Water Resources Data New Jersey Water Year 1988

Volume 2. Delaware River Basin and tributaries to Delaware Bay

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NJ-88-2
Prepared in cooperation with the New Jersey Department of Environmental Protection and with other agencies

CALENDAR FOR WATER YEAR 1988

1987

OCTOBER

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1988

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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 1988". 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 as well as summaries of tidal crest elevations in the New Jersey estuaries and intracoastal waterways.

Streamflow data in this report are presented in a new format, considerably different from that in previous years. The new format includes tabular presentations of streamflow statistics rather than some of the written text. Station numbers are included in the table of contents. Tables of discontinued surface-water and water-quality stations are also included. Hydrographs have been included for ground-water stations. These changes are part of a pilot program to reformat the annual water-data reports to meet user needs and data preferences.

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-88-1 (for volume 1) and NJ-88-2 (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,

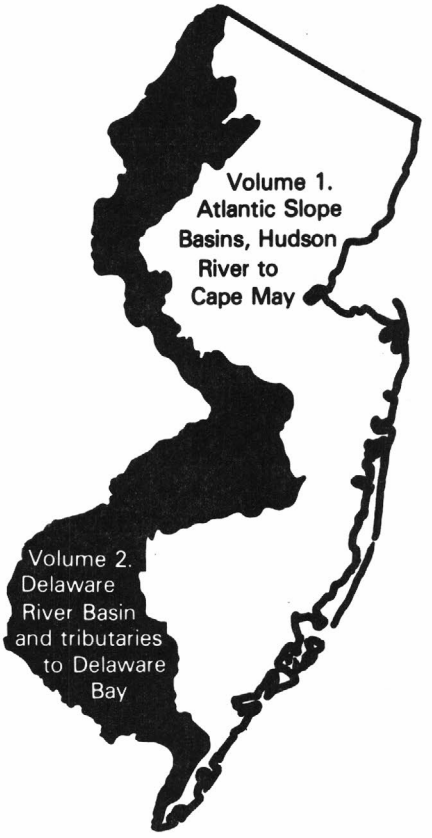
William R. Bauersfeld

William R. Bauersfeld, Chief
Hydrologic Data Assessment Program

Water Resources Data New Jersey Water Year 1988

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-88-2
Prepared in cooperation with the New Jersey
Department of Environmental Protection
and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

MANUEL LUJAN, JR., Secretary

GEOLOGICAL SURVEY

Dallas L. Peck, Director

For information on the water program in New Jersey write to

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1989

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 Mark A. Hardy Robert D. Schopp

M.D. Morgan 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:

G. Carleton	M.J. DeLuca	J.D. Joyner	R.G. Reiser
W.F. Calvetti	J.F. Dudek	D.S. Kauffman	E. Rodgers
G.L. Centinaro	M.D. Eanes	N.W. Leivers	F.L. Schaefer
R.S. Cole	C.E. Gurney	T.J. Reed	A.J. Velnich

This report was prepared in cooperation with the State of New Jersey and with other agencies under the general supervision of Janice R. Ward, 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.

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Mountain View Office Park
810 Bear Tavern Road, Suite 206
West Trenton, New Jersey 08628

13. Type of Report & Period Covered
Annual - Oct. 1, 1987 to Sept. 30, 1988

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 1988 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 24 gaging stations; tide summaries for 3 stations; stage and contents for 18 lakes and reservoirs; water quality for 30 surface-water sites and 81 wells; and water levels for 53 observation wells. Also included are data for 27 crest-stage partial-record stations, 2 tidal crest-stage gages and 19 low-flow partial-record stations. Additional water data were collected at 26 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

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(Formerly NTIS-35)
Department of Commerce

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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, (m) microbiological, (s) sediment, (t) water temperature, (e) elevation, gage height or contents, (b) biological]

Page

GROUND-WATER LEVEL RECORDS

QUALITY OF GROUND-WATER RECORDS

WATER RESOURCES DATA - NEW JERSEY, 1988

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 developing an improved understanding of the water resources of the State. To make these data readily available to interested parties outside the Geological Survey, the data are published annually in this report series entitled "Water Resources Data - New Jersey."

This report series includes records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; and water levels and water quality of ground-water wells. This volume contains records for water discharge at 24 gaging stations; tide summaries at 3 gaging stations; stage and content at 18 lakes and reservoirs; water quality at 30 surface-water stations and 81 wells; and water levels at 53 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 11, 12, 13, and 14. Additional water data were collected at various sites not involved in the systematic data-collection program. Discharge measurements were made at 19 low-flow partial-record stations. Miscellaneous data were collected at 24 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 Books and Open-file Reports Section, Federal Center, Building 4, Box 25425, Denver, CO, 80225.

Publications similar to this report are published annually by the Geological Survey for all States. These official Survey reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report NJ-88-2." 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, Christopher J. Daggett, Commissioner.
Division of Water Resources, Jorge H. Berkowitz, Acting 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 Gloucester, H. Fred Schuster, Director of Health.
County of Gloucester, Robert V. Scolpino, Director of Planning.
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 17 surface water stations, and by the U.S. Army Armament Research and Development Center for the collection of records at 3 surface-water 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 and Independent Hydro Developers Inc. Assistance was provided by the National Weather Service and the National Ocean Service.

The following organizations aided in collecting records:

Municipalities of Atlantic City, Jersey City, Newark, New Brunswick and Spotswood; American Cyanamid Co.; Elizabethown Water Co.; Ewing-Lawrence Sewerage Authority; Hackensack Water Co.; New Jersey--American Water Company (formerly Monmouth Consolidated Water Co. and Commonwealth Water Co.); and Jersey Central Power and Light Co.

Organizations that supplied data are acknowledged in station descriptions.

SUMMARY OF HYDROLOGIC CONDITIONS

Streamflow

Streamflow for the 1988 water year was about normal throughout the State. Precipitation ranged from 41.05 inches (97 percent of the 30-year mean) at Newark to 33.09 inches (79 percent of the 30-year mean) at Atlantic City. Figure 4 shows monthly precipitation compared with 30-year means. Reservoir contents were above average for the entire year and, at most sites, water levels were above spillway elevations from February through May (see Figure 1).

Water year 1988 began with streamflow about normal, ranging from 110 percent of long-term normal (1919-88) in the northern part of the State to 96 percent of long-term normal (1926-88) in the southern part. Streamflow

continued in the normal range through January. In February, when precipitation was 132 percent of normal, streamflow began to increase significantly. A storm on February 12 resulted in from 2.3 inches of rainfall in the southern part of the State to 1.1 inches in the northern part. At some sites in the south, peak flow for the year was recorded. Streamflow decreased steadily in March and April. By the end of April, flow was 85 percent of normal. May was a wet month; precipitation fell on 21 days of the month. The average precipitation for May was about 200 percent of normal. This precipitation produced above-normal runoff for the month. From May through September, streamflow remained in the normal range. Several severe storms were recorded during the summer. At Essex Fells, in Essex County, the National Weather Service (NWS) recorded 6.40 inches of rainfall on July 20-22. At Morris Plains, in Morris County, NWS recorded 11.48 inches of precipitation during July, which is 255 percent of the July average. At the end of the water year, streamflow was 161 percent of normal in the north but 63 percent of normal in the south.

Streamflow at the index station for northern New Jersey (South Branch Raritan River near High Bridge) averaged 119 ft^3/s for the water year; this flow is 98 percent of the 70-year average. Streamflow at the index station for southern New Jersey (Great Egg Harbor River at Folsom) averaged 68.8 ft^3/s for the water water year; this flow is 80 percent of the 63-year average. The observed annual mean discharge of the Delaware River at Trenton was 9,802 ft^3/s, which is 84 percent of the 76-year average. The Delaware River is highly regulated by reservoirs and diversions. The natural flow at Trenton (adjusted for upstream storage and diversion) was 92 percent of normal for the year. Figure 2 compares monthly mean discharge at each of these index gaging stations during the current water year with the long-term normal (1951-80) monthly discharge. Figure 3 compares annual mean discharge at each of these gaging stations with the annual mean discharge for the period of record.

Combined usable storage in 13 major water-supply reservoirs in New Jersey decreased from 70.5 billion gallons (93 percent of capacity) on October 1, 1987, to 55.4 billion gallons (72 percent of capacity) on September 30, 1988. Storage in Wanaque Reservoir decreased from 23.5 billion gallons (85 percent of capacity) on October 1, 1987, to 14.9 billion gallons (54 percent of capacity) on September 30, 1988. Pumped storage in Round Valley Reservoir, the largest capacity reservoir in the State, increased from 53.1 billion gallons (96 percent of capacity) on October 1, 1987, to 53.2 billion gallons (97 percent of capacity) on September 30, 1988.

Water Quality

Above-normal streamflow in northern parts of the State at the beginning of the water year caused increased dilution of dissolved solids in many northern and central streams in October, November, and December. Dilution of dissolved solids generally results in 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. The degree of dilution is apparent when monthly mean values of specific conductance, which are related directly to dissolved-solids concentrations, for 1988 are compared with specific-conductance values for 1981-87. Figure 5 compares specific-conductance values for the Delaware River at Trenton, a large drainage in central New Jersey as well as parts of New York and Pennsylvania, in 1988 with those for 1987, and with the mean for 1981-87. The lowest instantaneous specific-conductance value measured in 1988, 103 $\mu s/cm$ (microsiemens per centimeter at 25 degrees Celsius), was measured on March 29 and was caused by heavy rainfall during the last week of the month. The effects of periods of sustained precipitation and above-normal runoff during May produced the lowest mean monthly specific conductance for the year. Decreased dilution of dissolved solids resulting from below-normal streamflow in April is demonstrated by the difference between the specific-conductance value for April 1988 (170 $\mu S/cm$) and the mean value for 1981-87 (142 $\mu S/cm$). Periods of both higher-than-normal dilution and lower-than-normal dilution occurred during the year, resulting in a mean specific conductance for the Delaware River at Trenton that was within 1 percent of the mean for 1981-87.

Polychlorinated biphenyls (PCBs) and a number of pesticides commonly are detected in New Jersey streams. Table 1 summarizes the frequency of detection of these compounds in bottom sediments from 1976 through 1988. Detection limits during this period were 1.0 $\mu g/kg$ (micrograms per kilogram) for PCN, chlordane, and PCB; 1.0 to 10 $\mu g/kg$ for toxaphene, and 0.1 $\mu g/kg$ for the other compounds. The number of sites at which samples were collected ranged from 13 to 35 per year, with a median of 27 per year. Sites sampled more than once in a year were counted only once. The organochlorine compounds chlordane, dieldrin, DDT (and its decomposition products DDD and DDE), and PCBs are the most commonly detected organic compounds in stream-bottom sediments in the State. Chlordane and dieldrin have been used widely to control soil pests as well as termites and ants. The production and use of DDT, a common, low-cost, broad-spectrum pesticide, have been banned in the United States since 1972. PCBs were used in many industrial and manufactured items (for example, lubricants, dyes, and hydraulic fluids), but their use has been restricted to environmentally closed systems (for example, electrical capacitors and transformers) since 1971. Common sources of PCBs include industrial and municipal effluents, landfills and other soil-disposal sites, and incineration of material containing PCBs (Natural Resources Council, 1979). All of these organochlorine compounds persist in the environment and still are found in surface and ground waters in the State despite the restriction or prohibition of their use.

Figure 6 summarizes the concentrations of chlordane, DDT, DDD, DDE, and PCBs in New Jersey stream-bottom samples for 1976-88. Only those sites for which water-quality data are presented in either volume of this report are included. Figure 6 also shows the percentage of samples collected in which at least one compound exceeded a concentration of 20 $\mu g/kg$ (micrograms per kilogram)--a level selected to include the highest 15 to 20 percent of values measured nationwide (J. S. Cragwall, Jr., U.S. Geological Survey, written commun., 1977). Although it is detected frequently, dieldrin is not included in Figure 6 because its concentration has been measured at greater than 20 $\mu g/kg$ only three times during this period. Figure 7 shows the locations of water-quality stations sampled during the 1988 water year at which at least one of these compounds exceeded a concentration of 20 $\mu g/kg$.

The U.S. Geological Survey maintains a network of saltwater-observation wells in the Coastal Plain of New Jersey to document and evaluate the movement of saline water into freshwater aquifers that serve as sources of water supply. During the 1988 water year, 139 samples were collected in 8 counties. The results of the sampling of these wells are presented in the quality of ground water tables in these reports.

Ground-Water Levels

Changes in ground-water levels during the 1988 water year were determined from a statewide network of observation wells. Ground-water levels in water-table observation wells declined slightly from the previous year. Water levels in most observation wells that tap the heavily stressed confined aquifers of the Coastal Plain continued to show long-term net declines. Increases in withdrawals of ground water contributed to these declines.

Monthly water levels in 1988 for two water-table observation wells--the Bird well (NJ-WRD well number 19-0002) in Hunterdon County and the Crammer well (NJ-WRD well number 29-0486) in Ocean County--are compared with monthly extremes and long-term averages in figure 8. For further comparison, 20-year hydrographs of two Coastal Plain wells, one water-table well (NJ-WRD well number 05-0689) and one artesian well (NJ-WRD well number 07-0413) are presented in

figure 9. In addition, multi-year hydrographs are provided with the 1988 water-level data for most of the wells included in this report.

Water levels in the water-table aquifers of the Coastal Plain were declining slowly at the beginning of the 1988 water year. This decline continued through January and was followed by recovery until June. Water levels fell from June through the remainder of the water year.

Observation wells that tap the heavily stressed, confined Coastal Plain aquifers continued to show long-term net declines in many areas. New lows of record were set in 44 Coastal Plain artesian observation wells. The most significant water-level declines were measured in the Potomac-Raritan-Magothy aquifer system, where previous lows of record were exceeded in 30 network observation wells. The greatest decline in water level in the Potomac-Raritan-Magothy aquifer system occurred in the Marlboro observation well (NJ-WRD well number 25-0272), where the previous record low was exceeded by 8.9 feet. Other aquifers in which previous lows of record were exceeded include the Englishtown aquifer system, Wenonah-Mount Laurel aquifer, Piney Point aquifer, and the Atlantic City 800-foot sand.

Table 1.--Frequency of detection of organochlorine and organophosphorus compounds in bottom materials of New Jersey streams, water years 1976-88

COMPOUND	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Organochlorine compounds													
Chlordane	●	⊖	⊖	●	●	◒	◒	◒	◒	◒	◒	⊖	●
DDD	●	⊖	◒	●	●	●	◒	●	◒	◒	◒	●	●
DDE	●		◒	◒	◒	◒	●	⊖	◒	◒	◒	●	◒
DDT	●	⊖	◒	◒	◒	●	◒	◒	◒	◒	⊖	●	⊖
PCB	◒	⊖	◒	◒	●	◒	●	◒	◒	◒	⊖	◒	◒
Dieldrin	●	⊖	⊖	◒	◒	◒	◒	⊖	⊖	⊖	◒	⊖	⊖
Endosulfane		○		○	○	○	○	○	○	○	○	⊖	○
Heptachlor Epoxide	○	○	○	○	○	○	○	○	○	○	⊖	⊖	⊖
Aldrin, Lindane, Endrin Toxaphene, Heptachlor	○	○	○	○	○	○	○	○	○	○	○	○	⊖
PCN			○	○	○	○	○	○	○	○	○	○	○
Mirex					○	○	○	○	○	○	○	○	○
Organophosphorus compounds													
Methoxychlor, Malathion, Parathion, Diazanon, Methyl Parathion, Ethyl Trithion, Methyl Trithion, Ethion			○	○	○	○	○	○	○	○	○	○	⊖

Frequency (rounded to nearest whole number): ○ (0 - 25%), ⊖ (26 - 50%), ◒ (51 - 75%), ● (76 - 100%)

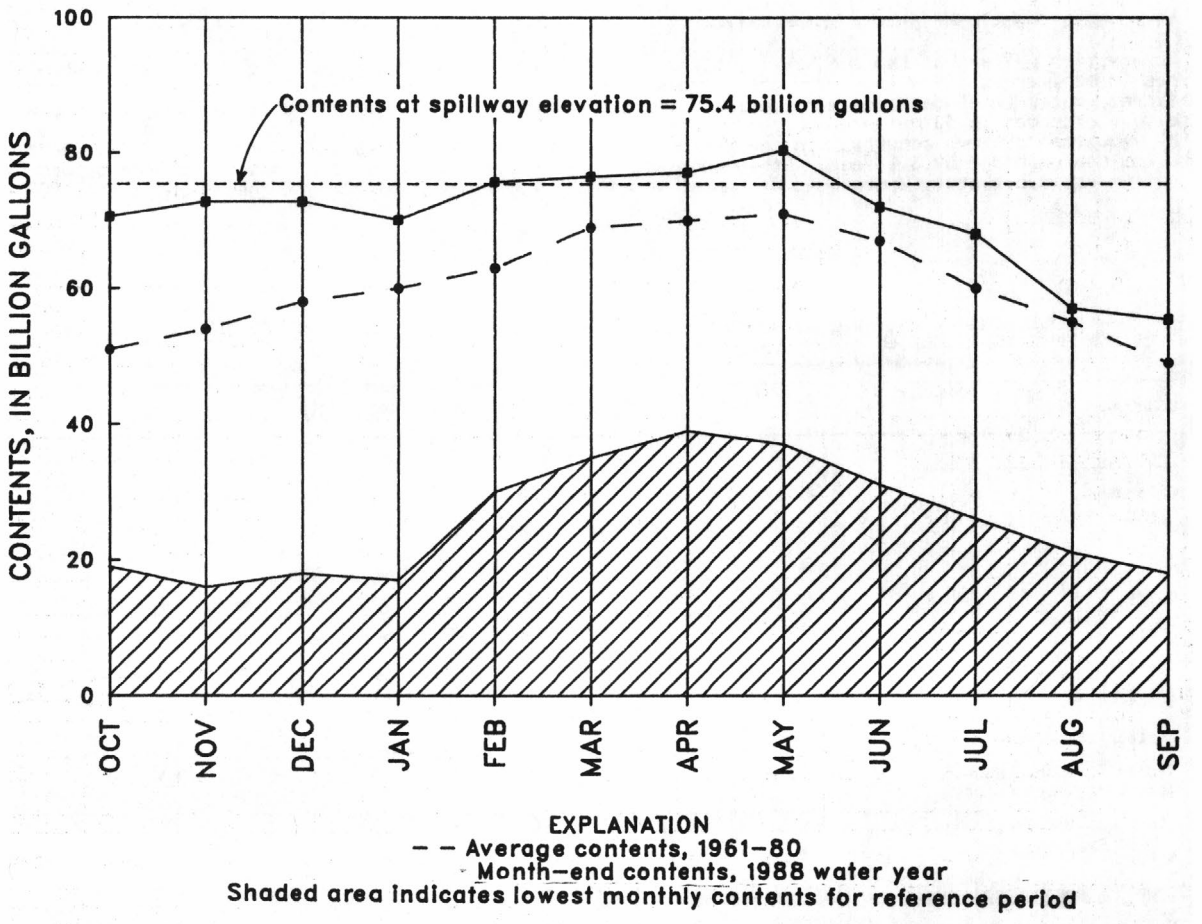
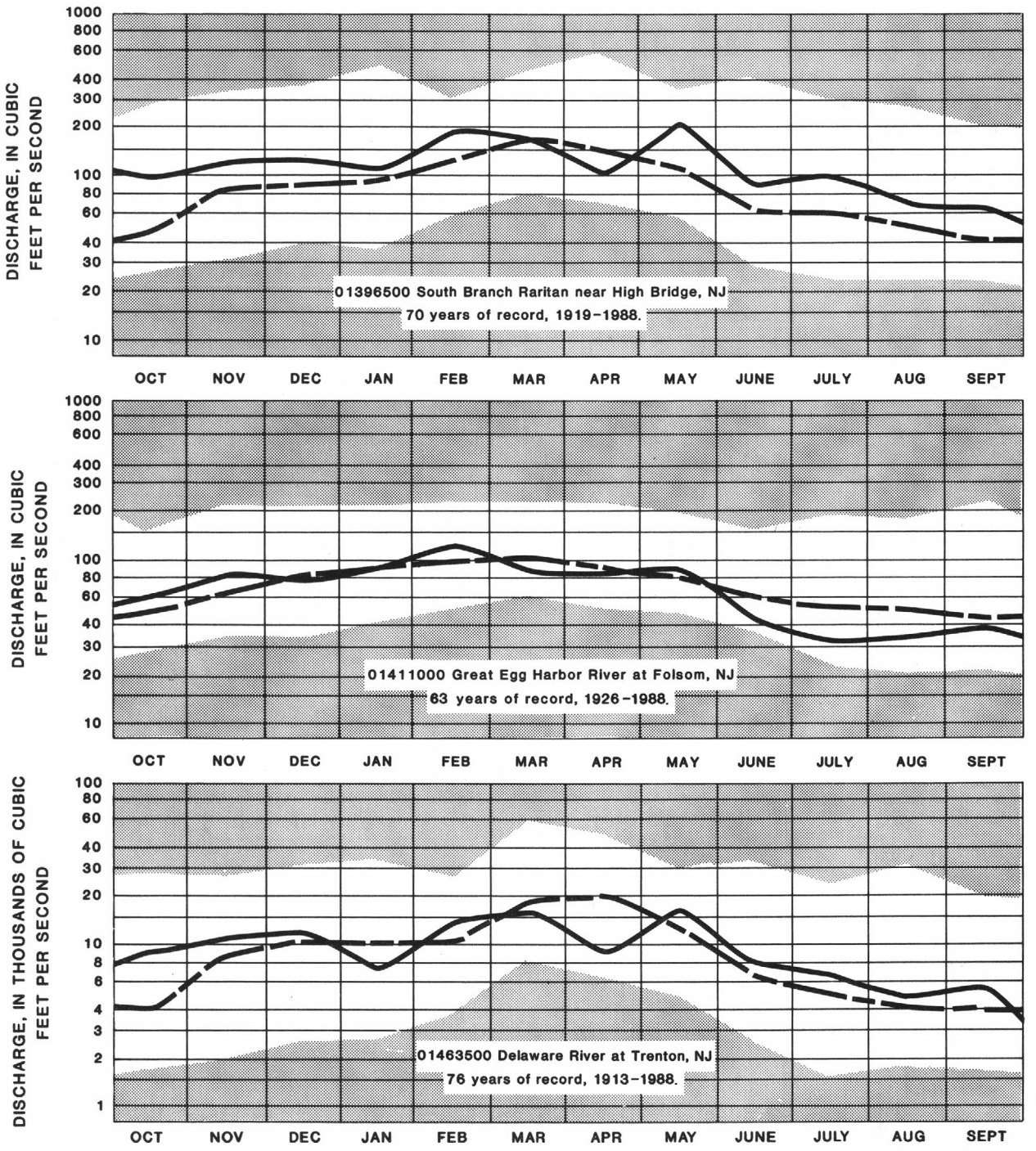


Figure 1.-- Combined usable storage in 13 major water-supply reservoirs



Unshaded area.--Indicates range between highest and lowest mean recorded for the month, prior to 1988 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 1988 water year.

Figure 2.--Monthly mean discharge at index gaging stations.

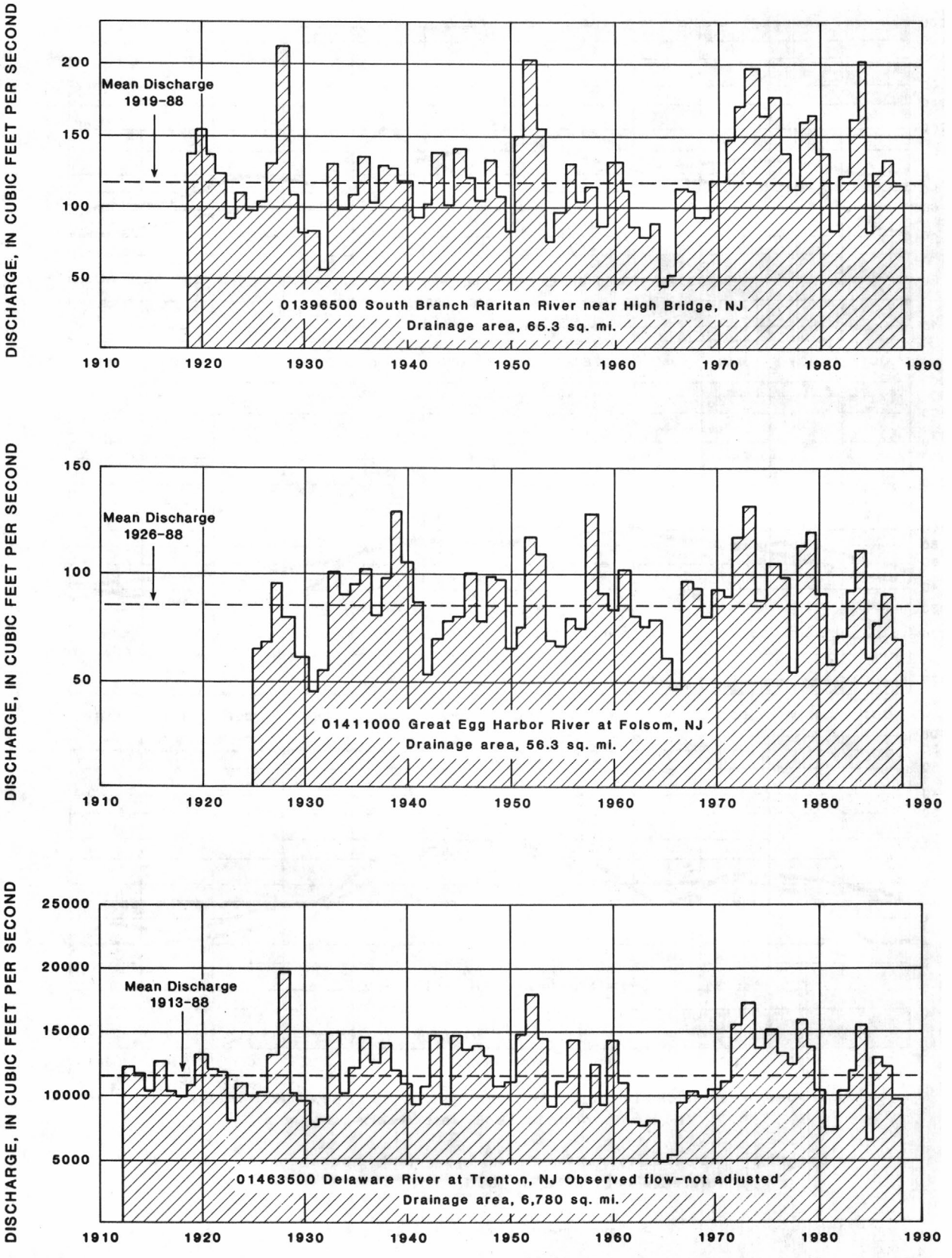


Figure 3.--Annual mean discharge at index gaging stations.

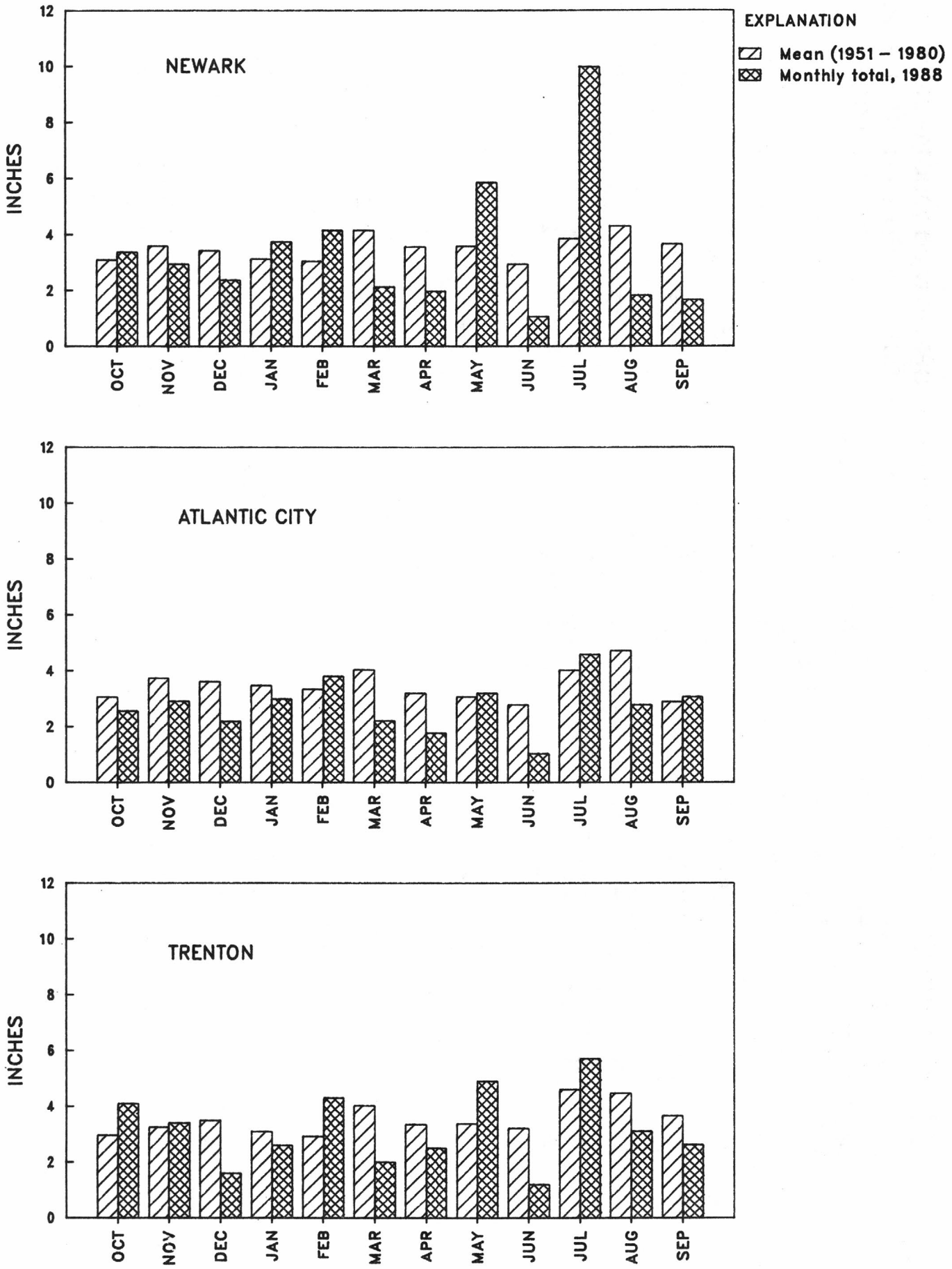


Figure 4.-- Monthly precipitation at three National Weather Service locations

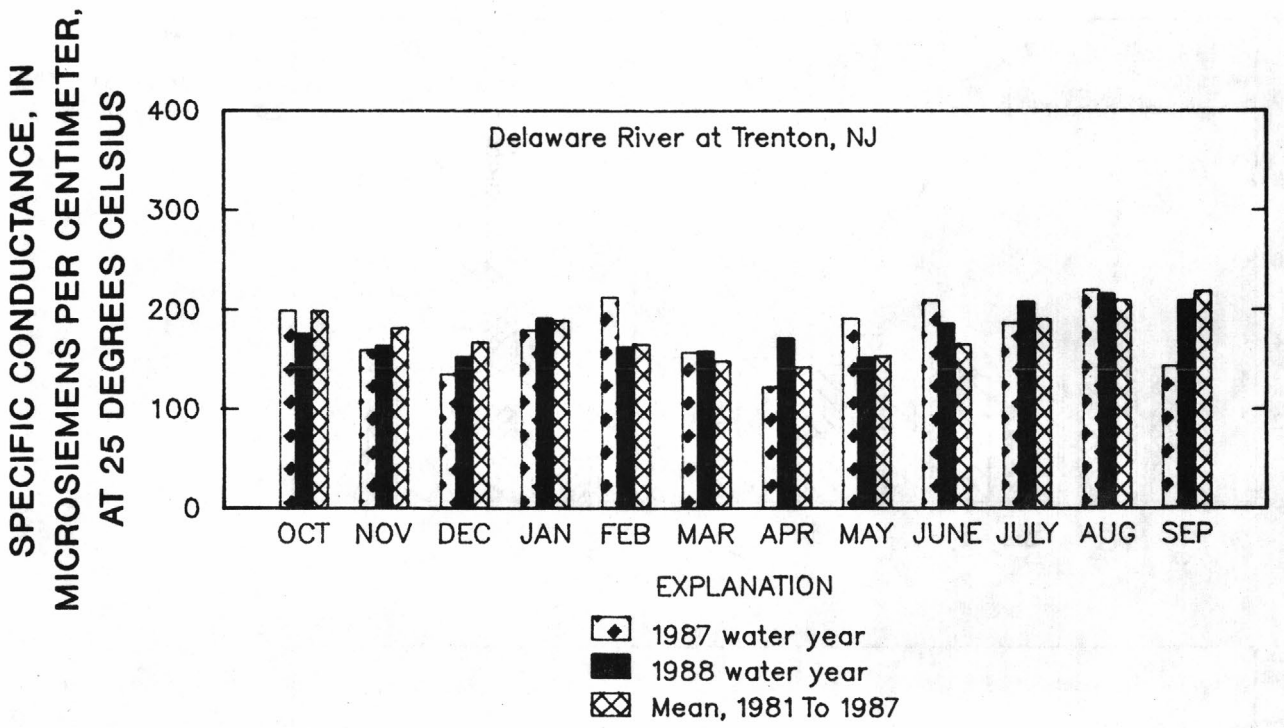


Figure 5.--Monthly mean specific conductance at Delaware River at Trenton.

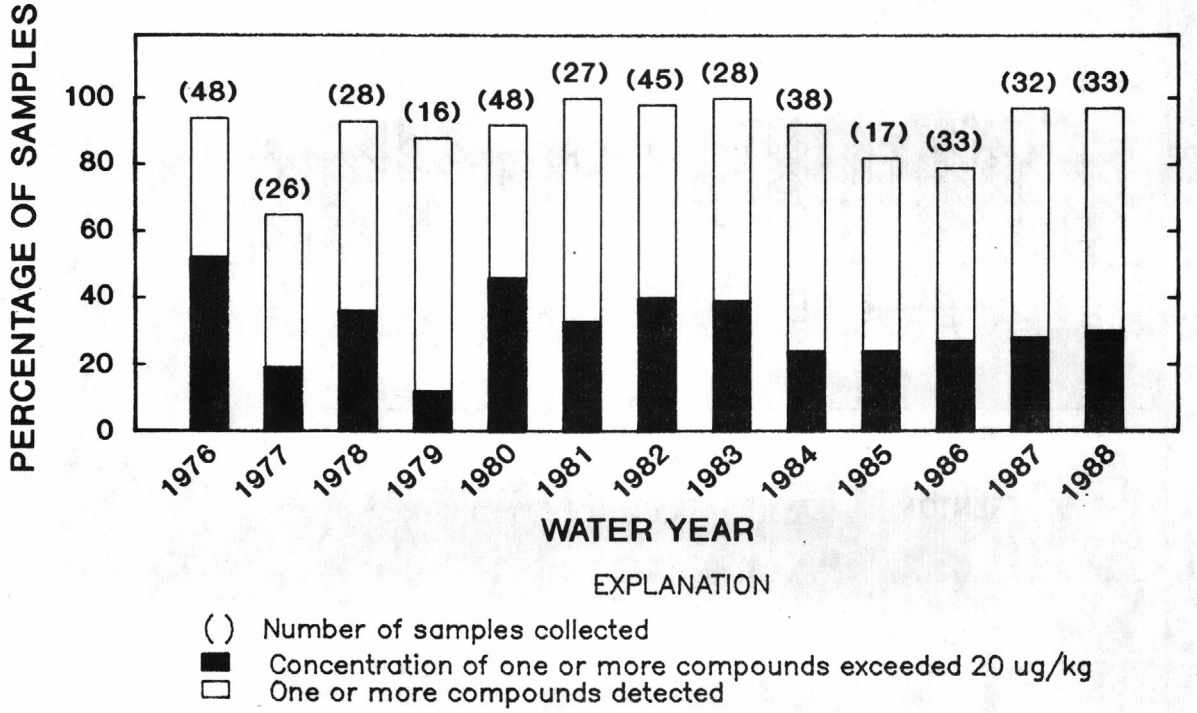


Figure 6.--Occurrence of chlordane, DDT, DDE, DDD and PCB's in stream bottom. material.

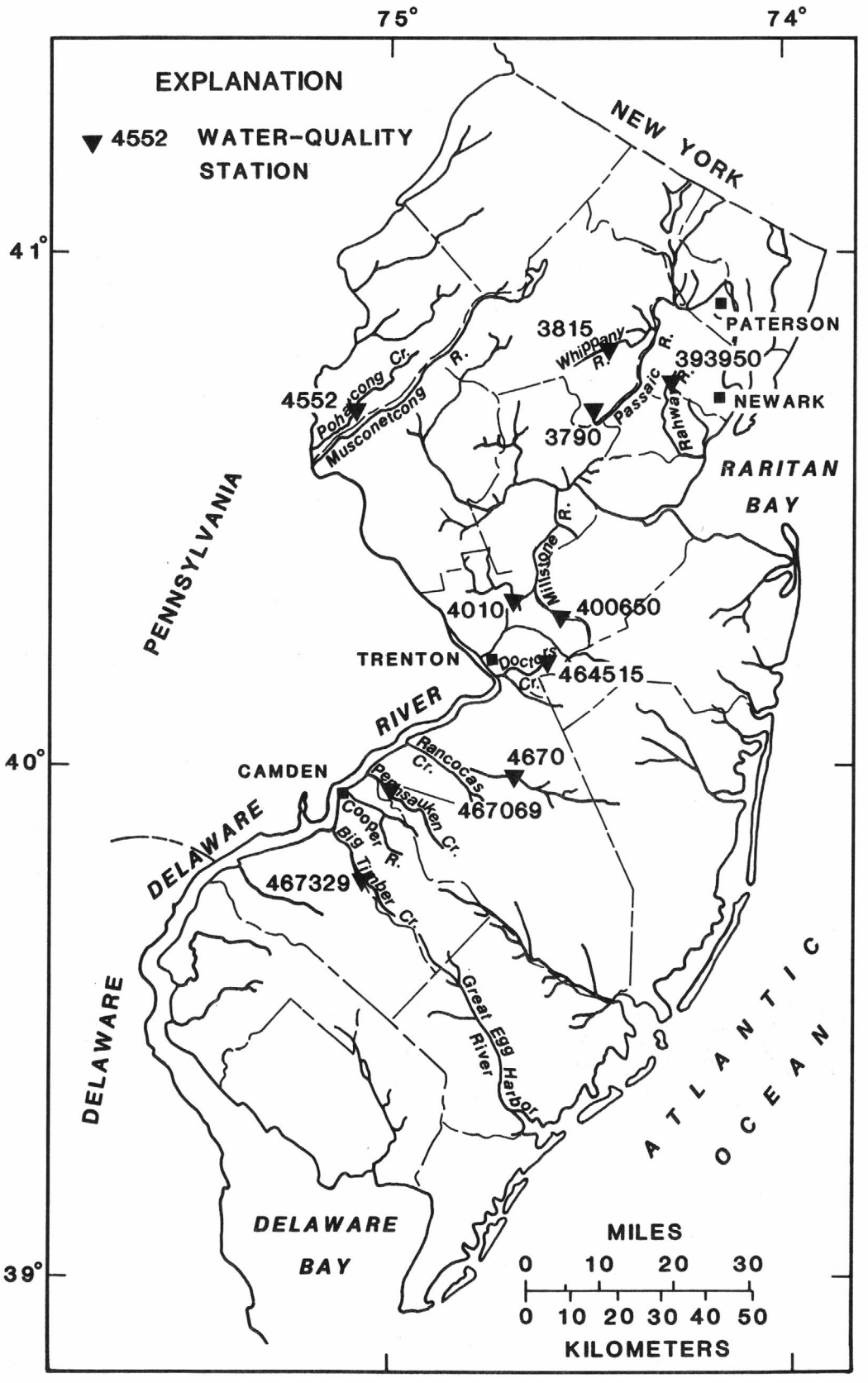
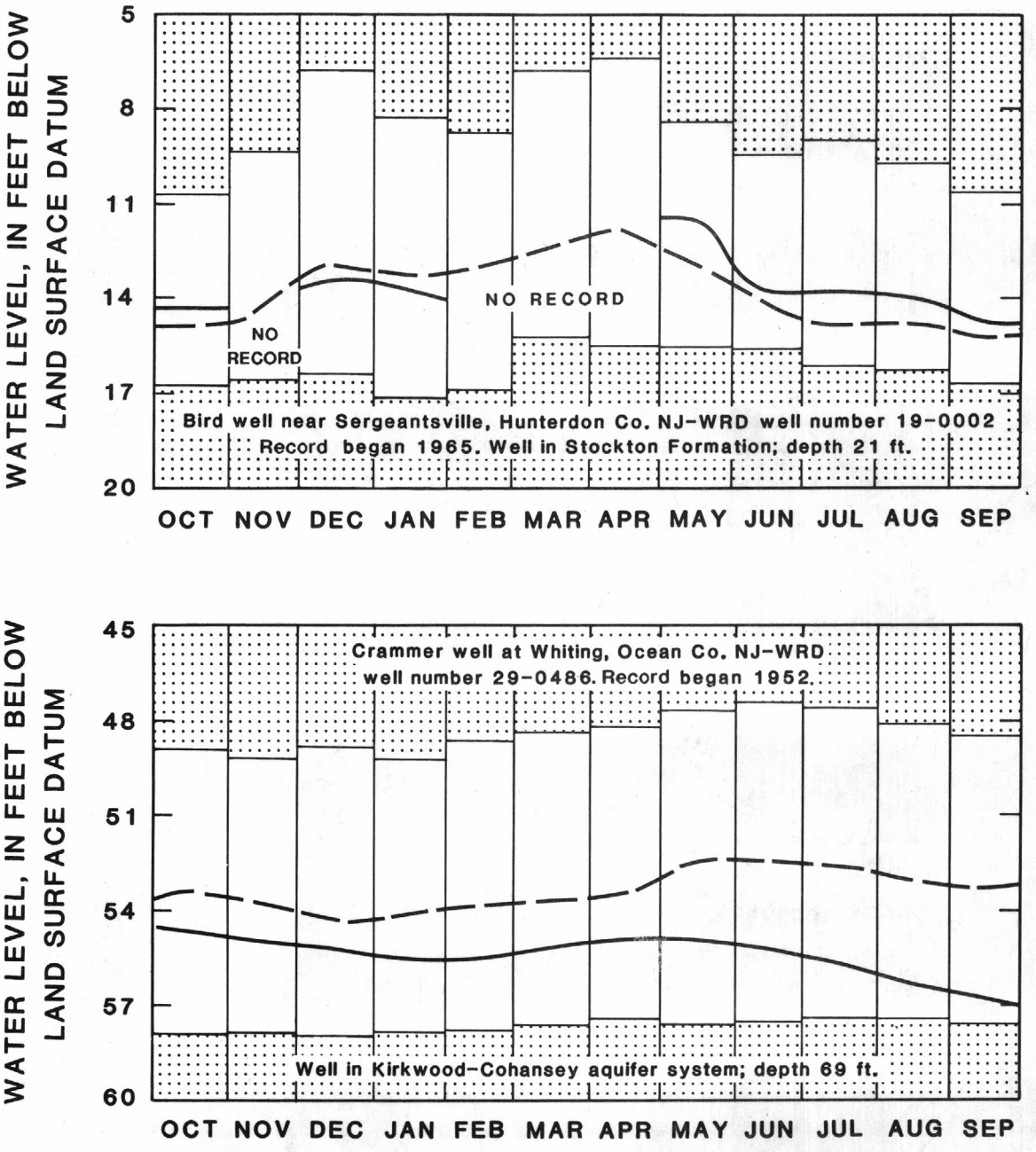


Figure 7.--Locations of water-quality stations with concentrations of chlordane, DDD, DDE, DDT, or PCB's in bottom material than 20 μg/kg, water year, 1988.



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

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

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

Figure 8.--Monthly ground-water levels at key water-table observation wells.

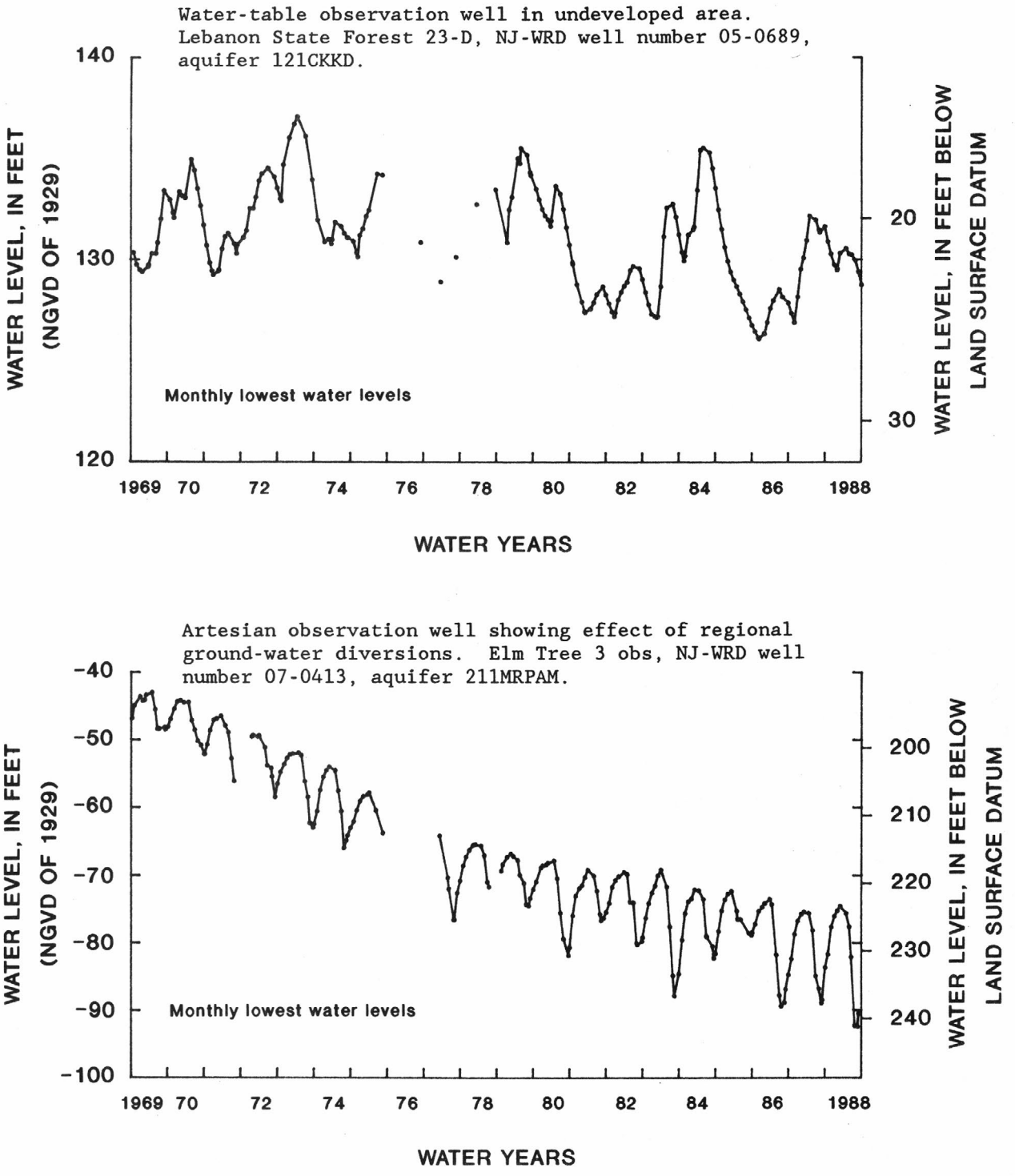


Figure 9.--Twenty-year hydrographs of one artesian and one water-table observation well.

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. The Bench-mark Network station published in this report is McDonalds Branch in Lebanon State Forest, NJ (01466500).

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. NASQAN stations published in this report are: Passaic River at Little Falls, NJ (01389500), Raritan River, at Queens Bridge, at Bound Brook, NJ (01403300), Toms River near Toms River, NJ (01408500), West Branch Wading River at Maxwell, NJ (01409815), Maurice River at Norma, NJ (01411500), and Delaware River at Trenton, NJ (01463500).

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). No NTN stations are published in this report.

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. The Radiochemical Program station published in this report is Delaware River at Trenton, NJ (01463500).

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. No Tritium Network stations are published in this report.

EXPLANATION OF THE RECORDS

The surface-water and ground-water records published in this report are for the 1988 water year that began October 1, 1987, and ended September 30, 1988. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, water-quality data for surface and ground water, and ground-water-level data. The locations of the stations and wells where the data were collected are shown in figures 10, 11, 12, and 13. 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.

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.)

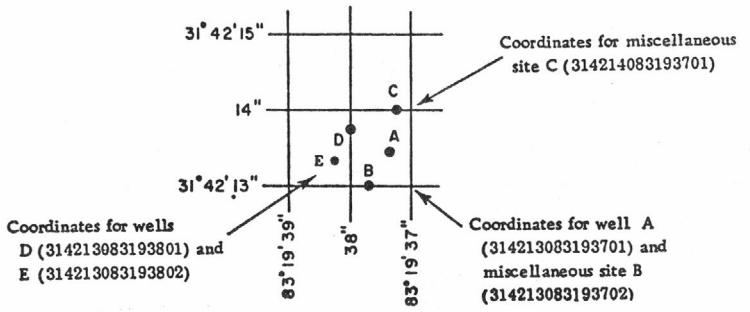


Figure 10.--System for numbering wells and miscellaneous sites (latitude and longitude).

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 10 and 11.

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 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.

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 summaries. In the monthly summary below the daily table, 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 for some stations can also be expressed in inches (line headed "IN"). Figures for runoff in inches are omitted if there is extensive regulation or diversion or if the drainage area includes large noncontributing areas. 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. Below the monthly summary, statistical figures are listed for current water year and period of record. The first heading is the average monthly flow data for the period of record. The line headed "MEAN" gives the average flow in cubic feet per second for that month for the period of record. The lines headed "MAX" and "MIN" give the highest and lowest mean for that month and the water year (WY) in

which it occurred. Below the monthly flow statistics, summary statistics for the current water year and period of record are listed. The line headed "AVERAGE FLOW" is the average for the current year and period of record. The following lines list the extremes and date of each for the current year and period of record. The line headed "ANNUAL RUNOFF (INCHES)" is the annual total discharge in inches. The following lines list the discharges for the 10, 50, and 95 percentiles.

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

Identifying Estimated Daily Discharge

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

Accuracy of the Records

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

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

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

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

Other Records Available

Information used in the preparation of the records in this publication, such as discharge- measurement notes, gage-height records, temperature measurements, and rating tables is on file in the 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. Locations of stations for which records on the quality of surface water appear in this report are shown in figure 10.

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.

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 13.

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.

Most 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 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 or elevation of water level. For wells equipped with recorders, only abbreviated tables are published. Mean daily water-levels 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. Locations of wells for which water-quality data are published are shown in figure 13.

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.

Assessing the potential impacts of climate change in the water resources of the Delaware River Basin.

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.

Forecasting water demand in the New Jersey Agriculture Sector.

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 and technical support at United States Environmental Protection Agency Superfund sites.

Geohydrology at Picatinny Arsenal in Morris County, New Jersey.

Geophysical characteristics of aquifers in New Jersey.

Ground-water contamination by light chlorinated hydrocarbons at Picatinny Arsenal.

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 resources investigation of the Rockaway River buried valley.

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

Ground-water resources of the buried valley and carbonate rock systems of the Lamington River and the S. Branch Raritan River drainage areas in northern 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, New Jersey.

Hydrology of buried valleys of Central Passaic River basin.

Hydrology of the Kirkwood-Cohansey-Aquifer system in Gloucester County and the Upper Maurice River Basin.

Hydrology of the Kirkwood-Cohansey-Aquifer system in Metedeconk and Toms River basin.

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 flood frequency for New Jersey streams.

Regionalization of low flows for New Jersey streams.

Removing volatile ground water contaminants by inducing air phase transport.

Simulation of multilayer Coastal Plain aquifer system of New Jersey.

Somerset County flood monitoring system, phase 2.

Surfactant sorption to soil and its effect on the distribution of anthropogenic compounds.

Surface-water data collection network.

Water quality trends in New Jersey streams, 1976-85.

Water-use data system for the Delaware River basin.

WATER-RELATED REPORTS FOR NEW JERSEY COMPLETED BY THE GEOLOGICAL SURVEY DURING 1987-88

Ayers, M.A., and Pustay, E.A., 1988, New Jersey ground-water quality: National Water Summary 1986, U.S. Geological Survey Water Supply Paper 2325, p. 369-376.

Barton, C., Vowinkel, E.F., and Nawyn, J.P., 1987, Preliminary assessment of water quality and its relation to hydrogeology and land use: Potomac-Raritan-Magothy aquifer system, New Jersey: U.S. Geological Survey Water-Resources Investigations Report 87-4023, 79 p.

Campbell, J.B., 1987, Rainfall-runoff data for Somerset County, New Jersey: U.S. Geological Survey Open-File Report 87-384, 161 p.

Kish, G.R., Macy, J., and Mueller, R.T., 1987, Trace-metal leaching from plumbing materials exposed to acidic ground water in three areas of the Coastal Plain of New Jersey: U.S. Geological Survey Water-Resources Investigations Report 87-4146, 19 p.

Lacombe, P., and Duran, P.B., 1988, Map of bedrock-surface topography in parts of the Paterson and Pompton Plains Quadrangles, New Jersey: U.S. Geological Survey Water-Resources Investigations Report 88-4061, 1 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.

Lewis, J.C., and Spitz, F.J., 1987, Hydrogeology, ground-water quality, and the possible effects of a hypothetical radioactive-water spill, Plainsboro Township, New Jersey: U.S. Geological Survey Water-Resources Investigation Report 87-4092, 45 p.

Macy, J., and Leahy, P.P., 1988, U.S. Geological Survey Ground-Water Studies in New Jersey--Water fact sheet: U.S. Geological Survey Open-File Report 88-106, 2 p.

Schaefer, F.L., 1987, Selected literature on the water resources of New Jersey by the U.S. Geological Survey, through 1986: U.S. Geological Survey Open-File Report 87-767, 45 p.

Szabo, Z., and Zapecza, O.S., 1987, Relation between radionuclide concentrations and other chemical constituents in ground water in the Newark Basin, New Jersey in Graves, Barbara, ed., Radon in ground water-Hydrogeologic impact and indoor air contamination [Conference on radon, radium, and other radioactivity in ground water-Hydrogeologic impact and application to indoor airborne contamination, Somerset, N.J., April 7-9, 1987]: Chelsea, Mich., Lewis Publishers Inc., p. 283-308.

U.S. Geological Survey, 1988, Water Resources data for New Jersey, 1988--part 1: U.S. Geological Survey Water-Data Report NJ-88-1, ___ p.

U.S. Geological Survey, 1988, Water Resources data for New Jersey, 1988--part 2: U.S. Geological Survey Water-Data Report NJ-88-2, ___ p.

Witkowski, P.J., Smith, J.A., Fusillo, T.V., and Chiou, C.T., 1987, A review of surface-water sediment fractions and their interactions with persistent anthropogenic organic compounds: U.S. Geological Survey Circular 993, 39 p.

Zapecza, O.S., and Szabo, Z., 1987, Source and distribution of natural radioactivity in ground water in the Newark Basin, New Jersey, in Graves, Barbara, ed., Radon in ground water-Hydrogeologic impact and indoor air contamination [Conference on radon, radium and other radioactivity-Hydrogeologic impact and application to indoor airborne contamination, Somerset, N.J., April 7-9, 1987]: Chelsea, Mich., Lewis Publishers., p. 31-46.

Zapecza, O.S., Voronin, L.M., and Martin, M., 1987, Ground-water-withdrawal and water-level data used to simulate regional flow in the major Coastal Plain aquifers of New Jersey: U.S. Geological Survey Water-Resources Investigations Report 87-4038, 120 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)
230TRSC	Triassic System
231BRCK*	Brunswick Group, undifferentiated
231LCKG	Lockatong Formation
231PSSC	Passaic Formation of Olsen (1980)
231SCKN	Stockton Formation
23103WG	Third Watchung Flow
400PCMB	Precambrian Erathem

* This designation is currently under revision.

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.

Benthic invertebrates are invertebrate animals inhabiting the bottoms of lakes, streams, and other water bodies. They are useful as indicators of water quality.

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

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

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

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

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

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

Bottom material: See Bed material.

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

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

Micrograms per liter (UG/L, $\mu g/L$) 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.

Multiple-plate samplers are artificial substrates of known surface area used for obtaining benthic-invertebrate samples. They consist of a series of spaced, hardboard plates on an eyebolt.

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

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

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

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

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 (1×10^{-12}) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7×10^{10} radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

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

Phytoplankton is the plant part of the plankton. They are usually microscopic and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment and 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/(m^2/time)] for periphyton and macrophytes and [mg C/(m^3/time)] for phytoplankton are units for expressing primary productivity. They define the amount of carbon dioxide consumed as measured by radioactive carbon (carbon 14). The carbon 14 method is of greater sensitivity than the oxygen light and dark bottle method and is preferred for use in unenriched waters. Unit time may be either the hour or day, depending on the incubation period.

Milligrams of oxygen per area or volume per unit time [mg O /(m^2/time)] for periphyton and macrophytes and [mg O /(m^3 / time)] for phytoplankton are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light and dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

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

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

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

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 filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent.

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

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

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

Kingdom	Animal
Phylum	Arthropoda
Class	Insecta
Order	Ephemeroptera
Family	Ephemeridae
Genus	Hexagenia
Species	Hexagenia Limbata

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

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

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

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

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

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

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

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

Water 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.

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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.

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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.

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

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

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

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

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

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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.

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

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

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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.

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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.

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

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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.

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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)
01368000	Wallkill River near Unionville, NY	140	1938-81
01368720	Auxiliary outlet of Upper Greenwood Lake at Moe, NJ	------	1968-80a
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	East Fork East Branch Rahway River at West Orange, NJ	.83	1972-74
01394000	West Branch 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	North Branch Raritan River at Pluckimen, NJ	52.0	1903-06
01399190	Lamington (Black) River at Succasunna, NJ	7.37	1976-87
01399200	Lamington (Black) River near Ironia, NJ	10.9	1975-87
01399690	South Branch Rockaway Creek at Whitehouse, NJ	13.2	1964-67
01399830	North Branch Raritan River at North Branch, NJ	174	1977-81
01400932	Baldwin Creek at Baldwin Lake, near Pennington, NJ	2.52	1963-70
01400953	Honey Branch near Pennington, NJ	.70	1967-75
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	South Branch 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	South Branch Rancocas Creek at Vincentown, NJ	64.5	1961-75
01466000	Middle Branch 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

a Not published, on file at U.S. Geological Survey, West Trenton, NJ

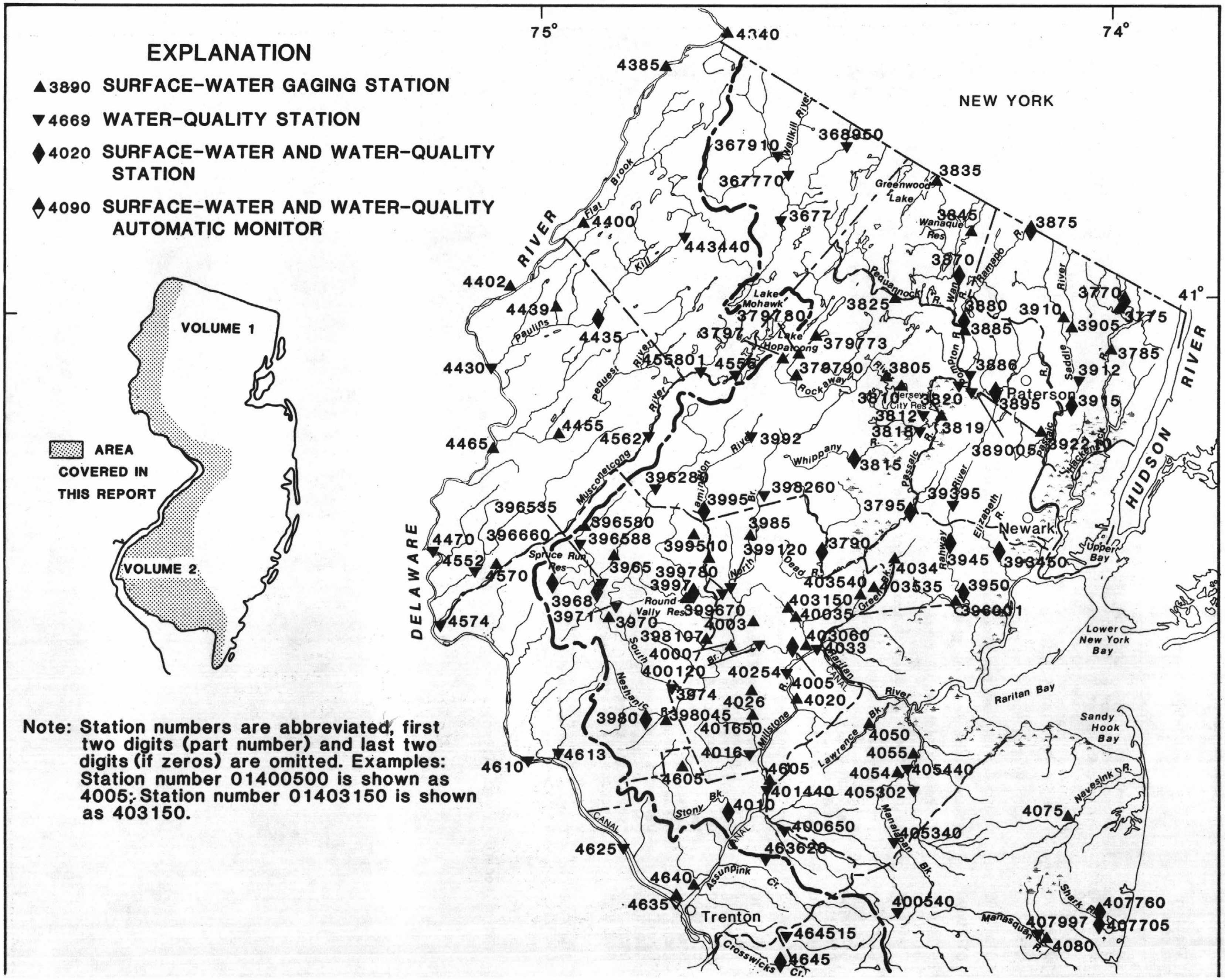
DISCONTINUED CONTINUOUS WATER-QUALITY STATIONS

The following stations were discontinued as continuous water-quality stations prior to the 1987 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
01379773	Green Pond Brook at Picatinny Arsenal, NJ		Temp., S.C., pH, D.O.	1984-86
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
			Temp., S.C.	1981-86
01396500	South Branch Raritan River near High Bridge, NJ	65.3	Temp.	1961-79
			S.C.	1969-79
01397000	South Branch Raritan River at Stanton, NJ	147	Temp., S.C.	1969-79
			Sed.	1960-63
01399690	South Branch 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 near Toms River, NJ	123	Temp., S.C.	1964-66, 1975-81
			S.C.	1975-81
01409095	Oyster Creek near Brookville, NJ	7.43	Temp., D.O.	1975-76
			S.C., pH	1975-77
01409810	West Branch 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
01411500	Maurice River at Norma, NJ	112	Temp., S.C.	1980-86
01440200	Delaware River near Delaware Water Gap, Pa.	3850	Sed.	1964-65, 1972
01442750	Delaware River at Dunnfield, NJ	4150	Sed.	1966-76
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	1969-74
			D.O.	1970-72
			pH	1970-74
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).

WATER RESOURCES DATA-NEW JERSEY, 1988



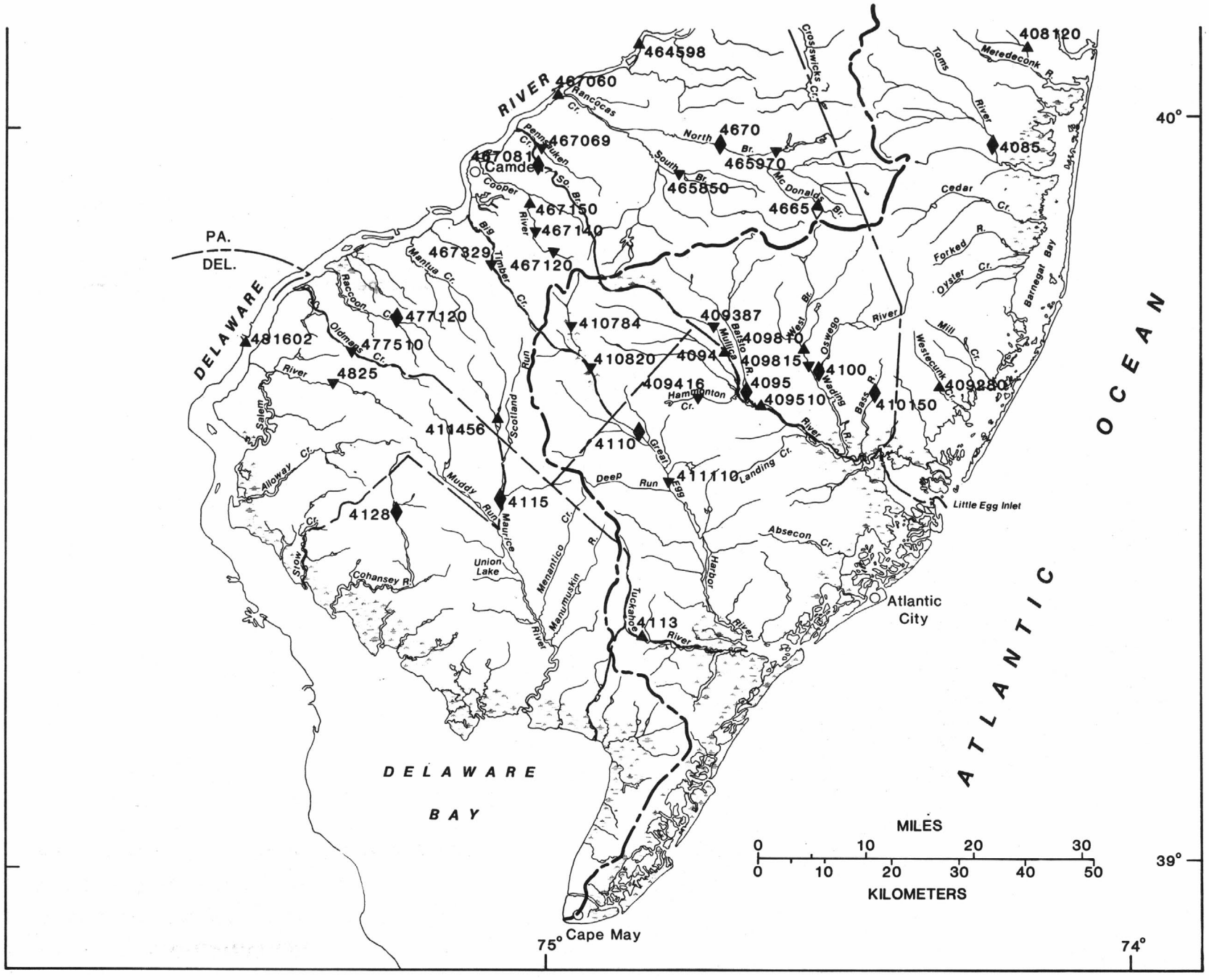
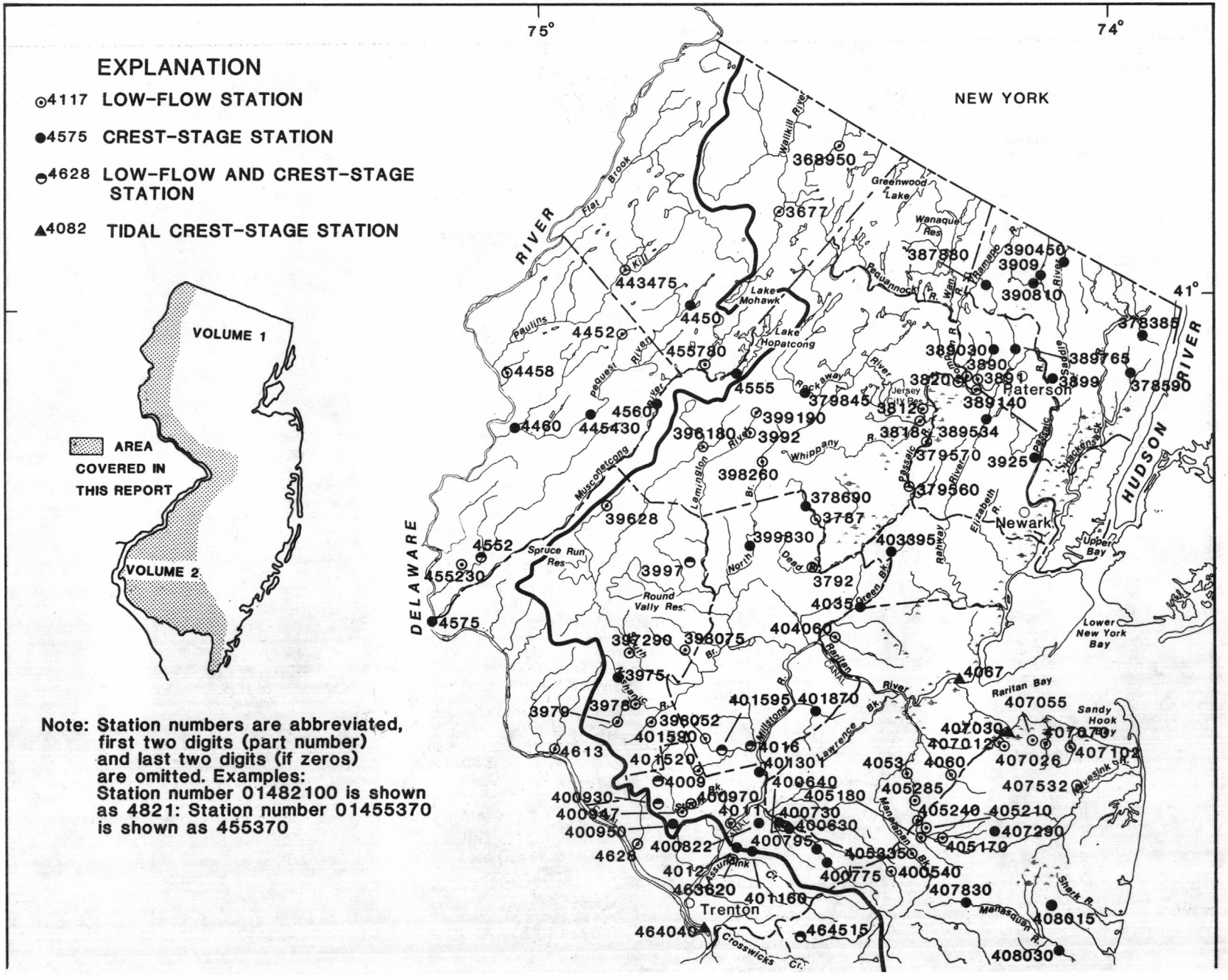


Figure 11.--Map showing location of gaging stations and surface-water quality stations.


