

# Water Resources Data New Jersey Water Year 2003

Volume 2  
Ground-Water Data



Water-Data Report NJ-03-2

**U.S. Department of the Interior  
U.S. Geological Survey**



**Prepared in cooperation with the  
New Jersey Department of  
Environmental Protection and with  
other agencies**

# 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
		1	2	3	4	5						1	2	1	2	3	4	5	7	7
6	7	8	9	10	11	12	3	4	5	6	7	8	9	8	9	10	11	12	13	14
13	14	15	16	17	18	19	10	11	12	13	14	15	16	15	16	17	18	19	20	21
20	21	22	23	24	25	26	17	18	19	20	21	22	23	22	23	24	25	26	27	28
27	28	29	30	31			24	25	26	27	28	29	30	29	30	31				

## 2003

JANUARY							FEBRUARY							MARCH						
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			1	2	3	4						1							1	
5	6	7	8	9	10	11	2	3	4	5	6	7	8	2	3	4	5	6	7	8
12	13	14	15	16	17	18	9	10	11	12	13	14	15	9	10	11	12	13	14	15
19	20	21	22	23	24	25	16	17	18	19	20	21	22	16	17	18	19	20	21	22
26	27	28	29	30	31		23	24	25	26	27	28		23	24	25	26	27	28	29
														30	31					

APRIL							MAY							JUNE							
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	
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13	14	15	16	17	18	19	11	12	13	14	15	16	17	15	16	17	18	19	20	21	
20	21	22	23	24	25	26	18	19	20	21	22	23	24	22	23	24	25	26	27	28	
27	28	29	30				25	26	27	28	29	30	31	29	30						

JULY							AUGUST							SEPTEMBER							
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6	7	8	9	10	11	12	3	4	5	6	7	8	9	7	8	9	10	11	12	13	
13	14	15	16	17	18	19	10	11	12	13	14	15	16	14	15	16	17	18	19	20	
20	21	22	23	24	25	26	17	18	19	20	21	22	23	21	22	23	24	25	26	27	
27	28	29	30	31			24	25	26	27	28	29	30	28	29	30					

# Water Resources Data New Jersey Water Year 2003

## Volume 2. Ground-Water Data

By Walter D. Jones

Water-Data Report NJ-03-2



Prepared in cooperation with the New Jersey Department of Environmental Protection and with other agencies



**U.S. Department of the Interior**  
**U.S. Geological Survey**

**U.S. Department of the Interior**

Gale A. Norton, Secretary

**U.S. Geological Survey**

Charles G. Groat, Director

2004

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Additional earth science information is available by accessing the USGS home page at <http://www.usgs.gov/>

## PREFACE

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

Hydrologic data for New Jersey are contained in 3 volumes:

Volume 1. Surface-Water Data

Volume 2. Ground-Water Data

Volume 3. Water-Quality Data

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

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VOLUME**

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	<u>WELL NUMBER</u>	
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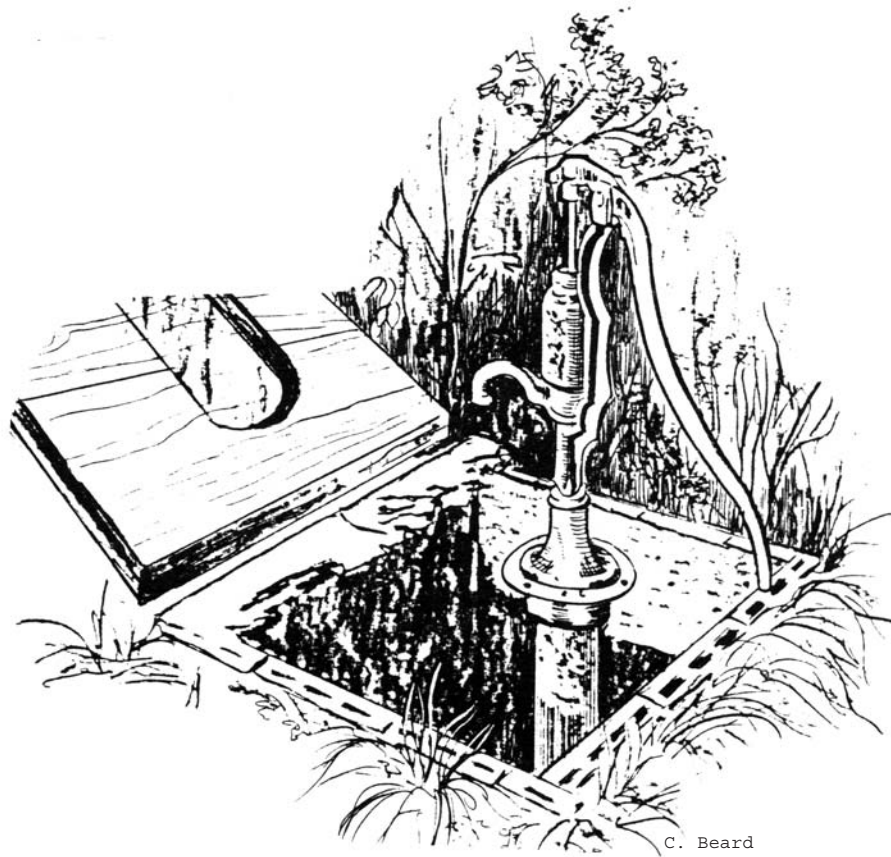
**GROUND-WATER LEVEL RECORDS**

<u>MIDDLESEX COUNTY</u>	<u>NJ-WRD WELL NUMBER</u>	<u>PAGE</u>
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C. Beard

## INTRODUCTION

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

This report series includes records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; and water levels and water quality of ground-water. Volume 2 contains records of ground-water levels in 185 wells. Locations of these wells are shown on figure 4. These data represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in New Jersey.

This series of annual reports for New Jersey began with the 1961 water year with a report that contained only data relating to the quantities of surface water. For the 1964 water year, a similar report was introduced that contained only data relating to water quality. For the 1975 through 1989 water years, the report format was changed to present, in one volume, data on quantities of surface water, quality of surface and ground water, and ground-water levels. Beginning with the 1977 water year, these data were published in two volumes. Beginning with the 1990 water year, the report format was changed to include surface-water and surface-water-quality data in Volume 1 and ground-water-level and ground-water-quality data in Volume 2. Beginning in the 1998 water year, the format changed to include surface-water discharge records in Volume 1, ground-water level records in Volume 2, and surface-water and ground-water quality records in Volume 3.

Prior to introduction of this series and for several water years concurrent with it, water-resources data for New Jersey were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage, and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-Water Supply of the United States, Part 1B." For the 1961 through 1970 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States," and water levels for the 1935 through 1974 water years were published under the title "Ground-Water Levels in the United States." The above mentioned Water-Supply Papers may be consulted in the libraries of the principal cities of the United States and may be purchased from the U.S. Geological Survey, Branch of Information Services, Box 25286, Denver, Colorado, 80225-0286.

Publications similar to this report are published annually by the Geological Survey for all States. These official Survey reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report NJ-03-2." For archiving and general distribution, the reports for 1971-74 water years also are identified as water-data reports.

The U.S. Geological Survey, New Jersey District, maintains a World Wide Web site which has information on New Jersey District activities and water-resource related links.

**<http://nj.usgs.gov>**

Additional information may be obtained from the District Chief at the address given on the back of the title page or by telephone (609) 771-3900.

## COOPERATION

This report was prepared by the U.S. Geological Survey under cooperative agreement with the following organizations:

New Jersey Department of Environmental Protection, Bradley M. Campbell, Commissioner.

County of Gloucester, Charles E. Romick, Director of Planning.

Atlantic Highlands Water Department, Robert Dougherty, Superintendent.

Medford Township Department of Municipal Utilities, Michael Achey, Sr., Director.

Washington Township Municipal Utilities Authority, Sheldon Belson, Executive Director.

Evesham Municipal Utilities Authority, Louis Russo, Executive Director

## **SUMMARY OF HYDROLOGIC CONDITIONS**

### **Ground-Water Levels**

Ground water is one of the Nation's most important natural resources. It provides about 40 percent of our Nation's public water supply. Currently, more than one-half of New Jersey's drinking-water is supplied by over 300,000 wells that serve more than 4 million people. (John P. Nawyn, U. S. Geological Survey, written commun., 2004) As population and demand for water increase, strategic water management will be required for New Jersey to meet its future water-supply needs. Managing the development and use of the ground-water resource so that the supply can be maintained for an indefinite time without causing unacceptable environmental, economic, or social consequences is of paramount importance.

The U.S. Geological Survey (USGS) has operated a network of observation wells in New Jersey for the purpose of monitoring water-level changes throughout the State since 1923. Long-term systematic measurement of water levels in observation wells provides the data needed to evaluate changes in the ground-water resource over time. Records of ground-water levels are used to evaluate the effects of climate changes and water-supply development, to develop ground-water models, and to forecast trends. Ground-water levels are currently measured in 185 wells: 114 wells are equipped for continuous water-level monitoring, 16 wells are equipped to measure maximum and minimum water levels between site visits, and 55 wells are measured manually from two to six times per year.

The USGS, in cooperation with the New Jersey Department of Environmental Protection (NJDEP), established a Drought Monitoring Network in 2001. NJDEP divided New Jersey into six drought regions on the basis of watersheds and water-supply characteristics. Drought indicators (ground-water levels, precipitation, streamflow, and reservoir contents) are monitored continuously in each region. The ground-water-level network, which is one part of the Drought Monitoring Network, was created to provide data to indicate water-level trends in shallow ground-water systems. Satellite telemetry has been added to 15 wells with continuous recorders in order to make the data available in the shortest time possible. An additional seven wells, which previously were measured periodically, were equipped with continuous recorders, and the frequency of measurements was increased at four additional wells. During 2003, the Network was expanded hydrologically and areally with the addition of six new wells equipped with continuous recorders. Current data from these wells and other shallow observation wells are compared to monthly statistics of historical data to put the current water levels in context. These data, along with data on precipitation, streamflow, and reservoir contents provide the information needed to determine the hydrologic conditions in each drought region.

The USGS Fact Sheet FS-129-02 "Real-Time Ground-Water Level Monitoring in New Jersey" (Jones and others, 2002) describes the ground-water level satellite telemetry segment of the Drought Monitoring Network in more detail. Ground-water data for New Jersey can be accessed on the Internet web pages of the USGS at <http://waterdata.usgs.gov/nj/nwis/gw>. Real-time data from a National Ground Water Climate Response Network of about 150 wells, including the 15 wells in New Jersey, can be accessed at <http://groundwaterwatch.usgs.gov/>.

During the 2003 water year, ground-water levels were measured in 185 wells. Wells in which water levels exceeded their previous measured extremes (highest or lowest water levels), and for which more than 2 years of data are available, are listed in table 1. Previous record low water levels were exceeded in 23 of the 185 wells in the statewide observation-well network during the 2003 water year. Twenty-one of the record low water levels were in wells located in the Coastal Plain, and two were in wells located in the northern part of the State. Thirteen of these record low levels occurred in wells that tap unconfined aquifers in the southern part of the State, and two occurred in stratified drift and fractured rock aquifers in the north. These record low ground-water levels can be attributed directly to the drought conditions that prevailed during the early part of the water year. Previous record high water levels were exceeded in 16 network observation wells during the 2003 water year.

**Table 1. Water-level records set during the 2003 water year, in observation wells with more than 2 years of data**

NJ-WRD Well Number	Local identifier	Aquifer <sup>1</sup> code	Lowest water-level, in feet below land surface	Value by which previous record low was exceeded, in feet	Year record began
<u>Record Lows in the Coastal Plain of New Jersey</u>					
01-0256	Scholler 1 Obs	121CCKD	40.55	0.05	1962
05-0570	Mount Obs	121CCKD	19.77	0.61	1955
05-0630	Penn SF Deep Obs	121CCKD	30.06	0.14	1951
05-0684	Butler Place 2 Obs	121CCKD	24.09	0.11	1965
05-0689	Lebanon State Forest 23-D Obs	121CCKD	26.76	0.42	1955
11-0042	Vocational School 2 Obs	121CCKD	10.86	0.02	1972
15-1033	WTMUA Monitoring 1 Obs	121CCKD	20.99	0.11	1989
15-1054	USGS GSC Obs-1 Shallow	121CCKD	24.70	0.08	1991
15-1208	USGS AGO2	121CCKD	28.61	0.29	1996
15-1213	USGS UND06	121CCKD	8.73	0.01	1997
29-1059	Fort Dix RLF-30 Obs	121CCKD	53.86	0.25	1992
09-0302	Coast Guard 800 Obs	122KRKDL	32.90	1.44	1990
09-0306	Oyster 800 Obs	122KRKDL	29.21	0.11	1990
09-0337	M-1 N Wildwood 800 Obs	122KRKDL	41.55	0.22	1992
05-0407	Atsion 1 Obs	124PNPN	-2.31	0.33	1963
29-1210	Great Bay Blvd. 1 Obs	124PNPN	22.48	0.48	1997
05-1250	McGuire 08-MW-52 OBS	125VNCN	10.86	0.02	1996
05-1390	New Lisbon 2 Obs	211EGLS	98.19	0.32	1997
33-0251	Salem 1 Obs	211MRPAM	37.68	0.61	1997
05-1391	Coyle 2 Obs (OW 96)	211MRPAU	213.45	0.35	1997
33-0253	Salem 3 Obs	211MRPAU	32.67	0.77	1965
<u>Record Lows in Northern New Jersey</u>					
27-012	Briarwood School Obs	112SFDF	65.91	0.83	1967
21-289	Bristol-Myers 100 Obs	227PSSC	26.54	0.30	1986
<u>Record Highs in the Coastal Plain of New Jersey</u>					
05-1251	Mcguire 08-MW-102 Obs	121CCKD	7.41	0.02	1996
11-237	Natural Area 1 Obs	121CCKD	6.88	0.04	1972
09-049	Higbee Beach 3 Obs	121CNSY	9.41	0.02	1965
15-712	Stefka 1 Obs	211MRPAL	12.23	0.07	1987
15-772	National Park #3-OW-AL	211MRPAL	20.35	1.30	2000
15-727	Stefka 3 Obs	211MRPAM	8.46	0.02	1987
15-774	Nationa Park #4-OW-AM	211MRPAM	10.07	0.73	2000
15-773	National Park #5-OW-AU	211MRPAU	6.83	0.47	2000
33-841	Parvin Sp 1 Obs (OW A)	211MRPAU	119.33	0.23	1997
23-351	SWD 1 Obs	211ODBG	10.83	0.06	1968
<u>Record Highs in Northern New Jersey</u>					
13-096	East Orange Shallow Obs	112SFDF	38.42	0.75	1991
37-206	Fairgrounds 7 Obs	112SFDF	30.74	0.33	1991
37-207	Walpack Twp 4 Obs	112SFDF	22.29	0.40	1991
21-028	Civil Defense Obs	231LCKG	13.97	0.17	1964
41-349	Blairstown 1 Obs	361MRBG	3.68	0.10	1999
37-205	Swartwood Park 5 Obs	371ALNN	10.78	1.42	1991

<sup>1</sup>AQUIFER CODES:

112SFDF	-Stratified drift	211MRPAM	-Middle Potomac-Raritan-Magothy aquifer
121CCKD	-Kirkwood-Cohansey aquifer system	211MRPAL	-Lower Potomac-Raritan-Magothy aquifer
121CNSY	-Cohansey Sand	211ODBG	-Old Bridge aquifer
122KRKDL	-Atlantic City 800-foot sand of the Kirkwood Formation	227PSSC	-Passaic Formation
124PNPN	-Piney Point Formation	231LKCKG	-Lockatong Formation
125VNCN	-Vincentown aquifer	361MRBG	-Martinsburg Shale
211EGLS	-Englishtown aquifer system	371ALNN	-Allentown Dolomite
211MRPAU	-Upper Potomac-Raritan-Magothy aquifer		

At the beginning of water year 2003, New Jersey was returning to normal conditions after experiencing 4 years of drought conditions. During droughts, it takes longer for the deficiencies of precipitation to show up in the ground-water system than in the surface-water system. This time lag causes ground-water levels to be the last to show the effects of the onset of drought and the last to return to normal after a drought ends. By December 2002, most ground-water levels had returned to normal seasonal levels. On January 8, 2003, Governor McGreevey lifted New Jersey's statewide Water Emergency which had been in effect for the previous 10 months. The drought years were followed by the fifth wettest calendar year since 1895. The average statewide precipitation totaled 57.5 inches, more than 10 inches greater than the normal annual mean. Annual mean precipitation for New Jersey is 47.2 inches per water year based on precipitation during 1971-2000. (Office of the N.J. State Climatologist, Rutgers University, New Jersey, unpub. data, accessed March 4, 2003, on the World Wide Web at URL <http://climate.rutgers.edu>) More New Jersey drought information can be found on the NJDEP drought web site at: [www.njdrought.org](http://www.njdrought.org).

The effects of the wet year on daily mean water levels in six observation wells during water year 2003 can be seen in the hydrographs shown in figure 1. Monthly extreme and long-term average water levels are shown for comparison. The Taylor, Readington School 11, and Cranston Farms 15 observation wells (NJ-WRD well numbers 37-202, 19-270, and 21-364) are open to fractured-rock aquifers; the hydrographs show the recovery of water levels in these wells from the drought. The Morrell 1, Lebanon State Forest 23-D, and Vocational School 2 observation wells (NJ-WRD well numbers 23-104, 5-689, 11-42) tap unconfined sand and gravel aquifers and show a somewhat slower recovery from the drought than wells that tap the fractured rock aquifers. These wells are all part of the USGS-NJDEP Drought Monitoring Network.

Water levels in most wells that tap unconfined aquifers in the Coastal Plain show the effects of recent climate patterns. The low water levels in 1995, 1998, 1999, 2001, and 2002 are the result of dry years, and the high water levels in 2003 are the result of the recent wet year. Water levels in these wells, in general, are similar regardless of which aquifer the wells are completed in.

For wells that tap fractured rock aquifers and stratified drift deposits in northern New Jersey, trends in water levels are not as similar as those for wells that tap the Coastal Plain unconfined aquifers. The effects of recent droughts can be seen in many wells that tap various aquifers; however, some wells do not show the effects of drought as clearly and may be influenced more by nearby withdrawals or local confinement.

Water levels in the confined aquifers in the Coastal Plain of New Jersey have been reacting to changes in withdrawals for the past 10 years. In 1986, NJDEP designated two "Critical Water-Supply Management Areas" in the New Jersey Coastal Plain. (See figure 2.) This legislation was initiated as a result of concern about long-term declines in ground-water levels in these areas where ground water is the primary source of water supply. Ground-water withdrawals from specified aquifers in these areas were reduced, and new allocations may be limited. In Critical Area 1, withdrawals from the Wenonah-Mount Laurel aquifer, Englishtown aquifer system, and Upper and Middle Potomac-Raritan-Magothy aquifers are restricted. In Critical Area 2, withdrawals from the Potomac-Raritan-Magothy aquifer system have been restricted since 1996.

In Critical Area 1, water levels rose dramatically in the Potomac-Raritan-Magothy aquifer system, Englishtown aquifer system, and Wenonah-Mount Laurel aquifer from 1991 to 1998. This rise in water levels was the result of the reduction in ground-water withdrawals from deep, confined aquifers; an increase in withdrawals from shallower aquifers; and a shift in withdrawals from ground-water to surface-water sources. In Critical Area 2, the shift in withdrawals away from the deeper, confined aquifers to surface water and ground water in shallower, confined and unconfined aquifers began in 1996. As a result, beginning in 1996 water levels rose in many observation wells screened in the Potomac-Raritan-Magothy aquifer system in Critical Area 2.

Water levels measured in confined aquifers in the Coastal Plain in water year 2003, together with those measured during previous years, show the effects of the Critical Area cutbacks -- recovering water levels in some aquifers in some areas. Declines in water levels in some parts of the shallower confined and unconfined aquifers also have occurred recently. Changes in water levels for each of the confined aquifers in the Coastal Plain are summarized in the following paragraphs.

Water levels in the confined Cohansey aquifer in Cape May County have been relatively unchanged in wells in the northern part of the county. In wells in the southern part of the county (9-48, 9-49, and 9-150), water levels have recovered about 5 feet since 1999 as a result of changes in withdrawals related to the desalination plant in Cape May City, which has provided water for public supply since 1998.

Water levels in the Atlantic City 800-foot sand have been affected by withdrawals for the desalination plant. Water levels in the Coast Guard 800 observation well (NJ-WRD well number 9-302) have declined more than 10 feet since 1998, and water levels in two wells located north of the desalination plant (9-306 and 9-337) have declined 2 to 4 feet since 1998. In Atlantic County, water levels have been relatively stable over the past 5 years (1-37, 1-180, 1-578, 1-702 and 1-703).



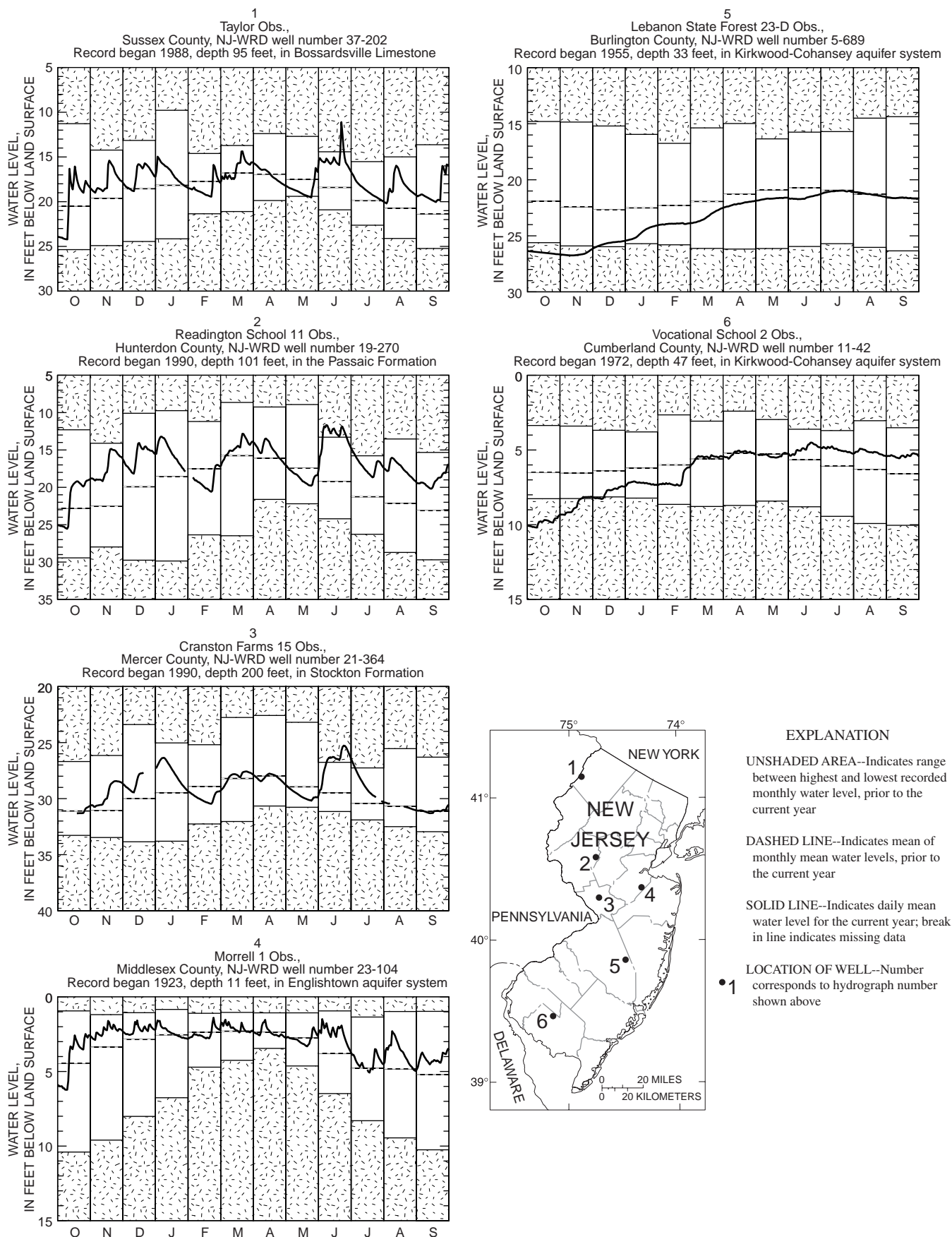
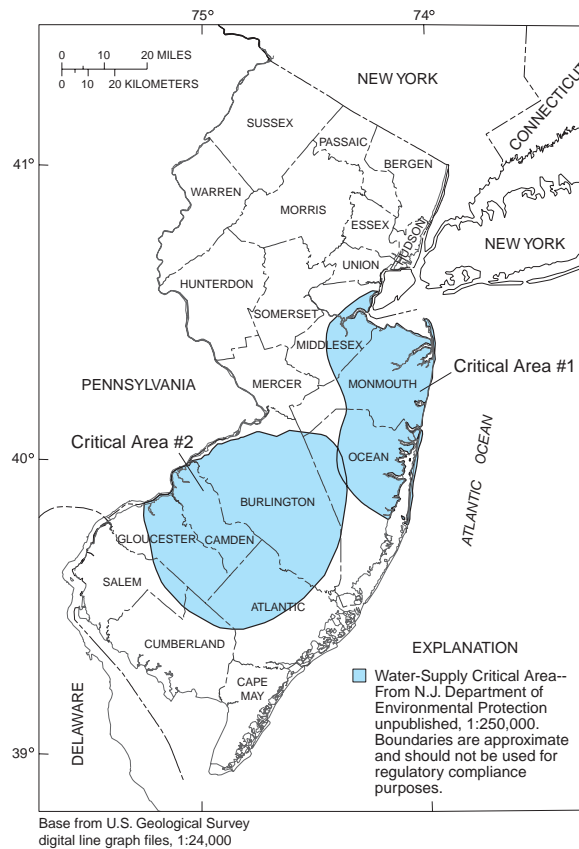


Figure 1. Ground-water levels at key observation wells in New Jersey during water year 2003.



**Figure 2.** Location of Water-Supply Critical Areas in New Jersey. These areas were designated to help control the decline in water levels in some of the confined aquifers. (From Watt, 2000)

Water levels in the Piney Point aquifer throughout much of the southern part of the State continue to decline. Declines of 3 to 10 feet have occurred over the past 10 years in several wells completed in the Piney Point aquifer (1-834, 1-1219, 11-44 and 29-1210); however, water levels in the aquifer in parts of Ocean and Burlington Counties have been relatively stable (5-407, 5-676, and 29-425). Water levels in the Vincentown aquifer have remained stable over the past 10 years except for periods of drought when levels dropped 1 to 3 feet (5-1250, 25-636 and 29-139).

Water levels in the Wenonah-Mount Laurel aquifer in parts of Burlington, Camden, Gloucester, and Salem Counties had been declining over the last several years but leveled off during 2002-03 (5-1155, 5-1387, 7-118, 7-478 and 33-20). The greatest long-term water-level decline in a confined aquifer observation well has occurred in the New Brooklyn Park 3 observation well (07-478), which is screened in the Wenonah-Mount Laurel aquifer in Camden County. The water level in this well declined more than 86 feet since December 1962 but has recently leveled off and showed slight recovery in 2003. Water levels in the northern part of the aquifer leveled off in the late 1990's after recovering as a result of Critical Area 1 withdrawal cutbacks (25-353, 25-486, and 25-637).

Water levels in observation wells that tap the Englishtown aquifer system recovered and have leveled off in the northern part of the aquifer as a result of Critical Area 1 withdrawal cutbacks (25-486, 29-503 and 29-530). Water-levels in several wells in southern Monmouth County, however, have shown slight declines over the past 2 years (25-429 and 25-638). Water levels in the Toms River 2 Obs well (29-534) in central Ocean County have been rising steadily for the past 10 years. Recent declines in water levels occurred at two wells in Burlington County (5-259 and 5-1390) because of increased withdrawals from the aquifer in that area.

Water levels in the Potomac-Raritan-Magothy aquifer system have been affected by withdrawal cutbacks in both Critical Areas. Water levels recovered through the late 1990's in the northern part of the aquifer system as a result of the decreased withdrawals in Critical Area 1 but have declined slightly in recent years at several wells (25-272, 25-635, 25-639, 29-19, 29-85). In the vicinity of Critical area 2 (Burlington, Camden, and Gloucester Counties), water levels began rising in 1996 and either are continuing to rise slightly or have leveled off in recent years.

## SPECIAL NETWORKS AND PROGRAMS

**Hydrologic Benchmark Network** is a network of 61 sites in small drainage basins in 39 States that was established in 1963 to provide consistent streamflow data representative of undeveloped watersheds nationwide, and from which data could be analyzed on a continuing basis for use in comparison and contrast with conditions observed in basins more obviously affected by human activities. At selected sites, water-quality information is being gathered on major ions and nutrients, primarily to assess the effects of acid deposition on stream chemistry. Additional information on the Hydrologic Benchmark Program may be accessed from <http://water.usgs.gov/hbn/>.

**National Stream-Quality Accounting Network (NASQAN)** is a network of sites used to monitor the water quality of large rivers within the Nation's largest river basins. From 1995 through 1999, a network of approximately 40 stations was operated in the Mississippi, Columbia, Colorado, and Rio Grande River basins. For the period 2000 through 2004, sampling was reduced to a few index stations on the Colorado and Columbia Rivers so that a network of 5 stations could be implemented on the Yukon River. Samples are collected with sufficient frequency that the flux of a wide range of constituents can be estimated. The objective of NASQAN is to characterize the water quality of these large rivers by measuring concentration and mass transport of a wide range of dissolved and suspended constituents, including nutrients, major ions, dissolved and sediment-bound heavy metals, common pesticides, and inorganic and organic forms of carbon. This information will be used (1) to describe the long-term trends and changes in concentration and transport of these constituents; (2) to test findings of the National Water-Quality Assessment (NAWQA) Program; (3) to characterize processes unique to large-river systems such as storage and re-mobilization of sediments and associated contaminants; and (4) to refine existing estimates of off-continent transport of water, sediment, and chemicals for assessing human effects on the world's oceans and for determining global cycles of carbon, nutrients, and other chemicals. Additional information about the NASQAN Program may be accessed from <http://water.usgs.gov/nasqan/>.

**The National Atmospheric Deposition Program/National Trends Network (NADP/NTN)** is a network of monitoring sites that provide continuous measurement and assessment of the chemical constituents in precipitation throughout the United States. As the lead Federal agency, the USGS works together with over 100 organizations to provide a long-term, spatial and temporal record of atmospheric deposition generated from this network of 250 precipitation-chemistry monitoring sites. The USGS supports 74 of these 250 sites. This long-term, nationally consistent monitoring program, coupled with ecosystem research, provides critical information toward a national scorecard to evaluate the effectiveness of ongoing and future regulations intended to reduce atmospheric emissions and subsequent impacts to the Nation's land and water resources. Reports and other information on the NADP/NTN Program, as well as data from the individual sites, may be accessed from <http://bgs.usgs.gov/acidrain/>.

**The USGS National Water-Quality Assessment (NAWQA) Program** 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; to provide an improved understanding of the primary natural and human factors affecting these observed conditions and trends; and to provide information that supports development and evaluation of management, regulatory, and monitoring decisions by other agencies.

Assessment activities are being conducted in 42 study units (major watersheds and aquifer systems) that represent a wide range of environmental settings nationwide and that account for a large percentage of the Nation's water use. A wide array of chemical constituents is 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 water-resources managers to use in making decisions and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest.

Communication and coordination between USGS personnel and other local, State, and Federal interests are critical components of the NAWQA Program. Each study unit has a local liaison committee consisting of representatives from key Federal, State, and local water-resources agencies, Indian nations, and universities in the study unit. Liaison committees typically meet semiannually to discuss their information needs, monitoring plans and progress, desired information products, and opportunities to collaborate efforts among the agencies. Additional information about the NAWQA Program may be accessed from <http://water.usgs.gov/nawqa/>.

The USGS National Streamflow Information Program (NSIP) is a long-term program with goals to provide framework streamflow data across the Nation. Included in the program are creation of a permanent Federally funded streamflow network, research on the nature of streamflow, regional assessments of streamflow data and databases, and upgrades in the streamflow information delivery systems. Additional information about NSIP may be accessed from <http://water.usgs.gov/nsip/>.

## EXPLANATION OF THE RECORDS

The ground-water level data 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 locations of the wells where data were collected are shown in figure 4. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

### Station Identification Numbers

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

### 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 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 well will retain its initial identification number; however, its true latitude and longitude will be listed in the LOCATION paragraph of the station description (fig. 3).

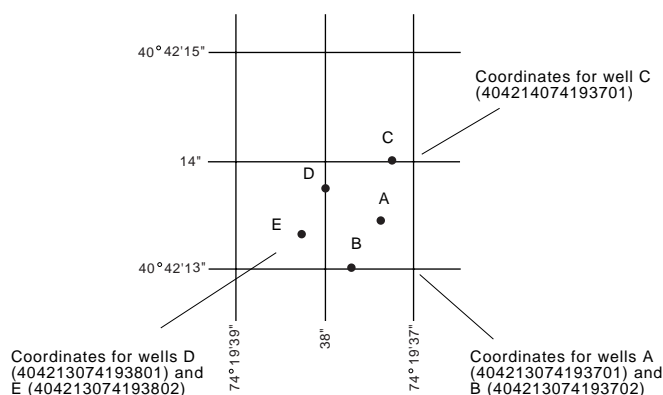


Figure 3. System for numbering wells and miscellaneous sites (latitude and longitude)

### Records of Ground-Water Levels

Water-level data from the New Jersey Observation-Well Network and other current ground water projects are given in this report. These data are intended to provide a historical record of water-level changes in the State's most important aquifers. The locations of these wells are shown in figure 4.

### Data Collection and Computation

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

Water-level data are presented by counties arranged in alphabetical order. The primary identification number for a given well is the NJ-WRD well number, a hyphenated 6 digit identification number assigned to all New Jersey wells in the Ground Water Site Inventory (GWSI) data base. The first two digits are a code for the county in which the well is located and the last four digits are a sequence number. These NJ-WRD well numbers are used in the ground-water level descriptions, and on the corresponding location maps in this report. The secondary identification number for a given well is the 15-digit number described in the previous section. Where available, New Jersey Water Allocation Permit Numbers are included as an additional identifier.

Water levels are measured manually using a steel tape at regular time intervals. Many wells are equipped with water-level recorders or pressure transducer-data logger combinations to observe daily fluctuations in water level. Beginning in the 1977 water year, water-level recorders were removed from some wells and replaced by water-level extremes recorders. The extremes are read from these recorders at about three month intervals, but the actual dates of occurrence of these extremes (highest and lowest water levels) are unknown. In this report, the water-level extremes are given together with the manually measured water levels.

Water-level measurements in this report are given in feet with reference to land-surface datum (lsd). Land-surface datum is a datum plane that is approximately at land surface at each well. The altitude of the land-surface and the height of the measuring point (MP) above or below land-surface are given in each well description.

### Data Presentation

Each water-level record consists of three parts: the well description, the data table of water levels observed during the current water year, and a hydrograph of the water levels for a selected time period including the current water year. The comments to follow clarify information presented under the various headings of the well description.

**LOCATION.**--This paragraph follows the well-identification number and reports the latitude and longitude (given in degrees, minutes, and seconds); the hydrologic-unit number; a description of the location; and the owner's name. Horizontal coordinate information is referenced to North American Datum of 1983 (NAD83). The hydrologic unit number is a code for the river basin where the well is located (U.S. Geological Survey, 1974: Hydrologic Unit Map).

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

**WELL CHARACTERISTICS.**--This entry describes the well in terms of depth, diameter of screened interval or open hole segment, method of construction, use, and additional information known about the physical characteristics of the well.

**INSTRUMENTATION.**--This paragraph provides information on both the frequency of measurement and the collection method used, allowing the user to better evaluate the reported water-level extremes by knowing whether they are based on continuous, monthly, or some other frequency of measurement.

**DATUM.**--This entry describes both the measuring point and the land-surface altitude at the well. The measuring point is described physically (such as top of coupling, top of recorder shelf, plug in pump base and so on), and in relation to land surface (such as 1.3 ft. above land-surface). The altitude of the land-surface is described in feet above National Geodetic Vertical Datum of 1929 (NGVD of 1929); it is reported with a precision depending on the method of determination.

**REMARKS.**--This entry describes factors that may influence the water level in a well or the measurement of the water level. It may give other important data relevant to the well site.

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

**EXTREMES FOR PERIOD OF RECORD.**--This entry identifies the highest and lowest instantaneously recorded or measured water levels during the period of record, with respect to land-surface datum, and the dates of occurrence.

A table of water levels follows the station description for each well. Water levels are reported in reference to land surface datum. For wells not equipped with continuous recorders, the table lists the water levels and measurement dates. For wells equipped with continuous recorders, only abbreviated tables are published. Daily mean water-levels are listed for every fifth day and at the end of the month (eom). The highest and lowest daily mean water levels of the water year and their dates of occurrence are shown on a line below the abbreviated table. Because all values are not published for wells with recorders, the extremes may be values that are not listed in the table. Missing records are indicated by dashes in place of the water level. For wells equipped with water-level extremes recorders, the extremes (highest and lowest water levels) for each time period are given together with the manually measured water levels.

A hydrograph for a selected period of record follows each water-level table. One of two types of hydrographs is shown depending on the method of data collection. For wells equipped with continuous recorders, daily mean water levels are plotted as continuous line graphs. For wells equipped with maximum-minimum recorders and wells without recorders, a scatter plot shows each individual water level measurement. Trend lines may be shown on the graphs. The trend line may be interpreted as a general direction of water-level movement. Actual water levels may deviate from this line. Some hydrographs may contain both periodic and continuous data.

### **CURRENT WATER-RESOURCES PROJECTS IN NEW JERSEY**

The Geological Survey is currently involved in a number of hydrologic investigations in the State of New Jersey. The following is a list of these investigations. Results are published at the conclusion of short-term projects or periodically in the case of long-term projects. Hydrologic data from these projects are entered into the NWIS data base.

Assessment of Current Ground-Water and Surface-Water Conditions within the NJ-NY Highlands Area

Delaware River Basin National Water Quality Assessment

Development of Database, Models, and Determination of Vulnerability of Public Supply Wells and Surface-Water Intakes in New Jersey for Chemicals of Concern to Support Source Water Assessment Program

Determination of the hydrologic and ecological effects of ground-water diversions from the Kirkwood-Cohansey aquifer system in the Pinelands Area

Determining Impacts on Special Protection Waters in the Delaware Water Gap National recreation Area

Distribution of MTBE and Related Volatile Organic Compounds in Lakes in Northern NJ and Investigation of Lake-Well Interactions

Distribution of Radium and Related Radionuclides in Coastal-Plain Aquifers

Effects of Land Use, Septic Systems, and Sewering on the Distribution of Nitrate in Shallow Ground Water

EPA Technical Assistance Program

Evaluation of Bacterial Contamination in Surface and Ground Water in Morristown National Historical Park

Flood Characteristics of New Jersey Streams

Flow Characteristics and Basis for Development of Ecological Goals for New Jersey Streams

Geohydrology of the Naval Air Warfare Center, West Trenton, New Jersey

Ground-Water Data Collection Network

Ground-Water Levels and Chloride Concentrations in Major Aquifers of the Coastal Plain

Ground-Water Supply Availability in Southern Ocean County

Head of Tide Sampling Program for the New Jersey Harbor Toxic Contaminant Assessment Reduction Program

Hydrogeologic Investigation to Ensure Sustainable Water Supply for Cape May County

Hydrogeologic Support to McGuire Air Force Base, Burlington County, New Jersey

Investigation of Hydrogeology and Volatile Organic Compound Contamination in Fair Lawn, New Jersey

Investigation of Hydrogeology and Volatile Organic Compound Contamination in the Pohatcong Valley, New Jersey

**CURRENT WATER-RESOURCES PROJECTS IN NEW JERSEY--Continued**

Investigation of Potential Threats to Water Supply from the Potomac-Raritan-Magothy Aquifer in Salem and Western Gloucester Counties, New Jersey

Lower Delaware Non-Point Source

Low Flow Characteristics of New Jersey Streams

Modeling and Experimental Investigation of Hydrocarbon Transport and Biodegradation in the Unsaturated Zone

Movement of Chromium in the Ground Water of Pennsauken Township, Camden County

Natural Radionuclide Occurrence in Principal New Jersey Aquifers

New Jersey Drought Monitoring System

New Jersey-Long Island National Water Quality Assessment

New Jersey Tide Telemetry System

Occurrence and Distribution of Trace Level Organics in Waste Water and Streams

Pascack Brook Flood Warning System

Passaic Flood Warning System

Passaic River Basin Flow Model

Program to Maintain and Update Ground-Water Models to Evaluate Continued Water-Supply Development

Quality of Water Data Collection Network

Quantification of Radium Mass Loading and Radioactivity in the Shallow Aquifer from the Water-Softening-Treatment Backwash Waste Stream that is Discharged to Septic Systems

Rahway Flood Warning System

Refinement of a Data Model for Watershed Water Transfer Analysis, Phase 2

Small Watershed Flood Data Collection

Somerset County Flood-Information System

Surface Water Data Collection Network

Vulnerability Assessment of the Kirkwood-Cohansey Aquifer System to Radium, Mercury, and Trace Metals

Water Budget Analysis of Confined Aquifers for Water-Supply Planning and Regulation

Water Budgets and Ground-water Availability in the Delaware River Basin

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## ACCESS TO USGS WATER DATA

The U.S. Geological Survey provides near real-time stage and discharge data for many of the gaging stations equipped with the necessary telemetry and historic daily-mean and peak-flow discharge data for most current or discontinued gaging stations through the world wide web (WWW). These data may be accessed at

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

Water-quality and ground-water data also are available through the WWW. In addition, data can be provided in various machine-readable formats on various media. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each Water Discipline District Office (see address on the back of the title page of this report).

## DEFINITION OF TERMS

Specialized technical terms 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 specialized technical 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.

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

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

**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 collection Platform (DCP)** is an electronic instrument that collects, processes, and stores data from various sensors, and transmits the data by satellite data relay, line-of-sight radio, and/or landline telemetry.

**Data logger** is a microprocessor-based data acquisition system designed specifically to acquire, process, and store data. Data are usually downloaded from onsite 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")

**Ground-water level** is the elevation of the water table or another potentiometric surface at a particular location.

**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.

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

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

**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")

**NJ-WRD well number** is a hyphenated, 6-digit identification number which the U.S. Geological Survey assigned to all New Jersey wells in the Ground Water Site Inventory (GWSI) data base. This numbering system was developed in 1978 to simplify identification of wells. The first two digits are a code for the county in which the well is located, and the last four digits are a sequence number. Each well added to GWSI is assigned the next higher sequence number for the county in which the well is located. These NJ-WRD well numbers are being used in the ground-water level descriptions, to identify ground-water quality sites, and on the corresponding location maps in this report.

## DEFINITION OF TERMS--Continued

**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 United States. This datum was established in 1991 by minimum-constraint adjustment of the Canadian, Mexican, and United States 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.

**Periodic-record station** is a site where stage, discharge, sediment, chemical, physical, or other hydrologic measurements are made one or more times during a year, but at a frequency insufficient to develop a daily record.

**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.

**Unconfined aquifer** is an aquifer whose upper surface is a water table free to fluctuate under atmospheric pressure. (See "Water-table aquifer")

**Vertical datum** (See "Datum")

**Water level** is the water-surface elevation or stage of the free surface of a body of water above or below any datum, or the surface of water standing in a well, usually indicative of the position of the water table or other potentiometric surface.

**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 reports dealing with surface-water supply is the 12-month period October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 2002, is called the "2002 water year."

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

**Well** is an excavation (pit, hole, tunnel), generally cylindrical in form and often walled in, drilled, dug, driven, bored, or jetted into the ground to such a depth as to penetrate water-yielding geologic material and allow the water to flow or to be pumped to the surface.

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

## TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS OF THE U.S. GEOLOGICAL SURVEY

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

Reports in the Techniques of Water-Resources Investigations series, which are listed below, are online at <http://water.usgs.gov/pubs/twri/>. Printed copies are for sale by the USGS, Information Services, Box 25286, Federal Center, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office), telephone 1-888-ASK-USGS. Please telephone 1-888-ASK-USGS for current prices, and refer to the title, book number, chapter number, and mention the "U.S. Geological Survey Techniques of Water-Resources Investigations." Products can then be ordered by telephone, or online at <http://www.usgs.gov/sales.html>, or by FAX to (303)236-469 of an order form available online at <http://mac.usgs.gov/isb/pubs/forms/>. Prepayment by major credit card or by a check or money order payable to the "U.S. Geological Survey" is required.

## TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS OF THE U.S. GEOLOGICAL SURVEY--Continued

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#### Section D. Water Quality

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### 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. Eaton, and D.R. Mabey: USGS–TWRI book 2, chap. D1. 1974. 116 p.

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- 3-A15. *Computation of water-surface profiles in open channels*, by Jacob Davidian: USGS-TWRI book 3, chap. A15. 1984. 48 p.
- 3-A16. *Measurement of discharge using tracers*, by F.A. Kilpatrick and E.D. Cobb: USGS-TWRI book 3, chap. A16. 1985. 52 p.
- 3-A17. *Acoustic velocity meter systems*, by Antonius Laenen: USGS-TWRI book 3, chap. A17. 1985. 38 p.
- 3-A18. *Determination of stream reaeration coefficients by use of tracers*, by F.A. Kilpatrick, R.E. Rathbun, Nobuhiro Yot-sukura, G.W. Parker, and L.L. DeLong: USGS-TWRI book 3, chap. A18. 1989. 52 p.
- 3-A19. *Levels at streamflow gaging stations*, by E.J. Kennedy: USGS-TWRI book 3, chap. A19. 1990. 31 p.
- 3-A20. *Simulation of soluble waste transport and buildup in surface waters using tracers*, by F.A. Kilpatrick: USGS-TWRI book 3, chap. A20. 1993. 38 p.
- 3-A21. *Stream-gaging cableways*, by C. Russell Wagner: USGS-TWRI book 3, chap. A21. 1995. 56 p.

### Section B. Ground-Water Techniques

- 3-B1. *Aquifer-test design, observation, and data analysis*, by R.W. Stallman: USGS-TWRI book 3, chap. B1. 1971. 26 p.
- 3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction*, by G.D. Bennett: USGS-TWRI book 3, chap. B2. 1976. 172 p.
- 3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J.E. Reed: USGS-TWRI book 3, chap. B3. 1980. 106 p.
- 3-B4. *Regression modeling of ground-water flow*, by R.L. Cooley and R.L. Naff: USGS-TWRI book 3, chap. B4. 1990. 232 p.
- 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, chap. B4. 1993. 8 p.
- 3-B5. *Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems—An introduction*, by O.L. Franke, T.E. Reilly, and G.D. Bennett: USGS-TWRI book 3, chap. B5. 1987. 15 p.
- 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, chap. B6. 1987. 28 p.
- 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, chap. B7. 1992. 190 p.
- 3-B8. *System and boundary conceptualization in ground-water flow simulation*, by T.E. Reilly: USGS-TWRI book 3, chap. B8. 2001. 29 p.

### Section C. Sedimentation and Erosion Techniques

- 3-C1. *Fluvial sediment concepts*, by H.P. Guy: USGS-TWRI book 3, chap. C1. 1970. 55 p.
- 3-C2. *Field methods for measurement of fluvial sediment*, by T.K. Edwards and G.D. Glysson: USGS-TWRI book 3, chap. C2. 1999. 89 p.
- 3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS-TWRI book 3, chap. C3. 1972. 66 p.

## 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, chap. A1. 1968. 39 p.
- 4-A2. *Frequency curves*, by H.C. Riggs: USGS-TWRI book 4, chap. A2. 1968. 15 p.
- 4-A3. *Statistical methods in water resources*, by D.R. Helsel and R.M. Hirsch: USGS-TWRI book 4, chap. A3. 1991. Available only online at <http://water.usgs.gov/pubs/twri/twri4a3/>. (Accessed August 30, 2002.)

## TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS OF THE U.S. GEOLOGICAL SURVEY--Continued

### Section B. Surface Water

- 4-B1. *Low-flow investigations*, by H.C. Riggs: USGS-TWRI book 4, chap. B1. 1972. 18 p.  
 4-B2. *Storage analyses for water supply*, by H.C. Riggs and C.H. Hardison: USGS-TWRI book 4, chap. B2. 1973. 20 p.  
 4-B3. *Regional analyses of streamflow characteristics*, by H.C. Riggs: USGS-TWRI book 4, chap. B3. 1973. 15 p.

### 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, chap. D1. 1970. 17 p.

## 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, editors: USGS-TWRI book 5, chap. A1. 1989. 545 p.  
 5-A2. *Determination of minor elements in water by emission spectroscopy*, by P.R. Barnett and E.C. Mallory, Jr.: USGS-TWRI book 5, chap. A2. 1971. 31 p.  
 5-A3. *Methods for the determination of organic substances in water and fluvial sediments*, edited by R.L. Wershaw, M.J. Fishman, R.R. Grabbe, and L.E. Lowe: USGS-TWRI book 5, chap. A3. 1987. 80 p.  
 5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, by L.J. Britton and P.E. Greeson, editors: USGS-TWRI book 5, chap. A4. 1989. 363 p.  
 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, chap. A5. 1977. 95 p.  
 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, chap. A6. 1982. 181 p.

### Section C. Sediment Analysis

- 5-C1. *Laboratory theory and methods for sediment analysis*, by H.P. Guy: USGS-TWRI book 5, chap. C1. 1969. 58 p.

## 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, chap. A1. 1988. 586 p.  
 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, chap. A2. 1991. 68 p.  
 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, chap. A3. 1993. 136 p.  
 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, chap. A4. 1992. 108 p.  
 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, chap. A5. 1993. 243 p.  
 6-A6. *A coupled surface-water and ground-water flow model (MODBRANCH) for simulation of stream-aquifer interaction*, by Eric D. Swain and Eliezer J. Wexler: USGS-TWRI book 6, chap. A6. 1996. 125 p.



## TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS OF THE U.S. GEOLOGICAL SURVEY--Continued

6–A7. *User's guide to SEAWAT: A computer program for simulation of three-dimensional variable-density ground-water flow*, by Weixing Guo and Christian D. Langevin: USGS–TWRI book 6, chap. A7. 2002. 77 p.

### 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, chap. C1. 1976. 116 p.

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, chap. C2. 1978. 90 p.

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, chap. C3. 1981. 110 p.

### Book 8. Instrumentation

#### Section A. Instruments for Measurement of Water Level

8–A1. *Methods of measuring water levels in deep wells*, by M.S. Garber and F.C. Koopman: USGS–TWRI book 8, chap. A1. 1968. 23 p.

8–A2. *Installation and service manual for U.S. Geological Survey manometers*, by J.D. Craig: USGS–TWRI book 8, chap. A2. 1983. 57 p.

#### 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, chap. B2. 1968. 15 p.

### 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 Gibbs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A1. 1998. 47 p.

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 Gibbs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A2. 1998. 94 p.

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 Gibbs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A3. 1998. 75 p.

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 Gibbs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A4. 1999. 156 p.

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 Gibbs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A5. 1999. 149 p.

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, chap. A6. 1998. Various 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, chap. A7. 1997 and 1999. Various paginated.

9–A8. *National field manual for the collection of water-quality data: Bottom-material samples*, by D.B. Radtke: USGS–TWRI book 9, chap. A8. 1998. 48 p.

9–A9. *National field manual for the collection of water-quality data: Safety in field activities*, by S.L. Lane and R.G. Fay: USGS–TWRI book 9, chap. A9. 1998. 60 p.

# WATER RESOURCES DATA-NEW JERSEY, 2003

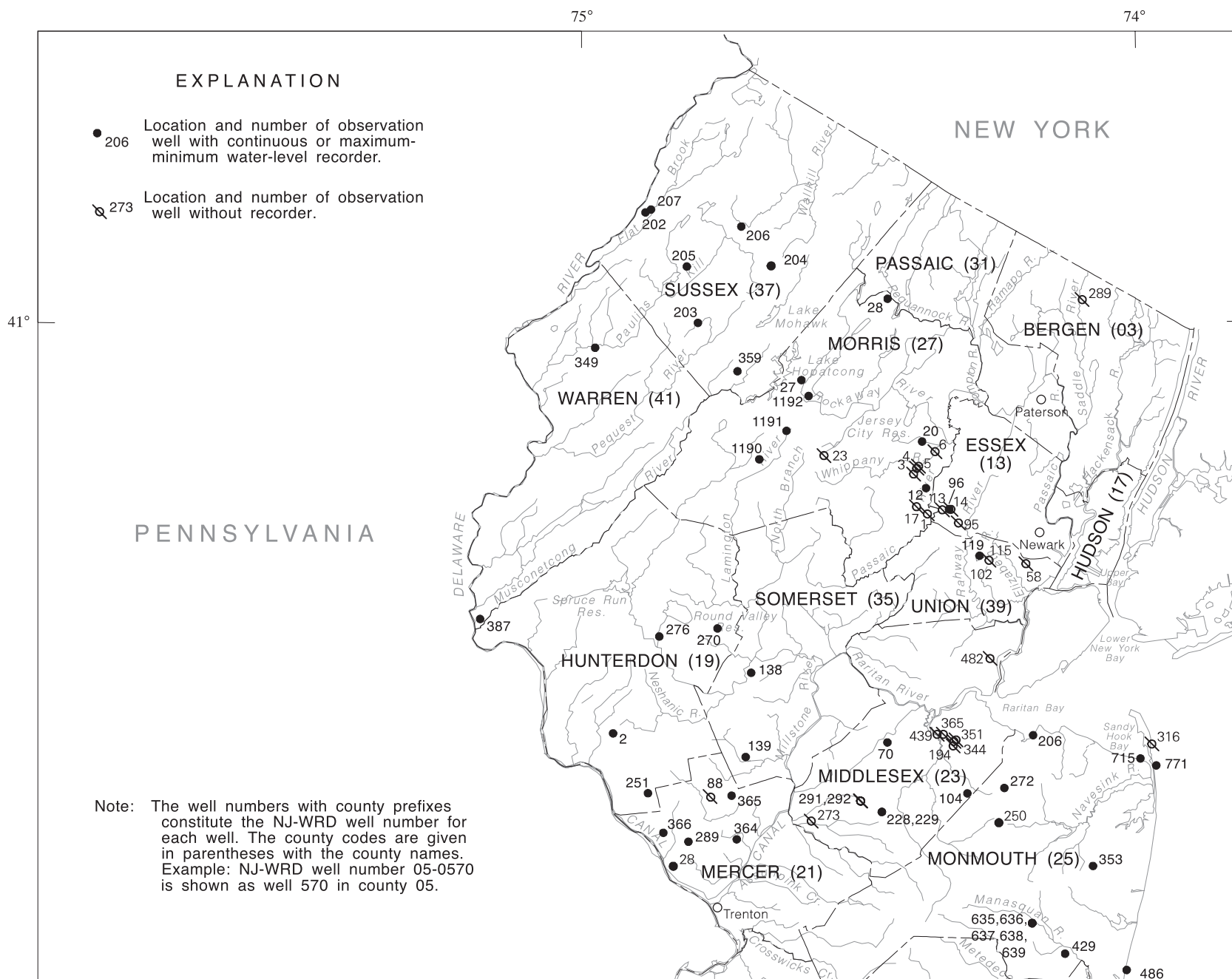




Figure 4. Location of ground-water-level observation wells in New Jersey.

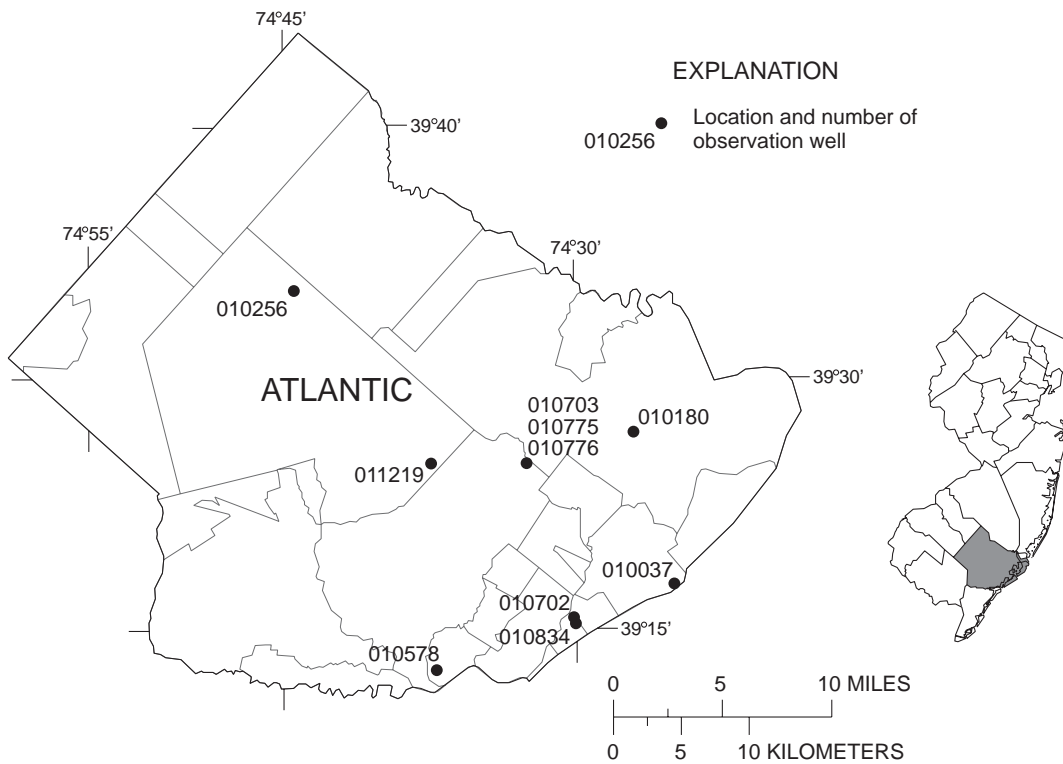
WATER RESOURCES DATA - NEW JERSEY, 2003

ATLANTIC COUNTY

NJ-WRD well number	Local identifier	Township	Well depth	Aquifer	Type of data
010037	GALEN HALL OBS	ATLANTIC CITY	842	KRKDL	DAILY
010180	OCEANVILLE 1 OBS	GALLOWAY TWP	570	KRKDL	DAILY
010256	SCHOLLER 1 OBS	HAMILTON TWP	275	CKKD	DAILY
010578	JOBS POINT OBS	SOMERS POINT CITY	680	KRKDL	DAILY
010702	BURK AVE TW OBS	MARGATE CITY	755	KRKDL	MANUAL
010703	FAA POMONA OBS	EGG HARBOR TWP	575	KRKDL	DAILY
010775	FAA INTERMEDIATE OBS	EGG HARBOR TWP	182	CKKD	MANUAL
010776	FAA SHALLOW OBS	EGG HARBOR TWP	93	CKKD	DAILY
010834	MARGATE FIREHOUSE 1 OBS	MARGATE CITY	997	PNPN	DAILY
011219	HTMUA 9 OBS	HAMILTON TWP	742	PNPN	MANUAL

Aquifer names

- CKKD - Kirkwood-Cohansey aquifer system
- KRKDL - Atlantic City 800-foot sand of the Kirkwood Formation
- PNPN - Piney Point aquifer



GROUND-WATER LEVELS

ATLANTIC COUNTY

NJ-WRD Well Number, 01-0037. Site I.D., 392153074250101. Local I.D., Galen Hall Obs. NJ Permit Number, 56-00071.

LOCATION.--Lat 39°21'51", long 74°24'58", Hydrologic Unit 02040302, near the intersection of Pacific Ave. and Congress Ave., Atlantic City. Owner: Atlantic City Municipal Utilities Authority.

AQUIFER.--Atlantic City 800-foot sand of the Kirkwood Formation of Miocene age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 4 in., depth 842 ft, screened 782 to 837 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval. Water-level extremes recorder, May 1977 to July 1980. Periodic measurements, Aug. 1975 to May 1977. Water-level recorder, Jan. 1949 to Aug. 1975.

DATUM.--Land surface is 9.54 ft above NGVD of 1929. Measuring point: Top of recorder shelf, 2.75 ft above land surface.

REMARKS.--Water level is affected by tidal fluctuation and nearby pumping.

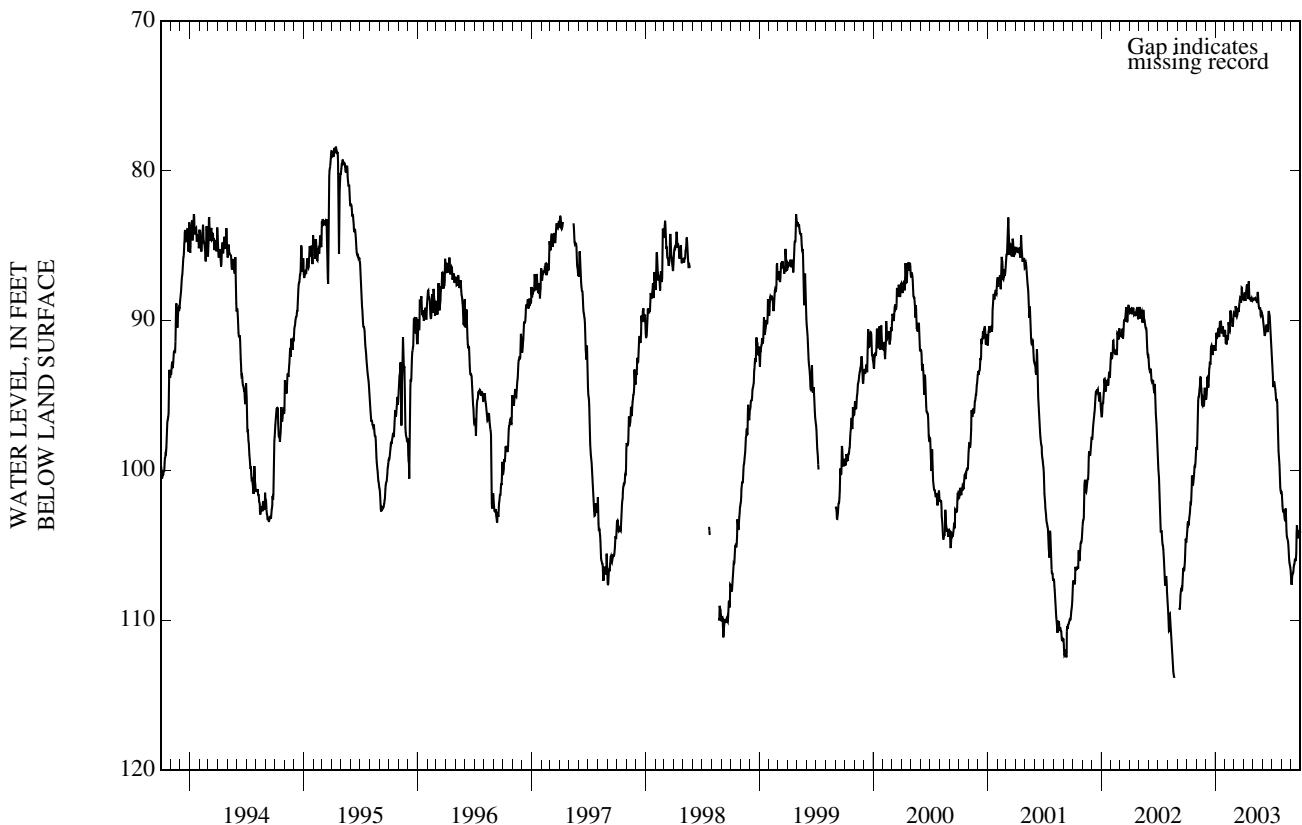
PERIOD OF RECORD.--Jan. 1949 to current year. Records for 1949 to 1976 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 52.58 ft below land surface, Mar. 7, 1962; lowest, 113.90 ft below land surface, Aug. 22, 2002.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	103.42	96.75	94.53	91.08	91.49	89.66	88.13	88.64	90.41	94.44	102.63	107.00
10	103.03	94.90	94.28	90.56	91.31	89.68	87.97	88.56	90.78	94.28	103.09	106.31
15	102.09	93.80	92.89	90.13	90.69	89.22	88.33	88.83	90.43	95.30	102.91	106.05
20	100.90	95.65	91.67	90.52	89.66	88.64	88.42	89.05	89.56	97.33	104.58	103.91
25	100.15	95.73	91.78	90.39	90.40	88.56	88.72	89.32	90.01	99.64	105.88	104.19
EOM	98.62	94.91	91.90	90.72	89.62	88.52	88.66	89.55	92.43	101.40	107.09	104.08
MEAN	101.68	95.44	93.00	90.79	90.53	89.01	88.32	88.88	90.46	96.57	104.05	105.52
MAX	104.54	98.62	95.29	92.01	91.59	89.75	88.72	89.68	92.43	101.44	107.09	107.63
MIN	98.62	93.79	91.64	90.08	89.34	87.79	87.38	88.09	89.36	92.81	101.44	103.66

WTR YR 2003 MEAN 94.55 HIGH 87.38 APR 18 LOW 107.63 SEP 2



GROUND-WATER LEVELS

ATLANTIC COUNTY--Continued

NJ-WRD Well Number, 01-0180. Site I.D., 392754074270101. Local I.D., Oceanville 1 Obs. NJ Permit Number, 36-00294.

LOCATION.--Lat 39°27'54", long 74°27'00", Hydrologic Unit 02040302, at the Edwin B. Forsythe National Wildlife Refuge, Brigantine Division, Oceanville, Galloway Township. Owner: U.S. Geological Survey.

AQUIFER.--Atlantic City 800-foot sand of the Kirkwood Formation of Miocene age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in., depth 570 ft, screened 560 to 570 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval. Water-level extremes recorder, Apr. 1977 to Feb. 1984. Periodic measurements, Aug. 1975 to Apr. 1977. Water-level recorder, Oct. 1959 to Aug. 1975.

DATUM.--Land surface is 27.00 ft above NGVD of 1929. Measuring point: Top of bushing, 2.30 ft above land surface.

REMARKS.--Water level is affected by tidal fluctuation and nearby pumping.

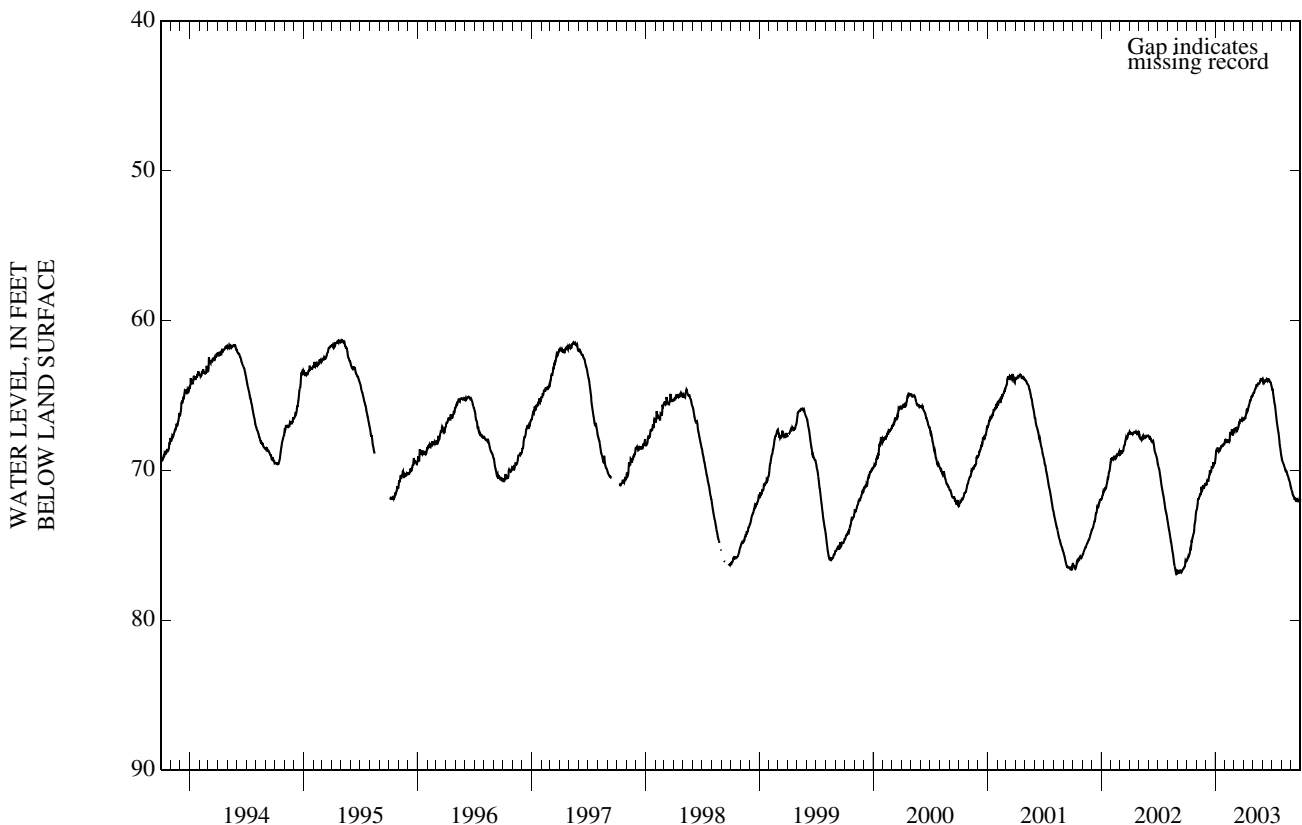
PERIOD OF RECORD.--Oct. 1959 to current year. Records for 1975 to 1981 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 33.62 ft below land surface, Apr. 13, 1961; lowest, 77.02 ft below land surface, Aug. 31, 2002.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	75.81	72.21	70.74	68.75	68.08	67.22	66.43	64.81	64.09	64.85	69.44	71.52
10	75.62	71.82	70.67	68.54	68.02	67.31	66.18	64.53	64.05	65.57	69.75	71.79
15	75.11	71.59	70.10	68.66	68.08	67.18	65.96	64.37	63.95	66.46	70.06	71.98
20	74.49	71.33	69.80	68.36	67.57	66.75	65.59	64.23	63.92	67.25	70.31	72.00
25	74.03	71.19	69.46	68.36	67.61	66.66	65.26	64.03	64.09	68.07	70.63	72.05
EOM	72.77	70.84	69.39	68.14	67.39	66.57	65.04	63.89	64.39	69.00	71.17	72.01
MEAN	74.79	71.57	70.17	68.54	67.81	66.98	65.84	64.35	64.05	66.61	70.10	71.83
MAX	76.05	72.68	70.96	69.22	68.17	67.39	66.64	64.97	64.39	69.00	71.17	72.08
MIN	72.77	70.84	69.39	68.14	67.26	66.50	65.02	63.89	63.87	64.50	69.11	71.25

WTR YR 2003 MEAN 68.56 HIGH 63.87 JUN 1 LOW 76.05 OCT 1



GROUND-WATER LEVELS

ATLANTIC COUNTY--Continued

NJ-WRD Well Number, 01-0256. Site I.D., 393333074442401. Local I.D., Scholler 1 Obs. NJ Permit Number, 32-00173.

LOCATION.--Lat 39°33'33", long 74°44'25", Hydrologic Unit 02040302, inside the boiler room at Scholler Inc., Weymouth Rd. and Blueberry Rd., Elwood, Hamilton Township. Owner: Scholler Incorporated.

AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 8 in., depth 275 ft, screened 254 to 275 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval. Water-level extremes recorder, May 1977 to Apr. 1984. Periodic measurements, Aug. 1975 to May 1977. Water-level recorder, Apr. 1962 to Aug. 1975.

DATUM.--Land surface is 93.19 ft above NGVD of 1929. Measuring point: Top of recorder shelf, 2.66 ft above land surface.

REMARKS.--Water level is affected by nearby pumping.

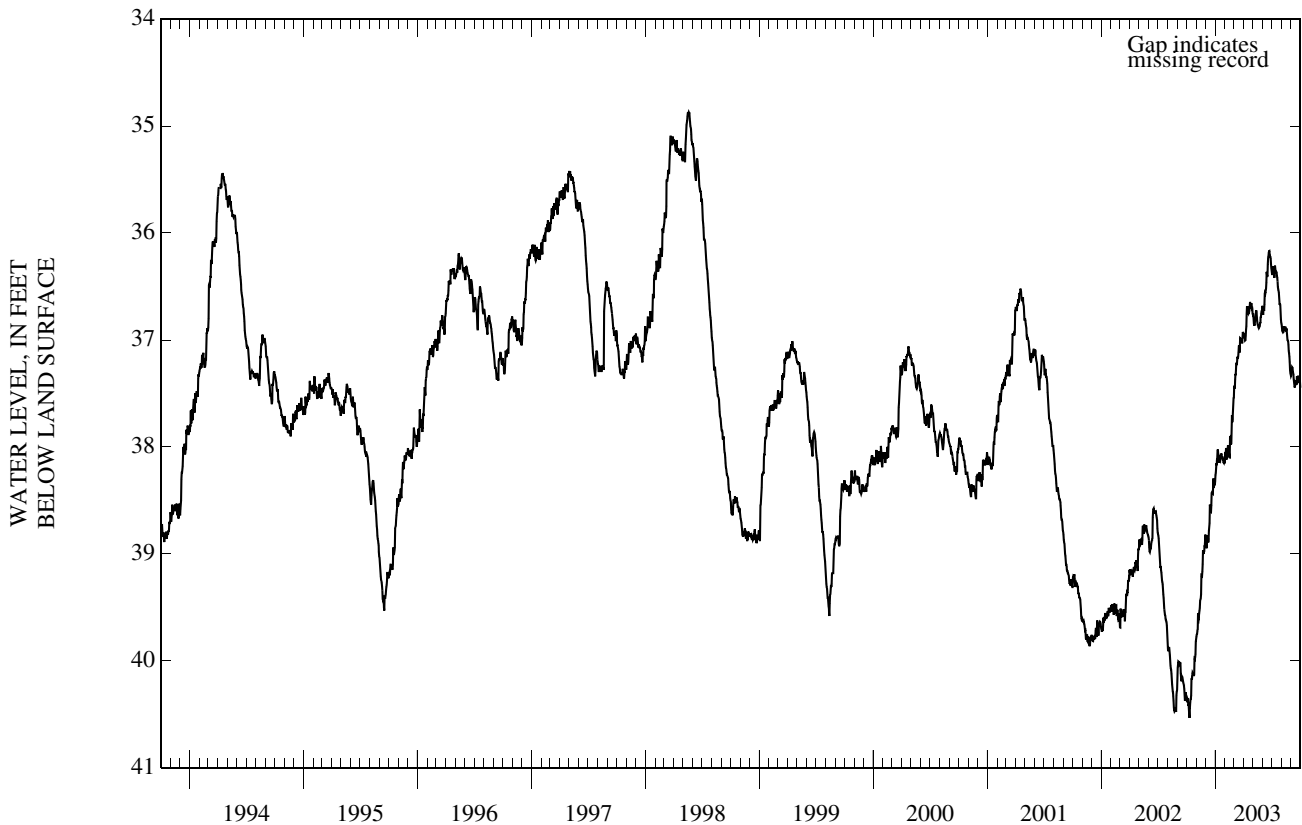
PERIOD OF RECORD.--Apr. 1962 to current year. Records for 1962 to 1976 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 27.18 ft below land surface, Mar. 20, 1963; lowest, 40.55 ft below land surface, Oct. 9-10, 2002.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	40.37	39.71	38.85	38.17	38.08	37.37	36.95	36.86	36.70	36.32	36.92	37.26
10	40.53	39.55	38.86	38.06	37.99	37.23	36.87	36.78	36.56	36.35	36.90	37.39
15	40.32	39.41	38.57	38.12	38.10	37.15	36.72	36.83	36.38	36.36	36.92	37.40
20	40.11	39.16	38.43	38.06	37.98	37.08	36.72	36.89	36.22	36.51	37.00	37.38
25	40.13	38.98	38.30	38.13	37.74	37.01	36.69	36.84	36.22	36.65	37.13	37.35
EOM	39.80	38.82	38.32	38.13	37.54	36.94	36.75	36.73	36.35	36.84	37.34	37.45
MEAN	40.22	39.32	38.61	38.12	37.94	37.15	36.79	36.81	36.43	36.47	37.00	37.36
MAX	40.53	39.77	38.95	38.26	38.12	37.54	37.01	36.89	36.77	36.84	37.34	37.45
MIN	39.80	38.82	38.30	38.02	37.54	36.92	36.64	36.72	36.17	36.31	36.85	37.26

WTR YR 2003 MEAN 37.69 HIGH 36.17 JUN 22 LOW 40.53 OCT 10



GROUND-WATER LEVELS

ATLANTIC COUNTY--Continued

NJ-WRD Well Number, 01-0578. Site I.D., 391827074371001. Local I.D., Jobs Point Obs. NJ Permit Number 36-00295.

LOCATION.--Lat 39°18'26", long 74°37'08", Hydrologic Unit 02040302, on the west side of the Garden State Parkway at interchange 29, Somers Point City. Owner: U.S. Geological Survey.

AQUIFER.--Atlantic City 800-foot sand of the Kirkwood Formation of Miocene age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 8 in., depth 680 ft, screened 670 to 680 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval. Water-level extremes recorder, May 1977 to Feb. 1984. Periodic measurements, June 1975 to May 1977. Water-level recorder, Oct. 1959 to June 1975.

DATUM.--Land surface is 10.00 ft above NGVD of 1929. Measuring point: Top of recorder shelf, 9.34 ft above land surface.

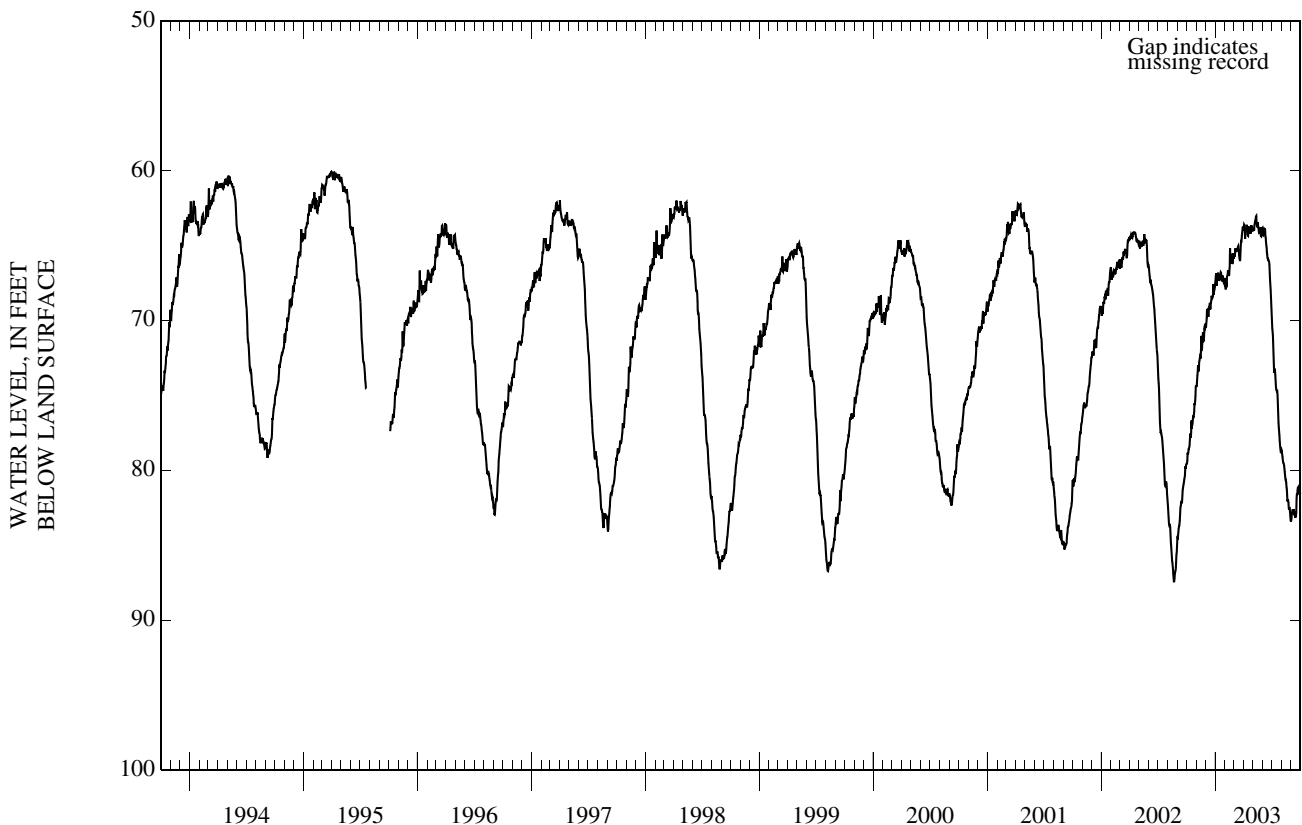
REMARKS.--Water level is affected by tidal fluctuation and nearby pumping.

PERIOD OF RECORD.--Oct. 1959 to current year. Records for 1975 to 1980 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 29.10 ft below land surface, Apr. 13, 1961; lowest, 88.17 ft below land surface, Aug. 21, 2002.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	78.95	73.42	69.29	67.67	67.79	65.43	63.87	63.92	64.12	71.65	79.33	82.69
10	78.34	72.78	69.66	66.80	66.64	65.32	63.86	63.23	64.36	73.39	79.92	82.74
15	77.44	72.45	69.26	67.13	66.62	65.05	64.34	63.77	65.41	74.60	80.65	83.05
20	76.83	71.39	68.34	67.16	66.11	65.96	63.96	64.03	65.94	75.70	82.08	81.66
25	76.08	71.21	67.57	67.12	66.13	64.71	63.99	64.09	67.27	77.72	82.64	81.45
EOM	74.32	70.20	67.53	67.27	65.51	63.90	64.00	63.81	69.68	78.70	83.38	81.57
MEAN	77.23	72.14	68.91	67.19	66.56	65.14	63.96	63.78	65.67	74.86	81.01	82.27
MAX	79.57	74.42	70.40	67.67	67.92	66.03	64.55	64.38	69.68	78.86	83.38	83.33
MIN	74.32	70.20	67.53	66.77	65.17	63.73	63.59	63.01	63.79	70.11	78.65	81.12
WTR YR 2003	MEAN 70.76		HIGH 63.01 MAY 12		LOW 83.38		AUG 31					





GROUND-WATER LEVELS

ATLANTIC COUNTY--Continued

NJ-WRD Well Number, 01-0702. Site I.D., 392032074300801. Local I.D., Burk Ave TW Obs.

LOCATION.--Lat 39°20'32", long 74°30'07", Hydrologic Unit 02040302, about 20 ft south of the intersection of Burk Ave. and Fredericksburg Ave., Margate City. Owner: U.S. Geological Survey.

AQUIFER.--Atlantic City 800-foot sand of the Kirkwood Formation of Miocene age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 4 in., depth 755 ft, screened 740 to 750 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape. Water-level recorder, Oct. 1985 to Jan. 1988.

DATUM.--Land surface is 5 ft above NGVD of 1929, from topographic map. Measuring point: Top of well shelter shelf, 2.30 ft above land surface.

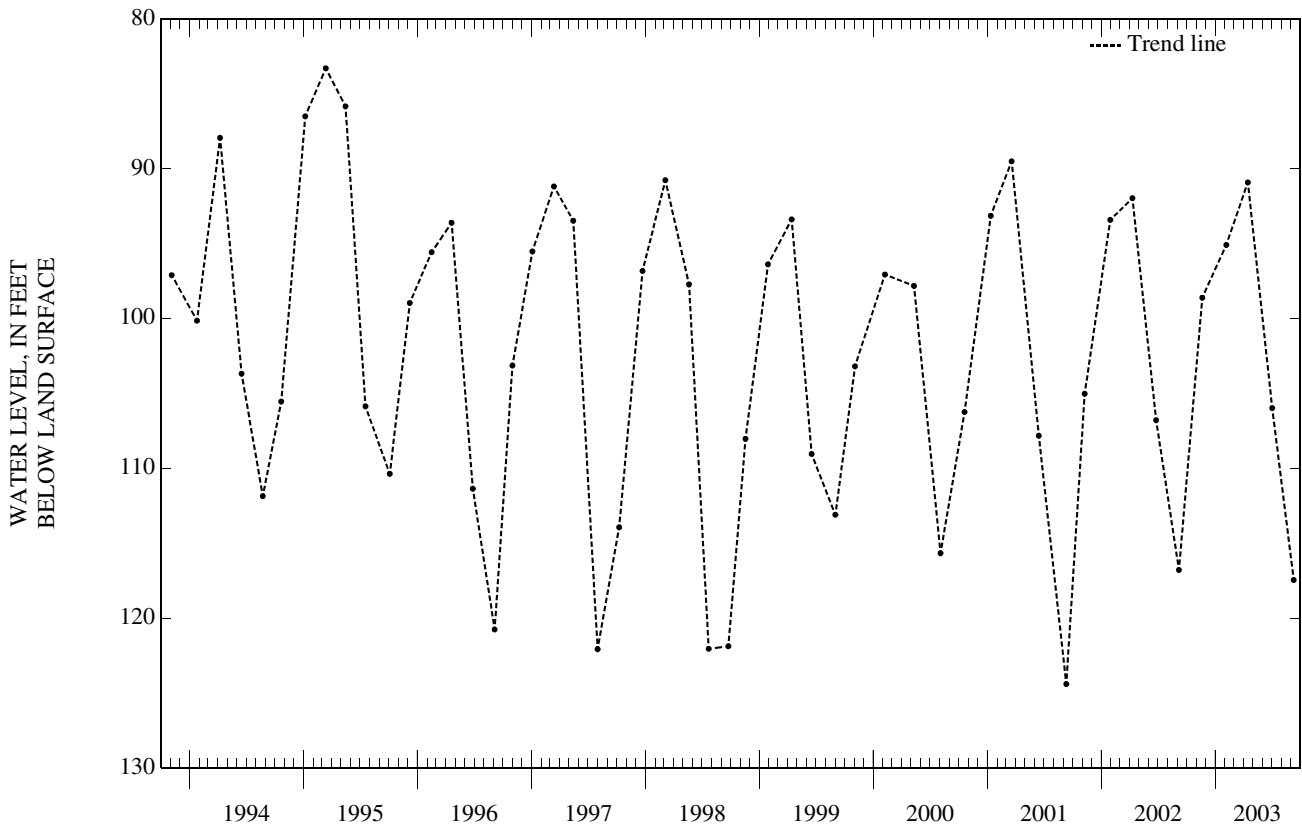
REMARKS.--Water level is affected by tidal fluctuation and nearby pumping.

PERIOD OF RECORD.--October 1985 to current year. Records for 1985 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 73.20 ft below land surface, May 17, 1986; lowest, 124.41 ft below land surface, Sept 10, 2001.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 20	98.61	FEB 05	95.08	APR 15	90.91	JUL 02	105.98	SEP 09	117.46
WATER YEAR 2003		HIGHEST	90.91	APR 15, 2003	LOWEST	117.46	SEP 09, 2003		



GROUND-WATER LEVELS

ATLANTIC COUNTY--Continued

NJ-WRD Well Number, 01-0703. Site I.D., 393232074263901. Local I.D., FAA Pomona Obs. NJ Permit Number, 36-05092.

LOCATION.--Lat 39°26'39", long 74°32'31", Hydrologic Unit 02040302, at the NAFEC Atlantic City Airport, Egg Harbor Township. Owner: U.S. Geological Survey.

AQUIFER.--Atlantic City 800-foot sand of the Kirkwood Formation of Miocene age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 4 in., depth 575 ft, screened 560 to 570 ft.

INSTRUMENTATION.--Submersible logger pressure transducer--60 minute recording interval. Water-level recorder, May 1985 to Mar. 2000. Periodic measurements, Mar to May 1985.

DATUM.--Land surface is 38 ft above NGVD of 1929. Measuring point: Top of recorder shelf, 1.75 ft above land surface.

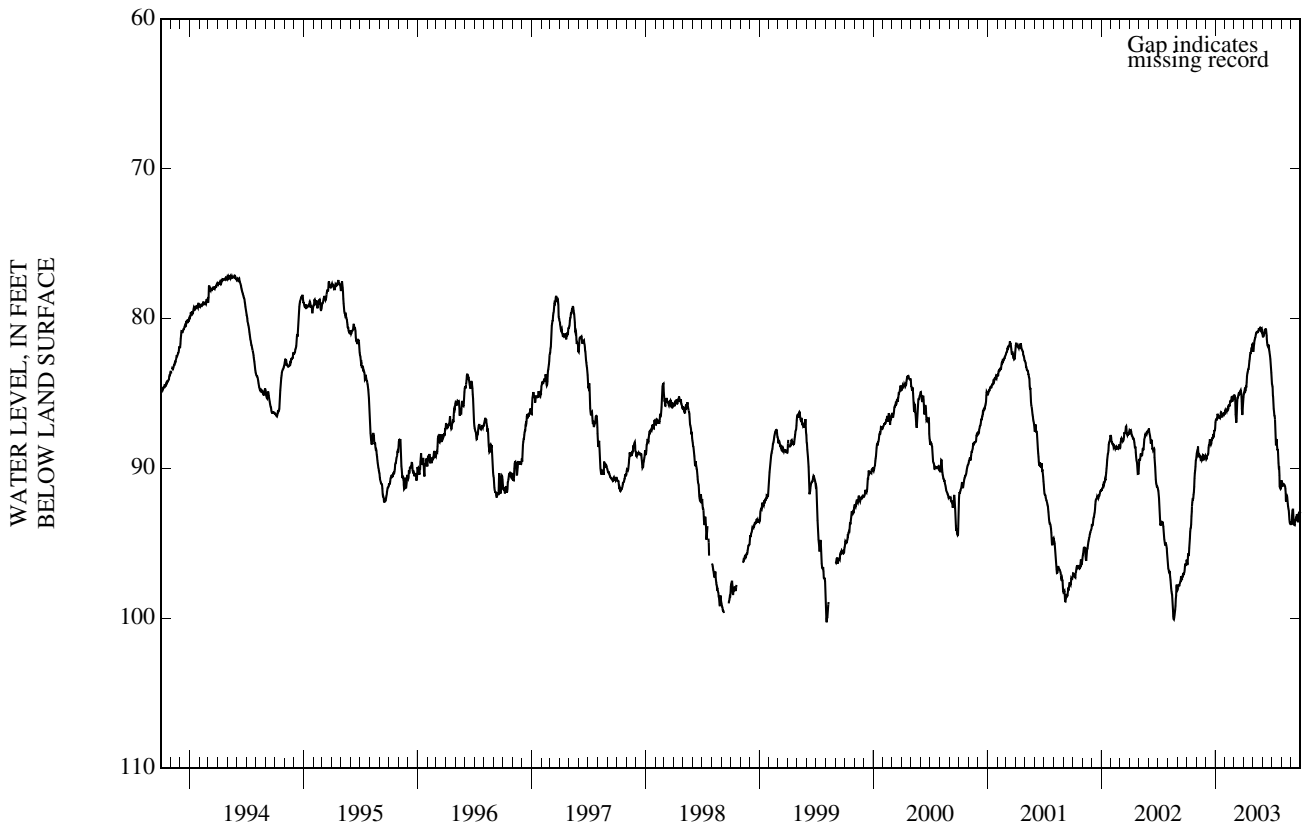
REMARKS.--Water level is affected by nearby pumping.

PERIOD OF RECORD.--Mar. 1985 to current year. Records for 1985 to 1986 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 69.74 ft below land surface, Mar. 18, 1986; lowest, 100.34 ft below land surface, Aug. 4, 1999.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	95.88	88.75	89.20	86.80	86.15	85.24	84.73	81.68	81.11	85.18	91.15	92.83
10	95.02	89.08	88.64	86.51	85.96	86.66	84.53	81.15	80.76	86.51	91.11	93.74
15	93.74	89.44	88.14	86.59	85.81	85.18	83.48	80.91	81.37	88.22	92.15	93.45
20	92.08	89.41	88.09	86.27	85.51	85.02	82.84	80.64	81.75	88.71	92.09	93.44
25	91.23	89.38	87.70	86.41	85.50	85.10	82.23	80.60	82.51	90.49	93.13	93.02
EOM	89.41	89.14	87.31	86.33	85.34	85.60	81.69	80.88	84.03	91.22	93.71	92.90
MEAN	93.26	89.16	88.37	86.52	85.75	85.53	83.47	81.06	81.71	88.16	92.03	93.30
MAX	96.45	89.46	89.39	86.94	86.20	86.94	85.26	82.22	84.03	91.36	93.78	93.79
MIN	89.41	88.55	87.31	86.24	85.23	84.80	81.69	80.60	80.71	84.34	90.80	92.75
WTR YR 2003	MEAN 87.38		HIGH 80.60		MAY 25		LOW 96.45		OCT		3	



GROUND-WATER LEVELS

ATLANTIC COUNTY--Continued

NJ-WRD Well Number, 01-0775. Site I.D., 393232074263902. Local I.D., FAA Intermediate Obs.

LOCATION.--Lat 39°26'39", long 74°32'31", Hydrologic Unit 02040302, at the NAFEC Atlantic City Airport, Egg Harbor Township.  
 Owner: Atlantic City Municipal Utilities Authority.

AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 4 in., depth 182 ft, screened 132 to 182 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape.

DATUM.--Land surface is 38.1 ft above NGVD of 1929. Measuring point: Top of PVC casing, 1.25 ft above land surface.

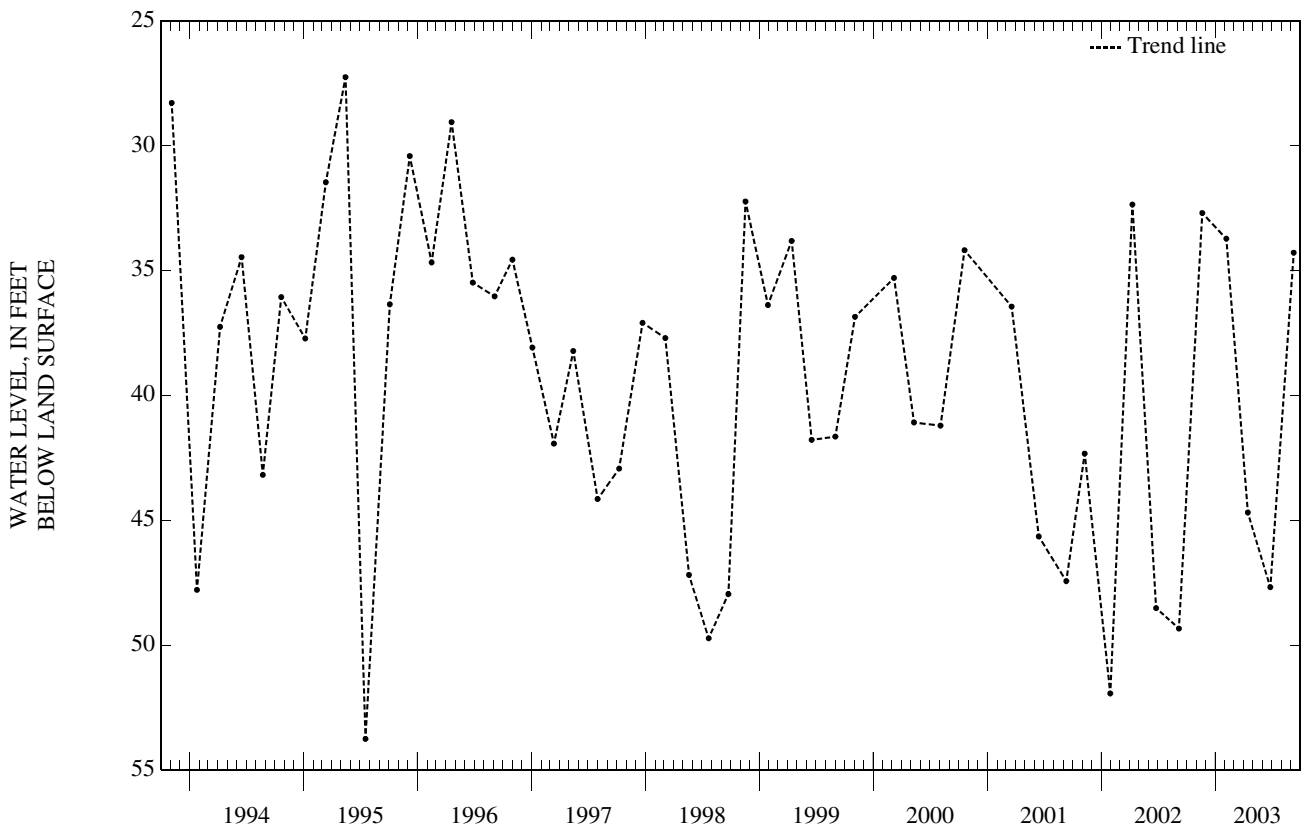
REMARKS.--Water level is affected by nearby pumping.

PERIOD OF RECORD.--May 1985 to current year. Records for 1985 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 24.06 ft below land surface, May 29, 1985; lowest, 53.76 ft below land surface, July 18, 1995.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 20	32.69	FEB 05	33.72	APR 15	44.69	JUN 26	47.68	SEP 09	34.28
WATER YEAR 2003 HIGHEST 32.69		NOV 20, 2002		LOWEST 47.68		JUN 26, 2003			



GROUND-WATER LEVELS

ATLANTIC COUNTY--Continued

NJ-WRD Well Number, 01-0776. Site I.D., 393232074263903. Local I.D., FAA Shallow Obs.

LOCATION.--Lat 39°26'39", long 74°32'31", Hydrologic Unit 02040302, at the NAFEC Atlantic City Airport, Egg Harbor Township.  
 Owner: Atlantic City Municipal Utilities Authority.

AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 4 in., depth 93 ft, screened 73 to 93 ft.

INSTRUMENTATION.--Submersible logger pressure transducer--60 minute recording interval. Periodic measurements, May 1985 to June 2003.

DATUM.--Land surface is 38.1 ft above NGVD of 1929. Measuring point: Top of PVC casing, 0.95 ft above land surface.

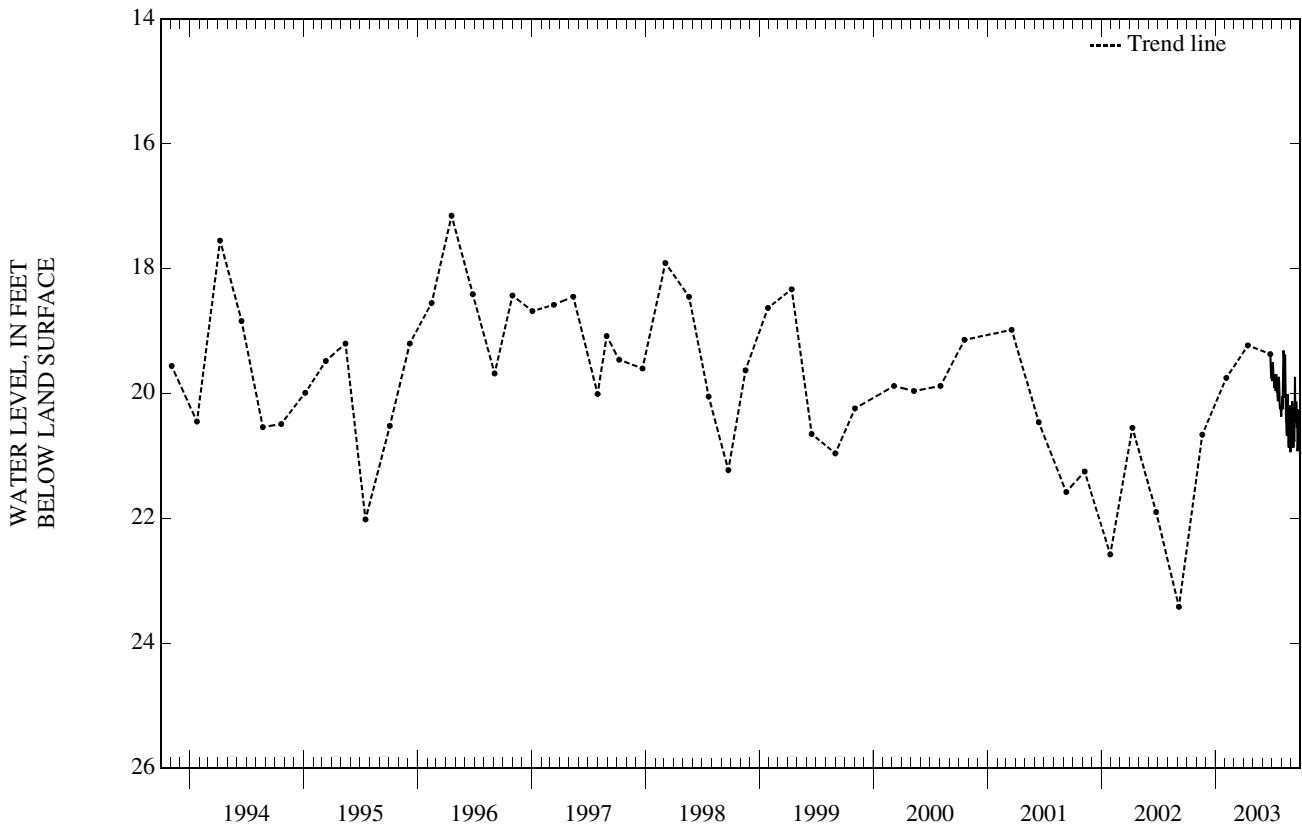
REMARKS.--Water level is affected by the stage of the Atlantic City Reservoir.

PERIOD OF RECORD.--May 1985 to current year. Records for 1985 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 16.86 ft below land surface, May 29, 1985; lowest, 23.42 ft below land surface, Sept. 6, 2002.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	---	---	---	---	---	---	19.59	19.91	20.17
10	---	---	---	---	---	---	---	---	---	19.83	19.86	20.75
15	---	---	---	---	---	---	---	---	---	19.70	20.33	20.43
20	---	---	---	---	---	---	---	---	---	20.12	20.16	20.39
25	---	---	---	---	---	---	---	---	---	20.01	20.59	20.26
EOM	---	---	---	---	---	---	---	---	19.76	20.37	20.93	20.94
MEAN	---	---	---	---	---	---	---	---	---	19.91	20.23	20.49
MAX	---	---	---	---	---	---	---	---	---	20.37	20.94	21.01
MIN	---	---	---	---	---	---	---	---	---	19.50	19.31	19.73



GROUND-WATER LEVELS

ATLANTIC COUNTY--Continued

NJ-WRD Well Number, 01-0834. Site I.D., 392017074300201. Local I.D., Margate Firehouse 1 Obs.

LOCATION.--Lat 39°20'17", long 74°30'01", Hydrologic Unit 02040302, behind Margate Firehouse No. 2, Fremont Ave., Margate City.  
Owner: U.S. Geological Survey.

AQUIFER.--Piney Point aquifer of Eocene age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 4 in., depth 997 ft, screened 970 to 991 ft.

INSTRUMENTATION.--Submersible logger pressure transducer--60 minute recording interval. Water-level recorder, May 1988 to May 1997.

DATUM.--Land surface is 5 ft above NGVD of 1929. Measuring point: Top of recorder shelf, 2.00 ft above land surface.

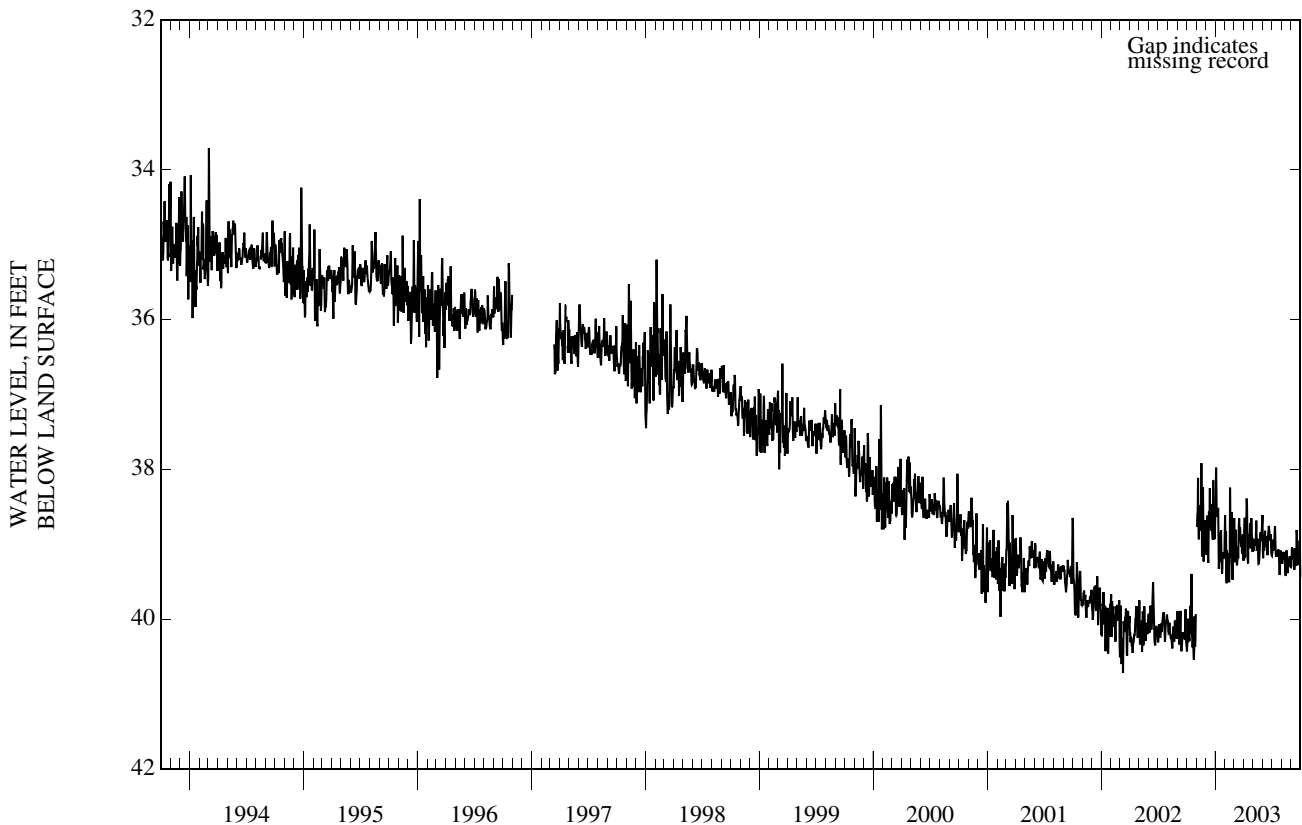
REMARKS.--Water level is affected by tidal fluctuation. The well was pumped on Oct 31, 2002. After pumping, the water-level did not return to its previous level. Therefore, the screen may have been partially clogged prior to the pumping.

PERIOD OF RECORD.--May 1988 to current year. Records for 1988 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 31.05 ft below land surface, June 2, 1988; lowest, 41.14 ft below land surface, Mar. 10-11, 2002.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	40.14	38.56	38.65	38.63	39.42	38.98	38.65	39.09	38.91	39.07	39.15	39.10
10	40.28	38.65	39.01	38.54	39.12	39.18	38.68	39.00	39.03	38.83	39.20	39.15
15	40.05	38.82	38.75	39.07	39.33	39.19	39.25	39.09	38.96	39.13	39.29	39.22
20	40.38	38.87	38.46	39.12	39.17	38.80	39.00	39.26	38.83	39.12	39.39	39.27
25	40.42	39.13	38.15	39.19	39.47	39.01	38.95	38.97	38.95	39.36	39.30	39.23
EOM	---	38.68	38.71	38.89	38.75	39.05	39.10	38.71	39.15	39.17	39.31	39.44
MEAN	---	---	38.81	38.91	39.09	38.99	38.92	38.98	38.95	39.10	39.23	39.16
MAX	---	---	39.25	39.39	39.52	39.28	39.26	39.26	39.19	39.41	39.42	39.44
MIN	---	---	38.15	37.98	38.25	38.65	38.39	38.69	38.61	38.76	39.08	38.81



GROUND-WATER LEVELS

ATLANTIC COUNTY--Continued

NJ-WRD Well Number, 01-1219. Site I.D., 392640074372401. Local I.D., HTMUA 9 Obs. NJ Permit Number, 36-16546.

LOCATION.--Lat 39°26'40", long 74°37'23", Hydrologic Unit 02040302, about 700 ft north of the Black Horse Pike (US 40 and 322) and 25 ft east of Lowell Ave., Hamilton Township. Owner: Hamilton Township Municipal Utilities Authority.

AQUIFER.--Piney Point aquifer of Eocene age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in., depth 742 ft, screened 722 to 742 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape.

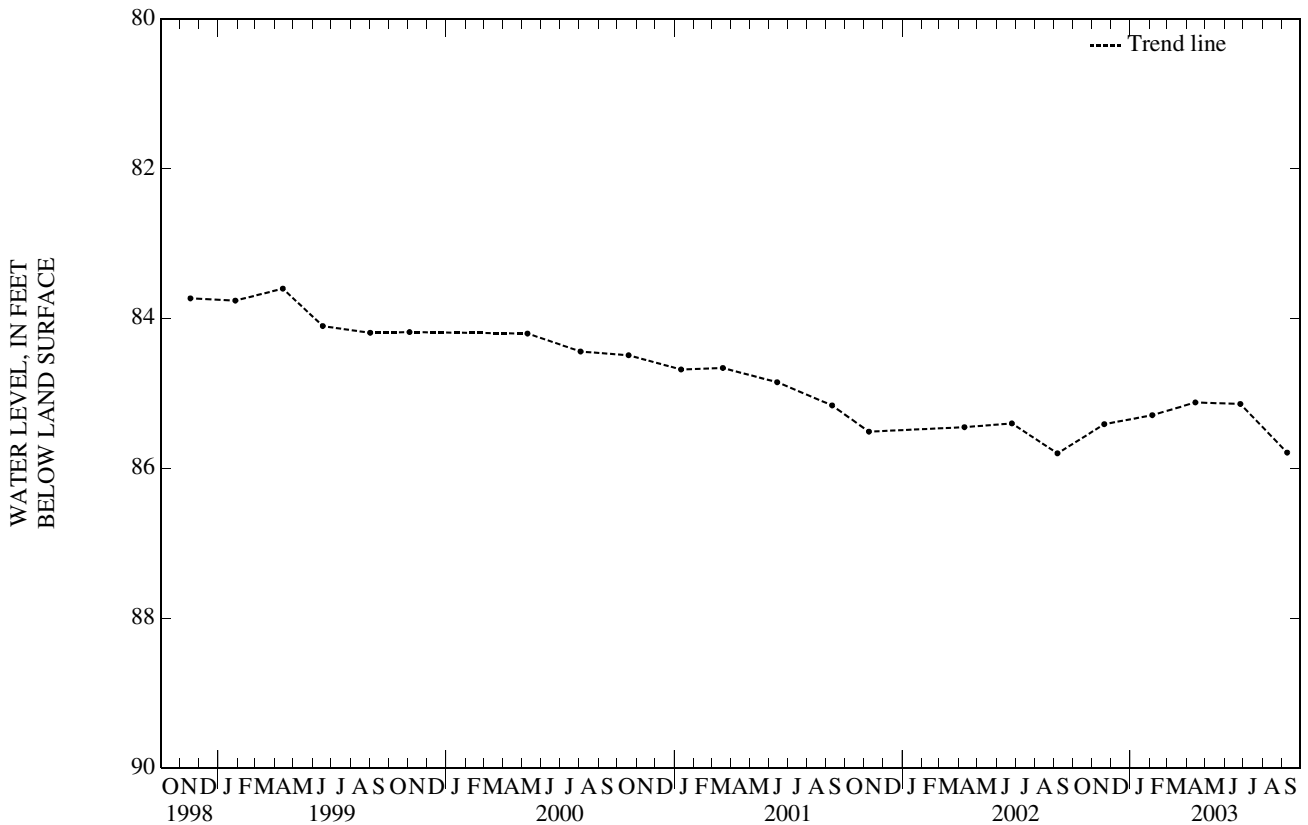
DATUM.--Land surface is 68 ft above NGVD of 1929, from topographic map. Measuring point: Top of protective casing, 2.20 ft above land surface.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 82.01 ft below land surface, Apr. 19, 1996; lowest, 85.80 ft below land surface, Sept. 6, 2002.

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

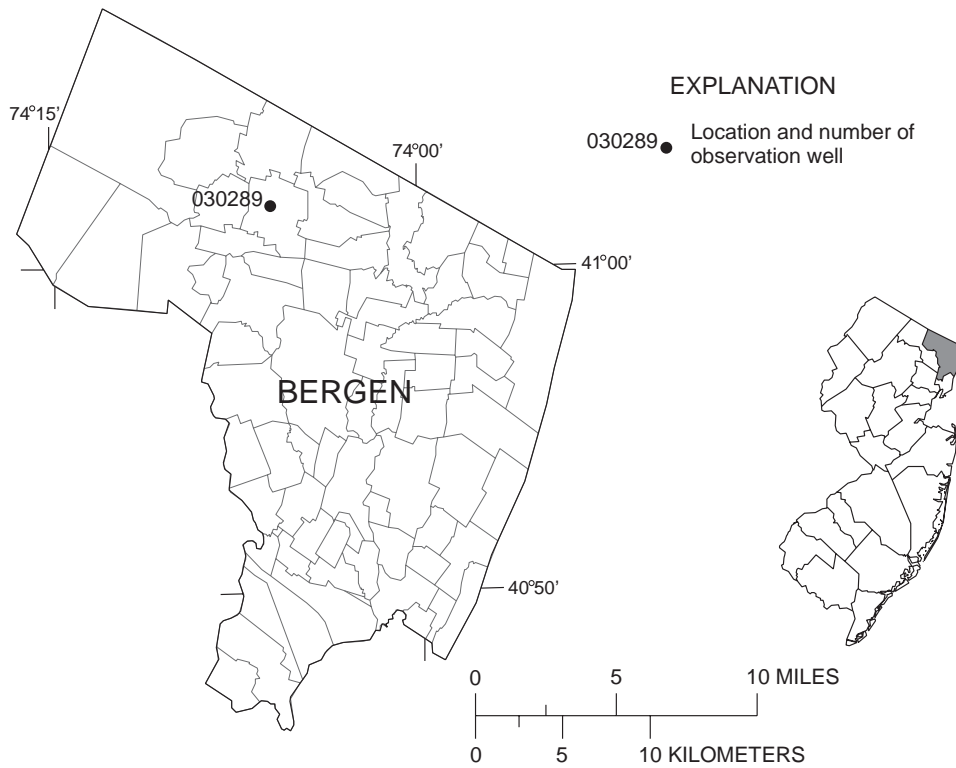
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 20	85.41	FEB 05	85.29	APR 15	85.12	JUN 26	85.14	SEP 09	85.79
WATER YEAR 2003 HIGHEST		85.12	APR 15, 2003		LOWEST		85.79	SEP 09, 2003	



BERGEN COUNTY

NJ-WRD well number	Local identifier	Township	Well depth	Aquifer	Type of data
030289	SADDLE RIVER 17 OBS	SADDLE RIVER BORO	175	PSSC	MANUAL

Aquifer names  
 PSSC - Passaic Formation



GROUND-WATER LEVELS

BERGEN COUNTY

NJ-WRD Well Number, 03-0289. Site I.D., 410155074060201. Local I.D., Saddle River 17 Obs. NJ Permit Number, 23-09532-6.

LOCATION.--Lat 41°01'55", long 74°06'01", Hydrologic Unit 02030103, at the Saddle River Fire Station, East Saddle Rd. and East Allendale Rd., Saddle River Boro. Owner: State of New Jersey - New Jersey Geological Survey.

AQUIFER.--Passaic Formation of Triassic-Jurassic age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 175 ft, open hole 165 to 175 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape.

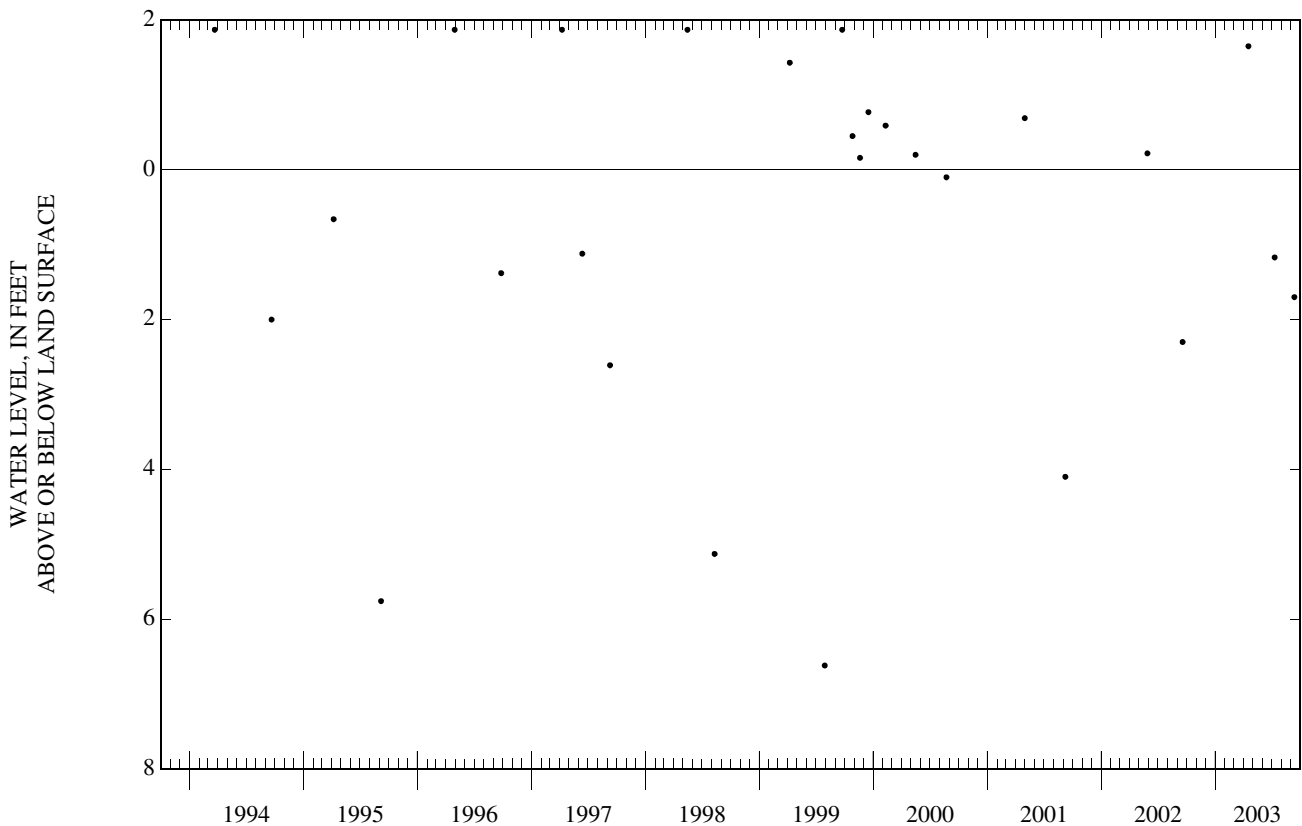
DATUM.--Land surface is 148.9 ft above NGVD of 1929. Measuring point: Top of casing, 3.55 ft above land surface.

PERIOD OF RECORD.--Mar. 1991 to current year

EXTREMES FOR PERIOD OF RECORD.--Highest water level, greater than 1.87 ft above land surface, (flowing), Mar. 21, 1991, Apr. 29, 1993, Mar. 22, 1994, Apr. 29, 1996, Apr. 8, 1997, May 15, 1998, Sept. 23, 1999; lowest, 6.62 ft below land surface, July 29, 1999.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM (READINGS ABOVE LAND-SURFACE INDICATED BY "+"),  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
APR 17	+1.65	JUL 10	1.17	SEP 11	1.70
WATER YEAR 2003 HIGHEST +1.65 APR 17, 2003					
LOWEST 1.70 SEP 11, 2003					



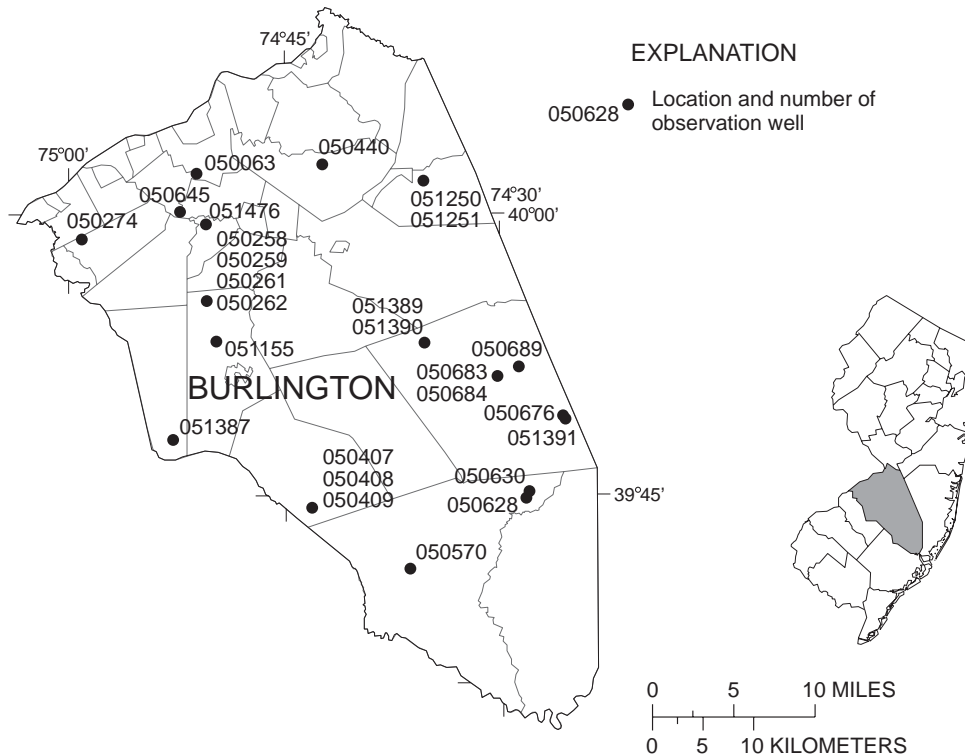


BURLINGTON COUNTY

NJ-WRD well number	Local identifier	Township	Well depth	Aquifer	Type of data
050063	WILLINGBORO 1 OBS	BURLINGTON TWP	294	MRPAM	MANUAL
050258	MEDFORD 1 OBS	MEDFORD TWP	410	MRPAU	DAILY
050259	MEDFORD 2 OBS	MEDFORD TWP	263	EGLS	DAILY
050261	MEDFORD 5 OBS	MEDFORD TWP	750	MRPAM	DAILY
050262	MEDFORD 4 OBS	MEDFORD TWP	1145	MRPAL	DAILY
050274	CAMPBELL 1 OBS	MOORESTOWN TWP	268	MRPAL	MANUAL
050407	ATSION 1 OBS	SHAMONG TWP	260	PNPN	MANUAL
050408	ATSION 2 OBS	SHAMONG TWP	65	CKKD	MANUAL
050409	ATSION 3 OBS	SHAMONG TWP	17	CKKD	MANUAL
050440	RHODIA 1 OBS	SPRINGFIELD TWP	615	MRPAM	MAXMIN
050570	MOUNT OBS	WASHINGTON TWP	25	CKKD	DAILY
050628	PENN SF SHALLOW OBS	WASHINGTON TWP	12	CKKD	DAILY
050630	PENN SF DEEP OBS	WASHINGTON TWP	41	CKKD	DAILY
050645	WILLINGBORO 2 OBS	WILLINGBORO TWP	441	MRPAL	DAILY
050676	COYLE AIRPORT OBS	WOODLAND TWP	540	PNPN	MANUAL
050683	BUTLER PLACE 1 OBS	WOODLAND TWP	2117	MRPA	DAILY
050684	BUTLER PLACE 2 OBS	WOODLAND TWP	170	CKKD	DAILY
050689	LEBANON SF 23-D OBS	WOODLAND TWP	33	CKKD	DAILY
051155	MEDFORD TWP MW-1 OBS	MEDFORD TWP	180	MLRW	DAILY
051250	MCGUIRE 08-MW-52 OBS	NEW HANOVER TWP	55	VNCN	DAILY
051251	MCGUIRE 08-MW-102 OBS	NEW HANOVER TWP	20	CKKD	DAILY
051387	EVESHAM 4 OBS	EVESHAM TWP	355	MLRW	DAILY
051389	NEW LISBON 1 OBS	WOODLAND TWP	920	MRPAU	DAILY
051390	NEW LISBON 2 OBS	WOODLAND TWP	635	EGLS	DAILY
051391	COYLE 2 OBS (OW 96)	WOODLAND TWP	1441	MRPAU	DAILY
051476	NJDEP/RANCOCAS ST PK MW3	HAINESPORT TWP	14	EGLS	DAILY

Aquifer names

- CKKD - Kirkwood-Cohansey aquifer system
- EGLS - Englishtown aquifer system
- MLRW - Wenonah-Mount Laurel aquifer
- MRPA - Potomac-Raritan-Magothy aquifer
- MRPAL - Lower Potomac-Raritan-Magothy aquifer
- MRPAM - Middle Potomac-Raritan-Magothy aquifer
- MRPAU - Upper Potomac-Raritan-Magothy aquifer
- PNPN - Piney Point aquifer
- VNCN - Vincentown aquifer



## GROUND-WATER LEVELS

## BURLINGTON COUNTY

NJ-WRD Well Number, 05-0063. Site I.D., 400213074510801. Local I.D., Willingboro 1 Obs.

LOCATION.--Lat 40°02'13", long 74°51'07", Hydrologic Unit 02040202, on the west side of Rancocas Rd., about 2 mi north of Rancocas, Burlington Township. Owner: Willingboro Municipal Utilities Authority.

AQUIFER.--Middle Potomac-Raritan-Magothy aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in., depth 294 ft, screened 284 to 294 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape. Water-level recorder, Dec. 1984 to Sept. 1987. Water-level extremes recorder, Feb. 1977 to Dec. 1984. Periodic measurements, Sept. 1975 to Feb. 1977. Water-level recorder, Mar. 1966 to Sept. 1975.

DATUM.--Land surface is 45.45 ft above NGVD of 1929. Measuring point: Top of well shelter shelf, 0.60 ft above land surface.

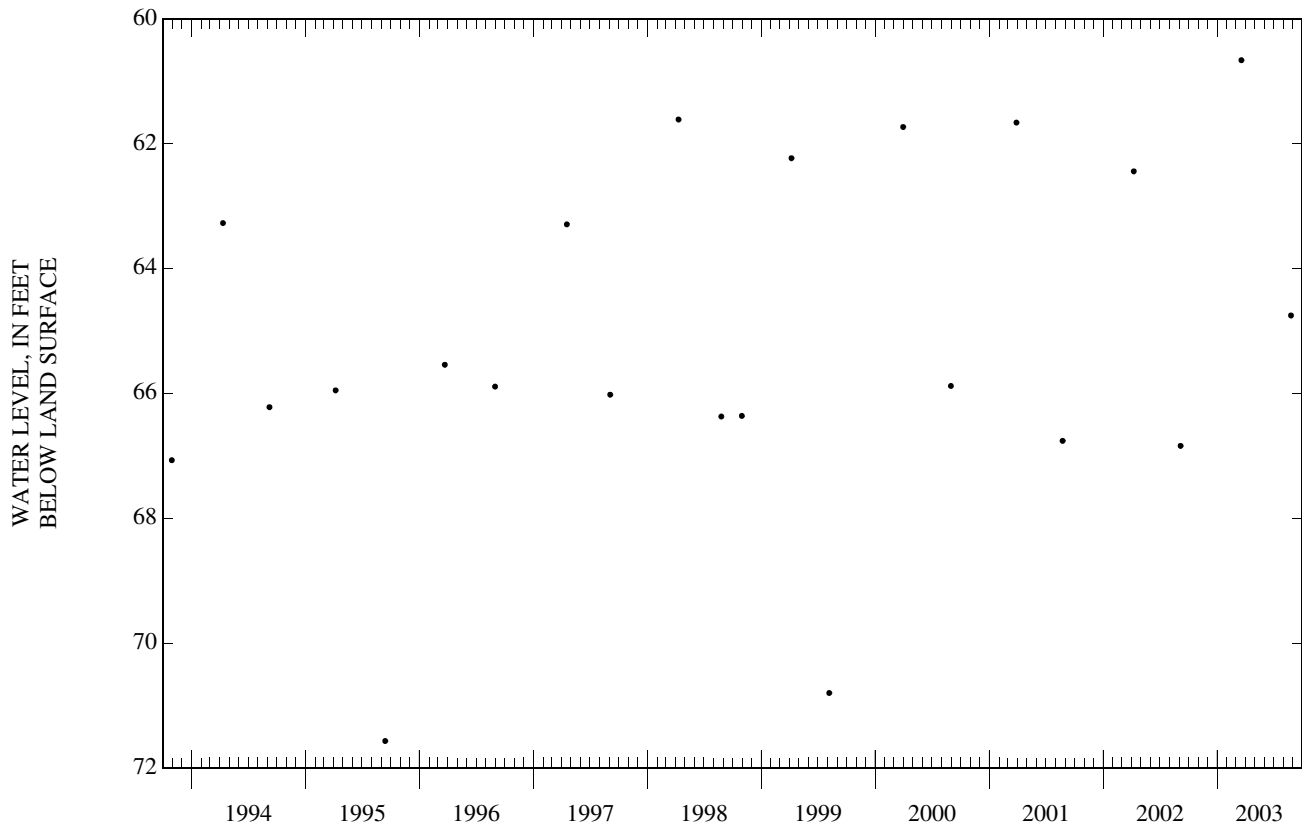
REMARKS.--Water level is affected by nearby pumping.

PERIOD OF RECORD.--Mar. 1966 to current year. Records for 1966 to 1975 and 1988 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 46.25 ft below land surface, Mar. 19, 1966; lowest, 71.57 ft below land surface, Sept. 13, 1995.

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

DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 19	60.66	AUG 25	64.75



GROUND-WATER LEVELS

BURLINGTON COUNTY--Continued

NJ-WRD Well Number, 05-0258. Site I.D., 395524074502501. Local I.D., Medford 1 Obs. NJ Permit Number, 31-04627.

LOCATION.--Lat 39°55'24", long 74°50'24", Hydrologic Unit 02040202, at Medford Wildlife Management Area, Medford Township. Owner: U.S. Geological Survey.

AQUIFER.--Upper Potomac-Raritan-Magothy aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in., depth 410 ft, screened 400 to 410 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval. Water-level extremes recorder, Feb. 1977 to Dec. 1984. Periodic measurements, Aug. 1975 to Feb. 1977. Water-level recorder, Oct. 1963 to Aug. 1975.

DATUM.--Land surface is 70.77 ft above NGVD of 1929. Measuring point: Top of coupling, 2.70 ft above land surface.

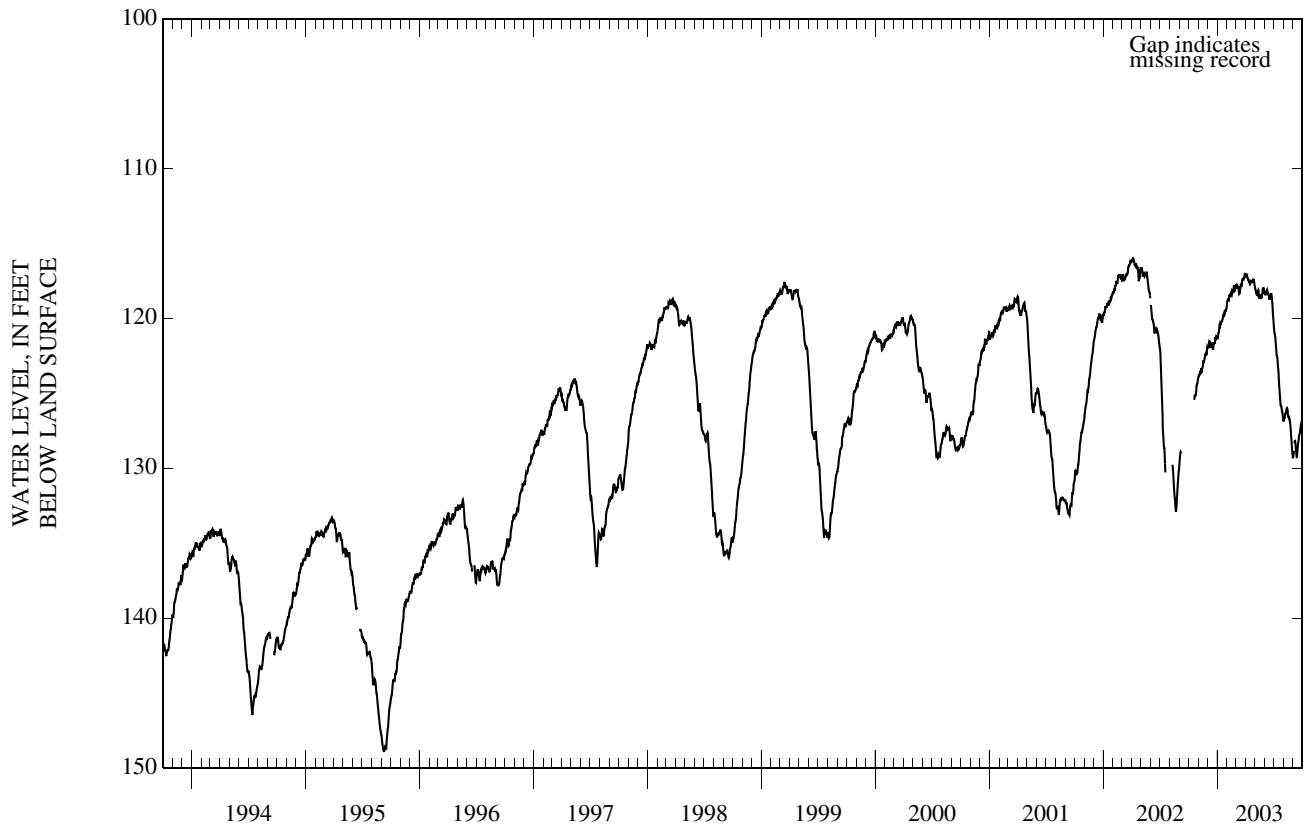
REMARKS.-- Water level is affected by nearby pumping.

PERIOD OF RECORD.--Oct. 1963 to current year. Records for 1963 to 1975 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 85.22 ft below land surface, Feb. 16-19, 1964; lowest, 148.95 ft below land surface, Sept. 8-9, 1995.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	123.75	121.65	120.94	118.74	117.78	117.01	118.30	118.30	121.17	126.55	128.32
10	---	123.34	121.88	120.33	118.45	118.02	117.46	118.34	118.17	122.46	126.08	128.85
15	---	123.18	121.70	120.18	118.34	117.99	117.53	118.59	118.41	123.41	126.42	128.65
20	125.19	122.79	121.72	119.78	118.17	117.73	117.48	118.56	118.49	125.16	126.66	127.78
25	124.89	122.33	121.24	119.58	118.14	117.39	117.49	118.30	118.80	125.90	127.75	127.21
EOM	123.98	121.87	121.27	119.19	117.97	117.01	117.78	118.24	120.26	126.80	129.33	126.86
MEAN	---	123.05	121.66	120.14	118.36	117.70	117.42	118.30	118.61	123.80	127.01	---
MAX	---	123.90	122.08	121.25	118.96	118.34	117.78	118.67	120.26	126.80	129.33	---
MIN	---	121.87	121.20	119.19	117.78	117.00	117.01	117.87	118.09	120.58	125.97	---



GROUND-WATER LEVELS

BURLINGTON COUNTY--Continued

NJ-WRD Well Number, 05-0259. Site I.D., 395524074502502. Local I.D., Medford 2 Obs.

LOCATION.--Lat 39°55'24", long 74°50'24", Hydrologic Unit 02040202, at the Medford Wildlife Management Area, Medford Township. Owner: U.S. Geological Survey.

AQUIFER.--Englishtown aquifer system of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in., depth 263 ft, screened 253 to 263 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval. Periodic measurements, Sept. 1987 to Mar. 2000. Water-level recorder, Dec. 1984 to Sept. 1987. Water-level extremes recorder, Feb. 1977 to Dec. 1984. Water-level recorder, Oct. 1963 to Aug. 1975.

DATUM.--Land surface is 72.92 ft above NGVD of 1929. Measuring point: Top of well shelter shelf, 3.22 ft above land surface.

