30	<0.3	30	<0.06	<7
		Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Cobalt water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Lithium water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)
MO Df 61	06-30-03	0.06	<0.8	2.48	0.4	2,820	0.21	1.3	145	E.2	6.58
MO Ce 25	06-23-03	0.11	<0.8	0.820	5.9	17	<0.08	1.6	31.0	0.5	15.6
MO Dd 26	06-24-03	E.02	E.7	0.118	5.1	18	<0.08	4.0	18.7	E.3	4.92
MO Ce 26	06-19-03	0.07	E.8	0.170	0.4	E8	<0.08	1.0	13.5	<0.3	1.45
MO Ce 21	06-17-03	0.20	<0.8	0.640	0.6	223	E.05	0.9	13.8	<0.3	2.23
MO Ce 34	06-25-03	<0.04	E.7	0.431	0.5	126	E.06	2.2	53.9	0.4	1.86
MO Ce 24	06-18-03	E.03	E.5	0.069	E.2	402	<0.08	3.8	31.3	0.3	1.08
MO Ce 22	06-18-03	0.17	E.5	7.38	0.2	15,600	<0.08	3.0	535	<0.3	3.24
MO Ce 23	08-13-03	<0.04	<0.8	<0.015	<0.2	E5	<0.08	<0.5	0.2	<0.3	0.14
	08-13-03	<0.04	<0.8	0.131	E.2	E4	<0.08	1.4	2.8	<0.3	3.04
MO Dd 28	07-01-03	<0.04	<0.8	0.143	0.3	E6	<0.08	5.2	46.7	2.9	2.19
MO De 51	06-12-03	1.22	0.9	0.245	1.5	<8	E.04	2.7	3.7	<0.3	2.89
MO Dd 27	06-26-03	E.03	E.7	0.280	0.3	16	<0.08	2.1	8.3	<0.3	3.78
MO De 52	07-02-03	<0.04	1.5	0.421	1.1	<8	E.05	0.6	29.3	<0.3	47.5
MO De 50	06-24-03	0.05	1.2	0.175	1.5	21	0.10	3.6	30.4	0.5	10.5

QUALITY OF GROUND WATER DATA

MONTGOMERY COUNTY, MARYLAND—Continued

Well Number	Date	Selen- ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Stront- ium, water, fltrd, ug/L (01080)	Thall- ium, water, fltrd, ug/L (01057)	Vanad- ium, water, fltrd, ug/L (01085)	Zinc, water, fltrd, ug/L (01090)	2,6-Di- ethyl- aniline water fltrd 0.7u GF ug/L (82660)	CIAT, water, fltrd, ug/L (04040)	Aceto- chlor, water, fltrd, ug/L (49260)	Ala- chlor, water, fltrd, ug/L (46342)
		alpha- HCH, water, fltrd, ug/L (34253)	alpha- HCH-d6, surrog, wat flt 0.7u GF percent recovry (91065)	Atra- zine, water, fltrd, ug/L (39632)	Azin- phos- methyl, water, fltrd 0.7u GF ug/L (82686)	Ben- flur- alin, water, fltrd 0.7u GF ug/L (82673)	Butyl- ate, water, fltrd, ug/L (04028)	Car- baryl, water, fltrd 0.7u GF ug/L (82680)	Carbo- furan, water, fltrd 0.7u GF ug/L (82674)	Chlor- pyrifos water, fltrd, ug/L (38933)	cis- Per- methrin water fltrd 0.7u GF ug/L (82687)
MO Df 61	06-30-03	<0.5	<0.2	281	E.02	0.3	4	<0.006	<0.006	<0.006	<0.004
MO Ce 25	06-23-03	E.3	<0.2	83.0	<0.04	2.2	3	<0.006	E.019	<0.006	<0.004
MO Dd 26	06-24-03	<0.5	<0.2	247	<0.04	0.7	2	<0.006	<0.006	<0.006	<0.004
MO Ce 26	06-19-03	<0.5	<0.2	54.7	<0.04	0.2	3	<0.006	E.006	<0.006	<0.004
MO Ce 21	06-17-03	<0.5	<0.2	173	<0.04	0.6	4	<0.006	E.028	<0.006	<0.004
MO Ce 34	06-25-03	<0.5	<0.2	107	<0.04	0.4	M	<0.006	<0.006	<0.006	<0.004
MO Ce 24	06-18-03	<0.5	<0.2	37.1	<0.04	1.3	M	<0.006	E.190	<0.006	0.007
MO Ce 22	06-18-03	<0.5	<0.2	229	0.06	1.4	8	<0.006	E.008	<0.006	<0.004
MO Ce 23	08-13-03	<0.5	<0.2	E.14	<0.04	<0.1	M	<0.006	<0.006	<0.006	<0.004
	08-13-03	<0.5	<0.2	16.2	E.03	<0.1	10	<0.006	<0.006	<0.006	<0.004
MO Dd 28	07-01-03	<0.5	<0.2	60.3	E.03	0.2	M	<0.006	<0.006	<0.006	<0.004
MO De 51	06-12-03	<0.5	<0.2	375	<0.04	0.5	4	<0.006	<0.006	<0.006	<0.004
MO Dd 27	06-26-03	<0.5	<0.2	78.0	<0.04	E.1	10	<0.006	E.005	<0.006	<0.004
MO De 52	07-02-03	E.3	<0.2	49.1	0.08	3.9	M	<0.006	<0.006	<0.006	<0.004
MO De 50	06-24-03	<0.5	<0.2	118	<0.04	2.2	2	<0.006	E.129	<0.006	<0.004
MO Df 61	06-30-03	<0.005	96.3	<0.007	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006
MO Ce 25	06-23-03	<0.005	100	0.009	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006
MO Dd 26	06-24-03	<0.005	94.4	0.007	<0.050	<0.010	<0.002	E.091	<0.020	<0.005	<0.006
MO Ce 26	06-19-03	<0.005	90.3	<0.007	<0.050	<0.010	<0.002	E.007	<0.020	<0.005	<0.006
MO Ce 21	06-17-03	<0.005	96.4	0.015	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006
MO Ce 34	06-25-03	<0.005	0.0	<0.007	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006
MO Ce 24	06-18-03	<0.005	88.4	0.015	<0.050	<0.010	<0.002	<0.041	E.012	<0.005	<0.006
MO Ce 22	06-18-03	<0.005	87.2	0.009	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006
MO Ce 23	08-13-03	<0.005	83.7	<0.007	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006
	08-13-03	<0.005	84.9	<0.007	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006
MO Dd 28	07-01-03	<0.005	92.3	<0.007	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006
MO De 51	06-12-03	<0.005	86.8	<0.007	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006
MO Dd 27	06-26-03	<0.005	92.5	<0.007	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006
MO De 52	07-02-03	<0.005	92.9	<0.007	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006
MO De 50	06-24-03	<0.005	97.2	0.018	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006

QUALITY OF GROUND WATER DATA

MONTGOMERY COUNTY, MARYLAND—Continued

Well Number	Date	Peb- ulate, water, fltrd	Pendi- meth- alin, water, fltrd	Phorate water fltrd	Prome- ton, water, fltrd,	Pron- amide, water, fltrd	Propa- chlor, water, fltrd,	Pro- panil, water, fltrd	Propar- gite, water, fltrd	Sima- zine, water, fltrd,	Tebu- thiuron water fltrd
		0.7u GF ug/L (82669)	0.7u GF ug/L (82683)	0.7u GF ug/L (82664)	ug/L (04037)	0.7u GF ug/L (82676)	ug/L (04024)	0.7u GF ug/L (82679)	0.7u GF ug/L (82685)	ug/L (04035)	0.7u GF ug/L (82670)
MO Df 61	06-30-03	<0.004	<0.022	<0.011	<0.01	<0.004	<0.010	<0.011	<0.02	<0.005	<0.02
MO Ce 25	06-23-03	<0.004	<0.022	<0.011	<0.01	<0.004	<0.010	<0.011	<0.02	<0.005	<0.02
MO Dd 26	06-24-03	<0.004	<0.022	<0.011	<0.01	<0.004	<0.010	<0.011	<0.02	<0.005	<0.02
MO Ce 26	06-19-03	<0.004	<0.022	<0.011	<0.01	<0.004	<0.010	<0.011	<0.02	<0.005	<0.02
MO Ce 21	06-17-03	<0.004	<0.022	<0.011	<0.01	<0.004	<0.010	<0.011	<0.02	<0.005	<0.02
MO Ce 34	06-25-03	<0.004	<0.022	<0.011	<0.01	<0.004	<0.010	<0.011	<0.02	<0.005	<0.02
MO Ce 24	06-18-03	<0.004	<0.022	<0.011	<0.01	<0.004	<0.010	<0.011	<0.02	<0.005	<0.02
MO Ce 22	06-18-03	<0.004	<0.022	<0.011	<0.01	<0.004	<0.010	<0.011	<0.02	0.011	<0.02
MO Ce 23	08-13-03	<0.004	<0.022	<0.011	<0.01	<0.004	<0.010	<0.011	<0.02	<0.005	<0.02
MO Dd 28	07-01-03	<0.004	<0.022	<0.011	<0.01	<0.004	<0.010	<0.011	<0.02	<0.005	<0.02
MO De 51	06-12-03	<0.004	<0.022	<0.011	<0.01	<0.004	<0.010	<0.011	<0.02	<0.005	<0.02
MO Dd 27	06-26-03	<0.004	<0.022	<0.011	<0.01	<0.004	<0.010	<0.011	<0.02	<0.005	<0.02
MO De 52	07-02-03	<0.004	<0.022	<0.011	<0.01	<0.004	<0.010	<0.011	<0.02	<0.005	<0.02
MO De 50	06-24-03	<0.004	<0.022	<0.011	<0.01	<0.004	<0.010	<0.011	<0.02	<0.005	<0.02
		Terba- cil, water, fltrd	Terbu- fos, water, fltrd	Thio- bencarb water fltrd	Tri- allate, water, fltrd	Tri- flur- alin, water, fltrd	1,1,1,2 -Tetra- chloro- ethane, water, unfltrd	1,1,1- Tri- chloro- ethane, water, unfltrd	1,1,2,2 -Tetra- chloro- ethane, water, unfltrd	CFC-113 water unfltrd	1,1,2- Tri- chloro- ethane, water, unfltrd
		0.7u GF ug/L (82665)	0.7u GF ug/L (82675)	0.7u GF ug/L (82681)	0.7u GF ug/L (82678)	0.7u GF ug/L (82661)	ug/L (77562)	ug/L (34506)	ug/L (34516)	ug/L (77652)	ug/L (34511)
MO Df 61	06-30-03	<0.034	<0.02	<0.005	<0.002	<0.009	<0.03	<0.03	<0.09	<0.06	<0.06
MO Ce 25	06-23-03	<0.034	<0.02	<0.005	<0.002	<0.009	<0.03	<0.03	<0.09	<0.06	<0.06
MO Dd 26	06-24-03	<0.034	<0.02	<0.005	<0.002	<0.009	<0.03	<0.03	<0.09	<0.06	<0.06
MO Ce 26	06-19-03	<0.034	<0.02	<0.005	<0.002	<0.009	<0.03	<0.03	<0.09	<0.06	<0.06
MO Ce 21	06-17-03	<0.034	<0.02	<0.005	<0.002	<0.009	<0.03	0.15	<0.09	<0.06	<0.06
MO Ce 34	06-25-03	<0.034	<0.02	<0.005	<0.002	<0.009	<0.03	<0.03	<0.09	<0.06	<0.06
MO Ce 24	06-18-03	<0.034	<0.02	<0.005	<0.002	<0.009	<0.03	<0.03	<0.09	<0.06	<0.06
MO Ce 22	06-18-03	<0.034	<0.02	<0.005	<0.002	<0.009	<0.03	<0.03	<0.09	<0.06	<0.06
MO Ce 23	08-13-03	<0.034	<0.02	<0.005	<0.002	<0.009	<0.03	<0.03	<0.09	<0.06	<0.06
MO Dd 28	07-01-03	<0.034	<0.02	<0.005	<0.002	<0.009	<0.03	<0.03	<0.09	<0.06	<0.06
MO De 51	06-12-03	<0.034	<0.02	<0.005	<0.002	<0.009	<0.03	<0.03	<0.09	<0.06	<0.06
MO Dd 27	06-26-03	<0.034	<0.02	<0.005	<0.002	<0.009	<0.03	<0.03	<0.09	<0.06	<0.06
MO De 52	07-02-03	<0.034	<0.02	<0.005	<0.002	<0.009	<0.03	<0.03	<0.09	<0.06	<0.06
MO De 50	06-24-03	<0.034	<0.02	<0.005	<0.002	<0.009	<0.03	<0.03	<0.09	<0.06	<0.06