EXPLANATION
⊙4117 LOW-FLOW STATION
●4575 CREST-STAGE STATION
◓4628 LOW-FLOW AND CREST-STAGE STATION
▲4082 TIDAL CREST-STAGE STATION
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 01482100 is shown as 4821: Station number 01455370 is shown as 455370
75°
74°
41°
NEW YORK
DELAWARE RIVER
HUDSON RIVER
Wallkill River
Flat Brook
Kill
Greenwood Lake
Wanaque Res
Ramapo R.
Pequannock R.
Wanaque R.
Pompton R.
Passaic R.
Lake Mohawk
Lake Hopatcong
Paulins Kill
Paquest River
Rockaway River
Jersey City Res
Whippany R.
Passaic River
Hackensack R.
Elizabeth R.
Rahway
Upper Bay
Lower New York Bay
Raritan Bay
Sandy Hook Bay
Spruce Run Res
Round Valley Res
Lamington R.
North Br.
Deed R.
Green Br.
South Br.
Raritan R.
Raritan River
Millstone R.
Lawrence Br.
Manasquan R.
Shark R.
Crosswicks Cr.
Assunpink Cr.
Paterson
Newark
Trenton
368950
3677
443475
4450
4452
4458
455780
4555
4560
4460
445430
396180
399190
3992
398260
39628
4552
455230
4575
399830
3997
3792
4035
397290
398075
404060
3975
3979
3978
396052
401595
401870
4067
407055
401590
4016
4613
401520
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407102
407532
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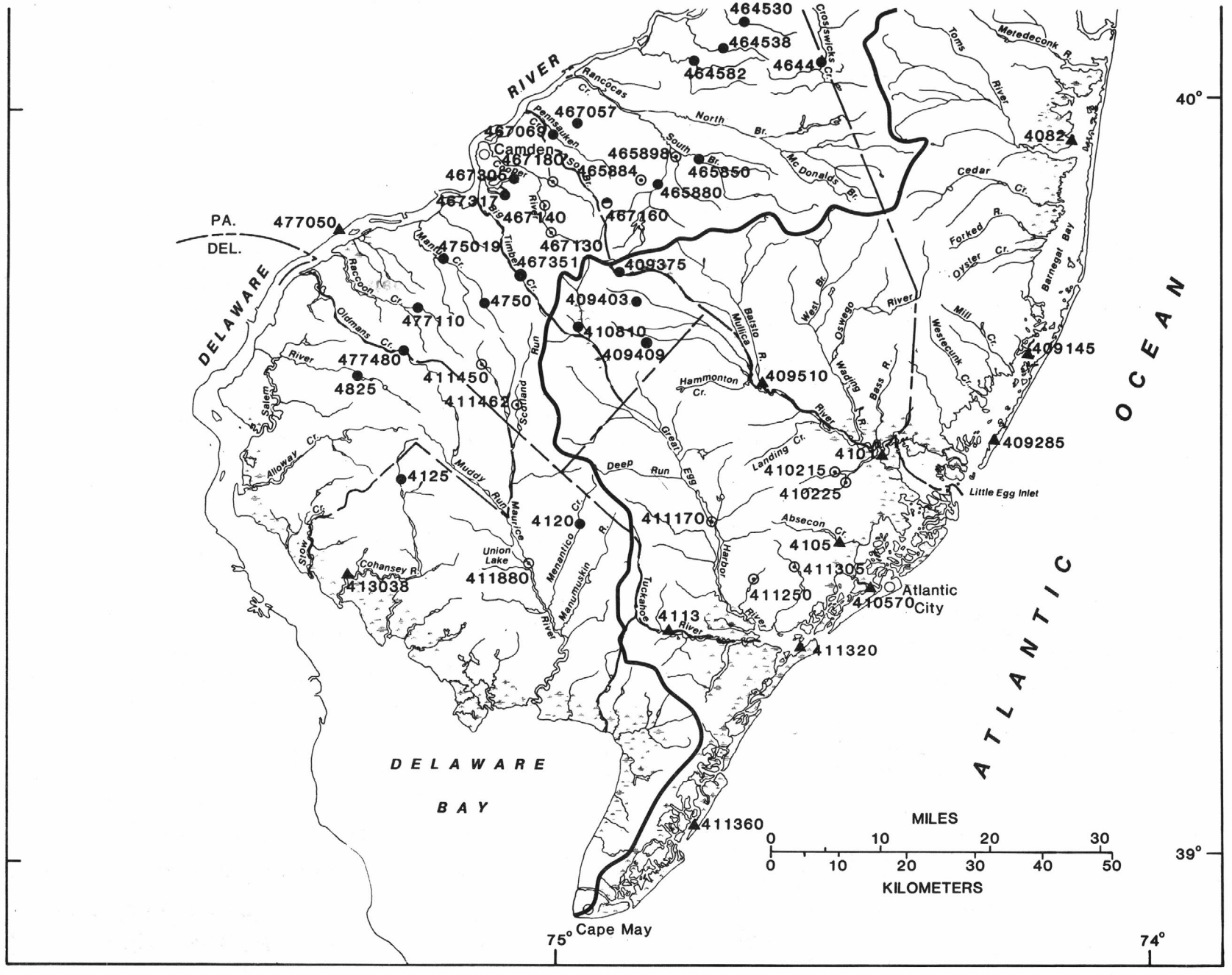
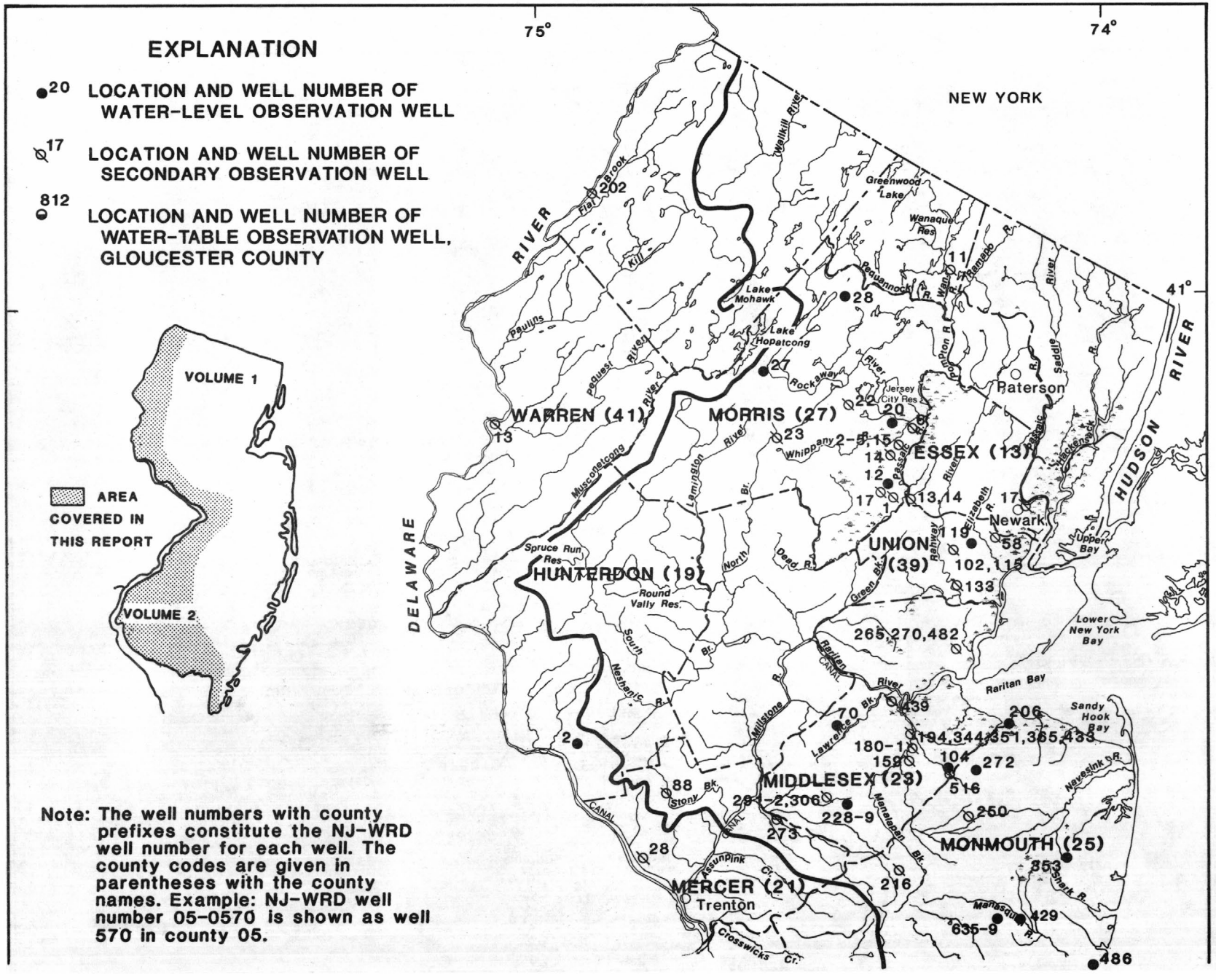


Figure 12.--Map showing location of low-flow and crest-stage partial-record stations.


EXPLANATION
20 LOCATION AND WELL NUMBER OF WATER-LEVEL OBSERVATION WELL
17 LOCATION AND WELL NUMBER OF SECONDARY OBSERVATION WELL
812 LOCATION AND WELL NUMBER OF WATER-TABLE OBSERVATION WELL, GLOUCESTER COUNTY
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
Jersey City Res.
Spruce Run Res.
Round Valley Res.
Lake Mohawk
Lake Hopatcong
Greenwood Lake
Wanaque Res.
Upper Bay
Lower New York Bay
Raritan Bay
Sandy Hook Bay
Delaware and Raritan Canal
Assunpink Cr.
Crosswicks Cr.
Shark R.
Manasquan R.
Neversink R.
Wallkill River
Pequannock R.
Wanaque R.
Ramapo R.
Passaic River
Rockaway River
Whippany River
Lamington River
Musconetcong River
Paulins Kill
Pequest River
Hackensack River
Elizabeth R.
Rahway River
North Branch Raritan R.
South Branch Raritan R.
Millstone R.
Lawrence Br.
Green Br.
Dead R.
Stony Br.
Manalapan Br.
Neshanic R.
202
28
27
13
23
2-5,15
14
12
17
1
13,14
17
119
58
102,115
133
265,270,482
439
70
206
194,344,351,365,433
180-1
159
104
272
516
2
88
28-2,306
228-9
273
250
353
216
635-9
429
486

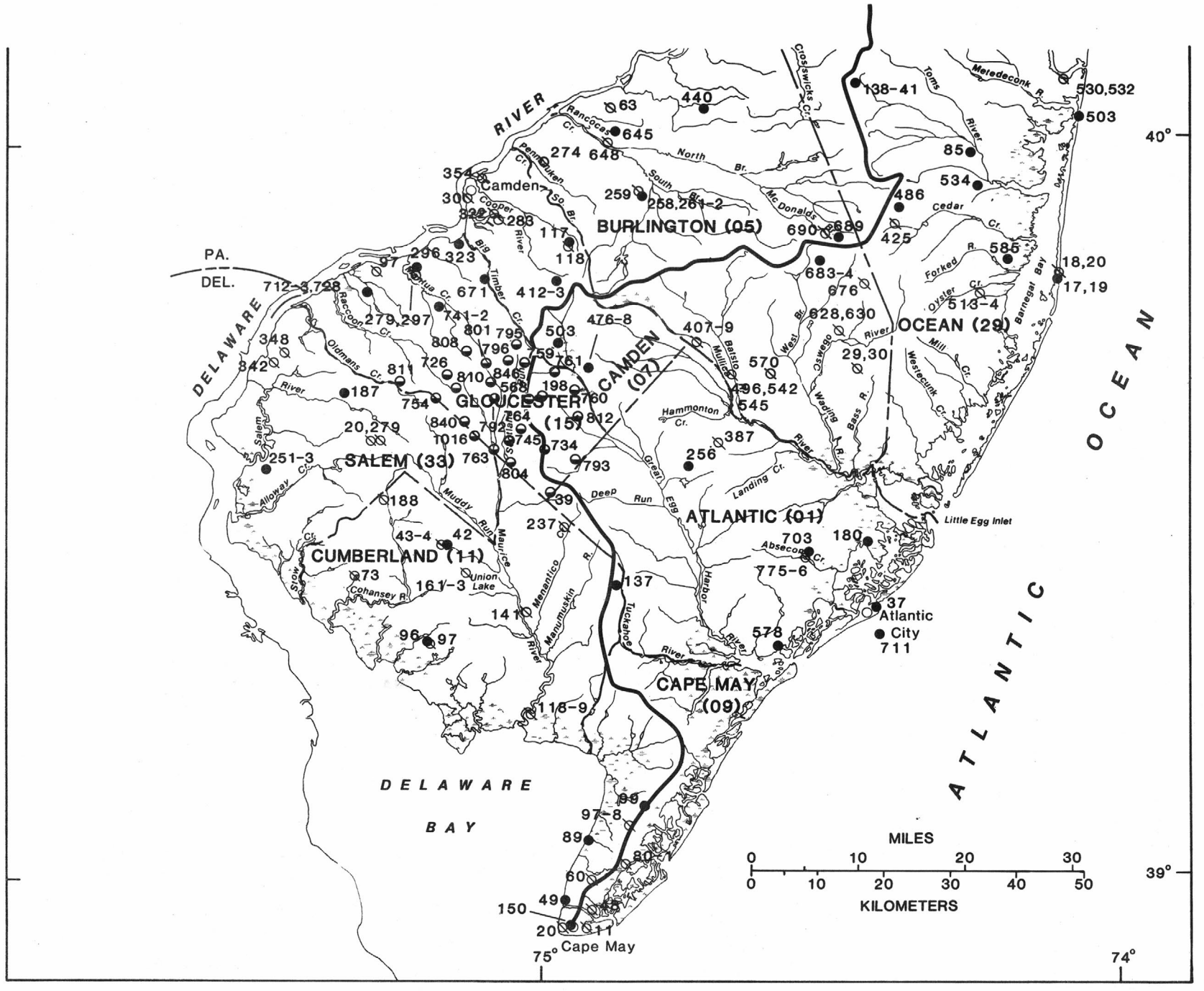
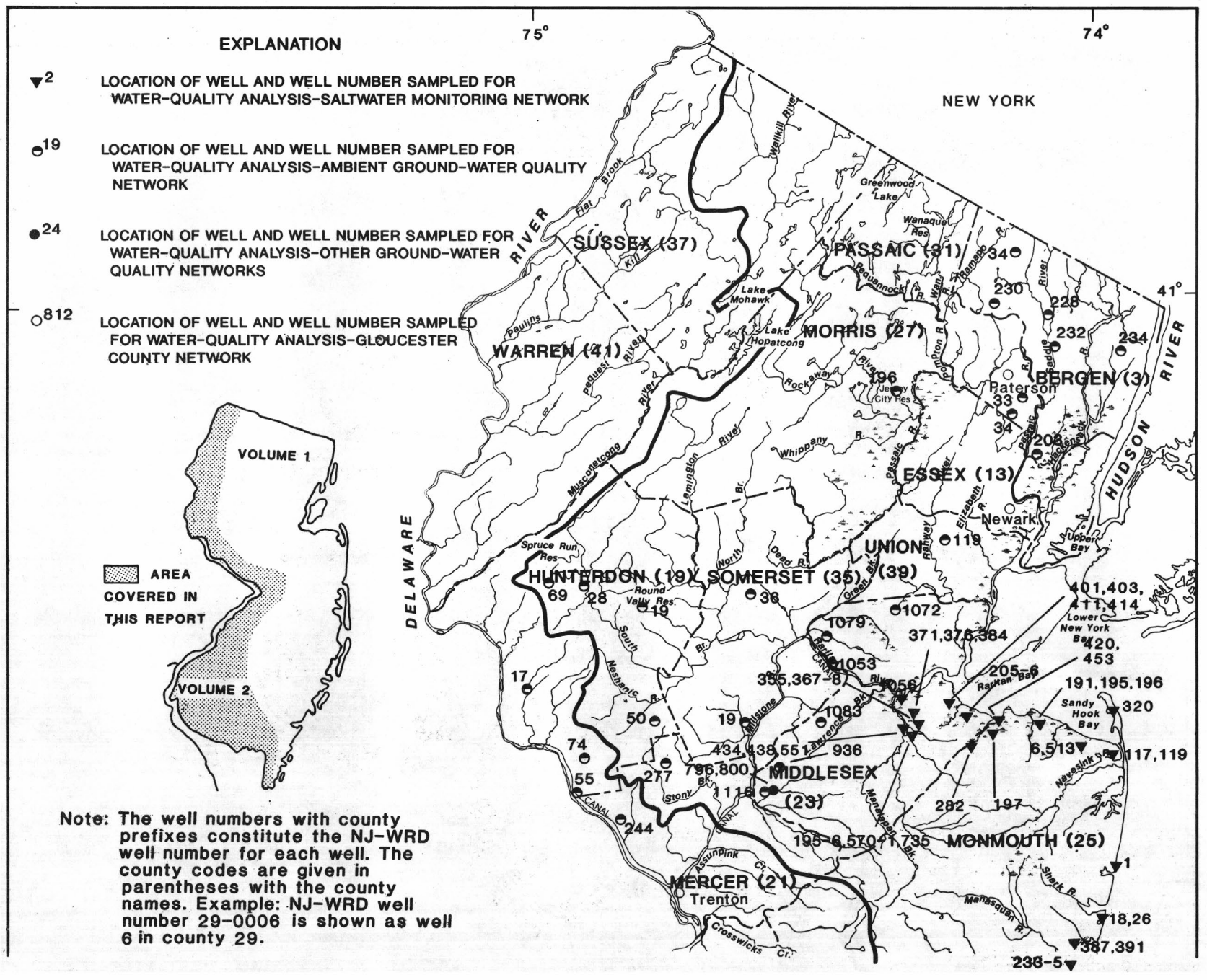


Figure 13.--Map showing location of ground-water observation well.


EXPLANATION
▼2 LOCATION OF WELL AND WELL NUMBER SAMPLED FOR WATER-QUALITY ANALYSIS-SALTWATER MONITORING NETWORK
⊖19 LOCATION OF WELL AND WELL NUMBER SAMPLED FOR WATER-QUALITY ANALYSIS-AMBIENT GROUND-WATER QUALITY NETWORK
●24 LOCATION OF WELL AND WELL NUMBER SAMPLED FOR WATER-QUALITY ANALYSIS-OTHER GROUND-WATER QUALITY NETWORKS
○812 LOCATION OF WELL AND WELL NUMBER SAMPLED FOR WATER-QUALITY ANALYSIS-GLOUCESTER COUNTY NETWORK
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 29-0006 is shown as well 6 in county 29.
75°
74°
41°
NEW YORK
SUSSEX (37)
WARREN (41)
MORRIS (27)
PASSAIC (31)
BERGEN (3)
ESSEX (13)
UNION (39)
HUNTERDON (19)
SOMERSET (35)
MIDDLESEX (23)
MONMOUTH (25)
MERCER (21)
Trenton
Paterson
Newark
DELAWARE RIVER
HUDSON RIVER
Wallkill River
Flat Brook
Kill
Paulins
Pequest River
Lake Mohawk
Lake Hopatcong
Greenwood Lake
Wanaque Res
Pequannock R.
Wanaque R.
Ramapo River
Pompton R.
Saddle R.
Jersey City Res
Rockaway River
Passaic R.
Whippany R.
Lamington River
Musconetcong River
Spruce Run Res
Round Valley Res
North Br.
South Br.
Raritan R.
Green Br.
Dead R.
Elizabeth R.
Railway
Upper Bay
Lower New York Bay
Raritan Bay
Sandy Hook Bay
Neshanic R.
Millstone
Lawrence Br.
Stony Br.
Manalapan Br.
Matchaponix Br.
Assunpink Cr.
Crosswicks Cr.
Shark R.
Manasquan R.
Navesink R.
CANAL
69
28
19
36
1079
1072
371,375,384
401,403, 411,414
420, 453
1053
355,367-87
1056
205-6
191,195,196
320
17
50
19
1083
74
55
277
434,438,551
936
796,800
1116
6,513
117,119
244
282
197
195-6,570-1,735
1
18,26
387,391
238-5

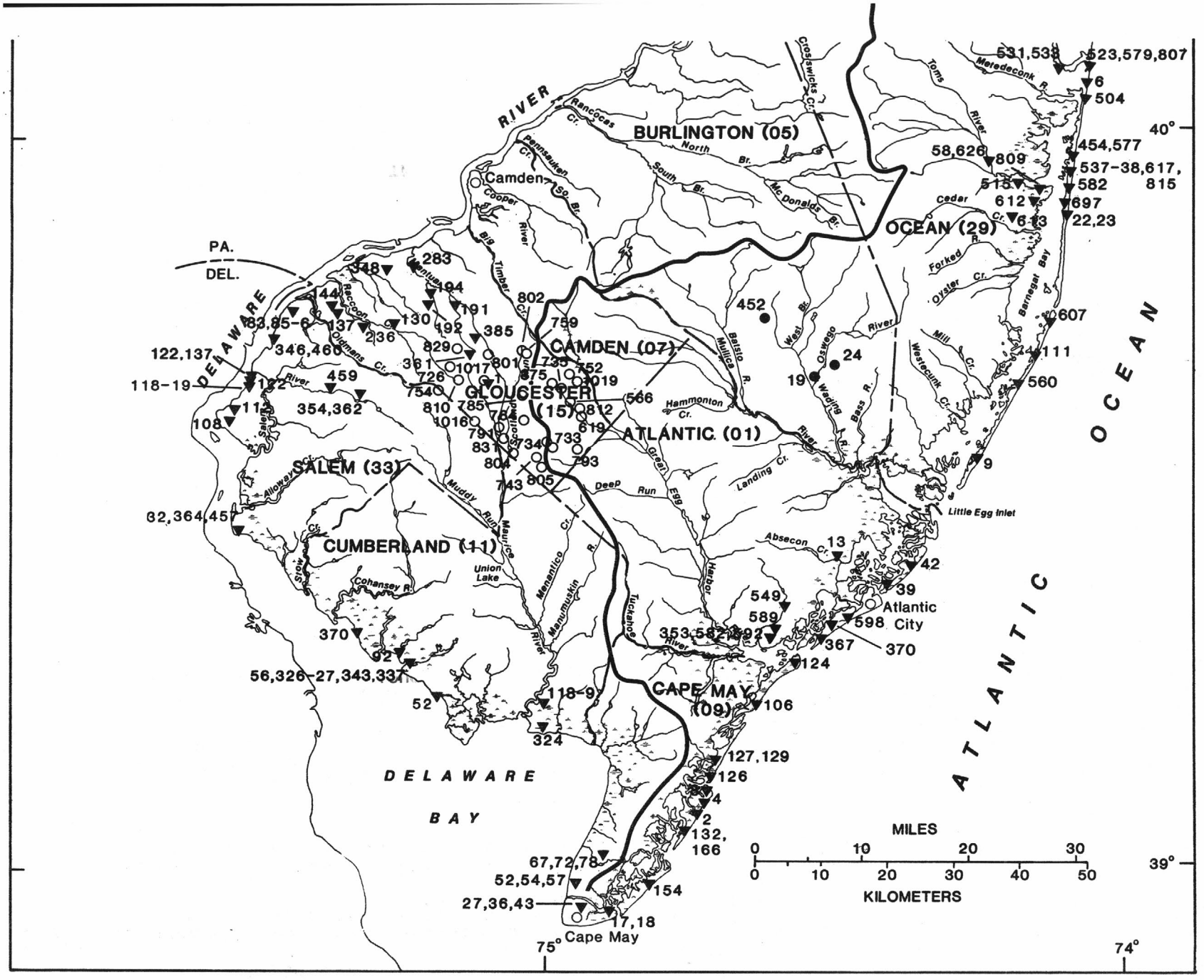


Figure 14.--Map showing location of ground-water quality stations.

MAURICE RIVER BASIN

01411456 LITTLE EASE RUN NEAR CLAYTON, NJ

LOCATION.--Lat 39°39'32", long 75°04'04", Gloucester County, Hydrologic Unit 02040206, on right bank 30 ft downstream from bridge on Academy Road (County Route 610), 0.9 mi west of Fries Mill, 1.3 mi east of Clayton, and 1.4 mi downstream from Beaverdam Branch.

DRAINAGE AREA.--9.77 mi^2.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1966, 1976-84, 1987. February 26, 1988 to September 30, 1988.

GAGE.--Water-stage recorder. Datum of gage is 100.94 ft above National Geodetic Vertical Datum of 1929.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	12	14	12	4.3	.78	1.9	1.7
2	---	---	---	---	---	12	12	11	4.2	.71	1.6	1.4
3	---	---	---	---	---	11	11	10	3.9	.60	1.4	1.2
4	---	---	---	---	---	14	11	9.2	3.8	.60	1.2	2.5
5	---	---	---	---	---	23	11	9.8	3.7	.60	1.0	6.2
6	---	---	---	---	---	25	10	16	3.3	.60	.93	4.8
7	---	---	---	---	---	23	19	23	3.1	.59	.78	3.8
8	---	---	---	---	---	20	33	21	2.8	.52	.73	3.0
9	---	---	---	---	---	17	34	17	2.8	.55	.61	2.3
10	---	---	---	---	---	15	29	13	2.8	.72	.60	1.9
11	---	---	---	---	---	13	23	12	2.6	.60	.60	1.6
12	---	---	---	---	---	12	18	11	2.4	1.0	.54	1.4
13	---	---	---	---	---	12	15	9.7	2.1	1.0	.46	1.7
14	---	---	---	---	---	11	13	8.7	2.0	.79	.46	1.6
15	---	---	---	---	---	11	12	7.8	1.9	.69	.43	1.3
16	---	---	---	---	---	10	12	6.9	1.8	.56	.41	1.2
17	---	---	---	---	---	9.7	12	6.5	1.8	1.1	.93	1.1
18	---	---	---	---	---	9.4	11	7.3	1.8	1.8	1.5	1.1
19	---	---	---	---	---	9.3	12	15	1.8	1.2	.90	1.1
20	---	---	---	†124	---	9.2	12	19	1.6	1.0	1.1	1.1
21	---	---	---	---	---	8.9	11	18	1.4	1.1	1.3	1.0
22	---	---	---	---	---	8.5	11	14	1.4	2.5	.97	.97
23	---	---	---	---	---	8.4	10	11	1.2	2.2	.84	.93
24	---	---	---	---	---	8.4	10	9.8	1.2	5.9	4.4	.92
25	---	---	---	---	---	8.3	11	12	1.0	4.3	6.8	1.3
26	---	---	---	---	15	12	10	13	1.0	3.2	4.3	1.5
27	---	---	---	---	14	24	9.5	11	1.0	6.5	2.9	1.2
28	†16	---	---	---	14	26	14	8.9	1.0	5.3	2.2	1.1
29	---	---	---	---	13	24	14	7.4	.78	4.3	2.3	1.1
30	---	†10	---	---	---	20	14	6.0	.78	3.2	3.2	1.1
31	---	---	---	---	---	16	---	5.0	---	2.3	2.3	---
MEAN	---	---	---	---	---	14.3	14.6	11.7	2.18	1.83	1.60	1.77
MAX	---	---	---	---	---	26	34	23	4.3	6.5	6.8	6.2
MIN	---	---	---	---	---	8.3	9.5	5.0	.78	.52	.41	.92
IN.	---	---	---	---	---	1.69	1.67	1.38	.25	.22	.19	.20

SUMMARY STATISTICS — FOR PERIOD OF RECORD

HIGHEST DAILY MEAN	34	Apr 9
LOWEST DAILY MEAN	.41	Aug 16
INSTANTANEOUS PEAK	35	Apr 8
INSTANTANEOUS PEAK STAGE	3.10	Apr 8
INSTANTANEOUS LOW FLOW	.35	Aug 15, 16, 17

† Result of discharge measurement.

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 mi^2.

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. Occasional regulation by ponds above station. Several measurments of water temperature, other than those published, were made during the year. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	75	157	119	114	156	171	191	161	113	64	74	87
2	73	144	121	112	155	167	178	158	114	64	70	79
3	78	132	119	108	166	164	168	153	111	63	67	74
4	113	121	119	115	171	166	164	147	108	62	64	81
5	116	111	115	111	180	193	155	145	105	61	62	105
6	122	103	109	104	179	201	142	164	103	60	61	103
7	126	97	103	100	169	207	164	189	101	58	58	99
8	120	93	100	101	160	208	215	196	99	57	56	89
9	112	91	97	102	153	206	267	200	102	59	55	83
10	104	98	93	100	147	197	241	194	104	65	56	81
11	97	135	109	99	142	183	223	194	100	62	52	77
12	90	142	111	98	212	168	221	194	98	64	49	72
13	86	143	114	98	259	159	210	185	96	73	48	71
14	84	142	113	98	244	158	169	172	93	74	47	72
15	85	137	117	96	299	154	165	158	86	69	45	69
16	90	130	129	94	298	152	167	147	83	63	42	66
17	84	123	130	93	285	149	164	141	86	61	37	64
18	78	120	130	103	271	146	159	124	97	68	51	65
19	74	117	159	115	255	143	160	147	94	71	51	65
20	72	112	134	156	254	139	160	178	88	73	58	64
21	71	108	135	197	248	133	157	208	82	70	68	62
22	69	101	129	206	237	127	155	189	79	74	67	61
23	69	96	124	212	228	122	152	179	76	79	64	59
24	70	95	121	210	221	125	151	170	74	89	73	57
25	71	95	121	203	211	132	148	171	72	92	87	65
26	69	93	131	227	201	154	146	170	71	94	96	69
27	73	93	129	199	190	197	144	155	69	117	97	67
28	146	91	128	188	180	207	153	154	67	109	88	65
29	174	97	129	178	173	210	155	139	67	101	88	63
30	171	114	112	169	---	210	160	133	65	94	107	61
31	167	---	117	161	---	203	---	121	---	84	99	---
MEAN	97.7	114	120	138	208	169	173	166	90.1	74.0	65.7	73.2
MAX	174	157	159	227	299	210	267	208	114	117	107	105
MIN	69	91	93	93	142	122	142	121	65	57	37	57
IN.	1.01	1.14	1.23	1.42	2.01	1.74	1.73	1.71	.90	.76	.68	.73

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	113.3	143.3	169.2	192.1	204.6	231.8	227.7	190.2	147.1	124.4	124.8	123.9
MAX	264	330	385	380	418	427	437	387	291	333	327	591
(WY)	1980	1973	1973	1936	1939	1979	1984	1958	1979	1975	1958	1940
MIN	48.6	46.7	57.1	64.7	95.7	97.2	90.9	79.5	57.7	35.6	34.6	40.6
(WY)	1966	1966	1966	1966	1981	1981	1966	1977	1966	1966	1966	1965

SUMMARY STATISTICS	FOR 1988 WATER YEAR		FOR PERIOD OF RECORD		
AVERAGE FLOW	124		166		
HIGHEST ANNUAL MEAN			253		1973
LOWEST ANNUAL MEAN			67.4		1966
HIGHEST DAILY MEAN	299	Feb 15	5260	Sep 2	1940
LOWEST DAILY MEAN	37	Aug 17	23	Sep 8	1964
INSTANTANEOUS PEAK FLOW	309	Feb 15	7360a	Sep 2	1940
INSTANTANEOUS PEAK STAGE	3.28	Feb 15	8.72	Sep 2	1940
INSTANTANEOUS LOW FLOW	35	Aug 17	23	Sep 8	1964
ANNUAL RUNOFF (INCHES)	15.0		20.1		
10 PERCENTILE	199		286		
50 PERCENTILE	113		146		
95 PERCENTILE	60		56		

a From rating curve extended above 3,000 ft^3/s, highest since 1867

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, January 1980 to November 1986.

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.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS TOTAL (MG/L AS CACO3)
NOV 1987												
12...	1110	144	74	6.2	5.5	1.3	10.3	82	1.8	K160	300	19
JAN 1988												
21...	1515	201	77	5.9	4.0	2.2	11.9	92	0.3	33	370	20
MAR												
10...	1000	198	84	5.8	9.5	1.4	9.3	83	0.5	--	27	19
MAY												
24...	1030	171	73	6.0	20.5	1.3	6.4	72	2.4	23	1700	19
JUL												
22...	1100	73	71	6.4	23.5	1.9	6.4	76	2.1	K160	--	19
SEP												
16...	1000	67	83	6.7	17.0	1.2	9.9	101	0.5	48	310	21

DATE	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)	ALKALINITY, CARBONATE IT-FLD (MG/L AS CACO3)	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
NOV 1987												
12...	3.9	2.3	4.9	2.1	4.9	4.0	6	11	8.5	0.1	7.0	48
JAN 1988												
21...	3.9	2.4	5.8	1.8	5.5	4.5	6	18	9.2	0.1	7.2	60
MAR												
10...	4.1	2.2	5.1	1.8	7.3	6.5	7	18	9.0	0.1	4.5	56
MAY												
24...	3.8	2.2	4.8	1.6	6.7	5.5	6	17	9.4	0.2	4.2	51
JUL												
22...	3.9	2.3	4.8	1.8	8.5	7.0	8	9.3	8.6	0.1	4.4	51
SEP												
16...	3.9	2.6	5.3	1.7	7.2	5.9	7	10	9.3	<0.1	5.2	48

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)	PHOSPHOROUS TOTAL (MG/L AS P)	PHOSPHOROUS DISSOLVED (MG/L AS P)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)
NOV 1987											
12...	--	--	--	<0.010	1.20	0.05	0.040	0.40	0.020	0.010	<0.010
JAN 1988											
21...	7	3.8	69	<0.010	1.80	0.05	0.040	0.50	0.020	0.010	<0.010
MAR											
10...	1	0.53	67	<0.010	1.60	0.02	0.040	0.40	0.020	0.020	<0.010
MAY											
24...	3	1.4	91	<0.010	1.10	0.04	0.050	0.40	0.020	<0.010	<0.010
JUL											
22...	6	1.2	41	<0.010	2.50	0.02	0.010	0.40	0.020	0.020	<0.010
SEP											
16...	1	0.18	75	<0.010	1.40	<0.01	<0.010	0.30	0.010	0.010	0.010

01411500 MAURICE RIVER AT NORMA, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 1988											
21...	1515	110	26	53	<0.5	<1	1	<3	5	150	<5
MAR											
10...	1000	120	24	65	<0.5	<1	<1	<3	2	150	<5
JUL											
22...	1100	30	66	52	<0.5	<1	<1	<3	3	220	<5
SEP											
16...	1000	30	29	43	<0.5	<1	<1	<3	1	170	11

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 1988										
21...	<4	60	<0.1	<10	2	4	<1.0	26	<6	14
MAR										
10...	<4	20	<0.1	<10	8	<1	1.0	26	<6	12
JUL										
22...	<4	22	<0.1	<10	2	<1	<1.0	25	<6	9
SEP										
16...	<4	19	0.2	<10	<1	<1	<1.0	23	<6	12

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 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1977 to September 1988 (discontinued).

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

REMARKS.--Records fair. Flow diverted above gage during summer months for irrigation. Several measurements of water temperature, other than those published, were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	e24	31	24	26	24	21	26	22	7.4	15	17
2	21	e24	27	24	28	24	21	24	23	6.3	14	16
3	34	e23	24	22	33	24	20	23	23	6.2	13	14
4	85	e23	26	26	31	35	22	24	23	6.0	12	28
5	35	e21	24	24	28	51	22	26	22	5.9	12	50
6	23	e21	23	21	24	34	21	36	21	6.0	12	22
7	24	e21	23	20	21	30	43	34	21	5.9	12	18
8	21	e21	23	22	21	27	46	25	21	5.7	11	16
9	20	e21	23	22	21	27	30	22	25	5.3	10	16
10	19	e35	25	21	21	28	25	22	22	5.9	9.6	17
11	19	e65	39	21	21	24	24	29	18	5.9	9.8	16
12	19	e48	31	21	211	27	23	24	18	10	8.9	15
13	18	e33	26	21	108	27	23	22	16	13	8.2	16
14	18	e29	25	21	32	25	23	22	14	10	8.3	17
15	17	e27	30	19	34	23	23	22	12	7.1	8.3	15
16	18	e25	34	19	43	22	24	21	12	6.3	7.6	14
17	18	e24	28	20	35	22	24	21	13	7.0	8.1	14
18	18	e28	24	31	31	22	23	e29	13	11	14	18
19	18	e25	23	40	30	23	25	e56	14	9.0	14	18
20	18	e24	25	125	43	22	25	e47	14	9.1	18	17
21	19	e24	25	113	35	21	25	e32	12	9.1	16	16
22	18	e23	24	40	29	20	23	e32	11	14	14	15
23	18	e23	24	29	29	20	22	e34	10	15	13	14
24	18	e24	23	26	29	21	24	e32	10	30	26	14
25	19	e24	24	29	27	21	25	e45	8.6	17	37	19
26	18	e24	32	45	26	35	24	e37	9.5	15	24	19
27	21	e24	28	31	27	61	23	32	9.4	106	17	17
28	73	e24	26	25	27	32	31	29	7.5	48	16	15
29	e40	e29	28	22	25	23	28	26	7.4	22	22	15
30	e31	e50	23	23	---	21	29	24	7.7	19	28	15
31	e25	---	22	24	---	21	---	22	---	17	20	---
MEAN	25.5	27.7	26.2	31.3	37.8	27.0	25.4	29.0	15.3	14.9	14.8	17.8
MAX	85	65	39	125	211	61	46	56	25	106	37	50
MIN	17	21	22	19	21	20	20	21	7.4	5.3	7.6	14
IN.	1.05	1.10	1.08	1.29	1.46	1.11	1.01	1.20	.61	.61	.61	.71

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	28.1	31.1	35.6	40.5	40.9	38.4	43.1	42.0	42.4	29.0	26.9	26.7
MAX	58.4	48.1	56.1	84.7	104	58.4	76.4	57.3	121	50.0	43.0	43.5
(WY)	1980	1984	1987	1978	1979	1978	1983	1983	1983	1984	1979	1979
MIN	20.5	20.5	25.1	20.8	24.5	19.3	22.2	27.9	15.3	14.9	14.8	17.8
(WY)	1987	1982	1981	1981	1983	1981	1985	1986	1988	1988	1987	1988

SUMMARY STATISTICS	FOR 1988 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	24.4		35.3	
HIGHEST ANNUAL MEAN			46.3	1979
LOWEST ANNUAL MEAN			24.4	1988
HIGHEST DAILY MEAN	211	Feb 12	2150	Jun 21 1983
LOWEST DAILY MEAN	5.3	Jul 9	5.3	Jul 9 1988
INSTANTANEOUS PEAK FLOW	340	Feb 12	10000a	Jun 21 1983
INSTANTANEOUS PEAK STAGE	5.20	Feb 12	8.5	Jun 21 1983
INSTANTANEOUS LOW FLOW	4.7	Jul 9	4.7	Jul 9 1988
ANNUAL RUNOFF (INCHES)	11.8		17.1	
10 PERCENTILE	34		54	
50 PERCENTILE	23		28	
95 PERCENTILE	7.8		16	

a Includes discharge from dam break at Seeley Lake, 1.3 mi upstream, from rating curve extended above 600 ft^3/s on basis of step-backwater computation of peak flow
e Estimated

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 1987 TO SEPTEMBER 1988

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)
NOV 1987										
04...	1130	E23	207	6.6	13.0	7.4	70	E1.4	220	240
FEB 1988										
02...	1130	25	210	6.4	8.0	8.5	72	--	20	79
MAR										
17...	1300	22	220	6.3	8.0	8.2	69	E1.5	80	17
MAY										
25...	1245	46	200	6.7	18.5	6.5	70	E1.8	3500	>2400
JUL										
19...	1045	9.1	210	7.0	25.0	6.8	83	2.8	330	1600
AUG										
02...	1200	14	182	7.0	24.5	6.7	81	E2.0	3500	>2400

DATE	HARDNESS TOTAL (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)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
NOV 1987									
04...	61	12	7.5	12	5.8	14	24	27	0.1
FEB 1988									
02...	55	11	6.6	11	4.2	8.0	25	22	0.2
MAR									
17...	61	12	7.5	11	4.0	10	30	24	0.1
MAY									
25...	55	11	6.8	8.4	4.1	16	24	17	0.2
JUL									
19...	61	12	7.5	15	4.0	31	22	27	0.1
AUG									
02...	55	11	6.7	12	5.1	14	29	24	0.2

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 1987									
04...	8.5	105	0.019	4.08	0.03	0.30	4.4	0.128	5.1
FEB 1988									
02...	6.6	91	0.021	4.60	--	--	--	0.050	3.1
MAR									
17...	7.5	102	0.021	--	0.06	0.50	--	--	2.7
MAY									
25...	6.5	88	E0.047	3.09	0.13	1.1	4.1	0.240	8.9
JUL									
19...	8.4	115	0.015	3.19	0.16	0.82	4.0	0.082	6.3
AUG									
02...	8.0	104	0.016	3.10	0.09	2.6	5.7	0.120	6.1

01412800 COHANSEY RIVER AT SEELEY, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 1987 04...	1130	<0.5	70	1	<10	10	<1	3	6

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 1987 04...	680	<5	90	0.10	1	<1	20	4

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. Highway 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.

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. WDR NY-86-1: 1979-80.

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.--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 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).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4490	5740	11100	e2100	e2000	2620	8230	4640	5210	1570	2250	2030
2	4310	4820	8080	e2500	e3800	3130	7570	4170	5020	1700	2690	1550
3	4120	4360	7050	e2400	e14000	3300	6960	3910	4380	1600	2830	1340
4	4720	4320	6430	e2300	12100	3590	6990	3350	3600	1710	2540	1170
5	4640	3990	5930	e2400	10300	3310	6890	3250	2930	1700	2070	2020
6	4500	3770	4860	e2500	8540	2510	6240	3460	2810	1650	1850	2540
7	3940	3560	5020	e2400	6740	2900	5480	4070	2960	1390	1510	2010
8	4170	2570	4930	e2400	e5300	3560	5180	3650	2710	1480	1400	1540
9	4220	2670	4630	e2600	e5000	3980	4300	3310	2590	1440	1790	1260
10	3960	3510	4170	e2000	e4600	6700	3590	3070	2330	1660	1870	1390
11	3930	3360	4070	e1900	e4400	8620	3430	2890	2050	1700	1930	1350
12	3730	3710	3380	e2500	e4100	6700	3140	2670	1480	2310	2180	1540
13	3130	3740	3170	e2600	e3700	6320	3160	2680	1680	1710	2000	1540
14	2870	3300	3560	e2800	3370	8810	3000	2260	2530	1830	2260	1350
15	2980	2840	3340	e2700	3530	8200	2530	2180	2510	1890	1810	1410
16	2610	3140	3680	e1700	3900	7020	2400	2020	2500	1690	1820	1780
17	2070	3120	4010	e1300	4230	6330	2340	2190	2320	1720	1290	1640
18	1830	3710	3590	e1700	4010	5750	2400	2380	1870	1670	1700	1660
19	2170	4730	2630	e2300	3960	5400	2380	3460	1680	2120	1560	1900
20	1770	4290	2670	2690	3850	4870	2390	8130	1780	1890	1680	1760
21	1900	3740	3740	3390	4330	4680	2160	11200	2030	3140	1640	1710
22	2270	3100	4060	3610	4240	4260	1990	11000	2350	2610	1640	1780
23	2330	3040	3770	2920	4250	4050	1740	13200	2520	2540	1800	1770
24	2020	3660	3080	e2200	4360	4080	1700	10600	1900	2600	2000	1640
25	1650	3440	2740	e2100	3730	5310	2080	12600	1470	2620	2280	1640
26	1850	2740	3360	e2400	3630	13400	2240	12800	1520	2760	1850	1510
27	2330	2870	3660	e2100	3340	25300	1980	11700	1500	3390	1700	1510
28	7900	2730	3900	e1900	2720	18900	2560	9480	1590	4430	1460	1500
29	14200	2270	e3800	e2100	2460	14200	5080	7080	1620	3590	1770	1620
30	9400	7130	e3600	e2100	---	11600	4770	5910	1600	3110	3440	1650
31	7620	---	e3000	e1900	---	9860	---	5280	---	2190	3410	---
MEAN	3988	3666	4355	2339	4982	7073	3830	5761	2435	2175	2001	1637
MAX	14200	7130	11100	3610	14000	25300	8230	13200	5210	4430	3440	2540
MIN	1650	2270	2630	1300	2000	2510	1700	2020	1470	1390	1290	1170

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	3179	4767	5477	5417	5307	10170	11180	6323	3824	2736	2277	2455
MAX	13140	15950	15240	14880	16240	28470	27400	13700	12650	10110	12430	10270
(WY)	1956	1928	1928	1913	1909	1936	1940	1943	1972	1928	1955	1938
MIN	504	535	1113	1132	1331	2583	2954	1946	993	593	552	357
(WY)	1911	1910	1923	1931	1920	1981	1985	1965	1965	1913	1913	1908

01434000 DELAWARE RIVER AT PORT JERVIS, NY--Continued

SUMMARY STATISTICS	FOR 1988 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	3688		5255	Unadjusted
HIGHEST ANNUAL MEAN			9882	1928
LOWEST ANNUAL MEAN			2028	1965
HIGHEST DAILY MEAN	25300	Mar 27	163000	Aug 19 1955
LOWEST DAILY MEAN	1170	Sep 4	175	Sep 23 1908
INSTANTANEOUS PEAK FLOW	30200	Mar 27	233000a	Aug 19 1955
INSTANTANEOUS PEAK STAGE	9.17b	Feb 3	26.6c	Feb 12 1981
INSTANTANEOUS LOW FLOW	847	Sep 4	175d	Sep 23 1908
ANNUAL RUNOFF (INCHES)	16.3		23.2	
10 PERCENTILE	6900		11700	
50 PERCENTILE	2850		3140	
95 PERCENTILE	1510		868	

a From rating curve extended above 89,000 ft^3/s, on basis of slope-area measurement of peak flow
b Floodmarks from ice jam
c Ice Jam
d Minimum observed
e Estimated

01434000 DELAWARE RIVER AT PORT JERVIS, NY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1957-60, 1964 to current year.
CHEMICAL DATA: 1958-59 (e), 1964-65 (c), 1966 (a), 1967-68 (c), 1969-76 (d), 1987 (b), 1988 (c).
MINOR ELEMENTS DATA: 1970 (a), 1972-73 (a), 1974-76 (c), 1987 (b), 1988 (c).
PESTICIDE DATA: 1974 (a).
ORGANIC DATA: OC--1974 (b), 1975 (d).
NUTRIENT DATA: 1968 (a), 1969-76 (d).
BIOLOGICAL DATA:
Bacteria--1973-76 (d).
Phytoplankton--1974 (b), 1975-76 (c).
Periphyton--1976 (a).
SEDIMENT DATA: 1959 (c), 1976 (c), 1988 (b).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: January 1973 to September 1973.
WATER TEMPERATURES: February 1957 to September 1960, January 1973 to September 1973, June 1974 to current year.
SUSPENDED-SEDIMENT DISCHARGE: February 1957 to September 1960, March 1970 to June 1976.

INSTRUMENTATION.--Water-temperature digital recorder since January 1973, provides one-hour-interval punches.

REMARKS.--Interruption of record was due to malfunction of recording instrument. Water-quality samples were collected by personnel of the New York State Department of Environmental Conservation, and were analyzed by USGS laboratories.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum (water years 1957-59, 1973-81, 1983-84, 1988), 30.0°C, July 13, 1981; minimum (water years 1958-60, 1973, 1975-88), 0.0°C, on many days during winter periods, except 1984.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 29.0°C, Aug. 15; minimum, 0.0°C, on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS TOTAL (MG/L AS CACO3)
OCT										
20...	1030	1680	--	75	7.40	10.0	--	10.8	--	23
NOV										
10...	0930	2490	--	--	7.00	5.0	--	11.8	--	32
DEC										
01...	1000	11000	--	--	7.20	5.0	--	16.5	--	19
APR										
05...	1000	6630	71	--	6.50	9.5	760	11.4	100	20
20...	1400	2290	76	--	6.60	9.5	755	11.9	105	22
JUN										
07...	1015	2600	77	--	7.00	18.5	748	9.2	100	23
23...	1000	2560	85	--	6.70	24.0	--	7.2	--	25
JUL										
19...	1030	1560	87	--	6.60	25.0	--	7.5	--	25
SEP										
01...	0945	1870	90	--	7.00	19.0	--	8.4	--	26

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)	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)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)
OCT										
20...	7.0	1.4	--	--	--	--	--	--	42	--
NOV										
10...	9.8	1.9	--	--	--	--	--	--	63	--
DEC										
01...	5.8	1.2	--	--	--	--	--	--	58	--
APR										
05...	5.9	1.3	3.8	0.8	10	9.3	7.0	0.10	--	--
20...	6.6	1.3	4.3	0.7	12	11	7.3	0.10	--	<10
JUN										
07...	6.8	1.4	4.1	0.7	14	11	6.9	0.30	--	30
23...	7.4	1.6	5.6	1.2	14	11	8.5	0.30	--	40
JUL										
19...	6.9	1.8	5.3	1.0	15	11	8.3	0.10	--	30
SEP										
01...	7.6	1.8	5.1	1.1	16	11	8.1	0.10	--	50

DELAWARE RIVER BASIN

01434000 DELAWARE RIVER AT PORT JERVIS, NY--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	ALUMINUM, DISSOLVED (UG/L AS AL)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM DISSOLVED (UG/L AS CD)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)
OCT									
20...	--	<1	--	6	--	30	--	<5	--
NOV									
10...	--	1	--	7	--	80	--	<5	--
DEC									
01...	--	<1	1	6	4	370	--	<5	<5
APR									
05...	10	<1	<1	2	1	110	20	<5	<5
20...	--	3	--	2	--	70	--	<5	--
JUN									
07...	20	<1	<1	6	2	90	45	<5	<5
23...	--	<1	--	6	--	110	--	<5	--
JUL									
19...	--	1	--	4	--	110	--	<5	--
SEP									
01...	--	<1	--	7	--	120	--	<5	--

DATE	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT									
20...	10	--	<0.10	<1	--	20	--	--	--
NOV									
10...	20	--	<0.10	<1	--	<10	--	--	--
DEC									
01...	80	--	<0.10	<1	<1	10	20	--	--
APR									
05...	30	10	<0.10	<1	1	<10	<3	--	--
20...	10	--	<0.10	9	--	10	--	--	--
JUN									
07...	20	10	<0.10	1	4	<10	8	--	--
23...	50	--	<0.10	<1	--	<10	--	2	14
JUL									
19...	70	--	<0.10	2	--	<10	--	3	13
SEP									
01...	40	--	<0.10	2	--	<10	--	4	20

ANALYSIS OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	SOLIDS, VOLATILE IN BOTTOM MATERIAL (MG/KG)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	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							
20...	1030	20200	<1	<10	9	6100	30

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)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	BED MAT. FALL DIAM. % FINER THAN .004 MM	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM
OCT							
20...	300	<0.10	10	80	0	5	99

DELAWARE RIVER BASIN

01434000 DELAWARE RIVER AT PORT JERVIS, NY--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	7.5	7.0	7.5	6.0	5.0	5.5	.5	.0	.0
2	---	---	---	8.5	7.0	8.0	5.5	4.5	5.0	.5	.0	.0
3	---	---	---	9.5	8.5	8.5	4.5	4.0	4.0	.0	.0	.0
4	---	---	---	10.5	8.5	9.5	4.0	3.5	4.0	1.0	.0	.0
5	---	---	---	11.0	9.5	10.0	3.5	2.5	3.0	.5	.0	.0
6	---	---	---	9.0	7.0	8.0	2.5	2.0	2.5	.5	.0	.0
7	---	---	---	7.5	6.5	7.0	2.5	1.5	2.0	.5	.0	.0
8	---	---	---	7.0	6.0	6.5	2.5	1.5	2.0	.5	.0	.0
9	13.0	11.5	12.0	7.5	6.0	7.0	3.5	2.0	2.5	.0	.0	.0
10	13.0	12.0	12.5	7.5	5.5	6.5	3.5	2.5	3.0	.0	.0	.0
11	12.5	11.5	12.5	6.0	4.5	5.0	4.0	3.0	3.5	.0	.0	.0
12	12.0	11.0	11.5	5.0	3.0	4.0	4.0	3.5	3.5	.0	.0	.0
13	11.5	10.0	10.5	6.0	4.0	5.0	3.5	3.0	3.5	.0	.0	.0
14	11.0	9.0	10.0	6.0	4.0	5.0	3.0	2.5	2.5	.0	.0	.0
15	12.0	9.0	10.5	5.0	4.0	4.5	3.0	2.0	2.5	.5	.0	.0
16	12.5	9.5	11.0	5.5	4.0	4.5	2.5	2.0	2.0	.0	.0	.0
17	11.5	10.5	11.0	7.5	4.5	6.0	2.0	1.0	1.5	.5	.0	.0
18	12.5	11.0	12.0	9.0	7.5	8.5	1.5	.5	1.0	.5	.0	.0
19	13.0	11.0	12.0	8.0	7.5	8.0	1.0	.5	.5	1.0	.0	.5
20	12.5	11.5	12.0	7.5	6.0	7.0	1.0	.5	1.0	.5	.0	.0
21	12.5	11.0	12.0	6.0	2.0	4.0	2.5	1.0	1.5	.0	.0	.0
22	11.5	10.5	11.0	2.0	.5	1.0	1.5	.5	1.0	.0	.0	.0
23	10.5	9.5	10.0	2.5	.0	1.0	1.5	1.0	1.0	.0	.0	.0
24	10.5	8.5	9.5	3.5	1.0	2.0	1.5	.5	1.0	.5	.0	.0
25	10.5	10.0	10.0	4.0	2.0	3.0	2.5	1.0	2.0	.5	.0	.0
26	10.0	8.5	9.5	4.5	3.0	4.0	3.0	2.5	2.5	.0	.0	.0
27	10.0	7.5	9.0	4.0	3.5	3.5	2.0	1.5	2.0	.5	.0	.0
28	10.0	8.5	9.5	4.5	3.5	4.0	1.5	1.0	1.5	.0	.0	.0
29	8.5	8.0	8.0	5.0	4.0	4.0	1.0	.0	.5	.5	.0	.0
30	8.0	7.5	7.5	6.0	4.5	5.5	.0	.0	.0	1.0	.0	.0
31	8.0	7.0	7.5	---	---	---	.0	.0	.0	.5	.0	.5
MONTH	---	---	---	11.0	0.0	5.5	6.0	0.0	2.0	1.0	0.0	0.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	1.0	.0	.5	1.5	.0	.5	8.0	7.0	7.5	9.5	9.0	9.0
2	.5	.0	.5	2.0	.0	1.0	7.5	7.0	7.5	10.0	9.0	9.5
3	.5	.0	.0	3.0	1.0	2.0	7.5	7.0	7.5	10.5	9.5	10.0
4	.5	.0	.0	1.5	.5	1.5	9.5	7.5	8.5	12.5	9.5	11.0
5	.0	.0	.0	2.0	.0	1.0	10.5	9.0	9.5	12.5	11.5	12.0
6	.0	.0	.0	2.5	.0	1.5	11.5	9.5	10.5	12.5	12.0	12.5
7	.0	.0	.0	3.5	1.0	2.5	10.5	9.5	10.0	15.5	12.0	13.5
8	.5	.0	.0	3.5	1.5	2.5	9.5	8.5	9.0	16.5	13.5	15.0
9	.0	.0	.0	3.0	2.0	2.5	9.0	7.5	8.5	16.0	14.5	15.0
10	.5	.0	.0	3.0	1.5	2.5	10.0	7.5	9.0	14.5	13.5	14.0
11	.5	.0	.0	2.0	1.0	1.5	10.5	8.5	9.5	15.0	13.5	14.0
12	.5	.0	.0	3.0	1.5	2.5	10.0	9.0	9.5	16.5	13.0	14.5
13	.5	.0	.0	4.5	2.5	3.5	11.0	8.5	10.0	18.0	13.5	16.0
14	.5	.0	.0	4.0	3.0	3.5	11.5	9.0	10.5	19.5	16.0	17.5
15	.0	.0	.0	3.5	2.0	2.5	10.5	9.5	10.0	19.5	16.0	18.0
16	1.0	.0	.5	2.0	1.5	2.0	9.5	8.0	9.0	18.5	16.5	18.0
17	1.0	.0	.5	3.0	1.5	2.5	10.5	7.5	9.0	18.5	16.5	17.5
18	1.5	.0	.5	2.5	2.0	2.5	10.0	9.0	9.5	16.5	15.5	16.5
19	.5	.0	.5	3.0	2.0	2.5	9.0	7.5	8.5	15.5	15.0	15.0
20	1.0	.0	.5	3.0	1.5	2.5	9.5	7.0	8.5	16.0	14.5	15.0
21	.5	.0	.5	2.0	1.0	1.5	10.0	8.0	9.0	16.0	15.0	15.5
22	.5	.0	.0	2.0	.5	1.5	10.5	7.5	9.0	16.0	16.0	16.0
23	1.0	.0	.5	3.5	1.0	2.5	9.5	8.0	8.5	17.0	15.5	16.0
24	1.5	.0	1.0	6.0	2.5	4.5	8.5	8.0	8.5	18.0	17.0	17.5
25	1.0	.0	.5	8.0	5.0	6.5	10.5	7.5	9.0	17.0	14.5	16.0
26	1.0	.0	.5	8.0	6.0	7.5	11.5	8.0	10.0	15.0	13.5	14.0
27	.5	.0	.0	6.0	4.5	5.0	13.5	10.0	11.5	16.0	13.5	14.5
28	1.5	.0	.5	4.5	4.0	4.5	13.5	11.5	12.5	17.5	15.5	16.5
29	1.0	.0	.5	5.5	4.0	5.0	12.0	11.0	12.0	19.5	17.0	18.5
30	---	---	---	7.0	5.0	6.0	11.0	9.5	10.5	20.5	18.5	19.5
31	---	---	---	8.0	6.0	7.0	---	---	---	22.0	19.5	21.0
MONTH	1.5	0.0	0.5	8.0	0.0	3.0	13.5	7.0	9.5	22.0	9.0	15.0

DELAWARE RIVER BASIN

01434000 DELAWARE RIVER AT PORT JERVIS, NY--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	21.0	19.5	20.5	19.5	18.5	19.0	27.5	25.5	26.0	21.5	19.0	20.5
2	20.0	18.5	19.0	19.5	17.5	18.5	27.0	25.0	26.0	22.0	19.5	21.0
3	18.0	17.0	17.5	21.0	17.5	19.5	27.0	25.0	26.0	22.0	20.0	21.0
4	17.0	16.0	16.5	22.5	19.0	21.0	27.5	25.0	26.0	21.5	20.0	20.5
5	18.5	15.0	17.0	23.5	20.5	22.0	28.5	25.0	27.0	20.5	19.0	20.0
6	20.0	16.5	18.5	25.5	21.5	24.0	27.0	25.5	26.5	19.0	17.5	18.5
7	19.0	18.0	19.0	26.0	22.5	24.0	27.5	25.5	26.5	19.0	16.5	18.0
8	19.0	17.5	18.0	26.0	23.5	24.5	27.5	25.5	27.0	19.5	17.0	18.5
9	18.0	16.5	17.5	26.0	24.0	25.0	28.0	25.5	27.0	20.0	17.5	19.0
10	18.5	15.5	17.0	28.5	24.5	26.5	28.0	25.5	27.0	21.0	19.0	20.0
11	19.0	16.0	17.5	28.0	25.0	26.5	28.0	25.5	26.5	20.0	19.0	19.5
12	21.0	16.5	19.0	26.5	23.0	25.0	27.5	25.5	26.5	20.0	18.0	19.0
13	23.0	19.5	21.5	27.0	23.0	25.5	29.0	25.5	27.5	20.5	19.0	19.5
14	22.5	20.0	21.0	27.5	25.0	26.0	29.0	27.5	28.0	20.5	18.5	19.5
15	23.0	20.5	22.0	27.5	24.0	26.0	29.0	26.5	28.0	20.0	18.5	19.0
16	24.0	21.0	22.5	26.5	24.0	25.5	26.5	25.0	26.0	19.5	17.0	18.5
17	23.0	21.0	22.0	27.5	25.0	26.0	25.0	23.5	24.5	18.5	17.0	17.5
18	24.0	20.5	22.5	28.0	25.0	26.5	25.0	23.5	24.0	18.5	16.5	17.5
19	25.0	21.5	23.5	26.5	23.5	25.5	24.0	22.0	23.0	20.0	18.0	19.0
20	26.0	23.5	24.5	25.5	23.0	24.0	23.5	22.0	22.5	19.5	18.5	19.0
21	26.5	22.0	24.5	23.0	22.0	22.5	23.0	21.5	22.0	19.5	19.0	19.5
22	25.5	22.5	24.0	23.5	22.5	23.0	22.0	20.0	21.5	19.0	18.0	18.5
23	24.5	21.5	23.0	24.5	22.5	23.5	21.5	19.5	20.0	19.5	17.5	18.5
24	24.0	21.5	23.0	24.5	23.0	24.0	19.5	18.0	18.5	19.0	17.5	18.5
25	24.5	22.0	23.5	25.5	23.0	24.0	19.5	17.5	18.5	18.5	17.5	18.0
26	25.0	23.0	24.0	24.0	22.0	23.5	20.5	18.5	19.5	18.0	16.5	17.5
27	23.0	21.0	22.5	23.5	22.0	22.5	22.0	19.5	21.0	17.5	16.0	17.0
28	23.5	20.5	22.0	24.0	22.5	23.5	23.0	21.5	22.5	18.0	16.5	17.5
29	22.5	21.0	22.0	25.5	23.5	24.5	23.0	21.5	22.5	17.5	15.5	16.5
30	21.0	19.5	20.5	26.0	24.0	25.0	21.5	20.5	21.0	17.5	16.0	17.0
31	---	---	---	27.0	25.0	26.0	21.0	19.5	20.5	---	---	---
MONTH	26.5	15.0	21.0	28.5	17.5	24.0	29.0	17.5	24.0	22.0	15.5	19.0

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 "Naversink River at Godeffroy, NY."

REVISED RECORDS.--WSP 1502: 1951 (M). WDR NY-82-1: Drainage area. WDR NY-87-1: 1986.

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.--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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	284	552	1150	e270	236	e260	557	289	452	106	212	186
2	253	465	909	e210	e700	e250	539	254	407	108	195	167
3	263	412	758	e200	1150	296	497	242	359	105	181	152
4	631	377	664	e180	850	340	488	235	340	103	175	267
5	475	347	588	e170	e700	348	471	232	312	102	171	893
6	366	310	503	e180	e620	328	422	427	277	104	170	420
7	399	285	440	e190	e520	351	393	569	247	115	171	325
8	430	268	399	e200	e500	409	364	453	230	119	159	272
9	362	243	374	e190	e450	462	339	391	226	145	132	245
10	330	265	359	e180	e400	694	316	369	221	140	118	217
11	344	308	341	e170	e380	686	277	382	204	137	115	182
12	390	307	321	e170	e360	631	266	397	192	145	113	160
13	388	317	311	e180	e370	707	250	342	183	139	121	177
14	335	359	287	e160	e360	889	242	333	176	136	118	162
15	301	372	293	e140	e320	752	246	305	166	126	112	142
16	277	352	353	e140	350	673	321	278	160	119	107	130
17	270	344	319	e150	333	613	283	279	176	128	109	125
18	260	533	277	e160	322	580	262	321	173	142	109	127
19	243	515	259	e190	310	542	248	641	158	146	98	123
20	231	443	289	e250	437	510	227	759	148	149	81	117
21	269	402	348	317	507	445	218	735	143	344	78	118
22	288	327	336	303	e420	403	213	861	138	332	73	106
23	254	329	302	e250	e400	392	209	820	138	210	70	114
24	236	326	275	e220	e380	411	222	692	140	381	158	105
25	235	312	283	213	e350	565	213	1450	124	357	205	101
26	221	302	358	217	e330	1110	201	1410	121	257	143	104
27	214	296	325	e200	e310	1240	192	1020	117	508	116	97
28	1510	279	289	e170	e290	933	336	818	113	333	108	90
29	1060	278	e270	e170	e280	758	334	671	110	327	206	93
30	786	1180	e250	e180	---	664	323	586	106	236	623	94
31	651	---	e240	182	---	599	---	514	---	223	266	---
MEAN	405	380	402	197	446	576	316	551	202	194	155	187
MAX	1510	1180	1150	317	1150	1240	557	1450	452	508	623	893
MIN	214	243	240	140	236	250	192	232	106	102	70	90
IN.	1.52	1.38	1.51	.74	1.57	2.16	1.15	2.07	.73	.73	.58	.68

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	299	448	521	443	479	851	987	635	416	284	231	235
MAX	2033	1210	1272	1504	1271	2303	2669	1519	1722	1404	1327	967
(WY)	1956	1952	1953	1949	1951	1945	1940	1943	1972	1945	1955	1938
MIN	75.2	86.3	119	72.6	118	297	248	180	111	54.2	64.7	68.4
(WY)	1942	1966	1981	1981	1980	1981	1985	1962	1957	1966	1949	1941

01437500 NEVERSINK RIVER AT GODEFFROY, NY--Continued

SUMMARY STATISTICS	FOR 1988 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	334		486a	Unadjusted
HIGHEST ANNUAL MEAN			943	1952
LOWEST ANNUAL MEAN			215	1965
HIGHEST DAILY MEAN	1510	Oct 28	15900	Aug 19 1955
LOWEST DAILY MEAN	70	Aug 23	32	Aug 17 1965
INSTANTANEOUS PEAK FLOW	2350	Oct 28	33000b	Aug 19 1955
INSTANTANEOUS PEAK STAGE	6.27b	Feb 2	12.49	Aug 19 1955
INSTANTANEOUS LOW FLOW	67	Aug 2	0	Jul 21 1911
ANNUAL RUNOFF (INCHES)	14.8		21.5a	
10 PERCENTILE	636		1070	
50 PERCENTILE	280		294	
95 PERCENTILE	106		82.5	

a Since water year 1938
b From rating curve extended above 11,000 ft^3/s, on basis of slope-area measurement of peak flow
c Ice jam
e Estimated

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 mi^2.

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.--Records excellent except for period of ice effect, Dec. 31 to Mar. 26, and from July 29 to Sept. 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.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4950	6680	11800	e2700	e2400	e3000	9430	5270	5970	1730	2280	2370
2	4830	5650	9550	e3500	e4800	e3400	8570	4650	5700	1820	2960	1760
3	4500	5160	8300	e3200	e16000	e3800	8000	4410	5010	1770	3110	1670
4	5490	4930	7520	e2700	e13800	e4000	7850	3870	4360	1840	2800	1250
5	5430	4600	6930	e3100	e11800	e4000	7760	3650	3430	1790	2240	2720
6	5220	4330	5850	e3600	e9600	e3100	7090	4030	3180	1820	2260	3010
7	4540	4100	5690	e2800	e7700	e3300	6280	4960	3340	1660	1590	2410
8	4790	3090	5670	e2800	e6400	e4100	5870	4570	3150	1550	1400	1970
9	4810	3030	5380	e3000	e6100	e4600	5060	4000	2930	1710	1960	1490
10	4400	3780	4900	e2300	e5400	e7000	4260	3680	2760	1770	1840	1590
11	4430	4050	4680	e2200	e5200	e9900	3920	3510	2510	1810	2040	1650
12	4250	4110	4120	e2900	e4800	e8100	3650	3310	1780	2470	2280	1640
13	3760	4300	3770	e3000	e4600	e7300	3610	3350	1740	2230	2170	1990
14	3420	4080	3960	e3200	e4000	e9600	3440	2820	2890	1880	2370	1530
15	3440	3450	3960	e3000	e3700	e9500	3020	2670	2660	2190	1680	1660
16	3100	3700	4270	e2100	e4500	e8100	2990	2490	2710	1890	2230	2040
17	2690	3690	4640	e1700	e4700	e7300	2820	2510	2600	1930	1390	1750
18	2240	4480	4170	e2000	e4600	e6600	2720	2890	2270	1810	1620	2010
19	2350	5640	3350	e2800	e4300	e6400	2780	4350	1920	2360	1670	2010
20	2350	5080	3130	e3300	e4500	e5700	2740	8460	1930	2120	1710	2110
21	2260	4610	4190	e3800	e4900	e5200	2560	12100	2200	3530	1640	2000
22	2510	3850	4690	e4200	e4900	e4900	2320	11700	2570	3310	1640	1970
23	2810	3370	4370	e3600	e4900	e4600	2210	14300	2570	2980	1740	1980
24	2390	4220	3760	e2800	e5000	e4600	2020	11600	2290	3250	2040	1920
25	1990	3990	3300	e2500	e4400	e5800	2350	13900	1710	3090	2500	1810
26	2080	3550	3830	e2900	e4300	e11700	2530	14600	1670	3270	2100	1750
27	2630	3280	4270	e2500	e3800	26900	2310	12900	1670	3850	1870	1790
28	8190	3250	4320	e2100	e3200	21000	2820	10800	1750	4950	1590	1690
29	14400	2820	4340	e2300	e3000	15500	5530	8330	1770	4240	1860	1850
30	10400	7410	4080	e2500	---	12400	5380	7020	1770	3820	3760	1790
31	8610	---	e3750	e2300	---	10800	---	6070	---	2640	3950	---
MEAN	4492	4276	5050	2819	5769	7813	4396	6541	2760	2486	2138	1906
MAX	14400	7410	11800	4200	16000	26900	9430	14600	5970	4950	3950	3010
MIN	1990	2820	3130	1700	2400	3000	2020	2490	1670	1550	1390	1250

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	3365	5062	6221	5746	6033	10310	12120	7477	4460	3065	2606	2723
MAX	15690	11760	14050	15050	15120	24480	31560	16090	15200	11220	14230	9167
(WY)	1956	1952	1974	1949	1976	1945	1940	1943	1972	1945	1955	1960
MIN	806	995	1968	1318	1748	3191	3322	2215	1214	864	715	892
(WY)	1942	1965	1965	1981	1980	1981	1985	1965	1965	1954	1954	1941

01438500 DELAWARE RIVER AT MONTAGUE, NJ--Continued

SUMMARY STATISTICS	FOR 1988 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	4205		5760	Unadjusted
HIGHEST ANNUAL MEAN			8621	1952
LOWEST ANNUAL MEAN			2309	1965
HIGHEST DAILY MEAN	26900	Mar 27	187000	Aug 19 1955
LOWEST DAILY MEAN	1250	Sep 4	412	Aug 23 1954
INSTANTANEOUS PEAK FLOW	30200	Mar 27	250000a	Aug 19 1955
INSTANTANEOUS PEAK STAGE	22.08	Feb 3	35.15	Aug 19 1955
INSTANTANEOUS LOW FLOW	997	Sep 4	382	Aug 24 1954
10 PERCENTILE	7660		12400	
50 PERCENTILE	3400		3460	
95 PERCENTILE	1680		1240	

a From rating curve extended above 90,000 ft^3/s on basis of flood-rating study
e Estimated

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 mi^2.

