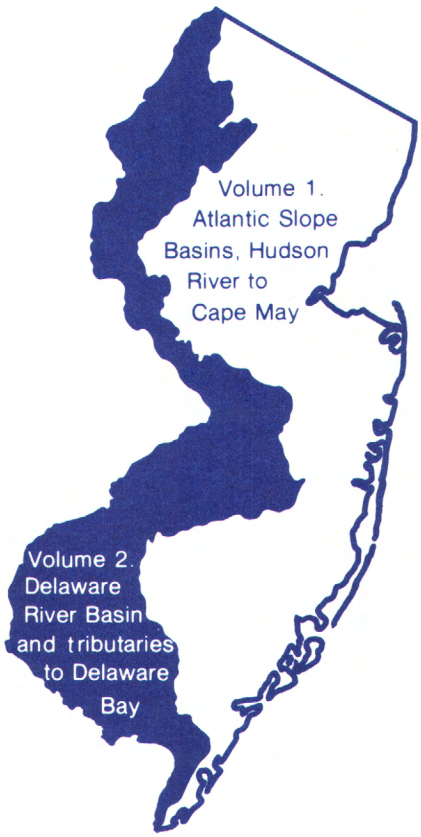
Water Resources Data New Jersey Water Year 1986

Volume 2. Delaware River Basin and tributaries to Delaware Bay



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NJ-86-2
Prepared in cooperation with the New Jersey Department of Environmental Protection and with other agencies

CALENDAR FOR WATER YEAR 1986

1985

OCTOBER

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

NOVEMBER

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

DECEMBER

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

1986

JANUARY

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

FEBRUARY

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

MARCH

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

APRIL

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

MAY

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

JUNE

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

JULY

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

AUGUST

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

SEPTEMBER

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

United States Department of the Interior

GEOLOGICAL SURVEY
Water Resources Division
Mountain View Office Park
810 Bear Tavern Road, Suite 206
West Trenton, New Jersey 08628

I am pleased to announce the release of our Annual Report, "Water Resources Data for New Jersey, Water Year 1986". This report was prepared by the U.S. Geological Survey, in cooperation with the State of New Jersey and several local and federal government agencies.

Once again this year, the report is issued in two volumes:

Volume 1.--Atlantic Slope Basins, Hudson River to Cape May.
Volume 2.--Delaware River Basin and tributaries to Delaware Bay.

The report contains records of stream discharge and water-quality measurements, elevations of lakes and reservoirs, major water-supply diversions, and tidal elevations. Also included are records of sediment concentrations and records of ground-water quality and ground-water levels. Special sections are devoted to low-flow and crest-stage data and summaries of tidal crest elevations in the New Jersey estuaries and intracoastal waterways.

This year the report has been expanded to include a listing of all surface-water and continuous water-quality stations which have been discontinued, as well as a list of additional ground-water wells for which long-term information is available. Also included are listings of current project titles and reports recently published by the district and the results of several projects recently completed by the New Jersey District.

Copies of this report in paper or microfiche are for sale through the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia 22161. When ordering, refer to U.S. Geological Survey Water-Data Report NJ-86-1 (for volume 1) and NJ-86-2 (for volume 2). For further information on this report, or to change or remove your address from our mailing list, please contact me at the above address or telephone (609) 771-3900.

Sincerely,

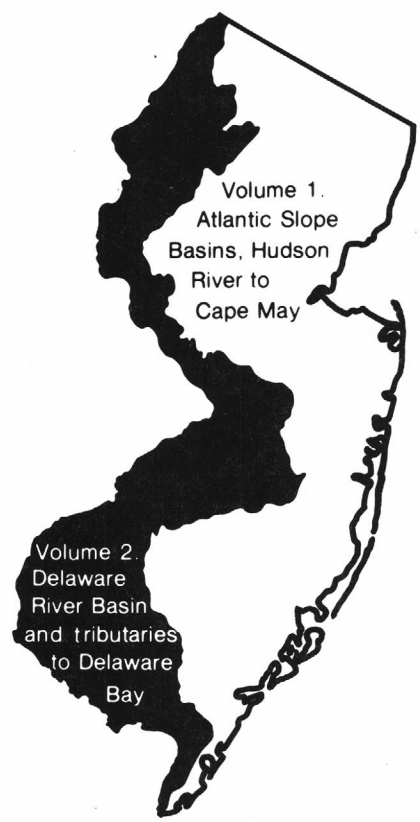
William R. Bauersfeld

William R. Bauersfeld, Chief
Hydrologic Data Assessment Program

Water Resources Data New Jersey Water Year 1986

Volume 2. Delaware River Basin and tributaries to Delaware Bay

by W.R. Bauersfeld, E.W. Moshinsky, E.A. Pustay, and W.D. Jones



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NJ-86-2
Prepared in cooperation with the New Jersey Department of Environmental Protection and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

DONALD PAUL HODEL, Secretary

GEOLOGICAL SURVEY

Dallas L. Peck, Director

For information on the water program in New Jersey write to

District Chief, Water Resources Division
U.S. Geological Survey
Mountain View Office Park
810 Bear Tavern Road, Suite 206
West Trenton, New Jersey 08628

1987

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 2 volumes:

Volume 1. Atlantic Slope Basins, Hudson River to Cape May
Volume 2. Delaware River Basin and tributaries to Delaware Bay

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.

Eugene Dorr
George M. Farlekas
Mark A. Hardy
Robert D. Schopp

D.C. Gilliom word processed the text of the report, and G.L. Simpson drafted the illustrations.

The data were collected, computed, and processed by the following personnel:

C. Bove
J.B. Campbell
J.P. Campbell
G.L. Centinaro
R.S. Cole
M.J. DeLuca
J.F. Dudek
C.E. Gurney
M.O. Philips
R.G. Reiser
E. Rodgers
R.D. Sachs
F.L. Schaefer

This report was prepared in cooperation with the State of New Jersey and with other agencies under the general supervision of Mark A. Ayers, Associate District Chief for Hydrologic Data Assessment and Information Management; Donald E. Vaupel, District Chief, New Jersey; and Stanley P. Sauer, Regional Hydrologist, Northeastern Region.

50272-101

REPORT DOCUMENTATION PAGE	1. REPORT NO. USGS/WRD/HD-87/261	2.	3. Recipient's Accession No.

4. Title and Subtitle
Water Resources Data - New Jersey, Water Year 1986
Volume 2. Delaware River Basin and tributaries to Delaware Bay

5. Report Date
August 1987

6.

7. Author(s)
W. R. Bauersfeld, E. W. Moshinsky, E. A. Pustay, W. D. Jones

8. Performing Organization Rept. No.
USGS-WRD-NJ-86-2

9. Performing Organization Name and Address
U.S. Geological Survey, Water Resources Division
Mountain View Office Park
810 Bear Tavern Road, Suite 206
West Trenton, New Jersey 08628

10. Project/Task/Work Unit No.

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

12. Sponsoring Organization Name and Address
U.S. Geological Survey, Water Resources Division
Mountain View Office Park
810 Bear Tavern Road, Suite 206
West Trenton, New Jersey 08628

13. Type of Report & Period Covered
Annual - Oct. 1, 1985 to Sept. 30, 1986

14.

15. Supplementary Notes
Prepared in cooperation with the New Jersey Department of Environmental Protection and with other agencies.

16. Abstract (Limit: 200 words)

Water Resources data for the 1986 water year for New Jersey consist of 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. This volume of the report contains discharge records for 23 gaging stations; tide summaries for 3 stations; stage and contents for 18 lakes and reservoirs; water quality for 30 surface-water sites and 79 wells; and water levels for 23 observation wells. Also included are data for 27 crest-stage partial-record stations, 2 tidal crest-stage gages and 9 low-flow partial-record stations. Additional water data were collected at various sites, not part of the systematic data collection program, and are published as miscellaneous measurements. These data represent that part of the national water data system operated by U.S. Geological Survey and cooperating State and Federal agencies in New Jersey.

17. Document Analysis a. Descriptors

*New Jersey, *Hydrologic data, *Surface water, *Ground water, *Water quality, Flow rate, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediments, Water temperatures, Sampling sites, Water Levels, Water Analyses

b. Identifiers/Open-Ended Terms

c. COSATI Field/Group

18. Availability Statement: No restriction on distribution. This report may be purchased from: National Technical Information Service, Springfield, VA 22161	19. Security Class (This Report) Unclassified	21. No. of Pages 205
	20. Security Class (This Page) Unclassified	22. Price

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

OPTIONAL FORM 272 (4-77)
(Formerly NTIS-35)
Department of Commerce

CONTENTS

ILLUSTRATIONS

TABLES

SURFACE WATER STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED

Note.--Data for partial-record stations and miscellaneous sites for surface-water quantity are published in a separate section of the data report. See references at the end of this list for page numbers for this section.

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

Page

GROUND-WATER LEVEL RECORDS

QUALITY OF GROUND-WATER RECORDS

WATER RESOURCES DATA - NEW JERSEY, 1986

INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with State agencies, obtains a large amount of data pertaining to the water resources of New Jersey each water year. These data, accumulated during many water years, constitute a valuable data base for 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 wells. This volume contains records for water discharge at 23 gaging stations; tide summaries at 3 gaging stations; stage and content at 18 lakes and reservoirs; water quality at 30 surface-water stations and 79 wells; and water levels at 23 observation wells. Records included for ground-water levels are only a part of those obtained during the year. Also included are data for 27 crest-stage partial-record stations and stage only at 2 tidal crest-stage gages. Locations of these sites are shown on figures 9, 10, 11, and 12. Additional water data were collected at various sites not involved in the systematic data-collection program. Discharge measurements were made at 9 low-flow partial-record stations. Miscellaneous data were collected at 21 measuring sites. 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. Beginning with the 1975 water year, the report format was changed to present, in one volume, data on quantities of surface water, quality of surface and ground water, and ground-water levels. Beginning with the 1977 water year, these data were published in two volumes.

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 Distribution Branch, Text Products Section, U.S. Geological Survey, 604 South Pickett Street, Alexandria, VA 22304.

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-86-2." For archiving and general distribution, the reports for 1971-74 water years also are identified as water-data reports. These water-data reports are for sale in paper copy or in microfiche by the National Technical Information, Service, U.S. Department of Commerce, Springfield, VA 22161.

Additional information, including current prices, for ordering specific reports may be obtained from the District Chief at the address given on the back of the title page or by telephone (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, Richard T. Dewling, Commissioner.
  Division of Water Resources, George McCann, Director.
New Jersey Water Supply Authority, Rocco Ricci, Executive Director.
North Jersey District Water Supply Commission, Dean C. Noll, Chief Engineer.
Passaic Valley Water Commission, W.I. Inhoffer, General Superintendent and Chief Engineer.
County of Bergen, Edward R. Ranuska, director of Public Works and County Engineer.
County of Camden, Barton Harrison, Chairman of Camden County Planning Board.
County of Morris, James Plante, Chairman of Morris County Municipal Utilities Authority.
County of Somerset, Thomas E. Decker, County Engineer, and Thomas Harris, Administrative Engineer.
Township of West Windsor, Larry Ellery, Chairman of Environmental Commission.

Assistance in the form of funds was given by the Corps of Engineers, U.S. Army, in collecting records for 25 surface water stations, and by the U.S. Army Armament Research and Development Center for the collection of records at 3 surface-water stations and one water-quality monitoring stations. In addition, several stations were operated fully or partially from funds appropriated directly to the Geological Survey. Funding was also supplied by the following Federal Energy Regulatory Commission licensee: Jersey Central Power and Light Company. Assistance was provided by the National Weather Service and the National Ocean Survey.

The following organizations aided in collecting records:

Municipalities of Atlantic City, Jersey City, Newark, New Brunswick and Spotswood; American Cyanamid Co.; Commonwealth Water Co.; Elizabethown Water Co.; Ewing-Lawrence Sewerage Authority; Hackensack Water Co.; Johns-Manville Products Corp.; Monmouth Consolidated Water Co.; and Jersey Central Power and Light Co.

Organizations that supplied data are acknowledged in station descriptions.

SUMMARY OF HYDROLOGIC CONDITIONS

Streamflow

Generally, streamflow for the 1986 water year was above normal in the northern part of the State and below normal in the southern part of the State. Precipitation ranged from 42.9 inches (101 percent of normal), at Newark in the north, to 32.4 inches (77 percent of normal), at Atlantic City in the south. Reservoir contents were above average for the entire year, and reservoir levels were above spillway elevations from December through May. Drought restrictions from the previous year were lifted in November.

Water Year 1986 began with streamflow above normal, primarily because of Hurricane Gloria at the end of September 1985. As a result of excessive precipitation in November, streamflow continued above normal and averaged 200 percent of normal for the month. With average precipitation during the winter months, mainly in the form of snow, streamflow steadily decreased. Storms on January 25 and 26 and March 13 and 14 resulted in increased streamflow. On March 16, the highest flow since 1955 was recorded on the Delaware River at Trenton. Another storm on April 16 and 17 caused above-normal monthly streamflow (200 percent of normal in the north and 120 percent of normal in the south). During the remainder of the year, precipitation was either normal or slightly below normal. By the end of September, streamflow was 115 percent of normal in the north but only 75 percent of normal in the south.

Streamflow at the index station for northern New Jersey (South Branch Raritan River near High Bridge) averaged 137 ft3/s for the water year; this flow is 112 percent of the 68-year average. Streamflow at the index station for southern New Jersey (Great Egg Harbor River at Folsom) averaged 77.6 ft3/s for the water year; this flow is 86 percent of the 61-year average. The observed annual mean discharge of the Delaware River at Trenton was 13,230 ft3/s, which is 113 percent of normal. The Delaware River is highly regulated by reservoirs and diversions. The natural flow at Trenton (adjusted for upstream storage and diversion) was 124 percent of normal for the year. Figures 1 and 2 compare the monthly and annual discharges with past records at these index gaging stations.

Storage in the 13 major water-supply reservoirs in New Jersey decreased from 63.6 billion gallons (84 percent of capacity) on September 30, 1985, to 55.6 billion gallons (74 percent of capacity) on September 30, 1986. Storage in Wanaque Reservoir decreased from 23.8 billion gallons (84 percent of capacity) on September 30, 1985, to 20.8 billion gallons (75 percent of capacity) on September 30, 1986. Pumped storage in Round Valley Reservoir, the largest reservoir capacity in the State, increased from 47.4 billion gallons (86 percent of capacity) on September 30, 1985, to 50.6 billion gallons (92 percent of capacity) on September 30, 1986.

Water Quality

Periods of above-normal streamflow in northern portions of the State caused dilution of dissolved solids in many northern and central streams. The degree of dilution is especially apparent if monthly mean values of specific conductance, which are directly related to dissolved solids concentrations, for 1986 are compared with those for 1985, a period of below-normal precipitation. Figure 3 compares specific conductances for large northern (Passaic River at Little Falls) and central (Delaware River at Trenton) drainages in New Jersey for 1986, 1985, and the last 5 years. This dilution of dissolved solids is generally regarded as an improvement in water quality because concentrations of undesirable substances, such as trace elements, organic compounds, nutrients, bacteria and nuisance aquatic organisms, usually also are diluted.

A number of toxic materials seem to be widespread at low to moderate concentrations throughout New Jersey. The organochlorine compounds chlordane, DDT (and its decomposition products DDD and DDE), and PCB's are commonly detected in stream bottoms of the State. Chlordane is a widely used pesticide; DDT was a common pesticide but its production and use in the United States has been banned since 1972. PCB's have been used in many industrial and manufactured items, but their use has been restricted to environmentally closed systems (for example, electrical capacitors and transformers) since 1971. All of these compounds are persistent and are still found in the surface and ground waters in the State. Common sources include industrial and municipal effluents, landfills and other soil disposal sites, and incineration of material containing PCB's (Natural Resources Council, 1979).

Samples of bottom materials from New Jersey streams have been analyzed for toxic substances for many years. Figure 4 shows the occurrence of chlordane, DDT, DDD, DDE and PCB's, in New Jersey stream-bottom materials for 1976-86. Only those sites were included for which water-quality data are presented in either volume of this report. At some sites, more than one sample was collected during a particular water year. Figure 4 includes the percentage of samples collected in which at least one compound exceeded a concentration of 20 µg/kg (micrograms per kilogram)--a level selected to include the highest 15 to 20 percent of values nationwide (J.S. Cragwall Jr., U.S.Geological

Survey, written commun., 1977). Figure 5 shows the locations of sites samples during the 1986 water year at which at least one of these compounds exceeded a concentration of 20 µg/kg.

The U.S. Geological Survey maintains a saltwater-monitoring network in the Coastal Plain of New Jersey to document and evaluate the intrusion of saline water into freshwater aquifers that serve as sources of water supply. The results of the sampling of wells in this network are presented in the tables of ground-water quality. In the 1986 water year, 216 samples were collected from 206 Coastal Plain wells in 8 counties. Chloride concentration in 18 wells from 6 counties exceeded national secondary drinking water standard of 250 mg/L (milligrams per liter).

According to Zapecza and Szabo (1987), elevated levels of naturally occurring radionuclides in ground water in the Newark Basin, N.J. (Piedmont physiographic province) are associated with zones of uranium enrichment. The uranium has been concentrated in black mudstones of the Lockatong and the lower Passaic Formations. High levels of gross-alpha radiation (greater than the 15 pCi/L (picocuries per liter) maximum contaminant level established by the U.S. Environmental Protection Agency) are present predominantly in ground water near the contacts between these two formations along the eastern part of the basin, and in the Hopewell and Flemington fault blocks, where these formations are repeated. Ground water from the upper part of the Passaic Formation and from basalt and diabase aquifers in the basin is characteristically very low in radionuclides (gross-alpha concentrations are less than 5 pCi/L) (Zapecza and Szabo, 1987).

Another study has been evaluating the effects of acidic deposition on waters within the McDonalds Branch basin in the New Jersey Pinelands. These waters may be especially susceptible to acidic deposition because of their low pH, low ionic strength, and low buffering capacity. Precipitation, throughfall, and surface, ground, and soil waters were sampled from 1984-86. According to Lord and others (1987), the median pH of bulk precipitation was 4.4; surface, ground, and soil waters had low pH's, ranging from 3.2 to 5.8, with acidity commonly dominated by sulfuric acid rather than organic acid. Aluminum concentrations in stream waters reached 10,000 µg/L, and generally corresponded closely to sulfate concentrations. Changes in ionic concentrations through the ecosystem indicate that aluminum is being mobilized from soils by sulfuric acid. Chemical input-output budgets show that hydrogen ion, ammonium, nitrate, and sulfate are being accumulated in the watershed, while aluminum, iron, calcium, magnesium, and DOC are being exported from the watershed.

A recently published work by Hochreiter and others (1986) investigated contamination of the Coastal Plain aquifers immediately beneath an abandoned waste-oil- and chemical-disposal facility. A lagoon had been used for disposal of a variety of materials, including spent crank-case oil and fuel oils. Organic contaminants were found to depths below land surface of at least 108 feet. The predominant organic contaminants identified were simple aromatic hydrocarbons (benzenes and phenols), propanes, butanes, and other compounds that are typical products of mineral-oil fractionation. Concentrations of organic contaminants ranged from the minimum detection limit (typically 3 µg/L (micrograms per liter)) to greater than 10,000 µg/L. Only 25 percent of the organic compounds identified at the site are on the U.S. Environmental Protection Agency priority pollutant list (Keith and Telliard, 1979). Therefore, most of the organic contaminants identified at this site are not regulated by either Federal or State drinking-water regulations (Hochreiter and others, 1986).

A study by Kish and others (1987) analyzed trace-metal concentrations in tap water from 25 domestic wells from new homes in Berkeley Township in Ocean County, and Galloway Township in Atlantic County. All of the wells are screened in the Kirkwood-Cohansey aquifer system, which typically yields acidic water with low alkalinity (usually less than 10 mg/L as $CaCO_3$) and low hardness (less than 10 mg/L as $CaCO_3$). The potable water-distribution systems in all homes sampled are constructed primarily of copper with lead-based solder joints. Tap-water samples were collected after the water had been standing in the pipes overnight. Of the 25 samples collected, 20 samples exceeded the maximum contaminant level of the national primary drinking-water regulation for lead (50 µg/L). At 14 of the sites, an additional sample was collected after the water had been allowed to run 17 to 18 minutes. None of these samples exceeded the drinking-water regulation for lead. These data indicate that increased residence time of soft, acidic ground water in new home plumbing systems may result in increased lead concentrations in tap water.

Ground-Water levels

Changes in ground-water levels that occurred during 1986 water year were determined from a statewide network of observation wells. Ground-water levels that were affected mainly by climactic conditions were below normal for the second consecutive year. This was true for many water-table and confined aquifers in the northern counties as well as for the water-table aquifers of the Atlantic Coastal Plain. Artesian water levels in most wells tapping the heavily stressed confined aquifers of the Coastal Plain continued to show long-term net declines. Increasing withdrawals of ground water contributed to these declines.

Monthly water levels for two water-table observation wells in 1986 are compared with long-term averages in figure 6; the wells are the Bird well (NJ-WRD well 19-002) in Hunterdon County and the Crammer well (NJ-WRD well 29-486) in Ocean County. For further comparison, 20-year hydrographs are presented in figure 7 for two Coastal Plain wells--one artesian well (NJ-WRD well 07-413) and one water-table well (NJ-WRD well 05-689). In addition, multiyear hydrographs and 1986 water-level data are provided for all wells included in this report.

The water-table aquifers in the Coastal Plain were at record low levels at the beginning of the 1986 water year. By December, water levels in two wells-(the Crammer well, NJ-WRD well 29-486 and the Lebanon State Forest 23-D well, NJ-WRD well 05-689) were at the lowest levels ever recorded. Water levels recovered somewhat during the spring of 1986; however, they continued to be below normal throughout the 1986 water year.

Observation wells that tap the heavily stressed Coastal Plain artesian aquifers continued to experience long-term net water-level declines in many areas. Record lows were recorded in 30 Coastal Plain artesian wells. The most notable water-level declines occurred in the Potomac-Raritan-Magothy aquifer system. Levels in the Marlboro observation well (NJ-WRD well 25-272) in Middlesex County and the Hutton Hill 1 observation well (NJ-WRD well 07-117) in Camden County were 7.6 and 9.8 feet below previous lows of record, respectively. Other aquifers with record low water levels during the 1986 water year include the Englishtown, Wenonah-Mount Laurel, Piney Point,and the Atlantic City 800-foot sand.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Bench-mark Network is a network of 57 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

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

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

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

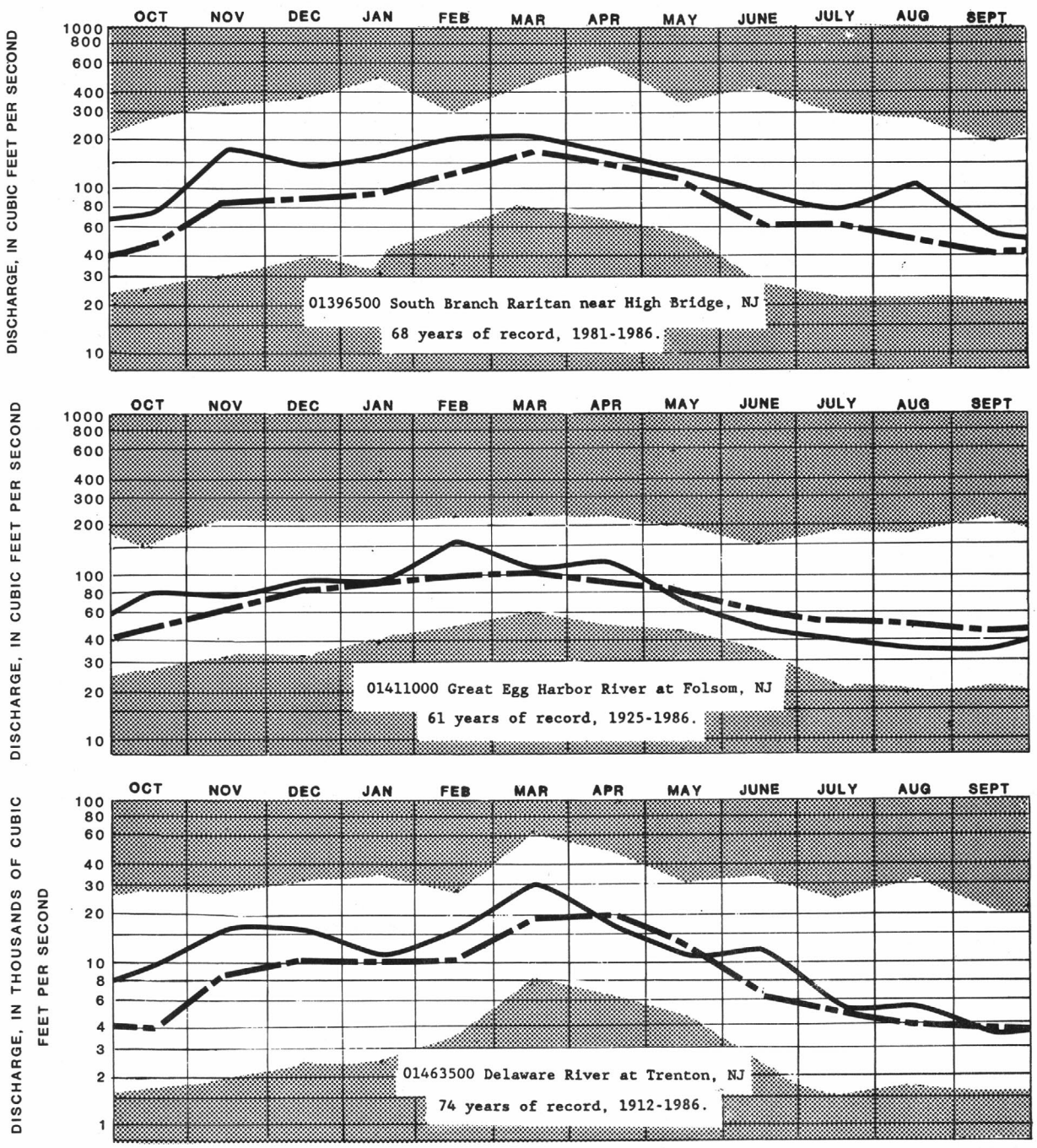
Tritium Network is a network of stations which has been established to provide baseline information or the occurrence of tritium in the Nation's surface waters. In addition to the surface-water stations in the network, tritium data are also obtained at a number of precipitation stations. The purpose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

EXPLANATION OF THE RECORDS

The surface-water and ground-water records published in this report are for the 1986 water year that began October 1, 1985, and ended September 30, 1986. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, water-quality data for surface and ground water, and ground-water-level data. The locations of the stations and wells where the data were collected are shown in figures 9, 10, 11, and 12. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

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



Unshaded area.--Indicates range between highest and lowest mean recorded for the month, prior to 1986 water year.

Broken line.--Indicates normal (median of the monthly means) for the standard reference period, 1951-1980.

Solid line.--Indicates observed monthly mean flow for the 1986 water year.

Figure 1.--Monthly streamflow at key gaging stations.

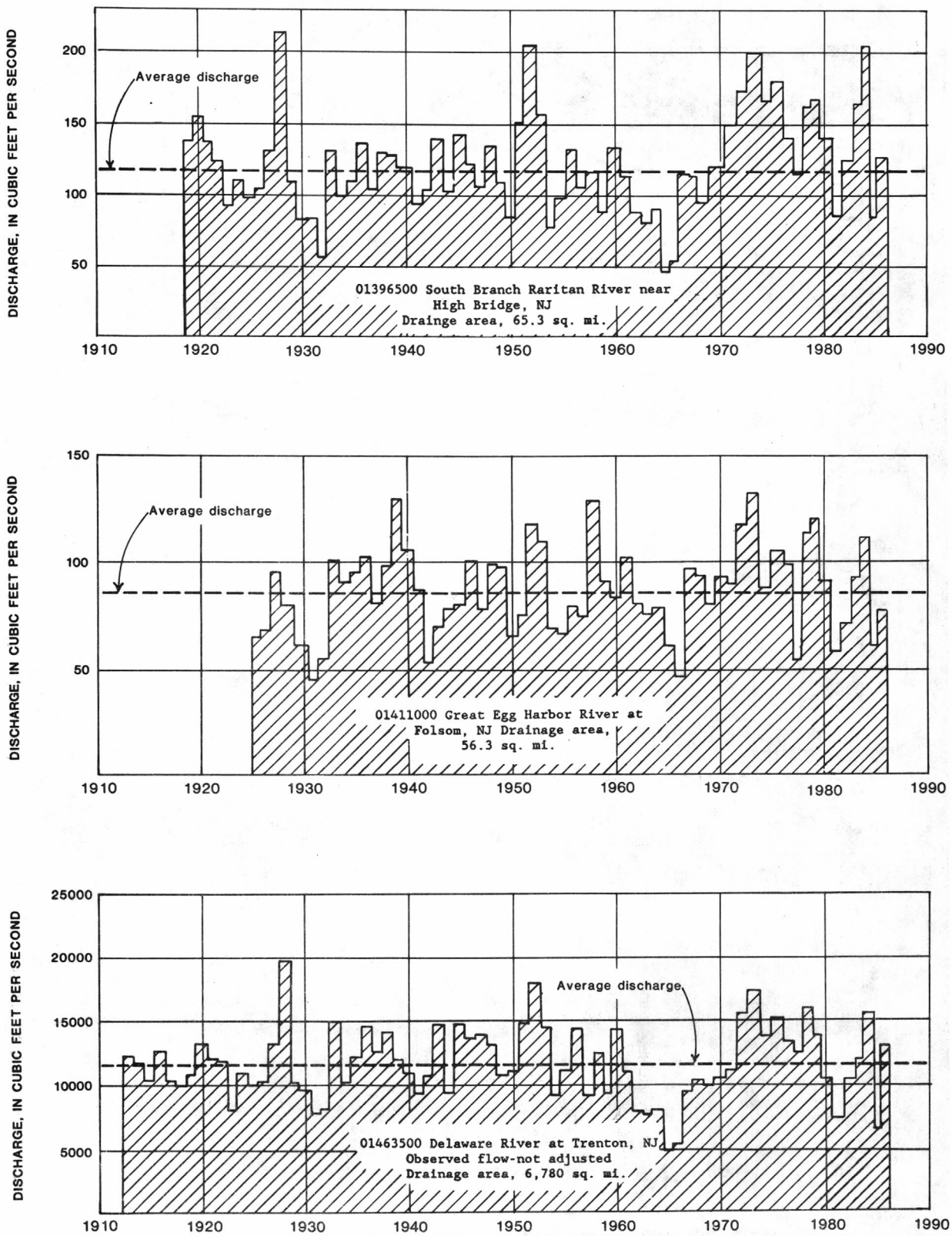


Figure 2.--Annual mean discharge at key gaging stations.

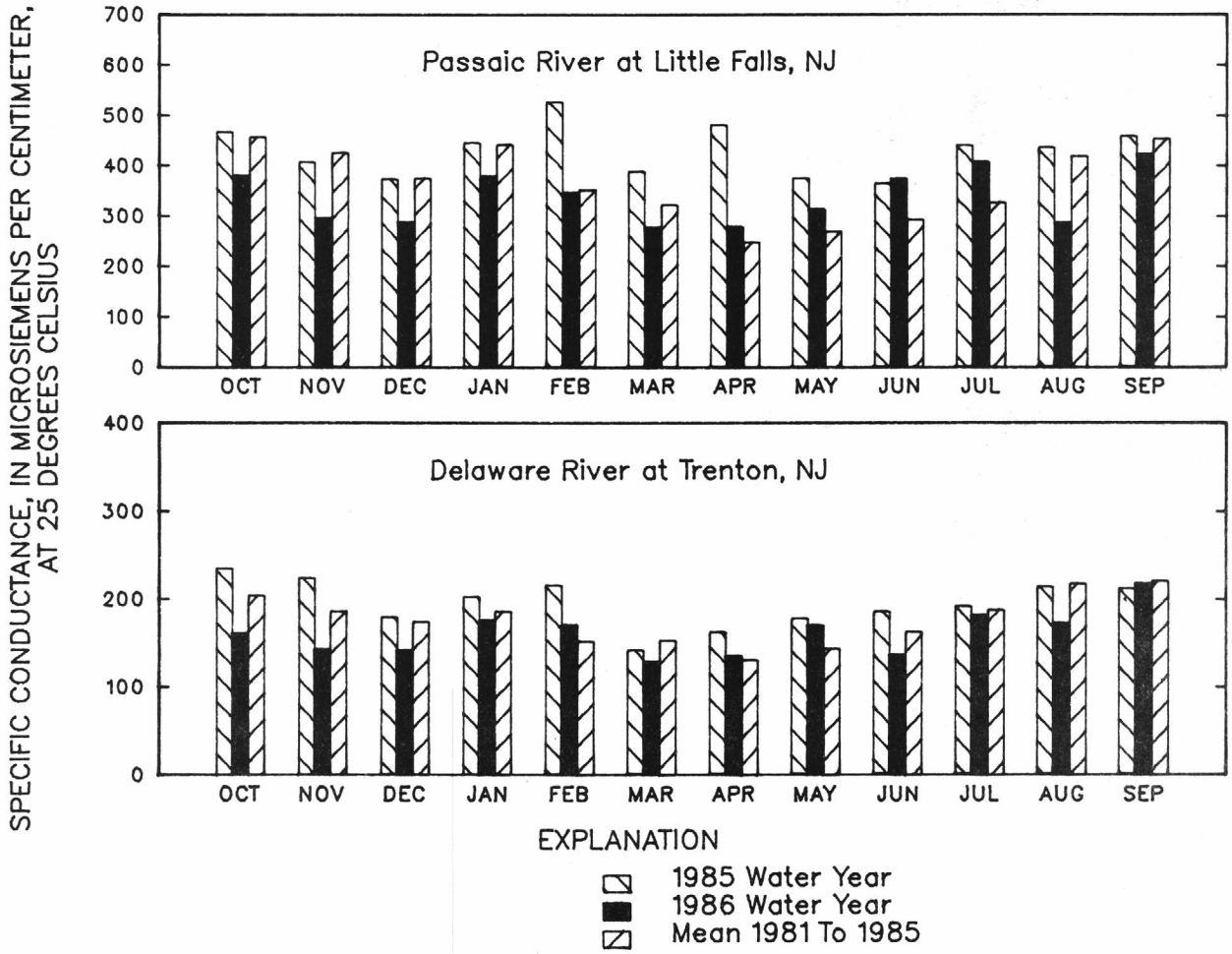


Figure 3.--Monthly mean specific conductance at Passaic River at Little Falls and Delaware River at Trenton.

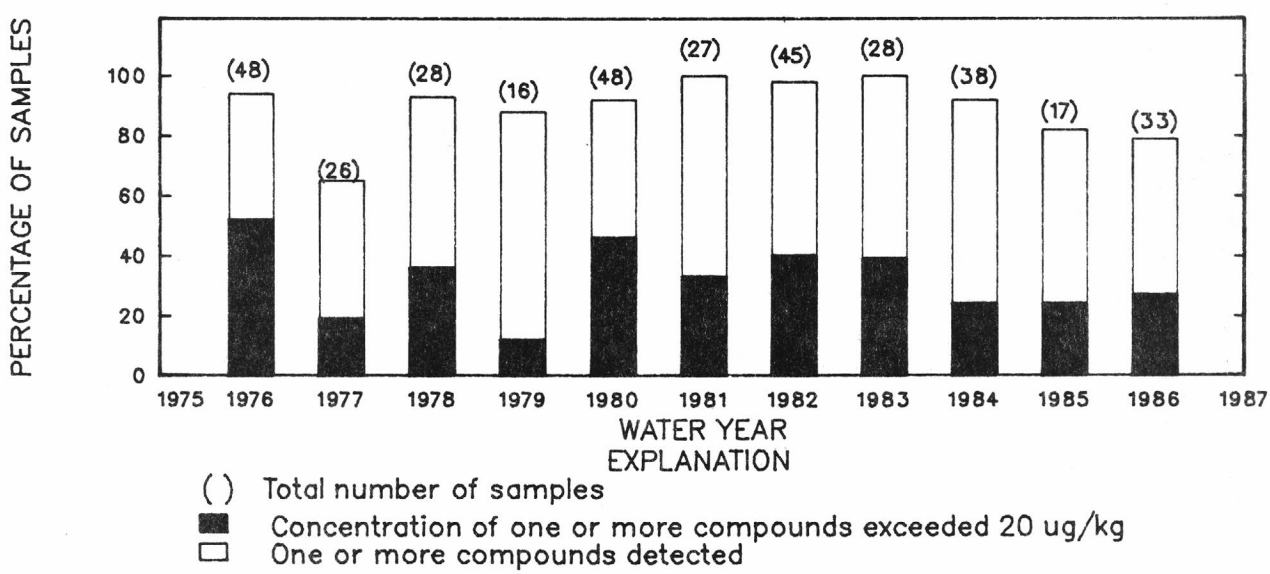


Figure 4.--Organochlorine compounds in bottom materials.

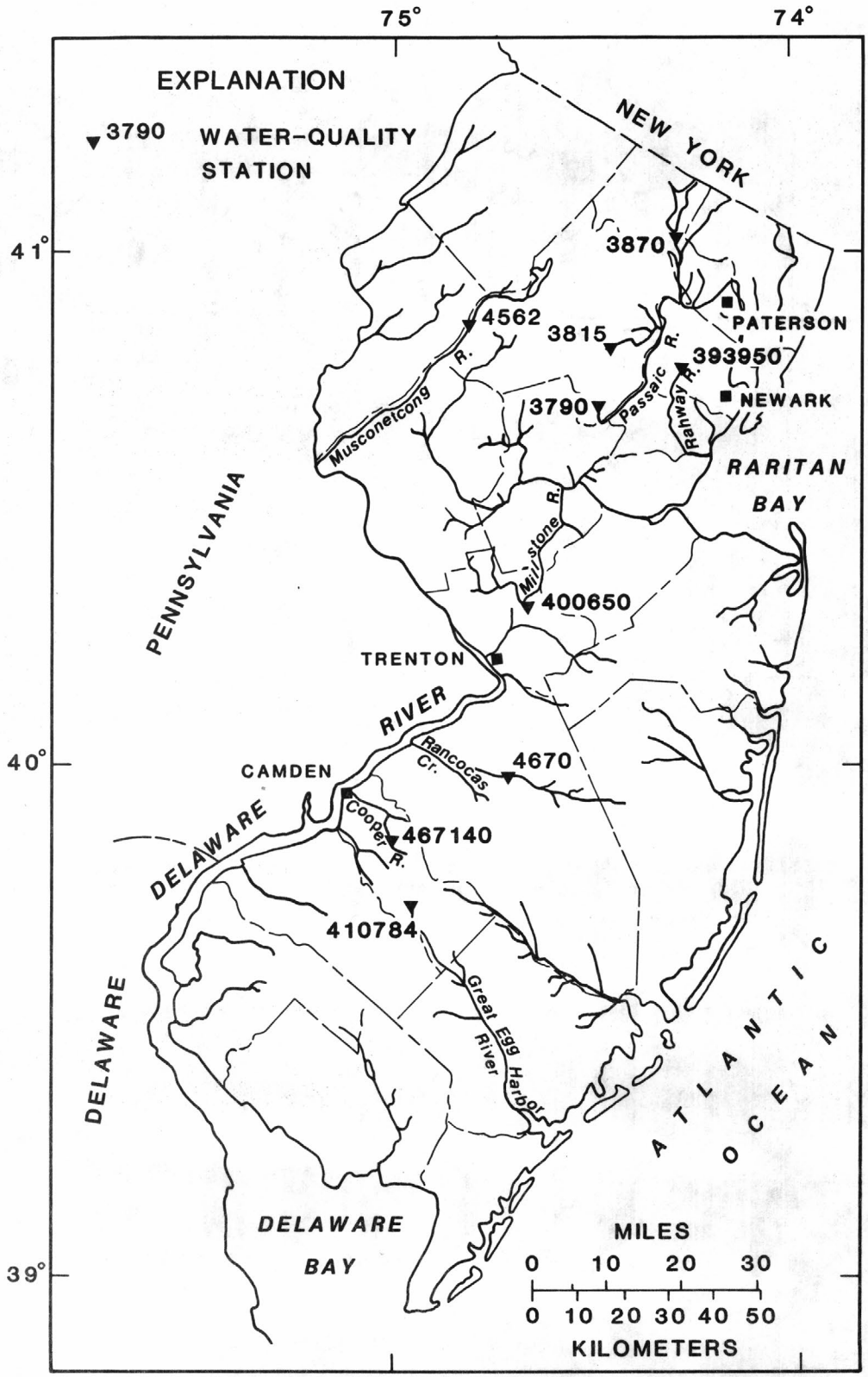
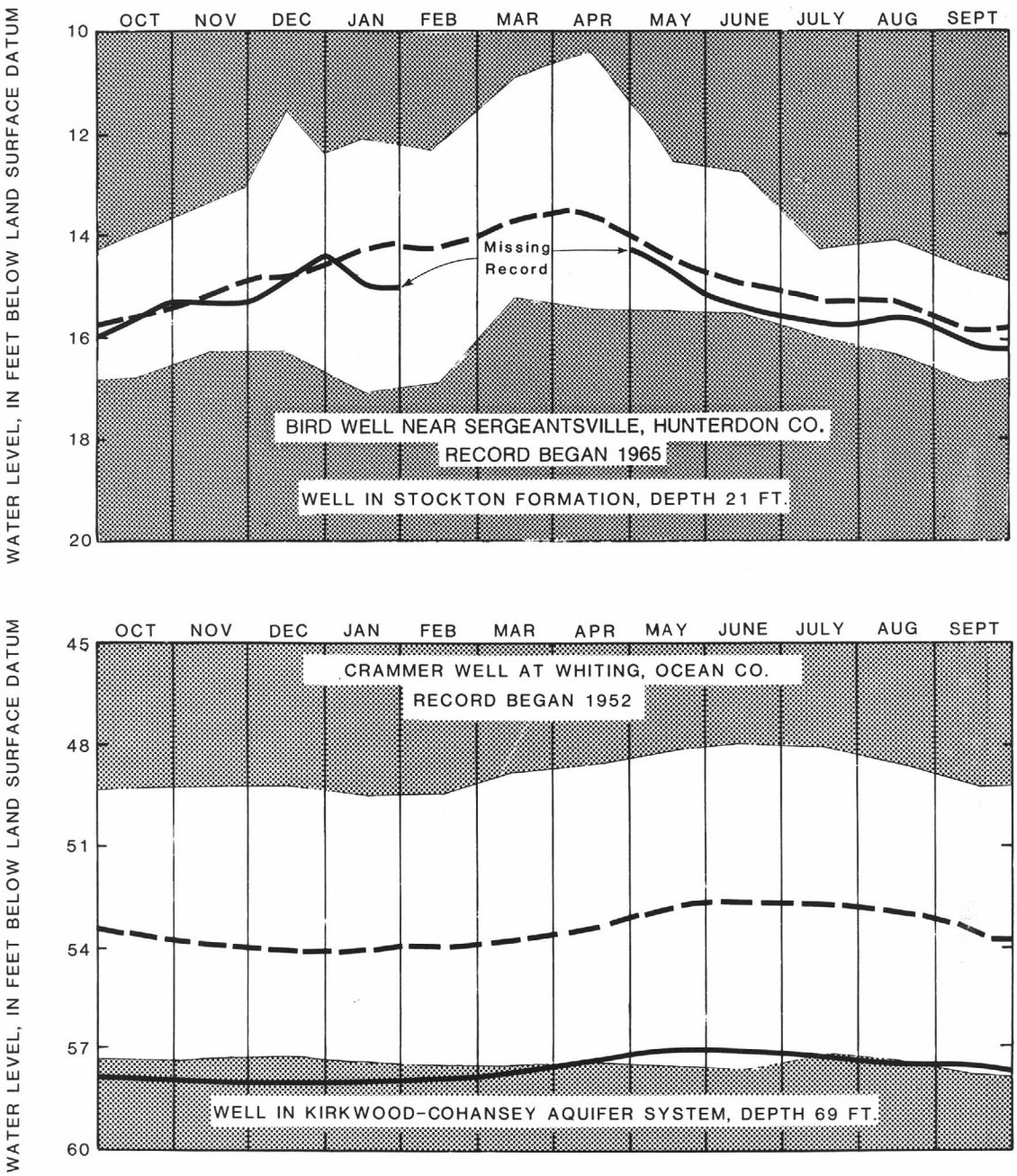


Figure 5.--Locations of sites with concentrations of Chlordane, DDD, DDE, DDT, or PCB's in bottom material greater than 20 µg/kg, 1986.

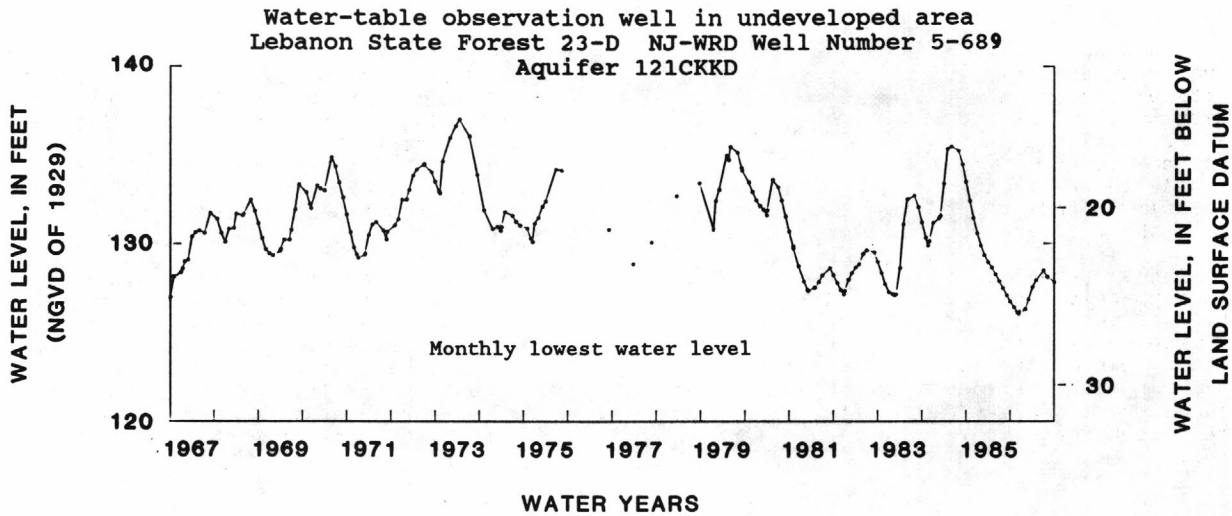


Unshaded area.--Indicates range between highest and lowest recorded monthly minimum water levels, prior to the current year.

Dashed line.--Indicates average of the monthly minimum water levels, prior to current year.

Solid line.--Indicates monthly minimum water level for the current year.

Figure 6.--Monthly ground-water levels at key observation wells.



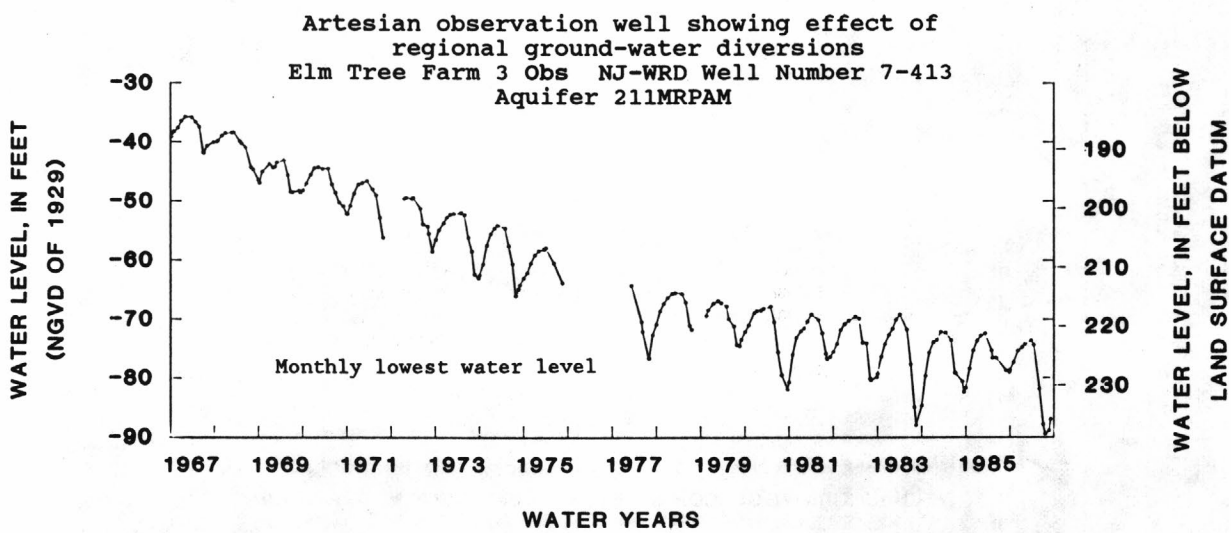


Figure 7.--Twenty-year hydrographs of one artesian and one water table observation well.

Downstream Order System

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

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete eight-digit number for each station, such as 01396500, which appears just to the left of the station name, includes the two-digit Part number "01" plus the 6-digit downstream-order number "396500". The Part number designates the major drainage basin; for example, Part "01" covers the North Atlantic slope basins.

Latitude-Longitude System

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

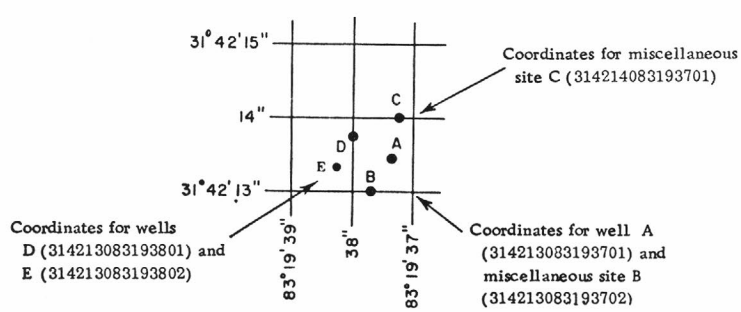


Figure 8. System for numbering wells and miscellaneous sites (latitude and longitude)

Records of Stage and Water Discharge

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

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles such as "Crest-stage partial records," or "Low-flow partial records." Records of miscellaneous discharge measurements or of measurements from special studies, such as low-flow seepage studies, may be considered as partial records, but they are presented separately in this report. Location of all complete-record and crest-stage partial-record stations for which data are given in this report are shown in figures 9 and 10.

Data Collection and Computation

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

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

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

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

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

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

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

Data Presentation

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Identifying Estimated Daily Discharge

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

Accuracy of the Records

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

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

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

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

Other Records Available

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

Records of Surface-Water Quality

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

Classification of Records

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

A careful distinction needs to be made between "continuing records", as used in this report, and "continuous recordings," which refers to a continuous graph or a series of discrete values punched at short intervals on a paper tape. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently. Locations of stations for which records on the quality of surface water appear in this report are shown in figure 9.

Arrangement of Records

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

On-site Measurements and Sample Collection

Water-quality data must represent the in-situ quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, must be made onsite when the samples are collected. In addition, specific procedures must be used in collecting, treating, and shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in publications on "Techniques of Water-Resources Investigations," Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4. These references are listed under "PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS" at the end of the introductory text. Also, detailed information on collecting, treating, and shipping samples may be obtained from the Geological Survey, New Jersey District office.

In streams, concentrations of various constituents may vary within the cross section depending on variables such as flow rate, the sources of the constituents, and mixing. Generally, constituents in solid phases are more variable in the cross section than are dissolved constituents. In many cases, samples must integrate several parts of the stream cross section to be representative, especially if loads will be calculated. One sample may be representative of the cross section when the distribution of constituents is homogeneous. All samples obtained for the National Stream Quality Accounting Network (see definitions) are obtained from several verticals.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. In some instances, apparent inconsistencies may exist in the data. For example, the orthophosphate-phosphorus concentration may exceed total phosphorus concentration. However, the difference in the inconsistent values normally is smaller than the precision of the analytical techniques. Inconsistencies between pH and carbonate and bicarbonate concentrations are commonly caused by intake or loss of carbon dioxide by the sample before it can be analyzed.

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

Water Temperature

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

At stations where recording instruments are used, maximum, minimum and mean temperatures for each day are published. Water temperatures measured at the time of water-discharge measurements are on file in the New Jersey District Office.

Sediment

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

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

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

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

Laboratory Measurments

Samples for biochemical-oxygen demand and for fecal coliform and fecal streptococcal bacteria are analyzed at the District laboratory or at the New Jersey Department of Health, Division of Laboratories and Epidemiology. Samples for nutrients are analyzed at the New Jersey Department of Health or at the Geological Survey Laboratory in Arvada, Colorado. Sediment samples are analyzed in the Geological Survey Laboratory in Harrisburg, Pennsylvania. All other samples are analyzed in the Geological Survey laboratory in Arvada, Colorado. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chap. C1. Methods used by the Geological Survey laboratory are given in TWRI, Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4.

Data Presentation

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

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

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

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

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

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

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

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

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

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

The surface-water-quality records for partial-record stations and miscellaneous sampling sites which are not at a surface-water daily record station are published in separate tables following the table of discharge measurements at miscellaneous sites. No descriptive statements are given for these records. Each station is published with its own station number and name in the regular downstream-order sequence.

Remark Codes

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

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

Records of Ground-Water Levels

Only water-level data from a national network of observation wells are given in this report. These data are intended to provide a sampling and historical record of water-level changes in the Nation's most important aquifers. Locations of the observation wells in this network in New Jersey are shown in figure 11.

Data Collection and Computation

Measurements of water levels are made in many types of wells under varying conditions, but the methods of measurement are standardized to the extent possible. The equipment and measuring techniques used at each observation well ensure that measurements at each well are of consistent accuracy and reliability.

Tables of water-level data are presented by counties arranged in alphabetical order. The prime identification number for a given well is the 15-digit number that appears in the upper left corner of the table. The secondary identification number is the 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 being used now in the ground-water level descriptions, wells sampled for water quality analyses, and on the corresponding location maps in these reports.

Water-level records are obtained from direct measurments with a steel tape, from the punched tape of a water-level recorder, or from water-level extremes recorder. 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 these reports, the water-level extremes are given together with the manually measured water levels.

The water-level measurements in this report are given in feet with reference to land-surface datum (lsd). Land-surface datum is a datum plane that is approximately at land surface at each well. The elevation of the land-surface datum is given in the well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description. Water levels in wells equipped with water-level recorders are reported for every fifth day and the end of each month (eom).

Water levels are reported to as many significant figures as can be justified by the local conditions. For example, in a measurement of a depth to water of several hundred feet, the error of determining the absolute value of the total depth to water may be a few tenths of a foot, whereas the error in determining the net change of water level between successive measurements may be only a hundredth or a few hundredths of a foot. For lesser depths to water, the accuracy is greater. All measurements published herein are reported to a hundredth of a foot.

Data Presentation

Each well record consists of three parts, the station description, the data table of water levels observed during the water year, and a multi-year hydrograph. The description of the well is presented first through use of descriptive headings preceding the tabular data. The comments to follow clarify information presented under the various headings.

LOCATION.--This paragraph follows the well-identification number and reports the latitude and longitude (given in degrees, minutes, and seconds); the hydrologic-unit number; (a landline location designation); the distance and direction from a geographic point of reference; and the owner's name.

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, casing depth and/or screened interval, method of construction, use, and additional information such as casing breaks, collapsed screen, and other changes since construction.

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

DATUM.--This entry describes both the measuring point and the land-surface elevation at the well. The measuring point is described physically (such as top of collar, notch in top of casing, plug in pump base and so on), and in relation to land surface (such as 1.3 ft above land-surface datum). The elevation of the land-surface datum is described in feet above 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 should identify wells that also are water-quality observation wells, and may be used to acknowledge the assistance of local (non-Survey) observers.

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

EXTREMES FOR PERIOD OF RECORD.--This entry contains the highest and lowest water levels of the period of record, with respect to land-surface datum, and the dates of their occurrence.

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

Records of Ground-Water Quality

Records of ground-water quality in this report consist of only one set of measurements for the water year. Because ground-water movement is normally slow compared to surface water, frequent measurements are not necessary for monitoring purposes. More frequent measurements may be necessary for studying ground-water problems, trends, or processes.

Data Collection and Computation

The records of ground-water quality in this report were obtained from water-quality monitoring studies in specific areas. Consequently, chemical analyses are presented for some counties but not for others. As a result, the records for this year, by themselves, do not provide a balanced view of ground-water quality Statewide. Such a view can be attained only by considering records for this year in context with similar records obtained for these and other counties in earlier years.

In ground-water observation wells, water in the casing may not be representative of aquifer water quality. To collect samples representative of aquifer water, samples are collected only after at least three casing volumes of water have been pumped from the well and measurements of temperature, specific conductance, and pH have stabilized during the pumping.

Data Presentation

The records of ground-water quality are published in a section titled QUALITY OF GROUND WATER immediately following the ground-water-level records. Data for quality of ground water are listed alphabetically by County and are identified by NJ-WRD well number. No descriptive statements are given for ground-water-quality records; however, the well number, depth of well, date of sampling, and other pertinent data are given in the table containing the chemical analyses of the ground water. The REMARK codes listed for surface-water-quality records are also applicable to ground-water-quality records.

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 Watstore data base. Subsequent sections contain information on recent publications and on Watstore.

Assessment of ground-water resources in the vicinity of ground-water contamination sites in Greenwich Township, New Jersey. *

Evaluation of field sampling techniques and analytical methods for organic compounds in ground water.

Geochemical effects on the corrosivity of ground water in the Kirkwood-Cohansey aquifer in the New Jersey Coastal Plain. *

Geochemical processes controlling aluminum and sulfate transport in acidic surface, ground and soil waters in a watershed in the New Jersey Coastal Plain.*

Geohydrologic Investigations at United States Environmental Protection Agency Superfund sites.

Geohydrology at Picatinny Arsenal in Morris County, New Jersey.

Geohydrology in the vicinity of a fusion test reactor, Plainsboro Township, Middlesex County, New Jersey.

Geophysical characteristics of aquifers in New Jersey. *

Ground-water quality and its relationship to geohydrology and land use in the outcrop area of the Potomac-Raritan-Magothy aquifer system, Mercer and Middlesex Counties, New Jersey.

Ground-water data collection network. *

Ground-water withdrawals and use in South River area of New Jersey. *

Ground-water resources investigation of the Rockaway River buried valley.*

Ground-water resources of northern Mercer County and southeastern Somerset County, New Jersey. *

Hydrologic processes with special emphasis on ground-water quality near Atlantic City, New Jersey. *

Hydrologic processes with special emphasis on ground-water quality near Camden, New Jersey. *

Hydrologic processes with special emphasis on ground-water quality near South River, N.J. *

Investigation of naturally occurring radioactive substances in ground water of the Triassic Formations in New Jersey. *

Land subsidence related to ground-water withdrawals in the Coastal Plain of New Jersey. *

New Jersey water-use data system. *

Optimal withdrawals from a coastal aquifer subject to salt-water encroachment: Numerical analysis and case study.*

Quality of water data collection network. *

Regionalization of low flows for New Jersey Streams. *

Simulation of multilayer Coastal Plain aquifer system of New Jersey.

Surface-water data collection network. *

Water-use data system for the Delaware River Basin.

*In cooperation with New Jersey Department of Environmental Protection, Division of Water Resources.

WATER-RELATED REPORTS FOR NEW JERSEY COMPLETED BY THE GEOLOGICAL SURVEY DURING 1985-86

Duran, P.B., 1985, Distribution of bottom sediments and effects of proposed dredging in the ship channel of the Delaware River between northeast Philadelphia, Pennsylvania, and Wilmington, Delaware: U.S. Geological Survey Hydrologic Atlas 697, 1 p.

Eckel, J.A., and Walker, R.L., 1986, Water levels in major artesian aquifers of the New Jersey Coastal Plain, 1983: U.S. Geological Survey Water-Resources Investigations Report 86-4028, 62 p.

Harriman, D.A., and Sargent, B.P., 1985, Ground-water quality in east central New Jersey and a plan for sampling networks: U.S. Geological Survey Water-Resources Investigations Report 85-4243, 114 p.

Harte, P.T., Sargent, B.P., and Vowinkel, E.F., 1986, Description and results of test-drilling program at Picatinny Arsenal, New Jersey, 1982-84: U.S. Geological Survey Open-File Report 86-316, 54 p.

Hochreiter, J.J., Jr., and Kozinski, Jane, 1985, Quality of water and bed material in streams of Logan Township, Gloucester County, New Jersey: U.S. Geological Survey Water-Resources Investigations Report 85-4300, 47 p.

Knobel, L.L., 1985, Ground-water-quality data for the Atlantic Coastal Plain: New Jersey, Delaware, Maryland, Virginia and North Carolina: U.S. Geological Survey Open-File Report 85-154, 84 p.

Koszalka, E.J., Miller, J.E., Jr., and Duran, P.B., 1985, Preliminary evaluation of chemical migration to ground water and the Niagra River from selected waste disposal sites: EPA-905/4-85-001, 425 p.

Lacombe, P., Sargent, B.P., Harte, P.T., and Vowinkel, E.F., 1987, Determination of geohydrologic framework and extent of ground-water contamination using surface geophysical techniques at Picatinny Arsenal, New Jersey: U.S. Geological Survey Water-Resources Investigations Report 86-4051, 31 p.

Leahy, P.P., 1985, Management of ground water and evolving hydrogeologic studies in New Jersey: A heavily urbanized and industrialized state in the northeastern United States: U.S. Geological Survey Water-Resources Investigations Report 85-4277, 27 p.

Lord, D.G., and Kish, G.R., 1985, Acidic deposition in New Jersey, Chapter III, Ground water processes in acidic deposition in New Jersey: a report to the Governor and Legislature of New Jersey by the panel on acidic deposition in New Jersey under the auspices of the Governor's Science Advisory Committee, 193 p.

May, J.E., 1985, Feasibility of artificial recharge to the 800-foot sand of the Kirkwood formation in the Coastal Plain near Atlantic City, New Jersey: U.S. Geological Survey Water-Resources Investigations Report 85-4063, 24 p.

Philips, M.O., and Schopp, R.D., 1986, Flood of April 5-7, 1984 in northeastern New Jersey: U.S. Geological Survey Open-File Report 86-423W, 112 p.

Sargent, B.P., Green, J.W., Harte, P.T., and Vowinkel, E.F., 1986, Ground-water-quality data for Picatinny Arsenal, New Jersey, 1958-85: U.S. Geological Survey Open-File Report 86-58, 66 p.

ACCESS TO WATSTORE DATA

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

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

General inquiries about WATSTORE may be directed to:

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

DEFINITION OF TERMS

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

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

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

Algae are mostly aquatic single-celled, colonial, or multi-celled plants, containing chlorophyll and lacking roots, stems, and leaves.

Algal growth potential (AGP) is the maximum algal dry weight biomass that can be produced in a natural water sample under standardized laboratory conditions. The growth potential is the algal biomass present at stationary phase and is expressed as milligrams dry weight of algae produced per liter of sample.

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

Aquifer codes and geologic names:

The following list shows the aquifer unit codes and geologic names of the formations in which the sampled wells are finished. The aquifer unit codes also appear in the ground-water quality tables.

112SFDF	Stratified drift
112TILL	Till
112HLBC	Holly Beach water-bearing zone
112CPMY	Cape May Formation, undifferentiated
112ESRNS	Cape May Formation, estuarine sand facies
121CNSY	Cohansey Sand
121CKKD	Kirkwood-Cohansey aquifer system
122KRKDU	Rio Grande water-bearing zone of the Kirkwood Formation
122KRKDL	Atlantic City 800-foot sand of the Kirkwood Formation
124PNPN	Piney Point aquifer
125VNCN	Vincentown Formation
211MLRW	Wenonah-Mount Laurel aquifer
211EGLS	Englishtown aquifer
211MRPA	Potomac-Raritan-Magothy aquifer system, undifferentiated
211MRPAU	Upper aquifer, Potomac-Raritan-Magothy aquifer system
211MRPAM	Middle aquifer, Potomac-Raritan-Magothy aquifer system
211MRPAL	Lower aquifer, Potomac-Raritan-Magothy aquifer system
211ODBG	Old Bridge aquifer, Potomac-Raritan-Magothy aquifer system (Mercer, Middlesex, Monmouth Counties)
211FRNG	Farrington aquifer, Potomac-Raritan-Magothy aquifer system (Mercer, Middlesex, Monmouth Counties)
231BRCK	Brunswick Formation
231SCKN	Stockton Formation
400PCMB	Precambrian Erathem

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

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, while others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. This group includes coliforms that inhabit the intestine of warm-blooded animals and those that inhabit soils. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35°C. In the laboratory these bacteria are defined as all the organisms that produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35°C plus or minus 1.0°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal coliform bacteria are bacteria that are present in the intestine or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory they are defined as all organisms that produce blue colonies within 24 hours when incubated at 44.5°C plus or minus 0.2°C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal streptococcal bacteria are bacteria found also in the intestine of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as Gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours at 35°C plus or minus 1.0°C on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Bedload is the sediment which moves along in essentially continuous contact with the streambed by rolling, sliding, and making brief excursions into the flow a few diameters above the bed.

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

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

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

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500°C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter (g/m^3), and periphyton and benthic organisms in grams per square mile (g/mi^2).

Dry mass refers to the mass of residue present after drying in an oven at 105°C for zooplankton and periphyton, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry-mass values are expressed in the same units as ash mass.

Organic mass or volatile mass of the living substance is the difference between the dry mass and ash mass and represents the actual mass of the living matter. The organic mass is expressed in the same units as for ash mass and dry mass.

Wet mass is the mass of living matter plus contained water.

Bottom material: See Bed material.

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

Cfs-day is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, about 646,000 gallons, or 2,447 cubic meters.

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

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

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

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

Continuing-record station is a specified site which meets one or all conditions listed:

1. When chemical samples are collected daily or monthly for 10 or more months during the water year.

2. When water temperature records include observations taken one or more times daily.

3. When sediment discharge records include periods for which sediment loads are computed and are considered to be representative of the runoff for the water year.

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

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

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

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

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

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

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

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

Dissolved-solids concentration of water is determined either analytically by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination of dissolved solids, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. Therefore, in the mathematical calculation of dissolved-solids concentration, the bicarbonate value, in milligrams per liter, is multiplied by 0.492 to reflect the change.

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

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

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

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

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations and is expressed as the equivalent concentration of calcium carbonate ($CaCo$).

High tide is the maximum height reached by each rising tide.

Hydrologic Bench-Mark Network is a network of 57 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an eight-digit number.

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

Low-tide is the minimum height reached by each falling tide.

Mean high or low tide is the average of all high or low tides, respectively, over a specified period.

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

Metamorphic stage refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This developmental process exists for most insects, and the degree of difference from the immature stage to the adult form varies from relatively slight to pronounced, with many intermediates. Examples of metamorphic stages of insects are egg-larva-adult or egg-nymph-adult.

Methylene blue active substances (MBAS) are apparent detergents. The determination depends on the formation of a blue color when methylene blue dye reacts with synthetic anionic detergent compounds.

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

Micrograms per liter (UG/L, µg/L) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

Milligrams per liter (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represents the mass of solute per unit volume (liter) of water. Concentration of suspended sediment also is expressed in mg/L and is based on the mass of dry sediment per liter of water-sediment mixture.

National Geodetic Vertical Datum of 1929 (NGVD of 1929) is a geodetic datum derived from a general adjustment of the first order level nets of both the United States and Canada. It was formerly called "Sea Level Datum of 1929" or "mean sea level" in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific Coasts, it does not necessarily represent local mean sea level at any particular place.

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

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

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 now in the ground-water level descriptions, wells sampled for water-quality analyses, and on the corresponding location maps in these reports.

Organism is any living entity.

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area habitat, usually square meter (m^2), acre, or hectare. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliter (mL) or liter (L). Numbers of planktonic organisms can be expressed in these terms.

Total organism count is the total number of organisms collected and enumerated in any particular sample.

Parameter Code is a 5-digit number used in the U.S. Geological Survey computerized data system, WATSTORE, to uniquely identify a specific constituent. The codes used in WATSTORE are the same as those used in the U.S. Environmental Protection Agency data system, STORET. The Environmental Protection Agency assigns and approves all requests for new codes.

Partial-record station is a particular site where limited streamflow and/or water-quality data are collected systematically over a period of years for use in hydrologic analyses.

Particle size is the diameter, in millimeters (mm), of a particle determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Particle-size classification used in this report agrees with the recommendation made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

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

The partial-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic matter is removed, and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native-water analysis.

Percent composition is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population, in terms of types, numbers, mass, or volume.

Periphyton is the assemblage of microorganisms attached to and living upon submerged solid surfaces. While primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms.

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

Picocurie (PC, pCi) is one trillionth (1 x 10) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7 x 10 radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

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

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

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

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

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

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

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

Primary productivity is a measure of the rate at which new organic matter is formed and accumulated through photosynthetic and chemosynthetic activity of producer organisms (chiefly, green plants). The rate of primary production is estimated by measuring the amount of oxygen released (oxygen method) or the amount of carbon assimilated by the plants (carbon method).

Milligrams of carbon per area or volume per unit time [mg C/(m².time)] for periphyton and macrophytes and [mg C/(m³.time)] for phytoplankton are units for expressing primary productivity. They define the amount of carbon dioxide consumed as measured by radioactive carbon (carbon 14). The carbon 14 method is of greater sensitivity than the oxygen light and dark bottle method and is preferred for use in unenriched waters. Unit time may be either the hour or day, depending on the incubation period.

Milligrams of oxygen per area or volume per unit time [mgO /(mi.time)] for periphyton and macrophytes and [mgO /(m^3.time)] for phytoplankton are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light and dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

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

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

Return period is the average time interval between occurrences of a hydrological event of a given or greater mangitude, usually expressed in years. May also be called recurrence interval.

River mile as used herein, is the distance above the mouth of Delaware Bay, measured along the center line of the navigation channel or the main stem of the Delaware River. River mile data were furnished by the Delaware River Basin Commission.

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

Screened interval is the length of well screen through which water enters a well, in feet below land surface.

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

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

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

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

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

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

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

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

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

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

7-day 10-year low flow (MA7CD10) is the discharge at the 10-year recurrence interval taken from a frequency curve of annual values of the lowest mean discharge for 7 consecutive days (the 7-day low flow).

Sodium-adsorption-ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions within soil and is an index of sodium or alkali hazard to the soil. Waters range in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which are generally unsatisfactory for irrigation.

Solute is any substance that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in microsiemens per centimeter at 25°C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is from 55 to 75 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

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

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

Substrate is the physical surface upon which an organism lives.

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

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

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

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

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of undissolved material in a water-sediment mixture. It is associated with the material retained on a 0.45-micrometer filter.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45 um membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

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

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

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

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

Kingdom	Animal
Phylum	Arthropoda
Class	Insecta
Order	Ephemeroptera
Family	Ephemeridae
Genus	Hexacenia
Species	Hexacenia limbata

Thermograph is an instrument that continuously records variations of temperature on a chart. The more general term "temperature recorder" is used in the table headings and refers to any instrument that records temperature whether on a chart, a tape, or any other medium.

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the year.

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

Tons per day (7/DAY) is the quantity of a substance in solution or suspension that passes a stream section during a 24-hour period.

Total is the total amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total." (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determined all of the constituent in the sample.)

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

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

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

Water table is that surface in an unconfined ground-water body at which the pressure is atmospheric.

Water year in Geological Survey reports dealing with surface-water supply is the 12-month period October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1985, is called the "1985 water year."

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

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

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

SELECTED REFERENCES

Anderson, P. W., 1970, Occurrence and distribution of trace elements in New Jersey streams; New Jersey Division of Water Policy and Supply, Water-Resources Circular 24, 24 p.

Anderson, P.W., and Faust, S. D., 1973 Characteristics of water quality and streamflow, Passaic River basin above Little Falls, New Jersey: U.S. Geological Survey Water-Supply Paper 2026, 80 p.

____ 1974, Water-quality and streamflow characteristics, Raritan River basin, New Jersey: U.S. Geological Survey Water-Resources Investigations 14-74, 82 p.

Anderson, P. W., and George, J. R., 1966, Water-quality characteristics of New Jersey streams: U.S. Geological Survey Water-Supply Paper 1819-G, 48 p.

Eckel, J. A., and Walker, R. L., 1986, Water levels in major artesian aquifers of the New Jersey Coastal Plain, 1983: U.S. Geological Survey Water-Resources Investigations 86-4028, 62 p.

Fusillo, T. V., 1982, Impact of suburban residential development on water resources in the area of Winslow Township, Camden County, New Jersey: U.S. Geological Survey Water-Resources Investigations 81-27, 38 p.

Fusillo, T. V., Hochreiter, J.J., Jr., and Lord, D.G., 1984, Water-quality data for the Potomac-Raritan-Magothy aquifer system in southwestern New Jersey, 1923-83: U.S. Geological Survey Open-File Report 84-737, 127 p, 1 pl.

Fusillo, T. V., and Voronin, L. M., 1982, Water-quality data for the Potomac-Raritan-Magothy aquifer system, Trenton to Pennsville, New Jersey, 1980: U.S. Geological Survey Open-File Report 81-814, 38 p. 2 pls.

Fusillo, T. V., Schornick, J. C., Jr., Koester, H. E., and Harriman, D. A., 1980, Investigation of acidity and other water-quality characteristics of upper Oyster Creek, Ocean County, New Jersey: U.S. Geological Survey Water-Resources Investigations 80-10, 30 p.

Gillespie, B. D., and Schopp, R. D., 1982, Low-flow characteristics and flow duration of New Jersey streams: U.S. Geological Survey Open-File Report 81-1110, 164 p.

Harriman, D. A., and Velnich, A. J., 1982, Flood data in West Windsor Township, Mercer County, New Jersey through 1982 Water Year: U.S. Geological Survey Open-File Report 82-434.

Harriman, D. A., and Voronin, L. M., 1984, Water-quality data for aquifers in east-central New Jersey, 1981-82: U.S. Geological Survey Open-File Report 84-821, 39 p.

Heath, R.C., 1983, Basic ground-water hydrology: U.S. Geological Survey Water-Supply Paper 2220, 84 p.

Hem, J. D., 1985, Study and interpretation of the chemical characteristics of natural water, 3d ed.: U.S. Geological Survey Water-Supply Paper 2254, 263 p.

Hindall, S. M., and Jungblut, D. W., 1980, Sediment yields of New Jersey streams: U.S. Geological Survey Open-File Report 80-432, 1 sheet.

Hochreiter, J. J., Jr., 1982, Chemical-quality reconnaissance of the water and surficial bed material in the Delaware River estuary and adjacent New Jersey tributaries, 1980-81: U.S. Geological Survey Water-Resources Investigations 82-36, 41 p.

Hochreiter, J. J., Jr., Kozinski, J., and Lewis, J. C., 1986, Characterization of organic ground-water contamination at a waste-oil disposal site, Bridgeport, N.J.: EOS, v. 67, no. 44, p. 945.

Keith, L. H., and Telliard, W. A., 1979, Priority Pollutants I - a perspective view: Environmental Science and Technology, v. 13, no. 4, p. 416-423.

Kish, G., and Macy, J. A., 1987, Leaching of trace metals from plumbing materials exposed to acidic ground water in the New Jersey Coastal Plain [abs]: New Jersey Academy of Science Bulletin, v. 32, no. 1, p. 41.

Langbein, W. B., and Iseri, K. T., 1960, General introduction of hydrologic definitions: U.S. Geological Survey Water-Supply Paper 1541-A, 29 p.

Laskowski, S. L., 1970, Statistical summaries of New Jersey streamflow records: New Jersey Division of Water Policy and Supply, Water-Resources Circular 23, 264 p.

Lohman, S. W., and others, 1972, Definitions of selected ground-water terms-revisions and conceptual refinements: U.S. Geological Survey Water-Supply Paper 1988, 21 p.

Lord, D. G., Barringer, J., Johnsson, P., and Schuster, P., Effects of Acid precipitation on surface and ground waters in the New Jersey Pinelands [abs]: EOS, Transactions, American Geophysical Union, v. 67, no. 16., April 22, 1986, p. 282.

Lord, D. G., Johnsson, P. A., Barringer, J. L., and Schuster, P. F., 1987, Results of an acidic deposition study in McDonalds Branch watershed, New Jersey Pinelands [abs]: New Jersey Academy of Science Bulletin, v. 32, no. 1, p. 45.

Luzier, J. E., 1980, Digital-simulation and projection of head changes in the Potomac-Raritan-Magothy aquifer system, Coastal Plain, New Jersey: U.S. Geological Survey Water-Resources Investigations 80-11, 72 p.

Mansue, L. J., and Anderson, P. W., 1974, Effect of landuse and retention practices on sediment yields in the Stony Brook basin, New Jersey: U.S. Geological Survey Water-Supply Paper 1798-L.

National Research Council, 1979, Polychlorinated biphenyls: Washington D.C., National Academy of Sciences, 182 p.

Paulachok, G. N., Walker, R. L., Barton, G. J., Clark, J. S., Duran, P. B., and Hochreiter, J. J., Jr., Marine well-drilling program for estimation the seaward extent of fresh ground water and evaluating the likelihood of seawater intrusion near Atlantic City, New Jersey [abs.]: EOS, Transactions, American Geophysical Union, v. 66, no. 46, Nov. 12, 1985, p. 889-890.

Philips, M. O., and Schopp, R. D., Flood of April 5-7, 1984, in northeastern New Jersey: U.S. Geological Survey Water-Resources Investigations Report 86-423W, 112 p.

Rantz, S. E., and others, 1982, Measurement and computation of streamflow; Volume 1. Measurement of stage and discharge, Volume 2. Computation of Discharge: U.S. Geological Survey Water-Supply Paper 2175, 631 p.

Schaefer, F. L., and Walker, R. L., 1982, Saltwater intrusion into the Old Bridge aquifer in the Keyport-Union Beach area of Monmouth County, New Jersey: U.S. Geological Survey Water-Supply Paper 2184, 21 p.

Schaefer, F. L., 1983, Distribution of chloride concentrations in the principal aquifers of the New Jersey Coastal Plain, 1977-81: U.S. Geological Survey Water-Resources Investigations Report 83-4061, 56 p.

Schornick, J. C., and Ram, N. M., 1978, Nitrification in four acidic streams in southern New Jersey: U.S. Geological Survey Water-Resources Investigations, 77-121, 51 p.

Schornick, J. C., and Fishel, D. K., 1980, Effects of storm runoff on water quality in the Mill Creek drainage basin, Willingboro, New Jersey: U.S. Geological Survey Water-Resources Investigations 80-98, 111 p.

Schopp, R. D., and Gillespie, B. D., 1979, Selected streamflow data for the Delaware River basin: U.S. Geological Survey Open-File Report 79-347, 16 p.

Schopp, R. D., and Ulery, R. L., 1984, Cost-effectiveness of the stream-gaging program in New Jersey: U.S. Geological Survey Water-Resources Investigations Report 84-4108, 97 p.

Schopp, R. D., and Velnich, A. J., 1979, Flood of November 8-10, 1977 in northeastern and central New Jersey: U.S. Geological Survey Open-File Report 79-559, 32 p.

Seaber, P. R., 1963, Chloride concentrations of water from wells in the Atlantic Coastal Plain of New Jersey, 1923-61: New Jersey Division of Water Policy and Supply, Special Report 22, 250 p.

Stankowski, S. J., 1972, Floods of August and September 1971 in New Jersey: New Jersey Division of Water Resources, Special Report 37, 329 p.

Stankowski, S. J., and Velnich, A. J., 1974, A summary of peak stages and discharges for the flood of August 1973 in New Jersey: U.S. Geological Survey Open-File Report, 12 p.

Stankowski, S. J., 1974, Magnitude and frequency of floods in New Jersey with effects of urbanization: New Jersey Department of Environmental Protection, Division of Water Resources, Special Report 38, 46 p.