QUALITY OF GROUND WATER DATA
MONTGOMERY COUNTY, MARYLAND—Continued

Well Number	Date	1,1-Di-chloro-ethane, water unfltrd ug/L (34496)	1,1-Di-chloro-ethene, water, unfltrd ug/L (34501)	1,1-Di-chloro-propene water unfltrd ug/L (77168)	1,2,3,4 Tetra-methyl-benzene water unfltrd ug/L (49999)	1,2,3,5 Tetra-methyl-benzene water unfltrd ug/L (50000)	1,2,3-Tri-chloro-benzene water unfltrd ug/L (77613)	1,2,3-Tri-chloro-propane water unfltrd ug/L (77443)	1,2,3-Tri-methyl-benzene water unfltrd ug/L (77221)	1,2,4-Tri-chloro-benzene water unfltrd ug/L (34551)	1,2,4-Tri-methyl-benzene water unfltrd ug/L (77222)
MO Df 61	06-30-03	<0.04	<0.04	<0.05	<0.2	<0.2	<0.3	<0.16	<0.1	<0.1	<0.06
MO Ce 25	06-23-03	<0.04	<0.04	<0.05	<0.2	<0.2	<0.3	<0.16	<0.1	<0.1	<0.06
MO Dd 26	06-24-03	<0.04	<0.04	<0.05	<0.2	<0.2	<0.3	<0.16	<0.1	<0.1	<0.06
MO Ce 26	06-19-03	<0.04	<0.04	<0.05	<0.2	<0.2	<0.3	<0.16	<0.1	<0.1	<0.06
MO Ce 21	06-17-03	<0.04	<0.04	<0.05	<0.2	<0.2	<0.3	<0.16	<0.1	<0.1	<0.06
MO Ce 34	06-25-03	<0.04	<0.04	<0.05	<0.2	<0.2	<0.3	<0.16	<0.1	<0.1	<0.06
MO Ce 24	06-18-03	<0.04	<0.04	<0.05	<0.2	<0.2	<0.3	<0.16	<0.1	<0.1	<0.06
MO Ce 22	06-18-03	<0.04	<0.04	<0.05	<0.2	<0.2	<0.3	<0.16	<0.1	<0.1	<0.06
MO Ce 23	08-13-03	<0.04	<0.04	<0.05	<0.2	<0.2	<0.3	<0.16	<0.1	<0.1	<0.06
MO Dd 28	07-01-03	<0.04	<0.04	<0.05	<0.2	<0.2	<0.3	<0.16	<0.1	<0.1	<0.06
MO De 51	06-12-03	<0.04	<0.04	<0.05	<0.2	<0.2	<0.3	<0.16	<0.1	<0.1	<0.06
MO Dd 27	06-26-03	<0.04	<0.04	<0.05	<0.2	<0.2	<0.3	<0.16	<0.1	<0.1	<0.06
MO De 52	07-02-03	<0.04	<0.04	<0.05	<0.2	<0.2	<0.3	<0.16	<0.1	<0.1	<0.06
MO De 50	06-24-03	<0.04	<0.04	<0.05	<0.2	<0.2	<0.3	<0.16	<0.1	<0.1	<0.06
		Dibromo-chloro-propane water unfltrd ug/L (82625)	1,2-Di-bromo-ethane, water, unfltrd ug/L (77651)	1,2-Di-chloro-benzene water unfltrd ug/L (34536)	1,2-Di-chloro-ethane, water, unfltrd ug/L (32103)	1,2-Di-chloro-ethane-d4, sur Sch2090 wat unf pct rcv (99832)	1,2-Di-chloro-propane water unfltrd ug/L (34541)	1,3,5-Tri-methyl-benzene water unfltrd ug/L (77226)	1,3-Di-chloro-benzene water unfltrd ug/L (34566)	1,3-Di-chloro-propane water unfltrd ug/L (77173)	1,4-Di-chloro-benzene water unfltrd ug/L (34571)
MO Df 61	06-30-03	<0.5	<0.04	<0.03	<0.1	119	<0.03	<0.04	<0.03	<0.1	E.04
MO Ce 25	06-23-03	<0.5	<0.04	<0.03	<0.1	118	<0.03	<0.04	<0.03	<0.1	E.09
MO Dd 26	06-24-03	<0.5	<0.04	<0.03	<0.1	119	<0.03	<0.04	<0.03	<0.1	0.11
MO Ce 26	06-19-03	<0.5	<0.04	<0.03	<0.1	133	<0.03	<0.04	<0.03	<0.1	E.05
MO Ce 21	06-17-03	<0.5	<0.04	<0.03	<0.1	121	<0.03	<0.04	<0.03	<0.1	E.02
MO Ce 34	06-25-03	<0.5	<0.04	<0.03	<0.1	137	<0.03	<0.04	<0.03	<0.1	E.02
MO Ce 24	06-18-03	<0.5	<0.04	<0.03	<0.1	124	<0.03	<0.04	<0.03	<0.1	E.06
MO Ce 22	06-18-03	<0.5	<0.04	<0.03	<0.1	125	E.08	<0.04	<0.03	<0.1	E.08
MO Ce 23	08-13-03	<0.5	<0.04	<0.03	<0.1	126	<0.03	<0.04	<0.03	<0.1	E.07
MO Ce 23	08-13-03	<0.5	<0.04	<0.03	<0.1	133	<0.03	<0.04	<0.03	<0.1	E.03
MO Dd 28	07-01-03	<0.5	<0.04	<0.03	<0.1	134	<0.03	<0.04	<0.03	<0.1	E.08
MO De 51	06-12-03	<0.5	<0.04	<0.03	<0.1	113	<0.03	<0.04	<0.03	<0.1	E.01
MO Dd 27	06-26-03	<0.5	<0.04	<0.03	<0.1	135	<0.03	<0.04	<0.03	<0.1	E.04
MO De 52	07-02-03	<0.5	<0.04	<0.03	<0.1	134	<0.03	<0.04	<0.03	<0.1	E.04
MO De 50	06-24-03	<0.5	<0.04	<0.03	<0.1	123	<0.03	<0.04	<0.03	<0.1	E.07

QUALITY OF GROUND WATER DATA

MONTGOMERY COUNTY, MARYLAND—Continued

Well Number	Date	14Bromo	2,2-Di-	2-	2-	3-	4-	4-Iso-	Acetone	Acrylo-	Benzene
		fluoro- benzene surrog. VOC Sch wat unfltrd pct rcv (99834)	chloro- propane water unfltrd ug/L (77170)	Chloro- toluene water unfltrd ug/L (77275)	2- Ethyl- toluene water unfltrd ug/L (77220)	3- Chloro- propene water unfltrd ug/L (78109)	4- Chloro- toluene water unfltrd ug/L (77277)	4-Iso- propyl- toluene water unfltrd ug/L (77356)				water unfltrd ug/L (81552)	water unfltrd ug/L (34215)	water unfltrd ug/L (34030)
MO Df 61	06-30-03	78.5	<0.05	<0.04	<0.06	<0.12	<0.05	<0.12	<7	<1	<0.04
MO Ce 25	06-23-03	109	<0.05	<0.04	<0.06	<0.12	<0.05	<0.12	<7	<1	<0.04
MO Dd 26	06-24-03	108	<0.05	<0.04	<0.06	<0.12	<0.05	<0.12	<7	<1	<0.04
MO Ce 26	06-19-03	79.8	<0.05	<0.04	<0.06	<0.12	<0.05	<0.12	<7	<1	<0.04
MO Ce 21	06-17-03	91.4	<0.05	<0.04	<0.06	<0.12	<0.05	<0.12	<7	<1	<0.04
MO Ce 34	06-25-03	74.9	<0.05	<0.04	<0.06	<0.12	<0.05	<0.12	<7	<1	<0.04
MO Ce 24	06-18-03	84.5	<0.05	<0.04	<0.06	<0.12	<0.05	<0.12	<7	<1	<0.04
MO Ce 22	06-18-03	84.1	<0.05	<0.04	<0.06	<0.12	<0.05	<0.12	<7	<1	<0.04
MO Ce 23	08-13-03	79.3	<0.05	<0.04	<0.06	<0.12	<0.05	<0.12	<7	<1	<0.04
	08-13-03	81.1	<0.05	<0.04	<0.06	<0.12	<0.05	<0.12	<7	<1	<0.04
MO Dd 28	07-01-03	111	<0.05	<0.04	<0.06	<0.12	<0.05	<0.12	<7	<1	E.02
MO De 51	06-12-03	95.9	<0.05	<0.04	<0.06	<0.12	<0.05	<0.12	<7	<1	<0.04
MO Dd 27	06-26-03	72.6	<0.05	<0.04	<0.06	<0.12	<0.05	<0.12	<7	<1	<0.04
MO De 52	07-02-03	113	<0.05	<0.04	<0.06	<0.12	<0.05	<0.12	<7	<1	<0.04
MO De 50	06-24-03	107	<0.05	<0.04	<0.06	<0.12	<0.05	<0.12	<7	<1	<0.04
		Bromo- benzene water unfltrd ug/L (81555)	Bromo- chloro- methane water unfltrd ug/L (77297)	Bromo- di- chloro- methane water unfltrd ug/L (32101)	Bromo- ethene, water, unfltrd ug/L (50002)	Bromo- methane water unfltrd ug/L (34413)	Carbon di- sulfide water unfltrd ug/L (77041)	Chloro- benzene water unfltrd ug/L (34301)	Chloro- ethane, water, unfltrd ug/L (34311)	Chloro- methane water unfltrd ug/L (34418)	cis- 1,2-Di- chloro- ethene, water, unfltrd ug/L (77093)
MO Df 61	06-30-03	<0.04	<0.12	<0.05	<0.1	<0.3	<0.07	<0.03	<0.1	<0.2	<0.04
MO Ce 25	06-23-03	<0.04	<0.12	<0.05	<0.1	<0.3	<0.07	<0.03	<0.1	<0.2	<0.04
MO Dd 26	06-24-03	<0.04	<0.12	<0.05	<0.1	<0.3	<0.07	<0.03	<0.1	<0.2	<0.04
MO Ce 26	06-19-03	<0.04	<0.12	<0.05	<0.1	<0.3	<0.07	<0.03	<0.1	<0.2	<0.04
MO Ce 21	06-17-03	<0.04	<0.12	<0.05	<0.1	<0.3	<0.07	<0.03	<0.1	<0.2	<0.04
MO Ce 34	06-25-03	<0.04	<0.12	<0.05	<0.1	<0.3	<0.07	<0.03	<0.1	<0.2	<0.04
MO Ce 24	06-18-03	<0.04	<0.12	E.04	<0.1	<0.3	<0.07	<0.03	<0.1	<0.2	<0.04
MO Ce 22	06-18-03	<0.04	<0.12	<0.05	<0.1	<0.3	<0.07	<0.03	<0.1	<0.2	<0.04
MO Ce 23	08-13-03	<0.04	<0.12	<0.05	<0.1	<0.3	<0.07	<0.03	<0.1	<0.2	<0.04
	08-13-03	<0.04	<0.12	<0.05	<0.1	<0.3	<0.07	<0.03	<0.1	<0.2	<0.04
MO Dd 28	07-01-03	<0.04	<0.12	<0.05	<0.1	<0.3	<0.07	<0.03	<0.1	<0.2	<0.04
MO De 51	06-12-03	<0.04	<0.12	<0.05	<0.1	<0.3	<0.07	<0.03	<0.1	<0.2	<0.04
MO Dd 27	06-26-03	<0.04	<0.12	<0.05	<0.1	<0.3	<0.07	<0.03	<0.1	<0.2	<0.04
MO De 52	07-02-03	<0.04	<0.12	<0.05	<0.1	<0.3	<0.07	<0.03	<0.1	<0.2	<0.04
MO De 50	06-24-03	<0.04	<0.12	<0.05	<0.1	<0.3	<0.07	<0.03	<0.1	<0.2	<0.04