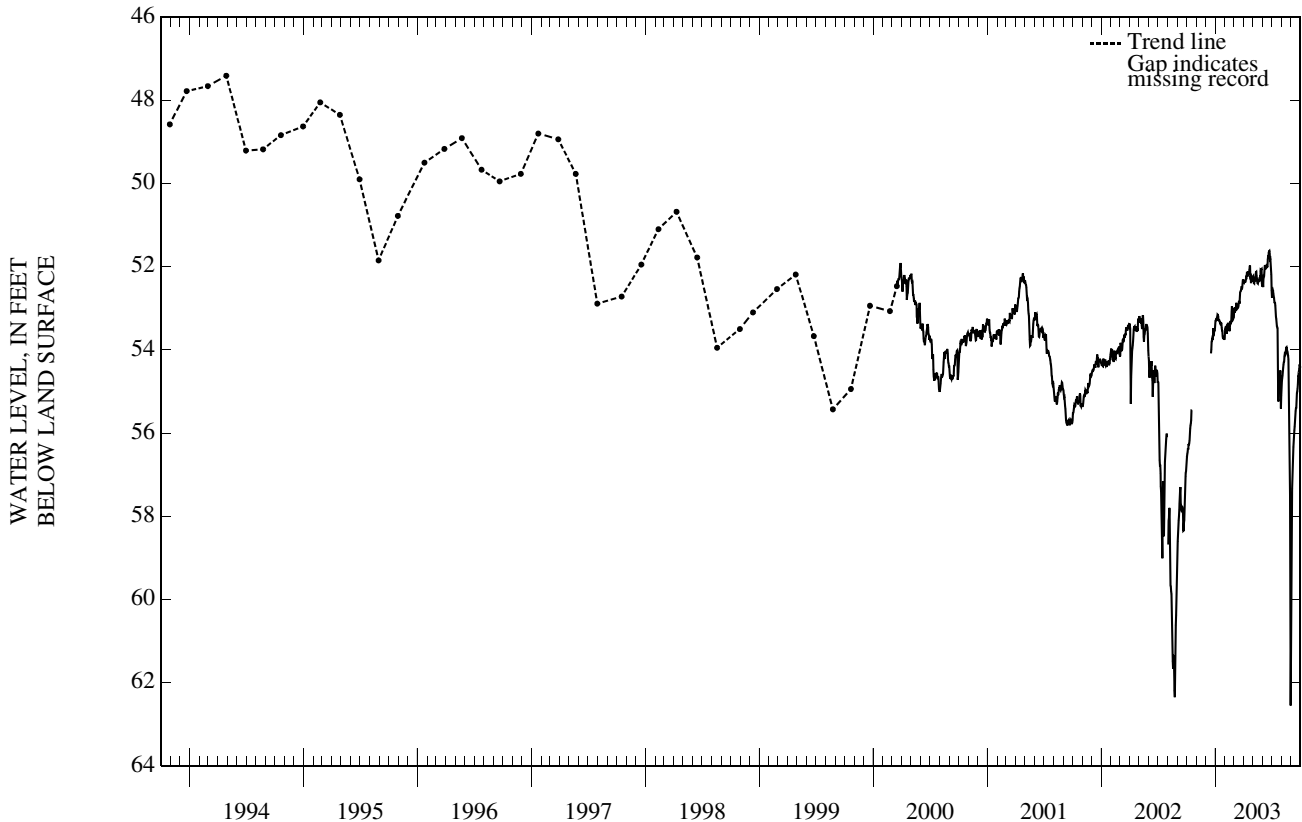
REMARKS.--Water level is occasionally affected by nearby pumping.

PERIOD OF RECORD.--Oct. 1963 to Aug. 1975, Feb. 1977 to current year. Records for 1963 to 1975 and 1987 to 1989 are unpublished and are available in files of the New Jersey District office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 45.42 ft below land surface, Apr. 27, 1973; lowest, 111.96 ft below land surface, July 9, 1964.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	56.36	---	---	53.30	53.54	53.00	52.32	52.41	52.21	52.58	54.54	57.06
10	56.18	---	---	53.20	53.35	52.94	52.30	52.24	52.07	52.88	54.17	56.07
15	55.69	---	---	53.32	53.53	52.98	52.16	52.35	51.96	53.26	54.02	55.47
20	---	---	53.81	53.37	53.35	52.77	52.08	52.35	51.74	54.08	54.04	55.00
25	---	---	53.48	53.72	53.24	52.54	52.40	52.22	51.82	54.68	55.71	54.54
EOM	---	---	53.43	53.69	53.23	52.33	52.30	52.48	52.57	55.11	60.86	54.43
MEAN	---	---	---	53.42	53.38	52.80	52.24	52.28	52.01	53.69	55.21	55.74
MAX	---	---	---	53.76	53.61	53.21	52.40	52.48	52.57	55.41	62.55	59.28
MIN	---	---	---	53.15	52.95	52.32	51.97	52.05	51.62	52.57	53.93	54.35



GROUND-WATER LEVELS

BURLINGTON COUNTY--Continued

NJ-WRD Well Number, 05-0261. Site I.D., 395525074502505. Local I.D., Medford 5 Obs.

LOCATION.--Lat 39°55'25", long 74°50'24", Hydrologic Unit 02040202, at Medford Wildlife Management Area, Medford Township.  
Owner: U.S. Geological Survey.

AQUIFER.--Middle Potomac-Raritan-Magothy aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in., depth 750 ft, screened 740 to 750 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval. Periodic measurements, Mar. 1975 to Feb. 1977. Water-level recorder, Jan. 1968 to Mar. 1975.

DATUM.--Land surface is 72.60 ft above NGVD of 1929. Measuring point: Top of recorder shelf, 3.60 ft above land surface.

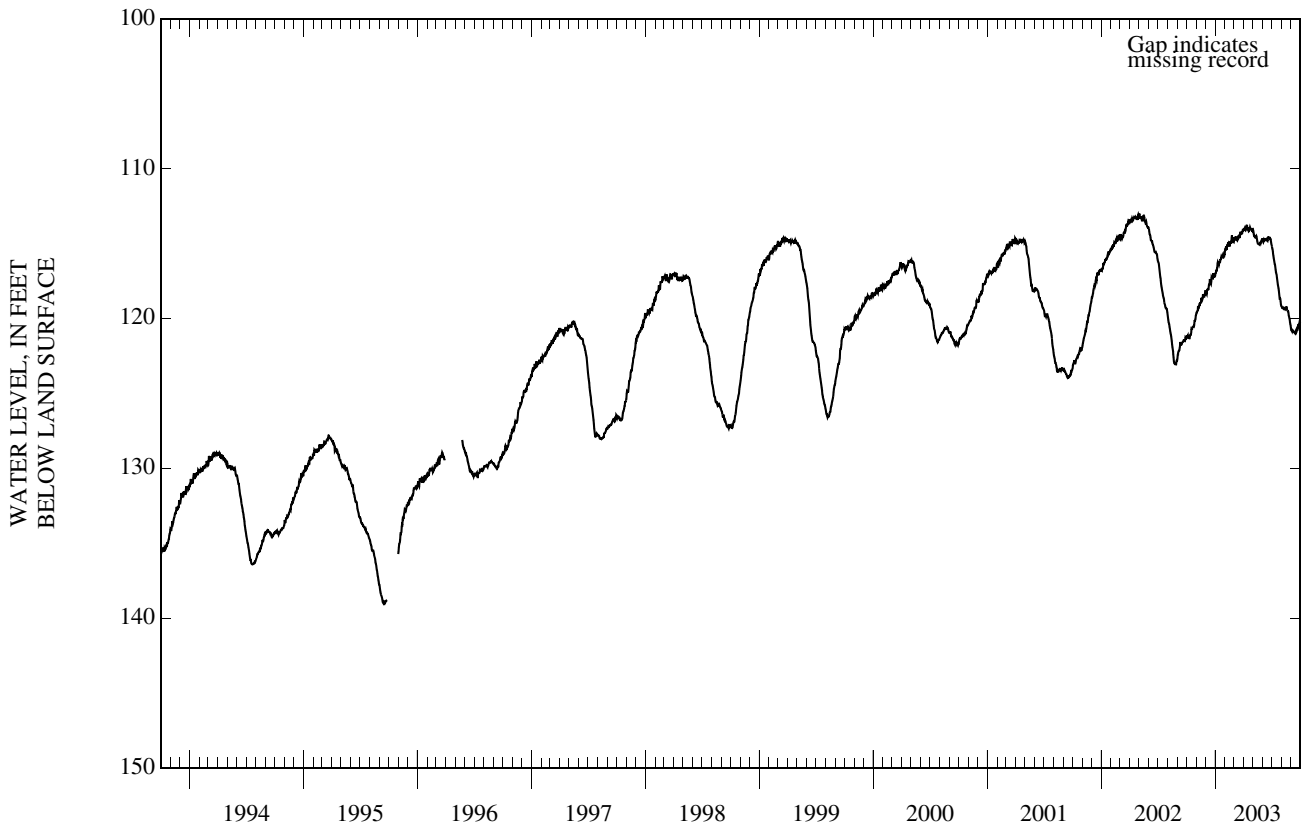
REMARKS.-- Water level is affected by nearby pumping.

PERIOD OF RECORD.--Jan. 1968 to current year. Records for 1968 to 1977 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 94.46 ft below land surface, Mar. 1, 1968; lowest, 139.15 ft below land surface, Sept. 16, 1995.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	121.14	119.46	118.14	116.85	115.33	114.59	113.96	114.47	114.72	115.69	119.29	120.79
10	121.31	119.15	117.96	116.27	115.00	114.67	113.95	114.58	114.75	116.35	119.30	120.89
15	120.99	118.93	117.48	116.23	115.09	114.68	114.02	114.83	114.69	116.99	119.32	120.93
20	120.56	118.74	117.24	115.86	114.96	114.50	114.10	115.03	114.60	117.74	119.46	120.75
25	120.44	118.51	116.98	115.91	114.89	114.31	114.03	115.01	114.69	118.53	119.87	120.44
EOM	119.72	118.10	117.12	115.64	114.80	114.07	114.17	114.72	115.08	119.15	120.68	120.28
MEAN	120.76	118.89	117.62	116.20	115.03	114.49	114.02	114.72	114.73	117.16	119.56	120.71
MAX	121.32	119.63	118.36	116.98	115.44	114.82	114.17	115.07	115.08	119.15	120.68	120.98
MIN	119.72	118.10	116.98	115.64	114.44	114.07	113.74	114.15	114.58	115.20	119.19	120.21
WTR YR 2003	MEAN 117.01	HIGH 113.74	APR 12	LOW 121.32	OCT 9							



## GROUND-WATER LEVELS

## BURLINGTON COUNTY--Continued

NJ-WRD Well Number, 05-0262. Site I.D., 395525074502601. Local I.D., Medford 4 Obs.

LOCATION.--Lat 39°55'24", long 74°50'24", Hydrologic Unit 02040202, at Medford Wildlife Management Area, Medford Township.  
Owner: U.S. Geological Survey.

AQUIFER.--Lower Potomac-Raritan-Magothy aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in., depth 1,145 ft, screened 1,125 to 1,145 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval. Water-level extremes recorder, Feb. 1977 to Dec. 1984.  
Periodic measurements, July 1975 to Feb. 1977. Water-level recorder, Jan. 1968 to July 1975.

DATUM.--Land surface is 72.32 ft above NGVD of 1929. Measuring point: Top of recorder shelf, 2.40 ft above land surface.

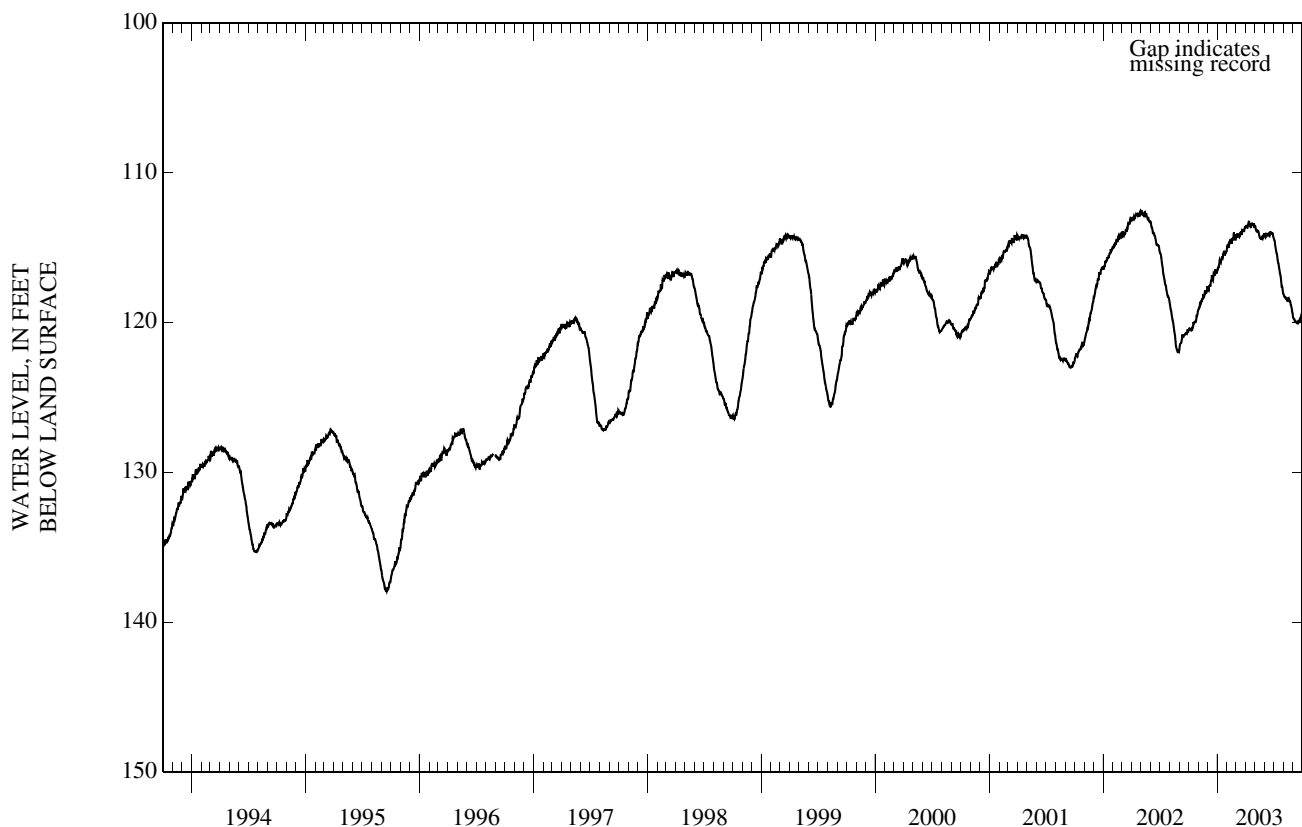
REMARKS.--Water level is affected by nearby pumping.

PERIOD OF RECORD.--Jan. 1968 to current year. Records for 1968 to 1975 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 94.24 ft below land surface, Mar. 13, 1968; lowest, 138.00 ft below land surface, Sept. 16, 1995.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	120.36	118.94	117.62	116.36	114.91	114.12	113.50	113.84	114.13	114.80	118.28	119.80
10	120.53	118.61	117.45	115.83	114.55	114.19	113.44	113.93	114.15	115.41	118.40	119.98
15	120.28	118.40	116.97	115.78	114.65	114.17	113.47	114.19	114.09	116.04	118.48	119.96
20	119.96	118.23	116.71	115.39	114.47	114.04	113.56	114.38	113.98	116.67	118.59	119.92
25	119.86	118.00	116.45	115.45	114.44	113.87	113.47	114.38	114.07	117.45	118.87	119.67
EOM	119.21	117.57	116.59	115.17	114.33	113.63	113.61	114.11	114.33	118.06	119.62	119.58
MEAN	120.08	118.37	117.11	115.73	114.58	114.03	113.50	114.09	114.11	116.18	118.61	119.82
MAX	120.53	119.13	117.85	116.45	115.00	114.36	113.66	114.42	114.33	118.06	119.62	120.01
MIN	119.21	117.57	116.45	115.17	113.98	113.63	113.20	113.54	113.97	114.42	118.10	119.45
WTR YR 2003	MEAN 116.36	HIGH 113.20	APR 12	LOW 120.53	OCT 9							



GROUND-WATER LEVELS

BURLINGTON COUNTY--Continued

NJ-WRD Well Number, 05-0274. Site I.D., 395838074590501. Local I.D., Campbell 1 Obs. NJ Permit Number, 31-03674.

LOCATION.--Lat 39°58'41", long 74°59'04", Hydrologic Unit 02040202, at Denton Vacuum Inc., Church Rd., Moorestown Township. Owner: Denton Vacuum Inc.

AQUIFER.--Lower Potomac-Raritan-Magothy aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 10 in., depth 268 ft, screened 241 to 262 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape. Water-level recorder, Jan. 1973 to May 1975. Periodic measurements, Apr. 1972 to Jan. 1973.

DATUM.--Land surface is 40 ft above NGVD of 1929, from topographic map. Measuring point: Top of coupling, 1.50 ft above land surface.

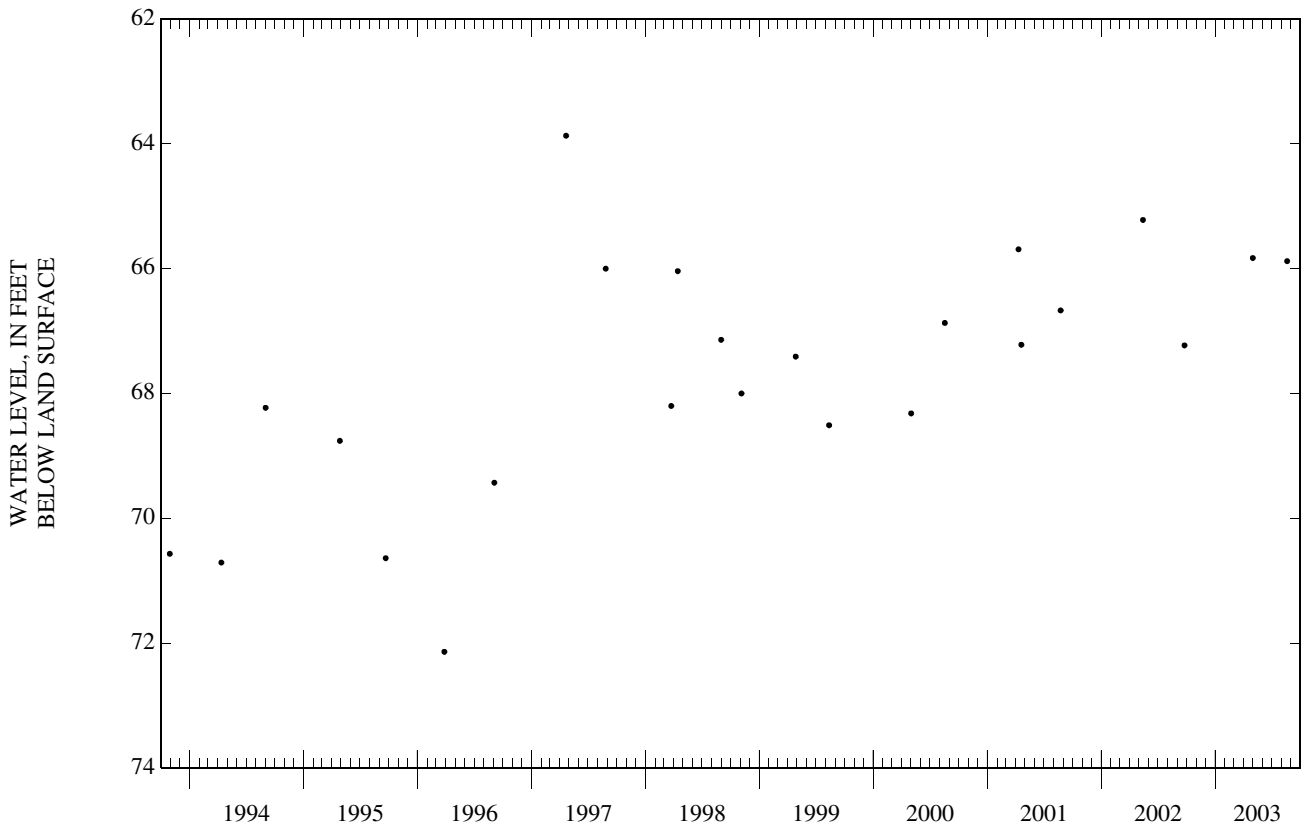
REMARKS.--Water level is affected by nearby pumping.

PERIOD OF RECORD.--Apr. 1972 to Apr. 1984, May 1986 to current year. Records for 1972 to 1984 and 1986 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 50.35 ft below land surface, June 30, 1973; lowest, 72.14 ft below land surface, Mar. 27, 1996.

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

DATE	WATER LEVEL	DATE	WATER LEVEL
MAY 01	65.83	AUG 19	65.88



GROUND-WATER LEVELS

BURLINGTON COUNTY--Continued

NJ-WRD Well Number, 05-0407. Site I.D., 394422074430901. Local I.D., Atsion 1 Obs.

LOCATION.--Lat 39°44'22", long 74°43'08", Hydrologic Unit 02040301, about 2,200 ft east of Rt. 206, in Atsion, Shamong Township.  
 Owner: U.S. Geological Survey.

AQUIFER.--Piney Point aquifer of Eocene age.

WELL CHARACTERISTICS.--Drilled artesian observation well, depth 260 ft, screened 240 to 260 ft.

INSTRUMENTATION.--None: periodic measurements with a 6 ft ruler.

DATUM.--Land surface is 46.76 ft above NGVD of 1929. Measuring point: Top edge of cap, 3.87 ft above land surface.

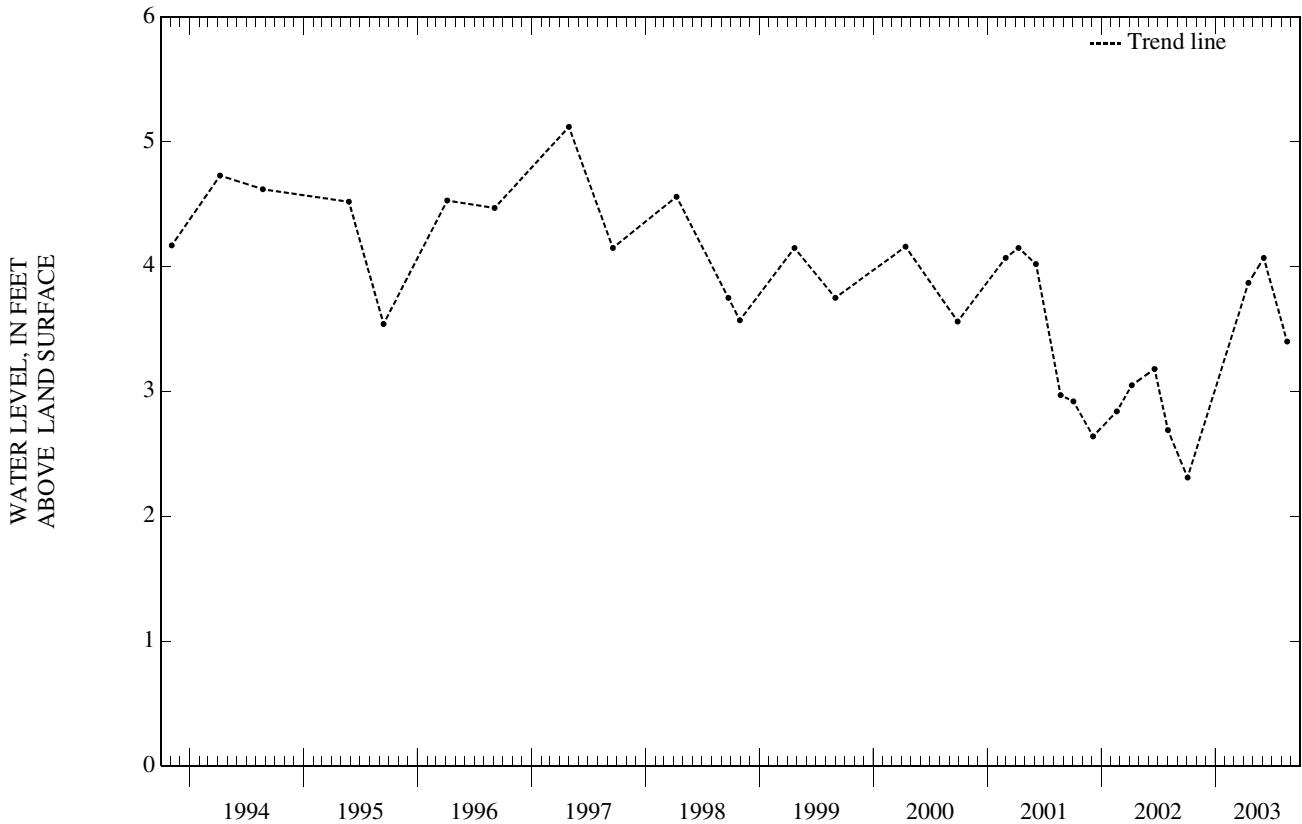
REMARKS.--This is a flowing well. The water level is measured in a clear plastic tube above land surface.

PERIOD OF RECORD.--Oct. 1963 to Sept. 1966, June 1968 to current year. Records for 1963 to 1966 and 1968 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.49 ft above land surface, Dec. 15, 1965; lowest, 2.31 ft above land surface, Oct. 4, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM (READINGS ABOVE LAND-SURFACE INDICATED BY "+"),  
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 04	+2.31	APR 17	+3.87	JUN 05	+4.07	AUG 19	+3.40
WATER YEAR 2003 HIGHEST		+4.07 JUN 05, 2003		LOWEST		+2.31 OCT 04, 2002	





GROUND-WATER LEVELS

BURLINGTON COUNTY--Continued

NJ-WRD Well Number, 05-0408. Site I.D., 394422074430902. Local I.D., Atsion 2 Obs.

LOCATION.--Lat 39°44'22", long 74°43'08", Hydrologic Unit 02040301, about 2,200 ft east of Rt. 206, in Atsion, Shamong Township.  
 Owner: U.S. Geological Survey.

AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.

WELL CHARACTERISTICS.--Driven water-table observation well, diameter 1.25 in., depth 65 ft, screened 63 to 65 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape.

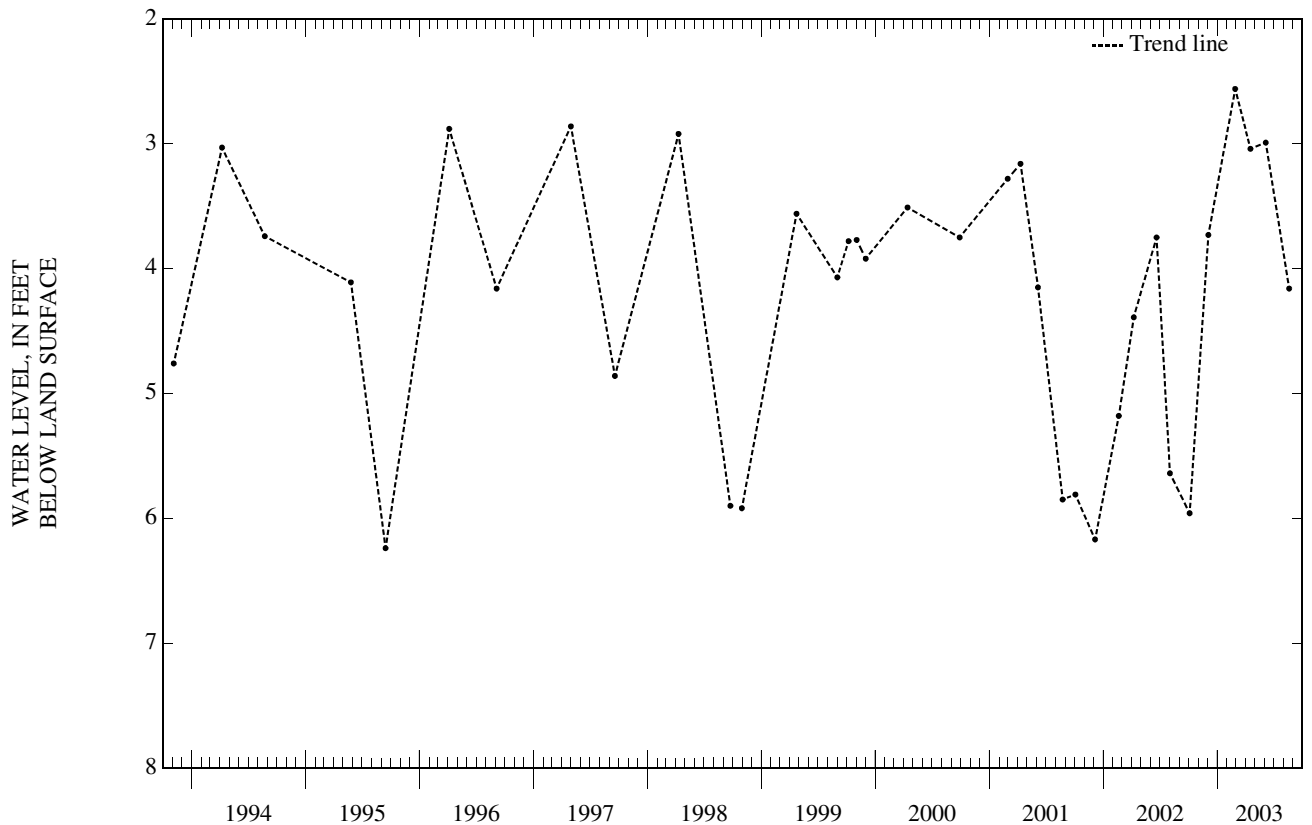
DATUM.--Land surface is 47.52 ft above NGVD of 1929. Measuring point: Top of casing, 1.00 ft above land surface.

PERIOD OF RECORD.--Oct. 1963 to current year. Records for 1963 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.40 ft below land surface, Apr. 28, 1983; lowest, 6.51 ft below land surface, Sept. 9, 1965.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 04	5.96	DEC 03	3.73	FEB 27	2.56	APR 17	3.04	JUN 05	2.99	AUG 19	4.16
WATER YEAR 2003		HIGHEST	2.56	FEB 27, 2003		LOWEST	5.96	OCT 04, 2002			



GROUND-WATER LEVELS

BURLINGTON COUNTY--Continued

NJ-WRD Well Number, 05-0409. Site I.D., 394422074430903. Local I.D., Atsion 3 Obs.

LOCATION.--Lat 39°44'22", long 74°43'08", Hydrologic Unit 02040301, about 2,200 ft east of Rt. 206, in Atsion, Shamong Township.  
 Owner: U.S. Geological Survey.

AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.

WELL CHARACTERISTICS.--Driven water-table observation well, diameter 1.25 in., depth 17 ft, screened 14 to 17 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape.

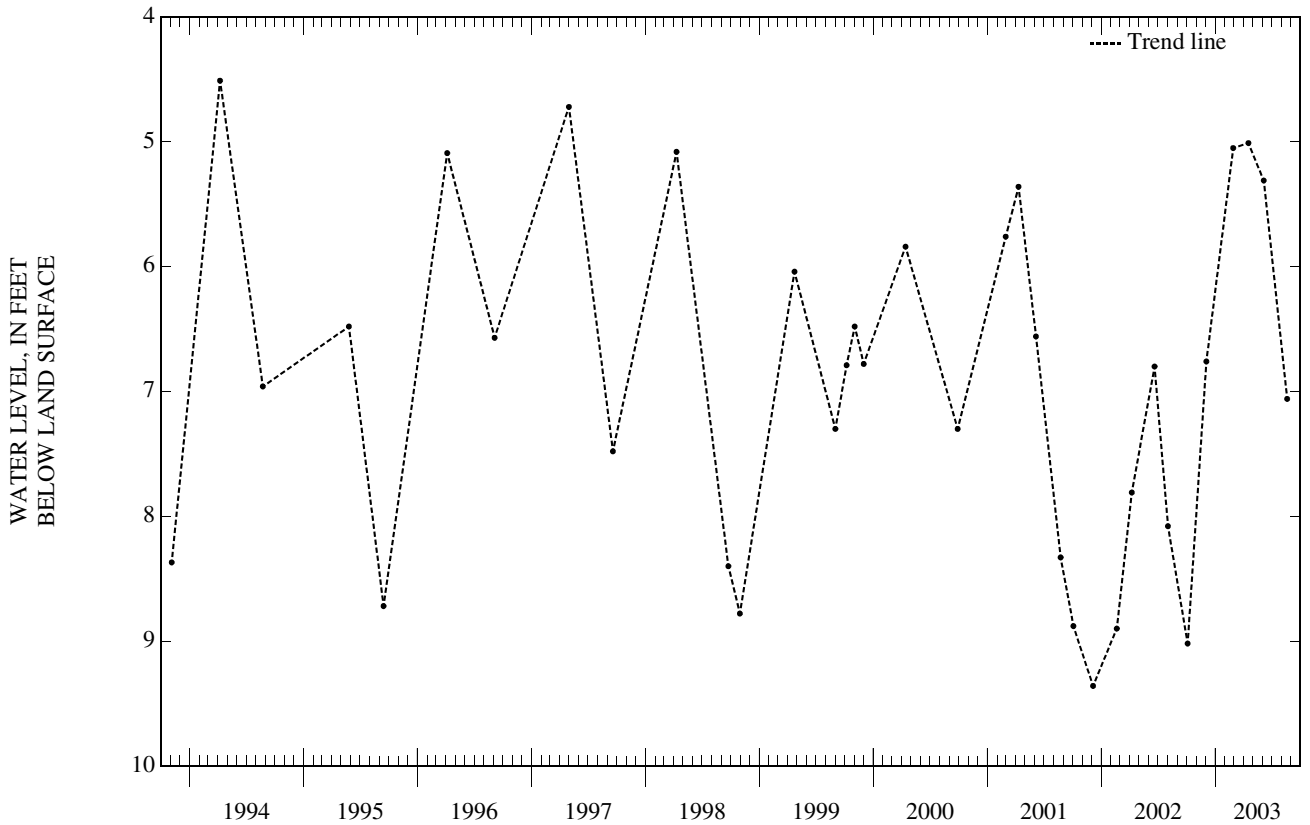
DATUM.--Land surface is 47.13 ft above NGVD of 1929. Measuring point: Top of casing, 2.00 ft above land surface.

PERIOD OF RECORD.--October 1963 to current year. Records for 1963 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.04 ft below land surface, Apr. 28, 1983; lowest, 9.36 ft below land surface, Dec. 5, 2001.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 04	9.02	DEC 03	6.76	FEB 27	5.05	APR 17	5.01	JUN 05	5.31	AUG 19	7.06
WATER YEAR 2003		HIGHEST	5.01	APR 17, 2003	LOWEST	9.02	OCT 04, 2002				



GROUND-WATER LEVELS

BURLINGTON COUNTY--Continued

NJ-WRD Well Number, 05-0440. Site I.D., 400242074422301. Local I.D., Rhodia 1 Obs. NJ Permit Number, 28-05128.

LOCATION.--Lat 40°02'42", long 74°42'22", Hydrologic Unit 02040201, at 1 Devi Dr. in Saddle Ridge Estates, near Jobstown, Springfield Township. Owner: Fred Goodwin.

AQUIFER.--Middle Potomac-Raritan-Magothy aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in., depth 615 ft, screened 603 to 613 ft.

INSTRUMENTATION.--Water-level extremes recorder. Periodic measurements, Aug. 1975 to Apr. 1977. Water-level recorder, Dec. 1968 to Aug. 1975.

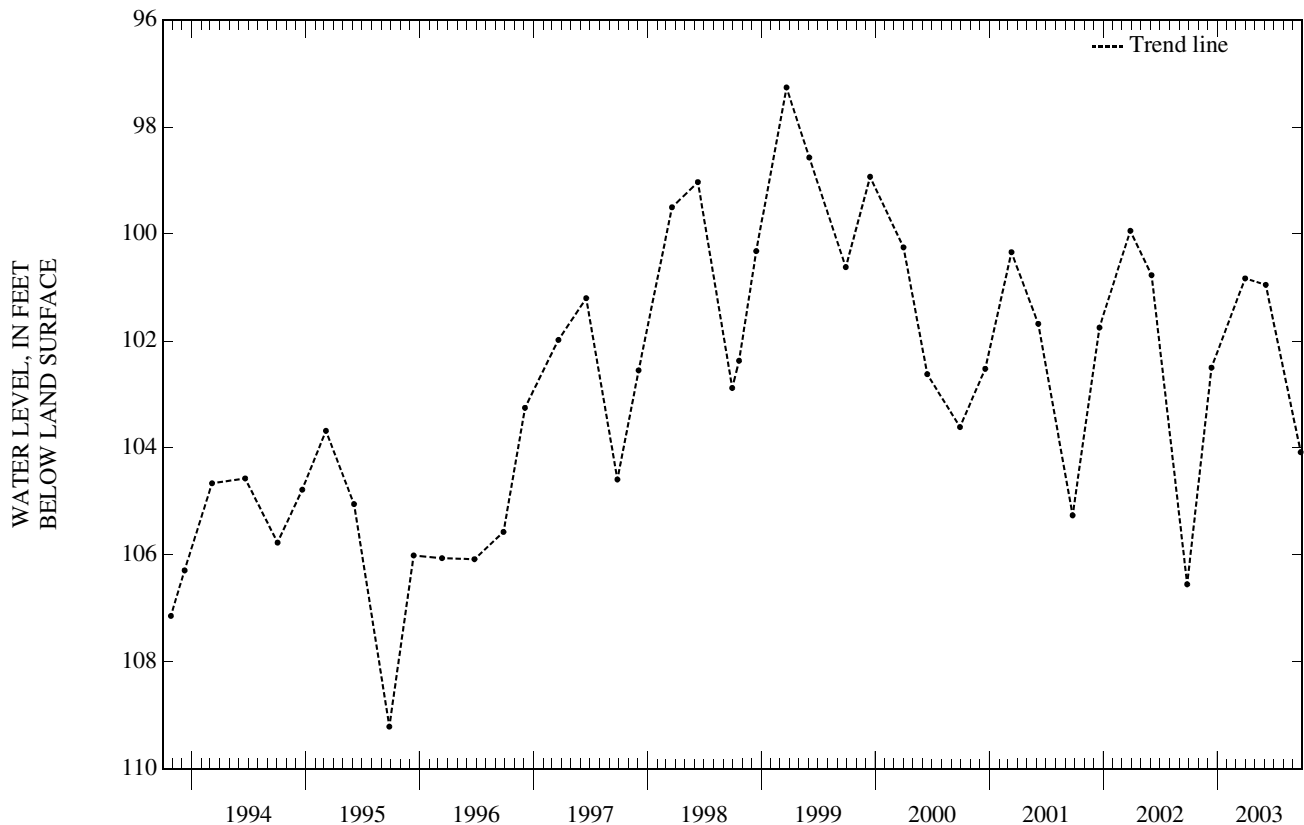
DATUM.--Land surface is 71.65 ft above NGVD of 1929. Measuring point: Front edge of cutout in recorder housing, 2.22 ft above land surface.

PERIOD OF RECORD.--Dec. 1968 to current year. Records for 1968 to 1978 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 86.55 ft below land surface, Dec. 31, 1969; lowest, 110.55 ft below land surface, between June 5 and Sept. 26, 1995.

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

PERIOD	WATER-LEVEL EXTREMES		MEASURED WATER LEVELS		
	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL	
SEPT. 26, 2002 TO DEC. 13, 2002	102.42	106.55	DEC. 13, 2002	102.50	
DEC. 13, 2002 TO MAR. 31, 2003	100.76	102.57	MAR. 31, 2003	100.83	
MAR. 31, 2003 TO JUNE 5, 2003	100.66	101.68	JUNE 5, 2003	100.95	
JUNE 5, 2003 TO SEPT. 25, 2003	100.90	105.94	SEPT. 25, 2003	104.08	



## GROUND-WATER LEVELS

## BURLINGTON COUNTY--Continued

NJ-WRD Well Number, 05-0570. Site I.D., 394106074362501. Local I.D., Mount Obs.

LOCATION.--Lat 39°41'06", long 74°36'22", Hydrologic Unit 02040301, at Mount in Wharton State Forest, Washington Township. Owner: U.S. Geological Survey.

AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 8 in., depth 25 ft, open-end concrete casing.

INSTRUMENTATION.--Submersible logger pressure transducer--60 minute recording interval. Periodic measurements, Apr. 1987 to Apr. 2001. Water-level recorder, Sept. 1977 to Apr. 1987. Periodic measurements, July 1970 to Sept. 1977. Water-level recorder, Sept. 1955 to July 1970.

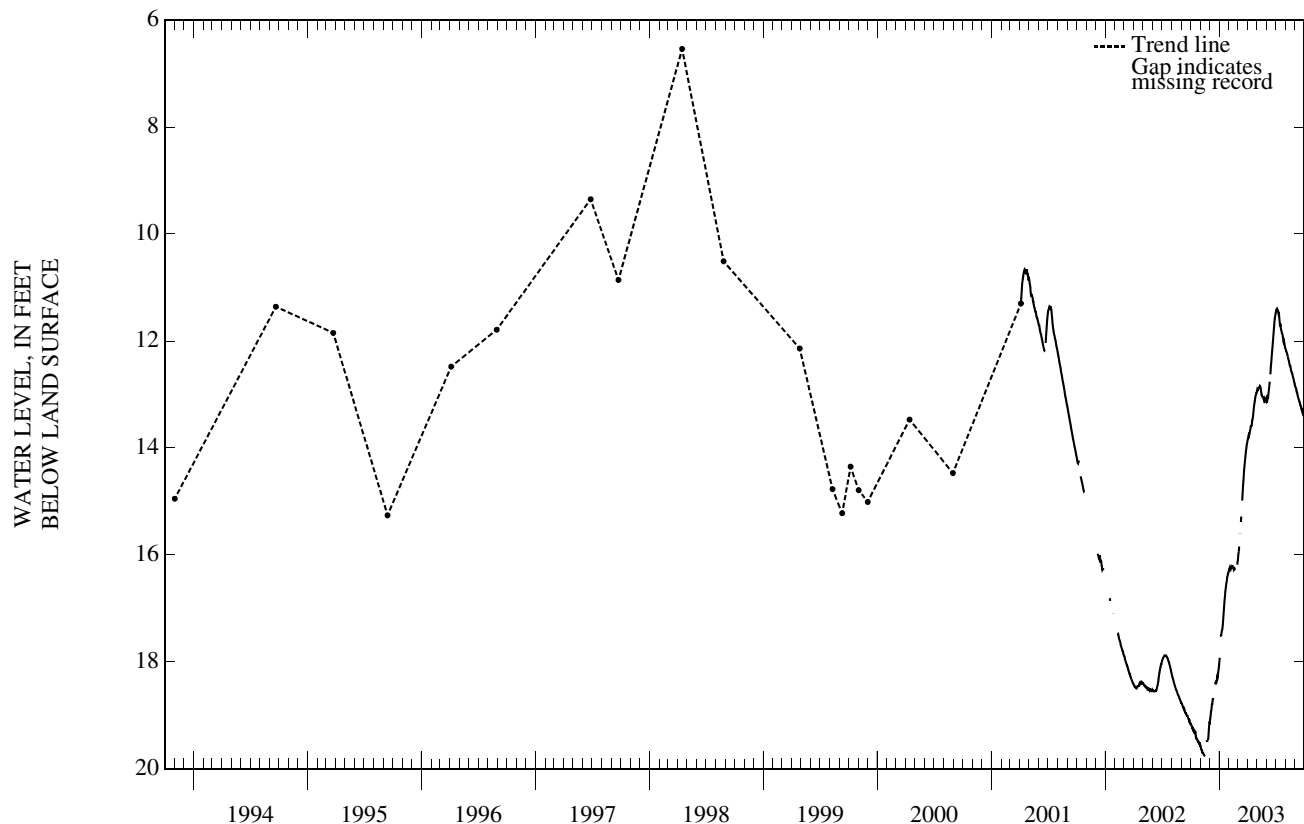
DATUM.--Land surface is 63.24 ft above NGVD of 1929. Measuring point: Top of concrete casing, 0.60 ft above land surface.

PERIOD OF RECORD.--Sept. 1955 to current year. Records for 1955 to 1977 and 1987 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.92 ft below land surface, Aug. 26, 1958; lowest, 19.77 ft below land surface, Nov. 15-16, 2002.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	19.21	19.66	18.92	17.49	16.24	15.84	13.76	12.90	13.04	11.39	12.22	12.92
10	19.30	19.70	18.73	17.40	16.20	---	13.66	12.86	12.83	11.51	12.34	13.04
15	19.33	19.76	---	17.04	16.25	14.98	13.54	12.96	12.48	11.71	12.46	13.14
20	19.42	---	18.39	16.68	16.28	14.51	13.34	13.05	12.12	11.85	12.58	13.25
25	19.48	19.47	18.28	16.46	---	14.17	13.10	13.12	11.73	12.00	12.67	13.34
EOM	19.57	19.14	18.05	16.30	16.13	13.90	12.97	13.07	11.48	12.13	12.84	13.46
MEAN	19.36	---	---	---	---	---	13.45	12.99	---	11.72	12.48	13.15
MAX	19.57	---	---	---	---	---	13.87	13.15	---	12.13	12.84	13.46
MIN	19.16	---	---	---	---	---	12.97	12.84	---	11.39	12.14	12.85



GROUND-WATER LEVELS

BURLINGTON COUNTY--Continued

NJ-WRD Well Number, 05-0628. Site I.D., 394452074281901. Local I.D., Penn SF Shallow Obs.

LOCATION.--Lat 39°44'52", long 74°28'18", Hydrologic Unit 02040301, about 500 ft south of the intersection of Sooy Rd. and Cabin Rd., Penn State Forest, Washington Township. Owner: U.S. Geological Survey.

AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 6 in., depth 12 ft, open-end steel casing.

INSTRUMENTATION.--Submersible logger pressure transducer--60 minute recording interval. Periodic measurements, Oct. 1991 to Apr. 2001. Water-level recorder, June 1990 to Oct. 1991. Periodic measurements, Oct. 1984 to June 1990. Water-level recorder, Oct. 1977 to Oct. 1984. Periodic measurements, Jan. 1975 to Oct. 1977. Water-level recorder, Dec. 1936 to Jan. 1975.

DATUM.--Land surface is 78.78 ft above NGVD of 1929. Measuring point: Top of well seal, 2.77 ft above land surface. Measuring point prior to July 1963, top of coupling, 0.11 ft above land surface.

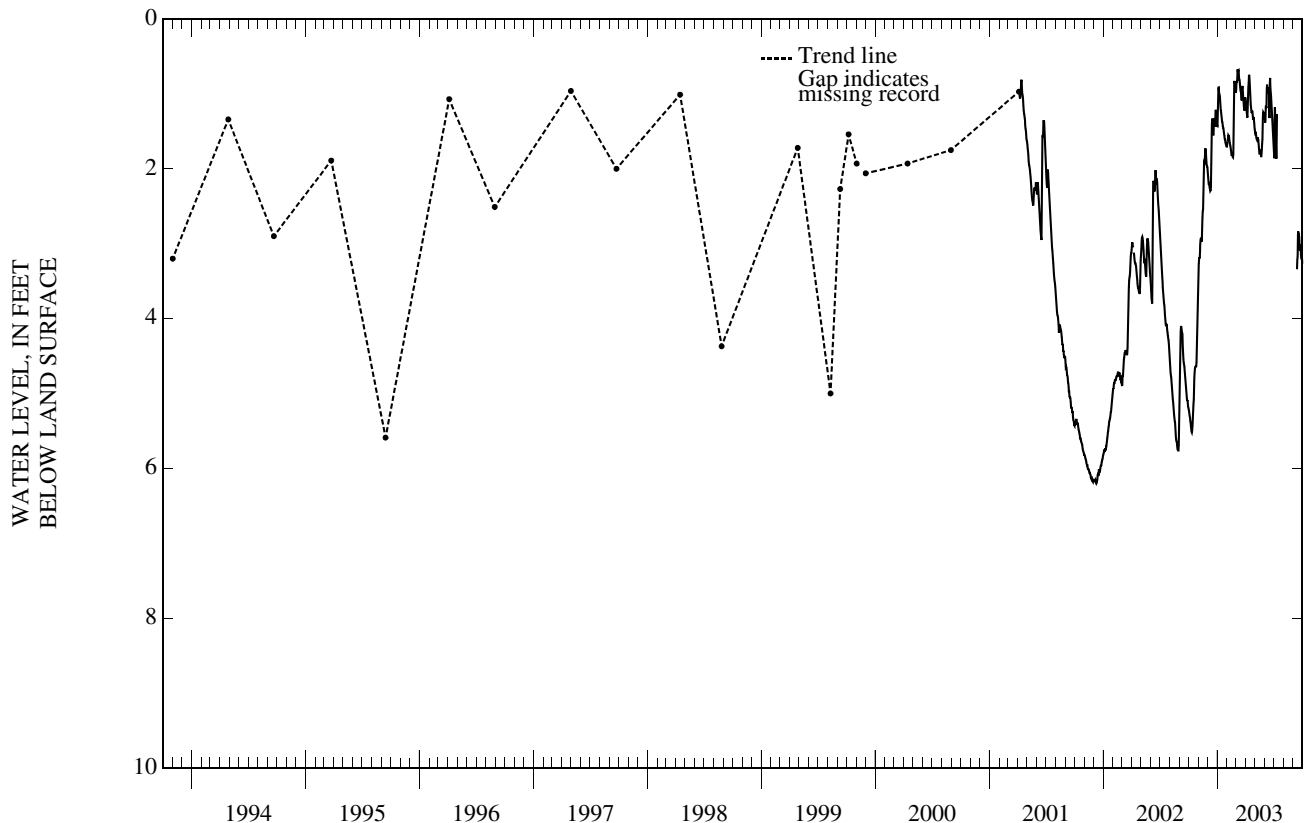
REMARKS.--Well deepened from 10 ft to 12 ft in July 1963.

PERIOD OF RECORD.--Dec. 1936 to current year. Records for 1975 to 1981 and 1985 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, greater than 0.11 ft above land surface (flowing), several times, 1959-62; lowest, 6.22 ft below land surface, Dec. 9-10, 2001.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.31	3.19	2.19	0.92	1.55	0.83	1.24	1.56	1.17	1.40	---	---
10	5.51	2.93	2.29	1.10	1.67	0.68	0.91	1.59	0.92	1.62	---	---
15	5.26	2.57	1.33	1.33	1.80	0.92	0.92	1.77	1.09	---	---	3.17
20	4.72	1.90	1.49	1.46	1.85	1.09	1.23	1.80	0.93	---	---	2.92
25	4.64	1.80	1.37	1.61	0.83	1.08	1.33	1.60	1.35	---	---	3.07
EOM	3.72	1.97	1.43	1.70	0.94	1.04	1.46	1.34	1.72	---	---	3.27
MEAN	4.96	2.49	1.69	1.35	1.53	0.93	1.15	1.60	---	---	---	---
MAX	5.52	3.43	2.29	1.70	1.85	1.22	1.46	1.84	---	---	---	---
MIN	3.72	1.73	1.21	0.92	0.83	0.67	0.75	1.24	---	---	---	---



GROUND-WATER LEVELS

BURLINGTON COUNTY--Continued

NJ-WRD Well Number, 05-0630. Site I.D., 394513074280601. Local I.D., Penn SF Deep Obs.

LOCATION.--Lat 39°45'13", long 74°28'05", Hydrologic Unit 02040301, about 800 ft south of the intersection of Sooy Rd. and Chatsworth Rd., Penn State Forest, Washington Township. Owner: U.S. Geological Survey.

AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 6 in., depth 41 ft, open end steel casing.

INSTRUMENTATION.--Submersible logger pressure transducer--60 minute recording interval. Periodic measurements, Oct. 1991 to Apr. 2001. Water-level recorder, Aug. 1990 to Oct. 1991. Periodic measurements, Feb. 1982 to Aug. 1990. Water-level recorder, Nov. 1977 to Feb. 1982. Periodic measurements, July 1970 to Nov. 1977. Water-level recorder, Aug. 1963 to July 1970. Periodic measurements, Jan. 1951 to Aug. 1963.

DATUM.--Land surface is 104.30 ft above NGVD of 1929. Measuring point: Top of well seal, 2.40 ft above land surface.

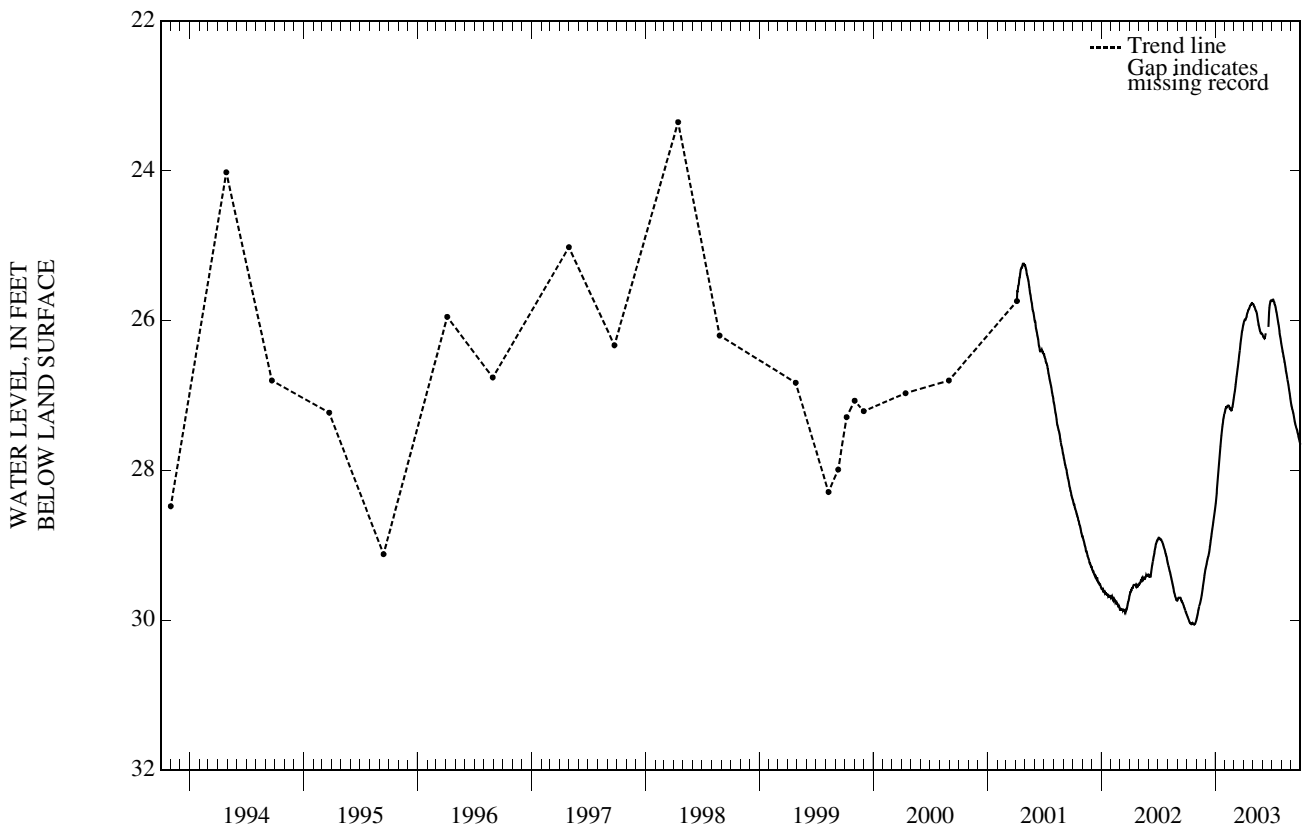
REMARKS.--Well depth was 30 ft before deepening in July 1963.

PERIOD OF RECORD.--Jan 1951 to current year. Records for 1951 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 22.73 ft below land surface, May 11, 1970; lowest, 30.06 ft below land surface, Oct. 24-26, 2002.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	29.97	29.92	29.22	28.31	27.16	26.91	25.99	25.81	26.23	25.72	26.42	27.19
10	30.02	29.82	29.13	28.03	27.14	26.75	25.96	25.86	26.20	25.79	26.54	27.29
15	30.05	29.73	29.00	27.78	27.16	26.58	25.88	25.94	---	25.88	26.67	27.40
20	30.04	29.61	28.85	27.54	27.19	26.40	25.84	26.07	26.08	26.00	26.79	27.47
25	30.06	29.46	28.69	27.36	27.14	26.21	25.79	26.15	25.77	26.14	26.92	27.56
EOM	30.01	29.32	28.51	27.23	27.06	26.06	25.78	26.18	25.74	26.30	27.10	27.66
MEAN	30.02	29.69	28.94	27.78	27.16	26.54	25.89	25.98	---	25.94	26.70	27.39
MAX	30.06	29.99	29.30	28.47	27.21	27.03	26.05	26.18	---	26.30	27.10	27.66
MIN	29.92	29.32	28.51	27.23	27.06	26.06	25.77	25.78	---	25.72	26.33	27.12



GROUND-WATER LEVELS

BURLINGTON COUNTY--Continued

NJ-WRD Well Number, 05-0645. Site I.D., 400010074521601. Local I.D., Willingboro 2 Obs.

LOCATION.--Lat 40°00'10", long 74°52'15", Hydrologic Unit 02040202, near intersection of Bridge Street and Tiffany Lane, Willingboro Township. Owner: Willingboro Municipal Utilities Authority.

AQUIFER.--Lower Potomac-Raritan-Magothy aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 4 in., depth 441 ft, screened 431 to 441 ft.

INSTRUMENTATION.--Submersible logger pressure transducer--60-minute recording interval. Water-level recorder, Jan. 1968 to May 1999. Periodic measurements, Mar. 1966 to Jan. 1968.

DATUM.--Land surface is 40.30 ft above NGVD of 1929. Measuring point: Top of hole in well seal, 1.94 ft below land surface.

REMARKS.--Water level is affected by tidal fluctuation and nearby pumping.

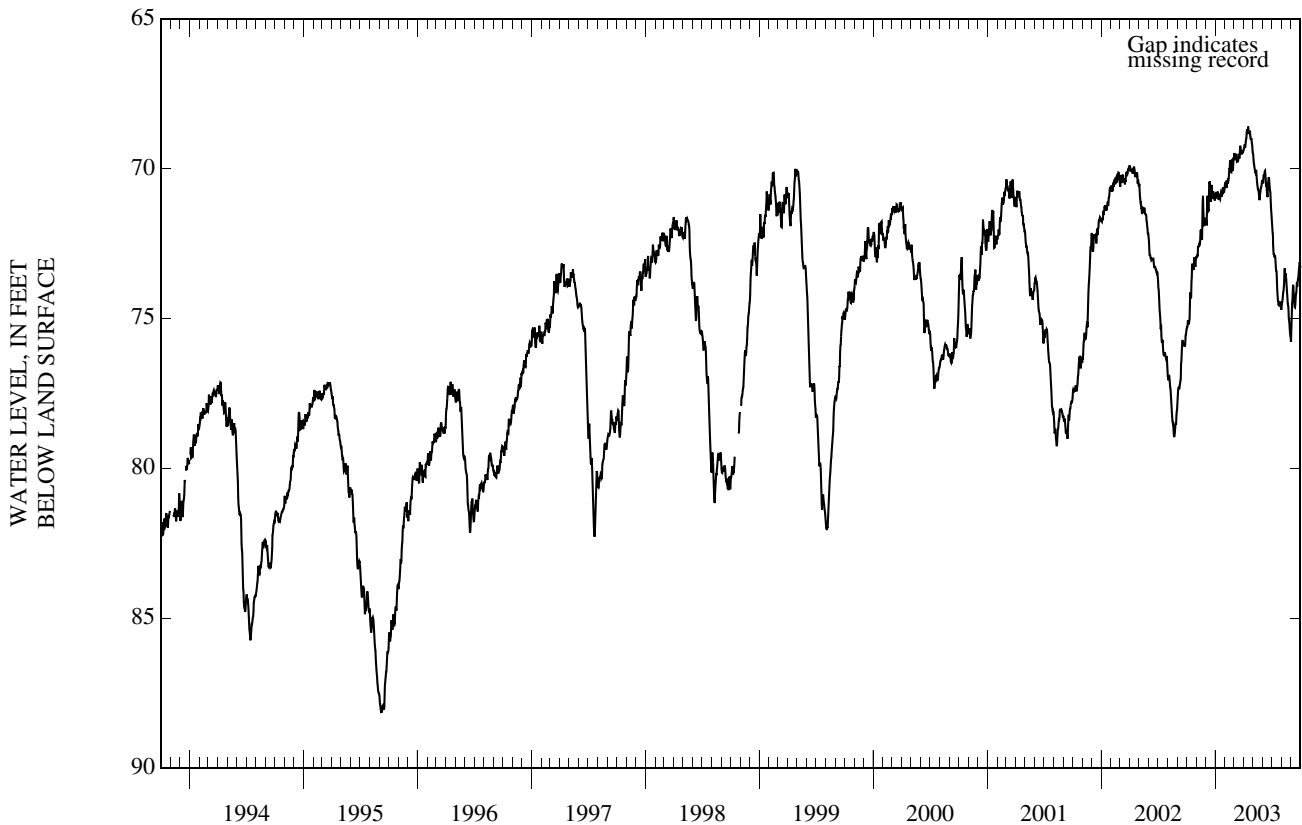
PERIOD OF RECORD.--Mar. 1966 to Sept. 1975, Mar. 1977 to current year. Records for 1966 to 1975 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 49.79 ft below land surface, June 21, 1967; lowest, 88.36 ft below land surface, Sept. 8-9, 1995.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	75.06	72.93	71.34	70.88	70.60	69.60	69.18	69.88	70.19	72.52	74.26	74.38
10	75.02	72.52	71.40	70.82	70.39	69.69	68.98	70.14	70.21	72.97	73.47	74.42
15	74.28	72.04	70.77	70.98	69.98	69.69	68.75	70.51	70.71	73.41	73.58	74.33
20	73.37	71.80	70.54	70.80	70.10	69.52	68.82	70.81	70.37	74.38	74.38	73.94
25	73.01	71.77	70.75	70.64	70.04	69.46	69.03	70.76	70.73	74.47	75.06	73.48
EOM	72.96	71.63	70.91	70.60	69.62	69.44	69.44	70.42	71.61	74.71	75.78	73.31
MEAN	74.04	72.19	71.01	70.83	70.17	69.55	69.00	70.36	70.58	73.56	74.39	74.06
MAX	75.34	72.97	71.86	71.04	70.64	69.78	69.44	71.04	71.61	74.71	75.78	75.52
MIN	72.96	70.90	70.42	70.60	69.62	69.23	68.59	69.46	70.06	71.81	73.32	73.11

WTR YR 2003 MEAN 71.66 HIGH 68.59 APR 16 LOW 75.78 AUG 31



GROUND-WATER LEVELS

BURLINGTON COUNTY--Continued

NJ-WRD Well Number, 05-0676. Site I.D., 394914074254401. Local I.D., Coyle Airport Obs.

LOCATION.--Lat 39°49'14", long 74°25'45", Hydrologic Unit 02040301, about 200 ft north of Rt. 72, and 3.5 mi west of the intersection of Routes 549 and 72, Woodland Township. Owner: U.S. Geological Survey.

AQUIFER.--Piney Point aquifer of Eocene age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in., depth 540 ft, screened 530 to 540 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape. Water-level recorder, Feb. 1962 to July 1970.

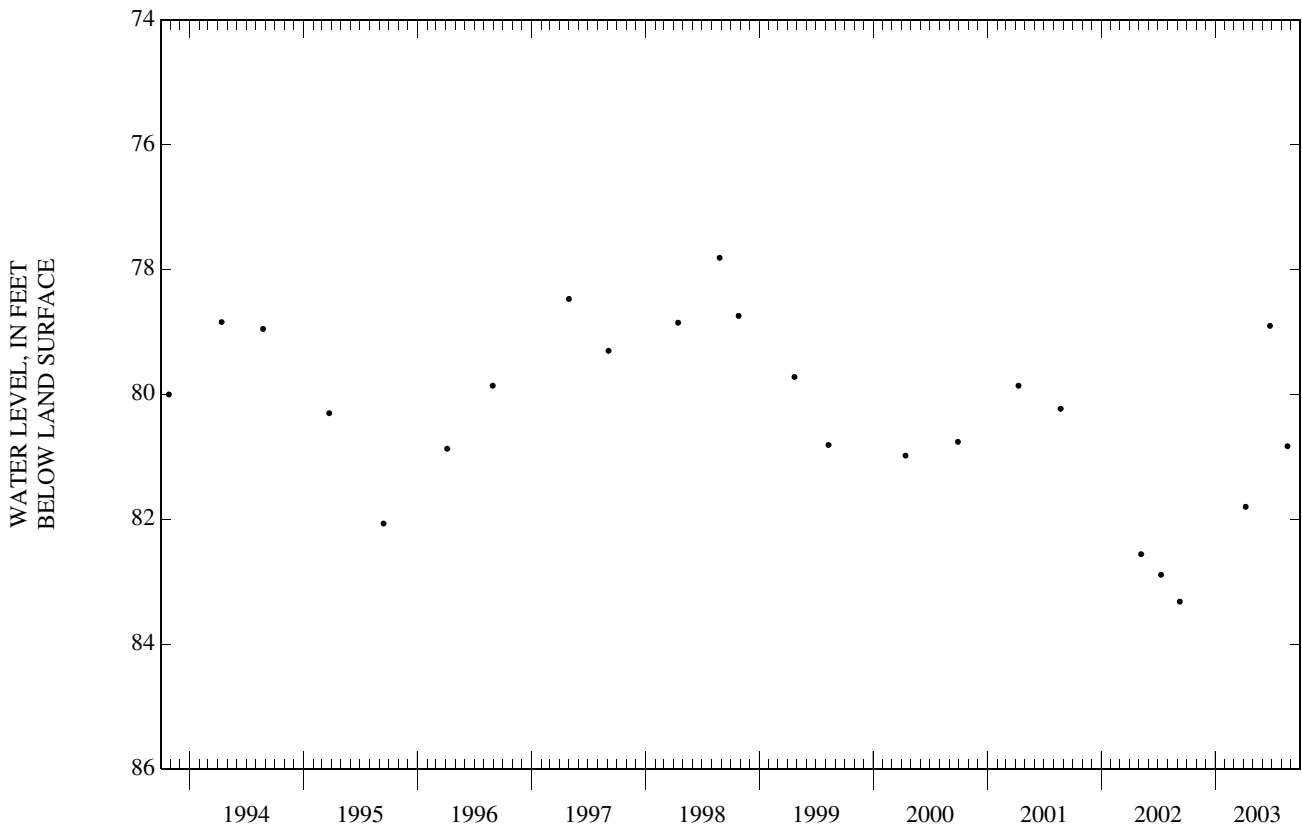
DATUM.--Land surface is 199.19 ft above NGVD of 1929. Measuring point: Top of shelter shelf, 2.40 ft above land surface.

PERIOD OF RECORD.--Feb. 1962 to current year. Records for 1962 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 75.41 ft below land surface, June 14, 1973; lowest, 83.32 ft below land surface, Sept. 9, 2002.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
APR 08	81.80	JUN 25	78.90	AUG 20	80.83
WATER YEAR 2003 HIGHEST		78.90	JUN 25, 2003		
LOWEST		81.80	APR 08, 2003		





GROUND-WATER LEVELS

BURLINGTON COUNTY--Continued

NJ-WRD Well Number, 05-0683. Site I.D., 395122074301701. Local I.D., Butler Place 1 Obs.

LOCATION.--Lat 39°51'22", long 74°30'16", Hydrologic Unit 02040301, in Lebanon State Forest, Woodland Township. Owner: U.S. Geological Survey.

AQUIFER.--Potomac-Raritan-Magothy aquifer system, undifferentiated, of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in., depth 2,117 ft, screened 2,102 to 2,117 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval. Periodic measurements, June 1975 to Sept. 1976. Water-level recorder, Oct. 1964 to June 1975.

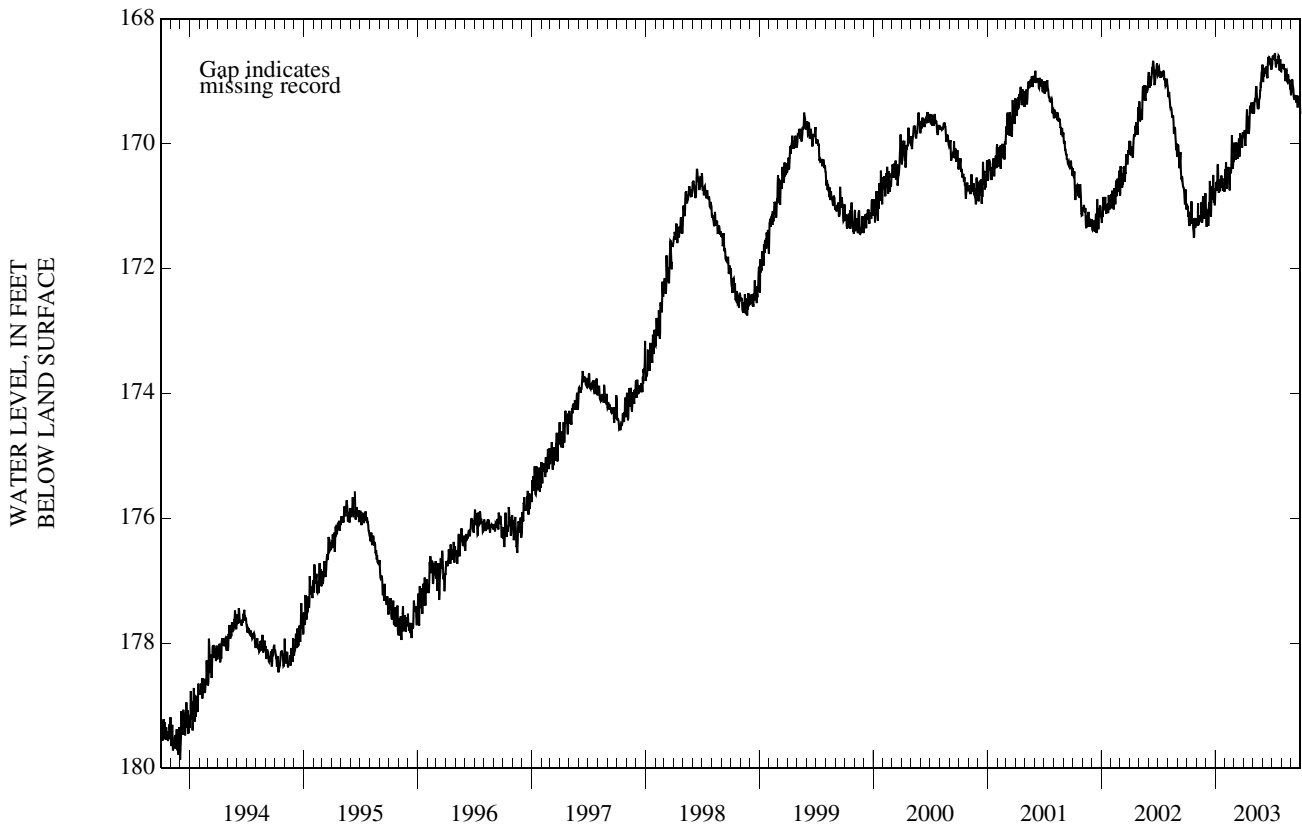
DATUM.--Land surface is 140.66 ft above NGVD of 1929. Measuring point: Top of coupling, 2.80 ft above land surface.

PERIOD OF RECORD.--Oct. 1964 to current year. Records for 1964 to 1977 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 143.20 ft below land surface, Feb. 25, 1965; lowest, 182.96 ft below land surface, Dec. 22-23, 1988.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	171.00	171.31	171.10	170.75	170.55	170.01	169.78	169.49	168.84	168.60	168.72	168.98
10	171.32	171.18	171.19	170.46	170.37	170.15	169.77	169.26	168.88	168.64	168.80	169.26
15	171.25	171.21	170.79	170.73	170.63	170.18	169.70	169.34	168.80	168.74	168.93	169.23
20	171.21	171.23	170.67	170.51	170.46	170.09	169.71	169.40	168.64	168.70	169.00	169.33
25	171.47	171.15	170.50	170.74	170.38	169.98	169.47	169.14	168.72	168.80	169.01	169.33
EOM	171.23	170.79	170.85	170.67	170.24	169.85	169.51	168.79	168.79	168.84	169.22	169.52
MEAN	171.21	171.15	170.96	170.65	170.42	170.05	169.67	169.24	168.78	168.68	168.91	169.25
MAX	171.51	171.31	171.33	170.79	170.75	170.29	170.03	169.51	169.01	168.84	169.22	169.52
MIN	170.92	170.79	170.50	170.32	169.86	169.81	169.34	168.79	168.61	168.54	168.72	168.96
WTR YR 2003	MEAN 169.91		HIGH 168.54 JUL 11		LOW 171.51 OCT 24							



GROUND-WATER LEVELS

BURLINGTON COUNTY--Continued

NJ-WRD Well Number, 05-0684. Site I.D., 395122074301702. Local I.D., Butler Place 2 Obs.

LOCATION.--Lat 39°51'22", long 74°30'16", Hydrologic Unit 02040301, in Lebanon State Forest, Woodland Township. Owner: U.S. Geological Survey.

AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 4 in., depth 170 ft, screened 160 to 170 ft.

INSTRUMENTATION.--Submersible logger pressure transducer--60 minute recording interval. Water-level extremes recorder, Mar. 1977 to Mar. 2001. Periodic measurements, Apr. 1975 to Mar. 1977. Water-level recorder, May 1965 to Apr. 1975.

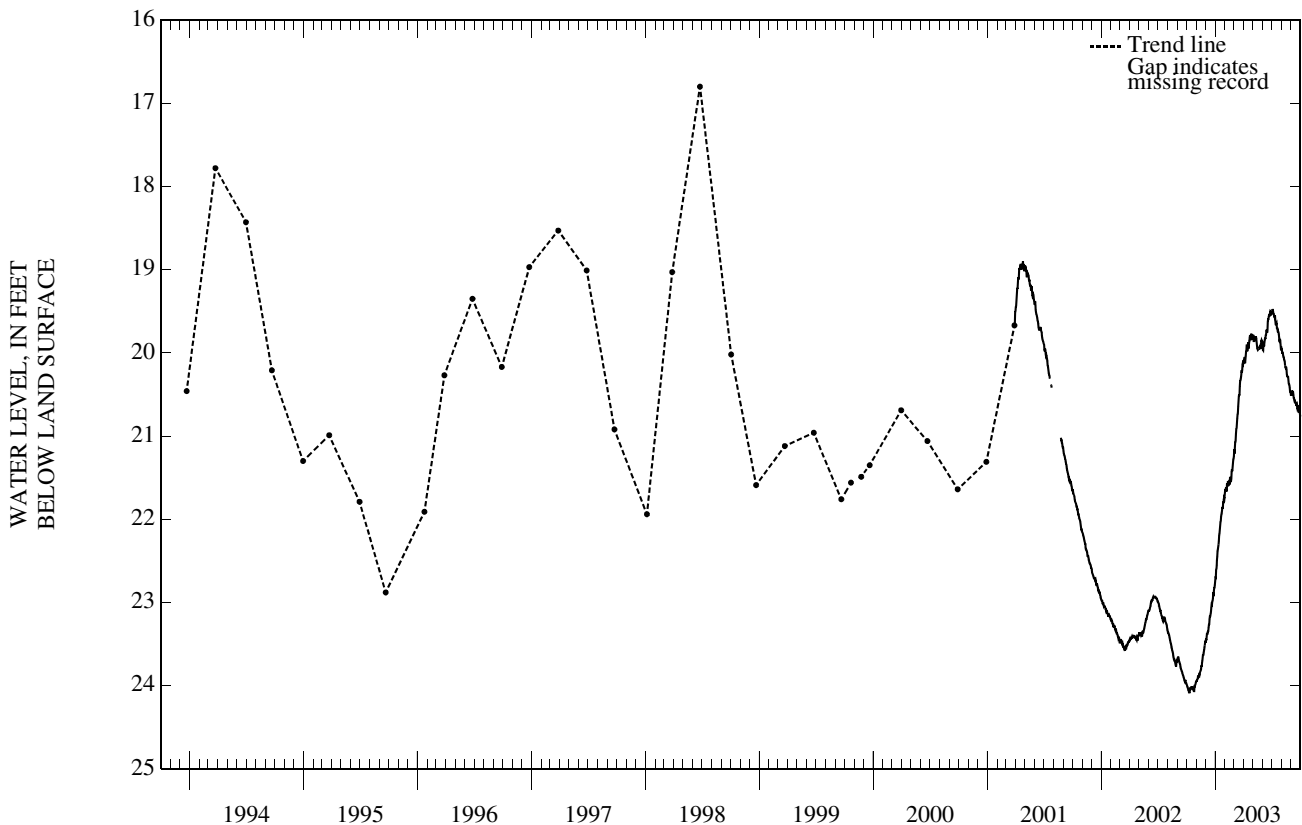
DATUM.--Land surface is 140.82 ft above NGVD of 1929. Measuring point: Top of coupling, 2.52 ft above land surface.

PERIOD OF RECORD.--May 1965 to current year. Records for 1965 to 1981 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.14 ft below land surface, Feb. 15, 1973; lowest, 24.09 ft below land surface, Oct. 9-11, 2002.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	24.03	23.92	23.37	22.55	21.67	21.08	20.05	19.85	19.89	19.50	20.00	20.46
10	24.09	23.87	23.30	22.33	21.54	20.91	19.98	19.83	19.84	19.58	20.09	20.55
15	24.04	23.82	23.16	22.13	21.58	20.64	19.89	19.94	19.73	19.65	20.18	20.59
20	24.03	23.70	23.02	21.94	21.54	20.41	19.85	19.93	19.59	19.75	20.29	20.66
25	24.06	23.58	22.88	21.83	21.38	20.25	19.81	19.95	19.52	19.86	20.37	20.67
EOM	23.96	23.47	22.75	21.70	21.27	20.13	19.84	19.86	19.52	19.95	20.51	20.76
MEAN	24.03	23.76	23.14	22.14	21.53	20.63	19.93	---	19.71	19.68	20.21	20.60
MAX	24.09	23.94	23.48	22.70	21.67	21.25	20.13	---	19.97	19.95	20.51	20.76
MIN	23.96	23.47	22.75	21.70	21.27	20.12	19.77	---	19.50	19.47	19.95	20.46



GROUND-WATER LEVELS

BURLINGTON COUNTY--Continued

NJ-WRD Well Number, 05-0689. Site I.D., 395150074284201. Local I.D., Lebanon State Forest 23-D Obs.

LOCATION.--Lat 39°51'52", long 74°28'47", Hydrologic Unit 02040202, in Lebanon State Forest, Woodland Township. Owner: U.S. Geological Survey.

AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 8 in., depth 33 ft, open-end cement casing.

INSTRUMENTATION.--Data collection platform with satellite telemetry--60-minute recording interval. Water-level recorder, Jan. 1979 to May 2001. Periodic measurements, Apr. 1975 to Jan. 1979. Water-level recorder, Sept. 1955 to Apr. 1975.

DATUM.--Land surface is 152.02 ft above NGVD of 1929. Measuring point: Top of casing, 0.70 ft above land surface.

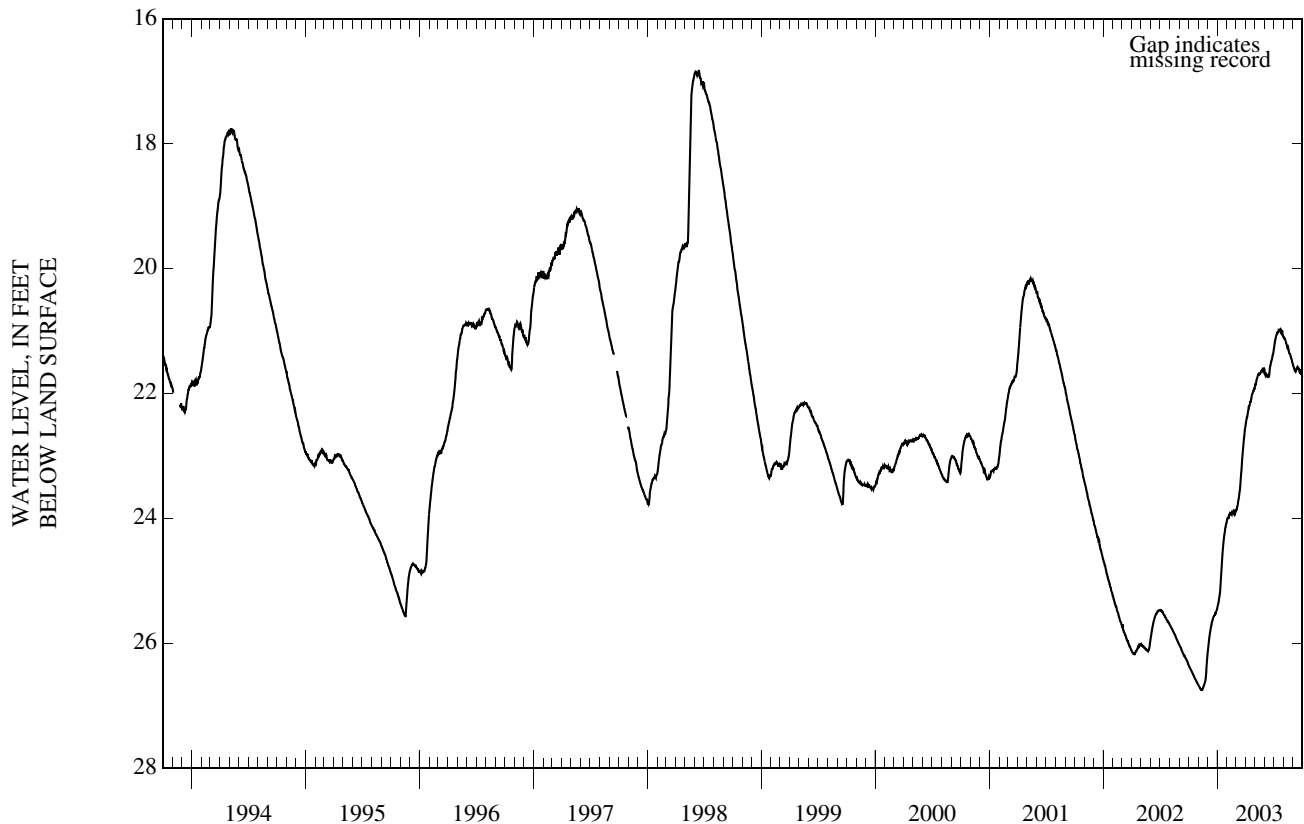
PERIOD OF RECORD.--Sept. 1955 to current year. Records for 1955 to 1979 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 14.37 ft below land surface, Sept. 11, 1958; lowest, 26.76 ft below land surface, Nov. 12, 2002.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	26.40	26.71	25.95	25.33	24.00	23.82	22.39	21.83	21.68	21.15	21.12	21.61
10	26.45	26.75	25.78	25.16	23.92	23.70	22.26	21.73	21.74	21.06	21.20	21.63
15	26.50	26.73	25.65	24.74	23.92	23.49	22.15	21.70	21.70	21.01	21.28	21.58
20	26.55	26.66	25.57	24.39	23.90	23.15	22.07	21.66	21.55	20.98	21.36	21.63
25	26.60	26.52	25.52	24.20	23.95	22.84	21.98	21.63	21.44	21.04	21.43	21.67
EOM	26.66	26.20	25.45	24.05	23.89	22.55	21.92	21.60	21.32	21.09	21.55	21.74
MEAN	26.51	26.63	25.70	24.72	23.94	23.33	22.17	21.70	21.60	21.06	21.30	21.63
MAX	26.66	26.75	26.14	25.42	24.02	23.89	22.52	21.89	21.74	21.28	21.55	21.74
MIN	26.35	26.20	25.45	24.05	23.87	22.55	21.92	21.60	21.32	20.97	21.09	21.56

WTR YR 2003 MEAN 23.36 HIGH 20.97 JUL 21 LOW 26.75 NOV 10



GROUND-WATER LEVELS

BURLINGTON COUNTY--Continued

NJ-WRD Well Number, 05-1155. Site I.D., 395315074494601. Local I.D., Medford Twp MW-1 Obs. NJ Permit Number, 31-39849.

LOCATION.--Lat 39°53'15", long 74°49'45", Hydrologic Unit 02040202, on the east side of Mill St. (County Rt. 623), 0.6 mi south of County Rt. 541, Medford Township. Owner: Medford Township.

AQUIFER.--Wenonah-Mount Laurel aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 4 in., depth 180 ft, screened 120 to 180 ft.

INSTRUMENTATION.--Submersible logger pressure transducer--60-minute recording interval. Water-level recorder, Sept. 1992 to May 1998.

DATUM.--Land surface is 46.15 ft above NGVD of 1929 (levels by Medford Township). Measuring point: Top of recorder shelf, 2.90 ft above land surface.

REMARKS.--Water level is affected by nearby pumping.

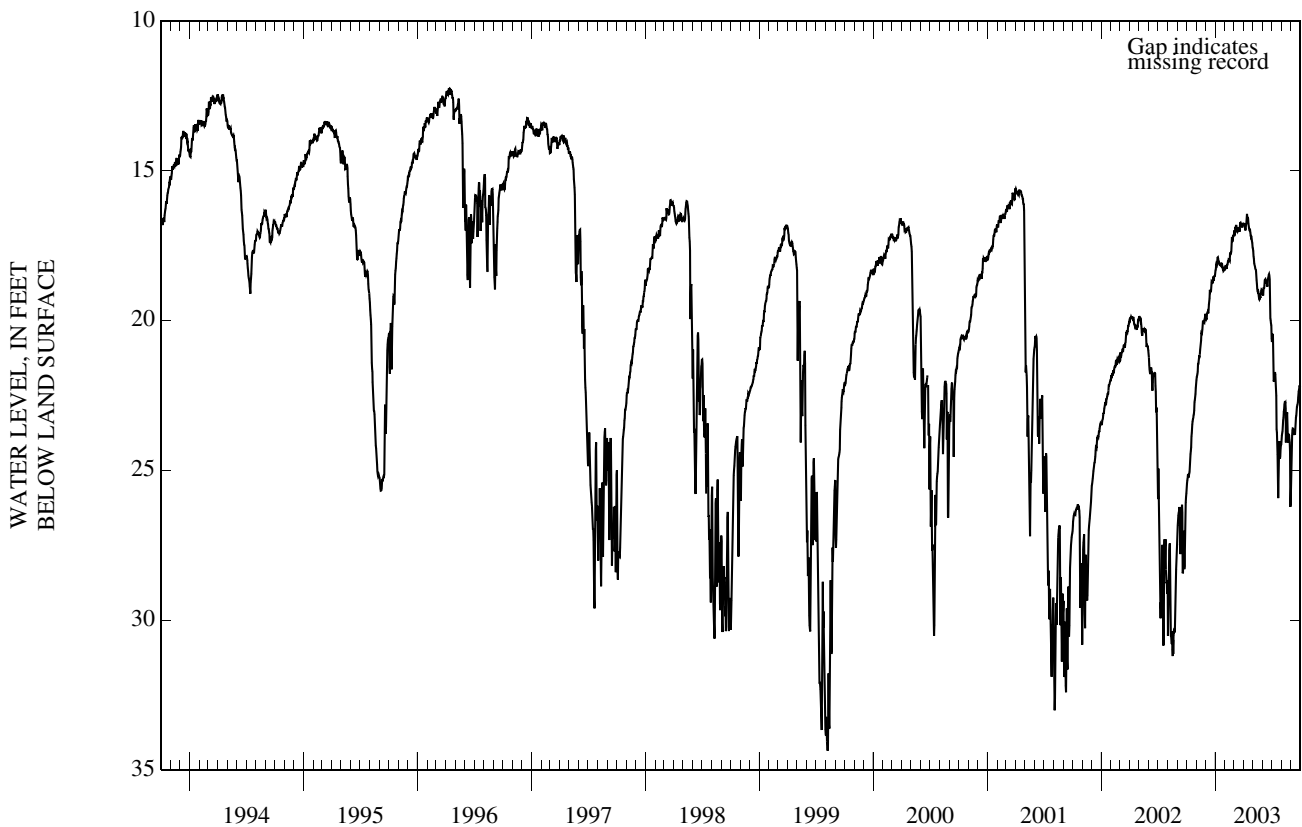
PERIOD OF RECORD.--Sept. 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.17 ft below land surface, Apr. 16, 1996; lowest, 34.43 ft below land surface, Aug. 7, 1999.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	25.14	21.72	19.78	18.13	18.23	16.95	16.80	18.08	18.89	20.81	23.53	23.66
10	25.05	21.21	19.64	17.96	18.02	16.89	16.75	18.29	18.68	21.88	22.79	23.72
15	24.23	20.77	19.03	18.14	17.99	17.00	16.58	18.94	18.74	22.51	24.07	23.45
20	23.37	20.30	18.70	18.09	17.75	16.93	16.98	19.20	18.55	25.38	23.35	22.84
25	23.00	20.06	18.53	18.28	17.34	16.81	17.20	19.25	19.54	24.02	23.84	22.37
EOM	22.11	19.78	18.44	18.30	17.15	16.78	17.55	19.02	20.60	24.15	25.67	22.23
MEAN	23.99	20.77	19.14	18.15	17.84	16.91	16.91	18.68	19.01	23.03	23.74	23.23
MAX	25.61	21.98	19.96	18.33	18.28	17.18	17.55	19.29	20.60	25.93	26.22	24.84
MIN	22.11	19.78	18.44	17.88	17.15	16.73	16.44	17.60	18.45	20.45	22.73	22.17

WTR YR 2003 MEAN 20.14 HIGH 16.44 APR 12 LOW 26.22 AUG 29



GROUND-WATER LEVELS

BURLINGTON COUNTY--Continued

NJ-WRD Well Number, 05-1250. Site I.D., 400148074352001. Local I.D., Mcguire 08-MW-52 Obs. NJ Permit Number, 28-20189-2.

LOCATION.--Lat 40°01'48", long 74°35'19", Hydrologic Unit 02040201, at base fuel storage area, New Hanover Township. Owner: U.S. Air Force-Mcguire AFB.

AQUIFER.--Vincentown aquifer of Paleocene age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in., depth 55 ft, screened 45 to 55 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval. Recording interval was 15 minutes from June 1996 to July 2001.

DATUM.--Land surface is 112.20 ft above NGVD of 1929. Measuring point: Top of recorder shelf, 4.73 ft above land surface.

REMARKS.--Water level affected by pumping between Nov. 30 and Dec. 16, 2000.

PERIOD OF RECORD.--June 1996 to current year. Records from 1996 to 1998 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.79 ft below land surface, June 21, 2003; lowest, 10.86 ft below land surface, Oct. 8, 2002.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.75	10.19	9.65	8.89	9.50	8.49	8.69	8.84	8.62	8.39	8.68	8.77
10	10.81	10.11	9.73	8.86	9.45	8.42	8.57	8.88	8.35	8.57	8.46	8.92
15	10.52	9.98	9.41	9.00	9.63	8.53	8.33	9.06	8.13	8.72	8.46	8.92
20	10.40	9.71	9.24	9.06	9.63	8.63	8.47	9.08	7.96	8.86	8.58	8.93
25	10.44	9.61	9.11	9.30	8.88	8.60	8.59	9.07	7.97	8.94	8.69	8.83
EOM	10.24	9.54	9.11	9.38	8.79	8.64	8.76	8.87	8.22	9.02	8.86	9.00
MEAN	10.54	9.89	9.46	9.06	9.37	8.55	8.57	8.93	8.26	8.69	8.63	8.88
MAX	10.84	10.22	9.83	9.42	9.66	8.82	8.84	9.09	8.97	9.02	8.92	9.00
MIN	10.24	9.53	9.11	8.72	8.77	8.32	8.31	8.71	7.81	8.27	8.41	8.72

WTR YR 2003 MEAN 9.07 HIGH 7.81 JUN 22 LOW 10.84 OCT 8



GROUND-WATER LEVELS

BURLINGTON COUNTY--Continued

NJ-WRD Well Number, 05-1251. Site I.D., 400148074352101. Local I.D., Mcguire 08-MW-102 Obs. NJ Permit Number, 28-27186.

LOCATION.--Lat 40°01'48", long 74°35'20", Hydrologic Unit 02040201, at base fuel storage area, New Hanover Township. Owner: U.S.Air Force-Mcguire AFB.

AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in., depth 20 ft, screened 10 to 20 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval.

DATUM.--Land surface is 113.49 ft above NGVD of 1929. Measuring point: Top of recorder shelf, 3.25 ft above land surface.

REMARKS.--Water level affected by pumping between Nov. 30 and Dec. 16, 2000.

PERIOD OF RECORD.--June 1996 to current year. Records from 1996 to 1998 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.41 ft below land surface, June 22, 2003; lowest, 12.80 ft below land surface, Dec. 14, 2000.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.51	10.03	9.47	8.78	9.36	8.38	8.37	8.49	8.30	7.93	8.31	8.30
10	10.64	9.92	9.56	8.71	9.28	8.28	8.27	8.52	8.00	8.13	8.09	8.46
15	10.36	9.84	9.32	8.82	9.50	8.30	7.99	8.76	7.80	8.29	8.00	8.48
20	10.23	9.59	9.10	8.86	9.50	8.39	8.09	8.75	7.58	8.45	8.12	8.53
25	10.26	9.48	8.97	9.13	8.93	8.32	8.22	8.76	7.55	8.58	8.20	8.41
EOM	10.12	9.36	8.97	9.22	8.71	8.35	8.41	8.50	7.76	8.65	8.42	8.63
MEAN	10.37	9.75	9.33	8.90	9.26	8.36	8.23	8.60	7.89	---	8.21	8.44
MAX	10.66	10.08	9.67	9.27	9.53	8.72	8.56	8.78	8.65	---	8.59	8.63
MIN	10.11	9.36	8.97	8.52	8.71	8.17	7.96	8.32	7.43	---	7.97	8.22



GROUND-WATER LEVELS

BURLINGTON COUNTY--Continued

NJ-WRD Well Number, 05-1387. Site I.D., 394800074524601. Local I.D., Evesham 4 Obs. NJ Permit Number, 31-40373.

LOCATION.--Lat 39°48'00", long 74°52'45", Hydrologic Unit 02040301, near the intersection of Thomas Eakins and Georgia O'Keefe roads, Evesham Township. Owner: Evesham Municipal Utilities Authority.

AQUIFER.--Wenonah-Mount Laurel aquifer of Cretaceous age.

WELL CHARACTERISTICS.-- Drilled artesian observation well, diameter 2 in., depth 355 ft, screened 335 to 355 ft.

INSTRUMENTATION.--Submersible logger pressure transducer--60 minute recording interval.

DATUM.-- Land surface is 119 ft above NGVD of 1929, from topographic map. Measuring point: Top of base of aluminum locking cap, 1.40 ft above land surface.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 99.24 ft below land surface, Apr. 18, 1997; lowest, 130.01 ft below land surface, Aug. 28, 2002.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	128.18	125.69	120.95	117.27	114.75	112.50	110.86	110.50	111.99	114.06	117.15	118.83
10	128.12	124.75	120.41	116.65	114.28	112.34	110.65	110.64	112.13	114.76	117.06	119.24
15	127.70	123.94	119.55	116.42	114.13	112.10	110.40	111.06	112.22	115.43	117.06	119.61
20	127.43	123.13	118.89	115.88	113.65	111.78	110.37	111.48	112.34	116.02	117.21	119.80
25	127.55	122.35	118.20	115.67	113.24	111.47	110.22	111.71	112.59	116.64	117.61	119.85
EOM	126.47	121.41	117.82	115.17	112.97	111.12	110.28	111.78	113.31	117.11	118.64	119.82
MEAN	127.68	123.86	119.57	116.31	114.00	111.97	110.51	111.09	112.33	115.44	117.36	119.45
MAX	128.53	126.30	121.42	117.61	114.95	112.95	111.10	111.78	113.31	117.11	118.64	119.87
MIN	126.47	121.41	117.82	115.17	112.97	111.12	110.13	110.25	111.79	113.49	117.00	118.73
WTR YR 2003	MEAN 116.65	HIGH 110.13	APR 26	LOW 128.53	OCT 1							



GROUND-WATER LEVELS

BURLINGTON COUNTY--Continued

NJ-WRD Well Number, 05-1389. Site I.D., 395309074352101. Local I.D., New Lisbon 1 Obs. NJ Permit Number, 32-22005.

LOCATION.--Lat 39°53'09", long 74°35'20", Hydrologic Unit 02040202, at New Lisbon Developmental Center, Woodland Township.  
 Owner: State of New Jersey - Human Services Dept.

AQUIFER.--Upper Potomac-Raritan-Magothy aquifer of Cretaceous age.

WELL CHARACTERISTICS.-- Drilled artesian observation well, diameter 4 in., depth 920 ft, screened 900 to 920 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval.

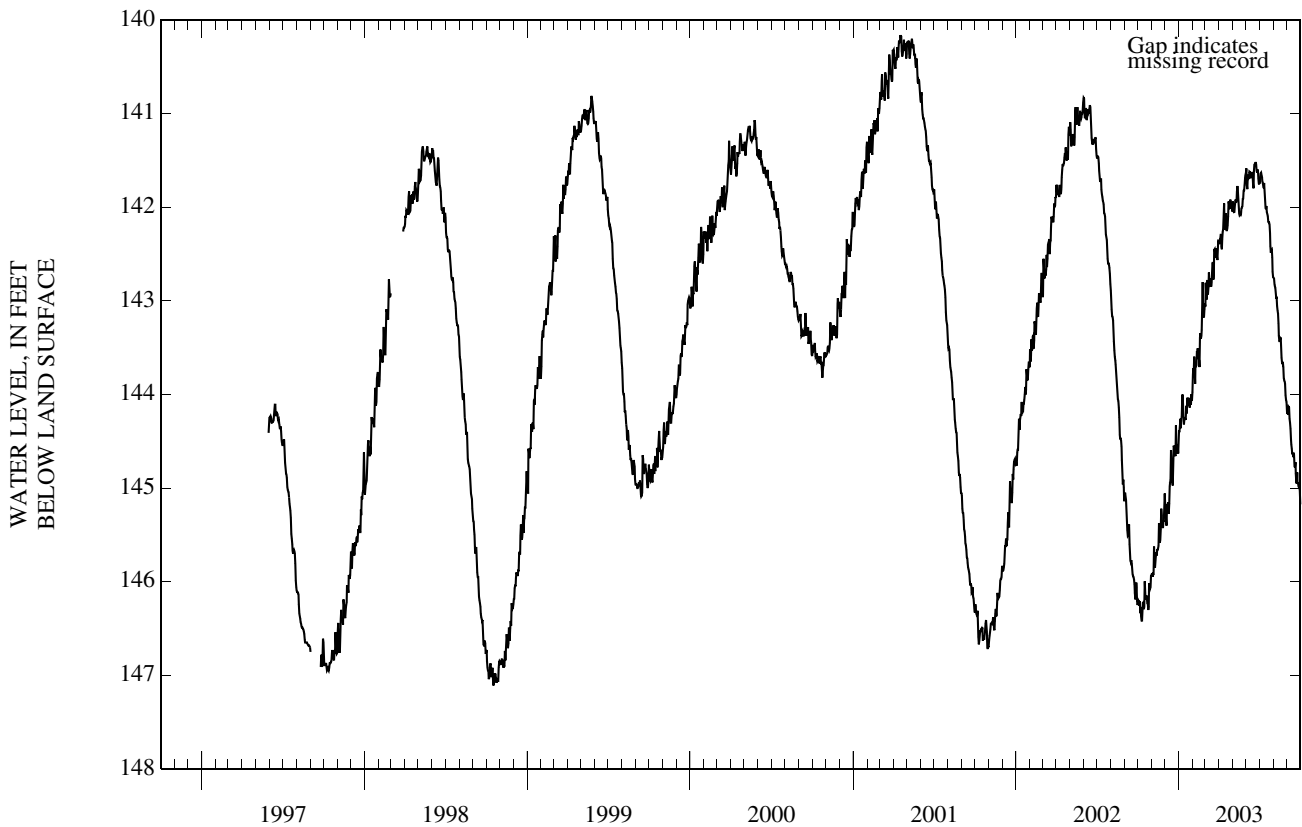
DATUM.-- Land surface is 107.3 ft above NGVD of 1929. Measuring point: Top of recorder shelf, 2.30 ft above land surface.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 140.12 ft below land surface, Apr. 18, 2001; lowest, 147.14 ft below land surface, Oct. 16-17, 1998.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	146.21	145.92	145.20	144.36	143.76	142.79	142.29	142.05	141.65	141.66	142.86	144.14
10	146.42	145.73	145.17	144.09	143.54	142.81	142.23	141.92	141.69	141.80	143.10	144.53
15	146.27	145.65	144.72	144.26	143.63	142.81	142.17	142.01	141.65	142.02	143.44	144.66
20	146.15	145.55	144.55	144.03	143.37	142.69	142.19	142.06	141.54	142.15	143.66	144.85
25	146.26	145.41	144.33	144.14	143.16	142.53	142.00	141.91	141.63	142.41	143.85	144.95
EOM	145.93	145.06	144.51	143.98	143.03	142.36	142.04	141.64	141.75	142.75	144.18	145.18
MEAN	146.20	145.59	144.86	144.17	143.46	142.68	142.16	141.93	141.65	142.05	143.42	144.65
MAX	146.42	145.95	145.40	144.40	143.89	143.06	142.45	142.09	141.81	142.75	144.18	145.18
MIN	145.93	145.06	144.33	143.98	142.80	142.36	141.92	141.64	141.52	141.63	142.75	144.13
WTR YR 2003	MEAN 143.57	HIGH 141.52	JUN 22	LOW 146.42	OCT 9							





GROUND-WATER LEVELS

BURLINGTON COUNTY--Continued

NJ-WRD Well Number, 05-1390. Site I.D., 395309074352102. Local I.D., New Lisbon 2 Obs. NJ Permit Number 32-21804.

LOCATION.--Lat 39°53'09", long 74°35'20", Hydrologic Unit 02040202, at New Lisbon Developmental Center, Woodland Township.  
 Owner: State of New Jersey-Human Services Dept.

AQUIFER.--Englishtown aquifer system of Cretaceous age.

WELL CHARACTERISTICS.-- Drilled artesian observation well, diameter 4 in., depth 635 ft, screened 615 to 635 ft.

INSTRUMENTATION.--Submersible logger pressure transducer--60 minute recording interval. Water-level recorder, May 1997 to Mar. 2000.

DATUM.-- Land surface is 107.0 ft above NGVD of 1929. Measuring point: Top of recorder shelf, 3.60 ft above land surface.

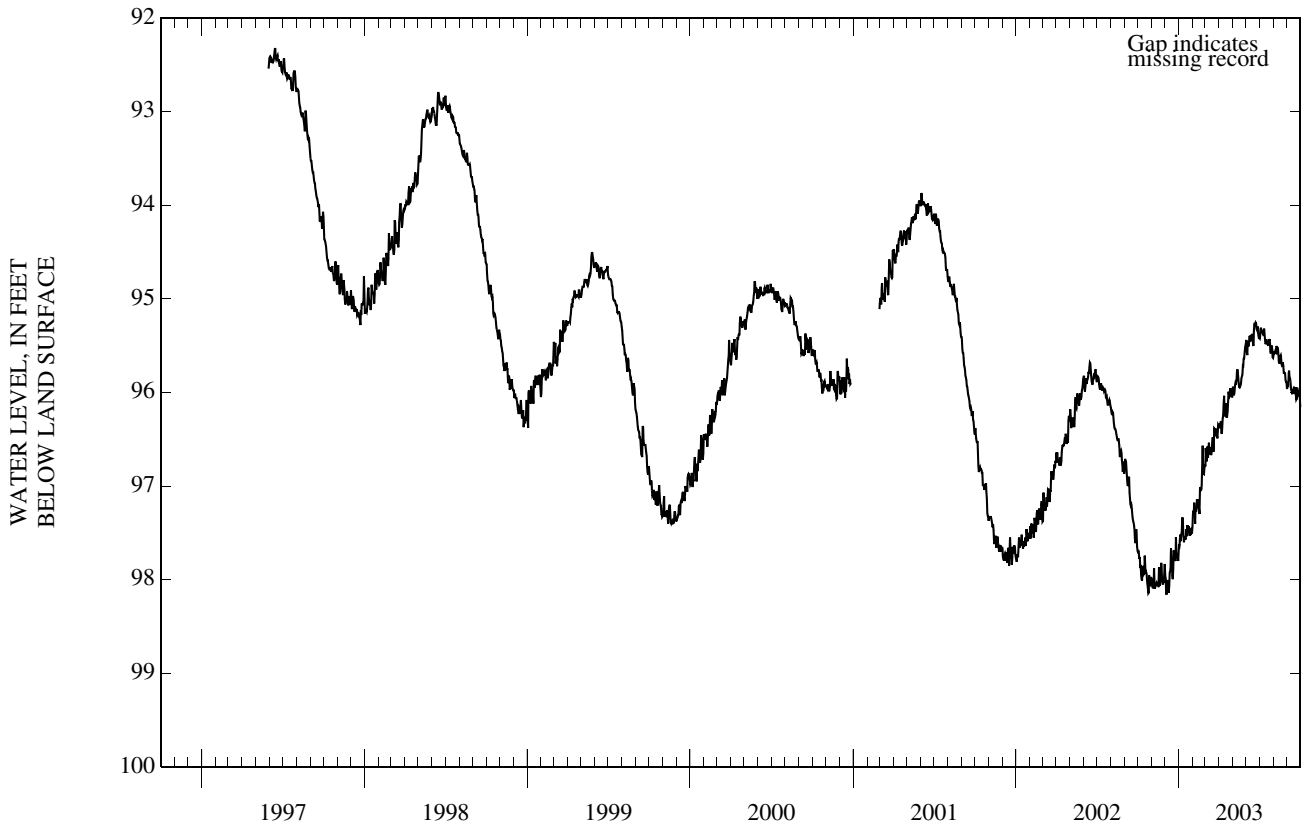
PERIOD OF RECORD.--May 1997 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 92.30 ft below land surface, June 13-14, 1997; lowest, 98.19 ft below land surface, Dec. 3-4, 2002.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	97.76	98.09	98.01	97.59	97.31	96.59	96.31	96.01	95.45	95.33	95.56	95.77
10	98.01	98.04	98.06	97.41	97.14	96.63	96.25	95.86	95.45	95.38	95.55	95.98
15	97.94	98.06	97.77	97.56	97.25	96.63	96.19	95.92	95.41	95.47	95.67	95.96
20	97.93	98.05	97.69	97.42	97.04	96.56	96.20	95.90	95.28	95.50	95.71	96.02
25	98.14	98.02	97.55	97.53	96.87	96.46	96.04	95.74	95.33	95.56	95.79	96.01
EOM	97.99	97.83	97.72	97.44	96.77	96.36	96.05	95.48	95.42	95.63	95.96	96.16
MEAN	97.92	98.01	97.87	97.50	97.09	96.55	96.19	95.82	95.40	95.45	95.68	95.97
MAX	98.15	98.09	98.16	97.63	97.40	96.79	96.44	96.03	95.60	95.63	95.96	96.16
MIN	97.70	97.82	97.55	97.33	96.57	96.35	95.95	95.48	95.25	95.32	95.50	95.77

WTR YR 2003 MEAN 96.62 HIGH 95.25 JUN 22 LOW 98.16 DEC 4



## GROUND-WATER LEVELS

## BURLINGTON COUNTY--Continued

NJ-WRD Well Number, 05-1391. Site I.D., 394904074253601. Local I.D., Coyle 2 Obs (OW96). NJ Permit Number, 32-21805.

LOCATION.--Lat 39°49'04", long 74°25'35", Hydrologic Unit 02040301, at the State Forest Fire Service installation, Coyle Field, Woodland Township. Owner: State of New Jersey-DEP/Division of Parks and Forestry.

AQUIFER.--Upper Potomac-Raritan-Magothy aquifer of Cretaceous age.

WELL CHARACTERISTICS.-- Drilled artesian observation well, diameter 4 in., depth 1,441 ft, screened 1,416 to 1,436 ft.

INSTRUMENTATION.--Water-level recorder--60 minute-recording interval.

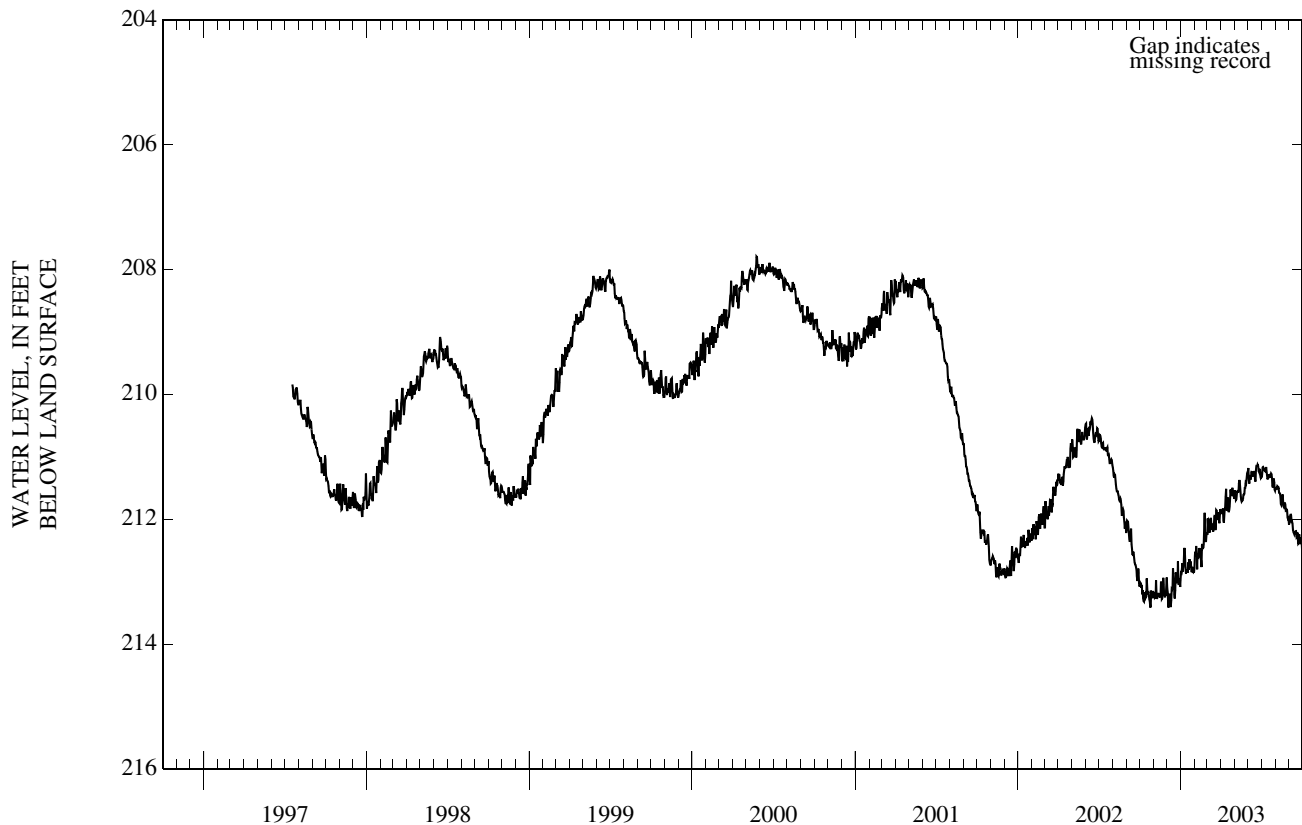
DATUM.-- Land surface is 186.8 ft above NGVD of 1929. Measuring point: Top of recorder shelf, 4.00 ft above land surface.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 207.75 ft below land surface, May 25, 2000; lowest, 213.45 ft below land surface, Dec. 3-4, 2002.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	213.05	213.27	213.21	212.84	212.65	212.02	211.83	211.68	211.29	211.18	211.47	211.94
10	213.32	213.21	213.30	212.58	212.46	212.12	211.81	211.53	211.32	211.24	211.58	212.20
15	213.24	213.24	212.95	212.83	212.67	212.15	211.76	211.64	211.26	211.34	211.73	212.19
20	213.17	213.26	212.85	212.64	212.46	212.08	211.80	211.66	211.15	211.34	211.81	212.30
25	213.39	213.22	212.68	212.85	212.34	211.99	211.61	211.51	211.24	211.46	211.86	212.36
EOM	213.17	212.93	212.97	212.78	212.21	211.86	211.67	211.23	211.33	211.54	212.08	212.56
MEAN	213.19	213.18	213.09	212.76	212.46	212.04	211.75	211.53	211.26	211.31	211.71	212.22
MAX	213.41	213.28	213.42	212.87	212.80	212.25	212.05	211.72	211.43	211.54	212.08	212.56
MIN	212.95	212.93	212.68	212.46	211.90	211.84	211.49	211.23	211.12	211.16	211.47	211.91
WTR YR 2003	MEAN 212.21	HIGH 211.12	JUN 22	LOW 213.42	DEC 4							



GROUND-WATER LEVELS

BURLINGTON COUNTY--Continued

NJ-WRD Well Number, 05-1476. Site I.D., 395928074502701. Local I.D., NJDEP/Rancocas St Pk MW 3. NJ Permit Number, 31-55694.

LOCATION.--Lat 39°59'28", long 74°50'26", Hydrologic Unit 02040202, in Rancocas State Park, Hainesport Township. Owner: State of New Jersey - DEP.

AQUIFER.--Englishtown aquifer system of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 2 in., depth 14 ft, screened 9 to 14 ft.

INSTRUMENTATION.--Submersible logger pressure transducer--60-minute recording interval.

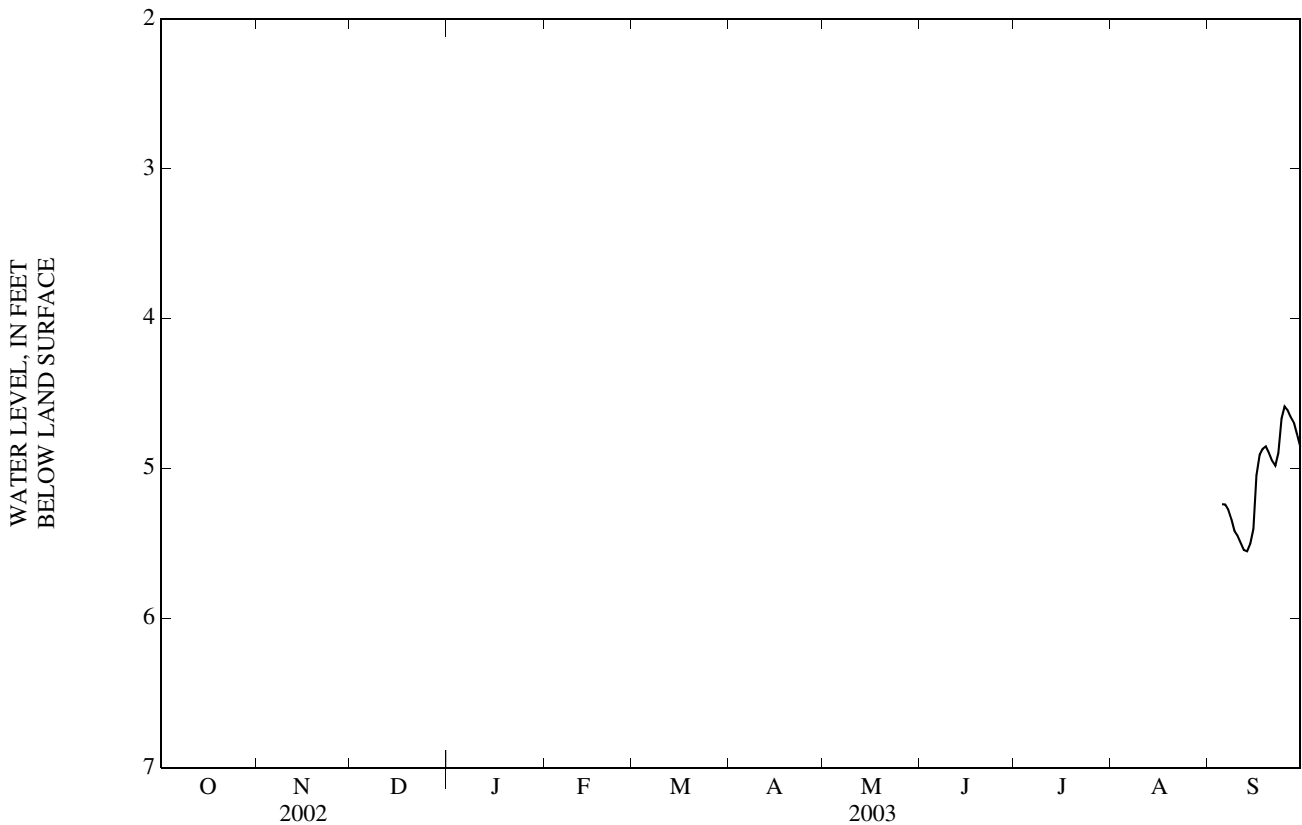
DATUM.--Land surface is 17 ft above NGVD of 1929, from topographic map. Measuring point: Top of protective well casing, 2.30 ft above land surface.

PERIOD OF RECORD.--June 2003 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.96 ft below land surface, June. 5, 2003; lowest, 5.57 ft below land surface, Sept. 13, 2003.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	---	---	---	---	---	---	---	---	5.24
10	---	---	---	---	---	---	---	---	---	---	---	5.45
15	---	---	---	---	---	---	---	---	---	---	---	5.41
20	---	---	---	---	---	---	---	---	---	---	---	4.90
25	---	---	---	---	---	---	---	---	---	---	---	4.59
EOM	---	---	---	---	---	---	---	---	---	---	---	4.85
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---



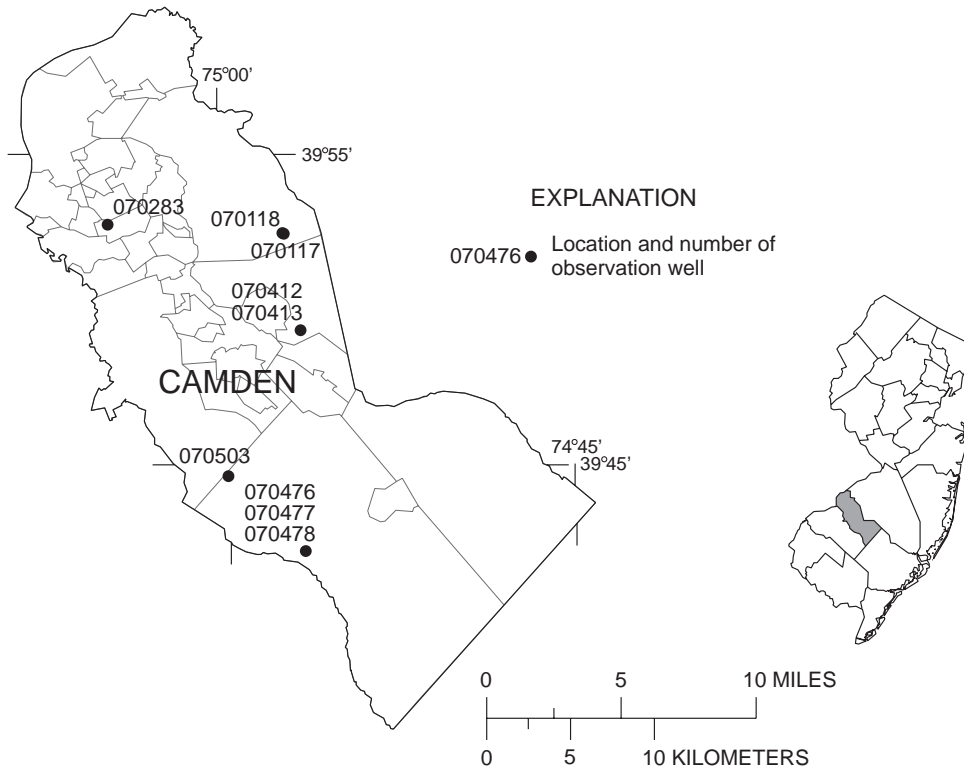
WATER RESOURCES DATA - NEW JERSEY, 2003

CAMDEN COUNTY

NJ-WRD well number	Local identifier	Township	Well depth	Aquifer	Type of data
070117	HUTTON HILL 1 OBS	CHERRY HILL TWP	562	MRPAU	DAILY
070118	HUTTON HILL 2 OBS	CHERRY HILL TWP	147	MLRW	DAILY
070283	EGBERT OBS	HADDON HEIGHTS BORO	455	MRPAL	MANUAL
070412	ELM TREE 2 OBS	VOORHEES TWP	1092	MRPAL	DAILY
070413	ELM TREE 3 OBS	VOORHEES TWP	717	MRPAM	DAILY
070476	NEW BROOKLYN PARK 1 OBS	WINSLOW TWP	1505	MRPA	DAILY
070477	NEW BROOKLYN PARK 2 OBS	WINSLOW TWP	849	MRPAU	DAILY
070478	NEW BROOKLYN PARK 3 OBS	WINSLOW TWP	530	MLRW	DAILY
070503	WINSLOW 5 OBS	WINSLOW TWP	76	CKKD	DAILY

Aquifer names

- CKKD - Kirkwood-Cohansey aquifer system
- MLRW - Wenonah-Mount Laurel aquifer
- MRPA - Potomac-Raritan-Magothy aquifer
- MRPAL - Lower Potomac-Raritan-Magothy aquifer
- MRPAM - Middle Potomac-Raritan-Magothy aquifer
- MRPAU - Upper Potomac-Raritan-Magothy aquifer



GROUND-WATER LEVELS

CAMDEN COUNTY

NJ-WRD Well Number, 07-0117. Site I.D., 395229074571201. Local I.D., Hutton Hill 1 Obs. NJ Permit Number, 31-04897.

LOCATION.--Lat 39°52'29", long 74°57'11", Hydrologic Unit 02040202, about 800 ft northeast of intersection of Kresson Rd. and Cropwell Rd., Cherry Hill Township. Owner: New Jersey - American Water Company.

AQUIFER.--Upper Potomac-Raritan-Magothy aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in., depth 562 ft, screened 552 to 562 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval. Water-level extremes recorder, Feb. 1977 to Dec. 1984. Periodic measurements, Apr. 1975 to Feb. 1977. Water-level recorder, Aug. 1967 to Apr. 1975.

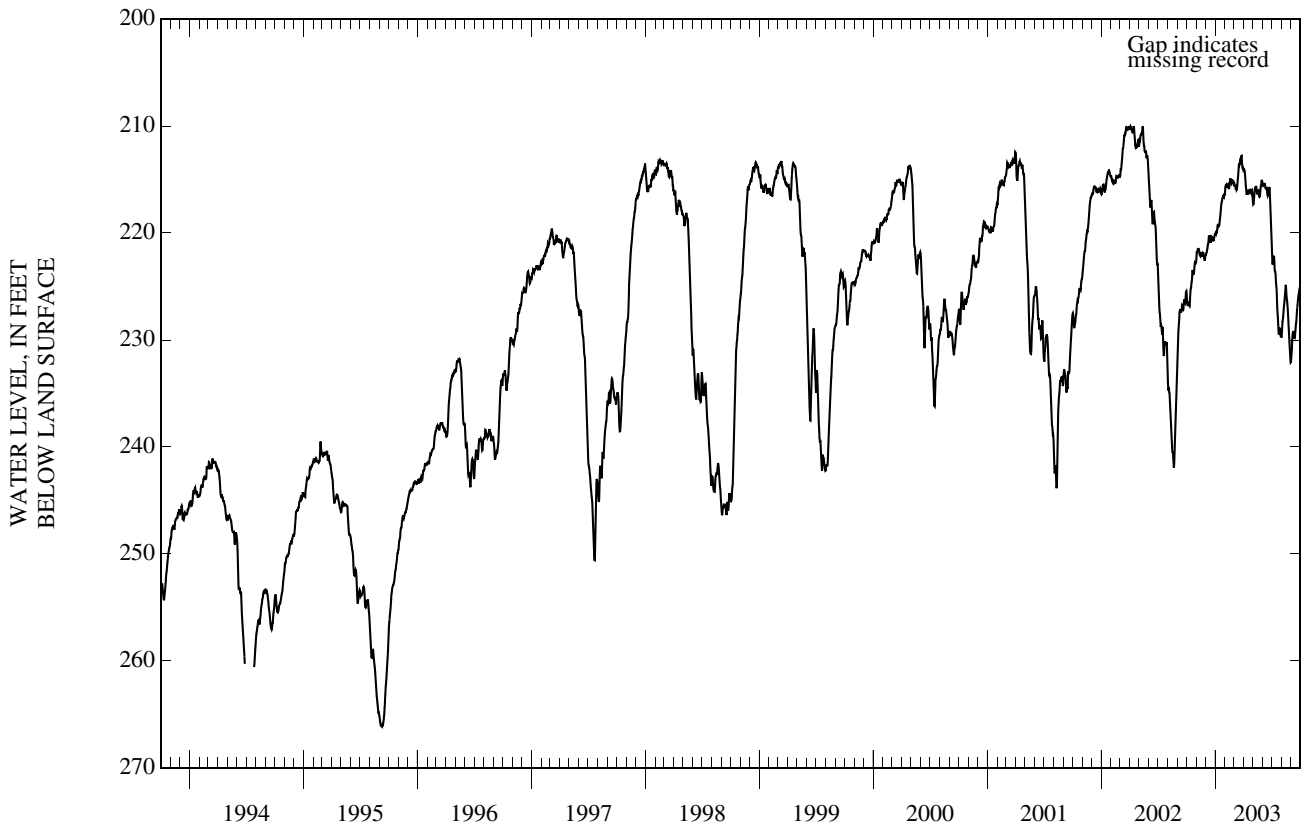
DATUM.--Land surface is 157.61 ft above NGVD of 1929. Measuring point: Top of recorder shelf, 1.60 ft above land surface.

PERIOD OF RECORD.--Aug. 1967 to current year. Records for 1967 to 1978 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 200.77 ft below land surface, Mar. 23, 1968; lowest, 266.26 ft below land surface, Sept. 9, 1995.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	226.73	221.59	221.62	219.93	215.63	215.51	214.25	216.65	215.44	222.47	228.11	229.73
10	226.84	221.69	220.61	219.24	215.46	215.98	216.14	215.68	215.76	223.46	226.43	229.70
15	225.06	222.04	220.60	218.78	215.57	214.58	216.06	216.39	215.84	224.94	224.86	228.85
20	223.47	222.21	220.34	217.25	215.22	213.50	216.00	216.13	216.36	227.90	226.81	226.95
25	223.46	222.32	220.62	216.70	215.28	212.80	216.28	216.02	216.50	228.84	229.47	225.74
EOM	222.74	222.07	220.07	216.31	215.27	213.99	216.69	215.21	220.46	229.67	232.04	225.18
MEAN	224.84	221.98	220.81	218.25	215.43	214.44	215.71	216.12	216.36	225.84	227.95	228.13
MAX	226.84	222.58	222.05	220.05	216.13	215.98	216.69	217.33	220.46	229.67	232.08	231.58
MIN	222.68	221.41	220.07	216.31	214.89	212.78	214.06	215.03	215.35	221.40	224.86	225.17
WTR YR 2003	MEAN 220.53	HIGH 212.78	MAR 26	LOW 232.08	AUG 30							



GROUND-WATER LEVELS

CAMDEN COUNTY--Continued

NJ-WRD Well Number, 07-0118. Site I.D., 395229074571202. Local I.D., Hutton Hill 2 Obs. NJ Permit Number, 31-04898.

LOCATION.--Lat 39°52'29", long 74°57'11", Hydrologic Unit 02040202, about 800 ft northeast of the intersection of Kresson Rd. and Cropwell Rd., Cherry Hill Township. Owner: New Jersey - American Water Company.

AQUIFER.--Wenonah-Mount Laurel aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in., depth 147 ft, screened 137 to 147 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval. Periodic measurements, Apr. 1975 to Jan. 1997. Water-level recorder, Aug. 1967 to Apr. 1975.

DATUM.--Land surface is 157.53 ft above NGVD of 1929. Measuring point: Top of recorder shelf, 1.89 ft above land surface.

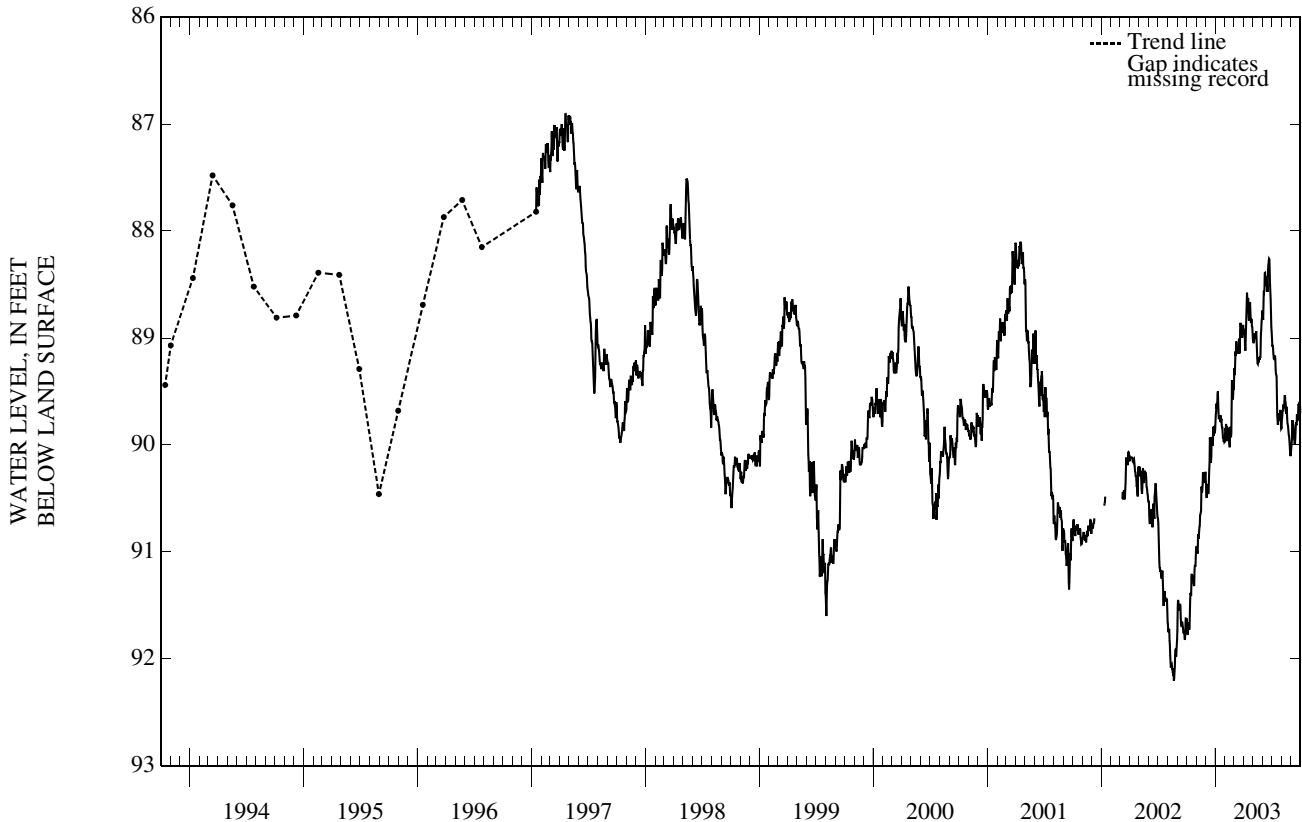
PERIOD OF RECORD.--Sept. 1967 to current year. Records for 1967 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 84.87 ft below land surface, Apr. 27, 1973; lowest, 92.24 ft below land surface, Aug. 21, 2002.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	91.71	91.02	90.39	89.66	89.87	89.22	88.97	89.02	88.56	89.10	89.68	89.77
10	91.71	90.81	90.44	89.59	89.85	89.07	88.87	88.99	88.43	89.21	89.59	89.93
15	91.40	90.63	89.99	89.75	89.98	89.15	88.69	89.19	88.44	89.34	89.66	89.87
20	91.22	90.42	89.95	89.75	89.93	89.14	88.80	89.22	88.32	89.81	89.80	89.73
25	91.32	90.34	89.84	89.94	89.56	88.93	88.86	89.18	88.50	89.74	89.92	89.62
EOM	90.96	90.25	89.86	89.97	89.46	88.88	88.96	88.81	88.94	89.85	90.06	89.70
MEAN	91.40	90.60	90.13	89.77	89.80	89.07	88.84	89.06	88.54	89.45	89.77	89.80
MAX	91.77	91.02	90.50	89.97	90.02	89.48	89.12	89.24	88.94	89.85	90.10	90.02
MIN	90.96	90.25	89.83	89.50	89.39	88.86	88.58	88.81	88.26	89.00	89.54	89.60

WTR YR 2003 MEAN 89.69 HIGH 88.26 JUN 22 LOW 91.77 OCT 4



GROUND-WATER LEVELS

CAMDEN COUNTY--Continued

NJ-WRD Well Number, 07-0283. Site I.D., 395246075043301. Local I.D., Egbert Obs. NJ Permit Number, 31-04282.

LOCATION.--Lat 39°52'46", long 75°04'33", Hydrologic Unit 02040202, in Camden County Park, about 400 ft south of the corner of Dallas and Sylvan Avenues, Haddon Heights Borough. Owner: New Jersey - American Water Company.

AQUIFER.--Lower Potomac-Raritan-Magothy aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in., depth 455 ft, screened 445 to 455 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape. Water-level recorder, Dec. 1984 to Apr. 1988. Water-level extremes recorder, Feb. 1977 to Dec. 1984. Periodic measurements, Apr. 1975 to Feb. 1977. Water-level recorder, June 1963 to Apr. 1975.

DATUM.--Land surface is 23.66 ft above NGVD of 1929. Measuring point: Top of base of aluminum locking cap, 2.78 ft above land surface.

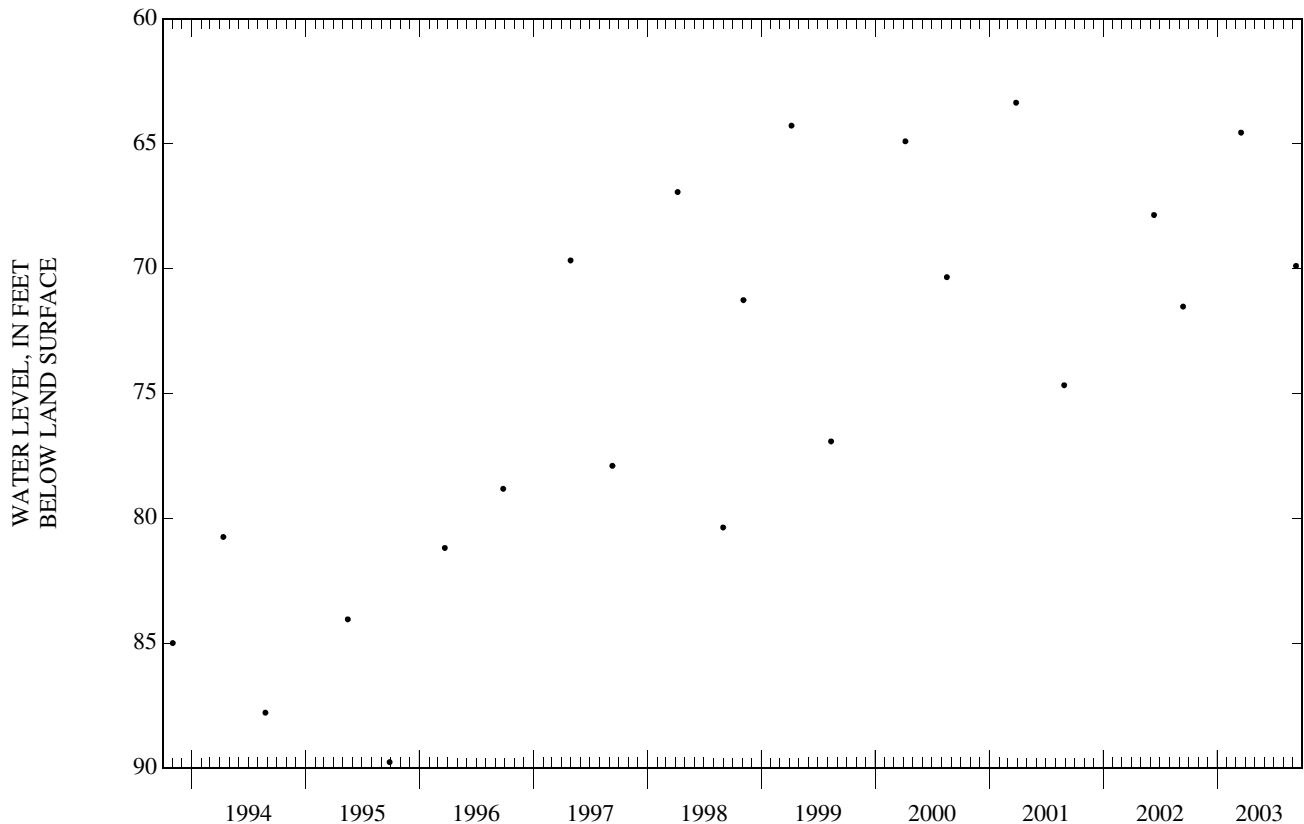
REMARKS.--Water level is affected by nearby pumping.

PERIOD OF RECORD.--June 1963 to current year. Records for 1963 to 1982 and 1988 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 61.93 ft below land surface, Apr. 8, 1964; lowest, 130.41 ft below land surface, between July 12 and Sept. 29, 1983.

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

DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 18	64.55	SEP 10	69.89



GROUND-WATER LEVELS  
CAMDEN COUNTY--Continued

NJ-WRD Well Number, 07-0412. Site I.D., 394922074563301. Local I.D., Elm Tree 2 Obs. NJ Permit Number, 31-09560.

LOCATION.--Lat 39°49'22", long 74°56'29", Hydrologic Unit 02040202, about 200 ft northeast of Thomas Rd. and about 2 mi northwest of Berlin, Voorhees Township. Owner: New Jersey - American Water Company.

AQUIFER.--Lower Potomac-Raritan-Magothy aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in., depth 1,092 ft, screened 1,082 to 1,092 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval. Water-level extremes recorder, Mar. 1977 to Dec. 1984. Periodic measurements, June 1975 to Mar. 1977. Water-level recorder, July 1965 to June 1975. Periodic measurements, Feb. 1964 to July 1965.

DATUM.--Land surface is 148.68 ft above NGVD of 1929. Measuring point: Top of recorder shelf, 2.80 ft above land surface.