Stankowski, S. J., Schopp, R. D., and Velnich, A. J., 1975, Flood of July 21, 1975 in Mercer County, New Jersey: U.S. Geological Survey Water-Resources Investigations 51-75, 52 p.

U.S. Environmental Protection Agency, 1976, National interim primary drinking water regulations: U.S. Environmental Protection Agency report EPA 570/9-76-003, 159 p.

U.S. Geological Survey, 1976, Surface water supply of the United States, 1966-70, Part 1. North Atlantic Slope basins, Volume 2. Basins from New York to Delaware: U.S. Geological Survey Water-Supply Paper 2102, 985 p., (most recent volume).

____1977, Ground-water levels in the United States, 1973-74, Northeastern States: U.S. Geological Survey Water-Supply Paper 2164, 126 p., (most recent volume).

Vecchioli, John, and Miller, E. G., 1973, Water resources of the New Jersey part of the Ramapo River basin: U.S. Geological Survey Water-Supply Paper 1974, 77 p.

Velnich, A.J., and Laskowski, S.L., 1979, Technique for estimating depth of 100-year flood in New Jersey: U.S. Geological Survey Open-File Report 79-419, 17 p.

Velnich, A.J., 1982, Drainage areas in New Jersey: Delaware River Basin and Streams Tributary to Delaware Bay: U.S. Geological Survey Open-File Report 82-572, 48 p.

Velnich, A.J., 1984, Drainage areas in New Jersey: Atlantic Coastal Basins, South Amboy to Cape May: U.S. Geological Survey Open-File Report 84-150, 33 p.

Vickers, A. A., and McCall, J. E., 1968, Surface water supply of New Jersey, Streamflow records 1961-65: New Jersey Division of Water Policy and Supply, Special Report 31, 351 p., (most recent volume).

Vickers, A. A., 1982, Flood of August 31 - September 1, 1978, in Crosswicks Creek basin and vicinity, Central New Jersey: U.S. Geological Survey Water-Resources Investigations 80-115, 20 p.

Vickers, A. A., Farsett, H. A., and Green, J. W., 1982, Flood peaks and discharge summaries in the Delaware River basin: U.S. Geological Survey Open-File Report 81-912, 292 p.

Vowinkel, E. F., 1984, Ground-water withdrawals from the Coastal Plain of New Jersey, 1956-80: U.S. Geological Survey Open-File Report 84-226, 32 p.

Walker, R. L., 1983, Evaluation of water levels in major aquifers of the New Jersey Coastal Plain, 1978: U.S. Geological Survey Water-Resources Investigations 82-4077, 56 p.

Zapecza, O. and Szabo, Z., 1987, Source and distribution of natural radioactivity in ground water of the Newark Basin, New Jersey [abs]: National Water Well Association (NWWA): in Proceedings of National Water Well Association--Radon, Radium and other Radioactivity in Ground water: Hydrogeologic Impact and application to indoor airborne contamination, Somerville, N.J. (in press).

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

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

The reports listed below are for sale by the U.S. Geological Survey, Books and Open- File Reports Section, Federal Center, Box 25425, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be sent by check or money order payable to the U.S. Geological Survey. Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations."

1-D1. *Water temperature--influential factors, field measurement, and data presentation,* by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.

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

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

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

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

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

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

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

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

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

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

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

3-A9. *Measurement of time of travel and dispersion in streams by dye tracing,* by E. F. Hubbard, F. A. Kilpatrick, L. A. Martens, and J. F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A9. 1982. 44 pages.

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

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

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

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

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

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

3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction,* by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.

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

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

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

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

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

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

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

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

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

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

5-A1. *Methods for determination of inorganic substances in water and fluvial sediments* by M. W. Skougstad and others, editors: USGS--TWRI Book 5, Chapter A1. 1979. 626 pages.

5-A2. *Determination of minor elements in water by emission spectroscopy*. by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages.

5-A3. *Methods for analysis of organic substances in water*, by D. F. Goerlitz and Eugene Brown: USGS--TWRI Book 5, Chapter A3. 1972. 40 pages.

5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*. edited by P. E. Greeson, T. A. Ehlke, G. A. Irwin, B. W. Lium, and K. V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 pages.

5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*. by L. L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.

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

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

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

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

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

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

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

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

DISCONTINUED GAGING STATIONS

The following continuous-record streamflow stations in New Jersey have been discontinued or converted to partial-record stations. Daily streamflow records were collected and published for the period of record shown for each station.

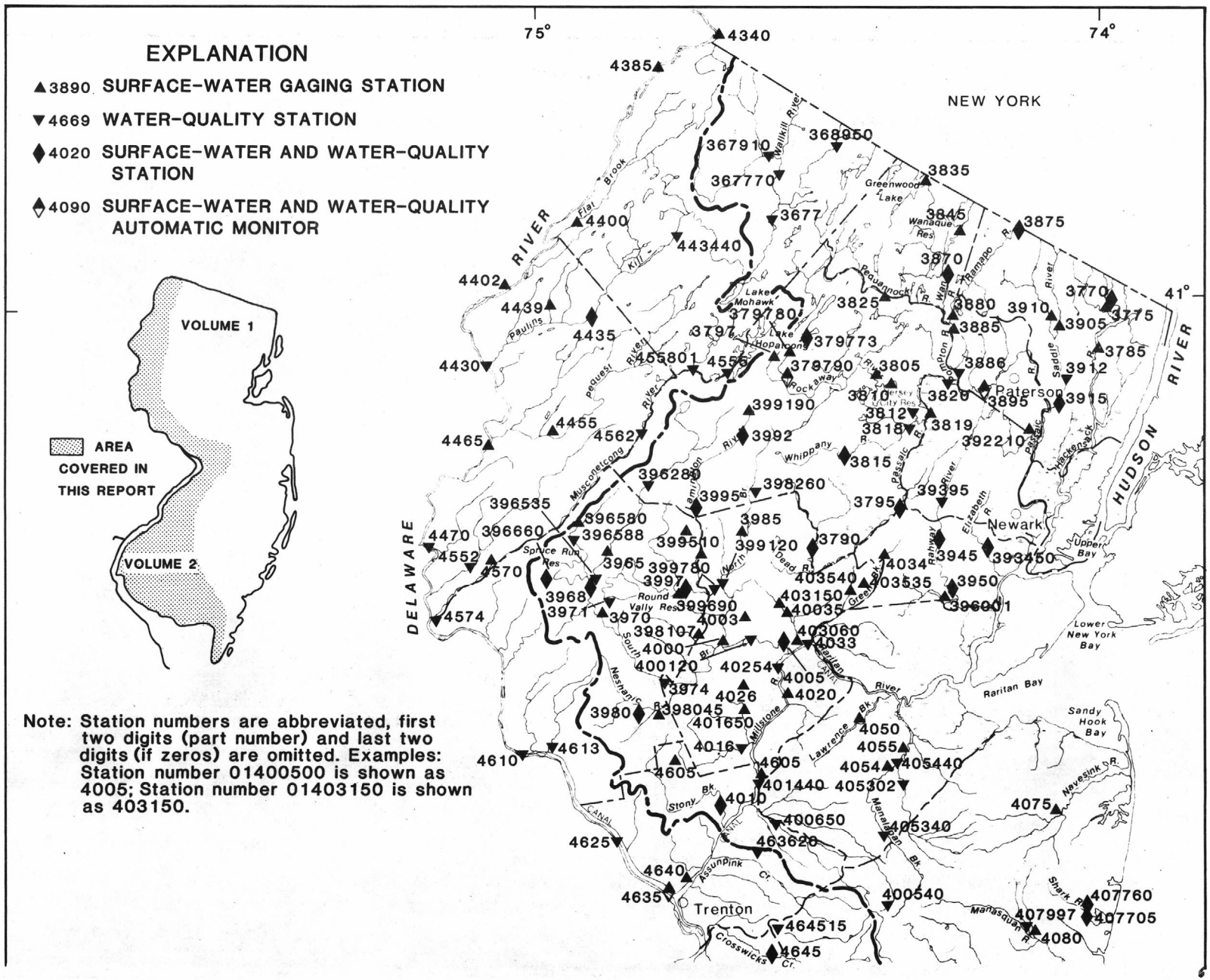
Station number	Station name	Drainage area (sq mi)	Period of record (water years)
01368720	Auxiliary outlet of Upper Greenwood Lake at Moe, NJ	------	1968-80
01378690	Passaic River near Bernardsville, NJ	8.83	1968-77
01379630	Russia Brook tributary at Milton, NJ	2.51	1969-71
01384000	Wanaque River at Monks, NJ	40.4	1935-85
01385000	Cupsaw Brook near Wanaque, NJ	4.37	1935-58
01385500	Erskine Brook near Wanaque, NJ	1.14	1934-38
01386000	West Brook near Wanaque, NJ	11.8	1935-78
01386500	Blue Mine Brook near Wanaque, NJ	1.01	1935-58
01389800	Passaic River at Paterson, NJ	785	1897-1955
01392000	Weasel Brook at Clifton, NJ	4.45	1937-62
01392500	Second River at Belleville, NJ	11.6	1938-64
01393000	Elizabeth River at Irvington, NJ	2.90	1931-38
01393500	Elizabeth River at Elizabeth, NJ	20.2	1922-73
01393800	EF EB Rahway River at West Orange, NJ	.83	1972-74
01394000	WB Rahway River at Millburn, NJ	7.10	1940-50
01395500	Robinsons Branch Rahway River at Goodmans, NJ	12.7	1921-24
01397500	Walnut Brook near Flemington, NJ	2.24	1936-61
01399000	NB Raritan River at Pluckimen, NJ	52.0	1903-06
01399830	NB Raritan River at North Branch, NJ	174	1977-81
01400730	Millstone River at Plainsboro, NJ	65.8	1964-75
01400932	Baldwin Creek at Baldwin Lake, near Pennington, NJ	2.52	1963-70
01400953	Honey Branch near Pennington, NJ	.70	1967-75
01401301	Millstone River at Carnegie Lake, at Princeton, NJ	159	1972-74
01401500	Millstone River near Kingston, NJ	171	1934-49
01402590	Royce Brook tributary at Frankfort, NJ	.29	1969-74
01403000	Raritan River at Bound Brook, NJ	779	1903-09, 1945-66
01403500	Green Brook at Plainfield, NJ	9.75	1938-84
01403900	Bound Brook at Middlesex, NJ	48.4	1972-77
01404000	Bound Brook at Bound Brook, NJ	49.0	1923-30
01404500	Lawrence Brook at Patricks Corner, NJ	29.0	1922-26
01405300	Matchaponix Brook at Spotswood, NJ	43.9	1957-67
01406000	Deep Run near Browntown, NJ	8.07	1932-40
01406500	Tennent Brook near Browntown, NJ	5.25	1932-41
01407000	Matawan Creek at Matawan, NJ	6.11	1932-55
01408140	SB Metedeconk River at Lakewood, NJ	26.0	1973-76
01409000	Cedar Creek at Lanoka Harbor, NJ	55.3	1933-58, 1971
01409095	Oyster Creek near Brookville, NJ	7.43	1965-84
01410500	Absecon Creek at Absecon, NJ	17.9	1946-85
01410787	Great Egg Harbor River tributary at Sicklerville, NJ	1.64	1972-79
01410810	Fourmile Branch at New Brooklyn, NJ	7.74	1973-79
01410820	Great Egg Harbor River near Blue Anchor, NJ	37.3	1972-79
01412000	Menantico Creek near Millville, NJ	23.2	1931-57, 1978-85
01412500	WB Cohansey River at Seeley, NJ	2.58	1951-67
01413000	Loper Run near Bridgeton, NJ	2.34	1937-59
01444000	Paulins Kill at Columbia, NJ	179	1908-09
01445000	Pequest River at Huntsville, NJ	31.0	1940-62
01445430	Pequest River at Townsbury, NJ	92.5	1977-80
01446000	Beaver Brook near Belvidere, NJ	36.7	1923-61
01455160	Brass Castle Creek near Washington, NJ	2.34	1970-83
01455200	Pohatcong Creek at New Village, NJ	33.3	1960-70
01455355	Beaver Brook near Weldon, NJ	1.72	1969-71
01455500	Musconetcong River at outlet of Lake Hopatcong, NJ	25.3	1961-75
01456000	Musconetcong River near Hackettstown, NJ	68.9	1922-74
01457500	Delaware River at Riegelsville, NJ	6328	1906-71
01462000	Delaware River at Lambertville, NJ	6680	1898-1906
01463587	New Sharon Run at Carsons Mills, NJ	6.63	1976-77
01463620	Assunpink Creek near Clarksville, NJ	34.3	1972-82
01463657	Shipetaukin Creek tributary at Lawrenceville, NJ	.78	1976-77
01463690	Little Shabakunk Creek at Bakersville, NJ	3.98	1976-77
01464525	Thornton Creek at Bordentown, NJ	.84	1976-77
01465850	SB Rancocas Creek at Vincentown, NJ	64.5	1961-75
01466000	MB Mount Misery Brook in Lebanon State Forest, NJ	2.82	1953-65, 1977
01467019	Mill Creek near Willingboro, NJ	4.12	1975-78
01467021	Mill Creek at Levitt Parkway, at Willingboro, NJ	9.12	1975-77
01476600	Still Run near Mickleton, NJ	3.98	1957-66
01477500	Oldmans Creek near Woodstown, NJ	18.5	1932-40
01482500	Salem River at Woodstown, NJ	14.6	1940, 1941-85
01483000	Alloway Creek at Alloway, NJ	20.3	1953-72

DISCONTINUED CONTINUOUS WATER-QUALITY STATIONS

The following stations were discontinued as continuous water-quality stations prior to the 1986 water year. Daily records of temperature, specific conductance, pH, dissolved oxygen or sediment were collected and published for the period of record shown for each station.

Station number	Station name	Drainage area (sq mi)	Type of record	Period of record (water years)
01379500	Passaic River near Chatham, NJ	100	Sed.	1964-68
01382000	Passaic River at Two Bridges, NJ	361	Temp., S.C., pH, D.O.	1969-74
01387500	Ramapo River near Mahwah, NJ	118	Sed.	1964-65
01389000	Pompton River near Two Bridges, NJ	372	Temp., S.C., pH, D.O.	1969-74
01389500	Passaic River at Little Falls, NJ	762	Sed.	1964-65
01396500	SB Raritan River near High Bridge, NJ	65.3	Temp.	1961-79
01397000	SB Raritan River at Stanton, NJ	147	Temp., S.C.	1969-79
			Sed.	1960-63
01399690	SB Rockaway Creek at Whitehouse, NJ	13.2	Temp., S.C.	1977-78
			Sed.	1977
01399700	Rockaway Creek at Whitehouse, NJ	37.1	Temp., S.C.	1977-78
01400510	Raritan River near Manville, NJ	497	Temp., S.C., pH, D.O.	1968-74
01400932	Baldwin Creek at Baldwin Lake near Pennington, NJ	2.52	Temp.	1963-66
			Sed.	1963-69
01401000	Stony Brook at Princeton, NJ	44.5	Sed.	1959-70
01402900	Millstone River near Manville, NJ	287	Temp., S.C., pH, D.O.	1968-74
01404100	Raritan River near South Bound Brook, NJ	862	Temp., S.C., pH, D.O.	1969-77
01408000	Manasquan River at Squankum, NJ	44	Temp., S.C., pH, D.O.	1969-74
01408500	Toms River at Toms River, NJ	123	Temp., S.C.	1964-66, 1974-81
			S.C.	1974-81
01409095	Oyster Creek near Brookville, NJ	7.43	Temp.	1975-76
01409810	WB Wading River near Jenkins, NJ	84.1	Temp., S.C.	1978-81
01410787	Great Egg Harbor River Trib. at Sicklerville, NJ	1.64	Sed.	1974-78
01410810	Fourmile Branch at New Brooklyn, NJ	7.74	Sed.	1974-78
01411000	Great Egg Harbor River at Folsom, NJ	57.1	Temp.	1961-80
01440200	Delaware River near Delaware Water Gap, Pa.	3850	Sed.	1966-70, 1979
01442750	Delaware River at Dunnfield, NJ	4150	Sed.	1966-71, 1973-76
01463500	Delaware River at Trenton, NJ	6780	Sed.	1949-82
01464040	Delaware River at Marine Terminal at Trenton, NJ	6870	Temp., S.C.	1973-76
01464500	Crosswicks Creek near Extonville, NJ	81.5	Sed.	1965-70
01467016	Rancocas Creek at Willingboro, NJ	315	Temp., S.C., pH	1971-74
			D.O.	1971-72
01467150	Cooper River at Haddonfield, NJ	17.0	Sed.	1968-69
01477120	Raccoon Creek near Swedesboro, NJ	26.9	Temp.	1966-73
			Sed.	1966-69

Type of record: Temp. (temperature), S.C. (specific conductance), pH (pH), D.O. (dissolved oxygen), Sed. (sediment).


EXPLANATION
▲3890 SURFACE-WATER GAGING STATION
▼4669 WATER-QUALITY STATION
♦4020 SURFACE-WATER AND WATER-QUALITY STATION
♦4090 SURFACE-WATER AND WATER-QUALITY AUTOMATIC MONITOR
VOLUME 1
VOLUME 2
AREA COVERED IN THIS REPORT
Note: Station numbers are abbreviated, first two digits (part number) and last two digits (if zeros) are omitted. Examples: Station number 01400500 is shown as 4005; Station number 01403150 is shown as 403150.
75°
74°
41°
NEW YORK
DELAWARE RIVER
HUDSON RIVER
Trenton
Paterson
Newark
Raritan Bay
Upper Bay
Lower New York Bay
Sandy Hook Bay
Navesink R.
Shark R.
Manasquan R.
Crosswicks Cr.
Assunpink Cr.
Stony Bk.
Millstone
Lawrence Bk.
Manalapan Bk.
Raritan River
South Br.
Neshanic
Wallkill River
Flat Brook
Kill
Paulins
Pequest River
Lake Mohawk
Lake Hopatcong
Rockaway
Musconetcong River
Lamington River
Whippany River
Passaic River
Pompton R.
Ramapo River
Wanaque R.
Wanaque Res
Greenwood Lake
Saddle R.
Hackensack River
Elizabeth R.
Rahway
Green Brook
Dead R.
Werth
Round Valley Res
Spruce Run Res
Delaware and Raritan Canal
4340
4385
367910
368950
367770
3835
3677
4400
443440
3845
3875
3870
4402
4439
4435
3825
379780
3880
3910
3770
3775
3797
3885
3905
4430
455801
4556
379773
379790
3805
3886
3912
3785
4455
4562
399190
3810
3820
3895
3915
3812
4465
3992
3818
3819
392210
3815
396280
398260
396535
3995
3795
39395
396580
3985
4470
396660
396588
399510
399120
3790
4552
3965
399780
4034
3945
393450
4570
3997
403540
403535
3950
3968
403150
396001
4574
3971
3970
399690
4003
40035
398107
403060
4033
40007
400120
40254
4005
3974
4026
4020
3980
398045
401650
4050
4613
4016
4055
4610
4605
4054
405440
401440
405302
4010
4075
400650
405340
4625
463620
4640
4635
400540
407760
407997
407705
464515
4080
4645

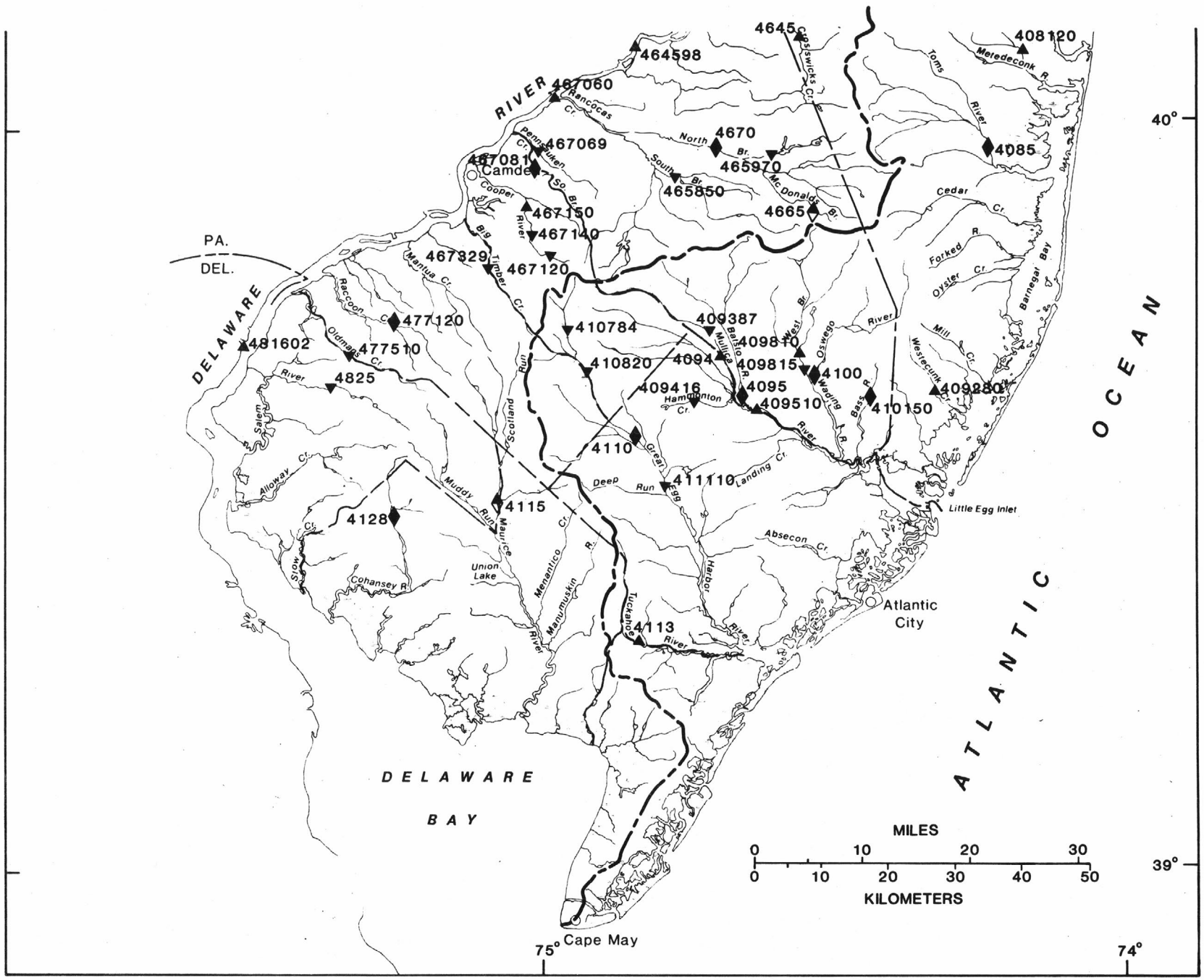
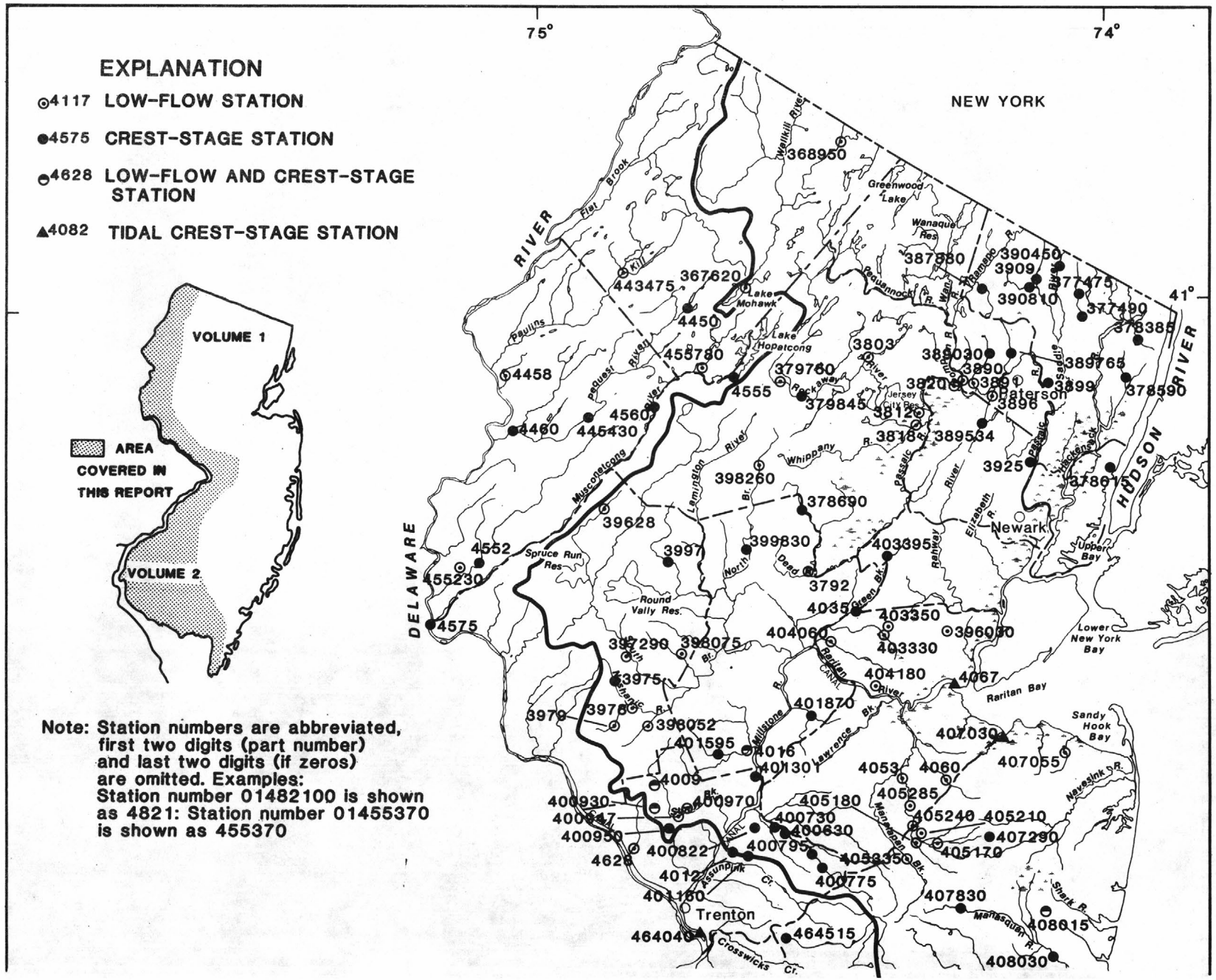


Figure 9.--Location of gaging stations and surface-water quality stations.

WATER RESOURCES DATA–NEW JERSEY, 1986



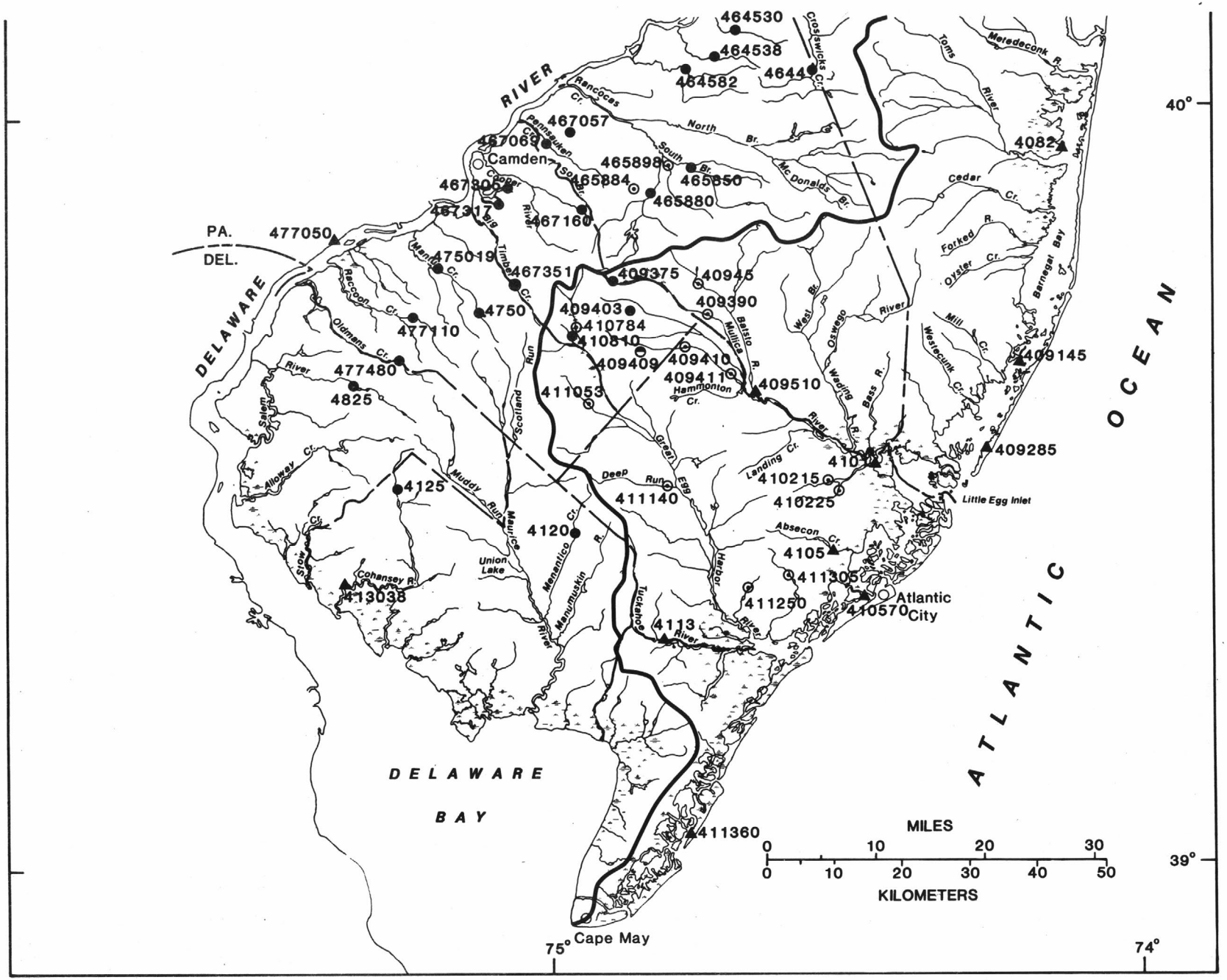
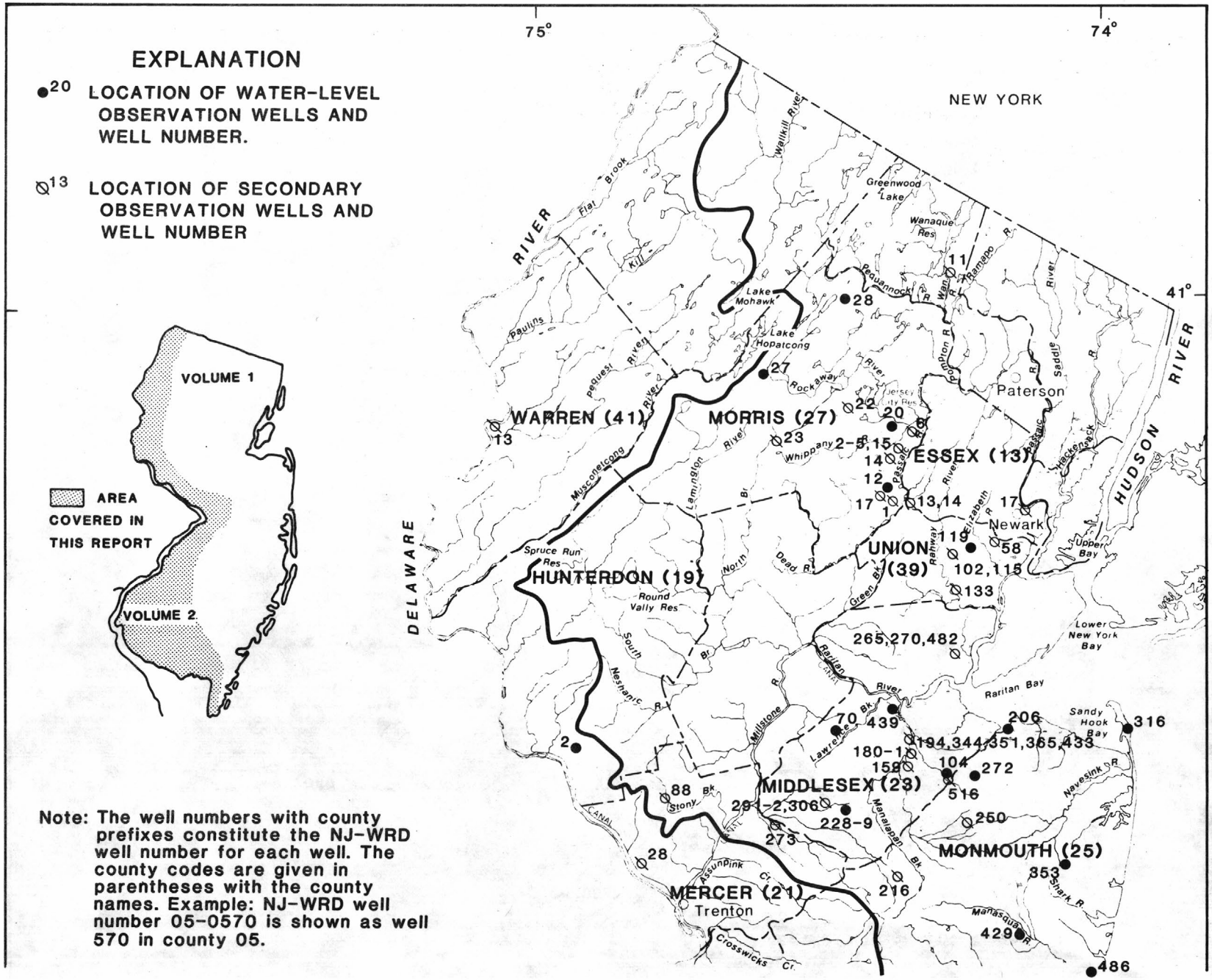


Figure 10.--Location of low-flow and crest-stage partial-record stations.


EXPLANATION
●20 LOCATION OF WATER-LEVEL OBSERVATION WELLS AND WELL NUMBER.
⊘13 LOCATION OF SECONDARY OBSERVATION WELLS AND WELL NUMBER
VOLUME 1
VOLUME 2
AREA COVERED IN THIS REPORT
Note: The well numbers with county prefixes constitute the NJ-WRD well number for each well. The county codes are given in parentheses with the county names. Example: NJ-WRD well number 05-0570 is shown as well 570 in county 05.
75°
74°
41°
NEW YORK
DELAWARE RIVER
HUDSON RIVER
WARREN (41)
MORRIS (27)
ESSEX (13)
UNION (39)
HUNTERDON (19)
MIDDLESEX (23)
MONMOUTH (25)
MERCER (21)
Trenton
Paterson
Newark
Wallkill River
Greenwood Lake
Wanaque Res
Lake Mohawk
Lake Hopatcong
Rockaway River
Whippany River
Passaic River
Pequannock R
Ramapo R
Saddle R
Hackensack River
Elizabeth R
Rahway R
Upper Bay
Lower New York Bay
Raritan Bay
Sandy Hook Bay
Spruce Run Res
Round Valley Res
North Br Raritan
South Br Raritan
Green Br
Dead R
Lamington River
Musconetcong River
Paulins Kill
Flat Brook
Pequest River
Millstone R
Lawrence Br
Stony Br
Assunpink Cr
Crosswicks Cr
Manalapan Br
Manasquan R
Shark R
Navesink R
Raritan Canal
Delaware and Raritan Canal
Old Mine Canal
11
28
27
22
20
23
2-5,15
14
12
17
1
13,14
17
119
58
102,115
133
265,270,482
70
439
206
316
194,344,351,365,433
180-1
158
104
272
516
88
29-2,306
228-9
273
250
28
216
353
429
486
2

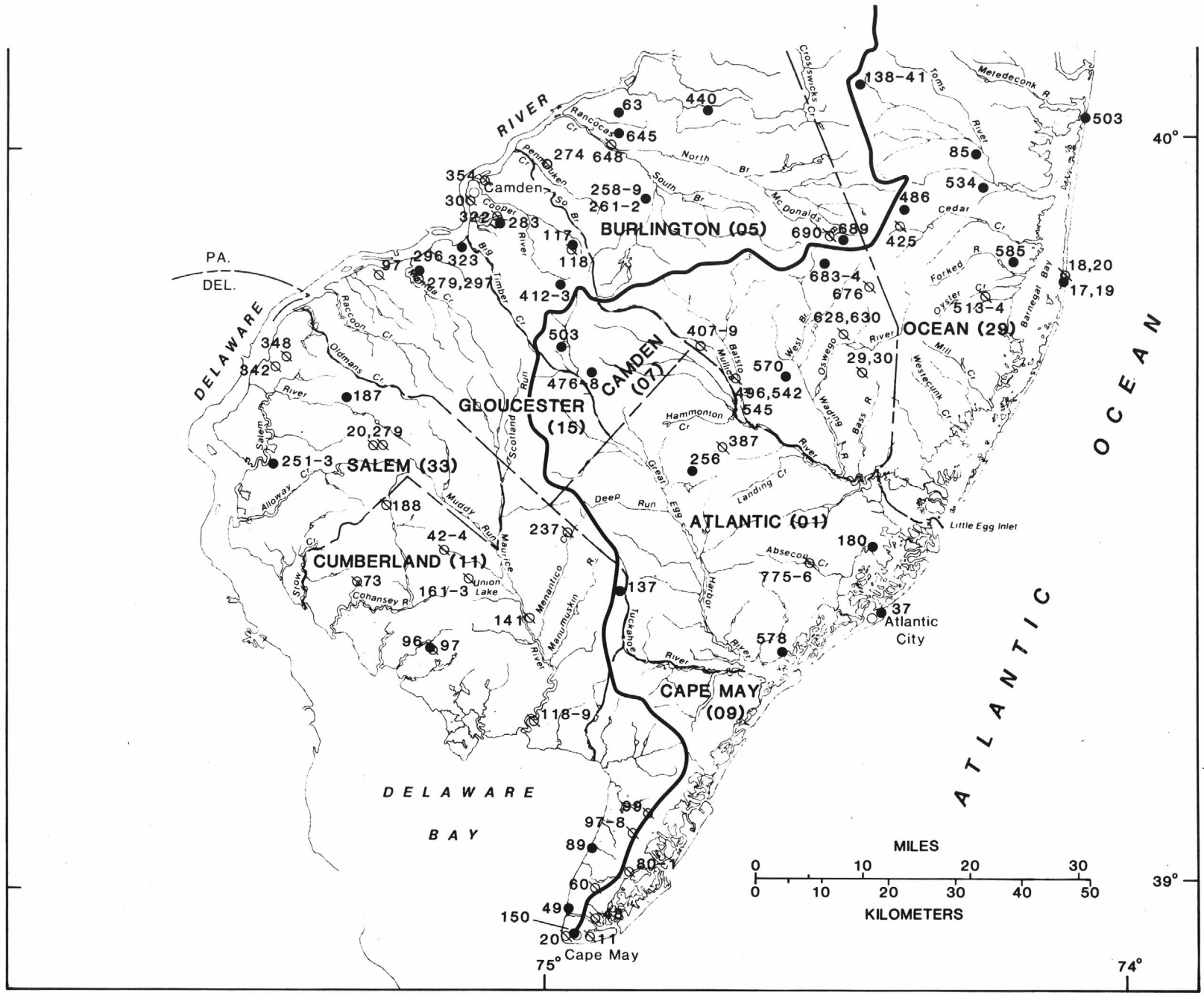
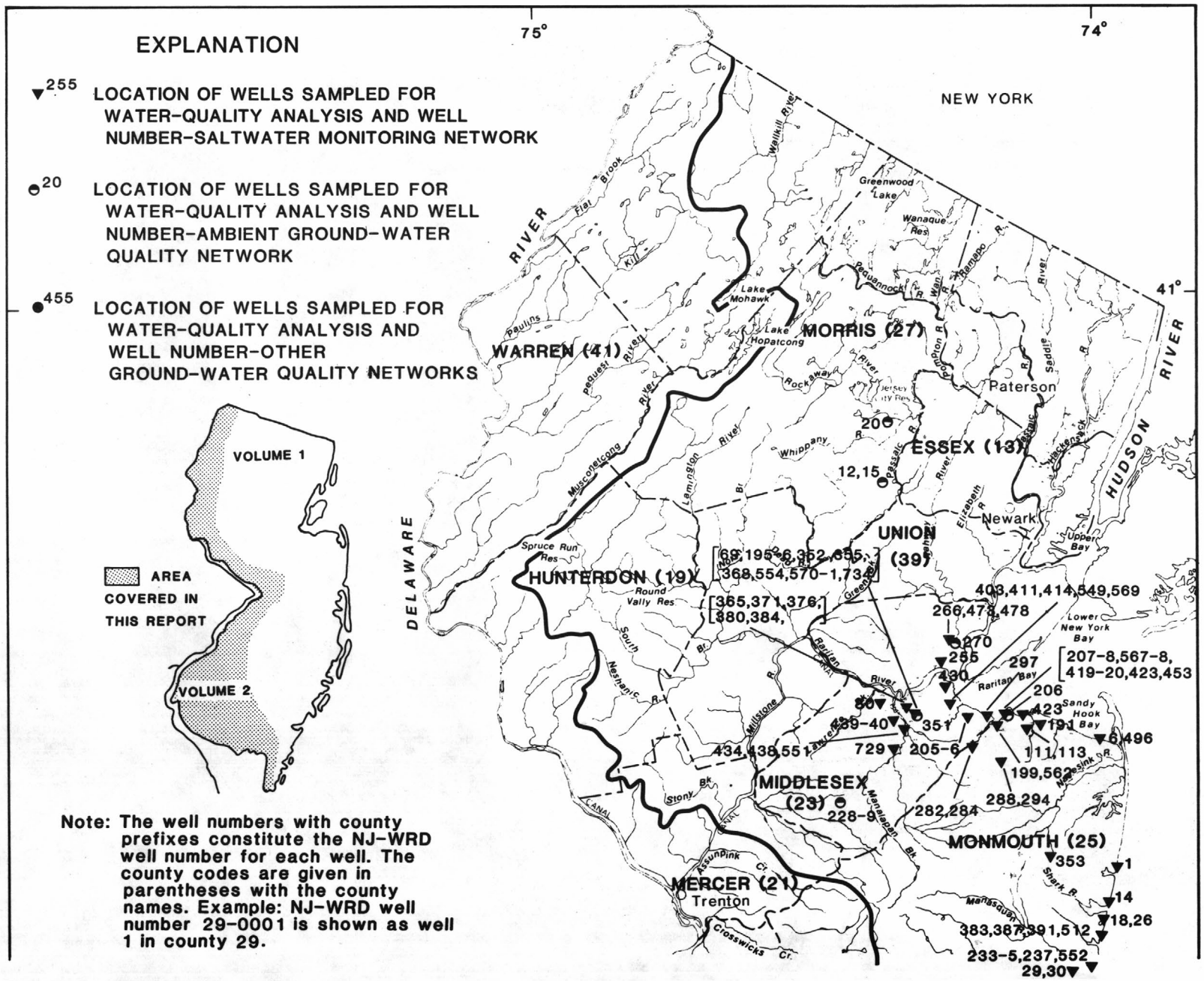


Figure 11.--Location of ground-water observation wells.

WATER RESOURCES DATA–NEW JERSEY, 1986



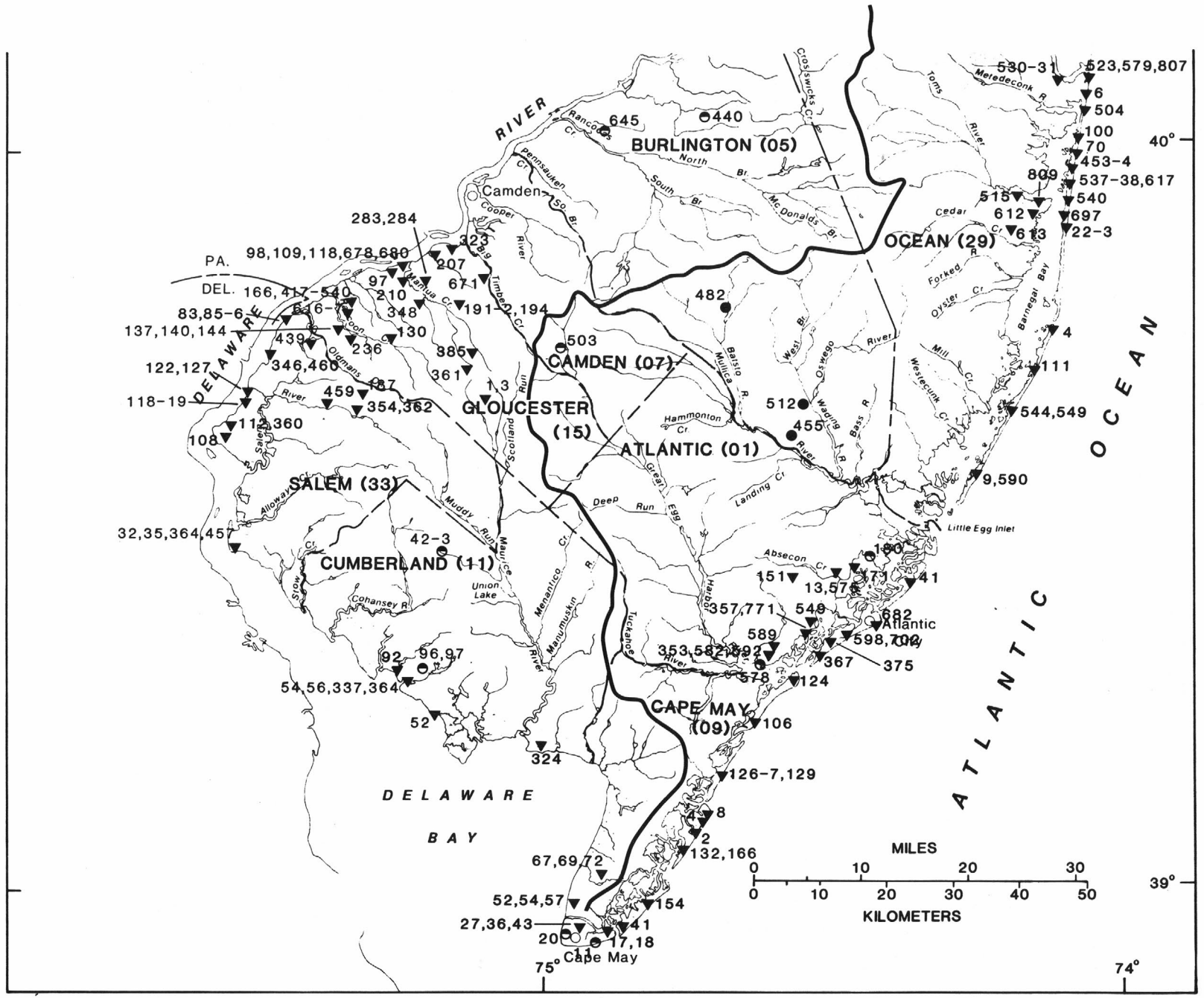


Figure 12.--Location of ground-water quality stations.

MAURICE RIVER BASIN

01411500 MAURICE RIVER AT NORMA, NJ
(National stream quality accounting network station)

LOCATION.--Lat 39°29'42", long 75°04'38", Salem County, Hydrologic Unit 02040206, on right bank just upstream from bridge on Almond Road (State Route 540) at Norma, and 0.8 mi downstream from Blackwater Branch.

DRAINAGE AREA.--112 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1932 to current year. Monthly discharge only for December 1933, published in WSP 1302.

REVISED RECORDS.--WSP 1382: 1933. WDR NJ-79-1: 1967(P). WDR NJ-82-2: Drainage area.

GAGE.--Water-stage recorder. Concrete control since Dec. 27, 1937. Datum of gage is 46.94 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good except those from May 23 to Sept. 30, which are fair. Occasional regulation by ponds above station. Several measurments of water temperature, other than those published, were made during the year.

AVERAGE DISCHARGE.--54 years, 167 ft³/s, 20.25 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,360 ft³/s, Sept. 2, 1940, gage height, 8.72 ft, from rating curve extended above 3,000 ft³/s; minimum daily, 23 ft³/s, Sept. 8, 1964, July 2, Sept. 7, 11-13, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 380 ft³/s and maximum(*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 1	0100	*a376	3.42	No peak greater than base discharge.			
Apr. 19	1200	b342	*3.45				

a occurred on recession following peak of Sept. 28, 1985.
b maximum independent peak discharge.

Minimum discharge, 42 ft³/s, Sept. 16,17, gage height, 2.34 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	331	104	211	116	220	191	149	149	88	61	51	56
2	168	102	291	123	204	189	144	151	83	70	53	52
3	209	92	263	136	192	183	141	149	80	82	92	57
4	238	91	250	138	192	178	139	147	78	86	85	57
5	212	116	220	138	211	175	139	144	74	85	82	63
6	208	114	215	141	212	172	146	138	74	80	79	65
7	213	121	204	140	217	167	149	135	73	74	80	60
8	207	118	189	133	215	153	148	131	74	68	77	58
9	188	110	152	123	209	158	148	127	73	63	72	57
10	158	104	148	117	200	148	146	125	72	61	66	56
11	133	100	149	116	193	128	144	123	70	59	61	54
12	127	96	143	115	182	145	143	121	75	57	60	52
13	123	94	133	115	150	167	141	116	97	58	57	52
14	108	93	185	113	158	249	136	112	97	60	54	49
15	97	94	167	109	160	234	134	113	98	60	53	47
16	103	94	131	105	159	235	178	112	95	59	52	44
17	103	122	143	103	158	234	231	111	87	59	52	43
18	102	125	143	104	173	231	322	112	81	60	52	44
19	101	131	139	114	206	225	339	112	74	95	48	44
20	101	140	132	128	278	213	330	109	74	96	49	45
21	100	140	127	133	249	200	290	110	73	86	55	45
22	98	144	127	133	273	171	263	133	67	82	68	45
23	98	162	128	131	310	166	190	143	67	78	73	53
24	102	157	130	125	280	165	255	142	68	73	72	119
25	101	153	130	121	260	161	212	137	68	66	66	98
26	97	140	128	189	235	158	188	127	66	64	62	93
27	94	127	123	274	225	156	176	117	65	66	61	94
28	93	130	122	275	192	152	176	110	64	65	62	100
29	91	159	119	275	---	142	161	102	64	65	64	98
30	90	168	116	264	---	136	155	98	62	64	62	92
31	97	---	115	242	---	133	---	92	---	57	60	---
TOTAL	4291	3641	4973	4589	5913	5515	5613	3848	2281	2159	1980	1892
MEAN	138	121	160	148	211	178	187	124	76.0	69.6	63.9	63.1
MAX	331	168	291	275	310	249	339	151	98	96	92	119
MIN	90	91	115	103	150	128	134	92	62	57	48	43
CFSM	1.23	1.08	1.43	1.32	1.88	1.59	1.67	1.11	.68	.62	.57	.56
IN.	1.43	1.21	1.65	1.52	1.96	1.83	1.86	1.28	.76	.72	.66	.63

CAL YR 1985 TOTAL 43293 MEAN 119 MAX 462 MIN 59 CFSM 1.06 IN. 14.38
WTR YR 1986 TOTAL 46695 MEAN 128 MAX 339 MIN 43 CFSM 1.14 IN. 15.51

01411500 MAURICE RIVER AT NORMA, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1923, 1953, 1960-62, 1965 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: January 1980 to November 1986 (discontinued).
WATER TEMPERATURE: October 1966 to January 1968 (once daily), January 1980 to November 1986 (discontinued).
SUSPENDED-SEDIMENT DISCHARGE: February 1965 to January 1968.

INSTRUMENTATION.--Water-quality monitor since January 1980.

REMARKS.--Missing continuous water-quality records are the result of malfunction of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 151 microsiemens, Jan. 25, 1984; 52 microsiemens, June 16, 1982.
WATER TEMPERATURE: Maximum, 28.0°C, July 21, 1980; minimum 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 102 microsiemens, Sep. 24; minimum, 54 microsiemens, Apr. 19, 20.
WATER TEMPERATURE: Maximum, 27.5°C, July 8, 15; minimum, 0.0°C, Jan. 28-31.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)
NOV 1985												
14...	1130	93	72	6.4	14.5	1.0	8.7	85	0.9	K8	230	19
JAN 1986												
10...	1200	116	73	6.4	3.5	1.0	12.4	94	--	<1	K44	19
FEB												
21...	0955	246	72	5.8	5.0	1.0	11.2	88	0.4	K4	88	19
APR												
24...	1055	267	60	6.0	9.5	1.5	9.7	85	1.2	14	K170	16
JUN												
24...	1145	69	71	6.5	21.0	2.5	7.2	81	1.7	180	9300	18
AUG												
14...	1125	54	79	6.7	21.0	1.5	7.8	87	--	K4	720	19

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE IT-FLD (MG/L AS HCO3)	ALKA-LINITY, CARBON-ATE IT-FLD (MG/L - CACO3)	ALKA-LINITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
NOV 1985												
14...	3.8	2.3	6.2	2.1	10	8.0	8	8.8	9.5	<0.1	5.4	43
JAN 1986												
10...	3.9	2.3	--	1.8	5.0	4.0	6	11	9.0	<0.1	6.1	42
FEB												
21...	3.8	2.2	5.7	1.5	1.7	1.4	3	13	9.4	<0.1	5.2	42
APR												
24...	3.4	1.9	4.8	1.7	1.8	1.5	4	11	8.4	<0.1	3.2	35
JUN												
24...	3.7	2.2	5.1	1.7	9.2	7.5	7	9.8	9.6	0.1	4.2	41
AUG												
14...	3.9	2.3	5.3	1.9	10	8.2	10	9.6	8.6	<0.1	4.5	41

DATE	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)
NOV 1985											
14...	2	0.5	88	0.01	1.60	0.05	0.05	0.3	0.01	<0.01	0.01
JAN 1986											
10...	25	7.8	11	<0.01	2.20	0.03	0.03	0.3	0.01	<0.01	0.01
FEB											
21...	5	3.3	65	<0.01	1.50	0.04	0.03	0.5	<0.01	<0.01	<0.01
APR											
24...	6	4.3	62	<0.01	0.90	0.03	0.04	0.5	0.01	<0.01	<0.01
JUN											
24...	7	1.3	77	<0.01	1.50	0.08	0.10	0.3	0.03	0.01	0.02
AUG											
14...	1	0.15	80	<0.01	1.30	0.05	0.05	0.5	0.02	0.01	<0.01

01411500 MAURICE RIVER AT NORMA, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)
JAN 1986											
10...	1200	80	90	59	<0.5	<1	4	<3	--	110	--
FEB											
21...	0955	130	50	60	<0.5	<1	<1	<3	1	150	2
AUG											
14...	1125	30	93	57	<0.5	<1	<1	<3	2	27	<5

DATE	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)
JAN 1986										
10...	<4	24	<0.1	<10	--	<1	--	26	<6	26
FEB										
21...	<4	31	<0.1	<10	5	<1	<1	25	<6	18
AUG										
14...	<4	23	<0.1	<10	<1	<1	<1	27	<6	9

01411500 MAURICE RIVER AT NORMA, NJ--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	72	65	68	74	72	73	67	64	65	82	80	81
2	75	72	73	75	73	74	65	63	64	82	80	81
3	73	64	67	74	73	74	67	65	66	80	77	79
4	71	65	68	75	73	74	68	67	68	79	76	77
5	72	70	71	76	73	75	70	68	69	78	75	77
6	71	69	70	74	72	73	72	69	70	77	73	75
7	71	69	70	75	72	74	73	71	72	77	73	74
8	73	69	71	76	73	74	74	71	73	75	73	74
9	73	71	72	79	75	77	76	74	75	77	74	76
10	74	71	72	79	75	77	75	73	74	78	76	77
11	74	72	73	76	75	76	76	74	75	78	77	77
12	74	72	73	76	73	75	77	75	76	78	77	77
13	74	73	74	76	74	75	77	73	75	79	76	77
14	76	73	74	75	74	75	73	71	72	77	75	76
15	76	74	75	76	75	75	75	72	74	78	76	77
16	75	73	75	76	74	75	77	75	76	80	77	79
17	75	73	74	77	74	76	76	75	75	79	77	78
18	75	73	74	74	72	73	77	76	76	78	76	77
19	75	74	74	74	73	73	77	75	76	79	76	77
20	75	74	74	75	72	73	80	77	79	79	72	75
21	75	74	75	75	73	74	80	78	79	73	71	72
22	74	73	74	75	70	73	80	79	80	73	71	72
23	74	73	73	74	71	72	80	78	79	71	69	70
24	74	73	74	74	72	73	80	78	79	71	69	70
25	75	74	75	74	68	72	79	77	78	71	70	71
26	75	73	74	74	72	73	80	78	79	70	59	62
27	76	74	75	73	71	72	81	79	80	61	58	60
28	75	74	75	73	70	71	81	80	80	62	60	61
29	75	74	75	71	68	69	81	79	80	64	61	63
30	75	74	74	70	66	68	81	80	80	67	63	65
31	75	73	74	---	---	---	82	80	81	68	65	67
MONTH	76	64	73	79	66	74	82	63	75	82	58	73

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	71	68	70	75	73	74	71	70	70	67	65	66
2	73	71	72	75	74	75	71	69	70	67	64	66
3	75	71	73	77	74	75	70	68	69	67	65	66
4	74	72	73	77	74	75	69	68	69	67	65	66
5	76	73	74	75	73	74	69	67	68	67	66	67
6	73	70	72	76	74	75	71	68	69	69	66	68
7	72	68	69	78	75	76	69	68	68	68	67	67
8	73	69	71	77	75	76	69	68	69	68	67	67
9	82	72	78	76	73	74	69	68	68	68	67	68
10	76	75	75	77	73	75	69	67	68	68	67	68
11	76	73	74	78	75	76	69	68	68	68	67	67
12	76	74	75	76	74	75	69	67	68	68	66	68
13	90	78	85	73	69	71	70	68	69	69	68	68
14	83	79	81	70	68	69	70	68	69	69	68	68
15	81	78	79	70	68	69	69	68	69	69	68	69
16	86	81	84	70	65	68	68	64	65	70	68	69
17	83	81	83	68	65	67	66	57	62	70	68	69
18	87	78	83	68	66	67	58	55	57	72	69	70
19	80	77	79	69	67	68	55	54	55	75	71	73
20	78	72	74	69	67	68	57	54	56	72	70	71
21	72	70	71	68	66	67	59	57	58	74	70	71
22	74	71	73	68	67	68	61	58	59	71	67	69
23	73	71	72	69	66	68	62	58	60	69	67	68
24	72	71	71	71	69	70	60	58	59	68	67	67
25	71	70	71	71	69	70	61	60	61	68	66	67
26	72	70	71	72	70	70	63	60	62	68	66	67
27	73	71	72	72	70	71	62	61	61	69	67	68
28	75	72	74	72	69	71	65	61	63	69	67	68
29	---	---	---	72	70	71	65	64	65	70	68	69
30	---	---	---	72	70	71	67	65	66	71	69	70
31	---	---	---	73	71	72	---	---	---	71	70	70
MONTH	90	68	75	78	65	71	71	54	65	75	64	68

01411500 MAURICE RIVER AT NORMA, NJ--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	71	69	71	73	72	73	76	74	75	77	76	76
2	72	70	71	73	71	72	78	73	76	78	77	77
3	72	71	72	71	70	70	80	74	76	78	77	78
4	73	71	72	71	69	70	74	72	74	78	77	77
5	72	70	71	71	69	70	75	72	73	80	77	78
6	74	71	72	72	70	71	75	74	74	80	79	79
7	74	71	72	74	72	73	76	75	76	80	78	79
8	72	71	72	74	73	73	77	75	76	79	76	77
9	72	71	72	75	74	74	78	75	76	78	76	77
10	72	71	71	76	74	75	78	75	76	78	76	77
11	72	71	72	76	74	75	80	77	79	79	76	77
12	73	70	71	76	74	75	79	75	77	79	77	78
13	71	69	70	76	75	75	79	76	78	79	77	78
14	71	69	70	76	74	75	79	77	78	78	77	78
15	69	68	69	75	73	74	79	78	78	79	77	78
16	70	67	69	75	74	74	79	78	79	79	77	78
17	71	67	69	76	74	75	80	78	79	79	77	78
18	72	68	70	76	75	75	81	78	79	78	77	78
19	73	68	70	77	72	74	81	79	80	78	77	78
20	72	70	71	74	73	73	81	78	79	78	76	77
21	74	69	71	74	72	73	79	77	77	78	77	77
22	72	69	71	74	72	73	77	75	76	78	76	77
23	72	70	71	74	72	73	76	74	75	84	74	77
24	73	69	72	74	72	73	76	75	76	102	85	90
25	73	72	73	74	72	73	76	75	76	86	78	82
26	74	72	73	75	73	74	77	75	76	79	77	78
27	73	72	72	75	74	75	79	76	76	82	78	80
28	73	72	72	75	73	74	79	75	76	83	79	80
29	74	72	73	75	73	74	77	75	76	84	81	82
30	74	72	73	75	73	74	76	74	75	84	80	82
31	---	---	---	76	73	74	76	75	76	---	---	---
MONTH	74	67	71	77	69	73	81	72	77	102	74	79

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	86	82	83	80	79	79						
2	88	83	85	81	79	80						
3	83	80	82	81	79	80						
4	85	82	84	80	78	79						
5	83	81	82	80	76	77						
6	84	80	82	83	80	82						
7	83	78	81	80	77	79						
8	84	81	83	81	78	80						
9	84	82	83	83	80	81						
10	83	82	83	82	78	80						
11	84	81	82	83	82	83						
12	83	80	81	83	79	81						
13	83	82	82	81	78	80						
14	90	82	85	82	77	80						
15	87	80	82	83	80	82						
16	82	79	81	82	80	81						
17	82	80	81	84	78	81						
18	82	80	81	---	---	---						
19	82	80	81	---	---	---						
20	81	80	81	---	---	---						
21	81	80	81	---	---	---						
22	81	80	80	---	---	---						
23	82	80	81	---	---	---						
24	82	80	81	---	---	---						
25	81	80	80	---	---	---						
26	81	79	80	---	---	---						
27	81	78	80	---	---	---						
28	80	78	79	---	---	---						
29	80	77	79	---	---	---						
30	80	78	79	---	---	---						
31	80	78	79	---	---	---						
MONTH	90	77	81	84	76	80						

01411500 MAURICE RIVER AT NORMA, NJ--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	2.0	.5	1.0	4.5	2.0	3.0	17.0	13.5	15.5	19.5	16.5	18.0
2	3.5	2.0	3.0	5.0	2.5	4.0	17.5	15.0	16.0	19.0	16.5	18.0
3	4.0	2.0	3.0	5.5	3.5	4.5	17.0	14.5	15.5	16.5	14.5	15.5
4	4.0	3.5	3.5	5.5	4.5	5.0	15.0	14.0	14.5	16.0	12.5	14.5
5	4.5	4.0	4.0	6.0	4.5	5.0	14.5	13.0	13.5	17.5	13.5	15.5
6	5.5	4.5	4.5	5.5	4.5	5.0	12.5	11.5	12.0	19.5	15.5	17.5
7	4.0	1.5	2.0	5.5	3.0	4.5	13.0	11.0	12.0	21.5	18.0	19.5
8	2.5	1.0	2.0	3.0	1.0	2.0	14.5	12.0	13.5	21.5	19.0	20.0
9	3.0	2.0	2.5	5.0	2.0	3.5	14.5	12.5	13.5	19.0	17.0	18.0
10	3.5	2.5	3.0	8.5	4.0	6.0	12.5	10.5	11.5	18.5	15.0	17.0
11	3.0	1.5	2.5	11.5	8.5	10.0	10.5	10.0	10.0	18.5	15.5	17.0
12	2.0	1.0	1.5	10.5	9.0	9.5	11.5	9.5	10.5	19.0	15.5	17.0
13	2.0	1.0	1.5	9.0	8.5	8.5	10.5	9.5	10.0	18.0	15.5	17.0
14	2.5	1.0	1.5	10.0	8.5	9.0	13.5	9.5	11.5	16.5	15.0	16.0
15	3.0	2.0	2.5	12.5	9.5	11.0	11.5	10.5	11.0	16.0	15.0	15.5
16	3.0	1.5	2.5	13.5	11.5	12.0	11.5	11.0	11.0	18.5	15.5	17.0
17	5.0	2.5	3.5	12.0	10.0	11.0	11.0	10.0	10.5	21.0	17.0	19.0
18	4.0	4.0	4.0	12.0	9.0	10.5	12.5	10.0	11.0	22.5	19.5	21.0
19	4.5	4.0	4.0	13.0	11.0	12.0	14.5	10.5	12.5	23.5	20.0	21.5
20	4.5	4.0	4.5	13.0	10.0	12.0	15.5	12.0	13.5	21.5	20.0	21.0
21	6.0	4.5	5.0	9.5	7.0	8.0	15.0	13.5	14.0	21.0	19.5	20.5
22	5.0	4.0	4.5	8.5	5.5	7.0	13.5	12.0	13.0	20.5	19.0	19.5
23	4.5	4.0	4.0	9.0	6.0	7.5	11.5	9.0	10.0	21.0	19.0	20.0
24	4.0	3.0	3.5	10.5	7.0	8.5	12.5	8.0	10.5	21.5	19.0	20.5
25	4.5	3.0	3.5	11.5	7.5	9.5	15.0	10.5	13.0	21.0	19.5	20.5
26	3.0	2.0	2.5	13.5	10.0	11.5	15.0	13.0	14.0	21.0	19.5	20.5
27	2.5	2.0	2.0	13.5	12.5	13.0	16.5	13.5	15.0	20.5	18.5	20.0
28	3.5	1.0	2.0	13.0	11.0	12.0	18.0	14.5	16.5	21.5	19.5	20.5
29	---	---	---	14.5	11.0	13.0	17.0	15.0	16.5	23.0	20.0	21.5
30	---	---	---	15.5	12.0	14.0	19.0	15.0	17.0	23.5	21.5	22.5
31	---	---	---	16.5	13.0	15.0	---	---	---	24.5	22.0	23.0
MONTH	6.0	.5	3.0	16.5	1.0	8.5	19.0	8.0	13.0	24.5	12.5	19.0

01411500 MAURICE RIVER AT NORMA, NJ--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	24.5	23.0	24.0	22.0	21.0	21.5	24.0	22.0	23.0	19.0	17.0	18.0
2	24.0	21.0	23.0	21.5	20.5	21.0	25.0	22.0	23.5	18.5	18.0	18.5
3	20.5	18.5	19.5	23.0	20.5	21.5	23.5	22.0	22.5	19.5	18.0	19.0
4	20.5	17.5	19.0	22.5	19.5	21.0	25.0	22.0	23.5	20.0	18.5	19.0
5	22.5	19.0	20.5	24.0	20.5	22.5	24.5	22.5	24.0	20.5	19.0	20.0
6	23.5	20.0	22.0	25.5	22.5	24.0	25.5	22.5	24.0	21.5	19.5	20.5
7	22.5	21.5	22.0	26.5	24.0	25.0	25.0	23.0	24.0	21.0	19.0	20.0
8	24.5	22.0	23.0	27.5	25.0	26.0	25.0	23.5	24.5	20.5	19.0	19.5
9	24.0	22.0	23.0	26.0	24.5	25.0	25.5	23.5	24.5	19.5	17.0	18.5
10	23.0	20.0	21.5	25.5	23.0	24.0	25.5	23.0	24.5	19.0	17.0	18.0
11	24.0	21.0	22.5	23.5	22.0	22.5	25.5	23.5	24.5	21.0	18.5	19.5
12	23.0	20.5	22.0	24.5	21.5	23.0	24.0	22.5	23.5	21.5	20.0	21.0
13	21.5	19.5	20.5	25.0	22.5	24.0	23.5	21.0	22.5	21.0	19.0	20.0
14	22.5	20.0	21.5	25.0	23.5	24.5	23.0	20.5	22.0	19.5	17.0	18.5
15	24.0	21.0	22.5	25.0	22.5	24.0	23.0	20.5	22.0	19.5	16.5	18.0
16	24.5	22.0	23.0	24.0	22.5	23.0	23.5	21.0	22.5	19.5	17.0	18.5
17	24.5	22.0	23.5	24.5	22.5	23.5	24.5	22.5	23.5	17.0	15.0	16.0
18	22.5	20.0	21.5	25.5	23.0	24.0	25.0	23.0	24.0	16.5	14.0	15.5
19	22.5	19.5	21.0	24.5	23.0	23.5	23.0	21.5	22.5	18.0	16.5	17.0
20	22.5	21.0	21.5	24.0	22.5	23.5	22.5	21.5	22.0	18.5	16.0	17.5
21	22.5	20.0	21.0	25.5	22.5	24.0	21.5	20.0	20.5	19.5	17.5	18.5
22	23.0	19.5	21.0	26.0	23.5	25.0	22.0	19.5	21.0	19.5	17.5	18.5
23	23.0	20.0	21.5	26.0	24.0	25.0	23.0	21.0	22.0	21.0	18.0	19.5
24	22.5	21.0	21.5	25.5	23.0	24.5	23.0	21.0	22.0	20.5	19.5	20.0
25	22.0	19.5	20.5	25.5	23.0	24.5	21.0	19.0	20.0	21.0	20.0	20.5
26	21.5	18.5	20.0	25.5	24.0	24.5	22.0	19.0	20.5	22.0	20.0	21.0
27	23.0	19.5	21.5	25.0	23.0	24.0	22.5	21.0	21.5	21.5	19.5	20.5
28	23.5	22.0	22.5	26.0	23.5	25.0	21.5	18.0	20.0	19.5	19.0	19.0
29	25.0	22.0	23.5	27.0	24.5	25.5	18.5	16.0	17.5	20.5	18.5	19.5
30	24.0	21.5	23.0	26.0	24.0	25.0	19.0	16.0	17.5	21.5	19.5	20.5
31	---	---	---	24.5	23.0	24.0	19.5	16.5	18.0	---	---	---
MONTH	25.0	17.5	22.0	27.5	19.5	24.0	25.5	16.0	22.0	22.0	14.0	19.0

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	22.5	21.0	21.5	12.5	10.5	12.0						
2	22.5	21.0	21.5	13.5	12.5	12.5						
3	21.5	20.5	21.0	12.0	10.5	11.5						
4	21.5	20.5	21.0	12.0	11.0	11.5						
5	21.0	19.5	20.5	11.5	10.0	10.5						
6	19.5	17.0	18.5	11.5	10.0	10.5						
7	16.5	14.5	15.5	10.5	9.5	10.0						
8	16.0	13.5	15.0	12.0	10.5	11.5						
9	17.5	15.5	16.5	13.5	12.0	13.0						
10	16.5	14.0	15.5	13.0	11.0	12.0						
11	14.5	13.0	14.0	11.0	10.0	10.5						
12	15.5	13.5	14.5	10.0	9.5	9.5						
13	15.5	15.0	15.0	9.0	7.0	8.5						
14	17.0	15.5	16.0	7.0	5.0	6.0						
15	16.0	14.5	15.0	6.0	4.5	5.5						
16	14.0	13.0	13.5	7.0	6.0	6.5						
17	13.0	12.5	13.0	8.5	7.0	7.5						
18	13.5	12.0	13.0	---	---	---						
19	12.5	11.0	11.5	---	---	---						
20	12.5	10.5	11.5	---	---	---						
21	12.5	11.0	12.0	---	---	---						
22	13.5	12.0	13.0	---	---	---						
23	14.0	12.5	13.5	---	---	---						
24	15.0	13.5	14.0	---	---	---						
25	13.5	12.5	13.0	---	---	---						
26	14.0	13.0	13.5	---	---	---						
27	14.0	14.0	14.0	---	---	---						
28	15.0	13.5	14.0	---	---	---						
29	14.0	12.5	13.5	---	---	---						
30	14.5	13.0	14.0	---	---	---						
31	13.0	11.5	12.5	---	---	---						
MONTH	22.5	10.5	15.0	13.5	4.5	10.0						

01412800 COHANSEY RIVER AT SEELEY, NJ

LOCATION.--Lat 39°28'21", long 75°15'21", Cumberland County, Hydrologic Unit 02040206, on right bank just downstream from bridge on Silver Lake Road, 0.6 mi south of Seeley, 2.6 mi east of Shiloh, 4.1 mi north of Bridgeton, and 22.5 mi upstream from mouth.

DRAINAGE AREA.--28.0 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1977 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 26.9 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 1 to Nov. 4, Nov. 7-15, 19-21, 25-27, Dec. 7-12, Dec. 16 to Jan. 2, Jan. 6-8, 22-25, Jan. 31 to Feb. 1, Feb. 13-16, Mar. 1-12, Mar. 21 to Apr. 5, May 31 to June 7, June 10, 11, June 18 to July 1, and July 4-16. Records fair except for period of Oct. 1 to July 16, which are poor. Flow diverted above gage during summer months for irrigation. Several measurements of water temperature, other than those published, were made during the year.

AVERAGE DISCHARGE.--9 years, 36.8 ft³/s, 17.85 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,000 ft³/s, June 21, 1983, includes discharge from dam break at Seeley Lake 1.3 mi upstream, gage height, 8.50 ft, from rating curve extended above 600 ft³/s on basis of step-backwater computation of peak flow; minimum, 12 ft³/s, Sept. 18, 1986, gage height, 2.54 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Jan. 27	0115	*137	*4.35	No peak greater than base discharge.			

Minimum discharge, 12 ft³/s, Sept. 18, gage height, 2.54 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	20	60	25	30	30	27	27	27	16	15	16
2	17	19	42	27	29	30	26	26	27	34	20	18
3	59	18	29	29	31	29	26	26	27	30	102	19
4	64	18	25	28	36	29	26	27	27	18	48	22
5	31	29	24	26	44	29	26	26	27	16	23	23
6	24	24	25	25	35	28	38	26	31	16	20	21
7	22	19	29	24	32	28	35	26	30	15	20	19
8	22	18	27	22	29	26	32	26	28	15	19	18
9	22	18	24	22	29	27	30	24	30	15	18	17
10	20	18	26	22	29	26	29	24	31	15	17	17
11	19	18	26	23	31	25	29	23	22	14	16	17
12	20	18	26	23	29	27	29	23	33	15	16	17
13	20	18	29	23	26	33	29	22	53	16	16	16
14	18	18	30	22	27	41	30	22	36	18	15	14
15	18	18	24	21	29	43	30	24	32	15	15	14
16	20	26	22	21	28	40	64	24	30	14	15	14
17	19	39	27	22	28	34	52	26	29	14	16	14
18	19	25	26	24	51	30	39	23	18	16	16	13
19	19	19	24	31	69	29	29	23	17	21	16	15
20	19	20	24	35	44	29	27	25	18	24	18	15
21	18	20	25	26	39	27	27	27	19	20	26	16
22	18	31	26	23	46	24	29	56	18	18	28	15
23	18	33	26	24	38	26	36	44	18	17	21	17
24	19	25	27	30	35	27	31	34	20	17	18	45
25	19	19	26	30	32	27	28	32	20	16	17	24
26	18	20	25	105	30	27	26	30	16	18	16	18
27	17	21	24	103	30	27	26	30	16	20	16	25
28	17	27	24	42	29	26	26	31	16	18	20	27
29	17	51	24	30	---	25	26	30	16	17	19	21
30	17	42	25	28	---	24	27	28	15	17	17	19
31	19	---	24	33	---	24	---	29	---	15	17	---
TOTAL	694	709	845	969	965	897	935	864	747	550	676	566
MEAN	22.4	23.6	27.3	31.3	34.5	28.9	31.2	27.9	24.9	17.7	21.8	18.9
MAX	64	51	60	105	69	43	64	56	53	34	102	45
MIN	17	18	22	21	26	24	26	22	15	14	15	13
CFSM	.80	.84	.97	1.12	1.23	1.03	1.11	1.00	.89	.63	.78	.67
IN.	.92	.94	1.12	1.29	1.28	1.19	1.24	1.15	.99	.73	.90	.75

CAL YR 1985 TOTAL 10359 MEAN 28.4 MAX 510 MIN 15 CFSM 1.01 IN. 13.76
WTR YR 1986 TOTAL 9417 MEAN 25.8 MAX 105 MIN 13 CFSM .92 IN. 12.51

01412800 COHANSEY RIVER AT SEELEY, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
30...	1000	24	210	6.2	10.5	10.4	93	<1.1	230	920
JAN 1986										
23...	1150	23	223	6.6	5.0	11.6	90	<0.5	20	49
MAR										
17...	1130	34	168	6.5	11.5	10.3	94	<1.2	20	49
MAY										
22...	1140	70	182	6.2	20.0	7.8	87	2.8	>24000	240
JUL										
15...	1150	23	213	6.8	21.5	9.7	110	E1.9	20	1600
AUG										
12...	1045	17	215	6.3	21.5	7.4	83	<0.9	220	1600

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
30...	56	11	7.0	13	4.7	11	22	29	<0.1
JAN 1986									
23...	57	11	7.2	11	4.2	7.0	17	28	<0.1
MAR									
17...	57	11	7.2	9.6	4.1	7.0	19	25	<0.1
MAY									
22...	56	11	6.9	8.7	3.9	17	25	21	<0.1
JUL									
15...	55	11	6.8	16	3.5	13	24	31	<0.1
AUG									
12...	52	10	6.5	12	4.8	14	24	27	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
30...	6.2	99	0.012	4.60	0.12	E0.05	--	0.03	2.3
JAN 1986									
23...	8.2	91	0.015	4.74	E0.17	0.11	4.8	0.03	1.4
MAR									
17...	7.1	87	0.16	4.45	0.16	0.41	4.9	0.07	2.8
MAY									
22...	6.6	93	0.052	2.81	0.16	1.2	4.0	0.20	8.7
JUL									
15...	9.3	110	0.04	3.62	0.16	0.38	4.0	0.06	3.2
AUG									
12...	8.3	100	0.019	2.80	0.07	0.68	3.5	0.06	2.3

01434000 DELAWARE RIVER AT PORT JERVIS, NY

LOCATION.--Lat 41°22'14", long 74°41'52", Pike County, Pa., Hydrologic Unit 02040104, on right bank 250 ft downstream from bridge (on U.S. Highways 6 and 209) between Port Jervis, N.Y. and Matamoras, Pa., 1.2 mi upstream from Neversink River, and 6.5 mi downstream from Mongaup River. Water-quality sampling site at discharge station.

DRAINAGE AREA.--3,070 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1904 to current year.

REVISED RECORDS.--WSP 1031: 1905-36. WDR NY-71-1: 1970. WDR NY-82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 415.35 ft above National Geodetic Vertical Datum of 1929. October 1904 to August 13, 1928, nonrecording gage at bridge 250 ft upstream at present datum; operated by U.S. Weather Bureau prior to June 20, 1914.

REMARKS.--Estimated daily discharges: Dec. 21 to Feb. 17. Records good except those for estimated daily discharges, which are fair. Flow regulated by Lake Wallenpaupack and by Toronto, Cliff Lake, and Swinging Bridge Reservoirs (see Reservoirs in Delaware River Basin) and smaller reservoirs. Large diurnal fluctuations at medium and low flows caused by powerplants on tributary streams. Subsequent to September 1954, entire flow from 371 mi^2 of drainage area controlled by Pepacton Reservoir, and subsequent to October 1963, entire flow from 454 mi^2 of drainage area controlled by Cannonsville Reservoir (see Reservoirs in Delaware River Basin). Part of flow from these reservoirs diverted for New York City municipal supply. Remainder of flow (except for conservation releases and spill) impounded for release during periods of low flow in the lower Delaware River basin, as directed by the Delaware River Master. Telephone gage-height telemeter and satellite gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 233,000 ft^3/s Aug. 19, 1955, gage height, 23.91 ft, from floodmarks in gage house, from rating curve extended above 89,000 ft^3/s on basis of slope-area measurement of peak flow; maximum gage height, 26.6 ft Feb. 12, 1981 (ice jam), from floodmarks; minimum observed discharge, 175 ft^3/s Sept. 23, 1908, gage height, 0.6 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--The U.S. Weather Bureau reported a discharge of 205,000 ft^3/s Oct. 10, 1903, gage height, 23.1 ft, from rating curve extended above 70,000 ft^3/s by velocity-area studies; maximum gage height, 25.5 ft Mar. 8, 1904 (ice jam).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 102,000 ft^3/s Mar. 15, gage height, 16.02 ft; minimum, 882 ft^3/s Aug. 31, gage height, 1.82 ft; minimum daily, 1,240 ft^3/s Aug. 31.