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.--Records good except for estimated daily discharges, which are fair. Flow occasionally regulated by ponds above station. Several measurements of water temperature were made during the year. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	128	596	e85	98	97	118	102	103	22	45	52
2	49	114	353	e80	264	90	123	87	106	22	34	38
3	52	120	268	e68	474	106	116	79	95	22	29	32
4	177	111	232	e78	312	164	113	75	90	21	25	42
5	134	93	200	e50	226	235	109	76	84	21	22	141
6	97	84	175	e47	198	174	102	115	75	20	21	80
7	87	78	156	e55	173	174	98	170	68	19	19	55
8	84	75	144	e51	157	216	107	127	65	18	19	44
9	72	74	139	e43	140	232	99	105	69	18	18	36
10	66	82	132	e38	127	298	90	97	72	26	17	32
11	67	112	125	e37	116	283	85	108	62	23	16	29
12	73	115	119	e48	118	249	81	116	57	18	15	28
13	70	122	113	e57	130	255	79	98	54	19	29	54
14	62	140	107	e48	127	247	75	116	49	18	23	73
15	57	162	119	e41	105	204	75	105	46	16	17	44
16	54	151	223	e42	110	173	75	91	43	17	15	33
17	52	154	163	e35	108	156	76	97	42	22	14	29
18	51	368	131	e36	106	145	73	145	41	23	13	29
19	49	318	117	e44	105	136	76	300	38	19	13	30
20	53	235	128	125	200	128	72	459	35	18	12	27
21	54	193	148	182	216	115	68	337	34	20	12	30
22	53	155	128	147	150	104	64	257	32	24	11	30
23	48	143	117	106	145	104	61	224	31	24	11	26
24	45	135	109	96	145	105	66	194	29	54	45	29
25	44	131	110	90	127	109	66	286	28	73	68	26
26	42	125	115	95	110	163	61	309	27	46	39	23
27	48	120	107	100	115	228	58	210	25	100	26	21
28	410	111	101	98	107	185	113	170	25	99	21	19
29	286	114	e95	97	100	151	115	147	24	101	40	18
30	187	632	e75	93	---	134	113	127	23	53	226	18
31	148	---	e75	87	---	123	---	114	---	47	87	---
MEAN	91.2	156	159	74.2	159	170	87.6	163	52.4	33.6	32.3	38.9
MAX	410	632	596	182	474	298	123	459	106	101	226	141
MIN	42	74	75	35	98	90	58	75	23	16	11	18
IN.	1.64	2.73	2.86	1.34	2.68	3.07	1.53	2.93	.91	.61	.58	.68

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	52.0	95.3	119	117	134	205	207	140	86.9	58.3	51.1	46.7
MAX	306	292	369	367	275	513	570	291	334	333	386	258
(WY)	1956	1928	1974	1979	1951	1936	1983	1984	1972	1928	1955	1933
MIN	9.57	12.2	20.6	24.5	37.3	82.0	65.9	44.0	23.7	13.1	9.55	7.01
(WY)	1964	1965	1947	1981	1940	1985	1946	1941	1965	1966	1966	1964

SUMMARY STATISTICS	FOR 1988 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	101		109	
HIGHEST ANNUAL MEAN			210	1928
LOWEST ANNUAL MEAN			43.4	1965
HIGHEST DAILY MEAN	632	Nov 30	6310	Aug 19 1955
LOWEST DAILY MEAN	11	Aug 22	4.1	Sep 11 1966
INSTANTANEOUS PEAK FLOW	997	Nov 30	9560a	Aug 19 1955
INSTANTANEOUS PEAK STAGE	4.39	Nov 30	12.58b	Aug 19 1955
INSTANTANEOUS LOW FLOW	10	Aug 23	3.6	Sep 25 1964
ANNUAL RUNOFF (INCHES)	21.5		23.2	
10 PERCENTILE	196		238	
50 PERCENTILE	87		70	
95 PERCENTILE	19		14	

a From rating curve extended above 2,000 ft^3/s on basis of slope-area measurement of peak flow
b From high-water mark in gage house
e Estimated

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 mi^2, approximately.

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.--Records good except for periods of estimated daily discharges, which are 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 satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 19, 1955, reached a stage of 37.4 ft, present datum (discharge about 260,000 cfs). Information on stage supplied by Harlan Fish, retired caretaker of Worthington State Forest.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5630	8110	16200	e3730	e3050	3660	10900	6240	7170	1850	2510	3380
2	5660	6900	13000	e3600	e4680	4000	9430	5580	6880	1820	3120	2290
3	5130	6490	10500	e3870	e13200	4630	8980	5300	6300	1960	3220	1990
4	6250	5750	9260	e3460	e17700	5500	8290	4850	5740	1920	3160	1590
5	6740	5650	8400	e3120	e13900	6020	8500	4370	4380	1960	2630	e2900
6	6380	5160	7480	e3270	e11300	4770	8040	4690	4090	2090	2520	e3730
7	5600	4910	6560	e3520	e9150	4530	7260	5770	4200	1750	1820	e3130
8	5640	4110	6840	e3050	e7810	5340	6670	5970	3930	1560	1750	e2460
9	5710	3460	6500	e3240	e7290	6120	6290	4960	3610	1940	1920	e1970
10	5190	4040	6100	e3160	e6860	7340	5300	4740	3550	1650	2020	e1790
11	5240	5200	5610	e2640	e6400	11700	4590	4390	3180	1870	2140	e1870
12	5260	4690	5500	e2900	e5780	10300	4400	4370	2420	2320	2270	e1840
13	4550	5200	4680	e3480	e5450	9040	4160	4040	2210	2570	2390	e2260
14	4170	5060	4430	e3570	e4850	10500	4020	3940	2970	1900	2320	e2070
15	3970	4400	4950	e3410	e4670	11400	3800	3500	3170	2220	2100	e1830
16	3830	4360	5140	e2890	e5040	9890	3520	3310	3130	2050	2280	e2020
17	3390	4630	5600	e2280	e5880	8790	3390	3140	3100	1860	1810	e2120
18	2780	5560	5280	e2270	5820	8120	3270	3590	2760	1960	1560	e2030
19	2640	6890	4670	e2880	5590	7640	3310	5030	2210	2360	1820	e2180
20	3000	6650	3780	e3770	5820	7000	3250	8900	2160	2190	1720	e2320
21	2610	6140	4320	e4270	6140	6320	3260	15500	2440	2750	1730	e2220
22	2740	5400	5480	e5070	6500	6130	2870	13500	2740	3710	1770	e2150
23	3180	4130	5340	e4620	5900	5720	2710	17600	2810	3210	1780	e2170
24	2990	4860	4920	e3690	6230	5590	2480	14500	2760	3420	2220	e2140
25	2480	4990	4190	e3240	5910	6070	2560	14700	2030	3660	2500	e1980
26	2280	4840	4110	e3340	5520	9750	2930	18400	1800	3730	2620	e1940
27	2770	3830	4980	e3340	4900	31100	2980	15800	1850	3880	2120	e1890
28	6250	4130	4790	e2810	4430	25000	3020	13500	1850	4900	1900	e1850
29	17900	3800	5210	e2640	3940	18300	5220	10300	1840	5240	1900	e1860
30	12900	7360	4890	e3080	---	14400	6340	8660	1900	4350	3160	e1920
31	10400	---	e4060	e3090	---	12200	---	7430	---	3310	4840	---
MEAN	5266	5223	6218	3332	6887	9254	5058	7954	3306	2644	2310	2196
MAX	17900	8110	16200	5070	17700	31100	10900	18400	7170	5240	4840	3730
MIN	2280	3460	3780	2270	3050	3660	2480	3140	1800	1560	1560	1590

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	3992	5093	6869	6073	7309	10730	12340	8267	5395	3532	2781	3150
MAX	13030	12870	16730	17960	17320	21490	24100	15670	18150	9455	6242	10310
(WY)	1978	1973	1974	1979	1976	1977	1983	1984	1972	1973	1969	1987
MIN	1193	992	1914	1437	1936	3873	3796	2746	1397	950	1101	1283
(WY)	1965	1965	1965	1981	1980	1981	1985	1965	1965	1965	1965	1965

SUMMARY STATISTICS	FOR 1988 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	4972		6312	Unadjusted
HIGHEST ANNUAL MEAN			9418	1973
LOWEST ANNUAL MEAN			2572	1965
HIGHEST DAILY MEAN	31100	Mar 27	96000	Mar 16 1986
LOWEST DAILY MEAN	1560	Jul 8	580	Jul 7 1965
INSTANTANEOUS PEAK FLOW	36000	Mar 27	110000	Mar 16 1986
INSTANTANEOUS PEAK STAGE	12.48a	Feb 3	24.00	Mar 16 1986
INSTANTANEOUS LOW FLOW	710	Sep 27	580	Jul 7 1965
10 PERCENTILE	8850		13500	
50 PERCENTILE	4100		3840	
95 PERCENTILE	1840		1580	

a Ice jam
e Estimated

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 mi^2.

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 1987 TO SEPTEMBER 1988

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	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 1987										
20...	1300	E3300	--	7.4	14.5	9.1	90	2.7	130	170
FEB 1988										
01...	1030	E3900	90	7.3	0.0	13.4	93	E1.8	20	46
MAR										
22...	1330	E6700	--	7.3	1.5	13.2	94	E1.5	<20	8
JUN										
08...	1100	E4900	83	7.6	21.0	8.3	95	<1.2	170	130
JUL										
12...	1300	E2000	102	7.2	26.5	7.8	98	3.1	20	130
AUG										
11...	1230	E2200	104	8.9	28.0	8.4	108	3.8	80	23

DATE	HARD-NESS TOTAL (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 1987									
20...	59	15	5.3	8.3	1.3	39	22	13	0.1
FEB 1988									
01...	30	9.2	1.8	6.7	1.0	17	17	11	0.2
MAR									
22...	27	7.8	1.8	5.2	1.0	14	13	8.9	0.1
JUN									
08...	28	8.3	1.8	5.6	0.7	18	12	7.9	0.3
JUL									
12...	34	9.9	2.3	6.6	1.2	21	13	8.2	0.1
AUG									
11...	32	9.5	2.0	6.8	1.1	21	11	9.8	<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 1987									
20...	2.4	91	0.066	1.03	0.20	0.92	1.9	0.120	3.2
FEB 1988									
01...	3.8	61	0.008	0.38	--	--	--	0.031	2.6
MAR									
22...	3.0	49	0.008	--	0.00	<0.20	--	--	2.5
JUN									
08...	1.5	49	0.005	0.15	<0.05	0.26	0.42	0.130	2.6
JUL									
12...	1.5	55	0.012	0.34	<0.05	0.77	1.1	0.372	5.3
AUG									
11...	1.5	54	0.010	0.15	<0.05	0.95	1.1	0.489	3.5

01443000 DELAWARE RIVER AT PORTLAND, PA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 1988 08...	1100	<0.5	20	1	<10	<10	1	9	7

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 1988 08...	150	16	30	<0.10	9	<1	<10	1

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 mi^2.

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 1987 TO SEPTEMBER 1988

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	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 1987										
12...	1045	E94	460	7.6	2.5	13.1	98	<1.2	1100	920
FEB 1988										
02...	1100	E180	404	7.3	2.0	14.2	104	2.4	490	350
MAR										
15...	1100	E210	--	8.3	4.0	14.3	112	E2.3	80	49
MAY										
23...	1045	E250	--	7.6	16.0	9.8	101	E2.0	130	350
JUL										
12...	1300	E17	601	7.7	25.0	7.7	95	<0.8	490	920
AUG										
02...	1245	E39	--	7.9	22.5	8.3	97	E1.4	2200	920

DATE	HARD-NESS TOTAL (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 1987									
12...	140	38	12	41	2.3	109	22	74	0.1
FEB 1988									
02...	110	30	9.1	28	1.9	85	22	50	0.2
MAR									
15...	130	34	11	19	13	98	22	33	0.1
MAY									
23...	130	32	11	20	1.0	99	18	34	0.2
JUL									
12...	240	59	23	31	2.4	187	29	55	0.1
AUG									
02...	220	55	19	31	2.2	153	34	57	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-PHOROUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 1987									
12...	6.5	261	0.011	0.73	0.16	0.74	1.5	0.714	7.2
FEB 1988									
02...	4.3	196	0.016	0.86	--	--	--	0.103	7.7
MAR									
15...	4.4	195	0.013	0.71	0.11	0.60	1.3	0.055	6.2
MAY									
23...	5.6	181	E0.024	0.59	0.07	0.88	1.5	0.093	7.3
JUL									
12...	4.2	316	0.068	1.64	<0.05	0.08	1.7	0.379	4.7
AUG									
02...	8.2	298	0.064	1.35	0.06	0.78	2.1	0.330	5.3

01443440 PAULINS KILL AT BALESVILLE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 (MG/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G 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 1987 12...	1045	--	560	1.5	6.5	--	--	4	--	--	--	<1
MAY 1988 23...	1045	<0.5	--	--	--	<10	1	--	<10	20	2	--

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 1987 12...	--	<10	<50	--	8	--	13000	--	20	--	500
MAY 1988 23...	1	--	--	4	--	610	--	<5	--	90	--

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 1987 12...	--	<0.10	--	10	--	<1	--	80	--	2	<1.0
MAY 1988 23...	<0.10	--	<1	--	<1	--	10	--	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)
NOV 1987 12...	<0.1	3.0	0.2	<0.4	<0.6	<0.1	0.1	<0.1	<0.1	<0.1	<0.1
MAY 1988 23...	--	--	--	--	--	--	--	--	--	--	--

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 1987 12...	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1
MAY 1988 23...	--	--	--	--	--	--	--	--	--	--	--

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 mi^2.

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.--Records good. 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	134	259	803	e160	156	225	252	188	185	41	77	66
2	119	245	593	e152	303	217	249	168	189	39	68	54
3	127	235	471	e140	532	247	237	150	167	38	59	46
4	268	226	410	e146	453	379	224	137	163	37	53	67
5	250	215	364	e98	e380	536	220	136	148	36	49	171
6	203	200	325	e96	e310	450	204	176	133	35	45	117
7	181	187	299	e104	e260	430	195	206	117	34	43	82
8	170	169	286	e101	e245	460	203	172	108	33	41	67
9	146	145	276	e75	230	452	196	150	119	34	39	58
10	135	123	268	e62	219	496	177	143	117	33	37	51
11	132	150	259	e64	211	461	164	165	105	33	37	45
12	136	162	249	e88	223	420	152	175	95	31	36	41
13	125	222	240	e112	233	408	150	155	89	33	36	73
14	112	235	230	e93	210	397	137	192	84	31	35	81
15	105	245	242	e75	203	360	134	172	79	29	34	64
16	100	245	284	e78	217	321	148	149	72	28	31	49
17	95	250	267	61	222	296	140	174	73	46	29	43
18	95	323	252	57	217	271	134	274	71	44	28	46
19	104	327	241	66	222	260	136	458	66	37	27	46
20	96	340	246	139	394	244	126	798	62	43	26	43
21	100	314	247	218	459	225	120	597	60	43	25	59
22	96	281	239	267	354	205	112	495	48	62	25	55
23	89	270	231	225	323	194	107	427	53	47	24	48
24	84	264	225	191	355	197	112	376	50	105	59	47
25	81	258	219	186	314	202	110	393	49	90	67	44
26	78	250	216	199	274	286	101	384	52	84	48	40
27	80	241	205	e174	261	446	99	322	47	197	42	36
28	432	232	196	e168	246	397	210	281	44	148	37	34
29	394	234	191	e155	234	330	238	252	44	102	43	33
30	302	496	e173	e163	---	293	209	233	41	80	116	31
31	278	---	e153	154	---	267	---	208	---	83	92	---
MEAN	156	245	287	131	285	335	167	268	91.0	56.6	45.4	57.9
MAX	432	496	803	267	532	536	252	798	189	197	116	171
MIN	78	123	153	57	156	194	99	136	41	28	24	31
IN.	1.43	2.17	2.63	1.20	2.44	3.06	1.48	2.45	.81	.52	.42	.51

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	101	162	206	216	251	370	336	217	152	118	106	106
MAX	634	479	588	712	516	963	930	552	690	527	663	626
(WY)	1956	1933	1974	1979	1951	1936	1983	1947	1972	1945	1955	1933
MIN	20.5	22.1	39.5	50.5	67.4	139	106	54.6	41.0	19.4	19.6	18.2
(WY)	1964	1965	1947	1981	1940	1965	1985	1941	1965	1955	1932	1964

SUMMARY STATISTICS	FOR 1988 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	177		194	
HIGHEST ANNUAL MEAN			362	1952
LOWEST ANNUAL MEAN			67.4	1965
HIGHEST DAILY MEAN	803	Dec 1	5950	Aug 19 1955
LOWEST DAILY MEAN	24	Aug 23	5.0	Aug 13 1930
INSTANTANEOUS PEAK FLOW	881	Dec 1	8750	Aug 19 1955
INSTANTANEOUS PEAK STAGE	3.10	Dec 1	11.12a	Aug 19 1955
INSTANTANEOUS LOW FLOW	23	Aug 22	2.8	Nov 1 1922
ANNUAL RUNOFF (INCHES)	19.1		21.0	
10 PERCENTILE	344		411	
50 PERCENTILE	158		132	
95 PERCENTILE	34		27	

a From high-water mark in gage house
e Estimated

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 1987 TO SEPTEMBER 1988

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)
NOV 1987 12...	1300	152	322	7.7	3.5	13.6	105	E1.3	20	170
FEB 1988 02...	1330	279	400	7.4	1.5	15.5	112	E2.0	20	13
MAR 15...	1245	360	337	8.6	5.5	13.4	109	2.6	20	11
MAY 23...	1245	418	294	7.6	17.0	9.8	103	E1.7	330	46
JUL 12...	1100	31	488	8.0	26.0	7.1	89	<0.9	230	350
AUG 02...	1045	69	420	8.3	25.5	9.5	117	E2.2	120	920

DATE	HARDNESS TOTAL (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)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
NOV 1987 12...	140	36	13	16	1.5	114	20	27	0.1
FEB 1988 02...	140	36	13	21	1.5	113	23	39	0.2
MAR 15...	120	30	11	15	1.6	93	18	26	0.1
MAY 23...	110	28	10	15	0.9	92	23	23	0.2
JUL 12...	200	44	21	22	1.5	163	24	38	0.1
AUG 02...	160	37	16	21	1.6	123	27	35	0.2

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 1987 12...	5.6	188	0.009	0.67	0.05	0.53	1.2	0.074	4.2
FEB 1988 02...	4.7	206	0.015	0.95	--	--	--	0.050	3.5
MAR 15...	3.9	161	0.010	0.52	0.02	0.40	0.92	0.031	4.4
MAY 23...	5.8	161	E0.040	0.41	0.07	0.68	1.1	0.075	6.4
JUL 12...	4.6	253	0.015	0.31	<0.05	0.59	0.90	0.085	5.0
AUG 02...	4.2	216	0.004	<0.05	<0.05	1.0	--	0.086	5.6

01443500 PAULINS KILL AT BLAIRSTOWN, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 (MG/KG AS C)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G 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)
NOV 1987 12...	1300	<0.5	2800	0.6	17	10	<1	2	<10	20	<1	<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)
NOV 1987 12...	1	<10	<50	5	6	210	4600	<5	20	40	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)
NOV 1987 12...	0.20	<0.10	3	<10	<1	<1	<10	40	4	<1	<1.0

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)
NOV 1987 12...	<0.1	2.0	0.1	0.2	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

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)
NOV 1987 12...	<0.1	<0.1	<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 mi^2.

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.--Records fair except for period of ice effect, Dec. 26 to Jan. 29, which are poor. Complete regulation by the Jersey Central Power and Light Co., at Yards Creek Reservoir 1.4 mi above station. Several measurements of water temperature, other than those published, were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	2.3	23	e15	2.5	2.4	21	2.8	20	1.3	1.5	1.7
2	5.1	2.2	22	e14	7.5	2.4	20	2.6	20	1.4	1.5	1.7
3	8.9	2.1	17	e15	5.1	3.2	18	2.6	17	1.0	1.5	1.7
4	6.4	2.0	24	e13	5.1	11	18	2.5	8.0	1.1	1.5	7.4
5	5.1	2.0	23	e14	3.6	15	19	3.0	7.4	.84	1.5	3.6
6	5.1	1.8	20	e47	3.1	14	19	3.8	7.1	.81	1.6	2.2
7	5.6	1.7	20	e145	3.7	11	20	3.1	7.5	1.4	1.5	2.1
8	5.0	1.6	20	e150	2.5	17	21	2.6	5.9	1.5	1.4	1.9
9	5.0	1.5	21	e130	2.3	22	15	2.6	3.1	1.6	1.4	1.9
10	5.2	2.2	21	e88	2.2	22	5.5	2.7	2.9	1.3	1.4	1.9
11	5.1	2.3	21	e130	2.2	22	4.7	3.4	2.9	1.3	1.4	1.7
12	4.7	2.3	21	e53	2.4	22	4.6	2.8	2.7	1.5	1.6	1.6
13	4.9	2.8	18	e14	2.2	20	3.5	2.9	2.6	1.5	1.5	3.3
14	4.9	3.6	19	e11	2.1	20	2.4	3.0	2.6	1.4	1.5	1.9
15	4.9	3.3	23	e13	2.1	21	2.5	2.6	2.5	1.4	1.3	1.8
16	4.9	3.0	21	e13	2.6	21	2.6	2.4	2.5	1.5	1.3	1.8
17	4.9	3.0	21	e12	2.4	21	2.3	4.6	2.7	2.5	1.4	2.0
18	4.6	15	21	e9.6	2.4	21	2.3	4.8	2.7	1.5	1.4	2.0
19	4.7	12	21	e10	2.7	20	2.3	11	2.6	1.5	1.3	1.8
20	4.9	12	20	e13	8.6	18	2.2	29	2.2	1.9	1.2	1.9
21	5.1	14	19	e11	4.6	19	2.1	25	1.8	1.7	1.2	2.0
22	4.8	12	20	e12	3.8	19	1.9	20	1.8	1.7	1.0	1.8
23	5.0	9.2	20	e11	3.6	19	2.0	54	1.7	1.6	1.2	1.8
24	4.7	9.2	20	e10	3.2	20	2.0	85	1.7	2.3	3.4	1.8
25	4.3	17	20	e9.4	2.9	20	1.9	90	1.8	1.5	2.0	1.7
26	4.4	18	e18	e10	2.6	23	1.9	50	1.7	3.2	1.6	1.6
27	5.1	15	e17	e11	2.6	19	1.9	22	1.5	2.7	1.7	1.6
28	7.6	16	e17	e14	2.5	19	4.1	22	1.1	1.9	1.6	1.6
29	3.2	18	e18	e9.2	2.4	19	3.7	20	1.2	1.8	3.6	1.5
30	2.8	27	e19	1.9	---	20	3.3	20	1.2	1.7	2.4	1.6
31	2.6	---	e20	1.8	---	21	---	19	---	2.0	1.8	---
MEAN	4.99	7.80	20.2	32.6	3.29	17.5	7.69	16.8	4.68	1.62	1.62	2.10
MAX	8.9	27	24	150	8.6	23	21	90	20	3.2	3.6	7.4
MIN	2.6	1.5	17	1.8	2.1	2.4	1.9	2.4	1.1	.81	1.0	1.5

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	4.37	8.01	14.2	15.3	16.0	16.8	19.1	13.8	8.91	5.06	4.11	4.11
MAX	17.3	22.4	37.7	51.0	36.4	50.1	55.3	28.9	35.2	19.9	21.6	27.0
(WY)	1980	1976	1974	1979	1979	1977	1983	1984	1972	1984	1969	1987
MIN	.97	1.20	.91	1.66	2.24	6.99	4.43	1.58	1.0	.89	.65	.58
(WY)	1981	1967	1981	1981	1985	1973	1981	1970	1980	1980	1980	1980

SUMMARY STATISTICS	FOR 1988 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	10.2		10.8	
HIGHEST ANNUAL MEAN			14.9	1984
LOWEST ANNUAL MEAN			3.17	1985
HIGHEST DAILY MEAN	150	Jan 8	225	Jan 18 1977
LOWEST DAILY MEAN	.81	Jul 6	.02	Jun 19 1970
INSTANTANEOUS PEAK FLOW	---	---	583	Feb 24 1977
INSTANTANEOUS PEAK STAGE	---	---	3.92	Feb 24 1977
INSTANTANEOUS LOW FLOW	.58	Jul 6	0	Sep 12 1971
10 PERCENTILE	21		26	
50 PERCENTILE	3.3		4.5	
95 PERCENTILE	1.3		.75	

e Estimated

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 mi^2.

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.--Records good. Several measurements of water temperature, other than those published, were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	112	141	483	139	e136	190	188	145	185	52	89	48
2	103	135	395	130	e280	184	182	135	188	52	79	44
3	112	129	329	107	e398	206	177	127	172	48	73	42
4	214	125	292	125	e369	354	172	116	162	46	68	87
5	181	120	267	94	e317	429	169	112	152	45	64	129
6	152	113	246	86	e264	354	160	152	139	44	61	81
7	136	108	226	105	e234	324	157	162	129	45	57	63
8	130	103	215	98	e209	330	160	131	129	43	53	53
9	119	102	208	100	e194	328	152	115	131	43	51	48
10	111	118	200	99	e186	355	141	112	129	43	50	45
11	110	193	192	90	e177	329	138	136	120	42	48	42
12	116	189	186	93	173	302	135	163	112	42	47	40
13	109	205	179	96	187	296	133	133	107	43	47	86
14	100	221	168	89	172	288	127	145	99	41	44	83
15	96	214	189	84	173	266	123	145	94	39	42	59
16	93	195	260	84	219	242	126	128	90	38	40	50
17	89	188	213	84	215	228	127	177	90	62	40	47
18	86	262	182	95	209	215	121	273	87	68	40	49
19	85	231	168	116	205	208	121	337	80	51	37	46
20	85	204	186	180	453	198	119	727	76	118	36	44
21	88	184	200	245	395	185	112	508	74	95	35	45
22	91	160	179	219	284	172	105	410	70	87	34	44
23	83	153	166	165	272	166	104	415	68	80	35	41
24	83	154	156	145	290	165	106	437	64	149	63	41
25	81	159	156	144	249	167	105	468	61	118	73	39
26	77	161	154	145	220	218	101	405	58	115	53	39
27	81	154	147	130	209	349	97	353	59	241	48	38
28	368	149	140	e131	200	285	211	286	57	176	43	37
29	266	157	139	e132	194	240	188	245	55	123	55	36
30	197	604	100	e127	---	213	161	220	53	98	82	34
31	157	---	117	e121	---	200	---	202	---	93	57	---
MEAN	126	178	208	123	244	258	141	246	103	76.8	53.0	52.7
MAX	368	604	483	245	453	429	211	727	188	241	89	129
MIN	77	102	100	84	136	165	97	112	53	38	34	34
IN.	1.37	1.87	2.26	1.33	2.49	2.80	1.48	2.67	1.08	.84	.58	.55

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	83.3	126	158	166	198	277	260	180	128	107	92.5	87.8
MAX	337	409	426	627	372	750	720	383	556	487	410	347
(WY)	1956	1928	1974	1979	1939	1936	1983	1984	1972	1945	1928	1960
MIN	18.0	21.4	27.0	33.9	60.8	93.8	76.9	55.7	35.0	19.0	15.1	16.6
(WY)	1965	1966	1966	1966	1940	1965	1985	1965	1965	1965	1965	1964

SUMMARY STATISTICS	FOR 1988 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	150		155	
HIGHEST ANNUAL MEAN			285	1952
LOWEST ANNUAL MEAN			45.8	1965
HIGHEST DAILY MEAN	727	May 20	2040	Jan 25 1979
LOWEST DAILY MEAN	34	Aug 22	12	Aug 18 1965
INSTANTANEOUS PEAK FLOW	845	May 20	2130	Jan 25 1979
INSTANTANEOUS PEAK STAGE	3.58	May 20	5.97a	Jan 25 1979
INSTANTANEOUS LOW FLOW	34	Aug 22	12	Aug 17 1965
ANNUAL RUNOFF (INCHES)	19.3		19.9	
10 PERCENTILE	277		329	
50 PERCENTILE	131		111	
95 PERCENTILE	41		28	

a From high-water mark
e Estimated

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 mi^2.

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.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 10, 1903, reached a stage of 28.6 ft, from floodmark, discharge, 220,000 ft^3/s, from rating curve extended above 170,000 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6680	10000	20100	4880	4120	5120	13200	7170	8970	2220	3330	4270
2	6630	8530	17400	4260	5690	5210	11600	6540	8620	2180	3340	2890
3	6390	7810	14100	4500	13900	6010	11100	6120	7830	2290	3570	2330
4	7830	6920	12400	4430	20400	7770	10200	5680	7060	2200	3600	2670
5	8360	6820	11200	3630	16100	9330	10400	5170	5790	2280	3160	4420
6	7670	6250	10000	3450	13000	7760	9880	5640	5220	2260	2800	4620
7	7000	5940	8680	4000	11000	7050	9080	6760	5060	2180	2530	4180
8	6750	5410	8780	3570	9510	7950	8320	7060	4850	1960	2090	3330
9	6720	4460	8380	3650	8890	8720	7880	5990	4590	1960	1930	2740
10	6300	4920	7860	4180	8570	9960	6730	5640	4530	2040	2320	2300
11	6200	6330	7260	3270	7940	14400	5850	5430	4060	2140	2340	2290
12	6270	5860	7080	3180	7340	13500	5620	5410	3550	2300	2500	2210
13	5750	6510	6190	4140	6610	12000	5280	4990	2950	2900	2770	2780
14	5160	6540	5830	4050	5990	13100	5140	5030	3190	2310	2540	2950
15	4800	6020	6450	3790	6030	14500	4920	4470	3800	2370	2650	2310
16	4760	5810	7220	3720	6560	12700	4510	4190	3690	2420	2170	2250
17	4280	6040	7270	3080	7540	11300	4380	4110	3670	2560	2350	2580
18	3650	7660	6920	2850	7200	10400	4230	4880	3420	2490	1710	2400
19	3410	9060	6220	3280	7010	9720	4290	6640	2930	2410	1950	2500
20	3710	8870	5370	4670	8850	8940	4160	14500	2700	2890	1930	2680
21	3310	8160	5820	5760	9020	8080	4100	19800	2750	3070	1990	2600
22	3470	7110	6880	6290	8240	7710	3710	18000	3030	4630	1920	2490
23	3790	5910	6830	5930	7880	7130	3490	21800	3190	3930	1920	2470
24	3760	6150	6360	4920	8210	6920	3310	19600	3270	4400	2710	2460
25	3340	6530	5570	4390	7770	7210	3260	18600	2700	4640	3040	2280
26	2980	6280	5330	4270	6790	11000	3570	22300	2270	4430	3080	2240
27	3200	5240	6130	4370	6570	30600	3670	19100	2230	5210	2560	2120
28	7480	5450	6040	3860	6180	27900	3960	16600	2190	5700	2290	2110
29	18700	5270	6400	3330	5400	21200	5560	13300	2240	6290	2310	2020
30	15600	12200	5510	3830	---	17100	7440	11100	2250	5000	3780	2120
31	12400	---	4520	4170	---	14700	---	9580	---	4240	5280	---
MEAN	6334	6802	8068	4119	8562	11450	6295	10040	4087	3158	2660	2720
MAX	18700	12200	20100	6290	20400	30600	13200	22300	8970	6290	5280	4620
MIN	2980	4460	4520	2850	4120	5120	3260	4110	2190	1960	1710	2020

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	4611	7123	8386	7894	8378	14260	15970	9851	5944	4359	3678	3843
MAX	19570	21140	20590	20890	19930	42520	40720	19960	22280	16840	19260	13940
(WY)	1956	1928	1974	1949	1976	1936	1940	1947	1972	1928	1955	1938
MIN	105	1226	148	168	245	524	451	326	1590	1017	881	1199
(WY)	1942	1965	1923	1981	1980	1981	1985	1965	1965	1965	1954	1941

SUMMARY STATISTICS	FOR 1988 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	6192		7849	Unadjusted
HIGHEST ANNUAL MEAN			14130	1928
LOWEST ANNUAL MEAN			2990	1965
HIGHEST DAILY MEAN	30600	Mar 27	184000	Aug 19 1955
LOWEST DAILY MEAN	1710	Aug 18	610	Aug 25 1954
INSTANTANEOUS PEAK FLOW	37000	Mar 27	273000a	Aug 19 1955
INSTANTANEOUS PEAK STAGE	10.88	Mar 27	30.21b	Aug 19 1955
INSTANTANEOUS LOW FLOW	1400	Aug 18	609	Sep 28 1943
10 PERCENTILE	11600		16800	
50 PERCENTILE	5250		5050	
95 PERCENTILE	2170		1470	

a From rating curve extended above 170,000 ft^3/s on basis of flood-routing study
b From high-water mark in gage house

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 mi^2.

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 1987 TO SEPTEMBER 1988

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	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 1987										
20...	1100	E3500	166	7.1	14.0	8.6	85	3.0	80	110
FEB 1988										
10...	1215	E9200	136	7.7	3.5	10.5	79	<0.7	40	79
MAR										
22...	1100	E7900	--	7.8	4.5	13.5	103	E2.4	<20	4
JUN										
16...	1300	E3400	179	8.4	28.0	8.5	109	E2.2	230	130
JUL										
12...	1130	E2300	152	7.1	27.5	6.9	88	E1.5	330	540
AUG										
11...	1040	E2700	148	8.2	30.0	7.9	105	3.2	210	920

DATE	HARD-NESS TOTAL (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 1987									
20...	70	18	6.0	9.6	1.5	36	24	15	0.1
FEB 1988									
10...	44	12	3.3	6.7	1.1	24	16	9.9	0.1
MAR									
22...	51	13	4.6	7.2	1.1	35	21	12	0.1
JUN									
16...	64	17	5.3	8.5	0.50	45	23	11	0.1
JUL									
12...	52	14	4.1	8.7	1.6	36	25	11	0.1
AUG									
11...	51	14	3.8	8.6	1.3	32	15	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 1987									
20...	2.8	99	0.067	1.13	0.25	0.94	2.1	0.040	3.6
FEB 1988									
10...	4.2	68	0.004	0.65	--	--	--	<0.020	2.1
MAR									
22...	3.7	84	0.016	--	0.22	0.50	--	--	3.9
JUN									
16...	1.4	94	0.014	0.53	0.17	0.46	1.0	0.027	4.0
JUL									
12...	2.3	88	0.013	0.57	0.06	0.50	1.1	0.817	3.6
AUG									
11...	2.1	76	0.011	0.43	0.07	0.20	0.64	0.570	4.7

01447000 DELAWARE RIVER AT NORTHAMPTON STREET AT EASTON, PA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 1988 16...	1300	<0.5	20	2	<10	10	<1	<1	8

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 1988 16...	70	<5	40	<0.10	6	<1	<10	4

01453000 LEHIGH RIVER AT BETHLEHEM, PA

LOCATION.--Lat 40°36'55", long 75°22'45", Lehigh County, PA, 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 mi^2 includes that of Monocacy Creek. At site used prior to Oct. 1, 1928, 1,229 mi^2.

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. WSO 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 estimated daily discharges, 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 measurements of water temperature were made during the year.

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 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2210	2050	7850	e1500	1510	2140	3140	2050	3210	e775	1990	1750
2	2030	2000	6100	e1400	2660	2050	2960	1970	3800	e785	1770	1300
3	2290	2140	5030	1280	5700	2120	2840	2150	3430	e750	1460	1080
4	2360	1810	4440	e1200	5220	3410	2800	1950	2840	e715	1320	1960
5	2010	1610	3560	e1150	5060	4860	2800	1710	2670	e680	1230	3890
6	1850	1560	3240	e1100	3850	3810	2640	2430	2500	680	1110	3120
7	1950	1500	3040	e1060	3350	3480	2500	2630	2100	703	1170	3070
8	2020	1450	2740	e1050	3200	3300	2540	2630	1810	683	1130	2520
9	1920	1440	2510	e1050	2460	3280	2230	2550	1870	736	1070	1780
10	1640	1670	2570	e1040	2310	3620	2080	2330	2110	773	934	1540
11	1600	1960	2370	e1040	2380	3880	2020	2340	1940	763	845	1360
12	1750	1830	2300	e1030	2340	3520	1970	2140	2000	774	837	1290
13	1840	1830	2120	e1030	2350	3430	1870	2020	1790	756	842	1890
14	1650	1850	2020	e1020	2180	3530	1830	2070	1470	764	834	2160
15	1470	1850	2210	e1020	2070	3820	1750	1890	1330	734	798	1780
16	1260	1810	2820	e1010	2380	3280	1710	1800	1240	794	741	1400
17	1320	1960	2420	e1010	2230	2750	1670	2080	1340	2230	827	1430
18	1610	3070	2320	e1000	2150	2490	1670	2740	1310	2700	1050	1640
19	1310	3400	2030	1390	2330	2280	1680	5890	1280	1660	809	1230
20	1390	3220	2060	2010	4700	2150	1690	13700	1270	2070	778	1290
21	1380	2930	2180	2880	4090	2080	1550	11400	1180	2390	738	1330
22	1310	2600	2390	2720	2990	2020	1520	10000	968	2870	704	1030
23	1260	2350	2260	2080	2960	1860	1450	11000	999	2530	698	946
24	1230	2050	2020	1900	3010	1820	1470	7810	963	4320	1610	927
25	1190	2180	1990	1850	2650	1860	1470	8230	909	3460	1750	958
26	1180	2160	2020	1680	2280	3860	1380	7610	1260	4490	1390	939
27	1190	2090	1950	1460	2170	4950	1330	6030	1150	4800	1080	941
28	2820	1930	1900	1380	2060	5740	1700	4640	809	3470	838	785
29	2930	2140	1860	1270	1990	5350	1800	4120	746	2970	1150	851
30	2720	7710	1710	1290	---	4100	1960	3820	736	2270	2530	841
31	2340	---	1520	1370	---	3390	---	3510	---	2000	2220	---
MEAN	1775	2272	2760	1396	2918	3233	2001	4427	1701	1810	1169	1568
MAX	2930	7710	7850	2880	5700	5740	3140	13700	3800	4800	2530	3890
MIN	1180	1440	1520	1000	1510	1820	1330	1710	736	680	698	785
IN.	1.60	1.98	2.49	1.26	2.46	2.92	1.75	3.99	1.48	1.63	1.05	1.37

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	1528	2108	2588	2494	2662	3968	3866	2737	1941	1607	1309	1330
MAX	5778	5660	6991	7898	5913	11920	9038	6489	7272	6362	6192	6907
(WY)	1956	1927	1984	1979	1915	1936	1983	1942	1972	1945	1955	1987
MIN	308	370	470	286	668	1632	1428	1020	681	366	405	334
(WY)	1911	1910	1931	1981	1934	1981	1985	1926	1965	1965	1964	1964

01453000 LEHIGH RIVER AT BETHLEHEM, PA--Continued

SUMMARY STATISTICS	FOR 1988 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	2253		2342	Unadjusted
HIGHEST ANNUAL MEAN			3973	1952
LOWEST ANNUAL MEAN			1165	1965
HIGHEST DAILY MEAN	13700	May 20	70400	Aug 19 1955
LOWEST DAILY MEAN	680	Jul 5	160	Oct 15 1910
INSTANTANEOUS PEAK FLOW	15200	May 20	92000a	May 23 1942
INSTANTANEOUS PEAK STAGE	7.69	May 20	25.9b	May 23 1942
INSTANTANEOUS LOW FLOW	---		125	Jun 28 1965
ANNUAL RUNOFF (INCHES)	23.92		24.87	Unadjusted
10 PERCENTILE	3800		4760	
50 PERCENTILE	1940		1650	
95 PERCENTILE	771		494	

a From rating curve extended above 48,000 ft^3/s
b From floodmark, present site, and datum
e Estimated

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 mi^2.

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 1987 TO SEPTEMBER 1988

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	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 1987										
21...	1045	E21	259	7.5	11.0	10.9	100	3.1	1700	>2400
FEB 1988										
10...	1045	E33	215	7.7	1.5	15.0	107	<1.0	20	22
MAR										
17...	1100	E36	209	8.9	5.0	15.2	120	E1.3	20	49
JUN										
06...	1330	E27	--	7.4	18.0	11.0	117	E1.1	2200	920
JUL										
19...	1320	E7.8	258	7.6	25.0	9.3	114	4.6	9200	>2400
AUG										
10...	1015	E7.6	280	8.5	25.0	13.0	159	4.5	1100	350

DATE	HARD-NESS TOTAL (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 1987									
21...	92	21	9.5	11	2.6	69	22	15	0.1
FEB 1988									
10...	72	17	7.1	9.8	1.6	47	20	15	0.2
MAR									
17...	65	15	6.7	8.9	1.4	45	18	14	0.1
JUN									
06...	73	17	7.3	9.2	1.5	48	19	14	0.3
JUL									
19...	91	21	9.3	12	2.9	64	20	18	0.1
AUG									
10...	100	23	11	14	2.7	75	18	19	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 1987									
21...	13	136	0.081	2.20	0.25	0.49	2.7	0.370	3.7
FEB 1988									
10...	14	113	0.011	1.83	--	--	--	0.110	1.7
MAR									
17...	12	103	0.013	1.79	0.13	0.40	2.2	0.124	2.6
JUN									
06...	14	111	0.057	1.55	<0.05	0.41	2.0	0.135	2.8
JUL									
19...	15	137	0.067	1.96	0.24	1.7	3.6	0.808	3.3
AUG									
10...	8.1	141	0.047	2.31	0.21	1.0	3.3	0.650	4.1

01455200 POHATCONG CREEK AT NEW VILLAGE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 (MG/KG AS C)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G 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 1987 21...	1045	<0.5	500	0.8	6.6	<10	<1	<1	<10	<10	<1	<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 1987 21...	1	<10	<50	3	<1	130	3000	<5	<10	20	99

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 1987 21...	<0.10	<0.10	<1	<10	<1	<1	<10	20	2	26	<1.0

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 1987 21...	0.1	<1.0	0.1	<1.0	<1.0	<0.1	0.1	<0.1	<0.1	<0.1	<0.1

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 1987 21...	<0.1	<0.1	<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 mi^2.

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 1987 TO SEPTEMBER 1988

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	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 1987										
05...	1030	E50	261	7.3	12.0	12.4	120	E2.2	<20	8
FEB 1988										
03...	1030	E38	249	7.6	2.0	13.9	103	E1.3	<20	220
APR										
28...	1315	E4.5	350	7.5	13.5	10.4	104	3.1	110	130
JUN										
02...	1100	E8.3	384	8.8	21.5	8.6	101	E1.9	70	27
JUL										
05...	1030	E9.2	342	8.0	24.0	8.4	102	E1.8	<20	17
AUG										
15...	1330	E4.2	--	7.5	29.0	7.3	99	<1.0	130	140

DATE	HARD-NESS TOTAL (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 1987									
05...	54	14	4.6	23	1.0	28	16	43	0.1
FEB 1988									
03...	56	15	4.6	23	1.3	28	17	43	0.2
APR									
28...	65	17	5.5	30	1.1	34	20	55	0.1
JUN									
02...	70	18	6.2	32	1.0	40	15	60	0.3
JUL									
05...	71	18	6.4	34	1.0	39	16	64	0.2
AUG									
15...	63	16	5.7	30	0.8	35	15	59	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 1987									
05...	3.6	122	0.006	0.02	0.23	0.62	0.65	0.020	3.8
FEB 1988									
03...	3.7	125	0.005	<0.05	--	--	--	<0.020	3.0
APR									
28...	0.24	149	0.011	<0.05	0.01	0.50	--	0.049	4.9
JUN									
02...	1.6	158	0.010	0.12	0.06	0.40	0.52	0.070	5.1
JUL									
05...	1.1	164	0.004	<0.05	<0.05	0.40	--	0.024	5.1
AUG									
15...	1.8	149	<0.003	<0.05	0.06	0.46	--	0.047	5.4

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 1988 02...	1100	<0.5	50	1	<10	20	<1	<1	2

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 1988 02...	200	<5	40	<0.10	<1	<1	<10	1

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 mi^2.

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 1987 TO SEPTEMBER 1988

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	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 1987										
04...	1300	E94	265	7.3	11.5	12.1	114	<0.8	<20	49
FEB 1988										
03...	1200	E250	311	7.3	1.0	14.6	104	E2.2	20	170
MAY										
12...	1045	E86	--	7.7	15.0	9.8	99	2.6	230	240
JUN										
02...	1245	E110	351	7.7	19.5	8.7	98	2.4	230	350
JUL										
05...	1200	E23	533	7.7	22.0	8.4	98	2.4	460	240
AUG										
15...	1200	E21	530	7.5	26.0	6.8	87	E1.3	1300	220

DATE	HARD-NESS TOTAL (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 1987									
04...	71	17	6.9	17	1.3	49	15	32	0.1
FEB 1988									
03...	77	19	7.1	24	1.3	52	17	44	0.2
MAY									
12...	79	19	7.7	20	0.9	53	16	38	0.3
JUN									
02...	86	21	8.1	22	1.1	58	16	42	0.3
JUL									
05...	150	35	14	38	2.3	82	19	84	0.2
AUG									
15...	150	34	15	35	2.4	86	18	82	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 1987									
04...	6.7	125	0.025	0.12	0.15	0.61	0.73	0.033	4.7
FEB 1988									
03...	8.0	152	0.013	0.24	--	--	--	0.027	4.3
MAY									
12...	5.1	139	0.035	0.18	0.18	0.74	0.92	0.057	5.0
JUN									
02...	7.4	153	0.041	0.33	0.19	0.75	1.1	0.057	5.3
JUL									
05...	11	253	0.240	1.70	0.43	0.82	2.5	0.068	4.5
AUG									
15...	10	248	0.185	1.96	0.23	0.88	2.8	0.104	4.5

01455801 MUSCONETCONG RIVER AT LOCKWOOD, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 (MG/KG AS C)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G 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)
NOV 1987 04...	1300	--	100	0.2	1.7	--	--	6	--	--	--	<1
JUN 1988 02...	1245	<0.5	--	--	--	20	2	--	<10	40	<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)
NOV 1987 04...	--	<10	<50	--	6	--	4100	--	<10	--	280
JUN 1988 02...	<1	--	--	2	--	510	--	<5	--	110	--

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)
NOV 1987 04...	--	<0.10	--	<10	--	<1	--	40	--	<1	<1.0
JUN 1988 02...	<0.10	--	1	--	<1	--	<10	--	<1	--	--

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)
NOV 1987 04...	<0.1	2.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
JUN 1988 02...	--	--	--	--	--	--	--	--	--	--	--

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)
NOV 1987 04...	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1
JUN 1988 02...	--	--	--	--	--	--	--	--	--	--	--

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 mi^2.

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 1987 TO SEPTEMBER 1988

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)
NOV 1987										
04...	1045	E150	301	7.8	10.5	11.8	108	<0.8	50	33
FEB 1988										
03...	1330	E310	334	7.4	1.5	14.9	107	E2.1	50	130
MAY										
12...	1200	E140	333	8.0	16.0	10.8	111	E2.2	130	79
JUN										
08...	1100	E100	--	7.6	16.0	10.1	105	E1.4	130	110
JUL										
05...	1330	E49	456	8.0	21.5	10.2	116	E1.9	130	130
AUG										
15...	1030	E46	--	8.0	22.5	8.0	95	E1.3	490	920

DATE	HARDNESS TOTAL (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)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
NOV 1987									
04...	91	21	9.3	19	1.4	68	17	32	0.1
FEB 1988									
03...	90	22	8.5	27	1.6	62	17	49	0.2
MAY									
12...	110	26	11	21	1.4	80	18	40	0.3
JUN									
08...	130	29	14	19	1.3	98	17	34	0.3
JUL									
05...	170	37	19	25	1.8	115	28	47	0.2
AUG									
15...	170	37	18	23	1.7	129	23	44	0.1

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 1987									
04...	6.8	147	0.033	0.57	0.09	0.61	1.2	0.103	4.3
FEB 1988									
03...	7.8	170	0.016	0.50	--	--	--	0.216	3.8
MAY									
12...	5.6	171	0.061	0.75	0.26	0.70	1.5	0.192	4.5
JUN									
08...	8.7	182	0.053	0.85	0.09	0.55	1.4	0.160	3.3
JUL									
05...	8.1	235	0.069	1.27	0.47	0.77	2.0	0.055	3.6
AUG									
15...	8.4	233	0.118	1.25	0.37	0.87	2.1	0.077	3.4

01456200 MUSCONETCONG RIVER AT BEATTYSTOWN, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 (MG/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)
NOV 1987 04...	1045	<0.5	150	1.2	4.0	<10	<1	3	<10	20	<1

DATE	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	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)
NOV 1987 04...	<1	1	<10	<50	3	7	200	4900	<5	10	30

DATE	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	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)
NOV 1987 04...	380	<0.10	<0.10	<1	<10	<1	<1	<10	40	3	3

DATE	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)	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)
NOV 1987 04...	<1.0	<0.1	3.0	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

DATE	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 1987 04...	<0.1	<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 mi^2.

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.--Records good. Flow regulated by Lake Hopatcong (see Delaware River basin, reservoirs in). Several measurements of water temperature, other than those published, were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	347	281	540	e178	193	298	210	195	246	103	133	111
2	328	262	481	e157	361	274	209	180	252	100	124	98
3	356	246	377	e171	411	286	207	176	227	98	117	95
4	483	225	333	e156	473	412	202	167	213	97	113	155
5	391	210	313	e180	419	513	200	162	204	94	106	213
6	364	193	295	e215	357	415	192	202	190	93	103	154
7	375	185	280	e195	336	372	190	214	180	95	101	120
8	363	182	271	e158	295	364	194	190	173	94	97	105
9	341	179	266	e146	281	369	191	169	184	97	95	99
10	329	216	311	e150	273	413	184	164	178	90	93	90
11	334	303	271	e163	264	404	179	193	168	88	93	86
12	340	268	230	e138	291	378	174	212	161	90	91	84
13	326	272	218	e135	314	367	169	195	155	91	91	130
14	318	286	208	e145	273	355	163	188	150	88	90	122
15	312	288	270	e140	265	342	159	183	143	88	89	111
16	283	275	280	e127	385	306	162	171	138	86	85	99
17	208	261	245	130	340	270	164	258	136	121	84	94
18	209	261	222	148	313	254	163	401	133	135	88	97
19	208	257	200	167	311	248	165	541	129	119	83	94
20	199	244	216	244	776	242	157	828	126	217	82	97
21	228	238	210	264	524	230	149	568	122	202	82	92
22	258	223	195	e193	425	217	143	481	118	166	80	91
23	259	208	191	e177	421	210	139	484	117	139	79	87
24	246	204	202	e175	424	207	144	676	111	231	123	86
25	169	195	209	e175	388	207	142	537	109	219	141	86
26	141	193	211	e172	355	254	136	491	109	217	108	84
27	134	192	206	e153	346	342	134	403	109	306	105	83
28	460	191	200	e150	334	298	261	346	106	234	94	81
29	399	622	e193	e154	321	256	248	308	104	192	109	80
30	360	626	e191	e160	---	234	213	279	103	165	162	79
31	336	---	e189	162	---	219	---	255	---	144	134	---
MEAN	303	260	259	167	361	308	178	317	153	139	102	103
MAX	483	626	540	264	776	513	261	828	252	306	162	213
MIN	134	179	189	127	193	207	134	162	103	86	79	79

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	171	224	259	262	279	345	353	267	194	162	152	157
MAX	770	701	686	924	582	935	1030	520	843	659	584	454
(WY)	1904	1928	1974	1979	1973	1936	1983	1984	1972	1975	1928	1960
MIN	41.2	61.2	57.3	73.7	99.4	127	104	98.1	56.8	38.1	38.5	37.3
(WY)	1964	1966	1966	1977	1923	1965	1985	1965	1965	1965	1965	1965

SUMMARY STATISTICS	FOR 1988 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	221		236	Unadjusted
HIGHEST ANNUAL MEAN			426	1928
LOWEST ANNUAL MEAN			82.6	1965
HIGHEST DAILY MEAN	828	May 20	5850	Oct 10 1903
LOWEST DAILY MEAN	79	Aug 23	27	Sep 8 1966
INSTANTANEOUS PEAK FLOW	1180	May 24	7200a	Jan 25 1979
INSTANTANEOUS PEAK STAGE	3.89	May 24	8.50b	Jan 25 1979
INSTANTANEOUS LOW FLOW	77	Jul 11	8.1	Aug 2 1955
10 PERCENTILE	376		458	
50 PERCENTILE	194		182	
95 PERCENTILE	88		64	

a From rating curve extended above 1,800 ft^3/s on basis of slope-area measurement at gage height 6.95 ft
b From floodmark
e Estimated

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 mi^2.

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 1987 TO SEPTEMBER 1988

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	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 1987										
21...	1245	E250	310	7.6	12.0	11.0	103	2.9	940	920
FEB 1988										
10...	1345	E300	352	7.9	3.5	15.6	117	E1.5	70	11
MAR										
17...	1245	E300	328	8.9	6.0	14.7	118	E1.7	40	9
JUN										
06...	1030	E210	310	7.2	16.0	9.8	100	E1.2	330	350
JUL										
25...	1300	E240	--	7.9	21.0	8.9	100	E1.8	3500	1600
AUG										
10...	1230	E110	402	8.1	22.0	9.9	113	4.2	1300	350

DATE	HARD-NESS TOTAL (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 1987									
21...	120	28	12	17	1.7	89	22	30	0.1
FEB 1988									
10...	110	26	12	19	1.5	81	21	36	0.1
MAR									
17...	110	25	12	17	1.4	83	18	31	0.1
JUN									
06...	130	29	14	14	1.5	98	29	23	0.3
JUL									
25...	120	26	13	13	1.7	86	20	23	0.1
AUG									
10...	160	35	18	14	2.4	127	24	23	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 1987									
21...	7.0	171	0.009	1.43	0.05	0.59	2.0	0.060	3.6
FEB 1988									
10...	8.3	172	0.011	1.57	--	--	--	0.042	2.3
MAR									
17...	6.3	161	0.013	1.59	0.01	0.40	2.0	0.047	2.9
JUN									
06...	9.1	179	0.020	1.61	<0.05	0.71	2.3	0.070	3.9
JUL									
25...	11	159	0.021	1.44	0.05	0.98	2.4	0.458	5.2
AUG									
10...	4.8	197	0.057	1.96	0.19	1.1	3.1	0.470	3.7

01457400 MUSCONETCONG RIVER AT RIEGELSVILLE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	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 1987 21...	1245	40	<1	<10	<10	<1	<10	23

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 1987 21...	180	<5	20	<0.10	<1	<1	<10	2

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.

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). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	130	114	92	119	118	117	119	117	144	147	151
2	36	109	118	89	120	118	117	119	119	144	147	151
3	35	92	122	97	118	118	117	118	118	144	147	151
4	81	91	120	104	118	118	117	119	117	140	147	151
5	130	89	119	107	119	121	116	119	118	141	147	151
6	125	91	119	110	116	120	117	120	118	144	146	144
7	117	97	119	112	114	119	117	121	119	144	146	143
8	112	100	117	114	116	118	118	120	119	142	146	141
9	111	111	117	115	117	118	118	119	117	142	144	140
10	110	120	120	116	118	118	117	118	117	142	146	139
11	108	113	122	117	118	117	117	118	116	145	146	139
12	106	102	123	117	126	116	118	118	116	146	146	139
13	96	104	124	116	126	116	119	118	116	146	146	141
14	97	108	141	117	121	116	118	118	120	146	146	139
15	104	110	158	117	120	117	118	116	135	146	146	139
16	104	105	161	117	123	117	119	117	141	147	146	138
17	117	99	154	116	118	116	119	118	141	149	146	138
18	124	99	147	117	116	116	118	119	142	148	147	138
19	113	103	137	115	117	116	118	120	142	148	147	138
20	98	108	131	119	124	116	118	122	142	149	147	137
21	96	124	132	122	119	116	119	119	142	150	147	136
22	98	113	133	120	120	115	118	119	142	155	146	137
23	93	114	133	118	121	111	115	120	143	152	146	138
24	89	114	133	118	120	110	116	119	144	152	150	137
25	89	115	133	118	119	112	115	118	144	150	149	136
26	89	114	133	118	119	115	115	118	144	150	147	136
27	86	114	133	118	118	119	117	118	143	152	149	136
28	96	112	133	117	118	118	122	119	144	148	148	136
29	103	113	133	117	118	116	120	119	144	145	146	136
30	122	115	119	117	---	116	120	119	144	146	149	135
31	138	---	87	117	---	117	---	117	---	146	149	---
MEAN	98.7	108	129	114	119	117	118	119	131	147	147	140
MAX	138	130	161	122	126	121	122	122	144	155	150	151
MIN	35	89	87	89	114	110	115	116	116	140	144	135

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	69.2	73.0	75.2	74.1	74.8	77.7	77.2	74.9	75.2	75.3	72.1	70.2
MAX	106	108	128	117	119	124	139	119	131	146	147	140
(WY)	1966	1988	1988	1980	1988	1980	1957	1988	1988	1988	1988	1988
MIN	.00	.03	.00	1.39	7.52	4.03	10.4	18.3	6.92	2.83	7.13	1.88
(WY)	1986	1982	1982	1982	1948	1948	1949	1949	1986	1985	1985	1985

SUMMARY STATISTICS	FOR 1988 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	124		74.6	
HIGHEST ANNUAL MEAN			124	1988
LOWEST ANNUAL MEAN			21.7	1948
HIGHEST DAILY MEAN	161	Dec 16	174	Apr 6 1957
LOWEST DAILY MEAN	35	Oct 3	0	Many days
10 PERCENTILE	148		109	
50 PERCENTILE	119		83	
95 PERCENTILE	97		12	

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 mi^2.

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 1987 TO SEPTEMBER 1988

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)
OCT 1987 08...	1030	E11000	186	7.6	13.0	10.0	95	<1.1	230	350
FEB 1988 18...	1045	E12000	166	8.1	2.0	15.5	112	E0.5	40	240
MAR 30...	1030	E26000	--	7.4	8.0	10.8	91	2.8	20	2
JUN 07...	1500	E8500	168	8.1	21.0	8.9	102	E1.0	700	79
JUL 11...	1030	E3100	--	7.7	28.0	8.2	105	E1.4	140	1600
AUG 22...	1200	E3300	246	7.6	21.5	8.0	90	<0.8	460	13

DATE	HARDNESS TOTAL (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)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1987 08...	61	16	5.1	8.3	1.4	38	21	11	0.1
FEB 1988 18...	58	15	5.0	10	1.6	36	19	16	0.2
MAR 30...	34	9.0	2.7	5.5	0.8	20	15	9.8	0.1
JUN 07...	60	15	5.5	8.9	1.4	40	20	12	0.3
JUL 11...	86	21	8.1	12	1.8	58	32	16	0.2
AUG 22...	92	23	8.3	13	1.9	56	29	17	0.1

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1987 08...	4.1	90	0.033	0.81	0.09	0.64	1.5	0.112	4.1
FEB 1988 18...	5.1	93	0.016	1.05	--	--	--	0.049	2.6
MAR 30...	3.4	58	0.017	0.66	0.09	--	--	0.064	3.5
JUN 07...	3.7	91	0.039	0.90	0.08	0.58	1.5	--	3.4
JUL 11...	3.3	129	0.016	2.36	<0.05	1.9	4.2	0.058	3.7
AUG 22...	3.4	129	0.052	1.34	0.18	0.52	1.9	0.133	3.4

01461000 DELAWARE RIVER AT LUMBERVILLE, PA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 1988 07...	1500	<0.5	40	1	<10	<10	1	1	6

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 1988 07...	260	31	40	<0.10	4	<1	60	3

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 mi^2.

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 1987 TO SEPTEMBER 1988

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	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 1987										
08...	1230	E5.7	220	8.2	11.0	12.0	109	<0.6	60	240
FEB 1988										
18...	1215	E77	492	7.7	2.0	16.4	118	E0.7	60	540
MAR										
30...	1200	E18	--	8.7	12.0	11.5	106	<1.1	80	8
MAY										
18...	1100	E23	240	7.2	17.0	6.5	68	E1.9	1400	540
JUL										
11...	1230	E1.2	215	9.1	23.5	10.9	129	E2.2	170	22
AUG										
22...	1030	E1.9	224	7.8	15.0	9.5	94	E1.2	20	280

DATE	HARD-NESS TOTAL (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 1987									
08...	46	11	4.5	20	2.5	37	27	18	0.1
FEB 1988									
18...	36	8.3	3.6	83	2.3	17	48	110	0.2
MAR									
30...	46	11	4.6	77	1.8	26	51	100	0.1
MAY									
18...	64	16	5.9	27	1.5	39	29	33	0.2
JUL									
11...	54	13	5.3	17	1.9	39	26	15	0.2
AUG									
22...	64	15	6.5	15	2.0	39	25	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 1987									
08...	8.5	114	0.004	0.66	0.09	0.47	1.1	0.068	4.7
FEB 1988									
18...	8.4	274	0.011	1.00	--	--	--	0.059	5.0
MAR									
30...	9.7	271	0.020	0.70	0.02	0.40	1.1	0.052	3.6
MAY									
18...	4.8	141	0.063	1.06	0.23	0.79	1.8	0.110	3.2
JUL									
11...	11	113	0.052	1.28	0.14	0.55	1.8	0.108	2.2
AUG									
22...	12	113	0.006	4.00	<0.05	0.60	4.6	0.061	1.9

01461300 WICKECHEOKE CREEK AT STOCKTON, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 1988 18...	1100	<0.5	60	<1	<10	<10	1	<1	2

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 1988 18...	160	<5	50	<0.10	5	<1	10	<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 mi^2.

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 1987 TO SEPTEMBER 1988

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)
OCT 1987										
08...	1400	E10000	--	7.3	13.5	10.8	104	<0.7	230	33
FEB 1988										
18...	1330	E13000	176	7.8	2.0	15.6	112	E0.4	50	350
MAR										
30...	1330	E24000	--	7.6	8.5	11.4	97	<0.3	<20	4
JUN										
07...	1140	E3600	160	8.0	20.0	6.0	67	E1.9	260	130
JUL										
11...	1430	E3700	255	8.4	30.0	10.5	140	2.8	70	2
AUG										
22...	1330	E3100	249	7.5	24.0	7.8	92	<0.5	130	22

DATE	HARDNESS TOTAL (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)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1987									
08...	58	15	4.9	8.1	1.4	37	21	12	0.1
FEB 1988									
18...	58	15	5.1	11	1.6	36	19	18	0.2
MAR									
30...	34	9.0	2.7	5.5	0.8	20	13	9.3	0.1
JUN									
07...	63	16	5.5	8.2	1.2	40	20	12	0.3
JUL									
11...	91	22	8.7	12	1.8	58	29	17	0.2
AUG									
22...	86	21	8.1	13	1.9	51	28	17	0.1

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1987									
08...	4.0	89	0.040	0.83	0.06	0.49	1.3	0.101	3.5
FEB 1988									
18...	5.1	97	0.020	1.07	--	--	--	0.054	2.9
MAR									
30...	3.4	56	0.013	1.14	0.10	--	--	0.073	3.8
JUN									
07...	3.6	91	0.034	0.97	0.08	0.53	1.5	0.700	3.1
JUL									
11...	3.8	129	0.063	1.46	<0.05	0.71	2.2	0.113	4.5
AUG									
22...	3.4	123	0.053	1.42	0.20	0.57	2.0	0.119	3.3

01462500 DELAWARE RIVER AT WASHINGTON CROSSING, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 1988 07...	1140	<0.5	70	1	<10	10	1	<1	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 1988 07...	160	<5	20	<0.10	2	<1	30	3

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 mi^2.

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.--Records excellent except for period of ice effect, Jan. 6-20, which are 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). Satellite telemeter at station.