QUALITY OF GROUND WATER DATA
MONTGOMERY COUNTY, MARYLAND—Continued

Well Number	Date	cis-1,3-Dichloropropene water unfltrd ug/L (34704)	Di-bromochloromethane water unfltrd ug/L (32105)	Di-bromomethane water unfltrd ug/L (30217)	Di-chloro-di-fluoro-methane wat unfltrd ug/L (34668)	Di-chloro-methane water unfltrd ug/L (34423)	Di-ethyl ether, water, unfltrd ug/L (81576)	Diiso-propyl ether, water, unfltrd ug/L (81577)	Ethyl methacrylate, water, unfltrd ug/L (73570)	Ethyl methyl ketone, water, unfltrd ug/L (81595)	Ethylbenzene water unfltrd ug/L (34371)
MO Df 61	06-30-03	<0.09	<0.2	<0.05	<0.18	<0.2	<0.2	<0.10	<0.2	<5.0	<0.03
MO Ce 25	06-23-03	<0.09	<0.2	<0.05	<0.18	<0.2	<0.2	<0.10	<0.2	<5.0	<0.03
MO Dd 26	06-24-03	<0.09	<0.2	<0.05	<0.18	<0.2	<0.2	<0.10	<0.2	<5.0	<0.03
MO Ce 26	06-19-03	<0.09	<0.2	<0.05	<0.18	<0.2	<0.2	<0.10	<0.2	<5.0	<0.03
MO Ce 21	06-17-03	<0.09	<0.2	<0.05	<0.18	<0.2	<0.2	<0.10	<0.2	<5.0	<0.03
MO Ce 34	06-25-03	<0.09	<0.2	<0.05	<0.18	<0.2	<0.2	<0.10	<0.2	<5.0	<0.03
MO Ce 24	06-18-03	<0.09	<0.2	<0.05	<0.18	M	<0.2	<0.10	<0.2	<5.0	<0.03
MO Ce 22	06-18-03	<0.09	<0.2	<0.05	E.97	M	<0.2	<0.10	<0.2	<5.0	<0.03
MO Ce 23	08-13-03	<0.09	<0.2	<0.05	<0.18	<0.2	<0.2	<0.10	<0.2	<5.0	<0.03
	08-13-03	<0.09	<0.2	<0.05	E.05	<0.2	<0.2	<0.10	<0.2	<5.0	<0.03
MO Dd 28	07-01-03	<0.09	<0.2	<0.05	<0.18	<0.2	<0.2	<0.10	<0.2	<5.0	<0.03
MO De 51	06-12-03	<0.09	<0.2	<0.05	<0.18	<0.2	<0.2	<0.10	<0.2	<5.0	<0.03
MO Dd 27	06-26-03	<0.09	<0.2	<0.05	<0.18	<0.2	<0.2	<0.10	<0.2	<5.0	<0.03
MO De 52	07-02-03	<0.09	<0.2	<0.05	<0.18	<0.2	<0.2	<0.10	<0.2	<5.0	<0.03
MO De 50	06-24-03	<0.09	<0.2	<0.05	<0.18	M	<0.2	<0.10	<0.2	<5.0	<0.03
		Hexa-chloro-buta-diene, water, unfltrd ug/L (39702)	Hexa-chloro-ethane, water, unfltrd ug/L (34396)	Iodo-methane water unfltrd ug/L (77424)	Iso-butyl methyl ketone, water, unfltrd ug/L (78133)	Iso-propyl-benzene water unfltrd ug/L (77223)	Methyl acrylo-nitrile water unfltrd ug/L (81593)	Methyl acrylate, water, unfltrd ug/L (49991)	Methyl methacrylate, water, unfltrd ug/L (81597)	Methyl tert-pentyl ether, water, unfltrd ug/L (50005)	meta+ para-Xylene, water, unfltrd ug/L (85795)
MO Df 61	06-30-03	<0.1	<0.2	<0.35	<0.4	<0.06	<0.6	<2.0	<0.3	<0.08	<0.06
MO Ce 25	06-23-03	<0.1	<0.2	<0.35	<0.4	<0.06	<0.6	<2.0	<0.3	<0.08	<0.06
MO Dd 26	06-24-03	<0.1	<0.2	<0.35	<0.4	<0.06	<0.6	<2.0	<0.3	<0.08	<0.06
MO Ce 26	06-19-03	<0.1	<0.2	<0.35	<0.4	<0.06	<0.6	<2.0	<0.3	<0.08	<0.06
MO Ce 21	06-17-03	<0.1	<0.2	<0.35	<0.4	<0.06	<0.6	<2.0	<0.3	<0.08	<0.06
MO Ce 34	06-25-03	<0.1	<0.2	<0.35	<0.4	<0.06	<0.6	<2.0	<0.3	<0.08	<0.06
MO Ce 24	06-18-03	<0.1	<0.2	<0.35	<0.4	<0.06	<0.6	<2.0	<0.3	<0.08	<0.06
MO Ce 22	06-18-03	<0.1	<0.2	<0.35	<0.4	<0.06	<0.6	<2.0	<0.3	<0.08	<0.06
MO Ce 23	08-13-03	<0.1	<0.2	<0.35	<0.4	<0.06	<0.6	<2.0	<0.3	<0.08	<0.06
	08-13-03	<0.1	<0.2	<0.35	<0.4	<0.06	<0.6	<2.0	<0.3	<0.08	<0.06
MO Dd 28	07-01-03	<0.1	<0.2	<0.35	<0.4	<0.06	<0.6	<2.0	<0.3	<0.08	E.04
MO De 51	06-12-03	<0.1	<0.2	<0.35	<0.4	<0.06	<0.6	<2.0	<0.3	<0.08	<0.06
MO Dd 27	06-26-03	<0.1	<0.2	<0.35	<0.4	<0.06	<0.6	<2.0	<0.3	<0.08	<0.06
MO De 52	07-02-03	<0.1	<0.2	<0.35	<0.4	<0.06	<0.6	<2.0	<0.3	<0.08	<0.06
MO De 50	06-24-03	<0.1	<0.2	<0.35	<0.4	<0.06	<0.6	<2.0	<0.3	<0.08	<0.06

QUALITY OF GROUND WATER DATA

MONTGOMERY COUNTY, MARYLAND—Continued

Well Number	Date	Naphthalene, water, unfltrd ug/L (34696)	Methyl n-butyl ketone, water, unfltrd ug/L (77103)	n-Butyl benzene water unfltrd ug/L (77342)	n-propyl-benzene water unfltrd ug/L (77224)	o-Xylene, water, unfltrd ug/L (77135)	sec-Butyl-benzene water unfltrd ug/L (77350)	Styrene water unfltrd ug/L (77128)	t-Butyl ether, water, unfltrd ug/L (50004)	Methyl t-butyl ether, water, unfltrd ug/L (78032)	tert-Butyl-benzene water unfltrd ug/L (77353)
MO Df 61	06-30-03	<0.5	<0.7	<0.2	<0.04	<0.07	<0.06	<0.04	<0.05	E.2	<0.10
MO Ce 25	06-23-03	<0.5	<0.7	<0.2	<0.04	<0.07	<0.06	<0.04	<0.05	E.1	<0.10
MO Dd 26	06-24-03	<0.5	<0.7	<0.2	<0.04	<0.07	<0.06	<0.04	<0.05	E.1	<0.10
MO Ce 26	06-19-03	<0.5	<0.7	<0.2	<0.04	<0.07	<0.06	<0.04	<0.05	<0.2	<0.10
MO Ce 21	06-17-03	<0.5	<0.7	<0.2	<0.04	<0.07	<0.06	<0.04	<0.05	M	<0.10
MO Ce 34	06-25-03	<0.5	<0.7	<0.2	<0.04	<0.07	<0.06	<0.04	<0.05	M	<0.10
MO Ce 24	06-18-03	<0.5	<0.7	<0.2	<0.04	<0.07	<0.06	<0.04	<0.05	<0.2	<0.10
MO Ce 22	06-18-03	<0.5	<0.7	<0.2	<0.04	<0.07	<0.06	<0.04	<0.05	E.1	<0.10
MO Ce 23	08-13-03	<0.5	<0.7	<0.2	<0.04	<0.07	<0.06	<0.04	<0.05	<0.2	<0.10
	08-13-03	<0.5	<0.7	<0.2	<0.04	<0.07	<0.06	<0.04	<0.05	<0.2	<0.10
MO Dd 28	07-01-03	<0.5	<0.7	<0.2	<0.04	<0.07	<0.06	<0.04	<0.05	0.2	<0.10
MO De 51	06-12-03	<0.5	<0.7	<0.2	<0.04	<0.07	<0.06	<0.04	<0.05	<0.2	<0.10
MO Dd 27	06-26-03	<0.5	<0.7	<0.2	<0.04	<0.07	<0.06	<0.04	<0.05	0.3	<0.10
MO De 52	07-02-03	<0.5	<0.7	<0.2	<0.04	<0.07	<0.06	<0.04	<0.05	<0.2	<0.10
MO De 50	06-24-03	<0.5	<0.7	<0.2	<0.04	<0.07	<0.06	<0.04	<0.05	<0.2	<0.10
		Tetra-chloro-ethene, water, unfltrd ug/L (34475)	Tetra-chloro-methane water unfltrd ug/L (32102)	Tetra-hydro-furan, water, unfltrd ug/L (81607)	Toluene water unfltrd ug/L (34010)	Toluene -d8, surrog, Sch2090 wat unf percent recovry (99833)	trans-1,2-Di-chloro-ethene, water, unfltrd ug/L (34546)	trans-1,3-Di-chloro-propene water unfltrd ug/L (34699)	trans-1,4-Di-chloro-2-butene, wat unf ug/L (73547)	Tri-bromo-methane water unfltrd ug/L (32104)	Tri-chloro-ethene, water, unfltrd ug/L (39180)
MO Df 61	06-30-03	<0.03	<0.06	<2	E.01	98.9	<0.03	<0.09	<0.7	<0.10	<0.04
MO Ce 25	06-23-03	<0.03	<0.06	<2	<0.05	102	<0.03	<0.09	<0.7	<0.10	<0.04
MO Dd 26	06-24-03	E.02	<0.06	<2	<0.05	101	<0.03	<0.09	<0.7	<0.10	<0.04
MO Ce 26	06-19-03	<0.03	<0.06	<2	<0.05	101	<0.03	<0.09	<0.7	<0.10	<0.04
MO Ce 21	06-17-03	<0.03	<0.06	<2	<0.05	101	<0.03	<0.09	<0.7	<0.10	<0.04
MO Ce 34	06-25-03	<0.03	<0.06	<2	E.01	97.1	<0.03	<0.09	<0.7	<0.10	<0.04
MO Ce 24	06-18-03	<0.03	<0.06	<2	<0.05	99.3	<0.03	<0.09	<0.7	<0.10	<0.04
MO Ce 22	06-18-03	E.07	<0.06	<2	E.01	99.5	<0.03	<0.09	<0.7	<0.10	<0.04
MO Ce 23	08-13-03	<0.03	<0.06	<2	E.01	98.6	<0.03	<0.09	<0.7	<0.10	<0.04
	08-13-03	E.02	<0.06	<2	<0.05	101	<0.03	<0.09	<0.7	<0.10	<0.04
MO Dd 28	07-01-03	<0.03	<0.06	<2	E.07	103	<0.03	<0.09	<0.7	<0.10	<0.04
MO De 51	06-12-03	<0.03	<0.06	<2	<0.05	97.7	<0.03	<0.09	<0.7	<0.10	<0.04
MO Dd 27	06-26-03	<0.03	<0.06	<2	<0.05	98.7	<0.03	<0.09	<0.7	<0.10	<0.04
MO De 52	07-02-03	<0.03	<0.06	<2	<0.05	105	<0.03	<0.09	<0.7	<0.10	<0.04
MO De 50	06-24-03	0.13	<0.06	<2	<0.05	101	<0.03	<0.09	<0.7	<0.10	<0.04