REVISIONS.--Peak and daily discharges have been revised as shown in the following tables. They supersede figures published in WDR NY Vol. 1, 1979, 1980.

Revised peak discharges for 1979-80 water years are given herewith:

Water year	Date	Discharge (ft^3/s)	Gage height (ft)	Water year	Date	Discharge (ft^3/s)	Gage height (ft)
1979	Mar. 6, 1979	56,600	11.88	1980	Mar. 22, 1980	60,400	12.28

Revised daily discharges, in cubic feet per second, for 1979-80 water years are given herewith:

Water year	Date	Discharge (ft^3/s)	Water year	Date	Discharge (ft^3/s)
1979	Mar. 6	52,900	1979	Mar. 8	26,900
1979	Mar. 7	41,000	1980	Mar. 22	50,300

01434000 DELAWARE RIVER AT PORT JERVIS, NY--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7990	2070	12400	2300	3800	4900	8020	5820	3480	2300	5710	1390
2	6610	1970	14600	2200	2800	4200	7340	5090	3240	2850	4900	1480
3	5810	1600	15800	2400	3200	4340	6720	4890	3060	3830	4710	1690
4	5300	1720	12100	1900	3800	5010	6160	4130	2720	3020	3960	1660
5	6740	2520	9980	1600	3700	4790	5500	3550	2420	1990	3810	1730
6	12400	2850	8760	1800	3800	4730	5060	3810	9620	1810	3220	1850
7	7960	3560	7160	2500	3600	4470	6030	3920	15800	1770	3400	1730
8	5150	2810	6590	2500	3100	3850	5620	3670	13600	2570	5410	1280
9	4000	2410	6090	2300	2300	2620	4710	3400	12600	2610	4210	1660
10	3370	2030	5750	1700	2600	3010	4270	2980	10100	2520	3450	1560
11	3040	2240	5590	1900	3100	4490	4230	1990	8160	2380	2990	1600
12	2650	3280	7150	1400	2900	6380	4030	2120	11200	2380	3920	1570
13	2430	4700	7800	1600	3000	7950	3840	2160	17700	2430	3170	1820
14	2480	5550	6630	2400	3000	11700	3620	1760	14200	3910	2360	1740
15	2720	8450	5270	2700	2500	76300	3440	1620	11200	4050	2130	1320
16	2710	9230	5070	2400	1700	66400	4190	1680	9810	3370	2800	1800
17	2600	17500	4900	2100	2000	39800	9160	1720	9080	3150	1820	1640
18	2350	20400	4540	1300	3600	27600	10900	2620	8460	2870	3020	1780
19	2160	15000	4190	1400	5240	26600	7510	2540	7260	2870	3540	1730
20	2040	11600	3920	4300	6870	39500	5820	2290	6410	2300	2770	1840
21	2340	9520	3000	13000	8230	27100	5600	2930	5310	2280	2400	1900
22	2420	7980	2800	8400	10400	19400	5910	11300	4740	2480	2310	1620
23	2510	7800	3100	7200	9530	15400	6730	16600	4330	2240	2110	1680
24	2380	7210	3200	5800	8060	13400	7110	13100	4020	1780	1450	1720
25	2830	6320	3000	4400	7210	12200	11000	11400	3550	1590	1690	1520
26	3080	6100	3000	4700	6100	10700	10800	9530	3060	1560	2390	1530
27	2650	8750	3300	7000	5490	10800	8590	8240	3070	1630	2340	1810
28	2540	13200	2600	6400	5440	11200	7830	7370	2740	2000	2000	1410
29	2640	16200	2400	5400	---	10300	7350	6310	1930	2400	1850	1540
30	2480	13600	2600	4400	---	9310	6600	5480	2020	2610	1720	1730
31	2220	---	2700	4300	---	8730	---	4460	---	5590	1240	---
TOTAL	118600	218170	185990	113700	127070	497180	193690	158480	214890	81140	92800	49330
MEAN	3826	7272	6000	3668	4538	16040	6456	5112	7163	2617	2994	1644
MAX	12400	20400	15800	13000	10400	76300	11000	16600	17700	5590	5710	1900
MIN	2040	1600	2400	1300	1700	2620	3440	1620	1930	1560	1240	1280

CAL YR 1985 TOTAL 1266037 MEAN 3469 MAX 48100 MIN 853
WTR YR 1986 TOTAL 2051040 MEAN 5619 MAX 76300 MIN 1240

01437500 NEVERSINK RIVER AT GODEFFROY, NY

LOCATION.--Lat 41°26'28", long 74°36'07", Orange County, Hydrologic Unit 02040104, on right bank just upstream from highway bridge on Graham Road, 0.5 mi downstream from Basher Kill, 0.8 mi southeast of Godeffroy, 1.7 mi south of Cuddebackville, and 8.5 mi upstream from mouth.

DRAINAGE AREA.--307 mi^2.

PERIOD OF RECORD.--August to October 1903, July 1937 to current year. Gage heights and discharge measurements, August 1909 to April 1914. Twice-daily figures of discharge, January 1911 to December 1912, which do not represent daily mean discharges because of diurnal fluctuation. August to October 1903, published as "Navesink River at Godeffroy, NY."

REVISED RECORDS.--WSP 1502: 1951(M). WDR NY-82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 459.66 ft above National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Apr. 30, 1914, nonrecording gages at same site (August to October 1903 at datum 0.98 ft higher).

REMARKS.--Estimated daily discharges: Dec. 13 to Jan. 20, Jan. 23-26, Jan. 29 to Feb. 17, and Mar. 4-10. Records fair except those for estimated daily discharges, which are poor. Prior to 1949, diurnal fluctuation at low and medium flow caused by powerplant at Cuddebackville. Subsequent to June 1953, entire flow from 92.5 mi^2 of drainage area controlled by Neversink Reservoir (see Reservoirs in Delaware River Basin). Part of flow diverted for New York City municipal supply. Remainder of flow (except for conservation releases and spill), impounded for release during periods of low flow in the lower Delaware River basin, as directed by the Delaware River Master. Several measurements of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,000 ft^3/s Aug. 19, 1955, gage height, 12.49 ft, from rating curve extended above 11,000 ft^3/s on basis of slope-area measurement of peak flow; minimum, practically no flow several times in July 1911.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,200 ft^3/s Mar. 15, gage height, 7.37 ft; minimum 128 ft^3/s Aug. 31; minimum gage height, 3.19 ft Aug. 30, 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	586	185	1040	220	560	454	509	561	294	202	361	140
2	511	190	1630	230	540	425	481	520	265	410	459	143
3	540	230	1330	230	500	401	441	482	232	530	684	141
4	563	218	1090	240	470	380	400	447	206	360	479	149
5	655	314	969	230	470	350	392	417	198	290	418	145
6	789	483	888	220	480	320	427	395	1870	254	372	153
7	602	475	786	210	420	300	467	419	2120	223	355	162
8	519	386	649	210	400	280	431	387	1430	218	339	153
9	456	324	587	200	380	290	390	360	1130	229	299	146
10	400	291	541	190	370	310	360	326	818	222	257	141
11	378	303	552	180	360	423	340	295	718	195	318	142
12	348	431	893	170	340	561	323	276	1120	234	289	139
13	362	638	790	170	330	624	307	257	1450	321	236	141
14	432	590	700	160	310	1100	299	236	1090	497	203	157
15	427	821	580	160	300	4690	287	222	934	357	185	153
16	397	717	540	150	290	3550	491	224	820	282	185	138
17	332	1800	480	140	290	2490	1110	282	906	251	185	135
18	289	1570	430	140	443	1980	870	274	720	239	322	131
19	269	1300	400	170	654	2300	701	230	571	237	256	140
20	252	1130	370	600	798	2640	609	219	520	222	191	145
21	233	983	350	859	788	1700	600	377	473	216	178	159
22	218	884	330	671	979	1330	652	1850	419	194	180	149
23	210	885	320	600	829	1120	734	2170	382	172	168	150
24	215	790	320	500	716	993	811	1060	362	154	231	162
25	312	669	340	450	645	858	1140	640	337	154	189	160
26	291	659	330	980	577	794	1030	499	290	176	164	163
27	245	1000	310	1350	535	800	938	428	263	483	157	253
28	226	1270	280	1030	495	733	797	383	260	539	154	223
29	214	1240	270	840	---	652	700	339	250	364	145	192
30	201	1110	250	720	---	601	625	301	222	318	142	175
31	194	---	230	620	---	555	---	270	---	474	136	---
TOTAL	11666	21886	18575	12840	14269	34004	17662	15146	20670	9017	8237	4680
MEAN	376	730	599	414	510	1097	589	489	689	291	266	156
MAX	789	1800	1630	1350	979	4690	1140	2170	2120	539	684	253
MIN	194	185	230	140	290	280	287	219	198	154	136	131

CAL YR 1985 TOTAL 121982 MEAN 334 MAX 2180 MIN 53
WTR YR 1986 TOTAL 188652 MEAN 517 MAX 4690 MIN 131

01438500 DELAWARE RIVER AT MONTAGUE, NJ

LOCATION.--Lat 41°18'33", long 74°47'44", Pike County, PA, Hydrologic Unit 02040104, on right bank 1,500 ft upstream from toll bridge (on U.S. Route 206) between Montague, NJ and Milford, PA, 0.8 mi downstream from Sawkill Creek, and at river mile 246.3.

DRAINAGE AREA.--3,480 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1936 to September 1939 (gage heights only, published as "at Milford, PA"). October 1939 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WDR-NJ-81-2: 1980.

GAGE.--Water-stage recorder. Datum of gage is 369.93 ft above National Geodetic Vertical Datum of 1929. Prior to Feb. 9, 1940, nonrecording gage on upstream side of left span of subsequently dismantled bridge at present site at datum 70 ft lower.

REMARKS.--Estimated daily discharges: Dec. 20 to Feb. 17. Records excellent except those for period of ice effect, Dec. 20 to Feb. 17, and those from Sept. 3-30, which are good. Diurnal fluctuations at medium and low flow caused by powerplants on tributary streams. Flow regulated by Lake Wallenpaupack and by Pepacton, Cannonsville, Swinging Bridge, Toronto, Cliff Lake, and Neversink Reservoirs (see Delaware River basin, reservoirs in) and smaller reservoirs. Diversion from Pepacton, Cannonsville, and Neversink Reservoirs (see Delaware River basin, diversions). Several measurements of water temperature were made during the year. Satellite telemeter at station.

AVERAGE DISCHARGE.--47 years, 5,801 ft³/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 250,000 ft³/s, Aug. 19, 1955, gage height, 35.15 ft, from rating curve extended above 90,000 ft³/s on basis of flood-routing study; minimum, 382 ft³/s, Aug. 24, 1954, gage height, 3.83 ft, minimum daily, 412 ft³/s, Aug. 23, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of October 10, 1903, reached a stage of 35.5 ft, from floodmark, present datum.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 114,000 ft³/s, Mar. 15, gage height, 23.28 ft; minimum, 1,150 ft³/s, Sept. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9020	2300	13400	3100	5320	6050	8990	7000	3920	2600	6070	1700
2	7480	2380	16800	2500	4150	5040	8270	6100	3600	3100	5390	1660
3	6690	1890	17700	3000	4500	4990	7610	5860	3400	4410	5750	2100
4	6180	1830	13300	2830	5350	5800	6980	4970	3080	3730	4730	2020
5	6600	2790	11100	2190	5200	5580	6400	4300	2640	2410	4410	1990
6	13100	3400	10000	2100	5250	5500	5810	4500	9800	2210	3780	1980
7	9070	4160	8470	3100	5100	5260	6860	4640	18200	1930	3520	1990
8	6040	3370	7770	3200	4380	4420	6560	4360	14900	2830	5850	1600
9	4780	2930	7180	2800	3270	3000	5510	4040	13600	2840	4650	1930
10	4020	2440	6770	2100	3580	3350	4960	3770	11000	2820	3840	1790
11	3590	2410	6480	2900	4430	5180	4880	2500	9050	2640	3210	1810
12	3170	3640	8290	1800	3770	7380	4660	2370	11500	2730	4270	1790
13	2930	5470	9070	1800	3800	9070	4420	2760	19700	2800	3710	1840
14	2980	6270	7980	2700	3800	12700	4170	2210	15600	4320	2700	1960
15	3260	8800	6440	3000	3400	77200	3970	1950	12100	4600	2280	1610
16	3220	10100	5990	2700	2350	75900	4750	2050	10800	3870	3250	2020
17	3070	17600	5870	2600	2500	44700	10300	2110	10100	3570	2160	1880
18	2790	22400	5400	1700	4470	31600	12500	2940	9400	3230	3160	1950
19	2560	16600	4860	1800	6520	29400	9150	2990	8060	3400	3900	1850
20	2390	12800	4400	4000	8270	42800	7130	2680	7110	2610	3240	2010
21	2610	10700	3800	13500	9610	30900	6650	3120	5960	2640	2740	2110
22	2690	9250	3500	10600	11700	22600	7090	12000	5310	2830	2660	1820
23	2750	9080	3700	9160	11000	17700	8120	18700	4840	2590	2580	1860
24	2660	8430	4400	7500	9510	14700	8470	14500	4470	2100	1800	1910
25	3130	7440	3900	6500	8580	13300	12300	12100	3980	1870	1910	1780
26	3590	7210	3600	6630	7320	11700	12400	10300	3500	1830	2730	1710
27	3060	9920	4200	10000	6710	11700	10300	8940	3380	2080	2680	2000
28	2690	14500	3500	9200	6530	12000	9260	8100	3270	2590	2320	1800
29	2940	17900	3000	7560	---	11200	8720	6960	2320	2900	2170	1670
30	2770	14700	3100	6200	---	10300	7850	6060	2150	2920	2100	1980
31	2550	---	3400	6150	---	9690	---	5150	---	5890	1430	---
TOTAL	134380	242710	217370	144920	160370	550710	225040	180030	236740	92890	104990	56120
MEAN	4335	8090	7012	4675	5728	17760	7501	5807	7891	2996	3387	1871
MAX	13100	22400	17700	13500	11700	77200	12500	18700	19700	5890	6070	2110
MIN	2390	1830	3000	1700	2350	3000	3970	1950	2150	1830	1430	1600

CAL YR 1985 TOTAL 1427810 MEAN 3912 MAX 50700 MIN 1010
WTR YR 1986 TOTAL 2346270 MEAN 6428 MAX 77200 MIN 1430

01440000 FLAT BROOK NEAR FLATBROOKVILLE, NJ

LOCATION.--Lat 41°06'24", long 74°57'09", Sussex County, Hydrologic Unit 02040104, on right bank 1.0 mi upstream from Flatbrookville, and 1.5 mi upstream from mouth.

DRAINAGE AREA.--64.0 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1923 to current year.

REVISED RECORDS.--WSP 1432: 1924(M), 1928(M), 1929, 1930(M), 1932, 1933(M), 1936, 1938(M), 1939-40, 1949(M), 1952-53(M). WDR-NJ-80-2: 1970(M). WDR NJ-82-2: Drainage area.

GAGE.--Water-stage recorder. Concrete control since Aug. 19, 1929. Datum of gage is 347.73 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 6, 1926, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Dec. 28 to Jan. 18 and Feb. 14-16. Records good except those for periods of ice effect, Dec. 28 to Jan. 18 and Feb. 14-16, which are fair. Flow occasionally regulated by ponds above station. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--63 years, 109 ft³/s, 23.13 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,560 ft³/s, Aug. 19, 1955, gage height, 12.58 ft, from high-water mark in gage house, from rating curve extended above 2,000 ft³/s on basis of slope-area measurement of peak flow; minimum, 3.6 ft³/s, Sept. 25, 26, 1964, Sept. 11, 1966, but may have been lower during period of ice effect, Feb. 2-11, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 650 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 17	1515	757	3.94	Apr. 17	1945	675	3.78
Jan. 27	0130	726	3.88	Aug. 3	0715	726	3.88
Mar. 15	1200	*1,840	*5.82				

Minimum discharge, 13 ft³/s, Sept. 14, 15, 16, 17, 18, gage height, 1.88 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	89	34	337	65	161	130	108	172	49	33	90	20
2	76	33	461	64	145	126	103	157	45	57	105	19
3	91	36	383	70	153	120	97	142	42	71	531	18
4	121	33	283	90	141	119	91	131	41	46	175	18
5	108	53	235	81	144	116	95	123	39	38	100	19
6	108	81	207	77	160	119	115	116	86	33	81	24
7	86	74	183	66	130	110	122	136	202	31	74	20
8	73	63	167	60	130	89	110	117	135	28	60	18
9	66	54	156	61	119	94	99	112	86	27	51	17
10	61	49	146	60	113	98	91	100	62	26	44	16
11	57	47	152	58	110	215	87	92	54	25	41	16
12	51	55	257	56	104	295	85	88	141	43	37	16
13	51	98	194	55	95	278	83	82	241	57	33	14
14	54	85	183	50	91	417	76	77	134	91	31	13
15	54	99	151	43	88	1440	75	74	94	66	29	13
16	51	101	137	47	86	905	168	74	201	43	27	14
17	45	583	130	45	92	524	558	73	130	37	26	14
18	42	451	121	46	161	398	477	69	91	34	37	14
19	41	288	97	88	320	368	299	63	74	36	36	14
20	41	219	98	323	356	357	227	62	69	34	30	14
21	39	175	103	234	322	266	204	90	61	31	29	14
22	38	168	100	150	362	224	238	252	54	28	49	14
23	36	206	102	131	287	202	368	206	50	25	39	15
24	38	173	96	104	234	181	353	123	47	23	40	16
25	56	144	107	99	202	161	450	96	45	23	34	16
26	50	154	106	403	169	153	358	83	42	24	28	20
27	44	296	100	544	159	147	310	75	39	32	26	26
28	39	338	84	303	144	142	248	67	38	26	25	27
29	37	411	76	225	---	133	213	61	37	24	23	22
30	36	317	72	187	---	124	197	56	36	22	23	19
31	36	---	67	167	---	116	---	53	---	95	21	---
TOTAL	1815	4918	5091	4052	4778	8167	6105	3222	2465	1209	1975	520
MEAN	58.5	164	164	131	171	263	204	104	82.2	39.0	63.7	17.3
MAX	121	583	461	544	362	1440	558	252	241	95	531	27
MIN	36	33	67	43	86	89	75	53	36	22	21	13
CFSM	.91	2.56	2.56	2.05	2.67	4.11	3.19	1.62	1.28	.61	1.00	.27
IN.	1.05	2.86	2.96	2.36	2.78	4.75	3.55	1.87	1.43	.70	1.15	.30

CAL YR 1985 TOTAL 31199 MEAN 85.5 MAX 625 MIN 14 CFSM 1.34 IN. 18.13
WTR YR 1986 TOTAL 44317 MEAN 121 MAX 1440 MIN 13 CFSM 1.89 IN. 25.76

01440200 DELAWARE RIVER BELOW TOCKS ISLAND DAMSITE, NEAR DELAWARE WATER GAP, PA

LOCATION.--Lat 41°00'42", long 75°05'09", Warren County, NJ, Hydrologic Unit 02040105, on left bank 40 ft streamward from River Road, 1.0 mi downstream from Tocks Island, 3.7 mi northeast of Delaware Water Gap, PA, 4.0 mi upstream from bridge on Interstate Route 80, and at mile 216.1.

DRAINAGE AREA.--3,850 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1964 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 293.64 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Jan. 28 to Feb. 4, July 29 to Aug. 5, and Aug. 28 to Sept. 2. Records fair. Diurnal fluctuation at medium and low flow caused by powerplants on tributary streams. Flow regulated by Lake Wallenpaupack, and by Pepacton, Cannonsville, Swinging Bridge, Toronto, Cliff Lake, and Neversink Reservoirs (see Delaware River basin, reservoirs in) and smaller reservoirs. Diversion from Pepacton, Cannonsville, and Neversink Reservoirs (see Delaware River basin, diversions). Several measurements of water temperature were made during the year. Gage-height telemeter at station. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--22 years, 6,383 ft³/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 110,000 ft³/s, Mar. 16, 1986, gage height, 24.00 ft; minimum daily, 580 ft³/s, July 7, 8, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 110,000 ft³/s, Mar. 16, gage height, 24.00 ft; minimum, 1,430 ft³/s, Sept. 11, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11100	2720	16500	4210	6400	7240	9990	8450	4590	2910	7170	1530
2	8900	2710	18500	3650	5800	6050	9170	7450	4250	3250	7080	1760
3	7920	2320	22600	3870	5700	5750	8510	6920	3930	4440	7790	2170
4	7430	2120	17300	3670	6600	6440	7840	6210	3650	4670	6660	2130
5	6990	2930	13700	2790	6630	6380	7400	5730	3240	3090	5580	2090
6	13200	3740	12100	3290	6460	6250	6540	5370	6330	2640	4850	2180
7	11700	4620	10600	3700	6460	6130	7160	5520	19400	2280	4120	2160
8	7630	4290	9130	3430	5910	5530	7790	5430	17200	2880	5900	2090
9	6140	3700	8540	3400	4390	3810	6660	5020	15600	3030	5650	1910
10	5130	3080	7990	3350	4050	3580	5910	4770	12600	3180	4710	1980
11	4410	2810	7630	3500	5380	5500	5700	3400	10400	2940	3700	1950
12	3980	3620	8670	2800	5310	7590	5490	3020	10100	3010	4630	1960
13	3540	5430	10500	2400	4800	9860	5210	3410	21200	2940	4500	1890
14	3370	6670	9880	3150	4750	13100	4930	2860	19200	3970	3170	2090
15	3690	8090	7970	3490	4680	64900	4670	2530	14100	5430	2810	1990
16	3740	11700	6980	4150	3690	96000	5180	2520	12400	4700	3360	1950
17	3580	19000	7010	3910	3070	61900	10500	2550	11100	4160	2740	2060
18	3340	30100	6600	2970	4410	42100	16300	2770	10600	3710	2650	2030
19	3020	22300	6560	2210	7150	34400	12400	3690	9200	3830	4600	2070
20	2810	16500	5870	3570	9060	49800	9250	3270	8110	3270	4110	2140
21	2730	13300	5140	15300	10800	41100	8080	3330	7190	3240	3290	2070
22	3050	11300	4750	13800	12900	27100	8410	9030	6280	3260	3210	2160
23	3130	10600	5320	10400	13000	20800	9480	20700	5710	3170	3030	1990
24	3050	10100	5710	8990	11300	17100	10100	17700	5220	2710	2340	2060
25	3460	9070	5140	7340	9970	15300	13300	13600	4730	2310	2210	2070
26	4100	8420	5570	7170	8790	13400	15400	11800	4150	2180	2830	1870
27	3900	10100	5510	11700	7840	12700	12700	9970	3870	2220	2540	1990
28	3280	15200	5400	11800	7330	13200	11000	9180	3750	2670	2650	2270
29	3370	21300	4210	8900	---	12600	10400	7900	2930	3090	2320	1760
30	3270	18800	4190	7400	---	11500	9430	6960	2570	3100	2200	2180
31	3040	---	4570	7100	---	10800	---	6240	---	6230	1860	---
TOTAL	158000	286640	270140	177410	192630	637910	264900	207300	263600	104510	124260	60550
MEAN	5097	9555	8714	5723	6880	20580	8830	6687	8787	3371	4008	2018
MAX	13200	30100	22600	15300	13000	96000	16300	20700	21200	6230	7790	2270
MIN	2730	2120	4190	2210	3070	3580	4670	2520	2570	2180	1860	1530

CAL YR 1985 TOTAL 1700040 MEAN 4658 MAX 61300 MIN 1080
WTR YR 1986 TOTAL 2747850 MEAN 7528 MAX 96000 MIN 1530

01443000 DELAWARE RIVER AT PORTLAND, PA

LOCATION.--Lat 40°55'26", long 75°05'46", Northampton County, Hydrologic Unit 02040105, at walkbridge connecting Portland, PA and Columbia, NJ, and 0.5 mi upstream of Paulins Kill.

DRAINAGE AREA.--4,165 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
NOV 1985										
21...	1100	15400	84	7.6	9.5	11.1	97	E1.9	50	33
MAR 1986										
04...	1030	8350	87	8.1	2.0	13.3	97	<2.1	20	11
APR										
10...	1045	6660	79	8.4	8.5	10.5	93	<0.1	20	2
JUN										
03...	1245	4310	82	7.4	21.0	8.4	95	E1.4	20	79
JUL										
23...	1100	2880	88	8.0	24.0	8.0	95	<0.3	<20	130
AUG										
18...	1045	3010	85	7.9	23.5	8.2	97	E1.1	130	130

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
NOV 1985									
21...	20	6.1	1.2	2.9	0.8	--	10	5.0	<0.1
MAR 1986									
04...	25	7.7	1.5	4.5	0.7	13	12	8.0	<0.1
APR									
10...	25	7.6	1.5	4.0	0.8	15	9.5	7.2	<0.1
JUN									
03...	26	7.6	1.6	4.0	0.8	16	11	5.9	<0.1
JUL									
23...	26	7.9	1.6	4.6	1.0	18	10	7.3	<0.1
AUG									
18...	26	7.9	1.5	4.2	0.8	18	11	6.9	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 1985									
21...	3.6	--	<0.003	0.25	0.15	0.31	0.56	0.04	3.7
MAR 1986									
04...	3.3	45	0.007	0.41	<0.05	0.12	0.53	<0.02	1.9
APR									
10...	2.5	42	0.01	0.32	0.02	0.24	0.56	0.02	2.7
JUN									
03...	2.0	42	0.009	0.31	<0.05	0.33	0.64	0.02	2.7
JUL									
23...	2.2	45	0.012	0.18	0.11	0.66	0.84	0.05	3.3
AUG									
18...	1.8	45	<0.003	0.12	0.07	0.55	0.67	0.05	3.6

01443000 DELAWARE RIVER AT PORTLAND, PA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
NOV 1985 21...	1100	<0.5	30	<1	<10	--	1	10	2
JUN 1986 03...	1245	<0.5	<10	<1	<10	<10	<1	<10	5

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
NOV 1985 21...	270	31	30	0.1	2	<1	40	<1
JUN 1986 03...	200	40	40	<0.1	1	<1	<10	2

01443440 PAULINS KILL AT BALESVILLE, NJ

LOCATION.--Lat 41°06'20", long 74°45'19", Sussex County, Hydrologic Unit 02040105, at bridge on unnamed road at Balesville, 2.2 mi downstream from Dry Brook, and 3.4 mi north of Newton.

DRAINAGE AREA.--67.1 mi².

WATER-QUALITY RECORDS

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

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
NOV 1985										
13...	1100	E72	423	8.0	8.5	11.0	95	E2.1	790	1600
FEB 1986										
19...	1240	E420	287	7.3	2.0	13.3	98	2.9	490	1600
MAR										
26...	1045	E179	371	8.2	8.0	11.9	101	E1.2	20	7
MAY										
22...	1100	E203	238	7.6	16.5	10.9	114	3.7	>24000	>2400
JUL										
14...	1045	E54	442	7.9	18.0	9.2	100	E2.2	3500	1600
AUG										
06...	1045	E70	432	8.1	19.0	8.0	88	E1.7	1100	>2400

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
NOV 1985									
13...	160	42	14	22	2.5	122	25	39	<0.1
FEB 1986									
19...	80	21	6.8	23	1.8	58	8.3	43	<0.1
MAR									
26...	130	34	11	19	1.9	105	17	38	0.1
MAY									
22...	78	21	6.3	14	1.8	62	15	21	<0.1
JUL									
14...	160	42	14	23	1.8	125	26	42	<0.1
AUG									
06...	160	41	13	22	1.7	121	21	39	0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 1985									
13...	7.1	220	0.028	0.94	0.29	0.87	1.8	0.13	7.9
FEB 1986									
19...	4.4	140	0.017	0.88	0.39	0.83	1.7	0.11	8.2
MAR									
26...	3.8	190	0.024	0.91	0.25	0.73	1.6	0.07	4.6
MAY									
22...	5.2	120	0.042	0.55	0.22	1.5	2.0	0.27	14
JUL									
14...	7.1	230	0.023	0.88	0.11	0.67	1.5	0.09	5.7
AUG									
06...	6.6	220	0.036	0.80	E0.12	0.78	1.6	0.16	6.8

01443440 PAULINS KILL AT BALESVILLE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
NOV 1985											
13...	1100	--	240	1.4	7.2	--	--	--	--	--	<1
13...	1100	--	--	--	--	20	1	<10	<20	1	--
MAY 1986											
22...	1100	<0.5	--	--	--	50	1	<10	30	<1	--

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
NOV 1985											
13...	--	120	<10	--	20	--	16000	--	40	--	1000
13...	<10	--	--	7	--	380	--	1	--	70	--
MAY 1986											
22...	<10	--	--	9	--	1900	--	12	--	290	--

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1985											
13...	--	0.03	--	10	--	<1	--	110	--	<1	<1.0
13...	<0.1	--	7	--	<1	--	20	--	<1	--	--
MAY 1986											
22...	0.1	--	5	--	<1	--	20	--	3	--	--

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1985											
13...	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
13...	--	--	--	--	--	--	--	--	--	--	--
MAY 1986											
22...	--	--	--	--	--	--	--	--	--	--	--

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1985											
13...	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1
13...	--	--	--	--	--	--	--	--	--	--	--
MAY 1986											
22...	--	--	--	--	--	--	--	--	--	--	--

01443500 PAULINS KILL AT BLAIRSTOWN, NJ

LOCATION.--Lat 40°58'44", long 74°57'15", Warren County, Hydrologic Unit 02040105, on right bank 1,200 ft upstream from bridge on State Highway 94 in Blairstown, 1,400 ft upstream from Blairs Creek, and 10 mi upstream from mouth. Water-quality samples collected at bridge 1,200 ft downstream from gage at high flows.

DRAINAGE AREA.--126 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.- 1921 to September 1976, October 1977 to current year.

REVISED RECORDS.--WSP 971: 1942. WSP 1382: 1952-53(M).

GAGE.--Water-stage recorder and concrete control (Aug. 1, 1931, to Aug. 3, 1941, concrete control at site 280 ft, downstream). Datum of gage is 335.86 ft above National Geodetic Vertical Datum of 1929. Prior to May 24, 1922, nonrecording gage and May 24, 1922 to July 31, 1931, water-stage recorder, at site of former highway bridge 1,300 ft downstream at different datum. Aug. 1, 1931 to July 28, 1939, water-stage recorder at site 100 ft downstream at present datum.

REMARKS.--No estimated daily discharges. Records fair. Diurnal fluctuation caused by powerplant above station and flow regulated slightly by Swartswood Lake. Several measurements of water temperature, other than those published, were made during the year.

AVERAGE DISCHARGE.--64 years, (water years 1922-76, 1978-86) 195 ft³/s, 21.02 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,750 ft³/s, Aug. 19, 1955, gage height, 11.12 ft, from high-water mark in gage house; minimum, about 2.8 ft³/s, Nov. 1, 1922; minimum daily, 5 ft³/s, Aug. 13, 14, 1930.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 17	1445	1,310	4.22	Mar. 15	1200	*2,010	*5.69
Jan. 27	0030	1,610	4.96	Apr. 17	2215	1,100	3.63
Feb. 22	0215	1,020	3.42				

Minimum discharge, 28 ft³/s, Sept. 16, 22, 23, gage height, 1.52 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	257	78	613	129	297	279	228	326	99	60	217	38
2	216	74	758	124	300	258	219	305	92	90	185	37
3	248	72	631	141	339	245	205	278	81	104	287	36
4	301	73	477	182	322	264	194	253	74	81	218	36
5	258	112	421	169	312	262	194	235	76	71	157	39
6	234	155	394	156	350	287	224	225	133	67	124	57
7	197	138	371	137	316	254	250	235	374	61	110	55
8	177	117	349	115	286	214	226	224	333	56	95	47
9	158	95	329	120	277	205	206	206	254	55	81	40
10	151	87	311	118	247	214	186	188	187	54	73	37
11	155	88	310	113	243	413	174	177	153	49	67	35
12	133	88	402	108	228	461	166	165	233	81	61	34
13	122	128	367	107	209	481	155	151	350	127	56	34
14	126	132	357	92	202	786	148	141	296	96	50	31
15	119	162	320	80	199	1830	142	135	231	81	46	30
16	113	178	291	93	183	1490	253	136	195	71	46	29
17	102	1030	278	88	193	1150	806	152	182	66	49	31
18	91	911	261	90	373	843	892	143	153	61	90	31
19	88	543	229	131	728	681	543	127	132	80	78	31
20	88	425	206	371	848	624	440	129	128	69	63	31
21	82	363	199	330	797	482	399	166	114	63	59	30
22	79	344	180	257	913	417	415	355	101	57	98	30
23	80	386	178	229	610	380	624	343	94	51	84	29
24	81	341	177	196	464	356	665	252	86	47	92	35
25	96	305	197	184	405	329	694	208	81	43	79	36
26	90	325	194	992	359	313	528	180	74	45	61	41
27	81	494	188	1340	332	303	474	154	69	91	52	68
28	83	567	159	775	301	293	419	140	68	79	50	61
29	73	783	144	465	---	271	380	123	68	76	45	50
30	73	614	139	395	---	256	362	110	63	70	41	44
31	77	---	129	338	---	243	---	103	---	220	39	---
TOTAL	4229	9208	9559	8165	10633	14884	10811	6065	4574	2322	2853	1163
MEAN	136	307	308	263	380	480	360	196	152	74.9	92.0	38.8
MAX	301	1030	758	1340	913	1830	892	355	374	220	287	68
MIN	73	72	129	80	183	205	142	103	63	43	39	29
CFSM	1.08	2.44	2.44	2.09	3.02	3.81	2.86	1.56	1.21	.59	.73	.31
IN.	1.25	2.72	2.82	2.41	3.14	4.39	3.19	1.79	1.35	.69	.84	.34

CAL YR 1985 TOTAL 57373 MEAN 157 MAX 1040 MIN 35 CFSM 1.25 IN. 16.94
WTR YR 1986 TOTAL 84466 MEAN 231 MAX 1830 MIN 29 CFSM 1.83 IN. 24.94

01443500 PAULINS KILL AT BLAIRSTOWN, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1921, 1925, 1957-60, 1962-63, 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
NOV 1985										
13...	1330	134	380	8.0	9.0	11.1	97	E1.9	80	170
FEB 1986										
19...	1130	722	366	7.7	1.5	14.0	102	E1.7	230	540
MAR										
26...	1230	309	323	8.3	8.5	12.1	104	E0.8	<20	2
MAY										
22...	1315	392	328	7.8	18.5	10.1	110	2.8	>24000	>2400
JUL										
14...	1230	96	427	8.2	21.5	8.6	99	E1.8	270	130
AUG										
06...	1230	122	360	8.2	21.0	8.2	93	E1.8	80	170

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
NOV 1985									
13...	150	37	13	18	2.1	116	24	30	<0.1
FEB 1986									
19...	130	32	12	22	1.4	100	12	41	<0.1
MAR									
26...	120	31	11	14	1.3	102	16	27	<0.1
MAY									
22...	130	32	12	15	1.4	--	19	23	<0.1
JUL									
14...	170	40	16	20	1.5	136	22	36	<0.1
AUG									
06...	140	35	12	16	1.5	111	19	28	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 1985									
13...	4.8	200	0.011	0.72	0.07	0.63	1.3	0.06	5.1
FEB 1986									
19...	5.2	190	0.012	0.92	0.27	0.62	1.5	0.06	4.8
MAR									
26...	4.1	170	0.016	0.73	0.28	0.4	1.1	0.03	4.1
MAY									
22...	3.6	--	0.023	0.50	0.11	1.0	1.5	0.07	6.0
JUL									
14...	4.2	220	0.011	0.46	0.08	0.51	0.97	0.07	4.9
AUG									
06...	5.0	180	0.008	0.52	E0.05	0.29	0.81	0.08	6.4

01443500 PAULINS KILL AT BLAIRSTOWN, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)
NOV 1985 13...	1330	280	1.7	8.6	<1	110	<10	30	16000	40

DATE	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1985 13...	840	0.08	10	<1	90	2	<1.0	<0.1	1.0	<0.1

DATE	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1985 13...	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

DATE	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1985 13...	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1

01443900 YARDS CREEK NEAR BLAIRSTOWN, NJ

LOCATION.--Lat 40°58'51", long 75°02'25", Warren County, Hydrologic Unit 02040105, on left bank 100 ft upstream from bridge on Hainesburg-Mount Vernon Road, 1.4 mi downstream of Yards Creek Reservoir, 2.2 mi northeast of Hainesburg, 2.4 mi upstream from mouth, and 4.2 mi west of Blairstown.

DRAINAGE AREA.--5.34 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1966 to current year.

REVISED RECORDS.--WDR NJ-77-2: 1976. WDR NJ-79-2: 1977(m). WDR NJ-82-2: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 606.8 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair. Complete regulation by the Jersey Central Power and Light Co., at Yards Creek Reservoir 1.4 mi above station. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--20 years, 10.9 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 583 ft³/s, Feb. 24, 1977, gage height, 3.92 ft; no flow Sept. 12, 1971.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 318 ft³/s, Nov. 27, gage height, 3.37 ft; minimum, 0.94 ft³/s, Oct. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	1.8	73	6.5	7.9	67	9.8	35	1.9	2.0	3.0	2.7
2	1.8	1.7	76	6.9	4.7	10	10	37	1.6	2.9	7.2	2.6
3	2.8	1.5	46	7.9	8.0	10	10	35	1.6	1.8	5.3	3.0
4	2.7	1.3	16	7.3	14	11	11	32	1.6	1.7	8.4	3.0
5	2.5	3.0	15	7.0	14	11	11	30	1.9	1.6	16	3.8
6	2.0	2.4	15	6.5	14	11	11	20	4.1	1.5	16	3.3
7	1.6	2.0	15	8.1	20	11	9.9	12	5.7	1.5	15	2.8
8	1.7	1.9	14	8.8	22	14	11	12	3.9	1.4	23	2.5
9	1.6	1.9	13	8.5	13	11	11	12	2.9	1.5	16	2.7
10	1.6	1.7	13	4.8	12	10	11	12	2.3	1.4	14	3.0
11	1.6	1.4	15	4.4	14	13	11	11	2.2	1.4	14	3.0
12	1.8	2.4	15	3.9	16	11	11	10	5.5	2.7	14	3.1
13	1.9	2.3	15	3.5	23	14	9.9	11	5.6	1.7	11	3.0
14	1.4	2.6	15	12	25	20	8.9	11	3.9	1.4	7.8	2.6
15	1.3	3.0	13	37	14	25	9.8	11	3.2	1.5	5.8	2.6
16	1.3	7.3	14	12	15	16	17	12	2.8	1.6	3.2	2.5
17	1.3	19	11	3.1	11	23	22	11	2.6	1.6	3.3	1.4
18	1.4	6.1	8.3	3.3	17	49	18	11	2.3	1.6	3.0	1.5
19	1.4	4.5	10	4.3	16	51	16	11	2.3	3.8	2.9	3.0
20	1.2	4.1	11	7.1	16	49	13	11	2.4	1.8	3.0	2.7
21	1.1	3.4	9.6	4.4	20	41	13	12	2.1	1.5	3.9	1.5
22	1.3	7.3	10	4.1	18	13	17	18	2.0	1.5	3.5	1.4
23	1.2	11	7.9	3.7	14	11	32	13	1.8	1.3	3.4	1.9
24	2.1	3.4	8.4	4.0	13	10	42	12	1.8	1.3	3.4	1.8
25	2.4	3.0	7.7	4.8	17	10	44	11	1.8	1.4	2.6	1.6
26	1.7	12	12	16	26	10	41	9.5	1.8	1.8	2.7	2.0
27	1.6	88	11	10	55	11	34	7.4	1.8	1.4	3.1	2.3
28	1.3	201	11	7.8	124	12	31	3.3	1.9	1.5	3.1	1.8
29	1.3	157	16	6.9	---	11	33	2.0	1.9	1.5	3.0	1.6
30	1.5	76	11	6.2	---	10	34	1.9	2.0	1.4	3.2	1.6
31	1.7	---	22	6.9	---	9.3	---	2.0	---	7.2	3.0	---
TOTAL	52.0	634.0	549.9	237.7	583.6	585.3	563.3	439.1	79.2	58.2	226.8	72.3
MEAN	1.68	21.1	17.7	7.67	20.8	18.9	18.8	14.2	2.64	1.88	7.32	2.41
MAX	2.8	201	76	37	124	67	44	37	5.7	7.2	23	3.8
MIN	1.1	1.3	7.7	3.1	4.7	9.3	8.9	1.9	1.6	1.3	2.6	1.4

CAL YR 1985 TOTAL 2246.3 MEAN 6.15 MAX 201 MIN 1.0
WTR YR 1986 TOTAL 4081.4 MEAN 11.2 MAX 201 MIN 1.1

01445500 PEQUEST RIVER AT PEQUEST, NJ

LOCATION.--Lat 40°49'50", long 74°58'43", Warren County, Hydrologic Unit 02040105, on right bank at Pequest, 100 ft upstream from CONRAIL (formerly Lehigh and Hudson River Railway) bridge, and 300 ft downstream from Furnace Brook.

DRAINAGE AREA.--106 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1921 to current year. Monthly discharge only for October 1921, published in WSP 1302.

REVISED RECORDS.--WSP 1902: 1940(M), 1945, 1955(M), 1957, 1959(M).

GAGE.--Water-stage recorder. Concrete control since Sept. 29, 1929. Datum of gage is 398.78 ft above National Geodetic Vertical Datum of 1929. Prior to June 22, 1926, nonrecording gage at site 10 ft upstream at same datum.

REMARKS.--No estimated daily discharges. Records fair. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--65 years, 155 ft³/s, 19.48 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,130 ft³/s, Jan. 25, 1979, gage height, 5.97 ft, from floodmark; minimum, 12 ft³/s, Aug. 17, 18, 19, 20, 21, 22, Dec. 10, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 650 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 17	0930	828	3.57	Mar. 15	0730	*1,000	*3.95
Nov. 28	2015	669	3.20	Apr. 17	1945	673	3.21
Jan. 26	1645	969	3.88	Aug. 3	0345	677	3.21
Feb. 21	2200	762	3.42				

Minimum discharge, 35 ft³/s, Sept. 22, gage height, 1.32 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	143	72	549	115	270	235	193	271	113	69	135	51
2	126	60	558	111	276	221	188	251	103	104	209	51
3	169	57	470	140	274	215	182	231	90	107	465	52
4	210	55	405	152	255	222	168	217	83	87	223	51
5	194	83	367	150	256	221	165	207	83	75	140	64
6	171	128	346	142	293	238	178	200	113	72	113	87
7	135	108	323	120	248	215	186	215	396	68	98	70
8	114	91	305	92	222	176	176	205	323	63	88	61
9	106	86	290	110	220	178	165	188	298	61	81	55
10	100	81	277	107	200	185	155	174	184	65	73	53
11	98	78	277	100	193	328	151	164	151	58	71	51
12	88	84	352	97	183	330	145	158	245	75	67	49
13	84	108	310	94	163	346	137	148	294	92	64	46
14	89	101	311	81	160	499	129	140	227	82	60	43
15	85	122	263	59	172	954	125	137	181	73	57	41
16	90	135	239	95	150	802	220	138	156	69	56	41
17	80	689	229	83	170	668	584	152	141	66	100	41
18	74	452	212	87	391	535	554	154	125	63	213	40
19	72	333	169	110	559	486	428	134	116	91	97	41
20	70	277	161	278	555	486	338	132	114	87	80	41
21	69	248	168	221	590	408	313	157	105	71	76	39
22	66	261	147	166	628	356	341	276	96	61	144	37
23	64	325	156	149	504	324	503	257	90	56	99	41
24	65	260	152	127	413	300	550	190	85	53	121	53
25	75	225	160	130	361	278	502	150	83	51	90	46
26	81	258	134	787	311	261	422	130	79	55	75	51
27	79	427	141	752	284	250	379	120	75	76	68	57
28	77	497	137	526	256	240	346	112	75	64	65	60
29	74	579	124	345	---	227	317	104	72	61	65	51
30	75	467	121	332	---	214	296	98	70	66	57	49
31	75	---	116	294	---	202	---	97	---	135	53	---
TOTAL	3098	6747	7969	6152	8557	10600	8536	5307	4366	2276	3403	1513
MEAN	99.9	225	257	198	306	342	285	171	146	73.4	110	50.4
MAX	210	689	558	787	628	954	584	276	396	135	465	87
MIN	64	55	116	59	150	176	125	97	70	51	53	37
CFSM	.94	2.12	2.42	1.87	2.89	3.23	2.69	1.61	1.38	.69	1.04	.48
IN.	1.09	2.37	2.80	2.16	3.00	3.72	3.00	1.86	1.53	.80	1.19	.53

CAL YR 1985 TOTAL 47629 MEAN 130 MAX 689 MIN 32 CFSM 1.23 IN. 16.72
WTR YR 1986 TOTAL 68524 MEAN 188 MAX 954 MIN 37 CFSM 1.77 IN. 24.05

01446500 DELAWARE RIVER AT BELVIDERE, NJ

LOCATION.--Lat 40°49'36", long 75°05'02", Warren County, Hydrologic Unit 02040105, on left bank at Belvidere, 800 ft downstream from Pequest River, and at mile 197.7.

DRAINAGE AREA.--4,535 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1922 to current year.

REVISED RECORDS.--WSP 781: 1933(M). WSP 951: 1940-41, Drainage area. WSP 1432: 1923, 1924(M).

GAGE.--Water-stage recorder. Datum of gage 226.43 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 1, 1929, nonrecording gage at site 200 ft upstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Diurnal fluctuations at medium and low flow caused by powerplants on tributary streams. Flow regulated by Lake Wallenpaupack, and by Pepacton, Cannonsville, Swinging Bridge, Toronto, Cliff Lake, and Neversink Reservoirs (see Delaware River basin, reservoirs in) and smaller reservoirs. Diversions from Pepacton, Cannonsville, and Neversink Reservoirs (see Delaware River basin, diversions). National Weather Service gage-height telemeter at station.

AVERAGE DISCHARGE.--64 years, 7,877 ft³/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 273,000 ft³/s, Aug. 19, 1955, gage height, 30.21 ft, from high-water mark in gage house, from rating curve extended above 170,000 ft³/s, on basis of flood-routing study; minimum, 609 ft³/s, Sept. 28, 29, 1943, gage height, 2.11 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 10, 1903, reached a stage of 28.6 ft, from floodmark, discharge, 220,000 ft³/s, from rating curve extended above 170,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 126,000 ft³/s, Mar. 16, gage height, 20.34 ft; minimum, 1,380 ft³/s, Sept. 1, gage height, 3.06 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13700	3410	20600	5470	8620	9600	11700	10900	5920	3220	8680	1610
2	10900	3240	22200	4440	8510	8290	10900	9820	5290	3870	8750	1830
3	9860	3000	25800	4750	8460	7810	10100	8970	4850	5030	12000	1890
4	9430	2630	21000	5140	9000	8390	9460	8280	4510	5530	9120	2200
5	8780	3510	17200	4300	9090	8440	8990	7540	4090	4040	7180	2290
6	12900	5110	15200	3650	9060	8340	8250	6940	5630	3130	6240	2500
7	13500	5740	13700	3310	8860	8100	8760	7210	20200	2760	5390	2420
8	9570	5730	12000	3390	7860	7180	9350	7080	19000	2860	6180	2280
9	7590	4920	11200	3600	7070	6000	8350	6580	17300	3490	6580	1800
10	6410	4220	10400	4080	6260	5360	7430	6190	14200	3620	5590	2120
11	5620	3750	10000	3460	7040	7880	7040	5120	11900	3340	4690	1990
12	5090	4350	11200	3780	6600	10500	6850	4270	11700	3550	4730	1980
13	4530	6290	12900	2900	5860	12800	6530	4480	21300	3820	5110	1910
14	4310	7800	12500	2650	5670	16700	6220	4020	21100	4300	3910	2010
15	4510	9120	10500	2980	6200	62300	5950	3570	16000	6050	3310	2040
16	4660	12800	9330	3700	5040	111000	7250	3420	13800	5500	3220	1700
17	4460	21600	9170	3890	4810	66800	15500	3590	12500	4740	3680	2180
18	4160	32300	8670	3800	6700	44900	21400	3620	11900	4320	3120	2010
19	3770	26300	7560	3260	10700	36300	16900	4650	10500	4480	4880	2100
20	3500	20200	6450	6550	12700	47800	12800	4350	9380	4160	4800	2060
21	3300	16500	6540	14700	14700	43400	11300	4740	8460	3530	3820	2160
22	3640	14300	5550	16500	17000	29500	11500	9760	7310	3300	4060	2260
23	3700	13800	6050	13000	17100	23200	13000	21300	6670	3400	3610	2000
24	3720	13000	6970	11400	14800	19500	13800	19600	6140	3030	3330	2130
25	4430	11700	6830	9540	13200	17500	16600	15200	5700	2460	2560	2130
26	4920	11100	5520	11600	11800	15700	18800	13300	5090	2270	2780	2010
27	4900	13300	5470	16600	10600	14700	16300	11400	4600	2410	3200	2120
28	4180	17900	6210	15800	9880	15000	14100	10500	4480	2860	3080	2540
29	4030	24100	4820	11900	---	14500	13200	9200	3820	3370	2630	2080
30	4000	22500	4650	9880	---	13300	12100	8180	3100	3490	2430	2050
31	3770	---	4950	9680	---	12500	---	7430	---	7410	2250	---
TOTAL	191840	344220	331140	219700	263190	713290	340430	251210	296440	119340	150910	62400
MEAN	6188	11470	10680	7087	9400	23010	11350	8104	9881	3850	4868	2080
MAX	13700	32300	25800	16600	17100	111000	21400	21300	21300	7410	12000	2540
MIN	3300	2630	4650	2650	4810	5360	5950	3420	3100	2270	2250	1610

CAL YR 1985 TOTAL 2028260 MEAN 5557 MAX 54900 MIN 1240
WTR YR 1986 TOTAL 3284110 MEAN 8998 MAX 111000 MIN 1610

01447000 DELAWARE RIVER AT NORTHAMPTON STREET AT EASTON, PA

LOCATION.--Lat 40°41'30", long 75°12'15", Northampton County, Hydrologic Unit 02040105, at bridge on Northampton Street in Easton, 600 ft upstream from Lehigh River, and 0.2 mi downstream from U.S. Route 22 toll bridge in Easton.

DRAINAGE AREA.--4,717 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
NOV 1985										
21...	1330	17700	101	7.5	10.0	11.0	97	E1.8	20	79
MAR 1986										
04...	1300	8020	136	8.1	2.0	13.2	96	E2.0	20	79
APR										
10...	1245	8060	118	8.3	8.5	10.4	91	<1.0	<20	27
JUN										
03...	1045	5390	128	7.8	21.0	8.3	93	E1.6	50	220
JUL										
23...	1300	3380	123	8.2	25.0	7.9	95	<0.7	110	350
AUG										
18...	1245	3180	160	8.1	24.0	7.9	94	E0.6	1300	920

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
NOV 1985									
21...	35	9.9	2.4	4.0	1.0	19	15	6.4	<0.1
MAR 1986									
04...	47	13	3.6	6.0	0.9	29	14	7.2	<0.1
APR									
10...	41	11	3.2	5.6	0.9	28	10	9.3	<0.1
JUN									
03...	44	12	3.5	5.4	0.9	31	13	7.6	<0.1
JUL									
23...	39	11	2.9	5.7	1.0	29	14	8.9	<0.1
AUG									
18...	54	15	4.1	6.8	1.2	38	20	9.9	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 1985									
21...	4.0	54	0.003	0.54	0.10	0.38	0.92	0.04	4.3
MAR 1986									
04...	3.6	66	0.01	0.67	<0.05	<0.05	--	0.02	2.4
APR									
10...	2.7	59	0.011	0.50	0.22	0.27	0.77	0.02	3.0
JUN									
03...	2.5	63	0.01	0.50	0.05	0.43	0.93	0.04	3.1
JUL									
23...	2.5	63	0.012	0.46	0.10	0.45	0.91	0.06	3.7
AUG									
18...	2.6	82	0.005	0.52	0.05	0.68	1.2	0.11	3.8

01453000 LEHIGH RIVER AT BETHLEHEM, PA

LOCATION.--Lat 40°36'55", long 75°22'45", Lehigh County, Hydrologic Unit 02040106, on left bank 110 ft upstream from New Street Bridge at Bethlehem, and 1,800 ft upstream from Monocacy Creek. Records include flow of Monocacy Creek.

DRAINAGE AREA.--1,279 mi² includes that of Monocacy Creek. At site used prior to Oct. 1, 1928, 1,229 mi².

PERIOD OF RECORD.--September 1902 to February 1905, April 1909 to current year. Monthly discharge only for some periods, published in WSP 1302. Published as "at South Bethlehem" prior to October 1913.

REVISED RECORDS.--WSP 261: 1903-5, WSP 321: 1910-11. WSP 1051: Drainage area. WSP 1141: 1929-34(M). WSP 1302: 1914(M), 1916(M), 1918, 1921, 1927-28. WSP 1432: 1903, 1919(M), 1920-21, 1929, 1933.

GAGE.--Water-stage recorder. Datum of gage is 210.94 ft above National Geodetic Vertical Datum of 1929. Prior to October 1928, nonrecording gage at New Street Bridge 120 ft downstream at same datum. Oct. 1, 1928, to Sept. 30, 1962, water-stage recorder at site 4,250 ft downstream at datum 2.49 ft lower. Oct. 1, 1963, to Dec. 14, 1975, water-stage recorder at site 40 ft downstream at same datum.

REMARKS.--Records good except for periods of estimated record, which are fair. Flow regulated by Wild Creek Reservoir (station 01449700) since January 1941, Penn Forest Reservoir (station 01449400) since October 1958, Francis E. Walter Reservoir (station 01447780) since February 1961, and Beltzville Lake (station 01449790) since February 1971. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--79 years (water years 1902-04, 1909-86), 2,341 ft³/s, 24.85 in/yr, adjusted for diversion 1902-04, 1909-42 and, for recirculated water, October 1, 1959 to September 30, 1962.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 92,000 ft³/s May 23, 1942, gage height, about 25.9 ft, from floodmark, present site and datum, from rating curve extended above 48,000 ft³/s; minimum, 125 ft³/s June 28, 1965, gage height, 0.94 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 28, 1902, reached a stage of 24.9 ft, from floodmark, present site and datum, discharge, about 88,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 26,200 ft³/s, Mar. 15, gage height, 11.00 ft; minimum, 463 ft³/s Sept. 18, gage height, 1.28 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6260	1210	6720	1730	2760	2840	2530	3270	1380	951	1210	808
2	4680	2290	7790	1630	2850	2700	2440	3010	1340	1350	2240	813
3	3250	2640	6920	1590	3030	2610	2270	2760	1240	1310	4360	801
4	2650	2620	5680	1550	2990	2520	2130	2660	1080	1090	3110	777
5	2510	3200	4850	1560	3270	2430	2170	2580	980	1100	2920	1220
6	3090	3450	4430	1500	3580	2390	2280	2210	1310	1070	2440	1390
7	3180	3670	3810	1260	2980	2250	2360	2080	3340	1030	1780	926
8	3600	2720	3440	975	2840	1990	2430	2130	2920	904	1540	824
9	2480	1740	3270	1040	2700	2120	2250	1950	3250	915	1360	864
10	2000	1400	3340	1170	2550	2060	2070	1860	2740	1060	1280	750
11	1880	1380	3100	1310	2390	3260	2020	1830	2120	895	1420	731
12	1860	1470	3540	1310	2090	4710	1920	1790	2440	880	1320	652
13	1860	1790	3370	1310	1900	4800	1810	1590	4330	1070	1200	631
14	1840	1820	3510	995	e1750	5950	1780	1480	3750	1160	1090	677
15	1860	2260	3250	810	e1650	20800	1590	1490	3380	1250	1000	676
16	1590	3030	3160	821	e1600	15300	3130	1500	2360	1020	931	670
17	1400	11600	2930	865	2160	12400	6950	1500	2000	918	1190	598
18	1290	9010	2830	950	3840	13200	9440	1500	2050	866	1540	587
19	1510	7100	2470	1170	5520	9950	7810	1450	1850	1470	1400	604
20	1740	5350	2360	3870	6140	7000	6650	1490	1720	2770	1200	684
21	1710	4770	2310	4670	6950	5970	5950	2020	1780	2130	1530	1030
22	1330	4290	3000	3680	7230	5350	4880	3920	1770	1420	2040	720
23	1100	4540	3500	3100	5690	4960	4440	3870	1490	1160	1680	841
24	1210	4040	4110	2650	4940	4110	4000	3000	1160	1040	1850	967
25	1550	3830	3180	2390	4570	3770	4060	2520	1240	873	1630	921
26	1550	3690	2770	5740	3900	3540	4680	2100	1180	1490	1380	818
27	1480	5060	2080	5850	3260	3300	4610	1900	1060	1630	1210	1080
28	1450	6570	1940	5800	3120	3160	4400	1770	1050	1110	1010	1290
29	1300	7090	1780	4400	---	2800	4190	1600	1000	1080	998	1290
30	1220	6420	1810	3650	---	2690	3780	1460	951	1410	975	1100
31	1220	---	1670	2940	---	2630	---	1360	---	1120	826	---
TOTAL	65650	120050	108920	72286	98250	163560	111020	65650	58261	37542	49660	25740
MEAN	2118	4002	3514	2332	3509	5276	3701	2118	1942	1211	1602	858
MAX	6260	11600	7790	5850	7230	20800	9440	3920	4330	2770	4360	1390
MIN	1100	1200	1670	810	1600	1990	1590	1360	951	866	826	587

CAL YR 1985 TOTAL 700953 MEAN 1920 MAX 16500 MIN 340
WTR YR 1986 TOTAL 976589 MEAN 2676 MAX 20800 MIN 587

01455200 POHATCONG CREEK AT NEW VILLAGE, NJ

LOCATION.--Lat 40°42'57", long 75°04'20", Warren County, Hydrologic Unit 02040105, at bridge on Edison Road, 0.4 mi southeast of New Village, and 4.3 mi upstream from Merrill Creek.

DRAINAGE AREA.--33.3 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1959, 1962 and January 1979 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
NOV 1985										
18...	1030	58	163	7.8	7.0	11.0	90	E1.7	490	>2400
FEB 1986										
19...	0950	150	154	7.2	2.0	11.8	87	3.5	790	1600
MAR										
18...	1200	76	173	8.2	8.0	10.0	85	E2.1	210	80
JUN										
02...	1030	26	225	7.9	18.0	8.3	89	<1.1	5400	1600
JUL										
30...	1030	21	210	7.4	21.0	9.0	102	4.2	>16000	>400
AUG										
13...	1330	18	247	8.5	18.5	12.3	132	<0.7	700	540

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
NOV 1985									
18...	56	14	5.1	7.3	2.5	34	18	11	<0.1
FEB 1986									
19...	39	9.8	3.6	11	2.3	21	17	17	<0.1
MAR									
18...	58	14	5.6	8.0	1.5	33	16	12	<0.1
JUN									
02...	82	19	8.5	9.1	2.0	61	19	13	<0.1
JUL									
30...	82	19	8.4	10	2.4	60	18	13	<0.1
AUG									
13...	91	21	9.3	9.8	2.0	67	18	15	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 1985									
18...	11	89	0.015	2.08	0.16	0.74	2.8	0.11	6.1
FEB 1986									
19...	7.3	81	0.015	0.99	0.39	1.0	2.0	0.15	7.3
MAR									
18...	12	89	0.012	1.27	0.17	0.3	1.6	0.07	3.2
JUN									
02...	14	120	0.074	1.69	0.13	0.52	2.2	0.20	3.2
JUL									
30...	14	120	0.057	1.76	0.06	0.56	2.3	0.32	5.1
AUG									
13...	12	130	0.039	1.76	0.11	0.46	2.2	0.20	2.0

01455200 POHATCONG CREEK AT NEW VILLAGE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	NITROGEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)
NOV 1985 18...	1030	150	0.1	2.7	<1	50	<10	30	4400	10

DATE	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1985 18...	87	0.03	<10	<1	40	<1	<1.0	<0.1	<1.0	<0.1

DATE	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1985 18...	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

DATE	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1985 18...	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1

01455500 MUSCONETCONG RIVER AT OUTLET OF LAKE HOPATCONG, NJ

LOCATION.--Lat 40°55'00", long 74°39'55", Morris County, Hydrologic Unit 02040105, just upstream of bridge on Warren County Route 43 and 300 ft downstream from Lake Hopatcong dam in Landing.

DRAINAGE AREA.--25.3 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962, 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
NOV 1985										
20...	1030	90	238	7.8	9.5	11.2	101	E1.7	80	350
FEB 1986										
05...	1330	156	240	8.1	3.0	14.9	116	E1.4	<20	11
MAR										
24...	1030	22	270	8.2	6.5	12.3	102	<0.4	<20	17
MAY										
21...	1045	28	258	7.5	19.0	8.7	97	2.9	<20	22
JUL										
15...	1045	14	263	8.0	23.0	8.1	97	<1.1	230	350
AUG										
05...	1030	19	258	8.3	24.0	7.9	97	E1.4	110	1600

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
NOV 1985									
20...	51	13	4.4	21	1.1	28	15	39	<0.1
FEB 1986									
05...	53	14	4.5	23	1.2	25	15	44	<0.1
MAR									
24...	54	14	4.7	27	1.2	28	15	51	<0.1
MAY									
21...	54	14	4.6	25	1.0	28	18	44	<0.1
JUL									
15...	54	14	4.7	26	1.0	28	16	47	<0.1
AUG									
05...	51	13	4.5	24	1.1	27	15	44	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 1985									
20...	3.0	110	0.004	0.08	0.08	0.33	0.41	0.02	3.5
FEB 1986									
05...	3.5	120	0.003	0.15	0.26	0.43	0.58	0.02	2.9
MAR									
24...	0.5	130	0.009	0.24	0.15	0.32	0.56	0.02	3.0
MAY									
21...	0.3	120	0.003	0.07	0.12	0.49	0.56	0.05	4.1
JUL									
15...	1.6	130	0.004	0.08	<0.05	0.41	0.49	0.03	3.8
AUG									
05...	1.4	120	0.008	<0.05	E0.05	0.39	--	0.04	3.8

01455500 MUSCONETCONG RIVER AT OUTLET OF LAKE HOPATCONG, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
NOV 1985 20...	1030	<0.5	10	<1	10	20	1	<10	1
MAY 1986 21...	1045	<0.5	20	<1	<10	30	<1	<10	5

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
NOV 1985 20...	190	3	20	<0.1	1	<1	20	<1
MAY 1986 21...	130	2	80	<0.1	5	<1	<10	2

01455801 MUSCONETCONG RIVER AT LOCKWOOD, NJ

LOCATION.--Lat 40°55'10", long 74°44'07", Sussex County, Hydrologic Unit 02040105, at bridge in Lockwood, at boundary between Sussex County and Morris County, 0.2 mi southeast of Cage Hill, 0.4 mi south of Jefferson Lake, and 0.9 mi downstream from Lubbers Run.

DRAINAGE AREA.--60.1 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
NOV 1985										
20...	1200	M334	218	7.4	10.5	10.3	94	E1.6	80	350
FEB 1986										
05...	1215	216	316	8.1	2.0	13.2	99	<0.9	<20	21
MAR										
24...	1200	E129	218	8.1	7.0	12.3	1.02	<0.5	<20	<2
MAY										
21...	1230	E70	338	7.5	19.0	8.5	95	3.5	490	540
JUL										
15...	1215	E34	367	7.8	21.0	7.8	90	3.2	170	350
AUG										
05...	1200	E76	284	7.9	21.0	8.3	95	E2.0	220	350

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
NOV 1985									
20...	62	15	5.9	16	1.2	42	14	29	<0.1
FEB 1986									
05...	63	16	5.7	32	1.1	33	15	62	<0.1
MAR									
24...	58	14	5.7	17	1.1	38	15	32	<0.1
MAY									
21...	90	22	8.4	25	1.4	62	17	49	0.1
JUL									
15...	99	24	9.4	24	1.5	68	15	45	<0.1
AUG									
05...	86	21	8.2	18	1.1	63	13	33	0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 1985									
20...	6.2	110	0.011	0.15	0.14	0.38	0.53	0.04	4.7
FEB 1986									
05...	4.8	160	0.008	0.25	0.11	0.47	0.72	0.04	2.8
MAR									
24...	4.4	110	0.011	0.21	0.27	0.64	0.85	0.20	4.7
MAY									
21...	5.0	170	0.114	0.51	0.53	1.0	1.5	0.15	4.6
JUL									
15...	7.4	170	0.236	0.86	0.38	1.0	1.9	0.15	5.6
AUG									
05...	9.0	140	0.078	0.27	E0.16	0.69	0.96	0.08	6.3

01456200 MUSCONETCONG RIVER AT BEATTYSTOWN, NJ

LOCATION.--Lat 40°48'48", long 74°50'32", Warren County, Hydrologic Unit 02040105, at bridge at Beattystown, 1.6 mi upstream of Hanes Brook, 2.1 mi northeast of Stephensburg, and 3.5 mi northeast of Scrappy Corner.

DRAINAGE AREA.--90.3 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
NOV 1985										
20...	1330	E263	242	7.6	11.5	10.9	102	<1.0	20	240
FEB 1986										
05...	1030	E346	329	8.4	2.0	13.7	102	<1.2	20	13
MAR										
24...	1330	E217	264	8.3	7.0	12.3	102	<0.8	<20	33
MAY										
21...	1345	E124	328	7.9	19.0	9.3	103	2.4	490	350
JUL										
15...	1330	E63	375	8.3	21.0	9.7	111	E1.4	310	540
AUG										
05...	1330	E118	288	8.3	21.5	9.5	110	E1.6	170	540

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
NOV 1985									
20...	72	17	7.2	15	1.3	53	15	27	<0.1
FEB 1986									
05...	78	19	7.4	31	1.2	45	15	57	<0.1
MAR									
24...	87	20	9.1	17	1.3	63	15	32	0.1
MAY									
21...	110	25	11	19	1.3	86	19	34	0.1
JUL									
15...	130	30	14	21	1.6	100	18	40	0.1
AUG									
05...	94	22	9.6	16	1.3	75	15	28	0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 1985									
20...	6.9	120	0.014	0.41	0.13	0.66	1.1	0.10	4.1
FEB 1986									
05...	5.7	160	0.014	0.48	0.38	0.53	1.0	0.09	2.5
MAR									
24...	5.7	140	0.022	0.63	0.20	1.4	2.1	0.14	2.5
MAY									
21...	6.3	170	0.051	0.97	0.18	0.49	1.5	0.19	4.5
JUL									
15...	8.4	190	0.058	1.27	0.10	0.67	1.9	0.26	3.8
AUG									
05...	9.5	150	0.03	0.70	E0.16	0.52	1.2	0.07	--

01456200 MUSCONETCONG RIVER AT BEATTYSTOWN, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)
NOV 1985 20...	1330	120	0.7	3.6	<1	80	<10	40	9700	20

DATE	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1985 20...	470	0.04	<10	<1	80	24	<1.0	<0.1	2.0	<0.1

DATE	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1985 20...	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

DATE	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1985 20...	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1

01457000 MUSCONETCONG RIVER NEAR BLOOMSBURY, NJ

LOCATION.--Lat 40°40'20", long 75°03'40", Warren County, Hydrologic Unit 02040105, on right bank just downstream from bridge on Limekiln Road (Person Road), 1.5 mi upstream from Bloomsbury, and 9.5 mi upstream from mouth.

DRAINAGE AREA.--141 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1903 to March 1907, July 1921 to current year.

REVISED RECORDS.--WSP 1051: 1944-45. WSP 1382: 1904-06, 1922, 1923-29(M), 1931(M), 1933-34(M), 1936(M), 1940, 1942(M), 1944-45(M), 1951-52(M). WDR NJ-82-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Concrete control since Sept. 29, 1932. Datum of gage is 274.83 ft above National Geodetic Vertical Datum of 1929. July 1903 to Mar. 31, 1907, nonrecording gage at bridge 15 ft upstream at different datum. July 26 to Sept. 12, 1921, nonrecording gage at bridge at present datum.

REMARKS.--Estimated daily discharges: Dec. 13-28 and Feb. 3-9. Records good except those for period of ice effect, Dec. 13-28 and Feb. 3-9, which are fair. Flow regulated by Lake Hopatcong (see Delaware River basin, reservoirs in). Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--68 years (water years 1904-06, 1922-86), 235 ft³/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,200 ft³/s, Jan. 25, 1979, gage height, 8.50 ft, from floodmark, from rating curve extended above 1,800 ft³/s on basis of slope-area measurement at gage height 6.95 ft; minimum, 8.1 ft³/s, Aug. 2, 1955; minimum daily 27 ft³/s, Sept. 8, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 17	0315	1,200	3.91	Mar. 15	1000	1,110	3.77
Jan. 26	0930	*1,840	*4.79	June 7	0545	1,020	3.61
Feb. 21	1900	1,240	3.98				

Minimum discharge, 60 ft³/s, Sept. 26, gage height, 1.23 ft, due to regulation from unknown sources.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	280	89	706	181	439	368	224	423	149	113	274	91
2	231	108	705	192	484	354	220	386	144	181	323	91
3	242	170	622	234	416	349	208	354	136	184	551	87
4	258	177	586	252	392	345	197	324	125	153	353	87
5	254	225	537	260	390	326	198	304	118	126	222	108
6	255	212	527	227	442	302	214	281	147	116	175	170
7	232	178	509	194	385	276	218	305	749	114	150	116
8	206	141	488	171	343	247	216	288	630	114	130	104
9	188	122	478	160	333	240	203	282	458	111	119	92
10	173	111	461	153	267	251	191	256	328	108	112	86
11	161	105	455	146	262	369	187	240	266	107	122	82
12	149	106	519	143	253	362	182	229	326	115	108	79
13	142	142	476	144	237	392	176	216	382	141	100	76
14	137	145	467	132	231	559	168	206	332	133	95	72
15	133	164	412	118	231	1000	165	196	288	114	92	72
16	129	217	380	130	219	790	383	190	253	106	91	72
17	124	861	368	126	233	649	825	192	230	105	94	72
18	118	591	345	128	557	563	733	199	205	101	175	72
19	114	490	286	163	681	529	597	194	185	143	195	74
20	111	424	249	372	666	520	489	196	175	134	173	74
21	109	367	257	275	823	459	433	206	165	118	165	74
22	109	447	226	215	747	400	455	351	152	102	198	73
23	107	455	237	195	601	366	629	343	143	95	188	75
24	106	421	233	187	524	344	648	259	135	91	220	100
25	108	400	245	242	487	323	660	228	128	87	185	94
26	106	439	210	1450	451	294	613	218	118	88	152	91
27	103	583	219	917	429	283	573	195	115	135	133	100
28	99	630	213	670	394	271	540	179	116	131	121	104
29	100	706	176	565	---	253	498	165	113	109	113	99
30	97	657	167	507	---	241	467	153	112	100	104	92
31	95	---	163	474	---	234	---	146	---	246	97	---
TOTAL	4776	9883	11922	9323	11917	12259	11510	7704	6923	3821	5330	2679
MEAN	154	329	385	301	426	395	384	249	231	123	172	89.3
MAX	280	861	706	1450	823	1000	825	423	749	246	551	170
MIN	95	89	163	118	219	234	165	146	112	87	91	72

CAL YR 1985 TOTAL 69598 MEAN 191 MAX 1170 MIN 60
WTR YR 1986 TOTAL 98047 MEAN 269 MAX 1450 MIN 72

01457400 MUSCONETCONG RIVER AT RIEGELSVILLE, NJ

LOCATION.--Lat 40°35'32", long 75°11'20", Warren County, Hydrologic Unit 02040105, at bridge on State Highway 13 in Riegelsville, 0.2 mi north of Mount Joy, and 0.2 mi upstream from mouth.

DRAINAGE AREA.--156 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962, 1976 to current year.

REMARKS.--Water-quality samples do not include Riegelsville Paper Company bypass.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
30...	1000	E120	373	8.1	8.0	11.6	98	E1.8	490	220
FEB 1986										
04...	1200	E465	318	7.9	3.5	13.2	99	<1.1	170	350
MAR										
25...	1300	E349	286	8.3	8.0	11.9	98	<0.4	80	4
JUN										
02...	1200	E168	349	8.2	20.5	8.7	98	<0.9	490	350
JUL										
30...	1320	E120	358	8.2	22.0	10.2	118	2.6	3500	9200
AUG										
13...	1030	E122	359	8.3	17.5	9.8	102	<0.4	790	590

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
30...	140	31	16	13	1.9	108	23	25	<0.1
FEB 1986									
04...	95	22	9.8	23	1.5	62	23	42	<0.1
MAR									
25...	110	24	11	12	1.6	82	16	23	0.1
JUN									
02...	140	30	15	13	1.7	110	21	24	<0.1
JUL									
30...	140	31	16	14	1.9	113	21	25	<0.1
AUG									
13...	150	33	16	13	1.5	112	21	24	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
30...	6.4	180	0.003	1.88	0.27	1.1	3.0	0.06	4.1
FEB 1986									
04...	7.3	170	0.015	1.32	0.14	0.48	1.8	0.05	2.9
MAR									
25...	6.5	140	0.016	2.03	E0.07	0.44	2.5	0.08	2.6
JUN									
02...	8.4	180	0.027	1.98	0.10	0.49	2.5	0.10	4.1
JUL									
30...	6.7	180	0.028	1.79	0.06	0.69	2.5	0.10	2.9
AUG									
13...	6.3	180	0.013	1.54	0.06	0.92	2.5	0.08	2.3

01457400 MUSCONETCONG RIVER AT RIEGELSVILLE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
OCT 1985 30...	1000	<0.5	90	1	<10	30	<1	10	13
JUN 1986 02...	1200	<0.5	60	1	<10	20	<1	<10	4

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1985 30...	90	3	20	<0.1	1	<1	10	3
JUN 1986 02...	320	1	40	<0.1	3	<1	<10	3

01460500 DELAWARE AND RARITAN CANAL AT KINGSTON, NJ

LOCATION.--Lat 40°22'24", long 74°37'08", Middlesex County, Hydrologic Unit 02040105, on right bank at canal lock at Kingston, and 250 ft upstream from new bridge on State Highway 27.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1947 to current year.

GAGE.--Two water-stage recorders and concrete control. Datum of gage is 40.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair. The canal diverts water from the Delaware River at Raven Rock and discharges into Raritan River at New Brunswick. Some water may be released to the Millstone River 500 ft and 2.3 mi above station (see Diversions in Raritan River basin). On days of zero flow, reverse flow may have occurred due to pumping out of the gage pool to the upstream end of the lock for water supply. Gage-height telemeter at station.

AVERAGE DISCHARGE.--39 years, 72.7 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 174 ft^3/s Apr. 6, 1957; no flow many days in many years.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 155 ft^3/s, Apr. 17; no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	100	.00	105	128	81	.65	.00	74	91
2	.00	.00	.00	101	.03	99	126	84	.34	6.9	75	91
3	.00	.00	.00	102	.25	101	125	84	4.3	13	74	91
4	.00	6.8	.00	105	.25	101	124	77	7.3	13	73	91
5	.00	.00	.00	106	.19	97	140	67	7.3	11	35	91
6	.00	.00	.00	87	.13	85	151	62	6.6	3.6	.00	92
7	.00	.00	.00	96	.05	79	145	53	6.3	3.5	.00	92
8	.00	.00	.00	89	.00	84	128	51	6.3	.79	14	91
9	.00	.00	.00	89	.00	88	122	51	6.6	.24	45	92
10	.00	.00	.00	102	.00	91	121	51	6.7	.06	60	92
11	.00	.00	.00	105	.00	95	121	51	6.7	.00	68	92
12	.00	.00	17	105	.00	97	119	46	18	.00	67	92
13	.00	.00	36	103	.00	99	116	38	27	.00	65	92
14	.00	.00	33	100	.00	99	116	37	26	.00	82	92
15	.00	.00	34	99	.00	100	117	37	26	.00	90	92
16	.00	.00	31	98	.00	100	141	36	26	.00	87	92
17	.00	.00	.00	101	.00	100	155	37	12	34	89	92
18	.00	.00	8.1	102	.00	99	135	36	5.3	42	91	92
19	.00	.00	1.0	104	.00	98	136	30	2.2	49	91	93
20	.00	.00	23	104	.00	98	139	22	.00	74	91	93
21	.00	.00	64	7.7	27	98	101	22	.00	91	92	93
22	.00	.00	69	52	111	98	102	41	.00	90	92	93
23	.00	.00	70	113	122	98	116	62	.00	91	91	93
24	.00	.00	78	110	121	98	131	61	2.9	90	92	93
25	.00	.00	84	110	118	108	127	40	3.2	89	92	93
26	.00	.00	86	127	115	116	129	31	.00	82	92	93
27	.00	.00	83	107	114	116	136	10	.00	81	91	93
28	.00	.00	92	107	115	116	133	5.4	.00	78	91	93
29	.00	.00	99	110	---	116	102	3.6	.00	74	91	93
30	.00	.00	101	115	---	115	78	1.1	.00	74	91	92
31	.00	---	99	93	---	123	---	.75	---	74	91	---
TOTAL	.00	6.80	1108.10	3049.7	843.90	3117	3760	1308.85	207.69	1165.09	2277.00	2765
MEAN	.00	.23	35.7	98.4	30.1	101	125	42.2	6.92	37.6	73.5	92.2
MAX	.00	6.8	101	127	122	123	155	84	27	91	92	93
MIN	.00	.00	.00	7.7	.00	79	78	.75	.00	.00	.00	91

CAL YR 1985 TOTAL 7441.90 MEAN 20.4 MAX 101 MIN .00
WTR YR 1986 TOTAL 19609.13 MEAN 53.7 MAX 155 MIN .00

01461000 DELAWARE RIVER AT LUMBERVILLE, PA

LOCATION.--Lat 40°24'27", long 75°02'16", Bucks County, Hydrologic Unit 02040105, at pedestrian bridge at Lumberville, 1.4 mi upstream of Lockatong Creek.

DRAINAGE AREA.--6,598 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
30...	1230	5440	180	8.1	11.0	11.9	108	<1.2	50	21
FEB 1986										
03...	1145	12900	202	8.0	2.5	13.2	95	E1.4	230	180
APR										
01...	1000	14800	134	8.1	12.0	10.4	96	<0.4	<20	17
JUN										
12...	1030	14000	126	7.6	21.0	7.0	79	E2.0	490	920
JUL										
24...	1000	4930	178	8.6	25.0	7.4	89	E1.9	330	350
AUG										
28...	1000	4900	182	8.0	19.0	7.7	83	E2.0	330	170

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
30...	59	15	5.3	7.7	1.4	37	20	14	<0.1
FEB 1986									
03...	54	14	4.7	9.3	1.3	33	39	13	<0.1
APR									
01...	43	11	3.8	5.4	1.0	27	14	8.8	<0.1
JUN									
12...	41	11	3.4	5.8	0.9	25	16	9.2	0.1
JUL									
24...	58	15	5.1	7.7	1.2	40	19	12	<0.1
AUG									
28...	66	17	5.8	9.1	1.4	44	22	12	0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
30...	2.1	88	0.08	1.02	0.25	0.44	1.5	0.08	3.8
FEB 1986									
03...	5.0	110	0.012	1.08	0.31	0.72	1.8	0.07	9.8
APR									
01...	3.5	64	0.02	0.79	E0.54	0.33	1.1	0.05	2.2
JUN									
12...	3.8	65	0.035	0.66	0.11	0.57	1.2	0.08	4.8
JUL									
24...	3.4	87	0.067	1.03	0.12	0.6	1.6	0.14	3.6
AUG									
28...	2.8	97	0.065	1.06	0.21	0.81	1.9	0.08	3.9

01461000 DELAWARE RIVER AT LUMBERVILLE, PA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
OCT 1985 30...	1230	<0.5	10	1	<10	30	<1	10	2
JUN 1986 12...	1030	<0.5	30	<1	<10	<10	<1	10	4

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1985 30...	100	15	20	<0.1	3	<1	20	<1
JUN 1986 12...	480	<5	70	<0.1	3	<1	20	2

01461300 WICKECHEOKE CREEK AT STOCKTON, NJ

LOCATION.--Lat 40°24'41", long 74°59'13", Hunterdon County, Hydrologic Unit 02040105, at bridge on State Route 29 in Stockton, 900 ft upstream from mouth.