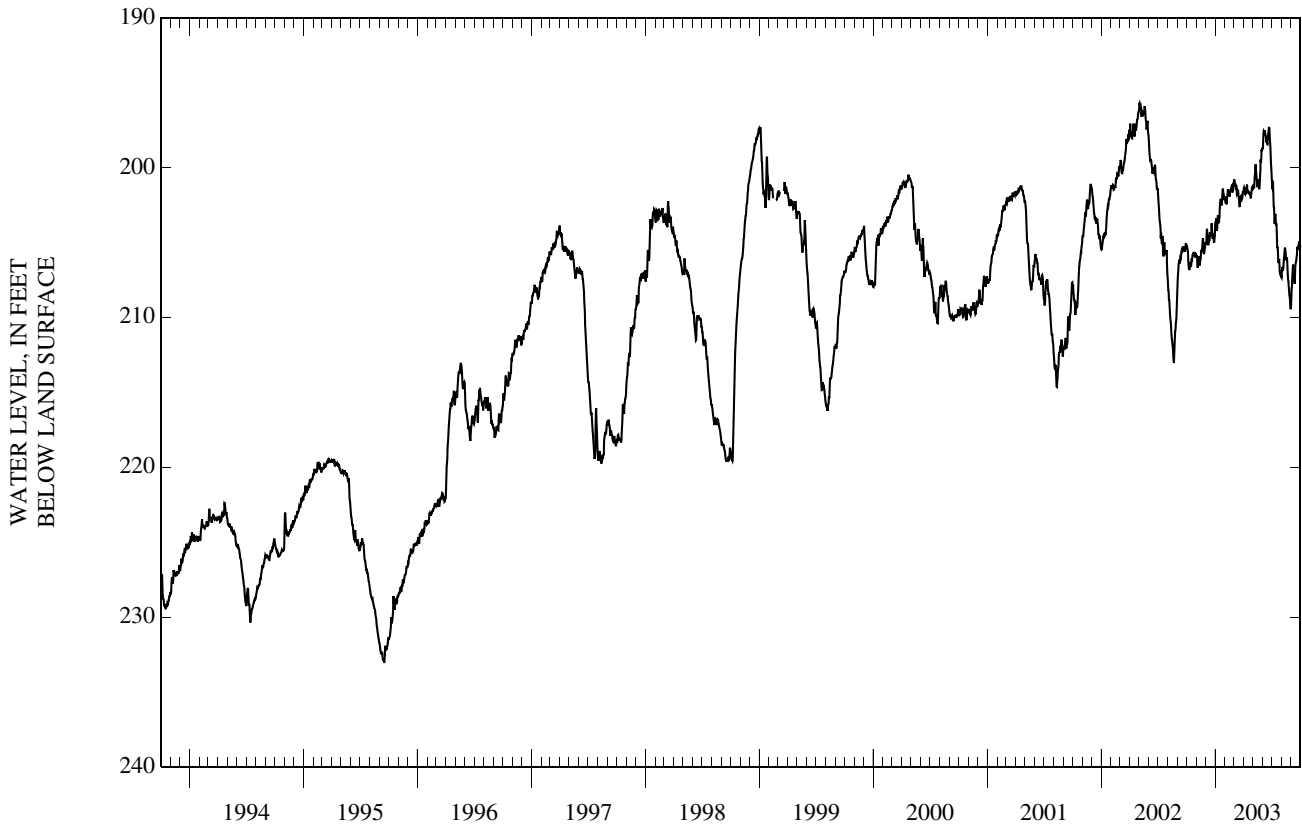
REMARKS.--Well was originally screened 1,217 to 1,227 ft; rehabilitated Aug. 1969.

PERIOD OF RECORD.--Mar. 1964 to current year. Records for 1964 to 1978 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 142.28 ft below land surface, Mar. 3, 1964; lowest, 233.08 ft below land surface, Sept. 16, 1995.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	205.61	206.68	204.07	203.79	202.38	201.02	201.40	201.35	197.56	201.15	206.88	207.10
10	206.73	205.96	204.93	203.37	201.43	201.43	201.51	199.77	197.80	203.74	205.72	207.32
15	206.54	205.93	204.30	202.66	201.83	201.53	201.57	201.30	198.31	203.70	205.97	206.40
20	205.82	205.22	203.70	202.34	201.46	202.55	201.69	201.25	197.65	205.53	206.57	205.36
25	205.76	205.76	204.35	201.44	201.64	202.01	201.98	200.08	198.21	206.49	208.21	205.09
EOM	205.87	204.98	203.78	202.00	201.03	201.66	201.43	198.77	200.63	207.28	209.30	205.31
MEAN	206.01	205.73	204.57	202.73	201.69	201.68	201.58	200.52	198.22	204.38	207.00	206.34
MAX	206.83	206.68	205.17	204.19	202.43	202.56	201.98	201.43	200.63	207.28	209.44	208.69
MIN	205.17	204.69	203.70	201.44	201.03	200.78	201.12	198.77	197.28	200.87	205.34	204.89
WTR YR 2003	MEAN 203.39	HIGH 197.28	JUN 22	LOW 209.44	AUG 30							





GROUND-WATER LEVELS

CAMDEN COUNTY--Continued

NJ-WRD Well Number, 07-0413. Site I.D., 394922074563302. Local I.D., Elm Tree 3 Obs. NJ Permit Number, 31-04561.

LOCATION.--Lat 39°49'22", long 74°56'29", Hydrologic Unit 02040202, about 200 ft northeast of Thomas Rd. and about 2 mi northwest of Berlin, Voorhees Township. Owner: New Jersey - American Water Company.

AQUIFER.--Middle Potomac-Raritan-Magothy aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in., depth 717 ft, screened 706 to 717 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval. Periodic measurements, Apr. 1975 to Mar. 1977. Water-level recorder, Dec. 1963 to Apr. 1975.

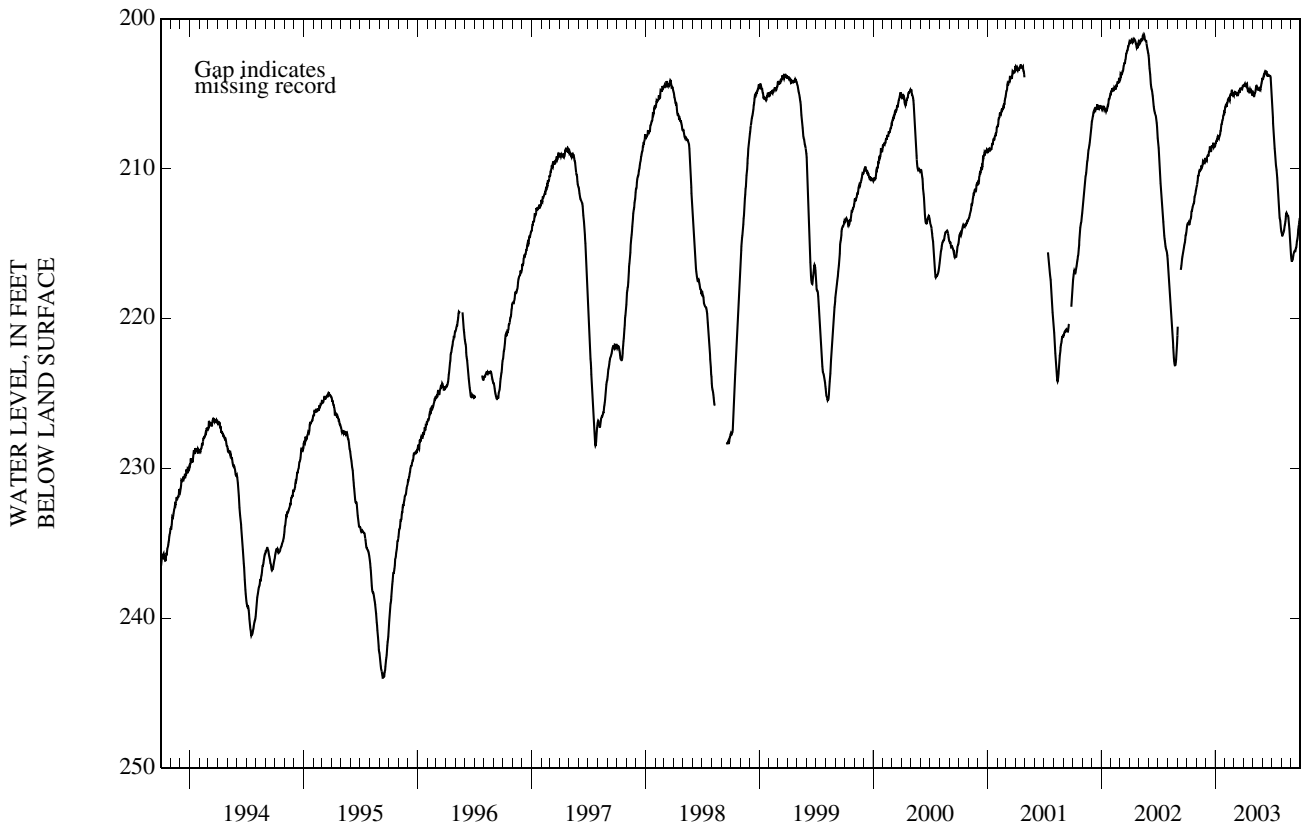
DATUM.--Land surface is 148.73 ft above NGVD of 1929. Measuring point: Top of recorder shelf, 0.60 ft above land surface.

PERIOD OF RECORD.--Dec. 1963 to current year. Records for 1963 to 1977 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 174.21 ft below land surface, Feb. 6, 1964; lowest, 243.99 ft below land surface, Sept. 11-12, 1995.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	213.60	210.78	209.25	208.20	205.79	204.87	204.34	205.15	203.75	206.97	214.38	216.10
10	213.71	210.20	209.05	207.88	205.38	205.01	204.41	204.76	203.57	208.64	213.92	215.58
15	213.19	210.07	208.64	207.79	205.40	205.06	204.65	204.60	203.61	209.94	213.17	215.38
20	212.56	209.84	208.51	207.04	205.06	204.83	204.86	204.68	203.79	211.28	213.10	214.75
25	212.19	209.57	208.25	206.66	205.08	204.68	204.86	204.71	203.80	213.09	213.77	213.86
EOM	211.37	209.27	208.45	206.15	205.04	204.45	205.03	204.06	204.91	214.14	215.75	213.29
MEAN	212.89	210.07	208.81	207.39	205.34	204.84	204.65	204.70	203.82	210.15	213.92	215.01
MAX	214.03	211.26	209.49	208.31	205.94	205.13	205.03	205.15	204.91	214.14	215.75	216.21
MIN	211.37	209.27	208.25	206.15	204.72	204.45	204.31	204.06	203.51	205.30	212.95	213.29
WTR YR 2003	MEAN 208.49	HIGH 203.51	JUN 13	LOW 216.21	SEP 3							



GROUND-WATER LEVELS

CAMDEN COUNTY--Continued

NJ-WRD Well Number, 07-0476. Site I.D., 394215074561701. Local I.D., New Brooklyn Park 1 Obs.

LOCATION.--Lat 39°42'15", long 74°56'16", Hydrologic Unit 02040302, on eastern shore of New Brooklyn Lake about 900 ft upstream of Rt. 536, Winslow Township. Owner: U.S. Geological Survey.

AQUIFER.--Potomac-Raritan-Magothy aquifer system, undifferentiated, of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 4 in., depth 1,505 ft, screened 1,485 to 1,495 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval. Water-level extremes recorder, Mar. 1977 to Dec. 1984. Periodic measurements, Aug. 1975 to Mar. 1977. Water-level recorder, Jan. 1963 to Aug. 1975. Periodic measurements, Aug. 1960 to Jan. 1963.

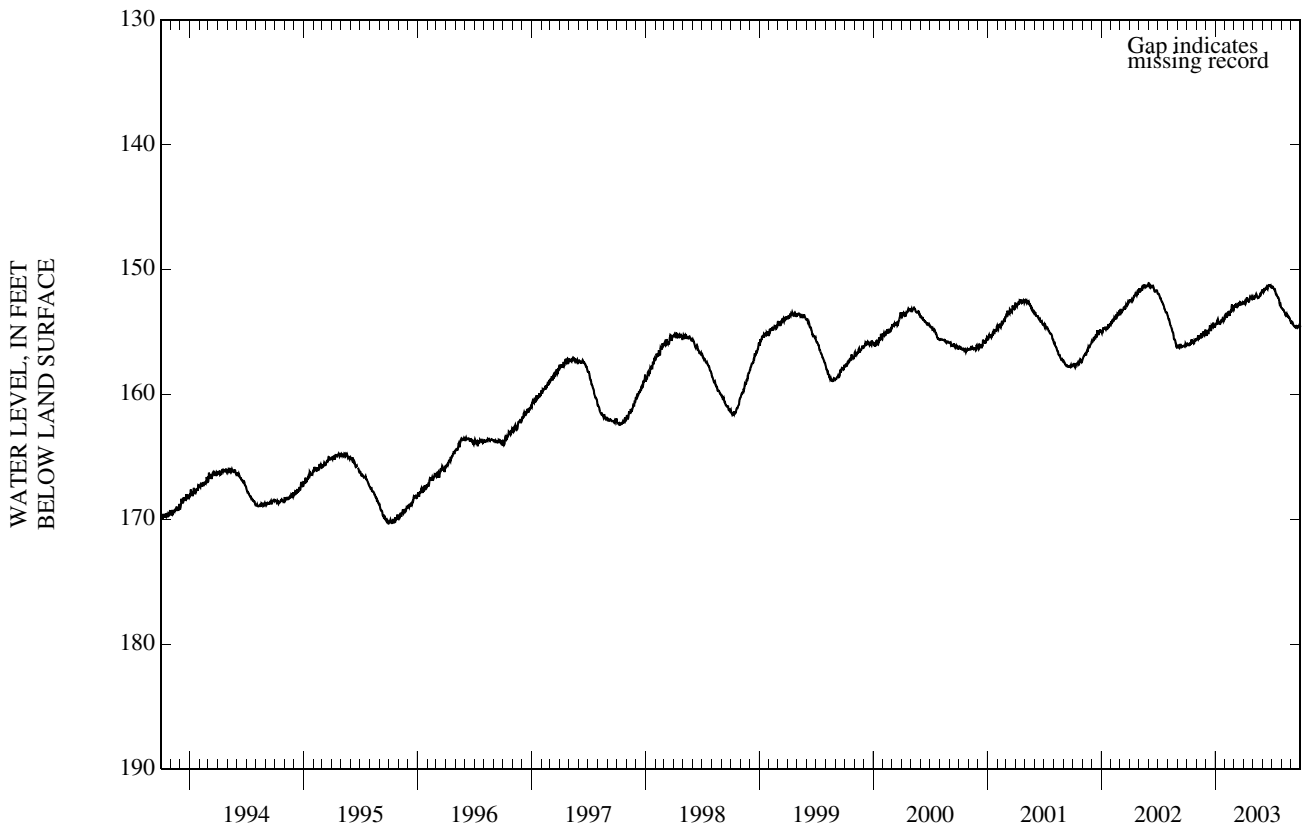
DATUM.--Land surface is 111.13 ft above NGVD of 1929. Measuring point: Top of coupling, 1.75 ft above land surface.

PERIOD OF RECORD.--Aug. 1960 to current year. Records for 1960 to 1981 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 117.24 ft below land surface, Nov. 16, 1960; lowest, 170.36 ft below land surface, Sept. 30, 1995.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	155.89	155.58	155.05	154.42	153.70	152.83	152.56	152.34	151.64	151.42	153.16	154.20
10	156.05	155.44	155.06	154.07	153.48	152.88	152.55	152.13	151.58	151.64	153.39	154.53
15	155.90	155.41	154.62	154.29	153.60	152.92	152.47	152.17	151.42	152.01	153.65	154.55
20	155.74	155.37	154.47	154.00	153.39	152.82	152.50	152.23	151.28	152.23	153.76	154.58
25	155.89	155.21	154.25	154.11	153.23	152.74	152.28	152.04	151.33	152.64	153.86	154.52
EOM	155.57	154.81	154.53	153.93	153.11	152.63	152.34	151.67	151.43	153.04	154.27	154.62
MEAN	155.84	155.32	154.77	154.17	153.44	152.81	152.45	152.11	151.47	152.04	153.59	154.47
MAX	156.06	155.60	155.30	154.42	153.85	153.14	152.78	152.34	151.83	153.04	154.27	154.65
MIN	155.57	154.81	154.25	153.93	152.79	152.59	152.18	151.67	151.24	151.35	153.06	154.17
WTR YR 2003	MEAN 153.54	HIGH 151.24	JUN 22	LOW 156.06	OCT 1							



GROUND-WATER LEVELS

CAMDEN COUNTY--Continued

NJ-WRD Well Number, 07-0477. Site I.D., 394215074561702. Local I.D., New Brooklyn Park 2 Obs.

LOCATION.--Lat 39°42'15", long 74°56'16", Hydrologic Unit 02040302, on eastern shore of New Brooklyn Lake about 900 ft upstream of Rt. 536, Winslow Township. Owner: U.S. Geological Survey.

AQUIFER.--Upper Potomac-Raritan-Magothy aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in., depth 849 ft, screened 829 to 839 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval. Periodic measurements, Aug. 1975 to Mar. 1977. Water-level recorder, Dec. 1962 to Aug. 1975. Periodic measurements, May 1961 to Dec. 1962.

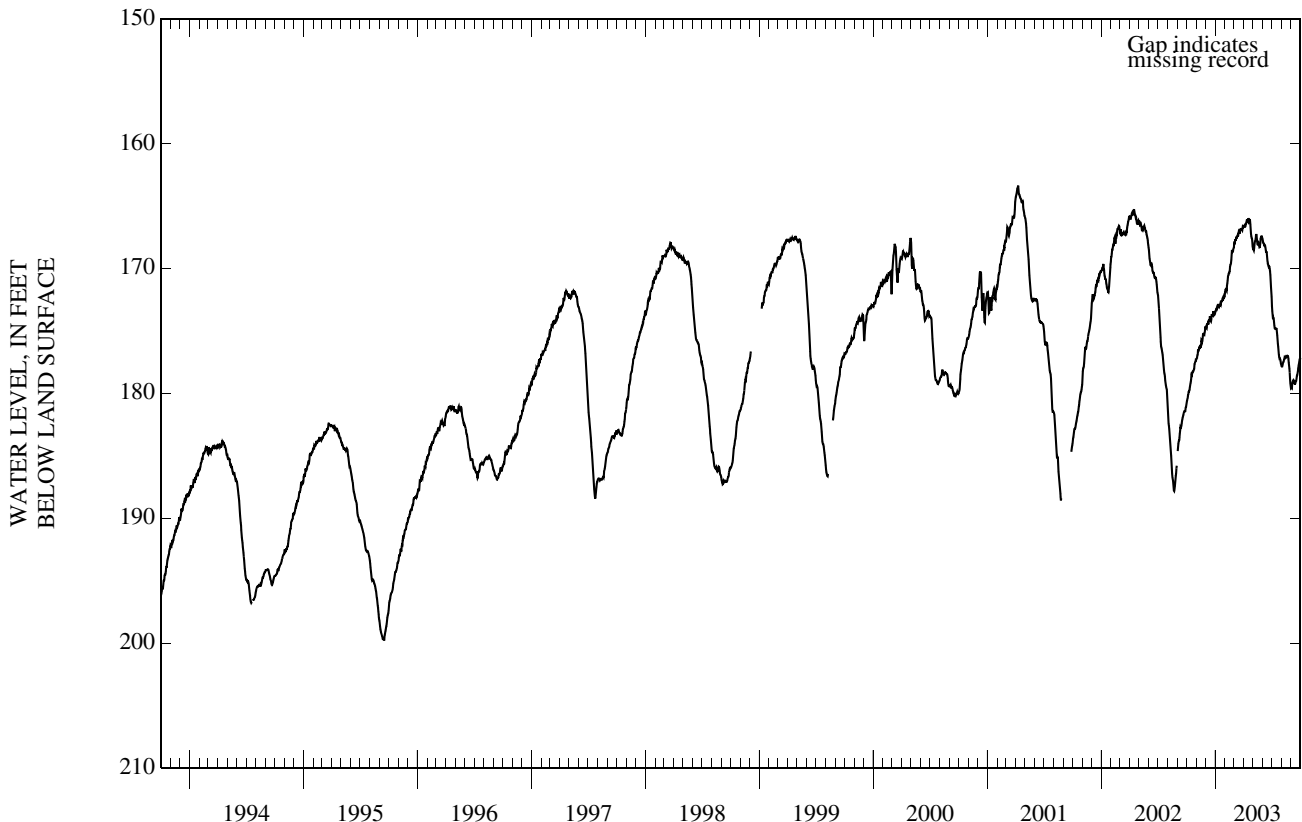
DATUM.--Land surface is 111.13 ft above NGVD of 1929. Measuring point: Top of recorder shelf, 3.30 ft above land surface.

PERIOD OF RECORD.--May 1961 to current year. Records for 1961 to 1976 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 127.48 ft below land surface, May 5, 1961; lowest, 199.76 ft below land surface, Sept. 16, 1995.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	180.18	176.89	174.52	173.24	171.71	167.74	166.49	168.35	167.98	173.98	177.61	179.16
10	179.69	176.31	174.35	172.96	170.66	167.50	166.31	167.63	168.30	174.75	177.19	179.07
15	178.86	176.29	173.93	172.99	170.25	167.33	166.07	167.87	168.79	174.81	177.10	179.12
20	178.24	175.78	173.72	172.55	169.53	167.08	166.07	168.01	169.78	176.02	176.98	178.53
25	178.01	175.30	173.43	172.50	168.67	166.87	167.22	167.89	170.22	177.18	177.75	177.74
EOM	177.33	174.64	173.56	172.14	168.39	166.63	168.21	167.55	172.27	177.70	179.61	177.18
MEAN	178.88	176.02	174.05	172.81	170.18	167.27	166.60	167.88	169.25	175.45	177.62	178.63
MAX	180.76	177.27	174.77	173.40	171.86	168.32	168.21	168.52	172.27	177.70	179.61	179.58
MIN	177.32	174.64	173.43	172.14	168.39	166.60	165.99	167.22	167.60	172.99	176.98	177.18
WTR YR 2003	MEAN 172.91	HIGH 165.99	APR 16	LOW 180.76	OCT 1							



GROUND-WATER LEVELS

CAMDEN COUNTY--Continued

NJ-WRD Well Number, 07-0478. Site I.D., 394215074561703. Local I.D., New Brooklyn Park 3 Obs.

LOCATION.--Lat 39°42'15", long 74°56'16", Hydrologic Unit 02040302, on eastern shore of New Brooklyn Lake about 900 ft upstream of Rt. 536, Winslow Township. Owner: U.S. Geological Survey.

AQUIFER.--Wenonah-Mount Laurel aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in., depth 530 ft, screened 520 to 530 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval. Periodic measurements, Aug. 1975 to Mar. 1977. Water-level recorder, Dec. 1962 to Aug. 1975. Periodic measurements, May 1961 to Dec. 1962.

DATUM.--Land surface is 111.45 ft above NGVD of 1929. Measuring point: Top of coupling, 2.10 ft above land surface.

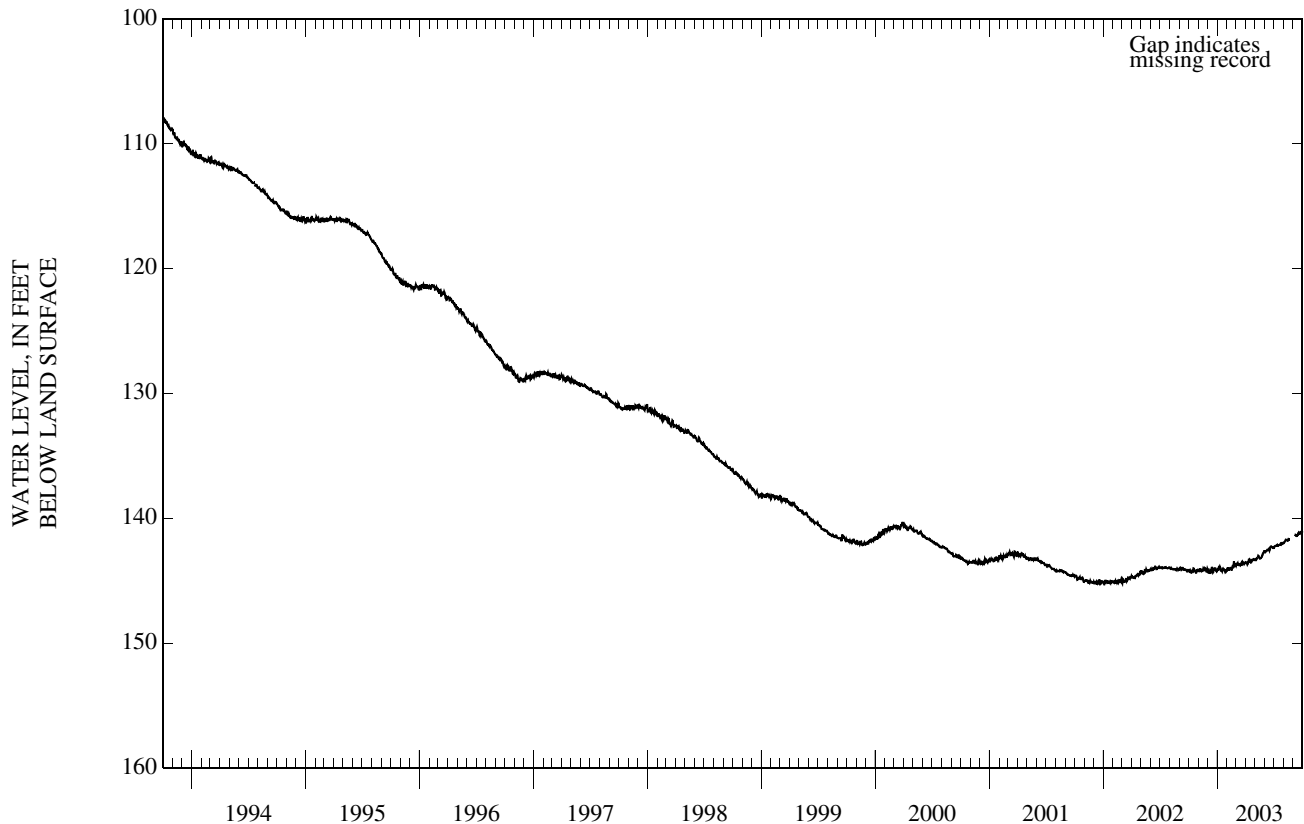
REMARKS.--Water level is affected by regional cone of depression.

PERIOD OF RECORD.--May 1961 to current year. Records for 1961 to 1976 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 56.12 ft below land surface, Aug. 14, 1962; lowest, 145.29 ft below land surface, Dec. 16, 2001.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	144.18	144.24	144.30	144.11	144.04	143.64	143.55	143.35	142.63	142.22	141.87	---
10	144.36	144.20	144.38	143.94	143.99	143.68	143.53	143.17	142.55	142.17	141.73	141.41
15	144.24	144.18	143.98	144.18	144.10	143.79	143.48	143.14	142.43	142.21	141.80	141.35
20	144.17	144.16	144.06	144.08	143.96	143.74	143.54	143.21	142.29	142.14	141.72	141.18
25	144.36	144.16	143.97	144.24	143.76	143.61	143.36	142.97	142.33	142.05	---	141.11
EOM	144.13	144.02	144.24	144.23	143.78	143.54	143.34	142.68	142.39	142.02	---	141.14
MEAN	144.22	144.15	144.18	144.14	143.95	143.66	143.46	143.10	142.47	142.14	---	---
MAX	144.36	144.24	144.42	144.28	144.19	143.82	143.71	143.35	142.74	142.38	---	---
MIN	144.03	144.00	143.90	143.87	143.44	143.49	143.24	142.68	142.26	141.97	---	---



GROUND-WATER LEVELS

CAMDEN COUNTY--Continued

NJ-WRD Well Number, 07-0503. Site I.D., 394440074593101. Local I.D., Winslow 5 Obs. NJ Permit Number, 31-05926.

LOCATION.--Lat 39°44'40", long 74°59'30", Hydrologic Unit 02040302, about 1,000 ft east of intersection of Cross Keys-Berlin Rd. and Erial-Williamstown Rd., Winslow Township. Owner: Winslow Township Water Company.

AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 6 in., depth 76 ft, screened 71 to 76 ft.

INSTRUMENTATION.--Data collection platform with satellite telemetry--60 minute recording interval. Submersible logger pressure transducer, May 2001 to April 2003. Water-level recorder, Dec. 1984 to May 2001. Water-level extremes recorder, Nov. 1977 to Dec. 1984. Water-level recorder, Dec. 1972 to Nov. 1977.

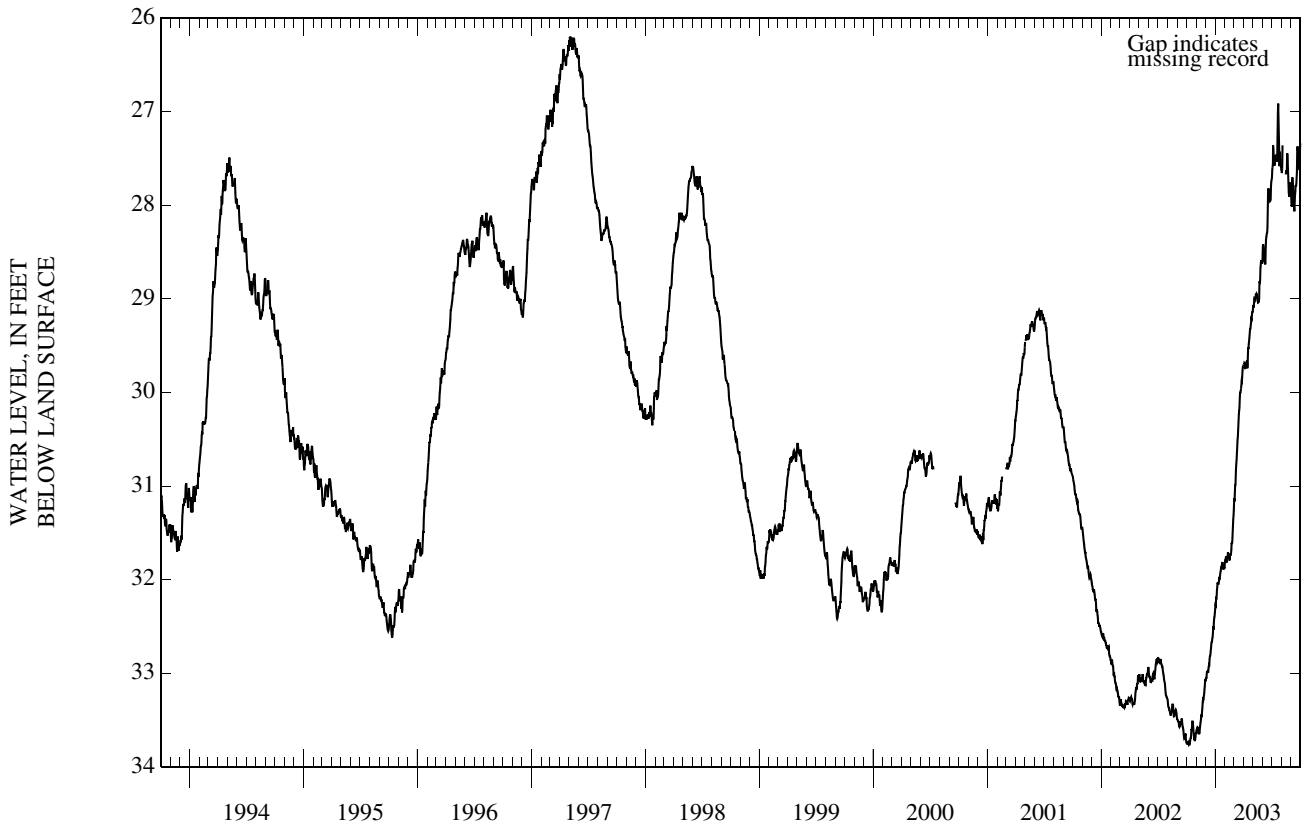
DATUM.--Land surface is 173.26 ft above NGVD of 1929. Measuring point: Top of well seal, 0.84 ft above land surface.

PERIOD OF RECORD.--Dec. 1972 to current year. Records for 1972 to 1980 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 26.11 ft below land surface, May 3, 1997; lowest, 38.35 ft below land surface, between June 3 and Oct. 6, 1981.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	33.75	33.59	32.98	32.16	31.82	30.99	29.69	29.02	28.51	27.36	---	27.70
10	33.76	33.63	32.94	32.04	31.71	30.72	29.71	28.98	28.63	27.57	---	28.02
15	33.65	33.51	32.82	31.98	31.79	30.38	29.59	28.99	28.30	27.49	27.66	27.78
20	33.51	33.37	32.66	31.86	31.72	30.05	29.42	29.03	27.82	27.01	27.47	27.41
25	33.69	33.24	32.50	31.85	31.52	29.91	29.26	28.67	27.95	27.57	27.90	27.57
EOM	33.64	33.06	32.31	31.84	31.31	29.72	29.15	28.61	27.73	27.62	27.88	27.34
MEAN	33.68	33.44	32.76	31.98	31.69	30.39	---	28.90	28.20	27.45	---	27.72
MAX	33.76	33.64	33.09	32.28	31.82	31.24	---	29.11	28.63	27.71	---	28.07
MIN	33.51	33.06	32.31	31.81	31.31	29.72	---	28.59	27.73	26.91	---	27.34



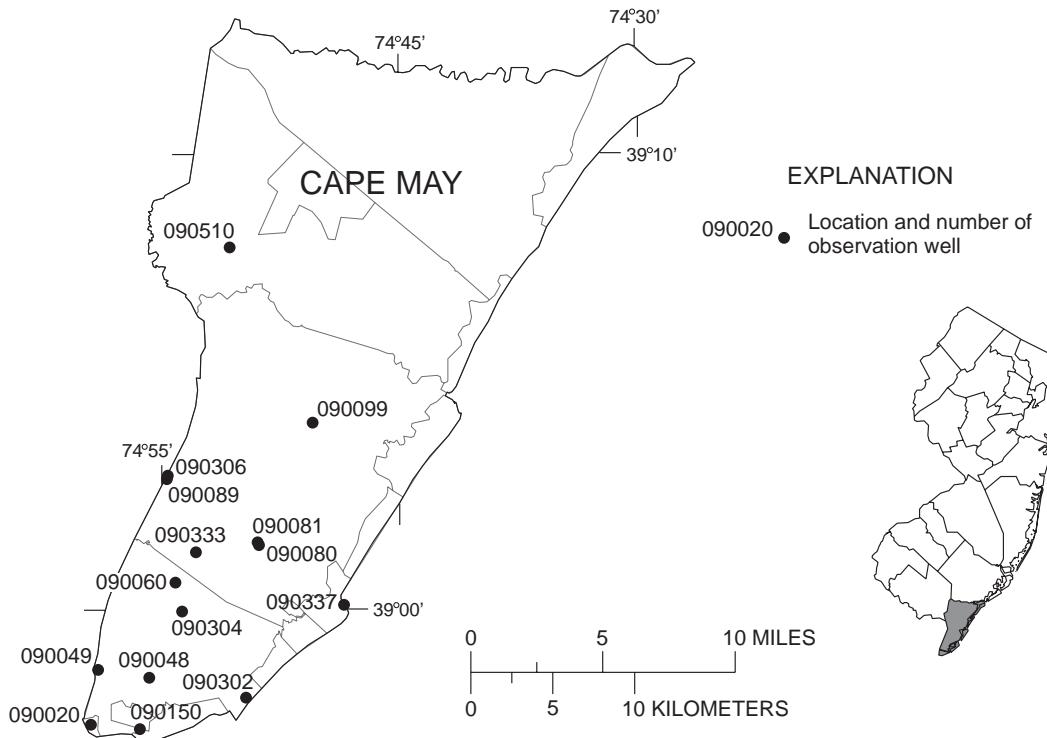
WATER RESOURCES DATA - NEW JERSEY, 2003

CAPE MAY COUNTY

NJ-WRD well number	Local identifier	Township	Well depth	Aquifer	Type of data
090020	TRAFFIC CIRCLE OBS	CAPE MAY POINT BORO	20	HLBC	MANUAL
090048	CANAL 5 OBS	LOWER TWP	252	CNSY	MANUAL
090049	HIGBEE BEACH 3 OBS	LOWER TWP	250	CNSY	MAXMIN
090060	AIRPORT 7 OBS	LOWER TWP	257	CNSY	MANUAL
090080	CAPE MAY 42 OBS	MIDDLE TWP	252	CNSY	MANUAL
090081	CAPE MAY 23 OBS	MIDDLE TWP	26	HLBC	MANUAL
090089	OYSTER LAB 4 OBS	MIDDLE TWP	210	CNSY	MAXMIN
090099	CAPE MAY COUNTY PK 8 OBS	MIDDLE TWP	230	CNSY	DAILY
090150	WEST CAPE MAY 1 OBS	WEST CAPE MAY BORO	293	CNSY	MAXMIN
090302	COAST GUARD 800 OBS	LOWER TWP	903	KRKDL	DAILY
090304	AIRPORT RIO GRANDE OBS	LOWER TWP	510	KRKDU	DAILY
090306	OYSTER 800 OBS	MIDDLE TWP	709	KRKDL	DAILY
090333	PUMP POND N OBS	MIDDLE TWP	43	HLBC	DAILY
090337	M-1 N WILDWOOD 800 OBS	NORTH WILDWOOD CITY	965	KRKDL	DAILY
090510	NJDEP BELLEPLAIN MW 44	DENNIS TWP	11	CKKD	DAILY

Aquifer names

- CKKD - Kirkwood-Cohansey aquifer system
- CNSY - Cohansey Sand
- HLBC - Holly Beach water-bearing zone
- KRKDL - Atlantic City 800-foot sand of the Kirkwood Formation
- KRKDU - Rio Grande water-bearing zone of the Kirkwood Formation



GROUND-WATER LEVELS

CAPE MAY COUNTY

NJ-WRD Well Number, 09-0020. Site I.D., 385616074580001. Local I.D., Traffic Circle Obs.

LOCATION.--Lat 38°56'16", long 74°57'59", Hydrologic Unit 02040206, at the traffic circle at the intersection of Central, Cape, and Ocean Avenues, Cape May Point, Cape May Point Borough. Owner: U.S. Geological Survey.

AQUIFER.--Holly Beach water-bearing zone.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 1.25 in., depth 20 ft, screened 15 to 20 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape. Water-level extremes recorder, May 1977 to Oct. 1984. Water-level recorder, Jan. 1963 to May 1977.

DATUM.--Land surface is 9.12 ft above NGVD of 1929. Measuring point: Top of shelter shelf, 3.00 ft above land surface.

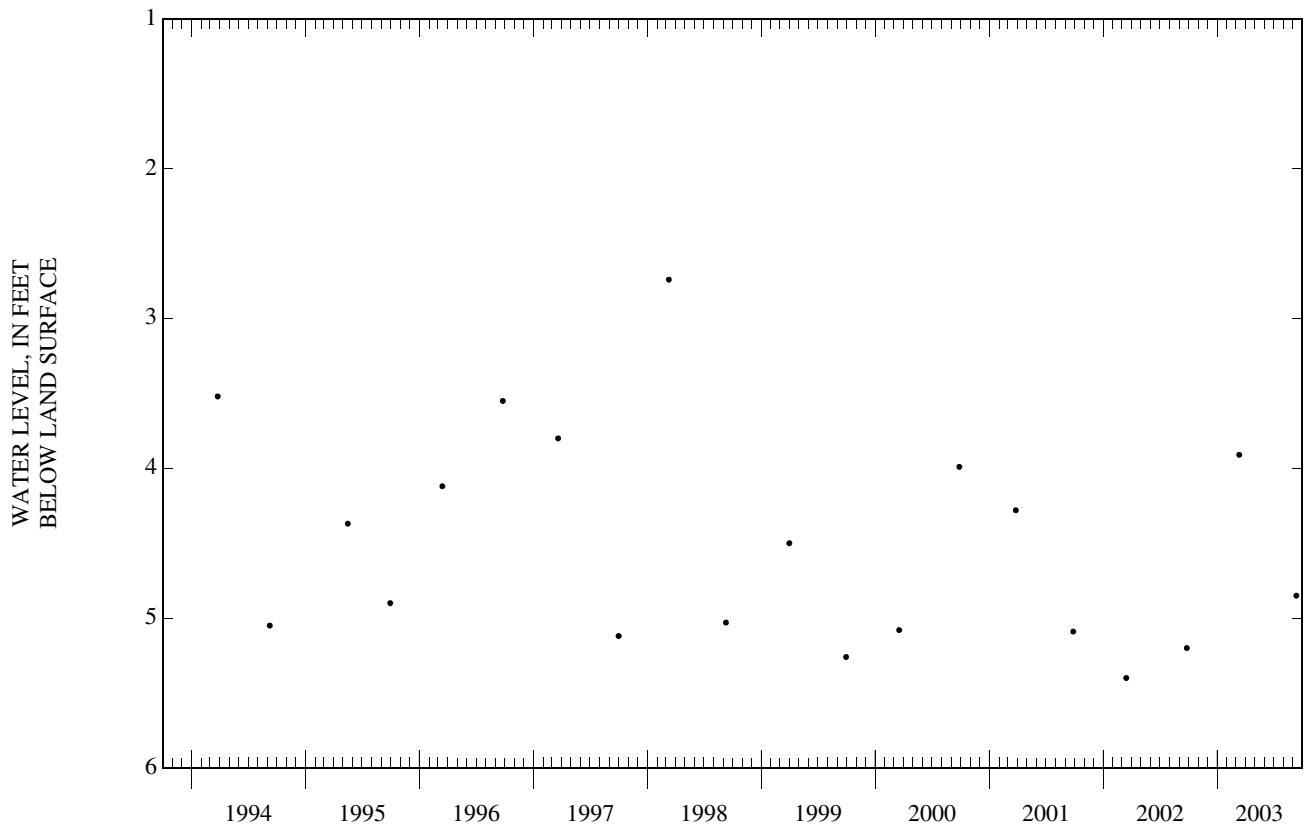
REMARKS.--Water level is affected by the stage of Lake Lilly.

PERIOD OF RECORD.--Jan. 1963 to current year. Records for 1963 to 1982 and 1985 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.45 ft below land surface, between Nov. 11, 1977 and Feb. 21, 1978; lowest, 7.75 ft below land surface, Aug. 25, 1988.

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

DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 12	3.91	SEP 11	4.85



GROUND-WATER LEVELS

CAPE MAY COUNTY--Continued

NJ-WRD Well Number, 09-0048. Site I.D., 385748074553301. Local I.D., Canal 5 Obs. NJ Permit Number, 37-00159.

LOCATION.--Lat 38°57'48", long 74°55'32", Hydrologic Unit 02040206, between the Cape May Canal and Jonathon Hoffman Rd., Lower Township. Owner: U.S. Geological Survey.

AQUIFER.--Cohansey Sand of Miocene age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in., depth 252 ft, screened 242 to 252 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape. Water-level recorder, Apr. 1963 to Aug. 1975. Periodic measurements, Oct. 1958 to Apr. 1963. Water-level recorder, July 1957 to Oct. 1958.

DATUM.--Land surface is 17.48 ft above NGVD of 1929. Measuring point: Top of shelter shelf, 3.10 ft above land surface.

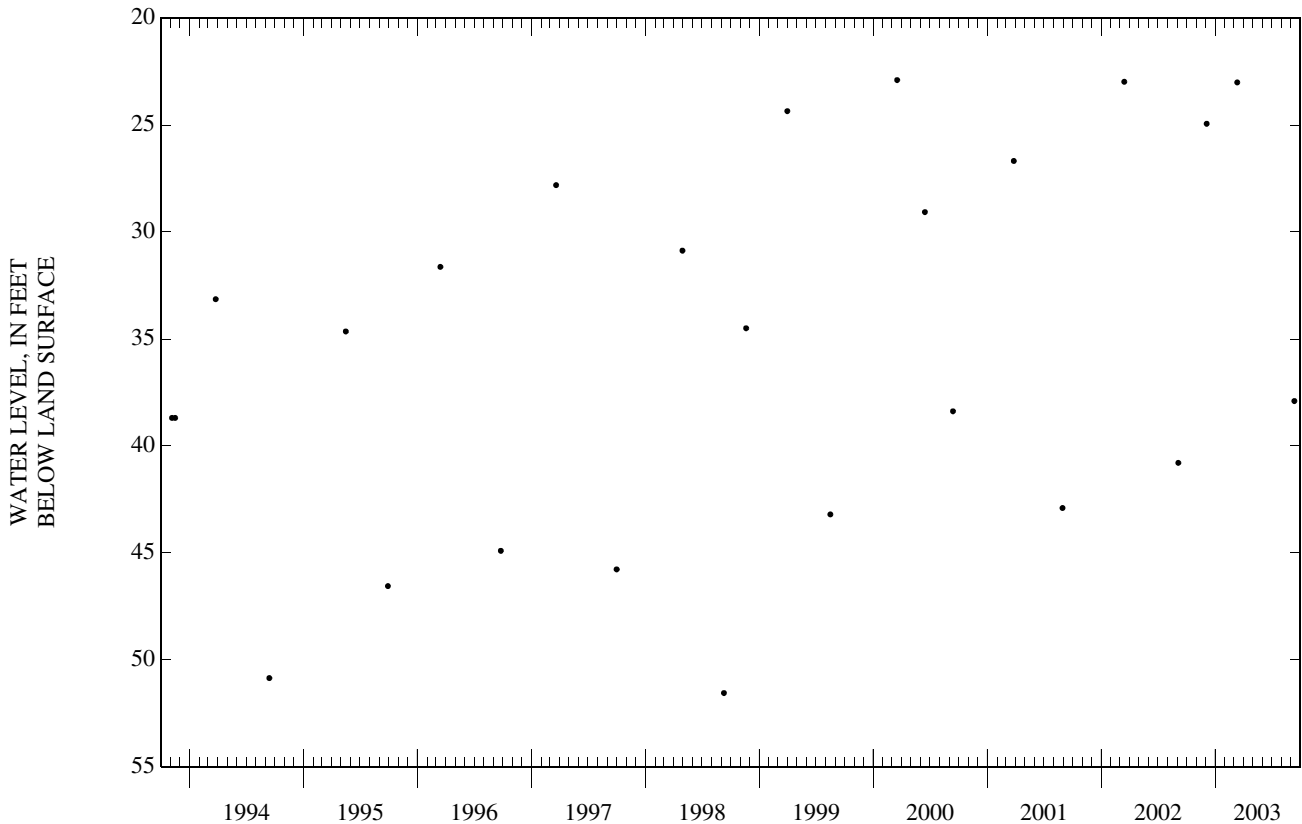
REMARKS.--Water level is affected by tidal fluctuation and nearby pumping.

PERIOD OF RECORD.--July 1957 to current year. Records for 1957 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 22.90 ft below land surface, Mar. 17, 2000; lowest, 56.67 ft below land surface, Aug. 11, 1977.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 04	24.94	MAR 12	23.01	SEP 11	37.90
WATER YEAR 2003 HIGHEST		23.01	MAR 12, 2003		
LOWEST		37.90	SEP 11, 2003		





GROUND-WATER LEVELS

CAPE MAY COUNTY--Continued

NJ-WRD Well Number, 09-0049. Site I.D., 385804074574201. Local I.D., Higbee Beach 3 Obs.

LOCATION.--Lat 38°58'04", long 74°57'41", Hydrologic Unit 02040206, on the north bank at the west end of the Cape May Canal, Lower Township. Owner: U.S. Geological Survey.

AQUIFER.--Cohansey Sand of Miocene age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in., depth 250 ft, screened 241 to 250 ft.

INSTRUMENTATION.--Water-level extremes recorder. Periodic measurements, Aug. 1975 to May 1977. Water-level recorder, May 1965 to Aug. 1975.

DATUM.--Land surface is 6.00 ft above NGVD of 1929. Measuring Point: Front edge of cutout in recorder housing, 2.93 ft above land surface.

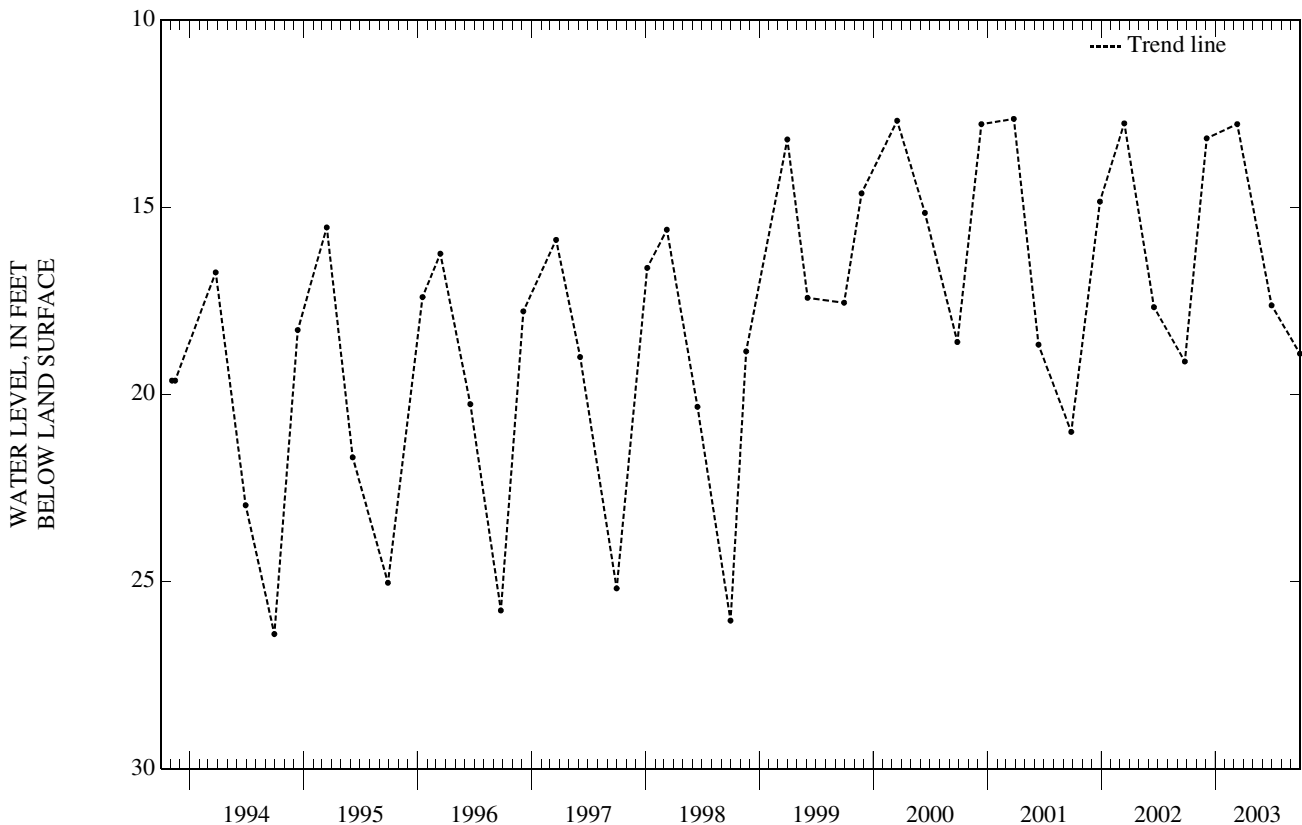
REMARKS.--Water level is affected by tidal fluctuation and nearby pumping.

PERIOD OF RECORD.--May 1965 to current year. Records for 1975 to 1980 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 9.41 ft below land surface, between Mar. 12 and June 30, 2003; lowest, 34.22 ft below land surface, July 31, 1974.

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

PERIOD	WATER-LEVEL EXTREMES		MEASURED WATER LEVELS	
	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 25, 2002 TO DEC. 4, 2002	11.35	20.65	DEC. 4, 2002	13.15
DEC. 4, 2002 TO MAR. 12, 2003	10.03	15.05	MAR. 12, 2003	12.78
MAR. 12, 2003 TO JUNE 30, 2003	9.41	18.54	JUNE 30, 2003	17.62
JUNE 30, 2003 TO SEPT. 29, 2003	16.55	25.30	SEPT. 29, 2003	18.91



## GROUND-WATER LEVELS

## CAPE MAY COUNTY--Continued

NJ-WRD Well Number, 09-0060. Site I.D., 390058074542701. Local I.D., Airport 7 Obs.

LOCATION.--Lat 39°00'56", long 74°54'25", Hydrologic Unit 02040206, at the Cape May County Airport, Lower Township. Owner: U.S. Geological Survey.

AQUIFER.--Cohansey Sand of Miocene age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in., depth 257 ft, screened 242 to 257 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape. Water-level recorder, Apr. 1963 to Aug. 1975. Periodic measurements, Jan. 1963 to Apr. 1963.

DATUM.--Land surface is 13.11 ft above NGVD of 1929. Measuring point: Top of shelter shelf, 3.00 ft above land surface.

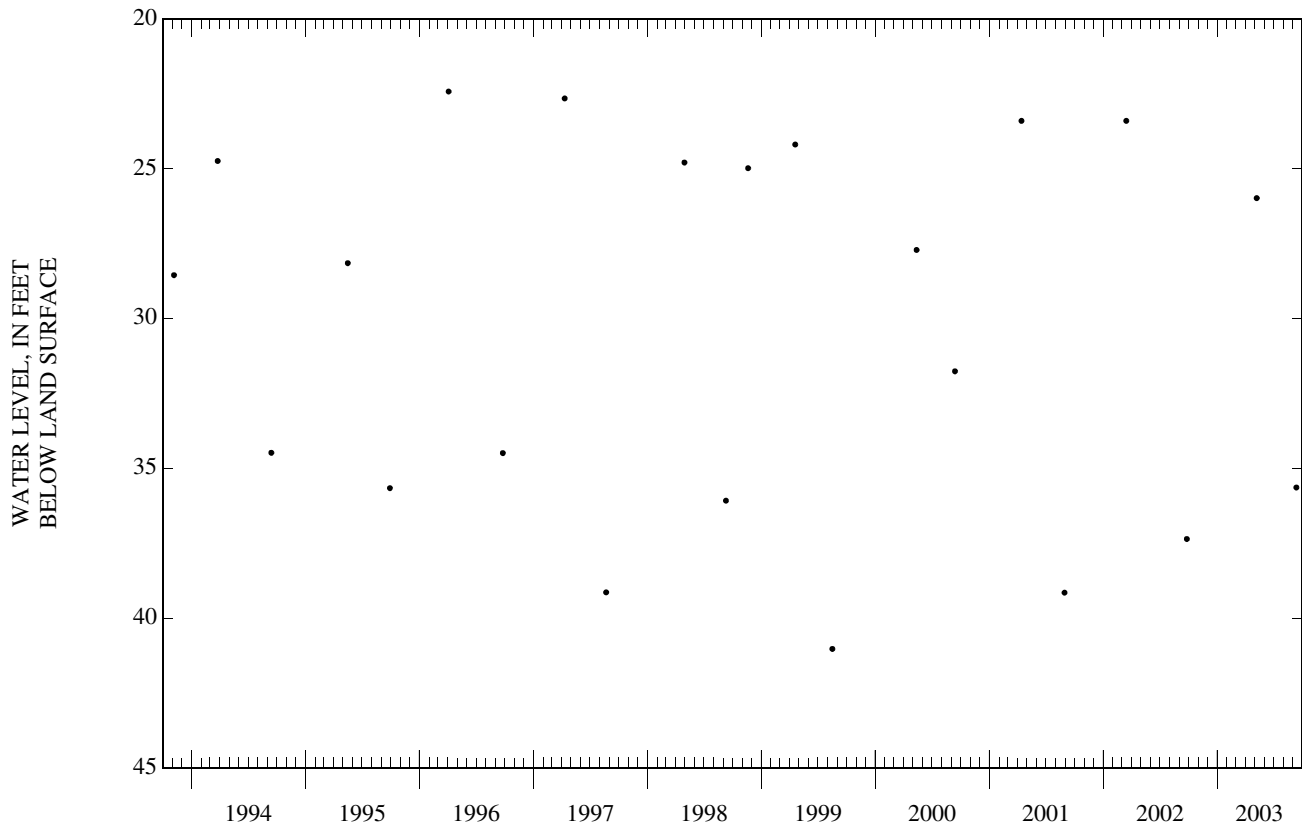
REMARKS.--Water level is affected by nearby pumping.

PERIOD OF RECORD.--Jan. 1963 to current year. Records for 1963 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.00 ft below land surface, Apr. 9, 1964; lowest, 42.43 ft below land surface, Aug. 11, 1977.

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

DATE	WATER LEVEL	DATE	WATER LEVEL
MAY 07	25.98	SEP 11	35.64



GROUND-WATER LEVELS

CAPE MAY COUNTY--Continued

NJ-WRD Well Number, 09-0080. Site I.D., 390211074505501. Local I.D., Cape May 42 Obs.

LOCATION.--Lat 39°02'13", long 74°50'55", Hydrologic Unit 02040302, in the center of the median of the Garden State Parkway, near mile marker 6, Middle Township. Owner: U.S. Geological Survey.

AQUIFER.--Cohansey Sand of Miocene age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in., depth 252 ft, screened 242 to 252 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape. Water-level recorder, May 1963 to July 1970. Periodic measurements, Oct. 1958 to May 1963. Water-level recorder, July 1957 to Oct. 1958.

DATUM.--Land surface is 13.67 ft above NGVD of 1929. Measuring point: Top of base of aluminum locking cap, 2.41 ft above land surface.

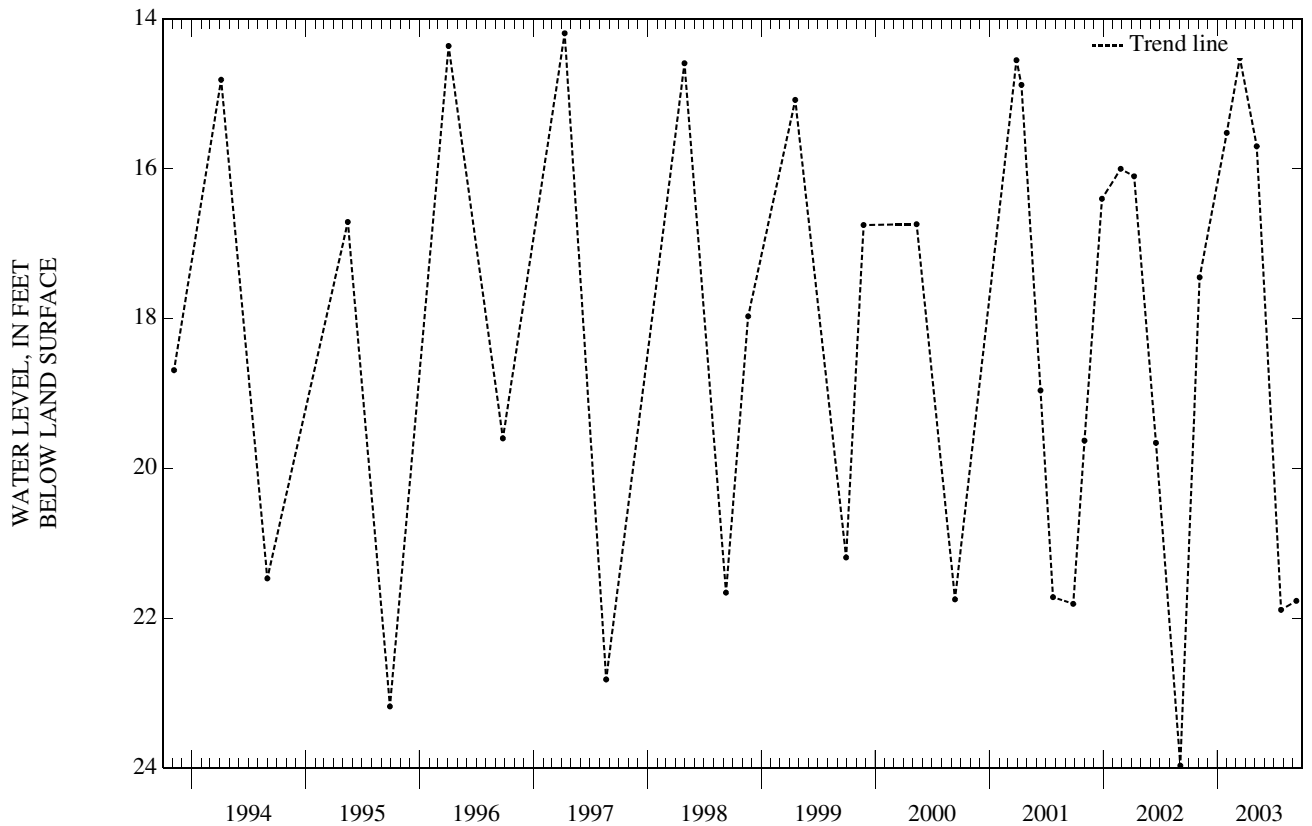
REMARKS.--Water level is affected by tidal fluctuation and nearby pumping.

PERIOD OF RECORD.--July 1957 to current year. Records for 1957 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 8.82 ft below land surface, Apr. 3, 6, 1958; lowest, 23.97 ft below land surface, Sept. 4, 2002.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	17.45	JAN 31	15.52	MAR 14	14.52	MAY 07	15.70	JUL 24	21.89	SEP 11	21.77
WATER YEAR 2003		HIGHEST	14.52	MAR 14, 2003		LOWEST	21.89	JUL 24, 2003			



GROUND-WATER LEVELS

CAPE MAY COUNTY--Continued

NJ-WRD Well Number, 09-0081. Site I.D., 390211074505502. Local I.D., Cape May 23 Obs.

LOCATION.--Lat 39°02'11", long 74°50'54", Hydrologic Unit 02040302, in the center of the median of the Garden State Parkway, near mile marker 6, Middle Township. Owner: U.S. Geological Survey.

AQUIFER.--Holly Beach water-bearing zone.

WELL CHARACTERISTICS.--Driven water-table observation well, diameter 1.25 in., depth 26 ft, screened 23 to 26 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape.

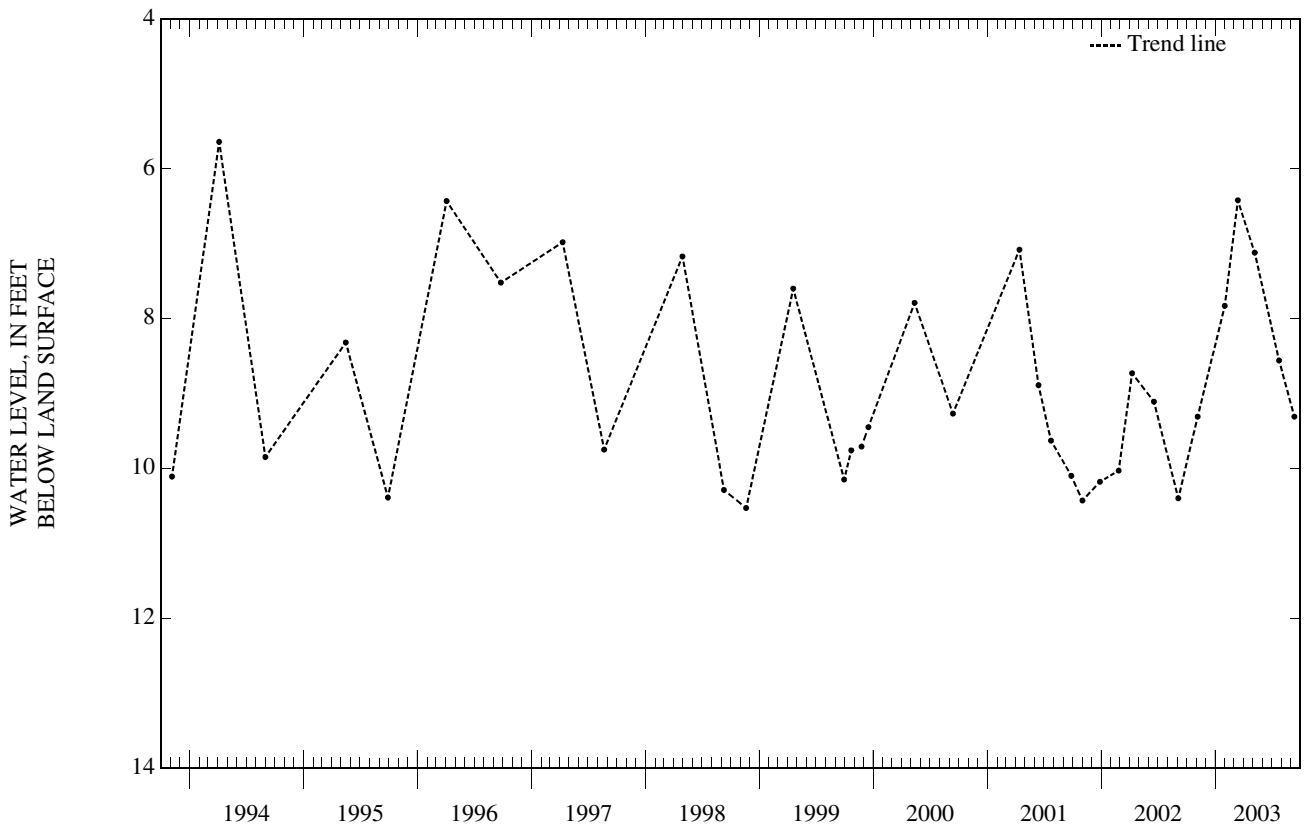
DATUM.--Land surface is 14.90 ft above NGVD of 1929. Measuring point: Top of casing, 1.30 ft above land surface.

PERIOD OF RECORD.--June 1957 to current year. Records for 1957 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 5.64 ft below land surface, Apr. 5, 1994; lowest, 10.82 ft below land surface, Sept. 30, 1986.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	9.31	JAN 31	7.83	MAR 14	6.42	MAY 07	7.12	JUL 24	8.56	SEP 11	9.31
WATER YEAR 2003		HIGHEST	6.42	MAR 14, 2003		LOWEST	9.31	NOV 05, 2002		SEP 11, 2003	



GROUND-WATER LEVELS

CAPE MAY COUNTY--Continued

NJ-WRD Well Number, 09-0089. Site I.D., 390425074544601. Local I.D., Oyster Lab 4 Obs. NJ Permit Number, 37-00158.

LOCATION.--Lat 39°04'25", long 74°54'45", Hydrologic Unit 02040206, at the Rutgers Oyster Laboratory near Green Creek, Middle Township. Owner: U.S. Geological Survey.

AQUIFER.--Cohansey Sand of Miocene age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in., depth 210 ft, screened 195 to 210 ft.

INSTRUMENTATION.--Water-level extremes recorder. Periodic measurements, Aug. 1975 to May 1977. Water-level recorder, Aug. 1957 to Aug. 1975.

DATUM.--Land surface is 7.37 ft above NGVD of 1929. Measuring point: Front edge of cutout in recorder housing, 3.90 ft above land surface.

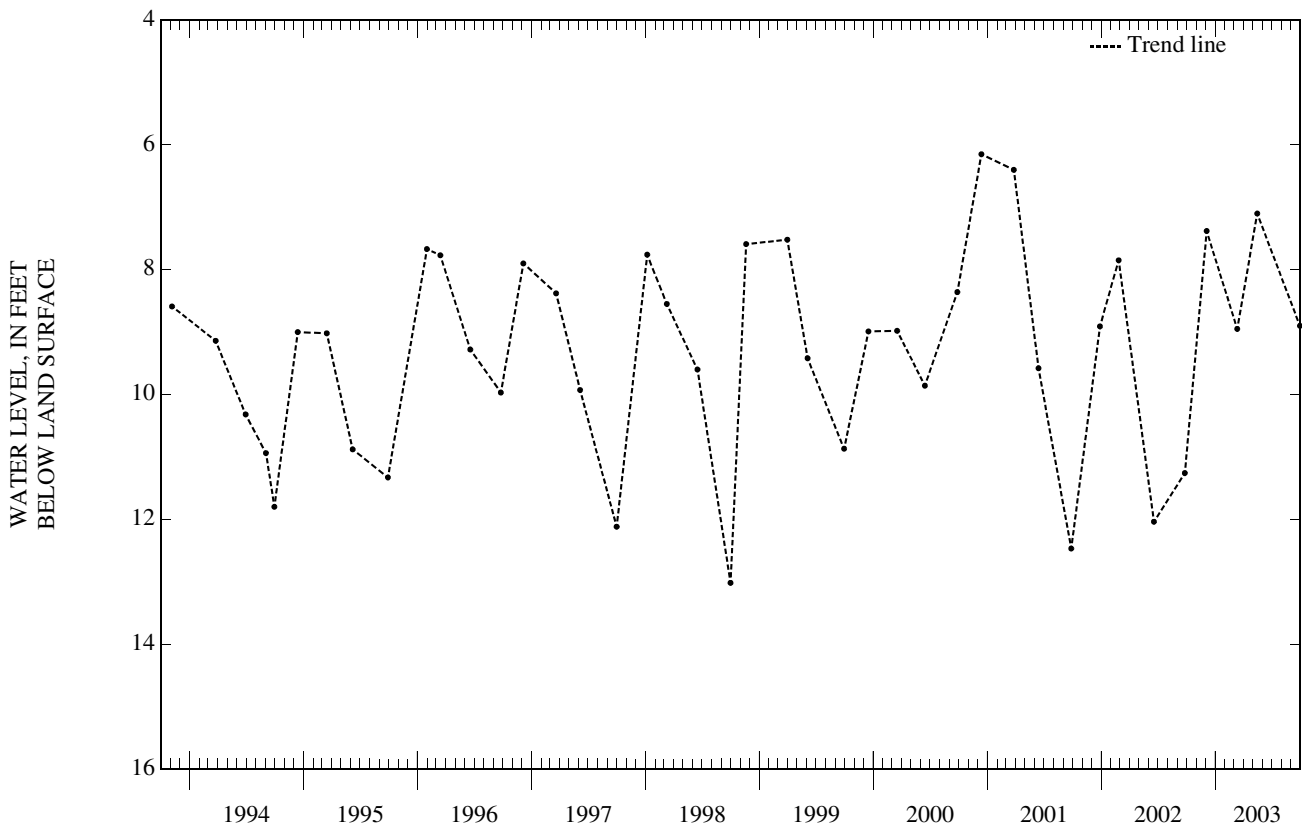
REMARKS.--Water level is affected by tidal fluctuation and nearby pumping.

PERIOD OF RECORD.--Aug. 1957 to current year. Records for 1957 to 1982 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.07 ft below land surface, Apr. 3, 1958; lowest, 15.71 ft below land surface, between June 4 and Sept. 30, 1986.

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

PERIOD	WATER-LEVEL EXTREMES		MEASURED WATER LEVELS	
	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 25, 2002 TO DEC. 4, 2002	6.51	13.25	DEC. 4, 2002	7.37
DEC. 4, 2002 TO MAR.12, 2003	4.90	10.24	MAR.12, 2003	8.95
MAR.12, 2003 TO MAY 15, 2003	5.16	10.13	MAY 15, 2003	7.10
MAY 15, 2003 TO SEPT. 29, 2003	7.07	13.32	SEPT. 29, 2003	8.90



GROUND-WATER LEVELS

CAPE MAY COUNTY--Continued

NJ-WRD Well Number, 09-0099. Site I.D., 390608074483801. Local I.D., Cape May County Park 8 Obs. NJ Permit Number, 35-00680.

LOCATION.--Lat 39°06'11", long 74°48'37", Hydrologic Unit 02040302, at Cape May County Park, Rt. 9, Middle Township. Owner: U.S. Geological Survey.

AQUIFER.--Cohansey Sand of Miocene age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in., depth 230 ft, screened 214 to 230 ft.

INSTRUMENTATION.--Submersible logger pressure transducer--60 minute recording interval. Water-level recorder, Nov. 1986 to May 2000. Periodic measurements, Nov. 1968 to Nov. 1986. Water-level recorder, Apr. 1961 to Nov. 1968. Periodic measurements, Nov. 1958 to Apr. 1961. Water-level recorder, Oct. 1957 to Oct. 1958.

DATUM.--Land surface is 10.73 ft above NGVD of 1929. Measuring point: Top of well seal, 2.27 ft above land surface.

REMARKS.--Water level is affected by tidal fluctuation and nearby pumping.

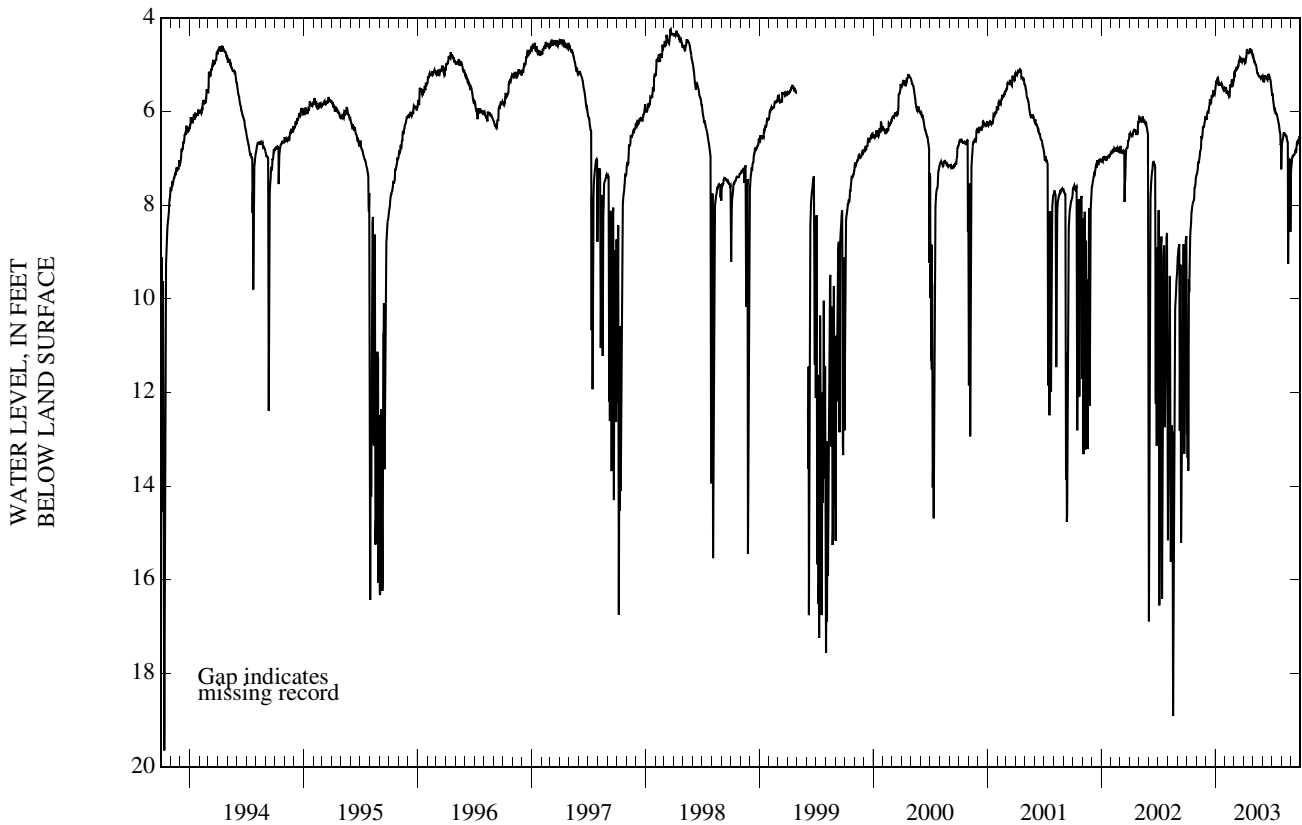
PERIOD OF RECORD.--Oct. 1957 to current year. Records from 1957 to 1987 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.73 ft below land surface, Apr. 5, 1958; lowest, 22.01 ft below land surface, July 9, 1988.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.28	7.25	6.04	5.37	5.56	5.13	4.91	4.92	5.33	5.74	6.60	6.96
10	9.52	7.03	6.00	5.31	5.57	5.08	4.83	5.00	5.28	5.93	6.47	6.93
15	8.34	6.82	5.78	5.43	5.69	5.05	4.74	5.18	5.28	6.04	6.52	6.82
20	7.98	6.52	5.66	5.39	5.46	4.91	4.71	5.24	5.21	6.17	6.63	6.68
25	7.85	6.32	5.54	5.52	5.45	4.91	4.72	5.28	5.30	6.37	7.14	6.59
EOM	7.39	6.10	5.57	5.54	5.34	4.88	4.80	5.27	5.55	7.23	7.30	6.58
MEAN	9.02	6.73	5.83	5.42	5.51	5.01	4.78	5.11	5.30	6.12	6.91	6.80
MAX	13.68	7.36	6.17	5.56	5.69	5.32	4.96	5.29	5.55	7.23	9.26	7.18
MIN	7.39	6.10	5.54	5.27	5.31	4.84	4.65	4.81	5.21	5.60	6.44	6.52

WTR YR 2003 MEAN 6.05 HIGH 4.65 APR 22 LOW 13.68 OCT 6



GROUND-WATER LEVELS

CAPE MAY COUNTY--Continued

NJ-WRD Well Number, 09-0150. Site I.D., 385607074555201. Local I.D., West Cape May 1 Obs. NJ Permit Number, 37-00155.

LOCATION.--Lat 38°56'07", long 74°55'55", Hydrologic Unit 02040302, on the north side of Sunset Blvd., West Cape May Borough.  
Owner: U.S. Geological Survey.

AQUIFER.--Cohansey Sand of Miocene age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in., depth 293 ft, screened 283 to 293 ft.

INSTRUMENTATION.--Water-level extremes recorder. Periodic measurements, Aug. 1975 to May 1977. Water-level recorder, June 1957 to Aug. 1975.

DATUM.--Land surface is 6.60 ft above NGVD of 1929. Measuring point: Front edge of cutout in recorder housing, 2.88 ft above land surface.

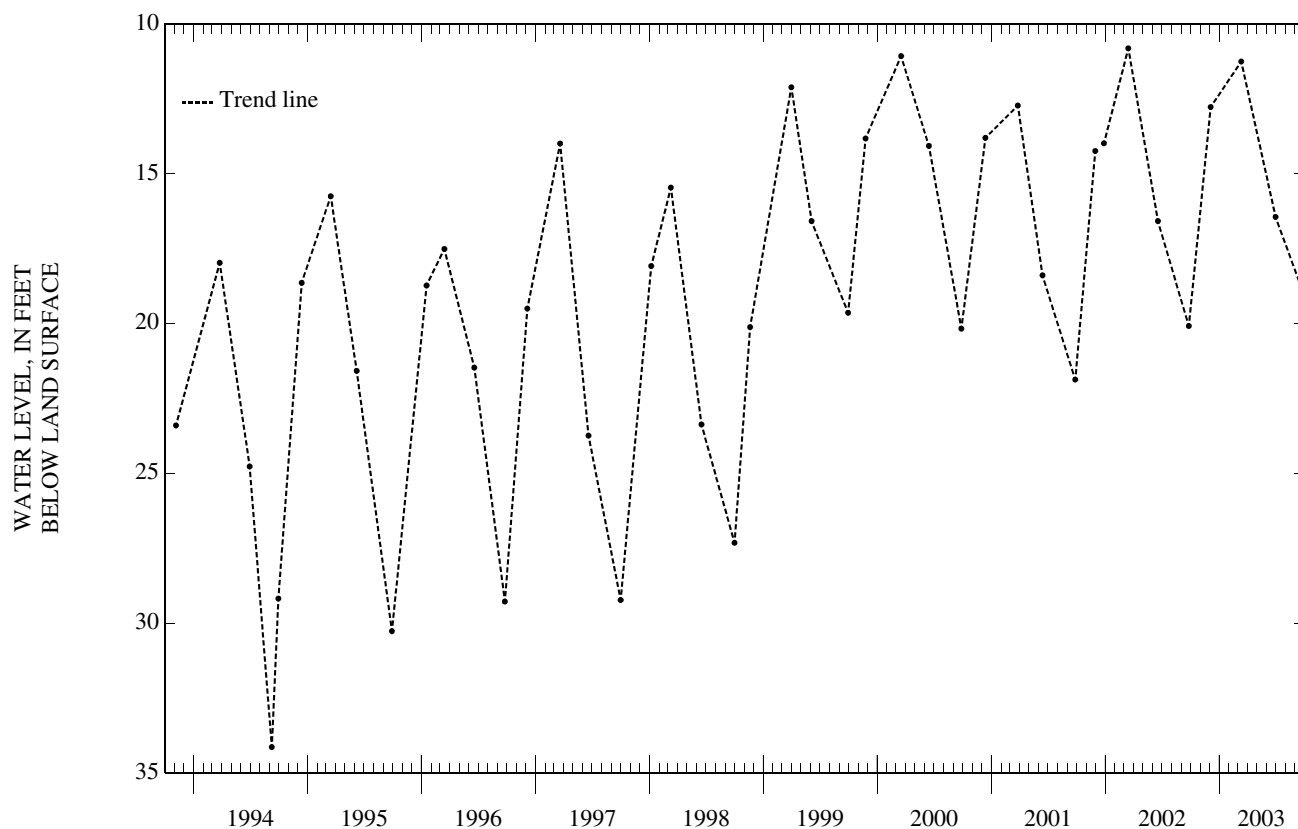
REMARKS.--Water level is affected by tidal fluctuation and nearby pumping.

PERIOD OF RECORD.--June 1957 to current year. Records for 1957 to 1982 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 8.93 ft below land surface, between Mar. 17, and June 14, 2000; lowest, 41.30 ft below land surface, Sept. 3, 1963.

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

PERIOD	WATER-LEVEL EXTREMES		MEASURED WATER LEVELS	
	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 25, 2002 TO DEC. 4, 2002	11.56	20.73	DEC. 4, 2002	12.77
DEC. 4, 2002 TO MAR. 12, 2003	9.80	13.93	MAR. 12, 2003	11.25
MAR. 12, 2003 TO JUNE 30, 2003	9.10	16.96	JUNE 30, 2003	16.44
JUNE 30, 2003 TO SEPT. 29, 2003	16.17	25.50	SEPT. 29, 2003	19.03



GROUND-WATER LEVELS

CAPE MAY COUNTY--Continued

NJ-WRD Well Number, 09-0302. Site I.D., 385709074512801. Local I.D., Coast Guard 800 Obs. NJ Permit Number, 37-03628-9.

LOCATION.--Lat 38°57'09", long 74°51'27", Hydrologic Unit 02040302, at Cape May National wildlife refuge, two mile beach unit, Lower Township. Owner: U. S. Geological Survey.

AQUIFER.--Atlantic City 800-foot sand of the Kirkwood Formation of Miocene age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 4 in., depth 903 ft, screened 883 to 893 ft.

INSTRUMENTATION.--Submersible logger pressure transducer--60 minute recording interval. Water-level recorder, Feb. 1990 to June 1997.

DATUM.--Land surface is 5 ft above NGVD of 1929. Measuring point: Top of recorder shelf, 3.05 ft above land surface.

REMARKS.--Water level is affected by regional pumping and tidal fluctuation.

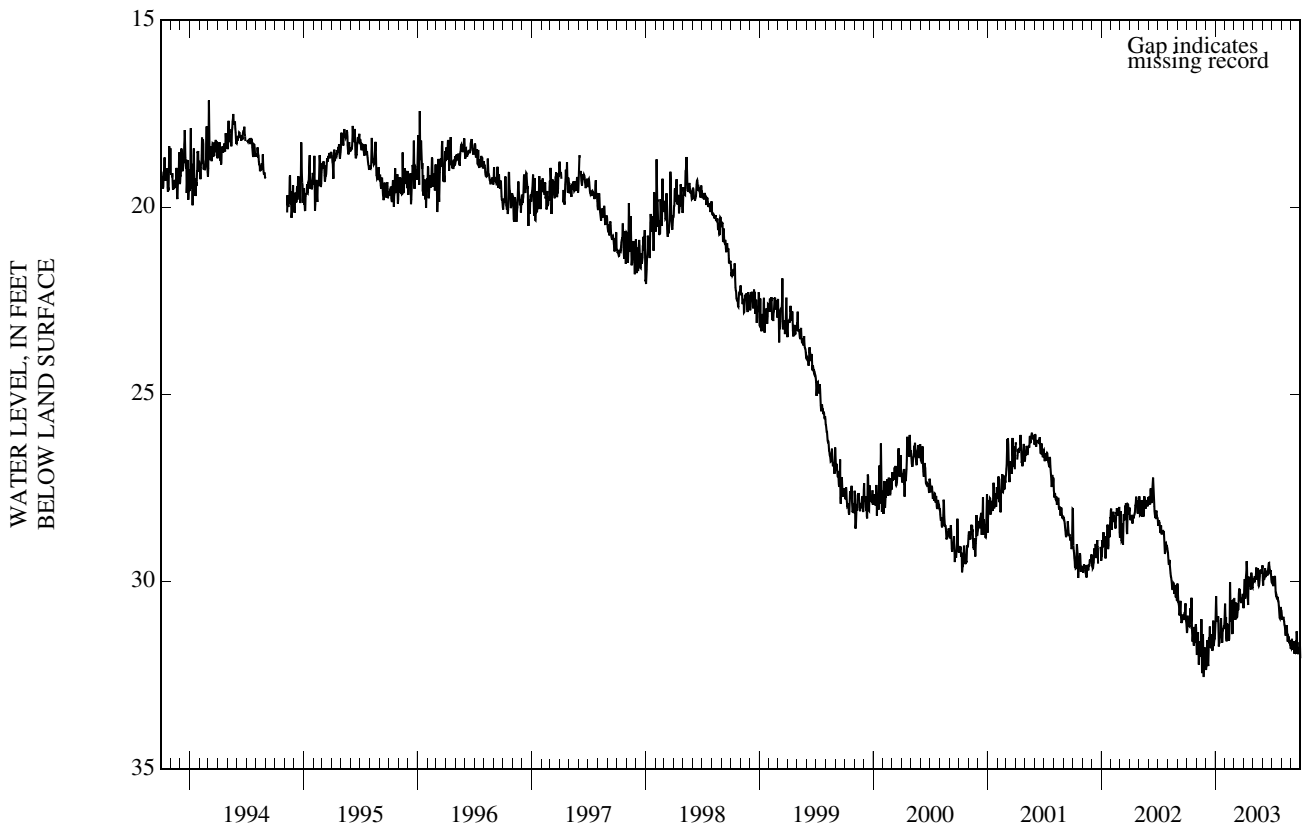
PERIOD OF RECORD.--Feb. 1990 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 16.04 ft below land surface, Apr. 21, 1991; lowest, 32.90 ft below land surface, Dec. 3, 2002.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	31.05	31.71	31.70	31.04	31.51	30.81	29.93	30.01	29.79	30.09	30.97	31.67
10	31.20	31.93	31.94	30.93	31.22	30.88	29.74	29.92	29.84	29.88	31.15	31.63
15	31.03	32.01	31.74	31.37	31.26	30.76	30.52	29.94	29.76	30.34	31.36	31.87
20	31.60	32.09	31.40	31.42	31.07	30.21	30.11	30.12	29.59	30.46	31.55	31.90
25	31.59	32.40	31.04	31.25	31.40	30.47	30.10	29.77	29.73	30.90	31.64	31.89
EOM	31.23	32.00	31.30	30.85	30.47	30.48	30.16	29.64	30.01	30.77	31.75	32.04
MEAN	31.23	31.87	31.73	31.19	31.03	30.58	30.11	29.87	29.77	30.37	31.31	31.75
MAX	31.71	32.54	32.36	31.73	31.59	31.01	30.71	30.12	30.10	30.98	31.79	32.04
MIN	30.43	31.00	31.04	30.39	30.01	30.20	29.45	29.62	29.51	29.85	30.81	31.33

WTR YR 2003 MEAN 30.90 HIGH 29.45 APR 11 LOW 32.54 NOV 24





GROUND-WATER LEVELS

CAPE MAY COUNTY--Continued

NJ-WRD Well Number, 09-0304. Site I.D., 390002074541002. Local I.D., Airport Rio Grande Obs. NJ Permit Number, 37-03763-3.

LOCATION.--Lat 39°00'02", long 74°54'09", Hydrologic Unit 02040302, at the Cape May County Airport, Lower Township. Owner: U.S. Geological Survey.

AQUIFER.--Rio Grande water-bearing zone of the Kirkwood Formation of Miocene age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 4 in., depth 510 ft, screened 495 to 505 ft.

INSTRUMENTATION.--Submersible logger pressure transducer--60-minute recording interval. Water-level recorder, Feb. 1990 to Oct. 1992.

DATUM.--Land surface is 25 ft above NGVD of 1929, from topographic map. Measuring point: Top of protective casing, 2.50 ft above land surface.

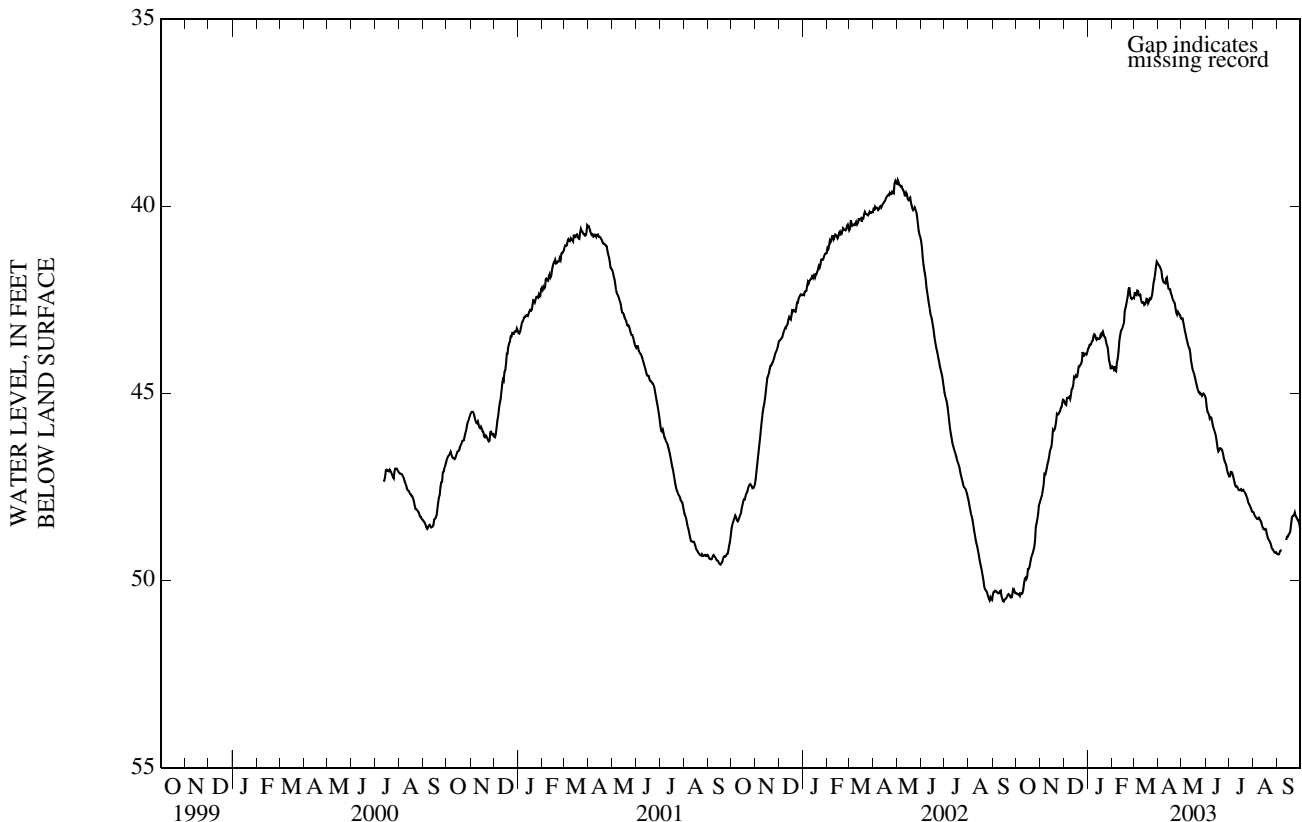
REMARKS.--Water level is affected by nearby pumping.

PERIOD OF RECORD.--Feb. 1990 to Oct. 1992, July 2000 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 32.21 ft below land surface, Mar. 18, 1990; lowest, 50.58 ft below land surface, Sept. 14-15, 2002.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	50.35	47.44	45.12	43.69	44.38	42.25	41.72	43.31	45.57	47.14	48.34	49.19
10	50.22	46.89	45.06	43.45	43.60	42.50	42.06	43.76	45.87	47.50	48.39	---
15	49.90	46.40	44.58	43.54	43.19	42.62	42.21	44.36	46.29	47.57	48.64	48.78
20	49.40	45.88	44.28	43.35	42.49	42.54	42.51	44.77	46.47	47.62	48.88	48.28
25	48.95	45.51	43.89	43.71	42.45	42.23	42.89	45.02	46.80	47.88	49.15	48.30
EOM	47.94	45.14	43.90	44.33	42.45	41.51	42.99	45.07	47.17	48.17	49.28	48.63
MEAN	49.56	46.38	44.59	43.66	43.25	42.31	42.28	44.25	46.23	47.60	48.71	---
MAX	50.40	47.86	45.31	44.33	44.41	42.64	42.99	45.07	47.17	48.17	49.28	---
MIN	47.94	45.14	43.89	43.35	42.17	41.48	41.56	43.00	45.15	47.09	48.18	---



GROUND-WATER LEVELS

CAPE MAY COUNTY--Continued

NJ-WRD Well Number, 09-0306. Site I.D., 390422074544701. Local I.D., Oyster 800 Obs. NJ Permit Number, 35-09239.

LOCATION.--Lat 39°04'22", long 74°54'46", Hydrologic Unit 02040206, at the Rutgers Oyster Laboratory near Green Creek, Middle Township. Owner: U. S. Geological Survey.

AQUIFER.--Atlantic City 800-foot sand of the Kirkwood Formation of Miocene age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 4 in., depth 709 ft, screened 656 to 666 ft.

INSTRUMENTATION.--Submersible logger pressure transducer--60 minute recording interval. Water-level recorder, Mar. 1990 to Dec. 1992.

DATUM.--Land surface is 6 ft above NGVD of 1929. Measuring point: Top of PVC casing, 3.05 ft above land surface.

REMARKS.--Water level is affected by tidal fluctuation.

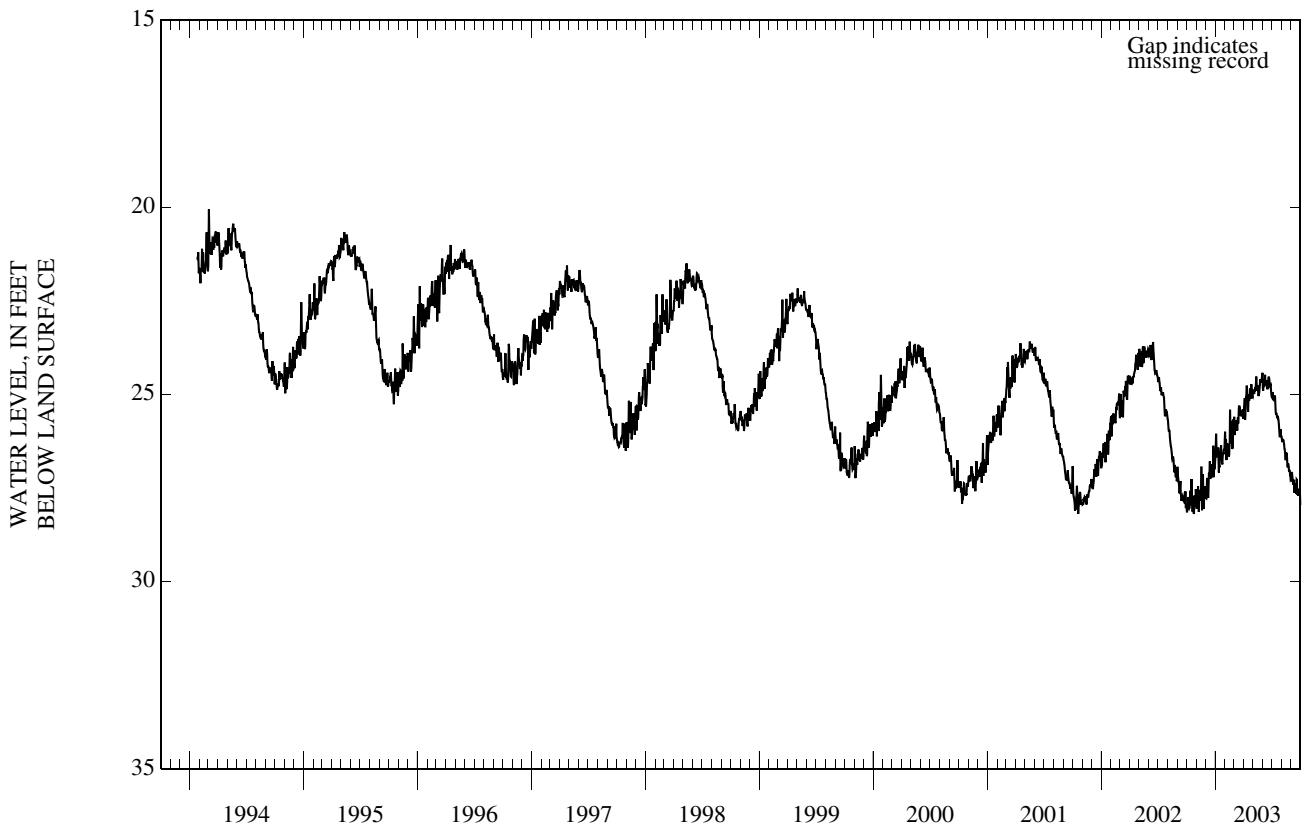
PERIOD OF RECORD.--Mar. 1990 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 17.74 ft below land surface, May 15, 1991; lowest, 29.21 ft below land surface, Oct. 6, 2002.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	27.91	27.78	27.26	26.68	26.73	25.86	25.10	24.99	24.64	25.13	26.23	27.21
10	28.02	27.81	27.45	26.42	26.36	25.97	25.00	24.84	24.69	25.04	26.44	27.35
15	27.78	27.85	27.25	26.67	26.40	25.78	25.41	24.90	24.73	25.49	26.68	27.56
20	28.13	27.71	26.87	26.70	26.30	25.39	25.12	25.02	24.58	25.64	26.92	27.68
25	28.05	27.91	26.37	26.56	26.43	25.49	24.99	24.69	24.75	26.05	27.07	27.66
EOM	27.63	27.48	26.75	26.21	25.66	25.52	25.08	24.48	25.05	26.11	27.26	27.95
MEAN	27.90	27.70	27.21	26.59	26.24	25.65	25.15	24.80	24.71	25.51	26.67	27.47
MAX	28.19	28.14	27.78	27.09	26.75	26.08	25.68	25.04	25.05	26.12	27.28	27.95
MIN	27.26	26.93	26.37	26.05	25.41	25.30	24.73	24.48	24.42	24.94	26.12	27.07

WTR YR 2003 MEAN 26.30 HIGH 24.42 JUN 1 LOW 28.19 OCT 24



GROUND-WATER LEVELS

CAPE MAY COUNTY--Continued

NJ-WRD Well Number, 09-0333. Site I.D., 390156074533401. Local I.D., Pump Pond N. Obs. NJ Permit Number, 37-04769.

LOCATION.--Lat 39°01'56", long 74°53'33", Hydrologic Unit 02040206, on the east side of Rt. 47, about 1,000 ft north of Pumping Station Pond, Middle Township. Owner: U. S. Geological Survey - Wildwood Water Department.

AQUIFER.--Holly Beach water-bearing zone.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 2 in., depth 43 ft, screened 28 to 38 ft.

INSTRUMENTATION.--Data collection platform with satellite telemetry--60 minute recording interval. Submersible logger pressure transducer, July 1992 to July 2002.

DATUM.--Land surface is 20 ft above NGVD of 1929. Measuring point: Top of protective casing, 3.60 ft above land surface.

REMARKS.--Water level is affected by nearby pumping.

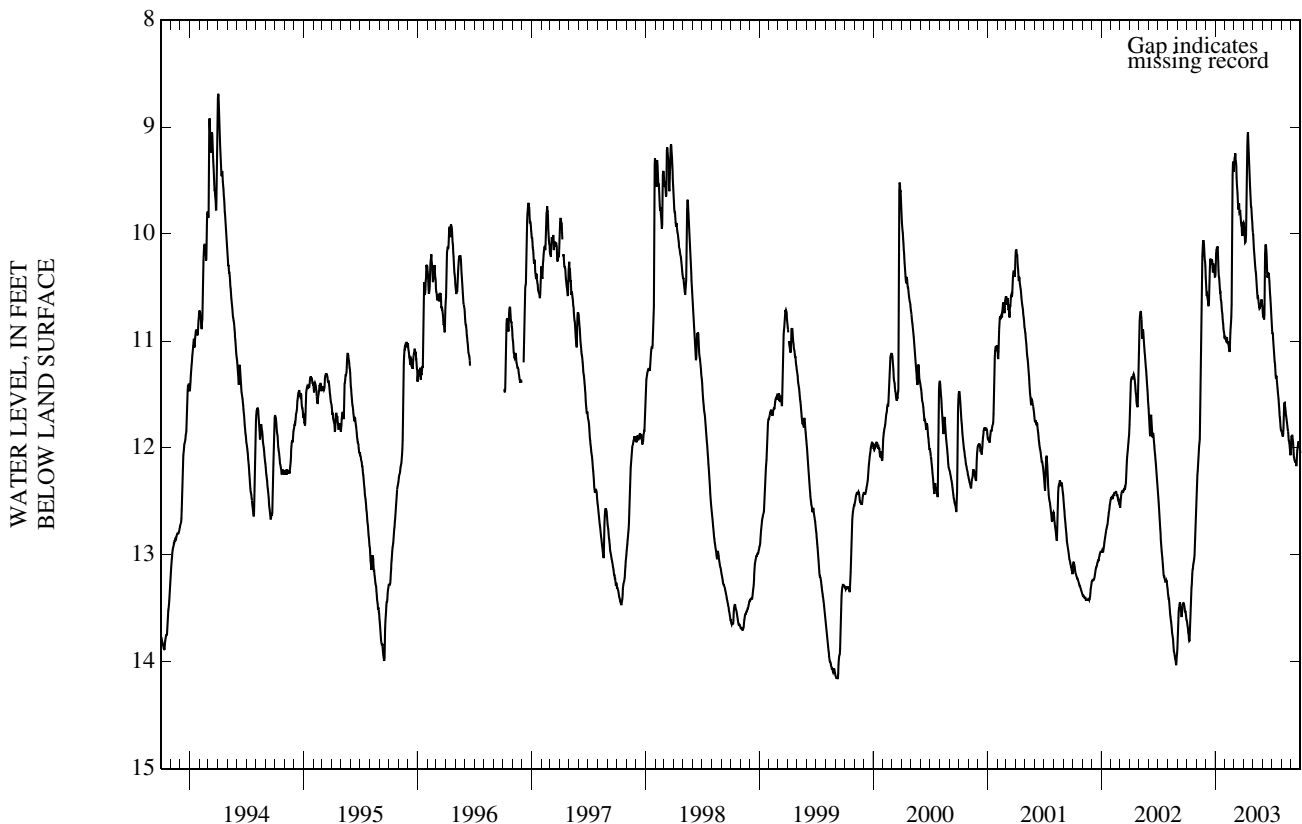
PERIOD OF RECORD.--July 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 8.68 ft below land surface, Apr. 2, 1994; lowest, 14.16 ft below land surface, Sept. 5-9, 1999.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.69	12.22	10.57	10.14	11.00	9.25	10.02	10.17	10.77	10.98	11.89	11.89
10	13.80	11.98	10.67	10.24	11.00	9.47	9.89	10.35	10.12	11.19	11.58	12.09
15	13.36	11.49	10.26	10.50	11.09	9.74	9.05	10.56	10.28	11.33	11.69	12.11
20	13.14	10.21	10.24	10.64	10.83	9.80	9.46	10.66	10.37	11.48	11.81	12.02
25	13.04	10.10	10.27	10.83	9.45	9.92	9.74	10.68	10.56	11.67	11.94	11.94
EOM	12.61	10.30	10.40	10.97	9.36	9.90	9.95	10.67	10.83	11.84	12.01	12.05
MEAN	13.33	11.20	10.41	10.52	10.67	9.66	9.67	10.46	10.49	11.36	11.82	12.01
MAX	13.80	12.49	10.67	10.97	11.10	10.02	10.08	10.70	10.83	11.84	12.07	12.17
MIN	12.61	10.06	10.23	10.12	9.32	9.25	9.05	9.99	10.10	10.88	11.58	11.88

WTR YR 2003 MEAN 10.97 HIGH 9.05 APR 15 LOW 13.80 OCT 9



## GROUND-WATER LEVELS

## CAPE MAY COUNTY--Continued

NJ-WRD Well Number, 09-0337. Site I.D., 390012074472001. Local I.D., M-1 N Wildwood 800 Obs. NJ Permit Number, 37-04660.

LOCATION.--Lat 39°00'12", long 74°47'19", Hydrologic Unit 02040302, on the north side of 2nd Ave., between Surf Ave. and Ocean Ave., North Wildwood City. Owner: U.S. Geological Survey - North Wildwood City.

AQUIFER.--Atlantic City 800-foot sand of the Kirkwood Formation of Miocene age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 4 in., depth 965 ft, screened 910 to 960 ft.

INSTRUMENTATION.--Submersible logger pressure transducer--60-minute recording interval. Water-level recorder, July 1992 to May 1998.

DATUM.--Land surface is 10 ft above NGVD of 1929, from topographic map. Measuring point: Top of recorder shelf, 4.40 ft above land surface.

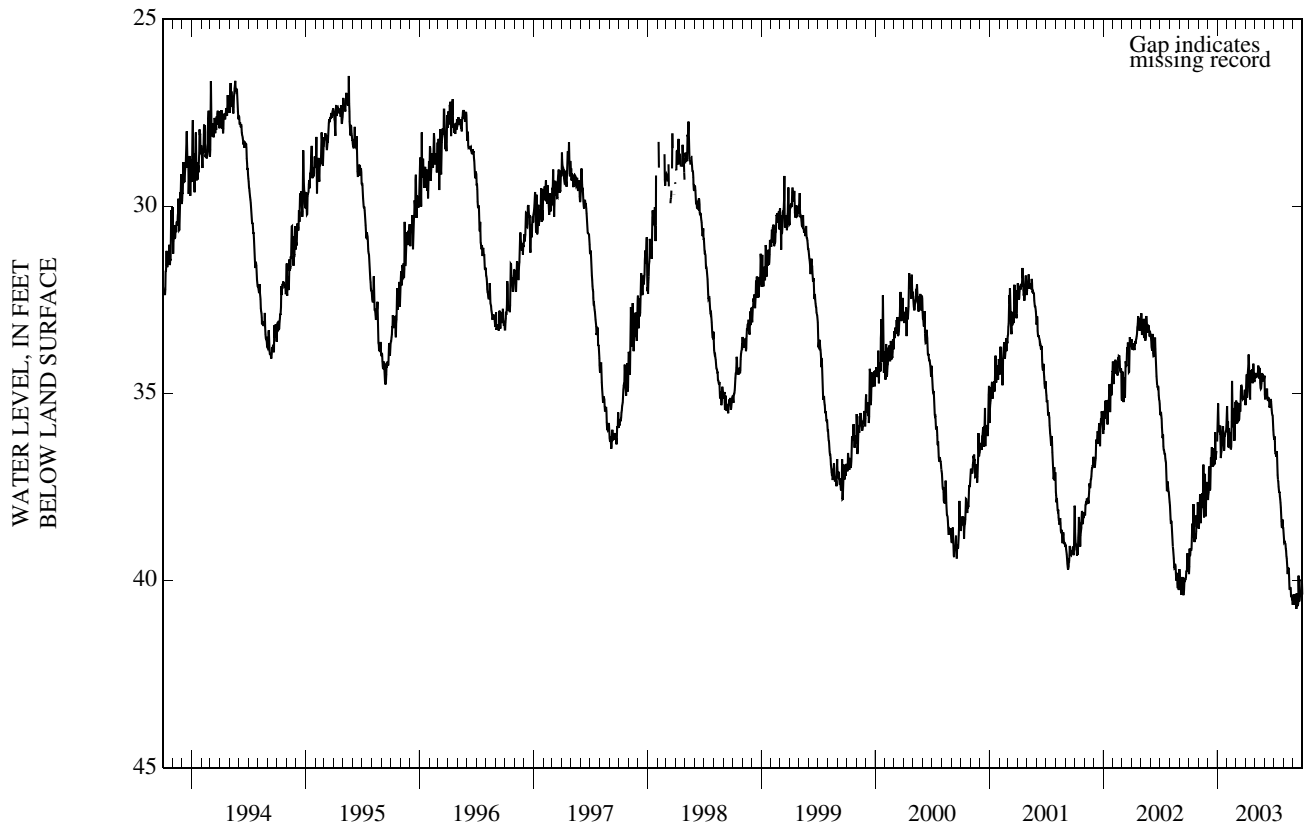
REMARKS.--Water level is affected by tidal fluctuation and nearby pumping.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 24.93 ft below land surface, May 20, 1993; lowest, 41.55 ft below land surface, Sept. 11, 2003.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	39.34	38.12	36.99	35.99	36.42	35.56	34.49	34.59	34.91	36.53	38.98	40.51
10	39.14	38.09	37.24	35.86	36.06	35.62	34.25	34.55	35.14	36.54	39.35	40.47
15	38.63	38.05	36.96	36.30	36.07	35.49	35.08	34.60	35.20	37.36	39.75	40.61
20	38.97	37.86	36.47	36.34	35.91	34.85	34.60	34.88	35.20	37.75	40.20	40.55
25	38.68	38.07	36.03	36.10	36.23	35.11	34.56	34.60	35.54	38.42	40.44	40.37
EOM	38.07	37.50	36.28	35.59	35.23	35.13	34.67	34.59	36.11	38.58	40.58	40.37
MEAN	38.83	37.90	---	36.08	35.87	35.27	34.63	34.57	35.25	37.41	39.74	40.42
MAX	39.83	38.61	---	36.73	36.50	35.80	35.31	34.88	36.11	38.59	40.65	40.76
MIN	37.91	36.90	---	35.27	34.66	34.79	33.96	34.25	34.53	36.14	38.70	39.86



GROUND-WATER LEVELS

CAPE MAY COUNTY--Continued

NJ-WRD Well Number, 09-510. Site I.D., 391145074520401. Local I.D., NJDEP Belleplain Mw 44. NJ Permit Number, 35-20735.

LOCATION.--Lat 39°11'45", long 74°52'03", Hydrologic Unit 02040206, in Belleplain State Forest, Old Robbins Trail, Dennis Township.  
 Owner: State of NJ - DEP.

AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 2 in., depth 11 ft, screened 6 to 11 ft.

INSTRUMENTATION.--Submersible logger pressure transducer--60 minute recording interval.

DATUM.--Land surface is 10 ft above NGVD of 1929, from topographic map. Measuring point: Top of protective casing, 1.95 ft above land surface.

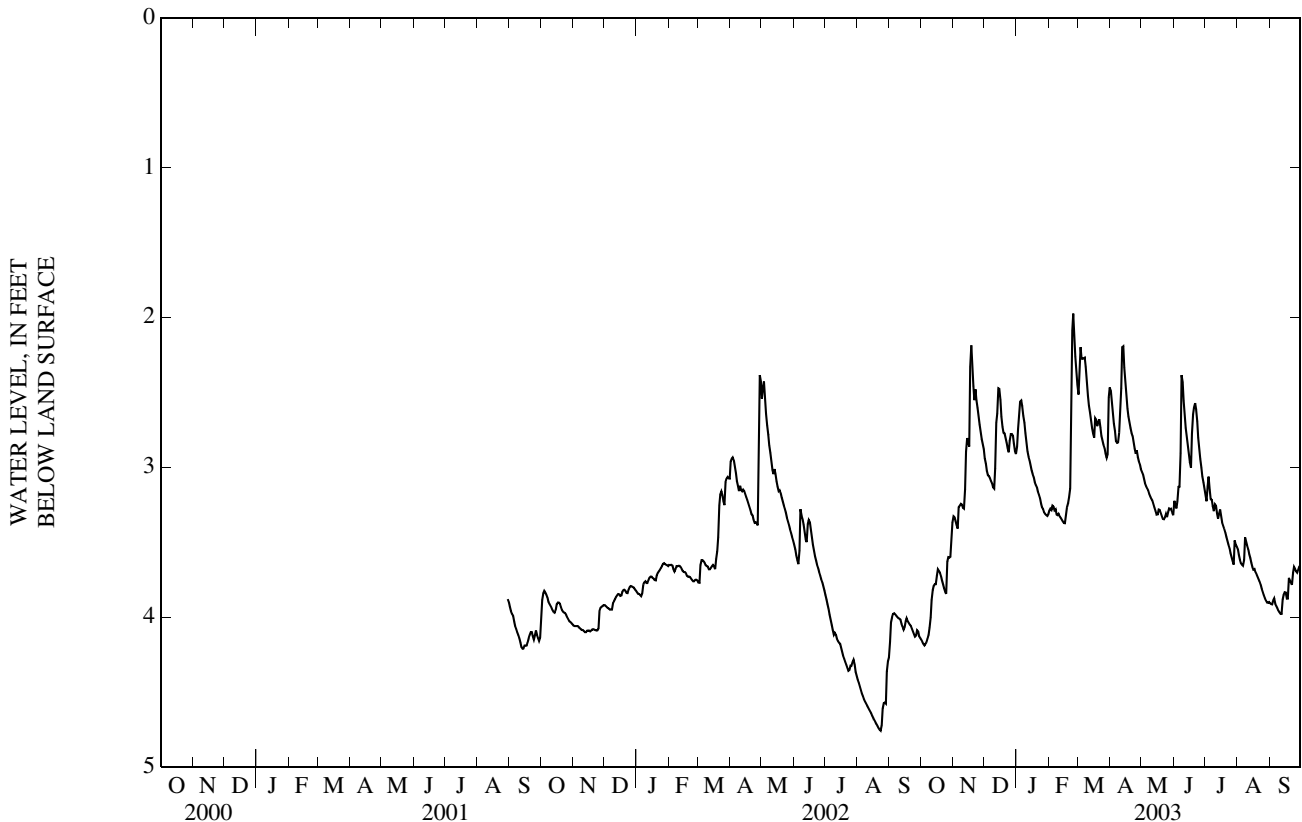
PERIOD OF RECORD.--Aug. 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.90 ft below land surface, Feb. 23, 2003; lowest, 4.76 ft below land surface, Aug. 22-24, 2002.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.18	3.41	3.06	2.55	3.26	2.28	2.76	3.13	3.13	3.15	3.65	3.88
10	4.00	3.27	3.14	2.84	3.31	2.52	2.64	3.21	2.56	3.25	3.52	3.97
15	3.78	2.83	2.48	3.02	3.37	2.77	2.43	3.32	2.92	3.28	3.67	3.83
20	3.73	2.46	2.77	3.13	3.20	2.70	2.74	3.33	2.60	3.44	3.73	3.75
25	3.85	2.66	2.82	3.27	2.14	2.85	2.91	3.33	2.88	3.57	3.83	3.68
EOM	3.37	2.88	2.91	3.31	2.45	2.47	3.01	3.32	3.14	3.53	3.90	3.66
MEAN	3.85	2.90	2.86	3.00	3.05	2.61	2.69	3.24	2.88	3.37	3.70	3.83
MAX	4.19	3.41	3.14	3.32	3.37	2.94	3.01	3.35	3.27	3.65	3.90	3.98
MIN	3.37	2.19	2.47	2.55	1.97	2.20	2.19	3.03	2.38	3.06	3.47	3.66

WTR YR 2003 MEAN 3.17 HIGH 1.97 FEB 24 LOW 4.19 OCT 4



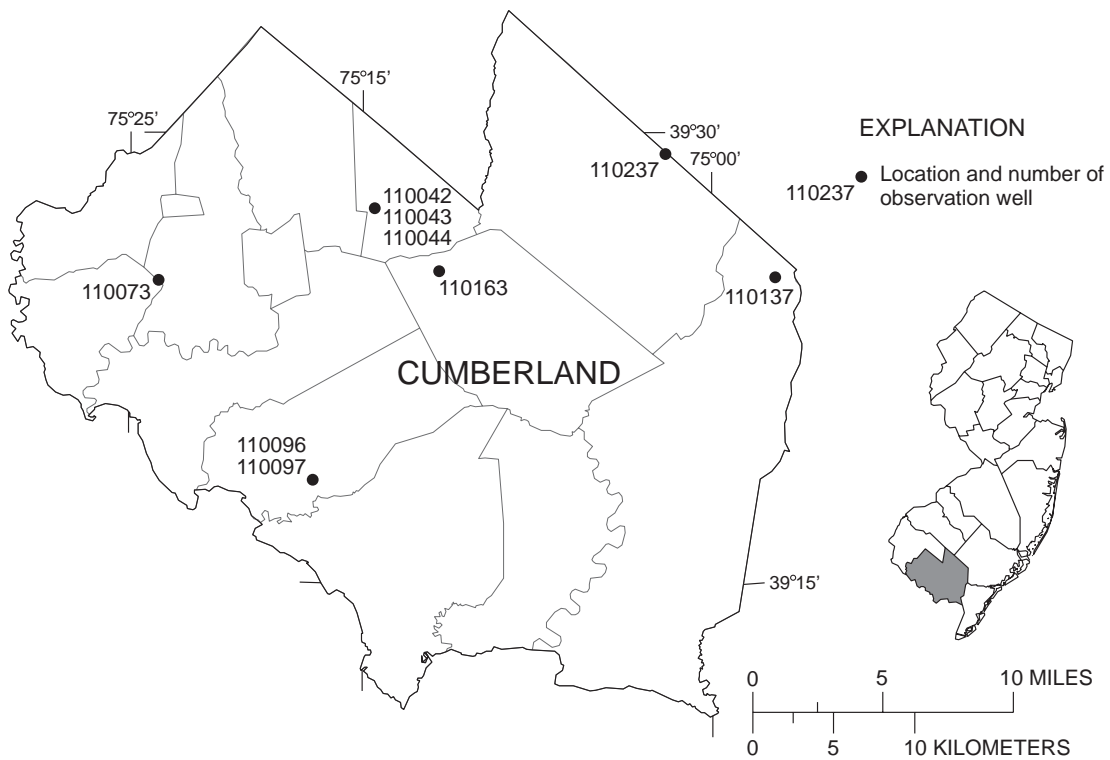
WATER RESOURCES DATA - NEW JERSEY, 2003

CUMBERLAND COUNTY

NJ-WRD well number	Local identifier	Township	Well depth	Aquifer	Type of data
110042	VOCATIONAL SCHOOL 2 OBS	DEERFIELD TWP	47	CKKD	DAILY
110043	VOCATIONAL SCHOOL 1 OBS	DEERFIELD TWP	138	CKKD	MANUAL
110044	VOCATIONAL SCHOOL 3 OBS	DEERFIELD TWP	376	PNPN	MANUAL
110073	SHEPPARDS 2 OBS	GREENWICH TWP	40	CKKD	MANUAL
110096	JONES ISLAND 2 OBS	LAWRENCE TWP	375	PNPN	DAILY
110097	JONES ISLAND 1 OBS	LAWRENCE TWP	171	CKKD	MANUAL
110137	RAGOVIN 2100 OBS	MAURICE RIVER TWP	2093	MRPA	DAILY
110163	FAIR GROUNDS 3 OBS	MILLVILLE CITY	473	PNPN	MANUAL
110237	NATURAL AREA 1 OBS	VINELAND CITY	81	CKKD	DAILY

Aquifer names

- CKKD - Kirkwood-Cohansey aquifer system
- MRPA - Potomac-Raritan-Magothy Aquifer
- PNPN - Piney Point aquifer



GROUND-WATER LEVELS

CUMBERLAND COUNTY--Continued

NJ-WRD Well Number, 11-0042. Site I.D., 392731075092401. Local I.D., Vocational School 2 Obs. NJ Permit Number, 35-01145.

LOCATION.--Lat 39°27'32", long 75°09'28", Hydrologic Unit 02040206, next to the Cumberland County Technical Education Center, Bridgeton Ave., Deerfield Township. Owner: Cumberland County.

AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 4 in., depth 47 ft, screened 42 to 47 ft.

INSTRUMENTATION.--Data collection platform with satellite telemetry--60 minute recording interval. Submersible logger pressure transducer, July 2000 to May 2001. Water-level recorder, July 1987 to July 2000. Periodic measurements, Mar. 1972 to July 1987.

DATUM.--Land surface is 81.77 ft above NGVD of 1929. Measuring point: Top of casing, 1.90 ft above land surface.

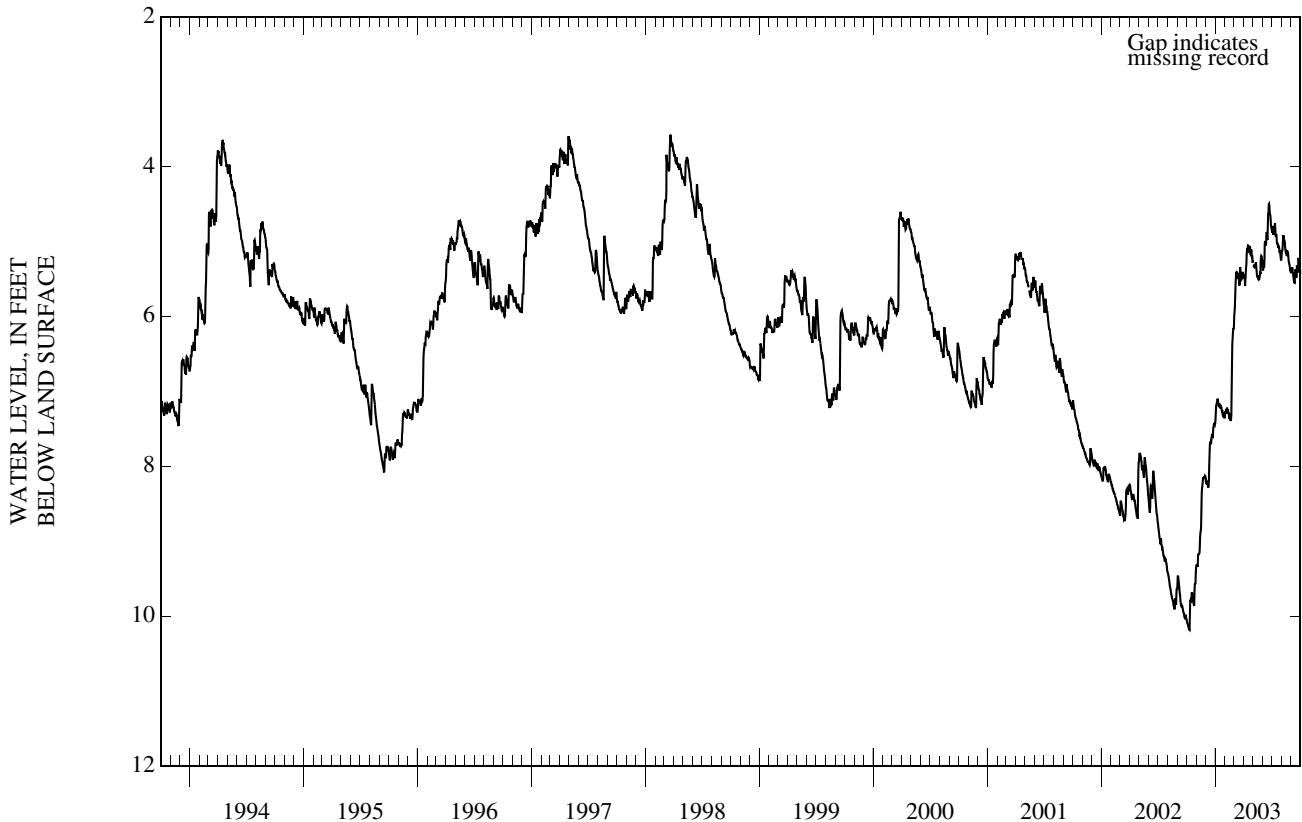
REMARKS.--Water level is occasionally affected by pumping from nearby irrigation well.

PERIOD OF RECORD.--Mar. 1972 to current year. Records from 1972 to 1987 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.40 ft below land surface, Apr. 21, 1972; lowest, 10.10 ft below land surface, Oct. 10, 2002.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.12	9.34	8.19	7.17	7.28	5.76	5.49	5.34	5.27	4.88	5.02	5.37
10	10.19	9.17	8.26	7.15	7.23	5.45	5.31	5.30	5.04	4.81	4.98	5.52
15	9.82	8.86	7.68	7.20	7.36	5.47	5.04	5.47	4.90	4.90	5.15	5.37
20	9.72	8.26	7.62	7.21	7.38	5.47	5.10	5.51	4.62	5.06	5.13	5.36
25	9.86	8.15	7.49	7.31	6.29	5.45	5.16	5.43	4.63	5.13	5.28	5.22
EOM	9.35	8.13	7.43	7.33	6.17	5.44	5.28	5.24	4.82	5.24	5.42	5.43
MEAN	9.84	8.71	7.82	7.23	7.08	5.54	5.24	---	4.92	4.98	5.15	5.39
MAX	10.19	9.34	8.28	7.38	7.39	6.16	5.59	---	5.38	5.24	5.42	5.55
MIN	9.35	8.13	7.42	7.10	6.17	5.34	5.04	---	4.50	4.75	4.91	5.22



GROUND-WATER LEVELS

CUMBERLAND COUNTY--Contintued

NJ-WRD Well Number, 11-0043. Site I.D., 392732075092401. Local I.D., Vocational School 1 Obs. NJ Permit Number, 35-01146.

LOCATION.--Lat 39°27'32", long 75°09'28", Hydrologic Unit 02040206, next to the Cumberland County Technical Education Center, Bridgeton Ave., Deerfield Township. Owner: Cumberland County.

AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 4 in., depth 138 ft, screened 133 to 138 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape.

DATUM.--Land surface is 82.14 ft above NGVD of 1929. Measuring point: Top of base of aluminum locking cap, 0.51 ft above land surface.

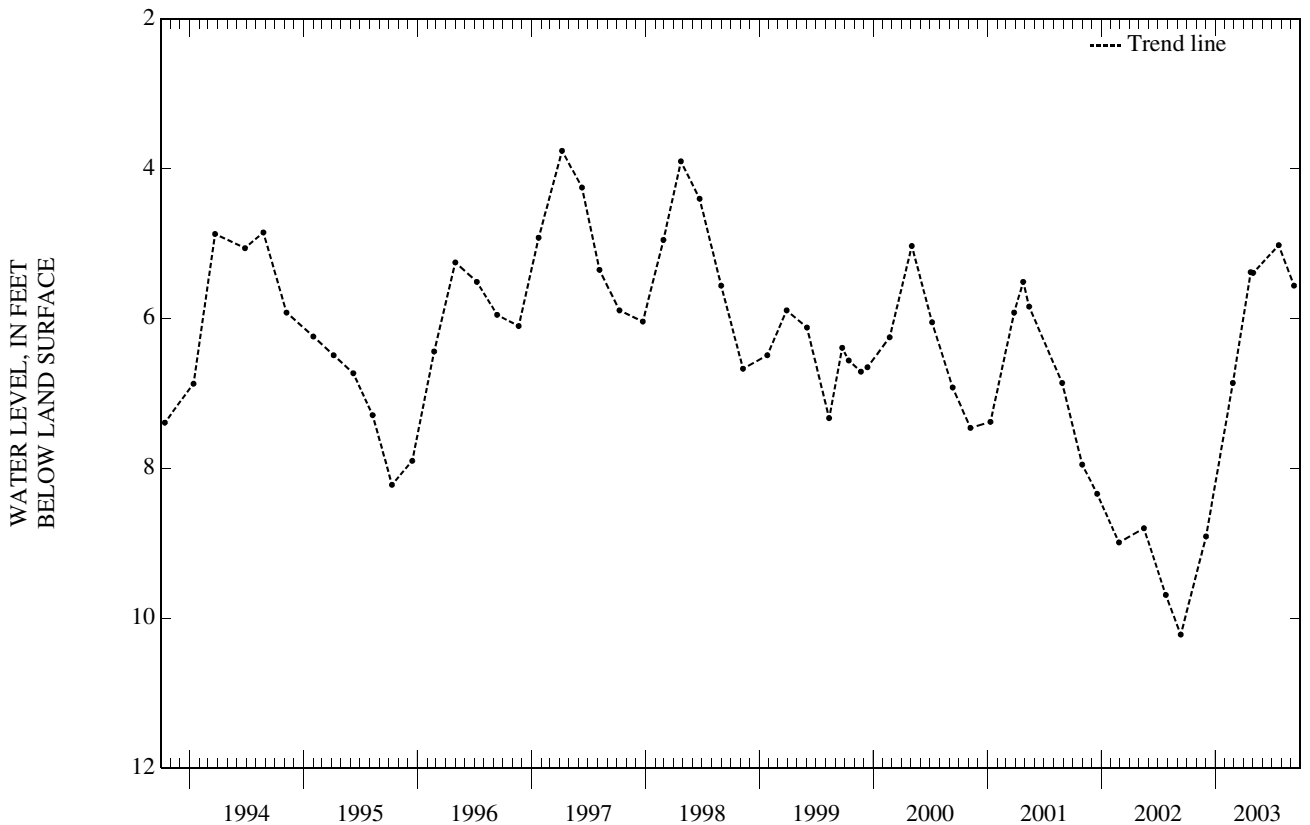
REMARKS.--Water level is occasionally affected by pumping from nearby wells.

PERIOD OF RECORD.--Mar. 1972 to current year. Records for 1972 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.31 ft below land surface, Feb. 8, 1973; lowest, 10.22 ft below land surface, Sept. 12, 2002.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 02	8.91	FEB 26	6.86	APR 24	5.38	MAY 02	5.39	JUL 23	5.02	SEP 10	5.56
WATER YEAR 2003		HIGHEST	5.02	JUL 23, 2003	LOWEST	8.91	DEC 02, 2002				





GROUND-WATER LEVELS

CUMBERLAND COUNTY--Continued

NJ-WRD Well Number, 11-0044. Site I.D., 392733075092401. Local I.D., Vocational School 3 Obs. NJ Permit Number, 35-01197.

LOCATION.--Lat 39°27'32", long 75°09'28", Hydrologic Unit 02040206, next to the Cumberland County Technical Education Center, Bridgeton Ave., Deerfield Township. Owner: Cumberland County.

AQUIFER.--Piney Point aquifer of Eocene age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 4 in., depth 376 ft, screened 361 to 376 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape.

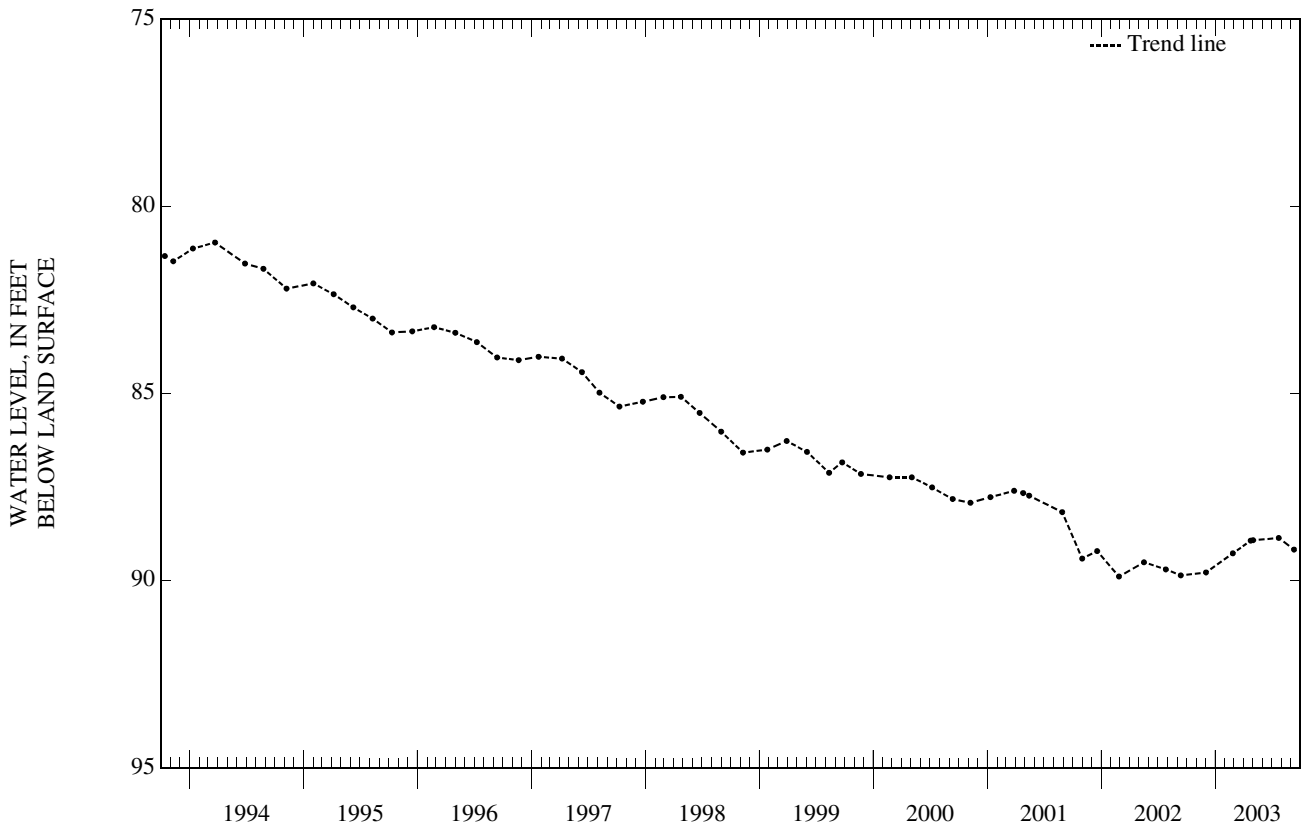
DATUM.--Land surface is 81.95 ft above NGVD of 1929. Measuring point: Top of base of aluminum locking cap, 0.31 ft above land surface.

PERIOD OF RECORD.--July 1972 to current year. Records for 1972 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 58.79 ft below land surface, July 31, 1972; lowest, 89.89 ft below land surface, Feb. 26, 2002.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 02	89.78	FEB 26	89.27	APR 24	88.93	MAY 02	88.92	JUL 23	88.86	SEP 10	89.17
WATER YEAR 2003 HIGHEST		88.86	JUL 23, 2003 LOWEST		89.78	DEC 02, 2002					



GROUND-WATER LEVELS

CUMBERLAND COUNTY--Continued

NJ-WRD Well Number, 11-0073. Site I.D., 392508075184601. Local I.D., Sheppards 2 Obs.

LOCATION.--Lat 39°25'08", long 75°18'45", Hydrologic Unit 02040206, at the Holly Shores Girl Scout Camp at Sheppards Mill, Greenwich Rd., Hopewell Township. Owner: Cumberland County.

AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 4 in., depth 40 ft, screened 35 to 40 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape.

DATUM.--Land surface is 37.35 ft above NGVD of 1929. Measuring point: Top of base of aluminum locking cap, 2.61 ft above land surface.

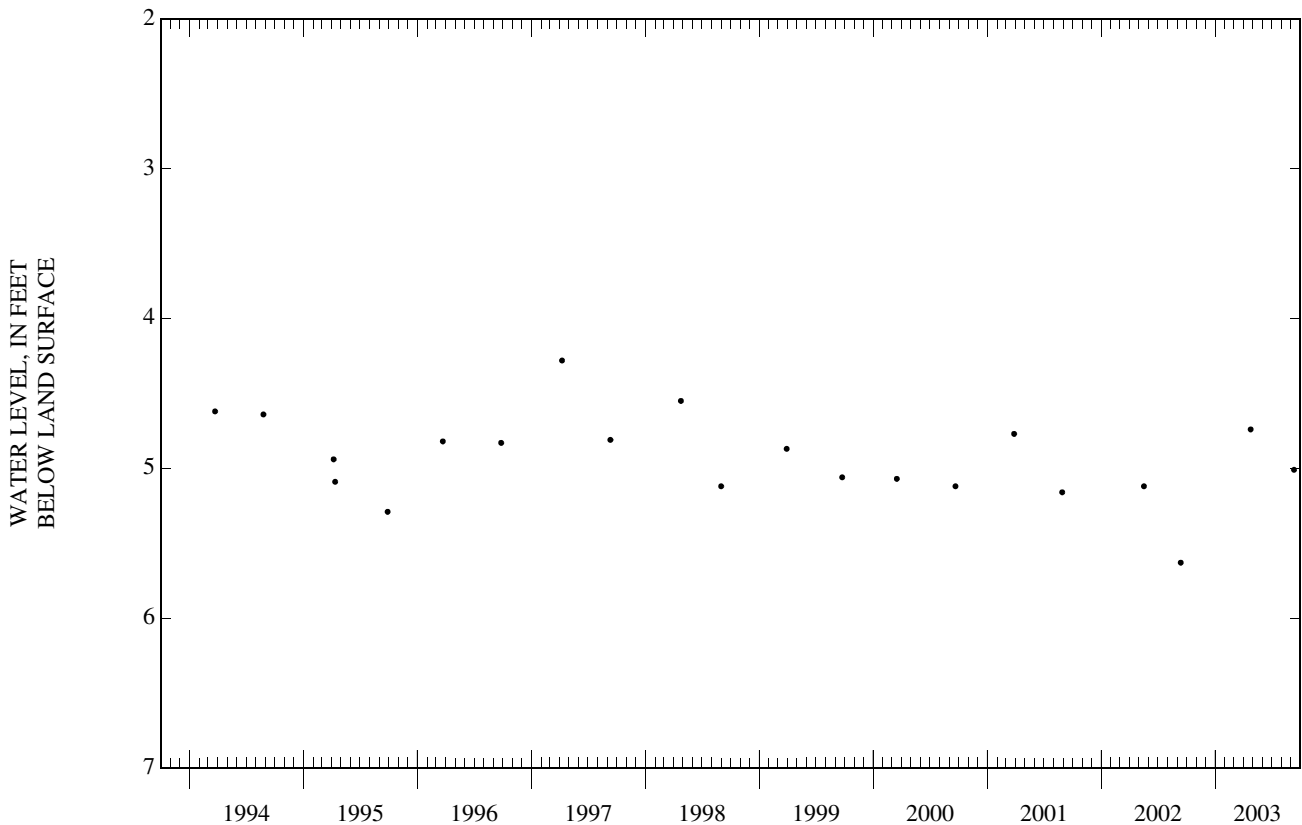
REMARKS.--Water level is affected by the stage of Sheppards Mill Pond.