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 ft^3/s. Maximum elevation since 1903, 30.6 ft above National Geodetic Vertical Datum of 1929, Mar. 8, 1904, from floodmark (ice jam).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10100	14800	30600	7100	6900	8680	17800	10000	13400	3330	7300	8350
2	10000	12500	29300	7210	9590	8400	16200	9710	14100	3400	6270	6450
3	9850	11100	23100	6480	17700	8640	14900	8910	13400	3480	6120	4800
4	11800	10800	19700	6650	28800	11100	14100	8730	11900	3510	5920	4440
5	12100	9450	17400	7290	27000	18800	13700	8050	10700	3370	5750	9010
6	11500	9000	15400	e7900	20700	15800	13600	8200	9140	3340	5090	9700
7	10900	8610	13800	e5730	17900	13100	12800	10200	8440	3260	4540	9160
8	10200	8370	12700	e5510	15000	12600	12100	10700	7870	3320	4310	8170
9	10000	7470	12300	e5390	13200	13000	11300	10300	7350	3190	3730	6560
10	9750	7050	11800	e6040	12200	14000	10200	9130	7450	3180	3480	5250
11	8850	11300	11300	e5410	11400	16900	9050	10300	7200	3390	3830	4470
12	9020	10600	10600	e4840	12700	19200	8260	9660	6710	3320	3800	4200
13	9040	9910	10100	e5840	11300	17100	7970	8690	6130	3500	3930	4360
14	8430	10300	9100	e5870	10300	16500	7570	8320	5420	4200	4080	6230
15	7670	10000	9000	e5290	9700	18800	7390	8060	5470	3610	3830	5950
16	7200	9260	11900	e5160	12400	18100	7070	7180	5800	3400	3900	4870
17	6800	8940	11500	e4960	13000	15800	6700	6840	5680	4030	3370	4410
18	6520	9810	10800	e4870	12400	14300	6520	7820	5560	6250	3790	4900
19	6010	13200	10100	e5170	11800	13500	6460	13700	5220	5630	3240	4810
20	5530	13600	9300	e7380	18900	12900	6420	35600	4770	5280	3110	4410
21	5940	12800	9160	13700	18900	11700	6240	34500	4460	7430	3160	4550
22	5470	11500	9440	12500	14400	10800	6000	33000	4350	8000	3070	4420
23	5560	10400	10400	10700	13100	10400	5600	34300	4460	8670	3030	4050
24	5850	e8880	9880	9120	13000	9750	5430	34400	4610	10800	3640	3890
25	5660	9200	9220	7960	12700	9660	5210	28800	4620	11100	5780	3920
26	5190	9520	8590	7680	11400	11200	5120	32400	4090	9620	5540	3780
27	4940	9190	8500	7030	10400	25400	5300	29200	3910	22900	5120	3620
28	9690	8090	9070	6820	10000	37700	6900	25000	3740	13900	4290	3540
29	16900	8280	8830	6260	9240	31200	7170	21000	3440	11700	3820	3450
30	23100	19000	8990	5560	---	24700	8960	17400	3360	10600	5230	3340
31	17600	---	7840	6060	---	20400	---	15300	---	8600	7410	---
MEAN	9264	10430	12570	6886	14000	15810	9068	16630	6758	6429	4499	5302
MAX	23100	19000	30600	13700	28800	37700	17800	35600	14100	22900	7410	9700
MIN	4940	7050	7840	4840	6900	8400	5120	6840	3360	3180	3030	3340

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	6736	10370	12460	12250	12880	20960	22500	14030	9042	7133	5971	5811
MAX	28710	27340	31070	34950	27550	60840	52680	30350	33460	25720	30290	22490
(WY)	1956	1928	1974	1979	1951	1936	1940	1947	1972	1928	1955	1933
MIN	1632	1868	2037	2539	3500	7715	6828	5209	2572	1548	1808	1762
(WY)	1942	1915	1923	1981	1920	1981	1985	1965	1965	1965	1965	1932

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

SUMMARY STATISTICS	FOR 1988 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	9802		11670	Unadjusted
HIGHEST ANNUAL MEAN			19810	1928
LOWEST ANNUAL MEAN			4708	1965
HIGHEST DAILY MEAN	37700	Mar 28	279000	Aug 20 1955
LOWEST DAILY MEAN	3030	Aug 23	1240	Oct 31 1914
INSTANTANEOUS PEAK FLOW	40600	Mar 28	329000a	Aug 20 1955
INSTANTANEOUS PEAK STAGE	13.37	Mar 28	28.60b	Aug 20 1955
INSTANTANEOUS LOW FLOW	2900	Aug 20	1180	Oct 31 1963
10 PERCENTILE	17300		24600	
50 PERCENTILE	8640		7880	
95 PERCENTILE	3420		2310	

a From rating curve extended above 230,000 ft^3/s
b From high-water mark in gage house
e Estimated

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 1979, 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 malfunctions of the instrument. 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, 19.7 mg/L, February 28, 1987; minimum, 4.0 mg/L, Nov. 9, 1972.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 255 microsiemens, Aug. 21; minimum, 103 microsiemens, Mar. 29.
pH: Maximum, 9.5, Mar. 25, Apr. 17, 21, 22; minimum, 6.8, July 7, 9.
WATER TEMPERATURE: Maximum, 32.5°C, Aug. 14; minimum, 0.0 °C on many days during the winter months.
DISSOLVED OXYGEN: Maximum, 17.1 mg/L, Mar 2; minimum, 4.8 mg/L, July 10.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	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 TOTAL (MG/L AS CACO3)
NOV 1987												
09...	1100	7300	165	8.1	10.5	0.60	11.9	106	1.0	28	18	59
MAR 1988												
24...	1230	9860	171	9.0	7.5	1.2	15.5	128	--	--	--	58
JUN												
22...	1110	4290	217	8.2	27.5	1.8	8.6	110	2.4	K11	360	79
SEP												
15...	1230	6000	224	7.8	20.5	4.0	8.7	96	4.0	K33	K9	81

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 WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
NOV 1987												
09...	15	5.2	7.5	1.4	--	--	--	19	11	0.1	3.1	88
MAR 1988												
24...	15	5.0	8.3	1.1	--	--	--	19	13	0.1	2.7	90
JUN												
22...	19	7.6	11	1.5	52	43	45	26	16	0.1	2.1	114
SEP												
15...	20	7.4	12	1.9	56	46	46	29	16	0.1	4.1	124

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-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)
NOV 1987											
09...	--	--	--	0.020	0.70	0.02	0.030	0.40	0.040	0.030	0.020
MAR 1988											
24...	--	--	--	0.010	0.85	0.08	0.090	0.40	0.040	0.030	0.010
JUN											
22...	9	104	69	0.040	1.20	0.05	<0.010	<0.20	0.090	0.050	0.030
SEP											
15...	10	162	85	<0.010	1.30	0.02	0.020	0.40	0.130	0.110	0.070

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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)
NOV 1987 09...	1100	30	1	25	<0.5	<1	<1	<3	4	47
MAR 1988 24...	1230	50	<1	25	<0.5	<1	<1	<3	2	22
JUN 22...	1110	40	3	32	<0.5	1	<1	<3	2	21
SEP 15...	1230	20	1	27	<0.5	<1	<1	<3	5	28

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)
NOV 1987 09...	5	5	11	<0.1	<10	1	<1	1.0	64
MAR 1988 24...	<5	<4	30	<0.1	<10	1	<1	<1.0	58
JUN 22...	<5	6	2	<0.1	<10	<1	<1	<1.0	82
SEP 15...	<5	<4	11	<0.1	<10	<1	<1	<1.0	87

DATE	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	GROSS ALPHA, DISSOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DISSOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DISSOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	RADIUM 226, DISSOLVED, RADON METHOD (PCI/L)
NOV 1987 09...	<6	12	<0.4	<0.4	1.7	<0.4	1.4	<0.4	0.05
MAR 1988 24...	<6	8	--	--	--	--	--	--	--
JUN 22...	<6	8	--	--	--	--	--	--	--
SEP 15...	<6	11	<0.4	0.6	1.7	<0.4	1.3	<0.4	0.06

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	164	157	159	122	115	119	173	119	143	177	171	173
2	168	163	166	131	116	123	118	112	114	180	173	176
3	166	161	164	139	130	135	120	114	117	179	173	176
4	174	160	165	148	138	143	124	119	122	180	177	178
5	174	160	167	151	145	147	128	124	126	204	143	173
6	160	155	157	156	149	151	132	128	130	193	154	177
7	161	155	158	161	154	157	136	133	135	203	189	199
8	169	160	163	163	161	162	143	135	139	207	194	202
9	171	168	170	164	162	163	144	140	142	197	192	195
10	172	163	168	178	163	169	146	141	144	196	192	195
11	167	162	165	184	166	171	151	145	148	199	192	197
12	168	162	164	196	186	190	153	151	152	192	181	187
13	171	168	170	202	187	193	156	152	154	183	178	180
14	173	165	168	200	194	196	160	151	155	189	183	186
15	174	171	172	193	186	188	166	158	161	190	182	187
16	179	173	174	185	179	182	175	161	167	197	187	190
17	182	178	179	185	181	183	168	165	167	197	189	193
18	183	178	181	181	177	179	165	155	159	197	192	193
19	204	181	193	182	169	177	158	154	156	200	194	196
20	206	193	200	169	146	158	160	154	157	210	199	205
21	198	191	194	148	145	147	180	158	167	202	197	199
22	212	199	204	150	146	148	180	175	177	200	189	196
23	212	204	207	154	145	150	174	162	168	190	182	185
24	209	203	206	162	152	156	160	154	158	182	176	179
25	204	195	201	168	162	165	158	154	156	184	175	177
26	200	196	197	165	161	163	164	155	158	199	186	190
27	204	162	198	164	160	162	167	163	165	205	193	200
28	187	151	169	167	159	162	167	159	164	214	185	206
29	209	146	184	169	166	167	159	154	157	224	182	202
30	143	104	118	173	156	166	166	157	160	217	198	204
31	120	114	116	---	---	---	174	165	167	209	199	204
MONTH	212	104	174	202	115	162	180	112	151	224	143	190
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	214	195	209	206	197	200	127	121	123	193	166	177
2	206	195	201	206	198	202	132	127	129	167	157	163
3	199	173	186	207	202	204	139	132	135	157	152	154
4	168	117	137	204	194	201	140	137	138	161	156	158
5	127	116	123	194	186	190	142	139	141	160	157	158
6	127	112	121	187	179	182	144	139	141	172	158	163
7	124	110	118	185	180	183	142	140	141	185	172	178
8	121	114	119	187	185	186	149	143	146	180	160	172
9	129	117	124	185	180	183	155	149	153	159	152	156
10	132	123	128	181	175	179	155	152	153	152	148	150
11	137	130	133	176	162	171	162	152	157	159	150	153
12	156	132	138	160	142	148	166	161	163	162	158	160
13	144	133	138	146	143	144	169	165	166	168	162	165
14	158	124	146	148	146	148	173	168	170	169	165	166
15	158	149	153	146	132	140	178	171	174	169	167	168
16	178	159	165	131	126	128	180	174	176	172	168	170
17	196	172	183	132	126	129	185	178	180	175	171	172
18	187	175	179	136	132	133	188	184	185	180	173	176
19	182	172	178	141	137	139	189	182	186	189	152	181
20	188	154	168	144	141	143	189	185	186	165	145	157
21	179	168	173	147	143	146	192	186	188	150	127	137
22	169	166	168	151	147	149	194	188	191	127	121	123
23	179	171	176	154	151	153	193	190	191	125	117	122
24	182	174	179	159	152	155	201	194	198	131	115	122
25	182	179	181	162	157	159	201	198	199	131	125	128
26	183	178	180	166	158	161	204	200	202	131	116	124
27	190	183	185	169	135	160	204	197	202	122	116	119
28	193	187	189	133	107	115	197	182	189	124	119	122
29	200	192	194	110	103	106	206	187	195	128	121	125
30	---	---	---	116	105	110	206	194	202	131	125	128
31	---	---	---	123	116	119	---	---	---	134	129	131
MONTH	214	110	161	207	103	157	206	121	170	193	115	151

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	134	131	133	223	212	217	177	171	173	220	175	194
2	140	135	138	233	224	230	190	178	184	173	166	168
3	145	140	142	238	232	235	200	189	195	175	169	171
4	145	140	143	246	233	237	201	191	197	189	152	173
5	151	143	148	235	226	232	195	189	193	217	191	199
6	159	150	154	226	220	222	200	189	195	221	180	204
7	164	159	162	221	219	220	214	195	204	179	175	177
8	169	163	166	223	219	221	219	210	214	178	173	175
9	173	165	168	226	219	222	221	211	215	177	171	173
10	181	173	175	231	227	230	231	222	228	184	177	181
11	186	182	184	238	231	235	234	228	231	201	185	193
12	184	178	181	237	227	231	234	223	229	218	201	211
13	185	181	183	235	226	232	227	224	225	221	206	216
14	188	183	185	228	220	226	225	218	221	225	217	221
15	195	188	191	219	211	216	225	216	220	226	214	222
16	199	186	194	220	210	214	222	216	219	214	211	213
17	193	188	190	226	220	223	221	208	215	218	211	214
18	199	191	195	229	218	222	224	211	219	223	218	220
19	203	194	199	251	210	234	223	213	217	228	219	222
20	206	197	202	207	192	198	248	219	235	230	219	227
21	207	200	203	202	125	192	255	242	251	217	209	212
22	207	205	206	209	140	193	241	232	236	221	215	219
23	210	205	208	213	181	205	235	232	233	227	218	222
24	206	202	204	183	154	166	233	146	213	227	218	221
25	212	202	207	190	173	181	231	198	217	228	222	224
26	207	203	205	175	160	168	241	220	234	229	225	227
27	215	203	207	170	120	144	219	206	211	234	228	230
28	234	217	228	170	159	165	210	204	206	237	234	236
29	232	217	226	177	167	173	209	203	207	236	233	234
30	217	212	215	172	165	169	214	200	206	238	233	235
31	---	---	---	175	163	168	237	215	227	---	---	---
MONTH	234	131	185	251	120	207	255	146	215	238	152	208

PH (STANDARD UNITS), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	8.8	7.8	8.2	8.9	7.7	8.3	7.4	7.0	7.2	7.9	7.6	7.8
2	7.8	7.4	7.6	9.0	7.7	8.4	7.6	7.0	7.2	8.0	7.5	7.7
3	7.6	7.4	7.5	8.8	7.7	8.1	7.6	7.0	7.3	8.6	7.4	7.8
4	7.5	7.2	7.4	7.9	7.4	7.6	7.7	7.1	7.3	8.3	7.3	7.6
5	7.3	7.2	7.3	7.5	7.3	7.4	8.2	7.1	7.5	7.5	7.3	7.4
6	7.4	7.3	7.4	7.6	7.4	7.5	7.8	7.0	7.4	7.7	7.4	7.5
7	7.7	7.2	7.5	8.4	7.5	7.8	7.5	7.0	7.3	8.1	7.5	7.7
8	7.6	7.4	7.5	8.7	7.6	8.1	7.7	7.3	7.4	7.9	7.6	7.7
9	7.9	7.4	7.6	8.6	7.6	8.0	7.8	7.3	7.5	7.9	7.5	7.7
10	7.8	7.4	7.6	8.5	7.4	7.9	8.1	7.4	7.7	7.8	7.4	7.6
11	7.9	7.5	7.7	8.4	7.5	7.8	8.1	7.6	7.9	7.6	7.2	7.4
12	7.7	7.3	7.5	7.6	7.3	7.4	8.7	7.8	8.1	7.7	6.9	7.2
13	7.9	7.5	7.6	7.7	7.3	7.5	8.2	7.7	7.9	7.3	6.9	7.1
14	8.0	7.5	7.8	8.0	7.4	7.7	8.7	7.9	8.2	7.7	7.0	7.2
15	8.0	7.6	7.8	8.1	7.5	7.8	9.3	8.1	8.6	7.2	7.0	7.1
16	7.8	7.4	7.6	8.3	7.4	7.8	9.2	7.9	8.6	7.7	7.2	7.4
17	8.0	7.6	7.8	8.7	7.6	8.1	9.5	8.2	8.9	7.5	7.2	7.3
18	8.1	7.7	7.9	8.7	7.7	8.1	9.1	8.1	8.8	7.3	7.2	7.3
19	7.9	7.7	7.7	8.8	7.7	8.2	9.3	7.5	8.5	7.3	7.2	7.2
20	7.6	7.4	7.5	8.8	7.7	8.2	9.4	8.5	9.0	7.3	7.1	7.2
21	7.6	7.5	7.6	9.1	7.8	8.4	9.5	8.5	9.0	7.3	7.2	7.2
22	7.7	7.6	7.6	9.3	7.9	8.6	9.5	8.7	9.1	7.2	7.2	7.2
23	8.1	7.6	7.8	9.3	7.9	8.6	9.2	8.0	8.8	7.2	7.1	7.2
24	8.3	7.6	7.9	9.4	7.8	8.6	8.5	7.5	8.0	7.1	7.1	7.1
25	8.3	7.6	7.9	9.5	7.9	8.8	8.5	7.7	8.1	7.1	7.1	7.1
26	8.6	7.6	8.0	8.4	7.5	7.9	8.3	7.4	7.9	7.2	7.1	7.1
27	8.3	7.7	7.9	7.5	7.2	7.4	9.0	7.4	8.0	7.2	7.1	7.2
28	8.8	7.6	8.1	7.2	7.0	7.1	8.4	7.5	7.9	7.3	7.2	7.2
29	8.9	7.7	8.2	7.3	7.0	7.1	8.1	7.5	7.8	7.3	7.2	7.2
30	---	---	---	7.2	7.1	7.1	8.1	7.8	7.9	7.3	7.2	7.3
31	---	---	---	7.4	7.1	7.2	---	---	---	7.4	7.2	7.3
MONTH	8.9	7.2	7.7	9.5	7.0	7.9	9.5	7.0	8.0	8.6	6.9	7.4
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.8	7.2	7.4	8.4	7.3	7.8	7.5	7.3	7.4	---	---	---
2	7.9	7.4	7.6	8.4	7.4	7.8	7.6	7.3	7.4	---	---	---
3	7.7	7.5	7.6	8.3	7.3	7.7	7.6	7.3	7.5	---	---	---
4	7.7	7.6	7.6	8.1	7.2	7.7	7.7	7.3	7.5	---	---	---
5	7.9	7.6	7.7	7.9	7.1	7.4	7.8	7.3	7.5	---	---	---
6	7.9	7.6	7.7	7.8	7.0	7.3	7.9	7.3	7.5	---	---	---
7	7.8	7.6	7.7	7.4	6.8	7.1	8.1	7.3	7.6	---	---	---
8	7.9	7.7	7.8	7.4	6.9	7.1	8.4	7.4	7.8	---	---	---
9	8.0	7.7	7.9	7.2	6.8	7.0	8.6	7.5	7.9	---	---	---
10	8.2	7.8	8.0	7.2	6.9	7.0	8.6	7.6	7.9	---	---	---
11	8.5	8.0	8.2	7.6	6.9	7.2	8.4	7.5	7.9	---	---	---
12	8.6	8.1	8.4	7.5	6.9	7.2	8.5	7.6	8.0	---	---	---
13	8.6	8.3	8.5	7.7	7.1	7.3	8.5	7.6	7.9	---	---	---
14	8.8	8.1	8.4	8.7	7.2	7.7	8.5	7.5	7.9	---	---	---
15	8.8	8.2	8.5	8.9	7.4	8.0	---	---	---	---	---	---
16	9.1	8.3	8.7	9.3	7.4	8.4	---	---	---	---	---	---
17	8.5	7.5	8.0	9.3	7.9	8.6	---	---	---	---	---	---
18	8.7	7.2	7.9	8.4	7.4	7.8	---	---	---	---	---	---
19	8.6	7.2	7.8	7.6	7.1	7.4	---	---	---	---	---	---
20	8.6	7.2	7.7	7.2	7.1	7.1	---	---	---	---	---	---
21	8.7	7.2	7.7	7.2	7.1	7.2	---	---	---	---	---	---
22	8.2	7.2	7.5	7.4	7.1	7.2	---	---	---	---	---	---
23	8.2	7.1	7.5	7.4	7.3	7.4	---	---	---	---	---	---
24	8.5	7.1	7.7	7.4	7.2	7.3	---	---	---	---	---	---
25	8.5	7.2	7.8	7.4	7.2	7.3	---	---	---	---	---	---
26	8.2	7.2	7.6	7.3	7.2	7.3	---	---	---	---	---	---
27	7.9	7.2	7.5	7.4	7.1	7.2	---	---	---	---	---	---
28	8.4	7.4	7.8	7.4	7.3	7.3	---	---	---	---	---	---
29	8.0	7.3	7.6	7.4	7.3	7.4	---	---	---	---	---	---
30	7.8	7.2	7.4	7.4	7.2	7.3	---	---	---	---	---	---
31	---	---	---	7.4	7.2	7.3	---	---	---	---	---	---
MONTH	9.1	7.1	7.8	9.3	6.8	7.4	---	---	---	---	---	---

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	22.5	20.5	21.5	23.0	20.0	21.5	29.5	26.5	28.0	24.5	22.0	23.5
2	22.0	20.5	21.5	23.5	19.5	21.5	30.0	27.5	28.5	25.0	22.0	23.0
3	20.5	19.5	20.0	26.0	20.5	23.0	30.0	27.5	28.5	24.5	21.5	23.0
4	19.5	18.0	19.0	27.0	22.0	24.0	31.0	27.5	29.0	22.5	21.5	22.0
5	19.5	17.5	18.5	27.0	23.5	25.0	30.5	28.0	29.0	22.5	21.0	21.5
6	20.5	18.5	19.5	28.5	23.5	26.0	31.5	28.0	29.0	21.0	19.5	20.0
7	21.0	19.5	20.0	29.0	25.0	27.0	31.0	28.0	29.5	21.0	19.0	20.0
8	20.5	19.0	20.0	30.5	25.5	28.0	31.5	27.5	29.5	21.0	19.0	20.0
9	19.5	18.5	19.0	28.5	26.5	27.0	32.0	27.5	29.5	22.5	20.0	21.0
10	20.0	17.0	18.5	30.0	25.5	28.0	31.5	28.0	29.5	23.5	20.5	22.0
11	21.0	18.0	19.5	30.5	27.0	29.0	31.0	28.5	29.5	22.5	20.5	21.5
12	22.0	18.5	20.5	28.5	27.0	28.0	32.0	29.0	30.5	22.5	19.0	20.5
13	24.0	20.0	22.0	30.5	26.0	28.0	32.0	29.5	30.5	23.0	20.0	21.0
14	25.5	21.5	23.5	30.5	27.0	28.5	32.5	29.5	31.0	22.5	20.0	21.5
15	27.0	23.0	25.0	31.5	27.5	29.5	32.0	29.0	30.5	22.0	19.5	21.0
16	27.5	24.5	26.0	31.5	27.5	29.5	30.5	28.0	29.5	21.5	18.5	20.0
17	26.5	25.0	25.5	31.5	28.0	29.5	29.0	26.5	27.5	19.5	18.5	19.0
18	28.5	24.0	26.0	30.5	27.5	29.0	29.0	26.0	27.5	20.0	18.5	19.0
19	28.5	25.0	26.5	29.5	28.0	28.5	26.0	24.5	25.0	22.0	19.0	20.5
20	28.0	24.5	26.5	28.0	27.0	27.5	24.0	23.0	23.5	22.5	20.0	21.0
21	29.5	25.5	27.5	27.0	25.0	26.5	26.0	21.5	23.5	22.0	20.5	21.0
22	30.0	26.0	28.0	26.0	25.0	25.5	26.5	21.5	24.0	22.0	19.5	20.5
23	29.0	26.5	27.5	25.5	25.0	25.5	23.5	22.0	23.0	23.0	19.5	21.0
24	28.5	24.0	26.0	25.0	24.0	24.5	25.5	20.5	23.0	21.5	20.0	20.5
25	27.5	23.5	25.5	26.0	24.5	25.0	25.0	22.5	24.0	20.0	19.0	19.5
26	27.0	24.0	25.0	25.5	24.5	25.0	26.0	22.5	24.0	22.0	18.0	20.0
27	27.0	22.5	24.5	24.5	21.5	22.5	26.0	23.5	24.5	22.0	18.5	20.0
28	28.0	22.5	24.5	24.0	22.5	23.5	26.5	24.0	25.5	22.5	19.0	20.5
29	28.0	23.5	25.0	26.0	24.0	25.0	25.5	23.5	24.5	20.0	18.5	19.5
30	24.5	22.0	23.5	27.5	25.5	26.5	24.5	22.5	23.5	20.0	18.0	18.5
31	---	---	---	28.0	26.5	27.0	25.0	22.5	23.5	---	---	---
MONTH	30.0	17.0	23.0	31.5	19.5	26.5	32.5	20.5	27.0	25.0	18.0	20.5

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	9.1	8.4	8.7	11.4	10.8	11.1	11.5	10.8	11.2	15.4	14.0	14.5
2	9.4	8.7	9.0	11.6	10.8	11.1	11.8	11.4	11.6	15.9	13.7	14.7
3	9.3	8.9	9.1	11.3	10.4	10.9	12.2	11.8	12.0	16.2	14.2	15.0
4	9.9	9.1	9.5	11.2	10.2	10.6	12.3	12.0	12.1	16.4	14.2	15.1
5	10.2	9.5	9.8	10.9	9.9	10.3	12.5	12.0	12.2	16.2	14.2	15.1
6	10.2	9.7	9.9	11.1	10.0	10.4	12.8	12.2	12.4	16.1	13.8	14.9
7	10.0	9.5	9.8	11.7	10.3	10.9	13.2	12.4	12.7	15.7	14.4	14.9
8	10.1	9.5	9.8	12.0	10.6	11.1	13.4	12.6	13.0	14.7	14.2	14.5
9	10.5	9.7	10.1	12.1	10.5	11.0	13.2	12.6	12.9	14.9	13.8	14.3
10	10.4	9.8	10.1	10.7	10.2	10.4	13.1	12.3	12.7	14.9	14.0	14.4
11	10.1	9.8	9.9	11.0	10.4	10.7	13.1	12.1	12.5	15.0	14.2	14.5
12	10.7	9.8	10.3	12.0	11.0	11.5	12.8	11.8	12.2	15.0	14.6	14.8
13	11.1	10.3	10.7	12.5	11.6	11.9	12.9	11.7	12.2	15.0	14.5	14.7
14	11.3	10.4	10.8	12.5	11.6	12.0	13.6	11.9	12.6	14.8	14.3	14.5
15	11.0	10.3	10.7	12.9	11.6	12.2	12.3	11.7	12.1	15.3	14.6	14.9
16	11.1	9.9	10.5	12.8	11.7	12.2	12.6	11.7	12.2	15.2	14.6	15.0
17	11.0	9.8	10.4	12.7	11.2	11.8	13.1	12.0	12.5	15.2	14.5	14.8
18	11.4	9.7	10.5	12.2	10.7	11.3	13.8	12.5	13.1	14.7	13.8	14.4
19	12.0	9.8	10.8	11.3	10.5	10.9	14.0	12.8	13.3	14.1	13.7	13.8
20	11.9	9.8	10.7	11.0	10.4	10.7	13.2	12.5	12.9	14.0	12.1	12.9
21	10.6	9.3	9.8	11.8	10.7	11.3	14.1	12.4	13.2	12.4	12.1	12.2
22	11.9	9.1	10.4	12.9	11.8	12.3	14.4	12.7	13.4	13.6	12.3	13.0
23	11.8	10.0	10.9	13.4	12.3	12.7	14.5	12.8	13.4	14.5	13.3	13.8
24	12.4	10.0	11.1	13.9	12.6	13.1	14.7	12.8	13.6	15.2	13.7	14.3
25	12.5	9.9	11.1	13.5	12.5	12.9	14.1	12.7	13.2	14.5	13.4	13.9
26	12.9	10.1	11.3	13.4	12.2	12.6	14.4	12.5	13.2	15.2	13.2	14.1
27	12.5	9.7	11.1	12.8	12.0	12.3	15.1	12.6	13.6	15.9	13.9	14.9
28	9.8	9.2	9.5	13.2	11.9	12.4	14.1	12.8	13.3	15.9	14.6	15.2
29	10.3	9.7	10.0	12.3	11.3	11.9	15.3	12.7	13.6	16.1	14.6	15.3
30	10.9	10.3	10.6	11.3	10.8	10.9	15.5	13.4	14.3	16.9	14.5	15.5
31	11.2	10.7	10.9	---	---	---	16.1	14.1	14.9	17.0	14.2	15.4
MONTH	12.9	8.4	10.3	13.9	9.9	11.5	16.1	10.8	12.8	17.0	12.1	14.5

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	16.3	13.6	14.7	16.5	13.3	14.7	12.1	11.3	11.7	11.7	9.2	10.3
2	13.7	12.5	13.0	17.1	13.1	14.9	12.4	10.9	11.5	10.9	9.3	10.1
3	13.1	12.6	12.8	15.6	12.7	13.9	12.4	11.0	11.6	12.1	9.2	10.4
4	13.6	13.1	13.4	13.4	12.1	12.7	12.3	10.9	11.4	11.8	8.9	10.2
5	13.8	13.6	13.7	12.8	12.4	12.6	12.9	10.7	11.7	9.7	8.6	9.3
6	14.3	13.8	14.1	13.4	12.6	13.0	12.0	10.2	11.1	9.5	8.4	8.9
7	14.6	14.2	14.4	14.7	12.8	13.6	11.1	10.0	10.5	11.1	8.5	9.6
8	14.7	14.2	14.4	15.4	12.7	13.8	11.7	10.1	10.8	11.0	8.3	9.5
9	14.7	14.2	14.4	14.7	12.3	13.3	13.5	10.3	11.7	10.9	8.3	9.4
10	14.8	14.0	14.3	14.4	11.6	12.8	14.1	10.5	12.1	10.9	8.1	9.3
11	14.8	13.8	14.2	14.2	11.9	13.0	14.4	10.3	12.3	8.8	7.8	8.1
12	13.9	13.4	13.5	13.2	12.0	12.5	15.1	10.1	12.5	10.7	7.8	9.0
13	14.5	13.3	13.9	13.0	12.0	12.4	15.9	10.2	12.8	10.7	7.9	9.2
14	15.0	13.9	14.4	13.1	11.8	12.4	16.4	10.4	13.0	10.1	7.4	8.6
15	15.0	13.7	14.3	13.3	11.9	12.5	15.6	10.2	12.5	10.3	7.2	8.7
16	13.7	13.1	13.3	13.4	12.0	12.7	14.8	10.0	12.3	9.5	7.0	8.0
17	13.8	13.0	13.2	14.0	12.2	13.0	17.0	10.5	13.5	8.5	6.8	7.5
18	14.0	12.7	13.3	13.8	12.1	12.9	13.9	10.5	12.1	7.9	7.2	7.5
19	13.5	12.7	13.0	13.9	11.9	12.9	15.9	9.6	12.6	8.4	7.3	7.7
20	12.6	12.1	12.4	13.7	11.9	12.8	16.0	11.0	13.3	8.6	8.5	8.6
21	12.6	12.1	12.4	14.8	12.2	13.4	15.8	10.6	13.1	9.1	8.7	8.9
22	13.6	12.6	13.1	15.5	12.4	13.9	16.6	10.6	13.4	9.0	8.8	8.9
23	14.1	13.0	13.3	15.8	12.5	14.0	13.9	10.4	12.1	8.9	8.6	8.8
24	14.4	12.6	13.4	16.2	12.2	13.9	14.0	9.3	11.5	8.6	8.1	8.4
25	14.5	12.9	13.6	16.3	11.8	13.7	16.3	10.0	13.0	8.5	8.0	8.2
26	15.1	13.1	14.0	12.1	10.5	11.3	16.5	10.5	13.4	9.0	8.5	8.8
27	14.4	13.1	13.7	10.9	10.1	10.6	14.7	10.2	12.2	9.3	9.0	9.1
28	15.7	13.0	14.2	11.6	10.7	11.2	11.7	8.6	9.9	9.2	9.0	9.1
29	16.4	13.2	14.6	11.9	11.5	11.8	11.4	8.5	9.8	9.0	8.7	8.9
30	---	---	---	12.2	11.7	11.9	11.8	8.6	10.0	8.9	8.5	8.7
31	---	---	---	12.5	11.6	12.0	---	---	---	9.1	8.2	8.6
MONTH	16.4	12.1	13.7	17.1	10.1	12.9	17.0	8.5	12.0	12.1	6.8	8.9
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	9.8	8.0	8.8	10.3	7.1	8.8	7.0	6.0	6.5	---	---	---
2	9.6	7.9	8.6	10.8	7.1	9.0	7.1	5.6	6.3	---	---	---
3	9.2	8.0	8.5	11.0	7.0	8.9	7.2	5.6	6.3	---	---	---
4	9.3	8.4	8.8	10.8	6.5	8.8	7.4	5.6	6.4	---	---	---
5	9.6	8.6	9.1	10.4	6.1	8.2	7.6	5.8	6.6	---	---	---
6	9.6	8.5	9.1	10.5	5.8	8.0	7.9	5.7	6.6	---	---	---
7	9.3	8.4	8.8	10.0	5.6	7.5	8.4	5.5	6.9	---	---	---
8	9.5	8.1	8.7	10.2	5.4	7.6	9.0	5.8	7.3	---	---	---
9	9.6	8.2	8.8	9.0	5.1	6.6	9.4	6.0	7.5	---	---	---
10	10.5	8.6	9.5	9.8	4.8	7.1	9.7	6.2	7.6	---	---	---
11	11.0	9.0	10.0	10.5	5.2	7.6	9.3	6.1	7.5	---	---	---
12	11.5	9.2	10.3	8.6	5.0	6.6	10.2	6.3	8.0	---	---	---
13	12.2	9.2	10.6	10.3	4.9	7.4	10.1	6.3	8.0	---	---	---
14	12.5	9.1	10.7	11.8	5.6	8.4	10.1	6.3	8.0	---	---	---
15	12.2	8.6	10.5	12.7	5.5	8.8	9.9	6.1	7.8	---	---	---
16	11.2	7.9	9.5	15.0	5.9	9.9	9.9	5.6	7.5	---	---	---
17	9.6	6.4	8.1	15.2	6.1	9.5	9.9	5.9	7.5	---	---	---
18	11.0	6.4	8.6	10.3	5.6	7.8	9.8	5.6	7.4	---	---	---
19	10.9	6.4	8.6	8.5	5.3	6.7	9.1	5.9	7.1	---	---	---
20	10.8	6.2	8.3	6.5	5.1	5.8	7.8	5.7	6.7	---	---	---
21	11.1	5.9	8.4	7.2	5.8	6.0	10.5	6.0	7.9	---	---	---
22	10.6	5.7	8.1	6.8	5.9	6.3	10.1	6.2	8.0	---	---	---
23	10.5	5.5	8.0	6.9	6.2	6.4	9.8	6.3	7.8	---	---	---
24	12.1	6.3	9.1	7.0	6.7	6.8	9.9	6.9	8.1	---	---	---
25	12.9	6.9	9.7	7.2	6.7	6.9	8.6	6.4	7.3	---	---	---
26	11.2	6.7	8.7	7.5	6.6	6.9	8.9	6.3	7.5	---	---	---
27	10.6	6.4	8.5	7.7	7.2	7.5	8.9	6.3	7.4	---	---	---
28	11.4	6.8	9.0	7.4	7.2	7.3	---	---	---	---	---	---
29	10.4	6.5	8.5	7.4	7.0	7.2	---	---	---	---	---	---
30	10.4	6.7	8.6	7.4	6.8	7.1	---	---	---	---	---	---
31	---	---	---	7.4	6.4	6.8	---	---	---	---	---	---
MONTH	12.9	5.5	9.0	15.2	4.8	7.6	10.5	5.5	7.3	---	---	---

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 mi^2.

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 1987 TO SEPTEMBER 1988

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	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 1987										
14...	1115	E25	102	6.6	12.5	9.7	91	E1.8	<20	23
JAN 1988										
25...	1330	E90	--	6.4	3.0	12.2	91	E2.0	20	240
MAY										
12...	1345	E42	148	7.3	19.0	9.7	104	3.3	<20	21
JUN										
08...	1330	E20	158	7.5	21.0	9.1	104	6.9	40	49
JUL										
13...	1400	E11	143	6.6	25.5	9.4	114	7.3	80	540
AUG										
31...	1130	E14	--	7.1	22.0	8.3	95	<0.9	50	79

DATE	HARD-NESS TOTAL (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 1987									
14...	33	7.2	3.7	4.7	3.2	16	16	11	0.2
JAN 1988									
25...	43	9.3	4.7	8.4	2.9	8.0	26	18	0.2
MAY									
12...	39	8.1	4.6	6.7	2.4	10	24	14	0.3
JUN									
08...	40	8.2	4.7	6.7	2.4	15	22	13	0.3
JUL									
13...	42	8.9	4.9	7.2	3.0	21	19	14	0.1
AUG									
31...	43	9.1	4.9	7.1	2.6	19	19	13	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 1987									
14...	5.3	61	0.008	0.36	0.10	0.90	1.3	0.065	7.1
JAN 1988									
25...	7.4	82	0.016	1.49	0.06	--	--	0.042	4.2
MAY									
12...	2.8	69	0.010	0.63	0.09	0.66	1.3	0.053	5.3
JUN									
08...	4.5	71	0.009	0.15	<0.05	1.2	1.3	0.102	7.2
JUL									
13...	4.9	75	0.012	0.39	0.11	1.0	1.4	0.359	10
AUG									
31...	3.0	70	0.003	0.27	<0.05	0.70	0.98	0.554	6.8

01463620 ASSUNPINK CREEK NEAR CLARKSVILLE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 1988 08...	1330	<0.5	30	1	<10	20	2	1	6

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 1988 08...	790	<5	120	<0.10	8	<1	<10	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 bridge on Chambers Street (Lincoln Avenue) in Trenton, and 1.5 mi upstream from mouth.

DRAINAGE AREA.--90.6 mi^2.

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.--Records good. 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 ft^3/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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	146	215	79	230	146	119	117	95	34	72	42
2	61	121	158	78	316	138	109	105	208	32	65	39
3	135	103	126	77	341	132	102	96	102	30	57	37
4	219	95	111	84	413	252	112	90	96	26	52	326
5	129	86	97	78	370	355	112	103	86	27	48	223
6	112	76	87	72	263	264	99	212	71	32	44	110
7	124	73	81	70	193	218	102	204	64	33	41	79
8	105	68	77	70	166	186	102	151	59	30	39	61
9	94	69	74	70	154	168	93	126	65	28	38	54
10	85	187	73	68	144	161	85	113	59	27	36	50
11	81	304	115	68	132	142	83	113	53	27	59	46
12	79	232	93	66	686	132	83	106	49	42	40	45
13	74	199	84	68	507	131	84	94	48	38	35	94
14	70	161	80	65	377	127	82	127	46	36	33	54
15	67	134	222	62	340	120	86	91	44	35	33	43
16	65	118	237	59	501	111	102	82	42	35	31	40
17	62	107	170	58	340	103	85	88	44	52	56	42
18	59	108	139	148	276	98	95	168	45	39	105	42
19	59	97	120	133	261	97	101	349	44	39	69	42
20	59	93	156	403	570	93	89	442	44	52	70	43
21	60	83	139	389	334	89	84	287	43	191	68	44
22	57	73	121	328	278	81	78	236	43	389	62	44
23	56	75	111	258	243	78	79	207	42	176	62	43
24	54	78	102	201	222	77	124	203	39	273	300	42
25	51	81	97	186	193	77	93	176	37	97	163	43
26	52	73	105	252	175	234	84	167	37	244	66	41
27	96	69	96	220	168	361	85	143	37	493	65	37
28	708	66	91	177	165	232	318	121	37	311	46	e31
29	382	e143	94	145	155	166	171	104	36	154	57	e40
30	285	e434	82	134	---	148	146	92	35	104	59	34
31	196	---	79	158	---	132	---	84	---	83	45	---
MEAN	123	125	117	139	294	156	106	155	58.3	104	65.0	63.7
MAX	708	434	237	403	686	361	318	442	208	493	300	326
MIN	51	66	73	58	132	77	78	82	35	26	31	31
(†)	14.1	14.7	15.3	15.2	22.0	17.3	14.9	17.2	13.9	12.9	12.5	12.5

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	76.2	113	143	160	186	204	178	126	92.4	96.8	88.1	88.4
MAX	257	331	386	498	395	426	494	338	249	545	355	327
(WY)	1928	1973	1984	1979	1939	1936	1983	1984	1946	1975	1971	1938
MIN	19.1	27.6	42.1	44.2	52.0	76.7	65.2	40.0	25.9	17.2	17.3	15.8
(WY)	1931	1932	1944	1981	1934	1985	1963	1941	1942	1955	1966	1943

SUMMARY STATISTICS	FOR 1988 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	125		129	Unadjusted
(†)	15.2		---	
HIGHEST ANNUAL MEAN			232.8	1984
LOWEST ANNUAL MEAN			69.2	1931
HIGHEST DAILY MEAN	708	Oct 28	4050	Jul 21 1975
LOWEST DAILY MEAN	26	Jul 4	4.0	Jul 21 1929
INSTANTANEOUS PEAK FLOW	1380	Oct 28	5450	Jul 21 1975
INSTANTANEOUS PEAK STAGE	7.2	Oct 28	14.61a	Jul 21 1975
INSTANTANEOUS LOW FLOW	23	Jul 5	1.0	Aug 21 1931
10 PERCENTILE	259		267	
50 PERCENTILE	91		86	
95 PERCENTILE	36		24	

a From high-water mark in gage house
e Estimated
† 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 mi^2.

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.--Records good. Flow regulated occasionally by lakes above station. Several measurements of water temperature, other than those published, were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87	113	259	100	135	124	113	108	62	33	39	35
2	68	102	162	107	154	116	108	95	197	33	36	32
3	58	94	132	105	272	114	102	89	184	33	34	30
4	232	90	118	101	311	125	102	87	112	32	33	38
5	229	87	114	104	426	288	108	92	90	31	32	107
6	128	82	104	125	262	273	103	132	76	30	31	82
7	136	77	95	154	161	186	99	185	67	30	31	49
8	157	76	91	115	140	156	104	146	64	29	30	38
9	116	76	89	108	123	142	99	112	70	28	29	47
10	101	87	89	90	120	136	91	96	81	30	28	73
11	90	255	107	85	115	125	89	94	65	29	29	75
12	85	270	138	89	313	117	83	93	58	28	30	70
13	77	197	121	91	596	114	81	85	52	30	28	72
14	70	155	106	89	366	113	80	80	49	28	27	90
15	74	128	107	85	214	108	80	89	47	28	26	67
16	74	112	278	83	399	102	95	84	45	e28	24	54
17	69	102	261	85	395	98	95	74	43	e27	24	45
18	67	104	160	107	232	96	84	88	49	e35	33	41
19	62	107	131	281	185	97	98	132	49	e30	31	39
20	62	102	128	326	268	96	92	247	44	e38	30	35
21	62	97	161	593	260	92	81	228	42	e47	34	32
22	60	87	142	438	176	89	77	157	40	e95	33	34
23	58	85	125	238	159	88	74	130	38	e68	28	31
24	62	88	113	169	154	89	120	115	39	e67	58	29
25	63	91	109	153	142	89	122	123	36	e66	117	31
26	57	89	115	238	130	113	98	145	37	e56	68	33
27	61	89	122	265	127	294	87	107	35	e110	44	33
28	419	87	119	181	134	240	127	89	34	114	37	30
29	411	92	114	179	132	162	133	80	33	61	35	28
30	165	204	112	141	---	137	115	73	33	51	44	26
31	133	---	120	124	---	123	---	67	---	45	44	---
MEAN	116	114	134	166	228	137	98.0	114	62.4	44.8	37.0	47.5
MAX	419	270	278	593	596	294	133	247	197	114	117	107
MIN	57	76	89	83	115	88	74	67	33	27	24	26
IN.	1.64	1.56	1.89	2.35	3.01	1.94	1.34	1.61	.85	.63	.52	.65

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	88.4	132	162	170	184	198	176	132	97.3	99.9	91.8	87.6
MAX	207	406	356	452	416	370	388	319	251	299	299	284
(WY)	1972	1973	1973	1978	1979	1958	1983	1984	1968	1945	1971	1971
MIN	32.9	36.7	46.2	62.1	86.6	86.1	68.3	60.8	39.8	25.8	25.4	31.7
(WY)	1966	1966	1966	1981	1954	1985	1985	1955	1965	1955	1966	1941

SUMMARY STATISTICS	FOR 1988 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	108		135	
HIGHEST ANNUAL MEAN			225	1978
LOWEST ANNUAL MEAN			76.9	1966
HIGHEST DAILY MEAN	596	Feb 13	3930	Aug 28 1971
LOWEST DAILY MEAN	24	Aug 16	16	Aug 30 1966
INSTANTANEOUS PEAK FLOW	652	Jan 21	4860	Sep 1 1978
INSTANTANEOUS PEAK STAGE	6.26	Jan 21	14.18	Sep 1 1978
INSTANTANEOUS LOW FLOW	22	Aug 16	13.1a	Feb 14 1942
ANNUAL RUNOFF (INCHES)	18.0		22.4	
10 PERCENTILE	202		254	
50 PERCENTILE	92		94	
95 PERCENTILE	29		35	

a Result of freezeup
e Estimated

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 1987 TO SEPTEMBER 1988

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	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 1987										
13...	1200	78	161	7.4	10.0	8.7	77	2.4	79	110
FEB 1988										
08...	1030	139	160	7.1	0.5	13.2	91	1.2	50	50
APR										
12...	0905	85	181	7.1	11.5	9.1	84	2.7	20	140
MAY										
25...	1130	115	145	6.9	19.5	6.4	71	3.6	490	790
JUL										
27...	0900	E110	177	6.9	21.5	6.1	69	8.4	>24000	>24000
AUG										
08...	0930	30	244	7.2	24.0	6.4	76	2.7	500	4900

DATE	HARD-NESS TOTAL (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 1987									
13...	52	16	2.9	7.8	3.0	24	23	15	0.3
FEB 1988									
08...	44	13	2.9	7.5	2.9	17	23	14	0.2
APR									
12...	52	16	3.0	8.4	2.8	22	27	15	0.3
MAY									
25...	46	14	2.7	7.0	2.6	18	24	12	0.3
JUL									
27...	52	16	2.9	9.5	4.0	18	27	15	0.3
AUG									
08...	69	22	3.4	16	4.0	35	29	25	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 1987									
13...	10	92	0.040	1.04	0.41	0.77	1.8	0.150	5.7
FEB 1988									
08...	9.0	83	0.012	0.88	--	--	--	0.105	5.3
APR									
12...	8.7	94	0.040	0.97	0.14	0.80	1.8	0.156	4.3
MAY									
25...	9.4	83	E0.038	0.94	0.21	1.0	2.0	0.246	9.1
JUL									
27...	9.2	95	0.090	0.92	0.20	1.4	2.3	1.20	12
AUG									
08...	11	132	0.150	1.65	0.10	0.91	2.6	0.160	5.2

01464500 CROSSWICKS CREEK AT EXTONVILLE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 1988 25...	1130	<0.5	10	2	<10	<10	2	<1	6

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 1988 25...	4800	<5	100	0.20	2	<1	20	4

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 mi^2.

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 1987 TO SEPTEMBER 1988

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)
OCT 1987										
13...	1000	E18	151	7.3	10.5	9.5	85	4.2	5400	270
FEB 1988										
08...	0900	E62	174	6.8	1.0	13.8	96	0.9	330	700
APR										
12...	1030	E21	176	7.2	12.0	11.5	107	3.3	790	80
MAY										
25...	1000	E48	149	7.0	19.5	7.7	85	5.7	9200	9200
JUL										
27...	1115	E38	182	7.2	24.0	7.1	84	4.5	790	16000
AUG										
08...	1115	E2.6	--	7.0	25.0	4.2	51	2.4	1100	1700

DATE	HARDNESS TOTAL (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)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1987									
13...	50	12	4.9	6.5	4.5	21	21	15	0.3
FEB 1988									
08...	47	11	4.8	9.1	3.7	13	23	19	0.2
APR									
12...	51	12	5.2	7.4	2.8	19	25	16	0.3
MAY									
25...	48	11	4.9	6.7	2.5	20	20	14	0.3
JUL									
27...	61	15	5.6	6.7	4.3	21	30	14	0.3
AUG									
08...	61	15	5.6	9.3	4.7	27	29	16	0.2

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1987									
13...	8.7	85	0.017	0.99	0.22	0.78	1.8	0.150	5.0
FEB 1988									
08...	8.2	87	0.035	1.76	--	--	--	0.167	3.6
APR									
12...	6.1	86	0.020	1.06	0.16	1.0	2.1	0.118	3.7
MAY									
25...	7.6	79	E0.032	0.96	0.12	0.89	1.9	0.121	5.7
JUL									
27...	9.3	98	0.040	0.40	0.24	0.94	1.3	0.159	6.8
AUG									
08...	10	106	0.084	1.42	0.49	0.80	2.2	0.420	5.9

01464515 DOCTORS CREEK AT ALLENTOWN, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 (MG/KG AS C)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G 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 1987 13...	1000	--	260	0.2	7.9	--	--	6	--	--	--	<1
MAY 1988 25...	1000	<0.5	--	--	--	<10	2	--	<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 1987 13...	--	140	<50	--	3	--	9100	--	20	--	200
MAY 1988 25...	<1	--	--	4	--	2200	--	9	--	180	--

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 1987 13...	--	<0.10	--	<10	--	<1	--	60	--	10	<1.0
MAY 1988 25...	<0.10	--	7	--	<1	--	10	--	<1	--	--

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 1987 13...	0.7	310	7.1	10	2.9	0.2	2.2	<5.0	<0.1	0.5	<0.1
MAY 1988 25...	--	--	--	--	--	--	--	--	--	--	--

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 1987 13...	<2.7	0.1	<0.1	<0.5	<0.1	<0.1	1.4	<0.1	<1.00	<10	<0.1
MAY 1988 25...	--	--	--	--	--	--	--	--	--	--	--

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 mi^2.

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: Jan. 6 to Feb. 2. 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, 6.90 ft, June 3; minimum recorded, -5.05 ft, Nov. 21.

Summaries of tide elevations during current year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	6.00	6.22	6.25	e6.6	6.18	5.22	6.17	6.28	6.90	6.56	6.36	6.01
high tide	Date	7	30	20	20	20	20	12	31	3	27	26	4
Minimum	Elevation	-3.80	-5.05	-4.29	e-4.4	-4.94	-4.21	-3.64	-3.19	-3.41	-3.50	-3.33	-3.31
low tide	Date	4	21	17	7	14	22	25	1	6	1	16	28
Mean high tide		4.86	4.63	4.71	--	4.26	4.23	4.75	5.29	5.13	5.07	5.10	4.92
Mean water level		1.38	1.26	1.36	--	0.95	0.78	1.30	1.72	1.43	1.35	1.40	1.30
Mean low tide		-2.39	-2.44	-2.25	--	-2.56	-2.84	-2.42	-1.96	-2.56	-2.61	-2.52	-2.59

e 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 mi^2.

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 1987 TO SEPTEMBER 1988

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)
OCT 1987										
13...	0900	E36	74	5.3	10.5	8.9	79	1.1	33	70
FEB 1988										
04...	0900	E110	91	5.5	3.5	12.1	91	0.9	80	110
MAR										
28...	1030	E94	83	5.8	10.0	9.7	85	1.9	350	170
MAY										
19...	0900	E56	73	5.9	16.0	7.5	76	1.9	2400	>2400
JUL										
20...	0900	E10	101	6.5	25.5	3.7	45	2.2	130	920
AUG										
10...	0900	E8.6	120	6.4	25.0	4.6	56	2.5	1100	170

DATE	HARDNESS TOTAL (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)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1987									
13...	19	5.2	1.5	4.3	1.8	4.0	15	8.5	0.2
FEB 1988									
04...	25	6.6	2.0	4.9	1.6	4.0	19	11	0.2
MAR									
28...	22	6.1	1.6	4.5	1.9	4.0	22	8.1	0.1
MAY									
19...	19	5.2	1.5	4.3	--	4.0	15	8.7	0.2
JUL									
20...	26	7.7	1.7	4.4	2.3	10	16	9.9	0.1
AUG									
10...	26	7.7	1.7	6.8	2.4	12	15	9.6	0.1

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1987									
13...	6.6	45	0.006	0.37	0.07	0.82	1.2	0.138	14
FEB 1988									
04...	5.4	53	0.008	0.64	--	--	--	0.079	11
MAR									
28...	4.1	51	0.010	0.45	0.06	--	--	0.107	14
MAY									
19...	4.5	--	0.021	0.30	0.22	1.0	1.3	0.185	15
JUL									
20...	5.0	53	0.019	0.79	0.24	0.73	1.5	0.425	13
AUG									
10...	4.8	55	0.022	0.93	0.18	1.0	1.9	0.405	13

01465850 SOUTH BRANCH RANCOCAS CREEK AT VINCENTOWN, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 1988 19...	0900	0.6	230	1	<10	<10	1	1	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)
MAY 1988 19...	2200	<5	30	<0.10	4	<1	20	<1

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 mi^2.

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 1987 TO SEPTEMBER 1988

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	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 1987										
14...	1100	E33	44	5.2	13.0	10.1	95	1.6	<2	17
FEB 1988										
10...	1000	E51	53	5.0	4.0	12.8	97	0.8	4	5
MAR										
30...	1215	E62	62	5.8	13.0	10.9	102	1.5	<2	2
MAY										
24...	1130	E63	49	5.3	18.5	8.1	87	0.9	33	13
JUL										
20...	1030	E14	45	5.9	25.5	5.9	72	1.5	49	5
AUG										
10...	1000	E12	53	6.1	26.0	7.3	90	1.3	2	11

DATE	HARD-NESS TOTAL (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 1987									
14...	10	2.2	1.0	3.3	1.0	2.0	11	5.8	0.2
FEB 1988									
10...	10	2.3	1.1	3.3	0.8	1.0	10	5.6	0.1
MAR									
30...	12	2.8	1.3	3.9	1.0	2.0	13	5.8	0.1
MAY									
24...	10	2.1	1.1	3.3	0.8	2.0	15	5.9	0.2
JUL									
20...	10	2.3	1.0	2.8	1.0	4.0	14	6.2	0.1
AUG									
10...	11	2.5	1.2	3.5	1.0	5.0	14	6.4	<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, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1987									
14...	4.5	30	0.003	0.08	0.13	0.61	0.69	0.044	9.7
FEB 1988									
10...	4.1	28	0.003	0.10	--	--	--	0.047	5.8
MAR									
30...	3.1	32	0.010	0.05	0.02	0.30	0.36	<0.020	5.9
MAY									
24...	2.8	32	0.010	<0.05	0.12	0.44	--	0.039	9.8
JUL									
20...	2.3	32	0.009	<0.05	<0.05	0.56	--	0.044	12
AUG									
10...	2.9	34	0.007	<0.05	<0.05	0.37	--	0.044	11

01465970 NORTH BRANCH RANCOCAS CREEK AT BROWNS MILLS, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 1987 14...	1100	<0.5	70	<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)
OCT 1987 14...	2700	8	30	0.10	<1	<1	10	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 mi^2.

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.--No estimated daily discharges. Records good above 1.0 ft^3/s and fair below. 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	1.5	1.6	1.4	2.0	2.0	1.8	1.5	1.5	1.0	.95	.90
2	1.5	1.5	1.5	1.4	2.4	2.0	1.8	1.5	2.0	1.0	.93	.89
3	1.6	1.5	1.4	1.4	2.8	2.0	1.8	1.5	1.9	1.0	.93	.88
4	2.2	1.5	1.4	1.4	2.8	2.4	1.7	1.5	1.7	1.0	.93	.98
5	2.0	1.5	1.4	1.4	2.7	2.9	1.7	1.5	1.6	1.0	.92	1.0
6	1.7	1.4	1.4	1.4	2.4	2.7	1.7	1.9	1.5	1.0	.92	.93
7	1.8	1.4	1.3	1.3	2.1	2.6	1.7	2.1	1.4	1.0	.92	.90
8	1.7	1.4	1.3	1.3	1.9	2.4	1.7	2.2	1.4	1.0	.90	.89
9	1.6	1.4	1.3	1.4	1.9	2.3	1.7	2.1	1.4	1.0	.90	.89
10	1.6	1.6	1.3	1.3	1.9	2.2	1.7	1.9	1.4	1.0	.89	.88
11	1.6	1.9	1.5	1.3	1.9	2.1	1.7	1.7	1.4	1.0	.88	.87
12	1.5	1.8	1.4	1.4	3.8	2.0	1.6	1.7	1.3	1.1	.87	.86
13	1.5	1.7	1.4	1.4	4.3	2.1	1.6	1.6	1.3	1.0	.86	.93
14	1.5	1.6	1.4	1.4	3.2	2.0	1.6	1.5	1.3	1.0	.86	.90
15	1.5	1.5	1.5	1.4	2.6	1.9	1.5	1.5	1.3	1.0	.85	.86
16	1.5	1.5	1.6	1.4	3.2	1.9	1.6	1.5	1.3	1.0	.84	.85
17	1.5	1.5	1.5	1.4	3.0	1.9	1.5	1.5	1.5	1.0	.85	.86
18	1.5	1.5	1.4	1.4	2.7	1.8	1.5	1.5	1.8	.99	.87	.88
19	1.5	1.5	1.5	1.4	2.4	1.9	1.6	1.7	1.7	1.0	.86	.87
20	1.5	1.5	1.6	1.9	2.9	1.8	1.5	2.2	1.5	1.0	.91	.86
21	1.5	1.5	1.6	3.0	2.8	1.8	1.5	2.3	1.4	1.0	.90	.85
22	1.5	1.4	1.5	3.4	2.4	1.8	1.5	2.3	1.3	1.0	.86	.84
23	1.5	1.4	1.5	2.6	2.4	1.7	1.5	2.2	1.3	1.0	.85	.87
24	1.5	1.3	1.5	2.2	2.4	1.8	1.7	2.0	1.2	1.0	1.1	.94
25	1.5	1.3	1.5	2.2	2.2	1.8	1.6	1.9	1.2	.99	1.0	.91
26	1.5	1.3	1.6	2.4	2.1	2.2	1.5	1.9	1.2	.97	.97	.89
27	1.5	1.3	1.5	2.2	2.1	2.9	1.5	1.8	1.2	1.1	.94	.86
28	1.9	1.3	1.5	2.2	2.1	2.6	1.6	1.7	1.1	.98	.92	.85
29	1.7	1.4	1.5	2.2	2.1	2.4	1.6	1.7	1.1	.96	.94	.84
30	1.6	1.7	1.4	2.2	---	2.1	1.6	1.6	1.0	.95	.96	.84
31	1.5	---	1.4	1.9	---	1.9	---	1.5	---	.95	.92	---
MEAN	1.60	1.49	1.46	1.76	2.53	2.13	1.62	1.77	1.41	1.00	.91	.89
MAX	2.2	1.9	1.6	3.4	4.3	2.9	1.8	2.3	2.0	1.1	1.1	1.0
MIN	1.5	1.3	1.3	1.3	1.9	1.7	1.5	1.5	1.0	.95	.84	.84
IN.	.78	.71	.72	.86	1.16	1.04	.77	.87	.67	.49	.45	.42

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	1.64	1.83	2.16	2.38	2.53	2.96	3.02	2.68	2.28	1.91	1.85	1.69
MAX	4.45	4.82	5.75	4.78	5.69	5.67	5.74	5.65	5.35	4.15	5.65	4.31
(WY)	1959	1973	1973	1973	1973	1979	1984	1958	1979	1958	1958	1958
MIN	.93	.95	1.00	.98	1.13	1.25	1.24	1.24	1.19	1.00	.91	.89
(WY)	1986	1986	1966	1981	1977	1966	1985	1985	1985	1977	1985	1988

SUMMARY STATISTICS	FOR 1988 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	1.54		2.24	
HIGHEST ANNUAL MEAN			3.85	1973
LOWEST ANNUAL MEAN			1.19	1966
HIGHEST DAILY MEAN	4.3	Feb 13	20	Feb 28 1958
LOWEST DAILY MEAN	.84	Aug 16	.71	Sep 21 1985
INSTANTANEOUS PEAK FLOW	4.5	Feb 12	35	Aug 25 1958
INSTANTANEOUS PEAK STAGE	1.58	Feb 12	2.33	Aug 25 1958
ANNUAL RUNOFF (INCHES)	8.90		12.9	
10 PERCENTILE	2.2		3.7	
50 PERCENTILE	1.5		1.9	
95 PERCENTILE	.84		1.0	

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 September 1986, October 1987 to current year.
WATER TEMPERATURE: October 1960 to current year.
DISSOLVED OXYGEN: October 1984 to September 1986, October 1987 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.

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, 3.6, Feb. 25-27, Mar. 6-7, 1988.
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, 88 microsiemens, Jan. 21; minimum, 29 microsiemens, Aug. 13, 20, 23, 24.
PH: Maximum, 4.3, on many days during the year; minimum, 3.6, Feb. 25-27, Mar. 6, 7.
WATER TEMPERATURE: Maximum, 18.0°C, Aug. 15; minimum, 0.5°C, Feb. 13, 14.
DISSOLVED OXYGEN: Maximum, 9.2 mg/L, Feb. 12; minimum, 1.2 mg/L, Aug. 15.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	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)
OCT 1987										
27...	0920	1.5	35	4.2	9.5	0.30	2.8	25	0.3	<1
NOV										
24...	0845	1.4	42	4.0	7.5	0.30	4.3	36	0.1	<1
DEC										
29...	1100	1.5	51	4.2	6.0	0.40	6.1	50	0.2	<1
JAN 1988										
26...	1000	2.4	66	3.7	3.0	0.60	8.7	66	0.8	<1
FEB										
23...	0910	2.4	61	3.9	2.5	<0.10	8.6	64	<0	<1
MAR										
29...	0940	2.4	70	3.8	7.0	0.40	6.0	49	0.2	<1
APR										
26...	1000	1.5	52	4.0	8.5	0.40	4.0	34	0.2	K1
MAY										
31...	1015	--	42	4.3	14.0	0.40	2.8	27	0.7	K3
JUN										
28...	0900	--	34	4.1	14.0	0.60	2.4	23	0.2	K2
JUL										
26...	1000	--	32	4.2	15.5	1.1	2.2	22	0.5	K1
AUG										
30...	1000	--	31	4.2	15.5	1.0	2.6	26	--	--
SEP										
27...	1000	--	32	4.5	13.0	4.0	3.5	33	0.7	<1

01466500 MCDONALDS BRANCH IN LEBANON STATE FOREST, NJ--Continued

WATER-QUALITY RECORDS

DATE	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS TOTAL (MG/L AS CACO3)	ACIDITY (MG/L AS H)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	CARBONATE IT-FLD (MG/L AS CO3)	BICARBONATE IT-FLD (MG/L AS HCO3)	ALKALINITY, CARBONATE IT-FLD (MG/L - CACO3)
OCT 1987										
27...	66	2	0.1	0.29	0.33	1.7	0.2	<1.0	<0.1	<0.1
NOV										
24...	30	2	0.1	0.34	0.38	1.8	<0.1	<1.0	<0.1	<0.1
DEC										
29...	<1	3	0.2	0.54	0.51	1.9	0.2	<1.0	<0.1	<0.1
JAN 1988										
26...	37	4	--	0.79	0.61	2.2	0.4	<1.0	<0.1	<0.1
FEB										
23...	15	3	--	0.56	0.39	1.8	0.5	1.0	<0.1	<0.1
MAR										
29...	60	4	--	0.72	0.56	2.0	-	<1.0	<0.1	<0.1
APR										
26...	64	3	--	0.48	0.42	1.9	0.3	<1.0	<0.1	<0.1
MAY										
31...	76	2	--	0.39	0.31	1.7	0.2	<1.0	<0.1	<0.1
JUN										
28...	84	2	--	0.33	0.27	1.7	0.2	<1.0	<0.1	<0.1
JUL										
26...	56	2	--	0.24	0.22	1.7	0.3	<1.0	<0.1	<0.1
AUG										
30...	<1	2	--	0.27	0.33	1.8	0.3	<1.0	<0.1	<0.1
SEP										
27...	K22	2	--	0.27	0.28	1.7	0.4	<1.0	<0.1	<0.1

DATE	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 1987									
27...	<1	8.1	3.0	0.1	4.4	18	1	0.00	83
NOV									
24...	<1	7.6	4.3	0.1	4.3	19	2	0.01	87
DEC									
29...	<1	12	4.0	0.1	4.4	24	1	0.00	75
JAN 1988									
26...	<1	17	3.8	0.1	3.6	29	24	0.16	9
FEB									
23...	<1	16	3.4	0.1	2.9	28	4	0.03	25
MAR									
29...	<1	20	2.7	0.1	2.5	29	3	0.02	73
APR									
26...	<1	12	3.1	0.1	2.9	21	4	0.02	57
MAY									
31...	<1	8.7	3.9	0.2	2.8	19	1	0.0	50
JUN									
28...	<1	6.9	3.5	<0.1	3.7	17	1	0.0	50
JUL									
26...	<1	5.5	3.4	0.1	4.0	16	--	--	--
AUG									
30...	<1	6.0	3.6	<0.1	4.3	17	1	0.0	60
SEP									
27...	<1	4.3	3.4	<0.1	4.2	16	6	0.0	91

01466500 MCDONALDS BRANCH IN LEBANON STATE FOREST, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	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)	PHOSPHOROUS DISSOLVED (MG/L AS P)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)	CARBON, ORGANIC DISSOLVED (MG/L AS C)
OCT 1987 27...	<0.010	<0.10	<0.01	0.010	<0.20	<0.010	0.030	<0.010	3.2
NOV 24...	<0.010	<0.10	0.01	0.020	<0.20	<0.010	<0.010	<0.010	3.8
DEC 29...	<0.010	<0.10	0.01	0.010	0.20	<0.010	<0.010	<0.010	4.8
JAN 1988 26...	<0.010	<0.10	0.02	0.010	0.20	0.010	<0.010	<0.010	7.3
FEB 23...	<0.010	<0.10	0.03	0.030	0.70	0.010	0.010	<0.010	5.8
MAR 29...	<0.010	<0.10	0.04	0.020	0.50	<0.010	<0.010	<0.010	7.7
APR 26...	<0.010	<0.10	0.02	<0.010	0.20	<0.010	0.010	<0.010	5.4
MAY 31...	<0.010	<0.10	0.01	<0.010	0.30	<0.010	0.010	<0.010	7.4
JUN 28...	<0.010	<0.10	0.02	0.020	0.40	0.010	0.010	0.010	5.4
JUL 26...	<0.010	<0.10	<0.01	<0.010	0.20	<0.010	0.010	<0.010	3.7
AUG 30...	<0.010	<0.10	0.02	0.010	0.40	<0.010	<0.010	<0.010	2.3
SEP 27...	<0.010	<0.10	0.03	<0.010	<0.20	0.010	0.010	<0.010	1.7

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 1987 27...	0920	70	<1	6	<0.5	<1	<1	<3	<1	86
NOV 24...	0845	90	--	--	--	--	--	--	--	77
DEC 29...	1100	130	<1	12	<0.5	<1	<1	<3	1	88
JAN 1988 26...	1000	260	--	--	--	--	--	--	--	170
FEB 23...	0910	270	--	--	--	--	--	--	--	170
MAR 29...	0940	250	<1	18	<0.5	<1	<1	<3	3	170
APR 26...	1000	150	--	--	--	--	--	--	--	110
MAY 31...	1015	180	--	--	--	--	--	--	--	180
JUN 28...	0900	100	<1	8	<0.5	<1	1	<3	<1	140
JUL 26...	1000	80	--	--	--	--	--	--	--	140
AUG 30...	1000	70	--	--	--	--	--	--	--	140
SEP 27...	1000	50	--	--	--	--	--	--	--	110

01466500 MCDONALDS BRANCH IN LEBANON STATE FOREST, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)
OCT 1987 27...	<5	<4	7	<0.1	<10	1	<1	<1.0	4
NOV 24...	--	--	--	--	--	--	--	--	--
DEC 29...	<5	<4	12	<0.1	<10	2	<1	<1.0	7
JAN 1988 26...	--	--	--	--	--	--	--	--	--
FEB 23...	--	--	--	--	--	--	--	--	--
MAR 29...	<5	5	20	<0.1	<10	3	3	<1.0	8
APR 26...	--	--	--	--	--	--	--	--	--
MAY 31...	--	--	--	--	--	--	--	--	--
JUN 28...	<5	<4	6	<0.1	<10	3	<1	<1.0	6
JUL 26...	--	--	--	--	--	--	--	--	--
AUG 30...	--	--	--	--	--	--	--	--	--
SEP 27...	--	--	--	--	--	--	--	--	--

DATE	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT)	GROSS 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)
OCT 1987 27...	<6	9	--	--	--	--	--	--	--
NOV 24...	--	--	0.5	<0.4	1.0	<0.4	1.0	<0.4	0.14
DEC 29...	<6	16	--	--	--	--	--	--	--
JAN 1988 26...	--	--	--	--	--	--	--	--	--
FEB 23...	--	--	--	--	--	--	--	--	--
MAR 29...	<6	13	--	--	--	--	--	--	--
APR 26...	--	--	--	--	--	--	--	--	--
MAY 31...	--	--	--	--	--	--	--	--	--
JUN 28...	<6	12	0.6	<0.4	0.8	<0.4	0.8	<0.4	0.15
JUL 26...	--	--	--	--	--	--	--	--	--
AUG 30...	--	--	--	--	--	--	--	--	--
SEP 27...	--	--	0.6	<0.4	1.0	0.4	1.0	0.4	0.07

01466500 MCDONALDS BRANCH IN LEBANON STATE FOREST, NJ--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	40	39	40	47	45	46	57	55	56	51	50	50
2	40	39	40	45	44	44	56	53	55	51	50	50
3	50	39	40	44	42	43	54	51	53	50	48	50
4	57	52	55	43	41	42	52	50	51	49	48	49
5	57	51	54	42	41	41	50	49	49	49	48	49
6	51	48	50	41	40	41	49	48	49	49	47	48
7	49	48	49	41	40	40	49	48	48	47	45	46
8	49	46	47	41	39	40	48	46	47	46	45	45
9	47	45	46	40	39	39	47	45	46	45	44	45
10	45	44	44	52	39	42	46	45	45	45	44	44
11	44	42	43	54	52	53	49	45	48	45	44	44
12	43	42	42	55	53	54	49	49	49	44	43	44
13	43	40	41	54	51	53	49	48	49	44	43	43
14	41	40	40	52	49	50	49	47	48	44	43	43
15	40	39	40	50	48	49	54	47	49	44	42	43
16	40	39	39	48	47	47	55	54	55	43	42	42
17	39	38	39	47	47	47	55	54	54	43	41	42
18	39	38	39	49	47	48	54	52	53	45	41	43
19	39	38	38	49	48	48	55	53	54	46	45	46
20	39	38	38	48	47	48	57	54	56	61	46	54
21	38	37	38	48	47	47	58	57	57	88	62	73
22	38	37	38	47	46	46	58	56	57	87	79	83
23	38	37	37	46	45	46	57	55	56	79	74	77
24	38	37	37	46	44	45	55	54	54	74	69	71
25	38	37	37	46	44	45	55	53	54	69	67	68
26	38	36	37	45	44	44	56	55	56	71	70	71
27	53	36	39	44	44	44	56	55	56	70	68	69
28	55	53	54	44	43	44	56	54	55	69	67	68
29	54	51	53	52	43	45	54	53	54	67	62	65
30	52	49	50	57	52	55	54	52	53	62	59	61
31	49	46	48	---	---	---	53	50	51	60	58	59
MONTH	57	36	43	57	39	46	58	45	52	88	41	54

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	62	59	60	62	60	61	67	63	65	52	50	51
2	70	63	65	61	60	60	65	62	63	52	50	51
3	74	71	72	62	60	61	62	60	61	52	50	51
4	75	70	72	73	61	64	64	60	61	51	50	50
5	75	71	73	74	71	73	62	58	60	51	49	50
6	72	68	70	72	70	71	60	57	58	64	51	57
7	68	63	66	71	68	70	58	56	57	66	64	65
8	63	60	61	69	67	68	60	57	58	69	66	68
9	61	59	60	67	65	66	59	56	58	68	64	66
10	60	58	59	66	64	65	58	55	57	65	61	63
11	59	57	58	65	63	64	57	55	56	61	59	60
12	78	59	72	65	62	63	57	54	56	59	57	58
13	80	76	78	63	62	62	56	55	55	57	55	56
14	79	74	76	62	61	62	56	53	54	56	54	55
15	74	71	72	62	61	61	55	52	53	54	52	53
16	73	71	72	61	60	60	55	53	53	53	51	52
17	72	70	71	60	59	60	54	52	53	51	50	50
18	70	68	69	60	58	59	53	51	52	52	49	51
19	69	65	67	59	58	59	54	51	53	60	51	54
20	70	68	69	60	58	59	53	51	52	65	61	64
21	69	67	68	60	58	59	52	50	51	68	64	66
22	68	65	67	61	58	59	52	49	50	67	64	65
23	67	65	66	59	57	58	50	48	49	65	62	63
24	66	65	66	59	57	57	52	51	51	62	59	60
25	65	63	64	58	57	58	52	51	52	62	59	60
26	64	62	63	75	57	64	52	51	51	61	58	60
27	62	61	62	78	74	76	51	49	50	59	56	58
28	62	61	62	75	73	74	53	50	52	57	55	56
29	62	61	61	74	70	72	53	52	52	56	53	55
30	---	---	---	71	68	69	52	51	52	54	51	53
31	---	---	---	69	65	67	---	---	---	52	48	50
MONTH	80	57	67	78	57	64	67	48	55	69	48	57

01466500 MCDONALDS BRANCH IN LEBANON STATE FOREST, NJ--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	53	47	48	36	35	35	34	33	33	33	31	32
2	59	55	57	36	35	35	34	33	33	33	31	32
3	59	55	57	35	34	35	34	33	34	32	30	32
4	55	52	53	36	34	35	34	32	33	36	31	33
5	52	48	50	35	34	35	34	32	33	37	34	36
6	49	47	48	35	34	34	33	31	32	35	33	34
7	47	46	46	35	33	34	33	31	32	34	31	33
8	46	44	45	35	33	34	33	31	32	33	32	32
9	45	44	44	36	33	34	33	31	32	33	31	32
10	44	43	43	34	33	34	33	32	32	33	32	32
11	44	42	43	34	33	34	34	31	32	33	31	32
12	43	42	42	37	33	36	33	31	32	33	31	32
13	43	41	42	37	35	36	32	29	31	34	31	33
14	42	40	41	36	34	35	32	31	31	34	31	33
15	40	39	40	35	34	34	32	31	32	33	31	32
16	40	39	39	34	33	34	32	31	32	33	31	32
17	57	39	47	34	33	33	34	31	32	33	30	32
18	55	53	54	34	33	33	33	31	32	32	31	32
19	54	51	52	34	33	34	32	30	31	32	31	31
20	51	48	49	34	33	33	32	29	30	32	31	32
21	48	45	47	33	32	33	31	30	31	32	31	32
22	45	43	44	33	32	33	31	30	31	32	31	32
23	44	41	43	33	32	33	31	29	30	36	31	32
24	42	40	41	34	33	33	45	29	40	35	32	34
25	40	39	40	34	32	33	41	38	39	34	33	34
26	40	38	39	36	32	34	37	33	36	34	33	33
27	39	38	38	39	37	38	34	32	33	33	32	33
28	39	36	37	38	36	37	33	31	32	33	32	32
29	36	35	36	36	34	36	33	31	32	33	32	32
30	36	35	36	35	33	34	34	30	32	33	31	32
31	---	---	---	35	33	34	33	32	33	---	---	---
MONTH	59	35	45	39	32	34	45	29	33	37	30	32

PH (STANDARD UNITS), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	4.2	4.2	4.2	4.0	4.0	4.0	4.1	4.0	4.1	4.1	4.1	4.1
2	4.2	4.2	4.2	4.0	4.0	4.0	4.1	4.0	4.0	4.1	4.0	4.1
3	4.2	4.1	4.2	4.1	4.0	4.0	4.1	4.0	4.1	4.0	4.0	4.0
4	4.1	4.0	4.0	4.1	4.0	4.1	4.2	4.1	4.2	4.0	4.0	4.0
5	4.0	4.0	4.0	4.1	4.1	4.1	4.2	4.1	4.1	4.0	4.0	4.0
6	4.0	4.0	4.0	4.2	4.0	4.1	4.1	4.1	4.1	4.0	3.9	4.0
7	4.0	4.0	4.0	4.1	4.1	4.1	4.1	4.1	4.1	4.0	3.9	4.0
8	4.0	3.9	4.0	4.2	4.1	4.2	4.1	4.1	4.1	4.0	4.0	4.0
9	4.0	3.9	3.9	4.2	4.2	4.2	4.2	4.1	4.2	4.0	4.0	4.0
10	4.0	3.9	4.0	4.2	4.1	4.2	4.2	4.2	4.2	4.0	4.0	4.0
11	4.0	3.9	4.0	4.1	4.1	4.1	4.2	4.1	4.2	4.0	3.8	3.9
12	4.0	3.9	3.9	4.1	4.1	4.1	4.2	4.1	4.2	3.9	3.9	3.9
13	4.0	3.9	4.0	4.1	4.1	4.1	4.1	4.1	4.1	3.9	3.9	3.9
14	4.0	4.0	4.0	4.1	4.1	4.1	4.1	4.1	4.1	3.9	3.9	3.9
15	4.0	4.0	4.0	4.1	4.1	4.1	4.2	4.1	4.2	3.9	3.9	3.9
16	4.0	4.0	4.0	4.1	4.1	4.1	4.2	4.1	4.1	3.9	3.9	3.9
17	4.1	4.0	4.0	4.2	4.1	4.1	4.1	4.1	4.1	3.9	3.9	3.9
18	4.1	4.0	4.1	4.2	4.1	4.2	4.1	4.1	4.1	3.9	3.9	3.9
19	4.0	4.0	4.0	4.1	4.1	4.1	4.1	4.1	4.1	3.9	3.8	3.9
20	4.1	4.0	4.1	4.1	4.1	4.1	4.2	4.1	4.2	3.8	3.8	3.8
21	4.1	4.0	4.1	4.1	4.1	4.1	4.2	4.2	4.2	4.0	3.9	4.0
22	4.0	4.0	4.0	4.1	4.1	4.1	4.2	4.2	4.2	4.0	3.9	3.9
23	4.0	4.0	4.0	4.1	4.1	4.1	4.2	4.2	4.2	3.9	3.9	3.9
24	4.0	4.0	4.0	4.2	4.1	4.1	4.2	4.2	4.2	3.9	3.8	3.9
25	4.1	4.0	4.0	4.1	4.0	4.1	4.3	4.2	4.2	3.9	3.9	3.9
26	4.0	4.0	4.0	4.1	4.1	4.1	4.3	4.2	4.2	3.9	3.9	3.9
27	4.1	4.0	4.0	4.1	4.0	4.1	4.2	4.2	4.2	3.9	3.8	3.9
28	4.1	4.0	4.0	4.1	4.1	4.1	4.2	4.2	4.2	3.9	3.8	3.9
29	4.0	4.0	4.0	4.2	4.1	4.1	4.2	4.1	4.2	3.9	3.9	3.9
30	4.0	4.0	4.0	4.2	4.1	4.1	4.1	4.1	4.1	3.9	3.9	3.9
31	4.0	4.0	4.0	---	---	---	4.1	4.1	4.1	4.0	3.9	4.0
MONTH	4.2	3.9	4.0	4.2	4.0	4.1	4.3	4.0	4.1	4.1	3.8	3.9