DRAINAGE AREA.--26.6 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1959-63, 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
24...	1330	E4.3	251	8.3	13.5	11.2	108	E1.5	2400	1600
FEB 1986										
04...	1330	E34	586	7.7	1.0	13.9	98	E1.5	170	350
MAR										
20...	1330	E45	506	8.3	9.5	11.7	103	<0.6	20	5
MAY										
20...	1330	E4.9	208	8.0	19.5	8.8	96	2.3	110	540
JUL										
24...	1145	E0.85	235	8.9	22.0	9.9	113	--	80	540
AUG										
07...	1330	E2.3	570	9.4	22.5	9.5	110	<1.0	50	350

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
24...	59	14	5.9	23	2.3	40	28	27	<0.1
FEB 1986									
04...	48	11	5.0	86	2.1	16	40	120	<0.1
MAR									
20...	46	11	4.6	76	2.0	22	47	110	<0.1
MAY									
20...	55	13	5.5	15	2.0	35	26	15	<0.1
JUL									
24...	64	15	6.4	18	2.3	51	24	20	<0.1
AUG									
07...	58	14	5.5	79	3.0	33	43	120	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
24...	11	140	0.005	2.41	0.08	0.23	2.6	0.05	2.6
FEB 1986									
04...	9.9	280	0.008	1.60	0.14	0.46	2.1	0.04	2.6
MAR									
20...	10	270	0.016	1.38	0.15	0.37	1.7	0.04	3.2
MAY									
20...	13	110	0.016	2.99	0.05	0.06	3.0	0.06	2.0
JUL									
24...	11	130	0.01	0.91	0.06	0.39	1.3	0.06	2.0
AUG									
07...	7.4	290	<0.003	0.35	E0.10	0.44	0.79	0.05	4.6

01461300 WICKECHEOKE CREEK AT STOCKTON, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)
OCT 1985 24...	1330	110	0.1	1.7	<1	180	20	50	21000	20

DATE	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985 24...	1000	0.03	20	<1	<10	<1	<1.0	<0.1	<1.0	<0.1

DATE	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985 24...	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

DATE	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985 24...	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1

01462500 DELAWARE RIVER AT WASHINGTON CROSSING, NJ

LOCATION.--Lat 40°17'20", long 74°52'08", Mercer County, Hydrologic Unit 02040105, at bridge at Washington Crossing, 1.4 mi upstream of Jacobs Creek.

DRAINAGE AREA.--6,735 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
23...	1345	5470	166	7.6	14.5	11.1	108	<0.6	50	22
FEB 1986										
03...	1330	13500	198	8.0	3.0	12.8	93	E1.7	<20	31
APR										
01...	1200	15000	126	8.1	12.5	10.2	96	<1.0	<20	<2
JUN										
12...	1215	14400	118	7.5	21.0	7.3	82	5.3	80	540
JUL										
24...	1330	4660	174	8.8	26.0	7.3	90	2.4	20	23
AUG										
28...	1215	5120	167	8.0	19.5	7.7	84	E2.0	110	130

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
23...	63	16	5.5	8.0	1.3	40	21	13	<0.1
FEB 1986									
03...	55	14	4.8	9.2	1.2	33	18	12	<0.1
APR									
01...	43	11	3.7	5.3	1.0	27	14	8.8	<0.1
JUN									
12...	38	10	3.1	5.5	0.9	23	16	8.5	<0.1
JUL									
24...	58	15	5.0	7.4	1.3	41	18	11	<0.1
AUG									
28...	70	18	6.2	9.0	1.4	47	23	12	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
23...	2.5	91	0.048	0.99	0.11	0.59	1.6	0.08	3.8
FEB 1986									
03...	5.0	84	0.015	1.06	--	0.74	1.8	0.11	2.9
APR									
01...	3.5	63	0.021	0.81	0.16	0.46	1.3	0.05	2.8
JUN									
12...	3.6	61	0.035	0.64	0.12	0.49	1.1	0.08	4.5
JUL									
24...	3.3	86	0.023	0.85	0.05	0.55	1.4	0.10	4.0
AUG									
28...	2.8	100	0.036	1.11	0.08	0.58	1.7	0.08	4.0

01462500 DELAWARE RIVER AT WASHINGTON CROSSING, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)
JUN 1986 12...	1215	<0.5	30	<1	<10	<10	<1	10	4

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
JUN 1986 12...	260	<5	60	<0.1	3	<1	20	1

01463500 DELAWARE RIVER AT TRENTON, NJ
(National stream quality accounting network and Radiochemical program station)

LOCATION.--Lat 40°13'18", long 74°46'42", Mercer County, Hydrologic Unit 02040105, on left bank 450 ft upstream from Calhoun Street Bridge at Trenton, 0.5 mi upstream from Assunpink Creek, and at mile 134.5.
DRAINAGE AREA.--6,780 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1913 to current year. October 1912 to February 1913 monthly discharge only, published in WSP 1302. Gage-height records collected in this vicinity since 1904 are contained in reports of the National Weather Service.
REVISED RECORDS.--WSP 951: Drainage area. WSP 1302: 1913-20. WSP 1382: 1924, 1928.
GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Sept. 30, 1965, at datum 7.77 ft higher. Feb. 24, 1913 to Oct. 2, 1928, nonrecording gage on downstream side of highway bridge at site 500 ft downstream.
REMARKS.--Estimated daily discharges: Jan. 6, 15-18, Feb. 4, 5, 19, Mar. 20, 21. Records good. Diurnal fluctuations at medium and low flow caused by powerplants on tributary streams. Flow regulated by Lakes Wallenpaupack and Hopatcong, and by Pepacton, Cannonsville, Swinging Bridge, Toronto, Cliff Lake, Neversink, and Wild Creek Reservoirs (see Delaware River basin, reservoirs in) and smaller reservoirs. Diversion from Pepacton, Cannonsville, and Neversink Reservoirs and to Delaware and Raritan Canal (see Delaware River basin, diversions). Water diverted just above station by borough of Morrisville, PA, and city of Trenton for municipal supply (see Delaware River basin, diversions). U.S. Army Corps of Engineers satellite telemeter at station.
AVERAGE DISCHARGE.--74 years, 11,688 ft³/s, unadjusted.
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 329,000 ft³/s, Aug. 20, 1955, elevation, 28.60 ft, from high-water mark in gage house, from rating curve extended above 230,000 ft³/s; minimum, 1,180 ft³/s Oct. 31, 1963, elevation, 7.26 ft. Flow in Delaware and Raritan Canal not included.
EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 11, 1903, reached an elevation of about 28.5 ft above National Geodetic Vertical Datum of 1929, discharge estimated, 295,000 ft³/s. Maximum elevation since 1903, 30.6 ft above National Geodetic Vertical Datum of 1929, Mar. 8, 1904, from floodmark (ice jam).
EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Elevation (ft)	Date	Time	Discharge (ft³/s)	Elevation (ft)
Mar. 16	1515	*140,000	*20.22	No other peak greater than base discharge.			

Minimum discharge, 2,930 ft³/s, Sept. 17, gage height, 8.00 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26700	5560	33600	7240	13700	14000	15800	17000	9190	4740	11000	3830
2	18900	5380	33600	7310	12500	13300	14900	15200	7490	5190	10700	3230
3	16700	6680	36500	6640	13600	11800	13900	13700	6940	6380	17700	3400
4	15000	6600	33100	7170	13300	11400	13000	12800	6480	6910	16700	3420
5	13800	7080	26900	7400	14500	12100	12300	11800	6050	6960	12600	3710
6	13500	8550	23300	6600	15900	12000	12000	11000	5770	5560	10700	4890
7	19600	9760	21000	5810	14800	11600	11600	10200	14100	4870	8930	4700
8	16600	10200	18300	5640	13200	10800	12300	10400	26100	4530	7440	4060
9	12900	8760	16700	4990	12200	9790	12400	10100	22400	4480	8620	3800
10	10300	7050	15800	5250	10500	8470	10900	9320	20400	5140	8040	3440
11	8870	6220	15000	5550	9820	9080	9990	8880	16600	5190	8080	3570
12	8020	5840	15300	5430	10500	15000	9640	7600	14700	4860	6460	3410
13	7570	6860	17500	5340	9320	18300	9260	6960	19900	5250	6690	3290
14	7100	9160	18500	4900	8530	25200	8830	6910	28600	5500	6600	3180
15	6880	10900	17100	4100	8650	53600	8500	6360	23400	5990	5340	3250
16	7020	14200	14600	3900	8860	128000	13200	6030	19000	7350	4890	3320
17	6730	37800	13500	3950	7460	92900	30000	5930	16500	6590	4910	3050
18	6410	45900	13000	4970	9650	64800	36800	6010	15100	5930	6260	3350
19	6080	39800	11900	5340	22200	51100	33000	6030	14200	6310	5670	3290
20	5940	30900	10500	7720	25500	49200	25600	6880	12600	7340	6920	3320
21	5880	25000	9950	14600	26900	54200	21200	6790	11400	7210	6500	3340
22	5680	22400	10100	24600	31700	41500	19500	9400	10400	6070	6640	3690
23	5570	22900	9710	18800	28300	33200	21300	21100	9370	5220	6830	3580
24	5410	20200	11000	15700	24600	27900	22000	26700	8390	5010	6330	3620
25	5770	18200	11900	13500	21400	24300	21800	20900	7590	4580	5900	3730
26	6640	16800	10100	28700	18900	22100	25600	17800	7240	4020	5010	3650
27	6970	21000	8830	30600	16600	20100	25400	15300	6570	6110	4970	3620
28	6750	28200	8340	26700	14900	19500	22200	13500	6150	5140	5050	4010
29	6080	38000	8260	21400	---	19300	20200	12500	6000	4900	4710	4410
30	5840	35900	6950	16500	---	18000	18900	11000	5300	5540	4330	4010
31	5740	---	6820	14900	---	16700	---	9910	---	6620	4120	---
TOTAL	300950	531800	507660	341250	437990	919240	532020	354010	383930	175490	234640	109170
MEAN	9708	17730	16380	11010	15640	29650	17730	11420	12800	5661	7569	3639
MAX	26700	45900	36500	30600	31700	128000	36800	26700	28600	7350	17700	4890
MIN	5410	5380	6820	3900	7460	8470	8500	5930	5300	4020	4120	3050

CAL YR 1985 TOTAL 3205470 MEAN 8782 MAX 65400 MIN 2100
WTR YR 1986 TOTAL 4828150 MEAN 13230 MAX 128000 MIN 3050

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1945 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: June 1968 to September 1978, May 1979 to current year.
pH: June 1968 to September 1978, May to September 1978, February 1980 to August 1982, April 1983 to current year.
WATER TEMPERATURE: October 1944 to September 1978, May 1979 to current year.
DISSOLVED OXYGEN: October 1962 to September 1978, May 1979 to current year.
SUSPENDED-SEDIMENT DISCHARGE: Water years 1949 to 1981.

INSTRUMENTATION.--Temperature recorder since October 1944, water-quality monitor since October 1962. Monitor probes are located within raw water intake of Trenton Filtration Plant.

REMARKS.--Missing continuous water-quality records are the result of malfunction of sensor or sampling mechanism. unpublished records of suspended sediment discharge for the period October 1, 1981 to March 31, 1982 are available in files of the district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 400 microsiemens, Jan. 24, 1959; minimum, 50 microsiemens, Mar. 19, 1945.
pH: Maximum, 10.3, August 9, 10, 1983; minimum, 5.3, June 22, 1972.
WATER TEMPERATURE: Maximum, 34.0°C, June 18, 1957; minimum 0.0°C on many days during winter months.
DISSOLVED OXYGEN: Maximum, 18.4 mg/L, January 10, 1980; minimum, 4.0 mg/L, Nov. 9, 1972.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 242 microsiemens, Sep. 7; minimum, 66 microsiemens, Mar. 16.
pH: Maximum, 9.9 Apr. 14; minimum 6.9, Mar. 16-18.
WATER TEMPERATURE: Maximum, 29.5°C, July 8; minimum 0.0°C on many days during the winter months.
DISSOLVED OXYGEN: Maximum, 17.2 mg/L, Apr. 14; minimum, 6.2 mg/L, July 28, 29.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)
NOV 1985												
12...	1300	5790	169	7.5	11.0	1.5	10.5	94	1.6	K56	K100	59
FEB 1986												
28...	1400	14800	147	7.6	2.5	2.4	15.0	110	1.7	K7	740	56
MAY												
07...	1200	10700	163	8.1	18.5	1.7	10.7	115	2.6	13	140	59
JUL												
30...	1200	5630	195	8.4	28.5	7.0	9.6	124	--	130	640	71

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE IT-FLD (MG/L AS HCO3)	ALKA-LINITY, CARBON-ATE IT-FLD (MG/L - CACO3)	ALKA-LINITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
NOV 1985												
12...	15	5.1	9.0	1.4	35	29	30	18	12	<0.1	2.0	80
FEB 1986												
28...	14	5.0	8.1	1.2	43	35	35	15	20	0.1	5.0	94
MAY												
07...	15	5.2	7.2	1.5	43	35	35	19	10	<0.1	2.5	82
JUL												
30...	18	6.3	8.6	1.7	--	--	47	21	11	<0.1	4.0	99

DATE	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)
NOV 1985											
12...	1	16	67	0.02	0.80	0.04	0.04	0.6	0.07	0.05	0.04
FEB 1986											
28...	5	200	76	0.01	0.99	0.14	0.13	0.5	0.04	0.02	0.02
MAY											
07...	3	87	91	0.04	0.93	0.07	0.06	0.5	0.04	0.03	0.02
JUL											
30...	21	319	91	0.04	1.10	0.03	0.02	0.8	0.11	0.03	0.03

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)
NOV 1985											
12...	1300	30	<1	32	<0.5	<1	<1	<3	4	58	5
FEB 1986											
28...	1400	50	<1	30	<0.5	<1	<1	<3	8	54	2
MAY											
07...	1200	60	<1	31	<0.5	<1	<1	<3	6	44	2

DATE	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)
NOV 1985										
12...	<4	6	<0.1	<10	37	<1	<1	63	<6	11
FEB 1986										
28...	<4	22	--	<10	6	<1	<1	61	<6	17
MAY										
07...	<4	11	0.2	<10	2	<1	<1	60	<6	9

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	99	89	92	169	166	168	119	114	117	178	173	175
2	117	100	108	175	169	173	121	116	118	176	167	171
3	129	118	123	186	175	178	120	109	114	173	166	169
4	142	131	135	190	160	177	110	106	108	183	175	178
5	151	145	148	172	153	159	117	111	114	188	180	183
6	155	150	153	163	158	161	124	117	120	189	181	184
7	159	121	137	158	153	156	131	124	127	197	185	190
8	126	122	124	154	140	149	133	130	131	208	192	203
9	130	127	128	142	137	140	139	134	136	210	199	206
10	140	133	137	146	139	143	142	138	140	204	199	201
11	153	140	148	150	144	146	145	141	143	213	199	208
12	165	154	161	167	151	161	146	142	144	209	204	206
13	172	166	168	175	166	171	150	143	147	213	196	207
14	174	171	173	173	156	167	144	138	140	198	164	190
15	180	174	178	154	141	147	140	137	138	210	171	201
16	180	177	179	144	133	139	140	135	137	212	208	210
17	181	174	179	133	118	127	141	137	139	211	203	207
18	177	173	175	131	103	115	142	140	141	208	201	204
19	181	175	179	102	100	101	145	141	143	204	199	201
20	181	178	179	107	100	103	152	144	148	200	195	198
21	188	181	186	117	106	110	160	138	153	219	177	201
22	188	182	186	130	114	118	164	123	146	174	108	130
23	184	181	182	133	124	129	173	161	166	120	110	115
24	181	175	179	134	129	132	172	150	158	120	115	118
25	182	175	179	135	130	132	150	138	145	127	116	120
26	192	181	187	141	133	136	149	138	141	136	107	118
27	186	177	181	151	143	147	155	149	152	146	141	144
28	177	161	168	152	127	141	167	157	162	146	142	145
29	165	160	163	130	124	126	168	165	166	145	133	136
30	166	162	165	122	114	116	170	164	167	147	138	142
31	168	165	167	---	---	---	177	172	175	159	148	155
MONTH	192	89	160	190	100	142	177	106	141	219	107	175

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	159	156	158	157	153	155	123	121	122	131	125	128
2	164	154	159	155	152	153	127	122	125	136	132	134
3	171	162	165	161	152	157	131	127	130	141	136	140
4	177	167	170	165	159	161	134	130	133	146	141	144
5	182	177	179	165	162	164	139	133	137	149	145	147
6	185	175	179	163	160	161	143	137	141	156	149	153
7	179	173	177	165	160	163	148	141	145	164	156	160
8	174	171	173	166	161	164	147	143	145	168	161	164
9	181	172	176	167	161	163	142	138	140	170	165	168
10	182	176	179	176	165	168	143	137	139	172	167	169
11	184	180	182	182	176	179	148	142	145	176	169	172
12	185	179	182	184	164	179	152	147	149	179	172	175
13	184	173	178	162	143	150	151	149	151	191	180	185
14	190	146	180	146	138	141	153	148	150	196	191	193
15	193	187	189	142	99	127	162	151	156	199	191	195
16	196	185	190	95	66	75	166	99	146	206	196	202
17	189	182	185	80	69	75	152	109	133	215	206	210
18	237	188	202	93	81	86	137	129	134	218	214	216
19	207	185	197	92	87	89	128	120	122	---	---	---
20	182	163	169	95	89	93	125	121	123	---	---	---
21	169	150	161	90	83	85	126	124	125	---	---	---
22	151	144	147	92	83	88	133	125	130	---	---	---
23	145	141	142	99	92	96	138	133	135	---	---	---
24	151	142	146	105	100	102	139	133	136	---	---	---
25	149	146	147	108	105	107	140	136	139	---	---	---
26	148	144	146	113	110	112	138	123	129	---	---	---
27	150	146	148	118	113	115	124	116	119	---	---	---
28	153	150	152	120	118	119	121	117	119	---	---	---
29	---	---	---	120	115	117	125	120	123	---	---	---
30	---	---	---	118	116	117	126	121	124	---	---	---
31	---	---	---	121	118	119	---	---	---	---	---	---
MONTH	237	141	170	184	66	128	166	99	135	218	125	170

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	181	168	175	193	154	177	213	209	211
2	---	---	---	188	181	183	153	146	150	214	201	206
3	168	161	165	193	185	189	167	149	156	222	204	214
4	171	167	169	198	182	190	150	132	138	223	219	220
5	177	172	175	182	168	174	137	132	135	226	223	224
6	182	177	180	168	164	166	144	137	141	225	216	220
7	197	157	185	178	166	173	147	143	145	242	216	229
8	153	100	118	187	178	183	154	147	151	234	207	216
9	105	100	102	193	186	188	166	155	161	213	205	207
10	107	104	106	196	188	193	162	145	150	213	210	211
11	110	105	107	192	185	189	150	137	147	222	212	215
12	117	110	114	196	190	194	166	149	161	225	218	221
13	129	119	126	193	185	190	174	165	170	224	220	222
14	127	95	105	193	187	190	173	159	165	227	221	224
15	100	94	96	195	188	192	162	160	161	228	222	224
16	104	100	102	191	167	181	177	161	170	228	223	225
17	109	103	106	164	151	155	187	178	182	224	217	220
18	117	110	114	159	152	154	191	177	185	219	216	217
19	119	116	118	161	158	159	203	179	191	220	205	212
20	121	118	119	189	162	172	200	196	198	213	206	209
21	127	121	124	189	176	182	196	172	182	220	215	218
22	133	127	130	182	157	167	180	173	176	226	220	223
23	139	133	136	162	156	159	198	184	193	228	196	225
24	142	135	138	169	162	166	191	177	185	228	199	213
25	144	138	140	181	165	173	192	187	189	208	198	201
26	152	144	147	188	180	182	195	192	194	215	209	213
27	161	153	157	201	173	189	200	195	198	214	208	211
28	164	161	162	223	204	219	204	193	200	217	209	212
29	168	164	166	217	189	199	197	191	194	221	217	219
30	170	167	169	196	188	195	198	189	193	220	208	213
31	---	---	---	198	185	193	212	198	202	---	---	---
MONTH	197	94	135	223	151	181	212	132	172	242	196	217

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

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

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	24.5	21.5	23.0	25.0	24.0	24.5	23.5	20.0	21.5
2	---	---	---	24.0	22.0	23.0	24.5	23.0	23.5	21.0	20.5	21.0
3	23.5	21.0	22.0	24.5	22.0	23.0	23.0	22.0	22.5	23.0	20.0	21.0
4	23.5	20.5	22.0	24.0	21.5	23.0	23.5	21.5	22.5	22.5	20.5	21.5
5	25.0	21.5	23.0	25.0	22.5	23.5	24.0	22.0	23.0	22.0	20.5	21.0
6	25.0	22.5	24.0	27.0	23.5	25.0	25.0	23.0	24.0	23.5	20.5	22.0
7	23.5	22.0	23.0	28.5	25.0	26.5	25.0	24.0	24.0	23.0	21.0	22.0
8	21.5	20.0	20.5	29.5	26.0	27.5	25.5	24.0	25.0	22.5	20.0	21.0
9	20.5	19.0	20.0	27.5	26.0	27.0	26.0	24.0	25.0	22.5	19.0	20.5
10	21.0	19.5	20.5	27.5	24.5	26.0	26.5	24.5	25.5	22.0	19.0	20.5
11	22.0	20.0	21.0	25.5	24.5	25.0	26.0	24.5	25.5	24.0	20.0	21.5
12	22.0	20.0	21.0	25.0	23.5	24.0	26.0	24.0	25.0	24.5	22.0	23.0
13	20.5	20.0	20.0	24.5	23.0	23.5	25.5	23.5	24.5	24.0	21.0	22.5
14	20.0	19.0	19.5	25.5	23.0	24.0	25.5	23.0	24.5	23.0	20.5	21.5
15	21.0	19.0	20.0	25.5	22.5	24.0	26.0	23.5	24.5	22.5	19.5	20.5
16	21.5	20.0	21.0	24.0	23.0	23.5	26.0	24.0	24.5	21.5	18.5	20.0
17	22.0	21.0	21.5	24.5	22.5	23.5	26.0	24.5	25.0	21.0	17.0	18.5
18	22.0	20.5	21.5	26.0	23.5	25.0	26.5	24.0	25.0	20.0	17.0	18.5
19	22.0	20.5	21.5	25.5	24.5	25.0	26.5	24.5	25.0	20.0	18.5	19.0
20	22.0	21.0	21.5	25.5	24.0	24.5	25.0	24.0	24.5	21.0	18.0	19.5
21	22.5	20.5	21.5	26.5	24.0	25.0	24.5	23.0	23.5	22.0	19.5	20.5
22	23.0	21.0	22.0	27.5	24.5	26.0	25.0	22.0	23.5	20.5	19.0	20.0
23	24.0	22.0	23.0	27.5	25.0	26.0	25.0	23.0	24.0	21.5	19.0	20.0
24	23.5	22.0	23.0	28.5	25.0	26.5	24.0	22.5	23.0	21.5	20.0	20.5
25	23.0	21.0	22.0	28.5	25.5	27.0	23.0	21.0	22.0	21.0	19.5	20.5
26	23.0	20.5	22.0	28.0	26.5	27.0	24.0	21.0	22.0	23.5	20.0	21.5
27	24.0	21.5	23.0	27.0	25.0	26.0	23.5	22.0	23.0	22.0	20.0	21.0
28	24.0	23.0	23.5	27.5	26.0	26.5	22.5	20.5	21.5	20.0	19.0	19.5
29	26.0	23.0	24.0	28.5	26.0	27.0	22.0	19.0	20.5	21.5	19.0	20.0
30	24.0	22.5	23.5	28.5	26.0	27.0	23.0	19.0	20.5	23.5	20.0	21.5
31	---	---	---	27.0	24.5	26.0	23.0	19.0	21.0	---	---	---
MONTH	26.0	19.0	22.0	29.5	21.5	25.0	26.5	19.0	23.5	24.5	17.0	20.5

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.2	7.1	7.1	9.1	7.7	8.3	7.6	7.5	7.6	8.4	8.2	8.3
2	7.3	7.1	7.3	8.5	7.8	8.1	7.8	7.6	7.7	8.4	8.2	8.3
3	7.4	7.3	7.3	8.6	7.8	8.1	7.8	7.7	7.8	8.3	8.1	8.2
4	7.4	7.3	7.4	8.1	7.7	7.9	7.7	7.7	7.7	8.5	8.2	8.3
5	7.5	7.4	7.4	7.8	7.6	7.7	7.7	7.7	7.7	8.5	8.2	8.3
6	7.5	7.4	7.5	7.7	7.5	7.6	7.8	7.7	7.7	8.6	8.2	8.4
7	7.5	7.3	7.4	7.9	7.6	7.7	7.8	7.8	7.8	8.7	8.3	8.4
8	7.4	7.3	7.4	8.0	7.6	7.7	7.9	7.8	7.8	8.8	8.3	8.5
9	7.4	7.3	7.4	8.3	7.6	7.8	7.9	7.8	7.9	8.9	8.4	8.5
10	7.5	7.4	7.4	8.6	7.6	7.9	7.9	7.9	7.9	8.8	8.4	8.5
11	7.6	7.4	7.5	8.6	7.6	7.9	7.9	7.9	7.9	8.9	8.4	8.6
12	7.6	7.5	7.6	7.8	7.7	7.7	7.9	7.8	7.9	9.0	8.4	8.6
13	7.6	7.5	7.5	8.0	7.6	7.7	7.9	7.9	7.9	9.1	8.4	8.6
14	7.7	7.5	7.6	7.7	7.6	7.6	7.9	7.9	7.9	9.1	8.4	8.6
15	7.7	7.5	7.6	7.9	7.6	7.7	7.9	7.9	7.9	9.1	8.3	8.7
16	7.8	7.5	7.6	7.7	7.6	7.6	7.9	7.8	7.9	9.1	8.4	8.7
17	7.9	7.6	7.7	7.6	7.4	7.5	8.0	7.8	7.9	8.9	8.5	8.6
18	8.0	7.6	7.7	7.6	7.4	7.5	8.0	7.9	7.9	9.4	8.4	8.7
19	8.2	7.6	7.8	7.4	7.4	7.4	8.0	7.9	7.9	9.0	8.4	8.6
20	8.2	7.7	7.8	7.5	7.4	7.4	8.0	7.9	7.9	8.5	8.3	8.4
21	8.6	7.7	8.0	7.6	7.5	7.5	8.0	7.8	7.9	8.4	8.2	8.3
22	8.9	7.8	8.2	7.6	7.5	7.6	8.1	8.0	8.0	8.2	7.8	8.0
23	9.1	7.8	8.3	7.7	7.5	7.6	8.1	8.0	8.1	7.9	7.9	7.9
24	8.8	7.8	8.2	7.7	7.6	7.7	8.1	8.0	8.0	8.0	7.8	7.9
25	9.1	7.8	8.3	7.7	7.6	7.7	8.1	8.0	8.0	7.9	7.8	7.8
26	9.0	8.0	8.4	7.7	7.6	7.7	8.1	8.0	8.0	7.8	7.4	7.6
27	9.0	7.9	8.4	7.7	7.6	7.7	8.1	7.9	8.1	7.8	7.7	7.8
28	9.1	8.0	8.5	7.7	7.5	7.6	8.2	8.0	8.2	7.8	7.7	7.7
29	9.2	8.0	8.6	7.6	7.5	7.6	8.2	8.1	8.2	7.7	7.6	7.7
30	9.1	8.0	8.4	7.6	7.5	7.6	8.3	8.1	8.2	7.8	7.6	7.7
31	9.0	7.8	8.2	---	---	---	8.3	8.2	8.2	7.9	7.7	7.8
MONTH	9.2	7.1	7.8	9.1	7.4	7.7	8.3	7.5	7.9	9.4	7.4	8.3

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.9	7.8	7.9	8.7	7.9	8.2	8.4	7.8	8.1	8.0	7.7	7.9
2	8.0	7.8	7.9	8.8	7.9	8.2	8.6	7.9	8.2	8.5	7.7	8.0
3	8.1	7.9	7.9	8.9	7.9	8.4	8.9	7.9	8.3	8.6	7.8	8.1
4	8.0	7.9	7.9	8.6	8.0	8.2	8.9	7.9	8.3	8.8	7.9	8.3
5	8.0	7.9	7.9	9.0	7.9	8.4	8.8	7.9	8.2	9.0	7.9	8.4
6	8.1	7.9	8.0	8.9	8.0	8.4	8.4	7.9	8.0	9.1	8.0	8.4
7	8.0	7.9	7.9	9.0	8.0	8.4	9.3	7.8	8.5	9.1	7.9	8.4
8	8.1	7.9	8.0	9.2	8.1	8.6	9.3	8.0	8.6	8.9	7.8	8.2
9	8.3	7.9	8.0	9.2	8.1	8.7	9.3	8.1	8.7	9.2	7.7	8.4
10	8.5	8.0	8.2	9.5	8.1	8.8	9.4	8.1	8.8	9.4	7.9	8.7
11	8.4	8.0	8.2	9.6	8.2	8.9	9.5	8.2	9.0	9.5	8.1	8.9
12	8.6	8.1	8.3	8.7	8.0	8.4	9.7	8.4	9.2	9.6	8.3	9.0
13	8.6	8.0	8.2	7.9	7.6	7.7	9.6	8.8	9.2	9.6	8.4	9.0
14	8.6	8.0	8.3	7.7	7.0	7.6	9.9	8.6	9.4	9.3	8.2	8.8
15	8.8	8.1	8.4	7.7	7.4	7.6	9.7	8.9	9.4	---	---	---
16	8.8	8.1	8.4	7.3	6.9	7.0	8.8	7.2	7.9	---	---	---
17	8.9	8.1	8.4	7.2	6.9	7.0	7.7	7.3	7.6	---	---	---
18	8.2	8.0	8.1	7.9	6.9	7.2	7.8	7.7	7.7	---	---	---
19	8.0	7.9	7.9	7.4	7.3	7.4	7.8	7.6	7.7	---	---	---
20	7.9	7.8	7.8	7.5	7.4	7.5	8.0	7.7	7.8	---	---	---
21	7.9	7.8	7.9	7.4	7.3	7.4	7.9	7.7	7.8	---	---	---
22	7.9	7.7	7.9	7.4	7.3	7.4	7.9	7.6	7.8	---	---	---
23	7.9	7.8	7.8	7.8	7.4	7.5	7.8	7.6	7.8	---	---	---
24	7.9	7.8	7.9	7.6	7.5	7.6	8.1	7.7	7.9	---	---	---
25	8.1	7.9	8.0	7.7	7.6	7.6	8.2	7.8	8.0	---	---	---
26	8.3	7.9	8.1	7.8	7.7	7.7	7.9	7.7	7.8	---	---	---
27	8.4	7.9	8.1	7.8	7.6	7.7	8.0	7.7	7.8	---	---	---
28	8.5	7.9	8.2	7.9	7.7	7.8	8.0	7.6	7.8	---	---	---
29	---	---	---	7.9	7.7	7.9	7.8	7.6	7.7	---	---	---
30	---	---	---	7.9	7.7	7.8	8.1	7.6	7.8	---	---	---
31	---	---	---	8.2	7.7	7.9	---	---	---	---	---	---
MONTH	8.9	7.7	8.1	9.6	6.9	7.9	9.9	7.2	8.2	9.6	7.7	8.5

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	9.4	8.3	9.0	7.5	7.4	7.5	9.4	8.3	8.9
2	---	---	---	9.2	8.3	8.8	7.5	7.4	7.4	9.1	8.4	8.7
3	9.6	8.4	9.1	9.3	8.1	8.8	7.5	7.4	7.4	9.2	7.9	8.6
4	9.7	8.9	9.4	9.4	8.3	8.9	7.4	7.3	7.4	9.1	8.1	8.6
5	9.8	9.0	9.4	9.4	8.3	9.0	7.5	7.4	7.4	8.9	7.7	8.2
6	9.7	8.9	9.3	9.5	8.3	9.0	7.6	7.4	7.5	8.7	7.5	8.0
7	9.0	7.8	8.3	9.6	8.3	9.1	7.7	7.5	7.5	8.8	7.5	8.1
8	7.8	7.5	7.6	9.7	8.7	9.3	7.9	7.5	7.7	9.0	7.5	8.2
9	7.6	7.5	7.6	9.4	8.6	9.0	8.1	7.5	7.8	9.2	7.7	8.4
10	7.7	7.6	7.6	9.3	7.9	8.7	8.5	7.6	7.9	9.3	7.8	8.6
11	7.8	7.6	7.7	9.2	8.0	8.7	7.9	7.4	7.6	9.3	7.9	8.6
12	7.7	7.6	7.7	9.2	7.9	8.5	8.3	7.4	7.8	9.2	7.9	8.5
13	7.8	7.7	7.7	8.8	7.8	8.2	8.3	7.6	7.9	9.2	7.7	8.4
14	7.7	7.6	7.6	9.1	7.7	8.4	8.8	7.7	8.1	9.2	7.8	8.5
15	7.7	7.5	7.6	9.0	7.8	8.5	8.9	7.7	8.3	9.0	7.8	8.3
16	7.8	7.6	7.7	8.5	7.7	8.1	8.8	7.6	8.1	9.0	7.7	8.3
17	8.0	7.7	7.8	8.4	7.5	7.8	8.6	7.5	7.9	9.0	7.7	8.3
18	8.2	7.8	8.0	8.5	7.4	7.9	8.5	7.5	7.9	9.0	7.7	8.2
19	8.4	7.9	8.1	8.5	7.4	7.8	8.4	7.5	7.9	8.6	7.5	7.9
20	8.4	7.8	8.0	8.2	7.5	7.7	8.0	7.5	7.7	8.8	7.4	8.0
21	8.7	7.7	8.1	8.3	7.5	7.8	7.9	7.5	7.7	8.6	7.4	7.8
22	8.8	7.8	8.2	8.6	7.5	8.0	8.3	7.4	7.8	8.3	7.4	7.7
23	8.9	7.8	8.4	8.7	7.5	8.1	8.5	7.5	7.9	8.2	7.3	7.5
24	9.1	8.0	8.5	9.4	7.6	8.6	8.6	7.5	8.0	7.9	7.2	7.4
25	9.3	8.2	8.8	9.5	8.4	9.1	8.7	7.6	8.1	7.8	7.1	7.3
26	9.3	8.6	9.0	9.1	8.4	8.8	8.9	7.6	8.2	8.0	7.1	7.4
27	9.3	8.6	9.0	8.8	7.5	8.2	8.7	7.6	8.1	8.1	7.0	7.4
28	9.2	8.6	8.9	7.9	7.5	7.6	8.8	7.5	8.0	7.9	7.6	7.7
29	9.3	7.9	8.8	8.1	7.5	7.7	9.0	7.6	8.3	8.1	7.6	7.8
30	9.3	8.3	8.9	9.1	7.5	8.3	9.2	7.7	8.5	7.9	7.4	7.6
31	---	---	---	8.5	7.5	7.8	9.4	7.9	8.7	---	---	---
MONTH	9.8	7.5	8.3	9.7	7.4	8.4	9.4	7.3	7.9	9.4	7.0	8.1

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	12.8	9.7	11.0	11.9	11.7	11.8	13.8	13.3	13.5
2	---	---	---	11.5	9.9	10.5	11.8	11.6	11.6	14.0	13.3	13.6
3	---	---	---	11.8	9.9	10.6	12.2	11.7	11.9	14.0	13.3	13.6
4	---	---	---	10.8	9.9	10.2	12.7	12.3	12.5	13.9	13.0	13.4
5	---	---	---	10.4	9.5	9.8	13.0	12.7	12.9	13.7	12.9	13.2
6	---	---	---	9.9	9.3	9.5	13.1	12.9	13.0	14.0	12.9	13.3
7	---	---	---	10.7	9.5	10.0	13.3	12.9	13.1	14.6	13.2	13.8
8	---	---	---	11.0	9.9	10.4	13.2	12.8	13.0	15.0	13.8	14.4
9	---	---	---	11.8	10.3	10.8	12.9	12.7	12.8	15.3	14.2	14.6
10	---	---	---	12.2	10.3	11.0	---	---	---	15.2	14.0	14.5
11	---	---	---	12.2	10.1	10.9	---	---	---	15.2	13.8	14.3
12	---	---	---	10.8	10.2	10.4	---	---	---	15.3	13.7	14.3
13	---	---	---	11.2	10.1	10.5	---	---	---	15.1	13.4	14.0
14	---	---	---	10.7	10.1	10.3	---	---	---	15.5	13.4	14.3
15	---	---	---	11.4	10.4	10.8	---	---	---	16.1	14.1	14.9
16	9.3	8.4	8.7	10.8	10.5	10.7	---	---	---	16.0	14.3	15.0
17	9.7	8.5	9.0	11.2	10.8	11.0	13.3	13.1	13.2	15.2	14.3	14.7
18	10.1	8.8	9.3	11.5	11.3	11.4	13.4	13.0	13.2	16.3	13.8	14.7
19	10.4	8.8	9.3	11.6	11.4	11.5	13.7	13.3	13.5	14.8	12.9	13.8
20	10.1	8.6	9.2	11.4	10.9	11.2	14.0	13.7	13.8	13.3	12.4	12.7
21	11.0	8.9	9.7	10.9	10.6	10.8	14.0	13.7	13.8	12.9	12.2	12.5
22	11.6	9.2	10.1	10.9	10.6	10.7	14.0	13.8	13.9	13.5	13.0	13.3
23	12.0	9.1	10.2	11.1	10.9	11.0	13.9	13.6	13.7	13.7	13.4	13.6
24	11.2	9.2	9.9	11.5	11.1	11.3	13.7	13.3	13.6	13.9	13.5	13.7
25	11.9	8.9	10.1	11.7	11.4	11.5	13.4	13.2	13.3	13.6	13.2	13.4
26	11.9	9.3	10.4	11.6	11.4	11.5	14.0	13.4	13.7	13.3	12.9	13.2
27	12.0	9.5	10.5	11.5	11.4	11.5	14.1	13.7	14.0	13.0	12.9	13.0
28	12.3	9.6	10.7	11.7	11.4	11.5	14.2	13.8	14.0	13.4	13.0	13.2
29	12.8	10.0	11.2	11.8	11.6	11.7	14.2	13.8	14.0	14.0	13.5	13.8
30	12.7	10.2	11.1	11.9	11.8	11.9	14.4	13.8	14.1	14.3	14.1	14.2
31	12.4	9.8	10.9	---	---	---	14.2	13.5	14.0	14.3	13.9	14.1
MONTH	12.8	8.4	10.0	12.8	9.3	10.9	14.4	11.6	13.3	16.3	12.2	13.8

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	14.2	13.8	14.0	14.7	13.1	13.8	10.8	9.9	10.3	9.7	8.7	9.1
2	14.1	13.5	13.8	14.7	13.1	13.8	11.0	9.7	10.3	10.1	8.6	9.3
3	13.9	13.2	13.5	15.2	13.1	14.0	11.5	9.7	10.5	10.6	8.9	9.7
4	13.5	13.0	13.2	14.3	13.0	13.5	11.5	9.8	10.5	11.3	9.3	10.2
5	13.3	12.9	13.1	14.9	12.5	13.6	11.6	9.8	10.6	11.7	9.5	10.5
6	13.5	12.9	13.1	14.4	12.6	13.4	11.2	10.1	10.6	11.7	9.3	10.3
7	13.3	12.9	13.1	14.5	12.4	13.4	13.4	10.3	11.6	11.4	8.5	9.7
8	14.1	13.1	13.6	15.8	13.1	14.3	13.0	10.5	11.5	10.7	7.6	9.0
9	14.4	13.5	13.8	15.9	13.4	14.6	13.1	10.3	11.5	11.9	7.5	9.5
10	14.5	13.3	13.8	16.9	13.2	14.8	13.3	10.3	11.8	12.9	8.3	10.4
11	14.1	13.0	13.5	15.9	12.4	13.9	14.2	10.6	12.3	13.0	8.3	10.4
12	14.5	13.2	13.8	13.4	11.7	12.5	15.4	10.9	13.0	13.8	8.4	10.9
13	14.9	13.5	14.1	12.1	11.8	12.0	14.4	11.3	12.8	13.6	8.5	10.8
14	15.1	13.6	14.3	11.9	11.7	11.8	17.2	11.4	14.1	11.9	8.3	10.1
15	15.1	13.6	14.3	11.7	11.5	11.6	14.8	10.5	12.6	10.5	8.2	9.2
16	15.1	13.6	14.2	12.1	11.7	12.0	10.3	9.2	9.6	12.3	7.7	9.9
17	15.2	13.4	14.1	12.1	12.0	12.1	10.0	9.9	10.0	12.4	7.8	9.9
18	13.6	13.0	13.3	12.0	12.0	12.0	10.2	10.1	10.1	12.0	6.9	9.3
19	13.0	12.6	12.7	12.0	11.5	11.8	10.2	9.9	10.1	---	---	---
20	12.8	12.5	12.7	11.5	11.4	11.4	10.3	9.7	10.0	---	---	---
21	12.6	12.5	12.5	12.0	11.5	11.8	9.7	9.4	9.6	---	---	---
22	12.7	12.6	12.6	12.3	12.0	12.2	9.8	9.3	9.5	---	---	---
23	12.9	12.8	12.9	12.3	12.1	12.3	10.2	9.6	9.9	---	---	---
24	13.3	13.0	13.1	12.1	11.9	12.0	11.1	10.2	10.6	---	---	---
25	13.7	13.0	13.3	11.9	11.6	11.8	11.0	10.3	10.6	---	---	---
26	14.1	13.2	13.6	11.7	11.3	11.6	10.4	10.0	10.2	---	---	---
27	14.4	13.3	13.7	11.2	10.9	11.1	10.3	9.8	10.0	---	---	---
28	14.6	13.5	13.9	11.2	10.9	11.0	10.3	9.4	9.8	---	---	---
29	---	---	---	11.3	10.8	11.0	9.6	9.0	9.2	---	---	---
30	---	---	---	11.1	10.6	10.9	10.0	8.8	9.3	---	---	---
31	---	---	---	10.8	10.1	10.5	---	---	---	---	---	---
MONTH	15.2	12.5	13.5	16.9	10.1	12.5	17.2	8.8	10.8	13.8	6.9	9.9

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	11.8	7.6	9.6	7.1	6.7	6.9	---	---	---
2	---	---	---	10.6	7.3	8.8	7.5	7.0	7.3	---	---	---
3	12.7	7.9	10.2	11.3	7.4	9.3	7.5	7.3	7.4	---	---	---
4	13.1	8.3	10.6	11.8	7.7	9.7	7.7	7.4	7.6	---	---	---
5	13.4	8.2	10.7	11.5	7.7	9.6	8.0	7.6	7.7	---	---	---
6	12.3	7.8	10.0	11.9	7.4	9.6	8.1	7.5	7.7	---	---	---
7	8.6	7.0	7.7	12.1	7.3	9.6	8.1	7.4	7.7	---	---	---
8	7.8	7.1	7.5	12.8	7.1	9.8	8.5	7.3	7.9	---	---	---
9	8.1	7.8	8.0	10.3	6.9	8.4	8.8	7.3	7.9	---	---	---
10	8.4	7.9	8.1	11.4	6.3	8.8	9.5	7.4	8.3	---	---	---
11	8.4	7.9	8.1	10.8	7.0	8.9	8.3	7.1	7.6	---	---	---
12	7.9	7.7	7.8	10.9	6.9	8.5	9.0	7.1	7.9	---	---	---
13	8.1	7.7	7.9	9.8	7.1	8.3	9.1	7.4	8.2	---	---	---
14	8.4	8.0	8.3	10.8	7.1	8.8	10.0	7.6	8.6	---	---	---
15	8.6	8.3	8.4	10.8	7.4	9.0	10.2	7.6	8.7	---	---	---
16	8.5	8.1	8.3	8.7	7.1	7.9	9.7	7.3	8.3	10.3	6.7	8.2
17	8.7	7.9	8.3	8.9	6.8	7.7	9.4	7.0	7.9	10.7	7.1	8.6
18	9.0	8.1	8.5	8.9	6.8	7.8	9.2	6.9	7.8	10.5	7.4	8.6
19	9.3	8.1	8.6	8.6	6.6	7.4	9.0	6.9	7.8	9.6	7.0	8.0
20	9.4	8.2	8.7	8.4	6.6	7.3	8.2	6.7	7.4	10.4	7.0	8.4
21	9.8	8.1	8.9	8.5	6.4	7.4	8.1	6.8	7.3	10.0	6.8	8.1
22	9.9	8.1	9.0	9.2	6.7	7.8	8.7	6.9	7.7	9.3	6.9	7.9
23	10.0	8.0	8.9	9.3	6.7	8.0	8.3	6.7	7.3	9.6	6.7	7.6
24	10.1	7.9	8.9	12.4	7.0	9.4	---	---	---	8.9	6.5	7.4
25	10.8	8.0	9.3	13.0	7.3	10.0	---	---	---	9.0	6.7	7.5
26	11.1	8.3	9.6	10.3	7.3	8.6	---	---	---	9.5	6.6	7.8
27	11.4	8.2	9.7	10.1	6.5	8.2	---	---	---	7.3	6.6	6.9
28	10.3	7.9	8.9	7.5	6.2	6.9	---	---	---	8.4	6.6	7.4
29	11.1	7.4	9.3	8.4	6.2	7.1	---	---	---	8.9	7.1	7.8
30	11.0	7.4	9.2	11.8	6.5	8.7	---	---	---	9.5	7.2	8.1
31	---	---	---	8.4	6.8	7.3	---	---	---	---	---	---
MONTH	13.4	7.0	8.8	13.0	6.2	8.5	10.2	6.7	7.8	10.7	6.5	7.9

01463620 ASSUNPINK CREEK NEAR CLARKSVILLE, NJ

LOCATION.--Lat 40°16'11", long 74°40'20", Mercer County, Hydrologic Unit 02040105, on left bank 200 ft upstream from bridge on Quaker Bridge Road, 1.9 south of Clarksville, 2.0 mi upstream from Shipetaukin Creek, and 7.6 mi upstream of mouth.

drainage area.--34.3 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963, 1965, 1967, and 1979 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection, Water Resources Division. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
16...	1500	16	125	6.2	18.0	10.2	107	2.3	80	240
FEB 1986										
10...	1340	53	152	5.8	3.5	13.2	99	2.4	<20	11
APR										
07...	1430	28	143	6.2	11.0	11.0	101	E4.2	<20	13
JUN										
09...	1300	7.7	126	6.9	24.0	8.0	95	E1.5	20	>2400
JUL										
10...	1300	7.7	184	6.8	22.0	8.5	97	<0.1	130	920
AUG										
18...	1100	8.9	128	6.5	24.0	8.0	95	<0.3	50	43

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
16...	35	7.7	3.9	5.1	3.7	14	20	12	0.1
FEB 1986									
10...	35	7.6	4.0	5.8	3.0	3.0	17	18	0.1
APR									
07...	39	8.4	4.4	7.4	2.8	6.0	27	17	0.1
JUN									
09...	39	8.3	4.4	5.5	2.6	14	22	11	0.2
JUL									
10...	42	9.1	4.8	5.9	2.7	19	20	12	0.2
AUG									
18...	41	8.5	4.7	5.6	2.7	21	17	12	0.2

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
16...	4.4	65	0.006	0.30	0.16	0.67	0.97	0.07	4.6
FEB 1986									
10...	6.0	63	0.011	1.47	0.14	0.16	1.6	0.08	4.8
APR									
07...	3.4	74	0.014	1.23	0.10	0.53	1.8	0.05	4.8
JUN									
09...	1.9	64	0.015	0.45	0.17	0.7	1.2	0.05	6.8
JUL									
10...	2.5	69	0.013	0.31	0.12	0.74	1.0	0.05	5.5
AUG									
18...	2.4	66	0.004	0.18	<0.05	0.8	0.98	0.05	6.8

01463620 ASSUNPINK CREEK NEAR CLARKSVILLE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)
OCT 1985 16...	1500	110	0.2	1.4	<1	40	<10	9	2100	<10

DATE	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985 16...	45	0.03	<10	<1	10	3	<1.0	<0.1	<1.0	1.0

DATE	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985 16...	0.9	0.9	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

DATE	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985 16...	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1

01464000 ASSUNPINK CREEK AT TRENTON, NJ

LOCATION.--Lat 40°13'27", long 74°44'58", Mercer County, Hydrologic Unit 02040105, on left bank 20 ft upstream from Chambers Street Bridge in Trenton, and 1.5 mi upstream from mouth.

DRAINAGE AREA.--90.6 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1923 to current year.

REVISED RECORDS.--WDR NJ-82-2: Drainage area.

GAGE.--Water-stage recorder. Concrete control since July 10, 1932. Datum of gage is 24.76 ft above National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark).

REMARKS.--Estimated daily discharges: Nov. 26 to Dec. 17 and May 1-15. Records good except those for periods of no gage-height record Nov. 26 to Dec. 17 and May 1-15, which are fair. Records include water diverted from outside the basin since February 1954 for municipal supply which returns to Assunpink Creek through Ewing-Lawrence Sewerage Authority Treatment Plant, 2.4 mi above station (records given herein). In addition there is an average inflow of about 2.0 ft³/s from industrial use of water that originates outside the basin. Some diversion for irrigation in headwater area during summer months. Flow regulated by several flood-control reservoirs upstream of gage since mid-1970's. Several measurements of water temperature were made during the year. National Weather Service gage-height telemeter at station.

AVERAGE DISCHARGE.--63 years, 129 ft³/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,450 ft³/s, July 21, 1975, gage height, 14.61 ft, from high-water mark in gage house; minimum, 1.0 ft³/s, Aug. 21, Oct.22, 1931, gage height, 0.25 ft; minimum daily, 4.0 ft³/s, July 21, Aug. 8, Sept. 2, 1929.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 900 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Jan. 26	1000	1,340	7.11	Apr. 17	0015	*2,310	*9.54

Minimum discharge, 18 ft³/s, July 12, gage height, 2.46 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	159	41	453	62	176	118	76	143	46	26	107	35
2	106	40	344	63	148	109	77	131	45	87	152	38
3	262	39	259	108	142	105	73	119	43	42	87	38
4	201	39	217	84	170	105	71	122	42	30	72	38
5	229	296	183	112	245	100	71	108	41	26	65	42
6	158	93	158	91	219	98	87	108	52	25	63	48
7	117	77	136	83	189	91	83	101	46	25	63	37
8	95	71	131	77	162	82	84	101	41	25	57	36
9	83	66	134	72	144	82	80	89	39	28	47	35
10	77	62	126	70	135	83	76	85	38	29	42	33
11	70	59	119	68	135	87	73	95	37	26	236	33
12	63	60	102	65	124	86	70	82	119	26	72	31
13	60	59	109	65	116	135	68	79	54	87	50	27
14	58	57	127	63	106	172	68	79	45	80	44	25
15	57	55	111	60	105	259	71	76	40	39	41	28
16	55	178	96	58	95	261	934	71	40	33	38	27
17	50	466	100	57	99	214	1330	65	41	32	52	26
18	49	246	92	57	324	181	680	62	37	33	89	26
19	48	154	86	69	361	154	512	61	35	83	47	32
20	47	126	82	111	424	134	423	62	37	46	53	30
21	46	108	79	80	372	118	387	65	34	41	73	41
22	45	226	76	76	323	109	391	152	31	37	63	36
23	45	191	75	73	263	101	510	83	32	37	43	56
24	47	155	76	70	220	96	389	66	32	36	177	61
25	46	135	74	115	192	91	286	60	29	34	64	42
26	43	142	72	903	165	89	229	58	28	44	49	38
27	43	202	70	574	146	87	196	57	30	340	44	69
28	42	448	68	461	129	84	175	56	33	118	53	44
29	42	491	66	352	---	81	161	53	29	92	47	38
30	42	431	65	307	---	79	151	51	26	152	39	35
31	42	---	64	243	---	78	---	49	---	195	36	---
TOTAL	2527	4813	3950	4749	5429	3669	7882	2589	1222	1954	2165	1125
MEAN	81.5	160	127	153	194	118	263	83.5	40.7	63.0	69.8	37.5
MAX	262	491	453	903	424	261	1330	152	119	340	236	69
MIN	42	39	64	57	95	78	68	49	26	25	36	25
(†)	12.5	14.6	14.9	15.1	19.7	16.3	19.0	14.4	11.8	11.5	11.7	11.2

CAL YR 1985 TOTAL 32814 MEAN 89.9 MAX 824 MIN 23 + 12.5
WTR YR 1986 TOTAL 42074 MEAN 115 MAX 1330 MIN 25 + 14.4

† Inflow from outside basin, 2.4 mi upstream of station through plant of Ewing-Lawrence Sewerage Authority, in cubic feet per second.

01464500 CROSSWICKS CREEK AT EXTONVILLE, NJ

LOCATION.--Lat 40°08'15", long 74°36'02", Mercer County, Hydrologic Unit 02040201, on right bank upstream from highway bridge in Extonville, 0.5 mi upstream from Pleasant Run, and 0.7 mi downstream from Mercer-Monmouth County line.

DRAINAGE AREA.--81.5 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1940 to October 1951, October 1952 to current year.

REVISED RECORDS.--WDR NJ-79-2: 1971(M). WDR NJ-82-2: Drainage area.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 24.94 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Flow regulated occasionally by lakes above station. Several measurements of water temperature, other than those published, were made during the year.

AVERAGE DISCHARGE.--45 years (water years 1941-51, 1953-86), 135 ft³/s, 22.49 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,860 ft³/s, Sept. 1, 1978, gage height, 14.18 ft; minimum, 13.1 ft³/s, Feb. 14, 1942 (result of freezeup); minimum daily, 16 ft³/s, Aug. 30 to Sept. 3, Sept. 12, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 750 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Jan. 27	0600	1,330	8.82	Apr. 17	1900	*1,920	*10.04

Minimum discharge, 27 ft³/s, June 27, 28, 30 and July 1,2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93	51	442	73	126	107	80	116	45	27	240	43
2	74	50	376	73	129	103	79	107	43	93	180	39
3	145	51	233	87	145	100	77	98	40	140	117	40
4	202	52	152	120	141	101	75	93	37	71	92	42
5	155	175	128	122	286	101	76	89	37	52	74	42
6	129	213	130	125	263	98	84	87	38	43	61	68
7	101	109	148	100	183	95	99	87	38	37	57	78
8	82	92	130	95	152	81	95	82	41	32	58	56
9	69	86	119	97	136	82	91	77	43	30	53	48
10	62	79	111	76	129	88	85	75	38	47	44	43
11	61	75	105	74	134	92	80	76	35	39	38	39
12	57	68	106	73	129	89	77	80	70	33	35	37
13	52	67	108	73	118	101	76	84	110	47	34	36
14	53	65	139	71	110	238	78	75	79	242	33	34
15	55	68	116	63	104	373	77	70	60	136	32	33
16	51	74	103	62	66	381	244	70	50	84	31	33
17	50	241	99	61	96	302	1510	71	59	67	57	33
18	48	200	96	65	228	188	1360	68	55	60	120	31
19	47	121	89	77	621	152	625	65	43	93	70	30
20	47	104	92	106	431	135	314	62	38	118	48	32
21	47	95	83	98	280	116	200	65	36	77	50	33
22	46	127	80	88	247	105	197	83	34	61	107	57
23	47	326	80	82	190	101	254	117	32	51	71	42
24	47	191	85	75	165	100	351	100	31	57	67	65
25	49	128	89	71	148	93	245	83	30	84	62	55
26	49	113	85	415	130	92	182	70	29	87	47	44
27	51	171	80	1130	121	90	161	63	28	89	43	129
28	48	212	73	600	114	90	148	59	28	68	50	133
29	49	473	71	294	---	88	111	56	30	69	69	77
30	47	448	71	188	---	85	122	52	28	160	61	61
31	48	---	68	142	---	81	---	49	---	171	49	---
TOTAL	2161	4325	3887	4876	5122	4048	7253	2429	1305	2465	2150	1533
MEAN	69.7	144	125	157	183	131	242	78.4	43.5	79.5	69.4	51.1
MAX	202	473	442	1130	621	381	1510	117	110	242	240	133
MIN	46	50	68	61	66	81	75	49	28	27	31	30
CFSM	.86	1.77	1.53	1.93	2.25	1.61	2.97	.96	.53	.98	.85	.63
IN.	.99	1.97	1.77	2.23	2.34	1.85	3.31	1.11	.60	1.13	.98	.70

CAL YR 1985 TOTAL 32491 MEAN 89.0 MAX 633 MIN 29 CFSM 1.09 IN. 14.83
WTR YR 1986 TOTAL 41554 MEAN 114 MAX 1510 MIN 27 CFSM 1.40 IN. 18.97

01464500 CROSSWICKS CREEK AT EXTONVILLE, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1966 to June 1970.
SUSPENDED-SEDIMENT DISCHARGE: February 1965 to June 1970.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
07...	1245	101	142	7.0	14.0	8.2	79	1.6	200	1100
FEB 1986										
12...	1030	127	169	6.9	0.5	12.8	89	4.2	--	--
APR										
08...	0930	95	177	7.1	12.0	8.3	78	3.5	80	2400
JUN										
19...	1330	43	178	7.1	19.5	6.8	74	3.9	220	790
JUL										
21...	0950	79	168	6.9	23.0	5.6	66	7.5	330	4900
AUG										
11...	1200	38	182	7.2	23.5	6.1	72	7.8	790	5400

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
07...	43	13	2.5	6.1	2.4	15	23	13	0.2
FEB 1986									
12...	47	14	2.9	11	2.2	15	18	25	0.2
APR									
08...	55	17	3.0	9.0	1.3	24	20	17	0.2
JUN									
19...	54	17	2.9	9.4	3.0	28	23	17	0.2
JUL									
21...	42	13	2.3	11	2.9	20	21	16	0.2
AUG									
11...	51	16	2.8	11	3.4	24	24	18	0.3

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
07...	8.8	78	0.029	0.68	0.46	1.0	1.7	0.24	5.3
FEB 1986									
12...	8.9	91	0.011	0.89	0.82	0.99	1.9	0.16	5.5
APR									
08...	9.2	91	0.078	1.29	0.35	1.0	2.3	0.29	5.7
JUN									
19...	10	99	0.146	1.65	0.49	E0.39	--	0.03	5.6
JUL									
21...	8.6	87	0.123	1.16	0.73	1.8	2.9	0.42	6.9
AUG									
11...	10	100	0.154	1.71	0.42	1.3	3.0	0.25	7.8

01464500 CROSSWICKS CREEK AT EXTONVILLE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
OCT 1985 07...	1245	<0.5	30	1	<10	50	1	10	3
JUN 1986 19...	1330	<0.5	<10	1	<10	20	<1	<10	16

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1985 07...	2000	12	70	<0.1	18	<1	130	4
JUN 1986 19...	2400	8	80	0.1	3	<1	20	3

01464515 DOCTORS CREEK AT ALLENTOWN, NJ

LOCATION.--Lat 40°10'37", long 74°35'57", Monmouth County, Hydrologic Unit 02040201, at bridge on Breza Road in Allentown, and 0.8 mi downstream from Conines Millpond dam.

DRAINAGE AREA.--17.4 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
07...	1000	E15	148	7.1	15.0	8.4	82	3.4	200	1300
FEB 1986										
12...	1200	E22	163	7.0	2.0	13.4	97	3.2	--	--
APR										
08...	1045	E14	163	7.2	13.0	10.1	97	2.1	330	230
JUN										
19...	1115	E4.3	178	7.0	20.0	6.5	71	4.8	2400	1400
JUL										
21...	1120	E10	152	7.2	24.0	6.9	82	6.6	3500	700
AUG										
11...	1310	E3.6	168	7.3	25.0	6.3	77	4.5	1400	1100

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
07...	41	10	4.0	5.0	4.4	16	20	13	0.2
FEB 1986									
12...	51	12	5.2	8.1	3.1	10	18	27	0.1
APR									
08...	52	12	5.3	7.0	3.3	17	33	17	0.2
JUN									
19...	58	14	5.7	7.8	3.5	28	21	15	0.3
JUL									
21...	46	11	4.5	5.6	3.8	24	19	11	0.3
AUG									
11...	54	13	5.2	6.7	4.4	31	18	14	0.3

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
07...	8.6	75	0.014	0.56	0.65	1.2	1.8	0.24	6.3
FEB 1986									
12...	8.2	88	0.018	2.02	0.61	0.75	2.8	0.13	2.3
APR									
08...	3.6	92	0.02	0.95	0.35	0.87	1.8	0.11	4.0
JUN									
19...	7.3	91	0.065	1.35	0.56	0.84	2.2	0.34	5.6
JUL									
21...	7.8	77	0.044	0.71	0.40	1.2	1.9	0.26	6.4
AUG									
11...	8.6	89	0.095	0.94	0.76	1.2	2.1	0.29	6.7

01464515 DOCTORS CREEK AT ALLENTOWN, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITRO-GEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INOR-GANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD)
OCT 1985											
07...	1000	--	160	<0.1	7.4	--	--	--	--	--	<1
07...	1000	<0.5	--	--	--	30	1	<10	40	<1	--
JUN 1986											
19...	1115	<0.5	--	--	--	40	<1	<10	<10	<1	--

DATE	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	COBALT, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, RECOV. FM BOT-TOM MA-TERIAL (UG/G)
OCT 1985											
07...	--	130	<10	--	40	--	26000	--	60	--	230
07...	10	--	--	29	--	1700	--	6	--	100	--
JUN 1986											
19...	<10	--	--	5	--	970	--	<5	--	120	--

DATE	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY RECOV. FM BOT-TOM MA-TERIAL (UG/G AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SELE-NIUM, TOTAL IN BOT-TOM MA-TERIAL (UG/G)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PCN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
OCT 1985											
07...	--	0.1	--	10	--	<1	--	110	--	<1	<1.0
07...	<0.1	--	14	--	<1	--	130	--	5	--	--
JUN 1986											
19...	<0.1	--	5	--	<1	--	10	--	2	--	--

DATE	ALDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	CHLOR-DANE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDD, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDT, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DI-AZINON, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DI-ELDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ENDO-SULFAN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ENDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ETHION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	HEPTA-CHLOR, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
OCT 1985											
07...	<0.1	7.0	2.5	3.2	<0.1	<0.1	0.4	<0.1	<0.1	<0.1	<0.1
07...	--	--	--	--	--	--	--	--	--	--	--
JUN 1986											
19...	--	--	--	--	--	--	--	--	--	--	--

DATE	HEPTA-CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	MALA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	METH-OXY-CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARA-THION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRI-THION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PARA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PER-THANE IN BOT-TOM MA-TERIAL (UG/KG)	TOXA-PHENE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	TRI-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
OCT 1985											
07...	0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1
07...	--	--	--	--	--	--	--	--	--	--	--
JUN 1986											
19...	--	--	--	--	--	--	--	--	--	--	--

01464598 DELAWARE RIVER AT BURLINGTON, NJ

LOCATION.--Lat 40°04'42", long 74°52'28", Burlington County, Hydrologic Unit 02040201, on left bank at the intake canal of the Public Service Electric and Gas Company, 0.3 mi downstream from Burlington-Bristol Bridge, 1.4 mi downstream from Assiscunk Creek, and at mile 117.54.

DRAINAGE AREA.--7,160 mi².

TIDE ELEVATION DATA

PERIOD OF RECORD.--July 1964 to current year. March 1921 to July 1926, January 1931 to November 1939, August 1951 to June 1954, July 1957 to June 1964, in files of Philadelphia District Corps of Engineers.

REVISED RECORDS.--WDR NJ-76-1: 1973(m).

GAGE.--Water-stage recorder. Datum of gage is -12.90 ft below National Geodetic Vertical Datum of 1929. Prior to May 20, 1971, water-stage recorder at site 0.7 mi upstream at same datum. Gage-height record converted to elevation above or below (-) National Geodetic Vertical Datum of 1929 for publication.

REMARKS.--No gage-height or doubtful record: Oct. 1-3, Nov. 23-30, Dec. 1-3, Jan. 11-13, 16, 21, and Mar. 8-31. Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy unless otherwise noted. Some periods cannot be estimated and are noted by dash (--) lines.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 8.74 ft Oct. 25, 1980; minimum, -6.60 ft Feb. 26, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation known, 10.8 ft, Aug. 20, 1955, from high-water mark at site 1.4 mi upstream; minimum, -9.1 ft Dec. 31, 1962, at present site.

EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded, 6.99 ft, Apr. 26; minimum recorded, -4.41 ft, Sept. 16.

Summaries of tide elevations during current year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	6.69	a6.7	a6.8	6.67	6.27	a6.5	6.99	6.86	6.69	6.57	6.85	5.91
high tide	Date	15	30	1	26	23	15	26	13	23	21	19	5
Minimum	Elevation	-3.28	-3.25	-3.62	-4.21	-3.40	--	-3.20	-3.56	-3.50	-2.99	-3.17	-4.41
low tide	Date	28	11	3	8	14	--	23	3	17	6,21	12	16
Mean high tide		5.16	--	4.84	4.15	4.87	--	5.49	5.37	5.21	5.14	5.11	4.90
Mean water level		1.61	--	1.39	.98	1.53	--	1.99	1.74	1.52	1.52	1.58	1.37
Mean low tide		-2.24	--	-2.39	-2.50	-2.05	--	-1.83	-2.22	-2.51	-2.45	-2.28	-2.44

a -- Estimated

01465850 SOUTH BRANCH RANCOCAS CREEK AT VINCENTOWN, NJ

LOCATION.--Lat 39°56'22", long 74°45'50", Burlington County, Hydrologic Unit 02040202, at bridge on Lumberton-Vincentown Road at Vincentown, 2.9 mi southeast of Lumberton, and 3.1 mi upstream from Southwest Branch.

DRAINAGE AREA.--64.5 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1925, 1959-62, 1975 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
01...	0900	E32	98	4.7	17.5	7.5	78	1.4	230	490
FEB 1986										
14...	0900	E82	115	5.1	0.5	13.5	92	1.1	--	--
APR										
02...	0900	E40	68	5.5	16.0	7.9	80	1.5	130	920
MAY										
20...	0900	E29	84	6.2	22.0	6.3	72	2.1	540	540
JUL										
01...	0900	E16	90	6.7	21.5	6.6	74	2.2	140	490
AUG										
11...	1000	E17	66	6.3	24.5	6.0	72	3.1	11	350

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
01...	22	6.0	1.7	4.6	2.0	1.0	22	7.9	<0.1
FEB 1986									
14...	23	5.9	1.9	4.7	1.5	<1.0	17	9.6	<0.1
APR									
02...	16	4.3	1.3	4.2	1.2	<3.0	14	6.9	<0.1
MAY									
20...	21	6.0	1.5	4.6	1.6	5.0	19	8.0	<0.1
JUL									
01...	25	7.5	1.5	5.4	1.8	10	16	8.2	<0.1
AUG									
11...	17	4.7	1.3	4.3	1.3	5.0	16	6.6	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
01...	6.2	51	0.003	0.26	0.18	0.63	0.89	0.10	9.2
FEB 1986									
14...	5.6	--	0.01	0.668	0.08	0.6	1.3	0.05	10
APR									
02...	2.8	--	0.007	0.20	0.16	0.47	0.67	0.08	8.3
MAY									
20...	4.0	48	0.011	0.43	0.18	0.84	1.3	0.24	13
JUL									
01...	4.1	50	0.018	0.67	0.21	0.6	1.3	0.32	8.9
AUG									
11...	4.9	42	0.006	0.46	0.16	0.41	0.87	0.23	12

01465850 SOUTH BRANCH RANCOCAS CREEK AT VINCENTOWN, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
OCT 1985 01...	0900	<0.5	<10	<1	<10	20	3	40	99

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1985 01...	1100	45	50	<0.1	26	<1	550	7

01465970 NORTH BRANCH RANCOCAS CREEK AT BROWNS MILLS, NJ

LOCATION.--Lat 39°58'04", long 74°34'48", Burlington County, Hydrologic Unit 02040202, at bridge on Lakehurst Road at outflow of Mirror Lake in Browns Mills, 1.5 mi north of Browns Mills Junction, and 2.0 mi northwest of outflow of Country Lake.

DRAINAGE AREA.--27.4 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
10...	1145	E25	58	5.4	17.0	9.0	92	1.3	7	22
FEB 1986										
14...	1130	E49	58	4.6	3.5	12.6	94	0.9	--	--
APR										
02...	1115	E30	60	4.9	15.5	10.0	100	1.0	<2	23
MAY										
20...	0930	E24	51	5.0	19.5	9.6	105	1.4	2	17
JUL										
01...	0930	E16	45	5.7	24.0	7.9	94	1.6	<20	170
AUG										
28...	0930	E19	42	6.2	23.0	8.2	96	1.2	<20	33

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
10...	13	3.0	1.3	3.1	1.2	2.0	13	5.4	<0.1
FEB 1986									
14...	11	2.5	1.1	3.1	0.9	<1.0	13	5.6	<0.1
APR									
02...	12	2.8	1.3	3.5	0.9	<3.0	12	5.6	<0.1
MAY									
20...	10	2.3	1.1	3.1	0.8	2.0	12	5.5	<0.1
JUL									
01...	9	1.9	0.94	3.1	0.9	3.0	17	6.1	<0.1
AUG									
28...	10	2.0	1.1	2.9	1.0	3.0	10	5.0	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
10...	4.0	32	<0.003	0.07	0.10	0.48	0.55	0.03	5.3
FEB 1986									
14...	4.3	--	0.004	0.118	0.04	0.4	0.52	<0.01	6.9
APR									
02...	3.2	--	0.009	0.09	0.09	0.3	0.39	0.05	4.7
MAY									
20...	2.3	28	<0.003	<0.05	0.07	0.47	--	0.03	5.4
JUL									
01...	2.7	34	0.013	0.05	0.13	0.42	0.47	0.05	6.4
AUG									
28...	1.5	25	0.005	<0.05	0.06	0.53	--	0.04	6.0

01465970 NORTH BRANCH RANCOCAS CREEK AT BROWNS MILLS, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
MAY 1986 20...	0930	<0.5	140	<1	<10	<10	<1	<10	9

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
MAY 1986 20...	1200	14	40	<0.1	2	<1	40	1

01466500 MCDONALDS BRANCH IN LEBANON STATE FOREST, NJ
(Hydrologic bench-mark station)

LOCATION.--Lat 39°53'05", long 74°30'20", Burlington County, Hydrologic Unit 02040202, on right bank in Lebanon State Forest, 25 ft upstream from Butterworth Road Bridge, 3.4 mi upstream from confluence with Cooper Branch, and 7.0 mi southeast of Browns Mills.

DRAINAGE AREA.--2.35 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1953 to current year. Prior to October 1962, published as "McDonald Branch in Lebanon State Forest".

REVISED RECORDS.--WDR NJ-82-2: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 117.73 ft above National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark).

REMARKS.--Estimated daily discharges: Jan. 8-20 and Feb. 4-5. Records good above 1.0 ft³/s and fair below, except for estimated daily discharges, which are fair. Gage-height record is collected above concrete control and discharge record, which includes leakage around control, is at site 785 ft downstream. Several measurements of water temperature, other than those published, were made during the year.

AVERAGE DISCHARGE.--33 years, 2.26 ft³/s, 13.06 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35 ft³/s, Aug. 25, 1958, gage height, 2.33 ft; minimum daily, 0.71 ft³/s, Sept. 21, 22, 1985.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7.0 ft³/s and maximum(*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 18	0215	*5.8	*1.65	No peak greater than base discharge.			

Minimum daily discharge, 0.85 ft³/s, Oct. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.99	.86	1.4	1.1	1.6	1.7	1.5	2.0	1.4	1.1	1.5	.97
2	.96	.86	1.3	1.1	1.7	1.6	1.5	1.9	1.4	1.6	1.3	.99
3	1.2	.86	1.2	1.2	1.7	1.6	1.5	1.9	1.4	1.4	1.2	1.0
4	1.2	.86	1.1	1.2	1.7	1.6	1.5	1.8	1.3	1.2	1.2	1.0
5	1.2	1.1	1.1	1.2	1.7	1.6	1.5	1.8	1.3	1.2	1.1	1.0
6	1.1	.94	1.2	1.1	1.7	1.6	1.5	1.8	1.3	1.1	1.1	1.1
7	.98	.89	1.2	1.1	1.8	1.6	1.5	1.7	1.4	1.1	1.1	1.0
8	.95	.87	1.2	1.1	1.8	1.6	1.5	1.7	1.4	1.1	1.1	.98
9	.93	.86	1.2	1.1	1.7	1.5	1.5	1.7	1.4	1.1	1.1	.96
10	.92	.86	1.2	1.1	1.7	1.6	1.5	1.7	1.3	1.1	1.1	.95
11	.90	.86	1.2	1.1	1.7	1.6	1.4	1.7	1.3	1.1	1.0	.95
12	.90	.87	1.2	1.1	1.6	1.6	1.4	1.7	1.9	1.1	1.0	.95
13	.90	.88	1.2	1.0	1.6	1.8	1.4	1.6	2.0	1.1	1.0	.93
14	.90	.87	1.2	1.0	1.5	2.2	1.4	1.6	1.7	1.1	1.0	.91
15	.90	.87	1.2	1.0	1.5	2.2	1.4	1.6	1.6	1.1	.99	.90
16	.90	.93	1.2	.99	1.5	2.2	2.6	1.6	1.5	1.1	.99	.90
17	.89	1.1	1.2	1.0	1.5	2.3	3.8	1.6	1.3	1.1	1.0	.88
18	.89	.94	1.1	.99	1.8	2.1	5.4	1.6	1.2	1.1	1.0	.88
19	.88	.90	1.1	.99	1.9	2.0	4.0	1.6	1.2	1.3	1.0	.92
20	.88	.89	1.1	1.1	2.0	1.9	3.0	1.6	1.2	1.1	1.0	.90
21	.87	.88	1.1	1.1	2.8	1.7	2.7	1.6	1.2	1.1	1.3	.92
22	.87	1.0	1.1	1.1	2.8	1.7	2.5	1.8	1.2	1.1	1.2	.90
23	.87	1.0	1.1	1.1	2.4	1.6	2.7	1.7	1.2	1.0	1.1	.92
24	.87	.95	1.1	1.1	2.2	1.6	2.7	1.7	1.2	1.0	1.1	.98
25	.87	.93	1.1	1.0	2.1	1.6	2.6	1.6	1.2	.98	1.0	.93
26	.86	.96	1.1	2.0	1.9	1.6	2.5	1.5	1.1	.99	.99	.94
27	.86	.99	1.1	2.1	1.8	1.6	2.3	1.5	1.1	1.1	.99	1.2
28	.86	1.1	1.1	2.1	1.7	1.6	2.2	1.5	1.1	1.1	1.1	1.1
29	.85	1.3	1.1	1.7	---	1.5	2.1	1.5	1.1	1.3	1.1	.98
30	.86	1.2	1.1	1.6	---	1.5	2.1	1.4	1.1	1.8	.99	.94
31	.86	---	1.1	1.5	---	1.5	---	1.4	---	1.6	.98	---
TOTAL	28.87	28.38	35.9	37.97	51.4	53.4	65.2	51.4	40.0	36.27	33.63	28.88
MEAN	.93	.95	1.16	1.22	1.84	1.72	2.17	1.66	1.33	1.17	1.08	.96
MAX	1.2	1.3	1.4	2.1	2.8	2.3	5.4	2.0	2.0	1.8	1.5	1.2
MIN	.85	.86	1.1	.99	1.5	1.5	1.4	1.4	1.1	.98	.98	.88
CFSM	.40	.40	.49	.52	.78	.73	.92	.71	.57	.50	.46	.41
IN.	.46	.45	.57	.60	.81	.85	1.03	.81	.63	.57	.53	.46

CAL YR 1985 TOTAL 415.04 MEAN 1.14 MAX 1.9 MIN .71 CFSM .49 IN. 6.57
WTR YR 1986 TOTAL 491.30 MEAN 1.35 MAX 5.4 MIN .85 CFSM .57 IN. 7.78

01466500 MCDONALDS BRANCH IN LEBANON STATE FOREST, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1968 to current year.
PH: October 1984 to current year.
WATER TEMPERATURE: October 1960 to current year.
DISSOLVED OXYGEN: October 1984 to current year.

INSTRUMENTATION.--Temperature recorder since October 1960, water-quality monitor since October 1968.