QUALITY OF GROUND WATER DATA
MONTGOMERY COUNTY, MARYLAND—Continued

Well Number	Date	Tri-chloro-fluoro-methane water unfltrd ug/L (34488)	Tri-chloro-methane water unfltrd ug/L (32106)	Vinyl chloride, water, unfltrd ug/L (39175)	Uranium natural water, fltrd, ug/L (22703)
MO Df 61	06-30-03	<0.09	E.10	<0.1	E.01
MO Ce 25	06-23-03	<0.09	24.7	<0.1	E.01
MO Dd 26	06-24-03	<0.09	0.18	<0.1	0.04
MO Ce 26	06-19-03	<0.09	1.07	<0.1	<0.02
MO Ce 21	06-17-03	<0.09	E.08	<0.1	E.01
MO Ce 34	06-25-03	<0.09	E.03	<0.1	0.17
MO Ce 24	06-18-03	<0.09	3.57	<0.1	<0.02
MO Ce 22	06-18-03	7.17	0.43	<0.1	<0.02
MO Ce 23	08-13-03	<0.09	<0.02	<0.1	<0.02
	08-13-03	<0.09	E.05	<0.1	E.01
MO Dd 28	07-01-03	<0.09	<0.02	<0.1	1.29
MO De 51	06-12-03	<0.09	<0.02	<0.1	<0.02
MO Dd 27	06-26-03	<0.09	E.05	<0.1	E.01
MO De 52	07-02-03	<0.09	E.03	<0.1	0.16
MO De 50	06-24-03	<0.09	14.8	<0.1	<0.02

Remark codes used in this table:

< -- Less than

E -- Estimated value

M-- Presence verified, not quantified

QUALITY OF GROUND WATER DATA
PRINCE GEORGES COUNTY, MARYLAND

Well Number	Date	Time	Station number	Sample type	Geologic unit	Station type	Depth of well, feet below LSD (72008)	Depth to bot sample intrval feet below LSD (72016)	Depth to top sample intrval feet below LSD (72015)
PG Ff 23	11-25-02	1000	384243076445301	Environmental	125AQUI	GW	360	360	340

Altitude of land surface feet (72000)	Flow rate, instantaneous gal/min (00059)	Pump or flow period prior to sampling, minutes (72004)	Sampling method, code (82398)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf 25 degC (00095)	Temperature, water, deg C (00010)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incm. titr., field, mg/L (00453)	Arsenate, water, fltrd, ug/L as As (62453)
140	6.0	16	8030	7.8	300	15.7	155	189	1.5

Arsenite, water, fltrd, ug/L as As (62452)	Dimethylarsinate, wat flt ug/L as As (62455)	Monomethylarsenate, wat flt ug/L as As (62454)
3.5	<0.1	<0.1

Remark codes used in this table:
< -- Less than

Geologic Unit (aquifer): 125AQUI - Aquia Formation

Station Type: GW - Ground Water

Sampling Method: 8030 - Grab sample at water-supply tap

QUALITY OF GROUND WATER DATA
QUEEN ANNES COUNTY, MARYLAND

Well Number	Date	Time	Station number	Sample type	Geologic unit	Station type	Depth of well, feet below LSD (72008)	Depth to bot sample intrval below LSD (72016)	Depth to top sample intrval below LSD (72015)
QA Db 14	03-26-03	1000	390055076184501	Environmental	125AQUI	GW	165.00	165	145
	08-25-03	1025		Blank	125AQUI	GW	165	--	--
	08-25-03	1030		Environmental	125AQUI	GW	165.00	165	145
QA Db 15	08-26-03	1000	390022076191801	Environmental	125AQUI	GW	103.00	103	96
QA Db 17	08-25-03	1200	390059076191801	Environmental	125AQUI	GW	--	--	--
QA Db 23	03-24-03	1030	390033076184501	Environmental	125AQUI	GW	185.00	185	165
	08-27-03	1000		Environmental	125AQUI	GW	185.00	185	165
	08-27-03	1005		Environmental	125AQUI	GW	185.00	165	185
QA Db 27	03-19-03	1055	390117076191301	Blank	125AQUI	GW	145	--	--
	03-19-03	1100		Environmental	125AQUI	GW	145.00	145	110
	08-22-03	1030		Environmental	125AQUI	GW	145.00	145	110
QA Db 30	08-22-03	1035	390201076182701	Environmental	125AQUI	GW	145.00	145	110
	08-20-03	1300		Environmental	125AQUI	GW	220.00	220	210
	08-20-03	1301		Replicate	125AQUI	GW	220.00	220	210
	08-20-03	1305		Environmental	125AQUI	GW	220.00	220	210
QA Db 32	08-20-03	1100	390201076182703	Environmental	125AQUI	GW	116.00	116	106
	08-20-03	1105		Environmental	125AQUI	GW	116.00	116	106
QA Db 34	08-20-03	1530	390023076174301	Environmental	125AQUI	GW	180.00	180	170
	08-20-03	1535		Environmental	125AQUI	GW	180.00	180	170
QA Db 35	08-22-03	1100	390119076191001	Environmental	125AQUI	GW	200.00	200	190
	08-22-03	1105		Environmental	125AQUI	GW	200.00	200	190
QA Db 37	08-20-03	1430	390023076174302	Environmental	125AQUI	GW	250.00	250	240
	08-20-03	1435		Environmental	125AQUI	GW	250.00	250	240
	08-20-03	1435		Environmental	125AQUI	GW	250.00	250	240
QA Dd 33	10-01-02	1000	390138076064801	Environmental	125AQUI	GW	280.00	280	270
	10-01-02	1001		Replicate	125AQUI	GW	280.00	280	270
QA De 30	11-26-02	1430	390221076031401	Environmental	125AQUI	GW	280.00	280	270
	12-12-02	1000		Environmental	125AQUI	GW	481.00	448	272
QA Ea 39	03-19-03	1230	385825076202901	Environmental	125AQUI	GW	95.00	95	80
QA Ea 42	08-25-03	1330	385820076202501	Environmental	125AQUI	GW	95.00	95	80
	03-26-03	1330		Environmental	125AQUI	GW	120.00	120	100
QA Ea 45	08-25-03	1430	385554076213801	Environmental	125AQUI	GW	120.00	120	100
	03-28-03	1500		Environmental	125AQUI	GW	210.00	210	200
	08-27-03	1130		Environmental	125AQUI	GW	210.00	210	200
QA Ea 48	03-26-03	1215	385825076201201	Environmental	125AQUI	GW	160.00	160	129
	08-27-03	1300		Environmental	125AQUI	GW	160.00	160	129
QA Ea 59	08-27-03	1305	385505076215001	Environmental	125AQUI	GW	160.00	160	129
	03-19-03	1400		Environmental	125AQUI	GW	215.00	215	195
QA Ea 60	08-26-03	1130	385701076212501	Environmental	125AQUI	GW	215.00	215	195
	04-02-03	1230		Environmental	125AQUI	GW	185.00	185	165
	04-02-03	1231		Blank	125AQUI	GW	185	--	--
QA Ea 61	04-02-03	1235	385812076202801	Environmental	125AQUI	GW	185	--	--
	08-26-03	1530		Environmental	125AQUI	GW	185.00	185	165
	04-02-03	1100		Environmental	125AQUI	GW	170.00	170	150
	04-02-03	1105		Replicate	125AQUI	GW	170	--	--
QA Ea 77	08-25-03	1530	385718076211501	Environmental	125AQUI	GW	170.00	170	150
	08-25-03	1530		Environmental	125AQUI	GW	170.00	170	150
QA Ea 78	08-19-03	1300	385718076211502	Environmental	125AQUI	GW	205.00	205	195
QA Ea 79	08-19-03	1500	385718076211502	Environmental	125AQUI	GW	135.00	135	125
QA Ea 80	08-21-03	1200	385757076200101	Environmental	125AQUI	GW	298.00	298	288
	08-21-03	1205		Environmental	125AQUI	GW	298.00	298	288
QA Ea 81	08-21-03	1100	385757076200102	Environmental	125AQUI	GW	130.00	130	120
	08-21-03	1105		Environmental	125AQUI	GW	130.00	130	120
	08-19-03	1229		Blank	125AQUI	GW	310	--	--
QA Ea 82	08-19-03	1230	385705076212002	Environmental	125AQUI	GW	310.00	310	300
	03-28-03	1000		Environmental	125AQUI	GW	170.00	170	155
	08-26-03	1430		Environmental	125AQUI	GW	170.00	170	155

Geologic Unit (aquifer): 125AQUI - Aquia Formation

Station Type: GW - Ground Water

QUALITY OF GROUND WATER DATA

QUEEN ANNES COUNTY, MARYLAND—Continued

Well Number	Date	Depth to water level, feet below LSD (72019)	Altitude of land surface feet (72000)	Flow rate, instantaneous gal/min (00059)	Pump or flow period prior to sampling, minutes (72004)	Sampling method, code (82398)	Dis-solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc-tance, wat unfiltered, uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Alka-linity, wat flt inc tit field, mg/L as CaCO3 (39086)
QA Db 14	03-26-03	--	15.0	--	22	8030	--	7.2	439	14.4	--
	08-25-03	--	15	--	--	--	--	--	--	--	--
	08-25-03	--	15.0	4.0	45	8030	--	7.1	456	14.0	--
QA Db 15	08-26-03	--	15.0	8.0	19	8030	--	6.8	1,090	17.1	--
QA Db 17	08-25-03	--	20.0	4.0	20	8030	--	6.7	751	16.9	--
QA Db 23	03-24-03	--	18.0	2.4	29	8030	--	7.3	427	14.7	--
	08-27-03	--	18.0	4.0	25	8030	--	7.2	434	15.9	--
	08-27-03	--	18.0	--	--	8030	--	--	--	--	--
QA Db 27	03-19-03	--	15	--	--	--	--	--	--	--	--
	03-19-03	--	15.0	4.0	38	8030	--	7.0	1,260	14.5	--
	08-22-03	--	15.0	2.0	23	8030	--	6.5	1,300	15.0	--
	08-22-03	--	15.0	--	--	8030	--	--	--	--	--
QA Db 30	08-20-03	16.35	17.8	5.7	69	4040	--	6.2	18,000	16.7	--
	08-20-03	16.35	17.80	5.7	69	--	--	--	--	--	--
	08-20-03	16.35	17.8	5.7	69	4040	--	--	--	--	--
QA Db 32	08-20-03	16.14	18.0	4.0	74	4040	--	6.5	8,410	16.2	--
	08-20-03	16.14	18.0	4.0	74	4040	--	--	--	--	--
QA Db 34	08-20-03	--	7.4	60.0	60	4030	--	7.2	527	15.7	--
	08-20-03	--	7.4	60.0	60	4030	--	--	--	--	--
QA Db 35	08-22-03	5.46	7.5	4.0	90	4030	--	6.7	18,600	18.5	--
	08-22-03	--	7.50	--	--	4030	--	--	--	--	--
QA Db 37	08-20-03	--	7.1	5.2	88	4040	--	7.4	566	17.1	--
	08-20-03	--	7.1	--	--	4040	--	--	--	--	--
QA Dd 33	10-01-02	--	40.0	E3.0	25	8030	<1.0	7.8	320	15.8	174
	10-01-02	--	40.0	E3.0	25	--	--	--	--	--	--
	11-26-02	--	40.0	4.0	21	8030	--	--	317	--	--
QA De 30	12-12-02	--	55.0	500	26	8030	<1.0	8.0	306	15.5	148
QA Ea 39	03-19-03	--	15.0	5.0	30	8030	--	7.5	424	14.8	--
	08-25-03	--	15.0	4.5	48	8030	--	7.3	452	15.7	--
QA Ea 42	03-26-03	--	18.0	1.8	25	8030	--	7.5	--	14.5	--
	08-25-03	--	18.0	2.0	30	8030	--	7.5	557	17.5	--
QA Ea 45	03-28-03	--	15.0	2.4	22	8030	--	--	347	--	--
	08-27-03	--	15.0	5.5	21	8030	--	7.5	364	16.7	--
QA Ea 48	03-26-03	--	5.0	8.6	27	8030	--	7.3	--	15.1	--
	08-27-03	--	5.0	6.0	30	8030	--	7.2	1,570	16.1	--
	08-27-03	--	5.0	--	--	8030	--	--	--	--	--
QA Ea 59	03-19-03	--	10.0	4.0	22	8030	--	7.9	569	15.3	--
	08-26-03	--	10.0	4.0	25	8030	--	7.7	593	16.5	--
QA Ea 60	04-02-03	--	7.0	6.0	20	8030	--	7.5	1,780	15.4	--
	04-02-03	--	7	--	--	--	--	--	--	--	--
	04-02-03	--	7	--	--	--	--	--	--	--	--
QA Ea 61	08-26-03	--	7.0	4.0	25	8030	--	7.5	1,840	16.8	--
	04-02-03	--	18.0	6.0	23	8030	--	7.1	5,220	14.9	--
	04-02-03	--	18	--	--	--	--	--	--	--	--
	08-25-03	--	18.0	5.0	30	8030	--	--	5,450	14.4	--
QA Ea 77	08-19-03	12.61	10.8	7.5	150	4030	--	6.9	17,600	16.6	--
QA Ea 78	08-19-03	12.89	11.8	3.4	93	4040	--	7.2	323	17.1	--
QA Ea 79	08-21-03	10.61	8.3	5.0	110	4040	--	9.0	358	17.2	--
	08-21-03	10.61	8.3	5.0	--	4040	--	--	--	--	--
QA Ea 80	08-21-03	--	8.5	24.0	20	4030	--	7.8	352	15.3	--
	08-21-03	--	8.5	--	--	4030	--	--	--	--	--
QA Ea 81	08-19-03	--	12.40	--	--	--	--	--	--	--	--
	08-19-03	12.41	12.4	4.8	134	4040	--	7.9	561	16.9	--
QA Ea 82	03-28-03	--	10.0	1.6	32	8030	--	7.6	1,140	14.4	--
	08-26-03	--	10.0	E4.0	35	8030	--	7.5	1,170	7.5	--

