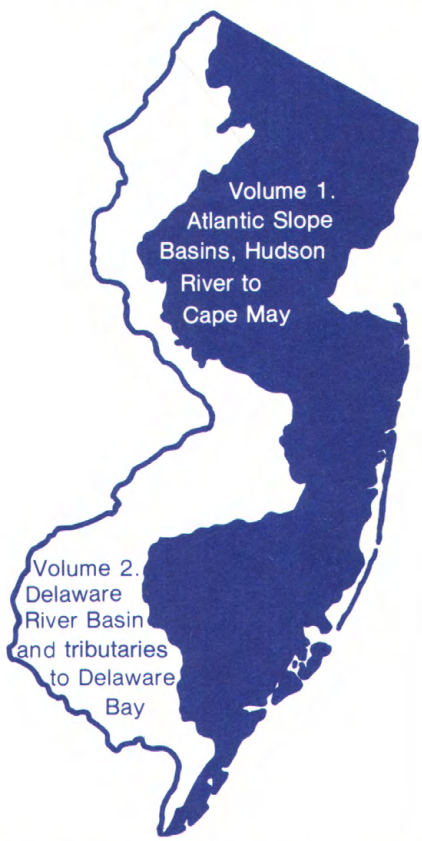
Water Resources Data New Jersey Water Year 1986

Volume 1. Atlantic Slope Basins Hudson River to Cape May



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NJ-86-1
Prepared in cooperation with the New Jersey Department of Environmental Protection and with other agencies

CALENDAR FOR WATER YEAR 1986

1985

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1986

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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 1986". This report was prepared by the U.S. Geological Survey, in cooperation with the State of New Jersey and several local and federal government agencies.

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

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

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

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

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

Sincerely,

William R. Bauersfeld

William R. Bauersfeld, Chief
Hydrologic Data Assessment Program

Water Resources Data New Jersey Water Year 1986

Volume 1. Atlantic Slope Basins Hudson River to Cape May

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

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NJ-86-1
Prepared in cooperation with the New Jersey Department of Environmental Protection and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

DONALD PAUL HODEL, Secretary

GEOLOGICAL SURVEY

Dallas L. Peck, Director

For information on the water program in New Jersey write to

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

1987

PREFACE

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

Hydrologic data for New Jersey are contained in 2 volumes:

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

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

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

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

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

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

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

50272-101

REPORT DOCUMENTATION PAGE	1. REPORT NO. USGS/WRD/HD-87/260	2.	3. Recipient's Accession No.
4. Title and Subtitle Water Resources Data - New Jersey, Water Year 1986 Volume 1. Atlantic Slope Basins, Hudson River to Cape May			5. Report Date August 1987 6.
7. Author(s) W. R. Bauersfeld, E. W. Moshinsky, E. A. Pustay, W. D. Jones			8. Performing Organization Rept. No. USGS-WRD, NJ-86-1
9. Performing Organization Name and Address U.S. Geological Survey, Water Resources Division Mountain View Office Park 810 Bear Tavern Road, Suite 206 West Trenton, New Jersey 08628			10. Project/Task/Work Unit No. 11. Contract(C) or Grant(G) No. (C) (G)
12. Sponsoring Organization Name and Address U.S. Geological Survey, Water Resources Division Mountain View Office Park 810 Bear Tavern Road, Suite 206 West Trenton, New Jersey 08628			13. Type of Report & Period Covered Annual - Oct. 1, 1985 to Sept. 30, 1986 14.

15. Supplementary Notes

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

16. Abstract (Limit: 200 words)

Water Resources data for the 1986 water year for New Jersey consist of records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; and water levels and water quality of ground water. This volume of the report contains discharge records for 77 gaging stations; tide summaries for 1 station; stage and contents for 15 lakes and reservoirs; water quality for 60 surface-water sites and 150 wells; and water levels for 39 observation wells. Also included are data for 41 crest-stage partial-record stations, 12 tidal crest-stage gages, and 49 low-flow partial-record stations. Additional water data were collected at various sites, not part of the systematic data collection program, and are published as miscellaneous measurements. These data represent that part of the national water data system operated by U.S. Geological Survey and cooperating State and Federal agencies in New Jersey.

17. Document Analysis a. Descriptors

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

b. Identifiers/Open-Ended Terms

c. COSATI Field/Group

18. Availability Statement: No restriction on distribution. This report may be purchased from: National Technical Information Service, Springfield, VA 22161	19. Security Class (This Report) Unclassified	21. No. of Pages 344
	20. Security Class (This Page) Unclassified	22. Price

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

OPTIONAL FORM 272 (4-77)
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Department of Commerce

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

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

WATER RESOURCES DATA - NEW JERSEY, 1986

INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with State agencies, obtains a large amount of data pertaining to the water resources of New Jersey each water year. These data, accumulated during many water years, constitute a valuable data base for 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 77 gaging stations; tide summaries at 1 gaging station; stage and content at 15 lakes and reservoirs; water quality at 60 surface-water stations and 150 wells; and water levels at 39 observation wells. Records included for ground-water levels are only a part of those obtained during the year. Also included are data for 41 crest-stage partial-record stations and stage only at 12 tidal crest-stage gages. Locations of these sites are shown on figures 9, 10, 11, and 12. Additional water data were collected at various sites not involved in the systematic data-collection program. Discharge measurements were made at 49 low-flow partial-record stations. Miscellaneous data were collected at 90 measuring sites. These data represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in New Jersey.

This series of annual reports for New Jersey began with the 1961 water year with a report that contained only data relating to the quantities of surface water. For the 1964 water year, a similar report was introduced that contained only data relating to water quality. Beginning with the 1975 water year, the report format was changed to present, in one volume, data on quantities of surface water, quality of surface and ground water, and ground-water levels. Beginning with the 1977 water year, these data were published in two volumes.

Prior to introduction of this series and for several water years concurrent with it, water-resources data for New Jersey were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-Water Supply of the United States, Part 1B." For the 1961 through 1970 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States," and water levels for the 1935 through 1974 water years were published under the title "Ground-Water Levels in the United States." The above mentioned Water-Supply Papers may be consulted in the libraries of the principal cities of the United States and may be purchased from Distribution Branch, Text Products Section, U.S. Geological Survey, 604 South Pickett Street, Alexandria, VA 22304.

Publications similar to this report are published annually by the Geological Survey for all States. These official Survey reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report NJ-86-1." For archiving and general distribution, the reports for 1971-74 water years also are identified as water-data reports. These water-data reports are for sale in paper copy or in microfiche by the National Technical Information, Service, U.S. Department of Commerce, Springfield, VA 22161.

Additional information, including current prices, for ordering specific reports may be obtained from the District Chief at the address given on the back of the title page or by telephone (609) 771-3900.

COOPERATION

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

New Jersey Department of Environmental Protection, Richard T. Dewling, Commissioner.
  Division of Water Resources, George McCann, Director.
New Jersey Water Supply Authority, Rocco Ricci, Executive Director.
North Jersey District Water Supply Commission, Dean C. Noll, Chief Engineer.
Passaic Valley Water Commission, W.I. Inhoffer, General Superintendent and Chief Engineer.
County of Bergen, Edward R. Ranuska, Director of Public Works and County Engineer.
County of Camden, Barton Harrison, Chairman of Camden County Planning Board.
County of Morris, James Plante, Chairman of Morris County Municipal Utilities Authority.
County of Somerset, Thomas E. Decker, County Engineer, and Thomas Harris, Administrative Engineer.
Township of West Windsor, Larry Ellery, Chairman of Environmental Commission.

Assistance in the form of funds was given by the U.S. Army Corps of Engineers, in collecting records for 25 surface water stations, and by the U.S. Army Armament Research and Development Center for the collection of records at 3 surface-water stations and one water-quality monitoring station. 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 Regulating Commission licensee: Jersey Central Power and Light Company. 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.; Commonwealth Water Co.; Elizabethown Water Co.; Ewing-Lawrence Sewerage Authority; Hackensack Water Co.; Johns-Manville Products Corp.; Monmouth Consolidated Water Co.; and Jersey Central Power and Light Co.

Organizations that supplied data are acknowledged in station descriptions.

SUMMARY OF HYDROLOGIC CONDITIONS

Streamflow

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

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

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

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

Water Quality

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

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

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

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

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

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

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

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

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

Ground-Water levels

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

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

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

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

SPECIAL NETWORKS AND PROGRAMS

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

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

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

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

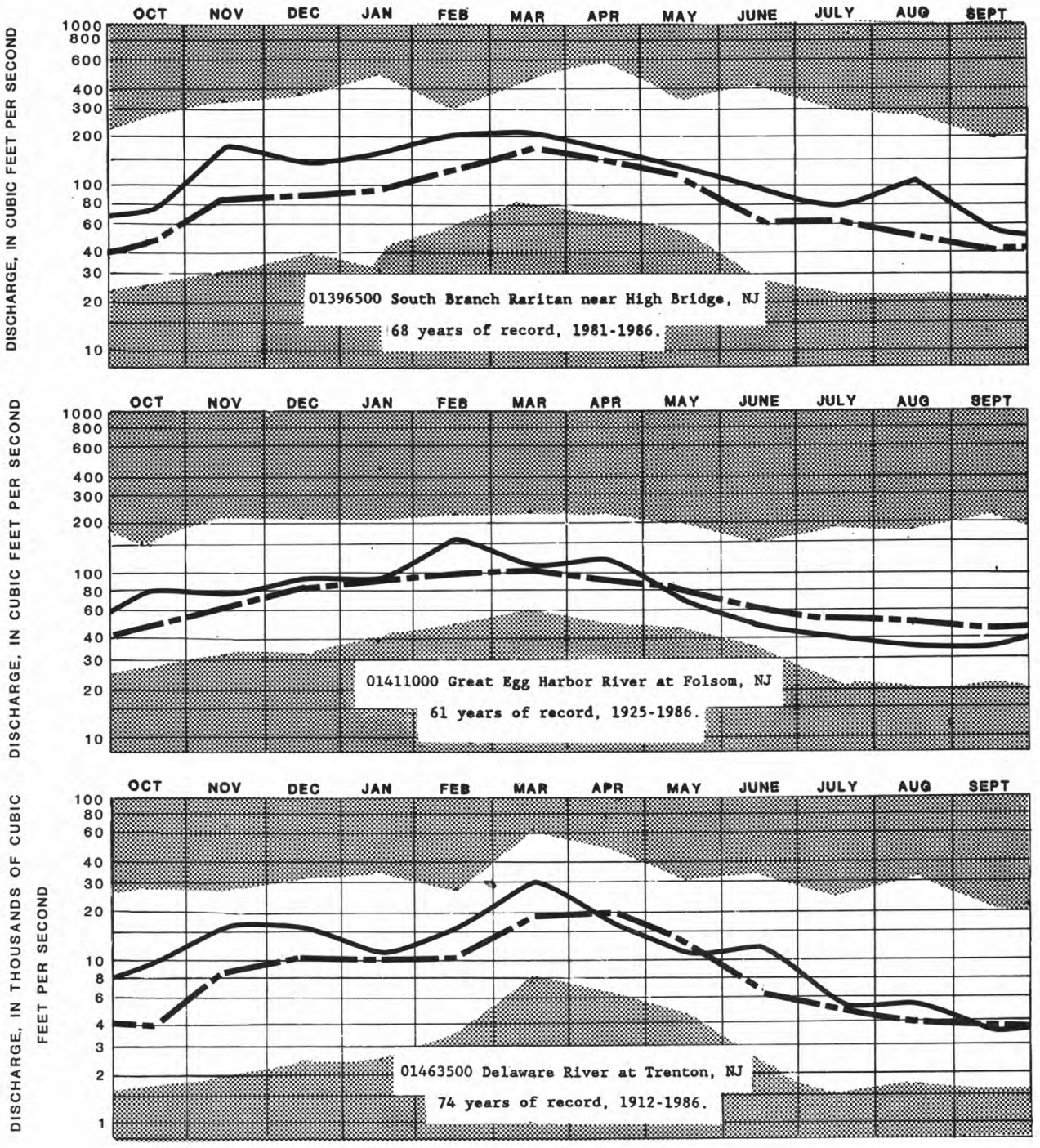
Tritium Network is a network of stations which has been established to provide baseline information on the occurrence of tritium in the Nation's surface waters. In addition to the surface-water stations in the network, tritium data are also obtained at a number of precipitation stations. The purpose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

EXPLANATION OF THE RECORDS

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

Station Identification Numbers

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



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

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

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

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

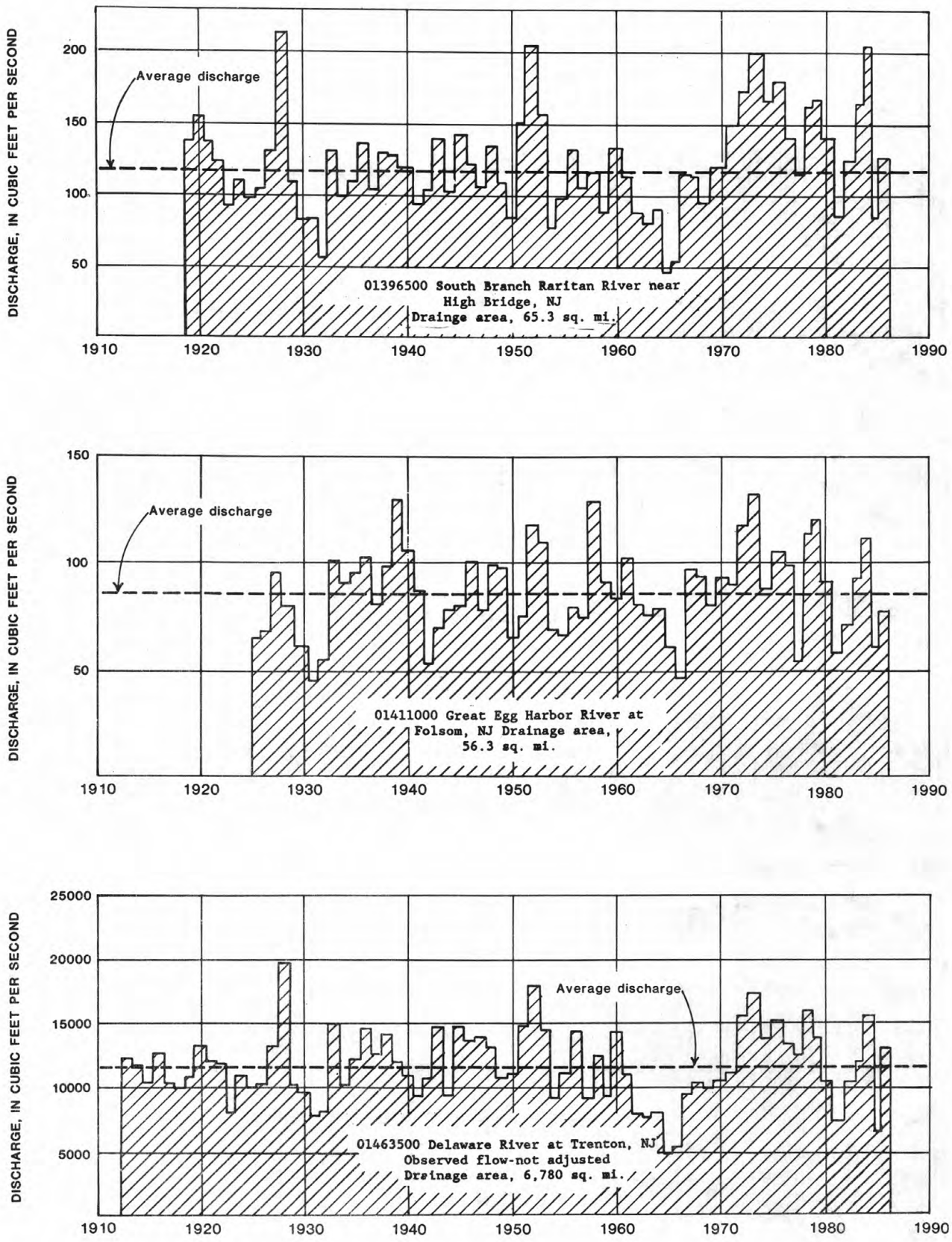


Figure 2.--Annual mean discharge at key gaging stations.

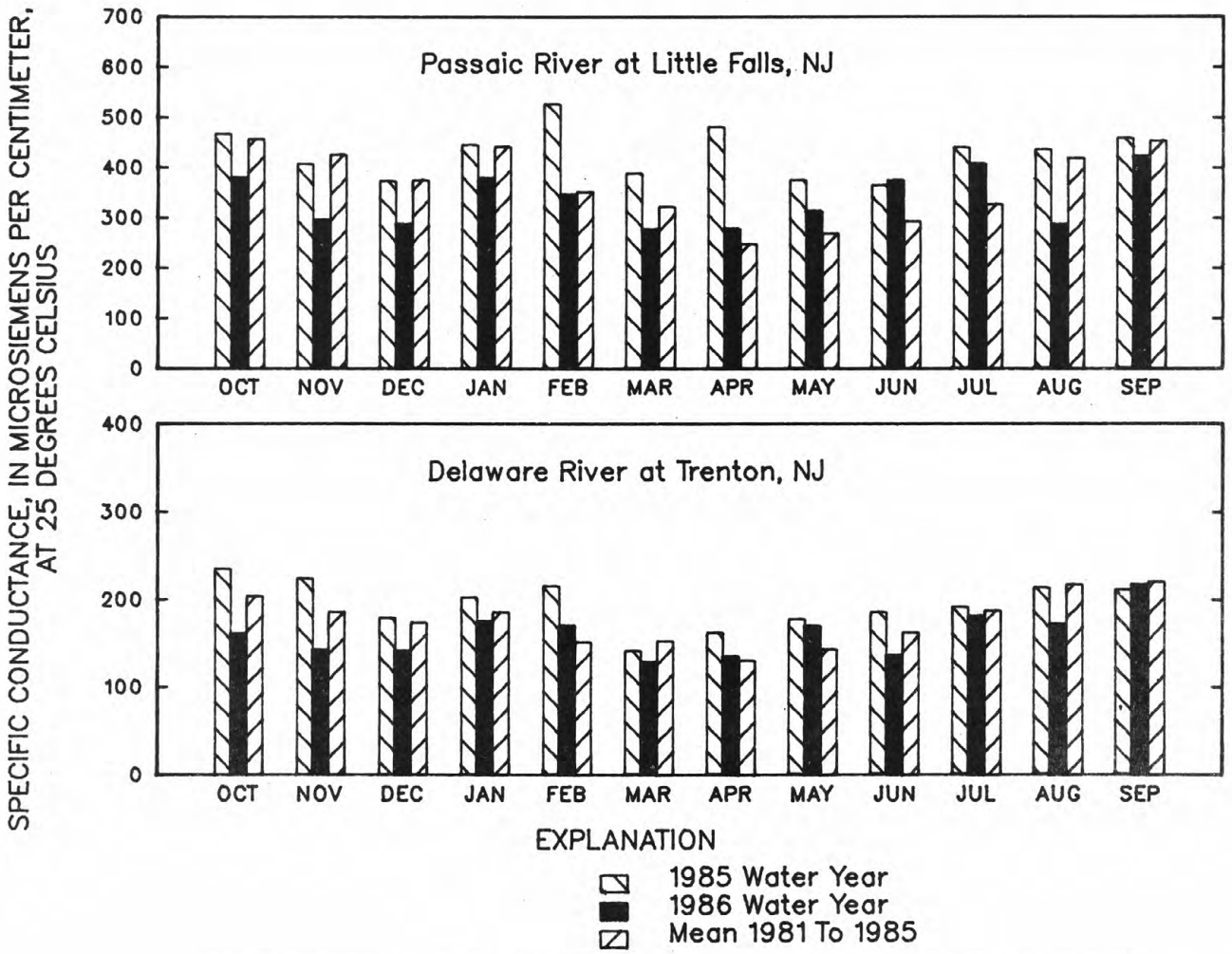


Figure 3.--Monthly mean specific conductance at Passaic River at Little Falls and Delaware River at Trenton.

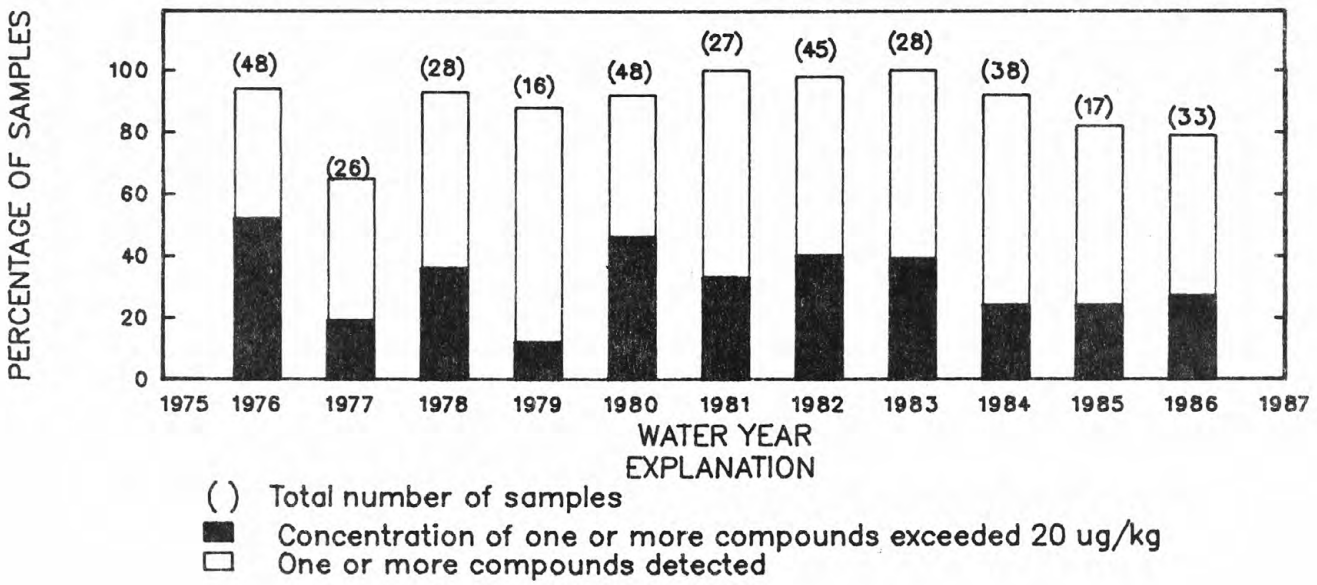


Figure 4.--Organochlorine compounds in bottom materials.

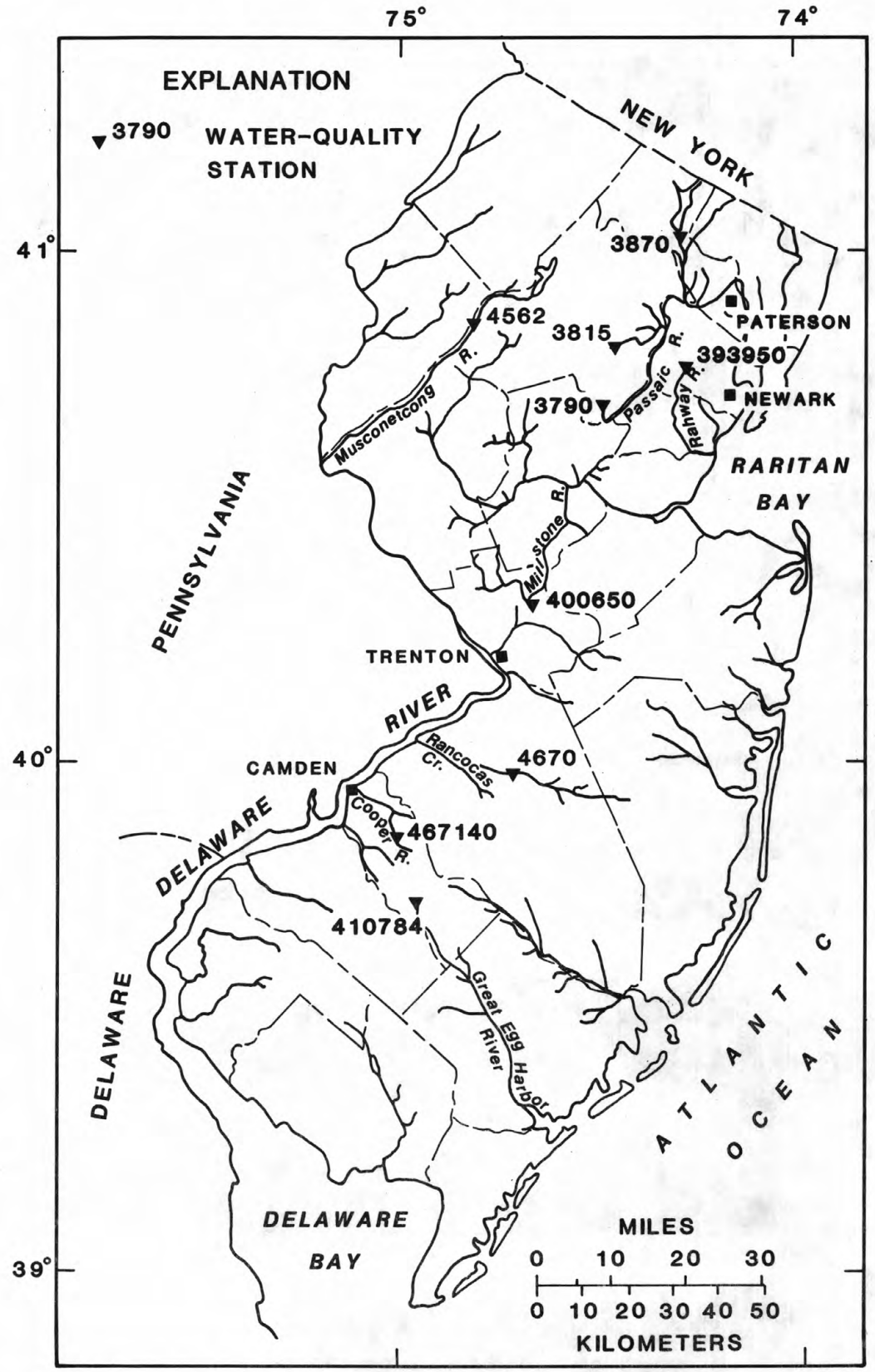
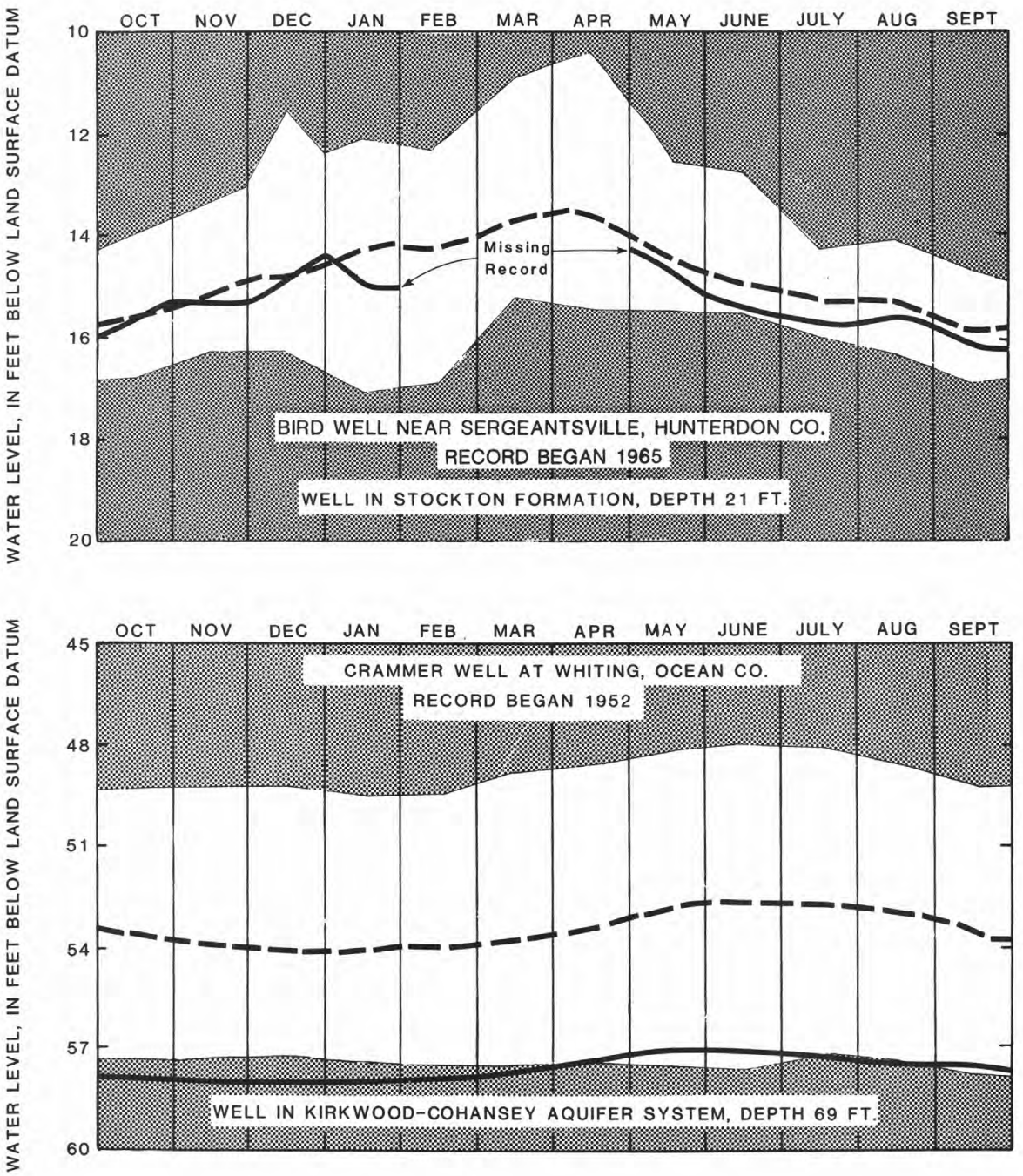


Figure 5.--Locations of sites with concentrations of Chlordane, DDD, DDE, DDT, or PCB's in bottom material greater than 20 µg/kg, 1986.

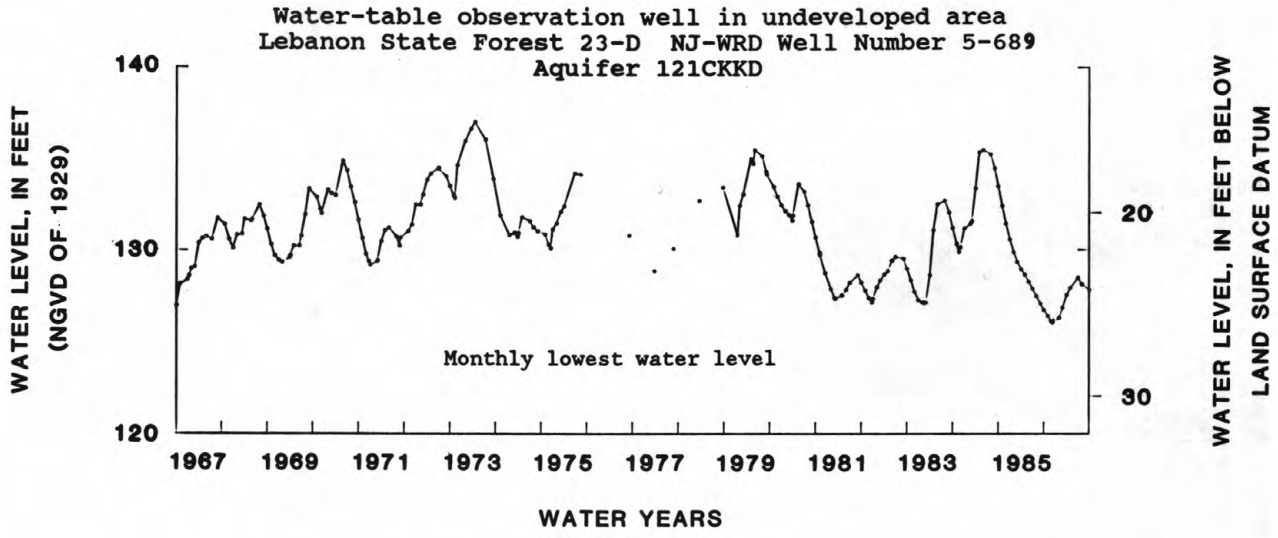


Unshaded area.--Indicates range between highest and lowest recorded monthly minimum water levels, prior to the current year.

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

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

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



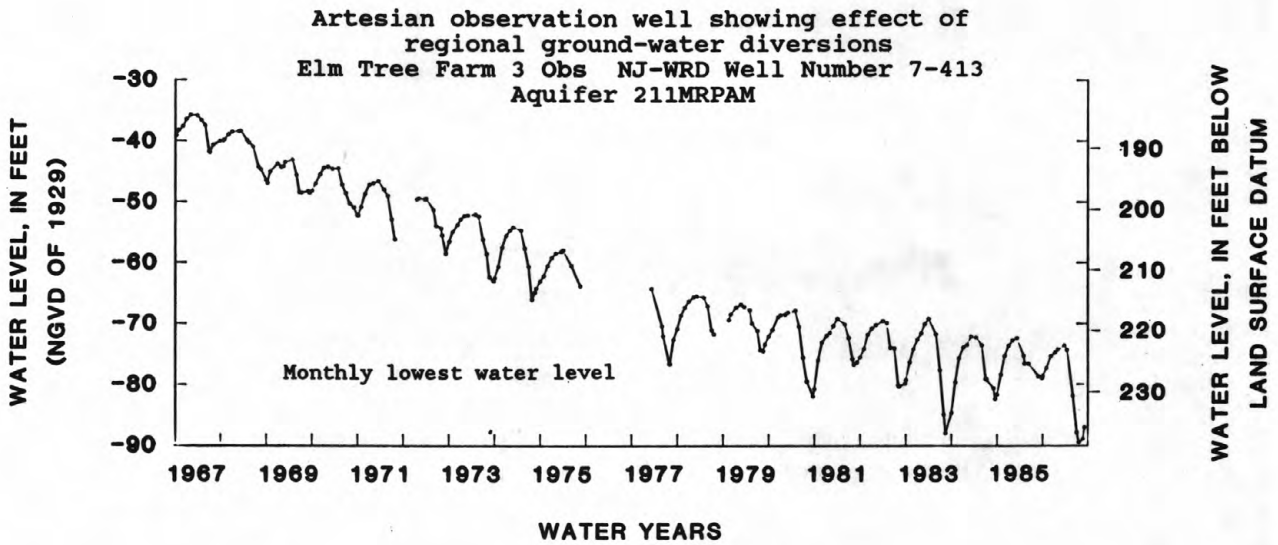


Figure 7.--Twenty-year hydrographs of one artesian and one water table observation well.

Downstream Order System

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

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

Latitude-Longitude System

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

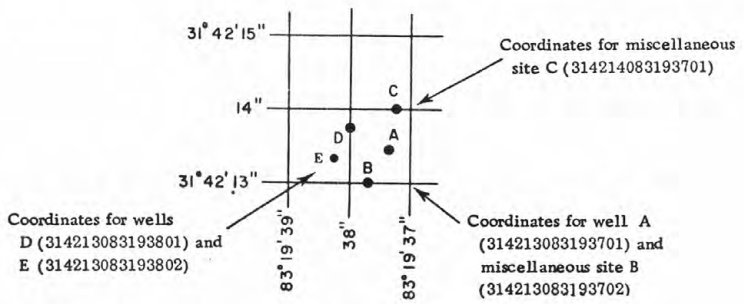


Figure 8. System for numbering wells and miscellaneous sites (latitude and longitude)

Records of Stage and Water Discharge

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

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

Data Collection and Computation

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

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

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

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

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

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

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

Data Presentation

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Identifying Estimated Daily Discharge

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

Accuracy of the Records

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

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

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

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

Other Records Available

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

Records of Surface-Water Quality

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

Classification of Records

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

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

Arrangement of Records

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

On-site Measurements and Sample Collection

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

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

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

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

Water Temperature

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

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

Sediment

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

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

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

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

Laboratory Measurments

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

Data Presentation

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

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

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

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

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

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

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

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

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

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

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

Remark Codes

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

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

Records of Ground-Water Levels

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

Data Collection and Computation

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

Tables of water-level data are presented by counties arranged in alphabetical order. The prime identification number for a given well is the 15-digit number that appears in the upper left corner of the table. The secondary identification number is the NJ-WRD well number, a hyphenated 6 digit identification number assigned to all New Jersey wells in the Ground Water Site Inventory (GWSI) data base. The first two digits are a code for the county in which the well is located and the last four digits are a sequence number. These NJ-WRD well numbers are being used now in the ground-water level descriptions, wells sampled for water quality analyses, and on the corresponding location maps in these reports.

Water-level records are obtained from direct measurments with a steel tape, from the punched tape of a water-level recorder, or from water-level extremes recorder. Beginning in the 1977 water year, water-level recorders were removed from some wells and replaced by water-level extremes recorders. The extremes are read from these recorders at about three month intervals, but the actual dates of occurrence of these extremes (highest and lowest water levels) are unknown. In these reports, the water-level extremes are given together with the manually measured water levels.

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

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

Data Presentation

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

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

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

WELL CHARACTERISTICS.--This entry describes the well in terms of depth, diameter, casing depth and/or screened interval, method of construction, use, and additional information such as casing breaks, collapsed screen, and other changes since construction.

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

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

REMARKS.--This entry describes factors that may influence the water level in a well or the measurement of the water level. It should identify wells that also are water-quality observation wells, and may be used to acknowledge the assistance of local (non-Survey) observers.

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

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

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

Records of Ground-Water Quality

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

Data Collection and Computation

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

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

Data Presentation

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

CURRENT WATER RESOURCES PROJECTS IN NEW JERSEY

The Geological Survey is currently involved in a number of hydrologic investigations in the State of New Jersey. The following is a list of these investigations. Results are published at the conclusion of short-term projects or periodically in the case of long-term projects. Hydrologic data from these projects are entered into the Watstore data base. Subsequent sections contain information on recent publications and on Watstore.

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

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

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

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

Geohydrologic Investigations at United States Environmental Protection Agency Superfund sites.

Geohydrology at Picatinny Arsenal in Morris County, New Jersey.

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

Geophysical characteristics of aquifers in New Jersey. *

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

Ground-water data collection network. *

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

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

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

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

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

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

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

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

New Jersey water-use data system. *

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

Quality of water data collection network. *

Regionalization of low flows for New Jersey Streams. *

Simulation of multilayer Coastal Plain aquifer system of New Jersey.

Surface-water data collection network. *

Water-use data system for the Delaware River Basin.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

ACCESS TO WATSTORE DATA

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

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

General inquiries about WATSTORE may be directed to:

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

DEFINITION OF TERMS

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

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

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

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

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

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

Aquifer codes and geologic names:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Bottom material: See Bed material.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Organism is any living entity.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Milligrams of carbon per area or volume per unit time [mg C/(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 [mgO /(m².time)] for periphyton and macrophytes and [mgO /(m³.time)] for phytoplankton are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light and dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Solute is any substance that is dissolved in water.

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

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

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

Substrate is the physical surface upon which an organism lives.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

DISCONTINUED GAGING STATIONS

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

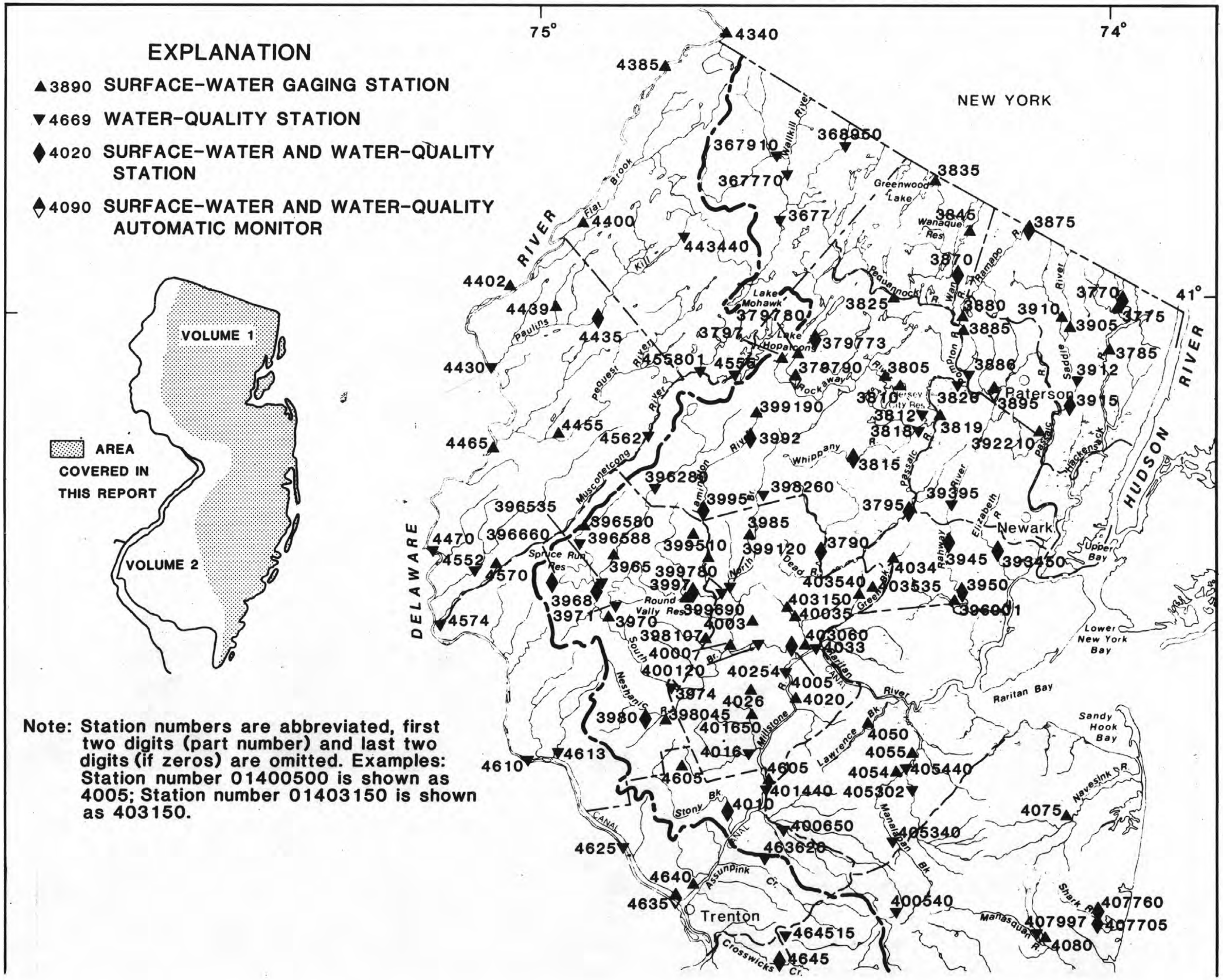
Station number	Station name	Drainage area (sq mi)	Period of record (water years)
01368720	Auxiliary outlet of Upper Greenwood Lake at Moe, NJ	------	1968-80
01378690	Passaic River near Bernardsville, NJ	8.83	1968-77
01379630	Russia Brook tributary at Milton, NJ	2.51	1969-71
01384000	Wanaque River at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

DISCONTINUED CONTINUOUS WATER-QUALITY STATIONS

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

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

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


EXPLANATION
▲3890 SURFACE-WATER GAGING STATION
▼4669 WATER-QUALITY STATION
◆4020 SURFACE-WATER AND WATER-QUALITY STATION
4090 SURFACE-WATER AND WATER-QUALITY AUTOMATIC MONITOR
VOLUME 1
VOLUME 2
AREA COVERED IN THIS REPORT
Note: Station numbers are abbreviated, first two digits (part number) and last two digits (if zeros) are omitted. Examples: Station number 01400500 is shown as 4005; Station number 01403150 is shown as 403150.
75°
74°
41°
NEW YORK
DELAWARE RIVER
HUDSON RIVER
Newark
Paterson
Trenton
Raritan Bay
Lower New York Bay
Upper Bay
Sandy Hook Bay

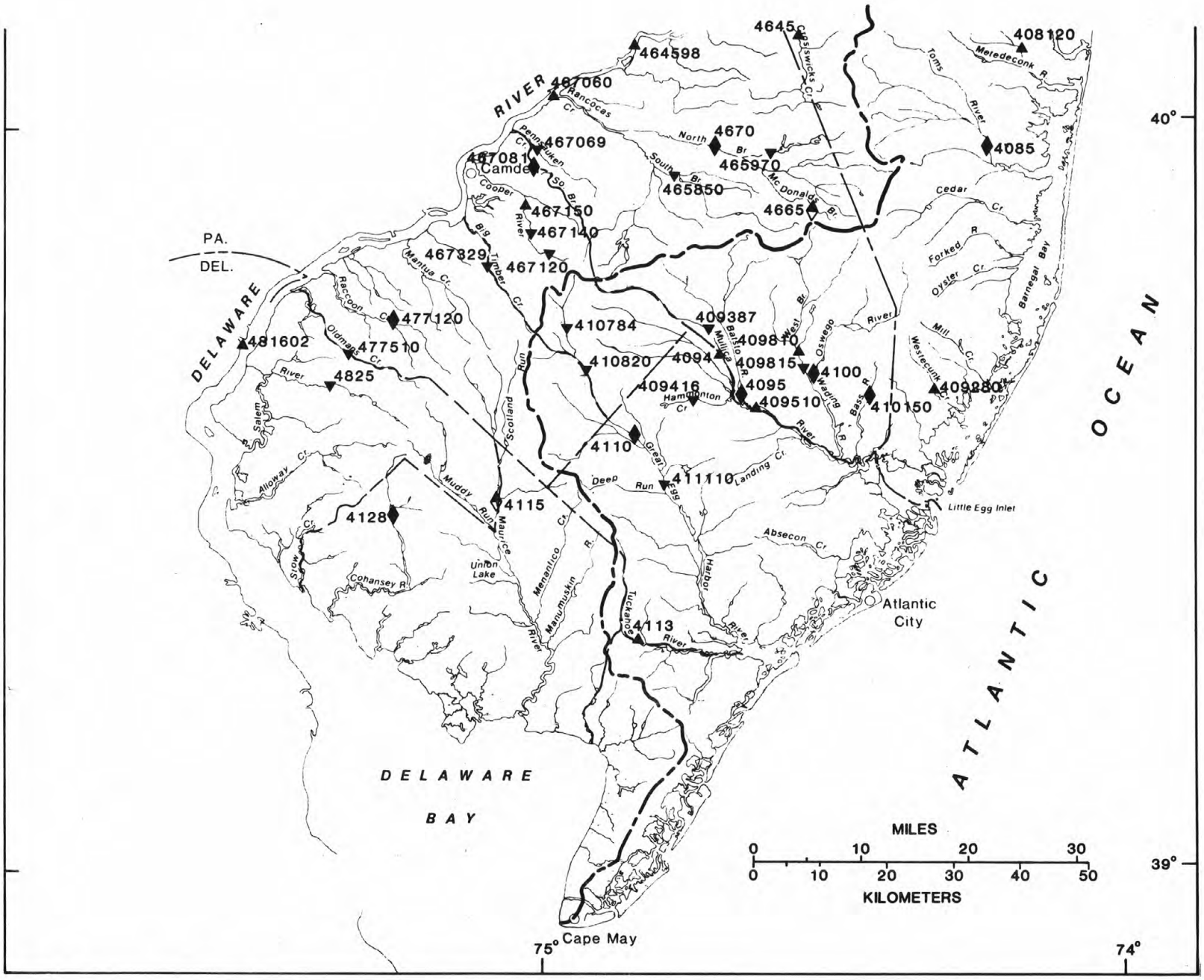
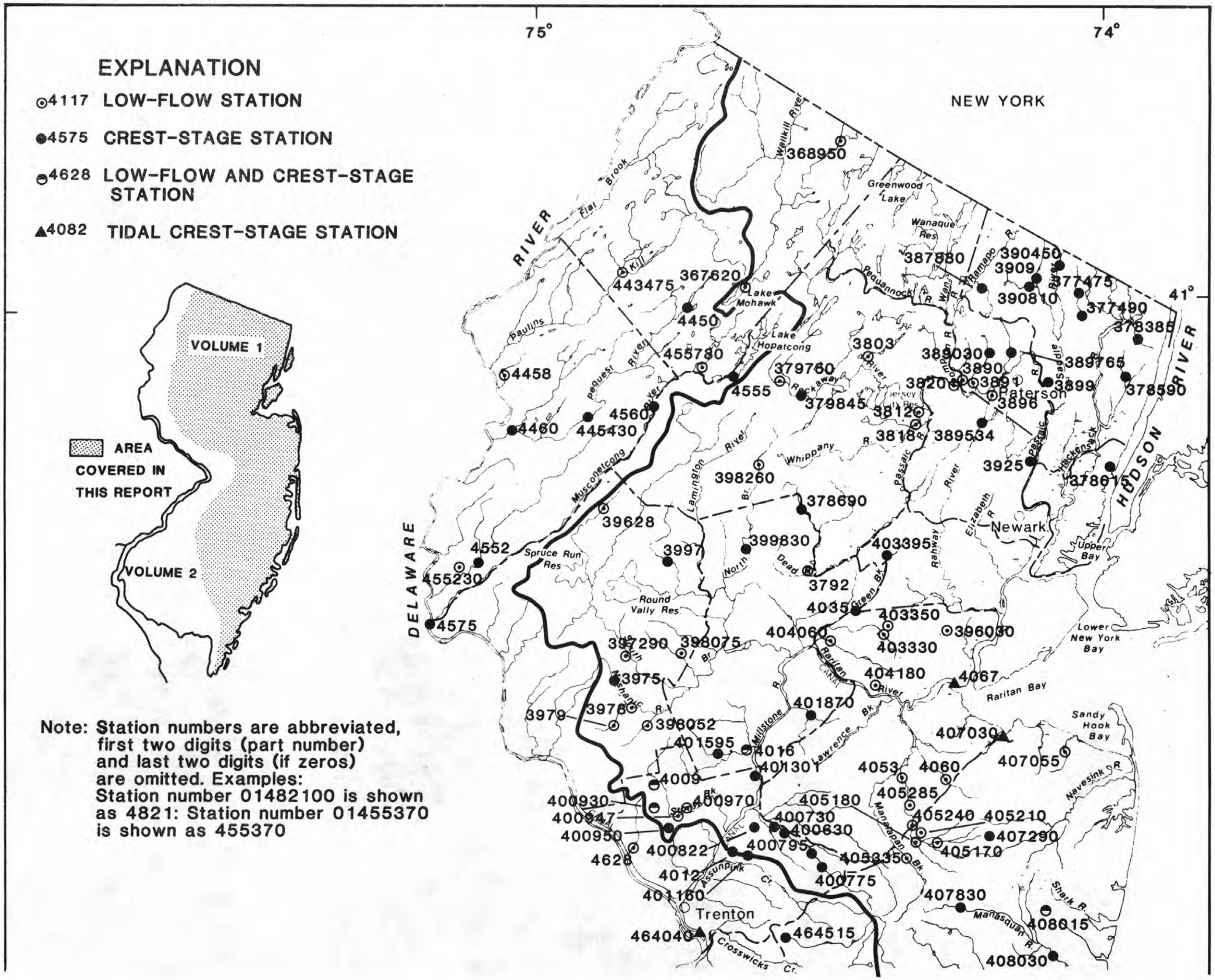


Figure 9.--Location of gaging stations and surface-water quality stations.


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
Lake Mohawk
Lake Hopatcong
Greenwood Lake
Wanaque Res
Spruce Run Res
Round Vally Res
Paterson
Newark
Trenton
Upper Bay
Lower New York Bay
Raritan Bay
Sandy Hook Bay
368950
367620
443475
4450
455730
4555
4458
4560
445430
4460
39628
4552
455230
4575
378690
3792
398260
399830
3997
403395
403350
403330
404060
404180
396030
4067
401870
407030
407055
4053
4060
405285
405240
405210
407290
405170
405335
400775
407830
408015
408030
464515
464040
401160
4628
4009
400930
400947
400950
400822
400970
401301
4016
401595
398052
3976
3979
33975
397290
398075
400730
400630
400795
405180
379760
379845
3803
3812
3818
389534
3925
378615
389765
3899
378590
378385
377490
377475
390810
390450
3909
387580
389030
3890
3891
3820
3896

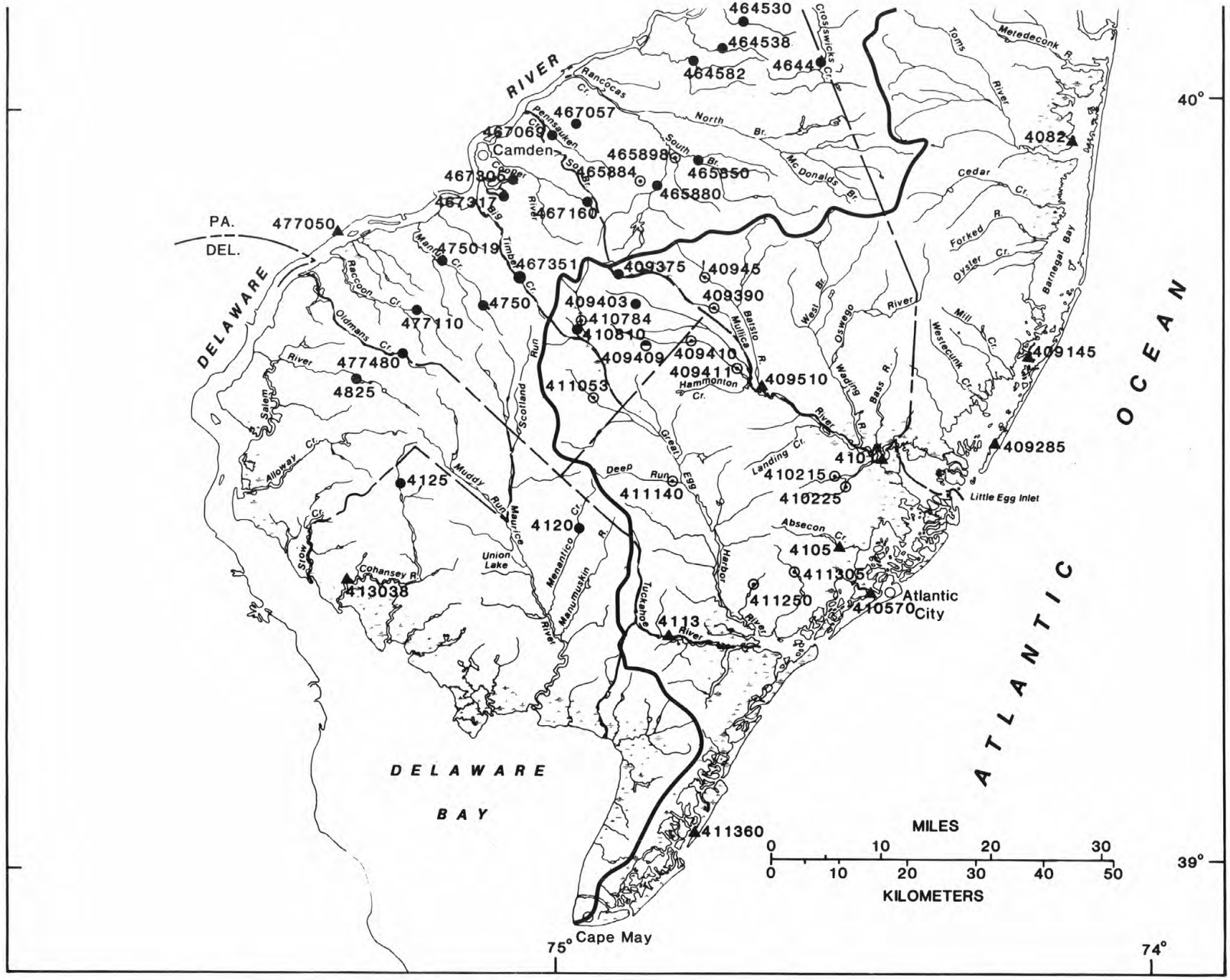
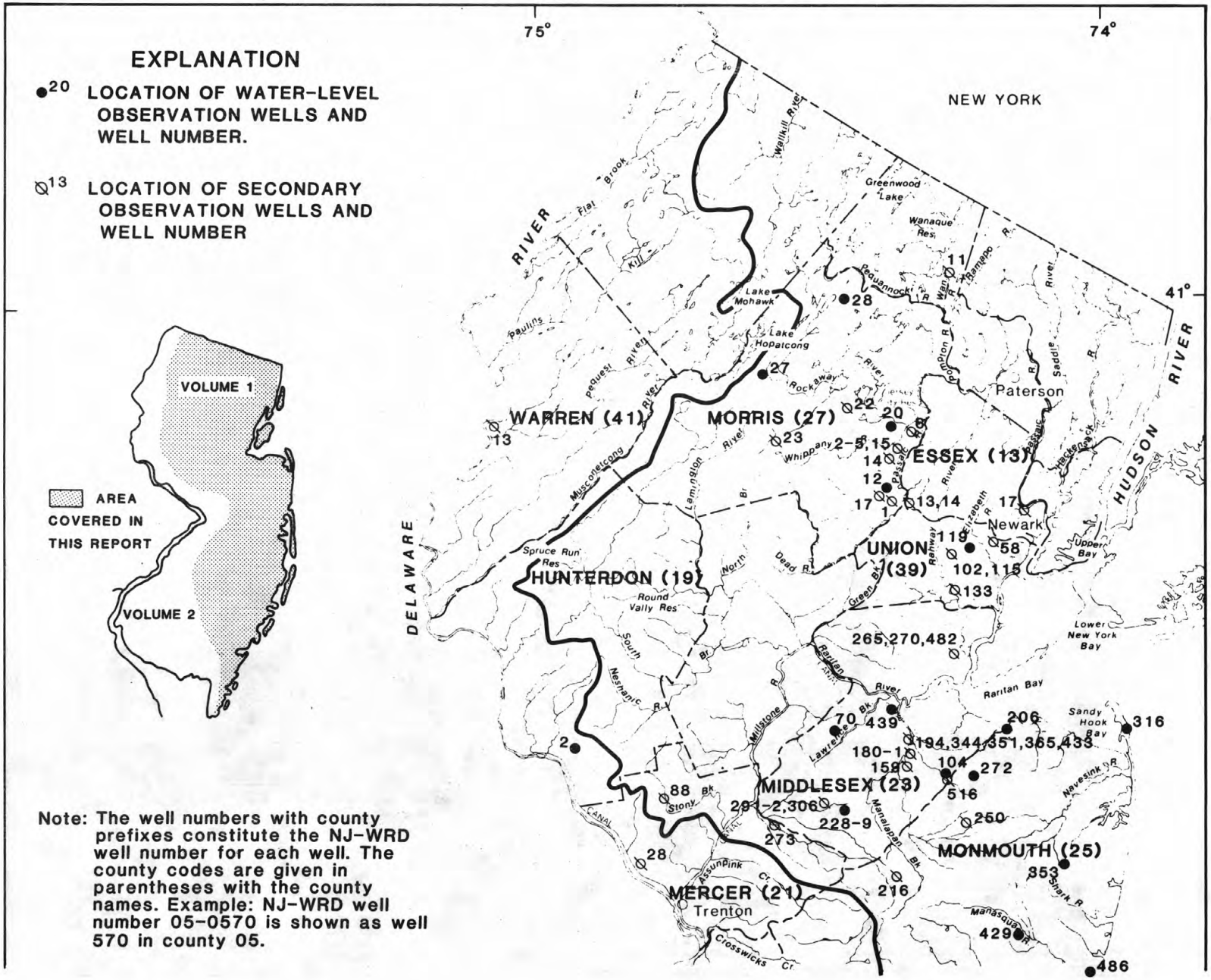


Figure 10.--Location of low-flow and crest-stage partial-record stations.


EXPLANATION
●20 LOCATION OF WATER-LEVEL OBSERVATION WELLS AND WELL NUMBER.
⊘13 LOCATION OF SECONDARY OBSERVATION WELLS AND WELL NUMBER
VOLUME 1
VOLUME 2
AREA COVERED IN THIS REPORT
Note: The well numbers with county prefixes constitute the NJ-WRD well number for each well. The county codes are given in parentheses with the county names. Example: NJ-WRD well number 05-0570 is shown as well 570 in county 05.
75°
74°
41°
NEW YORK
DELAWARE RIVER
HUDSON RIVER
WARREN (41)
MORRIS (27)
ESSEX (13)
UNION (39)
HUNTERDON (19)
MIDDLESEX (23)
MONMOUTH (25)
MERCER (21)
Trenton
Paterson
Newark
Wallkill River
Greenwood Lake
Wanaque Res
Lake Mohawk
Lake Hopatcong
Spruce Run Res
Round Valley Res
Raritan Bay
Lower New York Bay
Upper Bay
Sandy Hook Bay

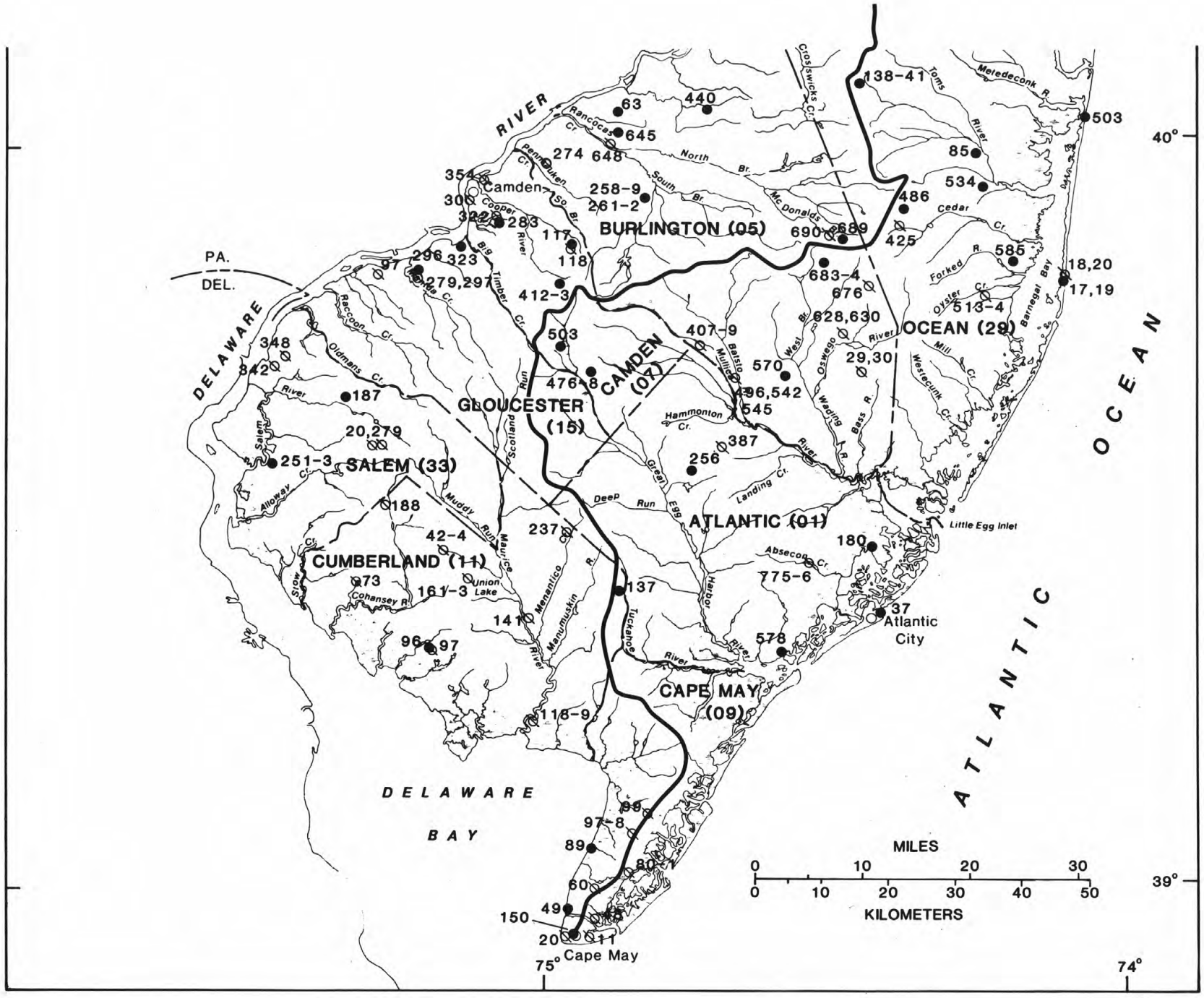
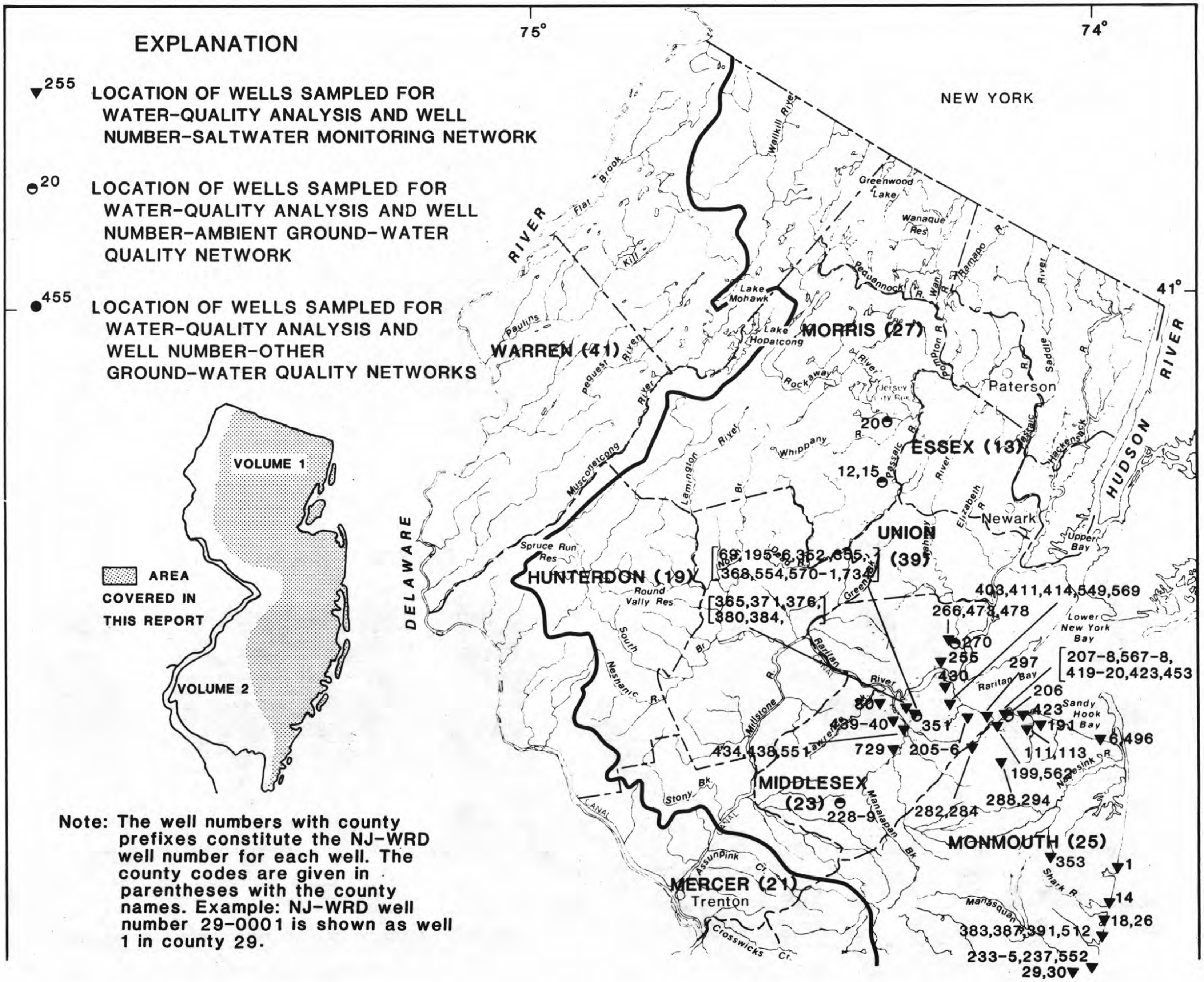


Figure 11.--Location of ground-water observation wells.


EXPLANATION
255 LOCATION OF WELLS SAMPLED FOR WATER-QUALITY ANALYSIS AND WELL NUMBER-SALTWATER MONITORING NETWORK
20 LOCATION OF WELLS SAMPLED FOR WATER-QUALITY ANALYSIS AND WELL NUMBER-AMBIENT GROUND-WATER QUALITY NETWORK
455 LOCATION OF WELLS SAMPLED FOR WATER-QUALITY ANALYSIS AND WELL NUMBER-OTHER GROUND-WATER QUALITY NETWORKS
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 29-0001 is shown as well 1 in county 29.
75°
74°
41°
NEW YORK
WARREN (41)
MORRIS (27)
ESSEX (13)
UNION (39)
HUNTERDON (19)
MIDDLESEX (23)
MONMOUTH (25)
MERCER (21)
DELAWARE
HUDSON RIVER
Paterson
Newark
Trenton
Upper Bay
Lower New York Bay
Raritan Bay
Sandy Hook Bay
Greenwood Lake
Wanaque Res
Lake Mohawk
Lake Hopatcong
Spruce Run Res
Round Vally Res
200
12,15
69,195-6,352,355, 368,554,570-1,734
365,371,376, 380,384,
403,411,414,549,569
266,473,478
270
255
297
207-8,567-8, 419-20,423,453
430
206
80
423
351
191
439-40
6,496
729
205-6
111,113
434,438,551
199,562
288,294
228-9
282,284
353
1
14
18,26
383,387,391,512
233-5,237,552
29,30

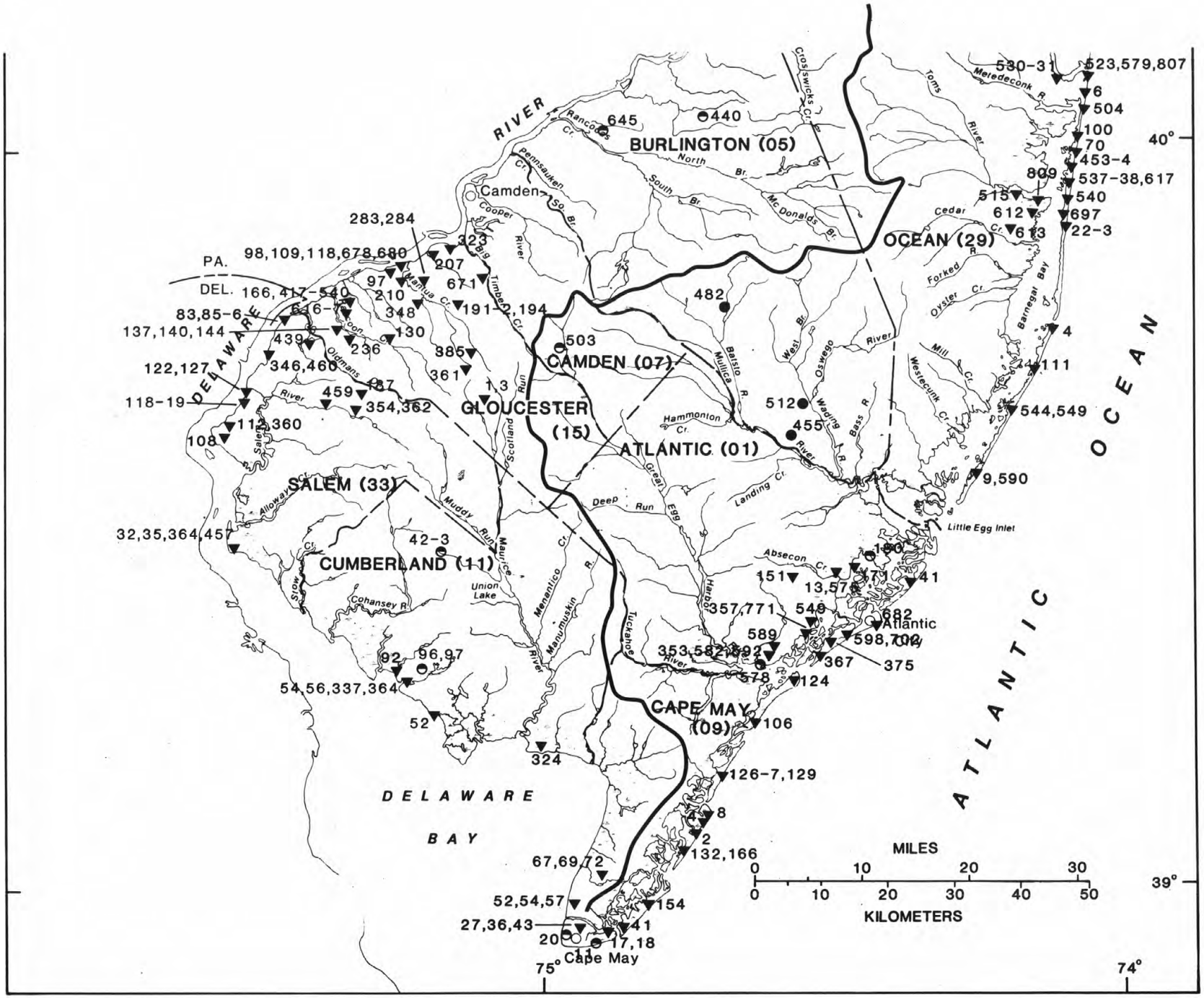


Figure 12.--Location of ground-water quality stations.

HUDSON RIVER BASIN

01367700 WALLKILL RIVER AT FRANKLIN, NJ

LOCATION.--Lat 41°06'43", long 74°35'21", Sussex County, Hydrologic Unit 02020007, at bridge 120 ft downstream from dam at outlet of Franklin Pond in Franklin, and 0.8 mi upstream from Wildcat Brook.

DRAINAGE AREA.--29.4 mi².

WATER-QUALITY RECORDS

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
NOV 1985										
19...	1315	E170	265	7.6	7.5	11.8	100	E1.9	230	920
MAR 1986										
03...	1220	E61	301	7.6	1.5	15.7	114	E1.1	<20	<2
APR										
09...	1245	E49	381	8.6	10.5	11.1	103	<1.0	<20	14
JUN										
09...	1230	E41	317	7.8	19.5	8.5	94	E1.9	1400	920
JUL										
24...	1050	E8.9	430	7.6	24.0	8.8	106	2.9	50	49
AUG										
12...	1330	E15	470	8.1	21.0	8.1	92	2.3	20	27

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
NOV 1985									
19...	83	21	7.3	16	1.1	62	15	30	<0.1
MAR 1986									
03...	110	27	10	22	1.0	77	15	43	0.1
APR									
09...	130	32	12	24	1.1	100	15	47	0.2
JUN									
09...	100	26	9.3	20	1.0	84	14	37	0.1
JUL									
24...	150	36	15	24	1.7	127	16	48	<0.1
AUG									
12...	160	37	16	29	1.8	125	16	55	0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 1985									
19...	8.1	140	0.003	0.21	0.13	0.44	0.65	0.03	4.7
MAR 1986									
03...	7.3	170	0.006	0.35	0.11	0.24	0.59	0.03	2.9
APR									
09...	6.2	200	0.012	0.40	<0.05	0.77	1.2	0.03	4.0
JUN									
09...	7.0	160	0.008	0.24	0.09	0.47	0.71	0.02	7.2
JUL									
24...	5.9	220	0.014	0.29	0.10	0.69	0.98	0.05	4.2
AUG									
12...	5.8	240	0.008	0.22	0.06	0.94	1.2	0.06	3.8

01367770 WALLKILL RIVER NEAR SUSSEX, NJ

LOCATION.--41°11'38", long 74°34'32", Sussex County, Hydrologic Unit 02020007, at bridge on Glenwood Road, 0.8 mi upstream of Papakating Creek, 1.7 mi southwest of Independence Corner, 2.0 mi southeast of Sussex, and 2.1 mi northwest of McAfee.

DRAINAGE AREA.--60.8 mi².

WATER-QUALITY RECORDS

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
NOV 1985										
14...	1215	E79	421	7.9	10.0	10.1	90	E1.3	230	350
MAR 1986										
05...	1145	E99	433	8.2	3.5	12.6	97	<0.9	270	22
APR										
09...	1145	E88	430	8.4	10.0	11.1	101	<0.9	80	8
JUN										
09...	1100	E122	372	7.7	18.5	6.8	73	E1.2	490	350
JUL										
24...	1140	E31	520	8.0	22.0	9.8	113	E1.4	330	240
AUG										
12...	1215	E44	540	8.1	18.5	8.2	88	<1.0	330	350

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
NOV 1985									
14...	170	41	16	19	1.8	136	17	34	0.1
MAR 1986									
05...	160	39	16	20	1.5	131	16	36	<0.1
APR									
09...	180	41	18	20	1.5	140	16	41	0.1
JUN									
09...	140	33	13	17	1.2	117	18	30	0.2
JUL									
24...	210	48	23	23	2.4	186	23	45	<0.1
AUG									
12...	210	49	22	23	2.0	179	20	44	0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 1985									
14...	8.3	220	0.004	0.58	0.07	0.47	1.1	0.03	4.9
MAR 1986									
05...	6.5	210	0.01	0.68	0.14	0.39	1.1	0.05	4.9
APR									
09...	4.5	230	0.024	0.63	0.31	0.31	0.94	0.04	4.1
JUN									
09...	8.1	190	0.012	0.43	0.07	0.21	0.64	0.07	7.9
JUL									
24...	7.9	280	0.017	1.56	0.06	0.73	2.3	0.06	3.7
AUG									
12...	7.5	270	0.016	1.02	0.06	0.62	1.6	0.05	2.8

01367770 WALLKILL RIVER NEAR SUSSEX, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
NOV 1985 14...	1215	<0.5	10	2	<10	<20	2	<10	3
JUN 1986 09...	1100	<0.5	10	3	<10	30	<1	<10	5

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
NOV 1985 14...	130	1	40	<0.1	6	<1	40	2
JUN 1986 09...	790	2	140	<0.1	1	<1	50	1

01367910 PAPAKATING CREEK AT SUSSEX, NJ

LOCATION.--41°12'02", long 74°35'59", Sussex County, Hydrologic Unit 02020007, at bridge on State Route 23 in Sussex, 0.7 mi downstream from Clove Brook, 2.6 mi southwest of Independence Corner, and 3.4 mi northwest of McAfee.

DRAINAGE AREA.--59.4 mi².

WATER-QUALITY RECORDS

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
NOV 1985										
19...	1045	E148	198	7.5	7.0	10.3	85	E1.9	790	1600
MAR 1986										
05...	1300	E66	241	8.1	3.0	12.4	93	2.4	460	240
APR										
03...	1045	E56	238	8.3	12.5	10.4	98	<1.1	80	17
JUN										
04...	1300	E26	319	7.6	17.5	7.4	78	E2.2	940	240
JUL										
29...	1045	E16	290	7.1	24.0	6.0	73	<1.0	2400	540
AUG										
20...	1045	E20	285	7.9	20.0	6.0	67	2.8	1300	>2400

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
NOV 1985									
19...	61	19	3.3	11	2.6	34	18	20	<0.1
MAR 1986									
05...	70	22	3.6	15	2.2	41	19	25	<0.1
APR									
03...	73	23	3.8	12	1.8	51	16	25	<0.1
JUN									
04...	110	35	5.1	15	1.9	75	25	30	<0.1
JUL									
29...	100	33	4.9	15	2.6	72	22	25	<0.1
AUG									
20...	91	29	4.4	15	2.4	66	19	26	0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 1985									
19...	7.1	100	0.015	0.96	0.16	0.65	1.6	0.08	5.1
MAR 1986									
05...	6.0	120	0.016	1.05	0.24	0.38	1.4	0.13	4.9
APR									
03...	2.8	110	0.017	0.70	0.28	0.57	1.3	0.07	4.2
JUN									
04...	6.8	160	0.119	1.41	0.25	0.55	2.0	0.13	4.3
JUL									
29...	7.9	150	0.061	0.80	0.15	0.81	1.6	0.15	5.6
AUG									
20...	7.5	140	0.04	0.58	0.09	0.92	1.5	0.17	7.5

01367910 PAPAKATING CREEK AT SUSSEX, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
NOV 1985											
19...	1045	--	700	0.2	12	--	--	--	--	--	<1
19...	1045	<0.5	--	--	--	10	<1	<10	<20	2	--
JUN 1986											
04...	1300	<0.5	--	--	--	20	<1	<10	<10	<1	--

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
NOV 1985											
19...	--	90	<10	--	30	--	10000	--	40	--	360
19...	<10	--	--	3	--	460	--	2	--	60	--
JUN 1986											
04...	<10	--	--	6	--	560	--	1	--	80	--

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1985											
19...	--	0.08	--	10	--	<1	--	70	--	15	<1.0
19...	<0.1	--	1	--	<1	--	20	--	<1	--	--
JUN 1986											
04...	<0.1	--	3	--	<1	--	<10	--	<1	--	--

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1985											
19...	<0.1	5.0	0.8	1.0	<0.1	0.2	0.1	<0.1	<0.1	<0.1	<0.1
19...	--	--	--	--	--	--	--	--	--	--	--
JUN 1986											
04...	--	--	--	--	--	--	--	--	--	--	--

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1985											
19...	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1
19...	--	--	--	--	--	--	--	--	--	--	--
JUN 1986											
04...	--	--	--	--	--	--	--	--	--	--	--

01368950 BLACK CREEK NEAR VERNON, NJ

LOCATION.--Lat 41°13'21", long 74°28'33", Sussex County, Hydrologic Unit 02020007, at bridge on Maple Grange road, 0.6 mi upstream of confluence with Wawayanda Creek, 0.7 mi northwest of Maple Grange, and 1.7 mi northeast of Vernon.

DRAINAGE AREA.--17.3 mi².

WATER-QUALITY RECORDS

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
NOV 1985										
14...	1030	E24	595	7.7	10.0	6.4	57	E1.2	130	540
MAR 1986										
05...	1045	E33	559	7.9	3.0	11.0	83	<0.8	80	17
APR										
03...	1245	E28	542	8.3	12.5	10.9	103	<0.8	20	94
JUN										
04...	1100	E12	578	8.1	17.0	8.4	88	E1.4	270	94
JUL										
29...	1215	E7.0	620	7.3	26.0	5.7	72	<0.7	1300	540
AUG										
20...	1215	E9.0	685	7.8	20.0	5.1	57	E1.5	490	1600

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
NOV 1985									
14...	230	55	23	31	2.2	194	18	53	0.2
MAR 1986									
05...	210	50	21	29	1.4	177	18	54	0.1
APR									
03...	210	48	21	26	1.5	176	15	52	0.2
JUN									
04...	220	50	23	30	1.1	192	20	58	0.1
JUL									
29...	230	54	24	36	2.3	196	17	64	0.1
AUG									
20...	240	56	24	39	2.3	200	22	73	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)
NOV 1985									
14...	8.6	310	0.012	0.59	0.13	0.7	1.3	0.07	7.0
MAR 1986									
05...	6.1	290	0.012	0.90	0.19	0.43	1.3	0.05	3.8
APR									
03...	4.2	270	0.02	0.70	0.14	0.43	1.1	0.04	3.6
JUN									
04...	6.6	300	0.024	0.75	0.06	0.48	1.2	0.05	5.3
JUL									
29...	9.7	320	0.178	0.86	0.34	1.2	2.1	0.15	5.5
AUG									
20...	9.0	350	0.133	0.90	0.33	1.2	2.1	0.15	6.2

01368950 BLACK CREEK NEAR VERNON, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)
NOV 1985 14...	1030	1200	9.2	41	1	180	10	50	18000	40

DATE	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1985 14...	810	0.16	20	<1	290	7	<1.0	<0.1	6.0	1.8

DATE	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1985 14...	1.9	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

DATE	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1985 14...	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1

01376800 HACKENSACK RIVER AT WEST NYACK, NY

LOCATION.--Lat 41°05'44", long 73°57'52", Rockland County, Hydrologic Unit 02030103, on right bank 20 ft downstream from Penn Central Transportation Co. railroad bridge at West Nyack, 1,000 ft upstream from State Highway 59, and 1.0 mi downstream from DeForest Lake.

DRAINAGE AREA.--29.4 mi^2.

PERIOD OF RECORD.--December 1958 to current year.

GAGE.--Water-stage recorder, stop-log control, and crest-stage gage. Datum of gage is 53.50 ft above National Geodetic Vertical Datum of 1929 (levels by Hackensack Water Co.).

REMARKS.--No estimated daily discharges. Records good. Flow regulated by DeForest Lake (see Reservoirs in Hackensack River Basin). Diversion from gaging station pool for municipal supply for village of Nyack (see Diversions in Hackensack River Basin). Discharge given for this station represents the flow of Hackensack River downstream from this diversion. Several measurements of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,550 ft^3/s Feb. 3, 1973, gage height, 9.38 ft, from floodmarks, from rating curve extended above 840 ft^3/s; maximum gage height, 10.52 ft May 30, 1984; minimum daily, 2.6 ft^3/s June 12, 1965, Sept. 25, 26, 30, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 381 ft^3/s Mar. 15, gage height, 6.10 ft; minimum daily, 11 ft^3/s May 14-15.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	19	27	16	56	50	32	35	15	17	35	17
2	15	19	32	15	65	46	34	33	17	33	42	18
3	18	19	23	18	63	44	30	29	16	22	129	18
4	17	19	21	17	54	43	26	24	15	19	82	17
5	31	28	20	23	71	43	29	19	16	19	56	17
6	21	23	20	19	77	43	31	19	24	19	39	19
7	16	19	19	17	72	43	35	22	45	18	32	17
8	16	17	18	15	65	38	36	24	20	18	28	16
9	16	14	18	15	57	32	36	24	17	19	23	16
10	16	16	17	14	50	31	31	18	16	18	18	17
11	16	17	21	14	50	32	27	14	16	18	24	16
12	16	20	28	15	46	32	27	18	31	29	17	13
13	17	20	21	19	42	42	23	12	25	23	14	12
14	18	19	21	20	40	71	21	11	20	20	13	13
15	19	21	17	19	37	304	19	11	17	19	13	15
16	20	26	17	16	34	143	30	15	17	18	13	15
17	19	72	17	16	40	87	87	16	19	20	48	15
18	20	21	17	16	105	74	99	15	17	20	37	14
19	20	18	16	17	209	68	66	16	16	21	21	16
20	19	17	16	21	212	72	52	17	18	21	16	14
21	17	16	16	19	170	61	50	19	16	20	20	17
22	17	24	15	18	178	49	61	18	15	18	28	14
23	17	22	16	16	104	47	85	15	15	13	20	14
24	17	19	15	16	85	47	73	16	16	12	25	16
25	17	17	16	21	80	39	60	17	18	12	20	12
26	17	27	16	111	69	36	50	14	17	17	18	12
27	17	30	16	88	62	38	48	13	18	24	19	17
28	17	51	15	118	55	42	43	13	18	14	19	12
29	17	32	16	95	---	38	38	14	18	25	18	12
30	17	23	15	82	---	36	39	16	18	72	16	15
31	18	---	16	66	---	37	---	16	---	56	16	---
TOTAL	554	705	578	992	2248	1808	1318	563	566	694	919	456
MEAN	17.9	23.5	18.6	32.0	80.3	58.3	43.9	18.2	18.9	22.4	29.6	15.2
MAX	31	72	32	118	212	304	99	35	45	72	129	19
MIN	15	14	15	14	34	31	19	11	15	12	13	12

CAL YR 1985 TOTAL 7039 MEAN 19.3 MAX 90 MIN 10
WTR YR 1986 TOTAL 11401 MEAN 31.2 MAX 304 MIN 11

01377000 HACKENSACK RIVER AT RIVERVALE, NJ

LOCATION.--Lat 40°59'55", long 73°59'27", Bergen County, Hydrologic Unit 02030103, on upstream right bank at bridge on Westwood Avenue in Rivervale, 1.5 mi upstream from Pascack Brook, 4.6 mi upstream from Oradell Dam, and 27.2 mi upstream from mouth.

DRAINAGE AREA.--58.0 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1941 to current year.

REVISED RECORDS.--WRD-NJ-80-1: 1968-79(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 22.51 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by De Forest Lake and Lake Tappan (see Hackensack River basin, reservoirs in). Diversions from De Forest Lake and West Nyack, NY, for municipal water supply (see Hackensack River basin, diversions). Water occasionally diverted from Oradell Reservoir to Lake Tappan. Several measurements of water temperature, other than those published, were made during the year.

COOPERATION.--Gage-height record collected in cooperation with Hackensack Water Co.

AVERAGE DISCHARGE.--45 years, 88.6 ft³/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,440 ft³/s, May 30, 1984, gage height, 7.85 ft; no flow part of Jan. 16, 1970 and May 30, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 778 ft³/s, Jan. 26, gage height, 3.74 ft; minimum, 15 ft³/s, Sept. 8, 9, 10, gage height 1.52 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	25	120	29	97	87	55	62	176	128	31	18
2	22	24	136	29	108	81	53	57	145	127	43	18
3	35	25	104	35	109	75	49	48	133	34	69	18
4	29	27	72	37	102	73	45	41	119	26	22	18
5	71	63	58	59	127	73	47	38	118	25	21	18
6	78	56	57	53	136	72	58	37	91	25	21	21
7	55	47	50	43	131	71	61	47	62	81	29	18
8	43	41	47	37	117	62	62	45	31	144	23	16
9	36	34	44	33	101	56	62	43	29	145	21	15
10	33	30	43	31	90	55	54	36	28	127	20	16
11	31	32	47	30	88	56	47	34	27	101	29	17
12	28	40	86	30	83	55	45	32	48	91	20	21
13	27	46	79	30	75	70	42	29	35	29	19	122
14	27	41	75	31	67	114	40	26	29	26	19	123
15	26	47	56	30	64	412	38	26	27	32	18	122
16	26	49	49	29	58	390	66	25	27	87	18	122
17	25	372	46	29	64	191	208	27	27	105	111	113
18	25	156	43	30	155	141	217	27	26	98	51	105
19	25	89	39	34	338	118	139	26	26	91	22	105
20	25	65	36	46	402	126	107	28	26	92	20	104
21	25	52	37	46	354	108	97	38	47	91	26	109
22	24	64	36	41	342	92	103	47	106	90	36	103
23	24	76	36	39	225	81	134	43	135	96	20	103
24	24	58	37	35	161	78	146	37	131	102	28	103
25	24	46	38	41	143	68	121	33	121	116	19	101
26	24	66	36	552	126	63	104	32	150	127	18	85
27	23	111	34	418	108	67	91	27	181	50	18	51
28	23	187	34	200	97	77	80	59	180	83	20	24
29	23	233	33	157	---	69	71	96	145	195	18	22
30	23	118	32	134	---	65	70	120	120	83	18	51
31	25	---	30	114	---	62	---	164	---	48	18	---
TOTAL	952	2320	1670	2482	4068	3208	2512	1430	2546	2695	866	1882
MEAN	30.7	77.3	53.9	80.1	145	103	83.7	46.1	84.9	86.9	27.9	62.7
MAX	78	372	136	552	402	412	217	164	181	195	111	123
MIN	22	24	30	29	58	55	38	25	26	25	18	15

CAL YR 1985 TOTAL 14854 MEAN 40.7 MAX 372 MIN 14
WTR YR 1986 TOTAL 26631 MEAN 73.0 MAX 552 MIN 15

01377000 HACKENSACK RIVER AT RIVERVALE, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962, 1964 to current year.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
28...	1100	23	373	7.9	12.5	9.1	85	1.8	110	130
FEB 1986										
13...	1100	74	406	7.8	2.0	13.3	97	2.4	23	20
APR										
15...	1100	39	417	8.1	12.0	11.9	111	3.9	33	17
JUN										
05...	1100	118	411	7.8	23.0	7.4	87	5.4	130	920
JUL										
21...	1100	92	388	7.8	25.5	7.2	88	6.3	230	170
SEP										
08...	1100	16	355	7.9	18.0	8.5	90	2.7	170	170

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
28...	110	34	7.0	29	2.5	85	19	52	0.2
FEB 1986									
13...	110	34	6.4	36	2.5	78	15	66	<0.1
APR									
15...	110	34	6.5	37	2.0	80	16	62	<0.1
JUN									
05...	110	33	6.2	36	2.0	80	19	68	0.2
JUL									
21...	110	33	6.2	33	2.0	81	18	59	0.1
SEP									
08...	110	34	6.7	24	2.1	83	20	44	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
28...	3.0	200	0.007	0.36	0.07	0.82	1.2	0.07	5.6
FEB 1986									
13...	3.6	210	0.009	0.63	0.38	0.74	1.4	0.04	8.4
APR									
15...	1.5	210	0.015	0.57	0.15	0.94	1.5	<0.02	6.3
JUN									
05...	1.2	210	0.032	0.28	0.15	0.74	1.0	0.07	7.6
JUL									
21...	1.8	200	0.018	0.17	0.19	0.8	0.97	0.12	7.8
SEP									
08...	4.2	180	0.018	E0.71	0.09	0.85	--	0.06	--

01377000 HACKENSACK RIVER AT RIVERVALE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
OCT 1985 28...	1100	<0.5	<10	1	<10	50	<1	20	3

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1985 28...	270	7	120	<0.1	1	<1	10	2

01377500 PASCACK BROOK AT WESTWOOD, NJ

LOCATION.--Lat 40°59'33", long 74°01'19", Bergen County, Hydrologic Unit 02030103, on right bank 75 ft upstream from Harrington Avenue in Westwood, 500 ft downstream from Musquapsink Brook, and 2.3 mi upstream from mouth.

DRAINAGE AREA.--29.6 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1934 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 28.62 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Woodcliff Lake 3.0 mi above station (see Hackensack River basin, reservoirs in). Water diverted for municipal supply by Spring Valley Water Co., by pumpage from well fields in headwater area of Pascack Brook in vicinity of Spring Valley, NY, and by Park Ridge Water Department by pumping from wells above Woodcliff Lake probably reduces flow past this station. Several measurements of water temperature were made during the year.

COOPERATION.--Gage-height record collected in cooperation with Hackensack Water Co.

AVERAGE DISCHARGE.--52 years, 55.2 ft³/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,440 ft³/s, Sept. 12, 1971, gage height, 7.57 ft; minimum, 5.6 ft³/s, June 29, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 17	0615	*739	*4.25	Aug. 3	0345	652	4.03
Jul. 31	0245	585	3.86	Aug. 17	2215	707	4.17

Minimum discharge, 15 ft³/s, June 26, Sept. 18-21, 23, gage height, 1.47 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	21	90	22	77	65	18	23	30	22	87	36
2	37	21	91	23	84	63	19	23	26	176	120	43
3	61	20	63	44	77	60	18	23	22	74	335	44
4	58	22	53	57	76	58	18	23	21	36	77	38
5	138	64	30	85	87	56	19	27	23	28	60	36
6	91	45	28	54	79	53	23	36	74	25	48	74
7	53	36	28	46	75	51	21	39	223	22	53	41
8	47	34	34	38	72	46	20	36	70	24	46	28
9	39	30	37	36	69	43	22	36	50	39	40	28
10	37	27	27	31	67	40	28	35	36	49	35	28
11	36	26	35	31	66	39	29	35	38	52	66	27
12	33	45	103	31	64	37	30	35	130	84	43	27
13	32	54	130	31	62	48	30	31	110	40	37	27
14	32	39	100	28	59	68	30	29	51	33	36	25
15	35	38	86	25	57	94	30	27	43	35	32	24
16	36	50	84	27	53	50	49	28	39	64	32	24
17	32	386	82	31	53	45	116	31	38	61	288	19
18	31	74	55	36	131	41	49	28	31	53	201	16
19	33	58	24	40	89	27	26	28	28	47	62	15
20	30	53	53	66	104	25	24	51	31	44	49	17
21	28	48	79	73	101	22	28	79	28	43	61	56
22	26	77	59	76	89	21	29	79	28	42	112	21
23	25	82	59	51	80	21	41	56	29	40	60	19
24	28	55	75	33	76	21	37	41	21	39	83	22
25	27	45	73	47	74	19	27	38	21	39	54	20
26	25	77	70	247	72	19	26	32	18	69	35	33
27	23	131	68	134	69	20	25	29	17	47	38	98
28	22	213	67	93	67	20	24	30	18	25	53	43
29	18	124	66	85	---	19	24	27	19	71	50	22
30	18	60	44	83	---	19	23	26	21	76	38	22
31	21	---	19	80	---	19	---	23	---	316	35	---
TOTAL	1193	2055	1912	1784	2129	1229	903	1084	1334	1815	2366	973
MEAN	38.5	68.5	61.7	57.5	76.0	39.6	30.1	35.0	44.5	58.5	76.3	32.4
MAX	138	386	130	247	131	94	116	79	223	316	335	98
MIN	18	20	19	22	53	19	18	23	17	22	32	15

CAL YR 1985 TOTAL 17290 MEAN 47.4 MAX 386 MIN 16
WTR YR 1986 TOTAL 18777 MEAN 51.4 MAX 386 MIN 15

01378500 HACKENSACK RIVER AT NEW MILFORD, NJ

LOCATION.--Lat 40°56'52", long 74°01'34", Bergen County, Hydrologic Unit 02030103, on right bank upstream from two masonry dams and two lift gates at pumping plant of Hackensack Water Co., New Milford, 4.0 mi downstream from Pascack Brook, and 21.8 mi upstream from mouth.

DRAINAGE AREA.--113 mi²

WATER-DISCHARGE RECORDS

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

REVISED RECORDS: WSP 601: Drainage area. WSP 711: 1927-28(M). WRD-NJ 1970: 1969. WDR-NJ 1977: 1975(M). WDR-NJ 1984: 1983.

GAGE.--Water-stage recorder above south dam. Datum of gage is 6.25 ft above National Geodetic Vertical Datum of 1929. October 1921 to November 23, 1923, nonrecording gage and Nov. 23, 1923, to Sept. 25, 1934, water-stage recorder at same site at datum 0.05 ft lower.

REMARKS.--No estimated daily discharge. Records poor. Records given herein do not include diversion at gage. Flow regulated by DeForest Lake, Lake Tappan, Woodcliff Lake 9.0 mi upstream from station, and Oradell Reservoir 0.6 mi upstream from station (see Hackensack River basin, reservoirs in). Water diverted at gage, De Forest Lake, and West Nyack, NY, for municipal supply (see Hackensack River basin, diversions). Several measurements of water temperature were made during the year.

COOPERATION.--Gage-height record collected in cooperation with Hackensack Water Co.

AVERAGE DISCHARGE.--65 years, 99.9 ft³/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,500 ft³/s, Nov. 9, 1977 and Apr. 5, 1984; maximum gage height, 7.96 ft, April 5, 1984; no flow many days during most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,120 ft³/s, Jan. 27, gage height, 3.13 ft; minimum daily, 0.12 ft³/s, Oct. 28.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.16	.15	318	5.5	94	65	12	14	.38	.43	.41	.40
2	.14	.14	344	6.0	123	54	13	18	.36	.53	.52	.39
3	.14	.14	206	6.9	118	44	12	15	.33	.45	.53	.47
4	.14	.14	93	6.4	106	38	18	14	.41	.46	.49	.42
5	.14	.15	25	8.7	155	31	14	17	.42	.49	.40	.39
6	.15	.15	16	7.1	166	39	11	5.7	.43	.43	.37	.50
7	.15	.15	7.6	8.4	145	34	13	.26	.53	.48	.43	.47
8	.16	.17	8.0	5.9	124	25	11	.27	.45	.43	.42	.47
9	.15	.17	6.0	6.2	99	15	15	.27	.39	.43	.40	.48
10	.14	.16	7.1	6.8	78	17	17	.26	.39	.44	.45	.46
11	.16	.17	8.9	5.4	76	18	15	.27	.47	.50	.48	.42
12	.16	.17	8.6	7.3	63	17	19	.26	.53	.49	.47	.38
13	.16	.18	50	8.4	46	72	15	.26	.44	.47	.44	.38
14	.15	.16	128	8.9	35	225	17	.24	.34	.44	.39	.40
15	.16	.16	82	12	36	484	20	.21	.35	.51	.40	.37
16	.14	.20	57	7.1	33	434	17	.14	.38	.43	.45	.47
17	.13	3.9	42	6.6	30	269	16	.39	.36	.46	2.1	.47
18	.14	2.6	26	9.0	307	242	14	.41	.38	.51	.44	.45
19	.16	2.3	13	7.0	524	130	18	.38	.38	.49	.46	.46
20	.15	2.2	8.9	8.5	699	16	15	.31	.35	.45	.45	.44
21	.16	2.5	11	18	574	23	15	.41	.49	.45	.46	.48
22	.15	2.0	7.5	17	420	18	15	.34	.40	.47	.44	.45
23	.15	2.1	9.0	16	328	14	25	.36	.39	.49	.40	.41
24	.15	1.7	10	15	222	18	81	.39	.42	.35	.38	.52
25	.16	1.7	10	18	162	18	68	.42	.46	.48	.45	.45
26	.15	2.0	8.5	16	125	18	52	.41	.37	1.6	.41	.47
27	.14	1.9	8.6	604	101	17	35	.31	.52	.40	.39	.51
28	.12	26	12	293	81	19	21	.40	.42	.50	.40	.44
29	.15	503	9.0	210	---	13	18	.37	.53	.45	.46	.56
30	.16	284	7.5	144	---	15	16	.64	.48	.45	.50	.57
31	.14	---	7.1	108	---	12	---	.49	---	.53	.50	---
TOTAL	4.61	840.46	1555.3	1607.1	5070	2454	648	92.17	12.55	15.49	15.29	13.55
MEAN	.15	28.0	50.2	51.8	181	79.2	21.6	2.97	.42	.50	.49	.45
MAX	.16	503	344	604	699	484	81	18	.53	1.6	2.1	.57
MIN	.12	.14	6.0	5.4	30	12	11	.14	.33	.35	.37	.37

CAL YR 1985 TOTAL 2493.17 MEAN 6.83 MAX 503 MIN .12
WTR YR 1986 TOTAL 12328.52 MEAN 33.8 MAX 699 MIN .12

RESERVOIRS IN HACKENSACK RIVER BASIN

01376700 DE FOREST LAKE.--Lat 41°06'23", long 73°58'01, Rockland County, NY, Hydrologic Unit 02030103, at dam on Hackensack River, 0.85 mi north of West Nyack, NY. DRAINAGE AREA, 27.5 mi². PERIOD OF RECORD, February 1956 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.
REMARKS.--Reservoir is formed by earthfill dam with sheet piling cutoff and concrete spillway; dam completed and storage began in February 1956. Total capacity at crest of dam 4,068,000,000 gal, elevation, 80.00 ft. Crest of dam topped by two 50-foot Bascule gates 5 ft high. Flow regulated by 12-inch Howell-Bunger valve at elevation, 59.25 ft and 24-inch Howell-Bunger valve at elevation, 61.25 ft. Reservoir used for storage and water released by Hackensack Water Co., for municipal water supply.
COOPERATION.--Records provided by Hackensack Water Company.
REVISED RECORDS.--WDR NJ-84-1: Drainage area.

01376950 LAKE TAPPAN.--Lat 41°01'05", long 74°00'05", Bergen County, Hydrologic Unit 02030103, at dam on Hackensack River, 0.50 mi north of Old Tappan. DRAINAGE AREA, about 49.0 mi². PERIOD OF RECORD, October 1966 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.
REMARKS.--Reservoir is formed by earthfill dam, completed in 1966. Capacity at spillway level, 3,378,000,000 gal, elevation, 55.00 ft. Flow regulated by four Bascule gates and one sluice gate. Water is released by Hackensack Water Co., for municipal water supply.
COOPERATION.--Records provided by Hackensack Water Company.

01377450 WOODCLIFF LAKE.--Lat 41°01', long 74°03', Bergen County, Hydrologic Unit 02030103, at dam on Pascack Brook, 0.75 mi north of Hillsdale. DRAINAGE AREA, 19.4 mi². PERIOD OF RECORD, December 1929 to current year. Monthend contents only, prior to September 1953, published in WSP 1302, 1722. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.
REMARKS.--Reservoir is formed by earthfill dam, completed about 1905. Capacity at spillway level, 835,000,000 gal, elevation, 94.33 ft. Flow is regulated by flashboards and one 36-inch gate in center of dam. Water is released for diversion at New Milford by Hackensack Water Co., for municipal supply.
COOPERATION.--Records provided by Hackensack Water Company.

01378480 ORADELL RESERVOIR.--Lat 40°57', long 74°02', Bergen County, Hydrologic Unit 02030103, at dam on Hackensack River at Oradell. DRAINAGE AREA, 113 mi². PERIOD OF RECORD, December 1922 to current year. Monthend contents only, prior to September 1953, published in WSP 1302, 1722. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.
REMARKS.--Reservoir is formed by hollow concrete dam, completed in 1922. Capacity at spillway level, 3,267,000,000 gal, elevation, 23.16 ft. Flow regulated by seven sluice gates (7 by 9 ft). Water is released for diversion by Hackensack Water Co., 1 mi downstream from dam for municipal supply.
COOPERATION.--Records provided by Hackensack Water Company.
REVISED RECORDS.--WDR NJ-84-1: Spillway elevation.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

Date	Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft³/s)	Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft³/s)
	01376700 DE FOREST LAKE			01376950 LAKE TAPPAN		
Sept. 30.....	79.06	3,839	-	54.93	3,827	-
Oct. 31.....	78.88	3,786	-2.6	55.00	3,852	+1.2
Nov. 30.....	81.90	4,690	+46.6	55.27	3,949	+5.0
Dec. 31.....	83.34	5,137	+22.3	55.00	3,852	-4.8
CAL YR 1985			+7.8			+8.2
Jan. 31.....	85.18	5,729	+29.5	55.29	3,957	+5.2
Feb. 28.....	85.18	5,729	0	55.27	3,949	-.4
Mar. 31.....	85.10	5,703	-1.3	55.20	3,924	-1.2
Apr. 30.....	85.13	5,713	+.5	55.22	3,931	+.4
May 31.....	84.50	5,507	-10.3	54.43	3,648	-14.1
June 30.....	84.02	5,352	-8.0	51.82	2,766	-45.5
July 31.....	85.09	5,699	+17.3	50.08	2,229	-26.8
Aug. 31.....	84.57	5,529	-8.5	53.30	3,256	+51.3
Sept. 30.....	83.31	5,127	-20.7	50.90	2,477	-40.2
WTR YR 1986			+5.5			-5.7

Date	Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft³/s)	Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft³/s)
	01377450 WOODCLIFF LAKE			01378480 ORADELL RESERVOIR		
Sept. 30.....	90.70	578	-	20.69	2,868	-
Oct. 31.....	89.05	500	-3.9	18.20	2,282	-29.2
Nov. 30.....	90.86	586	+4.4	23.43	3,581	+67.0
Dec. 31.....	78.00	123	-23.1	22.15	3,236	-17.2
CAL YR 1985			+0.5			+3.9
Jan. 31.....	84.90	328	+10.2	23.34	3,556	+16.0
Feb. 28.....	79.60	161	-9.2	23.33	3,553	-.2
Mar. 31.....	83.82	290	+6.4	22.48	3,323	-11.5
Apr. 30.....	93.41	719	+22.1	23.18	3,512	+9.7
May 31.....	95.09	814	+4.7	18.40	2,327	-59.9
June 30.....	95.04	873	+3.0	18.52	2,355	+1.4
July 31.....	95.35	891	+.9	20.68	2,865	+25.5
Aug. 31.....	94.99	870	-1.0	21.36	3,034	+8.4
Sept. 30.....	95.10	876	+3.9	18.89	2,440	-30.6
WR YR 1986			+1.3			-1.8

† Elevation at 2400 of the last day of each month.

DIVERSIONS INTO AND FROM HACKENSACK RIVER BASIN

01376272 Hackensack Water Co., diverts water from Sparkill Creek at foot of Danny Lane in Northvale, 300 ft south of New York-New Jersey state line and 0.6 mi upstream of Sparkill Brook. Water is diverted into Oradell Reservoir on the Hackensack River, for municipal supply. Records provided by Hackensack Water Co.

01376699 Spring Valley Water Co., diverts water at De Forest Lake for municipal supply in Rockland County, NY. Records provided by Spring Valley Water Co.

01376810 Village of Nyack, NY, diverts water from Hackensack River 100 ft downstream from gaging station on Hackensack River at West Nyack, NY (station 01376800) for municipal supply. Records provided by Board of Water Commissioners of Nyack, NY.

01378490 Hackensack Water Co., diverts water for municipal supply from Oradell Reservoir at Haworth pumping station 2.0 mi upstream from gaging station on Hackensack River at New Milford and from Hackensack River about 50 ft above gaging station on Hackensack River at New Milford, NJ (station 01378500).

01378520 Hackensack Water Co., diverts water from Hirshfeld Brook, a tributary of the Hackensack River, below the gaging station on Hackensack River at New Milford, NJ, for municipal supply. Records provided by Hackensack Water Co.

01387991 Hackensack Water Co. diverts water from the Ramapo River by pumping from Pompton Lake above the gaging station into Oradell Reservoir on the Hackensack River, for municipal supply. Pumping began Feb. 14, 1985. Records provided by Hackensack Water Co.

01391210 Hackensack Water Co., diverts water from Saddle River just north of bridge on State Route 4 at Arcola. Water is diverted into Oradell Reservoir on the Hackensack River, for municipal supply. Records provided by Hackensack Water Co.

DIVERSIONS, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MONTH	01376699 SPRING VALLEY WATER CO.	01376810 WEST NYACK, NY	01378490 HACKENSACK WATER CO.
October	0	2.65	132
November	0	2.60	132
December	0	2.73	134
CAL YR 1985	3.48	2.69	129
January	0	2.86	136
February	0	2.90	135
March	0	2.96	138
April	0	3.10	139
May	.05	3.14	162
June	12.7	3.12	176
July	12.3	3.25	174
August	10.2	3.00	154
September	11.0	3.16	154
WTR YR 1986	2.77	2.96	147

The following are diversions by pumpage from sources other than the Hackensack River into Oradell Reservoir. These figures are included in diversions from Hackensack River as noted above (station 01378490).

MONTH	01376272 SPARKILL CREEK (HUDSON RIVER BASIN)	01378520 HIRSHFELD BROOK (HACKENSACK RIVER BASIN)	01387991 RAMAPO RIVER (PASSAIC RIVER BASIN)	01391210 SADDLE RIVER (PASSAIC RIVER BASIN)	WELLS TO SURFACE SUPPLY
October	0.12	2.58	15.6	13.9	0.55
November	0.13	2.73	3.84	16.0	0.43
December	0	0	0	0	0.43
CAL YR 1985	0.80	2.16	13.6	14.9	2.01
January	0	0	0	12.9	0
February	0	0	0	0	0
March	0	0	0	0	0.03
April	0	0	0	4.85	0.13
May	0.06	0.79	5.53	12.2	1.06
June	0.16	2.14	15.3	11.6	2.23
July	0.03	2.11	14.8	10.0	2.33
August	0.18	2.74	6.12	18.9	0.42
September	0	1.76	9.02	9.58	0.20
WTR YR 1986	0.06	1.24	5.89	9.23	0.65

01379000 PASSAIC RIVER NEAR MILLINGTON, NJ

LOCATION.--Lat 40°40'48", long 74°31'45", Somerset County, Hydrologic Unit 02030103, on right bank 200 ft downstream from Davis Bridge, 0.7 mi northwest of Millington, and 1.8 mi downstream from Black Brook.

DRAINAGE AREA.--55.4 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1903 to June 1906 (published as "at Millington"), October 1921 to current year. Monthly discharge only for some periods published in WSP 1302.

REVISED RECORDS.--WSP 781: Drainage area. WSP 1552: 1905(M).

GAGE.--Water-stage recorder, crest-stage gage, and concrete-block control. Datum of gage is 215.60 ft above National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark). Nov. 25, 1903 to July 15, 1906, nonrecording gage at bridge 0.8 mi downstream at different datum. Nov. 10, 1921 to Sept. 1, 1923, nonrecording gage at site 200 ft downstream at present datum. Oct. 31, 1923 to July 3, 1925, nonrecording gage and concrete control at present site and datum.

REMARKS.--Estimated daily discharge: Jan. 25 to Feb. 6 and April 25 to May 1. Records good except those from April 25 to May 1 and those for period of ice effect, Jan. 25 to Feb. 6, which are fair. Diversion from Osborn Pond by Commonwealth Water Co., Bernards Division, was discontinued in April 1979 and the installation dismantled. Several measurements of water temperature, other than those published, were made during the year.

AVERAGE DISCHARGE.--66 years (water years 1905, 1921-86) 90.7 ft³/s, 22.22 in/yr, adjusted for diversion water years 1970-1979.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,000 ft³/s, Jan. 9, 1905, gage height, 7.8 ft, from graph based on gage readings, site and datum then in use, from rating curve extended above 1,400 ft³/s on basis of velocity-area study; maximum gage height, 9.73 ft, Aug. 29, 1971; minimum discharge, 0.2 ft³/s, Sept. 12, 13, 1966, gage height, 3.76 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 17	1745	644	7.01	Feb. 2	1730	648	7.02
Jan. 27	0415	787	7.33	Apr. 18	0130	*1,080	*8.04

Minimum discharge, 12 ft³/s, July 23-26, gage height, 4.34 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	276	17	306	23	228	117	48	94	21	14	42	19
2	190	17	268	23	158	98	46	83	20	35	55	18
3	140	16	220	33	142	88	41	77	19	62	199	19
4	132	16	170	47	123	91	39	70	19	24	179	22
5	119	72	137	60	137	88	39	65	18	22	141	24
6	153	136	116	69	170	101	47	60	25	21	131	82
7	126	104	110	48	118	104	55	63	50	18	101	61
8	106	93	101	36	100	82	51	58	41	16	66	41
9	90	80	96	30	90	77	48	54	37	15	44	39
10	74	69	92	28	87	78	44	50	30	15	32	33
11	62	58	87	27	80	98	43	46	28	14	119	28
12	51	49	92	26	82	113	41	40	105	16	104	23
13	45	48	90	27	66	124	37	38	167	22	59	17
14	41	49	93	23	62	213	35	37	115	20	50	16
15	37	63	83	19	59	370	34	36	90	17	39	16
16	29	98	73	18	52	370	252	35	69	16	31	16
17	27	526	69	18	53	292	921	37	52	16	30	15
18	25	532	61	20	91	214	1050	34	36	16	42	14
19	24	435	48	36	208	170	930	31	30	19	31	15
20	24	339	39	108	278	156	628	29	28	21	27	15
21	22	230	36	126	363	129	334	32	24	17	31	15
22	21	182	31	92	432	114	229	63	21	15	54	15
23	20	227	30	84	380	102	247	68	19	14	38	16
24	19	187	32	62	285	93	278	49	18	12	55	25
25	20	152	36	64	219	82	242	47	17	12	48	19
26	19	144	30	380	188	76	220	38	16	14	34	24
27	18	227	27	593	148	70	192	32	16	35	31	37
28	17	281	27	546	135	66	154	29	15	20	28	27
29	16	397	25	491	---	61	125	26	15	17	25	25
30	16	354	24	431	---	57	113	23	15	18	22	24
31	16	---	21	339	---	53	---	22	---	39	20	---
TOTAL	1975	5198	2670	3927	4534	3947	6563	1466	1176	632	1908	760
MEAN	63.7	173	86.1	127	162	127	219	47.3	39.2	20.4	61.5	25.3
MAX	276	532	306	593	432	370	1050	94	167	62	199	82
MIN	16	16	21	18	52	53	34	22	15	12	20	14
CFSM	1.15	3.12	1.55	2.29	2.92	2.29	3.95	.85	.71	.37	1.11	.46
IN.	1.33	3.49	1.79	2.64	3.04	2.65	4.41	.98	.79	.42	1.28	.51

CAL YR 1985 TOTAL 25067 MEAN 68.7 MAX 532 MIN 10 CFSM 1.24 IN. 16.83
WTR YR 1986 TOTAL 34756 MEAN 95.2 MAX 1050 MIN 12 CFSM 1.72 IN. 23.34

01379000 PASSAIC RIVER NEAR MILLINGTON, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1923-25, 1962 to current year.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
23...	1300	20	249	7.2	11.5	7.6	69	1.3	--	--
FEB 1986										
10...	1030	86	289	6.8	0.0	8.7	60	--	<20	20
APR										
10...	1030	44	225	7.5	9.5	9.0	86	4.5	31	49
JUN										
02...	1030	20	227	7.2	24.0	3.6	44	3.3	80	170
JUL										
15...	1100	17	214	7.2	22.5	5.2	60	2.7	200	500
AUG										
26...	1100	34	207	7.2	19.5	4.9	54	5.4	400	200

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
23...	70	17	6.8	17	2.5	56	14	26	<0.1
FEB 1986									
10...	70	17	6.6	29	1.8	37	16	52	<0.1
APR									
10...	73	18	6.9	16	1.9	52	17	24	0.1
JUN									
02...	77	19	7.2	15	1.1	65	11	23	0.1
JUL									
15...	70	17	6.6	15	1.2	56	15	24	0.1
AUG									
26...	65	16	6.1	16	1.1	53	16	22	0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
23...	14	130	0.007	0.17	0.31	0.77	0.94	0.15	11
FEB 1986									
10...	11	160	0.004	0.42	0.21	1.0	1.5	0.05	5.5
APR									
10...	5.2	120	0.011	0.18	<0.05	0.35	0.53	0.08	7.6
JUN									
02...	17	130	0.022	0.18	0.13	0.55	0.73	0.29	7.3
JUL									
15...	17	130	0.018	0.31	0.06	0.53	0.84	0.18	5.5
AUG									
26...	17	130	0.005	<0.05	0.07	1.5	--	0.19	--

01379000 PASSAIC RIVER NEAR MILLINGTON, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT 1985											
23...	1300	--	230	1.1	14	--	--	--	--	--	<1
23...	1300	<0.5	--	--	--	40	<1	<10	80	<1	--
JUN 1986											
02...	1030	<0.5	--	--	--	20	2	<10	50	<1	--

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT 1985											
23...	--	140	20	--	90	--	29000	--	200	--	2200
23...	20	--	--	4	--	790	--	3	--	70	--
JUN 1986											
02...	<10	--	--	3	--	1700	--	1	--	490	--

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985											
23...	--	0.1	--	20	--	<1	--	640	--	<1	<1.0
23...	0.2	--	1	--	<1	--	10	--	3	--	--
JUN 1986											
02...	<0.1	--	<1	--	<1	--	<10	--	4	--	--

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985											
23...	<0.1	38	22	33	25	<0.1	2.1	<0.1	<0.1	<0.1	1.3
23...	--	--	--	--	--	--	--	--	--	--	--
JUN 1986											
02...	--	--	--	--	--	--	--	--	--	--	--

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985											
23...	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1
23...	--	--	--	--	--	--	--	--	--	--	--
JUN 1986											
02...	--	--	--	--	--	--	--	--	--	--	--

01379500 PASSAIC RIVER NEAR CHATHAM, NJ

LOCATION.--Lat 40°43'31", long 74°23'23", Morris County, Hydrologic Unit 02030103, on left bank 150 ft downstream from Stanley Avenue bridge in Chatham, and 3.0 mi upstream from Canoe Brook.

DRAINAGE AREA.--100 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1903 to December 1911, October 1937 to current year. Monthly discharge only for some periods, published in WSP 1302.

GAGE.--Water-stage recorder. Concrete control since Sept. 19, 1938. Datum of gage is 193.51 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 31, 1911, nonrecording gage at bridge 150 ft upstream at different datum.

REMARKS.--Estimated daily discharges: Oct. 1-15, Nov. 19 to Dec. 17, May 20 to June 19, July 27-30, Sept. 8-24 and Sept. 28-30. Records good except for periods of no gage-height record, Oct. 15, Nov. 19 to Dec. 17, May 20 to June 19, July 27-30, Sept. 8-24 and Sept.28-30, which are poor. Diversion from Osborn Pond by Commonwealth Water Co., Bernards Division, during water years 1903-79. Several measurements of water-temperature, other than those published, were made during the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--57 years (water years 1904-11, 1938-86), 171 ft³/s, 23.22 in/yr, adjusted for diversion water years 1970-79.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,380 ft³/s, Aug. 2, 1973, gage height, 9.36 ft, from floodmark; minimum, 2.0 ft³/s, many days in May and June 1903, August and October 1905, September and October 1906, and September 11, 1944.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 17	0145	1,080	5.83	Apr. 18	1530	*1,550	*6.63
Jan. 27	2045	1,110	5.88				

Minimum discharge, 23 ft³/s, July 26, gage height, 3.25 ft.