REMARKS.--Water-quality samples were collected at the weir. Interruptions in the daily record were due to malfunctions of the instrument. The dissolved oxygen probe failed repeatedly during the period June-September, 1986. Accuracy of published record during this period is within 0.5 mg/L.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 182 microsiemens, June 16, 1969; minimum, 19 microsiemens, Aug. 25, 1979, Nov. 14, 1985.
pH: Maximum, 5.4, Nov. 1, 1985; minimum recorded, 3.8, Apr. 17-21, 23-25, 1986.
WATER TEMPERATURE: Maximum, 22.0°C, Aug. 1, 1970; minimum, 0.0°C on many days during winter months.
DISSOLVED OXYGEN: Maximum, 9.5 mg/L, Jan. 29, Feb. 22, 1986; minimum, 1.1 mg/L, May 11, 20, 1985.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 130 microsiemens, Jan. 29; minimum, 19 microsiemens, Nov. 14.
pH: Maximum, 5.4, Nov. 1; minimum, 3.8, Apr. 17-21, 23-25.
WATER TEMPERATURE: Maximum, 17.0°C, July 29, 30; minimum, 2.0°C, Jan. 29-31, Feb. 1.
DISSOLVED OXYGEN: Maximum, 9.5 mg/L, Jan. 29, Feb. 22; minimum, 1.4 mg/L, Nov. 20, July 15, 26.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)
OCT 1985												
22...	1050	0.88	34	4.5	11.5	4.0	2.1	19	0.6	K3	120	3
NOV												
18...	1325	0.99	36	4.4	10.5	0.4	3.5	31	0.7	K1	87	4
DEC												
17...	1330	1.2	58	4.3	6.5	0.5	5.7	47	0.6	<1	24	5
JAN 1986												
21...	1030	1.1	44	4.4	6.5	0.5	6.2	51	--	--	--	4
FEB												
18...	1240	1.8	71	4.0	4.5	0.5	7.6	60	0.6	<1	8	6
MAR												
21...	1240	1.7	82	3.9	6.5	0.6	6.4	51	0.2	<1	45	6
APR												
25...	1045	2.6	83	3.8	8.5	1.0	4.9	42	0.4	<1	37	6
MAY												
29...	1000	1.5	46	4.1	13.0	1.0	2.5	24	--	<1	<41	3
JUN												
25...	1230	1.1	35	4.2	14.0	1.5	3.0	29	<0.1	5	K100	2
JUL												
23...	1130	1.0	34	4.4	15.5	8.5	2.6	26	0.6	5	130	2
AUG												
25...	1320	1.0	35	4.3	15.0	2.0	3.0	30	0.9	5	K340	2
SEP												
26...	1140	0.91	29	4.3	14.0	1.0	2.6	25	0.6	11	K670	2

DATE	ACIDITY (MG/L AS H)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE IT-FLD (MG/L AS HCO3)	ALKA-LINITY, CARBON-ATE IT-FLD (MG/L - CACO3)	ALKA-LINITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
OCT 1985												
22...	--	0.4	0.51	2.3	0.2	<0.1	<0.1	<1	3.6	3.4	<0.1	4.2
NOV												
18...	0.2	0.51	0.61	2.4	0.3	<0.1	<0.1	<1	5.5	3.5	<0.1	4.4
DEC												
17...	0.2	0.8	0.8	2.2	0.5	<0.1	<0.1	<1	9.5	3.9	0.2	4.9
JAN 1986												
21...	--	0.7	0.6	2.1	0.5	<0.1	<0.1	<1	8.9	3.6	<0.1	4.5
FEB												
18...	0.2	0.99	0.79	2.2	0.5	<0.1	<0.1	<1	11	4.1	<0.1	4.4
MAR												
21...	0.3	1.1	0.8	2.4	0.4	<0.1	<0.1	<1	12	3.6	<0.1	4.1
APR												
25...	0.4	1.1	0.8	2.3	0.2	<0.1	<0.1	<1	12	4.3	<0.1	3.3
MAY												
29...	0.2	0.45	0.34	1.9	0.2	<0.1	<0.1	<1	7.7	3.7	<0.1	4.1
JUN												
25...	0.3	0.3	0.23	1.7	0.1	<0.1	<0.1	<1	5.7	3.6	<0.1	4.2
JUL												
23...	0.1	0.25	0.25	1.6	0.2	<0.1	<0.1	<1	5.1	3.6	<0.1	4.1
AUG												
25...	<0.1	0.31	0.29	1.8	0.4	<0.1	<0.1	<1	4.7	3.6	<0.1	4.4
SEP												
26...	0.1	0.31	0.41	1.9	0.3	<0.1	<0.1	<1	4.2	3.5	<0.1	4.4

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	CARBON, ORGANIC DISSOLVED (MG/L AS C)
OCT 1985												
22...	5	0.01	50	<0.01	<0.10	0.02	<0.01	0.6	0.01	0.02	0.01	2.8
NOV												
18...	2	0.01	33	<0.01	<0.10	0.02	0.02	0.3	<0.01	<0.01	0.01	3.7
DEC												
17...	1	0.0	25	<0.01	<0.10	<0.01	0.02	<0.2	<0.01	<0.01	<0.01	3.0
JAN 1986												
21...	4	0.01	8	<0.01	<0.10	0.01	0.01	0.4	<0.01	<0.01	<0.01	3.5
FEB												
18...	<1	--	100	<0.01	<0.10	0.03	0.03	0.3	<0.01	<0.01	<0.01	5.5
MAR												
21...	<1	--	100	<0.01	<0.10	0.02	0.01	0.3	<0.01	<0.01	0.01	7.3
APR												
25...	<1	--	100	<0.01	<0.10	0.01	0.05	0.4	<0.01	<0.01	<0.01	12
MAY												
29...	2	0.01	100	<0.01	<0.10	0.01	0.01	0.2	<0.01	0.02	<0.01	6.2
JUN												
25...	1	0.0	100	<0.01	<0.10	0.02	0.02	0.2	<0.01	<0.01	<0.01	2.6
JUL												
23...	<1	--	100	<0.01	<0.10	0.04	0.02	<0.2	<0.01	<0.01	<0.01	2.8
AUG												
25...	<1	--	100	<0.01	<0.10	0.03	0.02	<0.2	<0.01	0.02	<0.01	2.6
SEP												
26...	<1	--	100	<0.01	<0.10	0.07	0.02	<0.2	0.01	<0.01	0.01	2.1

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)
OCT 1985										
22...	1050	--	<1	10	2	2	<1	<3	2	110
DEC										
17...	1330	130	--	--	--	--	--	--	--	65
JAN 1986										
21...	1030	70	<1	12	--	<1	2	<3	3	47
FEB										
18...	1240	310	--	--	--	--	--	--	--	92
MAR										
21...	1240	370	--	--	--	--	--	--	--	130
APR										
25...	1045	430	<1	26	<0.5	<1	<1	<3	1	210
MAY										
29...	1000	140	--	--	--	--	--	--	--	110
JUN										
25...	1230	100	--	--	--	--	--	--	--	110
JUL										
23...	1130	80	--	--	--	--	--	--	--	110
AUG										
25...	1320	90	--	--	--	--	--	--	--	91
SEP										
26...	1140	60	--	--	--	--	--	--	--	87

DATE	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)
OCT 1985										
22...	<1	<4	9	<0.1	<10	<1	<1	<1	5	<6
DEC										
17...	2	--	17	--	--	--	--	--	--	--
JAN 1986										
21...	<1	<4	10	<0.1	<10	<1	<1	<1	8	<6
FEB										
18...	5	--	27	--	--	--	--	--	--	--
MAR										
21...	1	--	27	--	--	--	--	--	--	--
APR										
25...	3	<4	29	<0.1	<10	<1	<1	<1	13	<6
MAY										
29...	<5	--	8	--	--	--	--	--	--	--
JUN										
25...	<5	--	7	--	--	--	--	--	--	--
JUL										
23...	<5	--	6	--	--	--	--	--	--	--
AUG										
25...	<5	--	5	--	--	--	--	--	--	--
SEP										
26...	<5	--	6	--	--	--	--	--	--	--

01466500 MCDONALDS BRANCH IN LEBANON STATE FOREST, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	ZINC, DIS-SOLVED (UG/L AS ZN)	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L)	URANIUM DIS-SOLVED, EXTRAC-TION (UG/L)
OCT 1985									
22...	10	0.4	0.5	1.5	0.5	1.5	0.5	0.13	0.11
DEC									
17...	--	--	--	--	--	--	--	--	--
JAN 1986									
21...	18	--	--	--	--	--	--	--	--
FEB									
18...	--	--	--	--	--	--	--	--	--
MAR									
21...	--	--	--	--	--	--	--	--	--
APR									
25...	36	--	--	--	--	--	--	--	--
MAY									
29...	--	--	--	--	--	--	--	--	--
JUN									
25...	--	--	--	--	--	--	--	--	--
JUL									
23...	--	--	--	--	--	--	--	--	--
AUG									
25...	--	--	--	--	--	--	--	--	--
SEP									
26...	--	--	--	--	--	--	--	--	--

01466500 MCDONALDS BRANCH IN LEBANON STATE FOREST, NJ--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	54	50	52	31	23	26	70	64	67	46	44	45
2	50	47	49	25	24	25	72	71	71	45	41	44
3	55	45	50	24	22	23	72	70	71	47	43	45
4	54	51	53	24	22	22	71	65	70	47	45	47
5	60	52	54	35	23	32	69	66	68	48	46	47
6	68	51	57	37	32	35	67	66	67	49	47	48
7	50	46	48	31	24	29	67	65	66	49	48	49
8	48	46	47	28	24	26	64	63	64	50	48	49
9	50	44	45	28	26	27	63	61	62	49	47	48
10	45	42	43	27	25	26	61	59	60	49	47	48
11	42	40	41	25	21	24	60	58	59	48	47	48
12	40	38	39	24	21	23	59	56	58	48	46	47
13	38	36	37	23	22	23	58	54	57	47	45	46
14	37	35	36	23	19	22	57	56	57	46	45	46
15	35	34	35	24	20	21	58	56	57	46	44	45
16	34	33	33	28	21	22	57	56	57	45	43	44
17	34	32	33	40	29	35	59	56	57	44	42	43
18	32	30	31	41	36	39	59	56	58	43	42	42
19	32	30	31	39	34	37	58	56	57	43	42	42
20	44	30	35	34	27	31	56	54	55	43	42	43
21	31	29	30	33	29	31	55	50	53	43	42	43
22	30	28	29	40	20	32	53	51	52	43	42	43
23	31	28	30	45	42	44	52	50	51	43	42	43
24	31	29	30	45	41	43	51	49	50	43	42	43
25	29	25	28	43	39	41	50	47	49	44	41	42
26	29	27	28	42	38	40	49	46	48	88	45	74
27	29	27	28	44	42	43	49	47	48	105	88	100
28	28	25	27	49	38	43	48	46	47	126	102	113
29	27	26	27	57	51	55	47	46	47	130	127	129
30	27	26	27	63	58	60	47	44	45	128	122	125
31	27	26	26	---	---	---	46	45	46	122	113	118
MONTH	68	25	37	63	19	33	72	44	57	130	41	58

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	113	106	109	83	79	81	59	57	58	70	68	69
2	105	101	102	79	76	78	57	56	56	69	66	68
3	101	96	98	77	74	76	56	54	55	67	65	66
4	97	93	95	75	73	74	56	53	54	66	64	65
5	102	97	100	74	71	73	54	52	53	64	62	63
6	102	101	102	74	71	72	54	52	53	62	61	61
7	105	99	102	73	70	71	55	53	54	61	60	60
8	105	103	104	71	69	70	54	53	54	60	58	59
9	103	100	102	69	67	68	55	52	53	59	57	58
10	100	95	98	68	66	67	53	52	52	58	56	57
11	95	90	92	68	66	67	53	51	52	57	55	56
12	90	87	89	70	68	69	51	50	50	55	54	55
13	87	84	85	81	68	75	50	49	49	54	53	54
14	84	80	82	90	79	86	49	48	49	54	52	53
15	79	76	78	94	90	91	47	46	47	53	51	52
16	77	74	75	95	88	90	90	47	68	52	51	52
17	74	71	72	99	95	97	105	91	97	52	51	51
18	82	72	75	100	93	96	107	105	106	51	50	50
19	88	82	86	95	89	92	104	97	100	50	49	49
20	97	88	91	90	87	89	97	90	93	50	48	49
21	115	98	107	88	83	85	90	86	88	51	50	51
22	113	108	110	84	79	81	86	83	84	56	50	54
23	108	103	106	79	76	77	85	83	84	58	56	57
24	104	99	101	76	73	74	86	83	84	58	56	57
25	98	93	96	73	69	71	84	83	83	56	54	55
26	94	89	91	69	67	68	83	81	82	54	51	53
27	89	85	87	68	66	67	81	78	80	52	49	51
28	86	82	84	66	64	65	78	75	77	50	48	49
29	---	---	---	64	63	64	75	73	74	48	46	47
30	---	---	---	63	61	62	73	70	72	46	44	45
31	---	---	---	61	60	60	---	---	---	45	43	44
MONTH	115	71	94	100	60	76	107	46	69	70	43	55

01466500 MCDONALDS BRANCH IN LEBANON STATE FOREST, NJ--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	44	42	43	33	32	33	62	59	61	31	30	31
2	43	41	42	46	33	42	58	54	56	31	30	30
3	42	40	41	46	41	43	54	50	52	31	30	30
4	41	40	40	41	40	40	50	47	49	31	30	30
5	40	39	40	40	38	39	48	45	46	31	29	30
6	40	38	39	39	37	38	45	42	43	31	30	30
7	39	38	38	38	37	37	42	40	41	31	29	30
8	40	37	38	37	36	36	41	38	40	30	29	30
9	41	40	40	36	35	35	39	37	38	30	29	29
10	40	39	40	36	35	35	37	36	37	30	29	30
11	42	39	40	35	34	34	36	35	36	30	29	29
12	60	40	52	35	33	34	35	34	35	29	28	29
13	70	62	67	34	32	33	35	33	34	29	28	29
14	70	66	68	33	32	33	34	33	33	29	28	29
15	66	60	63	32	30	32	34	32	33	29	28	29
16	60	55	57	33	30	32	33	32	32	29	28	29
17	55	52	53	32	31	32	33	31	32	29	28	28
18	52	49	50	32	31	31	32	31	31	29	28	29
19	49	46	47	35	31	34	32	31	31	29	28	29
20	46	44	45	35	33	34	32	30	31	29	28	29
21	44	42	43	33	32	33	38	31	34	29	28	29
22	43	41	42	33	31	32	38	36	37	29	28	29
23	42	40	41	---	---	---	36	34	35	30	28	29
24	40	39	39	---	---	---	35	33	34	30	29	29
25	40	35	37	32	30	31	34	32	33	30	28	29
26	36	35	35	32	30	31	33	31	32	41	28	32
27	35	34	35	33	31	32	32	31	31	43	41	42
28	35	33	34	34	33	33	33	31	32	42	39	40
29	34	33	34	54	32	36	33	31	32	39	37	38
30	34	32	33	60	55	57	32	31	32	36	35	36
31	---	---	---	63	60	61	32	30	31	---	---	---
MONTH	70	32	44	63	30	36	62	30	37	43	28	31

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	15.5	14.5	14.5	11.0	10.0	10.5	10.0	9.5	9.5	6.0	5.5	5.5
2	15.0	14.5	14.5	10.5	9.5	10.0	10.0	8.5	9.5	6.0	5.0	5.5
3	14.5	14.5	14.5	11.0	10.5	11.0	8.5	7.5	8.0	6.5	5.5	6.0
4	15.0	14.5	14.5	11.5	11.0	11.0	7.5	7.0	7.5	6.5	6.0	6.0
5	15.0	14.0	15.0	12.0	11.5	12.0	7.5	6.5	7.0	6.5	6.0	6.5
6	14.0	13.0	13.5	11.5	11.0	11.5	7.5	7.5	7.5	6.0	6.0	6.0
7	13.5	11.5	12.5	11.5	10.5	11.0	7.5	7.0	7.0	6.0	5.0	5.5
8	13.5	10.5	12.0	11.0	9.5	10.5	7.5	7.0	7.0	5.0	4.5	5.0
9	13.5	11.5	12.5	10.0	8.5	9.5	7.5	6.5	7.0	5.0	4.5	5.0
10	14.0	13.0	13.5	11.0	10.0	10.5	7.5	7.0	7.5	5.5	5.0	5.5
11	14.0	12.5	13.5	12.0	11.0	11.5	8.0	7.5	8.0	5.5	5.0	5.0
12	12.5	11.5	12.0	11.5	11.5	11.5	8.5	8.0	8.5	6.0	5.0	5.5
13	13.5	12.0	12.5	12.0	11.5	11.5	8.5	8.0	8.0	6.0	5.0	5.5
14	14.0	12.5	13.0	12.0	12.0	12.0	8.5	7.0	8.0	5.0	4.5	5.0
15	14.5	13.5	14.0	12.0	10.0	11.0	7.0	6.5	7.0	4.5	4.0	4.0
16	14.0	13.5	14.0	11.5	9.5	10.0	7.0	6.0	6.5	5.0	4.0	4.5
17	13.0	11.5	12.5	11.5	10.0	11.5	6.5	6.5	6.5	5.5	4.5	5.0
18	12.0	10.5	11.0	10.5	9.0	10.0	6.5	5.5	6.0	6.0	5.0	5.5
19	13.0	12.0	12.5	11.0	10.0	11.0	5.5	5.0	5.5	6.5	6.0	6.5
20	13.5	12.5	13.0	12.0	11.0	11.5	5.5	4.5	5.0	6.5	6.5	6.5
21	12.5	12.0	12.5	12.0	10.5	11.5	5.0	4.5	5.0	7.0	6.5	6.5
22	12.5	11.5	12.0	11.0	9.0	10.0	5.0	4.5	5.0	7.0	6.0	6.5
23	13.5	12.5	12.5	10.5	8.0	9.5	6.0	5.0	5.5	7.0	6.0	6.5
24	13.0	12.0	12.5	9.0	8.0	8.5	6.5	5.5	6.0	6.0	5.5	6.0
25	14.0	12.0	13.0	8.5	8.0	8.0	6.0	5.5	6.0	7.0	5.5	6.0
26	12.0	10.0	10.5	8.5	7.5	8.0	5.5	4.5	5.0	7.0	5.5	6.0
27	11.0	10.0	10.5	9.5	8.5	9.0	5.5	4.5	5.0	5.5	4.5	5.0
28	11.5	10.0	11.0	9.5	8.5	9.0	5.5	5.5	5.5	4.0	2.5	3.5
29	9.5	8.0	9.0	9.5	9.0	9.0	5.5	5.0	5.5	2.0	2.0	2.0
30	8.5	7.0	8.0	9.5	9.0	9.5	5.5	5.0	5.0	2.5	2.0	2.0
31	10.0	9.0	9.5	---	---	---	6.0	5.0	5.5	2.5	2.0	2.0
MONTH	15.5	7.0	12.5	12.0	7.5	10.5	10.0	4.5	6.5	7.0	2.0	5.0

01466500 MCDONALDS BRANCH IN LEBANON STATE FOREST, NJ--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	3.0	2.0	2.5	3.5	2.5	3.0	10.0	8.5	9.5	11.5	10.5	11.0
2	4.0	3.0	3.5	3.5	3.0	3.5	10.5	9.5	10.0	11.5	10.5	11.0
3	4.0	3.5	3.5	4.0	3.0	3.5	10.0	9.0	9.5	10.5	10.0	10.0
4	4.0	4.0	4.0	4.0	3.5	4.0	9.5	9.0	9.5	10.0	9.0	9.5
5	4.5	4.0	4.0	4.5	4.0	4.5	9.5	9.5	9.5	11.0	9.5	10.0
6	4.5	4.0	4.5	5.0	4.0	4.5	9.5	9.0	9.5	12.0	10.5	11.0
7	4.0	3.0	3.5	4.5	3.5	4.5	10.0	9.0	9.5	12.5	11.5	12.0
8	3.5	3.5	3.5	4.0	3.5	3.5	10.5	9.5	10.0	12.5	11.5	12.0
9	4.0	3.5	3.5	4.5	3.5	4.0	10.0	9.5	9.5	12.0	11.0	11.5
10	4.0	3.5	4.0	5.5	4.0	5.0	9.5	9.0	9.0	11.5	10.5	11.0
11	4.0	3.0	3.5	6.5	5.5	6.5	9.0	9.0	9.0	11.0	10.0	10.5
12	3.5	3.0	3.5	6.5	5.5	6.0	9.0	8.5	9.0	11.0	10.0	10.5
13	3.5	3.0	3.0	6.0	6.0	6.0	8.5	8.0	8.5	11.0	10.0	10.5
14	3.5	3.0	3.5	6.0	5.5	6.0	9.5	8.0	9.0	10.5	10.0	10.5
15	4.0	3.5	3.5	6.5	6.0	6.5	9.0	8.5	8.5	11.0	10.5	10.5
16	4.0	3.5	4.0	7.0	6.5	6.5	9.0	8.5	9.0	11.5	11.0	11.0
17	5.0	4.0	4.5	6.5	6.0	6.0	8.5	8.0	8.5	12.5	11.5	12.0
18	5.0	4.5	4.5	6.5	5.5	6.0	9.0	8.0	8.5	13.0	12.0	12.5
19	4.5	4.5	4.5	8.0	6.5	7.0	8.5	8.0	8.5	13.5	12.5	13.0
20	4.5	4.0	4.5	8.0	7.0	7.5	9.0	8.0	8.5	13.0	13.0	13.0
21	4.0	3.0	3.5	6.5	5.5	6.0	9.5	8.5	9.0	13.5	13.0	13.0
22	3.0	3.0	3.0	6.0	5.0	5.5	9.0	9.0	9.0	13.5	13.0	13.0
23	3.0	3.0	3.0	6.0	5.0	5.5	9.0	7.5	8.0	13.5	13.0	13.0
24	3.0	2.5	2.5	6.5	5.5	6.0	8.5	7.5	8.0	13.5	12.5	13.0
25	3.0	2.5	3.0	6.5	5.5	6.0	8.5	8.0	8.5	13.0	12.5	13.0
26	3.0	2.5	2.5	7.5	6.5	7.0	9.0	8.5	8.5	13.0	12.5	13.0
27	3.0	2.5	3.0	8.0	7.5	8.0	9.5	9.0	9.0	13.0	12.5	12.5
28	3.0	2.5	3.0	8.5	7.5	8.0	10.0	9.0	9.5	13.5	12.5	13.0
29	---	---	---	9.0	8.0	8.5	10.5	9.5	10.0	13.5	12.5	13.5
30	---	---	---	9.5	8.5	9.0	11.0	10.0	10.5	14.0	13.0	13.5
31	---	---	---	10.0	9.0	9.5	---	---	---	14.0	13.5	14.0
MONTH	5.0	2.0	3.5	10.0	2.5	6.0	11.0	7.5	9.0	14.0	9.0	12.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	14.5	13.5	14.0	---	---	---	16.5	16.0	16.0	13.5	12.0	13.0
2	14.5	13.5	14.0	---	---	---	16.5	16.0	16.5	13.0	13.0	13.0
3	13.5	13.0	13.5	13.5	12.5	13.0	16.5	16.0	16.0	13.5	13.0	13.0
4	13.5	12.5	13.0	---	---	---	16.5	16.0	16.0	14.0	13.0	13.5
5	14.0	13.0	13.5	15.0	14.0	14.5	16.0	15.5	16.0	14.0	13.5	13.5
6	14.0	13.5	13.5	15.5	14.0	14.5	16.5	15.5	16.0	14.5	13.5	14.0
7	14.0	13.5	13.5	15.5	14.5	15.0	16.0	15.5	15.5	14.0	13.0	13.5
8	14.5	13.5	14.0	15.5	14.5	15.0	16.0	15.5	16.0	14.0	13.0	13.5
9	14.5	14.0	14.0	15.5	14.5	15.0	16.5	15.5	16.0	13.5	12.0	13.0
10	14.0	13.0	13.5	15.5	14.5	15.0	16.0	15.0	15.5	13.5	12.0	13.0
11	14.5	13.5	14.0	15.0	14.5	14.5	16.0	15.5	15.5	14.5	13.0	13.5
12	14.5	14.0	14.5	15.0	14.5	15.0	15.5	15.0	15.5	14.5	14.0	14.0
13	14.5	14.0	14.5	15.5	14.5	15.0	15.5	15.0	15.0	14.5	13.5	13.5
14	14.5	14.0	14.5	15.5	15.0	15.0	15.5	14.5	15.0	14.0	12.5	13.0
15	15.0	14.5	14.5	15.5	14.5	15.0	15.0	14.0	14.5	13.5	12.0	13.0
16	15.5	14.5	15.0	15.0	14.5	14.5	15.5	14.5	15.0	13.5	12.5	13.0
17	15.5	14.5	15.0	15.0	14.5	14.5	15.0	14.5	15.0	13.0	11.0	12.0
18	14.5	14.0	14.5	15.5	14.5	15.0	15.5	15.0	15.0	12.5	11.0	12.0
19	14.5	13.5	14.0	15.5	15.0	15.5	15.5	14.5	15.0	13.0	12.5	12.5
20	14.5	14.0	14.0	15.5	15.0	15.5	15.5	14.5	15.0	13.0	12.0	12.5
21	14.5	13.5	14.0	16.0	15.0	15.5	15.0	14.5	15.0	13.5	12.5	13.0
22	14.0	13.0	13.5	16.0	15.0	15.5	15.5	15.0	15.0	13.0	12.5	13.0
23	14.5	13.5	14.0	---	---	---	15.5	14.5	15.0	14.5	13.0	13.5
24	14.5	13.5	14.0	---	---	---	15.5	14.5	15.0	14.0	13.5	13.5
25	14.0	13.5	14.0	16.0	14.5	15.0	14.5	14.0	14.5	14.0	13.5	13.5
26	14.0	12.5	13.5	16.0	15.0	15.5	15.0	14.0	14.5	15.0	13.5	14.0
27	14.5	13.5	14.0	16.0	15.0	15.5	15.0	14.5	14.5	14.5	14.0	14.5
28	14.5	14.0	14.5	16.0	15.5	15.5	14.5	13.5	14.0	14.0	14.0	14.0
29	15.0	14.0	14.5	17.0	15.5	15.5	14.0	12.5	13.0	14.5	14.0	14.0
30	15.0	14.0	14.5	17.0	16.5	16.5	13.5	12.0	13.0	15.5	14.0	14.5
31	---	---	---	16.5	16.5	16.5	13.5	12.0	13.0	---	---	---
MONTH	15.5	12.5	14.0	17.0	12.5	15.0	16.5	12.0	15.0	15.5	11.0	13.5

01466500 MCDONALDS BRANCH IN LEBANON STATE FOREST, NJ--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY	
4.6	4.6	4.6	5.4	4.6	4.7	4.3	4.3	4.3	4.4	4.4	4.4
4.7	4.6	4.6	4.6	4.5	4.6	4.3	4.3	4.3	4.4	4.4	4.4
4.7	4.5	4.6	5.2	4.6	4.7	4.3	4.3	4.3	4.4	4.4	4.4
4.5	4.5	4.5	5.1	4.7	4.9	4.3	4.2	4.3	4.4	4.4	4.4
4.5	4.5	4.5	4.7	4.4	4.5	4.3	4.3	4.3	4.4	4.4	4.4
4.6	4.5	4.5	4.6	4.5	4.5	4.3	4.3	4.3	4.4	4.4	4.4
4.6	4.5	4.5	4.6	4.5	4.5	4.3	4.3	4.3	4.4	4.4	4.4
4.6	4.5	4.5	4.5	4.5	4.5	4.3	4.3	4.3	4.4	4.4	4.4
4.5	4.5	4.5	4.5	4.5	4.5	4.3	4.3	4.3	4.4	4.4	4.4
4.6	4.5	4.5	4.6	4.5	4.5	4.3	4.3	4.3	4.4	4.4	4.4
4.6	4.5	4.5	5.0	4.5	4.7	4.4	4.3	4.3	4.4	4.4	4.4
4.5	4.5	4.5	4.6	4.5	4.5	4.5	4.3	4.3	4.4	4.4	4.4
4.6	4.5	4.5	4.6	4.5	4.6	4.3	4.3	4.3	4.4	4.4	4.4
4.6	4.5	4.5	5.1	4.5	4.8	4.3	4.3	4.3	4.4	4.4	4.4
4.6	4.6	4.6	5.3	4.5	4.6	4.3	4.3	4.3	4.4	4.4	4.4
4.6	4.6	4.6	4.9	4.4	4.5	4.3	4.3	4.3	4.4	4.4	4.4
4.6	4.5	4.6	4.4	4.4	4.4	4.4	4.3	4.3	4.4	4.4	4.4
4.6	4.5	4.5	4.5	4.3	4.4	4.4	4.4	4.4	4.4	4.4	4.4
4.6	4.5	4.6	4.5	4.5	4.5	4.4	4.3	4.3	5.0	4.4	4.5
4.6	4.5	4.6	5.2	4.5	4.8	4.4	4.3	4.3	4.4	4.4	4.4
4.6	4.5	4.6	5.2	4.6	4.9	4.4	4.3	4.4	4.5	4.4	4.4
4.6	4.5	4.6	4.9	4.4	4.6	4.4	4.3	4.3	4.5	4.5	4.5
4.6	4.5	4.6	4.5	4.4	4.5	4.4	4.4	4.4	4.5	4.4	4.5
4.6	4.5	4.6	4.5	4.5	4.5	4.4	4.4	4.4	4.5	4.4	4.4
4.8	4.6	4.6	4.5	4.4	4.5	4.4	4.4	4.4	4.5	4.4	4.5
4.6	4.5	4.6	4.6	4.5	4.5	4.4	4.3	4.4	4.4	4.3	4.3
4.6	4.5	4.6	4.5	4.5	4.5	4.4	4.4	4.4	4.2	4.2	4.2
4.6	4.6	4.6	4.6	4.4	4.5	4.4	4.4	4.4	4.2	4.1	4.1
4.5	4.5	4.5	4.3	4.3	4.3	4.4	4.4	4.4	4.1	4.1	4.1
4.5	4.5	4.5	4.3	4.3	4.3	4.4	4.4	4.4	4.1	4.1	4.1
4.6	4.5	4.6	---	---	---	4.4	4.4	4.4	4.1	4.1	4.1
4.8	4.5	4.6	5.4	4.3	4.6	4.5	4.2	4.3	5.0	4.1	4.4

MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY	
4.1	4.1	4.1	4.0	3.9	3.9	4.1	4.0	4.0	4.0	3.9	4.0
4.2	4.1	4.1	3.9	3.9	3.9	4.1	4.0	4.0	4.0	4.0	4.0
4.1	4.1	4.1	4.0	3.9	3.9	4.1	4.0	4.0	4.0	4.0	4.0
4.2	4.1	4.1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
4.1	4.1	4.1	4.0	3.9	4.0	4.1	4.0	4.0	4.0	4.0	4.0
4.1	4.1	4.1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
4.1	4.1	4.1	4.0	3.9	4.0	4.0	4.0	4.0	4.1	4.0	4.0
4.1	4.1	4.1	4.0	3.9	3.9	4.1	4.0	4.1	4.1	4.1	4.1
4.1	4.1	4.1	4.0	3.9	4.0	4.1	4.0	4.1	4.1	4.1	4.1
4.1	4.1	4.1	4.0	3.9	4.0	4.1	4.0	4.0	4.1	4.0	4.1
4.1	4.1	4.1	4.0	3.9	4.0	4.1	4.0	4.0	4.1	4.0	4.0
4.1	4.1	4.1	4.0	4.0	4.0	4.0	4.0	4.0	4.1	4.0	4.0
4.1	4.1	4.1	4.0	4.0	4.0	4.0	4.0	4.0	4.1	4.0	4.0
4.1	4.1	4.1	4.0	3.9	3.9	4.1	4.0	4.0	4.1	4.0	4.1
4.1	4.1	4.1	4.0	3.9	3.9	4.0	4.0	4.0	4.1	4.0	4.0
4.1	4.1	4.1	3.9	3.9	3.9	4.0	3.9	4.0	4.1	4.0	4.1
4.1	4.1	4.1	3.9	3.9	3.9	3.9	3.8	3.9	4.1	4.0	4.1
4.1	4.0	4.1	3.9	3.9	3.9	3.8	3.8	3.8	4.1	4.1	4.1
4.1	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	4.1	4.1	4.1
4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	4.1	4.1	4.1
4.0	3.9	4.0	4.0	3.9	3.9	3.9	3.8	3.9	4.1	4.1	4.1
3.9	3.9	3.9	4.0	3.9	4.0	3.9	3.9	3.9	4.1	4.1	4.1
3.9	3.9	3.9	4.0	4.0	4.0	3.9	3.8	3.8	4.1	4.1	4.1
3.9	3.9	3.9	4.0	4.0	4.0	3.9	3.8	3.8	4.1	4.1	4.1
3.9	3.9	3.9	4.0	4.0	4.0	3.9	3.8	3.9	4.1	4.1	4.1
3.9	3.9	3.9	4.0	4.0	4.0	3.9	3.9	3.9	4.1	4.1	4.1
3.9	3.9	3.9	4.0	4.0	4.0	3.9	3.9	3.9	4.1	4.1	4.1
3.9	3.9	3.9	4.0	4.0	4.0	3.9	3.9	3.9	4.2	4.1	4.1
---	---	---	4.0	4.0	4.0	3.9	3.9	3.9	4.2	4.2	4.1
---	---	---	4.0	4.0	4.0	4.0	3.9	3.9	4.1	4.1	4.1
---	---	---	4.0	4.0	4.0	---	---	---	4.1	4.1	4.1
4.2	3.9	4.0	4.0	3.9	4.0	4.1	3.8	3.9	4.2	3.9	4.1

01466500 MCDONALDS BRANCH IN LEBANON STATE FOREST, NJ--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	4.1	4.1	4.1	4.3	4.3	4.3	4.2	4.2	4.2	4.2	4.2	4.2
2	4.1	4.1	4.1	4.3	4.2	4.3	4.3	4.2	4.3	4.2	4.2	4.2
3	4.1	4.1	4.1	4.3	4.2	4.3	4.3	4.3	4.3	4.2	4.2	4.2
4	4.1	4.1	4.1	4.3	4.3	4.3	4.3	4.3	4.3	4.2	4.2	4.2
5	4.1	4.1	4.1	4.3	4.3	4.3	4.3	4.3	4.3	4.2	4.2	4.2
6	4.2	4.1	4.1	4.3	4.3	4.3	4.3	4.3	4.3	4.2	4.2	4.2
7	4.2	4.1	4.2	4.3	4.3	4.3	4.3	4.3	4.3	4.2	4.2	4.2
8	4.2	4.2	4.2	4.4	4.3	4.3	4.3	4.3	4.3	4.2	4.2	4.2
9	4.2	4.2	4.2	4.4	4.3	4.4	4.4	4.3	4.3	4.2	4.1	4.2
10	4.2	4.2	4.2	4.4	4.3	4.4	4.4	4.3	4.3	4.2	4.1	4.2
11	4.2	4.2	4.2	4.4	4.3	4.4	4.4	4.3	4.3	4.2	4.2	4.2
12	4.2	4.2	4.2	4.4	4.4	4.4	4.3	4.3	4.3	4.3	4.2	4.2
13	4.2	4.1	4.2	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2
14	4.2	4.1	4.2	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2
15	4.2	4.2	4.2	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2
16	4.2	4.2	4.2	4.4	4.4	4.4	4.4	4.3	4.3	4.2	4.1	4.2
17	4.2	4.2	4.2	4.4	4.4	4.4	4.4	4.3	4.3	4.2	4.1	4.1
18	4.3	4.2	4.2	4.4	4.4	4.4	4.4	4.3	4.4	4.2	4.1	4.2
19	4.2	4.2	4.2	4.4	4.3	4.4	4.4	4.3	4.4	4.2	4.1	4.2
20	4.3	4.2	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.2	4.1	4.2
21	4.3	4.2	4.3	4.4	4.4	4.4	4.4	4.3	4.3	4.2	4.2	4.2
22	4.3	4.2	4.3	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.1	4.2
23	4.3	4.3	4.3	---	---	---	4.4	4.3	4.3	4.2	4.2	4.2
24	4.3	4.3	4.3	---	---	---	4.4	4.3	4.4	4.3	4.2	4.2
25	4.3	4.2	4.3	4.4	4.3	4.3	4.3	4.2	4.3	4.2	4.2	4.2
26	4.3	4.2	4.2	4.4	4.3	4.3	4.3	4.2	4.3	4.5	4.2	4.3
27	4.3	4.2	4.3	4.3	4.3	4.3	4.3	4.2	4.3	4.3	4.2	4.3
28	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.2	4.2	4.3	4.2	4.2
29	4.3	4.3	4.3	4.3	4.3	4.3	4.2	4.2	4.2	4.3	4.3	4.3
30	4.3	4.3	4.3	4.3	4.2	4.3	4.2	4.2	4.2	4.3	4.3	4.3
31	---	---	---	4.3	4.2	4.2	4.2	4.2	4.2	---	---	---
MONTH	4.3	4.1	4.2	4.4	4.2	4.3	4.4	4.2	4.3	4.5	4.1	4.2

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1				---	---	---	4.6	4.3	4.5	6.6	6.3	6.4
2				---	---	---	4.4	4.1	4.2	6.6	6.2	6.4
3				---	---	---	4.8	4.1	4.4	6.7	6.0	6.4
4				---	---	---	5.0	4.4	4.7	6.7	6.3	6.5
5				---	---	---	5.1	4.6	4.8	6.6	6.2	6.4
6				---	---	---	5.4	4.9	5.2	6.6	6.2	6.4
7				---	---	---	5.5	5.1	5.3	6.7	6.3	6.5
8				---	---	---	5.4	5.1	5.2	6.8	6.5	6.6
9				---	---	---	5.5	5.2	5.3	6.8	6.4	6.6
10				---	---	---	5.6	5.2	5.3	6.5	6.2	6.4
11				---	---	---	5.4	4.9	5.1	6.6	6.2	6.4
12				---	---	---	5.1	4.8	4.9	6.5	6.1	6.3
13				---	---	---	5.4	4.8	5.1	6.4	6.0	6.2
14				---	---	---	5.7	5.2	5.4	6.8	6.3	6.5
15				---	---	---	5.8	5.5	5.6	6.9	6.4	6.6
16				---	---	---	5.9	5.6	5.8	6.8	6.3	6.5
17				---	---	---	5.9	5.6	5.7	6.7	6.0	6.4
18				---	---	---	6.0	5.6	5.8	6.3	5.9	6.1
19				2.9	1.6	2.3	6.3	6.0	6.1	6.5	5.7	6.1
20				1.8	1.4	1.6	6.6	6.3	6.4	6.3	6.0	6.1
21				2.9	1.5	2.2	6.9	6.4	6.5	6.2	5.8	5.9
22				8.2	2.3	3.9	6.8	6.2	6.5	6.0	5.6	5.8
23				4.4	3.4	3.8	6.4	6.0	6.2	6.3	5.6	5.8
24				4.5	3.5	3.8	6.1	5.9	6.0	6.2	5.8	5.9
25				4.3	3.6	3.9	6.3	5.8	6.0	6.4	5.7	5.9
26				5.0	4.2	4.5	6.5	6.1	6.3	8.6	6.3	7.9
27				4.3	3.3	3.8	6.4	6.1	6.3	8.3	7.9	8.1
28				5.4	3.9	4.6	6.4	6.1	6.2	9.3	7.9	8.5
29				4.9	4.4	4.7	6.3	6.0	6.1	9.5	9.3	9.4
30				4.8	4.3	4.5	6.4	6.0	6.2	9.3	9.0	9.2
31				---	---	---	6.4	6.1	6.3	9.0	8.8	8.9
MONTH				8.2	1.4	3.6	6.9	4.1	5.6	9.5	5.6	6.8

01466500 MCDONALDS BRANCH IN LEBANON STATE FOREST, NJ--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY	
8.9	8.4	8.7	8.2	7.9	8.1	4.7	3.9	4.2	3.3	2.5	2.8
8.4	8.1	8.3	8.1	7.8	7.9	4.6	3.7	4.0	3.2	2.5	2.8
8.2	7.9	8.1	8.1	7.7	7.9	4.4	3.7	3.9	3.5	2.7	3.0
8.1	7.8	8.0	7.8	7.5	7.6	4.6	3.7	4.0	3.9	3.0	3.3
8.1	8.0	8.1	7.8	7.4	7.5	4.3	3.6	3.9	3.7	2.9	3.2
8.3	8.0	8.1	7.6	7.2	7.4	4.4	3.8	4.1	3.4	2.6	3.0
8.6	8.0	8.4	7.6	7.1	7.4	4.9	3.9	4.3	3.2	2.3	2.7
8.9	8.5	8.7	7.7	7.4	7.5	4.6	3.6	4.0	3.1	2.3	2.6
8.7	8.3	8.5	7.8	7.3	7.5	4.4	3.5	3.8	3.3	2.4	2.7
8.5	8.1	8.3	7.5	6.9	7.2	4.3	3.5	3.8	3.5	2.6	2.9
8.3	8.0	8.1	7.1	6.7	6.9	4.5	3.6	4.0	3.6	2.7	3.1
8.3	8.0	8.1	7.1	6.6	6.8	4.8	3.7	4.1	3.6	2.9	3.1
8.3	8.0	8.1	7.3	6.6	7.0	4.4	3.8	4.1	3.6	2.9	3.1
8.3	7.9	8.1	7.8	7.5	7.6	4.9	3.9	4.3	3.6	2.9	3.2
8.1	7.8	7.9	7.8	7.1	7.5	4.6	3.9	4.1	3.3	2.9	3.0
8.1	7.7	7.9	7.4	7.0	7.2	6.3	3.9	5.3	3.6	2.7	3.1
7.9	7.4	7.6	7.8	7.2	7.5	6.0	5.3	5.5	3.5	2.5	2.9
7.7	7.4	7.5	7.5	7.0	7.3	6.0	5.0	5.7	3.2	2.3	2.7
8.0	7.6	7.8	6.9	6.2	6.7	5.2	4.5	4.9	3.0	2.3	2.6
8.4	7.8	8.0	6.5	6.0	6.2	4.9	4.2	4.6	2.8	2.2	2.5
9.3	8.5	9.0	6.4	6.0	6.1	4.4	3.9	4.1	3.3	2.4	2.7
9.5	9.2	9.3	6.6	6.1	6.3	4.3	3.8	4.0	3.2	2.4	2.8
9.2	9.0	9.1	6.7	6.2	6.4	5.0	4.0	4.6	3.3	2.4	2.7
9.2	8.8	9.0	6.7	6.2	6.4	5.5	4.6	5.0	3.4	2.5	2.8
8.9	8.6	8.8	6.7	6.1	6.4	4.7	3.9	4.4	3.2	2.4	2.7
8.7	8.3	8.5	6.4	5.6	6.0	4.1	3.6	3.9	3.4	2.4	2.8
8.5	8.1	8.3	5.8	5.2	5.5	4.1	3.3	3.7	3.5	2.4	2.8
8.3	8.0	8.2	5.7	5.0	5.3	3.8	3.0	3.4	3.4	2.3	2.7
---	---	---	5.5	4.7	5.0	3.6	2.8	3.1	3.0	2.1	2.5
---	---	---	5.2	4.3	4.7	3.4	2.7	3.0	3.1	2.1	2.4
---	---	---	4.8	4.1	4.4	---	---	---	3.0	2.0	2.3
9.5	7.4	8.3	8.2	4.1	6.8	6.3	2.7	4.2	3.9	2.0	2.8

MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER	
3.0	1.9	2.3	3.1	1.6	2.1	3.3	2.1	2.5	---	---	---
2.9	1.9	2.2	3.2	1.9	2.5	3.3	2.0	2.4	---	---	---
3.2	2.1	2.5	3.1	2.1	2.4	3.1	2.0	2.5	---	---	---
3.3	2.3	2.7	3.3	2.0	2.5	3.3	1.9	2.4	---	---	---
3.4	2.2	2.7	3.5	1.9	2.5	3.3	1.9	2.4	---	---	---
3.4	2.2	2.6	3.6	1.8	2.4	3.7	1.8	2.4	---	---	---
2.8	2.1	2.4	3.7	1.7	2.4	3.3	1.7	2.5	---	---	---
3.3	2.2	2.6	3.3	1.6	2.2	3.3	1.7	2.3	---	---	---
3.4	2.3	2.7	2.9	1.6	2.2	3.4	1.7	2.3	---	---	---
3.4	2.3	2.7	3.5	1.8	2.5	3.6	1.6	2.3	---	---	---
3.6	2.2	2.8	3.3	1.7	2.2	3.6	1.5	2.2	---	---	---
3.4	2.6	2.9	3.2	1.7	2.2	---	---	---	---	---	---
3.5	2.6	2.9	3.6	1.6	2.4	---	---	---	---	---	---
3.7	2.5	2.9	3.8	1.7	2.6	---	---	---	---	---	---
3.7	2.3	2.8	3.4	1.4	2.1	---	---	---	---	---	---
3.6	2.2	2.7	---	---	---	---	---	---	---	---	---
3.4	2.1	2.6	---	---	---	---	---	---	---	---	---
---	---	---	---	---	---	---	---	---	---	---	---
---	---	---	---	---	---	---	---	---	---	---	---
---	---	---	---	---	---	---	---	---	---	---	---
---	---	---	---	---	---	---	---	---	---	---	---
---	---	---	---	---	---	---	---	---	---	---	---
---	---	---	---	---	---	---	---	---	---	---	---
---	---	---	---	---	---	---	---	---	---	---	---
---	---	---	3.3	1.5	2.1	---	---	---	---	---	---
3.1	1.7	2.2	3.1	1.4	2.1	---	---	---	---	---	---
3.2	1.6	2.2	3.3	2.1	2.6	---	---	---	2.6	2.3	2.5
2.5	1.6	2.0	3.4	1.8	2.4	---	---	---	3.2	2.0	2.4
2.9	1.6	2.1	3.6	1.7	2.5	---	---	---	3.3	1.7	2.2
3.2	1.6	2.2	2.8	1.9	2.3	---	---	---	3.3	1.6	2.1
---	---	---	2.6	2.0	2.2	---	---	---	---	---	---
3.7	1.6	2.5	3.8	1.4	2.3	3.7	1.5	2.4	3.3	1.6	2.3

01467000 NORTH BRANCH RANCOCAS CREEK AT PEMBERTON, NJ

LOCATION.--Lat 39°58'10", long 74°41'05", Burlington County, Hydrologic Unit 02040202, on right bank at downstream side of bridge on Hanover Street in Pemberton, 12 mi upstream from confluence with South Branch Rancocas Creek.

DRAINAGE AREA.--118 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1921 to current year.

REVISED RECORDS.--WSP 1302: 1922-23. WSP 1382: 1933. WDR NJ-82-2: Drainage area.

GAGE.--Water-stage recorder above concrete dams. Datum of gage is 31.19 ft above National Geodetic Vertical Datum of 1929. Prior to June 9, 1923, nonrecording gage and June 9, 1923 to Aug. 9, 1951, water-stage recorder at site 600 ft downstream at datum 6.54 ft lower.

REMARKS.--Estimated daily discharges: Feb. 2-9, Apr. 7-16, and July 7-13. Records good except these for periods of no gage-height record, Feb. 2-9, Apr. 7-16, and July 7-13, which are fair. Flow regulated occasionally by cranberry bogs and ponds above station. Several measurements of water temperature, other than those published, were made during the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--65 years, 171 ft³/s, 19.68 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,730 ft³/s, Aug. 31, 1939, gage height, 10.77 ft, from high-water mark, site and datum then in use; minimum daily, 9.0 ft³/s, Sept. 29, 1932.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft³/s and maximum(*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 17	1800	*860	*2.80	No other peak greater than base discharge.			

Minimum daily discharge, 34 ft³/s, Sept. 17, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	83	73	358	68	213	206	98	187	57	47	103	49
2	62	73	340	70	194	188	98	165	55	97	103	50
3	84	75	287	79	183	170	99	145	53	100	87	51
4	107	95	241	90	184	163	110	169	53	85	76	49
5	116	190	215	98	226	160	129	170	59	69	68	51
6	122	146	202	99	236	143	131	160	59	60	61	60
7	120	106	195	95	281	139	140	135	55	57	56	53
8	108	99	188	98	245	123	141	124	56	53	55	50
9	91	103	194	97	224	129	140	110	63	50	54	45
10	82	110	179	93	206	125	137	102	60	56	52	39
11	75	108	159	96	199	122	135	140	60	54	50	39
12	71	84	145	98	190	122	134	144	88	52	49	39
13	70	70	145	95	180	141	126	107	147	61	48	38
14	70	64	157	94	172	221	124	86	173	53	47	37
15	95	61	151	90	165	328	125	84	167	54	47	36
16	158	74	143	86	157	396	300	86	128	52	47	36
17	147	171	139	86	158	377	805	86	99	52	48	34
18	133	172	132	87	225	257	818	82	78	54	88	34
19	117	158	117	95	297	218	575	78	69	66	52	38
20	98	141	74	108	334	203	465	76	66	66	44	39
21	80	126	74	110	334	236	385	82	61	70	57	44
22	69	143	73	104	341	226	355	104	57	57	63	44
23	67	208	75	99	340	208	360	117	55	51	59	45
24	67	188	76	94	324	183	374	102	58	50	59	61
25	67	163	76	92	310	130	342	86	56	49	56	53
26	67	161	72	323	285	127	298	77	51	48	53	50
27	66	169	65	504	258	123	266	75	45	55	51	99
28	67	190	64	464	229	115	259	73	46	53	54	93
29	76	298	64	354	---	113	226	68	49	56	57	92
30	82	300	63	298	---	110	205	64	48	65	53	80
31	78	---	62	257	---	103	---	58	---	83	51	---
TOTAL	2795	4119	4525	4521	6690	5605	7900	3342	2171	1875	1848	1528
MEAN	90.2	137	146	146	239	181	263	108	72.4	60.5	59.6	50.9
MAX	158	300	358	504	341	396	818	187	173	100	103	99
MIN	62	61	62	68	157	103	98	58	45	47	44	34
CFSM	.76	1.16	1.24	1.24	2.03	1.53	2.23	.92	.61	.51	.51	.43
IN.	.88	1.30	1.43	1.43	2.11	1.77	2.49	1.05	.68	.59	.58	.48

CAL YR 1985 TOTAL 34743 MEAN 95.2 MAX 358 MIN 41 CFSM .81 IN. 10.95
WTR YR 1986 TOTAL 46919 MEAN 129 MAX 818 MIN 34 CFSM 1.09 IN. 14.79

01467000 NORTH BRANCH RANCOCAS CREEK AT PEMBERTON, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1923-24, 1958, 1962-69, 1975 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
01...	1015	86	76	4.3	17.0	7.8	80	1.1	130	110
FEB 1986										
14...	1015	170	77	4.4	1.0	13.1	91	0.5	--	--
APR										
02...	1015	98	57	4.5	14.0	9.1	89	0.8	5	14
JUN										
18...	0930	80	50	4.6	21.5	6.9	78	1.1	170	1600
JUL										
01...	1030	47	46	5.3	21.0	7.8	87	1.2	7	1300
AUG										
11...	1035	52	41	5.5	23.5	6.3	74	1.3	11	60

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
01...	10	2.3	1.1	3.6	0.9	<1.0	15	6.3	<0.1
FEB 1986									
14...	10	2.3	1.0	3.2	0.9	<1.0	13	6.3	<0.1
APR									
02...	9	2.1	0.95	3.3	0.8	<3.0	11	5.5	<0.1
JUN									
18...	7	1.6	0.76	3.3	0.7	<1.0	9.7	6.0	<0.1
JUL									
01...	8	1.8	0.89	3.4	0.9	2.0	9.2	6.0	<0.1
AUG									
11...	8	1.7	0.87	3.2	1.0	2.0	10	5.4	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
01...	4.6	--	<0.003	0.10	0.13	0.86	0.96	0.05	5.6
FEB 1986									
14...	4.7	--	0.007	0.132	0.04	0.4	0.53	0.02	11
APR									
02...	3.9	--	0.004	0.12	0.16	0.43	0.55	0.02	5.3
JUN									
18...	4.2	--	0.009	0.09	0.15	0.3	0.39	0.06	11
JUL									
01...	4.2	28	0.014	0.13	0.11	0.47	0.6	0.05	6.7
AUG									
11...	4.1	27	0.003	0.11	0.22	0.25	0.36	0.07	6.9

01467000 NORTH BRANCH RANCOCAS CREEK AT PEMBERTON, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT 1985											
01...	1015	--	400	0.3	21	--	--	--	--	--	2
01...	1015	<0.5	--	--	--	330	<1	<10	30	1	--
JUN 1986											
18...	0930	<0.5	--	--	--	150	<1	<10	<10	<1	--

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT 1985											
01...	--	170	<10	--	60	--	4900	--	300	--	39
01...	20	--	--	88	--	1900	--	300	--	50	--
JUN 1986											
18...	<10	--	--	7	--	2900	--	11	--	30	--

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985											
01...	--	0.08	--	10	--	<1	--	120	--	<1	<1.0
01...	<0.1	--	24	--	<1	--	450	--	9	--	--
JUN 1986											
18...	<0.1	--	2	--	<1	--	20	--	2	--	--

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985											
01...	<0.1	94	33	11	40	0.1	1.2	<0.1	<0.1	<0.1	<0.1
01...	--	--	--	--	--	--	--	--	--	--	--
JUN 1986											
18...	--	--	--	--	--	--	--	--	--	--	--

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985											
01...	0.9	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1
01...	--	--	--	--	--	--	--	--	--	--	--
JUN 1986											
18...	--	--	--	--	--	--	--	--	--	--	--

01467060 DELAWARE RIVER AT PALMYRA, NJ

LOCATION.--Lat 40°01'05", long 75°02'16", Philadelphia County, PA, Hydrologic Unit 02040202, on right bank opposite Palmyra, 0.5 mi upstream from Tacony-Palmyra Bridge, 3.5 mi downstream from Rancocas Creek, and at mile 107.55.

DRAINAGE AREA.--7,850 mi².

TIDE ELEVATION DATA

PERIOD OF RECORD.--December 1962 to current year. Tidal volumes published from December 1962 to September 1970.

GAGE.--Water-stage recorder. Datum of gage is -10.00 ft below National Geodetic Vertical Datum of 1929. Gage-height record converted to elevation above or below (-) National Geodetic Vertical Datum of 1929 for publication.

REMARKS.--No gage-height or doubtful record: Dec. 27-28, Jan. 29-30, Feb. 13, and Mar. 7-8. Some periods of low tide are affected by sluggish or plugged intake and the record is estimated with negligible loss in accuracy. Some periods cannot be estimated and are noted by dash (--) lines.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 8.23 ft, Oct. 25, 1980; minimum, -8.6 ft, Dec. 31, 1962.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation known since 1899, 8.9 ft, Aug. 24, 1933, from profile furnished by Corps of Engineers, U.S. Army.

EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded, 6.56 ft, Apr. 26; minimum recorded, lower than -3.94 ft, Mar. 8.

Summaries of tide elevations during current year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	6.07	6.35	6.45	6.41	5.89	6.14	6.56	6.42	6.18	6.05	6.49	5.52
high tide	Date	15	30	1	26	23	15	26	13	23	21	19	5
Minimum	Elevation	-3.19	-3.12	-3.79	-3.94	-3.25	a-3.94	-3.08	-3.18	-3.30	-2.70	-2.84	-3.63
low tide	Date	28	11	3	8	14	8	23	3	17	6	12	16
Mean high tide		4.62	4.95	4.28	3.71	4.43	4.45	5.02	4.87	4.71	4.67	4.66	4.42
Mean water level		1.45	1.91	1.22	.66	1.41	1.37	1.83	1.62	1.38	1.45	1.51	1.30
Mean low tide		-2.09	-1.46	-2.19	-2.67	-1.97	-2.09	-1.70	-2.01	-2.29	-2.17	-2.01	-2.20

a -- lower than indicated value.

01467069 NORTH BRANCH PENNSAUKEN CREEK NEAR MOORESTOWN, NJ

LOCATION.--Lat 39°57'07", long 74°58'10", Burlington County, Hydrologic Unit 02040202, at bridge on Kings Highway, 200 ft downstream from outlet of Strawbridge Lake, 0.6 mi northwest of Moorestown Mall, 0.8 mi southeast of Lenola, and 1.8 mi southwest of Moorestown.

DRAINAGE AREA.--12.8 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients wre performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
09...	0900	E4.9	289	6.8	15.5	6.5	64	2.1	2400	5400
FEB 1986										
12...	0930	E9.3	740	6.7	1.0	12.8	90	6.0	--	--
APR										
01...	0900	E6.0	365	6.8	7.5	7.8	64	4.5	49	13
JUN										
16...	0900	E6.4	258	7.1	25.0	6.6	80	6.3	700	490
JUL										
08...	0900	E4.2	274	7.1	27.5	5.6	70	7.1	130	50
AUG										
11...	0900	E6.4	288	7.3	26.5	5.2	65	8.7	170	140

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
09...	79	22	5.8	14	6.0	13	59	27	0.2
FEB 1986									
12...	92	25	7.3	93	4.6	10	60	160	0.2
APR									
01...	90	24	7.3	22	5.8	7.0	72	35	0.3
JUN									
16...	--	--	--	--	5.4	13	47	21	0.3
JUL									
08...	76	21	5.6	14	6.2	18	57	23	0.3
AUG									
11...	76	21	5.8	14	7.3	14	58	23	0.3

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
09...	11	150	0.047	1.02	1.26	2.0	3.0	0.29	7.0
FEB 1986									
12...	11	370	0.015	1.20	0.69	1.2	2.4	0.04	2.8
APR									
01...	11	180	0.043	0.87	2.43	3.0	3.8	0.20	4.9
JUN									
16...	--	--	0.072	0.67	1.30	2.1	2.7	0.21	7.8
JUL									
08...	8.7	150	0.094	0.46	1.09	1.9	2.4	0.27	6.8
AUG									
11...	9.8	150	0.09	0.41	2.00	2.8	3.2	0.33	9.2

01467069 NORTH BRANCH PENNSAUKEN CREEK NEAR MOORESTOWN, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
JUN 1986 16...	0900	<0.5	3	<10	<10	<1	<10	7

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
JUN 1986 16...	3800	<5	190	0.1	8	<1	20	<1

01467081 SOUTH BRANCH PENNSAUKEN CREEK AT CHERRY HILL, NJ

LOCATION.--Lat 39°56'30", long 75°00'05", Camden County, Hydrologic Unit 02040202, on left bank on downstream wingwall of bridge on Mill Road in Cherry Hill, 1.1 mi south of Maple Shade and 3.8 mi upstream from confluence with the North Branch Pennsauken Creek.

DRAINAGE AREA.--8.98 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1967 to September 1976, October 1977 to current year.

REVISED RECORDS.--WDR NJ-82-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 8.12 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair. Diurnal fluctuations from unknown source. Several measurements of water temperature, other than those published, were made during the year.

AVERAGE DISCHARGE.--18 years, (water years 1968-76, 1978-86) 18.2 ft³/s, 27.52 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 868 ft³/s, Aug. 28, 1978, gage height, 10.19 ft; maximum gage height, 11.34 ft, Aug. 28, 1971; minimum discharge, 2.6 ft³/s, Oct. 6, 9, 10, 11, 1970, gage height, 1.71 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Jan. 26	1130	395	7.08	June 12	1945	314	6.35
Apr. 16	1915	*478	*7.76	Aug. 17	1700	440	7.46

Minimum discharge, 3.2 ft³/s, Nov. 9, gage height, 2.07 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.8	8.8	61	9.8	10	9.8	8.5	11	5.6	5.6	9.8	5.3
2	10	8.1	22	9.3	12	9.6	8.5	10	5.5	66	36	8.1
3	114	8.8	13	34	11	11	8.2	9.8	5.3	10	13	9.0
4	27	9.5	11	12	38	13	8.2	9.8	5.4	7.1	6.2	8.6
5	16	48	11	18	47	14	8.6	9.6	6.0	6.2	5.6	18
6	11	5.8	20	10	20	14	23	9.4	5.8	5.9	5.0	19
7	8.9	4.6	13	8.7	14	18	12	9.1	5.9	6.1	4.8	6.7
8	8.2	4.1	11	7.7	14	22	11	8.7	5.6	6.1	4.9	6.2
9	9.6	4.2	10	7.9	16	24	10	8.3	5.5	12	4.6	5.6
10	12	4.4	9.5	8.4	16	25	7.8	8.4	5.0	11	4.4	5.4
11	11	4.4	10	8.4	15	27	7.9	8.3	14	5.5	4.2	5.4
12	9.4	4.9	11	8.5	14	25	7.9	8.2	86	5.4	4.2	5.5
13	9.3	5.2	35	8.6	11	31	7.8	8.1	47	6.7	4.2	5.0
14	10	5.5	17	8.3	9.9	37	8.1	8.0	8.9	8.3	4.3	4.7
15	11	6.3	8.6	8.3	11	42	10	7.9	6.8	5.2	4.1	5.0
16	10	31	8.0	7.7	10	53	294	8.4	6.5	4.9	4.8	5.0
17	9.9	49	7.9	8.5	14	15	175	8.3	6.1	5.5	112	5.3
18	8.4	6.9	7.6	8.9	133	12	40	7.6	5.4	6.6	172	5.5
19	6.3	5.3	7.2	17	47	11	19	7.4	5.3	38	14	8.5
20	8.5	5.3	7.2	18	24	10	16	9.1	5.3	10	8.1	5.0
21	8.6	5.0	7.4	11	25	9.6	17	9.4	5.3	7.6	70	6.1
22	10	45	7.5	9.6	22	9.3	31	50	5.9	5.9	18	4.4
23	11	19	7.9	9.4	19	9.4	59	10	6.2	20	9.4	13
24	11	7.2	8.5	9.1	14	9.3	23	8.4	6.1	6.6	7.9	20
25	11	5.9	8.8	19	13	8.9	15	7.6	6.0	5.2	7.3	6.1
26	8.8	12	8.1	256	11	9.0	14	7.2	5.9	6.1	7.0	9.3
27	10	14	8.2	67	11	9.1	13	7.4	5.8	8.3	6.9	36
28	11	60	8.5	19	10	8.8	12	7.4	5.9	5.3	17	12
29	12	108	8.2	12	---	8.8	12	5.9	5.5	5.7	7.6	9.6
30	14	36	8.3	11	---	8.7	12	5.5	5.6	5.3	5.9	7.0
31	12	---	9.0	10	---	8.5	---	5.8	---	5.1	5.5	---
TOTAL	439.7	542.2	391.4	661.1	611.9	522.8	899.5	300.0	305.1	313.2	588.7	270.3
MEAN	14.2	18.1	12.6	21.3	21.9	16.9	30.0	9.68	10.2	10.1	19.0	9.01
MAX	114	108	61	256	133	53	294	50	86	66	172	36
MIN	6.3	4.1	7.2	7.7	9.9	8.5	7.8	5.5	5.0	4.9	4.1	4.4
CFSM	1.58	2.02	1.40	2.37	2.44	1.88	3.34	1.08	1.14	1.12	2.12	1.00
IN.	1.82	2.25	1.62	2.74	2.53	2.17	3.73	1.24	1.26	1.30	2.44	1.12

CAL YR 1985 TOTAL 4611.8 MEAN 12.6 MAX 443 MIN 4.0 CFSM 1.40 IN. 19.10
WTR YR 1986 TOTAL 5845.9 MEAN 16.0 MAX 294 MIN 4.1 CFSM 1.78 IN. 24.22

01467081 SOUTH BRANCH PENNSAUKEN CREEK AT CHERRY HILL, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1970-73, 1975 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
09...	0945	9.0	389	7.2	15.0	6.3	61	4.3	350000	28000
FEB 1986										
12...	1130	12	755	7.1	2.0	11.9	86	2.1	--	--
APR										
01...	1030	7.9	404	7.2	14.0	8.3	80	7.6	7900	2200
JUN										
16...	0930	5.1	395	7.4	22.0	4.9	56	5.7	4600	4900
JUL										
08...	0930	5.1	435	7.5	24.0	4.1	49	9.6	13000	3300
AUG										
11...	0930	3.5	451	7.5	23.5	3.7	44	8.1	3100	24000

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
09...	95	26	7.3	26	9.4	40	60	32	0.2
FEB 1986									
12...	100	28	8.0	86	6.4	38	60	150	0.2
APR									
01...	91	24	7.6	29	8.5	35	61	41	0.2
JUN									
16...	88	24	6.8	28	10	41	51	28	0.3
JUL									
08...	84	23	6.5	32	11	54	57	31	0.2
AUG									
11...	86	23	7.0	35	13	49	52	53	0.3

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
09...	14	200	0.155	2.03	3.45	3.7	5.7	0.69	6.7
FEB 1986									
12...	12	370	0.089	1.30	2.20	3.3	4.6	0.60	7.6
APR									
01...	11	200	0.139	1.12	4.25	5.1	6.3	0.85	8.5
JUN									
16...	13	190	0.26	1.18	6.70	--	--	0.89	8.3
JUL									
08...	13	210	0.34	1.19	7.50	9.2	10	1.41	7.3
AUG									
11...	13	230	0.38	1.40	8.20	11	13	1.83	7.9

01467081 SOUTH BRANCH PENNSAUKEN CREEK AT CHERRY HILL, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)
OCT 1985 09...	0945	<0.5	20	2	<10	330	<1	10

DATE	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1985 09...	11	5	120	<0.1	12	<1	30	6

01467120 COOPER RIVER AT NORCROSS ROAD AT LINDENWOLD, NJ

LOCATION.--Lat 39°49'43", long 74°58'55", Camden County, Hydrologic Unit 02040202, at bridge on Norcross Road in Lindenwold, 50 ft downstream from outflow of Linden Lake, 1.1 mi southwest of Gibbstown, and 1.7 mi south of Glendale.

DRAINAGE AREA.--1.13 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
03...	1000	E5.6	83	6.2	17.5	6.3	66	0.5	260	1300
FEB 1986										
13...	1100	E1.1	142	6.5	3.5	12.4	92	1.2	20	<20
APR										
09...	1215	E1.0	91	7.0	13.0	9.4	91	2.1	<20	130
MAY										
21...	0930	E0.97	84	7.1	21.0	8.3	93	3.3	8	1600
JUL										
07...	0930	E0.85	76	6.7	26.0	6.3	77	4.8	8	920
AUG										
27...	0930	E0.73	90	6.5	21.5	5.3	61	3.9	5	220

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
03...	23	7.4	1.2	4.4	1.3	7.0	15	7.8	<0.1
FEB 1986									
13...	23	7.0	1.3	12	1.4	7.0	13	22	<0.1
APR									
09...	23	7.3	1.2	5.8	1.4	13	12	5.1	<0.1
MAY									
21...	24	7.3	1.3	5.7	1.1	14	11	9.5	0.1
JUL									
07...	23	7.2	1.1	3.9	1.2	13	12	6.9	<0.1
AUG									
27...	26	8.5	1.2	4.3	1.3	12	15	8.5	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
03...	3.4	45	0.004	0.05	0.13	0.61	0.66	0.06	9.3
FEB 1986									
13...	5.0	66	<0.003	0.11	0.18	0.42	0.53	0.02	5.8
APR									
09...	2.3	43	0.014	0.14	0.36	0.87	1.0	0.07	5.1
MAY									
21...	0.5	45	<0.003	0.06	0.10	0.56	0.62	0.05	5.6
JUL									
07...	2.5	43	0.007	<0.05	0.09	0.63	--	0.04	7.9
AUG									
27...	3.1	49	<0.003	<0.05	0.11	0.81	--	0.04	--

01467120 COOPER RIVER AT NORCROSS ROAD AT LINDENWOLD, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
OCT 1985 03...	1000	<0.5	90	<1	<10	30	<1	10	1
MAY 1986 21...	0930	<0.5	40	<1	<10	<10	<1	<10	3

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1985 03...	20000	5	110	<0.1	10	<1	160	4
MAY 1986 21...	880	2	20	<0.1	5	<1	20	2

01467140 COOPER RIVER AT LAWNSIDE, NJ

LOCATION.--Lat 39°52'14", long 75°00'59", Camden County, Hydrologic Unit 02040202, at bridge on Woodcrest Road in Lawnside, 0.2 mi upstream from the New Jersey Turnpike, and 1.7 mi upstream from Tindale Run.

DRAINAGE AREA.--12.7 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-65, 1976 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
01...	1000	E14	329	7.3	19.0	5.2	56	12	50	1400
FEB 1986										
14...	0900	E18	487	7.1	3.0	9.9	73	9.0	--	--
APR										
03...	1250	E18	372	7.3	17.0	6.0	62	15	17000	2200
JUN										
19...	0900	E17	355	7.2	18.0	3.1	33	8.4	1300	3300
JUL										
07...	1000	E15	390	7.3	23.0	3.4	40	8.6	>24000	16000
AUG										
27...	1045	E12	377	7.4	22.0	3.8	44	13	4600	1400

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
01...	58	17	3.8	23	7.7	17	33	29	0.2
FEB 1986									
14...	61	18	4.0	55	7.6	49	26	86	0.2
APR									
03...	56	16	3.9	28	9.3	15	32	40	0.3
JUN									
19...	62	18	4.1	31	9.8	19	31	38	0.2
JUL									
07...	62	18	4.1	30	10	68	30	36	0.2
AUG									
27...	59	17	3.9	28	10	19	29	36	0.3

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
01...	11	130	0.121	0.64	7.75	8.4	9.0	2.10	13
FEB 1986									
14...	11	240	0.056	0.618	7.40	9.3	9.9	1.60	16
APR									
03...	12	150	0.062	0.57	13.0	13	13	1.80	19
JUN									
19...	13	160	0.159	0.70	12.7	E11	--	2.30	12
JUL									
07...	14	180	0.136	0.63	9.90	12	12	3.00	15
AUG									
27...	13	150	0.169	0.69	9.80	11	11	0.04	13

01467140 COOPER RIVER AT LAWNSIDE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT 1985 01...	1000	--	130	0.1	2.3	--	--	--	--	--	4
JUN 1986 19...	0900	<0.5	--	--	--	20	4	<10	170	<1	--

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT 1985 01...	--	150	<10	--	100	--	21000	--	50	--	55
JUN 1986 19...	<10	--	--	18	--	4500	--	8	--	80	--

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985 01...	--	0.1	--	10	--	<1	--	150	--	<1	<1.0
JUN 1986 19...	0.1	--	17	--	<1	--	60	--	4	--	--

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985 01...	<0.1	41	15	3.7	<0.1	0.3	1.4	<0.1	<0.1	<0.1	<0.1
JUN 1986 19...	--	--	--	--	--	--	--	--	--	--	--

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985 01...	1.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1
JUN 1986 19...	--	--	--	--	--	--	--	--	--	--	--

01467150 COOPER RIVER AT HADDONFIELD, NJ

LOCATION.--Lat 39°54'11", long 75°01'19", Camden County, Hydrologic Unit 02040202, on right bank of Wallworth Lake in Pennypacker Park, 200 ft upstream from bridge on State Highway 41 (Kings Highway) in Haddonfield, 0.6 mi upstream from North Branch Cooper River, and 7.7 mi upstream from mouth.

DRAINAGE AREA.--17.0 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1963 to current year.

REVISED RECORDS.--WRD-NJ 1969: 1967(M). WDR NJ-82-2: Drainage area.

GAGE.--Water-stage recorder above concrete dam. Datum of gage is 9.29 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Nov. 14-19, 26. Records fair except those for the periods Oct. 1 to Nov. 19, Nov. 26, and June 14 to Sept. 30, which are poor. Occasional regulation at low flow from Kirkwood Lake, other small lakes and wastewater treatment plants. Several measurements of water temperature were made during the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--23 years, 35.8 ft³/s, 28.60 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,300 ft³/s, Aug. 28, 1971, gage height, 5.46 ft; minimum, 0.8 ft³/s, Nov. 13, 1972, gage height, 1.07 ft regulation from unknown source; minimum daily, 1.2 ft³/s, June 27,1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Jan. 26	0915	*516	*2.74	Apr. 16	1930	510	2.73

Minimum discharge, 14 ft³/s, Sept. 16, 17, gage height, 1.45 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	24	126	25	25	26	24	27	18	25	30	16
2	19	24	50	25	29	26	25	26	18	127	41	20
3	155	24	32	55	30	26	25	25	18	29	45	19
4	53	25	28	32	61	26	24	24	18	22	29	23
5	29	79	29	38	75	26	25	25	17	20	27	33
6	24	25	37	28	41	26	46	25	17	20	26	29
7	22	21	30	25	32	25	33	24	17	20	26	19
8	21	19	28	24	32	24	27	24	18	19	27	18
9	21	18	29	24	33	29	25	24	18	22	28	18
10	21	17	29	24	33	29	24	24	17	22	27	18
11	21	18	29	24	34	27	25	23	16	20	25	18
12	20	18	29	24	32	26	24	24	63	20	23	17
13	19	18	52	25	27	39	25	23	61	23	22	16
14	20	19	37	24	25	60	25	22	28	27	23	15
15	20	20	27	23	27	76	29	22	25	20	24	16
16	20	45	26	23	26	94	313	23	25	20	26	16
17	19	87	25	23	32	40	204	22	25	20	59	15
18	19	27	24	24	185	31	84	22	24	22	131	15
19	19	25	24	42	95	29	46	22	24	96	27	19
20	19	24	24	43	49	29	34	23	24	26	20	16
21	20	24	24	31	50	27	35	23	23	23	121	16
22	19	78	24	28	46	26	42	79	23	24	49	16
23	20	48	24	26	42	26	85	36	24	27	24	33
24	20	28	25	25	35	27	48	24	26	27	20	39
25	21	26	25	41	32	26	34	22	24	28	18	24
26	19	28	24	357	28	26	31	20	24	30	18	26
27	20	32	24	124	28	26	29	21	26	31	17	43
28	22	89	24	44	27	25	27	20	27	30	33	24
29	23	147	24	30	---	25	29	19	26	30	20	21
30	23	78	24	27	---	24	29	19	25	33	18	19
31	24	---	24	26	---	25	---	18	---	31	17	---
TOTAL	811	1155	981	1334	1211	997	1476	775	739	934	1041	637
MEAN	26.2	38.5	31.6	43.0	43.3	32.2	49.2	25.0	24.6	30.1	33.6	21.2
MAX	155	147	126	357	185	94	313	79	63	127	131	43
MIN	19	17	24	23	25	24	24	18	16	19	17	15
CFSM	1.54	2.26	1.86	2.53	2.55	1.89	2.89	1.47	1.45	1.77	1.98	1.25
IN.	1.77	2.53	2.15	2.92	2.65	2.18	3.23	1.70	1.62	2.04	2.28	1.39

CAL YR 1985 TOTAL 10377 MEAN 28.4 MAX 693 MIN 13 CFSM 1.67 IN. 22.71
WTR YR 1986 TOTAL 12091 MEAN 33.1 MAX 357 MIN 15 CFSM 1.95 IN. 26.46

01467329 SOUTH BRANCH BIG TIMBER CREEK AT BLACKWOOD TERRACE, NJ

LOCATION.--Lat 39°48'05", long 75°04'27", Gloucester County, Hydrologic Unit 02040202, at bridge on Blackwood-Clementon Road at Blackwood Terrace, 1,000 ft upstream from Bull Run, and 2.0 mi northeast of Fairview.

DRAINAGE AREA.--19.1 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
03...	0900	E128	101	7.2	17.0	8.6	89	--	16000	>24000
FEB 1986										
13...	0930	E25	175	7.1	1.0	13.9	97	1.0	80	170
APR										
09...	1020	E23	156	7.5	12.0	10.4	98	1.8	20	110
MAY										
21...	0900	E21	149	7.2	20.0	7.3	81	3.9	460	3500
JUL										
07...	0900	E19	142	7.1	24.0	6.1	72	7.5	50	1300
AUG										
05...	1015	E25	142	7.2	23.0	6.5	75	4.5	490	490

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
03...	33	10	1.9	4.2	2.3	19	11	7.2	<0.1
FEB 1986									
13...	44	13	2.9	20	2.6	19	15	36	<0.1
APR									
09...	42	12	2.9	9.3	2.6	26	13	12	<0.1
MAY									
21...	42	12	3.0	8.9	2.7	27	15	14	<0.1
JUL									
07...	37	10	2.8	9.7	3.0	25	14	16	<0.1
AUG									
05...	37	10	2.9	9.1	2.8	26	12	14	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
03...	4.1	52	0.021	0.61	0.15	0.7	1.3	0.30	5.2
FEB 1986									
13...	6.5	110	0.01	1.37	0.45	0.65	2.0	0.12	5.6
APR									
09...	4.8	72	0.034	1.23	0.26	0.8	2.0	0.11	8.2
MAY									
21...	5.1	77	0.062	1.19	0.39	1.0	2.2	0.14	3.9
JUL									
07...	3.6	74	0.044	0.96	0.19	0.9	1.9	0.09	6.3
AUG									
05...	5.8	72	0.027	0.97	E0.13	0.7	1.7	0.06	5.2

01467329 SOUTH BRANCH BIG TIMBER CREEK AT BLACKWOOD TERRACE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)
OCT 1985 03...	0900	<0.5	30	2	<10	40	2	10	17

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1985 03...	1700	21	50	0.1	13	<1	120	5

01474500 SCHUYLKILL RIVER AT PHILADELPHIA, PA
(National stream-quality accounting network station)

LOCATION.--Lat 39°58'00", long 75°11'20", Philadelphia County, Hyrologic Unit 02040203, on right bank 150 ft upstream from Fairmount Dam, 1,500 ft upstream from Spring Garden Street Bridge, in Philadelphia, and 8.7 mi upstream from mouth. Water-quality sampling site 1.6 mi upstream.

DRAINAGE AREA.--1,893 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1931 to current year. Records for January 1898 to December 1912, published in WSP 35, 48, 65, 82, 97, 125, 166, 202, 214, 261, 301, 381 have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 756: Drainage area. WSP 1302: 1936(M). WSP 1432: 1945. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 5.74 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 25, 1956, water-stage recorder at site on right bank just upstream from Fairmount Dam at same datum. Nov. 26, 1956, to Oct. 6, 1966, water-stage recorder at site on left bank 40 ft (12 m) upstream from Fairmount Dam at same datum.

REMARKS.--Records good. Flow regulated by Still Creek Reservoir (station 01469200) since February 1933, Blue Marsh Reservoir (station 01470870) since April 1979, Green Lane Reservoir (station 01472200) since December 1956 and to some extent by Lake Ontelaunee, capacity 518,600,000. Records of discharge do not include diversion above station by City of Philadelphia for municipal water supply.

AVERAGE DISCHARGE.--55 years, 2,937 ft³/s, 21.07 in/yr, adjusted for diversion from October 1931 to September 1982.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 103,000 ft³/s June 23, 1972, gage height, 14.65 ft; no flow over dam at times; minimum daily, 0.6 ft³/s Sept. 2, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 4, 1869, reached a stage of 17.0 ft, discharge, 135,000 ft³/s, from rating extended above 46,000 ft³/s). Flood of Mar. 1, 1902, reached a stage of 14.8 ft, discharge, 98,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 21,200 ft³/s, Jan. 26, gage height, 8.99 ft; minimum, 252 ft³/s July 9, gage height 5.68 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1680	588	11600	1260	2510	3250	1670	2220	887	472	675	725
2	1400	606	9500	1300	2340	2900	1600	1960	863	715	1100	740
3	2500	569	8480	1450	2880	2700	1520	1850	783	947	2220	729
4	3820	610	6350	1480	2880	2500	1470	1750	804	861	2060	719
5	2400	1470	5030	1360	4880	2490	1450	1700	777	694	1390	660
6	1760	1700	4320	1340	6110	2470	1580	1620	745	547	1220	698
7	1680	1400	3880	1200	4560	2420	1770	1550	837	526	1140	748
8	1370	1230	3330	1030	3740	1990	1700	1450	1090	400	841	837
9	1210	886	3010	1010	3060	1820	1560	1370	1060	400	797	683
10	1120	824	2660	977	2760	1850	1430	1300	898	552	740	629
11	1070	800	2370	981	2610	2000	1340	1290	826	522	1730	606
12	1030	805	2250	988	2360	3340	1350	1260	971	517	1540	591
13	1000	803	2480	1010	2020	3420	1320	1200	1090	579	1070	451
14	974	890	2970	933	1740	7300	1300	1170	1180	754	734	480
15	978	997	2670	811	1800	17900	1260	1150	1060	554	658	500
16	933	1450	2230	805	1730	18100	3790	1120	951	432	658	446
17	835	11600	2060	824	1680	11800	12300	1160	969	425	926	427
18	759	8640	1970	885	3600	8850	12100	1100	1010	483	1680	507
19	745	5620	1810	1010	12000	6540	8800	1080	897	948	1450	681
20	744	4190	1670	4390	13500	5630	6800	1090	809	926	1490	578
21	749	3030	1650	4240	12000	4610	5700	1160	770	944	1380	699
22	702	3070	1640	3050	14600	3840	4900	2810	737	758	2250	697
23	731	6500	1690	2230	10600	3380	5060	2980	736	727	1630	727
24	729	3800	1650	1830	8150	3130	5020	1750	655	601	2870	1030
25	753	2910	1640	1840	6200	2830	4050	1440	627	534	1920	972
26	804	2620	1640	15300	5110	2540	3290	1310	612	1150	1250	785
27	784	5310	1410	12500	4320	2320	2970	1270	512	5560	1210	1100
28	750	9780	1460	7950	3770	2040	2770	1190	458	1970	1170	1380
29	654	14300	1410	5210	---	1900	2540	1080	456	1110	1050	1300
30	635	8250	1370	3860	---	1800	2410	997	514	1040	903	968
31	623	---	1290	2960	---	1770	---	945	---	819	764	---
TOTAL	35922	105248	97490	86014	143510	139430	104820	45322	24584	27467	40516	22093
MEAN	1159	3508	3145	2775	5125	4498	3494	1462	819	886	1307	736
MAX	3820	14300	11600	15300	14600	18100	12300	2980	1180	5560	2870	1380
MIN	623	569	1290	805	1680	1770	1260	945	456	400	658	427
CFSM	.61	1.85	1.66	1.47	2.71	2.38	1.85	.77	.43	.47	.69	.39
IN	.71	2.1	1.9	1.7	2.8	2.7	2.1	.89	.48	.54	.80	.43
†	225	244	246	254	250	231	231	242	259	282	265	237

CAL YR 1985 TOTAL 685403 MEAN 1878 MAX 20900 MIN 406 CFSM .99 IN. 13
WTR YR 1986 TOTAL 872416 MEAN 2390 MAX 18100 MIN 400 CFSM 1.26 IN. 17

† Diversion, equivalent in cubic feet per second, for municipal supply, furnished by city of Philadelphia.