Sampling Method:4030 - Suction pump
 4040 - Submersible pump
 8030 - Grab sample at water-supply tap

QUALITY OF GROUND WATER DATA
 QUEEN ANNES COUNTY, MARYLAND—Continued

Well Number	Date	Bicar- bonate, wat flt incrm. titr., field, mg/L (00453)	Chlor- ide, water, fltrd, mg/L (00940)	Arsen- ate, water, fltrd, ug/L as As (62453)	Arsenic water unfltrd ug/L (01002)	Arsen- ite, water, fltrd, ug/L as As (62452)	Di- methyl- arsin- ate, wat flt ug/L as As (62455)	Mono- methyl- arson- ate, wat flt ug/L as As (62454)
QA Db 14	03-26-03	--	14.4	--	--	--	--	--
	08-25-03	--	<0.20	--	--	--	--	--
	08-25-03	--	13.9	--	--	--	--	--
QA Db 15	08-26-03	--	132	--	--	--	--	--
QA Db 17	08-25-03	--	102	--	--	--	--	--
QA Db 23	03-24-03	--	14.6	--	--	--	--	--
	08-27-03	--	16.3	--	--	--	--	--
	08-27-03	--	--	--	<2	--	--	--
QA Db 27	03-19-03	--	<0.20	--	--	--	--	--
	03-19-03	--	243	--	--	--	--	--
	08-22-03	--	259	--	--	--	--	--
QA Db 30	08-22-03	--	--	--	12	--	--	--
	08-20-03	--	5,860	--	--	--	--	--
	08-20-03	--	5,860	--	--	--	--	--
	08-20-03	--	--	--	6	--	--	--
QA Db 32	08-20-03	--	2,540	--	--	--	--	--
QA Db 34	08-20-03	--	--	--	2	--	--	--
	08-20-03	--	9.61	--	--	--	--	--
QA Db 35	08-20-03	--	--	--	E1	--	--	--
	08-22-03	--	6,180	--	--	--	--	--
QA Db 37	08-22-03	--	--	--	<4	--	--	--
	08-20-03	--	11.3	--	--	--	--	--
	08-20-03	--	--	--	E1	--	--	--
QA Dd 33	10-01-02	212	--	1.9	--	11.2	<0.1	<0.1
	10-01-02	--	--	2.0	--	11.6	<0.1	<0.1
QA De 30	11-26-02	--	--	2.4	--	11.5	<0.1	<0.1
QA Ea 39	12-12-02	180	--	1.6	--	26.9	0.6	0.2
	03-19-03	--	37.9	--	--	--	--	--
QA Ea 42	08-25-03	--	42.1	--	--	--	--	--
	03-26-03	--	29.9	--	--	--	--	--
QA Ea 45	08-25-03	--	67.6	--	--	--	--	--
	03-28-03	--	6.52	--	--	--	--	--
	08-27-03	--	8.22	--	--	--	--	--
QA Ea 48	03-26-03	--	340	--	--	--	--	--
	08-27-03	--	384	--	--	--	--	--
QA Ea 59	08-27-03	--	--	--	9	--	--	--
	03-19-03	--	86.1	--	--	--	--	--
QA Ea 60	08-26-03	--	88.2	--	--	--	--	--
	04-02-03	--	361	--	--	--	--	--
	04-02-03	--	<0.20	--	--	--	--	--
QA Ea 61	04-02-03	--	--	--	4	--	--	--
	08-26-03	--	492	--	--	--	--	--
	04-02-03	--	1,020	--	--	--	--	--
	04-02-03	--	1,010	--	--	--	--	--
QA Ea 77	08-25-03	--	1,690	--	--	--	--	--
	08-19-03	--	5,920	--	--	--	--	--
QA Ea 78	08-19-03	--	4.72	--	--	--	--	
QA Ea 79	08-21-03	--	1.73	--	--	--	--	--
	08-21-03	--	--	--	E2	--	--	--
QA Ea 80	08-21-03	--	2.52	--	--	--	--	--
	08-21-03	--	--	--	6	--	--	--
QA Ea 81	08-19-03	--	<0.20	--	--	--	--	--
	08-19-03	--	59.3	--	--	--	--	--
QA Ea 82	03-28-03	--	270	--	--	--	--	--
	08-26-03	--	276	--	--	--	--	--

QUALITY OF GROUND WATER DATA

QUEEN ANNES COUNTY, MARYLAND—Continued

Well Number	Date	Time	Station number	Sample type	Geologic unit	Station type	Depth of well, feet below LSD (72008)	Depth to bot sample intrval feet below LSD (72016)	Depth to top sample intrval feet below LSD (72015)
QA Eb 144	08-27-03	1100	385847076184801	Environmental	125AQUI	GW	240.00	240	220
	08-27-03	1105		Environmental	125AQUI	GW	240.00	240	220
QA Eb 155	08-21-03	1300	385843076155302	Environmental	125AQUI	GW	245.00	245	235
	08-21-03	1305		Environmental	125AQUI	GW	245.00	245	235
QA Eb 156	08-22-03	1400	385852076195201	Environmental	125AQUI	GW	220.00	220	210
	08-22-03	1405		Environmental	125AQUI	GW	220.00	220	210
QA Eb 157	08-22-03	1300	385852076195202	Environmental	125AQUI	GW	120.00	120	110
	08-22-03	1305		Environmental	125AQUI	GW	120.00	120	110
QA Ed 53	11-18-02	1500	385853076081801	Environmental	125AQUI	GW	280.00	280	273
QA Ed 54	10-01-02	1400	385633076094701	Environmental	125AQUI	GW	330.00	330	320
QA Ef 34	10-01-02	1200	385925075585701	Environmental	125AQUI	GW	440.00	440	420
	11-26-02	1330		Environmental	125AQUI	GW	440.00	440	420
QA Fa 49	08-26-03	1330	385354076212701	Environmental	125AQUI	GW	210.00	210	185
QA Fa 54	03-19-03	1500	385024076222501	Environmental	125AQUI	GW	260.00	260	240
	03-19-03	1600		Environmental	125AQUI	GW	260.00	260	240
	08-28-03	1450		Environmental	125AQUI	GW	260.00	260	240
QA Fa 58	03-24-03	1230	385133076201201	Environmental	125AQUI	GW	280.00	280	260
	08-28-03	1330		Environmental	125AQUI	GW	280.00	280	260
QA Fa 60	03-24-03	1330	385254076201901	Environmental	125AQUI	GW	240.00	240	230
	08-28-03	1050		Environmental	125AQUI	GW	240.00	240	230
QA Fa 63	03-28-03	1330	385434076215601	Environmental	125AQUI	GW	235.00	235	200
	08-29-03	1030		Environmental	125AQUI	GW	235.00	235	200
QA Fa 64	03-24-03	1500	385454076214901	Environmental	125AQUI	GW	231.00	231	191
	08-26-03	1230		Environmental	125AQUI	GW	231.00	231	191
QA Fa 66	03-27-03	1100	385236076215201	Environmental	125AQUI	GW	270.00	270	250
	09-08-03	1030		Environmental	125AQUI	GW	270.00	270	250
QA Fa 67	08-28-03	1530	385023076222201	Environmental	125AQUI	GW	270.00	270	250
QA Fa 72	03-28-03	1130	385254076201301	Environmental	125AQUI	GW	220.00	220	200
	03-28-03	1135		Replicate	125AQUI	GW	220.00	220	200
	09-08-03	1130		Environmental	125AQUI	GW	220.00	220	200
	09-08-03	1135		Replicate	125AQUI	GW	220.00	220	200
QA Fa 74	08-29-03	1150	385227076215401	Environmental	125AQUI	GW	280.00	--	--
QA Fa 75	03-27-03	1245	385155076200401	Environmental	125AQUI	GW	200.00	200	180
	08-28-03	1200		Environmental	125AQUI	GW	200.00	200	180
QA Fc 13	11-19-02	1100	385433076105101	Environmental	125AQUI	GW	350.00	350	330
	11-19-02	1101		Environmental	125AQUI	GW	350	350	330

Geologic Unit (aquifer): 125AQUI - Aquia Formation

Station Type: GW - Ground Water

QUALITY OF GROUND WATER DATA
 QUEEN ANNES COUNTY, MARYLAND—Continued

Well Number	Date	Depth to water level, feet below LSD (72019)	Altitude of land surface feet (72000)	Flow rate, instantaneous gal/min (00059)	Pump or flow period prior to sampling, minutes (72004)	Sampling method, code (82398)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unfluS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Alkalinity, wat flt inc tit field, mg/L as CaCO ₃ (39086)
QA Eb 144	08-27-03	--	15.0	5.0	20	8030	--	7.7	420	16.2	--
	08-27-03	--	15.0	--	--	8030	--	--	--	--	--
QA Eb 155	08-21-03	--	3.9	7.0	45	4030	--	7.8	327	17.2	--
	08-21-03	--	3.9	--	--	4030	--	--	--	--	--
QA Eb 156	08-22-03	13.81	12.0	6.3	55	4030	--	6.9	22,000	16.8	--
	08-22-03	--	12.0	--	--	8030	--	--	--	--	--
QA Eb 157	08-22-03	12.20	11.9	20.0	25	4030	--	7.4	338	15.0	--
	08-22-03	--	11.9	--	--	4030	--	--	--	--	--
QA Ed 53	11-18-02	--	50.0	4.0	30	8030	--	7.7	284	15.0	144
QA Ed 54	10-01-02	--	10.0	4.6	20	8030	<1.0	<7.9	282	16.6	150
QA Ef 34	10-01-02	--	70.0	5.0	23	8030	<1.0	8.2	421	16.9	231
	11-26-02	--	70.0	6.0	17	8030	--	--	410	--	--
QA Fa 49	08-26-03	--	8.0	5.0	18	8030	--	7.6	1,000	17.1	--
QA Fa 54	03-19-03	--	10.0	4.0	22	8030	--	7.7	348	15.6	--
	03-19-03	--	10.0	E2.0	--	8030	--	--	--	--	--
	08-28-03	--	10.0	--	--	8030	--	7.5	351	16.9	--
QA Fa 58	03-24-03	--	7.1	5.5	33	8030	--	7.9	453	15.5	--
	08-28-03	--	7.1	--	--	8030	--	7.8	459	17.0	--
QA Fa 60	03-24-03	--	10.1	1.0	21	8030	--	8.3	413	17.7	--
	08-28-03	--	10.1	--	--	8030	--	8.1	415	--	--
QA Fa 63	03-28-03	--	15.0	1.9	21	8030	--	7.1	452	15.2	--
	08-29-03	--	15.0	--	--	8030	--	7.0	460	16.2	--
QA Fa 64	03-24-03	--	5.0	4.0	27	8030	--	7.7	1,190	15.6	--
	08-26-03	--	5.0	4.0	20	8030	--	7.6	1,250	16.8	--
QA Fa 66	03-27-03	--	13.0	3.8	25	8030	--	7.7	505	13.7	--
	09-08-03	--	13.0	4.0	20	8030	--	7.7	515	17.3	--
QA Fa 67	08-28-03	--	7.3	--	--	8030	--	7.5	346	16.9	--
QA Fa 72	03-28-03	--	12.0	4.0	25	8030	--	7.9	479	15.2	--
	03-28-03	--	12	--	--	--	--	--	--	--	--
	09-08-03	--	12.0	4.0	20	8030	--	7.9	490	16.5	--
	09-08-03	--	12	--	--	--	--	--	--	--	--
QA Fa 74	08-29-03	--	10.0	--	--	8030	--	7.4	449	16.5	--
QA Fa 75	03-27-03	--	10.0	--	22	8030	--	7.9	510	15.2	--
	08-28-03	--	10.0	--	--	8030	--	8.1	521	25.1	--
QA Fc 13	11-19-02	--	10.0	4.0	23	8030	--	8.0	--	15.7	153
	11-19-02	--	10	--	--	--	--	--	--	--	--