REVISIONS.--The maximum gage height for water year 1984, which was not published in the 1984 report, is 7.26 ft on Apr. 6, 1984.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	300	30	452	48	382	200	78	160	35	28	106	34
2	253	30	370	49	250	180	73	141	33	87	147	32
3	215	29	306	73	242	163	69	124	32	106	331	34
4	195	30	240	101	217	162	65	110	32	72	336	47
5	200	257	198	175	252	163	64	101	31	40	219	57
6	248	270	176	170	310	174	78	98	51	37	166	112
7	204	199	172	157	263	179	89	101	103	35	143	117
8	174	143	164	154	191	136	88	96	83	33	108	80
9	140	118	160	150	229	127	80	86	74	32	77	69
10	118	99	154	85	185	120	73	79	57	33	57	57
11	102	85	148	74	162	158	69	73	52	30	290	50
12	86	76	158	63	160	187	66	68	178	44	283	43
13	78	72	156	59	181	242	62	62	257	45	134	34
14	74	75	162	65	192	435	58	59	186	56	83	32
15	67	127	140	52	123	596	56	57	141	40	67	30
16	53	254	126	44	120	639	455	56	109	32	55	31
17	47	880	117	43	109	567	1310	58	86	31	55	30
18	44	954	116	43	269	455	1520	56	64	31	100	29
19	41	772	106	66	495	347	1490	53	54	39	76	30
20	39	443	136	195	611	275	1330	49	51	46	56	30
21	37	295	80	249	691	218	1120	59	46	36	72	30
22	36	259	107	199	755	175	869	127	41	31	149	29
23	36	324	66	159	733	155	737	122	36	28	102	33
24	35	278	67	124	625	141	622	93	35	26	94	49
25	35	236	73	151	500	125	510	80	32	25	86	42
26	34	230	106	828	374	114	415	65	29	24	65	57
27	33	366	60	1070	295	109	316	55	30	64	52	41
28	31	487	56	1080	233	102	251	49	29	43	52	56
29	31	662	52	972	---	95	209	45	29	40	47	53
30	31	542	51	789	---	87	186	40	30	41	41	50
31	30	---	48	585	---	81	---	37	---	137	37	---
TOTAL	3047	8622	4523	8072	9149	6907	12408	2459	2046	1392	3686	1418
MEAN	98.3	287	146	260	327	223	414	79.3	68.2	44.9	119	47.3
MAX	300	954	452	1080	755	639	1520	160	257	137	336	117
MIN	30	29	48	43	109	81	56	37	29	24	37	29
CFSM	.98	2.87	1.46	2.60	3.27	2.23	4.14	.79	.68	.45	1.19	.47
IN.	1.13	3.21	1.68	3.00	3.40	2.57	4.62	.91	.76	.52	1.37	.53

CAL YR 1985 TOTAL 45294 MEAN 124 MAX 954 MIN 21 CFSM 1.24 IN. 16.85
WTR YR 1986 TOTAL 63729 MEAN 175 MAX 1520 MIN 24 CFSM 1.75 IN. 23.71

01379500 PASSAIC RIVER NEAR CHATHAM, NJ--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1966 to September 1968.
SUSPENDED-SEDIMENT DISCHARGE: July 1963 to September 1968.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
17...	1300	46	587	7.5	15.0	7.0	69	--	500	700
FEB 1986										
10...	1330	181	405	7.5	1.0	12.6	90	2.7	330	20
APR										
14...	1130	57	476	8.0	12.0	14.3	133	2.9	220	79
JUN										
04...	1100	E32	900	7.8	22.0	9.5	109	6.3	790	460
JUL										
15...	1330	38	433	7.3	25.5	5.5	67	8.1	1300	700
AUG										
27...	1100	52	374	7.6	22.0	6.3	73	3.6	200	200

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
17...	92	23	8.3	75	3.3	60	27	120	<0.1
FEB 1986									
10...	86	21	8.2	42	2.0	40	17	78	<0.1
APR									
14...	89	21	8.9	54	2.3	60	27	88	0.2
JUN									
04...	110	27	11	130	3.1	77	57	190	0.1
JUL									
15...	90	22	8.6	48	2.5	65	36	61	0.1
AUG									
27...	81	20	7.6	40	2.2	58	30	54	0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
17...	15	310	0.077	1.52	0.52	1.5	3.0	0.48	9.6
FEB 1986									
10...	13	210	0.016	1.05	0.46	0.53	1.6	0.17	5.3
APR									
14...	7.4	240	0.058	1.33	0.63	1.1	2.5	0.48	7.1
JUN									
04...	15	480	0.29	2.77	0.51	1.7	4.5	0.69	9.3
JUL									
15...	15	230	0.26	2.10	0.49	1.0	3.1	0.58	7.0
AUG									
27...	16	200	0.14	1.71	0.43	0.95	2.7	0.48	--

01379500 PASSAIC RIVER NEAR CHATHAM, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
JUN 1986 04...	1100	<0.5	20	<1	<10	140	<1	<10	11

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
JUN 1986 04...	1400	2	150	<0.1	7	<1	30	2

01379700 ROCKAWAY RIVER AT BERKSHIRE VALLEY, NJ

LOCATION.--Lat 40°55'51", long 74°35'42", Morris County, Hydrologic Unit 02030103, on left bank 60 ft downstream from bridge on Berkshire Valley Road in Berkshire Valley, 2.7 mi upstream from Stephens Brook, and 3.8 mi northwest of Dover.

DRAINAGE AREA.--24.4 mi³.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Low-flow partial-record station water years 1960-72. May 1985 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 682.8 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair. Some regulation from lakes and reservoirs upstream. Several measurements of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 353 ft³/s, Apr. 18, 1986, gage height, 6.22 ft; minimum, 9.3 ft³/s, July 12, Sept. 14, 15, 1986, gage height, 2.88 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 11, 1936, reached a stage of 6.72 ft, present datum, discharge not determined. Flood of April 5, 1984, reached a stage of 9.05 ft, from floodmarks, discharge 1,290 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 150 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 29	1115	174	5.59	Mar. 16	0130	294	5.93
Jan. 27	1245	203	5.80	Apr. 18	0500	*353	*6.22

Minimum discharge, 9.3 ft³/s, July 12, Sept. 14, 15, gage height, 2.88 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	24	154	32	79	57	51	98	30	14	25	12
2	53	24	158	30	76	53	48	89	27	26	29	12
3	55	24	150	35	76	49	45	73	25	21	82	13
4	57	24	128	34	71	48	44	60	24	16	55	13
5	62	43	112	35	71	47	44	56	22	15	32	14
6	62	49	103	34	72	47	51	53	38	14	22	26
7	60	47	95	35	80	48	48	55	97	14	20	21
8	54	43	87	39	70	46	48	51	64	13	18	17
9	48	40	80	29	55	39	46	49	83	13	16	14
10	46	37	74	28	50	40	43	44	59	13	14	13
11	44	34	72	27	48	51	41	42	41	11	15	12
12	42	34	82	26	53	71	40	40	53	14	14	11
13	41	38	82	25	52	82	39	37	77	16	14	10
14	39	37	80	27	48	110	38	36	65	20	12	9.6
15	37	40	69	23	40	247	37	36	51	18	12	12
16	36	45	60	22	43	284	77	36	47	15	12	15
17	32	134	55	22	42	229	239	39	39	14	48	13
18	31	138	50	22	67	182	331	36	34	14	63	13
19	29	136	62	28	108	162	243	34	33	17	34	14
20	27	111	48	45	120	163	188	36	34	15	25	14
21	26	91	44	40	119	138	160	39	31	14	23	16
22	26	84	47	36	126	116	147	53	31	14	39	15
23	27	97	42	35	114	104	166	58	30	13	31	15
24	26	90	42	35	100	94	172	66	28	13	32	16
25	27	78	43	37	90	83	167	48	26	12	23	14
26	27	79	54	145	87	78	155	39	20	12	19	20
27	28	108	40	194	71	73	143	34	17	15	17	24
28	27	131	39	178	63	70	129	31	16	14	16	21
29	25	170	42	148	---	66	116	29	16	14	14	18
30	24	159	36	116	---	63	109	28	15	14	13	16
31	24	---	37	93	---	57	---	29	---	43	13	---
TOTAL	1209	2189	2267	1655	2091	2997	3205	1454	1173	491	802	453.6
MEAN	39.0	73.0	73.1	53.4	74.7	96.7	107	46.9	39.1	15.8	25.9	15.1
MAX	67	170	158	194	126	284	331	98	97	43	82	26
MIN	24	24	36	22	40	39	37	28	15	11	12	9.6
CFSM	1.60	2.99	3.00	2.19	3.06	3.96	4.39	1.92	1.60	.65	1.06	.62
IN.	1.84	3.34	3.46	2.52	3.19	4.57	4.89	2.22	1.79	.75	1.22	.69

WTR YR 1986 TOTAL 19986.6 MEAN 54.8 MAX 331 MIN 9.6 CFSM 2.25 IN. 30.47

01379773 GREEN POND BROOK AT PICATINNY ARSENAL, NJ

LOCATION.--Lat 40°57'34", long 74°32'24", Morris County, Hydrologic Unit 02030103, on left bank at Picatinny Arsenal, 500 ft upstream from Picatinny Lake, and 0.55 mi downstream from Burnt Meadow Brook.

DRAINAGE AREA.--7.65 mi².

WATER-DISCHARGE RECORD

PERIOD OF RECORD.--October 1982 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 712.54 ft above National Geodetic Vertical Datum of 1929 (U.S. Army, Picatinny Arsenal, bench mark).

REMARKS.--No estimated daily discharges. Records good. Some regulation by Lake Denmark and Green Pond. Several measurements of water temperature, other than those published, were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 333 ft³/s, Apr. 5, 1984, gage height, 3.51 ft; minimum, 1.5 ft³/s, Nov. 27, 28, 1984, gage height, 1.30 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 75 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 17	1715	*73	*2.41	No peak greater than base discharge.			

Minimum discharge, 2.7 ft³/s, Jan. 15, gage height, 1.36 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	3.2	45	5.3	25	19	11	24	9.0	3.9	7.9	5.9
2	20	3.0	43	5.1	24	17	9.9	21	8.2	6.7	14	5.5
3	19	2.9	39	6.4	21	15	9.0	17	7.7	5.3	28	5.5
4	19	2.9	34	6.8	20	14	8.9	15	7.3	4.4	24	5.4
5	20	7.3	30	7.9	22	14	9.4	13	7.0	4.1	21	6.3
6	18	6.6	28	7.7	21	14	10	12	12	4.0	18	9.3
7	16	6.5	25	6.6	20	13	10	12	24	3.9	15	6.9
8	15	6.9	22	5.6	20	12	9.8	12	19	3.7	12	5.9
9	13	6.5	20	5.0	19	11	9.4	11	17	3.5	10	5.4
10	13	6.0	18	4.8	17	15	8.6	9.0	14	3.5	8.4	5.1
11	12	6.4	19	4.7	17	18	7.9	8.2	12	3.4	8.3	4.9
12	11	7.5	22	4.5	16	18	7.4	7.6	18	4.6	6.8	4.9
13	9.8	8.5	21	4.4	15	23	6.6	6.4	18	4.3	5.8	4.7
14	9.6	8.8	20	3.9	13	32	6.3	6.0	16	3.7	5.2	4.5
15	9.0	9.9	17	3.4	13	56	6.1	5.5	15	3.5	4.8	4.4
16	8.6	14	16	3.1	12	59	21	5.5	13	3.5	4.8	4.3
17	8.1	42	15	3.1	13	52	62	6.0	11	3.4	12	4.2
18	7.6	40	13	3.5	22	45	68	5.5	9.6	3.3	17	4.0
19	7.1	36	11	5.1	26	42	58	5.2	8.7	3.9	14	4.0
20	7.0	31	9.8	11	30	41	50	5.1	8.4	3.6	12	4.0
21	6.7	28	9.4	11	33	36	45	6.2	7.4	3.3	13	3.9
22	6.3	28	8.4	11	36	31	42	11	6.6	3.1	17	3.8
23	6.0	28	8.2	11	36	31	45	9.8	5.7	3.1	16	4.0
24	5.9	25	8.0	9.6	34	29	47	8.9	4.9	3.0	17	4.2
25	6.4	21	8.2	11	32	26	46	8.0	4.7	3.0	14	3.9
26	6.0	23	7.6	48	29	24	41	11	4.4	3.1	12	5.8
27	5.8	29	7.1	62	26	23	37	11	4.3	3.2	11	7.1
28	5.4	39	6.8	57	22	22	33	9.9	4.3	3.1	9.8	5.9
29	4.1	47	6.2	47	---	16	30	9.4	4.2	3.2	8.5	5.1
30	3.6	45	5.8	38	---	13	28	8.8	4.0	4.2	7.4	4.9
31	3.4	---	5.3	31	---	12	---	8.7	---	14	6.7	---
TOTAL	325.4	568.9	548.8	444.5	634	793	783.3	309.7	305.4	126.5	381.4	153.7
MEAN	10.5	19.0	17.7	14.3	22.6	25.6	26.1	9.99	10.2	4.08	12.3	5.12
MAX	23	47	45	62	36	59	68	24	24	14	28	9.3
MIN	3.4	2.9	5.3	3.1	12	11	6.1	5.1	4.0	3.0	4.8	3.8
CFSM	1.37	2.48	2.31	1.87	2.95	3.35	3.41	1.31	1.33	.53	1.61	.67
IN.	1.58	2.77	2.67	2.16	3.08	3.86	3.81	1.51	1.49	.62	1.85	.75

CAL YR 1985 TOTAL 3558.6 MEAN 9.75 MAX 47 MIN 2.2 CFSM 1.27 IN. 17.30
WTR YR 1986 TOTAL 5374.6 MEAN 14.7 MAX 68 MIN 2.9 CFSM 1.92 IN. 26.14

01379773 GREEN POND BROOK AT PICATINNY ARSENAL, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1983 to current year (discontinued).
pH: November 1983 to current year (discontinued).
WATER TEMPERATURE: November 1983 to current year (discontinued).
DISSOLVED OXYGEN: November 1983 to current year (discontinued).

INSTRUMENTATION.--Water-quality monitor since November 1983.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 169 microsiemens, Feb. 12, 1985; minimum, 48 microsiemens, July 13, 14, 16, 17, 1984.
pH: Maximum, 8.2, Aug. 28, 30, 31 and Sept. 3, 1984; minimum, 6.3, Apr. 13, 1984.
WATER TEMPERATURE: Maximum, 25.5°C, Aug. 15, 1985, and July 7, 23-26, 1986; minimum, 0.0°C on many days during the winter months.
DISSOLVED OXYGEN: Maximum, 14.6 mg/L, Jan. 12, 13, 1984; minimum, 6.8 mg/L, Sept. 6-9, 1985.

EXTREMES FOR THE CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 103 microsiemens, Aug. 2; minimum, 53 microsiemens, Oct. 1, Apr. 28.
pH: Maximum, 7.3, Apr. 14 and Aug. 20-22; minimum, 6.5, Aug. 3.
WATER TEMPERATURE: Maximum, 25.5°C, July 7, 23-26; minimum, 0.0°C on many days during the winter months.
DISSOLVED OXYGEN: Maximum, 14.1 mg/L, Dec. 5; minimum, 7.0 mg/L, July 7, 8, 24, 25, 27.

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	55	53	54	70	69	69	66	64	65	70	68	69
2	55	54	55	72	71	71	64	60	63	70	68	69
3	60	55	57	72	71	72	61	59	60	79	68	73
4	60	58	59	73	71	72	61	59	60	75	70	72
5	66	58	61	100	74	89	62	60	61	74	69	72
6	61	57	59	84	75	80	63	61	62	73	71	72
7	58	57	57	75	71	72	63	62	62	73	70	71
8	59	58	58	71	69	70	63	62	63	74	71	72
9	59	58	58	70	68	69	63	62	63	73	71	72
10	59	58	58	69	67	69	63	62	63	73	71	72
11	59	58	58	69	68	69	66	62	63	72	70	71
12	58	58	58	81	68	72	67	63	65	72	70	71
13	59	58	59	76	71	73	64	62	63	72	70	71
14	60	59	59	73	69	70	65	63	64	75	70	73
15	60	59	59	76	70	72	65	63	64	76	72	74
16	61	60	60	84	66	71	65	64	65	76	74	75
17	60	59	60	80	62	66	66	64	65	76	73	75
18	60	59	60	63	62	62	67	65	66	74	71	73
19	61	60	60	63	62	63	69	67	68	92	71	78
20	61	60	60	63	62	63	69	68	68	89	73	78
21	61	60	60	64	63	63	69	67	68	72	69	71
22	61	60	60	70	63	65	70	68	69	71	68	69
23	61	60	60	67	64	65	70	68	69	71	68	69
24	64	60	62	65	63	64	69	68	69	70	68	69
25	66	64	65	65	63	64	70	68	69	71	66	68
26	64	62	63	73	64	68	72	68	70	79	60	67
27	63	62	63	72	65	68	71	69	70	65	62	64
28	65	62	63	70	65	67	70	68	69	68	64	66
29	67	65	66	65	63	64	70	69	69	68	66	67
30	68	67	67	65	64	65	70	69	70	68	67	67
31	69	68	68	---	---	---	71	69	70	68	67	68
MONTH	69	53	60	100	62	69	72	59	66	92	60	71

01379773 GREEN POND BROOK AT PICATINNY ARSENAL, NJ--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	68	67	67	71	69	70	69	67	68	65	61	63
2	78	67	71	72	70	71	69	67	68	65	64	65
3	70	68	69	72	70	71	70	68	69	66	64	65
4	68	66	67	72	70	71	69	67	68	66	65	65
5	73	67	70	75	70	72	69	68	69	67	65	66
6	88	69	73	75	71	73	72	69	71	68	66	67
7	71	68	70	75	72	73	70	69	70	70	67	69
8	70	67	68	75	72	74	69	68	69	69	68	69
9	69	67	68	74	71	73	69	68	68	70	68	69
10	69	68	68	72	66	68	69	68	68	70	69	69
11	69	67	68	77	69	74	70	68	69	71	69	70
12	68	67	67	72	69	70	70	68	69	72	70	71
13	68	67	68	76	70	73	70	69	69	72	70	71
14	68	68	68	80	71	74	71	69	70	73	71	72
15	68	67	68	77	66	69	73	70	71	74	73	73
16	68	67	68	70	68	69	87	71	78	74	72	73
17	76	67	69	71	70	71	77	66	69	76	72	74
18	84	73	78	74	70	71	70	67	68	74	72	73
19	79	73	74	74	71	71	70	67	69	75	73	74
20	76	69	72	73	69	70	70	67	69	79	74	76
21	74	66	69	70	68	69	68	66	67	90	75	78
22	74	66	69	70	68	69	64	63	64	90	75	82
23	67	65	66	67	64	65	63	60	61	76	73	74
24	68	66	67	65	64	64	60	58	59	73	71	72
25	69	67	68	65	64	64	58	56	57	74	70	73
26	70	69	69	64	63	64	56	54	55	70	64	65
27	71	69	70	63	62	63	56	54	55	65	64	65
28	72	70	70	63	62	63	59	53	56	67	64	66
29	---	---	---	68	63	65	63	57	60	68	66	67
30	---	---	---	69	67	68	64	60	62	68	67	68
31	---	---	---	69	67	68	---	---	---	71	68	69
MONTH	88	65	69	80	62	69	87	53	66	90	61	70
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	69	67	68	76	75	76	83	79	81	70	69	70
2	70	69	69	93	71	79	103	76	83	70	68	69
3	71	69	70	75	73	74	79	72	74	70	69	70
4	72	70	71	76	74	75	79	75	77	70	68	69
5	74	72	73	76	75	76	80	78	79	89	69	72
6	82	69	76	77	76	77	83	80	82	87	67	72
7	80	72	75	78	76	77	83	82	83	68	67	67
8	83	75	79	78	76	77	84	83	84	68	67	67
9	82	80	81	78	77	77	84	83	83	68	66	67
10	82	79	80	78	76	78	84	83	83	68	66	67
11	82	80	81	78	76	77	86	84	85	68	66	67
12	84	80	82	88	76	81	84	82	83	68	67	68
13	80	76	77	79	76	77	83	81	82	69	67	68
14	81	75	77	79	77	78	83	82	82	69	67	68
15	88	81	85	78	77	77	82	81	81	69	68	69
16	89	87	88	78	77	77	82	80	81	70	67	68
17	88	84	86	79	77	78	99	79	88	69	67	68
18	87	82	85	79	77	78	85	80	81	69	67	68
19	85	83	84	82	76	79	81	79	80	69	68	69
20	90	83	86	78	76	77	86	81	84	69	68	69
21	89	83	86	79	77	78	86	82	84	70	68	69
22	82	79	81	79	77	78	85	76	79	70	68	69
23	84	78	81	79	77	78	75	70	72	73	68	69
24	83	81	82	79	77	79	74	70	72	72	68	69
25	80	75	78	80	77	79	71	69	70	69	68	68
26	74	73	74	80	78	79	70	69	69	82	66	71
27	75	74	75	80	78	79	70	69	70	75	66	70
28	76	75	75	80	78	79	69	68	69	69	68	69
29	76	75	76	80	78	79	70	68	69	69	68	68
30	76	74	75	98	76	82	69	67	68	68	67	67
31	---	---	---	100	75	89	69	68	68	---	---	---
MONTH	90	67	79	100	71	78	103	67	78	89	66	69

01379773 GREEN POND BROOK AT PICATINNY ARSENAL, NJ--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	18.0	16.0	17.0	10.0	8.0	9.0	5.0	4.5	4.5	1.5	.5	1.5
2	17.5	16.5	17.0	9.5	8.0	8.5	5.5	4.0	5.0	2.0	.5	1.0
3	16.5	15.5	15.5	10.0	9.0	9.5	4.0	2.0	3.0	2.5	1.0	1.5
4	15.5	15.0	15.5	9.5	9.0	9.5	2.0	1.5	2.0	2.0	1.0	1.5
5	16.0	14.5	15.5	10.0	9.5	10.0	2.0	1.0	1.5	2.5	1.0	1.5
6	15.0	13.5	14.5	10.0	9.5	10.0	2.0	1.0	1.5	2.0	.5	1.0
7	14.5	13.0	13.5	11.0	9.0	9.5	2.0	1.0	1.5	1.0	.0	.5
8	14.5	12.5	13.5	10.0	8.0	9.0	2.5	1.5	2.0	.5	.0	.0
9	15.0	13.0	14.0	10.5	7.5	9.0	3.0	2.0	2.5	.5	.0	.5
10	15.5	14.0	14.5	11.5	9.0	10.0	3.0	2.0	2.5	1.5	.5	1.0
11	15.0	13.5	14.5	10.5	9.0	10.0	3.0	3.0	3.0	1.5	.5	1.0
12	13.5	12.0	13.0	9.0	8.5	9.0	4.0	2.5	3.0	2.0	.5	1.0
13	13.5	12.5	13.0	10.5	9.0	10.0	3.0	2.5	2.5	2.0	.0	1.0
14	14.5	13.0	13.5	10.0	9.5	10.0	2.5	1.0	2.0	.5	.0	.0
15	15.0	14.0	14.5	9.5	7.5	8.5	1.5	.5	1.0	.5	.0	.0
16	15.0	13.0	14.0	7.5	5.5	6.5	2.0	1.0	1.5	.5	.0	.5
17	13.5	11.5	12.5	8.0	7.0	7.5	1.5	1.0	1.0	.5	.0	.5
18	13.0	11.0	12.0	8.0	6.5	7.0	1.0	.0	.5	1.5	.5	1.0
19	14.0	11.5	13.0	8.5	7.5	8.0	.5	.0	.5	2.0	1.5	1.5
20	13.5	12.0	12.5	10.0	8.5	9.5	1.0	.0	.5	2.0	1.5	2.0
21	12.5	11.0	11.5	9.5	8.0	9.0	1.0	.5	.5	3.5	2.0	2.5
22	13.0	10.0	11.0	8.0	7.0	7.5	.5	.0	.5	4.0	2.0	3.0
23	13.0	10.0	11.0	7.0	6.0	6.5	2.0	.5	1.0	3.0	2.0	2.5
24	12.5	11.0	11.5	7.0	6.0	6.0	2.5	1.5	2.0	2.5	1.0	1.5
25	13.5	11.0	12.5	6.0	5.5	6.0	2.0	.0	1.0	2.0	1.0	1.5
26	12.5	10.0	11.0	5.5	5.0	5.5	.5	.0	.0	2.5	1.5	2.0
27	12.5	10.0	11.0	6.0	5.5	5.5	.5	.0	.5	3.0	2.0	2.5
28	11.0	9.0	10.5	5.5	5.0	5.0	1.0	.5	1.0	3.0	2.0	2.5
29	10.0	7.5	8.5	5.0	4.5	5.0	1.5	.5	.5	3.0	2.0	2.5
30	10.0	7.5	8.5	4.5	4.5	4.5	1.0	.5	.5	3.0	2.0	2.5
31	10.0	9.0	9.5	---	---	---	1.5	.0	1.0	3.0	2.0	2.5
MONTH	18.0	7.5	13.0	11.5	4.5	8.0	5.5	.0	1.5	4.0	.0	1.5
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	3.0	2.0	2.5	4.0	2.0	2.5	14.5	9.5	11.5	---	---	---
2	3.5	2.5	3.0	3.5	2.0	2.5	15.0	10.5	12.0	---	---	---
3	3.5	2.0	2.5	5.0	2.0	3.0	14.5	9.5	11.5	---	---	---
4	2.5	1.5	2.5	3.5	2.5	3.0	11.5	9.5	10.5	---	---	---
5	3.5	2.5	3.0	5.0	2.5	3.0	11.0	9.0	10.0	---	---	---
6	3.5	1.5	2.5	4.0	2.0	3.0	9.0	8.5	8.5	---	---	---
7	2.0	.5	1.5	3.0	.5	2.0	12.5	8.5	10.0	---	---	---
8	3.0	1.5	2.0	3.0	.5	1.5	13.5	9.0	10.5	---	---	---
9	2.5	1.5	2.0	3.5	1.5	2.0	10.0	8.5	9.5	---	---	---
10	3.0	2.0	2.0	4.0	1.5	2.5	9.5	7.5	8.5	---	---	---
11	2.0	.5	1.5	5.0	2.5	3.5	9.5	7.0	8.0	---	---	---
12	2.5	.5	1.5	4.0	2.0	3.0	9.5	7.0	8.0	---	---	---
13	2.5	.5	1.0	3.5	3.0	3.0	12.0	6.0	8.5	---	---	---
14	2.0	.5	1.0	3.5	3.0	3.5	13.5	6.5	9.5	---	---	---
15	2.5	.5	1.5	5.0	3.0	4.0	11.0	8.0	9.5	---	---	---
16	2.0	.5	1.0	6.0	4.0	5.0	9.5	7.5	8.5	---	---	---
17	2.0	1.0	1.5	5.5	4.5	5.0	7.5	7.0	7.5	---	---	---
18	2.0	2.0	2.0	7.0	4.5	5.5	10.5	7.5	9.0	---	---	---
19	2.5	2.0	2.0	7.0	6.0	6.5	12.0	8.5	10.5	---	---	---
20	2.5	2.0	2.0	7.0	4.5	6.0	12.5	10.0	11.5	---	---	---
21	2.5	2.5	2.5	5.5	3.0	4.0	12.0	11.0	11.5	---	---	---
22	3.5	2.0	2.5	6.0	3.0	4.0	11.5	9.5	10.5	---	---	---
23	3.5	2.5	3.0	6.5	3.5	4.5	9.0	7.5	8.0	---	---	---
24	4.0	2.0	3.0	7.0	4.0	5.0	10.5	7.0	9.0	---	---	---
25	4.0	2.0	2.5	7.5	4.0	5.5	12.0	8.5	10.0	---	---	---
26	3.5	2.0	2.5	9.5	5.5	7.5	12.5	10.5	11.0	---	---	---
27	4.0	2.0	3.0	9.0	7.0	8.0	14.0	11.0	12.5	---	---	---
28	4.0	2.0	2.5	10.0	7.0	8.0	17.0	12.5	14.5	---	---	---
29	---	---	---	11.5	7.5	9.0	16.5	14.0	14.5	20.0	17.0	18.0
30	---	---	---	13.0	8.5	10.5	17.5	13.5	15.0	21.5	18.0	19.0
31	---	---	---	13.5	9.5	11.0	---	---	---	21.0	18.5	19.5
MONTH	4.0	.5	2.0	13.5	.5	4.5	17.5	6.0	10.5	21.5	17.0	19.0

01379773 GREEN POND BROOK AT PICATINNY ARSENAL, NJ--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	22.0	18.5	20.0	22.0	18.0	20.0	21.0	19.0	19.5	18.5	16.0	17.5
2	19.5	17.0	19.0	20.0	18.5	19.5	20.5	18.0	19.5	19.0	17.5	18.0
3	18.5	15.0	16.5	21.0	18.0	19.0	20.0	17.5	18.5	18.5	17.5	18.0
4	19.5	15.0	17.0	21.0	16.5	18.5	22.0	19.5	20.5	18.0	17.5	17.5
5	20.0	17.0	18.5	22.5	19.0	20.5	23.0	20.5	21.5	18.0	17.0	17.5
6	19.5	17.5	18.5	24.5	20.5	22.0	23.0	21.0	22.0	18.5	16.5	17.5
7	18.5	17.5	18.0	25.5	21.5	23.0	23.0	22.0	22.5	17.5	16.5	17.0
8	20.5	18.5	19.0	25.0	22.0	23.5	24.0	22.0	23.0	17.5	15.5	16.5
9	20.5	18.0	19.0	23.0	22.0	23.0	24.0	22.0	23.0	18.0	14.5	16.0
10	21.0	17.5	19.0	23.0	20.5	21.5	24.0	21.0	22.5	18.0	15.0	16.5
11	21.0	19.0	20.0	21.5	19.5	20.5	23.5	22.0	23.0	20.0	17.5	18.5
12	20.0	17.5	19.0	20.5	19.0	19.5	22.0	20.5	21.5	20.5	18.5	19.0
13	18.5	17.5	18.0	19.5	19.0	19.0	22.5	19.5	21.0	19.0	17.0	18.0
14	20.0	17.0	18.5	22.0	19.5	20.5	23.0	19.5	21.0	17.5	16.0	17.0
15	21.0	18.5	19.5	22.5	19.0	20.5	22.5	20.0	21.5	18.0	15.0	16.5
16	21.0	19.5	20.0	21.0	19.0	20.0	22.5	21.5	22.0	17.0	15.0	16.0
17	20.5	18.0	19.5	22.5	20.0	21.0	22.0	20.0	21.0	16.5	14.0	15.0
18	19.0	17.0	18.0	24.0	21.0	22.5	21.5	20.0	20.5	16.0	13.5	15.0
19	19.5	16.0	17.5	24.0	22.5	23.0	22.5	20.5	21.5	17.5	15.5	16.5
20	20.0	17.5	18.5	23.0	22.0	22.5	23.0	21.5	22.0	17.5	15.5	16.5
21	20.5	17.0	18.5	25.0	22.0	23.0	22.0	20.0	21.0	18.0	17.0	17.0
22	21.0	17.0	19.0	24.5	21.5	23.0	21.5	19.5	20.5	17.0	16.0	16.5
23	22.5	18.5	20.5	25.5	22.0	23.5	21.5	19.5	20.5	18.0	16.5	17.0
24	21.5	18.5	20.0	25.5	22.5	24.0	20.5	19.0	20.0	18.5	17.0	17.5
25	20.0	17.5	18.5	25.5	22.5	24.0	20.0	18.5	19.0	18.0	16.5	17.5
26	21.0	16.5	18.5	25.5	24.0	24.5	20.5	18.5	19.0	18.5	17.0	17.5
27	22.5	18.0	20.0	25.0	23.0	24.0	20.5	19.0	20.0	17.5	16.0	17.0
28	22.5	20.0	21.0	25.0	23.5	24.0	19.5	16.5	18.0	16.5	15.5	16.0
29	23.5	20.5	21.5	25.0	23.5	24.0	17.5	15.5	16.5	17.5	16.0	17.0
30	21.0	19.0	20.0	23.5	22.0	23.0	18.0	15.0	16.5	20.0	17.0	18.0
31	---	---	---	21.5	18.5	19.0	18.0	15.0	16.5	---	---	---
MONTH	23.5	15.0	19.0	25.5	16.5	22.0	24.0	15.0	20.5	20.5	13.5	17.0

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	6.8	6.7	6.7	7.0	6.9	7.0	7.2	7.1	7.1	6.9	6.8	6.8
2	6.8	6.7	6.7	7.0	6.9	7.0	7.2	7.1	7.1	6.9	6.8	6.8
3	6.9	6.7	6.8	7.0	6.9	7.0	7.1	7.1	7.1	6.9	6.8	6.9
4	7.0	6.8	6.9	7.0	6.9	6.9	7.1	7.1	7.1	6.9	6.8	6.9
5	7.1	6.9	7.0	6.9	6.9	6.9	7.1	7.0	7.1	6.9	6.8	6.9
6	7.1	7.0	7.0	6.9	6.8	6.8	7.2	7.1	7.2	6.9	6.9	6.9
7	7.1	7.0	7.0	7.0	6.9	7.0	7.2	7.1	7.2	6.9	6.9	6.9
8	7.1	7.0	7.0	7.1	7.0	7.0	7.2	7.1	7.1	6.9	6.8	6.9
9	7.1	7.0	7.0	7.1	7.0	7.0	7.2	7.1	7.1	6.9	6.8	6.9
10	7.1	7.0	7.0	7.1	7.0	7.0	7.2	7.1	7.1	6.9	6.9	6.9
11	7.1	7.0	7.0	7.1	7.0	7.0	7.1	7.1	7.1	6.9	6.9	6.9
12	7.1	7.0	7.0	7.1	7.0	7.1	7.2	7.1	7.1	6.9	6.8	6.9
13	7.0	7.0	7.0	7.1	7.0	7.1	7.1	7.1	7.1	6.9	6.9	6.9
14	7.0	6.9	7.0	7.1	7.0	7.1	7.1	7.1	7.1	6.9	6.8	6.9
15	7.0	6.9	6.9	7.2	7.1	7.1	7.1	7.0	7.1	6.9	6.8	6.8
16	7.0	6.9	6.9	7.1	7.0	7.1	7.1	7.0	7.1	6.9	6.8	6.9
17	7.0	6.9	6.9	7.0	6.9	6.9	7.1	7.0	7.0	6.9	6.8	6.9
18	7.0	6.9	6.9	7.0	6.9	7.0	7.0	7.0	7.0	6.9	6.8	6.9
19	7.0	6.9	6.9	7.1	7.0	7.0	7.0	7.0	7.0	7.0	6.8	6.9
20	7.0	6.9	7.0	7.1	7.0	7.1	7.0	6.9	7.0	7.0	6.9	6.9
21	7.0	6.9	7.0	7.1	7.1	7.1	7.0	6.9	6.9	7.0	6.9	6.9
22	7.0	6.9	7.0	7.1	7.1	7.1	7.0	6.9	6.9	7.0	6.9	6.9
23	7.0	6.9	6.9	7.1	7.1	7.1	7.0	6.9	6.9	7.0	6.9	6.9
24	7.0	6.9	6.9	7.1	7.1	7.1	7.0	6.9	6.9	7.0	6.9	6.9
25	7.0	6.9	7.0	7.2	7.1	7.1	6.9	6.9	6.9	7.0	6.9	6.9
26	7.1	7.0	7.0	7.2	7.1	7.1	6.9	6.8	6.8	6.9	6.7	6.8
27	7.0	6.9	6.9	7.2	7.1	7.1	6.9	6.8	6.9	6.9	6.8	6.8
28	7.0	6.9	7.0	7.2	7.1	7.1	6.9	6.8	6.9	6.9	6.8	6.9
29	7.0	6.9	7.0	7.1	7.1	7.1	6.9	6.8	6.8	6.9	6.9	6.9
30	7.0	7.0	7.0	7.1	7.1	7.1	6.8	6.8	6.8	6.9	6.9	6.9
31	7.0	7.0	7.0	---	---	---	6.8	6.8	6.8	7.0	6.9	6.9
MONTH	7.1	6.7	7.0	7.2	6.8	7.0	7.2	6.8	7.0	7.0	6.7	6.9

01379773 GREEN POND BROOK AT PICATINNY ARSENAL, NJ--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.0	6.9	6.9	7.2	7.1	7.1	7.1	6.9	7.0	7.0	6.8	6.9
2	7.0	6.9	7.0	7.2	7.1	7.1	7.1	6.9	7.0	7.0	6.8	6.9
3	7.0	7.0	7.0	7.2	7.1	7.1	7.1	6.9	7.0	7.0	6.8	6.9
4	7.0	7.0	7.0	7.2	7.1	7.1	7.0	6.9	6.9	7.0	6.8	6.9
5	7.0	7.0	7.0	7.2	7.1	7.1	7.0	6.8	6.9	7.0	6.9	6.9
6	7.1	7.0	7.0	7.2	7.1	7.1	6.9	6.8	6.9	7.0	6.9	6.9
7	7.0	6.9	6.9	7.2	7.1	7.1	7.0	6.9	6.9	7.0	6.8	6.9
8	6.9	6.8	6.9	7.2	7.1	7.1	7.0	6.9	6.9	7.0	6.9	6.9
9	6.9	6.8	6.9	7.2	7.1	7.1	7.0	6.9	7.0	7.0	6.9	6.9
10	6.9	6.8	6.9	7.1	7.0	7.0	7.1	6.9	7.0	7.0	6.9	6.9
11	6.9	6.8	6.9	7.2	7.0	7.1	7.2	7.0	7.1	7.0	6.9	6.9
12	6.9	6.8	6.9	7.1	7.0	7.1	7.2	7.1	7.1	7.0	6.9	6.9
13	6.9	6.8	6.9	7.1	7.0	7.0	7.2	7.0	7.1	7.0	6.9	6.9
14	6.9	6.8	6.9	7.0	7.0	7.0	7.3	7.1	7.1	7.0	6.9	6.9
15	6.9	6.8	6.9	7.0	6.9	7.0	7.2	7.1	7.1	6.9	6.9	6.9
16	6.9	6.9	6.9	7.0	6.9	7.0	7.2	7.0	7.1	6.9	6.9	6.9
17	6.9	6.9	6.9	7.0	7.0	7.0	7.0	6.9	6.9	7.0	6.9	6.9
18	7.0	6.9	6.9	7.1	7.0	7.1	7.0	6.9	7.0	6.9	6.8	6.9
19	7.0	6.9	6.9	7.1	7.0	7.1	7.1	7.0	7.1	6.9	6.8	6.9
20	7.0	6.9	6.9	7.1	7.0	7.1	7.1	7.0	7.1	6.9	6.9	6.9
21	6.9	6.9	6.9	7.1	7.0	7.1	7.1	7.0	7.0	7.0	6.8	6.9
22	6.9	6.9	6.9	7.2	7.1	7.1	7.1	7.0	7.1	7.0	6.9	7.0
23	6.9	6.9	6.9	7.1	7.0	7.0	7.1	7.0	7.0	7.0	6.9	7.0
24	7.0	6.9	6.9	7.1	7.0	7.0	7.1	7.0	7.1	7.0	6.9	7.0
25	7.0	6.9	7.0	7.1	7.0	7.0	7.1	7.0	7.1	7.1	7.0	7.0
26	7.1	7.0	7.1	7.1	6.9	7.0	7.1	7.0	7.0	6.9	6.8	6.9
27	7.2	7.1	7.1	7.1	6.9	7.0	7.1	6.9	7.0	6.9	6.8	6.9
28	7.2	7.1	7.1	7.0	6.9	7.0	7.1	6.9	7.0	6.9	6.8	6.9
29	---	---	---	7.1	6.9	7.0	7.0	6.9	7.0	6.9	6.8	6.8
30	---	---	---	7.1	6.9	7.0	7.0	6.9	6.9	6.9	6.8	6.8
31	---	---	---	7.1	6.9	7.0	---	---	---	6.9	6.8	6.9
MONTH	7.2	6.8	6.9	7.2	6.9	7.1	7.3	6.8	7.0	7.1	6.8	6.9

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	6.9	6.8	6.9	7.0	6.9	7.0	6.9	6.8	6.8	7.0	7.0	7.0
2	7.0	6.8	6.9	7.0	6.9	7.0	6.9	6.6	6.8	7.0	6.9	7.0
3	7.0	6.9	6.9	7.0	6.9	6.9	6.7	6.5	6.6	7.0	6.9	7.0
4	7.0	6.9	7.0	7.0	6.9	6.9	6.8	6.7	6.8	7.0	6.9	7.0
5	7.0	6.9	6.9	7.0	6.9	7.0	6.9	6.8	6.8	7.0	6.9	6.9
6	7.0	6.8	7.0	7.0	6.9	7.0	6.9	6.8	6.8	7.0	6.9	6.9
7	7.0	6.9	7.0	7.0	6.9	7.0	6.9	6.8	6.9	6.9	6.9	6.9
8	6.9	6.9	6.9	7.0	7.0	7.0	6.9	6.9	6.9	6.9	6.9	6.9
9	7.0	6.9	7.0	7.0	6.9	7.0	6.9	6.9	6.9	7.0	6.9	6.9
10	6.9	6.9	6.9	7.0	6.9	7.0	7.0	6.9	6.9	7.0	6.9	6.9
11	6.9	6.8	6.9	7.1	7.0	7.0	7.0	6.9	7.0	7.0	6.9	6.9
12	6.9	6.8	6.9	7.1	7.0	7.0	7.0	6.9	7.0	7.0	6.9	6.9
13	7.0	6.9	7.0	7.0	7.0	7.0	7.0	6.9	7.0	7.0	6.9	6.9
14	7.1	6.8	7.0	7.1	6.9	7.0	7.2	7.0	7.1	7.0	6.9	6.9
15	7.1	7.0	7.0	7.1	6.9	7.0	7.2	7.0	7.1	7.0	6.9	6.9
16	7.0	6.9	7.0	7.1	6.9	7.0	7.2	7.0	7.1	7.0	6.9	6.9
17	7.1	6.9	7.0	7.1	6.9	7.0	7.2	7.0	7.1	7.0	6.9	6.9
18	7.0	7.0	7.0	7.1	6.9	7.0	7.2	7.0	7.1	6.9	6.8	6.9
19	7.0	7.0	7.0	7.1	6.9	7.0	7.2	7.1	7.2	6.9	6.9	6.9
20	7.0	7.0	7.0	7.0	6.9	6.9	7.3	7.1	7.2	6.9	6.8	6.9
21	7.0	6.9	7.0	7.0	6.9	6.9	7.3	7.2	7.2	6.9	6.8	6.8
22	7.0	6.9	7.0	7.0	6.9	6.9	7.3	7.2	7.3	6.9	6.8	6.8
23	7.0	6.8	7.0	7.1	7.0	7.0	7.2	7.1	7.2	6.9	6.8	6.8
24	7.0	6.9	6.9	7.1	6.9	7.0	7.2	7.1	7.1	6.9	6.8	6.8
25	7.0	6.9	7.0	7.1	7.0	7.0	7.1	7.0	7.0	6.8	6.8	6.8
26	7.0	6.9	6.9	7.1	6.9	7.0	7.1	7.0	7.0	6.9	6.8	6.8
27	7.0	6.8	6.9	7.1	7.0	7.0	7.1	7.0	7.0	7.0	6.7	6.9
28	7.0	6.9	6.9	7.1	6.9	7.0	7.1	7.0	7.0	7.0	6.9	6.9
29	7.0	6.9	6.9	7.1	6.9	7.0	7.1	7.0	7.0	7.0	6.9	6.9
30	7.0	6.9	7.0	7.0	6.9	6.9	7.1	7.0	7.0	7.0	6.8	6.9
31	---	---	---	7.0	6.9	6.9	7.0	7.0	7.0	---	---	---
MONTH	7.1	6.8	7.0	7.1	6.9	7.0	7.3	6.5	7.0	7.0	6.7	6.9

01379773 GREEN POND BROOK AT PICATINNY ARSENAL, NJ--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	9.3	9.0	9.2	10.5	9.9	10.2	12.9	12.5	12.8	13.5	13.0	13.2
2	9.5	9.1	9.2	10.3	10.0	10.2	12.9	12.4	12.5	13.6	13.0	13.3
3	9.2	9.0	9.1	10.4	9.9	10.1	13.7	13.0	13.4	13.1	12.7	12.9
4	9.0	8.9	9.0	10.2	9.9	10.0	14.0	13.8	13.9	13.3	12.8	13.1
5	9.0	8.8	8.9	10.0	9.8	9.9	14.1	13.7	13.9	13.0	12.6	12.8
6	9.3	9.0	9.1	10.1	9.9	10.0	13.8	13.6	13.7	13.3	12.9	13.0
7	9.5	9.2	9.4	10.3	9.9	10.1	13.9	13.6	13.7	13.5	13.3	13.4
8	9.7	9.3	9.5	10.6	10.1	10.4	13.6	13.4	13.5	13.7	13.5	13.6
9	9.5	9.1	9.3	10.8	10.2	10.5	13.5	13.3	13.4	13.6	13.1	13.4
10	9.2	8.9	9.1	10.5	9.9	10.2	13.5	13.2	13.3	13.2	13.0	13.1
11	9.3	8.9	9.1	10.5	10.1	10.3	13.2	12.9	13.1	13.4	13.1	13.2
12	9.6	9.3	9.4	10.8	10.5	10.7	13.1	12.9	13.0	13.3	12.7	13.1
13	9.5	9.2	9.3	10.6	10.2	10.4	13.2	12.9	13.0	13.3	12.8	13.0
14	9.3	9.0	9.2	10.7	10.3	10.5	13.6	12.9	13.2	13.5	13.3	13.4
15	9.0	8.8	8.9	11.1	10.4	10.9	13.9	13.5	13.7	13.6	13.5	13.5
16	9.3	8.9	9.1	11.8	11.2	11.4	13.7	13.3	13.5	13.6	13.4	13.5
17	9.8	9.3	9.5	11.5	11.3	11.4	13.7	13.3	13.5	13.6	13.2	13.4
18	9.9	9.5	9.7	11.7	11.4	11.6	13.9	13.5	13.7	13.4	13.0	13.2
19	9.6	9.1	9.3	11.5	11.2	11.4	14.0	13.7	13.9	13.1	12.8	13.0
20	9.5	9.2	9.4	11.3	10.8	11.0	13.9	13.5	13.7	12.9	12.8	12.8
21	9.9	9.5	9.7	11.4	11.0	11.2	13.7	13.4	13.6	13.1	12.9	13.0
22	10.0	9.4	9.8	11.7	11.5	11.6	13.8	13.4	13.6	13.2	12.7	13.0
23	10.0	9.4	9.8	12.0	11.7	11.8	13.4	13.1	13.2	13.4	13.0	13.2
24	9.8	9.3	9.6	12.1	11.9	12.0	13.2	12.9	13.1	13.7	13.4	13.5
25	9.6	9.2	9.4	12.3	12.1	12.2	13.6	13.0	13.3	13.6	13.3	13.5
26	10.0	9.5	9.7	12.3	12.2	12.3	13.7	13.6	13.7	13.4	13.0	13.2
27	10.0	9.4	9.7	12.3	12.2	12.2	13.6	13.3	13.5	13.0	12.8	12.9
28	10.1	9.6	9.9	12.5	12.3	12.4	13.5	13.3	13.4	13.3	13.0	13.1
29	10.6	10.0	10.3	12.7	12.6	12.7	13.6	13.1	13.4	13.3	13.2	13.2
30	10.7	10.0	10.4	12.9	12.8	12.8	13.6	13.3	13.5	13.5	13.3	13.4
31	10.4	10.0	10.2	---	---	---	13.6	13.0	13.3	13.6	13.3	13.5
MONTH	10.7	8.8	9.5	12.9	9.8	11.1	14.1	12.4	13.4	13.7	12.6	13.2

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	13.7	13.3	13.5	12.7	12.1	12.4	11.0	10.3	10.7	8.9	8.5	8.7
2	13.3	13.0	13.2	12.6	12.2	12.4	10.8	10.3	10.5	9.1	8.7	8.9
3	13.4	13.0	13.2	12.7	12.0	12.4	10.9	10.4	10.6	9.5	9.1	9.3
4	13.4	13.1	13.3	12.5	12.3	12.4	10.9	10.5	10.7	9.7	9.1	9.4
5	13.1	12.9	13.0	12.6	11.9	12.3	11.0	10.7	10.8	9.5	8.7	9.1
6	13.4	13.0	13.2	12.5	12.0	12.3	11.0	10.8	10.9	9.1	8.5	8.8
7	13.7	13.3	13.4	13.0	12.2	12.5	11.1	10.7	10.9	8.8	8.3	8.6
8	13.4	13.1	13.3	13.3	12.6	13.0	11.0	10.6	10.8	8.9	8.5	8.7
9	13.4	13.1	13.3	13.0	12.4	12.7	10.8	10.3	10.5	9.3	8.7	9.0
10	13.4	13.1	13.2	12.9	12.3	12.7	10.6	10.4	10.5	9.4	8.5	8.9
11	13.5	13.1	13.2	12.6	12.1	12.3	10.7	10.5	10.6	9.2	8.6	8.8
12	13.6	13.1	13.4	12.9	12.4	12.7	10.7	10.4	10.5	9.2	8.5	8.8
13	13.6	13.2	13.5	12.6	12.4	12.5	11.0	10.4	10.6	9.1	8.4	8.7
14	13.7	13.2	13.4	12.5	12.2	12.4	10.9	10.4	10.6	9.1	8.6	8.8
15	13.5	13.0	13.2	12.4	12.0	12.2	10.4	10.0	10.3	8.9	8.7	8.8
16	13.6	13.2	13.4	12.2	11.8	12.0	10.2	10.0	10.1	8.9	8.4	8.7
17	13.3	13.1	13.2	12.2	11.9	12.1	10.1	9.9	10.0	8.8	8.2	8.4
18	13.1	13.0	13.0	12.3	11.8	12.0	10.3	10.0	10.1	8.7	8.0	8.3
19	13.0	12.9	12.9	11.8	11.3	11.5	10.4	10.0	10.2	8.4	7.9	8.1
20	13.1	12.9	13.0	12.2	11.4	11.8	10.2	9.7	10.0	8.3	8.0	8.2
21	12.9	12.8	12.8	12.8	12.2	12.4	9.9	9.6	9.8	8.4	8.1	8.2
22	13.1	12.7	12.9	12.8	12.1	12.4	9.9	9.5	9.7	8.6	8.3	8.4
23	12.8	12.6	12.7	12.7	11.9	12.3	9.7	9.2	9.5	8.6	8.3	8.4
24	12.9	12.5	12.7	12.3	11.8	12.1	9.9	9.2	9.5	8.7	8.3	8.5
25	12.8	12.4	12.5	12.4	11.7	12.0	9.8	9.3	9.6	8.6	8.1	8.4
26	12.6	12.2	12.4	12.0	11.2	11.6	9.4	9.1	9.3	8.8	8.4	8.6
27	12.4	12.0	12.3	11.4	11.2	11.3	9.5	9.0	9.2	8.7	8.4	8.6
28	12.6	12.2	12.4	11.7	11.2	11.4	9.4	9.1	9.2	8.6	8.2	8.4
29	---	---	---	11.5	10.8	11.2	9.8	9.0	9.4	8.5	8.1	8.3
30	---	---	---	11.2	10.5	10.9	9.4	8.6	9.1	8.3	7.9	8.1
31	---	---	---	11.0	10.5	10.7	---	---	---	8.1	7.7	8.0
MONTH	13.7	12.0	13.1	13.3	10.5	12.1	11.1	8.6	10.1	9.7	7.7	8.6

01379773 GREEN POND BROOK AT PICATINNY ARSENAL, NJ--Continued

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

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

01379780 GREEN POND BROOK BELOW PICATINNY LAKE AT PICATINNY ARSENAL, NJ

LOCATION.--Lat 40°56'56", long 74°33'29", Morris County, Hydrologic Unit 02030103, on left bank 100 ft upstream from bridge on Whitmore Avenue at Picatinny Arsenal, and 200 ft downstream from dam on Picatinny Lake.

DRAINAGE AREA.--9.16 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1984 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 694.91 ft above National Geodetic Vertical Datum of 1929 (U.S. Army, Picatinny Arsenal, benchmark).

REMARKS.--Estimated daily discharges: Dec. 16 to Jan. 2. Records good except those for period of ice effect, Dec. 16 to Jan. 2, which are fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 106 ft³/s, Apr. 17, 1986, gage height, 3.16 ft; minimum daily, 0.20 ft³/s, Nov. 20-23, 1984.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of April 5, 1984 reached an elevation of 699.0 ft above NGVD, 200 ft upstream of bridge on Whitmore Avenue.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 70 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Jan. 27	2030	87	3.09	Apr. 17	2200	*106	*3.16
Mar. 15	2315	75	3.04				

Minimum discharge, 1.5 ft³/s, Nov. 5, gage height, 2.24 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	2.9	55	5.1	28	21	12	25	6.6	5.0	4.8	8.8
2	22	2.8	52	5.2	26	19	11	22	6.0	5.1	5.2	8.5
3	21	2.6	46	7.6	23	17	9.2	19	5.6	5.2	7.0	8.2
4	20	2.2	39	7.8	22	16	8.6	16	5.1	5.2	11	7.1
5	21	2.1	34	9.3	23	15	9.0	14	5.3	5.2	19	6.8
6	20	3.9	31	8.5	22	15	11	13	11	5.2	18	7.2
7	18	5.0	27	7.3	22	15	11	13	31	5.2	16	7.2
8	17	5.7	24	6.2	22	13	10	12	21	5.2	14	7.2
9	17	5.8	22	5.6	20	12	9.5	11	19	5.0	11	6.9
10	13	5.5	20	5.3	18	14	8.3	9.0	16	5.0	9.6	6.3
11	10	6.4	21	4.9	19	18	7.6	8.1	14	4.9	9.2	6.0
12	10	7.3	24	4.8	18	20	7.0	7.5	18	4.5	9.0	6.0
13	10	8.7	23	4.7	16	23	6.3	7.6	20	4.0	8.6	6.3
14	10	8.7	22	4.2	15	34	6.0	6.3	18	4.0	8.4	6.2
15	9.5	9.9	19	3.7	14	68	5.8	5.8	16	4.0	8.1	6.0
16	9.2	13	17	3.2	13	72	21	5.0	14	4.0	8.1	5.8
17	8.3	49	16	3.1	15	65	82	5.1	13	4.0	8.3	5.3
18	7.6	47	14	3.4	24	53	95	4.6	11	3.9	9.6	5.2
19	7.2	42	11	5.3	30	49	77	4.1	9.2	3.8	12	5.2
20	7.0	36	10	11	34	48	65	3.9	8.9	3.8	13	5.2
21	6.5	31	9.6	12	37	39	54	4.5	7.5	3.8	13	5.0
22	5.8	31	8.4	12	41	34	48	9.7	6.3	3.5	19	4.6
23	5.0	31	8.0	11	39	32	54	9.8	5.8	3.3	16	4.7
24	4.8	27	8.0	10	37	31	52	8.1	5.7	3.2	19	4.9
25	4.6	23	8.1	12	34	27	53	7.1	5.8	3.2	16	4.7
26	4.6	26	7.0	58	30	24	47	8.5	5.8	3.2	14	4.5
27	4.1	33	6.9	81	27	24	41	9.3	5.6	3.2	13	4.3
28	3.9	46	7.0	72	23	22	35	8.9	5.6	2.9	12	4.3
29	3.8	58	5.2	57	---	19	31	8.3	5.6	3.0	11	4.1
30	3.8	54	5.3	44	---	15	29	7.5	5.2	3.2	9.6	4.0
31	3.3	---	5.2	35	---	13	---	6.9	---	4.3	9.0	---
TOTAL	333.0	626.5	605.7	520.2	692	887	916.3	300.6	327.6	129.0	361.5	176.5
MEAN	10.7	20.9	19.5	16.8	24.7	28.6	30.5	9.70	10.9	4.16	11.7	5.88
MAX	25	58	55	81	41	72	95	25	31	5.2	19	8.8
MIN	3.3	2.1	5.2	3.1	13	12	5.8	3.9	5.1	2.9	4.8	4.0
CFSM	1.17	2.28	2.13	1.83	2.70	3.12	3.33	1.06	1.19	.45	1.28	.64
IN.	1.35	2.54	2.46	2.11	2.81	3.60	3.72	1.22	1.33	.52	1.47	.72

CAL YR 1985 TOTAL 3687.88 MEAN 10.1 MAX 58 MIN .63 CFSM 1.10 IN. 14.98
WTR YR 1986 TOTAL 5875.9 MEAN 16.1 MAX 95 MIN 2.1 CFSM 1.76 IN. 23.86

01379790 GREEN POND BROOK AT WHARTON, NJ

LOCATION.--Lat 40°55'04", long 74°35'02", Morris County, Hydrologic Unit 02030103, on left bank 600 ft upstream from bridge on State Route 15, 0.2 mi northwest of Wharton, and 1.7 mi upstream from mouth.

DRAINAGE AREA.--12.6 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1982 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 679.50 ft above National Geodetic Vertical Datum of 1929 (U.S. Army, Picatinny Arsenal, bench mark).

REMARKS.--No estimated daily discharges. Records good. Some regulation from Lake Picatinny. Several measurements of water temperature, other than those published, were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 572 ft³/s, Apr. 5, 1984, gage height, 5.11 ft; minimum, 2.4 ft³/s, Sept. 29, 1983, gage height, 2.28 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 130 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Jan. 26	0730	*194	*3.78	June 7	0115	167	3.68
Apr. 17	1600	175	3.71				

Minimum discharge, 5.7 ft³/s, Nov. 4, gage height, 2.45 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	6.6	85	12	41	33	20	38	11	8.2	12	13
2	29	6.1	80	12	43	30	19	33	10	15	22	13
3	30	6.0	67	16	39	28	18	28	9.3	11	31	13
4	30	6.0	57	16	35	27	14	25	9.1	9.1	19	12
5	34	18	50	18	39	27	17	20	8.6	8.6	24	12
6	30	14	47	17	39	27	21	21	28	8.4	25	14
7	26	11	40	14	35	25	20	22	88	8.5	23	12
8	23	11	37	12	33	21	19	20	36	8.4	20	12
9	23	11	34	11	31	20	18	19	28	8.3	18	11
10	21	10	31	11	29	23	16	17	22	8.2	15	11
11	16	11	33	10	29	34	16	15	19	7.8	16	11
12	16	14	41	10	28	29	15	14	30	11	14	10
13	16	17	36	10	25	40	13	14	29	9.1	13	9.8
14	16	15	36	9.5	23	64	13	13	24	8.2	13	9.7
15	15	17	30	8.6	22	115	13	12	21	8.2	13	9.7
16	15	20	28	8.2	21	99	64	12	20	7.9	12	9.7
17	13	92	26	8.2	25	89	159	12	17	7.5	28	9.2
18	12	72	23	8.0	55	75	133	11	14	7.5	29	8.9
19	12	61	21	14	56	80	106	9.9	13	9.1	22	8.9
20	12	57	18	26	61	74	91	9.8	13	7.7	21	8.6
21	11	45	18	22	66	58	79	13	12	7.7	22	8.5
22	11	48	17	20	71	49	71	24	10	7.7	30	8.2
23	9.6	47	17	19	61	46	87	18	9.7	7.4	25	9.0
24	9.1	40	17	17	55	44	82	15	9.3	7.1	28	9.4
25	9.1	34	17	21	51	40	76	13	9.1	7.4	24	8.5
26	8.5	43	15	134	46	37	69	13	9.4	7.0	21	10
27	8.3	57	15	122	42	36	59	13	8.9	7.2	20	10
28	7.6	81	14	100	37	33	50	13	8.9	6.8	18	8.4
29	7.3	83	11	82	---	29	45	12	8.5	7.3	16	8.3
30	7.4	76	12	65	---	24	42	12	8.4	7.3	15	8.3
31	7.3	---	12	51	---	22	---	11	---	18	14	---
TOTAL	519.2	1029.7	985	904.5	1138	1378	1465	522.7	544.2	268.6	623	307.1
MEAN	16.7	34.3	31.8	29.2	40.6	44.5	48.8	16.9	18.1	8.66	20.1	10.2
MAX	34	92	85	134	71	115	159	38	88	18	31	14
MIN	7.3	6.0	11	8.0	21	20	13	9.8	8.4	6.8	12	8.2
CFSM	1.33	2.72	2.52	2.32	3.22	3.53	3.87	1.34	1.44	.69	1.60	.81
IN.	1.53	3.04	2.91	2.67	3.36	4.07	4.33	1.54	1.61	.79	1.84	.91

CAL YR 1985 TOTAL 6462.9 MEAN 17.7 MAX 109 MIN 3.5 CFSM 1.40 IN. 19.08
WTR YR 1986 TOTAL 9685.0 MEAN 26.5 MAX 159 MIN 6.0 CFSM 2.10 IN. 28.59

01380500 ROCKAWAY RIVER ABOVE RESERVOIR, AT BOONTON, NJ

LOCATION.--Lat 40°54'06", long 74°24'40", Morris County, Hydrologic Unit 02030103, on right bank, under CONRAIL railroad bridge, just downstream of bridge on Morris Avenue in Boonton, 1.8 mi upstream from dam at Boonton Reservoir.

DRAINAGE AREA.--116 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1937 to current year. Monthly discharge only for October 1937, published in WSP 1302.

REVISED RECORDS.--WRD-NJ 1974: 1938(M). WDR NJ-78-1: 1949(M), 1952(M), 1968(M), 1971(M), 1973(P), 1974(M), 1977(M).

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 364.47 ft above National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark).

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Splitrock Reservoir on Beaver Brook, 14.5 mi above station (see Passaic River basin, reservoirs in). Town of Boonton diverts water for municipal supply from Taylortown Reservoir on Stony Brook, capacity, 75,000,000 gal and by pumping from wells in vicinity of Boonton. The mean diversion during the water year from Taylortown Reservoir was 0.88 ft³/s. Rockaway Valley trunk sewer bypasses the station (see station 01381000). Several measurements of water temperature were made during the year.

COOPERATION.--Gage-height record collected in cooperation with Jersey City, Bureau of Water.

AVERAGE DISCHARGE.--49 years, 226 ft³/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,590 ft³/s, Apr. 5, 1984, gage height, 7.23 ft; minimum daily, 10 ft³/s, Aug. 10, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 950 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 17	1300	1,230	4.31	Apr. 17	2015	*1,830	*5.06
Jan. 26	1845	1,400	4.55	Aug. 3	0745	1,100	4.09
Mar. 15	1515	1,110	4.12				

Minimum discharge, 2.4 ft³/s, Jan. 8, gage height, 1.35 ft, result of ice jam; minimum daily, 41 ft³/s, July 25.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	211	55	702	123	329	263	184	351	92	50	317	65
2	159	54	701	116	356	246	175	318	88	197	282	70
3	182	54	571	167	359	234	165	279	79	150	936	65
4	196	56	469	171	315	234	157	252	76	83	485	69
5	290	256	409	190	327	233	154	229	72	65	253	81
6	328	288	381	177	361	245	189	214	146	58	180	186
7	210	197	337	136	299	243	201	242	551	55	140	131
8	167	150	304	110	300	197	184	209	351	51	118	102
9	147	126	285	133	279	189	173	201	223	56	101	82
10	149	112	273	115	243	189	162	179	179	63	86	70
11	136	109	275	109	228	283	152	165	143	48	130	63
12	122	146	356	106	211	310	146	155	169	101	91	59
13	115	209	320	104	197	326	137	146	224	105	75	54
14	110	161	318	95	195	492	132	137	190	74	68	49
15	103	159	266	89	193	1010	131	135	153	65	61	46
16	96	168	237	93	173	894	480	139	133	58	60	49
17	87	984	219	87	196	732	1590	138	122	55	117	50
18	80	739	202	90	419	573	1450	133	103	52	364	47
19	77	480	162	142	628	513	1000	122	91	74	277	48
20	73	398	163	305	624	509	781	119	95	68	173	47
21	70	329	171	251	600	439	639	153	87	56	141	47
22	68	332	157	183	698	377	612	350	82	48	244	47
23	65	432	163	162	535	337	738	281	76	45	198	52
24	67	338	160	143	447	310	780	200	72	43	223	78
25	72	288	164	152	400	281	666	169	67	41	163	55
26	68	319	128	1090	345	263	568	142	61	57	119	85
27	67	549	149	1200	325	251	513	125	56	73	103	137
28	61	618	140	807	286	243	452	113	56	54	95	138
29	57	827	128	523	---	228	408	102	55	92	88	113
30	55	654	127	480	---	212	395	95	52	82	75	109
31	55	---	119	390	---	200	---	90	---	516	68	---
TOTAL	3743	9587	8556	8039	9868	11056	13514	5683	3944	2635	5831	2294
MEAN	121	320	276	259	352	357	450	183	131	85.0	188	76.5
MAX	328	984	702	1200	698	1010	1590	351	551	516	936	186
MIN	55	54	119	87	173	189	131	90	52	41	60	46

CAL YR 1985 TOTAL 56576 MEAN 155 MAX 1020 MIN 27
WTR YR 1986 TOTAL 84750 MEAN 232 MAX 1590 MIN 41

01381000 ROCKAWAY RIVER BELOW RESERVOIR, AT BOONTON, NJ

LOCATION.--Lat 40°53'47", long 74°23'36", Morris County, Hydrologic Unit 02030103, on right bank 2,000 ft downstream from Boonton Reservoir Dam at Boonton.

DRAINAGE AREA.--119 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March to December 1903; January, February 1904 (gage height only); January 1906 to September 1950 (monthly discharge only, published in WSP 1302) October 1950 to current year (figures of daily discharge for October 1950 to September 1954 published in Special Report 16 of New Jersey Department of Environmental Protection). Published as "near Boonton" 1903-4, and as "at Boonton" 1906-37.

REVISED RECORDS.--WSP 1902: 1951-54. WDR NJ-79-1: 1949(M), 1952(M), 1968(M), 1970-74(M), 1977(M).

GAGE.--Water-stage recorder. Concrete control since Nov. 5, 1936. Datum of gage is 195.68 ft above National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark). Mar. 15, 1903 to Feb. 2, 1904, nonrecording gage at site 1.9 mi downstream at different datum. Jan. 1, 1906 to Mar. 3, 1918, nonrecording gage on Boonton Dam 2,000 ft upstream at datum 305.25 ft National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark).

REMARKS.--No estimated daily discharges. Records fair. Records represent flow in river only. Sewage effluent enters river about 600 ft below station (records given herein). Flow regulated by Boonton Reservoir (see Passaic River basin, reservoirs in) 2,000 ft above station, and by Splitrock Reservoir (see Passaic River basin, reservoirs in) 16.5 mi above station. Water diverted from Boonton Reservoir for municipal supply of Jersey City (see Passaic River basin, diversions). Several measurements of water temperature were made during the year. National Weather Service telemeter at station.

COOPERATION.--Gage-height record collected in cooperation with and record of sewage effluent funished by Jersey City, Bureau of Water.

AVERAGE DISCHARGE.--80 years (water years 1907-86), 138 ft³/s, adjusted for sewage effluent since October 1930.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 7,560 ft³/s, Oct. 10, 1903; no flow many days in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,980 ft³/s, Apr. 17, gage height, 5.66 ft; no flow part of July 15, 16.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.5	11	403	37	273	180	114	288	15	11	3.9	10
2	12	11	500	35	271	163	100	244	32	14	13	10
3	12	11	452	54	291	149	91	204	58	11	503	10
4	11	11	397	90	264	145	82	175	59	11	448	10
5	11	12	351	101	248	141	78	162	58	11	201	11
6	9.6	11	322	105	278	152	96	138	33	11	120	10
7	11	11	279	72	266	156	63	157	87	11	81	13
8	10	11	240	29	218	116	10	138	323	11	57	20
9	10	11	216	34	220	105	10	122	181	11	37	15
10	9.7	11	200	31	181	95	10	107	120	11	18	15
11	9.5	10	187	25	164	142	11	92	84	11	40	15
12	10	11	243	21	144	210	11	82	85	12	30	11
13	9.9	253	248	19	123	224	11	74	136	11	12	8.7
14	9.6	195	240	13	115	373	10	62	129	11	10	8.8
15	11	94	201	9.4	121	728	11	57	95	6.1	12	8.8
16	12	88	165	9.0	103	847	110	60	74	7.9	12	8.8
17	11	525	143	9.4	115	607	1400	61	42	9.1	13	8.8
18	11	635	124	10	240	476	1670	59	25	5.9	79	11
19	11	353	86	11	452	425	1000	55	19	6.4	220	12
20	11	325	74	126	473	408	616	41	13	5.7	133	12
21	11	274	82	193	452	375	461	55	12	5.3	84	12
22	11	245	75	135	499	326	438	195	12	5.3	134	12
23	11	330	74	96	433	279	478	248	12	5.1	143	12
24	11	287	76	76	382	248	529	147	13	4.6	149	12
25	11	225	79	80	335	220	460	107	11	4.3	107	12
26	11	229	62	624	274	196	412	81	11	6.5	62	12
27	11	352	53	1280	243	176	391	63	11	4.2	39	12
28	11	373	58	800	211	169	362	41	11	3.8	21	11
29	11	521	45	446	---	161	338	27	11	3.5	14	11
30	11	430	44	391	---	146	322	21	11	4.2	11	11
31	11	---	36	340	---	131	---	12	---	9.3	10	---
TOTAL	332.8	5866	5755	5301.8	7389	8269	9695	3375	1783	255.2	2816.9	345.9
MEAN	10.7	196	186	171	264	267	323	109	59.4	8.23	90.9	11.5
MAX	12	635	500	1280	499	847	1670	288	323	14	503	20
MIN	9.5	10	36	9.0	103	95	10	12	11	3.5	3.9	8.7
(+)	10.4	11.8	11.9	11.8	13.1	13.1	14.1	12.1	11.2	10.4	10.9	10.3

CAL YR 1985 TOTAL 19695.6 MEAN 54.0 MAX 635 MIN 9.5 + 10.6
WTR YR 1986 TOTAL 51184.6 MEAN 140 MAX 1670 MIN 3.5 + 11.8

+ Sewage effluent, in cubic feet per second, from plant of Rockaway Valley Regional Sewerage Authority.

01381200 ROCKAWAY RIVER AT PINE BROOK, NJ

LOCATION.--Lat 40°51'29", long 74°20'53", Morris County, Hydrologic Unit 02030103, at bridge on U.S. Route 46 at intersection with New Road in Pine Brook, and 1.1 mi upstream of mouth.

DRAINAGE AREA.--136 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963 to current year.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
29...	1030	E27	392	7.6	9.5	7.8	68	1.8	<200	<200
FEB 1986										
12...	1100	E218	235	7.5	1.5	14.6	105	2.4	--	--
APR										
16...	1330	E176	217	7.4	8.5	9.6	83	5.1	3500	5400
JUN										
11...	1300	E141	247	7.5	22.5	7.7	90	3.0	490	1700
JUL										
24...	1300	E13	409	7.5	24.0	7.2	85	9.9	1100	<200
AUG										
28...	1300	E46	338	7.6	19.0	7.4	81	1.5	700	2600

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
29...	110	28	10	31	4.1	74	26	49	<0.1
FEB 1986									
12...	60	15	5.5	21	1.3	33	14	37	<0.1
APR									
16...	66	17	5.6	16	2.2	39	22	23	0.1
JUN									
11...	71	18	6.4	19	1.8	45	19	33	0.1
JUL									
24...	120	28	11	34	4.5	63	29	51	0.2
AUG									
28...	97	24	8.9	24	2.9	60	23	40	0.2

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
29...	11	200	0.054	4.43	0.13	0.79	5.2	0.45	5.6
FEB 1986									
12...	8.7	120	0.005	0.98	0.38	0.37	1.3	0.10	3.7
APR									
16...	7.0	120	0.03	2.10	0.20	0.92	3.0	0.37	8.9
JUN									
11...	6.5	130	0.015	1.35	0.08	0.69	2.0	0.27	5.7
JUL									
24...	10	210	0.038	7.70	0.12	0.56	8.3	1.17	3.8
AUG									
28...	9.3	170	0.017	4.25	0.10	1.0	5.3	0.60	4.5

01381200 ROCKAWAY RIVER AT PINE BROOK, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
OCT 1985 29...	1030	<0.5	<10	1	<10	160	<1	<10	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)
OCT 1985 29...	170	5	60	<0.1	3	<1	10	3

01381500 WHIPPANY RIVER AT MORRISTOWN, NJ

LOCATION.--Lat 40°48'21", long 74°27'22", Morris County, Hydrologic Unit 02030103, on left bank at Morristown sewage-disposal plant, 0.8 mi downstream from Morristown, and 9.0 mi upstream from mouth.

DRAINAGE AREA.--29.4 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1921 to current year.

REVISED RECORDS.--WSP 781: Drainage area. WSP 1552: 1922-23(M), 1924, 1925-27(M) 1928-29, 1930-32(M), 1933-34. WRD-NJ 1974: 1965. WDR NJ-84-1: 1971(M).

GAGE.--Water-stage recorder and crest-stage gage. Concrete control since July 1, 1936. Datum of gage is 260.01 ft above National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark). Prior to July 16, 1930, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. Flow occasionally regulated by operation of gates in Pocahontas Dam, 2.5 mi above station. Several measurements of water temperature, other than those published, were made during the year.

AVERAGE DISCHARGE.--65 years, 60.2 ft³/s, 24.39 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,800 ft³/s, Aug. 28, 1971, gage height, 8.60 ft; minimum, 2.8 ft³/s, Aug. 27, 1932, gage height, 0.73 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 450 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 17	0215	618	4.24	July 2	0930	553	4.06
Jan. 26	1200	754	4.59	Aug. 2	2145	*1,060	5.32
Apr. 17	0845	833	4.78	Sept. 5	1945	525	3.98

Minimum discharge, 15 ft³/s, Oct. 29, gage height, 1.79 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	18	123	31	59	61	51	82	28	20	47	19
2	23	18	118	30	79	59	50	78	28	171	275	20
3	46	18	72	53	72	59	48	71	27	45	402	23
4	35	19	59	43	65	61	48	67	27	25	61	26
5	74	143	57	61	83	63	47	66	28	23	36	98
6	54	87	60	45	86	67	58	66	71	22	31	155
7	28	36	55	34	66	63	56	83	88	21	29	35
8	26	27	54	28	64	50	53	66	41	21	28	27
9	24	24	52	29	55	48	47	63	36	39	26	24
10	22	22	49	30	53	53	44	57	30	28	26	22
11	21	22	54	29	55	84	43	55	29	21	65	21
12	19	26	70	29	50	69	42	52	114	54	28	21
13	21	29	57	29	46	106	40	50	76	33	25	20
14	21	27	61	27	45	164	39	48	38	26	24	19
15	21	32	47	24	47	268	41	48	32	22	23	19
16	21	75	44	26	43	130	346	48	29	22	23	20
17	19	466	43	26	54	92	697	48	28	22	49	19
18	19	105	40	28	165	83	296	44	26	21	40	19
19	19	49	35	56	190	95	160	43	26	29	25	19
20	19	41	35	114	176	93	127	43	27	23	24	19
21	18	35	36	60	154	72	135	64	24	22	44	19
22	19	78	35	41	164	69	145	149	24	20	55	18
23	19	93	36	36	101	67	210	59	23	19	36	29
24	20	44	37	32	83	66	179	45	23	19	69	31
25	23	37	37	72	78	63	127	38	21	18	28	20
26	19	80	32	610	72	61	116	36	20	60	24	31
27	18	147	31	293	68	61	106	35	21	42	24	42
28	18	176	32	120	63	58	95	34	22	24	25	25
29	17	172	31	82	---	55	106	32	21	44	23	21
30	18	87	31	73	---	54	91	31	21	70	21	20
31	18	---	29	65	---	53	---	29	---	188	20	---
TOTAL	762	2233	1552	2256	2336	2447	3643	1730	1049	1214	1656	901
MEAN	24.6	74.4	50.1	72.8	83.4	78.9	121	55.8	35.0	39.2	53.4	30.0
MAX	74	466	123	610	190	268	697	149	114	188	402	155
MIN	17	18	29	24	43	48	39	29	20	18	20	18
CFSM	.84	2.53	1.70	2.48	2.84	2.68	4.12	1.90	1.19	1.33	1.82	1.02
IN.	.96	2.83	1.96	2.85	2.96	3.10	4.61	2.19	1.33	1.54	2.10	1.14

CAL YR 1985 TOTAL 14872 MEAN 40.7 MAX 554 MIN 14 CFSM 1.38 IN. 18.82
WTR YR 1986 TOTAL 21779 MEAN 59.7 MAX 697 MIN 17 CFSM 2.03 IN. 27.56

01381500 WHIPPANY RIVER AT MORRISTOWN, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1923-24, 1926, 1962 to current year.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
16...	1100	21	380	8.1	16.5	11.5	119	2.8	92000	7900
FEB 1986										
03...	1100	70	395	7.5	4.0	13.1	100	2.7	400	200
APR										
09...	1100	47	270	8.4	12.5	13.4	130	2.2	800	200
MAY										
20...	1100	41	301	7.8	21.0	8.9	101	6.0	800	200
JUL										
09...	1100	18	360	8.2	25.0	9.6	118	3.0	<200	700
AUG										
25...	1100	27	235	8.4	21.0	10.6	119	3.4	1700	800

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
16...	120	30	11	26	3.5	77	26	45	<0.1
FEB 1986									
03...	74	19	6.5	46	1.9	38	26	83	<0.1
APR									
09...	83	21	7.4	19	1.9	52	16	36	<0.1
MAY									
20...	91	23	8.2	20	2.0	59	21	39	<0.1
JUL									
09...	120	30	10	25	2.8	78	24	46	0.2
AUG									
25...	75	19	6.8	14	1.9	53	18	25	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
16...	18	210	0.169	2.56	0.50	1.1	3.6	0.54	2.6
FEB 1986									
03...	14	220	0.025	1.25	0.39	0.68	1.9	0.16	3.4
APR									
09...	15	150	0.059	1.43	0.29	0.6	2.0	0.33	3.2
MAY									
20...	16	160	0.125	1.48	0.29	0.65	2.1	0.33	3.2
JUL									
09...	16	200	0.054	1.85	0.06	0.89	2.7	0.45	4.2
AUG									
25...	13	130	0.034	1.17	0.05	0.4	1.6	0.22	5.5

01381500 WHIPPANY RIVER AT MORRISTOWN, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT 1985											
16...	1100	--	110	1.5	6.4	--	--	--	--	--	<1
16...	1100	<0.5	--	--	--	20	<1	<10	60	3	--
MAY 1986											
20...	1100	<0.5	--	--	--	20	<1	<10	30	<1	--

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT 1985											
16...	--	120	<10	--	90	--	9900	--	140	--	440
16...	10	--	--	8	--	460	--	9	--	60	--
MAY 1986											
20...	<10	--	--	7	--	640	--	3	--	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)
OCT 1985											
16...	--	0.1	--	10	--	<1	--	130	--	120	<1.0
16...	0.1	--	4	--	<1	--	50	--	3	--	--
MAY 1986											
20...	<0.1	--	3	--	<1	--	<10	--	3	--	--

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985											
16...	<0.1	49	11	<0.1	8.8	<0.1	0.3	<0.1	<0.1	<0.1	0.1
16...	--	--	--	--	--	--	--	--	--	--	--
MAY 1986											
20...	--	--	--	--	--	--	--	--	--	--	--

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985											
16...	1.3	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1
16...	--	--	--	--	--	--	--	--	--	--	--
MAY 1986											
20...	--	--	--	--	--	--	--	--	--	--	--

01381800 WHIPPANY RIVER NEAR PINE BROOK, NJ

LOCATION.--Lat 40°50'42", long 74°20'51", Morris County, Hydrologic Unit 02030103, at bridge on New Road, 0.3 mi southwest of overpass of Interstate 280, 0.4 mi upstream of Rockaway River, and 1.4 mi southwest of Pine Brook.

DRAINAGE AREA.--68.5 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963 to current year.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
24...	1100	E42	498	7.5	12.5	6.8	64	4.1	<200	<200
FEB 1986										
07...	1130	E128	493	7.3	0.0	12.8	88	--	--	--
APR										
16...	1030	E611	263	7.3	9.0	9.1	80	12	5400	5400
JUN										
11...	1030	E58	394	7.3	22.5	3.8	45	9.3	230	1300
JUL										
24...	1030	E37	488	7.5	25.0	4.6	56	8.4	700	1300
AUG										
28...	1030	E50	398	7.5	19.5	4.6	51	6.7	500	1300

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
24...	160	40	14	34	4.3	101	39	55	0.1
FEB 1986									
07...	95	25	7.9	57	2.2	49	18	100	<0.1
APR									
16...	58	15	4.9	27	1.6	33	13	43	<0.1
JUN									
11...	130	32	11	27	3.0	82	28	43	0.1
JUL									
24...	150	38	14	34	4.0	100	38	56	<0.1
AUG									
28...	130	34	12	26	3.2	84	30	42	0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
24...	18	260	0.275	2.78	2.05	4.8	7.6	0.79	6.6
FEB 1986									
07...	13	250	0.029	1.10	1.10	1.5	2.6	0.28	6.3
APR									
16...	6.1	130	0.051	1.03	0.68	3.4	4.4	0.94	28
JUN									
11...	17	210	0.325	2.05	1.42	2.3	4.3	0.67	10
JUL									
24...	16	260	0.44	2.56	1.28	1.7	4.3	0.92	6.4
AUG									
28...	15	210	0.35	2.22	1.68	2.2	4.4	0.65	8.1

01381800 WHIPPANY RIVER NEAR PINE BROOK, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT 1985 24...	1100	--	180	0.1	6.3	--	--	--	--	--	<1
JUN 1986 11...	1030	<0.5	--	--	--	20	3	10	70	<1	--

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT 1985 24...	--	100	<10	--	40	--	8500	--	50	--	120
JUN 1986 11...	10	--	--	15	--	2100	--	20	--	190	--

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985 24...	--	0.3	--	10	--	<1	--	100	--	11	<1.0
JUN 1986 11...	0.1	--	7	--	<1	--	30	--	2	--	--

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985 24...	<0.1	3.0	1.0	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1
JUN 1986 11...	--	--	--	--	--	--	--	--	--	--	--

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985 24...	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1
JUN 1986 11...	--	--	--	--	--	--	--	--	--	--	--

01381900 PASSAIC RIVER AT PINE BROOK, NJ

LOCATION.--Lat 40°51'45", long 74°19'18", Morris County, Hydrologic Unit 02030103, on downstream left wingwall of bridge on U.S. Route 46, 0.5 mi east of Pine Brook, and 1.3 mi downstream from Rockaway River.

DRAINAGE AREA.--349 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1963-69, 1973, and annual maximum, water years 1966-75, 1978-79. October 1979 to current year. Feb. 19 to Aug. 24, 1939 in files of U.S. Army Corps of Engineers, New York District.

REVISED RECORDS.--WDR NJ-77-1: 1967(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 149.26 ft above National Geodetic Vertical Datum of 1929. December 1965 to September 1979, crest-stage gage at same site at datum 10.00 ft higher. Feb. 19 to Aug. 24, 1939, water-stage recorder at present NJ Route 506 bridge, 1,600 ft upstream from gage, operated by U.S. Army Corps of Engineers, New York District at datum 13.05 ft higher.

REMARKS.--Estimated daily discharges: Dec. 19-31, Jan. 7-9, 14-17, Jan. 28, Feb. 17, Feb. 26 to Apr. 5. Records fair except those above 1,000 ft³/s, and periods of estimated daily discharges, which are poor. Flow regulated by Boonton and Splitrock Reservoirs (see Passaic River basin, reservoirs in) and many small lakes. Water diverted from Boonton Reservoir for municipal supply of Jersey City (see Passaic River basin, diversions). Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--7 years, 598 ft³/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,000 ft³/s, Apr. 7, 1984, gage height, 22.90 ft, affected by backwater downstream; minimum observed, 70 ft³/s, Sept. 29, 1980, gage height, 10.15 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1810, according to State Geologist in 1904, 23.2 ft, Oct. 10, 1903, present datum, from King Survey of highwater marks at present NJ Route 506 bridge, 1,600 ft upstream from gage. Floods of Mar. 13, 1936 and Sept. 24, 1938 reached stages of 20.8 ft and 19.4 ft respectively, at present NJ Route 506 bridge and present datum. Flood of July 23, 1945 reached a stage of 22.3 ft at present site and datum according to U.S. Army Corps of Engineers; minimum observed, 41.1 ft³/s Sept. 22, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 19	1130	2,160	18.07	Feb. 23	0615	2,170	18.08
Nov. 30	2315	2,140	18.05	Apr. 19	0345	*3,740	*19.56
Jan. 28	1315	2,860	18.78				

Minimum daily discharge, 116 ft³/s, July 25.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1270	132	2130	203	1450	850	400	990	175	126	504	133
2	1070	128	2120	197	1150	760	380	814	167	333	520	132
3	881	126	2030	230	1050	690	360	665	191	464	951	133
4	764	127	1830	340	910	670	340	543	183	303	1270	158
5	678	428	1580	424	945	660	330	487	179	199	1350	190
6	713	636	1350	490	1050	680	313	450	234	151	1200	458
7	622	559	1170	390	1050	690	359	474	431	138	938	437
8	472	394	981	300	890	620	290	461	485	134	643	305
9	346	307	818	235	850	550	264	416	467	132	398	218
10	264	262	702	210	740	510	244	377	346	169	262	179
11	216	233	624	203	700	580	232	341	273	136	400	168
12	191	220	649	197	650	680	225	315	406	179	469	161
13	178	285	666	192	640	840	215	294	681	260	390	146
14	176	523	670	190	640	1250	207	273	703	188	275	131
15	183	438	635	185	560	1850	201	257	619	167	213	122
16	185	391	551	180	520	2350	459	251	460	146	189	124
17	167	992	482	170	480	2100	1670	256	336	134	228	121
18	157	1720	433	157	608	1800	3360	250	250	130	347	118
19	155	2140	380	180	1060	1500	3690	235	203	174	412	122
20	149	2080	360	382	1500	1300	3410	226	188	168	371	121
21	144	1870	330	563	1830	1050	3060	241	168	149	292	120
22	143	1640	300	521	2070	880	2730	411	151	136	455	118
23	142	1570	280	432	2150	770	2550	572	144	126	445	123
24	140	1490	270	366	2020	700	2490	474	138	121	498	196
25	144	1310	250	329	1820	630	2290	371	136	116	426	158
26	142	1140	250	1080	1450	580	2020	297	129	128	313	213
27	134	1190	240	2280	1200	545	1760	260	126	243	240	307
28	134	1400	230	3550	990	510	1520	231	130	188	204	260
29	132	1840	230	3000	---	480	1310	202	128	177	191	193
30	131	2100	220	2400	---	450	1160	181	125	187	162	166
31	130	---	200	1900	---	425	---	169	---	437	144	---
TOTAL	10353	27671	22961	21476	30973	27950	37839	11784	8352	5839	14700	5531
MEAN	334	922	741	693	1106	902	1261	380	278	188	474	184
MAX	1270	2140	2130	3550	2150	2350	3690	990	703	464	1350	458
MIN	130	126	200	157	480	425	201	169	125	116	144	118

CAL YR 1985 TOTAL 142499 MEAN 390 MAX 2140 MIN 92
WTR YR 1986 TOTAL 225429 MEAN 618 MAX 3690 MIN 116

01382000 PASSAIC RIVER AT TWO BRIDGES, NJ

LOCATION.--Lat 40°53'40", long 74°16'23", Passaic County, Hydrologic Unit 02030103, at bridge on Two Bridges Road in Two Bridges, 50 ft upstream from Pompton River.

DRAINAGE AREA.--361 mi².

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: June 1969 to September 1974.
pH: June 1969 to September 1974.
WATER TEMPERATURES: October 1962 to September 1974.
DISSOLVED OXYGEN: June 1969 to September 1974.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
29...	1300	E157	613	7.5	11.5	4.4	40	4.1	490	<20
FEB 1986										
25...	1100	E2420	269	7.1	1.0	10.5	75	2.7	230	40
APR										
29...	1140	E1720	235	7.3	16.5	6.6	68	2.8	350	49
JUN										
12...	1300	E504	388	7.3	22.5	3.0	35	5.4	540	540
JUL										
29...	1300	E212	500	7.3	26.5	3.9	49	7.1	490	<20
SEP										
03...	1300	E157	510	7.4	21.0	3.7	41	13	1100	210

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
29...	140	36	13	61	6.0	84	54	87	0.2
FEB 1986									
25...	62	16	5.4	32	1.7	29	16	59	<0.1
APR									
29...	63	16	5.5	20	1.7	40	17	32	0.1
JUN									
12...	99	25	8.9	33	3.3	60	34	47	0.1
JUL									
29...	120	31	11	46	5.4	73	41	69	0.1
SEP									
03...	130	34	12	43	5.2	78	39	64	0.2

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
29...	17	320	0.206	3.49	4.50	4.8	8.2	1.09	8.9
FEB 1986									
25...	9.6	160	0.015	0.95	0.43	0.87	1.8	0.12	7.7
APR									
29...	6.5	120	0.043	0.62	0.20	0.96	1.6	0.16	8.6
JUN									
12...	12	200	0.192	1.68	2.22	3.0	4.7	0.63	6.9
JUL									
29...	14	260	0.251	2.60	2.62	3.3	5.9	0.92	7.8
SEP									
03...	16	260	0.24	4.11	1.40	3.7	7.8	0.97	7.7

01382000 PASSAIC RIVER AT TWO BRIDGES, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
OCT 1985 29...	1300	<0.5	<10	2	<10	170	<1	20	9
JUN 1986 12...	1300	<0.5	20	1	<10	80	<1	10	9

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1985 29...	1200	30	100	0.2	6	<1	--	6
JUN 1986 12...	1300	9	130	<0.1	5	<1	20	--

01382500 PEQUANNOCK RIVER AT MACOPIN INTAKE DAM, NJ

LOCATION.--Lat 41°01'00", long 74°23'47", Morris County, Hydrologic Unit 02030103, on left bank at Macopin intake dam of Newark water-works, 0.4 mi downstream from Macopin River, and 3.0 mi northwest of Butler.

DRAINAGE AREA.--63.7 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1898 to current year. Monthly discharge only for some periods, published in WSP 1302. Records for January 1892 to December 1897, published in WSP 541, have been found to be unreliable and should not be used.

GAGE.--Water-stage recorder above hewn-rock dam. Datum of gage is 570.00 ft above National Geodetic Vertical Datum of 1929 (levels by New Jersey Geological Survey). Prior to May 22, 1970, at datum 13.55 ft higher.

REMARKS.--No estimated daily discharges. Records good except those below 10 ft³/s, which are poor. Records given herein represent flow over intake dam only. Flow regulated by Canistear, Oak Ridge, Clinton, Charlotteburg Reservoirs, and Echo Lake (see Passaic River basin, reservoirs in). Water diverted at Charlotteburg Reservoir for municipal supply of city of Newark (see Passaic River basin, diversions). Several measurements of water temperature were made during the year. National Weather Service gage-height telemeter at station.

COOPERATION.--Gage-height record collected in cooperation with the Department of Public Affairs, Division of Water Supply, city of Newark. Prior to May 22, 1970, discharge figures furnished by city of Newark.

AVERAGE DISCHARGE.--88 years, 50.9 ft³/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 6,100 ft³/s, Oct. 10, 1903, gage height, 17.4 ft, present datum; no flow over dam during several months of most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,450 ft³/s, Apr. 27, gage height, 15.08 ft; minimum, 0.49 ft³/s, Sept. 16.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	2.4	324	11	79	68	58	106	6.6	2.4	9.2	3.1
2	17	2.4	371	10	81	61	52	80	5.7	6.1	43	2.9
3	19	2.4	304	12	86	55	31	59	3.5	4.3	49	2.4
4	20	2.7	219	12	71	59	17	38	3.0	2.9	15	2.7
5	20	16	195	12	84	69	17	32	3.4	4.0	7.7	4.0
6	14	15	172	12	86	74	17	27	6.5	3.6	4.7	5.2
7	12	13	151	9.9	69	69	17	28	21	3.0	2.6	5.3
8	9.9	10	117	14	63	68	17	26	12	2.2	2.1	3.5
9	8.8	7.8	103	8.9	45	63	15	24	10	2.3	1.2	2.4
10	7.0	6.4	88	6.2	31	63	14	23	6.8	2.0	.99	2.9
11	6.3	6.7	82	4.9	29	65	12	20	4.7	2.4	1.0	1.6
12	5.3	8.1	160	4.7	27	68	12	20	20	4.5	.99	1.3
13	5.3	8.9	146	4.7	31	78	11	17	17	4.2	.99	1.7
14	5.9	8.9	129	3.9	30	210	9.9	16	10	4.2	.99	2.1
15	6.1	11	82	4.4	23	665	10	15	7.0	3.7	1.3	1.6
16	6.1	13	56	3.5	20	646	62	15	5.6	3.5	1.5	.78
17	4.7	77	36	3.5	22	447	725	15	5.7	4.6	10	.55
18	4.0	64	28	3.5	38	320	976	13	4.0	5.7	6.2	.56
19	3.9	44	25	4.8	49	283	589	11	3.2	6.9	3.0	.99
20	4.8	37	23	6.9	188	281	377	11	3.1	4.7	1.6	1.3
21	4.7	31	21	10	267	227	291	16	3.3	5.4	3.5	1.8
22	4.7	34	20	8.6	272	163	271	30	2.8	7.9	6.9	2.4
23	4.7	36	20	8.0	227	125	347	23	2.6	7.9	3.1	1.8
24	4.8	29	20	6.1	177	109	328	18	2.1	7.9	4.1	2.0
25	4.8	26	18	8.0	129	84	307	13	2.2	7.9	1.4	2.4
26	3.4	34	18	69	91	71	298	11	2.5	6.3	.99	2.6
27	2.8	44	17	81	79	63	267	9.3	2.4	7.0	1.2	4.3
28	2.9	69	14	122	72	63	216	8.2	2.5	8.3	2.4	4.7
29	2.7	179	13	243	---	63	179	6.4	1.7	8.0	1.5	4.7
30	2.4	321	12	182	---	60	163	5.2	2.0	9.3	1.4	4.6
31	2.4	---	12	119	---	58	---	4.9	---	13	1.9	---
TOTAL	237.4	1159.7	2996	1009.5	2466	4798	5705.9	741.0	182.9	166.1	191.45	78.18
MEAN	7.66	38.7	96.6	32.6	88.1	155	190	23.9	6.10	5.36	6.18	2.61
MAX	20	321	371	243	272	665	976	106	21	13	49	5.3
MIN	2.4	2.4	12	3.5	20	55	9.9	4.9	1.7	2.0	.99	.55

CAL YR 1985 TOTAL 5565.81 MEAN 15.2 MAX 371 MIN .67
WTR YR 1986 TOTAL 19732.13 MEAN 54.1 MAX 976 MIN .55

01383500 WANAQUE RIVER AT AWOSTING, NJ

LOCATION.--Lat 41°09'31", long 74°20'00", Passaic County, Hydrologic Unit 02030103, on right bank 700 ft downstream from dam at outlet of Greenwood Lake at Awosting.

DRAINAGE AREA.--27.1 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1919 to current year. Prior to October 1940, published as "at Greenwood Lake".

REVISED RECORDS.--WSP 781: Drainage area. WSP 1552: 1922(M), 1928(M), 1936. WDR NJ-79-1: 1933(M), 1936(M), 1945(M), 1948(P), 1951(P), 1952(P), 1953(M), 1955(P), 1956(M), 1957(M), 1958(M), 1960(P), 1961(M), 1968(P), 1969(P). WDR NJ-80-1: 1960(P).

GAGE.--Water-stage recorder. Concrete control since Oct. 31, 1938. Datum of gage is 601.32 ft above National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark). Prior to Apr. 1, 1926, nonrecording gage and Apr. 1, 1926, to Oct. 31, 1938, water-stage recorder at site 100 ft upstream at same datum.

REMARKS.--No estimated daily discharges. Records fair. Flow completely regulated by Greenwood Lake (see Passaic River basin, reservoirs in). Several measurements of water temperature were made during the year.

COOPERATION.--Gage-height record collected in cooperation with North Jersey District Water Supply Commission.

AVERAGE DISCHARGE.--67 years, 54.4 ft³/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,800 ft³/s, Apr. 5, 1984, gage height, 6.65 ft, from rating curve extended above 750 ft³/s based on theoretical weir formula; no flow at times when gates at Greenwood Lake were closed and water below the spillway.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 18	0900	269	3.21	Mar. 16	0430	304	3.31
Nov. 29	0945	246	3.14	Apr. 18	0830	312	3.33
Jan. 27	1745	*398	*3.54	Apr. 23	1615	224	3.07
Feb. 22	0300	215	3.04				

Minimum discharge, 2.4 ft³/s June 4, gage height, 1.42 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	160	7.2	216	27	139	83	44	110	11	21	20	19
2	126	7.7	226	25	131	73	44	99	13	22	20	19
3	118	6.9	213	31	118	65	39	81	6.2	23	20	19
4	117	6.5	174	34	108	60	36	67	3.3	22	20	19
5	124	38	148	39	113	57	37	56	13	21	20	19
6	139	61	134	37	111	55	40	52	37	21	20	19
7	123	63	116	34	110	54	44	53	74	21	20	19
8	104	59	101	30	105	49	44	48	77	21	20	19
9	88	48	91	26	93	43	42	41	72	21	20	19
10	77	43	82	25	83	41	38	33	56	21	20	19
11	69	46	83	24	79	46	32	28	48	21	20	19
12	56	48	104	22	73	53	31	27	65	21	20	19
13	48	56	101	22	65	67	28	22	90	21	20	19
14	47	60	102	21	59	105	26	19	85	21	20	18
15	45	65	89	19	55	256	24	17	76	21	20	18
16	43	69	81	17	50	298	56	17	66	21	20	17
17	37	223	75	17	53	265	209	20	63	21	20	17
18	31	257	68	16	86	220	297	18	48	21	20	17
19	29	215	60	23	135	188	267	17	39	21	20	17
20	28	184	55	47	174	186	218	17	38	21	20	17
21	23	155	52	57	189	148	186	26	32	21	20	17
22	22	141	47	56	207	123	172	43	27	21	20	17
23	20	142	45	55	190	105	205	45	26	21	19	18
24	19	125	44	50	167	97	209	41	24	21	19	18
25	22	109	47	52	147	79	212	35	24	20	19	18
26	18	113	42	215	126	71	202	28	23	20	19	18
27	15	143	37	379	109	73	187	22	23	20	19	18
28	16	180	35	349	94	67	162	21	23	20	19	18
29	8.9	240	32	273	---	58	142	17	23	20	19	18
30	7.3	223	30	215	---	54	130	15	22	20	19	18
31	8.1	---	27	170	---	53	---	12	---	20	19	---
TOTAL	1788.3	3134.3	2757	2407	3169	3192	3403	1147	1227.5	648	611	546
MEAN	57.7	104	88.9	77.6	113	103	113	37.0	40.9	20.9	19.7	18.2
MAX	160	257	226	379	207	298	297	110	90	23	20	19
MIN	7.3	6.5	27	16	50	41	24	12	3.3	20	19	17

CAL YR 1985 TOTAL 16606.2 MEAN 45.5 MAX 407 MIN 1.0
WTR YR 1986 TOTAL 24030.1 MEAN 65.8 MAX 379 MIN 3.3

01384500 RINGWOOD CREEK NEAR WANAQUE, NJ

LOCATION.--Lat 41°07'36", long 74°15'52", Passaic County, Hydrologic Unit 02030103, on right bank 500 ft upstream from Wanaque Reservoir, 0.7 mi downstream from Ringwood Mill Pond Dam, and 6.5 mi north of Wanaque.

DRAINAGE AREA.--19.1 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1934 to September 1978, October 1985 to September 1986. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WDR NJ-82-1: 1935-77(P).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 302.67 ft above National Geodetic Vertical Datum of 1929 (levels by New Jersey Geological Survey).

REMARKS.--Estimated daily discharges: Oct. 1-4, Nov. 4,6-24, Jan. 1, 11-18. Records fair except for periods of estimated daily discharges, which are poor. Records given herein include flow over spillway and through ports in dam when open or through waste gate in dam. No flow through ports or waste gates this year. Flow slightly regulated by Ringwood Mill Pond, Sterling, and Sterling Forest Lakes, and several smaller lakes above station.

COOPERATION.--Gage-height record collected in cooperation with North Jersey Water Supply Commission.

AVERAGE DISCHARGE.--45 years (water years 1935-78, 1986) 33.5 ft³/s, 23.82 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,150 ft³/s, Mar. 30, 1951, gage height, 3.74 ft, from floodmark; no flow part of day in most years just after waste gage was closed and water was below ports.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 230 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Elevation (ft)	Date	Time	Discharge (ft³/s)	Elevation (ft)
Jan. 26	1415	*239	*11.71	No other peak greater than base discharge.			

Minimum discharge, 1.2 ft³/s, Sept. 16, 17, 18.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	11	124	19	66	54	28	60	7.6	4.1	13	2.8
2	30	10	137	18	72	51	25	53	7.4	15	60	2.9
3	34	14	109	22	68	47	23	45	6.6	22	112	2.8
4	44	46	91	23	62	47	22	40	5.5	14	34	2.6
5	57	58	82	23	68	46	23	36	5.2	11	19	3.6
6	59	42	77	21	68	45	27	33	7.2	9.2	15	10
7	48	30	70	17	58	40	28	34	39	7.6	13	6.1
8	42	24	65	19	59	32	26	31	18	6.5	11	4.1
9	37	21	61	18	54	31	23	28	13	4.9	9.5	3.4
10	34	20	55	15	50	33	22	25	9.3	4.1	7.9	3.2
11	30	23	58	17	47	41	20	23	7.3	3.1	7.3	3.0
12	27	26	76	15	45	44	19	21	31	4.2	5.7	2.1
13	27	28	64	14	58	54	19	19	39	11	4.7	1.9
14	26	25	64	13	56	85	18	17	22	10	4.2	1.7
15	26	32	55	12	38	187	17	16	16	9.7	4.0	1.5
16	22	37	50	13	37	149	49	15	15	9.2	4.0	1.4
17	19	180	48	12	37	121	184	15	13	8.0	18	1.2
18	19	107	43	16	62	100	141	15	11	6.3	16	1.2
19	19	78	36	19	88	94	103	14	9.6	5.5	9.5	1.7
20	18	80	33	36	120	95	85	13	9.0	4.9	7.1	1.9
21	17	70	32	29	122	76	82	19	9.0	4.9	6.5	3.5
22	16	74	31	23	127	69	85	31	7.8	4.9	14	3.0
23	15	82	30	22	104	63	116	26	7.3	4.6	10	2.7
24	15	40	30	19	87	58	118	19	6.9	4.1	8.9	2.6
25	16	44	31	23	80	52	117	16	5.9	3.8	6.9	2.5
26	15	74	26	213	70	48	107	13	4.7	3.4	5.1	2.5
27	13	103	24	213	65	45	95	12	4.5	3.7	4.3	4.9
28	13	141	23	150	59	42	82	11	4.4	3.7	4.0	4.9
29	12	161	21	117	---	38	73	9.9	4.4	3.3	3.2	3.3
30	12	127	20	88	---	34	67	8.2	4.4	3.8	3.0	2.8
31	11	---	18	76	---	31	---	7.7	---	14	2.9	---
TOTAL	806	1808	1684	1335	1927	1952	1844	725.8	351.0	224.5	443.7	91.8
MEAN	26.0	60.3	54.3	43.1	68.8	63.0	61.5	23.4	11.7	7.24	14.3	3.06
MAX	59	180	137	213	127	187	184	60	39	22	112	10
MIN	11	10	18	12	37	31	17	7.7	4.4	3.1	2.9	1.2
CFSM	1.36	3.16	2.84	2.26	3.60	3.30	3.22	1.23	.61	.38	.75	.16
IN.	1.57	3.52	3.28	2.60	3.75	3.80	3.59	1.41	.68	.44	.86	.18

WTR YR 1986 TOTAL 13192.8 MEAN 36.1 MAX 213 MIN 1.2 CFSM 1.89 IN. 25.69

01387000 WANAQUE RIVER AT WANAQUE, NJ

LOCATION.--Lat 41°02'33", long 74°17'36", Passaic County, Hydrologic Unit 02030103, on left bank 750 ft downstream from Raymond Dam in Wanaque, and 50 ft upstream from bridge on State Highway 511.

DRAINAGE AREA.--90.4 mi², considered as 94 mi² Oct. 1, 1928 to Sept. 30, 1934.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1903 to December 1905 (gage heights only), September 1912 to April 1915, May 1919 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 210.00 ft above National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark). Dec. 16, 1903, to Dec. 31, 1905, nonrecording gage on highway bridge at site 50 ft downstream at different datum. Sept. 15, 1912, to Apr. 1, 1922, nonrecording gage at site 200 ft downstream from present concrete control at different datum. Apr. 1, 1922 to Mar. 14, 1931, water-stage recorder at site 400 ft downstream from present concrete control at present datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Greenwood Lake (see Passaic River basin, reservoirs in) 11 mi above station, and since 1928 by Wanaque Reservoir (see Passaic River basin, reservoirs in). North Jersey Water Supply Commission diverts water for municipal supply from Wanaque Reservoir. Water is diverted to Wanaque Reservoir from Posts Brook at Wanaque and from Ramapo River at Pompton Lakes (see Passaic River basin, diversions). Several measurements of water temperature, other than those published, were made during the year. National Weather Service rain-gage and gage-height telemeter at station.

COOPERATION.--Gage-height record collected in cooperation with North Jersey District Water Supply Commission.

AVERAGE DISCHARGE.--69 years, (water years 1913, 1914, 1920-86), 78.5 ft³/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,500 ft³/s, Apr. 5, 1984, gage height, 10.82 ft, from rating curve extended above 5,000 ft³/s; minimum daily, 0.06 ft³/s, Oct. 11, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 856 ft³/s, Mar. 15, gage height, 4.72 ft; minimum daily, 17 ft³/s, Oct. 16, Nov. 1, 3, 4, 6-9, May 11.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	17	20	21	219	140	23	163	22	21	19	19
2	19	18	20	19	217	120	44	152	22	32	24	20
3	19	17	20	19	199	114	23	122	22	19	20	18
4	19	17	22	22	173	103	20	76	22	18	20	21
5	19	18	19	20	183	98	24	35	22	18	20	20
6	19	17	18	20	175	88	20	25	23	18	20	20
7	19	17	18	21	177	103	21	32	24	20	20	20
8	19	17	18	21	169	86	26	44	23	20	20	20
9	19	17	19	19	145	18	31	40	23	20	20	20
10	21	18	20	19	122	22	27	20	23	20	20	20
11	22	18	23	20	115	52	23	17	23	19	20	20
12	18	18	108	20	95	70	21	21	23	20	20	20
13	18	18	127	19	64	116	20	22	21	20	20	20
14	18	19	164	19	43	209	20	22	22	19	20	20
15	18	19	109	20	43	760	20	22	22	19	20	20
16	17	20	105	19	32	786	22	21	22	20	20	20
17	18	21	93	19	43	611	283	21	23	19	22	20
18	18	20	87	19	150	475	817	21	23	20	20	19
19	18	19	37	20	334	399	614	29	30	20	20	20
20	18	19	32	20	463	417	456	24	23	20	20	19
21	18	19	37	20	508	282	361	20	23	19	20	19
22	18	19	22	20	589	217	327	20	23	18	20	19
23	18	19	19	20	493	182	444	21	23	20	20	20
24	18	19	19	20	403	188	500	23	23	20	20	20
25	18	19	53	21	341	123	475	23	22	20	20	19
26	18	20	23	25	259	105	448	23	22	21	20	19
27	18	20	20	211	209	113	407	22	22	20	19	19
28	18	21	21	603	165	85	324	22	21	20	19	19
29	18	20	19	526	---	56	248	22	21	20	19	19
30	18	20	20	414	---	50	211	22	21	20	19	21
31	19	---	19	297	---	59	---	22	---	19	19	---
TOTAL	574	560	1351	2573	6128	6247	6300	1169	679	619	620	590
MEAN	18.5	18.7	43.6	83.0	219	202	210	37.7	22.6	20.0	20.0	19.7
MAX	22	21	164	603	589	786	817	163	30	32	24	21
MIN	17	17	18	19	32	18	20	17	21	18	19	18

CAL YR 1985 TOTAL 5001.3 MEAN 13.7 MAX 164 MIN 2.4
WTR YR 1986 TOTAL 27410 MEAN 75.1 MAX 817 MIN 17

01387000 WANAQUE RIVER AT WANAQUE, NJ--Continued

WATER-QUALITY RECORDS.

PERIOD OF RECORD.--Water years 1963 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1963 to September 1980.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
31...	1030	20	187	7.6	13.5	9.9	95	2.1	--	--
FEB 1986										
14...	1100	43	137	7.7	1.0	13.8	98	--	--	--
MAY										
01...	1100	165	116	7.4	13.0	10.0	96	2.1	<2	<2
JUN										
09...	1100	23	117	7.3	18.0	9.0	95	2.1	<2	7
JUL										
23...	1200	20	119	7.3	19.0	8.9	96	4.2	<2	1600
SEP										
02...	1100	19	118	7.5	19.5	8.7	95	2.1	2	49

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
31...	51	14	3.9	13	1.0	33	12	21	<0.1
FEB 1986									
14...	41	11	3.3	10	1.0	26	12	15	<0.1
MAY									
01...	32	8.4	2.7	9.1	0.8	20	12	16	<0.1
JUN									
09...	33	8.7	2.7	8.8	0.8	21	13	13	<0.1
JUL									
23...	34	9.0	2.7	8.9	0.9	21	14	15	<0.1
SEP									
02...	33	8.8	2.7	8.7	0.8	21	13	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 1985									
31...	2.8	87	0.013	0.24	0.12	0.38	0.62	0.02	3.3
FEB 1986									
14...	3.5	71	0.007	0.191	0.03	<0.2	--	<0.01	3.6
MAY									
01...	3.1	64	0.012	0.13	0.14	0.36	0.49	<0.02	3.3
JUN									
09...	2.3	62	0.003	0.09	0.07	0.31	0.4	0.003	2.8
JUL									
23...	2.7	66	<0.003	0.11	0.10	0.46	0.57	0.02	2.8
SEP									
02...	2.4	62	<0.003	0.06	<0.05	0.31	0.37	<0.02	3.3

01387000 WANAQUE RIVER AT WANAQUE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)
OCT 1985 31...	1030	30	1.3	16	1	180	<10	80	15000	230

DATE	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985 31...	1000	1.3	20	<1	150	51	<1.0	<0.1	12	2.3

DATE	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985 31...	<0.1	<0.1	0.7	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

DATE	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985 31...	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1

01387420 RAMAPO RIVER AT SUFFERN, NEW YORK

LOCATION.--Lat 41°07'06", long 74°09'38", Rockland County, Hydrologic Unit 02030103, on left bank, 145 ft downstream from highway bridge on New York State Thruway at Suffern, and 1.1 mi upstream from Mahwah River.

DRAINAGE AREA.--93.0 mi^2.

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

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 264.44 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Aug. 17-18. Records poor. Flow affected by diversion from Spring Valley Water Company well field upstream from station and by occasional regulation by Lake Sebago. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--7 years, 172 ft^3/s, unadjusted.

COOPERATION.--Figures of pumpage from well field provided by Spring Valley Water Company.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,300 ft^3/s Apr. 5, 1984, gage height, 15.38 ft, from rating curve extended above 5,400 ft^3/s; minimum discharge, 2.6 ft^3/s Sept. 30, 1981, gage height, 1.23 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,100 ft^3/s and maximum(*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 17	2015	1,220	6.05	Mar. 15	1800	1,510	6.72
Jan. 27	0115	1,850	7.44	Aug. 2	2300	*2,790	*8.93

Minimum discharge, 11 ft^3/s June 5, 6, Sept. 17; minimum gage height, 1.44 ft Sept. 17.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	207	25	644	70	254	195	121	253	22	19	50	17
2	189	25	698	67	277	177	103	225	20	127	630	16
3	180	25	598	77	288	158	96	195	16	148	1350	16
4	239	25	435	93	245	153	96	175	14	76	467	17
5	269	182	360	93	276	142	96	159	12	52	240	20
6	348	269	305	87	295	139	110	139	42	40	155	50
7	258	227	270	75	249	139	142	153	282	32	118	34
8	188	160	244	64	233	132	135	139	192	25	96	24
9	151	133	221	69	204	106	141	125	126	20	76	20
10	130	97	197	62	185	97	112	109	82	20	67	17
11	110	91	210	59	177	136	98	100	59	19	61	16
12	93	99	328	55	166	210	92	90	175	59	54	15
13	87	164	295	54	147	253	85	82	378	99	44	14
14	89	143	268	54	129	474	81	73	258	138	39	14
15	83	173	241	48	126	1320	80	69	170	102	35	14
16	77	186	201	25	118	1060	165	68	122	70	32	14
17	68	1040	181	24	127	650	802	66	110	55	50	12
18	60	871	164	31	330	473	826	64	84	43	70	12
19	57	533	142	55	549	425	497	60	67	39	60	15
20	56	398	137	131	584	413	372	55	59	33	51	15
21	53	327	120	123	542	328	335	118	52	28	45	23
22	48	307	123	93	596	291	351	162	41	22	74	21
23	44	349	107	85	460	269	463	153	35	19	57	20
24	42	298	108	73	386	247	531	102	31	16	56	19
25	40	237	114	74	337	232	626	76	29	15	39	18
26	43	260	103	1160	289	211	515	61	24	33	26	18
27	39	461	98	1640	249	199	431	50	20	69	23	33
28	35	678	87	896	222	195	368	41	22	45	21	32
29	32	909	81	554	---	179	303	34	43	34	20	26
30	28	705	77	414	---	139	286	27	26	38	17	23
31	26	---	74	318	---	121	---	22	---	56	17	---
TOTAL	3369	9397	7231	6723	8040	9263	8459	3245	2613	1591	4140	605
MEAN	109	313	233	217	287	299	282	105	87.1	51.3	134	20.2
MAX	348	1040	698	1640	596	1320	826	253	378	148	1350	50
MIN	26	25	74	24	118	97	80	22	12	15	17	12
ǂ	14	15	15	15	15	15	16	15	11	11	11	2.7

CAL YR 1985 TOTAL 45872.0 MEAN 126 MAX 1630 MIN 6.6 ǂ 12
WTR YR 1986 TOTAL 64676 MEAN 177 MAX 1640 MIN 12 ǂ 13

ǂ Diversion, in cubic feet per second, by pumpage from well field upstream of station.

01387450 MAHWAH RIVER NEAR SUFFERN, NY

LOCATION.--Lat 41°08'27", long 74°07'01", Rockland County, Hydrologic Unit 02030103, on left bank 13 ft upstream from bridge on U.S. Highway 202, 2.5 mi. northeast of Suffern, and 4.8 mi upstream from mouth.

DRAINAGE AREA.--12.3 mi^2.

PERIOD OF RECORD.--August 1958 to current year.

REVISED RECORDS.--WDR NY-79-1: 1977.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 321.57 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 18, 1976, water-stage recorder at site on right bank 13 ft downstream, at present datum.

REMARKS.--Estimated daily discharges: Apr. 17 to May 21 and July 2 to Sept. 2. Records fair except those for estimated daily discharges, which are poor. Occasional regulation from unknown source. Several measurements of water temperature were made during the year. Telephone gage-height telemeter at station.

AVERAGE DISCHARGE.--28 years, 24.8 ft^3/s, 27.38 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,840 ft^3/s Nov. 8, 1977, gage height, 9.91 ft, from rating curve extended above 850 ft^3/s on basis of contracted-opening measurements at gage heights 8.52 ft and 9.91 ft; minimum discharge, 0.05 ft^3/s Oct. 20, 21, 1970, result of temporary pumping from gage pool.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 17	0515	312	4.27	Mar. 15	0345	208	3.77
Jan. 26	0800	373	4.52	Aug. 3	0115	*630	*5.36

Minimum discharge, 3.6 ft^3/s July 25, 26; minimum gage height, 1.53 ft July 25, 26, Sept. 14, 15.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	6.4	68	12	31	28	21	25	8.8	8.1	23	7.2
2	20	6.4	76	11	38	27	20	22	8.7	33	101	6.9
3	19	6.3	57	13	35	26	18	20	8.5	22	304	6.6
4	21	6.4	46	14	31	26	18	19	8.6	14	83	6.7
5	35	38	39	18	37	27	18	17	8.5	9.9	46	6.9
6	32	30	36	16	38	28	21	16	14	8.2	33	9.9
7	25	23	32	12	32	27	23	15	39	7.0	27	7.8
8	21	18	29	9.0	29	23	21	13	21	6.3	22	6.9
9	18	16	28	8.2	27	22	20	12	15	5.8	18	5.8
10	16	14	25	9.1	25	22	19	11	12	5.5	16	5.0
11	15	14	27	9.9	25	28	18	10	11	5.3	16	4.7
12	13	16	41	9.6	23	31	18	9.8	29	12	13	4.7
13	13	21	32	9.3	22	37	17	9.1	30	13	11	4.4
14	13	19	31	8.0	21	54	17	8.5	21	11	9.9	4.0
15	12	22	26	7.8	21	140	16	7.9	16	8.2	9.3	3.8
16	12	26	23	7.3	19	80	23	8.5	18	6.5	8.8	4.5
17	10	194	22	6.7	21	59	121	7.9	16	5.7	19	4.7
18	9.6	90	20	8.7	62	50	73	7.4	13	5.2	15	4.4
19	9.4	58	18	12	65	47	48	7.0	11	4.8	11	4.5
20	9.4	44	17	21	75	45	41	7.0	11	4.6	12	4.4
21	8.6	36	16	16	72	37	40	17	10	4.2	11	6.0
22	8.4	41	16	13	72	32	45	21	9.5	4.1	20	5.3
23	8.1	42	16	12	57	31	56	18	9.0	3.8	12	4.8
24	8.0	34	15	12	48	30	78	15	8.8	3.9	13	4.8
25	8.3	29	17	13	43	28	74	13	8.5	3.8	11	4.6
26	7.8	39	14	262	37	27	63	12	8.0	16	9.3	4.7
27	7.4	61	13	183	34	27	50	10	7.7	51	8.3	7.8
28	7.1	109	13	83	30	26	40	9.9	7.9	14	8.5	6.0
29	6.8	105	12	53	---	24	31	9.6	10	10	8.0	4.8
30	6.7	72	11	42	---	23	28	9.5	9.1	20	7.5	4.7
31	6.6	---	11	35	---	23	---	9.2	---	33	7.4	---
TOTAL	432.2	1236.5	847	946.6	1070	1135	1096	397.3	408.6	359.9	914.0	167.3
MEAN	13.9	41.2	27.3	30.5	38.2	36.6	36.5	12.8	13.6	11.6	29.5	5.58
MAX	35	194	76	262	75	140	121	25	39	51	304	9.9
MIN	6.6	6.3	11	6.7	19	22	16	7.0	7.7	3.8	7.4	3.8
CFSM	1.13	3.35	2.22	2.48	3.11	2.98	2.97	1.04	1.11	.94	2.40	.45
IN.	1.31	3.74	2.56	2.86	3.24	3.43	3.31	1.20	1.24	1.09	2.76	0.51

CAL YR 1985 TOTAL 6069.8 MEAN 16.6 MAX 194 MIN 2.3 CFSM 1.35 IN. 18.36
WTR YR 1986 TOTAL 9010.4 MEAN 24.7 MAX 304 MIN 3.8 CFSM 2.01 IN. 27.25

01387500 RAMAPO RIVER NEAR MAHWAH, NJ

LOCATION.--Lat 41°05'51", long 74°09'48", Bergen County, Hydrologic Unit 02030103, on left bank 350 ft downstream from State Highway 17, 0.6 mi downstream from Mahwah River, and 1.0 mi west of Mahwah. Water-quality samples collected at bridge 350 ft upstream from gage at high flows.

DRAINAGE AREA.--120 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1902 to December 1906, September 1922 to current year. October 1902 to February 1905 monthly discharge only, published in WSP 1302. Figures of daily discharge Feb. 10, 1903, to Dec. 31, 1904, published in WSP 97, 125, are unreliable and should not be used. Gage-height records for 1903-14 are contained in reports of the National Weather Service.

REVISED RECORDS.--WSP 781: 1904(M). WSP 1031: 1938, 1940. WSP 1552: 1923(M), 1924, 1925-26(M), 1927-28, 1933, 1937. WRD-NJ 1971: 1968(M). WDR NJ-82-1: Drainage area.

GAGE.--Water-discharge recorder. Datum of gage is 253.10 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 31, 1906, nonrecording gage on former bridge at site 250 ft downstream at different datum. Sept. 1, 1922 to Dec. 23, 1936, water-stage recorder just below former bridge at present datum.

REMARKS.--No estimated daily discharges. Records fair. Flow affected by diversion from Spring Valley (NY) Water Company well field upstream from station (see station 01387420). Occasional regulation from lakes and ponds upstream from the station. Several measurements of water temperature, other than those published, were made during the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--68 years (water years 1903-06,1923-86), 230 ft³/s, 26.03 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,500 ft³/s, April 5, 1984, gage height, 13.35 ft, from rating curve extended above 1,400 ft³/s; minimum, 4.6 ft³/s, Sept. 30, 1981 (possible regulation); minimum daily, 6.1 ft³/s, Sept. 30, 1981 (possible regulation).