PERIOD OF RECORD.--Mar. 1973 to current year. Records for 1973 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.00 ft below land surface, May 4, 1973; lowest, 5.63 ft below land surface, Sept. 12, 2002.

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

DATE	WATER LEVEL	DATE	WATER LEVEL
APR 24	4.74	SEP 10	5.01



GROUND-WATER LEVELS

CUMBERLAND COUNTY--Continued

NJ-WRD Well Number, 11-0096. Site I.D., 391828075120902. Local I.D., Jones Island 2 Obs. NJ Permit Number, 34-00852.

LOCATION.--Lat 39°18'29", long 75°12'07", Hydrologic Unit 02040206, in Nantuxent Wildlife Management Area, about 1.7 mi south of Cedarville, Lawrence Township. Owner: Cumberland County.

AQUIFER.--Piney Point aquifer of Eocene age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 4 in., depth 375 ft, screened 365 to 375 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval. Periodic measurements, Mar. 1972 to Mar. 1977.

DATUM.--Land surface is 10.10 ft above NGVD of 1929. Measuring point: Top of recorder shelf, 1.90 ft above land surface.

REMARKS.--Water level is affected by tidal fluctuation.

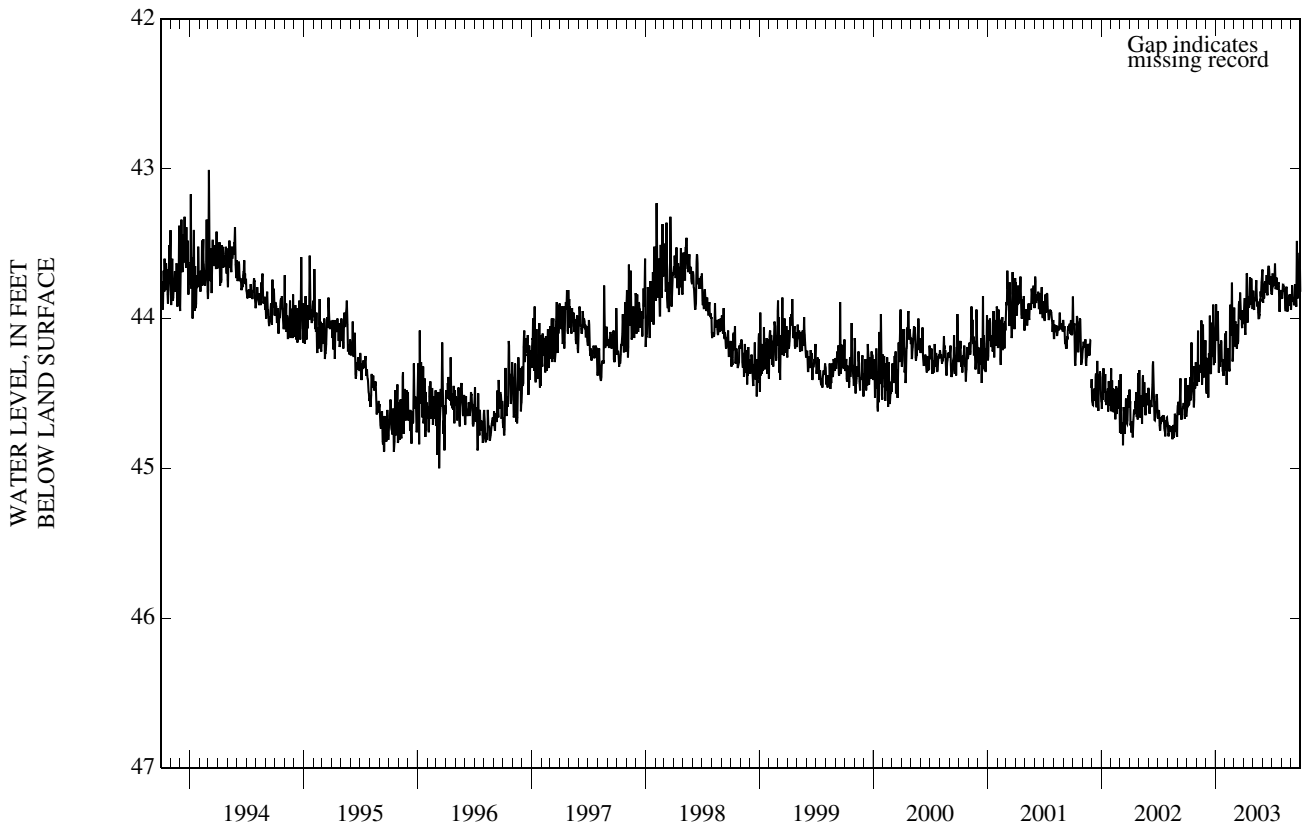
PERIOD OF RECORD.--Mar. 1972 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.27 ft below land surface, Apr. 11, 1972; lowest, 45.04 ft below land surface, Mar. 10, 1996.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	44.45	44.36	44.27	44.15	44.33	44.03	43.86	43.94	43.78	43.77	43.78	43.84
10	44.54	44.33	44.42	44.03	44.20	44.19	43.89	43.87	43.83	43.70	43.81	43.86
15	44.48	44.36	44.22	44.28	44.34	44.15	43.96	43.92	43.76	43.78	43.91	43.83
20	44.46	44.38	44.03	44.16	44.11	43.92	43.91	44.00	43.66	43.81	43.95	43.82
25	44.54	44.38	43.91	44.35	44.29	44.00	43.86	43.89	43.77	43.95	43.90	43.72
EOM	44.33	44.15	44.19	44.26	44.08	44.02	43.94	43.69	43.83	43.86	43.94	43.82
MEAN	44.47	44.31	44.27	44.20	44.17	44.04	43.90	43.87	43.77	43.79	43.86	43.80
MAX	44.63	44.45	44.53	44.38	44.44	44.20	44.11	44.00	43.90	43.96	43.95	43.92
MIN	44.16	44.01	43.91	43.91	43.76	43.83	43.70	43.69	43.65	43.63	43.78	43.48

WTR YR 2003 MEAN 44.04 HIGH 43.48 SEP 19 LOW 44.63 OCT 1



GROUND-WATER LEVELS

CUMBERLAND COUNTY--Continued

NJ-WRD Well Number, 11-0097. Site I.D., 391830075120801. Local I.D., Jones Island 1 Obs. NJ Permit Number, 34-00845.

LOCATION.--Lat 39°18'29", long 75°12'07", Hydrologic Unit 02040206, in Nantuxent Wildlife Management Area, about 1.7 mi south of Cedarville, Lawrence Township. Owner: Cumberland County.

AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 4 in., depth 171 ft, screened 166 to 171 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape.

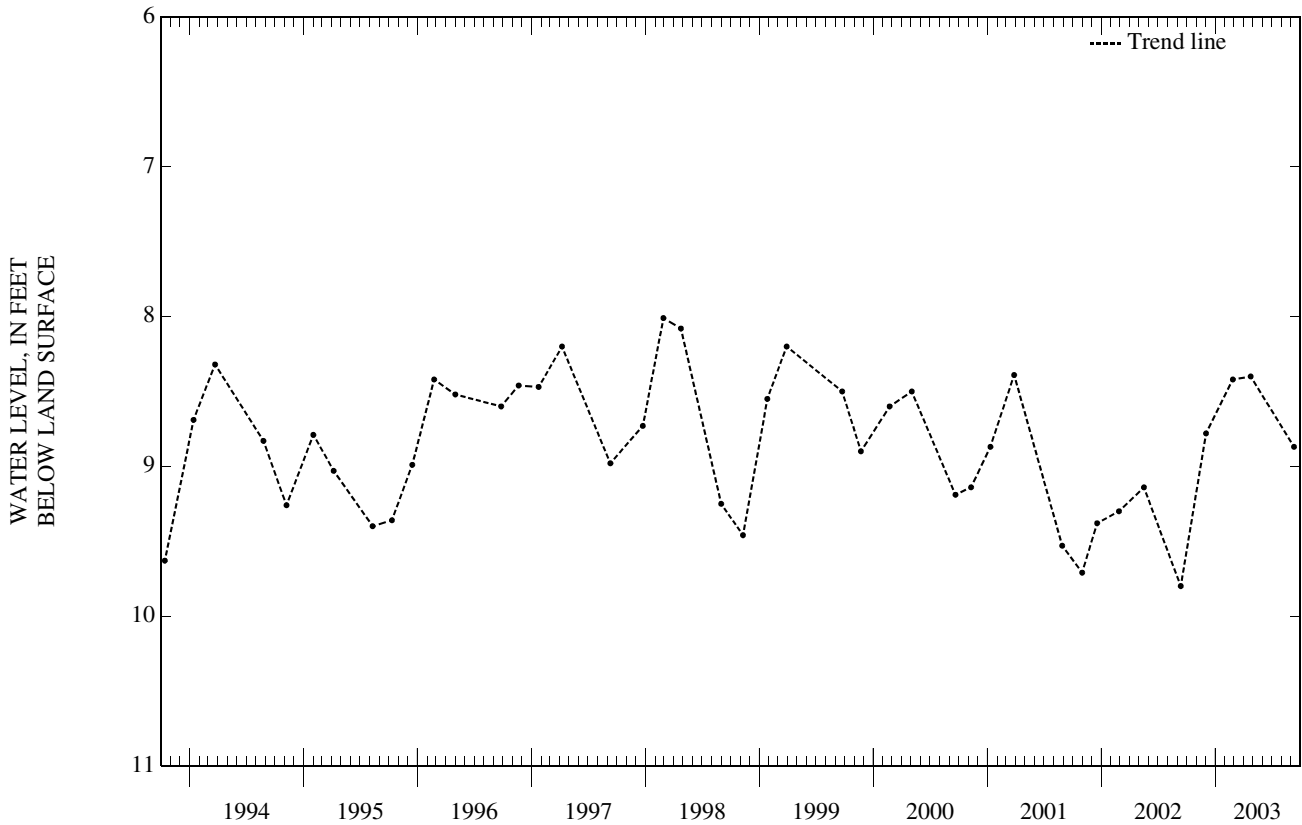
DATUM.--Land surface is 10.10 ft above NGVD of 1929. Measuring point: Top of base of aluminum locking cap, 3.30 ft above land surface.

PERIOD OF RECORD.--Mar. 1972 to current year. Records for 1972 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.86 ft below land surface, Feb. 8, 1973; lowest, 10.13 ft below land surface, Sept. 22, 1986.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 02	8.78	FEB 26	8.42	APR 24	8.40	SEP 10	8.87
WATER YEAR 2003 HIGHEST		8.40	APR 24, 2003 LOWEST		8.87	SEP 10, 2003	



GROUND-WATER LEVELS

CUMBERLAND COUNTY--Continued

NJ-WRD Well Number, 11-0137. Site I.D., 392512074521206. Local I.D., Ragovin 2100 Obs.

LOCATION.--Lat 39°25'14", long 74°52'16", Hydrologic Unit 02040302, in wooded area off Harriet Ave., 1.5 mi southeast of Milmay, Maurice River Township. Owner: Sam DeRosa.

AQUIFER.--Potomac-Raritan-Magothy aquifer system, undifferentiated, of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 5 in., depth 2,093 ft, perforated casing 2,083 to 2,093 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval. Periodic measurements, Oct. 1974 to Mar. 1977.

DATUM.--Land surface is 85.00 ft above NGVD of 1929, by altimeter. Measuring point: Top of recorder shelf, 2.40 ft above land surface.

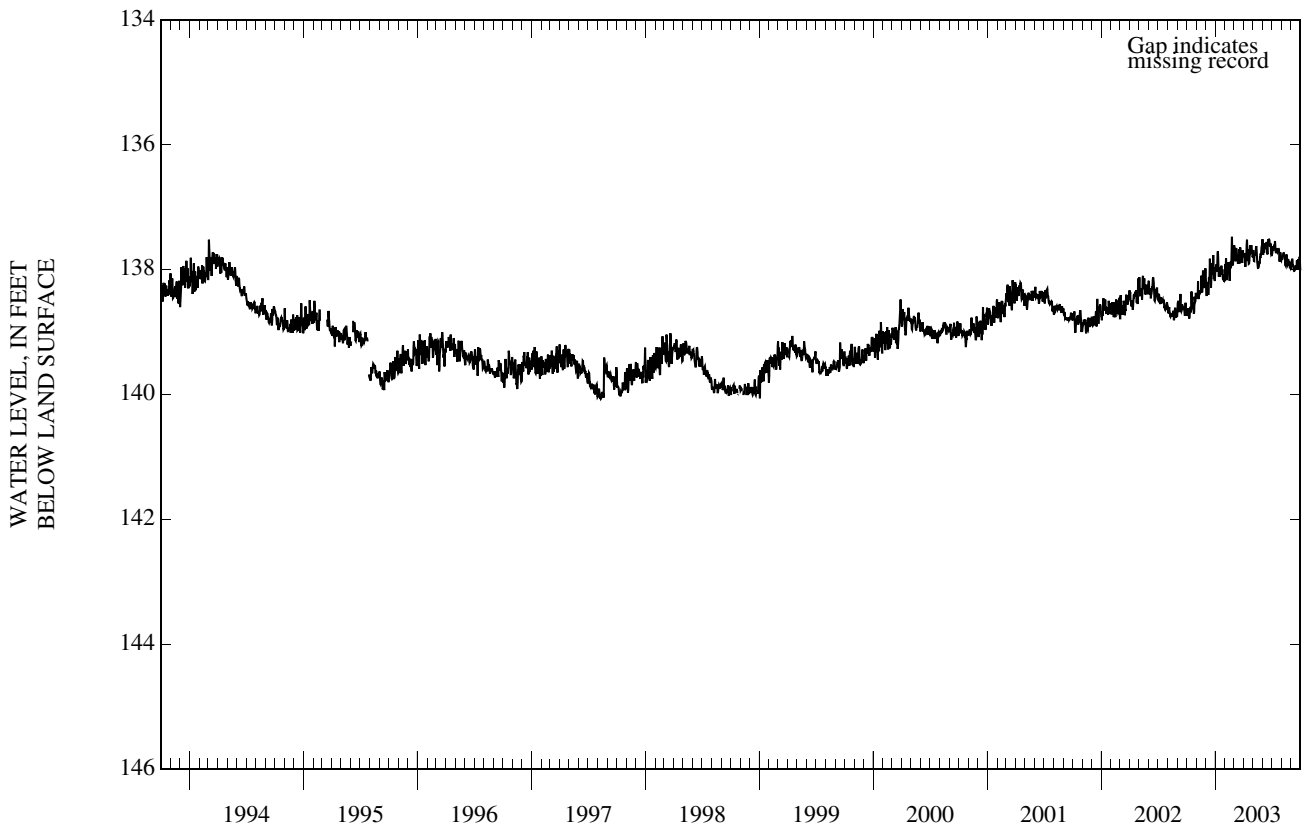
REMARKS.--This well is perforated in a saline zone of the aquifer system. A correction is needed to obtain the equivalent freshwater head. The well was pumped on July 28, 1995. After pumping, the water-level did not return to its previous level. Therefore, the perforated area may have been partially clogged prior to the pumping.

PERIOD OF RECORD.--Oct. 1974 to current year. Records for 1974 to 1977 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 115.82 ft below land surface, Apr. 3, 1975; lowest, 140.11 ft below land surface, Jan. 1-2, 1999.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	138.62	138.47	138.22	138.04	138.03	137.65	137.74	137.86	137.66	137.66	137.77	137.86
10	138.77	138.36	138.31	137.82	137.88	137.80	137.77	137.75	137.67	137.63	137.78	138.02
15	138.65	138.36	137.98	138.08	138.09	137.88	137.79	137.88	137.60	137.72	137.90	137.95
20	138.52	138.34	137.89	137.94	137.96	137.83	137.85	137.95	137.53	137.71	137.93	137.95
25	138.67	138.26	137.77	138.15	137.90	137.81	137.71	137.81	137.63	137.84	137.91	137.91
EOM	138.40	137.98	138.08	138.11	137.80	137.73	137.80	137.60	137.75	137.85	137.99	138.01
MEAN	138.60	138.30	138.13	138.02	137.93	137.77	137.76	137.79	137.63	137.70	137.85	137.93
MAX	138.79	138.47	138.42	138.19	138.18	137.90	137.95	137.97	137.76	137.87	137.99	138.02
MIN	138.35	137.98	137.77	137.71	137.47	137.61	137.52	137.60	137.51	137.54	137.72	137.79
WTR YR 2003	MEAN 137.95	HIGH 137.47	FEB 23	LOW 138.79	OCT 9							



GROUND-WATER LEVELS

CUMBERLAND COUNTY--Continued

NJ-WRD Well Number, 11-0163. Site I.D., 392528075064101. Local I.D., Fair Grounds 3 Obs. NJ Permit Number, 35-01196.

LOCATION.--Lat 39°25'26", long 75°06'42", Hydrologic Unit 02040206, at the Cumberland County Fairgrounds, between Carmel and Morais Avenues, Millville City. Owner: Cumberland County.

AQUIFER.--Piney Point aquifer of Eocene age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 4 in., depth 473 ft, screened 463 to 473 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape.

DATUM.--Land surface is 80 ft above NGVD of 1929, from topographic map. Measuring point: Top of base of aluminum locking cap, 3.34 ft above land surface.

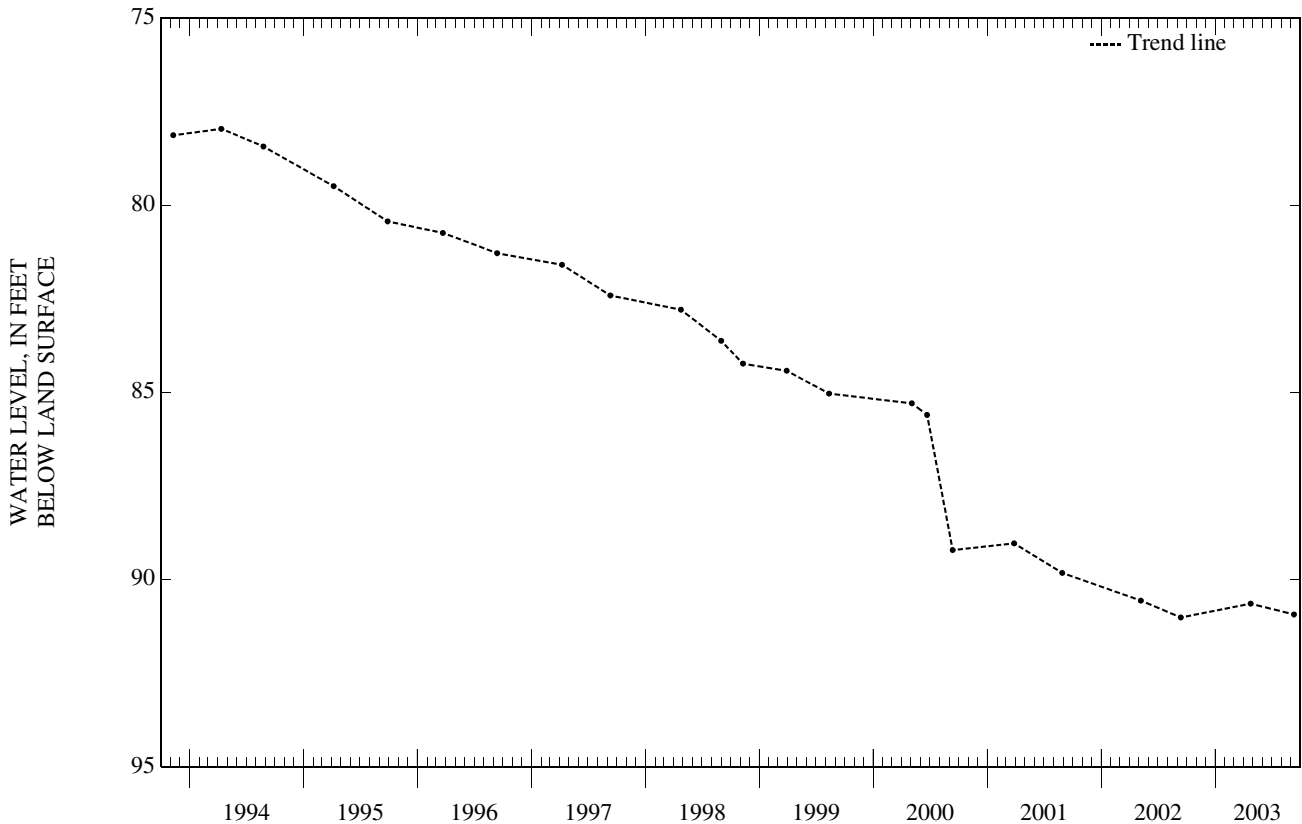
REMARKS.--The well was pumped on Sept. 11, 2000. After pumping, the water-level did not return to its previous level. Therefore, the well screen may have been partially clogged prior to the pumping.

PERIOD OF RECORD.--May 1973 to current year. Records for 1973 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 54.62 ft below land surface, May 4, 1973; lowest, 91.01 ft below land surface, Sept. 12, 2002.

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

DATE	WATER LEVEL	DATE	WATER LEVEL
APR 24	90.64	SEP 10	90.93



GROUND-WATER LEVELS

CUMBERLAND COUNTY--Continued

NJ-WRD Well Number, 11-0237. Site I.D., 392920074570001. Local I.D., Natural Area 1 Obs. NJ Permit Number, 35-01165.

LOCATION.--Lat 39°29'20", long 74°56'59", Hydrologic Unit 02040206, in the Willow Oak Natural Area, about 600 ft east of the intersection of Maple Ave. and Lincoln Ave., Vineland City. Owner: Cumberland County.

AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 4 in., depth 81 ft, screened 76 to 81 ft.

INSTRUMENTATION.--Submersible logger pressure transducer--60 minute recording interval. Periodic measurements, Apr. 1972 to Mar. 2001.

DATUM.--Land surface is 88.00 ft above NGVD of 1929, by altimeter. Measuring point: Top of base of aluminum locking cap, 0.98 ft above land surface.

REMARKS.--Water level is affected by pumping from nearby irrigation wells.

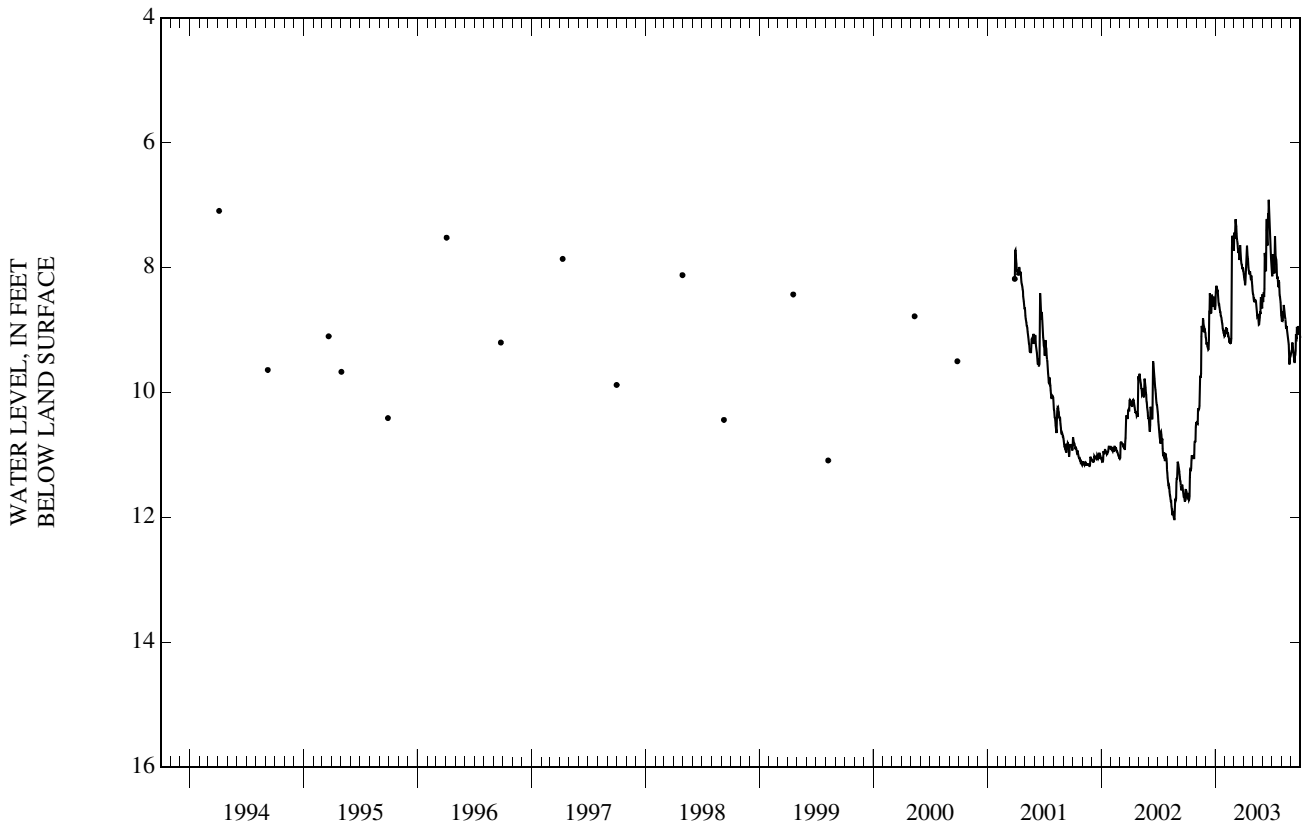
PERIOD OF RECORD.--Apr. 1972 to current year. Records for 1972 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.88 ft below land surface, June 21, 2003; lowest, 12.06 ft below land surface, Aug. 22, 2002.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.66	10.51	9.20	8.35	8.98	7.43	8.21	8.53	8.39	7.93	8.83	9.20
10	11.66	10.26	9.31	8.48	9.04	7.45	7.94	8.53	7.97	7.73	8.70	9.45
15	11.23	9.76	8.51	8.67	9.19	7.73	7.86	8.78	7.39	7.86	8.95	9.33
20	11.03	9.01	8.57	8.79	9.20	7.85	8.10	8.91	7.19	8.21	9.07	9.00
25	11.05	8.96	8.49	8.99	7.52	7.93	8.20	8.75	7.49	8.35	9.40	8.97
EOM	10.49	9.04	8.66	9.09	7.71	8.02	8.37	8.65	8.00	8.77	9.38	9.12
MEAN	11.21	9.62	8.81	8.70	8.76	7.69	8.07	8.64	7.76	8.11	9.02	9.20
MAX	11.73	10.51	9.31	9.10	9.22	8.02	8.37	8.91	8.55	8.77	9.55	9.51
MIN	10.49	8.81	8.41	8.29	7.49	7.22	7.65	8.41	6.91	7.50	8.60	8.93

WTR YR 2003 MEAN 8.80 HIGH 6.91 JUN 21 LOW 11.73 OCT 8

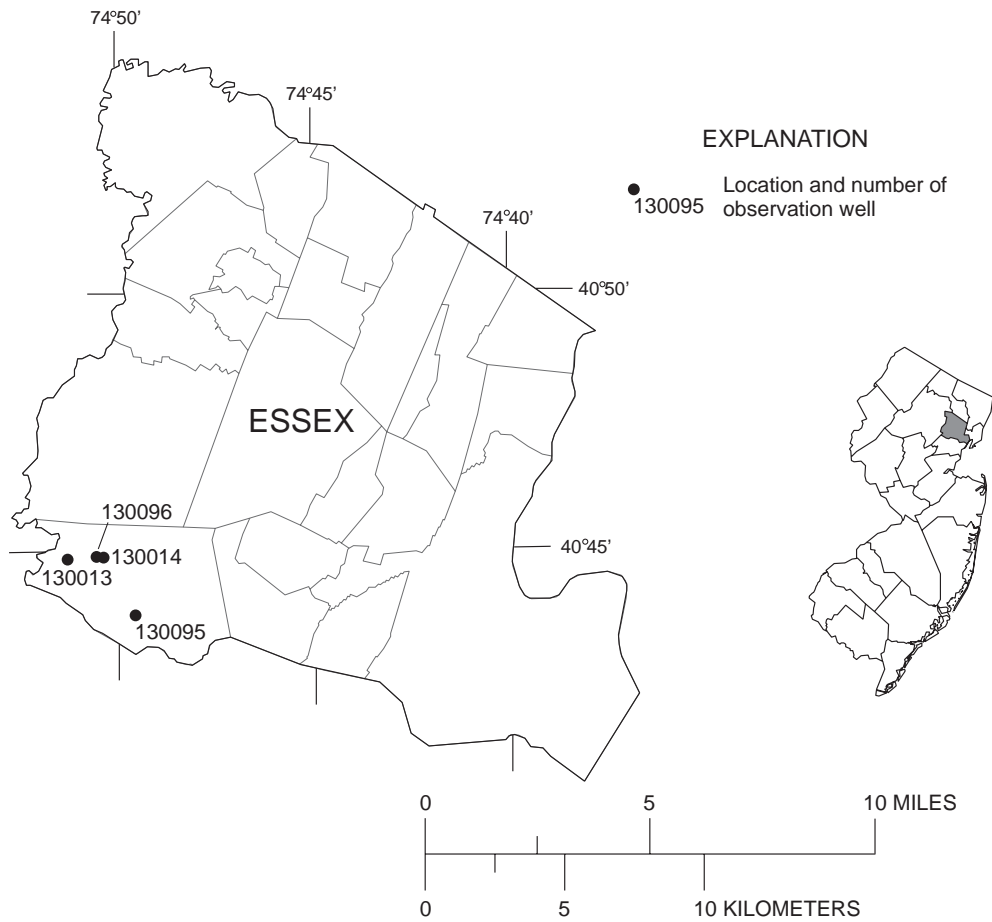


WATER RESOURCES DATA - NEW JERSEY, 2003

ESSEX COUNTY

NJ-WRD well number	Local identifier	Township	Well depth	Aquifer	Type of data
130013	CANOE BROOK 30 OBS	MILLBURN TWP	130	SFDF	MANUAL
130014	NEUTRAL ZONE OBS	MILLBURN TWP	64	SFDF	MANUAL
130095	CHRIST CHURCH 2 OBS	MILLBURN TWP	200	SFDF	MANUAL
130096	EAST ORANGE SHALLOW OBS	MILLBURN TWP	84	SFDF	DAILY

Aquifer names  
 SFDF - Stratified drift





GROUND-WATER LEVELS

ESSEX COUNTY

NJ-WRD Well Number, 13-0013. Site I.D., 404452074211601. Local I.D., Canoe Brook 30 Obs.

LOCATION.--Lat 40°44'52", long 74°21'15", Hydrologic Unit 02030103, about 0.3 mi north of the New Jersey - American Water Company's Canoe Brook pumping station, near Chatham, Millburn Township. Owner: New Jersey - American Water Company.

AQUIFER.--Stratified drift of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation well, depth 130 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape. Water-level recorder, Apr. 1977 to July 1984. Periodic measurements, Apr. 1975 to Apr. 1977. Water-level recorder, Sept. 1925 to Apr. 1975.

DATUM.--Land surface is 170.00 ft above NGVD of 1929. Measuring point: Top of well shelter shelf, 6.57 ft above land surface.

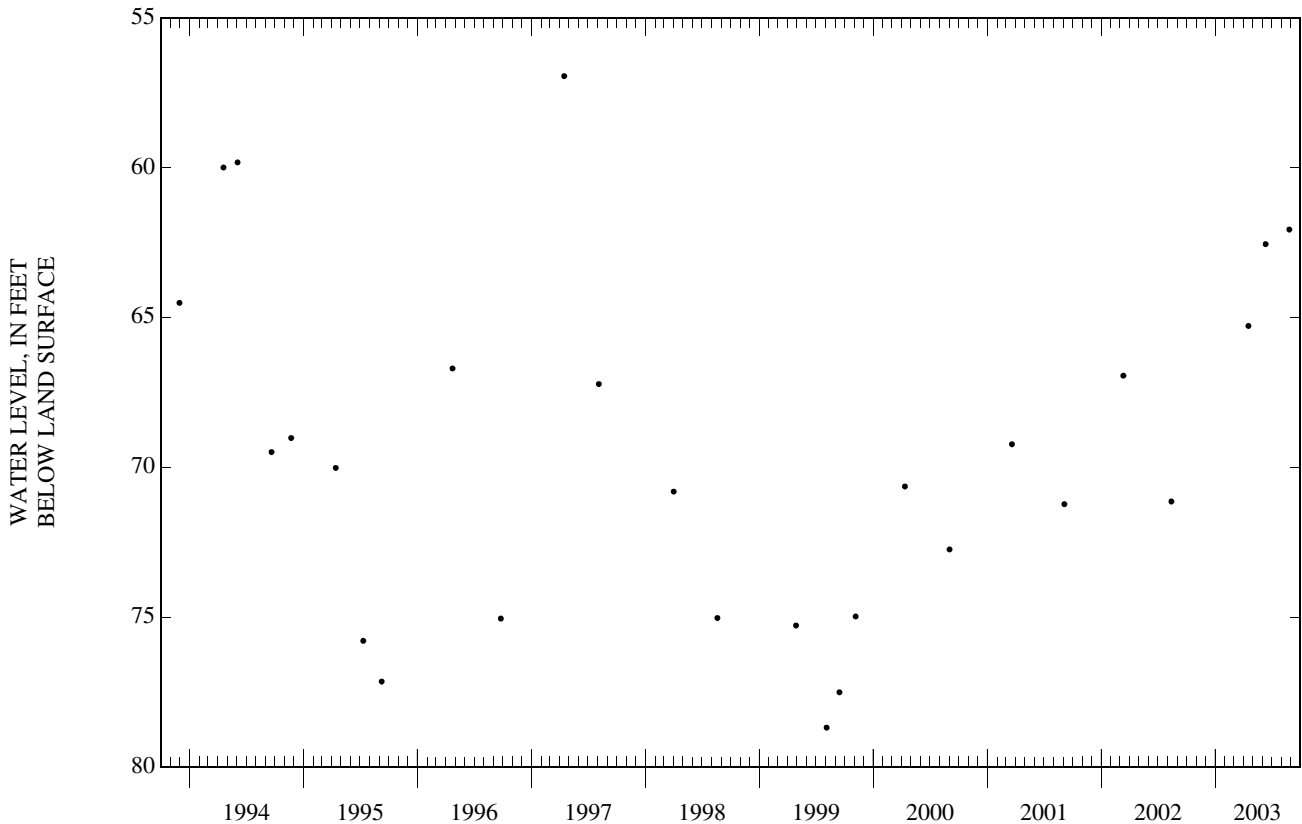
REMARKS.--Water level is affected by nearby pumping.

PERIOD OF RECORD.--Sept. 1925 to current year. Records for 1985 to 1989 are unpublished and are available in files of the New Jersey District office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.25 ft below land surface, Aug. 25, 1931; lowest, 86.70 ft below land surface, Oct. 23, 1977.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
APR 17	65.28	JUN 11	62.55	AUG 26	62.06
WATER YEAR 2003 LOWEST 65.28 APR 17, 2003		HIGHEST 62.06		AUG 26, 2003	



GROUND-WATER LEVELS

ESSEX COUNTY--Continued

NJ-WRD Well Number, 13-0014. Site I.D., 404454074202101. Local I.D., Neutral Zone Obs.

LOCATION.--Lat 40°44'54", long 74°20'20", Hydrologic Unit 02030103, about 1,500 ft south of the East Orange Water Department pumping station, Parsonage Hill Rd., Millburn Township. Owner: East Orange Water Department.

AQUIFER.--Stratified drift of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation well, depth 64 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape. Water-level recorder, Nov. 1926 to May 1975.

DATUM.--Land surface is 179.37 ft above NGVD of 1929. Measuring point: Top of casing, 3.50 ft above land surface.

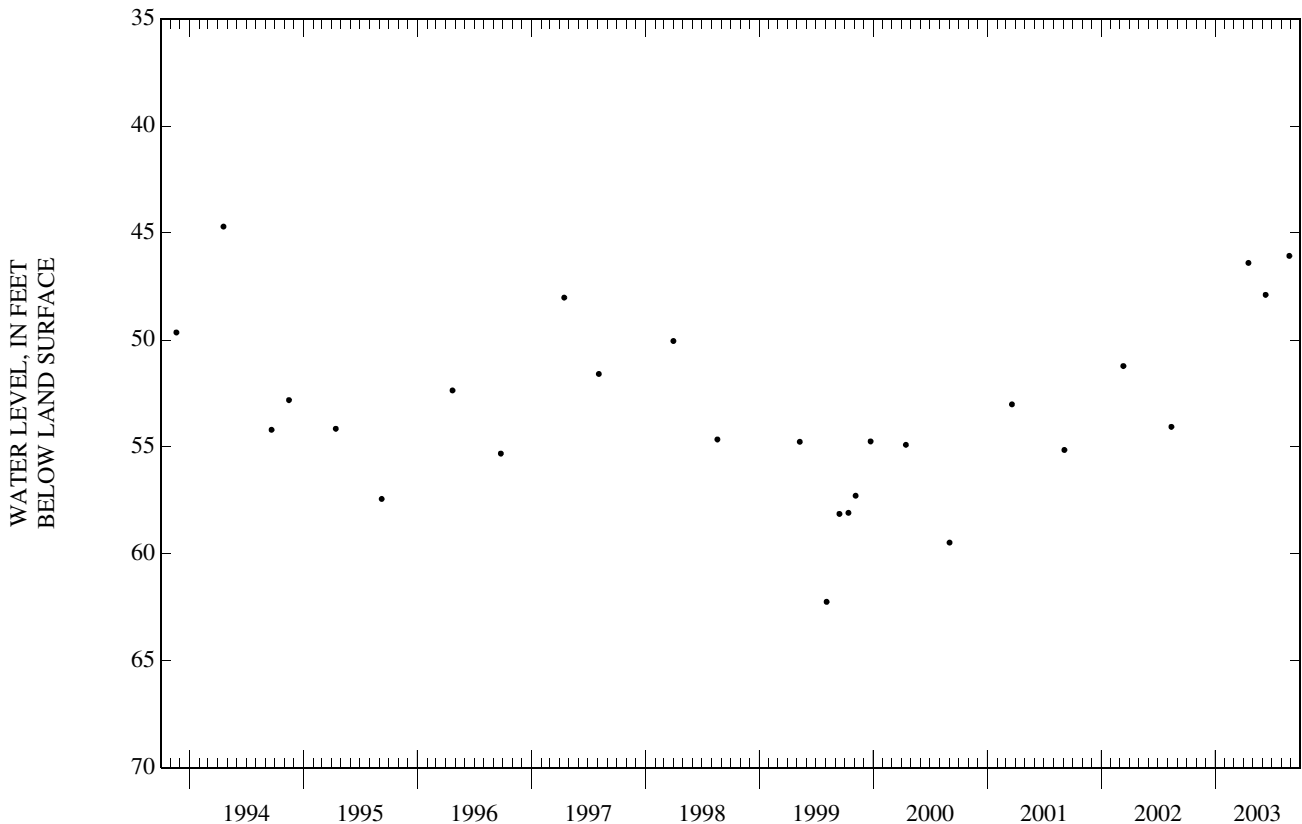
REMARKS.--Water level is affected by nearby pumping.

PERIOD OF RECORD.--Nov. 1926 to Oct. 1984, May 1986 to current year. Records for 1975 to 1984 and 1986 to 1989 are unpublished and are available in files of the New Jersey District office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.57 ft below land surface, Oct. 25, 1927; lowest, 63.12 ft below land surface, Apr. 10, 1967.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
APR 17	46.40	JUN 11	47.89	AUG 26	46.07
WATER YEAR 2003 HIGHEST		46.07		AUG 26, 2003	
LOWEST		47.89		JUN 11, 2003	



GROUND-WATER LEVELS

ESSEX COUNTY--Continued

NJ-WRD Well Number, 13-0095. Site I.D., 404347074193301. Local I.D., Christ Church 2 Obs. NJ Permit Number, 26-16359-4.

LOCATION.--Lat 40°43'47", long 74°19'32", Hydrologic Unit 02030104, at Christ Church, about 200 ft east of Highland Ave., Millburn Township. Owner: State of New Jersey - Christ Church.

AQUIFER.--Stratified drift of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in., depth 200 ft, screened 180 to 200 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape.

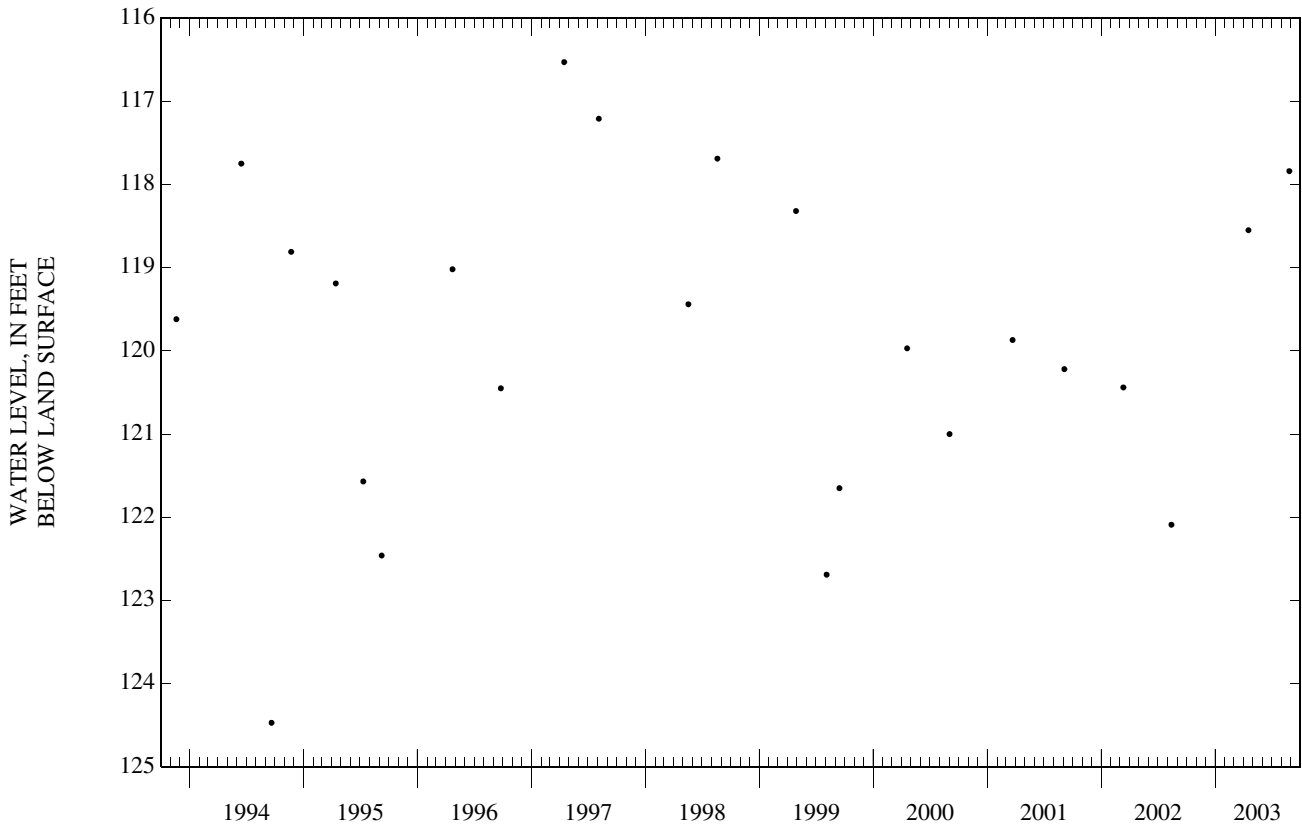
DATUM.--Land surface is 276.9 ft above NGVD of 1929. Measuring point: Top of casing, 0.67 ft below land surface.

PERIOD OF RECORD.--Apr. 1991 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 116.53 ft below land surface, Apr. 15, 1997; lowest, 124.47 ft below land surface, Sept. 20, 1994.

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

DATE	WATER LEVEL	DATE	WATER LEVEL
APR 17	118.55	AUG 26	117.84



GROUND-WATER LEVELS

ESSEX COUNTY--Continued

NJ-WRD Well Number, 13-0096. Site I.D., 404455074203202 Local I.D., East Orange Shallow Obs. NJ Permit Number, 25-34870.

LOCATION.--Lat 40°44'55", long 74°20'31", Hydrologic Unit 02030103, at East Orange Water Company, JFK Blvd. and Parsonage Hill Rd., Millburn Township. Owner: State of New Jersey - New Jersey Geological Survey.

AQUIFER.--Stratified drift of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in., depth 84 ft, screened 79 to 84 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval. Periodic measurements, Apr. 1991 to Apr. 1992.

DATUM.--Land surface is 184.7 ft above NGVD of 1929. Measuring point: Top of recorder shelf, 2.40 ft above land surface.

REMARKS.-- Water level is affected by nearby pumping.

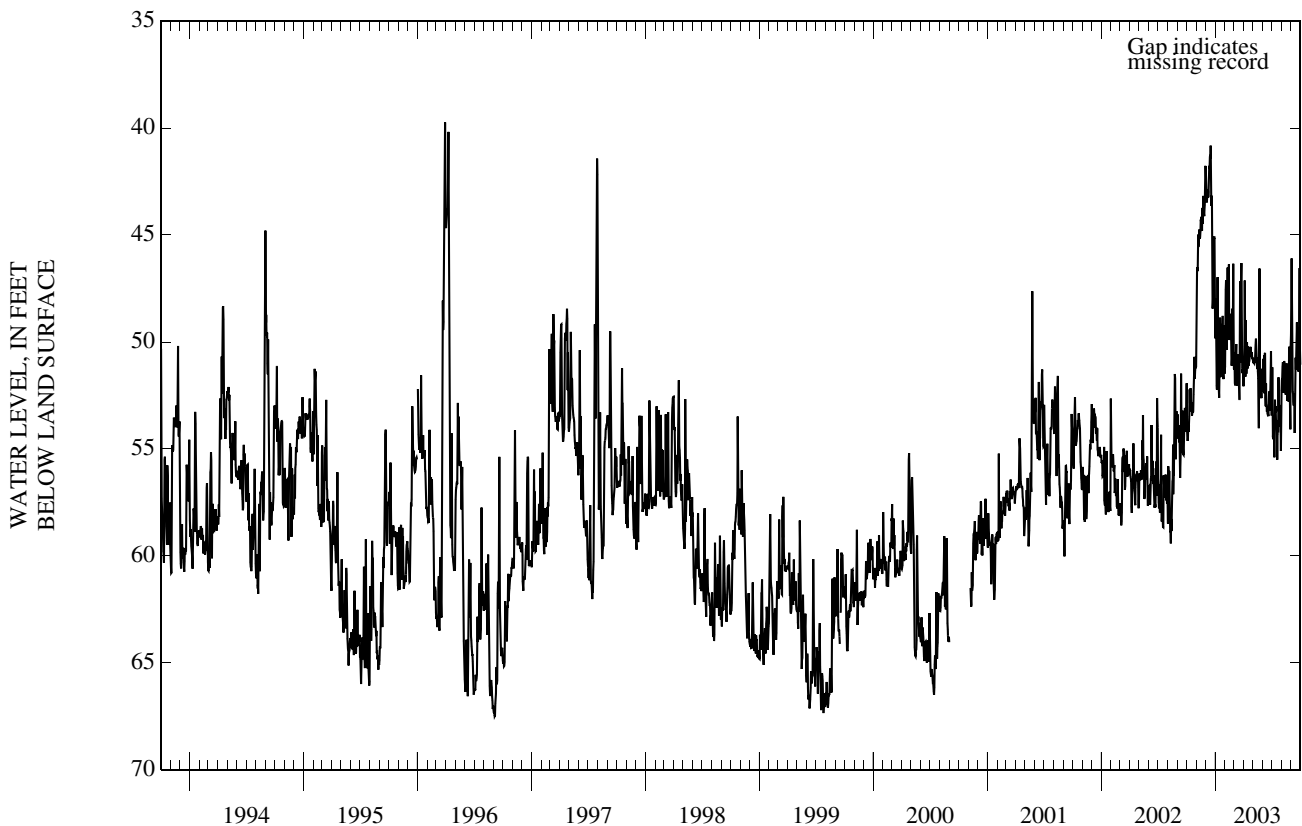
PERIOD OF RECORD.--Apr. 1991 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 38.42 ft below land surface, Dec. 17, 2002; lowest, 67.69 ft below land surface, Sept. 4, 1996.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	54.47	46.64	43.37	52.04	48.97	52.03	47.13	50.99	51.27	54.28	50.95	51.25
10	52.23	44.74	42.99	51.00	47.85	50.83	51.49	50.07	52.61	53.64	50.98	52.42
15	53.25	44.28	41.33	50.30	49.18	51.55	50.23	51.27	53.25	53.67	52.36	50.73
20	53.04	43.74	43.16	49.17	49.90	50.43	50.86	54.03	53.47	54.11	52.76	49.74
25	51.51	44.00	47.60	50.82	49.39	46.32	50.62	51.64	52.56	53.62	50.22	51.29
EOM	51.16	41.81	49.83	51.34	49.70	51.56	50.73	52.30	53.43	54.01	49.66	51.06
MEAN	52.78	44.73	43.79	50.37	48.93	50.60	50.59	51.14	52.26	53.69	51.70	50.66
MAX	54.62	48.15	49.83	52.61	51.16	52.70	52.07	54.03	53.47	55.50	54.09	54.26
MIN	50.69	41.81	40.82	46.98	46.34	46.32	47.13	46.57	50.43	51.18	49.66	46.10

WTR YR 2003 MEAN 50.12 HIGH 40.82 DEC 17 LOW 55.50 JUL 18

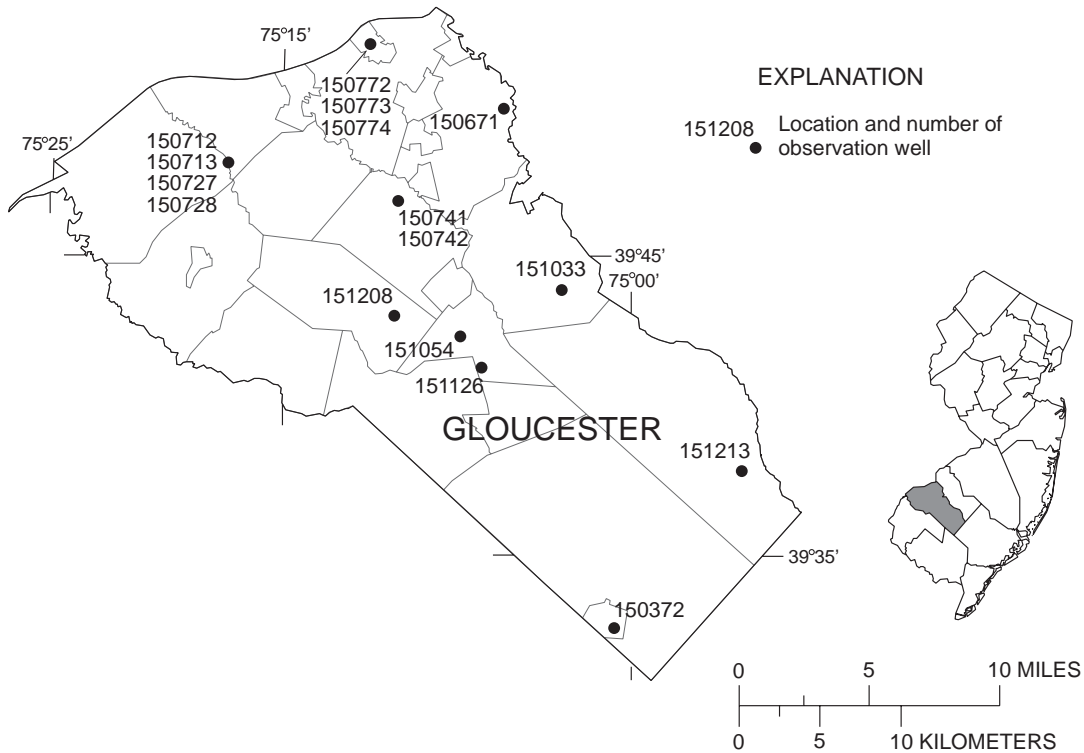


GLOUCESTER COUNTY

NJ-WRD well number	Local identifier	Township	Well depth	Aquifer	Type of data
150372	NEWFIELD 2-A OBS	NEWFIELD BORO	154	CKKD	DAILY
150671	DEPTFORD DEEP OBS	DEPTFORD TWP	670	MRPAL	DAILY
150712	STEFKA 1 OBS	GREENWICH TWP	295	MRPAL	DAILY
150713	STEFKA 2 OBS	GREENWICH TWP	155	MRPAM	DAILY
150727	STEFKA 3 OBS	GREENWICH TWP	210	MRPAM	MANUAL
150728	STEFKA 4 OBS	GREENWICH TWP	56	MRPAU	DAILY
150741	MANTUA SHALLOW OBS	MANTUA TWP	313	MRPAU	DAILY
150742	MANTUA DEEP OBS	MANTUA TWP	777	MRPAL	DAILY
150772	NATIONAL PARK #3OW-AL	NATIONAL PARK BORO	221	MRPAL	DAILY
150773	NATIONAL PARK #5OW-AU	NATIONAL PARK BORO	55	MRPAU	MANUAL
150774	NATIONAL PARK #4OW-AM	NATIONAL PARK BORO	118	MRPAM	MANUAL
151033	WTMUA MONITORING 1 OBS	WASHINGTON TWP	54	CKKD	DAILY
151054	USGS GSC OBS-1 SHALLOW	GLASSBORO BORO	36	CKKD	DAILY
151126	GLASSBORO ML-1 OBS	GLASSBORO BORO	338	MLRW	DAILY
151208	USGS AG02	HARRISON TWP	33	CKKD	DAILY
151213	USGS UND06	MONROE TWP	15	CKKD	DAILY

Aquifer names

- CKKD - Kirkwood-Cohansey aquifer system
- MLRW - Wenonah-Mount Laurel aquifer
- MRPAL - Lower Potomac-Raritan-Magothy aquifer
- MRPAM - Middle Potomac-Raritan-Magothy aquifer
- MRPAU - Upper Potomac-Raritan-Magothy aquifer



## GROUND-WATER LEVELS

## GLOUCESTER COUNTY

NJ-WRD Well Number, 15-0372. Site I.D., 393246075012701. Local I.D., Newfield 2-A Obs. NJ Permit Number, 31-06092.

LOCATION.--Lat 39°32'38", long 75°00'43", Hydrologic Unit 02040206, about 1,000 ft south of the intersection of Gorgo Lane and Catawba Ave., Newfield Borough. Owner: Newfield Water Department.

AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.

WELL CHARACTERISTICS.--Drilled water-table observation well, depth 154 ft, screened 129 to 149 ft.

INSTRUMENTATION.--Submersible logger pressure transducer--60 minute recording interval. Water-level recorder, Jan. 1986 to June 1989 and July 1994 to May 2000.

DATUM.--Land surface is 120.00 ft above NGVD of 1929, from topographic map. Measuring point: Top of recorder shelf, 2.80 ft above land surface.

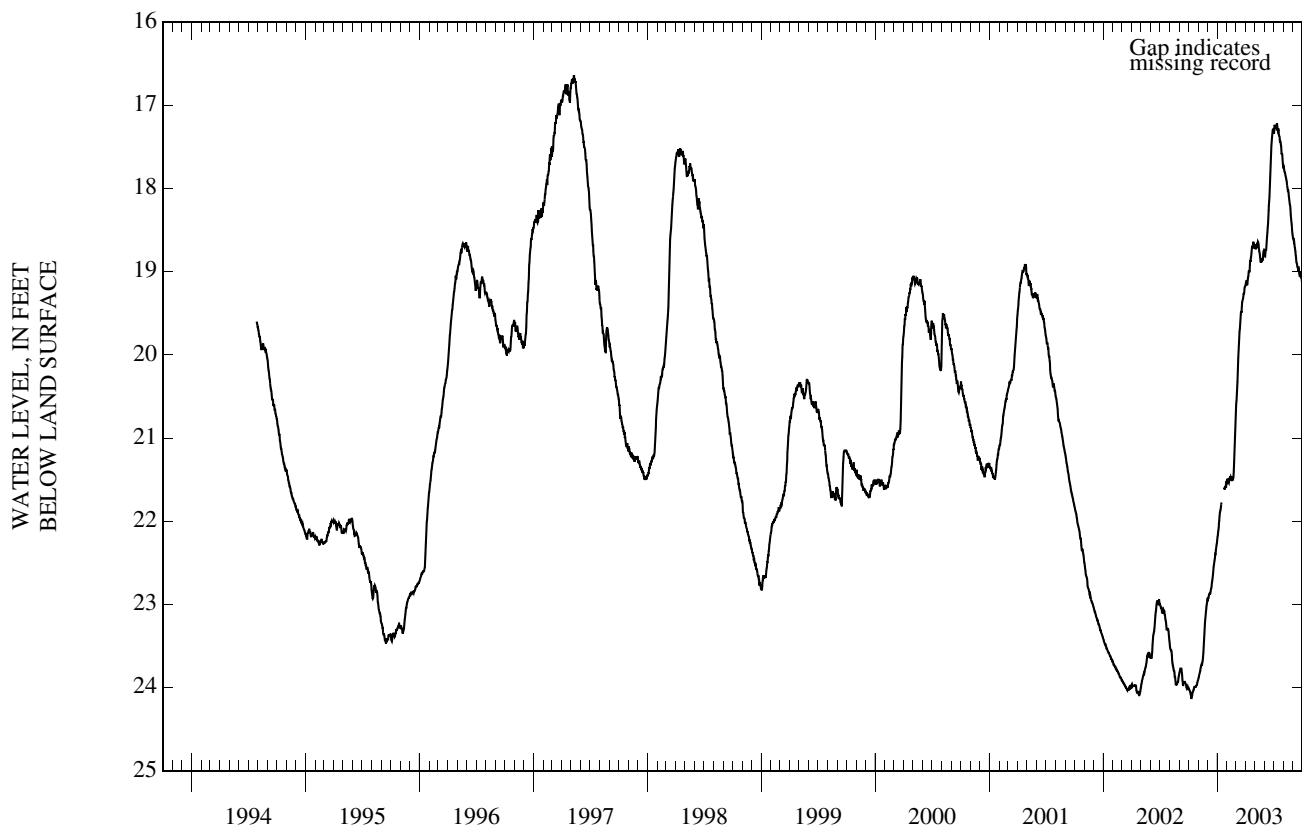
REMARKS.--Water level is affected by nearby pumping.

PERIOD OF RECORD.--Jan. 1987 to June 1989, Aug. 1994 to current year. Records for 1987 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 16.62 ft below land surface, May 3, 1997; lowest, 24.19 ft below land surface, Apr. 24, 2002.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	24.04	23.83	22.88	22.07	21.53	20.39	19.10	18.71	18.73	17.26	17.81	18.67
10	24.12	23.73	22.85	21.88	21.46	19.96	19.05	18.67	18.53	17.25	17.90	18.83
15	24.04	23.67	22.72	---	21.51	19.62	18.91	18.76	18.20	17.30	18.03	18.94
20	23.99	23.36	22.55	---	21.50	19.42	18.79	18.89	17.77	17.43	18.16	19.02
25	23.99	23.09	22.39	21.60	21.05	19.29	18.68	18.87	17.38	17.56	18.36	19.05
EOM	23.90	22.94	22.23	21.53	20.74	19.18	18.73	18.74	17.31	17.74	18.60	19.16
MEAN	24.02	23.50	22.65	---	21.39	19.73	18.91	18.76	18.09	17.39	18.09	18.91
MAX	24.13	23.89	22.94	---	21.54	20.68	19.17	18.89	18.82	17.74	18.60	19.16
MIN	23.90	22.94	22.23	---	20.74	19.18	18.64	18.64	17.29	17.22	17.73	18.61



GROUND-WATER LEVELS

GLOUCESTER COUNTY--Continued

NJ-WRD Well Number, 15-0671. Site I.D., 394957075053001. Local I.D., Deptford Deep Obs.

LOCATION.--Lat 39°49'57", long 75°05'29", Hydrologic Unit 02040202, at N.J. Department of Transportation facility, N.J. Rt. 41, Deptford Township. Owner: U.S. Geological Survey.

AQUIFER.--Lower Potomac-Raritan-Magothy aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 4 in., depth 670 ft, screened 650 to 670 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval.

DATUM.--Land surface is 35.00 ft above NGVD of 1929, from topographic map. Measuring point: Top of recorder shelf, 3.55 ft above land surface.

REMARKS.--Water level is affected by tidal fluctuation and nearby pumping.

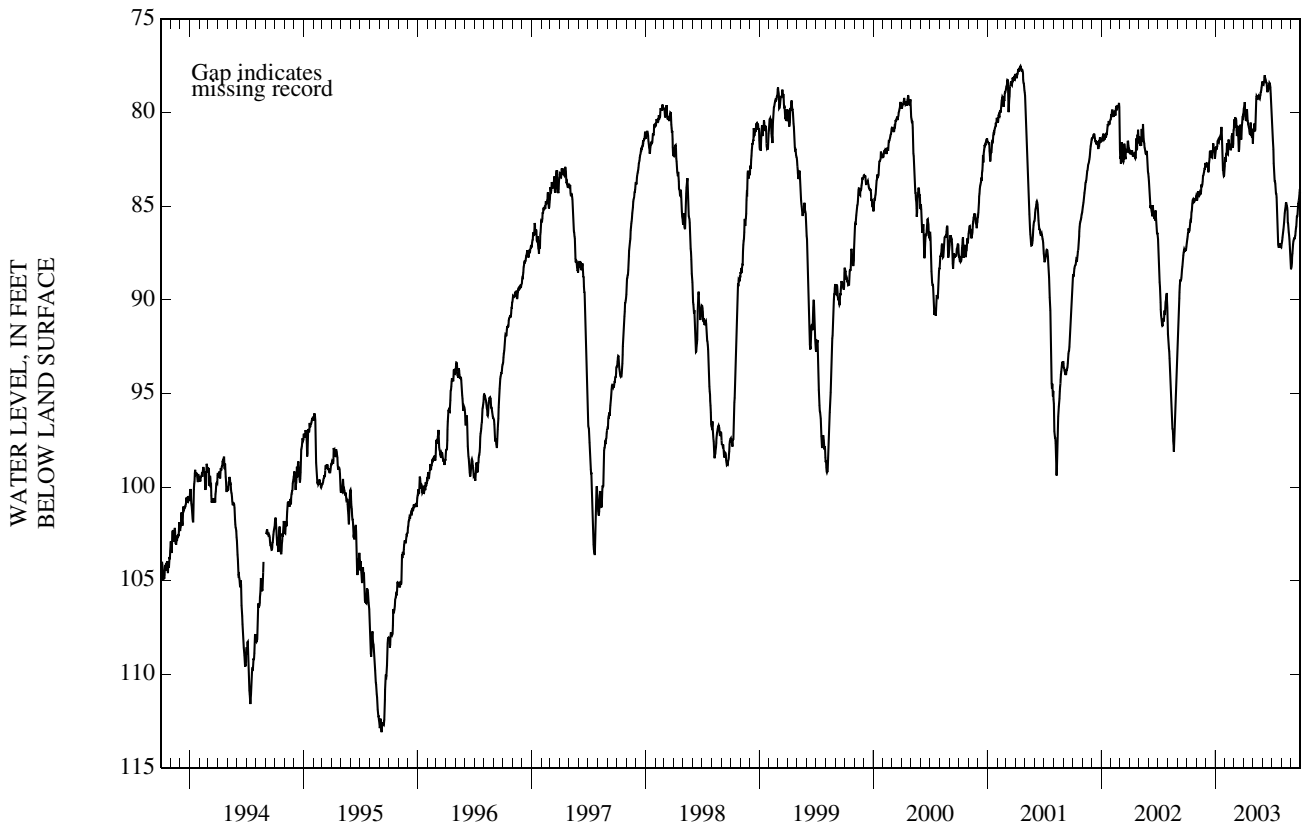
PERIOD OF RECORD.--June 1986 to current year. Records for 1986 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level 77.32 ft below land surface, Apr. 16, 2001; lowest 115.36 ft below land surface, July 19, 1988.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	86.43	84.47	82.67	81.97	82.19	80.24	79.44	80.78	78.41	81.68	86.50	87.52
10	86.30	84.32	83.14	81.46	82.24	80.96	80.34	80.28	78.17	83.67	85.61	86.72
15	85.65	84.34	82.11	81.34	81.79	81.13	80.50	79.22	78.56	84.32	84.86	86.34
20	84.72	83.82	82.37	80.76	81.94	81.11	80.99	79.09	78.71	86.44	85.24	85.57
25	84.77	83.19	81.64	83.11	81.59	81.37	80.80	79.09	78.52	87.02	86.54	84.72
EOM	84.52	82.68	82.35	82.85	80.94	80.22	81.30	78.42	80.25	87.20	88.36	84.32
MEAN	85.51	83.91	82.39	81.96	81.83	80.88	80.50	79.66	78.62	84.73	86.16	86.11
MAX	87.02	84.69	83.18	83.38	82.64	82.09	81.32	81.65	80.25	87.22	88.36	88.32
MIN	84.52	82.68	81.64	80.76	80.94	80.19	79.44	78.42	78.00	80.64	84.80	84.23

WTR YR 2003 MEAN 82.70 HIGH 78.00 JUN 8 LOW 88.36 AUG 31



GROUND-WATER LEVELS

GLOUCESTER COUNTY--Continued

NJ-WRD Well Number, 15-0712. Site I.D., 394808075172401. Local I.D., Stefka 1 Obs. NJ Permit Number, 30-04347.

LOCATION.--Lat 39°48'08", long 75°17'23", Hydrologic Unit 02040202, near the intersection of Swedesboro and Tomlin Station Roads, next to Pargey Creek, on land owned by Mr. William Stefka, Greenwich Township. Owner: U.S. Geological Survey.

AQUIFER.--Lower Potomac-Raritan-Magothy aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 4 in., depth 295 ft, screened 275 to 290 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval.

DATUM.--Land surface is 6.50 ft above NGVD of 1929. Measuring point: Top of recorder shelf, 2.20 ft above land surface.

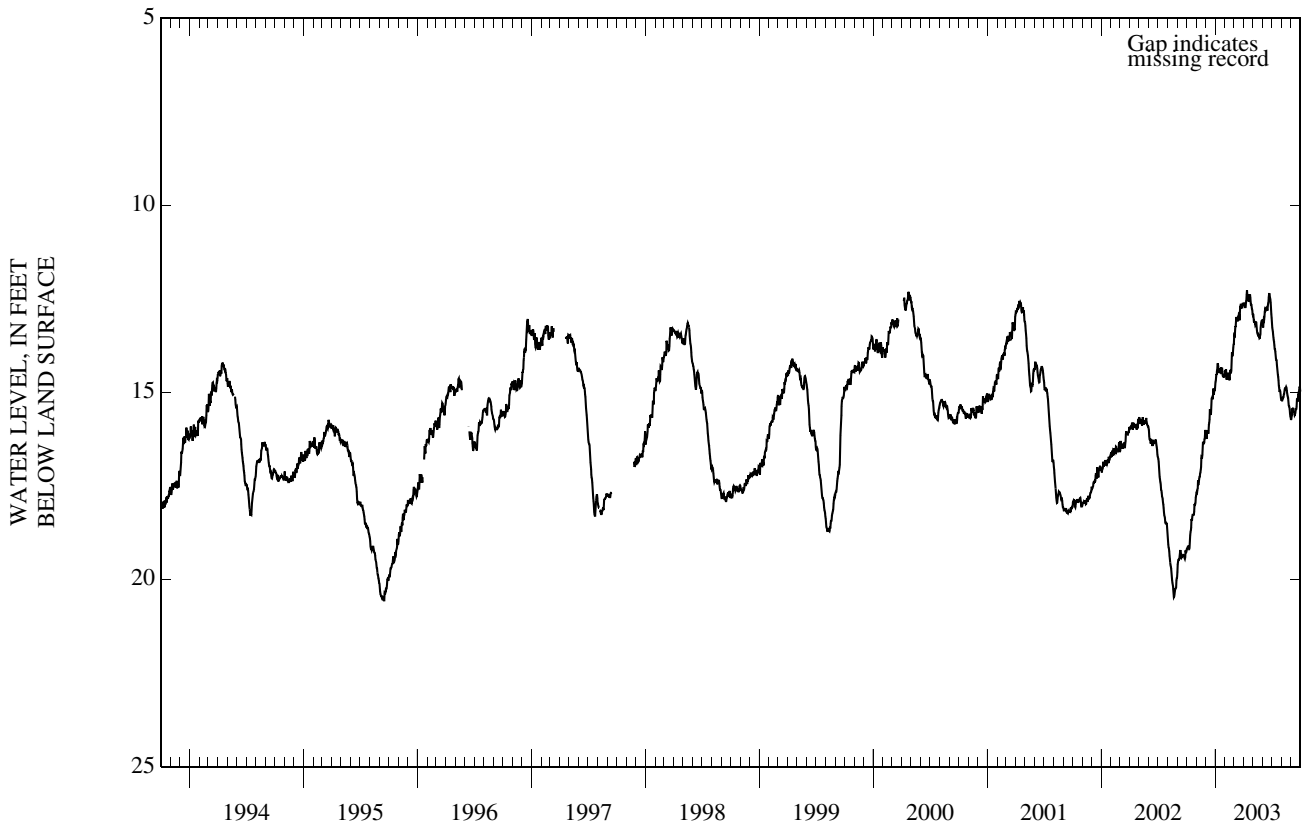
PERIOD OF RECORD.--Mar. 1987 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.23 ft below land surface, Apr. 12, 2003; lowest, 20.58 ft below land surface, Sept. 16, 1995.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	19.10	17.58	16.06	14.53	14.55	13.30	12.60	13.13	13.04	13.44	15.15	15.44
10	19.13	17.31	16.01	14.30	14.47	13.07	12.54	13.19	12.80	13.84	14.97	15.52
15	18.61	17.07	15.51	14.45	14.65	13.05	12.42	13.40	12.73	14.13	14.87	15.47
20	18.27	16.67	15.16	14.33	14.47	12.96	12.51	13.50	12.59	14.53	15.07	15.21
25	18.18	16.36	14.90	14.57	14.01	12.69	12.67	13.44	12.48	14.96	15.36	15.00
EOM	17.76	16.00	14.85	14.54	13.72	12.65	12.91	13.08	13.01	15.20	15.73	14.97
MEAN	18.58	16.92	15.54	14.47	14.37	12.99	12.58	13.25	12.78	14.22	15.17	15.33
MAX	19.20	17.67	16.24	14.72	14.68	13.70	12.91	13.55	13.27	15.20	15.73	15.70
MIN	17.76	16.00	14.85	14.22	13.72	12.61	12.27	12.90	12.35	13.15	14.85	14.84

WTR YR 2003 MEAN 14.69 HIGH 12.27 APR 12 LOW 19.20 OCT 1





GROUND-WATER LEVELS

GLOUCESTER COUNTY--Continued

NJ-WRD Well Number, 15-0713. Site I.D., 394808075172402. Local I.D., Stefka 2 Obs. NJ Permit Number, 30-04348.

LOCATION.--Lat 39°48'08", long 75°17'23", Hydrologic Unit 02040202, near the intersection of Swedesboro and Tomlin Station Roads, next to Pargey Creek, on land owned by Mr. William Stefka, Greenwich Township. Owner: U.S. Geological Survey.

AQUIFER.--Middle Potomac-Raritan-Magothy aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 8 in., depth 155 ft, screened 125 to 155 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval.

DATUM.--Land surface is 5.64 ft above NGVD of 1929. Measuring point: Top of recorder shelf, 3.00 ft above land surface.

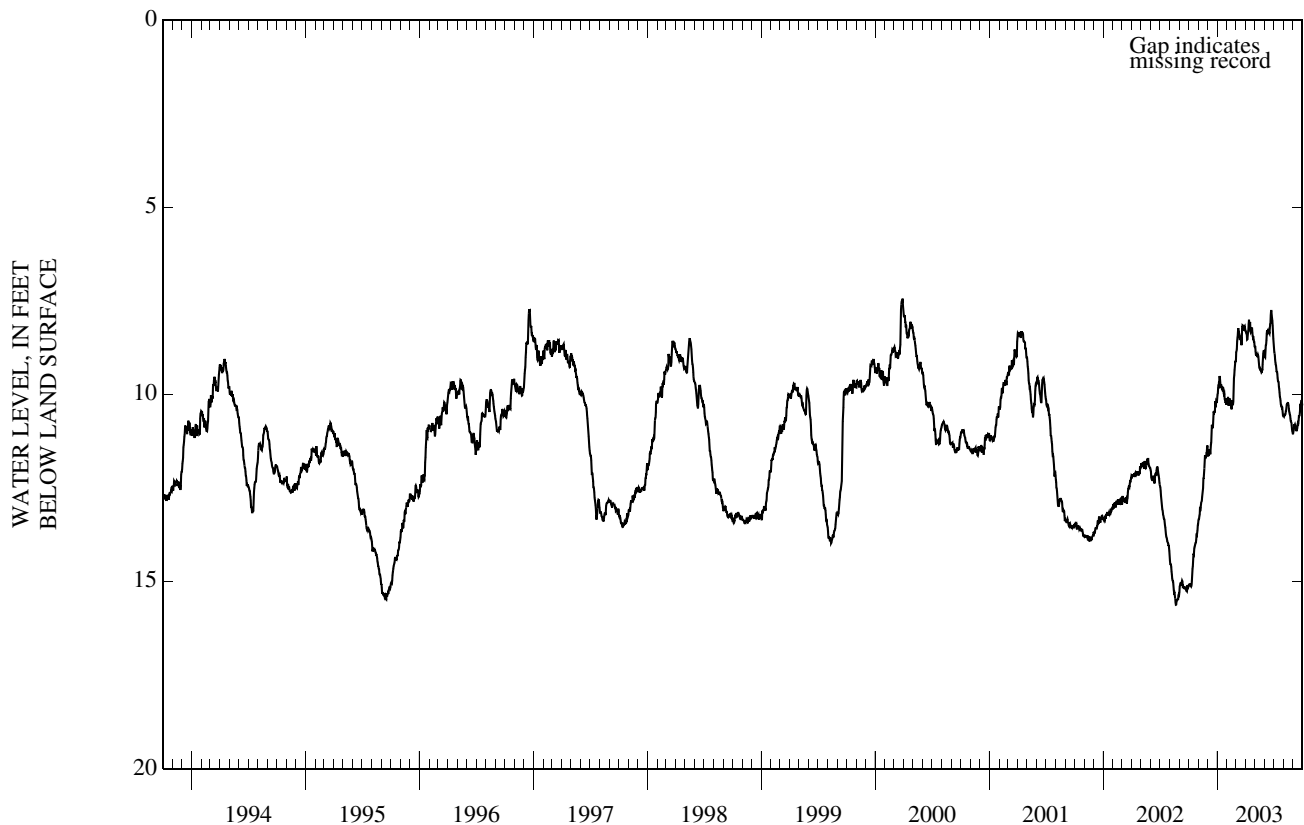
PERIOD OF RECORD.--May 1987 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.38 ft below land surface, Mar. 28, 2000; lowest, 15.65 ft below land surface, Aug. 21, 2002.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	15.06	13.20	11.47	9.79	10.25	8.58	8.37	8.95	8.69	9.06	10.55	10.82
10	15.10	12.90	11.47	9.64	10.11	8.36	8.29	8.96	8.32	9.40	10.35	10.92
15	14.44	12.57	10.87	9.84	10.36	8.51	8.09	9.26	8.27	9.65	10.25	10.79
20	14.07	11.97	10.45	9.86	10.26	8.54	8.30	9.36	8.11	10.06	10.49	10.58
25	13.88	11.65	10.18	10.15	9.34	8.18	8.47	9.36	7.97	10.32	10.72	10.26
EOM	13.45	11.36	10.11	10.20	9.12	8.26	8.72	8.84	8.63	10.57	11.06	10.29
MEAN	14.42	12.41	10.90	9.91	10.01	8.43	8.34	9.08	8.35	9.73	10.55	10.66
MAX	15.13	13.36	11.63	10.28	10.40	9.14	8.72	9.41	9.01	10.57	11.06	11.00
MIN	13.45	11.36	10.11	9.51	9.12	8.14	8.00	8.70	7.77	8.76	10.24	10.15

WTR YR 2003 MEAN 10.24 HIGH 7.77 JUN 22 LOW 15.13 OCT 9



GROUND-WATER LEVELS

GLOUCESTER COUNTY--Continued

NJ-WRD Well Number, 15-0727. Site I.D., 394808075172403. Local I.D., Stefka 3 Obs. NJ Permit Number, 30-04548.

LOCATION.--Lat 39°48'08", long 75°17'23", Hydrologic Unit 02040202, near the intersection of Swedesboro and Tomlin Station Roads, next to Pargey Creek, on land owned by Mr. William Stefka, Greenwich Township. Owner: U.S. Geological Survey.

AQUIFER.--Middle Potomac-Raritan-Magothy aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 4 in., depth 210 ft, screened 195 to 205 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape. Water-level recorder, Jun. 1987 to Nov. 1988.

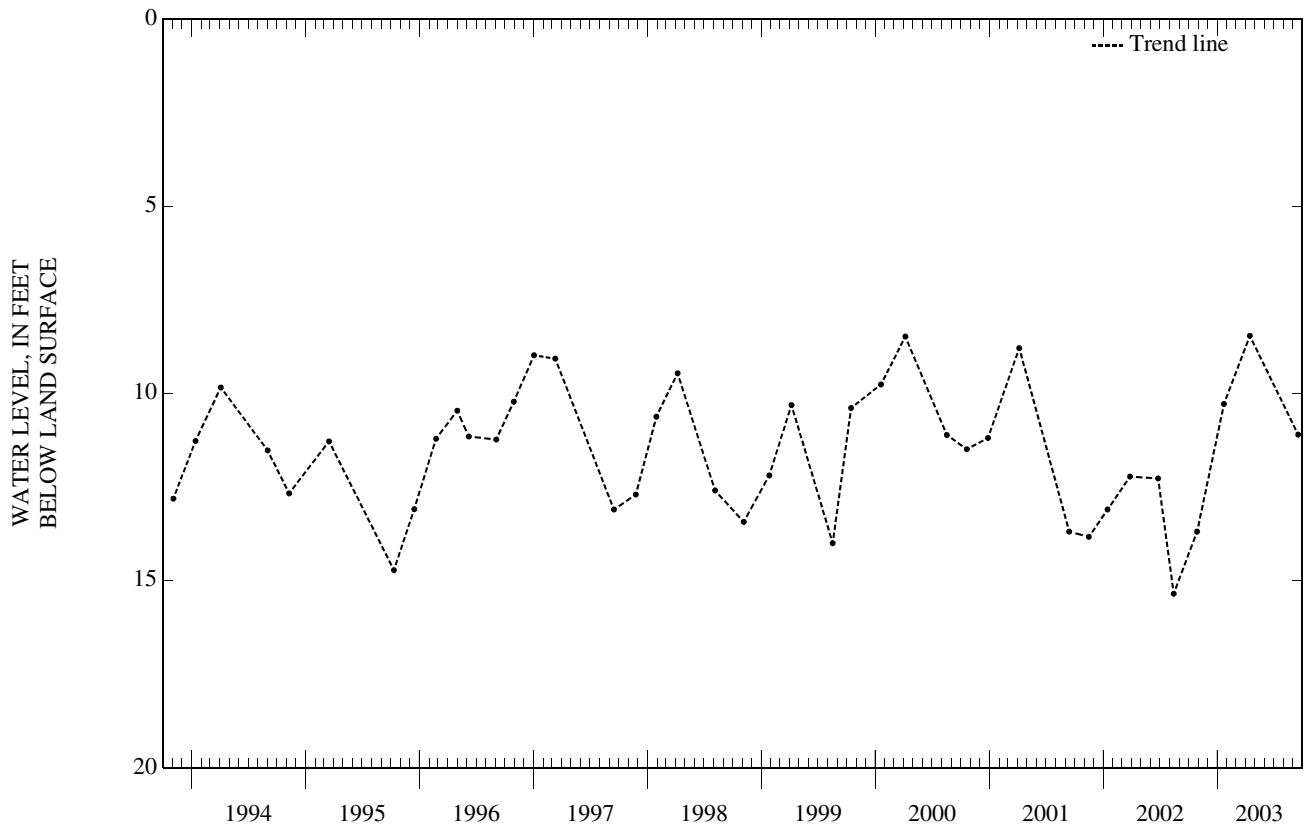
DATUM.--Land surface is 5.06 ft above NGVD of 1929. Measuring point: Top of shelter shelf, 2.90 ft above land surface.

PERIOD OF RECORD.--June 1987 to current year. Records for 1987 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 8.46 ft below land surface, Apr. 15, 2003; lowest, 15.35 ft below land surface, Aug. 14, 2002.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28	13.69	JAN 22	10.28	APR 15	8.46	SEP 17	11.10
WATER YEAR 2003 HIGHEST		8.46	APR 15, 2003 LOWEST		13.69	OCT 28, 2002	



GROUND-WATER LEVELS

GLOUCESTER COUNTY--Continued

NJ-WRD Well Number, 15-0728. Site I.D., 394808075172404. Local I.D., Stefka 4 Obs. NJ Permit Number, 30-04549.

LOCATION.--Lat 39°48'08", long 75°17'23", Hydrologic Unit 02040202, near the intersection of Swedesboro and Tomlin Station Roads, next to Pargey Creek, on land owned by Mr. William Stefka, Greenwich Township. Owner: U.S. Geological Survey.

AQUIFER.--Upper Potomac-Raritan-Magothy aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in., depth 56 ft, screened 46 to 56 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval.

DATUM.--Land surface is 4.46 ft above NGVD of 1929. Measuring point: Top of recorder shelf, 3.20 ft above land surface.

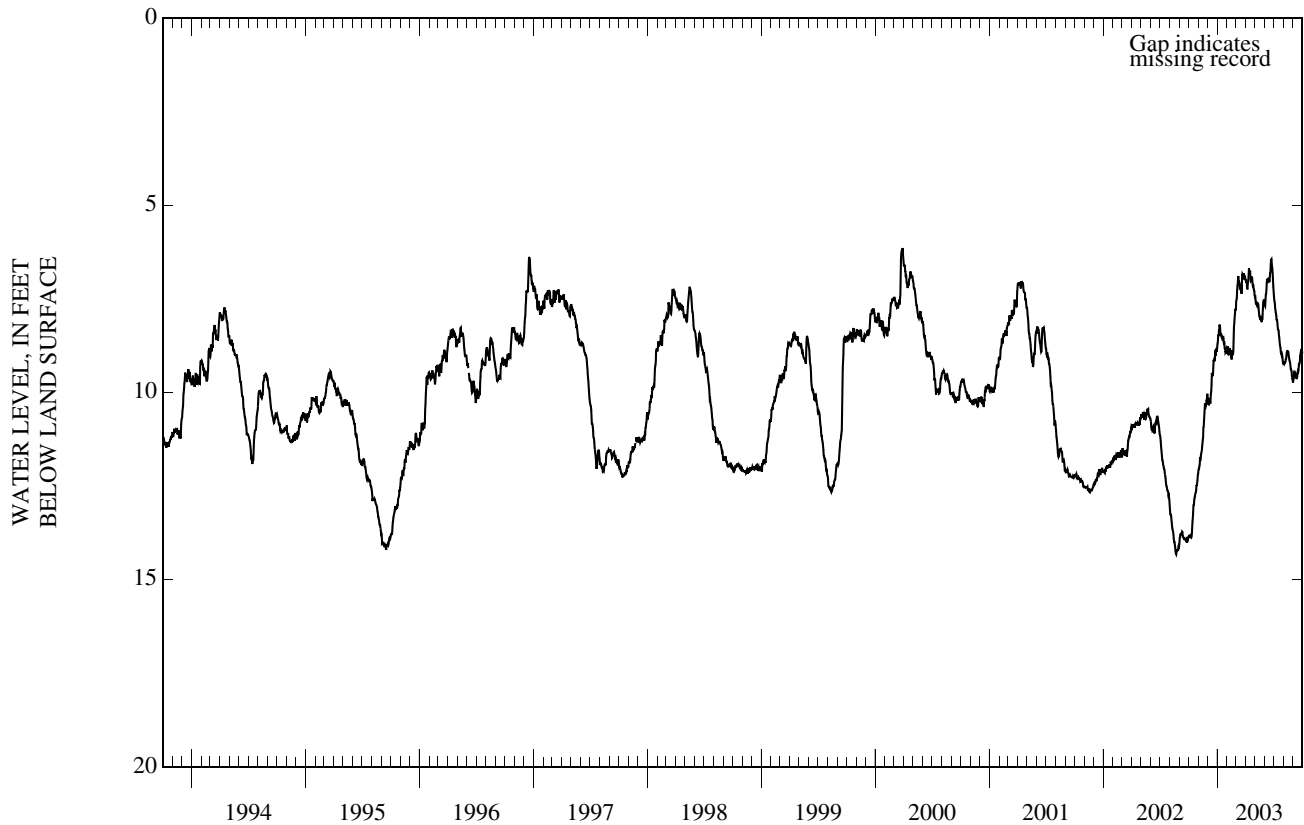
PERIOD OF RECORD.--May 1987 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.08 ft below land surface, Mar. 28, 2000; lowest, 14.34 ft below land surface, Aug. 22, 2002.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.82	11.93	10.16	8.47	8.95	7.27	7.06	7.64	7.39	7.72	9.20	9.47
10	13.86	11.64	10.17	8.32	8.82	7.01	6.98	7.66	7.00	8.08	9.03	9.58
15	13.20	11.27	9.54	8.53	9.07	7.21	6.78	7.95	6.95	8.32	8.91	9.46
20	12.81	10.64	9.13	8.56	8.97	7.25	7.00	8.06	6.79	8.73	9.14	9.25
25	12.60	10.32	8.86	8.85	8.01	6.86	7.16	8.06	6.64	8.98	9.38	8.93
EOM	12.17	10.03	8.80	8.91	7.78	6.94	7.41	7.54	7.30	9.22	9.73	8.96
MEAN	13.16	11.11	9.58	8.60	8.71	7.11	7.03	7.77	7.03	8.39	9.21	9.33
MAX	13.88	12.08	10.32	8.97	9.12	7.81	7.41	8.10	7.69	9.22	9.73	9.68
MIN	12.17	10.03	8.80	8.19	7.78	6.82	6.68	7.40	6.44	7.43	8.90	8.83

WTR YR 2003 MEAN 8.92 HIGH 6.44 JUN 23 LOW 13.88 OCT 6



GROUND-WATER LEVELS

GLOUCESTER COUNTY--Continued

NJ-WRD Well Number, 15-0741. Site I.D., 394652075100401. Local I.D., Mantua Shallow Obs.

LOCATION.--Lat 39°46'52", long 75°10'03", Hydrologic Unit 02040202, at the Township of Mantua Road Department, Main Street (County Rt. 553), Mantua Township. Owner: U.S. Geological Survey.

AQUIFER.--Upper Potomac-Raritan-Magothy aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 4 in., depth 313 ft, screened 293 to 313 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval.

DATUM.--Land surface is 82 ft above NGVD of 1929, from topographic map. Measuring point: Top of recorder shelf, 4.00 ft above land surface.

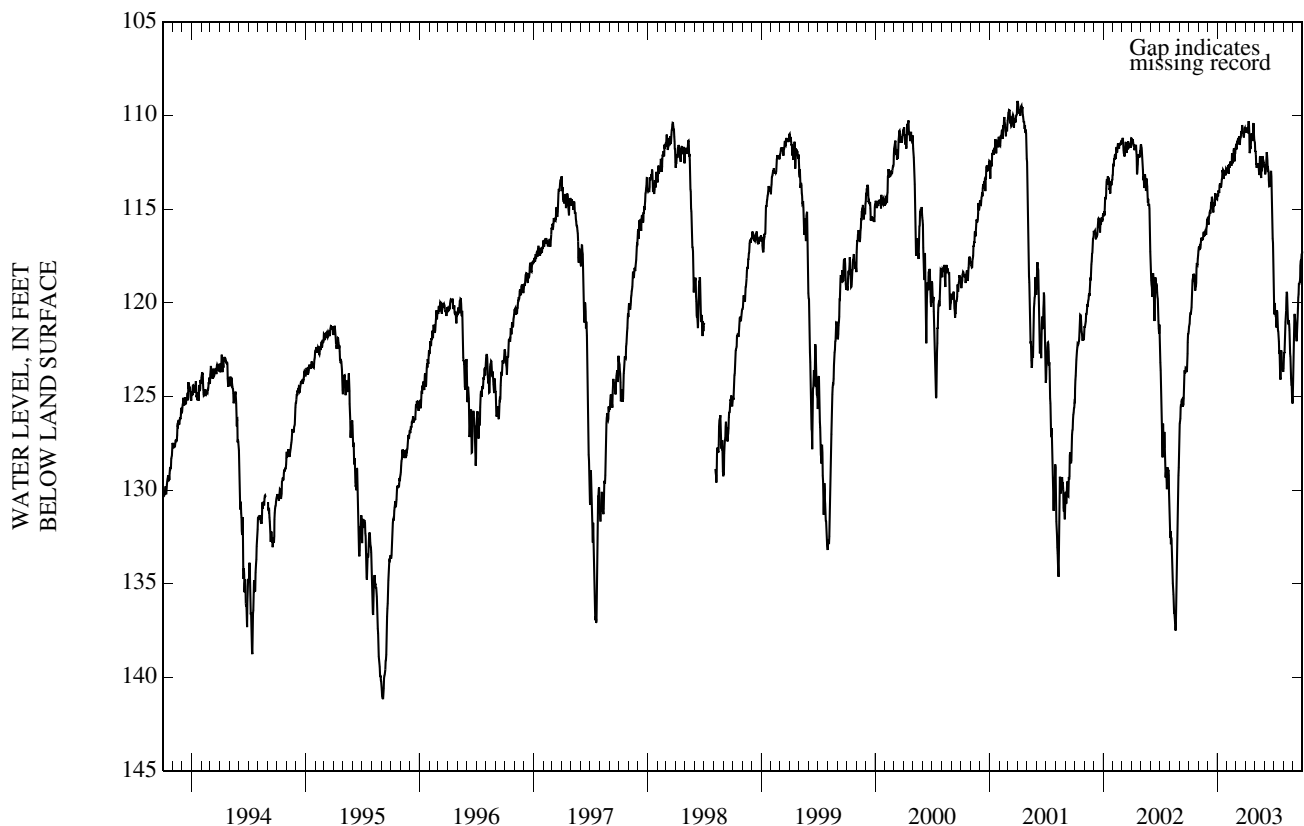
REMARKS.--Water level is affected by nearby pumping.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 108.91 ft below land surface, Mar. 31, 2001; lowest, 141.36 ft below land surface, Sept. 6-7, 1995.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	120.75	117.13	115.41	114.05	112.95	111.35	110.64	112.62	112.66	120.47	122.13	120.66
10	120.24	116.60	115.18	113.66	112.62	111.29	110.50	112.64	112.38	120.98	119.72	121.70
15	118.74	116.65	114.42	113.41	112.68	111.24	111.96	113.17	113.42	121.53	120.83	120.63
20	118.72	116.34	114.84	112.92	112.30	110.93	111.22	113.15	113.28	123.46	121.45	119.03
25	118.93	116.32	114.14	112.92	112.44	111.05	111.11	112.16	114.84	122.64	124.04	117.78
EOM	117.47	115.53	114.47	112.90	111.74	110.86	111.36	112.71	118.75	123.68	124.52	117.25
MEAN	119.31	116.51	114.87	113.45	112.47	111.14	111.03	112.54	113.75	121.95	122.17	120.00
MAX	121.54	117.23	115.83	114.31	113.10	111.80	112.00	113.34	118.75	124.10	125.33	123.61
MIN	117.47	115.53	114.14	112.82	111.74	110.51	110.29	111.46	111.95	119.88	119.41	117.25
WTR YR 2003	MEAN 115.80	HIGH 110.29	APR 11	LOW 125.33	AUG 29							



GROUND-WATER LEVELS

GLOUCESTER COUNTY--Continued

NJ-WRD Well Number, 15-0742. Site I.D., 394652075100402. Local I.D., Mantua Deep Obs. NJ Permit Number 31-25266-4.

LOCATION.--Lat 39°46'52", long 75°10'03", Hydrologic Unit 02040202, at the Township of Mantua Road Department, Main Street (County Rt. 553), Mantua Township. Owner: U.S. Geological Survey.

AQUIFER.--Lower Potomac-Raritan-Magothy aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 4 in., depth 777 ft, screened 757 to 777 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval.

DATUM.--Land surface is 84 ft above NGVD of 1929, from topographic map. Measuring point: Top of recorder shelf, 4.20 ft above land surface.

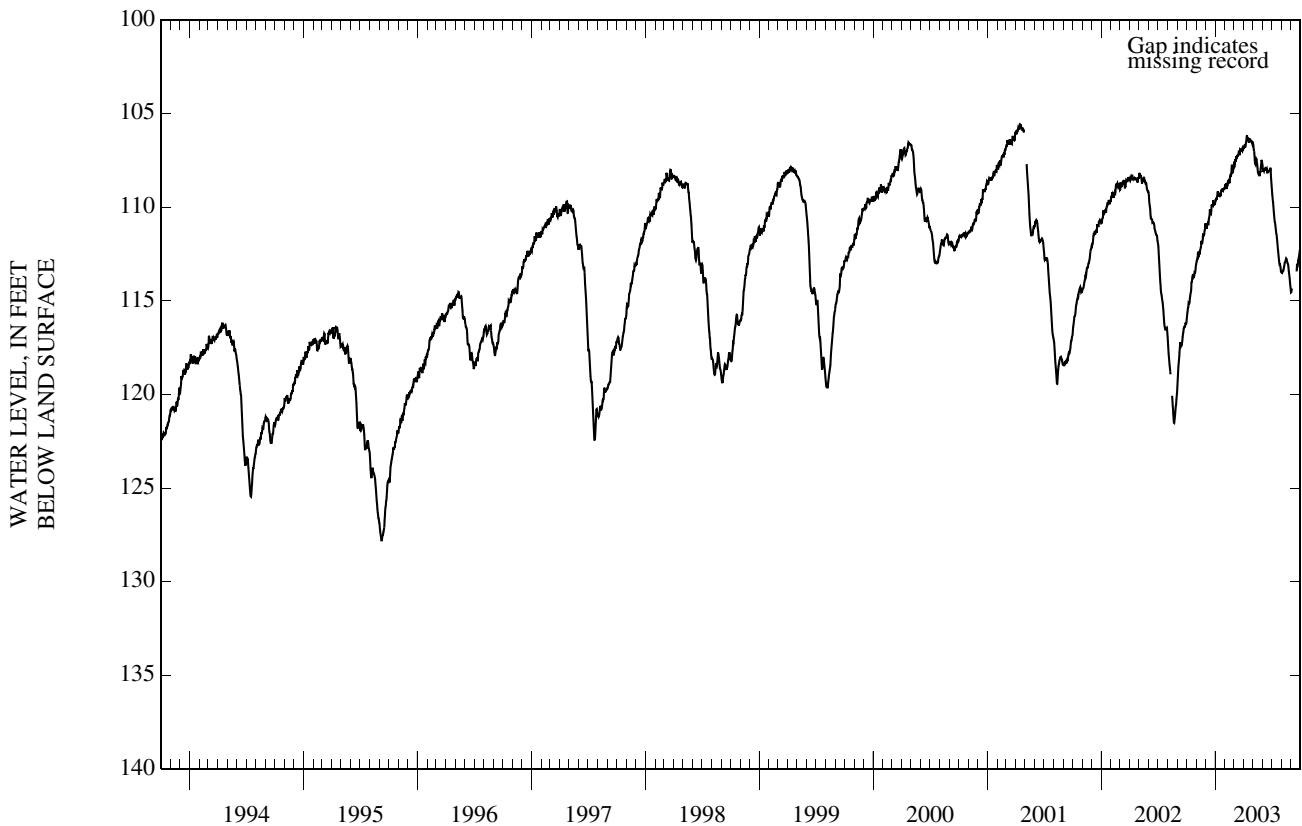
REMARKS.--Water level is affected by nearby pumping.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 105.55 ft below land surface, Apr. 16, 2001; lowest, 127.89 ft below land surface, Sept. 8-9, 1995.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	115.36	112.67	110.95	109.59	108.90	107.48	106.66	107.01	108.02	109.74	113.42	---
10	115.08	112.49	110.84	109.23	108.65	107.37	106.46	107.48	107.96	110.77	113.07	---
15	114.41	112.15	110.23	109.41	108.67	107.22	106.36	107.71	107.99	111.40	112.79	---
20	113.66	111.89	109.86	109.06	108.31	107.11	106.48	108.26	108.10	112.22	112.96	113.21
25	113.69	111.47	109.62	109.09	108.15	106.96	106.47	108.14	108.06	113.02	113.53	112.72
EOM	113.06	110.86	109.76	108.97	107.90	106.83	106.68	107.66	108.86	113.47	114.54	112.44
MEAN	114.36	112.05	110.34	109.26	108.49	107.20	106.52	107.65	108.08	111.51	113.32	---
MAX	116.01	112.95	111.16	109.62	109.02	107.88	106.87	108.34	108.86	113.47	114.54	---
MIN	113.06	110.86	109.62	108.96	107.73	106.80	106.14	106.68	107.76	109.10	112.74	---



GROUND-WATER LEVELS

GLOUCESTER COUNTY--Continued

NJ-WRD Well Number, 15-0772. Site I.D., 395206075111801. Local I.D., National Park #3-ow-al. NJ Permit Number 31-26242.

LOCATION.--Lat 39°52'06", long 75°11'17", Hydrologic Unit 02040202, near the intersection of Hessian Ave. and S. Second St, National Park Borough. Owner: U.S. Geological Survey.

AQUIFER.--Lower Potomac-Raritan-Magothy aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 2 in., depth 221 ft, screened 196 to 216 ft.

INSTRUMENTATION.--Submersible logger pressure transducer--60 minute recording interval.

DATUM.--Land surface is 10 ft above NGVD of 1929, from topographic map. Measuring point: Top of base of aluminum locking cap, 1.60 ft above land surface.

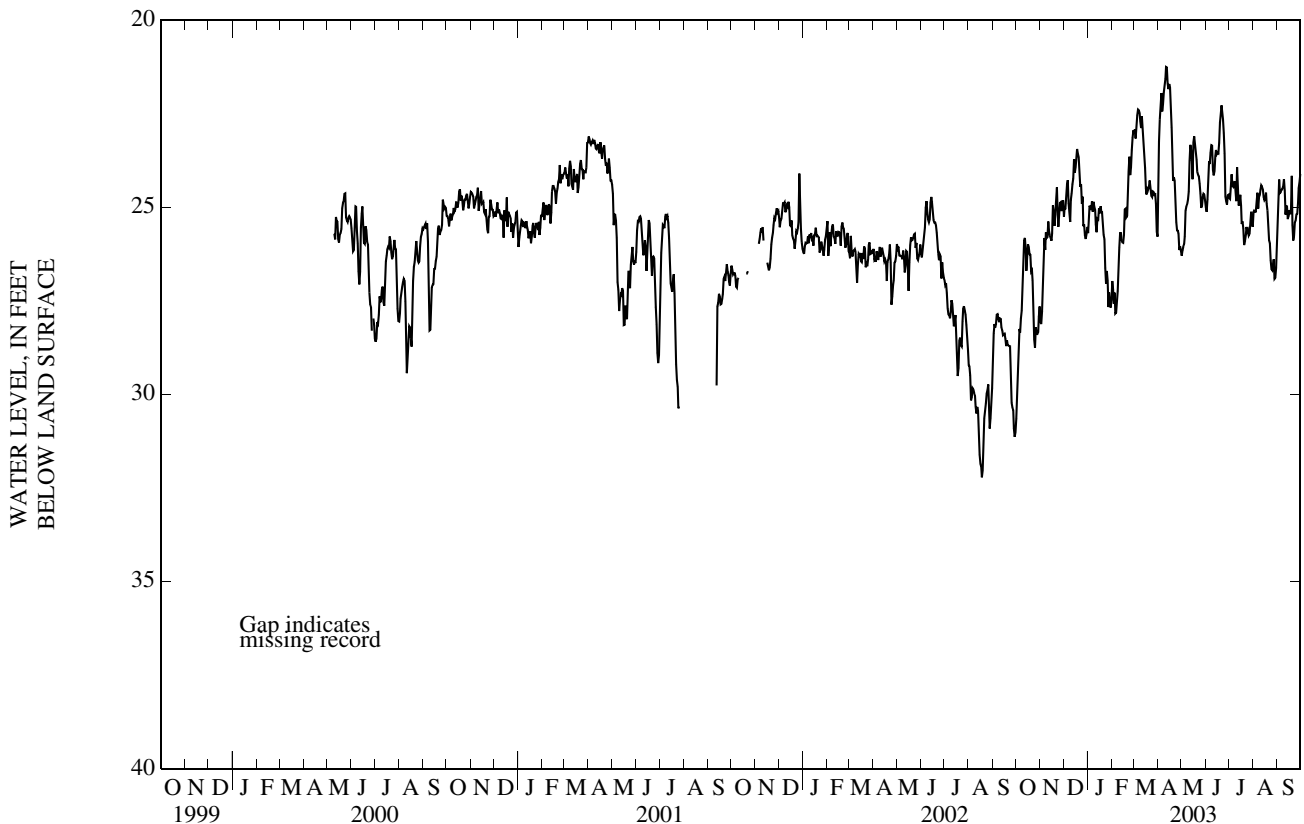
PERIOD OF RECORD.--May 2000 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 20.35 ft below land surface, Apr. 12, 2003; lowest, 33.39 ft below land surface, Aug. 18, 2002.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	28.25	26.56	24.40	25.07	27.84	22.55	21.95	25.78	23.77	24.43	24.89	24.60
10	26.48	25.79	24.81	25.07	26.06	22.88	21.57	24.58	24.00	24.84	24.54	24.56
15	26.37	25.89	24.07	25.03	25.95	23.95	21.71	24.25	23.58	24.67	24.81	25.25
20	26.72	25.22	23.66	25.46	25.23	24.45	24.29	23.73	22.52	26.01	25.50	25.47
25	28.75	25.19	24.72	26.70	23.94	24.58	25.62	24.64	23.56	25.61	26.69	25.19
EOM	27.65	24.81	25.52	27.49	22.94	25.79	26.16	24.83	24.67	25.52	25.74	24.11
MEAN	27.55	25.72	24.66	25.81	25.63	23.85	23.38	24.52	23.78	25.06	25.40	24.90
MAX	30.65	28.12	25.84	27.68	27.84	25.79	26.16	26.30	25.12	26.01	26.91	25.89
MIN	25.82	24.47	23.44	24.85	22.94	22.39	21.25	23.11	22.28	23.93	24.41	24.11

WTR YR 2003 MEAN 25.02 HIGH 21.25 APR 11 LOW 30.65 OCT 1



GROUND-WATER LEVELS

GLOUCESTER COUNTY--Continued

NJ-WRD Well Number, 15-0773. Site I.D., 395206075111802. Local I.D., National Park #5-ow-au. NJ Permit Number 31-26238.

LOCATION.--Lat 39°52'06", long 75°11'17", Hydrologic Unit 02040202, near the intersection of Hessian Ave. and S. Second St, National Park Borough. Owner: U.S. Geological Survey.

AQUIFER.--Upper Potomac-Raritan-Magothy aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 2 in., depth 55 ft, screened 30 to 50 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape.

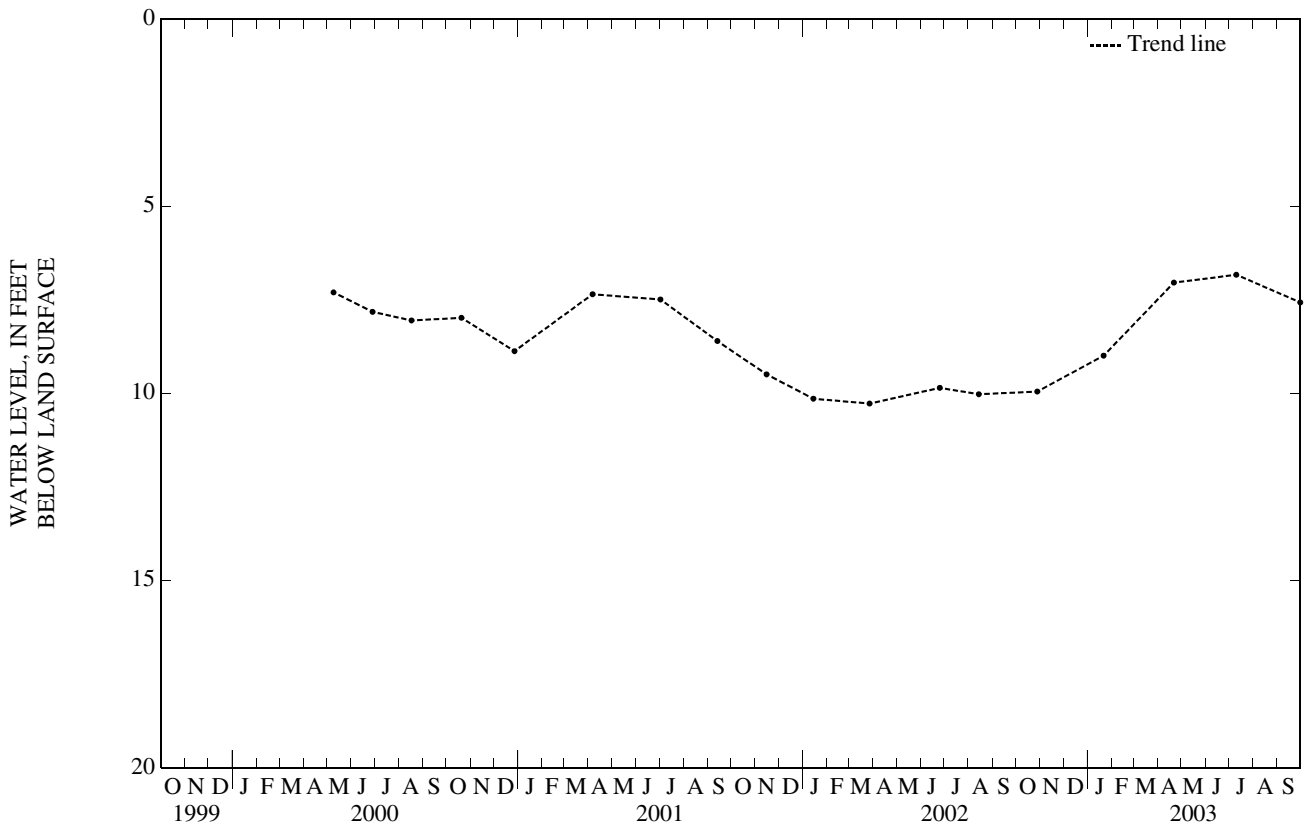
DATUM.--Land surface is 10 ft above NGVD of 1929, from topographic map. Measuring point: Top of base of aluminum locking cap, 2.40 ft above land surface.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.83 ft below land surface, July 10, 2003; lowest, 10.27 ft below land surface, Mar. 27, 2002.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28	9.95	JAN 21	8.99	APR 21	7.04	JUL 10	6.83	SEP 30	7.57
WATER YEAR 2003 HIGHEST		6.83	JUL 10, 2003 LOWEST		9.95	OCT 28, 2002			



GROUND-WATER LEVELS

GLOUCESTER COUNTY--Continued

NJ-WRD Well Number, 15-0774. Site I.D., 395206075111803. Local I.D., National Park #4-ow-am. NJ Permit Number 31-26241.

LOCATION.--Lat 39°52'06", long 75°11'17", Hydrologic Unit 02040202, near the intersection of Hessian Ave. and S. Second St, National Park Borough. Owner: U.S. Geological Survey.

AQUIFER.--Middle Potomac-Raritan-Magothy aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 2 in., depth 118 ft, screened 93 to 113 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape.

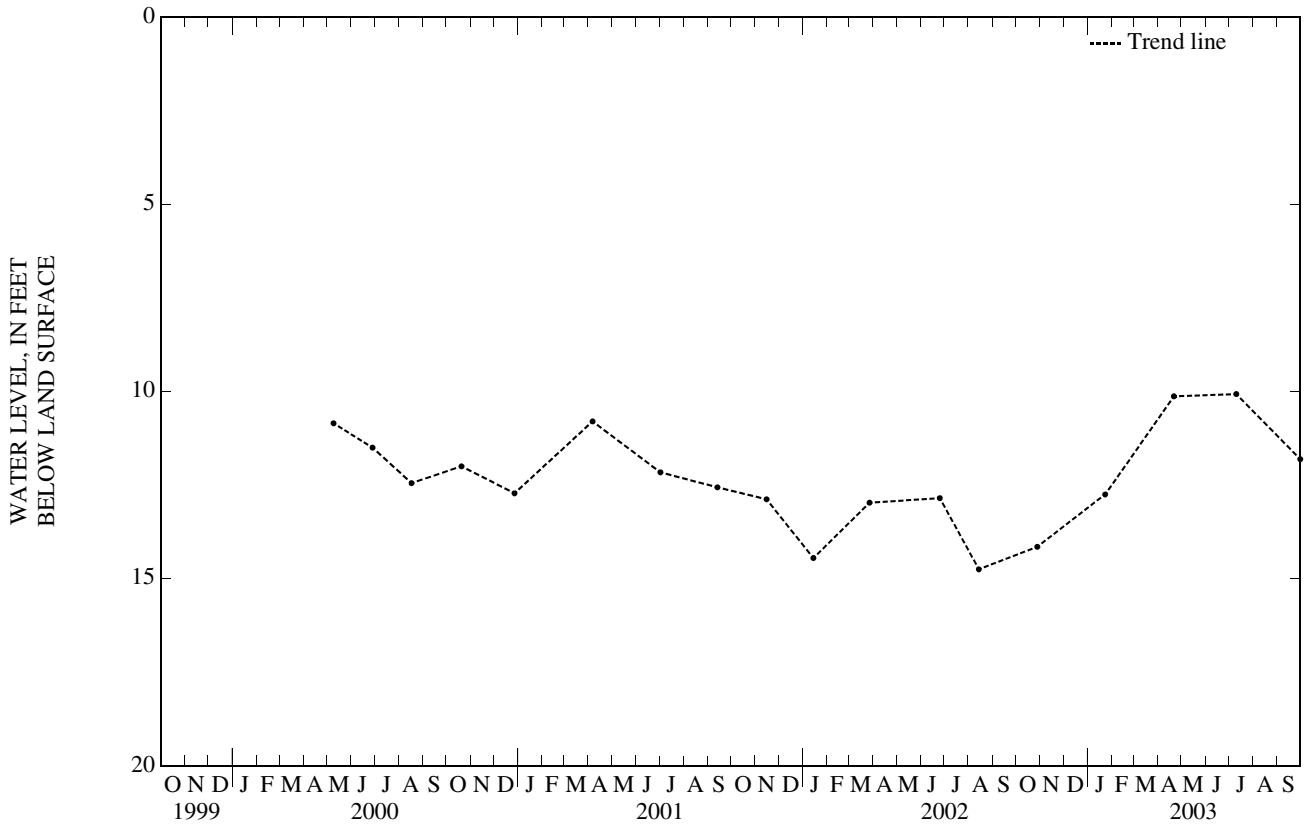
DATUM.--Land surface is 10 ft above NGVD of 1929, from topographic map. Measuring point: Top of base of aluminum locking cap, 2.60 ft above land surface.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 10.07 ft below land surface, July 10, 2003; lowest, 14.75 ft below land surface, Aug. 14, 2002.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28	14.15	JAN 23	12.75	APR 21	10.13	JUL 10	10.07	SEP 30	11.81
WATER YEAR 2003		HIGHEST	10.07	JUL 10, 2003	LOWEST	14.15	OCT 28, 2002		





GROUND-WATER LEVELS

GLOUCESTER COUNTY--Continued

NJ-WRD Well Number, 15-1033. Site I.D., 394354075025901. Local I.D., WTMUA Monitoring 1 Obs. NJ Permit Number, 31-31399.

LOCATION.--Lat 39°43'54", long 75°02'58", Hydrologic Unit 02040202, next to the Washington Township MUA water tank at the intersection of White Birches Rd. and Rt. 655 (Fries Mill Rd.), Washington Township. Owner: Washington Township Municipal Utilities Authority.

AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 4 in., depth 54 ft, screened 44 to 54 ft.

INSTRUMENTATION.--Submersible logger pressure transducer--60 minute recording interval.

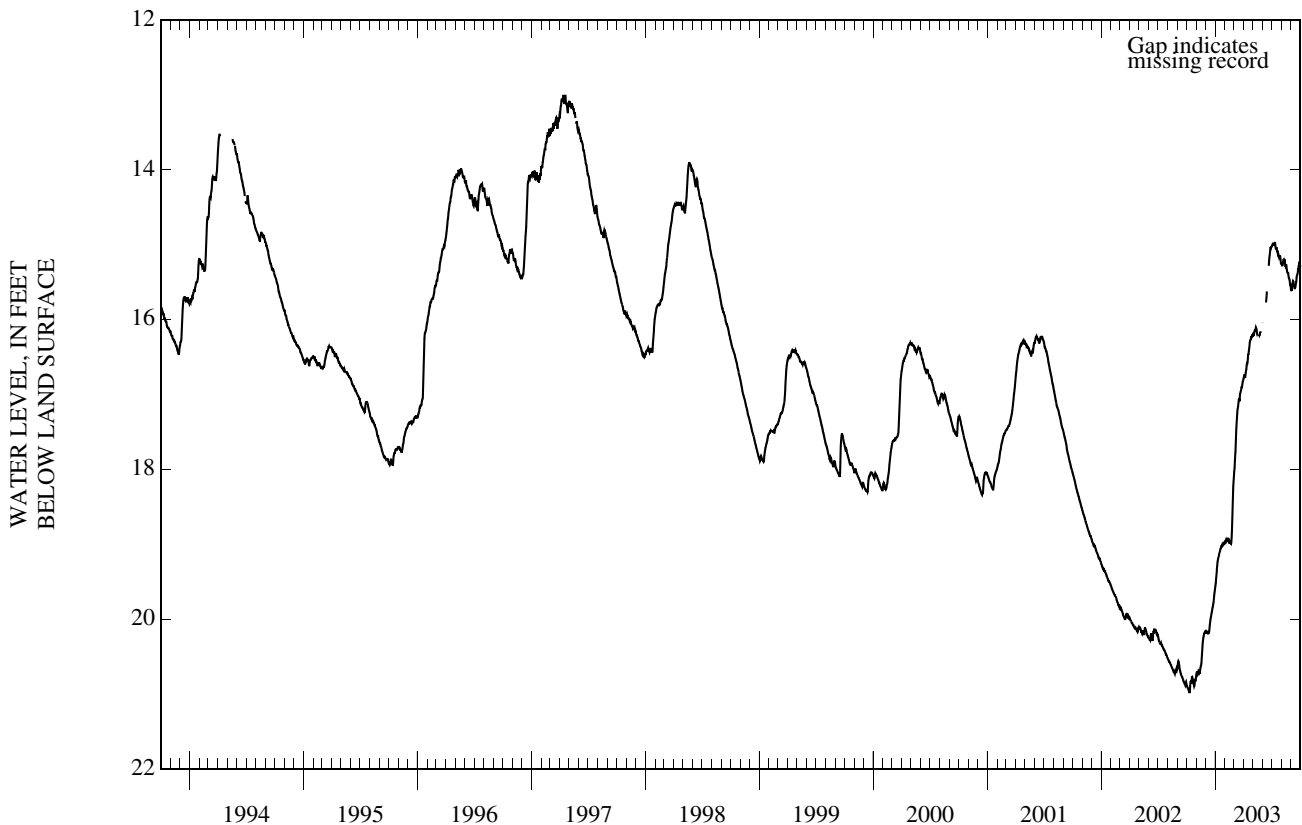
DATUM.--Land surface is 150.00 ft above NGVD of 1929, from topographic map. Measuring point: Top of outer protective casing, 2.50 ft above land surface.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.98 ft below land surface, Apr. 13, 1997; lowest, 20.99 ft below land surface, Oct. 10-11, 2002.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	20.92	20.74	20.17	19.37	18.96	17.82	16.73	16.18	---	14.99	15.26	15.53
10	20.99	20.71	20.19	19.19	18.91	17.40	16.66	16.13	---	15.00	15.21	15.55
15	20.84	20.63	20.04	19.10	18.98	17.14	16.51	16.20	15.62	15.05	15.29	15.54
20	20.79	20.38	19.92	19.03	19.00	17.03	16.36	---	---	15.13	15.37	15.40
25	20.90	20.20	19.80	19.01	18.47	16.92	16.25	16.18	15.09	15.18	15.45	15.28
EOM	20.76	20.16	19.58	18.98	18.16	16.81	16.23	16.04	15.02	15.26	15.60	15.30
MEAN	20.87	20.51	19.98	19.15	18.84	17.26	16.49	---	---	15.08	15.34	15.45
MAX	20.99	20.74	20.19	19.55	19.00	18.11	16.79	---	---	15.26	15.60	15.61
MIN	20.76	20.16	19.58	18.98	18.16	16.81	16.20	---	---	14.96	15.20	15.23



GROUND-WATER LEVELS

GLOUCESTER COUNTY--Continued

NJ-WRD Well Number, 15-1054. Site I.D., 394221075072201. Local I.D., USGS GSC Obs-1 Shallow. NJ Permit Number, 31-33949.

LOCATION.--Lat 39°42'21", long 75°07'21", Hydrologic Unit 02040202, at Rowan University, about 500 ft north of the intersection of Whitney and Oakwood Streets, Glassboro Borough. Owner: U.S. Geological Survey.

AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 2 in., depth 36 ft, screened 31 to 36 ft.

INSTRUMENTATION.--Submersible logger pressure transducer--60-minute recording interval. Periodic measurements, Mar. 1991 to Nov. 1994.

DATUM.--Land surface is 153.9 ft above NGVD of 1929. Measuring point: Top of base of aluminum locking cap, 3.85 ft above land surface.

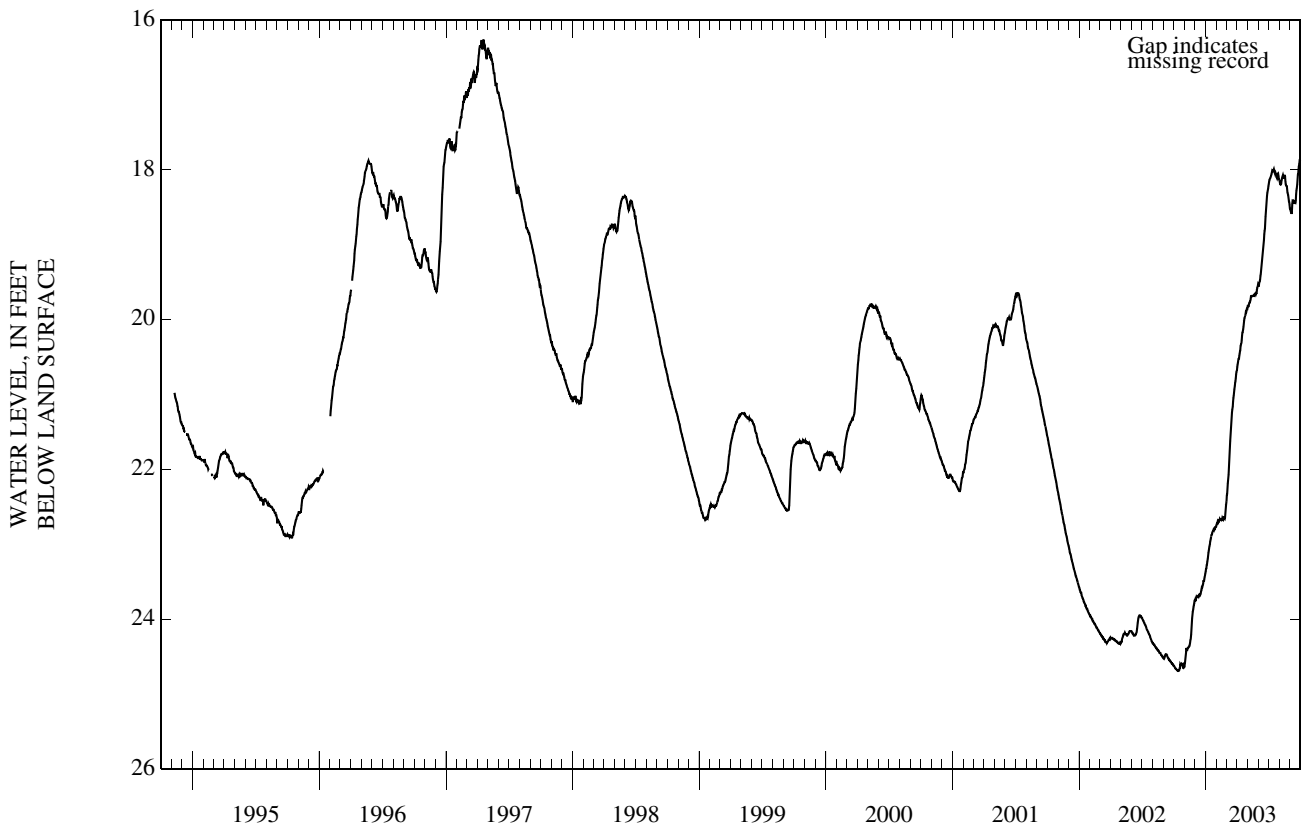
PERIOD OF RECORD.--Mar. 1991 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 16.24 ft below land surface, Apr. 18, 1997; lowest, 24.70 ft below land surface, Oct. 12-14, 16, 2002.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	24.66	24.43	23.70	23.23	22.71	22.19	20.52	19.80	19.49	18.12	18.20	18.59
10	24.68	24.38	23.69	23.06	22.66	21.82	20.41	19.72	19.31	18.04	18.08	18.41
15	24.69	24.34	23.68	22.92	22.68	21.38	20.22	19.69	19.06	18.00	18.09	18.43
20	24.62	24.14	23.58	22.84	22.68	21.09	20.06	19.66	18.79	18.06	18.21	18.25
25	24.60	23.87	23.48	22.80	22.64	20.89	19.93	19.66	18.41	18.11	18.32	17.99
EOM	24.63	23.75	23.36	22.75	22.48	20.68	19.86	19.53	18.22	18.13	18.51	17.87
MEAN	24.65	24.21	23.61	22.97	22.66	21.44	20.22	19.70	18.96	18.07	18.21	18.29
MAX	24.69	24.59	23.75	23.33	22.73	22.42	20.64	19.83	19.56	18.19	18.51	18.59
MIN	24.60	23.75	23.36	22.75	22.48	20.68	19.86	19.53	18.22	17.99	18.07	17.87

WTR YR 2003 MEAN 21.08 HIGH 17.87 SEP 30 LOW 24.69 OCT 11



GROUND-WATER LEVELS

GLOUCESTER COUNTY--Continued

NJ-WRD Well Number, 15-1126. Site I.D., 394119075062701. Local I.D., Glassboro ML-1 Obs. NJ Permit Number, 31-34033-4.

LOCATION.--Lat 39°41'19", long 75°06'26", Hydrologic Unit 02040206, at the end of Pershing St., Glassboro Borough. Owner: Glassboro Borough.

AQUIFER.--Wenonah-Mount Laurel aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 4 in., depth 338 ft, screened 328 to 338 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval. Periodic measurements, Jan. to June 1995.

DATUM.--Land surface is 145.95 ft above NGVD of 1929. Measuring point: Top of recorder shelf, 2.20 ft above land surface.

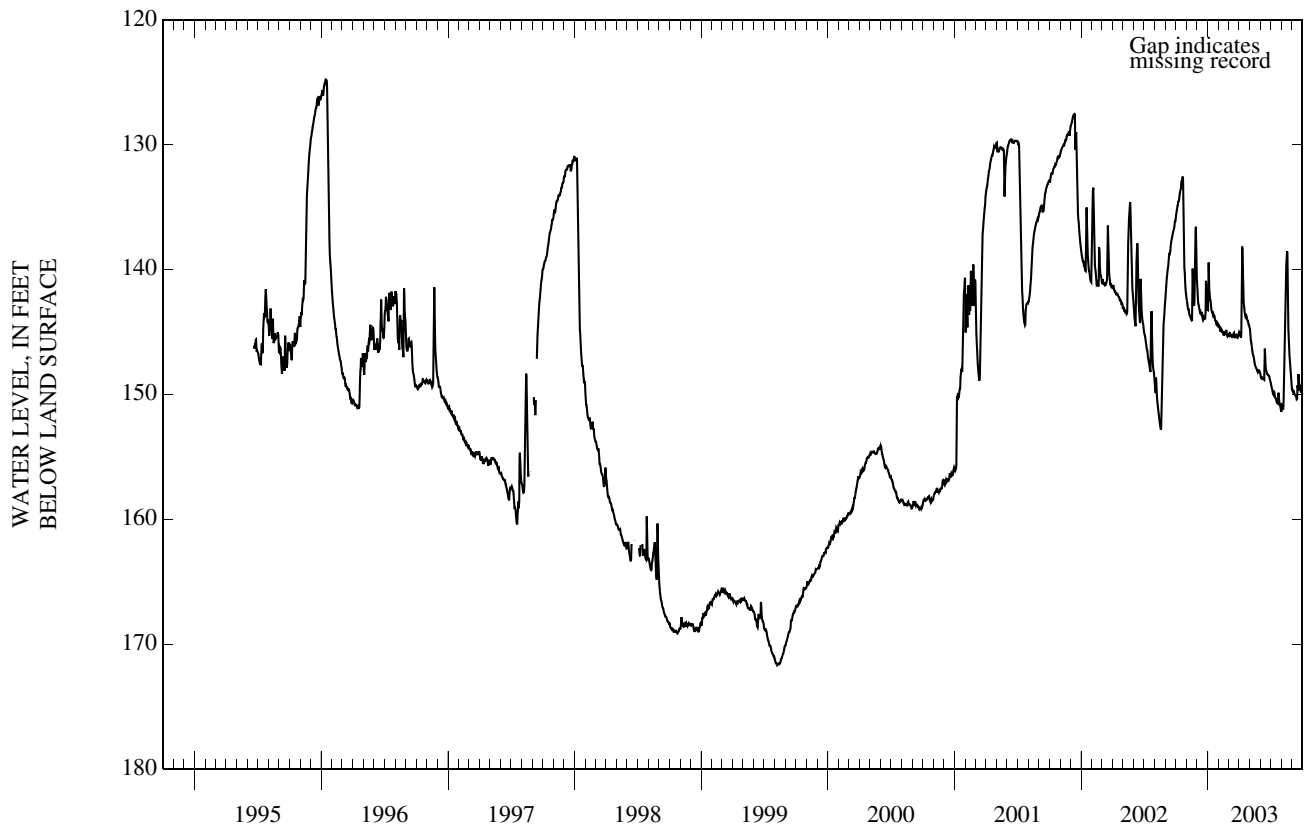
PERIOD OF RECORD.--Jan. 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 124.76 ft below land surface, Jan. 12-13, 1996; lowest, 171.71 ft below land surface, Aug. 7, 1999.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	134.89	143.24	142.78	141.62	144.76	145.07	145.22	145.71	148.62	149.59	151.15	149.72
10	134.30	143.68	143.51	142.90	144.84	145.32	138.16	146.71	148.76	149.71	143.70	150.10
15	133.41	144.06	143.61	143.57	145.18	145.22	142.94	147.40	146.82	150.31	139.62	150.36
20	132.54	142.26	143.74	143.74	145.15	145.42	143.84	147.87	148.30	150.69	143.51	148.72
25	139.82	138.09	143.26	144.32	145.26	145.41	144.09	148.19	148.50	150.42	147.30	149.70
EOM	142.28	140.71	143.24	144.53	145.26	145.14	144.56	148.25	148.95	151.31	149.49	149.99
MEAN	135.98	141.98	143.13	143.29	144.98	145.28	143.41	147.11	148.35	150.22	145.87	149.72
MAX	142.28	144.06	144.06	144.53	145.34	145.49	145.46	148.25	148.95	151.31	151.39	150.40
MIN	132.54	136.56	140.89	139.44	144.45	145.06	138.16	144.65	146.33	149.06	138.54	148.37

WTR YR 2003 MEAN 144.93 HIGH 132.54 OCT 20 LOW 151.39 AUG 1



## GROUND-WATER LEVELS

## GLOUCESTER COUNTY--Continued

NJ-WRD Well Number, 15-1208. Site I.D., 394256075101001. Local I.D., USGS AG02. NJ Permit Number, 31-49627.

LOCATION.--Lat 39°43'02", long 75°10'12", Hydrologic Unit 02040202, at Heritage Farm, Elmer-Barnsboro Rd., Richwood, Harrison Township. Owner: U.S. Geological Survey.

AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.

WELL CHARACTERISTICS.-- Drilled water-table observation well, diameter 2 in., depth 33 ft, screened 31 to 33 ft.

INSTRUMENTATION.--Submersible logger pressure transducer--60 minute recording interval.

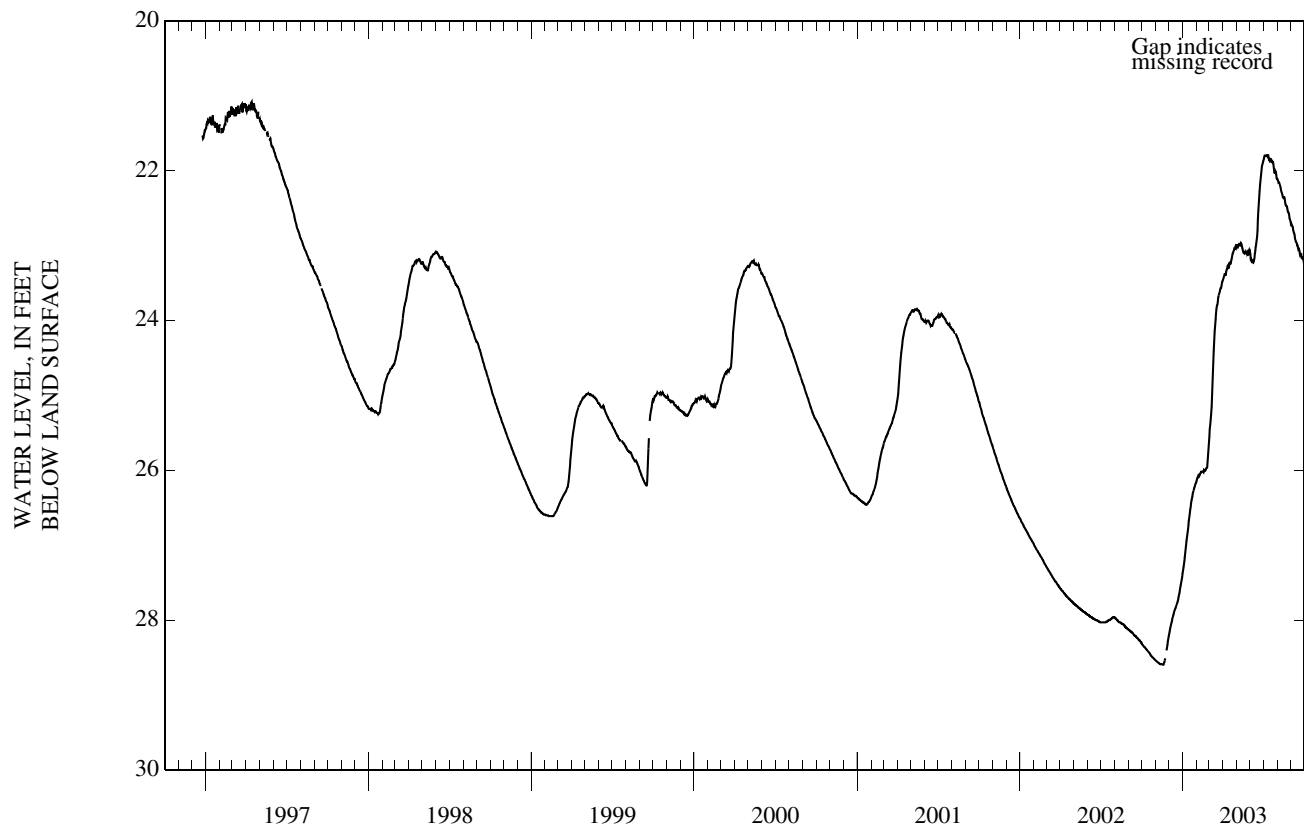
DATUM.-- Land surface is 140 ft above sea level, from topographic map. Measuring point: Top of outer protective casing, 2.95 ft above land surface.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 21.01 ft below land surface, Mar. 26, Apr. 12-13, 1997; lowest, 28.61 ft below land surface, Nov. 17, 2002.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	28.35	28.56	28.06	27.16	26.09	25.23	23.37	23.01	23.20	21.80	22.16	22.78
10	28.38	28.58	27.94	26.89	26.02	24.57	23.30	22.99	23.18	21.81	22.28	22.92
15	28.42	28.59	27.84	26.63	26.02	23.98	23.24	23.06	22.94	21.85	22.35	23.00
20	28.46	28.57	27.75	26.41	26.00	23.74	23.18	23.10	22.44	21.89	22.47	23.10
25	28.50	28.41	27.59	26.27	25.90	23.60	23.06	23.11	22.05	22.03	22.55	23.16
EOM	28.53	28.21	27.38	26.15	25.63	23.47	23.03	23.07	21.86	22.11	22.71	23.27
MEAN	28.43	---	27.81	26.65	25.99	24.22	23.23	23.05	22.70	21.89	22.39	23.00
MAX	28.53	---	28.18	27.34	26.12	25.55	23.45	23.13	23.23	22.11	22.71	23.27
MIN	28.32	---	27.38	26.15	25.63	23.47	23.01	22.96	21.86	21.78	22.11	22.71



GROUND-WATER LEVELS

GLOUCESTER COUNTY--Continued

NJ-WRD Well Number, 15-1213. Site I.D., 393749074550901. Local I.D., USGS UND06. NJ Permit Number 31-49658.

LOCATION.--Lat 39°37'52", long 74°55'13", Hydrologic Unit 02040302, at Winslow Wildlife Management Area, Monroe Township.  
 Owner: U.S. Geological Survey - State of New Jersey-DEP/Fish, Game & Wildlife.

AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.

WELL CHARACTERISTICS.-- Drilled water-table observation well, diameter 2 in., depth 15 ft, screened 13 to 15 ft.

INSTRUMENTATION.--Submersible logger pressure transducer--60 minute recording interval.

DATUM.-- Land surface is 97 ft above sea level, from topographic map. Measuring point: Top of outer protective casing, 2.30 ft above land surface.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.50 ft below land surface, June 21, 2003; lowest, 8.73 ft below land surface, Oct. 9-11, 2002.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.65	7.03	5.51	4.34	5.24	3.42	4.10	4.45	3.47	3.80	5.29	4.79
10	8.73	6.77	5.66	4.51	5.25	3.08	3.83	3.93	3.35	4.08	5.30	5.02
15	8.45	6.28	4.62	4.77	5.40	3.54	3.51	4.23	2.96	4.34	5.42	5.18
20	8.12	5.17	4.70	4.92	5.47	3.74	3.87	4.46	2.76	4.65	5.07	4.83
25	8.00	5.11	4.66	5.10	3.69	3.72	4.09	4.33	3.16	4.83	5.43	4.61
EOM	7.52	5.26	4.65	5.26	3.79	3.94	4.27	4.02	3.66	5.11	5.47	4.87
MEAN	8.30	6.08	---	4.79	4.98	3.54	3.91	4.22	---	4.40	5.33	4.94
MAX	8.73	7.34	---	5.26	5.47	3.94	4.27	4.49	---	5.11	5.64	5.43
MIN	7.52	5.10	---	4.34	3.69	3.00	3.39	3.85	---	3.67	5.05	4.61

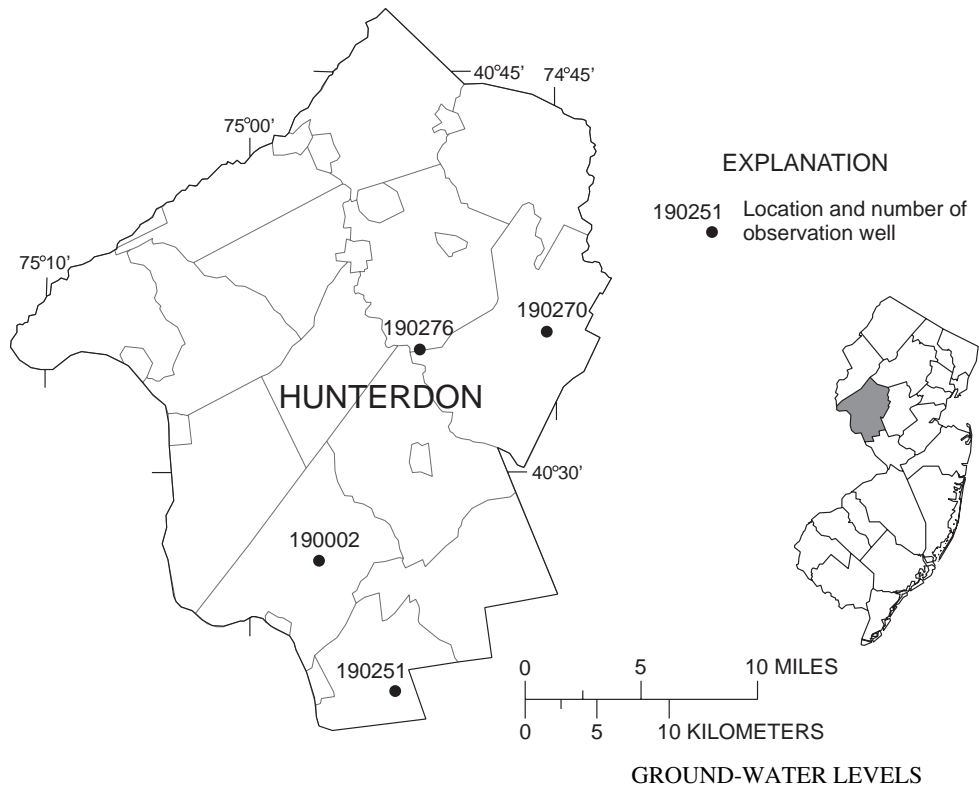


WATER RESOURCES DATA - NEW JERSEY, 2003

HUNTERDON COUNTY

NJ-WRD well number	Local identifier	Township	Well depth	Aquifer	Type of data
190002	BIRD OBS	DELAWARE TWP	21	SCKN	DAILY
190251	CORSALO RD TB1 OBS	WEST AMWELL TWP	299	PSSC	DAILY
190270	READINGTON SCHOOL 11 OBS	READINGTON TWP	101	PSSC	DAILY
190276	ENVIRONMENTAL CTR 1 OBS	CLINTON TWP	175	SCKN	DAILY

Aquifer names  
 PSSC - Passaic Formation  
 SCKN - Stockton Formation



GROUND-WATER LEVELS

HUNTERDON COUNTY

NJ-WRD Well Number, 19-0002. Site I.D., 402644074563601. Local I.D., Bird Obs.