Sampling Method:4030 - Suction pump
 8030 - Grab sample at water-supply tap

QUALITY OF GROUND WATER DATA

QUEEN ANNES COUNTY, MARYLAND—Continued

Well Number	Date	Bicar- bonate, wat flt incrm. titr., field, mg/L (00453)	Chlor- ide, water, fltrd, mg/L (00940)	Arsen- ate, water, fltrd, ug/L as As (62453)	Arsenic water unfltrd ug/L (01002)	Arsen- ite, water, fltrd, ug/L as As (62452)	Di- methyl- arsin- ate, wat flt ug/L as As (62455)	Mono- methyl- arson- ate, wat flt ug/L as As (62454)
QA Eb 144	08-27-03	--	5.30	--	--	--	--	--
	08-27-03	--	--	--	3	--	--	--
QA Eb 155	08-21-03	--	2.13	--	--	--	--	--
	08-21-03	--	--	--	E1	--	--	--
QA Eb 156	08-22-03	--	7,580	--	--	--	--	--
	08-22-03	--	--	--	6	--	--	--
QA Eb 157	08-22-03	--	4.08	--	--	--	--	--
	08-22-03	--	--	--	6	--	--	--
QA Ed 53	11-18-02	176	--	1.6	--	9.3	0.2	<0.1
QA Ed 54	10-01-02	183	--	4.2	--	17.2	0.1	<0.1
QA Ef 34	10-01-02	283	--	3.7	--	10.2	<0.1	<0.1
	11-26-02	--	--	3.0	--	10.6	0.1	<0.1
QA Fa 49	08-26-03	--	178	--	--	--	--	--
QA Fa 54	03-19-03	--	13.3	--	--	--	--	--
	03-19-03	--	12.0	--	--	--	--	--
	08-28-03	--	11.3	--	--	--	--	--
QA Fa 58	03-24-03	--	7.60	--	--	--	--	--
	08-28-03	--	9.22	--	--	--	--	--
QA Fa 60	03-24-03	--	9.42	--	--	--	--	--
	08-28-03	--	10.0	--	--	--	--	--
QA Fa 63	03-28-03	--	6.92	--	--	--	--	--
	08-29-03	--	8.84	--	--	--	--	--
QA Fa 64	03-24-03	--	291	--	--	--	--	--
	08-26-03	--	294	--	--	--	--	--
QA Fa 66	03-27-03	--	18.2	--	--	--	--	--
	09-08-03	--	20.7	--	--	--	--	--
QA Fa 67	08-28-03	--	<0.20	--	--	--	--	--
QA Fa 72	03-28-03	--	12.7	--	--	--	--	--
	03-28-03	--	12.9	--	--	--	--	--
	09-08-03	--	14.6	--	--	--	--	--
	09-08-03	--	14.8	--	--	--	--	--
QA Fa 74	08-29-03	--	11.9	--	--	--	--	--
QA Fa 75	03-27-03	--	18.6	--	--	--	--	--
	08-28-03	--	20.9	--	--	--	--	--
QA Fc 13	11-19-02	187	--	2.9	--	33.4	0.5	0.1
	11-19-02	--	--	2.8	--	33.4	0.5	0.1

Remark codes used in this table:

- < -- Less than
- E -- Estimated value

QUALITY OF GROUND WATER DATA
ST. MARYS COUNTY, MARYLAND

Well Number	Date	Time	Station number	Sample type	Geologic unit	Station type	Depth of well, feet below LSD (72008)	Depth to bot sample intrval feet below LSD (72016)	Depth to top sample intrval feet below LSD (72015)
SM Ce 47	12-03-02	1200	382208076334301	Environmental	125AQUI	GW	555	555	540
SM Dc 63	12-03-02	1400	381800076444501	Environmental	125AQUI	GW	370	370	350
SM Dd 70	12-16-02	1200	381921076372601	Environmental	125AQUI	GW	545	545	450
	12-16-02	1205		Replicate	125AQUI	GW	545	--	--
SM Fe 41	12-16-02	1000	380833076303301	Environmental	125AQUI	GW	420	420	400
SM Fg 65	12-04-02	1200	380640076233901	Environmental	124PNPN	GW	364	364	350

		Altitude of land surface feet (72000)	Flow rate, instantaneous gal/min (00059)	Pump or flow period prior to sampling, minutes (72004)	Sampling method, code (82398)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)
SM Ce 47	12-03-02	70.0	4.0	23	8030	--	8.4	--	15.4	113	138
SM Dc 63	12-03-02	45.0	4.0	31	8030	--	8.8	--	16.0	117	143
SM Dd 70	12-16-02	125	115	55	8030	<1.0	8.6	207	17.1	96	116
	12-16-02	125	--	--	--	--	--	--	--	--	--
SM Fe 41	12-16-02	8.0	200	17	8030	<1.0	8.6	484	19.7	248	302
SM Fg 65	12-04-02	10.0	6.7	25	8030	--	8.6	663	16.6	340	415

			Bromide water, fltrd, mg/L (71870)	Arsenate, water, fltrd, ug/L as As (62453)	Arsenite, water, fltrd, ug/L as As (62452)	Dimethylarsinate, wat flt ug/L as As (62455)	Monomethylarsenate, wat flt ug/L as As (62454)
SM Ce 47	12-03-02	E.01	1.4	10.6	0.3	0.2	
SM Dc 63	12-03-02	--	1.7	6.2	0.2	<0.1	
SM Dd 70	12-16-02	--	2.0	11.5	0.3	0.2	
	12-16-02	--	0.2	6.8	0.2	<0.1	
SM Fe 41	12-16-02	--	0.8	9.3	0.2	0.2	
SM Fg 65	12-04-02	0.04	1.1	7.3	0.2	0.1	

Remark codes used in this table:
< -- Less than
E -- Estimated value

Geologic Unit (aquifer): 124PNPN - Piney Point Formation
125AQUI - Aquia Formation

Station Type: GW - Ground Water

Sampling Method: 8030 - Grab sample at water-supply tap

QUALITY OF GROUND WATER DATA
SOMMERSET COUNTY, MARYLAND

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Well Number	Date	Time	Station number	Sample type	Geologic unit	Station type	Depth of well, feet below LSD (72008)	Depth to bot sample intrval below LSD (72016)	Depth to top sample intrval below LSD (72015)		
SO Be 114	01-16-03 01-16-03	1045 1100	381245075404002	Blank Environmental	112KILD 112KILD	GW GW	-- 19.00	-- 19	-- 16		
		Depth to water level, feet below LSD (72019)	Altitude of land surface feet (72000)	Flow rate, instantaneous gal/min (00059)	Pump or flow period prior to sampling, minutes (72004)	Sampling method, code (82398)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	
SO Be 114	01-16-03 01-16-03	-- 7.09	-- 19.00	-- 0.25	-- 60	4040 4040	-- 774	-- 1.9	-- 18	-- 5.1	-- 206
		Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incm. titr., field, mg/L (00453)	Bromide water, fltrd, mg/L (71870)
SO Be 114	01-16-03 01-16-03	-- -4.0	-- 14.0	-- 67	-- 8.37	-- 11.1	-- 1.16	-- 7.73	-- 9	-- 11	-- 0.04
		Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)
SO Be 114	01-16-03 01-16-03	-- 12.0	-- <0.17	-- 30.7	-- 48.2	-- 137	-- 146	-- 0.11	-- <0.04	-- 2.76	-- <0.008
		Orthophosphate, water, fltrd, mg/L as P (00671)	Total nitrogen, water, fltrd, mg/L (00602)	Organic carbon, water, fltrd, mg/L (00681)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)
SO Be 114	01-16-03 01-16-03	-- E.01	-- 2.9	<0.3 1.5	-- 15	-- <0.30	-- E.3	-- 133	-- 0.70	-- 14	-- 0.18

Geologic Unit (aquifer): 112KILD - Kent Island Formation

Station Type: GW - Ground Water

Sampling Method: 4040 - Submersible pump

QUALITY OF GROUND WATER DATA
SOMMERSET COUNTY, MARYLAND—Continued

Well Number	Date	Chromium, water, fltrd, ug/L (01030)	Cobalt, water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Lithium, water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)
SO Be 114	01-16-03	--	--	--	--	--	--	--	--	--	--
	01-16-03	E.6	11.0	2.4	13	0.36	10.4	83.5	0.4	35.6	0.8
SO Be 114	01-16-03	--	--	--	--	--	--	--	--	--	--
	01-16-03	<0.2	191	E.02	8.1	3	100	<0.009	<0.02	<0.02	<0.006
SO Be 114	01-16-03	--	--	--	--	--	--	--	--	--	--
	01-16-03	E.005	<0.04	<0.008	<0.006	<2	<0.006	<0.007	<0.004	<0.02	<0.008
SO Be 114	01-16-03	--	--	--	--	--	--	--	--	--	--
	01-16-03	<0.04	<0.005	97.3	E.007	<0.050	130	<0.03	<0.010	<0.004	<0.02
SO Be 114	01-16-03	--	--	--	--	--	--	--	--	--	--
	01-16-03	<0.01	<0.03	<0.02	<0.002	<0.010	E62.0	<0.03	<0.041	<0.006	<0.020

2,6-Diethyl-aniline water fltrd ug/L (82660)

Aldi-carb sulfone water, fltrd, 0.7u GF ug/L (49313)

Bensulfuron, water, fltrd, ug/L (61693)

Carbofuran, water, fltrd, 0.7u GF ug/L (82674)

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QUALITY OF GROUND WATER DATA

SOMMERSET COUNTY, MARYLAND—Continued

Well Number	Date	Chlor-amben methyl ester, water, fltrd, ug/L (61188)	Chlorimuron, water, fltrd, ug/L (50306)	Chloro-di-amino-s-triazine, wat flt ug/L (04039)	Chloro-thalonil, water, fltrd 0.7u GF ug/L (49306)	Chlorpyrifos water, fltrd, ug/L (38933)	cis-Permethrin water fltrd 0.7u GF ug/L (82687)	Clopyralid, water, fltrd 0.7u GF ug/L (49305)	Cyanazine, water, fltrd, ug/L (04041)	Cycloate, water, fltrd, ug/L (04031)	Dacthal mono-acid, water, fltrd 0.7u GF ug/L (49304)
SO Be 114	01-16-03	--	--	--	--	--	--	--	--	--	--
	01-16-03	<0.02	<0.010	<0.01	<0.04	<0.005	<0.006	<0.01	<0.018	<0.01	<0.01
		DCPA, water fltrd 0.7u GF ug/L (82682)	Diazinon, water, fltrd, ug/L (39572)	Diazinon-d10 surrog. wat flt 0.7u GF percent recovry (91063)	Dicamba water fltrd 0.7u GF ug/L (38442)	Dichloroprop, water, fltrd 0.7u GF ug/L (49302)	Dieldrin, water, fltrd, ug/L (39381)	Dinoseb water, fltrd 0.7u GF ug/L (49301)	Diphenamid, water, fltrd, ug/L (04033)	Disulfoton, water, fltrd 0.7u GF ug/L (82677)	Diuron, water, fltrd 0.7u GF ug/L (49300)
SO Be 114	01-16-03	--	--	--	--	--	--	--	--	--	--
	01-16-03	<0.003	<0.005	97.3	<0.01	<0.01	<0.005	<0.01	<0.03	<0.02	<0.01
		EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethalfurfluralin, water, fltrd, ug/L (82663)	Ethoprop, water, fltrd, ug/L (82672)	Fenuron water, fltrd, ug/L (49297)	Flumetsulam, water, fltrd, ug/L (61694)	Fluometuron water, fltrd, ug/L (38811)	Fonofos water, fltrd, ug/L (04095)	Imazaquin, water, fltrd, ug/L (50356)	Imazethapyr, water, fltrd, ug/L (50407)	Imidacloprid water, fltrd, ug/L (61695)
SO Be 114	01-16-03	--	--	--	--	--	--	--	--	--	--
	01-16-03	<0.002	<0.009	<0.005	<0.03	<0.01	<0.03	<0.003	<0.02	<0.02	0.224
		Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (38478)	Linuron water fltrd 0.7u GF ug/L (82666)	Malathion, water, fltrd, ug/L (39532)	MCPA, water, fltrd, ug/L (38482)	MCPB, water, fltrd, ug/L (38487)	Metaxyl, water, fltrd, ug/L (50359)	Methiocarb, water, fltrd, ug/L (38501)	Methomyl, water, fltrd, ug/L (49296)	Methyl parathion, water, fltrd, ug/L (82667)
SO Be 114	01-16-03	--	--	--	--	--	--	--	--	--	--
	01-16-03	<0.004	<0.01	<0.035	<0.027	<0.02	<0.01	<0.02	<0.008	<0.004	<0.006
		Metolachlor, water, fltrd, ug/L (39415)	Metribuzin, water, fltrd, ug/L (82630)	Metsulfuron, water, fltrd, ug/L (61697)	Molinate, water, fltrd 0.7u GF ug/L (82671)	N-(4-Chlorophenyl)-N-methylurea, ug/L (61692)	Napropamide, water, fltrd, ug/L (82684)	Neburon water, fltrd 0.7u GF ug/L (49294)	Nicosulfuron, water, fltrd, ug/L (50364)	Norflurazon, water, fltrd 0.7u GF ug/L (49293)	Oryzalin, water, fltrd 0.7u GF ug/L (49292)
SO Be 114	01-16-03	--	--	--	--	--	--	--	--	--	--
	01-16-03	E.005	<0.006	<0.03	<0.002	<0.02	<0.007	<0.01	<0.01	<0.02	<0.02