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,400 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 17	1645	1,470	6.48	Aug. 3	0030	*3,370	*8.27
Mar. 15	1615	1,750	6.85				

Minimum discharge, 26 ft³/s, Sept. 17.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	270	58	788	90	333	269	185	317	53	46	103	36
2	208	57	846	87	374	254	170	282	51	232	713	35
3	221	55	714	104	390	235	157	250	48	203	2040	36
4	292	65	533	120	330	229	148	227	45	104	666	38
5	358	274	444	136	369	228	156	210	44	75	335	47
6	433	343	396	121	392	233	185	189	121	61	235	73
7	310	227	351	96	329	225	196	204	392	53	188	49
8	236	166	309	104	312	184	188	185	266	48	155	39
9	193	136	280	76	278	169	189	166	190	45	126	35
10	170	123	251	74	255	165	157	145	132	44	106	32
11	151	115	270	74	245	206	140	132	100	43	113	31
12	132	137	443	71	238	283	133	118	284	123	86	30
13	123	198	382	70	218	327	123	109	445	142	75	29
14	125	178	361	60	207	571	116	101	299	164	67	28
15	120	210	291	52	202	1570	121	94	212	127	61	28
16	111	234	248	54	194	1230	261	94	183	86	57	29
17	99	1330	227	51	192	758	1110	94	150	67	227	28
18	89	1110	203	55	438	577	972	88	116	58	143	28
19	86	689	170	86	732	518	591	82	94	54	90	30
20	85	513	154	182	755	508	450	87	86	49	78	30
21	81	410	149	166	692	418	425	190	78	46	86	49
22	78	418	139	126	765	363	440	233	68	41	136	35
23	73	486	139	114	599	330	590	204	62	39	92	34
24	72	390	140	98	490	303	645	141	58	38	94	32
25	73	323	147	108	427	276	722	110	56	37	67	29
26	76	387	130	526	369	255	603	94	51	117	53	31
27	71	626	120	722	328	245	517	81	48	190	49	57
28	67	903	114	790	291	246	437	73	49	80	48	46
29	64	1150	105	719	---	238	386	66	65	62	42	36
30	61	853	99	497	---	219	360	60	53	99	39	32
31	59	---	91	397	---	204	---	55	---	152	37	---
TOTAL	4587	12164	9034	6026	10744	11836	10873	4481	3899	2725	6407	1092
MEAN	148	405	291	194	384	382	362	145	130	87.9	207	36.4
MAX	433	1330	846	790	765	1570	1110	317	445	232	2040	73
MIN	59	55	91	51	192	165	116	55	44	37	37	28
CFSM	1.23	3.37	2.42	1.62	3.20	3.18	3.02	1.21	1.08	.73	1.72	.30
IN.	1.42	3.77	2.80	1.87	3.33	3.67	3.37	1.39	1.21	.84	1.99	.34

CAL YR 1985 TOTAL 57672 MEAN 158 MAX 1480 MIN 19 CFSM 1.32 IN. 17.88
WTR YR 1986 TOTAL 83868 MEAN 230 MAX 2040 MIN 28 CFSM 1.92 IN. 26.00

01387500 RAMAPO RIVER NEAR MAHWAH, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963 to current year.

PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: February 1964 to June 1965.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
NOV 1985										
07...	1100	235	227	7.8	11.0	10.4	96	2.1	800	500
FEB 1986										
18...	1130	290	428	7.6	1.5	13.3	97	2.1	--	--
APR										
30...	1100	364	223	7.8	16.5	11.3	117	2.0	110	230
JUN										
10...	1100	133	267	7.6	19.0	8.7	94	5.4	790	790
JUL										
22...	1130	43	395	7.9	23.5	8.4	99	2.7	3100	1300
SEP										
04...	1100	37	441	7.9	18.0	7.9	84	--	500	1300

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
NOV 1985									
07...	64	18	4.7	17	1.5	40	15	28	0.1
FEB 1986									
18...	71	20	5.2	58	1.2	42	15	110	<0.1
APR									
30...	58	16	4.5	18	0.9	41	15	30	0.1
JUN									
10...	69	19	5.3	24	1.6	47	19	39	0.1
JUL									
22...	110	31	8.4	32	1.7	81	21	55	0.1
SEP									
04...	130	35	9.6	36	2.0	92	22	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, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 1985									
07...	6.9	120	0.011	1.55	0.19	0.67	2.2	0.15	5.5
FEB 1986									
18...	6.1	240	0.027	0.89	0.70	0.97	1.9	0.10	6.8
APR									
30...	5.1	110	0.029	0.48	0.14	0.61	1.1	0.08	2.9
JUN									
10...	6.9	140	0.056	1.60	0.08	0.69	2.3	0.24	5.2
JUL									
22...	7.1	200	0.022	2.04	0.23	0.65	2.7	0.23	3.8
SEP									
04...	7.1	230	0.028	2.19	0.18	E0.79	--	0.21	4.1

01387500 RAMAPO RIVER NEAR MAHWAH, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
NOV 1985											
07...	1100	--	70	0.1	1.5	--	--	--	--	--	<1
07...	1100	<0.5	--	--	--	50	<1	<10	<20	1	--
JUN 1986											
10...	1100	<0.5	--	--	--	20	<1	<10	30	<1	--

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
NOV 1985											
07...	--	120	<10	--	50	--	12000	--	30	--	320
07...	10	--	--	4	--	400	--	1	--	70	--
JUN 1986											
10...	<10	--	--	7	--	630	--	3	--	120	--

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1985											
07...	--	0.4	--	10	--	<1	--	80	--	1	<1.0
07...	<0.1	--	5	--	<1	--	20	--	1	--	--
JUN 1986											
10...	<0.1	--	1	--	<1	--	10	--	4	--	--

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1985											
07...	<0.1	1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
07...	--	--	--	--	--	--	--	--	--	--	--
JUN 1986											
10...	--	--	--	--	--	--	--	--	--	--	--

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1985											
07...	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1
07...	--	--	--	--	--	--	--	--	--	--	--
JUN 1986											
10...	--	--	--	--	--	--	--	--	--	--	--

01388000 RAMAPO RIVER AT POMPTON LAKES, NJ

LOCATION.--Lat 40°59'33", long 74°16'44", Passaic County, Hydrologic Unit 02030103, on right end of dam at pumping station in Pompton Lakes and 2.0 mi upstream from mouth.

DRAINAGE AREA.--160 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1921 to current year.

REVISED RECORDS.--WSP 1552: 1922(M), 1924-25, 1929-31(M), 1934-35(M). WRD-NJ 1970: 1968-69.

GAGE.--Water-stage recorder and concrete dam. Datum of gage is 190.96 ft above National Geodetic Vertical Datum of 1929. Prior to October 1, 1981, at datum 10.00 ft higher.

REMARKS.--Estimated daily discharges: Feb. 2-6 and Feb. 10-17. Records good except those for periods of ice effect, Feb. 2-6 and Feb. 10-17, which are fair. Diversion by North Jersey District Water Supply Commission to Wanaque Reservoir since December 1953 (see Passaic River basin, diversions) and to Oradell Reservoir by Hackensack Water Company since February 1985 (see Hackensack River basin, diversions) for municipal supply (records given herein). Slight regulation by Pompton Lake, capacity, 300,000,000 gal. Several measurements of water temperature were made during the year. National Weather Service gage-height telemeter at station.

AVERAGE DISCHARGE.--65 years, 303 ft³/s, 25.72 in/yr, adjusted for diversion since Dec. 1, 1953.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,400 ft³/s, April 5, 1984, gage height, 15.21 ft, in gage well, 15.33 ft, from flood marks, present datum; no flow part of September 30, 1980 and many days in 1981, 1982, 1985.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,600 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Jan. 27	0815	2,400	11.65	Apr. 17	1500	1,880	11.42
Mar. 15	2045	1,810	11.39	Aug. 3	0915	*2,760	*11.80

Minimum discharge, 23 ft³/s, Oct. 3, gage height, 10.08 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	135	56	974	135	422	353	224	416	68	55	183	77
2	60	56	1030	133	430	327	214	373	63	216	211	75
3	35	56	907	144	450	303	203	331	55	282	2220	70
4	95	54	693	173	350	299	194	299	54	158	1020	71
5	136	237	574	188	400	298	194	272	51	110	471	73
6	252	351	512	196	440	310	223	260	103	86	308	125
7	172	101	459	159	341	300	248	252	413	69	242	103
8	92	83	414	111	314	250	238	241	364	57	207	75
9	77	110	380	116	282	233	235	211	243	51	173	64
10	76	97	348	116	250	223	216	188	187	49	148	60
11	72	92	341	113	240	249	207	174	143	47	178	58
12	81	92	503	108	230	336	204	165	244	100	137	55
13	75	184	494	108	215	382	181	157	520	191	118	50
14	76	232	457	94	205	654	161	152	393	149	108	48
15	74	248	399	81	200	1550	157	141	272	174	103	43
16	72	274	343	77	190	1550	319	134	229	120	97	43
17	78	1380	318	77	200	1010	1580	135	198	92	464	42
18	86	1370	296	77	440	751	1470	128	156	79	510	42
19	110	886	258	91	926	652	926	116	126	72	216	42
20	102	640	229	219	1000	639	664	112	110	68	158	44
21	98	502	220	246	937	523	576	188	97	63	147	52
22	86	474	205	190	1010	449	622	300	85	53	251	59
23	79	571	201	160	845	404	783	280	78	48	188	57
24	72	473	206	145	685	375	902	206	70	42	187	57
25	73	402	215	141	593	341	921	158	64	41	144	52
26	72	428	202	1540	506	311	829	130	59	53	116	62
27	75	713	184	2270	445	303	698	115	54	221	106	71
28	73	981	178	1500	394	300	587	101	54	140	105	84
29	65	1390	159	869	---	279	513	88	60	89	98	66
30	61	1080	151	633	---	259	461	74	63	87	85	55
31	59	---	138	520	---	241	---	69	---	243	80	---
TOTAL	2769	13613	11988	10730	12940	14454	14950	5966	4676	3305	8779	1875
MEAN	89.3	454	387	346	462	466	498	192	156	107	283	62.5
MAX	252	1390	1030	2270	1010	1550	1580	416	520	282	2220	125
MIN	35	54	138	77	190	223	157	69	51	41	80	42
(†)	86.5	25.8	0	0	0	0	0	5.5	15.3	14.8	6.1	9.0
MEAN‡	176	480	387	346	462	466	498	198	171	122	289	71.5
CFSM‡	1.10	3.00	2.42	2.16	2.89	2.91	3.11	1.24	1.07	.76	1.81	.45
IN.‡	1.27	3.35	2.79	2.49	3.01	3.36	3.48	1.43	1.19	.88	2.08	.50

CAL YR 1985 TOTAL 47040.70 MEAN 129 MAX 2100 MIN .00 MEAN‡ 182 CFSM‡ 1.14 IN.‡ 15.44
WTR YR 1986 TOTAL 106045 MEAN 291 MAX 2270 MIN 35 MEAN‡ 300 CFSM‡ 1.88 IN.‡ 25.45

† Diversion, in cubic feet per second, at station to Wanaque and Oradell Reservoirs. Records of diversion furnished by North Jersey District Water Supply Commission and Hackensack Water Company.
‡ Adjusted for diversion.

01388500 POMPTON RIVER AT POMPTON PLAINS, NJ

LOCATION.--Lat 40°58'09", long 74°16'56", Passaic County, Hydrologic Unit 02030103, on left bank in Passaic Valley Water Commission pumping station, 800 ft below confluence of Pequannock and Ramapo Rivers, 100 ft upstream from bridge on Jackson Avenue (Pompton Plains Cross Road), and 0.7 mi east of Pompton Plains.

DRAINAGE AREA.--355 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1903 to December 1904, May 1940 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 1202: 1945(M).

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 160.00 ft above National Geodetic Vertical Datum of 1929. March 1903 to December 1904, nonrecording gage on main spillway of dam 2,000 ft upstream at different datum. May 1940 to September 1964 two water-stage recorders, each above a concrete dam about 2,000 ft upstream at datum 14.46 ft higher.

REMARKS.--Estimated daily discharge: Mar. 17-31. Records fair. Water diverted from reservoirs on Pequannock and Wanaque Rivers, from Pompton River to Point View Reservoir, and from Ramapo River to Wanaque Reservoir and Oradell Reservoir (from February 1985) for municipal supply (see Hackensack River basin, diversions into and from and Passaic River basin, diversions). Flow regulated by Canistear, Oak Ridge, Clinton, Charlotteburg and Echo Lake Reservoirs on Pequannock River and by Greenwood Lake and Wanaque Reservior on Wanaque River (see Passaic River basin, reservoirs in). Several measurements of water temperature were made during the year. National Weather Service gage-height telemeter at station.

COOPERATION.--Gage-height record collected in cooperation with Passaic Valley Water Commission.

AVERAGE DISCHARGE.--47 years, (water years 1904, 1941-86), 484 ft^3/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 28,340 ft^3/s, Oct. 10, 1903, gage height, 14.3 ft, site and datum then in use, by computation of peak flow over dam; no flow Aug. 18-20, 1904.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,200 ft^3/s, and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 15	1345	3,300	12.69	Apr. 18	0130	*4,270	*13.81

Minimum discharge, 27 ft^3/s, June 5, 6.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	255	142	1920	227	1290	1050	397	1190	134	87	240	104
2	165	141	1980	222	1280	881	392	1100	111	297	346	106
3	121	138	1840	240	1330	764	343	848	88	325	2500	104
4	201	98	1470	259	1200	725	299	577	77	194	1200	111
5	276	350	1190	274	1250	735	295	444	56	143	515	120
6	369	456	1010	276	1310	734	335	400	167	118	357	200
7	293	202	841	243	1210	715	365	378	719	104	294	155
8	225	160	691	181	1160	621	353	397	528	94	253	124
9	186	185	591	203	1030	421	349	350	341	88	208	108
10	188	160	510	197	777	398	328	299	260	84	176	100
11	177	147	487	186	679	488	299	275	215	79	206	96
12	168	168	1010	172	617	725	299	264	409	166	157	92
13	170	271	1060	166	483	927	276	257	959	239	135	88
14	161	312	1070	138	433	1490	255	246	580	181	123	84
15	149	332	754	109	412	3010	252	233	364	204	115	80
16	142	369	570	129	366	3300	351	230	304	152	111	84
17	152	2110	483	127	400	3200	2150	229	269	125	692	80
18	157	2020	442	127	1140	2800	3870	223	240	112	722	80
19	193	1510	364	165	1890	2600	2650	211	202	104	323	80
20	186	1030	330	312	2100	2400	2050	220	171	99	243	81
21	179	707	325	335	2130	2200	1830	278	135	92	225	86
22	162	693	297	289	2260	1700	1810	515	104	82	350	98
23	156	915	291	258	2010	1400	2050	436	83	78	268	101
24	152	651	292	245	1810	1300	2160	319	64	74	275	106
25	158	498	318	253	1620	1200	2110	263	47	72	203	98
26	160	619	290	2240	1400	1000	2010	228	96	103	162	133
27	162	1270	270	2990	1260	910	1880	214	89	259	147	130
28	164	1640	264	2550	1150	840	1690	189	87	176	142	137
29	158	2110	247	2100	---	760	1470	166	90	123	132	117
30	152	2000	241	1830	---	680	1360	140	95	134	122	106
31	144	---	230	1520	---	500	---	146	---	325	111	---
TOTAL	5681	21404	21678	18563	33997	40474	34278	11265	7084	4513	11053	3189
MEAN	183	713	699	599	1214	1306	1143	363	236	146	357	106
MAX	369	2110	1980	2990	2260	3300	3870	1190	959	325	2500	200
MIN	121	98	230	109	366	398	252	140	47	72	111	80

CAL YR 1985 TOTAL 82832 MEAN 227 MAX 2500 MIN 19
WTR YR 1986 TOTAL 213179 MEAN 584 MAX 3870 MIN 47

01388600 POMPTON RIVER AT PACKANACK LAKE, NJ

LOCATION.--Lat 40°56'36", long 74°16'47", Morris County, Hydrologic Unit 02030103, at bridge on State Highway 504 in Packanack Lake, and 2.2 mi downstream from confluence of Pequannock and Wanaque Rivers.

DRAINAGE AREA.--361 mi².

WATER-QUALITY RECORDS

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
30...	1030	E154	295	7.9	10.0	10.3	92	2.8	20	20
FEB 1986										
19...	1100	E1920	296	7.7	1.5	13.9	101	1.8	330	490
APR										
29...	1000	E1510	163	7.5	13.5	10.0	97	1.5	40	50
JUN										
12...	1030	E224	269	7.4	21.5	7.0	80	6.6	1600	>2400
JUL										
29...	1030	E125	307	7.8	26.5	6.9	87	4.7	1300	330
SEP										
03...	1030	E107	277	7.5	20.5	7.6	84	7.3	140	490

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
30...	84	23	6.4	21	1.9	56	21	38	<0.1
FEB 1986									
19...	62	17	4.8	33	1.1	37	14	62	<0.1
APR									
29...	48	13	3.7	13	0.8	29	13	20	<0.1
JUN									
12...	77	21	5.9	21	1.5	51	22	30	<0.1
JUL									
29...	88	24	6.7	24	1.7	63	19	39	0.1
SEP									
03...	81	22	6.3	20	1.7	56	20	34	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
30...	6.7	150	0.045	1.00	0.43	1.1	2.1	0.23	5.1
FEB 1986									
19...	6.3	160	0.014	0.72	0.37	0.68	1.4	0.07	4.4
APR									
29...	5.2	86	0.02	0.35	0.11	0.45	0.8	0.03	3.8
JUN									
12...	7.6	140	0.002	1.30	0.35	0.79	2.1	0.22	5.1
JUL									
29...	5.4	160	0.084	0.86	0.24	1.2	2.1	0.21	5.8
SEP									
03...	6.9	140	0.102	1.04	0.38	1.0	2.1	0.18	4.3

01388600 POMPTON RIVER AT PACKANACK LAKE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
JUN 1986 12...	1030	<0.5	30	<1	<10	30	<1	10	8

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
JUN 1986 12...	790	16	150	<0.1	4	<1	10	4

01389500 PASSAIC RIVER AT LITTLE FALLS, NJ
(National stream quality accounting network station)

LOCATION.--Lat 40°53'05", long 74°13'35", Passaic County, Hydrologic Unit 02030103, on left bank 0.6 mi downstream from Beattie's Dam in Little Falls, and 1.0 mi upstream from Peckman River. Water-quality monitor located 0.5 mi upstream from gaging station.

DRAINAGE AREA.--762 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1897 to current year. Monthly discharge only for September 1897, published in WSP 1302. Published as "at Paterson" September 1897 to September 1955.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 120.00 ft above National Geodetic Vertical Datum of 1929 (levels by Passaic Valley Water Commission). Prior to Jan. 8, 1933, nonrecording gage and Jan. 8, 1933, to Sept. 30, 1955, water-stage recorder, at site 3.7 mi downstream at National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark).

REMARKS.--No estimated daily discharge. Records good except those from June 20 to Sept. 30, which are fair. Diurnal fluctuation at medium and low flow caused by hydroelectric plant at Beattie's Dam. Flow regulated by reservoirs in Rockaway, Pequannock, Wanaque, and Ramapo River subbasins (see Passaic River basin, reservoirs in). Large diversions for municipal supply from Passaic River above Beattie's Dam, and from Rockaway, Pequannock, Ramapo, and Wanaque Rivers (see Passaic River basin, diversions and Hackensack River basin, diversions). In addition, the Commonwealth Water Co., diverts from Canoe Brook near Summit and from Passaic River (see Passaic River basin, diversions); that company and the city of East Orange also divert water for municipal supply by pumping wells. Several measurements of water temperature, other than those published, were made during the year. National Weather Service rain-gage and gage-height telemeter at station.

COOPERATION.--Gage-height record collected in cooperation with the Passaic Valley Water Commission.

AVERAGE DISCHARGE.--89 years, 1,160 ft³/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,700 ft³/s, Oct. 10, 1903, present site; no flow July 3-5, 1904, July 16, 23, 1905.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,400 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Jan. 28	2200	4,150	5.89	Apr. 19	1330	*6,150	*7.03

Minimum discharge, 52 ft³/s, June 6, gage height, 0.16 ft; minimum daily, 149 ft³/s, July 25.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1740	222	3610	413	3110	1960	813	2240	295	183	863	222
2	1460	220	3740	401	2780	1600	764	1930	276	708	1000	218
3	1310	213	3600	445	2550	1300	704	1520	270	898	2940	214
4	1200	213	3210	566	2280	1180	627	1240	268	619	2860	246
5	1200	802	2830	737	2140	1140	593	1070	276	390	2240	303
6	1250	1230	2540	806	2100	1140	646	922	403	279	1850	614
7	1140	1010	2270	701	1980	1150	725	886	1040	230	1520	634
8	823	691	2020	454	1780	1070	744	896	1040	206	1200	481
9	591	549	1720	430	1540	843	675	817	904	190	773	344
10	493	477	1430	396	1350	773	642	731	676	216	512	272
11	418	425	1290	378	1240	819	588	654	514	196	597	247
12	359	415	1490	366	1160	1060	537	607	689	312	677	235
13	332	526	1680	355	990	1270	505	574	1280	503	591	211
14	325	824	1670	324	861	1800	466	527	1300	394	450	186
15	320	849	1500	283	830	3220	459	479	1140	365	340	166
16	316	826	1280	284	775	4170	1090	461	843	305	300	173
17	304	2640	1160	317	761	4150	3730	468	650	257	623	164
18	263	3010	1010	283	1390	3790	5300	450	496	234	1340	159
19	304	2890	848	323	2470	3460	6090	418	394	259	881	205
20	296	2750	694	623	3030	3240	5820	425	346	258	754	195
21	288	2630	667	908	3380	2890	5250	465	300	226	608	169
22	275	2550	630	878	3740	2510	4770	764	268	193	829	209
23	267	2530	596	738	3770	2200	4680	1010	251	172	803	264
24	252	2330	591	629	3570	1920	4700	858	229	166	854	308
25	259	2140	612	618	3280	1550	4450	662	214	149	733	247
26	252	2090	602	2830	2890	1290	4150	534	199	169	541	369
27	246	2330	514	4040	2560	1190	3760	453	191	406	404	566
28	240	2690	517	4410	2250	1150	3300	407	189	386	371	449
29	233	3280	485	4410	---	1030	2850	365	188	306	327	332
30	227	3440	470	4130	---	934	2550	310	190	529	279	268
31	227	---	419	3610	---	871	---	286	---	784	247	---
TOTAL	17210	46792	45695	36086	60557	56670	71978	23429	15319	10488	28307	8670
MEAN	555	1560	1474	1164	2163	1828	2399	756	511	338	913	289
MAX	1740	3440	3740	4410	3770	4170	6090	2240	1300	898	2940	634
MIN	227	213	419	283	761	773	459	286	188	149	247	159

CAL YR 1985 TOTAL 225008 MEAN 616 MAX 3740 MIN 82
WTR YR 1986 TOTAL 421201 MEAN 1154 MAX 6090 MIN 149

01389500 PASSAIC RIVER AT LITTLE FALLS, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1980 to November 1986 (discontinued).
WATER TEMPERATURE: Water years 1963 to 1980 (once daily), September 1980 to November 1986 (discontinued).
DISSOLVED OXYGEN: October 1970 to September 1980 (once daily).
SUSPENDED-SEDIMENT DISCHARGE: August 1963 to July 1965.

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

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

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 965 microsiemens, Feb. 4, 1985; minimum, 99 microsiemens, April 6, 1984.
WATER TEMPERATURE: Maximum, 29.5°C, July 12, 1981; minimum, 0.0°C on many days during winter months.
DISSOLVED OXYGEN: Maximum daily, 14.4 mg/L, Jan. 7, 1973; minimum daily, 1.7 mg/L, June 23, 1976.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 535 microsiemens, Feb. 18; minimum 149 microsiemens, Aug. 4.
WATER TEMPERATURE: Maximum, 28.0, July 8; minimum, 0.0°C on many days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)
NOV 1985												
15...	1300	831	273	7.4	11.0	11	8.9	80	3.4	280	7200	80
JAN 1986												
29...	1330	4400	189	7.3	0.0	7.5	11.5	79	4.5	110	500	46
FEB												
27...	1130	2560	269	7.3	1.5	32	13.7	100	3.9	33	160	65
MAY												
14...	1300	512	338	7.8	19.0	7.5	8.8	95	7.5	130	K80	92
JUN												
24...	1100	225	423	7.7	24.0	9.0	7.5	91	7.1	74	130	110
AUG												
29...	1200	334	367	7.8	20.0	10	8.4	93	4.6	510	1100	100

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE IT-FLD (MG/L AS HCO3)	ALKA-LINITY, CARBON-ATE IT-FLD (MG/L - CACO3)	ALKA-LINITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
NOV 1985												
15...	21	6.8	20	2.4	47	39	48	21	33	<0.1	8.5	140
JAN 1986												
29...	12	3.9	20	1.6	27	22	23	14	31	<0.1	6.8	110
FEB												
27...	17	5.4	26	1.6	39	32	34	17	47	0.1	8.8	150
MAY												
14...	24	7.8	27	2.6	--	--	--	27	42	0.1	9.4	180
JUN												
24...	28	9.1	38	3.4	84	69	69	32	57	0.2	11	220
AUG												
29...	27	8.5	32	3.1	87	71	70	30	48	0.1	12	210

DATE	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)
NOV 1985											
15...	33	74	88	0.05	1.00	0.58	0.57	1.2	0.36	0.20	0.14
JAN 1986											
29...	30	356	77	0.01	0.67	0.30	0.29	1.0	0.15	0.07	0.06
FEB											
27...	12	83	65	0.03	0.85	0.37	0.35	0.8	0.12	0.09	0.07
MAY											
14...	27	37	99	0.10	1.60	1.20	1.20	1.9	0.39	0.22	0.19
JUN											
24...	25	15	99	0.20	2.20	1.30	1.40	2.5	0.72	0.37	0.34
AUG											
29...	30	27	76	0.16	2.20	0.60	0.59	1.7	0.43	0.29	0.24

01389500 PASSAIC RIVER AT LITTLE FALLS, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)
JAN 1986											
29...	1330	40	<1	17	<0.5	<1	<1	<3	8	82	<1
FEB											
27...	1130	30	<1	20	<0.5	<1	<1	<3	5	72	1
AUG											
29...	1200	20	1	23	<0.5	<1	<1	<3	2	16	<5

DATE	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)
JAN 1986										
29...	<4	47	0.1	<10	2	<1	<1	45	<6	16
FEB										
27...	<4	47	<0.1	<10	8	<1	<1	68	<6	36
AUG										
29...	6	110	1.6	<10	1	<1	1	100	<6	29

01389500 PASSAIC RIVER AT LITTLE FALLS, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	210	193	200	519	499	508	180	172	176	384	377	380
2	234	212	224	519	498	515	179	175	177	395	383	387
3	247	234	240	493	468	475	186	177	181	443	391	409
4	270	245	258	479	465	472	197	186	191	424	403	410
5	272	258	266	474	286	401	201	196	198	454	430	441
6	275	265	271	437	298	337	246	202	222	453	426	439
7	271	265	268	300	269	282	255	236	245	463	383	413
8	288	269	275	320	293	302	275	256	266	407	396	400
9	301	290	293	330	318	324	289	271	279	408	402	405
10	328	303	314	348	329	342	290	286	288	415	406	410
11	353	330	343	374	343	358	295	277	285	421	416	420
12	355	343	349	385	374	378	291	264	276	428	422	425
13	373	359	369	383	349	356	266	256	260	434	426	430
14	391	368	383	364	267	337	265	255	260	446	434	437
15	403	391	398	294	265	276	263	251	256	455	441	448
16	415	397	409	343	293	309	279	264	273	461	449	456
17	443	413	435	282	209	231	285	279	282	462	450	459
18	445	430	442	208	191	197	303	280	291	462	455	459
19	436	402	422	192	190	190	315	302	308	461	450	457
20	410	400	405	191	189	190	320	314	316	463	439	449
21	440	410	429	196	189	192	343	315	330	465	392	434
22	457	437	449	208	196	199	367	343	352	390	343	354
23	471	449	462	209	198	203	365	341	349	360	343	350
24	487	468	479	216	209	213	353	346	349	375	359	365
25	496	479	489	223	215	218	354	347	350	457	375	392
26	475	463	468	232	222	227	351	345	348	476	272	325
27	466	452	457	223	219	222	352	344	348	275	191	224
28	478	462	471	225	195	212	361	348	352	189	177	181
29	494	474	485	201	186	194	366	360	363	199	180	190
30	499	487	493	185	175	178	364	357	360	208	199	202
31	515	483	499	---	---	---	380	362	371	214	207	210
MONTH	515	193	379	519	175	295	380	172	287	476	177	379

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	228	215	221	288	279	283	315	304	307	239	226	233
2	270	229	259	293	285	289	328	318	324	246	240	243
3	279	262	269	300	292	296	325	319	322	259	243	249
4	333	280	297	301	295	299	352	326	338	265	255	259
5	430	352	401	305	298	302	367	354	361	282	265	274
6	440	404	422	305	296	301	372	350	362	284	279	282
7	446	403	433	308	298	304	368	348	360	303	284	297
8	400	375	386	312	306	309	365	346	352	301	289	296
9	381	364	371	328	307	313	364	347	352	304	289	294
10	373	364	369	334	329	332	378	365	370	314	298	307
11	374	366	369	357	332	343	395	380	386	322	302	312
12	387	368	376	360	339	345	391	380	385	---	---	---
13	397	371	382	359	323	334	388	377	381	---	---	---
14	422	398	407	319	288	302	390	379	382	---	---	---
15	423	402	414	287	206	239	390	378	382	---	---	---
16	439	409	421	203	186	191	393	293	357	---	---	---
17	529	412	455	203	191	197	279	176	218	---	---	---
18	535	456	504	213	203	208	173	160	163	---	---	---
19	459	400	424	222	213	217	164	159	162	---	---	---
20	397	314	344	220	214	216	162	161	162	---	---	---
21	310	277	294	231	220	225	168	162	165	---	---	---
22	275	260	265	241	233	236	172	162	166	---	---	---
23	259	256	257	249	241	245	187	172	180	---	---	---
24	259	255	257	253	249	251	186	177	180	324	313	319
25	263	259	261	267	251	259	194	184	189	329	319	322
26	270	263	267	284	267	274	198	194	196	347	330	340
27	274	270	272	286	282	284	200	197	198	351	342	346
28	281	273	277	286	280	284	208	199	203	375	353	367
29	---	---	---	300	288	293	222	208	214	397	371	385
30	---	---	---	311	299	306	227	218	222	412	395	401
31	---	---	---	313	308	311	---	---	---	418	402	410
MONTH	535	215	346	360	186	277	395	159	278	418	226	312

01389500 PASSAIC RIVER AT LITTLE FALLS, NJ--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	410	399	404	469	446	454	349	269	298	408	384	398
2	415	404	411	472	239	375	275	198	258	425	407	415
3	419	406	411	404	281	339	234	156	203	424	418	421
4	456	409	437	334	311	325	176	149	163	441	416	424
5	459	445	453	344	336	341	191	177	184	475	435	458
6	452	379	431	375	339	365	207	191	198	466	396	434
7	379	309	338	393	375	387	230	207	218	398	291	320
8	363	323	339	393	386	390	254	230	241	290	285	287
9	347	305	317	426	392	405	279	255	264	338	291	321
10	327	307	316	438	423	428	296	281	291	356	340	347
11	345	325	335	491	438	457	335	293	305	388	356	378
12	348	304	327	494	353	455	354	306	330	403	377	391
13	329	276	300	415	338	376	304	275	285	443	403	429
14	290	253	265	422	386	405	280	268	272	431	415	425
15	263	251	257	386	375	379	317	282	305	447	427	436
16	284	264	271	400	378	392	343	318	330	459	440	446
17	297	282	286	407	394	402	371	238	327	483	463	475
18	317	300	308	428	402	418	307	198	269	469	457	463
19	350	319	336	453	423	439	312	285	297	490	446	466
20	365	352	357	464	449	459	325	286	304	513	492	505
21	384	367	378	482	449	470	291	277	287	520	503	511
22	401	374	389	450	427	441	306	268	286	526	485	515
23	423	398	413	449	435	440	304	274	286	484	467	477
24	439	421	432	453	435	441	288	270	280	489	465	471
25	435	420	428	474	454	467	289	267	276	517	491	503
26	443	426	435	473	459	466	310	284	301	512	348	454
27	466	438	448	458	407	433	358	312	331	396	351	379
28	487	464	475	416	373	404	370	349	360	393	360	367
29	480	452	461	369	332	345	374	355	367	377	359	368
30	462	453	456	428	239	375	389	373	383	381	361	367
31	---	---	---	397	210	337	402	388	397	---	---	---
MONTH	487	251	374	494	210	407	402	149	287	526	285	422

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	420	385	412	448	439	444						
2	451	411	436	453	443	448						
3	446	421	434	450	438	443						
4	431	375	402	482	450	468						
5	443	365	413	490	480	486						
6	383	366	372	480	411	447						
7	397	379	390	485	373	438						
8	402	379	394	382	359	374						
9	441	399	420	390	331	370						
10	453	440	445	328	321	324						
11	460	449	454	349	317	336						
12	460	455	458	331	301	321						
13	478	458	467	---	---	---						
14	478	424	458	---	---	---						
15	478	425	459	---	---	---						
16	471	421	449	---	---	---						
17	427	421	425	---	---	---						
18	460	424	447	---	---	---						
19	458	447	451	---	---	---						
20	449	441	446	---	---	---						
21	454	445	449	---	---	---						
22	456	447	451	---	---	---						
23	472	458	468	---	---	---						
24	486	468	477	---	---	---						
25	489	483	486	---	---	---						
26	483	447	471	---	---	---						
27	493	425	454	---	---	---						
28	497	437	471	---	---	---						
29	436	424	429	---	---	---						
30	449	434	444	---	---	---						
31	452	447	450	---	---	---						
MONTH	497	365	441	490	301	408						

01389500 PASSAIC RIVER AT LITTLE FALLS, NJ--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	18.0	17.5	17.5				6.5	6.0	6.0	1.5	1.0	1.5
2	17.5	17.0	17.5				7.0	6.5	6.5	1.5	1.5	1.5
3	17.0	16.0	16.5				6.0	4.0	5.0	2.5	2.0	2.0
4	16.0	15.5	15.5				---	---	---	2.5	2.0	2.0
5	16.5	15.5	16.0				---	---	---	2.5	2.0	2.5
6	16.0	15.5	15.5				---	---	---	2.0	1.0	2.0
7	15.5	14.5	15.0				3.5	2.5	3.0	1.0	.5	1.0
8	15.0	14.0	14.5				4.0	3.5	4.0	.5	.0	.0
9	15.0	14.0	14.5				4.5	4.0	4.0	.5	.0	.0
10	16.0	14.5	15.0				5.0	4.5	4.5	.5	.0	.5
11	16.5	15.5	16.0				5.5	5.0	5.0	1.0	.5	1.0
12	16.0	14.5	15.0				6.0	5.5	6.0	1.5	.5	1.0
13	15.0	13.5	14.0				6.0	5.0	5.5	1.5	1.0	1.0
14	15.0	14.0	14.0				5.0	4.0	4.5	1.0	.5	.5
15	15.5	15.0	15.0				4.0	3.0	3.0	.5	.0	.5
16	16.5	14.5	15.5				3.0	2.5	2.5	.5	.0	.5
17	16.0	15.0	15.5				3.0	2.5	3.0	.5	.0	.5
18	15.0	14.0	14.5				3.0	1.5	2.5	1.5	.5	1.0
19	14.5	14.0	14.5				1.5	1.0	1.0	2.5	1.5	2.0
20	15.0	14.0	14.5				.5	.5	.5	4.0	2.5	3.5
21	14.0	13.5	14.0				1.0	.5	.5	4.0	3.5	4.0
22	13.5	13.0	13.0				.5	.5	.5	3.5	2.5	3.0
23	---	---	---				1.5	.5	1.0	3.0	2.5	3.0
24	---	---	---				2.5	1.5	2.0	2.5	2.0	2.0
25	---	---	---				3.0	2.0	2.5	1.5	1.0	1.5
26	13.5	12.5	13.0				2.0	.5	1.0	2.0	1.5	1.5
27	12.5	10.5	11.0				1.0	.5	.5	1.5	1.0	1.5
28	---	---	---				1.0	.5	1.0	1.0	.0	.5
29	---	---	---				1.0	.5	1.0	.0	.0	.0
30	---	---	---				1.0	.5	1.0	.5	.0	.0
31	---	---	---				1.0	.5	1.0	.5	.0	.0
MONTH	18.0	10.5	15.0				7.0	.5	3.0	4.0	.0	1.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	.5	.0	.0	2.5	1.5	2.0	14.0	13.0	13.5	17.5	16.5	17.0
2	1.0	.5	.5	2.5	2.0	2.5	14.5	13.5	14.0	17.0	16.0	16.5
3	1.5	.5	1.0	3.0	2.0	2.5	15.0	13.5	14.0	16.0	14.5	15.0
4	1.5	1.5	1.5	3.5	3.0	3.5	14.0	12.5	13.5	14.5	13.0	14.0
5	2.0	1.5	1.5	4.5	3.0	4.0	12.5	11.5	12.0	15.5	13.5	14.5
6	2.5	2.0	2.0	4.0	3.5	4.0	11.5	10.0	10.5	17.5	15.5	16.5
7	2.0	.5	1.0	4.0	2.5	3.5	11.5	10.0	10.5	18.5	17.5	18.0
8	1.0	.5	.5	2.5	1.5	2.0	12.5	11.0	12.0	18.5	18.0	18.0
9	1.5	1.0	1.0	2.0	1.5	1.5	12.0	11.5	12.0	18.0	17.0	17.5
10	2.0	1.0	1.5	3.5	2.5	3.0	11.5	10.5	11.0	17.5	16.5	17.0
11	2.0	1.0	1.5	5.5	3.5	4.5	10.5	10.0	10.5	17.5	16.5	17.0
12	1.0	.5	1.0	5.5	5.0	5.5	10.5	9.5	10.0	---	---	---
13	1.0	.0	.5	5.5	4.5	5.0	11.0	9.5	10.5	---	---	---
14	.5	.0	.5	5.0	4.5	4.5	12.5	10.5	11.5	---	---	---
15	1.0	.5	.5	5.5	4.5	5.0	12.5	11.5	12.0	---	---	---
16	1.0	.5	1.0	6.0	5.0	5.5	12.0	9.5	11.0	---	---	---
17	1.0	1.0	1.0	6.0	5.0	5.5	9.5	8.5	8.5	---	---	---
18	1.5	1.5	1.5	7.0	5.5	6.0	11.0	8.5	9.5	---	---	---
19	2.0	1.5	1.5	8.0	6.5	7.0	12.0	10.5	11.0	---	---	---
20	1.5	1.5	1.5	8.5	7.0	7.5	12.5	11.5	12.0	---	---	---
21	2.0	1.5	1.5	7.0	5.0	5.5	12.5	12.0	12.0	---	---	---
22	2.0	1.5	1.5	5.5	4.5	5.0	12.0	11.5	12.0	---	---	---
23	2.0	1.5	1.5	6.5	5.0	5.5	12.0	9.0	10.0	---	---	---
24	1.5	1.0	1.5	7.0	6.0	6.5	11.0	8.5	9.5	21.0	19.5	20.0
25	2.0	1.5	1.5	7.5	6.0	7.0	13.0	10.5	11.5	21.5	20.0	20.5
26	1.5	.5	1.0	9.5	7.5	8.5	13.0	12.0	12.5	22.0	20.5	21.5
27	1.5	1.0	1.5	10.0	9.5	9.5	14.5	12.5	13.5	22.5	21.0	21.5
28	2.0	1.0	1.5	10.0	9.0	9.5	16.5	14.0	15.0	23.5	21.0	22.0
29	---	---	---	11.0	9.5	10.5	17.0	15.5	16.0	24.0	22.0	23.0
30	---	---	---	12.5	11.0	11.5	17.5	16.0	17.0	25.0	23.0	24.0
31	---	---	---	13.5	12.5	13.0	---	---	---	25.0	24.5	25.0
MONTH	2.5	.0	1.0	13.5	1.5	5.5	17.5	8.5	12.0	25.0	13.0	19.0

01389500 PASSAIC RIVER AT LITTLE FALLS, NJ--Continued

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

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

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	21.5	20.5	21.0	11.5	11.0	11.5						
2	22.0	21.0	21.5	12.0	11.0	11.5						
3	21.0	20.0	20.5	11.0	10.5	11.0						
4	20.5	20.0	20.5	10.5	10.0	10.5						
5	20.5	19.5	20.0	10.0	8.5	9.5						
6	19.5	17.5	18.5	8.5	8.5	8.5						
7	17.5	16.0	16.5	8.5	8.0	8.0						
8	16.0	15.5	16.0	10.0	8.5	9.0						
9	16.5	15.5	16.0	11.5	10.0	10.5						
10	16.0	14.5	15.5	11.0	10.0	10.5						
11	14.5	14.0	14.0	10.0	8.0	9.0						
12	14.5	13.5	14.0	8.0	7.5	8.0						
13	14.5	14.5	14.5	---	---	---						
14	15.5	14.5	15.0	---	---	---						
15	15.5	14.5	15.0	---	---	---						
16	15.0	14.5	14.5	---	---	---						
17	14.0	13.5	14.0	---	---	---						
18	13.5	13.0	13.5	---	---	---						
19	13.0	12.0	12.5	---	---	---						
20	13.0	12.0	12.5	---	---	---						
21	12.5	11.5	12.0	---	---	---						
22	13.0	12.0	12.5	---	---	---						
23	13.5	12.5	13.0	---	---	---						
24	14.0	13.0	13.5	---	---	---						
25	13.5	13.0	13.0	---	---	---						
26	13.0	12.5	12.5	---	---	---						
27	12.5	12.0	12.0	---	---	---						
28	13.0	12.0	12.5	---	---	---						
29	13.0	12.0	12.5	---	---	---						
30	13.0	12.5	13.0	---	---	---						
31	12.5	11.5	12.0	---	---	---						
MONTH	22.0	11.5	15.0	12.0	7.5	10.0						

01390500 SADDLE RIVER AT RIDGEWOOD, NJ

LOCATION.--Lat 40°59'05", long 74°05'30", Bergen County, Hydrologic Unit 02030103, on left bank 15 ft upstream from bridge on State Highway 17 in Ridgewood and 2.8 mi upstream from Hohokus Brook.

DRAINAGE AREA.--21.6 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1954 to September 1974, October 1977 to current year. Operated as a maximum-stage gage water years 1975-77.

REVISED RECORDS.--WRD-NJ 1974: 1971.

GAGE.--Water-stage recorder. Datum of gage is 71.74 ft above National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark).

REMARKS.--Estimated daily discharges: June 25 to July 1 and July 5-8. Records fair. The flow past this station is affected by pumpage from wells by Hackensack Water Co. and others. Several measurements of water temperature were made during the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--28 years (water years 1955-74, 1978-86), 35.3 ft³/s, 22.19 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,650 ft³/s, Nov. 8, 1977, gage height, 12.25 ft; minimum daily, 0.2 ft³/s, Sept. 17, 18, 1966.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Flood of July 23, 1945, reached a discharge of 6,400 ft³/s, at site 1.6 mi upstream, drainage area, 19.1 mi², by slope-area measurement.

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

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 17	0315	550	4.37	June 7	0130	666	4.74
Jan. 26	0500	*768	*5.03	June 12	1515	427	3.96
Mar. 15	0300	420	3.92	Aug. 3	0130	640	4.66
Apr. 17	0915	564	4.42	Aug. 17	1815	679	4.76

Minimum daily discharge, 6.2 ft³/s, July 24.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	12	69	16	29	36	29	28	18	7.4	21	9.3
2	11	12	78	16	50	34	28	28	17	83	118	11
3	22	13	47	21	41	35	26	26	16	15	156	11
4	17	13	38	19	35	34	27	24	16	10	22	11
5	82	85	34	44	58	35	28	25	19	9.3	15	11
6	34	34	36	26	50	36	34	26	116	8.6	14	17
7	18	19	33	18	39	34	33	31	240	7.8	14	9.8
8	14	16	32	16	36	27	31	25	60	7.3	12	9.1
9	13	13	30	15	33	26	29	24	30	6.8	10	8.7
10	11	11	28	15	32	29	28	23	17	6.8	9.5	9.1
11	9.9	11	36	15	33	33	27	23	15	6.3	18	8.1
12	9.7	20	60	15	30	30	26	22	111	56	11	7.5
13	9.9	29	38	15	30	53	25	21	54	17	9.8	7.0
14	9.9	17	41	14	28	89	26	21	19	11	9.2	6.6
15	9.9	24	31	11	28	201	26	21	16	9.6	8.9	6.8
16	9.7	33	28	12	26	66	94	21	15	8.6	8.6	7.2
17	9.4	234	26	13	33	52	396	21	14	8.3	236	6.6
18	9.2	45	24	13	147	45	84	19	14	8.2	51	6.3
19	9.4	29	21	18	102	49	43	20	15	8.5	18	6.6
20	9.5	24	21	33	135	51	36	69	13	8.1	14	6.7
21	9.2	21	21	24	116	50	49	59	11	8.0	21	12
22	9.4	46	20	18	91	48	48	45	10	7.1	35	8.3
23	9.3	41	20	16	63	47	97	27	10	7.5	15	8.7
24	9.5	26	20	14	53	50	71	22	9.7	6.2	27	9.0
25	9.6	22	20	42	50	48	41	20	9.1	6.3	14	7.1
26	9.7	53	18	423	43	39	37	19	8.8	30	12	9.3
27	9.6	69	17	165	42	32	33	19	8.6	19	12	21
28	10	146	17	60	38	32	33	19	8.2	11	13	12
29	9.6	82	16	49	---	31	31	18	7.9	28	12	9.3
30	10	48	16	36	---	30	29	19	7.7	67	10	8.3
31	11	---	16	32	---	30	---	17	---	84	9.8	---
TOTAL	438.4	1248	952	1244	1491	1432	1545	802	926.0	577.7	956.8	281.4
MEAN	14.1	41.6	30.7	40.1	53.3	46.2	51.5	25.9	30.9	18.6	30.9	9.38
MAX	82	234	78	423	147	201	396	69	240	84	236	21
MIN	9.2	11	16	11	26	26	25	17	7.7	6.2	8.6	6.3
CFSM	.65	1.93	1.42	1.86	2.47	2.14	2.38	1.20	1.43	.86	1.43	.43
IN.	.76	2.15	1.64	2.14	2.57	2.47	2.66	1.38	1.59	.99	1.65	.48

CAL YR 1985 TOTAL 7274.63 MEAN 19.9 MAX 300 MIN .93 CFSM .92 IN. 12.53
WTR YR 1986 TOTAL 11894.3 MEAN 32.6 MAX 423 MIN 6.2 CFSM 1.51 IN. 20.48

01391000 HOHOKUS BROOK AT HO-HO-KUS, NJ

LOCATION.--Lat 40°59'52", long 74°06'48", Bergen County, Hydrologic Unit 02030103, on left bank 500 ft upstream from bridge on Maple Avenue in Ho-ho-kus, and 3.5 mi upstream from mouth.

DRAINAGE AREA.--16.4 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1954 to September 1973, October 1977 to current year. Operated as a crest-stage record station, water years 1974-77.

REVISED RECORDS.--WDR NJ-77-1: 1955(M), 1968(M), 1976(M).

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 120.09 ft above National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark).

REMARKS.--No estimated daily discharges. Records good below 300 ft³/s and fair above. Some regulation and diurnal fluctuation at low and medium flows caused by unknown sources, possibly sewage treatment plant upstream of gage. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--28 years, (water years 1955-73, 1978-86) 33.3 ft³/s, 27.57 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,700 ft³/s, Nov. 8, 1977, gage height, 7.06 ft, from rating curve extended above 750 ft³/s by computation of peak flow over dam; minimum, 1.9 ft³/s, Aug. 2, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 450 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Aug. 17	1730	*1,340	*3.95	No other peak greater than base discharge.			

Minimum discharge, 9.0 ft³/s, Oct. 28, 29, Nov. 4, Jan. 15, gage height, 1.28 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	14	72	20	40	40	34	38	26	17	36	20
2	18	14	79	20	46	39	34	36	20	85	54	20
3	31	14	47	27	46	39	32	34	18	36	173	20
4	26	15	36	25	39	40	32	32	18	20	45	23
5	70	99	34	45	55	41	33	32	18	18	30	27
6	39	47	35	31	57	43	45	33	52	17	25	38
7	23	27	33	23	47	40	41	38	114	18	24	22
8	20	23	32	21	42	35	38	33	40	17	22	21
9	19	19	31	20	38	34	36	30	30	17	21	21
10	18	18	29	21	36	35	33	28	24	16	19	20
11	18	17	38	21	37	40	31	26	23	16	40	20
12	16	29	55	20	34	38	31	25	71	58	22	20
13	17	35	38	20	32	59	30	24	50	38	19	19
14	17	28	40	19	28	96	29	23	30	23	18	17
15	18	30	31	18	27	167	30	23	25	20	18	19
16	18	45	29	18	25	76	99	24	24	19	17	19
17	16	205	28	19	37	56	266	26	22	19	205	16
18	15	54	26	20	128	51	99	24	21	19	131	16
19	16	35	24	26	111	54	60	23	20	20	40	16
20	15	30	24	47	132	56	50	39	21	18	30	16
21	16	30	25	31	113	45	59	62	19	18	44	21
22	15	52	24	25	97	43	60	57	18	17	62	18
23	18	46	24	23	68	42	95	36	19	16	32	21
24	17	30	25	21	58	40	75	27	18	16	51	21
25	15	26	24	32	54	38	54	23	18	16	28	18
26	15	59	24	227	49	38	49	23	17	29	24	24
27	14	71	22	171	45	40	47	22	17	31	23	43
28	14	123	22	82	42	38	44	21	17	19	27	24
29	14	88	21	50	---	37	40	20	17	28	24	19
30	15	51	21	45	---	36	40	20	17	48	21	18
31	17	---	21	42	---	35	---	23	---	83	20	---
TOTAL	620	1374	1014	1230	1563	1511	1646	925	844	832	1345	637
MEAN	20.0	45.8	32.7	39.7	55.8	48.7	54.9	29.8	28.1	26.8	43.4	21.2
MAX	70	205	79	227	132	167	266	62	114	85	205	43
MIN	14	14	21	18	25	34	29	20	17	16	17	16
CFSM	1.22	2.79	1.99	2.42	3.40	2.97	3.35	1.82	1.71	1.63	2.65	1.29
IN.	1.41	3.12	2.30	2.79	3.55	3.43	3.73	2.10	1.91	1.89	3.05	1.44

CAL YR 1985 TOTAL 9913 MEAN 27.2 MAX 220 MIN 10 CFSM 1.66 IN. 22.49
WTR YR 1986 TOTAL 13541 MEAN 37.1 MAX 266 MIN 14 CFSM 2.26 IN. 30.71

01391200 SADDLE RIVER AT FAIR LAWN, NJ

LOCATION.--Lat 40°56'30", long 74°05'36", Bergen County, Hydrologic Unit 02030103, at bridge on Century Road in Fair Lawn, and 0.8 mi downstream from Hohokus Brook.

DRAINAGE AREA.--45.2 mi².

WATER-QUALITY RECORDS

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
08...	1245	E41	622	7.6	16.0	7.5	75	7.4	1300	130
FEB 1986										
13...	1030	E78	641	7.7	2.5	11.7	86	24	>24000	9200
APR										
02...	1005	E76	558	7.5	14.0	8.5	83	7.7	330	<20
JUN										
16...	1100	E46	620	7.6	23.0	6.4	75	8.1	490	170
JUL										
10...	1000	E39	595	7.7	21.5	6.8	77	8.7	1300	170
AUG										
12...	1000	E45	562	7.6	21.0	6.7	75	12	5400	490

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
08...	160	43	13	52	6.0	101	40	71	0.1
FEB 1986									
13...	160	46	12	58	3.9	123	29	99	0.2
APR									
02...	160	44	12	40	3.4	106	28	68	0.1
JUN									
16...	160	43	13	49	5.8	106	35	77	0.1
JUL									
10...	170	44	14	48	5.7	100	42	76	0.2
AUG									
12...	160	43	13	43	5.1	105	36	66	0.2

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
08...	14	300	0.88	4.85	4.70	5.8	11	1.70	13
FEB 1986									
13...	11	330	0.126	1.79	6.70	8.2	10	1.81	25
APR									
02...	7.5	270	0.40	1.77	--	3.5	5.2	0.88	7.4
JUN									
16...	14	300	0.30	3.49	5.30	5.5	8.9	1.54	9.0
JUL									
10...	11	300	0.61	5.22	2.45	3.5	8.7	1.63	7.9
AUG									
12...	12	280	0.70	4.22	1.60	2.8	7.0	1.48	7.8

01391200 SADDLE RIVER AT FAIR LAWN, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITRO-GEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INOR-GANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD)
OCT 1985											
08...	1245	--	80	0.2	1.6	--	--	--	--	--	<1
08...	1245	<0.5	--	--	--	20	3	<10	210	<1	--

DATE	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	COBALT, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, RECOV. FM BOT-TOM MA-TERIAL (UG/G)
OCT 1985											
08...	--	40	<10	--	40	--	4800	--	10	--	80
08...	10	--	--	30	--	500	--	5	--	130	--

DATE	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY RECOV. FM BOT-TOM MA-TERIAL (UG/G AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SELE-NIUM, TOTAL IN BOT-TOM MA-TERIAL (UG/G)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PCN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
OCT 1985											
08...	--	0.02	--	<10	--	<1	--	40	--	<1	<1.0
08...	0.1	--	8	--	<1	--	50	--	13	--	--

DATE	ALDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	CHLOR-DANE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDD, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDT, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DI-AZINON, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DI-ELDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ENDO-SULFAN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ENDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ETHION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	HEPTA-CHLOR, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
OCT 1985											
08...	<0.1	11	0.8	0.3	1.5	0.2	<0.1	<0.1	<0.1	<0.1	<0.1
08...	--	--	--	--	--	--	--	--	--	--	--

DATE	HEPTA-CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	MALA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	METH-OXY-CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARA-THION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRI-THION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PARA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PER-THANE IN BOT-TOM MA-TERIAL (UG/KG)	TOXA-PHENE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	TRI-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
OCT 1985											
08...	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1
08...	--	--	--	--	--	--	--	--	--	--	--

01391500 SADDLE RIVER AT LODI, NJ

LOCATION.--Lat 40°53'25", long 74°04'51", Bergen County, Hydrologic Unit 02030103, on left bank 560 ft upstream from bridge on Outwater Lane in Lodi and 3.2 mi upstream from mouth. Water-quality samples collected at bridge on Outwater Lane at high flows.

DRAINAGE AREA.--54.6 mi².

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 781: Drainage area. WSP 1031: 1940(M). WSP 1552: 1929(M), 1936(M), 1938. WRD-NJ 1969: 1967. WRD-NJ 1970: 1968, 1969.

GAGE.--Water-stage recorder. Concrete control since Nov. 2, 1938. Datum of gage is 25.00 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 2, 1938, at site 560 ft downstream at datum 2.54 ft lower.

REMARKS.--Estimated daily discharge: Nov. 12, 13, April 16, 17, and Aug. 2-12. Records fair. Occasional regulation at low flow. Diversion above station at Arcola by Hackensack Water Co., for municipal supply (records given herein). The flow past this station is affected by pumpage from wells by Hackensack Water Co. and others. Several measurements of water temperature, other then those published, were made during the year. National Weather Service gage-height telemeter at station.

AVERAGE DISCHARGE.--63 years, 101 ft³/s, 25.12 in/yr, adjusted for diversion since 1966.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,500 ft³/s, Nov. 9, 1977, gage height, 12.36 ft, from high-water mark in gage house; minimum, 1.0 ft³/s, May 25, 1938, gage height, 1.03 ft, site and datum then in use; minimum daily, 6.0 ft³/s, Aug. 23, 1934.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 17	0445	1,290	4.65	Aug. 17	2245	1,660	5.43
Jan. 26	0900	*1,850	*5.81				

Minimum discharge, 23 ft³/s, Jan. 15, gage height 1.73 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	34	208	59	101	111	83	103	57	42	76	44
2	46	35	216	57	142	107	83	102	51	382	200	46
3	108	35	134	72	127	106	78	94	51	82	480	49
4	60	34	107	57	111	105	78	89	50	47	86	51
5	218	202	99	118	168	105	82	83	49	43	68	71
6	114	89	104	71	153	107	110	77	165	42	60	88
7	58	52	96	56	120	103	104	92	405	41	55	47
8	47	43	91	51	112	91	92	76	92	40	50	45
9	48	40	89	50	103	89	82	70	67	42	45	41
10	44	39	83	48	99	90	70	65	58	40	40	41
11	42	39	95	47	99	101	64	63	56	39	100	42
12	40	60	150	46	93	96	62	62	241	187	50	39
13	42	80	104	46	88	152	58	59	151	90	37	38
14	40	64	108	44	85	237	57	58	69	45	35	37
15	41	69	88	42	86	534	56	60	57	41	37	36
16	40	145	82	43	82	196	280	63	53	42	42	43
17	38	596	79	42	105	147	900	63	50	43	606	42
18	38	125	75	42	377	128	206	58	49	44	417	42
19	39	76	69	58	312	145	161	57	49	60	92	43
20	37	64	68	84	363	139	134	139	50	43	64	41
21	37	59	69	60	301	113	154	159	47	44	120	51
22	37	141	66	43	265	107	163	133	39	40	174	44
23	38	124	67	40	185	103	270	82	39	41	68	50
24	38	70	68	41	155	102	215	67	46	40	139	56
25	36	60	66	87	146	96	147	60	42	39	62	43
26	36	132	62	1200	131	95	132	59	45	171	54	81
27	38	181	61	484	125	100	123	58	45	90	54	118
28	35	352	59	198	116	97	120	54	47	62	63	58
29	38	260	58	136	---	90	113	54	44	111	53	47
30	37	142	58	120	---	87	107	52	43	112	49	44
31	36	---	57	108	---	85	---	54	---	253	47	---
TOTAL	1594	3442	2836	3650	4350	3964	4384	2365	2307	2438	3523	1518
MEAN	51.4	115	91.5	118	155	128	146	76.3	76.9	78.6	114	50.6
MAX	218	596	216	1200	377	534	900	159	405	382	606	118
MIN	35	34	57	40	82	85	56	52	39	39	35	36
(†)	13.9	16.0	0	12.9	0	0	4.8	12.2	11.6	10.0	18.9	9.6
MEAN‡	65.3	131	91.5	131	155	128	151	88.5	88.5	88.6	133	60.2
CFSM‡	1.20	2.40	1.68	2.40	2.84	2.34	2.77	1.62	1.62	1.62	2.44	1.10
IN.‡	1.38	2.68	1.93	2.77	2.96	2.70	3.08	1.87	1.87	1.87	2.81	1.23

CAL YR 1985 TOTAL 24037 MEAN 65.9 MAX 1070 MIN 26 MEAN‡ 80.9 CFSM‡ 1.48 IN.‡ 20.07
WTR YR 1986 TOTAL 36371 MEAN 99.6 MAX 1200 MIN 34 MEAN‡ 109 CFSM‡ 2.00 IN.‡ 27.08

† Diversion, equivalent in cubic feet per second, above station by Hackensack Water Co. Records of diversion furnished by Hackensack Water Co.
‡ Adjusted for diversion.

01391500 SADDLE RIVER AT LODI, NJ--Continued

WATER-QUALITY RECORDS

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
08...	1030	43	622	7.5	13.0	6.0	56	5.7	16000	9200
FEB 1986										
13...	1220	76	778	7.8	2.0	11.4	82	5.7	220	230
APR										
02...	1140	81	594	7.5	15.0	7.4	74	7.2	790	20
JUN										
17...	1030	44	634	7.5	21.5	4.4	50	7.1	2400	490
JUL										
10...	1130	37	636	7.8	22.0	3.8	44	11	2300	790
AUG										
12...	1100	50	552	7.6	21.0	4.3	48	8.4	11000	9200

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
08...	170	48	13	46	5.0	114	38	68	0.1
FEB 1986									
13...	180	51	13	85	3.5	109	32	150	0.1
APR									
02...	180	49	13	40	3.3	118	35	72	0.1
JUN									
17...	190	52	14	49	5.4	123	47	80	0.1
JUL									
10...	190	52	15	50	5.2	124	43	83	0.2
AUG									
12...	170	47	13	40	4.4	111	33	68	0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
08...	15	300	0.194	4.11	3.10	4.5	8.6	1.05	8.7
FEB 1986									
13...	12	410	0.095	1.96	3.80	4.0	6.0	0.72	10
APR									
02...	7.7	290	0.33	2.00	3.65	4.8	6.8	0.97	8.0
JUN									
17...	15	340	0.42	4.32	2.90	2.9	7.2	0.35	7.3
JUL									
10...	11	330	0.47	3.59	2.18	3.0	6.5	1.50	6.7
AUG									
12...	12	280	0.50	3.97	0.90	2.1	6.1	1.12	--

01391500 SADDLE RIVER AT LODI, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
OCT 1985 08...	1030	<0.5	20	3	<10	140	<1	10	18
JUN 1986 17...	1030	<0.5	<10	2	<10	140	<1	<10	9

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1985 08...	530	5	160	<0.1	6	<1	50	8
JUN 1986 17...	540	5	210	<0.1	2	<1	10	3

01392210 THIRD RIVER AT PASSAIC, NJ

LOCATION.--Lat 40°49'47", long 74°08'32", Passaic County, Hydrologic Unit 02030103, on right bank 400 ft upstream from bridge on State Highway 3, 0.8 mi south of Passaic, 1.2 mi upstream from Passaic River.

DRAINAGE AREA.--11.8 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 22.15 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair. Some regulation from ponds upstream. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--9 years, 21.8 ft³/s, 25.09 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,300 ft³/s, Nov. 8, 1977, gage height, 8.25 ft, from rating curve extended above 300 ft³/s) on basis of contracted-opening measurement of peak flow; minimum, 0.84 ft³/s, July 3, 1981, gage height, 1.39 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 550 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 17	0115	680	4.53	Aug. 2	0715	874	5.01
July 30	1645	*908	*5.10				

Minimum discharge, 3.4 ft³/s, July 26, gage height, 1.66 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	8.6	36	9.3	14	14	11	32	7.4	4.9	19	6.8
2	9.4	7.9	38	9.1	26	14	9.9	31	7.3	85	254	6.7
3	40	8.2	17	22	16	13	10	31	6.9	10	61	7.0
4	13	9.4	14	11	17	13	9.7	30	6.9	7.4	14	8.8
5	52	117	13	38	34	13	10	30	7.0	6.7	12	53
6	14	19	18	12	19	13	17	35	33	5.6	11	23
7	11	10	14	10	15	13	12	38	34	4.9	9.5	8.0
8	10	8.2	13	9.6	16	13	11	30	11	5.7	8.7	7.5
9	9.9	8.6	13	11	15	11	11	25	8.9	5.4	7.4	7.3
10	9.6	8.3	12	9.7	15	11	10	17	7.9	5.9	7.6	6.9
11	9.4	8.1	18	9.1	15	14	10	17	7.6	4.9	59	6.8
12	8.8	9.2	20	8.8	14	11	9.7	17	54	39	9.1	6.7
13	9.8	11	14	9.3	13	36	10	16	22	11	9.0	5.9
14	9.4	9.8	14	8.1	13	53	12	14	9.3	7.9	8.5	5.3
15	10	19	11	7.9	13	61	25	15	8.6	6.4	7.1	5.5
16	10	52	11	8.5	13	20	135	17	9.4	5.9	6.8	7.9
17	9.4	180	11	9.3	22	16	196	17	8.2	5.2	11	5.9
18	9.7	15	11	9.3	89	15	36	17	7.1	5.6	7.6	5.6
19	10	11	10	26	37	18	28	17	6.7	19	7.6	6.5
20	9.8	10	12	29	54	20	25	80	7.2	5.6	7.2	5.7
21	9.5	9.3	12	13	51	13	32	39	6.0	11	41	5.8
22	11	48	11	10	31	13	24	41	6.1	6.9	24	5.9
23	9.9	16	10	11	22	13	75	17	5.5	5.0	10	14
24	9.9	11	9.9	9.7	20	13	36	13	4.8	5.1	39	9.4
25	9.8	11	9.8	45	18	12	31	12	4.7	4.1	8.6	7.0
26	9.1	44	9.5	219	17	12	29	12	4.3	4.7	7.6	47
27	9.4	31	9.4	63	16	12	28	11	4.3	9.5	7.9	57
28	8.7	97	9.2	25	16	11	29	9.4	8.1	4.9	10	10
29	8.8	34	9.3	19	---	11	33	8.5	5.0	23	7.3	8.5
30	9.1	21	9.9	17	---	11	32	8.2	5.4	172	6.7	8.3
31	9.6	---	9.0	15	---	11	---	7.1	---	96	6.8	---
TOTAL	380.0	852.6	429.0	713.7	661	524	947.3	704.2	324.6	594.2	706.0	369.7
MEAN	12.3	28.4	13.8	23.0	23.6	16.9	31.6	22.7	10.8	19.2	22.8	12.3
MAX	52	180	38	219	89	61	196	80	54	172	254	57
MIN	8.7	7.9	9.0	7.9	13	11	9.7	7.1	4.3	4.1	6.7	5.3
CFSM	1.04	2.41	1.17	1.95	2.00	1.43	2.68	1.92	.92	1.63	1.93	1.04
IN.	1.20	2.69	1.35	2.25	2.08	1.65	2.99	2.22	1.02	1.87	2.23	1.17

CAL YR 1985 TOTAL 5359.7 MEAN 14.7 MAX 325 MIN 4.3 CFSM 1.25 IN. 16.90
WTR YR 1986 TOTAL 7206.3 MEAN 19.7 MAX 254 MIN 4.1 CFSM 1.67 IN. 22.72

RESERVOIRS IN PASSAIC RIVER BASIN

01379990 SPLITROCK RESERVOIR.--Lat 40°57'40", long 74°27'45", Morris County, Hydrologic Unit 02030103, at dam on Beaver Brook, 2 mi northeast of Hibernia, NJ. DRAINAGE AREA, 5.50 mi². PERIOD OF RECORD, September 1925 to September 1931, December 1948 to September 1950, October 1953 to current year. Monthend contents only 1925-31, 1948-50, published in WSP 1302. October 1950 to September 1953 in Special Report 16, New Jersey Department of Environmental Protection. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.
REMARKS.--Reservoir is formed by a concrete gravity dam with earth embankment; present dam constructed 1946-48 and sluice gate first closed Dec. 22, 1948. Prior to 1946, reservoir was formed by earthfill dam with crest about 20 ft lower. Capacity of spillway level, 3,310,000,000 gal, elevation, 835 ft. Flow is regulated by two 30-inch sluice gates. Flow is released for diversion for municipal supply of Jersey City.
COOPERATION.--Records provided by Jersey City, Bureau of Water.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 3,652,500,000 gal, Apr. 5, 1973, elevation, 836.75 ft; minimum, 1,522,800,000 gal, Jan. 4, 1954, elevation, 824.20 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 3,454,500,000 gal, Apr. 18, elevation, 835.75 ft; minimum, 3,246,600,000 gal, July 11, 12, elevation, 834.70 ft.

01380900 BOONTON RESERVOIR.--Lat 40°53'. long 74°24', Morris County, Hydrologic Unit 02030103, at dam on Rockaway River at Boonton, NJ. DRAINAGE AREA, 119 mi². PERIOD OF RECORD, April 1904 to September 1950, October 1953 to current year. Monthend contents only 1904-50, published in WSP 1302. October 1950 to September 1953 in Special Report 16, New Jersey Department of Environmental Protection. REVISED RECORDS.--WDR NJ-85-1: 1984. GAGE, hook gage. Datum of gage is National Geodetic Vertical Datum of 1929.
REMARKS.--Reservoir is formed by a cyclopean masonry dam with earth wings; dam completed and storage began in 1904. Total capacity at spillway level, 7,620,000,000 gal elevation, 305.25 ft of which 7,366,000,000 gal is usable contents above elevation 259.75 ft, sill of lowest outlet gate. Flow regulated by flashboards, 3 outlets in gatehouse at head of conduit and by two 48-inch pipes (bottom of sluice pipes at elevation 205 ft). Water is diverted from reservoir for municipal supply of Jersey City.
COOPERATION.--Records provided by Jersey City, Bureau of Water.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 8,545,600,000 gal, May 31, 1984, elevation, 308.81 ft; minimum, 1,445,000,000 gal, Jan. 31, 1981, elevation 274.71 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 8,459,800,000 gal, Apr. 18, elevation, 308.48 ft; minimum, 6,945,000,000 gal, Oct. 1, elevation, 302.63 ft.

01382100 CANISTEAR RESERVOIR.--Lat 41°06'30", long 74°29'30", Sussex County, Hydrologic Unit 02030103, at dam on Pacock Brook, 1.8 mi northeast of Stockholm, NJ. DRAINAGE AREA, 5.6 mi². PERIOD OF RECORD, October 1923 to September 1950, October 1953 to current year. Monthend contents 1923-50, published in WSP 1302. October 1950 to September 1953 in Special Report 16, New Jersey Department of Environmental Protection. GAGE, staff gage. Datum of gage is National Geodetic Vertical Datum of 1929.
REMARKS.--Reservoir is formed by earth-embankment type dam, completed about 1896. Capacity at spillway level, 2,407,000,000 gal, elevation, 1,086.0 ft. Reservoir used for storage and water released for diversion at Macopin intake dam on Pequannock River prior to May 21, 1961, and for diversion at Charlotteburg Reservoir on Pequannock River since May 21, 1961, for municipal supply for City of Newark. Outflow is controlled mostly by operation of gates in pipes through dam.
COOPERATION.--Records provided by City of Newark, Division of Water Supply.

01382200 OAK RIDGE RESERVOIR.--Lat 41°02'30", long 74°30'10", Passaic County, Hydrologic Unit 02030103, at dam on Pequannock River, 0.9 mi southwest of Oak Ridge, NJ. DRAINAGE AREA, 27.3 mi². PERIOD OF RECORD, October 1923 to September 1950, October 1953 to current year. Monthend contents only 1924-50, published in WSP 1302. October 1950 to September 1953 in Special Report 16, New Jersey Department of Environmental Protection. GAGE, staff gage. Datum of gage is National Geodetic Vertical Datum of 1929.
REMARKS.--Reservoir is formed by earthfill dam with concrete-core wall and ogee overflow section; dam constructed between 1880-92; dam raised 10 ft during 1917-19. Capacity at spillway level, 3,895,000,000 gal, elevation, 846.0 ft. Reservoir used for storage and water released for diversion at Macopin intake dam on Pequannock River prior to May 21, 1961, and diversion at Charlotteburg Reservoir on Pequannock River since May 21, 1961, for municipal supply of City of Newark. Outflow is controlled mostly by operation of gates in pipes through dam.
COOPERATION.--Records provided by City of Newark, Division of Water Supply.

01382300 CLINTON RESERVOIR.--Lat 41°04'30", long 74°27'00", Passaic County, Hydrologic Unit 02030103, at dam on Clinton Brook, 2.0 mi north of Newfoundland, NJ. DRAINAGE AREA, 10.5 mi². PERIOD OF RECORD, October 1923 to September 1950, October 1953 to current year. Monthend contents only 1923-50, published in WSP 1302. October 1950 to September 1953 in Special Report 16, New Jersey Department of Environmental Protection. GAGE, staff gage. Datum of gage is National Geodetic Vertical Datum of 1929.
REMARKS.--Reservoir is formed by earthfill dam constructed between 1889-92. Capacity at spillway level, 3,518,000,000 gal, elevation, 992.0 ft. Reservoir used for storage and water released for diversion at Macopin intake dam on Pequannock River prior to May 21, 1961, and for diversion at Charlotteburg Reservoir since May 21, 1961, for municipal supply of City of Newark. Outflow is controlled mostly by operation of gates in pipes through dam.
COOPERATION.--Records provided by City of Newark, Division of Water Supply.

01382380 CHARLOTTEBURG RESERVOIR.--Lat 41°01'34", long 74°25'30", Passaic County, Hydrologic Unit 02030103, at dam on Pequannock River, 1.1 mi upstream from Macopin River, and 1.5 mi southeast of Newfoundland, NJ. DRAINAGE AREA, 56.2 mi². PERIOD OF RECORD, May 1961 to current year. REVISED RECORDS.--WRD NJ-74: Station number. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.
REMARKS.--Reservoir is formed by concrete-masonry dam and earth embankment, with concrete spillway at elevation 738.00 ft; storage began May 19, 1961. Spillway equipped with Bascule gate 5 ft high. Capacity, 2,964,000,000 gal, elevation, 743.00 ft, top to Bascule gate. No dead storage. Outflow is controlled by sluice and automatic Bascule gates. Water diverted from reservoir since May 21, 1961, for municipal supply of City of Newark.
COOPERATION.--Records provided by City of Newark, Division of Water Supply.

RESERVOIRS IN PASSAIC RIVER BASIN--Continued

01382400 ECHO LAKE.--Lat 41°03'00", long 74°24'30", Passaic County, Hydrologic Unit 02030103, at Echo Lake Dam on Macopin River, 1.6 mi north of Charlotteburg, NJ, and 1.9 mi upstream from mouth. DRAINAGE AREA, 4.35 mi². PERIOD OF RECORD, October 1927 to September 1950, October 1953 to current year. Monthend contents only 1928-50, published in WSP 1302. October 1950 to September 1953 in Special Report 16, New Jersey Department of Environmental Protection. GAGE, staff gage. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Lake is formed by earth-embankment type dam completed about 1925. Capacity at spillway level, 1,583,000,000 gal, elevation, 893.0 ft, with provision for additional storage of 180,000,000 gal at elevation 894.9 ft with flashboards. Usable contents, 1,045,000,000 gal above elevation 880.0 ft. Lake used for storage and water released for diversion at Macopin intake dam on Pequannock River prior to May 21, 1961, and water diverted to Charlotteburg Reservoir on Pequannock River since May 21, 1961, for municipal supply of City of Newark. Outflow to Macopin River controlled by operation of gates in gatehouse at dam and water released through pipe and canal to Charlotteburg Reservoir.

COOPERATION.--Records provided by City of Newark, Division of Water Supply.

01383000 GREENWOOD LAKE.--Lat 41°09'36", long 74°20'03", Passaic County, Hydrologic Unit 02030103, in gatehouse near right end of Greenwood Lake Dam on Wanaque River at Awosting. DRAINAGE AREA, 27.1 mi². PERIOD OF RECORD, June 1898 to November 1903, June 1907 to current year (gage heights only prior to October 1953). GAGE, water-stage recorder. Datum of gage is 608.86 ft National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark). Prior to Oct. 1, 1931, staff gage on former railroad bridge at site 100 ft upstream at datum 89.75 ft lower.

REMARKS.--Reservoir is formed by earthfill dam with concrete spillway; dam completed about 1837 and reconstruction completed in 1928 with crest of spillway 0.25 ft lower. Usable capacity, 6,860,000,000 gal between gage heights -4.00 ft, sill of gate, and 10.00 ft, crest of spillway. Dead storage, 7,140,000,000 gal. Outflow mostly regulated by two gates, 3.5 by 5.0 ft. Records given herein represent usable capacity. Lake used for recreation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 9,528,000,000 gal, Oct. 9-14, 1903, gage height, 14.25 ft, present datum; minimum, 3,160,000,000 gal, several days in November 1900, gage height, 3.50 ft, present datum.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 7,455,000,000 gal, Jan. 28, gage height, 10.96 ft; minimum, 6,238,000,000 gal, Sept. 30, gage height, 8.98 ft.

01386990 WANAQUE RESERVOIR.--Lat 41°02'33", long 74°17'36", Passaic County, Hydrologic Unit 02030103, at Raymond Dam on Wanaque River at Wanaque. DRAINAGE AREA, 90.4 mi². PERIOD OF RECORD, February 1928 to September 1950, October 1953 to current year. Monthend contents only 1928-50, published in WSP 1302. October 1950 to September 1953 in Special Report 16, New Jersey Department of Environmental Protection. REVISED RECORDS.--WDR NJ-85-1: 1984 (M). GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by North Jersey District Water Supply Commission).

REMARKS.--Reservoir is formed by earthfill with concrete-core wall main dam and seven secondary dams; dams completed in 1927 and storage began in March 1928. Total capacity of spillway level, 27,210,000,000 gal elevation, 300.3 ft. Capacity available by gravity at spillway level, 26,230,000,000 gal. Outflow mostly controlled by sluice gates in intake conduits in gage house. Water is diverted from reservoir for municipal supply. Diversion to reservoir from Post Brook and Ramapo River (see Passaic River basin, diversions).

COOPERATION.--Records provided by North Jersey District Water Supply Commission.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 30,930,000,000 gal, Apr. 6, 1984, elevation, 304.07 ft; minimum, 5,110,000,000 gal, Dec. 26, 1964, elevation, 256.06 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 30,100,000,000 gal, Mar. 16, elevation, 303.01 ft; minimum, 20,810,000,000 gal, Sept. 30, elevation, 289.89 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

Date	Elevation (feet)*	Contents (million gallons)	Change in contents (equivalent in ft³/s)	Elevation (feet)*	Contents (million gallons)	Change in contents (equivalent in ft³/s)	Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft³/s)
	01379990 SPLITROCK RESERVOIR			01380900 BOONTON RESERVOIR			01382100 CANISTEAR RESERVOIR		
Sept. 30...	835.20	3,346	-	302.63	6,945	-	1,086.10	2,417	-
Oct. 31...	834.95	3,296	-2.5	304.98	7,550	+30.2	1,086.00	2,407	-0.5
Nov. 30...	835.40	3,385	+4.6	305.31	7,636	+4.4	1,086.20	2,427	+.5
Dec. 31...	835.05	3,316	-3.4	305.31	7,636	0	1,086.00	2,407	-.5
CAL YR 1985			+.08			-.2			+1.8
Jan. 31...	835.35	3,375	+2.9	305.75	7,750	+5.7	1,086.00	2,407	0
Feb. 28...	835.20	3,346	-1.6	305.58	7,706	-2.4	1,086.10	2,417	+.6
Mar. 31...	835.15	3,336	-.5	305.52	7,690	-.8	1,086.00	2,407	-.5
Apr. 30...	835.25	3,356	+1.0	307.64	8,241	+28.4	1,086.10	2,417	+.5
May 31...	835.05	3,316	-2.0	307.14	8,111	-6.5	1,086.00	2,407	-.5
June 30...	834.80	3,266	-2.6	306.35	7,906	-10.6	1,085.90	2,396	-.5
July 31...	834.95	3,296	+1.5	304.85	7,516	-19.5	1,086.00	2,407	+.5
Aug. 31...	835.05	3,316	+1.0	307.19	8,124	+30.3	1,085.90	2,396	-.5
Sept. 30...	835.05	3,316	0	305.94	7,799	-16.8	1,085.90	2,396	0
WTR YR 1986			-.1			+3.6			-.1

RESERVOIRS IN PASSAIC RIVER BASIN--Continued

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

Date	Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft³/s)	Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft³/s)	Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft³/s)
	01382200 OAK RIDGE RESERVOIR			01382300 CLINTON RESERVOIR			01382380 CHARLOTTEBURG RESERVOIR		
Sept. 30...	838.10	2,823	-	988.40	3,057	-	734.40	2,054	-
Oct. 31...	841.20	3,231	+20.4	991.30	3,428	+18.5	730.75	1,729	-16.2
Nov. 30...	846.20	3,927	+35.9	992.40	3,569	+7.3	743.40	3,014	+66.3
Dec. 31...	846.00	3,895	-1.6	992.20	3,544	-1.3	740.10	2,632	-19.0
CAL YR 1985			+14.0			+7.2			+3.5
Jan. 31...	846.10	3,909	+.7	992.40	3,569	+1.3	743.20	2,989	+17.8
Feb. 28...	846.10	3,909	0	992.30	3,556	-.7	743.15	2,983	-.3
Mar. 31...	846.10	3,909	0	992.30	3,556	0	742.10	2,860	-6.2
Apr. 30...	846.20	3,924	+.8	992.40	3,569	+.7	743.25	2,996	+7.0
May 31...	846.00	3,895	-1.4	992.20	3,544	-1.3	737.80	2,386	-30.4
June 30...	844.30	3,655	-12.4	991.10	3,403	-7.3	731.20	1,767	-31.9
July 31...	836.50	2,618	-51.7	985.00	2,608	-39.7	734.40	2,054	+14.3
Aug. 31...	830.20	1,868	-37.4	984.80	2,584	-1.2	733.20	1,943	-5.5
Sept. 30...	823.00	1,170	-36.0	980.00	2,058	-27.1	732.95	1,291	-33.6
WTR YR 1986			-7.0			-4.2			-3.2

Date	Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft³/s)	Gage height (feet)**	Contents (million gallons)	Change in contents (equivalent in ft³/s)	Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft³/s)
	01382400 ECHO LAKE			01383000 GREENWOOD LAKE			01386990 WANAQUE RESERVOIR		
Sept. 30...	893.10	1,592	-	10.57	7,213	-	294.41	23,770	-
Oct. 31...	893.00	1,583	-0.5	10.05	6,891	-16.1	294.60	23,890	+6.0
Nov. 30...	893.50	1,630	+2.4	10.67	7,275	+19.8	300.21	27,940	+209
Dec. 31...	893.00	1,592	-1.9	e10.17	6,965	-15.5	302.01	29,330	+69.4
CAL YR 1985			-.04			+0.2			+69.4
Jan. 31...	893.30	1,611	+.9	e10.42	7,120	+7.7	302.72	29,880	+27.4
Feb. 28...	893.30	1,611	0	e10.30	7,046	-4.1	302.63	29,800	-4.4
Mar. 31...	893.10	1,592	-.9	10.19	6,978	-3.4	302.43	29,650	-7.5
Apr. 30...	893.20	1,601	+.5	10.41	7,114	+7.0	302.69	29,850	+10.3
May 31...	893.00	1,583	-.9	10.05	6,891	-11.1	300.91	28,480	-68.4
June 30...	892.80	1,564	-.9	9.81	6,744	-7.6	298.31	26,520	-101
July 31...	893.00	1,583	+.9	9.67	6,659	-4.2	294.54	23,850	-133
Aug. 31...	893.00	1,583	0	9.37	6,476	-9.1	293.52	23,150	-34.9
Sept. 30...	892.90	1,574	-.5	8.99	6,244	-12.0	289.71	20,640	-129
WTR YR 1986			-.09			-4.1			-13.3

e Gage height estimated.
* Elevation at 0900.
** Gage height at 2400.
† Elevation at 0800 on first day of following month.

DIVERSIONS WITHIN PASSAIC RIVER BASIN

01368720 North Jersey District Water Supply Commission diverts water from Upper Greenwood Lake (Hudson River basin) near Moe, NJ to the Green Brook, a tributary of Greenwood Lake, for municipal supply. Consult North Jersey District Water Supply Commission for data available.

01379510 Commonwealth Water Company diverts water from Passaic River, 1.2 mi upstream from Canoe Brook for municipal supply. These figures also include water diverted from the Passaic River by the Bernards Division of the Commonwealth Water Company. Records provided by Commonwealth Water Company.

01379530 Commonwealth Water Company diverts water from Canoe Brook near Summit, 0.5 mi from mouth, for municipal supply. Records provided by Commonwealth Water Company.

01380800 Jersey City diverts water from Boonton Reservoir on Rockaway River at Boonton for municipal supply. Records provided by Jersey City, Bureau of Water.

01382370 City of Newark diverts water from Charlotteburg Reservoir on Pequannock River since May 21, 1961 for municipal supply. Prior to May 21, 1961 water was diverted from reservoir formed by Macopin intake dam on Pequannock River (former diversion 01382490). Records provided by City of Newark, Division of Water Supply.
REVISED RECORDS.--WDR NJ-82-1: Station number.

01386980 North Jersey District Water Supply Commission diverts water for municipal supply from Wanaque Reservoir on Wanaque River. Records provided by North Jersey District Water Supply Commission.

01387020 North Jersey District Water Supply Commission diverts water from Post Brook near Wanaque into Wanaque Reservoir for municipal supply. Records not available.

01387990 North Jersey District Water Supply Commission diverts water from Ramapo River by pumping from Pompton Lakes into Wanaque Reservoir. Records provided by North Jersey District Water Supply Commission.

01387991 Hackensack Water Company diverts water from the Ramapo River by pumping from Pompton Lake above the gaging station into Oradell Reservoir in the Hackensack River basin (see Hackensack River basin, diversions). Pumping began Feb. 14, 1985. Records provided by Hackensack Water Company.

01388490 Passaic Valley Water Commission supplements the dependable yield of its supply at Little Falls by diverting water at high flows at the Jackson Avenue Pumping Station into Point View Reservoir on Haycock Brook for release as required to sustain minimum flow requirements. Also water may be released into Haycock Brook for maintenance of flow in that stream. These diversions and releases occur upstream of Pompton Plains gaging station. Records provided by Passaic Valley Water Commission. No diversion or release during the year.
REVISED RECORDS.--WDR NJ-82-1: Station number.

01389490 The Passaic Valley Water Commission diverts water from Passaic River above Beattie's Dam at Little Falls for municipal supply. Records provided by Passaic Valley Water Commission.

DIVERSIONS, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MONTH	01379510 COMMONWEALTH WATER COMPANY FROM PASSAIC RIVER	01379530 COMMONWEALTH WATER COMPANY FROM CANOE BROOK	01380800 JERSEY CITY	01382370 NEWARK	01386980 FROM WANAQUE RESERVOIR	01387990 FROM RAMAPO RIVER TO WANAQUE RESERVOIR	01389490 PASSAIC VALLEY WATER COMMISSION
October.....	35.9	2.55	81.7	74.2	154	70.9	49.1
November.....	51.5	12.7	83.3	90.3	135	22.0	58.1
December.....	0	4.58	85.4	101	123	0	67.1
CAL YR 1985..	26.8	3.19	102	66.1	135	68.4	61.6
January.....	27.6	2.87	84.5	99.8	121	0	68.6
February.....	18.3	1.32	84.1	120	116	0	68.1
March.....	13.9	4.00	85.5	92.3	109	0	67.7
April.....	4.90	4.83	77.8	109	143	0	36.0
May.....	9.82	.74	78.1	122	134	0	64.9
June.....	3.83	4.15	80.0	136	146	0	79.2
July.....	2.76	3.83	81.0	131	149	0	78.4
August.....	3.68	4.91	79.0	109	133	0	74.8
September....	2.51	3.19	79.3	95.2	138	0	71.5
WTR YR 1986..	15.2	4.14	81.6	106	134	7.8	65.3

01393450 ELIZABETH RIVER AT URSINO LAKE, AT ELIZABETH, NJ

LOCATION.--Lat 40°40'30", long 74°13'20", Union County, Hydrologic Unit 02030104, on left bank at Ursino Lake Dam in Elizabeth, 75 ft upstream of bridge on Trotters Lane and 3.8 mi upstream from mouth.

DRAINAGE AREA.--16.9 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1921 to current year.

REVISED RECORDS.--WSP 1552: Drainage area, 1922-23, 1927-29(M), 1932, 1933-34(M), 1938(P), 1942(M) 1944(P), 1945(M), 1948(P), 1952-53(M). WDR NJ-84-1: 1974.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Oct. 1, 1922, nonrecording gage at site 2,800 ft downstream at datum 4.14 ft higher and Oct. 1, 1922 to May 18, 1923, at same site at datum 5.23 ft higher. May 19, 1923 to Dec. 27, 1972, at site 2,800 ft downstream at datum 5.23 ft higher and published as "Elizabeth River at Elizabeth" (station 01393500).

REMARKS.--Estimated daily discharges: July 2, July 13, Aug. 24, Sept. 3 and Sept. 5. Records fair. Diversion by pumpage from Hammock Well Field in Union for municipal supply by Elizabethtown Water Co., probably reduces the flow past the station. Some measurements of water temperature, other than those published, were made during the year.

AVERAGE DISCHARGE.--65 years, 25.9 ft³/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,110 ft³/s, Aug. 28, 1971, gage height, 18.7 ft, from floodmark, site and datum then in use, from rating curve extended above 1,100 ft³/s on basis of contracted-opening measurement of peak flow; no flow many times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Elevation (ft)	Date	Time	Discharge (ft³/s)	Elevation (ft)
Nov. 17	0100	*940	*19.00	No peak greater than base discharge.			

No flow May 13.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.6	5.6	40	7.9	12	12	11	9.7	8.7	7.5	25	5.9
2	8.7	5.3	50	8.2	30	12	11	10	9.0	144	138	6.4
3	74	5.0	16	39	13	12	11	8.2	8.7	12	60	35
4	17	12	13	9.8	28	12	10	7.7	8.8	8.4	16	17
5	60	179	12	68	53	12	11	8.3	8.7	7.7	12	74
6	12	33	28	11	19	12	30	12	46	8.3	10	25
7	8.8	12	15	9.4	14	12	15	24	22	9.3	10	9.3
8	7.8	8.5	12	12	17	10	12	10	16	9.2	11	7.6
9	7.6	6.9	12	9.2	16	9.9	11	8.9	11	16	9.0	7.5
10	7.6	6.2	11	9.0	18	10	10	7.2	8.5	8.1	8.6	7.7
11	7.5	6.5	16	8.4	14	19	10	6.7	8.8	7.8	96	7.3
12	5.9	12	19	8.0	15	12	9.7	7.3	127	39	14	7.5
13	12	10	18	8.4	13	84	9.3	5.5	34	44	10	6.6
14	6.7	18	14	8.7	11	99	9.8	8.0	12	24	9.0	6.3
15	6.6	29	9.5	8.5	12	67	22	7.8	9.1	9.7	8.1	6.9
16	6.6	165	9.7	8.3	10	21	359	8.9	9.3	9.1	10	7.6
17	6.3	234	9.9	8.2	30	16	371	9.3	9.0	8.9	7.8	6.6
18	6.3	36	9.7	7.9	154	14	62	7.0	8.3	9.2	14	6.4
19	5.9	16	9.4	47	56	17	30	9.4	8.2	30	8.1	6.9
20	6.2	12	9.3	37	69	13	20	54	12	9.1	7.8	6.2
21	6.8	10	9.0	11	70	12	39	33	7.6	12	81	7.2
22	6.2	114	9.3	9.3	31	11	25	87	7.5	8.6	26	6.6
23	6.4	25	9.3	9.1	20	11	118	19	8.4	22	11	23
24	6.4	12	9.0	8.6	17	11	29	12	8.4	15	49	9.7
25	6.3	10	8.5	56	16	11	17	10	8.1	9.0	8.8	7.4
26	5.4	94	8.5	319	15	13	15	10	8.0	9.4	8.1	46
27	4.9	49	8.6	95	14	20	12	10	8.1	34	7.8	39
28	5.7	175	8.3	27	13	11	10	11	8.2	9.4	20	7.7
29	5.9	46	8.2	17	---	10	13	10	7.4	76	7.6	7.4
30	5.9	30	8.5	15	---	9.8	11	10	8.8	158	6.6	7.3
31	5.6	---	8.2	13	---	11	---	9.6	---	206	6.2	---
TOTAL	347.6	1377.0	428.9	913.9	800	606.7	1323.8	451.5	465.6	980.7	716.5	425.0
MEAN	11.2	45.9	13.8	29.5	28.6	19.6	44.1	14.6	15.5	31.6	23.1	14.2
MAX	74	234	50	319	154	99	371	87	127	206	138	74
MIN	4.9	5.0	8.2	7.9	10	9.8	9.3	5.5	7.4	7.5	6.2	5.9

CAL YR 1985 TOTAL 7417.2 MEAN 20.3 MAX 315 MIN 4.6
WTR YR 1986 TOTAL 8837.2 MEAN 24.2 MAX 371 MIN 4.9

01393450 ELIZABETH RIVER AT URSINO LAKE, AT ELIZABETH, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1979 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 OCTOER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
03...	1230	216	172	7.3	15.5	9.2	92	--	28000	92000
APR 1986										
07...	1045	14	480	7.6	12.0	9.8	92	8.7	54000	3300
JUN										
20...	1030	9.6	592	8.1	24.5	10.0	121	4.5	--	--
JUL										
09...	1020	8.7	526	8.1	23.5	9.0	107	5.7	11000	500
AUG										
12...	1415	14	517	7.8	23.0	8.6	100	4.5	17000	800

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
03...	37	12	1.7	13	1.6	25	11	21	<0.1
APR 1986									
07...	130	40	6.3	37	1.9	75	37	62	0.1
JUN									
20...	210	64	11	42	2.2	123	55	87	<0.1
JUL									
09...	190	56	11	30	2.0	110	51	65	0.1
AUG									
12...	140	45	7.7	42	2.4	91	38	73	0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
03...	3.2	78	0.035	0.71	0.16	1.0	1.7	0.26	7.1
APR 1986									
07...	7.3	240	0.073	1.23	0.41	1.3	2.5	0.14	10
JUN									
20...	13	350	--	--	--	--	--	--	4.9
JUL									
09...	8.6	290	0.031	1.01	0.08	0.56	1.6	0.09	3.6
AUG									
12...	12	270	0.031	1.22	0.14	0.78	2.0	0.10	3.8

01393950 WEST BRANCH RAHWAY RIVER AT WEST ORANGE, NJ

LOCATION.--Lat 40°47'01", long 74°16'27", Essex County, Hydrologic Unit 02030104, at bridge on Mountain Avenue, 300 ft downstream of Turtle Brook, and 400 ft southeast of intersection with Pleasant Valley Way in West Orange.

DRAINAGE AREA.--2.52 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1982 to current year.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
02...	1215	E1.2	710	7.6	17.5	7.7	81	4.2	2300	92000
FEB 1986										
03...	1230	E2.8	1540	7.3	3.0	13.0	97	1.5	<200	<200
APR										
09...	1200	E1.6	1020	7.7	10.5	12.0	110	1.2	400	<200
JUN										
13...	1100	E4.4	577	7.4	18.0	7.7	83	3.3	--	--
JUL										
22...	1000	E0.8	723	7.4	21.5	6.3	72	5.7	1700	2200
AUG										
12...	1300	E1.2	643	7.5	20.0	8.0	88	2.7	4900	3100

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
02...	210	52	19	49	1.8	74	35	150	<0.1
FEB 1986									
03...	210	54	18	210	2.2	47	32	410	<0.1
APR									
09...	230	56	22	100	1.7	69	30	260	<0.1
JUN									
13...	130	32	11	60	1.5	53	26	130	<0.1
JUL									
22...	210	52	19	47	1.5	74	32	160	<0.1
AUG									
12...	180	47	16	47	2.0	68	29	140	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
02...	16	370	0.007	1.10	0.09	0.38	1.5	0.04	3.1
FEB 1986									
03...	15	770	0.005	1.56	0.25	0.36	1.9	0.03	3.0
APR									
09...	14	530	0.019	1.07	0.07	0.61	1.7	0.06	4.5
JUN									
13...	11	300	0.016	0.81	0.10	0.7	1.5	0.21	5.8
JUL									
22...	13	370	0.028	0.48	0.13	0.77	1.2	0.09	4.5
AUG									
12...	15	340	0.007	0.89	<0.05	0.51	1.4	0.06	3.9

01393950 WEST BRANCH RAHWAY RIVER AT WEST ORANGE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)
OCT 1985 02...	1215	80	1.6	5.2	3	240	10	80	13000	450

DATE	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985 02...	230	0.06	20	<1	210	<1	<1.0	<0.1	66	23

DATE	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985 02...	2.3	11	0.1	1.3	<0.1	<0.1	<0.1	<0.1	4.5	<0.1

DATE	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985 02...	<0.1	<0.1	<0.1	<0.1	5.8	<0.1	<1.00	<10	<0.1

01394500 RAHWAY RIVER NEAR SPRINGFIELD, NJ

LOCATION.--Lat 40°41'11", long 74°18'44", Union County, Hydrologic Unit 02030104, on left bank 50 ft downstream from bridge on eastbound U.S. Highway 22, 100 ft downstream from Pope Brook, and 1.5 mi south of Springfield.

DRAINAGE AREA.--25.5 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1938 to current year.

REVISED RECORDS.--WSP 1622: 1945. WRD-NJ 1973: 1938(M), 1968(M), 1971(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 66.17 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good except those above 50 ft³/s, which are fair. Water for municipal supply diverted from river by city of Orange. The flow past this station is affected by diversions by pumpage from wells by Orange, South Orange, Short Hills Water Co., and Springfield station of Elizabethtown Water Co. Several measurements of water temperature, other than those published, were made during the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--48 years, 28.7 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,430 ft³/s, Aug. 2, 1973, gage height, 9.76 ft, from floodmark, from rating curve extended above 1,600 ft³/s on basis of slope-area measurement of peak flow; minimum, 0.1 ft³/s, Sept. 11, 1966.

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

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 17	0200	*1,210	*5.88	Apr. 17	1130	1,070	5.52

Minimum discharge, 2.7 ft³/s, Oct. 21, Nov. 4, Sept. 13.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.5	3.5	47	6.4	11	12	8.7	15	9.0	7.7	10	5.1
2	7.3	3.3	77	6.3	25	12	8.7	14	8.2	104	153	5.2
3	64	3.1	23	27	14	12	8.5	13	7.6	7.3	109	15
4	10	5.6	15	6.7	18	12	8.6	12	7.7	5.7	11	25
5	54	202	12	60	59	11	8.5	12	7.8	5.8	7.5	56
6	12	14	19	7.8	31	11	18	14	43	5.5	7.0	29
7	7.6	7.9	14	6.2	17	10	9.8	26	21	5.5	6.4	5.3
8	6.8	5.9	12	5.5	16	9.4	8.0	11	11	5.8	7.8	4.8
9	6.7	7.5	12	5.6	13	9.4	7.4	11	9.6	11	5.7	4.1
10	6.9	7.7	11	5.8	13	9.6	7.2	9.5	6.9	6.5	7.4	3.7
11	6.8	7.8	13	5.6	12	13	7.2	9.1	7.9	5.7	157	3.8
12	6.8	12	17	5.4	11	9.5	7.3	8.8	118	40	9.9	4.2
13	11	13	14	5.4	10	56	6.9	9.4	30	25	7.3	3.4
14	7.5	17	16	4.9	9.1	91	6.7	8.1	7.5	25	6.9	3.1
15	8.3	20	11	4.5	9.4	146	9.0	9.3	6.9	6.9	6.6	3.3
16	8.5	155	9.3	5.0	8.6	32	371	9.0	7.2	6.4	7.1	3.6
17	8.2	491	9.2	5.2	19	18	858	9.9	7.1	6.6	7.3	3.5
18	7.2	30	8.5	5.4	168	15	147	8.0	7.0	6.2	7.6	3.9
19	6.0	13	8.0	28	94	17	55	8.4	7.3	24	6.3	3.9
20	4.5	12	7.8	28	115	16	34	60	9.4	6.1	6.0	3.6
21	3.4	10	7.8	8.2	127	12	46	24	7.0	5.4	68	3.5
22	4.2	118	7.3	6.2	74	11	33	96	6.7	5.3	29	3.5
23	3.8	43	7.6	6.3	37	11	191	15	6.9	5.7	7.7	15
24	3.8	14	7.8	5.7	26	10	87	9.3	7.3	13	43	4.4
25	3.5	9.8	7.1	63	23	9.0	42	8.2	7.4	4.9	6.1	3.5
26	3.8	88	6.6	536	20	11	31	8.5	7.2	7.8	6.0	17
27	4.3	104	6.9	201	17	9.4	25	8.6	7.4	19	6.3	14
28	4.4	251	7.0	46	15	9.3	21	9.0	9.0	5.9	13	3.1
29	4.0	117	6.6	24	---	8.6	22	9.4	7.4	25	6.1	3.3
30	4.4	43	6.5	17	---	9.9	23	8.9	8.5	101	5.5	3.3
31	4.1	---	6.4	12	---	9.4	---	8.8	---	199	5.3	---
TOTAL	301.3	1829.1	433.4	1160.1	1012.1	632.5	2116.5	483.2	414.9	708.7	742.8	260.1
MEAN	9.72	61.0	14.0	37.4	36.1	20.4	70.5	15.6	13.8	22.9	24.0	8.67
MAX	64	491	77	536	168	146	858	96	118	199	157	56
MIN	3.4	3.1	6.4	4.5	8.6	8.6	6.7	8.0	6.7	4.9	5.3	3.1

CAL YR 1985 TOTAL 7963.3 MEAN 21.8 MAX 675 MIN 3.1
WTR YR 1986 TOTAL 10094.7 MEAN 27.7 MAX 858 MIN 3.1

01394500 RAHWAY RIVER NEAR SPRINGFIELD, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1978 to current year.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
02...	1030	7.2	559	7.6	17.5	6.8	71	4.2	600	900
FEB 1986										
03...	1045	14	1040	7.6	2.5	11.6	84	1.8	>24000	790
APR										
09...	1030	7.2	576	7.9	11.0	10.4	96	1.4	230	80
JUN										
17...	1300	7.2	565	7.7	21.5	5.9	67	2.7	2400	790
JUL										
22...	1200	6.0	517	7.8	22.5	5.4	63	3.1	4900	800
AUG										
04...	1210	10	454	7.1	21.5	5.8	66	6.9	700	800

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
02...	190	57	11	30	2.3	110	37	71	<0.1
FEB 1986									
03...	150	44	8.7	140	2.1	66	45	260	<0.1
APR									
09...	180	55	11	40	1.9	92	37	91	<0.1
JUN									
17...	200	60	11	35	2.5	117	36	74	<0.1
JUL									
22...	180	55	10	28	2.0	--	40	65	<0.1
AUG									
04...	120	37	7.7	33	2.2	75	30	69	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
02...	16	290	0.016	2.03	0.10	0.61	2.6	0.07	3.0
FEB 1986									
03...	13	550	0.015	1.51	0.16	0.53	2.0	0.06	3.5
APR									
09...	7.6	300	0.039	1.23	0.07	0.56	1.8	0.07	5.4
JUN									
17...	14	300	0.071	1.50	0.21	0.54	2.0	0.16	4.1
JUL									
22...	10	--	0.038	1.59	0.18	0.54	2.1	0.13	4.2
AUG									
04...	12	240	0.031	1.28	E0.13	0.8	2.1	0.14	6.4

01394500 RAHWAY RIVER NEAR SPRINGFIELD, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)
OCT 1985									
02...	1030	<0.5	--	1	<10	--	2	10	3
JUN 1986									
17...	1300	0.6	10	2	<10	80	<1	<10	5

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1985								
02...	430	7	40	0.1	7	<1	30	2
JUN 1986								
17...	480	<5	130	<0.1	3	<1	<10	4

01395000 RAHWAY RIVER AT RAHWAY, NJ

LOCATION.--Lat 40°37'05", long 74°17'00", Union County, Hydrologic Unit 02030104, on left bank 100 ft upstream from St. Georges Avenue bridge in Rahway and 0.9 mi upstream from Robinsons Branch.

DRAINAGE AREA.--40.9 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1908 to April 1915 (gage heights and discharge measurements only), October 1921 to current year.

REVISED RECORDS.--WSP 781: Drainage area. WSP 1552: 1922-23(M), 1924, 1930-31(M), 1937. WDR NJ-79-1: 1978.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 8.77 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 25, 1934, nonrecording gage at site 40 ft downstream from Church Street and 1,500 ft downstream from present site at datum 2.77 ft lower.

REMARKS.--No estimated daily discharges. Records fair. Water for municipal supply diverted from river by Rahway and Orange. The flow past this station is affected by diversions by pumpage from wells by Orange, South Orange, Short Hills Water Co., Springfield station of Elizabethtown Water Co, and by storage in the Lenape Park flood control reservoir (since 1980). Several measurements of water temperature, other than those published, were made during the year.

AVERAGE DISCHARGE.--65 years (water years 1922-86), 47.2 ft³/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,420 ft³/s, Aug. 2, 1973, gage height, 7.88 ft, from rating curve extended above 3,000 ft³/s; no flow part or all of some days in many years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 17	0230	1,270	4.29	Apr. 17	1130	*1,710	*4.92
Jan. 26	1130	1,020	3.87				

Minimum daily discharge, 0.67 ft³/s, Aug. 16.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	2.1	83	9.1	20	26	15	36	7.0	3.7	34	.98
2	8.6	5.0	118	8.1	48	23	16	31	5.8	150	88	.92
3	104	6.2	58	43	32	21	14	25	6.0	26	220	.94
4	44	7.6	32	31	32	22	14	21	5.6	7.0	18	21
5	73	352	27	106	108	21	14	23	6.1	4.1	3.3	21
6	42	80	37	30	79	20	33	24	68	3.0	2.2	102
7	31	21	40	19	41	22	27	52	42	1.8	1.8	8.9
8	14	15	30	15	33	19	16	21	15	1.9	1.6	4.3
9	9.3	13	24	14	31	20	12	23	17	4.0	2.3	3.8
10	8.0	12	21	14	27	21	9.6	17	6.2	15	1.3	3.1
11	5.5	9.1	20	13	30	35	11	16	8.7	5.5	222	3.1
12	1.3	16	38	12	22	22	9.8	14	180	36	15	3.3
13	1.6	20	25	11	20	103	9.5	16	96	40	6.6	3.1
14	1.2	20	37	11	18	148	8.5	14	15	67	.98	2.6
15	24	70	20	9.3	18	313	10	15	7.6	9.5	.69	2.2
16	6.9	98	15	9.1	17	82	481	15	6.4	6.0	.67	2.3
17	2.8	1010	16	10	20	49	1430	16	5.3	5.9	1.4	3.0
18	1.3	217	15	12	246	37	655	13	4.7	4.8	11	3.0
19	1.4	36	12	44	296	39	107	11	4.7	48	4.2	3.9
20	1.3	33	13	77	233	39	65	72	6.8	9.7	.69	4.5
21	1.0	26	13	29	181	31	76	70	5.4	2.5	24	3.5
22	.77	126	11	18	201	24	65	165	3.7	2.0	112	18
23	1.1	164	11	16	89	21	229	44	3.3	1.5	3.2	17
24	1.8	26	12	16	42	20	153	18	4.7	8.0	49	33
25	3.0	19	12	35	42	20	73	14	3.6	2.1	2.0	1.4
26	1.7	70	9.0	804	40	20	53	12	4.4	1.8	1.3	26
27	1.4	207	9.5	499	37	24	46	12	3.9	40	1.4	30
28	.86	287	9.9	117	31	20	39	12	4.0	6.0	2.4	4.6
29	.88	300	9.3	53	---	17	39	8.5	2.9	12	4.2	21
30	.96	80	9.3	48	---	17	47	7.5	2.2	143	1.3	1.6
31	1.2	---	8.6	36	---	17	---	6.8	---	292	1.1	---
TOTAL	406.87	3348.0	795.6	2168.6	2034	1313	3777.4	844.8	552.0	959.8	837.63	354.04
MEAN	13.1	112	25.7	70.0	72.6	42.4	126	27.3	18.4	31.0	27.0	11.8
MAX	104	1010	118	804	296	313	1430	165	180	292	222	102
MIN	.77	2.1	8.6	8.1	17	17	8.5	6.8	2.2	1.5	.67	.92

CAL YR 1985 TOTAL 12489.67 MEAN 34.2 MAX 1010 MIN .77
WTR YR 1986 TOTAL 17391.74 MEAN 47.6 MAX 1430 MIN .67

01395000 RAHWAY RIVER AT RAHWAY, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1923-24, 1952, 1962, 1967-70, and February 1979 to current year.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
03...	1030	70	301	7.6	17.0	8.2	85	--	7900	4900
FEB 1986										
04...	1130	23	650	7.7	2.0	13.9	100	1.7	330	2400
APR										
07...	1215	21	522	8.2	12.5	12.3	117	5.1	310	80
JUN										
20...	1330	6.8	381	8.3	24.0	9.9	118	3.9	--	--
JUL										
09...	1150	2.7	318	7.7	25.0	4.3	53	1.7	1300	700
AUG										
04...	1010	15	279	7.4	22.0	7.5	86	3.0	500	500

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
03...	92	28	5.3	16	2.0	56	28	30	0.1
FEB 1986									
04...	150	47	9.1	68	1.9	82	42	130	<0.1
APR									
07...	180	54	11	31	1.7	117	36	62	<0.1
JUN									
20...	140	44	7.7	20	1.8	100	35	37	<0.1
JUL									
09...	120	36	6.4	16	2.0	84	25	30	0.1
AUG									
04...	70	21	4.3	20	1.8	40	23	39	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
03...	9.6	150	0.018	0.81	0.10	0.77	1.6	0.13	6.5
FEB 1986									
04...	14	360	0.015	1.63	0.17	0.55	2.2	0.06	3.1
APR									
07...	7.2	270	0.026	0.88	0.10	0.71	1.6	0.08	5.2
JUN									
20...	9.3	210	0.018	0.492	<0.01	0.6	1.1	0.09	5.0
JUL									
09...	6.4	170	0.02	0.33	0.11	0.71	1.0	0.11	6.1
AUG									
04...	6.6	140	0.034	0.66	E0.18	1.0	1.7	0.11	5.5

01395000 RAHWAY RIVER AT RAHWAY, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
JUN 1986 20...	1330	<0.5	<10	2	<10	20	<1	<10	26

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
JUN 1986 20...	280	7	160	0.1	7	<1	<10	2

01396000 ROBINSONS BRANCH AT RAHWAY, NJ

LOCATION.--Lat 40°36'20", long 74°17'40", Union County, Hydrologic Unit 02030104, on right bank of Milton Lake, 2,000 ft upstream from Maple Avenue in Rahway, 3,200 ft downstream from Middlesex Reservoir Dam, and 1.6 mi upstream from mouth.

DRAINAGE AREA.--21.6 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1939 to current year. September 1939 to September 1978, published as "Robinsons Branch Rahway River at Rahway." October 1978 to September 1985, published as "Robinsons Branch Rahway River at Maple Avenue, at Rahway" (station 01396001).

REVISED RECORDS.--WDR-NJ-75-1: 1973(P).

GAGE.--Water-stage recorder. Datum of gage is 19.99 ft above National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark). From Sept. 26, 1978 to Sept. 30, 1985, water-stage recorder 2,000 ft downstream on Maple Avenue at datum 8.69 ft lower.

REMARKS.--No estimated daily discharges. Records good above 10 ft³/s and fair below, except for periods of bypass gate openings, May 28 to June 6 and June 17 to Sept. 30, which are poor. Water diverted for municipal supply by Middlesex Water Co., from Middlesex Reservoir, capacity, 89,000,000 gal, 1.0 mi above station. No diversion during the year. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--47 years, 25.5 ft³/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,110 ft³/s, July 15, 1975, gage height, 5.85 ft, from rating curve extended above 750 ft³/s on basis of flow-over-dam computation, site and datum then in use; maximum gage height, 6.02 ft, Aug. 15, 1969, site and datum then in use; no flow many times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 450 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 17	0230	*1,140	*5.13	Apr. 16	2115	970	5.04
Jan. 26	0900	613	4.81	Apr. 17	0930	1,080	5.10

Minimum discharge, 0.12 ft³/s, Oct. 2, 3, gage height, 3.42 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	4.0	46	5.6	9.2	9.8	22	19	5.7	7.4	39	1.3
2	.32	3.1	55	5.4	18	9.1	21	8.2	5.0	21	34	1.2
3	51	2.1	23	19	16	8.4	19	8.1	4.4	9.1	46	1.6
4	38	1.9	14	15	17	9.9	19	8.0	3.9	5.5	20	2.4
5	46	165	11	42	50	9.4	19	8.3	3.7	4.3	13	34
6	25	50	16	21	42	8.7	19	8.0	8.1	3.6	9.4	60
7	8.2	14	15	10	22	14	19	6.6	12	3.2	6.8	9.5
8	4.4	10	13	6.8	15	23	15	6.9	12	2.8	6.0	4.2
9	3.3	5.7	13	6.1	15	14	10	8.1	12	2.6	5.9	2.5
10	3.2	5.4	12	6.3	15	3.1	8.1	11	12	4.3	4.6	1.8
11	5.5	5.3	15	6.3	14	2.8	4.9	11	13	6.3	71	1.7
12	4.6	9.6	18	6.1	11	3.3	4.8	9.6	100	11	15	2.1
13	6.3	15	16	6.3	10	31	5.4	7.4	49	34	8.5	1.7
14	7.6	17	18	5.7	9.0	102	6.1	7.4	22	61	5.4	1.2
15	7.9	28	10	4.7	8.9	172	5.4	9.6	23	32	4.1	.81
16	7.7	102	8.3	4.0	8.4	46	309	12	18	17	3.9	1.7
17	6.6	516	7.6	4.5	9.9	26	817	8.0	7.8	11	5.8	1.1
18	2.1	156	7.3	5.3	131	25	379	8.1	6.2	8.7	21	.53
19	1.9	26	6.4	17	179	25	111	8.0	6.5	35	14	.41
20	1.8	14	5.7	32	176	23	27	8.3	4.9	26	2.3	.64
21	1.8	13	5.8	19	130	13	27	10	4.0	13	11	.93
22	1.2	62	5.2	12	92	4.6	27	20	3.6	7.5	39	1.0
23	1.2	62	5.5	8.8	38	4.8	102	20	5.2	5.2	9.7	2.4
24	1.9	20	5.9	7.3	25	4.7	61	21	5.4	4.3	26	8.5
25	3.0	11	6.6	15	20	5.1	25	21	7.0	3.7	7.7	3.2
26	2.4	37	5.5	393	13	5.4	23	21	7.4	3.6	4.2	33
27	2.3	90	5.2	259	12	6.1	23	17	7.4	33	2.6	26
28	4.6	174	5.8	62	11	6.3	23	8.6	7.4	21	4.7	9.4
29	4.7	172	5.7	19	---	6.3	24	3.8	7.4	15	4.9	3.8
30	5.3	49	5.5	13	---	6.5	24	8.1	7.1	101	2.9	2.4
31	5.6	---	5.2	11	---	12	---	6.9	---	148	2.0	---
TOTAL	266.62	1840.1	392.2	1048.2	1117.4	640.3	2199.7	339.0	391.1	661.1	450.4	221.02
MEAN	8.60	61.3	12.7	33.8	39.9	20.7	73.3	10.9	13.0	21.3	14.5	7.37
MAX	51	516	55	393	179	172	817	21	100	148	71	60
MIN	.32	1.9	5.2	4.0	8.4	2.8	4.8	3.8	3.6	2.6	2.0	.41

CAL YR 1985 TOTAL 5710.04 MEAN 15.6 MAX 516 MIN .00
WTR YR 1986 TOTAL 9567.14 MEAN 26.2 MAX 817 MIN .32

01396280 SOUTH BRANCH RARITAN RIVER AT MIDDLE VALLEY, NJ

LOCATION.--Lat 40°45'40", long 74°49'18", Morris County, Hydrologic Unit 02030105, at bridge on Middle Valley Road in Middle Valley, 6.9 mi downstream from Drakes Brook.

DRAINAGE AREA.--47.6 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-65, 1967, 1976 to current year.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
NOV 1985										
18...	1245	E171	178	7.8	7.0	11.8	97	E2.1	220	1600
FEB 1986										
04...	1030	E110	251	8.2	2.5	13.2	98	<1.1	50	21
MAR										
20...	1030	E178	183	8.1	7.5	11.5	97	<0.4	40	23
MAY										
20...	1030	E67	246	7.7	17.0	8.4	88	E2.1	330	130
JUL										
10...	1030	E44	280	8.0	18.0	8.6	93	E1.6	1300	1600
AUG										
07...	1030	E57	252	8.0	17.5	8.8	94	E1.6	330	350

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
NOV 1985									
18...	52	12	5.3	11	1.7	33	12	19	<0.1
FEB 1986									
04...	62	14	6.5	21	1.3	37	15	39	<0.1
MAR									
20...	56	13	5.8	13	1.3	35	12	27	<0.1
MAY									
20...	87	19	9.6	12	1.5	68	13	21	<0.1
JUL									
10...	100	22	11	14	1.6	73	13	27	<0.1
AUG									
07...	87	19	9.5	11	1.5	68	11	21	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 1985									
18...	11	92	0.01	0.97	0.15	0.51	1.5	0.09	6.4
FEB 1986									
04...	12	130	0.014	1.37	0.22	0.37	1.7	0.07	2.8
MAR									
20...	11	100	0.022	1.13	0.31	0.5	1.6	0.04	3.5
MAY									
20...	11	130	0.037	1.61	0.11	0.18	1.8	0.14	2.4
JUL									
10...	12	140	0.039	1.75	0.08	0.39	2.1	0.18	3.3
AUG									
07...	13	130	0.015	1.47	E0.05	0.44	1.9	0.11	4.4

01396280 SOUTH BRANCH RARITAN RIVER AT MIDDLE VALLEY, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
MAY 1986 20...	1030	<0.5	<10	1	<10	40	<1	<10	4

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
MAY 1986 20...	270	3	30	<0.1	4	<1	<10	2

01396500 SOUTH BRANCH RARITAN RIVER NEAR HIGH BRIDGE, NJ

LOCATION.--Lat 40°40'40", long 74°52'46", Hunterdon County, Hydrologic Unit 02030105, on left bank 1.0 mi northeast of High Bridge, and 4.4 mi upstream from Spruce Run.

DRAINAGE AREA.--65.3 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1918 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 601: 1924. WSP 781: Drainage area. WSP 1552: 1(M), 1920(M), 1921, 1923, 1924(M), 1927-28(M), 1934(M), 1941(M).

GAGE.--Water-stage recorder and crest-stage gage. Concrete control since Sept. 28, 1930. Datum of gage is 282.10 ft above National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark). Prior to Sept. 30, 1921, reference point at same site and datum.

REMARKS.--Estimated daily discharges: Jan. 16-19 and June 13-17. Records good except those below 30 ft³/s, which are fair. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--68 years, 122 ft³/s, 25.38 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,910 ft³/s, Jan. 25, 1979, gage height, 12.07 ft; maximum height, 12.23 ft, Feb. 24, 1979 (ice jam); minimum discharge, 6.6 ft³/s, Oct. 11, 1930; minimum daily, 13 ft³/s, Aug. 11, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Outstanding floods occurred on Feb. 6, 1896, in February 1902, and October 1903. At High Bridge, according to reports of the New Jersey State Geologist, the discharges for these floods respectively were 7,560 ft³/s, 3,840 ft³/s, and 2,670 ft³/s.

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

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 17	0645	*1,350	*8.84	Mar. 15	0600	1,010	8.45
Jan. 26	2345	1,010	8.44	Apr. 17	0315	1,040	8.49

Minimum discharge, 36 ft³/s, Jan. 15.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	82	47	352	75	147	131	129	186	78	56	145	52
2	80	47	329	71	198	127	128	176	75	122	366	52
3	106	47	248	121	205	126	120	161	71	89	519	53
4	129	47	223	113	161	129	117	152	69	65	158	52
5	121	142	197	123	186	128	117	147	69	59	107	91
6	110	148	186	107	224	138	134	141	104	56	91	225
7	82	95	166	81	164	127	136	175	312	55	83	77
8	73	71	155	70	137	101	123	145	157	53	79	62
9	68	64	149	79	132	105	115	147	169	54	74	57
10	67	60	147	92	123	128	110	130	103	63	70	53
11	64	59	143	87	119	361	109	122	90	53	103	53
12	58	60	209	68	109	234	107	116	198	65	73	51
13	60	113	155	68	101	256	100	111	174	84	65	48
14	61	85	176	62	98	376	97	106	120	63	62	46
15	59	111	131	63	101	797	95	104	110	55	61	46
16	57	171	122	67	92	362	446	106	100	52	60	45
17	54	847	117	65	107	285	870	102	80	53	70	45
18	53	259	108	70	371	251	429	95	79	52	98	43
19	53	194	91	88	419	258	272	91	77	89	67	45
20	52	149	94	368	388	259	241	90	77	72	62	45
21	52	129	102	172	431	208	239	118	75	58	67	43
22	50	205	114	117	412	192	259	365	69	52	110	42
23	50	253	114	100	257	185	447	160	68	50	71	44
24	51	154	92	85	225	176	388	116	67	48	128	63
25	55	128	95	129	218	163	337	101	64	46	73	46
26	54	190	77	920	175	157	259	93	60	58	62	58
27	50	359	88	523	157	155	238	88	58	93	60	67
28	50	429	84	275	141	149	227	87	60	62	59	58
29	48	379	77	232	---	143	212	83	60	56	58	48
30	47	250	77	224	---	138	202	81	57	55	55	45
31	47	---	75	182	---	133	---	78	---	505	54	---
TOTAL	2043	5292	4493	4897	5598	6478	6803	3973	2950	2393	3210	1755
MEAN	65.9	176	145	158	200	209	227	128	98.3	77.2	104	58.5
MAX	129	847	352	920	431	797	870	365	312	505	519	225
MIN	47	47	75	62	92	101	95	78	57	46	54	42
CFSM	1.01	2.70	2.22	2.42	3.06	3.20	3.48	1.96	1.51	1.18	1.59	.90
IN.	1.16	3.01	2.56	2.79	3.19	3.69	3.88	2.26	1.68	1.36	1.83	1.00

CAL YR 1985 TOTAL 35785 MEAN 98.0 MAX 847 MIN 37 CFSM 1.50 IN. 20.39
WTR YR 1986 TOTAL 49885 MEAN 137 MAX 920 MIN 42 CFSM 2.10 IN. 28.42

01396535 SOUTH BRANCH RARITAN RIVER AT ARCH STREET AT HIGH BRIDGE, NJ

LOCATION.--Lat 40°39'49", long 74°53'52", Hunterdon County, Hydrologic Unit 02030105, at bridge on Arch Street in High Bridge, 0.9 mi northeast of Mariannes Corner, 1.0 mi downstream from Lake Solitude dam, and 4.3 mi northeast of Norton.

DRAINAGE AREA.--68.8 mi².

WATER-QUALITY RECORDS

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
03...	1320	E106	235	7.2	14.5	9.8	97	E2.0	1100	2200
JAN 1986										
29...	1330	E245	254	7.8	0.0	15.1	104	E1.9	80	70
MAR										
20...	1200	E276	183	8.3	8.5	11.2	97	E2.0	50	13
MAY										
20...	1145	E89	237	7.8	19.0	8.6	94	E2.0	50	350
JUL										
10...	1200	E60	262	8.0	21.0	8.6	97	E1.3	330	350
AUG										
07...	1200	E81	240	8.1	20.0	8.9	99	E1.2	2400	350

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
03...	86	19	9.4	10	1.4	65	13	17	<0.1
JAN 1986									
29...	62	14	6.5	19	1.5	37	13	34	<0.1
MAR									
20...	58	13	6.1	12	1.3	38	13	19	<0.1
MAY									
20...	87	19	9.7	10	1.3	70	14	17	<0.1
JUL									
10...	100	22	11	10	1.6	82	13	17	<0.1
AUG									
07...	84	18	9.5	9.7	1.5	68	13	18	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
03...	13	120	0.009	1.34	0.06	0.41	1.7	0.12	3.7
JAN 1986									
29...	13	120	0.007	1.22	0.11	0.51	1.7	0.05	2.8
MAR									
20...	11	98	0.019	1.13	0.05	0.38	1.5	0.04	2.8
MAY									
20...	10	120	0.039	1.38	0.10	0.33	1.7	0.09	2.0
JUL									
10...	8.9	130	0.036	1.33	0.10	0.39	1.7	0.11	2.8
AUG									
07...	13	120	0.011	1.25	E0.05	0.31	1.6	0.08	4.6

01396535 SOUTH BRANCH RARITAN RIVER AT ARCH STREET AT HIGH BRIDGE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	NITRO-GEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INOR-GANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)
OCT 1985											
03...	1320	120	1.7	7.4	--	--	--	--	--	<1	--
03...	1320	--	--	--	20	5	<10	20	2	--	10

DATE	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)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)
OCT 1985											
03...	220	10	--	100	--	17000	--	40	--	890	--
03...	--	--	16	--	460	--	11	--	30	--	<0.1

DATE	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)	ALDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
OCT 1985											
03...	0.08	--	20	--	<1	--	120	--	<1	<1.0	<0.1
03...	--	16	--	<1	--	80	--	4	--	--	--

DATE	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)	HEPTA-CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)
OCT 1985											
03...	14	<0.1	0.1	<0.1	<0.1	0.5	<0.1	<0.1	<0.1	<0.1	0.9
03...	--	--	--	--	--	--	--	--	--	--	--

DATE	LINDANE TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	MALA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	METH-OXY-CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARA-THION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRI-THION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PARA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PER-THANE IN BOT-TOM MA-TERIAL (UG/KG)	TOXA-PHENE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	TRI-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
OCT 1985										
03...	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1
03...	--	--	--	--	--	--	--	--	--	--

01396580 SPRUCE RUN AT GLEN GARDNER, NJ

LOCATION.--Lat 40°41'29", long 74°56'15", Hunterdon County, Hydrologic Unit 02030105, on right downstream wingwall of bridge on Sanatorium Road in Glen Gardner, 0.8 mi downstream from Alpaugh Brook, and 2.0 mi upstream from Spruce Run Reservoir.