LOCATION.--Lat 40°26'44", long 74°56'35", Hydrologic Unit 02040105, near U.S. Post Office, Sergeantsville, Delaware Township. Owner: Phillip Fleming.

AQUIFER.--Stockton Formation of Triassic age.

WELL CHARACTERISTICS.--Dug water-table observation well, diameter 36 in., depth 21 ft, lined with stone.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval. Periodic measurements, July 1970 to May 1977. Water-level recorder, June 1965 to July 1970.

DATUM.--Land surface is 342.08 ft above NGVD of 1929. Measuring point: Top of recorder shelf, 1.50 ft above land surface.

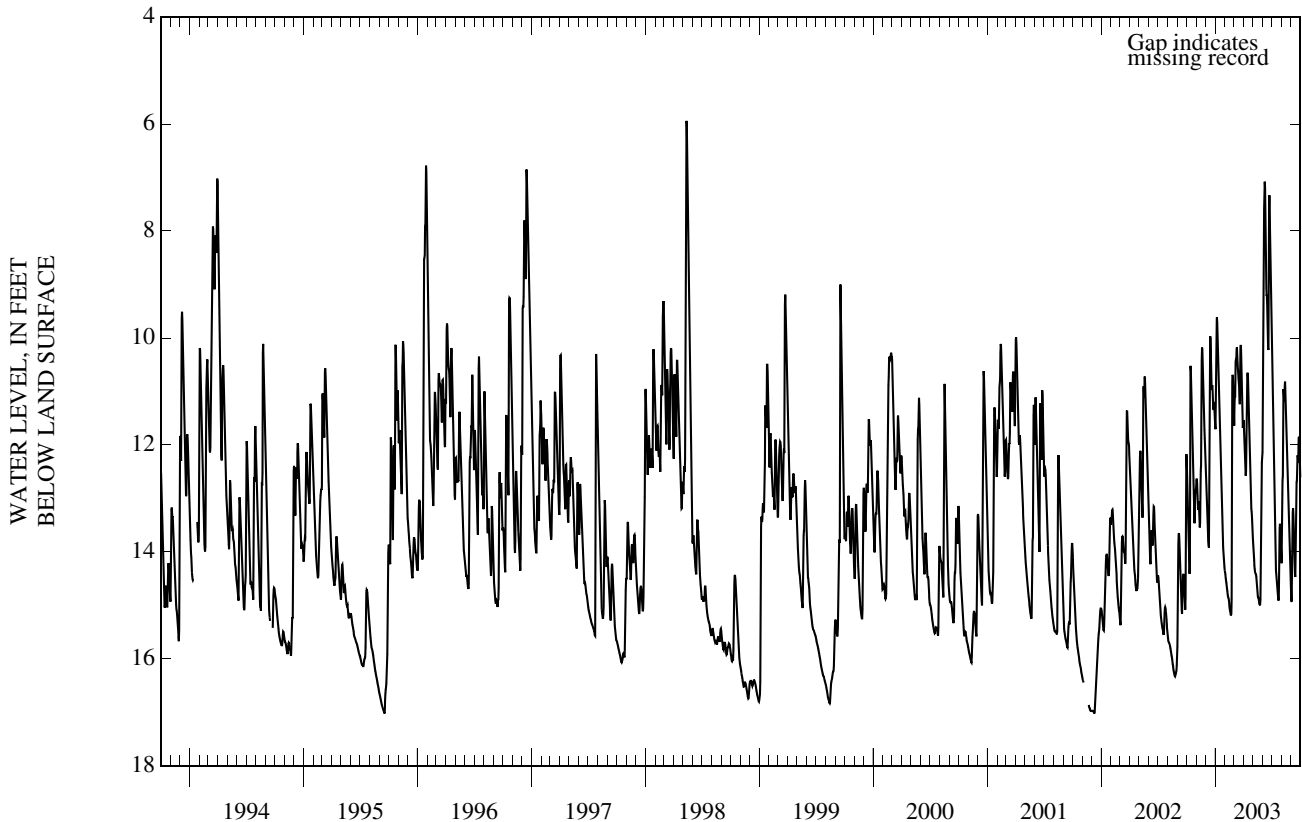
PERIOD OF RECORD.--June 1965 to current year. Records for 1965 to 1976 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 5.27 ft below land surface, Mar. 29, 1993; lowest, 17.04 ft below land surface, Jan. 26-28, 1981.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.33	13.08	13.25	9.67	14.58	11.11	12.10	14.16	8.63	12.99	12.59	13.64
10	14.41	13.20	13.88	10.34	14.83	10.23	11.87	14.41	7.61	13.91	11.16	13.79
15	10.81	12.49	9.97	11.91	15.01	10.65	10.71	14.67	9.19	14.40	11.55	14.09
20	11.73	10.22	10.97	13.05	15.19	11.24	11.91	14.90	10.22	14.79	12.92	12.38
25	13.26	11.23	11.33	13.83	10.69	10.47	13.03	14.89	8.17	13.96	13.97	11.86
EOM	12.80	12.13	11.63	14.35	11.11	11.60	13.62	12.23	11.06	14.02	14.81	12.60
MEAN	12.56	12.12	11.86	12.07	14.04	10.82	12.06	14.25	9.11	13.84	12.72	13.22
MAX	14.41	13.54	13.92	14.35	15.19	11.68	13.62	14.99	12.14	14.91	14.81	14.92
MIN	10.52	10.18	9.97	9.62	10.69	10.13	10.65	12.23	7.08	11.54	10.82	11.86

WTR YR 2003 MEAN 12.38 HIGH 7.08 JUN 8 LOW 15.19 FEB 20



GROUND-WATER LEVELS

HUNTERDON COUNTY--Continued

NJ-WRD Well Number, 19-0251. Site I.D., 402151074525301. Local I.D., Corsalo Rd TB 1 Obs. NJ Permit Number, 27-10124.

LOCATION.--Lat 40°21'51", long 74°52'52", Hydrologic Unit 02040105, 1,100 ft east of the intersection of County Rt. 518 and Corsalo Rd., West Amwell Township. Owner: U.S. Geological Survey.

AQUIFER.--Passaic Formation of Triassic-Jurassic age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 3 in., depth 299 ft, open hole 21.5 to 299 ft.

INSTRUMENTATION.--Data collection platform with satellite telemetry--60 minute recording interval. Submersible logger pressure transducer, July 1999 to Aug. 2002. Water-level recorder, June 1989 to July 1999.

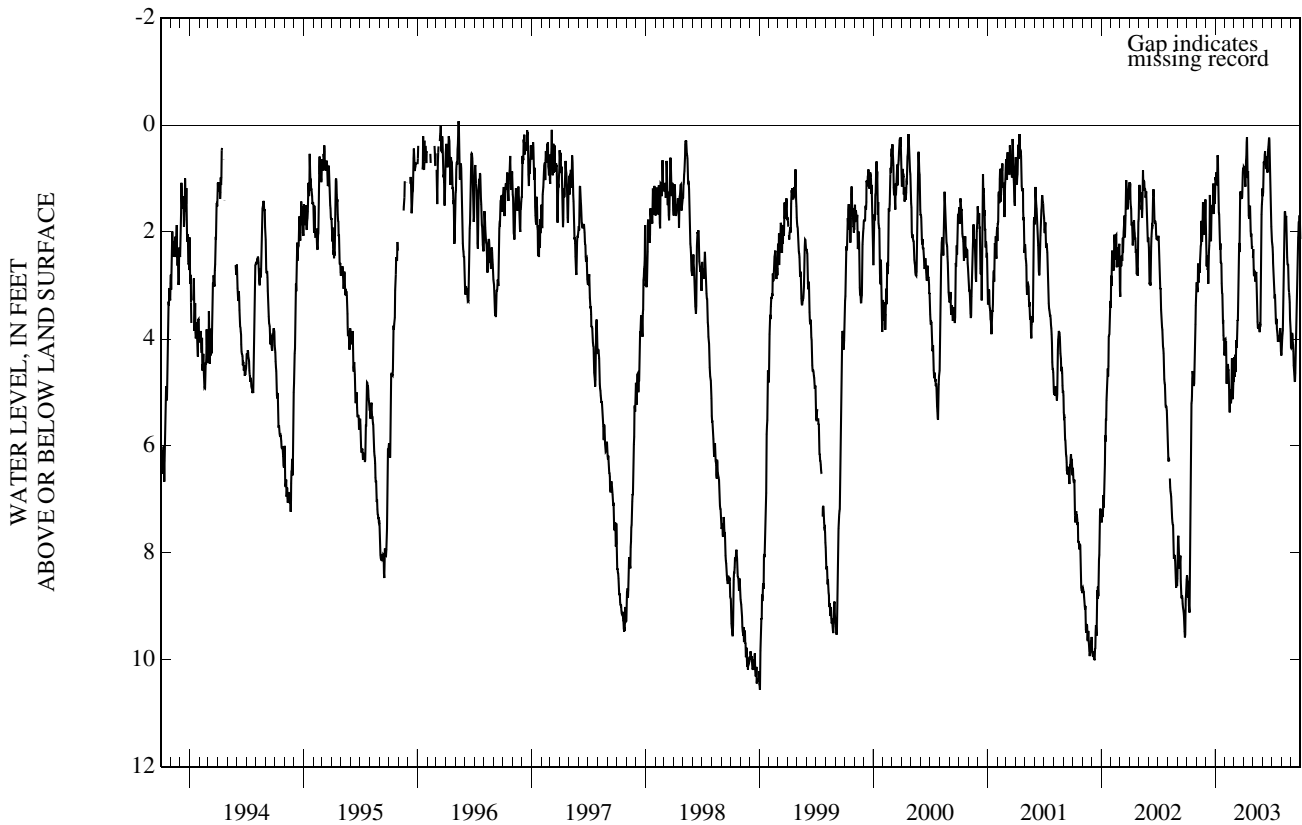
DATUM.--Land surface is 405 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.35 ft above land surface.

PERIOD OF RECORD.--June 1989 to current year. Records for 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.51 ft above land surface, Mar. 13, 1993; lowest, 10.65 ft below land surface, Jan. 1-2, 1999.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.52	3.12	2.45	1.13	4.49	4.29	0.77	2.83	0.69	2.58	3.84	3.93
10	9.12	2.67	2.68	0.93	4.47	4.17	0.58	2.90	0.64	3.24	1.87	4.59
15	5.88	2.27	1.56	2.10	5.13	3.31	0.88	3.50	0.58	3.70	1.75	4.30
20	4.60	2.05	1.49	2.58	5.20	2.00	1.72	3.78	0.41	4.05	2.59	2.82
25	4.83	1.98	1.10	3.71	5.12	1.34	2.09	3.73	0.76	4.05	3.13	1.83
EOM	3.20	1.39	1.18	4.26	4.74	0.80	---	1.39	2.04	4.31	4.16	2.13
MEAN	6.26	2.32	1.92	2.27	4.74	2.84	---	3.00	0.84	3.47	2.84	3.42
MAX	9.12	3.12	2.97	4.31	5.37	4.81	---	3.87	2.04	4.31	4.28	4.80
MIN	3.20	1.39	1.10	0.57	4.00	0.80	---	1.39	0.24	2.18	1.61	1.69





HUNTERDON COUNTY--Continued

NJ-WRD Well Number, 19-0270. Site I.D., 403517074452501. Local I.D., Readington School 11 Obs. NJ Permit Number, 25-33679-7.

LOCATION.--Lat 40°35'17", long 74°45'24", Hydrologic Unit 02030105, behind Readington School, on Readington Rd. (County Rd. 620), Readington Township. Owner: State of New Jersey.

AQUIFER.--Passaic Formation of Triassic-Jurassic age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 101 ft, open hole 50 to 101 ft.

INSTRUMENTATION.--Data collection platform with satellite telemetry--60 minute recording interval. Water-level recorder, Apr. 1990 to May 2001.

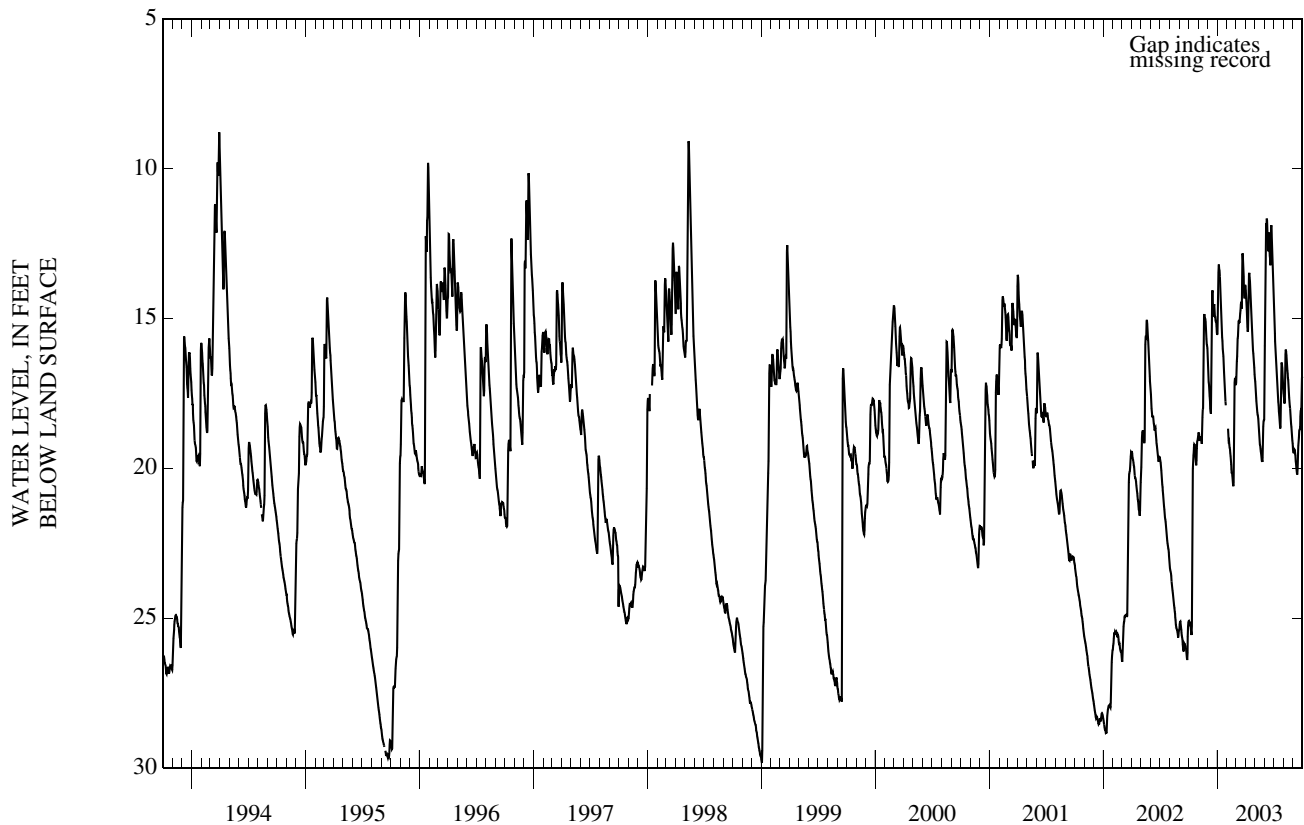
DATUM.--Land surface is 224.99 ft above NGVD of 1929. Measuring point: Top of casing, 2.13 ft above land surface.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 8.64 ft below land surface, Mar. 26, 1993; lowest, 29.86 ft below land surface, Jan. 2-3, 1999.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	25.18	19.09	17.20	13.22	18.89	16.25	14.68	17.65	12.44	15.75	17.76	19.37
10	25.56	18.98	18.11	13.90	19.35	15.08	14.57	18.21	12.08	16.88	16.22	19.85
15	19.77	18.05	14.14	15.34	20.02	14.82	13.75	18.85	12.13	17.78	16.98	20.00
20	19.21	14.85	14.90	16.25	20.52	14.67	15.05	19.44	13.22	18.53	17.77	18.75
25	19.90	15.29	14.94	17.39	17.14	13.37	16.06	19.79	12.58	16.60	18.51	18.09
EOM	18.93	15.99	15.55	---	17.08	13.88	16.87	18.38	14.44	17.34	19.38	16.94
MEAN	21.66	17.26	15.88	---	---	14.81	14.96	18.59	13.06	17.00	17.60	19.04
MAX	25.56	19.18	18.18	---	---	17.22	16.87	19.79	17.50	18.67	19.38	20.18
MIN	18.93	14.85	14.06	---	---	12.83	13.47	17.00	11.66	14.73	16.04	16.94



## GROUND-WATER LEVELS

## HUNTERDON COUNTY--Continued

NJ-WRD Well Number, 19-0276. Site I.D., 403455074514801. Local I.D., Environmental Ctr 1 Obs. NJ Permit Number, 24-25826.

LOCATION.--Lat 40°34'38", long 74°51'38", Hydrologic Unit 02030105, at the Hunterdon County Arboretum, Rt. 31, Clinton Township.  
Owner: State of New Jersey - New Jersey Geological Survey.

AQUIFER.--Stockton Formation of Triassic age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 175 ft, open hole 55 to 175 ft.

INSTRUMENTATION.--Data collection platform with satellite telemetry--60 minute recording interval. Water-level recorder, May 1992 to Aug. 2002. Periodic measurements, Mar. 1991 to May 1992.

DATUM.--Land surface is 170.4 ft above NGVD of 1929. Measuring point: Top of casing, 1.36 ft above land surface.

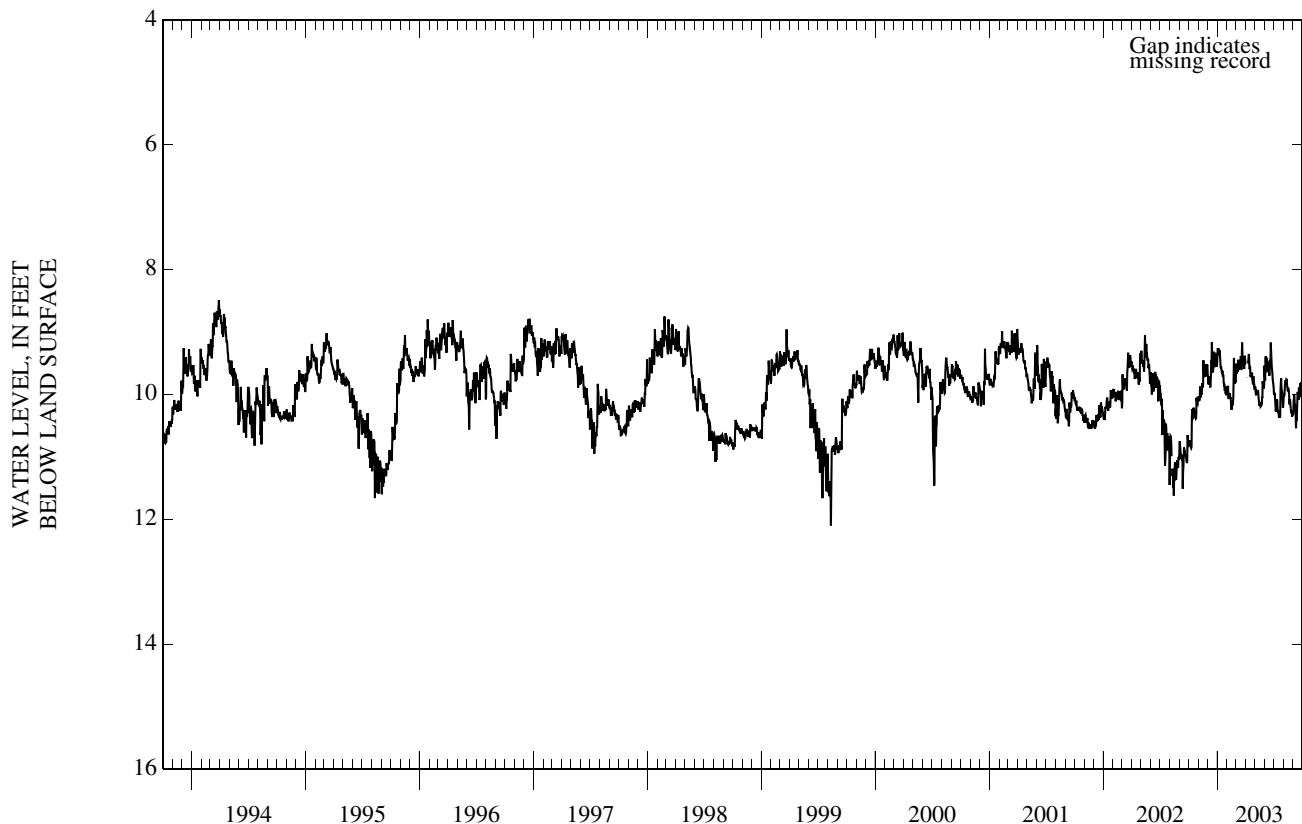
REMARKS.--Water level is affected by nearby pumping.

PERIOD OF RECORD.--Mar. 1991 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 8.44 ft below land surface, Mar. 29, 1994; lowest, 12.75 ft below land surface, Aug. 11, 1995.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.73	10.08	9.71	9.37	10.02	9.53	---	10.00	9.39	10.07	9.87	10.05
10	10.84	9.98	9.81	9.45	9.98	9.54	9.45	9.96	9.63	10.16	9.76	10.54
15	10.38	9.89	9.41	9.64	10.23	9.49	9.56	10.15	9.54	10.27	9.95	9.96
20	10.28	9.70	9.31	9.69	10.11	9.45	9.69	10.18	9.49	10.37	10.16	9.97
25	10.38	9.69	9.33	9.92	9.83	9.51	9.84	10.05	9.60	9.91	10.27	9.90
EOM	10.05	9.52	9.48	9.96	9.80	9.45	9.92	9.83	9.89	10.19	10.33	10.0
MEAN	10.43	9.81	9.58	9.64	9.97	9.51	---	10.00	9.57	10.13	10.03	10.08
MAX	10.86	10.11	9.89	10.01	10.25	9.80	---	10.19	9.89	10.37	10.35	10.54
MIN	10.04	9.45	9.16	9.26	9.42	9.17	---	9.79	9.17	9.74	9.76	9.80

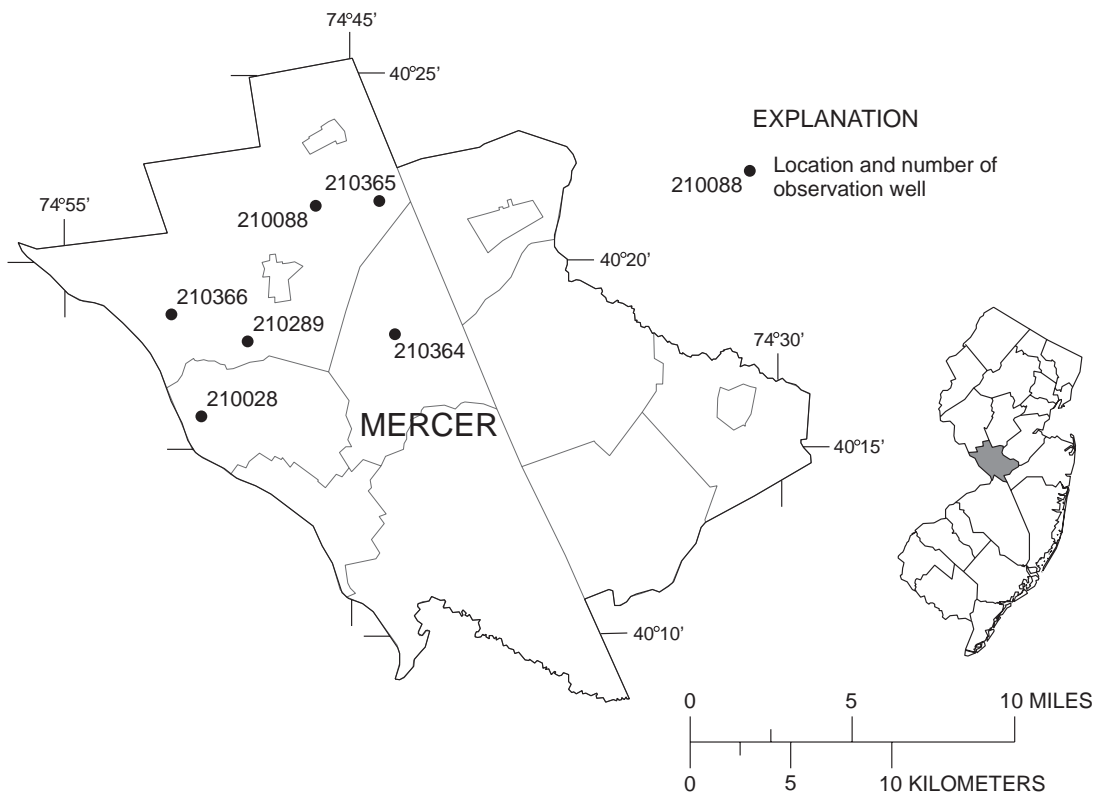


MERCER COUNTY

NJ-WRD well number	Local identifier	Township	Well depth	Aquifer	Type of data
210028	CIVIL DEFENSE OBS	EWING TWP	300	LCKG	DAILY
210088	SBMWA HONEY BR 10 OBS	HOPEWELL TWP	150	PSSC	MANUAL
210289	BRISTOL-MYERS 100 OBS	HOPEWELL TWP	300	PSSC	DAILY
210364	CRANSTON FARMS 15 OBS	LAWRENCE TWP	200	SCKN	DAILY
210365	AT&T NORTH OBS	HOPEWELL TWP	99	PSSC	DAILY
210366	WASH CROSSING PK 14 OBS	HOPEWELL TWP	225	PSSC	DAILY

Aquifer names

- LCKG - Lockatong Formation
- PSSC - Passaic Formation
- SCKN - Stockton Formation



GROUND-WATER LEVELS

GROUND-WATER LEVELS

MERCER COUNTY

NJ-WRD Well Number, 21-0028. Site I.D., 401552074501801. Local I.D., Civil Defense Obs. NJ Permit Number, 27-04214.

LOCATION.--Lat 40°15'53", long 74°50'11", Hydrologic Unit 02040105, at the State Police Headquarters, Ewing Township. Owner: State of New Jersey.

AQUIFER.--Lockatong Formation of Triassic age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 300 ft, open hole 33 to 300 ft.

INSTRUMENTATION.--Submersible logger pressure transducer--60-minute recording interval. Periodic measurements, July 1970 to Sept. 1976 and Apr. 1978 to Apr. 2001. Water-level recorder, June 1964 to July 1970.

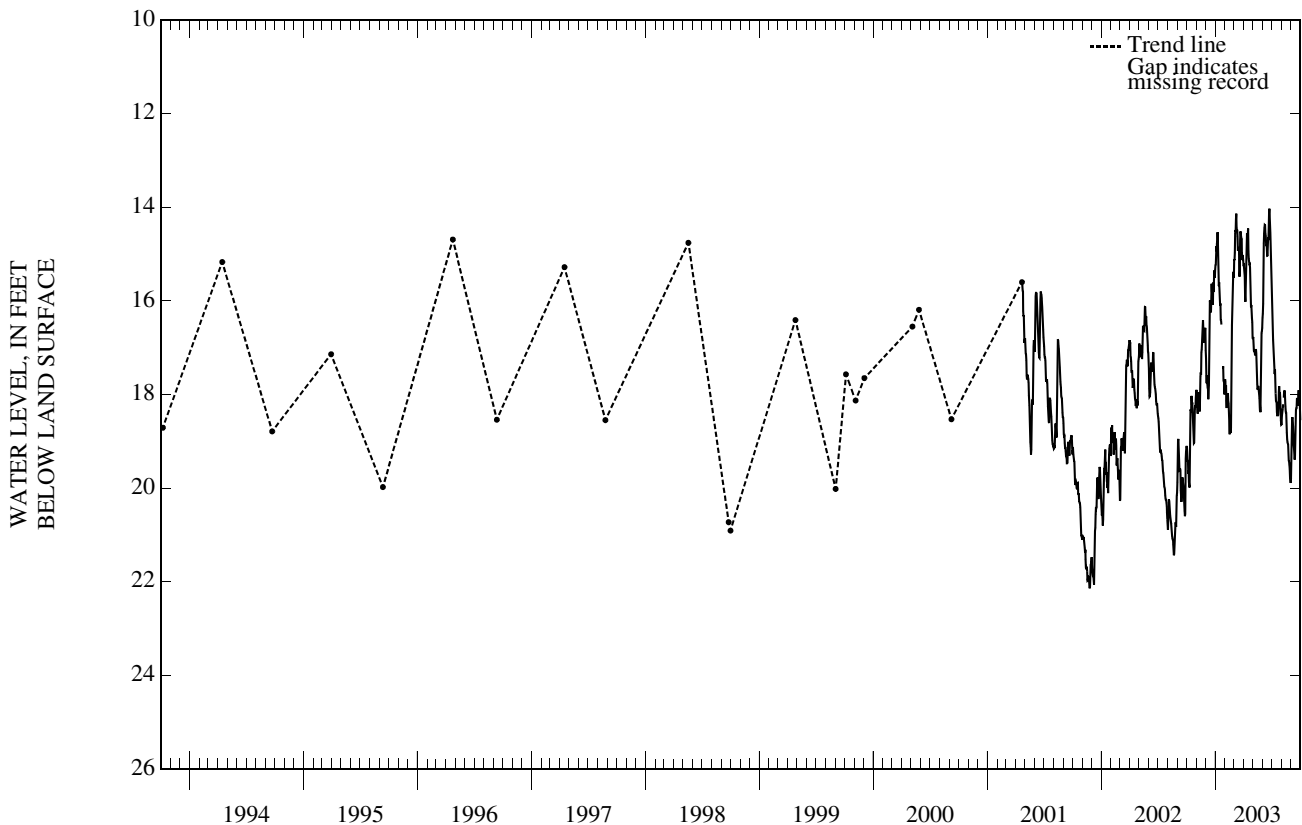
DATUM.--Land surface is 122.99 ft above NGVD of 1929. Measuring point: Top of base of aluminum locking cap, 0.0 ft above land surface.

PERIOD OF RECORD.--June 1964 to Sept. 1976, Apr. 1978 to current year. Records for 1964 to 1976 and 1978 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 13.97 ft below land surface, Mar. 9, 2003; lowest, 49.69 ft below land surface, June 17, 1964.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	19.42	18.41	17.59	14.94	18.13	14.56	15.48	17.09	14.77	16.83	18.29	18.49
10	19.99	18.19	17.95	15.09	17.98	14.43	15.19	17.10	14.57	17.56	17.93	19.17
15	18.32	17.53	16.07	15.92	18.68	14.90	14.50	17.78	14.87	18.15	18.38	18.61
20	18.34	16.81	15.63	16.51	18.71	15.36	15.21	17.93	14.70	18.46	19.02	18.08
25	19.03	16.81	15.61	17.44	15.86	14.67	16.14	18.38	14.41	17.94	19.44	17.91
EOM	17.97	16.58	15.33	17.91	15.40	15.13	16.79	16.58	15.76	18.64	19.79	18.55
MEAN	18.81	17.45	16.55	---	17.73	14.81	15.45	17.41	14.89	17.73	---	18.58
MAX	19.99	18.41	18.10	---	18.85	15.51	16.79	18.38	16.37	18.64	---	19.56
MIN	17.97	16.41	15.33	---	15.40	14.14	14.45	16.58	14.03	16.02	---	17.91



GROUND-WATER LEVELS

MERCER COUNTY--Continued

NJ-WRD Well Number, 21-0088. Site I.D., 402131074461201. Local I.D., SBMWA Honey Branch 10 Obs.

LOCATION.--Lat 40°21'31", long 74°46'10", Hydrologic Unit 02030105, at the Stony Brook-Millstone Watersheds Reserve, Wargo Rd., near Pennington, Hopewell Township. Owner: U.S. Geological Survey - Stony Brook-Millstone Watersheds Association.

AQUIFER.--Passaic Formation of Triassic-Jurassic age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 150 ft, open hole 20 to 150 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape. Water-level recorder, Apr. 1994 to Mar. 1995. Periodic measurements, Oct. 1988 to Apr. 1994. Water-level recorder, Jan. 1987 to Oct. 1988. Periodic measurements, July 1984 to Jan. 1987. Water-level recorder, Apr. 1977 to July 1984. Periodic measurements, Aug. 1975 to Apr. 1977. Water-level recorder, June 1967 to Aug. 1975.

DATUM.--Land surface is 179.53 ft above NGVD of 1929. Measuring point: Top of base of locking well cap, 3.78 ft above land surface.

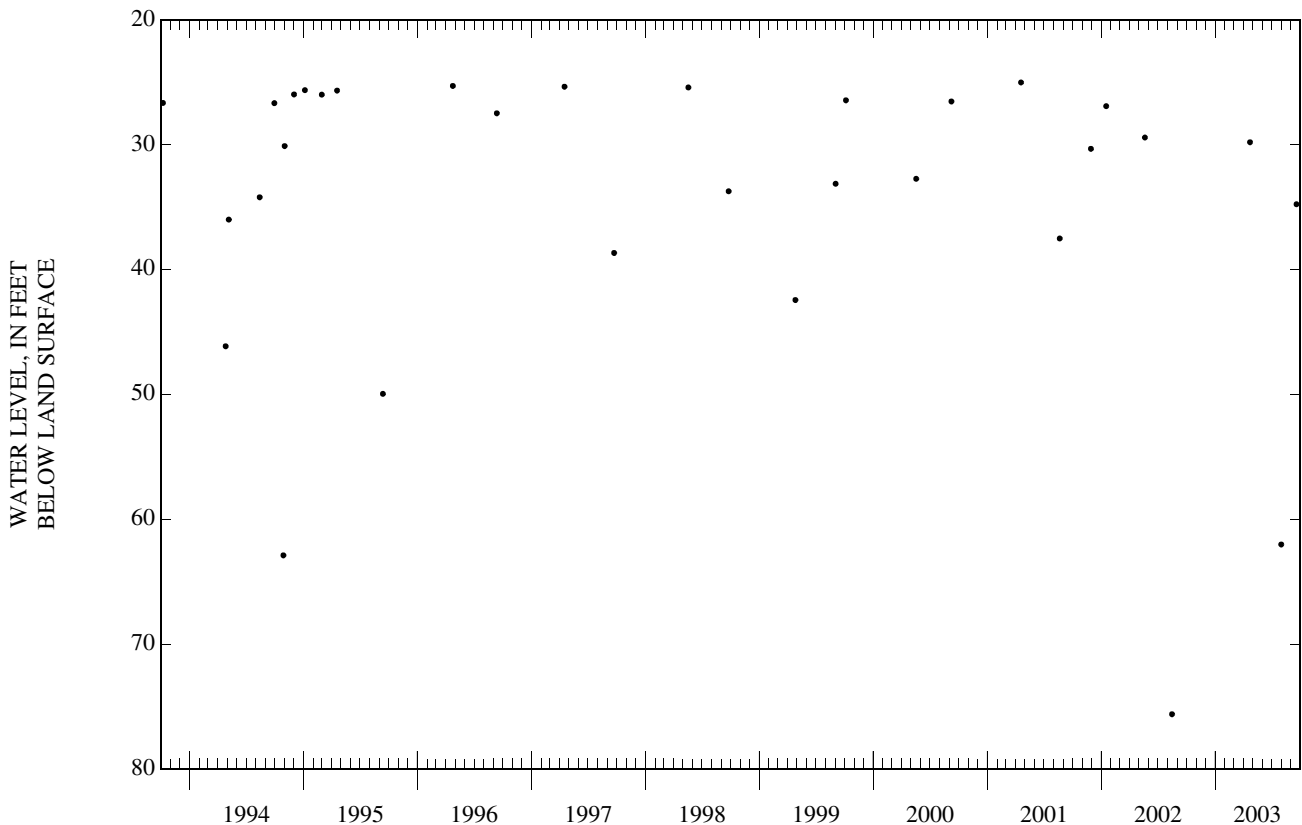
REMARKS.--Water level is affected by nearby pumping.

PERIOD OF RECORD.--June 1967 to current year. Records for 1967 to 1975 and 1985 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 24.63 ft below land surface, July 21, 1967; lowest, 75.62 ft below land surface, Aug. 15, 2002.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
APR 22	29.79	JUL 31	62.02	SEP 18	34.76
WATER YEAR 2003 HIGHEST 29.79		APR 22, 2003			
LOWEST 62.02		JUL 31, 2003			



GROUND-WATER LEVELS

MERCER COUNTY--Continued

NJ-WRD Well Number, 21-0289. Site I.D., 401753074483501. Local I.D., Bristol-Myers 100 Obs.

LOCATION.--Lat 40°17'53", long 74°48'34", Hydrologic Unit 02040105, about 600 ft east of Scotch Rd. and about 1.1 mi north of I-95, interchange 3, Hopewell Township. Owner: Bristol-Myers Squibb Company.

AQUIFER.--Passaic Formation of Triassic-Jurassic age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 8 in., depth 300 ft, open hole 12 to 300 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval.

DATUM.--Land surface is 212 ft above NGVD of 1929, from topographic map. Measuring point: Top of recorder shelf, 1.65 ft above land surface.

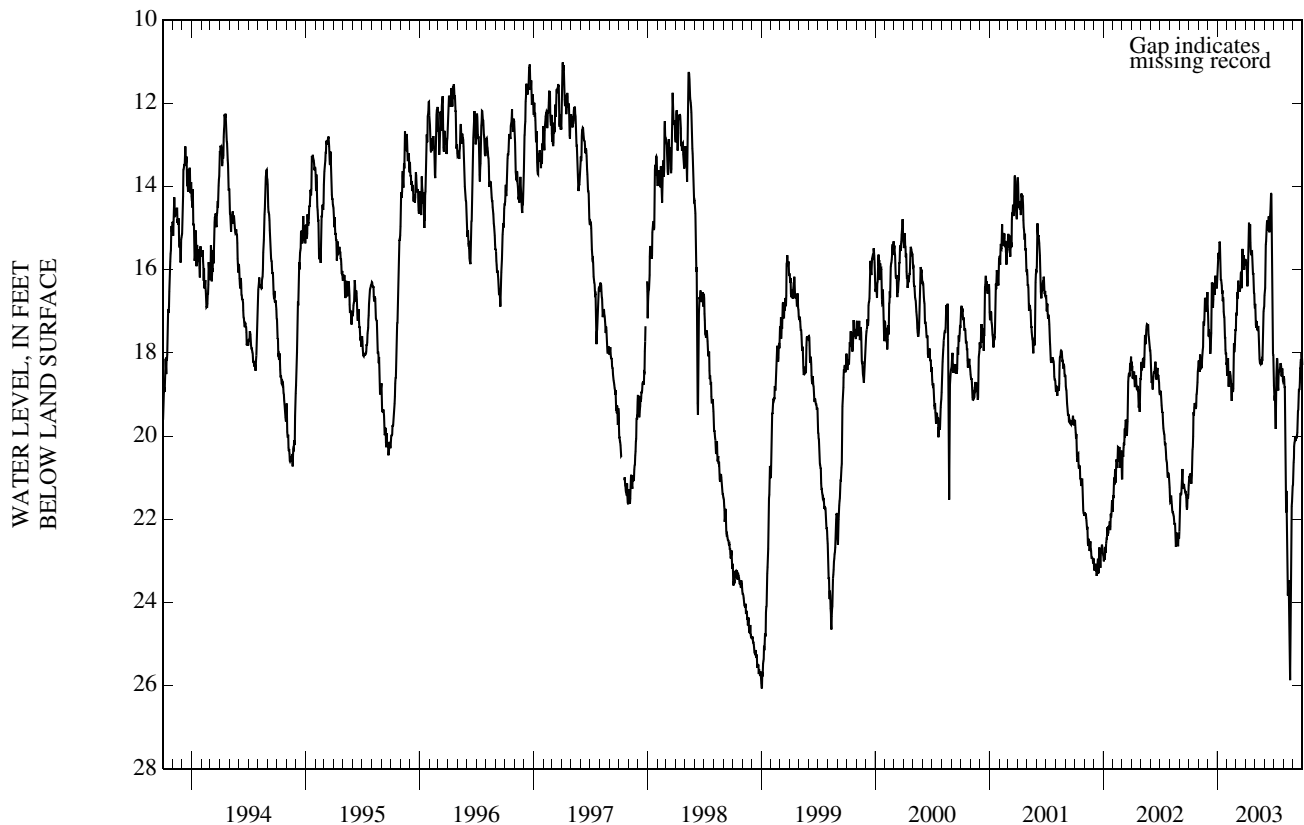
REMARKS.--Water level is occasionally affected by pumping of nearby irrigation well. Water level was affected by Mercuri and Assoc. aquifer tests between June and Aug. 2000.

PERIOD OF RECORD.--Dec. 1986 to current year. Records for 1986 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 10.96 ft below land surface, Apr. 4, 1997; lowest, 26.54 ft below land surface, Aug. 22, 2003.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	20.92	18.45	17.43	15.74	18.55	16.72	15.90	17.40	15.40	19.12	18.83	20.17
10	21.11	18.23	17.90	15.64	18.44	16.43	15.76	17.45	14.93	18.40	21.32	20.05
15	20.01	17.93	16.41	16.38	18.95	16.43	15.10	17.96	14.74	18.90	23.84	19.65
20	19.21	17.21	16.35	16.72	18.94	16.32	15.65	18.24	14.59	18.41	24.83	18.89
25	19.28	16.92	16.14	17.66	17.88	15.74	16.12	18.19	15.85	18.53	22.62	18.22
EOM	18.38	16.54	16.26	18.24	17.43	15.74	16.83	16.90	18.34	18.70	21.17	18.29
MEAN	19.94	17.63	16.88	16.63	18.45	16.27	15.80	17.62	15.55	18.64	22.09	19.38
MAX	21.19	18.45	18.02	18.28	19.16	17.47	16.83	18.27	18.34	19.83	25.87	20.90
MIN	18.38	16.54	16.14	15.33	17.43	15.50	14.87	16.82	14.16	18.12	18.57	17.99
WTR YR 2003	MEAN 17.91	HIGH 14.16	JUN 22	LOW 25.87	AUG 22							



GROUND-WATER LEVELS

MERCER COUNTY--Continued

NJ-WRD Well Number, 21-0364. Site I.D., 401804074432601. Local I.D., Cranston Farms 15 Obs. NJ Permit Number, 28-230000-1.

LOCATION.--Lat 40°18'04", long 74°43'25", Hydrologic Unit 02040105, 1,200 ft north of intersection of Cold Soil Rd. and Rt. 206, Lawrenceville, Lawrence Township. Owner: State of New Jersey.

AQUIFER.--Stockton Formation of Triassic age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 200 ft, open hole 50 to 200 ft.

INSTRUMENTATION.--Data collection platform with satellite telemetry--60 minute recording interval. Water-level recorder, Mar. 1990 to May 2001.

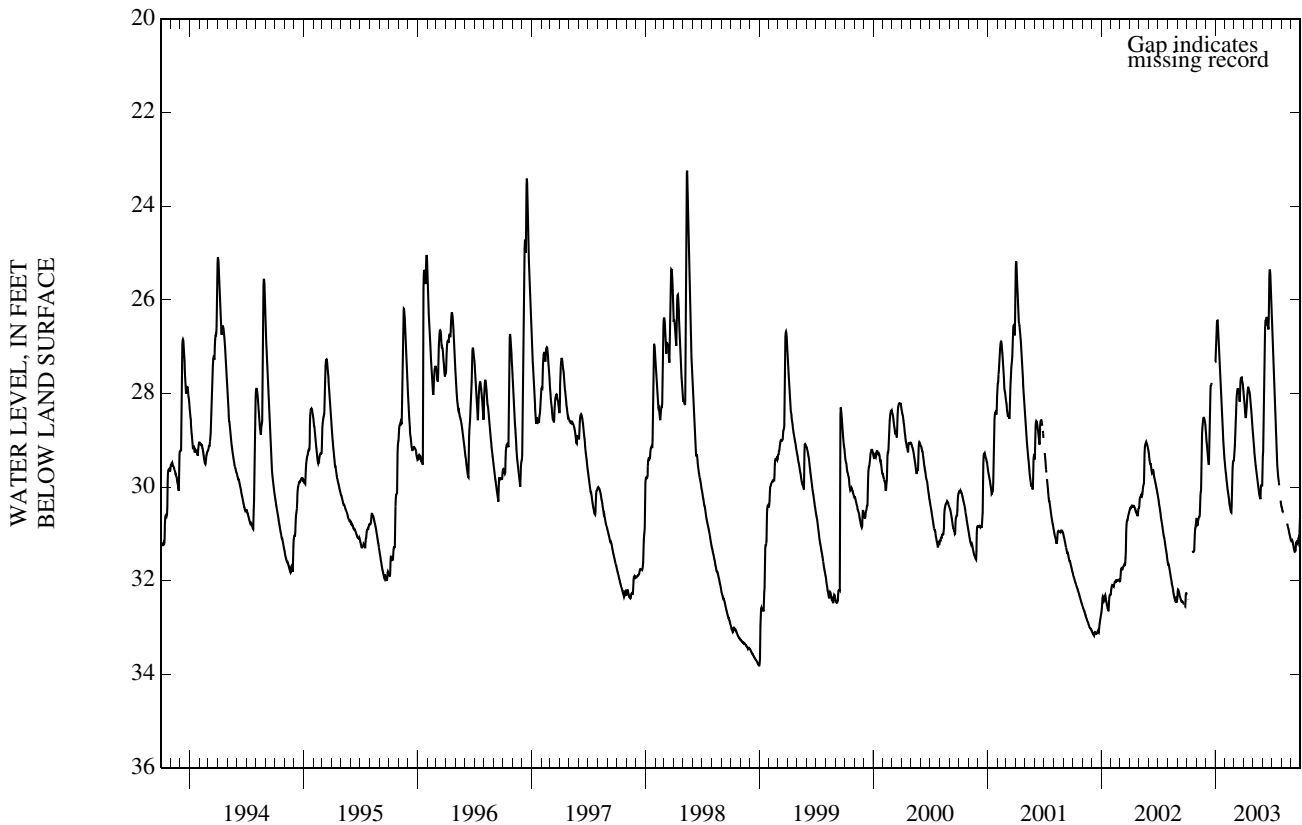
DATUM.--Land surface is 123.2 ft above NGVD of 1929. Measuring point: Top of casing, 2.22 ft above land surface.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 22.58 ft below land surface, Apr. 2-3, 1993; lowest, 33.85 ft below land surface, Dec. 30, 1998.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	32.39	30.81	29.11	26.59	29.81	28.98	28.28	29.19	27.96	27.43	30.53	31.15
10	---	30.64	29.51	26.64	30.09	28.10	28.37	29.53	26.48	28.39	---	31.32
15	---	30.11	28.09	27.40	30.35	27.90	27.89	29.86	26.38	29.15	---	31.36
20	31.39	28.74	27.77	28.14	30.53	28.17	27.96	30.10	26.63	29.69	30.81	31.17
25	31.36	28.52	---	28.86	29.59	27.66	28.30	30.26	25.37	---	30.96	31.08
EOM	30.74	28.68	27.32	29.47	29.44	27.88	28.76	29.97	26.30	30.39	31.14	30.65
MEAN	---	29.71	---	27.75	30.02	28.18	28.21	29.73	26.74	---	---	31.16
MAX	---	30.81	---	29.47	30.54	29.43	28.76	30.26	29.65	---	---	31.38
MIN	---	28.52	---	26.44	29.44	27.66	27.85	28.84	25.36	---	---	30.65



GROUND-WATER LEVELS

MERCER COUNTY--Continued

NJ-WRD Well Number, 21-0365. Site I.D., 402138074435801. Local I.D., AT&T North Obs.

LOCATION.--Lat 40°21'38", long 74°43'57", Hydrologic Unit 02030105, AT&T, Carter Rd., Hopewell Township. Owner: AT&T.

AQUIFER.--Passaic Formation of Triassic-Jurassic age.

WELL CHARACTERISTICS.--Drilled observation well, depth 99 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval.

DATUM.--Land surface is 231 ft above NGVD of 1929, by altimeter. Measuring point: Top of recorder shelf, 3.00 ft above land surface.

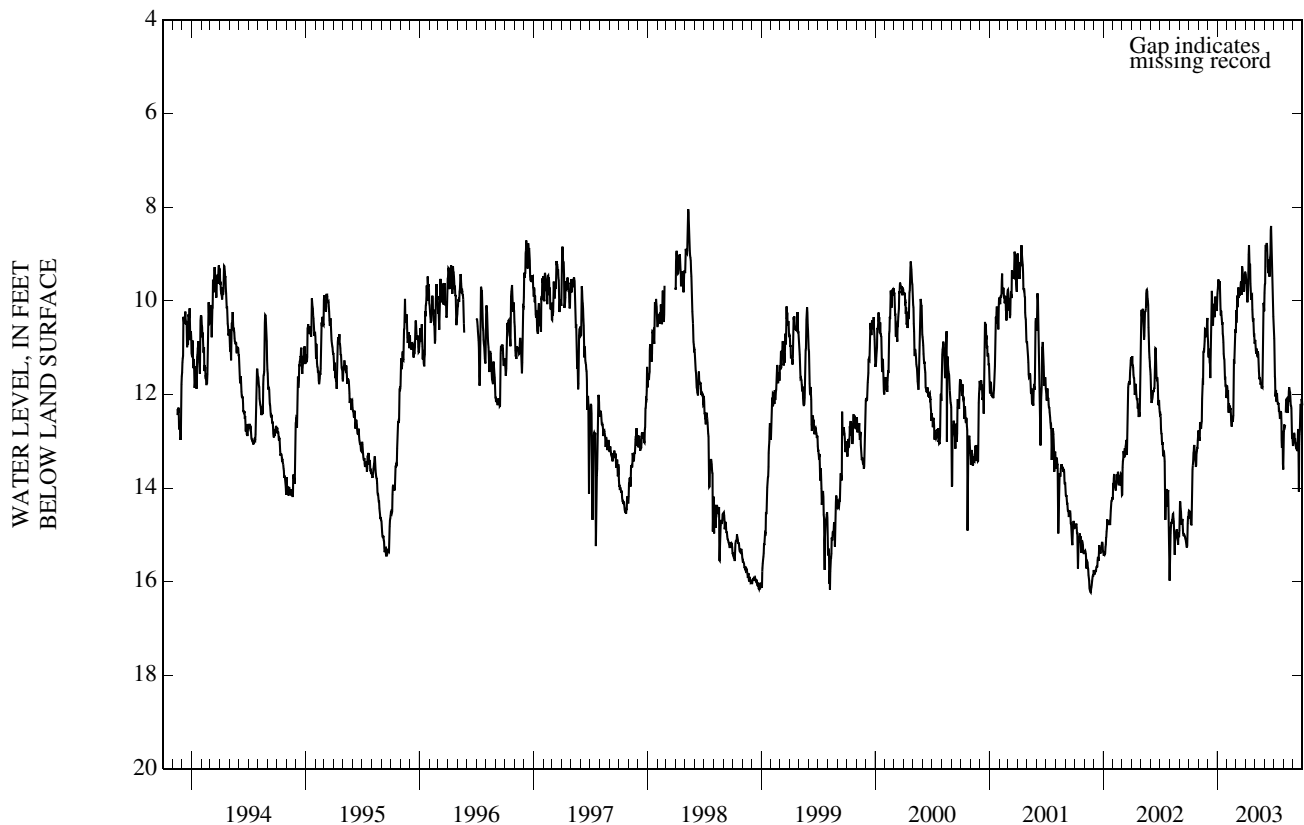
REMARKS.--Water level is affected by nearby pumping.

PERIOD OF RECORD.--Feb. 1987 to current year. Records for 1987 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.94 ft below land surface, May 11-12, 1998; lowest, 16.80 ft below land surface, Aug. 19, 1998.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	14.50	12.99	11.03	9.72	12.27	9.90	9.62	11.12	8.80	11.66	12.69	12.86
10	14.78	12.72	11.44	9.84	12.24	9.90	9.43	11.18	9.00	12.16	12.10	13.12
15	13.44	11.71	10.07	10.39	12.59	9.79	9.21	11.62	9.11	12.20	12.30	13.10
20	13.18	10.97	10.07	10.88	12.55	9.69	9.95	11.77	9.00	12.50	11.90	13.07
25	13.51	10.69	9.91	11.68	11.10	9.70	10.44	11.85	9.13	12.61	12.24	12.20
EOM	12.89	10.37	10.05	12.03	10.60	9.38	10.92	10.22	10.48	13.60	13.10	12.23
MEAN	13.77	11.70	10.54	10.63	12.02	9.81	9.83	11.22	9.24	12.26	---	12.84
MAX	14.78	12.99	11.65	12.08	12.69	10.68	10.92	11.87	10.48	13.60	---	14.08
MIN	12.89	10.37	9.79	9.54	10.60	9.27	8.81	10.05	8.40	10.67	---	12.10





GROUND-WATER LEVELS

MERCER COUNTY--Continued

NJ-WRD Well Number, 21-0366. Site I.D., 401834074515501. Local I.D., Washington Crossing Park 14 Obs. NJ Permit Number, 27-10248-3.

LOCATION.--Lat 40°18'37", long 74°51'14", Hydrologic Unit 02040105, off Brick Yard Rd., in Washington Crossing State Park, Hopewell Township. Owner: State of New Jersey - New Jersey Geological Survey.

AQUIFER.--Passaic Formation of Triassic-Jurassic age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 225 ft, open hole 50 to 225 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval. Periodic measurements, Apr. 1991 to Apr. 1992.

DATUM.--Land surface is 183.3 ft above NGVD of 1929. Measuring point: Top of recorder shelf, 2.10 ft above land surface.

REMARKS.--Water level is affected by nearby pumping.

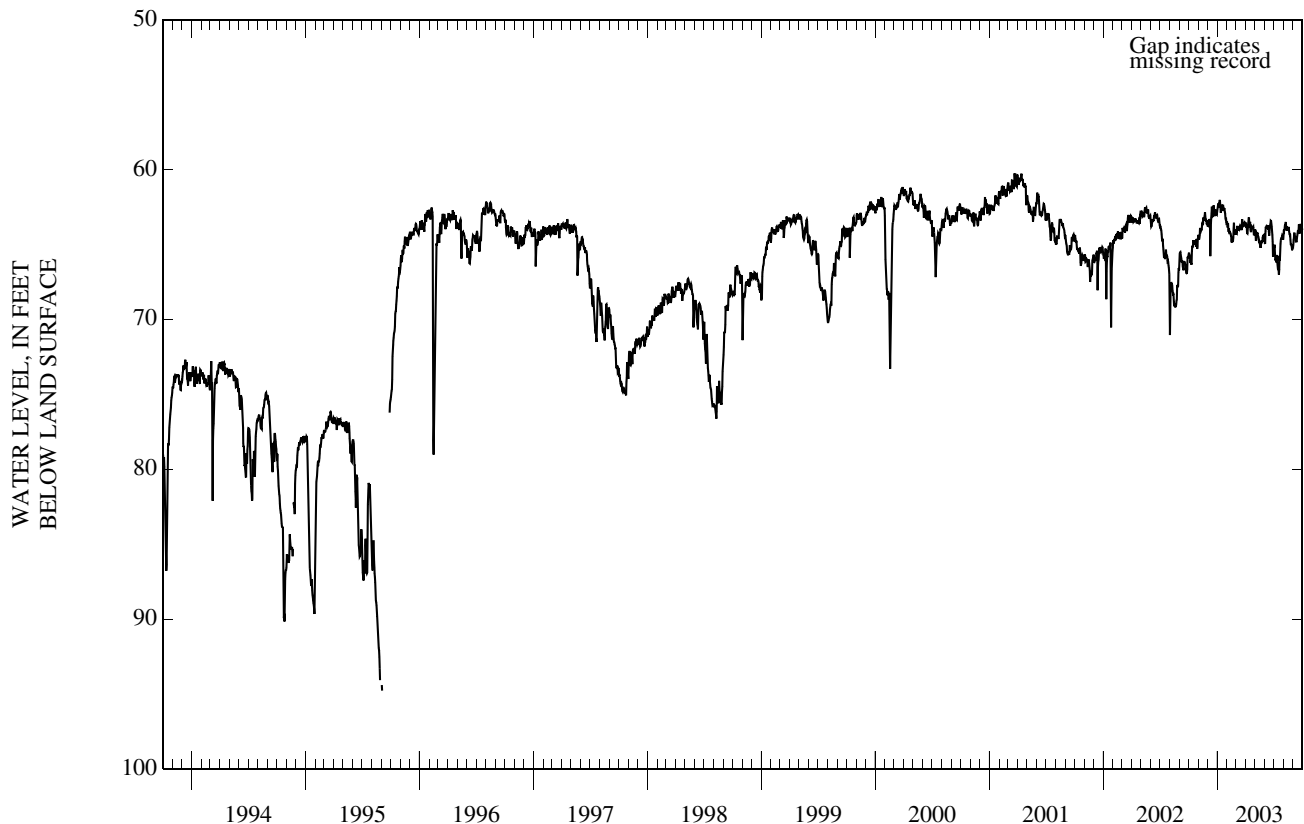
PERIOD OF RECORD.--Apr. 1991 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 59.76 ft below land surface, Apr. 13, 2001; lowest, 95.09 ft below land surface, Sept. 3, 1995.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	65.77	64.39	63.29	62.53	63.96	63.82	63.80	64.69	63.81	65.70	63.76	64.20
10	66.33	64.07	64.42	62.29	64.15	64.00	63.53	64.24	63.92	66.02	64.03	64.77
15	65.10	63.56	62.92	62.54	64.67	63.90	63.58	64.83	64.12	66.64	64.00	64.23
20	64.94	63.18	62.37	62.52	64.71	63.76	64.08	65.10	63.62	66.04	64.27	63.91
25	65.13	63.33	62.65	62.87	64.24	63.62	63.87	64.83	64.06	64.56	64.95	63.69
EOM	64.50	63.38	62.78	63.54	64.20	63.58	64.24	64.50	65.32	64.65	65.18	64.01
MEAN	65.27	63.68	63.20	62.66	64.21	63.82	63.84	64.58	64.15	65.54	64.29	64.23
MAX	66.33	64.66	65.77	63.55	64.85	64.34	64.36	65.21	65.79	67.00	65.32	65.02
MIN	64.50	62.83	62.37	62.00	63.46	63.29	63.19	63.99	63.40	64.36	63.48	63.65

WTR YR 2003 MEAN 64.12 HIGH 62.00 JAN 9 LOW 67.00 JUL 17

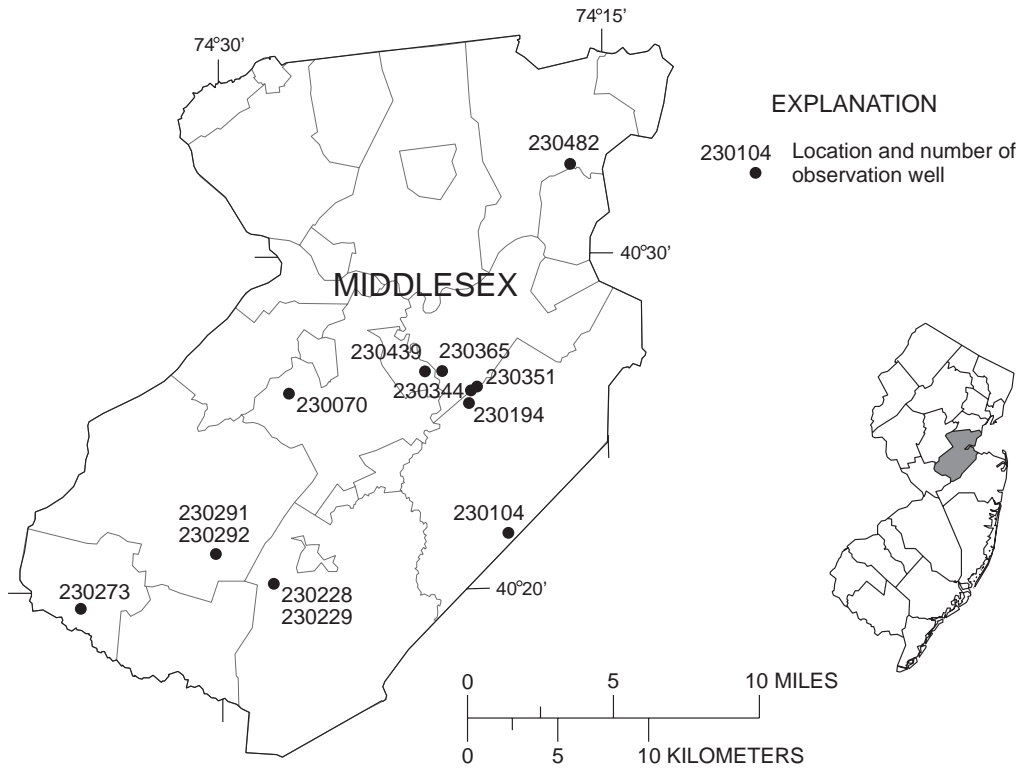


WATER RESOURCES DATA - NEW JERSEY, 2003

MIDDLESEX COUNTY

NJ-WRD well number	Local identifier	Township	Well depth	Aquifer	Type of data
230070	FISCHER OBS	EAST BRUNSWICK TWP	21	FRNG	DAILY
230104	MORRELL 1 OBS	OLD BRIDGE TWP	11	EGLS	DAILY
230194	RUNYON 1 OBS	OLD BRIDGE TWP	281	FRNG	MANUAL
230228	FORSGATE 3 OBS	MONROE TWP	138	ODBG	MAXMIN
230229	FORSGATE 4 OBS	MONROE TWP	330	FRNG	MAXMIN
230273	PLAINSBORO POND OBS	PLAINSBORO TWP	75	MRPAM	MANUAL
230291	FORSGATE 1 OBS	SOUTH BRUNSWICK TWP	203	FRNG	MANUAL
230292	FORSGATE 2 OBS	SOUTH BRUNSWICK TWP	104	ODBG	MANUAL
230344	SWD 2 OBS	SAYREVILLE BORO	37	ODBG	MANUAL
230351	SWD 1 OBS	SAYREVILLE BORO	82	ODBG	MANUAL
230365	DUH SAY 4 OBS	SAYREVILLE BORO	160	FRNG	MANUAL
230439	SRWD 2 OBS	SOUTH RIVER BORO	126	FRNG	MANUAL
230482	AMERICAN CYANAMID 1 OBS	WOODBRIIDGE TWP	76	FRNG	MANUAL

Aquifer names  
 EGLS - Englishtown aquifer system  
 FRNG - Farrington aquifer  
 MRPAM - Middle Potomac-Raritan-Magothy aquifer  
 ODBG - Old Bridge aquifer



GROUND-WATER LEVELS

MIDDLESEX COUNTY

NJ-WRD Well Number, 23-0070. Site I.D., 402553074271701. Local I.D., Fischer Obs.

LOCATION.--Lat 40°25'55", long 74°27'18", Hydrologic Unit 02030105, 32 Beaver Dam Drive and Hardenburg Lane, East Brunswick Township. Owner: Abe Weiss.

AQUIFER.--Farrington aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.

WELL CHARACTERISTICS.--Dug water-table observation well, diameter 54 in., depth 21 ft, lined with concrete blocks.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval. Water-level extremes recorder, Jan. 1977 to Apr. 1985. Water-level recorder, July 1936 to April 1975.

DATUM.--Land surface is 73.00 ft above NGVD of 1929. Measuring point: Top of angle iron at bottom of shelter doors, 1.70 ft above land surface.

REMARKS.--Well deepened on Oct. 29, 1965 from 17 to 21 ft.

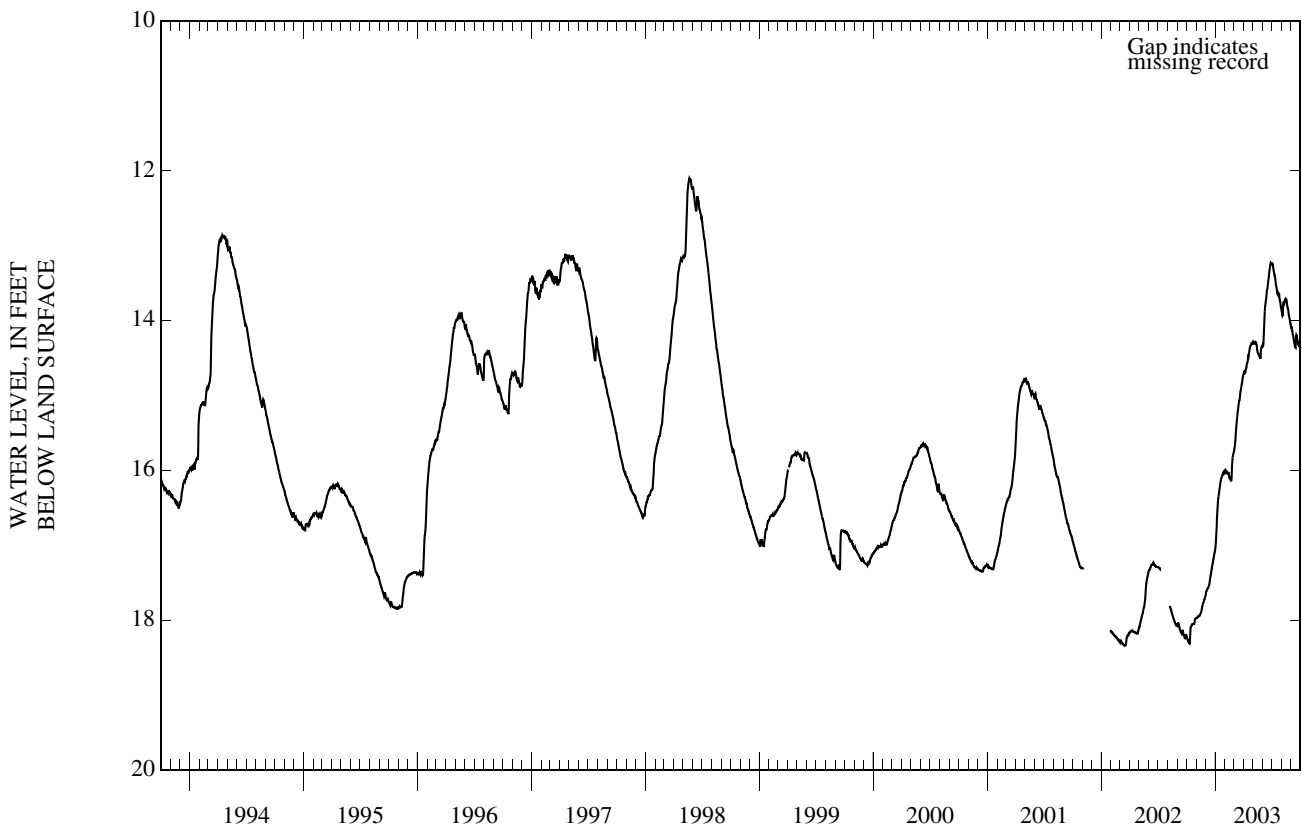
PERIOD OF RECORD.--June 1936 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 8.88 ft below land surface, Apr. 26-27, 1939; lowest, 19.11 ft below land surface, between July 24 and Oct. 6, 1981. Well was dry many times from 1963 to 1965, before deepening.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	18.27	17.96	17.60	16.74	16.03	15.63	14.67	14.30	14.17	13.28	13.93	14.15
10	18.31	17.94	17.56	16.38	16.02	15.37	14.63	14.30	13.78	13.41	13.77	14.27
15	18.08	17.91	17.44	16.23	16.09	15.17	14.52	14.40	13.60	13.54	13.73	14.36
20	18.05	17.81	17.32	16.10	16.14	15.04	14.40	14.45	13.46	13.64	13.82	14.25
25	18.05	17.75	17.20	16.05	15.83	14.88	14.33	14.51	13.28	13.70	13.94	14.31
EOM	17.97	17.68	17.06	16.01	15.77	14.73	14.32	14.35	13.24	13.85	14.08	14.38
MEAN	18.13	17.86	17.40	16.31	16.01	15.19	14.51	14.37	13.67	13.53	13.85	14.26
MAX	18.31	17.97	17.67	17.02	16.14	15.76	14.72	14.51	14.35	13.85	14.08	14.38
MIN	17.97	17.68	17.06	16.01	15.77	14.73	14.30	14.29	13.23	13.24	13.71	14.10

WTR YR 2003 MEAN 15.42 HIGH 13.23 JUN 27 LOW 18.31 OCT 9



GROUND-WATER LEVELS

MIDDLESEX COUNTY--Continued

NJ-WRD Well Number, 23-0104. Site I.D., 402143074185201. Local I.D., Morrell 1 Obs.

LOCATION.--Lat 40°21'43", long 74°18'48", Hydrologic Unit 02030105, on the north side of Texas Rd., about 0.4 mi west of Rt. 9, Old Bridge Township. Owner: Olympia and York Bridge Development Corp.

AQUIFER.--Englishtown aquifer system of Cretaceous age.

WELL CHARACTERISTICS.--Dug water-table observation well, diameter 17 in., depth 11 ft, cased with precast concrete rings.

INSTRUMENTATION.--Data collection platform with satellite telemetry--60 minute recording interval. Water-level recorder, Dec. 1984 to May 2001. Periodic measurements, Aug. 1975 to Dec. 1984. Water-level recorder, Oct. 1923 to Aug. 1975.

DATUM.--Land surface is 76.75 ft above NGVD of 1929. Measuring point: Top of concrete ring, 0.20 ft above land surface.

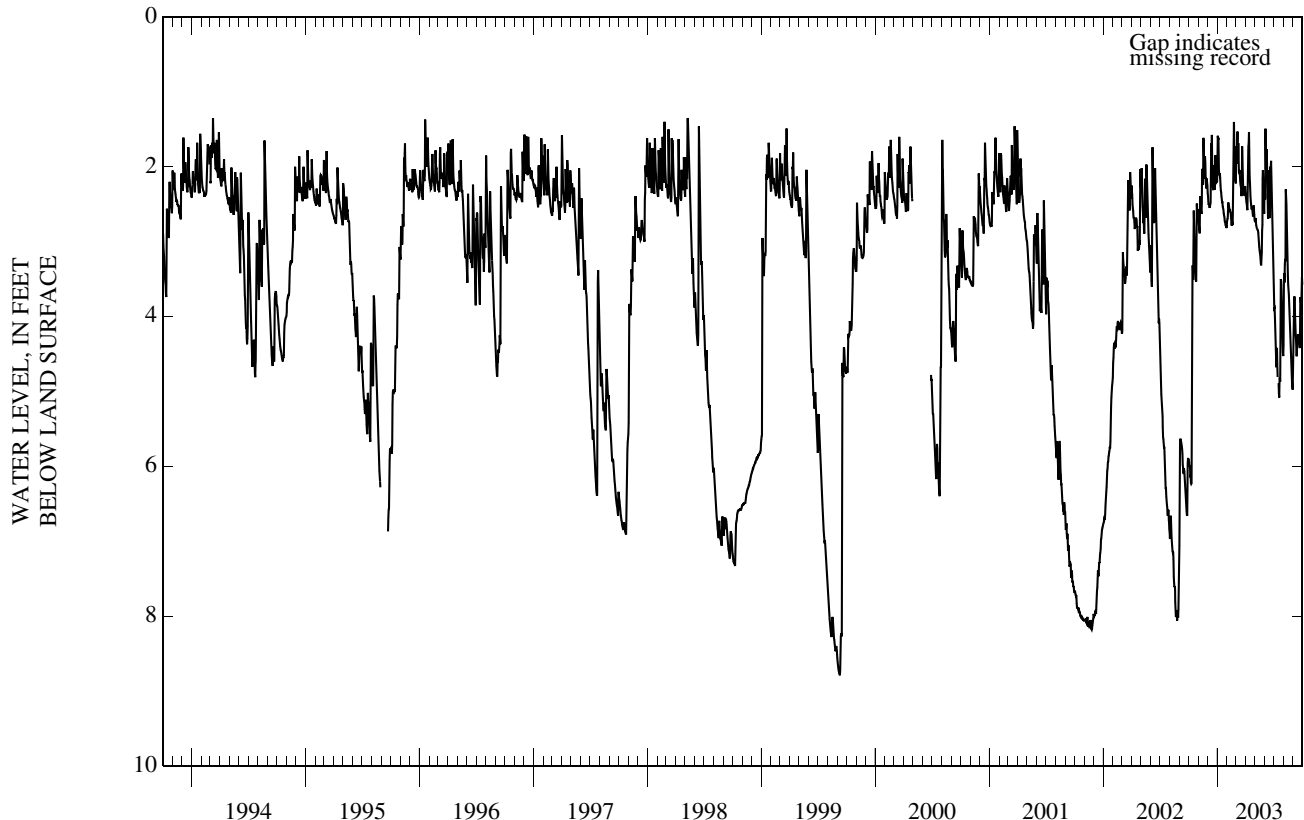
REMARKS.--Well depth was 6 ft before deepening in Sept. 1932.

PERIOD OF RECORD.--Oct. 1923 to current year. Records for 1973 to 1985 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.84 ft below land surface, Jan. 19, 1996; lowest, 10.40 ft below land surface, Oct. 13, 1953. Well was dry, Aug. to Sept. 1932, before deepening.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.99	2.89	2.49	1.94	2.48	1.70	2.49	2.78	1.74	4.22	3.30	3.73
10	6.23	2.59	2.48	2.15	2.56	1.86	1.73	2.84	2.38	4.55	2.50	4.32
15	3.51	2.22	1.96	2.43	2.74	2.19	2.21	3.07	2.30	---	3.46	4.33
20	3.17	2.10	2.10	2.57	2.63	2.29	2.54	3.29	2.12	4.81	4.00	4.31
25	3.53	2.23	1.89	2.75	2.00	2.30	2.66	2.77	2.76	3.77	4.61	3.77
EOM	2.58	2.25	2.19	2.78	2.19	2.26	2.71	2.63	3.62	4.53	4.85	3.57
MEAN	4.13	2.30	2.20	2.37	2.45	2.08	2.37	2.83	2.40	---	3.77	4.12
MAX	6.23	2.89	2.55	2.82	2.79	2.39	2.71	3.32	3.62	---	4.98	4.69
MIN	2.49	1.61	1.58	1.58	1.40	1.53	1.54	2.04	1.49	---	2.30	3.48



GROUND-WATER LEVELS

MIDDLESEX COUNTY--Continued

NJ-WRD Well Number, 23-0194. Site I.D., 402536074201801. Local I.D., Runyon 1 Obs.

LOCATION.--Lat 40°25'36", long 74°20'17", Hydrologic Unit 02030105, at the Runyon Watershed, Old Waterworks Rd., Old Bridge Township. Owner: Perth Amboy Water Department.

AQUIFER.--Farrington aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 18 in., depth 281 ft, screened 201 to 231 ft and 251 to 281 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape. Water-level recorder, Aug. 1934 to Aug. 1975.

DATUM.--Land surface is 18.30 ft above NGVD of 1929. Measuring point: Top of casing, 0.00 ft above land surface.

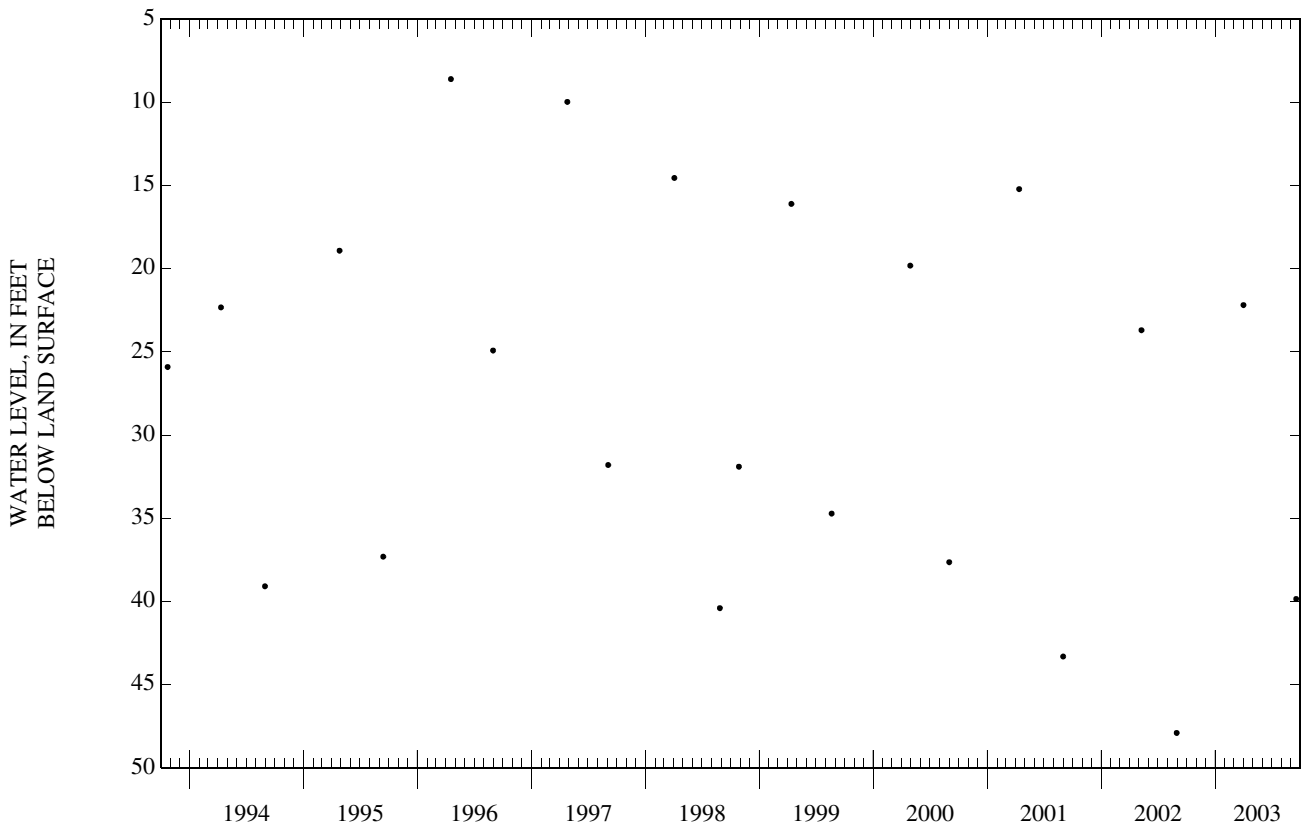
REMARKS.--Water level is affected by nearby pumping.

PERIOD OF RECORD.--Aug. 1934 to current year. Records for 1934 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 5.50 ft below land surface, Mar. 1, 1943, Mar. 26, 1944; lowest, 109.32 ft below land surface, Oct. 21, 1981.

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

DATE	WATER LEVEL	DATE	WATER LEVEL
APR 01	22.19	SEP 17	39.85



GROUND-WATER LEVELS

MIDDLESEX COUNTY--Continued

NJ-WRD Well Number, 23-0228. Site I.D., 402015074275701. Local I.D., Forsgate 3 Obs. NJ Permit Number, 28-04251.

LOCATION.--Lat 40°20'15", long 74°27'56", Hydrologic Unit 02030105, Hanover Lane at Rossmoor, Monroe Township. Owner: Monroe Township Municipal Utilities Authority.

AQUIFER.--Old Bridge aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in., depth 138 ft, screened 128 to 138 ft.

INSTRUMENTATION.--Water-level extremes recorder. Periodic measurements, Feb. 1975 to Jan. 1977. Water-level recorder, Oct. 1961 to Feb. 1975.

DATUM.--Land surface is 147.34 ft above NGVD of 1929. Measuring point: Front edge of cutout in recorder housing, 1.40 ft below land surface.

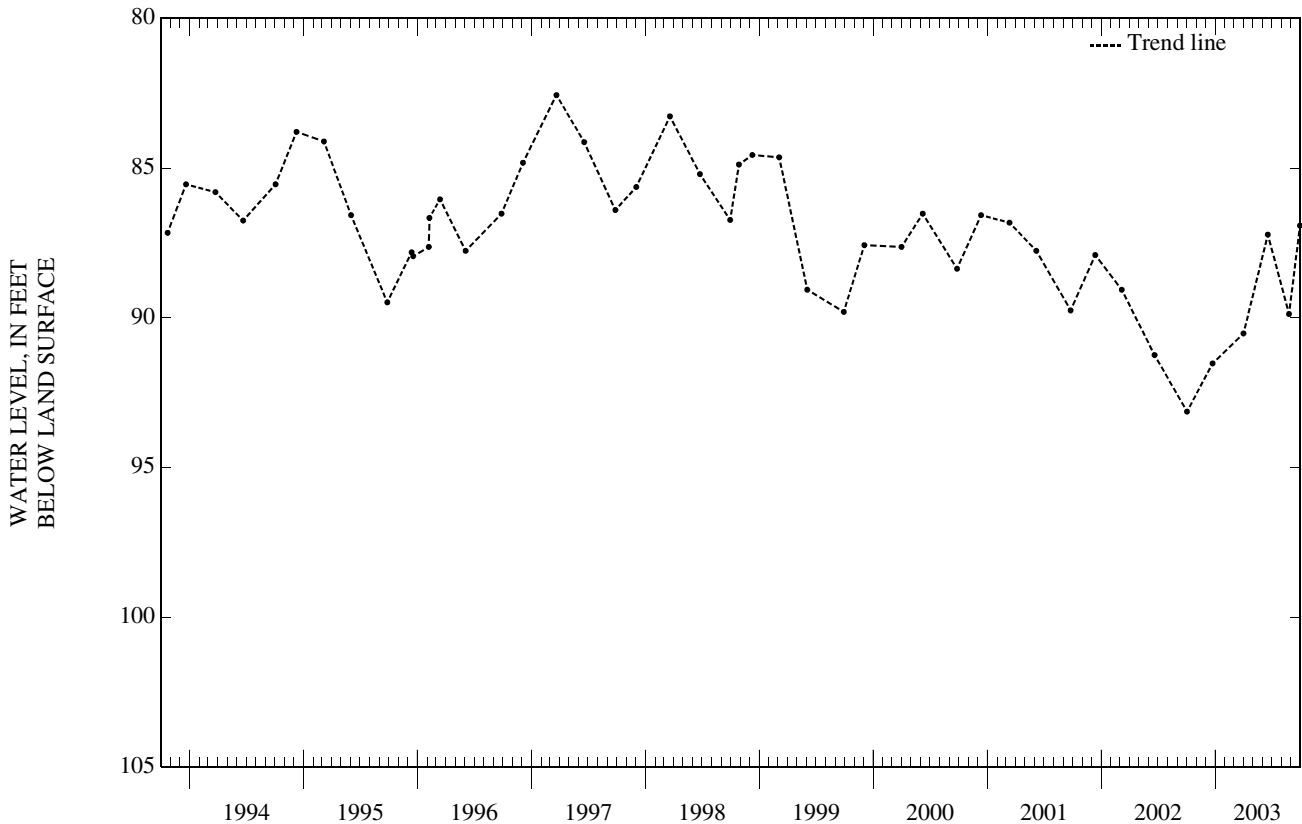
REMARKS.--Water level is affected by nearby pumping. Water level was affected by aquifer test between Sept. 11 and Sept. 26, 1996.

PERIOD OF RECORD.--Oct. 1961 to current year. Records for 1961 to 1976 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 70.32 ft below land surface, May 6, 1962; lowest, 94.57 ft below land surface, between June 20 and Oct. 2, 2002.

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

PERIOD	WATER-LEVEL EXTREMES		MEASURED WATER LEVELS	
	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
OCT. 2, 2002 TO DEC. 23, 2002	90.37	93.66	DEC. 23, 2002	91.52
DEC. 23, 2002 TO APR. 1, 2003	88.97	91.91	APR. 1, 2003	90.52
APR. 1, 2003 TO JUNE 18, 2003	87.15	90.67	JUNE 18, 2003	87.22
JUNE 18, 2003 TO AUG. 25, 2003	86.77	90.87	AUG. 25, 2003	89.87
AUG. 25, 2003 TO SEPT. 29, 2003	86.58	90.69	SEPT. 29, 2003	86.91



GROUND-WATER LEVELS

MIDDLESEX COUNTY--Continued

NJ-WRD Well Number, 23-0229. Site I.D., 402015074275702. Local I.D., Forsgate 4 Obs. NJ Permit Number, 28-04252.

LOCATION.--Lat 40°20'15", long 74°27'56", Hydrologic Unit 02030105, Hanover Lane at Rossmoor, Monroe Township. Owner: Monroe Township Municipal Utilities Authority.

AQUIFER.--Farrington aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in., depth 330 ft, screened 319 to 330 ft.

INSTRUMENTATION.--Water-level extremes recorder. Periodic measurements, Oct. 1975 to Jan. 1977. Water-level recorder, Apr. 1965 to Oct. 1975.

DATUM.--Land surface is 147.34 ft above NGVD of 1929. Measuring point: Front edge of cutout in recorder housing, 1.50 ft below land surface.

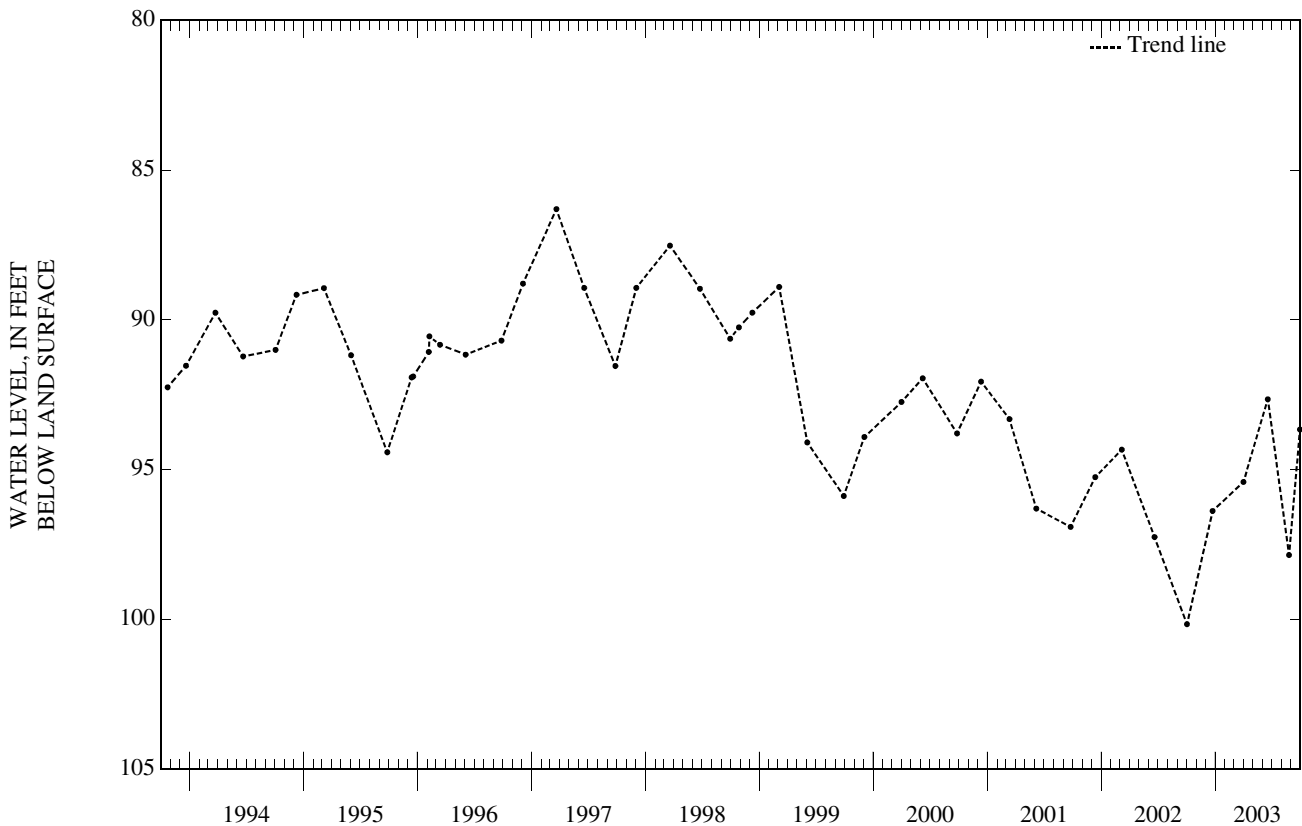
REMARKS.--Water level is affected by nearby pumping. Water level was affected by aquifer test between Sept. 11 and Sept. 26, 1996.

PERIOD OF RECORD.--Apr. 1965 to current year. Records for 1965 to 1976 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 80.09 ft below land surface, July 16, 1973; lowest, 104.24 ft below land surface, between June 20 and Oct. 2, 2002.

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

PERIOD	WATER-LEVEL EXTREMES		MEASURED WATER LEVELS		
	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL	
OCT. 2, 2002 TO DEC. 23, 2002	95.03	100.42	DEC. 23, 2002	96.38	
DEC. 23, 2002 TO APR. 1, 2003	94.18	101.34	APR. 1, 2003	95.41	
APR. 1, 2003 TO JUNE 18, 2003	92.04	95.82	JUNE 18, 2003	92.65	
JUNE 18, 2003 TO AUG. 25, 2003	91.74	98.67	AUG. 25, 2003	97.85	
AUG. 25, 2003 TO SEPT. 29, 2003	93.31	99.12	SEPT. 29, 2003	93.66	



GROUND-WATER LEVELS

MIDDLESEX COUNTY--Continued

NJ-WRD Well Number, 23-0273. Site I.D., 401932074352901. Local I.D., Plainsboro Pond Obs.

LOCATION.--Lat 40°19'32", long 74°35'28", Hydrologic Unit 02030105, near Plainsboro High School, Grovers Mill Rd. Plainsboro Township. Owner: State of New Jersey - NJ Water Policy.

AQUIFER.--Middle Potomac-Raritan-Magothy aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 4 in., depth 75 ft, screened 70 to 75 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape.

DATUM.--Land surface is 76 ft above NGVD of 1929, from topographic map. Measuring point: Top of shelf, 1.40 ft above land surface.

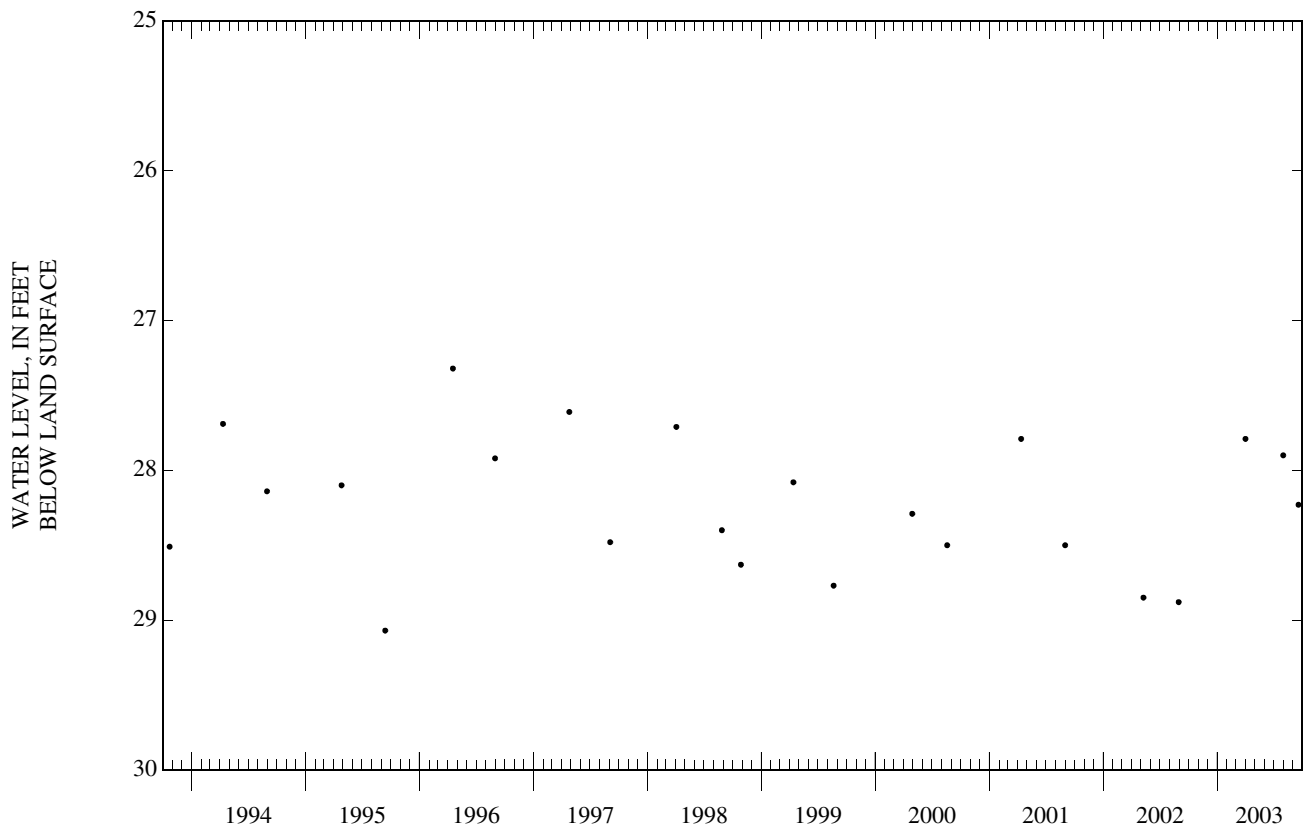
REMARKS.--Water level is affected by the stage of Plainsboro Pond.

PERIOD OF RECORD.--Dec. 1970 to Nov. 1984, Apr. 1987 to Sept. 1987, Apr. 1990 to current year. Records for 1970 to 1984, and 1987 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 26.49 ft below land surface, May 20, 1983; lowest, 29.94 ft below land surface, July 27, 1971.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
APR 01	27.79	JUL 31	27.90	SEP 18	28.23
WATER YEAR 2003 HIGHEST 27.79		APR 01, 2003			
LOWEST 28.23		SEP 18, 2003			





GROUND-WATER LEVELS

MIDDLESEX COUNTY--Contineud

NJ-WRD Well Number, 23-0291. Site I.D., 402109074301301. Local I.D., Forsgate 1 Obs. NJ Permit Number, 28-04249.

LOCATION.--Lat 40°21'09", long 74°30'12", Hydrologic Unit 02030105, on the south side of Friendship Rd., about 0.4 mi west of Rt. 130, South Brunswick Township. Owner: Monroe Township Municipal Utilities Authority.

AQUIFER.--Farrington aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in., depth 203 ft, screened 192 to 203 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape. Water-level extremes recorder, Jan. 1977 to Sept. 1984. Periodic measurements, Oct. 1975 to Jan. 1977. Water-level recorder, Apr. 1965 to Oct. 1975.

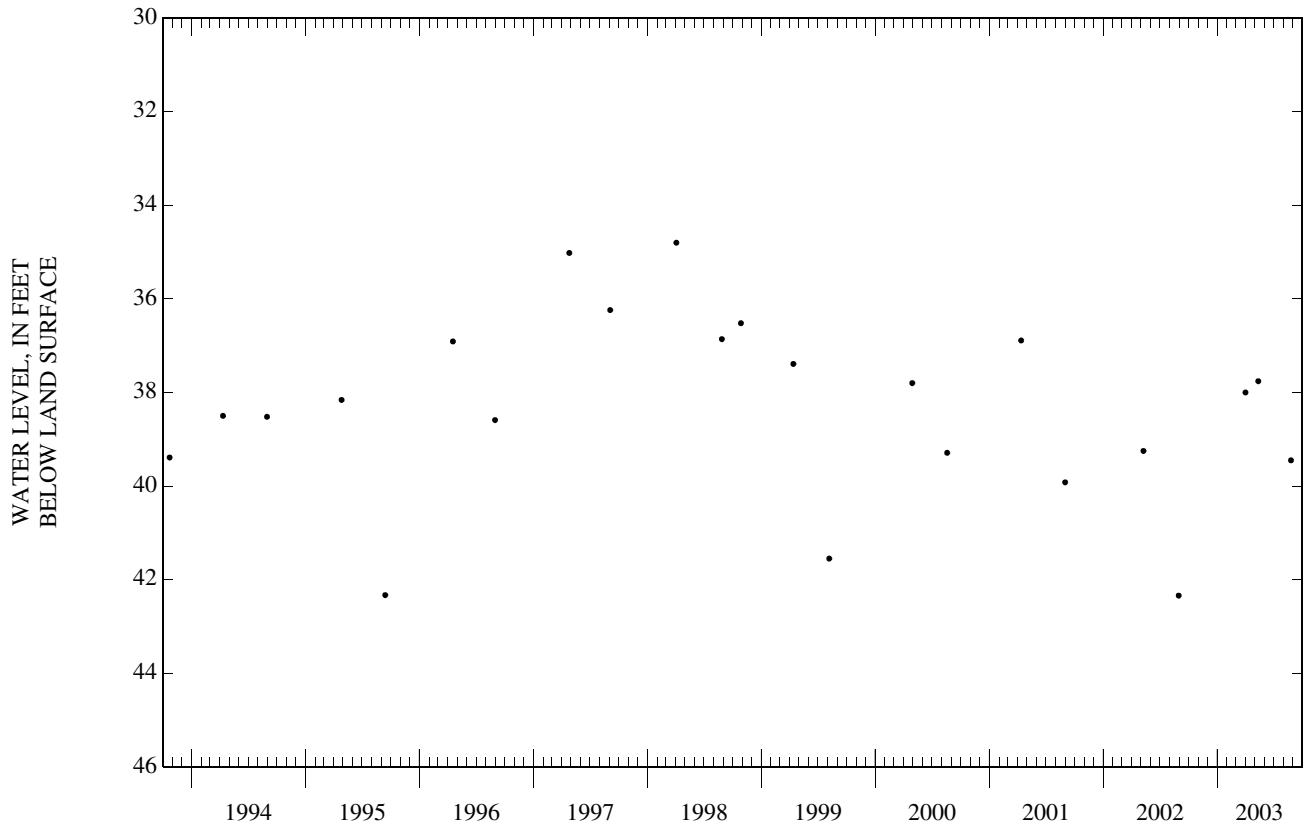
DATUM.--Land surface is 106.79 ft above NGVD of 1929. Measuring point: Top of shelf, 1.90 ft above land surface.

PERIOD OF RECORD.--Apr. 1965 to current year. Records for 1965 to 1975 and 1985 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 24.70 ft below land surface, July 5, 1973; lowest, 44.31 ft below land surface, between Jan. 12 and Apr. 21, 1983.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
APR 01	38.00	MAY 12	37.76	AUG 25	39.45
WATER YEAR 2003 HIGHEST		37.76	MAY 12, 2003		
LOWEST		39.45	AUG 25, 2003		



GROUND-WATER LEVELS

MIDDLESEX COUNTY--Continued

NJ-WRD Well Number, 23-0292. Site I.D., 402109074301302. Local I.D., Forsgate 2 Obs. NJ Permit Number, 28-04250.

LOCATION.--Lat 40°21'09", long 74°30'11", Hydrologic Unit 02030105, on the south side of Friendship Rd., about 0.4 mi west of Rt. 130, South Brunswick Township. Owner: Monroe Township Municipal Utilities Authority.

AQUIFER.--Old Bridge aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in., depth 104 ft, screened 93 to 104 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape. Water-level extremes recorder, Aug. 1983 to Sept. 1985. Periodic measurements, Oct. 1975 to Aug. 1983. Water-level recorder, Oct. 1961 to Oct. 1975.

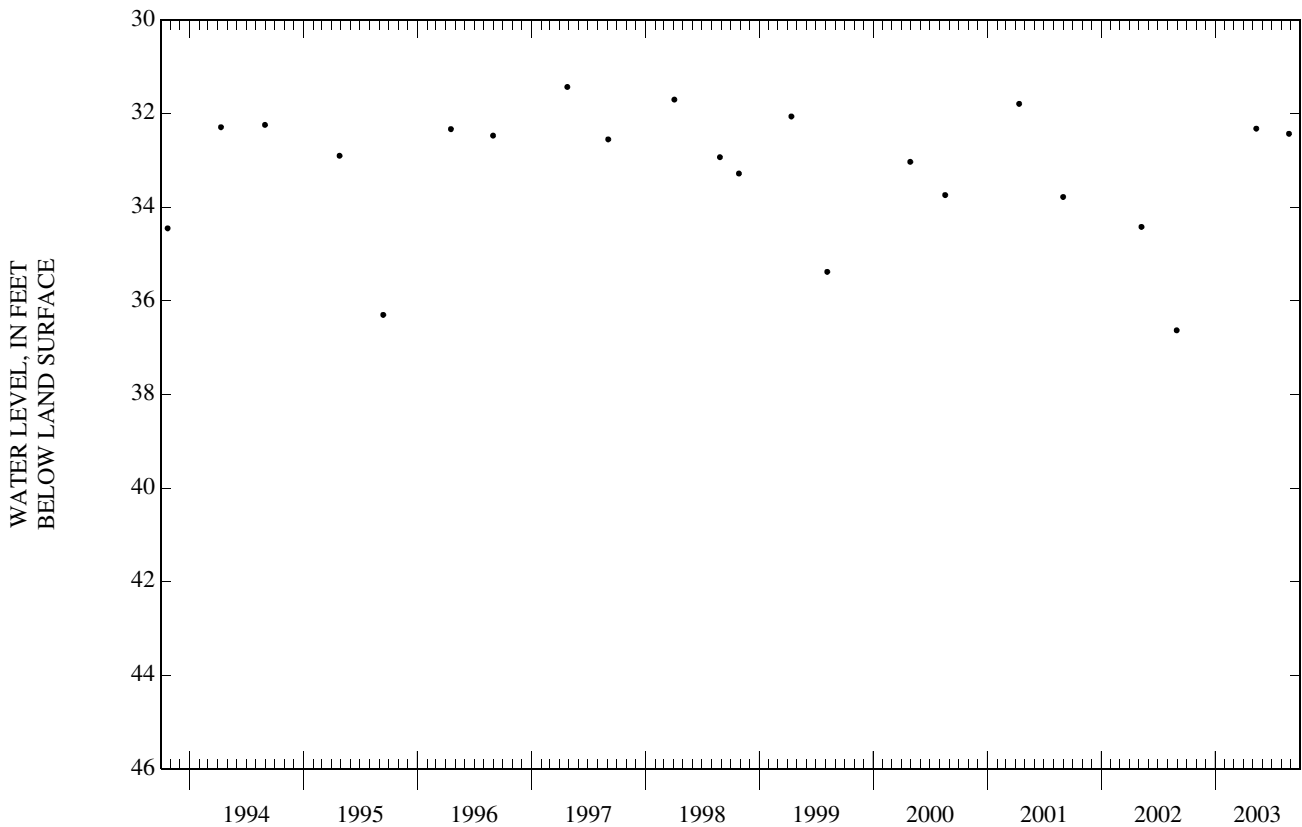
DATUM.--Land surface is 106.89 ft above NGVD of 1929. Measuring point: Top of shelf, 2.60 ft above land surface.

PERIOD OF RECORD.--October 1961 to current year. Records for 1961 to 1983 and 1985 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 21.09 ft below land surface, May 2-3, 1962; lowest, 36.98 ft below land surface, Sept. 29, 1982.

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

DATE	WATER LEVEL	DATE	WATER LEVEL
MAY 12	32.32	AUG 25	32.43



GROUND-WATER LEVELS

MIDDLESEX COUNTY--Continued

NJ-WRD Well Number, 23-0344. Site I.D., 402558074201301. Local I.D., SWD 2 Obs.

LOCATION.--Lat 40°25'58", long 74°20'12", Hydrologic Unit 02030105, 1,200 ft west of the Sayreville Water Treatment Plant, Old Bridge-South Amboy Rd., Sayreville Borough. Owner: Sayreville Water Department.

AQUIFER.--Old Bridge aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 6 in., depth 37 ft, screened 31 to 37 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape. Water-level recorder, Oct. 1968 to July 1975.

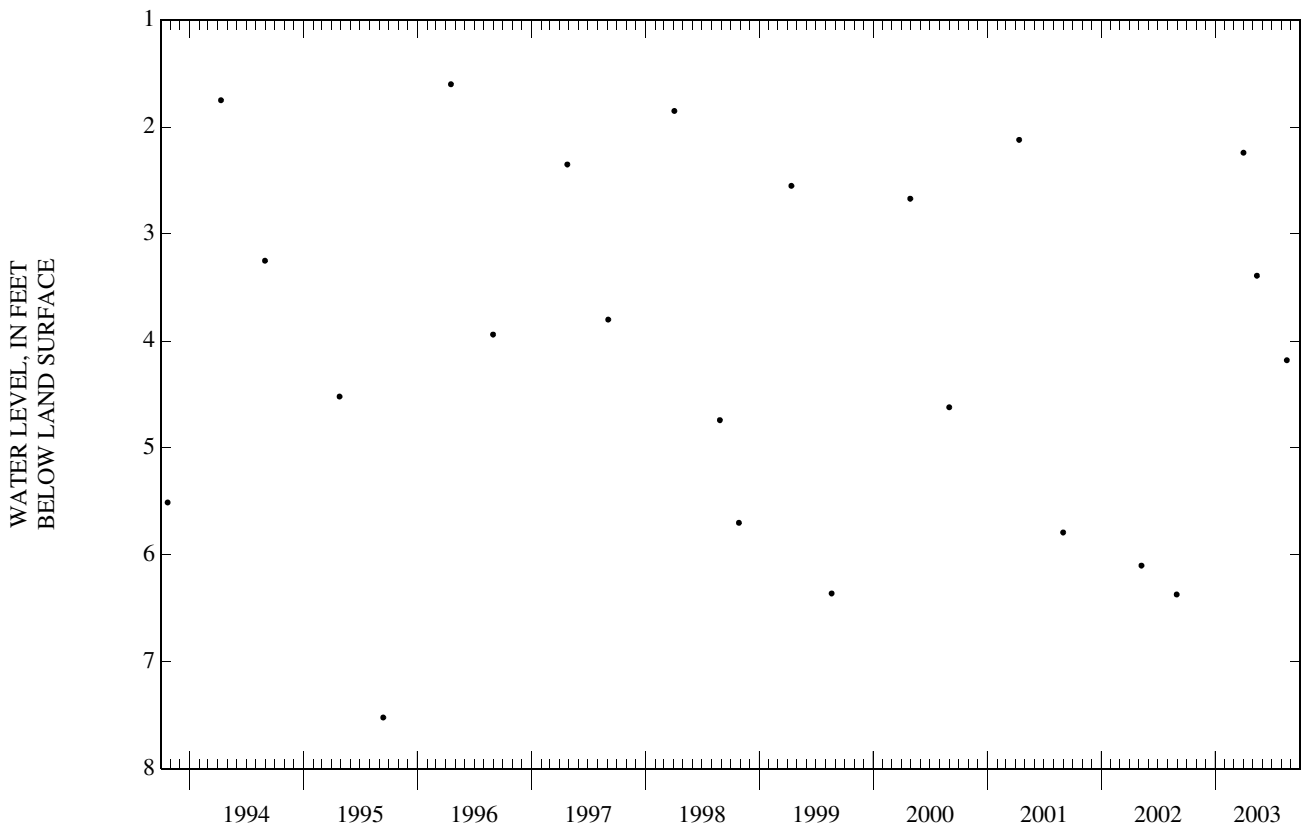
DATUM.--Land surface is 22.19 ft above NGVD of 1929. Measuring point: Top of well shelter shelf, 2.00 ft above land surface.

PERIOD OF RECORD.--Nov. 1968 to current year. Records for 1968 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.60 ft below land surface, Apr. 17, 1996; lowest, 14.04 ft below land surface, Nov. 30, 1969, Dec. 16, 1969, Nov. 17-22, 1970.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
APR 01	2.24	MAY 14	3.39	AUG 18	4.18
WATER YEAR 2003 HIGHEST		2.24	APR 01, 2003		
LOWEST		4.18	AUG 18, 2003		



GROUND-WATER LEVELS

MIDDLESEX COUNTY--Continued

NJ-WRD Well Number, 23-0351. Site I.D., 402608074195701. Local I.D., SWD 1 Obs.

LOCATION.--Lat 40°26'05", long 74°19'58", Hydrologic Unit 02030105, near the Sayreville Water Treatment Plant, Old Bridge-South Amboy Rd, Sayreville Borough. Owner: Sayreville Water Department.

AQUIFER.--Old Bridge aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 6 in., depth 82 ft, screened 76 to 82 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape.

DATUM.--Land surface is 35.27 ft above NGVD of 1929. Measuring point: Top of casing, 1.70 ft above land surface.

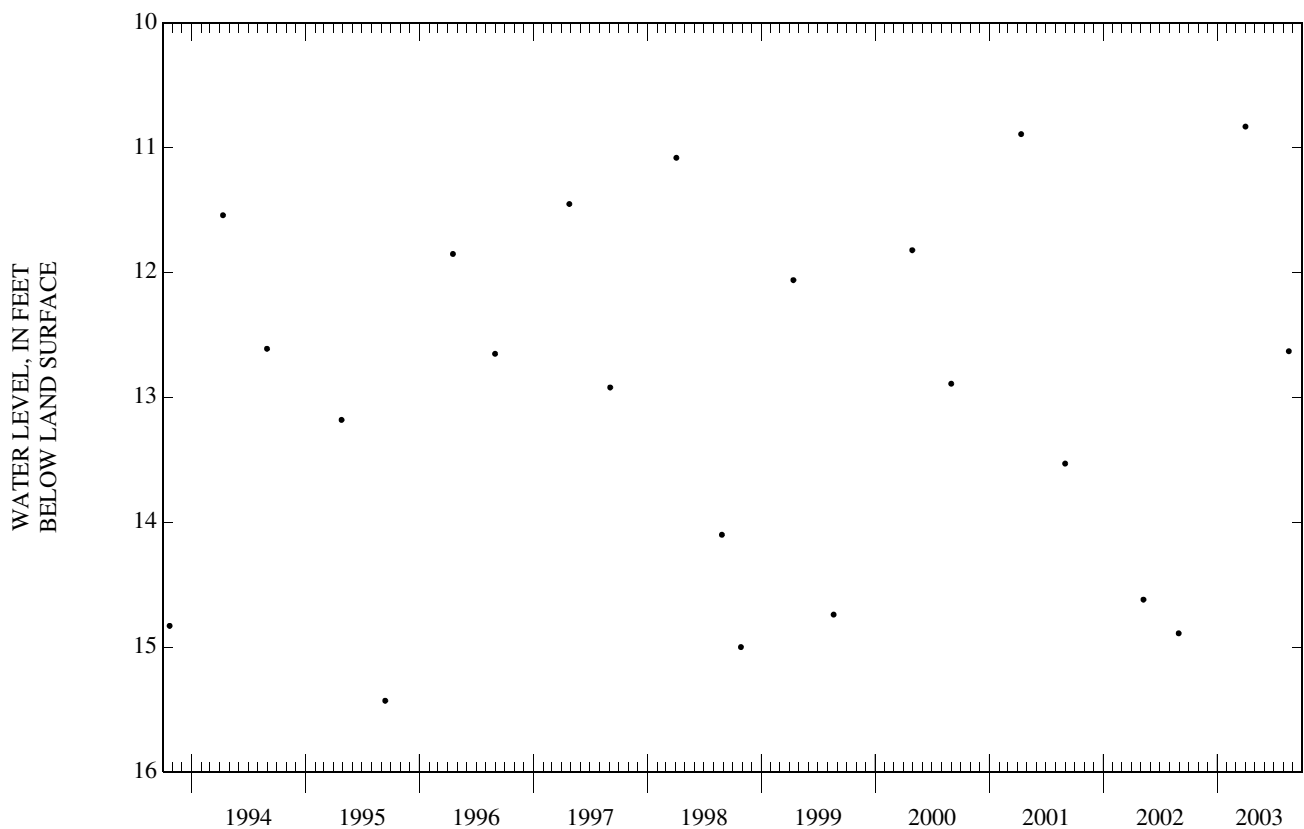
REMARKS.--Water level is affected by nearby pumping.

PERIOD OF RECORD.--Nov. 1968 to current year. Records for 1968 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 10.83 ft below land surface, Apr. 1, 2003; lowest, 27.20 ft below land surface, Dec. 16, 1969.

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

DATE	WATER LEVEL	DATE	WATER LEVEL
APR 01	10.83	AUG 18	12.63



GROUND-WATER LEVELS

MIDDLESEX COUNTY--Continued

NJ-WRD Well Number, 23-0365. Site I.D., 402623074212701. Local I.D., Duh Say 4 Obs.

LOCATION.--Lat 40°26'33", long 74°21'19", Hydrologic Unit 02030105, in the Maristat Inc. Auto Exchange, Jernee Mill Rd, Sayreville Borough. Owner: Duhernal Water Company.

AQUIFER.--Farrington aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, depth 160 ft, screened 148 to 160 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape. Water-level recorder, Jan. 1936 to Dec. 1973.

DATUM.--Land surface is 5.70 ft above NGVD of 1929. Measuring point: Top of well shelter shelf, 3.00 ft above land surface.

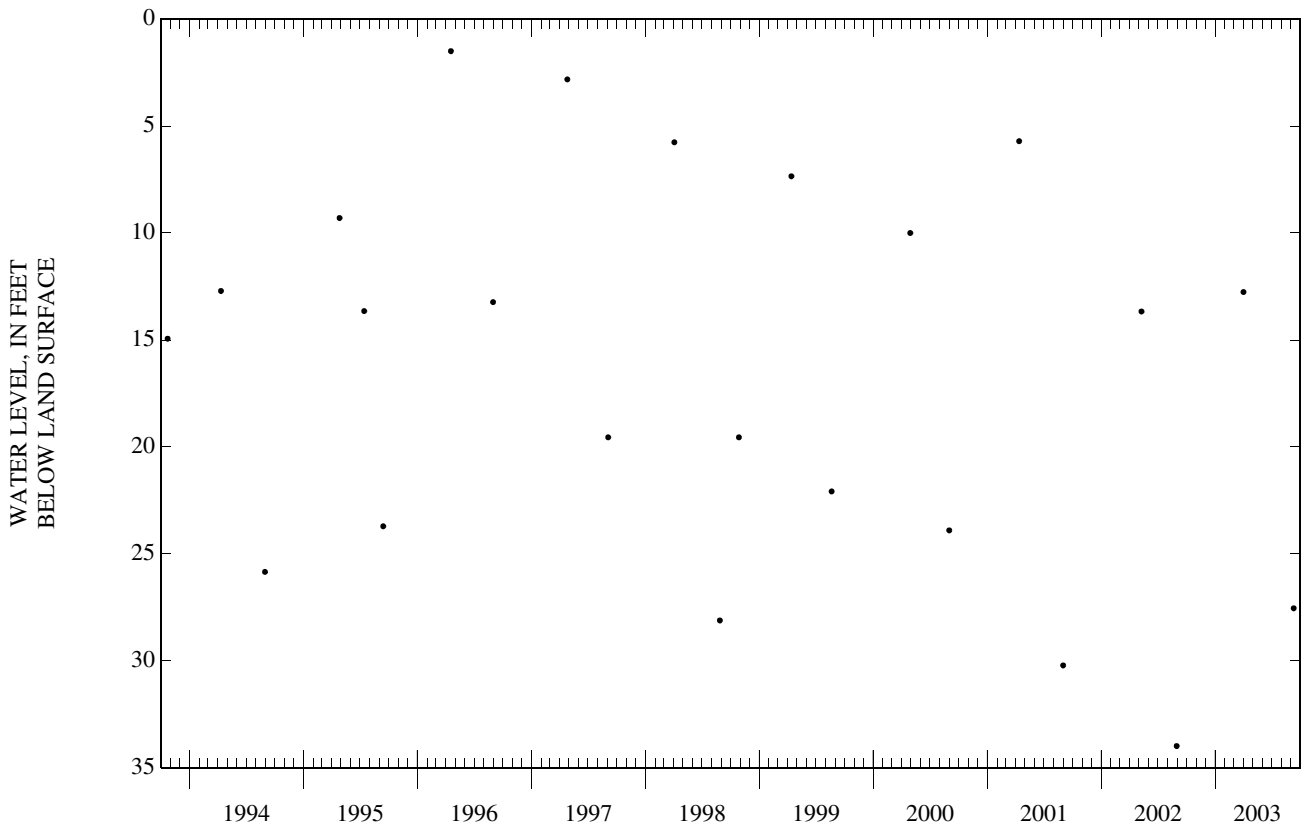
REMARKS.--Water level is affected by tidal fluctuation and nearby pumping.

PERIOD OF RECORD.--Jan. 1936 to Nov. 1984, May 1986 to current year. Records for 1936 to 1984 and 1986 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 5.87 ft above land surface, Mar. 27, 1944; lowest, 72.00 ft below land surface, Oct. 21, 1981.

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

DATE	WATER LEVEL	DATE	WATER LEVEL
APR 01	12.76	SEP 09	27.54



GROUND-WATER LEVELS

MIDDLESEX COUNTY--Continued

NJ-WRD Well Number, 23-0439. Site I.D., 402633074220001. Local I.D., SRWD 2 Obs. NJ Permit Number, 28-05987.

LOCATION.--Lat 40°26'33", long 74°21'59", Hydrologic Unit 02030105, at the corner of Whitehead Ave. and Anne St. South River Borough. Owner: South River Water Department.

AQUIFER.--Farrington aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 5 in., depth 126 ft, screened 121 to 126 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape. Water-level extremes recorder, Jan. 1977 to Sept. 1987. Periodic measurements, Apr. 1975 to Jan. 1977. Water-level recorder, Jan. 1968 to Apr. 1975.

DATUM.--Land surface is 20.69 ft above NGVD of 1929. Measuring point: Top of coupling, 2.12 ft above land surface.

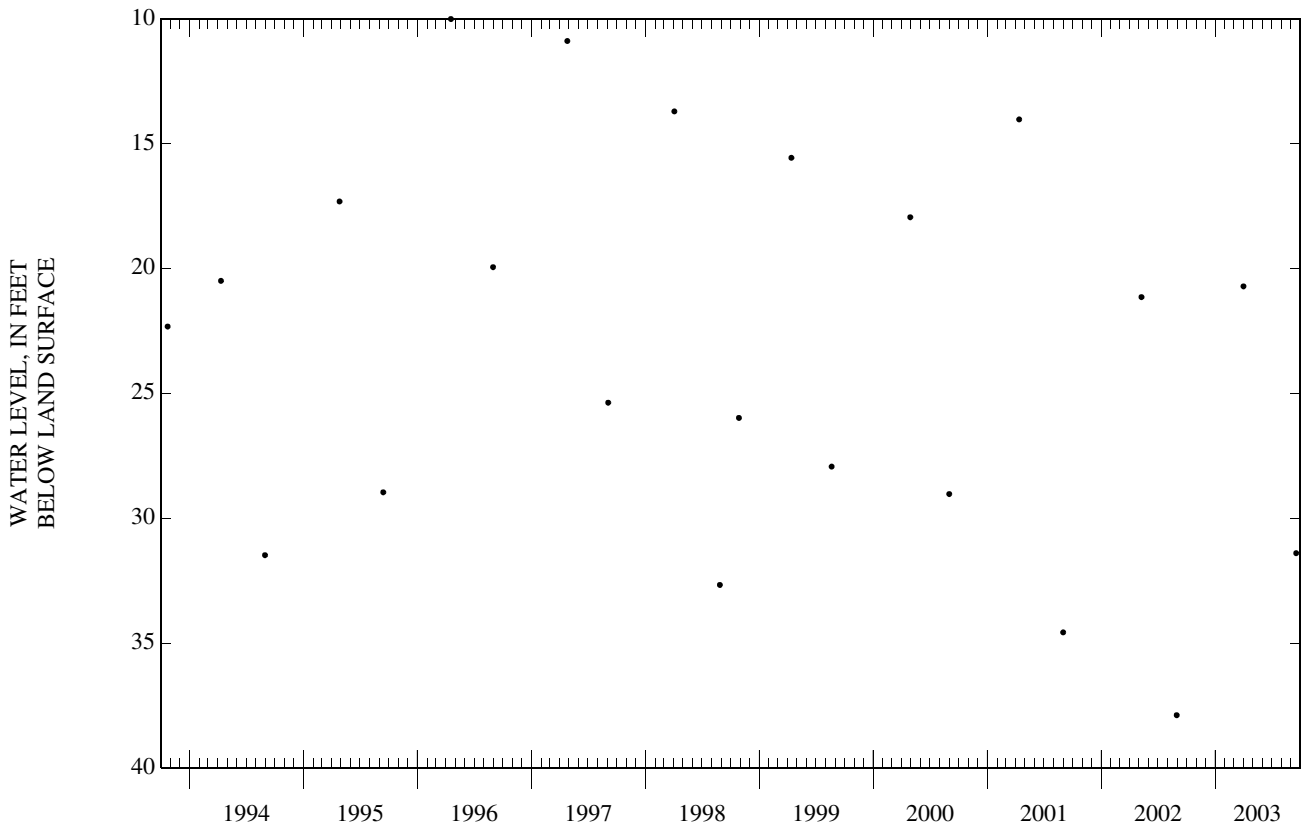
REMARKS.--Water level is affected by tidal fluctuation and nearby pumping.

PERIOD OF RECORD.--January 1968 to current year. Records for 1968 to 1975 and 1988 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 10.00 ft below land surface, Apr. 17, 1996; lowest, 73.64 ft below land surface, between Aug. 25 and Oct. 16, 1980.

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

DATE	WATER LEVEL	DATE	WATER LEVEL
APR 01	20.71	SEP 17	31.40



GROUND-WATER LEVELS

MIDDLESEX COUNTY--Continued

NJ-WRD Well Number, 23-0482. Site I.D., 403242074161701. Local I.D., American Cyanamid 1 Obs.

LOCATION.--Lat 40°32'42", long 74°16'16", Hydrologic Unit 02030104, at the rear of plant near Cutters Dock Rd., Woodbridge Township.  
 Owner: American Cyanamid Company.

AQUIFER.--Farrington aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in., depth 76 ft, screened 44 to 54 ft and 64 to 76 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape. Water-level extremes recorder, Jan. 1977 to July 1984.  
 Periodic measurements, July 1970 to Jan. 1977. Water-level recorder, Nov. 1952 to July 1970. Periodic measurements, Mar. 1952 to Nov. 1952. Water-level recorder, Oct. 1950 to Mar. 1952. Periodic measurements, Sept. 1950 to Oct. 1950.

DATUM.--Land surface is 11.00 ft above NGVD of 1929. Measuring point: Top of shelf, 2.10 ft above land surface.

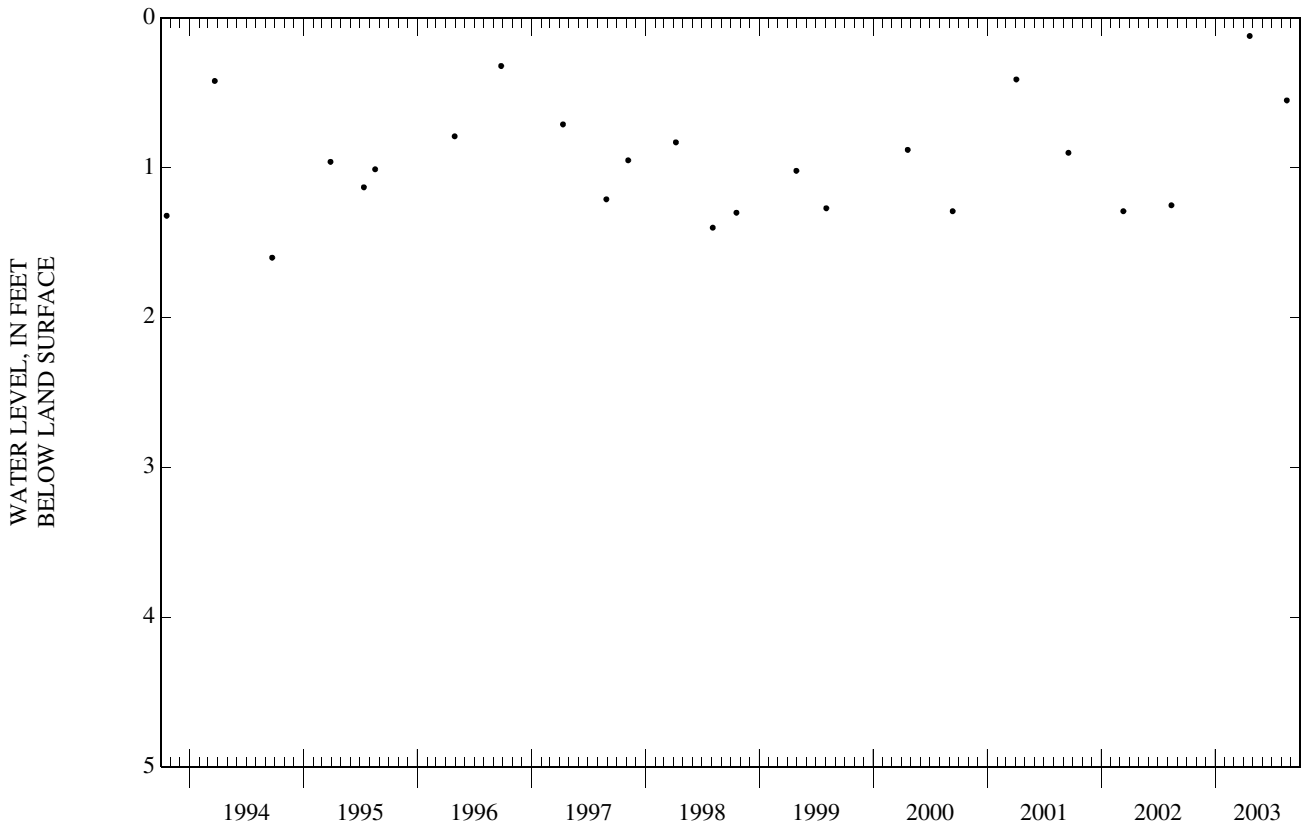
REMARKS.--Water level is affected by tidal fluctuation.

PERIOD OF RECORD.--Sept. 1950 to Sept. 2003 (discontinued). Records for 1950 to 1982 and 1985 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.34 ft above land surface, between Mar. 30 and July 17, 1984; lowest, 15.43 ft below land surface, between Aug. 26 and Oct. 14, 1980.

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

DATE	WATER LEVEL	DATE	WATER LEVEL
APR 21	.12	AUG 18	.55



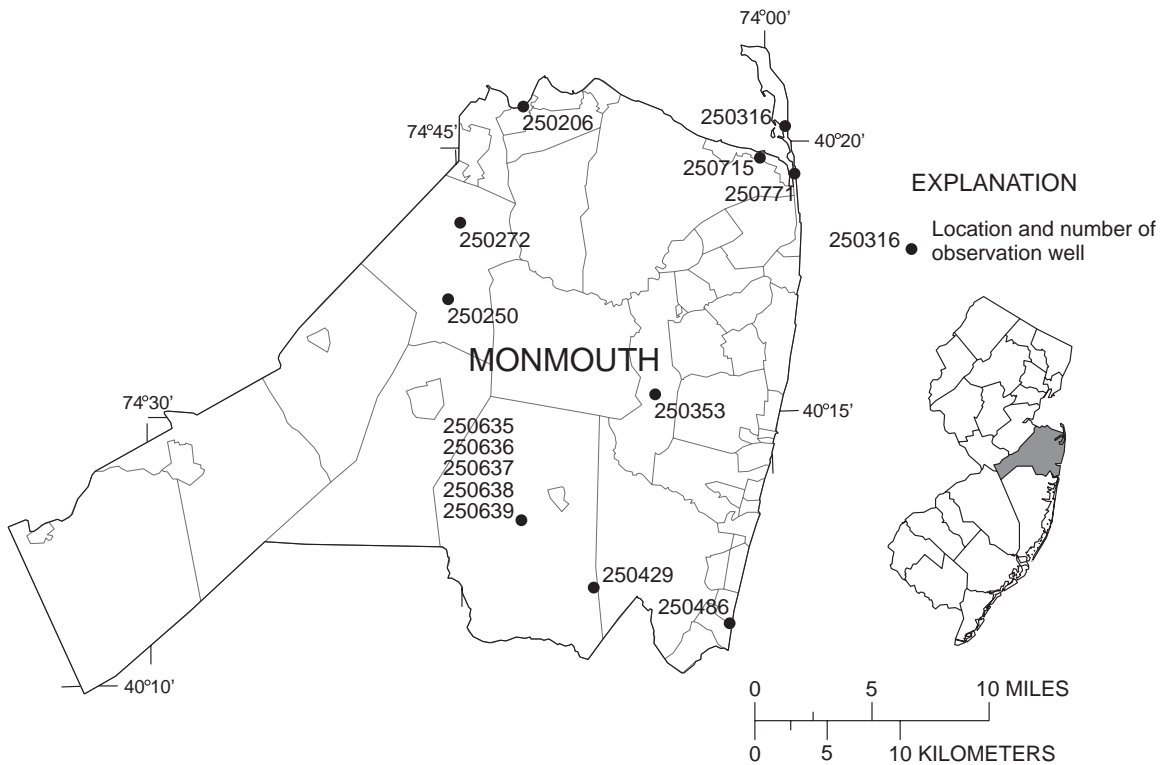
WATER RESOURCES DATA - NEW JERSEY, 2003

MONMOUTH COUNTY

NJ-WRD well number	Local identifier	Township	Well depth	Aquifer	Type of data
250206	KEYPORT 4 OBS	KEYPORT BORO	249	ODBG	MAXMIN
250250	VILLAGE 215 OBS	MARLBORO TWP	215	EGLS	DAILY
250272	MARLBORO 1 OBS	MARLBORO TWP	680	FRNG	DAILY
250316	SANDY HOOK SP1 OBS	MIDDLETOWN TWP	397	ODBG	MANUAL
250353	FORT MONMOUTH 1-NCO OBS	TINTON FALLS BORO	327	MLRW	DAILY
250429	ALLAIRE STATE PARK C OBS	HOWELL TWP	633	EGLS	MAXMIN
250486	DOE-SEA GIRT OBS	SEA GIRT BORO	614	MLRW	DAILY
250635	HOWELL TWP 1 OBS	HOWELL TWP	1360	MRPA	DAILY
250636	HOWELL TWP 2 OBS	HOWELL TWP	100	VNCN	DAILY
250637	HOWELL TWP 3 OBS	HOWELL TWP	324	MLRW	DAILY
250638	HOWELL TWP 4 OBS	HOWELL TWP	499	EGLS	DAILY
250639	HOWELL TWP 5 OBS	HOWELL TWP	907	MRPAU	DAILY
250715	AHWD B OBS	ATLANTIC HIGHLANDS BORO	360	EGLS	DAILY
250771	SANDY HOOK 2 OBS	SEA BRIGHT BORO	278	EGLS	DAILY

Aquifer names

- EGLS - Englishtown aquifer system
- FRNG - Farrington aquifer
- MLRW - Wenonah-Mount Laurel aquifer
- MRPA - Potomac-Raritan-Magothy aquifer
- MRPAU - Upper Potomac-Raritan-Magothy aquifer
- ODBG - Old Bridge aquifer
- VNCN - Vincentown aquifer





GROUND-WATER LEVELS

MONMOUTH COUNTY

NJ-WRD Well Number, 25-0206. Site I.D., 402626074114204. Local I.D., Keyport 4 Obs.

LOCATION.--Lat 40°26'25", long 74°11'44", Hydrologic Unit 02030104, at the Benjamin C. Terry Park, Myrtle Ave., Keyport Borough.  
 Owner: Keyport Borough Water Department.

AQUIFER.--Old Bridge aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 8 in., depth 249 ft, screened 225 to 249 ft.

INSTRUMENTATION.--Water-level extremes recorder. Water-level recorder, June 1978 to Nov. 1987.

DATUM.--Land surface is 14.47 ft above NGVD of 1929. Measuring point: Front edge of cutout in recorder housing, 2.47 ft above land surface.

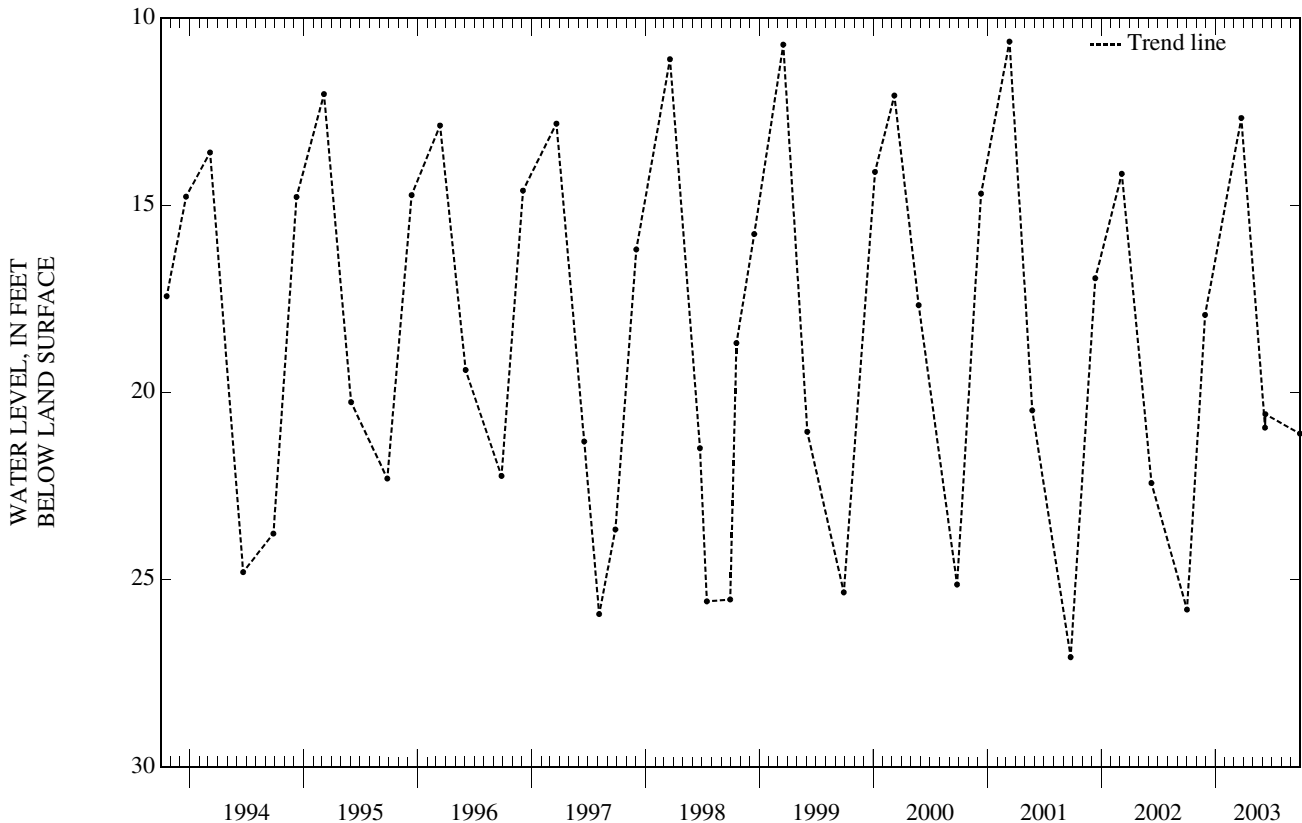
REMARKS.--Water level is affected by tidal fluctuation and nearby pumping.

PERIOD OF RECORD.--June 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 9.20 ft below land surface, between Mar. 8 and June 14, 1993; lowest, 35.22 ft below land surface, between June 20 and Sept. 28, 1988.

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

PERIOD	WATER-LEVEL EXTREMES		MEASURED WATER LEVELS		
	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL	
OCT. 2, 2002 TO NOV. 29, 2002	16.29	26.27	NOV. 29, 2002	17.93	
NOV. 29, 2002 TO MAR. 25, 2003	10.59	18.74	MAR. 25, 2003	12.67	
MAR. 25, 2003 TO JUNE 9, 2003	10.09	21.20	JUNE 9, 2003	20.94	
JUNE 9, 2003 TO SEPT. 29, 2003	18.97	26.50	SEPT. 29, 2003	21.10	



GROUND-WATER LEVELS

MONMOUTH COUNTY--Continued

NJ-WRD Well Number, 25-0250. Site I.D., 401906074151401. Local I.D., Village 215 Obs. NJ Permit Number, 29-04437.