QUALITY OF GROUND WATER DATA
SOMMERSET COUNTY, MARYLAND—Continued

Well Number	Date	Oxamyl, water, fltrd 0.7u GF (38866)	p,p'-DDE, water, fltrd, ug/L (34653)	Parathion, water, fltrd, ug/L (39542)	Pebulate, water, fltrd 0.7u GF (82669)	Pendi-methalin, water, fltrd 0.7u GF (82683)	Phorate water fltrd 0.7u GF (82664)	Picloram, water, fltrd 0.7u GF (49291)	Prometon, water, fltrd, ug/L (04037)	Pronamide, water, fltrd 0.7u GF (82676)	Propachlor, water, fltrd, ug/L (04024)
SO Be 114	01-16-03	-- <0.01	-- <0.003	-- <0.010	-- <0.004	-- <0.022	-- <0.011	-- <0.02	-- <0.01	-- <0.004	-- <0.010
		Propanil, water, fltrd 0.7u GF (82679)	Propar-gite, water, fltrd 0.7u GF (82685)	Propham water fltrd 0.7u GF (49236)	Propi-conazole, water, fltrd, ug/L (50471)	Pro-poxur, water, fltrd 0.7u GF (38538)	Siduron water, fltrd, ug/L (38548)	Sima-zine, water, fltrd, ug/L (04035)	Sulfo-met-ruron, water, fltrd, ug/L (50337)	Tebu-thiuron water fltrd 0.7u GF (82670)	Terba-cil, water, fltrd 0.7u GF (82665)
SO Be 114	01-16-03	-- <0.011	-- <0.02	-- <0.010	-- <0.02	-- <0.008	-- <0.02	-- <0.005	-- <0.009	-- <0.02	-- <0.034
		Terba-cil, water, fltrd, ug/L (04032)	Terbu-fos, water, fltrd 0.7u GF (82675)	Thio-bencarb water fltrd 0.7u GF (82681)	Tri-allate, water, fltrd 0.7u GF (82678)	Tri-clopyr, water, fltrd 0.7u GF (49235)	Tri-flur-alin, water, fltrd 0.7u GF (82661)	Rn-222 2-sigma water unfltrd pCi/L (76002)	Rn-222, water, unfltrd pCi/L (82303)	Uranium natural water, fltrd, ug/L (22703)	County
SO Be 114	01-16-03	-- <0.010	-- <0.02	-- <0.005	-- <0.002	-- <0.02	-- <0.009	-- 26	-- 600	-- 0.24	039 039

Remark codes used in this table:
< -- Less than
E -- Estimated value

QUALITY OF GROUND WATER DATA

TALBOT COUNTY, MARYLAND

Well Number	Date	Time	Station number	Sample type	Geologic unit	Station type	Depth of well, feet below LSD (72008)	Depth to bot sample intrval feet below LSD (72016)	Depth to top sample intrval feet below LSD (72015)
TA Be 91	09-15-03	1500	385154076003801	Environmental	112CLMB	GW	31.00	31	26
TA Be 92	11-06-02	1600	385408076024701	Environmental	124PNPN	GW	280.00	280	260
	11-21-02	1700		Environmental	124PNPN	GW	280.00	280	260
TA Cb 99	11-04-02	1200	384602076163901	Environmental	125AQUI	GW	379.00	379	349
	11-26-02	1200		Environmental	125AQUI	GW	379.00	379	349
TA Cc 52	11-06-02	1200	384901076133601	Environmental	125AQUI	GW	420.00	420	400
TA Cc 53	12-10-02	1400	384946076002201	Environmental	122PNSK	GW	26.50	26	24
TA Cd 64	11-04-02	1400	384815076064701	Environmental	124PNPN	GW	360.00	360	320
TA Cd 65	11-19-02	1500	384649076054801	Environmental	125AQUI	GW	595.00	595	585
TA Da 50	11-26-02	1130	384312076201701	Environmental	125AQUI	GW	380.00	380	360
TA Dc 57	11-20-02	1200	384440076104901	Environmental	125AQUI	GW	528.00	528	508
TA Dc 58	11-20-02	1000	384010076102001	Environmental	125AQUI	GW	575.00	575	555

		Depth to water level, feet below LSD (72019)	Altitude of land surface feet (72000)	Flow rate, instantaneous gal/min (00059)	Pump or flow period prior to sampling, minutes (72004)	Color, water, fltrd, Pt-Co units (00080)	Sampling method, code (82398)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)
TA Be 91	09-15-03	--	70.0	3.0	24	2	8030	--	--	--	4.9
TA Be 92	11-06-02	--	60.0	3.8	19	--	8030	--	--	--	7.8
	11-21-02	--	60.0	--	13	--	8030	--	--	--	--
TA Cb 99	11-04-02	--	5.0	4.0	30	--	8030	--	--	--	7.9
	11-26-02	--	5.0	6.0	15	--	8030	--	--	--	--
TA Cc 52	11-06-02	--	10.0	5.4	24	--	8030	--	--	--	7.9
TA Cc 53	12-10-02	9.85	74.00	0.32	40	--	4040	772	3.9	38	6.0
TA Cd 64	11-04-02	--	10.0	3.5	26	--	8030	--	--	--	8.1
TA Cd 65	11-19-02	--	15.0	4.0	45	--	8030	--	--	--	8.3
TA Da 50	11-26-02	--	5.0	5.0	18	--	8030	--	--	--	--
TA Dc 57	11-20-02	--	5.0	6.0	28	--	8030	--	--	--	8.5
TA Dc 58	11-20-02	--	5.0	4.6	55	--	8030	--	--	--	8.0

		Specif. conductance, wat unfiltered, 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, unfiltered mg/L as CaCO3 (00900)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat fltr inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat fltr incrm. titr., field, mg/L (00453)
TA Be 91	09-15-03	202	--	15.8	62	11.5	8.01	2.02	7.86	4	5
TA Be 92	11-06-02	277	--	15.3	--	--	--	--	--	140	171
	11-21-02	--	--	--	--	--	--	--	--	--	--
TA Cb 99	11-04-02	297	--	16.1	--	--	--	--	--	141	172
	11-26-02	300	--	--	--	--	--	--	--	--	--
TA Cc 52	11-06-02	710	--	16.5	--	--	--	--	--	221	270
TA Cc 53	12-10-02	179	1.0	15.0	36	5.30	5.60	23.1	4.34	26	32
TA Cd 64	11-04-02	457	--	16.7	--	--	--	--	--	232	283
TA Cd 65	11-19-02	M	--	18.6	--	--	--	--	--	427	521
TA Da 50	11-26-02	283	--	--	--	--	--	--	--	--	--
TA Dc 57	11-20-02	--	--	17.5	--	--	--	--	--	277	338
TA Dc 58	11-20-02	657	--	18.9	--	--	--	--	--	320	390

Geologic Unit (aquifer): 112CLMB - Columbia Formation
 122PNSK - Pensauken Formation
 124PNPN - Piney Point Formation
 125AQUI - Aquia Formation

Station Type: GW - Ground Water

Sampling Method: 4040 - Submersible pump
 8030 - Grab sample at water-supply tap

QUALITY OF GROUND WATER DATA
TALBOT COUNTY, MARYLAND—Continued

Well Number	Date	Rn-222, water, unfltrd pCi/L (82303)	Uranium natural water, fltrd, ug/L (22703)
TA Be 91	09-15-03	230	--
TA Be 92	11-06-02	--	--
	11-21-02	--	--
TA Cb 99	11-04-02	--	--
	11-26-02	--	--
TA Cc 52	11-06-02	--	--
TA Cc 53	12-10-02	220	<0.02
TA Cd 64	11-04-02	--	--
TA Cd 65	11-19-02	--	--
TA Da 50	11-26-02	--	--
TA Dc 57	11-20-02	--	--
TA Dc 58	11-20-02	--	--

Remark codes used in this table:

< -- Less than

E -- Estimated value

M-- Presence verified, not quantified

QUALITY OF GROUND WATER DATA

WICOMICO COUNTY, MARYLAND

Well Number	Date	Time	Station number	Sample type	Geologic unit	Station type	Depth of well, feet below LSD (72008)	Depth to bot sample intrval feet below LSD (72016)	Depth to top sample intrval feet below LSD (72015)	
WI Cd 72	09-16-03	1500	382328075411301	Environmental	112CLMB	GW	55	55	50	
	Altitude of land surface feet (72000)	Flow rate, instantaneous gal/min (00059)	Pump or flow period prior to sampling, minutes (72004)	Color, water, fltrd, Pt-Co units (00080)	Sampling method, code (82398)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unfiltered 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfiltered mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)
	35.0	5.0	23	5	8030	5.7	66	13.7	11	3.37
	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, water fltrd, mg/L as CaCO3 (39086)	Bicarbonate, water fltrd, mg/L (00453)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)
	0.572	1.30	7.73	17	21	6.34	<0.2	24.4	0.4	59
	Residue on evap. at 180degC wat fltrd mg/L (70300)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Organic carbon, water, unfiltered mg/L (00680)	Arsenic water, fltrd, ug/L (01000)	Beryllium, water, fltrd, ug/L (01010)	Iron, water, fltrd, ug/L (01046)
	56	<0.04	0.99	<0.008	<0.18	<0.04	E.2	<0.3	0.23	<8
	Iron, water, unfiltered recoverable, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfiltered recoverable, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Thallium, water, fltrd, ug/L (01057)	CIAT, water, fltrd, ug/L (04040)	CEAT, water, fltrd, ug/L (04038)	Acetochlor, water, fltrd, ug/L (49260)	Alachlor, water, fltrd, ug/L (46342)
	M	0.34	1.4	1.3	<0.02	<0.04	<0.05	<0.05	<0.05	<0.05

Geologic Unit (aquifer): 112CLMB - Columbia aquifer

Station Type: GW - Ground Water

Sampling Method: 8030 - Grab sample at water-supply tap

QUALITY OF GROUND WATER DATA
WICOMICO COUNTY, MARYLAND—Continued

Well Number	Date	alpha-HCH-d6 surrog, Sch1379 wat flt percent recovry (90505)	Ametryn water, fltrd, ug/L (38401)	Atra-zine, water, fltrd, ug/L (39632)	Bromacil, water, fltrd, ug/L (04029)	Butachlor, water, fltrd, ug/L (04026)	Butylate, water, fltrd, ug/L (04028)	Carboxin, water, fltrd, ug/L (04027)	Cyanazine, water, fltrd, ug/L (04041)	Cycloate, water, fltrd, ug/L (04031)	Diazinon-d10 sur Sch 1379, wat flt pct rcv (90670)
WI Cd 72	09-16-03	70.2	<0.05	<0.05	<1.00	<0.05	<0.05	<0.05	<0.02	<0.05	86.1