DRAINAGE AREA.--12.3 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1978 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 389.10 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 19-31, Jan. 8-17, 28-31. Records fair except for periods of no gage-height record, Dec. 19-31, Jan. 8-17, 28-31, which are poor. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--8 years, 20.8 ft³/s, 22.97 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,820 ft³/s, Jan. 24, 1979, gage height, 7.60 ft, from high-water mark, from rating curve extended above 700 ft³/s on basis of slope-conveyance computation; minimum, 1.1 ft³/s, Oct. 1, 1982, minimum gage height, 1.76 ft Sept. 8, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 16	2330	*835	*4.59	Apr. 16	2030	591	4.10
Jan. 26	0900	570	4.06				

Minimum discharge, 4.1 ft³/s Sept. 11, 12, 13, 14, 15, 16, 17, 18, 22.

REVISIONS.--Some peak discharges reported for water years 1983-1985 have been revised as shown in the following table. They supersede figures published in the reports for 1983-1985.

Water Year	Date	Time	Discharge (ft³/s)	Gage height (ft)	Water Year	Date	Time	Discharge (ft³/s)	Gage height (ft)
1983	Mar. 19	0015	407	3.78	1984	July 5	2230	1,010	4.98
1983	Mar. 27	2300	484	3.91	1985	July 26	2330	1,040	5.04
1984	Apr. 5	0500	914	4.76					

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.7	6.4	57	11	28	22	17	26	9.1	5.1	12	4.5
2	8.1	6.3	55	9.4	43	21	17	25	7.2	15	65	4.4
3	15	6.3	34	26	35	21	16	23	6.5	7.8	33	4.4
4	15	6.4	29	19	29	23	15	22	6.4	5.5	12	4.4
5	20	31	27	31	40	25	16	21	6.4	5.2	9.3	7.6
6	12	19	28	18	37	25	22	20	13	5.1	8.3	12
7	9.0	11	26	14	30	22	20	22	22	5.1	8.1	5.0
8	7.9	8.2	26	8.7	28	19	18	18	12	5.0	8.1	4.4
9	7.6	7.3	24	9.4	24	19	16	22	14	6.4	7.7	4.2
10	7.6	6.9	23	10	22	29	15	17	8.0	5.8	8.4	4.2
11	7.3	6.7	24	9.7	22	69	15	16	6.9	5.1	13	4.1
12	6.4	7.7	31	7.3	24	33	14	15	17	6.7	10	4.1
13	7.6	11	26	6.5	24	56	13	14	15	7.3	8.5	4.1
14	7.6	11	28	6.6	24	103	13	13	10	5.6	8.2	4.1
15	7.4	24	21	6.5	23	124	13	13	12	5.2	7.7	4.1
16	7.1	118	19	6.9	22	53	149	13	8.7	5.1	7.7	4.1
17	6.4	191	18	6.7	24	42	170	13	8.4	5.2	11	4.1
18	6.2	37	16	9.3	99	37	64	12	6.6	5.1	15	4.1
19	6.4	28	12	26	75	39	42	11	6.1	8.7	8.1	4.3
20	6.5	24	13	86	73	37	36	14	6.6	6.3	7.3	4.2
21	6.3	21	14	27	112	29	38	19	5.8	5.4	8.4	4.2
22	6.1	56	13	20	68	27	57	37	5.5	5.1	12	4.1
23	6.5	39	14	17	44	26	82	18	5.5	4.9	7.5	4.6
24	7.1	25	13	14	36	25	78	13	5.4	4.9	16	5.2
25	9.1	22	14	67	32	23	50	11	5.3	4.9	7.2	4.3
26	7.6	49	9.9	290	30	23	40	9.8	5.2	6.4	5.9	5.5
27	6.9	58	11	62	26	22	36	9.1	5.2	16	5.4	8.6
28	6.5	102	11	33	25	21	33	8.7	5.2	6.2	5.4	7.0
29	6.3	60	10	28	---	20	32	8.0	5.2	6.3	5.1	5.2
30	6.3	40	9.7	27	---	18	29	7.5	5.2	11	4.7	4.7
31	6.3	---	9.6	24	---	18	---	7.9	---	58	4.6	---
TOTAL	254.8	1039.2	666.2	937.0	1099	1071	1176	499.0	255.4	255.4	350.6	149.8
MEAN	8.22	34.6	21.5	30.2	39.3	34.5	39.2	16.1	8.51	8.24	11.3	4.99
MAX	20	191	57	290	112	124	170	37	22	58	65	12
MIN	6.1	6.3	9.6	6.5	22	18	13	7.5	5.2	4.9	4.6	4.1
CFSM	.67	2.81	1.75	2.46	3.20	2.80	3.19	1.31	.69	.67	.92	.41
IN.	.77	3.14	2.01	2.83	3.32	3.24	3.56	1.51	.77	.77	1.06	.45

CAL YR 1985 TOTAL 5937.2 MEAN 16.3 MAX 358 MIN 3.3 CFSM 1.33 IN. 17.96
WTR YR 1986 TOTAL 7753.4 MEAN 21.2 MAX 290 MIN 4.1 CFSM 1.72 IN. 23.45

01396588 SPRUCE RUN NEAR GLEN GARDNER, NJ

LOCATION.--Lat 40°40'41", long 74°55'06", Hunterdon County, Hydrologic Unit 02030105, at site 800 ft downstream of Rocky Run, 0.3 mi above Van Syckel Road bridge, 1.5 mi northwest of High Bridge, and 1.6 mi southeast of Glen Gardner.

DRAINAGE AREA.--15.5 mi².

WATER-QUALITY RECORDS

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
17...	0940	E8.4	170	7.6	10.0	10.5	93	<0.6	170	540
JAN 1986										
22...	0950	E25	148	7.6	1.5	13.8	99	E1.7	170	540
MAR										
18...	1000	E45	142	--	6.0	12.2	103	2.3	<20	11
MAY										
21...	1000	E20	150	6.9	16.0	10.2	104	E1.3	460	>2400
JUL										
02...	1000	E9.5	140	6.7	17.5	9.4	100	4.0	2400	>2400
AUG										
04...	1000	E15	137	6.7	18.5	9.0	96	<1.0	230	540

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
17...	59	14	5.8	9.1	1.6	37	20	16	<0.1
JAN 1986									
22...	46	11	4.5	7.8	1.3	20	15	18	0.1
MAR									
18...	43	10	4.3	9.0	1.2	19	16	15	0.1
MAY									
21...	49	12	4.7	8.5	1.4	30	19	11	0.1
JUL									
02...	44	11	4.0	8.0	1.9	27	17	10	0.1
AUG									
04...	49	12	4.7	7.5	1.5	31	20	11	0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
17...	17	110	0.004	0.87	0.08	0.21	1.1	0.04	1.6
JAN 1986									
22...	15	85	0.004	1.20	E0.05	0.41	1.6	0.03	1.4
MAR									
18...	14	81	0.009	1.05	0.10	0.28	1.3	0.06	1.7
MAY									
21...	16	91	0.008	1.03	0.14	0.5	1.5	0.06	4.6
JUL									
02...	13	81	0.032	1.02	0.16	1.9	2.9	0.65	4.2
AUG									
04...	16	91	0.012	0.94	E0.05	0.57	1.5	0.04	3.7

01396660 MULHOCKAWAY CREEK AT VAN SYCKEL, NJ

LOCATION.--Lat 40°38'51", long 74°58'09", Hunterdon County, Hydrologic Unit 02030105, on left bank downstream side of bridge on Jutland Road, 0.2 mi south of Van Syckel, 0.8 mi north of Perryville, and 0.3 mi upstream from Spruce Run Reservoir.

DRAINAGE AREA.--11.8 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1973-77. July 1977 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 280.25 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Jan. 10-15, Feb. 7-14, Feb. 26 to Mar. 9, Mar. 24 to Apr. 14, and May 10-29. Records fair except those for period of ice effect, Jan. 10-15 and periods of no gage-height record, Feb. 7-14, Feb. 26 to Mar. 9, Mar. 24 to Apr. 14 and May 10-29, which are poor. Several measurements of water temperature, other than those published, were made during the year.

AVERAGE DISCHARGE.--9 years, 20.8 ft³/s, 23.94 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,950 ft³/s, Jan. 24, 1979, gage height, 6.48 ft, from rating curve extended above 200 ft³/s; minimum, 1.1 ft³/s, Sept. 23, 1980, gage height, 0.66 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 16	2330	*881	*4.17	Mar. 14	2245	327	2.80
Jan. 25	2315	403	3.04	Apr. 16	2015	*881	*4.17
Jan. 26	0900	406	3.05				

Minimum discharge, 3.5 ft³/s, Aug. 31, Sept. 1, 2, 14, 15, 16, 17, 18.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	6.9	51	12	24	17	16	24	8.2	5.2	9.8	3.9
2	9.7	6.8	50	11	34	16	16	23	7.5	23	67	4.3
3	26	6.9	30	24	27	17	14	22	7.0	7.5	28	4.4
4	20	7.3	26	17	25	17	14	21	7.2	5.9	11	9.2
5	21	38	25	24	41	18	14	20	7.1	5.6	7.6	26
6	13	15	26	16	33	18	19	19	14	5.3	6.5	14
7	10	10	24	11	19	16	17	19	22	5.0	6.1	6.4
8	8.9	8.6	24	10	17	13	15	18	19	4.5	5.9	5.7
9	8.6	7.9	22	10	14	13	13	20	12	12	5.7	5.1
10	8.5	7.8	21	9.8	14	26	13	15	8.3	7.0	7.1	4.8
11	8.0	7.6	22	10	14	36	13	14	7.8	5.7	17	4.6
12	7.4	8.9	26	7.7	14	24	13	14	34	7.0	6.3	4.4
13	9.9	9.5	26	6.0	12	63	12	13	17	6.7	5.8	4.0
14	8.6	14	26	6.9	12	108	11	13	11	7.1	5.5	3.8
15	8.4	19	20	6.6	12	103	15	12	9.0	5.4	5.4	3.8
16	7.9	131	19	6.9	24	45	188	13	11	5.4	5.7	4.2
17	7.3	161	18	6.9	30	37	148	12	8.9	5.7	6.1	3.8
18	7.2	29	16	6.6	105	33	53	11	7.2	5.6	6.2	4.0
19	7.6	22	14	12	67	35	37	10	6.8	25	5.3	5.3
20	7.5	20	14	14	73	31	31	12	7.3	8.1	4.9	4.7
21	7.0	17	15	19	94	27	34	16	6.3	6.3	12	4.5
22	6.9	62	14	18	53	26	58	47	6.0	5.5	9.5	4.4
23	6.9	30	15	16	39	26	78	20	6.0	5.1	6.2	6.8
24	7.8	21	16	13	33	23	44	13	5.9	4.7	9.2	6.0
25	9.5	19	16	61	31	21	33	11	5.9	4.7	5.4	4.9
26	7.6	59	12	189	22	21	31	10	5.6	12	4.9	5.0
27	7.1	53	12	59	26	20	29	9.6	5.7	17	4.9	8.8
28	6.9	98	13	32	19	19	28	9.4	5.9	9.8	5.2	6.0
29	6.6	47	12	27	---	18	27	9.0	5.6	8.9	4.4	5.7
30	6.9	34	11	25	---	17	25	8.5	5.3	8.1	4.1	5.0
31	6.9	---	11	24	---	16	---	8.3	---	23	3.9	---
TOTAL	295.6	977.2	647	711.4	928	920	1059	486.8	290.5	267.8	292.6	183.5
MEAN	9.54	32.6	20.9	22.9	33.1	29.7	35.3	15.7	9.68	8.64	9.44	6.12
MAX	26	161	51	189	105	108	188	47	34	25	67	26
MIN	6.6	6.8	11	6.0	12	13	11	8.3	5.3	4.5	3.9	3.8
CFSM	.81	2.76	1.77	1.94	2.81	2.52	2.99	1.33	.82	.73	.80	.52
IN.	.93	3.08	2.04	2.24	2.93	2.90	3.34	1.53	.92	.84	.92	.58

CAL YR 1985 TOTAL 5437.9 MEAN 14.9 MAX 404 MIN 3.4 CFSM 1.26 IN. 17.14
WTR YR 1986 TOTAL 7059.4 MEAN 19.3 MAX 189 MIN 3.8 CFSM 1.64 IN. 22.26

01396660 MULHOCKAWAY CREEK AT VAN SYCKEL, NJ--Continued

WATER-QUALITY RECORDS

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
17...	1200	7.4	200	7.4	11.5	11.0	100	<0.2	330	540
JAN 1986										
22...	1030	17	177	7.9	1.0	14.6	104	E1.2	80	27
MAR										
18...	1100	34	152	--	6.5	12.5	101	E1.2	20	170
MAY										
21...	1100	19	158	7.2	16.0	9.0	91	E1.5	700	>2400
JUL										
02...	1045	75	125	7.2	17.5	9.0	96	2.8	>24000	>2400
AUG										
04...	1040	12	175	7.3	19.0	7.3	79	<0.8	790	540

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
17...	79	20	7.1	6.9	1.6	61	17	9.0	<0.1
JAN 1986									
22...	61	16	5.2	8.2	1.2	43	16	12	0.1
MAR									
18...	49	13	4.1	7.3	1.2	28	17	11	<0.1
MAY									
21...	58	15	5.0	7.4	1.2	43	18	10	<0.1
JUL									
02...	40	11	3.0	6.0	2.4	32	14	8.7	<0.1
AUG									
04...	68	18	5.7	8.4	1.7	55	18	11	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
17...	15	110	0.007	1.04	0.08	0.3	1.3	0.02	1.5
JAN 1986									
22...	13	97	<0.003	1.08	E0.11	0.3	1.4	0.02	1.4
MAR									
18...	12	82	0.009	0.80	E0.09	0.2	1.0	<0.02	2.0
MAY									
21...	14	96	0.009	0.93	0.15	0.47	1.4	0.05	2.9
JUL									
02...	8.9	73	0.053	0.64	0.11	2.2	2.8	0.92	--
AUG									
04...	15	110	0.011	0.80	E0.05	0.42	1.2	0.05	2.7

01396660 MULHOCKAWAY CREEK AT VAN SYCKEL, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT 1985											
17...	1200	--	70	0.2	2.2	--	--	--	--	--	<1
17...	1200	<0.5	--	--	--	<10	<1	<10	<20	1	--
MAY 1986											
21...	1100	<0.5	--	--	--	20	<1	<10	<10	<1	--

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT 1985											
17...	--	50	<10	--	50	--	5000	--	10	--	240
17...	30	--	--	4	--	120	--	<1	--	50	--
MAY 1986											
21...	<10	--	--	5	--	450	--	4	--	30	--

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985											
17...	--	0.05	--	<10	--	<1	--	50	--	<1	<1.0
17...	<0.1	--	3	--	<1	--	30	--	5	--	--
MAY 1986											
21...	<0.1	--	10	--	<1	--	10	--	<1	--	--

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985											
17...	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
17...	--	--	--	--	--	--	--	--	--	--	--
MAY 1986											
21...	--	--	--	--	--	--	--	--	--	--	--

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985											
17...	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1
17...	--	--	--	--	--	--	--	--	--	--	--
MAY 1986											
21...	--	--	--	--	--	--	--	--	--	--	--

01396800 SPRUCE RUN AT CLINTON, NJ

LOCATION.--Lat 40°38'21", long 74°54'58", Hunterdon County, Hydrologic Unit 02030105, 1,800 ft downstream from dam at Spruce Run Reservoir, 0.2 mi north of Clinton, 0.3 mi upstream from mouth, and 2.2 mi southwest of High Bridge.

DRAINAGE AREA.--41.3 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and crest-stage gage. Concrete control since Mar. 15, 1964. Datum of gage is 193.5 ft above National Geodetic Vertical Datum of 1929. May to Nov. 24, 1959, nonrecording gage; Nov. 25, 1959 to July 23, 1961, water-stage recorder at site 1,800 ft upstream and at datum 1.41 ft lower; July 24, 1961 to Mar. 14, 1964, water-stage recorder at site 1,500 ft upstream at datum 1.41 ft lower.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Spruce Run Reservoir (see Raritan River basin, reservoirs in). Several measurements of water temperature, other than those published, were made during the year.

AVERAGE DISCHARGE.--27 years, 64.3 ft^3/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,410 ft^3/s, Apr. 2, 1970, gage height, 5.17 ft; no flow Aug. 22 to Sept. 17, 1963, Sept. 19, 1963 to Mar. 14, 1964, Mar. 19, 1964, result of filling Spruce Run Reservoir.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 688 ft^3/s, Apr. 17, gage height, 2.69 ft; minimum daily, 5.6 ft^3/s, Oct. 6.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.7	108	7.7	6.4	88	145	49	101	155	210	11	98
2	7.6	108	7.7	6.4	108	145	66	120	158	89	14	167
3	8.1	108	6.8	6.8	181	111	50	86	169	42	12	237
4	7.2	108	7.0	6.4	140	81	53	55	183	173	11	238
5	7.0	51	7.0	6.6	113	81	81	48	186	179	11	238
6	5.6	6.4	7.0	6.4	187	81	81	52	160	191	11	238
7	6.1	6.4	6.6	57	181	82	85	70	78	195	11	232
8	8.3	6.3	6.5	95	176	81	99	58	91	200	11	232
9	6.3	6.4	6.4	53	174	81	93	61	66	216	11	232
10	7.5	6.4	6.4	121	174	66	98	55	72	193	12	252
11	9.2	6.4	6.7	86	153	55	92	48	97	192	12	274
12	7.6	6.5	6.7	7.6	121	55	117	47	40	198	11	274
13	7.9	6.4	6.8	32	76	36	116	41	8.9	168	11	274
14	7.6	6.8	6.5	70	83	28	116	38	8.3	134	11	274
15	7.6	6.2	6.5	70	136	371	54	38	24	129	34	274
16	7.1	9.1	6.4	70	135	249	40	42	37	122	52	269
17	9.5	11	6.4	60	135	183	530	47	14	105	45	267
18	9.1	7.0	6.5	41	74	159	370	41	68	98	10	267
19	8.9	5.8	6.4	42	24	165	216	38	101	66	10	267
20	6.5	7.0	6.4	43	157	166	169	37	101	15	20	267
21	29	6.8	6.4	23	247	121	166	58	116	56	42	261
22	41	8.4	6.4	8.3	278	144	194	109	158	89	42	261
23	32	7.9	6.4	8.3	187	125	345	84	160	84	43	261
24	32	7.9	6.4	8.3	194	152	254	50	182	96	43	260
25	32	7.6	6.5	10	166	137	193	38	200	108	43	255
26	32	8.9	6.4	33	148	66	163	26	207	115	43	244
27	41	8.5	6.4	232	145	29	148	32	222	61	64	232
28	67	8.7	6.4	197	145	34	134	45	224	30	98	183
29	103	8.3	6.4	144	---	46	121	124	215	72	98	129
30	106	7.7	6.5	122	---	46	115	148	210	72	98	123
31	108	---	6.4	103	---	52	---	155	---	37	98	---
TOTAL	775.4	667.8	205.0	1775.5	4126	3373	4408	1992	3711.2	3735	1043	7080
MEAN	25.0	22.3	6.61	57.3	147	109	147	64.3	124	120	33.6	236
MAX	108	108	7.7	232	278	371	530	155	224	216	98	274
MIN	5.6	5.8	6.4	6.4	24	28	40	26	8.3	15	10	98

CAL YR 1985 TOTAL 16484.6 MEAN 45.2 MAX 204 MIN 5.5
WTR YR 1986 TOTAL 32891.9 MEAN 90.1 MAX 530 MIN 5.6

01396800 SPRUCE RUN AT CLINTON, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960-62, 1967 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1968 to September 1969, January 1971 to September 1980.
SUSPENDED-SEDIMENT DISCHARGE: October 1960 to April 1961.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
17...	1100	9.7	132	7.4	16.0	10.3	103	E1.7	90	33
JAN 1986										
22...	1100	8.3	163	8.1	2.0	13.8	101	<1.1	<20	6
MAR										
18...	1140	159	156	--	7.0	12.2	100	3.0	<20	2
MAY										
21...	1320	60	149	8.7	19.5	10.2	111	3.4	50	350
JUL										
02...	1220	17	152	7.2	19.0	9.8	107	E1.8	50	350
AUG										
04...	1130	11	160	7.3	22.5	9.2	106	3.3	50	4

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
17...	62	15	5.9	6.8	1.5	45	16	10	<0.1
JAN 1986									
22...	58	14	5.5	7.1	1.6	39	15	9.8	0.1
MAR									
18...	50	12	4.8	7.8	1.5	33	16	11	<0.1
MAY									
21...	50	12	4.9	7.6	1.2	36	18	11	0.1
JUL									
02...	52	13	4.8	7.6	1.4	36	18	11	<0.1
AUG									
04...	58	14	5.6	7.0	1.4	45	17	11	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
17...	6.5	89	0.009	0.14	0.18	0.51	0.65	0.06	2.6
JAN 1986									
22...	7.1	84	0.004	0.46	E0.08	0.43	0.89	0.02	2.1
MAR									
18...	7.4	80	0.011	0.62	0.12	0.46	1.1	0.04	3.8
MAY									
21...	0.2	77	0.009	0.29	0.11	0.61	0.9	0.05	3.9
JUL									
02...	3.2	81	0.016	0.30	0.10	0.47	0.77	0.03	3.7
AUG									
04...	4.2	87	0.019	0.17	E0.07	0.45	0.62	0.03	2.9

01396800 SPRUCE RUN AT CLINTON, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
OCT 1985 17...	1100	<0.5	20	1	<10	<20	3	20	3
MAY 1986 21...	1320	<0.5	40	<1	<10	<10	<1	<10	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)
OCT 1985 17...	380	<1	220	<0.1	3	<1	30	3
MAY 1986 21...	120	3	30	<0.1	4	<1	<10	2

01397000 SOUTH BRANCH RARITAN RIVER AT STANTON, NJ

LOCATION.--Lat 40°34'21", long 74°52'10", Hunterdon County, Hydrologic Unit 02030105, on right bank at downstream side of bridge on Stanton Road at Stanton Station, 0.4 mi upstream from Prescott Brook, and 1.4 mi west of Stanton.

DRAINAGE AREA.--147 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1903 to December 1906, July 1919 to current year. Monthly discharge only for some periods published in WSP 1302.

REVISED RECORDS.--WSP 561: Drainage area. WSP 1552: 1904, 1922-24(M), 1928-29(M), 1933-35(M).

GAGE.--Water-stage recorder. Datum of gage is 125.01 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 17, 1925, nonrecording gage on downstream side of highway bridge at same site and datum.

REMARKS.--Estimated daily discharges: Jan. 8-17. Records good except those for period of ice effect, Jan. 8-17, which are fair. Flow regulated by Spruce Run Reservoir since September 1963 (see Raritan River basin, reservoirs in). Occasional regulation at low flows by ponds above station. Water diverted by Hamden Pumping Station, 4.0 mi upstream, into Round Valley Reservoir since February 1966 (see Raritan River basin, diversions).

AVERAGE DISCHARGE.--70 years (water years 1904-06, 1920-86) 245 ft³/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,000 ft³/s, Aug. 19, 1955, gage height, 15.22 ft, from rating curve extended above 6,400 ft³/s on basis of computation of flow over Clinton Dam, 6.5 mi upstream, at gage height 10.72 ft, contracted-opening measurement 1.7 mi downstream, and slope-area measurement 0.4 mi downstream at gage height 15.22 ft, adjusted to present site; minimum, 9 ft³/s, Nov. 7, 1931; minimum daily, 12 ft³/s, Oct. 18, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,890 ft³/s, Jan. 26, gage height, 7.02 ft; minimum, 55 ft³/s, July 23, gage height, 2.11 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	144	161	565	126	351	398	159	352	221	247	198	149
2	135	160	545	121	398	387	179	357	218	256	467	189
3	168	160	403	167	511	351	153	308	227	152	797	274
4	187	160	321	191	432	317	143	262	233	212	222	283
5	174	264	294	186	414	304	106	240	242	223	148	323
6	167	197	284	169	547	319	126	237	262	223	127	534
7	132	147	266	165	467	300	198	279	432	230	115	321
8	120	109	251	138	407	256	191	252	272	224	107	290
9	110	96	239	155	397	258	177	246	272	256	104	278
10	103	91	230	180	380	253	173	229	178	243	100	288
11	102	88	220	172	367	455	159	207	196	223	194	322
12	95	88	273	134	306	428	121	197	296	238	111	318
13	97	133	244	134	274	410	112	183	234	245	94	313
14	97	121	260	124	247	625	170	175	153	210	89	310
15	94	149	210	126	300	1570	145	170	135	172	97	309
16	90	247	193	125	292	892	798	175	170	172	121	309
17	86	1700	189	130	303	649	2080	179	121	152	124	310
18	85	491	182	139	712	491	1300	166	142	149	134	310
19	84	297	166	180	897	467	748	156	178	182	97	311
20	81	246	184	639	1000	479	574	151	181	125	87	308
21	89	214	180	299	1090	359	526	192	182	106	129	302
22	112	340	176	190	1180	279	567	517	208	139	181	300
23	99	433	155	169	754	245	1100	308	220	126	136	305
24	100	256	153	148	627	327	830	200	221	142	181	326
25	105	217	154	248	556	293	749	166	252	145	138	307
26	104	265	138	2290	468	235	559	143	245	168	118	301
27	103	631	141	1310	454	176	504	139	259	206	121	318
28	126	704	137	727	419	177	453	137	267	102	160	278
29	163	769	133	556	---	115	414	196	258	136	157	166
30	163	451	133	450	---	109	393	217	248	131	152	184
31	163	---	140	416	---	169	---	221	---	668	150	---
TOTAL	3678	9385	7159	10304	14550	12093	13907	6957	6723	6203	5156	8836
MEAN	119	313	231	332	520	390	464	224	224	200	166	295
MAX	187	1700	565	2290	1180	1570	2080	517	432	668	797	534
MIN	81	88	133	121	247	109	106	137	121	102	87	149

CAL YR 1985 TOTAL 70846 MEAN 194 MAX 1700 MIN 72
WTR YR 1986 TOTAL 104951 MEAN 288 MAX 2290 MIN 81

01397400 SOUTH BRANCH RARITAN RIVER AT THREE BRIDGES, NJ

LOCATION.--Lat 40°31'01", long 74°48'12", Hunterdon County, Hydrologic Unit 02030105, at bridge on Main Street in Three Bridges, 0.4 mi northeast of Voorhees Corner, 1.3 mi downstream of Bushkill Brook, and 2.2 mi southeast of Darts Mills.

DRAINAGE AREA.--181 mi².

WATER-QUALITY RECORDS

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
24...	1000	E108	283	8.0	13.0	9.5	90	3.3	>24000	>2400
JAN 1986										
29...	1130	E631	258	8.0	0.0	15.2	104	1.6	170	240
MAR										
17...	1130	E729	192	8.0	7.0	12.6	103	E1.8	20	2
MAY										
28...	1245	E150	273	8.0	22.5	9.3	109	E1.6	220	130
JUL										
09...	1230	E266	224	7.8	23.0	8.2	97	<0.3	1700	350
AUG										
04...	1215	E266	205	8.0	20.5	8.4	94	E2.2	3500	110

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
24...	110	27	9.6	17	2.3	83	32	23	0.1
JAN 1986									
29...	67	16	6.5	16	2.1	41	15	26	<0.1
MAR									
17...	60	14	6.0	12	1.6	35	16	20	<0.1
MAY									
28...	91	22	8.8	15	2.3	67	26	20	<0.1
JUL									
09...	70	17	6.8	12	2.0	54	25	15	0.1
AUG									
04...	61	15	5.6	12	2.4	44	22	15	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
24...	7.3	170	0.025	1.01	0.17	0.6	1.6	0.19	3.8
JAN 1986									
29...	11	120	0.014	1.50	0.71	0.88	2.4	0.17	3.3
MAR									
17...	10	100	0.047	1.29	0.29	0.49	1.8	0.09	2.9
MAY									
28...	8.9	140	0.047	1.44	0.13	0.57	2.0	0.20	3.3
JUL									
09...	4.2	110	0.017	0.70	<0.05	0.48	1.2	0.12	--
AUG									
04...	11	110	0.037	1.05	E0.05	0.64	1.7	0.12	7.0

01397400 SOUTH BRANCH RARITAN RIVER AT THREE BRIDGES, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
OCT 1985 24...	1000	<0.5	10	1	<10	40	<1	20	3

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1985 24...	130	1	40	<0.1	1	<1	20	4

01398000 NESHANIC RIVER AT REAVILLE, NJ

LOCATION.--Lat 40°28'18", long 74°49'42", Hunterdon County, Hydrologic Unit 02030105, on left bank 50 ft downstream from highway bridge, 0.6 ft southwest of Reaville, 1.5 mi downstream from Third Neshanic River, and 2.2 mi upstream from Back Brook.

DRAINAGE AREA.--25.7 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1930 to current year.

REVISED RECORDS.--WSP 1552: 1933, 1934(M), 1936(M), 1938, 1940(M), 1942(M), 1945-46, 1951, 1952(M).

GAGE.--Water-stage recorder. Concrete control since Sept. 26, 1935. Datum of gage is 109.46 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Several measurements of water temperature, other than those published, were made during the year.

AVERAGE DISCHARGE.--56 years, 36.3 ft³/s, 19.17 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,900 ft³/s, Aug. 28, 1971, gage height, 13.84 ft, from high-water mark in gage house, from rating curve extended above 1,700 ft³/s on basis of slope-area measurement 0.7 mi downstream (adjusted to present site) at gage height 11.90 ft; no flow many days 1965, 1966, and part of July 17, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,600 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 17	0100	2,290	8.05	Apr. 16	2045	*3,180	*8.96
Jan. 26	0545	1,680	7.22				

Minimum discharge, 0.34 ft³/s, Sept. 18, gage height, 2.13 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	3.4	198	7.7	30	28	13	26	2.7	.96	8.1	1.0
2	11	3.3	132	7.1	50	25	13	22	2.4	16	23	1.1
3	100	3.1	72	23	41	23	12	19	2.3	2.9	28	1.2
4	64	3.0	55	15	36	23	11	17	2.2	1.7	7.5	1.1
5	237	82	47	28	121	24	11	16	2.1	1.3	4.5	4.5
6	71	25	47	16	91	24	17	15	3.9	1.1	3.3	5.3
7	41	17	40	11	53	20	16	14	4.8	.99	2.6	1.7
8	28	13	41	8.7	45	14	14	12	2.8	.84	2.4	1.2
9	22	11	38	7.9	37	16	12	12	2.4	1.2	1.9	1.0
10	19	9.4	35	8.6	33	17	11	10	2.0	1.6	1.7	.94
11	15	8.6	34	8.0	33	32	10	9.4	1.9	.99	44	.93
12	12	8.0	38	7.7	27	24	9.4	8.8	46	1.3	5.2	.92
13	12	8.3	38	7.5	24	121	8.6	8.0	11	4.9	3.4	.77
14	11	8.3	44	5.8	23	222	8.3	7.2	5.1	4.5	2.5	.65
15	9.5	9.3	29	5.0	22	320	8.4	7.2	3.5	1.3	2.1	.55
16	8.1	220	27	5.1	19	109	785	7.3	4.8	1.0	1.9	.63
17	6.6	620	25	5.2	21	74	714	6.8	8.9	1.3	2.1	.66
18	6.2	95	19	6.5	196	57	203	6.1	3.1	1.3	2.7	.49
19	6.3	62	16	15	234	56	96	5.3	2.6	15	1.6	2.2
20	5.6	48	15	112	366	47	69	5.4	2.8	2.7	1.3	1.2
21	5.0	37	15	39	339	35	68	6.5	2.1	1.7	10	.98
22	4.9	190	13	27	161	31	87	16	1.8	1.2	12	1.1
23	4.7	99	14	24	99	29	232	7.1	1.8	.99	3.6	3.4
24	4.7	60	15	18	78	26	105	5.5	1.7	.96	9.0	3.1
25	4.9	46	13	126	65	22	69	4.7	1.4	.92	2.8	1.4
26	4.2	72	10	936	47	21	55	4.1	1.2	7.6	2.1	1.1
27	3.8	127	9.5	275	41	20	46	3.9	1.3	25	1.9	8.9
28	3.5	420	9.5	90	33	18	39	3.6	1.5	3.3	2.3	3.2
29	3.4	256	8.3	57	---	17	34	3.3	1.4	3.1	1.8	1.8
30	3.5	139	7.4	45	---	16	29	3.0	1.1	3.5	1.4	1.5
31	3.5	---	7.3	36	---	15	---	2.8	---	63	1.1	---
TOTAL	744.4	2703.7	1112.0	1983.8	2365	1526	2805.7	295.0	132.6	174.15	197.8	54.52
MEAN	24.0	90.1	35.9	64.0	84.5	49.2	93.5	9.52	4.42	5.62	6.38	1.82
MAX	237	620	198	936	366	320	785	26	46	63	44	8.9
MIN	3.4	3.0	7.3	5.0	19	14	8.3	2.8	1.1	.84	1.1	.49
CFSM	.93	3.51	1.40	2.49	3.29	1.91	3.64	.37	.17	.22	.25	.07
IN.	1.08	3.91	1.61	2.87	3.42	2.21	4.06	.43	.19	.25	.29	.08

CAL YR 1985 TOTAL 9750.05 MEAN 26.7 MAX 685 MIN .39 CFSM 1.04 IN. 14.11
WTR YR 1986 TOTAL 14094.67 MEAN 38.6 MAX 936 MIN .49 CFSM 1.50 IN. 20.40

01398000 NESHANIC RIVER AT REAVILLE, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1957, 1962, 1979 to current year.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
24...	1145	4.6	504	7.9	12.0	11.1	103	E2.2	1700	170
JAN 1986										
22...	1240	26	273	8.0	3.0	15.0	112	E1.7	460	920
MAR										
17...	1300	73	210	8.1	8.5	12.4	106	E1.4	140	130
JUN										
02...	1330	2.3	445	9.5	24.5	18.2	219	2.3	70	170
JUL										
09...	1345	0.77	391	8.0	25.5	5.8	72	<0.4	790	140
AUG										
04...	1330	7.7	389	8.3	24.5	11.2	135	E1.6	1300	920

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
24...	170	46	14	30	2.1	75	82	60	<0.1
JAN 1986									
22...	87	22	7.7	15	2.1	35	37	25	<0.1
MAR									
17...	66	16	6.3	11	1.8	28	23	20	<0.1
JUN									
02...	160	42	14	23	2.1	75	97	34	<0.1
JUL									
09...	150	39	13	16	2.7	109	55	18	0.1
AUG									
04...	120	31	9.3	23	3.0	65	39	45	0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
24...	3.8	280	0.018	1.16	0.14	0.54	1.7	0.03	2.6
JAN 1986									
22...	11	140	0.018	2.51	E0.07	0.66	3.2	0.07	2.1
MAR									
17...	11	110	0.013	2.84	0.05	0.24	3.1	0.07	3.3
JUN									
02...	6.2	260	0.013	<0.05	<0.05	0.35	--	0.04	4.4
JUL									
09...	5.8	210	0.008	<0.05	0.09	0.63	--	0.14	--
AUG									
04...	10	200	0.036	1.11	E0.08	0.64	1.7	0.12	4.2

01398000 NESHANIC RIVER AT REAVILLE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
OCT 1985 24...	1145	<0.5	10	<1	<10	70	<1	10	3

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1985 24...	70	1	30	<0.1	1	<1	10	3

01398045 BACK BROOK TRIBUTARY NEAR RINGOES, NJ

LOCATION.--Lat 40°25'41", long 74°49'52", Hunterdon County, Hydrologic Unit 02030105, on right upstream wingwall of bridge on Wertsville Road, 2.1 mi east of Ringoes, 1.3 mi upstream from Back Brook, and 2.3 mi southwest of Wertsville.

DRAINAGE AREA.--1.98 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 161.6 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 12 to Nov. 4, Nov. 9-15, Jan. 8-17, June 12-18, July 13-30, Sept. 5, 6. Records fair except below 1.0 ft³/s and for periods of estimated discharge, which are poor.

AVERAGE DISCHARGE.--9 years, 4.34 ft³/s, 29.77 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,290 ft³/s, Aug. 3, 1979, gage height, 5.05 ft, from rating curve extended above 200 ft³/s on basis of contracted-opening measurement at gage height 4.64 ft. No flow July 19, 1986.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 16	1845	*438	*2.76	No peak greater than base discharge.			

No flow July 19.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.83	.20	13	.47	1.9	1.6	1.1	1.0	.16	.15	.37	.18
2	.73	.18	7.6	.47	3.9	1.4	1.1	.85	.15	.55	3.0	.20
3	14	.17	3.6	2.3	2.5	1.5	1.0	.74	.13	.15	2.2	.14
4	5.1	.16	2.5	1.4	2.5	1.3	1.0	.69	.13	.08	.35	.11
5	9.8	8.1	2.2	3.9	13	1.5	1.0	.67	.13	.06	.12	.42
6	3.5	1.8	2.3	1.8	6.1	1.7	1.7	.64	.16	.05	.07	.31
7	2.0	1.3	2.1	1.0	6.9	1.3	1.6	.59	.21	.04	.06	.08
8	1.4	1.1	2.2	.44	3.1	1.1	1.5	.56	.22	.03	.06	.08
9	1.2	.80	2.6	.42	2.1	.90	1.3	.51	.15	.01	.05	.08
10	1.1	.70	2.9	.47	2.1	1.2	1.2	.48	.10	.02	1.1	.09
11	.99	.65	2.4	.41	2.8	2.4	1.0	.46	.12	.01	11	.11
12	1.0	.60	2.6	.40	3.0	1.8	.91	.46	3.2	.02	1.3	.09
13	.85	.65	3.5	.39	2.0	15	.78	.44	.73	.25	.70	.08
14	.70	.65	3.7	.44	1.6	31	.74	.42	.31	.21	.55	.06
15	.60	.80	2.0	.20	1.6	20	.83	.42	.21	.06	.50	.05
16	.50	40	1.8	.23	1.4	7.3	109	.39	.30	.05	.47	.06
17	.45	33	1.6	.31	1.3	4.6	54	.37	.38	.06	.52	.08
18	.40	4.5	1.3	.42	22	3.6	12	.32	.16	.06	.50	.09
19	.35	3.0	.97	1.3	20	3.6	4.9	.28	.14	.91	.36	.21
20	.32	2.4	.89	10	27	2.7	3.0	.32	.22	.11	.26	.13
21	.30	1.9	.88	3.1	28	2.1	2.9	.33	.23	.08	1.3	.14
22	.28	18	.74	2.1	11	2.0	7.2	.53	.18	.06	1.3	.10
23	.28	5.7	.77	1.6	6.1	1.8	18	.33	.18	.05	.71	.18
24	.29	3.3	.83	1.3	4.7	1.7	6.5	.30	.17	.05	1.0	.09
25	.31	2.4	.76	30	3.7	1.5	3.5	.27	.14	.05	.51	.08
26	.29	6.1	.57	81	3.3	1.4	2.4	.25	.12	.38	.45	.10
27	.26	8.2	.51	19	2.0	1.4	2.0	.23	.12	1.3	.40	.19
28	.24	47	.52	5.6	2.2	1.3	1.5	.21	.16	.13	.47	.10
29	.21	15	.47	3.3	---	1.3	1.3	.19	.15	.18	.35	.08
30	.22	16	.47	2.4	---	1.2	1.1	.19	.13	.19	.30	.08
31	.22	---	.45	2.1	---	1.1	---	.17	---	6.4	.25	---
TOTAL	48.72	224.36	68.73	178.27	187.8	122.30	246.06	13.61	8.89	11.75	30.58	3.79
MEAN	1.57	7.48	2.22	5.75	6.71	3.95	8.20	.44	.30	.38	.99	.13
MAX	14	47	13	81	28	31	109	1.0	3.2	6.4	11	.42
MIN	.21	.16	.45	.20	1.3	.90	.74	.17	.10	.01	.05	.05
CFSM	.79	3.78	1.12	2.90	3.39	1.99	4.14	.22	.15	.19	.50	.07
IN.	.92	4.22	1.29	3.35	3.53	2.30	4.62	.26	.17	.22	.57	.07

CAL YR 1985 TOTAL 953.65 MEAN 2.61 MAX 225 MIN .02 CFSM 1.32 IN. 17.92
WTR YR 1986 TOTAL 1144.86 MEAN 3.14 MAX 109 MIN .01 CFSM 1.59 IN. 21.51

01398107 HOLLAND BROOK AT READINGTON, NJ

LOCATION.--Lat 40°33'30", long 74°43'50", Somerset County, Hydrologic Unit 02030105, on right bank 15 ft downstream from bridge on Old York Road, 0.9 mi southeast of Readington, and 2.5 mi upstream from mouth.

DRAINAGE AREA.--9.00 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1978 to current year.

REVISED RECORDS.--WDR NJ-80-1: 1978, 1979(P). WDR NJ-82-1: Drainage area.

GAGE.--Water-stage recorder, crest-stage gage and concrete parking-block control. Datum of gage is 77.65 ft above National Geodetic Vertical Datum of 1929 (levels by Somerset County).

REMARKS.--Estimated daily discharges: Feb. 11-23. Records good except for period of no gage-height record, Feb. 11-23, which are fair. Several measurements of water temperature were made during the year. Recording rain-gage and gage-height telemeters at station.

AVERAGE DISCHARGE.--8 years, 15.5 ft³/s, 23.04 in/yr.

COOPERATION.--Gage-height record collected in cooperation with Somerset County.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,300 ft³/s, July 7, 1984, gage height, 8.08 ft; minimum, 0.22 ft³/s, Aug. 28, 1980, gage height, 1.61 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 5	1250	446	4.53	Apr. 16	2045	802	6.09
Nov. 17	0105	*841	*6.25	Aug. 11	0205	533	4.93
Jan. 26	0440	582	5.15				

Minimum discharge, 0.83 ft³/s, Sept. 18.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	1.9	40	3.3	14	13	8.4	12	2.5	1.2	3.8	2.0
2	5.3	1.9	39	2.9	18	12	8.0	11	2.4	9.3	31	1.9
3	15	1.9	26	7.0	14	11	6.5	9.4	2.1	2.0	24	1.9
4	14	1.7	22	5.0	14	10	5.9	8.8	1.9	1.5	9.2	1.9
5	63	13	19	9.6	31	9.9	5.6	8.3	2.0	1.4	6.4	10
6	28	5.9	17	6.4	27	9.6	7.7	7.8	6.1	1.3	4.9	6.2
7	17	4.9	14	4.8	21	8.4	6.7	7.7	5.6	1.2	4.0	3.5
8	11	4.4	14	4.1	18	6.8	6.1	7.1	6.1	1.1	3.5	2.9
9	8.7	3.8	13	4.0	15	7.5	5.4	6.8	4.9	1.9	2.9	2.6
10	7.3	3.7	12	4.6	14	7.7	5.0	6.2	2.9	2.5	3.6	2.4
11	5.9	3.7	13	4.2	14	9.7	4.9	5.8	2.5	1.9	80	2.2
12	5.1	3.6	14	4.0	12	8.6	4.7	5.6	17	2.4	11	1.9
13	5.3	3.8	14	3.9	11	30	4.5	5.2	14	3.5	7.7	1.8
14	4.7	3.9	15	2.8	10	81	4.1	4.9	7.1	3.0	5.9	1.5
15	4.2	5.3	14	1.9	9.0	137	4.3	4.9	5.2	1.7	4.6	1.7
16	3.7	91	13	2.0	8.4	54	192	4.9	5.7	1.7	4.5	1.5
17	3.1	254	12	2.1	10	34	271	4.8	4.0	1.7	7.3	1.3
18	3.1	46	9.8	2.7	62	25	93	4.4	3.0	1.6	6.4	1.2
19	3.1	28	8.0	4.9	81	23	45	4.1	2.7	7.0	3.9	1.5
20	2.8	21	7.3	21	126	18	31	4.1	2.6	2.2	3.2	1.4
21	2.5	17	7.3	11	120	14	28	4.4	2.1	1.8	9.2	1.4
22	2.5	55	6.6	9.3	67	12	30	7.4	1.9	1.5	9.4	1.2
23	2.3	42	6.8	8.4	43	11	71	4.5	1.9	1.4	6.7	1.4
24	2.4	28	6.8	7.2	28	9.2	44	4.0	1.7	1.4	8.2	1.9
25	2.4	21	6.4	56	25	7.4	30	3.6	1.4	1.3	5.0	1.4
26	2.2	30	4.5	320	20	6.9	24	3.4	1.4	3.6	4.3	1.9
27	2.2	53	4.6	120	18	6.2	20	3.4	1.4	8.5	4.0	3.3
28	2.2	136	4.6	45	15	6.3	17	3.4	1.5	2.4	3.6	2.7
29	1.9	98	4.0	27	---	8.5	15	2.9	1.5	3.6	2.9	1.8
30	2.0	48	3.4	22	---	9.0	13	2.7	1.3	3.8	2.6	1.7
31	2.0	---	3.1	17	---	8.7	---	2.6	---	9.8	2.3	---
TOTAL	241.2	1031.4	394.2	744.1	865.4	615.4	1011.8	176.1	116.4	89.2	286.0	70.0
MEAN	7.78	34.4	12.7	24.0	30.9	19.9	33.7	5.68	3.88	2.88	9.23	2.33
MAX	63	254	40	320	126	137	271	12	17	9.8	80	10
MIN	1.9	1.7	3.1	1.9	8.4	6.2	4.1	2.6	1.3	1.1	2.3	1.2
CFSM	.86	3.82	1.41	2.67	3.43	2.21	3.74	.63	.43	.32	1.03	.26
IN.	1.00	4.26	1.63	3.08	3.58	2.54	4.18	.73	.48	.37	1.18	.29

CAL YR 1985 TOTAL 3559.12 MEAN 9.75 MAX 254 MIN .83 CFSM 1.08 IN. 14.71
WTR YR 1986 TOTAL 5641.2 MEAN 15.5 MAX 320 MIN 1.1 CFSM 1.72 IN. 23.32

01398260 NORTH BRANCH RARITAN RIVER NEAR CHESTER, NJ

LOCATION.--Lat 40°37'34", Morris County, Hydrologic Unit 02030105, at bridge on State Route 24, 0.8 mi upstream from Burnett Brook, and 3.8 mi east of Chester.

DRAINAGE AREA.--7.57 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-65, 1967, 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 Epaidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
09...	1300	E5.1	245	7.1	13.5	10.2	99	<0.9	170	540
FEB 1986										
06...	1100	E13	390	6.6	3.0	13.0	98	<0.8	700	79
MAR										
31...	1015	E11	191	7.3	11.0	13.2	120	E1.7	20	7
MAY										
27...	1040	E6.6	226	7.1	15.0	8.8	--	2.4	790	220
JUL										
07...	1015	E4.1	240	6.8	19.5	7.5	82	E1.5	230	280
AUG										
11...	1030	E7.4	192	7.0	21.0	8.7	99	E2.2	1700	>2400

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
09...	72	18	6.5	15	2.3	49	18	24	<0.1
FEB 1986									
06...	56	14	5.2	50	1.5	23	14	88	<0.1
MAR									
31...	58	14	5.5	13	1.5	33	14	27	0.1
MAY									
27...	69	17	6.5	15	2.0	42	24	31	<0.1
JUL									
07...	73	18	6.8	15	2.3	51	17	24	<0.1
AUG									
11...	57	14	5.3	12	1.9	37	13	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, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
09...	16	130	0.136	1.65	0.66	1.1	2.8	0.48	3.6
FEB 1986									
06...	13	200	0.009	0.98	0.58	0.79	1.8	0.12	2.6
MAR									
31...	12	110	0.031	0.99	0.54	0.95	1.9	0.21	2.5
MAY									
27...	17	140	0.137	1.68	1.08	1.5	3.2	0.45	3.9
JUL									
07...	17	130	0.164	2.22	0.18	0.61	2.8	0.55	3.3
AUG									
11...	15	110	0.054	0.92	0.27	0.46	1.4	0.23	4.6

01398260 NORTH BRANCH RARITAN RIVER NEAR CHESTER, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
MAY 1986 27...	1040	<0.5	10	<1	<10	40	<1	<10	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 1986 27...	130	1	30	0.1	5	<1	<10	2

01398500 NORTH BRANCH RARITAN RIVER NEAR FAR HILLS, NJ

LOCATION.--Lat 40°42'30", long 74°38'11", Somerset County, Hydrologic Unit 02030105, on left bank 75 ft upstream from Ravine Lake Dam, 1.6 mi north of Far Hills, and 2.3 mi upstream from Peapack Brook. Water-quality samples collected at bridge 900 ft downstream from gage.

DRAINAGE AREA.--26.2 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1921 to September 1975, October 1977 to current year. Operated as crest-stage gage water years 1976-77. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 781: Drainage area. WSP 1552: 1922-23, 1924-25(M), 1935(M). WSP 1902: 1954.

GAGE.--Water-stage recorder and crest-stage gage above masonry dam. Datum of gage is 224.49 ft above National Geodetic Vertical Datum of 1929 (New Jersey Geological Survey bench mark). Prior to June 18, 1925, nonrecording gage in stilling box at left end of dam at same datum.

REMARKS.--Estimated daily discharges: Dec. 15 to Jan. 2. Records good except for periods of ice effect, Dec. 15 to Jan. 2, which are fair. Records given herein include diversion by small turbine at dam (average discharge, 3.0 ft³/s) and returned to river 1,000 ft downstream from Ravine Lake Dam. Turbine operating from Oct. 1-26, and Apr. 20 to Sept. 30. Flow regulated occasionally by operation of waste gate in dam (no gate opening this year). Recording rain gage, with telemeter, 500 ft downstream of station. Gage-height telemeter at station. Several measurements of water temperature were made during the year.

COOPERATION.--Gage-height record collected in cooperation with Somerset County.

AVERAGE DISCHARGE.--63 years (water years 1922-75, 1978-86) 47.9 ft³/s, 24.83 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,390 ft³/s, Aug. 28, 1971, gage height, 7.28 ft, from rating curve extended above 2,000 ft³/s on basis of computation of peak flow over dam; no flow at times when Ravine Lake was filling.

EXTREMES OUTSIDE PERIOD OF RECORD.--Stage of 7.6 ft, from floodmark, occurred July 23, 1919, discharge about 7,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 17	0315	*1,200	*3.94	Apr. 16	2200	901	3.61
Jan. 26	0530	1,020	3.75	Aug. 3	0045	761	3.44

Minimum daily discharge, 12 ft³/s, July 11, Sept. 16, 17, 18.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	17	112	22	56	55	48	70	21	14	32	13
2	19	22	100	22	74	54	49	68	19	70	89	13
3	28	17	67	51	66	55	50	64	18	33	194	13
4	34	14	59	43	58	56	50	62	18	21	43	16
5	85	83	60	54	69	57	49	60	19	17	30	54
6	48	76	62	40	73	59	58	58	38	17	26	87
7	27	36	56	30	59	56	55	71	52	16	24	28
8	21	24	54	24	57	45	52	58	34	15	23	19
9	20	21	50	29	51	46	49	56	32	15	22	16
10	22	19	48	29	49	51	48	52	24	14	20	15
11	22	19	49	29	50	85	47	49	25	12	57	15
12	20	22	70	28	46	63	47	47	86	20	31	15
13	21	31	55	28	41	90	44	45	55	25	23	15
14	20	28	60	24	43	146	43	45	38	18	19	13
15	21	44	41	21	48	265	43	45	31	14	17	13
16	19	75	39	26	44	105	312	46	29	13	17	12
17	17	406	37	27	48	92	465	46	27	14	18	12
18	18	116	33	30	181	91	184	43	24	14	24	12
19	16	87	31	49	135	97	117	41	22	27	21	13
20	19	75	29	99	139	91	104	42	24	23	20	15
21	19	93	26	55	158	70	109	49	21	17	21	15
22	17	177	33	44	128	67	110	65	20	14	34	14
23	16	74	36	42	90	67	179	46	19	13	18	15
24	23	47	35	40	76	63	135	39	17	13	32	23
25	19	42	28	72	71	59	108	33	17	13	19	18
26	13	80	26	620	65	59	98	30	15	30	16	29
27	14	142	24	188	62	58	91	26	15	41	15	26
28	14	219	24	91	58	55	83	26	17	21	15	20
29	14	128	26	69	---	54	79	22	19	17	15	16
30	14	77	22	69	---	53	75	20	15	14	14	15
31	14	---	26	61	---	49	---	21	---	59	13	---
TOTAL	694	2311	1418	2056	2095	2313	2981	1445	811	664	962	600
MEAN	22.4	77.0	45.7	66.3	74.8	74.6	99.4	46.6	27.0	21.4	31.0	20.0
MAX	85	406	112	620	181	265	465	71	86	70	194	87
MIN	13	14	22	21	41	45	43	20	15	12	13	12
CFSM	.85	2.94	1.74	2.53	2.85	2.85	3.79	1.78	1.03	.82	1.18	.76
IN.	.99	3.28	2.01	2.92	2.97	3.28	4.23	2.05	1.15	.94	1.37	.85

CAL YR 1985 TOTAL 12199.0 MEAN 33.4 MAX 438 MIN 4.8 CFSM 1.27 IN. 17.32
WTR YR 1986 TOTAL 18350 MEAN 50.3 MAX 620 MIN 12 CFSM 1.92 IN. 26.05

01399120 NORTH BRANCH RARITAN RIVER AT BURNT MILLS, NJ

LOCATION.--Lat 40°38'09", long 74°40'56", Somerset County, Hydrologic Unit 02030105, at bridge on Burnt Mills Road in Burnt Mills, 0.1 mi upstream from Lamington River, and 4.0 mi southwest of Far Hills.

DRAINAGE AREA.--63.8 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964, 1977 to current year.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
NOV 1985										
12...	1230	E39	160	7.1	9.0	11.2	97	E0.8	130	920
FEB 1986										
10...	1115	E96	354	6.8	2.0	14.2	103	<1.2	490	17
APR										
08...	1050	E104	206	7.0	11.5	11.8	110	E1.5	50	70
JUN										
03...	1150	E34	223	8.0	17.0	11.2	115	E2.2	220	170
JUL										
16...	1130	E28	240	7.1	21.5	10.2	115	<1.2	490	350
AUG										
21...	1130	E34	242	6.7	20.0	9.4	103	E1.2	790	920

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
NOV 1985									
12...	88	22	8.0	13	2.2	59	20	22	<0.1
FEB 1986									
10...	72	18	6.6	27	1.4	38	15	53	<0.1
APR									
08...	70	17	6.7	12	6.6	48	16	23	<0.1
JUN									
03...	81	20	7.6	12	1.7	55	17	19	<0.1
JUL									
16...	85	21	7.9	14	2.3	62	19	25	0.1
AUG									
21...	83	21	7.5	13	1.9	62	19	22	0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 1985									
12...	13	140	0.012	0.98	0.07	0.45	1.4	0.11	3.4
FEB 1986									
10...	14	160	0.009	1.07	0.26	0.96	2.0	0.07	1.2
APR									
08...	10	120	0.034	0.82	0.11	0.46	1.3	0.05	3.9
JUN									
03...	15	130	0.045	1.11	0.05	0.39	1.5	0.12	3.5
JUL									
16...	10	140	0.018	1.16	0.08	0.39	1.6	0.13	3.5
AUG									
21...	11	130	0.011	0.72	0.08	0.53	1.2	0.06	3.8

01399190 LAMINGTON (BLACK) RIVER AT SUCCASUNNA, NJ

LOCATION.--Lat 40°51'03", long 74°38'02", Morris County, Hydrologic Unit 02030105, on right bank, 10 ft upstream from bridge on Righter Road, 0.7 mi south of Succasunna, and 0.4 mi upstream from Succasunna Brook.

DRAINAGE AREA.--7.37 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1976 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and prefabricated concrete bumper-block control. Datum of gage is 692.92 ft above National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--10 years, 11.5 ft³/s, 21.19 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 176 ft³/s, Jan. 24, 1979, gage height, 5.20 ft; minimum, 1.2 ft³/s, Sept. 11, 12, 1980, gage height, 2.27 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 40 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 17	0345	49	3.81	Apr. 17	1315	54	3.86
Jan. 26	0715	*60	*3.93	Aug. 2	2345	48	3.79
Mar. 15	0745	41	3.70				

Minimum discharge, 2.2 ft³/s, Sept. 16, 17, gage height, 2.44 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	3.4	26	8.7	15	14	13	17	7.3	4.5	11	3.5
2	8.9	3.5	26	8.6	16	13	12	16	6.9	9.9	19	3.5
3	10	3.7	22	11	16	13	12	16	6.1	8.4	29	3.3
4	9.8	4.0	20	11	15	13	11	15	5.8	7.2	20	3.2
5	14	14	18	13	17	13	12	14	5.8	6.5	14	6.3
6	12	15	18	11	16	13	13	14	9.7	5.9	12	7.0
7	9.1	12	17	10	16	13	13	16	18	5.3	9.8	5.3
8	7.2	9.5	16	9.3	15	12	12	14	19	4.6	9.0	4.5
9	6.6	8.2	16	8.8	14	11	12	13	16	6.1	8.3	3.7
10	6.3	8.0	14	8.5	13	11	11	13	12	7.0	7.9	3.3
11	6.1	7.3	15	8.5	12	15	10	12	10	6.3	9.5	3.2
12	5.9	8.9	17	8.2	12	15	10	11	12	8.3	7.1	3.1
13	6.3	9.5	16	8.1	11	17	10	9.9	12	8.8	6.0	3.0
14	5.8	9.1	17	7.9	10	21	9.6	9.7	11	7.8	5.0	3.1
15	5.3	8.9	15	7.6	10	39	8.7	9.5	10	6.5	4.5	2.9
16	5.5	11	14	7.3	9.6	34	23	9.7	8.7	5.9	4.4	2.4
17	5.0	35	14	7.3	10	28	48	9.9	7.6	6.0	5.1	2.3
18	4.8	25	12	7.4	20	23	44	9.9	6.8	5.3	5.6	2.5
19	4.9	19	12	9.6	23	23	34	9.0	6.4	5.7	4.8	2.6
20	5.2	16	11	15	25	23	26	8.9	6.5	5.0	4.3	2.7
21	4.9	14	11	13	26	21	23	10	6.3	4.5	5.2	2.8
22	4.0	16	11	11	26	20	22	15	6.3	3.9	6.4	2.7
23	4.1	18	11	10	23	19	27	15	5.9	3.9	5.3	3.3
24	4.2	16	10	9.2	20	17	27	14	5.3	3.9	8.6	3.5
25	4.9	13	10	11	18	15	24	11	5.2	3.9	5.8	3.1
26	4.8	15	9.9	52	17	15	23	9.6	5.0	5.1	4.6	3.6
27	5.1	20	9.5	45	15	15	21	8.4	5.0	5.9	4.0	4.2
28	4.6	25	9.3	32	15	15	19	7.6	5.3	5.4	3.9	4.0
29	3.3	26	9.1	23	---	14	18	7.4	5.4	4.7	3.7	3.6
30	3.2	23	9.1	19	---	14	18	7.1	5.2	4.6	3.5	3.2
31	3.3	---	8.7	17	---	14	---	7.1	---	13	3.5	---
TOTAL	196.1	417.0	444.6	429.0	455.6	543	566.3	359.7	252.5	189.8	250.8	105.4
MEAN	6.33	13.9	14.3	13.8	16.3	17.5	18.9	11.6	8.42	6.12	8.09	3.51
MAX	14	35	26	52	26	39	48	17	19	13	29	7.0
MIN	3.2	3.4	8.7	7.3	9.6	11	8.7	7.1	5.0	3.9	3.5	2.3
CFSM	.86	1.89	1.94	1.87	2.21	2.37	2.56	1.57	1.14	.83	1.10	.48
IN.	.99	2.10	2.24	2.17	2.30	2.74	2.86	1.82	1.27	.96	1.27	.53

CAL YR 1985 TOTAL 2891.8 MEAN 7.92 MAX 43 MIN 2.3 CFSM 1.07 IN. 14.60
WTR YR 1986 TOTAL 4209.8 MEAN 11.5 MAX 52 MIN 2.3 CFSM 1.56 IN. 21.25

01399200 LAMINGTON (BLACK) RIVER NEAR IRONIA, NJ

LOCATION.--Lat 40°50'07", long 74°38'40", Morris County, Hydrologic Unit 02030105, on left bank 15 ft upstream from bridge on Ironia Road, 1.0 mi below Succasunna Brook, 1.3 mi northwest of Ironia, and 4.4 mi northeast of Chester.

DRAINAGE AREA.--10.9 mi².

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR NJ-82-1: 1981(P).

GAGE.--Water-stage recorder and concrete block control. Datum of gage is 687.4 ft, above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Jan. 6-18, Jan. 28 to Feb. 19 and Feb. 23 to Mar. 13. Records fair except those for period of no gage-height record, Jan. 6-18, Jan. 28 to Feb. 19 and Feb. 23 to Mar. 13, which are poor. Water for municipal supply pumped from wells upstream of gage by Morris Couynty Municipal Utilities Authority. Several measurements of water temperature, other than those published, were made during the year.

AVERAGE DISCHARGE.--11 years, 19.2 ft³/s, 23.92 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum dishcarge, 389 ft³/s, July 7, 1984, gage height, 5.15 ft; maximum gage height, 5.27 ft, Jan. 25, 1979; minimum daily discharge, 1.5 ft³/s, Oct. 1, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 80 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 17	1445	86	4.07	Apr. 17	1645	89	4.09
Jan. 26	1615	*137	*4.41	Aug. 3	1100	84	4.05

Minimum daily discharge, 2.4 ft³/s, July 25.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	4.9	39	11	24	22	18	21	11	8.1	26	7.5
2	14	4.6	40	11	26	21	18	20	11	17	23	7.5
3	15	4.7	35	15	27	21	17	20	9.3	22	72	7.3
4	18	5.2	30	17	25	21	17	19	8.5	13	38	7.2
5	19	15	28	18	28	21	17	18	8.4	10	25	9.9
6	27	29	25	19	29	22	19	17	15	9.5	20	22
7	19	22	23	15	27	22	20	21	29	8.5	16	10
8	14	14	21	14	25	19	18	20	29	6.6	14	6.9
9	11	11	20	14	22	17	17	19	30	6.7	12	5.4
10	9.6	9.8	19	13	20	18	16	17	20	10	11	4.7
11	9.1	9.5	19	13	19	22	15	16	15	7.6	17	4.4
12	8.5	9.8	25	12	19	24	15	16	16	9.6	13	4.2
13	8.4	15	23	10	18	29	15	14	21	14	10	4.0
14	8.6	13	24	8.6	17	35	15	14	16	10	9.6	3.8
15	7.9	13	20	8.4	16	69	13	14	14	7.0	9.2	3.7
16	7.3	14	18	8.2	15	54	31	15	12	5.5	9.3	3.3
17	6.9	69	17	10	17	43	79	15	10	5.0	9.8	2.8
18	6.6	50	15	11	33	37	68	15	8.9	4.4	13	2.8
19	6.3	33	15	13	49	35	48	14	8.1	5.6	10	3.0
20	6.4	25	14	32	52	35	39	13	8.2	5.3	9.4	3.1
21	6.5	21	15	28	47	32	34	16	7.6	3.9	9.8	3.3
22	6.0	22	15	20	50	30	33	25	7.6	2.9	17	3.3
23	5.5	31	15	16	40	28	39	28	7.1	2.6	12	3.4
24	5.5	25	15	14	30	26	41	22	6.1	2.5	20	5.1
25	6.3	20	14	16	24	22	37	19	5.6	2.4	14	4.3
26	6.2	21	14	104	24	22	33	16	5.3	3.4	10	5.6
27	6.1	37	13	90	23	22	30	14	5.7	7.3	9.3	7.6
28	6.2	40	12	47	23	21	27	12	6.9	5.6	8.9	7.9
29	6.0	49	12	36	---	20	25	11	8.0	4.4	8.5	6.7
30	5.2	38	12	30	---	20	23	11	8.5	3.9	7.6	5.9
31	5.1	---	12	26	---	20	---	10	---	20	7.5	---
TOTAL	307.2	675.5	619	700.2	769	850	837	522	368.8	244.3	491.9	176.6
MEAN	9.91	22.5	20.0	22.6	27.5	27.4	27.9	16.8	12.3	7.88	15.9	5.89
MAX	27	69	40	104	52	69	79	28	30	22	72	22
MIN	5.1	4.6	12	8.2	15	17	13	10	5.3	2.4	7.5	2.8
CFSM	.91	2.06	1.83	2.07	2.52	2.51	2.56	1.54	1.13	.72	1.46	.54
IN.	1.05	2.31	2.11	2.39	2.62	2.90	2.86	1.78	1.26	.83	1.68	.60

CAL YR 1985 TOTAL 4594.8 MEAN 12.6 MAX 120 MIN 3.3 CFSM 1.16 IN. 15.68
WTR YR 1986 TOTAL 6561.5 MEAN 18.0 MAX 104 MIN 2.4 CFSM 1.65 IN. 22.39

01399200 LAMINGTON (BLACK) RIVER NEAR IRONIA, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1977 to current year.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
09...	1100	11	420	6.9	12.5	5.2	49	<0.1	50	170
FEB 1986										
06...	1150	63	450	6.8	3.0	9.9	74	<0.9	20	8
MAR										
31...	1120	20	395	6.6	13.0	9.0	87	3.2	<20	79
MAY										
27...	1220	14	430	7.4	19.5	4.0	--	2.4	20	49
JUL										
07...	1130	8.4	420	7.3	23.5	2.4	28	2.6	80	920
AUG										
11...	1130	19	295	6.8	22.5	2.0	24	<0.1	9200	920

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
09...	95	22	9.7	40	2.9	95	24	38	<0.1
FEB 1986									
06...	88	21	8.7	48	2.3	70	15	67	<0.1
MAR									
31...	98	23	9.9	41	2.5	85	21	54	0.1
MAY									
27...	91	20	10	41	3.1	75	24	50	<0.1
JUL									
07...	95	20	11	42	3.5	84	25	51	0.1
AUG									
11...	76	17	8.2	29	2.6	60	17	37	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
09...	8.9	200	0.11	2.43	0.41	0.84	3.3	0.31	4.4
FEB 1986									
06...	10	210	0.042	2.41	1.08	1.5	4.0	0.21	3.8
MAR									
31...	6.7	210	0.099	2.62	1.49	2.0	4.6	0.37	4.3
MAY									
27...	8.0	200	0.215	1.88	3.25	3.4	5.2	0.61	5.6
JUL									
07...	4.1	210	0.29	1.53	1.70	2.5	4.0	0.82	6.2
AUG									
11...	7.8	150	0.142	0.98	1.21	E0.8	--	0.56	10

01399200 LAMINGTON (BLACK) RIVER NEAR IRONIA, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITRO-GEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INOR-GANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD)
OCT 1985											
09...	1100	--	280	0.4	9.2	--	--	--	--	--	<1
09...	1100	<0.5	--	--	--	20	<1	<10	130	<1	--
MAY 1986											
27...	1220	<0.5	--	--	--	20	1	<10	60	<1	--

DATE	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	COBALT, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, RECOV. FM BOT-TOM MA-TERIAL (UG/G)
OCT 1985											
09...	--	30	<10	--	40	--	4800	--	20	--	170
09...	<10	--	--	7	--	140	--	2	--	30	--
MAY 1986											
27...	<10	--	--	11	--	250	--	<1	--	170	--

DATE	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY RECOV. FM BOT-TOM MA-TERIAL (UG/G AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SELE-NIUM, TOTAL IN BOT-TOM MA-TERIAL (UG/G)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PCN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
OCT 1985											
09...	--	0.05	--	<10	--	<1	--	60	--	5	<1.0
09...	<0.1	--	6	--	<1	--	20	--	5	--	--
MAY 1986											
27...	<0.1	--	6	--	<1	--	80	--	3	--	--

DATE	ALDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	CHLOR-DANE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDD, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDT, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DI-AZINON, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DI-ELDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ENDO-SULFAN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ENDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ETHION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	HEPTA-CHLOR, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
OCT 1985											
09...	<0.1	11	0.9	1.1	<0.1	0.1	0.3	<0.1	<0.1	<0.1	<0.1
09...	--	--	--	--	--	--	--	--	--	--	--
MAY 1986											
27...	--	--	--	--	--	--	--	--	--	--	--

DATE	HEPTA-CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	MALA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	METH-OXY-CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARA-THION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRI-THION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PARA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PER-THANE IN BOT-TOM MA-TERIAL (UG/KG)	TOXA-PHENE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	TRI-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
OCT 1985											
09...	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1
09...	--	--	--	--	--	--	--	--	--	--	--
MAY 1986											
27...	--	--	--	--	--	--	--	--	--	--	--

01399500 LAMINGTON (BLACK) RIVER NEAR POTTERSVILLE, NJ

LOCATION.--Lat 40°43'39", long 74°43'50", Morris County, Hydrologic Unit 02030105, on right bank 1.1 mi upstream from bridge on State Highway 512, 1.2 mi northwest of Pottersville, and 5.5 mi upstream from Cold Brook. Water-quality sample collected at bridge 1.1 mi downstream from gage at high flows.

DRAINAGE AREA.--32.8 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1921 to current year. Monthly discharge only for October and November 1921, published in WSP 1302. Prior to October 1952, published as "Black River near Pottersville".

REVISED RECORDS.--WSP 741: 1932. WSP 781: Drainage area. WSP 1552: 1922, 1924-29(M), 1931(M), 1933-34(M), 1938(P), 1939(M), 1940, 1941(M), 1942-46(P), 1947(M), 1948-49(P), 1951-52(P), 1953(M). WDR-NJ-80-1: Correction 1979(P).

GAGE.--Water-stage recorder. Concrete control since July 1, 1937. Datum of gage is 284.14 ft above National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark). Prior to July 1, 1922, nonrecording gage on downstream side of highway bridge at Pottersville, 1.1 mi downstream at different datum.

REMARKS.--Estimated daily discharges: Dec. 12 to Feb. 18. Records good except those for period of ice effect and no gage-height record, Dec. 12 to Feb. 18, which are fair. Flow regulated occasionally by pond above station. Several measurements of water temperature, other than those published, were made during the year.

AVERAGE DISCHARGE.--65 years, 56.1 ft³/s, 23.23 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,460 ft³/s, July 7, 1984, gage height, 5.94 ft, from floodmark, from rating curve extended above 380 ft³/s on basis of slope-area measurement at gage height 4.71 ft; minimum, 1.3 ft³/s, Oct. 4, 1930.

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

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 16	2300	391	3.08	Apr. 16	2030	386	3.07
Jan. 26	0445	448	3.20	Aug. 2	2300	*532	*3.36

Minimum discharge, 13 ft³/s, July 24, 25, 26, gage height, 1.54 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	16	112	39	69	65	52	74	25	16	50	21
2	48	16	105	48	84	62	51	70	24	34	111	20
3	41	16	87	52	76	63	48	65	23	25	156	19
4	38	16	78	47	71	63	48	62	22	22	88	19
5	59	47	72	57	84	65	48	59	21	23	88	38
6	54	54	67	49	84	69	57	58	34	23	82	56
7	48	48	60	44	78	65	59	68	44	21	75	35
8	44	47	58	42	72	50	56	63	47	18	61	36
9	40	41	56	40	64	53	50	61	50	17	46	41
10	32	30	55	38	60	58	47	55	45	16	38	38
11	25	25	56	36	58	91	47	51	42	15	47	33
12	22	26	67	34	56	87	45	47	72	23	34	28
13	22	31	68	32	57	102	43	45	60	21	29	23
14	21	33	69	31	54	143	42	43	47	20	27	20
15	21	40	63	30	49	213	40	43	41	19	25	18
16	21	77	60	31	45	173	156	43	37	20	25	17
17	19	143	57	32	52	154	234	43	32	21	51	16
18	18	38	52	33	115	126	206	40	27	20	44	16
19	18	31	50	51	141	115	178	37	24	32	27	16
20	18	29	47	85	139	106	139	38	23	23	25	16
21	18	27	48	64	173	94	120	47	21	20	30	16
22	18	34	47	55	167	87	114	88	20	18	37	15
23	18	25	46	49	138	80	135	74	19	17	28	16
24	18	23	45	43	118	75	128	63	19	16	50	18
25	21	25	45	80	108	70	122	53	18	14	32	16
26	19	57	44	263	85	66	110	43	16	16	29	20
27	18	88	43	176	79	64	102	36	16	23	28	22
28	18	116	42	143	71	61	93	31	16	18	28	21
29	17	117	40	109	---	59	86	28	16	19	26	21
30	17	104	38	91	---	57	80	25	16	16	24	21
31	17	---	36	78	---	54	---	25	---	112	22	---
TOTAL	874	1420	1813	2002	2447	2690	2736	1578	917	718	1463	712
MEAN	28.2	47.3	58.5	64.6	87.4	86.8	91.2	50.9	30.6	23.2	47.2	23.7
MAX	66	143	112	263	173	213	234	88	72	112	156	56
MIN	17	16	36	30	45	50	40	25	16	14	22	15
CFSM	.86	1.44	1.78	1.97	2.66	2.65	2.78	1.55	.93	.71	1.44	.72
IN.	.99	1.61	2.06	2.27	2.78	3.05	3.10	1.79	1.04	.81	1.66	.81

CAL YR 1985 TOTAL 12537.1 MEAN 34.3 MAX 173 MIN 8.7 CFSM 1.05 IN. 14.22
WTR YR 1986 TOTAL 19370 MEAN 53.1 MAX 263 MIN 14 CFSM 1.62 IN. 21.97

01399500 LAMINGTON (BLACK) RIVER NEAR POTTERSVILLE, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1977 to current year.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
NOV 1985										
12...	1020	24	280	7.3	8.5	11.2	96	E1.0	330	1600
FEB 1986										
06...	1330	194	260	7.0	2.0	13.8	100	E1.2	20	130
MAR										
31...	1230	54	216	8.5	14.5	12.4	122	2.4	<20	21
MAY										
27...	1350	36	252	7.8	19.0	9.3	--	<1.2	70	180
JUL										
07...	1230	21	238	7.5	22.5	8.2	95	E2.2	50	220
AUG										
11...	1250	43	210	7.4	22.0	8.8	102	E2.0	170	>2400

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
NOV 1985									
12...	77	18	7.7	22	2.7	57	19	27	<0.1
FEB 1986									
06...	55	13	5.4	26	1.6	31	14	41	<0.1
MAR									
31...	59	14	5.9	19	1.7	44	16	30	0.1
MAY									
27...	68	16	6.9	20	1.7	56	16	29	<0.1
JUL									
07...	65	15	6.6	20	1.8	54	17	27	0.1
AUG									
11...	58	14	5.6	16	1.8	49	11	25	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 1985									
12...	12	140	0.005	1.20	0.10	0.46	1.7	0.08	5.5
FEB 1986									
06...	12	130	0.01	1.53	0.30	0.34	1.9	0.03	3.3
MAR									
31...	6.5	120	0.023	1.23	0.11	0.47	1.7	0.08	3.8
MAY									
27...	11	130	0.024	1.36	0.11	0.35	1.7	0.17	5.0
JUL									
07...	10	130	0.008	0.50	0.07	0.59	1.1	0.14	6.8
AUG									
11...	14	120	0.009	0.46	0.07	1.5	2.0	0.26	9.2

01399500 LAMINGTON (BLACK) RIVER NEAR POTTERSVILLE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)
NOV 1985 12...	1020	70	0.2	2.2	<1	100	<10	20	11000	<10

DATE	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1985 12...	790	<0.01	<10	<1	50	<1	<1.0	<0.1	<1.0	<0.1

DATE	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1985 12...	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

DATE	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1985 12...	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1

01399510 UPPER COLD BROOK NEAR POTTERSVILLE, NJ

LOCATION.--Lat 40°43'16", long 74°45'09", Hunterdon County, Hydrologic Unit 02030105, on right bank along a private dirt road, 400 ft downstream from the Pottersville Reservoir, and 1.5 mi west of Pottersville.

DRAINAGE AREA.--2.18 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1972 to current year.

REVISED RECORDS.--WDR-NJ-84-1: 1975(P), 1979-83(P).

GAGE.--Water-stage recorder and rock outcrop control. Datum of gage is 451.57 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharge. Records good above 2.0 ft³/s and fair below. Flow regulated by Pottersville Reservoir, 400 ft above station, until August 1982 when dam was demolished. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--14 years, 3.84 ft³/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,000 ft³/s, July 7, 1984, gage height, 3.91 ft, from rating curve extended above 20 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 0.03 ft³/s, Aug. 28, 29, Sept. 3, 8, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 16	2230	105	1.61	Aug. 17	1900	*162	*1.83
Aug. 2	2045	103	1.60				

Minimum discharge, 0.78 ft³/s Oct. 29, 30, 31, Nov. 1, 2, 3, 4, gage height, 0.49 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.95	.80	5.5	1.9	3.1	3.2	3.5	4.4	1.5	.90	1.5	1.2
2	.91	.82	5.4	1.8	6.2	3.2	3.5	4.2	1.5	3.7	12	1.2
3	1.2	.82	3.7	3.7	3.6	3.7	3.3	4.0	1.4	1.4	4.4	1.2
4	1.1	.83	3.4	2.3	3.5	3.4	3.3	3.8	1.3	1.2	2.6	1.2
5	3.6	2.1	3.2	3.3	5.6	4.0	3.3	3.7	1.3	1.2	2.3	3.5
6	1.1	1.2	3.2	2.2	5.0	3.7	4.2	3.9	2.3	1.1	2.1	2.0
7	.96	.99	2.9	2.0	3.9	3.2	3.7	4.1	2.5	1.1	1.9	1.3
8	.90	.93	2.9	2.3	3.4	3.8	3.4	3.6	2.3	1.1	1.9	1.2
9	.88	.88	2.8	1.8	3.1	2.7	3.2	3.6	1.7	1.1	1.7	1.1
10	.90	.87	2.7	1.9	2.9	3.7	3.1	3.3	1.4	1.1	1.8	1.1
11	.90	.87	3.0	1.8	3.0	6.1	3.2	2.9	1.3	1.1	3.7	1.1
12	.87	.94	3.2	1.8	3.1	3.5	3.0	2.8	5.5	1.6	1.9	1.1
13	.97	.97	3.1	1.8	3.6	9.8	2.8	2.7	2.3	1.3	1.7	1.1
14	.95	1.1	3.1	1.8	3.4	17	2.7	2.6	1.5	1.2	1.7	1.0
15	.94	1.4	2.5	1.9	2.5	17	2.8	2.7	1.6	1.1	1.7	1.0
16	.91	16	2.4	1.6	2.4	7.4	26	2.7	1.6	1.1	1.8	1.1
17	.87	20	2.3	1.7	3.6	5.9	24	2.7	1.4	1.1	15	1.1
18	.87	3.4	2.2	1.9	20	5.3	9.9	2.4	1.2	1.1	3.6	1.1
19	.91	2.6	2.1	5.5	13	6.0	7.0	2.3	1.2	3.0	1.8	1.1
20	.91	2.2	2.1	10	13	5.2	6.0	2.7	1.1	1.2	1.6	1.1
21	.87	2.0	2.1	3.1	19	4.5	6.5	2.6	1.1	1.1	2.7	1.1
22	.91	6.1	2.0	2.6	9.6	4.4	8.3	4.0	1.1	1.0	2.2	1.1
23	.91	3.3	2.1	2.3	6.2	4.4	12	2.4	1.0	1.0	1.8	1.5
24	.99	2.5	2.2	2.1	5.0	4.3	8.1	2.1	.99	.98	2.7	1.3
25	1.0	2.2	2.1	17	4.5	4.1	6.2	2.0	.97	.97	1.5	1.2
26	.96	5.7	2.1	51	4.0	4.1	5.7	1.9	.95	1.2	1.4	1.7
27	.94	5.4	1.9	12	3.6	4.1	5.2	1.8	.95	1.5	1.4	1.4
28	.92	12	1.9	5.3	3.4	3.8	5.0	1.7	.95	1.1	1.4	1.3
29	.87	6.0	1.9	4.4	---	3.7	5.0	1.6	.93	1.1	1.3	1.2
30	.82	4.6	1.8	3.7	---	3.7	4.6	1.6	.92	1.3	1.2	1.2
31	.81	---	1.8	3.4	---	3.5	---	1.5	---	5.5	1.2	---
TOTAL	31.60	109.52	83.6	159.9	163.2	162.4	188.5	88.3	45.76	44.45	85.5	38.8
MEAN	1.02	3.65	2.70	5.16	5.83	5.24	6.28	2.85	1.53	1.43	2.76	1.29
MAX	3.6	20	5.5	51	20	17	26	4.4	5.5	5.5	15	3.5
MIN	.81	.80	1.8	1.6	2.4	2.7	2.7	1.5	.92	.90	1.2	1.0
CFSM	.47	1.67	1.24	2.37	2.67	2.40	2.88	1.31	.70	.66	1.27	.59
IN.	.54	1.87	1.43	2.73	2.78	2.77	3.22	1.51	.78	.76	1.46	.66

CAL YR 1985 TOTAL 714.77 MEAN 1.96 MAX 22 MIN .71 CFSM .90 IN. 12.20
WTR YR 1986 TOTAL 1201.53 MEAN 3.29 MAX 51 MIN .80 CFSM 1.51 IN. 20.50

01399525 AXLE BROOK NEAR POTTERSVILLE, NJ

LOCATION.--Lat 40°41'40", long 74°43'05", Somerset County, Hydrologic Unit 02030105, on right upstream wingwall of bridge on Black River Road, 1.3 mi south of Pottersville, and 0.3 mi upstream from mouth.

DRAINAGE AREA.--1.22 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1977 to current year. Prior to October 1984, published as Lamington (Black) River tributary No. 2 near Pottersville.

GAGE.--Water-stage recorder. Wooden control since October 1982. Datum of gage is 172.74 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 26 to Jan. 14, July 26 to Aug. 5 and Aug. 10-11. Records fair except those below 1.0 ft³/s and estimated daily discharges, which are poor. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--9 years, 2.23 ft³/s, 24.82 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 955 ft³/s, July 7, 1984, gage height, 6.30 ft, from floodmark, from rating extended above 400 ft³/s on basis of contracted-opening measurement of peak flow; no flow many days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 16	2215	*246	*3.37	Aug. 17	1930	221	3.25
Apr. 16	2000	233	3.31				

No flow July 1.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.13	.22	5.0	.57	1.4	1.1	.78	.87	.04	.01	.12	.10
2	.12	.22	6.0	.62	2.6	1.1	.75	.77	.03	1.4	1.4	.10
3	.95	.20	3.0	1.1	1.6	1.1	.63	.66	.02	.12	.89	.10
4	.74	.19	2.5	.98	1.4	1.2	.61	.64	.03	.04	.67	.11
5	5.6	3.1	2.5	1.3	5.7	1.3	.62	.62	.03	.03	.48	1.3
6	1.3	1.1	2.5	.97	3.3	1.3	1.1	.64	.19	.02	.23	.75
7	.59	.53	2.1	1.2	1.6	1.0	.96	.72	.31	.02	.23	.19
8	.40	.34	1.8	.83	1.6	.79	.81	.56	.10	.01	.19	.13
9	.32	.26	2.4	.75	1.4	.83	.65	.53	.10	.02	.13	.11
10	.35	.24	2.9	.62	1.3	1.2	.57	.46	.04	.03	.12	.10
11	.45	.23	2.9	.56	1.4	2.1	.59	.42	.05	.01	.23	.10
12	.36	.34	2.8	.54	1.1	1.3	.52	.37	3.5	.06	.17	.10
13	.53	.51	1.7	.35	1.1	6.6	.48	.34	.94	.05	.12	.10
14	.50	1.4	1.5	.32	1.1	18	.44	.30	.37	.05	.10	.09
15	.48	3.2	1.1	.17	1.1	13	.47	.32	.34	.02	.08	.09
16	.41	36	1.1	.07	1.0	4.6	36	.34	.32	.01	.10	.11
17	.31	23	.93	.10	1.0	3.4	29	.34	.23	.02	15	.10
18	.31	3.1	.70	.15	3.9	2.9	6.2	.24	.09	.02	2.1	.11
19	.32	2.3	.62	1.9	11	3.1	3.5	.18	.07	.83	.56	.14
20	.30	2.0	.54	8.9	12	2.5	2.6	.26	.08	.08	.40	.12
21	.28	1.7	.50	2.4	15	2.0	3.0	.36	.05	.04	2.3	.13
22	.24	9.2	2.9	1.3	6.4	1.8	4.5	.63	.04	.02	1.5	.13
23	.24	3.5	3.3	.99	3.7	1.8	13	.28	.04	.02	.64	.26
24	.26	2.5	2.4	.75	3.1	1.6	4.1	.16	.03	.02	1.4	.67
25	.35	2.0	1.0	19	2.5	1.4	2.5	.12	.03	.01	.34	.44
26	.30	10	.86	43	1.9	1.4	2.0	.09	.02	.01	.24	.82
27	.29	7.3	.65	12	1.6	1.3	1.6	.08	.02	.05	.20	.71
28	.27	19	.47	3.3	1.3	1.1	1.3	.07	.02	.04	.21	.61
29	.23	6.2	.63	2.9	---	1.1	1.1	.06	.02	.03	.15	.44
30	.24	4.0	.44	2.4	---	.97	.99	.05	.01	.07	.11	.37
31	.23	---	.63	1.7	---	.87	---	.04	---	.48	.10	---
TOTAL	17.40	143.88	58.37	111.74	92.1	83.76	121.37	11.52	7.16	3.64	30.51	8.63
MEAN	.56	4.80	1.88	3.60	3.29	2.70	4.05	.37	.24	.12	.98	.29
MAX	5.6	36	6.0	43	15	18	36	.87	3.5	1.4	15	1.3
MIN	.12	.19	.44	.07	1.0	.79	.44	.04	.01	.01	.08	.09
CFSM	.46	3.93	1.54	2.95	2.70	2.21	3.32	.30	.20	.10	.80	.24
IN.	.53	4.39	1.78	3.41	2.81	2.55	3.70	.35	.22	.11	.93	.26

CAL YR 1985 TOTAL 481.93 MEAN 1.32 MAX 36 MIN .03 CFSM 1.08 IN. 14.69
WTR YR 1986 TOTAL 690.08 MEAN 1.89 MAX 43 MIN .01 CFSM 1.55 IN. 21.04

01399690 SOUTH BRANCH ROCKAWAY CREEK AT WHITEHOUSE, NJ

LOCATION.--Lat 40°37'24", long 74°46'01", Hunterdon County, Hydrologic Unit 02030105, on right upstream wingwall of bridge on U.S. Route 22, 0.6 mi north of Whitehouse Station, 0.9 mi west of Whitehouse, and 0.3 mi upstream from mouth.

DRAINAGE AREA.--13.2 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1964-67. March 1977 to September 1986 (discontinued).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 113.52 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Jan. 26 to Feb. 27. Records good except those for the period of no gage-height record, Jan. 26 to Feb. 27, which are poor. Releases from Round Valley Reservoir enter stream 1,700 ft upstream of gage (see Raritan River basin, reservoirs in). Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--9 years, 35.1 ft³/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,190 ft³/s, July 7, 1984, gage height, 15.89 ft; minimum, 0.18 ft³/s, Oct. 3, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 840 ft³/s, Nov. 17, gage height, 10.05 ft; minimum, 2.0 ft³/s, July 25; minimum gage height, 3.90 ft, July 25.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	5.0	50	8.5	25	20	13	25	18	8.0	8.4	5.2
2	9.3	4.9	50	7.8	37	18	13	23	20	36	88	5.5
3	28	5.1	35	22	35	17	12	21	20	9.3	78	5.5
4	23	5.3	28	13	27	18	12	20	31	5.2	16	6.8
5	67	37	25	28	39	18	12	20	29	4.9	7.6	23
6	30	12	27	14	40	18	17	19	37	4.4	6.1	24
7	17	8.0	23	9.7	24	17	15	21	40	4.2	5.6	8.0
8	12	6.6	23	7.6	21	12	14	17	34	3.7	5.2	7.1
9	11	5.5	21	8.0	20	13	12	18	34	6.1	4.5	6.0
10	11	5.6	19	8.7	20	15	11	17	33	11	8.3	5.5
11	8.5	5.5	19	8.4	20	23	11	16	34	4.7	48	5.6
12	7.0	5.8	27	8.3	19	17	10	15	59	6.1	8.3	5.3
13	8.8	6.3	25	8.7	17	45	9.4	14	42	6.3	6.2	4.4
14	7.7	7.4	30	7.5	17	82	9.4	14	22	7.5	5.5	4.1
15	7.1	17	18	8.2	17	113	9.3	14	16	3.7	5.3	4.1
16	6.8	89	16	7.3	22	48	212	15	25	3.4	5.7	4.7
17	5.5	255	16	6.3	26	40	231	14	20	4.1	9.5	3.4
18	5.5	40	14	7.3	108	35	70	12	16	3.5	14	3.7
19	6.1	28	11	18	84	35	49	11	16	14	6.8	5.1
20	5.9	22	11	71	69	31	42	13	19	6.1	5.8	4.3
21	5.3	17	11	29	83	23	41	16	16	4.3	15	4.2
22	5.3	53	10	18	64	22	43	29	16	3.0	23	3.7
23	5.4	41	11	16	41	21	90	16	17	2.4	8.1	4.9
24	5.7	26	11	12	37	20	51	15	16	2.4	14	5.9
25	6.7	19	12	25	37	18	42	14	14	2.2	6.7	3.8
26	4.8	43	8.5	223	28	18	39	14	12	9.5	6.5	5.8
27	5.5	68	8.6	79	28	18	36	14	12	24	6.4	13
28	6.8	100	9.2	36	22	16	33	15	12	5.7	6.9	8.7
29	5.0	64	8.4	33	---	16	31	19	10	9.8	6.2	6.0
30	4.9	45	8.0	34	---	16	29	18	8.6	11	5.5	4.5
31	5.1	---	8.1	29	---	14	---	16	---	41	5.4	---
TOTAL	347.7	1047.0	593.8	812.3	1027	837	1219.1	525	698.6	267.5	446.5	201.8
MEAN	11.2	34.9	19.2	26.2	36.7	27.0	40.6	16.9	23.3	8.63	14.4	6.73
MAX	67	255	50	223	108	113	231	29	59	41	88	24
MIN	4.8	4.9	8.0	6.3	17	12	9.3	11	8.6	2.2	4.5	3.4

CAL YR 1985 TOTAL 5961.9 MEAN 16.3 MAX 276 MIN 1.7
WTR YR 1986 TOTAL 8023.3 MEAN 22.0 MAX 255 MIN 2.2

01399700 ROCKAWAY CREEK AT WHITEHOUSE, NJ

LOCATION.--Lat 40°37'49", long 74°44'11", Hunterdon County, Hydrologic Unit 02030105, on right bank at bridge on Lamington Road, 1.4 mi northeast of Whitehouse, and 1.8 mi upstream from mouth.

DRAINAGE AREA.--37.1 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1977 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 1977 to September 1978.
WATER TEMPERATURES: April 1977 to September 1978.
SEDIMENT ANALYSES: October 1976 to September 1978.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
23...	1000	15	231	7.8	10.5	11.6	102	E1.6	110	350
JAN 1986										
29...	1000	140	204	7.9	0.0	15.1	104	<0.8	60	350
MAR										
17...	1000	100	167	8.1	7.0	12.7	104	<1.0	20	33
MAY										
28...	1030	E21	212	8.2	20.5	10.3	116	E1.0	220	920
JUL										
09...	1045	12	275	7.9	24.0	8.7	104	<0.5	330	170
AUG										
04...	1030	36	190	8.0	19.5	8.2	90	E2.2	2400	540

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
23...	95	23	9.2	10	2.0	73	23	14	0.1
JAN 1986									
29...	61	15	5.6	9.7	1.9	33	15	15	<0.1
MAR									
17...	56	14	5.2	9.0	1.5	33	16	13	<0.1
MAY									
28...	83	20	8.0	7.8	1.4	61	19	11	<0.1
JUL									
09...	73	18	6.8	12	2.0	75	26	16	0.1
AUG									
04...	60	15	5.5	8.9	2.3	44	20	11	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
23...	13	140	0.006	1.12	0.10	0.45	1.6	0.12	2.8
JAN 1986									
29...	14	96	0.007	1.45	0.11	0.31	1.8	0.12	2.5
MAR									
17...	13	91	0.011	1.15	0.26	0.33	1.5	0.06	2.3
MAY									
28...	15	120	0.027	1.34	0.05	0.2	1.5	0.04	1.6
JUL									
09...	4.2	130	0.02	1.58	0.11	0.36	1.9	0.16	3.9
AUG									
04...	13	100	0.029	1.16	E0.05	0.57	1.7	0.13	5.7

01399700 ROCKAWAY CREEK AT WHITEHOUSE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
MAY 1986 28...	1030	<0.5	10	<1	<10	50	<1	<10	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 1986 28...	190	<1	40	<0.1	3	<1	<10	<1

01399780 LAMINGTON (BLACK) RIVER AT BURNT MILLS, NJ

LOCATION.--Lat 40°38'04", long 74°41'13", Somerset County, Hydrologic Unit 02030105, at bridge on Burnt Mills Road in Burnt Mills, 1,400 ft upstream from mouth, and 2.4 mi southwest of Greater Cross Roads.

DRAINAGE AREA.--100 mi².

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964, 1976 to current year.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
NOV 1985										
12...	1200	E58	190	7.4	9.0	11.2	97	E0.6	1100	350
FEB 1986										
10...	1020	E528	311	6.8	1.0	14.2	100	E1.0	80	49
APR										
08...	1000	E144	201	7.2	11.0	12.2	112	<1.0	70	34
JUN										
03...	1040	E56	239	7.8	14.0	11.8	114	E2.2	790	79
JUL										
16...	1015	E43	246	6.9	22.0	9.2	105	<0.7	330	110
AUG										
21...	1040	E61	232	--	20.5	9.0	100	<1.1	490	350

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
NOV 1985									
12...	87	21	8.4	17	2.3	65	21	20	<0.1
FEB 1986									
10...	70	17	6.7	21	1.6	42	16	36	<0.1
APR									
08...	68	16	6.7	12	1.5	53	17	20	0.1
JUN									
03...	85	20	8.4	14	1.7	66	17	16	<0.1
JUL									
16...	89	21	8.8	15	2.0	71	18	22	<0.1
AUG									
21...	76	18	7.5	12	1.9	61	18	17	0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 1985									
12...	11	140	0.006	0.89	0.06	0.4	1.3	0.08	4.5
FEB 1986									
10...	13	140	0.007	1.52	0.10	1.0	2.6	0.13	2.8
APR									
08...	8.7	110	0.021	1.15	<0.05	0.66	1.8	0.04	4.4
JUN									
03...	13	130	0.026	1.34	0.13	0.41	1.7	0.09	2.5
JUL									
16...	11	140	0.017	0.92	0.06	0.53	1.4	0.12	3.6
AUG									
21...	11	120	0.008	0.80	<0.05	0.7	1.5	0.13	4.8

01399780 LAMINGTON (BLACK) RIVER AT BURNT MILLS, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITRO-GEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INOR-GANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD)
NOV 1985											
12...	1200	--	80	0.1	1.8	--	--	--	--	--	<1
12...	1200	<0.5	--	--	--	50	<1	<10	20	1	--
JUN 1986											
03...	1040	<0.5	--	--	--	40	--	<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)
NOV 1985											
12...	--	80	<10	--	20	--	10000	--	<10	--	520
12...	20	--	--	3	--	140	--	2	--	30	--
JUN 1986											
03...	<10	--	--	7	--	280	--	1	--	30	--

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 1985											
12...	--	0.01	--	10	--	<1	--	50	--	<1	<1.0
12...	<0.1	--	6	--	<1	--	20	--	<1	--	--
JUN 1986											
03...	<0.1	--	4	--	--	--	<10	--	3	--	--

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 1985											
12...	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
12...	--	--	--	--	--	--	--	--	--	--	--
JUN 1986											
03...	--	--	--	--	--	--	--	--	--	--	--

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 1985											
12...	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1
12...	--	--	--	--	--	--	--	--	--	--	--
JUN 1986											
03...	--	--	--	--	--	--	--	--	--	--	--

01400000 NORTH BRANCH RARITAN RIVER NEAR RARITAN, NJ

LOCATION.--Lat 40°34'10", long 74°40'45", Somerset County, Hydrologic Unit 02030105, on right bank, 400 ft upstream from U.S. Highway 202, 1.4 mi upstream from confluence with South Branch, and 2.7 mi west of Raritan.

DRAINAGE AREA.--190 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1923 to current year. Monthly discharge only for June 1923, published in WSP 1302. Prior to October 1943, published as "at Milltown".

REVISED RECORDS.--WSP 1552: 1924-26, 1928-35. WDR NJ-79-1: 1971-78(P).

GAGE.--Water-stage recorder. Concrete control since Sept. 1, 1936. Datum of gage is 50.43 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 17, 1936, nonrecording gage at site 30 ft downstream at same datum.

REMARKS.--Estimated daily discharges: Jan. 16 and July 22-31. Records fair above 5,000 ft³/s and good below. Regulation by Round Valley Reservoir. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--63 years, 308 ft³/s unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,600 ft³/s, Aug. 28, 1971, gage height, 15.47 ft, from high-water mark in gage house, from rating curve extended above 15,000 ft³/s; minimum observed, about 3 ft³/s, Nov. 28, 1930, gage height, 1.72 ft, result of freezeup, minimum daily, 7.5 ft³/s, Sept. 26, 27, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 17	0800	*9,030	*9.68	Apr. 17	0230	7,280	8.89
Jan. 26	1030	7,920	9.19				

Minimum discharge, 46 ft³/s, July 21.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	220	74	732	166	431	314	228	343	97	57	205	74
2	192	72	719	146	440	301	225	321	91	318	725	73
3	275	78	492	251	427	293	212	298	84	159	1420	73
4	263	76	392	260	350	311	206	280	84	87	302	81
5	716	382	360	369	580	297	207	270	93	76	218	137
6	376	258	359	252	606	322	242	260	160	71	192	470
7	220	183	327	161	419	301	249	309	243	67	168	154
8	182	151	322	132	343	229	229	262	154	61	148	119
9	157	132	312	157	316	238	214	255	163	61	122	111
10	139	118	297	171	308	246	196	238	127	71	103	103
11	123	103	286	165	307	394	193	222	115	59	950	95
12	106	97	374	153	318	360	190	213	623	68	179	86
13	108	119	319	147	287	634	178	201	354	105	129	77
14	110	126	389	109	276	1090	172	193	196	91	108	70
15	101	227	276	111	268	2100	167	193	160	66	93	64
16	96	495	253	112	259	869	1960	193	153	59	90	65
17	86	4480	245	122	244	678	4650	193	142	66	403	61
18	81	638	227	135	1260	574	1390	175	109	65	664	59
19	81	433	182	187	1390	539	864	161	95	87	173	65
20	80	356	167	765	1450	505	682	155	96	54	129	65
21	78	295	197	378	1490	400	636	186	85	54	172	64
22	76	691	207	264	1180	367	634	316	78	50	356	62
23	76	679	244	232	779	348	1340	250	76	52	165	69
24	80	361	244	189	618	327	876	193	73	52	265	105
25	97	294	197	443	553	303	666	171	69	54	153	77
26	88	458	119	5360	446	293	559	151	64	109	121	115
27	79	1090	169	1670	398	284	504	135	62	275	111	161
28	78	1490	177	811	348	270	446	128	64	132	110	124
29	75	1120	163	600	---	256	409	122	64	103	100	92
30	75	656	164	550	---	245	377	110	61	110	86	83
31	75	---	165	525	---	241	---	99	---	505	79	---
TOTAL	4589	15732	9076	15093	16091	13929	19101	6596	4035	3244	8239	3054
MEAN	148	524	293	487	575	449	637	213	135	105	266	102
MAX	716	4480	732	5360	1490	2100	4650	343	623	505	1420	470
MIN	75	72	119	109	244	229	167	99	61	50	79	59

CAL YR 1985 TOTAL 78226 MEAN 214 MAX 4480 MIN 38
WTR YR 1986 TOTAL 118779 MEAN 325 MAX 5360 MIN 50

01400120 RARITAN RIVER AT RARITAN, NJ

LOCATION.--Lat 40°33'52", long 74°38'10", Somerset County, Hydrologic Unit 02030105, at bridge on South Branch-Raritan Road in Raritan, 1.7 mi upstream from Peters Brook, 3.5 mi northeast of South Branch, and 3.6 mi southeast of North Branch.

DRAINAGE AREA.--474 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1977 to current year.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
10...	1030	E360	271	7.8	15.5	9.1	92	0.8	330	220
JAN 1986										
30...	1100	E1160	203	7.7	0.0	12.1	82	1.1	70	50
MAR										
20...	1100	E1080	194	7.8	9.5	12.2	107	1.4	50	<20
MAY										
22...	1030	E620	232	7.7	20.5	8.1	91	2.5	2400	5400
JUL										
02...	1100	E689	203	7.8	22.0	7.7	90	2.6	7900	1700
AUG										
06...	1100	E395	202	7.7	25.5	8.2	100	2.4	<200	500

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
10...	89	22	8.3	14	2.6	55	26	19	<0.1
JAN 1986									
30...	63	15	6.1	14	1.9	35	16	23	<0.1
MAR									
20...	65	16	6.2	12	1.6	38	16	19	0.1
MAY									
22...	84	20	8.3	13	1.7	60	24	18	<0.1
JUL									
02...	73	18	6.9	11	1.7	54	21	15	<0.1
AUG									
06...	65	16	6.2	11	2.1	47	21	17	0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
10...	13	140	0.015	1.96	0.10	0.53	2.5	0.10	3.8
JAN 1986									
30...	12	110	0.01	1.78	0.26	0.55	2.3	0.06	2.9
MAR									
20...	10	100	0.027	1.40	0.10	0.52	1.9	0.05	2.8
MAY									
22...	8.8	130	0.041	1.19	0.10	0.45	1.6	0.11	2.9
JUL									
02...	2.6	110	0.021	0.49	0.08	0.61	1.1	0.11	3.6
AUG									
06...	12	110	0.013	0.92	E0.06	0.7	1.6	0.11	6.0

01400120 RARITAN RIVER AT RARITAN, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT 1985											
10...	1030	--	90	0.2	1.0	--	--	--	--	--	<1
10...	1030	<0.5	--	--	--	220	<1	<10	40	<1	--
MAY 1986											
22...	1030	<0.5	--	--	--	10	<1	<10	50	<1	--

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT 1985											
10...	--	60	<10	--	60	--	8400	--	<10	--	430
10...	10	--	--	4	--	300	--	3	--	60	--
MAY 1986											
22...	<10	--	--	5	--	310	--	9	--	60	--

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985											
10...	--	<0.01	--	10	--	<1	--	60	--	<1	<1.0
10...	<0.1	--	8	--	<1	--	30	--	3	--	--
MAY 1986											
22...	<0.1	--	11	--	<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)
OCT 1985											
10...	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10...	--	--	--	--	--	--	--	--	--	--	--
MAY 1986											
22...	--	--	--	--	--	--	--	--	--	--	--

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

01400300 PETERS BROOK NEAR RARITAN, NJ

LOCATION.--Lat 40°35'35", long 74°40'00", Somerset County, Hydrologic Unit 02030105, on left bank 12 ft upstream from bridge on Garretson Road, 1.5 mi north of Raritan, and 2.5 mi from mouth.

DRAINAGE AREA.--4.19 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORDS.--May 1978 to current year.

REVISED RECORD.--WDR NJ-79-1: 1978(P).

GAGE.--Water-stage recorder. Datum of gage is 68.713 ft above National Geodetic Vertical Datum of 1929 (levels by Somerset County).

REMARKS.--Estimated daily discharges: Sept. 29. Records poor. Several measurements of water temperature were made during the year. Recording rain gage and gage-height telemeter at station.

AVERAGE DISCHARGE.--8 years, 6.14 ft³/s, 19.90 in/yr.

COOPERATION.--Gage-height record collected in cooperation with Somerset County.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,090 ft³/s, July 7, 1984, gage height, 8.15 ft; no flow part or all of some days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 16	2340	726	6.48	July 31	0355	531	5.71
Jan. 25	2320	561	5.81	Aug. 2	2245	631	6.05
Apr. 16	2045	*1,020	*7.24	Aug. 11	0110	689	6.25

Minimum discharge, 0.04 ft³/s, June 30, July 1, 2.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	.21	8.5	.51	1.3	1.5	.53	1.9	.17	.05	3.9	.31
2	1.0	.19	9.3	.44	4.5	1.5	.53	1.7	.12	18	83	.31
3	13	.26	3.8	7.4	2.3	1.3	.53	1.6	.12	.48	22	.30
4	5.8	.22	2.6	2.0	2.9	1.3	.51	1.5	.11	.13	3.9	.29
5	7.0	20	2.2	10	19	1.3	.48	1.4	.10	.09	1.8	17
6	3.3	1.5	3.2	2.4	7.5	1.3	1.5	1.9	2.6	.07	1.2	5.5
7	1.6	.68	3.0	1.2	3.3	1.0	.88	2.6	5.0	.09	.91	1.5
8	.98	.45	3.6	.71	2.5	.73	.70	1.6	.66	.07	.80	1.0
9	.82	.34	3.2	.67	2.4	.74	.59	1.4	.43	.95	.75	.54
10	.75	.47	2.5	.70	2.5	.86	.54	1.3	.26	.15	2.6	.29
11	.64	.36	2.7	.63	2.4	2.5	.48	1.2	.17	.06	68	.29
12	.51	.31	4.6	.62	2.0	1.4	.46	1.1	31	.94	3.0	.27
13	.84	.48	4.0	.63	1.7	25	.42	1.0	5.4	3.2	1.8	.22
14	.58	1.4	4.9	.46	1.4	43	.45	1.0	.91	1.6	1.2	.21
15	.48	2.8	2.0	.34	1.5	42	.69	1.0	.54	.14	5.3	.18
16	.32	107	1.7	.34	1.3	6.4	241	1.0	.60	.09	1.0	.25
17	.28	110	1.5	.35	3.0	3.7	142	.95	.51	.09	6.8	.22
18	.27	5.7	1.1	.52	64	2.4	17	.95	.35	.25	3.9	.19
19	.29	3.2	.84	3.1	36	2.5	5.6	.82	.37	11	.92	.24
20	.32	2.3	.76	10	48	1.9	3.9	.82	.29	.54	.46	.19
21	.25	1.8	.85	3.6	46	1.3	5.0	.87	.16	.20	20	.18
22	.25	36	.78	1.8	11	1.1	9.9	5.1	.09	.09	6.8	.18
23	.25	7.9	.87	1.3	7.1	1.1	43	1.1	.09	.08	1.9	1.6
24	.29	3.5	.95	.91	5.1	.97	7.7	.72	.08	.07	4.8	.60
25	.24	2.3	.94	76	4.3	.83	3.9	.58	.07	.06	.94	.25
26	.23	21	.57	173	2.9	.83	3.3	.54	.08	2.8	.62	11
27	.21	19	.55	42	2.5	1.1	2.9	.49	.08	6.4	.36	8.4
28	.20	67	.60	5.5	1.9	.76	2.5	.45	.07	19	.87	1.4
29	.19	15	.53	2.6	---	.67	2.4	.34	.06	9.9	.56	.39
30	.21	8.5	.45	2.1	---	.67	2.0	.32	.05	8.9	.39	.34
31	.25	---	.44	1.7	---	.61	---	.24	---	86	.31	---
TOTAL	42.45	439.87	73.53	353.53	290.3	152.27	501.39	37.49	50.54	171.49	250.79	53.64
MEAN	1.37	14.7	2.37	11.4	10.4	4.91	16.7	1.21	1.68	5.53	8.09	1.79
MAX	13	110	9.3	173	64	43	241	5.1	31	86	83	17
MIN	.19	.19	.44	.34	1.3	.61	.42	.24	.05	.05	.31	.18
CFSM	.33	3.51	.57	2.72	2.48	1.17	3.99	.29	.40	1.32	1.93	.43
IN.	.38	3.91	.65	3.14	2.58	1.35	4.45	.33	.45	1.52	2.23	.48

CAL YR 1985 TOTAL 1519.10 MEAN 4.16 MAX 205 MIN .05 CFSM .99 IN. 13.49
WTR YR 1986 TOTAL 2417.29 MEAN 6.62 MAX 241 MIN .05 CFSM 1.58 IN. 21.46

01400350 MACS BROOK AT SOMERVILLE, NJ

LOCATION.--Lat 40°34'26", long 74°37'06", Somerset County, Hydrologic Unit 02030105, on left upstream wingwall of culvert under access road from U.S. Highway 22 west to U.S. Highways 202 and 206, 1,200 ft upstream from Peters Brook, and 0.4 mi north of Somerville.

DRAINAGE AREA.--0.77 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1982 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 58.37 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 6-24, Dec. 18 to Jan. 2, 7-19, 21-25, Jan. 28 to Feb. 2, 7-17, and 20. Records good above 0.5 ft³/s and fair below, except for periods of no gage-height record, Oct. 6-24, Dec. 18 to Jan. 2, 8-19, 21-25, Jan. 28 to Feb. 2, 7-17, and 20, which are poor. Several measurements of water temperature were made during the year.

COOPERATION.--Gage-height record collected in cooperation with Somerset County.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 549 ft³/s, Apr. 16, 1986, gage height 4.66 ft; no flow part or all of many days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 150 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 16	2320	236	3.35	July 31	0250	218	3.27
Jan. 25	2300	220	3.29	Aug. 2	2125	299	3.62
Apr. 16	1950	*549	*4.66	Aug. 11	0005	299	3.62

No flow part of many days in June, July, August and September.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.16	.13	1.8	.05	.24	.41	.23	.47	.08	.01	.35	.08
2	.17	.14	2.2	.04	.97	.38	.23	.36	.05	3.5	19	.08
3	4.1	.13	.71	.53	.64	.34	.17	.30	.03	.14	2.7	.06
4	.94	.14	.50	.65	.72	.33	.17	.31	.04	.08	.55	.07
5	.75	5.6	.44	2.8	4.4	.37	.17	.29	.03	.06	.21	6.3
6	.25	.27	.64	.73	1.6	.39	.49	.43	.44	.06	.13	.57
7	.10	.14	.60	.13	.55	.31	.27	.50	1.3	.03	.11	.15
8	.06	.23	.78	.10	.43	.23	.25	.25	.09	.02	.10	.31
9	.06	.14	.63	.10	.33	.26	.21	.23	.06	.07	.10	.10
10	.08	.17	.55	.11	.30	.30	.22	.22	.03	.04	2.9	.18
11	.09	.16	.61	.09	.31	.96	.18	.18	.03	.02	15	.09
12	.07	.16	.82	.09	.29	.49	.17	.17	6.4	.07	.28	.09
13	.13	.19	.89	.10	.27	9.8	.17	.17	1.1	.65	.14	.08
14	.12	.43	.89	.11	.25	15	.17	.14	.18	.10	.11	.07
15	.09	.34	.38	.09	.24	8.7	.32	.14	.10	.03	.10	.05
16	.10	38	.30	.08	.19	1.6	97	.13	.23	.03	.11	.06
17	.11	25	.28	.07	.30	.93	43	.13	.09	.04	.19	.09
18	.12	.81	.16	.06	17	.69	3.5	.13	.05	.08	.16	.08
19	.16	.63	.14	.52	9.6	.78	1.2	.10	.03	2.4	.09	.08
20	.18	.46	.13	3.1	11	.58	.85	.12	.05	.10	.09	.05
21	.15	.26	.16	.46	12	.42	1.1	.13	.05	.16	3.3	.05
22	.08	10	.14	.25	2.5	.40	2.7	1.0	.05	.04	.71	.05
23	.07	1.5	.15	.19	1.6	.39	9.9	.12	.03	.04	.50	.24
24	.08	.59	.13	1.1	1.2	.36	1.7	.11	.03	.03	.59	.13
25	.13	.40	.13	22	.96	.32	.90	.11	.02	.02	.13	.06
26	.11	6.1	.07	50	.69	.33	.73	.11	.02	.87	.10	1.3
27	.12	4.8	.07	9.8	.63	.34	.65	.11	.02	.78	.10	2.3
28	.13	20	.07	1.4	.47	.30	.57	.10	.04	.58	.17	.17
29	.13	3.9	.06	1.0	---	.28	.66	.08	.04	.28	.09	.27
30	.13	1.9	.05	.70	---	.27	.48	.07	.02	.34	.09	.24
31	.13	---	.05	.39	---	.23	---	.08	---	24	.08	---
TOTAL	9.10	122.72	14.53	96.84	69.68	46.49	168.36	6.79	10.73	34.67	48.28	13.45
MEAN	.29	4.09	.47	3.12	2.49	1.50	5.61	.22	.36	1.12	1.56	.45
MAX	4.1	38	2.2	50	17	15	97	1.0	6.4	24	19	6.3
MIN	.06	.13	.05	.04	.19	.23	.17	.07	.02	.01	.08	.05
CFSM	.38	5.31	.61	4.05	3.23	1.95	7.29	.29	.47	1.45	2.03	.58
IN.	.44	5.93	.70	4.68	3.37	2.25	8.13	.33	.52	1.67	2.33	.65

CAL YR 1985 TOTAL 415.78 MEAN 1.14 MAX 61 MIN .02 CFSM 1.48 IN. 20.09
WTR YR 1986 TOTAL 641.64 MEAN 1.76 MAX 97 MIN .01 CFSM 2.29 IN. 31.00

01400500 RARITAN RIVER AT MANVILLE, NJ

LOCATION.--Lat 40°33'18", long 74°35'02", Somerset County, Hydrologic Unit 02030105, on left bank at downstream side of bridge on North Main Street (Finderne Avenue) at Manville, and 1.4 mi upstream from Millstone River.

DRAINAGE AREA.--490 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1903 to March 1907 (published as "at Finderne"), August 1908 to April 1915 (gage heights only, published in WSP 521), August 1921 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 1552: 1904, 1906, 1922, 1923(M), 1924-25, 1926-29(M), 1930, 1932-33(M), 1924-54. WDR NJ-75-1: 1964(M), 1969(M), 1970(P), 1972(P), 1973(P).

GAGE.--Water-stage recorder. Datum of gage is 20.61 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 15, 1923, nonrecording gage on downstream side of highway bridge at same site and datum. From Oct. 1, 1952 to Sept. 30, 1966, water-stage recorder at station at Bound Brook, above Calco Dam (station 01403000) used as auxiliary gage when stage is above 5.0 ft. Since Oct. 1, 1966, water-stage recorder at station at Bound Brook, used as auxiliary gage, was moved downstream to present site (station 01403060). Between June 9, 1978 and June 7, 1979, gage temporarily relocated at site 1.4 mi downstream, just upstream of Millstone River, because of reconstruction of highway bridge.

REMARKS.--Estimated daily discharges: Dec. 27 to Jan. 17. Records good except those for period of ice effect, Dec. 27 to Jan. 17, which are fair. Records given herein represent flow at gage only. Slight diurnal fluctuation at low flow. Flow regulated by Spruce Run and Round Valley Reservoirs (see Raritan River basin, reservoirs in). Diversion to Round Valley Reservoir (see Raritan River basin, diversions). Water diverted 1,500 ft upstream from station by Johns-Manville Corporation and returned to river 600 ft downstream from Millstone River (see Raritan River basin, diversions). Several measurements of water temperature were made during the year. National Weather Service and New Jersey Water Supply Authority operate gage-height telemeters at station.

AVERAGE DISCHARGE.--68 years, (water years 1904-06, 1922-86), 766 ft³/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,300 ft³/s, Aug. 28, 1971, gage height, 23.8 ft, from floodmark (backwater from Millstone River), from rating curve extended above 14,000 ft³/s on basis of slope-area measurements at gage heights, 14.9 and 20.42 ft; minimum daily discharge, 17 ft³/s, Sept. 19, 1964 (does not include water diverted to Johns-Manville Plant).

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 17	1230	15,500	14.24	Apr. 17	2100	14,500	14.30
Jan. 26	1700	*15,800	*14.65				

Minimum discharge, 180 ft³/s, July 22, gage height, 3.97 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	534	254	2210	340	902	859	430	858	373	351	843	269
2	453	250	2040	300	956	813	426	805	361	699	804	262
3	883	252	1480	500	1180	764	413	733	354	481	2360	362
4	1040	251	1110	505	993	728	373	670	352	292	898	420
5	1520	1070	985	725	1290	691	382	614	381	350	515	541
6	1280	695	956	525	1690	737	392	593	456	325	414	1200
7	695	468	879	380	1280	706	456	655	743	339	358	620
8	521	349	830	340	1010	528	462	642	540	317	321	476
9	435	287	795	330	933	576	441	574	525	343	287	443
10	378	255	744	360	876	551	400	554	367	391	250	425
11	336	234	705	380	864	788	387	509	351	319	1590	456
12	296	223	866	360	729	989	377	474	1150	336	498	455
13	285	247	798	310	631	1160	315	447	875	413	320	439
14	290	303	955	270	570	2320	304	417	469	408	265	423
15	269	403	718	260	693	5090	354	405	355	288	239	415
16	252	827	613	280	640	2540	2640	414	347	273	252	415
17	224	9210	584	330	632	1790	11900	424	358	255	327	405
18	214	2300	536	292	2080	1430	7560	399	273	249	1260	403
19	213	1290	420	353	3740	1280	2670	371	302	490	371	422
20	210	1010	439	1620	4080	1260	1750	355	323	380	263	416
21	195	823	466	1050	3650	971	1510	402	316	216	344	404
22	212	1490	447	611	3680	852	1520	769	319	216	821	395
23	218	2050	472	504	2140	744	3250	798	350	225	449	411
24	210	1130	438	408	1660	718	2450	491	329	202	529	475
25	227	865	441	552	1500	708	1870	402	359	227	430	442
26	221	956	466	10600	1200	658	1480	356	354	264	305	479
27	208	2500	350	6640	1080	543	1310	319	363	770	279	579
28	208	3300	360	2490	954	521	1140	309	383	384	303	516
29	235	4240	340	1560	---	480	1030	324	381	281	321	355
30	257	1990	330	1320	---	411	954	375	361	377	296	314
31	257	---	330	1080	---	398	---	378	---	1410	280	---
TOTAL	12776	39522	23103	35575	41633	32604	48946	15836	12770	11871	16792	13637
MEAN	412	1317	745	1148	1487	1052	1632	511	426	383	542	455
MAX	1520	9210	2210	10600	4080	5090	11900	858	1150	1410	2360	1200
MIN	195	223	330	260	570	398	304	309	273	202	239	262

CAL YR 1985 TOTAL 201461 MEAN 552 MAX 9210 MIN 145
WTR YR 1986 TOTAL 305065 MEAN 836 MAX 11900 MIN 195

01400500 RARITAN RIVER AT MANVILLE, NJ--Continued

WATER-QUALITY RECORDS PERIOD OF RECORD.--Water years 1923-25, 1959, 1962-73, 1976 to current year.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
15...	1100	270	300	7.9	17.0	9.7	101	0.3	50	20
JAN 1986										
31...	1030	1050	222	7.6	0.0	15.1	102	1.1	--	--
APR										
07...	1100	451	236	8.2	10.0	15.3	137	1.8	17	5
MAY										
19...	1100	371	234	8.4	26.0	11.1	137	2.8	20	20
JUL										
07...	1100	341	208	8.3	29.0	8.7	113	1.7	20	50
AUG										
12...	1100	486	185	7.6	24.0	7.8	92	3.7	5400	700

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
15...	100	25	9.4	16	2.6	66	31	27	0.1
JAN 1986									
31...	67	16	6.5	16	1.9	38	17	25	<0.1
APR									
07...	82	20	7.8	14	1.6	55	16	23	<0.1
MAY									
19...	86	21	8.1	12	1.9	60	23	19	0.2
JUL									
07...	73	18	6.9	12	1.8	54	21	15	0.1
AUG									
12...	60	15	5.5	9.5	2.8	43	19	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, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
15...	11	160	0.011	1.60	0.25	0.39	2.0	0.11	2.9
JAN 1986									
31...	12	120	0.012	1.90	0.10	0.2	2.1	0.06	3.0
APR									
07...	7.1	120	0.029	1.03	0.10	0.45	1.5	0.04	2.9
MAY									
19...	6.2	130	0.03	0.94	0.12	0.69	1.6	0.06	2.6
JUL									
07...	4.5	110	0.013	0.48	0.09	0.57	1.1	0.10	3.2
AUG									
12...	9.4	100	0.028	0.85	0.07	0.74	1.6	0.22	5.4

01400500 RARITAN RIVER AT MANVILLE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
OCT 1985 15...	1100	<0.5	60	<1	<10	50	1	10	4

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1985 15...	240	6	60	<0.1	4	<1	30	2

01400540 MILLSTONE RIVER NEAR MANALAPAN, NJ

LOCATION.--Lat 40°15'44", long 74°25'13", Middlesex County, Hydrologic Unit 02030105, at bridge on State Route 33, 1.3 mi west of Manalapan, 5.5 mi east of Hightstown, and 8.4 mi above Rocky Brook.