01477120 RACCOON CREEK NEAR SWEDESBORO, NJ

LOCATION.--Lat 39°44'28", long 75°15'33", Gloucester County, Hydrologic Unit 02040202, on right bank 25 ft downstream from County Bridge No. 5-F-3 on Harrisonville-Gibbstown Road, 1.8 mi west of Mullica Hill, and 2.8 mi east of Swedesboro.

DRAINAGE AREA.--26.9 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1966 to current year.

REVISED RECORDS.--WDR NJ-82-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to July 28, 1969, at datum 7.96 ft higher. July 28, 1969 to Sept. 30, 1969, at datum 5.96 ft higher.

REMARKS.--Estimated daily discharges: June 5-11, July 18-22, Aug. 2-5 and Sept. 16-23. Records good except those for the period May 22 to September 23, which are fair. Several measurements of water temperature, other than those published, were made during the year.

AVERAGE DISCHARGE.--20 years, 41.2 ft³/s, 20.80 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,530 ft³/s, Aug. 10, 1967, elevation, 17.44 ft, present datum; minimum daily, 2.9 ft³/s, July 14, Aug. 27, 28, Sept. 10, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Elevation (ft)	Date	Time	Discharge (ft³/s)	Elevation (ft)
Jan. 26	1700	*399	*11.08	Feb. 18	2315	330	10.62

Minimum discharge, 10 ft³/s, Aug. 14, 15, 16, gage height, 6.51 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	21	173	27	40	35	34	32	18	12	15	13
2	21	21	79	26	42	34	37	29	17	42	17	14
3	139	22	51	39	44	34	40	24	16	25	83	15
4	110	22	40	41	54	34	38	23	17	17	22	15
5	80	43	37	33	99	33	39	22	18	16	11	15
6	43	32	36	29	61	32	41	24	20	14	12	16
7	31	24	33	25	48	31	44	25	19	13	12	14
8	28	22	32	22	42	28	40	24	19	13	12	14
9	28	21	31	22	39	28	36	23	20	13	12	14
10	27	21	30	22	40	30	35	24	19	13	11	13
11	26	21	29	22	44	31	34	23	19	12	11	14
12	24	21	29	22	40	28	34	23	23	13	11	13
13	24	22	37	22	35	33	33	23	31	14	11	13
14	23	22	43	21	33	54	33	22	22	18	10	12
15	23	22	33	20	34	66	32	22	19	14	10	12
16	23	27	31	20	32	77	103	23	17	13	10	12
17	22	69	32	19	35	48	133	23	17	15	15	11
18	22	37	31	22	145	40	95	22	17	14	20	11
19	22	27	29	33	170	38	54	20	16	39	20	13
20	22	25	27	42	77	37	45	21	16	25	16	12
21	21	23	28	30	64	34	44	25	16	18	52	13
22	22	38	29	25	78	34	47	53	16	15	28	14
23	21	59	29	24	57	34	59	45	16	15	17	16
24	22	35	30	22	51	36	50	32	17	15	15	41
25	22	28	31	26	45	37	42	27	18	15	13	20
26	22	27	28	282	39	37	39	25	14	15	13	16
27	21	32	26	167	38	37	38	23	13	15	13	28
28	21	48	26	72	36	38	36	21	13	15	18	24
29	19	145	26	52	---	37	34	20	13	16	16	17
30	21	70	26	49	---	36	33	19	12	15	14	15
31	21	---	25	42	---	35	---	18	---	15	13	---
TOTAL	994	1047	1167	1320	1562	1166	1402	780	528	524	553	470
MEAN	32.1	34.9	37.6	42.6	55.8	37.6	46.7	25.2	17.6	16.9	17.8	15.7
MAX	139	145	173	282	170	77	133	53	31	42	83	41
MIN	19	21	25	19	32	28	32	18	12	12	10	11
CFSM	1.19	1.30	1.40	1.58	2.07	1.40	1.74	.94	.65	.63	.66	.58
IN.	1.37	1.45	1.61	1.83	2.16	1.61	1.94	1.08	.73	.72	.76	.65

CAL YR 1985 TOTAL 11290 MEAN 30.9 MAX 510 MIN 11 CFSM 1.15 IN. 15.61
WTR YR 1986 TOTAL 11513 MEAN 31.5 MAX 282 MIN 10 CFSM 1.17 IN. 15.92

01477120 RACCOON CREEK NEAR SWEDESBORO, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: May 1966 to September 1973.
SUSPENDED-SEDIMENT DISCHARGE: June 1966 to September 1969.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and selected water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
08...	1000	27	170	6.4	12.0	9.4	86	<1.1	230	540
FEB 1986										
05...	0930	105	153	6.2	2.5	12.5	92	<0.8	110	>2400
APR										
03...	1050	41	175	6.5	14.0	10.8	104	<0.8	170	350
JUN										
05...	1000	21	184	7.2	19.0	8.5	91	<0.6	130	1600
JUL										
21...	0940	16	174	6.5	22.0	8.2	94	<0.8	130	1600
AUG										
07...	0930	11	191	6.7	22.0	8.8	100	<0.9	170	>2400

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
08...	59	17	3.9	4.7	3.8	23	28	13	0.2
FEB 1986									
05...	49	14	3.3	5.5	3.3	10	21	12	0.1
APR									
03...	58	16	4.3	5.7	3.9	21	28	15	0.2
JUN									
05...	66	20	3.8	5.3	3.3	37	25	12	0.2
JUL									
21...	62	19	3.6	5.1	3.6	37	24	11	0.3
AUG									
07...	68	21	3.7	6.0	3.9	42	22	14	0.2

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
08...	9.8	94	0.011	1.49	0.15	0.66	2.2	0.11	4.5
FEB 1986									
05...	7.8	73	0.015	1.76	0.19	0.6	2.4	0.15	4.2
APR									
03...	7.5	93	0.018	2.42	0.40	0.37	2.8	0.09	3.2
JUN									
05...	11	100	0.039	1.35	0.09	0.47	1.8	0.11	3.0
JUL									
21...	10	99	0.032	1.05	0.14	0.52	1.6	0.16	4.0
AUG									
07...	11	110	0.01	0.92	E0.20	0.54	1.5	0.18	2.2

01477120 RACCOON CREEK NEAR SWEDESBORO, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
OCT 1985 08...	1000	<0.5	10	2	<10	60	<1	10	5

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1985 08...	1200	3	30	<0.1	7	<1	20	2

01477510 OLDMANS CREEK AT PORCHES MILL, NJ

LOCATION.--Lat 39°41'57", long 75°20'01", Salem County, Hydrologic Unit 02040206, at bridge on Kings Highway in Porches Mill, 150 ft downstream of tributary from outflow of lake at Porches Mill, 1.0 mi north of Seven Stars, and 2.1 mi southeast of Auburn.

DRAINAGE AREA.--21.0 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
08...	1130	E19	175	6.2	13.5	9.6	91	<1.1	790	350
FEB 1986										
05...	1030	E73	176	6.1	2.0	12.6	92	E1.7	2400	>2400
APR										
03...	1150	E28	186	7.8	16.5	11.8	120	<0.8	<20	79
JUN										
05...	1100	E12	202	7.4	19.5	9.3	101	--	170	1600
JUL										
21...	1040	E10	184	6.7	23.0	8.2	96	2.6	230	920
AUG										
07...	1030	E7.5	185	6.8	23.5	7.1	83	E1.3	130	920

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
08...	60	17	4.2	4.1	4.3	22	25	13	0.2
FEB 1986									
05...	58	16	4.4	5.0	4.1	11	20	14	0.2
APR									
03...	65	18	4.8	4.6	3.1	24	28	23	0.2
JUN									
05...	75	22	4.9	4.5	3.5	41	24	15	0.2
JUL									
21...	76	22	5.1	4.5	3.5	43	25	14	0.3
AUG									
07...	71	20	5.0	4.6	3.8	41	20	16	0.2

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
08...	11	92	0.013	1.49	0.21	0.76	2.3	0.11	5.5
FEB 1986									
05...	8.6	79	0.019	2.72	0.31	0.6	3.3	0.15	4.9
APR									
03...	6.2	100	0.015	2.45	0.12	0.5	3.0	0.06	2.1
JUN									
05...	9.5	110	0.042	1.79	0.07	0.33	2.1	0.11	5.1
JUL									
21...	10	110	0.032	1.05	0.12	0.59	1.6	0.17	5.8
AUG									
07...	11	110	0.015	1.03	E0.15	0.98	2.0	0.17	5.5

01477510 OLDMANS CREEK AT PORCHES MILL, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
JUN 1986 05...	1100	<0.5	10	2	<10	50	<1	<10	4

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
JUN 1986 05...	2500	5	70	0.1	6	<1	20	1

01481602 DELAWARE RIVER BELOW CHRISTINA RIVER AT WILMINGTON, DE

LOCATION.--Lat 39°43'00", long 75°31'03", New Castle County, DE, Hydrologic Unit 02040206, on right bank, 1,000 ft from mouth of Christina River at the Wilmington Marine Terminal at Wilmington, 2.0 mi upstream of Delaware Memorial Bridge, and at mile 69.70.

DRAINAGE AREA.--11,030 mi².

TIDE ELEVATION DATA

PERIOD OF RECORD.--December 1982 to current year. July 1967 to May 1983 published as Delaware River at Delaware Memorial Bridge, at Wilmington, DE (station 01482100). Tidal volumes published from July 1967 to September 1973.

GAGE.--Water-stage recorder. Datum of gage is -18.05 ft below National Geodetic Vertical Datum of 1929. Prior to Dec. 1982, water-stage recorder at Delaware River at Delaware Memorial Bridge 2.0 mi downstream at datum 8.05 ft higher. Gage-height record converted to elevation above or below (-) National Geodetic Vertical Datum 1929 for publication.

REMARKS.--No gage-height or doubtful record: Dec. 19, 22, 30, Jan. 15-16, 28-29, Feb. 12-15, 26 and Mar. 7-8. Summaries for months with short periods of no gage-height record have been estimated with negligible or no loss of accuracy unless otherwise noted. Some periods cannot be estimated and are noted by dash (--) lines.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 7.88 ft, Oct. 25, 1980; minimum, -5.86 ft, Apr. 4, 1975.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation known, 8.4 ft, Nov. 23, 1950, furnished by Corps of Engineers, U.S. Army; minimum, -9.1 ft, Dec. 31, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded, 5.72 ft, Aug. 18; minimum recorded, -4.45 ft, Mar. 8.

Summaries of tide elevations during current year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	5.22	5.35	5.33	4.98	4.73	4.65	5.41	5.49	5.32	5.18	5.72	4.69
high tide	Date	15	4,30	1	26	7	15	26	13	21	20	18	5
Minimum	Elevation	-2.70	-2.67	-4.36	-4.40	a-3.0	-4.45	-3.27	-3.20	-3.00	-2.33	-2.38	-3.55
low tide	Date	28	15	3	8	13	8	23	3	17	21	12	16
Mean high tide		3.72	3.97	3.26	2.81	3.44	3.33	4.01	3.90	3.71	3.79	3.75	3.55
Mean water level		1.12	1.47	.66	0.30	1.01	.69	1.33	1.18	1.00	1.13	1.16	1.01
Mean low tide		-1.67	-1.25	-2.12	-2.44	-1.76	-2.15	-1.56	-1.77	-1.99	-1.77	-1.63	-1.72

a - Estimated

01482500 SALEM RIVER AT WOODSTOWN, NJ

LOCATION.--Lat 39°38'36", long 75°19'52", Salem County, Hydrologic Unit 02040206, on right end of Memorial Lake Dam at Woodstown, 0.2 mi upstream from small brook, and 0.3 mi downstream from Pennsylvania-Reading Seashore Lines bridge.

DRAINAGE AREA.--14.6 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
30...	1130	5.0	225	7.3	12.0	10.6	99	3.5	330	130
JAN 1986										
23...	1030	12	245	6.5	4.0	12.2	92	E2.3	1700	220
MAR										
17...	1030	26	180	6.2	11.0	10.2	92	3.4	9200	350
MAY										
22...	1000	12	239	6.9	22.0	8.2	95	3.3	790	170
JUL										
15...	1050	2.0	248	8.0	27.5	8.5	106	4.7	50	46
AUG										
12...	0940	2.0	180	8.2	23.0	8.6	100	7.9	330	1600

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
30...	86	19	9.4	7.0	5.7	38	32	21	0.2
JAN 1986									
23...	76	16	8.8	6.7	5.0	18	29	21	0.1
MAR									
17...	72	15	8.3	7.5	6.4	15	34	27	0.2
MAY									
22...	91	20	10	7.9	4.2	40	39	20	0.2
JUL									
15...	86	19	9.4	7.8	5.9	52	26	22	0.2
AUG									
12...	62	14	6.6	5.4	6.3	27	30	16	0.2

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
30...	4.9	120	0.044	1.69	0.11	0.85	2.5	0.13	5.0
JAN 1986									
23...	7.0	100	0.034	3.08	E0.29	1.3	4.4	0.13	4.6
MAR									
17...	8.6	120	0.047	2.93	0.42	2.1	5.0	0.33	9.6
MAY									
22...	6.6	130	0.06	1.01	0.16	1.4	2.4	0.21	6.8
JUL									
15...	8.8	130	0.013	0.18	0.06	1.2	1.3	0.29	16
AUG									
12...	7.9	100	0.007	<0.05	0.11	2.3	--	0.35	21

01482500 SALEM RIVER AT WOODSTOWN, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
OCT 1985 30...	1130	<0.5	20	1	<10	30	<1	10	1
MAY 1986 22...	1000	<0.5	30	2	<10	50	<1	<10	3

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1985 30...	720	5	80	<0.1	2	<1	20	4
MAY 1986 22...	1100	3	110	0.2	13	<1	<10	1

RESERVOIRS IN DELAWARE RIVER BASIN

01416900 PEPACTON RESERVOIR.--Lat 42°04'38", long 74°58'04", Delaware County, NY, Hydrologic Unit 02040102, near release chamber at Downsville Dam on East Branch Delaware River, and 1.6 mi east of Downsville, NY. DRAINAGE AREA, 371 mi². PERIOD OF RECORD, September 1954 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Board of Water Supply, City of New York).
REMARKS.--Reservoir is formed by an earthfill rockfaced dam. Storage began Sept. 15, 1954. Usable capacity 140,190 mil gal between minimum operating level, elevation, 1,152.0 ft, and crest of spillway, elevation, 1,280.0 ft. Capacity, at crest of spillway 149,700 mil gal; at minimum operating level, 9,609 mil gal; at still of diversion tunnel, elevation, 1,143.0 ft, 6,098 mil gal; in dead storage below release outlet, elevation, 1,126.50 ft, 1,898 mil gal. Figures given herein represent total contents. Reservoir impounds water for diversion through East Delaware Tunnel to Rondout Reservoir on Rondout Creek, in Hudson River basin (see Delaware River Basin, diversions), for water supply to City of New York; for release during periods of low flow in the lower Delaware River basin, as directed by the Delaware River Master; and for conservation release. No diversion prior to Jan. 6, 1955.
COOPERATION.--Records provided by Bureau of Water Resources Development and Department of Environmental Protection, City of New York.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 154,027 mil gal, Apr. 5, 1960, elevation, 1,282.27 ft; minimum observed (after first filling), 9,575 mil gal, Dec. 26, 1964, elevation, 1,151.92 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 151,466 mil gal, May 24, elevation, 1,280.90 ft; minimum, 64,418 mil gal, Oct. 1, elevation, 1,222.18 ft.

01424997 CANNONSVILLE RESERVOIR.--Lat 42°03'46", long 75°22'29", Delaware County, NY, Hydrologic Unit 02040101, in emergency gate tower at Cannonsville Dam on West Branch Delaware River, and 1.8 mi southeast of Stilesville, NY. DRAINAGE AREA, 454 mi². PERIOD OF RECORD, October 1963 to current year. REVISED RECORDS, WRD-NY 1972: 1966. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Board of Water Supply, City of New York).
REMARKS.--Reservoir is formed by an earthfill rockfaced dam; storage began Sept. 30, 1963, usable capacity 95,706 mil gal between minimum operating level, elevation, 1,040.0 ft and crest of spillway, elevation, 1,150.0 ft. Capacity, at crest of spillway, 98,618 mil gal; at minimum operating level, 2,912 mil gal; at mouth of inlet channel to diversion tunnel, elevation, 1,035.0 ft, 1,892 mil gal; in dead storage below release outlet elevation, 1,020.5 ft, 328 mil gal. Figures given herein represent total contents. Impounded water is diverted for New York City water supply via West Delaware Tunnel to Rondout Reservoir in Hudson River basin (see Delaware River Basin, diversion); is released in Delaware River for downstream low flow augmentation as directed by Delaware River Master; and is released for conservation flow in the Delaware River. No diversion prior to Jan. 29. 1964.
COOPERATION.--Records provided by Bureau of Water Resources Development, City of New York.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 108,116 mil gal, Mar. 15, 1977, elevation, 1,155.85 ft; minimum observed (after first filling), 11,901 mil gal, Nov. 7, 1968, elevation, 1,066.24 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 109,617 mil gal, Mar. 16, elevation, 1,156.73 ft; minimum, 59,969 mil gal, Nov. 11, elevation, 1,121.79 ft.

01428900 PROMPTON RESERVOIR.--Lat 41°35'18", long 75°19'39", Wayne County, PA, Hydrologic Unit 02040103, at dam on West Branch Lackawaxen River, 0.3 mi north of Prompton, PA, 0.4 mi upstream from highway bridge and 0.5 mi upstream from Van Auken Creek. DRAINAGE AREA, 59.6 mi². PERIOD OF RECORD, December 1960 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).
REMARKS.--Reservoir formed by an earth and rockfill dam with ungaged bedrock spillway at elevation 1,205.00 ft; storage began July 1960. Capacity at elevation 1,205.00 ft is 51,700 acre-ft. Ordinary minimum (conservation) pool elevation, 1,125.00 ft capacity, 3,420 acre-ft. Reservoir is used for flood control and recreation. Figures given herein represent total contents. Regulation is accomplished by discharge through an ungated tunnel.
COOPERATION.--Records provided by U.S. Army Corps of Engineers.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 8,170 acre-ft, June 29, 1973, elevation, 1,138.40 ft; minimum (after first filling), 2,920 acre-ft, Sept. 27, 1964, elevation, 1,123.20 ft.
EXTREMES FOR CURRENT YEAR.--Maximum content, 4,460 acre-ft, Nov. 17, elevation, 1,128.43 ft; minimum, 2,800 acre-ft, Mar. 8, elevation, 1,122.50 ft.

01429400 GENERAL EDGAR JADWIN RESERVOIR.--Lat 41°36'44", long 75°15,55", Wayne County, PA, Hydrologic Unit 02040103, at dam on Dyberry Creek, 0.45 mi upstream from unnamed tributary, 2.4 mi north of Honesdale, PA, and 2.9 mi upstream from mouth. DRAINAGE AREA, 64.5 mi². PERIOD OF RECORD, October 1959 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).
REMARKS.--Reservoir formed by an earth and rockfill dam with ungated, concrete spillway at elevation, 1,053.00 ft; storage began in October 1959. Capacity at elevation 1,053.00 ft is 24,500 acre-ft. Reservoir is used for flood control. Figures given herein represent total contents. Regulation is accomplished by discharge through an ungated tunnel.
COOPERATION.--Records provided by U.S. Army Corps of Engineers.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 6,520 acre-ft, June 19, 1973, elevation 1,017.40 ft; no storage many times.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 5,390 acre-ft, Mar. 16 elevation, 1,013.62 ft; no storage many times.

01431700 LAKE WALLENPAUPACK.--Lat 41°27'35", long 75°11'10", Wayne County, PA, Hydrologic Unit 02040103, at dam on Wallenpaupack Creek at Wilsonville, PA, 1.2 mi south of and 1.5 mi upstream from mouth. DRAINAGE AREA, 228 mi². PERIOD OF RECORD, January 1926 to current year. GAGE, vertical staff. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Pennsylvania Power and Light Co.).
REMARKS.--Reservoir formed by concrete gravity-type and earthfill dam with concrete spillway at elevation 1,176.00 ft in two sections. Spillway equipped with roller gate, 14 ft high on each section. Storage began Nov. 3, 1925; water in reservoir first reached minimum pool elevation in January 1926. Total capacity at elevation 1,190.00 ft, top of gates, is 209,300 acre-ft of which 157,800 acre-ft is controlled storage above elevation 1,160.00 ft, minimum pool. Reservoir is used for generation of hydrolelectric power. Figures given herein represent usable contents.
COOPERATION.--Records provided by Pennsylvania Power and Light Co.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 178,200 acre-ft, Aug. 19-21, 1955, elevation, 1,193.45 ft; minimum (after first filling), 12,280 acre-ft, Mar. 28, 1958, elevation, 1,162.60 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 91,030 acre-ft, June 13, 14, elevation, 1,186.9 ft; minimum, 32,790 acre-ft, Mar. 7, 10, elevation, 1,176.3 ft.

RESERVOIRS IN DELAWARE RIVER BASIN--Continued

01433000 SWINGING BRIDGE RESERVOIR.--Lat 41°34'25", long 74°47'00", Sullivan County, NY, Hydrologic Unit 02040104, at dam on Mongaup River, and 1.8 mi northwest of Fowlersville, NY. DRAINAGE AREA, 118 mi² excluding Cliff Lake, Lebanon Lake, and Toronto Reservoir. PERIOD OF RECORD, January 1930 to current year. REVISED RECORDS, WSP 1552: 1951-54. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Orange and Rockland Utilities, Inc.). All capacity figures given herein are based on zero storage at minimum operating pool level, 1,010 ft.

REMARKS.--Reservoir is formed by an earthfill dam. Storage began Jan. 19, 1930. Usable capacity, 1,436.6 mil ft³ between elevations 1,010.0 ft, minimum operating pool, and 1,071.2 ft, top of flashboards. Capacity below elevation 1,010.0 ft, minimum operating pool, about 212.7 mil ft³. Reservoir is used for storage of water for power. Figures given herein represent contents above 1,010.0 ft. Water is received from Cliff Lake, Lebanon Lake, and Toronto Reservoir.

COOPERATION.--Records provided by Orange and Rockland Utilities, Inc.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,461.6 mil ft³, Mar. 14, 1977, elevation, 1,071.8 ft; minimum (after first filling), -141.4 mil ft³, Dec. 2, 1938, elevation, 987.5 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,363 mil ft³, Dec. 4, June 18, elevation, 1,069.4 ft; minimum, 863.5 mil ft³, Feb. 14, elevation, 1,055.6 ft.

REVISIONS.--Monthend elevation, contents, and change in contents for Water Year 1985 have been revised as shown on the first page of reservoir tables. They supersede figures published in WDR NJ-85-2 and WDR NY-85-1.

01433100 TORONTO RESERVOIR.--Lat 41°37'15", long 74°49'55", Sullivan County, NY, Hydrologic Unit 02040104, at dam on Black Lake Creek, and 2.5 mi southeast of village of Black Lake, NY. DRAINAGE AREA, 23.2 mi². PERIOD OF RECORD, January 1926 to current year. REVISED RECORDS, WSP 1552: 1951-54. WSP 1702: 1959(M) WDR NJ-85-2: 1984. Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Orange and Rockland Utilities, Inc.). All capacity figures given herein are based on zero storage at minimum operating pool level, 1,165.0 ft.

REMARKS.--Reservoir is formed by an earthfill dam completed July 24, 1926. Storage began Jan. 13, 1926. Usable capacity, 1,098.2 mil ft³ between elevations 1,165.0 ft, minimum operating pool, and operating pool, about 26.8 mil ft³. Reservoir is used for storage of water for power. Figures given herein represent contents above 1,165.0 ft.

COOPERATION.--Records provided by Orange and Rockland Utilities, Inc.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 1,171.2 mil ft³, July 20, 1945, elevation, 1,222.0 ft. minimum observed (after first filling), -26.8 mil ft³, Nov. 15, 1928, elevation, 1,144.5 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 1,149.0 mil ft³, June 7, elevation, 1,221.4 ft; minimum observed, 472.9 mil ft³, Nov. 15, elevation, 1,198.2 ft.

REVISIONS.--Monthend elevation, contents, and change in contents for Water Year 1985 have been revised as shown on the first page of reservoir tables. They supersede figures published in WDR NJ-85-2 and WDR NY-85-1.

01433200 CLIFF LAKE.--Lat 41°35'00", long 74°47'40", Sullivan County, NY, Hydrologic Unit 02040104, at dam on Black Lake Creek, and 2.5 mi northwest of Fowlersville, NY. DRAINAGE AREA, 6.46 mi² excluding area above Toronto Reservoir. PERIOD OF RECORD, January 1939 to current year. REVISED RECORDS, WSP 1552: 1951-54. WRD NY-75-1: 1974(m). Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Orange and Rockland Utilities, Inc.). All capacity figures given herein are based on zero storage at minimum operating pool level, 1,043.3 ft.

REMARKS.--Reservoir is formed by a concrete gravity-type dam. Storage began Jan. 6, 1939. Usable capacity, 136.06 mil ft³ between elevations 1,043.3 ft, minimum operating pool, and 1,072.0 ft, top of permanent flashboards. Capacity below elevation 1,043.3 ft, minimum operating pool, about 6.54 mil ft³. Reservoir is used for storage of water for power. Water is received from Toronto and Lebanon Lake reservoirs and is discharged through a tunnel into Swinging Bridge Reservoir. Figures given herein represent contents above 1,043.3 ft.

COOPERATION.--Records provided by Orange and Rockland Utilities, Inc.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 145.44 mil ft³, July 30, 31, 1945, elevation, 1,073.1 ft; minimum observed (after first filling), about -6.54 mil ft³, Mar. 16, 1963, elevation, 1,038.0 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 136.06 mil ft³, June 9, elevation, 1,072.0 ft, minimum observed, 34.9 mil ft³, Feb. 14, elevation, 1,055.8 ft.

REVISIONS.--Monthend elevation, contents, and change in contents for Water Year 1985 have been revised as shown on the first page of reservoir tables. They supersede figures published in WDR NJ-85-2 and WDR NY-85-1.

01435900 NEVERSINK RESERVOIR.--Lat 41°49'40", long 74°38'21", Sullivan County, NY, Hydrologic Unit 02040104, at a gate-house at Neversink Dam on Neversink River, and 2 mi southwest of Neversink, NY. DRAINAGE AREA, 91.8 mi². PERIOD OF RECORD, June 1953 to current year. Nonrecording gage read daily at 0900. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Board of Water Supply, City of New York).

REMARKS.--Reservoir is formed by an earthfill rockfaced dam. Storage began June 2, 1953. Usable capacity 34,941 mil gal between minimum operating level, elevation, 1,319.0 ft and crest of spillway, elevation, 1,440.0 ft. Capacity at crest of spillway, 37,146 mil gal; at minimum operating level, 2,205 mil gal; dead storage belowand outlet sill at elevation 1,314.0 ft, 1,680 mil gal. Figures given herein represent total contents. Reservoir impounds water for diversion through Neversink-Grahamsville Tunnel to Rondout Reservoir on Rondout Creek, in Hudson River basin, for water supply of City of New York (see Delaware River basin, diversions); for release during periods of low flow in the lower Delaware River basin, as directed by the Delaware River Master; and for conservation release. No diversion prior to Dec. 3, 1953.

COOPERATION.--Records provided by Bureau of Water Resources Development and Department of Environmental Protection, City of New York.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 37,978 mil gal, Apr. 25, 1961, elevation, 1,441.67 ft; minimum observed (after first filling), 1,985 mil gal, Nov. 25, 1964, elevation, 1,316.98 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 37,499 mil gal, May 23, elevation, 1,440.71 ft; minimum observed, 23,534 mil gal, Oct. 1, elevation, 1,408.72 ft.

01447780 FRANCIS E. WALTER RESERVOIR (formerly published as Bear Creek Reservoir).--Lat 41°06'45", long 75°43'15", Luzerne County, PA, Hydrologic Unit 02040106, at dam on Lehigh River, 2,200 ft downstream from Bear Creek and 5 mi northwest of White Haven, PA. DRAINAGE AREA, 289 mi². PERIOD OF RECORD, February 1961 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Reservoir formed by an earthfill embankment covered with a rock shell, with concrete spillway at elevation 1,450.0 ft; storage began Feb. 17, 1961; water in reservoir first reached conservation pool elevation in June 1961. Total capacity at elevation 1,450.0 ft is 110,700 acre-ft of which 108,700 acre-ft is controlled storage above elevation 1,300.0 ft or (conservation pool). Dead storage is 2,000 acre-ft. Reservoir is used for flood control and recreation. Figures given herein represent total contents. Flow regulated by three gates and low flow by-pass system.

COOPERATION.--Records provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 62,100 acre-ft, Sept. 28, 1985, elevation, 1,417.08 ft; minimum (after establishment of conservation pool), 981 acre-ft, July 6, 1982, elevation, 1,287.70 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 41,650 acre-ft, Oct. 1, elevation, 1,397.20 ft; minimum, 1,580 acre-ft, Feb. 17, elevation, 1,295.90 ft.

RESERVOIRS IN DELAWARE RIVER BASIN--Continued

01449400 PENN FOREST RESERVOIR.--Lat 40°55'45", long 75°33'45", Carbon County, PA, Hydrologic Unit 02040106, at dam on Wild Creek near Hatchery, PA, 0.7 mi upstream from Hatchery, 2.6 mi upstream from Wild Creek Dam, 4.4 mi upstream from mouth, and 10 mi northeast of Palmerton, PA. DRAINAGE AREA, 16.5 mi². PERIOD OF RECORD, October 1958 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by city of Bethlehem).

REMARKS.--Reservoir formed by an earthfill dam, with ungated concrete spillway at elevation 1,000.00 ft; storage began in October 1958. Capacity at elevation 1,000.00 ft is 19,980 acre-ft. Reservoir is used for municipal water supply. Figures given herein represent total contents. Regulation is done by valves on pipe through dam. Figures given herein include diversion, since October 1969, from Tunkhannock Creek basin into Wild Creek basin.

COOPERATION.--Records provided by city of Bethlehem.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 20,560 acre-ft, Apr. 6, 1984, elevation, 1,001.19 ft; minimum, 176 acre-ft, Oct. 6, 1965, elevation, 902.40 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 20,300 acre-ft, Mar. 21, elevation, 1,000.55 ft; minimum, 9.160 acre-ft, Nov. 14, elevation, 970.94 ft.

01449700 WILD CREEK RESERVOIR.--Lat 40°53'50", long 75°33'50", Carbon County, PA, Hydrologic Unit 02040106, at dam on Wild Creek near Hatchery, PA, 1.6 mi upstream from mouth, 2.4 mi south of Hatchery, and 7.5 mi northeast of Palmerton, PA. DRAINAGE AREA, 22.2 mi². PERIOD OF RECORD, January 1941 to current year. Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by city of Bethlehem).

REMARKS.--Reservoir formed by earthfill dam, with concrete ungated spillway at elevation 820.00 ft; storage began January 27, 1941; water in reservoir first reached minimum pool elevation in February 1941. Total capacity at elevation 820.00 ft is 12,500 acre-ft of which 12,000 acre-ft is controlled storage. Reservoir is used for municipal water supply. Figures given herein represent usable contents. Regulation is accomplished by valves on pipe through dam. Since October 1969 the basin upstream has received diversion from Tunkhannock Creek basin.

COOPERATION.--Records provided by City of Bethlehem.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 12,880 acre-ft, May 23, 1942, elevation, 822.93 ft; minimum (after first filling), 2,680 acre-ft, Nov. 15, 1966, elevation, 774.10 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 12,150 acre-ft, Apr. 18, elevation, 820.50 ft; minimum, 9,820 acre-ft, Oct. 15, elevation, 811.80 ft.

01449790 BELTZVILLE LAKE.--Lat 40°50'56", long 75°38'19", Carbon County, PA, Hydrologic Unit 02040106, at dam on Pohopoco Creek, 0.45 mi upstream from gaging station on Pohopoco Creek, 0.55 mi upstream from Sawmill Run and 2.3 mi northeast of Parryville, PA. DRAINAGE AREA, 96.3 mi². PERIOD OF RECORD, February 1971 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Reservoir formed by an earth and rockfill dam with ungated, partially lined spillway at elevation 651.00 ft; storage began Feb. 8, 1971. Capacity at elevation 651.00 ft is 68,300 acre-ft. Ordinary minimum (conservation) pool elevation, 628.00 ft, capacity, 41,250 acre-ft. Dead storage is 1,390 acre-ft. Reservoir is used for recreation, flood control, low flow augmentation and water supply. Figures given herein represent total contents. Regulation is accomplished by a multi-level water-quality outlet system and two flood-control gates.

COOPERATION.--Records provided by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents 49,730 acre-ft, Jan. 29, 1976, elevation, 636.30 ft; minimum, 15,110 acre-ft, March 31, 1983 elevation, 588.79

EXTREMES FOR CURRENT YEAR.--Maximum contents 43,380 acre-ft, Mar. 6, elevation, 630.18 ft; minimum, 40,770 acre-ft, Feb. 10, elevation, 627.49 ft.

01455400 LAKE HOPATCONG.--Lat 40°55'00", long 74°39'50", Morris County, Hydrologic Unit 02040105, in gatehouse of Lake Hopatcong Dam on Musconetcong River at Landing. DRAINAGE AREA, 25.3 mi². PERIOD OF RECORD, February 1887 to current year. Monthend contents only prior to October 1950, published in WSP 1302. REVISED RECORDS, WDR NJ-82-2: Drainage area; WDR NJ-83-2: Corrections 1981 (m/m). GAGE, max-mim recorder and staff gage. Prior to June 24, 1928, daily readings obtained by measuring from high-water mark to water surface converted to gage height, present datum. Datum of gage is 914.57 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Lake is formed by concrete spillway and earthfill dam completed about 1828. Crest of spillway was lowered 0.11 ft in 1925. Usable capacity, 7,459,000,000 gal between (gage height -2.6 ft, sills of gates and 9.00 ft, crest of spillway). Flow regulated by four gates (3 by 5 ft, also by one 24-inch pipe with gate valve to recreation fountain 250 ft downstream from dam. Dead storage, about 8,117,000,000 gal. Figures given herein represent usable capacity. Lake used for recreation. CORRECTIONS.--Once-daily staff readings furnished by New Jersey Department of Environmental Protection.

COOPERATION.--Records provided by New Jersey Department of Environmental Protection.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 8,777,000,000 gal, August 19, 1955 correction, gage height, 10.55 ft; minimum, 1,525,000,000 gal, Dec. 29, 1960, gage height, 0.65 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 7,863,000,000 gal, Apr. 26, gage height, 9.48 ft; minimum, 5,412,000,000 gal, Jan. 14, gage height, 6.46 ft.

01459350 NOCKAMIXON RESERVOIR.--Lat 40°28'13", long 75°11'10", Bucks County, PA, Hydrologic Unit 02040105, at dam on Tohickon Creek, 6.2 mi upstream from gaging station on Tohickon Creek, 2.9 mi upstream from Mink Run and 1.3 mi east of Ottsville. DRAINAGE AREA, 73.3 mi². PERIOD OF RECORD, December 1973 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Pennsylvania Department of Environmental Resources).

REMARKS.--Reservoir formed by earthfill dam with concrete spillway at elevation 395.0 ft. Storage began Decmeber 1973. Total capacity 66,500 acre-ft at elevation 410 ft. Reservoir is used primarily for recreation, but can be used for water supply and flood control.

COOPERATION.--Records provided by Pennsylvania Department of Environmental Resources.

EXTRMES FOR PERIOD OF RECORD.--Maximum contents, 44,380 acre-ft, Jan. 20, 1979, elevation 397.85 ft; minimum (after first filling) 15,900 acre-ft, around Dec. 31, 1975, elevation 372.78 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 42,200 acre-ft, Mar. 15, elevation 396.40 ft; minimum, 38,590 acre-ft, Nov. 4, elevation 393.85 ft.

01469200 STILL CREEK RESERVOIR.--Lat 40°51'25", long 75°59'30". Schuylkill County, PA, Hydrologic Unit 02040106, at dam on Still Creek, 1 mi upstream from mouth and 2.3 mi north of Hometown, PA. DRAINAGE AREA, 8.5 mi². PERIOD OF RECORD, January 1933 to current year. Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Panther Valley Water Co.).

REMARKS.--Reservoir formed by earth fill dam, with ungated concrete spillway at elevation 1,182.00 ft; storage began in February 1933. Capacity at elevation, 1,182.00 ft is 8,290 acre-ft. Reservoir is used for municipal water supply. Figures given herein represent total contents. Regulation is accomplished by valves on pipe through dam.

COOPERATION.--Records provided by Panther Valley Water Co.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 8,570 acre-ft, Oct. 15, 1955, elevation, 1,182.92 ft, but may have been greater during 1950 and 1951 water years; minimum (after initial filling), 588 acre-ft, Dec. 8, 1944, elevation, 1,136.70 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 8,440 acre-ft, Mar. 15, elevation, 1,182.5 ft; minimum, 5,190 acre-ft, Sept. 29, elevation, 1,170.9 ft.

RESERVOIRS IN DELAWARE RIVER BASIN--Continued

01470870 BLUE MARSH LAKE.--Lat 40°22'45", long 76°01'59", Berks County, PA, Hydrologic Unit 02040203, at dam on Tulpehocken Creek, 0.8 mi upstream from gaging station on Tulpehocken Creek, 1.0 mi northeast of Blue Marsh, PA, 1.9 mi upstream from Reber's Bridge, and 5.1 mi southeast of Bernville, PA. DRAINAGE AREA, 175 mi². PERIOD OF RECORD, April 1979 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Reservoir formed by earthfill dam, with concrete ungated spillway at elevation 307.00 ft. Storage began April 23, 1979. Capacity at elevation, 307.00 ft is 50,000 acre-ft. Dead storage is 3,000 acre-ft. Reservoir is used for flood control, water supply, and recreation. Figures herein represent total contents.

COOPERATION.--Records provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 39,480 acre-ft, Apr. 17, 1983, elevation, 301.65 ft; minimum, 17,440 acre-ft, Nov. 28, 1983 elevation, 284.49 ft.

EXTREMES FOR CURRENT YEAR: Maximum contents, 25,320 acre-ft, Apr. 18, elevation, 292.04 ft; minimum, 15,770 acre-ft, Mar. 21, elevation, 283.00 ft.

01472200 GREEN LANE RESERVOIR.--Lat 40°20'30", long 75°28'45", Montgomery County, PA, Hydrologic Unit 02040203, at dam on Perkiomen Creek at Green Lane, PA, 0.4 mi west of Green Lane and 2.1 mi upstream from Unami Creek. DRAINAGE AREA, 70.9 mi². PERIOD OF RECORD, December 1956 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Philadelphia Suburban Water Co.).

REMARKS.--Reservoir formed by concrete, gravity-type dam, with ungated spillway at elevation 286.00 ft; storage began December 21, 1956. Capacity at spillway level, elevation 286.00 ft, 13,430 acre-ft. Reservoir is used for municipal water supply. Figures given herein represent total contents. Regulation is accomplished by valves on pipe through dam.

COOPERATION.--Records provided by Philadelphia Suburban Water Co.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 17,030 acre-ft, June 23, 1972, elevation, 290.05 ft; minimum (after first filling), 1,270 acre-ft, Aug. 25, 1957, elevation, 251.60 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 14,140 acre-ft, Mar. 15, elevation, 286.80 ft; minimum, 11,600 acre-ft, Sept. 26, elevation, 283.80 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

Date	Elevation (feet)‡	Contents (million gallons)	Change in contents (equivalent in ft³/s)	Elevation (feet)‡	Contents (million gallons)	Change in contents (equivalent in ft³/s)	Elevation (feet)†	Contents (acre-feet)	Change in contents (equivalent in ft³/s)
	01433000 SWINGING BRIDGE RESERVOIR			01433100 TORONTO RESERVOIR			01433200 CLIFF LAKE		
Sept. 30...	1,063.1	1,121	-4.1R	1,196.8	440		1,064.6	81.1	
Oct. 31...	1,062.8	1,110R	-4.1R	1,184.0	195	-91.6	1,063.8R	76.0R	-1.9R
Nov. 30...	1,063.5R	1,136R	+9.9R	1,181.3	153	-16.4	1,063.0R	71.1R	-1.9R
Dec. 31...	1,066.0	1,229	+35.0R	1,186.0	228	+28.2	1,065.9	89.6	+6.9R
CAL YR 1984			+ 2.5			-4.4			+0.3
Jan. 31...	1,061.3	1,056	-64.7	1,189.2	284	+20.9	1,061.5	62.2	-10.2
Feb. 28...	1,062.6R	1,103R	+19.3R	1,191.2R	321R	+15.5R	1,062.2	66.3	+1.7
Mar. 31...	1,062.8R	1,110R	+2.7R	1,198.5R	480R	+59.3R	1,063.4R	73.5R	+2.7R
Apr. 30...	1,062.7	1,106	-1.4	1,201.2	546	+25.6R	1,062.5	68.1	-2.1R
May 31...	1,066.5	1,249	+53.2	1,203.4	603	+21.0	1,066.7	95.1	+10.1
June 30...	1,066.2	1,237	-4.5	1,204.8	639	+14.1	1,066.0	90.3	-1.9
July 31...	1,066.5R	1,249R	+4.3R	1,205.8R	666R	+9.9R	1,066.3R	92.3R	+0.8R
Aug. 31...	1,062.0	1,081	-62.6R	1,202.3	574	-34.2R	1,063.1	71.7	-7.7R
Sept. 30...	1,067.8	1,299	+84.3	1,203.6R	608R	+13.0R	1,067.8	102.9	+12.1
WTR YR 1985			+5.7			+5.3R			+0.7

R Revised.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

Date	Elevation (feet)‡	Contents (million gallons)	Change in contents (equivalent in ft³/s)	Elevation (feet)‡	Contents (million gallons)	Change in contents (equivalent in ft³/s)	Elevation (feet)†	Contents (acre-feet)	Change in contents (equivalent in ft³/s)
	01416900 PEPACTON RESERVOIR			01424997 CANNONSVILLE RESERVOIR			01428900 PROMPTON RESERVOIR		
Sept. 30...	1,222.18	64,418		1,125.20	64,143		1,126.50	3,920	
Oct. 31...	1,229.33	72,687	+413	1,123.66	62,252	-94.4	1,125.18	3,550	- 6.0
Nov. 30...	1,244.84	92,774	+1,036	1,132.81	73,978	+605	1,126.97	4,050	+8.4
Dec. 31...	1,252.02	103,136	+517	1,135.77	77,943	+198	1,125.04	3,510	-8.8
CAL YR 1985			+ 77.8			+128			-0.5
Jan. 31...	1,254.91	107,501	+218	1,140.52	84,537	+329	1,125.40	3,610	+1.6
Feb. 28...	1,259.55	114,738	+400	1,150.96	100,163	+863	1,125.61	3,670	+1.1
Mar. 31...	1,280.40	150,540	+1,787	1,151.33	100,758	+29.7	1,126.00	3,780	+1.8
Apr. 30...	1,279.89	149,597	-48.6	1,150.33	99,149	-83.0	1,125.81	3,730	-0.8
May 31...	1,280.02	149,836	+11.9	1,150.86	100,002	+42.6	1,124.88	3,470	-4.2
June 30...	1,278.77	147,539	-118	1,149.31	97,568	-126	1,124.83	3,450	-0.3
July 31...	1,276.22	142,920	-231	1,144.64	90,492	-353	1,126.64	3,960	+8.3
Aug. 31...	1,273.12	137,420	-275	1,145.66	92,016	+76.1	1,124.42	3,340	-10.1
Sept. 30...	1,265.66	124,670	-658	1,135.26	77,238	-762	1,124.28	3,300	-0.7
WTR YR 1986			+255			+ 55.5			-0.9

RESERVOIRS IN DELAWARE RIVER BASIN--Continued

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

Date	Elevation (feet)†	Contents (acre-feet)	Change in contents (equivalent in ft³/s)	Elevation (feet)†	Contents (acre-feet)	Change in contents (equivalent in ft³/s)	Elevation (feet)†	Contents (million cu ft)	Change in contents (equivalent in ft³/s)
	01429400 GENERAL EDGAR JADWIN RESERVOIR			01431700 LAKE WALLENPAUPACK			01433000 SWINGING BRIDGE RESERVOIR		
Sept. 30...	978.85	17	-	1,182.8	68,000	-	1,067.8	1,299	
Oct. 31...	976.44	0	-0.3	1,181.4	60,300	-125	1,063.8	1,146	-57.0
Nov. 30...	982.42	137	+2.3	1,183.1	69,660	+157	1,068.1	1,311	+63.5
Dec. 31...	976.75	0	-2.2	1,181.7	61,950	-125	1,058.5	959	-131
CAL YR 1985			-0.1			+41.7			-8.6
Jan. 31...	979.97	49	+0.9	1,180.5	55,400	-107	1,059.8	1,003	+16.6
Feb. 28...	977.35	0	-0.9	1,177.2	37,580	-321	1,058.0	942	-25.3
Mar. 31...	977.82	0	0	1,179.3	48,920	+184	1,066.7	1,256	117
Apr. 30...	978.34	7	+0.1	1,184.7	78,620	+499	1,064.8	1,184	-28.0
May 31...	976.72	0	-0.1	1,184.3	76,380	-36.4	1,065.3	1,203	+7.1
June 30...	976.37	0	0	1,184.5	77,500	+18.8	1,066.9	1,264	-23.6
July 31...	977.70	0	0	1,183.1	69,660	-127	1,063.4	1,132	-49.4
Aug. 31...	976.20	0	0	1,180.9	57,560	-197	1,064.8	1,184	+19.4
Sept. 30...	976.78	0	0	1,177.9	41,360	-272	1,064.0	1,154	-11.5
WTR YR 1986			0			-36.8			-4.6

Date	Elevation (feet)†	Contents (million cu ft)	Change in contents (equivalent in ft³/s)	Elevation (feet)†	Contents (million cu ft)	Change in contents (equivalent in ft³/s)	Elevation (feet)‡	Contents (million cu ft)	Change in contents (equivalent in ft³/s)
	01433100 TORONTO RESERVOIR			01433200 CLIFF LAKE			01435900 NEVERSINK RESERVOIR		
Sept. 30...	1,203.6	608		1,067.8	102.9		1,408.72	23,534	
Oct. 31...	1,201.1	544	-23.9	1,065.3	85.6	-6.4	1,413.20	25,273	+86.8
Nov. 30...	1,202.8	587	+16.7	1,068.2	105.9	+7.8	1,421.95	28,864	+185
Dec. 31...	1,204.4	629	+15.5	1,064.2	78.5	-10.2	1,425.11	30,223	+67.8
CAL YR 1985			+12.7			-0.4			+66.5
Jan. 31...	1,200.1	519	-41.0	1,062.1	65.7	-4.8	1,423.77	29,643	-28.9
Feb. 28...	1,203.4	603	+34.6	1,058.0	44.2	-8.9	1,422.88	29,261	-21.1
Mar. 31...	1,214.4	910	+115	1,067.3	99.3	+20.6	1,438.53	36,423	+357
Apr. 30...	1,217.8	1,022	+42.9	1,065.0	83.7	-6.0	1,436.30	35,344	-55.6
May 31...	1,220.3	1,109	+32.6	1,067.2	98.6	+5.6	1,436.26	35,325	-0.95
June 30...	1,220.3	1,109	0.0	1,066.0	90.3	-3.2	1,436.41	35,397	+3.71
July 31...	1,215.0	929	-67.1	1,065.9	89.6	-0.2	1,428.17	31,574	-191
Aug. 31...	1,209.0	753	-65.9	1,067.0	97.2	+2.8	1,420.31	28,172	-170
Sept. 30...	1,199.0	492	-101	1,066.7	95.1	-0.8	1,408.91	23,606	-235
WTR YR 1986			-3.7			-0.2			+0.30

Date	Elevation (feet)‡	Contents (acre-feet)	Change in contents (equivalent in ft³/s)	Elevation (feet)†	Contents (acre-feet)	Change in contents (equivalent in ft³/s)	Elevation (feet)†	Contents (acre-feet)	Change in contents (equivalent in ft³/s)
	01447780 FRANCIS E. WALTER LAKE			01449400 PENN FOREST RESERVOIR			01449700 WILD CREEK RESERVOIR		
Sept. 30...	1,397.83	42,250	-	974.96	10,330	-	814.46	10,550	-
Oct. 31...	1,391.91	37,090	-83.9	972.38	9,580	-12.2	814.13	10,460	-1.5
Nov. 30...	1,354.28	13,690	-393	975.34	10,450	+14.6	815.19	10,760	+5.0
Dec. 31...	1,300.37	2,040	-189	982.45	12,820	+38.5	814.36	10,530	-3.1
CAL YR 1985			-0.5			-1.7			-0.8
Jan. 31...	1,302.25	2,230	+2.9	986.13	14,150	+21.6	815.06	10,720	+3.1
Feb. 28...	1,301.08	2,110	-2.0	993.67	17,170	+54.3	813.25	10,220	-9.0
Mar. 31...	1,304.13	2,410	+4.9	1,000.27	20,140	+48.3	820.25	12,080	+30.2
Apr. 30...	1,301.72	2,170	-4.0	1,000.25	20,120	-0.[illegible]	820.17	12,050	-0.5
May 31...	1,303.38	2,340	+2.8	1,000.02	19,990	-2.1	820.09	12,030	-0.3
June 30...	1,303.86	2,390	+0.8	999.45	19,730	-4.4	819.67	11,930	-1.7
July 31...	1,304.60	2,470	+1.3	998.30	19,210	-8.5	819.11	11,820	-1.8
Aug. 31...	1,301.69	2,170	-4.9	997.10	18,670	-8.8	817.76	11,460	-5.9
Sept. 30...	1,299.74	1,970	-3.4	994.10	17,350	-22.2	816.39	11,090	-6.2
WTR YR 1986			-55.6			+9.7			+0.7

RESERVOIRS IN DELAWARE RIVER BASIN--Continued

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

Date	Elevation (feet)†	Contents (acre-feet)	Change in contents (equivalent in ft³/s)	Elevation (feet)‡	Contents (million gallons)	Change in contents (equivalent in ft³/s)	Elevation (feet)†	Contents (acre-feet)	Change in contents (equivalent in ft³/s)
	01449790 BELTZVILLE LAKE			01455400 LAKE HOPATCONG			01459350 NOCKAMIXON RESERVOIR		
Sept. 30...	628.03	41,280	-	9.36	7,761	-	395.00	40,200	-
Oct. 31...	628.11	41,350	+1.1	9.02	7,476	-14.2	394.75	39,850	-5.7
Nov. 30...	628.11	41,350	0	9.40	7,795	+16.4	395.40	40,760	+15.3
Dec. 31...	627.92	41,170	-2.9	6.60	5,568	-111	394.90	40,060	-11.4
CAL YR 1985			-0.2			-1.3			-0.4
Jan. 31...	628.12	41,360	+3.1	7.06	5,881	+15.6	395.10	40,340	+4.6
Feb. 28...	628.02	41,270	-1.6	6.76	5,646	-13.0	395.10	40,340	0
Mar. 31...	628.05	41,300	+0.5	7.98	6,620	+48.6	395.00	40,200	-2.3
Apr. 30...	628.06	41,310	+0.2	9.48	7,863	+64.1	395.00	40,200	0
May 31...	628.01	41,260	-0.8	9.12	7,560	-15.1	394.75	39,850	-5.7
June 30...	628.14	41,380	+2.0	8.76	7,260	-15.5	394.70	39,780	-1.2
July 31...	628.06	41,310	-1.1	8.86	7,343	+4.1	395.20	40,480	+11.4
Aug. 31...	628.00	41,250	-1.0	9.10	7,543	+10.0	394.75	39,850	-10.2
Sept. 30...	628.08	41,330	+1.3	8.90	7,376	-8.76	394.75	39,850	0
WTR YR 1986			0			-1.6			-0.5

Date	Elevation (feet)†	Contents (acre-feet)	Change in contents (equivalent in ft³/s)	Gage Height (feet)†	Contents (million gallons)	Change in contents (equivalent in ft³/s)	Elevation (feet)†	Contents (acre-feet)	Change in contents (equivalent in ft³/s)
	01469200 STILL CREEK RESERVOIR			01470870 BLUE MARSH LAKE			01472200 GREEN LANE RESERVOIR		
Sept. 30...	1,175.75	6,530	-	287.94	20,610	-	286.07	13,490	-
Oct. 31...	1,175.50	6,460	-1.1	290.03	22,930	+37.7	285.64	13,110	-6.2
Nov. 30...	1,179.50	7,560	+18.5	289.60	22,450	-8.1	286.23	13,640	+8.9
Dec. 31...	1,180.75	7,920	+5.9	286.05	18,660	-61.6	285.93	13,370	-4.4
CAL YR 1985			+1.6			-6.2			-0.1
Jan. 31...	1,180.75	7,920	0	285.20	17,820	-13.7	286.04	13,470	+1.6
Feb. 28...	1,182.10	8,320	+7.2	285.08	17,700	-2.2	286.10	13,520	+0.9
Mar. 31...	1,182.10	8,320	0	285.28	17,900	+3.3	286.01	13,440	-1.3
Apr. 30...	1,182.10	8,320	0	290.04	22,940	+84.7	286.07	13,490	+0.8
May 31...	1,181.90	8,260	-1.0	290.12	23,040	+1.6	285.90	13,340	-2.4
June 30...	1,181.10	8,020	-4.0	290.14	23,060	+0.3	285.46	12,950	-6.6
July 31...	1,178.00	7,150	-14.1	290.02	22,920	-2.3	284.57	12,190	-12.4
Aug. 31...	1,175.50	6,460	-11.2	290.05	22,960	+0.7	285.44	12,930	+12.0
Sept. 30...	1,170.90	5,190	-21.3	290.01	22,910	-0.8	283.81	11,610	-22.2
WTR YR 1986			-1.9			+3.2			-2.6

‡ Elevation at 0900 hours on first day of following month.
† Elevation or gage height at 2400 hours.
* Elevation at 0900 hours.

DIVERSIONS AND WITHDRAWALS

WITHDRAWALS FROM THE DELAWARE RIVER BASIN

01415200 Diversion from Pepacton Reservoir, NY, on East Branch Delaware River to Rondout Reservoir on Rondout Creek, in Hudson River basin, for municipal supply of City of New York. No diversion prior to Jan. 6, 1955. Records provided by Bureau of Water Resources Development and Department of Environmental Protection, City of New York.
REVISIONS (Water Years).--WRD-NY 1972: 1970.
REVISED RECORDS.--WRD NY-71: 1970. WRD NY-72: 1970. WDR NY-82: 1980. WDR NY-81-1: 1980.

01423900 Diversion from Cannonsville Reservoir, NY, on West Branch Delaware River to Rondout Reservoir on Rondout Creek, in Hudson River basin, for municipal supply of city of New York. No diversion prior to Jan. 29, 1964. Records provided by Board of Water Supply, City of New York.
REVISED RECORDS.--WDR NJ-82-2: 1980. WDR NY-81-1: 1980.

01435800 Diversion from Neversink Reservoir, NY, on Neversink River to Rondout Reservoir on Rondout Creek, in Hudson River basin, for municipal supply of city of New York. No diversion prior to Dec. 3, 1953. Records furnished by Board of Water Supply and Department of Water Resources, city of New York.
REVISED RECORDS.--WDR NJ-82-2: 1976, 1977. WDR NY-82-1: 1976, 1977.

01436520 Village of Woodridge, NY, diverts water from East Pond Reservoir, tributary to Neversink River, for municipal supply outside of basin. Records provided by village of Woodridge.

01437360 Diversion from Bear Swamp Reservoir, NY, tributary to Neversink River, by the New York State Training School, Otisville, NY, for water supply outside of basin. Records provided by Delaware River Basin Commission.

01447750 Diversion from Bear Creek, PA, tributary to Lehigh River, by Bear Creek Gas and Water Company for water supply outside of basin. Records provided by Delaware River Basin Commission.

01448830 Diversion from Hazle Creek Watershed by Hazelton Joint Sewerage Authority for municipal water supply. Waste effluent from the municipal water system is released to the Susquehanna River. Records provided by Delaware River Basin Commission.

01460500 Diversion by Delaware and Raritan Canal from Delaware River at Raven Rock, for municipal and industrial use. Water is discharged into the Raritan River at New Brunswick. Records of discharge are collected on the Delaware and Raritan Canal at Kingston, (see station 01460500). Canal closed for dredging during the entire year.
REVISED RECORDS.--WDR NJ-82-2: 1981.

WITHDRAWALS BY CITY OF NEW YORK

DIVERSION, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

Month	01415200 PEPACTON RESERVOIR	01423900 CANNONSVILLE RESERVOIR	01435800 NEVERSINK RESERVOIR
October	182	742	107
November	129	744	187
December	245	730	183
CAL YR 1985	418	391	110
January	376	385	185
February	377	33.1	186
March	378	36.2	290
April	541	99.4	323
May	606	267	221
June	678	209	207
July	696	274	230
August	673	67.5	237
September	692	276	242
WTR YR 1986	465	324	217

DIVERSIONS AND WITHDRAWALS--Continued

MISCELLANEOUS WITHDRAWALS FROM BASIN, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MONTH	a01436520 EAST POND RESERVOIR	*01437360 BEAR SWAMP RESERVOIR	01447750 BEAR CREEK	‡01448830 HAZLE CREEK	01460500 DELAWARE & RARITAN CANAL
October	DATA NOT	DATA NOT	0	DATA NOT	0
November	AVAILABLE	AVAILABLE	0	AVAILABLE	0
December			0		40.7
CAL YR 1985			0		3.4
January			0		121
February			0		82.3
March			0		115
April			0		142
May			0		0
June			0		0
July			0		51.4
August			0		91.1
September			0		86.1
WTR YR 1986			0		60.8

a Village of Woodridge has estimated that virtually all the withdrawal from East Pond Reservoir was returned to the Neversink River.
* Data not available this year but, from past records, monthly withdrawal is approximately 0.5 ft³/s.
‡ Data not available this year but, from past records, monthly withdrawal is approximately 4 ft³/s.

DIVERSIONS WITHIN THE DELAWARE RIVER BASIN

01463480 Diversion from the Delaware River at the Morrisville Filtration Plant for municipal supply, by the Borough of Morrisville, PA. The water withdrawn at this site is returned to the basin after treatment, only slightly diminished by consumptive uses and losses in transmission. Records provided by the Borough of Morrisville, PA.

01463490 Diversion from the Delaware River just above the Trenton gaging station for municipal supply by the city of Trenton, NJ. The water being withdrawn is returned to the basin after treatment only slightly diminished by consumptive uses and losses in transmission. Records provided by the City of Trenton.
REVISED RECORDS.--WDR NJ-82-2: Station number.

01467030 Diversion from the Delaware River at the Torresdale Intake for municipal supply, by the City of Philadelphia, PA. The water being withdrawn at this intake is returned to the basin after treatment only slightly diminished by consumptive uses and losses in transmission. Records provided by the Delaware River Basin Commission.

01474500 Diversion from the Schuylkill River at the Belmont and Queen Lanes Intakes for municipal supply, by the City of Philadelphia, PA. The water being withdrawn at these intakes is returned after treatment within the Delaware River basin only slightly diminished by consumptive uses and lossesmission. Records provided by the Delaware River Basin Commission.

WITHDRAWALS, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

Month	01463480 BOROUGH OF MORRISVILLE	01463490 CITY OF TRENTON	CITY OF PHILADELPHIA 01467030 DELAWARE RIVER TORRESDALE	CITY OF PHILADELPHIA 01474500 SCHUYLKILL RIVER BELMONT	CITY OF PHILADELPHIA 01474500 SCHUYLKILL RIVER QUEEN LANE
October	6.34	47.1	303	89.6	136
November	6.24	45.2	288	86.0	158
December	5.84	44.7	284	86.8	159
CAL YR 1985	6.25	46.8	309	91.0	151
January	4.61	44.0	291	87.1	168
February	4.61	44.3	286	91.3	159
March	3.97	43.3	310	93.1	138
April	3.82	43.5	290	89.7	141
May	4.40	48.0	305	96.5	146
June	6.06	52.3	337	102	157
July	5.93	50.4	375	109	172
August	5.49	47.8	327	97.9	167
September	4.41	47.6	303	94.2	143
WTR YR 1986	5.11	46.5	308	93.6	154

DIVERSIONS AND WITHDRAWALS--Continued

DIVERSIONS IMPORTED INTO BASIN

01367630 Water diverted from Morris Lake, tributary to the Wallkill River (Hudson River basin), by the Newton Water and Sewer Authority for municipal use. After use the water is released into the Paulins Kill (Delaware River basin). Records provided by the Delaware River Basin Commission.

01578420 Water diverted from West Branch Octoraro Creek (Susquehanna River basin) at the McCray Plant of the Coatsville Water Authority (formerly Octoraro Water Co.) for municipal use. After use the water is released into the Delaware River basin. Records provided by the Delaware River Basin Commission.

01578450 Water divered from Octoraro Lake (Susquehanna River basin) by Chester Water Authority for municipal use. After use the water is released into the Delaware River basin. Records provided by the Delaware River Basin Commission.

DIVERSIONS IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

		OCTORARO CREEK	
MONTH	01367630 MORRIS LAKE	01578420 COATSVILLE WATER AUTHORITY	01578450 CHESTER WATER AUTHORITY
October	1.15	2.00	41.4
November	1.12	1.82	40.3
December	1.33	1.95	39.7
CAL YR 1985	1.30	1.95	41.9
January	1.48	1.73	38.0
February	1.66	2.03	38.0
March	1.52	2.11	35.8
April	1.17	1.99	37.3
May	1.35	2.09	39.9
June	1.29	2.38	42.1
July	1.38	2.14	44.3
August	1.26	2.06	43.7
September	1.31	2.02	43.7
WTR YR 1986	1.34	2.03	40.4

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other tha stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use i hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in two tables. The first is a table of annual maximum stage and discharge at crest-stage stations, and the second is a table of discharge measurements at low-flow partial recor stations.

Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower stages may have been obtained, and discharge measurements may have been made for purposes of establishing the stage-discharge relation, but these are not published herein. The years given in the period of record represent water years for which the annual maximum has been determined. The gage heights are heights on the upstream side of the bridge, above the dam or at the discontinued continuous-record gaging station unless otherwise noted.

Annual maximum discharge at crest-stage partial-record stations during water year 1986

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual Maximum		
					Date	Gage height (ft)	Discharg (ft^3/s)
		Maurice River basin					
01412000	Menantico Creek near Millville, NJ	Lat 39°25'12", long 74°58'00", Cumberland county, Hydrologic Unit 02040206, on left bank at upstream side of Mays Landing Road (State Route 552), 0.9 mi downstream of Menantico Lake, 4.0 mi northeast of Millville, and 7.0 mi upstream from mouth. Datum of gage is 36.63 ft above National Geodetic Vertical Datum of 1929.	23.2	1931-57‡, 1978-84‡, 1985-86	4-17-86	f<2.27	<106
		Cohansey River basin					
01412500	West Branch Cohansey River at Seeley, NJ	Lat 39°29'06, long 75°15'33", Cumberland County, Hydrologic Unit 02040206, on right bank 15 ft upstream from county bridge, Highway 31, at Seeley, 450 ft upstream from mouth and 4.1 mi northwest of Bridgeton. Datum of gage is 42.23 ft above National Geodetic Vertical Datum of 1929.	2.58	1952-67‡, 1968-86	1-26-86	2.28	95
		Delaware River basin					
*01445000	Pequest River at Huntsville, NJ	Lat 40°58'52", long 74°46'36", Sussex County, Hydrologic Unit 02040105, on right bank, 20 ft upstream from highway bridge in Huntsville, and 0.4 mi downstream from East Branch. Datum of gage is 553.81 ft above National Geodetic Vertical Datum of 1929.	31.0	1940-62‡, 1963-86	3-15-86	3.76	275
01445430	Pequest River at Townsbury, NJ	Lat 40°51'06", long 74°56'02", Warren County, Hydrologic Unit 02040105, upstream of highway bridge in Townsbury, 2.8 mi northeast of Pequest and 8.7 mi west of Hackettstown. Altitude of gage is 480 ft, from topographic map.	92.5	1977-80‡, 1981-86	3-15-86	3.87	1,110
*01446000	Beaver Brook near Belvidere, NJ	Lat 40°50'40", long 75°02'48, Warren County, Hydrologic Unit 02040105, on right bank, 2,000 ft upstream from mouth, and 2 mi east Belvidere. Datum of gage is 303.36 ft National Geodetic Vertical Datum of 1929.	36.7	1922-61‡, 1963-86	3-15-86	3.73	483
*01455200	Pohatcong Creek at New Village, NJ	Lat 40°42'57", long 75°04'20", Warren County, Hydrologic Unit 02040105, at bridge on Edison Road, 0.4 mi southeast of New Village, and 4.3 mi upstream from Merrill Creek. Datum of gage is 308.32 ft above National Geodetic Vertical Datum of 1929.	33.3	1960-69‡, 1970-86	1-26-86	4.84	890

Annual maximum discharge at crest-stage partial-record stations during water year 1986--Continued

tation No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual Maximum Date	Annual Maximum Gage height (ft)	Annual Maximum Discharge (ft^3/s)
		Delaware River basin--Continued					
01455500	Musconetcong River at outlet of Lake Hopatcong, NJ	Lat 40°55'00", long 74°39'55", Morris County, Hydrologic Unit 02040105, on left bank just upstream of highway bridge 300 ft downstream from Lake Hopatcong Dam in Landing. Datum of gage is 904.99 ft above National Geodetic Vertical Datum of 1929.	25.3	1929-75‡, 1976-86	11-28-85	3.28	200
01456000	Musconetcong River near Hackettstown, NJ	Lat 40°53'17", long 74°47'53", Warren County, Hydrologic Unit 02040105, on right bank 75 ft upstream from Saxton Falls Dam, 0.5 mi upstream from Erie-Lackawanna Railway bridge, and 3.0 mi northeast of Hackettstown. Datum of gage is 630.93 ft above National Geodetic Vertical Datum of 1929.	68.9	1921-73‡, 1974-85	8-03-86	2.56	808
01457500	Delaware River at Riegelsville, NJ	Lat 40°35'36", long 75°11'17", Warren County, Hydrologic Unit 02040105, just upstream of suspension bridge at Riegelsville, 600 ft upstream from Musconetcong River (flow of which is included in the records for this station since Oct. 1, 1931). Datum of gage is 125.12 ft National Geodetic Vertical Datum of 1929.	6,328	1906-71‡, 1972-86	3-16-86	25.16	147,000
01464400	Crosswicks Creek at New Egypt, NJ	Lat 40°04'03", long 74°31'57", Ocean County, Hydrologic Unit 020401201, at upstream side of bridge on State Route 528 in New Egypt, and 300 ft downstream from Oakford Lake Dam. Datum of gage is 43.46 ft above National Geodetic Vertical Datum of 1929.	41.2	1968-86	4-17-86	b21.06	950
01464515	Doctors Creek at Allentown, NJ	Lat 40°10'37", long 74°35'57", Monmouth County, Hydrologic Unit 02040201, at bridge on Breza Road in Allentown, and 0.8 mi downstream from Conines Millpond dam. Datum of gage is 50.98 ft above National Geodetic Vertical Datum of 1929.	17.4	1968-86	4-17-86	b3.58	‡
01464530	Blacks Creek at Mansfield Square, NJ	Lat 40°07'02", long 74°41'58", Burlington County, Hydrologic Unit 02040202, at bridge on Mansfield Square-Crosswicks Road, 0.4 mi east of Mansfield Square, and 3.4 mi upstream from mouth. Datum of gage is 12.44 ft above National Geodetic Vertical Datum of 1929.	19.7	1978-86	4-17-86	b8.96	1,000
01464538	Crafts Creek at Columbus, NJ	Lat 40°04'44", long 74°43'07", Burlington County, Hydrologic Unit 02040202, at bridge on Columbus-Mansfield road, 0.4 mi north of Columbus, and 6.0 mi northeast of Mount Holly. Datum of gage is 33.71 ft above National Geodetic Vertical Datum of 1929.	5.38	1978-86	4-16-86	b8.50	450
01464582	Assiscunk Creek near Columbus, NJ	Lat 40°03'13", long 74°44'34", Burlington County, Hydrologic Unit 02040202, at bridge on Petticoat Bridge Road, 1.7 mi southwest of Columbus, 4.0 mi northeast of Mount Holly, and 0.1 mi downstream from Assiscunk Branch.	10.9	1978-86	4-17-86	b7.27	490

Annual maximum discharge at crest-stage partial-record stations during water year 1986--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual Maximum		
					Date	Gage height (ft)	Discharge (ft^3/s)
		Delaware River basin--Continued					
01465850	South Branch Rancocas Creek at Vincentown, NJ	Lat 39°56'22", long 74°45'50", Burlington County, Hydrologic Unit 02040202, on left bank 150 ft downstream from highway bridge on Lumberton-Vincentown road, 0.8 mi west of Vincentown, 2.9 mi southeast of Lumberton, and 3.1 mi upstream from Southwest Branch. Datum of gage is 13.17 ft above National Geodetic Vertical Datum of 1929.	64.5	1962-75‡, 1976-86	4-17-86	7.26	980
*01465880	Southwest Branch Rancocas Creek at Medford, NJ	Lat 39°53'43", long 74°49'26", Burlington County, Hydrologic Unit 02040202, at bridge on Argonne Highway (State Route 541), 0.6 mi south of intersection of Argonne Highway and State Highway 70 at Medford, and 5.3 mi upstream from mouth.	47.2	1983-86	4-17-86	11.05	1,050
01467057	Pompeston Creek at Cinnaminson, NJ	Lat 40°00'11", long 74°59'00", Burlington County, Hydrologic Unit 02040202, at U.S. Route 130 bridge, 0.7 mi northwest of Cinnaminson, 1.7 mi upstream from mouth, and 2.1 mi east of Palmyra. Datum of gage is 11.36 ft above National Geodetic Vertical Datum of 1929.	5.77	1975-86	4-16-86	b4.29	245
01467069	North Branch Pennsauken Creek near Moorestown, NJ	Lat 39°57'07", revised, long 74°58'10", Burlington County, Hydrologic Unit 02040202, at bridge on State Route 41 (Kings Highway), and 1.7 mi southwest of Moorestown. Datum of gage is 5.9 ft above National Geodetic Vertical Datum of 1929.	12.8	1975-86	4-16-86	4.93	620
*01467160	North Branch Cooper River near Marlton, NJ	Lat 39°53'20", long 74°58'08", Camden County, Hydrologic Unit 02040202, at bridge on blacktop road to Springdale, 2.5 mi west of Marlton. Datum of gage is 36.36 ft above National Geodetic Vertical Datum of 1929.	5.34	1964-86	4-16-86	b3.20	380
*01467305	Newton Creek at Collingswood, NJ	Lat 39°54'30", long 75°03'13", Camden County, Hydrologic Unit 02040202, at bridge on Park Avenue in Collingswood, 0.3 mi east of Cuthbert Avenue. Datum of gage is 18.74 ft above National Geodetic Vertical Datum of 1929.	1.33	1964-86	7-26-86	3.20	150
01467317	South Branch Newton Creek at Haddon Heights, NJ	Lat 39°52'45", long 75°04'26", Camden County, Hydrologic Unit 02040202, at bridge on Haddon Heights Park in Haddon Heights, and 2.6 mi south of Collingswood. Datum of gage is 23.34 ft above National Geodetic Vertical Datum of 1929.	0.63	1964-86	7-02-86	2.64	60

Annual maximum discharge at crest-stage partial-record stations during water year 1986--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual Maximum		
					Date	Gage height (ft)	Discharge (ft^3/s)
		Delaware River basin--Continued					
01467351	North Branch Big Timber Creek at Laurel Road at Laurel Springs, NJ	Lat 39°49'07", long 75°00'56", Camden County, Hydrologic Unit 02040202, at bridge on Laurel Road in Laurel Springs, and 2.5 mi upstream from confluence with the South Branch. Datum of gage is 26.89 ft above National Geodetic Vertical Datum of 1929.	7.17	1975-86	4-16-86	1.49	170
01475000	Mantua Creek at Pitman, NJ	Lat 39°44'14", long 75°06'53", Gloucester County, Hydrologic Unit 02040202, on left abutment of Wadsworth Dam, 0.9 mi east of Pitman, and 2.0 mi upstream from Porch Branch. Datum of gage is 68.51 ft above National Geodetic Vertical Datum of 1929.	6.05	1940-76‡, 1977-86	2-18-86	1.37	45
01475019	Mantua Creek at Salina, NJ	Lat 39°46'13", long 75°07'59", Gloucester County, Hydrologic Unit 02040202, at bridge on Salina-Sewell Road, 0.2 mi downstream of Bees Branch, and 0.5 mi west of Salina. Datum of gage is 11.67 ft above National Geodetic Vertical Datum of 1929.	14.1	1975-86	1-26-86	4.09	365
01477110	Raccoon Creek at Mullica Hill, NJ	Lat 39°44'10", long 75°13'30", Gloucester County, Hydrologic Unit 02040202, at bridge on State Routes 45 and 77 in Mullica Hill, 1,200 ft downstream of Mullica Hill Pond, and 5.5 mi west of Pitman. Datum of gage is 21.91 ft above National Geodetic Vertical Datum of 1929.	15.6	1978-86	1-26-86	2.15	140
01477480	Oldmans Creek near Harrisonville, NJ	Lat 39°41'20", revised, long 75°18'38", Salem County, Hydrologic Unit 02040206, at bridge on Harrisonville Station Road, 2.4 mi west of Harrisonville, and 2.8 mi north of Woodstown. Datum of gage is 16.58 ft above National Geodetic Vertical Datum of 1929.	13.8	1975-86	1-26-86	4.60	260
01482500	Salem River at Woodstown, NJ	Lat 39°38'36", long 75°19'52", Salem County, Hydrologic Unit 02040206, on right side of Memorial Lake Dam at Woodstown, 0.2 mi upstream from small brook and 0.3 mi downstream from Pennsylvania-Reading Seashore Lines bridge. Datum of gage is 29.49 ft above National Geodetic Vertical Datum of 1929.	14.6	1940‡, 1942-84‡, 1985-86	1-26-86	12.9	1,750

* Also a low-flow partial-record station.
‡ Operated as a continuous-record gaging station.
< Gage height is less than following figure.
† Discharge not determined.
b Downstream side of bridge.
c Stage-discharge relationship ice affected, discharge not determined
e Peak did not reach bottom of gage.
f Peak discharge for the period was less than the minimum recordable discharge.
g Former low flow site.

Low-flow partial-record stations

Measurements of streamflow in New Jersey made at low-flow partial-record stations are given in the following table. Most of these measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will give a picture of the low-flow potentiality of a stream. The column headed "Period of record" shows the water years in which measurements were made at the same, or practically the same, site.

Discharge measurements made at low-flow partial-record stations during water year 1986

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		Delaware River basin				
01443475	Trout Brook near Middleville, NJ	Lat 41°03'03", long 74°51'23", Sussex County, Hydrologic Unit 02040105, at bridge on County Highway 612, 0.4 mi upstream from mouth, 0.5 mi southeast of Middleville, and 5.1 mi west of Newton.	24.0	1979-86	7-16-86 9-09-86	10 2.8
01445800	Honey Run near Ramseyburg, NJ	Lat 40°53'44", long 75°01'04", Warren County, Hydrologic Unit 02040105, at bridge on Hope-Delaware Road, 2.3 mi northeast of Ramseyburg, 2.8 mi southwest of Hope, and 3.1 mi upstream from mouth.	2.21	1981-86	7-16-86 9-09-86	0.54 .79
01455230	Merrill Creek at Coopersville, NJ	Lat 40°42'25", long 75°06'54", Warren County, Hydrologic Unit 02040105, at bridge on Lows Hollow Road at Coopersville, 0.9 mi north of Stewartsville, 2.1 mi upstream from mouth, and 3.3 mi east of Phillipsburg.	3.85	1981-86	7-17-86 9-08-86	2.3 3.2
01455780	Lubbers Run at Lockwood, NJ	Lat 40°55'36", long 74°43'09", Sussex County, Hydrologic Unit 02040105, at bridge on U.S. Route 206 at Lockwood, 1.0 mi upstream from mouth, and 1.5 mi northwest of Stanhope.	16.3	1982-86	7-17-86 9-08-86	7.5 6.4
01462800	Jacobs Creek at Somerset, NJ	Lat 40°16'42", long 74°51'14", Mercer County, Hydrologic Unit 02040105, at bridge on State Route 29, 400 ft upstream from mouth, 0.3 mi north of Somerset and 1.4 mi south of Washington Crossing Road.	13.3	1958-62, 1964, 1985-86	5-06-86 7-01-86	6.8 .01
01463620	Assunpink Creek near Clarksville, NJ	Lat 40°16'11", long 74°40'20", Mercer County, Hydrologic Unit 02040105, on left bank 200 ft upstream from bridge on Quaker Bridge Road, 1.9 mi south of Clarksville, 2.0 mi upstream from Shipetaukin Creek and 7.6 mi upstream of mouth.	34.2	1963-67, 1972-81†, 1985	a4-30-85	9.4
*01464515	Doctors Creek at Allentown, NJ	Lat 40°10'37", long 74°35'57", Monmouth County, Hydrologic Unit 02040201, at bridge on Breza Road, 0.75 mi west of Allentown and 0.80 mi downstream from Conines Millpond dam.	17.2	1965-72, 1975-76, 1979, 1983-86	7-08-86	3.8
01465884	Sharps Run at Route 541 at Medford, NJ	Lat 39°54'18", long 74°49'30", Burlington County, Hydrologic Unit 02040202, at bridge on State Route 541 (Argonne Highway) in Medford, 0.7 mi upstream from mouth, 1.2 mi northeast of Oliphants Mills, and 2.6 mi northwest of Medford Lakes.	4.41	1982-86	7-17-86 9-10-86	.23 .37
01465898	Little Creek near Lumberton, NJ	Lat 39°56'16", long 74°47'38", Burlington County, Hydrologic Unit 02040202, at bridge on Eayrestown Road, 0.6 mi upstream from mouth, 1.9 mi southeast of Lumberton, and 3.0 mi northeast of Medford.	19.2	1982-86	7-17-86 9-10-86	2.6 2.7

* Also a crest-stage partial-record station.
a Not previously published.
† Operated as continous-record gaging station.

Discharge measurements at miscellaneous sites

Measurements of streamflow at points other than gaging stations are given in the following table. Those that are measurements of base flow are designated by an asterisk (*).