LOCATION.--Lat 40°19'18", long 74°15'28", Hydrologic Unit 02030104, near the intersection of River Dr. and Newport Rd., Marlboro Township. Owner: Gordons Corner Water Company.

AQUIFER.--Englishtown aquifer system of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 8 in., depth 215 ft, screened 185 to 215 ft.

INSTRUMENTATION.--Submersible logger pressure transducer--60 minute recording interval. Periodic measurements, May 1986 to Dec. 2002. No record, Sept. 1984 to May 1986. Periodic measurements, July 1975 to Sept. 1984. Water-level recorder, Apr. 1971 to July 1975.

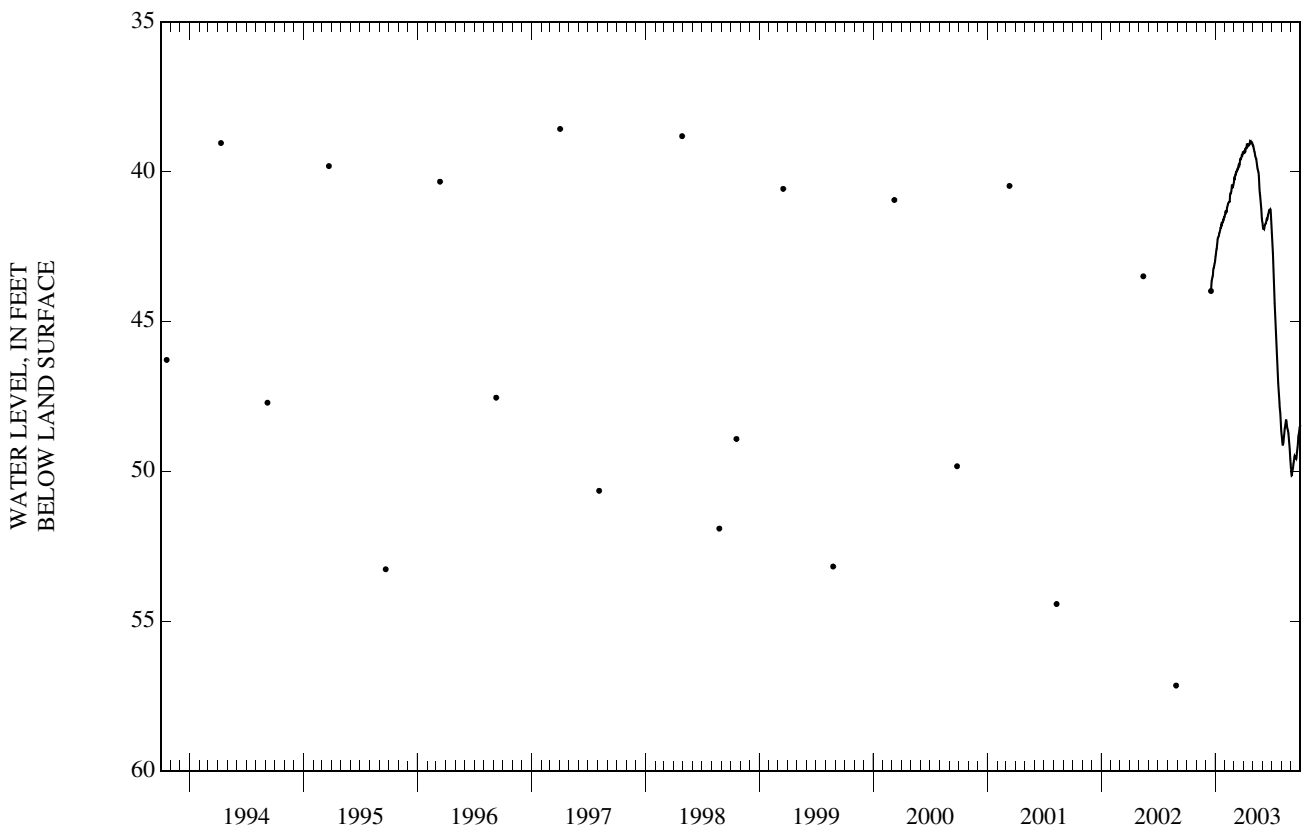
DATUM.--Land surface is 138.60 ft above NGVD of 1929. Measuring point: Top of base of aluminum locking cap, 2.26 ft above land surface.

PERIOD OF RECORD.--Apr. 1971 to Sept. 1984, May 1986 to current year. Records for 1971 to 1976 and 1985 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 33.92 ft below land surface, between Mar. 27 and July 12, 1984, lowest, 57.15 ft below land surface, Aug. 28, 2002.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	42.57	41.31	40.13	39.30	39.29	41.89	42.94	49.13	49.97
10	---	---	---	42.18	41.08	40.00	39.19	39.51	41.75	44.40	48.68	49.62
15	---	---	---	42.00	41.00	39.85	39.11	39.83	41.57	45.59	48.31	49.56
20	---	---	43.65	41.76	40.70	39.70	39.08	40.13	41.41	46.83	48.58	49.30
25	---	---	43.27	41.67	40.53	39.54	39.03	40.95	41.27	47.71	48.99	48.77
EOM	---	---	42.96	41.47	40.41	39.37	39.10	41.65	41.78	48.64	49.94	48.45
MEAN	---	---	---	42.02	40.92	39.81	39.14	40.09	41.59	45.64	48.86	49.40
MAX	---	---	---	42.85	41.40	40.38	39.38	41.65	41.92	48.64	49.94	50.14
MIN	---	---	---	41.47	40.41	39.37	38.98	39.12	41.25	42.00	48.27	48.45



GROUND-WATER LEVELS

MONMOUTH COUNTY--Continued

NJ-WRD Well Number, 25-0272. Site I.D., 402208074145201. Local I.D., Marlboro 1 Obs. NJ Permit Number, 29-06527.

LOCATION.--Lat 40°22'08", long 74°14'51", Hydrologic Unit 02030105, on the west side of NJ Rt. 79, 0.9 mi south of Morganville, Marlboro Township. Owner: Marlboro Township Municipal Utilities Authority.

AQUIFER.--Farrington aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 4 in., depth 680 ft, screened 670 to 680 ft.

INSTRUMENTATION.--Submersible logger pressure transducer--60 minute recording interval. Water-level recorder, Jan. 1973 to May 1998.

DATUM.--Land surface is 116.93 ft above NGVD of 1929. Measuring point: Top of hole in well seal, 2.54 ft above land surface.

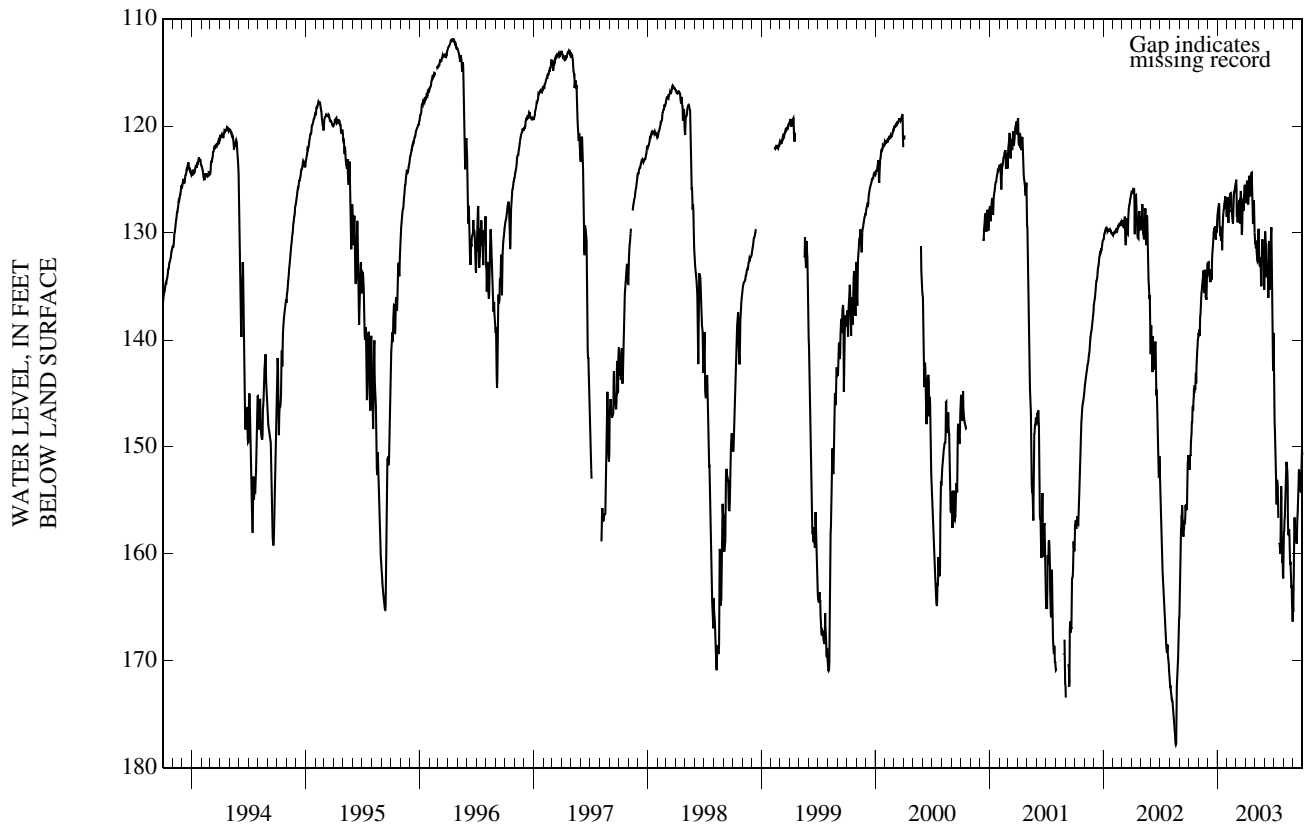
REMARKS.--Water level is affected by nearby pumping.

PERIOD OF RECORD.--Jan. 1973 to current year. Records for 1973 to 1977 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 111.77 ft below land surface, Apr. 16, 1996; lowest, 207.78 ft below land surface, July 16, 1988.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	151.03	139.59	133.79	127.48	129.06	128.15	125.51	130.95	130.95	150.01	156.53	156.67
10	148.70	136.16	134.59	130.23	126.38	128.09	127.34	132.68	132.81	155.38	151.40	158.23
15	146.62	134.36	132.15	129.52	128.03	127.71	126.23	132.29	131.02	156.64	156.60	156.25
20	144.23	135.17	130.02	128.08	129.11	130.15	124.39	133.53	131.83	159.28	158.38	152.23
25	144.06	136.06	129.39	126.91	126.02	127.94	129.07	130.60	134.24	154.78	162.29	154.17
EOM	139.87	133.03	128.88	128.49	125.47	126.62	129.94	135.33	139.35	162.29	165.10	150.75
MEAN	146.19	135.97	131.79	128.46	127.22	127.37	126.54	---	133.58	---	158.27	155.86
MAX	152.13	139.64	134.59	131.61	129.11	130.15	129.94	---	142.89	---	166.33	165.39
MIN	139.87	133.03	128.88	126.59	125.47	125.01	124.37	---	129.47	---	151.40	150.26



GROUND-WATER LEVELS

MONMOUTH COUNTY--Continued

NJ-WRD Well Number, 25-0316. Site I.D., 402536073590501. Local I.D., Sandy Hook SP 1 Obs. NJ Permit Number, 29-04299.

LOCATION.--Lat 40°25'36", long 73°59'03", Hydrologic Unit 02030104, about 1.9 mi north of the main entrance of Sandy Hook National Park, Middletown Township. Owner: State of New Jersey.

AQUIFER.--Old Bridge aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 8 in., depth 397 ft, screened 371 to 397 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape. Water-level extremes recorder, Feb. 1977 to Dec. 1984. Periodic measurements, Aug. 1975 to Feb. 1977. Water-level recorder, May 1965 to Aug. 1975.

DATUM.--Land surface is 10.91 ft above NGVD of 1929. Measuring point: Top of base of aluminum locking cap, 1.76 ft above land surface.

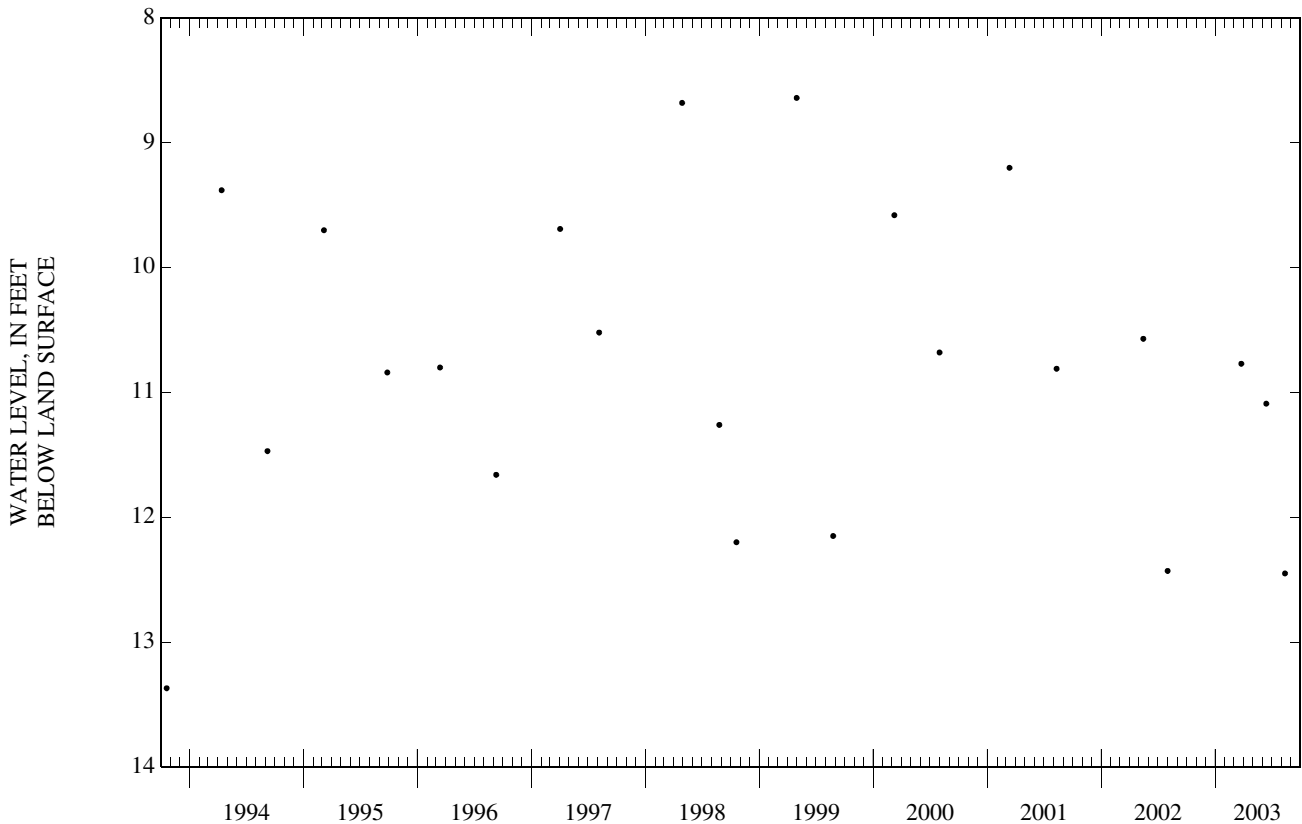
REMARKS.--Water level is affected by tidal fluctuation.

PERIOD OF RECORD.--May 1965 to Dec. 1984, Aug. 1988 to current year. Records for 1965 to 1976 and 1988 to 1992 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 8.64 ft below land surface, Apr. 30, 1999; lowest, 20.12 ft below land surface, between Sept. 7 and Nov. 2, 1977.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 25	10.77	JUN 13	11.09	AUG 12	12.45
WATER YEAR 2003 HIGHEST		10.77	MAR 25, 2003		
LOWEST		12.45	AUG 12, 2003		



GROUND-WATER LEVELS

MONMOUTH COUNTY--Continued

NJ-WRD Well Number, 25-0353. Site I.D., 401542074053001. Local I.D., Fort Monmouth 1-NCO Obs.

LOCATION.--Lat 40°15'42", long 74°05'29", Hydrologic Unit 02030104, at Training Center, Wyckoff Rd. and Wayside Rd., Tinton Falls Borough. Owner: U.S. Army.

AQUIFER.--Wenonah-Mount Laurel aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 3.5 in., depth 327 ft, screened 321 to 327 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval.

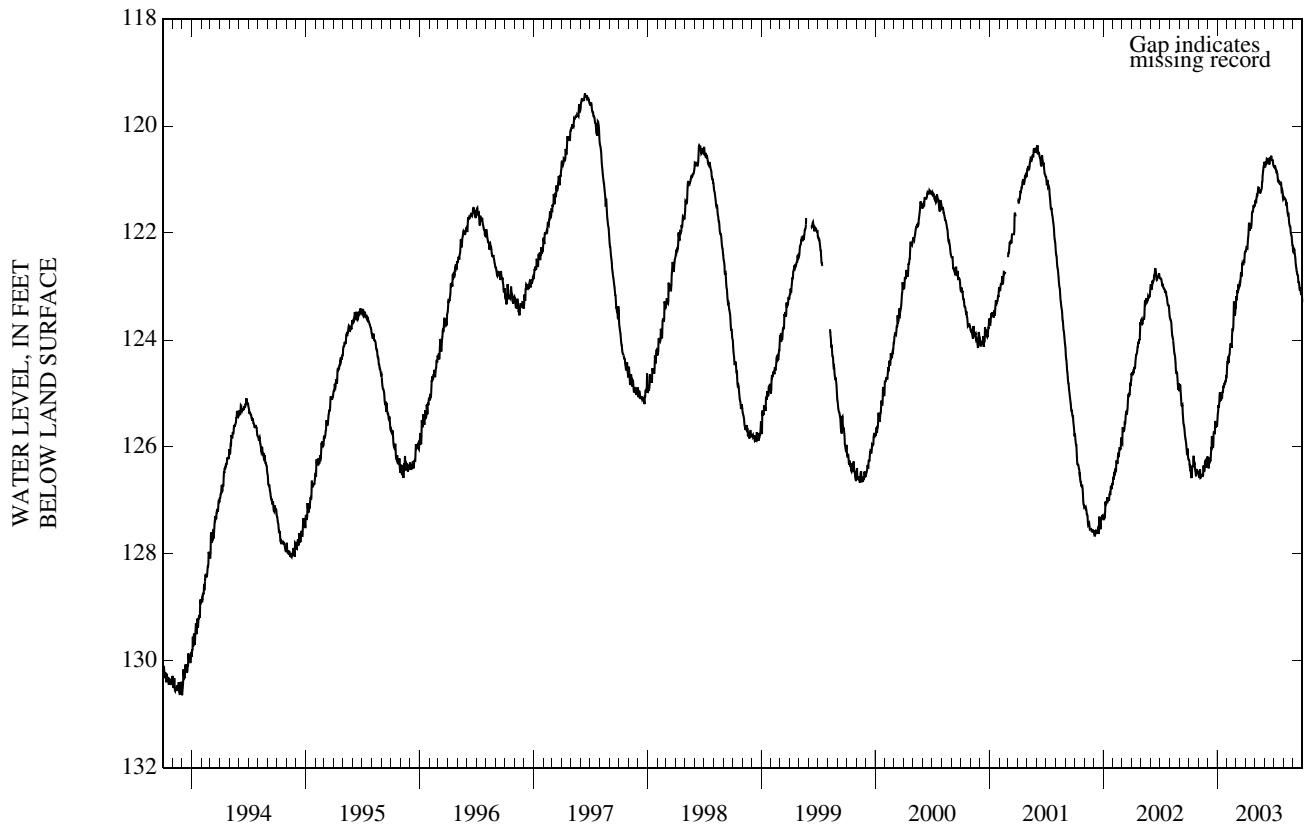
DATUM.--Land surface is 140 ft above NGVD of 1929, from topographic map. Measuring point: Top of recorder shelf, 1.50 ft above land surface.

PERIOD OF RECORD.--Feb. 1985 to current year. Records for 1985 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level 119.39 ft below land surface, June 13-14, 1997; lowest, 155.63 ft below land surface, Dec. 22-23, 1988.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	126.32	126.58	126.30	125.27	124.35	123.13	122.25	121.43	120.67	120.75	121.35	122.31
10	126.58	126.55	126.25	125.01	124.16	123.00	122.06	121.26	120.67	120.88	121.43	122.63
15	126.38	126.52	125.83	125.08	124.11	122.94	121.92	121.21	120.65	121.03	121.65	122.79
20	126.32	126.45	125.75	124.85	123.81	122.78	121.86	121.23	120.59	121.08	121.85	122.97
25	126.55	126.37	125.52	124.83	123.52	122.58	121.60	121.04	120.63	121.18	122.02	123.09
EOM	126.47	126.18	125.58	124.66	123.40	122.34	121.49	120.74	120.74	121.37	122.33	123.29
MEAN	126.39	126.44	125.94	125.00	123.98	122.84	121.90	121.17	120.66	121.00	121.71	122.78
MAX	126.58	126.58	126.40	125.48	124.51	123.40	122.36	121.48	120.77	121.37	122.33	123.29
MIN	126.17	126.18	125.52	124.66	123.28	122.34	121.47	120.74	120.57	120.75	121.33	122.30
WTR YR 2003	MEAN 123.32	HIGH 120.57	JUN 22	LOW 126.58	OCT 10							



GROUND-WATER LEVELS

MONMOUTH COUNTY--Continued

NJ-WRD Well Number, 25-0429. Site I.D., 400832074082101. Local I.D., Allaire State Park C Obs. NJ Permit Number, 29-04140.

LOCATION.--Lat 40°08'34", long 74°08'33", Hydrologic Unit 02040301, about 1.3 mi southeast of Lower Squankum off County Rt. 21, in Allaire State Park, Howell Township. Owner: U.S. Geological Survey.

AQUIFER.--Englishtown aquifer system of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in., depth 633 ft, screened 623 to 633 ft.

INSTRUMENTATION.--Water-level extremes recorder. Periodic measurements, July 1975 to Feb. 1977. Water-level recorder, Feb. 1964 to July 1975.

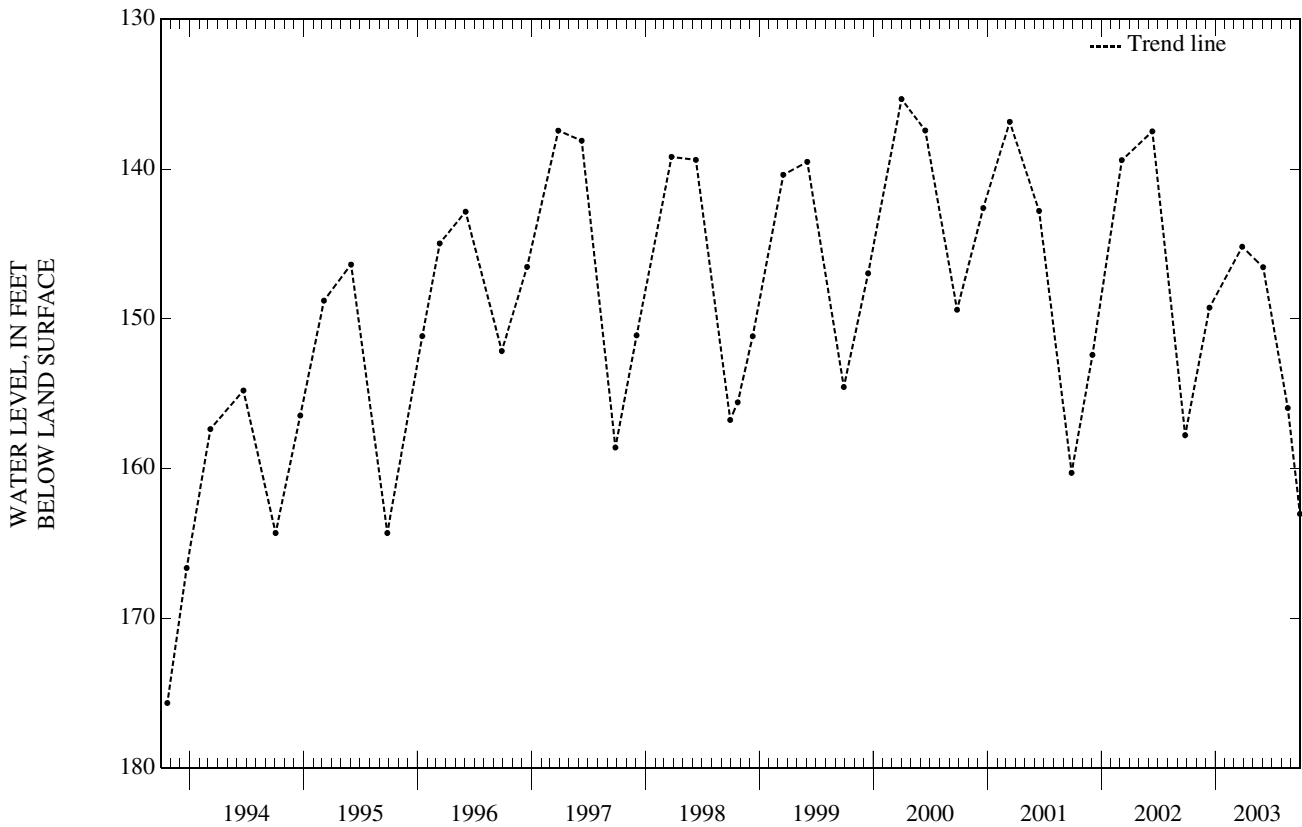
DATUM.--Land surface is 97.93 ft above NGVD of 1929. Measuring point: Front edge of cutout in recorder housing, 1.64 ft above land surface.

PERIOD OF RECORD.--Feb. 1964 to current year. Records for 1964 to 1976 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 132.96 ft below land surface, between Mar. 31 and June 15, 2000; lowest, 249.89 ft below land surface, between June 24 and Sept. 28, 1988.

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

PERIOD	WATER-LEVEL EXTREMES		MEASURED WATER LEVELS		
	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL	
SEPT. 26, 2002 TO DEC. 13, 2002	149.23	157.89	DEC. 13, 2002	149.25	
DEC. 13, 2002 TO MAR. 28, 2003	142.87	149.25	MAR. 28, 2003	145.18	
MAR. 28, 2003 TO JUNE 3, 2003	144.86	146.55	JUNE 3, 2003	146.55	
JUNE 3, 2003 TO AUG. 21, 2003	146.44	155.99	AUG. 21, 2003	155.95	
AUG. 21, 2003 TO SEPT. 29, 2003	155.95	163.13	SEPT. 29, 2003	163.02	



GROUND-WATER LEVELS

MONMOUTH COUNTY--Continued

NJ-WRD Well Number, 25-0486. Site I.D., 400711074020201. Local I.D., DOE - Sea Girt Obs.

LOCATION.--Lat 40°07'11", long 74°02'00", Hydrologic Unit 02040301, at the National Guard Camp, Sea Girt, Sea Girt Borough. Owner: State of New Jersey.

AQUIFER.--Wenonah-Mount Laurel aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 4 in., depth 614 ft, perforated casing 604 to 614 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval.

DATUM.--Land surface is 10 ft above NGVD of 1929, from topographic map. Measuring point: Top of recorder shelf, 3.00 ft above land surface.

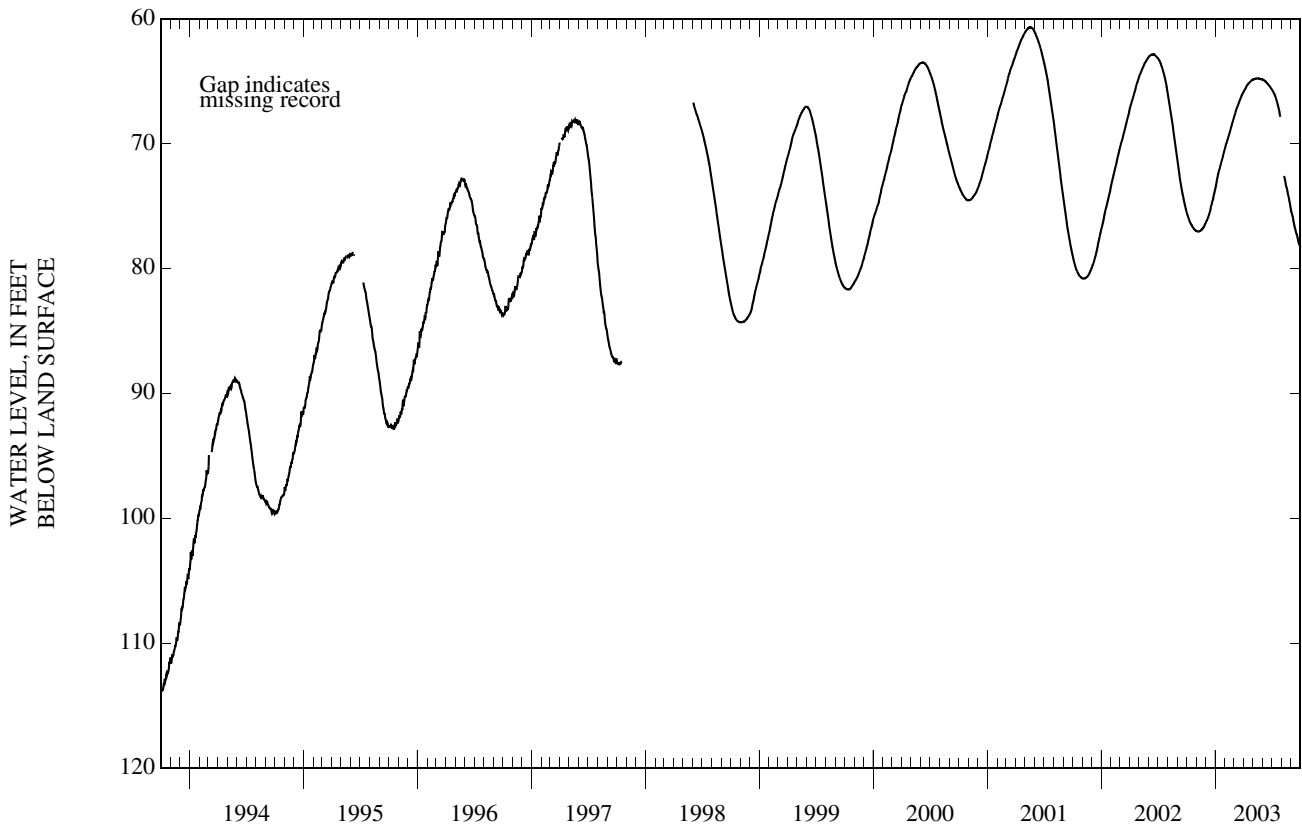
REMARKS.--Water level is affected by tidal fluctuation and nearby pumping. Well damaged by construction equipment, Oct. 1997; repaired June 1998.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 60.66 ft below land surface, May 16-18, 2001; lowest, 195.60 ft below land surface, Sept. 17, 1988.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	75.80	77.03	76.13	73.01	69.98	67.60	65.66	64.82	64.90	65.81	---	75.73
10	76.18	77.02	75.81	72.41	69.58	67.20	65.44	64.78	64.99	66.06	72.67	76.41
15	76.45	76.95	75.35	71.95	69.19	66.87	65.23	64.75	65.12	66.42	73.33	76.97
20	76.65	76.83	74.88	71.47	68.74	66.53	65.09	64.77	65.27	66.89	73.83	77.38
25	76.84	76.65	74.34	71.02	68.27	66.21	64.96	64.80	65.43	67.45	74.45	77.91
EOM	76.96	76.39	73.65	70.46	68.03	65.90	64.86	64.83	65.61	---	75.30	78.28
MEAN	76.40	76.85	75.17	71.90	69.19	66.83	65.27	64.79	65.17	---	---	76.92
MAX	76.96	77.03	76.33	73.54	70.35	67.94	65.85	64.86	65.61	---	---	78.28
MIN	75.47	76.39	73.65	70.46	68.03	65.90	64.86	64.75	64.84	---	---	75.44



GROUND-WATER LEVELS

MONMOUTH COUNTY--Continued

NJ-WRD Well Number, 25-0635. Site I.D., 401105074120201. Local I.D., Howell Twp 1 Obs. NJ Permit Number, 29-18402-9.

LOCATION.--Lat 40°11'05", long 74°12'01", Hydrologic Unit 02040301, on the south side of Peskin Rd., about 5,000 ft east of the intersection of Georgia Tavern Rd. and Peskin Rd., Howell Township. Owner: U.S. Geological Survey.

AQUIFER.--Potomac-Raritan-Magothy aquifer system, undifferentiated, of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 2 in., depth 1,360 ft, screened 1,226 to 1,240, and 1,280 to 1,290 and 1,320 to 1,330 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval.

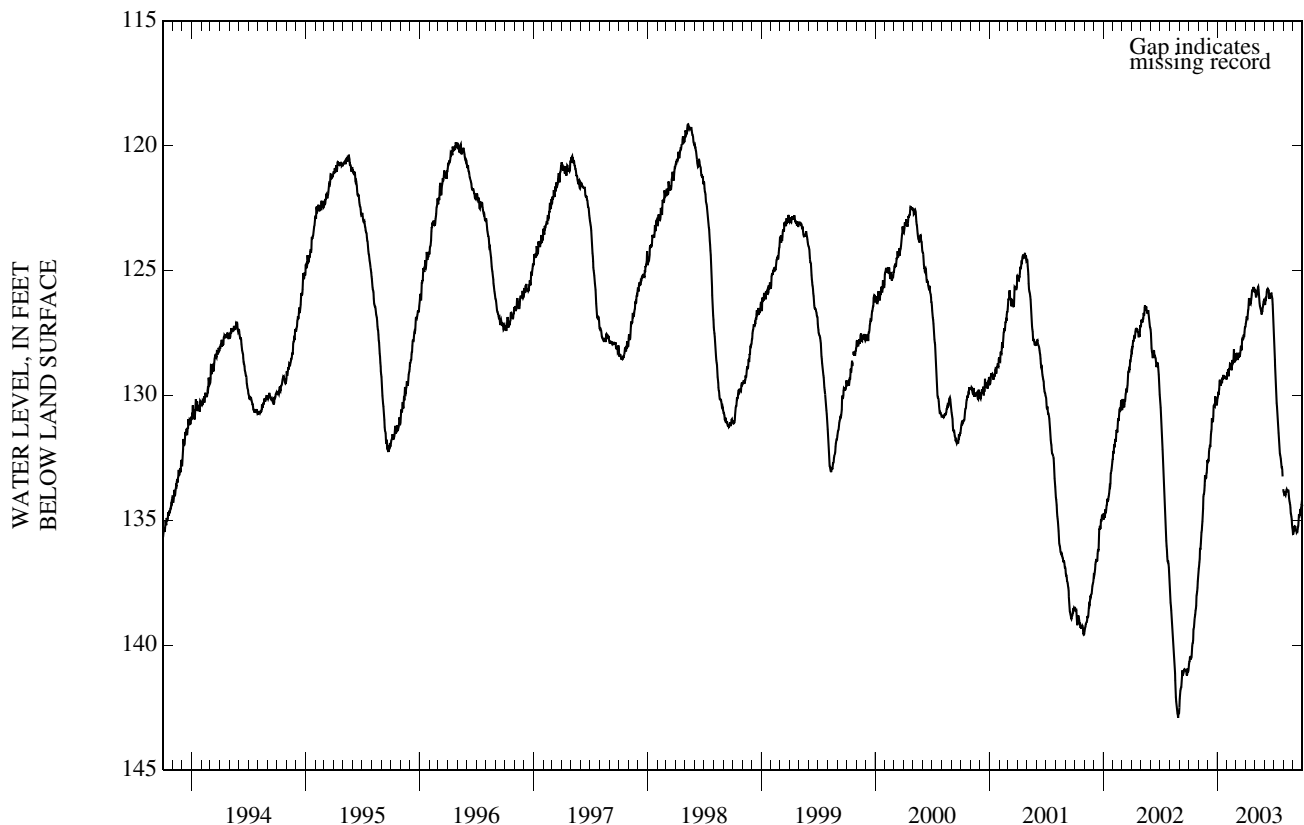
DATUM.--Land surface is 111.3 ft above NGVD of 1929. Measuring point: Top of recorder shelf, 2.10 ft above land surface.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 119.12 ft below land surface, May. 11, 1998; lowest, 150.32 ft below land surface, Sept. 2, 1988.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	140.49	136.55	132.26	129.96	129.10	128.38	126.83	126.07	126.05	128.81	133.93	135.25
10	140.49	135.69	131.85	129.44	128.74	128.43	126.55	125.76	125.74	130.30	133.80	135.39
15	139.81	134.79	130.98	129.48	128.88	128.31	126.23	126.13	125.85	131.33	133.82	135.37
20	138.96	133.81	130.43	129.18	128.71	128.06	126.10	126.56	126.03	132.32	134.23	134.80
25	138.42	133.30	130.04	129.34	128.63	127.72	125.79	126.63	126.06	132.81	134.77	134.57
EOM	137.28	132.59	130.25	129.31	128.54	127.26	125.83	126.19	127.44	133.76	135.55	134.44
MEAN	139.40	134.74	131.19	129.49	128.78	128.08	126.30	126.19	126.12	---	134.26	135.05
MAX	140.91	137.11	132.64	130.11	129.23	128.59	127.25	126.75	127.44	---	135.55	135.55
MIN	137.28	132.59	130.04	129.18	128.15	127.26	125.65	125.65	125.72	---	133.76	134.34





GROUND-WATER LEVELS

MONMOUTH COUNTY--Continued

NJ-WRD Well Number, 25-0636. Site I.D., 401105074120202. Local I.D., Howell Twp 2 Obs. NJ Permit Number, 29-18404-5

LOCATION.--Lat 40°11'05", long 74°12'01", Hydrologic Unit 02040301, on the south side of Peskin Rd., about 5,000 ft east of the intersection of Georgia Tavern Rd. and Peskin Rd., Howell Township. Owner: U.S. Geological Survey.

AQUIFER.--Vincentown aquifer of Paleocene age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in., depth 100 ft, screened 85 to 95 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval.

DATUM.--Land surface is 111.9 ft above NGVD of 1929. Measuring point: Top of recorder shelf, 1.20 ft above land surface.

REMARKS.--Water level is affected by the stage of the Manasquan Reservoir and by nearby pumping.

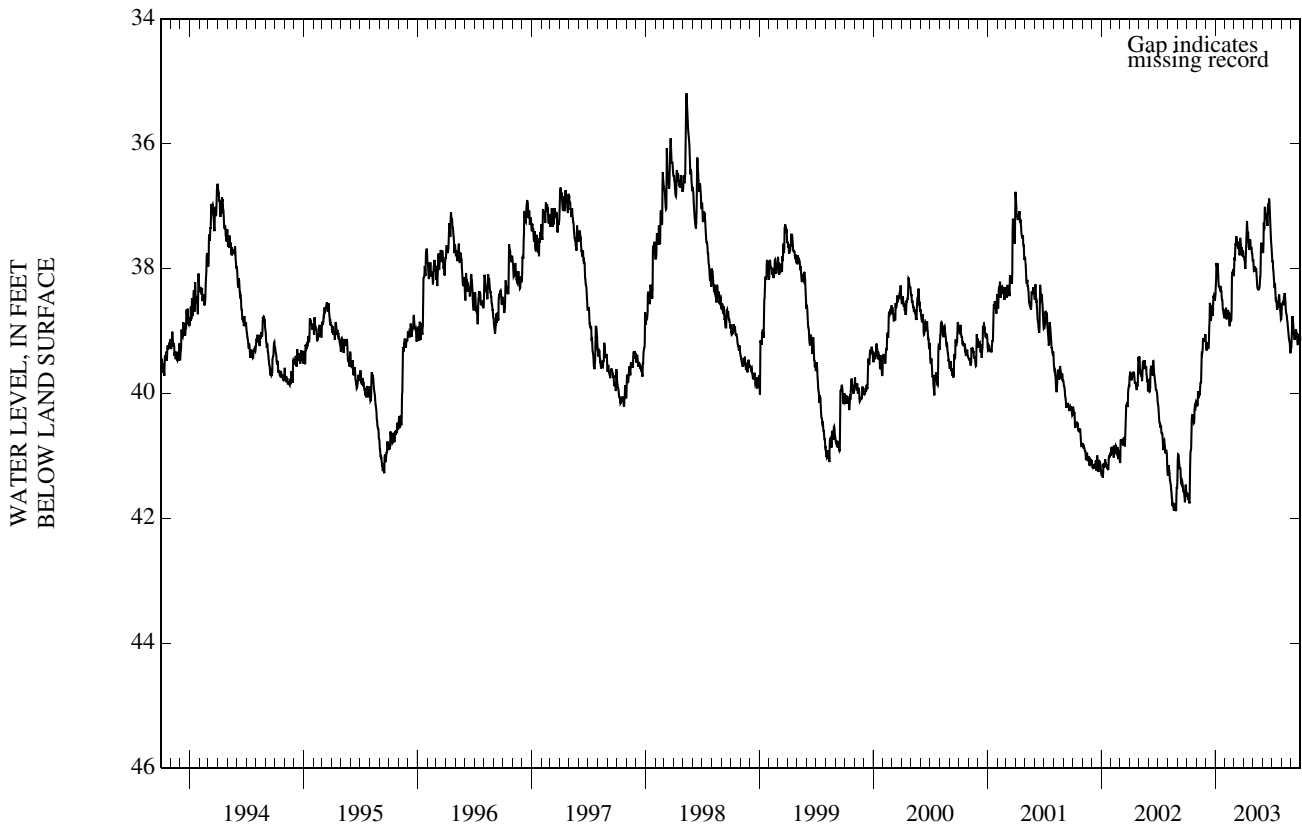
PERIOD OF RECORD.--Dec. 1987 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 35.15 ft below land surface, May. 12, 1998; lowest, 56.09 ft below land surface, Apr. 29, 1988.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	41.60	40.18	39.19	37.96	38.73	37.73	37.87	38.03	37.27	38.00	38.56	38.76
10	41.76	40.02	39.24	38.07	38.66	37.52	37.53	38.03	37.11	38.31	38.41	39.06
15	40.88	39.82	38.61	38.31	38.85	37.68	37.42	38.28	37.15	38.51	38.68	39.05
20	40.35	39.35	38.60	38.35	38.85	37.77	37.69	38.33	36.98	38.58	38.85	39.13
25	40.46	39.15	38.52	38.67	38.05	37.69	37.70	38.13	37.19	38.49	39.13	39.08
EOM	40.12	39.05	38.46	38.77	38.04	37.73	37.85	37.71	37.69	38.81	39.25	39.15
MEAN	40.89	39.65	38.84	38.35	38.60	37.68	37.66	38.04	37.26	38.39	38.80	39.05
MAX	41.76	40.21	39.31	38.79	38.92	38.12	38.00	38.33	37.75	38.82	39.36	39.25
MIN	40.12	39.05	38.43	37.91	38.04	37.48	37.23	37.58	36.88	37.79	38.39	38.76

WTR YR 2003 MEAN 38.60 HIGH 36.88 JUN 22 LOW 41.76 OCT 10



## GROUND-WATER LEVELS

## MONMOUTH COUNTY-Continued

NJ-WRD Well Number, 25-0637. Site I.D., 401105074120203. Local I.D., Howell Twp 3 Obs. NJ Permit Number, 29-18400-2.

LOCATION.--Lat 40°11'05", long 74°12'01", Hydrologic Unit 02040301, on the south side of Peskin Rd., about 5,000 ft east of the intersection of Georgia Tavern Rd. and Peskin Rd., Howell Township. Owner: U.S. Geological Survey.

AQUIFER.--Wenonah-Mount Laurel aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 4 in., depth 324 ft, screened 307 to 317 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval.

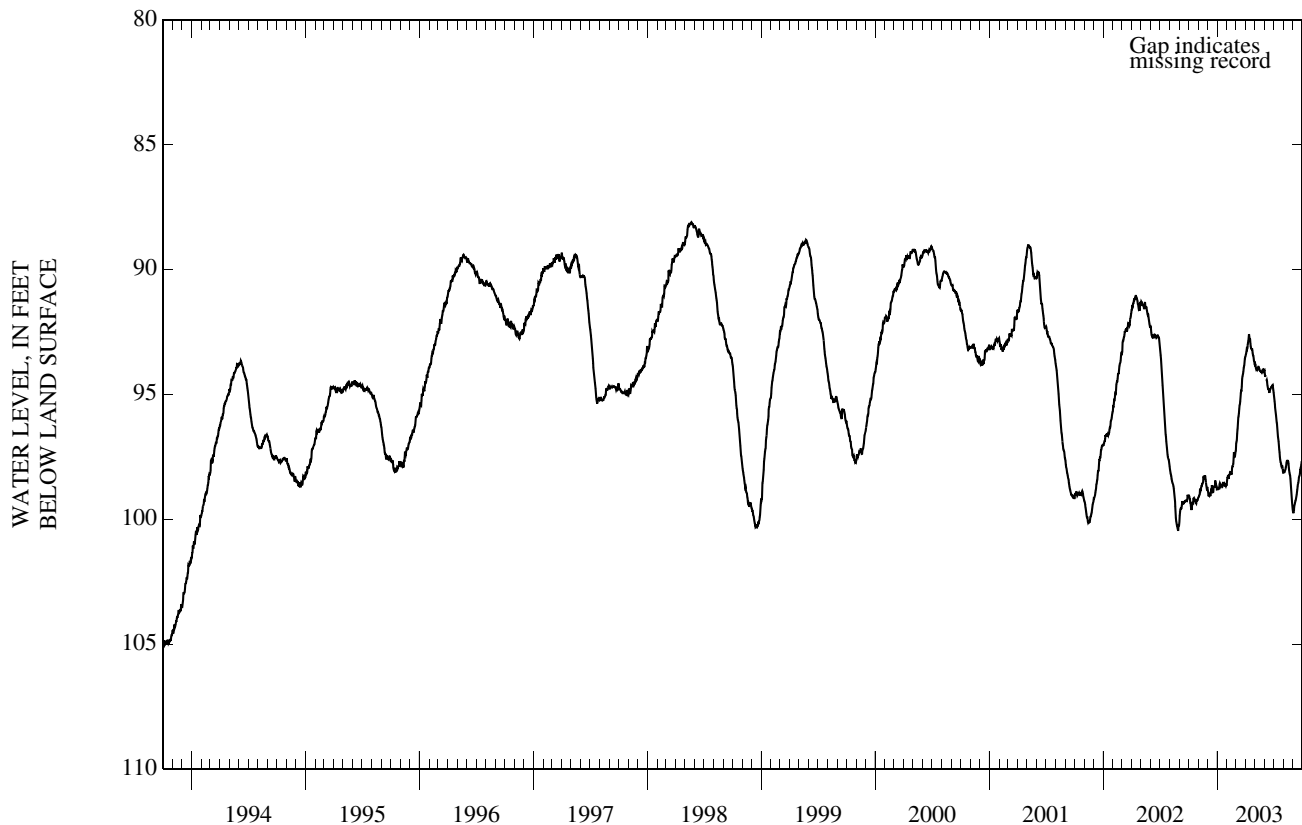
DATUM.--Land surface is 111.9 ft above NGVD of 1929. Measuring point: Top of recorder shelf, 1.80 ft above land surface.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 88.08 ft below land surface, May 21, 1998; lowest, 140.65 ft below land surface, Oct. 6-7, 1988.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	99.20	99.01	99.02	98.80	98.30	96.58	93.18	93.98	94.27	95.52	98.09	99.45
10	99.63	98.72	99.02	98.58	98.13	95.87	92.86	94.00	94.63	96.11	97.75	99.17
15	99.35	98.55	98.73	98.67	98.19	95.28	92.78	93.98	94.82	96.79	97.66	98.69
20	99.19	98.37	98.70	98.51	97.84	94.68	93.18	94.09	94.78	97.50	98.13	98.29
25	99.36	98.52	98.45	98.68	97.50	94.08	93.43	94.10	94.68	97.86	98.73	97.94
EOM	99.16	98.71	98.80	98.60	97.30	93.51	93.79	94.05	94.93	98.13	99.69	97.72
MEAN	99.28	98.65	98.82	98.65	97.97	95.19	93.17	93.99	---	96.80	98.26	98.68
MAX	99.63	99.13	99.08	98.80	98.44	97.24	93.79	94.13	---	98.13	99.69	99.76
MIN	99.06	98.24	98.45	98.51	97.30	93.51	92.58	93.79	---	95.06	97.65	97.68



GROUND-WATER LEVELS

MONMOUTH COUNTY--Continued

NJ-WRD Well Number, 25-0638. Site I.D., 401105074120204. Local I.D., Howell Twp 4 Obs. NJ Permit Number, 29-18401-1.

LOCATION.--Lat 40°11'05", long 74°12'01", Hydrologic Unit 02040301, on the south side of Peskin Rd., about 5,000 ft east of the intersection of Georgia Tavern Rd. and Peskin Rd., Howell Township. Owner: U.S. Geological Survey.

AQUIFER.--Englishtown aquifer system of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 4 in., depth 499 ft, screened 483 to 493 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval.

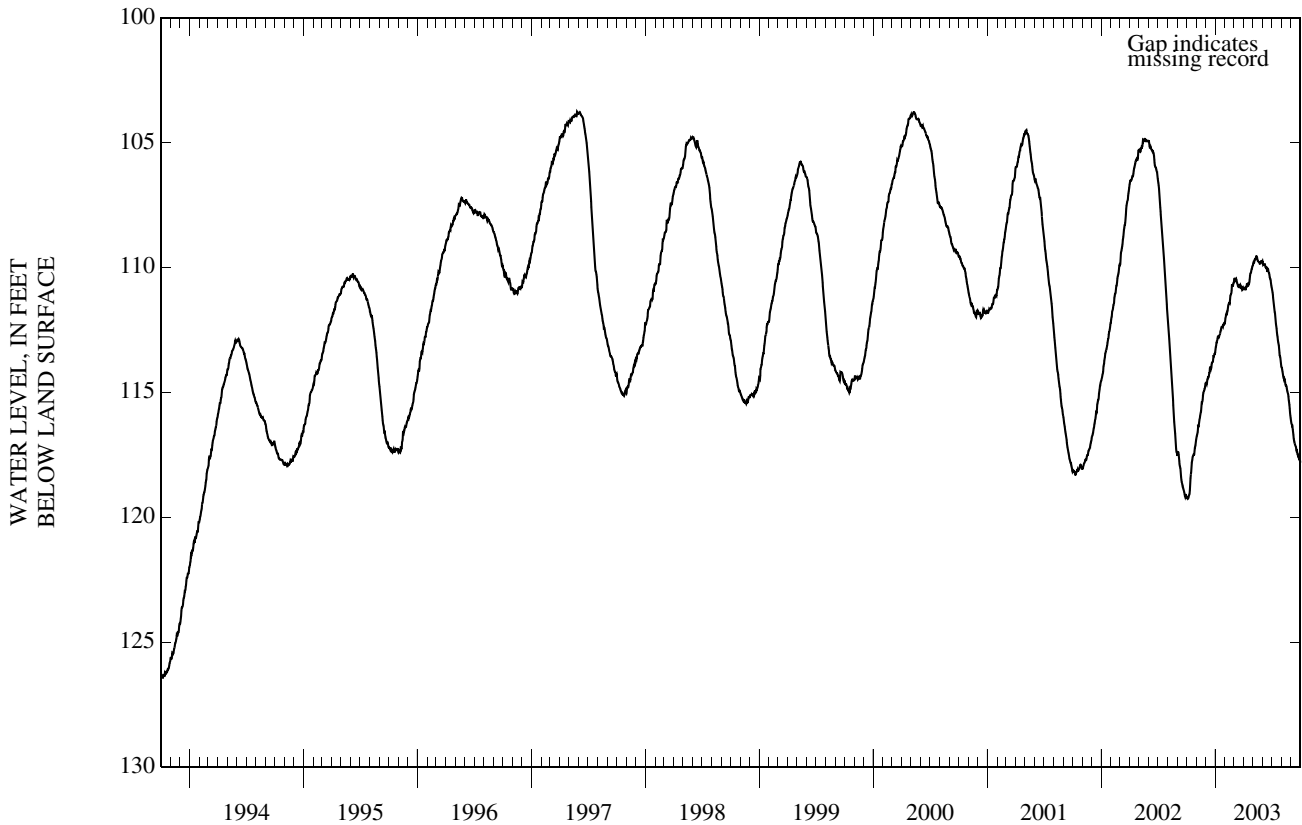
DATUM.--Land surface is 112.1 ft above NGVD of 1929. Measuring point: Top of recorder shelf, 1.80 ft above land surface.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 103.74 ft below land surface, May 26-27, 1997; lowest, 165.02 ft below land surface, Oct. 21, 1988.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	119.21	116.58	114.60	113.00	111.86	110.44	110.81	109.78	109.83	111.20	114.26	116.35
10	119.06	116.20	114.39	112.75	111.61	110.52	110.77	109.63	109.97	111.77	114.45	116.92
15	118.20	115.80	113.99	112.68	111.42	110.75	110.71	109.64	110.03	112.35	114.73	117.15
20	117.60	115.38	113.88	112.39	111.08	110.82	110.57	109.78	110.15	112.90	114.98	117.41
25	117.49	114.95	113.63	112.36	110.73	110.82	110.19	109.83	110.43	113.41	115.39	117.59
EOM	116.90	114.66	113.39	112.25	110.60	110.80	109.94	109.78	110.78	113.94	116.14	117.82
MEAN	118.18	115.73	114.06	112.64	111.36	110.67	110.55	109.73	---	112.41	114.87	117.10
MAX	119.24	116.83	114.67	113.29	112.16	110.89	110.90	109.91	---	113.94	116.14	117.82
MIN	116.90	114.66	113.39	112.25	110.60	110.41	109.94	109.54	---	110.85	113.99	116.21



GROUND-WATER LEVELS

MONMOUTH COUNTY--Continued

NJ-WRD Well Number, 25-0639. Site I.D., 401105074120205. Local I.D., Howell Twp 5 Obs. NJ Permit Number, 29-18403-7.

LOCATION.--Lat 40°11'05", long 74°12'01", Hydrologic Unit 02040301, on the south side of Peskin Rd., about 5,000 ft east of the intersection of Georgia Tavern Rd. and Peskin Rd., Howell Township. Owner: U.S. Geological Survey.

AQUIFER.--Upper Potomac-Raritan-Magothy aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 4 in., depth 907 ft, screened 891 to 901 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval.

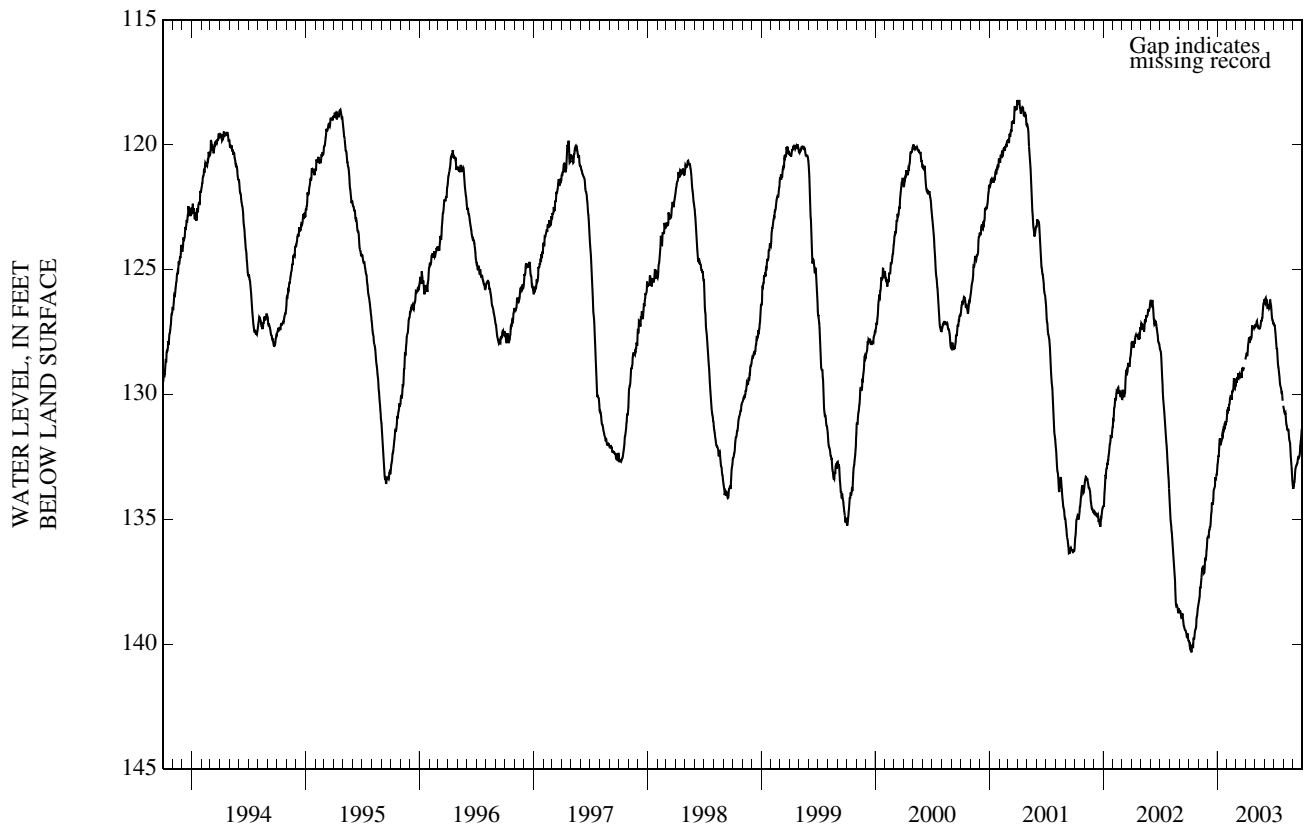
DATUM.--Land surface is 111.7 ft above NGVD of 1929. Measuring point: Top of recorder shelf, 2.40 ft above land surface.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 118.12 ft below land surface, Mar. 30, 2001; lowest, 149.23 ft below land surface, Oct. 6-7, 1988.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	140.01	138.09	135.51	132.48	130.60	129.34	128.33	127.25	126.14	127.39	130.77	133.52
10	140.30	137.47	135.18	131.86	130.17	129.26	127.97	127.30	126.54	128.18	131.19	132.88
15	140.09	136.94	134.39	131.84	130.13	129.32	127.81	127.36	126.49	128.89	131.42	132.66
20	139.63	137.13	133.86	131.40	129.86	129.22	127.76	127.15	126.29	129.53	131.85	132.50
25	139.28	136.54	133.32	131.29	129.74	129.01	127.34	126.93	126.94	129.94	132.65	131.91
EOM	138.49	135.75	133.00	131.00	129.59	---	127.35	126.29	127.14	130.45	133.71	131.40
MEAN	139.66	137.14	134.42	131.74	130.09	---	127.83	127.06	126.53	---	131.74	132.62
MAX	140.30	138.42	135.72	132.83	130.79	---	128.60	127.37	127.16	---	133.71	133.78
MIN	138.49	135.75	133.00	131.00	129.35	---	127.24	126.29	126.14	---	130.53	131.36



GROUND-WATER LEVELS

MONMOUTH COUNTY--Continued

NJ-WRD Well Number, 25-0715. Site I.D., 402426074001901. Local I.D., AHWD B Obs. NJ Permit Number, 29-25384.

LOCATION.--Lat 40°24'26", long 74°00'17", Hydrologic Unit 02030104, near the intersection of Highland Ave. and Beverot Pl., Atlantic Highlands Borough. Owner: Atlantic Highlands Water Department.

AQUIFER.--Englishtown aquifer system of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in., depth 360 ft, screened 350 to 360 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval.

DATUM.--Land surface is 228.8 ft above NGVD of 1929. Measuring point: Top of recorder shelf, 2.90 ft above land surface.

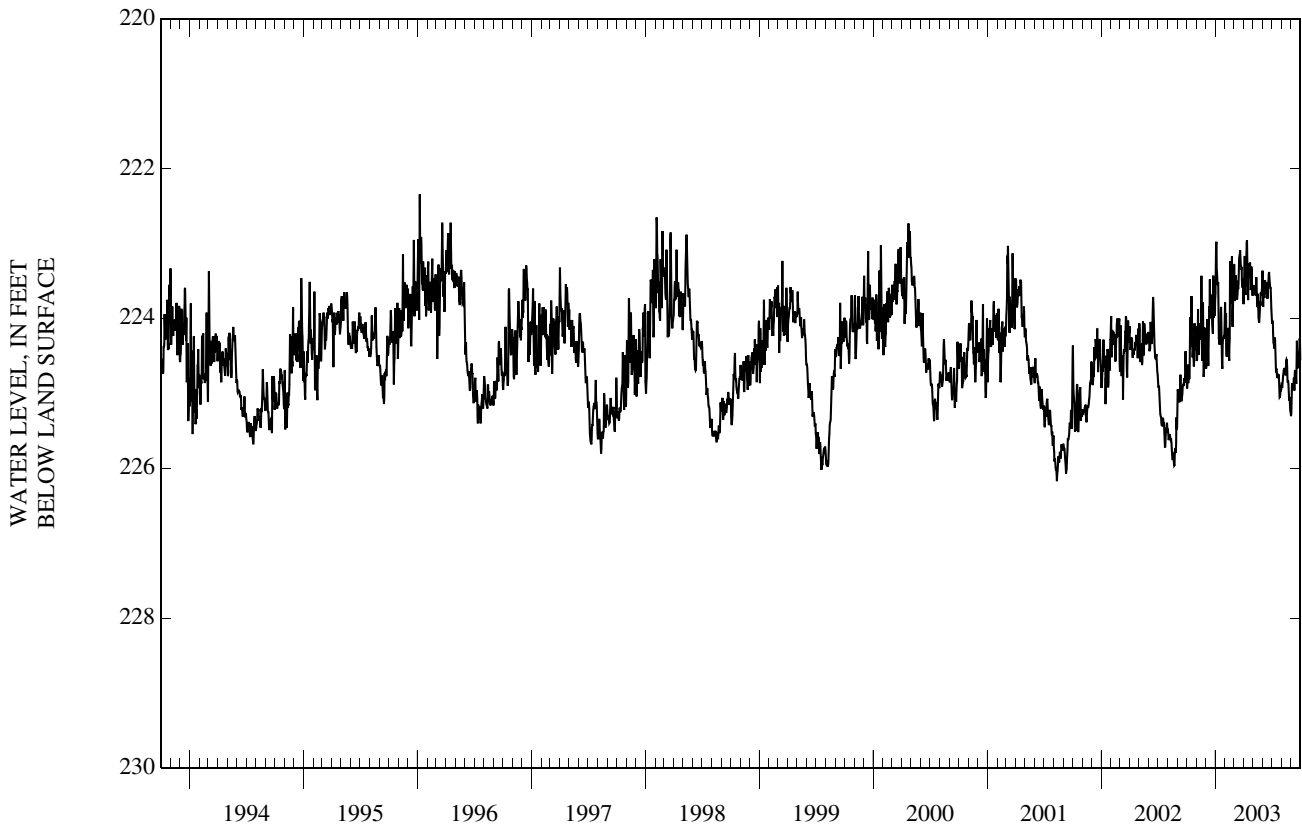
REMARKS.--Water level is affected by tidal fluctuation and nearby pumping.

PERIOD OF RECORD.--Aug. 1991 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 221.79 ft below land surface, Mar. 14, 1993; lowest, 226.47 ft below land surface, Aug. 11, 2001.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	224.67	224.30	224.30	223.36	224.39	223.64	223.16	223.67	223.55	224.20	224.82	224.91
10	224.79	224.29	224.43	223.52	224.18	223.66	223.21	223.69	223.61	224.36	224.66	224.81
15	224.30	224.28	223.98	224.12	224.38	223.61	223.65	223.85	223.58	224.68	224.71	224.83
20	224.52	224.32	223.68	224.20	223.78	223.14	223.46	224.03	223.51	224.80	224.82	224.60
25	224.56	224.71	223.43	224.27	224.11	223.33	223.59	223.83	223.57	224.99	225.07	224.58
EOM	224.10	224.25	223.75	224.00	223.45	223.60	223.69	223.55	223.95	224.95	225.30	224.56
MEAN	224.45	224.25	224.08	223.94	223.98	223.45	223.44	223.72	223.61	224.60	224.85	224.72
MAX	224.93	224.78	224.67	224.67	224.56	223.77	223.81	224.05	223.95	225.05	225.30	225.27
MIN	223.70	223.43	223.43	222.97	223.17	223.09	222.95	223.45	223.36	224.03	224.55	224.27
WTR YR 2003	MEAN 224.09	HIGH 222.95	APR 12	LOW 225.30	AUG 31							



GROUND-WATER LEVELS

MONMOUTH COUNTY--Continued

NJ-WRD Well Number, 25-0771. Site I.D., 402350073583901. Local I.D., Sandy Hook 2 Obs. NJ Permit Number, 29-36217.

LOCATION.--Lat 40°23'50", long 73°58'37", Hydrologic Unit 02030104, near the main entrance of Sandy Hook National Park, Sea Bright Boro. Owner: U.S Dept. of Interior-National Park Service.

AQUIFER.--Englishtown aquifer system of Cretaceous age.

WELL CHARACTERISTICS.-- Drilled artesian observation well, diameter 4 in., depth 278 ft, screened 258 to 278 ft.

INSTRUMENTATION.--Submersible logger pressure transducer--60 minute recording interval.

DATUM.-- Land surface is 8.4 ft above NGVD of 1929. Measuring point: Top of casing, 4.4 ft above land surface

REMARKS.--Water-level affected by tidal fluctuation.

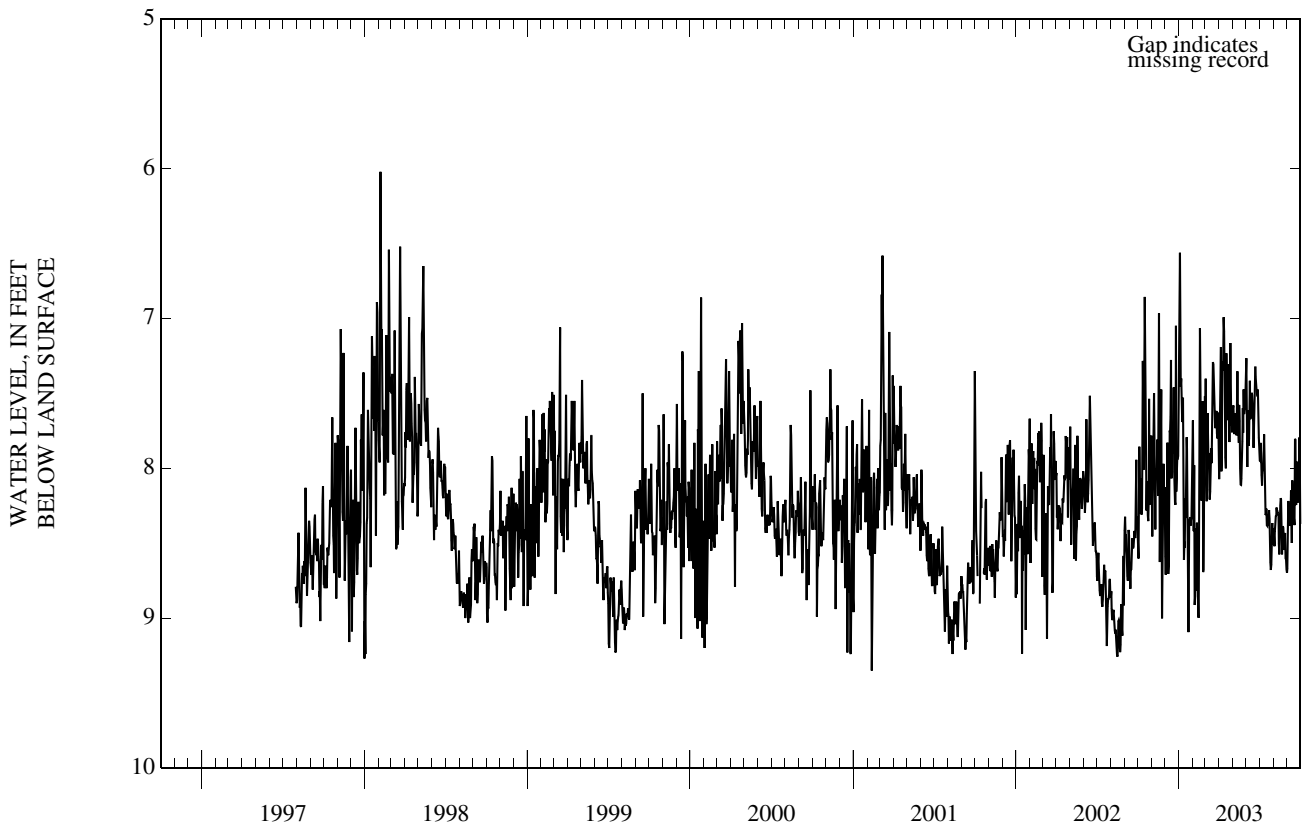
PERIOD OF RECORD.--July 1997 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.63 ft below land surface, Feb. 24, 1998; lowest, 10.93 ft below land surface, Dec. 13, 2000, and Feb. 11, 2001.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.16	7.92	8.01	7.46	8.91	7.92	7.19	7.77	7.61	8.04	8.37	8.33
10	8.27	8.00	8.39	7.53	8.36	8.14	7.33	7.78	7.67	7.85	8.29	8.33
15	7.70	8.18	8.07	8.20	8.66	7.97	7.93	7.83	7.61	8.30	8.41	8.33
20	8.28	8.12	7.46	8.49	8.21	7.43	7.68	8.11	7.45	8.38	8.57	8.24
25	8.20	8.71	7.05	8.34	8.68	7.67	7.62	7.76	7.51	8.63	8.54	8.15
EOM	7.78	8.13	7.62	7.88	7.52	7.91	7.76	7.42	7.87	8.43	8.70	8.37
MEAN	8.01	8.11	8.03	8.03	8.26	7.77	7.56	7.71	7.61	8.23	8.42	8.21
MAX	8.60	9.00	8.71	9.09	9.00	8.22	8.07	8.11	7.99	8.68	8.70	8.67
MIN	6.86	6.97	7.05	6.56	7.06	7.29	6.99	7.35	7.27	7.77	8.20	7.79

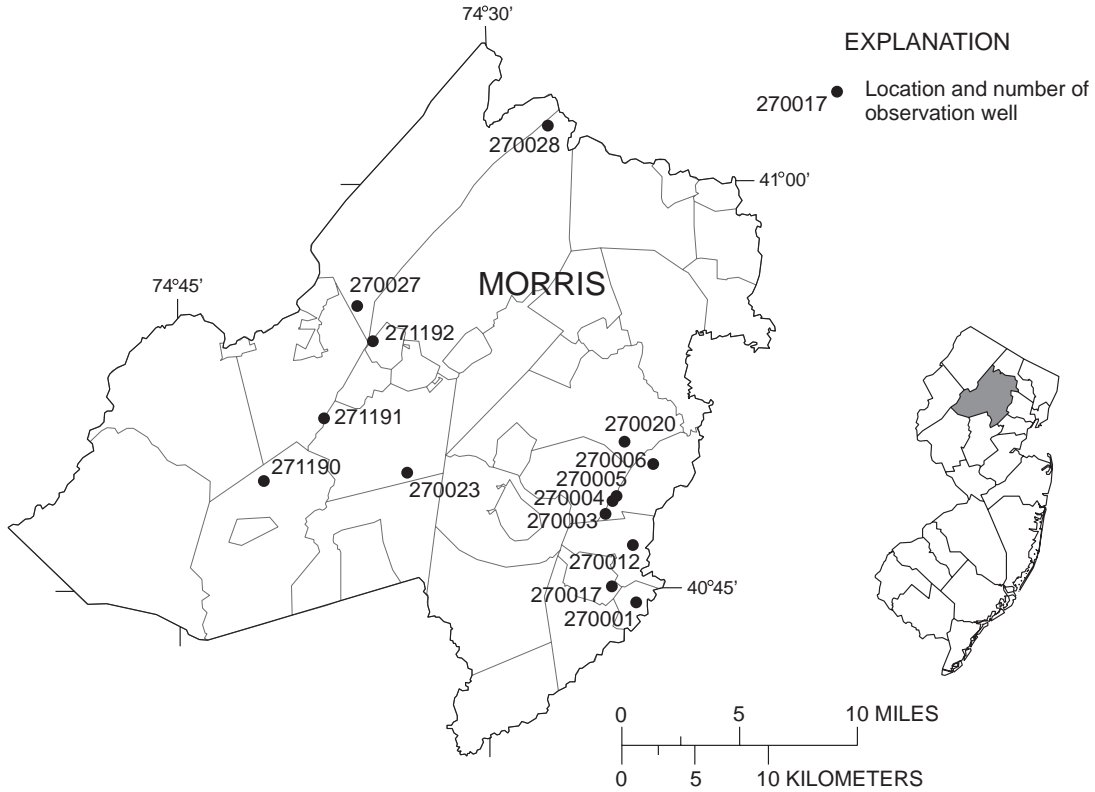
WTR YR 2003 MEAN 7.99 HIGH 6.56 JAN 3 LOW 9.09 JAN 22



MORRIS COUNTY

NJ-WRD well number	Local identifier	Township	Well depth	Aquifer	Type of data
270001	RECREATION FLD OBS	CHATHAM BORO	150	SFDF	MANUAL
270003	W B DRIVER 2 OBS	EAST HANOVER TWP	108	SFDF	MANUAL
270004	CLEMENS OBS	EAST HANOVER TWP	110	SFDF	MANUAL
270005	SANDOZ OBS	EAST HANOVER TWP	123	SFDF	MANUAL
270006	GREEN ACRES OBS	EAST HANOVER TWP	104	SFDF	MANUAL
270012	BRIARWOOD SCHOOL OBS	FLORHAM PARK BORO	110	SFDF	DAILY
270017	MBWD 4 OBS	MADISON BORO	100	SFDF	MANUAL
270020	TROY MEADOWS 1 OBS	PARSIP-TROY HILLS TWP	89	SFDF	MAXMIN
270023	MT FREEDOM 2 OBS	RANDOLPH TWP	218	PCMB	MANUAL
270027	BERKSHIRE VALLEY 9 OBS	JEFFERSON TWP	98	SFDF	DAILY
270028	GREEN POND 5 OBS	ROCKAWAY TWP	120	SFDF	DAILY
271190	BLACK RIVER 10 OBS	CHESTER TWP	200	PCMB	DAILY
271191	ROXBURY 1 OBS	ROXBURY TWP	154	SFDF	DAILY
271192	MORRIS MAINT YD 22 OBS	WHARTON BORO	100	SFDF	DAILY

Aquifer names  
 PCMB - Precambrian Erathem  
 SFDF - Stratified drift



GROUND-WATER LEVELS

MORRIS COUNTY

NJ-WRD Well Number, 27-0001. Site I.D., 404432074225301. Local I.D., Recreation Fld Obs. NJ Permit Number, 25-14164.

LOCATION.--Lat 40°44'32", long 74°22'51", Hydrologic Unit 02030103, at Chatham Recreation Field, about 35 ft east of the intersection of Center Place and North Passaic St., Chatham Borough. Owner: U.S. Geological Survey.

AQUIFER.--Stratified drift of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 150 ft, screened 140 to 150 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape. Water-level recorder, Mar. 1967 to Aug. 1970.

DATUM.--Land surface is 218.8 ft above NGVD of 1929, by altimeter. Measuring point: Top of well shelter shelf, 3.20 ft above land surface.

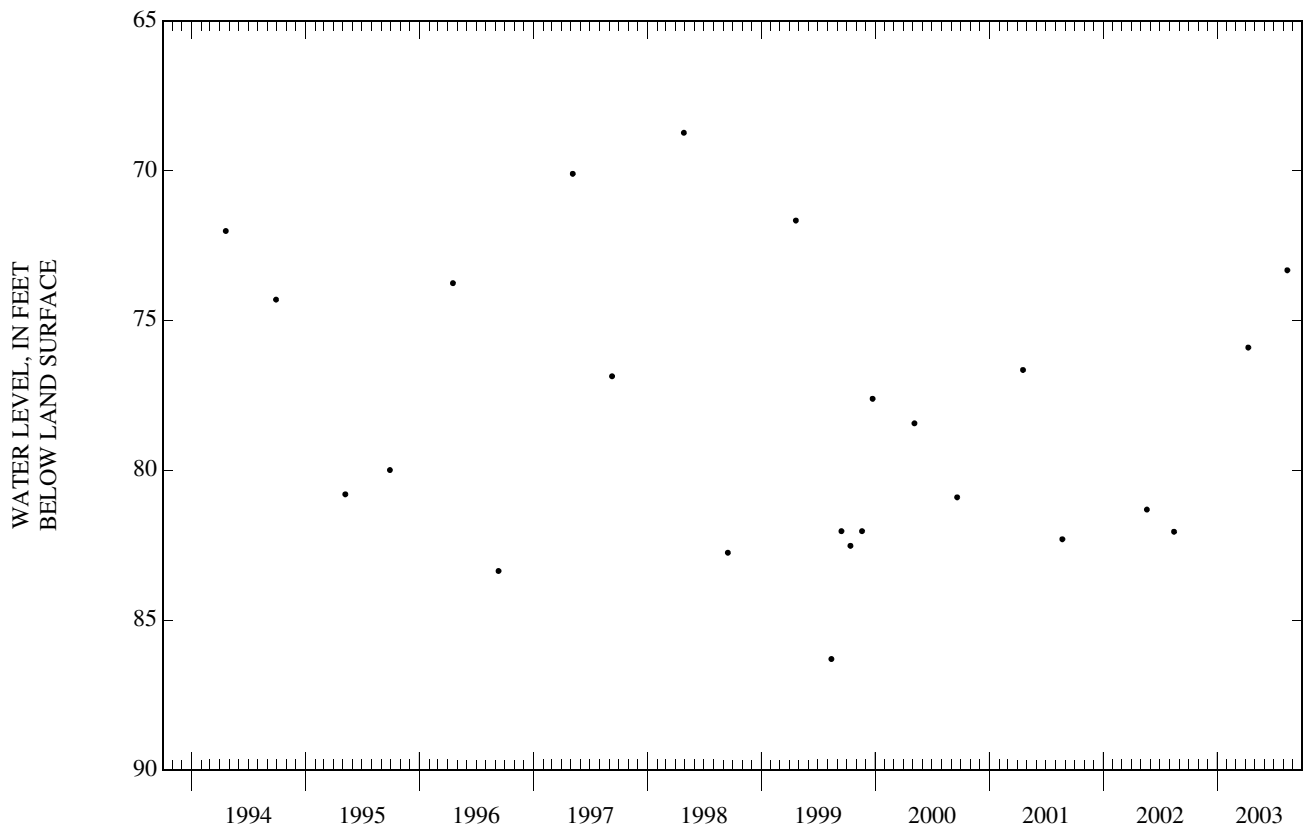
REMARKS.--Water level is affected by nearby pumping.

PERIOD OF RECORD.--Mar. 1967 to current year. Records for 1967 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 65.30 ft below land surface, May 23, 1985; lowest, 94.55 ft below land surface, Aug. 16, 1970.

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

DATE	WATER LEVEL	DATE	WATER LEVEL
APR 10	75.90	AUG 13	73.32





GROUND-WATER LEVELS

MORRIS COUNTY--Continued

NJ-WRD Well Number, 27-0003. Site I.D., 404748074241901. Local I.D., W B Driver 2 Obs. NJ Permit Number, 25-13653.

LOCATION.--Lat 40°47'48", long 74°24'18", Hydrologic Unit 02030103, near the Precision Rolled Products Plant, about 2,500 ft north of Columbia Rd., East Hanover Township. Owner: U.S. Geological Survey.

AQUIFER.--Stratified drift of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 108 ft, screened 99 to 108 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape. Water-level recorder, Mar. 1966 to Apr. 1975.

DATUM.--Land surface is 178.26 ft above NGVD of 1929. Measuring point: Top of base of aluminum locking cap, 4.21 ft above land surface.

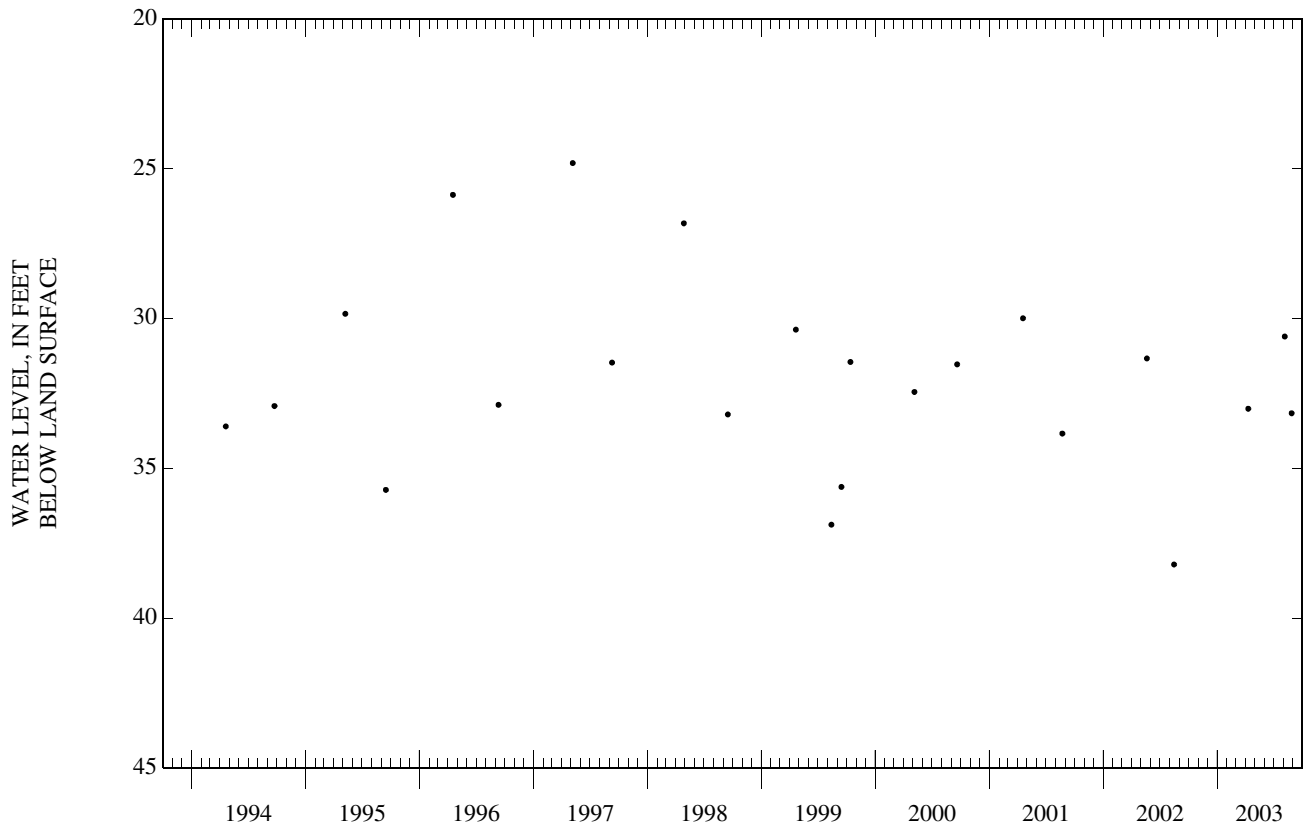
REMARKS.--Water level is affected by nearby pumping.

PERIOD OF RECORD.--Mar. 1966 to current year. Records for 1966 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.56 ft below land surface, Apr. 10, 1967; lowest, 38.21 ft below land surface, Aug. 15, 2002.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
APR 10	3.01	AUG 05	30.60	AUG 27	33.16
WATER YEAR 2003 HIGHEST		30.60		AUG 05, 2003	
LOWEST		33.16		AUG 27, 2003	



GROUND-WATER LEVELS

MORRIS COUNTY--Continued

NJ-WRD Well Number, 27-0004. Site I.D., 404816074235901. Local I.D., Clemens Obs.

LOCATION.--Lat 40°48'16", long 74°23'58", Hydrologic Unit 02030103, about 3,200 ft southwest of the intersection of Rt. 10 and Ridgedale Ave., East Hanover Township. Owner: U.S. Geological Survey.

AQUIFER.--Stratified drift of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 110 ft, screened 100 to 110 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape. Periodic measurements, Feb. 1975 to Sept. 1984. Water-level recorder, May 1966 to Feb. 1975.

DATUM.--Land surface is 174.91 ft above NGVD of 1929. Measuring point: Top of bushing, 4.60 ft above land surface.

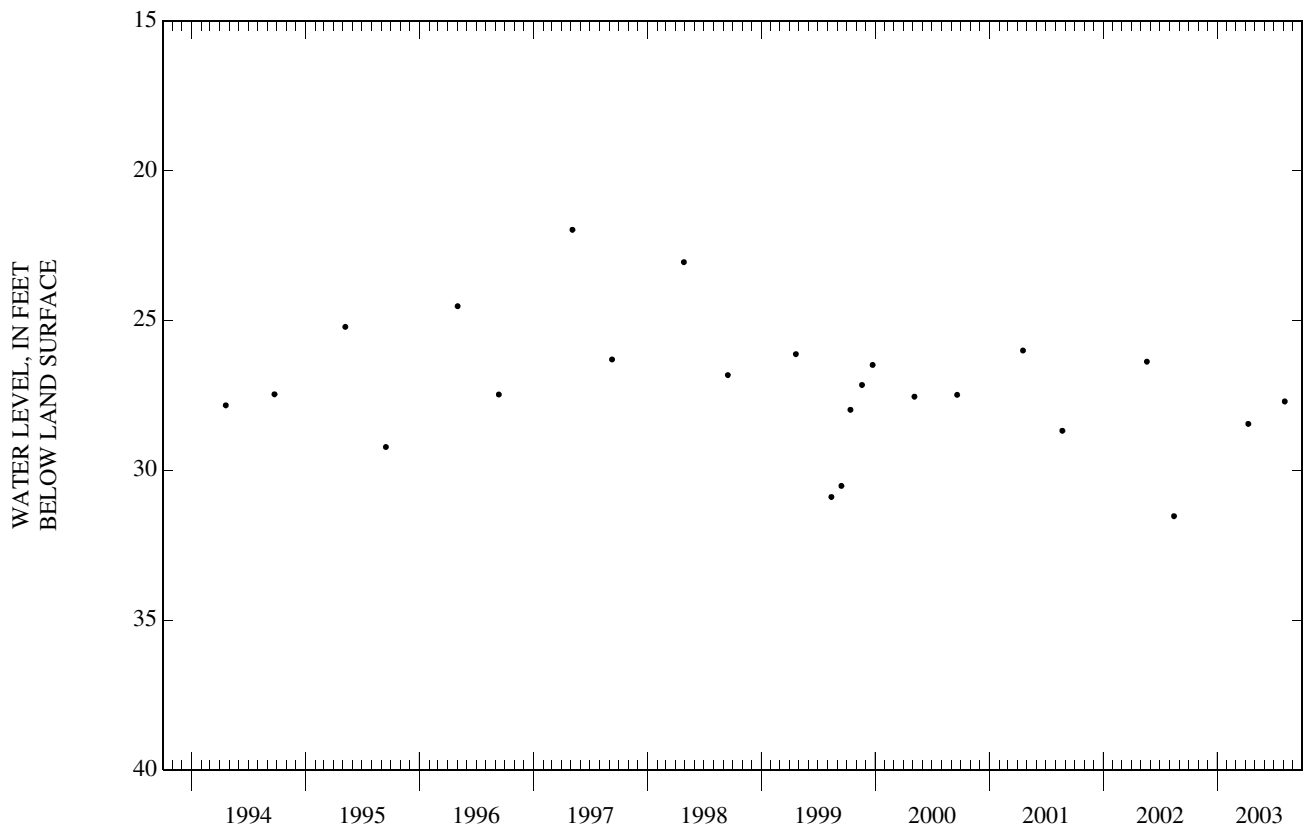
REMARKS.--Water level is affected by nearby pumping.

PERIOD OF RECORD.--May 1966 to Sept. 1984, Apr. 1987 to current year. Records for 1966 to 1984 and 1987 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.33 ft below land surface, May 7, 1967; lowest, 31.53 ft below land surface, Aug. 15, 2002.

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

DATE	WATER LEVEL	DATE	WATER LEVEL
APR 10	28.45	AUG 05	27.70





GROUND-WATER LEVELS

MORRIS COUNTY--Continued

NJ-WRD Well Number, 27-0006. Site I.D., 404937074220001. Local I.D., Green Acres Obs.

LOCATION.--Lat 40°49'37", long 74°21'59", Hydrologic Unit 02030103, about 65 ft northwest of the end of the paved portion of Weaver Place, East Hanover Township. Owner: U.S. Geological Survey.

AQUIFER.--Stratified drift of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 104 ft, screened 94 to 104 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape. Water-level extremes recorder, Apr. 1977 to July 1984. Periodic measurements, Apr. 1975 to Apr. 1977. Water-level recorder, Mar. 1967 to Apr. 1975.

DATUM.--Land surface is 181 ft above NGVD of 1929, by altimeter. Measuring point: Top of base of aluminum locking cap, 3.86 ft above land surface.

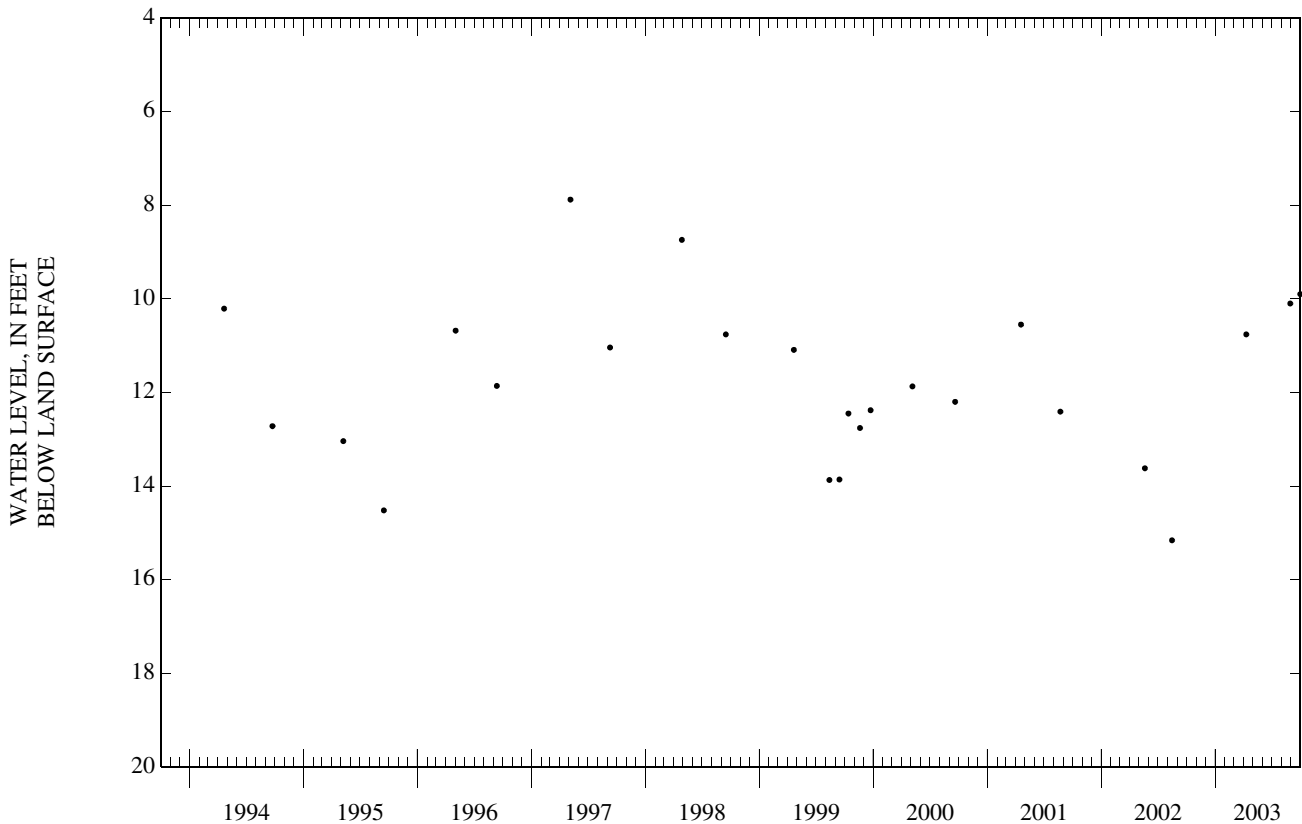
REMARKS.--Water level is affected by nearby pumping.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.15 ft below land surface, Apr. 10, 1973; lowest, 15.21 ft below land surface, between Apr. 3 and July 9, 1984.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
APR 10	10.76	AUG 29	10.10	SEP 30	9.90
WATER YEAR 2003 HIGHEST 10.76 APR 10, 2003		HIGHEST 9.90 SEP 30, 2003		LOWEST	



GROUND-WATER LEVELS

MORRIS COUNTY--Continued

NJ-WRD Well Number, 27-0012. Site I.D., 404639074230001. Local I.D., Briarwood School Obs. NJ Permit Number, 25-14149.

LOCATION.--Lat 40°46'39", long 74°22'59", Hydrologic Unit 02030103, at Briarwood School, Florham Park Borough. Owner: U.S. Geological Survey.

AQUIFER.--Stratified drift of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 110 ft, screened 100 to 110 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval. Periodic measurements, Aug. 1975 to Mar. 1977. Water-level recorder, Mar. 1967 to Aug. 1975.

DATUM.--Land surface is 198 ft above NGVD of 1929, by altimeter. Measuring point: Top of recorder shelf, 3.00 ft above land surface.

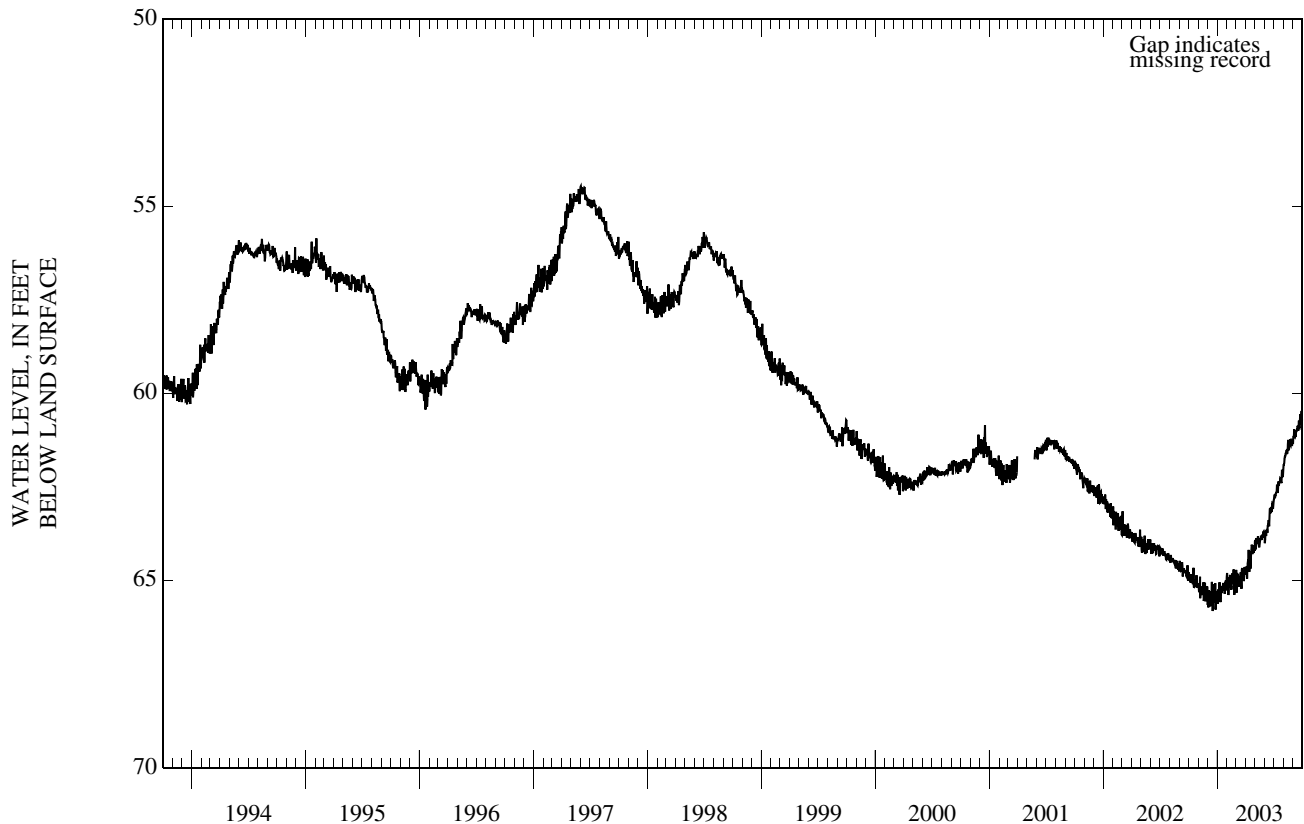
REMARKS.--Water level is affected by nearby pumping.

PERIOD OF RECORD.--Mar. 1967 to current year. Records for 1967 to 1976 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 34.17 ft below land surface, June 3, 1968; lowest, 65.91 ft below land surface, Dec. 26, 2002.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	64.87	65.23	65.25	65.49	65.39	64.79	64.62	63.96	63.66	62.72	61.69	61.16
10	64.97	65.16	65.36	65.54	64.85	65.16	64.46	63.90	63.72	62.62	61.52	61.02
15	64.96	65.33	65.60	65.30	65.24	64.90	64.23	64.11	63.43	62.42	61.35	60.86
20	65.07	65.37	65.10	65.20	65.05	64.72	64.18	63.83	63.20	62.36	61.38	60.91
25	65.06	65.45	65.07	65.14	65.31	64.80	64.19	63.85	63.05	62.40	61.23	60.66
EOM	65.17	65.20	65.31	64.90	65.05	64.84	64.20	63.75	62.87	62.06	61.35	60.72
MEAN	65.01	65.30	65.47	65.25	65.06	64.93	64.41	63.91	63.38	62.46	---	60.90
MAX	65.18	65.55	65.81	65.62	65.39	65.32	64.95	64.17	64.00	62.83	---	61.17
MIN	64.66	64.90	65.03	64.90	64.70	64.64	64.04	63.69	62.87	62.04	---	60.46



GROUND-WATER LEVELS

MORRIS COUNTY--Continued

NJ-WRD Well Number, 27-0017. Site I.D., 404510074240201. Local I.D., MBWD 4 Obs.

LOCATION.--Lat 40°45'08", long 74°24'01", Hydrologic Unit 02030103, at the Madison Borough Public Works facility, John Ave. and Dean St, Madison Borough. Owner: Madison Borough Water Department.

AQUIFER.--Stratified drift of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation well, depth 100 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape. Water-level recorder, Apr. 1955 to June 1970.

DATUM.--Land surface is 194.90 ft above NGVD of 1929. Measuring point: Top of well shelter shelf, 1.97 ft above land surface.

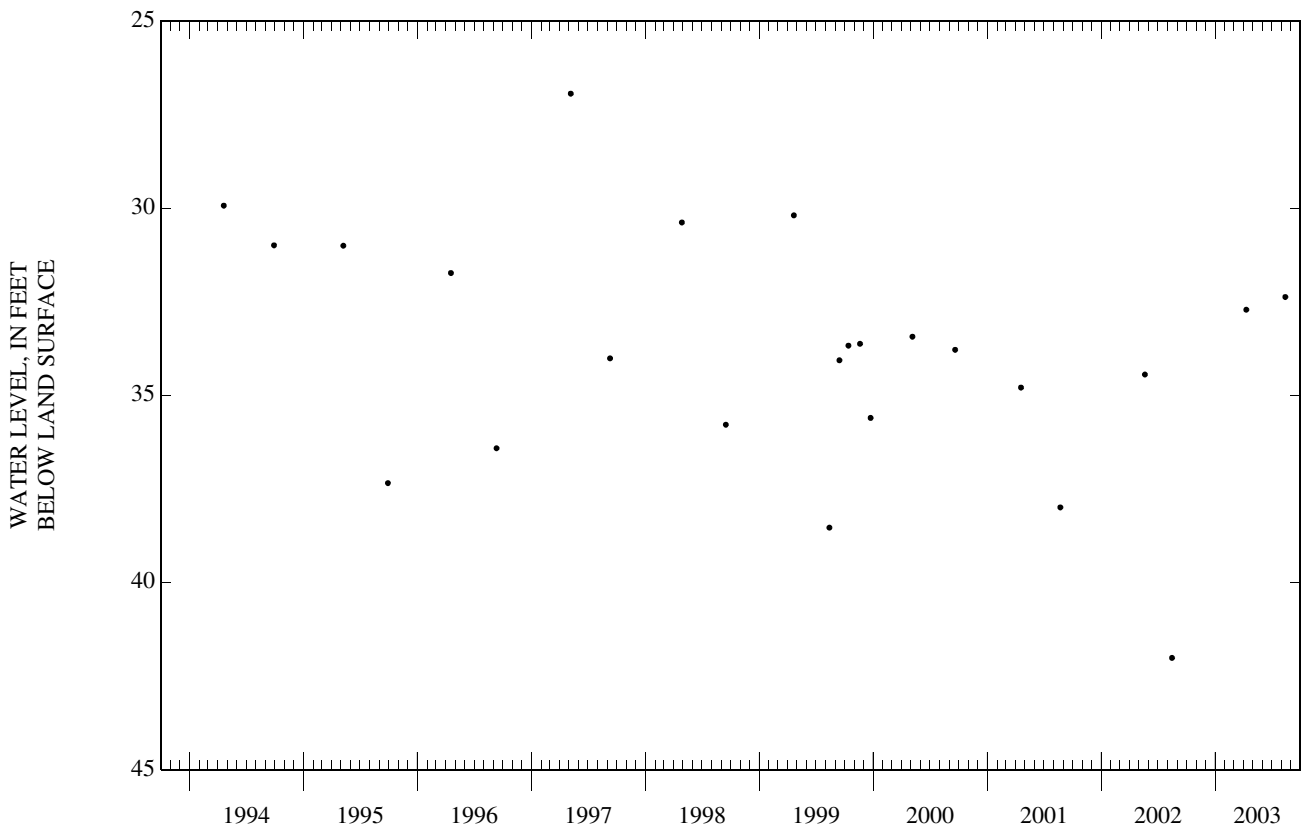
REMARKS.--Water level is affected by nearby pumping.

PERIOD OF RECORD.--Apr. 1955 to current year. Records for 1955 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 8.50 ft below land surface, Apr. 30, 1955; lowest, 42.01 ft below land surface, Aug. 15, 2002.

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

DATE	WATER LEVEL	DATE	WATER LEVEL
APR 10	32.71	AUG 13	32.37



GROUND-WATER LEVELS

MORRIS COUNTY--Continued

NJ-WRD Well Number, 27-0020. Site I.D., 405027074232301. Local I.D., Troy Meadows 1 Obs.

LOCATION.--Lat 40°50'27", long 74°23'22", Hydrologic Unit 02030103, on the east side of Beverwyck Rd., 0.8 mi north of intersection with Troy Rd., Parsippany-Troy Hills Township. Owner: U.S. Geological Survey.

AQUIFER.--Stratified drift of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 89 ft, screened 79 to 89 ft.

INSTRUMENTATION.--Water-level extremes recorder. Periodic measurements, July 1970 to Apr. 1977. Water-level recorder, Dec. 1965 to July 1970.

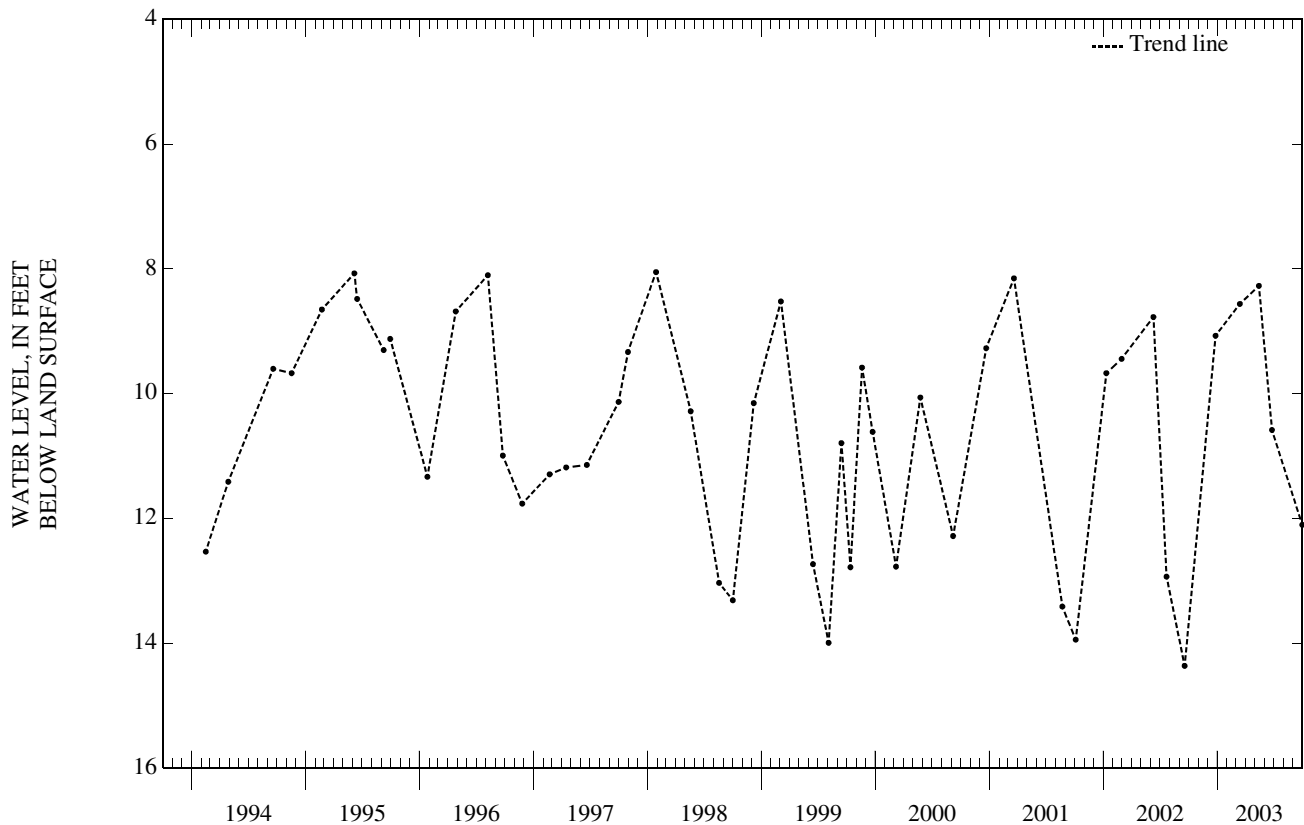
DATUM.--Land surface is 192.07 ft above NGVD of 1929. Measuring point: Front edge of cutout in recorder housing, 3.32 ft above land surface.

PERIOD OF RECORD.--Dec. 1965 to current year. Records for 1965 to 1981 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.00 ft below land surface, Mar. 15-16, 1967, June 15, 1968; lowest, 15.77 ft below land surface, between Feb. 10 and May 31, 1978.

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

PERIOD	WATER-LEVEL EXTREMES		MEASURED WATER LEVELS	
	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 18, 2002 TO DEC. 26, 2002	8.95	14.49	DEC. 26, 2002	9.07
DEC. 26, 2002 TO MAR. 14, 2003	8.53	9.07	MAR. 14, 2003	8.56
MAR. 14, 2003 TO MAY 14, 2003	8.01	8.56	MAY 14, 2003	8.27
MAY 14, 2003 TO JUNE 25, 2003	8.23	10.81	JUNE 25, 2003	10.58
JUNE 25, 2003 TO SEPT. 30, 2003	10.21	12.24	SEPT. 30, 2003	12.10



GROUND-WATER LEVELS

MORRIS COUNTY--Continued

NJ-WRD Well Number, 27-0023. Site I.D., 404921074335601. Local I.D., Mt Freedom 2 Obs.

LOCATION.--Lat 40°49'21", long 74°33'55", Hydrologic Unit 02030103, 440 ft north of the intersection of Phyllis Place and Leonard Lane, Randolph Township. Owner: Randolph Township Water Department.

AQUIFER.--Precambrian Erathem.

WELL CHARACTERISTICS.--Drilled observation well, diameter 8 in., depth 218 ft, open hole 11 to 218 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape. Water-level extremes recorder, Apr. 1977 to July 1984. Periodic measurements, July 1970 to Apr. 1977. Water-level recorder, Jan. 1964 to July 1970.

DATUM.--Land surface is 800 ft above NGVD of 1929, by altimeter. Measuring point: Top of base of aluminum locking cap, 4.61 ft above land surface.

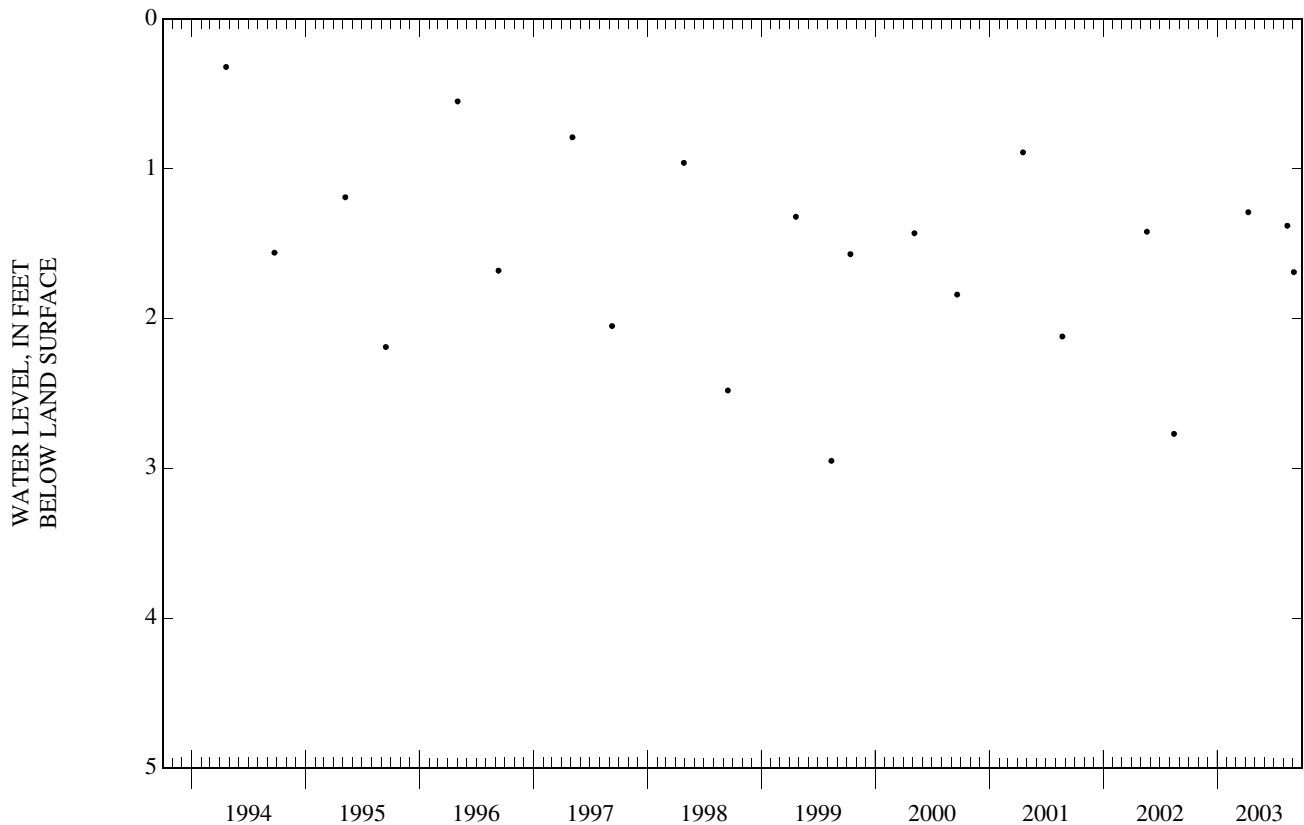
REMARKS.--Water level is occasionally affected by nearby pumping.

PERIOD OF RECORD.--Jan. 1964 to current year. Records for 1964 to 1975 and 1985 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.02 ft above land surface, between Apr. 3 and July 9, 1984; lowest, 15.29 ft below land surface, between Aug. 26 and Oct. 8, 1980.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
APR 10	1.29	AUG 13	1.38	SEP 03	1.69
WATER YEAR 2003 HIGHEST		1.29	APR 10, 2003		
LOWEST		1.69	SEP 03, 2003		





GROUND-WATER LEVELS

MORRIS COUNTY--Continued

NJ-WRD Well Number, 27-0027. Site I.D., 405531074361901. Local I.D., Berkshire Valley 9 Obs. NJ Permit Number, 25-22024.

LOCATION.--Lat 40°55'31", long 74°36'18", Hydrologic Unit 02030103, about 1,000 ft east of the intersection of Lower Berkshire Valley Rd. and Minnisink Rd., Jefferson Township. Owner: State of New Jersey-DEP.

AQUIFER.--Stratified drift of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 98 ft, screened 78 to 98 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval. Periodic measurements, Nov. 1981 to Mar. 1985.

DATUM.--Land surface is 725.64 ft above NGVD of 1929 (levels by Woodward-Clyde Consultants). Measuring point: Top of casing, 2.25 ft above land surface.

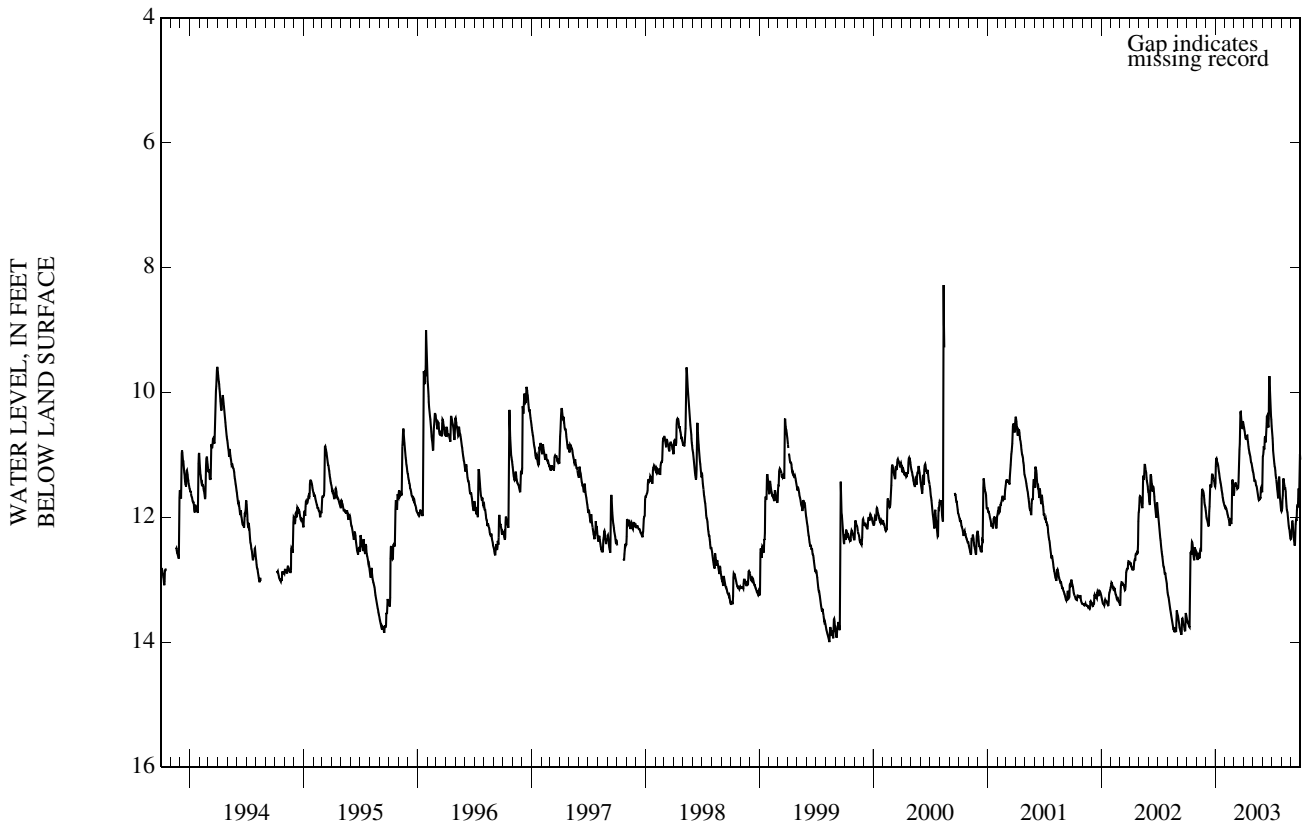
PERIOD OF RECORD.--Nov. 1981 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.89 ft below land surface, Aug. 13, 2000; lowest, 14.01 ft below land surface, Aug. 13, 1999.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.68	12.68	12.03	11.08	11.86	11.51	10.63	11.39	10.86	10.93	11.65	12.07
10	13.76	12.62	12.13	11.18	11.98	11.49	10.72	11.44	10.77	11.19	11.49	12.37
15	12.60	12.51	11.52	11.38	12.11	11.53	10.79	11.57	10.39	11.40	11.66	12.11
20	12.44	11.56	11.45	11.53	12.08	10.83	10.96	11.72	10.56	11.65	11.92	11.82
25	12.69	11.66	11.36	11.71	11.41	10.45	11.11	11.70	10.02	11.41	12.17	11.54
EOM	12.57	11.84	11.51	11.83	11.59	10.47	11.24	11.60	10.54	11.89	12.34	11.08
MEAN	12.95	12.19	11.68	11.42	11.88	11.07	10.86	11.53	10.54	11.34	11.85	11.95
MAX	13.76	12.68	12.14	11.83	12.14	11.65	11.24	11.72	11.35	11.89	12.35	12.45
MIN	12.39	11.56	11.30	11.05	11.40	10.31	10.52	11.26	9.74	10.60	11.38	10.99

WTR YR 2003 MEAN 11.61 HIGH 9.74 JUN 23 LOW 13.76 OCT 10



GROUND-WATER LEVELS

MORRIS COUNTY--Continued

NJ-WRD Well Number, 27-0028. Site I.D., 410207074270001. Local I.D., Green Pond 5 Obs.

LOCATION.--Lat 41°02'07", long 74°26'59", Hydrologic Unit 02030103, about 500 ft east of County Rt. 513 and 1.1 mi south of the intersection with Rt. 23, Rockaway Township. Owner: State of New Jersey-DEP.

AQUIFER.--Stratified drift of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 120 ft, screened 80 to 120 ft.

INSTRUMENTATION.--Data collection platform with satellite telemetry--60 minute recording interval. Water-level recorder, Nov. 1981 to June 2001.

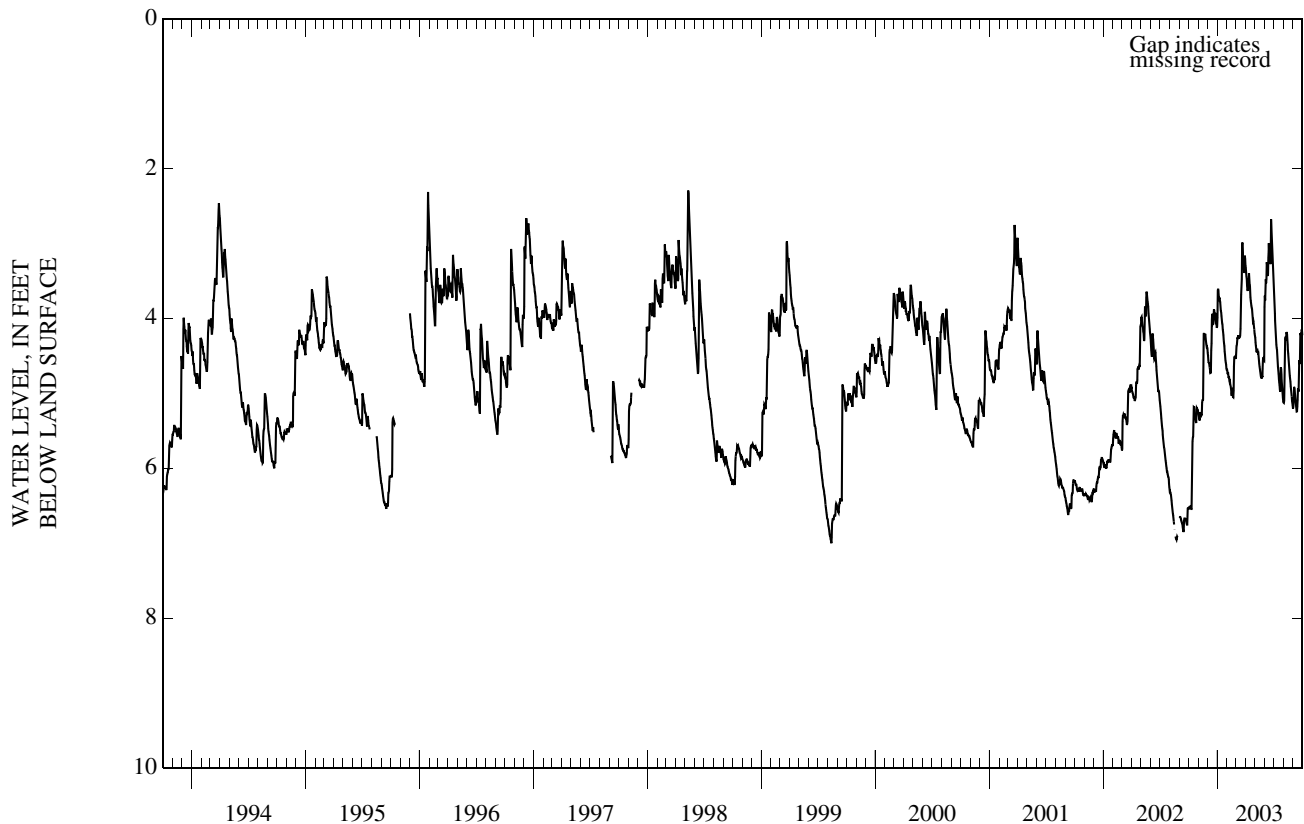
DATUM.--Land surface is 758.56 ft above NGVD of 1929 (levels by Woodward-Clyde Consultants). Measuring point: Top of casing, 0.93 ft above land surface.

PERIOD OF RECORD.--Nov. 1981 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.35 ft below land surface, Apr. 5, 1984; lowest, 7.24 ft below land surface, Sept. 2-4, 1993.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.50	5.36	4.58	3.70	4.76	4.31	3.47	4.40	3.47	4.03	4.52	4.93
10	6.54	5.28	4.73	3.78	4.84	4.25	3.57	4.45	3.38	4.39	4.18	5.16
15	5.57	5.09	3.94	4.01	5.00	4.23	3.57	4.60	2.99	4.69	4.42	5.09
20	5.22	4.23	3.95	4.22	5.05	3.48	3.83	4.77	3.27	4.95	4.72	4.56
25	5.40	4.30	3.92	4.48	4.51	3.24	4.04	4.78	3.06	4.75	4.95	4.21
EOM	5.25	4.39	4.10	4.68	4.52	3.20	4.20	4.57	3.57	5.11	5.20	4.22
MEAN	5.75	4.80	4.25	4.10	4.81	3.82	3.71	4.55	3.30	4.56	4.68	4.78
MAX	6.54	5.36	4.73	4.68	5.05	4.54	4.20	4.80	3.85	5.11	5.20	5.24
MIN	5.18	4.19	3.88	3.60	4.50	2.98	3.29	4.23	2.68	3.67	4.18	4.15
WTR YR 2003	MEAN 4.43	HIGH 2.68	JUN 22	LOW 6.54	OCT 9							



GROUND-WATER LEVELS

MORRIS COUNTY--Continued

NJ-WRD Well Number, 27-1190. Site I.D., 404934074400501. Local I.D., Black River 10 Obs. NJ Permit Number, 25-33678-9.

LOCATION.--Lat 40°49'04", long 74°40'52", Hydrologic Unit 02030105, at the Black River Wildlife Management Area, Pleasant Hill Rd., Chester Township. Owner: State of New Jersey.

AQUIFER.--Precambrian Erathem.

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 200 ft, open hole 87 to 200 ft.

INSTRUMENTATION.--Data collection platform with satellite telemetry--60 minute recording interval. Water-level recorder, May 1992 to July 2002. Periodic measurements, Apr. 1991 to May 1992.

DATUM.--Land surface is 890 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.80 ft above land surface.

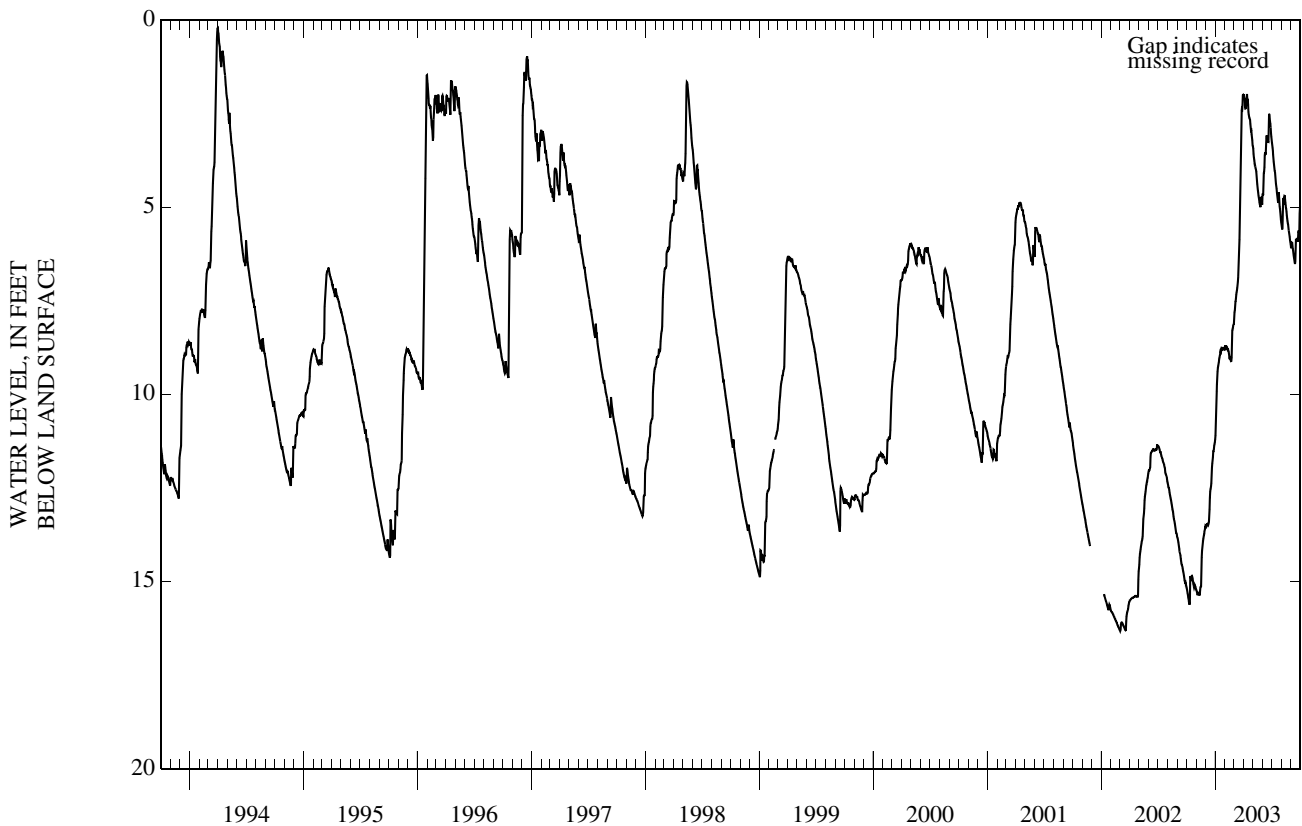
PERIOD OF RECORD.--Apr. 1991 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.46 ft above land surface, Apr. 2, 1993; lowest, 16.34 ft below land surface, Mar. 2-3, 2002.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	15.36	15.36	13.46	9.91	8.74	7.64	2.11	3.73	4.09	3.59	5.26	6.02
10	15.62	15.32	13.43	9.24	8.77	7.27	2.17	3.97	3.58	4.02	4.70	6.35
15	14.95	15.13	12.60	8.96	9.01	6.86	2.20	4.38	3.12	4.44	5.01	6.14
20	14.92	14.09	12.20	8.77	9.11	5.54	2.62	4.74	3.25	4.83	5.37	5.84
25	15.17	13.76	11.52	8.79	8.26	2.59	2.95	5.00	2.72	4.87	5.68	5.64
EOM	15.21	13.52	11.20	8.78	8.13	1.99	3.34	4.93	3.19	5.41	6.06	4.98
MEAN	15.16	14.64	12.54	9.20	8.75	5.57	2.48	4.34	3.40	4.39	5.32	5.92
MAX	15.62	15.37	13.54	11.10	9.11	8.12	3.34	5.00	4.68	5.41	6.06	6.52
MIN	14.85	13.52	11.20	8.74	8.13	1.99	1.97	3.38	2.50	3.28	4.70	4.98

WTR YR 2003 MEAN 7.65 HIGH 1.97 APR 12 LOW 15.62 OCT 10



GROUND-WATER LEVELS

MORRIS COUNTY--Continued

NJ-WRD Well Number, 27-1191. Site I.D., 405123074375701. Local I.D., Roxbury 1 Obs. NJ Permit Number, 25-33680-1.

LOCATION.--Lat 40°51'23", long 74°37'56", Hydrologic Unit 02030105, 600 ft south of Horseshoe Lake, between the Roxbury Municipal Building and the Lamington River, Roxbury Township. Owner: State of New Jersey.

AQUIFER.--Stratified drift of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in., depth 154 ft, screened 134 to 154 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval.

DATUM.--Land surface is 704.2 ft above NGVD of 1929. Measuring point: Top of recorder shelf, 2.20 ft above land surface.

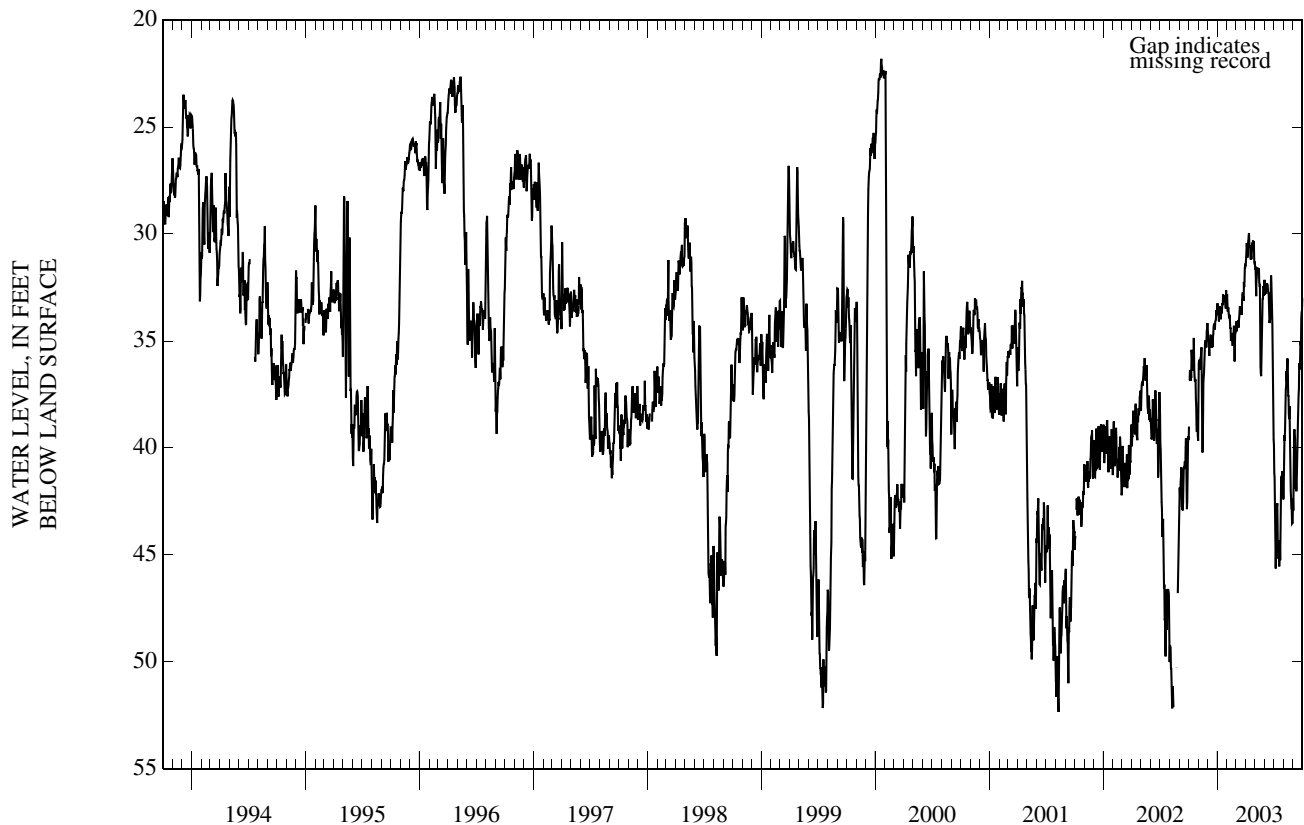
REMARKS.--Water level is affected by nearby pumping and by the stage of the Lamington River.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 16.14 ft below land surface, Apr. 17, 1993; lowest, 52.34 ft below land surface, Aug. 10-11, 2001.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	36.36	36.33	35.29	33.87	33.43	34.26	30.42	32.91	32.78	43.85	39.67	39.13
10	35.41	35.47	34.75	33.64	34.08	34.38	30.32	31.71	32.36	43.80	36.41	41.67
15	35.95	40.11	34.74	33.71	34.65	33.48	30.56	32.26	33.02	44.33	36.25	39.80
20	36.68	36.13	34.32	33.00	34.93	33.66	31.18	36.52	33.14	44.58	38.05	36.05
25	38.00	35.13	34.11	33.21	35.96	32.93	30.31	33.37	33.73	41.37	42.43	35.12
EOM	39.67	34.16	33.50	33.38	34.57	31.48	31.38	32.59	39.61	42.40	42.36	33.01
MEAN	---	36.19	34.61	33.37	34.39	33.44	30.74	32.91	33.53	43.21	39.54	38.24
MAX	---	40.22	35.71	34.09	35.96	34.55	31.50	36.65	39.61	45.64	43.53	42.93
MIN	---	34.16	33.50	32.63	32.81	31.48	29.95	31.37	31.94	39.87	35.82	33.01



GROUND-WATER LEVELS

MORRIS COUNTY--Continued

NJ-WRD Well Number, 27-1192. Site I.D., 405414074354201. Local I.D., Morris Maint Yd 22 Obs. NJ Permit Number, 25-34668-7.

LOCATION.--Lat 40°54'13", long 74°35'32", Hydrologic Unit 02030103, about 600 ft north of the Rockaway River, at the Morris County Maintenance Yard, Dewey Ave., Wharton Borough. Owner: State of New Jersey.

AQUIFER.--Stratified drift of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in., depth 100 ft, screened 80 to 100 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval. Periodic measurements, Apr. 1991 to May 1992.

DATUM.--Land surface is 669.1 ft above NGVD of 1929. Measuring point: Top of recorder shelf, 2.10 ft above land surface.

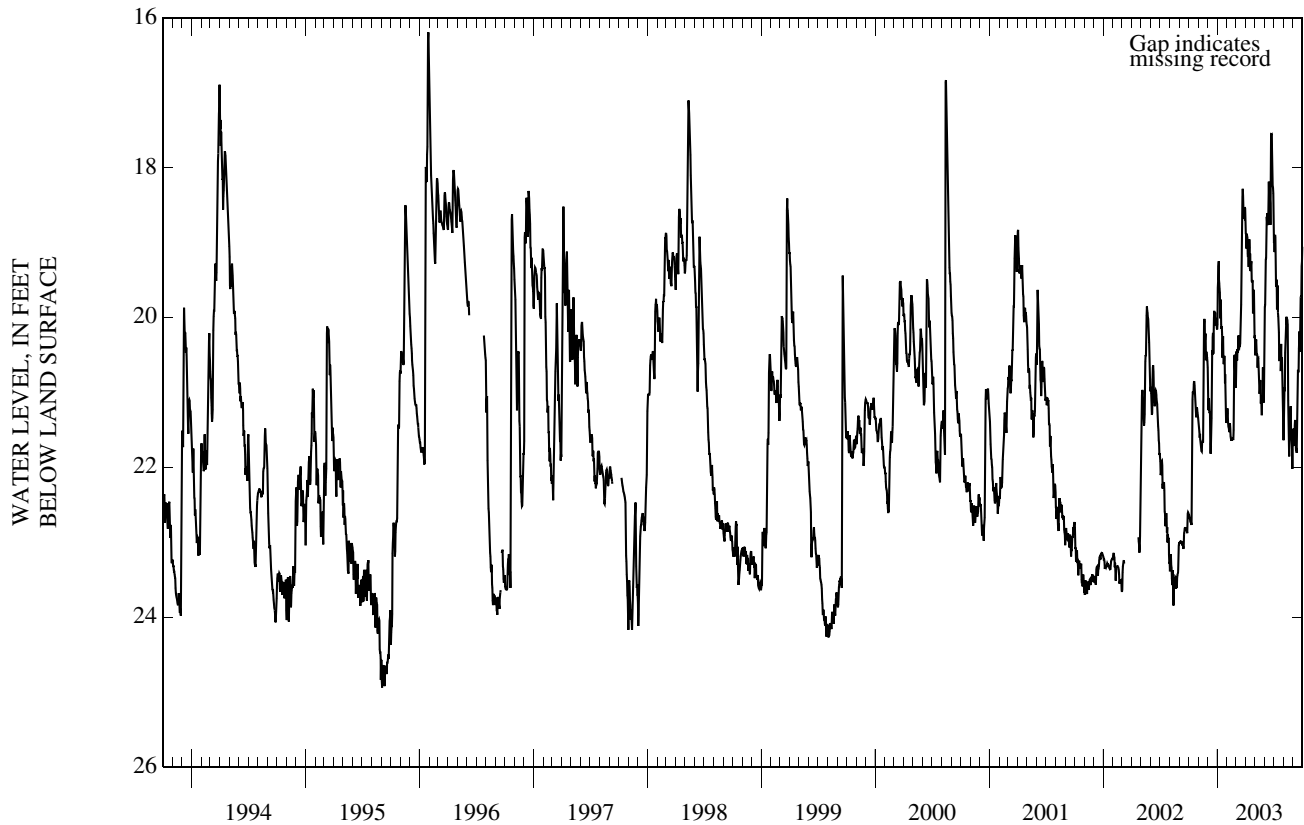
REMARKS.--Water level is affected by nearby pumping and by the stage of the Rockaway River.