01466500 MCDONALDS BRANCH IN LEBANON STATE FOREST, NJ--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	4.3	4.0	4.2	3.7	3.7	3.7	3.8	3.8	3.8	4.0	4.0	4.0
2	4.3	4.2	4.3	3.7	3.7	3.7	3.8	3.8	3.8	4.0	4.0	4.0
3	4.2	4.1	4.2	3.7	3.7	3.7	3.8	3.8	3.8	4.0	4.0	4.0
4	4.1	4.0	4.1	3.7	3.7	3.7	3.9	3.8	3.8	4.0	4.0	4.0
5	4.0	4.0	4.0	3.7	3.7	3.7	3.9	3.8	3.9	4.0	4.0	4.0
6	4.0	3.9	4.0	3.7	3.6	3.7	3.9	3.9	3.9	4.0	4.0	4.0
7	3.9	3.9	3.9	3.7	3.6	3.7	3.9	3.9	3.9	4.0	3.9	4.0
8	3.9	3.9	3.9	3.7	3.7	3.7	3.9	3.9	3.9	4.0	3.9	4.0
9	3.9	3.9	3.9	3.7	3.7	3.7	3.9	3.9	3.9	4.0	3.9	4.0
10	3.9	3.9	3.9	3.8	3.7	3.7	3.9	3.9	3.9	4.0	4.0	4.0
11	4.0	3.9	4.0	3.7	3.7	3.7	3.9	3.9	3.9	4.0	4.0	4.0
12	4.0	3.9	3.9	3.8	3.7	3.7	3.9	3.9	3.9	4.0	4.0	4.0
13	3.9	3.8	3.9	3.8	3.8	3.8	3.9	3.9	3.9	4.0	4.0	4.0
14	3.8	3.8	3.8	3.8	3.7	3.8	3.9	3.9	3.9	3.9	3.9	3.9
15	3.9	3.8	3.9	3.7	3.7	3.7	3.9	3.9	3.9	3.9	3.9	3.9
16	3.9	3.9	3.9	3.8	3.7	3.7	3.9	3.9	3.9	4.0	3.9	4.0
17	3.9	3.8	3.9	3.8	3.7	3.7	3.9	3.9	3.9	4.0	4.0	4.0
18	3.9	3.8	3.9	3.7	3.7	3.7	4.0	3.9	3.9	4.1	4.0	4.1
19	4.0	3.8	3.9	3.7	3.7	3.7	4.0	3.9	4.0	4.1	4.0	4.0
20	4.0	4.0	4.0	3.7	3.7	3.7	4.0	4.0	4.0	4.0	4.0	4.0
21	4.0	3.9	4.0	3.7	3.7	3.7	4.1	4.0	4.1	4.0	4.0	4.0
22	3.9	3.9	3.9	3.7	3.7	3.7	4.1	4.0	4.0	4.1	4.0	4.0
23	3.9	3.8	3.9	3.8	3.7	3.7	4.1	4.0	4.1	4.1	4.0	4.1
24	3.8	3.7	3.7	3.8	3.8	3.8	4.1	4.0	4.1	4.1	4.1	4.1
25	3.7	3.6	3.7	3.9	3.8	3.9	4.1	4.0	4.1	4.1	4.1	4.1
26	3.6	3.6	3.6	3.9	3.9	3.9	4.1	4.0	4.0	4.1	4.0	4.1
27	3.7	3.6	3.7	3.9	3.8	3.9	4.0	3.9	4.0	4.1	4.1	4.1
28	3.7	3.7	3.7	3.8	3.8	3.8	4.0	4.0	4.0	4.1	4.1	4.1
29	3.7	3.7	3.7	3.9	3.8	3.8	4.0	4.0	4.0	4.1	4.1	4.1
30	---	---	---	3.8	3.8	3.8	4.0	3.9	4.0	4.1	4.1	4.1
31	---	---	---	3.8	3.8	3.8	---	---	---	4.1	4.1	4.1
MONTH	4.3	3.6	3.9	3.9	3.6	3.7	4.1	3.8	3.9	4.1	3.9	4.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	4.1	4.0	4.1	4.1	4.1	4.1	4.3	4.1	4.2	4.3	4.2	4.2
2	4.0	4.0	4.0	4.1	4.1	4.1	4.2	4.2	4.2	4.3	4.2	4.3
3	4.0	4.0	4.0	4.1	4.1	4.1	4.2	4.2	4.2	4.3	4.3	4.3
4	4.0	4.0	4.0	4.1	4.1	4.1	4.2	4.2	4.2	4.3	4.2	4.3
5	4.1	4.1	4.1	4.1	4.1	4.1	4.2	4.2	4.2	4.2	4.1	4.2
6	4.1	4.1	4.1	4.2	4.1	4.2	4.2	4.2	4.2	4.2	4.1	4.2
7	4.1	4.0	4.1	4.2	4.1	4.2	4.2	4.2	4.2	4.2	4.2	4.2
8	4.0	4.0	4.0	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
9	4.1	4.0	4.1	4.2	4.1	4.2	4.3	4.2	4.2	4.2	4.2	4.2
10	4.1	4.0	4.1	4.2	4.2	4.2	4.3	4.2	4.3	4.3	4.2	4.2
11	4.1	4.1	4.1	4.2	4.2	4.2	4.3	4.3	4.3	4.2	4.2	4.2
12	4.1	4.1	4.1	4.2	4.1	4.2	4.3	4.2	4.3	4.3	4.2	4.2
13	4.1	4.1	4.1	4.2	4.2	4.2	4.2	4.2	4.2	4.3	4.2	4.3
14	4.1	4.1	4.1	4.2	4.2	4.2	4.2	4.2	4.2	4.3	4.2	4.3
15	4.1	4.1	4.1	4.2	4.2	4.2	4.3	4.2	4.2	4.3	4.2	4.3
16	4.2	4.1	4.2	4.2	4.2	4.2	4.3	4.2	4.3	4.3	4.2	4.3
17	4.2	4.0	4.1	4.2	4.2	4.2	4.3	4.2	4.3	4.2	4.2	4.2
18	4.0	4.0	4.0	4.2	4.2	4.2	4.3	4.3	4.3	4.2	4.2	4.2
19	4.0	4.0	4.0	4.2	4.2	4.2	4.3	4.3	4.3	4.2	4.2	4.2
20	4.1	4.0	4.1	4.2	4.2	4.2	4.3	4.2	4.3	4.2	4.2	4.2
21	4.1	4.0	4.0	4.3	4.2	4.2	4.3	4.2	4.3	4.3	4.2	4.2
22	4.0	4.0	4.0	4.3	4.2	4.3	4.3	4.2	4.2	4.2	4.2	4.2
23	4.1	4.0	4.0	4.3	4.2	4.3	4.3	4.2	4.2	4.3	4.2	4.2
24	4.1	4.0	4.1	4.3	4.2	4.3	4.3	4.0	4.1	4.2	4.2	4.2
25	4.1	4.1	4.1	4.3	4.2	4.3	4.1	4.1	4.1	4.2	4.2	4.2
26	4.1	4.1	4.1	4.3	4.2	4.3	4.1	4.1	4.1	4.3	4.2	4.2
27	4.1	4.1	4.1	4.2	4.2	4.2	4.1	4.1	4.1	4.3	4.2	4.3
28	4.2	4.1	4.1	4.2	4.2	4.2	4.2	4.1	4.1	4.3	4.2	4.2
29	4.1	4.1	4.1	4.2	4.2	4.2	4.2	4.1	4.1	4.2	4.2	4.2
30	4.1	4.1	4.1	4.3	4.2	4.2	4.2	4.1	4.2	4.2	4.2	4.2
31	---	---	---	4.3	4.2	4.3	4.2	4.2	4.2	---	---	---
MONTH	4.2	4.0	4.1	4.3	4.1	4.2	4.3	4.0	4.2	4.3	4.1	4.2

01466500 MCDONALDS BRANCH IN LEBANON STATE FOREST, NJ--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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

01466500 MCDONALDS BRANCH IN LEBANON STATE FOREST, NJ--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	15.0	14.0	14.5	14.0	13.0	13.5	16.5	15.5	16.0	15.5	14.0	14.5
2	15.0	14.0	14.5	14.0	13.0	13.5	16.5	15.5	16.0	15.0	14.0	14.5
3	14.0	13.5	13.5	14.0	13.0	13.5	16.5	15.5	16.0	15.0	13.5	14.5
4	13.5	13.0	13.0	14.0	13.5	13.5	16.5	15.5	16.0	15.0	14.0	14.5
5	13.5	12.5	13.0	14.5	13.5	14.0	16.5	16.0	16.0	15.5	14.5	15.0
6	14.0	13.0	13.5	14.5	14.0	14.0	16.5	16.0	16.0	14.5	13.5	14.0
7	14.0	13.5	13.5	15.0	14.0	14.5	16.5	16.0	16.0	14.5	12.5	13.5
8	13.5	13.0	13.5	15.0	14.5	15.0	16.5	15.5	16.0	14.0	12.0	13.0
9	13.0	12.5	13.0	15.0	14.5	15.0	16.5	15.5	16.0	14.5	13.5	14.0
10	13.0	12.5	12.5	15.5	14.5	15.0	17.0	16.0	16.5	15.0	13.5	14.0
11	13.0	12.0	12.5	16.0	15.0	15.5	16.5	16.0	16.0	14.5	13.0	13.5
12	13.0	12.5	13.0	15.5	15.5	15.5	17.0	16.0	16.5	14.0	12.5	13.5
13	13.5	12.5	13.0	16.0	15.5	15.5	17.0	16.0	16.5	14.5	13.5	14.0
14	14.0	13.0	13.5	16.0	15.5	15.5	17.5	16.0	17.0	14.5	13.5	14.0
15	14.5	13.5	14.0	16.5	15.5	16.0	18.0	16.5	17.0	14.0	13.0	13.5
16	14.5	14.0	14.5	16.5	15.5	16.0	17.5	16.0	17.0	13.5	12.0	12.5
17	15.0	14.0	14.5	17.0	15.5	16.0	17.0	15.5	16.0	13.0	12.0	12.5
18	15.0	14.5	15.0	16.5	16.0	16.0	16.5	16.0	16.0	13.5	13.0	13.0
19	15.0	14.5	15.0	16.5	16.0	16.0	15.5	15.0	15.5	14.0	13.0	13.5
20	15.5	15.0	15.0	16.0	16.0	16.0	15.0	15.0	15.0	15.0	13.5	14.0
21	15.5	15.0	15.5	16.5	16.0	16.5	15.5	14.5	15.0	14.5	14.0	14.5
22	16.0	15.0	15.5	16.0	16.0	16.0	15.5	14.0	14.5	15.0	13.5	14.0
23	16.0	15.5	16.0	16.0	15.5	16.0	15.0	14.0	14.5	15.5	13.5	14.5
24	15.5	15.0	15.5	16.0	15.5	16.0	15.5	14.5	15.0	14.5	14.0	14.0
25	15.0	14.5	15.0	16.5	15.5	16.0	16.0	15.0	15.5	14.0	13.5	13.5
26	15.0	14.5	15.0	16.5	15.5	16.0	16.0	15.0	15.5	14.5	13.0	13.5
27	15.0	14.5	14.5	16.0	16.0	16.0	16.0	15.0	15.5	14.5	12.5	13.5
28	14.5	14.0	14.0	16.0	15.5	15.5	16.0	15.0	15.5	14.5	13.0	13.5
29	14.5	14.0	14.0	16.5	15.5	16.0	16.0	15.5	15.5	13.5	12.5	13.0
30	14.5	13.5	14.0	16.5	15.5	16.0	15.5	15.0	15.5	13.5	12.5	13.0
31	---	---	---	16.0	15.5	16.0	15.5	14.5	15.0	---	---	---
MONTH	16.0	12.0	14.0	17.0	13.0	15.5	18.0	14.0	16.0	15.5	12.0	13.5

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	2.8	2.2	2.4	3.5	2.9	3.2	4.0	3.6	3.8	5.8	5.4	5.5
2	2.7	2.0	2.3	3.4	2.7	2.9	3.9	3.5	3.7	6.0	5.5	5.6
3	3.8	2.0	2.4	3.3	2.5	2.8	4.1	3.6	3.8	6.0	5.6	5.8
4	3.8	3.1	3.3	2.9	2.3	2.5	4.2	3.7	3.9	6.3	5.9	6.0
5	3.4	3.0	3.2	2.8	2.1	2.4	4.1	3.6	3.8	6.2	5.8	6.0
6	3.3	2.6	3.0	2.8	2.1	2.4	4.2	3.8	4.0	6.1	5.8	5.9
7	3.4	2.6	3.0	2.9	2.4	2.6	4.3	3.9	4.1	6.3	5.8	5.9
8	3.1	2.7	2.8	3.1	2.3	2.6	4.7	4.1	4.4	6.4	5.9	6.1
9	3.2	2.7	2.8	2.9	2.2	2.4	4.5	4.0	4.3	6.3	5.8	6.0
10	3.2	2.6	2.8	4.3	2.1	3.1	4.2	3.9	4.0	6.2	5.8	5.9
11	2.9	2.5	2.6	4.2	3.9	4.1	4.7	4.1	4.5	6.2	5.8	5.9
12	3.0	2.5	2.6	4.6	4.1	4.3	4.6	4.3	4.4	6.3	5.6	5.9
13	3.0	2.5	2.7	4.4	3.9	4.1	4.6	4.2	4.3	6.0	5.4	5.6
14	3.1	2.6	2.7	4.2	3.7	3.9	4.6	4.3	4.4	5.9	5.5	5.7
15	3.1	2.6	2.8	4.1	3.7	3.8	5.2	4.2	4.8	6.0	5.6	5.8
16	3.0	2.5	2.7	4.2	3.7	3.9	5.4	5.0	5.2	5.9	5.5	5.7
17	3.0	2.4	2.7	4.3	3.7	3.9	5.4	5.0	5.1	6.0	5.4	5.7
18	2.8	2.2	2.5	4.1	3.4	3.8	5.4	4.9	5.1	6.4	5.4	5.9
19	2.7	2.2	2.4	3.7	3.3	3.5	6.0	5.4	5.7	6.6	6.1	6.2
20	2.9	2.2	2.4	3.8	3.2	3.4	6.2	5.7	5.9	7.2	6.1	6.8
21	2.6	2.2	2.4	4.1	3.3	3.7	6.0	5.7	5.8	8.9	7.0	7.9
22	2.8	2.2	2.4	4.1	3.7	3.9	6.0	5.5	5.7	8.8	8.4	8.7
23	3.0	2.4	2.6	4.3	3.9	4.1	5.8	5.5	5.6	8.4	7.9	8.2
24	3.0	2.3	2.5	4.3	3.6	4.0	5.8	5.5	5.6	7.9	7.6	7.8
25	2.8	2.2	2.4	4.0	3.3	3.6	5.8	5.4	5.5	7.7	7.4	7.5
26	2.8	2.2	2.4	3.7	3.2	3.4	5.7	5.4	5.5	8.0	7.7	7.8
27	4.3	2.3	2.8	3.3	3.1	3.2	6.0	5.5	5.7	8.0	7.7	7.8
28	4.2	3.2	3.5	3.5	3.0	3.2	5.7	5.5	5.6	7.9	7.6	7.8
29	3.8	3.2	3.4	3.9	3.3	3.5	5.9	5.4	5.6	7.6	7.2	7.4
30	3.9	3.2	3.5	4.3	3.7	3.9	5.8	5.4	5.6	7.3	6.9	7.1
31	3.5	3.1	3.3	---	---	---	6.0	5.4	5.7	7.2	6.8	7.0
MONTH	4.3	2.0	2.8	4.6	2.1	3.4	6.2	3.5	4.9	8.9	5.4	6.5

01466500 MCDONALDS BRANCH IN LEBANON STATE FOREST, NJ--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.4	6.9	7.1	7.9	7.6	7.7	4.5	3.8	4.1	4.3	3.2	3.6
2	8.0	7.2	7.5	7.8	7.4	7.6	4.3	3.6	3.9	4.0	3.2	3.5
3	8.4	8.0	8.2	7.7	7.3	7.5	4.0	3.3	3.6	4.1	3.1	3.5
4	8.5	7.9	8.2	8.4	7.3	7.6	3.8	3.1	3.3	4.2	3.1	3.4
5	8.5	8.2	8.4	8.7	8.4	8.5	3.7	2.9	3.2	3.7	3.0	3.3
6	8.3	8.0	8.2	8.7	8.4	8.5	3.4	2.9	3.1	4.3	3.1	3.7
7	8.1	7.6	7.9	8.6	8.2	8.4	3.4	3.0	3.2	4.6	3.5	3.9
8	7.7	7.3	7.5	8.4	7.9	8.2	3.9	3.4	3.6	4.6	3.5	4.0
9	7.6	7.2	7.4	8.1	7.3	7.8	4.3	3.4	3.7	4.7	3.4	3.9
10	7.5	7.1	7.2	7.4	6.9	7.1	4.1	3.4	3.6	4.1	3.0	3.5
11	7.5	7.0	7.2	7.2	6.7	6.9	4.0	3.3	3.6	3.7	2.7	3.1
12	9.2	7.1	8.7	7.1	6.4	6.7	4.3	3.4	3.7	3.8	2.6	3.0
13	9.0	8.6	8.9	6.6	5.9	6.3	4.5	3.6	3.9	3.7	2.4	2.9
14	9.0	8.6	8.8	6.4	5.8	6.0	4.4	3.6	3.9	3.4	2.3	2.6
15	8.7	8.5	8.6	6.3	5.8	6.0	4.3	3.6	3.8	3.5	2.4	2.8
16	8.8	8.6	8.7	6.6	5.9	6.2	4.6	3.7	4.1	3.7	2.3	2.7
17	8.8	8.5	8.7	6.5	6.0	6.2	4.6	3.8	4.1	3.1	2.3	2.5
18	8.7	8.4	8.5	6.7	6.1	6.3	4.1	3.6	3.8	3.1	2.3	2.7
19	8.4	8.2	8.3	6.6	6.1	6.3	4.2	3.6	3.9	3.6	2.6	3.1
20	8.6	8.3	8.5	6.5	6.0	6.2	4.6	3.7	4.0	3.8	2.9	3.4
21	8.6	8.3	8.4	6.6	6.1	6.3	4.5	3.7	4.0	4.0	2.9	3.3
22	8.4	8.1	8.3	6.8	6.3	6.5	4.4	3.6	3.9	3.7	2.6	3.0
23	8.3	8.0	8.1	7.0	6.4	6.6	4.2	3.7	3.9	3.5	2.3	2.8
24	8.2	7.8	8.0	6.8	6.0	6.4	4.8	4.1	4.4	3.2	2.1	2.5
25	8.1	7.8	7.9	6.3	5.4	5.9	4.8	3.9	4.2	2.8	2.1	2.4
26	8.0	7.7	7.8	6.1	5.1	5.6	4.8	3.6	4.1	3.4	2.4	2.7
27	7.8	7.6	7.7	6.2	5.4	5.9	4.5	3.3	3.8	3.5	2.4	2.8
28	7.9	7.6	7.7	6.1	5.3	5.6	4.7	3.5	4.0	3.6	2.4	2.8
29	8.0	7.6	7.7	5.9	4.8	5.4	4.3	3.4	3.7	3.4	2.3	2.7
30	---	---	---	5.1	4.3	4.7	4.4	3.4	3.7	3.4	2.2	2.6
31	---	---	---	4.8	4.1	4.4	---	---	---	3.1	2.0	2.4
MONTH	9.2	6.9	8.1	8.7	4.1	6.6	4.8	2.9	3.8	4.7	2.0	3.1
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	3.0	2.0	2.3	3.0	1.9	2.3	3.2	1.6	2.2	3.4	1.8	2.3
2	3.2	2.3	2.7	3.1	2.0	2.4	3.1	1.5	2.0	3.6	1.8	2.4
3	3.4	2.4	2.7	3.4	2.0	2.4	3.1	1.5	2.0	3.5	1.8	2.3
4	3.2	2.3	2.7	3.3	1.9	2.4	2.8	1.5	1.9	3.4	1.7	2.6
5	3.4	2.2	2.7	3.3	1.9	2.4	2.7	1.4	1.9	3.6	2.4	3.0
6	3.2	2.1	2.5	3.5	1.8	2.4	2.9	1.4	2.0	3.6	2.4	2.8
7	3.2	2.0	2.4	3.3	1.7	2.3	3.0	1.4	2.0	3.7	2.1	2.8
8	2.9	2.0	2.3	3.2	1.6	2.2	3.1	1.4	2.0	3.5	2.1	2.5
9	2.9	2.1	2.4	2.8	1.7	2.1	3.1	1.4	2.0	3.6	1.9	2.5
10	3.4	2.3	2.7	3.5	1.8	2.4	3.0	1.4	1.9	3.9	2.0	2.8
11	3.4	2.3	2.7	3.3	1.6	2.3	3.0	1.4	1.9	3.6	1.9	2.5
12	3.5	2.2	2.6	2.9	1.6	2.2	3.2	1.4	2.0	3.7	1.9	2.5
13	3.5	2.1	2.6	3.6	1.9	2.6	3.1	1.4	2.0	4.1	1.9	3.0
14	3.4	1.9	2.5	3.4	1.7	2.4	3.1	1.3	1.9	3.7	2.2	2.9
15	3.5	1.8	2.4	3.3	1.6	2.2	2.8	1.2	1.8	3.4	2.1	2.5
16	3.4	1.8	2.3	3.7	1.5	2.3	2.7	1.3	1.7	3.7	2.0	2.5
17	3.2	1.8	2.3	3.7	1.5	2.2	3.1	1.3	2.0	3.2	2.2	2.7
18	3.3	2.1	2.5	3.4	1.5	2.1	3.3	1.6	2.4	3.5	2.4	3.0
19	3.3	2.1	2.5	2.7	1.5	1.9	2.9	1.6	2.1	3.8	2.2	2.7
20	3.4	1.9	2.4	2.8	1.5	2.2	3.1	1.9	2.5	3.7	2.0	2.6
21	3.2	1.7	2.3	3.5	1.6	2.2	3.8	2.1	2.9	3.3	2.0	2.4
22	3.3	1.7	2.2	2.8	2.0	2.3	3.4	2.0	2.4	3.6	1.9	2.4
23	3.1	1.6	2.1	2.7	2.0	2.3	3.4	1.9	2.4	3.8	1.9	2.6
24	3.0	1.6	2.1	3.5	2.1	2.6	3.4	2.5	2.9	3.6	2.8	3.2
25	3.3	1.7	2.2	3.6	1.9	2.5	3.5	2.3	2.9	3.7	2.8	3.3
26	3.4	1.7	2.2	3.1	1.5	2.2	3.5	2.2	2.7	3.8	2.4	2.9
27	3.1	1.7	2.2	3.1	1.9	2.4	3.6	2.0	2.5	3.7	2.3	2.7
28	3.0	1.8	2.2	3.0	1.8	2.2	3.3	1.8	2.4	3.8	2.1	2.6
29	3.1	1.8	2.2	3.0	1.6	2.1	2.8	1.8	2.3	3.7	2.1	2.6
30	3.0	1.8	2.2	2.8	1.5	2.0	3.1	2.0	2.5	3.6	2.2	2.7
31	---	---	---	3.1	1.5	2.1	3.1	1.8	2.3	---	---	---
MONTH	3.5	1.6	2.4	3.7	1.5	2.3	3.8	1.2	2.2	4.1	1.7	2.7

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 mi^2.

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.--Records good except for periods of estimated daily discharges, 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	101	177	206	127	e192	e172	178	119	124	60	54	47
2	95	162	199	127	e208	e165	163	115	188	59	48	47
3	96	150	191	127	e254	e162	168	114	219	58	43	49
4	150	132	168	130	e300	e176	194	114	233	61	41	58
5	172	120	159	133	e334	e240	194	119	191	60	39	68
6	173	135	140	126	e300	e263	180	142	162	59	39	58
7	167	132	124	121	e238	e243	179	170	148	58	39	54
8	151	115	116	118	e215	e224	176	179	128	57	37	52
9	150	107	114	118	e191	229	163	166	119	70	36	51
10	144	125	110	118	e178	225	149	156	114	86	34	52
11	133	189	124	110	e169	207	138	177	104	70	36	51
12	120	221	131	110	e282	172	129	167	98	66	34	50
13	113	261	127	110	e412	164	131	157	97	66	34	57
14	110	248	118	110	e449	157	129	145	88	60	32	58
15	107	211	133	102	e385	150	144	136	79	57	32	53
16	105	211	216	103	e461	142	138	121	76	54	29	51
17	105	205	217	101	e457	137	129	112	85	44	31	52
18	102	185	186	113	e385	134	121	123	93	41	36	52
19	104	168	162	149	e321	131	130	167	88	39	35	51
20	105	147	160	220	e369	127	124	269	86	39	37	51
21	107	126	167	315	e336	124	117	314	88	43	43	49
22	107	115	147	373	e288	123	111	299	87	52	37	49
23	97	110	149	340	e259	121	109	257	87	42	35	52
24	94	116	140	286	e241	119	141	228	84	52	70	64
25	94	118	132	254	e218	120	140	228	78	50	86	58
26	94	118	138	268	e200	146	134	241	75	46	66	60
27	97	116	145	245	e189	231	127	232	71	79	53	83
28	220	111	144	235	e184	257	142	204	69	73	46	79
29	209	115	136	214	e179	248	132	176	67	68	47	76
30	210	184	133	193	---	223	125	147	66	61	63	73
31	201	---	127	177	---	203	---	131	---	53	51	---
MEAN	130	154	150	173	283	179	144	175	110	57.5	43.3	56.8
MAX	220	261	217	373	461	263	194	314	233	86	86	83
MIN	94	107	110	101	169	119	109	112	66	39	29	47
IN.	1.27	1.46	1.47	1.69	2.58	1.74	1.37	1.71	1.04	.56	.42	.54

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	118	153	173	198	218	246	238	195	144	122	129	116
MAX	365	430	434	480	445	469	475	397	297	401	426	341
(WY)	1928	1973	1973	1979	1939	1958	1984	1958	1968	1938	1958	1971
MIN	38.7	45.7	54.4	62.1	92.2	105	85.4	89.8	54.8	44.1	41.4	40.1
(WY)	1923	1923	1966	1981	1931	1985	1985	1985	1942	1957	1957	1957

SUMMARY STATISTICS	FOR 1988 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	138		171	
HIGHEST ANNUAL MEAN			286	1978
LOWEST ANNUAL MEAN			92.7	1985
HIGHEST DAILY MEAN	461	Feb 16	1690	Aug 21 1939
LOWEST DAILY MEAN	29	Aug 16	9.0	Sep 29 1932
INSTANTANEOUS PEAK FLOW	377	Jan 22	1730	Aug 21 1939
INSTANTANEOUS PEAK STAGE	2.13	Jan 22	10.77a	Aug 21 1939
INSTANTANEOUS LOW FLOW	27	Aug 17	9.0	Sep 29 1932
ANNUAL RUNOFF (INCHES)	15.8		19.6	
10 PERCENTILE	237		313	
50 PERCENTILE	126		142	
95 PERCENTILE	40		52	

e Estimated
a From high-water mark, site and datum then in use.

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 1987 TO SEPTEMBER 1988

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	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 1987										
22...	1000	110	46	4.6	12.5	8.1	76	1.1	79	540
FEB 1988										
04...	0930	E300	55	4.2	4.0	11.8	90	0.6	13	49
MAR										
29...	1030	248	53	4.5	11.0	9.8	88	0.3	5	2
MAY										
19...	1030	150	48	5.3	16.5	7.8	80	1.6	460	>2400
JUL										
20...	0930	39	45	5.1	24.5	5.0	60	1.2	170	130
AUG										
10...	0930	34	45	5.2	24.0	5.4	64	0.9	130	110

DATE	HARD-NESS TOTAL (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 1987									
22...	8	1.7	0.81	3.3	1.0	2.0	14	5.2	0.1
FEB 1988									
04...	8	1.9	0.80	3.0	0.7	<1.0	23	5.9	0.1
MAR									
29...	8	1.8	0.81	3.3	1.6	<1.0	20	5.3	0.1
MAY									
19...	10	2.3	0.96	3.5	0.9	1.0	15	6.1	0.2
JUL									
20...	8	1.7	0.85	3.0	0.9	2.0	10	6.1	0.1
AUG									
10...	8	1.8	0.94	3.6	1.1	2.0	10	6.2	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-PHOROUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1987									
22...	4.7	32	<0.003	0.09	0.02	0.74	0.83	<0.020	7.1
FEB 1988									
04...	4.7	40	<0.003	0.09	--	--	--	0.031	9.5
MAR									
29...	3.4	36	0.007	0.04	0.03	0.30	0.35	0.023	8.3
MAY									
19...	3.6	33	0.013	0.10	0.12	0.66	0.76	0.068	10
JUL									
20...	4.7	29	0.011	0.15	0.10	0.65	0.80	0.067	10
AUG									
10...	4.3	29	0.009	0.14	0.06	0.60	0.74	0.066	8.8

01467000 NORTH BRANCH RANCOCAS CREEK AT PEMBERTON, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 1988 19...	1030	<0.5	150	1	<10	<10	<1	1	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)
MAY 1988 19...	1800	5	30	<0.10	4	<1	20	6

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 (MG/KG AS C)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	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)
OCT 1987 22...	1000	400	0.1	11	3	<1	10	<50	30	3600

DATE	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	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)
OCT 1987 22...	130	37	<0.10	<10	<1	90	16	<1.0	<0.1	61

DATE	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)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)
OCT 1987 22...	<15	7.6	15	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

DATE	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 1987 22...	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1

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 mi^2.

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: Oct. 1 to Nov 2, Feb. 13, 21, 22, and May 7-31. 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, 6.45 ft, June 3; minimum recorded, -4.03 ft; Feb. 14 (bottom of stilling well at 4.0 ft).

Summaries of tide elevations during current year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	e5.5	5.71	5.71	6.18	5.87	5.11	6.13	e5.8	6.45	5.83	5.74	5.60
high tide	Date	7	29	20	20	20	20	8	31	3	28	26	4
Minimum	Elevation	e-3.7	-3.89	-3.71	-3.73	-4.03	-3.42	-3.05	e-2.5	-3.15	-3.18	-2.97	-2.89
low tide	Date	4	21	17	7	14	21	25	1	6	1	16	28
Mean high tide		--	4.16	4.30	3.76	4.08	4.11	4.70	--	4.63	4.58	4.62	4.47
Mean water level		--	1.16	1.33	0.91	1.11	1.04	1.60	--	1.38	1.34	1.38	1.28
Mean low tide		--	-2.19	-1.81	-2.25	-2.19	-2.27	-1.87	--	-2.26	-2.31	-2.27	-2.31

e Estimated

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 mi^2.

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 1987 TO SEPTEMBER 1988

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	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 1987										
06...	0900	E3.2	241	6.5	14.0	7.9	77	2.5	9200	5400
FEB 1988										
03...	0900	E17	425	6.2	5.5	11.1	87	4.2	9200	9200
MAR										
28...	0900	E8.5	230	6.6	9.5	8.9	77	3.3	490	>2400
MAY										
16...	0900	E2.4	289	6.6	19.5	7.0	77	5.7	90	<20
JUL										
25...	1115	E5.6	210	6.7	23.5	5.0	59	1.2	9200	5400
AUG										
09...	0900	E1.0	290	6.8	26.0	6.5	80	6.3	500	200

DATE	HARD-NESS TOTAL (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 1987									
06...	58	16	4.3	11	5.3	14	49	17	0.2
FEB 1988									
03...	69	19	5.3	48	4.3	12	45	86	0.2
MAR									
28...	56	15	4.4	16	4.3	13	42	27	0.2
MAY									
16...	85	23	6.7	16	4.9	14	61	30	0.4
JUL									
25...	55	15	4.2	11	4.8	13	39	18	0.2
AUG									
09...	92	25	7.1	14	5.8	22	61	28	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 1987									
06...	9.3	120	0.036	0.73	0.73	1.6	2.3	0.253	8.4
FEB 1988									
03...	8.5	223	0.023	0.71	--	--	--	0.084	5.6
MAR									
28...	8.0	125	0.031	0.63	0.52	--	--	0.347	12
MAY									
16...	12	162	0.029	0.69	0.20	1.2	1.9	0.245	6.2
JUL									
25...	8.1	108	0.034	0.70	0.40	1.7	2.4	0.240	11
AUG									
09...	8.9	163	0.017	0.22	0.12	1.1	1.3	0.225	8.4

01467069 NORTH BRANCH PENNSAUKEN CREEK NEAR MOORESTOWN, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 (MG/KG AS C)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G 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 1987 06...	0900	--	140	0.9	7.4	--	--	2	--	--	--	<1
MAY 1988 16...	0900	<0.5	--	--	--	<10	2	--	<10	40	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 1987 06...	--	110	<50	--	8	--	4600	--	<100	--	49
MAY 1988 16...	2	--	--	6	--	5300	--	7	--	280	--

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 1987 06...	--	<0.10	--	<10	--	<1	--	40	--	58	<1.0
MAY 1988 16...	<0.10	--	12	--	<1	--	20	--	<1	--	--

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 1987 06...	<0.1	100	22	<14	<6.8	0.9	1.4	<0.1	<0.1	<0.1	<0.1
MAY 1988 16...	--	--	--	--	--	--	--	--	--	--	--

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 1987 06...	0.2	<0.1	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1
MAY 1988 16...	--	--	--	--	--	--	--	--	--	--	--

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 mi^2.

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.--Records fair. Diurnal fluctuations from unknown source. Several measurements of water temperature, other than those published, were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e9.0	8.4	17	14	14	11	9.9	e10	10	5.8	7.8	6.2
2	e7.0	8.1	13	12	41	10	9.7	e7.0	33	5.8	7.5	6.0
3	e44	7.9	10	10	40	11	9.2	e7.1	8.2	5.9	7.2	5.9
4	e53	7.8	11	13	74	58	12	e11	7.4	8.6	6.9	48
5	e13	8.7	9.6	11	24	49	9.6	e23	6.9	7.2	6.7	49
6	e8.0	12	7.8	13	15	16	9.1	e53	6.2	5.8	6.5	9.0
7	e22	13	7.2	9.4	13	14	44	e20	6.2	5.6	6.4	7.1
8	e10	13	7.5	9.3	12	13	21	e13	6.2	5.8	6.4	6.4
9	9.0	14	9.5	8.9	11	12	11	e7.9	13	8.8	6.3	6.2
10	7.7	58	10	8.3	11	12	9.4	e8.4	7.2	7.1	6.1	6.1
11	7.2	68	35	8.6	11	11	8.8	e25	6.3	6.3	6.0	5.9
12	6.8	27	14	10	252	11	8.5	e16	6.1	7.6	6.0	5.9
13	6.4	16	11	9.5	31	12	8.2	e10	6.0	6.3	6.0	31
14	6.3	12	8.6	9.5	17	11	8.1	e7.1	6.0	5.6	6.0	7.8
15	6.4	11	51	9.8	22	10	9.1	e7.8	5.7	5.4	5.9	6.2
16	6.4	9.7	48	8.1	72	9.5	13	e7.5	5.9	5.6	5.7	5.9
17	6.5	12	16	7.9	20	9.3	8.6	e7.8	5.9	6.4	33	6.1
18	6.4	15	13	56	17	9.6	e13	e22	5.9	8.7	37	6.7
19	6.7	12	12	32	22	10	e16	e95	5.7	6.3	8.2	6.1
20	6.7	9.9	35	114	62	9.6	e10	e25	5.7	6.8	18	6.0
21	7.5	9.0	18	31	21	9.4	e8.0	e18	5.7	93	9.6	5.9
22	6.7	9.8	13	18	15	9.4	e7.7	e13	5.9	290	6.3	5.8
23	6.4	11	13	14	15	9.6	e8.0	e10	6.7	32	6.1	21
24	6.3	13	11	12	14	10	e24	e30	5.5	126	123	30
25	6.3	11	17	38	12	9.8	e10	e54	5.5	15	33	9.9
26	6.7	12	24	60	12	80	e8.5	e14	5.4	e60	8.9	7.4
27	51	11	13	17	12	65	e7.0	e10	5.5	e150	7.1	6.3
28	185	10	12	13	12	15	e47	8.4	5.5	e70	6.6	6.1
29	18	28	18	12	11	12	e11	7.8	5.4	12	12	5.9
30	12	64	13	12	---	11	e13	8.2	5.4	10	9.6	5.9
31	10	---	11	13	---	10	---	8.0	---	8.6	6.6	---
MEAN	18.2	17.4	16.4	19.8	31.2	17.7	13.1	18.2	7.33	32.2	13.8	11.4
MAX	185	68	51	114	252	80	47	95	33	290	123	49
MIN	6.3	7.8	7.2	7.9	11	9.3	7.0	7.0	5.4	5.4	5.7	5.8
IN.	2.34	2.16	2.11	2.54	3.75	2.28	1.63	2.34	.91	4.13	1.77	1.42

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	13.0	17.8	22.9	21.8	20.8	22.1	22.7	19.5	15.1	16.0	15.8	13.2
MAX	23.2	48.8	40.8	50.5	44.7	41.0	49.8	33.7	29.0	45.7	58.2	38.8
(WY)	1973	1973	1978	1979	1979	1984	1983	1982	1984	1987	1978	1975
MIN	6.08	6.99	7.05	6.55	9.19	9.29	8.08	8.57	6.65	6.92	6.22	4.71
(WY)	1969	1977	1981	1981	1968	1985	1985	1969	1971	1982	1968	1968

SUMMARY STATISTICS	FOR 1988 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	18.1		18.5	
HIGHEST ANNUAL MEAN			27.3	1978
LOWEST ANNUAL MEAN			12.2	1981
HIGHEST DAILY MEAN	290	Jul 22	494	Aug 28 1971
LOWEST DAILY MEAN	5.4	Jun 26	2.9	Sep 19 1982
INSTANTANEOUS PEAK FLOW	708	Jul 21	868	Aug 28 1978
INSTANTANEOUS PEAK STAGE	9.38	Jul 21	11.34	Aug 28 1971
INSTANTANEOUS LOW FLOW	---		2.6	Oct 6 1970
ANNUAL RUNOFF (INCHES)	27.4		28.0	
10 PERCENTILE	38		35	
50 PERCENTILE	10		10	
95 PERCENTILE	5.4		4.6	

e Estimated

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 1987 TO SEPTEMBER 1988

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	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 1987										
06...	1115	E8.0	312	7.0	14.0	7.6	74	4.2	800	1700
FEB 1988										
03...	0945	35	380	6.8	6.0	10.5	83	5.7	1100	1700
MAR										
28...	0930	15	--	7.0	9.0	9.3	80	6.9	200	700
MAY										
16...	0930	7.6	368	7.1	16.0	4.3	44	3.9	1300	700
JUL										
25...	1245	15	280	6.8	23.0	5.2	61	2.9	2700	1300
AUG										
09...	0930	6.2	418	7.1	22.5	3.8	44	8.6	9400	2600

DATE	HARD-NESS TOTAL (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 1987									
06...	85	23	6.6	18	7.4	50	48	21	0.2
FEB 1988									
03...	74	21	5.2	41	6.1	26	38	73	0.2
MAR									
28...	79	21	6.5	18	5.4	35	50	25	0.2
MAY									
16...	94	25	7.6	25	9.0	40	55	33	0.3
JUL									
25...	80	22	6.2	15	6.2	23	58	21	0.1
AUG									
09...	95	26	7.4	31	9.9	49	50	36	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 1987									
06...	12	166	0.214	2.34	1.50	2.0	4.3	0.559	6.7
FEB 1988									
03...	7.7	208	0.035	0.60	--	--	--	0.257	9.9
MAR									
28...	8.5	157	0.090	0.99	--	--	--	0.392	8.9
MAY									
16...	13	192	0.171	E0.92	4.00	4.2	--	0.490	7.3
JUL									
25...	12	154	0.075	0.72	1.60	2.1	2.9	0.408	7.6
AUG									
09...	13	203	0.339	1.02	5.10	5.0	6.0	0.623	9.7

01467081 SOUTH BRANCH PENNSAUKEN CREEK AT CHERRY HILL, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 1987 06...	1115	<0.5	<10	2	<10	90	<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)	PHENOLS TOTAL (UG/L)
OCT 1987 06...	6	<5	100	<0.10	7	<1	2

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 mi^2.

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 1987 TO SEPTEMBER 1988

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)
OCT 1987										
05...	1100	E1.0	78	6.3	12.5	9.6	90	2.4	1600	540
FEB 1988										
01...	0930	E1.0	100	6.3	2.0	13.4	96	0.6	<2	7
MAR										
23...	1000	E0.60	89	6.8	6.5	12.2	98	3.6	<2	8
MAY										
17...	0930	E0.60	82	7.0	21.0	8.3	94	1.8	13	<20
JUL										
21...	0930	E3.0	71	6.8	26.5	4.7	59	5.7	49	49
AUG										
08...	0930	E0.40	78	6.4	26.5	6.2	77	4.8	130	50

DATE	HARDNESS TOTAL (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)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1987									
05...	23	6.8	1.4	4.5	1.6	13	12	7.8	0.1
FEB 1988									
01...	21	6.4	1.2	7.0	1.4	10	13	12	0.1
MAR									
23...	22	6.5	1.3	6.7	1.4	11	11	10	0.1
MAY									
17...	23	7.3	1.2	5.9	1.2	15	14	10	0.2
JUL									
21...	23	7.2	1.1	4.0	0.8	13	9.5	8.0	0.1
AUG									
08...	24	7.6	1.1	4.3	1.1	14	13	7.9	0.2

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1987									
05...	3.5	46	0.003	0.05	<0.05	0.45	0.50	0.052	8.3
FEB 1988									
01...	5.3	52	0.007	0.06	--	--	--	<0.020	4.2
MAR									
23...	1.5	45	0.008	<0.05	0.01	0.20	--	0.022	5.3
MAY									
17...	1.1	50	0.007	<0.05	<0.05	0.52	--	0.028	7.1
JUL									
21...	0.80	39	0.005	<0.05	0.25	0.90	--	0.039	8.9
AUG									
08...	2.2	46	0.013	0.16	0.11	1.2	1.3	0.092	10

01467120 COOPER RIVER AT NORCROSS ROAD AT LINDENWOLD, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 (MG/KG AS C)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G 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)
OCT 1987 05...	1100	<0.5	140	0.5	3.1	50	1	<1	<10	10	1

DATE	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD)	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)
OCT 1987 05...	<1	10	40	<50	4	3	880	1300	<5	<100	10

DATE	MANGA-NESE, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	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 1987 05...	10	<0.10	1	<10	<1	<1	<10	10	<1	1	<1.0

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 1987 05...	<0.2	5.0	1.5	<0.8	<1.7	<0.1	2.6	<0.1	<0.1	<0.1	<0.1

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 1987 05...	<0.1	<0.1	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1

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 mi^2.

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 1987 TO SEPTEMBER 1988

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)
OCT 1987										
13...	1130	E8.8	175	6.8	10.5	9.1	81	3.9	7900	700
FEB 1988										
10...	0915	E13	222	6.9	3.0	12.0	88	1.5	80	20
MAR										
30...	1015	E15	189	6.9	12.0	10.2	94	3.3	490	130
MAY										
23...	1030	E14	175	6.8	18.0	7.7	82	1.8	3500	790
JUL										
21...	1015	E6.1	181	7.0	21.5	6.4	73	9.9	11000	35000
AUG										
08...	1000	E5.7	155	6.9	21.5	8.3	94	7.2	2400	1300

DATE	HARDNESS TOTAL (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)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1987									
13...	52	15	3.5	7.9	3.7	27	25	15	0.3
FEB 1988									
10...	55	16	3.7	15	3.2	24	34	25	0.2
MAR									
30...	49	14	3.3	9.2	3.0	23	29	15	0.2
MAY									
23...	51	15	3.4	10	2.7	27	26	16	0.3
JUL									
21...	57	17	3.6	9.5	4.1	28	28	15	0.2
AUG									
08...	56	16	3.8	8.6	3.9	29	27	15	0.2

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1987									
13...	12	99	0.019	0.39	0.28	0.91	1.3	0.367	6.3
FEB 1988									
10...	11	122	0.009	0.41	--	--	--	0.157	3.9
MAR									
30...	9.5	97	0.014	0.34	0.11	0.50	0.85	0.202	6.6
MAY									
23...	11	101	--	0.32	0.27	0.78	1.1	0.275	7.7
JUL									
21...	12	106	0.051	0.37	0.24	0.80	1.2	0.689	12
AUG									
08...	13	105	0.023	0.31	<0.05	0.72	1.0	0.385	5.1

01467140 COOPER RIVER AT LAWNSIDE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 (MG/KG AS C)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G 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 1987 13...	1130	--	140	0.3	7.9	--	--	11	--	--	--	<1
MAY 1988 23...	1030	<0.5	--	--	--	<10	4	--	<10	50	2	--

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 1987 13...	--	170	<50	--	20	--	11000	--	20	--	21
MAY 1988 23...	2	--	--	7	--	4800	--	16	--	90	--

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 1987 13...	--	<0.10	--	<10	--	<1	--	90	--	<1	<1.0
MAY 1988 23...	<0.10	--	8	--	<1	--	40	--	1	--	--

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 1987 13...	<0.1	14	2.2	1.4	1.5	0.5	0.5	<0.1	<0.1	<0.1	<0.1
MAY 1988 23...	--	--	--	--	--	--	--	--	--	--	--

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 1987 13...	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<1.00	<10	<0.1
MAY 1988 23...	--	--	--	--	--	--	--	--	--	--	--

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 mi^2.

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.--Records good except for estimated daily discharges, which are fair. Bypass gates were installed on both ends of the dam in August 1987. Gates were open Dec. 21 to Mar. 2, Apr. 8, July 29 to Aug. 1, Aug. 30, 31. 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	13	28	e20	e23	e20	17	18	15	7.2	e28	10
2	12	13	19	e18	e45	e18	17	15	56	7.0	12	9.8
3	82	12	15	e16	e48	16	17	14	17	7.2	9.6	9.6
4	89	12	16	e20	e70	89	20	18	12	8.6	8.7	42
5	24	12	14	e17	e36	72	18	37	11	8.9	8.1	66
6	16	11	13	e19	e23	29	16	98	10	7.5	7.8	18
7	37	11	13	e19	e20	23	66	44	9.3	7.1	9.1	12
8	16	11	12	e17	e19	21	e38	24	9.4	6.3	7.8	11
9	13	11	12	e16	e18	23	24	17	16	7.8	7.4	11
10	13	83	14	e15	e18	21	18	16	11	7.7	7.2	11
11	13	86	42	e15	e18	19	16	40	9.3	6.7	7.6	9.6
12	13	40	23	e16	e303	18	16	35	8.7	7.8	7.5	9.5
13	12	26	16	e17	e56	20	16	18	8.4	7.5	7.1	35
14	12	19	13	e17	e30	18	15	14	8.0	7.0	7.1	14
15	12	15	75	e17	e32	17	17	13	7.8	6.4	6.8	11
16	12	14	81	e15	e87	15	22	13	7.9	6.1	6.3	9.9
17	12	14	25	e14	e32	14	15	14	8.4	10	26	9.8
18	12	20	18	e56	e28	14	21	33	9.2	16	36	12
19	13	15	15	e42	e32	16	26	163	8.8	7.0	12	10
20	13	14	37	e135	e75	14	17	e49	8.7	7.0	24	9.9
21	13	13	e26	e51	e34	13	14	e33	8.0	82	17	9.5
22	13	11	e19	e31	e25	13	13	23	8.1	303	11	9.3
23	13	12	e20	e22	e26	13	14	19	8.4	34	10	50
24	13	12	e17	e17	e25	13	32	53	7.4	176	122	52
25	12	13	e22	e43	e21	13	17	122	7.3	23	44	18
26	12	13	e31	e65	e21	94	14	e34	7.3	71	16	13
27	61	13	e20	e28	e21	121	14	21	7.4	302	12	11
28	267	13	e19	e21	e21	30	66	16	7.1	41	11	10
29	33	32	e25	e20	e20	22	23	14	7.2	e18	32	9.9
30	21	77	e19	e20	---	20	28	14	7.1	e19	e17	9.6
31	15	---	e17	e21	---	18	---	12	---	e18	e11	---
MEAN	29.5	22.0	23.7	27.7	42.3	28.0	22.2	34.0	10.9	40.1	17.7	17.4
MAX	267	86	81	135	303	121	66	163	56	303	122	66
MIN	12	11	12	14	18	13	13	12	7.1	6.1	6.3	9.3
IN.	2.00	1.45	1.61	1.88	2.68	1.90	1.46	2.31	.72	2.72	1.20	1.15

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	28.5	34.4	40.4	40.1	39.9	42.4	43.5	38.3	30.5	31.5	31.2	27.2
MAX	46.8	79.6	74.6	97.8	76.1	78.9	99.4	66.7	54.9	66.8	97.6	65.8
(WY)	1976	1973	1973	1978	1979	1984	1983	1983	1972	1975	1971	1975
MIN	9.26	11.8	14.3	16.1	22.5	23.2	20.2	14.2	10.9	14.6	7.79	13.0
(WY)	1966	1966	1966	1966	1968	1981	1965	1965	1988	1966	1966	1965

SUMMARY STATISTICS	FOR 1988 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	26.3		35.7	
HIGHEST ANNUAL MEAN			50.6	1973
LOWEST ANNUAL MEAN			20.3	1965
HIGHEST DAILY MEAN	303	Feb 12	1510	Aug 28 1971
LOWEST DAILY MEAN	6.1	Jul 16	1.2	Jun 27 1964
INSTANTANEOUS PEAK FLOW	797	Jul 22	3300	Aug 28 1971
INSTANTANEOUS PEAK STAGE	3.15	Jul 22	5.46	Aug 28 1971
INSTANTANEOUS LOW FLOW	6.1	Jul 16	.8a	Nov 13 1972
ANNUAL RUNOFF (INCHES)	21.0		28.5	
10 PERCENTILE	51		59	
50 PERCENTILE	17		25	
95 PERCENTILE	6.9		13	

a Regulation from unknown source
e Estimated

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 mi^2.

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 1987 TO SEPTEMBER 1988

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	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 1987										
05...	0900	E26	120	6.5	11.5	9.9	90	3.0	1100	700
FEB 1988										
01...	0900	E31	166	6.8	4.5	13.0	99	4.3	50	140
MAR										
23...	0900	E27	158	6.8	4.5	13.7	104	3.6	490	80
MAY										
17...	0900	E24	148	6.9	19.0	7.4	81	1.9	630	110
AUG										
08...	0900	E14	140	6.7	24.0	6.3	75	3.9	330	330

DATE	HARD-NESS TOTAL (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 1987									
05...	35	9.9	2.6	7.8	2.6	19	18	12	0.1
FEB 1988									
01...	42	12	2.9	11	2.7	23	18	17	0.2
MAR									
23...	43	12	3.1	10	2.7	--	17	15	0.1
MAY									
17...	42	12	3.0	9.7	2.6	26	15	14	0.3
AUG									
08...	40	11	3.0	8.6	2.7	27	16	13	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 1987									
05...	5.4	70	0.021	0.79	0.19	0.78	1.6	0.101	7.3
FEB 1988									
01...	6.7	84	0.011	1.41	--	--	--	0.059	3.2
MAR									
23...	4.9	65	0.023	1.54	0.42	--	--	0.061	3.4
MAY									
17...	4.3	76	0.054	1.01	0.28	0.89	1.9	0.110	4.6
AUG									
08...	4.6	75	0.042	0.74	0.10	0.59	1.3	0.139	4.9

01467329 SOUTH BRANCH BIG TIMBER CREEK AT BLACKWOOD TERRACE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 (MG/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)
OCT 1987 05...	0900	<0.5	200	1.0	8.0	40	1	3	<10	80	1
MAY 1988 17...	0900	<0.5	--	--	--	10	2	--	<10	70	1

DATE	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	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)
OCT 1987 05...	<1	<10	30	<50	3	1	1500	240	<5	<100	20
MAY 1988 17...	--	<1	--	--	14	--	1600	--	<5	--	50

DATE	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	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)
OCT 1987 05...	<10	--	<0.10	<1	<10	<1	<1	<10	<10	<1	68
MAY 1988 17...	--	<0.10	--	16	--	<1	--	10	--	<1	--

DATE	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)	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)
OCT 1987 05...	<1.0	<2.0	13	1.7	<5.0	<0.1	0.4	0.6	<0.1	<0.1	<0.1
MAY 1988 17...	--	--	--	--	--	--	--	--	--	--	--

DATE	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	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)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1987 05...	<0.2	<0.1	<0.1	<0.1	<1.0	<0.1	<0.1	<1.2	<0.1	<10	<0.1
MAY 1988 17...	--	--	--	--	--	--	--	--	--	--	--

01474500 SCHUYLKILL RIVER AT PHILADELPHIA, PA

(National stream-quality accounting network station)

LOCATION.--Lat 39°58'00", long 75°11'20", Philadelphia County, PA, Hydrologic 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. Water-quality monitor intake at gage.

DRAINAGE AREA.--1,893 mi^2.

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 upstream from Fairmount Dam at same datum.

REMARKS.--Records good. Flow regulated by Still Creek Reservoir (station 01469200) since February 1933, Blue March Reservoir (stration 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.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 4, 1869, reached a stage of 17.0 ft, discharge, 135,000 ft^3/s, from rating extended above 46,000 ft^3/s. Flood of Mar. 1, 1902, reached a stage of 14.8 ft, discharge, 98,000 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1490	1400	9680	1480	2130	2370	2250	1840	2440	725	1730	1280
2	1390	1320	6150	1540	5100	2360	2030	1660	2680	728	1530	885
3	1590	1250	4670	1400	9090	2220	1920	1570	2610	744	1260	799
4	2670	1200	3760	1400	7660	2710	1950	1460	2310	727	1040	1490
5	2020	1200	3200	1360	8350	7360	1890	1560	2090	717	928	4350
6	1560	1140	2770	1050	5260	4910	1650	3120	1900	698	875	3460
7	1520	1090	2480	991	3730	4000	2200	3600	1760	646	894	2420
8	1600	1070	2270	956	3170	3840	3520	2770	1690	611	918	1950
9	1420	1050	2100	e930	2930	3380	2610	2320	1660	619	845	1440
10	1330	1300	1980	e900	2640	3070	2040	2170	1740	669	806	1250
11	1280	4770	1910	e880	2410	3050	1850	4380	1760	658	786	1100
12	1310	3340	1830	e830	4080	2800	1710	3580	1450	687	731	1040
13	1340	2660	1740	e810	4540	2640	1610	2570	1330	709	832	1220
14	1230	2460	1660	e790	2980	2650	1590	2500	1330	746	813	1510
15	1180	2100	1840	e770	2760	2550	1490	2320	1210	672	763	1420
16	1160	1940	3200	e720	7260	2340	1530	1990	1120	571	667	1040
17	1110	1880	2870	e710	5980	2090	1500	1810	1130	656	724	988
18	992	2060	2210	e700	4380	1910	1530	2640	950	1950	1050	989
19	955	2540	1900	2010	3920	1930	1630	12400	1120	1490	969	1000
20	918	2430	1940	5890	9460	1850	1650	27300	1020	1740	1080	921
21	982	2170	2410	7610	7180	1750	1450	17200	1010	3920	984	1030
22	1050	2000	2260	4640	4940	1670	1320	12000	1100	5960	847	962
23	983	1800	2110	3220	4040	1700	1230	10900	967	2740	702	954
24	941	1700	1880	2560	3690	1710	1410	8490	821	4570	1430	1060
25	916	1610	1780	2350	3140	1520	1380	5930	789	3940	2300	867
26	889	1590	1840	2450	2870	1960	1290	5400	856	2600	1410	947
27	955	1560	1950	2140	2570	3700	1320	4290	958	10900	1030	718
28	2810	1480	1780	1780	2510	3530	2790	3660	813	4060	920	677
29	3300	1680	1750	1330	2410	2900	2570	3240	778	2840	1750	666
30	2390	13300	1630	1550	---	2500	2020	2940	756	2130	2400	642
31	1600	---	1480	1700	---	2310	---	2700	---	1810	1790	---
MEAN	1448	2236	2614	1853	4523	2751	1831	5171	1405	2008	1123	1302
MAX	3300	13300	9680	7610	9460	7360	3520	27300	2680	10900	2400	4350
MIN	889	1050	1480	700	2130	1520	1230	1460	756	571	667	642
IN.	.88	1.32	1.59	1.13	2.58	1.68	1.08	3.15	.83	1.22	.68	.77
†	244	232	239	280	271	269	239	231	288	291	297	268

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	1275	2267	3093	3255	3707	4761	4264	3040	2069	1613	1379	1404
MAX	4771	6272	9569	11400	8136	13320	11620	7345	11640	6435	7980	4863
(WY)	1956	1973	1984	1979	1939	1936	1983	1984	1972	1984	1933	1960
MIN	89.4	223	444	340	647	1552	1237	693	261	116	140	117
(WY)	1942	1932	1981	1981	1934	1981	1985	1965	1965	1966	1966	1932

01474500 SCHUYLKILL RIVER AT PHILADELPHIA, PA--Continued

(National stream-quality accounting network station)

SUMMARY STATISTICS	FOR 1988 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	2351		2671	
HIGHEST ANNUAL MEAN			4791	1984
LOWEST ANNUAL MEAN			1014	1965
HIGHEST DAILY MEAN	27300	May 20	93400	Jun 23 1972
LOWEST DAILY MEAN	571	Jul 16	.6	Sep 2 1966
INSTANTANEOUS PEAK FLOW	29600	May 20	103000	Jun 23 1972
INSTANTANEOUS PEAK STAGE	9.78	May 20	14.65	Jun 23 1972
INSTANTANEOUS LOW FLOW	571	Jul 16	0	At times
ANNUAL RUNOFF (INCHES)	16.87		19.16	
10 PERCENTILE	4060		5950	
50 PERCENTILE	1730		1640	
95 PERCENTILE	718		254	

† Diversion, equivalent in cubic feet per second, for municipal supply, provided by City of Philadelphia
e Estimated

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 mi^2.

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.--Records fair. Several measurements of water temperature, other than those published, were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	20	30	26	36	36	39	34	17	9.8	15	13
2	17	20	25	25	38	35	40	30	17	9.8	14	13
3	32	20	23	22	49	35	34	26	17	9.6	13	12
4	70	20	24	25	55	52	34	26	17	9.6	13	20
5	28	20	23	24	50	91	33	29	18	9.4	13	27
6	20	19	22	e25	37	50	31	50	17	9.4	12	17
7	21	19	21	e24	32	42	65	54	16	9.5	13	14
8	20	20	21	e26	31	39	88	37	16	10	12	13
9	18	20	22	e26	31	38	52	32	17	10	12	13
10	18	35	22	e24	31	37	41	30	17	11	11	13
11	18	62	33	e24	30	35	37	31	16	10	11	13
12	18	43	29	e24	360	34	35	31	15	10	11	12
13	18	34	24	e24	115	34	33	28	15	12	11	19
14	17	28	22	e24	56	34	32	27	14	10	10	15
15	17	25	36	e23	49	33	33	26	13	9.5	9.9	13
16	17	24	65	e23	92	32	34	25	13	8.4	9.6	12
17	17	23	37	e23	59	32	33	26	13	9.5	11	12
18	18	25	29	e40	47	32	33	28	14	14	15	13
19	18	23	26	42	46	33	36	68	13	11	12	13
20	18	22	31	132	96	32	33	46	13	11	14	13
21	18	22	31	89	63	31	32	31	13	19	15	13
22	18	21	27	51	46	30	30	35	12	54	12	12
23	18	21	26	40	44	30	30	42	11	18	11	12
24	18	22	25	36	43	30	36	38	11	46	21	12
25	18	22	27	43	40	30	33	59	11	19	30	15
26	17	22	32	79	38	62	31	40	11	41	17	16
27	22	21	29	46	38	98	30	28	11	175	13	15
28	75	21	26	36	38	50	56	24	11	32	13	13
29	35	25	28	34	37	39	40	21	10	20	15	13
30	24	38	25	32	---	37	38	19	9.9	17	17	13
31	21	---	24	34	---	40	---	18	---	15	14	---
MEAN	23.3	25.2	27.9	37.0	59.6	40.7	38.4	33.5	14.0	21.3	13.6	14.1
MAX	75	62	65	132	360	98	88	68	18	175	30	27
MIN	17	19	21	22	30	30	30	18	9.9	8.4	9.6	12
IN.	1.00	1.05	1.20	1.58	2.39	1.75	1.59	1.44	.58	.91	.58	.59

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	28.5	36.1	46.4	51.2	51.7	52.4	52.9	42.5	35.3	31.4	30.4	25.1
MAX	62.6	93.9	107	123	115	88.5	134	71.4	77.7	112	121	71.9
(WY)	1972	1973	1973	1978	1979	1984	1983	1983	1975	1975	1967	1971
MIN	15.9	18.0	18.8	20.7	25.9	22.7	21.3	15.9	10.7	6.01	5.89	11.7
(WY)	1969	1975	1981	1981	1981	1981	1985	1977	1966	1966	1966	1968

SUMMARY STATISTICS	FOR 1988 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	28.9		40.6	
HIGHEST ANNUAL MEAN			64.7	1973
LOWEST ANNUAL MEAN			22.5	1981
HIGHEST DAILY MEAN	360	Feb 12	1260	Aug 28 1971
LOWEST DAILY MEAN	8.4	Jul 16	2.9	Jul 14 1966
INSTANTANEOUS PEAK FLOW	532	Feb 12	3530	Aug 10 1967
INSTANTANEOUS PEAK STAGE	11.80	Feb 12	17.44a	Aug 10 1967
INSTANTANEOUS LOW FLOW	8.3	Jul 17	---	
ANNUAL RUNOFF (INCHES)	14.6		20.5	
10 PERCENTILE	47		68	
50 PERCENTILE	24		30	
95 PERCENTILE	11		13	

a Present datum
e Estimated

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 1987 TO SEPTEMBER 1988

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)
OCT 1987										
08...	1030	19	--	7.3	16.5	7.4	76	<0.4	490	540
JAN 1988										
28...	1330	40	--	7.1	0.5	12.5	86	<0.7	<20	94
MAR										
29...	1230	39	--	7.0	10.5	10.8	96	<0.7	20	49
JUN										
23...	1230	12	208	6.8	24.0	6.2	74	6.8	110	1600
JUL										
06...	1100	9.4	--	7.6	21.5	8.1	91	E1.3	220	240
AUG										
02...	1100	14	--	7.5	24.5	5.8	69	<1.2	130	>2400

DATE	HARDNESS TOTAL (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)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1987									
08...	62	18	4.1	5.9	4.0	31	28	14	0.2
JAN 1988									
28...	60	16	4.8	7.4	3.8	16	30	16	0.2
MAR									
29...	56	15	4.6	6.2	4.0	18	31	14	0.2
JUN									
23...	69	20	4.7	8.4	4.0	39	24	16	0.3
JUL									
06...	70	18	6.0	5.7	4.3	30	22	16	0.3
AUG									
02...	69	20	4.6	6.0	4.4	33	25	14	0.2

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1987									
08...	10	103	0.012	1.85	0.08	0.58	2.4	0.101	3.6
JAN 1988									
28...	9.3	97	0.012	3.04	--	--	--	0.070	2.7
MAR									
29...	8.3	94	0.018	--	0.06	0.30	--	--	3.5
JUN									
23...	11	112	0.068	1.83	0.11	0.83	2.7	--	3.4
JUL									
06...	9.7	100	E0.025	2.95	0.14	0.40	3.3	0.110	2.7
AUG									
02...	11	105	0.027	1.71	0.08	0.64	2.3	0.170	4.5

01477120 RACCOON CREEK NEAR SWEDESBORO, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	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 1988 23...	1230	10	2	<10	30	2	1	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 1988 23...	1300	<5	60	<0.10	8	<1	30	3

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 mi^2.

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 1987 TO SEPTEMBER 1988

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)
OCT 1987 08...	1300	E14	178	7.1	17.0	7.8	81	<1.0	490	240
JAN 1988 28...	1200	E30	150	7.2	0.5	12.2	84	<1.2	20	540
MAR 29...	1030	E33	162	7.3	9.0	10.5	90	<0.8	20	240
JUN 29...	1115	E6.1	166	7.8	21.0	9.8	110	5.9	110	1600
JUL 06...	1300	E5.7	210	7.4	24.5	9.5	113	E2.0	170	350
AUG 02...	1345	E9.3	245	7.3	27.0	8.4	105	2.4	490	920

DATE	HARDNESS TOTAL (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)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1987 08...	34	9.8	2.4	6.3	2.6	26	21	10	0.1
JAN 1988 28...	67	19	4.8	5.6	3.4	17	36	14	0.2
MAR 29...	67	19	4.8	5.2	2.8	21	34	14	0.2
JUN 29...	59	17	4.1	5.5	3.6	31	18	15	0.4
JUL 06...	78	23	5.0	5.0	3.7	35	28	17	0.2
AUG 02...	74	22	4.7	4.7	4.9	31	31	14	0.3

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1987 08...	6.1	74	0.012	1.54	0.06	1.1	2.6	0.165	8.8
JAN 1988 28...	10	103	0.012	4.53	--	--	--	0.070	4.3
MAR 29...	8.8	101	0.019	--	0.06	0.40	--	--	6.0
JUN 29...	6.6	89	0.023	1.12	0.17	1.3	2.4	--	6.8
JUL 06...	7.1	110	E0.016	1.49	0.07	0.47	2.0	0.055	4.0
AUG 02...	12	112	0.018	1.20	<0.05	0.79	2.0	0.120	5.3

01477510 OLDMANS CREEK AT PORCHES MILL, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 1988 29...	1115	<0.5	<10	2	<10	<10	2	2	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)
JUN 1988 29...	950	<5	80	<0.10	17	<1	20	3

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 mi^2.

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: Nov. 22 to Dec. 2, Jan. 6 to Feb. 1, and July 6 to Aug. 1. 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, 5.68 ft, Apr. 7; minimum recorded, -4.68 ft, Nov. 21.

Summaries of tide elevations during current year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	4.79	e5.0	4.99	e5.4	5.10	4.29	5.68	5.12	5.64	e5.3	5.19	4.70
high tide	Date	7	29	20	20	20	20	7	19	3	28	26	4
Minimum	Elevation	-3.40	-4.68	-3.91	e-4.0	-4.38	-3.16	-2.60	-2.27	-2.75	-2.60	-2.37	-2.30
low tide	Date	4	21	17	7	14	20	16	13	6	1	16	24
Mean high tide		3.55	--	3.31	--	3.25	3.21	3.90	4.00	3.86	--	3.86	3.74
Mean water level		0.98	--	0.91	--	0.89	0.66	1.35	1.34	1.17	--	1.15	--
Mean low tide		-1.79	--	-1.71	--	-1.82	-2.01	-1.43	-1.51	-1.77	--	-1.76	-1.72

e 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 mi^2.

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 1987 TO SEPTEMBER 1988

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	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 1987										
04...	1330	E16	225	6.6	13.5	9.4	90	E2.1	230	>2400
FEB 1988										
02...	1330	E624	210	6.4	8.0	8.5	72	E2.1	110	110
MAR										
17...	1045	E16	250	7.0	6.0	11.7	94	2.7	<20	21
MAY										
25...	1045	E16	243	7.4	22.5	7.7	90	3.2	1100	350
JUL										
19...	1330	E5.0	229	8.0	29.0	7.2	94	4.7	230	>2400
AUG										
15...	1030	E5.0	245	8.7	30.5	5.0	67	8.1	330	350

DATE	HARD-NESS TOTAL (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 1987									
04...	77	16	8.9	7.8	7.9	29	35	20	0.2
FEB 1988									
02...	68	15	7.5	7.4	4.1	19	37	19	0.2
MAR									
17...	82	18	9.1	7.7	4.0	21	39	21	0.2
MAY									
25...	80	17	9.0	7.6	5.0	32	34	18	0.2
JUL									
19...	94	22	9.4	18	5.0	68	24	25	0.3
AUG									
15...	85	20	8.6	8.0	6.8	61	23	19	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-PHOROUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 1987									
04...	6.3	119	0.053	1.89	0.25	1.5	3.4	0.575	10
FEB 1988									
02...	5.9	107	0.017	3.52	--	--	--	0.103	5.4
MAR									
17...	7.6	119	0.041	--	0.06	0.70	--	--	5.5
MAY									
25...	6.9	117	E0.078	1.42	0.48	1.2	2.6	0.207	9.1
JUL									
19...	2.3	147	0.007	0.28	0.13	1.6	1.9	0.273	20
AUG									
15...	11	133	<0.003	0.43	0.05	3.8	4.3	0.500	21

01482500 SALEM RIVER AT WOODSTOWN, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 1988 25...	1045	<0.5	150	2	<10	<10	1	<1	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)
MAY 1988 25...	1800	8	160	<0.10	6	<1	<10	10

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 mi^2. 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, 150,206 mil gal, June 1, elevation, 1,280.22 ft; minimum, 105,193 mil gal, Sept. 30, elevation, 1,253.39 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 mi^2. 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, 103,430 mil gal, Mar. 28, elevation, 1,152.99 ft; minimum, 40,610 mil gal, Sept. 30, elevation, 1,104.47 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 mi^2. 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, 4,610 acre-ft, May 21, elevation, 1,128.95 ft; minimum, 2,930 acre-ft, Aug. 23, elevation, 1,122.97 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 mi^2. 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, 312 acre-ft, May 20, elevation, 986.20 ft; no storage many days.

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 mi^2. 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, 90,460 acre-ft, May 30, elevation, 1,186.8 ft; minimum, 17,580 acre-ft, Oct. 16, 26, Nov. 13, elevation, 1,173.4 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 mi^2 excluding Cliff Lake, Lebanon Lake, and Toronto Reservoir. PERIOD OF RECORD, January 1930 to current year. REVISED RECORDS, WSP 1552: 1951-54. WDR NJ-86-2: 1985. 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 ft^3 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 ft^3. 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 ft^3, Mar. 14, 1977, elevation, 1,071.8 ft; minimum (after first filling), -141.4 mil ft^3, Dec. 2, 1938, elevation, 987.5 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,283.6 mil ft^3, Oct. 30, elevation, 1,067.4 ft; minimum, 779.1 mil ft^3, Feb. 22, elevation, 1,052.9 ft.

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 mi^2. PERIOD OF RECORD, January 1926 to current year. REVISED RECORDS, WSP 1552: 1951-54. WSP 1702: 1959(M). WDR NJ-85-2: 1984. WDR NJ-86-2: 1985. 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 ft^3 between elevations 1,165.0 ft, minimum operating pool, and operating pool, about 26.8 mil ft^3. 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 ft^3, July 20, 1945, elevation, 1,222.0 ft. minimum observed (after first filling), -26.8 mil ft^3, Nov. 15, 1928, elevation, 1,144.5 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 775.2 mil ft^3, June 1, 3, 6, 8, elevation, 1,209.8 ft; minimum observed, 27.0 mil ft^3, Sept. 30, elevation, 1,170.4 ft.

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 mi^2 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). WDR NJ-86-2: 1985. 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 ft^3 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 ft^3. 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 ft^3, July 30, 31, 1945, elevation, 1,073.1 ft; minimum observed (after first filling), about -6.54 mil ft^3, Mar. 16, 1963, elevation, 1,038.0 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 126.95 mil ft^3, Sept. 16, elevation, 1,070.9 ft; minimum observed, 25.61 mil ft^3, Feb. 29, elevation, 1,053.3 ft.

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 mi^2. 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, 36,889 mil gal, May 30, elevation, 1,439.48 ft; minimum observed, 23,102 mil gal, SEPT. 30, elevation, 1,407.58 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 mi^2. 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, 10,150, May 22, elevation, 1,344.89 ft; minimum, 1,650 acre-ft, Feb. 17, elevation, 1,296.64 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 mi^2. 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, 20,390 acre-ft, May 20, elevation, 1,000.71 ft; minimum, 17,470 acre-ft, Sept. 30, elevation, 994.38 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 mi^2. 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, 12,250 acre-ft, May 21, elevation, 820.83 ft; minimum, 11,170 acre-ft, Sept. 3, elevation, 816.71 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 mi^2. 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 42,390 acre-ft, Sept. 6, elevation, 629.19 ft; minimum, 35,800 acre-ft, Oct. 1, elevation, 621.94 ft.

01455221 MERRILL CREEK RESERVOIR.--Lat 40°43'42", long 75°06'11", Warren County, Hydrologic Unit 02040105, at dam on Merrill Creek in Harmony Township, 4.5 mi northeast of Phillipsburg, and 2.8 mi upstream from mouth. DRAINAGE AREA, 3,13 mi^2. PERIOD OF RECORD, March to September 1988. GAGE, measurement from reference point. Datum of gage is National Geodetic Vertical Datum of 1929.
REMARKS.--Reservoir formed by zoned, compacted, earth-rockfill dam constructed in November 1987. Total capacity at spillway elevation, 16,617,000,000 gal, elevation 929.0 ft. Useable capacity, 15,6654,000,000 gal. Reservoir used for storage of water pumped from the Delaware River through a 57-inch diameter pipe 17,000 ft long. Releases are made into the Delaware River through the same pipe. Reservoir is used to augment low flow in the Delaware River.
COOPERATION.--Records provided by the Merrill Creek Project.
EXTREMES FOR PERIOD MARCH TO SEPTEMBER, 1988.--Maximum contents, 16,056,000,000 gal, Sept. 30, elevation, 917.4 ft; minimum, 3,222,000,000 gal, March 31, (first filling) elevation 829.5 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 mi^2. 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, 6,393,000,000 gal, Jan. 8, gage height, 7.70 ft; minimum, 3,575,000,000 gal, Sept. 14, gage height, 3.96 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 mi^2. 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, 41,750 acre-ft, Nov. 30, elevation 396.10 ft; minimum, 39,080 acre-ft, Nov. 8, elevation 394.20 ft.