Discharge measurements made at miscellaneous sites during water year 1986

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		Delaware River basin				
01446400 Pequest River	Delaware River	Lat 40°49'45", long 75°04'44", Warren County, Hydrologic Unit 02040105, at bridge on State Route 519, in Belvidere, 1,400 ft upstream of mouth.	157	1950,53, 1977-82 1984-85	12-10-85 7-17-86	*437 *90
01460460 Delaware and Raritan Canal	Raritan River	Lat 40°20'31", long 74°38'16", Mercer County, Hydrologic Unit 02030105, at bridge on Harrison Street, 0.6 mi downstream from bridge on Washington Road and 0.7 mi north of Penns Neck.	-	1943-45	12-23-85	*89
01462733 Jacobs Creek	Delaware River	Lat 40°19'53", long 74°50'11", Mercer County, Hydrologic Unit 02040105, at bridge on Pennington-Harbourton Road, 500 ft upstream of unnamed tributary, 0.8 mi east of State Route 579 at Ackors Corner and 2.2 mi upstream of Woolsey Brook.	2.04	1985	5-06-86 7-01-86	*1.8 *0
01462737 Jacobs Creek	Delaware River	Lat 40°19'07",long 74°50'18", Mercer County, Hydrologic Unit 02040105, at bridge on Pennington-Titusville Road, 0.8 mi east of Bear Tavern Road (State Route 579) 1.3 mi upstream of Woolsey Brook and 2.6 mi west of Pennington.	4.30	1985	5-06-86 7-01-86	*2.7 *0.01
01462740 Jacobs Creek	Delaware River	Lat 40°18'07", long 74°50'00", Mercer County, Hydrologic Unit 02040105, just upstream of Woolsey Brook, 0.4 mi downstream of Pennington Road (State Route 546) and on right side of Jacobs Creek Road, 0.5 mi south of Pennington Road and 1.0 mi southeast of Bear Tavern.	5.53	1985	5-06-86 7-01-86	*3.2 *0
01462742 Woolsey Brook	Jacobs Creek	Lat 40°19'11", long 74°48'09", Mercer County, Hydrologic Unit 02040105, at bridge on Dublin Road, 0.5 mi upstream of confluence with unnamed tributary and 0.8 mi southwest of Pennington.	.16	1985	5-06-86 7-01-86	*.07 *0
01462744 Woolsey Brook tributary No. 1	Woolsey Brook	Lat 40°18'47", long 74°48'08", Mercer County, Hydrologic Unit 02040105, at bridge on Dublin Road, 0.3 mi north of Pennington Road (State Route 546) 0.45 mi upstream from Woolsey Brook and 1.2 mi south of Pennington.	.32	1985	5-06-86 7-01-86	*.15 *0
01462745 Woolsey Brook tributary No. 2	Woolsey Brook	Lat 40°18'55", long 74°48'49", Mercer County, Hydrologic Unit 02040105, at mouth, 200 ft upstream from bridge on Scotch Road over Woolsey Brook and 1.5 mi southwest of Pennington.	.46	1985	a11-15-84 a7-19-85 5-06-86 7-01-86	*0 *0 *.12 *0
01462747 Woolsey Brook	Jacobs Creek	Lat 40°18'51", long 74°48'53", Mercer County, Hydrologic Unit 02040105, at bridge on Scotch Road, 0.5 mi north of State Route 546 at Harts Corner and 1.3 mi from mouth.	1.47	1985	5-06-86 7-01-86	*.52 *0

Discharge measurements made at miscellaneous sites during water year 1986--Continued

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		Delaware River basin--Continued				
01462750 Woolsey Brook	Jacobs Creek	Lat 40°18'27", long 74°49'36", Mercer County, Hydrologic Unit 02040105, at bridge on Pennington Road (State Route 546), downstream of unnamed pond, 0.5 mi upstream of mouth, 1.2 mi east of Bear Tavern Road (State Route 579) at Bear Tavern.	2.13	1985	5-06-86 7-01-86	*.74 *0
01462755 Woolsey Brook tributary No. 3	Woolsey Brook	Lat 40°18'08", long 74°49'54", Mercer County, Hydrologic Unit 02040105, at bridge on Jacobs Creek Road, 250 ft upstream of mouth, 300 ft upstream of confluence of Jacobs Creek and Woolsey Brook, and 1.0 mi southeast of Bear Tavern.	0.89	1985	5-06-86 7-01-86	*0.33 *0
01462760 Jacobs Creek	Delaware River	Lat 40°17'31", long 74°50'28", Mercer County, Hydrologic Unit 02030105, at bridge on Bear Tavern Road, 1.3 mi upstream from mouth and 1.4 mi southeast of Washington Crossing.	10.0	1957, 1971, 1985	5-06-86 7-01-86	*5.0 *0
01462765 Ewing Creek	Jacobs Creek	Lat 40°17'13", long 74°48'45", Mercer County, Hydrologic Unit 02040105, at bridge on Scotch Road, 300 ft south of Interstate 95 exit, 3,800 ft downstream of small unnamed pond and 1.5 mi north of West Trenton.	1.24	1985	5-06-86 7-01-88	*.49 *.02
01462770 Ewing Creek	Jacobs Creek	Lat 40°17'19", long 74°49'42", Mercer County, Hydrologic Unit 02040105, at bridge on Nursery Road, 0.6 mi from Bear Tavern Road (State Route 579), 0.8 mi upstream from mouth and 1.6 mi north of West Trenton.	2.29	1985	5-06-86 7-01-86	*.75 *.007
01462775 Ewing Creek	Jacobs Creek	Lat 40°17'24", long 74°50'30", Mercer County, Hydrologic Unit 02040105, at bridge on Jacobs Creek Road, 200 ft north of southern intersection of Jacobs Creek Road and Bear Tavern Road, 300 ft upstream of mouth and 1.2 mi northeast of Somerset.	2.65	1985	5-06-86 7-01-86	*1.1 *.03
01465970 North Branch Rancocas Creek	Rancocas Creek	Lat 39°58'04", long 74°34'48", Burlington County, Hydrologic Unit 02040202, at bridge on Lakehurst Road in Browns Mills, at outflow of Mirror Lake and 5.0 mi east of Pemberton.	27.4	1979-81, 1985	a5-06-85 7-30-86	37 19
01466470 McDonalds Branch	Bisphams Mill Creek	Lat 39°52'21", long 74°29'46", Burlington County, Hydrologic Unit 02040202, at bridge on Butler Place Road in Lebanon State Forest and 1.6 mi west of Woodmansie.	2.31	1961-63, 1985	a1-24-85	.04
01467120 Cooper River	Delaware River	Lat 39°49'43", long 74°58'55", Camden County, Hydrologic Unit 02040202, at bridge on Norcross Road, at downstream end of Linden Lake at Lindenwold and 0.4 mi upstream from Nicholson Branch.	1.13	1971, 1979-81	a5-24-85 7-29-86	.90 .15

Discharge measurements made at miscellaneous sites during water year 1986--Continued

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		Delaware River basin--Continued				
01467140 Cooper River	Delaware River	Lat 39°52'14", long 75°00'59", Camden County, Hydrologic Unit 02040202, at bridge on Evesham Road, 0.8 mi downstream of Lawnside Sewage Treatment Plant and 1.1 mi upstream from New Jersey Turnpike.	12.9	1963-72, 1979-81, 1985	a5-24-85 7-29-86	19 15
01467329 SB Big Timber Creek	Big Timber Creek	Lat 39°48'05", long 75°04'27", Gloucester County, Hydrologic Unit 02040202, just upstream from Bull Run, 1,000 ft downstream of Blackwood Avenue and 0.5 mi southeast of Blackwood Terrace.	19.1	1979-81	a5-24-85 7-29-86	27 17
01477510 Oldmans Creek	Delaware River	Lat 39°41'57", long 75°20'01", Salem County, Hydrologic Unit 02040206, at bridge on Kings Highway in Porches Mill, 1.0 mi north of Seven Stars and 3.1 mi north of Woodstown.	21.0	1979-83	7-28-86	*9.2

* Base flow.
a Not previously published

The following table contains annual maximum elevations for tidal crest-stage stations. The information is obtained from a crest-stage gage or a water-stage recorder located at each site. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. All stages are converted to elevations above National Geodetic Vertical Datum of 1929 unless otherwise noted. Only the maximum elevation is given. Information on some other high stages may have been obtained but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum elevation at tidal crest-stage partial-record stations during water year 1986

Station No.	Station name	Location	Period of record	Annual Maximum	
				Date	Elevation NGVD* (ft)
01413038	Cohansey River at Greenwich, NJ	Lat 39°23'02", long 75°20'58", Cumberland County, at Greenwich Pier, 0.7 mi southwest of Greenwich, and 5.8 mi southwest of Shiloh.	1979-86	8-18-86	5.48
01464040	Delaware River at Marine Terminal, Trenton, NJ	Lat 40°11'21", long 74°45'22", Mercer County, on left bank at downstream end of wharf at Marine Terminal, Trenton, 1.6 mi downstream from toll bridge on U.S. Route 1, 2.0 mi downstream from Assunpink Creek, and at mile 131.80.	1921-46‡, 1951-54‡, 1957-86‡a	b	b

* National Geodetic Vertical Datum of 1929.
‡ Operated as a continuous-record gaging station.
a Operated by National Ocean Survey since March 1975.
b Not available

BURLINGTON COUNTY

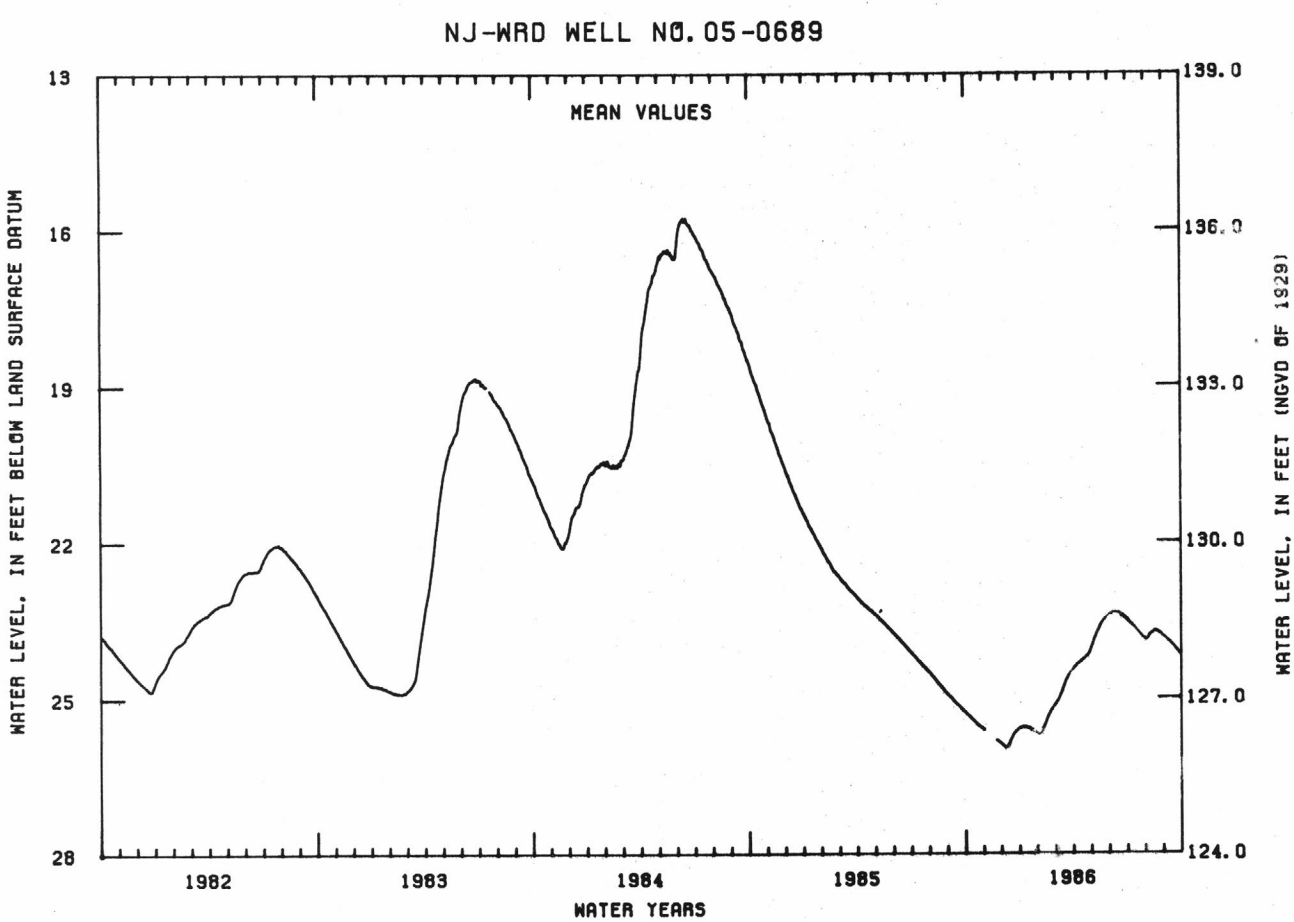
395150074284201. Local I.D., Lebanon State Forest 23-D Obs. NJ-WRD Well Number, 05-0689.
LOCATION.--Lat 39°51'52", long 74°28'48", Hydrologic Unit 02040202, in Lebanon State Forest, Woodland Township.
Owner: U.S. Geological Survey.
AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.
WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 8 in, depth 33 ft, open-end cement casing.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch.
DATUM.--Land-surface datum is 152.02 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top of 8 inch casing, 0.70 ft above land-surface datum.
PERIOD OF RECORD.--September 1955 to April 1975, January 1979 to current year. Records for 1955 to 1975 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 14.37 ft below land-surface datum, Sept. 11, 1958; lowest, 25.97 ft below land-surface datum, Dec. 8-10, 1985.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	25.34	---	25.94	25.56	25.68	25.06	24.39	23.91	23.37	23.56	23.87	23.87
10	25.39	---	25.97	25.56	25.56	24.94	24.33	23.76	23.37	23.61	23.77	23.93
15	25.45	---	25.83	25.58	25.42	24.79	24.29	23.65	23.37	23.68	23.73	23.98
20	25.52	---	25.72	25.61	25.29	24.65	24.24	23.53	23.39	23.73	23.73	24.05
25	25.56	25.84	25.64	25.66	25.19	24.54	24.18	23.46	23.45	23.81	23.76	24.11
EOM	25.61	25.89	25.58	25.70	25.14	24.45	24.08	23.39	23.50	23.86	23.83	24.18
MEAN	25.46	---	25.79	25.61	25.44	24.78	24.28	23.65	23.40	23.69	23.78	24.00

WATER YEAR 1986 -- MEAN 24.64 HIGH 23.34 JUN 8,11 LOW 25.97 DEC 8-10



BURLINGTON COUNTY

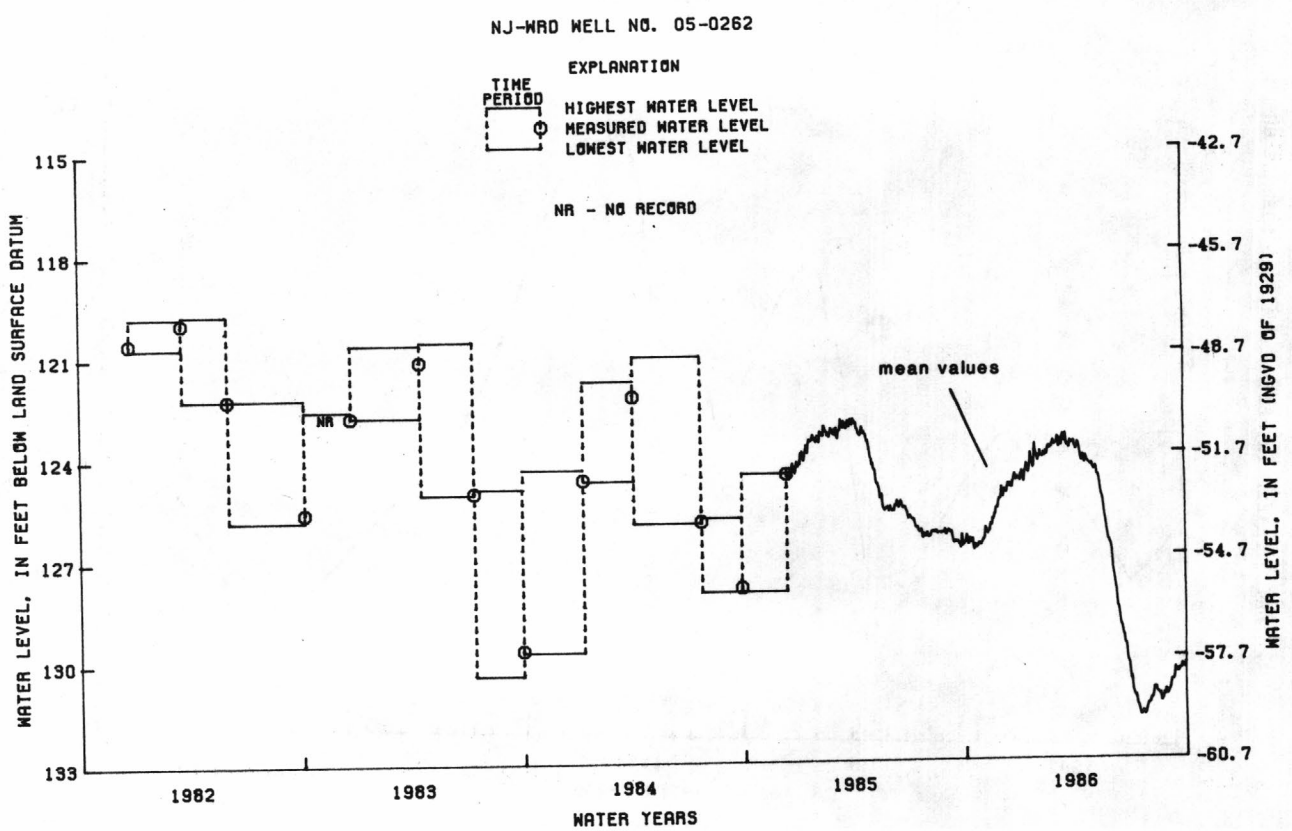
395525074502601. Local I.D., Medford 4 Obs. NJ-WRD Well Number, 05-0262.
LOCATION.--Lat 39°55'24", long 74°50'25", Hydrologic Unit 02040202, at Medford Public Shooting Grounds, Medford Township.
Owner: U.S. Geological Survey.
AQUIFER.--Lower aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 1,145 ft, screened 1,125 to 1,145 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch. Water-level extremes recorder, February 1977 to December 1984.
DATUM.--Land-surface datum is 72.32 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top edge of recorder shelf, 2.40 ft above land-surface datum.
PERIOD OF RECORD.--January 1968 to July 1975, February 1977 to current year. Records for 1968 to 1975 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 94.24 ft below land-surface datum, Mar. 13, 1968; lowest, 131.80 ft below land-surface datum, July 17, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	126.39	126.17	125.20	124.53	123.95	123.65	123.92	124.44	127.63	131.06	131.23	130.80
10	126.48	126.28	125.16	124.52	124.10	123.66	123.79	124.68	128.54	131.30	130.94	130.65
15	126.50	126.12	125.00	124.57	123.95	123.46	124.25	125.22	129.08	131.69	131.10	130.43
20	126.71	125.77	124.92	124.00	123.89	123.58	124.22	125.78	129.40	131.62	131.35	130.39
25	126.63	125.62	124.65	124.30	123.74	123.87	124.28	126.39	129.96	131.64	131.18	130.35
EOM	126.60	125.33	124.70	124.18	123.77	123.70	124.39	126.74	130.48	131.39	131.11	130.20
MEAN	126.62	125.97	124.93	124.39	123.96	123.68	124.07	125.40	128.91	131.40	131.14	130.53

WATER YEAR 1986 -- MEAN 126.75 HIGH 123.25 MAR 15 LOW 131.80 JUL 17



BURLINGTON COUNTY

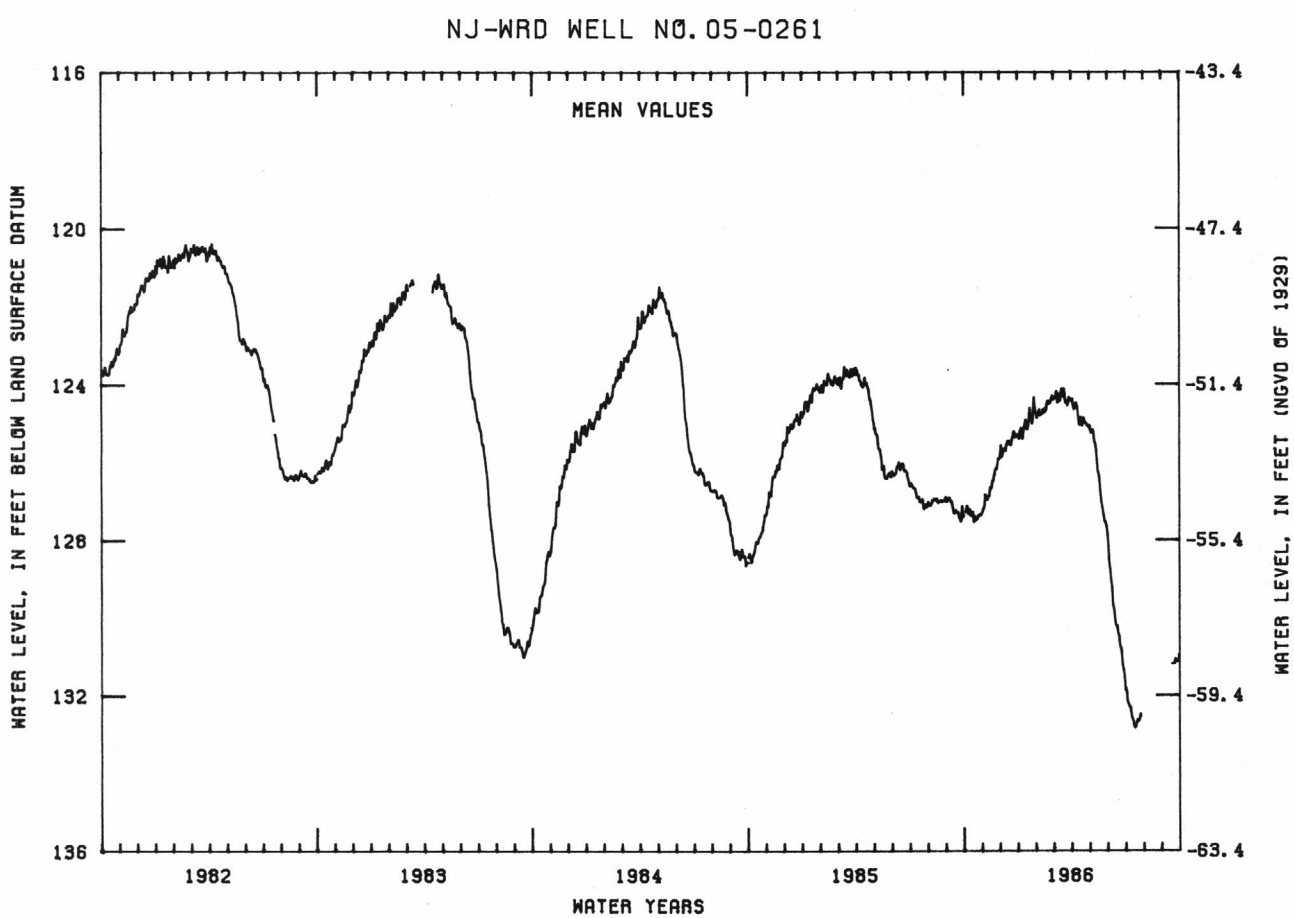
395525074502505. Local I.D., Medford 5 Obs. NJ-WRD Well Number, 05-0261.
LOCATION.--Lat 39°55'25", long 74°50'25", Hydrologic Unit 02040202, at Medford Public Shooting Grounds, Medford Township.
Owner: U.S. Geological Survey.
AQUIFER.--Middle aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 750 ft, screened 740 to 750 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch.
DATUM.--Land-surface datum is 72.60 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top edge of recorder shelf, 3.60 ft above land-surface datum.
REMARKS.--Missing record from July to September 1986 was due to recorder malfunction.
PERIOD OF RECORD.--January 1968 to March 1975, March 1977 to current year. Records for 1968 to 1977 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 94.46 ft below land-surface datum, Mar. 1, 1968; lowest, 132.84 ft below land-surface datum, July 16,17 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	127.11	126.82	125.78	125.12	124.64	124.28	124.65	125.18	128.77	132.20		---
10	127.20	126.88	125.72	125.10	124.74	124.31	124.57	125.51	129.71	132.45		---
15	127.27	126.68	125.55	125.15	124.60	124.10	125.04	126.22	130.19	132.78		---
20	127.43	126.32	125.48	124.60	124.50	124.24	124.98	126.84	130.46	132.65		131.18
25	127.35	126.18	125.23	124.90	124.38	124.55	124.99	127.36	131.07	132.53		131.13
EOM	127.29	125.90	125.29	124.81	124.39	124.39	125.11	127.75	131.67	---		130.94
MEAN	127.34	126.56	125.50	124.98	124.60	124.33	124.82	126.31	130.04	132.47		---

WATER YEAR 1986 -- MEAN 127.10 HIGH 123.91 MAR 15 LOW 132.84 JUL 16,17



BURLINGTON COUNTY

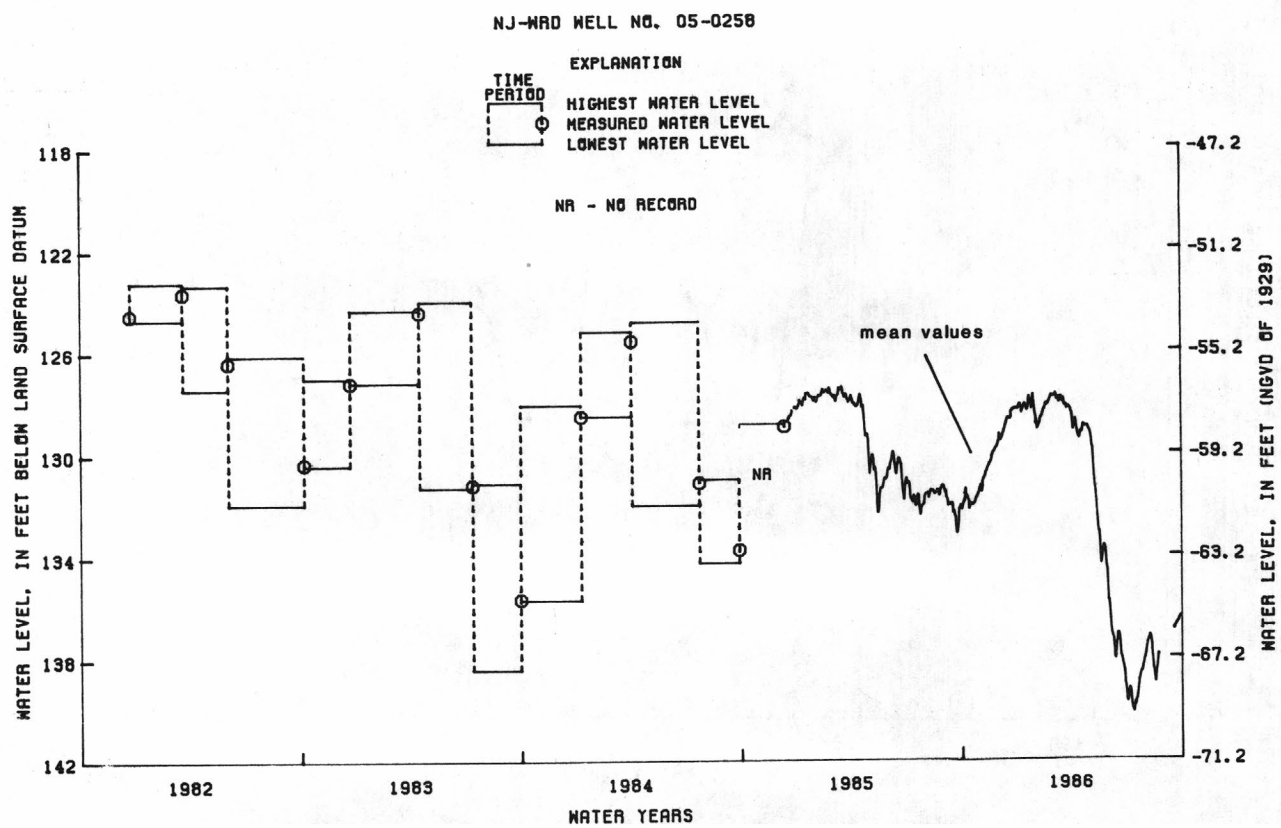
395524074502501. Local I.D., Medford 1 Obs. NJ-WRD Well Number, 05-0258.
LOCATION.--Lat 39°55'24", long 74°50'25", Hydrologic Unit 02040202, at Medford Public Shooting Grounds, Medford Township.
Owner: U.S. Geological Survey.
AQUIFER.--Upper aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 410 ft, screened 400 to 410 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch. Water-level extremes recorder, February 1977 to December 1984.
DATUM.--Land-surface datum is 70.77 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top of coupling, 2.70 ft above land-surface datum.
PERIOD OF RECORD.--October 1963 to August 1975, February 1977 to current year. Records for 1963 to 1975 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 85.22 ft below land-surface datum, Feb. 16-19, 1964; lowest, 140.28 ft below land-surface datum, July 12, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	131.53	131.27	129.52	128.05	128.84	127.77	128.99	129.77	136.78	139.21	137.37	---
10	131.61	130.66	129.24	128.22	128.59	127.85	129.06	131.33	137.57	140.03	137.30	---
15	131.96	130.46	128.69	128.28	128.29	127.81	129.40	132.90	137.35	139.88	138.59	---
20	131.95	130.12	128.61	127.80	128.16	127.97	129.05	134.33	137.55	139.09	138.36	136.76
25	131.71	129.85	128.24	128.13	127.91	128.30	128.97	133.63	138.33	138.54	---	136.52
EOM	131.43	129.56	128.18	128.69	127.83	128.34	129.11	135.20	139.35	138.02	---	136.19
MEAN	131.80	130.42	128.78	128.16	128.38	127.99	129.01	132.39	137.56	139.23	137.92	---

WATER YEAR 1986 -- MEAN 132.35 HIGH 127.62 JAN 27 LOW 140.28 JUL 12



BURLINGTON COUNTY

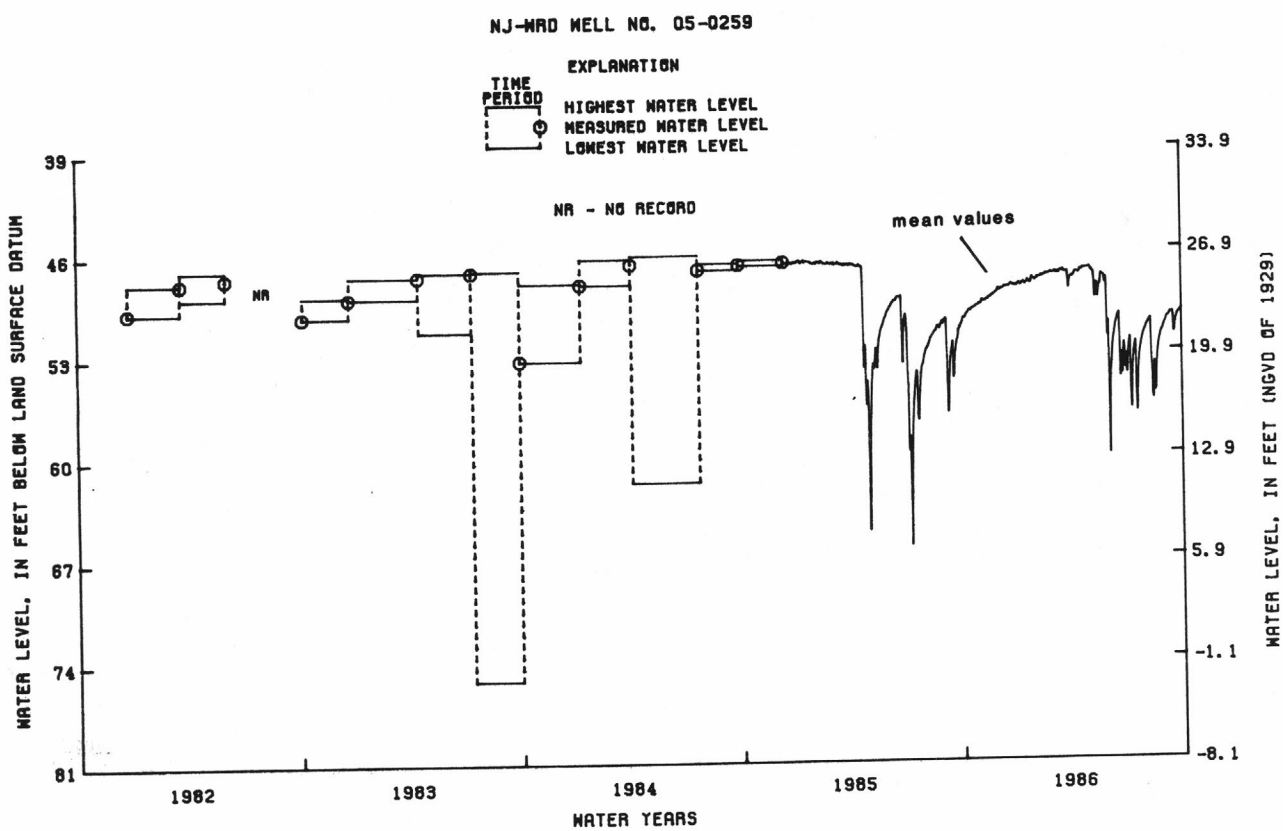
395524074502502. Local I.D., Medford 2 Obs. NJ-WRD Well Number, 05-0259.
LOCATION.--Lat 39°55'24", long 74°50'25", Hydrologic Unit 02040202, at Medford Public Shooting Grounds, Medford Township.
Owner: U.S. Geological Survey.
AQUIFER.--Englishtown aquifer of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 263 ft, screened 253 to 263 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch. Water-level extremes recorder, February 1977 to December 1984.
DATUM.--Land-surface datum is 72.92 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top edge of recorder shelf, 3.22 ft above land-surface datum.
REMARKS.--Water level affected by nearby pumping.
PERIOD OF RECORD.--October 1963 to August 1975, February 1977 to current year. Records for 1963 to 1975 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 45.42 ft below land-surface datum, Apr. 27, 1973; lowest, 111.96 ft below land-surface datum, July 9, 1964.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	50.66	49.46	48.78	48.33	47.92	47.63	47.91	47.48	54.49	52.70	51.22	50.91
10	50.42	49.50	48.71	48.34	47.92	47.61	47.62	49.39	52.06	55.08	50.90	50.65
15	50.13	49.43	48.60	48.42	47.81	47.51	47.65	49.38	50.97	52.64	54.68	50.46
20	50.02	49.20	48.54	48.12	47.78	47.56	47.44	47.92	52.72	54.56	53.85	51.07
25	49.89	49.11	48.42	48.28	47.67	47.64	47.37	47.91	53.67	52.64	52.22	50.55
EOM	49.72	48.90	48.49	48.16	47.69	48.00	47.35	52.02	53.28	51.69	51.47	50.25
MEAN	50.27	49.33	48.59	48.30	47.85	47.71	47.58	48.35	52.94	53.58	52.73	50.80

WATER YEAR 1986 -- MEAN 49.84 HIGH 46.95 MAY 28 LOW 62.12 JUN 3



BURLINGTON COUNTY

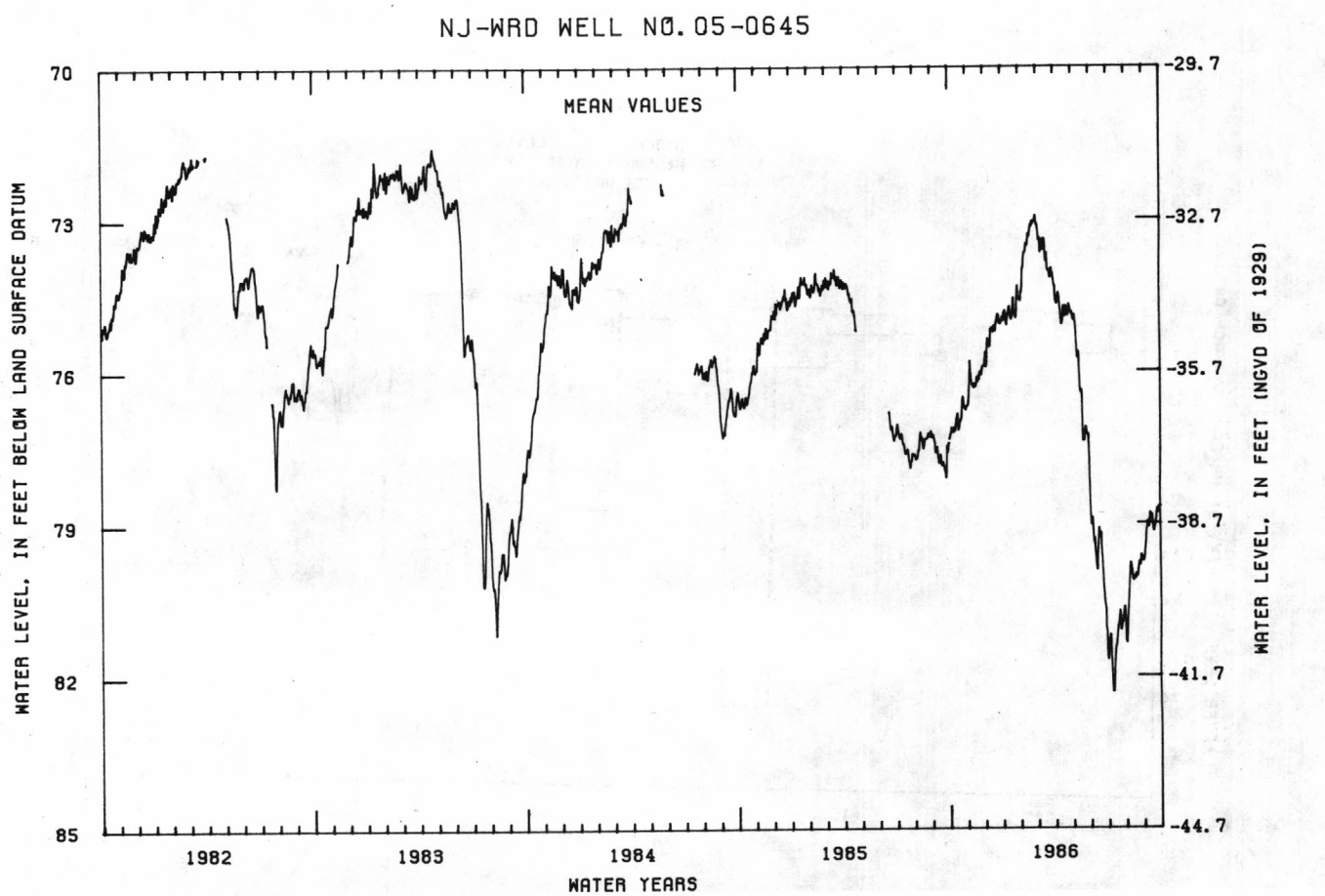
400010074521601. Local I.D., Willingboro 2 Obs. NJ-WRD Well Number, 05-0645.
LOCATION.--Lat 40°00'10", long 74°52'16", Hydrologic Unit 02040202, near intersection of Bridge Street and Tiffany Lane, Willingboro.
Owner: Willingboro Municipal Utilities Authority.
AQUIFER.--Lower aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 441 ft, screened 431 to 441 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch.
DATUM.--Land-surface datum is 40.30 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top edge of recorder shelf, 2.00 ft below land-surface datum.
REMARKS.--Water level affected by tidal fluctuation and nearby pumping. Water-quality data for 1986 is published elsewhere in this report.
PERIOD OF RECORD.--March 1966 to September 1975, March 1977 to current year. Records for 1966 to 1975 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 49.79 ft below land-surface datum, June 21, 1967; lowest, 82.52 ft below land-surface datum, July 10, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	77.11	75.80	75.47	74.81	73.98	73.42	74.68	74.89	78.89	81.19	80.41	79.15
10	77.11	76.26	75.47	74.87	73.63	73.43	74.67	75.74	79.66	82.31	79.88	79.06
15	76.84	76.31	75.24	74.97	73.30	73.42	74.99	76.40	79.23	81.41	80.04	78.83
20	76.99	76.09	75.12	74.56	73.16	73.88	74.83	77.39	79.48	80.85	80.05	79.05
25	76.57	76.08	74.91	74.83	73.04	74.16	74.81	77.13	80.55	80.95	79.83	78.80
EOM	76.70	75.90	74.94	74.58	73.05	74.25	74.88	77.74	81.51	80.96	79.75	78.67
MEAN	76.97	76.16	75.24	74.82	73.51	73.69	74.75	76.31	79.70	81.29	80.07	78.99

WATER YEAR 1986 -- MEAN 76.79 HIGH 72.79 FEB 27 LOW 82.52 JUL 10



BURLINGTON COUNTY

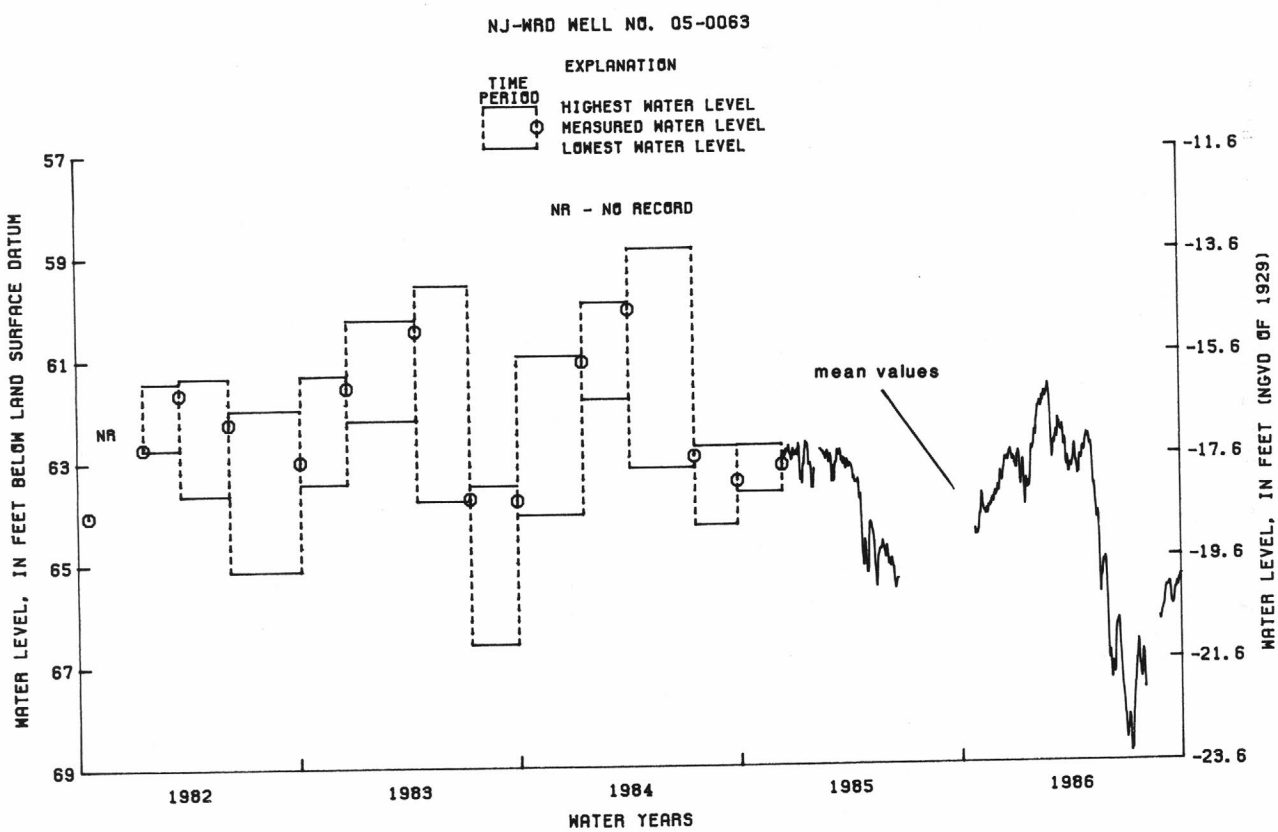
400213074510801. Local I.D., Willingboro 1 Obs. NJ-WRD Well Number, 05-0063.
LOCATION.--Lat 40°02'13", long 74°51'08", Hydrologic Unit 02040202, on the west side of Rancocas Road about 2 mi north of Rancocas.
Owner: Willingboro Municipal Utilities Authority.
AQUIFER.--Middle aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 294 ft, screened 284 to 294 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch. Water-level extremes recorder, February 1977 to December 1984.
DATUM.--Land-surface datum is 45.45 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top edge of recorder shelf, 0.60 ft above land surface datum.
REMARKS.--Water level affected by nearby pumping.
PERIOD OF RECORD.--March 1966 to September 1975, February 1977 to current year. Records for 1966 to 1975 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 46.25 ft below land-surface datum, Mar. 19, 1966; lowest, 69.05 ft below land-surface datum, July 9, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	63.73	63.54	62.92	62.29	62.72	63.12	62.78	67.02	68.11	---	65.64
10	---	64.08	63.47	63.42	61.96	62.68	63.16	63.57	67.19	68.77	---	65.55
15	---	64.15	63.10	63.77	61.97	62.49	63.37	64.26	66.36	67.50	---	65.93
20	---	63.94	63.03	63.65	61.84	62.52	63.04	65.71	66.45	66.78	---	65.67
25	64.44	63.92	63.02	63.33	61.72	63.15	62.82	65.08	67.59	67.35	---	65.61
EOM	64.46	63.74	63.19	62.71	62.51	63.21	62.68	65.81	68.45	67.26	66.04	65.38
MEAN	---	63.97	63.22	63.29	62.03	62.77	63.01	64.28	67.07	67.67	---	65.68

WATER YEAR 1986 -- MEAN 64.49 HIGH 61.57 FEB 24 LOW 69.05 JUL 9

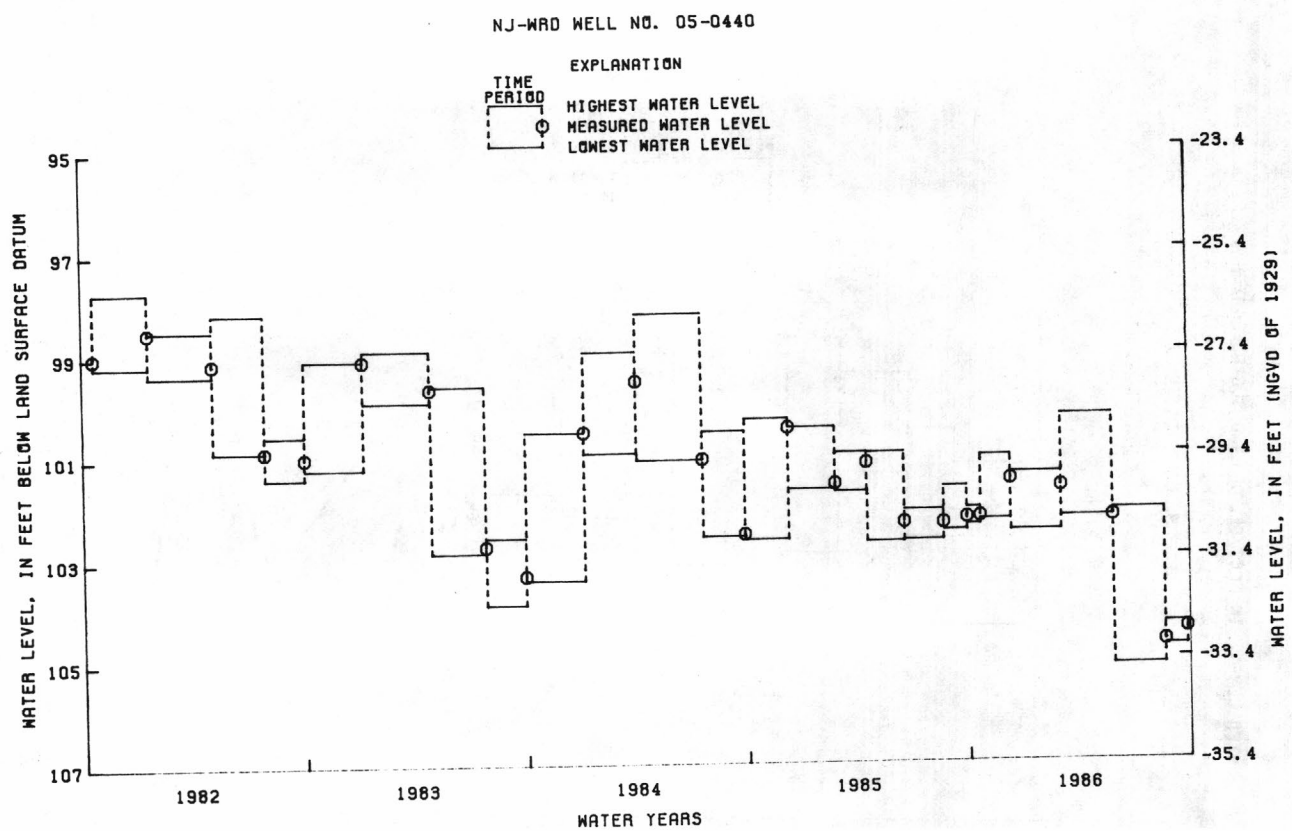


BURLINGTON COUNTY

400242074422301. Local I.D., Rhodia Corp. 1 Obs. NJ-WRD Well Number, 05-0440.
LOCATION.--Lat 40°02'42", long 74°42'23", Hydrologic Unit 02040201, on the lands of Rhodia Corporation near Jobstown.
Owner: Rhodia Corporation.
AQUIFER.--Middle aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 8 in, depth 615 ft, screened 603 to 613 ft.
INSTRUMENTATION.--Water-level extremes recorder, April 1977 to current year. Water-level recorder, December 1968 to March 1975.
DATUM.--Land-surface datum is 71.65 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Front edge of cutout in recorder housing, 2.22 ft above land-surface datum.
REMARKS.--Water-quality data for 1986 is published elsewhere in this report.
PERIOD OF RECORD.--December 1968 to March 1975, April 1977 to current year. Records for 1968 to 1975 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 86.55 ft below land-surface datum, Dec. 31, 1969; lowest, 105.14 ft below land-surface datum, between May 27 and Aug. 20, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 30, 1985 TO OCT. 22, 1985	102.05	102.38	OCT. 22, 1985	102.22
OCT. 22, 1985 TO DEC. 11, 1985	101.03	102.28	DEC. 11, 1985	101.50
DEC. 11, 1985 TO MAR. 3, 1986	101.37	102.50	MAR. 3, 1986	101.65
MAR. 3, 1986 TO MAY 27, 1986	100.25	102.24	MAY 27, 1986	102.24
MAY 27, 1986 TO AUG. 20, 1986	102.10	105.14	AUG. 20, 1986	104.68
AUG. 20, 1986 TO SEPT. 25, 1986	104.32	104.77	SEPT. 25, 1986	104.43



CAMDEN COUNTY

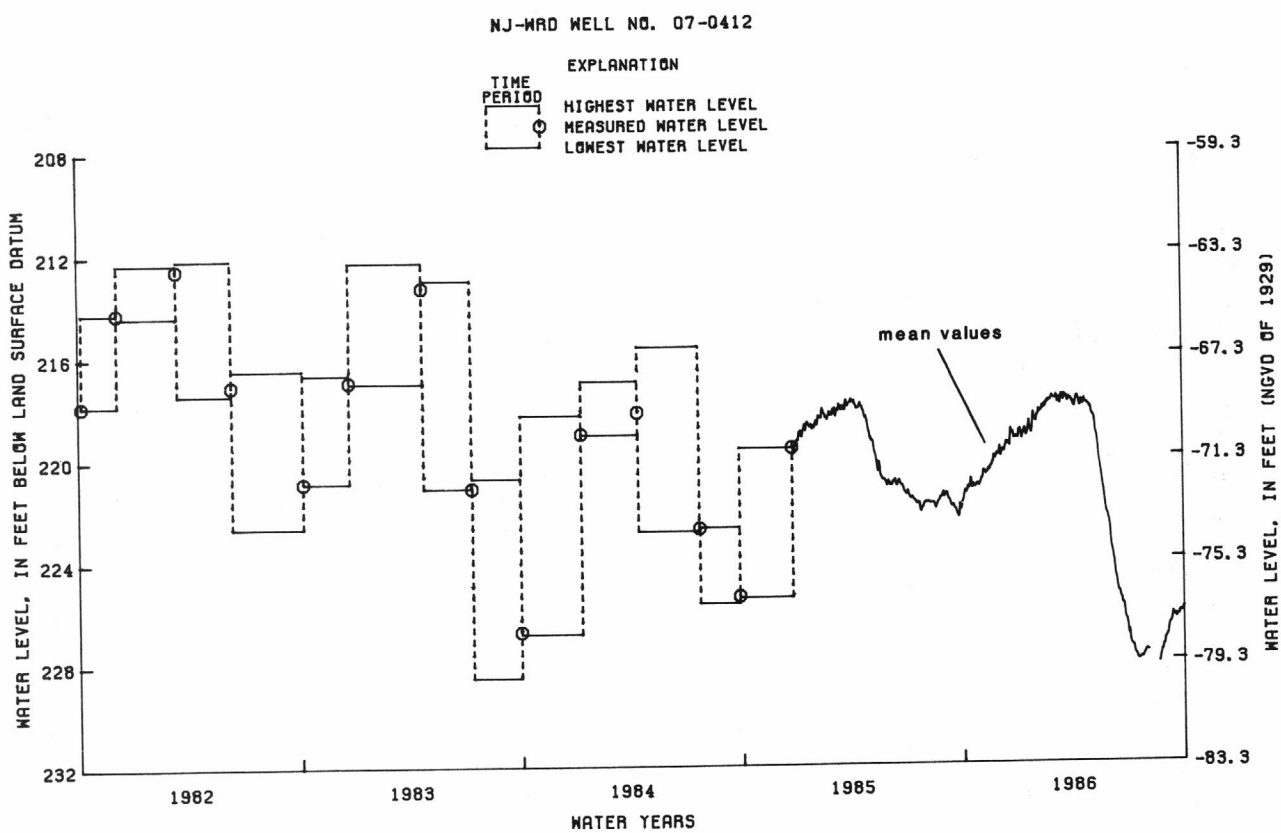
394922074563301. Local I.D., Elm Tree Farm 2 Obs. NJ-WRD Well Number, 07-0412.
LOCATION.--Lat 39°49'22", long 74°56'30", Hydrologic Unit 02040202, about 200 ft northeast of Thomas Road and about 2 mi northwest of Berlin.
Owner: New Jersey Water Company.
AQUIFER.--Lower aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 1,092 ft, screened 1,082 to 1,092 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch. Water-level extremes recorder, February 1977 to December 1984.
DATUM.--Land-surface datum is 148.68 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top edge of recorder shelf, 2.80 ft above land-surface datum.
REMARKS.--Well was originally screened 1,217 to 1,227 ft; rehabilitated August 1969.
PERIOD OF RECORD.--January 1963 to June 1975, February 1977 to current year. Records for 1963 to 1975 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 166.06 ft below land-surface datum, July 21, 1965; lowest, 228.51 ft below land-surface datum, between July 11 and Sept. 30, 1983.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	221.35	220.54	219.91	218.96	218.20	217.79	218.15	218.45	223.74	227.40	---	226.76
10	221.18	220.61	219.84	219.10	218.22	217.80	217.72	219.17	224.70	227.65	---	226.48
15	220.86	220.56	219.57	219.23	218.00	217.64	218.08	220.24	225.35	227.98	---	226.27
20	221.13	220.22	219.06	218.63	217.97	217.75	217.95	221.07	225.63	227.96	228.13	226.29
25	221.06	220.11	219.17	218.98	217.84	217.94	217.99	221.97	226.19	227.87	227.69	226.16
EOM	221.02	219.95	219.26	218.69	217.80	217.88	218.18	222.61	226.78	227.65	227.19	225.96
MEAN	221.23	220.40	219.49	218.97	218.10	217.80	217.97	220.32	225.10	227.69	---	226.41

WATER YEAR 1986 -- MEAN 221.76 HIGH 217.41 MAR 15 LOW 228.17 AUG 21



CAMDEN COUNTY

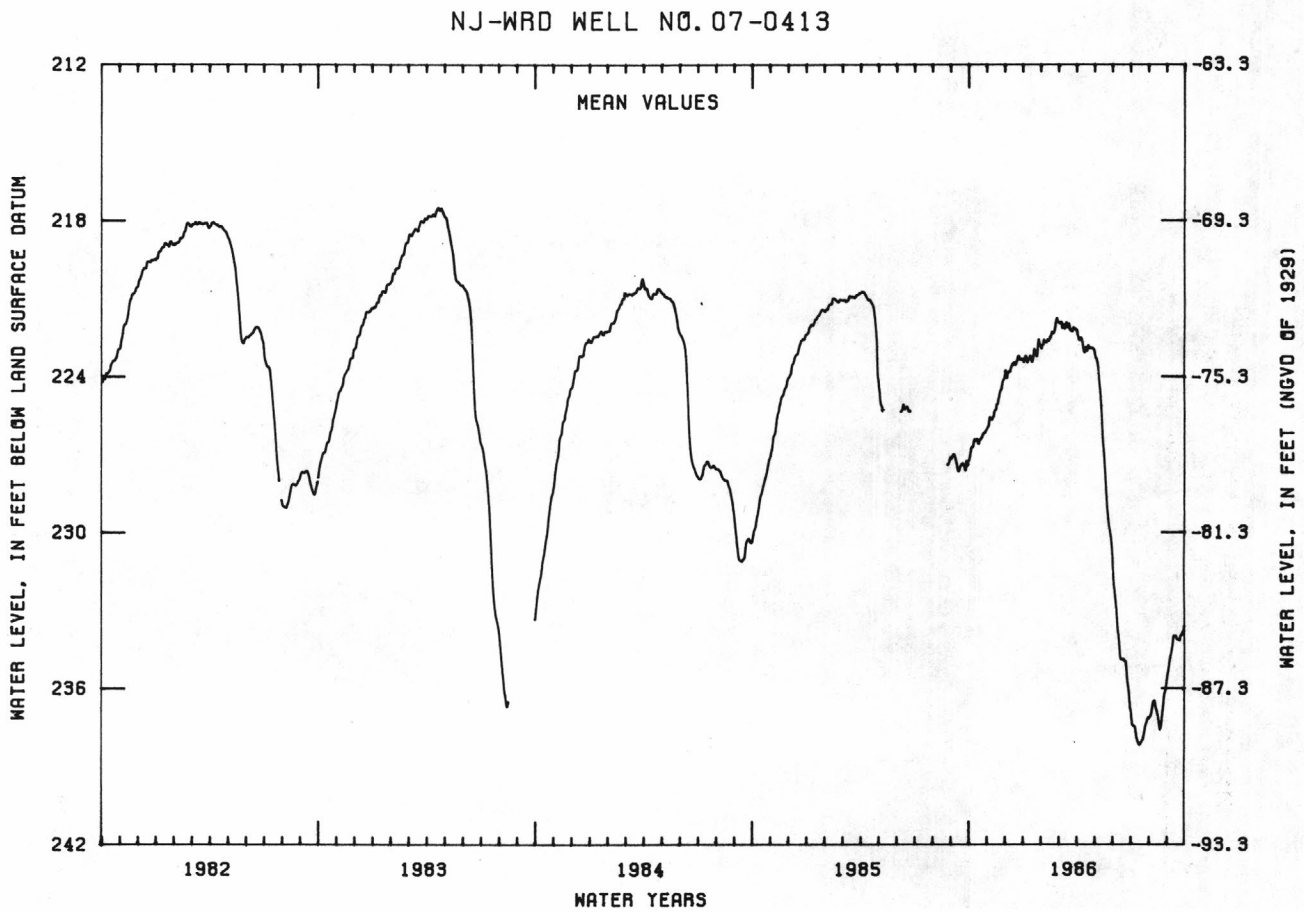
394922074563302. Local I.D., Elm Tree Farm 3 Obs. NJ-WRD Well Number, 07-0413.
LOCATION.--Lat 39°49'22", long 74°56'30", Hydrologic Unit 02040202, about 200 ft northeast of Thomas Road and about 2 miles northwest of Berlin.
Owner: New Jersey Water Company.
AQUIFER.--Middle aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 717 ft, screened 706 to 717 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch.
DATUM.--Land-surface datum is 148.73 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top edge of recorder shelf, 0.60 ft above land-surface datum.
PERIOD OF RECORD.--December 1963 to April 1975, March 1977 to current year. Records for 1963 to 1977 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 174.21 ft below land-surface datum, Feb. 6, 1964; lowest, 238.20 ft below land-surface datum, July 16,17 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	226.73	225.54	223.96	223.19	222.57	221.94	222.57	223.31	232.22	237.43	236.98	234.98
10	226.43	225.56	223.81	223.29	222.65	222.03	222.56	224.39	233.79	237.66	236.47	234.36
15	226.38	225.28	223.55	223.40	222.46	221.91	223.07	226.21	234.89	238.14	236.90	233.97
20	226.40	224.83	223.49	222.92	222.35	222.03	222.94	227.92	234.86	238.03	237.59	234.13
25	226.18	224.48	223.21	223.10	221.93	222.27	222.88	229.53	235.40	237.60	236.81	233.96
EOM	226.01	224.05	223.34	222.88	221.85	222.17	222.95	230.42	236.49	237.11	235.80	233.59
MEAN	226.48	225.10	223.56	223.17	222.43	222.06	222.75	226.55	234.18	237.63	236.82	234.31

WATER YEAR 1986 -- MEAN 227.92 HIGH 221.72 FEB 27 LOW 238.20 JUL 16,17



CAMDEN COUNTY

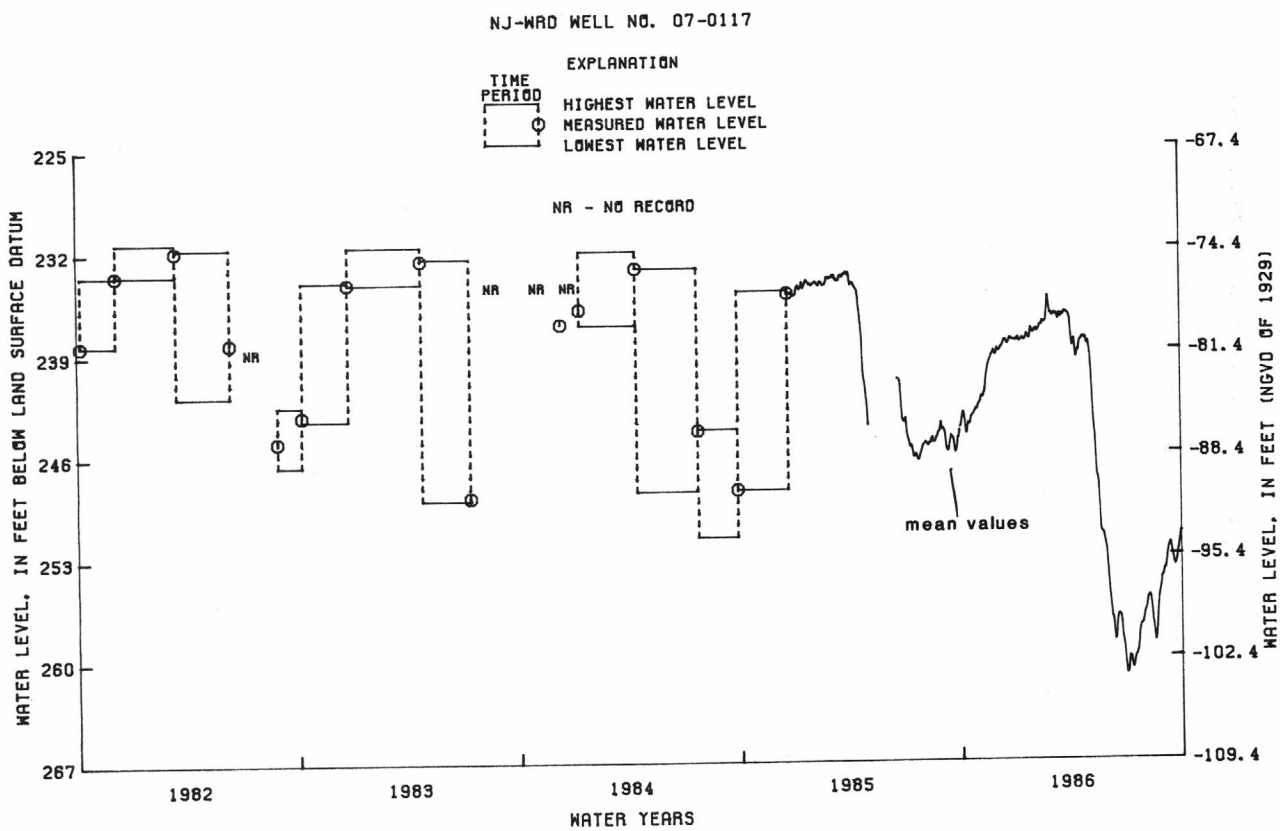
395229074571201. Local I.D., Hutton Hill 1 Obs. NJ-WRD Well Number, 07-0117.
LOCATION.--Lat 39°52'29", long 74°57'12", Hydrologic Unit 02040202, about 800 ft northeast of intersection of Kresson and Cropwell Roads, Cherry Hill Township.
Owner: New Jersey Water Company.
AQUIFER.--Upper aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 562 ft, screened 552 to 562 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch. Water-level extremes recorder, February 1977 to December 1984.
DATUM.--Land-surface datum is 157.61 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top edge of recorder shelf, 1.60 ft above land-surface datum.
PERIOD OF RECORD.--August 1967 to April 1975, February 1977 to current year. Records for 1967 to 1975 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 200.77 ft below land-surface datum, Mar. 23, 1968; lowest, 261.32 ft below land-surface datum, July 1,2, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	243.32	242.16	239.07	238.14	237.56	236.62	238.78	240.05	256.26	260.14	255.96	253.49
10	244.11	241.87	238.76	238.28	237.42	236.57	239.24	244.31	258.03	260.74	256.22	252.37
15	243.91	240.43	238.34	238.27	237.01	236.51	239.13	247.68	257.61	259.99	258.26	253.10
20	243.47	239.59	238.55	237.89	237.04	236.61	238.32	250.89	257.19	259.27	257.81	253.67
25	243.15	239.17	238.22	238.07	235.60	236.46	238.26	251.58	258.89	257.80	255.45	252.60
EOM	242.71	239.26	238.28	237.85	236.59	236.75	238.61	253.36	260.80	256.92	254.25	251.46
MEAN	243.59	240.66	238.55	238.13	237.02	236.60	238.48	247.06	257.70	259.38	256.46	252.93

WATER YEAR 1986 -- MEAN 245.55 HIGH 235.18 FEB 24 LOW 261.32 JUL 1,2



CAMDEN COUNTY

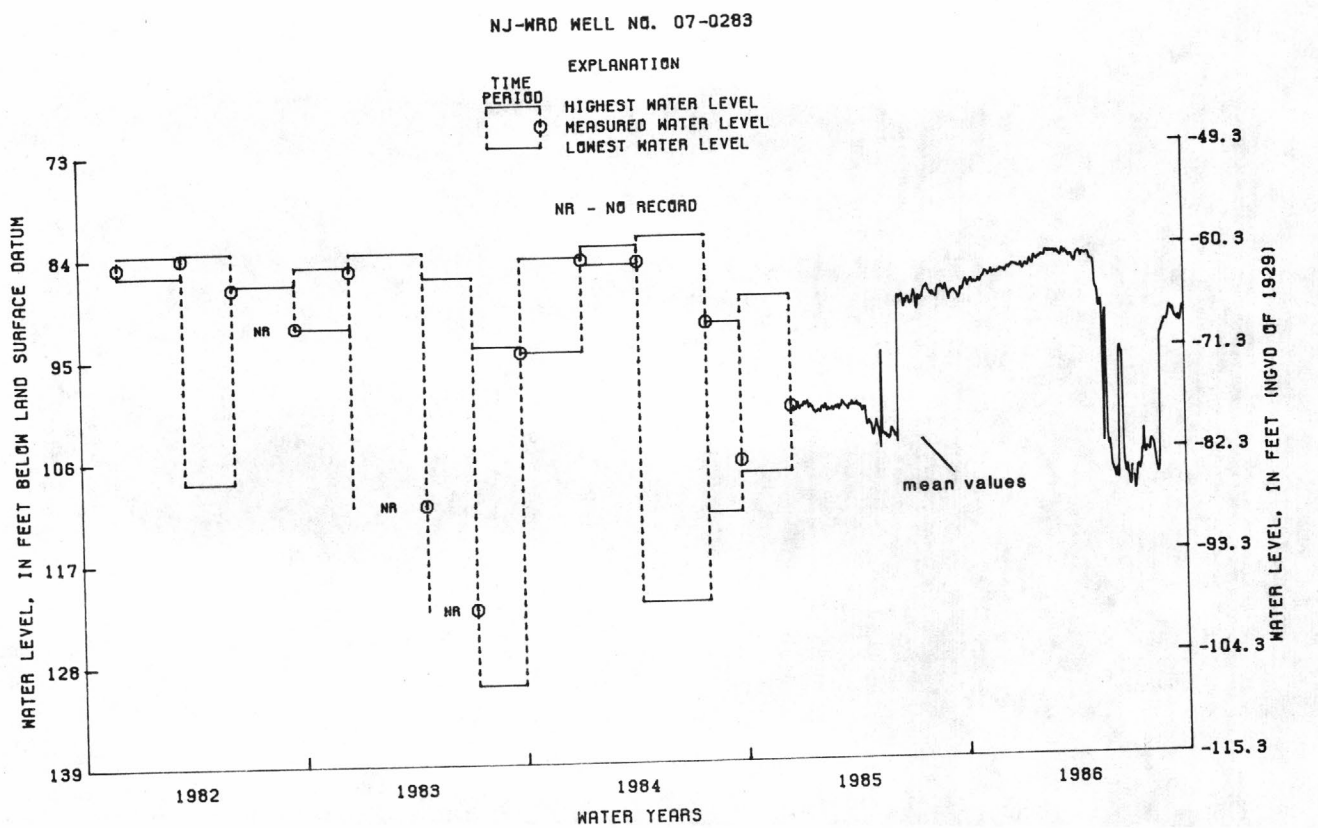
395246075043301. Local I.D., Egbert Station Obs. NJ-WRD Well Number, 07-0283.
LOCATION.--Lat 39°52'46", long 75°04'34", Hydrologic Unit 02040202, in Camden County Park, about 400 ft south of the corner of Dallas and Sylvan Avenues, Haddon Heights.
Owner: New Jersey Water Company.
AQUIFER.--Lower aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 455 ft, screened 445 to 455 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch. Water-level extremes recorder, February 1977 to December 1984.
DATUM.--Land-surface datum is 23.66 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top edge of recorder shelf, 3.00 ft above land-surface datum.
REMARKS.--Water level affected by nearby pumping.
PERIOD OF RECORD.--July 1963 to August 1975, February 1977 to current year. Periodic manual measurements, September 1975 to January 1977. Records for 1963 to 1982 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 61.93 ft below land-surface datum, Apr. 8, 1964; lowest, 130.41 ft below land-surface datum, between July 12 and Sept. 29, 1983.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	87.58	86.99	86.64	85.93	85.27	84.75	85.72	86.38	108.90	---	105.26	91.23
10	88.06	86.90	86.88	86.29	85.20	85.19	84.84	88.92	109.39	109.42	106.58	91.37
15	87.51	86.94	86.36	86.27	84.63	84.50	85.41	90.12	95.07	108.08	108.86	92.13
20	87.83	86.88	86.21	85.50	84.85	84.70	85.09	101.47	106.99	106.26	94.40	92.06
25	87.83	86.97	86.10	85.94	84.84	85.37	84.93	104.66	107.94	106.56	92.98	92.02
EOM	87.60	86.83	86.31	85.63	84.80	85.40	85.74	107.65	110.18	106.25	92.41	91.22
MEAN	87.85	86.93	86.38	85.99	85.01	85.00	85.22	94.34	105.67	107.68	101.27	91.72

WATER YEAR 1986 -- MEAN 91.92 HIGH 84.17 MAR 15 LOW 111.89 JUL 8

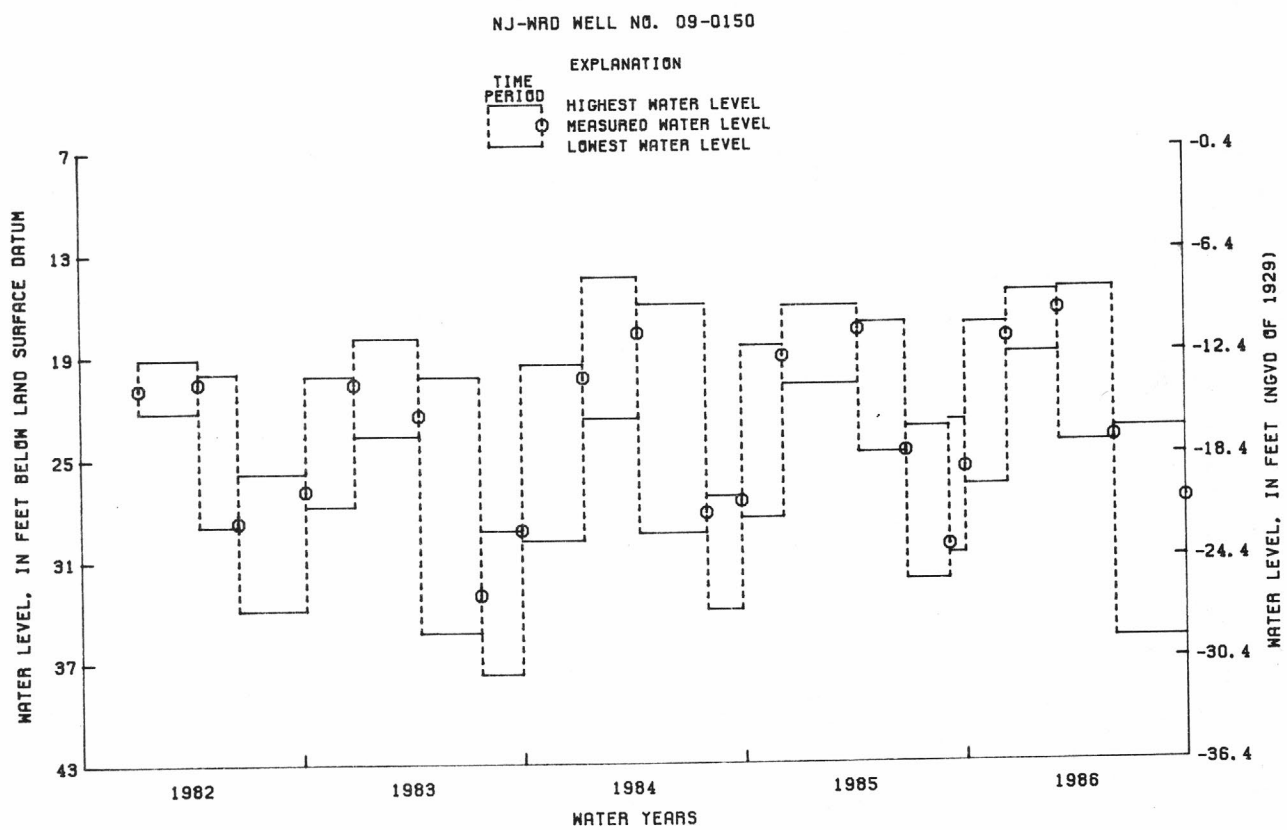


CAPE MAY COUNTY

385607074555201. Local I.D., West Cape May 1 Obs. NJ-WRD Well Number, 09-0150.
LOCATION.--Lat 38°56'07", long 74°55'56", Hydrologic Unit 02040206, on the north side of Sunset Boulevard, West Cape May.
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, May 1977 to current year. Water-level recorder, July 1957 to December 1972.
DATUM.--Land-surface datum is 6.60 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Front edge of cutout in recorder housing, 2.88 ft above land-surface datum.
REMARKS.--Water level affected by tidal fluctuation and nearby pumping.
PERIOD OF RECORD.--July 1957 to December 1972, May 1977 to current year. Periodic manual measurements, February 1973 to September 1976. Records for 1957 to 1982 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 14.38 ft below land-surface datum, between Jan. 10 and Apr. 10, 1984; lowest, 41.30 ft below land-surface datum, Sept. 3, 1963.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
OCT. 1, 1985 TO DEC. 10, 1985	17.23	26.71	DEC. 10, 1985	18.07
DEC. 10, 1985 TO MAR. 4, 1986	15.37	19.01	MAR. 4, 1986	16.48
MAR. 4, 1986 TO JUNE 4, 1986	15.20	24.22	JUNE 4, 1986	23.95
JUNE 4, 1986 TO SEPT. 30, 1986	23.39	35.76	SEPT. 30, 1986	27.59

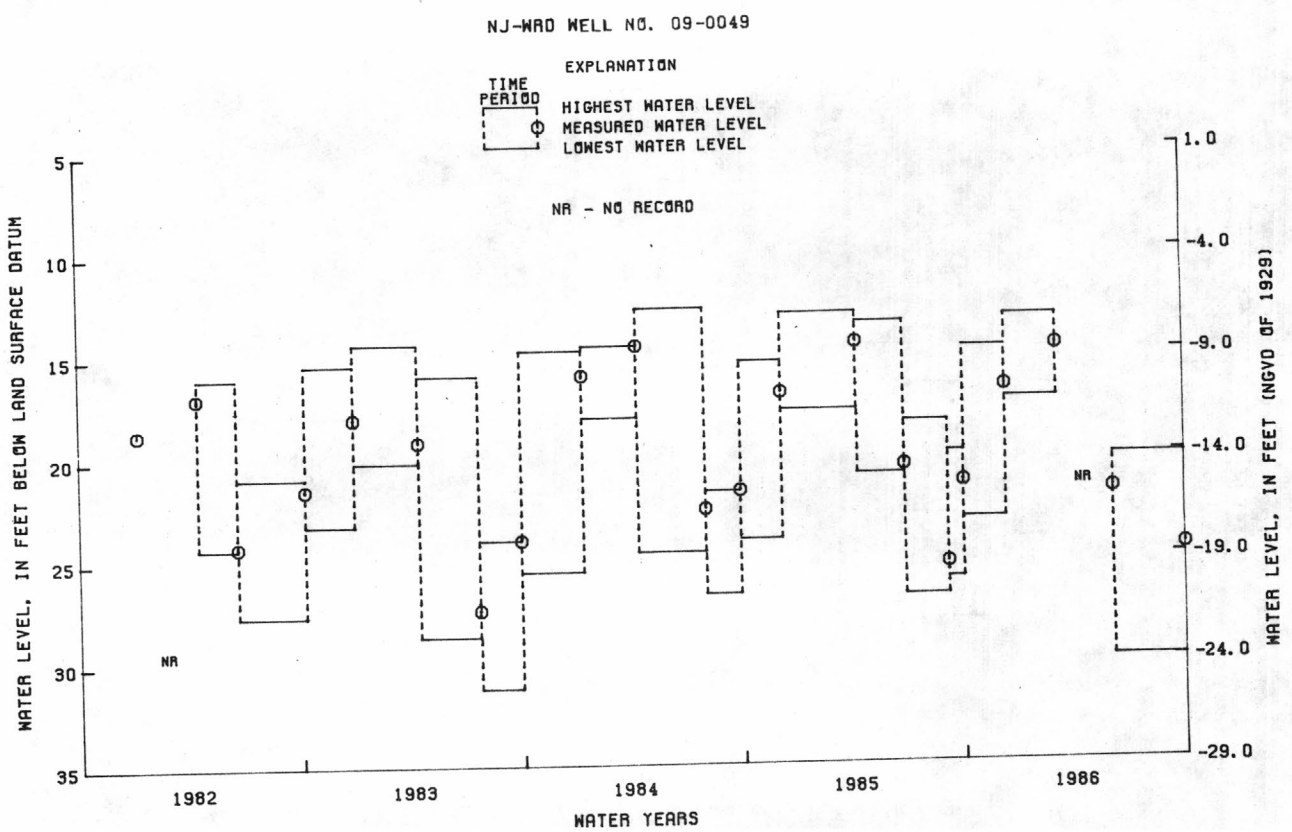


CAPE MAY COUNTY

385804074574201. Local I.D., Higbee Beach 3 Obs. NJ-WRD Well Number, 09-0049.
LOCATION.--Lat 38°58'04", long 74°57'42", Hydrologic Unit 02040206, on the north bank of 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, May 1977 to current year. Water-level recorder, June 1965 to September 1975.
DATUM.--Land-surface datum is 6.00 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Front edge of cutout in recorder housing, 2.93 ft above land-surface datum.
REMARKS.--Water level affected by tidal fluctuation. Missing record from March 4 to June 4, 1986 was due to recorder malfunction.
PERIOD OF RECORD.--June 1965 to September 1975, May 1977 to current year. Records for 1975 to 1980 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.65 ft below land-surface datum, between Apr. 10 and July 31, 1984; lowest, 34.22 ft below land-surface datum, July 31, 1974.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
OCT. 1, 1985 TO DEC. 10, 1985	14.71	23.10	DEC. 10, 1985	16.66
DEC. 10, 1985 TO MAR. 4, 1986	13.19	17.25	MAR. 4, 1986	14.70
MAR. 4, 1986 TO JUNE 4, 1986	---	---	JUNE 4, 1986	21.75
JUNE 4, 1986 TO SEPT. 30, 1986	20.06	29.95	SEPT. 30, 1986	24.57