PERIOD OF RECORD.--Apr. 1991 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 16.13 ft below land surface, Jan. 28-29, 1996; lowest, 25.09 ft below land surface, Sept. 11, 1995.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	22.69	21.60	21.08	19.25	21.45	20.57	18.88	20.29	19.22	18.89	20.98	21.71
10	22.77	21.74	21.82	20.01	21.41	20.24	19.17	20.67	18.60	19.49	19.99	21.78
15	21.02	21.65	20.44	20.12	21.63	20.34	19.35	20.89	18.19	19.99	20.58	20.97
20	20.91	20.02	20.23	20.53	21.62	19.41	19.25	21.15	18.76	---	21.42	20.29
25	21.33	20.57	19.93	20.88	20.51	18.54	19.94	20.98	17.76	20.65	21.54	19.73
EOM	21.34	20.58	20.16	21.39	20.89	18.54	20.28	20.82	18.80	21.50	21.63	19.06
MEAN	21.67	21.05	20.66	20.27	21.34	19.67	19.30	20.76	18.61	---	21.04	20.79
MAX	22.77	21.79	21.82	21.41	21.64	20.94	20.28	21.30	20.19	---	22.02	21.81
MIN	20.85	20.02	19.91	19.25	20.51	18.28	18.70	20.24	17.55	---	19.99	19.06



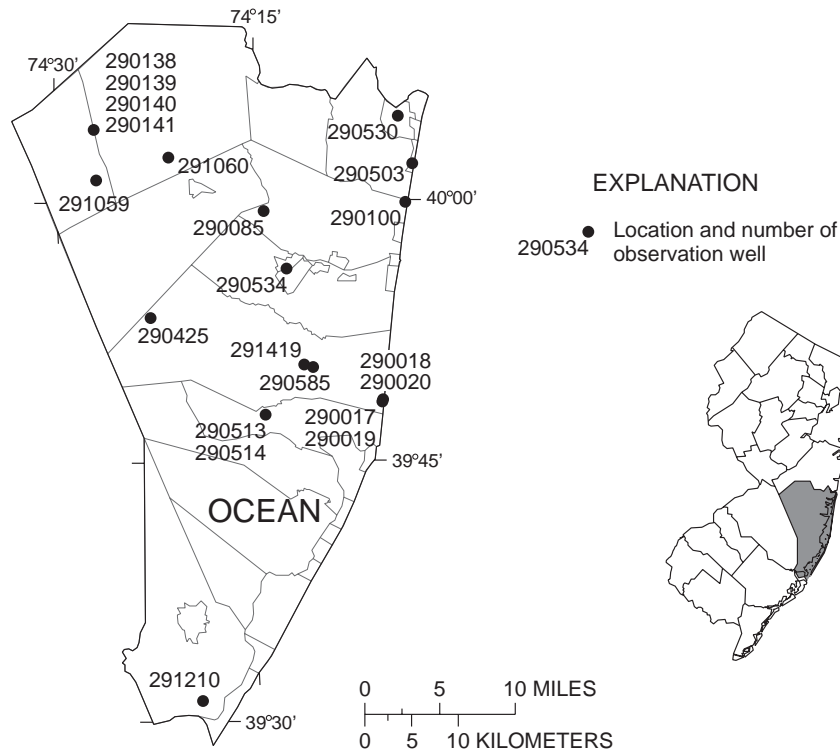
WATER RESOURCES DATA - NEW JERSEY, 2003

OCEAN COUNTY

NJ-WRD well number	Local identifier	Township	Well depth	Aquifer	Type of data
290017	ISLAND BEACH 1 OBS	LACEY TWP	397	CKKD	MAXMIN
290018	ISLAND BEACH 2 OBS	LACEY TWP	474	PNPN	MANUAL
290019	ISLAND BEACH 3 OBS	LACEY TWP	2756	MRPA	MAXMIN
290020	ISLAND BEACH 4 OBS	LACEY TWP	12	CKKD	MANUAL
290085	TOMS RIVER 84 OBS	DOVER TWP	1480	MRPA	DAILY
290100	NORMANDY 3 OBS	DOVER TWP	1479	MRPAU	DAILY
290138	COLLIERS MILLS 1 OBS	JACKSON TWP	427	EGLS	DAILY
290139	COLLIERS MILLS 2 OBS	JACKSON TWP	171	VNCN	MAXMIN
290140	COLLIERS MILLS 3 OBS	JACKSON TWP	267	MLRW	DAILY
290141	COLLIERS MILLS 4 OBS	JACKSON TWP	71	CKKD	MAXMIN
290425	WEBBS MILLS 2 OBS	LACEY TWP	348	PNPN	MANUAL
290503	MANTOLOKING 6 OBS	MANTOLOKING BORO	906	EGLS	DAILY
290513	GARDEN ST PKY 1 OBS	OCEAN TWP	21	CKKD	MANUAL
290514	GARDEN ST PKY 2 OBS	OCEAN TWP	316	CKKD	DAILY
290530	PPWD 6 OBS	PT PLEASANT BORO	790	EGLS	MANUAL
290534	TOMS RIVER 2 OBS	SOUTH TOMS RIVER BORO	1146	EGLS	DAILY
290585	DOE-FORKED RIVER OBS	LACEY TWP	422	PNPN	DAILY
291059	FORT DIX RLF-30 OBS	PLUMSTED TWP	75	CKKD	DAILY
291060	LNAS-EC OBS	JACKSON TWP	38	CKKD	DAILY
291210	GREAT BAY BLVD 1 OBS	LITTLE EGG HARBOR TWP	880	PNPN	DAILY
291419	NJDEP MW 61	LACEY TWP	20	CKKD	DAILY

Aquifer names

- CKKD - Kirkwood-Cohansey aquifer system
- EGLS - Englishtown aquifer system
- MLRW - Wenonah-Mount Laurel aquifer
- MRPA - Potomac-Raritan-Magothy aquifer
- MRPAU - Upper Potomac-Raritan-Magothy aquifer
- PNPN - Piney Point aquifer
- VNCN - Vincentown aquifer



GROUND-WATER LEVELS

OCEAN COUNTY

NJ-WRD Well Number, 29-0017. Site I.D., 394829074053501. Local I.D., Island Beach 1 Obs.

LOCATION.--Lat 39°48'29", long 74°05'33", Hydrologic Unit 02040301, in Island Beach State Park, about 6.6 mi south of the main entrance, Lacey Township. Owner: U.S. Geological Survey.

AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 6 in., depth 397 ft, screened 377 to 397 ft.

INSTRUMENTATION.--Water-level extremes recorder. Periodic measurements, Aug. 1975 to Feb. 1977. Water-level recorder, July 1962 to Aug. 1975.

DATUM.--Land surface is 8.50 ft above NGVD of 1929. Measuring point: Front edge of cutout in recorder housing, 3.40 ft above land surface.

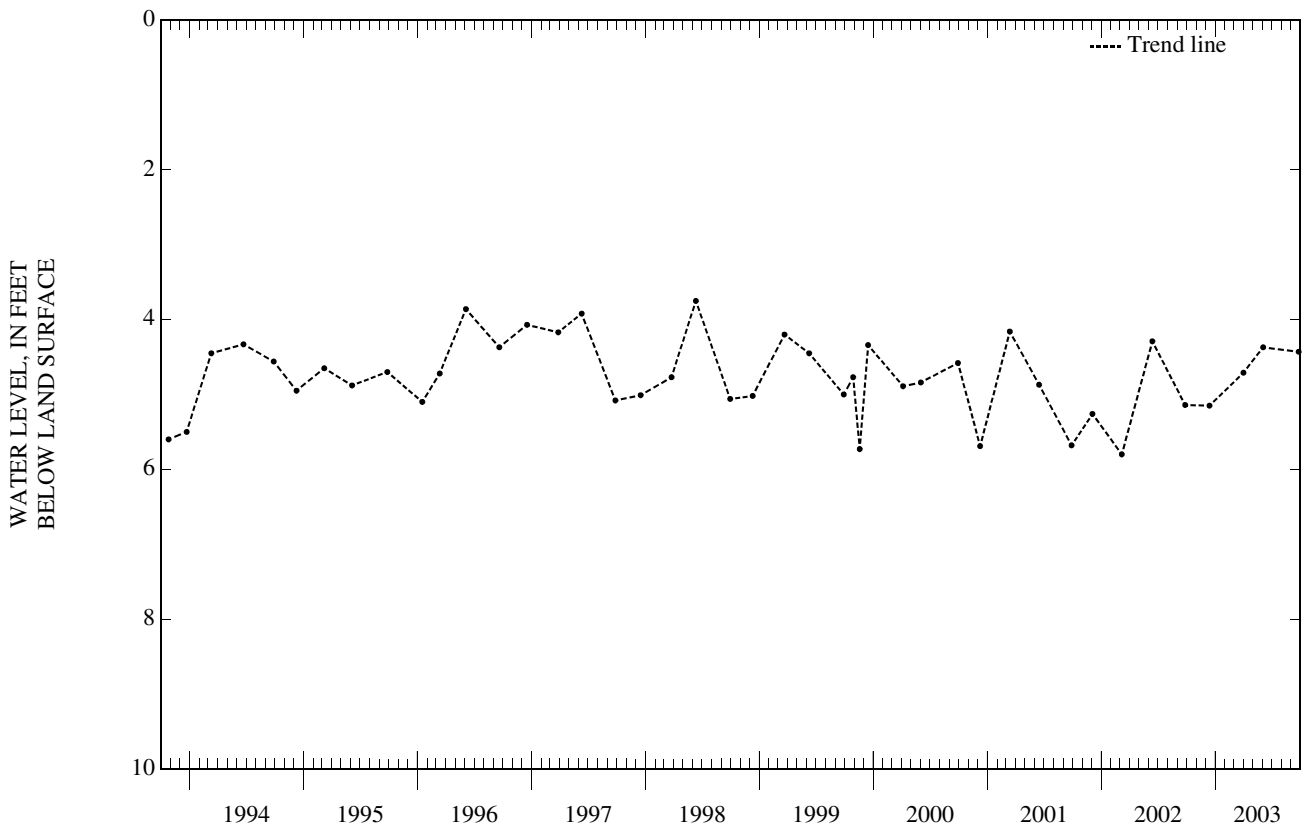
REMARKS.--Water level is affected by tidal fluctuation.

PERIOD OF RECORD.--July 1962 to current year. Records for 1962 to 1976 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.05 ft below land surface, Dec. 6, 1962; lowest, 6.57 ft below land surface, between Dec. 3, 2001 and Mar. 7, 2002.

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

PERIOD	WATER-LEVEL EXTREMES		MEASURED WATER LEVELS		
	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL	
SEPT. 26, 2002 TO DEC. 13, 2002	3.97	6.48	DEC. 13, 2002	5.15	
DEC. 13, 2002 TO APR. 1, 2003	3.30	6.04	APR. 1, 2003	4.71	
APR. 1, 2003 TO JUNE 3, 2003	3.40	5.14	JUNE 3, 2003	4.37	
JUNE 3, 2003 TO SEPT. 25, 2003	3.37	5.15	SEPT. 25, 2003	4.43	



GROUND-WATER LEVELS

OCEAN COUNTY--Continued

NJ-WRD Well Number, 29-0018. Site I.D., 394829074053502. Local I.D., Island Beach 2 Obs.

LOCATION.--Lat 39°48'29", long 74°05'33", Hydrologic Unit 02040301, in Island Beach State Park, about 6.6 mi. south of the main entrance, Lacey Township. Owner: U.S. Geological Survey.

AQUIFER.--Piney Point aquifer of Eocene age.

WELL CHARACTERISTICS.--Drilled artesian observation well, depth 474 ft, screened 468 to 474 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape.

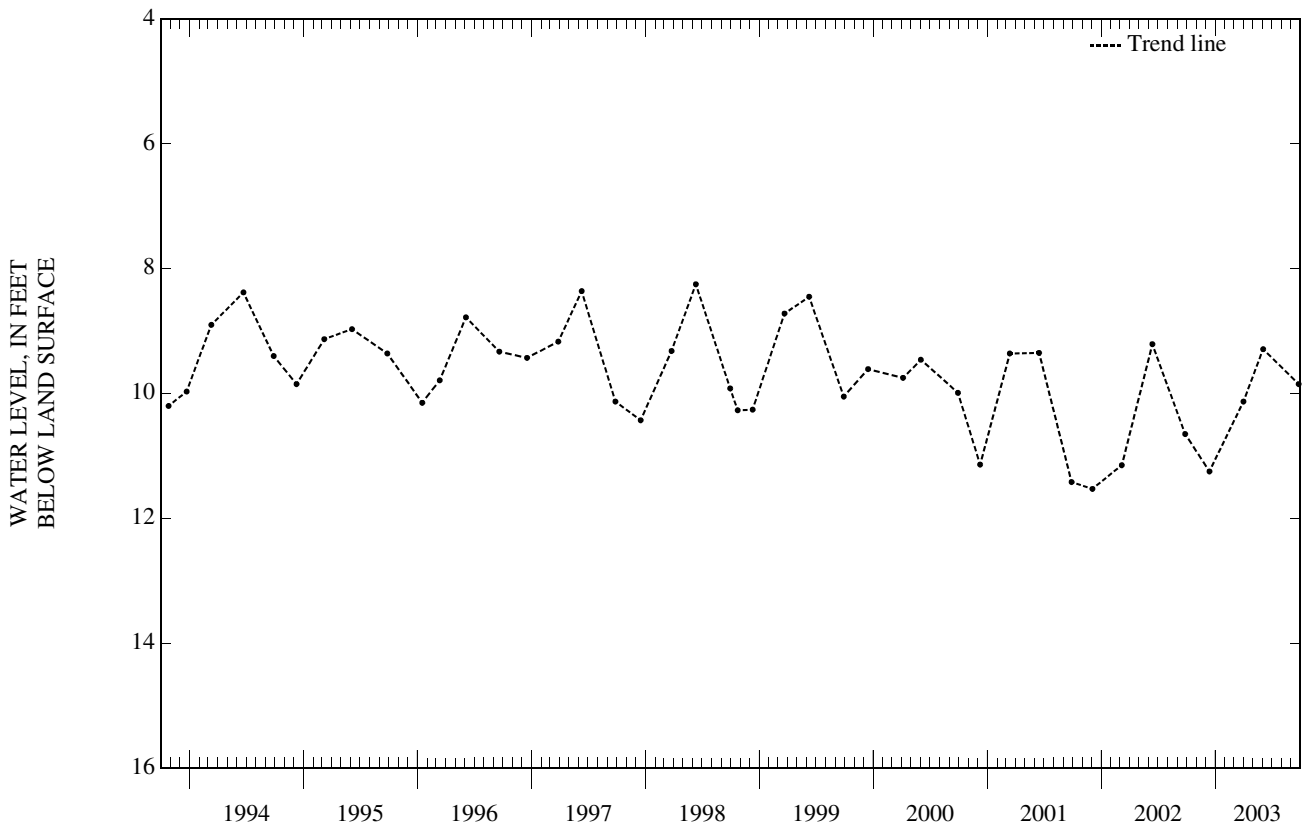
DATUM.--Land surface is 8.50 ft above NGVD of 1929. Measuring point: Top of coupling, 0.13 ft above land surface.

PERIOD OF RECORD.--July 1962 to current year. Records for 1962 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.93 ft below land surface, June 7, 1963; lowest, 11.53 ft below land surface, Dec. 3, 2001.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 13	11.25	APR 01	10.13	JUN 03	9.29	SEP 25	9.85
WATER YEAR 2003 HIGHEST		9.29	JUN 03, 2003 LOWEST		11.25	DEC 13, 2002	





GROUND-WATER LEVELS

OCEAN COUNTY--Continued

NJ-WRD Well Number, 29-0019. Site I.D., 394829074053503. Local I.D., Island Beach 3 Obs.

LOCATION.--Lat 39°48'29", long 74°05'33", Hydrologic Unit 02040301, in Island Beach State Park, about 6.6 mi south of the main entrance, Lacey Township. Owner: U.S. Geological Survey.

AQUIFER.--Potomac-Raritan-Magothy aquifer system, undifferentiated, of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in., depth 2,756 ft, screened 2,736 to 2,756 ft.

INSTRUMENTATION.--Water-level extremes recorder. Water-level recorder, Nov. 1968 to Feb. 1977.

DATUM.--Land surface is 9.02 ft above NGVD of 1929. Measuring point: Front edge of cutout in recorder housing, 5.11 ft above land surface.

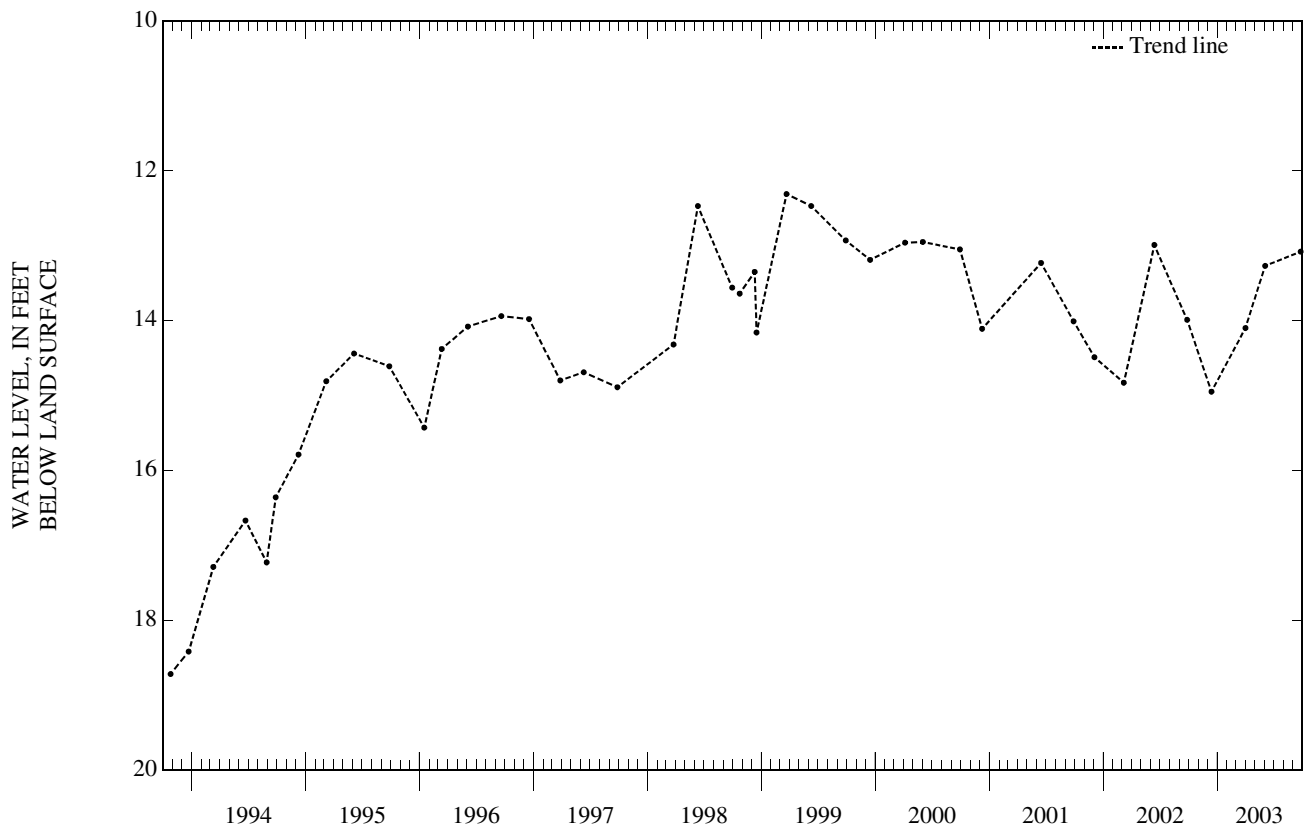
REMARKS.--Water level is affected by tidal fluctuation.

PERIOD OF RECORD.--Nov. 1968 to current year. Records for 1968 to 1976 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 5.95 ft above land surface, Apr. 23, 1969; lowest, 23.00 ft below land surface, between Dec. 12, 1989 and Mar. 22, 1990.

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

PERIOD	WATER-LEVEL EXTREMES		MEASURED WATER LEVELS		
	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL	
SEPT. 26, 2002 TO DEC. 13, 2002	13.12	16.16	DEC. 13, 2002	14.95	
DEC. 13, 2002 TO APR. 1, 2003	12.94	15.83	APR. 1, 2003	14.10	
APR. 1, 2003 TO JUNE 3, 2003	12.18	14.57	JUNE 3, 2003	13.27	
JUNE 3, 2003 TO SEPT. 25, 2003	11.96	14.06	SEPT. 25, 2003	13.08	



GROUND-WATER LEVELS

OCEAN COUNTY--Continued

NJ-WRD Well Number, 29-0020. Site I.D., 394829074053504. Local I.D., Island Beach 4 Obs.

LOCATION.--Lat 39°48'29", long 74°05'33", Hydrologic Unit 02040301, in Island Beach State Park, about 6.6 mi. south of the main entrance, Lacey Township. Owner: U.S. Geological Survey.

AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.

WELL CHARACTERISTICS.--Drilled water-table observation well, depth 12 ft, screened 9 to 12 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape. Water-level recorder, May 1962 to Dec. 1972.

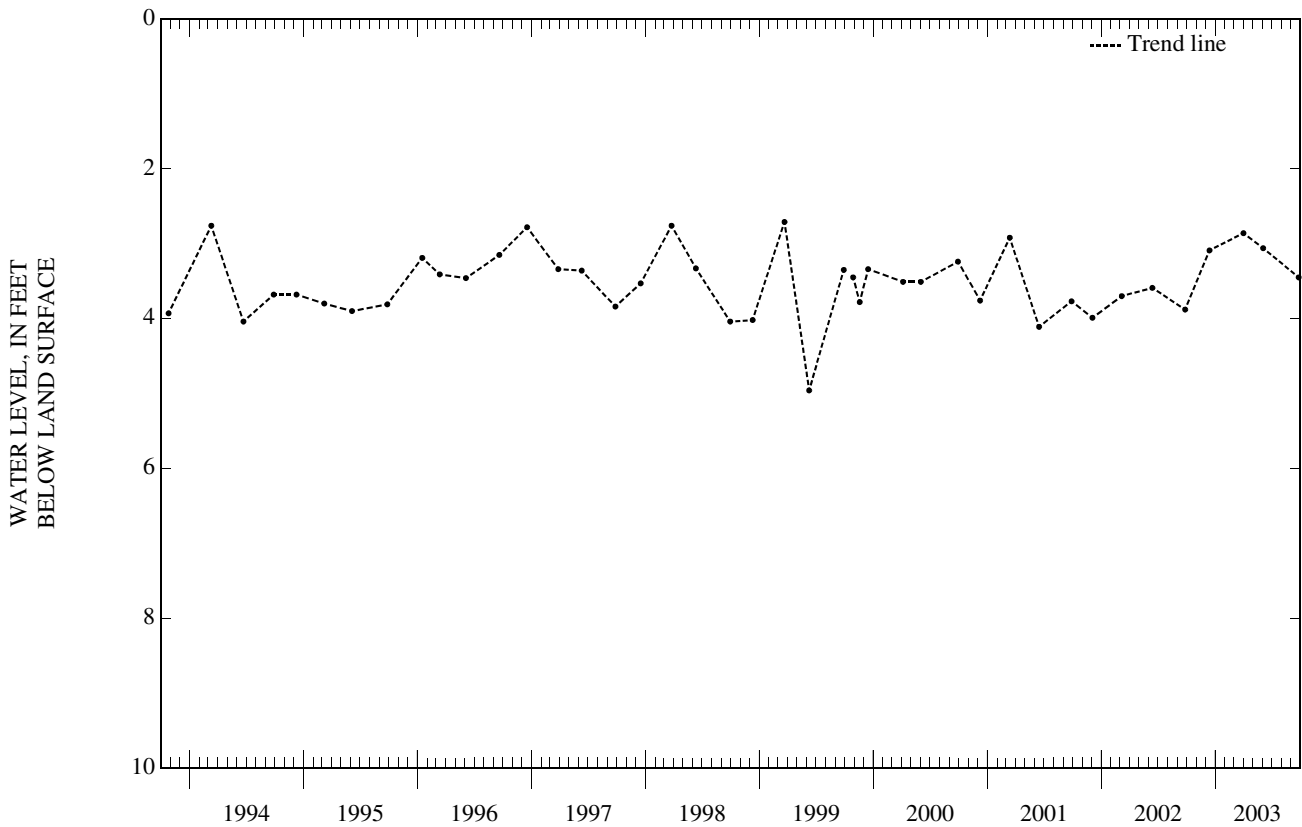
DATUM.--Land surface is 8.19 ft above NGVD of 1929. Measuring point: Top of base of aluminum locking cap, 2.62 ft above land surface.

PERIOD OF RECORD.--May 1962 to current year. Records for 1962 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.42 ft below land surface, June 24, 1964; lowest, 4.96 ft below land surface, June 9, 1999.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 13	3.09	APR 01	2.86	JUN 03	3.06	SEP 25	3.45
WATER YEAR 2003 HIGHEST		2.86	APR 01, 2003 LOWEST		3.45	SEP 25, 2003	



GROUND-WATER LEVELS

OCEAN COUNTY--Continued

NJ-WRD Well Number, 29-0085. Site I.D., 395930074142101. Local I.D., Toms River 84 Obs.

LOCATION.--Lat 39°59'29", long 74°14'19", Hydrologic Unit 02040301, at Toms River Plant, Ciba-Geigy Corporation, Dover Township. Owner: Ciba-Geigy Corporation.

AQUIFER.--Potomac-Raritan-Magothy aquifer system, undifferentiated, of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 8 in., depth 1,480 ft, screened 1,460 to 1,480 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval. Periodic measurements, July 1975 to Feb. 1977. Water-level recorder, July 1968 to July 1975.

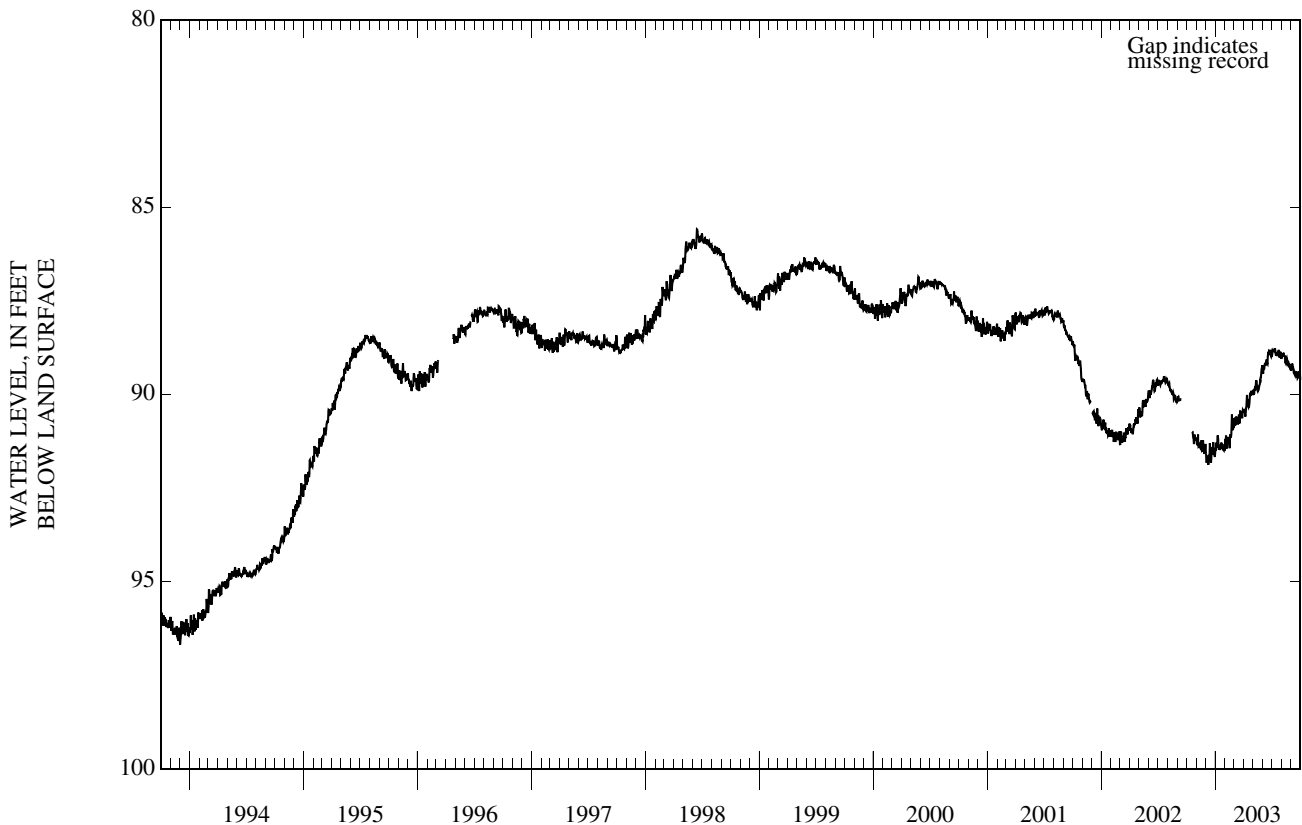
DATUM.--Land surface is 66.71 ft above NGVD of 1929. Measuring point: Top of recorder shelf, 2.70 ft above land surface.

PERIOD OF RECORD.--July 1968 to current year. Records for 1968 to 1976 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 62.32 ft below land surface, July 19, 1968, Feb. 9, 1969; lowest, 107.45 ft below land surface, Jan. 11, 1989.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	91.36	91.66	91.41	91.29	90.64	90.38	89.98	89.27	88.82	88.92	89.20
10	---	91.34	91.80	91.21	91.13	90.73	90.34	89.79	89.23	88.85	88.97	89.43
15	---	91.45	91.45	91.45	91.34	90.76	90.23	89.85	89.08	88.94	89.12	89.40
20	91.00	91.51	91.42	91.29	91.12	90.69	90.24	89.84	88.89	88.91	89.20	89.50
25	91.30	91.53	91.27	91.49	90.91	90.57	90.01	89.64	88.92	88.99	89.21	89.48
EOM	91.18	91.32	91.57	91.42	90.85	90.44	90.02	89.29	88.97	89.03	89.37	89.61
MEAN	---	91.38	91.60	91.38	91.12	90.64	90.22	89.74	89.09	88.89	89.10	89.41
MAX	---	91.59	91.88	91.51	91.44	90.90	90.59	90.01	89.45	89.03	89.37	89.61
MIN	---	91.07	91.27	91.10	90.54	90.42	89.90	89.29	88.83	88.76	88.91	89.18



GROUND-WATER LEVELS

OCEAN COUNTY--Continued

NJ-WRD Well Number 29-0100. Site I.D., 395956074034402. Local I.D., Normandy 3 Obs. NJ Permit Number, 33-00360.

LOCATION.--Lat 39°59'56", long 74°03'42", Hydrologic Unit 02040301, near the intersection of Rt. 35 (north) and 2nd Ave., Dover Township. Owner: New Jersey - American Water Company.

AQUIFER.--Upper Potomac-Raritan-Magothy aquifer of Cretaceous age.

WELL CHARACTERISTICS.-- Drilled artesian unused public-supply well, diameter 4 in., depth 1,479 ft, screened 1,428 to 1,479 ft.

INSTRUMENTATION.--Submersible logger pressure transducer--60 minute recording interval. Water-level recorder, Aug. 1999 to June 2001. Periodic measurements, June to Aug. 1999.

DATUM.-- Land surface is 8 ft above NGVD of 1929, from topographic map. Measuring point: Top of well seal, 3.37 ft above land surface.

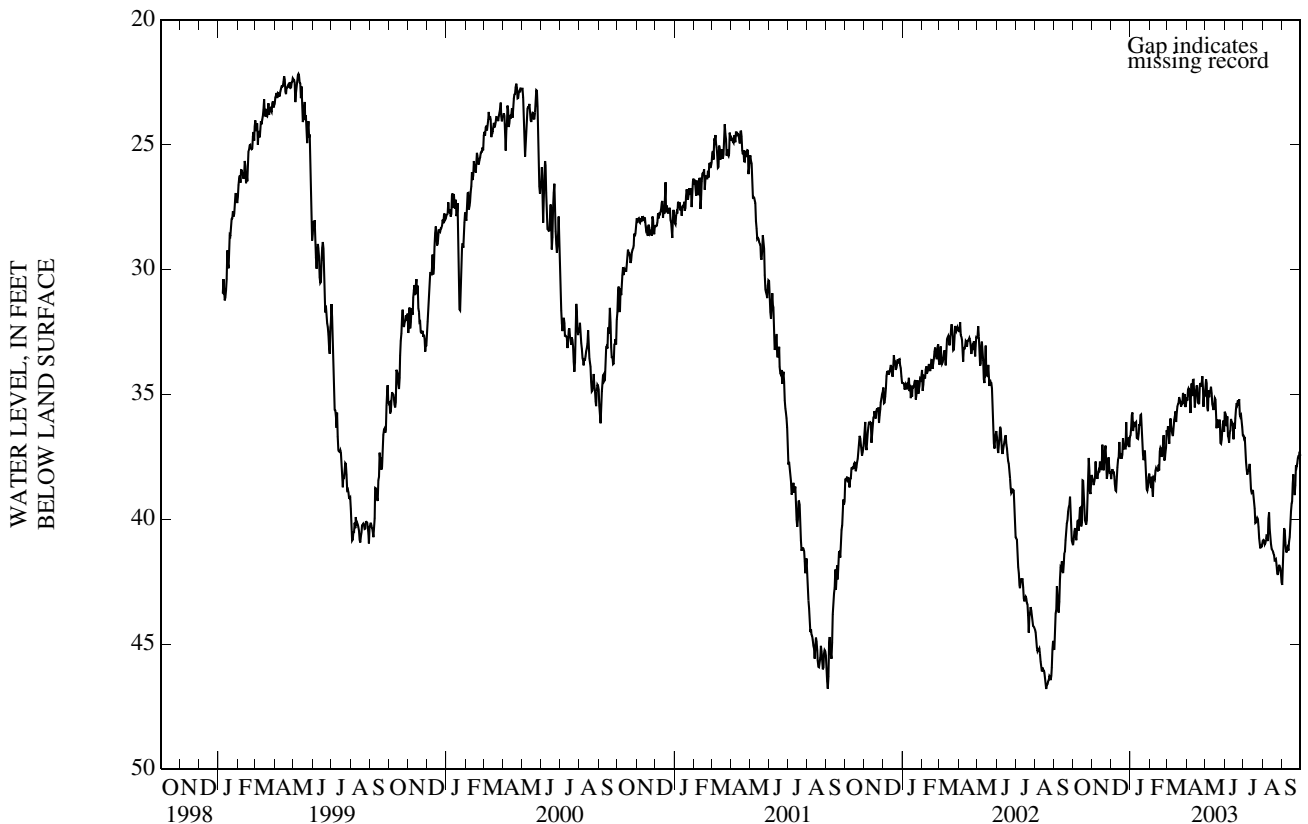
REMARKS.--Water level is affected by tidal fluctuation and nearby pumping.

PERIOD OF RECORD.--June 1998 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 21.51 ft below land surface, Apr. 16, 1999; lowest, 47.33 ft below land surface, Aug. 19, 2002.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	40.57	38.34	38.09	36.47	38.86	36.37	34.82	35.67	35.88	37.71	40.96	40.43
10	40.45	38.19	38.40	36.11	38.06	36.66	35.06	34.69	36.46	37.96	39.98	41.11
15	40.11	38.03	37.42	36.19	37.81	36.10	35.07	35.43	36.80	38.89	41.18	39.68
20	40.04	37.60	36.75	36.93	37.50	35.11	35.34	35.99	35.34	40.14	41.65	38.78
25	38.51	38.19	36.11	37.90	37.59	35.36	34.53	36.94	35.81	40.31	42.23	37.77
EOM	38.22	38.08	36.70	38.17	36.44	35.36	35.05	36.50	36.64	40.99	42.52	37.46
MEAN	39.63	37.96	37.54	36.93	37.83	35.80	34.93	35.65	36.04	39.07	41.27	39.59
MAX	41.04	38.63	38.87	38.84	39.09	36.97	35.74	36.97	36.94	41.16	42.52	42.63
MIN	37.54	37.01	36.11	35.72	36.44	34.94	34.27	34.40	35.19	36.64	39.73	37.30
WTR YR 2003	MEAN 37.69	HIGH 34.27	APR 26	LOW 42.63	SEP 1							



GROUND-WATER LEVELS

OCEAN COUNTY--Continued

NJ-WRD Well Number, 29-0138. Site I.D., 400416074270101. Local I.D., Colliers Mills 1 Obs.

LOCATION.--Lat 40°04'14", long 74°27'01", Hydrologic Unit 02040301, along western shore of Colliers Mills Pond, Jackson Township. Owner: U.S. Geological Survey.

AQUIFER.--Englishtown aquifer system of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in., depth 427 ft, screened 417 to 427 ft.

INSTRUMENTATION.--Submersible logger pressure transducer--60-minute recording interval. Water-level recorder, Mar. 1977 to June 2000. Water-level extremes recorder, Oct. 1976 to Mar. 1977. Periodic measurements, July 1975 to Oct. 1976. Water-level recorder, Feb. 1964 to July 1975.

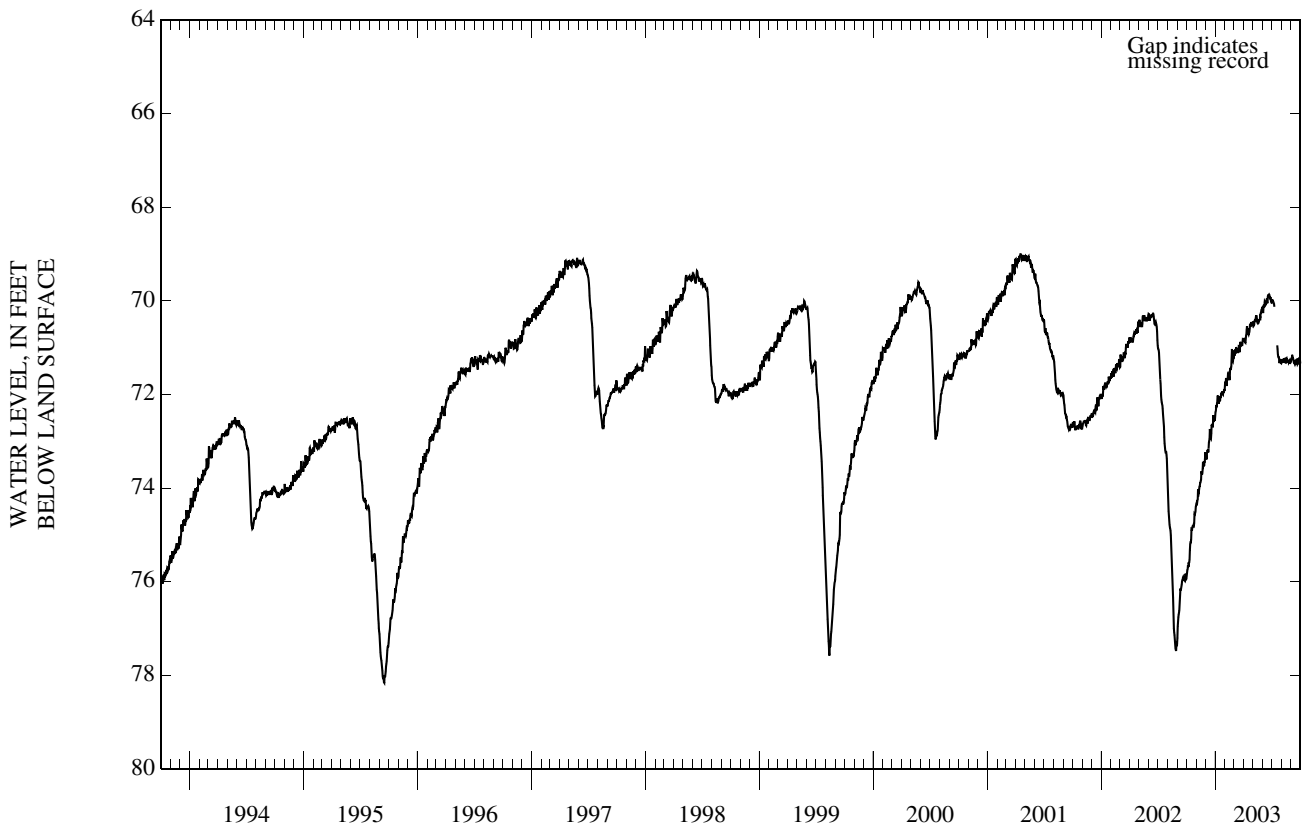
DATUM.--Land surface is 136.52 ft above NGVD of 1929. Measuring point: Top of well seal, 2.22 ft above land surface.

PERIOD OF RECORD.--Feb. 1964 to current year. Records for 1964 to 1976 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 52.02 ft below land surface, Feb. 19, 1964; lowest, 78.18 ft below land surface, Sept. 16, 1995.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	75.65	74.25	73.24	72.27	71.75	71.05	70.79	70.51	70.09	70.01	71.29	71.18
10	75.53	74.02	73.15	72.08	71.58	71.08	70.73	70.39	70.08	---	71.24	71.31
15	75.10	73.85	72.81	72.13	71.66	71.09	70.65	70.44	69.95	---	71.29	71.27
20	74.82	73.68	72.65	71.96	71.45	71.03	70.66	70.45	69.89	71.14	71.30	71.32
25	74.75	73.51	72.44	72.00	71.28	70.94	70.53	70.35	69.94	71.32	71.31	71.26
EOM	74.37	73.23	72.48	71.87	71.21	70.83	70.53	70.17	70.03	71.33	71.30	71.34
MEAN	75.10	73.81	72.89	72.08	71.52	71.01	70.66	70.38	70.02	---	---	71.27
MAX	75.87	74.33	73.39	72.38	71.82	71.23	70.90	70.53	70.26	---	---	71.35
MIN	74.37	73.23	72.44	71.87	71.03	70.83	70.45	70.17	69.86	---	---	71.15



GROUND-WATER LEVELS

OCEAN COUNTY--Continued

NJ-WRD Well Number, 29-0139. Site I.D., 400416074270102. Local I.D., Colliers Mills 2 Obs. NJ Permit Number, 28-04784.

LOCATION.--Lat 40°04'14", long 74°27'01", Hydrologic Unit 02040301, along western shore of Colliers Mills Pond, Jackson Township. Owner: U.S. Geological Survey.

AQUIFER.--Vincentown aquifer of Paleocene age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in., depth 171 ft, screened 161 to 171 ft.

INSTRUMENTATION.--Water-level extremes recorder. Periodic measurements, July 1975 to Oct. 1976. Water-level recorder, Jan. 1964 to July 1975.

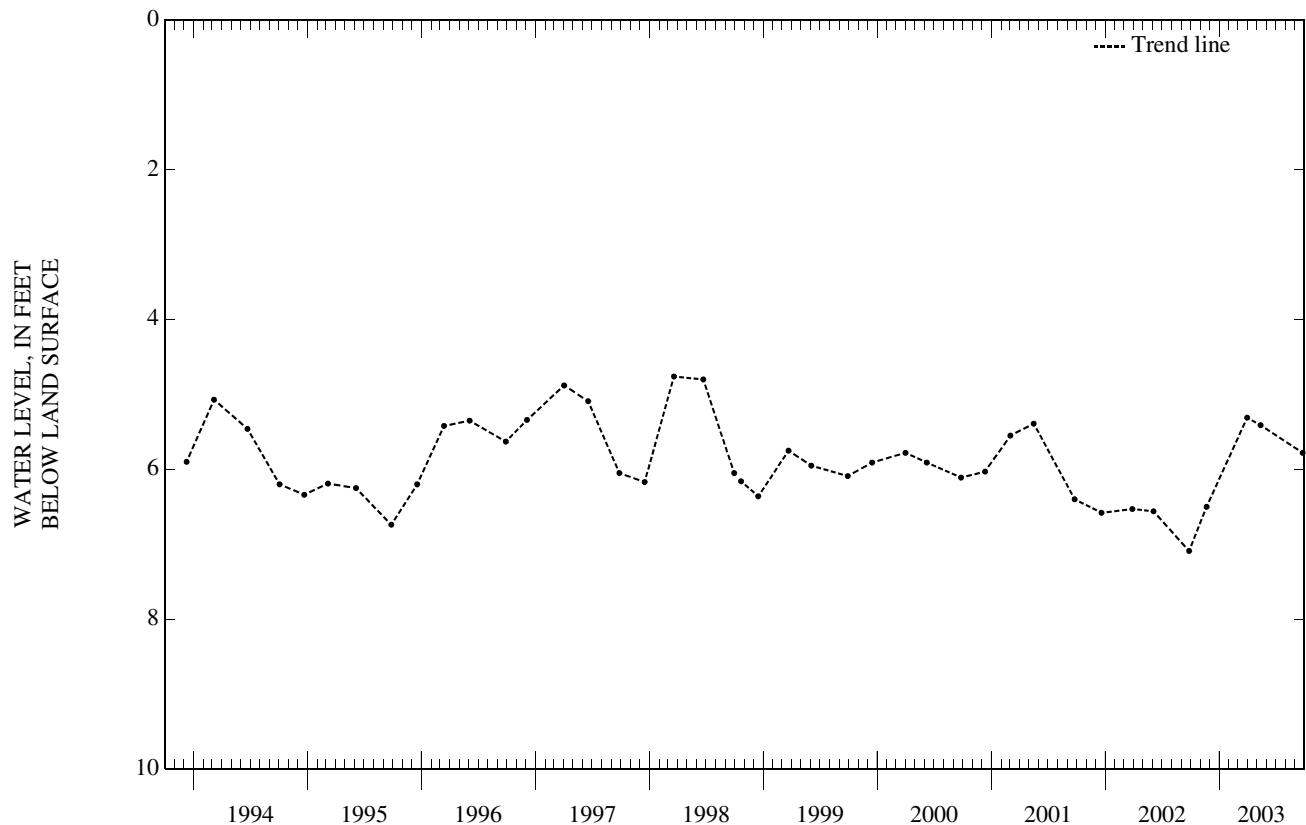
DATUM.--Land surface is 135.76 ft above NGVD of 1929. Measuring point: Front edge of cutout in recorder housing, 3.25 ft above land surface.

PERIOD OF RECORD.--Jan. 1964 to current year. Records for 1964 to 1981 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.92 ft below land surface, between Apr. 3 and July 11, 1984; lowest, 7.17 ft below land surface, between June 4 and Sept. 26, 2002.

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

PERIOD	WATER-LEVEL EXTREMES		MEASURED WATER LEVELS		
	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL	
SEPT. 26, 2002 TO NOV. 21, 2002	6.48	7.11	NOV. 21, 2002	6.50	
NOV. 21, 2002 TO MAR. 31, 2003	5.19	6.52	MAR. 31, 2003	5.31	
MAR. 31, 2003 TO MAY 13, 2003	5.16	5.40	MAY 13, 2003	5.40	
MAY 13, 2003 TO SEPT. 25, 2003	5.03	5.84	SEPT. 25, 2003	5.78	



GROUND-WATER LEVELS

OCEAN COUNTY--Continued

NJ-WRD Well Number, 29-0140. Site I.D., 400416074270103. Local I.D., Colliers Mills 3 Obs. NJ Permit Number, 28-04785

LOCATION.--Lat 40°04'14", long 74°27'01", Hydrologic Unit 02040301, along western shore of Colliers Mills Pond, Jackson Township.  
Owner: U.S. Geological Survey.

AQUIFER.--Wenonah-Mount Laurel aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in., depth 267 ft, screened 257 to 267 ft.

INSTRUMENTATION.--Submersible logger pressure transducer--60 minute recording interval. Water-level extremes recorder, Oct. 1976 to Mar. 2001. Periodic measurements, July 1975 to Oct. 1976. Water-level recorder, Jan. 1964 to July 1975.

DATUM.--Land surface is 135.15 ft above NGVD of 1929. Measuring point: Top of well seal, 3.37 ft above land surface.

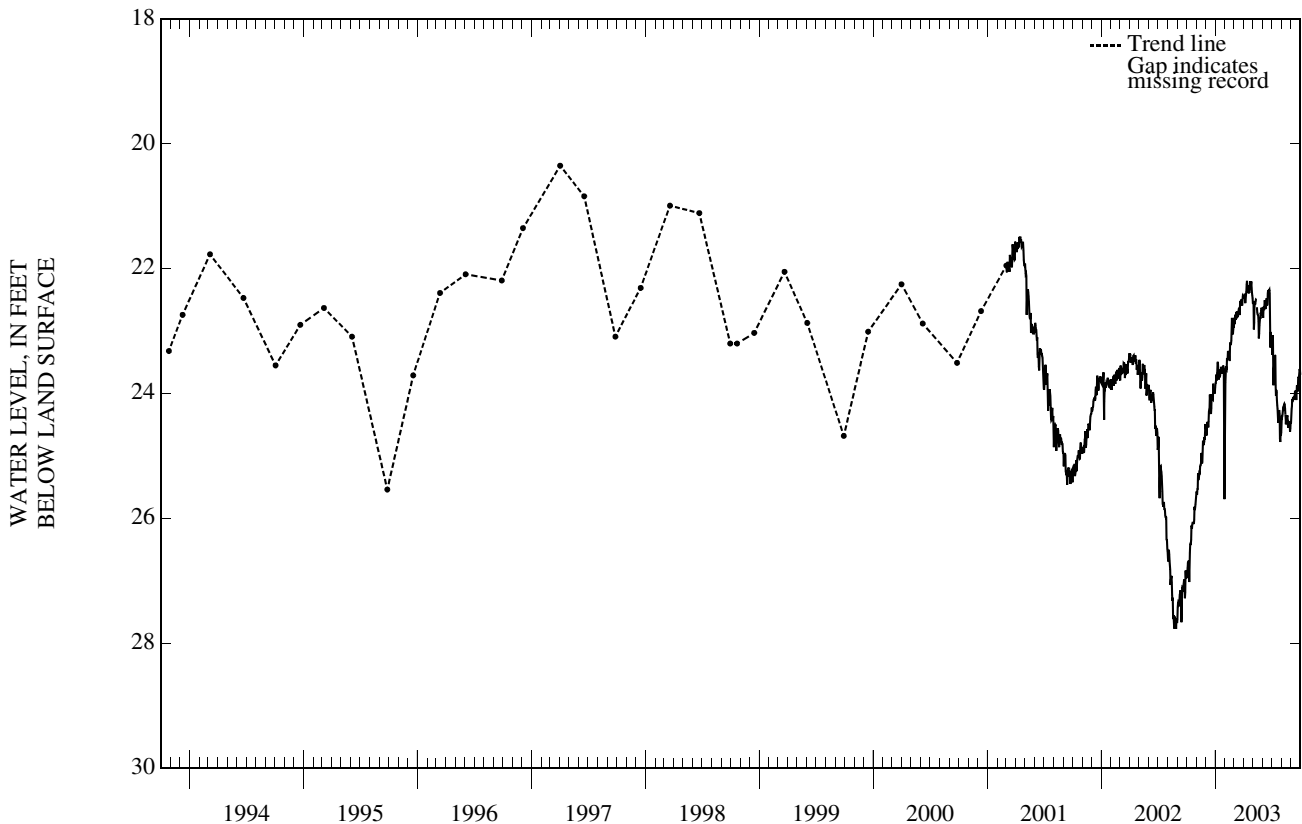
REMARKS.--Water level is affected by nearby pumping.

PERIOD OF RECORD.--Jan. 1964 to current year. Records for 1964 to 1976 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.72 ft below land surface, May 9, 1964; lowest, 28.17 ft below land surface, between June 3 and Aug. 18, 2002.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	26.71	25.53	24.50	23.79	23.61	22.76	22.40	22.87	22.61	23.30	24.28	24.10
10	26.86	25.32	24.45	23.57	23.32	22.77	22.37	22.52	22.65	23.53	24.17	24.08
15	26.35	25.15	24.14	23.73	23.41	22.72	22.34	22.70	22.55	23.94	24.50	23.95
20	26.07	25.09	24.03	23.57	23.21	22.69	22.39	23.12	22.37	24.34	24.36	23.88
25	26.02	24.78	23.84	23.65	23.04	22.56	22.26	22.80	22.68	24.31	24.46	23.74
EOM	25.64	24.49	23.90	25.44	22.92	22.45	22.48	22.74	23.14	24.62	24.48	23.70
MEAN	26.33	25.11	---	23.80	23.33	22.68	22.36	---	22.64	23.98	24.39	23.96
MAX	27.02	25.62	---	25.69	24.27	22.95	22.55	---	23.27	24.78	24.61	24.37
MIN	25.64	24.49	---	23.49	22.79	22.44	22.20	---	22.34	23.07	24.17	23.61



GROUND-WATER LEVELS

OCEAN COUNTY--Continued

NJ-WRD Well Number, 29-0141. Site I.D., 400416074270104. Local I.D., Colliers Mills 4 Obs.

LOCATION.--Lat 40°04'14", long 74°27'01", Hydrologic Unit 02040301, along western shore of Colliers Mills Pond, Jackson Township. Owner: U.S. Geological Survey.

AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 6 in., depth 71 ft, gravel-filled hole 46 to 71 ft.

INSTRUMENTATION.--Water-level extremes recorder. Periodic measurements, July 1975 to Oct. 1976. Water-level recorder, Mar. 1964 to July 1975.

DATUM.--Land surface is 135.31 ft above NGVD of 1929. Measuring point: Front edge of cutout in recorder housing, 2.86 ft above land surface.

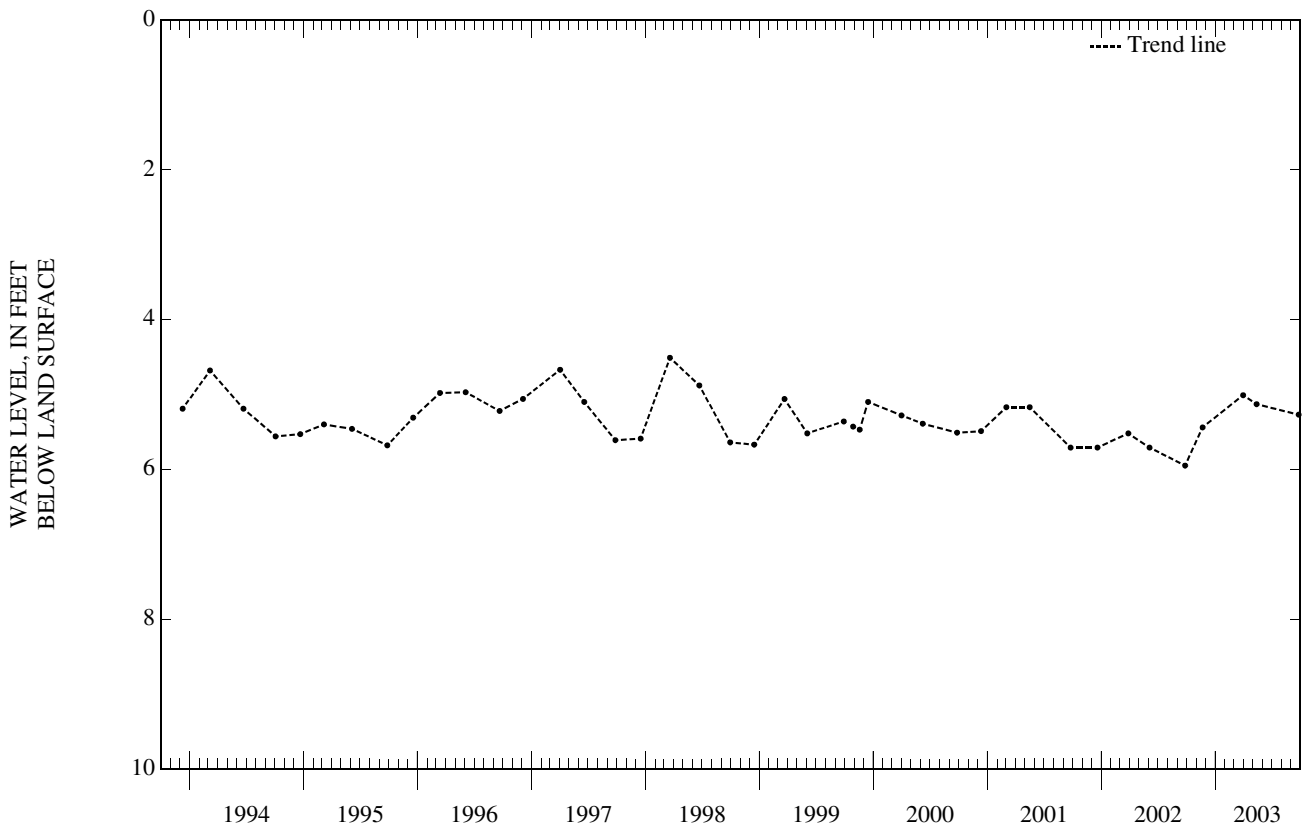
REMARKS.--Water level is affected by the stage of Colliers Mills Pond.

PERIOD OF RECORD.--Mar. 1964 to current year. Records for 1964 to 1981 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.68 ft below land surface, between Apr. 3 and July 11, 1984; lowest, 7.17 ft below land surface, between Dec. 4, 1984 and Mar. 6, 1985.

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

PERIOD	WATER-LEVEL EXTREMES		MEASURED WATER LEVELS	
	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 26, 2002 TO NOV. 21, 2002	5.38	5.98	NOV. 21, 2002	5.44
NOV. 21, 2002 TO MAR. 31, 2003	4.55	5.51	MAR. 31, 2003	5.01
MAR. 31, 2003 TO MAY 13, 2003	4.87	5.14	MAY 13, 2003	5.14
MAY 13, 2003 TO SEPT. 25, 2003	4.52	5.32	SEPT. 25, 2003	5.27





GROUND-WATER LEVELS

OCEAN COUNTY--Continued

NJ-WRD Well Number, 29-0425. Site I.D., 395323074225501. Local I.D., Webbs Mills 2 Obs.

LOCATION.--Lat 39°53'22", long 74°22'51", Hydrologic Unit 02040301, about 180 ft west of County Rt. 539, and about 500 ft north of Webbs Mill Branch, Lacey Township. Owner: U.S. Geological Survey.

AQUIFER.--Piney Point aquifer of Eocene age.

WELL CHARACTERISTICS.--Drilled artesian observation well, depth 348 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape. Water-level recorder, Feb. 1962 to Jan. 1975.

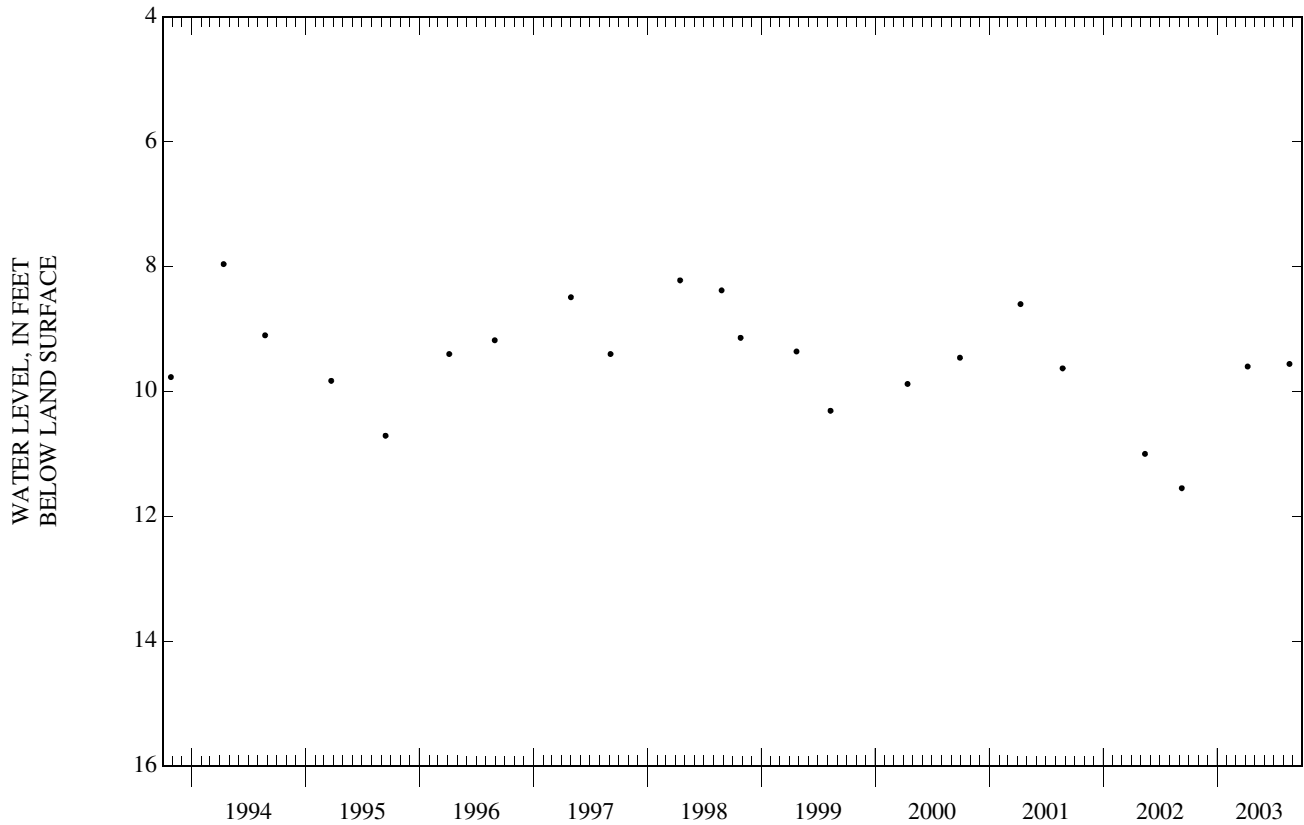
DATUM.--Land surface is 128.27 ft above NGVD of 1929. Measuring point: Top of shelf, 1.90 ft above land surface.

PERIOD OF RECORD.--Feb. 1962 to current year. Records for 1962 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.01 ft below land surface, Apr. 20, 1973; lowest, 11.55 ft below land surface, Sept. 9, 2002.

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

DATE	WATER LEVEL	DATE	WATER LEVEL
APR 08	9.60	AUG 20	9.56



GROUND-WATER LEVELS

OCEAN COUNTY--Continued

NJ-WRD Well Number, 29-0503. Site I.D., 400210074031001. Local I.D., Mantoloking 6 Obs. NJ Permit Number, 29-01325.

LOCATION.--Lat 40°02'10", long 74°03'08", Hydrologic Unit 02040301, at the Bay Ave. water treatment plant, Mantoloking Borough.  
 Owner: New Jersey - American Water Company.

AQUIFER.--Englishtown aquifer system of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian unused public-supply well, diameter 8 in., depth 906 ft, screened 845 to 906 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval. Periodic measurements, Oct. 1983 to May 1984.

DATUM.--Land surface is 5 ft above NGVD of 1929, from topographic map. Measuring point: Top of recorder shelf, 2.40 ft above land surface.

REMARKS.--Water level is affected by tidal fluctuation and nearby pumping.

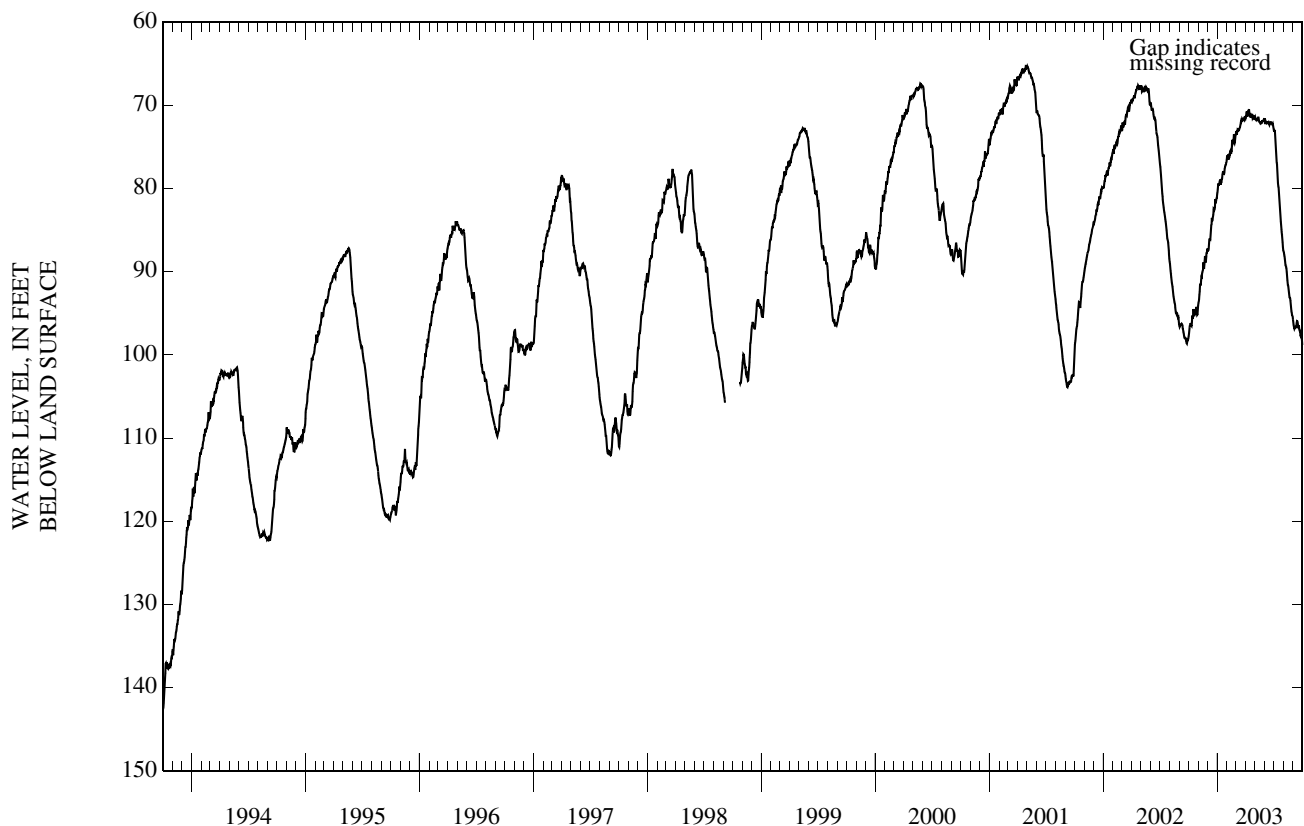
PERIOD OF RECORD.--Oct. 1983 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 64.79 ft below land surface, Apr. 28, 2001; lowest, 207.49 ft below land surface, Oct. 31, 1987.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	96.42	92.39	86.72	79.70	76.40	73.23	70.75	71.78	71.98	73.54	88.46	96.87
10	96.52	90.97	85.61	78.93	75.71	73.04	70.81	71.76	72.08	76.84	89.63	96.61
15	95.36	89.94	83.94	78.84	75.55	72.53	71.25	71.97	72.10	79.71	91.60	96.12
20	95.20	89.17	82.47	78.08	74.57	71.91	71.40	72.15	72.08	82.27	93.05	96.89
25	94.53	88.67	81.31	77.50	74.53	71.71	71.48	71.91	72.27	84.92	94.33	97.69
EOM	94.07	87.23	80.70	76.54	73.55	71.51	71.75	71.70	72.84	87.42	95.79	98.80
MEAN	95.54	90.08	83.97	78.54	75.19	72.38	71.20	71.83	72.16	79.95	91.68	96.91
MAX	97.76	93.78	87.47	80.47	76.54	73.56	71.75	72.19	72.84	87.42	95.79	98.80
MIN	94.07	87.23	80.70	76.54	73.48	71.42	70.46	71.39	71.56	73.03	87.52	95.94

WTR YR 2003 MEAN 81.66 HIGH 70.46 APR 12 LOW 98.80 SEP 30



GROUND-WATER LEVELS

OCEAN COUNTY--Continued

NJ-WRD Well Number, 29-0513. Site I.D., 394742074142001. Local I.D., Garden St Pky 1 Obs.

LOCATION.--Lat 39°47'44", long 74°14'17", Hydrologic Unit 02040301, near the intersection of the Garden State Parkway and Rt. 532 (Waretown-Brookville Rd), Ocean Township. Owner: U.S. Geological Survey.

AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.

WELL CHARACTERISTICS.--Drilled water-table observation well, depth 21 ft, screened 18 to 21 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape.

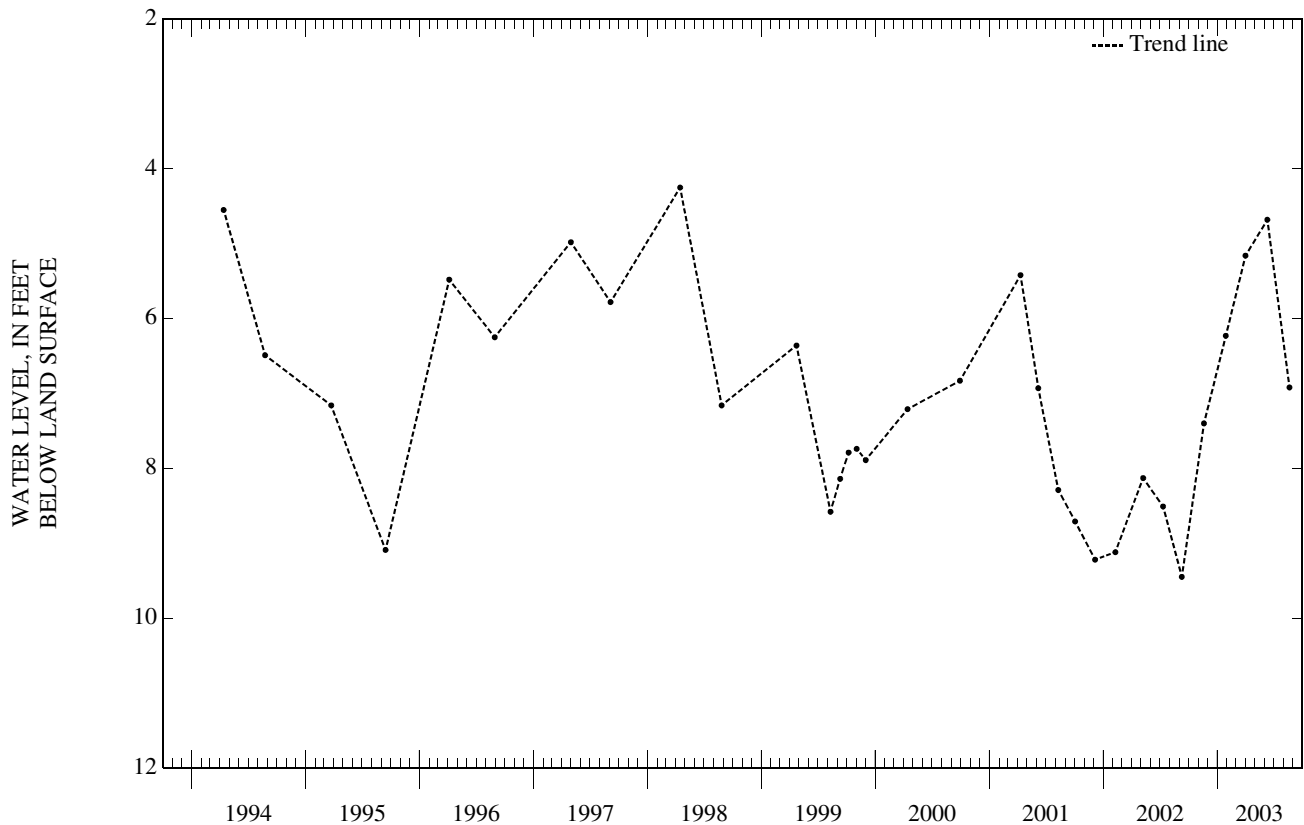
DATUM.--Land surface is 44.25 ft above NGVD of 1929. Measuring point: Top of coupling, 1.00 ft above land surface.

PERIOD OF RECORD.--May 1962 to current year. Records for 1962 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.99 ft below land surface, Apr. 3, 1984; lowest, 9.60 ft below land surface, Oct. 8, 1985.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 19	7.40	JAN 28	6.23	APR 01	5.16	JUN 10	4.68	AUG 20	6.92
WATER YEAR 2003		HIGHEST	4.68	JUN 10, 2003	LOWEST	7.40	NOV 19, 2002		



GROUND-WATER LEVELS

OCEAN COUNTY--Continued

NJ-WRD Well Number, 29-0514. Site I.D., 394742074142002. Local I.D., Garden St Pky 2 Obs.

LOCATION.--Lat 39°47'44", long 74°14'17", Hydrologic Unit 02040301, near the intersection of the Garden State Parkway and Rt. 532 (Waretown-Brookville Rd), Ocean Township. Owner: U.S. Geological Survey.

AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.

WELL CHARACTERISTICS.--Drilled water-table observation well, depth 316 ft, screened 306 to 316 ft.

INSTRUMENTATION.--Submersible logger pressure transducer--60 minute recording interval. Periodic measurements, Mar. 1975 to Apr. 2001. Water-level recorder, May 1962 Mar. 1975.

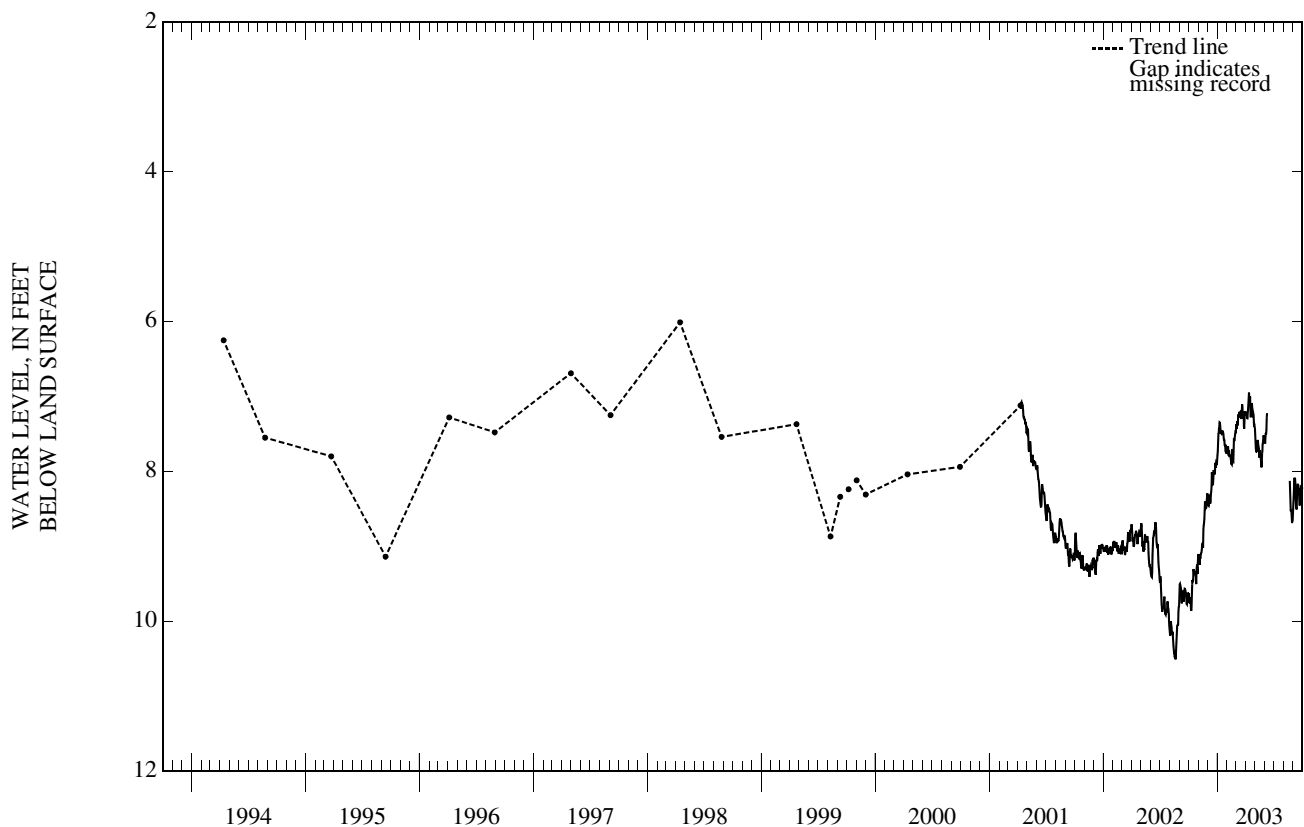
DATUM.--Land surface is 43.82 ft above NGVD of 1929. Measuring point: Top of base of aluminum locking cap, 1.92 ft above land surface.

PERIOD OF RECORD.--Feb. 1962 to current year. Records for 1962 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 5.23 ft below land surface, Apr. 10-11, 1973; lowest, 10.54 ft below land surface, Aug. 20, 2002.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.68	9.25	8.34	7.49	7.73	7.35	7.21	7.74	7.49	---	---	8.08
10	9.81	9.09	8.38	7.39	7.78	7.27	7.11	7.58	---	---	---	8.47
15	9.46	8.95	8.08	7.50	7.90	7.27	7.03	7.79	---	---	---	8.18
20	9.35	8.64	7.98	7.50	7.87	7.22	7.13	7.83	---	---	---	8.37
25	9.51	8.49	7.89	7.65	7.57	7.27	7.24	7.72	---	---	8.53	8.20
EOM	9.14	8.29	7.86	7.75	7.47	7.21	7.41	7.56	---	---	8.55	8.24
MEAN	9.49	8.82	8.15	7.56	7.74	7.28	7.19	7.69	---	---	---	8.28
MAX	9.86	9.25	8.46	7.78	7.91	7.47	7.41	7.95	---	---	---	8.50
MIN	9.14	8.29	7.86	7.35	7.47	7.10	6.95	7.42	---	---	---	8.08



GROUND-WATER LEVELS

OCEAN COUNTY--Continued

NJ-WRD Well Number, 29-0530. Site I.D., 400454074041301. Local I.D., PPWD 6 Obs. NJ Permit Number, 29-04530.

LOCATION.--Lat 40°04'54", long 74°04'11", Hydrologic Unit 02040301, at the Point Pleasant Borough public works facility, Albert E. Clifton Ave., Point Pleasant Borough. Owner: Point Pleasant Borough Water Department.

AQUIFER.--Englishtown aquifer system of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian unused public-supply well, diameter 8 in., depth 790 ft, screened 730 to 790 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape.

DATUM.--Land surface is 17 ft above NGVD of 1929, from topographic map. Measuring point: Top of pump base, 2.90 ft above land surface.

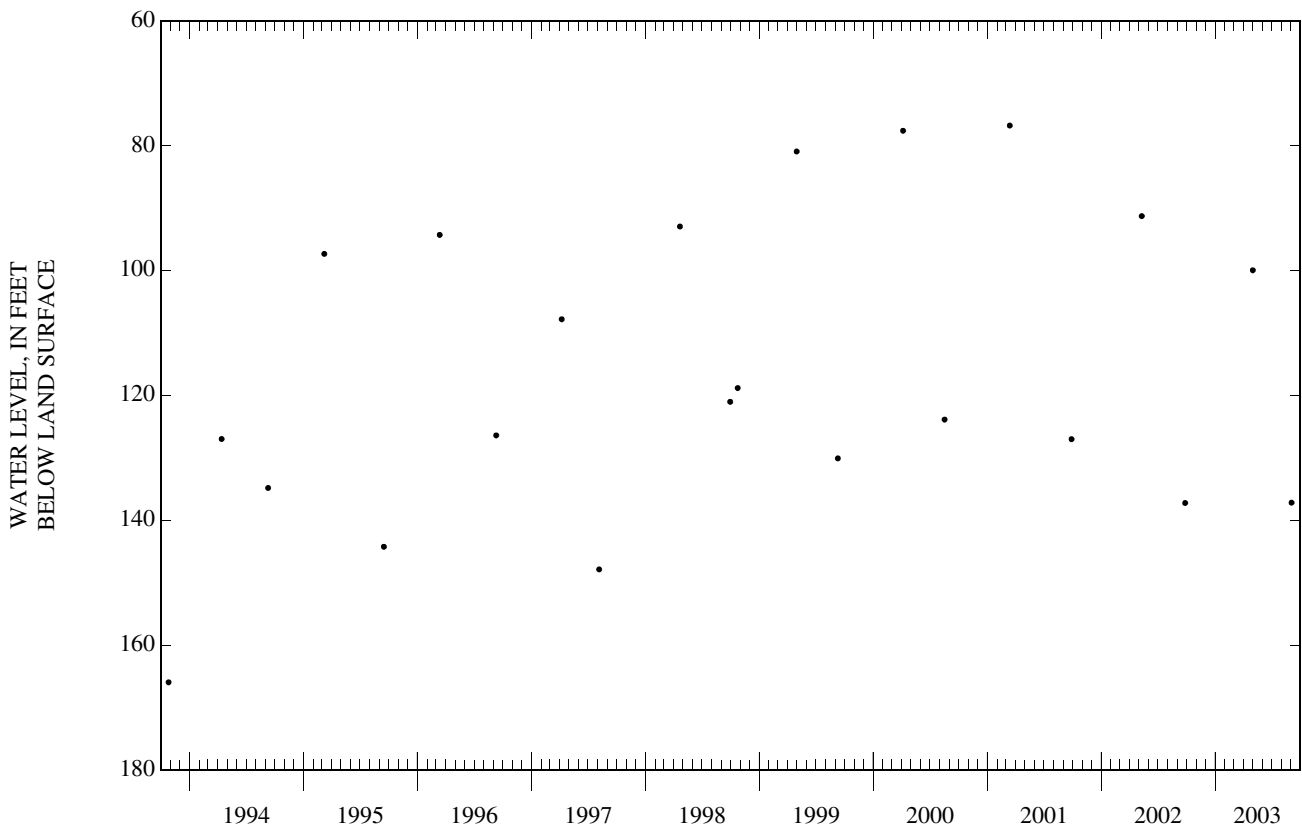
REMARKS.--Water level is affected by tidal fluctuation and nearby pumping.

PERIOD OF RECORD.--Sept. 1988 to current year. Records for 1988 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 76.75 ft below land surface, Mar. 13, 2001; lowest, 250.66 ft below land surface, Aug 17, 1989.

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

DATE	WATER LEVEL	DATE	WATER LEVEL
MAY 01	99.94	SEP 02	137.18



GROUND-WATER LEVELS

OCEAN COUNTY--Continued

NJ-WRD Well Number, 29-0534. Site I.D., 395609074124001. Local I.D., Toms River 2 Obs. NJ Permit Number, 33-01117.

LOCATION.--Lat 39°56'09", long 74°12'39", Hydrologic Unit 02040301, about 200 ft east of Double Trouble Rd. on the north side of Jakes Branch, South Toms River Borough. Owner: U.S. Geological Survey.

AQUIFER.--Englishtown aquifer system of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in., depth 1,146 ft, screened 1,080 to 1,146 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval. Water-level extremes recorder, Feb. 1977 to Oct. 1990. Periodic measurements, July 1975 to Feb. 1977. Water-level recorder, Dec. 1965 to July 1975.

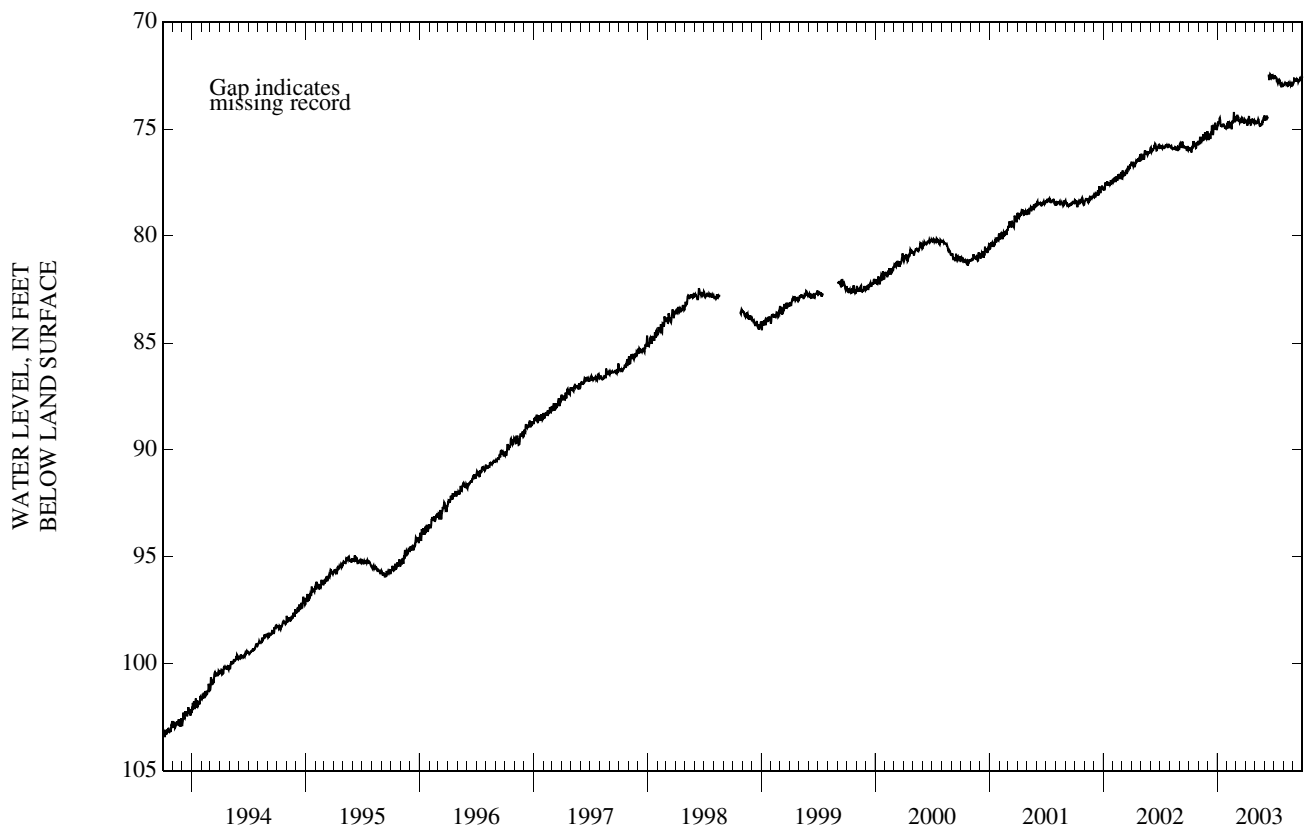
DATUM.--Land surface is 18.34 ft above NGVD of 1929. Measuring point: Top of coupling, 2.44 ft above land surface.

PERIOD OF RECORD.--Dec. 1965 to current year. Records for 1965 to 1976 and 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 48.37 ft below land surface, May 28, 1966; lowest, 106.41 ft below land surface, Dec. 19-20, 1992.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	75.87	75.66	75.34	74.77	74.81	74.38	74.62	74.78	74.47	72.53	72.87	72.65
10	76.07	75.55	75.38	74.60	74.74	74.58	74.66	74.66	74.48	72.73	72.88	72.70
15	75.85	75.52	74.98	74.87	74.92	74.68	74.66	74.75	72.54	72.84	72.98	72.68
20	75.70	75.48	74.88	74.75	74.71	74.67	74.75	74.82	72.46	72.75	72.91	72.75
25	75.87	75.40	74.70	74.97	74.63	74.64	74.64	74.71	72.56	73.03	72.94	72.64
EOM	75.60	75.10	74.95	74.93	74.57	74.59	74.71	74.44	72.60	72.99	72.92	72.54
MEAN	75.82	75.45	75.12	74.81	74.72	74.57	74.65	74.68	---	72.77	72.90	72.70
MAX	76.07	75.68	75.52	74.99	75.01	74.74	74.84	74.85	---	73.05	72.99	72.89
MIN	75.57	75.10	74.70	74.49	74.21	74.38	74.39	74.44	---	72.52	72.83	72.54



GROUND-WATER LEVELS

OCEAN COUNTY--Continued

NJ-WRD Well Number, 29-0585. Site I.D., 395028074104401. Local I.D., DOE-Forked River Obs.

LOCATION.--Lat 39°50'28", long 74°10'43", Hydrologic Unit 02040301, at the Forked River Game Farm, Forked River, Lacey Township.  
 Owner: State of New Jersey.

AQUIFER.--Piney Point aquifer of Eocene age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 4 in., depth 422 ft, perforated casing 412 to 422 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval.

DATUM.--Land surface is 15 ft above NGVD of 1929, from topographic map. Measuring point: Top of recorder shelf, 3.80 ft above land surface.

REMARKS.--Water level is affected by nearby pumping.

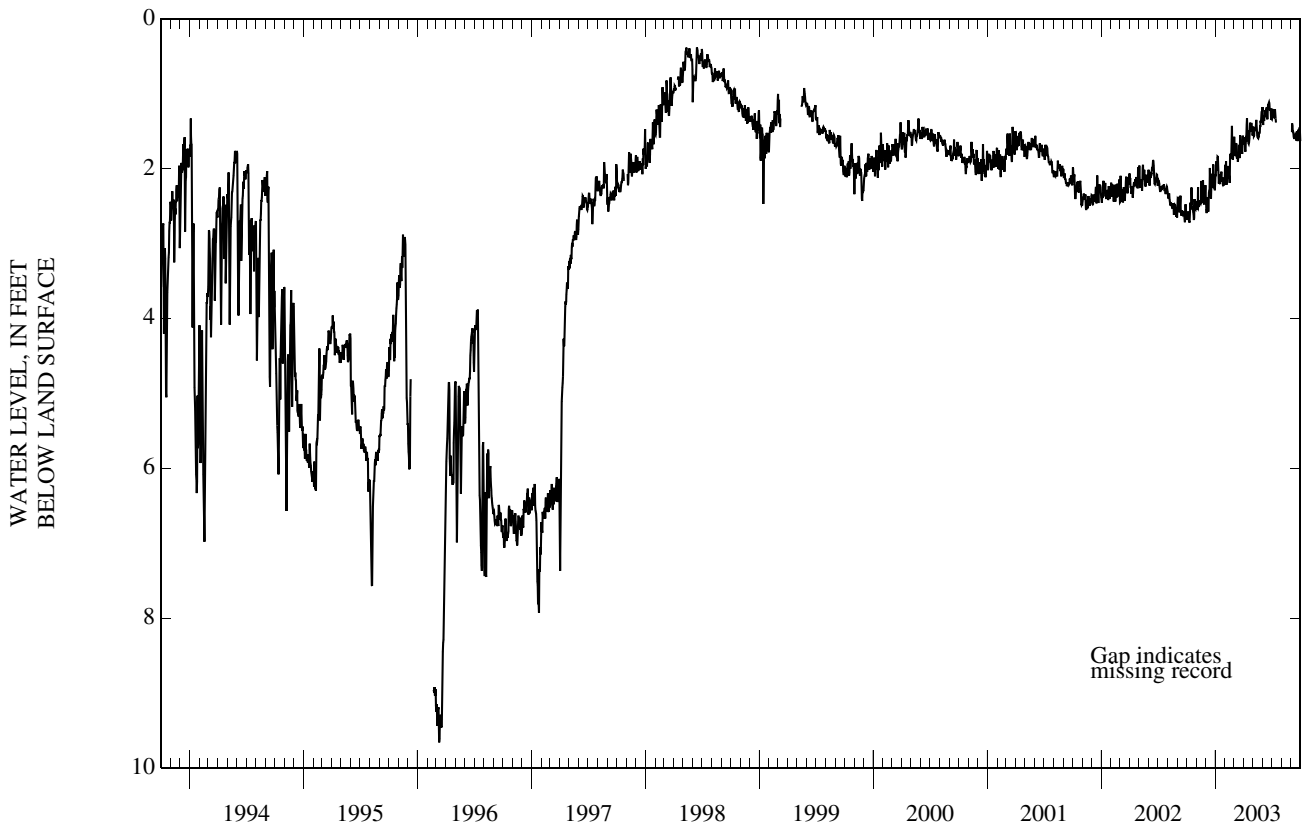
PERIOD OF RECORD.--Apr. 1984 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.83 ft above land surface, June 1, 1984; lowest, 9.70 ft below land surface, Mar. 10, 1996.

EXTREMES FOR CURRENT YEAR.--Maximum water-level depth below land surface, 2.72 ft, Oct. 9, 10; minimum water-level depth below land surface, 1.10 ft, June 1, 22.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	2.57	2.53	2.40	2.02	2.09	1.66	1.58	1.56	1.28	1.24	---	1.43
10	2.71	2.46	2.47	1.94	1.96	1.82	1.56	1.47	1.31	1.30	---	1.58
15	2.52	2.46	2.17	2.18	2.13	1.86	1.55	1.55	1.22	---	---	1.54
20	2.49	2.44	2.07	2.04	1.85	1.76	1.59	1.56	1.15	---	---	1.56
25	2.66	2.46	1.94	2.22	1.85	1.72	1.51	1.44	1.22	---	---	1.55
EOM	2.44	2.22	2.19	2.14	1.77	1.61	1.55	1.23	1.33	---	---	1.63
MEAN	2.55	2.41	2.29	2.09	1.93	1.73	1.55	1.46	1.25	---	---	---
MAX	2.71	2.55	2.59	2.22	2.21	1.90	1.77	1.58	1.41	---	---	---
MIN	2.25	2.15	1.94	1.84	1.43	1.55	1.33	1.23	1.11	---	---	---



GROUND-WATER LEVELS

OCEAN COUNTY--Continued

NJ-WRD Well Number, 29-1059. Site I.D., 400120074265401. Local I.D., Fort Dix RLF-30 Obs. NJ Permit Number, 28-16707-4.

LOCATION.--Lat 40°01'20", long 74°26'53", Hydrologic Unit 02040301, at the Fort Dix Military Reservation, Plumsted Township. Owner: US Army - Fort Dix.

AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 4 in., depth 75 ft.

INSTRUMENTATION.--Submersible logger pressure transducer--60-minute recording interval. Water-level recorder, May 1992 to Apr. 2000.

DATUM.--Land surface is 180 ft above NGVD of 1929, from topographic map. Measuring point: Top of recorder shelf, 2.15 ft above land surface.

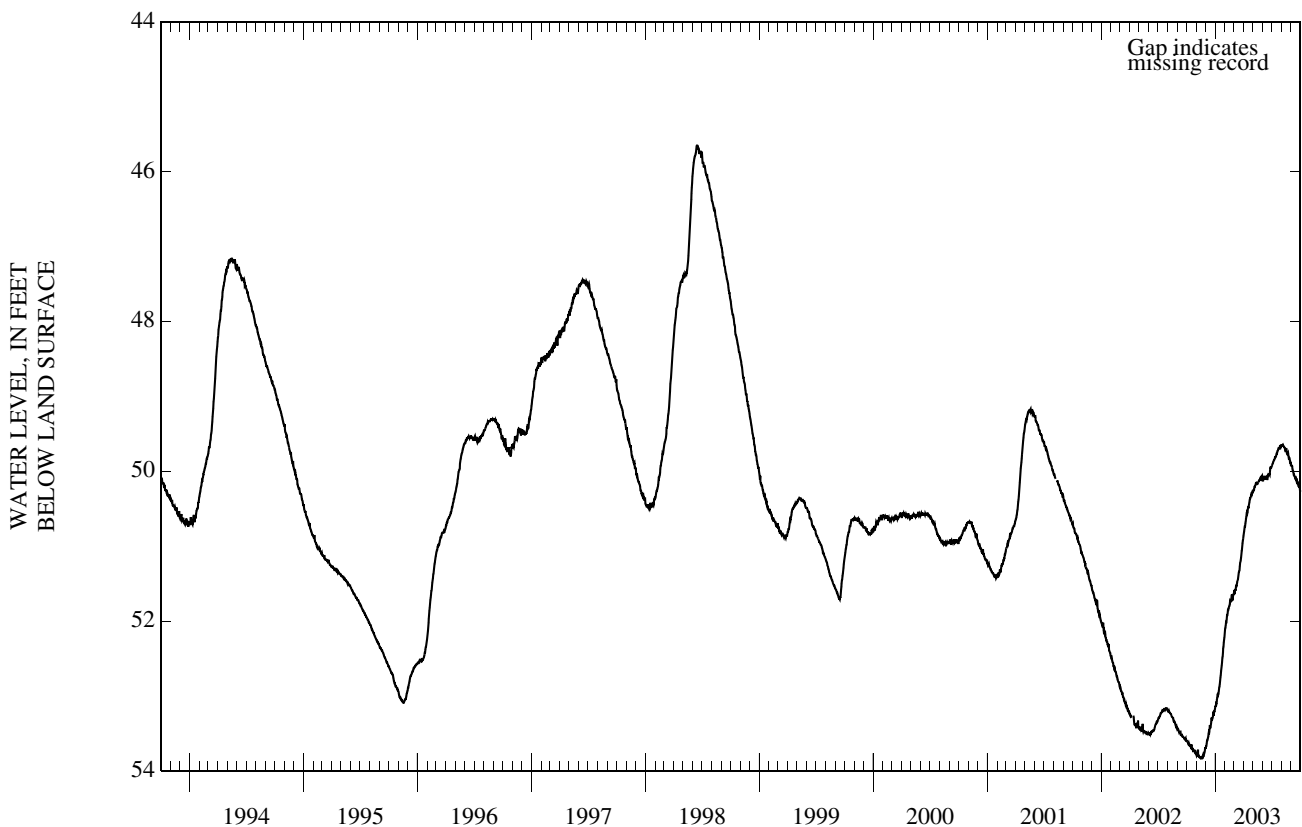
PERIOD OF RECORD.--May 1992 to current year. Records for 1992 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 45.63 ft below land surface, June 15, 1998; lowest, 53.86 ft below land surface, Nov. 18, 2002.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	53.62	53.79	53.60	53.08	52.01	51.57	50.73	50.23	50.09	49.88	49.64	49.97
10	53.66	53.80	53.50	52.98	51.85	51.53	50.61	50.17	50.11	49.84	49.68	50.04
15	53.67	53.83	53.43	52.84	51.80	51.42	50.49	50.17	50.09	49.78	49.71	50.09
20	53.71	53.82	53.29	52.63	51.73	51.27	50.41	50.13	50.05	49.72	49.77	50.14
25	53.73	53.79	53.21	52.42	51.71	51.11	50.33	50.10	49.99	49.70	49.82	50.19
EOM	53.77	53.69	53.15	52.16	51.65	50.90	50.29	50.06	49.94	49.66	49.93	50.27
MEAN	53.68	53.79	53.41	52.73	51.83	51.34	50.52	50.15	50.06	49.77	49.74	50.09
MAX	53.77	53.84	53.70	53.14	52.11	51.64	50.86	50.27	50.12	49.93	49.93	50.27
MIN	53.60	53.69	53.15	52.16	51.64	50.90	50.28	50.06	49.94	49.66	49.64	49.91

WTR YR 2003 MEAN 51.43 HIGH 49.64 AUG 5 LOW 53.84 NOV 18





GROUND-WATER LEVELS

OCEAN COUNTY--Continued

NJ-WRD Well Number, 29-1060. Site I.D., 400232074213201. Local I.D., LNAS-EC Obs.

LOCATION.--Lat 40°02'37", long 74°21'27", Hydrologic Unit 02040301, at Lakehurst Naval Air Station, Jackson Township. Owner: Lakehurst Naval Air Station.

AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 4 in., depth 38 ft, screened 23 to 38 ft.

INSTRUMENTATION.--Data collection platform with satellite telemetry--60 minute recording interval. Submersible logger pressure transducer, Feb. 1999 to June 2002. Water-level recorder, May 1992 to Feb. 1999.

DATUM.--Land surface is 110 ft above NGVD of 1929, from topographic map. Measuring point: Top of protective casing, 2.95 ft above land surface.

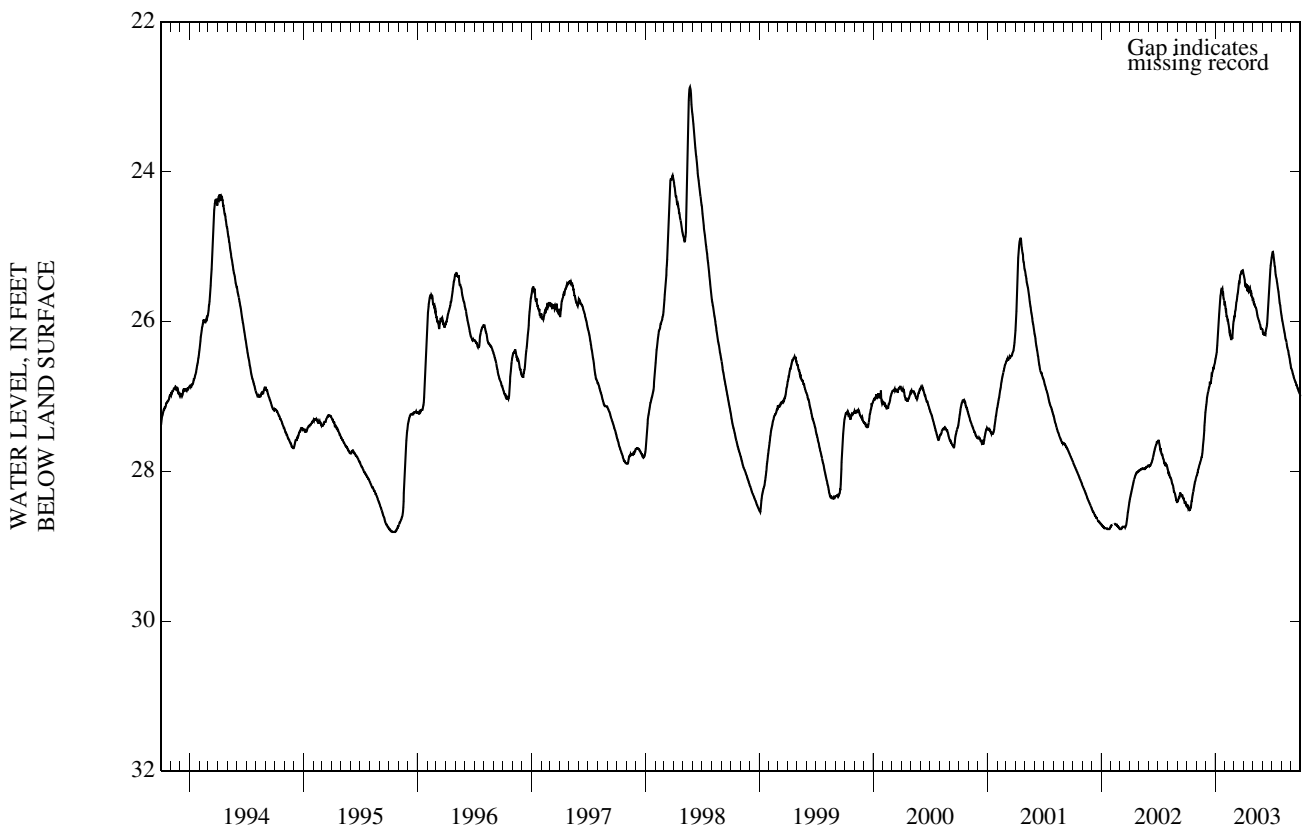
PERIOD OF RECORD.--May 1992 to current year. Records for 1992 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 22.86 ft below land surface, May. 23, 1998; lowest 28.81 ft below land surface, Oct. 13-21, 1995.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	28.47	28.01	27.02	26.42	25.90	25.87	25.44	25.77	26.16	25.08	26.02	26.67
10	28.52	27.93	26.91	26.11	25.98	25.74	25.55	25.81	26.17	25.26	26.14	26.75
15	28.45	27.86	26.83	25.78	26.13	25.58	25.54	25.91	26.06	25.41	26.25	26.81
20	28.32	27.76	26.70	25.57	26.23	25.43	25.58	25.98	25.70	25.55	26.35	26.87
25	28.20	27.51	26.60	25.63	26.17	25.34	25.63	26.06	25.37	25.72	26.45	26.93
EOM	28.09	27.21	26.53	25.78	26.00	25.34	25.71	26.10	25.15	25.90	26.61	27.00
MEAN	28.36	27.77	26.82	25.92	26.05	25.58	25.55	25.91	25.83	25.44	26.27	26.81
MAX	28.52	28.07	27.18	26.50	26.25	25.98	25.71	26.10	26.19	25.90	26.61	27.00
MIN	28.09	27.21	26.53	25.56	25.77	25.32	25.37	25.70	25.15	25.07	25.92	26.62

WTR YR 2003 MEAN 26.36 HIGH 25.07 JUL 3 LOW 28.52 OCT 10



GROUND-WATER LEVELS

OCEAN COUNTY--Continued

NJ-WRD Well Number 29-1210. Site I.D., 393115074191001. Local I.D., Great Bay Blvd. 1 Obs. NJ Permit Number, 36-20855.

LOCATION.--Lat 39°31'15", long 74°19'09", Hydrologic Unit 02040301, on the west side of Great Bay Boulevard, about 200 ft north of Little Sheepshead Creek, Little Egg Harbor Township. Owner: State of New Jersey-DEP/Fish, Game & Wildlife.

AQUIFER.--Piney Point aquifer of Eocene age.

WELL CHARACTERISTICS.-- Drilled artesian observation well, diameter 4 in., depth 880 ft, screened 860 to 880 ft.

INSTRUMENTATION.--Submersible logger pressure transducer--60-minute recording interval. Water-level recorder, May to July 1997.

DATUM.-- Land surface is 5.6 ft above NGVD of 1929. Measuring point: Top of base of locking cap, 4.70 ft above land surface

REMARKS.--Water level affected by tidal fluctuation.

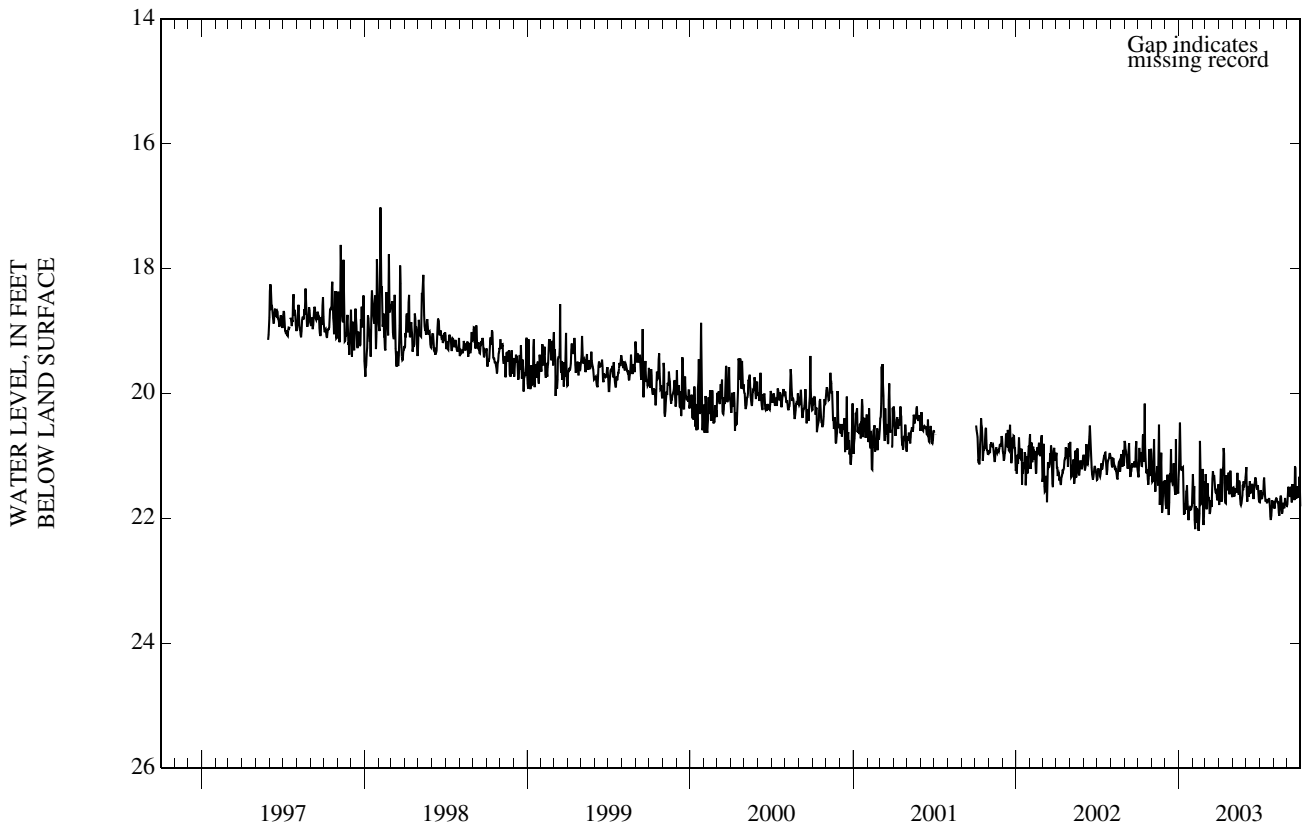
PERIOD OF RECORD.--May 1997 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 16.05 ft below land surface, Feb. 5, 1998; lowest, 22.48 ft below land surface, Feb. 16, 2003.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	21.04	21.19	21.39	21.22	22.03	21.63	21.21	21.65	21.48	21.67	21.73	21.55
10	21.16	21.33	21.75	21.18	21.83	21.82	21.19	21.58	21.61	21.40	21.75	21.58
15	20.94	21.47	21.39	21.77	22.05	21.82	21.75	21.63	21.50	21.71	21.85	21.65
20	21.28	21.55	21.12	21.73	21.76	21.33	21.53	21.79	21.42	21.74	21.93	21.65
25	21.37	21.85	20.73	21.87	22.11	21.59	21.54	21.55	21.54	21.98	21.84	21.63
EOM	20.97	21.39	21.38	21.58	21.40	21.62	21.66	21.29	21.74	21.76	21.80	21.81
MEAN	21.07	21.36	21.48	21.56	21.74	21.59	21.46	21.54	21.53	21.70	21.78	21.57
MAX	21.46	21.91	21.95	22.03	22.20	21.93	21.79	21.79	21.74	22.03	21.96	21.81
MIN	20.16	20.50	20.73	20.47	20.76	21.25	20.87	21.27	21.18	21.35	21.64	21.17

WTR YR 2003 MEAN 21.53 HIGH 20.16 OCT 16 LOW 22.20 FEB 14



GROUND-WATER LEVELS

OCEAN COUNTY--Continued

NJ-WRD Well Number, 29-1419. Site I.D., 395034074112101. Local I.D., NJDEP MW 61. NJ Permit Number, 33-40574.

LOCATION.--Lat 39°50'34", long 74°11'20", Hydrologic Unit 02040301, at the Forked River Game Farm, Forked River, Lacey Township.  
 Owner: State of New Jersey - DEP.

AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 2 in., depth 20 ft, screened 15 to 20 ft.

INSTRUMENTATION.--Submersible logger pressure transducer--60-minute recording interval.

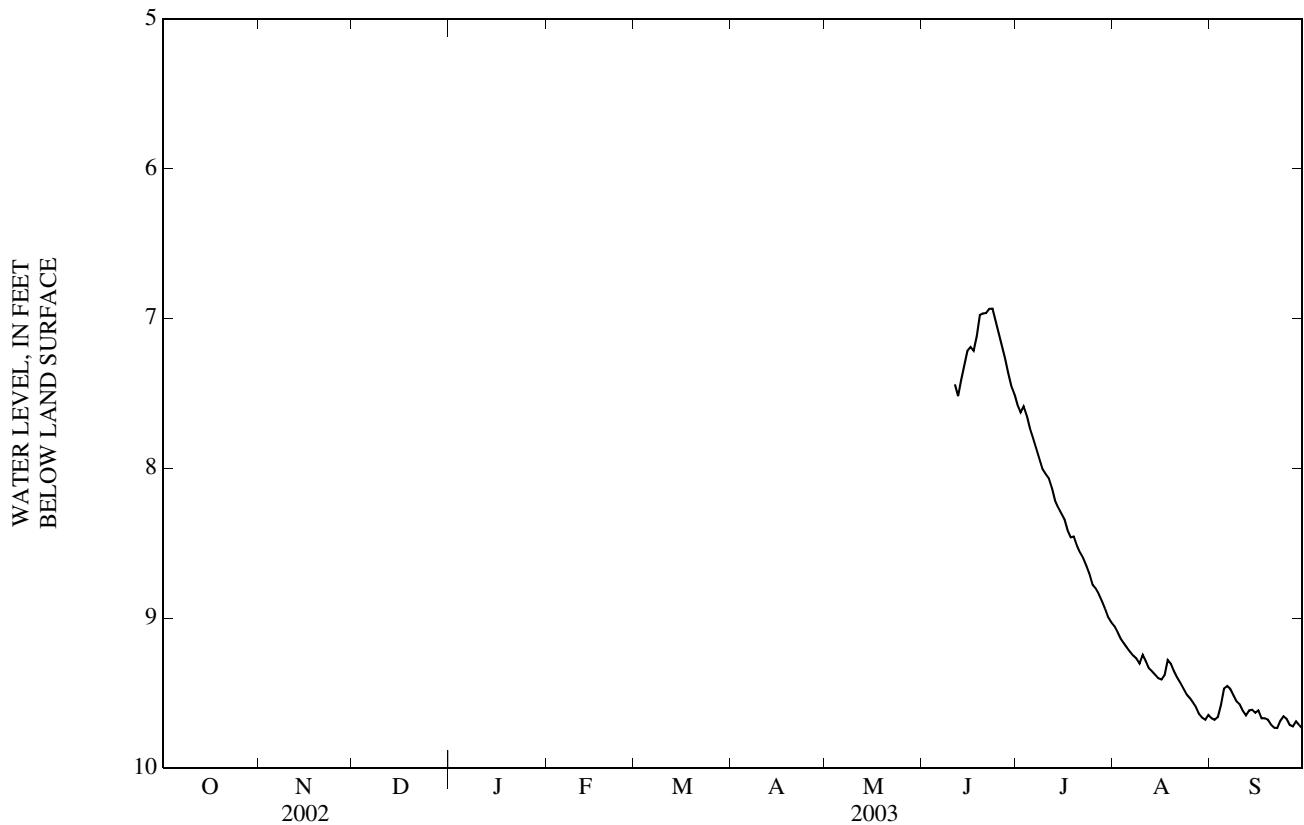
DATUM.--Land surface is 19 ft above NGVD of 1929, from topographic map. Measuring point: Top of flush mount well cover, 0.00 ft above land surface.

PERIOD OF RECORD.--June 2003 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.91 ft below land surface, June. 23, 2003; lowest, 9.76 ft below land surface, Sept. 21, 2003.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	---	---	---	---	---	---	7.73	9.20	9.47
10	---	---	---	---	---	---	---	---	---	8.04	9.25	9.58
15	---	---	---	---	---	---	---	---	7.22	8.30	9.40	9.63
20	---	---	---	---	---	---	---	---	6.97	8.52	9.35	9.71
25	---	---	---	---	---	---	---	---	7.10	8.78	9.53	9.67
EOM	---	---	---	---	---	---	---	---	7.50	9.03	9.65	9.74
MEAN	---	---	---	---	---	---	---	---	---	8.31	9.37	9.64
MAX	---	---	---	---	---	---	---	---	---	9.03	9.68	9.74
MIN	---	---	---	---	---	---	---	---	---	7.57	9.06	9.45



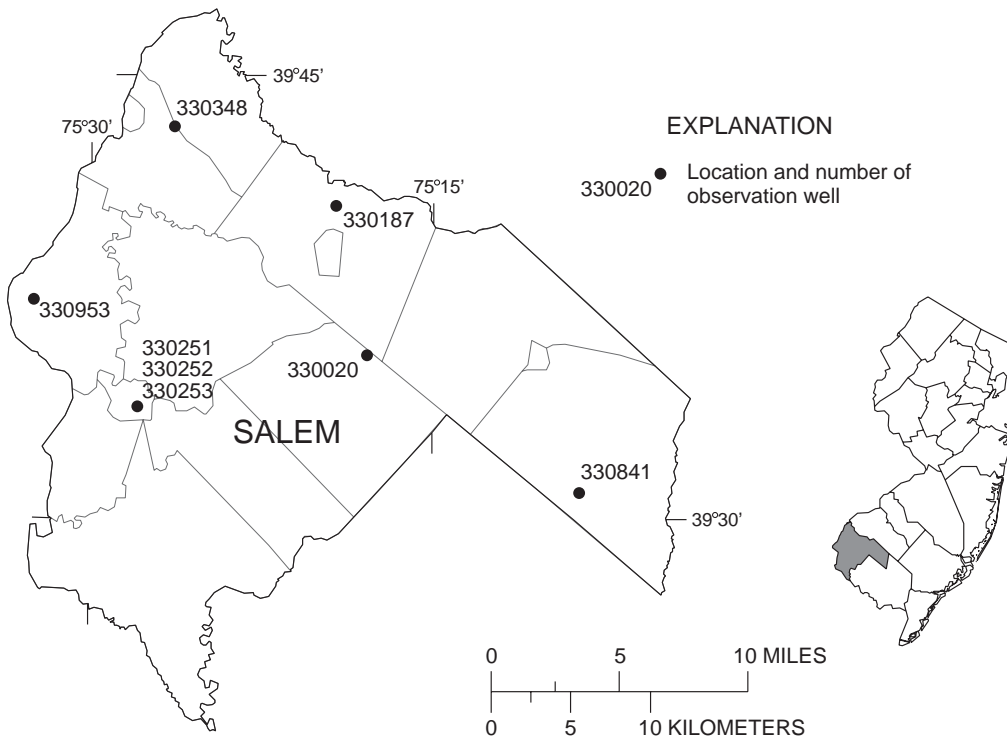
WATER RESOURCES DATA - NEW JERSEY, 2003

SALEM COUNTY

NJ-WRD well number	Local identifier	Township	Well depth	Aquifer	Type of data
330020	HORNER OBS	ALLOWAY TWP	283	MLRW	MANUAL
330187	POINT AIRY OBS	PIESGROVE TWP	672	MRPAL	DAILY
330251	SALEM 1 OBS	SALEM CITY	709	MRPAM	MAXMIN
330252	SALEM 2 OBS	SALEM CITY	96	MLRW	MAXMIN
330253	SALEM 3 OBS	SALEM CITY	340	MRPAU	MAXMIN
330348	PENNS GROVE 14 OBS	CARNEYS POINT TWP	18	MRPAU	MANUAL
330841	PARVIN SP 1 OBS (OW A)	PITTSGROVE TWP	1025	MRPAU	DAILY
330953	ELW-2 KILLCOHOOK	PENNSVILLE TWP	114	MRPAU	DAILY

Aquifer names

- MLRW - Wenonah-Mount Laurel aquifer
- MRPAL - Lower Potomac-Raritan-Magothy aquifer
- MRPAM - Middle Potomac-Raritan-Magothy aquifer
- MRPAU - Upper Potomac-Raritan-Magothy aquifer



GROUND-WATER LEVELS

SALEM COUNTY

NJ-WRD Well Number, 33-0020. Site I.D., 393534075175201. Local I.D., Horner Obs.

LOCATION.--Lat 39°35'34", long 75°17'51", Hydrologic Unit 02040206, near the intersection of Rt. 581 (Commissioners Pike) and Rt. 672 (Yorketown Rd), Alloway Township. Owner: Ephraim Horner.

AQUIFER.--Wenonah-Mount Laurel aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, depth 283 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape.

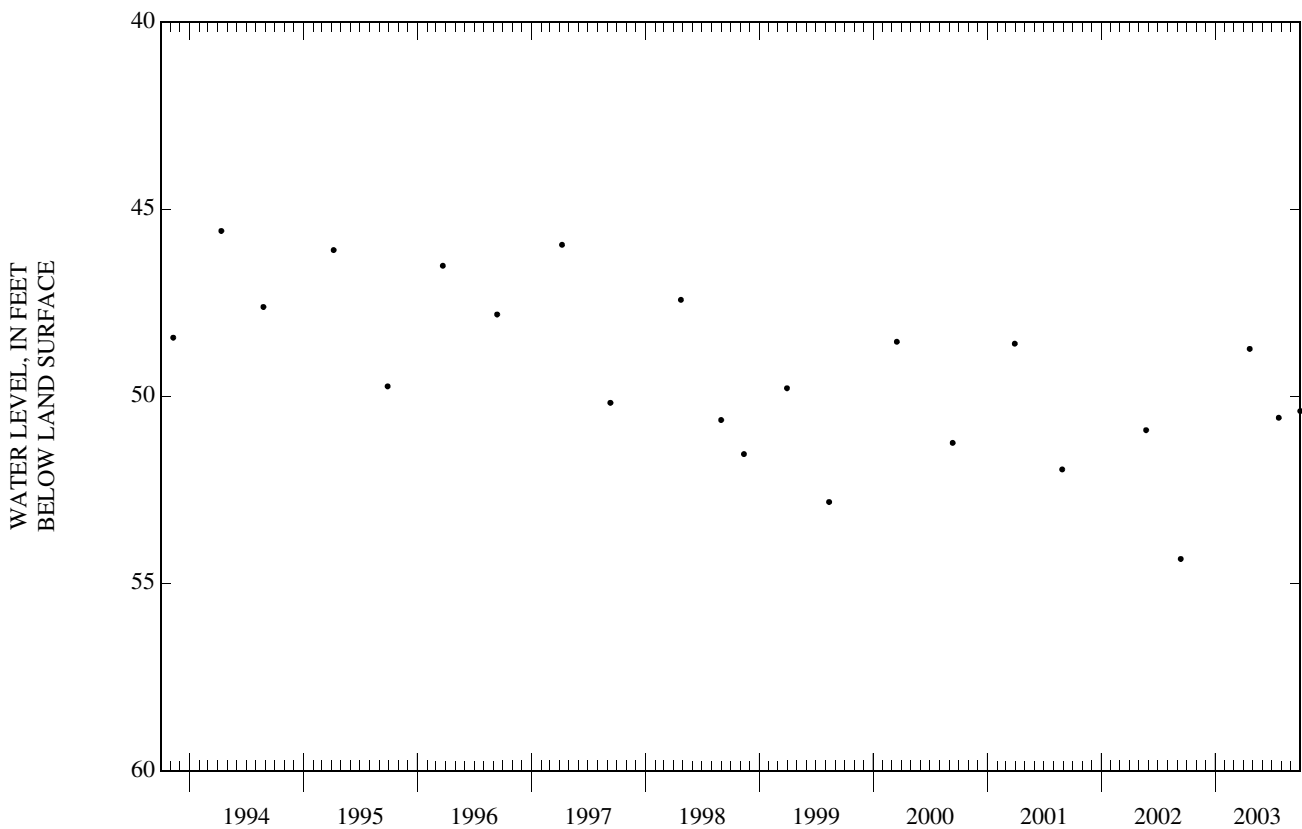
DATUM.--Land surface is 76.75 ft above NGVD of 1929. Measuring point: Top of base of aluminum locking cap, 1.81 ft above land surface.

PERIOD OF RECORD.--June 1959 to current year. Records for 1959 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 38.32 ft below land surface, Apr. 25, 1961; lowest, 54.34 ft below land surface, Sept. 12, 2002.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
APR 21	48.73	JUL 23	50.57	SEP 30	50.39
WATER YEAR 2003 HIGHEST 48.73		APR 21, 2003			
LOWEST 50.57		JUL 23, 2003			



GROUND-WATER LEVELS

SALEM COUNTY--Continued

NJ-WRD Well Number, 33-0187. Site I.D., 394037075191501. Local I.D., Point Airy Obs.

LOCATION.--Lat 39°40'37", long 75°19'13", Hydrologic Unit 02040206, near the intersection of Point Airy Rd. and Woodstown-Swedesboro Rd., 1 mi north of Woodstown Borough boundary, Pilesgrove Township. Owner: U.S. Geological Survey.

AQUIFER.--Lower Potomac-Raritan-Magothy aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 4 in., depth 672 ft, screened 664 to 672 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval. Periodic measurements, Aug. 1975 to Mar. 1977. Water-level recorder, Feb. 1959 to Aug. 1975.

DATUM.--Land surface is 72.97 ft above NGVD of 1929. Measuring point: Top of casing, 1.80 ft above land surface.

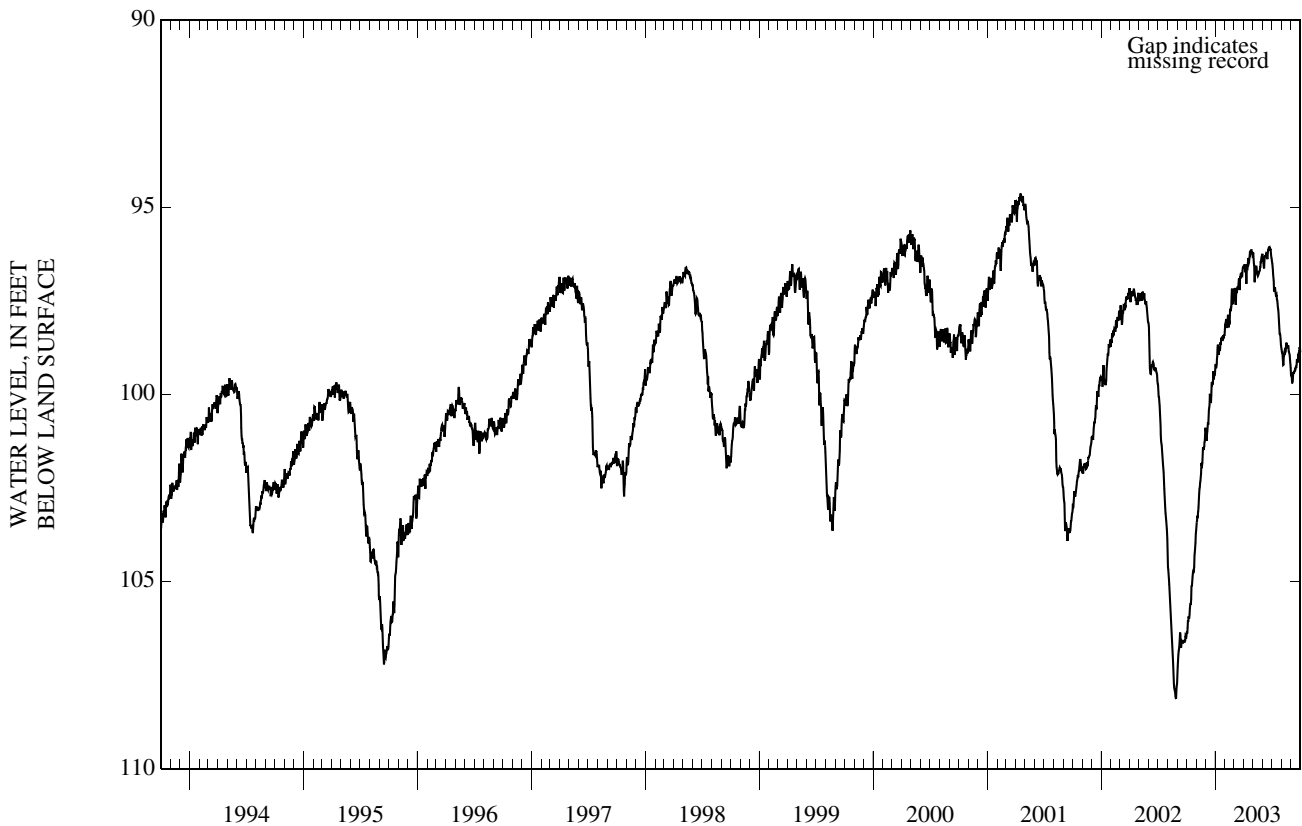
PERIOD OF RECORD.--Feb. 1959 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 78.55 ft below land surface, Mar. 6, 1959; lowest, 108.12 ft below land surface, Aug. 27-28, 2002.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	106.03	103.30	101.07	99.20	98.14	97.15	96.53	96.56	96.59	96.78	99.08	99.68
10	105.87	102.65	100.64	98.74	97.87	97.28	97.04	96.69	96.35	97.20	98.88	99.41
15	105.48	102.21	100.07	98.82	98.05	97.14	96.47	96.78	96.27	97.37	98.77	99.28
20	104.85	101.82	99.73	98.48	97.73	97.15	96.38	96.77	96.13	97.67	98.74	99.13
25	104.60	101.43	99.38	98.52	97.57	96.83	96.22	96.59	96.14	98.29	98.88	98.90
EOM	103.63	100.89	99.36	98.34	97.42	96.61	96.28	96.26	96.37	98.74	99.46	98.87
MEAN	105.22	102.21	100.19	98.74	97.86	97.06	96.46	96.60	96.28	97.53	98.91	99.24
MAX	106.36	103.53	101.23	99.30	98.23	97.60	97.04	97.00	96.63	98.74	99.46	99.70
MIN	103.63	100.89	99.36	98.34	97.17	96.61	96.13	96.21	96.06	96.45	98.61	98.73

WTR YR 2003 MEAN 98.87 HIGH 96.06 JUN 23 LOW 106.36 OCT 1



GROUND-WATER LEVELS

SALEM COUNTY--Continued

NJ-WRD Well Number, 33-0251. Site I.D., 393348075275701. Local I.D., Salem 1 Obs.

LOCATION.--Lat 39°33'48", long 75°27'54", Hydrologic Unit 02040206, about 300 ft south of the intersection of Elm and Magnolia Streets, Salem City. Owner: U.S. Geological Survey.

AQUIFER.--Middle Potomac-Raritan-Magothy aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in., depth 709 ft, screened 699 to 709 ft.

INSTRUMENTATION.--Water-level extremes recorder. Periodic measurements, Oct. 1976 to May 1977. No record, Aug. 1975 to Oct. 1976. Water-level recorder, Oct. 1972 to Aug. 1975. No record, July 1970 to Oct. 1972. Water-level recorder, Nov. 1965 to July 1970.

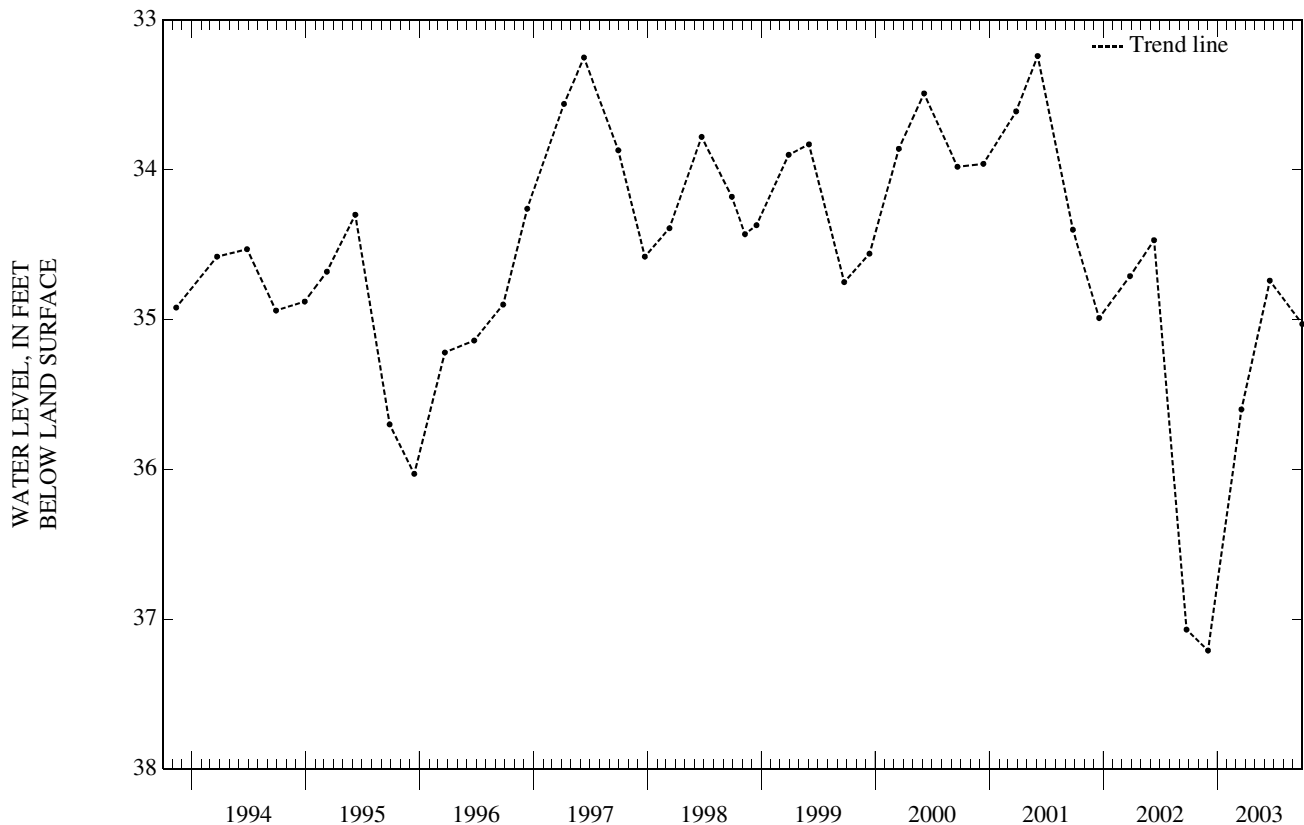
DATUM.--Land surface is 3.00 ft above NGVD of 1929. Measuring point: Front edge of cutout in recorder housing, 2.87 ft above land surface.

PERIOD OF RECORD.--Nov. 1965 to July 1970, Oct. 1972 to Aug. 1975, Oct. 1976 to current year. Records for 1965 to 1970 and for 1972 to 1980 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 14.97 ft below land surface, Dec. 13, 1965; lowest, 37.68 ft below land surface, between Sept. 24 and Dec. 2, 2002.

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

PERIOD	WATER-LEVEL EXTREMES		MEASURED WATER LEVELS	
	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 24, 2002 TO DEC. 2, 2002	36.89	37.68	DEC. 2, 2002	37.21
DEC. 2, 2002 TO MAR. 19, 2003	35.19	37.40	MAR. 19, 2003	35.60
MAR. 19, 2003 TO JUNE 18, 2003	34.67	35.61	JUNE 18, 2003	34.74
JUNE 18, 2003 TO SEPT. 30, 2003	34.61	35.18	SEPT. 30, 2003	35.03



GROUND-WATER LEVELS

SALEM COUNTY--Continued

NJ-WRD Well Number, 33-0252. Site I.D., 393348075275702. Local I.D., Salem 2 Obs.

LOCATION.--Lat 39°33'48", long 75°27'54", Hydrologic Unit 02040206, about 300 ft south of the intersection of Elm and Magnolia Streets, Salem City. Owner: U.S. Geological Survey.

AQUIFER.--Wenonah-Mount Laurel aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 4 in., depth 96 ft, screened 91 to 96 ft.

INSTRUMENTATION.--Water-level extremes recorder. Periodic measurements, Aug. 1975 to May 1977. Water-level recorder, Nov. 1965 to Aug. 1975.