DRAINAGE AREA.--7.37 mi^2.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960 to 1964, June 1981 to current year.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
02...	1230	E6.1	104	6.9	17.0	8.8	--	<0.7	80	540
FEB 1986										
03...	0940	E14	107	6.1	1.0	13.0	92	<1.0	<20	4
APR										
01...	1210	E6.7	108	6.4	14.0	11.4	109	<0.9	<20	4
JUN										
09...	1115	E3.1	102	7.2	19.0	9.0	97	E1.2	330	240
JUL										
01...	1220	E1.8	95	6.8	18.0	9.0	95	4.4	790	>2400
AUG										
14...	1330	E2.3	96	6.8	20.0	9.2	101	<0.5	130	1600

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
02...	28	6.1	3.2	4.7	2.6	10	14	11	0.2
FEB 1986									
03...	30	6.3	3.5	7.1	2.1	3.0	15	12	0.1
APR									
01...	29	5.9	3.5	6.1	2.2	6.0	17	12	0.2
JUN									
09...	30	5.8	3.7	5.2	2.3	13	10	10	0.2
JUL									
01...	28	5.5	3.4	5.3	2.0	14	8.4	11	0.1
AUG									
14...	30	5.9	3.6	5.1	2.4	16	10	10	0.2

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
02...	10	58	0.016	0.94	0.12	0.39	1.3	0.08	3.5
FEB 1986									
03...	9.2	57	0.009	1.67	0.17	0.38	2.1	0.06	2.1
APR									
01...	7.4	58	0.014	1.64	0.12	0.18	1.8	0.04	1.8
JUN									
09...	9.0	54	0.016	1.46	0.11	0.64	2.1	0.10	3.3
JUL									
01...	8.0	52	0.015	1.46	0.10	0.45	1.9	0.14	1.9
AUG									
14...	9.3	56	0.006	1.14	<0.05	E0.47	--	0.07	3.1

01400540 MILLSTONE RIVER NEAR MANALAPAN, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITRO-GEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INOR-GANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD)
OCT 1985											
02...	1230	--	170	0.3	4.9	--	--	--	--	--	6
02...	1230	<0.5	--	--	--	20	1	<10	20	1	--

DATE	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	COBALT, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, RECOV. FM BOT-TOM MA-TERIAL (UG/G)
OCT 1985											
02...	--	170	<10	--	70	--	32000	--	20	--	120
02...	10	--	--	5	--	2200	--	11	--	50	--

DATE	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY RECOV. FM BOT-TOM MA-TERIAL (UG/G AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SELE-NIUM, TOTAL IN BOT-TOM MA-TERIAL (UG/G)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PCN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
OCT 1985											
02...	--	0.05	--	10	--	<1	--	100	--	<1	<1.0
02...	<0.1	--	12	--	<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 1985											
02...	<0.1	2.0	5.7	3.7	3.4	0.2	0.9	<0.1	<0.1	<0.1	<0.1
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)
OCT 1985											
02...	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1
02...	--	--	--	--	--	--	--	--	--	--	--

01400650 MILLSTONE RIVER AT GROVERS MILL, NJ

LOCATION.--Lat 40°19'19", long 74°36'31", Mercer County, Hydrologic Unit 02030105, at bridge on Millstone Road in Grovers Mill, 0.3 mi upstream from Cranbury Brook, and 2.7 mi north of Dutch Neck.

DRAINAGE AREA.--43.4 mi².

WATER-QUALITY RECORDS

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
01...	1245	E45	144	6.2	17.5	4.8	50	2.1	330	1300
FEB 1986										
04...	0915	E88	213	6.6	2.0	12.7	91	1.1	79	9
APR										
08...	1245	E47	198	6.9	13.0	7.8	75	4.5	230	110
JUN										
19...	0910	E13	205	6.5	19.5	2.6	28	4.5	110	920
JUL										
28...	1100	E27	128	6.1	24.5	2.8	34	3.1	2100	490
AUG										
28...	1130	E17	176	6.7	20.0	3.1	34	1.9	130	330

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
01...	36	9.0	3.4	7.9	4.2	7.0	26	16	0.1
FEB 1986									
04...	47	11	4.7	17	3.5	2.0	--	35	0.1
APR									
08...	45	10	4.8	13	3.5	9.0	35	25	0.2
JUN									
19...	48	11	4.9	15	3.6	16	20	21	0.3
JUL									
28...	31	7.5	3.1	7.8	3.6	16	22	12	0.2
AUG									
28...	46	11	4.5	12	3.8	21	18	18	0.3

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
01...	8.3	79	0.024	0.89	0.33	2.0	2.9	0.25	6.1
FEB 1986									
04...	8.7	140	0.02	2.26	1.10	1.8	4.1	0.21	3.3
APR									
08...	6.5	100	0.065	2.03	1.70	1.9	4.0	0.30	5.4
JUN									
19...	7.4	93	0.56	5.00	0.30	0.75	5.8	0.40	4.2
JUL									
28...	6.2	72	0.065	1.03	0.33	1.0	2.0	0.40	7.9
AUG									
28...	6.4	87	0.01	2.87	<0.05	0.64	3.5	0.25	4.8

01400650 MILLSTONE RIVER AT GROVERS MILL, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT 1985											
01...	1245	--	590	0.1	35	--	--	--	--	--	3
01...	1245	<0.5	--	--	--	50	2	<10	50	2	--
JUN 1986											
19...	0910	<0.5	--	--	--	20	2	<10	20	<1	--

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT 1985											
01...	--	110	<10	--	10	--	9300	--	30	--	67
01...	<10	--	--	95	--	1000	--	51	--	50	--
JUN 1986											
19...	<10	--	--	5	--	610	--	9	--	70	--

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985											
01...	--	0.1	--	<10	--	<1	--	40	--	<1	<1.0
01...	<0.1	--	30	--	<1	--	580	--	4	--	--
JUN 1986											
19...	<0.1	--	4	--	<1	--	20	--	4	--	--

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985											
01...	<0.1	12	23	21	37	0.1	6.3	<0.1	<0.1	<0.1	<0.1
01...	--	--	--	--	--	--	--	--	--	--	--
JUN 1986											
19...	--	--	--	--	--	--	--	--	--	--	--

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985											
01...	0.6	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1
01...	--	--	--	--	--	--	--	--	--	--	--
JUN 1986											
19...	--	--	--	--	--	--	--	--	--	--	--

01401000 STONY BROOK AT PRINCETON, NJ

LOCATION.--Lat 40°19'59", long 74°40'56", Mercer County, Hydrologic Unit 02030105, at bridge on U.S. Highway 206, 1.6 mi southwest of Princeton, and 4.0 mi upstream from Carnegie Lake.

DRAINAGE AREA.--44.5 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1953 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 62.23 ft above National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark).

REMARKS.--No estimated daily discharges. Records good. Since July 1959 some regulation by several small reservoirs, combined capacity, 49,800,000 gal. Several measurements of water temperature, other than those published, were made during the year.

AVERAGE DISCHARGE.--33 years, 64.0 ft³/s, 19.53 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,960 ft³/s, Aug. 28, 1971, gage height, 14.26 ft, from rating curve extended above 4,000 ft³/s on basis of contracted-opening measurement of peak flow; no flow many days in August and September 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,800 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 17	0400	1,950	6.81	Apr. 16	2315	*3,780	*9.69
Jan. 26	0830	2,430	7.73				

Minimum discharge, 0.78 ft³/s, Sept. 17, gage height, 1.24 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	6.3	412	18	47	47	22	43	4.1	.85	27	2.8
2	18	5.7	229	15	58	43	22	38	3.8	8.6	22	2.7
3	160	5.4	129	37	82	41	20	32	3.3	9.0	39	2.5
4	141	5.6	88	63	67	42	19	29	3.0	4.3	21	2.5
5	180	213	74	75	194	42	20	27	3.2	2.7	8.8	2.6
6	129	65	76	56	197	43	27	25	3.6	2.1	5.4	3.6
7	53	32	68	29	111	42	37	23	3.8	1.7	4.2	3.0
8	36	24	68	22	89	27	32	22	3.6	1.4	3.5	3.1
9	29	19	70	22	66	29	30	20	3.1	1.5	2.8	2.5
10	25	18	68	21	59	30	25	18	2.7	1.4	2.4	2.0
11	22	16	62	20	61	43	22	17	2.5	1.6	94	1.9
12	18	15	63	18	49	43	20	16	13	2.0	24	1.9
13	17	15	61	19	43	110	18	13	8.4	2.4	8.9	1.4
14	17	15	109	14	41	258	18	12	6.3	3.5	5.3	1.0
15	15	16	60	13	43	454	17	12	5.1	2.1	3.9	.95
16	14	112	46	12	39	174	1270	12	4.5	1.8	3.1	.89
17	12	830	44	12	39	111	1400	13	3.9	1.6	8.7	.86
18	10	134	35	14	222	84	417	12	3.2	1.5	76	.87
19	9.5	82	28	23	461	76	180	10	2.8	8.1	14	2.1
20	10	63	27	144	592	66	124	9.1	2.8	4.6	7.0	1.3
21	9.2	50	28	89	458	49	108	9.5	2.2	3.0	9.7	1.7
22	8.6	226	25	46	336	43	111	30	1.8	2.4	22	1.8
23	7.8	217	26	38	185	41	516	24	1.6	2.4	13	3.0
24	8.0	94	28	28	141	39	271	14	1.4	2.0	29	3.1
25	7.6	64	29	56	117	34	130	9.8	1.1	1.5	14	2.9
26	7.6	76	18	1480	85	33	99	7.9	1.1	2.1	7.9	2.5
27	6.7	221	22	540	70	32	83	6.8	.97	10	5.9	3.0
28	6.6	790	20	195	55	31	66	6.4	1.2	7.5	6.1	2.5
29	6.0	594	18	82	---	27	56	5.7	1.1	4.5	5.4	2.1
30	5.6	269	16	87	---	26	50	5.1	.92	11	4.5	2.2
31	5.8	---	15	80	---	24	---	4.6	---	29	3.3	---
TOTAL	1017.0	4293.0	2062	3368	4007	2184	5230	526.9	100.09	138.15	501.8	65.27
MEAN	32.8	143	66.5	109	143	70.5	174	17.0	3.34	4.46	16.2	2.18
MAX	180	830	412	1480	592	454	1400	43	13	29	94	3.6
MIN	5.6	5.4	15	12	39	24	17	4.6	.92	.85	2.4	.86
CFSM	.74	3.21	1.49	2.45	3.21	1.58	3.91	.38	.08	.10	.36	.05
IN.	.85	3.59	1.72	2.82	3.35	1.83	4.37	.44	.08	.12	.42	.05

CAL YR 1985 TOTAL 17520.6 MEAN 48.0 MAX 1620 MIN 1.0 CFSM 1.08 IN. 14.65
WTR YR 1986 TOTAL 23493.21 MEAN 64.4 MAX 1480 MIN .85 CFSM 1.45 IN. 19.64

01401000 STONY BROOK AT PRINCETON, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1956-75, 1978 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1956 to September 1962, October 1963 to September 1964, October 1965 to June 1970.
SUSPENDED-SEDIMENT DISCHARGE: January 1956 to June 1970.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
09...	1100	29	227	7.7	13.0	10.4	98	0.7	330	1700
FEB 1986										
06...	1100	168	183	7.3	2.5	13.8	101	2.1	>2400	920
APR										
28...	1230	66	175	7.6	16.5	10.6	109	3.3	130	130
MAY										
29...	1030	6.0	258	8.3	23.0	9.0	105	--	49	27
JUL										
10...	1300	1.4	377	7.6	25.5	7.2	88	1.8	790	330
AUG										
13...	1330	8.1	177	8.6	23.0	11.2	129	5.7	330	33

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
09...	68	16	6.9	13	3.1	42	26	19	<0.1
FEB 1986									
06...	48	11	5.1	13	2.1	24	18	23	0.1
APR									
28...	53	12	5.7	10	1.8	32	18	12	<0.1
MAY									
29...	88	21	8.7	18	2.6	66	30	17	0.1
JUL									
10...	110	25	11	35	3.3	74	36	52	0.2
AUG									
13...	54	13	5.3	12	3.0	40	18	15	0.2

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
09...	13	120	0.007	1.62	0.10	0.57	2.2	0.12	4.5
FEB 1986									
06...	11	98	0.015	1.14	0.12	0.51	1.7	0.07	6.0
APR									
28...	11	90	0.016	1.07	0.06	0.32	1.4	0.06	2.8
MAY									
29...	4.3	140	0.003	<0.05	0.05	0.53	--	0.05	4.8
JUL									
10...	5.8	210	0.012	0.06	0.07	0.69	0.75	0.09	4.8
AUG									
13...	7.0	97	0.011	0.58	0.08	0.53	1.1	0.17	6.6

01401000 STONY BROOK AT PRINCETON, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT 1985 09...	1100	--	230	0.2	3.2	--	--	--	--	--	<1
MAY 1986 29...	1030	<0.5	--	--	--	20	1	<10	30	<1	--

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT 1985 09...	--	260	20	--	60	--	24000	--	20	--	1000
MAY 1986 29...	10	--	--	5	--	70	--	<5	--	40	--

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985 09...	--	0.02	--	30	--	<1	--	130	--	4	<1.0
MAY 1986 29...	<0.1	--	5	--	<1	--	<10	--	<1	--	--

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985 09...	<0.1	5.0	1.4	0.8	2.3	<0.1	0.1	<0.1	<0.1	<0.1	0.1
MAY 1986 29...	--	--	--	--	--	--	--	--	--	--	--

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985 09...	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1
MAY 1986 29...	--	--	--	--	--	--	--	--	--	--	--

01401440 MILLSTONE RIVER AT KINGSTON, NJ

LOCATION.--Lat 40°22'24", long 74°37'15", Middlesex County, Hydrologic Unit 02030105, at bridge on Lincoln Highway in Kingston, 0.2 mi downstream from the outflow of Carnegie Lake, and 3.0 mi northwest of Plainsboro.

DRAINAGE AREA.--172 mi², includes 8.0 mi² which drains into Delaware and Raritan Canal.

WATER-QUALITY RECORDS

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
07...	1130	E215	173	7.1	16.0	9.4	95	1.9	170	50
FEB 1986										
05...	1100	E564	205	7.0	2.5	13.2	98	1.8	540	100
APR										
28...	1010	E253	149	7.0	15.0	9.6	95	2.7	17	49
MAY										
28...	1030	E44	202	9.0	25.0	8.9	108	--	<20	240
JUL										
10...	1100	E14	228	10.0	26.0	8.8	109	5.9	20	330
AUG										
13...	1030	E57	167	7.5	25.0	8.3	99	7.8	50	33

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
07...	46	11	4.4	9.1	3.3	22	20	15	0.1
FEB 1986									
05...	52	12	5.3	17	3.0	17	18	28	0.1
APR									
28...	42	9.9	4.2	9.5	2.4	16	27	21	0.1
MAY									
28...	60	14	6.2	14	2.8	35	23	20	0.2
JUL									
10...	56	14	5.0	17	3.3	35	24	25	0.3
AUG									
13...	49	12	4.6	11	3.3	28	19	16	0.2

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
07...	8.5	85	0.022	1.08	0.21	0.89	2.0	0.17	5.2
FEB 1986									
05...	11	100	0.021	2.15	0.51	1.0	3.2	0.12	4.2
APR									
28...	7.8	91	0.029	1.45	0.17	0.78	2.2	0.11	5.0
MAY									
28...	3.9	110	0.065	0.84	0.05	1.3	2.2	0.10	6.9
JUL									
10...	5.4	110	0.014	<0.05	0.05	0.62	--	0.24	15
AUG									
13...	6.0	89	0.036	0.75	0.12	0.92	1.7	0.14	6.6

01401440 MILLSTONE RIVER AT KINGSTON, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
OCT 1985 07...	1130	<0.5	20	1	<10	50	<1	10	33
MAY 1986 28...	1030	<0.5	50	1	<10	20	<1	<10	3

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1985 07...	930	5	80	<0.1	24	<1	100	<1
MAY 1986 28...	390	1	100	<0.1	5	<1	<10	4

01401600 BEDEN BROOK NEAR ROCKY HILL, NJ

LOCATION.--Lat 40°24'52", long 74°39'02", Somerset County, Hydrologic Unit 02030105, at bridge on U.S. Route 206 at State Route 533, 0.7 mi upstream from Pike Run, 1.2 mi northwest of Rocky Hill, and 4.6 mi north of Princeton.

DRAINAGE AREA.--27.6 mi².

WATER-QUALITY RECORDS

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
03...	1115	E93	195	7.5	15.0	9.8	97	--	16000	>24000
FEB 1986										
04...	1330	E40	225	7.5	2.0	13.6	98	0.6	49	110
APR										
23...	1240	E290	101	7.1	6.0	12.1	98	1.2	240	>2400
MAY										
27...	1100	E4.4	263	8.5	21.0	10.9	122	2.4	46	240
JUL										
08...	1230	E0.94	493	8.4	27.0	10.0	125	1.9	490	90
AUG										
11...	1200	E56	147	7.4	25.5	7.8	96	4.9	9200	9200

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
03...	60	14	6.0	9.1	2.5	31	20	27	<0.1
FEB 1986									
04...	60	14	6.0	24	1.7	22	18	42	<0.1
APR									
23...	35	7.9	3.6	6.0	1.3	18	15	8.1	0.1
MAY									
27...	92	22	9.1	13	2.3	52	46	17	<0.1
JUL									
08...	170	40	16	29	4.3	76	110	39	0.1
AUG									
11...	46	11	4.5	7.7	2.6	31	18	10	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
03...	10	110	0.026	2.54	0.09	0.89	3.4	0.12	5.8
FEB 1986									
04...	13	130	0.009	2.03	0.13	0.36	2.4	0.08	1.5
APR									
23...	11	64	0.019	1.25	0.06	0.65	1.9	0.13	6.1
MAY									
27...	7.7	150	0.071	1.15	0.11	0.59	1.7	0.25	3.2
JUL									
08...	6.5	290	0.035	0.78	0.10	0.9	1.7	0.45	5.2
AUG									
11...	7.8	80	0.033	1.07	0.11	1.1	2.1	0.27	8.3

01401600 BEDEN BROOK NEAR ROCKY HILL, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
MAY 1986 27...	1100	<0.5	30	2	<10	90	<1	<10	4

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
MAY 1986 27...	100	1	30	<0.1	1	<1	<10	4

01401650 PIKE RUN AT BELLE MEAD, NJ

LOCATION.--Lat 40°28'05", long 74°38'57", Somerset County, Hydrologic Unit 02030105, on right bank 20 ft upstream of bridge on Township Line Road, 0.7 mi east of Belle Mead, 0.8 mi upstream of Cruser Brook, and 1.0 mi downstream of bridge on U.S. Route 206.

DRAINAGE AREA.--5.36 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder, crest-stage gage, and concrete parking-block control. Datum of gage is 58.85 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 1-29. Records fair except for period of no gage-height record, Oct. 1-29, which are poor. Several measurements of water temperature were made during the year. Recording rain-gage and gage-height telemeters at station.

AVERAGE DISCHARGE.--6 years, 8.06 ft/³/s, 21.41 in/yr.

COOPERATION.--Gage-height record collected in cooperation with Somerset County.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,010 ft³/s, July 7, 1984, gage height, 11.76 ft; no flow many days in August and September 1980.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1810, 13.5 ft, from floodmark, present datum, Aug. 28, 1971.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 17	0200	598	6.93	Apr. 17	1400	333	5.60
Jan. 26	0510	499	6.45	Aug. 17	2320	491	6.41
Apr. 16	2205	*701	*7.40				

Minimum discharge, 0.14 ft³/s, June 30, July 1, 2, 9; minimum gage height, 2.64 ft, July 9.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	.86	30	1.0	6.5	4.4	2.5	4.6	.66	.15	2.2	.65
2	2.2	.96	19	.95	5.9	4.1	2.6	4.2	.58	5.0	13	.65
3	12	1.1	9.0	5.7	5.6	4.0	2.4	3.4	.50	.99	15	.62
4	8.9	1.3	6.8	3.4	5.5	4.0	2.4	2.8	.46	.46	2.6	.55
5	28	19	5.3	8.5	23	4.1	2.4	2.6	.47	.33	1.2	6.0
6	12	3.9	5.7	4.5	17	4.2	4.3	2.4	.47	.29	.88	5.2
7	5.2	2.3	5.8	6.8	11	4.0	4.6	2.2	.83	.26	.69	1.4
8	3.5	1.8	6.8	2.7	7.7	4.0	3.4	2.0	.62	.20	.56	.94
9	2.8	1.5	6.5	1.6	6.4	2.9	3.0	1.8	.43	4.6	.47	.74
10	2.5	1.4	6.3	1.5	6.3	3.3	2.7	1.7	.32	1.7	.35	.62
11	2.1	1.4	5.4	1.4	6.5	5.3	2.6	1.5	.31	.45	33	.60
12	1.8	1.3	6.6	1.4	9.9	4.2	2.4	1.4	11	.45	2.1	.50
13	2.2	1.4	6.6	1.5	9.9	22	2.0	1.4	1.5	3.6	1.1	.42
14	1.8	1.5	9.2	2.1	7.2	32	2.0	1.3	.80	2.3	.79	.35
15	1.6	2.2	4.3	.87	4.4	46	2.1	1.4	.60	.54	.62	.33
16	1.3	57	3.5	.83	5.6	14	182	1.6	.50	.33	.64	.30
17	1.1	156	3.3	.85	3.9	8.9	179	1.6	.51	.32	51	.27
18	1.1	11	3.0	.97	37	7.1	31	1.3	.44	.24	36	.29
19	1.1	6.5	2.4	2.4	44	6.9	13	1.2	.42	19	4.6	1.4
20	1.0	5.2	2.0	12	61	6.0	9.5	1.3	.42	2.1	2.4	.60
21	.88	3.9	1.9	5.8	48	4.6	9.0	1.6	.34	.71	22	.42
22	.86	38	1.7	4.0	23	4.1	12	5.1	.29	.42	16	.36
23	.83	15	1.8	3.7	15	4.0	54	2.0	.28	.31	3.7	1.4
24	.88	7.2	2.0	2.7	12	3.7	17	1.3	.24	.24	5.8	1.8
25	.88	5.2	2.1	31	9.8	3.1	9.4	1.2	.20	.19	2.2	.80
26	.77	9.8	2.4	255	9.3	3.1	7.6	1.1	.19	2.7	1.6	.75
27	.74	23	1.1	53	5.9	3.3	6.5	1.0	.21	16	1.3	5.3
28	.70	101	1.2	15	5.2	3.0	5.8	1.0	.23	1.5	1.6	2.2
29	.63	47	1.1	23	---	2.8	5.4	.90	.25	1.0	1.1	1.3
30	.66	28	1.0	5.9	---	2.6	5.0	.84	.19	1.5	.83	.90
31	.76	---	.94	6.1	---	2.6	---	.75	---	9.3	.74	---
TOTAL	103.19	555.72	164.74	466.17	412.5	228.3	587.6	58.49	24.26	77.18	226.07	37.66
MEAN	3.33	18.5	5.31	15.0	14.7	7.36	19.6	1.89	.81	2.49	7.29	1.26
MAX	28	156	30	255	61	46	182	5.1	11	19	51	6.0
MIN	.63	.86	.94	.83	3.9	2.6	2.0	.75	.19	.15	.35	.27
CFSM	.62	3.45	.99	2.80	2.74	1.37	3.66	.35	.15	.46	1.36	.24
IN.	.72	3.86	1.14	3.24	2.86	1.58	4.08	.41	.17	.54	1.57	.26

CAL YR 1985 TOTAL 2425.16 MEAN 6.64 MAX 204 MIN .36 CFSM 1.24 IN. 16.83
WTR YR 1986 TOTAL 2941.88 MEAN 8.06 MAX 255 MIN .15 CFSM 1.50 IN. 20.42

01402000 MILLSTONE RIVER AT BLACKWELLS MILLS, NJ

LOCATION.--Lat 40°28'30", long 74°34'34", Somerset County, Hydrologic Unit 02030105, on left bank 30 ft downstream from highway bridge at Blackwells Mills, and 0.3 mi downstream from Six Mile Run.

DRAINAGE AREA.--258 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1903 to December 1904 (gage heights only), August 1921 to current year. Monthly discharge only for some periods, published in WSP 1302. Published as "at Millstone" 1903-04.

REVISED RECORDS.--WSP 1552: 1924-25(M), 1926.

GAGE.--Water-stage recorder. Concrete control since Nov. 18, 1933. Datum of gage is 26.97 ft above National Geodetic Vertical Datum of 1929. June 27, 1903 to Dec. 31, 1904, nonrecording gage at bridge 2.0 mi downstream at Millstone at different datum. Aug. 4, 1921 to Aug. 16, 1928, nonrecording gage at present site and datum.

REMARKS.--No estimated daily discharges. Records good except those above 1,200 ft³/s, which are poor. Inflow from and losses to Delaware and Raritan Canal above station. Flow slightly regulated by Carnegie Lake, capacity, 310,000,000 gal and several smaller reservoirs, combined capacity, 49,800,000 gal. Several measurements of water temperature were made during the year. National Weather Service and New Jersey Water Supply Authority operate gage-height telemeters at station.

AVERAGE DISCHARGE.--65 years, 374 ft³/s, 19.68 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,200 ft³/s, Aug. 28, 1971, gage height, 18.68 ft, from high-water mark; minimum, about 5 ft³/s, Sept. 16, 1923.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 29	1145	3,050	8.17	Apr. 17	1845	*7,650	*12.41
Jan. 26	2330	4,330	9.91				

Minimum discharge, 30 ft³/s, July 12, gage height, 1.36 ft, July 12.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	363	59	1950	160	364	303	174	242	62	43	491	120
2	247	61	1540	160	451	281	164	215	60	91	369	118
3	662	60	966	213	423	264	157	203	53	76	485	117
4	764	59	619	305	412	259	152	179	52	53	313	114
5	669	529	494	358	733	258	147	165	50	43	294	120
6	765	463	446	380	1040	256	171	154	46	38	219	161
7	413	314	419	287	741	244	210	150	49	36	186	126
8	284	266	401	225	556	196	209	144	52	36	168	118
9	234	199	397	192	456	192	198	133	51	44	134	114
10	196	154	383	173	427	195	182	117	47	60	131	110
11	169	119	362	171	486	238	167	110	44	35	460	108
12	144	112	331	170	445	229	153	103	145	32	309	104
13	132	114	315	178	318	390	144	99	94	37	250	96
14	124	111	411	173	290	880	141	93	69	76	176	93
15	117	125	339	145	288	1550	137	88	62	71	138	95
16	112	261	276	134	279	1020	1220	87	63	123	116	93
17	98	2530	269	132	345	716	5960	87	55	159	121	92
18	88	1770	281	138	706	548	5250	78	51	148	619	95
19	88	759	250	172	1770	491	2610	80	52	233	255	109
20	86	529	246	349	2190	370	1070	74	43	215	194	111
21	83	376	226	389	2150	322	681	83	37	176	205	112
22	78	637	198	319	1830	308	614	136	36	153	338	113
23	76	1130	195	230	1010	276	1460	134	37	130	242	118
24	75	682	202	193	779	243	1460	108	38	119	242	147
25	78	517	217	185	639	238	881	83	35	106	236	135
26	71	444	201	2880	513	220	628	69	35	99	211	142
27	69	765	191	3760	423	209	508	64	38	329	186	186
28	64	1540	174	2310	345	207	434	56	45	400	164	157
29	58	2880	173	909	---	200	377	52	47	339	145	136
30	58	2230	164	552	---	189	346	59	46	400	132	125
31	60	---	155	429	---	178	---	63	---	586	126	---
TOTAL	6525	19795	12791	16371	20409	11470	26005	3508	1594	4486	7655	3585
MEAN	210	660	413	528	729	370	867	113	53.1	145	247	120
MAX	765	2880	1950	3760	2190	1550	5960	242	145	586	619	186
MIN	58	59	155	132	279	178	137	52	35	32	116	92
CFSM	.81	2.56	1.60	2.05	2.83	1.43	3.36	.44	.21	.56	.96	.47
IN.	.94	2.85	1.84	2.36	2.94	1.65	3.75	.51	.23	.65	1.10	.52

CAL YR 1985 TOTAL 87487 MEAN 240 MAX 2880 MIN 32 CFSM .93 IN. 12.61
WTR YR 1986 TOTAL 134194 MEAN 368 MAX 5960 MIN 32 CFSM 1.43 IN. 19.35

01402540 MILLSTONE RIVER AT WESTON, NJ

LOCATION.--Lat 40°31'47", long 74°35'19", Somerset County, Hydrologic Unit 02030105, at bridge on Wilhouski Street in Weston, 50 ft upstream from Royce Brook, 0.8 mi southwest of Alma White College, and 1.9 mi north of Millstone.

DRAINAGE AREA.--271 mi^2, includes approximately 13 mi^3 which drains into Delaware and Raritan canal.

WATER-QUALITY RECORDS

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
08...	1100	E326	202	7.2	14.5	8.7	84	0.9	80	130
FEB 1986										
04...	1030	E462	201	7.0	2.0	13.1	94	1.2	70	130
APR										
23...	1040	E1930	132	7.1	8.0	10.5	90	2.4	1100	1700
MAY										
21...	1100	E84	261	7.2	21.5	6.2	70	3.9	130	170
JUL										
08...	1030	E37	319	8.8	25.5	10.0	122	4.7	70	230
AUG										
07...	1100	E210	195	7.3	25.5	7.3	90	3.7	230	130

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
08...	56	13	5.7	11	3.3	27	25	17	0.2
FEB 1986									
04...	55	13	5.5	15	2.7	18	25	31	0.1
APR									
23...	40	9.5	4.0	8.4	1.8	20	21	11	0.1
MAY									
21...	77	18	7.9	17	3.8	44	38	23	0.2
JUL									
08...	94	22	9.5	21	5.2	50	53	27	0.3
AUG									
07...	58	14	5.7	12	3.3	34	26	17	0.2

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
08...	11	100	0.016	2.08	0.16	0.67	2.8	0.18	4.7
FEB 1986									
04...	12	120	0.029	2.13	0.39	0.85	3.0	0.17	3.9
APR									
23...	10	78	0.033	1.40	0.21	0.98	2.4	0.27	6.2
MAY									
21...	7.1	140	0.035	1.57	0.19	1.2	2.7	0.51	5.4
JUL									
08...	7.7	180	0.026	2.66	0.10	1.6	4.2	0.58	9.0
AUG									
07...	7.3	110	0.014	1.28	E0.06	0.87	2.2	0.26	7.7

01402540 MILLSTONE RIVER AT WESTON, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT 1985											
08...	1100	--	200	0.2	2.4	--	--	--	--	--	<1
08...	1100	<0.5	--	--	--	10	2	<10	100	<1	--
MAY 1986											
21...	1100	<0.5	--	--	--	30	2	<10	70	<1	--

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT 1985											
08...	--	120	20	--	40	--	16000	--	50	--	1300
08...	<10	--	--	7	--	590	--	5	--	50	--
MAY 1986											
21...	<10	--	--	5	--	320	--	3	--	120	--

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985											
08...	--	0.03	--	30	--	<1	--	170	--	12	<1.0
08...	0.1	--	6	--	<1	--	20	--	5	--	--
MAY 1986											
21...	<0.1	--	5	--	<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)
OCT 1985											
08...	<0.1	2.0	0.9	0.7	0.1	0.1	0.2	<0.1	<0.1	<0.1	<0.1
08...	--	--	--	--	--	--	--	--	--	--	--
MAY 1986											
21...	--	--	--	--	--	--	--	--	--	--	--

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985											
08...	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.00	10	<0.1
08...	--	--	--	--	--	--	--	--	--	--	--
MAY 1986											
21...	--	--	--	--	--	--	--	--	--	--	--

01402600 ROYCE BROOK TRIBUTARY NEAR BELLE MEAD, NJ

LOCATION.--Lat 40°29'56", long 74°39'05", Somerset County, Hydrologic Unit 02030105, on right bank 25 ft upstream from bridge on State Highway 514 (Amwell Road), 1,200 ft upstream from mouth, and 2.0 mi north of Belle Mead.

DRAINAGE AREA.--1.20 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1966 to September 1974, January 1980 to current year.

REVISED RECORDS.--WRD NJ-69: 1967, 1968. WDR NJ-85-1: 1980-84(P).

GAGE.--Water-stage recorder, crest-stage gage and concrete control. Datum of gage is 66.98 ft above National Geodetic Vertical Datum of 1929. Prior to September 1974 at same site at datum 0.79 ft higher.

REMARKS.--Estimated daily discharges: Aug. 18-20. Records fair. Some regulation from storm-water detention basin 542 ft upstream of gage since 1980. Several measurements of water temperature were made during the year. Recording rain gage and gage-height telemeters at station.

AVERAGE DISCHARGE.--14 years (water years 1967-74, 1981-86), 2.44 ft³/s, 27.62 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,450 ft³/s, Aug. 28, 1971, gage height, 7.80 ft, present datum, from high-water mark, from rating curve extended above 203 ft³/s on basis of slope-area measurement of peak flow; no flow part of or all of some days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 125 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 16	2205	173	4.03	Aug. 17	2055	*239	*4.45
Apr. 16	2015	190	4.15	Aug. 21	2000	128	3.69
Aug. 11	0005	130	3.71				

No flow Jan. 16, 17, 18, 19, June 25, 26, 29.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	.13	11	.05	.91	.86	.37	.69	.28	.03	1.8	.43
2	1.0	.13	11	.05	1.6	.78	.39	.61	.33	5.3	16	.43
3	19	.13	8.8	2.5	1.3	.73	.33	.49	.11	.38	6.1	.40
4	9.6	.19	4.8	6.4	2.0	.63	.33	.42	.34	.24	1.5	.39
5	16	15	2.6	4.3	7.8	.59	.36	.43	.31	.22	.89	14
6	7.3	2.8	2.5	1.2	3.8	.56	1.1	.39	1.2	.19	.70	2.4
7	3.1	1.0	2.6	.80	2.2	.55	.75	.50	1.4	.17	.58	.84
8	1.4	.71	2.6	.53	1.5	.49	.69	.36	.40	.14	.48	.65
9	1.2	.51	2.7	.34	1.4	.44	.59	.31	.29	3.2	.42	.47
10	1.0	.48	2.7	.27	1.4	.44	.50	.34	.17	.55	1.5	.43
11	.82	.43	2.5	.31	1.4	.75	.48	.30	.19	.35	13	.44
12	.72	.45	3.0	.27	1.1	.53	.42	.25	12	.52	.89	.43
13	1.0	.51	3.0	.27	.97	5.3	.39	.23	.97	.90	.64	.36
14	.96	.54	4.4	.20	.86	9.6	.37	.34	.49	.66	.50	.31
15	.85	.94	2.5	.05	.86	10	.49	.40	.39	.41	.43	.30
16	.67	35	1.6	.00	.80	3.2	49	.25	.34	.42	.53	.33
17	.44	28	1.4	.00	1.1	1.9	36	.25	.30	.43	21	.20
18	.37	9.6	1.0	.00	16	1.4	7.4	.25	.30	.42	14	.29
19	.41	7.6	.55	.84	14	1.3	3.1	.26	.20	9.2	2.0	1.2
20	.34	4.9	.43	15	18	1.1	1.9	.26	.24	.86	.78	.46
21	.28	2.4	.59	8.5	13	.83	2.0	.31	.09	.55	16	.39
22	.25	15	.45	3.5	5.2	.78	3.9	2.5	.09	.43	6.7	.31
23	.25	9.9	.49	1.3	3.5	.69	13	.44	.11	.40	2.1	1.9
24	.29	8.4	.63	.81	2.6	.64	4.3	.32	.10	.37	2.9	.58
25	.34	5.0	.52	17	2.0	.59	2.2	.36	.05	.34	1.0	.34
26	.22	6.7	.32	52	1.4	.57	1.6	.34	.03	5.0	.82	2.7
27	.20	11	.14	16	1.3	.59	1.3	.30	.10	8.0	.72	5.2
28	.20	33	.18	3.7	1.0	.50	1.0	.31	.13	2.3	1.2	1.6
29	.14	14	.15	2.1	---	.48	.92	.24	.13	1.1	.59	.78
30	.11	12	.10	1.5	---	.43	.78	.26	.06	.75	.48	.53
31	.13	---	.03	1.2	---	.42	---	.24	---	7.2	.43	---
TOTAL	69.69	226.45	75.28	140.99	109.00	47.67	135.96	12.95	21.14	51.03	116.68	39.09
MEAN	2.25	7.55	2.43	4.55	3.89	1.54	4.53	.42	.70	1.65	3.76	1.30
MAX	19	35	11	52	18	10	49	2.5	12	9.2	21	14
MIN	.11	.13	.03	.00	.80	.42	.33	.23	.03	.03	.42	.20
CFSM	1.87	6.29	2.03	3.79	3.24	1.28	3.78	.35	.58	1.37	3.13	1.08
IN.	2.16	7.02	2.33	4.37	3.38	1.48	4.21	.40	.66	1.58	3.62	1.21

CAL YR 1985 TOTAL 890.74 MEAN 2.44 MAX 95 MIN .01 CFSM 2.03 IN. 27.61
WTR YR 1986 TOTAL 1045.93 MEAN 2.87 MAX 52 MIN .00 CFSM 2.39 IN. 32.42

01403060 RARITAN RIVER BELOW CALCO DAM, AT BOUND BROOK, NJ

LOCATION.--Lat 40°33'05", long 74°32'54", Somerset County, Hydrologic Unit 02030105, on right bank 1,000 ft downstream from Calco Dam and Cuckold Brook, 1,400 ft upstream of bridge on Interstate 287, 1.2 mi downstream from Millstone River, and 1.2 mi southwest of Bound Brook.

DRAINAGE AREA.--785 mi² (includes 11 mi² which drains into the Delaware and Raritan Canal).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1903 to March 1909, October 1944 to current year. Monthly discharge only for some periods, published in WSP 1302. Prior to October 1966 published as "Raritan River at Bound Brook" (station 01403000).

REVISED RECORDS.--WSP 1552: 1903-07, 1946(M), 1949, 1952(P).

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Sept. 12, 1903 to Mar. 31, 1909, nonrecording gages at highway bridge, 1.2 mi downstream at different datum. October 1944 to Sept. 30, 1966, water-stage recorder and concrete control at site 1,120 ft upstream at datum 18.06 ft higher.

REMARKS.--No estimated daily discharges. Records good. Water diverted 1.2 mi above station by Elizabethtown Water Co. for municipal supply (see Raritan River basin, diversions). Flow regulated by Spruce Run and Round Valley Reservoirs (see Raritan River basin, reservoirs in). Diversions to and releases from Round Valley Reservoir (see Raritan River basin, diversions and station 01399690). Slight diurnal fluctuations at low flow. New Jersey Water Supply Authority and National Weather Service gage-height telemeters at station. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--47 years, (water years 1904-08, 1945-86), 1,279 ft³/s, adjusted for diversion by Elizabethtown Water Co. since 1944, and change in contents in Spruce Run Reservoir since 1964 and Round Valley Reservoir since 1966.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 46,100 ft³/s, Aug. 28, 1971, elevation, 37.47 ft, from floodmark; minimum daily, 37 ft³/s, Sept. 6, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 12,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Elevation (ft)	Date	Time	Discharge (ft³/s)	Elevation (ft)
Nov. 17	1545	15,000	26.97	Apr. 17	2100	*20,100	*28.95
Jan. 26	2030	17,400	27.96				

Minimum discharge, 85 ft³/s, Oct. 27, elevation, 16.41 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	776	130	4350	403	1170	1130	559	1040	189	136	1540	197
2	560	138	3750	351	1310	1080	557	917	172	658	1340	190
3	1390	134	2520	551	1570	1020	533	827	156	414	5270	289
4	1770	127	1730	887	1330	957	473	721	147	130	1090	358
5	2240	1470	1400	1000	1920	923	492	651	168	167	762	536
6	2010	1050	1290	910	2790	952	515	601	257	137	517	1290
7	1020	650	1220	579	1970	908	612	658	556	145	364	567
8	701	474	1130	456	1430	671	627	632	395	128	294	423
9	531	347	1120	501	1230	713	582	560	345	154	238	383
10	443	273	1060	439	1170	691	502	504	230	244	195	366
11	367	213	1000	548	1250	938	471	451	181	134	2300	377
12	307	187	1110	400	1100	1150	451	407	1190	158	839	374
13	288	205	1040	382	822	1490	371	371	866	261	474	356
14	273	272	1310	315	680	3520	347	333	368	314	329	332
15	243	384	1020	283	798	7490	396	324	226	175	238	337
16	216	955	836	297	695	4020	4350	328	198	181	224	328
17	170	10800	776	318	886	2680	18200	339	223	233	237	311
18	145	4590	730	318	2510	2040	13500	302	120	233	1940	310
19	148	2090	493	435	6050	1780	6110	262	141	636	577	352
20	144	1510	496	1880	6830	1640	3160	244	157	568	348	356
21	123	1120	597	1460	6280	1260	2330	287	128	276	430	352
22	144	2070	502	904	6200	1120	2260	716	121	219	1220	340
23	131	3400	566	696	3450	986	5250	813	164	217	585	368
24	112	1800	581	541	2590	912	4410	424	126	178	580	438
25	136	1290	594	631	2220	895	3040	313	134	176	490	400
26	134	1300	397	12300	1750	839	2260	252	129	209	364	445
27	118	3480	434	11500	1540	722	1900	211	125	1070	303	586
28	135	4950	466	5500	1300	686	1620	173	160	768	301	506
29	165	7590	427	2580	---	648	1410	152	169	610	294	348
30	195	4580	391	1880	---	562	1280	199	148	784	247	268
31	168	---	321	1440	---	519	---	179	---	2380	221	---
TOTAL	15303	57579	33657	50685	62841	44942	78568	14191	7689	12093	24151	12083
MEAN	494	1919	1086	1635	2244	1450	2619	458	256	390	779	403
MAX	2240	10800	4350	12300	6830	7490	18200	1040	1190	2380	5270	1290
MIN	112	127	321	283	680	519	347	152	120	128	195	190

CAL YR 1985 TOTAL 243363 MEAN 667 MAX 10800 MIN 73
WTR YR 1986 TOTAL 413782 MEAN 1134 MAX 18200 MIN 112

01403150 WEST BRANCH MIDDLE BROOK NEAR MARTINSVILLE, NJ

LOCATION.--Lat 40°36'44", long 74°35'28", Somerset County, Hydrologic Unit 02030105, on left bank 150 ft upstream from bridge on Crim Road, 1.4 mi northwest of Martinsville, and 1.8 mi upstream from confluence with East Branch Middle Brook.

DRAINAGE AREA.--1.99 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 240.48 ft above National Geodetic Vertical Datum of 1929 (levels by Somerset County).

REMARKS.--No estimated daily discharges. Records fair. Several measurements of water temperature were made during the year. Recording rain-gage and gage-height telemeters at station.

AVERAGE DISCHARGE.--7 years, 3.07 ft³/s, 20.95 in/yr.

COOPERATION.--Gage-height record collected in cooperation with Somerset County.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 816 ft³/s, May 11, 1981, gage height, 5.60 ft; no flow part or all of each day Sept. 19-30, 1980 and June 29, 30, July 8.9, 1986.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 225 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 16	2320	351	4.72	July 31	0350	295	4.55
Jan. 25	2315	258	4.43	Aug. 2	2205	369	4.77
Apr. 16	2000	*582	*5.27	Aug. 11	0015	366	4.76

No flow June 29, 30, July 8, 9.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.24	.52	4.9	.42	.97	1.4	.89	1.8	.14	.04	.77	.18
2	.26	.70	6.6	.39	3.2	1.4	.85	1.5	.11	4.7	32	.13
3	4.4	.74	2.2	3.8	1.8	1.5	.76	1.3	.11	.16	7.5	.14
4	1.1	.85	1.6	1.1	1.7	1.5	.76	1.2	.11	.10	.93	.15
5	2.4	16	1.5	5.5	9.7	1.9	.74	1.2	.11	.09	.47	4.6
6	.78	.86	1.7	1.3	5.2	1.9	1.5	1.6	.64	.13	.33	.59
7	.42	.54	1.6	.78	2.4	1.5	1.3	2.1	2.0	.14	.26	.18
8	.30	.48	1.9	.57	2.0	1.1	1.1	1.1	.23	.09	.24	.15
9	.29	.50	1.9	.54	1.6	1.1	.96	.98	.15	.29	.23	.15
10	.34	.55	1.8	.59	1.5	1.6	.87	.83	.11	.11	3.4	.16
11	.38	.55	1.8	.53	1.7	3.6	.80	.75	.48	.09	21	.16
12	.29	.81	2.5	.52	1.3	1.8	.72	.65	18	.25	.55	.14
13	.44	1.0	2.4	.53	1.2	17	.57	.58	2.9	1.0	.37	.08
14	.44	1.2	2.6	.41	1.1	27	.55	.52	.48	.34	.29	.08
15	.27	1.6	1.3	.27	1.1	23	.66	.54	.26	.08	.25	.07
16	.31	48	1.2	.27	.92	5.4	139	.52	.22	.06	.28	.08
17	.41	51	1.2	.32	1.4	3.0	75	.46	.17	.08	.29	.09
18	.45	2.4	.92	.45	24	2.3	9.4	.40	.14	.21	.35	.11
19	.65	1.5	.69	2.1	20	2.8	3.6	.36	.12	2.4	.26	.15
20	.79	1.2	.66	7.0	27	2.1	2.9	.38	.13	.18	.17	.16
21	.65	.94	.76	1.8	30	1.5	4.1	.41	.10	.12	4.5	.16
22	.21	17	.65	1.3	10	1.5	6.7	2.1	.08	.08	.83	.15
23	.19	3.8	.72	1.1	4.7	1.4	21	.47	.11	.17	.37	.31
24	.21	1.8	.79	.76	3.3	1.3	6.0	.35	.09	.07	.94	.16
25	.43	1.3	.75	31	2.8	1.2	3.4	.27	.04	.05	.38	.16
26	.44	13	.49	83	2.1	1.2	3.0	.24	.05	1.0	.40	1.5
27	.15	12	.48	22	1.8	1.2	2.5	.22	.06	.78	.34	2.3
28	.16	37	.51	3.1	1.5	1.1	2.2	.22	.08	4.8	.33	.30
29	.24	11	.44	1.6	---	1.1	2.3	.18	.06	2.3	.27	.19
30	.25	5.2	.38	1.4	---	1.1	2.0	.17	.04	1.6	.25	.26
31	.31	---	.36	1.2	---	.97	---	.14	---	41	.23	---
TOTAL	18.20	234.04	47.30	175.65	165.99	116.47	296.13	23.54	27.32	62.51	78.78	13.04
MEAN	.59	7.80	1.53	5.67	5.93	3.76	9.87	.76	.91	2.02	2.54	.43
MAX	4.4	51	6.6	83	30	27	139	2.1	18	41	32	4.6
MIN	.15	.48	.36	.27	.92	.97	.55	.14	.04	.04	.17	.07
CFSM	.30	3.92	.77	2.85	2.98	1.89	4.96	.38	.46	1.02	1.28	.22
IN.	.34	4.38	.88	3.28	3.10	2.18	5.54	.44	.51	1.17	1.47	.24

CAL YR 1985 TOTAL 906.57 MEAN 2.48 MAX 97 MIN .04 CFSM 1.25 IN. 16.95
WTR YR 1986 TOTAL 1258.97 MEAN 3.45 MAX 139 MIN .04 CFSM 1.73 IN. 23.53

01403300 RARITAN RIVER AT QUEENS BRIDGE AT BOUND BROOK, NJ
(National stream-quality accounting network)

LOCATION.--Lat 40°33'34", long 74°31'41", Somerset County, Hydrologic Unit 02030105, at Queens Bridge on Main street in Bound Brook, 1.7 mi upstream of Fieldsville Dam.

DRAINAGE AREA.--804 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964 to 1969, 1971 to 1973, 1978 and November 1981 to present. Published as "at Bound Brook" (station 01403000) 1964-66, and as "below Calco Dam at Bound Brook" (station 01403060) 1967-69.

REMARKS.--Instantaneous discharges are determined at Raritan River below Calco Dam at Bound Brook (station 01403060).

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)
NOV 1985												
13...	1100	191	338	7.6	11.5	1.5	9.5	87	2.0	K40	660	100
FEB 1986												
20...	1100	7800	192	7.2	2.0	46	13.2	95	3.6	K490	K30000	49
MAY												
05...	1100	675	220	8.2	16.0	2.0	12.0	123	--	--	--	74
JUL												
25...	1100	198	300	8.1	28.5	5.1	8.4	108	7.8	K89	1900	92

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE IT-FLD (MG/L AS HCO3)	ALKA-LINITY, CARBON-ATE IT-FLD (MG/L - CACO3)	ALKA-LINITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
NOV 1985												
13...	26	8.9	23	3.9	57	47	48	45	31	0.1	9.2	180
FEB 1986												
20...	12	4.5	18	2.0	26	21	22	15	31	<0.1	7.7	110
MAY												
05...	18	7.1	14	2.0	--	--	--	29	22	0.1	8.9	130
JUL												
25...	23	8.5	18	3.1	94	77	75	36	25	0.2	7.7	170

DATE	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)
NOV 1985											
13...	15	7.7	48	0.02	2.80	0.16	0.16	1.1	0.34	0.27	0.24
FEB 1986											
20...	129	2720	96	0.01	1.50	0.25	0.23	1.1	0.22	0.07	0.05
MAY											
05...	4	7.3	92	0.03	1.20	0.44	0.43	1.0	0.15	0.07	0.06
JUL											
25...	8	4.3	96	0.10	1.10	1.10	1.10	2.1	0.48	0.34	0.33

01403300 RARITAN RIVER AT QUEENS BRIDGE AT BOUND BROOK, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)
NOV 1985											
13...	1100	20	<1	45	<0.5	<1	<1	<3	6	97	13
FEB 1986											
20...	1100	40	<1	36	<0.5	<1	<1	<3	2	56	<1
MAY											
05...	1100	50	<1	34	<0.5	<1	<1	<3	2	85	1

DATE	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)
NOV 1985										
13...	7	73	0.1	<10	5	<1	<1	200	<6	9
FEB 1986										
20...	<4	44	<0.1	<10	3	<1	<1	70	<6	12
MAY										
05...	<4	28	0.2	<10	1	<1	<1	120	<6	4

01403400 GREEN BROOK AT SEELEY MILLS, NJ

LOCATION.--Lat 40°39'53", long 74°24'10", Somerset County, Hydrologic Unit 02030105, on right bank at Seeley Mills, 250 ft downstream from Blue Brook, 300 ft downstream from bridge on Diamond Hill Road, and 0.5 mi northwest of Scotch Plains.

DRAINAGE AREA.--6.23 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1959-64, 1969: annual maximum, water years 1969-79. June 1979 to current year. Fragmentary records 1944-53 in the files of the Geological Survey. Crest-stage data 1927-38, 1958-68 in files of Union County Park Commission.

REVISED RECORDS.--WDR-NJ 81-1: 1979(M).

GAGE.--Water-stage recorder. Datum of gage is 184.44 ft above National Geodetic Vertical Datum of 1929. From 1944 to 1953, water-stage recorder and masonry dam about 400 ft downstream above lower Seeley Mills dam at different datum. From July 1969 to May 1979, crest-stage gage about 450 ft downstream below lower Seeley Mills dam (washed out May 29, 1968) at different datum.

REMARKS.--No estimated daily discharges. Records fair. Several measurements of water temperature were made during the year. Recording rain gage and gage-height telemeters at station..

AVERAGE DISCHARGE.--7 years, 9.35 ft³/s, 21.47 in/yr.

COOPERATION.--Gage-height record collected in cooperation with Somerset County.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,240 ft³/s, Aug. 2, 1973, gage height, 16.1 ft, from rating curve extended above 600 ft³/s on basis of slope-area measurement of peak flow, site and datum then in use; no flow part or all of some days in September 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 23, 1938 reached an elevation of 196.5 ft, New Jersey Geological Survey datum, above lower Seeley Mills dam.

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

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 5	0615	301	2.86	Apr. 16	2045	675	3.94
Nov. 16	2330	*679	*3.95	Apr. 17	0855	434	3.29
Jan. 26	0405	301	2.86	Aug. 11	0055	282	2.80

Minimum discharge, 0.60 ft³/s July 5, gage height, 0.83 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	1.4	21	3.1	7.1	6.3	3.9	8.8	2.4	1.9	1.8	1.5
2	1.9	1.3	24	2.9	12	5.9	3.9	7.7	2.4	12	12	1.5
3	13	1.3	15	8.0	8.7	5.6	3.6	6.5	2.3	1.8	4.2	2.0
4	4.2	1.7	11	4.3	8.8	5.5	3.3	6.2	2.2	1.5	1.7	1.9
5	13	51	10	17	19	5.8	3.3	5.7	2.2	1.5	1.6	11
6	4.2	7.2	11	5.6	15	5.7	5.6	6.6	7.3	1.5	1.5	3.6
7	2.6	4.3	9.6	3.8	10	5.0	4.3	7.3	4.8	1.5	1.5	1.6
8	4.3	3.7	9.4	3.2	8.9	4.1	4.0	5.7	3.0	1.5	1.5	1.5
9	2.1	3.1	9.2	3.2	7.6	3.8	3.5	4.8	2.5	2.4	1.5	1.5
10	2.0	2.9	8.9	3.3	7.1	4.3	3.3	4.4	2.2	1.5	2.7	1.5
11	2.5	2.8	9.3	3.1	7.3	6.5	3.2	4.2	2.5	1.3	27	1.5
12	1.7	3.0	10	3.1	6.3	4.6	3.1	3.9	32	3.7	1.8	1.5
13	2.0	3.2	9.6	3.1	5.4	21	2.9	3.8	9.3	3.7	1.6	1.4
14	1.7	5.9	9.2	2.6	5.0	40	2.9	3.5	3.5	2.5	1.6	1.4
15	2.7	8.7	6.8	3.5	5.1	53	3.6	3.3	3.2	1.5	1.5	1.4
16	1.6	95	6.3	2.4	4.5	21	232	3.3	2.7	1.5	1.9	1.5
17	1.5	161	6.0	2.4	6.1	13	286	3.5	2.5	1.5	6.3	1.4
18	1.5	21	5.1	2.7	42	10	60	3.2	2.2	1.5	1.9	1.4
19	1.5	12	4.5	6.7	37	10	31	3.1	2.2	2.4	1.6	1.5
20	1.5	9.0	4.2	10	46	8.8	21	4.4	2.3	1.5	1.5	1.4
21	1.5	7.3	4.3	5.5	57	6.9	22	4.2	2.1	1.5	13	1.4
22	1.4	33	4.0	4.3	37	6.3	19	10	2.1	1.4	4.0	1.4
23	1.4	20	4.3	3.8	23	6.0	44	3.6	2.1	1.5	2.3	3.4
24	1.5	11	4.3	3.3	17	5.3	29	3.1	2.0	1.4	4.4	1.7
25	1.4	8.4	4.1	22	14	4.9	18	2.9	2.0	1.3	1.5	1.4
26	1.3	26	3.4	157	10	4.8	16	2.7	1.9	1.6	1.5	4.4
27	1.4	34	3.2	64	8.9	5.3	13	2.6	1.9	2.9	1.5	2.0
28	1.4	69	3.3	22	7.2	4.6	11	2.5	2.0	1.5	2.1	1.5
29	1.4	41	3.1	13	---	4.5	11	2.5	1.9	1.4	1.5	1.5
30	1.5	23	3.0	10	---	4.4	9.9	2.4	2.0	2.5	1.5	1.5
31	1.4	---	2.9	8.5	---	4.1	---	2.4	---	11	1.5	---
TOTAL	83.1	672.2	240.0	407.4	443.0	297.0	877.3	138.8	113.7	76.2	111.5	62.2
MEAN	2.68	22.4	7.74	13.1	15.8	9.58	29.2	4.48	3.79	2.46	3.60	2.07
MAX	13	161	24	157	57	53	286	10	32	12	27	11
MIN	1.3	1.3	2.9	2.4	4.5	3.8	2.9	2.4	1.9	1.3	1.5	1.4
CFSM	.43	3.60	1.24	2.10	2.54	1.54	4.69	.72	.61	.39	.58	.33
IN.	.50	4.01	1.43	2.43	2.65	1.77	5.24	.83	.68	.45	.67	.37

CAL YR 1985 TOTAL 2740.7 MEAN 7.51 MAX 180 MIN 1.3 CFSM 1.21 IN. 16.37
WTR YR 1986 TOTAL 3522.4 MEAN 9.65 MAX 286 MIN 1.3 CFSM 1.55 IN. 21.03

01403535 EAST BRANCH STONY BROOK AT BEST LAKE AT WATCHUNG, NJ

LOCATION.--Lat 40°38'25", long 74°26'52", Somerset County, Hydrologic Unit 02030105, 700 ft upstream of dam on Best Lake in Watchung, 1,400 ft upstream of mouth, and 0.5 mi northeast of Watchung.

DRAINAGE AREA.--1.57 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder above concrete dam. Datum of gage is 193.87 ft above National Geodetic Vertical Datum of 1929 (levels by Somerset County).

REMARKS.--No estimated daily discharges. Records fair above 0.21 ft³/s and poor below. Records given herein represent flow over dam and leakage through ports in dam. Several measurements of water temperature were made during the year. Recording rain gage and gage-height telemeters at station.

COOPERATION.--Gage-height record collected in cooperation with Somerset County.

AVERAGE DISCHARGE.--6 years, 2.56 ft³/s, 22.14 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 484 ft³/s, July 7, 1984, gage height, 2.56 ft; no flow part or all of many days in 1980 and 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 3, 1973, reached a stage of 5.4 ft, present datum, from floodmarks, discharge, 2,840 ft³/s, by computation of flow over dam, embankment, and road.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 5	0540	100	1.67	Apr. 17	0835	107	1.69
Nov. 16	2305	*216	*1.99	Aug. 11	0025	107	1.69
Apr. 16	2025	*216	*1.99				

Minimum discharge, 0.03 ft³/s, July 26, gage height, 0.72 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.76	.60	5.3	.32	1.9	1.9	1.1	3.2	.52	.21	.76	.57
2	.70	.79	5.7	.28	3.2	1.8	1.0	2.6	.50	3.1	3.3	.61
3	4.1	.91	3.7	1.4	2.4	1.7	.84	2.1	.42	.83	2.2	.62
4	2.5	1.1	3.2	.76	2.4	1.7	.87	1.9	.38	.54	.87	.65
5	3.7	14	2.9	5.7	5.1	1.7	.82	1.8	.38	.50	.64	1.9
6	1.8	2.1	3.0	2.6	3.9	1.6	1.3	1.9	2.0	.44	.55	1.0
7	1.1	1.2	2.7	1.6	3.1	1.3	1.1	2.0	1.5	.37	.50	.64
8	.84	.94	2.7	1.1	2.5	1.0	1.1	1.5	.81	.28	.43	.55
9	.87	.75	2.5	1.0	2.3	1.0	.90	1.4	.64	.21	.38	.52
10	.82	.71	2.7	1.1	2.0	1.2	.86	1.3	.52	.24	.35	.52
11	.79	.87	2.8	.99	2.1	2.1	.87	1.2	1.8	.15	7.2	.52
12	.69	1.6	2.9	.93	1.7	1.5	.77	1.3	15	.21	.91	.52
13	.75	1.8	2.7	.97	1.3	7.0	.70	1.2	5.4	.72	.68	.49
14	.70	2.8	2.7	.79	1.2	12	.70	1.1	2.0	1.5	.60	.44
15	.68	1.8	2.3	.50	1.3	11	.76	1.1	1.2	.55	.52	.38
16	.67	31	1.9	.36	1.1	5.0	62	.96	1.1	.45	.52	.38
17	.72	31	1.8	.36	1.5	3.9	55	.87	.89	.44	4.0	.38
18	.60	4.9	1.6	.51	12	3.4	11	.80	.68	.38	1.8	.34
19	.52	4.1	1.4	2.3	8.3	3.3	6.6	.65	.61	.51	1.1	.32
20	.51	3.0	1.2	4.4	12	2.6	5.3	.69	.61	.53	.82	.32
21	.52	2.1	1.2	1.9	14	2.2	5.5	.73	.56	.42	3.3	.29
22	.60	8.9	1.2	1.4	7.6	2.3	5.3	2.5	.52	.36	1.1	.25
23	.61	4.3	1.2	1.1	5.2	2.2	11	.86	.44	.25	.65	.52
24	.70	2.9	1.2	.76	4.3	1.7	6.8	.70	.44	.16	.99	.53
25	.69	2.5	1.2	6.8	3.6	1.6	4.8	.68	.40	.11	.61	.42
26	.61	6.9	.97	39	3.2	1.4	4.5	.66	.38	.05	.61	.52
27	.61	7.2	.81	13	2.8	1.6	4.0	.65	.33	.22	.61	.52
28	.57	17	.62	4.5	2.1	1.3	3.7	.67	.32	.25	.63	.46
29	.48	8.6	.56	3.2	---	1.2	4.0	.64	.29	.21	.60	.40
30	.33	5.4	.48	2.8	---	1.1	3.4	.61	.26	.18	.52	.37
31	.39	---	.35	2.2	---	1.0	---	.54	---	2.4	.52	---
TOTAL	29.93	171.77	65.49	104.63	114.1	84.3	206.59	38.81	40.90	16.77	38.27	15.95
MEAN	.97	5.73	2.11	3.38	4.07	2.72	6.89	1.25	1.36	.54	1.23	.53
MAX	4.1	31	5.7	39	14	12	62	3.2	15	3.1	7.2	1.9
MIN	.33	.60	.35	.28	1.1	1.0	.70	.54	.26	.05	.35	.25
CFSM	.62	3.65	1.34	2.15	2.59	1.73	4.39	.80	.87	.34	.78	.34
IN.	.71	4.07	1.55	2.48	2.70	2.00	4.89	.92	.97	.40	.91	.38

CAL YR 1985 TOTAL 741.04 MEAN 2.03 MAX 43 MIN .10 CFSM 1.29 IN. 17.56
WTR YR 1986 TOTAL 927.51 MEAN 2.54 MAX 62 MIN .05 CFSM 1.62 IN. 21.98

01403540 STONY BROOK AT WATCHUNG, NJ

LOCATION.--Lat 40°38'12", long 74°27'06", Somerset County, Hydrologic Unit 02030105, on right bank at Watchung Borough Administration Building, 150 ft downstream from Watchung Avenue Bridge, and 2.9 mi upstream from confluence with Green Brook.

DRAINAGE AREA.--5.51 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 172.24 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Jan. 13-15, 19-23. Records good except those for periods of no gage-height record, Jan. 13-15, 19-23, which are fair. Occasional regulation from Watchung and Best Lakes directly upstream from station. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--12 years, 10.3 ft³/s, 25.39 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,420 ft³/s, July 14, 1975, gage height, 10.40 ft, from rating curve extended above 500 ft³/s on basis of slope-area measurements of peak flow; no flow all or part of Sept. 13, 18-20, 1982.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 2, 1973, reached a stage of 14.5 ft, from floodmark, discharge, 10,500 ft³/s (revised), from slope-area measurements of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 16	2255	*930	*5.78	Apr. 16	2030	898	5.71
Jan. 26	0410	354	4.06	Apr. 17	0835	335	3.98

Minimum discharge, 0.88 ft³/s June 3, July 24, 25, 26, gage height, 0.80 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	1.1	19	2.9	9.1	8.3	4.1	10	1.5	1.0	2.4	1.2
2	2.7	1.1	21	2.7	13	7.9	3.9	6.5	1.4	7.6	6.7	1.1
3	13	1.1	13	6.9	10	7.3	3.6	6.3	1.2	2.4	7.0	1.2
4	7.1	1.4	12	4.8	9.6	7.2	3.4	6.2	1.1	1.5	2.3	1.4
5	17	41	10	15	18	7.0	3.3	5.9	1.1	1.2	1.8	7.0
6	6.6	6.7	10	6.5	14	6.9	4.9	6.1	4.4	1.1	1.6	5.8
7	4.0	4.4	9.3	4.7	11	6.4	4.7	2.5	3.6	1.0	1.4	2.1
8	3.0	3.5	9.1	3.9	9.5	5.1	4.1	2.0	2.1	1.0	1.4	1.7
9	2.7	2.9	8.9	3.6	8.6	5.0	3.7	1.9	1.8	1.1	1.2	1.4
10	2.4	2.7	8.9	3.6	8.0	5.1	3.4	1.8	1.5	1.1	1.9	1.2
11	2.2	2.5	8.5	3.5	8.2	8.3	3.3	1.7	3.6	.98	24	1.2
12	1.9	3.0	9.5	3.4	7.0	6.0	3.1	1.6	42	1.4	2.3	1.1
13	2.0	3.2	9.0	2.9	6.5	24	3.0	2.4	12	2.3	1.6	1.0
14	1.9	3.7	9.4	2.6	6.0	34	2.9	3.0	4.4	3.8	1.4	.99
15	1.8	6.9	7.1	2.3	5.9	38	3.0	3.0	3.1	1.6	1.3	.96
16	1.6	123	6.6	2.5	5.3	16	210	3.0	2.6	1.3	1.3	1.1
17	1.3	117	6.2	2.4	5.8	12	170	2.9	2.3	1.2	17	.95
18	1.2	15	5.6	2.5	39	11	37	2.7	1.9	1.2	4.8	.95
19	1.3	11	5.4	5.6	28	11	22	2.5	1.7	2.1	2.2	1.1
20	1.3	9.1	5.1	9.0	40	9.5	17	2.5	1.8	1.7	1.9	.98
21	1.2	7.7	4.7	5.5	48	8.0	17	3.2	1.6	1.4	10	1.1
22	1.1	31	4.3	4.4	26	7.6	16	8.2	1.4	1.1	7.4	1.3
23	1.1	15	4.3	3.8	18	7.3	34	3.6	1.3	.98	3.0	2.9
24	1.2	10	4.4	4.0	15	6.7	20	2.7	1.3	.92	4.6	2.9
25	1.6	8.7	4.3	25	13	6.0	14	2.4	1.2	.90	2.1	1.6
26	1.1	23	3.6	142	11	5.7	13	2.2	1.0	1.1	1.8	2.1
27	.96	25	3.4	46	10	6.0	17	2.0	1.1	2.4	1.7	2.1
28	1.2	62	3.4	17	9.2	5.4	15	2.0	1.2	1.5	1.9	1.8
29	1.6	31	3.2	12	---	5.0	11	1.8	1.2	1.2	1.8	1.4
30	1.3	20	3.1	11	---	4.8	14	1.7	1.1	1.3	1.4	1.1
31	1.2	---	2.8	10	---	4.5	---	1.7	---	8.8	1.2	---
TOTAL	91.66	593.7	235.1	372.0	412.7	303.0	681.4	106.0	107.5	58.18	122.4	52.73
MEAN	2.96	19.8	7.58	12.0	14.7	9.77	22.7	3.42	3.58	1.88	3.95	1.76
MAX	17	123	21	142	48	38	210	10	42	8.8	24	7.0
MIN	.96	1.1	2.8	2.3	5.3	4.5	2.9	1.6	1.0	.90	1.2	.95
CFSM	.54	3.59	1.38	2.18	2.67	1.77	4.12	.62	.65	.34	.72	.32
IN.	.62	4.01	1.59	2.51	2.79	2.05	4.60	.72	.73	.39	.83	.36

CAL YR 1985 TOTAL 2647.99 MEAN 7.25 MAX 163 MIN .84 CFSM 1.32 IN. 17.88
WTR YR 1986 TOTAL 3136.37 MEAN 8.59 MAX 210 MIN .90 CFSM 1.56 IN. 21.17

01405000 LAWRENCE BROOK AT FARRINGTON DAM, NJ

LOCATION.--Lat 40°27'00", long 74°27'05", Middlesex County, Hydrologic Unit 02030105, on left bank 300 ft upstream from Farrington Dam, 0.7 mi southwest of Milltown, and 5.4 mi upstream from mouth.

DRAINAGE AREA.--34.4 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1927 to current year.

REVISED RECORDS.--WSP 781: Drainage area. WSP 1432: 1959(P).

GAGE.--Water-stage recorder above concrete dam. Datum of gage is 25.8 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: June 24 to July 28. Records good except those below 15 ft³/s, which are poor. Records given herein include flow over dam and through blowoff gates. Gates open Mar. 29 to July 28, and Aug. 14-26. Flow regulated by Farrington Lake, capacity, 655,250,000 gal. Several measurements of water temperature were made during the year.

COOPERATION.--Water-stage recorder inspected by and records of gate openings furnished by employees of City of New Brunswick.

AVERAGE DISCHARGE.--59 years, 38.6 ft³/s, 15.23 in/yr, adjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,920 ft³/s, July 21, 1975, gage height, 26.93 ft, from rating curve extended above 1,100 ft³/s on basis of weir formula; no flow at times when gates in dam were closed and water was below spillway.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 450 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 17	0400	485	25.26	Apr. 16	2300	*993	*25.29

Minimum daily discharge, 4.3 ft³/s, many days in October and November.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	4.3	137	12	26	26	9.0	29	16	21	22	5.9
2	15	4.3	109	12	32	24	10	28	15	11	19	5.9
3	65	4.3	69	25	38	24	12	28	14	9.0	53	5.9
4	49	4.3	49	29	39	24	13	25	13	8.9	20	5.9
5	71	4.3	39	37	83	24	14	25	13	8.9	14	5.9
6	60	4.3	43	31	80	24	20	27	13	8.9	10	5.9
7	29	4.3	42	22	51	21	24	25	13	8.9	9.2	5.9
8	19	4.3	40	16	38	16	25	23	13	8.9	8.6	5.9
9	16	4.3	40	14	32	17	23	23	13	8.8	7.8	5.9
10	14	4.3	38	12	31	17	23	23	13	8.9	7.0	5.9
11	13	4.3	36	12	34	23	23	23	13	8.9	46	5.9
12	11	4.3	36	12	29	20	20	22	17	8.9	18	5.9
13	11	4.3	36	12	25	40	20	20	22	8.9	11	5.9
14	11	4.3	47	12	21	76	18	20	18	8.9	11	5.9
15	10	5.1	33	11	22	126	19	20	15	8.9	13	5.9
16	7.6	57	27	10	20	80	327	22	13	8.9	8.8	5.8
17	5.2	271	25	10	20	50	599	22	13	8.9	6.5	5.8
18	4.3	88	22	11	74	38	193	21	13	8.9	8.2	5.8
19	4.3	49	17	17	151	31	108	23	13	8.9	6.6	5.8
20	4.3	37	17	31	150	28	70	23	13	8.9	6.2	5.8
21	4.3	30	17	27	123	24	59	26	13	8.9	6.1	5.8
22	4.3	73	15	22	114	21	57	30	11	8.9	6.1	5.9
23	4.3	103	15	18	76	20	131	27	8.1	8.9	6.1	5.9
24	4.3	52	17	16	56	19	110	25	14	8.9	6.1	5.9
25	4.3	36	17	17	47	17	62	23	22	8.9	6.1	5.9
26	4.3	39	16	276	37	16	49	20	22	8.9	6.0	6.0
27	4.3	83	14	172	32	15	42	20	22	8.9	5.9	6.2
28	4.3	203	14	92	29	15	37	20	22	9.0	5.9	6.5
29	4.3	213	12	50	---	16	32	20	22	6.1	5.9	6.8
30	4.3	116	12	39	---	16	32	18	22	6.5	5.9	6.8
31	4.3	---	12	31	---	12	---	17	---	25	5.9	---
TOTAL	486.0	1515.3	1063	1108	1510	920	2181.0	718	464.1	301.1	371.9	179.2
MEAN	15.7	50.5	34.3	35.7	53.9	29.7	72.7	23.2	15.5	9.71	12.0	5.97
MAX	71	271	137	276	151	126	599	30	22	25	53	6.8
MIN	4.3	4.3	12	10	20	12	9.0	17	8.1	6.1	5.9	5.8
(†)	-6.5	+7.7	-1.1	+0.2	0	-0.7	+0.7	-0.5	-6.7	+7.0	-3.9	+3.4
MEAN‡	9.22	58.2	33.2	35.9	53.9	29.0	73.4	22.7	8.76	16.7	8.12	9.33
CFSM‡	0.27	1.69	0.97	1.04	1.57	0.84	2.14	0.66	0.25	0.46	0.24	0.27
IN.‡	0.31	1.89	1.11	1.20	1.63	0.97	2.38	0.76	0.28	0.59	0.27	0.30

CAL YR 1985 TOTAL 8983.2 MEAN 24.6 MAX 278 MIN 2.4 MEAN‡ 24.6 CFSM‡ 0.72 IN.‡ 9.71
WTR YR 1986 TOTAL 10817.6 MEAN 29.6 MAX 599 MIN 4.3 MEAN‡ 29.0 CFSM‡ 0.84 IN.‡ 11.45

† Change in contents, in cubic feet per second, in Farrington Lake.
‡ Adjusted for change in contents.

01405302 MATCHAPONIX BROOK AT MUNDY AVENUE AT SPOTSWOOD, NJ

LOCATION.--Lat 40°23'22", long 74°22'55", Middlesex County, Hydrologic Unit 02030105, at bridge on Mundy Avenue in Spotswood, 0.2 mi upstream from mouth, 0.5 mi east of De Voe Lake dam, and 3.4 mi southeast of Tanners Corners.

DRAINAGE AREA.--44.1 mi².

WATER-QUALITY RECORDS

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
02...	1130	E44	258	6.0	17.0	8.2	--	E1.3	40	280
FEB 1986										
03...	1115	E139	285	5.6	2.0	12.3	88	E1.2	20	14
APR										
01...	1030	E51	240	6.7	13.0	9.6	90	<0.5	20	11
JUN										
04...	1030	E11	280	6.5	17.5	8.6	89	4.8	50	79
JUL										
14...	1030	E13	213	6.3	20.0	7.7	85	2.7	1300	>2400
AUG										
06...	1020	E20	275	6.5	22.0	7.9	89	<1.1	330	350

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
02...	84	28	3.5	20	4.0	10	46	24	0.2
FEB 1986									
03...	51	14	3.8	32	3.0	1.0	59	53	0.1
APR									
01...	63	19	3.8	14	3.6	9.0	51	21	0.2
JUN									
04...	73	23	3.9	22	5.0	16	50	31	0.2
JUL									
14...	54	17	2.8	14	3.9	15	32	20	0.2
AUG									
06...	72	23	3.5	17	4.7	22	46	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 1985									
02...	11	140	0.014	3.14	0.21	0.4	3.5	0.05	2.1
FEB 1986									
03...	9.5	170	0.066	1.73	1.19	1.5	3.2	0.22	3.1
APR									
01...	9.5	130	0.061	2.91	0.88	1.2	4.1	0.03	2.3
JUN									
04...	13	160	0.019	5.02	0.09	0.41	5.4	0.07	3.7
JUL									
14...	8.5	110	0.035	2.98	0.26	1.3	4.3	0.29	5.6
AUG									
06...	12	140	0.017	4.90	E0.09	0.43	5.3	0.05	3.5

01405302 MATCHAPONIX BROOK AT MUNDY AVENUE AT SPOTSWOOD, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
OCT 1985 02...	1130	<0.5	30	<1	<10	60	1	<10	6
JUN 1986 04...	1030	<0.5	20	<1	<10	30	1	<10	8

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1985 02...	430	13	230	<0.1	15	<1	30	2
JUN 1986 04...	1000	12	70	0.1	9	<1	20	5

01405340 MANALAPAN BROOK AT FEDERAL ROAD NEAR MANALAPAN, NJ

LOCATION.--Lat 40°17'46", long 74°23'53", Middlesex County, Hydrologic Unit 02030105, at bridge on Federal Road, 2.6 mi north of Manalapan, 3.1 mi southwest of Matchaponix, 3.3 mi downstream of Still House Brook, and 4.1 mi northeast of Applegarth.

DRAINAGE AREA.--20.9 mi².

WATER-QUALITY RECORDS

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
02...	0940	E20	128	5.8	16.5	8.4	--	<0.8	230	>2400
FEB 1986										
03...	1030	E45	118	5.5	1.0	13.1	92	<0.9	20	23
APR										
01...	0930	E23	119	5.6	11.0	11.4	102	<0.9	20	70
JUN										
09...	1000	E8.0	112	6.7	20.0	8.7	95	<1.1	490	920
JUL										
14...	0930	E8.5	145	6.0	21.0	8.5	96	E1.9	230	>2400
AUG										
06...	0940	E11	183	5.8	21.0	8.3	93	E1.3	170	240

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
02...	34	7.8	3.6	8.3	3.1	4.0	25	15	0.2
FEB 1986									
03...	35	8.0	3.6	6.2	2.3	1.0	19	10	0.1
APR									
01...	35	7.9	3.7	5.8	2.5	3.0	25	14	0.2
JUN									
09...	34	7.6	3.6	5.8	2.7	11	19	11	0.2
JUL									
14...	34	7.6	3.7	6.4	2.8	11	21	13	0.2
AUG									
06...	36	8.3	3.7	5.9	2.9	11	21	13	0.2

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
02...	11	76	0.004	0.57	0.12	0.51	1.1	0.11	4.1
FEB 1986									
03...	9.9	60	0.009	1.40	0.20	0.42	1.8	0.06	1.3
APR									
01...	8.4	69	0.014	1.21	0.05	0.33	1.5	0.03	2.6
JUN									
09...	8.0	64	0.021	0.85	0.13	E0.54	--	0.08	4.0
JUL									
14...	7.8	69	0.007	0.51	0.13	0.64	1.2	0.16	3.6
AUG									
06...	10	72	0.008	0.56	E0.09	0.55	1.1	0.08	3.9

01405400 MANALAPAN BROOK AT SPOTSWOOD, NJ

LOCATION.--Lat 40°23'22", long 74°23'27", Middlesex County, Hydrologic Unit 02030105, on right bank of DeVoe Lake Dam in Spotswood, 0.1 mi upstream from Cedar Brook, and 0.6 mi upstream from confluence with Matchaponix Brook.

DRAINAGE AREA.--40.7 mi².

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1722: 1957-60.

GAGE.--Water-stage recorder above concrete dam. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Duhernal Water System). January 1957 to September 1966 at datum 17.72 ft higher.

REMARKS.--No estimated daily discharges. Records good. Discharge given herein includes flow through waste gates when open. Gates open on Feb. 4, Mar. 18, and June 5. Some regulation by Lake Manalapan, Helmetta Pond, and DeVoe Lake. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--29 years, 64.3 ft³/s, 21.45 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,650 ft³/s, May 30, 1968, elevation, 19.90 ft, waste gates open; no flow part or all of some days in many years when gates were closed and water was below spillway.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 926 ft³/s, Apr. 18, elevation, 19.34 ft; minimum, 5.0 ft³/s, June 5, elevation, 17.79 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	21	197	34	51	47	37	64	21	7.5	56	18
2	35	21	180	34	54	45	36	56	21	18	60	17
3	60	21	120	40	68	44	36	51	20	29	76	19
4	109	23	78	51	86	46	35	48	19	23	45	22
5	82	102	63	55	106	47	36	47	19	15	33	22
6	61	174	62	60	116	46	43	46	19	11	25	21
7	46	90	65	46	80	43	49	45	20	9.3	22	18
8	38	54	63	34	63	39	48	42	22	7.7	26	14
9	33	43	59	34	56	38	45	40	21	12	22	12
10	31	37	54	33	53	40	40	39	16	23	20	10
11	29	33	52	34	56	44	39	39	14	14	57	10
12	28	31	52	33	55	45	37	36	34	12	37	11
13	27	34	53	34	47	49	36	36	36	17	23	9.4
14	27	34	65	32	44	97	36	35	33	34	20	8.4
15	26	31	58	28	47	166	36	35	24	22	19	10
16	25	41	48	28	43	148	138	36	20	16	19	9.4
17	24	165	44	27	44	117	573	35	18	14	24	9.7
18	23	192	43	29	80	96	815	34	16	17	27	10
19	24	88	39	36	245	71	372	31	15	33	42	13
20	23	58	36	53	249	53	121	29	13	71	28	14
21	23	49	36	52	169	46	94	34	12	40	24	17
22	23	62	36	43	138	46	99	45	11	24	33	17
23	23	158	37	39	104	44	159	56	11	21	29	18
24	23	110	40	36	77	44	232	42	11	22	39	24
25	23	67	43	34	66	43	142	34	10	16	42	22
26	21	58	38	157	59	41	94	29	9.3	14	27	27
27	22	80	35	416	53	41	82	27	9.2	101	23	34
28	21	140	34	358	50	41	73	27	10	68	22	35
29	21	270	34	102	---	40	66	25	10	56	25	29
30	21	278	33	74	---	39	67	24	9.4	64	23	24
31	21	---	31	58	---	39	---	22	---	69	21	---
TOTAL	1035	2565	1828	2124	2359	1785	3716	1189	523.9	900.5	989	524.9
MEAN	33.4	85.5	59.0	68.5	84.3	57.6	124	38.4	17.5	29.0	31.9	17.5
MAX	109	278	197	416	249	166	815	64	36	101	76	35
MIN	21	21	31	27	43	38	35	22	9.2	7.5	19	8.4
CFSM	.82	2.10	1.45	1.68	2.07	1.42	3.05	.94	.43	.71	.78	.43
IN.	.95	2.34	1.67	1.94	2.16	1.63	3.40	1.09	.48	.82	.90	.48

CAL YR 1985 TOTAL 15346.6 MEAN 42.0 MAX 402 MIN 9.6 CFSM 1.03 IN. 14.03
WTR YR 1986 TOTAL 19539.3 MEAN 53.5 MAX 815 MIN 7.5 CFSM 1.31 IN. 17.86

01405440 MANALAPAN BROOK AT BRIDGE STREET AT SPOTSWOOD, NJ

LOCATION.--Lat 40°23'26", long 74°23'26", Middlesex County, Hydrologic Unit 02030105, at bridge on Bridge Street in Spotswood, 150 ft downstream from Cedar Brook, and 400 ft below DeVoe Lake Dam.

DRAINAGE AREA.--43.9 mi².

WATER-QUALITY RECORDS

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
02...	1040	E38	126	4.0	17.0	9.0	--	<0.8	40	130
FEB 1986										
03...	1200	E78	179	4.0	2.0	12.8	92	E1.4	<20	170
APR										
01...	1100	E40	124	4.9	15.0	10.5	103	<0.9	<20	8
JUN										
04...	1140	E21	116	5.7	19.0	9.8	105	E0.5	80	240
JUL										
14...	1130	E40	121	5.8	20.0	9.0	99	<1.2	220	1600
AUG										
06...	1130	E30	122	5.5	22.5	8.8	101	<1.2	110	1600

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
02...	28	6.4	3.0	5.6	2.8	1.0	26	12	0.1
FEB 1986									
03...	33	7.4	3.6	9.1	2.2	<1.0	25	16	0.1
APR									
01...	32	6.9	3.6	6.8	2.3	<3.0	27	13	0.1
JUN									
04...	29	6.2	3.4	6.8	2.2	2.0	22	14	0.1
JUL									
14...	29	6.2	3.3	7.0	2.3	4.0	21	14	0.1
AUG									
06...	31	6.7	3.5	6.4	2.6	2.0	26	12	0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
02...	6.8	64	0.003	0.65	0.19	0.46	1.1	0.03	3.1
FEB 1986									
03...	8.8	--	0.006	1.18	0.38	0.48	1.7	0.03	2.2
APR									
01...	5.2	--	0.01	1.10	0.07	0.15	1.2	0.02	1.1
JUN									
04...	5.2	61	0.029	0.81	0.11	0.48	1.3	0.03	2.7
JUL									
14...	4.3	61	<0.003	0.57	0.08	0.42	0.99	0.03	2.9
AUG									
06...	5.6	64	0.004	0.75	E0.05	0.52	1.3	0.03	4.6

01405440 MANALAPAN BROOK AT BRIDGE STREET AT SPOTSWOOD, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITRO-GEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INOR-GANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD)
OCT 1985											
02...	1040	--	100	0.1	5.3	--	--	--	--	--	1
02...	1040	<0.5	--	--	--	270	<1	<10	30	1	--
JUN 1986											
04...	1140	<0.5	--	--	--	50	<1	<10	<10	<1	--

DATE	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	COBALT, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, RECOV. FM BOT-TOM MA-TERIAL (UG/G)
OCT 1985											
02...	--	10	<10	--	70	--	6100	--	30	--	11
02...	10	--	--	5	--	950	--	15	--	110	--
JUN 1986											
04...	<10	--	--	4	--	1500	--	5	--	30	--

DATE	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY RECOV. FM BOT-TOM MA-TERIAL (UG/G AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SELE-NIUM, TOTAL IN BOT-TOM MA-TERIAL (UG/G)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PCN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
OCT 1985											
02...	--	0.06	--	<10	--	<1	--	50	--	<1	<1.0
02...	<0.1	--	20	--	<1	--	30	--	4	--	--
JUN 1986											
04...	<0.1	--	5	--	<1	--	70	--	<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 1985											
02...	<0.1	11	1.2	0.6	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	0.4
02...	--	--	--	--	--	--	--	--	--	--	--
JUN 1986											
04...	--	--	--	--	--	--	--	--	--	--	--

DATE	HEPTA-CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	MALA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	METH-OXY-CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARA-THION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRI-THION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PARA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PER-THANE IN BOT-TOM MA-TERIAL (UG/KG)	TOXA-PHENE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	TRI-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
OCT 1985											
02...	0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1
02...	--	--	--	--	--	--	--	--	--	--	--
JUN 1986											
04...	--	--	--	--	--	--	--	--	--	--	--

01405500 SOUTH RIVER AT OLD BRIDGE, NJ

LOCATION.--Lat 40°24'22", long 74°22'08", Middlesex County, Hydrologic Unit 02030105, on right abutment of Duhernal Dam, 0.6 mi south of Old Bridge, 2.3 mi upstream from Deep Run, and 9.1 mi upstream from mouth.

DRAINAGE AREA.--94.6 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1939 to current year.

REVISED RECORDS.--WSP 1902: 1957. WDR NJ-82-1: 1975-80(P).

GAGE--Water-stage recorder above concrete dam. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 8 to Nov. 22, Sept. 23-30. Records good except those for periods when waste gates were open, Oct. 8 to Nov. 22, Sept. 23-30, which are poor. Records include flow over dam and through waste gates when open. Flow past this station is affected by pumpage from well fields for industrial use by Duhernal Water System. Some regulation by Duhernal Lake, capacity, 138,000,000 gal, Lake Manalapan, DeVoe Lake, and several small ponds in headwater tributaries.

AVERAGE DISCHARGE.--47 years, 142 ft³/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,250 ft³/s, Sept. 15, 1944, elevation, 11.71 ft, waste gates open; maximum gage height, 11.73 ft, Aug. 28, 1971; no flow on days when waste gates were closed and water was below spillway.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 29	2400	966	10.63	Feb. 19	2000	824	10.56
Jan. 27	1000	1,500	10.86	Apr. 17	2000	*2,710	*11.26

No flow part of Nov. 22 when waste gates were closed and water was below spillway.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	112	49	530	70	145	129	85	169	54	27	182	45
2	83	50	486	74	152	122	82	154	50	38	146	42
3	156	50	320	88	185	118	81	139	49	81	170	42
4	286	53	218	147	177	118	79	129	48	61	108	42
5	204	281	184	155	297	122	79	124	45	42	76	42
6	161	505	174	168	289	118	93	118	46	34	59	50
7	113	230	188	122	207	108	128	116	48	30	53	56
8	92	138	180	86	173	94	117	111	50	27	66	44
9	81	106	172	75	160	88	112	103	52	28	68	40
10	75	91	163	69	153	94	96	97	47	84	55	36
11	71	81	154	72	160	99	87	93	44	66	154	34
12	67	76	153	71	152	110	83	89	85	40	123	34
13	64	82	155	71	133	124	80	86	123	47	67	32
14	64	82	187	69	119	275	78	82	90	98	51	30
15	62	76	174	59	121	443	79	78	61	66	45	30
16	60	100	140	55	116	388	329	80	50	46	42	29
17	57	428	116	53	113	296	1920	80	43	41	50	28
18	55	507	111	57	215	199	2120	77	39	47	77	28
19	57	222	96	76	667	154	795	70	36	80	141	32
20	55	140	82	149	658	152	299	72	35	141	81	38
21	54	124	80	144	422	130	239	88	35	87	62	41
22	54	167	83	112	356	122	273	120	34	55	85	48
23	54	432	83	94	260	117	399	160	33	44	81	41
24	54	298	91	85	211	112	584	121	31	52	111	60
25	53	185	102	75	184	104	342	96	30	48	127	60
26	51	164	94	426	165	94	243	82	29	40	74	43
27	51	221	78	1360	151	96	215	76	28	238	57	91
28	49	380	74	793	141	99	194	71	28	282	55	105
29	49	801	75	273	---	93	179	66	30	142	69	60
30	49	771	72	192	---	90	183	62	28	202	60	48
31	49	---	68	163	---	88	---	57	---	240	50	---
TOTAL	2542	6890	4883	5503	6282	4496	9673	3066	1401	2554	2645	1351
MEAN	82.0	230	158	178	224	145	322	98.9	46.7	82.4	85.3	45.0
MAX	286	801	530	1360	667	443	2120	169	123	282	182	105
MIN	49	49	68	53	113	88	78	57	28	27	42	28

CAL YR 1985 TOTAL 39408 MEAN 108 MAX 972 MIN 24
WTR YR 1986 TOTAL 51286 MEAN 141 MAX 2120 MIN 27

RESERVOIRS IN RARITAN RIVER BASIN

01396790 SPRUCE RUN RESERVOIR.--Lat 40°38'30", long 74°55'19", Hunterdon County, Hydrologic Unit 02030105, at dam on Spruce Run, 0.5 mi north of Clinton, and 0.6 mi upstream from mouth. DRAINAGE AREA, 41.3 mi². PERIOD OF RECORD, November 1963 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by earthfill dam with concrete spillway; dam completed in October 1963 with crest of spillway at elevation 273.00 ft. Usable capacity, 11,000,000,000 gal. Dead storage 300,000 gal. Reservoir used for water supply and recreation. Outflow mostly regulated by gates. Water is released to maintain minimum flow on the South Branch Raritan River and, at times, for municipal supply. Records given herein represent usable capacity.

COOPERATION.--Records provided by New Jersey Water Supply Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 11,640,000,000 gal, Apr. 2, 1970, elevation, 274.38 ft; minimum observed, 3,100,000,000 gal, Oct. 18, 1983, elevation, 246.68 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 11,170,000,000 gal, Mar. 15, elevation, 273.30 ft; minimum observed, 3,790,000,000 gal, Sept. 30, elevation, 249.70 ft.

REVISED RECORDS.--WDR NJ-84-1: (M). WDR NJ-85-1: 1984.

01397050 ROUND VALLEY RESERVOIR.--Lat 40°36'39", long 74°50'42", Hunterdon County, Hydrologic Unit 02030105, at main dam on Prescott Brook, 1.8 mi south of Lebanon, 3.2 mi upstream from mouth, and 4.5 mi west of Whitehouse. DRAINAGE AREA, 5.7 mi². PERIOD OF RECORD, March 1966 to current year. Nonrecording gage read daily. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by earthfill dam at main dam on Prescott Brook and two dams on South Branch Rockaway River at Lebanon; storage began in March 1966. Capacity at spillway level, 55,000,000,000 gal, elevation, 385.00 ft. Reservoir is used primarily for storage and is filled by pumping from South Branch Raritan River at Hamden Pumping Station (see following page). Outflow is controlled by operation of gates in pipe in dams. Water is released into South Branch Rockaway Creek and Prescott Brook.

COOPERATION.--Records provided by New Jersey Water Supply Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 55,400,000,000 gal, June 15, 1975, elevation, 385.63 ft; minimum observed (after first filling), 37,100,000,000 gal, Feb. 9, 1981, elevation, 361.30 ft.

EXTREMES FOR CURRENT YEAR: Maximum contents observed, 50,790,000,000 gal, Aug. 11, elevation, 379.38 ft; minimum observed, 47,770,000,000 gal, Dec. 2, elevation, 375.25 ft.

REVISED RECORDS.--WDR NJ-85-1: 1984.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

Date	Elevation (feet)*	Contents (million gallons)	Change in contents (equivalent in ft³/s)	Elevation (feet)*	Contents (million gallons)	Change in contents (equivalent in ft³/s
	01396790 SPRUCE RUN RESERVOIR			01397050 ROUND VALLEY RESERVOIR		
Sept. 30.....	261.96	6,940	-	375.99	48,390	-
Oct. 31.....	262.18	7,010	+3.5	376.21	48,500	+5.5
Nov. 30.....	267.37	8,800	+92.3	375.29	47,790	-36.6
Dec. 31.....	270.75	10,050	+62.4	375.44	47,940	+7.5
CAL YR 1985....	-	-	+9.3	-	-	+2.1
Jan. 31.....	273.05	11,030	+48.9	375.80	48,200	+13.0
Feb. 28.....	272.67	10,870	-8.8	376.16	48,480	+15.5
Mar. 31.....	272.89	10,950	+4.0	377.39	49,390	+45.4
Apr. 30.....	273.06	11,040	+4.6	379.06	50,560	+60.3
May 31.....	272.53	10,830	-10.5	379.05	50,550	-0.5
June 30.....	268.49	9,210	-83.5	379.02	50,520	-1.5
July 31.....	263.85	7,600	-80.3	379.15	50,650	+6.5
Aug. 31.....	264.16	7,700	+5.0	379.20	50,700	+2.5
Sept. 30.....	249.70	3,790	-201.6	379.12	50,620	-4.1
WTR YR 1986....	-	-	-13.4	-	-	+9.5

* Elevation at 0800 on first day of following month.

DIVERSIONS IN RARITAN RIVER BASIN

01396920 Water is diverted 4.0 mi upstream from the gaging station on South Branch Raritan River at Stanton (see station 01397000), at the Hamden Pumping Station, for storage in Round Valley Reservoir. Records provided by New Jersey Water Supply Authority.
REVISED RECORDS.--WDR NJ-85-1: 1984.

01400490 Johns-Manville Products Corporation diverts water 1,500 ft upstream from the gaging station on Raritan River at Manville (station 01400500) for industrial processes and cooling purposes. The effluent is then mixed with that from the Borough of Manville sewage treatment plant and discharged into the Raritan River 600 ft downstream from the Millstone River. Plant officially closed on Sept. 1, 1986. Records provided by the Johns-Manville Products Corporation.
REVISED RECORDS.--WDR NJ-84-1: 1983.

01400509 Elizabethtown Water Company diverts water from the Raritan and Millstone Rivers just upstream from the mouth of the Millstone River at Manville. Records given herein represent the total diversion from both rivers. Records provided by the Elizabethtown Water Company.

01400836 Water is diverted from Carnegie Lake (Millstone River) at Princeton to the Delaware and Raritan Canal at the aqueduct 2.3 mi upstream from the gaging station on the Delaware and Raritan Canal at Kingston (station 01460500). Negative discharge indicates flow from Canal to Carnegie Lake. Records provided by New Jersey Water Supply Authority.
REVISED RECORDS.--WDR NJ-85-1: 1984.

01402910 Water is diverted from the Raritan River just below the Millstone River to the Delaware and Raritan Canal at Ten Mile Lock for municipal supply. Negative discharge indicates flow from Canal to Millstone River. Records provided by the New Jersey Water Supply Authority.
REVISED RECORDS.--WDR NJ-85-1: 1984.

01460570 Elizabethtown Water Company diverts water from the Delaware and Raritan Canal 1200 ft downstream from Ten Mile Lock at Manville for municipal supply. Records provided by the Elizabethtown Water Company.

DIVERSIONS, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MONTH	01396920 HAMDEN PUMPING STATION	01400490 JOHNS-MANVILLE PRODUCTS CORPORATION	01400509 RARITAN AND MILLSTONE RIVERS	01400836 CARNEGIE LAKE	01402910 TEN MILE LOCK DIVERSION	01460570 DELAWARE AND RARITAN CANAL
October	0	2.6	145	0	41.8	1.9
November	0	2.7	141	-13.9	45.3	2.8
December	0	2.2	129	-24.2	11.9	3.0
CAL YR 1985	0	2.9	152	13.4	26.1	2.0
January	0	a	140	-23.6	0	7.8
February	0	a	145	-52.2	19.4	1.0
March	38.4	a	142	-15.4	-12.6	7.0
April	37.1	a	139	-12.2	-26.6	9.5
May	0	a	157	37.9	35.2	2.7
June	0	a	172	7.9	73.0	13.2
July	0	a	176	8.5	54.9	9.1
August	0	a	169	-22.7	30.2	4.6
September	0	a	170	0	15.2	1.5
WTR YR 1986	6.3	a	152	-9.2	24.0	5.4

a Data not available.

01407500 SWIMMING RIVER NEAR RED BANK, NJ

LOCATION.--Lat 40°19'10", long 74°06'55", Monmouth County, Hydrologic Unit 02030104, on left bank 50 ft upstream from spillway at Swimming River Reservoir, 3.3 mi southwest of Red Bank, and 4.8 mi upstream from mouth. Water-quality samples collected at bridge on Swimming River Road, 800 ft downstream from gaging station.

DRAINAGE AREA.--49.2 mi².

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR NJ-83-1. Drainage area. WSP 891: 1939.

GAGE.--Water-stage recorder above concrete dam. Datum of gage is 30.00 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 19, 1962, at site 800 ft upstream at datum 17.67 ft lower. Jan. 19 to Mar. 30, 1962, nonrecording gage, 700 ft upstream at datum 13.87 ft lower.

REMARKS.--Estimated daily discharges: Jan. 21-23. Records fair. Records given herein represent flow over spillway and flow or leakage through blowoff gates. Diversion above station for municipal supply. Flow regulated by Swimming River Reservoir. Several measurements of water temperature were made during the year.

COOPERATION.--Water-stage recorder inspected by and record of diversion furnished by Monmouth Consolidated Water Co.

AVERAGE DISCHARGE.--64 years, 80.4 ft³/s, 22.51 in/yr, adjusted for storage and diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,910 ft³/s, Oct. 27, 1943, gage height, 8.96 ft, site and datum then in use, from rating curve extended above 1,000 ft³/s on basis of weir formula; no flow some days in many years.

EXTREMES OUTSIDE PERIOD OF RECORD.--A flood in July 1919 reached a stage of 7.84 ft (site and datum then in use), from floodmark, discharge about 11,800 ft³/s.

EXTREMES OF CURRENT YEAR.--Maximum discharge, 1,430 ft³/s, Apr. 17, gage height, 6.07 ft; no flow Oct. 1 to Nov. 4, June 3 to Aug. 21 and Aug. 30 to Sept. 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	234	22	37	31	28	60	.33	.00	.00	.00
2	.00	.00	164	21	45	31	29	49	.03	.00	.00	.00
3	.00	.00	61	32	48	29	27	40	.00	.00	.00	.00
4	.00	.00	44	41	52	31	25	37	.00	.00	.00	.00
5	.00	.02	39	50	113	33	26	34	.00	.00	.00	.00
6	.00	.87	57	40	70	31	33	30	.00	.00	.00	.00
7	.00	1.9	61	33	53	27	38	32	.00	.00	.00	.00
8	.00	2.6	44	26	46	18	37	35	.00	.00	.00	.00
9	.00	2.7	37	24	40	20	34	33	.00	.00	.00	.00
10	.00	2.6	36	23	38	25	28	30	.00	.00	.00	.00
11	.00	2.4	36	22	45	27	25	27	.00	.00	.00	.00
12	.00	2.7	40	21	39	28	23	25	.00	.00	.00	.00
13	.00	3.6	41	21	34	57	22	23	.00	.00	.00	.00
14	.00	3.8	52	19	33	166	21	21	.00	.00	.00	.00
15	.00	4.2	33	16	36	201	21	21	.00	.00	.00	.00
16	.00	7.8	29	13	34	140	291	22	.00	.00	.00	.00
17	.00	280	30	12	34	76	1140	19	.00	.00	.00	.00
18	.00	79	30	13	179	56	435	14	.00	.00	.00	.00
19	.00	39	25	19	285	50	154	10	.00	.00	.00	.00
20	.00	31	24	34	140	44	102	11	.00	.00	.00	.00
21	.00	25	28	30	83	37	108	19	.00	.00	.00	.00
22	.00	73	28	27	72	37	136	32	.00	.00	.08	.00
23	.00	163	29	25	45	37	165	33	.00	.00	.03	.00
24	.00	62	30	23	35	37	170	26	.00	.00	.56	.00
25	.00	39	31	22	34	35	93	18	.00	.00	.45	.00
26	.00	42	28	577	34	33	80	13	.00	.00	.19	.00
27	.00	68	26	351	36	34	77	9.4	.00	.00	.05	.00
28	.00	191	25	103	34	36	69	7.4	.00	.00	.04	.00
29	.00	400	23	48	---	33	67	4.5	.00	.00	.04	.00
30	.00	143	22	50	---	30	70	2.4	.00	.00	.00	.00
31	.00	---	20	40	---	29	---	.95	---	.00	.00	---
TOTAL	.00	1670.19	1407	1798	1774	1499	3574	738.65	.36	.00	1.44	.00
MEAN	.00	55.7	45.4	58.0	63.4	48.4	119	23.8	.01	.00	.05	.00
MAX	.00	400	234	577	285	201	1140	60	.33	.00	.56	.00
MIN	.00	.00	20	12	33	18	21	.95	.00	.00	.00	.00
(†)	35.3	57.3	31.1	34.7	31.5	38.7	42.0	41.8	34.8	64.8	52.4	41.7
MEAN‡	35.3	113	76.5	92.7	94.9	87.1	161	65.6	34.8	64.8	52.5	41.7
CFSM‡	0.72	2.30	1.55	1.88	1.93	1.77	3.27	1.33	0.71	1.32	1.07	0.85
IN.‡	0.83	2.56	1.79	2.17	2.01	2.04	3.65	1.54	0.79	1.52	1.23	0.95

CAL YR 1985 TOTAL 5575.51 MEAN 15.3 MAX 465 MIN .00 MEAN‡ 54.8 CFSM‡ 1.11 IN.‡ 15.13
WTR YR 1986 TOTAL 12462.64 MEAN 34.1 MAX 1140 MIN .00 MEAN‡ 76.2 CFSM‡ 1.55 IN.‡ 21.03

† Diversion and change in contents in Swimming River Reservoir, in cubic feet per second.
‡ Adjusted for diversion and change in contents.

01407705 SHARK RIVER NEAR NEPTUNE CITY, NJ

LOCATION.--Lat 40°11'56", long 74°04'14", Monmouth County, Hydrologic Unit 02030104, on left bank 100 ft upstream from bridge on Remsen Mill Road, 0.3 mi downstream from Robins Swamp Brook, and 1.7 mi west of Neptune City.

DRAINAGE AREA.--9.96 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 7.05 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Diversion above station by Monmouth Consolidated Water Co. for municipal supply (records given herein) and by farmers for irrigation. Several measurements of water temperature were made during the year.

COOPERATION.--Water-stage recorder inspected by and records of diversion provided by Monmouth Consolidated Water Co.

AVERAGE DISCHARGE.--20 years, 14.3 ft³/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 601 ft³/s, May 30, 1984, gage height, 5.69 ft; maximum gage height, 7.84 ft, Dec. 26, 1969; no flow many days during most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 235 ft³/s, July 31, gage height, 4.66 ft; no flow part of many days during the year.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	2.2	38	5.9	14	8.6	3.1	3.8	9.1	.36	24	2.1
2	3.3	2.7	29	5.3	12	8.3	.96	3.0	5.4	36	17	2.5
3	12	3.4	14	14	9.2	6.1	2.0	2.2	1.6	3.0	6.7	3.2
4	8.2	2.7	12	11	14	2.0	3.5	1.8	2.3	2.4	3.2	2.9
5	8.4	57	11	11	31	1.8	.65	1.8	2.1	1.4	1.1	4.2
6	2.7	12	17	6.7	14	2.3	4.3	3.3	2.1	1.0	1.9	7.0
7	3.9	2.4	14	3.9	8.7	1.6	3.5	4.4	2.5	.73	2.5	3.3
8	3.6	3.2	12	5.3	7.6	2.9	2.2	4.4	2.9	1.3	3.9	2.5
9	2.8	4.8	13	4.2	5.5	4.7	1.3	4.1	1.7	9.3	2.6	2.7
10	2.9	4.4	5.0	4.7	5.4	2.2	.77	3.7	1.3	3.2	2.8	2.3
11	2.4	4.4	5.0	4.7	5.9	2.4	.68	3.5	1.3	1.6	2.9	2.4
12	2.1	4.5	5.7	4.6	4.3	2.1	2.5	1.3	5.4	1.6	5.0	2.3
13	2.4	4.4	7.7	4.7	6.6	18	2.8	1.4	3.9	3.3	2.2	1.7
14	2.3	4.3	7.8	4.0	10	32	3.0	2.0	2.9	2.6	1.7	1.5
15	2.3	4.0	4.3	5.0	8.3	28	3.6	1.7	2.1	2.3	1.6	3.6
16	2.3	13	3.3	3.3	7.9	23	45	2.4	1.5	1.2	1.8	2.9
17	2.0	47	3.2	3.5	11	11	144	2.1	2.1	2.0	2.3	3.5
18	1.9	7.4	5.8	4.1	35	6.0	78	2.2	1.1	1.7	3.0	2.7
19	2.0	5.1	7.4	7.7	38	5.3	31	4.7	1.1	2.9	3.5	3.1
20	2.4	3.3	8.0	7.0	28	2.5	19	2.5	1.2	2.2	2.2	2.3
21	1.5	6.2	6.3	4.1	19	3.1	21	8.7	1.0	2.1	8.7	6.4
22	1.9	25	6.1	4.0	15	2.8	18	17	.86	1.7	10	3.9
23	2.2	16	6.7	4.9	11	3.2	19	3.4	.92	1.4	5.4	4.9
24	2.4	3.5	7.8	4.4	7.8	4.9	23	1.1	.79	1.2	3.9	4.2
25	2.5	3.8	7.7	4.7	6.3	4.0	17	3.2	1.1	.96	5.1	3.8
26	2.2	5.4	5.7	96	4.2	3.5	8.0	2.8	.80	2.8	2.5	9.4
27	2.2	7.7	5.2	68	3.8	2.8	7.3	2.7	.87	44	2.6	27
28	2.2	26	5.4	27	8.1	2.4	6.2	2.3	1.9	7.7	6.1	17
29	2.3	58	5.2	13	---	1.8	5.0	3.5	1.7	2.7	2.4	13
30	2.3	28	5.1	7.5	---	1.5	4.7	3.1	.28	38	2.9	7.1
31	2.3	---	4.9	8.8	---	1.6	---	4.8	---	136	2.4	---
TOTAL	98.2	371.8	289.3	363.0	351.6	202.4	481.06	108.9	63.82	318.65	143.9	155.4
MEAN	3.17	12.4	9.33	11.7	12.6	6.53	16.0	3.51	2.13	10.3	4.64	5.18
MAX	12	58	38	96	38	32	144	17	9.1	136	24	27
MIN	1.5	2.2	3.2	3.3	3.8	1.5	.65	1.1	.28	.36	1.1	1.5
(†)	6.2	6.2	6.1	6.9	10.9	12.2	10.9	13.5	6.7	9.3	9.3	6.3

CAL YR 1985 TOTAL 2880.79 MEAN 7.89 MAX 118 MIN .90
WTR YR 1986 TOTAL 2948.03 MEAN 8.08 MAX 144 MIN .28

† Diversion, in cubic feet per second, from Shark River by Monmouth Consolidated Water Co., for municipal supply.

01407705 SHARK RIVER NEAR NEPTUNE CITY, NJ--Continued

WATER-QUALITY RECORDS

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
10...	1045	2.4	155	6.3	13.5	9.9	95	<0.9	130	220
JAN 1986										
21...	1100	6.7	148	6.4	5.5	12.4	99	<20	34	
MAR										
19...	1050	4.2	164	6.4	9.0	10.8	94	E1.3	20	79
MAY										
19...	1150	0.76	152	6.6	17.5	8.8	--	E1.7	490	350
JUL										
10...	1100	0.57	135	7.0	19.5	8.2	89	E1.8	1700	>2400
AUG										
14...	1115	2.0	160	6.9	19.0	8.2	88	<0.6	130	130

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
10...	43	14	1.9	8.6	2.6	21	20	14	<0.1
JAN 1986									
21...	38	12	2.0	10	2.2	14	17	17	0.1
MAR									
19...	36	11	2.1	13	2.8	9.0	18	22	0.1
MAY									
19...	43	14	1.9	11	2.5	19	22	18	0.1
JUL									
10...	37	12	1.8	10	2.4	7.0	27	17	0.1
AUG									
14...	46	15	2.0	9.5	3.2	24	22	15	0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
10...	14	88	0.004	0.15	0.22	0.36	0.51	0.06	3.2
JAN 1986									
21...	12	81	0.003	0.37	0.32	0.48	0.85	0.06	1.9
MAR									
19...	10	84	0.011	0.51	0.32	0.78	1.3	0.05	3.7
MAY									
19...	12	93	0.007	0.19	0.12	0.6	0.79	0.05	2.2
JUL									
10...	9.9	84	0.024	0.27	0.17	0.77	1.0	0.11	6.5
AUG									
14...	15	96	0.012	0.17	0.10	E0.42	--	0.06	4.3

01407705 SHARK RIVER NEAR NEPTUNE CITY, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
OCT 1985 10...	1045	<0.5	50	<1	<10	--	<1	20	3
MAY 1986 19...	1150	<0.5	30	<1	<10	10	<1	<10	4

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1985 10...	2200	2	70	<0.1	5	<1	50	7
MAY 1986 19...	1800	<1	50	0.2	5	<1	30	2

01407760 JUMPING BROOK NEAR NEPTUNE CITY, NJ

LOCATION.--Lat 40°12'13", long 74°03'58", Monmouth County, Hydrologic Unit 02030104, on left bank 50 ft downstream from dam on Jumping Brook Reservoir, 0.8 mi upstream from mouth, and 1.4 mi west of Neptune City. Water quality samples collected at bridge on Carlies Avenue, 600 ft downstream from gaging station.

DRAINAGE AREA.--6.46 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1966 to current year. Records for water years 1976-83 are unpublished but are available in the files of New Jersey District Office.

REVISED RECORDS.--WDR-84-1: drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 13.76 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good except those below 10 ft³/s and above 150 ft³/s, which are fair. Diversion above station by Monmouth Consolidated Water Co. for municipal supply (records given herin) and by farmers for irrigation. Several measurements of water temperature, other than those published, were made during the year.

COOPERATION.--Water-stage recorder inspected by and records of diversion provided by Monmouth Consolidated Water Co.

AVERAGE DISCHARGE.--20 years, 10.1 ft³/s, unadjusted.

EXTREMES FOR PERIOD OF RECORDS.--Maximum discharge, 1,830 ft³/s, Sept. 12, 1971, from rating curve extended above 150 ft³/s; maximum gage height, 7.00 ft, December 16, 1974; no flow June 7, 1971.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 707 ft³/s, July 31, gage height, 5.21 ft, from rating curve extended above 150 ft³/s; minimum, 0.50 ft³/s, July 1, gage height, 1.13 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	2.1	22	3.2	4.7	4.0	3.6	4.5	2.2	.91	13	1.7
2	2.9	2.3	17	2.9	8.1	3.9	3.5	4.3	1.9	57	11	1.9
3	13	2.9	7.7	9.9	6.8	3.8	3.3	3.9	1.5	6.9	6.6	2.5
4	7.7	2.5	5.6	5.5	11	4.2	3.4	3.9	1.6	3.0	4.4	2.1
5	5.8	45	5.0	5.5	20	4.1	3.6	3.7	1.4	2.2	3.3	4.1
6	4.3	7.5	12	4.0	8.2	3.9	6.6	3.5	1.3	1.7	3.0	11
7	3.4	4.4	7.3	3.3	6.2	3.8	5.5	3.5	2.0	1.2	2.8	3.2
8	3.0	3.5	5.5	2.8	5.8	3.2	4.6	3.4	2.3	.92	3.1	2.5
9	2.8	3.2	5.5	2.7	5.4	3.4	4.1	3.2	1.7	6.9	2.5	2.4
10	2.8	3.0	5.0	2.9	5.3	3.8	3.7	3.2	1.3	5.3	2.0	1.9
11	2.5	2.9	4.5	2.9	5.8	3.8	3.6	3.1	1.4	2.0	2.0	1.8
12	2.3	3.1	4.9	2.9	5.2	3.4	3.5	3.0	10	1.6	1.5	1.6
13	2.5	3.2	6.2	2.9	4.6	19	3.4	2.7	9.7	14	1.8	1.5
14	2.5	3.0	6.1	2.6	4.3	27	3.4	2.9	3.3	7.4	1.6	1.4
15	2.5	3.0	4.1	2.3	4.6	22	3.4	3.0	2.5	2.8	1.5	1.4
16	2.3	16	3.8	2.3	4.3	17	39	3.0	1.9	1.8	1.6	1.3
17	2.1	45	3.8	2.5	5.6	8.7	98	3.0	2.4	1.9	2.4	1.5
18	2.2	7.4	3.5	2.8	26	6.8	31	2.7	1.6	1.8	5.3	1.3
19	2.2	5.1	3.1	5.1	21	5.8	10	2.9	1.2	4.0	2.9	2.6
20	2.2	4.3	3.0	6.9	16	5.2	7.6	3.9	1.4	2.3	1.9	2.1
21	2.0	3.7	3.3	4.0	9.8	4.7	9.4	13	1.3	7.4	8.6	6.5
22	2.0	26	3.3	3.3	8.7	4.4	8.8	25	1.3	9.1	8.4	2.8
23	2.0	17	3.4	3.1	7.1	4.2	12	6.5	1.0	2.8	3.1	5.5
24	1.9	6.3	3.7	2.7	6.0	4.3	12	4.1	.92	2.2	6.7	7.6
25	2.1	4.8	3.8	3.0	5.6	4.0	7.3	3.5	.88	1.9	2.6	3.2
26	2.0	6.8	3.2	90	4.9	3.9	6.5	3.1	.90	4.3	1.9	31
27	2.0	9.5	3.0	34	4.7	3.9	6.3	2.8	.94	44	1.8	58
28	2.0	28	3.0	10	4.5	3.8	5.4	2.6	1.4	6.7	7.7	9.2
29	2.0	40	3.0	6.6	---	3.6	5.1	2.3	1.2	7.2	4.0	5.4
30	2.0	16	2.8	5.7	---	3.6	4.9	2.0	1.0	66	2.3	4.7
31	2.2	---	3.0	5.1	---	3.5	---	2.1	---	267	2.0	---
TOTAL	94.4	327.5	171.1	243.4	230.2	200.7	322.5	134.3	63.44	544.23	123.3	183.7
MEAN	3.05	10.9	5.52	7.85	8.22	6.47	10.7	4.33	2.11	17.6	3.98	6.12
MAX	13	45	22	90	26	27	98	25	10	267	13	58
MIN	1.9	2.1	2.8	2.3	4.3	3.2	3.3	2.0	.88	.91	1.5	1.3
(†)	0	0	0	0	0	.40	.10	.46	.45	.38	.40	.24

CAL YR 1985 TOTAL 1888.34 MEAN 5.17 MAX 98 MIN .94
WTR YR 1986 TOTAL 2638.77 MEAN 7.23 MAX 267 MIN .88

† Diversion, in cubic feet per second, from Jumping Brook, for municipal supply, by Monmouth Consolidated Water Co.

01407760 JUMPING BROOK NEAR NEPTUNE CITY, NJ--Continued

WATER-QUALITY RECORDS

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
10...	1000	2.7	155	4.8	14.5	9.1	89	E1.4	<20	49
JAN 1986										
21...	1150	4.0	158	4.9	5.0	12.4	97	<0.2	<20	14
MAR										
19...	1130	5.6	193	4.6	10.0	10.6	95	<0.8	<20	79
MAY										
19...	1240	3.1	163	5.7	20.5	9.0	--	E2.1	<20	540
JUL										
10...	1000	5.1	132	5.1	21.0	7.8	88	E1.5	490	>2400
AUG										
14...	1215	1.7	159	6.1	21.0	8.6	96	E2.3	330	350

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
10...	33	8.8	2.6	10	2.7	1.0	28	17	<0.1
JAN 1986									
21...	31	8.1	2.5	13	2.3	<1.0	24	23	<0.1
MAR									
19...	30	8.1	2.3	19	2.1	<1.0	20	36	<0.1
MAY									
19...	--	--	--	--	--	--	--	--	--
JUL									
10...	27	7.5	1.9	12	2.5	3.0	25	19	0.1
AUG									
14...	34	9.3	2.7	11	3.0	5.0	29	20	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
10...	10	80	<0.003	0.17	0.19	0.49	0.66	0.02	2.4
JAN 1986									
21...	8.8	--	<0.003	0.30	0.13	0.55	0.85	0.02	1.7
MAR									
19...	7.0	--	0.009	0.33	0.32	0.78	1.1	0.03	3.5
MAY									
19...	--	--	0.004	0.26	0.18	0.49	0.75	0.03	--
JUL									
10...	6.4	76	0.016	0.24	0.17	0.78	1.0	0.06	7.8
AUG									
14...	9.8	88	0.003	0.17	0.16	E0.61	--	0.04	7.0

01407760 JUMPING BROOK NEAR NEPTUNE CITY, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
OCT 1985 10...	1000	<0.5	50	<1	<10	<20	<1	10	4

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1985 10...	780	4	80	0.1	11	<1	60	5

01407997 MARSH BOG BROOK AT SQUANKUM, NJ

LOCATION.--Lat 40°10'01", long 74°09'33", Monmouth County, Hydrologic Unit 02040301, at bridge on Squankum-Yellow Brook Road in Squankum, and 0.2 mi upstream from mouth.

DRAINAGE AREA.--4.91 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1971-74, 1976 to current year.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
10...	1200	E1.8	150	6.3	15.0	8.2	81	<1.0	80	540
JAN 1986										
21...	0930	E2.9	138	6.2	4.5	11.6	90	<0.6	2400	170
MAR										
19...	0930	E4.9	108	5.3	9.0	10.3	90	E1.5	170	33
MAY										
19...	1000	E2.1	110	4.8	17.0	8.4	--	E1.3	80	350
JUL										
01...	1000	E0.67	163	6.3	16.0	7.6	77	E1.6	790	920
AUG										
14...	1000	E0.81	188	6.5	18.5	8.4	89	<1.2	5400	60

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
10...	41	13	2.0	7.9	2.9	10	26	12	<0.1
JAN 1986									
21...	31	9.4	1.8	7.0	2.5	6.0	25	17	0.1
MAR									
19...	24	6.8	1.6	7.0	1.9	1.0	22	11	0.1
MAY									
19...	30	9.2	1.7	5.6	2.4	3.0	25	9.6	0.1
JUL									
01...	49	16	2.3	8.7	3.9	20	33	12	0.1
AUG									
14...	50	17	1.9	10	3.2	25	31	13	0.2

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
10...	13	83	0.007	0.34	0.67	0.87	1.2	0.08	3.9
JAN 1986									
21...	11	77	<0.003	0.20	0.49	0.93	1.1	0.08	1.9
MAR									
19...	9.0	60	0.007	0.18	0.53	0.6	0.78	0.11	4.4
MAY									
19...	13	68	0.004	0.16	0.29	0.79	0.95	0.09	4.2
JUL									
01...	13	100	0.016	0.54	0.29	0.95	1.5	0.11	4.7
AUG									
14...	15	110	0.011	0.26	0.17	E1.0	--	0.09	5.6

01407997 MARSH BOG BROOK AT SQUANKUM, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITRO-GEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INOR-GANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD)
OCT 1985											
10...	1200	--	120	0.1	2.5	--	--	--	--	--	<1
10...	1200	<0.5	--	--	--	80	<1	<10	20	<1	--
MAY 1986											
19...	1000	<0.5	--	--	--	70	<1	<10	<10	<1	--

DATE	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	COBALT, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, RECOV. FM BOT-TOM MA-TERIAL (UG/G)
OCT 1985											
10...	--	40	<10	--	50	--	4400	--	10	--	26
10...	10	--	--	4	--	1700	--	7	--	80	--
MAY 1986											
19...	<10	--	--	6	--	2600	--	<1	--	70	--

DATE	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY RECOV. FM BOT-TOM MA-TERIAL (UG/G AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SELE-NIUM, TOTAL IN BOT-TOM MA-TERIAL (UG/G)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PCN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
OCT 1985											
10...	--	0.03	--	<10	--	<1	--	40	--	2	<1.0
10...	0.2	--	8	--	<1	--	90	--	5	--	--
MAY 1986											
19...	0.2	--	5	--	<1	--	30	--	3	--	--

DATE	ALDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	CHLOR-DANE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDD, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDT, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DI-AZINON, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DI-ELDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ENDO-SULFAN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ENDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ETHION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	HEPTA-CHLOR, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
OCT 1985											
10...	<0.1	3.0	0.6	0.2	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1
10...	--	--	--	--	--	--	--	--	--	--	--
MAY 1986											
19...	--	--	--	--	--	--	--	--	--	--	--

DATE	HEPTA-CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	MALA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	METH-OXY-CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARA-THION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRI-THION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PARA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PER-THANE IN BOT-TOM MA-TERIAL (UG/KG)	TOXA-PHENE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	TRI-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
OCT 1985											
10...	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1
10...	--	--	--	--	--	--	--	--	--	--	--
MAY 1986											
19...	--	--	--	--	--	--	--	--	--	--	--

01408000 MANASQUAN RIVER AT SQUANKUM, NJ

LOCATION.--Lat 40°09'47", Long 74°09'21", Monmouth County, Hydrologic Unit 02040301, on right bank 50 ft upstream from North bound bridge on State Highway 547 (Squankum Park Road) in Squankum, and 0.4 mi downstream from Marsh Bog Brook.

DRAINAGE AREA.--44.0 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1931 to current year. Monthly discharge only for July 1931, published in WSP 1302.

REVISED RECORDS.--WDR NJ-83-1: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 18.82 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 13, 1940, water-stage recorder at site 80 ft upstream at same datum.