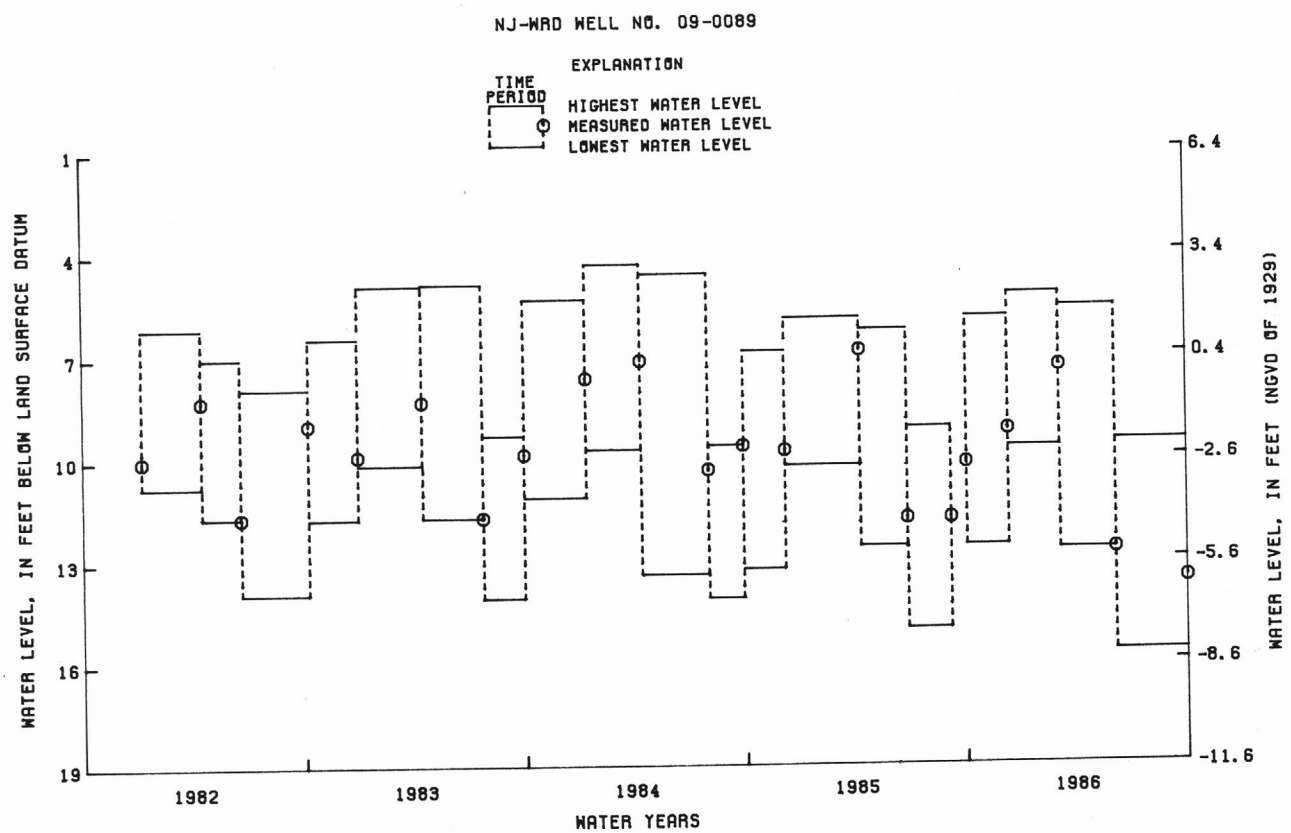


CAPE MAY COUNTY

390425074544601. Local I.D., Oyster Lab 4 Obs. NJ-WRD Well Number, 09-0089.
LOCATION.--Lat 39°04'25", long 74°54'46", 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, May 1977 to current year. Water-level recorder, August 1957 to August 1975.
DATUM.--Land-surface datum is 7.37 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Front edge of cutout in recorder housing, 3.90 ft above land-surface datum.
REMARKS.--Water level affected by tidal fluctuation.
PERIOD OF RECORD.--August 1957 to August 1975, May 1977 to current year. Periodic manual measurements, September 1975 to April 1977. Records for 1957 to 1982 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.07 ft below land-surface datum, Apr. 3, 1958; lowest, 15.71 ft below land-surface datum, between June 4 and Sept. 30, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
OCT. 1, 1985 TO DEC. 10, 1985	5.89	12.59	DEC. 10, 1985	9.21
DEC. 10, 1985 TO MAR. 4, 1986	5.22	9.71	MAR. 4, 1986	7.37
MAR. 4, 1986 TO JUNE 4, 1986	5.61	12.72	JUNE 4, 1986	12.72
JUNE 4, 1986 TO SEPT. 30, 1986	9.53	15.71	SEPT. 30, 1986	13.59



CUMBERLAND COUNTY

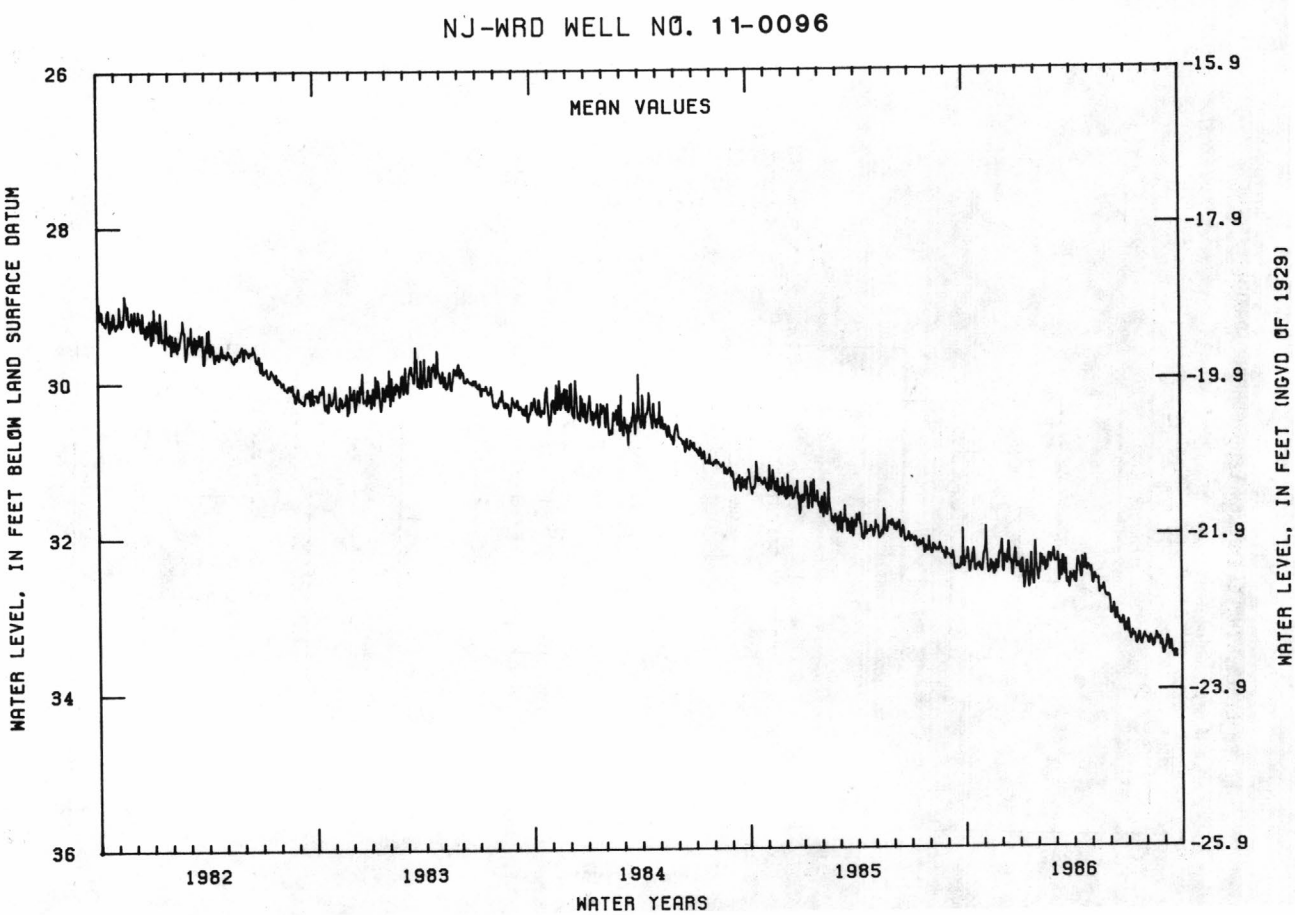
391828075120902. Local I.D., Jones Island 2 Obs. NJ-WRD Well Number, 11-0096.
LOCATION.--Lat 39°18'29", long 75°12'08", Hydrologic Unit 02040206, about 1.7 mi south of Cedarville at Jones Island, Lawrence Township.
Owner: Cumberland County.
AQUIFER.--Piney Point aquifer of Eocene age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 4 in, depth 375 ft, screened 365 to 375 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch.
DATUM.--Land-surface datum is 10.10 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top edge of recorder shelf, 1.90 ft above land-surface datum.
REMARKS.--Water level affected by tidal fluctuation. Water-quality data for 1986 is published elsewhere in this report.
PERIOD OF RECORD.--March 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 19.99 ft below land-surface datum, Mar. 22, 1977; lowest, 33.64 ft below land-surface datum, Sept. 17, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	32.17	31.89	32.38	32.31	32.26	32.33	32.63	32.58	32.99	33.32	33.42	33.32
10	32.37	32.46	32.37	32.50	32.41	32.40	32.36	32.58	33.10	33.29	33.36	33.50
15	32.17	32.45	32.35	32.61	32.35	32.28	32.52	32.76	33.10	33.41	33.39	33.51
20	32.41	32.42	32.45	32.24	32.29	32.48	32.36	32.71	33.11	33.27	33.37	33.51
25	32.36	32.44	32.24	32.49	32.26	32.69	32.41	32.78	33.20	33.39	33.44	---
EOM	32.33	32.22	32.37	32.54	32.31	32.55	32.49	32.79	33.20	33.33	33.54	---
MEAN	32.36	32.33	32.32	32.46	32.35	32.46	32.44	32.66	33.07	33.32	33.39	33.49

WATER YEAR 1986 -- MEAN 32.72 HIGH 31.78 NOV 5 LOW 33.64 SEP 17



GLOUCESTER COUNTY

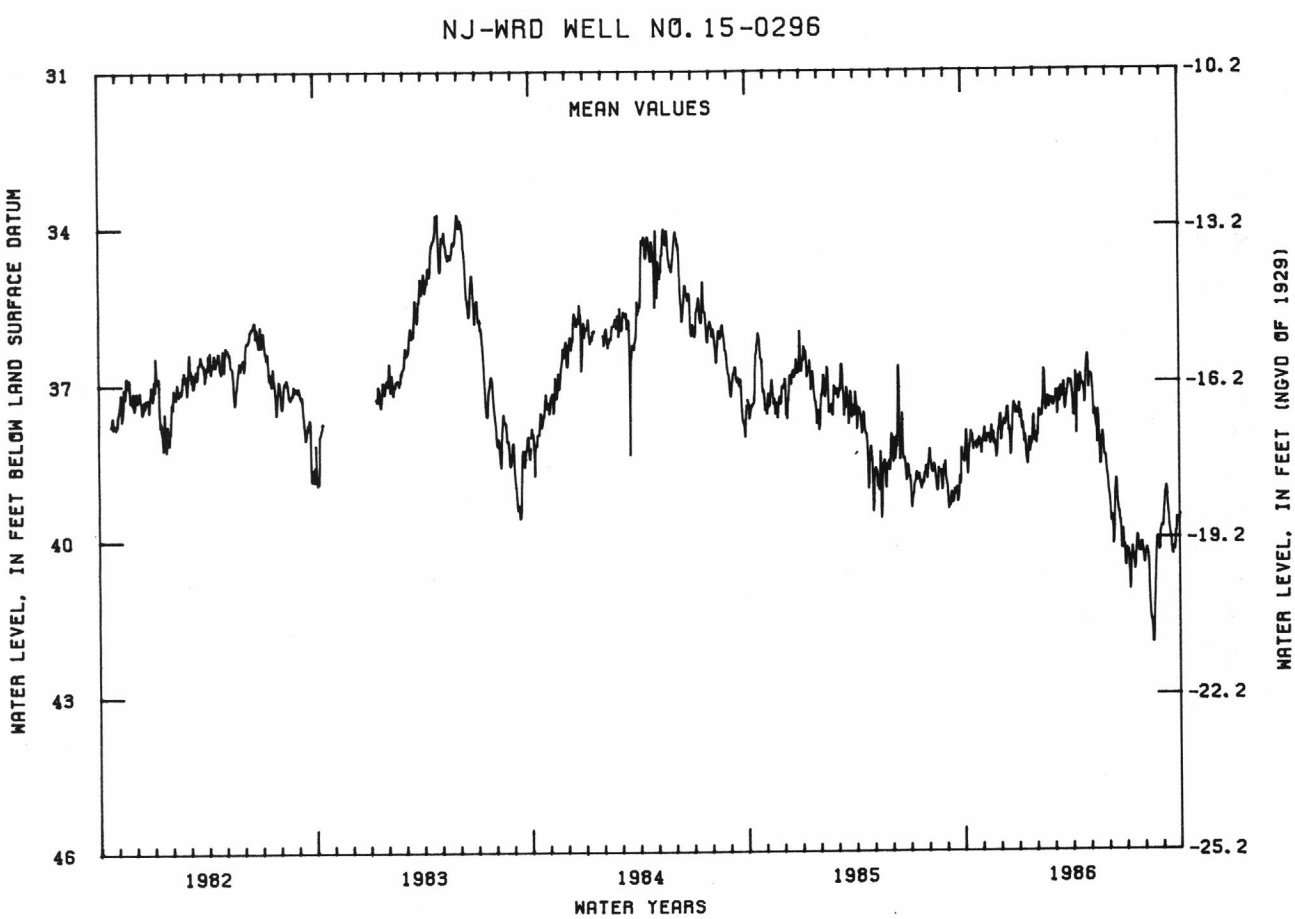
394942075131701. Local I.D., Shell Chemical 5 Obs. NJ-WRD Well Number, 15-0296.
LOCATION.--Lat 39°49'42", long 75°13'17", Hydrologic Unit 02040202, near the intersection of Mantua Grove Road and Route 295, West Deptford Township.
Owner: Shell Chemical Company.
AQUIFER.--Lower aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 327 ft, screened 321 to 326 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch.
DATUM.--Land-surface datum is 20.76 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top edge of recorder shelf, 2.90 ft above land-surface datum.
REMARKS.--Water level affected by tidal fluctuation and nearby pumping.
PERIOD OF RECORD.-June 1962 to current year. Records for 1962 to 1977 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 27.75 ft below land-surface datum, Dec. 6, 1962; lowest, 42.50 ft below land-surface datum, Aug. 15, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	37.92	37.87	37.93	37.55	37.53	37.31	37.66	36.92	39.45	40.23	40.19	39.14
10	38.28	38.08	37.82	37.94	37.63	37.23	37.32	37.56	40.12	40.33	41.24	39.45
15	38.00	38.18	37.61	38.46	37.22	37.26	37.16	37.54	38.86	40.45	42.01	40.01
20	38.18	37.96	38.37	38.07	37.28	37.44	37.07	38.57	39.50	39.95	40.53	40.19
25	38.11	38.45	37.39	37.98	37.31	37.16	36.84	38.30	39.88	40.22	40.18	39.61
EOM	38.37	37.83	37.56	38.06	37.45	36.99	37.12	38.79	40.51	40.40	39.76	39.56
MEAN	38.24	38.09	37.76	38.00	37.47	37.24	37.11	37.86	39.60	40.33	40.64	39.73

WATER YEAR 1986 -- MEAN 38.51 HIGH 36.02 APR 28 LOW 42.50 AUG 15



GLOUCESTER COUNTY

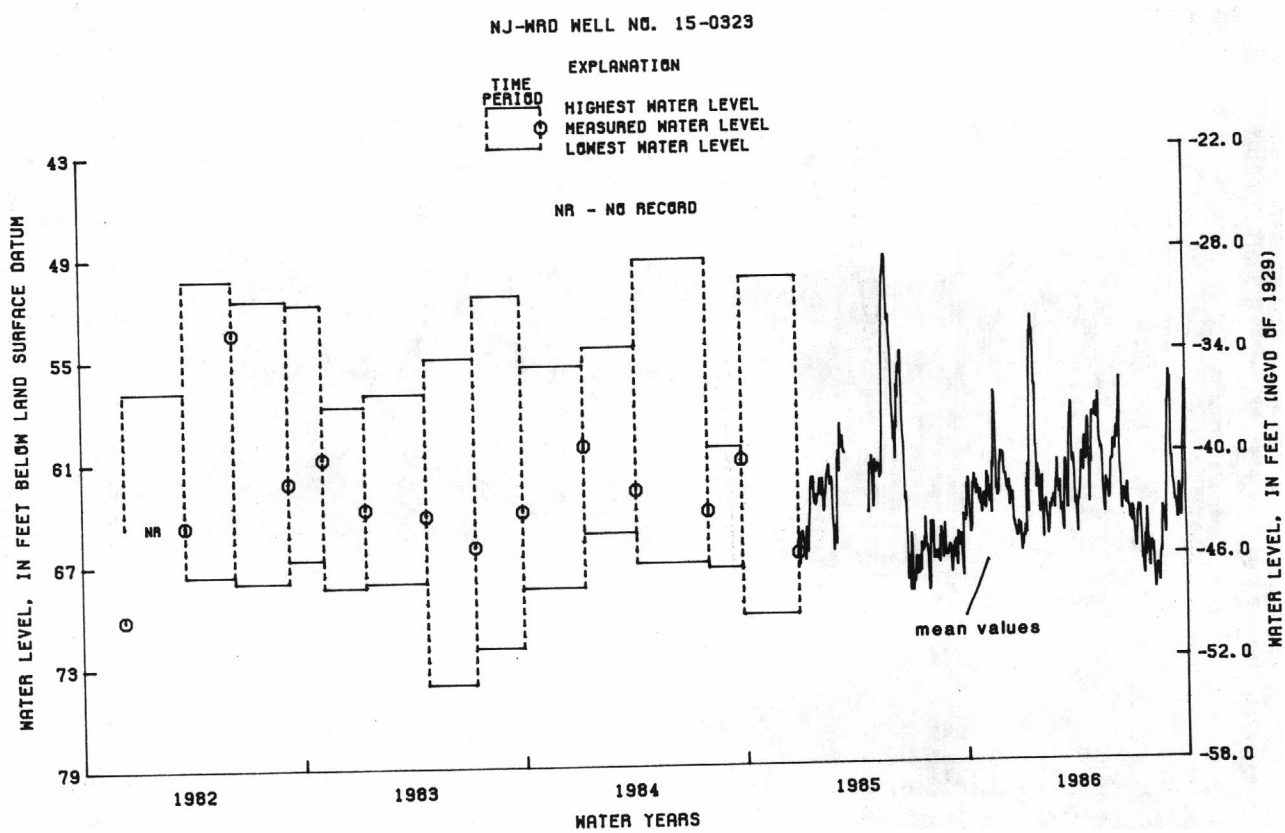
395232075094201. Local I.D., Eagle Point 3 Obs. NJ-WRD Well Number, 15-0323.
LOCATION.--Lat 39°52'35", long 75°09'50", Hydrologic Unit 02040202, at the Coastal Eagle Point Oil Company, West Deptford Township.
Owner: Coastal Eagle Point Oil Company.
AQUIFER.--Lower aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 8 in, depth 276 ft, screened 255 to 275 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch. Water-level extremes recorder, April 1981 to December 1984.
DATUM.--Land-surface datum is 20.96 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top of casing, 3.00 ft above land-surface datum.
REMARKS.--Water level affected by tidal fluctuation and nearby pumping. Water-quality data for 1986 is published elsewhere in this report.
PERIOD OF RECORD.--November 1949 to July 1975, April 1981 to current year. Periodic manual measurements, October 1976 to March 1981. Records for 1975 to 1981 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 37.70 ft below land-surface datum, Nov. 25, 1950; lowest, 87.30 ft below land-surface datum, June 28, 1963.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	62.47	62.15	62.31	65.92	62.41	63.41	64.30	58.18	60.61	64.34	66.83	56.77
10	65.48	63.90	62.81	62.63	63.93	64.09	62.25	58.94	59.84	65.85	68.71	62.90
15	62.26	61.89	63.66	56.13	65.54	61.87	62.13	60.74	62.29	64.29	68.10	64.06
20	62.91	61.32	65.05	53.96	64.28	64.28	61.36	64.58	63.24	67.08	66.95	63.23
25	63.15	63.28	65.88	60.54	63.75	58.11	63.99	63.30	62.97	67.16	64.44	63.18
EOM	63.43	61.18	66.15	62.74	62.70	62.33	58.69	61.47	64.97	67.80	58.16	57.63
MEAN	63.62	62.21	63.91	60.94	64.14	62.37	61.89	61.18	61.96	65.70	66.23	61.49

WATER YEAR 1986 -- MEAN 62.97 HIGH 52.17 JAN 19 LOW 70.59 AUG 9



HUNTERDON COUNTY

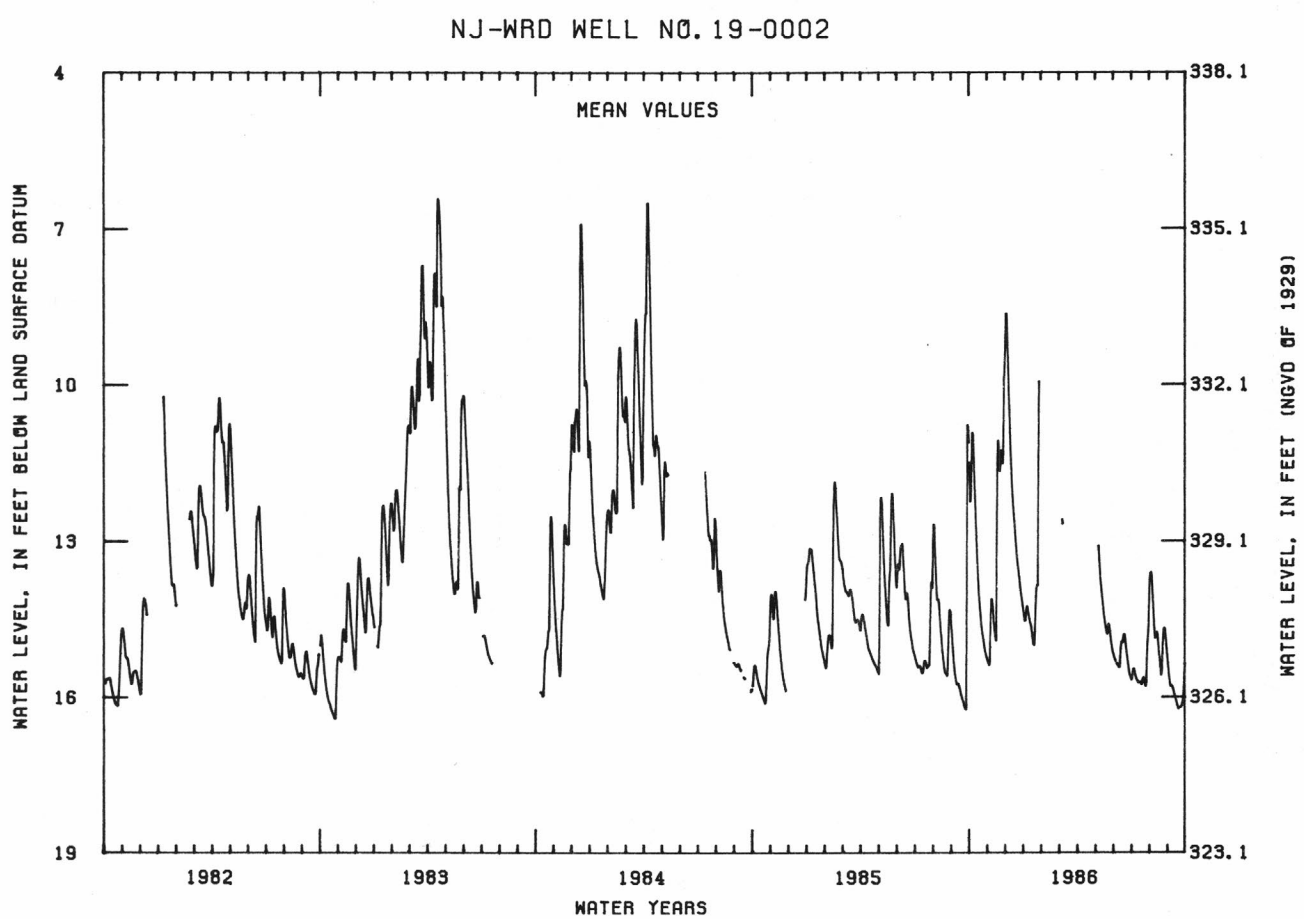
402644074563601. Local I.D., Bird Obs. NJ-WRD Well Number, 19-0002.
LOCATION.--Lat 40°26'44", long 74°56'36", Hydrologic Unit 02040105, near U.S. Post Office, Sergeantsville.
Owner: Phillip Fleming.
AQUIFER.--Stockton Formation of Triassic age.
WELL CHARACTERISTICS.--Dug water-table observation well, diameter 3 ft, depth 21 ft, lined with stone.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch.
DATUM.--Land-surface datum is 342.08 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top edge of recorder shelf, 1.50 ft above land-surface datum.
REMARKS.--Missing record from January to May 1986 was due to recorder malfunction.
PERIOD OF RECORD.--June 1965 to July 1970, May 1977 to current year. Periodic manual measurements, September 1970 to September 1976. Records for 1965 to 1976 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.37 ft below land-surface datum, Apr. 18, 1983; lowest, 17.04 ft below land-surface datum, Jan. 26-28, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.59	15.27	9.23	14.41				---	15.31	15.45	13.68	15.74
10	11.79	14.24	11.17	14.43				13.68	15.42	15.65	14.73	15.83
15	13.42	14.86	12.39	14.75				14.28	14.92	15.71	14.81	16.06
20	14.38	11.17	13.16	14.79				14.70	14.79	15.72	15.46	16.22
25	14.88	11.33	13.71	13.85				14.62	15.26	15.75	14.74	16.15
EOM	15.25	9.65	14.28	---				15.11	15.60	14.61	15.16	15.36
MEAN	13.36	13.12	12.02	14.18				14.38	15.21	15.56	14.68	15.91

WATER YEAR 1986 -- HIGH 8.55 DEC 2 LOW 16.24 SEP 19

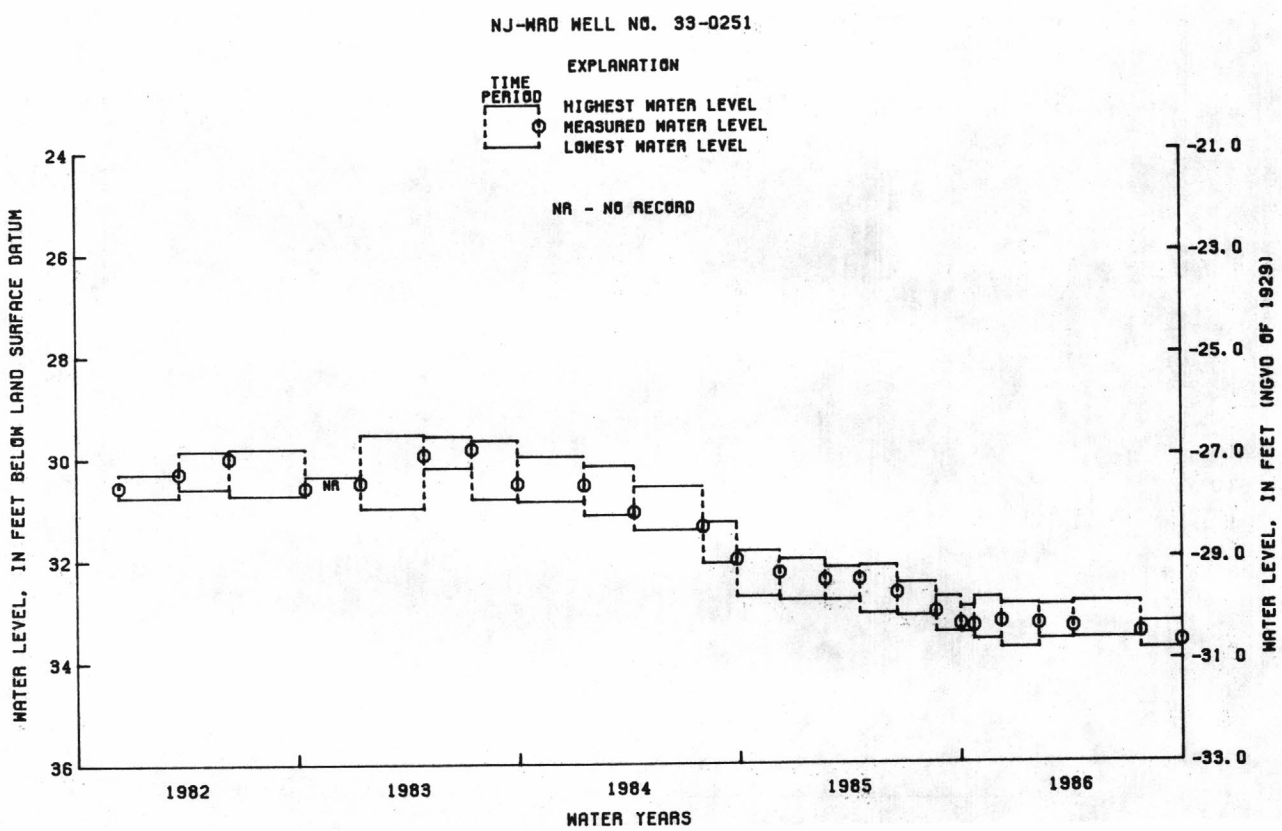


SALEM COUNTY

393348075275701. Local I.D., Salem 1 Obs. NJ-WRD Well Number, 33-0251.
LOCATION.--Lat 39°33'48", long 75°27'55", Hydrologic Unit 02040206, about 300 ft south of the intersection of Elm and Magnolia Streets, Salem.
Owner: U.S. Geological Survey.
AQUIFER.--Middle aquifer, Potomac-Raritan-Magothy aquifer system 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, May 1977 to current year. Water-level recorder, December 1965 to August 1975.
DATUM.--Land-surface datum is 3.00 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Front edge of cutout in recorder housing, 2.87 ft above land-surface datum.
PERIOD OF RECORD.--December 1965 to August 1975, May 1977 to current year. Records for 1965 to 1980 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 14.97 ft below land-surface datum, Dec. 13, 1965; lowest, 33.79 ft below land-surface datum, between July 23 and Sept. 29, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 30, 1985 TO OCT. 22, 1985	32.95	33.46	OCT. 22, 1985	33.33
OCT. 22, 1985 TO DEC. 6, 1985	32.77	33.60	DEC. 6, 1985	33.25
DEC. 6, 1985 TO FEB. 6, 1986	32.90	33.77	FEB. 6, 1986	33.29
FEB. 6, 1986 TO APR. 3, 1986	32.92	33.60	APR. 3, 1986	33.35
APR. 3, 1986 TO JULY 23, 1986	32.86	33.58	JULY 23, 1986	33.47
JULY 23, 1986 TO SEPT. 29, 1986	33.27	33.79	SEPT. 29, 1986	33.64

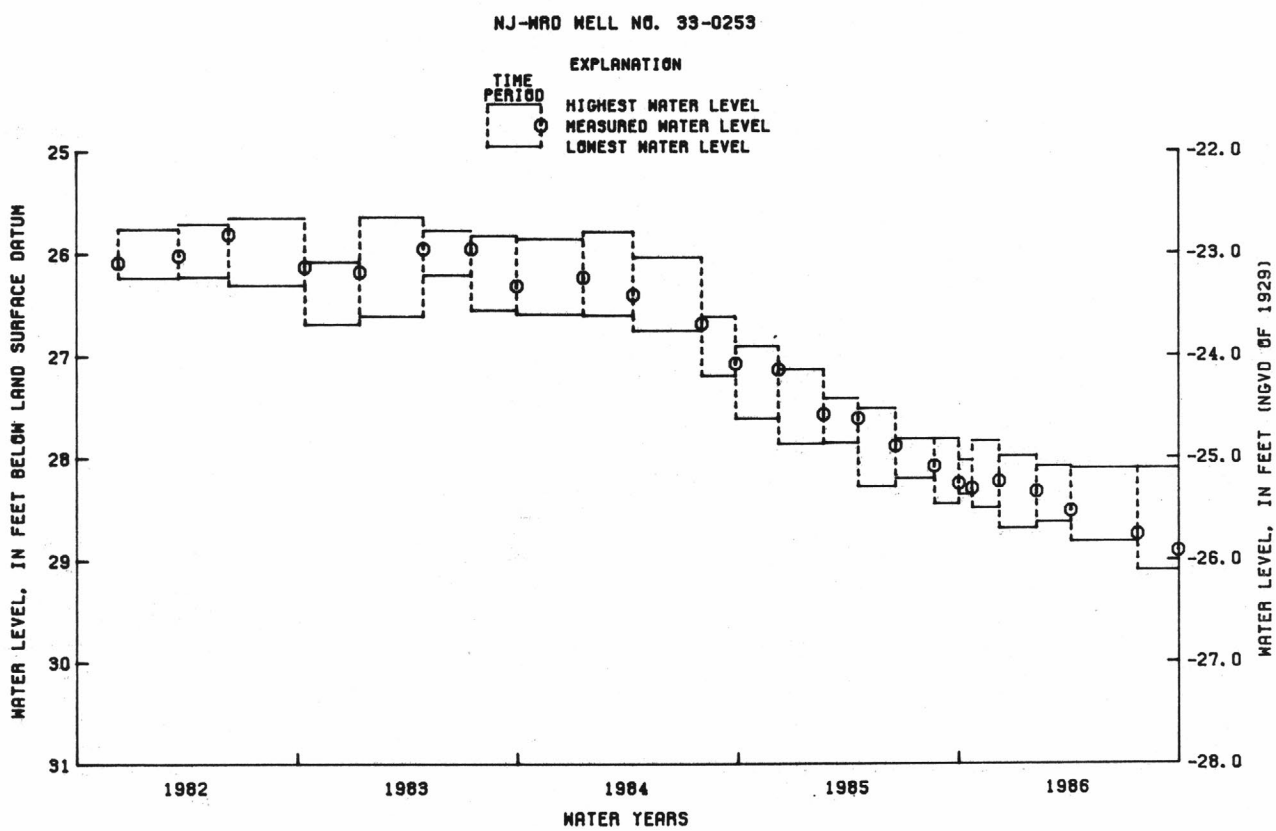


SALEM COUNTY

393348075275703. Local I.D., Salem 3 Obs. NJ-WRD Well Number, 33-0253.
LOCATION.--Lat 39°33'48", long 75°27'55", Hydrologic Unit 02040206, about 300 ft south of the intersection of Elm and Magnolia Streets, Salem.
Owner: U.S. Geological Survey.
AQUIFER.--Upper aquifer, Potomac-Raritan-Magothy aquifer system 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, May 1977 to current year. Water-level recorder, November 1965 to August 1975.
DATUM.--Land-surface datum is 3.00 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Front edge of cutout in recorder housing, 2.30 ft above land-surface datum.
PERIOD OF RECORD.--November 1965 to August 1975, May 1977 to current year. Records for 1965 to 1981 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.28 ft below land-surface datum, Feb. 13, 1966; lowest, 29.10 ft below land-surface datum, between July 23 and Sept. 29, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 30, 1985 TO OCT. 22,1985	28.02	28.36	OCT. 22, 1985	28.30
OCT. 22, 1985 TO DEC. 6, 1985	27.83	28.49	DEC. 6, 1985	28.23
DEC. 6, 1985 TO FEB. 6, 1986	27.98	28.69	FEB. 6, 1986	28.33
FEB. 6, 1986 TO APR. 3, 1986	28.08	28.63	APR. 3, 1986	28.52
APR. 3, 1986 TO JULY 23, 1986	28.10	28.82	JULY 23, 1986	28.75
JULY 23, 1986 TO SEPT. 29, 1986	28.10	29.10	SEPT. 29, 1986	28.91

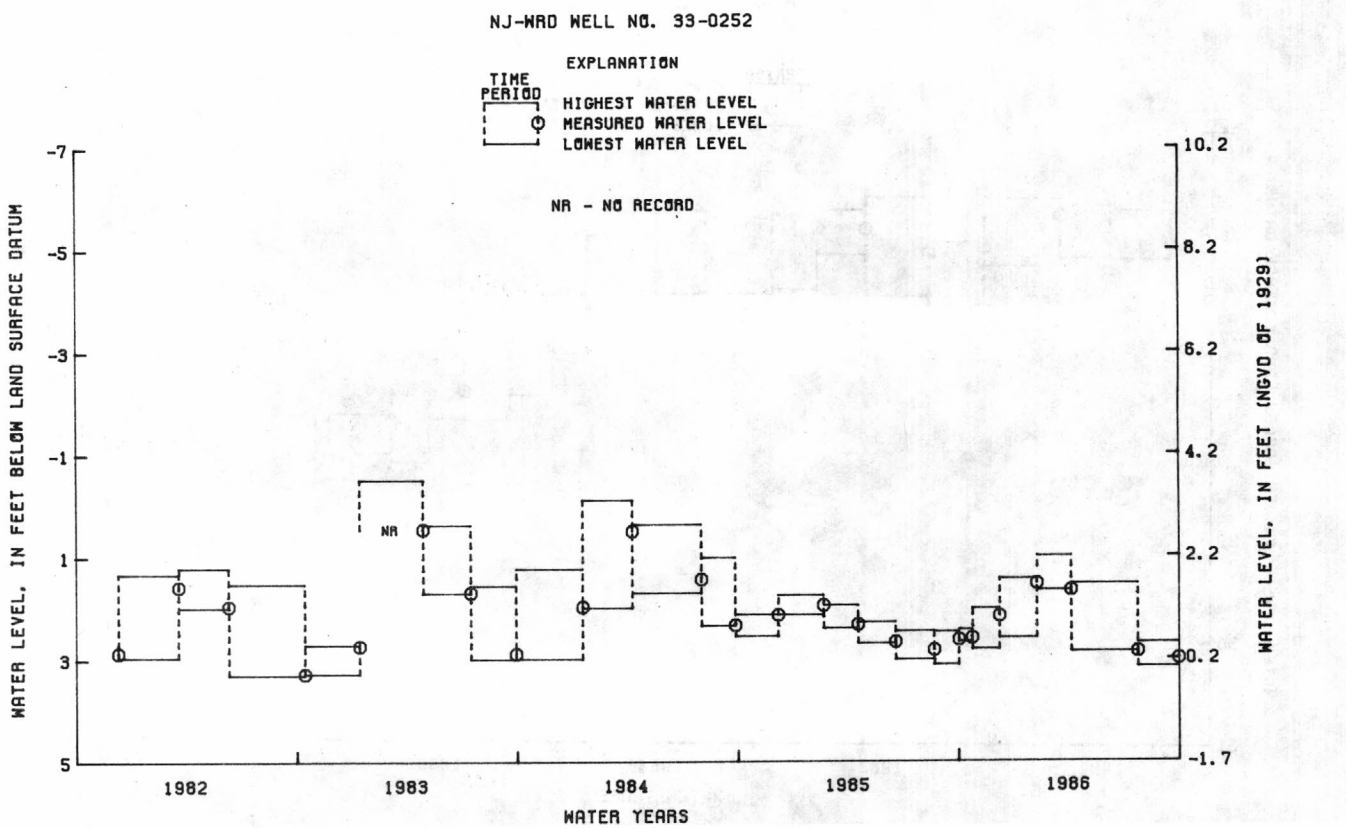


SALEM COUNTY

393348075275702. Local I.D., Salem 2 Obs. NJ-WRD Well Number, 33-0252.
LOCATION.--Lat 39°33'48", long 75°27'55", Hydrologic Unit 02040206, about 300 ft south of the intersection of Elm and Magnolia Streets, Salem.
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, May 1977 to current year. Water-level recorder, November 1965 to July 1975.
DATUM.--Land-surface datum is 3.25 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Front edge of cutout in recorder housing, 2.77 ft above land-surface datum.
PERIOD OF RECORD.--November 1965 to July 1975, May 1977 to current year. Records for 1965 to 1981 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.51 ft above land-surface datum, between Jan. 12 and Apr. 27, 1983; lowest, 6.45 ft below land-surface datum, Sept. 9, 1966.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 30, 1985 TO OCT. 22, 1985	2.42	2.66	OCT. 22, 1985	2.59
OCT. 22, 1985 TO DEC. 6, 1985	2.01	2.81	DEC. 6, 1985	2.16
DEC. 6, 1985 TO FEB. 6, 1986	1.43	2.59	FEB. 6, 1986	1.53
FEB. 6, 1986 TO APR. 3, 1986	0.99	1.66	APR. 3, 1986	1.66
APR. 3, 1986 TO JULY 23, 1986	1.53	2.86	JULY 23, 1986	2.86
JULY 23, 1986 TO SEPT. 29, 1986	2.68	3.16	SEPT. 29, 1986	3.00



SALEM COUNTY

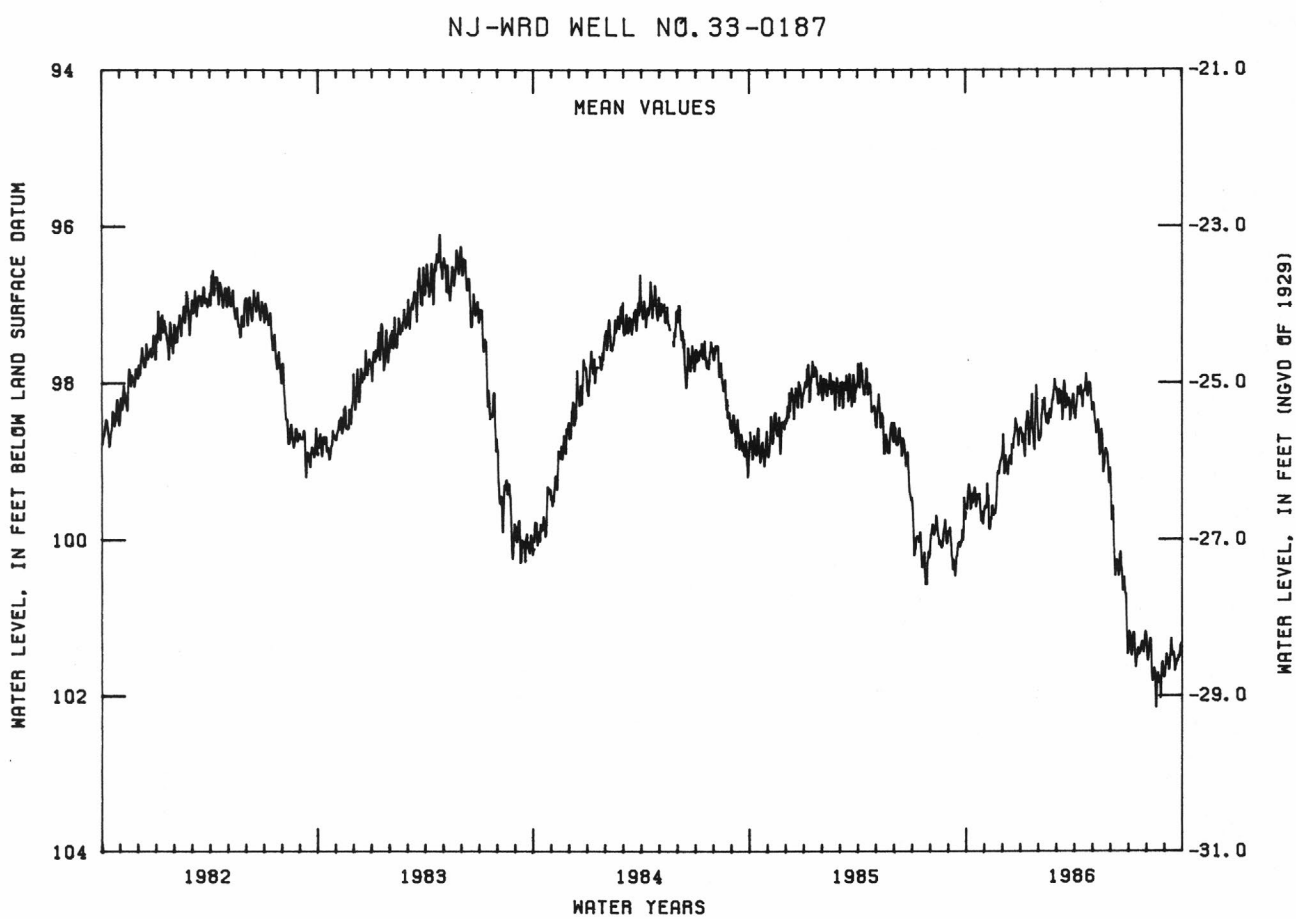
394037075191501. Local I.D., Point Airy Obs. NJ-WRD Well Number, 33-0187.
LOCATION.--Lat 39°40'37", long 75°19'14", Hydrologic Unit 02040206, at intersection of Point Airy and Woodstown-Swedesboro Roads, 1 mi north of Woodstown Borough boundary.
Owner: U.S. Geological Survey.
AQUIFER.--Lower aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 672 ft, screened 664 to 672 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch.
DATUM.--Land-surface datum is 72.97 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top of 6 inch casing, 1.80 ft above land-surface datum.
REMARKS.-- Water-quality data for 1986 is published elsewhere in this report.
PERIOD OF RECORD.--February 1959 to August 1975, March 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 78.55 ft below land-surface datum, Mar. 6, 1959; lowest, 102.22 ft below land-surface datum, Aug. 17, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	99.29	99.28	98.94	98.65	98.41	98.27	98.27	98.40	99.57	101.30	101.39	101.60
10	99.44	99.84	99.17	98.49	98.19	98.11	98.15	98.54	100.34	101.18	101.72	101.50
15	99.33	99.65	99.03	98.79	98.39	97.97	98.31	98.87	100.46	101.53	101.69	101.44
20	99.46	99.54	98.71	98.14	98.45	98.23	97.99	99.14	100.37	101.44	101.70	101.60
25	99.67	99.16	98.53	98.54	98.11	98.48	98.02	98.85	100.61	101.30	102.03	101.51
EOM	99.63	98.93	98.57	98.71	98.08	98.20	98.25	99.08	101.46	101.18	101.77	101.38
MEAN	99.51	99.45	98.82	98.56	98.36	98.21	98.14	98.74	100.31	101.35	101.66	101.50

WATER YEAR 1986 -- MEAN 99.55 HIGH 97.78 MAR 15 LOW 102.22 AUG 17



GROUND WATER LEVELS - SECONDARY OBSERVATION WELLS
OTHER SITES FOR WHICH DATA ARE AVAILABLE

NJ-WRD WELL NUMBER	SITE OWNER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	AQUIFER UNIT	WC	PERIOD OF RECORD
05-274	CAMPBELL SOUP	CAMPBELL 1	395841	745905	211MRPAM	A	1972-P
05-648	WILLINGBORO MUA	WMUA 3-OBS	400103	745409	211MRPAL	A	1966-P
05-690	US GEOL SURVEY	LEBANON SF 2	395211	743103	121CKKD	W	1964-P
07-030	SO JRSY PORT CM	NY SHIP 5A	395447	750711	211MRPAU	W	1950-P
07-118	NJ WATER CO	HUTTON HILL 2	395229	745712	211MLRW	A	1967-P
07-322	NJ WATER CO	OAKLYN TEST	395359	750445	211MRPAU	U	1963-P
07-354	GENERAL FOODS	PETTY IS OBS	395811	750556	211MRPAL	W	1950-P
*09-020	US GEOL SURVEY	TRAFFIC CIRCLE	385616	745800	112CPMY	W	1967-P
09-060	US GEOL SURVEY	AIRPORT T7	390056	745426	121CNSY	A	1963-P
09-097	US GEOL SURVEY	BDWLL DCH 31ES	390527	745024	112ESRNS	A	1968-1984
09-098	US GEOL SURVEY	BDWLL DCH 31HB	390527	745024	112HLBC	W	1968-1984
09-099	US GEOL SURVEY	COUNTY PARK T8	390611	744838	112CNSY	A	1957-P
*11-042	CUMBERLAND CO	VOCAT SCH 2	392732	750929	121CKKD	W	1972-P
*11-043	CUMBERLAND CO	VOCAT SCH 1	392732	750929	121CKKD	W	1972-P
11-044	CUMBERLAND CO	VOCAT SCH 3	392732	750929	124PNPN	A	1972-P
*11-073	CUMBERLAND CO	SHEPPARDS 2	392508	751846	121CKKD	W	1973-P
*11-097	CUMBERLAND CO	JONES ISLAND 1	391829	751208	121CKKD	U	1972-P
11-118	CUMBERLAND CO	HEISLERVILLE 1	391350	750018	112CKKD	W	1972-P
11-119	CUMBERLAND CO	HEISLERVILLE 2	391350	750018	121CKKD	W	1972-P
11-141	MILLVILLE WD	ORANGE ST	392219	750113	121CKKD	W	1962-P
11-161	CUMBERLAND CO	FAIR GROUNDS 1	392526	750643	121CKKD	W	1972-P
11-162	CUMBERLAND CO	FAIR GROUNDS 2	392526	750643	121CKKD	W	1972-P
11-163	CUMBERLAND CO	FAIR GROUNDS 3	392526	750643	124PNPN	A	1973-P
11-188	CUMBERLAND CO	BOSTWICK LK 1	393141	751601	121CKKD	W	1972-P
11-237	CUMBERLAND CO	NATURAL AREA 1	392920	745700	121CKKD	W	1972-P
*15-097	HERCULES CHEM	GIBBSTOWN TH 8	395000	751636	211MRPAM	W	1953-P
15-279	SHELL CHEM CO	SHELL OBS 7	394857	751250	211MRPAL	A	1962-P
15-297	SHELL CHEM CO	SHELL OBS 6	394942	751317	211MRPAU	A	1970-P
21-028	STATE OF NJ	CIVIL DEFENSE	401553	745012	231SCKN	W	1964-P
33-020	HORNER,EPHRAIM	HORNER	393534	751752	211MLRW	A	1959-P
33-279	GARRISON HENRY	GARRISON	393622	751531	211MLRW	A	1959-P
33-342	NJ WATER POLICY	PENNS GROVE 24	394236	752724	211MRPAU	A	1942-P
33-348	NJ WATER POLICY	PENNS GROVE 14	394317	752619	112CPMY	W	1959-P
41-013	HOFFMAN-LAROCHE	HOF LAR 4	405050	750332	112SFDF	U	1960-P

P - present
See figuer 9 for well locations.
Aquifer unit: see definition of terms
WC - (Water Condition): A-Artesian, W-Water table, U-Undetermined
* - Water-quality data for 1986 is published elsewhere in this report.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

BURLINGTON COUNTY

NJ-WRD WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	SCREENED INTERVAL (FT)	AQUIFER UNIT	DATE OF SAMPLE	TEMPERATURE (DEG C)
05-0645	WILLINGBORO 2 OBS	40 00 10	074 52 16	40	431-441	211MRPAL	09-17-86	14.5
05-0440	RHODIA CORP. 1 OBS	40 02 42	074 42 23	72	603-613	211MRPAM	08-20-86	16.0

LOCAL IDENTIFIER	DATE OF SAMPLE	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE IT-FLD (MG/L AS HCO3)	CARBONATE IT-FLD (MG/L AS CO3)
WILLINGBORO 2 OBS	09-17-86	236	7.1	100	31	5.6	3.9	5.8	117	<1.0
RHODIA CORP. 1 OBS	08-20-86	162	7.3	67	21	3.6	2.9	4.0	86	<1.0

LOCAL IDENTIFER	DATE OF SAMPLE	ALKALINITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)
WILLINGBORO 2 OBS	09-17-86	96	32	1.8	<0.1	8.4	150	<0.01	<0.10	0.14
RHODIA CORP. 1 OBS	08-20-86	71	15	1.6	<0.1	8.1	100	<0.01	<0.10	0.08

LOCAL IDENTIFIER	DATE OF SAMPLE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)
WILLINGBORO 2 OBS	09-17-86	<0.2	--	0.45	0.19	<10	<1	<1	<1
RHODIA CORP. 1 OBS	08-20-86	0.2	--	<0.01	<0.01	<10	<1	1	<1

LOCAL IDENTIFIER	DATE OF SAMPLE	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	PHENOLS TOTAL (UG/L)
WILLINGBORO 2 OBS	09-17-86	<1	5700	<5	110	<0.1	7	0.3	1
RHODIA CORP. 1 OBS	08-20-86	<1	2800	<5	77	<0.1	16	0.5	2

Aquifer unit:
211MRPAL - Lower aquifer, Potomac-Raritan-Magothy aquifer system
211MRPAM - Middle aquifer, Potomac-Raritan-Magothy aquifer system

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

CAPE MAY COUNTY

NJ-WRD WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	SCREENED INTERVAL (FT)	AQUIFER UNIT	DATE OF SAMPLE	TEMPERATURE (DEG C)
09-0020	TRAFFIC CIRCLE OBS	38 56 16	074 58 00	9	15-20	112CPMY	09-22-86	19.0

LOCAL IDENTIFIER	DATE OF SAMPLE	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE IT-FLD (MG/L AS HCO3)	CARBONATE IT-FLD (MG/L AS CO3)
TRAFFIC CIRCLE OBS	09-22-86	466	6.7	67	8.7	11	64	8.4	72	<1.0

LOCAL IDENTIFIER	DATE OF SAMPLE	ALKALINITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)
TRAFFIC CIRCLE OBS	09-22-86	59	14	110	0.1	23	280	<0.01	<0.10	0.54

LOCAL IDENTIFIER	DATE OF SAMPLE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)
TRAFFIC CIRCLE OBS	09-22-86	1.1	--	0.19	0.18	40	1	2	<1

LOCAL IDENTIFIER	DATE OF SAMPLE	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	PHENOLS TOTAL (UG/L)
TRAFFIC CIRCLE OBS	09-22-86	1	2200	<5	34	<0.1	4300	5.4	2

Aquifer unit:
112CPMY - Cape May Formation, undifferentiated

QUALITY OF GROUND WATER - SALTWATER MONITORING NETWORK
WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
CAPE MAY COUNTY

NJ-WRD WELL NUMBER	SITE OWNER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	ELEV. LAND SURF. FT. NGVD	SCREENED INTERVAL (FT.)	AQUIFER UNIT
09-020	US GEOL SURVEY	TRAFFIC CIRCLE	385616	745800	9	15 - 20	112CPMY
09-027	CAPE MAY CITY WD	CMCWD 1	385643	745533	7	277 - 306	121CNSY
09-036	CAPE MAY CITY WD	CMCWD 2	385701	745528	10	174 - 282	121CNSY
09-043	CAPE MAY CITY WD	CMCWD 3	385724	745521	15	276*	121CNSY
09-052	LOWER TWP MUA	LTMUA 1	385851	745715	18	241 - 262	121CNSY
09-054	LOWER TWP MUA	LTMUA 2	385905	745625	14	212 - 247	121CNSY
09-057	LOWER TWP MUA	LTMUA 3	385919	745518	20	263 - 303	121CKKD
09-067	WILDWOOD WD	RIO GRANDE 38	390135	745352	10	461 - 590	122KRKDU
09-069	WILDWOOD WD	RIO GRANDE 33	390136	745342	9	200 - 250	121CNSY
09-072	WILDWOOD WD	RIO GRANDE 31	390138	745350	10	108 - 135	112ESRNS

NJ-WRD WELL NUMBER	SITE OWNER	LOCAL IDENTIFIER	DATE OF SAMPLE	TEMPER-ATURE (DEG C)	SPE-CIFIC CONDUCT ANCE (UC/CM)	PH (UNITS)	SODIUM DIS-SOLVED (MG/L AS NA)	CHLORIDE DIS-SOLVED (MG/L AS CL)
09-020	US GEOL SURVEY	TRAFFIC CIRCLE	9/22/1986	19.0	466	6.7	64	110
09-027	CAPE MAY CITY WD	CMCWD 1	8/27/1986	15.0	790	7.5	---	150
09-036	CAPE MAY CITY WD	CMCWD 2	8/27/1986	15.0	580	7.5	---	100
09-043	CAPE MAY CITY WD	CMCWD 3	8/27/1986	15.0	310	7.6	---	18
09-052	LOWER TWP MUA	LTMUA 1	8/26/1986	15.0	260	7.8	---	12
09-054	LOWER TWP MUA	LTMUA 2	8/26/1986	14.5	252	7.8	---	13
09-057	LOWER TWP MUA	LTMUA 3	8/26/1986	---	258	7.8	---	16
09-067	WILDWOOD WD	RIO GRANDE 38	8/26/1986	16.0	522	8.1	---	78
09-069	WILDWOOD WD	RIO GRANDE 33	8/26/1986	14.5	172	7.5	---	10
09-072	WILDWOOD WD	RIO GRANDE 31	8/26/1986	13.0	196	7.7	---	11

* Total depth of well.

Aquifer unit:

112CPMY - Cape May Formation, undifferentiated
112ESRNS - Cape May Formation, Estuarine Sand Facies
121CNSY - Cohansey Sand
122KRKDU - Rio Grande water-bearing zone of the Kirkwood Formation

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

CUMBERLAND COUNTY

NJ-WRD WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	SCREENED INTERVAL (FT)	AQUIFER UNIT	DATE OF SAMPLE	TEMPERATURE (DEG C)
11-0096	JONES ISLAND 2 OBS	39 18 29	075 12 08	10	365-375	124PNPN	09-22-86	14.5
11-0097	JONES ISLAND 1 OBS	39 18 29	075 12 08	10	166-171	121CKKD	09-22-86	13.5
11-0073	SHEPPARDS 2	39 25 08	075 18 46	37	35-40	121CKKD	07-29-86	12.0
11-0042	VOCATIONAL SCHOOL 2	39 27 32	075 09 29	82	42-47	121CKKD	05-13-86	13.5
11-0043	VOCATIONAL SCHOOL 1	39 27 29	075 09 29	82	133-138	121CKKD	05-12-86	13.5

LOCAL IDENTIFIER	DATE OF SAMPLE	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE IT-FLD (MG/L AS HCO3)	CARBONATE IT-FLD (MG/L AS CO3)
JONES ISLAND 2 OBS	09-22-86	208	8.1	86	29	3.3	9.8	3.4	113	<1.0
JONES ISLAND 1 OBS	09-22-86	183	7.9	90	34	1.2	2.2	1.6	101	<1.0
SHEPPARDS 2	07-29-86	135	6.3	43	14	1.9	4.6	1.5	20	<1.0
VOCATIONAL SCHOOL 2	05-13-86	38	5.3	7	1.0	1.2	2.2	0.8	2.4	<1.0
VOCATIONAL SCHOOL 1	05-12-86	90	5.1	20	3.3	2.8	3.7	1.5	1.2	<1.0

LOCAL IDENTIFIER	DATE OF SAMPLE	ALKALINITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)
JONES ISLAND 2 OBS	09-22-86	96	11	4.0	0.1	54	170	<0.01	<0.10	0.10
JONES ISLAND 1 OBS	09-22-86	86	16	3.0	0.1	36	140	<0.01	<0.10	0.03
SHEPPARDS 2	07-29-86	18	20	8.2	<0.1	16	76	<0.01	1.30	0.01
VOCATIONAL SCHOOL 2	05-13-86	2	0.7	4.3	<0.1	6.3	18	<0.01	1.90	0.02
VOCATIONAL SCHOOL 1	05-12-86	2	1.5	7.7	<0.1	8.9	31	<0.01	5.60	0.01

LOCAL IDENTIFIER	DATE OF SAMPLE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)
JONES ISLAND 2 OBS	09-22-86	0.3	--	0.16	0.15	<10	<1	<1	<1
JONES ISLAND 1 OBS	09-22-86	<0.2	--	0.19	0.18	<10	<1	<1	1
SHEPPARDS 2	07-29-86	0.3	--	1.00	0.02	70	<1	<1	2
VOCATIONAL SCHOOL 2	05-13-86	0.3	--	<0.01	--	20	<1	<1	<1
VOCATIONAL SCHOOL 1	05-12-86	0.4	--	<0.01	--	210	<1	<1	<1

LOCAL IDENTIFIER	DATE OF SAMPLE	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	PHENOLS TOTAL (UG/L)
JONES ISLAND 2 OBS	09-22-86	<1	100	<5	15	<0.1	8	0.5	5
JONES ISLAND 1 OBS	09-22-86	1	250	<5	24	<0.1	7	0.3	3
SHEPPARDS 2	07-29-86	1	220	<5	29	<0.1	35	0.5	5
VOCATIONAL SCHOOL 2	05-13-86	12	75	10	8	<0.1	20	0.8	<1
VOCATIONAL SCHOOL 1	05-12-86	15	450	13	24	<0.1	25	1.1	<1

Aquifer unit:
124PNPN - Piney Point aquifer
121CKKD - Kirkwood-Cohansey aquifer system

QUALITY OF GROUND WATER - SALTWATER MONITORING NETWORK
WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
CUMBERLAND COUNTY

NJ-WRD WELL NUMBER	SITE OWNER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	ELEV. LAND SURF. FT. NGVD	SCREENED INTERVAL (FT.)	AQUIFER UNIT
11-324	EAST PT WATER ASSOC	1	391138	750117	5	242 - 262	121CKKD
11-052	FORTESCUE REALTY	FORTESCUE 4	391420	751023	8	283 - 303	121CKKD
11-364	DURR, MADELYN	DOMESTIC-1985	391617	751355	5	400 - 420	124PNPN
11-054	GANDYS BEACH WC	GANDYS BEACH	391618	751354	5	378 - 402	124PNPN
11-337	COVE RD WATER ASSOC	1	391622	751414	5	373 - 393	124PNPN
11-056	MONEY IS MARINA	POLLINO 1	391704	751415	4	350 - 370	124PNPN
11-092	BAY PT ROD GUN	BAY POINT 2	391746	751510	5	397 - 417	124PNPN
11-096	CUMBERLAND CO	JONES ISLAND 2	391829	751208	10	365 - 375	124PNPN
11-097	CUMBERLAND CO	JONES ISLAND 1	391829	751208	10	166 - 171	121CKKD

NJ-WRD WELL NUMBER	SITE OWNER	LOCAL IDENTIFIER	DATE OF SAMPLE	TEMPER-ATURE (DEG C)	SPE-CIFIC CONDUCT ANCE (UC/CM)	PH (UNITS)	SODIUM DIS-SOLVED (MG/L AS NA)	CHLORIDE DIS-SOLVED (MG/L AS CL)
11-324	EAST PT WATER ASSOC	1	9/ 4/1986	---	184	---	---	2.1
11-052	FORTESCUE REALTY	FORTESCUE 4	9/ 4/1986	---	221	---	---	5.6
11-364	DURR, MADELYN	DOMESTIC-1985	9/ 5/1986	---	780	---	---	170
11-054	GANDYS BEACH WC	GANDYS BEACH	9/ 5/1986	---	4,100	---	---	1,200
11-337	COVE RD WATER ASSOC	1	9/ 5/1986	---	615	---	---	56
11-056	MONEY IS MARINA	POLLINO 1	9/ 4/1986	---	730	---	---	74
11-092	BAY PT ROD GUN	BAY POINT 2	9/ 4/1986	---	740	---	---	77
11-096	CUMBERLAND CO	JONES ISLAND 2	9/22/1986	14.5	208	8.1	9.8	4.0
11-097	CUMBERLAND CO	JONES ISLAND 1	9/22/1986	13.5	183	7.9	2.2	3.0

Aquifer unit:

121CKKD - Kirkwood-Cohansey aquifer system
124PNPN - Piney Point aquifer

QUALITY OF GROUND WATER - SALTWATER MONITORING NETWORK
WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
GLOUCESTER COUNTY

NJ-WRD WELL NUMBER	SITE OWNER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	ELEV. LAND SURF. FT. NGVD	SCREENED INTERVAL (FT.)	AQUIFER UNIT
15-001	CLAYTON WD	CWD 3	393913	750517	133	746 - 800	211MRPAU
15-003	CLAYTON WD	4-1973	394015	750559	140	670 - 740	211MRPAU
15-361	GLASSBORO WD	GWD 5	394141	750710	140	610 - 657	211MRPAU
15-385	PITMAN WD	PWD P4	394345	750804	125	520*	211MRPAU
15-130	SO JERSEY WC	SJWC 3	394408	751330	35	234 - 265	211MRPAU
15-236	SWEDESBORO WD	SBWD 3	394434	751843	75	241 - 312	211MRPAU
15-137	PURELAND WC	PURE 2(3-1973)	394535	752054	37	158 - 208	211MRPAM
15-140	LANDTECT CORP	TEST WELL 4	394608	752135	8	132 - 184	211MRPAM
15-144	PURELAND WC	1-1973	394613	752129	8	81 - 136	211MRPAM
15-144	PURELAND WC	1-1973	394613	752129	8	81 - 136	211MRPAM
15-191	MANTUA TWP MUA	MTMUA 2	394629	750859	60	336 - 368	211MRPAU
15-616	US GEOL SURVEY	SHIVELER MIDDLE	394637	751916	30	230 - 240	211MRPAM
15-617	US GEOL SURVEY	SHIVELER UPPER	394637	751916	30	60 - 70	211MRPAU
15-192	MANTUA TWP MUA	MTMUA 5	394641	751109	88	315 - 337	211MRPAU
15-194	MANTUA TWP MUA	MTMUA 4	394732	751037	10	233 - 265	211MRPAU
15-166	PENNS GROVE WSC	BRIDGEPORT 2	394755	752108	5	65 - 85	211MRPAM
15-540	US EPA	EPA 108	394800	751936	8	87 - 97	211MRPAU
15-417	S & S AUCTION	1-1978	394820	751833	10	61 - 71	211MRPAM
15-348	GREENWICH T WD	GTWD 6	394910	751541	20	105 - 135	211MRPAU
15-283	SHELL CHEM CO	SHELL 3	394919	751256	30	358 - 383	211MRPAL
15-284	SHELL CHEM CO	SHELL 4	394919	751256	30	127 - 157	211MRPAU
15-210	PAULSBORO WD	6-1973	394921	751417	15	185 - 227	211MRPAM
15-678	MOBIL OIL CO	5C	394946	751612	9	194 - 204	211MRPAL
15-671	US GEOL SURVEY	DEPTFORD DEEP	394957	750530	35	650 - 670	211MRPAL
15-097	HERCULES CHEM	GIBBSTOWN TH 8	395000	751636	6	102 - 107	211MRPAM
15-098	MOBIL OIL CO	MOBIL 45	395006	751532	3	95 - 118	211MRPAM
15-109	MOBIL OIL CO	MOBIL 41	395027	751503	20	230 - 260	211MRPAL
15-118	MOBIL OIL CO	MOBIL 47	395036	751501	20	220 - 240	211MRPAL
15-118	MOBIL OIL CO	MOBIL 47	395036	751501	20	220 - 240	211MRPAL
15-680	MOBIL OIL CO	7C	395038	751605	9	186 - 196	211MRPAL
15-207	NATIONAL PK WD	NPWD 2	395156	751053	30	241 - 282	211MRPAL
15-323	COASTAL OIL CO	EAGLE PT OBS 3	395235	750950	21	255 - 275	211MRPAL

NJ-WRD WELL NUMBER	SITE OWNER	LOCAL IDENTIFIER	DATE OF SAMPLE	TEMPER-ATURE (DEG C)	SPE-CIFIC CONDUCT ANCE (UC/CM)	PH (UNITS)	SODIUM DIS-SOLVED (MG/L AS NA)	CHLORIDE DIS-SOLVED (MG/L AS CL)
15-001	CLAYTON WD	CWD 3	9/ 4/1986	20.5	1,020	8.4	---	150
15-003	CLAYTON WD	4-1973	9/ 4/1986	19.5	950	8.4	---	120
15-361	GLASSBORO WD	GWD 5	9/ 4/1986	19.5	680	8.4	---	64
15-385	PITMAN WD	PWD P4	9/ 4/1986	17.0	580	8.4	---	48
15-130	SO JERSEY WC	SJWC 3	9/ 9/1986	15.5	1,000	8.2	---	170
15-236	SWEDESBORO WD	SBWD 3	9/ 4/1986	14.5	390	7.2	---	48
15-137	PURELAND WC	PURE 2(3-1973)	9/ 9/1986	14.0	223	6.7	---	19
15-140	LANDTECT CORP	TEST WELL 4	11/20/1985	12.0	133	5.1	22	33
15-144	PURELAND WC	1-1973	7/14/1986	13.5	152	5.7	22	34
15-144	PURELAND WC	1-1973	9/ 9/1986	13.5	170	5.8	---	37
15-191	MANTUA TWP MUA	MTMUA 2	9/ 9/1986	15.0	422	8.2	---	25
15-616	US GEOL SURVEY	SHIVELER MIDDLE	11/20/1985	13.0	100	6.2	2.6	6.3
15-617	US GEOL SURVEY	SHIVELER UPPER	11/21/1985	12.0	238	6.2	3.2	14
15-192	MANTUA TWP MUA	MTMUA 5	9/ 9/1986	15.0	530	8.2	---	50
15-194	MANTUA TWP MUA	MTMUA 4	9/ 9/1986	---	458	8.1	---	38
15-166	PENNS GROVE WSC	BRIDGEPORT 2	6/16/1986	---	---	---	10	14
15-540	US EPA	EPA 108	12/10/1985	---	---	---	2.8	8.9
15-417	S & S AUCTION	1-1978	10/ 3/1985	15.5	251	5.1	4.6	28
15-348	GREENWICH T WD	GTWD 6	7/14/1986	14.0	188	4.2	13	11
15-283	SHELL CHEM CO	SHELL 3	9/ 4/1986	15.0	750	6.6	---	150
15-284	SHELL CHEM CO	SHELL 4	9/ 4/1986	14.0	369	7.3	---	13
15-210	PAULSBORO WD	6-1973	9/ 9/1986	14.0	250	5.6	---	30
15-678	MOBIL OIL CO	5C	9/23/1986	14.5	528	6.7	94	130
15-671	US GEOL SURVEY	DEPTFORD DEEP	6/ 3/1986	8.0	202	7.8	28	10
15-097	HERCULES CHEM	GIBBSTOWN TH 8	10/11/1985	16.0	480	6.0	53	120
15-098	MOBIL OIL CO	MOBIL 45	9/ 9/1986	16.0	1,560	5.2	---	79
15-109	MOBIL OIL CO	MOBIL 41	10/18/1985	17.5	810	5.8	83	92
15-118	MOBIL OIL CO	MOBIL 47	10/18/1985	15.0	455	6.2	73	110
15-118	MOBIL OIL CO	MOBIL 47	9/ 9/1986	14.5	465	6.1	---	110
15-680	MOBIL OIL CO	7C	9/22/1986	18.0	450	6.6	51	71
15-207	NATIONAL PK WD	NPWD 2	9/ 9/1986	13.0	330	6.9	---	30
15-323	COASTAL OIL CO	EAGLE PT OBS 3	10/ 4/1985	16.0	675	6.5	41	38

* Total depth of well.

Aquifer unit:

211MRPAU - Upper aquifer, Potomac-Raritan-Magothy aquifer system
211MRPAM - Middle aquifer, Potomac-Raritan-Magothy aquifer system
211MRPAL - Lower aquifer, Potomac-Raritan-Magothy aquifer system

QUALITY OF GROUND WATER - SALTWATER MONITORING NETWORK
WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
SALEM COUNTY

NJ-WRD WELL NUMBER	SITE OWNER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	ELEV. LAND SURF. FT. NGVD	SCREENED INTERVAL (FT.)	AQUIFER UNIT
33-032	PSEG-SALEM GEN STA	PW 3	392740	753201	20	242 - 293	211MLRW
33-364	PSEG-SALEM GEN STA	PW 5	392743	753158	17	765 - 840	211MRPAM
33-035	PSEG-SALEM GEN STA	PW 2	392744	753206	20	230 - 281	211MLRW
33-457	PSEG-SALEM GEN STA	PSEG 6	392751	753207	20	1115 -1135	211MRPAM
33-108	US ARMY	FINNS POINT	393641	753322	7	290 - 319	211MRPAM
33-360	PENNSVILLE TWP WD	PTWD 5	393750	753131	10	101 - 117	211MRPAU
33-112	PENNSVILLE TWP WD	PTWD 4	393754	753147	10	117 - 137	211MRPAU
33-354	WOODSTOWN WD	WWD 2	393904	751946	45	670 - 705	211MRPAM
33-362	WOODSTOWN WD	WWD 3	393926	751927	60	692 - 712	211MRPAM
33-459	RICHMAN ICE CRM	1A	393928	752147	25	414 - 457	211MRPAM
33-118	PENNSVILLE TWP WD	PTWD 1	393958	753045	8	213 - 238	211MRPAM
33-119	PENNSVILLE TWP WD	PTWD 2	394009	753043	7	210 - 230	211MRPAM
33-187	US GEOL SURVEY	POINT AIRY OBS	394037	751914	73	664 - 672	211MRPAL
33-122	ATL CITY ELEC	DEEPWATER 3R	394045	753018	10	165 - 235	211MRPAM
33-127	ATL CITY ELEC	DEEPWATER 6	394100	753030	10	158 - 188	211MRPAM
33-460	PENNS GROVE WSC	PGWSC 1A	394247	752714	19	41 - 61	211MRPAU
33-460	PENNS GROVE WSC	PGWSC 1A	394247	752714	19	41 - 61	211MRPAU
33-346	PENNS GROVE WSC	LAYNE 1	394256	752718	19	317 - 357	211MRPAL
33-439	BOND, WILLARD K	1	394453	752351	23	49 - 59	211MRPAU
33-083	B F GOODRICH CO	9 (PW-1)	394547	752535	10	93 - 133	211MRPAM
33-085	B F GOODRICH CO	6 (PW-2)	394556	752530	10	109 - 129	211MRPAM
33-086	B F GOODRICH CO	4 (PW-3)	394557	752523	13	169 - 189	211MRPAL

NJ-WRD WELL NUMBER	SITE OWNER	LOCAL IDENTIFIER	DATE OF SAMPLE	TEMPER-ATURE (DEG C)	SPE-CIFIC CONDUCT ANCE (UC/CM)	PH (UNITS)	SODIUM DIS-SOLVED (MG/L AS NA)	CHLORIDE DIS-SOLVED (MG/L AS CL)
33-032	PSEG-SALEM GEN STA	PW 3	9/29/1986	15.5	790	7.8	---	140
33-364	PSEG-SALEM GEN STA	PW 5	9/29/1986	---	465	7.7	---	45
33-035	PSEG-SALEM GEN STA	PW 2	9/29/1986	15.5	1,570	7.6	---	190
33-457	PSEG-SALEM GEN STA	PSEG 6	9/29/1986	---	850	7.6	---	390
33-108	US ARMY	FINNS POINT	9/26/1986	---	575	7.5	---	99
33-360	PENNSVILLE TWP WD	PTWD 5	7/25/1986	14.0	160	6.8	6.8	7.2
33-112	PENNSVILLE TWP WD	PTWD 4	9/26/1986	14.0	192	6.6	---	13
33-354	WOODSTOWN WD	WWD 2	9/26/1986	17.0	970	7.9	---	180
33-362	WOODSTOWN WD	WWD 3	9/26/1986	17.5	890	7.9	---	150
33-459	RICHMAN ICE CRM	1A	9/26/1986	15.0	385	7.9	---	14
33-118	PENNSVILLE TWP WD	PTWD 1	9/26/1986	14.5	435	6.9	---	61
33-119	PENNSVILLE TWP WD	PTWD 2	9/26/1986	---	450	6.9	---	60
33-187	US GEOL SURVEY	POINT AIRY OBS	10/ 7/1985	16.0	980	8.9	200	170
33-122	ATL CITY ELEC	DEEPWATER 3R	9/25/1986	14.0	365	7.0	---	40
33-127	ATL CITY ELEC	DEEPWATER 6	9/25/1986	15.0	515	6.7	---	69
33-460	PENNS GROVE WSC	PGWSC 1A	6/16/1986	14.0	187	5.1	10	12
33-460	PENNS GROVE WSC	PGWSC 1A	9/25/1986	---	193	5.1	---	10
33-346	PENNS GROVE WSC	LAYNE 1	9/25/1986	14.5	1,000	7.4	---	220
33-439	BOND, WILLARD K	1	7/25/1986	15.0	368	4.4	15	27
33-083	B F GOODRICH CO	9 (PW-1)	9/29/1986	13.5	172	6.0	---	17
33-085	B F GOODRICH CO	6 (PW-2)	9/29/1986	13.5	210	6.0	---	23
33-086	B F GOODRICH CO	4 (PW-3)	9/29/1986	14.5	1,190	7.0	---	280

Aquifer unit:

211MLRW - Wenonah-Mount Laurel aquifer
211MRPAU - Upper aquifer, Potomac-Raritan-Magothy aquifer system
211MRPAM - Middle aquifer, Potomac-Raritan-Magothy aquifer system
211MRPAL - Lower aquifer, Potomac-Raritan-Magothy aquifer system

☆U.S.GOVERNMENT PRINTING OFFICE:1987-050-714

October 1, 1978

FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI). This report contains both the inch-pound and SI unit equivalents in the station manuscript descriptions.

Multiply inch-pound units	By	To obtain SI units
	Length	
inches (in)	2.54×10^{1}	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^{0}	kilometers (km)
	Area	
acres	4.047×10^{3}	square meters (m^2)
	4.047×10^{-1}	square hectometers (hm^2)
	4.047×10^{-3}	square kilometers (km^2)
square miles (mi^2)	2.590×10^{0}	square kilometers (km^2)
	Volume	
gallons (gal)	3.785×10^{0}	liters (L)
	3.785×10^{0}	cubic decimeters (dm^3)
	3.785×10^{-3}	cubic meters (m^3)
million gallons	3.785×10^{3}	cubic meters (m^3)
	3.785×10^{-3}	cubic hectometers (hm^3)
cubic feet (ft^3)	2.832×10^{1}	cubic decimeters (dm^3)
	2.832×10^{-2}	cubic meters (m^3)
cfs-days	2.447×10^{3}	cubic meters (m^3)
	2.447×10^{-3}	cubic hectometers (hm^3)
acre-feet (acre-ft)	1.233×10^{3}	cubic meters (m^3)
	1.233×10^{-3}	cubic hectometers (hm^3)
	1.233×10^{-6}	cubic kilometers (km^3)
	Flow	
cubic feet per second (ft^3/s)	2.832×10^{1}	liters per second (L/s)
	2.832×10^{1}	cubic decimeters per second (dm^3/s)
	2.832×10^{-2}	cubic meters per second (m^3/s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm^3/s)
	6.309×10^{-5}	cubic meters per second (m^3/s)
million gallons per day	4.381×10^{1}	cubic decimeters per second (dm^3/s)
	4.381×10^{-2}	cubic meters per second (m^3/s)
	Mass	
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

U.S. DEPARTMENT OF THE INTERIOR
Geological Survey, Mountain View Office Park
810 Bear Tavern Road, Suite 206
West Trenton, NJ 08628

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE $300

SPECIAL 4TH CLASS BOOK RATE