RESERVOIRS IN DELAWARE RIVER BASIN--Continued

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 mi^2. 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, 8,410 acre-ft, May 20, elevation, 1,182.4 ft; minimum, 6,100 acre-ft, Sept. 30, elevation, 1,147.2 ft.

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 mi^2. 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, 32,750 acre-ft, May 20, elevation, 297.51 ft; minimum, 16,630 acre-ft, Mar. 23, elevation, 283.95 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 mi^2. 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, 14,240 acre-ft, Nov. 30, elevation, 286.91 ft; minimum, 12,090 acre-ft, July 17, elevation, 284.44 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

Date	Elevation (feet)‡	Contents (million gallons)	Change in contents (equivalent in ft^3/s)	Elevation (feet)‡	Contents (million gallons)	Change in contents (equivalent in ft^3/s)	Elevation (feet)†	Contents (acre-feet)	Change in contents (equivalent in ft^3/s)
	01416900 PEPACTON RESERVOIR			01424997 CANNONSVILLE RESERVOIR			01428900 PROMPTON RESERVOIR		
Sept. 30...	1,259.89	115,278	-	1,129.60	69,746	-	1,125.21	3,560	-
Oct. 31...	1,263.08	120,420	+257	1,140.26	84,162	+720	1,125.68	3,690	+2.1
Nov. 30...	1,262.75	119,882	-27.7	1,149.90	98,466	+738	1,127.76	4,270	+9.7
Dec. 31...	1,260.82	116,765	-156	1,150.17	98,892	+21.3	1,125.28	3,580	-11.2
CAL YR 1987			-43.1			3.8			-.2
Jan. 31...	1,255.35	108,177	-429	1,147.41	94,678	-210	1,124.98	3,490	-1.5
Feb. 29...	1,258.69	113,376	+277	1,150.58	99,551	+260	1,124.88	3,470	-.3
Mar. 31...	1,266.25	125,652	+613	1,151.63	101,241	+84.4	1,126.24	3,850	+6.2
Apr. 30...	1,271.74	135,010	+483	1,149.99	98,603	-136	1,125.90	3,750	-1.7
May 31...	1,280.22	150,206	+758	1,150.64	99,648	+52.2	1,125.44	3,620	-2.1
June 30...	1,274.90	140,563	-497	1,142.41	87,269	-638	1,123.47	3,070	-9.2
July 31...	1,269.02	130,327	-511	1,127.08	66,537	-1,035	1,123.95	3,210	+2.3
Aug. 31...	1,261.49	117,859	-622	1,112.75	49,447	-853	1,124.06	3,240	+.5
Sept. 30...	1,253.12	104,785	-674	1,103.68	39,827	-496	1,123.21	3,000	-4.0
WTR YR 1988			-44.4			-126			-.8

RESERVOIRS IN DELAWARE RIVER BASIN--Continued

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

Date	01429400 GENERAL EDGAR JADWIN RESERVOIR Elevation (feet)†	Contents (acre-feet)	Change in contents (equivalent in ft³/s)	01431700 LAKE WALLENPAUPACK Elevation (feet)†	Contents (acre-feet)	Change in contents (equivalent in ft³/s)	01433000 SWINGING BRIDGE RESERVOIR Elevation (feet)†	Contents (million ft³)	Change in contents (equivalent in ft³/s)
Sept. 30...	977.40	0	-	1,179.0	47,300	-	1,064.8	1,184	-
Oct. 31...	977.82	0	0	1,174.2	21,740	-416	1,067.2	1,276	+34.3
Nov. 30...	982.18	127	+2.1	1,175.3	27,490	+96.6	1,065.7	1,218	-22.3
Dec. 31...	972.00	0	-2.1	1,177.8	40,820	+217	1,064.1	1,158	-22.5
CAL YR 1987			0			-34.5			+0.2
Jan. 31...	975.89	0	0	1,176.8	35,440	-87.5	1,058.1	946	-79.2
Feb. 29...	976.73	0	0	1,177.6	39,740	+74.8	1,053.7	804	-56.6
Mar. 31...	978.81	0	0	1,179.0	47,300	+123	1,064.4	1,169	+136
Apr. 30...	979.70	0	0	1,181.1	58,650	+191	1,064.8	1,184	+5.8
May 31...	977.12	0	0	1,186.6	89,320	+499	1,066.6	1,252	+25.6
June 30...	976.13	0	0	1,183.8	73,580	-264	1,064.0	1,154	-38.0
July 31...	975.73	0	0	1,183.0	69,100	-72.9	1,062.9	1,114	-15.1
Aug. 31...	973.83	0	0	1,180.2	53,780	-249	1,063.9	1,150	+13.7
Sept. 30...	962.36	0	0	1,179.1	47,840	-99.8	1,064.7	1,180	+11.5
WTR YR 1988			0			+.7			-.1

Date	01433100 TORONTO RESERVOIR Elevation (feet)†	Contents (million ft³)	Change in contents (equivalent in ft³/s)	01433200 CLIFF LAKE Elevation (feet)†	Contents (million ft³)	Change in contents (equivalent in ft³/s)	01435900 NEVERSINK RESERVOIR Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft³/s)
Sept. 30...	1,196.1	424	-	1,066.3	92.3	-	1,418.40	27,377	-
Oct. 31...	1,197.7	461	+13.7	1,067.3	99.3	+2.6	1,423.05	29,334	+97.7
Nov. 30...	1,195.8	418	-16.7	1,066.8	95.8	-1.4	1,423.20	29,398	+3.3
Dec. 31...	1,196.8	440	+8.4	1,065.1	84.3	-4.3	1,419.29	27,747	-82.4
CAL YR 1987			-3.5			-.1			+12.2
Jan. 31...	1,197.7	461	+7.7	1,057.7	42.8	-15.5	1,410.96	24,395	-167
Feb. 29...	1,200.7	534	+29.0	1,053.3	25.6	-6.9	1,413.65	25,451	+56.3
Mar. 31...	1,204.4	629	+35.5	1,064.0	77.3	+19.3	1,424.25	29,850	+220
Apr. 30...	1,206.8	693	+24.7	1,064.9	83.0	+2.2	1,430.83	32,784	+151
May 31...	1,209.7	772	+29.8	1,066.9	96.5	+5.0	1,439.27	36,787	+200
June 30...	1,205.8	666	-41.1	1,065.4	86.3	-3.9	1,432.71	33,648	-162
July 31...	1,199.9	514	-56.7	1,064.8	82.4	-1.5	1,431.39	33,036	-30.5
Aug. 31...	1,188.5	271	-90.6	1,065.0	83.7	+.5	1,426.12	30,665	-118
Sept. 30...	1,170.4	27	-94.3	1,064.5	80.5	-1.2	1,406.68	22,764	-407
WTR YR 1988			-12.6			-.4			-19.5

Date	01447780 FRANCIS E. WALTER LAKE Elevation (feet)‡	Contents (acre-feet)	Change in contents (equivalent in ft³/s)	01449400 PENN FOREST RESERVOIR Elevation (feet)†	Contents (acre-feet)	Change in contents (equivalent in ft³/s)	01449700 WILD CREEK RESERVOIR Elevation (feet)†	Contents (acre-feet)	Change in contents (equivalent in ft³/s)
Sept. 30...	1,308.13	2,860	-	1,000.22	20,110	-	819.71	11,940	-
Oct. 31...	1,309.53	3,020	+2.6	1,000.17	20,080	-0.5	818.67	11,710	-3.7
Nov. 30...	1,315.92	3,890	+14.6	1,000.52	20,280	+3.4	817.96	11,520	-3.2
Dec. 31...	1,299.53	1,950	-31.6	1,000.08	20,020	-4.2	820.00	12,000	+7.8
CAL YR 1987			-.3			-.6			+.7
Jan. 31...	1,303.95	2,400	+7.3	1,000.15	20,070	+0.8	817.86	11,490	-8.3
Feb. 29...	1,303.37	2,340	-1.0	1,000.17	20,080	+0.2	817.36	11,350	-2.4
Mar. 31...	1,301.83	2,180	-2.6	1,000.25	20,120	+0.7	820.31	12,090	+12.0
Apr. 30...	1,307.71	2,810	+10.6	1,000.21	20,100	-0.3	819.50	11,900	-3.2
May 31...	1,310.49	3,140	+5.4	1,000.35	20,180	+1.3	820.35	12,100	+3.3
June 30...	1,300.69	2,070	-18.0	1,000.04	20,000	-3.0	818.17	11,580	-8.7
July 31...	1,307.13	2,740	+10.9	999.37	19,690	-5.0	817.39	11,360	-3.6
Aug. 31...	1,304.89	2,500	-3.9	996.65	18,470	-19.8	816.96	11,240	-2.0
Sept. 30...	1,304.89	2,500	0	994.38	17,470	-16.8	817.09	11,280	+.7
WTR YR 1988			-.5			-3.6			-.9

RESERVOIRS IN DELAWARE RIVER BASIN--Continued

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

Date	01449790 BELTZVILLE LAKE Elevation (feet)†	Contents (acre-feet)	Change in contents (equivalent in ft³/s)	01455221 MERRILL CREEK RESERVOIR Elevation (feet)‡	Contents (million gallons)	Change in contents (equivalent in ft³/s)	01455400 LAKE HOPATCONG Elevation (feet)†	Contents (acre-feet)	Change in contents (equivalent in ft³/s)
Sept. 30...	621.94	35,800	-				6.80	5,677	-
Oct. 31...	625.04	38,490	+43.8				4.10	3,672	-100
Nov. 30...	628.88	42,090	+60.5				4.16	3,714	+2.2
Dec. 31...	627.84	41,100	-16.1				4.00	3,603	-5.5
CAL YR 1987			-.6						-7.9
Jan. 31...	628.14	41,380	+4.6				4.12	3,686	+4.1
Feb. 29...	627.92	41,170	-3.7				4.10	3,672	-.8
Mar. 31...	627.96	41,210	+.7	829.5	3,222	-	4.96	4,284	+30.5
Apr. 30...	627.94	41,190	-.3	857.8	6,011	+144	5.54	4,711	+22.0
May 31...	627.66	40,930	-4.2	869.4	7,728	+85.7	7.50	6,232	+75.9
June 30...	628.07	41,320	+6.6	887.0	10,240	+130	7.16	5,961	-14.0
July 31...	628.30	41,540	+3.6	896.6	11,780	+76.9	7.66	6,361	+20.0
Aug. 31...	628.05	41,300	-3.9	907.0	13,840	+103	7.54	6,264	-4.8
Sept. 30...	628.05	41,300	0	917.4	16,056	+114	7.64	6,344	+4.1
WTR YR 1988			+7.6			-			+2.8

Date	01459350 NOCHAMIXON RESERVOIR Elevation (feet)†	Contents (acre-feet)	Change in contents (equivalent in ft³/s)	01469200 STILL CREEK RESERVOIR Elevation (feet)†	Contents (acre-feet)	Change in contents (equivalent in ft³/s)	01470870 BLUE MARSH LAKE Elevation (feet)†	Contents (acre-feet)	Change in contents (equivalent in ft³/s)
Sept. 30...	395.10	40,340	-	1,182.00	8,290	-	290.04	22,950	-
Oct. 31...	395.10	40,340	0	1,181.75	8,210	-1.3	285.67	18,280	-76.0
Nov. 30...	396.10	41,750	+23.7	1,182.20	8,350	+2.4	286.89	19,510	+20.7
Dec. 31...	395.05	40,270	-24.1	1,182.00	8,290	-1.0	285.01	17,630	-30.6
CAL YR 1987			-.1			+2.9			0
Jan. 31...	395.10	40,340	+1.1	1,182.00	8,290	0	285.40	18,020	+6.3
Feb. 29...	395.15	40,410	+1.2	1,182.00	8,290	0	285.38	18,000	-.3
Mar. 31...	395.15	40,410	0	1,182.10	8,320	+.5	285.00	17,620	-6.2
Apr. 30...	395.20	40,480	+1.2	1,181.10	8,020	-5.0	289.95	22,840	+87.7
May 31...	395.10	40,340	-2.3	1,182.00	8,290	+4.4	290.35	23,310	+7.6
June 30...	395.00	40,200	-2.4	1,180.10	7,730	-9.4	290.09	23,000	-5.2
July 31...	395.15	40,410	+3.4	1,178.50	7,290	-7.2	290.09	23,000	0
Aug. 31...	395.15	40,410	0	1,175.60	6,490	-13.0	290.04	22,940	-1.0
Sept. 30...	394.80	39,920	-8.2	1,174.20	6,100	-6.6	289.92	22,810	-2.2
WTR YR 1988			-.6			-3.0			-.2

Date	01472200 GREEN LANE RESERVOIR Elevation (feet)†	Contents (acre-feet)	Change in contents (equivalent in ft³/s)
Sept. 30...	285.88	13,330	-
Oct. 31...	285.90	13,340	0.2
Nov. 30...	286.91	14,240	+15.1
Dec. 31...	285.88	13,330	-14.8
CAL YR 1987			-.1
Jan. 31...	285.91	13,350	+.3
Feb. 29...	285.98	13,420	+1.2
Mar. 31...	285.96	13,400	-.3
Apr. 30...	285.99	13,420	+.3
May 31...	285.94	13,380	-.7
June 30...	285.36	12,860	-8.7
July 31...	285.86	13,310	+7.3
Aug. 31...	285.57	13,050	-4.2
Sept. 30...	285.33	12,840	-3.5
WTR YR 1988			-.7

‡ 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.
REVISED RECORDS.--WRD NY-71: 1970. WRD NJ-72: 1970. WRD NJ-82-2: 1980. WRD 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. Village of Woodridge has estimated that this year virtually all the withdrawal from East Pond Reservoir was returned to the Neversink River.

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.

01446572 Diversion from Delaware River at Brainards to Merrill Creek Reservoir for storage to augment low flow in the Delaware River. Records provided by Merrill Creek Project.

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. Data for this year is not available but, from past records, monthly withdrawal is approximately 0.5 ft^3/s.

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).
REVISED RECORDS.--WDR NJ-82-2: 1981.

WITHDRAWALS BY CITY OF NEW YORK

DIVERSION, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

Month	01415200 PEPACTON RESERVOIR	01423900 CANNONSVILLE RESERVOIR	01435800 NEVERSINK RESERVOIR
October	694	159	163
November	696	0	196
December	697	313	234
CAL YR 1987	662	264	169
January	647	550	240
February	552	145	115
March	515	391	108
April	242	757	74.0
May	185	717	54.4
June	635	264	207
July	689	510	125
August	681	254	154
September	675	1.3	449
WTR YR 1988	580	340	176

DIVERSIONS AND WITHDRAWALS--Continued

MISCELLANEOUS WITHDRAWALS FROM BASIN, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

MONTH	01446572 MERRILL CREEK RESERVOIR	01447750 BEAR CREEK	01448830 HAZLE CREEK	01460500 DELAWARE & RARITAN CANAL
October	-	0	3.1	98.7
November	-	0	3.1	108
December	-	0	3.1	129
CAL YR 1987	-	0	2.9	110
January	-	0	3.1	114
February	-	0	3.1	119
March	-	0	3.1	117
April	144	0	3.1	118
May	85.7	0	3.1	119
June	130	0	3.1	131
July	76.9	0	3.1	147
August	103	0	3.1	147
September	114	0	3.1	140
WTR YR 1988	-	0	3.1	124

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 losses in transmission. Records provided by the Delaware River Basin Commission.

WITHDRAWALS, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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	2.82	46.0	332	94.0	150
November	2.88	40.2	342	106	126
December	2.91	43.2	330	105	134
CAL YR 1987	4.39	45.8	296	106	157
January	3.35	49.2	328	116	164
February	3.19	44.7	303	107	164
March	3.13	43.8	299	97.2	172
April	2.94	43.2	306	89.7	150
May	3.30	44.6	322	77.5	154
June	3.43	52.2	352	117	171
July	3.27	54.9	386	123	168
August	3.84	56.4	383	121	176
September	3.86	50.4	328	117	151
WTR YR 1988	3.24	47.8	334	106	157

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 Coatesville 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 1987 TO SEPTEMBER 1988

MONTH	01367630 MORRIS LAKE	OCTORARO CREEK	
		01578420 COATSVILLE WATER AUTHORITY	01578450 CHESTER WATER AUTHORITY
October	1.33	1.58	44.5
November	1.36	1.04	43.5
December	1.46	1.23	44.2
CAL YR 1987	1.34	1.89	45.9
January	1.58	1.04	46.9
February	1.53	1.10	48.4
March	1.47	1.48	47.3
April	1.56	1.44	44.8
May	1.41	1.62	45.1
June	1.74	1.76	50.3
July	1.46	1.35	52.3
August	1.46	1.35	52.9
September	1.40	1.34	47.4
WTR YR 1988	1.48	1.36	47.3

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in 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.

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 1988

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual Maximum		
					Date	Gage height (ft)	Discharge (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‡, 1985-88	10-29-87	2.40	115
		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‡, 1968-88	2-12-88	2.60	820
		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‡, 1963-88	5-20-88	3.30	160
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‡, 1981-88	5-20-88	3.59	1,050
*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‡, 1963-88	3-03-88	3.31	314

Annual maximum discharge at crest-stage partial-record stations during water year 1988

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					
*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‡, 1970-88	11-29-87	3.85	565
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‡, 1976-88	11-30-87	3.35	210
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‡, 1974-88	5-24-88	2.65	900
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‡, 1972-88	3-27-88	11.50	39,600
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	1968-88	2-05-88	19.64	800
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	1968-88	1-21-88	b4.13	698
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	1978-88	1-21-88	b6.97	500
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	1978-87	10-28-87	b6.62	191

Annual maximum discharge at crest-stage partial-record stations during water year 1988

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					
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	1978-88	10-28-88	b6.60	371
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, 1976-88	11-12-87	6.06	615
*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	1983-88	11-12-88	9.93	800
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	1975-88	7-21-88	e4.3	490
01467069	North Branch Pennsauken Creek near Moorestown, NJ	Lat 39°57'07", 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	1975-87	7-27-88	6.83	1,280
*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	1964-88	11-13-87	3.38	410
*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	1964-88	7-22-88	4.60	220
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.	.63	1964-88	7-22-88	3.59	113

Annual maximum discharge at crest-stage partial-record stations during water year 1988

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual Maximum Date	Annual Maximum Gage height (ft)	Annual Maximum Discharge (ft^3/s)
		Delaware River basin--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	1975-88 (discontinued)	11-13-87	1.86	322
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‡, 1977-88	2-16-88	1.59	87
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	1975-88 (discontinued)	7-27-88	6.07	422
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	1978-88	2-12-88	2.69	284
01477480	Oldmans Creek near Harrisonville, NJ	Lat 39°41'20", 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	1975-88	2-12-88	5.05	278
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‡, 1985-88	2-12-88	12.02	540

* Also a low-flow partial-record station.
‡ Operated as a continuous-record gaging station.
b Downstream side of bridge.
c Peak gage height below recordable level.
e Estimated.
f Revised.

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 groundwater 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 1988

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		Maurice River basin				
01411450	Still Run at Aura, NJ	Lat 39°40'23", long 75°07'50", Gloucester County, Hydrologic Unit 02040206, at bridge on Aura-Glassboro Road, 0.4 mi east of Aura, 1.0 mi upstream of Silver Lake and 2.6 mi southeast of Glassboro.	3.21	1966, 1976-84, 1987-88	6-30-88 9-08-88	0.87 1.2
01411462	Scotland Run at Franklinville, NJ	Lat 39°37'05", long 75°03'36", Gloucester County, Hydrologic Unit 02040206, at bridge on State Route 538, 0.9 mi east of Franklinville, 2.7 mi upstream of Malaga Lake and 2.8 mi southeast of Clayton.	14.8	1976-84, 1987-88	6-30-88 9-08-88	6.2 8.3
01411880	Maurice River at Sharp Street, at Millville, NJ	Lat 39°24'01", long 75°05'15", Cumberland County, Hydrologic Unit 02040206, at bridge on Sharp Street, 200 ft downstream from Union Lake, and 0.9 mi northwest of Millville.	218	1973-76, 1988	6-30-88 9-30-88	174 22
		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	1979-88	6-30-88 9-09-88	2.3 17
01445200	Bear Creek near Johnsonburg, NJ	Lat 40°56'35", long 74°52'31", Warren County, Hydrologic Unit 02040105, at bridge on Bear Creek Road, 1.8 mi upstream of Trout Brook and 1.5 mi south of Johnsonburg.	12.9	1940-42, 1987-88	6-30-88 9-09-88	5.3 4.9
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	1981-88	6-30-88 9-09-88	.35 .31
*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.	33.3	1960-69a, 1970-88	9-28-88	8.9
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	1981-88	6-30-88 9-09-88	4.6 6.8
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	1982-88	6-30-88 9-09-88	3.1 3.2

Discharge measurements made at low-flow partial-record stations during water year 1988--Continued

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		Delaware River basin--Continued				
01461300	Wickecheoke Creek at Stockton, NJ	Lat 40°24'41", long 74°59'13" Hunterdon County, Hydrologic Unit 02040105, at bridge on State Highway 29, at Prallsville, 0.2 mi upstream of mouth and 0.6 mi northwest of Stockton.	26.6	1958-62, 1964, 1977-83, 1987-88	9-28-88	1.6
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, 1985-87	11-20-87 2-05-88	*12 39
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 (State Route 533), 1.9 mi south of Clarksville, 2.0 mi upstream from Shipetaukin Creek and 7.6 mi upstream of mouth.	34.2	1963-67, 1972-81a, 1985, 1987-88	9-27-88	7.5
*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, 1983-88	9-29-88	4.6
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	1982-88	6-30-88 9-09-88	.11 1.4
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	1982-88	6-30-88 9-08-88	.22 3.8
01467130	Cooper River at Kirkwood, NJ	Lat 39°50'11", long 75°00'06", Camden County, Hydrologic Unit 02040202, at outlet of Kirkwood Lake in Kirkwood, 100 ft east of tracks of Pennsylvania-Reading Seashore Lines, and 1.0 mi north of Laurel Springs.	5.18	1964-72, 1988	6-29-88 9-08-88	.65 2.8
01467140	Cooper River at Lawnside, NJ	Lat 39°52'14", long 75°00'59", Camden County, Hydrologic Unit 02040202, on right bank at Lawnside, 300 ft downstream of Lawnside sewage treatment plant and 0.2 mi upstream of New Jersey Turnpike.	12.7	1964-72, 1988	6-29-88 9-08-88 9-22-88	4.2 8.3 8.6
01467160	North Branch Cooper River near Marlton, NJ	Lat 39°53'20", long 74°58'08", Burlington County, Hydrologic Unit 02040202, at bridge on Springdale Road, 2.5 mi west of Marlton, and 5.7 mi southwest of Moorestown.	5.34	1965-69, 1971, 1988	6-29-88 9-08-88	4.5 4.9
01467180	North Branch Cooper River at Ellisburg, NJ	Lat 39°54'27", long 75°00'42", Camden County, Hydrologic Unit 02040202, on Brace Road, 0.4 mi south of Ellisburg, and 0.9 mi upstream from confluence with Cooper River.	10.5	1964-69, 1971-72, 1977, 1988	6-29-88 9-08-88	6.8 10

* Also a crest-stage partial-record station.
a 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 1988

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		Delaware River basin				
01443440 Paulins Kill	Delaware River	Lat 40°06'20", long 74°45'19", Sussex County, Hydrologic unit 02040105, at bridge in Balesville, 2.3 mi upstream from Paulins Kill Lake, and 3.0 mi north of Newton.	67.1	1979-82, 1985, 1987	9-27-88	*21
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, 1984-87	11-17-87 2-17-88 4-27-88 9-07-88	*295 286 *134 93
01455801 Musconetcong River	Delaware River	Lat 40°55'10", long 74°44'07", Sussex County, Hydrologic Unit 02040105, at bridge on unnamed road at Lockwood, 0.2 mi downstream from Lubbers Run, and 1.5 mi northwest of Stanhope.	60.1	1979-83, 1985-87	9-27-88	*14
01456200 Musconetcong River	Delaware River	Lat 40°48'48", long 74°50'32", Warren County, Hydrologic Unit 02040105, at bridge on Kings Highway at Beattystown, 1.6 mi upstream from Hances Brook and 1.8 mi west of Schooleys Mountain.	90.3	1973, 1979-81, 1983, 1985-87	9-28-88	*36
01457400 Musconetcong River	Delaware River	Lat 40°35'32", long 75°11'11", Warren County, Hydrologic Unit 02040105, at bridge on County Route 627, 0.2 mi north of Mount Joy, and 0.2 mi upstream from mouth.	156	1940-55, 1973, 1977, 1987	9-28-88	*73
01460440 Delaware and Raritan Canal	Raritan River	Lat 40°18'17", long 74°41'06", Mercer County, Hydrologic Unit 02040105, at bridge on State Route 533 at Port Mercer, 3.0 mi south of Princeton	--	1923, 1936-38, 1942-43, 1945, 1981	10-16-87 12-17-87 1-14-88 2-24-88 8-11-88	112 146 116 108 158
01462730 Jacobs Creek	Delaware River	Lat 40°20'27", long 74°50'19", Mercer County, Hydrologic Unit 02040105, at bridge on Woosamonsa Road, 0.7 mi upstream of bridge on Pleasant Valley Road, 1.1 mi south of Harbourton and 2.6 mi northwest of Pennington.	13.1	1987	11-19-87	*1.1
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	1985-87	11-19-87	*1.8
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	1985-87	11-19-87	*2.8

Discharge measurements made at miscellaneous sites during water year 1988--Continued

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		Delaware River basin--Continued				
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	1985-87	11-20-87	*4.2
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	1985-87	11-20-87	*.13
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	1985-87	11-20-87	*.35
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	1985-87	11-19-87	*.14
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	1985-87	11-19-87	*.86
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	1985-87	11-19-87	*1.8
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.	.89	1985-87	11-19-87	*.78
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, 1985-87	11-20-87	*8.4
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	1985-87	11-20-87	*.94

Discharge measurements made at miscellaneous sites during water year 1988--Continued

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		Delaware River basin--Continued				
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	1985-87	11-20-87	*2.2
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	1985-87	11-20-87	*2.3
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, 1985-87	9-20-88	*13
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, 1985-87	4-18-88	1.0
01467329 South Branch 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, 1985-87	9-26-88	33
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, 1987	9-30-88	*8.9

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 1988

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.	1979-88	4-08-88	5.40
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‡, 1957-88‡a	6-03-88	7.47

* National Geodetic Vertical Datum of 1929.
‡ Operated as a continuous-record gaging station.
a Operated by National Ocean Service since March 1975.

Water-quality partial-record stations and miscellaneous sites are locations where chemical-quality, biological and/or sediment data are collected once only, intermittently, or systematically but on limited frequency over a period of years for use in hydrologic analyses.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	RADIUM 226, DISSOLVED, RADON METHOD (PCI/L)	RADIUM 228, DISSOLVED, (PCI/L AS RA-228)	RADIUM 224, SEDIMENT, BOTTOM MATERIAL, TOTAL (PCI/G AS RA-224)	RADIUM 226, SEDIMENT, BOTTOM MATERIAL, TOTAL (PCI/G AS RA-226)	RADIUM 228, SEDIMENT, BOTTOM MATERIAL, TOTAL (PCI/G AS RA-228)
01411460 SCOTLAND RN NR WILLIAMSTOWN NJ (LAT 39 41 34N LONG 075 02 28W)						
APR 1988 11...	1510	0.64	<1.0	<.3	<.3	<.6
01411461 SCOTLAND RUN AT FRIES MILL NJ (LAT 39 39 21N LONG 075 03 05W)						
APR 1988 11...	1000	0.20	<1.0	<.3	<.3	<.6

BURLINGTON COUNTY

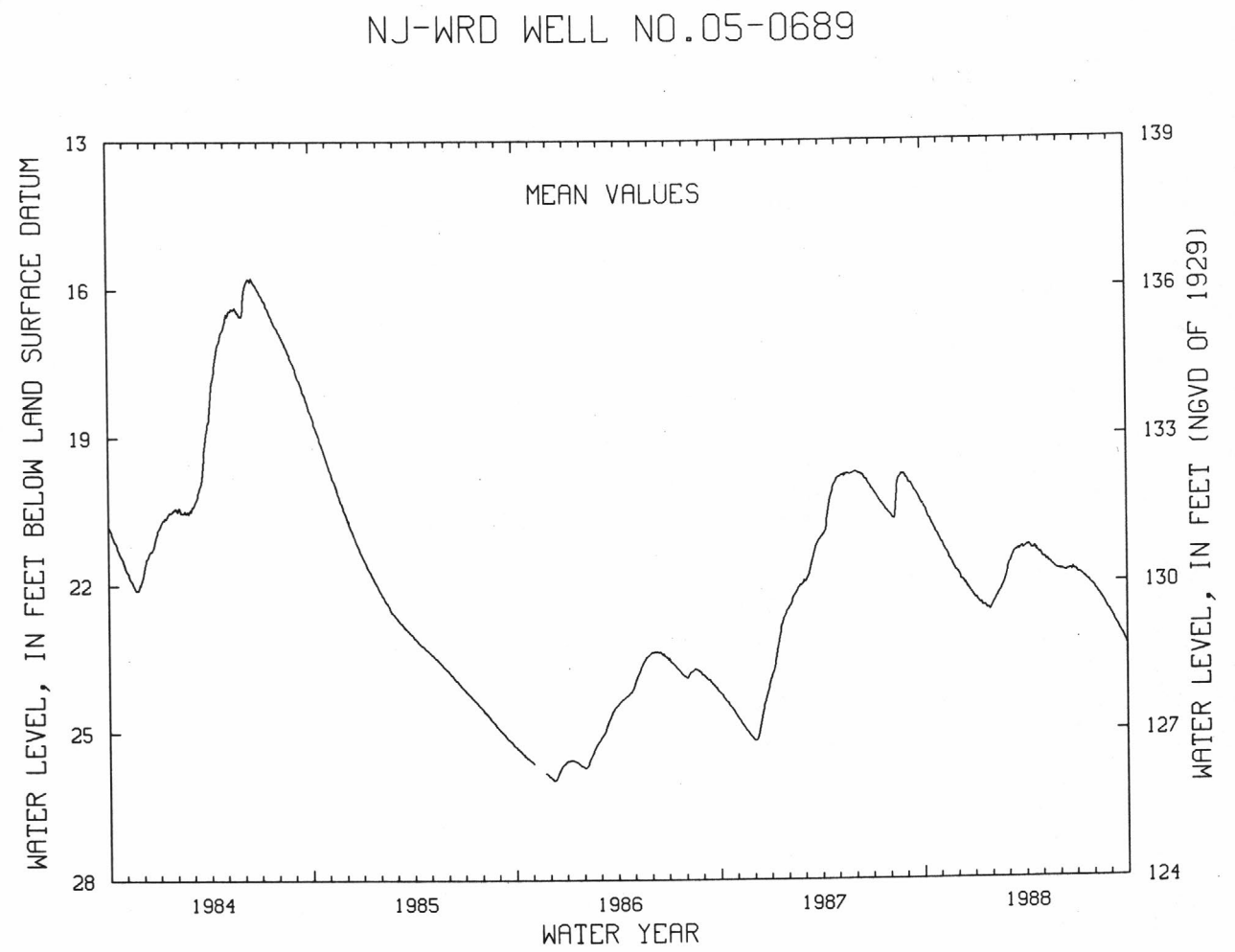
395150074284201. Local I.D., Lebanon State Forest 23-D Obs. NJ-WRD Well Number, 05-0689.
LOCATION.--Lat 39°51'52", long 74°28'48", Hydrologic Unit 02040202, in Lebanon State Forest, Woodland Township.
Owner: U.S. Geological Survey.
AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.
WELL CHARACTERISTICS.--Drilled 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 1987 TO SEPTEMBER 1988

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	20.54	21.22	21.86	22.36	22.39	21.60	21.27	21.52	21.76	21.84	22.16	22.72
10	20.67	21.35	21.94	22.42	22.29	21.44	21.29	21.55	21.79	21.85	22.25	22.84
15	20.77	21.48	22.00	22.47	22.17	21.36	21.31	21.62	21.78	21.90	22.33	22.95
20	20.88	21.54	22.09	22.47	22.06	21.33	21.35	21.68	21.76	21.96	22.42	23.06
25	21.00	21.69	22.18	22.51	21.90	21.30	21.40	21.71	21.78	22.01	22.52	23.17
EOM	21.14	21.74	22.29	22.51	21.74	21.30	21.46	21.76	21.77	22.08	22.63	23.28
MEAN	20.79	21.47	22.04	22.45	22.16	21.42	21.33	21.63	21.77	21.92	22.36	22.96

WTR YR 1988 MEAN 21.86 HIGH 20.42 OCT 1 LOW 23.29 SEP 30



BURLINGTON COUNTY

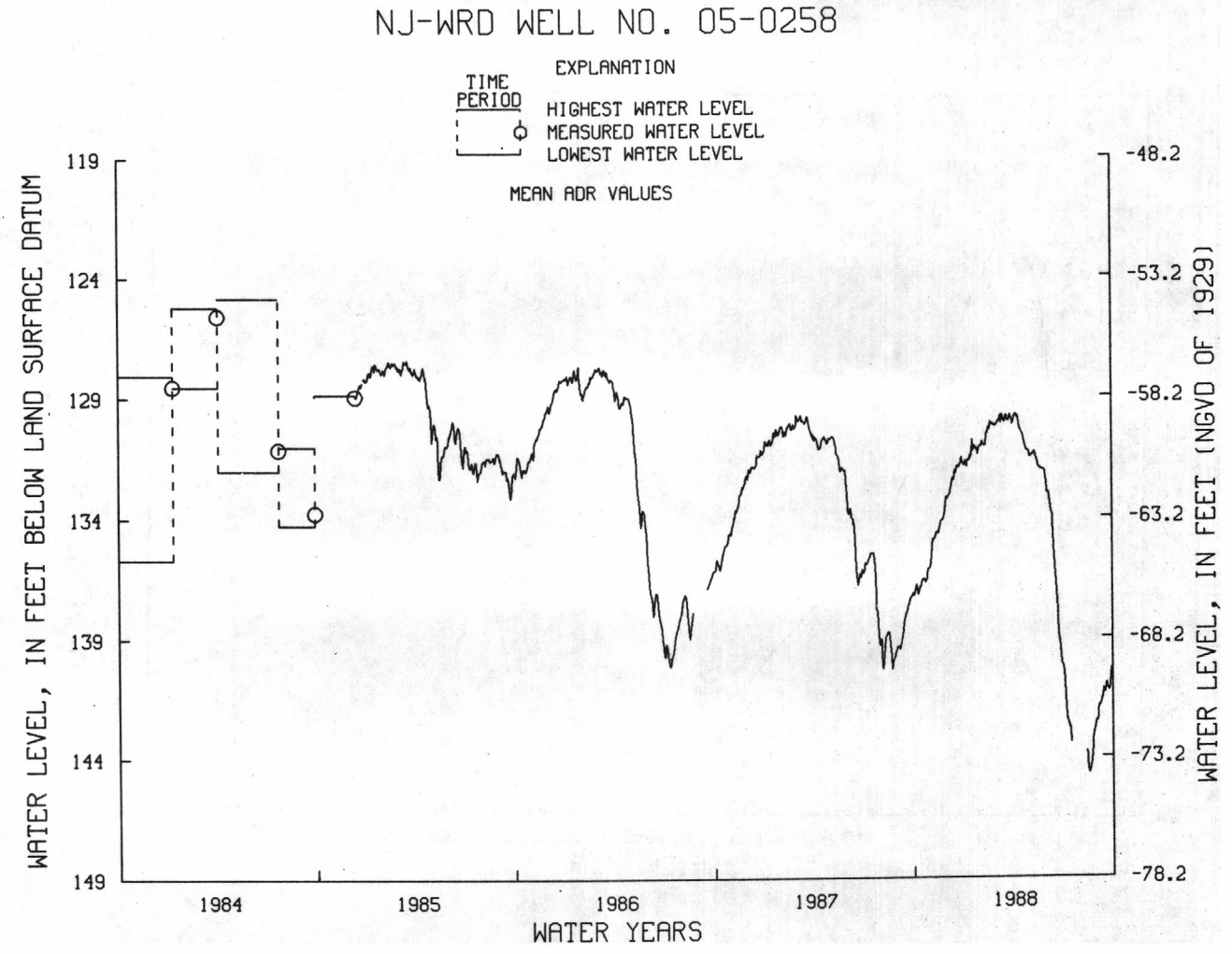
395524074502501. Local I.D., Medford 1 Obs. NJ-WRD Well Number, 05-0258.
LOCATION.--Lat 39°55'24", long 74°50'25", Hydrologic Unit 02040202, at Medford Public Shooting Grounds, Medford Township.
Owner: U.S. Geological Survey.
AQUIFER.--Upper aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous 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.
REMARKS.--Missing record from July 17 to August 12 was due to recorder malfunction.
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, 144.81 ft below land-surface datum, Aug. 17,18, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	136.95	134.90	133.09	131.80	130.95	130.11	129.81	131.49	132.97	140.83	---	141.88
10	137.21	134.83	132.68	131.65	131.05	129.81	129.88	131.30	133.77	142.52	---	141.63
15	136.79	134.68	132.26	131.45	130.35	129.99	130.39	131.61	135.24	142.88	144.20	141.15
20	136.59	134.21	131.93	131.17	130.08	129.81	130.71	131.92	137.16	---	144.46	141.10
25	136.60	134.06	131.80	131.16	130.22	130.05	131.15	132.00	139.04	---	143.31	141.20
EOM	136.11	133.19	131.76	131.06	130.20	130.09	131.32	132.40	140.11	---	142.50	140.27
MEAN	136.74	134.55	132.33	131.41	130.55	129.99	130.45	131.74	135.85	141.87	143.74	141.37

WTR YR 1988 MEAN 134.46 HIGH 129.70 APR 7 LOW 144.81 AUG 17,18



BURLINGTON COUNTY

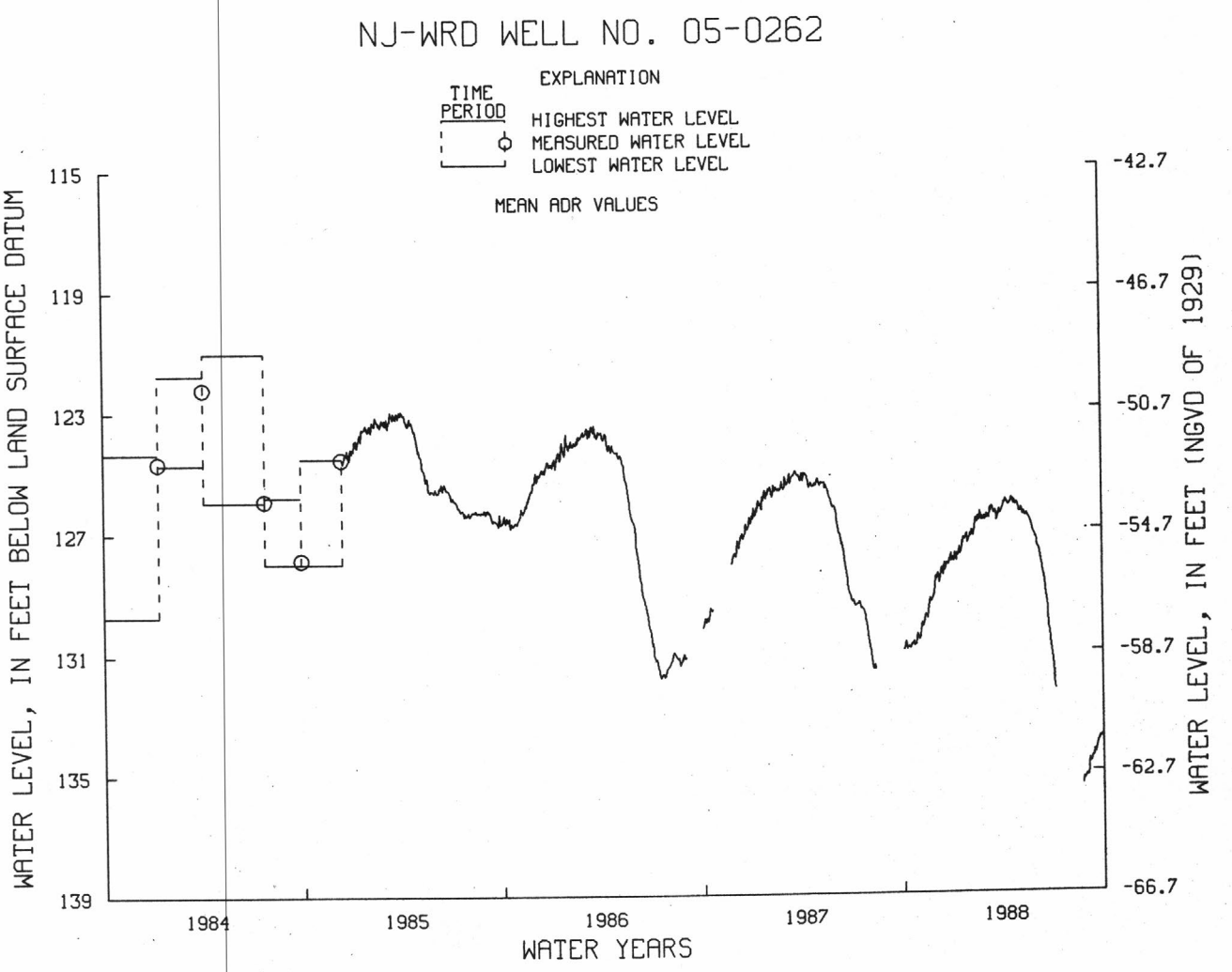
395525074502601. Local I.D., Medford 4 Obs. NJ-WRD Well Number, 05-0262.
LOCATION.--Lat 39°55'24", long 74°50'25", Hydrologic Unit 02040202, at Medford Public Shooting Grounds, Medford Township.
Owner: U.S. Geological Survey.
AQUIFER.--Lower aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous 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.
REMARKS.--Missing record from July 7 to August 22 was due to recorder malfunction.
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, 135.51 ft below land-surface datum, Aug. 23, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	130.83	130.05	128.51	127.87	127.12	126.65	126.15	126.41	127.57	132.19	---	134.61
10	130.87	129.99	128.43	127.83	127.07	126.30	126.14	126.44	128.06	---	---	134.52
15	130.83	129.90	128.27	127.74	126.62	126.30	126.15	126.57	128.50	---	---	134.37
20	130.70	129.24	128.12	127.28	126.41	126.44	126.10	126.68	129.30	---	---	134.06
25	130.73	129.22	127.96	127.20	126.70	126.57	126.18	126.79	130.33	---	135.20	133.89
EOM	130.57	128.56	127.97	127.27	126.64	126.41	126.28	127.27	131.12	---	135.16	133.84
MEAN	130.74	129.67	128.27	127.59	126.83	126.49	126.16	126.67	128.86	---	---	134.34

WTR YR 1988 MEAN 128.79 HIGH 125.95 APR 18 LOW 135.51 AUG 23



BURLINGTON COUNTY

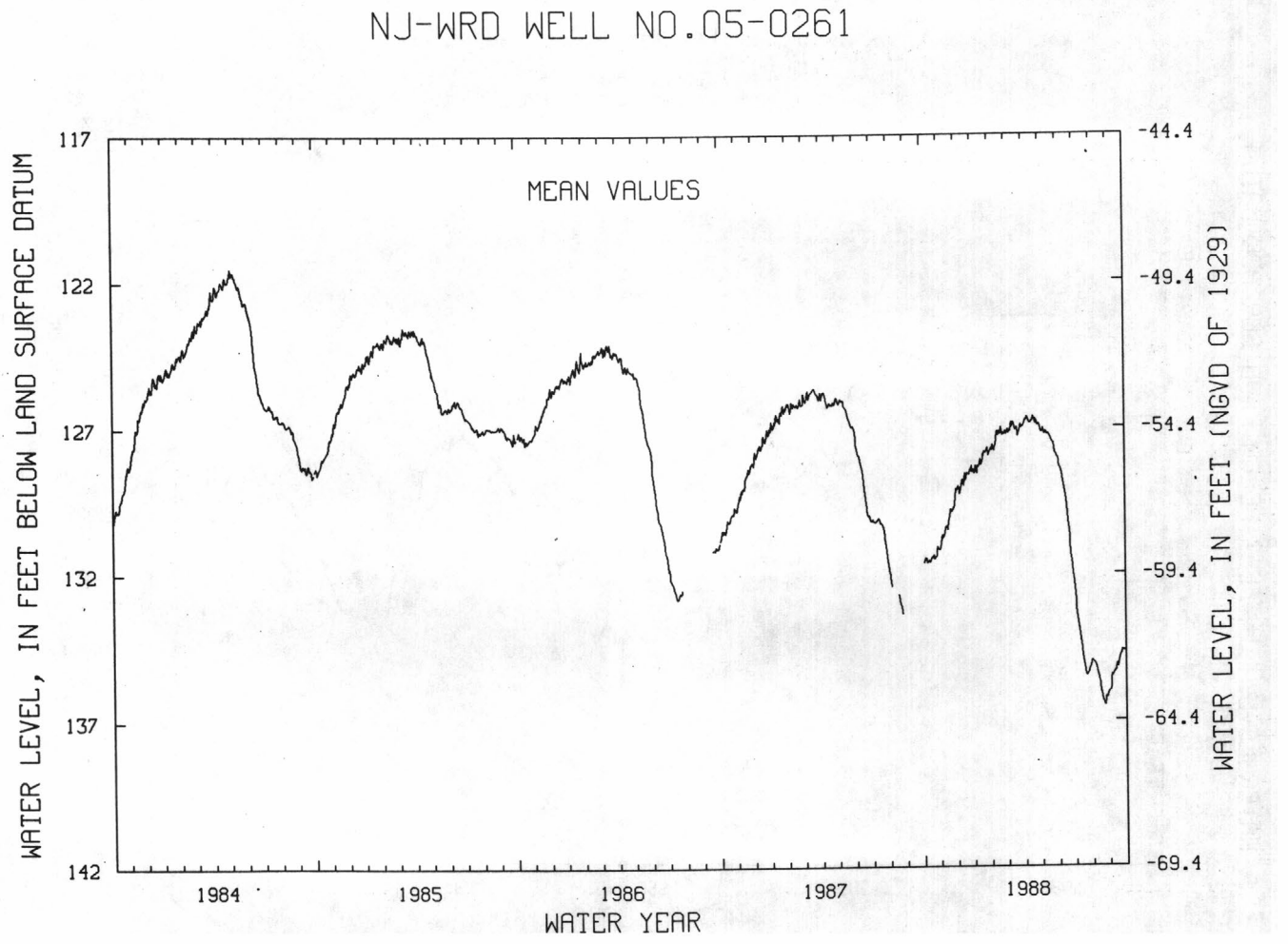
395525074502505. Local I.D., Medford 5 Obs. NJ-WRD Well Number, 05-0261.
LOCATION.--Lat 39°55'25", long 74°50'25", Hydrologic Unit 02040202, at Medford Public Shooting Grounds, Medford Township.
Owner: U.S. Geological Survey.
AQUIFER.--Middle aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous 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.
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, 136.57 ft below land-surface datum, Aug. 23, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	131.52	130.69	129.09	128.46	127.69	127.20	126.76	127.14	128.40	133.39	135.08	135.45
10	131.63	130.62	128.99	128.37	127.63	126.83	126.79	127.15	128.89	134.09	135.41	135.34
15	131.54	130.50	128.77	128.26	127.14	126.89	126.79	127.26	129.38	134.79	135.85	135.15
20	131.42	129.82	128.59	127.83	126.99	127.05	126.75	127.42	130.38	135.45	136.36	134.81
25	131.42	129.79	128.46	127.76	127.26	127.13	126.86	127.55	131.50	135.41	136.22	134.67
EOM	131.21	129.13	128.52	127.81	127.19	126.97	127.01	128.05	132.31	134.98	136.06	134.60
MEAN	131.45	130.27	128.80	128.14	127.38	127.06	126.81	127.39	129.83	134.54	135.79	135.13

WTR YR 1988 MEAN 130.22 HIGH 126.59 APR 18 LOW 136.57 AUG 23



BURLINGTON COUNTY

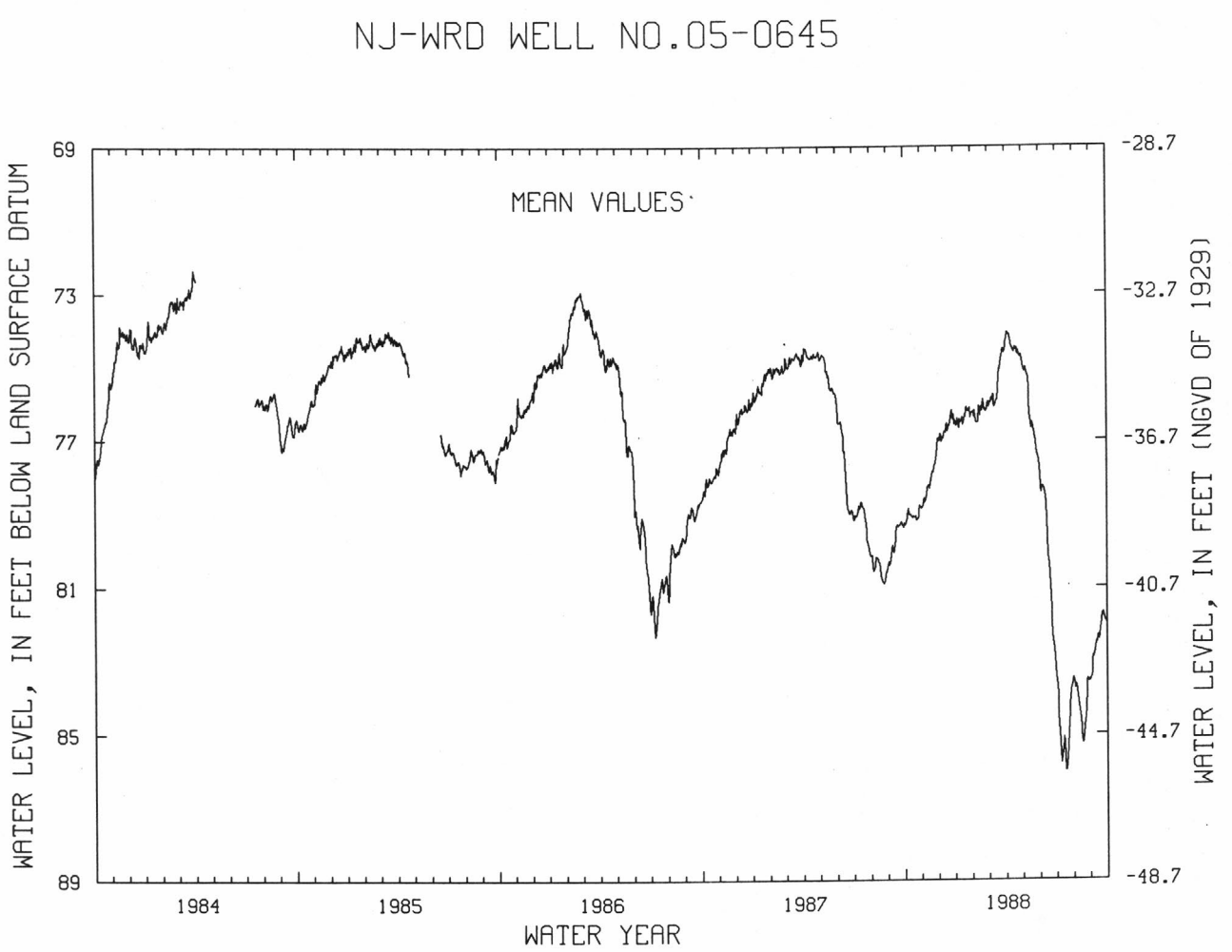
400010074521601. Local I.D., Willingboro 2 Obs. NJ-WRD Well Number, 05-0645.
LOCATION.--Lat 40°00'10", long 74°52'16", Hydrologic Unit 02040202, near intersection of Bridge Street and Tiffany Lane, Willingboro.
Owner: Willingboro Municipal Utilities Authority.
AQUIFER.--Lower aquifer, Potomac-Raritan-Magothy 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.
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, 86.22 ft below land-surface datum, July 18, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	79.13	78.58	76.90	76.57	76.38	76.00	74.10	75.13	78.28	84.77	83.66	82.88
10	79.04	78.50	76.96	76.53	76.53	75.79	74.33	75.22	78.47	85.60	84.21	82.55
15	79.11	78.32	76.61	76.51	76.14	75.94	74.55	76.41	79.65	85.27	85.00	82.36
20	79.09	77.86	76.60	76.19	75.90	75.07	74.56	76.66	80.97	85.66	84.82	81.92
25	79.13	77.63	76.20	76.17	76.22	74.75	74.68	77.05	82.46	84.19	83.58	81.81
EOM	78.86	76.96	76.48	76.26	75.97	74.46	74.85	77.74	83.44	83.48	83.53	81.94
MEAN	79.06	78.14	76.70	76.40	76.24	75.47	74.47	76.22	80.15	84.82	84.16	82.38

WTR YR 1988 MEAN 78.70 HIGH 73.91 APR 7 LOW 86.22 JUL 18

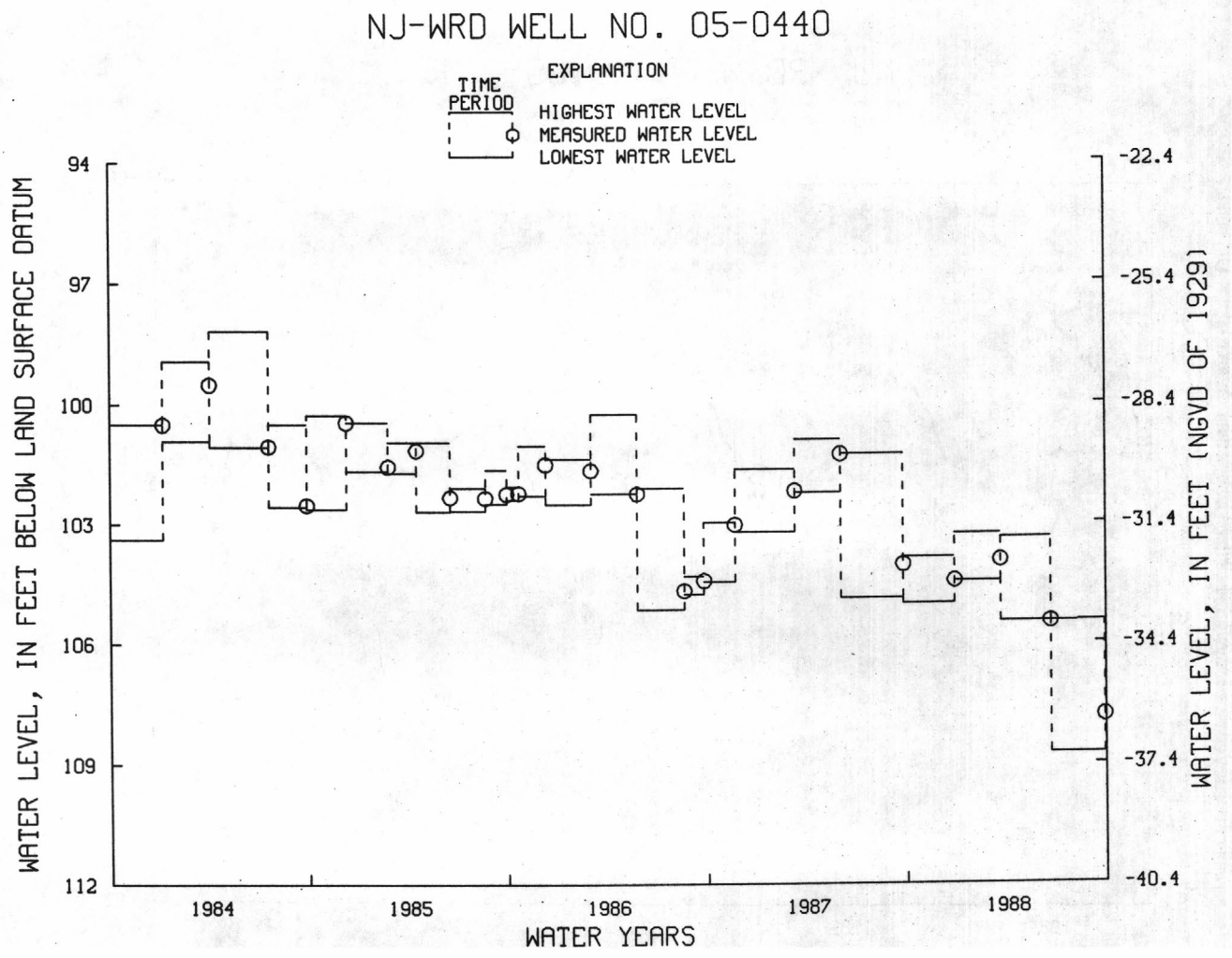


BURLINGTON COUNTY

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.
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, 108.74 ft below land-surface datum, between Jun. 21 and Sep. 28, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 25, 1987 TO DEC. 28, 1987	103.85	105.01	DEC. 28, 1987	104.45
DEC. 28, 1987 TO MAR. 21, 1988	103.27	104.46	MAR. 21, 1988	103.94
MAR. 21, 1988 TO JUNE 21, 1988	103.37	105.48	JUNE 21, 1988	105.48
JUNE 21, 1988 TO SEPT. 28, 1988	105.46	108.74	SEPT. 28, 1988	107.81



CAMDEN COUNTY

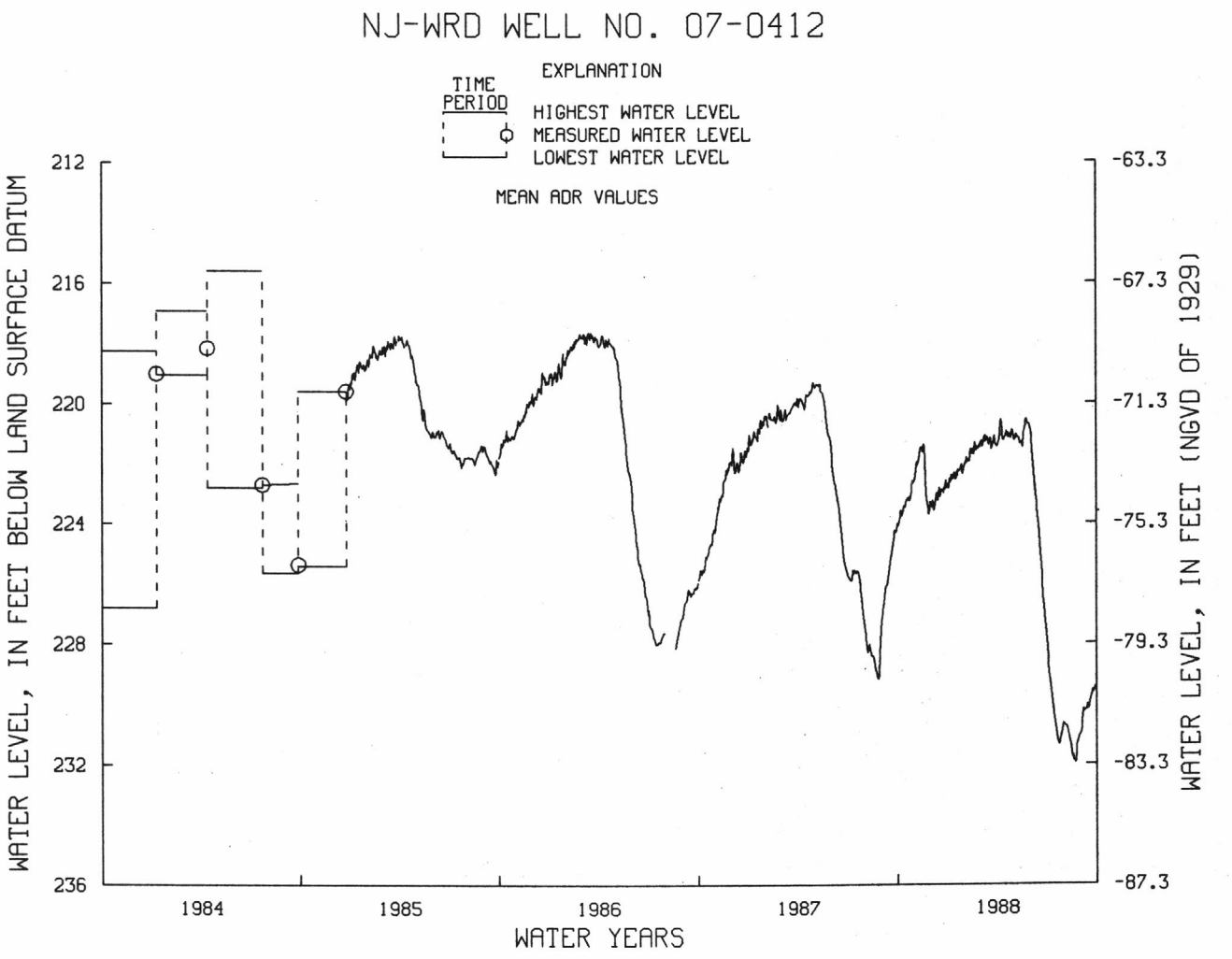
394922074563301. Local I.D., Elm Tree Farm 2 Obs. NJ-WRD Well Number, 07-0412.
LOCATION.--Lat 39°49'22", long 74°56'30", Hydrologic Unit 02040202, about 200 ft northeast of Thomas Road and about 2 mi northwest of Berlin.
Owner: New Jersey - American Water Company.
AQUIFER.--Lower aquifer, Potomac-Raritan-Magothy 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, 232.01 ft below land-surface datum, Aug. 22, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	223.82	221.95	223.38	222.63	221.90	221.45	221.27	221.16	221.87	228.97	230.71	230.43
10	223.68	221.74	223.25	222.54	221.94	221.08	220.91	221.10	223.04	229.75	231.04	230.16
15	223.36	221.62	223.00	222.57	221.54	221.21	221.13	221.33	223.92	230.45	231.45	230.12
20	223.20	221.90	222.92	222.22	221.33	221.22	221.12	220.92	225.21	231.19	231.86	229.76
25	223.02	223.47	222.83	222.12	221.55	221.42	221.13	220.54	226.65	231.25	231.42	229.62
EOM	222.60	223.29	222.77	222.14	221.44	221.45	221.06	220.85	227.68	230.65	231.04	229.40
MEAN	223.34	222.32	223.09	222.41	221.69	221.31	221.08	221.03	224.23	230.22	231.25	230.03

WTR YR 1988 MEAN 224.35 HIGH 220.52 MAY 25 LOW 232.01 AUG 22



CAMDEN COUNTY

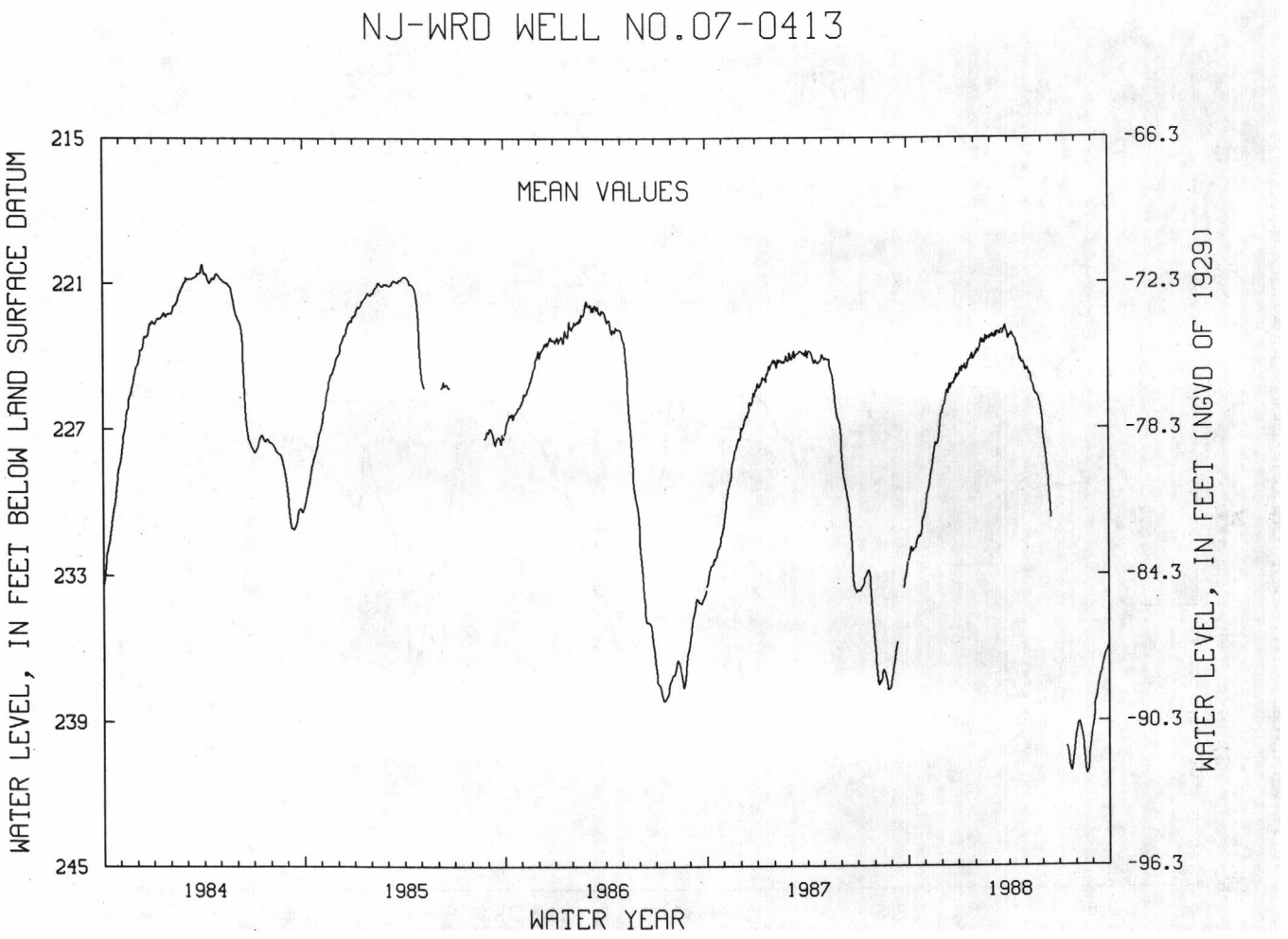
394922074563302. Local I.D., Elm Tree Farm 3 Obs. NJ-WRD Well Number, 07-0413.
LOCATION.--Lat 39°49'22", long 74°56'30", Hydrologic Unit 02040202, about 200 ft northeast of Thomas Road and about 2 miles northwest of Berlin.
Owner: New Jersey - American Water Company.
AQUIFER.--Middle aquifer, Potomac-Raritan-Magothy 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.
REMARKS.--Missing record from June 18 to July 14 was due to recorder malfunction.
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, 241.24 ft below land-surface datum, Aug. 20, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	232.07	229.59	226.09	224.57	223.79	223.22	223.16	224.59	227.57	---	239.11	238.15
10	232.01	229.23	225.66	224.50	223.67	223.03	223.20	224.70	228.66	---	239.34	237.50
15	231.86	228.54	225.33	224.55	223.36	223.01	223.38	225.16	229.85	240.04	240.10	237.03
20	231.45	227.60	225.15	224.18	223.18	222.93	223.89	225.58	---	240.80	241.21	236.52
25	231.20	227.50	224.96	223.98	223.28	222.94	224.24	225.57	---	240.92	240.41	236.18
EOM	230.51	226.49	224.81	224.02	223.21	223.18	224.38	226.38	---	239.65	239.27	235.89
MEAN	231.60	228.46	225.45	224.36	223.49	223.07	223.62	225.23	---	240.50	239.94	237.13

WTR YR 1988 MEAN 228.89 HIGH 222.69 MAR 26 LOW 241.24 AUG 20



CAMDEN COUNTY

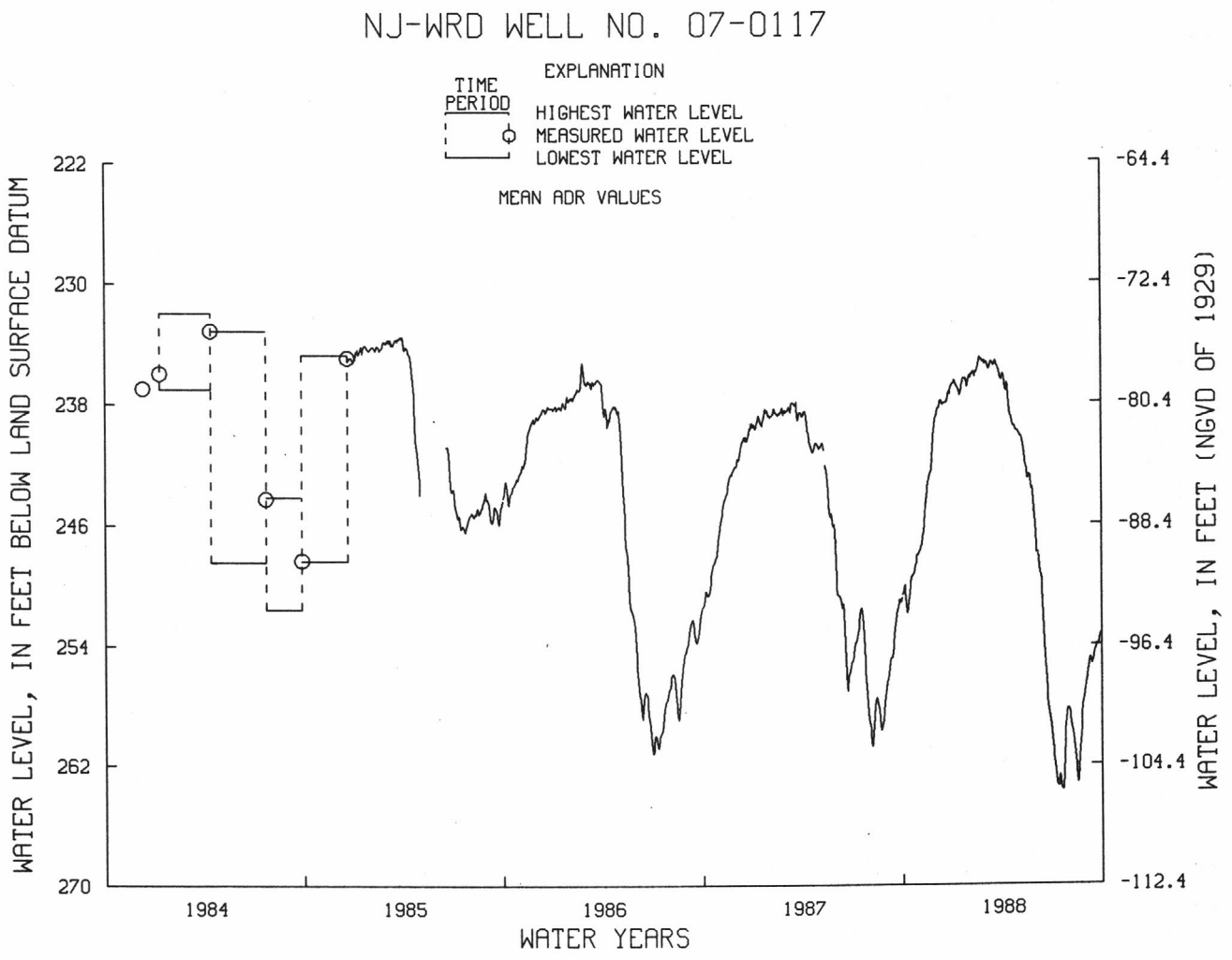
395229074571201. Local I.D., Hutton Hill 1 Obs. NJ-WRD Well Number, 07-0117.
LOCATION.--Lat 39°52'29", long 74°57'12", Hydrologic Unit 02040202, about 800 ft northeast of intersection of Kresson and Cropwell Roads, Cherry Hill Township.
Owner: New Jersey - American Water Company.
AQUIFER.--Upper aquifer, 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, 263.74 ft below land-surface datum, July 20, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	250.00	247.43	238.34	236.60	236.12	235.46	236.31	240.24	247.83	261.76	259.19	255.72
10	251.83	246.00	237.94	237.02	236.12	235.54	236.76	241.13	249.29	263.37	260.49	254.91
15	250.13	243.84	238.01	237.52	235.79	235.45	238.55	242.23	252.05	262.74	262.35	254.95
20	249.34	242.76	237.95	236.56	235.00	235.23	239.30	242.76	255.77	263.72	261.60	254.13
25	248.59	240.98	237.29	236.40	235.31	235.75	239.72	243.71	258.33	259.70	258.64	253.93
EOM	247.89	239.16	236.83	236.38	235.25	236.47	239.90	246.02	259.79	258.23	256.87	253.26
MEAN	249.77	243.97	237.92	236.81	235.70	235.62	238.21	242.31	252.98	261.67	259.97	254.70