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

AVERAGE DISCHARGE.--55 years, 75.2 ft³/s, 23.21 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,940 ft³/s, Sept. 21, 1938, gage height, 12.45 ft, from floodmark, site then in use, from rating curve extended above 900 ft³/s on basis of contracted-opening measurement of peak flow; minimum, 8.1 ft³/s, Aug. 6, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 5	1715	678	5.97	Apr. 17	2130	*1,150	*7.68
Jan. 26	2300	900	6.86				

Minimum discharge, 18 ft³/s Sept. 18, gage height, 2.42 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	30	264	49	74	67	53	82	32	20	55	22
2	44	30	190	48	87	66	53	78	32	110	62	23
3	118	32	123	71	89	64	50	72	31	49	42	24
4	91	31	98	69	92	65	48	69	30	31	36	23
5	80	391	88	76	173	64	51	68	31	27	32	27
6	64	124	113	63	112	63	62	66	30	25	29	43
7	51	77	106	54	91	61	64	64	31	23	32	26
8	47	61	87	51	82	53	60	62	34	22	41	24
9	43	51	79	46	77	54	56	60	31	26	30	23
10	41	47	73	48	75	57	53	58	29	59	27	23
11	40	44	71	47	78	60	52	56	28	26	25	23
12	37	45	72	45	72	55	50	55	56	25	24	23
13	36	46	75	46	67	99	48	54	83	68	23	21
14	36	44	84	44	63	189	49	52	40	51	23	20
15	36	42	67	40	64	203	48	53	33	30	23	20
16	35	59	63	40	61	166	286	53	30	26	23	20
17	33	285	62	41	65	108	1010	52	33	27	24	20
18	33	105	60	43	188	89	540	48	28	44	37	19
19	36	78	54	57	284	83	189	46	27	78	30	23
20	33	67	52	71	186	75	140	54	27	41	25	24
21	32	60	55	57	138	67	137	64	25	31	31	28
22	33	117	54	51	135	65	143	73	24	29	42	25
23	32	188	55	49	107	63	185	60	24	31	28	24
24	32	91	57	46	95	62	184	52	23	37	43	43
25	32	73	58	45	89	58	125	47	23	28	27	26
26	32	72	51	520	80	59	109	44	22	34	24	27
27	31	104	49	407	76	58	101	42	22	104	24	53
28	30	168	49	154	71	57	94	40	23	48	34	34
29	30	364	48	107	---	55	89	38	23	45	32	27
30	30	154	48	93	---	54	89	36	22	64	24	25
31	31	---	47	82	---	54	---	33	---	130	23	---
TOTAL	1329	3080	2452	2660	2871	2393	4218	1731	927	1389	975	783
MEAN	42.9	103	79.1	85.8	103	77.2	141	55.8	30.9	44.8	31.5	26.1
MAX	118	391	264	520	284	203	1010	82	83	130	62	53
MIN	30	30	47	40	61	53	48	33	22	20	23	19
CFSM	.97	2.34	1.80	1.95	2.34	1.75	3.20	1.27	.70	1.02	.72	.59
IN.	1.12	2.60	2.07	2.25	2.43	2.02	3.57	1.46	.78	1.17	.82	.66

CAL YR 1985 TOTAL 19796 MEAN 54.2 MAX 436 MIN 22 CFSM 1.23 IN. 16.74
WTR YR 1986 TOTAL 24808 MEAN 68.0 MAX 1010 MIN 19 CFSM 1.55 IN. 20.97

01408120 NORTH BRANCH METEDECONK RIVER NEAR LAKEWOOD, NJ

LOCATION.--Lat 40°05'30", long 74°09'10", Ocean County, Hydrologic Unit 02040301, on upstream right bank at bridge on State Route 549, 1.0 mi upstream from confluence with South Branch Metedeconk River, and 2.3 mi east of Lakewood.

DRAINAGE AREA.--34.9 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1972 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 3.89 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 17, 1977 gage located on upstream left side of bridge. Nov. 17, 1977 to Dec. 19, 1984 gage located on the downstream side of bridge.

REMARKS.--Estimated daily discharges: Jan. 28 to Feb. 1. Records good. Several measurements of water temperature were made during the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--14 years, 63.0 ft³/s, 24.51 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,370 ft³/s, Nov. 8, 1977, gage height, 9.28 ft, from rating extended above 500 ft³/s; minimum, 11 ft³/s, many days in August and September, 1981.

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

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 5	2330	253	6.16	Apr. 18	0130	*572	*7.53
Jan. 27	0915	324	6.59	July 31	0130	330	6.62

Minimum discharge, 14 ft³/s, Sept. 14, 15, gage height, 2.38 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	27	193	37	61	51	42	62	24	19	59	25
2	37	27	171	36	63	49	43	58	24	85	50	24
3	61	28	127	56	68	48	42	54	23	106	44	27
4	76	28	91	68	72	48	41	52	23	46	38	26
5	74	163	65	58	110	49	41	50	23	28	33	27
6	60	218	77	55	102	48	50	48	22	24	29	58
7	48	130	86	47	86	47	56	47	24	22	28	30
8	39	85	72	42	69	43	50	46	26	20	29	23
9	36	49	61	40	62	43	47	44	24	20	27	20
10	34	38	55	34	59	45	43	44	21	22	25	19
11	32	35	51	35	61	47	42	42	21	21	24	18
12	30	34	52	34	58	45	41	41	35	20	23	18
13	30	34	57	34	56	78	40	40	66	48	22	17
14	30	33	66	33	56	137	40	39	43	161	22	16
15	29	32	56	34	51	155	40	39	33	71	22	15
16	30	45	50	38	49	145	111	40	27	31	24	19
17	29	132	46	34	52	121	432	39	32	28	25	16
18	29	118	44	32	90	90	475	36	28	28	37	15
19	29	92	41	41	142	70	257	34	25	50	34	19
20	28	63	41	60	146	62	161	34	24	55	27	21
21	27	45	41	53	140	55	107	50	23	38	38	25
22	27	73	41	43	115	52	99	73	22	29	59	27
23	27	127	39	39	89	51	108	59	22	25	39	26
24	27	106	43	38	74	50	128	45	22	31	38	48
25	28	77	45	38	65	48	114	37	21	25	32	32
26	27	58	42	159	59	47	94	33	20	23	26	24
27	27	72	40	294	56	47	79	31	20	74	28	31
28	26	98	36	200	53	47	72	30	21	80	49	33
29	26	166	36	124	---	45	66	28	21	70	48	27
30	26	165	35	86	---	44	66	26	20	129	31	24
31	27	---	34	66	---	43	---	25	---	206	26	---
TOTAL	1105	2398	1934	1988	2164	1950	3027	1326	780	1635	1036	750
MEAN	35.6	79.9	62.4	64.1	77.3	62.9	101	42.8	26.0	52.7	33.4	25.0
MAX	76	218	193	294	146	155	475	73	66	206	59	58
MIN	26	27	34	32	49	43	40	25	20	19	22	15
CFSM	1.02	2.29	1.79	1.84	2.21	1.80	2.89	1.23	.74	1.51	.96	.72
IN.	1.18	2.56	2.06	2.12	2.31	2.08	3.23	1.41	.83	1.74	1.10	.80

CAL YR 1985 TOTAL 16503 MEAN 45.2 MAX 319 MIN 18 CFSM 1.30 IN. 17.59
WTR YR 1986 TOTAL 20093 MEAN 55.0 MAX 475 MIN 15 CFSM 1.58 IN. 21.42

01408500 TOMS RIVER NEAR TOMS RIVER, NJ
(National stream quality accounting network station)

LOCATION.--Lat 39°59'10", long 74°13'29", Ocean County, Hydrologic Unit 02040301, on left bank 1.9 mi downstream from Union Branch, and 2.6 mi northwest of Toms River.

DRAINAGE AREA.--123 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1928 to current year. Monthly discharge only for October, November 1928, published in WSP 1302.

REVISED RECORDS.--WSP 1702: 1938. WDR NJ-76-1: 1975(M). WDR NJ-77-1: 1976.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 8.10 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Several measurements of water temperature, other than those published, were made during the year.

AVERAGE DISCHARGE.--58 years, 214 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,000 ft³/s, Sept. 23, 1938, gage height, 12.50 ft, from floodmark, from rating curve extended above 1,500 ft³/s; minimum, 46 ft³/s, many days in August and September 1966, gage height, 2.70 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,070 ft³/s, Apr. 18, gage height, 9.28 ft; minimum, 58 ft³/s, Sept. 16, gage height, 2.86 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	277	81	372	138	267	190	149	216	105	72	223	96
2	180	84	399	137	233	183	146	218	100	122	214	90
3	165	81	379	150	224	179	144	234	95	160	204	92
4	184	83	333	169	225	176	143	211	96	166	181	90
5	201	168	272	176	252	172	142	185	96	128	156	92
6	199	196	237	178	263	171	151	177	92	107	134	127
7	178	203	230	174	284	172	164	170	95	93	117	125
8	154	211	224	162	274	164	166	166	100	84	107	112
9	137	183	212	147	242	157	163	162	97	77	102	101
10	123	148	199	142	220	160	157	161	91	77	94	91
11	113	131	188	138	209	162	151	165	90	75	87	86
12	108	119	181	136	204	160	147	156	114	77	83	82
13	104	114	182	135	194	179	144	134	176	89	81	80
14	100	112	192	135	183	245	142	126	174	146	74	77
15	98	109	192	127	181	292	140	126	153	171	77	73
16	94	117	185	122	176	350	211	125	135	163	79	68
17	88	179	178	121	174	388	425	140	122	125	98	69
18	88	193	172	123	197	364	796	140	114	110	105	70
19	90	210	162	135	251	312	960	134	102	146	110	76
20	88	203	152	158	305	255	687	131	96	180	94	78
21	87	172	152	161	377	220	513	142	93	182	109	81
22	87	175	149	155	388	200	412	167	89	152	143	81
23	87	207	150	147	347	187	355	182	85	123	135	87
24	87	220	153	141	302	182	354	179	82	125	125	116
25	90	231	157	135	261	176	354	161	80	134	114	108
26	94	210	153	240	231	171	342	146	74	130	102	98
27	86	205	146	350	210	183	308	134	74	154	93	123
28	82	222	143	470	199	172	267	127	76	190	108	135
29	81	280	140	531	---	160	243	121	77	195	123	130
30	80	308	139	447	---	157	227	114	74	226	115	119
31	81	---	137	347	---	153	---	108	---	243	104	---
TOTAL	3711	5155	6260	6027	6873	6392	8703	4858	3047	4222	3691	2853
MEAN	120	172	202	194	245	206	290	157	102	136	119	95.1
MAX	277	308	399	531	388	388	960	234	176	243	223	135
MIN	80	81	137	121	174	153	140	108	74	72	74	68
CFSM	.98	1.40	1.64	1.58	1.99	1.67	2.36	1.28	.83	1.11	.97	.77
IN.	1.12	1.56	1.89	1.82	2.08	1.93	2.63	1.47	.92	1.28	1.12	.86

CAL YR 1985 TOTAL 49671 MEAN 136 MAX 399 MIN 56 CFSM 1.11 IN. 15.02
WTR YR 1986 TOTAL 61792 MEAN 169 MAX 960 MIN 68 CFSM 1.37 IN. 18.69

01408500 TOMS RIVER NEAR TOMS RIVER, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1974 to September 1981 (discontinued).
WATER TEMPERATURE: November 1963 to May 1966, November 1974 to September 1981 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)
NOV 1985												
14...	1030	114	75	5.4	13.5	1.5	9.2	87	0.5	K21	4600	13
MAR 1986												
18...	1100	368	65	4.2	9.5	1.9	10.3	89	1.2	K4	48	10
MAY												
09...	1300	162	55	4.9	16.5	2.6	9.1	92	1.6	<11	440	10
JUL												
31...	1200	243	62	4.2	21.5	5.0	7.6	86	--	170	2300	10

DATE	ACIDITY (MG/L AS H)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE IT-FLD (MG/L AS HCO3)	ALKA-LINITY, CARBON-ATE IT-FLD (MG/L - CACO3)	ALKA-LINITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV 1985												
14...	--	3.1	1.3	6.7	1.5	6.1	5.0	8	11	11	<0.1	5.6
MAR 1986												
18...	0.2	2.4	1.0	4.2	0.9	<0.1	<0.1	<1	13	7.1	<0.1	3.8
MAY												
09...	--	2.3	1.0	5.1	1.4	--	--	--	13	8.8	<0.1	2.7
JUL												
31...	0.2	2.6	0.88	4.0	0.7	<0.1	<0.1	<1	12	8.0	<0.1	4.8

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)
NOV 1985												
14...	44	2	0.62	63	<0.01	0.43	0.14	0.14	0.4	0.02	<0.01	0.01
MAR 1986												
18...	--	12	12	32	<0.01	0.17	0.05	0.01	0.4	0.01	0.01	0.01
MAY												
09...	37	7	3.1	67	<0.01	0.39	0.11	0.13	0.4	0.02	0.01	<0.01
JUL												
31...	--	11	7.2	79	<0.01	0.16	0.07	0.08	0.7	0.04	0.02	<0.01

01408500 TOMS RIVER NEAR TOMS RIVER, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)
NOV 1985											
14...	1030	160	<1	30	2	<1	<1	<3	3	240	7
MAR 1986											
18...	1100	250	<1	37	<0.5	<1	<1	<3	2	370	10
MAY											
09...	1300	150	<1	30	<0.5	<1	<1	<3	1	330	<5

DATE	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)
NOV 1985										
14...	21	51	<0.1	<10	<1	<1	<1	19	<6	19
MAR 1986										
18...	<4	41	0.1	<10	<1	<1	<1	18	<6	31
MAY										
09...	<4	37	0.3	<10	1	<1	<1	16	<6	20

01409280 WESTECUNK CREEK AT STAFFORD FORGE, NJ

LOCATION.--Lat 39°40'00", long 74°19'12", Ocean County, Hydrologic Unit 02040301, 75 ft downstream from dam, 0.2 mi south of Stafford Forge, 1.2 mi downstream from Log Swamp Branch, and 2.0 mi west of Staffordville.

DRAINAGE AREA.--15.8 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1973 to current year. Occasional low-flow measurements, water years 1969-73, at site 400 ft downstream.

REVISED RECORDS.--WDR NJ-83-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 6.36 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 6, 1981, water-stage recorder and wooden control at site 50 ft upstream at datum 9.42 ft higher.

REMARKS.--Estimated daily discharges: Nov. 12-14 and Feb. 11 to Mar. 13. Records fair except those for periods of no gage-height record, Nov. 12-14 and Feb. 11 to Mar. 13, which are poor. Flow regulated by dam 75 ft upstream. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--13 years, 32.0 ft³/s, 27.50 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 256 ft³/s, July 4, 1978, gage height, 3.70 ft; no flow part of May 17, 1974, Sept. 7, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 75 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
July 31	1445	*68	*11.22	No peak greater than base discharge.			

Minimum daily discharge, 9.6 ft³/s, Nov. 2, 3.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	9.8	24	19	24	29	22	17	14	15	30	16
2	23	9.6	24	18	24	27	22	17	14	19	23	17
3	32	9.6	24	21	24	27	21	16	14	21	25	17
4	35	9.7	24	22	25	26	21	16	14	18	22	17
5	31	12	23	22	27	25	21	16	14	17	19	17
6	27	12	24	20	26	25	24	17	14	17	18	22
7	23	11	24	15	27	24	24	17	15	16	17	19
8	20	15	24	18	26	23	23	17	16	16	16	18
9	19	21	23	17	25	23	21	16	17	15	16	18
10	16	22	23	17	24	24	21	15	16	17	16	18
11	14	22	23	17	31	23	20	15	16	16	16	18
12	13	17	23	17	30	23	18	15	20	15	16	18
13	13	16	23	17	28	27	18	15	21	16	16	17
14	13	16	24	17	27	28	19	14	21	18	15	17
15	14	17	23	17	27	26	18	15	20	16	15	17
16	16	17	22	17	26	26	25	15	19	15	14	17
17	17	21	22	17	26	26	31	16	18	16	14	17
18	15	19	22	17	30	25	30	16	17	17	17	17
19	14	18	19	19	36	25	25	16	17	19	16	18
20	13	18	21	20	37	26	22	16	18	19	15	17
21	13	18	21	19	41	24	23	17	17	17	22	17
22	13	21	20	18	41	23	23	18	16	17	26	17
23	12	24	19	17	40	23	21	18	16	16	21	17
24	12	23	20	17	39	22	20	17	17	15	18	20
25	12	21	20	17	36	21	18	18	18	15	17	19
26	11	21	19	23	33	21	19	17	17	14	16	19
27	9.9	21	18	27	32	23	19	16	16	15	17	19
28	9.8	21	18	27	31	23	18	16	16	15	18	19
29	9.8	23	18	29	---	23	18	16	16	20	18	17
30	9.9	23	18	26	---	23	18	16	16	26	17	13
31	9.9	---	18	24	---	22	---	15	---	38	16	---
TOTAL	515.3	528.7	668	608	843	756	643	501	500	546	562	529
MEAN	16.6	17.6	21.5	19.6	30.1	24.4	21.4	16.2	16.7	17.6	18.1	17.6
MAX	35	24	24	29	41	29	31	18	21	38	30	22
MIN	9.8	9.6	18	15	24	21	18	14	14	14	14	13
CFSM	1.05	1.11	1.36	1.24	1.91	1.54	1.35	1.03	1.06	1.11	1.15	1.11
IN.	1.21	1.24	1.57	1.43	1.98	1.78	1.51	1.18	1.18	1.29	1.32	1.25

CAL YR 1985 TOTAL 7138.2 MEAN 19.6 MAX 45 MIN 2.7 CFSM 1.24 IN. 16.81
WTR YR 1986 TOTAL 7200.0 MEAN 19.7 MAX 41 MIN 9.6 CFSM 1.25 IN. 16.95

01409387 MULLICA RIVER AT OUTLET OF ATSION LAKE, AT ATSION, NJ

LOCATION.--Lat 39°44'25", long 74°43'37", Burlington County, Hydrologic Unit 02040301, at bridge on U.S. Route 206 in Atsion, at outlet of Atsion Lake, and 0.2 mi upstream from Wesickaman Creek.

DRAINAGE AREA.--26.7 mi².

WATER-QUALITY RECORDS

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
15...	1200	E24	62	4.0	20.0	9.2	101	<0.5	<20	7
FEB 1986										
05...	1340	E89	59	3.8	3.5	12.2	93	<0.9	<20	4
APR										
09...	1340	E38	41	4.6	13.5	10.2	99	E1.4	<20	2
JUN										
10...	0930	E13	34	4.6	23.5	8.2	96	E1.7	<20	79
JUL										
22...	1230	E17	32	5.3	25.0	8.7	104	<1.1	<20	51
AUG										
18...	0900	E13	29	4.7	22.0	8.2	95	<0.1	<20	130

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
15...	11	2.6	0.99	4.5	0.9	<1.0	17	5.5	<0.1
FEB 1986									
05...	7	1.5	0.75	2.5	0.8	<1.0	12	4.7	<0.1
APR									
09...	8	1.7	0.8	2.8	0.7	<3.0	9.3	5.0	<0.1
JUN									
10...	6	1.3	0.75	2.3	0.6	1.0	7.5	4.2	<0.1
JUL									
22...	7	1.5	0.7	2.5	0.5	2.0	9.7	4.8	<0.1
AUG									
18...	6	1.4	0.6	2.0	0.6	2.0	9.8	3.5	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
15...	3.6	--	<0.003	0.08	0.18	0.33	0.41	0.04	5.9
FEB 1986									
05...	3.9	--	0.003	0.13	0.13	0.4	0.53	0.04	6.6
APR									
09...	2.5	--	0.008	0.17	0.27	0.72	0.89	0.02	5.1
JUN									
10...	3.1	20	0.009	0.10	0.05	0.37	0.47	0.02	9.7
JUL									
22...	2.9	24	0.008	0.09	0.13	0.48	0.57	0.05	7.2
AUG									
18...	2.9	22	<0.003	<0.05	<0.05	0.64	--	0.03	7.7

01409387 MULLICA RIVER AT OUTLET OF ATSION LAKE, AT ATSION, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
JUN 1986 10...	0930	<0.5	90	1	<10	<10	<1	<10	7

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
JUN 1986 10...	2300	5	20	0.1	6	<1	<10	<1

01409400 MULLICA RIVER NEAR BATSTO, NJ

LOCATION.--Lat 39°40'28", long 74°39'55", Atlantic County, Hydrologic Unit 02040301, on right bank 2.4 mi upstream from Sleeper Branch, and 2.5 mi north of Batsto.

DRAINAGE AREA.--46.7 mi².

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WRD-NJ 1969: 1958(M), 1960(M), 1967-68(M), WDR NJ-83-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 11.93 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good except those for Mar. 13 to Apr. 3 and May 1 to June 13, which are fair. Some regulation from upstream cranberry bogs and Atsion Lake. Diversions from Sleeper Branch enter river upstream of gage. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--29 years, 108 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,840 ft³/s Feb. 26, 1979, gage height, 6.14 ft; minimum, 7.0 ft³/s, Sept. 6, 7, 8, 1966, gage height, 0.28 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 419 ft³/s, Apr. 19, gage height, 3.62 ft; minimum , 17 ft³/s, Sept. 23, gage height, 0.38 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	134	42	162	61	192	134	52	119	40	28	39	22
2	128	41	191	58	176	120	45	112	39	43	35	23
3	106	35	219	67	165	111	44	103	40	55	34	23
4	76	33	216	75	160	105	47	95	40	49	33	23
5	97	45	177	76	182	101	53	89	29	40	31	23
6	105	45	137	75	183	96	70	85	29	36	29	23
7	103	44	133	72	170	93	76	87	28	33	29	23
8	97	43	125	67	164	84	82	90	29	30	29	23
9	86	41	117	67	159	86	79	78	28	26	27	23
10	77	40	78	66	154	85	75	73	27	23	26	22
11	68	39	59	64	150	84	71	74	28	22	25	22
12	60	37	68	62	142	82	70	80	45	22	24	21
13	54	37	77	61	132	91	67	73	56	24	24	21
14	51	37	95	58	125	121	66	70	54	26	24	22
15	50	37	96	55	120	150	64	69	50	25	23	23
16	49	42	89	54	114	169	110	63	46	25	24	22
17	47	66	83	54	114	169	309	60	43	25	24	20
18	44	70	78	56	133	166	369	56	39	25	24	19
19	44	69	70	63	156	154	407	53	37	39	24	19
20	44	69	67	69	139	145	369	54	35	52	23	20
21	38	66	66	68	153	140	290	53	34	51	32	21
22	30	79	64	64	213	127	275	60	34	38	42	19
23	29	106	65	62	229	118	264	58	33	30	46	18
24	31	107	67	61	221	111	248	55	31	29	41	28
25	33	96	66	61	204	105	220	51	28	27	34	25
26	33	93	60	132	180	102	201	48	27	28	30	24
27	34	93	60	237	164	101	188	45	29	36	27	27
28	34	95	61	238	145	98	152	44	29	40	30	28
29	33	123	60	255	---	93	127	42	30	38	29	27
30	35	141	58	241	---	90	126	41	28	50	27	26
31	42	---	57	223	---	78	---	41	---	43	25	---
TOTAL	1892	1911	3021	2922	4539	3509	4616	2121	1065	1058	914	680
MEAN	61.0	63.7	97.5	94.3	162	113	154	68.4	35.5	34.1	29.5	22.7
MAX	134	141	219	255	229	169	407	119	56	55	46	28
MIN	29	33	57	54	114	78	44	41	27	22	23	18

CAL YR 1985 TOTAL 21048 MEAN 57.7 MAX 219 MIN 17
WTR YR 1986 TOTAL 28248 MEAN 77.4 MAX 407 MIN 18

01409416 HAMMONTON CREEK AT WESCOATVILLE, NJ

LOCATION.--Lat 39°38'02", long 74°43'05", Atlantic County, Hydrologic Unit 02040301, at bridge on Chestnut Road in Wescoatville, 1.1 mi southwest of Nesco, 1.7 mi upstream from Norton Branch, and 3.8 mi southwest of Batsto.

DRAINAGE AREA.--9.57 mi², revised.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
15...	1120	E13	155	6.1	17.0	3.8	39	3.0	20	240
JAN 1986										
28...	1230	E124	90	6.8	1.0	9.3	66	2.6	<20	49
MAR										
26...	1140	E20	167	6.6	12.0	6.2	57	E7.8	20	6
JUN										
10...	1110	E7.1	190	6.4	17.5	3.8	39	3.2	40	140
JUL										
22...	1130	E8.8	198	6.7	20.5	3.2	35	E1.9	130	>2400
AUG										
05...	1300	E5.8	186	6.5	21.0	4.4	49	3.0	170	1600

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
15...	19	4.6	1.8	16	4.5	<1.0	16	18	0.3
JAN 1986									
28...	21	5.0	2.1	6.2	2.7	4.0	16	9.2	0.2
MAR									
26...	22	5.3	2.1	14	4.0	<3.0	13	15	0.6
JUN									
10...	19	4.6	1.8	21	4.0	4.0	14	18	0.4
JUL									
22...	17	4.1	1.7	19	4.5	3.0	12	18	0.4
AUG									
05...	19	4.7	1.8	19	4.8	<1.0	12	21	0.3

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
15...	8.4	--	0.073	1.52	3.50	3.5	5.0	1.18	7.9
JAN 1986									
28...	4.8	49	0.017	1.62	0.83	1.8	3.4	0.38	6.6
MAR									
26...	8.5	--	0.033	0.66	4.35	4.3	4.9	1.02	10
JUN									
10...	9.8	76	0.059	0.58	5.00	7.0	7.6	1.45	11
JUL									
22...	9.8	71	0.145	2.17	0.10	4.6	6.8	1.73	8.0
AUG									
05...	9.0	--	0.126	3.07	E3.95	9.7	13	1.25	7.0

01409416 HAMMONTON CREEK AT WESCOATVILLE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
OCT 1985 15...	1120	<0.5	40	<1	<10	--	2	30	16
JUN 1986 10...	1110	<0.5	40	<1	<10	80	<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 1985 15...	680	8	40	<0.1	6	<1	90	7
JUN 1986 10...	730	9	20	0.2	4	<1	10	6

01409500 BATSTO RIVER AT BATSTO, NJ

LOCATION.--Lat 39°38'33", long 74°39'00", Burlington County, Hydrologic Unit 02040301, on right bank 30 ft downstream from bridge on State Highway 542 at Batsto, and 1.0 mi upstream from mouth.

DRAINAGE AREA.--67.8 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1927 to current year. Monthly discharge only for April to September 1939, published in WSP 1302.

REVISED RECORDS.--WSP 1432: 1930, 1933, 1936, 1938. WDR NJ-83-1: Drainage area.

GAGE.--Water-stage recorder. Concrete control since Oct. 12, 1939; prior to Mar. 24, 1939, wooden control at site 50 ft downstream. Datum of gage is 1.4 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Considerable regulation at times by sluice gates prior to December 1954 and by automatic Bascule and sluice gates since July 1959 at Batsto Lake, 300 ft upstream, capacity, about 60,000,000 gal. Several measurements of water temperature, other than those published, were made during the year.

AVERAGE DISCHARGE.--59 years, 124 ft³/s, 24.84 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,310 ft³/s, Aug. 24, 1933; maximum gage height, 8.7 ft, Aug. 20, 1939, from floodmark; minimum daily discharge, 5.7 ft³/s, Oct. 4, 1959.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 531 ft³/s, Apr. 19; minimum daily, 45 ft³/s, Sept. 17, 18, 19, 22.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	86	50	159	71	157	130	89	124	64	47	83	52
2	87	50	178	71	145	124	88	120	61	60	80	51
3	86	50	172	75	134	119	85	114	59	74	77	54
4	86	52	158	81	135	115	83	106	58	70	76	53
5	96	62	139	86	138	111	83	101	57	60	72	53
6	96	68	128	86	153	109	90	99	56	57	67	55
7	87	64	120	85	169	105	94	98	56	54	63	55
8	78	58	116	80	163	100	94	95	57	51	60	52
9	70	54	111	76	147	95	95	94	56	49	59	51
10	66	53	107	73	138	97	94	90	55	49	57	49
11	66	52	98	71	135	97	94	86	56	50	55	48
12	63	52	98	70	130	94	95	93	75	50	53	48
13	62	52	94	71	126	99	90	94	86	50	51	49
14	62	53	98	70	120	115	86	92	85	52	49	48
15	62	55	100	69	114	137	86	88	79	52	48	46
16	56	63	97	68	110	161	111	83	74	50	49	46
17	55	77	91	69	108	171	219	80	70	49	49	45
18	56	85	88	68	114	168	472	77	65	50	50	45
19	54	87	82	71	135	161	531	75	62	62	52	45
20	51	80	79	77	186	149	407	76	60	78	50	47
21	51	76	79	80	203	136	295	78	58	82	61	48
22	54	83	77	79	210	126	236	85	57	78	75	45
23	54	93	75	76	212	116	210	92	54	69	75	46
24	52	104	75	75	201	108	205	94	54	62	66	61
25	55	105	75	72	195	102	208	87	54	58	61	59
26	53	101	74	117	171	97	189	81	52	56	56	55
27	51	96	72	167	156	96	176	77	51	60	55	56
28	50	96	72	246	139	94	161	72	50	64	57	61
29	51	111	71	255	---	94	145	71	50	64	59	61
30	51	139	70	227	---	93	132	69	48	79	59	56
31	52	---	70	185	---	91	---	67	---	83	55	---
TOTAL	1999	2221	3123	3067	4244	3610	5043	2758	1819	1869	1879	1540
MEAN	64.5	74.0	101	98.9	152	116	168	89.0	60.6	60.3	60.6	51.3
MAX	96	139	178	255	212	171	531	124	86	83	83	61
MIN	50	50	70	68	108	91	83	67	48	47	48	45
CFSM	.95	1.09	1.49	1.46	2.24	1.71	2.48	1.31	.89	.89	.89	.76
IN.	1.10	1.22	1.71	1.68	2.33	1.98	2.77	1.51	1.00	1.03	1.03	.84

CAL YR 1985 TOTAL 26960 MEAN 73.9 MAX 178 MIN 38 CFSM 1.09 IN. 14.79
WTR YR 1986 TOTAL 33172 MEAN 90.9 MAX 531 MIN 45 CFSM 1.34 IN. 18.20

01409500 BATSTO RIVER AT BATSTO, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1925, 1956, 1962-63, 1976 to current year.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
15...	1000	59	48	4.3	22.0	10.2	117	<0.4	<20	130
FEB 1986										
05...	1230	137	62	3.9	5.0	11.8	93	<0.7	20	4
MAR										
26...	1050	96	47	5.1	10.5	10.8	96	E0.3	<20	<2
MAY										
28...	1140	72	34	5.2	20.0	9.4	104	E0.6	<20	11
JUL										
22...	1015	77	37	5.4	24.0	7.8	92	<0.4	<20	8
AUG										
05...	1215	74	38	5.3	24.0	9.6	113	<1.1	20	17

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
15...	10	2.2	1.1	2.8	0.9	1.0	12	4.3	<0.1
FEB 1986									
05...	11	2.4	1.1	2.5	0.8	<1.0	12	4.9	<0.1
MAR									
26...	9	1.9	0.96	2.4	1.2	<3.0	10	4.9	<0.1
MAY									
28...	7	1.6	0.8	2.3	0.7	2.0	9.1	4.4	<0.1
JUL									
22...	8	1.7	0.84	2.4	0.6	3.0	8.3	4.5	<0.1
AUG									
05...	7	1.6	0.78	2.2	0.7	2.0	9.7	4.9	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
15...	5.1	29	<0.003	0.05	0.17	0.3	0.35	0.03	2.3
FEB 1986									
05...	5.2	--	0.004	0.21	0.17	0.28	0.49	0.26	3.6
MAR									
26...	4.1	--	0.008	0.11	0.08	0.31	0.42	<0.02	3.3
MAY									
28...	4.2	24	0.003	<0.05	0.10	0.38	--	<0.02	5.6
JUL									
22...	4.3	24	0.007	<0.05	0.12	0.53	--	0.07	4.1
AUG									
05...	4.0	25	0.006	<0.05	E0.05	0.35	--	<0.02	5.3

01409500 BATSTO RIVER AT BATSTO, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)
OCT 1985 15...	1000	--	20	<1	<10	<20	3	20	14
MAY 1986 28...	1140	<0.5	60	<1	<10	<10	<1	<10	2

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1985 15...	320	12	30	0.1	8	<1	40	6
MAY 1986 28...	1700	7	20	0.6	2	<1	<10	2

01409510 BATSTO RIVER AT PLEASANT MILLS, NJ

LOCATION.--Lat 39°37'55", long 74°38'40", Burlington County, Hydrologic Unit 02040301, on right bank, 0.5 mi southeast of Pleasant Mills.

DRAINAGE AREA.--73.6 mi².

TIDE ELEVATION DATA

PERIOD OF RECORD.--July 1958 to current year. Annual maximum only published for 1958 to 1965.

GAGE.--Water-stage recorder. Datum of gage is -8.6 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. 1-16, Dec. 22, and Jan. 7-9, 29. 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 recorded, 7.2 ft Mar. 7, 1962; minimum (1966-86), -0.67 ft Jan. 2, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded, 4.51 ft, Nov. 5; minimum recorded, -0.22 ft Oct. 27, 28.

Summaries of tide elevations during year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	--	4.51	3.98	3.55	3.88	3.13	3.73	3.70	3.50	3.36	3.85	3.22
high tide	Date	--	5	1	26	7	15	18	13	13	21	19	5
Minimum	Elevation	-.22	-.19	-.11	-.19	.27	-.02	-.03	-.05	-.14	-.05	.11	-.03
low tide	Date	27,28	11	28,29	17	16	31	3	28	5	8	12	16
Mean high tide		--	2.93	2.40	2.11	2.59	2.29	2.90	2.68	2.50	2.65	2.63	2.55
Mean water level		--	1.88	1.36	1.19	1.67	1.21	1.94	1.57	1.27	1.50	1.54	1.39
Mean low tide		--	.70	.40	.23	.72	.28	.81	.33	.06	.25	.40	.27

01409810 WEST BRANCH WADING RIVER NEAR JENKINS, NJ

LOCATION.--Lat 39°41'17", long 74°32'54", Burlington County, Hydrologic Unit 02040301, on right bank 900 ft downstream from Godfrey Bridge on Washington-Jenkins Road, 2.2 mi downstream from Hospitality Brook, and 1.2 mi southwest of Jenkins.

DRAINAGE AREA.--84.1 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1974 to current year.

REVISED RECORDS.--WDR NJ-77-1: 1976. WDR NJ-81-1: 1975(P), 1976(P), 1977(P), 1978(P), 1979(P), 1980(P).

GAGE.--Water-stage recorder. Datum of gage is 10.17 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good except those from Oct. 1 to Dec. 11, which are fair. Some regulation by cranberry bogs and small ponds. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--12 years, 142 ft³/s, 22.93 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,320 ft³/s, Feb. 26, 1979, gage height, 16.14 ft; minimum, 22 ft³/s, July 24, 1977, gage height 10.16 ft; minimum gage height, 10.14 ft, July 24, 25, 26, 1985, June 30, 1986.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft³/s and maximum(*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 18	0430	715	14.49	July 31	2215	*940	*15.14

Minimum discharge, 31 ft³/s, June 30, gage height, 10.14 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	92	183	63	168	133	69	132	46	34	863	62
2	55	59	181	62	157	126	82	116	44	68	644	60
3	77	58	152	72	161	119	71	101	41	81	432	63
4	105	53	115	84	170	114	68	99	45	63	276	61
5	111	69	99	86	176	112	70	98	43	56	203	58
6	114	72	97	84	179	109	80	85	41	50	159	62
7	108	58	98	78	177	104	101	71	42	43	126	61
8	76	55	74	73	172	86	138	65	42	40	109	58
9	68	49	67	75	162	92	120	63	46	39	91	55
10	59	44	64	76	153	96	115	66	42	45	70	59
11	58	43	62	77	150	99	123	74	43	44	67	54
12	61	46	59	77	146	126	107	77	85	43	60	51
13	70	45	61	77	135	130	91	73	96	42	55	48
14	68	47	67	75	126	153	96	64	78	44	49	44
15	60	44	64	70	121	169	120	63	65	51	47	44
16	47	56	60	69	117	174	247	77	57	51	45	44
17	54	116	61	71	118	166	601	65	53	49	44	41
18	47	99	56	73	146	144	694	56	46	53	71	56
19	50	90	51	79	190	129	572	55	48	98	67	54
20	45	80	51	91	192	116	369	61	44	146	58	45
21	43	74	53	88	185	105	318	74	40	126	119	43
22	42	92	55	84	213	95	338	77	40	88	194	44
23	42	158	60	83	200	88	261	79	39	68	155	45
24	47	132	63	81	190	89	238	69	40	59	134	55
25	46	108	64	81	181	99	242	63	39	50	112	56
26	42	96	62	196	169	118	247	58	40	44	94	60
27	41	94	61	342	149	112	215	54	37	58	80	78
28	52	102	61	342	142	76	199	53	36	89	81	76
29	50	153	60	244	---	65	183	50	35	122	79	68
30	52	157	59	208	---	64	150	48	33	565	70	63
31	67	---	59	189	---	71	---	48	---	913	73	---
TOTAL	1911	2441	2379	3450	4545	3479	6325	2234	1426	3322	4727	1668
MEAN	61.6	81.4	76.7	111	162	112	211	72.1	47.5	107	152	55.6
MAX	114	158	183	342	213	174	694	132	96	913	863	78
MIN	41	43	51	62	117	64	68	48	33	34	44	41
CFSM	.73	.97	.91	1.32	1.93	1.33	2.51	.86	.56	1.27	1.81	.66
IN.	.85	1.08	1.05	1.53	2.01	1.54	2.80	.99	.63	1.47	2.09	.74

CAL YR 1985 TOTAL 26534 MEAN 72.7 MAX 237 MIN 32 CFSM .86 IN. 11.74
WTR YR 1986 TOTAL 37907 MEAN 104 MAX 913 MIN 33 CFSM 1.24 IN. 16.77

01409815 WEST BRANCH WADING RIVER AT MAXWELL, NJ
(National stream-quality accounting network station)

LOCATION.--Lat 39°40'30", long 74°32'28", Burlington County, Hydrologic Unit 02040301, at bridge on State Highway 563 in Maxwell, 1.6 mi southeast of Washington, 1.8 mi southwest of Jenkins, and 2.2 mi upstream from confluence with Oswego River.

DRAINAGE AREA.--85.9 mi².

WATER-QUALITY RECORDS

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

REMARKS.--Water-stage recorder located at station 01409810.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)
NOV 1985												
13...	1130	46	45	4.6	13.5	1.5	9.1	87	0.6	K1	160	4
JAN 1986												
14...	1100	77	49	4.4	1.5	2.0	12.4	89	--	<1	K280	5
MAR												
19...	1200	134	52	4.0	11.5	3.0	9.1	85	0.8	<1	K1300	5
MAY												
08...	1200	66	42	4.2	19.5	3.0	8.0	87	1.1	<1	820	3
JUN												
26...	1130	47	33	4.3	19.0	4.5	8.3	89	--	K12	640	4
AUG												
15...	1130	49	36	4.2	20.5	6.0	7.3	81	--	K7	820	3

DATE	ACIDITY (MG/L AS H)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE IT-FLD (MG/L AS HCO3)	ALKA-LINITY, CARBON-ATE IT-FLD (MG/L - CACO3)	ALKA-LINITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV 1985												
13...	--	0.76	0.42	2.6	0.9	1.2	1.0	<1	5.9	4.4	<0.1	5.8
JAN 1986												
14...	--	1.0	0.6	2.6	0.8	<0.1	<0.1	<0	8.9	4.8	<0.1	6.2
MAR												
19...	0.2	1.1	0.6	2.5	0.6	<0.1	<0.1	<1	10	4.3	<0.1	4.3
MAY												
08...	0.1	0.69	0.43	2.3	0.7	<0.1	<0.1	<1	7.6	4.2	<0.1	5.4
JUN												
26...	0.1	0.76	0.43	2.2	0.5	<0.1	<0.1	<1	5.2	3.8	<0.1	5.8
AUG												
15...	0.2	0.7	0.4	2.2	0.7	<0.1	<0.1	<1	8.2	4.0	0.1	6.8

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)
NOV 1985												
13...	21	1	0.12	67	0.01	<0.10	0.03	0.03	0.2	0.01	0.01	0.01
JAN 1986												
14...	--	6	1.2	33	<0.01	<0.10	0.02	0.04	0.3	0.02	<0.01	<0.01
MAR												
19...	--	33	12	10	<0.01	<0.10	<0.01	<0.01	0.4	0.01	<0.01	<0.01
MAY												
08...	--	8	1.4	72	<0.01	<0.10	0.02	0.02	0.4	0.01	<0.01	<0.01
JUN												
26...	--	12	1.5	90	<0.01	<0.10	<0.01	0.02	0.4	0.03	0.01	<0.01
AUG												
15...	--	22	2.9	84	<0.01	<0.10	0.01	0.03	0.7	0.05	<0.01	<0.01

01409815 WEST BRANCH WADING RIVER AT MAXWELL, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)
JAN 1986											
14...	1100	210	<1	18	0.6	<1	<1	<3	4	400	4
MAR											
19...	1200	210	<1	24	--	1	<1	<3	2	12	5
AUG											
15...	1130	140	1	20	<0.5	<1	<1	<3	4	390	8

DATE	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)
JAN 1986										
14...	<4	17	<0.1	<10	4	<1	<1	9	<6	26
MAR										
19...	<4	19	<0.1	<10	1	<1	1	12	<6	40
AUG										
15...	<4	16	0.2	<10	2	<1	<1	7	<6	17

01410000 OSWEGO RIVER AT HARRISVILLE, NJ

LOCATION.--Lat 39°39'47", long 74°31'26", Burlington County, Hydrologic Unit 02040301, on right bank 50 ft downstream from bridge on State Highway Spur 563 at Harrisville, and 0.5 mi upstream from confluence with West Branch Wading River.

DRAINAGE AREA.--72.5 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1930 to current year. Monthly discharge only for some periods, published in WSP 1302. Prior to October 1955, published as "East Branch Wading River at Harrisville".

REVISED RECORDS.--WDR NJ-83-1: Drainage area.

GAGE.--Water-stage recorder. Concrete control since June 23, 1939. Datum of gage is 4.62 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Figures given herein represent flow over main spillway and through bypass channel. Flow regulated by Harrisville Pond 200 ft above station, capacity, about 30,000,000 gal and by ponds and cranberry bogs 5 to 10 mi upstream. Several measurements of water temperature, other than those published, were made during the year.

AVERAGE DISCHARGE.--56 years, 86.9 ft³/s, 16.28 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,390 ft³/s, Aug. 20, 1939, gage height, 9.54 ft, from high-water mark in gage house, from rating curve extended above 640 ft³/s; no flow part of Oct. 26, 1932, June 10, 1970, and May 29, 30, 1974, while pond was filling.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 473 ft³/s, Aug. 1, gage height, 4.74 ft; minimum, 23 ft³/s, July 15, gage height, 2.77 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	27	85	41	65	77	38	70	39	26	459	51
2	41	26	78	39	67	71	39	64	31	56	384	50
3	57	26	67	47	69	67	38	60	28	62	291	52
4	60	26	59	51	75	66	38	55	28	48	207	51
5	55	36	51	53	96	63	39	51	28	43	146	50
6	51	33	54	49	98	62	48	39	28	39	117	54
7	46	32	56	45	97	59	51	38	29	33	103	52
8	42	30	54	42	89	56	47	40	38	28	66	49
9	46	29	57	43	85	57	45	42	41	26	53	46
10	40	30	56	46	80	56	44	42	28	28	52	45
11	40	29	52	42	81	54	43	41	31	28	46	42
12	37	29	48	41	76	53	43	44	54	28	44	41
13	33	29	50	41	72	69	42	43	58	31	41	40
14	32	29	50	39	67	99	42	45	53	43	33	39
15	31	31	45	39	66	108	41	49	51	27	36	38
16	31	34	45	38	62	102	100	73	44	26	36	37
17	29	65	44	39	64	109	218	67	39	31	37	33
18	28	65	40	40	81	108	280	49	36	32	43	31
19	28	46	39	45	102	87	241	59	34	51	43	31
20	31	43	39	47	102	95	150	44	35	48	42	31
21	33	39	39	45	101	60	116	46	31	41	77	31
22	33	53	39	43	112	53	109	48	29	52	117	31
23	34	79	41	41	108	58	110	44	28	38	103	32
24	34	78	42	40	102	55	109	43	31	28	82	43
25	33	58	43	39	95	46	119	41	37	27	66	42
26	30	49	41	114	87	44	130	44	34	29	58	40
27	28	47	39	155	88	43	115	40	33	48	57	47
28	27	49	39	125	84	41	93	32	31	72	63	51
29	28	76	39	87	---	40	82	35	33	78	65	47
30	29	75	39	72	---	39	76	40	28	268	59	43
31	29	---	39	65	---	38	---	37	---	457	54	---
TOTAL	1139	1298	1509	1693	2371	2035	2686	1465	1068	1872	3080	1270
MEAN	36.7	43.3	48.7	54.6	84.7	65.6	89.5	47.3	35.6	60.4	99.4	42.3
MAX	60	79	85	155	112	109	280	73	58	457	459	54
MIN	27	26	39	38	62	38	38	32	28	26	33	31
CFSM	.51	.60	.67	.75	1.17	.90	1.23	.65	.49	.83	1.37	.58
IN.	.58	.67	.77	.87	1.22	1.04	1.38	.75	.55	.96	1.58	.65

CAL YR 1985 TOTAL 16100 MEAN 44.1 MAX 104 MIN 23 CFSM .61 IN. 8.26
WTR YR 1986 TOTAL 21486 MEAN 58.9 MAX 459 MIN 26 CFSM .81 IN. 11.02

01410000 OSWEGO RIVER AT HARRISVILLE, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 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 nutrietns were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)
OCT 1985									
01...	0945	43	69	3.9	17.5	9.4	--	E1.6	<20
JAN 1986									
28...	1000	130	84	4.4	2.0	13.0	96	E1.6	<20
MAR									
26...	0940	43	48	4.3	10.0	11.0	96	E0.3	<20
MAY									
28...	0940	32	39	4.0	20.5	8.8	98	E0.7	<20
JUL									
08...	0940	31	44	4.1	27.0	8.1	101	E1.8	<20
AUG									
05...	1000	151	73	3.9	19.0	6.7	71	E1.3	<20

DATE	STREP-TOCOCCI FECAL (MPN)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
OCT 1985									
01...	2	5	0.98	0.53	2.4	0.7	<1.0	6.4	4.8
JAN 1986									
28...	5	5	1.1	0.66	3.5	1.3	<1.0	11	4.9
MAR									
26...	<2	5	1.0	0.55	2.4	1.1	<3.0	10	4.3
MAY									
28...	350	4	0.9	0.5	2.4	0.8	<3.0	7.2	3.9
JUL									
08...	2	5	1.2	0.5	2.1	0.9	<1.0	7.4	4.1
AUG									
05...	17	6	1.3	0.61	2.6	1.0	<1.0	12	4.7

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
01...	<0.1	7.3	<0.003	0.07	0.07	0.33	0.4	0.02	2.3
JAN 1986									
28...	<0.1	6.9	<0.003	0.09	0.06	0.48	0.57	0.02	3.1
MAR									
26...	<0.1	7.1	0.008	<0.05	0.07	0.22	--	0.02	1.1
MAY									
28...	<0.1	6.7	<0.003	<0.05	0.08	0.31	--	0.02	2.8
JUL									
08...	<0.1	6.5	0.007	<0.05	<0.05	0.37	--	0.02	1.7
AUG									
05...	<0.1	4.5	0.006	<0.05	E0.05	0.6	--	0.03	15

01410000 OSWEGO RIVER AT HARRISVILLE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)
OCT 1985 01...	0945	60	<0.1	1.0	<1	20	<10	120	5200	10

DATE	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985 01...	<10	0.06	<1	60	<1	<1.0	<0.1	<1.0	<0.1	<0.1

DATE	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985 01...	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

DATE	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985 01...	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1

01410150 EAST BRANCH BASS RIVER NEAR NEW GRETNA, NJ

LOCATION.--Lat 39°37'23", long 74°26'30", Burlington County, Hydrologic Unit 02040301, on left bank upstream of bridge on Stage Road, 0.7 mi west of Lake Absegami, 2.2 mi north of New Gretna, and 5.3 mi upstream from mouth.

DRAINAGE AREA.--8.11 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1969 to 1974. January 1978 to current year.

REVISED RECORDS.--WDR NJ-81-1: 1978-80(P).

GAGE.--Water-stage recorder. Datum of gage is 1.10 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Some regulation by Lake Absegami. Several measurements of water temperature, other than those published, were made during the year.

AVERAGE DISCHARGE.--8 years, 15.0 ft³/s, 22.12 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 260 ft³/s July 4, 1978, gage height, 5.87 ft; minimum, 5.6 ft³/s July 8, 1986, gage height, 3.47 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 65 ft³/s and maximum(*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 17	1615	*31	*4.63	No peak greater than base discharge.			

Minimum discharge, 5.6 ft³/s, July 8, gage height, 3.47 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.9	8.1	13	8.7	9.9	11	9.7	12	8.2	6.7	10	6.9
2	8.7	8.1	12	8.6	10	11	9.6	11	8.1	11	8.6	7.2
3	12	7.9	11	9.7	11	11	9.5	11	8.1	12	9.3	7.7
4	15	7.9	10	11	11	11	9.1	11	8.0	8.7	9.2	7.6
5	12	11	9.9	10	14	11	9.3	11	8.0	7.5	8.1	7.4
6	11	10	11	9.7	13	11	12	11	8.0	7.0	7.6	8.7
7	9.7	8.7	11	9.0	12	11	13	11	8.1	6.6	7.4	8.0
8	9.2	8.2	11	8.5	11	10	11	11	8.5	6.4	7.6	7.5
9	9.1	7.9	10	8.5	11	10	9.9	10	8.3	6.3	7.3	7.3
10	8.9	7.8	9.9	8.5	11	10	9.2	10	8.0	6.8	7.1	6.9
11	8.8	7.9	9.8	8.4	12	11	9.0	9.9	7.9	6.7	7.1	6.8
12	8.7	7.8	9.8	8.4	11	10	9.1	9.9	9.4	6.7	6.9	6.7
13	8.7	7.8	10	8.4	11	14	9.0	9.9	12	7.3	6.9	6.7
14	8.7	7.8	11	8.2	10	25	9.1	9.7	10	8.7	6.8	6.7
15	8.7	7.8	10	8.1	11	23	9.1	9.8	8.7	7.5	6.8	6.7
16	8.7	8.5	9.6	8.0	10	17	20	10	8.1	6.8	6.8	6.7
17	8.5	12	9.4	8.0	10	14	30	9.6	7.8	7.3	6.8	6.7
18	8.4	11	9.3	8.1	13	13	27	9.6	7.6	7.9	8.1	6.7
19	8.4	8.9	9.0	8.7	16	13	19	9.5	7.5	10	8.3	6.7
20	8.4	8.5	8.8	9.7	16	12	15	10	8.0	10	7.5	6.8
21	8.4	8.2	9.0	8.9	15	12	14	11	7.8	8.2	10	6.7
22	8.3	10	9.0	8.3	17	11	15	11	7.5	7.4	13	6.7
23	8.3	14	9.0	8.1	15	11	16	10	7.3	7.2	10	6.7
24	8.3	12	9.1	8.0	14	11	16	9.5	7.8	6.9	8.0	8.0
25	8.3	9.7	9.3	8.0	13	11	14	9.3	8.1	6.8	7.4	8.2
26	8.2	9.4	8.9	16	12	11	13	9.1	7.4	6.7	7.1	7.3
27	8.2	9.7	8.8	21	12	11	13	8.9	7.3	7.1	7.1	7.4
28	8.1	10	8.8	16	12	11	13	8.7	7.3	7.7	7.7	7.7
29	8.1	13	8.7	12	---	10	13	8.7	7.3	10	8.2	7.3
30	8.1	12	8.6	11	---	10	13	8.5	7.1	8.6	7.3	6.9
31	8.1	---	8.5	10	---	9.8	---	8.3	---	9.8	7.0	---
TOTAL	280.9	281.6	303.2	303.5	343.9	377.8	398.6	309.9	243.2	244.3	247.0	215.3
MEAN	9.06	9.39	9.78	9.79	12.3	12.2	13.3	10.0	8.11	7.88	7.97	7.18
MAX	15	14	13	21	17	25	30	12	12	12	13	8.7
MIN	8.1	7.8	8.5	8.0	9.9	9.8	9.0	8.3	7.1	6.3	6.8	6.7
CFSM	1.12	1.16	1.21	1.21	1.52	1.50	1.64	1.23	1.00	.97	.98	.89
IN.	1.29	1.29	1.39	1.39	1.58	1.73	1.83	1.42	1.12	1.12	1.13	.99

CAL YR 1985 TOTAL 3408.2 MEAN 9.34 MAX 22 MIN 6.3 CFSM 1.15 IN. 15.63
WTR YR 1986 TOTAL 3549.2 MEAN 9.72 MAX 30 MIN 6.3 CFSM 1.20 IN. 16.28

01410150 EAST BRANCH BASS RIVER NEAR NEW GRETNA, NJ--Continued

WATER-QUALITY RECORDS

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)
OCT 1985									
01...	1130	9.0	50	4.3	14.0	7.7	--	E1.8	20
JAN 1986									
28...	1040	16	67	4.2	2.0	12.6	93	<1.1	<20
MAR									
26...	1010	11	41	4.6	8.5	10.0	84	E0.3	<20
MAY									
28...	1030	8.8	35	4.2	15.0	7.6	76	E0.6	<20
JUL									
08...	1050	6.8	35	4.5	20.0	8.0	88	<1.1	<20
AUG									
05...	1100	8.4	36	4.4	18.0	6.3	66	<0.2	<20

DATE	STREP-TOCOCCI FECAL (MPN)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
OCT 1985									
01...	8	5	0.79	0.77	3.1	0.6	<1.0	6.0	6.0
JAN 1986									
28...	27	7	1.0	1.0	3.6	0.7	<1.0	10	5.8
MAR									
26...	130	4	0.76	0.63	3.1	1.1	<3.0	7.3	5.5
MAY									
28...	E240	3	0.5	0.5	2.7	0.6	<3.0	5.6	4.6
JUL									
08...	120	4	0.7	0.5	2.6	0.7	<1.0	5.2	5.3
AUG									
05...	130	3	0.49	0.48	2.7	0.7	<1.0	6.8	5.7

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
01...	<0.1	8.7	<0.003	0.10	0.10	0.3	0.4	0.02	5.1
JAN 1986									
28...	<0.1	6.5	<0.003	0.06	0.15	0.29	0.35	0.02	7.4
MAR									
26...	<0.1	6.4	0.008	0.05	0.21	E0.17	--	0.06	2.5
MAY									
28...	<0.1	6.6	<0.003	<0.05	0.05	0.25	--	<0.02	2.2
JUL									
08...	<0.1	8.2	0.006	<0.05	0.06	0.26	--	0.04	2.7
AUG									
05...	<0.1	8.2	0.006	<0.05	E0.05	0.21	--	0.03	3.4

01410150 EAST BRANCH BASS RIVER NEAR NEW GRETNA, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
OCT 1985 01...	1130	<0.5	120	<1	<10	20	2	20	31

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1985 01...	290	25	10	<0.1	16	<1	130	7

01410784 GREAT EGG HARBOR RIVER NEAR SICKLERVILLE, NJ

LOCATION.--Lat 39°44'02", long 74°57'05", Camden County, Hydrologic Unit 02040302, at bridge on Sicklerville-New Freedom Road (Spur 536), 1.5 mi northeast of Sicklerville, and 2.7 mi upstream of New Brooklyn Lake dam.

DRAINAGE AREA.--15.1 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1972 to current year.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
02...	0945	16	112	5.5	16.0	6.2	63	1.5	630	330
FEB 1986										
19...	1100	57	108	5.3	2.0	10.4	76	1.9	130	1600
APR										
03...	1030	7.2	99	6.6	11.5	7.8	71	2.7	8	920
JUN										
17...	0930	7.2	132	6.5	20.0	2.6	29	4.3	33	920
30...	1000	4.3	201	6.6	20.0	1.8	20	3.5	130	5400
AUG										
14...	1000	2.6	--	6.6	17.0	3.0	31	6.0	40	2400

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
02...	22	5.5	2.1	7.1	2.1	1.0	22	11	<0.1
FEB 1986									
19...	17	4.1	1.6	12	1.5	2.0	12	19	<0.1
APR									
03...	21	5.3	1.9	9.6	2.9	9.0	15	16	<0.1
JUN									
17...	21	5.4	1.9	13	4.1	14	13	9.9	<0.1
30...	31	7.8	2.8	21	5.8	30	15	23	<0.1
AUG									
14...	30	7.8	2.6	27	6.7	26	13	27	0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
02...	6.3	57	0.015	0.65	0.66	1.4	2.0	0.33	13
FEB 1986									
19...	3.9	55	0.011	0.51	0.31	0.62	1.1	0.18	17
APR									
03...	4.6	61	0.033	1.50	0.81	1.3	2.8	0.58	10
JUN									
17...	6.9	63	0.054	1.88	1.33	1.7	3.6	1.10	8.2
30...	3.9	97	0.059	2.99	1.50	2.3	5.3	1.63	5.4
AUG									
14...	4.4	100	0.033	4.00	0.07	E1.2	--	1.16	5.1

01410784 GREAT EGG HARBOR RIVER NEAR SICKLERVILLE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITRO-GEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INOR-GANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD)
OCT 1985 02...	0945	--	250	0.1	24	--	--	--	--	--	1
JUN 1986 17...	0930	<0.5	--	--	--	70	<1	<10	80	<1	--

DATE	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	COBALT, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, RECOV. FM BOT-TOM MA-TERIAL (UG/G)
OCT 1985 02...	--	40	<10	--	40	--	890	--	20	--	10
JUN 1986 17...	<10	--	--	7	--	660	--	<5	--	20	--

DATE	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY RECOV. FM BOT-TOM MA-TERIAL (UG/G AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SELE-NIUM, TOTAL IN BOT-TOM MA-TERIAL (UG/G)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PCN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
OCT 1985 02...	--	0.04	--	<10	--	<1	--	40	--	<1	<1.0
JUN 1986 17...	<0.1	--	3	--	<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 1985 02...	<0.1	2.0	78	3.2	8.0	<0.1	0.1	<0.1	<0.1	<0.1	<0.1
JUN 1986 17...	--	--	--	--	--	--	--	--	--	--	--

DATE	HEPTA-CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	MALA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	METH-OXY-CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARA-THION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRI-THION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PARA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PER-THANE IN BOT-TOM MA-TERIAL (UG/KG)	TOXA-PHENE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	TRI-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
OCT 1985 02...	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1
JUN 1986 17...	--	--	--	--	--	--	--	--	--	--	--

01410820 GREAT EGG HARBOR RIVER NEAR BLUE ANCHOR, NJ

LOCATION.--39°40'09", long 74°54'49", Camden County, Hydrologic Unit 02040302, downstream side of bridge on Broad Lane Road, 1.9 mi southwest of Blue Anchor, and 2.1 mi downstream from confluence of Fourmile Branch.

DRAINAGE AREA.--37.3 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1972 to current year.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
02...	0900	E90	112	4.5	16.5	5.3	54	0.7	330	790
FEB 1986										
19...	0950	E95	95	5.2	3.5	10.6	81	0.8	920	790
APR										
03...	0930	E42	72	6.6	12.0	8.1	75	1.8	9	350
JUN										
17...	0900	E30	73	6.4	20.0	6.2	69	2.2	49	1600
30...	0930	E18	106	6.7	19.0	6.7	72	1.4	>1600	>2400
AUG										
14...	0930	E16	88	6.6	16.5	7.9	81	1.2	23	490

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
02...	22	5.4	2.1	5.7	1.6	1.0	22	9.7	<0.1
FEB 1986									
19...	16	3.6	1.8	10	1.6	<1.0	12	16	<0.1
APR									
03...	16	3.5	1.7	7.2	2.2	7.0	15	9.2	<0.1
JUN									
17...	15	3.2	1.6	7.2	1.8	8.0	10	8.0	<0.1
30...	16	3.3	1.8	13	2.3	14	9.9	11	<0.1
AUG									
14...	14	2.9	1.6	9.7	2.1	14	7.4	8.9	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
02...	6.3	54	0.004	0.31	0.12	0.79	1.1	0.16	19
FEB 1986									
19...	4.3	--	0.011	0.74	0.34	0.64	1.4	0.13	14
APR									
03...	3.4	46	0.032	1.43	0.54	0.79	2.2	0.27	6.9
JUN									
17...	5.7	42	0.01	1.30	0.14	0.55	1.8	0.36	7.2
30...	4.5	54	0.011	2.31	0.06	0.57	2.9	0.50	3.0
AUG									
14...	5.0	46	<0.003	1.82	<0.05	E0.5	--	0.35	3.1

01410820 GREAT EGG HARBOR RIVER NEAR BLUE ANCHOR, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)
OCT 1985 02...	0900	<0.5	360	<1	<10	50	2	<10	5

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1985 02...	950	8	60	<0.1	15	<1	30	9

01411000 GREAT EGG HARBOR RIVER AT FOLSOM, NJ

LOCATION.--Lat 39°35'42", long 74°51'06", Atlantic County, Hydrologic Unit 02040302, on left bank 25 ft upstream from bridge on State Highway 54, 1.0 mi south of Folsom, and 2.0 mi upstream from Pennypot Stream.

DRAINAGE AREA.--57.1 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1925 to current year. Prior to October 1947, published as "Great Egg River at Folsom".

REVISED RECORDS.--WSP 1432: 1928(M), 1933. WDR NJ-83-1: Drainage area.

GAGE.--Water-stage recorder. Concrete control since Nov. 26, 1934. Datum of gage is 53.32 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 6, 1941, water-stage recorder at site 100 ft downstream at same datum. Mar. 6 to Oct. 5, 1941, nonrecording gage at site 145 ft downstream at datum 0.25 ft higher.

REMARKS.--Estimated daily discharges: Oct. 28 to Nov. 4, Feb. 28 to Mar. 12, May 6-28. Records good except those for periods of estimated discharge, which are fair. Several measurements of water-temperature were made during the year. Recording rain-gage and gage-height telemeter at station.

AVERAGE DISCHARGE.--61 years, 86.2 ft³/s, 20.50 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,440 ft³/s, Sept. 3, 1940, gage height, 9.09 ft; minimum, 15 ft³/s, Sept. 6, 1957, Aug. 28-30, 1966; minimum gage height, 3.42 ft, Aug. 28-30, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 305 ft³/s, Apr. 18, gage height, 5.29 ft; minimum, 23 ft³/s, Sept. 23.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	207	62	149	62	137	146	73	94	47	31	31	30
2	157	60	177	62	116	138	72	89	45	42	33	30
3	130	55	185	66	111	129	71	85	43	59	42	31
4	117	53	169	76	112	121	70	81	43	62	41	31
5	119	60	143	83	121	119	70	78	41	54	36	37
6	137	69	123	85	137	116	74	76	41	48	33	34
7	145	72	108	82	152	114	83	73	40	42	32	32
8	128	68	98	75	145	102	86	74	41	36	38	31
9	107	62	92	69	137	104	82	69	42	34	36	30
10	86	59	87	66	129	100	77	68	41	33	32	29
11	74	57	82	64	126	94	73	65	40	31	31	28
12	69	55	79	64	124	90	71	68	66	31	30	27
13	65	53	79	64	122	83	71	65	75	33	29	26
14	63	53	84	62	119	99	70	61	75	36	28	25
15	61	52	88	61	118	124	70	59	65	38	28	25
16	58	54	86	59	118	149	99	53	59	33	28	26
17	57	73	81	58	118	156	180	57	53	33	26	25
18	56	83	77	58	125	146	294	56	48	33	27	25
19	54	93	74	63	149	132	296	56	43	56	28	25
20	53	94	71	72	204	117	260	56	41	64	27	26
21	53	86	70	75	239	104	211	52	39	59	30	26
22	52	80	69	74	243	95	175	61	38	47	45	26
23	51	89	68	71	238	89	150	72	37	40	48	26
24	50	97	68	68	222	85	140	70	37	37	42	43
25	49	105	70	65	204	82	139	66	37	36	37	51
26	48	102	69	97	187	79	134	61	37	34	33	46
27	48	92	67	157	178	78	122	59	37	39	30	45
28	50	87	65	254	157	77	110	58	36	38	32	50
29	49	97	65	250	---	77	102	56	35	35	37	52
30	50	112	64	216	---	75	97	53	32	34	36	45
31	60	---	62	171	---	74	---	50	---	33	33	---
TOTAL	2503	2234	2869	2849	4288	3294	3622	2041	1354	1261	1039	983
MEAN	80.7	74.5	92.5	91.9	153	106	121	65.8	45.1	40.7	33.5	32.8
MAX	207	112	185	254	243	156	296	94	75	64	48	52
MIN	48	52	62	58	111	74	70	50	32	31	26	25
CFSM	1.41	1.30	1.62	1.61	2.68	1.86	2.12	1.15	.79	.71	.59	.57
IN.	1.63	1.46	1.87	1.86	2.79	2.15	2.36	1.33	.88	.82	.68	.64

CAL YR 1985 TOTAL 23896 MEAN 65.5 MAX 248 MIN 29 CFSM 1.15 IN. 15.57
WTR YR 1986 TOTAL 28337 MEAN 77.6 MAX 296 MIN 25 CFSM 1.36 IN. 18.46

01411110 GREAT EGG HARBOR RIVER AT WEYMOUTH, NJ

LOCATION.--Lat 39°30'50", long 74°46'47", Atlantic County, Hydrologic Unit 02040302, at bridge on U.S. Route 322 in Weymouth, 0.5 mi upstream from Deep Run, and 20.9 mi upstream from mouth.

DRAINAGE AREA.--154 mi².

WATER-QUALITY RECORDS

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1985										
10...	0930	E269	75	4.6	13.5	8.6	82	1.0	130	140
FEB 1986										
19...	0900	E339	74	4.8	4.5	11.2	87	0.5	17	220
APR										
03...	0900	E199	45	5.8	13.5	8.9	85	1.0	<2	34
JUN										
18...	0900	E151	55	6.5	19.0	8.0	86	1.3	7	>2400
30...	0900	E104	59	6.3	20.0	8.6	95	1.3	17	>2400
AUG										
14...	0900	E90	54	6.6	19.0	8.1	87	1.9	13	1600

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1985									
10...	12	2.6	1.4	4.6	1.3	<1.0	11	8.1	<0.1
FEB 1986									
19...	12	2.5	1.3	7.4	1.2	<1.0	13	11	<0.1
APR									
03...	10	2.2	1.2	4.6	1.4	<3.0	10	7.6	<0.1
JUN									
18...	10	2.1	1.1	5.0	1.2	3.0	8.8	8.2	<0.1
30...	10	2.1	1.2	6.1	1.3	5.0	7.7	8.2	<0.1
AUG									
14...	9	1.9	1.1	5.0	1.3	5.0	6.4	7.3	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1985									
10...	6.8	--	0.003	0.46	0.24	0.6	1.1	0.06	15
FEB 1986									
19...	5.6	--	0.005	0.58	0.27	0.44	1.0	0.04	8.4
APR									
03...	3.5	--	0.006	0.68	0.19	0.55	1.2	0.08	7.0
JUN									
18...	5.0	33	0.007	0.45	0.16	0.37	0.82	0.11	6.3
30...	5.7	35	<0.003	0.80	0.11	0.45	1.2	0.11	2.8
AUG									
14...	5.8	32	<0.003	0.54	0.05	E0.44	--	0.08	3.6

01411110 GREAT EGG HARBOR RIVER AT WEYMOUTH, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT 1985											
10...	0930	--	70	0.1	1.2	--	--	--	--	--	<1
10...	0930	<0.5	--	--	--	310	1	<10	30	<1	--

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT 1985											
10...	--	30	<10	--	80	--	370	--	<10	--	<10
10...	10	--	--	30	--	1000	--	8	--	40	--

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985											
10...	--	0.03	--	<10	--	<1	--	30	--	1	<1.0
10...	0.1	--	13	--	<1	--	160	--	4	--	--

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1985											
10...	<0.1	<1.0	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10...	--	--	--	--	--	--	--	--	--	--	--

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

01411300 TUCKAHOE RIVER AT HEAD OF RIVER, NJ

LOCATION.--Lat 39°18'25", long 74°49'15", Cape May County, Hydrologic Unit 02040302, on right bank at highway bridge on State Route 49, 0.2 mi upstream from McNeals Branch, 0.4 mi southeast of Head of River, and 3.7 mi west of Tuckahoe.

DRAINAGE AREA.--30.8 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1969 to current year.

REVISED RECORDS.--WDR NJ-78-1: 1975(M), 1976(M).

GAGE.--Water-stage recorder, wooden control, and downstream tidal crest-stage gage. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 17-19 and July 22 to Aug. 28. Records good above 25 ft³/s and fair below, except for periods of estimated daily discharge, Dec. 17-19 and July 22 to Aug. 28, which are poor. Occasional regulation by ponds above station. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--16 years, 44.3 ft³/s, 19.53 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 510 ft³/s, May 31, 1984, elevation, 6.17 ft; maximum elevation, 7.01 ft; minimum daily discharge, 1.3 ft³/s, Sept. 3, 13, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 129 ft³/s, Apr. 14, May 17, elevation, 4.77 ft; minimum daily, 12 ft³/s, Sept. 14, 15, 16, 17, 18, 19.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	20	58	24	42	46	33	46	23	15	42	14
2	33	21	62	28	44	43	32	43	21	18	38	15
3	40	24	50	27	48	42	32	41	20	32	50	15
4	54	21	40	30	53	42	32	39	18	29	37	15
5	52	45	36	33	74	41	32	38	19	22	30	15
6	41	33	37	32	74	40	40	37	19	18	27	15
7	35	29	37	30	70	39	46	35	19	16	24	15
8	31	26	34	28	66	36	42	35	19	15	21	15
9	28	24	32	26	58	37	38	35	18	14	17	15
10	26	23	31	24	54	36	34	35	18	14	16	14
11	24	22	30	24	53	36	33	33	17	14	15	13
12	24	22	29	24	51	35	32	33	17	14	15	13
13	23	21	32	24	45	51	31	33	19	14	14	13
14	23	21	34	24	41	108	30	31	19	13	13	12
15	23	20	32	24	40	124	31	31	19	13	13	12
16	23	22	30	22	39	100	70	31	17	13	13	12
17	23	32	30	23	41	78	123	30	16	14	13	12
18	22	31	29	23	55	63	120	29	16	17	14	12
19	21	27	29	25	73	54	101	28	16	33	14	12
20	21	24	29	32	74	50	80	34	16	37	13	13
21	22	23	28	32	70	46	68	48	16	32	20	13
22	21	30	26	29	75	43	64	47	16	21	39	13
23	21	40	26	27	76	40	67	43	15	18	34	13
24	21	37	26	26	73	39	66	38	17	15	25	26
25	20	31	26	25	67	38	60	34	20	14	18	32
26	20	30	27	41	59	37	54	31	18	15	16	31
27	20	28	27	100	53	37	51	30	16	21	16	24
28	19	29	26	112	49	36	49	28	15	27	19	23
29	19	39	25	77	---	35	47	26	16	25	16	21
30	19	44	25	58	---	34	47	25	15	43	15	18
31	20	---	25	47	---	33	---	23	---	52	15	---
TOTAL	834	839	1008	1101	1617	1519	1585	1070	530	658	672	486
MEAN	26.9	28.0	32.5	35.5	57.8	49.0	52.8	34.5	17.7	21.2	21.7	16.2
MAX	54	45	62	112	76	124	123	48	23	52	50	32
MIN	19	20	25	22	39	33	30	23	15	13	13	12

CAL YR 1985 TOTAL 9615 MEAN 26.3 MAX 126 MIN 10
WTR YR 1986 TOTAL 11919 MEAN 32.7 MAX 124 MIN 12

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 1986

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual Maximum		
					Date	Gage height (ft)	Discharge (ft^3/s)
		Hackensack River basin					
*01377475	Musquapsink Brook near Westwood, NJ	Lat 40°59'41", long 74°03'42", Bergen County, Hydrologic Unit 02030103, at bridge on Pascack Road in Washington Borough, 1.5 mi west of Westwood, and 5.3 mi above mouth. Datum of gage before 1973 was 69.67 ft, datum since is 68.07 ft. above National Geodetic Vertical Datum of 1929.	2.12	1965-86 (discontinued)	8-03-86	b1.20	470
01377490	Musquapsink Brook at Westwood, NJ	Lat 40°59'11", long 74°02'03", Bergen County, Hydrologic Unit 02030103, at footbridge at Bogert Pond, 8 ft upstream from dam near intersection of Mill Street and First Avenue in Westwood. Datum of gage is 47.67 ft above National Geodetic Vertical Datum of 1929.	6.53	1966-86 (discontinued)	11-17-85	1.17	170
*01378385	Tenakill Brook at Closter, NJ	Lat 40°58'29", long 73°58'06, Bergen County, Hydrologic Unit 02030103, at bridge on High Street in Closter, 0.7 mi upstream from mouth. Datum of gage is 23.85 ft above National Geodetic Vertical Datum of 1929.	8.56	1965-86	11-17-85	b1.86	190
*01378590	Metzler Brook at Englewood, NJ	Lat 40°54'29", long 73°59'13", Bergen County, Hydrologic Unit 02030103, at bridge on Lantana Avenue in Englewood, and 1.6 mi upstream from mouth. Datum of gage is 43.10 ft above National Geodetic Vertical Datum of 1929.	1.54	1965-86	8-03-86	b1.77	120
*01378615	Wolf Creek at Ridgefield, NJ	Lat 40°49'45", Long 74°00'14", Bergen County, Hydrologic Unit 02030103, at bridge on Clark Avenue in Ridgefield and 0.9 mi upstream from mouth. Datum of gage is 12.1 ft above National Geodetic Vertical Datum of 1929.	1.18	1965-86 (discontinued)	8-03-86	b4.49	350
		Passaic River basin					
01378690	Passaic River near Bernardsville, NJ	Lat 40°44'03", long 74°32'26", Somerset County, Hydrologic Unit 02030103, at bridge on U.S. Route 202, 1.8 mi northeast of Bernardsville, and 3.0 mi upstream from Great Brook. Datum of gage is 238.07 ft above National Geodetic Vertical Datum of 1929.	8.83	1968-76‡, 1977-86	8-03-86	b12.80	420

Annual maximum discharge at crest-stage partial-record stations during water year 1986--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual Maximum		
					Date	Gage height (ft)	Discharge (ft^3/s)
		Passaic River basin--Continued					
01379845	Rockaway River at Warren Street, at Dover, NJ	Lat 40°53'08", long 74°33'36", Morris County, Hydrologic Unit 02030103, on left bank, 100 ft upstream from bridge on Warren Street, in Dover, 4.0 mi west of Denville and 6 mi southeast of Lake Hopatcong. Datum of gage is 561.83 ft above National Geodetic Vertical Datum of 1929.	52.1	1981-86	4-17-86	4.43	730
01387880	Pond Brook at Oakland, NJ	Lat 41°01'36", long 74°14'04", Bergen County, Hydrologic Unit 02030103, at bridge on NJ Route 208 in Oakland, 0.2 mi upstream from former site at Franklin Avenue (prior to October 1975), 0.6 mi upstream from mouth, and 1.5 mi northwest of Frnaklin Lakes. Datum of gage is 276.97 ft above National Geodetic Vertical Datum of 1929.	6.76	1968-71, 1976-86	8-03-86	2.35	420
01389030	Preakness (Singac) Brook near Preakness, NJ	Lat 40°56'55", long 74°13'25", Passaic County, Hydrologic Unit 02030103, at bridge on Ratzer Road, 1.0 mi north of Preakness, and 2.0 mi upstream from Naachtpunkt Brook. Datum of gage is 230.8 ft above National Geodetic Vertical Datum of 1929.	3.24	1979-86	8-3-86	b4.58	725
01389534	Peckman River at Ozone Avenue, at Verona, NJ	Lat 40°50'42", long 74°14'09", Passaic County, Hydrologic Unit 02030103, at bridge on Ozone Avenue in Verona, 4.0 mi west of Clifton and 1.0 mi southwest of Cedar Grove Reservoir. Datum of gage is 300.08 ft above National Geodetic Vertical Datum of 1929.	4.45	1945, 1979-86	8-03-86	3.41	705
01389765	Molly Ann Brook at North Haledon, NJ	Lat 40°57'11", long 74°11'07", Passaic County, Hydrologic Unit 02030103, at bridge on Overlook Avenue in North Haldeon, 1.5 mi west of Hawthorne and 0.5 mi upstream from Oldham Pond Dam. Datum of gage is 209.68 ft above National Geodetic Vertical Datum of 1929.	3.89	1945, 1979-86	8-03-86	8.08	1,200
01389900	Fleischer Brook at Market Street, at Elmwood Park, NJ	Lat 40°53'57", long 74°06'54", Bergen County, Hydrologic Unit 02030103, at culvert on Market Street in Elmood Park (formerly East Paterson), and 2.0 mi upstream from mouth. Datum of gage is 35.31 ft above National Geodetic Vertical Datum of 1929.	1.37	1967-86	6-07-86	2.31	135
*01390450	Saddle River at Upper Saddle River, NJ	Lat 41°03'32", long 74°05'44", Bergen County, Hydrologic Unit 02030103, at culvert on Lake Street in Upper Saddle River, and 1.3 mi downstream from Pine Brook. Datum of gage is 186.11 ft above National Geodetic Vertical Datum of 1929.	10.9	1966-86	1-27-86	3.60	700
01390810	Hohokus Brook at Allendale, NJ	Lat 41°01'37", long 74°08'44", Bergen County, Hydrologic Unit 02030103, at bridge on Brookside Avenue in Allendale, and 0.2 mi downstream from Valentine Brook. Datum of gage is 277.46 ft above National Geodetic Vertical Datum of 1929.	9.11	1969-86	8-03-86	5.81	489

Annual maximum discharge at crest-stage partial-record stations during water year 1986--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual Maximum		
					Date	Gage height (ft)	Discharge (ft^3/s)
		Passaic River basin--Continued					
01390900	Ramsey Brook at Allendale, NJ	Lat 41°01'44", long 74°08'07", Bergen County, Hydrologic Unit 02030103, at bridge on Brookside Avenue in Allendale and 0.6 mi upstream from Hohokus Brook. Datum of gage is 270.79 ft above National Geodetic Vertical Datum of 1929.	2.55	1975-86	1-26-86	2.35	162
01392500	Second River at Belleville, NJ	Lat 40°47'17", long 74°10'19", Essex County, Hydrologic Unit 02030103, on Mill Street in Branch Brook Park at Belleville, 300 ft downstream from Franklin Avenue, and 1,100 ft downstream from Hendricks Pond dam. Datum of gage is 62.6 ft above National Geodetic Vertical Datum of 1929.	11.6	1937-64‡, 1963-86	7-30-86	8.21	4,500
		Raritan River basin					
01397500	Walnut Brook near Flemington, NJ	Lat 40°30'55", long 74°52'52", Hunterdon County, Hydrologic Unit 02030105, bank 1.2 mi northwest of Flemington, and 2.3 mi upstream from mouth. Datum of gage is 267.33 ft above National Geodetic Vertical Datum of 1929.	2.24	1936-61‡, 1963-86	4-16-86	2.83	385
01399700	Rockaway Creek at Whitehouse, NJ	Lat 40°37'55", long 74°44'11", Hunterdon County, Hydrologic Unit 02030105, on right bank at bridge on Lamington Road, 1.4 mi northeast of Whitehouse, and 1.8 mi upstream from mouth. Datum of gage is 99.64 ft. National Geodetic Vertical Datum of 1929.	37.1	1959-62, 1964-65, 1977-84‡, 1985-86	11-17-85	7.26	2,280
01399830	North Branch Raritan River at North Branch, NJ	Lat 40°36'00", long 74°40'27", Somerset County, Hydrologic Unit 02030105, on right bank 5 ft upstream from bridge on State Highway 28 in North Branch, 0.1 mi south of River Brook, and 3.6 mi upstream from confluence with South Branch Raritan River. Datum of gage is 56.94 ft above National Geodetic Vertical Datum of 1929.	174	1977-81‡, 1982-86	1-26-86	11.97	7,010
01400630	Millstone River at Southfield Road, near Grovers Mill, NJ	Lat 40°18'12", long 74°34'33", Mercer County, Hydrologic Unit 02030105, at bridge on Southfield Road, 0.2 mi southeast at Grovers Mill, 3.5 mi southwest of Cranbury, and 3.0 mi upstream of Bear Brook. Datum of gage is 62.63 ft above National Geodetic Vertical Datum of 1929.	41.0	1971,75, 1979-86	4-17-86	5.83	740
01400730	Millstone River at Plainsboro, NJ	Lat 40°19'27", long 74°36'51", Mercer County, Hydrologic Unit 02030105, 30 ft upstream from railroad bridge on AMTRAK (former Penn Central) mainline, 100 ft downstream from Cranbury Brook, 0.2 mi upstream from Bear Brook, and 0.9 mi southwest of Plainsboro. Datum of gage is 53.41 ft above National Geodetic Vertical Datum of 1929.	65.8	1965-75‡, 1976-86	4-17-86	5.44	1,430
01400775	Bear Brook at Route 535, near Locust Corner, NJ	Lat 40°16'41", long 74°34'39" Mercer County, Hydrologic Unit 02030105, at bridge on State Route 535, 0.9 mi southwest of Locust Corner, 2.0 mi east of Hightstown, and 4.2 mi above mouth. Datum of gage is 73.75 ft above National Geodetic Vertical Datum of 1929.	6.69	1971,75, 1979-86	4-16-86	b5.15	316

Annual maximum discharge at crest-stage partial-record stations during water year 1986--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual Maximum Date	Annual Maximum Gage height (ft)	Annual Maximum Discharge (ft^3/s)
		Raritan River basin--Continued					
01400795	Bear Brook at Route 571, near Grovers Mill, NJ	Lat 40°17'41", long, 74°35'34", Mercer County, Hydrologic Unit 02030105, at bridge on Route 571 (Princeton - Hightstown Road), 1.2 mi upstream of Grovers Mill Pond, 1.4 mi east of Princeton Junction, and 2.9 mi west of U.S. Route 130 and Hightstown.	9.28	1986	4-16-86	8.73	240
01400822	Little Bear Brook at Penns Neck, NJ	Lat 40°19'21", long 74°37'37", Mercer County, Hydrologic Unit 02030105, at downstream side of bridge on Alexander Road, 0.9 mi southeast of Penns Neck, 2.8 mi southwest of Plainsboro and 1.0 mi above mouth. Datum of gage is 53.96 ft above National Geodetic Vertical Datum of 1929.	1.84	1971,1975 1979-86	4-16-86	2.47	67
01400900	Stony Brook at Glenmoore, NJ	Lat 40°21'55", long 74°47'14", Mercer County, Hydrologic Unit 02030105, at highway bridge on Spur State Route 518, 200 ft east of tracks of CONRAIL, at Glenmoore, and 2.0 mi southwest of Hopewell. Datum of gage is 159.1 ft above National Geodetic Vertical Datum of 1929.	17.0	1957-86	4-16-86	b7.40	2,600
*01400930	Baldwin Creek at Pennington, NJ	Lat 40°20'18", long 74°47'50", Mercer County, Hydrologic Unit 02030105, at bridge on State Route 31, 0.8 mi north of Pennington, and 0.9 mi upstream from Baldwin Lake dam. Datum of gage is 161.69 ft above National Geodetic Vertical Datum of 1929.	1.99	1960-86	4-16-86	5.59	330
01400950	Hart Brook near Pennington, NJ	Lat 40°19'17", long 74°45'38", Mercer County, Hydrologic Unit 02030105, at culvert on Federal City Road, 1.6 mi upstream of mouth, and 1.7 mi southeast of Pennington. Datum of gage after July 1, 1975 is 163.32 ft above National Geodetic Vertical Datum of 1929.	0.57	1968-86	4-16-86	3.15	113
01401160	Duck Pond Run near Princeton Junction, NJ	Lat 40°17"47", long 74°38'47", Mercer County, Hydrologic Unit 02030105, on right bank upstream from bridge on Clarksville Road, 1.5 mi southwest of Princeton Junction, and 4.0 mi south of Princeton. Datum of gage is 72.50 ft above National Geodetic Vertical Datum of 1929.	1.35	1980-86	4-16-86	4.55	158
01401301	Millstone River at Carnegie Lake, at Princeton, NJ	Lat 40°22'11", long 74°37'15", Middlesex County, Hydrologic Unit 02030105, at right end of Carnegie Lake dam, 2.5 mi northeast of Princeton. Datum of gage is 50.00 ft above National Geodetic Vertical Datum of 1929.	159	1977-86,	4-17-86	4.82	5,690
01401595	Rock Brook near Blawenburg, NJ	Lat 40°25'47", long 74°41'05", Somerset County, Hydrologic Unit 02030105, at bridge on Burnt Hill Road, 0.7 mi upstream from mouth, 1.0 mi northeast of Blawenburg, and 2.8 mi northwest of Rocky Hill. Datum of gage is 63.45 ft above National Geodetic Vertical Datum of 1929.	9.03	1967-86	4-17-86	b4.82	1,200
01401600	Beden Brook near Rocky Hill, NJ	Lat 40°24'52", long 74°39'02", Somerset County, Hydrologic Unit 02030105, at bridge on U.S. Route 206, 0.7 mi upstream from Pike Run, 1.2 mi northwest of Rocky Hill, and 4.6 mi north of Princeton. Datum of gage is 38.09 ft above National Geodetic Vertical Datum of 1929.	27.6	1967-86	4-17-86	b9.89	3,200

Annual maximum discharge at crest-stage partial-record stations during water year 1986--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual Maximum		
					Date	Gage height (ft)	Discharge (ft^3/s)
		Raritan River basin--Continued					
01401870	Six Mile Run near Middlebush, NJ	Lat 40°28'12", long 74°32'42", Somerset County, Hydrologic Unit, 02030105, at bridge on South Middlebush Road, 1.6 mi upstream from mouth, and 2.1 mi south of Middlebush. Datum of gage is 39.91 ft above National Geodetic Vertical Datum of 1929.	10.7	1966-86	4-17-86	6.61	940
01403395	Blue Brook at Seeleys Pond Dam, near Berkeley Heights, NJ	Lat 40°40'02", long 74°24'13", Union County, Hydrologic Unit 02030105, on wall on right bank, upstream from Seeleys Pond spillway, 300 ft north of Scotch Plains, 1.0 mi west of Mountainside, and 4.5 mi southeast of Berkeley Heights. Datum of gage is 202.05 ft National Geodetic Vertical Datum of 1929.	3.59	1973, 1981-86	4-17-86	4.69	210
01403500	Green Brook at Plainfield, NJ	Lat 40°36'53", Long 74°25'55", Union County, Hydrologic Unit 02030105, on left bank 20 ft downstream from bridge on Sycamore Avenue in Plainfield and 1.0 mi upstream from Stony Brook. Datum of gage is 70.37 ft above National Geodetic Vertical Datum of 1929.	9.75	1938-84‡ 1985-86	4-17-86	3.38	773
		Navesink River basin					
01407290	Big Brook at Marlboro, NJ	Lat 40°19'10", long 74°12'52", Monmouth County, Hydrologic Unit 02030104, downstream side of bridge on Hillsdale Road, 1.7 mi east of Marlboro, and 3.0 mi northwest of Colts Neck.	6.42	1980-86	7-30-86	b7.62	840
		Manasquan River basin					
*01407830	Manasquan River near Georgia, NJ	Lat 40°12'36", long 74°16'41", Monmouth County, Hydrologic Unit 02040301, at culvert on Jacksons Mill Road near Georgia, and 0.5 mi upstream from Debois Creek. Datum of gage is 70.47 ft above National Geodetic Vertical Datum of 1929.	10.6	1969-86	1-26-86	10.62	470
*01408015	Mingamahone Brook at Farmingdale, NJ	Lat 40°11'38", long 74°09'42", Monmouth County, Hydrologic Unit 02040301, at bridge on Belmar Road in Farminodale, and 3.0 mi upstream from mouth. Datum of gage is 48.64 ft above National Geodetic Vertical Datum of 1929.	6.20	1969-86	7-30-86	5.16	177
*01408030	Manasquan River at Allenwood, NJ	Lat 40°08'35", long 74°07'03", Monmouth County, Hydrologic Unit 02040301, at bridge on Hospital Road at Allenwood, and 1.5 mi downstream from Mill Run. Datum of gage is 3.56 ft above National Geodetic Vertical Datum of 1929.	63.9	1969-86	4-17-86	b8.56	1,640
		Mullica River basin					
*01409375	Mullica River near Atco, NJ	Lat 39°47'08", long 74°51'38", Burlington County, Hydrologic Unit 02040301, on left bank of small lake 50 ft downstream from bridge on Jackson-Medford Road, 0.7 mi north of intersection of State Route 534 with Jackson-Medford Road, and 1.6 mi east of Atco. Datum of gage is 102.90 ft above National Geodetic Vertical Datum of 1929.	3.22	1975-86	4-17-86	b5.03	28

Annual maximum discharge at crest-stage partial-record stations during water year 1986--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual Maximum		
					Date	Gage height (ft)	Discharge (ft^3/s)
		Mullica River basin--Continued					
*01409403	Wildcat Branch at Chesilhurst, NJ	Lat 39°44'04", long 74°51'33", Camden County, Hydrologic Unit 02040301, at culvert on Old White Horse Pike, 0.5 mi east of Chesilhurst, and 0.9 mi north of Waterford Works. Datum of gage is 98.98 ft National Geodetic Vertical Datum of 1929.	1.03	1975-86	4-17-86	4.79	8.0
*01409409	Blue Anchor Brook near Blue Anchor, NJ	Lat 39°41'17", long 74°51'00", Camden County, Hydrologic Unit 02040302, at bridge on Spring Garden Road, 4,000 ft upstream of Route 30 highway bridge, 1.8 mi east of Blue Anchor and 2.2 mi upstream from mouth. Datum of gage is 84.94 ft above National Geodetic Vertical Datum of 1929.	3.01	1975-86	4-17-86	4.06	15
		Great Egg Harbor River basin					
01410810	Fourmile Branch at New Brooklyn, NJ	Lat 39°41'47", long 74°56'25", Camden County, Hydrologic Unit 02040302, on left bank 70 ft upstream from bridge on Malaga Road, 0.3 mi northeast of New Brooklyn, 0.3 mi upstream from mouth. Datum of gage is 101.04 ft above National Geodetic Vertical Datum of 1929.	7.74	1972-79‡, 1980-86	4-17-86	3.77	63

* Also a low-flow partial-record station.
** Also a tidal crest-stage station.
† Discharge not determined.
‡ Operated as a continuous-record gaging station.
b Downstream side of bridge.
c Not previously published.

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 1986

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		Hudson River basin				
01367620	Wallkill River at outflow of Lake Mohawk at Sparta, NJ	Lat 41°01'59", long 74°38'36", revised, Sussex County, Hydrologic Unit 02020007, at bridge on West Shore Trail, at Sparta, 200 ft downstream from outflow of Lake Mohawk, and 1.2 mi southwest of Sparta Station.	4.38	1979-86	7-16-86 9-09-86	1.5 1.3
01368950	Black Creek near Vernon, NJ	Lat 41°13'21", long 74°28'33", Sussex County, Hydrologic Unit 02020007, at bridge on Maple Grange Road, 0.6 mi upstream of confluence with Wawayanda Creek, 0.7 mi northwest of Maple Grange, and 1.7 mi northeast of Vernon.	17.3	1980-86	7-16-86 9-09-86	14 7.4
		Passaic River basin				
01379200	Dead River near Millington, NJ	Lat 40°38'56", long 74°31'26", Morris County, Hydrologic Unit 02030103, at bridge on King George Road (Spur State Route 527), 100 ft upstream from mouth, 2.0 mi south of Millington, and 4.2 mi south of Basking Ridge.	20.8	1962-67, 1973-75, 1986	9-10-86	6.3
01379750	Rockaway River at Dover, NJ	Lat 40°54'12, long 74°34'36", Morris County, Hydrologic Unit 2030103, 500 ft downstream from Main Street, at Carpenter Plant, 0.5 mi upstream from Green Pond Brook, and 1.4 mi northwest of Dover.	30.8	1963-66, 1983-86	4-02-86 6-03-86	58 32
01380300	Stony Brook near Rockaway Valley, NJ	Lat 40°56'25", long 74°25'39", Morris County, Hydrologic Unit 02030103, at bridge on Rockaway Valley Road, 0.2 mi downstream of unnamed tributary and 1.7 mi west of Taylortown.	8.43	1963-67, 1985-86	4-02-86 6-03-86	8.3 1.3
*01381200	Rockaway River at Pine Brook, NJ	Lat 40°51'42, long 74°20'53", Morris County, Hydrologic Unit 02030103,at bridge on U.S. Route 46, 0.9 mi west of Pine Brook, and 1.1 mi upstream of Whippany River.	136	1963-73, 1979-81, 1983-86	7-10-86 9-11-86	27 31
01381800	Whippany River near Pine Brook, NJ	Lat 40°50'42", long 74°20'51", Morris County, Hydrologic Unit 02030103, at bridge on Edwards Road, 0.3 mi upstream from mouth, and 1.3 mi southwest of Pine Brook.	68.5	1963-68, 1978, 1979-81, 1983-86	7-11-86 9-10-86	36 44
01382000	Passaic River at Two Bridges, NJ	Lat 40°53'50", long 74°16'23", Essex County, Hydrologic Unit 02030103, at bridge on Two Bridges Road, just above confluence with Pompton River, 0.3 mi northeast of Two Bridges and 2.6 mi northwest of Little Falls.	361	1963-68, 1983-84, 1986	7-10-86 9-11-86	149 196
01389000	Pompton River at Two Bridges, NJ	Lat 40°53'52", long 74°16'22", Essex County, Hydrologic Unit 02030103, at bridge on Two Bridges Road, just upstream of mouth, 0.3 mi northeast of Two Bridges and 2.6 mi northeast of Little Falls.	372	1963-68, 1984, 1986	7-17-86 9-12-86	161 104

Discharge measurements made at low-flow partial-record stations during water year 1986--Continued

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		Passaic River basin--Continued				
01389100	Singac Brook at Singac, NJ	Lat 40°53'57", long 74°15'57", Passaic County, Hydrologic Unit 02030103, at bridge on Fairfield Road, between U.S. Routes 80 and 46, 60 ft upstream from mouth, 1.2 mi northwest of Signac and 1.8 mi northwest of Little Falls.	11.1	1963-67, 1983-84, 1986	7-17-86 9-12-86	18 17
01389600	Peckman River at McBride Avenue at West Paterson, NJ	Lat 40°53'32", long 74°12'43", Passaic County, Hydrologic Unit 02030103, at bridge on McBride Avenue, 0.2 mi upstream from mouth, 0.7 mi west of West Paterson and 3.2 mi southwest of Paterson.	10.1	1963-67, 1983-84 1986	9-10-86	12
		Rahway River basin				
01396030	South Branch Rahway River at Colonia, NJ	Lat 40°34'57", long 74°18'04", Middlesex County, Hydrologic Unit 02030104, at bridge on Dover Road in Colonia, 0.7 mi northeast of Iselin, and 3.5 mi northeast of Metuchen.	9.41	1979-86	7-18-86 9-09-86	1.6 1.8
		Raritan River basin				
01396280	South Branch Raritan River at Middle Valley, NJ	Lat 40°45'40", long 74°49'18", Morris County, Hydrologic Unit 02030105, at bridge on Middle Valley Road, at Middle Valley, 200 ft northwest of West Mill Road (State Route 513), and 0.2 mi upstream of railroad bridge.	47.7	1963-67, 1973, 1975, 1982-83, 1985-86	7-21-86	38
01397290	Assiscong Creek at Bartles Corners, NJ	Lat 40°32'23", long 74°50'52" Hunterdon County, Hydrologic Unit 02030105, at bridge on River Road, 0.3 mi upstream from mouth, 1.5 mi north of Flemington, and 2.8 mi west of Three Bridges.	2.98	1981-86	7-17-86 9-08-86	.14 .88
01397800	Neshanic River near Flemington, NJ	Lat 40°28'46", long 74°51'29" Hunterdon County, Hydrologic Unit 02030105, at bridge on Kuhl Road, 200 ft downstream from confluence of First Neshanic River and Second Neshanic River, 1.4 mi south of Flemington, and 2.1 mi west of Reaville.	11.4	1981-86	7-17-86 9-08-86	.13 .18
01397900	Third Neshanic River near Ringoes, NJ	Lat 40°27'31", long 74°52'05", Hunterdon County, Hydrologic Unit 02030105, at bridge on Eitts Road, 2.0 mi upstream from mouth, 2.1 mi north of Ringoes, and 3.0 mi southwest of Reaville.	9.24	1981-86	7-17-86 9-10-86	.86 .36
01398052	Back Brook near Reaville, NJ	Lat 40°27'32", long 74°49'24", Hunterdon County, Hydrologic Unit 02030105, at bridge on Manners Road, 0.6 mi upstream from mouth, 0.8 mi northwest of Wertsville, and 1.5 mi southeast of Reaville.	11.4	1981-86	7-17-86 9-10-86	.04 .31
01398075	Pleasant Run at Centerville, NJ	Lat 40°32'17", long 74°45'17", Hunterdon County, Hydrologic Unit 02030105, at bridge on Old York Road in Centerville, 2.4 mi northwest of Neshanic Station, 2.5 mi upstream from mouth, and 2.7 mi northwest of Three Bridges.	8.11	1982-86	7-17-86 9-08-86	.38 2.50
01398260	North Branch Raritan River near Chester, NJ	Lat 40°46'16", long 74°37'34", Morris County, Hydrologic Unit 02030105, at bridge on State Route 24, 0.8 mi upstream from Burnett Brook, and 3.8 mi east of Chester.	7.57	1964-67, 1980-86	7-10-86	4.3

Discharge measurements made at low-flow partial-record stations during water year 1986--Continued

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		Raritan River basin--Continued				
01400540	Millstone River near Manalapan, NJ	Lat 40°15'44", long 74°25'13", Monmouth County, Hydrologic Unit 02030105, at bridge on State Route 33, 1.3 mi west of Manalapan, 5.5 mi east of Hightstown and 8.4 mi upstream of Rocky Brook.	7.37	1960-62 1964 1971-72	a5-02-85	4.2
*01400900	Stony Brook at Glenmore, NJ	Lat 40°21'55", long 74°47'14", Mercer County, Hydrologic Unit 02030105, at bridge on Pennington-Hopewell Road (State Route 518 Spur), at entrance to Hopewell Valley Country Club, 0.3 mi downstream of unnamed tributary and 2.6 mi north of Pennington.	17.0	1957-62, 1964, 1969-71, 1985-86	5-06-86 7-01-86	5.5 .22
*01400930	Baldwin Creek at Pennington, NJ	Lat 40°20'18", long 74°47'50", Mercer County, Hydrologic Unit 02030105 at bridge on U.S. Route 31, 450 ft downstream of unnamed tributary, 0.4 mi north of Pleasant Valley Road and 0.8 mi from Pennington.	1.99	1957-59, 1963, 1965-69, 1972, 1985-86	5-06-86 7-01-86	.84 .04
*01400947	Stony Brook at Pennington, NJ	Lat 40°19'50", long 74°46'05", Mercer County, Hydrologic Unit 02030105, 25 ft upstream from dam on Stony Brook at Old Mill Road, 1.3 mi east of Pennington and 1.4 mi downstream from Baldwin Creek.	26.7	1965-69, 1971-72, 1985-86	5-06-86 7-01-86	15.5 .22
01400970	Honey Branch near Rosedale, NJ	Lat 40°20'26", long 74°44'39", Mercer County, Hydrologic Unit 02030105, at bridge on Elm Ridge Road, 0.2 mi above mouth, and 1.2 mi west of Rosedale.	3.83	1957-59, 1968-73, 1975, 1985-86	5-06-86 7-01-86	1.3 .02
01401600	Beden Brook near Rocky Hill, NJ	Lat 40°24'52", long 74°39'02", Somerset County, Hydrologic Unit 02030105, at bridge on U.S. Route 206 and State Route 533, 0.7 mi upstream from Pike Run, 1.2 mi northwest of Rocky Hill and 4.6 mi north of Princeton.	27.6	1959-63, 1965-67, 1971-72, 1977, 1979-83, 1986	7-11-86	.59
01403330	Bound Brook at South Plainfield, NJ	Lat 40°34'43", long 74°24'45", Middlesex County, Hydrologic Unit 02030105, at bridge on Hamilton Road in South Plainfield, 0.5 mi upstream from Cedar Brook, and 1.9 mi east of New Market.	9.55	1979-86	7-17-86 9-09-86	.47 4.5
01403350	Cedar Brook at South Plainfield, NJ	Lat 40°34'57", long 74°24'53", Middlesex County, Hydrologic Unit 02030105, at bridge on Lakeview Road in South Plainfield, 0.4 mi upstream from mouth, and 2.0 mi east of Dunellen.	7.10	1982, 1984-86	7-18-86 9-09-86	0 .15
01404060	Ambrose Brook at Middlesex, NJ	Lat 40°34'03", long 74°31'02", Middlesex County, Hydrologic Unit 02030105, at dam, 900 ft upstream from bridge on State Route 18 in Middlesex, and 0.7 mi upstream from mouth.	13.9	1979-86	7-18-86 9-09-86	7.1 3.3
01404180	Mill Brook at Highland Park, NJ	Lat 40°30'23", long 74°25'51", Middlesex County, Hydrologic Unit 02030105, at bridge on Harrison Street in Highland Park, 0.7 mi upstream from mouth, and 0.9 mi northeast of New Brunswick.	1.41	1979-86	7-18-86 9-09-86	.19 .19
01405170	Milford Brook at Englishtown, NJ	Lat 40°18'02", long 74°20'07", Monmouth County, Hydrologic Unit 02030105, at bridge on Conmack Road, 0.6 mi upstream from McGellairds Brook, 1.2 mi east of Englishtown, and 2.0 mi southwest of Gordons Corner.	4.86	1982, 1984-86	7-17-86 9-15-86	1.1 1.3

Discharge measurements made at low-flow partial-record stations during water year 1986--Continued

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		Raritan River basin--Continued				
01405180	McGellairds Brook at Englishtown, NJ	Lat 40°18'06", long 74°21'26", Monmouth County, Hydrologic Unit 02030105, at bridge on Wilson Avenue in Englishtown, 0.8 mi downstream from Milford Brook, 1.0 mi southeast of Monmouth-Middlesex County line, and 5.5 mi northwest of Freehold.	14.9	1982, 1984-86	7-17-86 9-15-86	6.7 4.7
01405210	Pine Brook at Clarks Mills, NJ	Lat 40°18'58", long 74°19'51", Monmouth County, Hydrologic Unit 02030105, at bridge on Winthrop Drive, 1.3 mi east of Clarks Mills, 1.9 mi upstream of Matchaponix Brook, and 4.8 mi northwest of Freehold.	4.66	1982, 1984-86	7-17-86 9-15-86	2.0 1.7
01405240	Matchaponix Brook near Englishtown, NJ	Lat 40°19'21", long 74°21'35", Middlesex County, Hydrologic Unit 0203105, at bridge on Union Hill Road, 1.9 mi north of Englishtown, 2.8 mi northwest of Gordons Corner and 3.9 mi upstream of Barclay Brook.	29.1	1979-86	7-16-86 9-08-86	17 20
01405285	Barclay Brook near Englishtown, NJ	Lat 40°20'53", long 74°21'27", Middlesex County, Hydrologic Unit 02030105, at bridge on State Route 527 (Old Bridge-Englishtown Road), 0.6 mi south of Redshaw Corner, 0.9 mi upstream from mouth, and 3.5 mi north of Englishtown.	4.94	1979-86	7-16-86 9-08-86	.50 .71
01405300	Matchaponix Brook at Spotswood, NJ	Lat 40°22'53", long 74°22'51", Middlesex County, Hydrologic Unit 02030105, 0.9 mi southeast of Spotswood, 1.1 mi upstream from confluence with Manalapan Brook, and 2.3 mi southwest of Old Bridge.	43.9	1952-67‡, 1968-86b	7-16-86 9-08-86	18 23
01405335	Manalapan Brook near Manalapan, NJ	Lat 40°16'45", long 74°22'53", Monmouth County, Hydrologic Unit 02030105, at bridge on South Main Street, 1.8 mi northeast of Manalapan, 1.8 mi southwest of Englishtown, and 5.6 mi southeast of Jamesburg.	16.0	1979-86	7-16-86 9-08-86	8.4 6.9
01406000	Deep Run near Browntown, NJ	Lat 40°22'30", long 74°18'14", Middlesex County, Hydrologic Unit 02030105, upstream from highway bridge, 0.7 mi downstream from the Middlesex-Monmouth County line, and 1.8 mi south of Browntown.	8.07	1933-40‡, 1982, 1984-86	7-16-86 9-08-86	1.3 2.1
		East Creek basin				
01407055	East Creek at North Centerville, NJ	Lat 40°25'32", long 74°09'58", Monmouth County, Hydrologic Unit 02030104, at bridge on Middle Road, 0.2 mi west of intersection of Union Road and Middle Road at North Centerville, 2.0 mi upstream from mouth.	2.56	1969, 1986	9-24-86	1.2
01409390	Mullica River at Atsion, NJ	Lat 39°44'19", long 74°43'20", Burlington County, Hydrologic Unit 2040301, at abandoned bridge on Central Railroad of New Jersey in Atsion, 500 ft downstream from Wesickaman Creek, and 0.3 mi southeast of Atsion.	33.1	1975-86	7-18-86 9-10-86	14 11
01409410	Albertson Brook near Hammonton, NJ	Lat 39°41'41", long 74°45'21", Atlantic County, Hydrologic Unit 02040301, at bridge on U.S. Route 206, 3.1 mi downstream from confluence of Pump Branch and Blue Anchor Brook, 3.5 mi south of Atsion, and 5.2 mi northeast of Hammonton.	19.3	1975-86	7-18-86 9-10-86	17 12

Discharge measurements made at low-flow partial-record stations during water year 1986--Continued

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		East Creek basin--Continued				
01409411	Nescochague Creek at Pleasant Mills, NJ	Lat 39°38'28", long 74°39'43", Atlantic County, Hydrologic Unit 02040301, at bridge on sand road in Pleasant Mills, 0.2 mi upstream from Mullica River, and 0.6 mi west of Batsto.	43.7	1975-86	7-18-86 9-10-86	26 19
		Absecon Creek basin				
01410215	Clarks Mill Stream at Port Republic, NJ	Lat 39°30'23", long 74°30'21", Atlantic County, Hydrologic Unit 02040301, at bridge on State Route 575, 0.5 mi upstream of Mill Pond and 1.0 mi east of Port Republic.	8.61	1986	9-17-86	3.3
01410225	Morses Mill Stream at Port Republic, NJ	Lat 39°30'48", long 74°30'30", Atlantic County, Hydrologic Unit 02040301, at bridge on State Alternate Route 561 (Moss Mill Road), 0.6 mi upstream of Mill Pond and 1.2 mi southwest of Port Republic.	8.25	1986	9-17-86	1.7
c01410500	Absecon Creek at Absecon, NJ	Lat 39°25'45", long 74°31'16", Atlantic County, Hydrologic Unit 02040302, on right bank 30 ft downstream from Doughty Pond Dam of Atlantic City Water Department, 1 mi west of Absecon and 3.4 mi upstream from mouth.	16.6	1923-29‡ 1933-38‡ 1946-85‡ 1986	7-16-86 9-12-86	1.4 1.3
		Great Egg Harbor River basin				
01410784	Great Egg Harbor River near Sicklerville, NJ	Lat 39°44'02", long 74°57'05", Camden County, Hydrologic Unit 02040302, at bridge on Williamstown-New Freedom Road, 1.5 mi northeast of Sicklerville and 3.2 mi upstream from Fourmile Branch.	15.1	1971-81, 1985-86	a5-16-85 7-28-86	3.8 2.7
01411053	Hospitality Branch at Berryland, NJ	Lat 39°36'31", long 74°54'34", Gloucester County, Hydrologic Unit 02040302, at bridge on Piney Hollow Road, 0.3 mi southwest of Berryland, 1.2 mi upstream of Oak Branch and 3.4 mi west of Folsom.	20.0	1976-86	7-18-86 9-10-86	12 8.9
01411140	Deep Run at Weymouth, NJ	Lat 39°30'26", long 74°46'56", Atlantic County, Hydrologic Unit 02040302, at bridge on State Highway 559, 0.3 mi upstream of mouth, and 0.5 mi southwest of Weymouth.	20.0	1976-86	7-17-86 9-10-86	11 12
		Patcong Creek basin				
01411250	English Creek near Scullville, NJ	Lat 39°22'07", long 74°39'46", Atlantic Coutny, Hydrologic Unit 02040302, at bridge on School House Road, 1.8 mi upstream from State Route 559, at the community of English Creek, and 2.5 mi northwest of Scullville.	3.80	1986	9-17-86	1.6
01411305	Mill Branch near Northfield, NJ	Lat 39°23'23", long 74°35'37", Atlantic County, Hydrologic Unit 02040302, at bridge on County Route 684 (Spruce Rd), 0.4 mi downstream of Cedar Branch, 1.1 mi south of Cardiff and 4.5 mi northwest of Northfield.	7.47	1986	9-17-86	2.6

* Also a crest-stage partial-record station.
a Not previously published.
b Operated as a continuous-record gaging station by Duhernal Water Company. Recorder charts on file in U.S. Geological Survey, West Trenton Office.
‡ Operated as a continuous-record gaging station.
c Also a tidal crest-stage partial-record station.

Discharge measurements at miscellaneous sites

Measurements of streamflow at points other than gaging stations are given in the following table. Those that are measurements of base flow are designated by an asterisk (*).