Diphenamid, water, fltrd, ug/L (04033)	Hexazinone, water, fltrd, ug/L (04025)	Metolachlor, water, fltrd, ug/L (39415)	Metribuzin, water, fltrd, ug/L (82630)	Prometon, water, fltrd, ug/L (04037)	Prometryn, water, fltrd, ug/L (04036)	Propachlor, water, fltrd, ug/L (04024)	Propazine, water, fltrd, ug/L (38535)	Simazine, water, fltrd, ug/L (04035)	Simetryn, water, fltrd, ug/L (04030)
--	--	---	--	--------------------------------------	---------------------------------------	--	---------------------------------------	--------------------------------------	--------------------------------------

<0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05

Terbacil, water, fltrd, ug/L (04032)	Tri-fluralin, water, fltrd, ug/L (04023)	Vernolate, water, fltrd, ug/L (04034)	Xylenes water, unfltrd, ug/L (81551)	1,2-Dichloroethane-d4, sur Sch2090, wat unfltrd, pct rcv (99832)	14Bromo fluoro-benzene surrog. VOC Sch, wat unfltrd, pct rcv (99834)	Benzene water, unfltrd, ug/L (34030)	Ethylbenzene water, unfltrd, ug/L (34371)	meta+ para-Xylene, water, unfltrd, ug/L (85795)	o-Xylene, water, unfltrd, ug/L (77135)
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<0.05 <0.05 <0.05 <0.2 140 79.6 <0.2 <0.2 <0.2 <0.2

Methyl t-butyl ether, water, unfltrd, ug/L (78032)	Toluene water, unfltrd, ug/L (34010)	Toluene-d8, surrog, Sch2090, wat unfltrd, percent recovry (99833)	Alpha radio-activity Th-230, 2-sigma, wat flt, pCi/L (75987)	Alpha radio-activity Th-230, water, fltrd, pCi/L (04126)	Beta radio-activity 2-sigma, wat flt, CS-137, pCi/L (75989)	Gross beta radioac water, fltrd, Cs-137, pCi/L (03515)	Rn-222 2-sigma water, unfltrd, pCi/L (76002)	Rn-222, water, unfltrd, pCi/L (82303)
--	--------------------------------------	---	--	--	---	--	--	---------------------------------------

<0.2 <0.2 102 0.72 1 0.93 2 23 360

Remark codes used in this table:

< -- Less than

E -- Estimated value

M-- Presence verified, not quantified

QUALITY OF GROUND WATER DATA

WORCESTER COUNTY, MARYLAND

Well Number	Date	Time	Station number	Sample type	Geologic unit	Station type	Depth of well, feet below LSD (72008)	Depth to bot sample intrval feet below LSD (72016)	Depth to top sample intrval feet below LSD (72015)
WO Ah 36	09-04-03	1030	382635075030602	Environmental	122MNKN	GW	440	440	430
WO Ah 38	09-03-03	0830	382638075033001	Environmental	122MNKN	GW	--	--	--
WO Bf 88	09-10-03	1000	382305075150001	Environmental	112CLMB	GW	69	69	64
WO Bh 34	09-05-03	1000	382443075033501	Environmental	122MNKN	GW	353	353	337
WO Bh 84	09-02-03	1330	382215075041901	Environmental	121BVDM	GW	89	89	84
	09-02-03	1335		Replicate	121BVDM	GW	89	89	84
WO Bh 85	09-02-03	1230	382215075041902	Environmental	122PCMK	GW	195	195	191
WO Bh 89	09-02-03	1130	382215075041903	Environmental	122MNKN	GW	500	500	388
WO Bh 98	09-05-03	1130	382127075043802	Environmental	122OCNC	GW	275	275	255
WO Bh 101	09-03-03	1030	382127075043804	Environmental	122OCNC	GW	312	239	237
WO Cc 4	09-09-03	1405	381541075271401	Blank	112CLMB	GW	--	--	--
	09-10-03	1200		Environmental	112CLMB	GW	70	70	60
WO Cg 33	09-03-03	1130	381938075052001	Environmental	112RDGV	GW	290	--	--
WO Cg 87	09-03-03	1230	381953075051401	Environmental	122OCNC	GW	310	305	250
	09-03-03	1235		Replicate	122OCNC	GW	310	--	--
WO Fe 1	01-15-03	1100	380358075292901	Environmental	112OMAR	GW	24	24	21
	01-15-03	1105		Replicate	112OMAR	GW	24	24	21

		Depth to water level, feet below LSD (72019)	Altitude of land surface feet (72000)	Flow rate, instantaneous gal/min (00059)	Pump or flow period prior to sampling, minutes (72004)	Color, water, fltrd, Pt-Co units (00080)	Sampling method, code (82398)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)
WO Ah 36	09-04-03	25.70	14.3	9.0	91	--	4040	760	0.1	2	6.4
WO Ah 38	09-03-03	--	4	--	--	--	8010	770	5.3	56	6.3
WO Bf 88	09-10-03	--	40.0	4.0	19	5	8030	--	--	--	5.5
WO Bh 34	09-05-03	13.59	4.0	10.0	70	--	4040	767	0.3	3	6.5
WO Bh 84	09-02-03	4.37	5.0	10.0	30	--	4040	766	0.3	3	6.7
	09-02-03	4.37	5.0	10.0	30	--	4040	766	0.3	3	6.7
WO Bh 85	09-02-03	5.70	5.0	10.0	40	--	4040	766	0.2	2	6.6
WO Bh 89	09-02-03	19.72	5.6	10.0	95	--	4040	766	<1.0	--	6.8
WO Bh 98	09-05-03	32.30	5.0	15.0	480	--	4040	767	0.2	2	6.3
WO Bh 101	09-03-03	--	5	--	--	--	4045	770	6.5	67	7.0
WO Cc 4	09-09-03	--	--	--	--	<1	--	--	--	--	--
	09-10-03	--	40.0	4.0	20	10	8030	--	--	--	5.6
WO Cg 33	09-03-03	--	6.00	--	--	--	4045	770	3.4	35	7.3
WO Cg 87	09-03-03	--	10	--	--	--	4045	770	3.5	38	7.2
	09-03-03	--	10	--	--	--	4045	770	3.5	38	7.2
WO Fe 1	01-15-03	8.40	32.00	0.33	70	--	4040	769	0.2	2	5.1
	01-15-03	8.40	32.00	0.33	70	--	4040	--	--	--	--

Geologic Unit (aquifer): 112CLMB - Columbia Frmation
 112OMAR - Omar Formatio
 112RDGV - Red Gravelly Facies
 121BVDM - Beaverdam Sand
 122MNKN - Manokin aquifer
 122OCNC - Ocean City aquifer
 122PCMK - Pocomoke aquifer

Sampling Method: 4040 - Submersible pump
 4045 - Submersible multiple impeller (turbine) pump
 8010 - Other
 8030 - Grab sample at water-supply tap

Station Type: GW - Ground Water

QUALITY OF GROUND WATER DATA

WORCESTER COUNTY, MARYLAND—Continued

Well Number	Date	meta- + para- Xylene, water, unfltrd ug/L (85795)	o- Xylene, water, unfltrd ug/L (77135)	Methyl t-butyl ether, water, unfltrd ug/L (78032)	Toluene water unfltrd ug/L (34010)	Toluene -d8, surrog, Sch2090 wat unfl percent recovery (99833)	Alpha radio- activty 2-sigma wat flt Th-230, pCi/L (75987)	Alpha radio- activty water, fltrd, Th-230, pCi/L (04126)	Beta radio- activty 2-sigma wat flt CS-137, pCi/L (75989)	Gross beta radioac water, fltrd, Cs-137, pCi/L (03515)	Rn-222 2-sigma water unfltrd pCi/L (76002)
WO Ah 36	09-04-03	--	--	--	--	--	--	--	--	--	--
WO Ah 38	09-03-03	--	--	--	--	--	--	--	--	--	--
WO Bf 88	09-10-03	<0.2	<0.2	<0.2	<0.2	96.2	2.1	M	2.1	4	21
WO Bh 34	09-05-03	--	--	--	--	--	--	--	--	--	--
WO Bh 84	09-02-03	--	--	--	--	--	--	--	--	--	--
	09-02-03	--	--	--	--	--	--	--	--	--	--
WO Bh 85	09-02-03	--	--	--	--	--	--	--	--	--	--
WO Bh 89	09-02-03	--	--	--	--	--	--	--	--	--	--
WO Bh 98	09-05-03	--	--	--	--	--	--	--	--	--	--
WO Bh 101	09-03-03	--	--	--	--	--	--	--	--	--	--
WO Cc 4	09-09-03	<0.2	<0.2	<0.2	<0.2	98.4	0.35	M	0.82	M	--
	09-10-03	<0.2	<0.2	<0.2	<0.2	95.2	0.56	1	0.97	1	22
WO Cg 33	09-03-03	--	--	--	--	--	--	--	--	--	--
WO Cg 87	09-03-03	--	--	--	--	--	--	--	--	--	--
	09-03-03	--	--	--	--	--	--	--	--	--	--
WO Fe 1	01-15-03	--	--	--	--	--	--	--	--	--	23
	01-15-03	--	--	--	--	--	--	--	--	--	23

Uranium
natural
water,
unfltrd
fltrd,
ug/L
(22703)

WO Ah 36	09-04-03	--	--
WO Ah 38	09-03-03	--	--
WO Bf 88	09-10-03	280	--
WO Bh 34	09-05-03	--	--
WO Bh 84	09-02-03	--	--
	09-02-03	--	--
WO Bh 85	09-02-03	--	--
WO Bh 89	09-02-03	--	--
WO Bh 98	09-05-03	--	--
WO Bh 101	09-03-03	--	--
WO Cc 4	09-09-03	--	--
	09-10-03	310	--
WO Cg 33	09-03-03	--	--
WO Cg 87	09-03-03	--	--
	09-03-03	--	--
WO Fe 1	01-15-03	350	<0.02
	01-15-03	310	--

Remark codes used in this table:

- < -- Less than
- E -- Estimated value
- M-- Presence verified, not quantified



Photo by C.J. Strain

Well 392517077190401 Local number FR Df 35

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Conversion Factors

Multiply	By	To obtain
Length		
inch (in.)	2.54×10^1	millimeter (mm)
	2.54×10^{-2}	meter
foot (ft)	3.048×10^{-1}	meter (m)
mile (mi)	1.609×10^0	kilometer (km)
Area		
acre	4.047×10^3	square meter (m ²)
	4.047×10^{-1}	square hectometer (hm ²)
	4.047×10^{-3}	square kilometer (km ²)
square mile (mi ²)	2.590×10^0	square kilometer (km ²)
Volume		
gallon (gal)	3.785×10^0	liter (L)
	3.785×10^{-3}	cubic meter (m ³)
	3.785×10^0	cubic decimeter (dm ³)
million gallons (Mgal)	3.785×10^3	cubic meter (m ³)
	3.785×10^{-3}	cubic hectometer (hm ³)
cubic foot (ft ³)	2.832×10^{-2}	cubic meter (m ³)
	2.832×10^1	cubic decimeter (dm ³)
cubic-foot-per-second-per-day [(ft ³ /s/d)]	2.447×10^3	cubic meter (m ³)
	2.447×10^{-3}	cubic hectometer (hm ³)
acre-foot (acre-ft)	1.223×10^3	cubic meter (m ³)
	1.223×10^{-3}	cubic hectometer (hm ³)
	1.223×10^{-6}	cubic kilometer (km ³)
Flow rate		
cubic foot per second (ft ³ /s)	2.832×10^1	liter (L/s)
	2.832×10^{-2}	cubic meter per second (m ³ /s)
	2.832×10^1	cubic decimeter per second (dm ³ /s)
gallon per minute (gal/min)	6.309×10^{-2}	liter per second (L/s)
	6.309×10^{-5}	cubic meter per second (m ³ /s)
	6.309×10^{-2}	cubic decimeter per second (dm ³ /s)
million gallons per day (Mgal/d)	4.381×10^{-2}	cubic meter per second
	4.381×10^1	cubic decimeter per second (dm ³ /s)
Mass		
ton, short (2,000 lb)	9.072×10^{-1}	megagram (Mg) or metric ton

Temperature in degrees Celsius (°C) may be converted to degrees Fahrenheit (°F) as follows:

$$^{\circ}\text{F} = (1.8 \times ^{\circ}\text{C}) + 32$$



1879–2004