WTR YR 1988 MEAN 245.84 HIGH 234.95 FEB 20 LOW 263.74 JUL 20

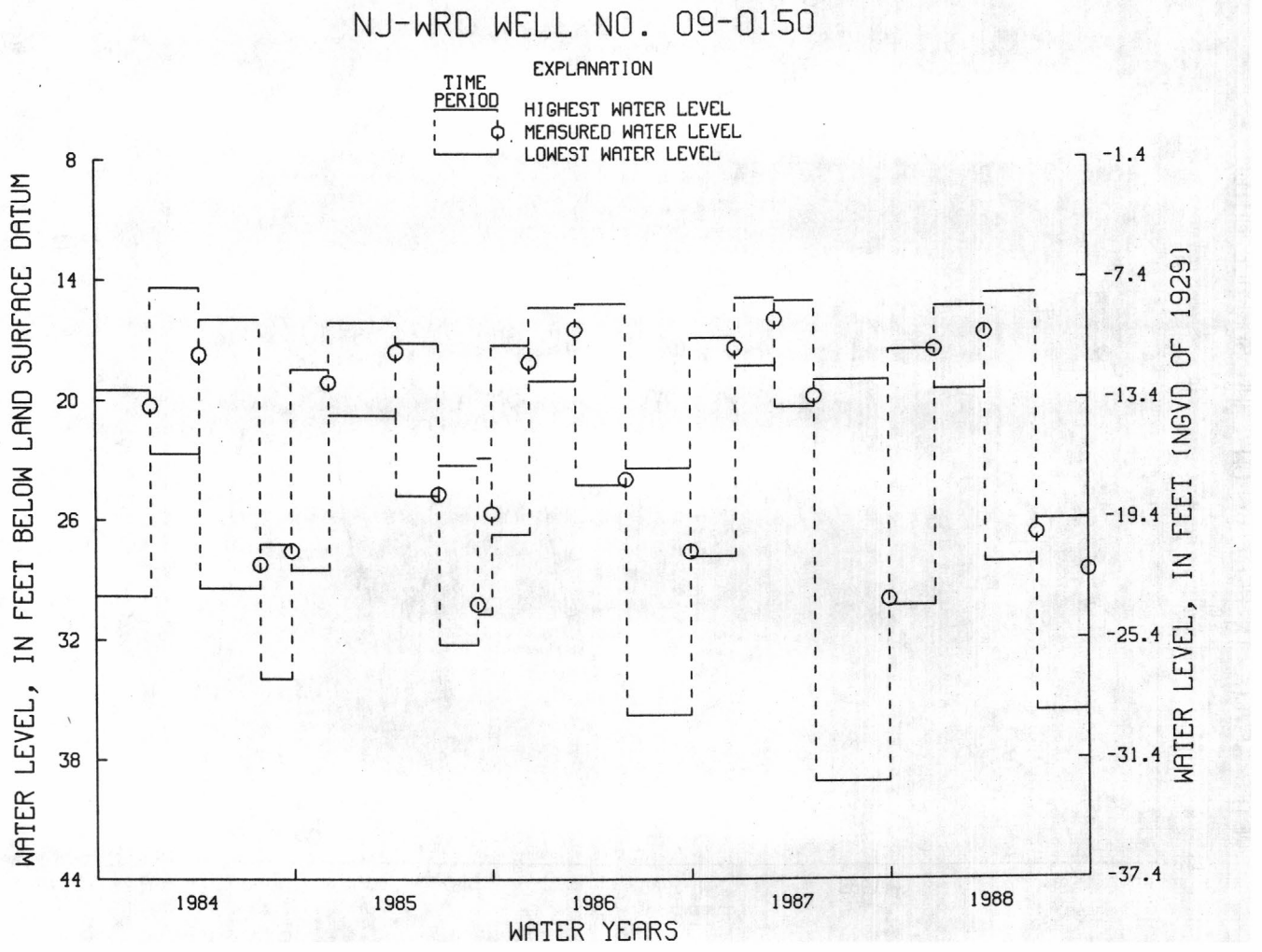


CAPE MAY COUNTY

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 1987 TO SEPTEMBER 1988

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 29, 1987 TO DEC. 23, 1987	17.52	30.31	DEC. 23, 1987	17.52
DEC. 23, 1987 TO MAR. 24, 1988	15.37	19.49	MAR. 24, 1988	16.69
MAR. 24, 1988 TO JUNE 27, 1988	14.76	28.15	JUNE 27, 1988	26.71
JUNE 27, 1988 TO SEPT. 30, 1988	26.04	35.60	SEPT. 30, 1988	28.61

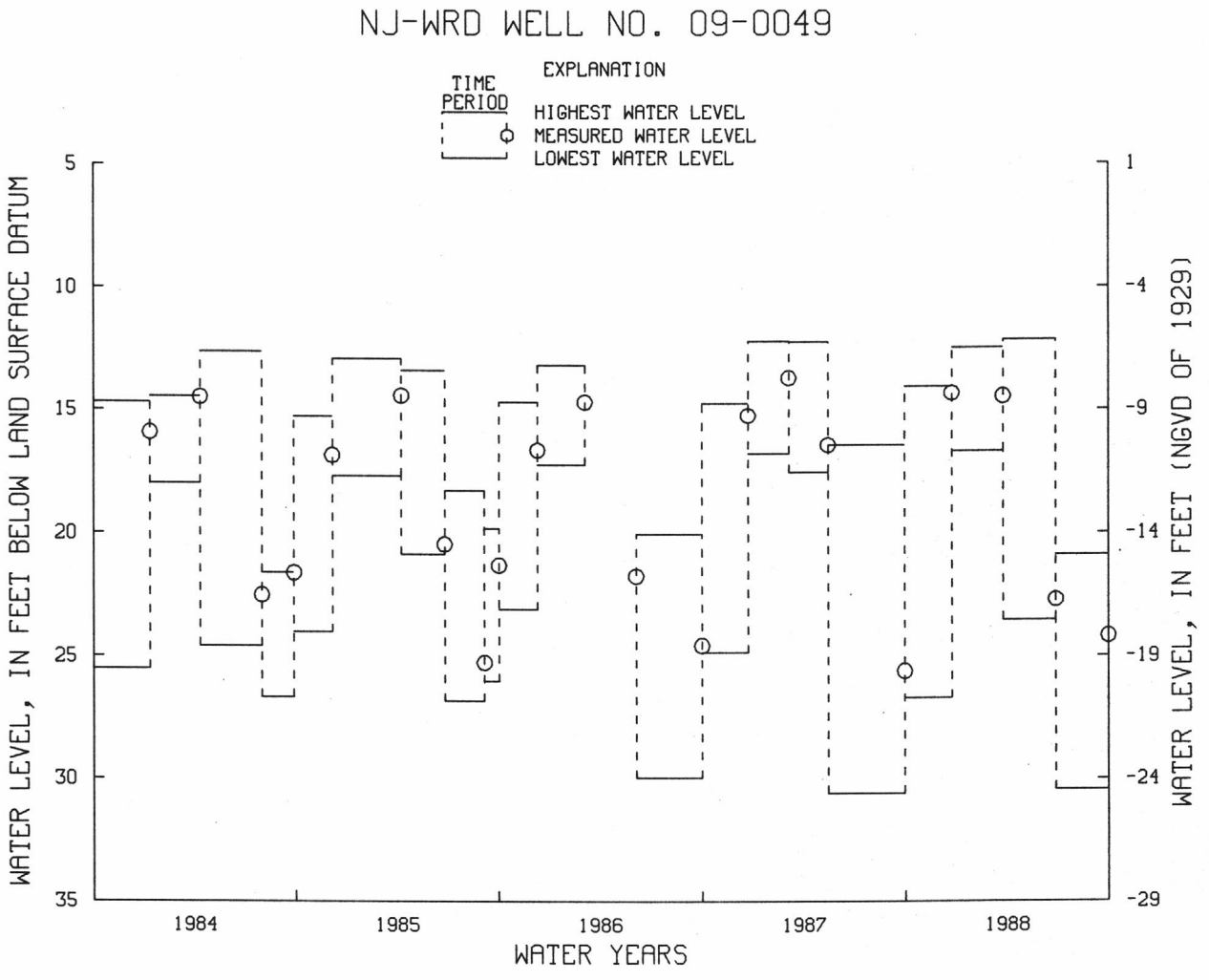


CAPE MAY COUNTY

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 and nearby pumping.
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, 12.17 ft below land-surface datum, between Mar. 24 and Jun. 27, 1988; lowest, 34.22 ft below land-surface datum, July 31, 1974.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 29, 1987 TO DEC. 23, 1987	14.07	26.69	DEC. 23, 1987	14.35
DEC. 23, 1987 TO MAR. 24, 1988	12.49	16.70	MAR. 24, 1988	14.47
MAR. 24, 1988 TO JUNE 27, 1988	12.17	23.53	JUNE 27, 1988	22.71
JUNE 27, 1988 TO SEPT. 30, 1988	20.90	30.44	SEPT. 30, 1988	24.19

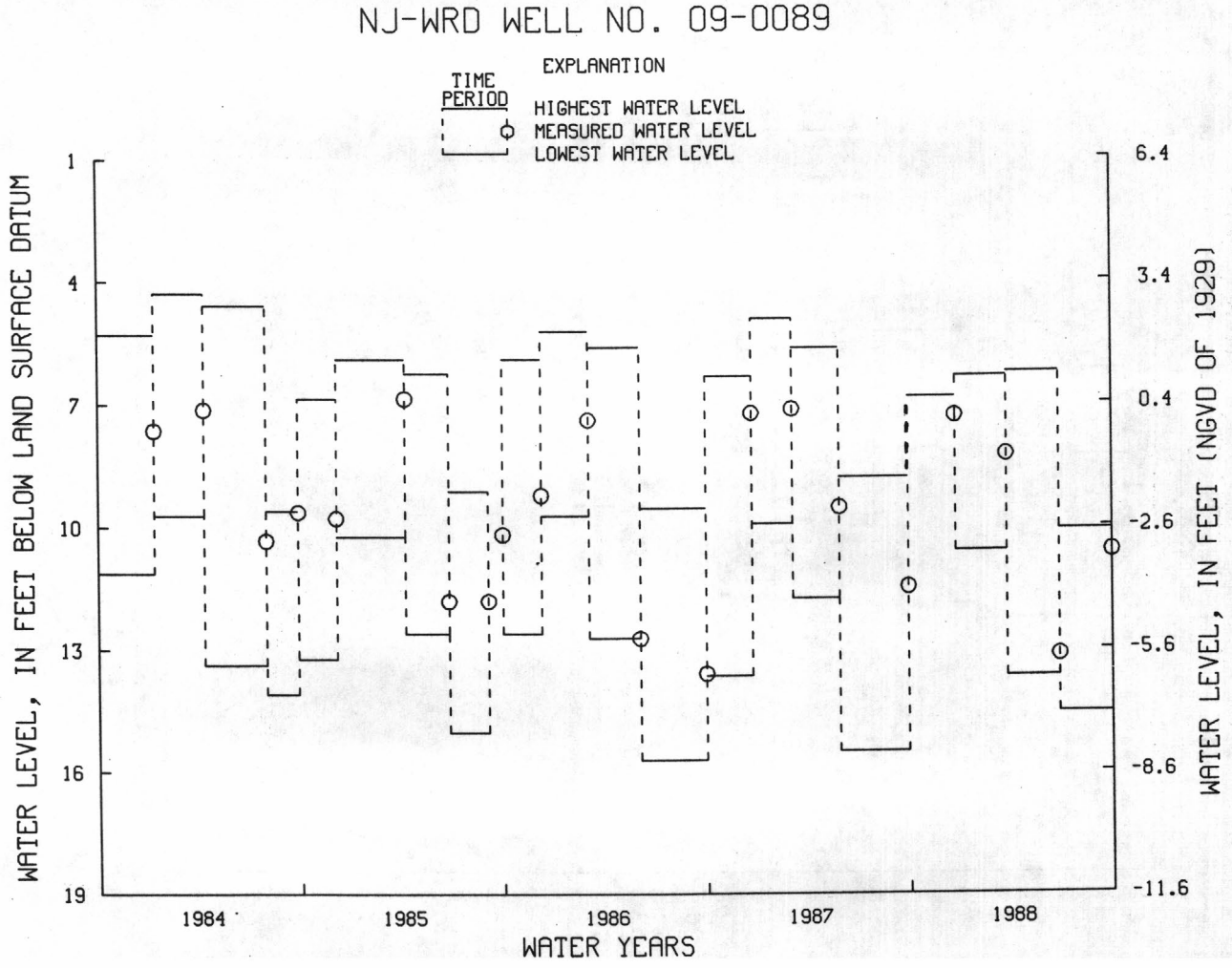


CAPE MAY COUNTY

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 and nearby pumping. Water-quality data for 1987 is published elsewhere in this report.
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 1987 TO SEPTEMBER 1988

WATER-LEVEL EXTREMES		MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL / LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 29, 1987 TO DEC. 23, 1987	6.84 / ---	DEC. 23, 1987	7.29
DEC. 23, 1987 TO MAR. 24, 1988	6.33 / 10.58	MAR. 24, 1988	8.24
MAR. 24, 1988 TO JUNE 27, 1988	6.24 / 13.66	JUNE 27, 1988	13.14
JUNE 27, 1988 TO SEPT. 30, 1988	10.07 / 14.54	SEPT. 30, 1988	10.60



CAPE MAY COUNTY

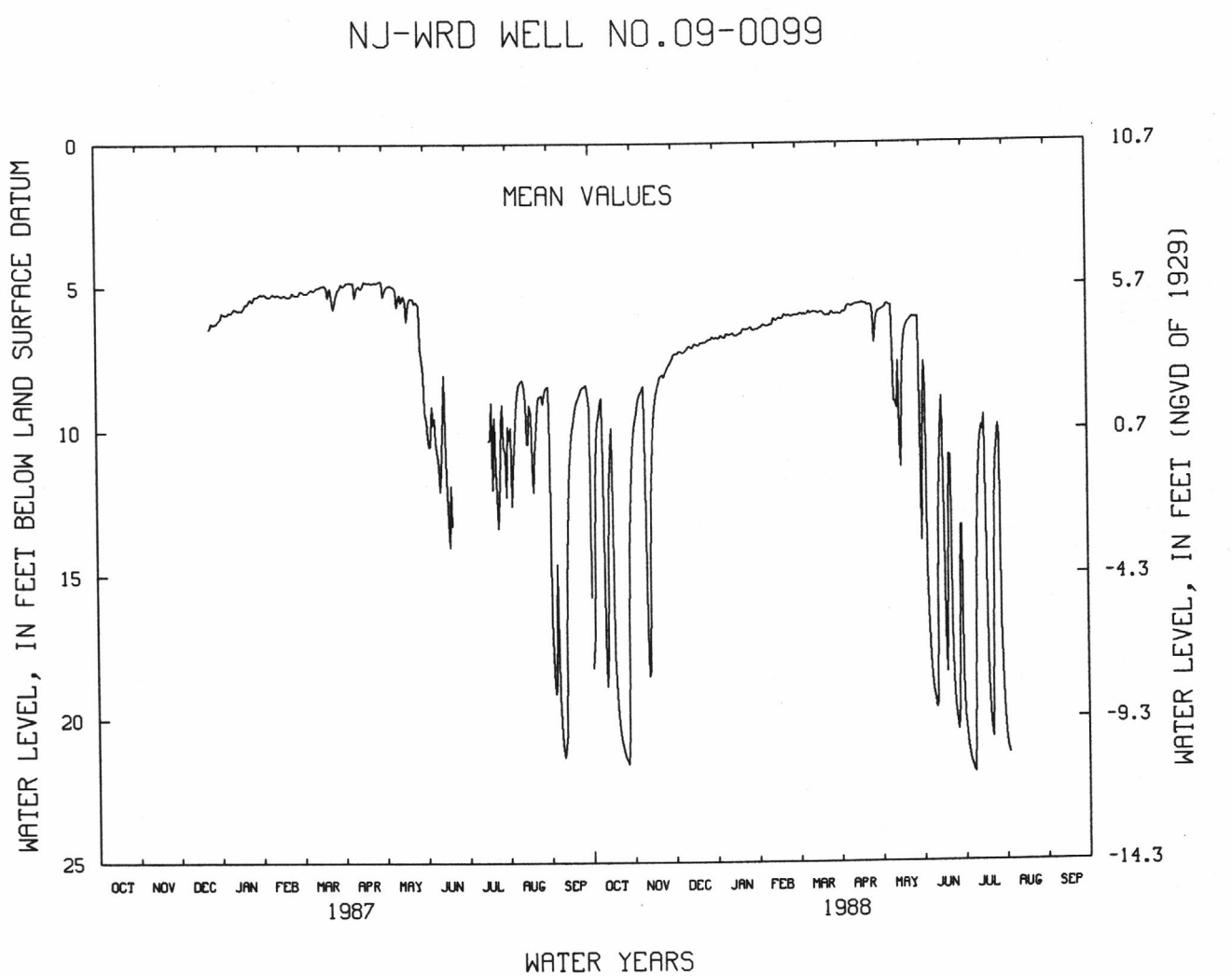
390608074483801. Local I.D., Cape May County Park T8 Obs. NJ-WRD Well Number, 09-0099.
LOCATION.--Lat 39°06'11", long 74°48'38", Hydrologic Unit 02040206, at the Cape May County Park on Rt. 9, Middle Township.
Owner: U.S. Geological Survey.
AQUIFER.--Cohansey Sand of Miocene age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 230 ft, screened 215 to 230 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch.
DATUM.--Land-surface datum is 10.73 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top edge of recorder shelf, 2.20 ft above land-surface datum.
REMARKS.--Water level affected by tidal fluctuation and nearby pumping. Missing record from August 3 to September 30 was due to recorder malfunction.
PERIOD OF RECORD.--October 1957 to current year. Records from 1957 to 1987 are unpublished and are available in files of the New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.73 ft below land-surface datum, April 5, 1958; lowest, 22.01 ft below land-surface datum, July 9, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.71	8.74	7.26	6.74	6.34	5.97	5.89	5.75	16.84	21.49	---	---
10	17.05	16.88	7.18	6.69	6.33	5.88	5.70	7.22	19.65	13.57	---	---
15	9.87	9.66	7.03	6.71	6.15	5.89	5.61	10.33	8.88	10.05	---	---
20	20.32	8.15	6.96	6.52	5.97	5.91	5.63	6.45	10.87	20.14	---	---
25	21.44	7.89	6.89	6.45	6.04	6.02	5.71	6.09	20.08	10.33	---	---
EOM	10.34	7.37	6.79	6.47	5.99	5.96	5.89	13.84	18.43	20.49	---	---
MEAN	15.38	9.69	7.06	6.62	6.18	5.95	5.81	7.17	15.24	16.22	---	---

WTR YR 1988 HIGH 5.56 APR 18 LOW 22.01 JUL 9



CUMBERLAND COUNTY

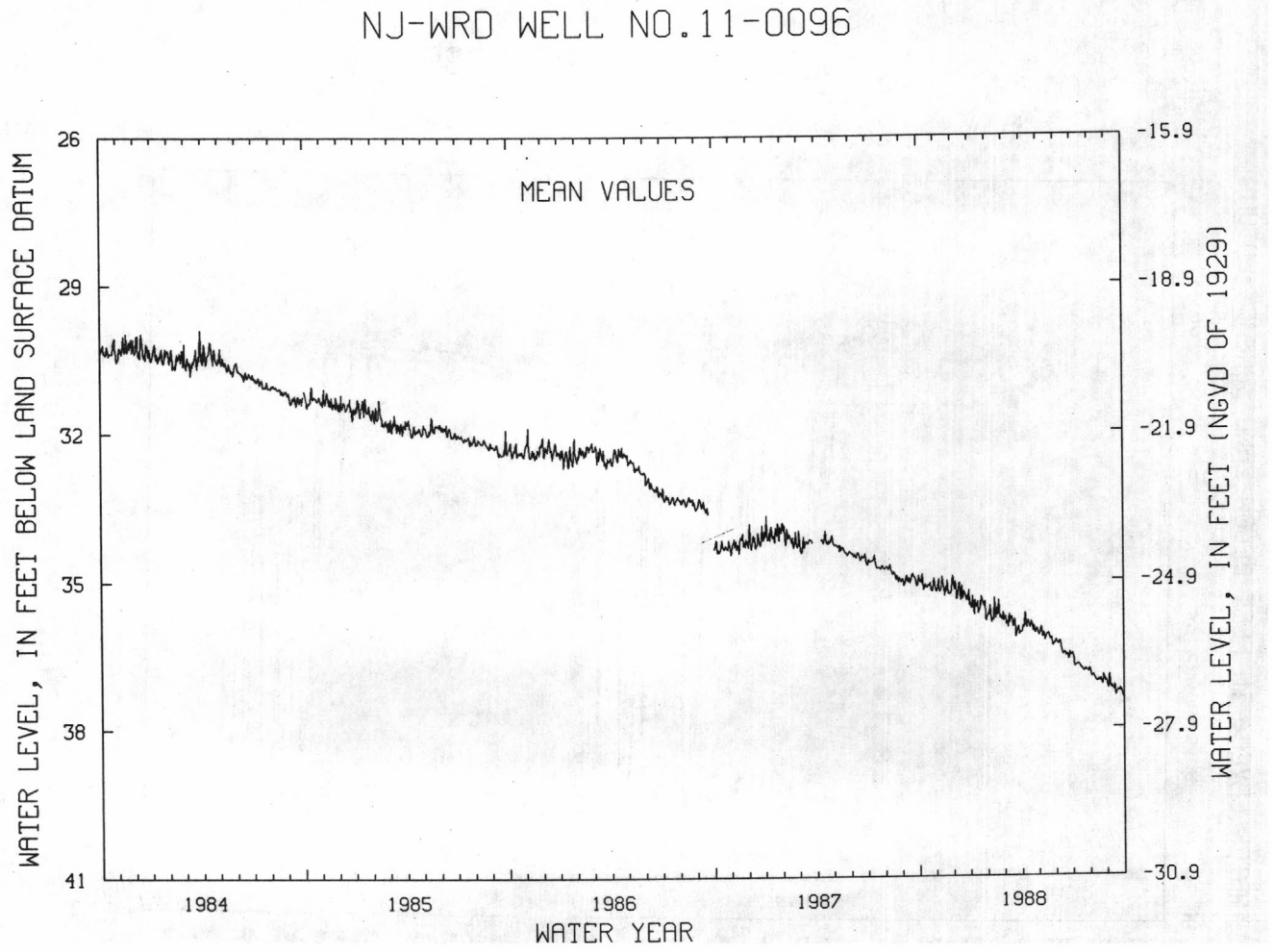
391828075120902. Local I.D., Jones Island 2 Obs. NJ-WRD Well Number, 11-0096.
LOCATION.--Lat 39°18'29", long 75°12'08", Hydrologic Unit 02040206, about 1.7 mi south of Cedarville at Jones Island, Lawrence Township.
Owner: Cumberland County.
AQUIFER.--Piney Point aquifer of Eocene age.
WELL CHARACTERISTICS.--Drilled 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. Well was pumped on Sept. 22, 1986. After pumping, the water level did not recover to its previous level. The screen may have been partially clogged.
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, 37.49 ft below land-surface datum, Sept. 29, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	35.05	34.98	35.13	35.52	35.70	35.90	35.97	36.12	36.29	36.77	36.98	36.94
10	35.19	35.13	35.20	35.55	35.79	35.70	35.97	36.08	36.37	36.71	37.01	37.16
15	35.14	35.28	35.16	35.64	35.64	35.77	35.89	36.19	36.51	36.76	37.04	37.29
20	35.07	35.00	35.23	35.34	35.41	35.85	35.97	36.15	36.54	36.86	37.01	37.25
25	35.20	35.27	35.32	35.45	35.80	36.09	36.08	36.19	36.59	36.85	36.94	37.24
EOM	35.21	34.91	35.46	35.75	35.75	36.08	36.08	36.27	36.50	36.81	37.11	37.41
MEAN	35.09	35.16	35.26	35.55	35.70	35.92	35.96	36.17	36.43	36.77	37.02	37.23

WTR YR 1988 MEAN 36.02 HIGH 34.73 NOV 11 LOW 37.49 SEP 29



CUMBERLAND COUNTY

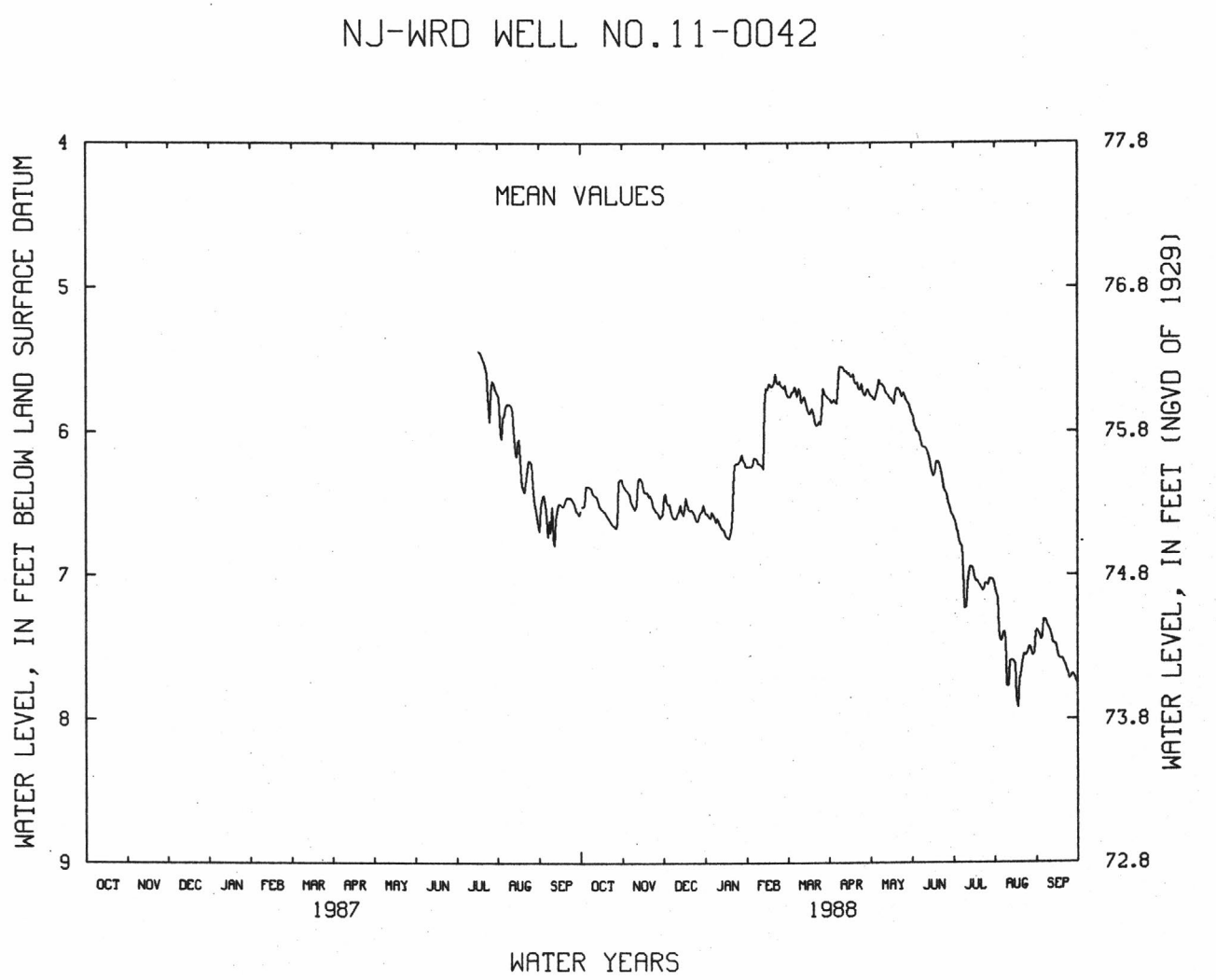
392731075092401. Local I.D., Vocational School 2 Obs. NJ-WRD Well Number, 11-0042.
LOCATION.--Lat 39°27'32", long 75°09'29", Hydrologic Unit 02040206, next to the Cumberland County Vocational and Technical School on Bridgeton Avenue, Deerfield Township.
Owner: Cumberland County.
AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.
WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 4 in, depth 47 ft, screened 42 to 47 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch.
DATUM.--Land-surface datum is 81.77 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top edge of recorder shelf, 2.92 ft above land-surface datum.
PERIOD OF RECORD.--March 1972 to current year. Records from 1972 to 1987 are unpublished and are available in files of the New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.40 ft below land-surface datum, April 21, 1972; lowest, 8.12 ft below land-surface datum, Aug. 17, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.38	6.43	6.54	6.57	6.18	5.72	5.80	5.78	6.00	6.76	7.46	7.31
10	6.44	6.51	6.60	6.65	6.24	5.72	5.55	5.67	6.11	7.22	7.77	7.39
15	6.52	6.39	6.53	6.73	5.67	5.82	5.59	5.77	6.27	6.96	7.62	7.52
20	6.59	6.44	6.54	6.37	5.60	5.89	5.67	5.70	6.21	7.07	7.63	7.60
25	6.66	6.56	6.62	6.20	5.69	5.95	5.72	5.73	6.42	7.06	7.50	7.71
EOM	6.36	6.45	6.57	6.24	5.73	5.77	5.73	5.87	6.58	7.08	7.38	7.75
MEAN	6.50	6.46	6.55	6.48	5.89	5.80	5.67	5.75	6.22	6.97	7.54	7.53

WTR YR 1988 MEAN 6.45 HIGH 5.54 APR 8-10 LOW 8.12 AUG 17



GLOUCESTER COUNTY

394652075100401. Local I.D., Mantua Shallow Obs. NJ-WRD Well Number, 15-0741.
LOCATION.--Lat 39°46'52", long 75°10'04", Hydrologic Unit 02040202, at the Township of Mantua Road Dept. off Main Street (County Rd 555), Mantua Township.
Owner: U.S. Geological Survey.
AQUIFER.--Upper aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 4 in, depth 313 ft, screened 293 to 313 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch.
DATUM.--Land-surface datum is 82 ft above National Geodetic Vertical Datum of 1929, from topographic map
Measuring point: Top edge of recorder shelf, 4.00 ft above land-surface datum.
REMARKS.--Water level affected by nearby pumping.
PERIOD OF RECORD.--July 1987 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 121.20 ft below land-surface datum, Feb. 20, 1988; lowest, 139.61 ft below land-surface datum, July 17, 1988.

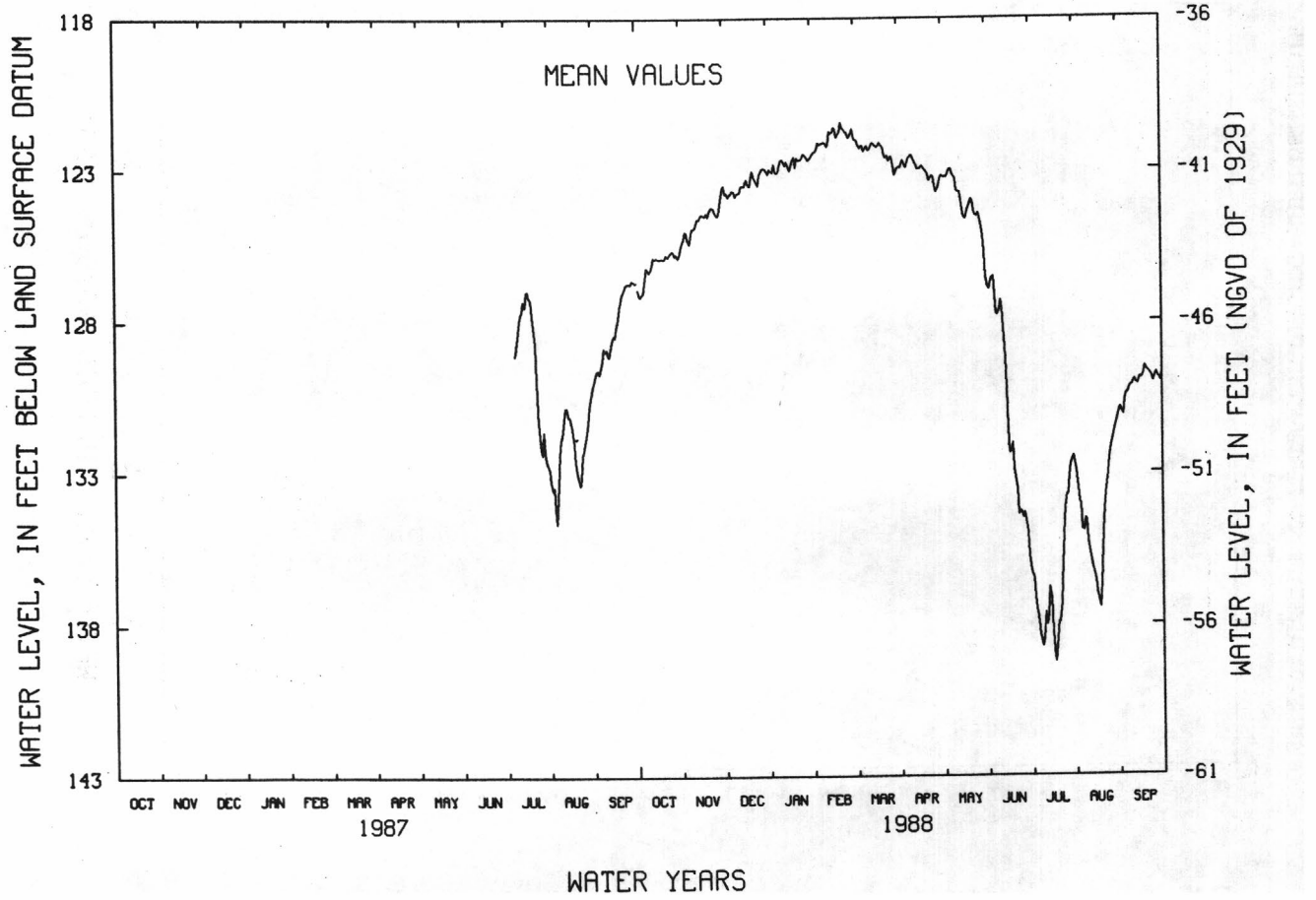
WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	127.04	125.27	123.80	123.06	122.16	122.30	122.86	123.22	126.52	137.76	134.88	130.44
10	126.28	124.89	123.74	122.66	122.22	122.21	122.52	123.33	127.32	137.61	135.64	130.02
15	125.87	124.46	123.42	123.03	121.60	122.14	122.97	124.34	131.58	138.30	136.95	129.89
20	125.90	124.38	123.05	122.61	121.44	122.20	123.08	124.16	133.14	137.94	134.53	129.68
25	125.66	124.51	123.17	122.48	121.94	122.71	123.30	124.55	134.47	133.73	132.15	129.85
EOM	125.61	123.52	123.14	122.48	121.64	122.95	123.26	126.55	136.08	132.70	130.98	129.76
MEAN	126.12	124.60	123.45	122.77	121.91	122.38	123.02	124.07	130.91	136.48	134.24	130.08

WTR YR 1988 MEAN 126.69 HIGH 121.20 FEB 20 LOW 139.61 JUL 17

NJ-WRD WELL NO.15-0741



GLOUCESTER COUNTY

394652075100402. Local I.D., Mantua Deep Obs. NJ-WRD Well Number, 15-0742.
LOCATION.--Lat 39°46'52", long 75°10'04", Hydrologic Unit 02040202, at the Township of Mantua Road Dept. off Main Street (County Rd 555), Mantua Township.
Owner: U.S. Geological Survey.
AQUIFER.--Lower aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 4 in, depth 777 ft, screened 757 to 777 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch.
DATUM.--Land-surface datum is 84 ft above National Geodetic Vertical Datum of 1929, from topographic map
Measuring point: Top edge of recorder shelf, 4.20 ft above land-surface datum.
REMARKS.--Water level affected by nearby pumping.
PERIOD OF RECORD.--November 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 116.47 ft below land-surface datum, April 7, 1987; lowest, 126.62 ft below land-surface datum, Aug. 19, 1988.

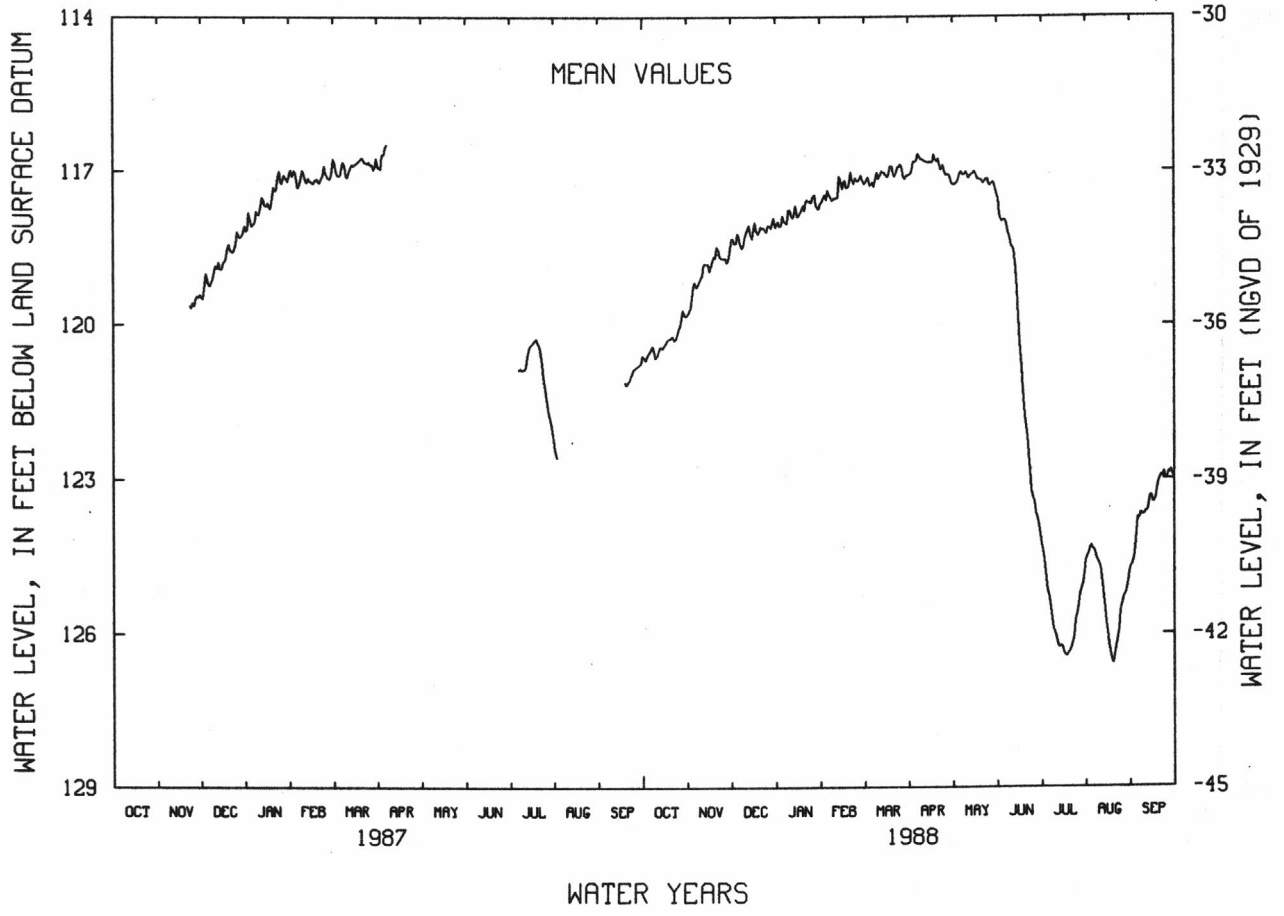
WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	120.54	119.17	118.28	117.97	117.45	117.29	116.82	117.16	117.95	125.16	124.36	123.75
10	120.60	119.02	118.22	117.88	117.52	117.04	116.77	117.03	118.47	126.00	124.72	123.63
15	120.40	118.96	118.12	117.87	117.21	117.04	116.82	117.05	119.86	126.26	125.98	123.41
20	120.25	118.49	118.09	117.59	117.02	116.91	116.81	117.17	121.90	126.36	126.44	122.99
25	120.07	118.71	118.06	117.50	117.20	116.93	117.00	117.16	123.37	125.60	125.40	122.97
EOM	119.82	118.33	118.04	117.60	117.17	117.10	117.22	117.42	124.08	124.59	124.70	122.94
MEAN	120.31	118.92	118.19	117.77	117.31	117.09	116.89	117.16	120.48	125.65	125.29	123.41

WTR YR 1988 MEAN 119.89 HIGH 116.62 APR 7 LOW 126.62 AUG 19

NJ-WRD WELL NO.15-0742



GLOUCESTER COUNTY

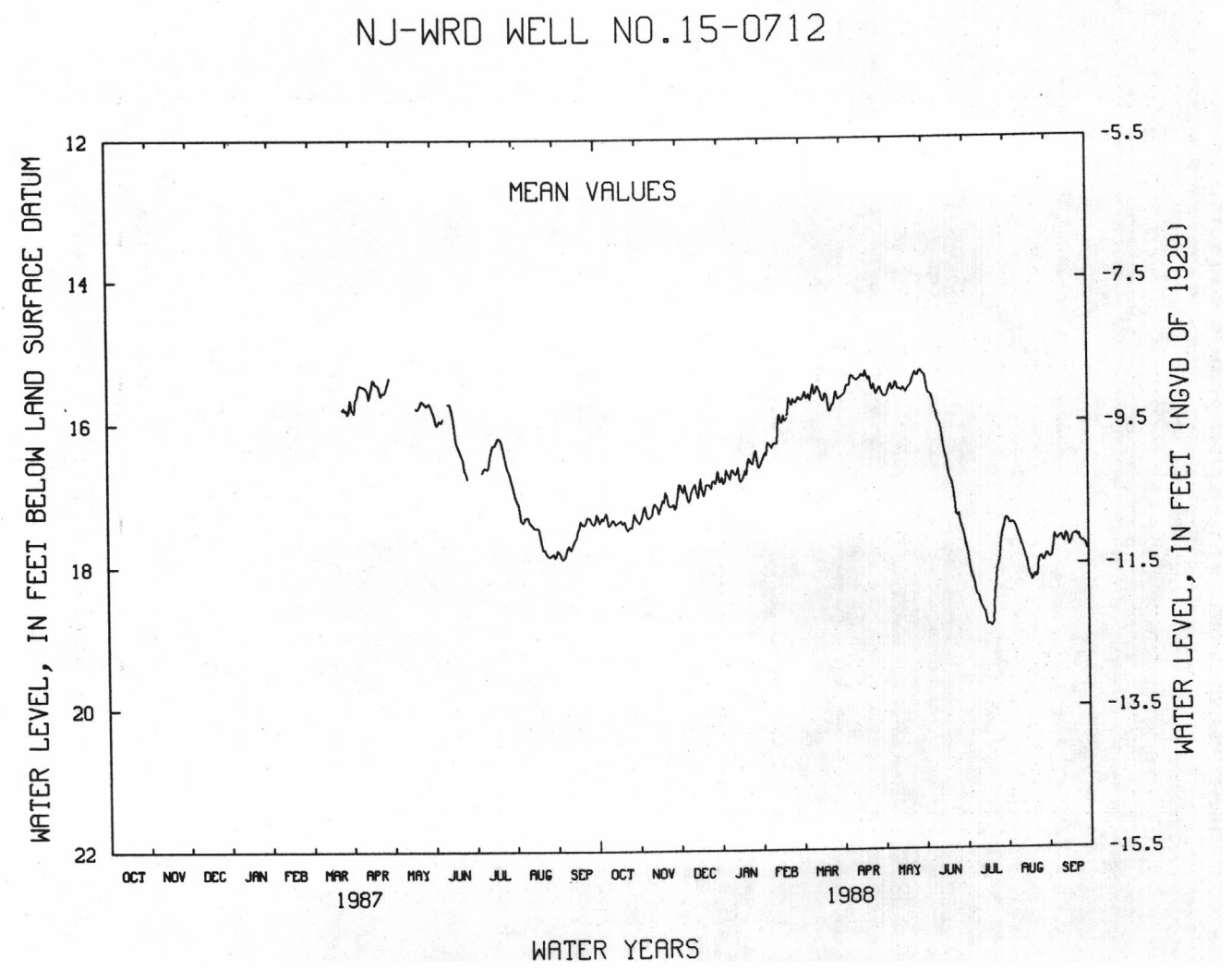
394808075172401. Local I.D., Stefka 1 Obs. NJ-WRD Well Number, 15-0712.
LOCATION.--Lat 39°48'08", long 75°17'24", Hydrologic Unit 02040202, near the intersection of Swedesboro and Tomlin Station roads, next to Pargey Creek, on land owned by Mr. William Stefka, Greenwich Township.
Owner: U.S. Geological Survey.
AQUIFER.--Lower aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 4 in, depth 290 ft, screened 275 to 290 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch.
DATUM.--Land-surface datum is 6.50 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top edge of recorder shelf, 2.20 ft above land-surface datum.
PERIOD OF RECORD.--March 1987 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.26 ft below land-surface datum, April 29, 1987; lowest, 18.88 ft below land-surface datum, July 20,21, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	17.33	17.15	16.92	16.70	16.28	15.66	15.48	15.56	15.61	18.12	17.42	17.59
10	17.40	17.27	16.92	16.70	16.28	15.47	15.39	15.44	15.96	18.44	17.66	17.61
15	17.38	17.26	16.88	16.81	15.98	15.55	15.33	15.56	16.37	18.68	17.95	17.67
20	17.38	16.95	16.85	16.57	15.65	15.62	15.40	15.52	16.79	18.87	18.18	17.59
25	17.43	17.14	16.80	16.47	15.72	15.75	15.56	15.31	17.32	17.99	17.90	17.69
EOM	17.37	16.84	16.79	16.51	15.65	15.64	15.57	15.33	17.62	17.35	17.87	17.78
MEAN	17.36	17.16	16.89	16.65	16.00	15.64	15.45	15.48	16.45	18.24	17.82	17.68

WTR YR 1988 MEAN 16.74 HIGH 15.27 MAY 28,29 LOW 18.88 JUL 20,21



GLOUCESTER COUNTY

394808075172402. Local I.D., Stefka 2 Obs. NJ-WRD Well Number, 15-0713.
LOCATION.--Lat 39°48'08", long 75°17'24", Hydrologic Unit 02040202, near the intersection of Swedesboro and Tomlin Station roads, next to Pargey Creek, on land owned by Mr. William Stefka, Greenwich Township.
Owner: U.S. Geological Survey.
AQUIFER.--Middle aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 8 in, depth 155 ft, screened 125 to 155 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch.
DATUM.--Land-surface datum is 5.64 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top edge of recorder shelf, 3.00 ft above land-surface datum.
PERIOD OF RECORD.--May 1987 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 10.37 ft below land-surface datum, May 24, 1987; lowest, 13.96 ft below land-surface datum, July 17, 1988.

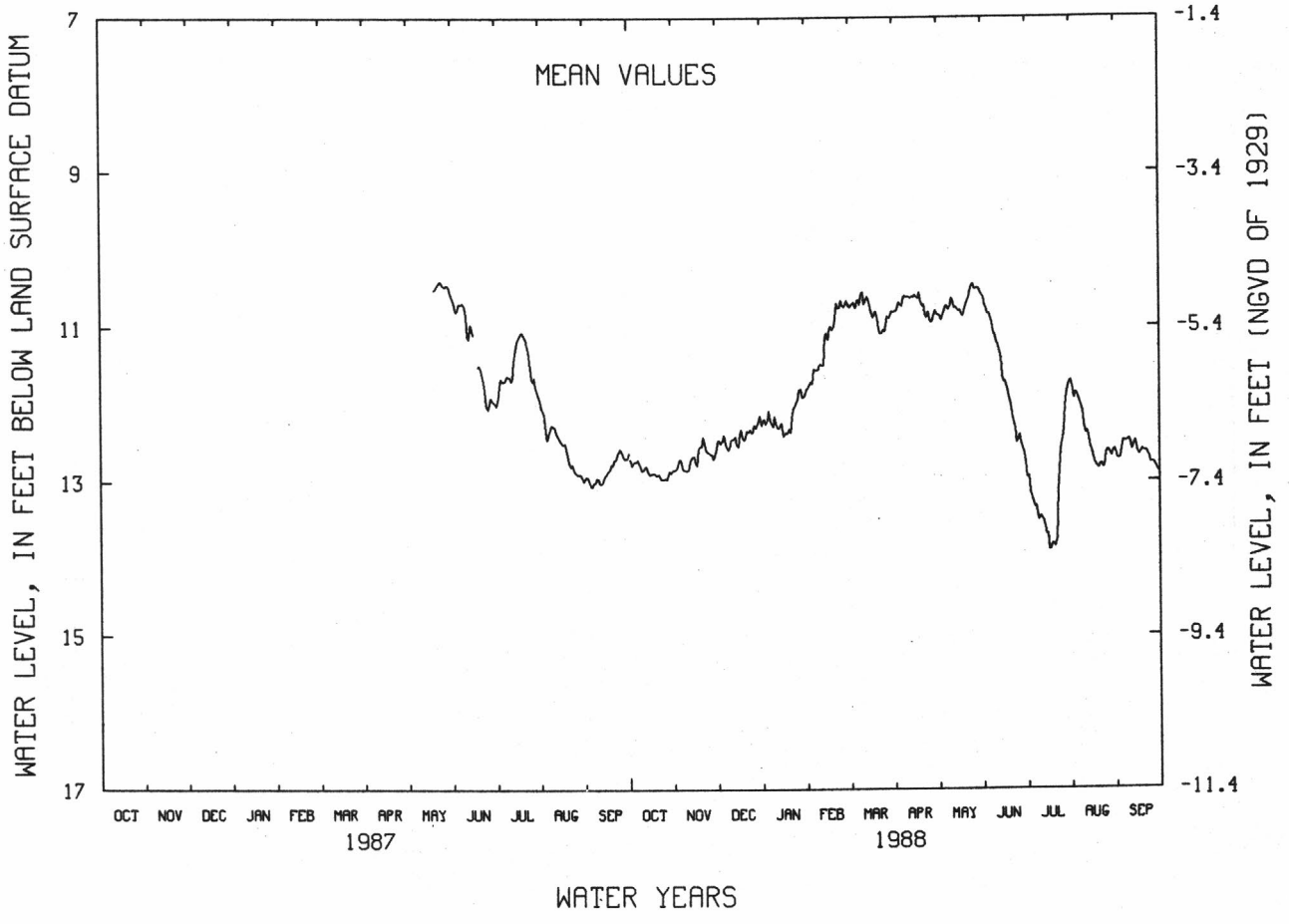
WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.73	12.71	12.46	12.20	11.56	10.76	10.72	10.82	10.83	13.20	11.92	12.48
10	12.84	12.84	12.46	12.30	11.50	10.55	10.61	10.63	11.21	13.45	12.38	12.51
15	12.89	12.75	12.37	12.37	11.02	10.72	10.59	10.80	11.72	13.68	12.61	12.63
20	12.90	12.42	12.33	12.17	10.69	10.90	10.73	10.73	12.02	13.85	12.79	12.62
25	12.95	12.63	12.26	11.82	10.74	11.07	10.90	10.45	12.43	12.45	12.60	12.77
EOM	12.86	12.46	12.20	11.79	10.70	10.81	10.83	10.59	12.76	11.70	12.64	12.86
MEAN	12.85	12.68	12.39	12.13	11.13	10.80	10.72	10.70	11.68	13.09	12.46	12.64

WTR YR 1988 MEAN 11.94 HIGH 10.41 MAY 25 LOW 13.96 JUL 17

NJ-WRD WELL NO.15-0713



GLOUCESTER COUNTY

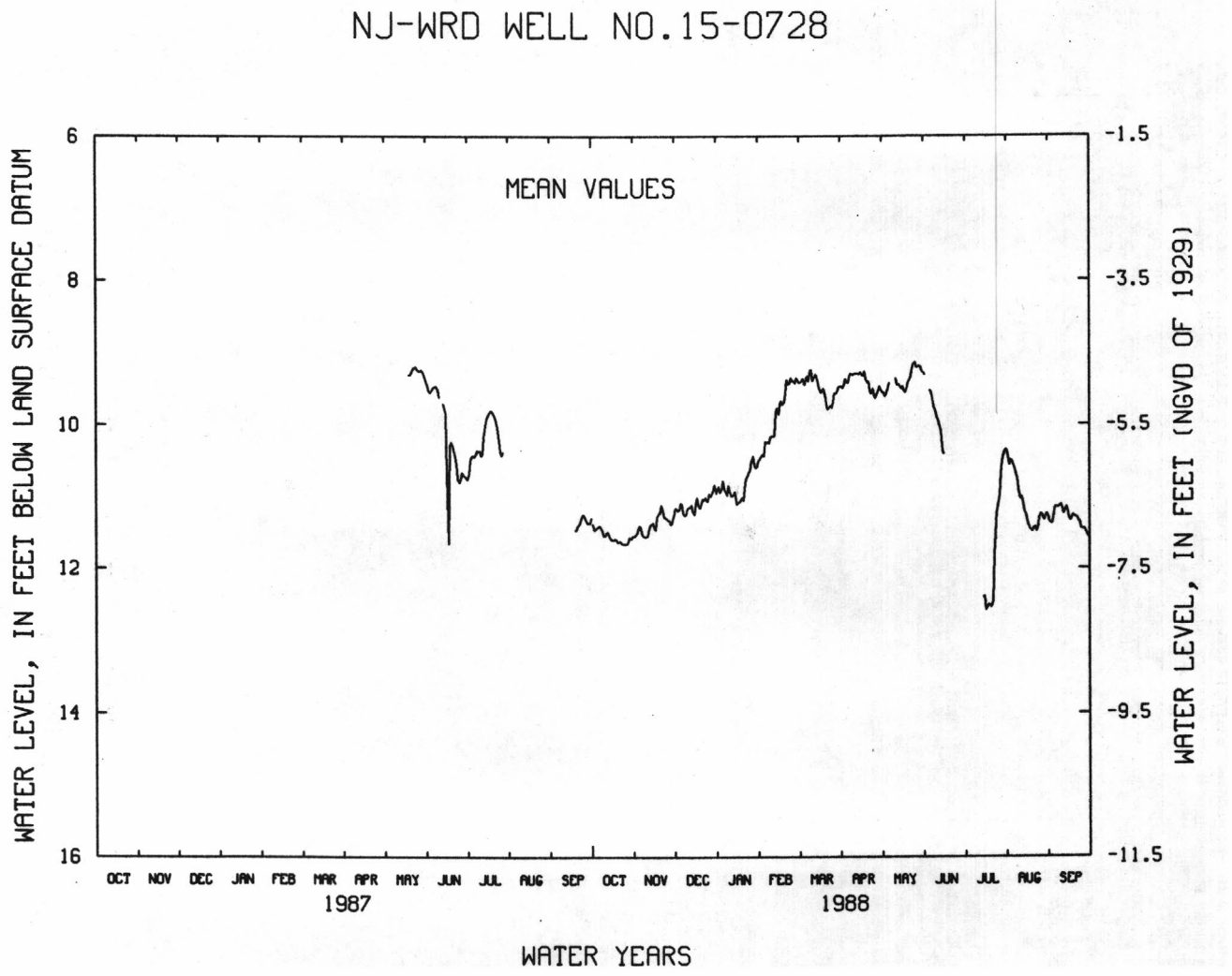
394808075172404. Local I.D., Stefka 4 Obs. NJ-WRD Well Number, 15-0728.
LOCATION.--Lat 39°48'08", long 75°17'24", Hydrologic Unit 02040202, near the intersection of Swedesboro and Tomlin Station roads, next to Pargey Creek, on land owned by Mr. William Stefka, Greenwich Township.
Owner: U.S. Geological Survey.
AQUIFER.--Upper aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 4 in, depth 56 ft, screened 46 to 56 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch.
DATUM.--Land-surface datum is 4.46 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top edge of recorder shelf, 3.42 ft above land-surface datum.
REMARKS.--Missing record from June 17 to July 13 was due to recorder malfunction.
PERIOD OF RECORD.--May 1987 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 9.09 ft below land-surface datum, May 25, 1988; lowest, 12.64 ft below land-surface datum, July 17, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.42	11.42	11.10	10.89	10.25	9.44	9.40	9.51	9.52	---	10.56	11.15
10	11.54	11.55	11.17	10.99	10.16	9.23	9.29	---	9.89	---	11.03	11.17
15	11.59	11.44	11.09	11.08	9.70	9.40	9.27	9.49	10.41	12.39	11.26	11.30
20	11.63	11.12	11.03	10.88	9.37	9.58	9.41	9.42	---	12.55	11.44	11.29
25	11.66	11.33	10.97	10.52	9.38	9.76	9.58	9.13	---	11.09	11.25	11.46
EOM	11.56	11.17	10.89	10.48	9.38	9.47	9.51	9.27	---	10.35	11.30	11.55
MEAN	11.55	11.38	11.09	10.83	9.81	9.48	9.40	9.38	9.89	11.61	11.11	11.31

WTR YR 1988 MEAN 10.58 HIGH 9.09 MAY 25 LOW 12.64 JUL 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.

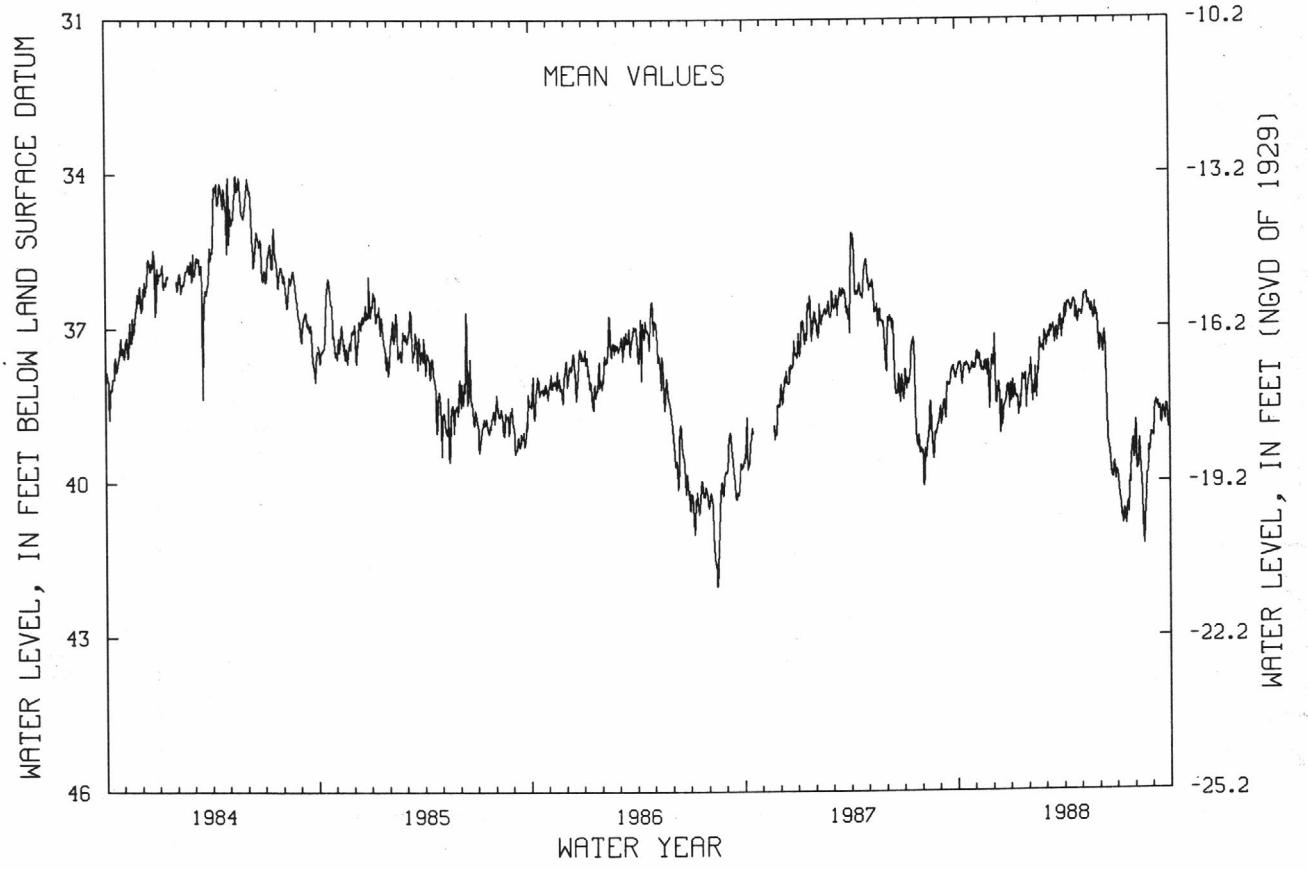
WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	37.70	37.50	37.89	38.39	37.91	37.28	36.83	36.73	37.19	40.16	39.77	38.51
10	38.10	37.77	38.25	38.33	38.14	36.98	36.51	36.32	37.08	40.62	39.54	38.48
15	37.73	37.85	38.84	38.51	38.05	36.94	36.68	36.50	38.61	40.60	40.78	38.84
20	37.73	37.64	38.52	38.12	37.22	37.00	36.47	36.55	39.58	40.40	40.32	38.67
25	37.81	38.57	38.16	37.90	37.43	37.07	36.88	36.52	39.92	39.90	39.32	38.55
EOM	37.80	37.54	38.34	38.04	37.11	36.88	36.72	37.27	39.79	39.48	39.08	38.93
MEAN	37.77	37.76	38.29	38.25	37.77	37.10	36.66	36.65	38.56	40.16	39.77	38.71

WTR YR 1988 MEAN 38.13 HIGH 35.98 MAY 25 LOW 41.51 AUG 17

NJ-WRD WELL NO.15-0296



GLOUCESTER COUNTY

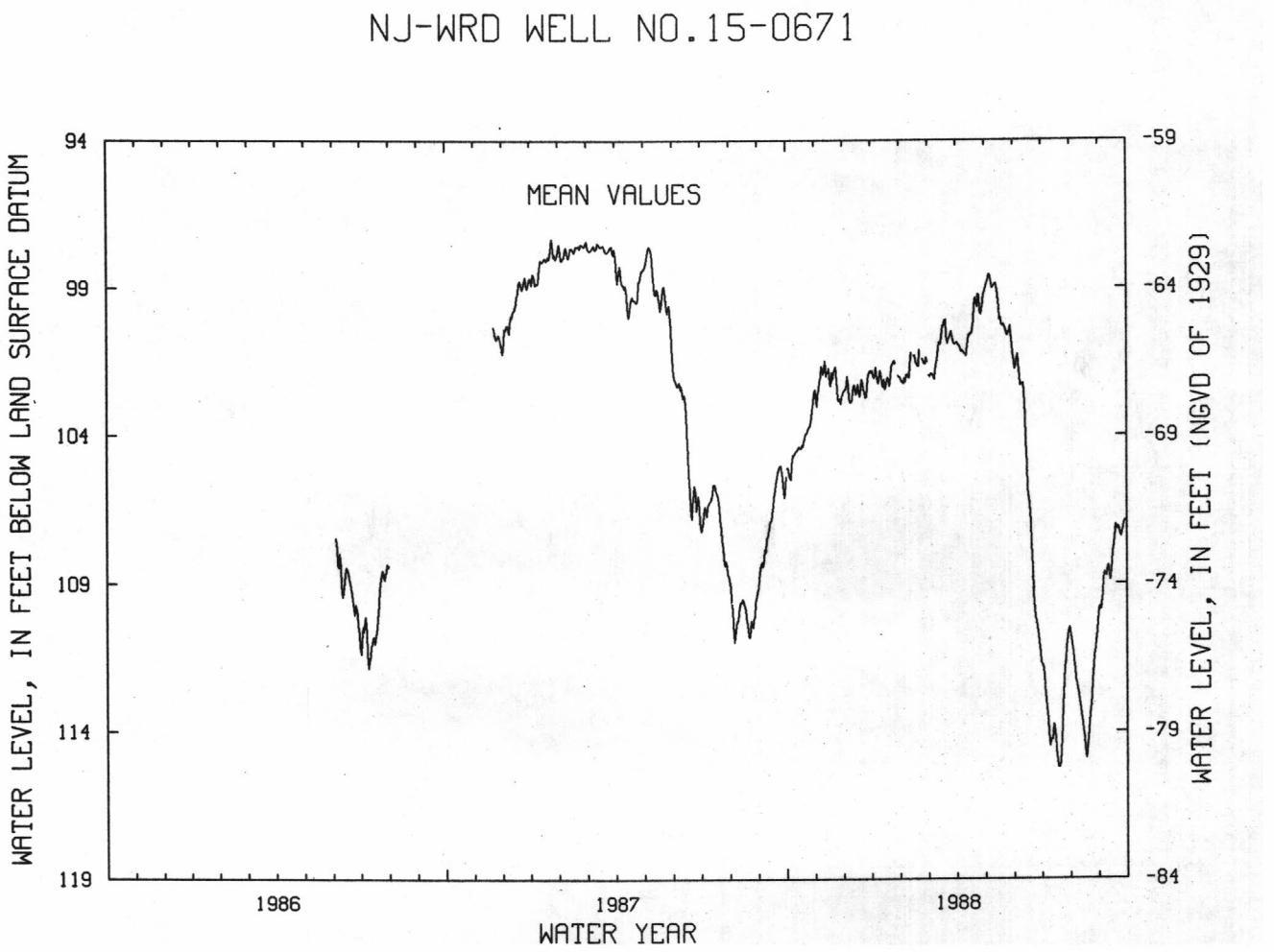
394957075053001. Local I.D., Deptford Deep Obs. NJ-WRD Well Number, 15-0671.
LOCATION.--Lat 39°49'57", Long 75°05'30", Hydrologic Unit 02040202, at N.J. Dept. of Transportation facility off N.J. Route 41 south, Deptford Township.
Owner: U.S. Geological Survey.
AQUIFER.--Lower aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 4 in, depth 670 ft, screened 650 to 670 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch.
DATUM.--Land-surface datum is 35 ft above National Geodedic Vertical Datum of 1929, from topographic map.
Measuring point: Top edge of recorder shelf, 3.55 ft above land-surface datum.
REMARKS.--Water level affected by nearby pumping.
PERIOD OF RECORD.--June 1986 to current year. Records for 1986 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level 97.10 ft below land surface datum, Jan. 22, 1987; lowest 115.36 ft below land surface datum, July 19, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	105.48	102.17	101.97	101.92	102.16	101.92	101.05	98.68	101.26	112.91	111.88	108.83
10	104.57	101.72	102.81	102.00	101.59	101.49	101.22	98.97	102.25	114.29	112.93	108.40
15	104.43	101.70	102.43	102.34	101.30	100.86	100.60	99.27	105.00	114.19	114.22	107.96
20	104.08	101.88	102.08	101.99	101.11	100.09	99.61	100.30	107.68	115.06	113.95	107.18
25	103.72	102.78	102.69	101.57	101.57	100.65	99.28	100.63	110.28	111.83	111.77	107.27
EOM	102.44	102.58	101.79	102.08	---	100.96	99.26	101.24	111.66	110.60	109.86	106.87
MEAN	104.23	102.18	102.37	101.98	101.68	101.05	100.40	99.69	105.72	113.13	112.53	108.03

WTR YR 1988 MEAN 104.49 HIGH 98.28 MAY 6 LOW 115.36 JUL 19



GLOUCESTER COUNTY

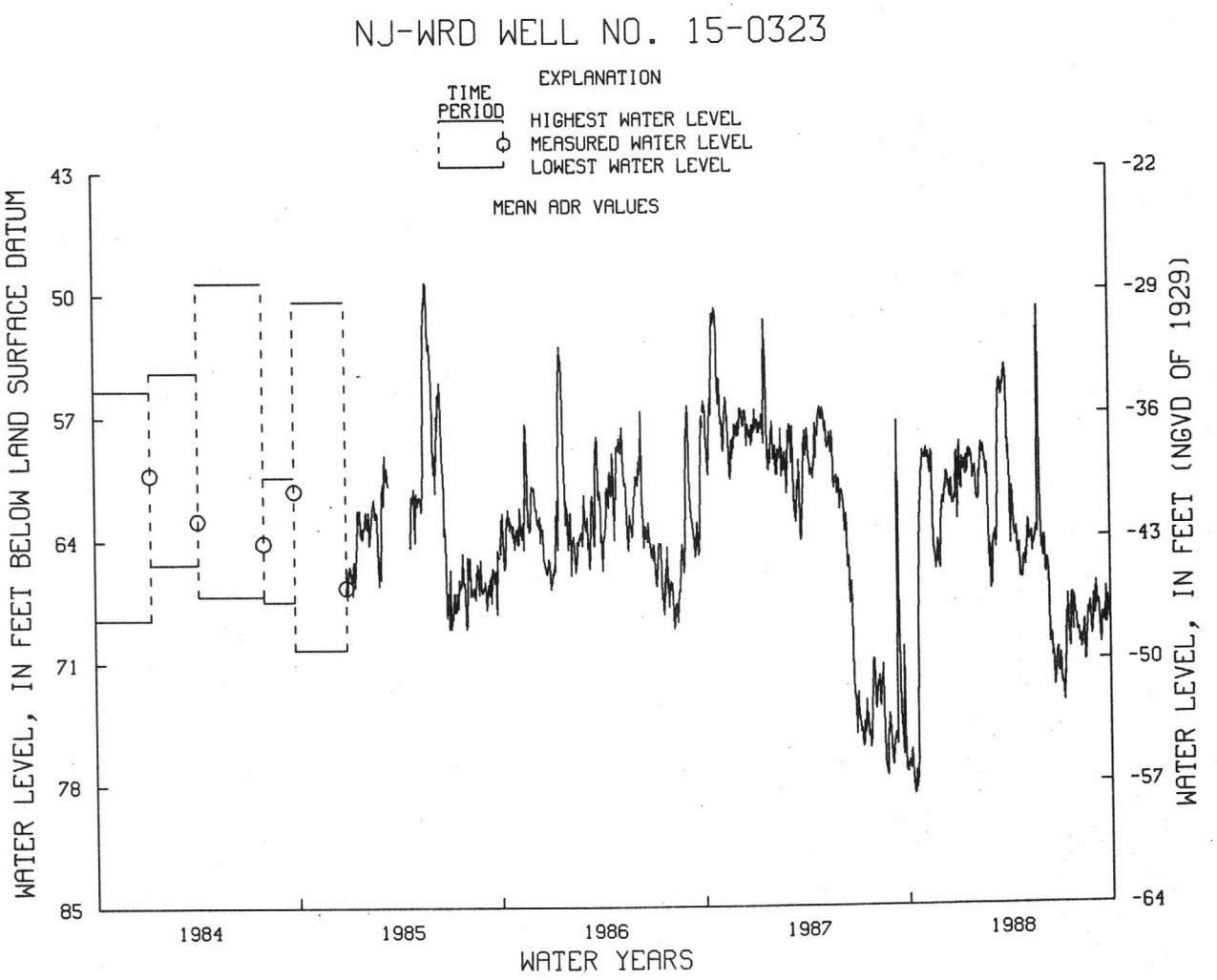
395232075094201. Local I.D., Eagle Point 3 Obs. NJ-WRD Well Number, 15-0323.
LOCATION.--Lat 39°52'35", long 75°09'50", Hydrologic Unit 02040202, at the Coastal Eagle Point Oil Company, West Deptford Township.
Owner: Coastal Eagle Point Oil Company.
AQUIFER.--Lower aquifer, Potomac-Raritan-Magothy aquifer 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.
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 1987 TO SEPTEMBER 1988