Discharge measurements made at miscellaneous sites during water year 1986

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		Passaic River basin				
01379530 Canoe Brook	Passaic River	Lat 40°45'21", long 74°21'43", Essex County, Hydrologic Unit 02030103, just downstream of Commonwealth Water Company pumping station, 0.5 mi upstream of mouth, 2.0 mi north of Summit.	11.0	1933-60ac, 1961-85bc	10-28-85 12-10-85 1-10-86 3-04-86 4-15-86 5-19-86 7-21-86 8-16-86 9-16-86	0.57 0 2.9 0 2.5 4.7 0 0 0
01379620 Russia Brook	Rockaway River	Lat 41°01'31", long 74°32'10", Morris County, Hydrologic Unit 02030103, at bridge on Russia Road, 0.1 mi south of Russia and 1.7 mi upstream of Lake Swannanoa.	8.55	-	4-02-86	*15
01379650 Rockaway River	Rockaway River	Lat 40°59'38", long 74°31'24", Morris County, Hydrologic Unit 02030103, in Woodstock, 650 ft downstream of Oak Ridge Lake dam, 0.3 mi upstream of Longwood Lake and 2.0 mi south of Petersburg.	17.5	-	4-02-86	*30
01379690 Rockaway River	Passaic River	Lat 40°56'38", long 74°34'57", Morris County, Hydrologic Unit 02030103, 700 ft northwest of Berkshire Valley Road, 800 ft southeast of Taylor Road and 1.1 mi upstream of State Route 15.	23.1	1985	11-05-85 4-02-86 6-03-86	23 *45 *26
01379697 Rockaway River tributary No. 9	Rockaway River	Lat 40°56'21", long 74°35'13", Morris County, Hydrologic Unit 0203103, 300 ft upstream of mouth, 950 ft downstream of Taylor Road and 0.6 mi north of Berkshire Valley.	0.86	1985	6-03-86	*d.15
01379705 Rockway River tributary No. 1	Rockaway River	Lat 40°55'43", long 74°36'22", Morris County, Hydrologic Unit 02030103, at bridge on Berkshire Valley Road, 0.5 mi above mouth and 0.8 mi west of Berkshire Valley.	1.27	1966, 1981	6-03-86	*d.2
01379710 Rockaway River	Passaic River	Lat 40°54'44", long 74°36"08", Morris County, Hydrologic Unit 02030103, at former Wharton and Northern Railroad bridge, 1.0 mi upstream of Stephens Brook and 1.5 mi northwest of Wharton.	27.4	1966, 1981, 1985	4-02-86 6-03-86	*52 *27
01379730 Stephens Brook	Rockaway River	Lat 40°54'09", long 74°36'07", Morris County, Hydrologic Unit 02030103, at bridge on Dewey Avenue, 0.5 mi from the mouth and 1.0 mi northwest of Wharton.	1.73	-	6-03-86	*d1.5
01379740 Rockaway River	Passaic River	Lat 40°54'13", long 74°35'25", Morris County, Hydrologic Unit 02030103, at bridge on West Central Avenue, 0.2 mi upstream of Washington Pond and 2.1 mi northwest of Dover.	30.3	1985	11-05-85 4-02-86 6-03-86	38 *56 *36

Discharge measurements made at miscellaneous sites during water year 1986--Continued

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		Passaic River basin--Continued				
01379800 Green Pond Brook	Rockaway River	Lat 40°54'15", long 74°34'06", Morris County, Hydrologic Unit 02030103, at bridge on State Route 15, 50 ft west of Mount Pleasant Avenue at Dover and 0.2 mi from mouth.	15.1	1963-64, 1984-85	11-05-85 4-02-86 6-03-86	24 *22 *11
01379805 Rockaway River	Passaic River	Lat 40°53'29", long 74°34'10", Morris County, Hydrologic Unit 02030103, 0.5 mi upstream from Jackson Brook, 0.7 mi downstream of Green Pond Brook, and 2.0 mi east of Roxbury.	46.3	1983-85	4-02-86 6-03-86	*87 *45
01379807 Rockaway River	Passaic River	Lat 40°53'21", long 74°34'06", Morris County, Hydrologic Unit 02030103, at Waterworks Bridge on Rutgers Street at Dover, 0.6 mi upstream of Jackson Brook and 0.9 mi downstream of Green Pond Brook.	47.0	1983-84	6-04-86	*45
01379808 Rockaway River	Passaic River	Lat 40°53'17", long 74°34'09", Morris County, Hydrologic Unit 02030103, 0.2 mi upstream from Jackson Brook, 1.0 mi downstream of Green Pond Brook, and 2.1 mi east of Roxbury.	47.1	1983-85	8-22-84e 11-05-85 11-20-85 4-02-86 6-03-86	42 102 229 *89 *2.4
01379820 Jackson Brook	Rockaway River	Lat 40°53'09", long 74°34'07", Morris County, Hydrologic Unit 02030103, in Dover at mouth, 400 ft downstream of Spring Brook.	4.87	1985	4-02-86 6-03-86	*7.6 *4.0
01379855 Rockaway River	Passaic River	Lat 40°52'47", long 74°32'03", Morris County, Hydrologic Unit 02030103, at bridge on Dover-Rockaway Road, 800 ft north of Franklin Road, 0.8 mi downstream of bridge at East Blackwell Street and 1.3 mi southeast of Dover.	56.1	1985	11-05-85 4-02-86 6-03-86	254 *106 *54
01379870 Mill Brook	Rockaway River	Lat 40°52'39", long 74°31'31", Morris County, Hydrologic Unit 02030103, at mouth, 600 ft downstream of bridge on Palmer Road, 0.4 mi downstream of bridge at Dover-Rockaway Road and 1.7 mi southeast of Dover.	4.84	1985	4-02-86 6-03-86	*9.2 *4.4
01379875 Foxs Pond outlet stream	Rockaway River	Lat 40°53'53", long 74°30'58", Morris County, Hydrologic Unit 02030103, at Rockaway, 200 ft upstream of mouth, 600 ft east of State Route 513 and and 0.5 mi downstream of Foxs Pond.	1.39	1985	4-02-86 6-03-86	*1.6 *.37
01379880 Rockaway River	Passaic River	Lat 40°54'04", long 74°30'32", Morris County, Hydrologic Unit 02030103, at Conrail railroad bridge at Rockaway, 0.2 mi upstream of bridge at Beach Street and 0.4 mi downstream of Foxs Pond outlet stream.	64.3	1985	11-05-85 4-02-86	252 *110
01380000 Beaver Brook	Passaic River	Lat 40°57'38", long 74°27'43", Morris County, Hydrologic Unit 02030103, 50 ft below sluice gates at outlet of Splitrock Reservoir, 2 mi northeast of Hibernia, and 3.5 mi upstream of mouth of Hibernia Brook.	5.50	1925-46ac, 1976-85bc	10-17-85 12-02-85 1-17-86 3-31-86 6-23-86	*3.4 35 *2.4 *7.5 *1.8

Discharge measurements made at miscellaneous sites during water year 1986--Continued

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		Passaic River basin--Continued				
01380010 Beaver Brook	Rockaway River	Lat 40°56'49", long 74°27'38", Morris County, Hydrologic Unit 02030103, at bridge on Meriden-Lyonsville Road, 700 ft west of Meriden Road, 1.3 mi downstream of Splitrock Reservoir and 1.3 mi southwest of Lyonsville.	6.80	1985	4-02-86 6-03-86	*11 *1.9
01380015 Beaver Brook tributary No. 3	Beaver Brook	Lat 40°56'41", long 74°27'21", Morris County, Hydrologic Unit 02030103, at bridge on Meridan Road, 0.2 mi from mouth and 0.2 mi south of Meriden-Lyonsville Road, at Meriden.	.25	1985	4-02-86 6-03-86	*.38 *.09
01380020 Beaver Brook tributary No. 2	Beaver Brook	Lat 40°55'32", long 74°28'47", Morris County, Hydrologic Unit 02030103, at bridge on Ford Road, 0.2 mi upstream of mouth and 0.5 mi southeast of Beach Glen.	.41	1985	4-02-86 6-03-86	*3.5 *2.8
01380075 Hibernia Brook	Beaver Brook	Lat 40°55'50", long 74°29'14", Morris County, Hydrologic Unit 02030103, at bridge on Meriden-Lyonsville Road, at Beach Glen, 200 ft east of Green Pond Road and 0.5 mi upstream of mouth.	7.73	1985	4-02-86 6-03-86	*16 *2.6
01380090 White Meadow Brook	Beaver Brook	Lat 40°55'01", long 74°30'13", Morris County, Hydrologic 02030103, 100 ft west of Sanders Road, 0.7 mi downstream of White Meadow Lake and 0.8 mi north of Denville.	3.35	1985	4-02-86 6-03-86	*.77 *.90
01380095 Beaver Brook tributary No. 1	Beaver Brook	Lat 40°54'47", long 74°29'05", Morris County, Hydrologic Unit 02030103, at mouth, 100 ft upstream of Ford Road, 1.2 mi south of Beach Glen and 1.6 mi northwest of Denville.	.16	1985	4-02-86 6-03-86	*.17 *.03
01380100 Beaver Brook	Rockaway River	Lat 40°54'08", long 74°30'06", Morris County, Hydrologic Unit 02030103, at bridge on Gill Avenue, at Rockaway, and 0.2 mi upstream of the mouth.	22.7	1963 1985	4-02-86 6-03-86	*30 *7.9
01380110 Rockaway River	Passaic River	Lat 40°53'57", long 74°2911", Morris County, Hydrologic Unit 02030103, at bridge on Savage Avenue, 0.2 mi north of Route 46, 0.2 mi downstream of bridge on I-80 and 1.6 mi northwest of Denville.	87.6	1985	11-04-85 4-02-86 6-03-86	55 *157 *67
01380133 Rockaway River	Rockaway River	Lat 40°53'25", long 74°31'24", Morris County, Hydrologic Unit 02030103, in Woodstock, 650 ft downstream of Oak Ridge Lake dam, 0.3 mi upstream of Longwood Lake and 2.0 mi south of Petersburg.	17.5	-	4-02-86	*30
01380135 Rockaway River	Passaic River	Lat 40°53'38", long 74°28'19", Morris County, Hydrologic Unit 02030103, at bridge on Pocono Road, 0.8 mi east of Denville and 1.0 mi downstream of bridge on Savage Avenue.	96.7	1985	11-04-85 4-02-86 6-03-86 6-20-86	65 *162 *70 *90
01380140 Rockaway River	Rockaway River	Lat 40°54'13", long 74°27'50", Morris County, Hydrologic Unit 02030103, at bridge on Diamond Spring Road, 0.1 mi upstream of mouth, 0.6 mi downstream of Cedar Lake and 1.2 mi northeast of Denville.	1.80	1985	4-02-86 6-03-86	*1.8 *.23

Discharge measurements made at miscellaneous sites during water year 1986--Continued

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		Passaic River basin--Continued				
01380145 Rockaway River	Passaic River	Lat 40°54'38", long 74°27'11", Morris County, Hydrologic Unit 02030103, at bridge on Bush Road, 0.2 mi east of Diamond Spring Road, 1.4 mi downstream of bridge at Pocono Road and 1.8 mi northeast of Denville.	99.5	1985	11-05-85 4-22-86 6-03-86 6-20-86	360 *165 *86 *94
01380280 Stony Brook tributary	Stony Brook	Lat 40°57'04", long 74°24'48", Morris County, Hydrologic Unit 02030103, 0.1 mi northwest of Powerville Road, 0.8 mi downstream of Lake Juliet and 1.3 mi northwest of Taylortown.	2.49	1985	4-02-86 6-03-86	*1.6 *.43
01380290 Stony Brook	Rockaway River	Lat 40°56'24", long 74°25'08", Morris County, Hydrologic Unit 02030103, at bridge on Powerville Road, 300 ft downstream of unnamed pond, 600 ft north of Rockaway Valley Road and 1.2 mi west of Taylortown.	4.98	1985	4-02-86 6-03-86	*5.1 *.50
01380310 Dixon Pond Outlet Strem	Rockaway River	Lat 40°55'57", long 74°26'17", Morris County, Hydrologic Unit 02030103, at bridge on Rockaway Valley Road, 800 ft upstream of mouth and 0.9 mi north of Powerville.	3.05	1985	4-02-86 6-03-86	*4.5 *.37
01380320 Stony Brook at Boonton	Rockaway River	Lat 40°55'42" long 74°26'18", Morris County, Hydrologic Unit 02030103, at bridge on Valley Road, 0.4 mi from the mouth and 0.8 mi northwest of Powerville.	12.7	1985	11-05-86 4-01-86 6-03-86	5.6 *14 *2.6
01380325 Rockaway River tributary No. 7	Rockaway River	Lat 40°55'23", long 74°26'17", Morris County, Hydrologic Unit 02030103, at west end of Rockaway Drive, 100 ft downstream of unnamed pond and 0.5 mi west of Powerville.	.44	1985	4-02-86 6-03-86	*.08 *0
01380330 Griffith Pond outlet stream	Rockaway River	Lat 40°55'12", long 74°25'35", Morris County, Hydrologic Unit 02030103, at bridge on Rockaway Drive at Powerville 300 ft upstream of the mouth and 1.2 mi northwest of Boonton.	.82	1985	4-02-86 6-03-86	*1.2 *.20
01380335 Rockaway River	Passaic River	Lat 40°54'53", long 74°25'40", Morris County, Hydrologic Unit 02030103,at bridge on North Main Street, 0.4 mi downstream of bridge on Powerville Road and 0.4 mi south of Powerville.	115	1985	11-05-85 4-02-86 6-03-86 6-20-86	364 *174 *84 *91
01380340 Hood Dam outlet stream	Rockaway River	Lat40°54'47", long 74°25'31", Morris County, Hydrologic Unit 02030103, 100 ft upstream of mouth, 200 ft southwest of North Main Street and 0.6 mi south of Powerville and 0.4 mi south of Powerville.	.18	1985	4-02-86 6-03-86	*.13 *.05
01380350 Rockaway River tributary No. 1	Rockaway River	Lat 40°53'39", long 74°25'33", Morris County, Hydrologic Unit 02030103, 700 ft from the mouth, 0.1 mi downstream of Powerville Road and 0.7 mi south of Powerville.	.79	1985	4-02-86 6-03-86	*1.4 *.22

Discharge measurements made at miscellaneous sites during water year 1986--Continued

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		Passaic River basin--Continued				
01389882 Dundee Canal	Passaic River	Lat 40°52'45", long 74°07'21", Passaic County, Hydrologic Unit 02030103, at bridge on Ackerman Avenue at Clifton, 0.4 mi downstream from Dundee Dam and 1.2 mi upstream from Passaic Street Bridge.	-	-	8-13-86	*0
01389895 Passaic River	Newark Bay	Lat 40°52'45", long 74°07'14", Bergen County, Hydrologic Unit 02030103, at bridge on Outwater Lane at Garfield, 0.4 mi downstream from Dundee Dam and 1.2 mi upstream from bridge on Passaic Street.	806	1970-71	8-13-86	557
01391200 Saddle River	Passaic River	Lat 40°56'30", long 74°05'36", Bergen County, Hydrologic Unit 02030103, at bridge on Century Road, at Fair Lawn, and 0.8 mi downstream of Hohokus Brook.	45.2	1978, 1981, 1983	7-10-86	*34
		Rahway River basin				
01393950 West Branch Rahway River	Rahway River	Lat 40°47'02", long 74°16'27", Essex County, Hydrologic Unit 02030104, at bridge on Indian Avenue, at West Orange, 1.1 mi downstream from bridge at Interstate 280 and 1.25 mi upstream from Orange Reservoir.	2.52	1983, 1985	e4-25-85 4-16-86 7-11-86	*34 67 *.78
01394900 Rahway River	Arthur Kill	Lat 40°37'39", long 74°17'10", Union County, Hydrologic Unit 02030104, at bridge on Valley Road in Clark, 200 ft downstream of unnamed pond and 1.5 mi north of Rahway.	40.5	1985	10-22-85 11-26-85	*4.8 28
01394990 Rahway River	Arthur Kill	Lat 40°37'07", long 74°17'24", Union County, Hydrologic Unit 02030104, at Rahway downstream of dam at Rahway waterworks, 800 ft north of Westfield Ave and 0.4 mi upstream of bridge at St. Georges Avenue.	40.9	1985	10-23-85 11-26-85	*.61 20
		Raritan River basin				
01396535 South Branch Raritan River	Raritan River	Lat 40°39'49", long 74°53'52", Unterdon County, Hydrologic Unit 02030105, at bridge on Arch Street in High Bridge, 0.9 mi northeast of Mariannes Corner and 4.3 mi northeast of Norton.	68.8	1978-81, 1983, 1985	e11-06-84 7-11-86	74 46
01396588 Spruce Run	South Branch Raritan River	Lat 40°40'41", long 74°55'06", Hunterdon County, Hydrologic Unit 02030105, 800 ft downstream of Rocky Run, 0.3 mi upstream of bridge on Van Syckel Road and 1.6 mi southeast of Glen Gardner.	15.5	1979, 1981-83, 1985	e11-07-84 7-11-86	7.0 5.9
01397400 South Branch	Raritan River	Lat 40°31'01", long 74°48'10", Hunterdon County, Hydrologic Unit 02030105, at bridge on Main Street in Three Bridges, 1.4 mi downstream from Bushkill Brook, and 3.0 mi northeast of Flemington.	181	1976 1978-81, 1983, 1985	e11-13-84 7-22-86	92 157
01400540 Millstone River	Raritan River	Lat 40°15'44", long 74°25'13", Monmouth County, Hydrologic Unit 02030105, at bridge on State Route 33, 1.3 mi west of Manalapan, 5.5 mi east of Hightstown and 8.4 mi upstream of Rocky Brook.	7.37	1960-62, 1964, 1971-72	7-21-86	5.1

Discharge measurements made at miscellaneous sites during water year 1986--Continued

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		Raritan River basin--Continued				
40210607435500000 Bee Brook	Raritan River	Lat 40°21'06", long 74°35'50", Mercer County, Hydrologic Unit 02030105, 0.6 mi northwest of Schalks, 1.2 mi upstream from mouth, and 1.4 mi north of Plainsboro.	-	-	10-30-85	*.43
40210107435480000 Bee Brook	Raritan River	Lat 40°21'01", long 74°35'48", Mercer County, Hydrologic Unit 02030105, 0.6 mi northwest of Schalks, 1.1 mi upstream from mouth, and 1.3 mi north of Plainsboro.	-	-	10-30-85	*.04
40205807435490000 Bee Brook tributary No. 3	Raritan River	Lat 40°20'58", long 74°35'48", Mercer County, Hydrologic Unit 02030105, at mouth, 0.6 mi northwest of Schalks, 1.0 mi upstream of Devils Brook, and 1.2 mi north of Plainsboro.	-	-	10-30-85	*.04
40205607435470000 Bee Brook tributary No. 2	Raritan River	Lat 40°20'58", long 74°35'47", Mercer County, Hydrologic Unit 02030105, at mouth, 0.6 mi northwest of Schalks and 1.2 mi north of Plainsboro.	-	-	d10-30-85	*.02
40205607435490000 Bee Brook	Raritan River	Lat 40°20'56", long 74°35'49", Mercer County, Hydrologic Unit 02030105, 0.60 mi northwest of Schalks, 1.0 mi upstream of mouth and 1.2 mi north of Plainsboro.	-	-	10-30-85	*.39
40204807435550000 Bee Brook tributary No. 1	Raritan River	Lat 40°20'48", long 74°35'55", Mercer County, Hydrologic Unit 02030105, 15 ft upstream of mouth, 0.55 mi west of Schalks, and 1.0 mi north of Plainsboro.	-	-	10-30-85	*.36
40204707435470000 Bee Brook	Raritan River	Lat 40°20'47", long 74°35'57", Mercer County, Hydrologic Unit 02030105, 0.6 mi west of Schalks, 0.7 mi upstream of mouth, and 0.8 mi north of Plainsboro.	-	-	10-30-85	*.52
01400880 Stony Brook	Millstone River	Lat 40°22'53", long 74°48'11", Mercer County, Hydrologic Unit 02030105, downstream of unnamed tributary, 0.8 mi and 1.4 mi east of Woodsville.	2.12	1985	5-06-86 7-01-86	*6.0 *0
01400910 Stony Brook Branch	Stony Brook	Lat 40°21'07", long 74°47'04", Mercer County, Hydrologic Unit 02030105, 1,000 ft upstream from Titus Mill Road, at mouth of Pennington and 1.8 mi east of State Route 31.	1.46	1985	5-06-86 7-01-86	*1.7 *.19
01400920 Stony Brook	Millstone River	Lat 40°20'21", long 74°46'42", Mercer County, Hydrologic Unit 02030105, 250 ft upstream from confluence with Baldwin Creek in, Hopewell Township, and 1.1 mi northwest of intersection of East Delaware Avenue and Main Street in Pennington Borough.	23.5	1963, 1971-72, 1985	5-06-86 7-01-86	*4.6 *4.9
01400923 Baldwin Creek	Stony Brook	Lat 40°20'26", long 74°48'38", Mercer County, Hydrologic Unit 02030105, at bridge on unimproved road, 0.1 mi north of Yard Road, 0.2 mi upstream of unnamed tributary and 1.3 mi northwest of Pennington.	.58	1985	5-06-86 7-01-86	*.34 *.03

Discharge measurements made at miscellaneous sites during water year 1986--Continued

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		Raritan River basin--Continued				
01400925 Baldwin Creek	Stony Brook	Lat 40°21'21", long 74°48'07", Mercer County, Hydrologic Unit 02030105, at bridge on Yard Road, 200 ft upstream of unnamed tributary, 0.3 mi west of route 31 and 1.0 north of Pennington.	1.07	1985	5-06-86 7-19-86	*.53 *.04
01400927 Baldwin Creek tributary	Baldwin Creek	Lat 40°20'15", long 74°47'56", Mercer County, Hydrologic Unit 02030105, 450 ft upstream of bridge on State Route 31, 0.2 mi south of Yard Road, 0.4 mi north of Pleasant Valley Road and 0.8 mi from Pennington.	.43	1985	5-06-86 7-01-86	*.23 *0
01400932 Baldwin Creek	Stony Creek	Lat 40°20'26", long 074°46'48", Mercer County, Hydrologic Unit 02030105, just downstream from earthfill dam, 1,000 ft upstream from mouth, and 1.1 mi northeast of Pennington.	2.52	1962-70c, 1985	5-06-86 7-01-86	*.95 *0
01400936 Lewis Brook	Stony Brook	Lat 40°19'53", long 74°47'32", Mercer County, Hydrologic Unit 02030105, at bridge on North Main Street, 0.2 mi north of Delaware Avenue at Brookside Avenue, one street south of Franklin Avenue at Pennington and 0.6 mi upstream of mouth.	0.32	1985	5-06-86 7-01-86	*0.28 *.07
01400938 Lewis Brook	Stony Brook	Lat 40°20'02", long 74°46'58", Mercer County, Hydrologic Unit 02030105, 200 ft upstream from mouth, 0.3 mi northeast of intersection of King George and Mount Rose Road in Pennington.	.53	1971-72, 1985	5-06-86 7-01-86	*.30 *.07
01400939 Lewis Brook tributary	Lewis Brook	Lat 40°20°00", long 74°46'57", Mercer County, Hydrologic Unit 02030105, 100 ft upstream from mouth and 0.3 mi northeast of intersection of King George Road and Mount Rose Road in Pennington.	.08	1971-72, 1985	5-06-86 7-01-86	*.10 *0
01400940 Stony Brook	Millstone River	Lat 40°19'55", long 74°46'39", Mercer County, Hydrologic Unit 02030105, at bridge on Mt. Rose Road (Pennington-Rocky Hill Road), 100 ft east of King George Road, 100 ft upstream of unnamed tributary and 1.2 mi east of Pennington.	25.1	1985	5-06-86 7-01-86	*15 *.22
01400941 Stony Brook tributary No. 4	Stony Brook	Lat 40°19'52", long 74°46'42", Mercer County, Hydrologic Unit 02030105, 100 ft upstream from mouth near Mount Rose Road at Pennington, 0.2 mi downstream from Federal City Road.	.32	1971-72, 1985	5-06-86 7-01-86	*.09 *0
01400942 Stony Brook tributary No. 5	Stony Brook	Lat 40°18'49", long 74°47'09", Mercer County, Hydrologic Unit 02030105, at bridge on Pennington-Lawrenceville Road at Baldwins Corner, 1.0 mi south of Pennington and 1.5 mi upstream from mouth	.81	1985	5-06-86 7-01-86	*.29 *0
01400944 Stony Brook tributary No. 5	Stony Brook	Lat 40°19'14", long 74°46'45", Mercer County, Hydrologic Unit 02030105, at north end of Oak Street, 400 ft upstream of unnamed lake and 0.75 mi south of Pennington.	0.17	1985	5-06-86 7-01-86	*.22 *.02
01400945 Stony Brook tributary No. 5	Stony Brook	Lat 40°19'43", long 74°46'12", Mercer County, Hydrologic Unit 02030105, at bridge on Federal City Road, east of Pennington, and 0.1 mi upstream from mouth.	1.62	1985	5-06-86 7-01-86	*.75 *.007

Discharge measurements made at miscellaneous sites during water year 1986--Continued

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		Raritan River basin--Continued				
01400950 Hart Brook	Stony Brook	Lat 40°19'17", long 74°45'38" , Mercer County, Hydrologic Unit 02030105, at culvert on Federal City Road, 1.0 mi upstream from mouth and 1.7 mi southeast of Pennington.	0.57	1985	5-06-86 7-01-86	*.30 *0
01400951 Hart Brook	Stony Brook	Lat 40°19'52", long 74°45'23", Mercer County, Hydrologic Unit 02030105, 0.2 mi upstream from Stony Brook, 0.6 mi downstream from Blackwells Road, 1.9 mi east of Pennington, and 1.9 mi southwest of Rosedale.	1.25	1965, 1985	5-06-86 7-01-86	*.44 *0
01400952 Stony Brook tributary No. 2	Stony Brook	Lat 40°20'08", long 74°44'48", Mercer County, Hydrologic Unit 02030105, 0.3 mi upstream of Honey Branch, 1.3 mi west of Rosedale, and 2.4 mi east of Pennington.	0.49	1965, 1985	5-06-86 7-01-86	*.20 *0
01400953 Honey Branch	Stony Brook	Lat 40°21'27", long 74°45'58", Mercer County, Hydrologic Unit 02030105, at bridge on Wargo Road, 0.5 mi upstream of Pennington-Rocky Hill Road and 8 mi north of Centerville.	0.70	1985	5-06-86 7-01-86	*.13 *0
01400960 Honey Branch	Stony Brook	Lat 40°21'17", long 74°45'29", Mercer County, Hydrologic Unit 02030105, at bridge on Mount Rose Road, 0.6 mi northeast of Centerville, 1.4 mi southeast of Mount Rose and 2.5 mi northeast of Pennington.	1.28	1985	5-06-86 7-01-86	*.17 *0
01400962 Honey Branch tributary	Honey Branch	Lat 40"21'22", long 74"45'22", Mercer County, Hydrologic Unit 02030105, at bridge on Bayberry Road (formerly Van Kirk Road) 0.1 above mouth, and 2.7 mi northeast of Pennington.	0.58	1965, 1968-69, 1985	5-06-86 7-01-86	*.19 *.12
01400974 Stony Brook	Millstone River	Lat 40°20'35", long 74°43'33", Mercer County, Hydrologic Unit 02030105, at bridge on Carter Road in Rosedale, 1.2 mi downstream from Honey Branch.	34.2	1965, 1971-72 1985	5-06-86 7-01-86	*17 *.26
01400978 Cleveland Brook	Stony Brook	Lat 40°21'24", long 74°45'51", Mercer County, Hydrologic Unit 0230105, 800 ft upstream from Cleveland Brook Road, 1.4 mi north of Rosedale and 1.8 mi upstream of mouth	0.41	1985	5-06-86 7-01-86	*.29 *0
01400985 Stony Brook	Millstone River	Lat 40°21'09", long 74°42'39", Mercer County, Hydrologic Unit 02030105, at bridge on Province Line Road, 0.65 mi downstream of Cleveland Brook and 1.2 mi northeast of Rosedale.	36.2	1985	5-06-86 7-01-86	*18 *.23
01401440 Millstone River	Raritan River	Lat 40°22'24", long 74°37'15", Middlesex County, Hydrologic Unit 02030105, at bridge on State Route 27 (Lincoln Highway) in Kingston, 0.2 mi downstream from the dam at Carnegie Lake and 3.0 mi northwest of Plainsboro.	172	1983 1985	e4-25-85 7-10-86	*34 21

Discharge measurements made at miscellaneous sites during water year 1986--Continued

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		Raritan River basin--Continued				
01402540 Millstone River	Raritan River	Lat 40°31'47", long 74°35'19", Somerset County, Hydrologic Unit 02030105, at bridge on Wilhouski Street in Weston, 0.8 mi southwest of Alma White College, and 1.9 mi north of Millstone.	271	1979-81, 1985	7-23-86	*140
01403200 Middle Brook	Raritan River	Lat 40°33'38", long 74°32'56", Middlesex County, Hydrologic Unit 02030105, at bridge on Lincoln Boulevard (old State Route 28), at Bound Brook, 0.5 mi above mouth.	17.2	1955, 1975, 1982-83, 1985	3-12-86	18
		Manasquan River basin				
01405435 Cedar Brook	Manalapan Brook	Lat 40°23'26", long 74°23'31" Middlesex County, Hydrologic Unit 02030105, 50 ft upstream from mouth in Spotswood and 4.3 mi south of South River.	3.85	1943, 1949-50, 1957-86f,	4-02-86 7-16-86 8-29-86	*8.6 20 28
01407997 Marsh Bog Brook	Manasquan River	Lat 40°10'01", long 74°09'33", Monmouth County, Hydrologic Unit 02040301, at bridge on Yellow Brook Road at Squankum, 0.2 mi upstream from mouth.	4.91	1966, 1972-74, 1978-82, 1985	e5-02-85 7-21-86	*1.2 1.1
		Mullica River basin				
01409387 Mullica River	Great Bay	Lat 39°44'25", long 74°43'37", Burlington County, Hydrologic Unit 02040301, at bridge on U.S. Route 206 in Atsion, at outlet of Atsion Lake and 0.2 mi upstream from Wesickman Creek.	26.7	1980-81, 1985	e5-06-85 7-16-86	57 13
01409416 Hammonton Creek	Mullica River	Lat 39°38'02", long 74°43'05", Atlantic County, Hydrologic Unit 02040301, at bridge on Chestnut Road, 0.4 mi south of Wescoatville and 1.6 mi upstream from Norton Branch.	9.57	1974 1978-81, 1983, 1985	e5-15-85 7-29-86	*5.1 6.5
		Great Egg Harbor River basin				
01410820 Great Egg Harbor River	Great Egg Harbor Bay	Lat 39°40'09", long 74°54'49", Camden County, Hydrologic Unit 02040302, at bridge on Broad Lane Road, 2.1 mi downstream from confluence of Fourmile Branch and 1.9 mi southwest of Blue Anchor.	37.2	1972-80c, 1985	e5-16-85 7-24-86	*23 23
01411110 Great Egg Harbor River	Great Egg Harbor Bay	Lat 39°30'50", long 74°46'47", Atlantic County, Hydrologic Unit 02040302, at bridge on U.S. Route 322 in Weymouth, 0.5 mi upstream from Deep Run and 20.9 mi upstream from mouth.	154	1978-81 1985	e5-15-85 7-24-86	*2.0 93

a Discharge records published in reports of the New Jersey Department of Environmental Protection.
b Discharge records on file in U.S. Geological Survey Office, West Trenton, New Jersey.
c Operated as continuous-recording gaging station.
d Estimated.
e Not previously published.
f Operated as continuous gaging station by Duhernal Water Company.

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 elevations above National Geodetic Vertical Datum of 1929 unless otherwise noted. Only the maximum elevation is given. Information on some other high elevations 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 elevation has been determined.

Annual maximum elevation at tidal crest-stage partial-record stations during water year 1986

Station No.	Station name	Location	Period of record	Annual Maximum	
				Date	Elevation NGVD* (ft)
01406700	Raritan River at Perth Amboy, NJ	Lat 40°30'31", long 74°17'30", Middlesex County, Hydrologic Unit 02030104, on downstream left bank, 20 ft downstream of Victory Bridge on State Route 35 in Perth Amboy, 0.5 mi downstream from Garden State Parkway bridge, and 1.5 mi upstream from mouth of Raritan River.	1967-70‡, 1980-86	11-05-85	6.38
01407030	Luppatatong Creek at Keyport, NJ	Lat 40°26'08", long 74°12'27", Monmouth County, Hydrologic Unit 02030104, on left bank upstream side of Front Street bridge in Keyport, 0.1 mi upstream from mouth, and 2.0 mi northwest of Matawan.	1980-86	11-05-85	6.42
01408200	Barnegat Bay at Bay Shore, NJ	Lat 39°56'56", long 74°06'52", Ocean County, Hydrologic Unit 02040301, at west end of State Route 37 bridge over Barnegat Bay at Bay Shore, 2.2 mi west of Seaside Heights, and 4.5 mi east of Toms River.	1965-86	11-05-85	3.89
01409145	Manahawkin Bay near Manahawkin, NJ	Lat 39°40'13", long 74°12'54", Ocean County, Hydrologic Unit 02040301, at west end of State Route 72 bridge over Manahawkin Bay, 2.5 mi northwest of Ship Bottom, and 3.1 mi southeast of Manahawkin.	1965-86	8-18-86	3.32
01409285	Little Egg Harbor at Beach Haven, NJ	Lat 39°33'10", long 74°15'07", Ocean County, Hydrologic Unit 02040301, in Beach Haven at U.S. Coast Guard station, 6.0 mi southeast of Tuckerton and 7.4 mi southeast of Ship Bottom.	1979-86	11-05-85	4.56
01409510	Batsto River at Pleasant Mills, NJ	Lat 39°37'55", long 74°38'40", Ocean County, Hydrologic Unit 02040301, on right bank, 0.5 mi upstream from mouth, and 1.0 mi southeast of Pleasant Mills.	1958-86‡	11-05-85	4.51
01410100	Mullica River near Port Republic, NJ	Lat 39°33'12", long 74°27'46", Atlantic County, Hydrologic Unit 02040301, on right bank on bulkhead piling at south end of U.S. Route 9 and Garden State Parkway bridge over Mullica River, 2.8 mi northeast of Port Republic, and 2.8 mi south of New Gretna.	1965-86	11-05-85	4.68
01410500	Absecon Creek at Absecon, NJ	Lat 39°25'45", long 74°31'16", Atlantic County, Hydrologic Unit 02040302, on right bank 30 ft downstream from Doughty Pond Dam of Atlantic City Water Department, 1 mi west of Absecon, and 3.4 mi upstream from mouth.	1923-29‡, 1933-38‡, 1946-84‡ 1985-86	11-05-85	6.39
01410570	Beach Thorofare at Atlantic City, NJ	Lat 39°21'56", long 74°26'44", Atlantic County, Hydrologic Unit 02040302, on west abutment south side of Pennsylvania-Reading Seashore Lines railroad swivel bridge in Atlantic City, 0.5 mi northeast of Bader Field airport, and 2.7 mi northeast of Ventnor City.	1978‡, 1969-86	8-18-86	5.28

Annual maximum elevation at tidal crest-stage partial-record stations during water year 1986--Continued

Station No.	Station name	Location	Period of record	Annual Maximum	
				Date	Elevation NGVD* (ft)
01411300	Tuckahoe River at Head of River, NJ	Lat 39°18'25", long 74°49'15", Cape May County, Hydrologic Unit 02040302, on right bank at highway bridge on State Route 49, 0.2 mi upstream from McNeals Branch, 0.4 mi southeast of Head of River, and 3.7 mi west of Tuckahoe.	1979-86‡	11-05-85	4.89
01411320	Great Egg Harbor Bay at Ocean City, NJ	Lat 39°17'03", long 74°34'41", Cape May County, Hydrologic Unit 02040302, on bulkhead at west end of 7th Street (prior to October 1974, gage was located at Fifth Street), Ocean City, and 2.5 mi southeast of Somers Point.	1965-86	8-18-86	5.81
01411360	Great Channel at Stone Harbor, NJ	Lat 39°03'26", long 74°45'53", Cape May County, Hydrologic Unit 02040302, on bulkhead piling at east end of bridge at west end of Borough of Stone Harbor, 3.7 mi southeast of Cape May Court House, and 3.9 mi southwest of Avalon.	1965-86	8-18-86	5.17

* National Geodetic Vertical Datum of 1929 (NGVD).
‡ Operated as a continuous-record gaging station.

ATLANTIC COUNTY

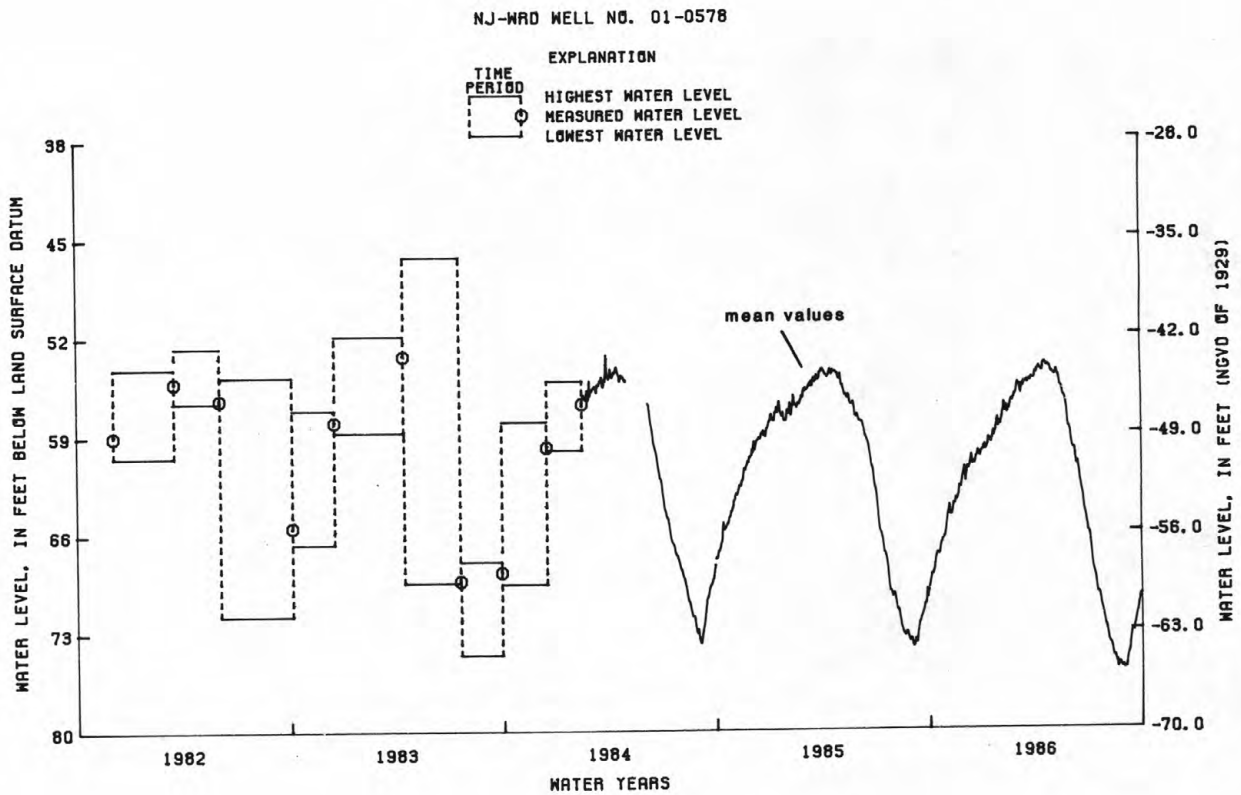
391827074371001. Local I.D., Jobs Point Obs. NJ-WRD Well Number, 01-0578.
LOCATION.--Lat 39°18'26", long 74°37'09", Hydrologic Unit 02040302, on the west side of the Garden State Parkway at interchange 29, Somers Point.
Owner: U.S. Geological Survey.
AQUIFER.--Atlantic City 800-foot sand of the Kirkwood Formation of Miocene age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 8 in, depth 680 ft, screened 670 to 680 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch. Water-level extremes recorder, May 1977 to February 1984.
DATUM.--Land-surface datum is 10.00 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top edge of recorder shelf, 9.34 ft above land-surface datum.
REMARKS.--Water level affected by tidal fluctuation. Water-quality data for 1986 is published elsewhere in this report.
PERIOD OF RECORD.--October 1959 to June 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, 29.10 ft below land-surface datum, Apr. 13, 1961; lowest, 76.65 ft below land-surface datum, Aug. 19, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	68.97	64.10	61.75	59.84	57.51	55.68	54.70	54.93	60.12	66.72	73.87	75.03
10	68.60	64.64	61.31	59.81	57.46	55.57	54.50	54.77	61.06	68.81	74.41	73.85
15	67.48	63.98	61.24	59.64	57.17	55.53	54.61	55.73	61.65	70.09	75.06	73.08
20	67.20	63.43	60.92	58.86	56.61	55.52	54.11	56.41	63.08	70.55	75.70	72.22
25	66.53	62.81	60.32	58.32	56.27	55.37	54.21	57.18	64.58	71.68	75.70	71.17
EOM	65.40	61.65	60.23	58.37	56.04	55.19	54.76	58.80	65.64	72.80	75.80	70.51
MEAN	67.68	63.67	61.02	59.28	57.10	55.48	54.45	56.09	62.20	69.75	74.89	73.03

WATER YEAR 1986 -- MEAN 62.89 HIGH 52.98 APR 25 LOW 76.65 AUG 19



ATLANTIC COUNTY

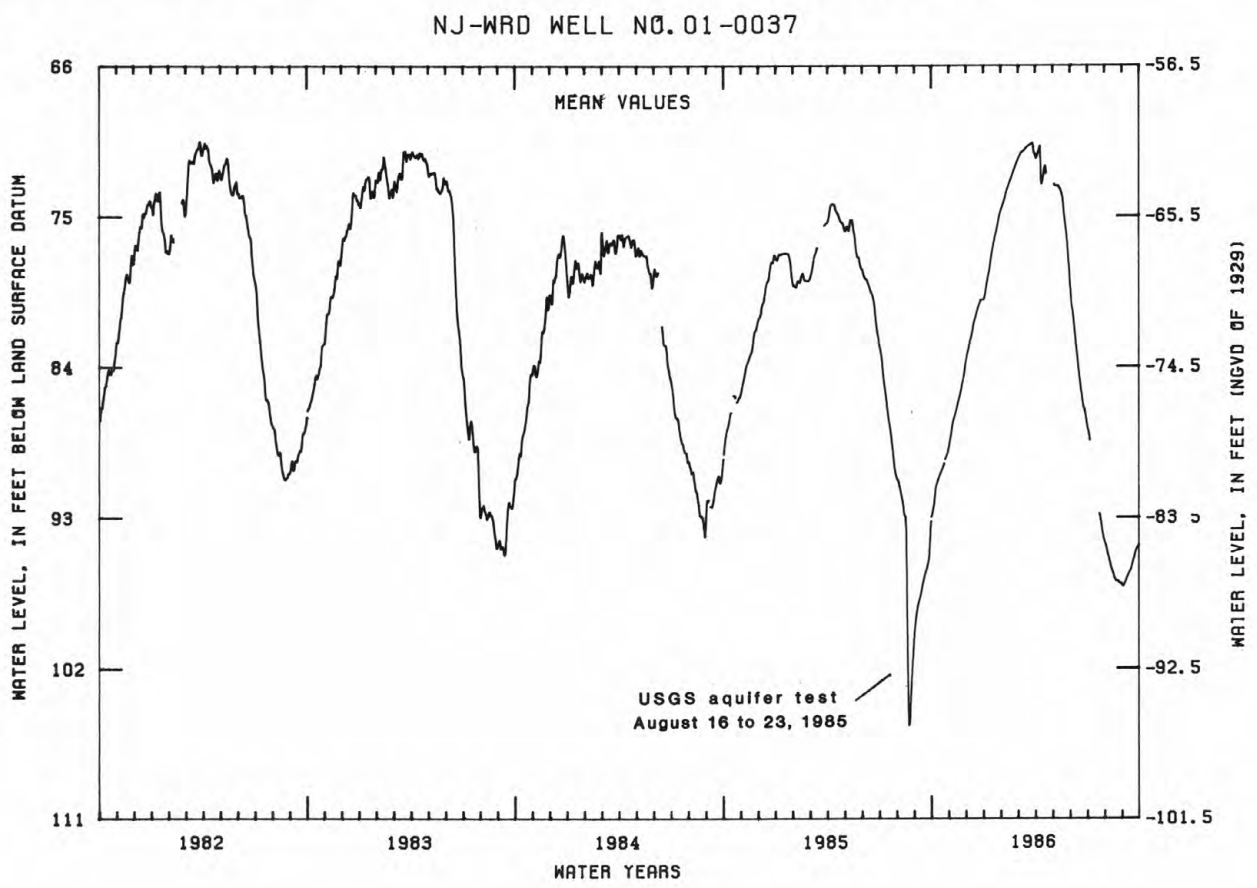
392153074250101. Local I.D., Galen Hall Obs. NJ-WRD Well Number, 01-0037.
LOCATION.--Lat 39°21'51", long 74°24'59", Hydrologic Unit 02040302, near the intersection of Pacific and Congress Avenues, Atlantic City.
Owner: Atlantic City Municipal Utilities Authority.
AQUIFER.--Atlantic City 800-foot sand of the Kirkwood Formation of Miocene age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 837 ft, screened 782 to 837 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch. May 1977 to July 1980, water-level extremes recorder.
DATUM.--Land-surface datum is 9.54 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Front edge of cutout in recorder housing, 0.90 ft above land-surface datum.
REMARKS.--Water level affected by tidal fluctuation and nearby pumping. Water level affected by USGS aquifer test, August 16 to 23, 1985.
PERIOD OF RECORD.--January 1949 to August 1975, May 1977 to current year. Records for 1949 to 1975 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 52.58 ft below land-surface datum, Mar. 7, 1962; lowest, 105.70 ft below land-surface datum, Aug. 22, 1985. (see remarks)

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	92.26	87.81	82.90	79.23	74.10	71.37	71.32	73.21	80.59	88.12	94.98	96.96
10	91.01	86.98	82.14	78.30	73.46	71.16	71.58	73.23	82.08	---	95.64	96.52
15	90.50	86.34	81.24	77.12	72.95	70.97	72.61	73.47	83.70	---	96.24	96.18
20	90.09	85.64	80.67	76.27	72.48	70.83	72.49	74.32	85.23	---	96.76	95.56
25	89.51	84.82	80.12	75.49	72.00	70.71	---	75.89	86.48	93.14	96.85	94.97
EOM	88.84	83.68	79.99	74.59	71.71	71.32	---	78.31	87.22	94.35	96.98	94.67
MEAN	90.63	86.22	81.50	77.13	73.05	71.07	71.93	74.61	83.63	---	96.10	95.98

WATER YEAR 1986 -- MEAN 82.76 HIGH 70.66 MAR 27 LOW 97.13 SEP 2



ATLANTIC COUNTY

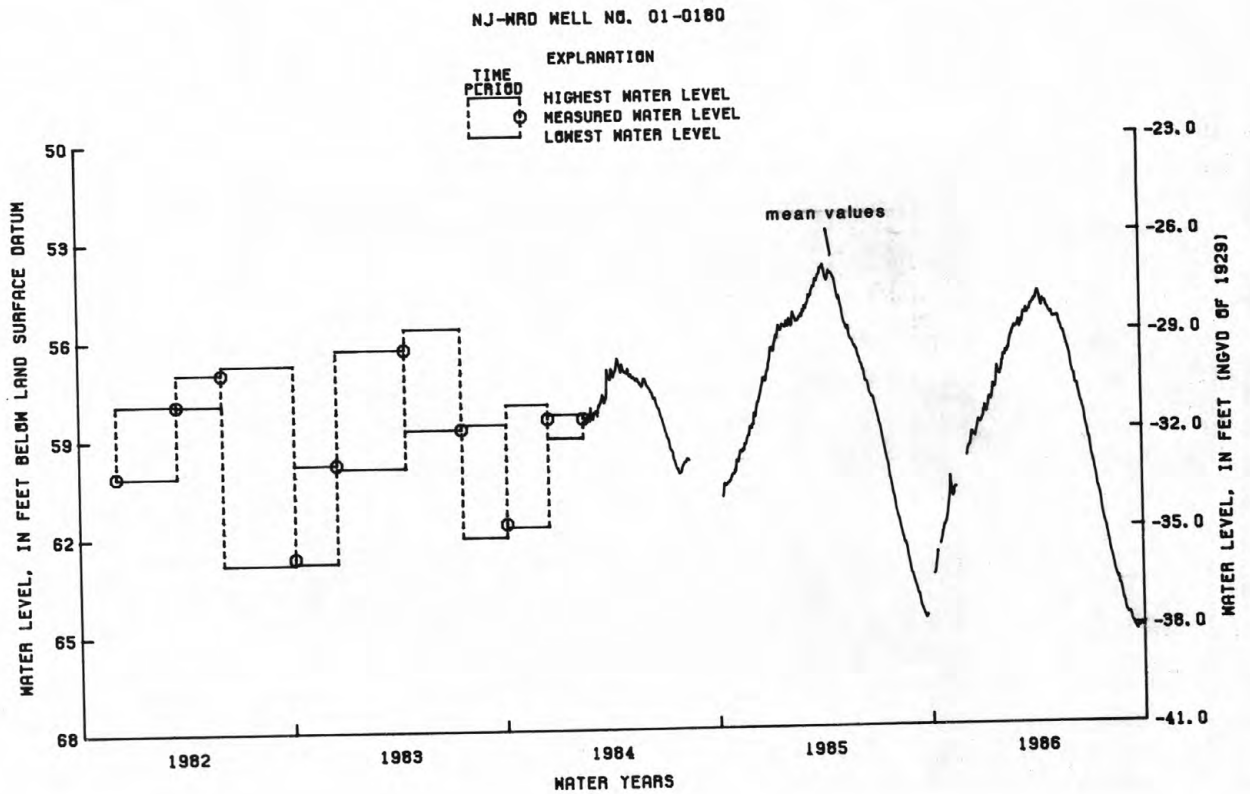
392754074270101. Local I.D., Oceanville 1 Obs. NJ-WRD Well Number, 01-0180.
LOCATION.--Lat 39°27'54", long 74°27'01", Hydrologic Unit 02040302, at Edwin B. Forsythe National Wildlife Refuge, Brigantine Division, Oceanville.
Owner: U.S. Geological Survey.
AQUIFER.--Atlantic City 800-foot sand of the Kirkwood Formation of Miocene age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 8 in, depth 570 ft, screened 560 to 570 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch. Water-level extremes recorder, April 1977 to February 1984.
DATUM.--Land-surface datum is 27.17 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top edge of bushing, 2.30 ft above land-surface datum.
REMARKS.--Water level affected by tidal fluctuation. Water-quality data for 1986 is published elsewhere in this report.
PERIOD OF RECORD.--October 1959 to August 1975, April 1977 to current year. 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, 33.62 ft below land-surface datum, Apr. 13, 1961; lowest, 65.24 ft below land-surface datum, Sept. 17,18, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	60.40	59.73	58.27	56.92	55.78	55.02	55.62	57.24	59.69	62.71	64.66
10	63.12	61.01	59.46	58.31	56.75	55.75	54.89	55.60	57.66	60.14	63.11	64.94
15	---	60.74	59.17	58.09	56.54	55.45	55.28	55.80	57.90	60.73	63.51	65.10
20	62.34	---	59.14	57.62	56.21	55.40	55.14	56.05	58.24	61.07	63.79	65.08
25	61.89	---	58.69	57.54	55.95	55.39	55.32	56.31	58.68	61.72	64.16	65.04
EOM	61.51	---	58.66	57.31	55.91	55.15	55.50	56.69	59.17	62.18	64.60	65.09
MEAN	62.36	---	59.12	57.94	56.52	55.54	55.15	55.93	57.97	60.75	63.50	64.96

WATER YEAR 1986 -- MEAN 59.22 HIGH 54.66 APR 8 LOW 65.24 SEP 17,18



ATLANTIC COUNTY

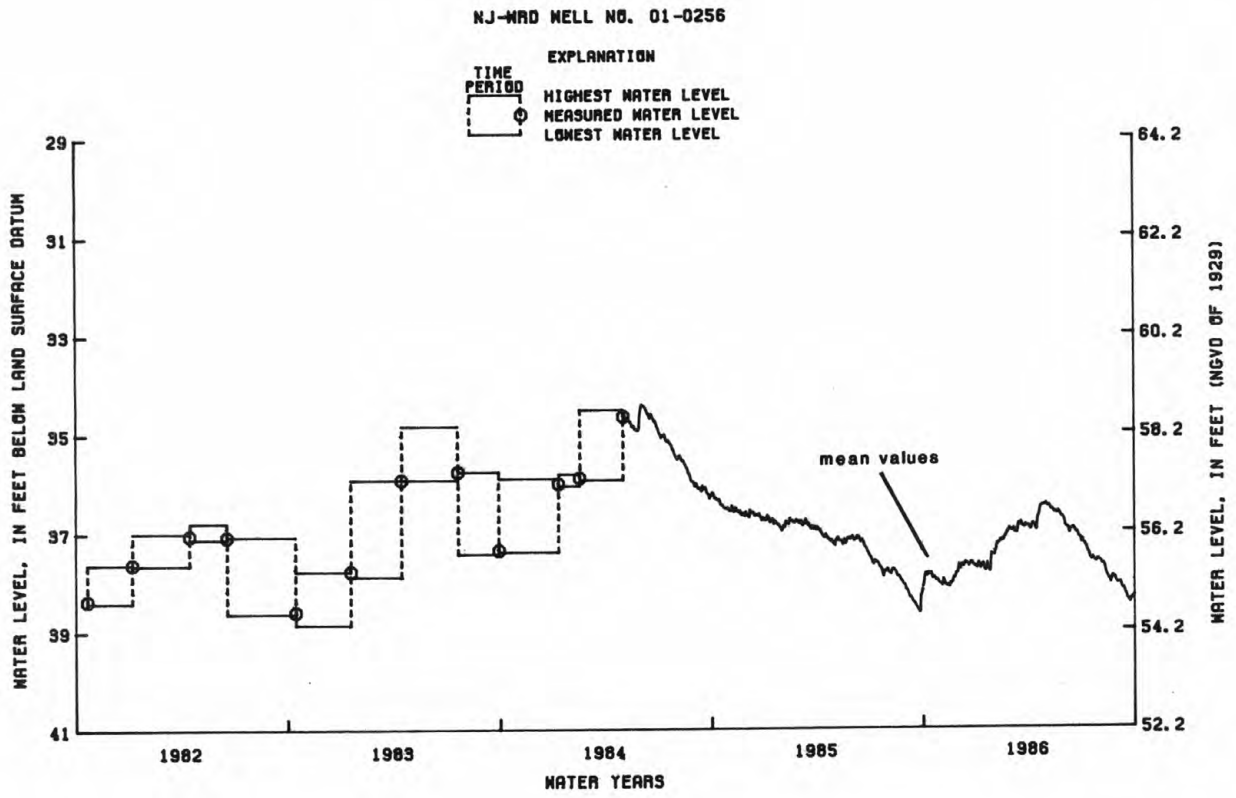
393333074442401. Local I.D., Scholler 1 Obs. NJ-WRD Well Number, 01-0256.
LOCATION.--Lat 39°33'33", long 74°44'26", Hydrologic Unit 02040302, at Scholler Brothers plant, near intersection of Weymouth and Second Roads, Elwood.
Owner: Scholler Brothers Incorporated.
AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.
WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 8 in, depth 275 ft, screened 254 to 275 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch. Water-level extremes recorder, May 1977 to April 1984.
DATUM.--Land-surface datum is 93.19 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top edge of recorder shelf, 2.66 ft above land-surface datum.
PERIOD OF RECORD.--April 1962 to August 1975, May 1977 to current year. Records for 1962 to 1975 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 27.18 ft below land-surface datum, Mar. 20, 1963; lowest, 39.56 ft below land-surface datum, Sept. 13, 1966.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	37.84	37.96	37.74	37.63	37.25	36.97	36.97	36.48	36.92	37.25	37.67	38.05
10	37.83	38.08	37.71	37.67	37.22	36.99	36.86	36.57	37.05	37.36	37.74	38.18
15	37.83	38.13	37.66	37.78	37.15	36.83	36.97	36.63	36.95	37.53	37.93	38.29
20	37.92	38.02	37.69	37.64	37.11	36.84	36.60	36.64	36.97	37.54	38.06	38.42
25	37.97	37.94	37.64	37.79	36.97	36.93	36.46	36.65	37.08	37.62	37.95	38.40
EOM	38.06	37.82	37.71	37.47	36.97	36.90	36.46	36.74	37.19	37.59	38.05	38.30
MEAN	37.94	38.01	37.68	37.68	37.16	36.92	36.73	36.59	36.99	37.46	37.86	38.26

WATER YEAR 1986 -- MEAN 37.44 HIGH 36.41 MAY 31 LOW 38.47 SEP 22



BURLINGTON COUNTY

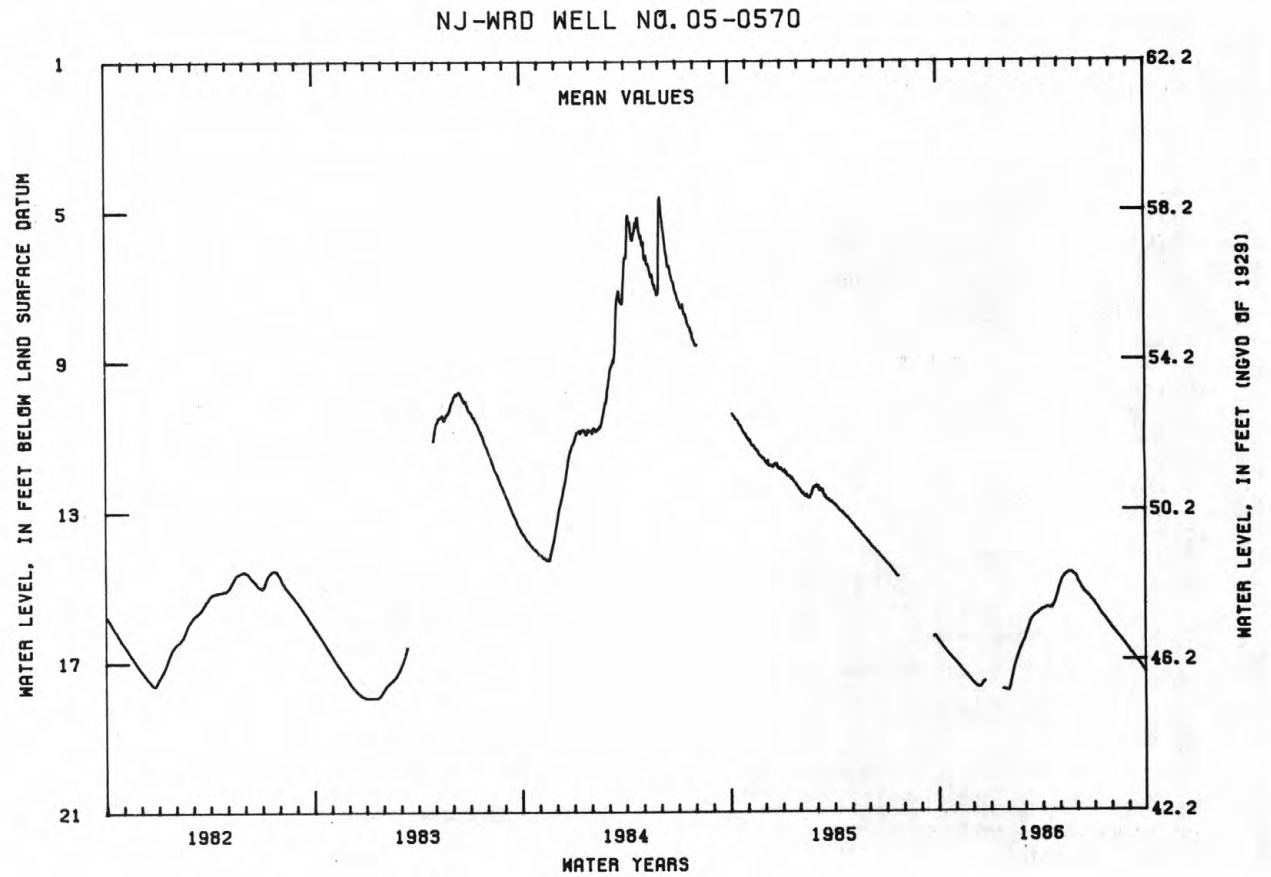
394106074362501. Local I.D., Mount at Mount Obs. NJ-WRD Well Number, 05-0570.
LOCATION.--Lat 39°41'06", long 74°36'23", Hydrologic Unit 02040301, at Mount in Wharton State Forest.
Owner: U.S. Geological Survey.
AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.
WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 8 in, depth 25 ft, open-end cement casing.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch.
DATUM.--Land-surface datum is 63.24 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top of cement casing, 0.60 ft above land-surface datum.
REMARKS.--Missing record from December 1985 to January 1986 was due to vandalism.
PERIOD OF RECORD--September 1955 to July 1970, October 1977 to September 1986 (discontinued). Periodic manual measurements, October 1970 to September 1977. Records for September 1955 to September 1977 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.92 ft below land-surface datum, Aug. 26, 1958; lowest, 18.51 ft below land-surface datum, Oct. 2, 1966.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	16.57	17.13	17.66	---	17.56	16.25	15.63	14.89	14.96	15.56	16.21	16.83
10	16.68	17.23	17.71	---	17.20	16.02	15.59	14.75	15.11	15.67	16.30	16.92
15	16.77	17.32	17.66	---	16.95	15.87	15.62	14.69	15.20	15.79	16.40	17.02
20	16.86	17.40	17.55	---	16.74	15.79	15.56	14.66	15.27	15.88	16.49	17.12
25	16.95	17.49	---	17.78	16.56	15.74	15.38	14.70	15.36	15.99	16.60	17.22
EOM	17.05	17.59	---	17.80	16.46	15.66	15.12	14.78	15.45	16.11	16.72	17.33
MEAN	16.78	17.32	17.64	---	17.04	15.93	15.52	14.76	15.18	15.80	16.42	17.03

WATER YEAR 1986 -- MEAN 16.44 HIGH 14.66 MAY 18-23 LOW 17.81 JAN 30,31



BURLINGTON COUNTY

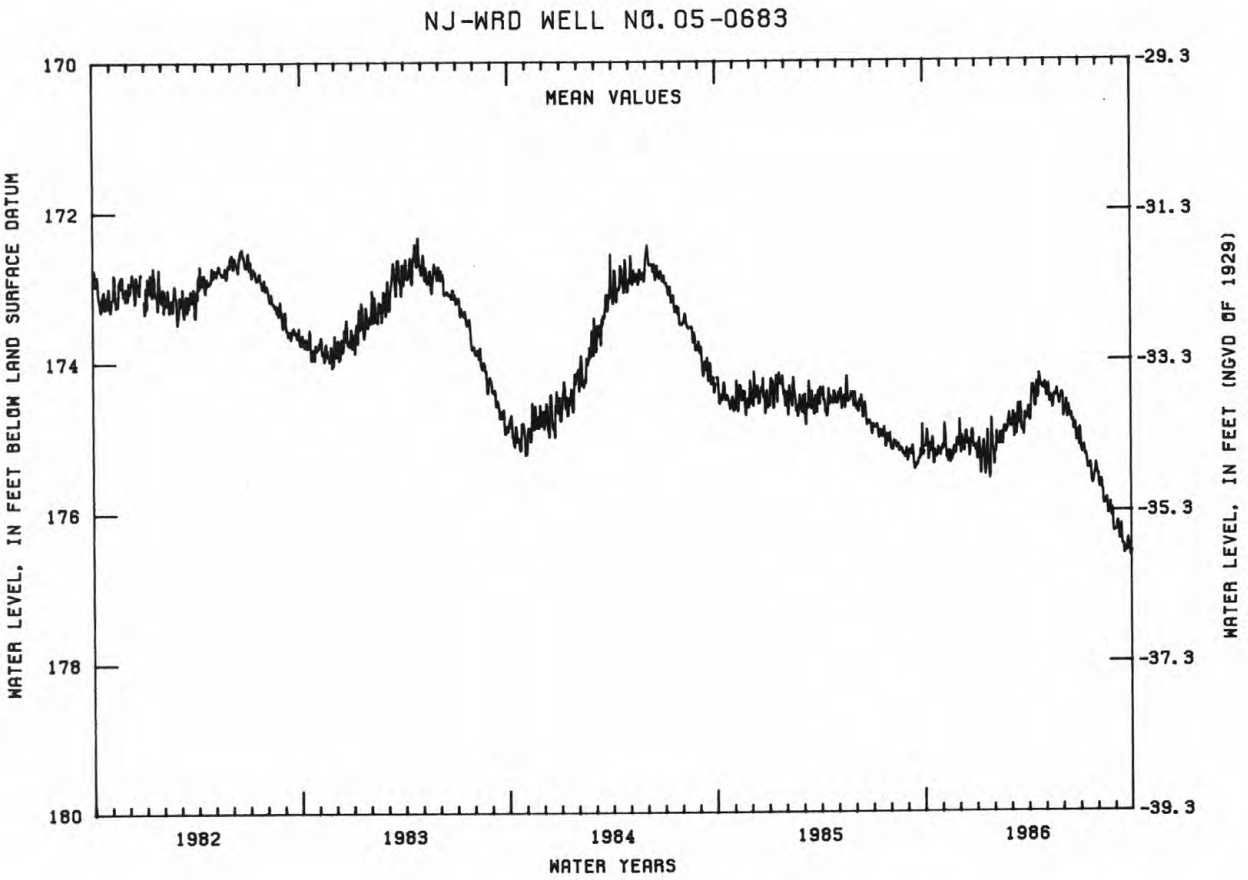
395122074301701. Local I.D., Butler Place 1 Obs. NJ-WRD Well Number, 05-0683.
LOCATION.--Lat 39°51'22", long 74°30'17", Hydrologic Unit 02040301, in Lebanon State Forest, Woodland Township.
Owner: U.S. Geological Survey.
AQUIFER.--Potomac-Raritan-Magothy aquifer system, undifferentiated, of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 8 in, depth 2,117 ft, screened 2,102 to 2,117 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch.
DATUM.--Land-surface datum is 140.66 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top of coupling, 2.80 ft above land-surface datum.
PERIOD OF RECORD.--October 1964 to August 1975, March 1977 to current year. Records for 1964 to 1977 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 143.20 ft below land-surface datum, Feb. 25, 1965; lowest, 176.65 ft below land-surface datum, Sept. 29, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	174.91	174.83	175.15	175.03	174.94	174.81	174.80	174.38	174.64	175.20	175.68	176.16
10	175.11	175.23	175.20	175.20	175.09	174.82	174.33	174.55	174.76	175.19	175.71	176.38
15	175.01	175.31	175.11	175.44	174.94	174.57	174.58	174.63	174.75	175.39	175.88	176.44
20	175.21	175.20	175.21	174.92	174.96	174.69	174.37	174.47	174.78	175.36	176.04	176.50
25	175.14	175.23	174.95	175.45	174.80	174.99	174.31	174.51	174.97	175.61	176.03	176.45
EOM	175.17	175.13	175.15	175.31	174.84	174.71	174.38	174.42	175.01	175.41	176.27	176.53
MEAN	175.17	175.16	175.07	175.23	175.00	174.80	174.45	174.46	174.76	175.33	175.86	176.39

WATER YEAR 1986 -- MEAN 175.14 HIGH 174.11 APR 21 LOW 176.65 SEP 29

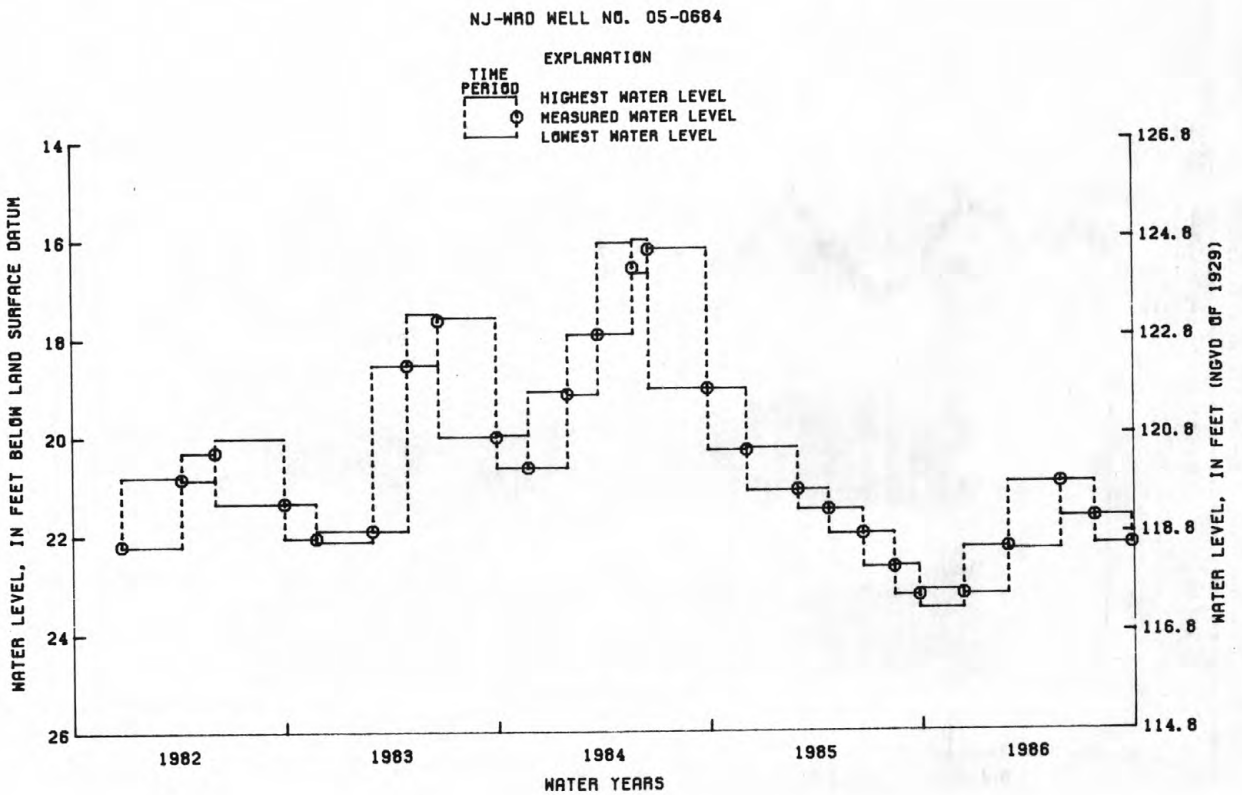


BURLINGTON COUNTY

395122074301702. Local I.D., Butler Place 2 Obs. NJ-WRD Well Number, 05-0684.
LOCATION.--Lat 39°51'22", long 74°30'17", Hydrologic Unit 02040301, in Lebanon State Forest, Woodland Township.
Owner: U.S. Geological Survey.
AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.
WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 4 in, depth 170 ft, screened 160 to 170 ft.
INSTRUMENTATION.--Water-level extremes recorder, March 1977 to current year. Water-level recorder, May 1965 to April 1975.
DATUM.--Land-surface datum is 140.82 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Front edge of cutout in recorder housing, 2.67 ft above land-surface datum.
PERIOD OF RECORD.--May 1965 to April 1975, March 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, 15.14 ft below land-surface datum, Feb. 15, 1973; lowest, 23.53 ft below land-surface datum, between Sept. 26, and Dec. 11, 1985.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 26, 1985 TO DEC. 11, 1985	23.15	23.53	DEC. 11, 1985	23.23
DEC. 11, 1985 TO FEB. 26, 1986	22.29	23.25	FEB. 26, 1986	22.29
FEB. 26, 1986 TO MAY 27, 1986	20.98	22.34	MAY 27, 1986	20.98
MAY 27, 1986 TO JULY 24, 1986	20.98	21.69	JULY 24, 1986	21.69
JULY 24, 1986 TO SEPT. 26, 1986	21.67	22.24	SEPT. 26, 1986	22.23



CAMDEN COUNTY

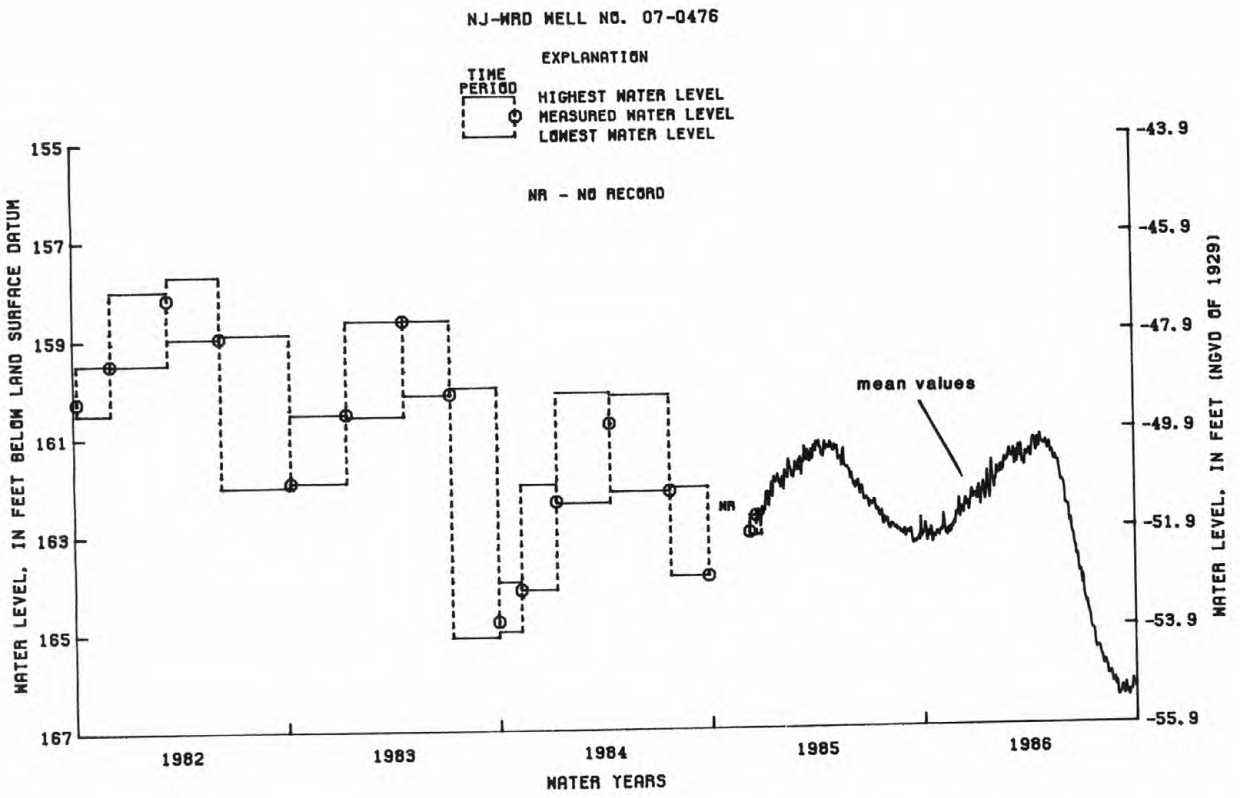
394215074561701. Local I.D., New Brooklyn 1 Obs. NJ-WRD Well Number, 07-0476.
LOCATION.--Lat 39°42'15", long 74°56'17", Hydrologic Unit 02040302, on eastern shore of New Brooklyn Lake about 900 ft upstream of Route 536, Winslow Township.
Owner: U.S. Geological Survey.
AQUIFER.--Potomac-Raritan-Magothy aquifer system, undifferentiated, of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 4 in, depth 1,505 ft, screened 1,485 to 1,495 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch. Water-level extremes recorder, February 1977 to December 1984.
DATUM.--Land-surface datum is 111.13 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top of coupling, 1.75 ft above land-surface datum.
PERIOD OF RECORD.--February 1963 to August 1975, February 1977 to current year. Records for 1963 to 1981 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 120.16 ft below land-surface datum, March 6, 1963; lowest, 166.52 ft below land-surface datum, Aug. 30, Sept. 17, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	162.89	162.71	162.66	162.14	161.77	161.53	161.59	161.35	162.54	164.42	165.82	166.28
10	163.09	163.08	162.71	162.25	161.88	161.55	161.20	161.52	162.93	164.63	165.84	166.43
15	162.98	163.11	162.56	162.40	161.72	161.34	161.43	161.66	163.16	164.99	166.00	166.39
20	163.15	162.95	162.58	161.85	161.68	161.46	161.29	161.68	163.42	165.12	166.19	166.35
25	163.06	162.94	162.26	162.28	161.54	161.76	161.29	161.92	163.79	165.49	166.23	166.19
EOM	163.07	162.74	162.31	162.16	161.56	161.50	161.34	162.11	164.03	165.57	166.46	166.21
MEAN	163.11	162.95	162.49	162.20	161.77	161.55	161.34	161.64	163.16	164.94	166.01	166.33

WATER YEAR 1986 -- MEAN 163.13 HIGH 161.06 APR 21 LOW 166.52 AUG 30,SEPT 17



CAMDEN COUNTY

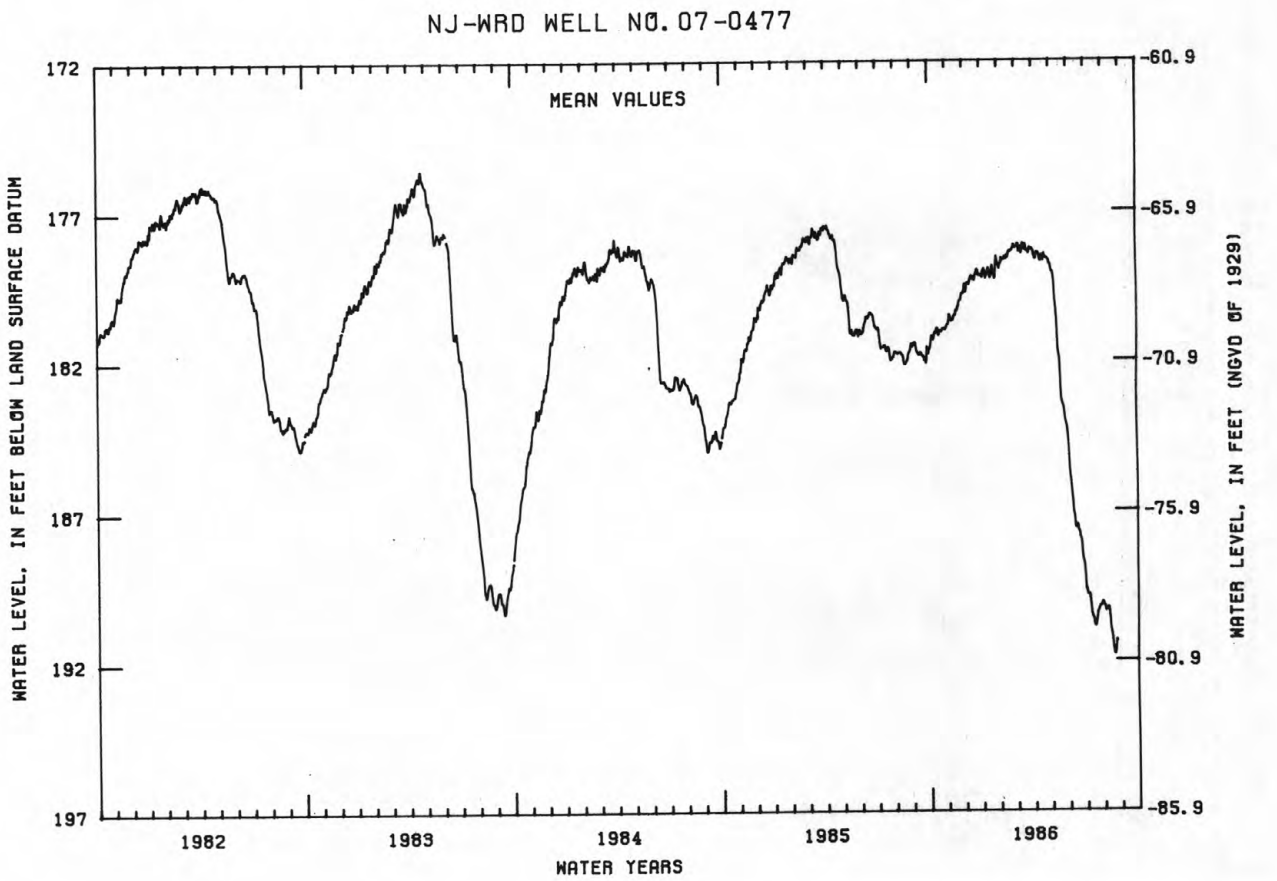
394215074561702. Local I.D., New Brooklyn Park 2 Obs. NJ-WRD Well Number, 07-0477.
LOCATION.--Lat 39°42'15", long 74°56'17", Hydrologic Unit 02040302, on eastern shore of New Brooklyn Lake about 900 ft upstream of Route 536, Winslow Township.
Owner: U.S. Geological Survey.
AQUIFER.--Upper aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 849 ft, screened 829 to 839 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch.
DATUM.--Land-surface datum is 111.13 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top edge of recorder shelf, 3.30 ft above land-surface datum.
REMARKS.--Missing record from August to September 1986 was due to recorder malfunction.
PERIOD OF RECORD.--January 1963 to August 1975, March 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, 131.54 ft below land-surface datum, Mar. 6, 1963; lowest, 191.81 ft below land-surface datum, Aug. 19,20, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	181.17	180.47	179.61	178.95	178.58	178.19	178.64	179.04	186.02	189.78	190.34	
10	181.11	180.64	179.49	179.08	178.63	178.28	178.41	180.20	187.10	190.42	190.36	
15	180.91	180.52	179.31	179.20	178.49	178.09	178.69	181.67	187.53	190.84	191.21	
20	181.00	180.21	179.28	178.84	178.41	178.18	178.58	182.96	187.73	190.53	191.80	
25	180.93	180.01	179.02	179.15	178.26	178.44	178.58	183.56	188.49	190.18	---	
EOM	180.90	179.77	179.15	178.92	178.23	178.29	178.80	184.41	189.27	190.10	---	
MEAN	181.11	180.35	179.30	179.05	178.52	178.27	178.56	181.64	187.36	190.25	190.88	

WATER YEAR 1986 -- MEAN 182.30 HIGH 177.95 MAR 15 LOW 191.81 AUG 19,20



CAMDEN COUNTY

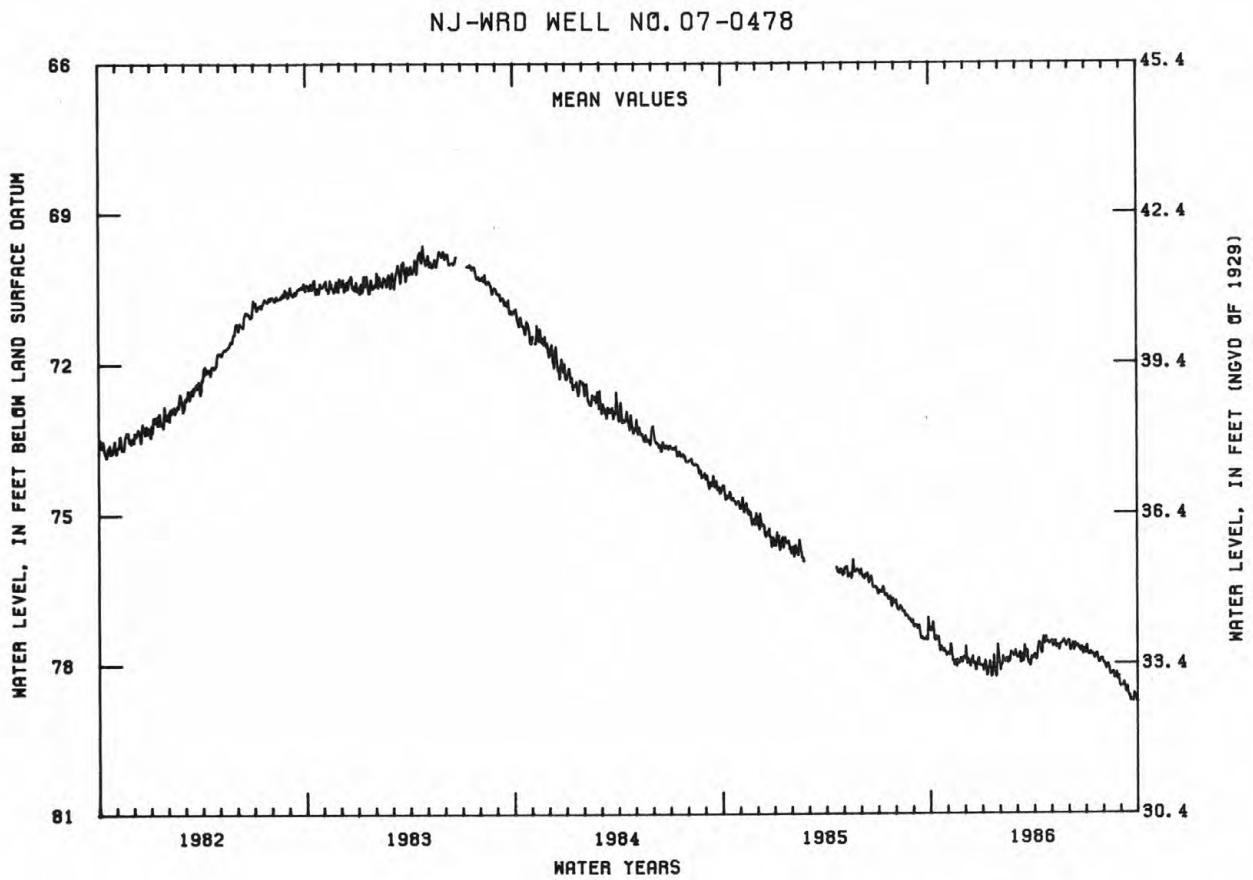
394215074561703. Local I.D., New Brooklyn Park 3 Obs. NJ-WRD Well Number, 07-0478.
LOCATION.--Lat 39°42'15", long 74°56'17", Hydrologic Unit 02040302, on eastern shore of New Brooklyn Lake about 900 ft upstream of Route 536, Winslow Township.
Owner: U.S. Geological Survey.
AQUIFER.--Wenonah-Mount Laurel aquifer of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 540 ft, screened 520 to 530 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch.
DATUM.--Land-surface datum is 111.45 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top of 6 inch coupling, 2.10 ft above land-surface datum.
PERIOD OF RECORD.--December 1962 to August 1975, March 1977 to current year. Records for 1962 to 1975 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 58.53 ft below land-surface datum, Dec. 18, 1962; lowest, 78.79 ft below land-surface datum, Sept. 29, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	77.17	77.61	78.00	77.94	77.85	77.85	77.92	77.62	77.70	77.80	78.09	78.40
10	77.47	77.94	78.06	78.08	77.97	77.91	77.59	77.69	77.74	77.78	78.08	78.58
15	77.46	77.99	78.00	78.18	77.88	77.64	77.78	77.73	77.68	77.86	78.21	78.66
20	77.65	77.96	78.13	77.83	77.80	77.75	77.57	77.61	77.67	77.80	78.30	78.72
25	77.70	77.98	77.89	78.24	77.80	78.05	77.56	77.59	77.73	77.98	78.26	78.62
EOM	77.80	77.91	78.06	78.06	77.81	77.84	77.60	77.54	77.73	77.95	78.47	78.76
MEAN	77.57	77.89	77.97	78.05	77.90	77.87	77.66	77.61	77.68	77.85	78.19	78.60

WATER YEAR 1986 -- MEAN 77.90 HIGH 77.14 OCT 5 LOW 78.79 SEP 29



CAMDEN COUNTY

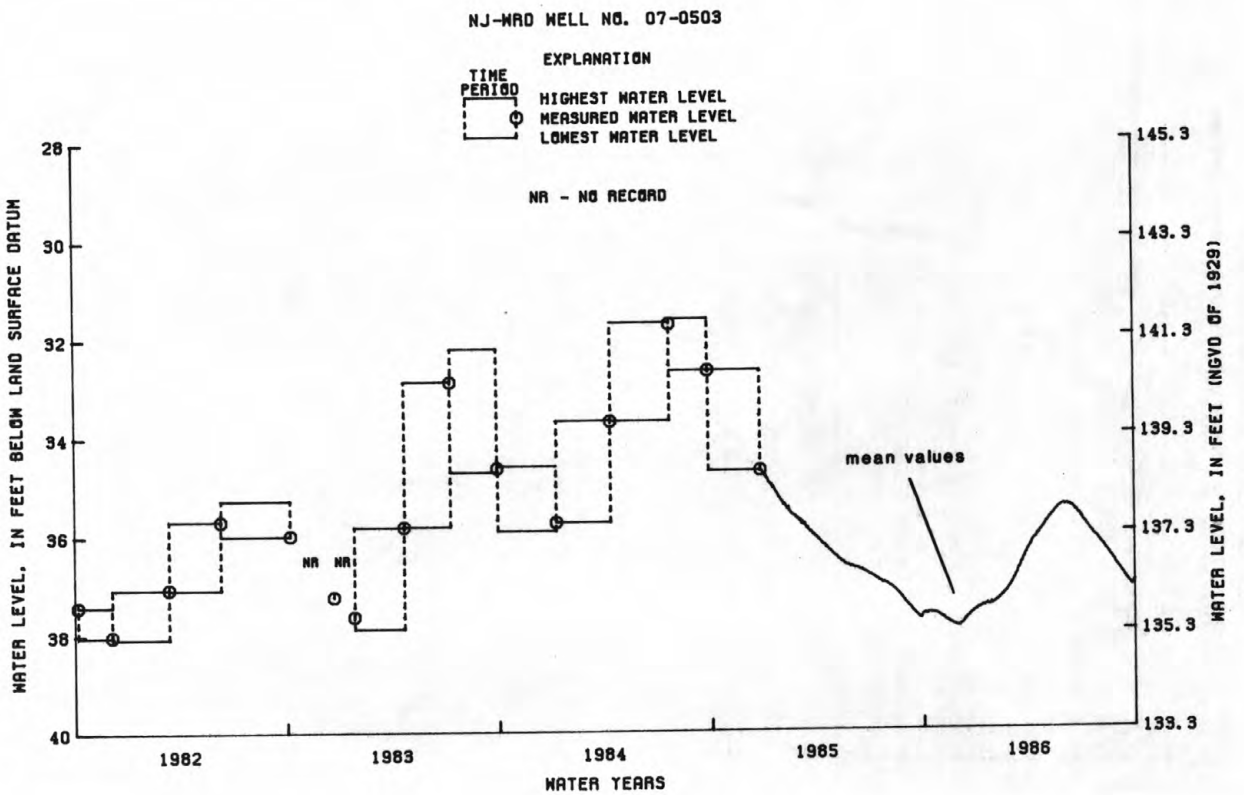
394440074593101. Local I.D., Winslow WC 5 Obs. NJ-WRD Well Number, 07-0503.
LOCATION.--Lat 39°44'40", long 74°59'31", Hydrologic Unit 02040302, about 1,000 ft east of intersection of Cross Keys-Berlin and Erial-Williamstown Roads, Winslow Township.
Owner: Winslow Water Company.
AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.
WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 6 in, depth 76 ft, screened 71 to 76 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch. Water-level extremes recorder, November 1977 to December 1984.
DATUM.--Land-surface datum is 173.26 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top edge of recorder shelf, 1.00 ft above land surface datum.
REMARKS.--Water-quality data for 1986 is published elsewhere in this report.
PERIOD OF RECORD.--December 1972 to current year. Records for 1972 to 1980 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 26.78 ft below land-surface datum, May 20-21, 1973; lowest, 38.35 ft below land-surface datum, between June 3 and Oct. 6, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	37.64	37.73	37.88	37.54	37.39	36.99	36.27	35.76	35.46	35.81	36.27	36.78
10	37.63	37.79	37.83	37.51	37.34	36.87	36.15	35.68	35.49	35.89	36.34	36.87
15	37.63	37.85	37.75	37.51	37.30	36.76	36.08	35.63	35.51	35.97	36.42	36.95
20	37.65	37.86	37.68	37.47	37.24	36.64	36.00	35.56	35.56	36.03	36.52	37.04
25	37.66	37.90	37.64	37.46	37.15	36.50	35.93	35.50	35.65	36.11	36.60	37.13
EOM	37.71	37.91	37.57	37.45	37.11	36.37	35.85	35.46	35.71	36.19	36.71	37.03
MEAN	37.66	37.83	37.75	37.50	37.29	36.72	36.08	35.62	35.54	35.97	36.45	36.95

WATER YEAR 1986 -- MEAN 36.78 HIGH 35.44 JUN 1,8 LOW 37.95 DEC 3



CUMBERLAND COUNTY

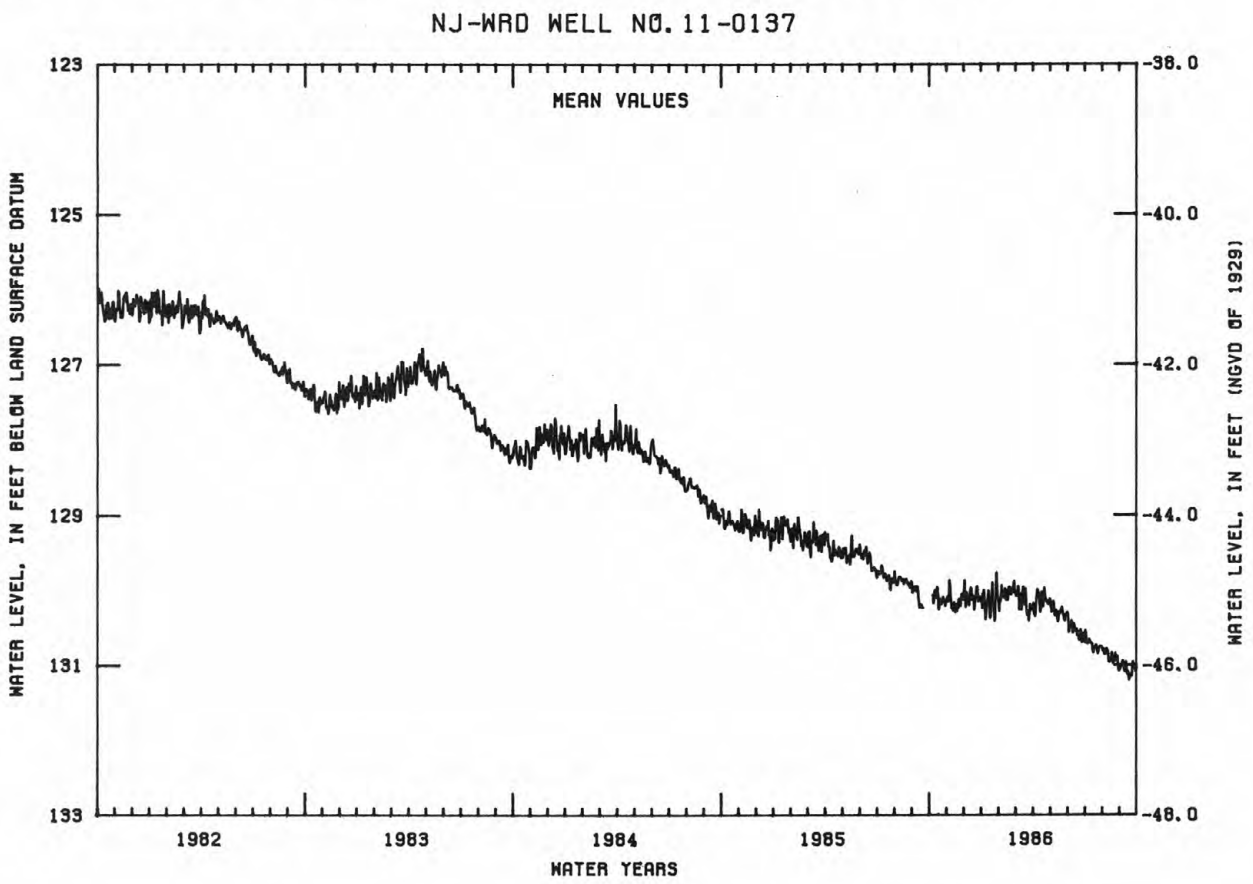
392512074521206. Local I.D., Ragovin 2100 Obs. NJ-WRD Well Number 11-0137.
LOCATION.--Lat 39°25'12", long 74°52'12", Hydrologic Unit 02040302, in wooded area off Harriet Avenue, 1.5 mi southeast of Milmay.
Owner: Sam DeRosa.
AQUIFER.--Potomac-Raritan-Magothy aquifer system, undifferentiated, of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 5 in, depth 2,093 ft, perforated casing 2083 to 2,093 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch.
DATUM.--Altitude of land-surface datum is 85 ft, by altimeter.
Measuring point: Top edge of recorder shelf, 2.40 ft above land-surface datum.
REMARKS.--This well is screened in a saline zone of the aquifer system (Luzier, 1980,p. 8-12). An equivalent freshwater head is obtained by multiplying the column of water in the well by the ratio of density of water in the well to the density of freshwater. In 1974, the density of water was 1.011 grams per milliliter at 20 deg. C and a plus 17 foot correction was needed to obtain the equivalent freshwater head.
PERIOD OF RECORD.--October 1974 to April 1975, February 1977 to current year. Records for 1974 to 1977 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 115.82 ft below land-surface datum, Apr. 3, 1975; lowest, 131.23 ft below land-surface datum, Sept. 17, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	129.86	130.15	129.99	129.93	130.04	130.35	130.21	130.48	130.71	130.86	130.96
10	130.01	130.20	130.20	130.14	130.08	130.11	130.01	130.34	130.57	130.68	130.82	131.09
15	129.95	130.25	130.13	130.32	129.99	129.95	130.25	130.42	130.55	130.81	130.93	131.12
20	130.13	130.18	130.20	129.89	130.05	130.08	130.12	130.29	130.55	130.75	130.98	131.13
25	130.08	130.21	129.98	130.31	129.95	130.41	130.13	130.34	130.63	130.82	130.92	130.97
EOM	130.13	130.12	130.11	130.23	130.01	130.23	130.18	130.29	130.62	130.76	131.08	131.04
MEAN	130.11	130.14	130.08	130.15	130.04	130.15	130.15	130.29	130.54	130.74	130.90	131.05

WATER YEAR 1986 -- MEAN 130.36 HIGH 129.72 JAN 27 LOW 131.23 SEP 17

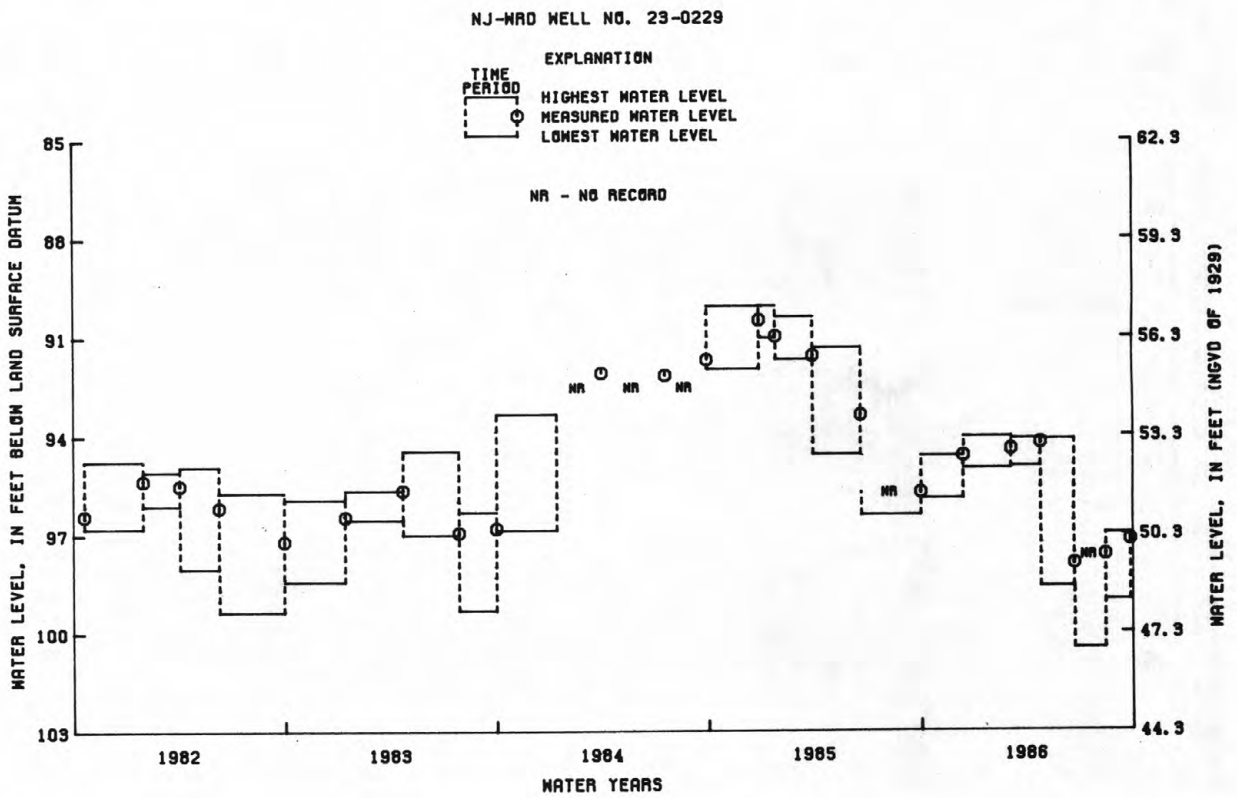


MIDDLESEX COUNTY

402015074275702. Local I.D., Forsgate 4 Obs.. NJ-WRD Well Number, 23-0229.
LOCATION.--Lat 40°20'15", long 74°27'57", Hydrologic Unit 02030105, on Hanover Lane at Rossmoor, Monroe Township.
Owner: Monroe Township Municipal Utilities Authority.
AQUIFER.--Farrington aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 330 ft screened 319 to 330 ft.
INSTRUMENTATION.--Water-level extremes recorder, January 1977 to current year. Water-level recorder, April 1965 to August 1967, August 1968 to August 1975.
DATUM.--Land-surface datum is 147.34 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Front edge of cutout in recorder housing, 1.50 ft below land-surface datum.
REMARKS.--Water-quality data for 1986 is published elsewhere in this report.
PERIOD OF RECORD.--April 1965 to August 1967, August 1968 to August 1975, January 1977 to current year. Records for 1965 to 1975 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 80.09 ft below land-surface datum, July 16, 1973; lowest, 100.47 ft below land-surface datum, between June 20 and Aug. 13, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 30, 1985 TO DEC. 12, 1985	94.59	95.89	DEC. 12, 1985	94.59
DEC. 12, 1985 TO MAR. 3, 1986	94.01	94.98	MAR. 3, 1986	94.40
MAR. 3, 1986 TO APR. 23, 1986	94.07	94.92	APR. 23, 1986	94.20
APR. 23, 1986 TO JUNE 20, 1986	94.09	98.59	JUNE 20, 1986	97.89
JUNE 20, 1986 TO AUG. 13, 1986	---	100.47	AUG. 13, 1986	97.63
AUG. 13, 1986 TO SEPT. 25, 1986	96.96	99.02	SEPT. 25, 1986	97.17

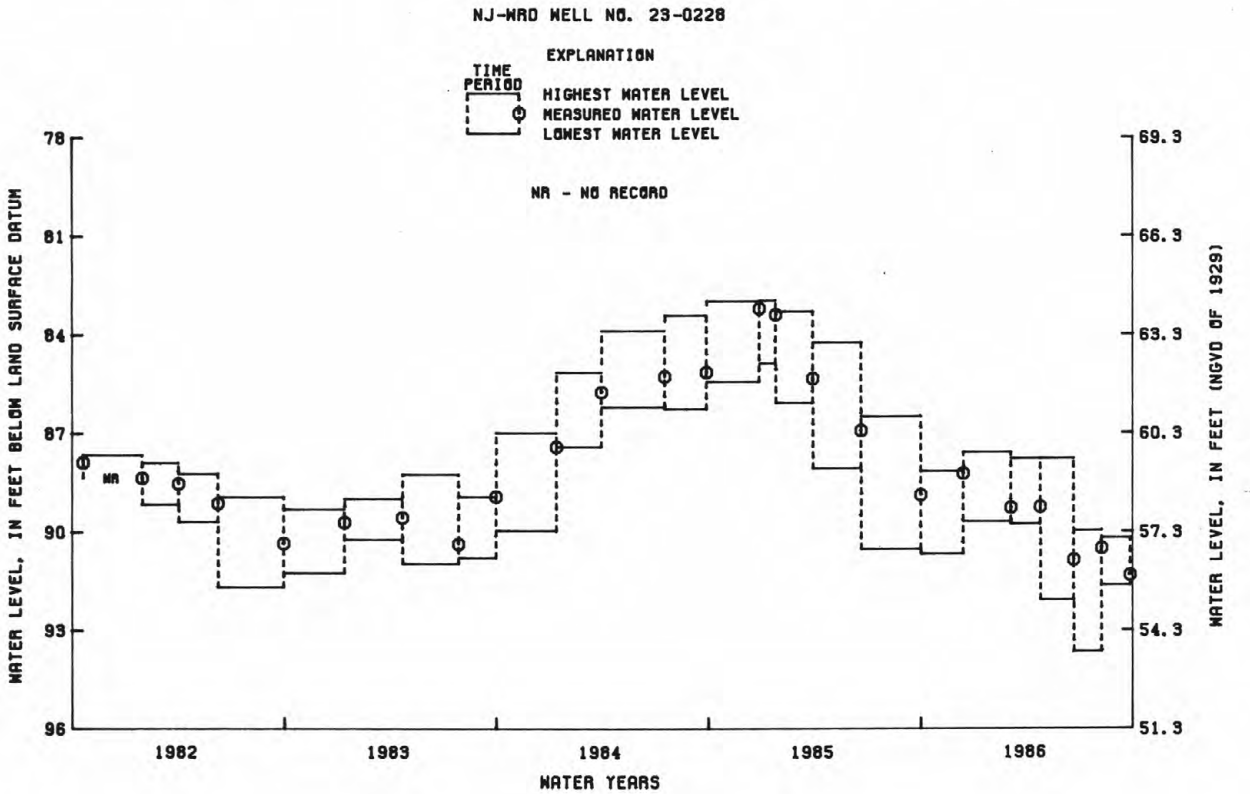


MIDDLESEX COUNTY

402015074275701. Local I.D., Forsgate 3 Obs. NJ-WRD Well Number, 23-0228.
LOCATION.--Lat 40°20'15", long 74°27'57", Hydrologic Unit 02030105, on Hanover Lane at Rossmoor, Monroe Township.
Owner: Monroe Township Municipal Utilities Authority.
AQUIFER.--Old Bridge aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 138 ft, screened 128 to 138 ft.
INSTRUMENTATION.--Water-level extremes recorder, January 1977 to current year. Water-level recorder, October 1961 to August 1967, August 1968 to August 1975.
DATUM.--Land-surface datum is 147.34 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Front edge of cutout in recorder housing, 1.40 ft below land-surface datum.
REMARKS.--Water-quality data for 1986 is published elsewhere in this report.
PERIOD OF RECORD.--October 1961 to August 1967, August 1968 to August 1975, January 1977 to current year. Records for 1961 to 1975 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 70.32 ft below land-surface datum, May 6, 1962; lowest, 93.64 ft below land-surface datum, between June 20 and Aug. 7, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 30, 1985 TO DEC. 12, 1985	88.13	90.65	DEC. 12, 1985	88.21
DEC. 12, 1985 TO MAR. 3, 1986	87.56	89.68	MAR. 3, 1986	89.26
MAR. 3, 1986 TO APR. 23, 1986	87.75	89.75	APR. 23, 1986	89.23
APR. 23, 1986 TO JUNE 20, 1986	87.75	92.06	JUNE 20, 1986	90.84
JUNE 20, 1986 TO AUG. 7, 1986	89.94	93.64	AUG. 7, 1986	90.49
AUG. 7, 1986 TO SEPT. 25, 1986	90.16	91.61	SEPT. 25, 1986	91.30



MIDDLESEX COUNTY

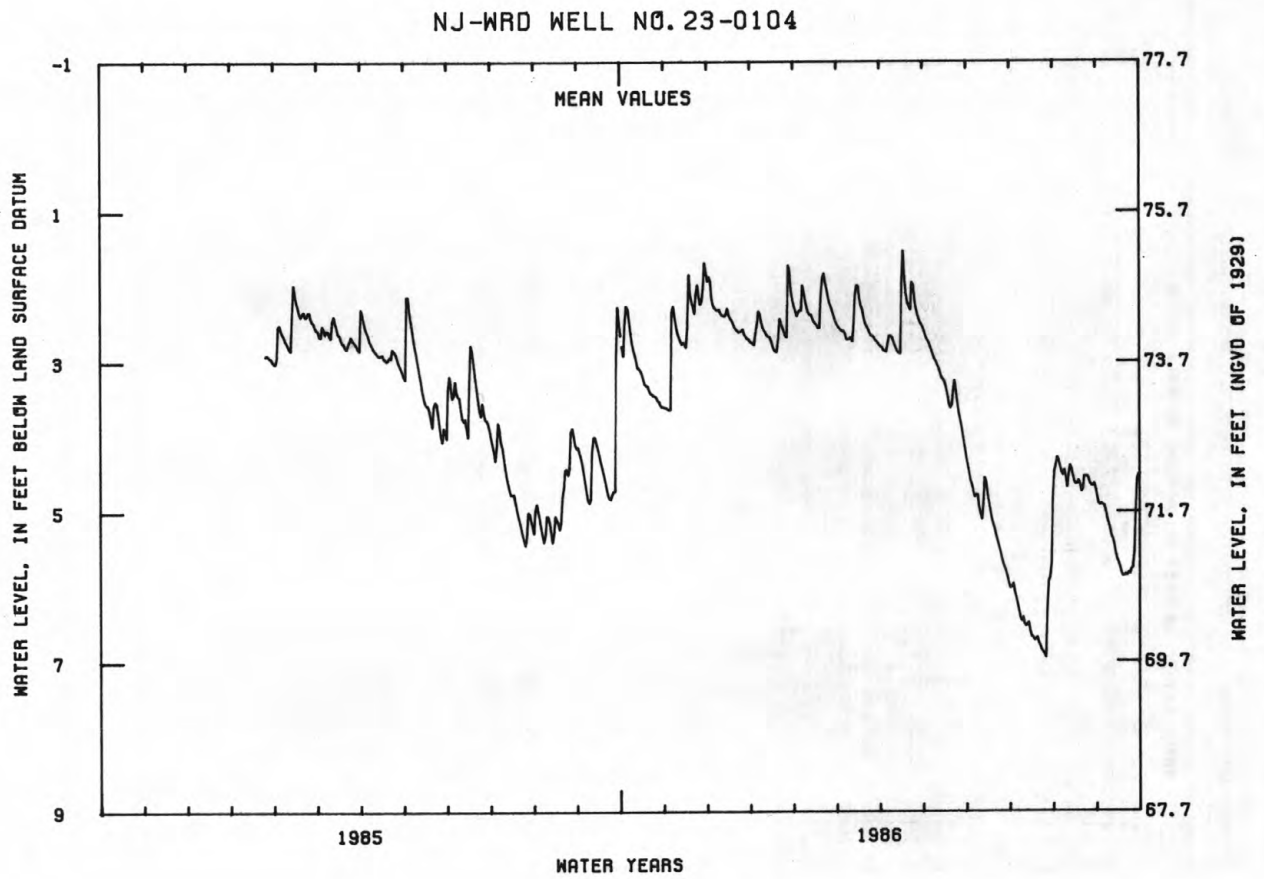
402143074185201. Local I.D., Morrell 1 Obs. NJ-WRD Well Number 23-104.
LOCATION.--Lat 40°21'43", long 74°18'49", Hydrologic Unit 02030105, on the north side of Texas Road, about .4 mi. east of Route 9, Old Bridge Township
OWNER: Olympia and York Bridge Development Corp.
AQUIFER.--Englishtown aquifer of Cretaceous age.
WELL CHARACTERISTICS.--Dug water-table observation well, diameter 17 in,depth 11 ft,cased with precast concrete rings.
INSTRUMENTATION.--Digital water-level recorder -- 60-minute punch.
DATUM.--Land-surface datum is 76.75 ft above National Geodedic Vertical Datum of 1929.
Measuring point: Top inside edge of concrete ring, .20 ft above land-surface datum.
REMARKS.--Well depth was 6 ft before deepening in September 1932.
PERIOD OF RECORD.--October 1923 to July 1975, January 1985 to current year. Periodic manual measurments August 1975 to December 1984. Records for 1923 to 1985 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.18 ft below land-surface datum, August 27, 1971; lowest, 10.40 ft below land surface datum, October 13, 1953. Well was dry, August to September 1932, before deepening.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	2.28	2.32	2.28	2.32	1.98	2.59	2.87	2.75	4.73	6.14	4.40	4.92
10	2.89	2.66	2.37	2.61	2.37	2.69	2.73	3.00	5.02	6.41	4.67	5.32
15	3.15	2.80	2.37	2.79	2.51	1.98	2.89	3.24	4.77	6.60	4.60	5.68
20	3.37	2.26	2.56	2.42	1.82	2.40	2.22	3.61	5.23	6.68	4.73	5.83
25	3.46	2.23	2.56	2.67	2.27	2.65	2.18	3.56	5.62	6.91	4.55	5.74
EOM	3.60	1.92	2.74	2.32	2.46	2.78	2.52	4.26	5.96	4.80	4.80	4.49
MEAN	3.12	2.48	2.43	2.52	2.27	2.53	2.48	3.29	5.09	6.38	4.55	5.34

WATER YEAR 1986 -- MEAN 3.54 HIGH 1.27 APR 16 LOW 6.97 JUL 26



MIDDLESEX COUNTY

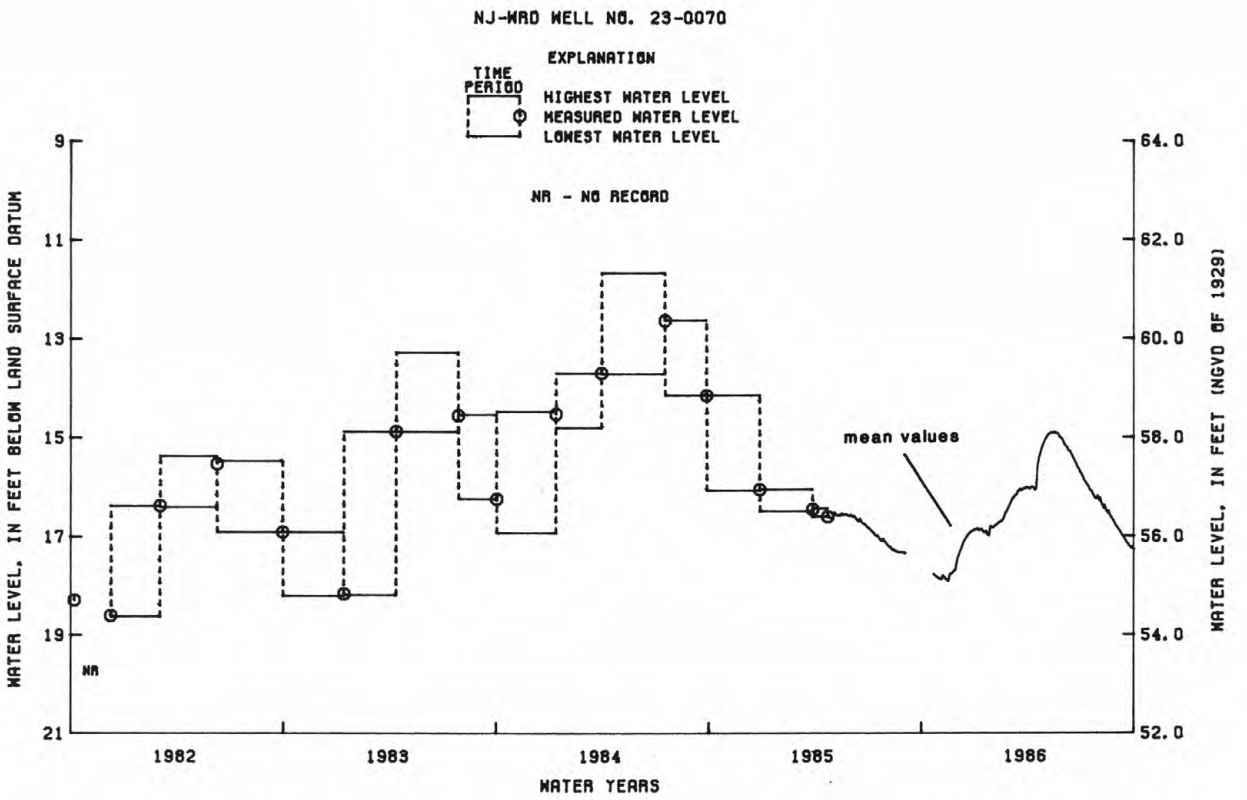
402553074271701. Local I.D., Robert Fischer Obs. NJ-WRD Well Number, 23-0070.
LOCATION.--Lat 40°25'55", long 74°27'19", Hydrologic Unit 02030105, about 1,800 ft southeast of Weber School on Hardenburg Lane, East Brunswick Township.
Owner: Robert D. Fischer.
AQUIFER.--Farrington aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.
WELL CHARACTERISTICS.--Dug water-table observation well, diameter 4.5 ft, depth 21 ft, lined with concrete blocks.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch. Water-level extremes recorder, January 1977 to April 1985.
DATUM.--Land-surface datum is 73.00 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top of angle iron at bottom of shelter doors, 1.70 ft above land-surface datum.
REMARKS.--Well deepened October 29, 1965 from 17 to 21 ft.
PERIOD OF RECORD.--June 1936 to April 1975, January 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 8.88 ft below land-surface datum, Apr. 26-27, 1939; lowest, 19.11 ft below land-surface datum, between July 24 and Oct. 6, 1981; well was dry many times, 1963-1965 before deepening.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	17.85	17.34	16.84	16.77	16.27	16.04	14.96	15.17	15.81	16.31	16.88
10	---	17.84	17.19	16.85	16.73	16.18	16.00	14.91	15.28	15.93	16.45	16.98
15	---	17.90	17.06	16.90	16.69	16.10	16.06	14.91	15.35	16.02	16.51	17.08
20	---	17.75	16.97	16.89	16.60	16.06	15.47	14.92	15.46	16.09	16.58	17.16
25	17.80	17.71	16.90	16.98	16.48	16.05	15.23	14.96	15.59	16.22	16.67	17.24
EOM	17.85	17.56	16.86	16.82	16.40	16.02	15.08	15.05	15.70	16.21	16.80	17.28
MEAN	---	17.79	17.09	16.88	16.66	16.13	15.70	14.95	15.38	16.02	16.51	17.07

WATER YEAR 1986 -- MEAN 16.50 HIGH 14.88 MAY 17 LOW 17.91 NOV 16

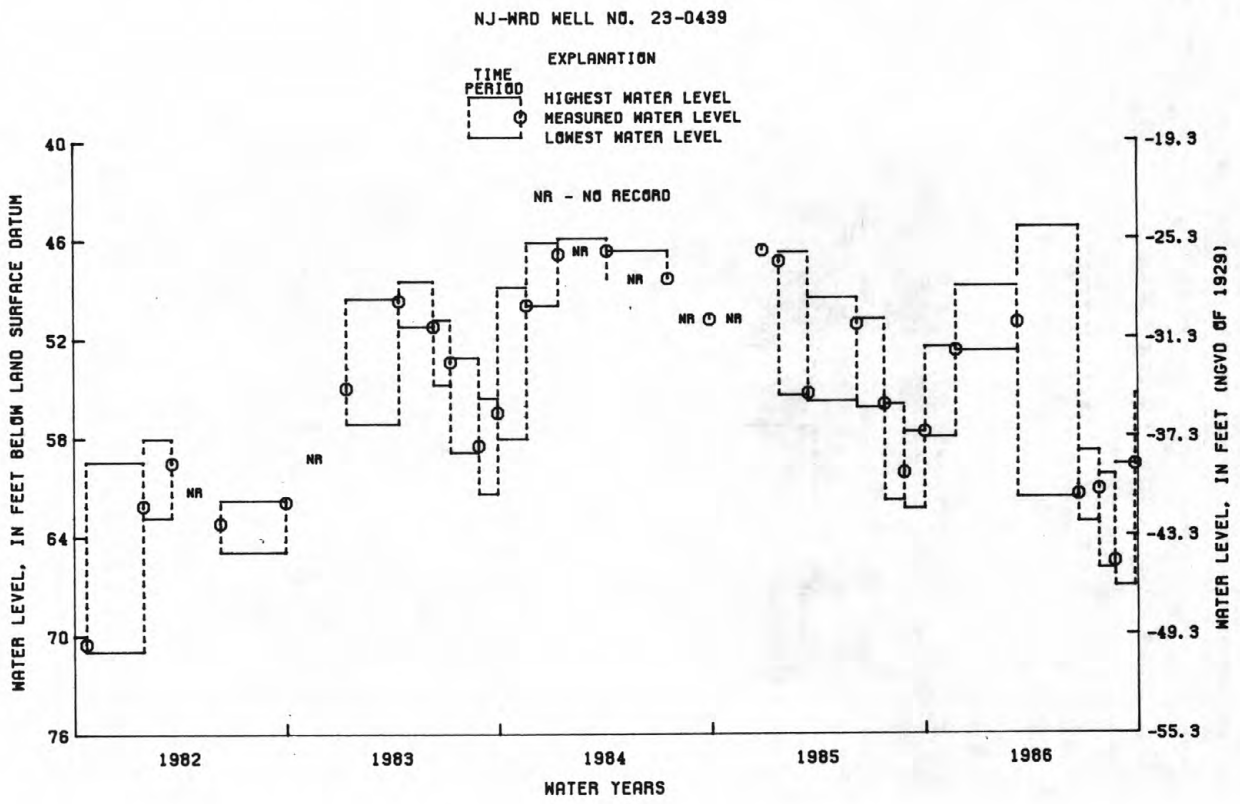


MIDDLESEX COUNTY

402633074220001. Local I.D., South River 2 Obs. NJ-WRD Well Number, 23-0439.
LOCATION.--Lat 40°26'33", long 74°22'00", Hydrologic Unit 02030105, at the corner of Whitehead Avenue and Anne Street, South River.
Owner: South River Utilities.
AQUIFER.--Farrington aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 126 ft, screened 121 to 126 ft.
INSTRUMENTATION.--Water-level extremes recorder, January 1977 to current year. Water-level recorder, January 1968 to August 1975.
DATUM.--Land-surface datum is 20.69 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Front edge of cutout in recorder housing, 2.55 ft above land-surface datum.
REMARKS.--Water level affected by nearby pumping. Water-quality data for 1986 is published elsewhere in this report.
PERIOD OF RECORD.--January 1968 to August 1975, January 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, 39.37 ft below land-surface datum, Jan. 30, 1968; lowest, 73.64 ft below land-surface datum, between Aug. 25 and Oct. 16, 1980.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 30, 1985 TO NOV. 22, 1985	52.48	57.98	NOV. 22, 1985	52.71
NOV. 22, 1985 TO MAR. 7, 1986	48.79	52.74	MAR. 7, 1986	51.02
MAR. 7, 1986 TO JUNE 20, 1986	45.21	61.63	JUNE 20, 1986	61.48
JUNE 20, 1986 TO JULY 25, 1986	58.84	63.15	JULY 25, 1986	61.20
JULY 25, 1986 TO AUG. 22, 1986	60.27	65.98	AUG. 22, 1986	65.56
AUG. 22, 1986 TO SEPT. 25, 1986	59.65	67.06	SEPT. 25, 1986	59.69



MONMOUTH COUNTY

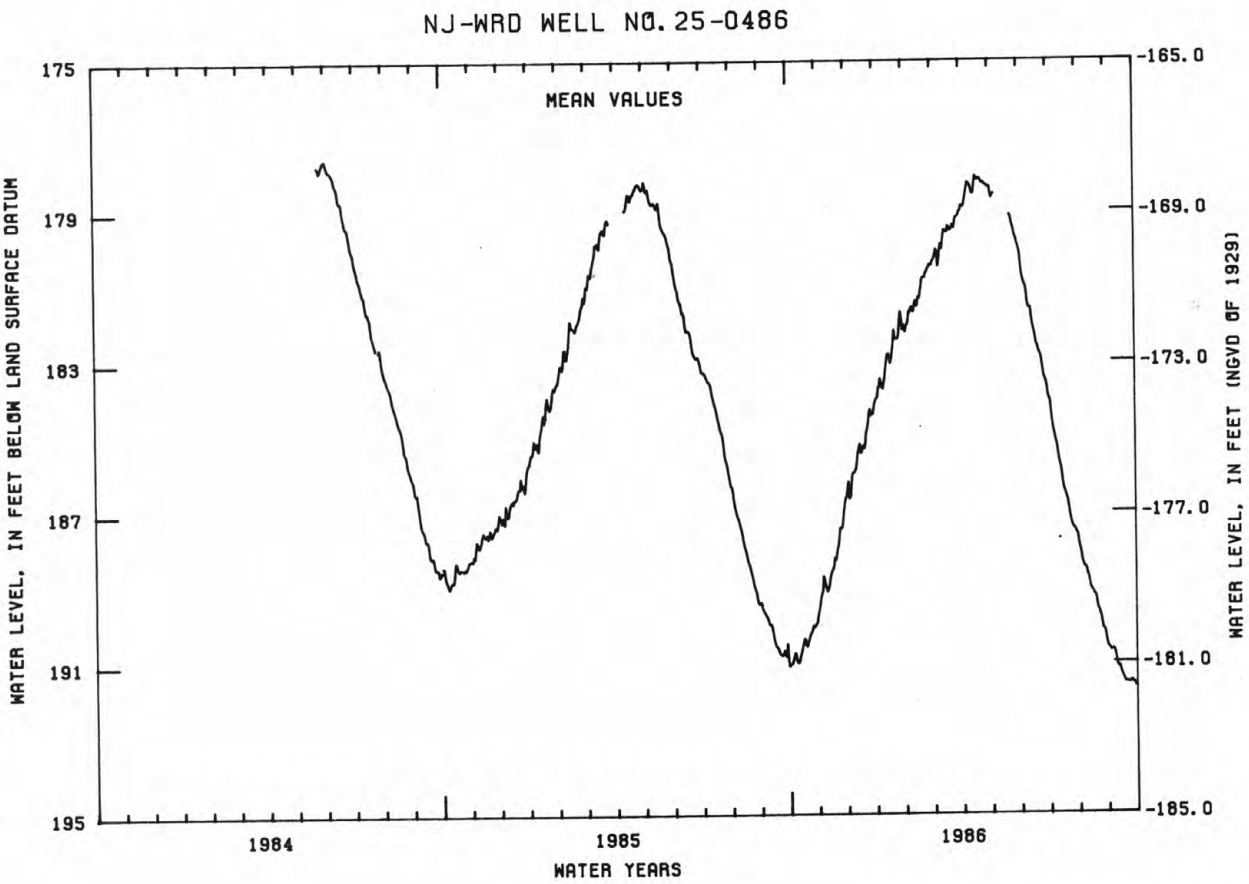
400711074020201. Local I.D., DOE - Sea Girt Obs. NJ-WRD Well Number, 25-0486.
LOCATION.--Lat 40°07'11", long 74°02'02", Hydrologic Unit 02030104, at the National Guard Camp, Sea Girt.
Owner: State of New Jersey.
AQUIFER.--Wenonah-Mount Laurel aquifer of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 4 in, depth 988 ft, perforated casing 604 to 614 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch.
DATUM.--Altitude of land-surface datum is 10 ft, from topographic map
Measuring point: Top edge of recorder shelf, 3.20 ft above land-surface datum.
REMARKS.--Water level affected by tidal fluctuation.
PERIOD OF RECORD.--May 1984 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 176.58 ft below land-surface datum, May 25, 1984; lowest, 191.70 ft below land-surface datum, Sept. 29, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	190.70	188.67	186.37	183.44	181.67	180.15	178.84	178.59	180.81	184.60	188.35	190.66
10	190.89	189.01	185.84	183.42	181.68	180.04	178.29	---	181.48	185.25	188.67	191.10
15	190.32	188.49	185.42	182.93	181.29	179.51	178.54	---	182.02	186.05	189.10	191.36
20	190.34	187.94	185.19	182.16	180.77	179.44	178.18	---	182.60	186.64	189.48	191.54
25	189.97	187.40	184.25	182.26	180.53	179.47	178.25	179.34	183.12	187.32	189.98	191.49
EOM	189.59	186.56	184.02	182.10	180.43	179.02	178.39	179.93	183.72	187.61	190.58	191.64
MEAN	190.44	188.21	185.27	182.85	181.25	179.72	178.42	---	182.01	186.04	189.18	191.23

WATER YEAR 1986 -- MEAN 184.48 HIGH 178.03 APR 21 LOW 191.70 SEP 29

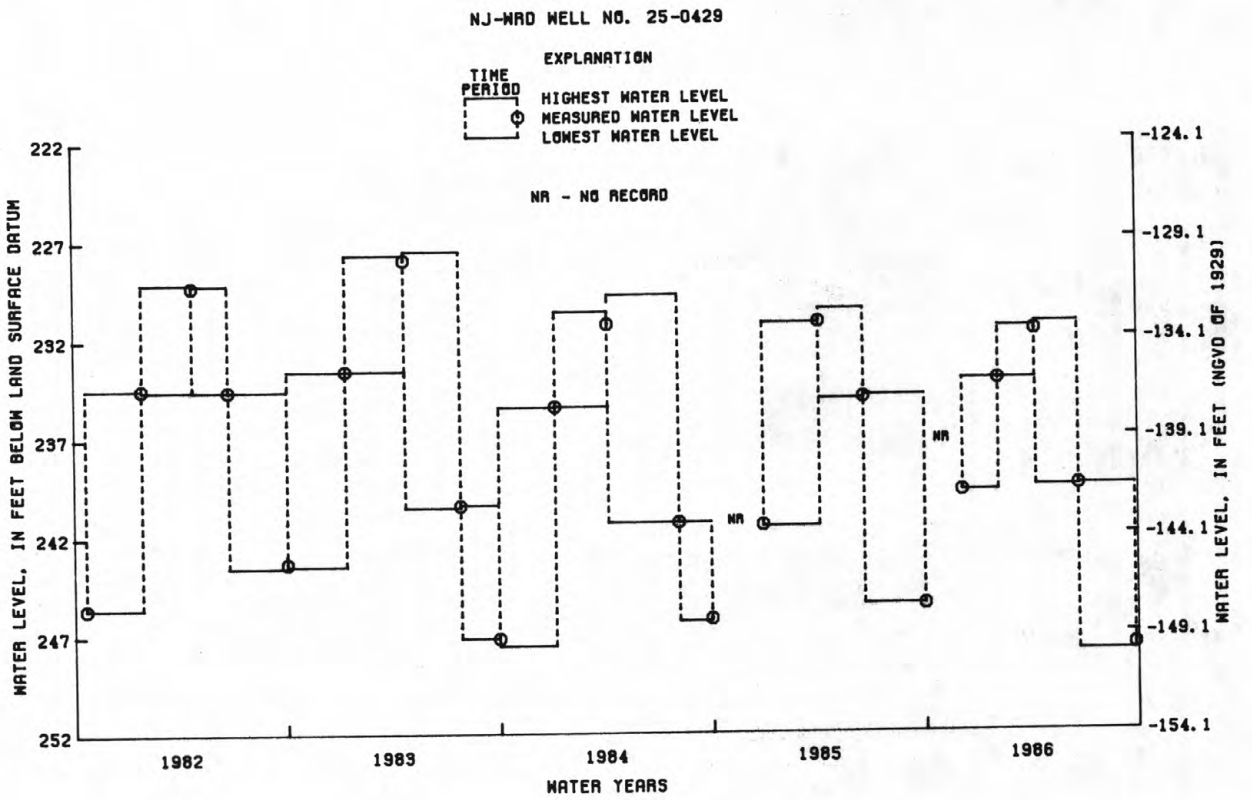


MONMOUTH COUNTY

400832074082101. Local I.D., Allaire State Park C Obs. NJ-WRD Well Number, 25-0429.
LOCATION.--Lat 40°08'34", long 74°08'34", Hydrologic Unit 02040301, about 1.3 mi southeast of Lower Squankum, in Allaire State Park, Wall Township.
Owner: U.S. Geological Survey.
AQUIFER.--Englishtown aquifer of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 715 ft, screened 623 to 633 ft.
INSTRUMENTATION.--Water-level extremes recorder, February 1977 to current year. Water-level recorder, January 1964 to July 1975.
DATUM.--Land-surface datum is 97.93 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Front edge of cutout in recorder housing, 1.64 ft above land-surface datum.
PERIOD OF RECORD.--January 1964 to July 1975, February 1977 to current year. Records for 1964 to 1975 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 141.05 ft below land-surface datum, Apr. 8, 1964; lowest, 247.94 ft below land-surface datum, between June 20 and Sept. 25, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 30, 1985 TO DEC. 3, 1985	---	---	DEC. 3, 1985	239.78
DEC. 3, 1985 TO FEB. 3, 1986	234.08	239.79	FEB. 3, 1986	234.12
FEB. 3, 1986 TO APR. 7, 1986	231.46	234.12	APR. 7, 1986	231.65
APR. 7, 1986 TO JUNE 20, 1986	231.26	239.57	JUNE 20, 1986	239.54
JUNE 20, 1986 TO SEPT. 25, 1986	239.54	247.94	SEPT. 25, 1986	247.66