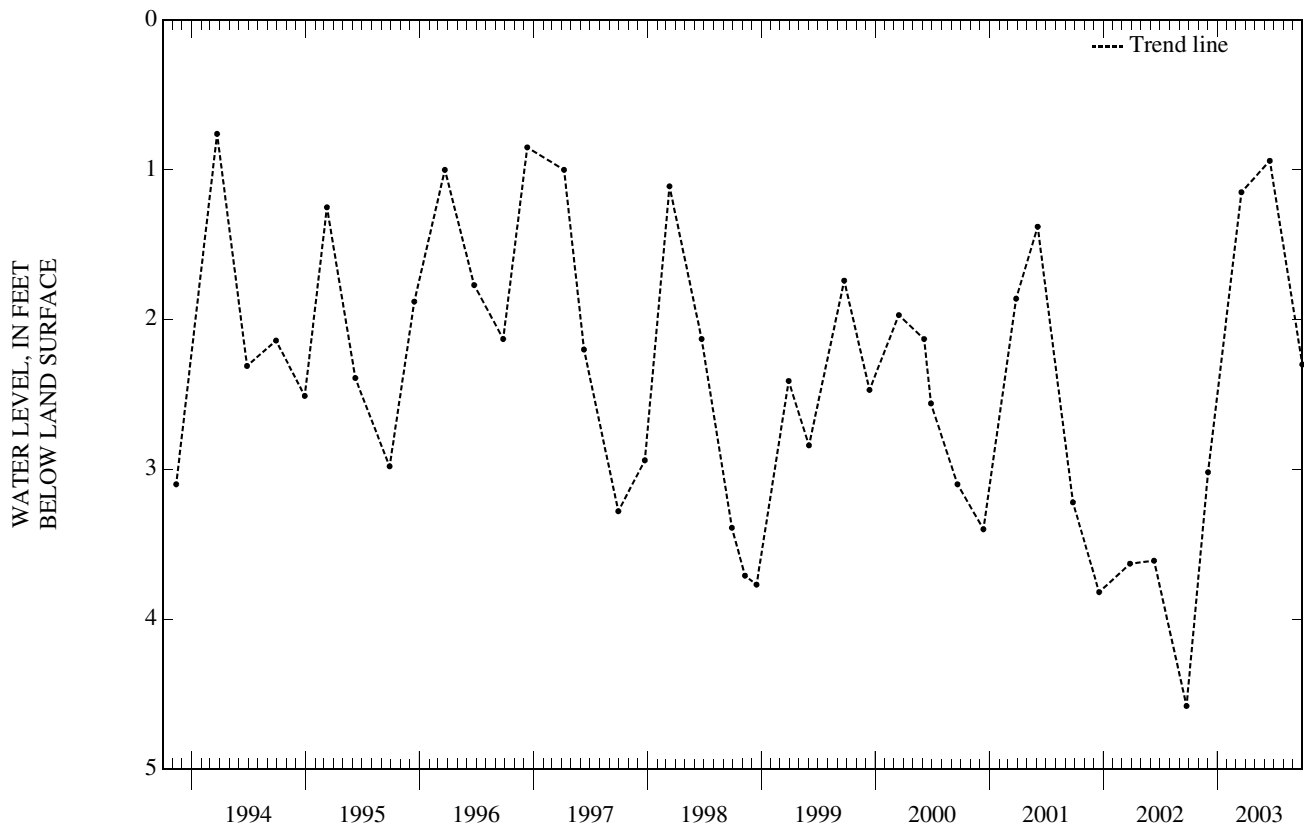
DATUM.--Land surface is 3.25 ft above NGVD of 1929. Measuring point: Front edge of cutout in recorder housing, 2.77 ft above land surface.

PERIOD OF RECORD.--Nov. 1965 to current year. Records for 1965 to 1981 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.86 ft above land surface, between Dec. 11, 1996 and Apr. 8, 1997; lowest, 6.45 ft below land surface, Sept. 9, 1966.

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

PERIOD	WATER-LEVEL EXTREMES		MEASURED WATER LEVELS	
	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 24, 2002 TO DEC. 2, 2002	2.93	4.58	DEC. 2, 2002	3.02
DEC. 2, 2002 TO MAR. 19, 2003	-0.16	3.11	MAR. 19, 2003	1.15
MAR. 19, 2003 TO JUNE 18, 2003	0.58	2.18	JUNE 18, 2003	0.94
JUNE 18, 2003 TO SEPT. 30, 2003	0.43	2.78	SEPT. 30, 2003	2.30





GROUND-WATER LEVELS

SALEM COUNTY--Continued

NJ-WRD Well Number, 33-0253. Site I.D., 393348075275703. Local I.D., Salem 3 Obs.

LOCATION.--Lat 39°33'48", long 75°27'54", Hydrologic Unit 02040206, about 300 ft south of the intersection of Elm and Magnolia Streets, Salem City. Owner: U.S. Geological Survey.

AQUIFER.--Upper Potomac-Raritan-Magothy aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in., depth 340 ft, screened 335 to 340 ft.

INSTRUMENTATION.--Water-level extremes recorder. Periodic measurements, Aug. 1975 to May 1977. Water-level recorder, Nov. 1965 to Aug. 1975.

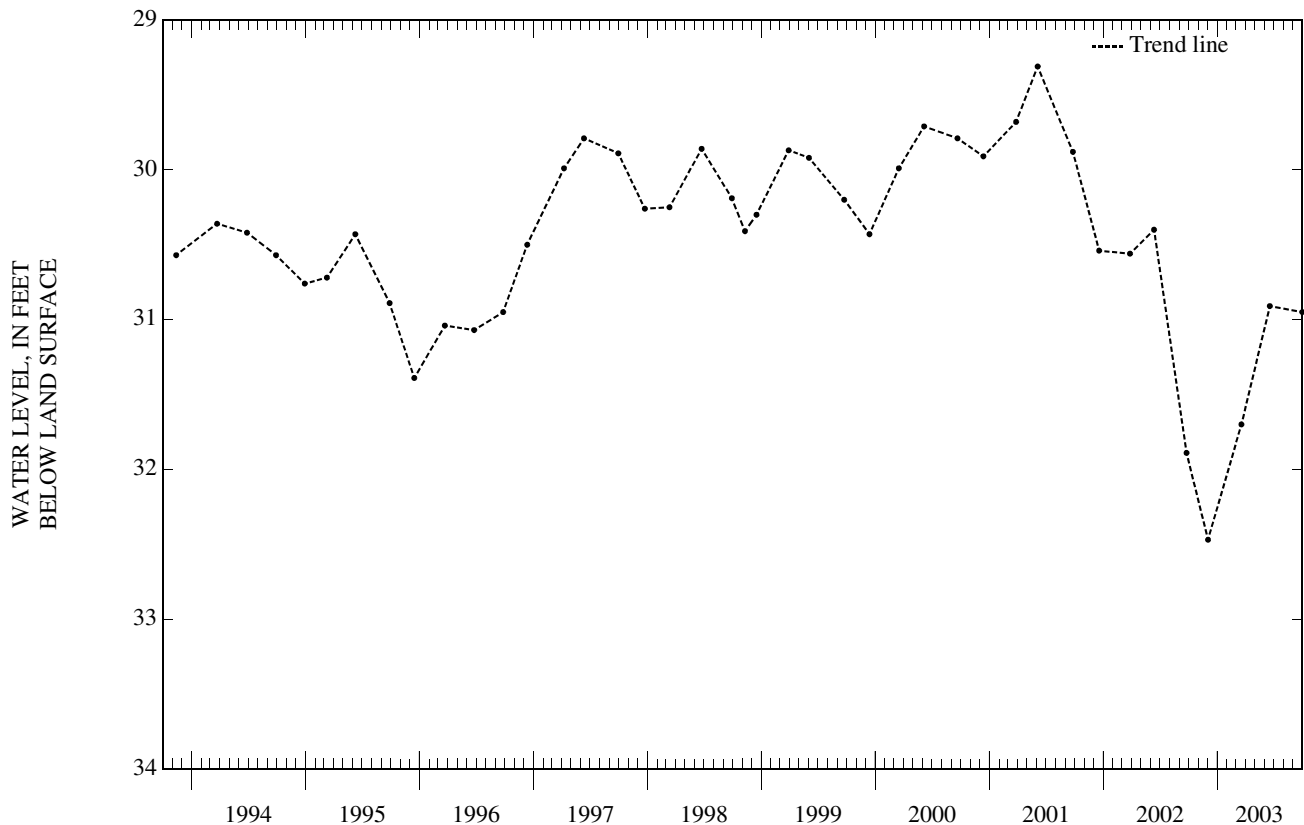
DATUM.--Land surface is 3.00 ft above NGVD of 1929. Measuring point: Front edge of cutout in recorder housing, 2.30 ft above land surface.

PERIOD OF RECORD.--Nov. 1965 to current year. Records for 1965 to 1981 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.28 ft below land surface, Feb. 13, 1966; lowest, 32.67 ft below land surface, between Dec. 2, 2002 and Mar. 19, 2003.

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

PERIOD	WATER-LEVEL EXTREMES		MEASURED WATER LEVELS	
	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 24, 2002 TO DEC. 2, 2002	31.64	32.60	DEC. 2, 2002	32.47
DEC. 2, 2002 TO MAR. 19, 2003	31.28	32.67	MAR. 19, 2003	31.70
MAR. 19, 2003 TO JUNE 18, 2003	30.91	31.73	JUNE 18, 2003	30.91
JUNE 18, 2003 TO SEPT. 30, 2003	30.66	31.17	SEPT. 30, 2003	30.95



GROUND-WATER LEVELS

SALEM COUNTY--Continued

NJ-WRD Well Number, 33-0348. Site I.D., 394317075261901. Local I.D., Penns Grove 14 Obs.

LOCATION.--Lat 39°43'17", long 75°26'18", Hydrologic Unit 02040206, about 110 ft south of the intersection of Pedricktown Rd. and Penns Grove-Auburn Rd., Carneys Point Township. Owner: State of New Jersey - New Jersey Division of Water Policy.

AQUIFER.--Upper Potomac-Raritan-Magothy aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Driven water-table observation well, diameter 1.25 in., depth 18 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape.

DATUM.--Land surface is 25.40 ft above NGVD of 1929. Measuring point: Top of casing, 0.20 ft above land surface.

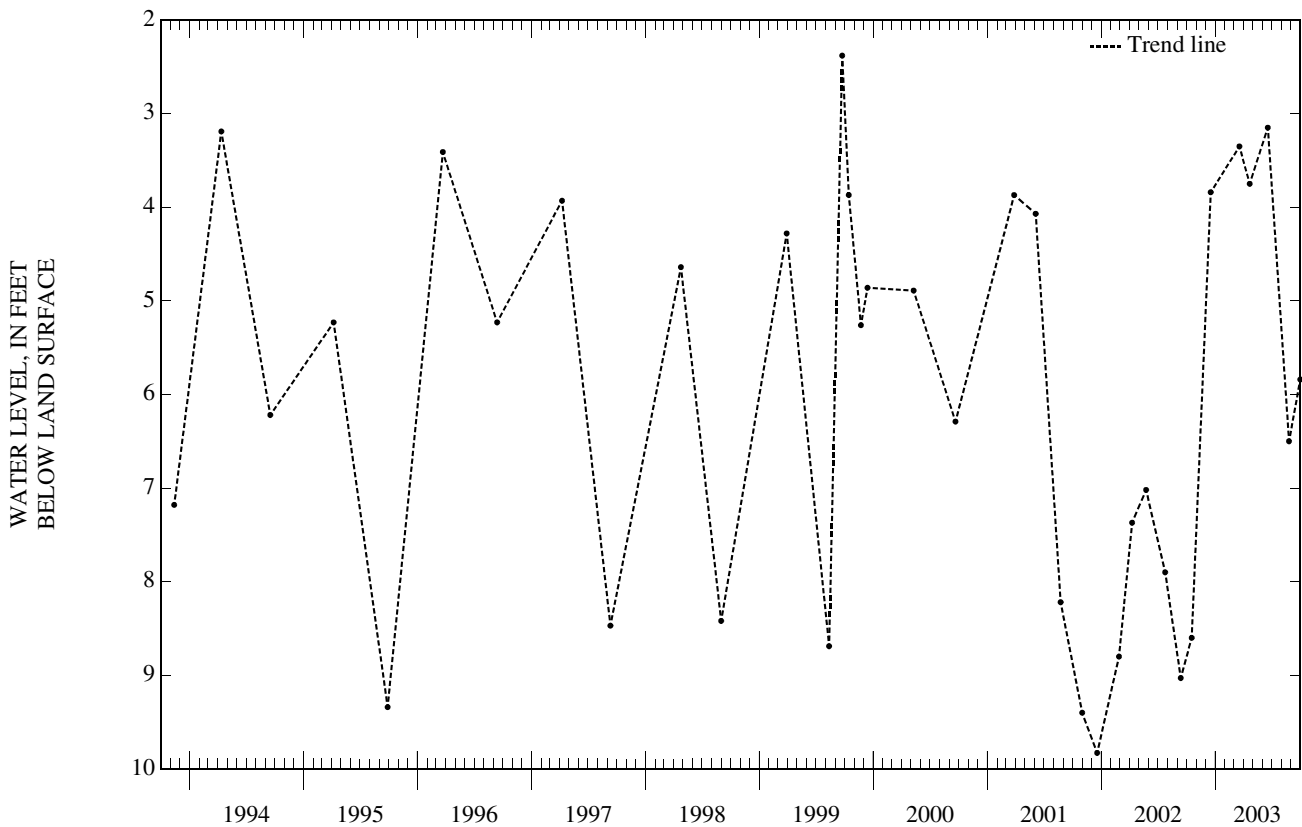
PERIOD OF RECORD.--June 1959 to Mar. 1975, Feb. 1977 to current year. Records for 1959 to 1975 and 1977 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.00 ft below land surface, Feb. 23, 1961; lowest, 9.83 ft below land surface, Dec. 18, 2001.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17	8.60	MAR 19	3.35	JUN 18	3.15	SEP 30	5.84
DEC 17	3.84	APR 21	3.75	AUG 25	6.50		

WATER YEAR 2003 HIGHEST 3.15 JUN 18, 2003 LOWEST 8.60 OCT 17, 2002



GROUND-WATER LEVELS

SALEM COUNTY--Continued

NJ-WRD Well Number 33-0841. Site I.D., 393055075083501. Local I.D., Parvin SP 1 Obs (OW A). NJ Permit Number, 35-17766.

LOCATION.--Lat 39°30'55", long 75°08'34", Hydrologic Unit 02040206, Parvin State Park, Almond Rd (Rt. 540), Pittsgrove Township.  
 Owner: State of New Jersey-DEP/Div of Parks and Forestry.

AQUIFER.--Upper Potomac-Raritan-Magothy aquifer of Cretaceous age.

WELL CHARACTERISTICS.-- Drilled artesian observation well, diameter 4 in., depth 1,025 ft, screened 1,005 to 1,025 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval.

DATUM.-- Land surface is 76.6 ft above NGVD of 1929. Measuring point: Top of recorder shelf, 3.20 ft above land surface.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 119.33 ft below land surface, Aug. 5-6, 2003; lowest, 124.14 ft below land surface, July 6-8, 1997.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	120.19	120.11	119.99	119.91	119.99	119.64	119.74	119.83	119.58	119.52	119.41	119.52
10	120.34	120.02	120.09	119.76	119.87	119.75	119.76	119.69	119.61	119.51	119.48	119.68
15	120.19	120.02	119.82	119.98	120.06	119.85	119.76	119.81	119.53	119.59	119.57	119.57
20	120.10	120.00	119.76	119.87	119.94	119.81	119.81	119.87	119.40	119.58	119.59	119.54
25	120.26	119.98	119.67	120.07	119.80	119.78	119.70	119.73	119.52	119.66	119.57	119.47
EOM	120.05	119.77	119.94	120.05	119.79	119.74	119.78	119.52	119.62	119.68	119.68	119.59
MEAN	120.18	119.98	119.95	119.93	119.89	119.75	119.74	119.73	119.54	119.56	119.54	119.56
MAX	120.36	120.11	120.18	120.11	120.14	119.88	119.92	119.89	119.69	119.68	119.68	119.68
MIN	119.94	119.75	119.66	119.65	119.47	119.62	119.51	119.52	119.40	119.44	119.38	119.40

WTR YR 2003 MEAN 119.78 HIGH 119.38 AUG 6 LOW 120.36 OCT 9



GROUND-WATER LEVELS

SALEM COUNTY--Continued

NJ-WRD Well Number, 33-0953. Site I.D., 393725075322501. Local I.D., ELW-2 Killcohook. NJ Permit Number 30-13726.

LOCATION.--Lat 39°37'25", long 75°32'25", Hydrologic Unit 02040206, Lehigh Rd, Pennsville Township. Owner: US Army Corps of Engineers.

AQUIFER.--Upper Potomac-Raritan-Magothy aquifer of Cretaceous age.

WELL CHARACTERISTICS.-- Drilled artesian observation well, diameter 4 in., depth 114 ft, screened 109 to 114 ft.

INSTRUMENTATION.--Submersible logger pressure transducer--60 minute recording interval.

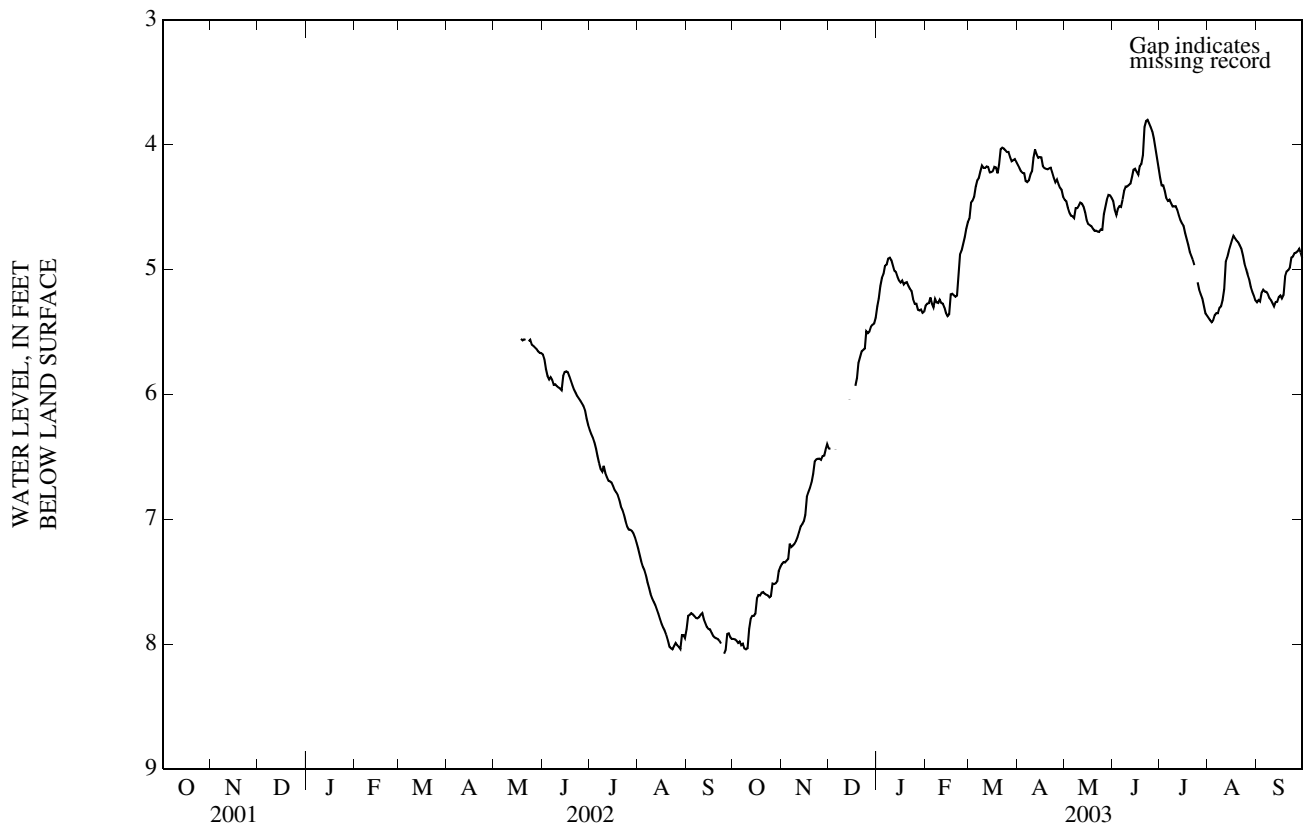
DATUM.-- Land surface is 7.0 ft above NGVD of 1929. Measuring point: Top of outer protective casing, 2.23 ft above land surface.

PERIOD OF RECORD.--May 2002 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.79 ft below land surface, June 23, 2003; lowest, 8.08 ft below land surface, Sept. 25-26, 2002.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

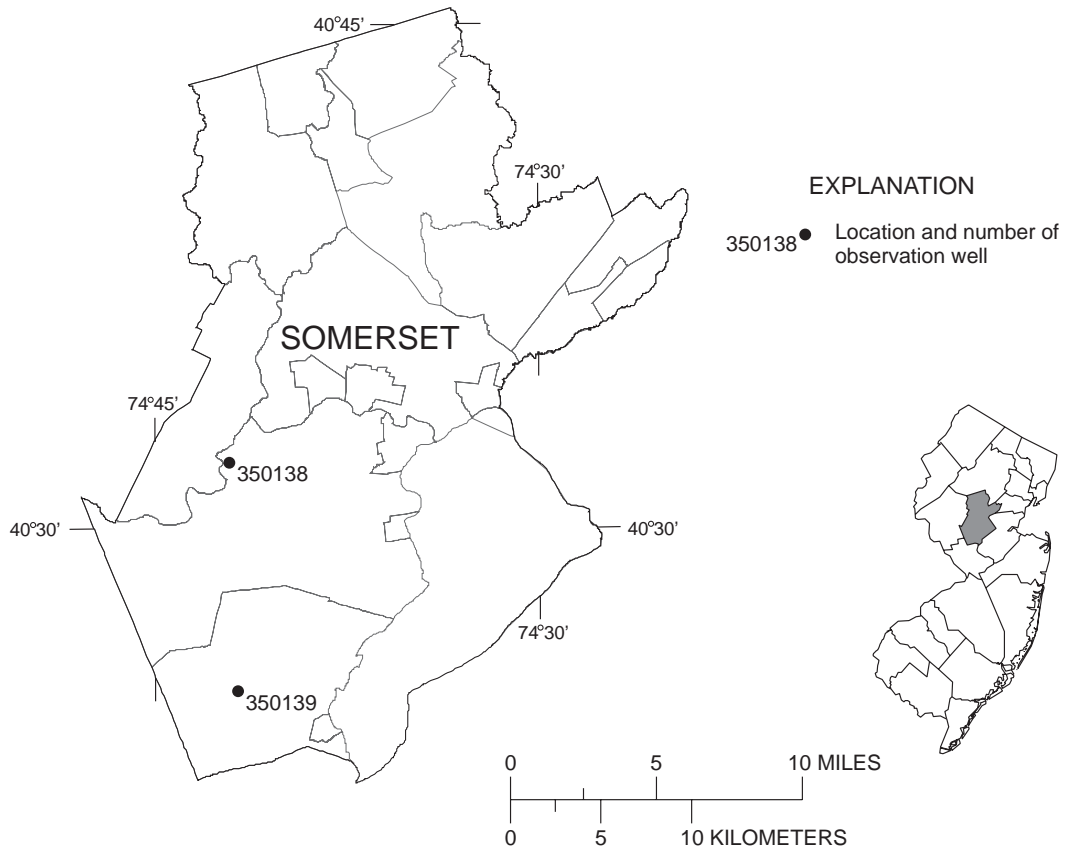
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.98	7.32	6.45	5.03	5.27	4.34	4.23	4.57	4.49	4.43	5.37	5.16
10	8.03	7.17	---	4.92	5.24	4.18	4.21	4.49	4.33	4.49	5.24	5.25
15	7.76	7.02	---	5.09	5.37	4.22	4.10	4.60	4.19	4.63	4.81	5.22
20	7.58	6.71	5.75	5.10	5.22	4.16	4.20	4.69	4.08	4.86	4.78	5.02
25	7.62	6.51	5.49	5.27	4.79	4.06	4.30	4.68	3.86	5.10	5.00	4.87
EOM	7.38	6.40	5.38	5.34	4.62	4.14	4.42	4.43	4.19	5.37	5.25	4.91
MEAN	7.74	6.90	---	5.13	5.15	4.20	4.22	4.55	4.20	---	5.08	5.10
MAX	8.04	7.36	---	5.35	5.37	4.59	4.42	4.70	4.56	---	5.42	5.29
MIN	7.38	6.40	---	4.90	4.62	4.02	4.04	4.40	3.80	---	4.73	4.83



SOMERSET COUNTY

NJ-WRD well number	Local identifier	Township	Well depth	Aquifer	Type of data
350138	NJDEP MW 110	HILLSBOROUGH TWP	36	PSSC	DAILY
350139	NJDEP MW 109	MONTGOMERY TWP	40	PSSC	DAILY

Aquifer names  
 PSSC - Passaic Formation



GROUND-WATER LEVELS

SOMERSET COUNTY

NJ-WRD Well Number, 35-0138. Site I.D., 403200074420601. Local I.D., NJDEP MW 110. NJ Permit Number, 25-60350.

LOCATION.--Lat 40°32'00", long 74°42'06", Hydrologic Unit 02030105, near the edge of River Rd, South Branch, Hillsborough Township.  
 Owner: State of New Jersey - DEP.

AQUIFER.--Passaic Formation of Triassic-Jurassic age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 2 in., depth 36 ft, screened 31 to 36 ft.

INSTRUMENTATION.--Submersible logger pressure transducer--60-minute recording interval.

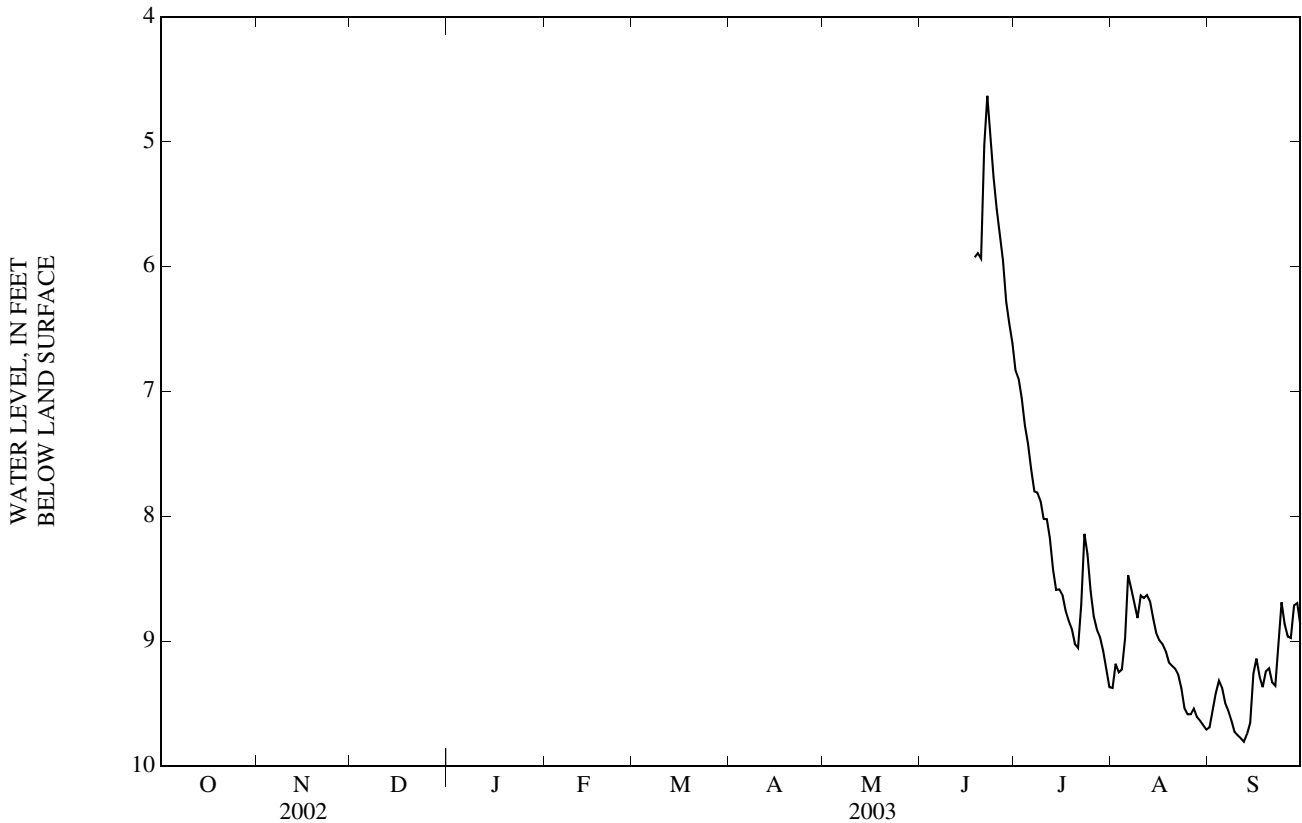
DATUM.--Land surface is 60 ft above NGVD of 1929, from topographic map. Measuring point: Top of protective well casing, 2.22 ft above land surface.

PERIOD OF RECORD.--June 2003 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.43 ft below land surface, June 21, 2003; lowest, 9.86 ft below land surface, Sept. 12, 2003.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	---	---	---	---	---	---	7.42	8.98	9.37
10	---	---	---	---	---	---	---	---	---	8.02	8.63	9.75
15	---	---	---	---	---	---	---	---	---	8.59	8.94	9.26
20	---	---	---	---	---	---	---	---	5.94	9.02	9.20	9.22
25	---	---	---	---	---	---	---	---	5.54	8.60	9.59	8.86
EOM	---	---	---	---	---	---	---	---	6.61	9.37	9.71	8.87
MEAN	---	---	---	---	---	---	---	---	---	8.31	9.13	9.32
MAX	---	---	---	---	---	---	---	---	---	9.37	9.71	9.81
MIN	---	---	---	---	---	---	---	---	---	6.83	8.47	8.69



GROUND-WATER LEVELS

SOMERSET COUNTY--Continued

NJ-WRD Well Number, 35-0139. Site I.D., 402512074414301. Local I.D., NJDEP MW 109. NJ Permit Number, 28-50831.

LOCATION.--Lat 40°25'12", long 74°41'43", Hydrologic Unit 02030105, near the intersection of Blawenburg Bell Mead Rd and Skillman Rd, Montgomery Township. Owner: State of New Jersey - DEP.

AQUIFER.--Passaic Formation of Triassic-Jurassic age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 2 in., depth 40 ft, screened 20 to 40 ft.

INSTRUMENTATION.--Submersible logger pressure transducer--60-minute recording interval.

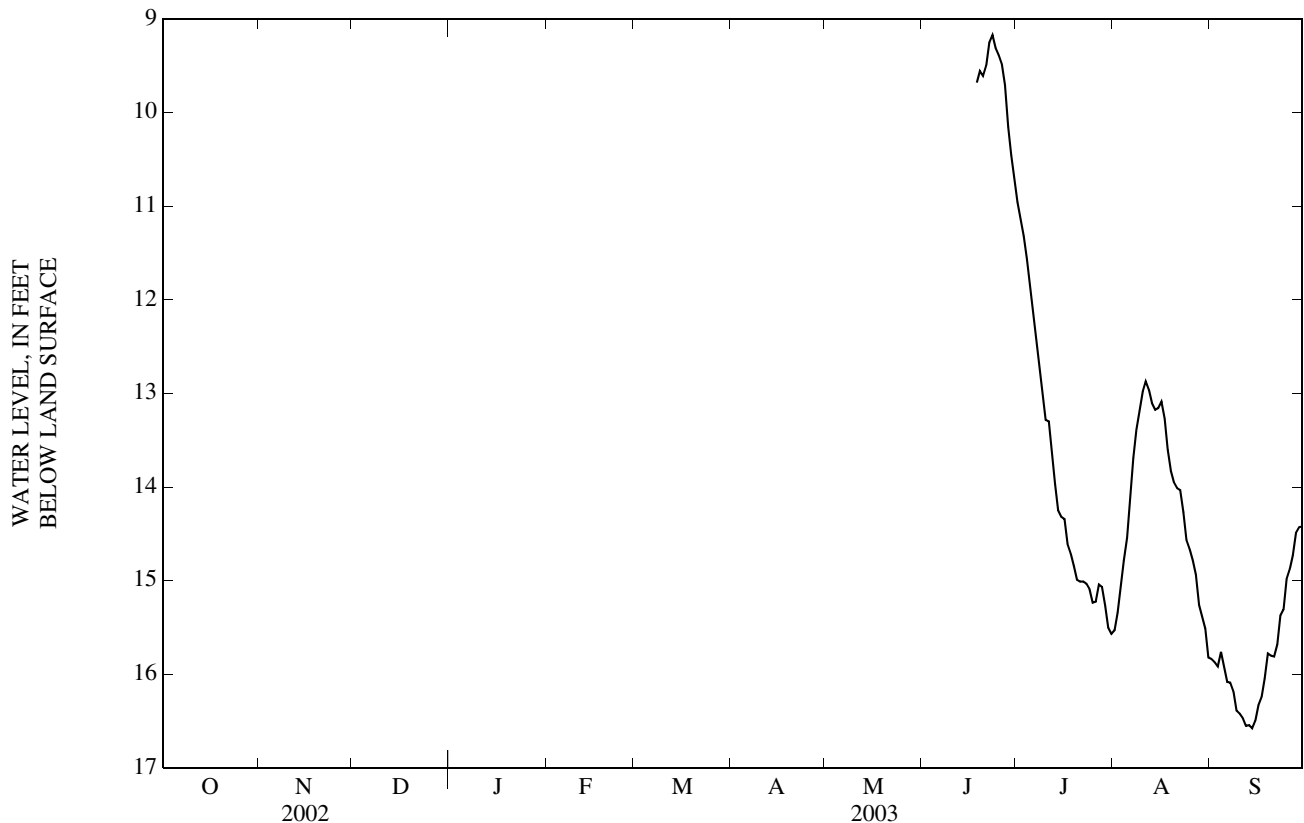
DATUM.--Land surface is 110 ft above NGVD of 1929, from topographic map. Measuring point: Top of protective well casing, 2.05 ft above land surface.

PERIOD OF RECORD.--June 2003 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 9.13 ft below land surface, June 23, 2003; lowest, 16.60 ft below land surface, Sept. 14, 2003.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	---	---	---	---	---	---	11.85	14.54	15.92
10	---	---	---	---	---	---	---	---	---	13.28	12.98	16.42
15	---	---	---	---	---	---	---	---	---	14.32	13.16	16.49
20	---	---	---	---	---	---	---	---	9.61	14.99	13.95	15.80
25	---	---	---	---	---	---	---	---	9.38	15.24	14.66	14.98
EOM	---	---	---	---	---	---	---	---	10.70	15.57	15.82	14.42
MEAN	---	---	---	---	---	---	---	---	---	13.89	14.15	15.78
MAX	---	---	---	---	---	---	---	---	---	15.57	15.82	16.58
MIN	---	---	---	---	---	---	---	---	---	10.96	12.87	14.42



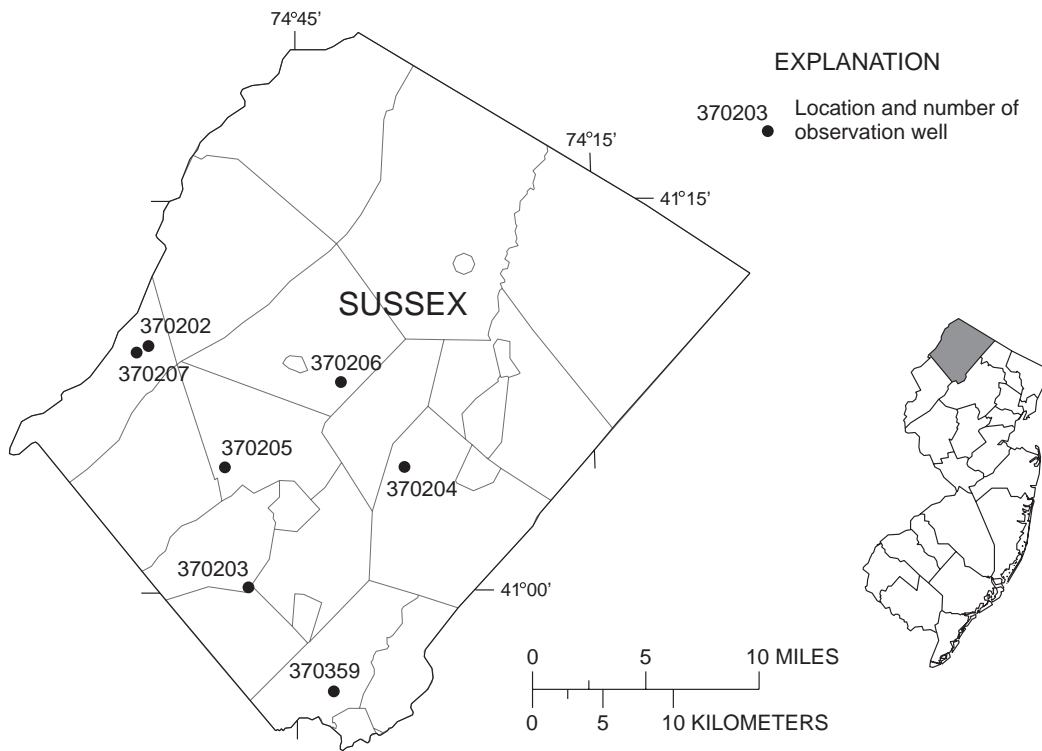
WATER RESOURCES DATA - NEW JERSEY, 2003

SUSSEX COUNTY

NJ-WRD well number	Local identifier	Township	Well depth	Aquifer	Type of data
370202	TAYLOR OBS	WALPACK TWP	95	BDVL	DAILY
370203	WHITTINGHAM 19 OBS	FREDON TWP	500	ALNN	DAILY
370204	SPARTA TWP 6 OBS	SPARTA TWP	143	SFDF	DAILY
370205	SWARTSWOOD PARK 5 OBS	HAMPTON TWP	148	ALNN	DAILY
370206	FAIRGROUNDS 7 OBS	FRANKFORD TWP	80	SFDF	DAILY
370207	WALPACK TWP 4 OBS	WALPACK TWP	55	SFDF	DAILY
370359	BYRAM TWP PW-1 OBS	BYRAM TWP	100	PCMB	DAILY

Aquifer names

- ALNN - Allentown Dolomite
- BDVL - Bossardville Limestone
- PCMB - Precambrian Erathem
- SFDF - Stratified drift





GROUND-WATER LEVELS

SUSSEX COUNTY

NJ-WRD Well Number, 37-0202. Site I.D., 410914074540401. Local I.D., Taylor Obs.

LOCATION.--Lat 41°09'14", long 74°53'03", Hydrologic Unit 02040104, near Walpack Center, Delaware Water Gap National Recreation Area, Walpack Township. Owner: National Park Service.

AQUIFER.--Bossardville Limestone of Silurian age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 95 ft, open hole 42 to 95 ft.

INSTRUMENTATION.--Data collection platform with satellite telemetry--60 minute recording interval. Water-level recorder, June 1988 to May 2001.

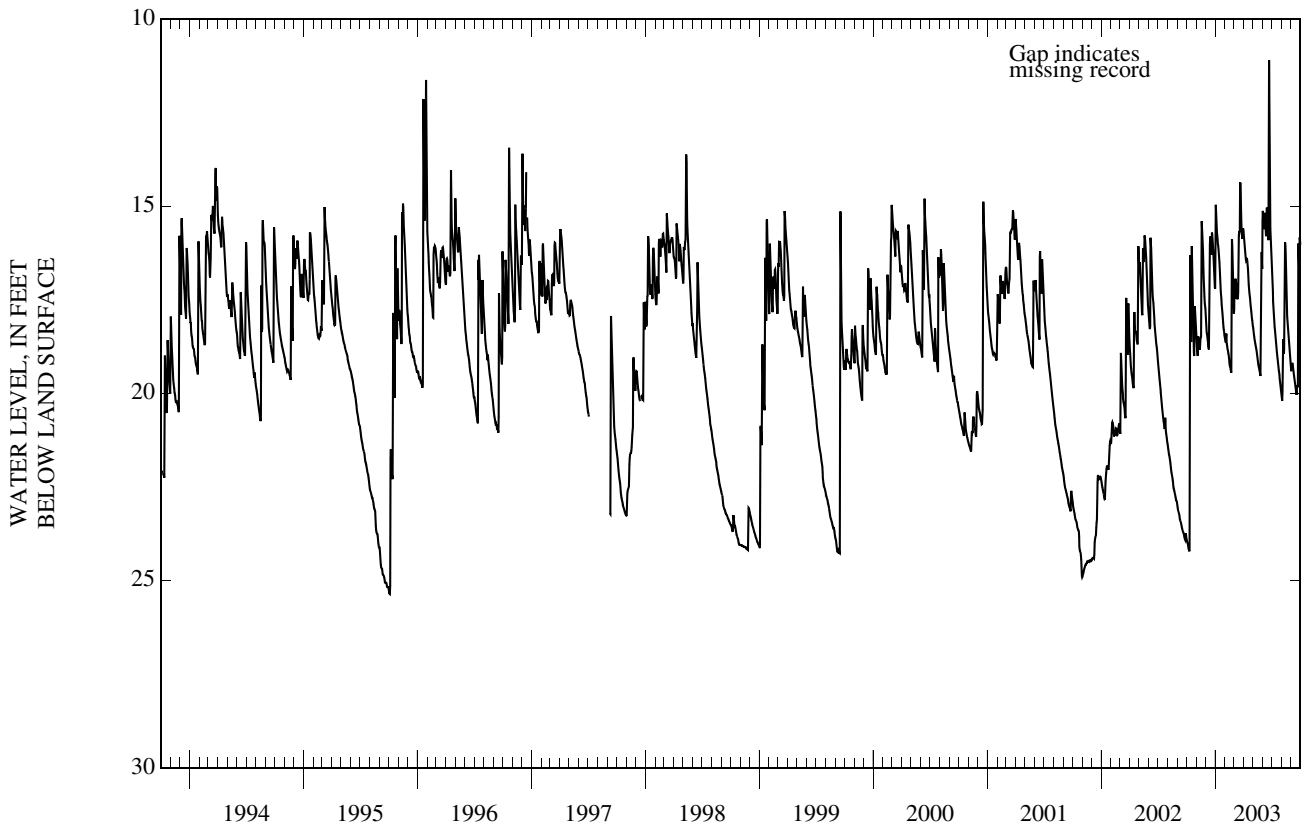
DATUM.--Land surface is 480 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.73 ft above land surface.

PERIOD OF RECORD.--June 1988 to current year. Records for 1988 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 9.78 ft below land surface, Jan. 27, 1996; lowest, 25.36 ft below land surface, Oct. 3-5, 1995.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	24.03	19.00	18.41	15.55	18.40	17.46	16.03	18.48	15.53	17.54	18.96	19.18
10	24.22	18.62	18.79	16.06	18.85	17.05	16.42	18.72	15.52	18.24	16.83	19.52
15	18.63	18.51	15.81	16.69	19.18	17.28	16.67	19.01	15.04	18.72	16.66	19.86
20	17.97	15.79	16.09	17.48	19.41	15.65	17.31	19.29	15.91	19.16	18.09	19.78
25	19.00	17.07	16.17	18.05	16.51	15.50	17.74	19.53	15.02	19.51	18.75	16.19
EOM	18.43	17.74	17.20	18.50	17.66	15.59	18.15	16.68	16.42	19.97	19.33	16.03
MEAN	20.03	17.72	17.13	16.91	18.46	16.39	16.88	18.58	15.23	18.66	18.31	18.73
MAX	24.22	19.00	18.82	18.50	19.44	17.86	18.15	19.53	16.42	19.97	20.20	20.04
MIN	16.06	15.40	15.70	14.96	15.88	14.37	15.65	16.23	11.10	16.65	15.97	15.84
WTR YR 2003	MEAN 17.75	HIGH 11.10	JUN 22	LOW 24.22	OCT 10							



GROUND-WATER LEVELS

SUSSEX COUNTY--Continued

NJ-WRD Well Number, 37-0203. Site I.D., 410005074473801. Local I.D., Whittingham 19 Obs. NJ Permit Number, 21-07796-1.

LOCATION.--Lat 41°00'13", long 74°47'25", Hydrologic Unit 02040105, in Whittingham Wildlife Refuge, County Rt. 611 (Springdale-Grendell Rd.), Fredon Township. Owner: State of New Jersey.

AQUIFER.--Allentown Dolomite of Cambrian-Ordovician age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 500 ft, open hole 50 to 500 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval. Periodic measurements, Apr. 1991 to July 1992.

DATUM.--Land surface is 648.5 ft above NGVD of 1929. Measuring point: Top of recorder shelf, 2.30 ft above land surface.

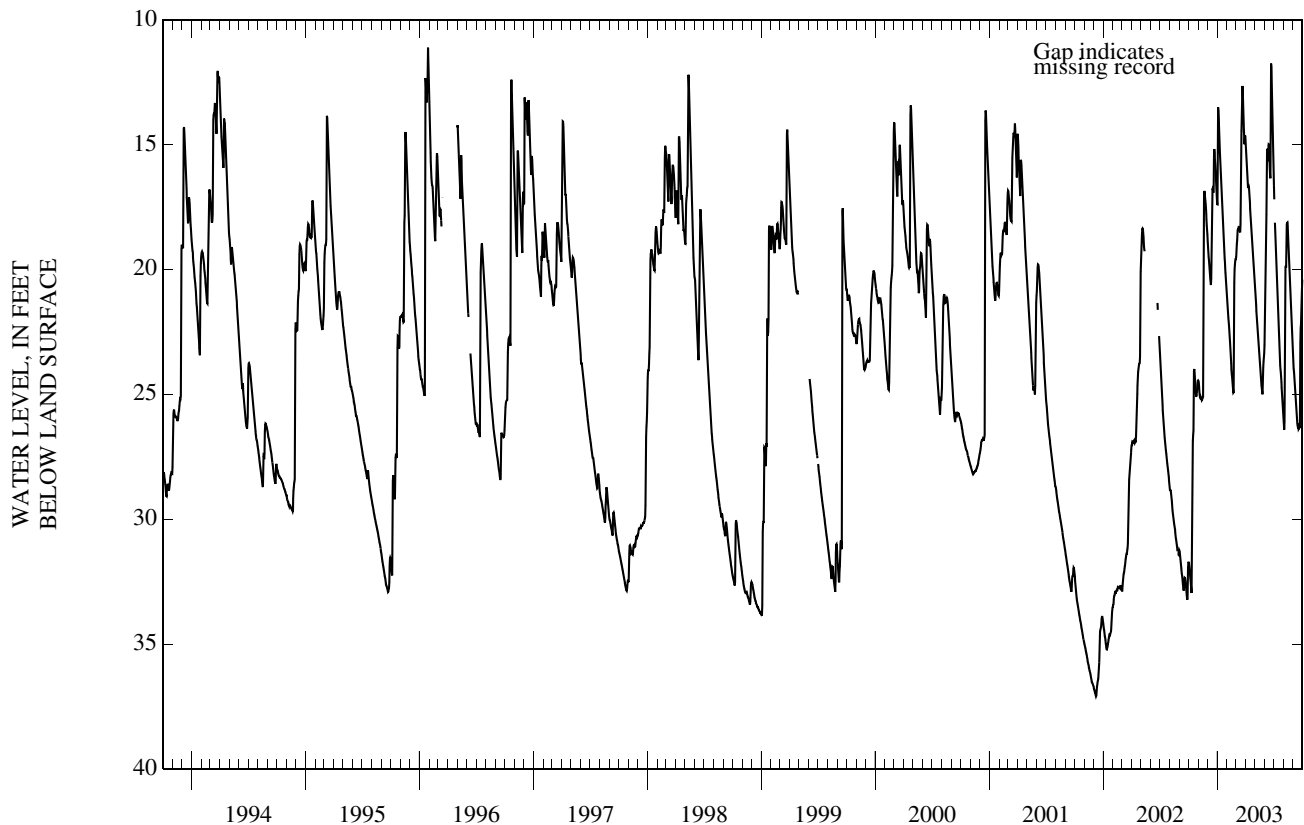
REMARKS.--Water level is affected by nearby pumping.

PERIOD OF RECORD.--Apr. 1991 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 10.76 ft below land surface, Jan. 28, 1996; lowest, 37.16 ft below land surface, Dec. 8, 2001.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	32.16	25.01	19.63	13.97	21.93	18.82	15.76	21.43	18.94	18.53	23.62	24.35
10	32.96	25.14	20.49	15.49	22.85	18.31	16.67	22.52	15.24	20.18	18.97	25.44
15	26.62	25.15	17.30	17.13	23.99	18.51	17.31	23.51	14.99	21.68	18.44	26.25
20	24.13	16.85	16.80	18.62	24.79	14.03	18.52	24.35	16.34	23.53	19.84	26.25
25	25.09	17.53	15.78	19.74	19.98	13.61	19.42	24.99	12.99	24.52	21.28	22.34
EOM	24.44	18.60	17.38	20.83	19.58	14.63	20.41	23.36	16.10	25.88	23.45	20.40
MEAN	27.76	21.68	17.93	17.38	22.58	16.52	17.64	23.18	16.03	---	21.09	24.57
MAX	32.96	25.23	20.61	20.83	24.93	19.57	20.41	24.99	23.02	---	26.41	26.39
MIN	23.98	16.85	15.17	13.49	19.58	12.64	14.78	20.59	11.74	---	18.11	20.40



GROUND-WATER LEVELS

SUSSEX COUNTY--Continued

NJ-WRD Well Number, 37-0204. Site I.D., 410431074395801. Local I.D., Sparta Twp 6 Obs. NJ Permit Number, 22-28915-1.

LOCATION.--Lat 41°04'49", long 74°39'31", Hydrologic Unit 02040105, on the north side of the soccer fields off White Lake Rd., Germany Flats, Sparta Township. Owner: State of New Jersey.

AQUIFER.--Stratified drift of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in., depth 143 ft, screened 123 to 143 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval. Periodic measurements, Aug. 1991 to May 1998.

DATUM.--Land surface is 621.7 ft above NGVD of 1929. Measuring point: Top of shelf, 2.80 ft above land surface.

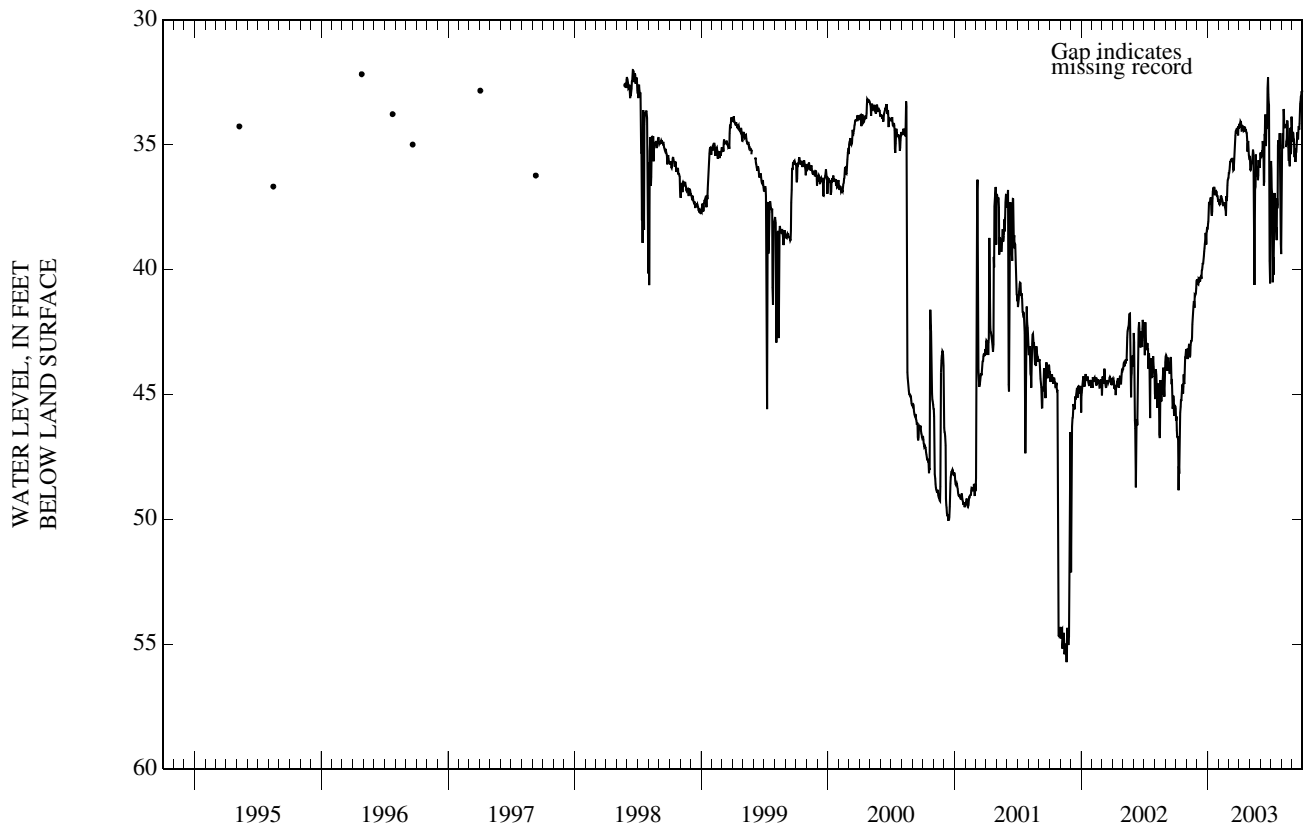
REMARKS.--Water level is affected by nearby pumping.

PERIOD OF RECORD.--Aug. 1991 to Sept. 1993, May 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 31.84 ft below land surface, June 19, 1998; lowest, 56.09 ft below land surface, Nov. 19, 2001.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	46.71	43.16	40.40	37.32	37.41	35.88	34.07	35.98	35.38	36.98	35.05	34.74
10	48.18	43.51	40.40	37.27	37.16	35.61	34.41	35.41	35.06	38.40	34.24	35.69
15	45.20	42.85	40.01	36.88	37.34	36.02	34.43	40.62	33.78	38.46	34.87	34.73
20	44.61	41.46	39.45	36.77	37.56	34.87	34.38	36.15	34.34	37.54	34.90	34.25
25	44.59	41.03	38.53	36.87	37.07	34.54	35.27	36.42	33.28	35.09	35.86	33.27
EOM	43.29	40.42	38.36	37.28	36.38	34.34	35.55	35.65	37.31	39.38	34.17	32.83
MEAN	45.42	42.25	39.67	37.19	37.22	35.27	34.52	36.21	35.05	37.30	---	34.39
MAX	48.84	43.59	40.59	38.17	37.83	36.30	35.55	40.62	40.55	40.51	---	35.69
MIN	43.18	40.42	38.36	36.68	36.38	34.25	34.07	35.19	32.30	34.53	---	32.83



GROUND-WATER LEVELS

SUSSEX COUNTY--Continued

NJ-WRD Well Number, 37-0205. Site I.D., 410449074483301. Local I.D., Swartswood Park 5 Obs. NJ Permit Number, 21-07722-3.

LOCATION.--Lat 41°04'49", long 74°48'36", Hydrologic Unit 02040105, in Swartswood State Park, about 700 ft south of the intersection of County Rt. 622 (Swartswood Rd.) and Chandler Rd., Hampton Township. Owner: State of New Jersey.

AQUIFER.--Allentown Dolomite of Cambrian-Ordovician age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 148 ft, open hole 50 to 148 ft.

INSTRUMENTATION.--Data collection platform with satellite telemetry--60 minute recording interval. Water-level recorder, July 1992 to Aug. 2002. Periodic measurements, Apr. 1991 to July 1992.

DATUM.--Land surface is 514.1 ft above NGVD of 1929. Measuring point: Top of casing, 2.50 ft above land surface.

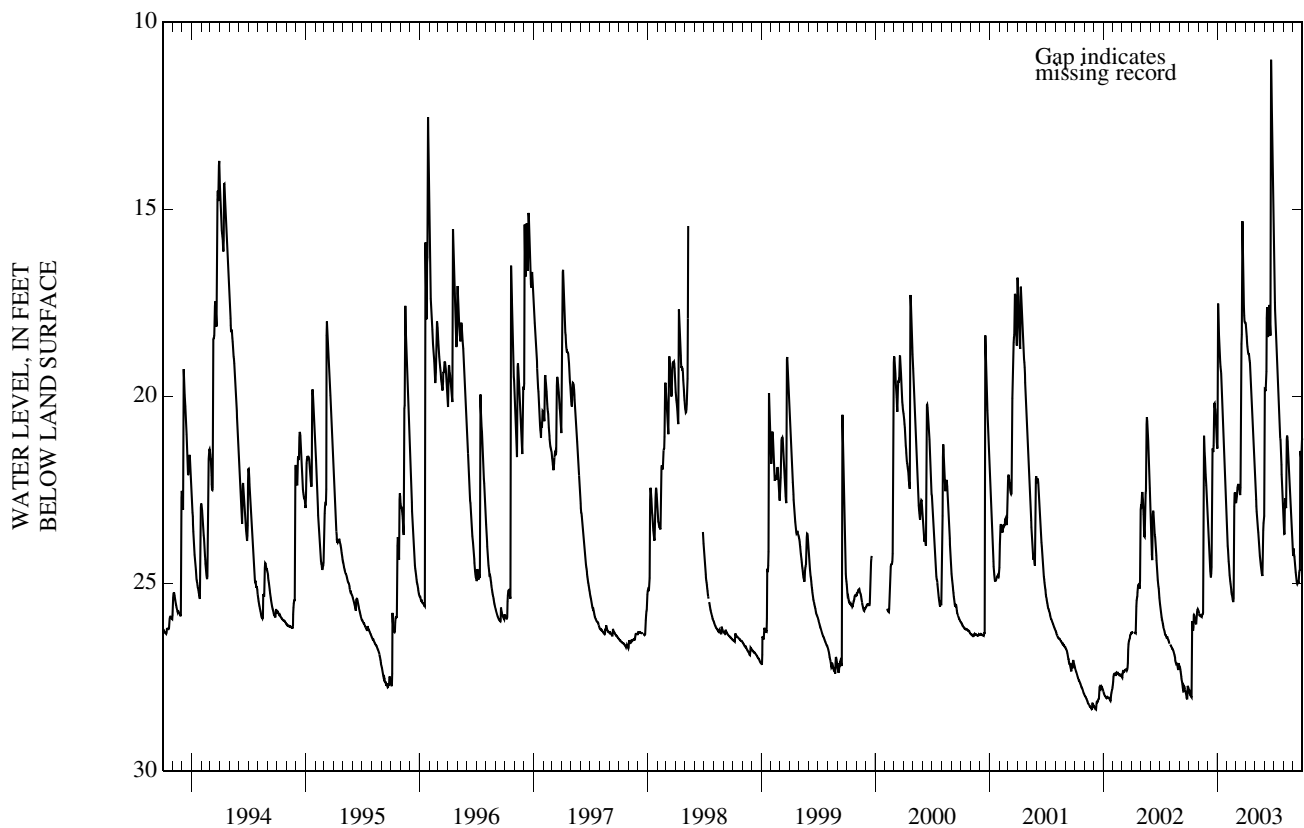
PERIOD OF RECORD.--Apr. 1991 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 10.78 ft below land surface, Jun. 22, 2003; lowest, 28.37 ft below land surface, Dec. 8, 2001.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	27.89	25.86	23.99	18.09	24.24	22.56	18.40	22.76	19.76	17.69	22.96	24.29
10	28.03	25.87	24.76	19.08	24.86	22.39	18.86	23.42	17.90	18.64	21.62	24.78
15	26.26	25.81	22.11	19.74	25.22	22.63	19.10	24.03	17.70	19.61	21.35	24.99
20	25.90	21.28	21.31	20.82	25.46	18.35	19.89	24.52	18.38	20.85	22.28	24.71
25	26.08	22.23	20.35	22.11	22.60	16.83	20.80	24.79	14.44	21.83	23.26	21.52
EOM	25.70	22.98	21.36	23.47	22.70	18.02	21.76	23.20	16.68	23.20	24.18	21.12
MEAN	26.62	24.13	22.41	20.37	24.42	20.18	19.54	23.66	17.38	19.95	22.67	23.86
MAX	28.03	25.88	24.83	23.47	25.49	22.83	21.76	24.79	21.62	23.20	24.18	25.01
MIN	25.68	21.05	20.18	17.52	22.57	15.32	18.03	21.94	11.01	16.90	21.05	21.12

WTR YR 2003 MEAN 22.09 HIGH 11.01 JUN 22 LOW 28.03 OCT 10



GROUND-WATER LEVELS

SUSSEX COUNTY--Continued

NJ-WRD Well Number, 37-0206. Site I.D., 410804074424401. Local I.D., Fairgrounds 7 Obs. NJ Permit Number, 22-28916-0.

LOCATION.--Lat 41°08'04", long 74°42'43", Hydrologic Unit 02020007, at Sussex County Fairgrounds, Frankford Township. Owner: State of New Jersey.

AQUIFER.--Stratified drift of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in., depth 80 ft, screened 59 to 80 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval. Periodic measurements Apr. 1991 to July 1992.

DATUM.--Land surface is 528.5 ft above NGVD of 1929. Measuring point: Top of recorder shelf, 2.70 ft above land surface.

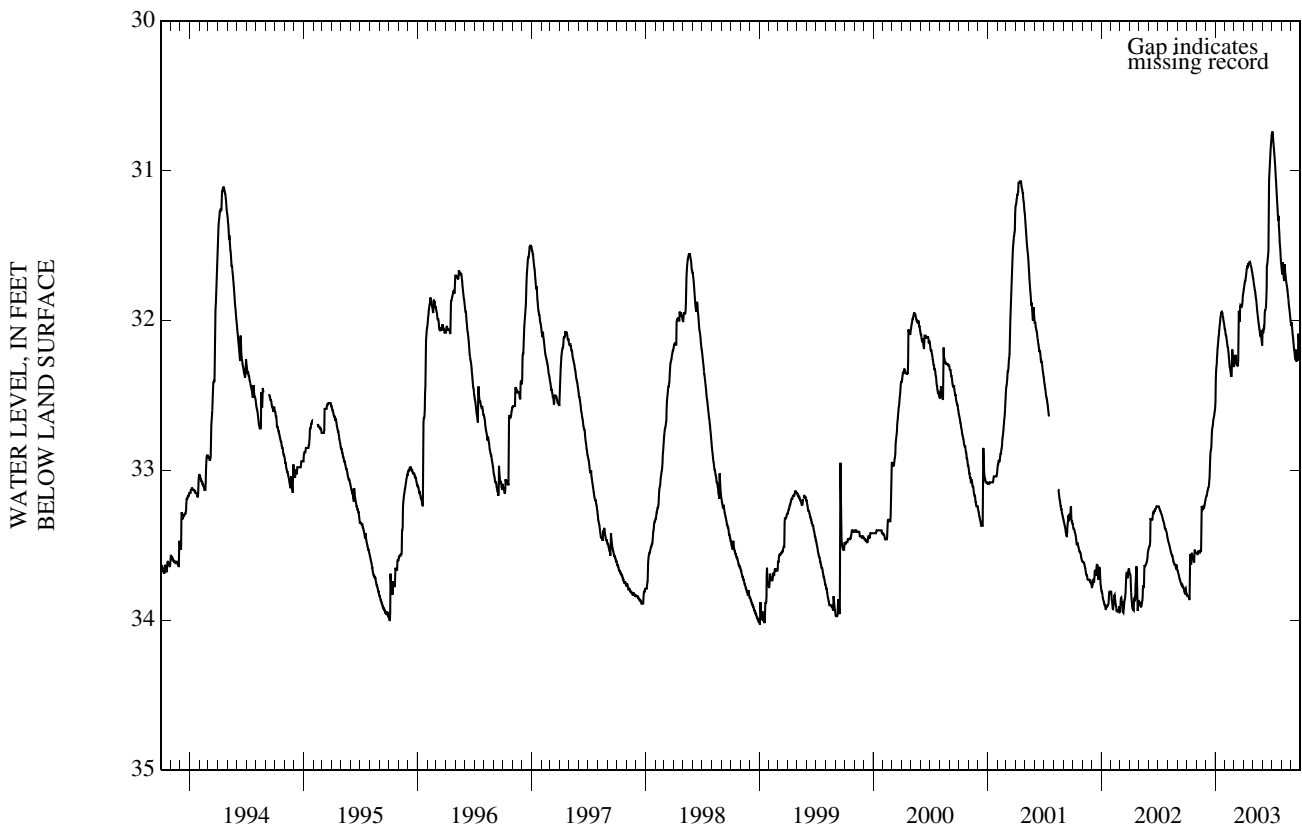
REMARKS.--Removal of land in the area surrounding the well during the fall of 1998 resulted in the lowering of land surface at this site by 5 feet. The removal of a section of casing resulted in a new measuring point 6.2 feet lower than the previous one. Water-level data prior to the change, including extremes, and well and screen depths, have to correspond to the new land surface.

PERIOD OF RECORD.--Apr. 1991 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 30.74 ft below land surface, July 2-3, 2003; lowest, 34.04 ft below land surface, Jan. 3, 1999.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	33.84	33.56	33.16	32.29	32.11	32.28	31.74	31.77	32.05	30.78	31.61	32.07
10	33.86	33.54	33.11	32.14	32.18	32.29	31.68	31.84	31.93	30.92	31.62	32.19
15	33.63	33.54	32.92	32.03	32.29	32.27	31.63	31.94	31.64	31.11	31.72	32.19
20	33.58	33.26	32.79	31.94	32.37	32.01	31.61	32.03	31.54	31.30	31.80	32.22
25	33.61	33.25	32.67	31.97	32.23	31.91	31.64	32.11	30.94	31.44	31.91	32.11
EOM	33.55	33.20	32.58	32.06	32.29	31.82	31.70	32.17	30.77	31.63	32.03	32.13
MEAN	33.67	33.41	32.91	32.10	32.23	32.10	31.67	31.94	31.56	31.14	31.78	32.16
MAX	33.86	33.56	33.19	32.54	32.38	32.31	31.81	32.17	32.08	31.63	32.03	32.27
MIN	33.53	33.20	32.58	31.94	32.06	31.82	31.61	31.71	30.77	30.74	31.61	32.01
WTR YR 2003	MEAN 32.22		HIGH 30.74 JUL 2		LOW 33.86 OCT 9							



GROUND-WATER LEVELS

SUSSEX COUNTY--Continued

NJ-WRD Well Number, 37-0207. Site I.D., 410928074522801. Local I.D., Walpack Twp. 4 Obs. NJ Permit Number, 21-07721-5.

LOCATION.--Lat 41°09'28", long 74°52'27", Hydrologic Unit 02040104, off Main St., about 800 ft east of Flat Brook, Walpack Center, Walpack Township. Owner: State of New Jersey.

AQUIFER.--Stratified drift of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in., depth 55 ft, screened 46 to 55 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval. Periodic measurements, Apr. 1991 to July 1992.

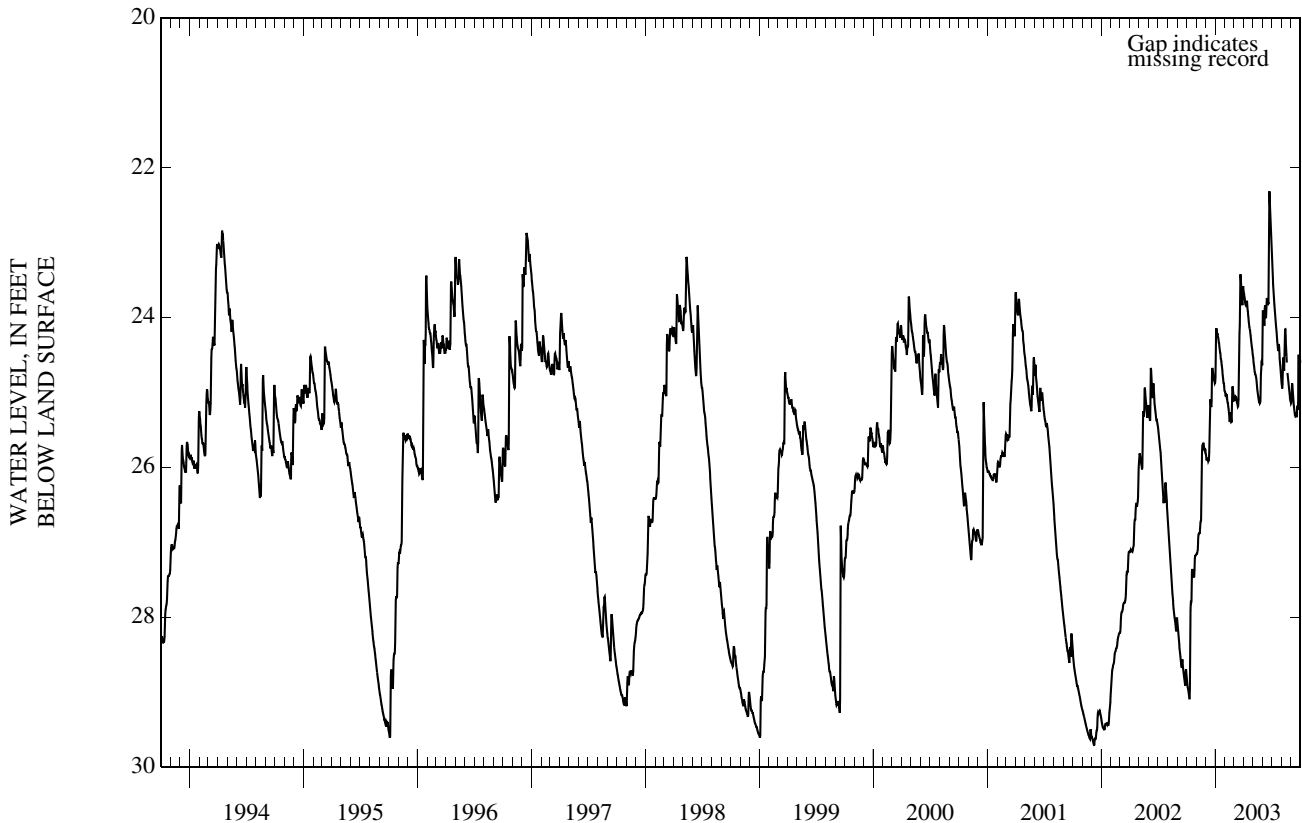
DATUM.--Land surface is 425.3 ft above NGVD of 1929. Measuring point: Top of recorder shelf, 3.40 ft above land surface.

PERIOD OF RECORD.--Apr. 1991 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 22.29 ft below land surface, June 23, 2003; lowest, 29.72 ft below land surface, Dec. 9, 2001.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	28.95	27.12	25.88	24.18	25.04	25.05	23.75	24.66	23.97	23.55	24.66	24.91
10	29.10	26.88	25.91	24.26	25.15	25.11	23.83	24.77	23.92	23.87	24.53	25.20
15	27.81	26.72	25.19	24.43	25.35	25.18	23.93	24.95	23.74	24.15	24.34	25.30
20	27.39	25.71	25.12	24.59	25.33	24.10	24.13	25.11	23.82	24.41	24.74	25.18
25	27.46	25.72	24.76	24.80	24.92	23.66	24.29	25.12	22.66	24.47	24.96	24.50
EOM	27.17	25.76	24.87	24.99	25.05	23.58	24.48	24.64	23.20	24.82	25.15	24.60
MEAN	28.01	26.41	25.33	24.53	25.16	24.50	24.00	24.84	23.57	24.12	---	25.02
MAX	29.10	27.16	25.92	24.99	25.40	25.19	24.48	25.15	24.36	24.82	---	25.33
MIN	27.17	25.67	24.67	24.14	24.92	23.42	23.64	24.51	22.31	23.27	---	24.50



GROUND-WATER LEVELS

SUSSEX COUNTY--Continued

NJ-WRD Well Number, 37-0359. Site I.D., 405613074430901. Local I.D., Byram Twp. PW-1 Obs.

LOCATION.--Lat 40°56'13", long 74°43'08", Hydrologic Unit 02040105, about 1,500 ft north of the intersection of U. S. Route 206 and County Route 607 (Lackawanna Dr.), Byram Township. Owner: McGovern, W. M. - Byram Plaza.

AQUIFER.--Precambrian Erathem.

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 100 ft, open hole 16 to 100 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval.

DATUM.--Land surface is 732 ft above NGVD of 1929, from topographic map. Measuring point: Top of recorder shelf, 1.50 ft above land surface.

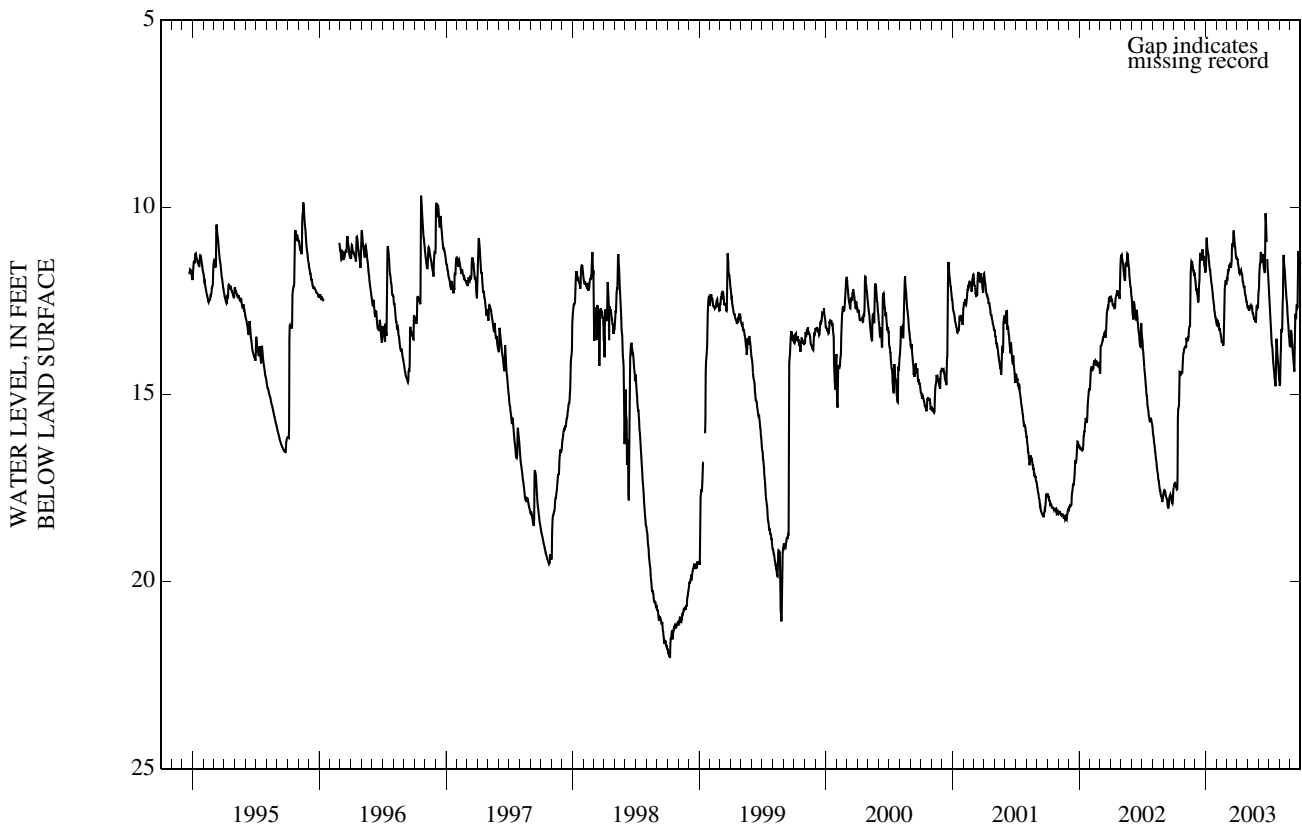
REMARKS.--Water level is affected by nearby pumping.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 9.64 ft below land surface, Oct. 20, 1996; lowest, 22.22 ft below land surface, Oct. 8, 1998.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	17.44	13.73	12.19	11.10	13.07	11.78	11.56	12.74	11.55	12.86	13.80	13.40
10	17.53	13.49	12.52	11.46	13.24	11.55	11.67	12.63	11.46	13.67	12.54	14.04
15	15.29	13.16	11.30	11.88	13.57	11.55	11.79	12.81	11.36	14.24	11.57	13.09
20	14.44	11.45	11.30	12.27	13.70	11.01	12.13	12.99	11.75	14.73	12.24	12.60
25	14.40	11.66	11.30	12.76	12.09	11.00	12.35	13.08	10.93	13.73	12.96	11.18
EOM	13.77	11.83	11.71	13.09	12.03	11.36	12.66	12.67	11.98	14.61	13.71	11.52
MEAN	15.54	12.65	11.75	11.99	13.09	11.37	11.95	12.77	---	13.78	12.89	12.89
MAX	17.54	13.76	12.52	13.09	13.70	12.06	12.66	13.08	---	14.78	14.77	14.39
MIN	13.77	11.44	11.12	10.81	11.95	10.62	11.37	12.61	---	12.15	11.27	11.18

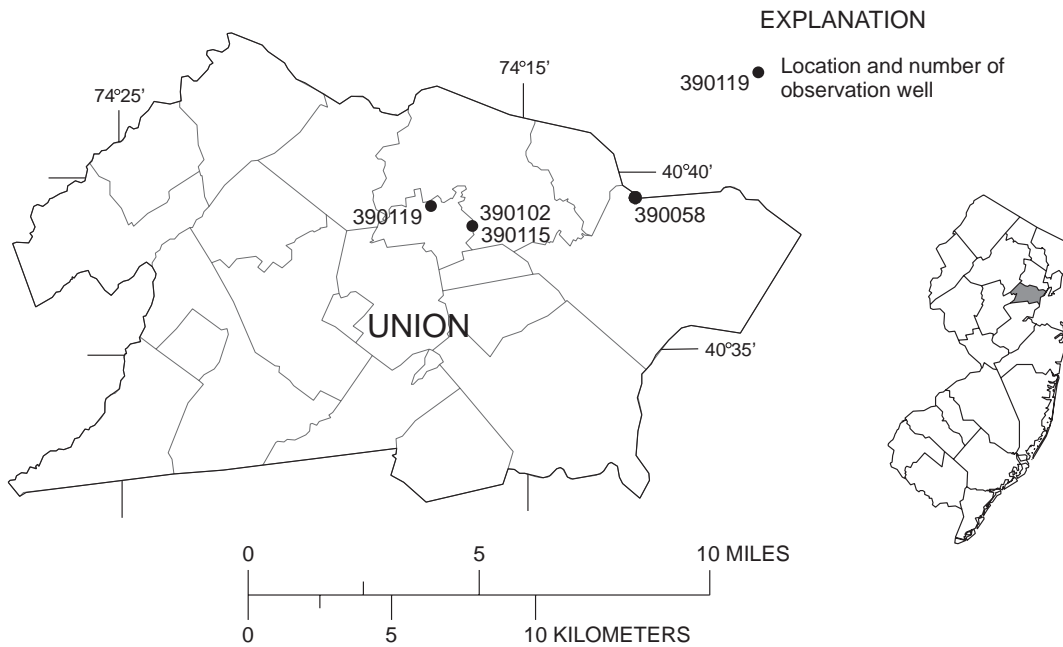


WATER RESOURCES DATA - NEW JERSEY, 2003

UNION COUNTY

NJ-WRD well number	Local identifier	Township	Well depth	Aquifer	Type of data
390058	SCHWEITZER OBS	ELIZABETH CITY	660	PSSC	MANUAL
390102	WHITE LAB 3 OBS	KENILWORTH BORO	251	PSSC	MANUAL
390115	WHITE LAB 4 OBS	KENILWORTH BORO	251	PSSC	MANUAL
390119	UNION COUNTY PARK OBS	KENILWORTH BORO	290	PSSC	DAILY

Aquifer names  
 PSSC - Passaic Formation





UNION COUNTY

NJ-WRD Well Number, 39-0058. Site I.D., 404111074121701. Local I.D., Schweitzer Obs.

LOCATION.--Lat 40°41'13", long 74°12'15", Hydrologic Unit 02030104, on the east side of Newark Ave., about 0.5 mi north of the intersection with North Ave., Elizabeth City. Owner: Magruder Color Company.

AQUIFER.--Passaic Formation of Triassic-Jurassic age.

WELL CHARACTERISTICS.--Drilled observation well, depth 660 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape. Water-level extremes recorder, Apr. 1977 to July 1984. Periodic measurements, July 1970 to Apr. 1977. Water-level recorder, Apr. 1956 to July 1970.

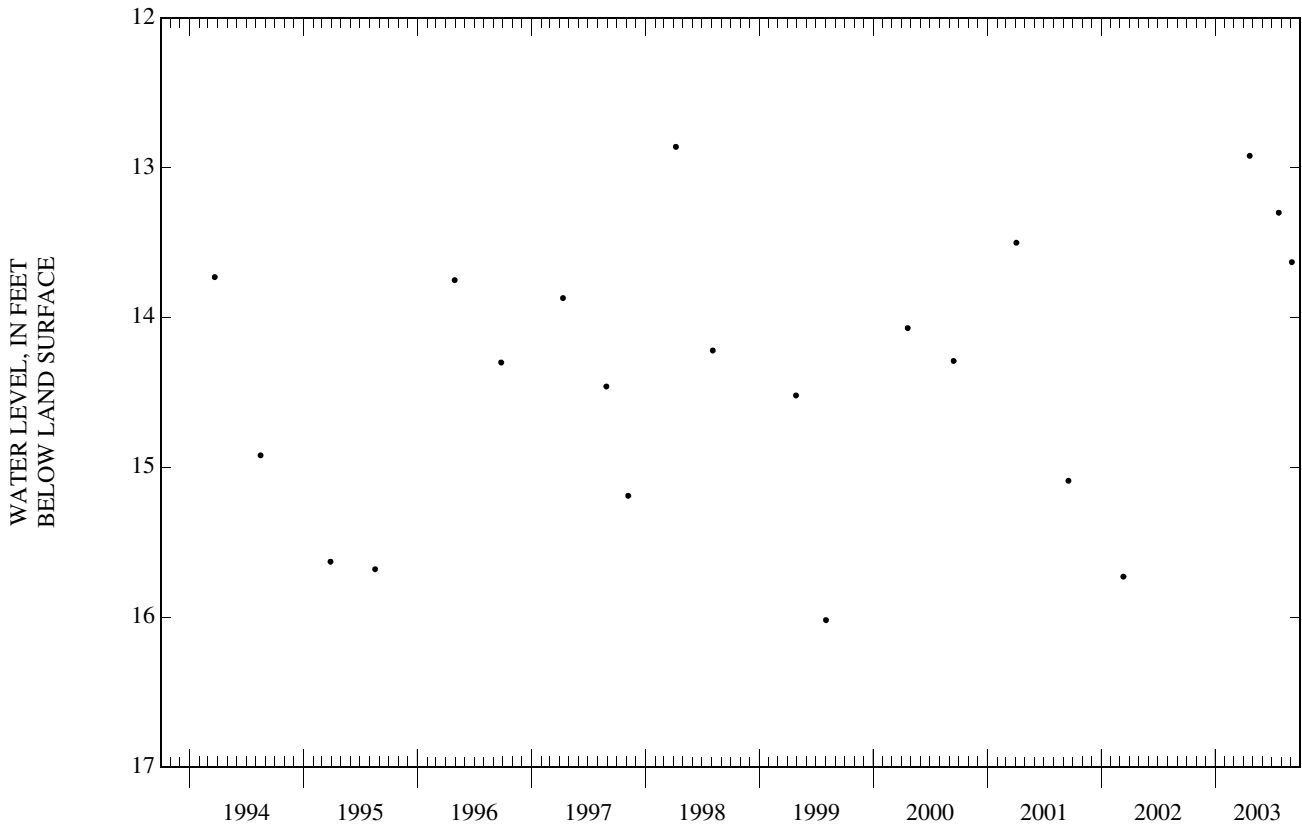
DATUM.--Land surface is 28.23 ft above NGVD of 1929. Measuring point: Top of base of aluminum locking cap, 1.94 ft above land surface.

PERIOD OF RECORD.--Apr. 1956 to current year. Records for 1956 to 1982 and 1985 to 1989 are unpublished and are available if files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 11.07 ft below land surface, between Apr. 2 and July 13, 1984; lowest, 26.83 ft below land surface, Oct. 31, 1963.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
APR 21	12.92	JUL 23	13.30	SEP 03	13.63
WATER YEAR 2003 HIGHEST 12.92		APR 21, 2003			
LOWEST 13.63		SEP 03, 2003			



GROUND-WATER LEVELS

UNION COUNTY--Continued

NJ-WRD Well Number, 39-0102. Site I.D., 404027074164401. Local I.D., White Lab 3 Obs.

LOCATION.--Lat 40°40'27", long 74°16'43", Hydrologic Unit 02030104, at the Schering facility, about 0.3 mi east of the intersection of Galloping Hill Rd. and the Garden State Parkway, Kenilworth Borough. Owner: Schering Corporation.

AQUIFER.--Passaic Formation of Triassic-Jurassic age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 8 in., depth 251 ft, open hole 49 to 251 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape. Water-level recorder, Sept. 1952 to July 1984.

DATUM.--Land surface is 85.22 ft above NGVD of 1929. Measuring point: Top of base of locking cap, 0.68 ft above land surface.

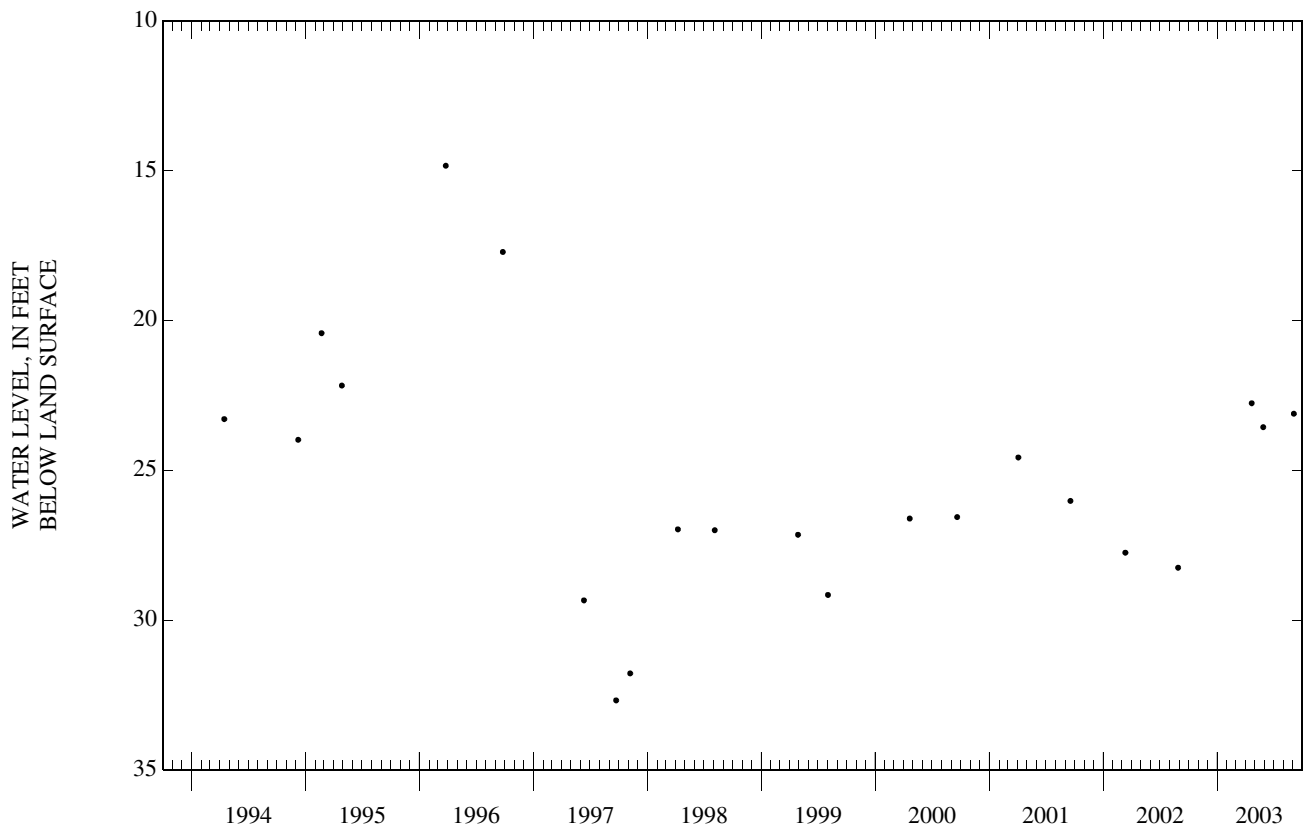
REMARKS.--Water level is affected by nearby pumping.

PERIOD OF RECORD.--Sept. 1952 to current year. Records for 1985 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 10.51 ft below land surface, Apr. 17, 1961; lowest, 32.68 ft below land surface, Sept. 22, 1997.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
APR 21	22.76	MAY 28	23.56	SEP 03	23.11
WATER YEAR 2003 HIGHEST 22.76		APR 21, 2003			
LOWEST 23.56		MAY 28, 2003			



GROUND-WATER LEVELS

UNION COUNTY--Continued

NJ-WRD Well Number, 39-0115. Site I.D., 404044074162101. Local I.D., White Lab 4 Obs.

LOCATION.--Lat 40°40'43", long 74°16'17", Hydrologic Unit 02030104, at the Schering facility, about 0.3 mi east of the intersection of Galloping Hill Rd. and the Garden State Parkway, Kenilworth Borough. Owner: Schering Corporation.

AQUIFER.--Passaic Formation of Triassic-Jurassic age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 251 ft, open hole 47 to 251 ft.

INSTRUMENTATION.--None: periodic measurements with chalked steel tape. Water-level recorder, Apr. 1952 to July 1970.

DATUM.--Land surface is 96.20 ft above NGVD of 1929. Measuring point: Top of base of aluminum locking cap, 0.37 ft above land surface.

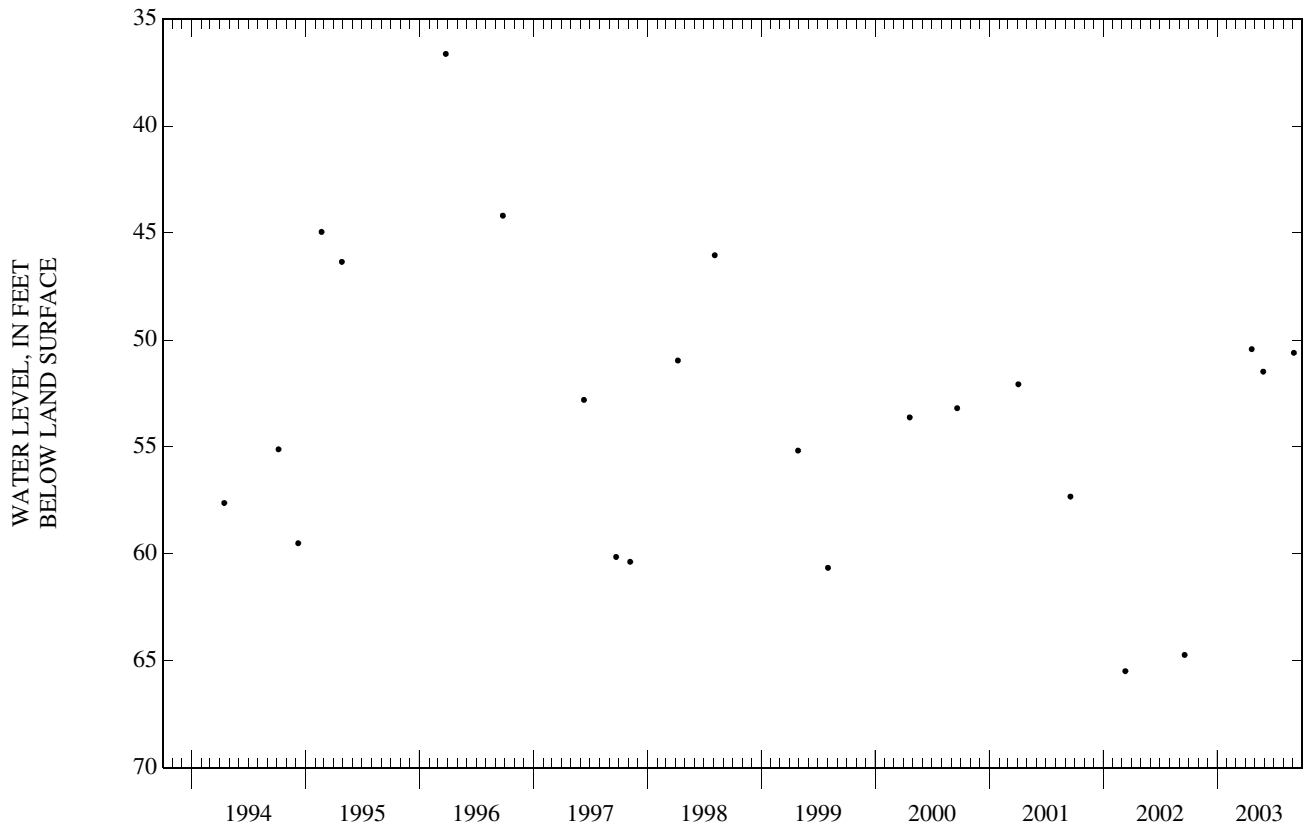
REMARKS.--Water level is affected by nearby pumping.

PERIOD OF RECORD.--Apr. 1952 to current year. Records for 1952 to 1989 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 32.96 ft below land surface, Mar. 28, 1960; lowest, 88.25 ft below land surface, Mar. 14, 1977.

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

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
APR 21	50.43	MAY 28	51.48	SEP 03	50.60
WATER YEAR 2003 HIGHEST 50.43		APR 21, 2003			
LOWEST 51.48		MAY 28, 2003			



GROUND-WATER LEVELS

UNION COUNTY--Continued

NJ-WRD Well Number, 39-0119. Site I.D., 404106074171901. Local I.D., Union County Park Obs.

LOCATION.--Lat 40°41'06", long 74°17'18", Hydrologic Unit 02030104, at Galloping Hill Golf Course, Kenilworth Borough. Owner: Union County Park Commission.

AQUIFER.--Passaic Formation of Triassic-Jurassic age.

WELL CHARACTERISTICS.--Drilled observation well, depth 290 ft.

INSTRUMENTATION.--Data collection platform with satellite telemetry--60 minute recording interval. Water-level recorder, July, 1984 to July 2002. Periodic measurements, Aug. 1975 to July 1984. Water-level recorder, June 1943 to Aug. 1975.

DATUM.--Land surface is 69.00 ft above NGVD of 1929. Measuring point: Top of recorder shelf, 2.30 ft above land surface.

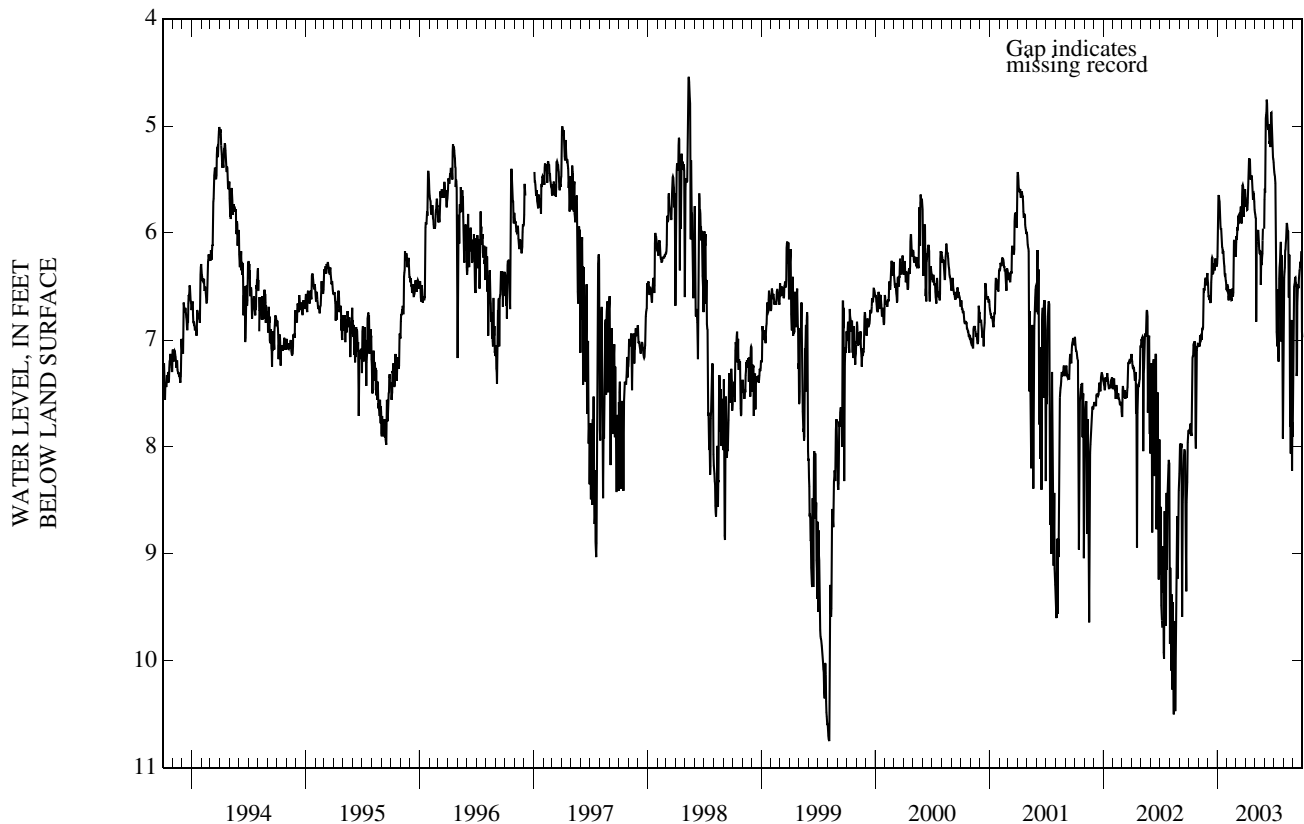
REMARKS.--Water level is affected by nearby pumping of irrigation well.

PERIOD OF RECORD.--June 1943 to current year. Records for 1975 to 1983 are unpublished and are available in files of the New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.06 ft below land surface, June 2, 1952; lowest, 16.05 ft below land surface, June 29, 1966.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

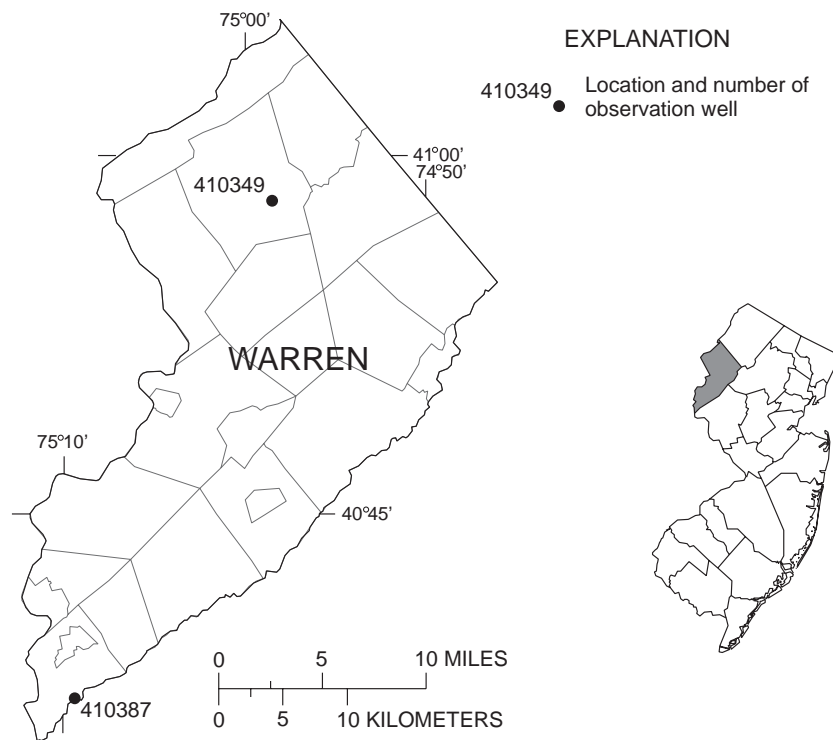
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.82	7.06	6.58	5.65	6.59	6.00	5.74	6.83	4.93	5.49	6.32	6.48
10	7.90	6.96	6.65	5.87	6.53	5.84	5.54	6.03	4.91	6.92	5.97	6.47
15	7.15	6.90	6.23	6.08	6.63	5.84	5.32	6.16	5.01	7.12	5.99	6.56
20	7.01	6.54	6.30	6.17	6.59	5.89	5.47	6.49	5.20	6.28	6.20	6.39
25	7.41	6.44	6.24	6.40	6.11	5.60	5.69	6.19	5.07	7.02	7.45	6.28
EOM	7.04	6.38	6.28	6.53	6.20	5.60	5.78	5.96	5.34	7.24	7.59	6.97
MEAN	7.42	6.75	6.41	6.10	6.46	5.82	5.58	---	5.11	6.47	6.70	6.55
MAX	8.02	7.06	6.65	6.53	6.63	6.22	5.78	---	5.69	7.92	8.22	7.34
MIN	7.01	6.38	6.23	5.65	6.06	5.55	5.30	---	4.75	5.39	5.91	6.17



WARREN COUNTY

NJ-WRD well number	Local identifier	Township	Well depth	Aquifer	Type of data
410349	BLAIRSTOWN 1 OBS	BLAIRSTOWN TWP	294	MRBG	DAILY
410387	NJDEP MW 82	POHATCONG TWP	12	SFDF	DAILY

Aquifer names  
 MRBG - Martinsburg Shale  
 SFDF - Stratified Drift



## GROUND-WATER LEVELS

## WARREN COUNTY

NJ-WRD Well Number, 41-0349. Site I.D., 405808074583001. Local I.D., Blairstown 1 Obs.

LOCATION.--Lat 40°58'08", long 74°58'29", Hydrologic Unit 02040105, in the Limestone Ridge and Marsh Preserve, Cedar Lake Rd., Blairstown Township. Owner: State of New Jersey - DEP.

AQUIFER.--Martinsburg Shale of Ordovician age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 294 ft, open hole 41 to 294 ft.

INSTRUMENTATION.--Water-level recorder--60-minute recording interval.

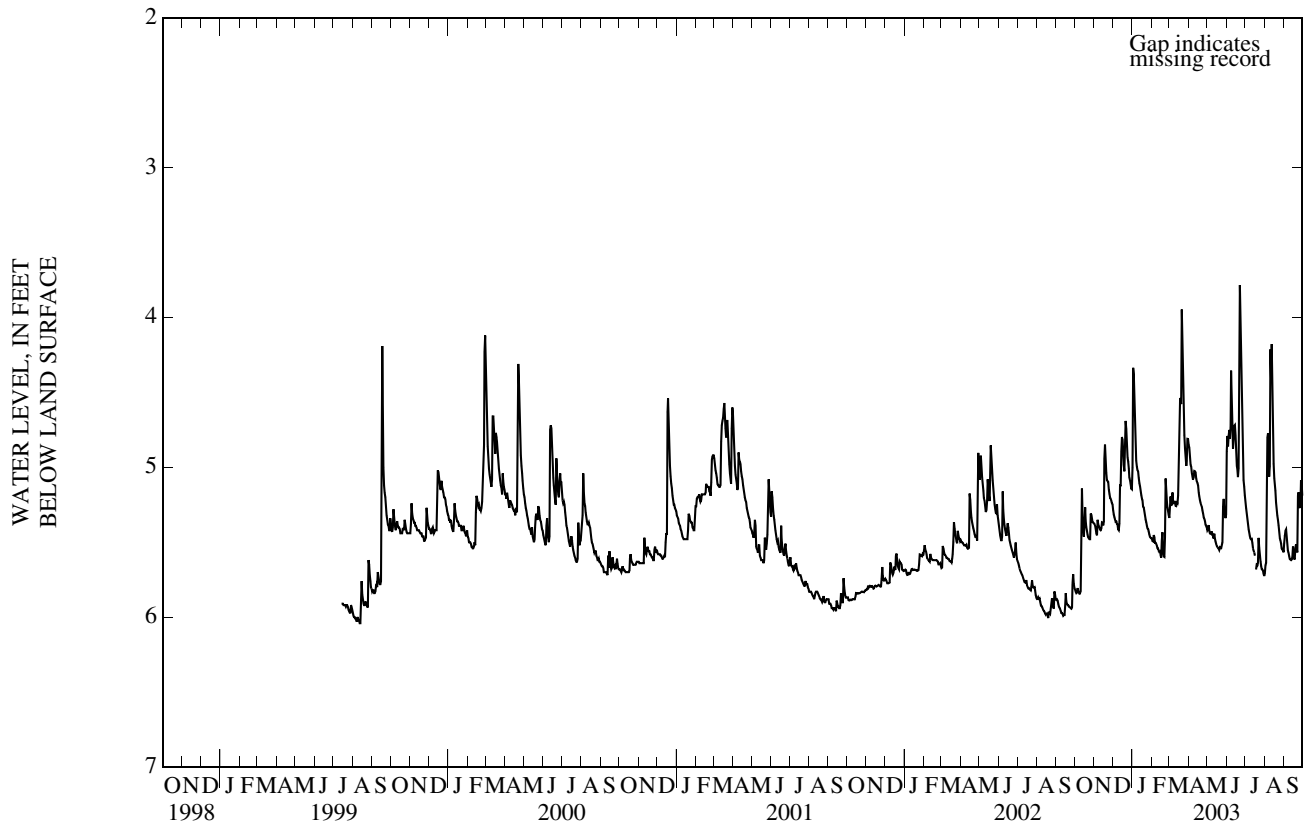
DATUM.--Land surface is 460 ft above NGVD of 1929, from topographic map. Measuring point: Top of recorder shelf, 3.00 ft above land surface.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.68 ft below land surface, June 22, 2003; lowest, 6.09 ft below land surface, Aug. 7, 1999.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.81	5.45	5.36	4.78	5.47	5.25	5.00	5.44	4.75	5.38	4.80	5.47
10	5.83	5.42	5.42	5.03	5.54	5.23	5.02	5.46	4.72	5.48	4.21	5.61
15	5.46	5.39	4.80	5.19	5.59	5.19	5.10	5.51	4.79	5.57	4.98	5.53
20	5.42	5.04	4.83	5.29	5.59	4.58	5.24	5.55	5.01	5.65	5.28	5.52
25	5.48	5.18	4.96	5.41	5.23	4.78	5.33	5.50	4.75	5.63	5.47	5.26
EOM	5.37	5.25	5.15	5.47	5.32	4.81	5.40	5.32	5.19	5.73	5.57	5.19
MEAN	5.52	5.26	5.10	5.14	5.46	4.94	5.15	5.44	4.76	---	5.16	5.45
MAX	5.84	5.45	5.42	5.47	5.60	5.34	5.40	5.55	5.19	---	5.71	5.62
MIN	5.14	4.85	4.69	4.34	5.07	3.95	4.85	5.21	3.78	---	4.18	5.09



GROUND-WATER LEVELS

WARREN COUNTY--Continued

NJ-WRD Well Number, 41-0387. Site I.D., 403719075091801. Local I.D., NJDEP MW 82. NJ Permit Number, 24-40758.

LOCATION.--Lat 40°37'19", long 75°09'17", Hydrologic Unit 02040105, at the edge of County rt. 627 (Riegelsville Rd), Hughesville, Pohatcong Township. Owner: State of New Jersey - DEP.

AQUIFER.--Stratified drift of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 2 in., depth 12 ft, screened 7 to 12 ft.

INSTRUMENTATION.--Submersible logger pressure transducer--60-minute recording interval.

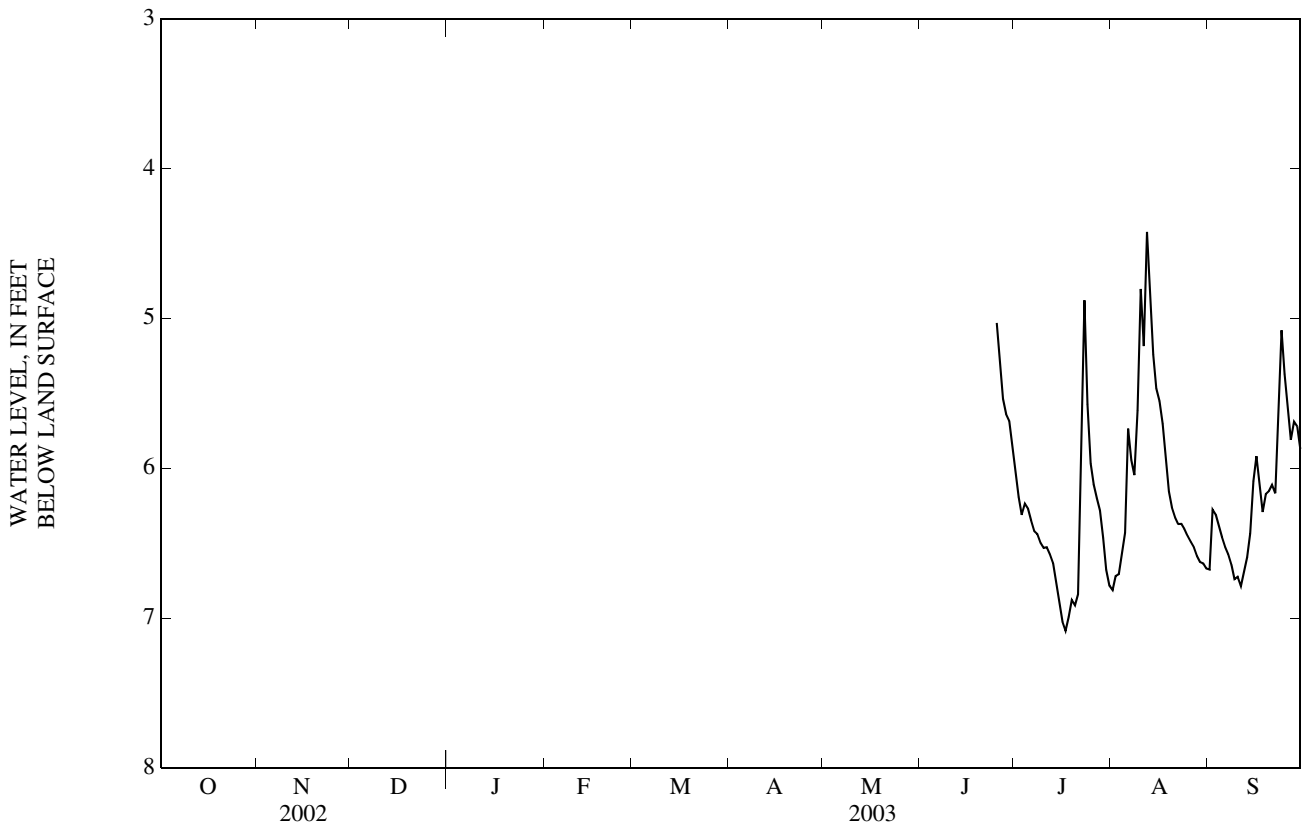
DATUM.--Land surface is 190 ft above NGVD of 1929, from topographic map. Measuring point: Top of flush mount well cover, 0.00 ft above land surface.

PERIOD OF RECORD.--June 2003 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.19 ft below land surface, Aug. 12, 2003; lowest, 7.16 ft below land surface, July. 17, 2003.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	---	---	---	---	---	---	6.27	6.43	6.46
10	---	---	---	---	---	---	---	---	---	6.53	4.80	6.72
15	---	---	---	---	---	---	---	---	---	6.89	5.47	6.09
20	---	---	---	---	---	---	---	---	---	6.91	6.26	6.15
25	---	---	---	---	---	---	---	---	5.03	5.97	6.45	5.37
EOM	---	---	---	---	---	---	---	---	5.86	6.78	6.67	5.87
MEAN	---	---	---	---	---	---	---	---	---	6.42	6.05	6.18
MAX	---	---	---	---	---	---	---	---	---	7.08	6.81	6.79
MIN	---	---	---	---	---	---	---	---	---	4.88	4.42	5.08



**Table 2. Discontinued observation wells for which ground-water-level data are available**

[Data available in the files of the New Jersey District Office]

NJ-WRD well number	Site owner	Local identifier	Latitude (NAD83)	Longitude (NAD83)	Period of record	Aquifer unit <sup>1</sup>
01-366	LONGPORT WD	LONGPORT OBS/SEALED	391821	743207	1924-84	122KRKDL
01-387	RALPH RAMBERG - AMATOL	AMATOL 6 OBS	393557	744113	1961-91	121CCKD
01-496	US GEOLOGICAL SURVEY	USGS 4 H 2	394029	743956	1963-86	121CCKD
01-542	US GEOLOGICAL SURVEY	WHARTON 2G	394028	743959	1960-86	121CCKD
01-545	US GEOLOGICAL SURVEY	WHARTON 11	394058	744021	1957-86	121CCKD
01-704	US GEOLOGICAL SURVEY	EGG HARBOR HS	392343	743732	1985-85	122KRKDL
01-706	US GEOLOGICAL SURVEY	STKTN ST COLL	392933	743129	1985-88	122KRKDL
01-710	US GEOLOGICAL SURVEY	ACOW2 OBS	391726	742220	1993-96	122KRKDL
01-711	US GEOLOGICAL SURVEY	ACOW1 OBS	391955	742506	1987-91	122KRKDL
01-713	US GEOLOGICAL SURVEY	MIZPAH DEEP	392902	745050	1985-86	124PNPN
03-286	US GEOLOGICAL SURVEY	WALLINGTON 2 OBS	405053	740603	1989-92	227PSSC
03-287	US GEOLOGICAL SURVEY	WALLINGTON 1 OBS	405106	740556	1989-92	227PSSC
03-288	US GEOLOGICAL SURVEY	WALLINGTON 3 OBS	405107	740608	1989-92	227PSSC
05-029	US GEOLOGICAL SURVEY	OSWEGO LAKE 1	394208	742644	1962-86	121CCKD
05-030	US GEOLOGICAL SURVEY	OSWEGO LAKE 2	394208	742644	1962-86	121CCKD
05-648	WILLINGBORO MUA	WMUA 3-OBS	400103	745408	1966-86	211MRPAL
05-690	US GEOLOGICAL SURVEY	LEBANON SF 2	395211	743102	1964-86	121CCKD
05-836	US GEOLOGICAL SURVEY	QWO-3B	395245	742951	1984-89	121CCKD
05-841	US GEOLOGICAL SURVEY	QWC-3A	395301	742952	1984-87	121CCKD
05-842	US GEOLOGICAL SURVEY	QWC-3B	395301	742952	1985-88	121CCKD
05-851	US GEOLOGICAL SURVEY	QWH-3B	395217	742936	1985-88	121CCKD
07-030	SO JRSY PORT CM	NY SHIP 5A/SEALED	395447	750710	1950-86	211MRPAU
07-201	AMSPEC CHEMICAL	AMSPEC 1/SEALED	395318	750754	1984-88	211MRPAL
07-204	AMSPEC CHEMICAL	AMSPEC 4/SEALED	395322	750756	1984-88	211MRPAL
07-221	US GEOLOGICAL SURVEY	COAST GUARD 1	395356	750737	1983-88	211MRPAL
07-322	NJ/AMERICAN WATER CO	OAKLYN TEST	395359	750444	1963-86	211MRPAU
07-354	GENERAL FOODS	PETTY IS OBS/SEALED	395811	750555	1950-92	211MRPAL
07-485	WINSLOW WC	OBS 2-1971	394235	745727	1972-79	121CCKD
07-493	WINSLOW WC	OBS 3-1971	394311	745706	1972-79	121CCKD
07-498	WINSLOW WC	OBS 4-1971	394332	750002	1972-79	121CCKD
07-573	US GEOLOGICAL SURVEY	COAST GUARD 2	395355	750737	1983-88	211MRPAU
07-574	US GEOLOGICAL SURVEY	COAST GUARD 3	395355	750737	1984-88	111HPPM
07-740	CAMDEN COUNTY MUA	CCMUA PZ 3	394131	744818	1993-2001	121CCKD
07-741	CAMDEN COUNTY MUA	CCMUA PZ 4	394208	745347	1992-2001	121CCKD
07-742	CAMDEN COUNTY MUA	CCMUA PZ 2	394337	744613	1992-2001	121CCKD
07-743	CAMDEN COUNTY MUA	CCMUA PZ 1	394340	744613	1992-2001	121CCKD
07-744	CAMDEN COUNTY MUA	CCMUA PZ 5	394410	745344	1992-2001	121CCKD
07-745	CAMDEN COUNTY MUA	CCMUA PZ 8	394413	744948	1992-2001	121CCKD
07-746	CAMDEN COUNTY MUA	CCMUA PZ 7	394516	745204	1992-2001	121CCKD
07-747	CAMDEN COUNTY MUA	CCMUA PZ 6	394630	744927	1992-2001	121CCKD
09-011	CAPE MAY CITY WD	CMCWD 1 OBS	385612	745456	1967-86	121CNSY
09-071	WILDWOOD WATER DEPARTMENT	RIO GRANDE 23 OBS	390138	745347	1990-92	122KRKDU
09-079	HALLER, LEE	NUMMY ISLAND 2 OBS	390210	744729	1990-92	122KRKDL
09-095	US GEOLOGICAL SURVEY	BDWLL DCH 30ES	390527	745027	1972-75	112ESRNS
09-097	US GEOLOGICAL SURVEY	BDWLL DCH 31ES	390527	745023	1968-84	112ESRNS
09-098	US GEOLOGICAL SURVEY	BDWLL DCH 31HB	390527	745023	1968-84	112HLBC
09-185	US GEOLOGICAL SURVEY	MACNAMARA W A	391621	744354	1985-86	122KRKDL
09-292	US GEOLOGICAL SURVEY	WETLANDS 1 OBS	390337	744622	1988-92	121CNSY
09-293	US GEOLOGICAL SURVEY	WETLANDS 2 OBS	390337	744622	1988-92	112ESRNS
09-294	US GEOLOGICAL SURVEY	WETLANDS 3 OBS	390337	744622	1988-92	112ESRNS

Footnotes at end of table.



Table 2. Discontinued observation wells for which ground-water-level data are available--Continued

[Data available in the files of the New Jersey District Office]

NJ-WRD well number	Site owner	Local identifier	Latitude (NAD83)	Longitude (NAD83)	Period of record	Aquifer unit <sup>1</sup>
09-295	US GEOLOGICAL SURVEY	WETLANDS 4 OBS	390337	744622	1988-92	112HLBC
09-304	US GEOLOGICAL SURVEY	AIRPORT RIO GRANDE OBS	390002	745409	1990-92	122KRKDU
11-118	CUMBERLAND COUNTY	HEISLERVILLE 1 OBS	391350	750017	1972-2001	121CKKD
11-119	CUMBERLAND COUNTY	HEISLERVILLE 2 OBS	391350	750017	1972-2001	121CKKD
11-141	MILLVILLE WD	ORANGE ST	392219	750112	1962-86	121CKKD
11-161	CUMBERLAND COUNTY	FAIR GROUNDS 1	392526	750642	1972-86	121CKKD
11-162	CUMBERLAND COUNTY	FAIR GROUNDS 2	392526	750642	1972-86	121CKKD
11-188	CUMBERLAND COUNTY	BOSTWICK LK 1	393141	751600	1972-86	121CKKD
11-692	US GEOLOGICAL SURVEY	RUTGERS R&D 1 SHALLOW OBS	393059	751219	1991-92	121CKKD
11-693	US GEOLOGICAL SURVEY	RUTGERS R&D 2 MED OBS	393104	751221	1991-92	121CKKD
11-694	US GEOLOGICAL SURVEY	RUTGERS R&D 3 DEEP OBS	393104	751221	1991-92	121CKKD
13-017	WALSH BROS INC	BALLENTINE 8 OBS	404401	740833	1949-93	227PSSC
13-094	STATE OF NJ - NJGS	EAST ORANGE 28 OBS	404455	742031	1991-98	227TOWC
15-097	HERCULES CHEMICAL	GIBBSTOWN TH 8/TW8 (NEW)	395000	751635	1953-89	211MRPAM
15-139	PURELAND WATER CO	PURELAND TEST WELL 3	394608	752134	1985-86	211MRPAL
15-140	PURELAND WATER CO	PURELAND TEST WELL 4	394608	752134	1985-86	211MRPAM
15-279	HUNTSMAN POLYPROPYLENE CORP	SHELL OBS 7	394857	751249	1962-86	211MRPAM
15-296	HUNTSMAN POLYPROPYLENE CORP	SHELL 5 OBS/SEALED	394942	751316	1962-96	211MRPAL
15-297	HUNTSMAN POLYPROPYLENE CORP	SHELL 6 OBS/SEALED	394942	751316	1962-96	211MRPAU
15-323	COASTAL EAGLEPOINT OIL COMPANY	EAGLE POINT 3 OBS	395235	750949	1949-2000	211MRPAL
15-379	MANTUA TWP MUA	EWC 6/MANTUA OBS/SEALED	394601	751004	1988	211MRPAU
15-540	US EPA	EPA 108	394800	751935	1985-88	211MRPAM
15-564	US EPA-GAVENTA	S-9	394802	751932	1985-88	211MRPAU
15-615	US GEOLOGICAL SURVEY	SHIVELER LOWER	394637	751915	1985-88	211MRPAL
15-616	US GEOLOGICAL SURVEY	SHIVELER MIDDLE	394637	751915	1985-88	211MRPAM
15-617	US GEOLOGICAL SURVEY	SHIVELER UPPER	394637	751915	1985-88	211MRPAU
15-618	US GEOLOGICAL SURVEY	GAVENTA DEEP	394804	751932	1985-88	211MRPAL
15-620	US GEOLOGICAL SURVEY	GAVENTA MIDDLE 1	394804	751932	1985-88	211MRPAM
15-770	US GEOLOGICAL SURVEY	NATIONAL PARK #1-PW-L	395202	751114	1987-88	211MRPAL
15-771	US GEOLOGICAL SURVEY	NATIONAL PARK #2-PW-M	395202	751114	1987-88	211MRPAM
15-1052	US GEOLOGICAL SURVEY	USGS WTMUA OBS-2 MED	394314	750144	1991-92	121CKKD
15-1053	US GEOLOGICAL SURVEY	USGS WTMUA OBS-3 DEEP	394314	750144	1991-92	121CKKD
15-1055	US GEOLOGICAL SURVEY	USGS GSC OBS-2 MED	394221	750721	1991-92	121CKKD
15-1056	US GEOLOGICAL SURVEY	USGS GSC OBS-3 DEEP	394221	750721	1991-92	121CKKD
15-1058	US GEOLOGICAL SURVEY	USGS TPE OBS-2 MED-DEEP	394242	750329	1991-92	121CKKD
15-1059	US GEOLOGICAL SURVEY	USGS TPE OBS-3 DEEP	394242	750329	1991-92	121CKKD
15-1063	US GEOLOGICAL SURVEY	USGS TPE OBS-4 MED-SHAL	394242	750329	1991-92	121CKKD
19-249	US GEOLOGICAL SURVEY	HUNTER RD TB 3 OBS	402141	745357	1989-92	227PSSC
19-250	US GEOLOGICAL SURVEY	W AMWELL FIRE TB 2 OBS	402146	745350	1989-92	227PSSC
21-358	US GEOLOGICAL SURVEY	PRINCETON 1-BRICK RD OBS	402023	743918	1989-90	231SCKN
21-359	US GEOLOGICAL SURVEY	PRINCETON 2-CHILL PL OBS	402032	743924	1989-92	231SCKN
21-395	WEST WINDSOR TOWNSHIP	WW MW-2 OBS	401806	743532	1993-94	211FRNG
23-159	DUHERNAL WC	DUHERNAL OBS 5	402353	742151	1939-86	211ODBG
23-180	DUHERNAL WC	DUHERNAL OBS 1	402438	742128	1938-86	211ODBG
23-181	PERTH AMBOY WD	RUNYON 123	402442	742135	1955-86	211ODBG
23-182	BOWNE, CLYDE	BROWNTOWN	402449	741818	1932-87	211ODBG
23-189	PERTH AMBOY WD	RUNYON R50	402525	741953	1972-75	211ODBG
23-265	CHEVRON OIL CO	11	403211	741611	1950-86	211FRNG
23-270	AMERICAN CYANAMID CO	TEST 2	403231	741615	1950-86	211FRNG
23-306	PHELPS DODGE CO	PHELPS DODGE 3	402147	742846	1969-87	211FRNG

Footnotes at end of table.

Table 2. Discontinued observation wells for which ground-water-level data are available--Continued

[Data available in the files of the New Jersey District Office]

NJ-WRD well number	Site owner	Local identifier	Latitude (NAD83)	Longitude (NAD83)	Period of record	Aquifer unit <sup>1</sup>
23-343	STATE OF NJ - NJ WATER POLICY	SUN BISCUIT 5/SEALED	402553	742032	1972-75	211ODBG
23-404	SAYREVILLE WD	MORGAN OBS 1	402745	741644	1973-80	211FRNG
23-433	STATE OF NJ - NJ WATER POLICY	SO RIVER 4	402555	742132	1968-86	211ODBG
23-516	NOVAK	HULSART/SEALED	402123	741848	1936-84	211EGLS
23-796	PRINCETON UNIVERSITY	TEST WELL 5 OBS	402058	743558	1986-92	231SCKN
23-800	PRINCETON UNIVERSITY	TEST WELL 9 OBS	402058	743558	1986-92	231SCKN
23-1056	MIDDLESEX CO. UTIL. AUTHORITY	MONITORING #3	402743	742215	1987	211FRNG
23-1058	US GEOLOGICAL SURVEY	HESS BROS #1	402704	742138	1987-88	211FRNG
23-1077	US GEOLOGICAL SURVEY	JCP&L-SAY	402831	742119	1987-88	211FRNG
23-1165	STATE OF NEW JERSEY	RUTGERS GOLF 13 OBS	403108	742811	1991-2002	227PSSC
23-1330	STATE OF NEW JERSEY	RUTGERS MW-12A	403135	742743	1998-2002	227PSSC
23-1331	RUTGERS UNIVERSITY	RUTGERS MW-12B	403135	742743	1998-2002	227PSSC
23-1332	RUTGERS UNIVERSITY	RUTGERS MW-12C	403135	742743	1998-2002	227PSSC
25-216	MANALAPAN TWP WD	MANALAPAN 1	401518	742229	1971-84	211EGLS
25-350	NJ/AMERICAN WATER CO	WHITESVILLE 2/SEALED	401323	740154	1973-75	211ODBG
25-716	HERBERT SAND COMPANY	HERBERT SAND MW-3 OBS	401044	741417	1992-93	121CKKD
25-717	US GEOLOGICAL SURVEY	TURKEY SWAMP 1 OBS	401046	742001	1992-93	125VNCN
27-014	US GEOLOGICAL SURVEY	EXXON OBS	404705	742451	1967-99	112SFDF
27-015	MORRISTOWN AIRPORT	MORRISTOWN ARPT. 2 OBS	404743	742521	1960-75, 77-97	112SFDF
27-022	INTERNATIONAL PIPE & CERAMIC CORP	INT PIPE OBS	405209	742637	1963-95	112SFDF
27-095	US ARMY - PICATINNY ARSENAL	PICATINNY 9C OBS	405628	743417	1987-93	112SFDF
27-150	US GEOLOGICAL SURVEY	GREAT SWAMP 4 OBS	404349	742515	1989-90	112SFDF
27-152	US GEOLOGICAL SURVEY	NILES PARK 1 OBS	404450	742458	1990-91	112SFDF
27-242	US ARMY - PICATINNY ARSENAL	PICATINNY CAF 1 OBS	405623	743412	1983-84,87-93	377HRDS
27-245	US ARMY - PICATINNY ARSENAL	PICATINNY CAF 4 OBS	405623	743412	1983-84,87-93	112SFDF
27-250	US ARMY - PICATINNY ARSENAL	PICATINNY LF 1 OBS	405509	743503	1983-84,89-91	374LSVL
27-251	US ARMY - PICATINNY ARSENAL	PICATINNY LF 2 OBS	405509	743503	1983-91	112SFDF
27-304	US ARMY - PICATINNY ARSENAL	PICATINNY CAF 5 OBS	405629	743408	1984,87-93	112SFDF
27-321	ROCKAWAY RIVER C C	GEONICS 2	405344	742739	1985-90	112SFDF
27-322	DOVER TOWN WD	DTWD TW 2	405314	743249	1985-89	112SFDF
27-323	MOUNTAIN LAKES WD	CRANE RD (GEONICS 1)	405253	742707	1985-89,1997-98	112SFDF
27-324	ST CLAIRE'S HOSPITAL	POCONO RD (GEONICS 2)	405334	742827	1985-89,1997-98	112SFDF
27-325	BOONTON TOWNSHIP WD	VALLEY RD (GEONICS 3)	405542	742616	1985-89	400PCMB
27-709	KEUFFEL & ESSER CO	KEUFFEL 2	405441	742947	1985-89	112SFDF
27-1083	MORRIS COUNTY MUA	MCMUA TEST WELL 1 OBS	405005	744100	1988-90	374LSVL
27-1084	MORRIS COUNTY MUA	MCMUA TEST WELL 2 OBS	404954	744121	1988-90	374LSVL
27-1085	WASHINGTON TWP MUA	WASHINGTON TWP TW OBS	404705	744637	1988-91	374LSVL
27-1110	ST ELIZABETH SISTERS OF CHARITY	CONVENT 2	404709	742543	1988-89	227BNTN
27-1111	ST ELIZABETH SISTERS OF CHARITY	CONVENT 3	404709	742543	1988-89	112SFDF
27-1123	US GEOLOGICAL SURVEY	KENVIL NEWCRETE 1 OBS	405330	743637	1989-91	374LSVL
27-1124	US GEOLOGICAL SURVEY	KENVIL NEWCRETE 2 OBS	405330	743637	1989-90	112SFDF
27-1125	US GEOLOGICAL SURVEY	BLACK RIVER 3 OBS	404934	743858	1989-91	374LSVL
27-1126	US GEOLOGICAL SURVEY	BLACK RIVER 4 OBS	404809	744154	1989-91	374LSVL
27-1127	US ARMY - PICATINNY ARSENAL	PICATINNY SB1-1 OBS	405458	743454	1989-91	400PCMB
27-1128	US ARMY - PICATINNY ARSENAL	PICATINNY SB1-2 OBS	405458	743454	1989-91	112SFDF
27-1129	US ARMY - PICATINNY ARSENAL	PICATINNY SB1-3 OBS	405458	743454	1989-91	112SFDF
27-1130	US ARMY - PICATINNY ARSENAL	PICATINNY SB2-1 OBS	405509	743508	1989-91	112SFDF
27-1131	US ARMY - PICATINNY ARSENAL	PICATINNY SB2-2 OBS	405509	743508	1989-91	112SFDF
27-1132	US ARMY - PICATINNY ARSENAL	PICATINNY SB3-1 OBS	405517	743514	1989-91	374LSVL
27-1133	US ARMY - PICATINNY ARSENAL	PICATINNY SB2-3 OBS	405509	743508	1989-91	374LSVL

Footnotes at end of table.

Table 2. Discontinued observation wells for which ground-water-level data are available--Continued

[Data available in the files of the New Jersey District Office]

NJ-WRD well number	Site owner	Local identifier	Latitude (NAD83)	Longitude (NAD83)	Period of record	Aquifer unit <sup>1</sup>
27-1134	US ARMY - PICATINNY ARSENAL	PICATINNY SB3-2 OBS	405517	743514	1989-91	112SFDF
27-1135	US ARMY - PICATINNY ARSENAL	PICATINNY SB3-3 OBS	405517	743514	1989-91	112SFDF
27-1164	US GEOLOGICAL SURVEY	BLACK RIVER 5 OBS	404809	744154	1989-91	112SFDF
27-1183	US GEOLOGICAL SURVEY	KENVIL NEWCRETE 7 OBS	405330	743637	1989-90	112SFDF
27-1197	STATE OF NJ - GEOLOGICAL SURVEY	MADISON 8 OBS	404513	743453	1991-96	112SFDF
27-1302	STATE OF NJ - GEOLOGICAL SURVEY	JENKINSON FARM 1 OBS	404452	744930	1989-91	374LSVL
27-1303	STATE OF NJ - GEOLOGICAL SURVEY	DREW UNIVERSITY FARM OBS	404712	744546	1990-2000	374LSVL
27-1866	DOVER WATER COMMISSION	MOOSE LODGE 1S OBS	405308	743231	1997-98	112SFDF
27-1867	STATE OF NJ - DEP	ROC MW 18-S OBS	405434	743010	1997-98	112SFDF
29-486	WHITING BIBLE CHURCH	CRAMMER OBS	395714	742233	1952-90	121CKKD
29-532	PT PLEASANT WD	PPWD 3	400459	740357	1986-88	211EGLS
29-624	NJ/AMERICAN WATER CO	OCEAN CO DEEP	394755	741508	1975-76	121CKKD
29-625	NJ/AMERICAN WATER CO	OCEAN CO SHALL	394755	741508	1975-76	111ALVM
29-1056	DENZER AND SCHAFFER	D AND S-18D OBS	395433	741013	1992-93	121CKKD
31-011	WANAQUE WD	HASKELL OBS	410209	741707	1965-82	112SFDF
33-002	CUMBERLAND COUNTY	BOSTWICK NO 3	393202	751629	1973-87	211MLRW
33-279	DARETOWN FIRE CO	GARRISON	393622	751530	1959-86	211MLRW
33-342	STATE OF NJ	PENNS GROVE 24	394236	752723	1942-87	211MRPAU
33-680	US GEOLOGICAL SURVEY	USGS COLES FARM OBS-1	393849	751327	1991-92	121CKKD
33-681	US GEOLOGICAL SURVEY	USGS COLES FARM OBS-2	393849	751327	1991-92	121CKKD
39-133	HATFIELD WIRE	HATFIELD OBS	403726	741622	1959-87	227BRCKS
41-013	HOFFMAN-LAROCHE	HOF LAR 4	405050	750331	1960-85	112SFDF

<sup>1</sup>Aquifer units:

111ALVM	- Holocene Alluvium	211MRPAM	- Middle Potomac-Raritan-Magothy aquifer
111HPPM	- Undifferentiated Holocene, Pleistocene, Pliocene, and Miocene	211MRPAL	- Lower Potomac-Raritan-Magothy aquifer
112HLBC	- Holly Beach water-bearing zone	211ODBG	- Old Bridge aquifer, Potomac-Raritan-Magothy aquifer system (Middlesex and Monmouth Counties)
112ESRNS	- Cape May Formation, estuarine sand facies	211FRNG	- Farrington aquifer, Potomac-Raritan-Magothy aquifer system (Middlesex and Monmouth Counties)
112SFDF	- Stratified drift	227BNTN	- Boonton Formation
121CNSY	- Cohansey Sand	227BRCKS	- Brunswick Group sedimentary rocks
121CKKD	- Kirkwood-Cohansey aquifer system	227PSSC	- Passaic Formation
122KRKDL	- Atlantic City 800-foot sand of the Kirkwood Formation	227TOWC	- Towaco Formation
122KRKDU	- Rio Grande water-bearing zone of the Kirkwood Formation	231SCKN	- Stockton Formation
124PNPN	- Piney Point Formation	374LSVL	- Leithsville Formation
125VNCN	- Vincentown Formation	377HRDS	- Hardyston Quartzite
211EGLS	- Englishtown aquifer system	400PCMB	- Precambrian Erathem
211MLRW	- Wenonah-Mount Laurel aquifer		
211MRPAU	- Upper Potomac-Raritan-Magothy aquifer		

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# Conversion Factors

Multiply	By	To obtain
<b>Length</b>		
inch (in.)	$2.54 \times 10^1$	millimeter (mm)
	$2.54 \times 10^{-2}$	meter
foot (ft)	$3.048 \times 10^{-1}$	meter (m)
mile (mi)	$1.609 \times 10^0$	kilometer (km)
<b>Area</b>		
acre	$4.047 \times 10^3$	square meter (m <sup>2</sup> )
	$4.047 \times 10^{-1}$	square hectometer (hm <sup>2</sup> )
	$4.047 \times 10^{-3}$	square kilometer (km <sup>2</sup> )
square mile (mi <sup>2</sup> )	$2.590 \times 10^0$	square kilometer (km <sup>2</sup> )
<b>Volume</b>		
gallon (gal)	$3.785 \times 10^0$	liter (L)
	$3.785 \times 10^{-3}$	cubic meter (m <sup>3</sup> )
	$3.785 \times 10^0$	cubic decimeter (dm <sup>3</sup> )
million gallons (Mgal)	$3.785 \times 10^3$	cubic meter (m <sup>3</sup> )
cubic foot (ft <sup>3</sup> )	$3.785 \times 10^{-3}$	cubic hectometer (hm <sup>3</sup> )
	$2.832 \times 10^{-2}$	cubic meter (m <sup>3</sup> )
cubic-foot-per-second-per-day [(ft <sup>3</sup> /s/d)]	$2.832 \times 10^1$	cubic decimeter (dm <sup>3</sup> )
	$2.447 \times 10^3$	cubic meter (m <sup>3</sup> )
acre-foot (acre-ft)	$2.447 \times 10^{-3}$	cubic hectometer (hm <sup>3</sup> )
	$1.223 \times 10^3$	cubic meter (m <sup>3</sup> )
	$1.223 \times 10^{-3}$	cubic hectometer (hm <sup>3</sup> )
	$1.223 \times 10^{-6}$	cubic kilometer (km <sup>3</sup> )
<b>Flow rate</b>		
cubic foot per second (ft <sup>3</sup> /s)	$2.832 \times 10^1$	liter (L/s)
	$2.832 \times 10^{-2}$	cubic meter per second (m <sup>3</sup> /s)
	$2.832 \times 10^1$	cubic decimeter per second (dm <sup>3</sup> /s)
gallon per minute (gal/min)	$6.309 \times 10^{-2}$	liter per second (L/s)
	$6.309 \times 10^{-5}$	cubic meter per second (m <sup>3</sup> /s)
	$6.309 \times 10^{-2}$	cubic decimeter per second (dm <sup>3</sup> /s)
million gallons per day (Mgal/d)	$4.381 \times 10^{-2}$	cubic meter per second
	$4.381 \times 10^1$	cubic decimeter per second (dm <sup>3</sup> /s)
<b>Mass</b>		
ton, short (2,000 lb)	$9.072 \times 10^{-1}$	megagram (Mg) or metric ton

Temperature in degrees Celsius (°C) may be converted to degrees Fahrenheit (°F) as follows:

$$^{\circ}\text{F} = (1.8 \times ^{\circ}\text{C}) + 32$$

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