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	76.21	58.90	61.80	61.15	61.89	64.17	64.43	63.99	64.39	72.27	69.24	66.58
10	77.74	59.70	61.23	59.90	60.63	63.98	63.22	63.80	65.66	71.82	70.06	68.14
15	77.75	59.33	60.83	60.46	58.75	56.19	63.44	64.17	70.04	69.05	69.61	69.24
20	69.11	64.78	60.66	59.12	59.44	56.00	64.34	63.39	71.09	70.33	68.88	68.30
25	61.54	64.10	61.72	59.50	64.46	54.89	66.33	50.98	71.40	67.87	67.96	67.43
EOM	59.49	65.74	62.96	60.11	66.94	59.34	65.42	64.32	71.76	68.50	67.33	68.69
MEAN	71.51	62.01	61.43	59.95	61.20	59.35	63.82	62.93	68.63	69.78	69.27	68.30

WTR YR 1988 MEAN 64.86 HIGH 47.35 MAY 25 LOW 79.65 OCT 11



GLOUCESTER COUNTY

NJ-WRD WELL NUMBER	SITE OWNER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	DEPTH OF WELL (FT.)	ELEV.** OF LAND SURFACE DATUM (FT.NGVD)	DATE OF MEASURMENT	WATER LEVEL (FT.)*
15-039	CIFALOGLIO,S	1	393148	745822	123	110	10/28/1987	8.45
							3/ 2/1988	7.27
15-198	LESHAY BROS	1965 WELL	393944	745934	141	130	10/28/1987	10.74
							3/ 2/1988	8.46
15-568	RALPH SMITH FARM	1	394305	750307	97	140	10/26/1987	18.79
							3/ 1/1988	17.82
15-726	SMITH, JOHN	AURA ORCHARDS	394130	750921	62	140	10/28/1987	13.23
							3/ 3/1988	10.08
15-734	DASE , DENNIS	DASE 1	393523	745912	110	138	10/28/1987	19.18
							3/ 2/1988	19.26
15-745	FRANKLIN TWP SANITARY LANDFILL	DUMP NORTH	393608	750257	35	124	10/29/1987	28.24
							3/ 2/1988	26.70
15-754	DEAN, GEORGE	DEAN 1	393934	751033	58	143	10/28/1987	14.31
							3/ 3/1988	10.35
15-759	MESIANO , JIM	MESIANO 1	394232	750126	135	159	10/28/1987	37.57
							3/ 2/1988	37.60
15-760	WILLIAMS , RONALD	RW 1	394020	745611	30	115	10/29/1987	16.82
							3/ 2/1988	14.26
15-761	LUCAS , HARRY	LUCAS IRR 1	394142	745818	38	130	10/28/1987	12.88
							3/ 2/1988	12.53
15-763	MOORE , EAYRE	MOORE 2	393525	750521	60	109	10/29/1987	20.65
							3/ 2/1988	19.08
15-764	SCAFONIS , FELIX	SCAFONIS D	393708	750143	49	130	10/29/1987	20.42
							3/ 2/1988	19.48
15-792	THE PLANT PLACE INC	PP 1	393928	750434	75	110	10/28/1987	12.40
							3/ 3/1988	10.46
15-793	FERRUCCI, MARY	FERRUCCI 10	393448	745606	150	110	10/28/1987	11.56
							3/ 2/1988	11.02
15-795	SMITH, FRED	FRED SMITH-1965	394140	750312	100	150	10/29/1987	14.41
							3/ 2/1988	12.69
15-796	SMITH , FRED	SMITH 5	394238	750308	90	160	10/29/1987	18.60
							3/ 2/1988	17.49
15-801	CHILLARI , JOE	CHILLARI 1	394227	750522	85	144	10/28/1987	15.04
							3/ 2/1988	12.92
15-804	FRANKLIN TWP BOARD OF EDUCATION	MALAGA SCHOOL 1	393428	750244	100	110	10/29/1987	31.13
							3/ 2/1988	30.26
15-808	GLASSBORO WATER DEPT	GLASS OBS 1	394319	750725	60	122	10/29/1987	27.80
							3/ 2/1988	28.05
15-810	ELK TWP MUA	ELK 1	394021	750827	63	144	10/28/1987	15.57
							3/ 3/1988	13.02
15-811	SHOEMAKER , G	SHOEMAKER 1	394055	751412	32	140	10/28/1987	19.64
							3/ 3/1988	18.91
15-812	CORONA PUMPS	CORONA 1	393805	745554	100	123	10/28/1987	29.12
							3/ 2/1988	27.13
15-840	DEVAULT, HARRY	DEVAULT 1	393744	750735	34	110	10/28/1987	4.70
							3/ 3/1988	4.07
15-846	U S GEOL SURVEY	CARPENTER 126	394053	750453	10	126	10/28/1987	7.24
							3/ 2/1988	3.35
15-1016	DUFFIELD, CLAUDE	DUFFIELD 2	393633	750630	60	129	10/29/1987	24.75
							3/ 2/1988	23.93

* - Water level in feet below land surface datum

** - Elevations are from USGS topographic maps

Aquifer unit: 121CKKD - Kirkwood-Cohansey aquifer system

HUNTERDON COUNTY

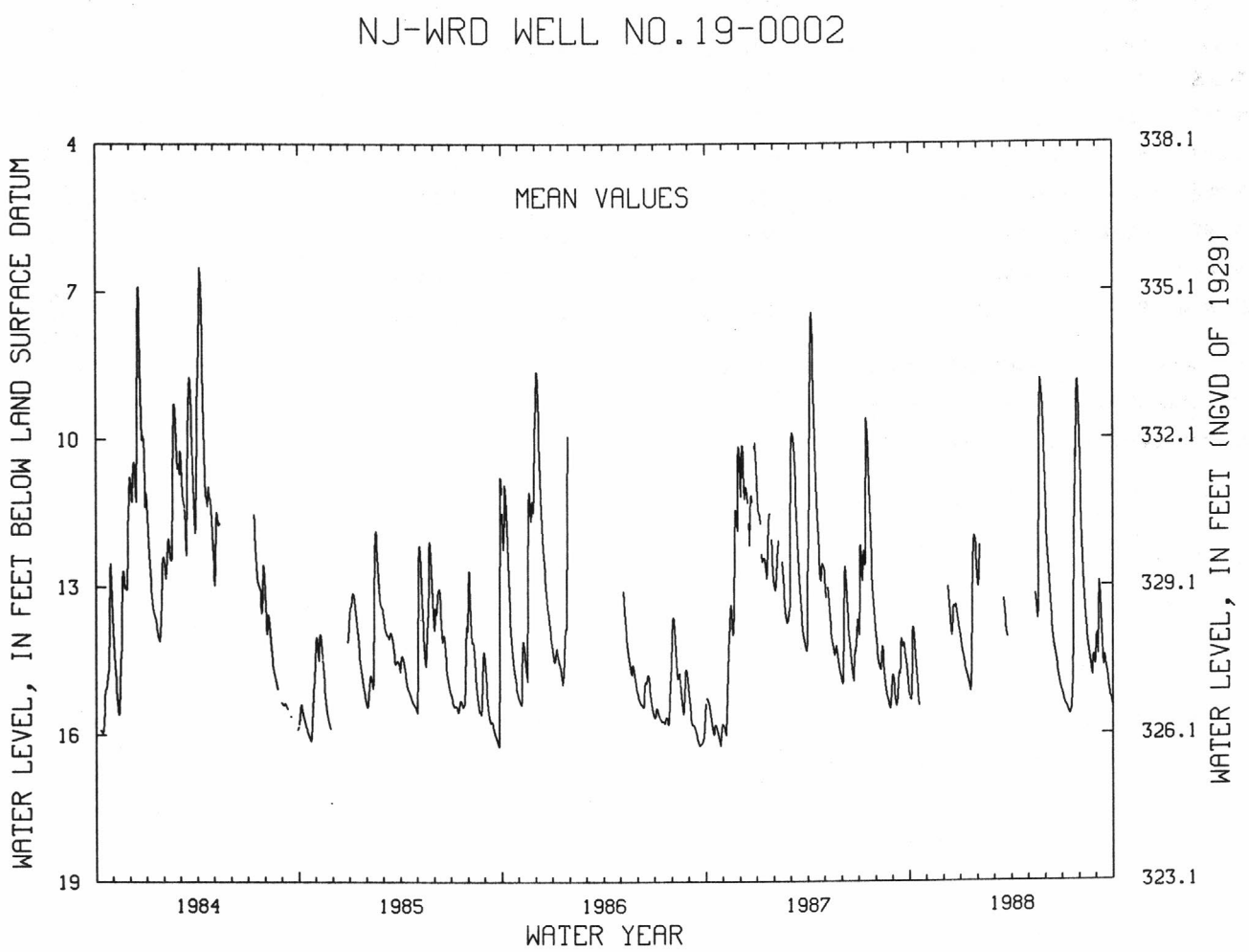
402644074563601. Local I.D., Bird Obs. NJ-WRD Well Number, 19-0002.
LOCATION.--Lat 40°26'44", long 74°56'36", Hydrologic Unit 02040105, near U.S. Post Office, Sergeantsville, Delaware Township
Owner: Phillip Fleming.
AQUIFER.--Stockton Formation of Triassic age.
WELL CHARACTERISTICS.--Dug water-table 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 October 19 to December 8, 1987, February 4 to March 17, and March 27 to May 13, 1988 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 1987 TO SEPTEMBER 1988

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	14.46	---	---	14.42	---	---	---	---	12.36	15.33	11.74	13.47
10	14.19	---	13.21	14.73	---	---	---	---	13.30	15.48	13.23	13.88
15	15.07	---	14.00	14.98	---	---	---	13.26	14.04	15.61	14.00	14.42
20	---	---	13.43	14.56	---	13.51	---	9.98	14.45	14.92	14.50	14.77
25	---	---	13.61	12.00	---	14.04	---	9.06	14.84	10.26	14.67	15.24
EOM	---	---	14.03	12.96	---	---	---	10.94	15.13	9.54	14.10	15.45
MEAN	14.72	---	13.61	13.90	---	---	---	10.85	13.76	13.62	13.50	14.47

WTR YR 1988 HIGH 8.75 JUL 29 LOW 15.65 JUL 16,17

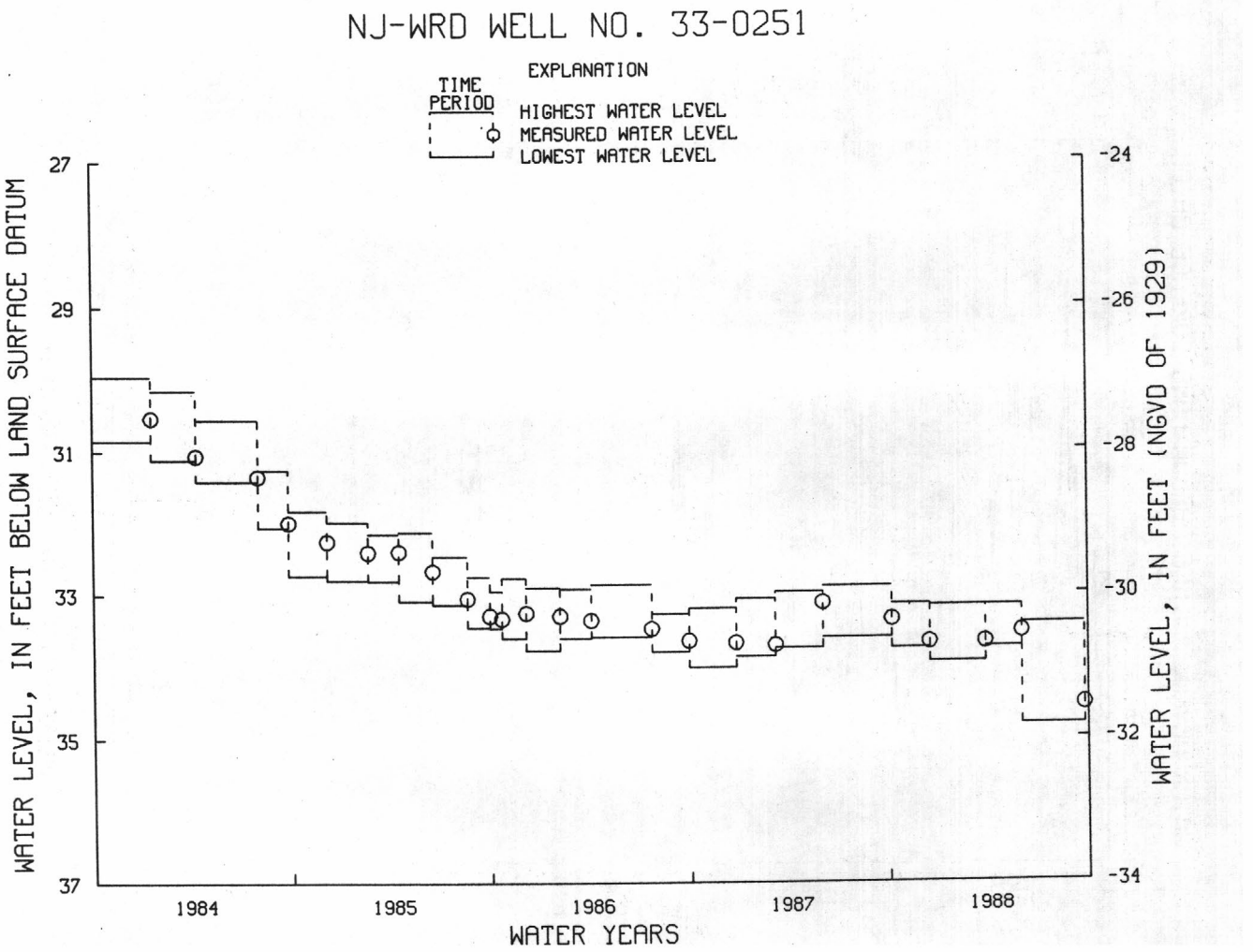


SALEM COUNTY

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, 34.82 ft below land-surface datum, between May 31 and Sept. 23, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
OCT. 6, 1987 TO DEC. 14, 1987	33.14	33.75	DEC. 14, 1987	33.67
DEC. 14, 1987 TO MAR. 25, 1988	33.17	33.94	MAR. 25, 1988	33.67
MAR. 25, 1988 TO MAY 31, 1988	33.17	33.74	MAY 31, 1988	33.53
MAY 31, 1988 TO SEPT. 23, 1988	33.42	34.82	SEPT. 23, 1988	34.54

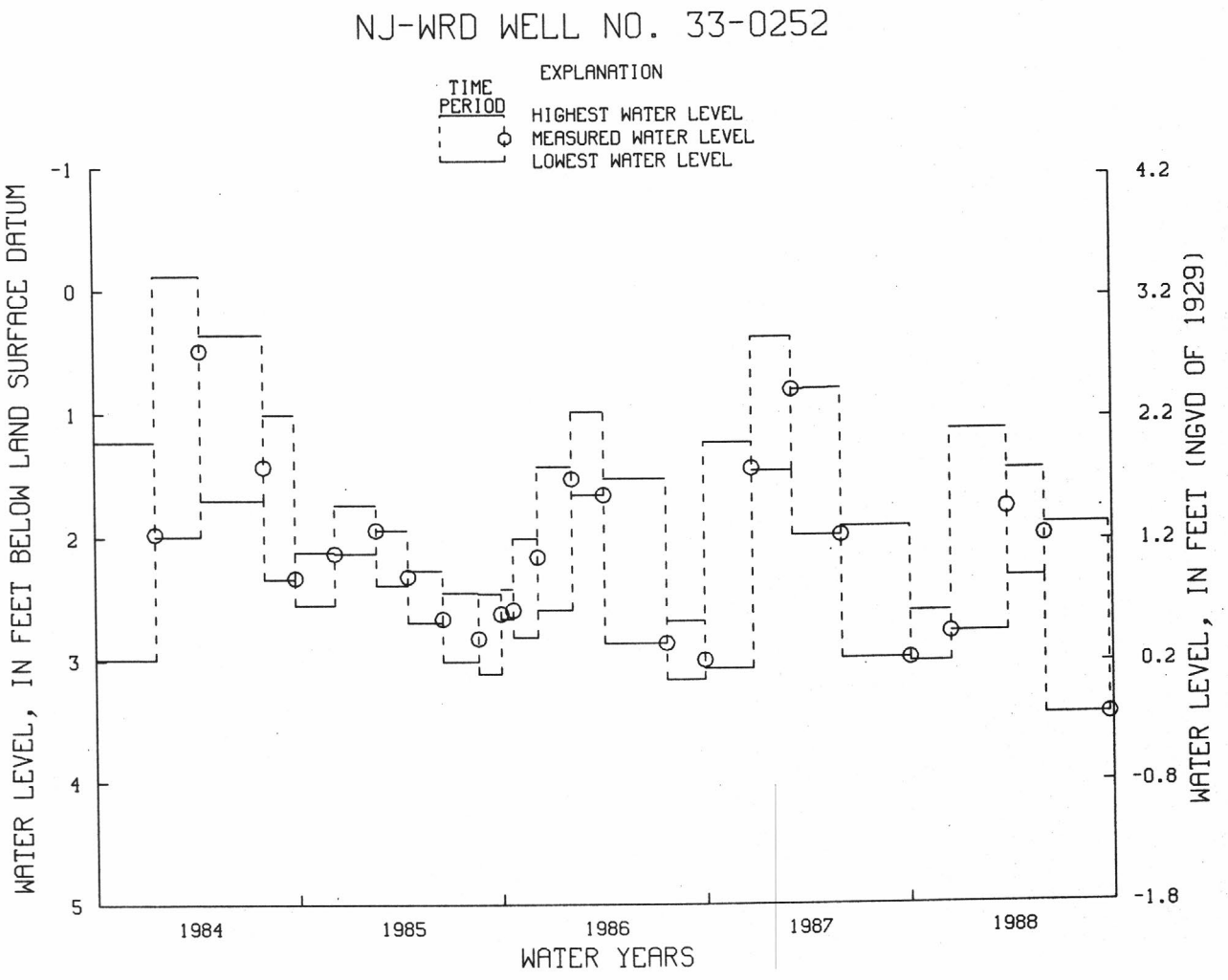


SALEM COUNTY

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 1987 TO SEPTEMBER 1988

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
OCT. 2, 1987 TO DEC. 14, 1987	2.61	3.02	DEC. 14, 1987	2.78
DEC. 14, 1987 TO MAR. 25, 1988	1.15	2.78	MAR. 25, 1988	1.78
MAR. 25, 1988 TO MAY 31, 1988	1.47	2.34	MAY 31, 1988	2.00
MAY 31, 1988 TO SEPT. 23, 1988	1.91	3.46	SEPT. 23, 1988	3.46

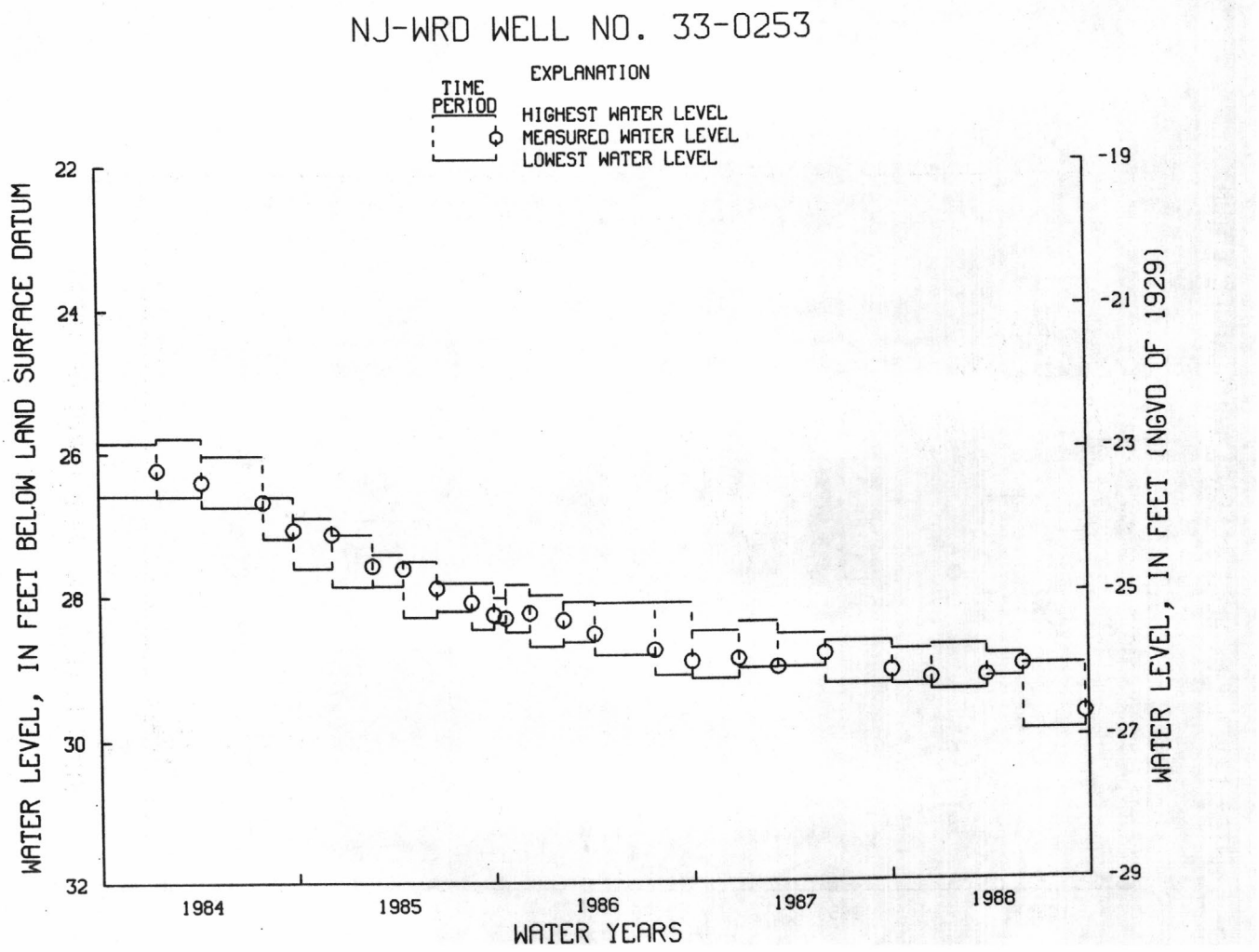


SALEM COUNTY

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, 29.90 ft below land-surface datum, between May 31 and Sept. 23, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
OCT. 2, 1987 TO DEC. 14, 1987	28.77	29.26	DEC. 14, 1987	29.17
DEC. 14, 1987 TO MAR. 25, 1988	28.72	29.34	MAR. 25, 1988	29.15
MAR. 25, 1988 TO MAY 31, 1988	28.85	29.17	MAY 31, 1988	29.00
MAY 31, 1988 TO SEPT. 23, 1988	29.00	29.90	SEPT. 23, 1988	29.68



SALEM COUNTY

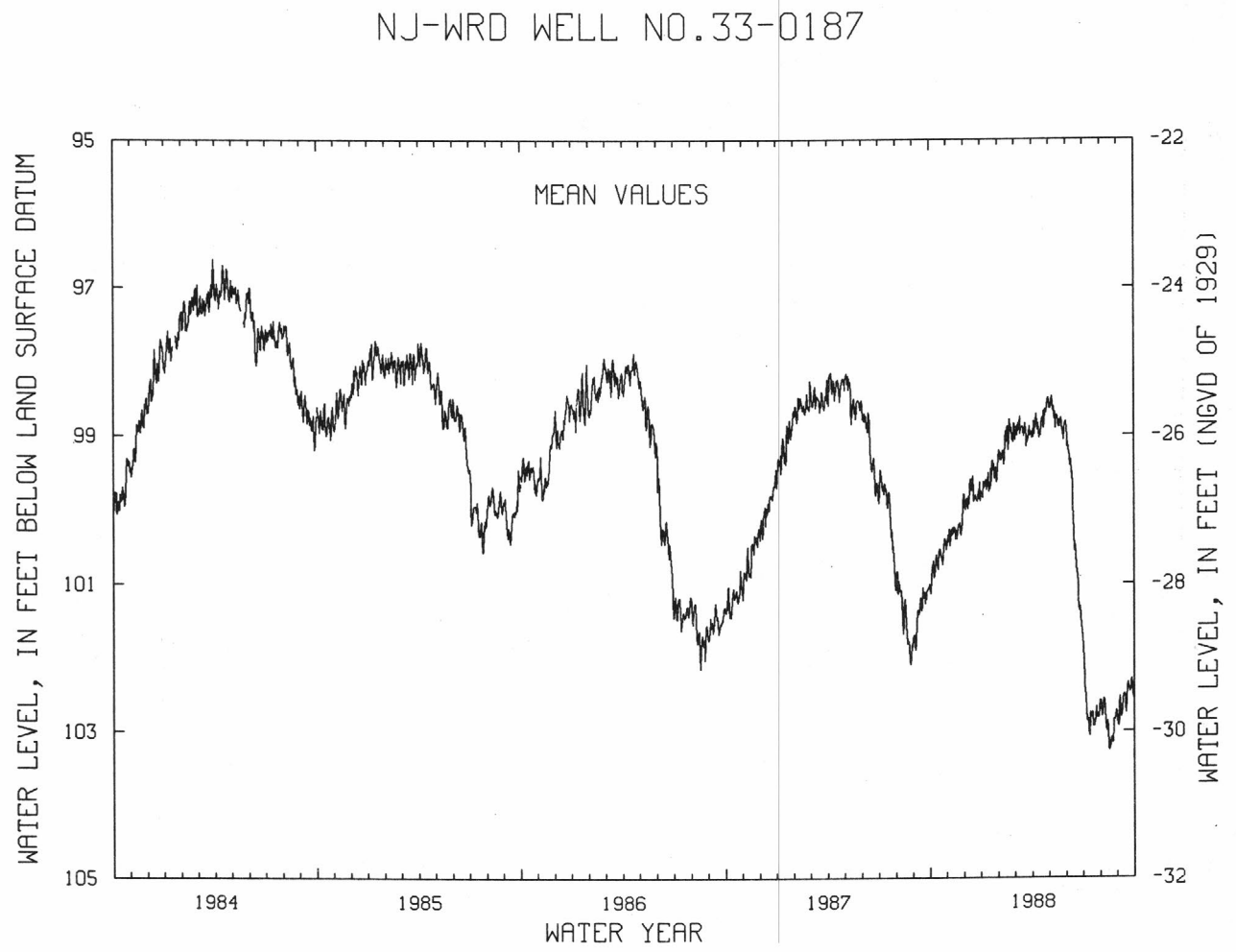
394037075191501. Local I.D., Point Airy Obs. NJ-WRD Well Number, 33-0187.
LOCATION.--Lat 39°40'37", long 75°19'14", Hydrologic Unit 02040206, at intersection of Point Airy and Woodstown-Swedesboro Roads, 1 mi. north of Woodstown Borough boundary, Pilesgrove Township.
Owner: U.S. Geological Survey.
AQUIFER.--Lower aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 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.
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, 103.37 ft below land-surface datum, Aug. 17, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	100.76	100.31	99.86	99.72	99.34	99.01	98.99	98.54	99.19	102.45	102.77	102.53
10	100.80	100.34	99.93	99.74	99.40	98.76	98.85	98.77	99.52	102.83	102.88	102.58
15	100.81	100.35	99.64	99.67	98.91	98.88	98.96	98.73	100.32	102.81	102.97	102.67
20	100.56	100.27	99.85	99.37	98.79	98.95	98.89	98.89	100.84	102.92	103.09	102.40
25	100.53	100.35	99.85	99.48	99.03	99.03	98.67	98.95	101.37	102.69	102.84	102.33
EOM	100.45	99.80	99.77	99.34	98.86	98.96	98.56	98.82	101.74	102.58	102.84	102.49
MEAN	100.68	100.28	99.83	99.60	99.09	98.96	98.82	98.76	100.29	102.70	102.89	102.56

WTR YR 1988 MEAN 100.38 HIGH 98.45 MAY 7 LOW 103.37 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
05-063	WILLINGBORO MUA	WMUA 1-OBS	400213	745108	211MRPAM	A	1966-P
05-259	US GEOL SURVEY	MEDFORD 2 OBS	395524	745025	211EGLS	A	1963-P
05-274	CAMPBELL SOUP	CAMPBELL 1	395841	745905	211MRPAM	A	1972-P
05-648	WILLINGBORO MUA	WMUA 3-OBS	400103	745409	211MRPAL	A	1966-1986
05-690	US GEOL SURVEY	LEBANON SF 2	395211	743103	121CKKD	W	1964-1986
07-030	SO JRSY PORT CM	NY SHIP 5A	395447	750711	211MRPAU	W	1950-1986
07-118	NJ WATER CO	HUTTON HILL 2	395229	745712	211MLRW	A	1967-P
07-283	NJ WATER CO	EGBERT	395246	750434	211MRPAL	A	1963-P
07-322	NJ WATER CO	OAKLYN TEST	395359	750445	211MRPAU	U	1963-1986
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
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	1962-1986
11-161	CUMBERLAND CO	FAIR GROUNDS 1	392526	750643	121CKKD	W	1972-1986
11-162	CUMBERLAND CO	FAIR GROUNDS 2	392526	750643	121CKKD	W	1972-1986
11-163	CUMBERLAND CO	FAIR GROUNDS 3	392526	750643	124PNPN	A	1973-P
11-188	CUMBERLAND CO	BOSTWICK LK 1	393141	751601	121CKKD	W	1972-1986
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	1962-1986
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	1959-1986
33-342	NJ WATER POLICY	PENNS GROVE 24	394236	752724	211MRPAU	A	1942-1987
33-348	NJ WATER POLICY	PENNS GROVE 14	394317	752619	112CPMY	W	1959-P
37-202	NAT. PARK SERVICE	TAYLOR HOUSE	410914	745404	340DVNN	U	1988-P
41-013	HOFFMAN-LAROCHE	HOF LAR 4	405050	750332	112SFDF	U	1960-1985

See figure 13 for well locations.
P - present
Aquifer unit: see definition of terms
WC - (Water Condition): A-Artesian, W-Water table, U-Undetermined
Data available in the files of the New Jersey District Office.

QUALITY OF GROUND WATER - SALTWATER MONITORING NETWORK
WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
CAPE MAY COUNTY

NJ-WRD WELL NUMBER	SITE OWNER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	ELEV. LAND SURF. (FT. NGVD)	SCREENED INTERVAL (FT.)	AQUIFER UNIT
09-027	CAPE MAY CITY WD	CMCWD 3	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 5	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	121CNSY
09-067	WILDWOOD WD	RIO GRANDE 38	390135	745352	10	461 - 590	122KRKDU
09-072	WILDWOOD WD	RIO GRANDE 31	390138	745350	10	108 - 135	112ESRNS
09-078	WILDWOOD WD	RIO GRANDE 30	390149	745354	9	229 - 250	121CNSY

NJ-WRD WELL NUMBER	SITE OWNER	LOCAL IDENTIFIER	DATE OF SAMPLE	TEMPER-ATURE (DEG C)	SPE-CIFIC CONDUCT-ANCE (US/CM)	PH (UNITS)	CHLORIDE DIS-SOLVED (MG/L AS CL)
09-027	CAPE MAY CITY WD	CMCWD 3	8/23/1988	16.0	806	7.7	150
09-036	CAPE MAY CITY WD	CMCWD 2	8/23/1988	15.5	663	7.6	130
09-043	CAPE MAY CITY WD	CMCWD 5	8/23/1988	15.5	293	7.7	16
09-052	LOWER TWP MUA	LTMUA 1	8/23/1988	15.5	250	7.9	11
09-054	LOWER TWP MUA	LTMUA 2	8/23/1988	15.5	244	7.9	13
09-057	LOWER TWP MUA	LTMUA 3	8/23/1988	---	226	7.7	12
09-067	WILDWOOD WD	RIO GRANDE 38	8/23/1988	17.0	512	8.0	76
09-072	WILDWOOD WD	RIO GRANDE 31	8/23/1988	14.0	190	7.7	12
09-078	WILDWOOD WD	RIO GRANDE 30	8/23/1988	15.0	142	7.7	9.5

* Total depth of well.

Aquifer Unit:

112ESRNS - Cape May Formation, estuarine sand facies
121CNSY - Cohansey Sand
122KRKDU - Rio Grande water-bearing zone of the Kirkwood Formation

QUALITY OF GROUND WATER - SALTWATER MONITORING NETWORK
WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
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 W ASSOC	1	391138	750117	5	242 - 262	121CKKD
11-118	CUMBERLAND COUNTY	HEISLERVILLE 1	391350	750018	6	36 - 41	121CKKD
11-119	CUMBERLAND COUNTY	HEISLERVILLE 2	391350	750018	6	125 - 135	121CKKD
11-052	FORTESCUE REALTY	FORTESCUE 4	391420	751023	8	283 - 303	121CKKD
11-326	STANGER, GEORGE	1	391617	751355	5	440*	124PNPN
11-327	MYERS, H	1	391619	751357	5	399 - 409	124PNPN
11-343	NEIL, A	1	391619	751405	5	459*	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
11-370	SOBUSIAK, WALTER	SOBUSIAK 1	391938	751923	5	350*	124PNPN

NJ-WRD WELL NUMBER	SITE OWNER	LOCAL IDENTIFIER	DATE OF SAMPLE	TEMPER-ATURE (DEG C)	SPE-CIFIC CONDUCT-ANCE (US/CM)	PH (UNITS)	CHLORIDE DIS-SOLVED (MG/L AS CL)
11-324	EAST PT W ASSOC	1	8/31/1988	---	162	---	2.0
11-118	CUMBERLAND COUNTY	HEISLERVILLE 1	2/ 2/1988	14.0	258	6.7	49
11-119	CUMBERLAND COUNTY	HEISLERVILLE 2	2/ 2/1988	14.0	154	7.3	2.8
11-052	FORTESCUE REALTY	FORTESCUE 4	8/31/1988	---	207	---	5.5
11-326	STANGER, GEORGE	1	8/31/1988	---	1,080	---	310
11-327	MYERS, H	1	8/31/1988	---	940	---	240
11-343	NEIL, A	1	8/31/1988	---	565	---	55
11-337	COVE RD WATER ASSOC	1	8/31/1988	---	560	---	56
11-056	MONEY IS MARINA	POLLINO 1	8/31/1988	---	630	---	81
11-092	BAY PT ROD GUN	BAY POINT 2	9/ 1/1988	---	680	---	82
11-370	SOBUSIAK, WALTER		9/ 1/1988	---	820	---	140

* Total depth of well.

Aquifer unit:

121CKKD - Kirkwood-Cohansey aquifer system
124PNPN - Piney Point aquifer

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

GLOUCESTER COUNTY

NJ-WRD WELL NUMBER	SITE OWNER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	ELEV. LAND SURF. (FT. NGVD)	OPEN OR SCREENED INTERVAL (FT.)	AQUIFER UNIT
15-0375	MONROE TWP MUA	MT MUA 7 1979	394010	0745845	148	118 - 147	121CKKD
15-0566	CECIL FIRE CO	CECIL 1	393842	0745655	110	108 - 128	121CKKD
15-0619	HOSPITALITY CK CAMPG INC	HOSPITALITY CMPG 1	393724	0745542	105	38 - 98	121CKKD
15-0726	SMITH, JOHN	AURA ORCHARDS	394130	0750921	140	52 - 62	121CKKD
15-0733	WROBEL, ANTHONY	WROBEL.H1	393457	0745839	135	100 - 110	121CKKD
15-0734	DASE, DENNIS	DASE #1	393523	0745912	138	100 - 110	121CKKD
15-0735	DEMATTO, LOU	DEMATTO #1	393940	0745746	140	75 - 80	121CKKD
15-0743	FRANKLIN TWP BD OF ED	LAKE SCHOOL 1	393411	0750022	111	83 - 98	121CKKD
15-0752	DECORA INC	DECORA 1	394054	0745700	128	105 - 120	121CKKD
15-0754	DEAN, GEORGE	DEAN 1	393934	0751033	143	48 - 58	121CKKD
15-0759	MESIANO, JIM	MESIANO 1	394232	0750126	159	130 - 135	121CKKD
15-0764	SCAFONIS, FELIX	SCAFONIS D	393708	0750143	130	44 - 49	121CKKD
15-0785	D & M BUILDERS	BEHL RD WELL	393917	0750149	143	52 - 56	121CKKD
15-0791	FRANKLIN TWP BD OF ED	CLR 1	393634	0750415	111	70 - 90	121CKKD
15-0793	FERRUCCI, MARY	FERRUCCI #10	393448	0745606	110	100 - 150	121CKKD
15-0801	CHILLARI, JOE	CHILLARI 1	394227	0750522	144	80 - 85	121CKKD
15-0802	WAWA INC	WAWA #1	394246	0750151	150	60 - 65	121CKKD
15-0804	FRANKLIN TWP BD OF ED	MALAGA #1	393428	0750244	110	100#	121CKKD
15-0805	FRANKLIN TWP BD OF ED	MAIN RD SCHOOL #1	393322	0745950	119	100#	121CKKD
15-0810	ELK TWP MUA	ELK #1	394021	0750827	144	58 - 63	121CKKD
15-0812	CORONA PUMPS	CORONA #1	393805	0745554	123	100#	121CKKD
15-0829	ZEE, DOUGLAS	ZEE WORKER	394258	0750836	141	25 - 29	121CKKD
15-0831	FRANKLIN TWP MUA	FRANKLIN ADMIN BLD	393539	0750348	104	80 - 85	121CKKD
15-1016	DUFFIELD, CLAUDE	DUFFIELD 2	393633	0750630	129	50 - 60	121CKKD
15-1017	HAYNICZ, H	SHOREWAY HOUSE	394025	0750548	136	80#	121CKKD
15-1019	WILLIAMS, RON	WILLIAMS GARDEN	394020	0745611	115	45#	121CKKD

NJ-WRD WELL NUMBER	DATE	TEMPERATURE WATER (DEG C)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	HARDNESS TOTAL (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)	ALKALINITY, CARBONATE IT-FLD (MG/L - CACO3)
15-0375	09-28-88	13.0	101	4.5	17	3.1	2.2	8.6	1.8	<1.0	<1.0
15-0566	09-26-88	14.0	135	4.3	31	4.3	4.9	7.7	2.7	--	--
15-0619	09-15-88	14.0	36	4.2	6	1.1	0.86	2.2	1.3	<1.0	1.0
15-0726	09-20-88	13.5	246	4.7	83	22	6.9	3.9	7.6	3.0	2.0
15-0733	09-29-88	13.5	145	4.7	46	2.9	9.2	5.1	1.7	<1.0	<1.0
15-0734	08-26-88	15.5	51	4.7	14	0.81	2.8	2.1	1.0	1.3	1.1
15-0735	09-23-88	17.5	125	4.4	21	3.5	3.0	12	4.3	<1.0	<1.0
15-0743	09-26-88	16.0	37	4.6	7	0.47	1.3	2.2	0.8	--	--
	02-16-89	13.5	33	4.4	6	0.44	1.2	2.1	0.8	1.8	1.5
15-0752	09-29-88	14.0	52	4.8	12	1.6	1.9	3.0	1.2	<1.0	<1.0
15-0754	09-19-88	14.0	190	4.4	71	18	6.2	2.2	5.4	<1.0	<1.0
15-0759	09-07-88	13.5	30	5.0	6	1.2	0.81	3.4	0.6	3.0	2.0
15-0764	09-27-88	12.5	21	5.3	3	0.31	0.48	1.6	0.7	7.0	6.0
15-0785	09-19-88	15.0	73	4.6	9	1.0	1.6	7.9	10	<1.0	<1.0
15-0791	09-15-88	15.0	28	4.4	9	2.1	0.99	2.9	1.0	<1.0	<1.0
15-0793	09-09-88	14.0	79	4.6	22	4.6	2.5	2.1	1.4	<1.0	<1.0
15-0801	08-25-88	15.5	57	4.9	14	3.3	1.4	3.3	1.0	2.1	1.7
15-0802	09-30-88	14.0	203	4.8	32	5.3	4.5	3.9	29	2.0	2.0
15-0804	09-09-88	14.0	45	4.8	9	2.1	1.0	4.0	0.9	<1.0	<1.0
15-0805	09-20-88	14.5	58	5.2	17	2.6	2.6	2.0	1.6	4.0	3.0
15-0810	09-08-88	19.0	140	5.2	46	8.1	6.2	2.5	2.7	4.0	4.0
15-0812	08-24-88	17.5	38	5.2	8	1.2	1.3	3.1	0.7	4.3	3.5
15-0829	09-22-88	15.5	256	5.2	120	28	11	2.4	1.3	10	8.0
15-0831	09-14-88	15.0	74	5.2	17	3.0	2.2	2.5	3.5	2.0	2.0
15-1016	09-20-88	14.0	47	4.8	12	2.5	1.5	2.8	0.9	4.0	3.0
15-1017	09-22-88	15.0	146	4.7	39	8.1	4.5	7.7	4.2	1.0	1.0
15-1019	09-28-88	12.5	74	4.8	12	1.8	1.9	4.8	2.7	1.0	1.0

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

GLOUCESTER COUNTY

NJ-WRD WELL NUMBER	DATE	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	NITROGEN, NITRITE DIS-SOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)
15-0375	09-28-88	<1	11	11	<0.1	11	61	<0.01	2.5	<0.01	0.2
15-0566	09-26-88	1*	<0.2	12	<0.1	7.5	62	<0.01	5.0	<0.01	0.7
15-0619	09-15-88	<1	3.9	4.3	<0.1	12	31	<0.01	1.1	<0.01	0.2
15-0726	09-20-88	2	51	12	0.1	7.70	142	<0.01	6.4	<0.01	0.3
15-0733	09-29-88	<1	<0.2	14	<0.1	6.2	84	<0.01	9.7	0.01	0.3
15-0734	08-26-88	<1	0.5	7.7	0.1	6.4	32	<0.01	2.2	<0.01	0.3
15-0735	09-23-88	<1	<0.2	20	0.1	6.2	77	<0.01	6.0	<0.01	0.3
15-0743	09-26-88	2*	<0.2	3.9	<0.1	6.2	24	<0.01	1.6	<0.01	0.2
	02-16-89	<1	<0.2	3.9	<0.1	6.1	--	0.02	1.6	<0.01	<0.2
15-0752	09-29-88	1	0.3	4.6	<0.1	21	50	<0.01	3.4	0.02	0.5
15-0754	09-19-88	<1	26	10	0.1	7.9	120	<0.01	9.9	<0.01	0.4
15-0759	09-07-88	2	<0.2	3.8	<0.1	6.5	26	<0.01	1.6	<0.01	<0.2
15-0764	09-27-88	6	0.3	2.7	0.1	5.1	18	<0.01	0.31	<0.01	<0.2
15-0785	09-19-88	<1	0.8	9.9	<0.1	6.9	67	<0.01	5.9	0.44	0.9
15-0791	09-15-88	<1	6.6	4.2	<0.1	12	38	<0.01	1.7	<0.01	<0.2
15-0793	09-09-88	<1	11	5.7	0.1	8.1	49	<0.01	2.8	0.02	<0.2
15-0801	08-25-88	2	<0.2	4.1	0.1	7.9	43	<0.01	4.4	<0.01	0.4
15-0802	09-30-88	3	24	12	<0.1	7.5	127	<0.01	8.8	0.01	<0.2
15-0804	09-09-88	1	<0.2	3.8	<0.1	7.1	36	<0.01	3.5	0.02	<0.2
15-0805	09-20-88	5	4.8	5.3	<0.1	8.2	40	<0.01	2.3	<0.01	0.3
15-0810	09-08-88	4	25	11	<0.1	9.8	81	<0.01	3.0	<0.01	<0.2
15-0812	08-24-88	4	0.9	4.4	<0.1	6.2	30	0.01	2.1	0.06	0.3
15-0829	09-22-88	8	60	17	<0.1	10	158	<0.01	5.0	<0.01	<0.2
15-0831	09-14-88	4	<0.2	6.0	<0.1	6.5	46	<0.01	4.5	<0.01	<0.2
15-1016	09-20-88	2	0.5	4.2	<0.1	7.7	35	<0.01	2.8	<0.01	<0.2
15-1017	09-22-88	1	8.7	9.7	0.1	7.3	90	<0.01	8.7	<0.01	0.5
15-1019	09-28-88	2	<0.2	6.3	<0.1	5.2	46	<0.01	4.8	<0.01	0.3

NJ-WRD WELL NUMBER	DATE	PHOSPHOROUS DIS-SOLVED (MG/L AS P)	PHOSPHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	ALUMINUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYLLIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHROMIUM DIS-SOLVD (UG/ AS C)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)
15-0375	09-28-88	0.01	<0.01	210	2	70	<0.5	<1	5	<3	<10
15-0566	09-26-88	<0.01	<0.01	120	<1	180	<0.5	<1	5	<3	210
15-0619	09-15-88	0.01	<0.01	100	<1	37	<0.5	<1	5	<3	20
15-0726	09-20-88	<0.01	<0.01	440	<1	94	<0.5	<1	5	5	<10
15-0733	09-29-88	0.01	0.01	140	<1	420	<0.5	<1	5	5	20
15-0734	08-26-88	0.02	<0.01	40	<1	130	<0.5	<1	5	<3	160
15-0735	09-23-88	0.02	<0.01	190	<1	150	<0.5	<1	5	5	70
15-0743	09-26-88	<0.01	<0.01	20	<1	60	<0.5	<1	5	<3	--
	02-16-89	<0.01	<0.01	20	<1	59	<0.5	<1	5	<3	10
15-0752	09-29-88	0.01	0.01	40	<1	66	<0.5	<1	5	<3	<10
15-0754	09-19-88	<0.01	<0.01	530	<1	120	<0.5	<1	5	4	20
15-0759	09-07-88	<0.01	0.02	<10	<1	19	0.5	<1	5	<3	40
15-0764	09-27-88	0.01	0.01	<10	<1	20	<0.5	1	5	<3	<10
15-0785	09-19-88	<0.01	<0.01	40	<1	100	<0.5	<1	5	<3	270
15-0791	09-15-88	<0.01	<0.01	350	<1	27	<0.5	<1	5	<3	60
15-0793	09-09-88	0.01	<0.01	340	<1	57	<0.5	<1	5	<3	10
15-0801	08-25-88	0.01	<0.01	<10	<1	49	<0.5	<1	5	<3	80
15-0802	09-30-88	0.01	<0.01	110	<1	130	<0.5	<1	5	<3	<10
15-0804	09-09-88	<0.01	<0.01	<10	<1	42	<0.5	<1	5	<3	20
15-0805	09-20-88	<0.01	<0.01	<10	<1	75	<0.5	<1	5	<3	290
15-0810	09-08-88	0.01	<0.01	20	<1	120	<0.5	<1	5	<3	40
15-0812	08-24-88	0.01	0.01	<10	1	36	<0.5	<1	5	<3	<10
15-0829	09-22-88	<0.01	0.02	<10	<1	120	<0.5	<1	5	<3	230
15-0831	09-14-88	<0.01	<0.01	20	<1	84	<0.5	<1	5	<3	270
15-1016	09-20-88	<0.01	<0.01	40	<1	64	<0.5	<1	5	<3	20
15-1017	09-22-88	<0.01	<0.01	120	<1	190	<0.5	<1	5	<3	<10
15-1019	09-28-88	0.01	0.01	80	<1	97	<0.5	1	5	<3	10

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

GLOUCESTER COUNTY

NJ-WRD WELL NUMBER	DATE	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)
15-0375	09-28-88	160	10	<4	19	<0.1	<10	<10	<1	27	<6
15-0566	09-26-88	16	<10	<4	24	<0.1	<10	<10	<1	46	<6
15-0619	09-15-88	120	<10	<4	9	<0.1	<10	<10	<1	11	<6
15-0726	09-20-88	30	<10	<4	77	<0.1	<10	<10	<1	68	<6
15-0733	09-29-88	4	<10	<4	27	<0.1	<10	<10	<1	81	<6
15-0734	08-26-88	10	<10	<4	11	<0.1	<10	<10	<1	21	<6
15-0735	09-23-88	19	20	<4	35	<0.1	<10	<10	<1	22	<6
15-0743	09-26-88	10	--	<4	6	<0.1	<10	<10	<1	12	<6
	02-16-89	5	<10	<4	5	<0.1	<10	<10	<1	11	<6
15-0752	09-29-88	95	<10	10	92	<0.1	<10	<10	<1	130	<6
15-0754	09-19-88	52	60	<4	79	<0.1	<10	<10	<1	110	<6
15-0759	09-07-88	42	<10	<4	8	<0.1	<10	20	<1	15	<6
15-0764	09-27-88	280	40	<4	8	<0.1	<10	<10	<1	4	<6
15-0785	09-19-88	8	<10	<4	19	0.2	<10	<10	<1	13	<6
15-0791	09-15-88	450	<10	<4	14	<0.1	<10	<10	<1	11	<6
15-0793	09-09-88	72	<10	<4	17	<0.1	<10	<10	<1	29	<6
15-0801	08-25-88	13	<10	<4	9	<0.1	<10	<10	<1	17	<6
15-0802	09-30-88	250	<10	<4	39	<0.1	<10	<10	<1	35	<6
15-0804	09-09-88	12	30	<4	3	<0.1	<10	<10	<1	14	<6
15-0805	09-20-88	250	<10	<4	22	<0.1	<10	<10	<1	26	<6
15-0810	09-08-88	33	<10	<4	21	<0.1	<10	<10	<1	61	<6
15-0812	08-24-88	620	<10	<4	45	0.1	<10	<10	<1	11	<6
15-0829	09-22-88	450	20	<4	52	<0.1	<10	<10	<1	45	<6
15-0831	09-14-88	120	<10	<4	15	0.3	<10	<10	<1	26	<6
15-1016	09-20-88	190	20	<4	17	<0.1	<10	<10	<1	15	<6
15-1017	09-22-88	40	<10	<4	40	<0.1	<10	<10	<1	34	<6
15-1019	09-28-88	15	20	<4	20	0.2	<10	<10	<1	14	<6

NJ-WRD WELL NUMBER	DATE	ZINC, DIS-SOLVED (UG/L AS ZN)	RADON 222 TOTAL (PC/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	BROMO-FORM TOTAL (UG/L)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)
15-0375	09-28-88	11	84	--	--	--	--	--	--	--	--
15-0566	09-26-88	16	170	--	--	--	--	--	--	--	--
15-0619	09-15-88	98	330	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
15-0726	09-20-88	16	640	<0.2	<0.2	<0.2	<0.2	<0.2	0.6	<0.2	<0.2
15-0733	09-29-88	5	340	--	--	--	--	--	--	--	--
15-0734	08-26-88	10	200	--	--	--	--	--	--	--	--
15-0735	09-23-88	32	150	--	--	--	--	--	--	--	--
15-0743	09-26-88	14	210	--	--	--	--	--	--	--	--
	02-16-89	11	--	--	--	--	--	--	--	--	--
15-0752	09-29-88	7	<80	--	--	--	--	--	--	--	--
15-0754	09-19-88	85	500	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
15-0759	09-07-88	14	--	--	--	--	--	--	--	--	--
15-0764	09-27-88	--	--	--	--	--	--	--	--	--	--
15-0785	09-19-88	19	510	--	--	--	--	--	--	--	--
15-0791	09-15-88	38	250	--	--	--	--	--	--	--	--
15-0793	09-09-88	22	260	--	--	--	--	--	--	--	--
15-0801	08-25-88	12	--	--	--	--	--	--	--	--	--
15-0802	09-30-88	58	520	--	--	--	--	--	--	--	--
15-0804	09-09-88	7	410	--	--	--	--	--	--	--	--
15-0805	09-20-88	6	200	--	--	--	--	--	--	--	--
15-0810	09-08-88	390	320	--	--	--	--	--	--	--	--
15-0812	08-24-88	52	360	--	--	--	--	--	--	--	--
15-0829	09-22-88	7	480	--	--	--	--	--	--	--	--
15-0831	09-14-88	45	390	--	--	--	--	--	--	--	--
15-1016	09-20-88	25	230	--	--	--	--	--	--	--	--
15-1017	09-22-88	5	230	--	--	--	--	--	--	--	--
15-1019	09-28-88	870	320	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	<0.2	<0.2

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

GLOUCESTER COUNTY

NJ-WRD WELL NUMBER	DATE	CHLORO-BENZENE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-CHLO-RIDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)
15-0375	09-28-88	--	--	--	--	--	--	--	--	--	--
15-0566	09-26-88	--	--	--	--	--	--	--	--	--	--
15-0619	09-15-88	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
15-0726	09-20-88	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	<0.2	<0.2	<0.2
15-0733	09-29-88	--	--	--	--	--	--	--	--	--	--
15-0734	08-26-88	--	--	--	--	--	--	--	--	--	--
15-0735	09-23-88	--	--	--	--	--	--	--	--	--	--
15-0743	09-26-88	--	--	--	--	--	--	--	--	--	--
	02-16-89	--	--	--	--	--	--	--	--	--	--
15-0752	09-29-88	--	--	--	--	--	--	--	--	--	--
15-0754	09-19-88	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
15-0759	09-07-88	--	--	--	--	--	--	--	--	--	--
15-0764	09-27-88	--	--	--	--	--	--	--	--	--	--
15-0785	09-19-88	--	--	--	--	--	--	--	--	--	--
15-0791	09-15-88	--	--	--	--	--	--	--	--	--	--
15-0793	09-09-88	--	--	--	--	--	--	--	--	--	--
15-0801	08-25-88	--	--	--	--	--	--	--	--	--	--
15-0802	09-30-88	--	--	--	--	--	--	--	--	--	--
15-0804	09-09-88	--	--	--	--	--	--	--	--	--	--
15-0805	09-20-88	--	--	--	--	--	--	--	--	--	--
15-0810	09-08-88	--	--	--	--	--	--	--	--	--	--
15-0812	08-24-88	--	--	--	--	--	--	--	--	--	--
15-0829	09-22-88	--	--	--	--	--	--	--	--	--	--
15-0831	09-14-88	--	--	--	--	--	--	--	--	--	--
15-1016	09-20-88	--	--	--	--	--	--	--	--	--	--
15-1017	09-22-88	--	--	--	--	--	--	--	--	--	--
15-1019	09-28-88	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	<0.2	<0.2	<0.2

NJ-WRD WELL NUMBER	DATE	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	1,2-TRANSDI CHLORO-ETHENE TOTAL (UG/L)	1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)
15-0375	09-28-88	--	--	--	--	--	--	--	--	--
15-0566	09-26-88	--	--	--	--	--	--	--	--	--
15-0619	09-15-88	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
15-0726	09-20-88	1.6	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
15-0733	09-29-88	--	--	--	--	--	--	--	--	--
15-0734	08-26-88	--	--	--	--	--	--	--	--	--
15-0735	09-23-88	--	--	--	--	--	--	--	--	--
15-0743	09-26-88	--	--	--	--	--	--	--	--	--
	02-16-89	--	--	--	--	--	--	--	--	--
15-0752	09-29-88	--	--	--	--	--	--	--	--	--
15-0754	09-19-88	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
15-0759	09-07-88	--	--	--	--	--	--	--	--	--
15-0764	09-27-88	--	--	--	--	--	--	--	--	--
15-0785	09-19-88	--	--	--	--	--	--	--	--	--
15-0791	09-15-88	--	--	--	--	--	--	--	--	--
15-0793	09-09-88	--	--	--	--	--	--	--	--	--
15-0801	08-25-88	--	--	--	--	--	--	--	--	--
15-0802	09-30-88	--	--	--	--	--	--	--	--	--
15-0804	09-09-88	--	--	--	--	--	--	--	--	--
15-0805	09-20-88	--	--	--	--	--	--	--	--	--
15-0810	09-08-88	--	--	--	--	--	--	--	--	--
15-0812	08-24-88	--	--	--	--	--	--	--	--	--
15-0829	09-22-88	--	--	--	--	--	--	--	--	--
15-0831	09-14-88	--	--	--	--	--	--	--	--	--
15-1016	09-20-88	--	--	--	--	--	--	--	--	--
15-1017	09-22-88	--	--	--	--	--	--	--	--	--
15-1019	09-28-88	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

GLOUCESTER COUNTY

NJ-WRD WELL NUMBER	DATE	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	1,2-DIBROMO ETHANE WATER WHOLE TOTAL (UG/L)	XYLENE TOTAL WATER WHOLE TOT REC (UG/L)
15-0375	09-28-88	--	--	--	--	--	--	--	--	--
15-0566	09-26-88	--	--	--	--	--	--	--	--	--
15-0619	09-15-88	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	--	<0.2
15-0726	09-20-88	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
15-0733	09-29-88	--	--	--	--	--	--	--	--	--
15-0734	08-26-88	--	--	--	--	--	--	--	--	--
15-0735	09-23-88	--	--	--	--	--	--	--	--	--
15-0743	09-26-88	--	--	--	--	--	--	--	--	--
	02-16-89	--	--	--	--	--	--	--	--	--
15-0752	09-29-88	--	--	--	--	--	--	--	--	--
15-0754	09-19-88	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	--	<0.2
15-0759	09-07-88	--	--	--	--	--	--	--	--	--
15-0764	09-27-88	--	--	--	--	--	--	--	--	--
15-0785	09-19-88	--	--	--	--	--	--	--	--	--
15-0791	09-15-88	--	--	--	--	--	--	--	--	--
15-0793	09-09-88	--	--	--	--	--	--	--	--	--
15-0801	08-25-88	--	--	--	--	--	--	--	--	--
15-0802	09-30-88	--	--	--	--	--	--	--	--	--
15-0804	09-09-88	--	--	--	--	--	--	--	--	--
15-0805	09-20-88	--	--	--	--	--	--	--	--	--
15-0810	09-08-88	--	--	--	--	--	--	--	--	--
15-0812	08-24-88	--	--	--	--	--	--	--	--	--
15-0829	09-22-88	--	--	--	--	--	--	--	--	--
15-0831	09-14-88	--	--	--	--	--	--	--	--	--
15-1016	09-20-88	--	--	--	--	--	--	--	--	--
15-1017	09-22-88	--	--	--	--	--	--	--	--	--
15-1019	09-28-88	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

\# Total depth of well

* Laboratory determination

Aquifer Unit:
121CKKD - Kirkwood-Cohansey aquifer system

QUALITY OF GROUND WATER - SALTWATER MONITORING NETWORK
WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
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
15-361	GLASSBORO WD	GWD 5	394141	750710	140	610 - 657	211MRPAU
15-385	PITMAN WD	PWD P4	394345	750804	125	520*	211MRPAU
15-130	SOUTH JERSEY WC	SJWC 3	394408	751330	35	234 - 265	211MRPAU
15-236	SWEDESBORO WD	SBWD 3	394434	751843	75	241 - 312	211MRPAM
15-137	PURELAND WC	PURE 2(3-1973)	394535	752054	37	158 - 208	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
15-192	MANTUA TWP MUA	MTMUA 5	394641	751109	88	315 - 337	211MRPAU
15-194	MANTUA TWP MUA	MTMUA 4	394732	751037	10	233 - 265	211MRPAU
15-348	GREENWICH TWP WD	GTWD 6	394910	751541	20	105 - 135	211MRPAM
15-283	SHELL CHEM CO	SHELL 3	394919	751256	30	358 - 383	211MRPAL

NJ-WRD WELL NUMBER	SITE OWNER	LOCAL IDENTIFIER	DATE OF SAMPLE	TEMPER-ATURE (DEG C)	SPE-CIFIC CONDUCT-ANCE (US/CM)	PH (UNITS)	CHLORIDE DIS-SOLVED (MG/L AS CL)
15-001	CLAYTON WD	CWD 3	8/12/1988	20.0	1,010	8.4	140
15-361	GLASSBORO WD	GWD 5	8/12/1988	22.0	700	8.5	64
15-385	PITMAN WD	PWD P4	8/12/1988	17.0	580	8.3	46
15-130	SOUTH JERSEY WC	SJWC 3	8/12/1988	15.0	860	8.1	170
15-236	SWEDESBORO WD	SBWD 3	8/15/1988	15.0	350	7.2	39
15-137	PURELAND WC	PURE 2(3-1973)	8/19/1988	14.0	340	6.8	15
15-144	PURELAND WC	1-1973	8/19/1988	14.0	135	6.4	28
15-191	MANTUA TWP MUA	MTMUA 2	8/12/1988	15.0	600	8.2	26
15-192	MANTUA TWP MUA	MTMUA 5	8/12/1988	15.0	480	8.2	47
15-194	MANTUA TWP MUA	MTMUA 4	8/12/1988	15.0	500	7.9	38
15-348	GREENWICH TWP WD	GTWD 6	8/29/1988	13.5	280	4.0	13
15-283	SHELL CHEM CO	SHELL 3	8/15/1988	15.0	---	7.8	140

* 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

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

HUNTERDON COUNTY

NJ-WRD WELL NUMBER	SITE OWNER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	ELEV. LAND SURF. (FT. NGVD)	OPEN OR SCREENED INTERVAL (FT.)	AQUIFER UNIT
19-0055	GRIESER, THOMAS	GRIESER 1	402055	0745526	390	52 - 430	231BRCK
19-0074	WEST AMWELL TWP	MUNICIPAL BLDG 1	402341	0745436	290	30.33 - 107	231BRCK
19-0017	VAN SCOTEN, TERRY	VAN SCOTEN 1	402909	0750032	480	50 - 450	231BRCK

NJ-WRD WELL NUMBER	DATE	TEMPERATURE WATER (DEG C)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	HARDNESS TOTAL (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)
19-0055	06-09-88	13.0	395	8.0	170	50	11	13	3.5	187
19-0074	03-09-88	13.5	610	6.5	270	80	18	11	1.9	205
19-0017	03-08-88	12.0	689	9.4	8	1.8	0.91	160	1.8	328

NJ-WRD WELL NUMBER	DATE	CARBONATE IT-FLD (MG/L AS CO3)	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)
19-0055	06-09-88	<1.0	157	42	3.9	0.7	24	240	<0.01	<0.1
19-0074	03-09-88	<1.0	167	52	39	0.1	26	342	<0.01	3.1
19-0017	03-08-88	37	330	0.6	18	1.4	10	393	<0.01	<0.1

NJ-WRD WELL NUMBER	DATE	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHOROUS DISSOLVED (MG/L AS P)	PHOSPHOROUS 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)
19-0055	06-09-88	0.07	0.3	<0.01	<0.01	10	2	<1	5
19-0074	03-09-88	<0.01	<0.2	0.02	<0.01	<10	9	2	1
19-0017	03-08-88	<0.01	<0.2	0.04	0.01	<10	<1	3	<1

NJ-WRD WELL NUMBER	DATE	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)
19-0055	06-09-88	3	37	<5	68	<0.1	220	0.7	3
19-0074	03-09-88	3	<3	<5	2	<0.1	23	0.7	2
19-0017	03-08-88	<1	3	<5	1	<0.1	<3	0.4	2

Aquifer Unit:
231BRCK - Brunswick Group (undifferentiated)

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

MERCER COUNTY

NJ-WRD WELL NUMBER	SITE OWNER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	ELEV. LAND SURF. (FT. NGVD)	OPEN OR SCREENED INTERVAL (FT.)	AQUIFER UNIT
21-0244	HOPEWELL TWP MUA	WASH CROSSING ESTATES	401846	0745046	210	105 - 235	231BRCK

NJ-WRD WELL NUMBER	DATE	TEMPERATURE WATER (DEG C)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	HARDNESS TOTAL (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)	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)
21-0244	08-15-88	13.0	449	7.6	200	50	18	13	0.9	152	33

NJ-WRD WELL NUMBER	DATE	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)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)
21-0244	08-15-88	13	0.1	20	250	<0.01	2.2	<0.01	0.2	0.03	10

NJ-WRD WELL NUMBER	DATE	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)
21-0244	08-15-88	4	220	<0.5	1	<5	<3	<10	3	<10	15

NJ-WRD WELL NUMBER	DATE	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	PHENOLS TOTAL (UG/L)
21-0244	08-15-88	1	<0.1	20	<10	<1	470	<6	26	0.6	7

NJ-WRD WELL NUMBER	DATE	DICHLOROBROMOMETHANE TOTAL (UG/L)	CARBONTETRACHLORIDE TOTAL (UG/L)	1,2-DICHLOROETHANE TOTAL (UG/L)	BROMOFORM TOTAL (UG/L)	CHLORODIBROMOMETHANE TOTAL (UG/L)	CHLOROFORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLOROBENZENE TOTAL (UG/L)
21-0244	08-15-88	<0.2	<0.2	<0.2	0.6	0.2	<0.2	<0.2	<0.2	<0.2

NJ-WRD WELL NUMBER	DATE	CHLOROETHANE TOTAL (UG/L)	ETHYLBENZENE TOTAL (UG/L)	METHYLBROMIDE TOTAL (UG/L)	METHYLCHLORIDE TOTAL (UG/L)	METHYLENE CHLORIDE TOTAL (UG/L)	TETRACHLOROETHYLENE TOTAL (UG/L)	TRICHLOROFLUOROMETHANE TOTAL (UG/L)	1,1-DICHLOROETHANE TOTAL (UG/L)	1,1-DICHLOROETHYLENE TOTAL (UG/L)
21-0244	08-15-88	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

NJ-WRD WELL NUMBER	DATE	1,1,1-TRICHLOROETHANE TOTAL (UG/L)	1,1,2-TRICHLOROETHANE TOTAL (UG/L)	1,1,2,2 TETRACHLOROETHANE TOTAL (UG/L)	1,2-DICHLOROBENZENE TOTAL (UG/L)	1,2-DICHLOROPROPANE TOTAL (UG/L)	1,2-TRANSDICHLOROETHENE TOTAL (UG/L)	1,3-DICHLOROPROPENE TOTAL (UG/L)	1,3-DICHLOROBENZENE TOTAL (UG/L)	1,4-DICHLOROBENZENE TOTAL (UG/L)
21-0244	08-15-88	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

MERCER COUNTY

NJ-WRD WELL NUMBER	DATE	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	1,2-DIBROMO ETHYL-ENE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	XYLENE TOTAL WATER WHOLE TOT REC (UG/L)
21-0244	08-15-88	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

Aquifer Unit:
231BRCK - Brunswick Formation (undifferentiated)

QUALITY OF GROUND WATER - SALTWATER MONITORING NETWORK
WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
SALEM COUNTY

NJ-WRD WELL NUMBER	SITE OWNER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	ELEV. LAND SURF. (FT. NGVD	SCREENED INTERVAL (FT.)	AQUIFER UNIT
33-032	PUBLIC SERV E-G	PW 3	392740	753201	20	242 - 293	211MLRW
33-364	PUBLIC SERV E-G	PW5	392743	753158	17	765 - 840	211MRPAM
33-457	PUBLIC SEV E-G	PSEG 6	392751	753207	20	1115 - 1135	211MRPAM
33-108	US ARMY	FINNS POINT	393641	753322	7	290 - 319	211MRPAM
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
33-122	ATL CITY ELEC	DEEPWATER 3R	394045	753018	10	165 - 235	211MRPAM
33-137	E I DUPONT	DRINKWATER 8	394112	753028	14	317 - 347	211MRPAL
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
33-083	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 (US/CM)	PH (UNITS)	CHLORIDE DIS-SOLVED (MG/L AS CL)
33-032	PUBLIC SERV E-G	PW 3	8/16/1988	17.0	790	8.0	150
33-364	PUBLIC SERV E-G	PW5	8/16/1988	20.0	400	8.0	31
33-457	PUBLIC SEV E-G	PSEG 6	8/16/1988	20.0	840	7.9	190
33-108	US ARMY	FINNS POINT	8/19/1988	14.5	520	7.5	100
33-112	PENNSVILLE TWP WD	PTWD 4	8/16/1988	14.5	---	7.1	11
33-354	WOODSTOWN WD	WWD 2	8/16/1988	16.0	940	8.1	210
33-362	WOODSTOWN WD	WWD 3	8/16/1988	17.0	790	8.1	150
33-459	RICHMAN ICE CRM	1A	8/17/1988	15.0	440	8.0	16
33-118	PENNSVILLE TWP WD	PTWD 1	8/16/1988	14.5	440	7.5	62
33-119	PENNSVILLE TWP WD	PTWD 2	8/16/1988	14.5	550	7.1	120
33-122	ATL CITY ELEC	DEEPWATER 3R	8/17/1988	15.0	400	7.1	49
33-137	E I DUPONT	DRINKWATER 8	8/17/1988	15.0	520	7.6	76
33-460	PENNS GROVE WSC	PGWSC 1A	8/17/1988	14.0	175	5.2	12
33-346	PENNS GROVE WSC	LAYNE 1	8/17/1988	15.0	950	7.5	220
33-083	B F GOODRICH CO	#9 (PW-1)	8/17/1988	14.0	200	6.1	31
33-085	B F GOODRICH CO	#6 (PW-2)	8/17/1988	14.0	225	6.0	33
33-086	B F GOODRICH CO	#4 (PW-3)	8/17/1988	15.0	1,200	7.1	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

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October 1, 1978

FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI).

Multiply inch-pound units	By	To obtain SI units
	Length	
inches (in)	2.54×10^{1}	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^{0}	kilometers (km)
	Area	
acres	4.047×10^{3}	square meters (m^2)
	4.047×10^{-1}	square hectometers (hm^2)
	4.047×10^{-3}	square kilometers (km^2)
square miles (mi^2)	2.590×10^{0}	square kilometers (km^2)
	Volume	
gallons (gal)	3.785×10^{0}	liters (L)
	3.785×10^{0}	cubic decimeters (dm^3)
	3.785×10^{-3}	cubic meters (m^3)
million gallons	3.785×10^{3}	cubic meters (m^3)
	3.785×10^{-3}	cubic hectometers (hm^3)
cubic feet (ft^3)	2.832×10^{1}	cubic decimeters (dm^3)
	2.832×10^{-2}	cubic meters (m^3)
cfs-days	2.447×10^{3}	cubic meters (m^3)
	2.447×10^{-3}	cubic hectometers (hm^3)
acre-feet (acre-ft)	1.233×10^{3}	cubic meters (m^3)
	1.233×10^{-3}	cubic hectometers (hm^3)
	1.233×10^{-6}	cubic kilometers (km^3)
	Flow	
cubic feet per second (ft^3/s)	2.832×10^{1}	liters per second (L/s)
	2.832×10^{1}	cubic decimeters per second (dm^3/s)
	2.832×10^{-2}	cubic meters per second (m^3/s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm^3/s)
	6.309×10^{-5}	cubic meters per second (m^3/s)
million gallons per day	4.381×10^{1}	cubic decimeters per second (dm^3/s)
	4.381×10^{-2}	cubic meters per second (m^3/s)
	Mass	
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

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