MONMOUTH COUNTY

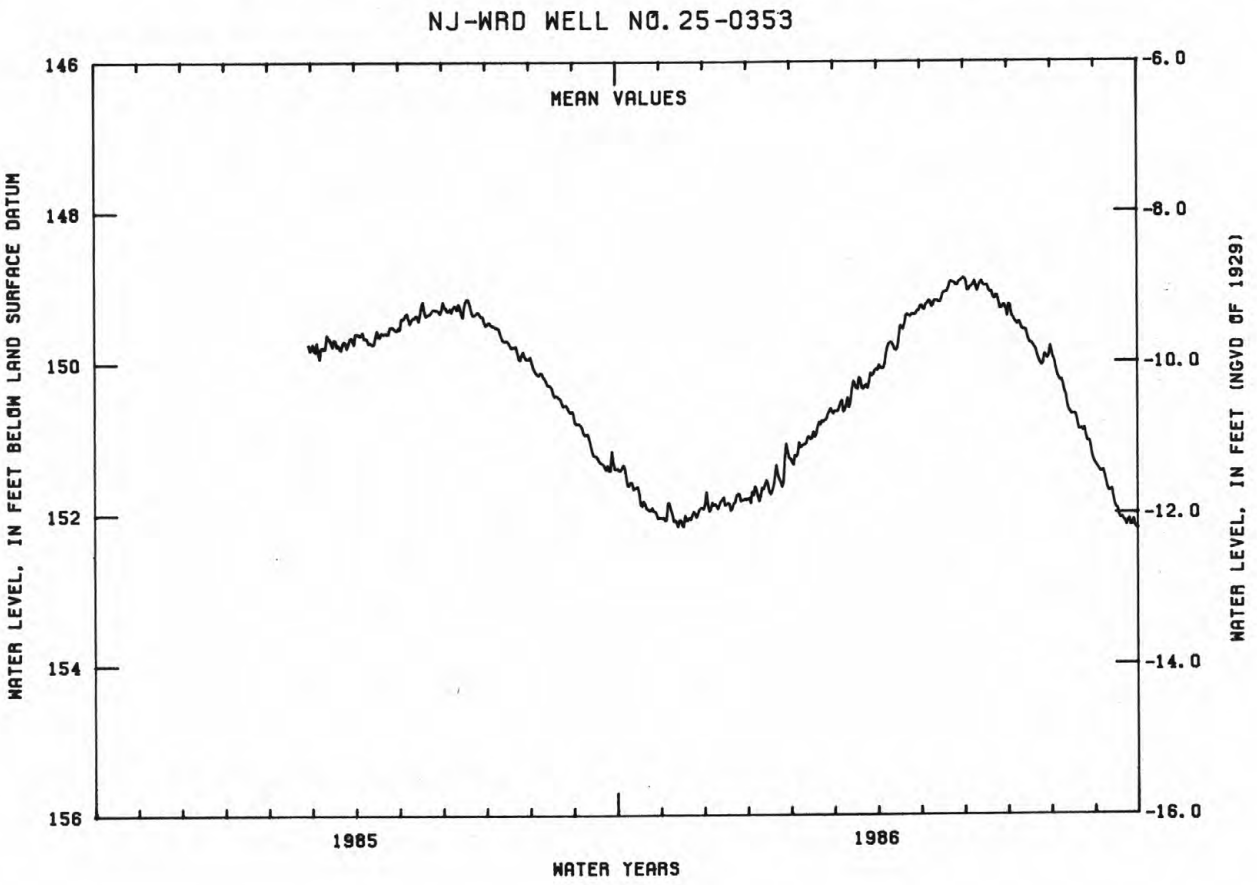
401542074053001. Local I.D., Ft. Monmouth 1-NCO. NJ-WRD Well Number, 25-0353.
LOCATION.--Lat 40°15'42", long 74°05'30", Hydrologic Unit 02030104, at Training Center, Wyckoff Rd. and Wayside Rd. New Shrewsbury Boro.
Owner: U.S. Army.
AQUIFER.--Wenonah-Mount Laurel aquifer of Cretaceous age.
WELL CHACTERISTICS.--Drilled artesian observation well, diameter 4 in, depth 327 ft, screened 321 to 327 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch.
DATUM.--Altitude of land surface datum is 140 ft, from topographic map.
Measuring point: Top edge of recorder shelf, 1.50 ft above land surface datum.
REMARKS.--Water-quality data for 1986 is published elsewhere in this report.
PERIOD OF RECORD.--February 1985 to current year. Records for 1985 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PREOID OF RECORD.--Highest water level 148.88 ft below land surface datum, May 31-Jun. 2, 1985; lowest, 152.26 ft below land surface datum Sept. 30, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	151.34	151.84	151.93	151.63	151.05	150.59	150.07	149.23	149.00	149.41	150.16	151.45
10	151.57	152.07	151.93	151.65	151.06	150.55	149.73	149.24	149.06	149.49	150.39	151.71
15	151.63	152.14	151.88	151.70	150.91	150.24	149.80	149.20	148.99	149.66	150.69	151.93
20	151.86	152.04	151.92	151.35	150.82	150.22	149.49	149.06	149.06	149.81	150.89	152.09
25	151.91	152.04	151.73	151.59	150.68	150.34	149.36	148.95	149.21	150.04	150.98	152.16
EOM	152.04	151.93	151.79	151.31	150.65	150.08	149.31	148.88	149.30	149.78	151.33	152.24
MEAN	151.73	152.02	151.84	151.57	150.94	150.39	149.66	149.10	149.06	149.68	150.63	151.85

WATER YEAR 1986 -- MEAN 150.71 HIGH 148.88 MAY 31,JUN 1,2 LOW 152.26 SEPT 30



MONMOUTH COUNTY

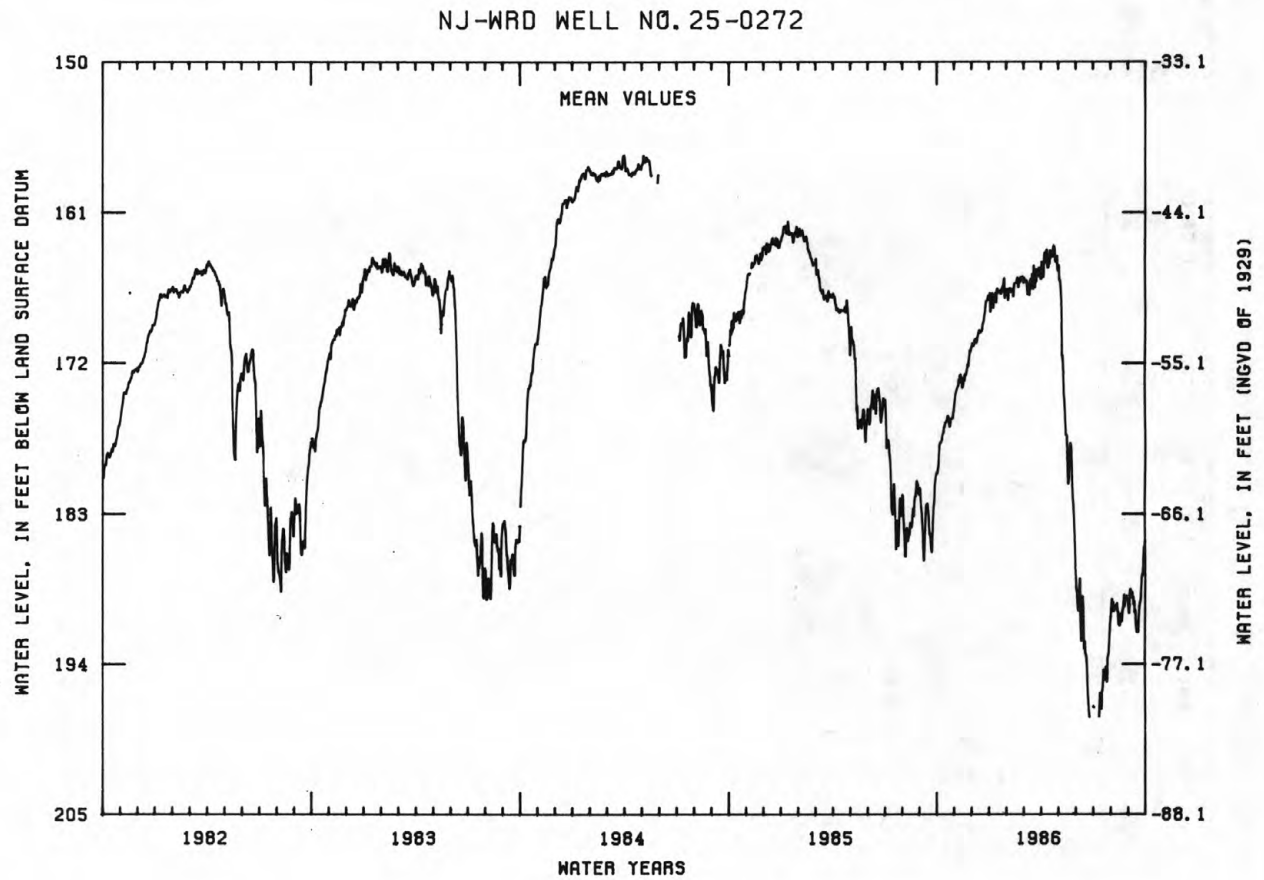
402208074145201. Local I.D., Marlboro 1 Obs. NJ-WRD Well Number, 25-0272.
LOCATION.--Lat 40°22'08", long 74°14'52", Hydrologic Unit 02030104, on the west side of New Jersey Route 79, 0.9 mi south of Morganville.
Owner: Marlboro Township Municipal Utilities Authority.
AQUIFER.--Farrington aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 680 ft, screened 670 to 680 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch.
DATUM.--Land-surface datum is 116.93 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top edge of recorder shelf, 2.50 ft above land-surface datum.
REMARKS.--Water level affected by nearby pumping.
PERIOD OF RECORD.--January 1973 to July 1975, March 1977 to current year. Records for 1973 to 1977 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 144.06 ft below land-surface datum, Apr. 4, 1973; lowest, 198.14 ft below land-surface datum, June 25, July 5, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	177.91	173.75	170.56	166.90	166.52	166.05	165.65	166.37	190.01	197.92	189.48	188.83
10	177.30	172.85	170.33	166.91	166.57	166.34	164.39	172.13	191.47	---	190.00	189.64
15	176.26	173.65	169.78	166.77	166.14	166.58	164.34	177.26	191.28	196.60	191.10	191.43
20	175.83	172.91	169.13	166.92	166.48	166.28	163.91	180.08	193.50	194.38	190.89	189.84
25	175.97	172.20	167.53	166.11	165.71	165.12	163.62	179.61	197.85	195.22	189.78	187.38
EOM	174.95	170.85	167.23	166.59	165.97	165.86	165.21	186.67	---	191.18	189.29	185.00
MEAN	176.87	172.92	169.26	166.93	166.30	165.90	164.44	175.80	191.76	195.24	189.93	189.02

WATER YEAR 1986 -- MEAN 177.03 HIGH 162.85 APR 11 LOW 198.14 JUN 25, JUL 5

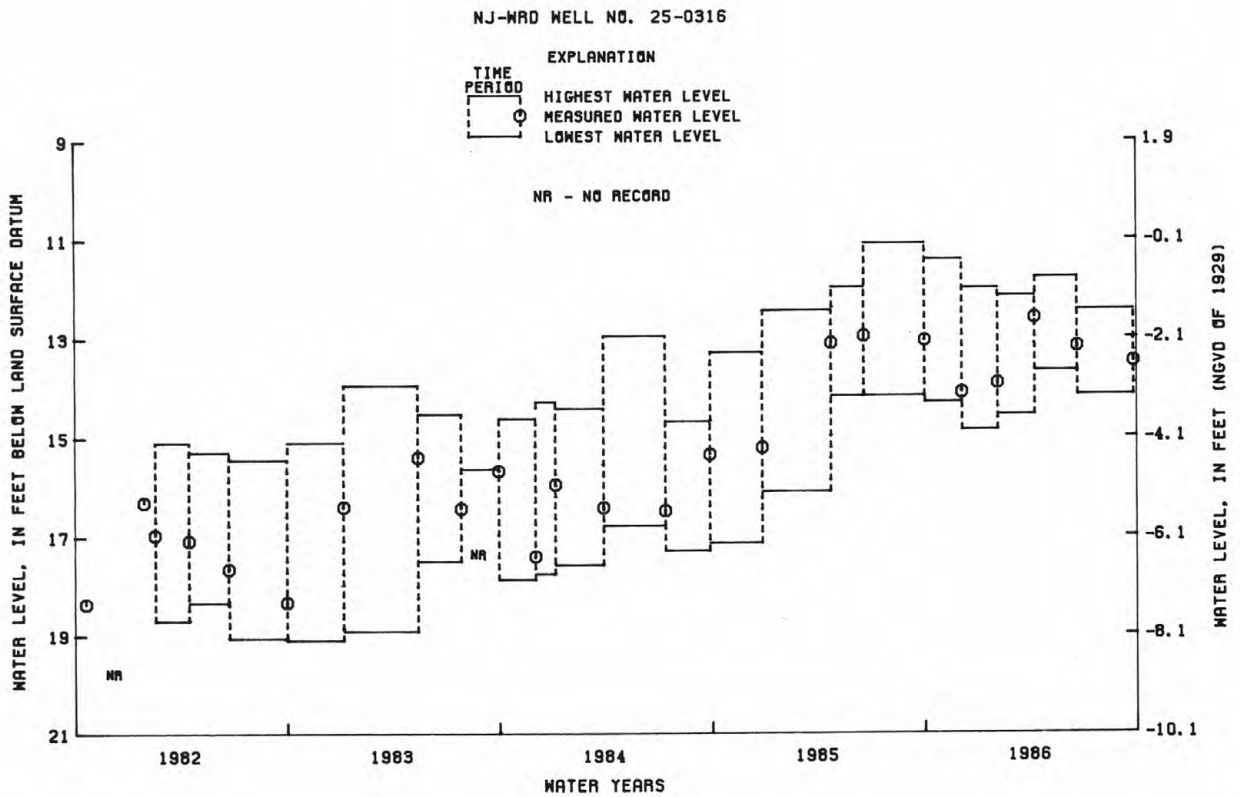


MONMOUTH COUNTY

402536073590501. Local I.D., Sandy Hook SP 1 Obs. NJ-WRD Well Number, 25-0316.
LOCATION.--Lat 40°25'36", long 73°59'05", Hydrologic Unit 02030104, about 1.9 mi north of the main entrance of Sandy Hook National Park, Middletown Township.
Owner: National Park Service.
AQUIFER.--Old Bridge aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 8 in, depth 397 ft, screened 371 to 397 ft.
INSTRUMENTATION.--Water-level extremes recorder, February 1977 to May 1978, November 1978 to current year. Water-level recorder, May 1965 to August 1975.
DATUM.--Land-surface datum is 10.91 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Front edge of cutout in recorder housing, 1.20 ft above land-surface datum.
REMARKS.--Water level affected by tidal fluctuation.
PERIOD OF RECORD.--May 1965 to August 1975, February 1977 to May 1978, November 1978 to current year. Records for 1965 to 1975 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 8.99 ft below land-surface datum, Jan. 23, 1966; lowest, 20.12 ft below land-surface datum, between Sept. 7 and Nov. 2, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 30, 1985 TO DEC. 3, 1985	11.41	14.30	DEC. 3, 1985	14.11
DEC. 3, 1985 TO FEB. 3, 1986	12.00	14.87	FEB. 3, 1986	13.93
FEB. 3, 1986 TO APR. 7, 1986	12.16	14.57	APR. 7, 1986	12.61
APR. 7, 1986 TO JUNE 20, 1986	11.78	13.68	JUNE 20, 1986	13.18
JUNE 20, 1986 TO SEPT. 25, 1986	12.44	14.17	SEPT. 25, 1986	13.49



MONMOUTH COUNTY

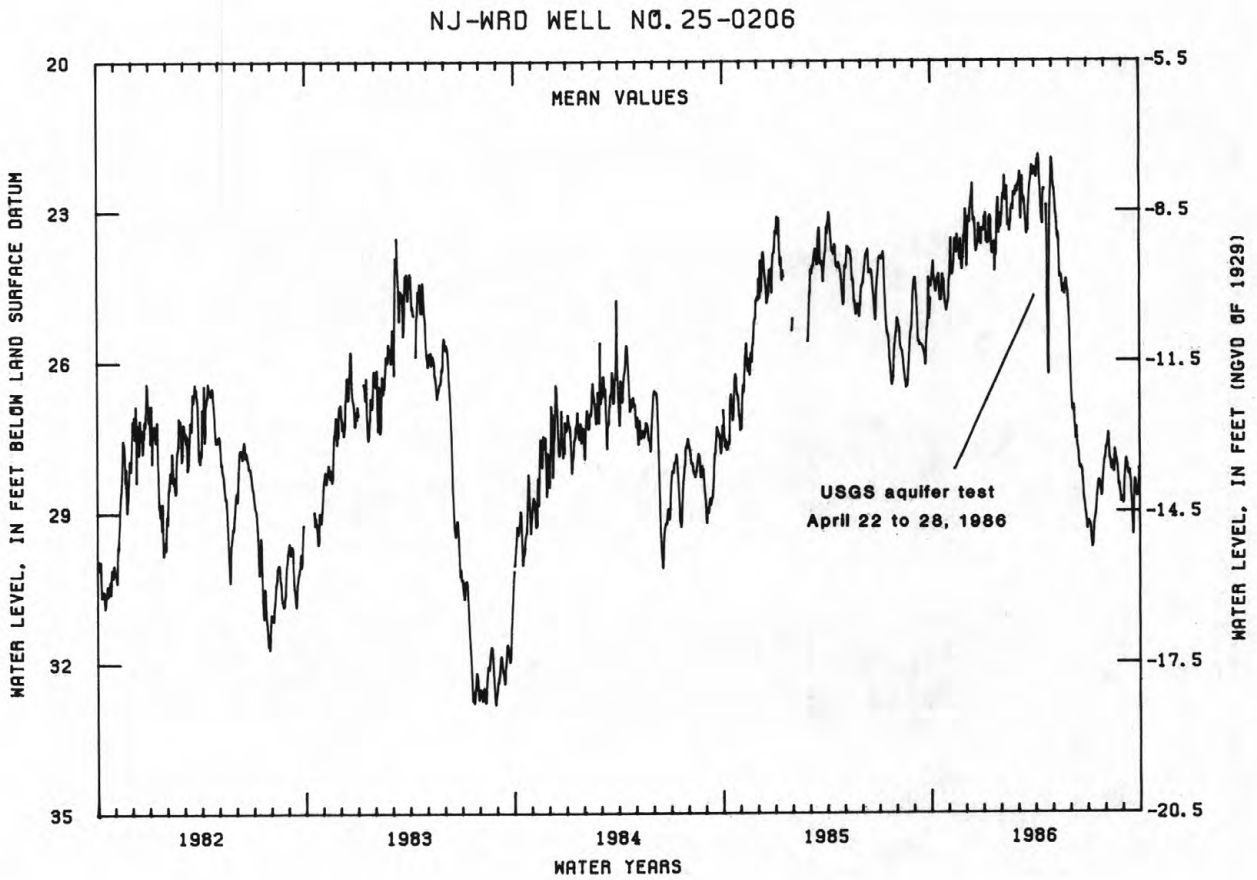
402626074114204. Local I.D., Keyport Borough WD 4 Obs. NJ-WRD Well Number, 25-0206.
LOCATION.--Lat 40°26'25", long 74°11'45", Hydrologic Unit 02030104, at the unused Myrtle Avenue Water Plant, Keyport.
Owner: Keyport Borough Water Department.
AQUIFER.--Old Bridge aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 8 in, depth 249 ft, screened 225 to 249 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch.
DATUM.--Land-surface datum is 14.47 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top edge of recorder shelf, 2.30 ft above land-surface datum.
REMARKS.--Water level affected by tidal fluctuation. Water-quality data for 1986 is published elsewhere in this report.
Water level affected by USGS aquifer test, April 22 to 28, 1986.
PERIOD OF RECORD.--June 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 20.57 ft below land-surface datum, Mar. 27, 1986; lowest, 34.88 ft below land-surface datum, July 22, 1980.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	24.00	23.54	23.39	23.04	22.66	22.37	22.15	22.56	26.86	29.26	27.68	28.22
10	24.61	24.07	22.93	23.64	22.74	22.31	22.39	23.39	27.33	29.70	27.94	28.18
15	24.25	23.83	23.20	23.69	23.21	22.99	23.27	24.33	27.73	29.08	28.05	28.38
20	24.57	23.80	23.79	23.61	22.92	23.40	---	24.63	28.09	28.45	27.95	29.15
25	24.68	24.17	23.39	23.11	22.67	22.37	26.26	24.48	28.74	28.57	28.48	28.63
EOM	24.81	23.30	23.36	23.34	22.60	22.13	22.20	25.16	29.19	27.96	28.72	28.13
MEAN	24.52	23.89	23.33	23.44	22.88	22.66	22.96	23.83	27.71	28.91	28.08	28.49

WATER YEAR 1986 -- MEAN 25.06 HIGH 20.57 MAR 27 LOW 30.83 JUL 10



MORRIS COUNTY

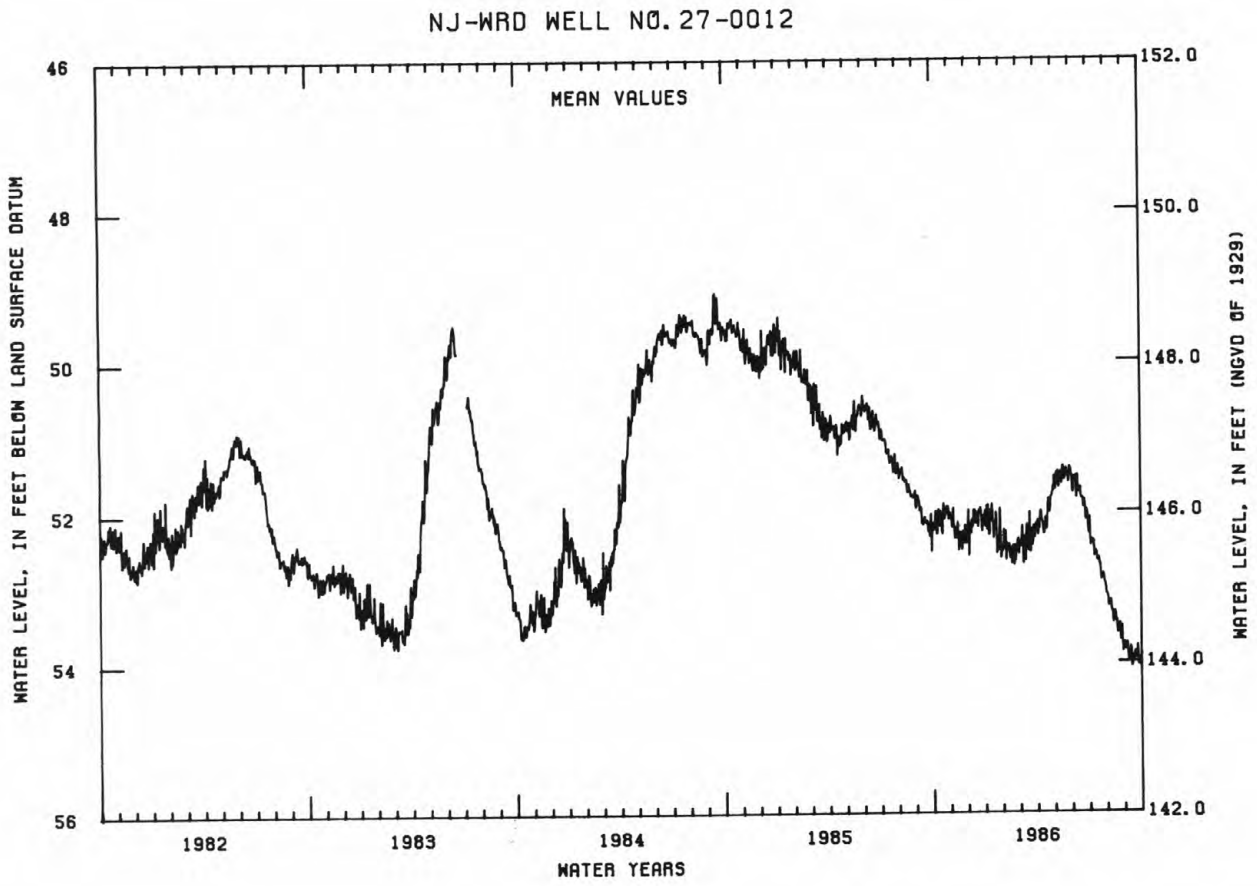
404639074230001. Local I.D., Briarwood School Obs. NJ-WRD Well Number, 27-0012.
LOCATION.--Lat 40°46'39", long 74°23'00", Hydrologic Unit 02030103, at Briarwood School near Florham Park.
Owner: U.S. Geological Survey.
AQUIFER.--Stratified drift of Pleistocene age.
WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in, depth 110 ft, screened 100 to 110 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch.
DATUM.--Altitude of land-surface datum is 198 ft, by altimeter.
Measuring point: Top edge of recorder shelf, 3.00 ft above land-surface datum.
REMARKS.--Water-quality data for 1986 is published elsewhere in this report.
PERIOD OF RECORD.--March 1967 to May 1975, April 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, 34.17 ft below land-surface datum, June 3, 1968; lowest, 54.15 ft below land-surface datum, Sept. 13, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	51.99	51.95	52.19	51.91	52.26	52.35	52.23	51.49	51.55	52.37	53.23	53.75
10	51.97	52.21	52.18	52.01	52.49	52.33	52.13	51.50	51.73	52.60	53.33	53.90
15	52.02	52.51	52.16	52.35	52.48	52.34	52.18	51.56	51.74	52.65	53.33	53.92
20	52.10	52.28	52.00	52.08	52.71	52.54	51.91	51.55	51.83	52.70	53.62	53.90
25	51.96	52.42	52.13	52.22	52.44	52.39	51.81	51.54	52.11	52.83	53.71	54.04
EOM	52.08	52.31	51.99	52.48	52.56	52.28	51.73	51.52	52.26	53.10	53.75	53.89
MEAN	52.09	52.28	52.12	52.22	52.49	52.36	52.04	51.53	51.80	52.65	53.44	53.91

WATER YEAR 1986 -- MEAN 52.41 HIGH 51.31 MAY 16 LOW 54.15 SEP 13

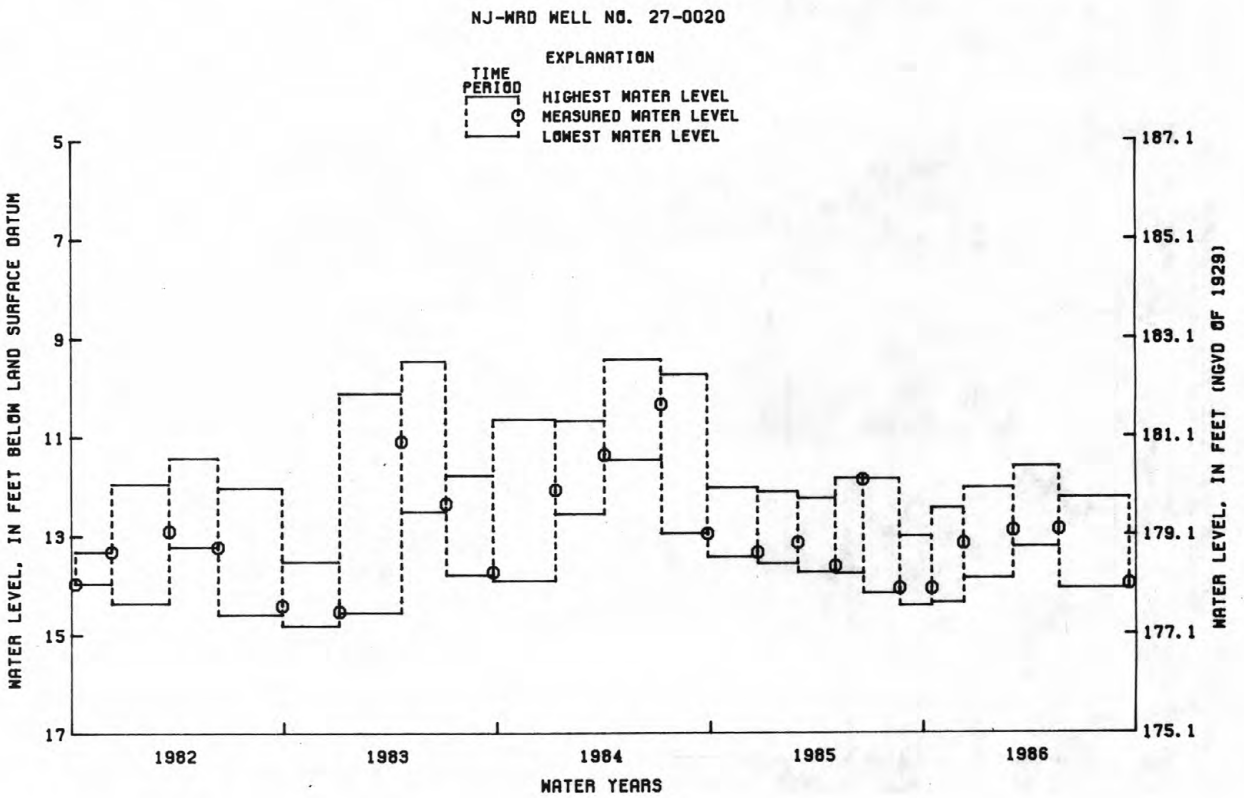


MORRIS COUNTY

405027074232301. Local I.D., Troy Meadows 1 Obs. NJ-WRD Well Number, 27-0020.
LOCATION.--Lat 40°50'27", long 74°23'23", Hydrologic Unit 02030103, on the east side of Beverwyck Road, 0.8 mi north of intersection with Troy Road, Parsippany-Troy Hills Township.
Owner: U.S. Geological Survey.
AQUIFER.--Stratified drift of Pleistocene age.
WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in, depth 89 ft, screened 79 to 89 ft.
INSTRUMENTATION.--Water-level extremes recorder, April 1977 to current year. Water-level recorder, December 1965 to July 1970.
DATUM.--Land-surface datum is 192.07 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Front edge of cutout in recorder housing, 3.32 ft above land-surface datum.
REMARKS.--Water-quality data for 1986 is published elsewhere in this report.
PERIOD OF RECORD.--December 1965 to July 1970, April 1977 to current year. Periodic manual measurements, December 1970 to February 1975. 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, 6.00 ft below land-surface datum, Mar. 15-16, 1967 and June 15, 1968; lowest, 15.77 ft below land-surface datum, between Feb. 10 and May 31, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
OCT. 16, 1985 TO DEC. 10, 1985	12.45	14.37	DEC. 10, 1985	13.16
DEC. 10, 1985 TO MAR. 4, 1986	12.03	13.87	MAR. 4, 1986	12.90
MAR. 4, 1986 TO MAY 21, 1986	11.60	13.23	MAY 21, 1986	12.88
MAY 21, 1986 TO SEPT. 18, 1986	12.23	14.07	SEPT. 18, 1986	13.98



MORRIS COUNTY

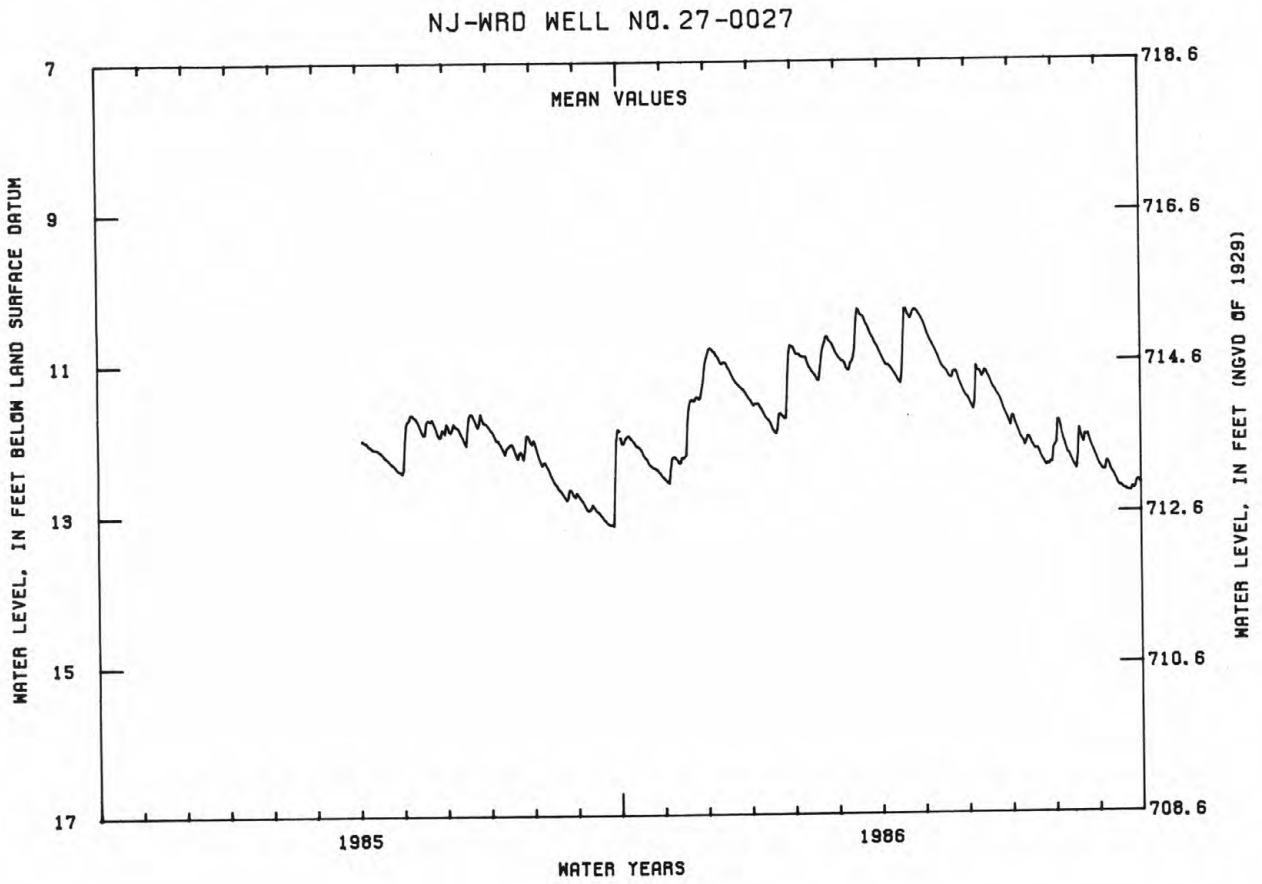
405531074361901. Local I.D., Berkshire Valley TW-9. NJ-WRD Well Number, 27-0027.
LOCATION.--Lat 40°55'31", long 74°36'19", Hydrologic Unit 02030103, about 1,000 ft east of Lower Berkshire Valley Rd. Jefferson Township.
Owner: State of New Jersey.
AQUIFER.--Stratified drift of Pleistocene age.
WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in, depth 115 ft, screened 78 to 98 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch.
DATUM.--Land-surface datum is 725.64 ft above National Geodedic Vertical Datum of 1929.(levels by Woodward-Clyde Consultants)
Measuring point: Top of 6 in casing, 2.25 ft above land surface datum.
PERIOD OF RECORD.--April 1985 to current year. Periodic manual measurments November 1981 to March 1985.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 9.70 ft below land-surface datum, Apr. 12, 1983; lowest, 13.17 ft below land-surface datum, Sept. 25, 1985

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.97	12.39	10.85	11.54	10.93	10.99	11.05	10.68	11.64	11.86	11.88	12.45
10	12.03	12.28	11.00	11.70	11.06	11.11	11.14	10.88	11.16	12.07	12.23	12.49
15	12.13	12.23	11.06	11.85	11.20	10.46	11.29	11.09	11.19	12.06	12.41	12.67
20	12.29	11.48	11.24	11.68	10.79	10.40	10.37	11.22	11.38	12.17	12.05	12.73
25	12.38	11.48	11.35	11.73	10.74	10.63	10.31	11.19	11.57	12.37	12.05	12.71
EOM	12.51	10.94	11.50	10.85	10.85	10.86	10.44	11.47	11.81	12.15	12.35	12.64
MEAN	12.20	11.91	11.12	11.55	10.94	10.75	10.77	11.03	11.41	12.11	12.13	12.58

WATER YEAR 1986 -- MEAN 11.54 HIGH 10.26 APR 18,19 LOW 12.75 SEP 22,23



MORRIS COUNTY

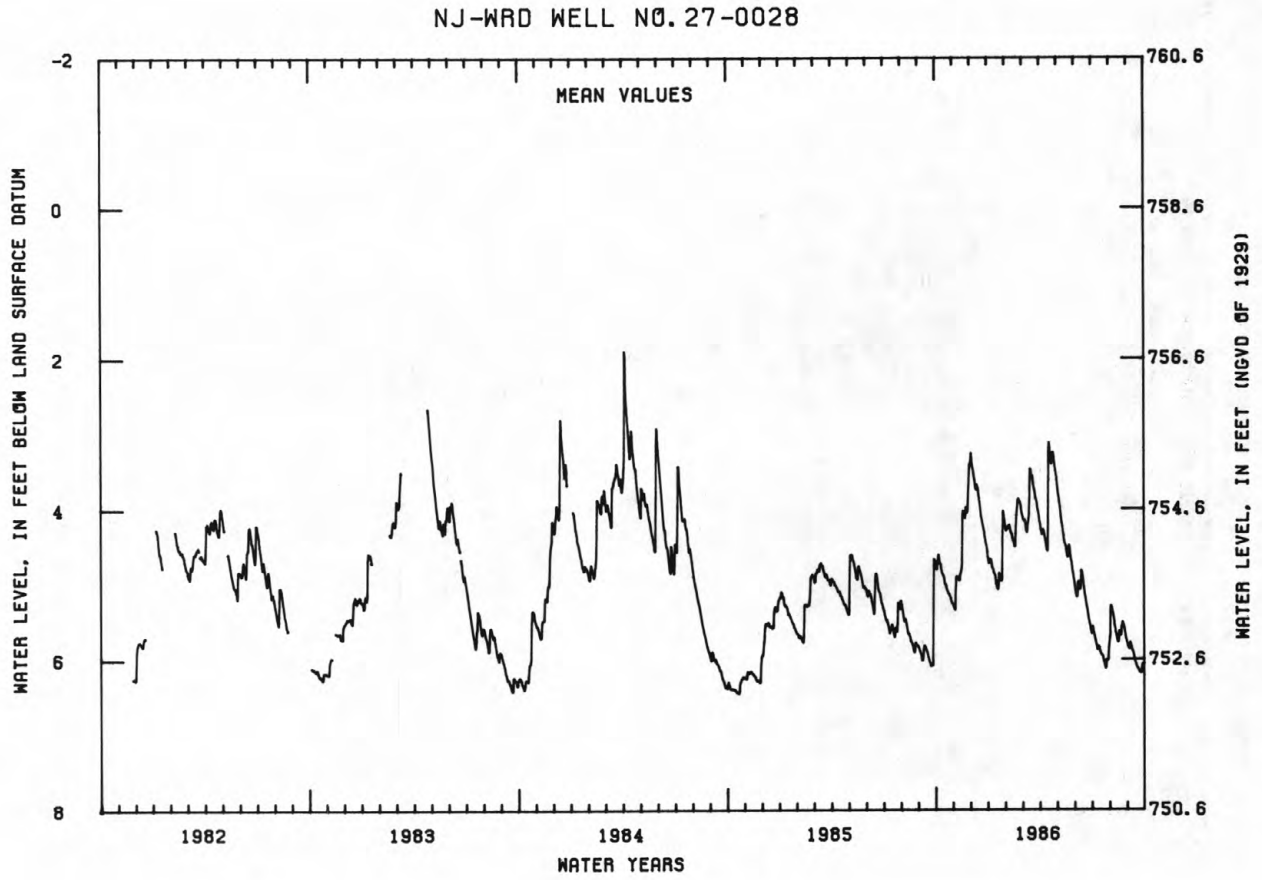
410207074270001. Local I.D., Green Pond TW5 Obs. NJ-WRD Well Number, 27-0028.
LOCATION.--Lat 41°02'07", long 74°27'00", Hydrologic Unit 02030103, about 500 ft east of Route 513 and 1.1 mi south of intersection with Route 23, Rockaway Township.
Owner: State of New Jersey.
AQUIFER.--Stratified drift of Pleistocene age.
WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in, depth 120 ft, screened 80 to 120 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch.
DATUM.--Land-surface datum is 758.56 ft above National Geodetic Vertical Datum of 1929 (levels by Woodward-Clyde Consultants).
Measuring point: Top edge of recorder shelf, 1.20 ft above land-surface datum.
PERIOD OF RECORD.--November 1981 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.35 ft below land-surface datum, Apr. 5, 1984; lowest, 6.45 ft below land-surface datum, Oct. 22, 1984.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.65	5.04	3.46	4.66	4.22	4.16	4.34	3.85	5.17	5.65	5.31	5.85
10	4.74	4.91	3.73	4.81	4.32	4.31	4.36	4.18	5.04	5.83	5.55	5.88
15	4.89	4.80	3.81	5.00	4.45	3.46	4.56	4.45	4.88	5.87	5.75	6.04
20	5.05	4.05	4.11	4.85	4.02	3.60	3.32	4.64	5.17	5.95	5.67	6.13
25	5.13	4.05	4.30	4.93	3.90	3.86	3.25	4.61	5.42	6.12	5.53	6.18
EOM	5.27	3.43	4.63	4.25	4.03	4.12	3.53	4.92	5.62	5.83	5.76	6.05
MEAN	4.94	4.48	3.92	4.72	4.19	3.94	3.87	4.35	5.16	5.87	5.58	6.00

WATER YEAR 1986 -- MEAN 4.75 HIGH 3.04 APR 17,18 LOW 6.19 SEP 25,26

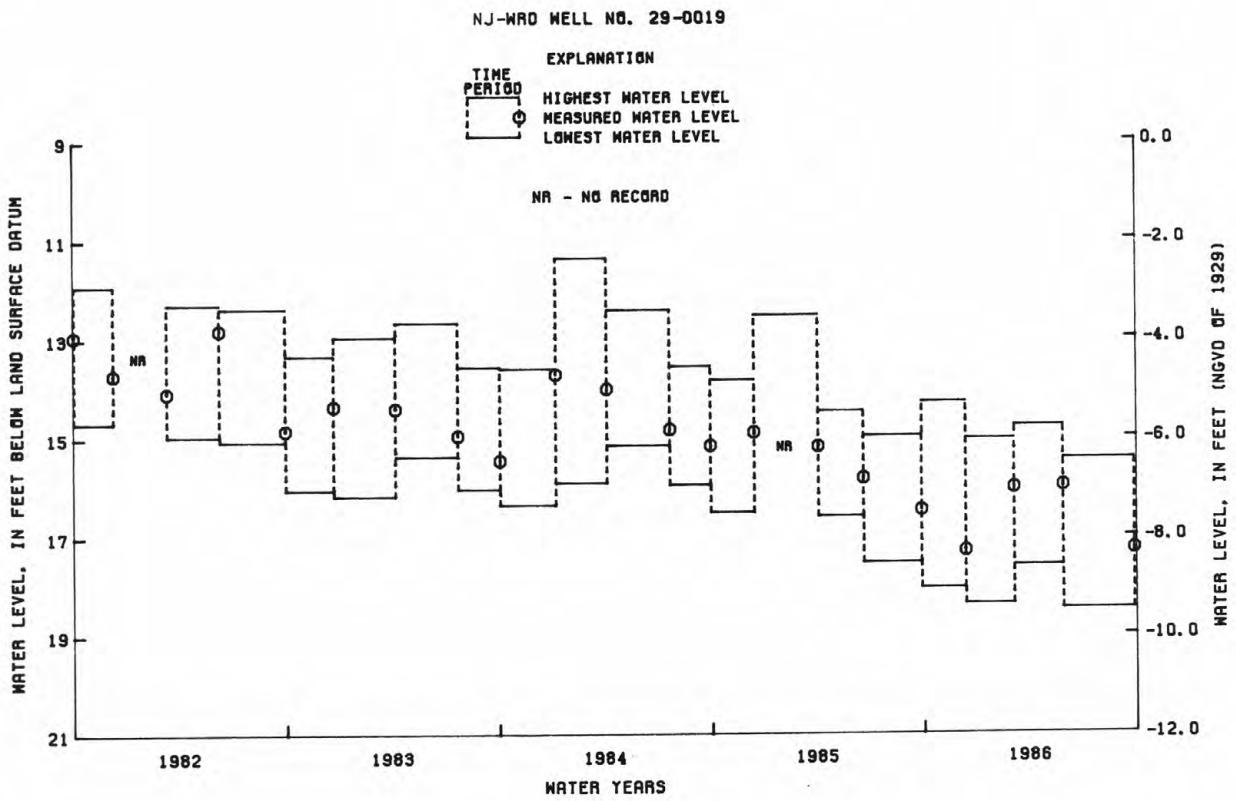


OCEAN COUNTY

394829074053503. Local I.D., Island Beach 3 Obs. NJ-WRD Well Number, 29-0019.
LOCATION.--Lat 39°48'29", long 74°05'35", Hydrologic Unit 02040301, in Island Beach State Park, about 6.6 mi south of main entrance, Berkeley Township.
Owner: U.S. Geological Survey.
AQUIFER.--Potomac-Raritan-Magothy aquifer system, undifferentiated, of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 8 in, depth 2,756 ft, screened 2,736 to 2,756 ft.
INSTRUMENTATION.--Water-level extremes recorder, February 1977 to current year. Water-level recorder, November 1968 to March 1975.
DATUM.--Land-surface datum is 9.02 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Front edge of cutout in recorder housing, 5.11 ft above land-surface datum.
REMARKS.--Water level affected by tidal fluctuation.
PERIOD OF RECORD.--November 1968 to March 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, 5.95 ft above land-surface datum, Apr. 23, 1969; lowest, 18.48 ft below land-surface datum, between May 27 and Sept. 26, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 26, 1985 TO DEC. 11, 1985	14.28	18.05	DEC. 11, 1985	17.30
DEC. 11, 1985 TO MAR. 3, 1986	15.03	18.38	MAR. 3, 1986	16.03
MAR. 3, 1986 TO MAY 27, 1986	14.77	17.60	MAY 27, 1986	15.99
MAY 27, 1986 TO SEPT. 26, 1986	15.44	18.48	SEPT. 26, 1986	17.27

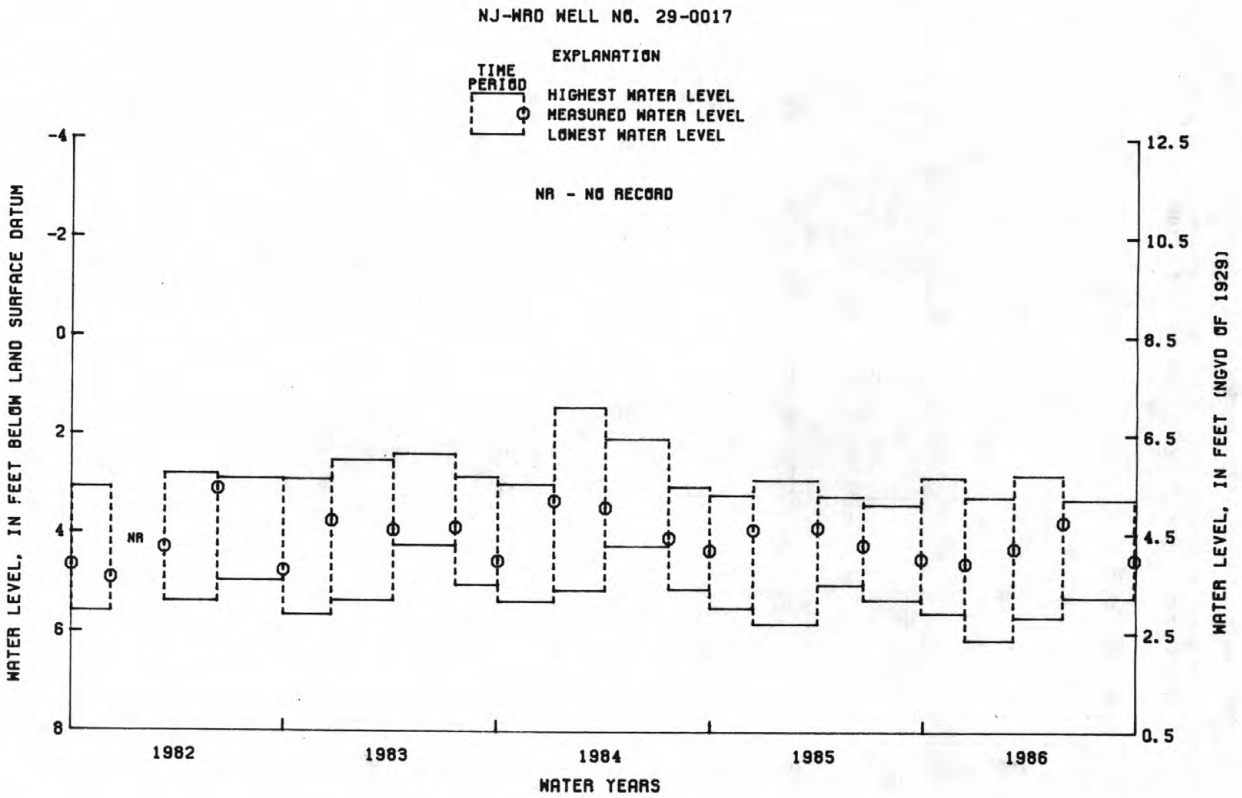


OCEAN COUNTY

394829074053501. Local I.D., Island Beach 1 Obs. NJ-WRD Well Number, 29-0017.
LOCATION.--Lat 39°48'29", long 74°05'35", Hydrologic Unit 02040301, in Island Beach State Park, about 6.6 mi south of main entrance, Berkeley Township.
Owner: U.S. Geological Survey.
AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.
WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 6 in, depth 397 ft, screened 377 to 397 ft.
INSTRUMENTATION.--Water-level extremes recorder, February 1977 to current year. Water-level recorder, July 1962 to March 1975.
DATUM.--Land-surface datum is 8.50 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Front edge of cutout in recorder housing, 3.40 ft above land-surface datum.
REMARKS.--Water level affected by tidal fluctuation.
PERIOD OF RECORD.--July 1962 to March 1975, February 1977 to current year. Records for 1962 to 1975 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.05 ft below land-surface datum, Dec. 6, 1962; lowest, 6.14 ft below land-surface datum, between Dec. 13, 1978 and Jan. 10, 1979 and between Dec. 11, 1985 and Mar. 3, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

WATER-LEVEL EXTREMES		MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 26, 1985 TO DEC. 11, 1985	2.86	DEC. 11, 1985	4.60
DEC. 11, 1985 TO MAR. 3, 1986	3.26	MAR. 3, 1986	4.29
MAR. 3, 1986 TO MAY 27, 1986	2.80	MAY 27, 1986	3.76
MAY 27, 1986 TO SEPT. 26, 1986	3.30	SEPT. 26, 1986	4.53



OCEAN COUNTY

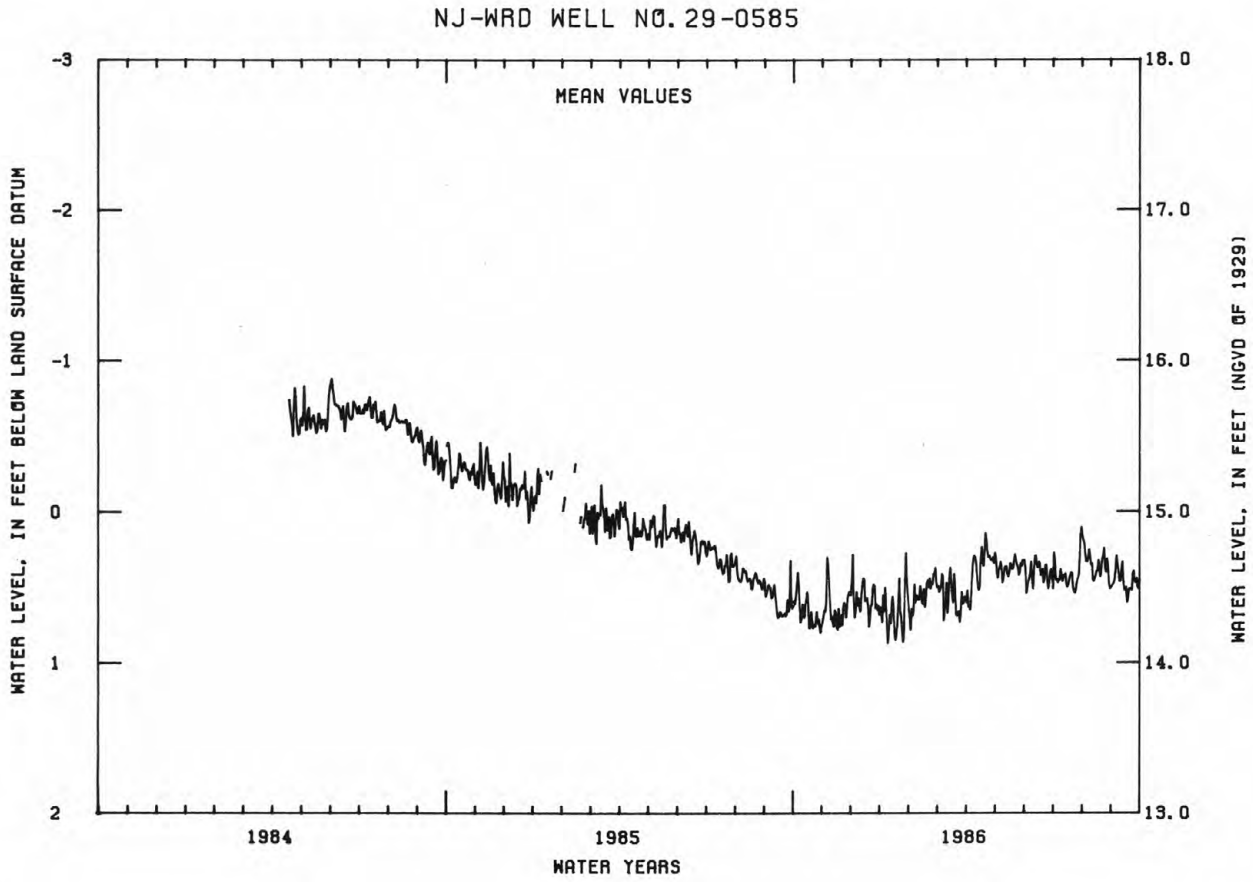
395028074104401. Local I.D., DOE-Forked River Obs. NJ-WRD Well Number, 29-0585.
LOCATION.--Lat 39°50'28", long 74°10'44", Hydrologic Unit 02040301, at the Forked River Game Farm, Forked River.
Owner: State of New Jersey.
AQUIFER.--Piney Point aquifer of Eocene age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 4 in, depth 959 ft, perforated casing 412 to 422 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch.
DATUM.--Altitude of land-surface datum is 15 ft, from topographic map.
Measuring point: Top edge of recorder shelf, 3.80 ft above land-surface datum.
PERIOD OF RECORD.--April 1984 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.83 ft above land-surface datum, June 1, 1984; lowest, 0.90 ft below land-surface datum, Jan. 24,25, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	0.40	0.30	0.65	0.50	0.48	0.49	0.65	0.38	0.46	0.45	0.33	0.37
10	0.61	0.69	0.66	0.68	0.58	0.58	0.30	0.43	0.51	0.42	0.35	0.46
15	0.53	0.76	0.59	0.81	0.51	0.37	0.49	0.43	0.37	0.48	0.42	0.51
20	0.72	0.68	0.71	0.44	0.50	0.50	0.27	0.37	0.38	0.40	0.43	0.51
25	0.66	0.70	0.49	0.78	0.41	0.73	0.29	0.37	0.45	0.51	0.37	0.46
EOM	0.73	0.55	0.63	0.71	0.47	0.57	0.34	0.32	0.44	0.10	0.50	0.45
MEAN	0.66	0.63	0.58	0.66	0.54	0.56	0.38	0.37	0.41	0.42	0.35	0. 46

WATER YEAR 1986 -- MEAN 0.50 HIGH 0.06 JUL 31 LOW 0.90 JAN 24,25



OCEAN COUNTY

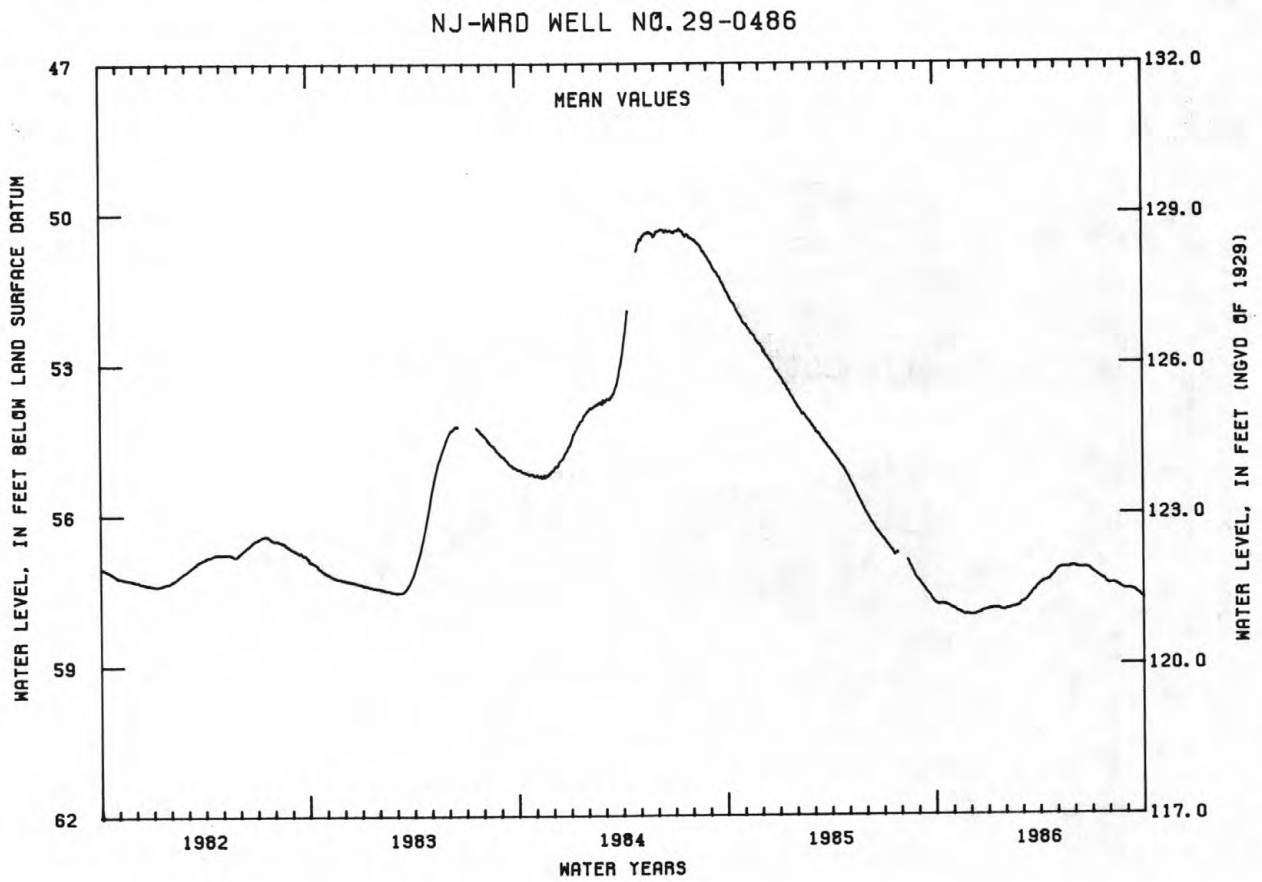
395714074223401. Local I.D., Crammer Obs. NJ-WRD Well Number, 29-0486.
LOCATION.--Lat 39°57'14", long 74°22'34", Hydrologic Unit 02040301, about 800 ft east of Central Railroad of New Jersey, Whiting.
Owner: Whiting Bible Church.
AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.
WELL CHARACTERISTICS.--Water-table observation well, diameter 8 in, depth 69 ft, slotted steel casing, gravel packed.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch.
DATUM.--Land-surface datum is 179.05 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top of 8-inch coupling, 0.90 ft above land-surface datum.
REMARKS.--Originally a dug well in which slotted casing was installed on March 31, 1966, and the well deepened from 60 to 69 ft.
PERIOD OF RECORD.--May 1952 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 47.80 ft below land-surface datum, June 9-14, 20-29, 1973; lowest, 58.02 ft below land surface datum, Nov. 21,22,29-30, Dec. 1-8, 1985. Well was dry, November 1957 to February 1958, December 1965, before deepening.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	57.81	57.92	58.02	57.89	57.90	57.75	57.38	57.10	57.08	57.19	57.40	57.52
10	57.80	57.95	58.01	57.89	57.88	57.71	57.35	57.08	57.09	57.23	57.40	57.53
15	57.80	57.98	57.99	57.89	57.87	57.63	57.33	57.08	57.09	57.27	57.43	57.55
20	57.82	58.01	57.96	57.89	57.85	57.56	57.28	57.08	57.08	57.31	57.47	57.60
25	57.85	58.01	57.93	57.92	57.83	57.51	57.23	57.06	57.10	57.35	57.50	57.66
EOM	57.88	58.02	57.91	57.91	57.78	57.43	57.15	57.05	57.14	57.41	57.52	57.70
MEAN	57.82	57.97	57.97	57.90	57.86	57.61	57.31	57.08	57.09	57.28	57.45	57.58

WATER YEAR 1986 -- MEAN 57.58 HIGH 57.04 MAY 30, JUN 1 LOW 58.02 NOV 21,22,29-30, DEC 1-8

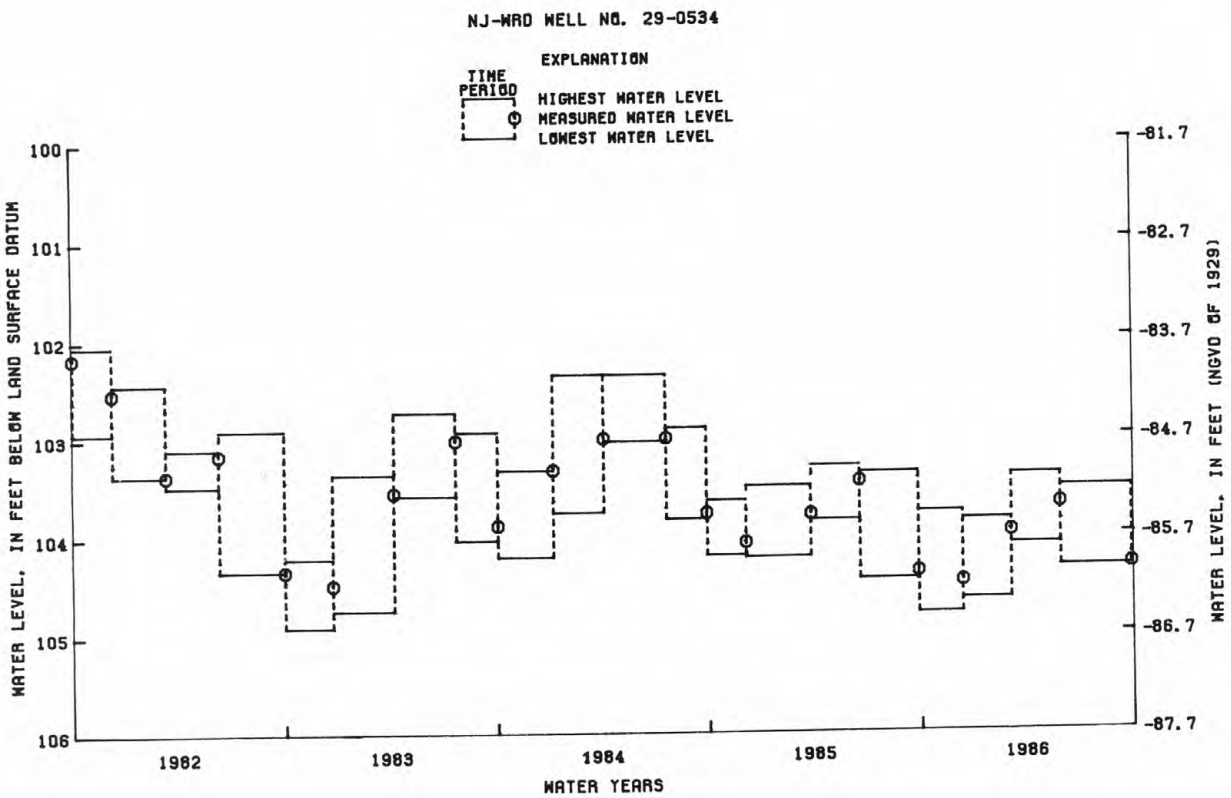


OCEAN COUNTY

395609074124001. Local I.D., Toms River TW 2 Obs. NJ-WRD Well Number, 29-0534.
LOCATION.--Lat 39°56'09", long 74°12'40", Hydrologic Unit 02040301, about 200 ft east of Double Trouble Road on the north side of Jakes Branch, South Toms River.
Owner: U.S. Geological Survey.
AQUIFER.--Englishtown aquifer of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 8 in, depth 1,146 ft, screened 1,080 to 1,146 ft.
INSTRUMENTATION.--Water-level extremes recorder, February 1977 to current year. Water-level recorder, December 1965 to March 1975.
DATUM.--Land-surface datum is 18.34 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Front edge of cutout in recorder housing, 1.70 ft above land-surface datum.
PERIOD OF RECORD.--December 1965 to March 1975, February 1977 to current year. Records for 1965 to 1975 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 48.37 ft below land-surface datum, May 28, 1966; lowest, 104.91 ft below land-surface datum, between Sept. 29 and Dec. 21, 1982.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 26, 1985 TO DEC. 11, 1985	103.76	104.79	DEC. 11, 1985	104.47
DEC. 11, 1985 TO MAR. 3, 1986	103.84	104.65	MAR. 3, 1986	103.97
MAR. 3, 1986 TO MAY 27, 1986	103.39	104.10	MAY 27, 1986	103.69
MAY 27, 1986 TO SEPT. 26, 1986	103.52	104.33	SEPT. 26, 1986	104.31



OCEAN COUNTY

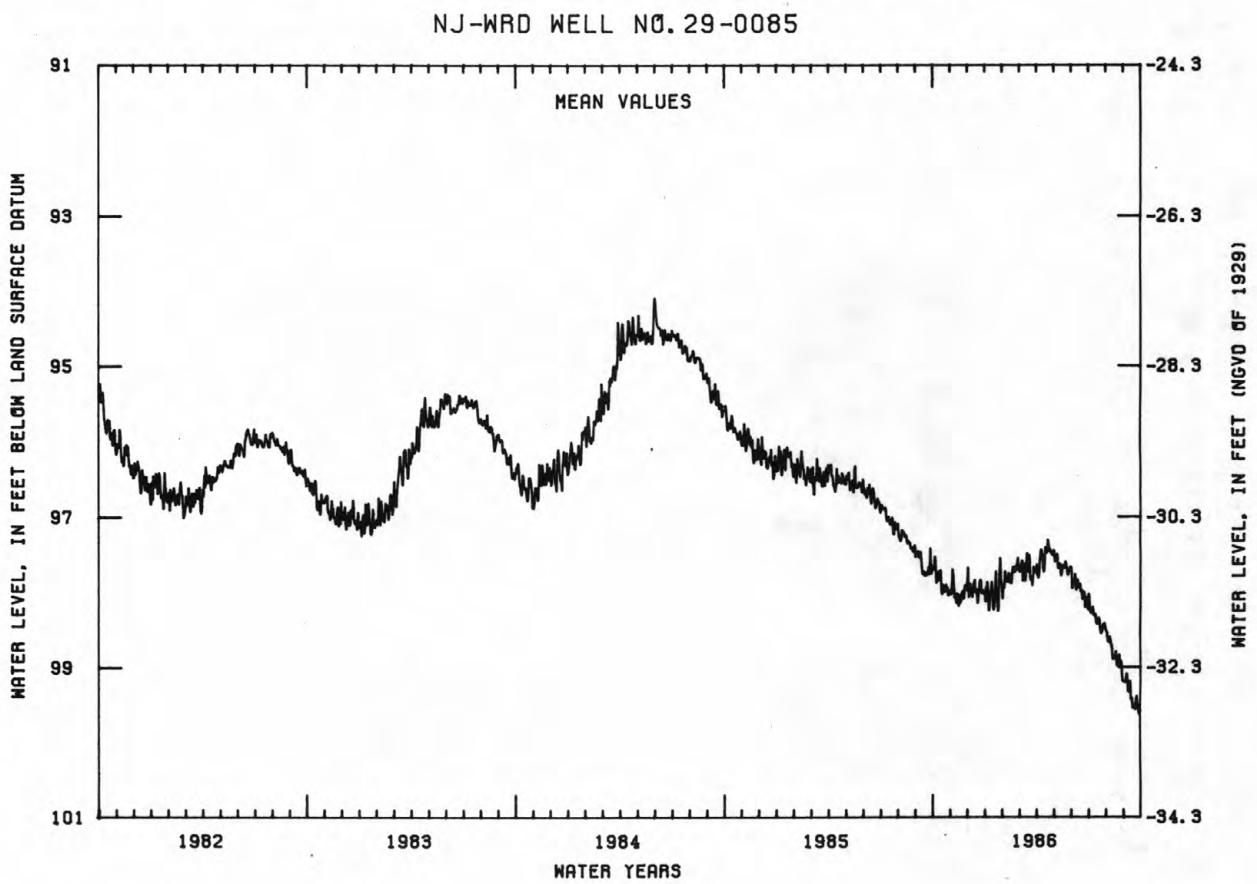
395930074142101. Local I.D., Toms River Chem 84 Obs. NJ-WRD Well Number, 29-0085.
LOCATION.--Lat 39°59'29", long 74°14'20", Hydrologic Unit 02040301, at Toms River Plant, Ciba-Geigy Corporation, Dover Township.
Owner: Ciba-Geigy Corporation.
AQUIFER.--Potomac-Raritan-Magothy aquifer system, undifferentiated, of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 8 in, depth 1,480 ft, screened 1,460 to 1,480 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch.
DATUM.--Land-surface datum is 66.71 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top edge of recorder shelf, 2.70 ft above land-surface datum.
PERIOD OF RECORD.--July 1968 to July 1975, March 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, 62.32 ft below land-surface datum, July 19, 1968 and Feb. 9, 1969; lowest, 99.66 ft below land-surface datum, Sept. 29, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	97.52	97.69	98.01	97.86	97.72	97.67	97.81	97.53	97.87	98.25	98.66	99.13
10	97.73	98.03	98.06	97.99	97.84	97.72	97.45	97.68	97.97	98.25	98.70	99.33
15	97.70	98.12	98.00	98.17	97.75	97.48	97.70	97.78	97.94	98.37	98.87	99.43
20	97.92	98.04	98.10	97.72	97.74	97.59	97.43	97.68	97.97	98.34	98.98	99.50
25	97.89	98.08	97.85	98.17	97.63	97.91	97.43	97.70	98.11	98.53	98.96	99.47
EOM	98.00	97.97	98.00	98.00	97.67	97.69	97.51	97.66	98.13	98.45	99.19	99.58
MEAN	97.84	98.00	97.95	97.99	97.78	97.71	97.54	97.64	97.95	98.34	98.82	99.38

WATER YEAR 1986 -- MEAN 98.08 HIGH 97.25 APR 21 LOW 99.66 SEP 29



OCEAN COUNTY

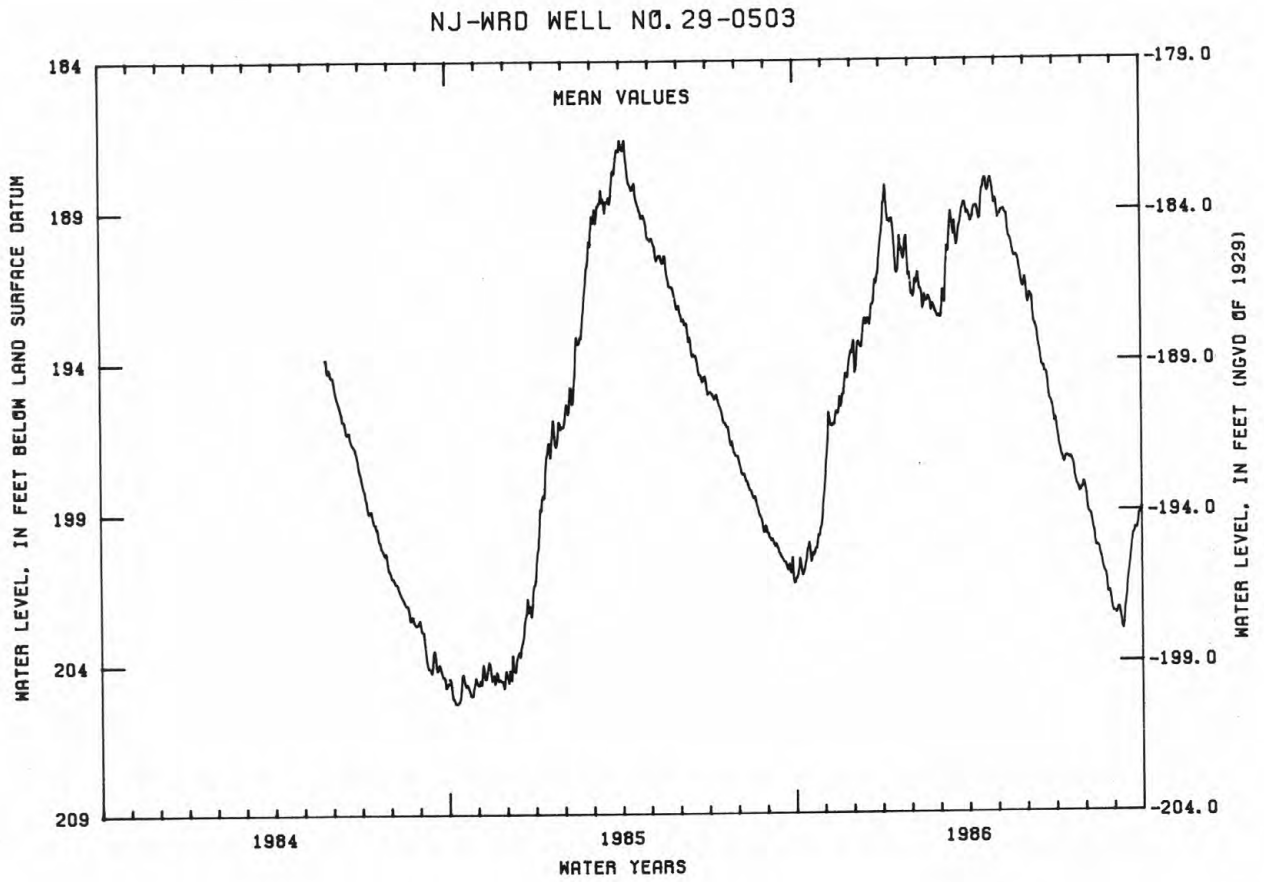
400210074031001. Local I.D., Mantoloking 6 Obs. NJ-WRD Well Number, 29-0503.
LOCATION.--Lat 40°02'10", long 74°03'10", Hydrologic Unit 02040301, at the Bay Avenue water treatment plant, Mantoloking.
Owner: New Jersey Water Company.
AQUIFER.--Englishtown aquifer of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 8 in, depth 906 ft, screened 845 to 906 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch.
DATUM.--Altitude of land-surface datum is 5 ft, from topographic map.
Measuring point: Top edge of recorder shelf, 2.40 ft above land-surface datum.
REMARKS.--Water level affected by tidal fluctuation.
PERIOD OF RECORD.--May 1984 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 185.95 ft below land-surface datum, Apr. 6, 1985; lowest, 205.61 ft below land-surface datum, Oct. 24, 1984.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	200.50	195.68	193.85	188.17	191.29	192.22	189.39	189.14	191.92	196.60	199.02	202.21
10	200.83	196.05	193.54	189.40	191.62	190.65	188.90	188.98	192.76	197.35	199.58	202.94
15	199.98	195.73	192.78	190.53	191.80	189.05	189.26	189.88	193.52	197.22	200.16	201.29
20	200.40	195.07	192.49	189.85	191.94	189.89	187.95	190.49	194.19	197.38	200.86	199.98
25	199.73	194.56	191.30	190.37	192.23	189.42	188.03	190.72	195.07	198.17	201.71	199.59
EOM	198.35	193.73	189.98	191.38	192.51	188.95	188.79	191.39	195.79	198.05	202.36	198.91
MEAN	200.25	195.44	192.51	189.96	191.88	190.29	188.69	189.95	193.52	197.36	200.31	201.04

WATER YEAR 1986 -- MEAN 194.27 HIGH 187.33 APR 25 LOW 203.22 SEP 10



OCEAN COUNTY

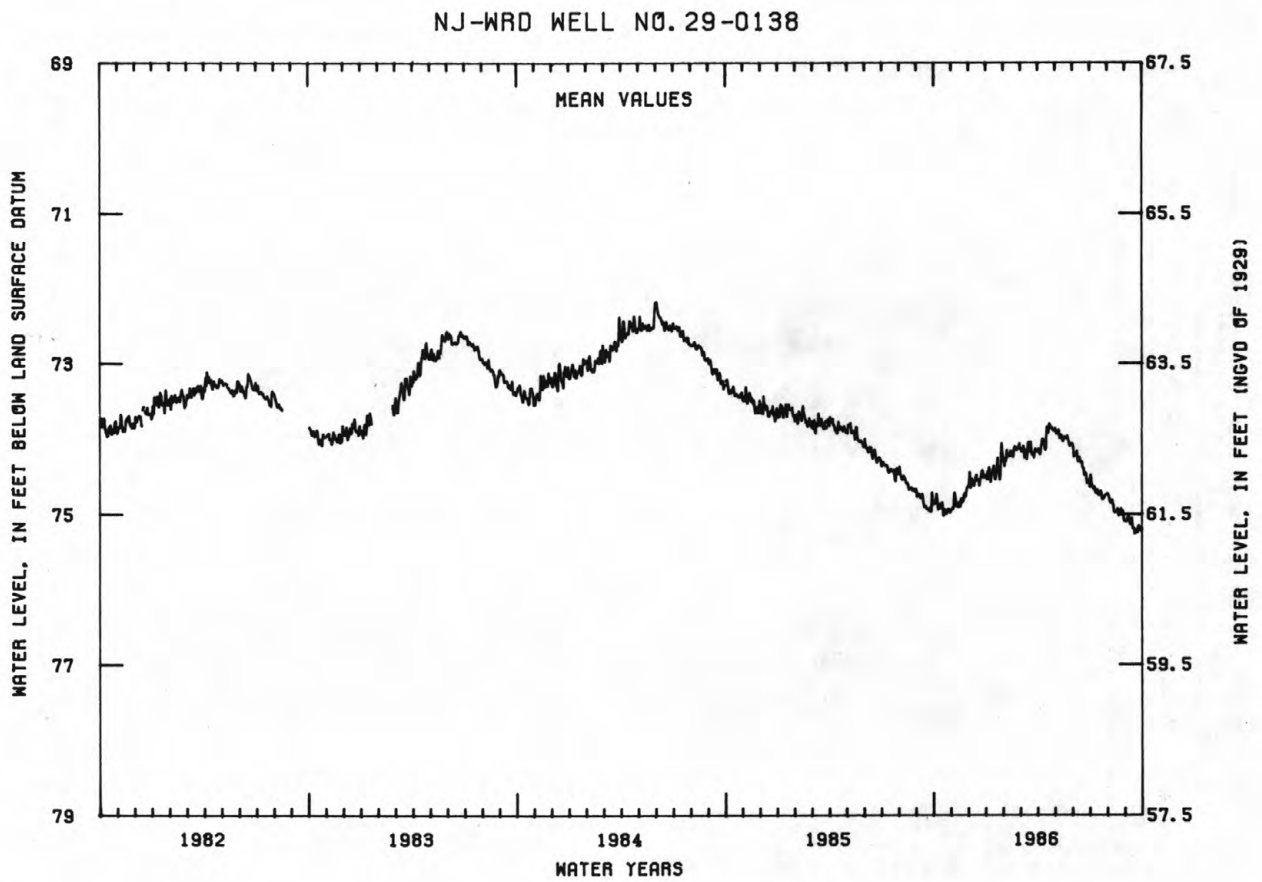
400416074270101. Local I.D., Colliers Mills TW 1 Obs. NJ-WRD Well Number, 29-0138.
LOCATION.--Lat 40°04'14", long 74°27'02", Hydrologic Unit 02040301, along western shore of Colliers Mills Pond, Jackson Township.
Owner: U.S. Geological Survey.
AQUIFER.--Englishtown aquifer of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 427 ft, screened 417 to 427 ft.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch.
DATUM.--Land-surface datum is 136.52 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top of 6 inch coupling, 2.20 ft above land-surface datum.
PERIOD OF RECORD.--February 1964 to July 1975, March 1977 to current year. Records for 1964 to 1975 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 52.02 ft below land-surface datum, Feb. 19, 1964; lowest, 75.28 ft below land-surface datum, Sept. 17, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	74.73	74.71	74.61	74.37	74.15	74.15	74.21	73.90	74.20	74.62	74.84	75.04
10	74.86	74.87	74.62	74.43	74.23	74.18	74.01	73.99	74.30	74.68	74.87	75.14
15	74.84	74.90	74.55	74.52	74.16	74.04	74.13	74.04	74.31	74.72	74.97	75.19
20	74.96	74.79	74.58	74.25	74.15	74.11	73.88	74.00	74.39	74.69	75.02	75.22
25	74.93	74.77	74.43	74.48	74.11	74.25	73.85	74.04	74.53	74.79	74.99	75.20
EOM	74.94	74.64	74.47	74.32	74.13	74.15	73.90	74.07	74.58	74.73	75.10	75.19
MEAN	74.91	74.80	74.53	74.40	74.18	74.16	73.99	73.99	74.34	74.70	74.93	75.15

WATER YEAR 1986 -- MEAN 74.51 HIGH 73.77 APR 21 LOW 75.28 SEP 17



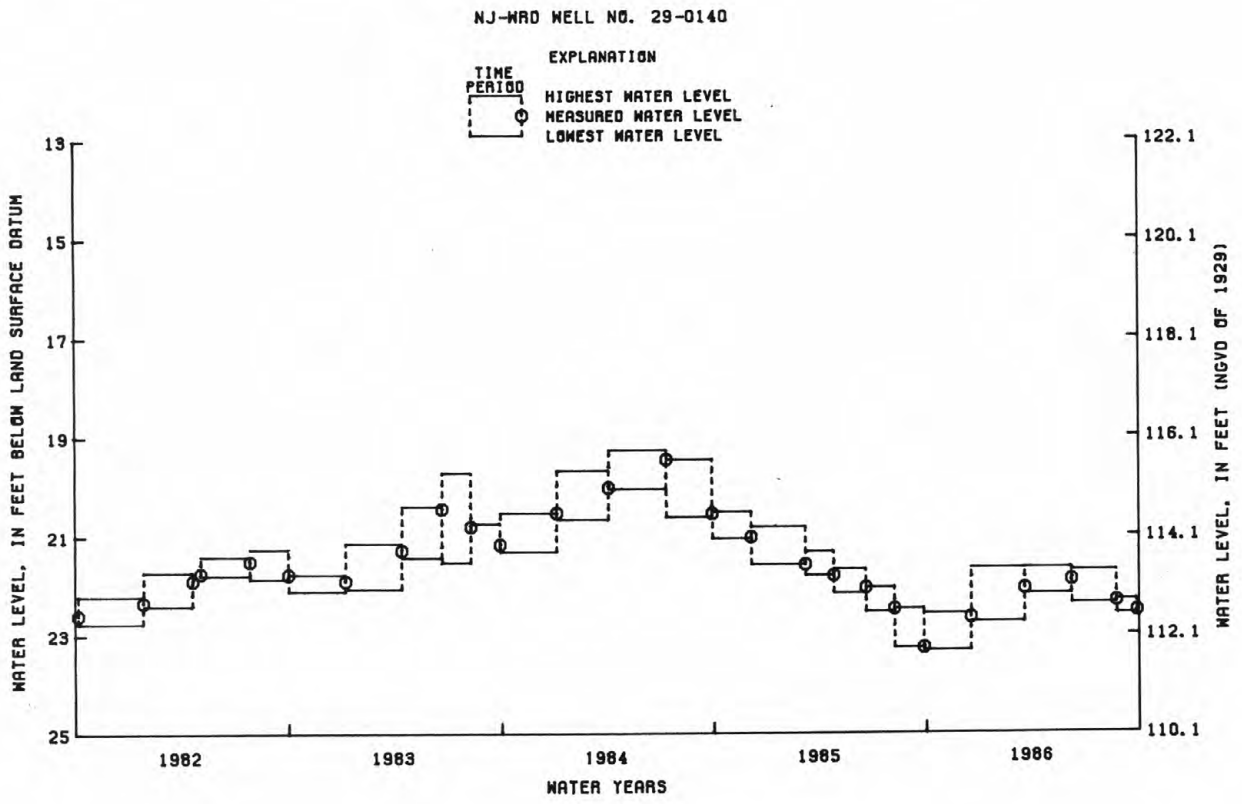
OCEAN COUNTY

400416074270103. Local I.D., Colliers Mills TW 3 Obs. NJ-WRD Well Number, 29-0140.
LOCATION.--Lat 40°04'14", long 74°27'02", Hydrologic Unit 02040301, along western shore of Colliers Mills Pond, Jackson Township.
Owner: U.S. Geological Survey.
AQUIFER.--Wenonah-Mount Laurel aquifer of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 270 ft, screened 257 to 267 ft.
INSTRUMENTATION.--Water-level extremes recorder, October 1976 to current year. Water-level recorder, January 1964 to July 1975.
DATUM.--Land-surface datum is 135.15 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Front edge of cutout in recorder housing, 3.49 ft above land-surface datum.
PERIOD OF RECORD.--January 1964 to July 1975, October 1976 to current year. Records for 1964 to 1975 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.72 ft below land-surface datum, May 9, 1964; lowest, 23.32 ft below land-surface datum, between Sept. 26 and Dec. 16, 1985.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

WATER-LEVEL EXTREMES		MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL / LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 26, 1985 TO DEC. 16, 1985	22.56 / 23.32	DEC. 16, 1985	22.65
DEC. 16, 1985 TO MAR. 17, 1986	21.65 / 22.74	MAR. 17, 1986	22.07
MAR. 17, 1986 TO JUNE 6, 1986	21.65 / 22.18	JUNE 6, 1986	21.90
JUNE 6, 1986 TO AUG. 22, 1986	21.70 / 22.37	AUG. 22, 1986	22.33

AUG.

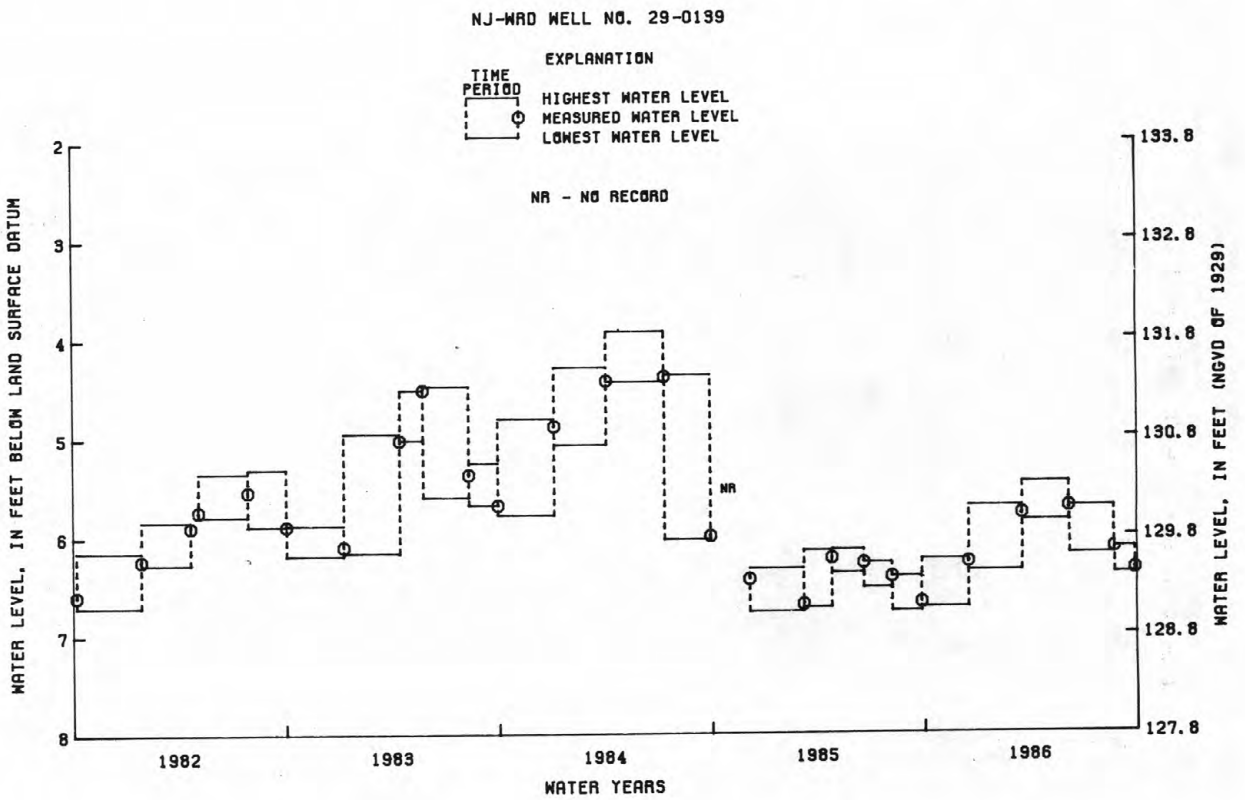


OCEAN COUNTY

400416074270102. Local I.D., Colliers Mills TW 2 Obs. NJ-WRD Well Number, 29-0139.
LOCATION.--Lat 40°04'14", long 74°27'02", Hydrologic Unit 02040301, along western shore of Colliers Mills Pond, Jackson Township.
Owner: U.S. Geological Survey.
AQUIFER.--Vincentown Formation of Paleocene age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 171 ft, screened 161 to 171 ft.
INSTRUMENTATION.--Water-level extremes recorder, October 1976 to current year. Water-level recorder, January 1964 to August 1975.
DATUM.--Land-surface datum is 135.76 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Front edge of cutout in recorder housing, 3.10 ft above land-surface datum.
PERIOD OF RECORD.--January 1964 to August 1975, October 1976 to current year. Records for 1964 to 1981 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.92 ft below land-surface datum, between Apr. 3 and July 11, 1984; lowest, 6.77 ft below land-surface datum, between Dec. 4, 1984 and Mar. 6, 1985 and between Aug. 6 and Sept. 26, 1985.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 26, 1985 TO DEC. 16, 1985	6.24	6.73	DEC. 16, 1985	6.27
DEC. 16, 1985 TO MAR. 17, 1986	5.70	6.36	MAR. 17, 1986	5.78
MAR. 17, 1986 TO JUNE 6, 1986	5.46	5.85	JUNE 6, 1986	5.71
JUNE 6, 1986 TO AUG. 22, 1986	5.71	6.19	AUG. 22, 1986	6.13
AUG. 22, 1986 TO SEPT. 26, 1986	6.13	6.39	SEPT. 26, 1986	6.35

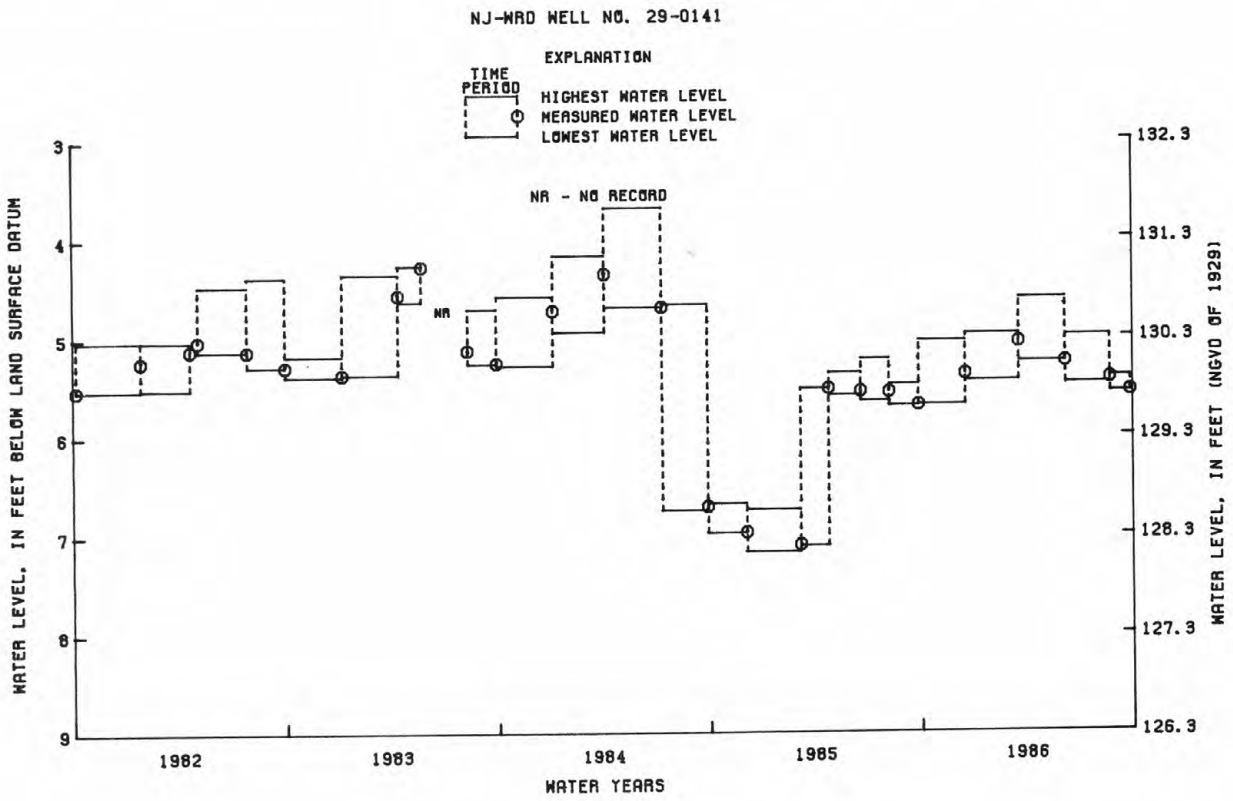


OCEAN COUNTY

400416074270104. Local I.D., Colliers Mills TW 4 Obs. NJ-WRD Well Number, 29-0141.
LOCATION.--Lat 40°04'14", long 74°27'02", Hydrologic Unit 02040301, along western shore of Colliers Mills Pond, Jackson Township.
Owner: U.S. Geological Survey.
AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.
WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 6 in, depth 71 ft, gravel-filled hole 46 to 71 ft.
INSTRUMENTATION.--Water-level extremes recorder, October 1976 to current year. Water-level recorder, March 1964 to April 1975.
DATUM.--Land-surface datum is 135.31 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Front edge of cutout in recorder housing, 2.86 ft above land-surface datum.
REMARKS.--Water level affected by stage of Colliers Mills Pond.
PERIOD OF RECORD.--March 1964 to April 1975, October 1976 to current year. Records for 1964 to 1981 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.68 ft below land-surface datum, between Apr. 3 and July 11, 1984; lowest, 7.17 ft below land-surface datum, between Dec. 4, 1984 and Mar. 6, 1985.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

WATER-LEVEL EXTREMES		MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 26, 1985 TO DEC. 16, 1985	5.04	5.69	DEC. 16, 1985	5.38
DEC. 16, 1985 TO MAR. 17, 1986	4.97	5.45	MAR. 17, 1986	5.06
MAR. 17, 1986 TO JUNE 6, 1986	4.61	5.26	JUNE 6, 1986	5.26
JUNE 6, 1986 TO AUG. 22, 1986	4.99	5.48	AUG. 22, 1986	5.43
AUG. 22, 1986 TO SEPT. 26, 1986	5.41	5.57	SEPT. 26, 1986	5.56



UNION COUNTY

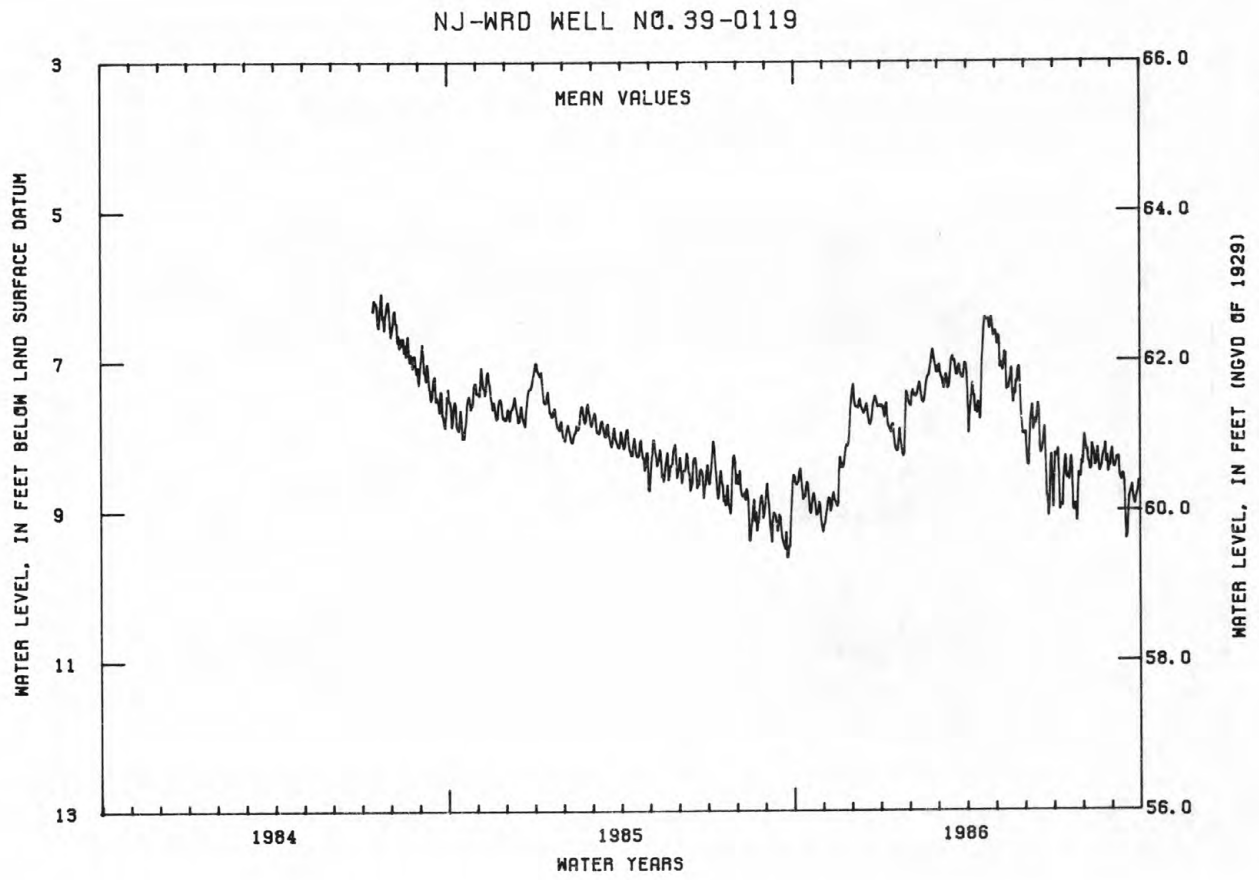
404106074171901. Local I.D., Union County Park Obs. NJ-WRD Well Number, 39-0119.
LOCATION.--Lat 40°41'06", long 74°17'19", Hydrologic Unit 02030104, at Galloping Hill Golf Course, Kenilworth.
Owner: Union County Park Commission.
AQUIFER.--Brunswick Formation of Triassic age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, length of casing unknown, depth 290 ft, open hole.
INSTRUMENTATION.--Digital water-level recorder--60-minute punch.
DATUM.--Land-surface datum is 69.00 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top edge of recorder shelf, 2.30 ft above land-surface datum.
REMARKS.--Water levels affected by nearby pumping.
PERIOD OF RECORD.--June 1943 to May 1975, July 1984 to current year. Periodic manual measurements, August 1976 to April 1984. Records for 1975 to 1983 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.06 ft below land-surface datum, June 2, 1952; lowest, 16.05 ft below land-surface datum, June 29, 1966.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.60	8.87	7.62	7.59	7.44	7.22	7.59	6.69	8.40	8.26	8.19	8.36
10	8.84	8.81	7.61	7.92	7.29	7.18	7.68	7.00	7.92	8.92	8.43	8.57
15	8.65	8.94	7.62	8.11	7.53	7.09	7.78	7.37	7.57	8.53	8.38	9.10
20	8.82	8.36	7.85	7.90	7.19	7.10	6.42	7.56	8.11	8.28	8.44	8.76
25	9.04	8.11	7.47	8.22	6.94	7.17	6.57	7.11	8.84	8.92	8.10	8.92
EOM	9.28	7.51	7.62	7.60	7.16	7.05	6.62	7.95	8.63	8.34	8.25	8.74
MEAN	8.82	8.57	7.61	7.86	7.30	7.16	7.10	7.21	8.13	8.61	8.29	8.67

WATER YEAR 1986 -- MEAN 7.94 HIGH 6.27 APR 21 LOW 9.72 OCT 31



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
01-387	RAMBERG, RALPH	AMATOL 8	393557	744114	121CKKD	W	1961-P
01-496	US GEOL SURVEY	USGS 4-H-2	394029	743957	121CKKD	W	1963-P
01-542	US GEOL SURVEY	WHARTON 2G	394028	743959	121CKKD	W	1960-P
01-545	US GEOL SURVEY	WHARTON 11	394046	744010	121CKKD	W	1957-P
01-775	ATLANTIC CITY MUA	FAA INTERMED	392639	743232	121CKKD	W	1985-P
01-776	ATLANTIC CITY MUA	FAA SHALLOW	392639	743232	121CKKD	W	1985-P
05-029	US GEOL SURVEY	OSWEGO LAKE 1	394208	742645	121CKKD	W	1962-P
05-030	US GEOL SURVEY	OSWEGO LAKE 2	394208	742645	121CKKD	W	1962-P
05-407	US GEOL SURVEY	ATSION 1	394422	744309	124PNPN	A	1963-P
05-408	US GEOL SURVEY	ATSION 2	394422	744309	121CKKD	W	1963-P
05-409	US GEOL SURVEY	ATSION 3	394422	744309	121CKKD	W	1963-P
05-628	US GEOL SURVEY	PENN SF SHALLOW	394452	742819	121CKKD	W	1936-P
05-630	US GEOL SURVEY	PENN SF DEEP	394513	742806	121CKKD	W	1963-P
05-676	US GEOL SURVEY	COYLE AIRPORT	394914	742546	124PNPN	A	1962-P
*09-011	CAPE MAY CITY WD	CMCWD 1 OBS	385612	745457	121CNSY	A	1967-P
09-048	US GEOL SURVEY	CANAL 5	385748	745533	121CNSY	A	1957-P
09-080	US GEOL SURVEY	CAPE MAY 42CC	390213	745056	121CNSY	A	1957-P
09-081	US GEOL SURVEY	CAPE MAY 23HB	390211	745055	112HLBC	W	1957-P
13-013	COMMONWEALTH WC	CANOE BROOK 30	404452	742116	112SFDF	U	1950-P
13-014	EAST ORANGE WD	NEUTRAL ZONE	404454	742021	112SFDF	U	1926-P
13-017	WALSH BROS	BALLENTINE 8	404401	740834	231BRCK	A	1949-P
21-088	US GEOL SURVEY	HONEYBRANCH 10	402128	744613	231BRCK	W	1968-P
23-159	DUHERNAL WC	DUHERNAL OBS 5	402353	742152	211ODBG	W	1939-P
23-180	DUHERNAL WC	DUHERNAL OBS 1	402438	742129	211ODBG	W	1938-P
23-181	PERTH AMBOY WD	RUNYON 123	402442	742136	211ODBG	W	1955-P
23-194	PERTH AMBOY WD	RUNYON 1	402536	742018	211FRNG	A	1934-P
23-265	CHEVRON OIL CO	11	403211	741612	211FRNG	W	1950-P
*23-270	AMER CYANAMID	TEST 2	403231	741616	211FRNG	W	1950-P
23-273	NJ WATER POLICY	PLNSBORO POND	401932	743529	211MRPAM	U	1970-P
23-291	MONROE TWP MUA	OBS 1-1961	402109	743013	211FRNG	A	1965-P
23-292	MONROE TWP MUA	OBS 2-1961	402109	743012	211ODBG	W	1961-P
23-306	PHELPS DODGE CO	PHELPS DODGE 3	402147	742847	211FRNG	A	1969-P
23-344	SAYREVILLE WD	SWD 2	402558	742013	211ODBG	W	1968-P
*23-351	SAYREVILLE WD	SWD 1	402605	741959	211ODBG	W	1968-P
*23-365	DUHERNAL WC	DUH SAY 4	402633	742120	211FRNG	A	1932-P
23-433	NJ WATER POLICY	SO RIVER 4	402555	742133	211ODBG	W	1968-P
23-482	AMER CYANAMID	TEST 1	403242	741617	211FRNG	A	1950-P
23-516	NOVAK, W	HULSART	402123	741849	211EGLS	W	1936-1984
25-250	GORDONS CRNR WC	VILLAGE 215	401918	741529	211EGLS	A	1971-P
27-001	US GEOL SURVEY	RECREATION FLD	404432	742252	112SFDF	U	1967-P
27-002	US GEOL SURVEY	W B DRIVER 1	404738	742406	112SFDF	U	1966-P
27-003	US GEOL SURVEY	W B DRIVER 2	404748	742419	112SFDF	U	1966-P
27-004	US GEOL SURVEY	CLEMENS	404816	742359	112SFDF	U	1966-P
27-005	US GEOL SURVEY	SANDOZ CHEM CO	404826	742347	112SFDF	U	1966-P
27-006	US GEOL SURVEY	GREEN ACRES	404937	742200	112SFDF	U	1967-P
27-014	US GEOL SURVEY	ESSO SIX INCH	404705	742452	112SFDF	U	1967-P
*27-015	MORRISTOWN ARPT	T2	404743	742522	112SFDF	U	1960-P
27-017	MADISON BORO WD	MBWD 4	404508	742402	112SFDF	U	1958-P
27-022	INT PIPE	INT PIPE	405209	742638	112SFDF	U	1963-P
27-023	RANDOLPH WD	RWD MT FR 2	404921	743356	400PCMB	U	1964-P
29-018	US GEOL SURVEY	IS BEACH 2	394829	740535	124PNPN	A	1962-P
29-020	US GEOL SURVEY	IS BEACH 4	394829	740535	121CKKD	W	1962-P
29-425	US GEOL SURVEY	WEBBS MILLS 2	395322	742252	124PNPN	A	1962-P
29-513	US GEOL SURVEY	GARDEN ST PKY 1	394744	741418	121CKKD	W	1962-P
29-514	US GEOL SURVEY	GARDEN ST PKY 2	394744	741418	121CKKD	W	1962-P
31-011	WANAQUE WD	HASKELL	410209	741708	112TILL	W	1965-1982
39-058	MAGRUDER COLOR	SCHWEITZER	404113	741216	231BRCK	A	1956-P
39-102	WHITE LABS INC	LAB 3	404027	741644	231BRCK	A	1952-P
39-115	WHITE LABS INC	LAB 4	404043	741618	231BRCK	A	1952-P
39-133	ORIT CORP	HATFIELD OBS	403726	741623	231BRCK	A	1959-P

P - Present
See figure 9 for well locations.
Aquifer unit: see definition of terms
WC - (Water Condition): A-Artesian, W-Water table, U-Undetermined
* - Water quality data for 1986 is published elsewhere in this report.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

ATLANTIC COUNTY

NJ-WRD WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	SCREENED INTERVAL (FT)	AQUIFER UNIT	DATE OF SAMPLE	TEMPERATURE (DEG C)
01-0180	OCEANVILLE 1 OBS	39 27 54	074 27 01	27	560-570	122KRKDL	09-19-86	16.0
01-0578	JOBS POINT OBS	39 18 26	074 37 09	10	670-680	122KRKDL	09-24-86	17.5

LOCAL IDENTIFIER	DATE OF SAMPLE	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE IT-FLD (MG/L AS HCO3)	CARBONATE IT-FLD (MG/L AS CO3)
OCEANVILLE 1 OBS	09-19-86	99	7.2	17	4.2	1.5	14	2.6	43	<1.0
JOBS POINT OBS	09-24-86	159	7.7	45	14	2.4	19	2.9	82	<1.0

LOCAL IDENTIFIER	DATE OF SAMPLE	ALKALINITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)
OCEANVILLE 1 OBS	09-19-86	38	12	1.7	0.2	32	91	<0.01	<0.10	0.12
JOBS POINT OBS	09-24-86	68	16	5.0	0.2	36	140	<0.01	<0.10	0.14

LOCAL IDENTIFIER	DATE OF SAMPLE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)
OCEANVILLE 1 OBS	09-19-86	0.2	--	0.32	0.31	<10	<1	1	2
JOBS POINT OBS	09-24-86	0.3	--	0.36	0.35	<10	<1	1	<1

LOCAL IDENTIFIER	DATE OF SAMPLE	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	PHENOLS TOTAL (UG/L)
OCEANVILLE 1 OBS	09-19-86	2	630	<5	64	<0.1	13	0.4	<1
JOBS POINT OBS	09-24-86	2	61	<5	33	<0.1	8	0.4	1

Aquifer unit:
122KRKDL - Atlantic City 800-foot sand of the Kirkwood Formation

QUALITY OF GROUND WATER - SALTWATER MONITORING NETWORK
WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
ATLANTIC COUNTY

NJ-WRD WELL NUMBER	SITE OWNER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	ELEV. LAND SURF. FT. NGVD	SCREENED INTERVAL (FT.)	AQUIFER UNIT
01-578	US GEOL SURVEY	JOBS POINT	391826	743709	10	670 - 680	122KRKDL
01-367	LONGPORT WD	LONGPORT 2	391859	743122	10	750 - 800	122KRKDL
01-582	NJWC-SHORE DIV	SHORE-DOBBS	391906	743629	20	78 - 99	121CKKD
01-589	NJWC-SHORE DIV	SHORE-GROVELAND	391924	743549	19	129 - 159	121CKKD
01-592	SOMERS POINT SA	SOM PT-1	391957	743606	10	80 - 110	121CKKD
01-353	NJWC-SHORE DIV	SHORE-KIRKLIN	392000	743523	20	56 - 71	121CKKD
01-375	MARGATE CITY WD	MCWD 4	392002	743011	10	745 - 795	122KRKDL
01-598	VENTNOR CITY WD	VCWD 9	392032	742852	8	740 - 800	122KRKDL
01-702	U S GEOL SURVEY	BURKE AVE TW	392032	743008	5	740 - 750	122KRKDL
01-357	BRIGHTON FARMS		392102	743400	25	137 - 158	121CKKD
01-771	HACKNEY BOAT YARD	HACKNEY 1	392113	743223	5	117 - 120	121CKKD
01-682	RESORTS INTRNTL	1-1980	392134	742521	8	830*	122KRKDL
01-549	NJWC-SHORE DIV	SHORE-MILL RD	392159	743216	20	117 - 152	121CKKD
01-041	BRIGANTINE WD	BRIG WD 1	392431	742153	9	736 - 827	122KRKDL
01-151	NJWC-SHORE DIV	SHORE-CANALE	392524	743329	50	172 - 208	121CKKD
01-575	ATLANTIC CITY WD	ACMUA 12	392548	743108	5	145 - 195	121CKKD
01-013	NJWC-SHORE DIV	SHORE-ABSECON 1	392554	743027	30	178 - 205	121CKKD
01-171	SEAVIEW C C	SEAVIEW 5	392650	742754	10	174*	121CKKD
01-180	US GEOL SURVEY	OCEANVILLE 1	392754	742701	27	560 - 570	122KRKDL

NJ-WRD WELL NUMBER	SITE OWNER	LOCAL IDENTIFIER	DATE OF SAMPLE	TEMPER-ATURE (DEG C)	SPE-CIFIC CONDUCT ANCE (UC/CM)	PH (UNITS)	SODIUM DIS-SOLVED (MG/L AS NA)	CHLORIDE DIS-SOLVED (MG/L AS CL)
01-578	US GEOL SURVEY	JOBS POINT	9/24/1986	17.5	159	7.7	19	5.0
01-367	LONGPORT WD	LONGPORT 2	8/14/1986	18.5	182	7.6	---	7.5
01-582	NJWC-SHORE DIV	SHORE-DOBBS	8/29/1986	14.5	139	5.0	---	26
01-589	NJWC-SHORE DIV	SHORE-GROVELAND	8/29/1986	13.5	530	4.6	---	160
01-592	SOMERS POINT SA	SOM PT-1	10/29/1985	13.0	50	5.5	6.7	10
01-353	NJWC-SHORE DIV	SHORE-KIRKLIN	8/29/1986	14.0	122	5.2	---	21
01-375	MARGATE CITY WD	MCWD 4	8/14/1986	18.5	167	7.3	---	7.0
01-598	VENTNOR CITY WD	VCWD 9	8/14/1986	19.5	187	7.2	---	7.9
01-702	U S GEOL SURVEY	BURKE AVE TW	2/12/1986	16.5	180	9.6	22	9.6
01-357	BRIGHTON FARMS		10/24/1985	13.5	90	4.9	9.7	12
01-771	HACKNEY BOAT YARD	HACKNEY 1	12/17/1985	13.0	55	5.3	6.3	11
01-682	RESORTS INTRNTL	1-1980	9/ 8/1986	---	184	7.6	---	8.0
01-549	NJWC-SHORE DIV	SHORE-MILL RD	8/29/1986	14.0	131	4.9	---	14
01-041	BRIGANTINE WD	BRIG WD 1	8/14/1986	18.5	122	7.2	---	3.8
01-151	NJWC-SHORE DIV	SHORE-CANALE	10/25/1985	12.5	64	4.3	3.2	0.3
01-575	ATLANTIC CITY WD	ACMUA 12	10/17/1985	13.0	55	5.8	3.0	5.4
01-013	NJWC-SHORE DIV	SHORE-ABSECON 1	8/29/1986	13.5	52	4.8	---	7.0
01-171	SEAVIEW C C	SEAVIEW 5	10/24/1985	13.5	46	4.8	4.3	7.3
01-180	US GEOL SURVEY	OCEANVILLE 1	9/19/1986	16.0	99	7.2	14	1.7

* Total depth of well.

Aquifer unit:

121CKKD - Kirkwood-Cohansey aquifer system
122KRKDL - Atlantic City 800-foot sand of the Kirkwood Formation

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

BURLINGTON COUNTY

NJ-WRD WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	SCREENED INTERVAL (FT)	AQUIFER UNIT	DATE OF SAMPLE	TEMPERATURE (DEG C)
05-0482	MULLICA 43S	39 38 09	074 33 49	40	20-25	121CKKD	09-30-86	17.0
05-0512	MULLICA 56S	39 40 09	074 32 52	42	45-50	121CKKD	09-30-86	12.0
05-0455	MULLICA 53S	39 48 12	074 40 31	67	46-51	121CKKD	09-30-86	13.0

LOCAL IDENTIFIER	DATE OF SAMPLE	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE IT-FLD (MG/L AS HCO3)	CARBONATE IT-FLD (MG/L AS CO3)
MULLICA 43S	09-30-86	94	4.2	6	1.1	0.7	7.1	--	--	--
MULLICA 56S	09-30-86	54	4.2	2	0.2	0.4	2.3	--	--	--
MULLICA 53S	09-30-86	43	4.3	6	0.7	0.9	2.3	--	--	--

LOCAL IDENTIFIER	DATE OF SAMPLE	ALKALINITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)
MULLICA 43S	09-30-86	--	--	--	--	3.8	--	<0.01	<0.10	0.02
MULLICA 56S	09-30-86	--	--	--	--	9.7	--	<0.01	<0.10	0.02
MULLICA 53S	09-30-86	--	--	--	--	5.8	--	<0.01	0.37	0.02

LOCAL IDENTIFIER	DATE OF SAMPLE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)
MULLICA 43S	09-30-86	0.3	--	0.03	--	1500	--	<1	--
MULLICA 56S	09-30-86	0.6	--	0.01	--	1200	--	<1	--
MULLICA 53S	09-30-86	0.5	--	<0.01	--	100	--	<1	--

LOCAL IDENTIFIER	DATE OF SAMPLE	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	PHENOLS TOTAL (UG/L)
MULLICA 43S	09-30-86	<10	3	<10	30	--	11	1.4	--
MULLICA 56S	09-30-86	<10	700	<10	5	--	5	0.6	--
MULLICA 53S	09-30-86	<10	<3	<10	15	--	8	0.7	--

Aquifer unit:
121CKKD - Kirkwood-Cohansey aquifer system

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

CAMDEN COUNTY

NJ-WRD WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	SCREENED INTERVAL (FT)	AQUIFER UNIT	DATE OF SAMPLE	TEMPERATURE (DEG C)
07-0503	WINSLOW WC 5 OBS	39 44 40	074 59 31	173	71-76	121CKKD	08-22-86	11.5

LOCAL IDENTIFIER	DATE OF SAMPLE	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE IT-FLD (MG/L AS HCO3)	CARBONATE IT-FLD (MG/L AS CO3)
WINSLOW WC 5 OBS	08-22-86	16	5.5	1	0.1	0.3	1.2	0.4	2.1	<1.0

LOCAL IDENTIFIER	DATE OF SAMPLE	ALKALINITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)
WINSLOW WC 5 OBS	08-22-86	4	0.7	2.3	<0.1	4.9	11	<0.01	<0.10	<0.01

LOCAL IDENTIFIER	DATE OF SAMPLE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)
WINSLOW WC 5 OBS	08-22-86	<0.2	--	<0.01	<0.01	<10	<1	<1	<1

LOCAL IDENTIFIER	DATE OF SAMPLE	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	PHENOLS TOTAL (UG/L)
WINSLOW WC 5 OBS	08-22-86	2	200	<5	39	<0.1	14	0.4	2

Aquifer unit:
121CKKD - Kirkwood-Cohansey aquifer system

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

CAPE MAY COUNTY

NJ-WRD WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	SCREENED INTERVAL (FT)	AQUIFER UNIT	DATE OF SAMPLE	TEMPERATURE (DEG C)
09-0011	CMCWD 1 OBS	38 56 12	074 54 57	7	281-321	121CNSY	09-23-86	15.5

LOCAL IDENTIFIER	DATE OF SAMPLE	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE IT-FLD (MG/L AS HCO3)	CARBONATE IT-FLD (MG/L AS CO3)
CMCWD 1 OBS	09-23-86	3150	7.4	330	55	47	460	25	106	<1.0

LOCAL IDENTIFIER	DATE OF SAMPLE	ALKALINITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)
CMCWD 1 OBS	09-23-86	86	33	910	<0.1	30	1600	<0.01	<0.10	1.40

LOCAL IDENTIFIER	DATE OF SAMPLE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)
CMCWD 1 OBS	09-23-86	1.8	--	0.05	0.04	<10	<1	<1	1

LOCAL IDENTIFIER	DATE OF SAMPLE	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	PHENOLS TOTAL (UG/L)
CMCWD 1 OBS	09-23-86	1	4300	<5	410	<0.1	<10	4.4	1

Aquifer unit:
121CNSY - Cohansey Sand

QUALITY OF GROUND WATER - SALTWATER MONITORING NETWORK
WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
CAPE MAY COUNTY

NJ-WRD WELL NUMBER	SITE OWNER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	ELEV. LAND SURF. FT. NGVD	SCREENED INTERVAL (FT.)	AQUIFER UNIT
09-011	CAPE MAY CITY WD	CMCWD 1 OBS	385612	745457	7	281 - 321	121CNSY
09-017	US COAST GUARD	USCG 1	385651	745310	11	292 - 322	121CNSY
09-018	US COAST GUARD	USCG 2	385652	745327	11	295 - 325	121CNSY
09-041	SNOW CANNING	SNOW 2	385722	745241	10	280 - 320	121CNSY
09-154	WILDWOOD WD	WWD 2	385932	744851	10	293 - 354	121CNSY
09-132	STONE HARBOR WD	SHWD 4	390301	744545	10	830 - 880	122KRKDL
09-166	STONE HARBOR WD	SHWD 5	390351	744504	7	820 - 860	122KRKDL
09-002	AVALON WD	AVALON WD 7-71	390420	744435	5	821 - 861	122KRKDL
09-004	AVALON WD	AVALON WD 6	390528	744338	10	880 - 920	122KRKDL
09-008	AVALON WD	AVALON WD 3	390621	744248	10	845 - 925	122KRKDL
09-126	SEA ISLE CITY WD	SICWD 5	390747	744241	7	735 - 802	122KRKDL
09-127	SEA ISLE CITY WD	SICWD 4	390847	744200	7	742 - 830	122KRKDL
09-129	SEA ISLE CITY WD	SICWD 2	390926	744131	7	744 - 861	122KRKDL
09-106	NJ WATER CO	SHORE DIV 7	391343	743755	8	760 - 810	122KRKDL
09-124	NJ WATER CO	SHORE DIV 13	391712	743340	8	757 - 840	122KRKDL

NJ-WRD WELL NUMBER	SITE OWNER	LOCAL IDENTIFIER	DATE OF SAMPLE	TEMPER-ATURE (DEG C)	SPE-CIFIC CONDUCT ANCE (UC/CM)	PH (UNITS)	SODIUM DIS-SOLVED (MG/L AS NA)	CHLORIDE DIS-SOLVED (MG/L AS CL)
09-011	CAPE MAY CITY WD	CMCWD 1 OBS	9/23/1986	15.5	3,150	7.4	460	910
09-017	US COAST GUARD	USCG 1	8/27/1986	15.0	370	7.8	---	41
09-018	US COAST GUARD	USCG 2	8/27/1986	15.0	340	7.8	---	32
09-041	SNOW CANNING	SNOW 2	8/26/1986	15.0	339	7.6	---	34
09-154	WILDWOOD WD	WWD 2	8/26/1986	15.0	690	7.6	---	130
09-132	STONE HARBOR WD	SHWD 4	8/28/1986	20.0	350	8.8	---	34
09-166	STONE HARBOR WD	SHWD 5	8/28/1986	21.0	335	8.6	---	29
09-002	AVALON WD	AVALON WD 7-71	8/28/1986	19.5	255	8.7	---	15
09-004	AVALON WD	AVALON WD 6	8/28/1986	19.5	373	8.7	---	49
09-008	AVALON WD	AVALON WD 3	8/28/1986	19.5	338	8.6	---	40
09-126	SEA ISLE CITY WD	SICWD 5	8/28/1986	19.0	234	8.5	---	12
09-127	SEA ISLE CITY WD	SICWD 4	8/28/1986	19.5	242	8.4	---	13
09-129	SEA ISLE CITY WD	SICWD 2	8/28/1986	19.5	230	8.4	---	12
09-106	NJ WATER CO	SHORE DIV 7	8/29/1986	19.5	200	7.9	---	12
09-124	NJ WATER CO	SHORE DIV 13	8/29/1986	19.5	196	7.8	---	9.7

Aquifer unit:

121CNSY - Cohansey Sand
122KRKDL- Atlantic City 800-foot sand of the Kirkwood Formation

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MIDDLESEX COUNTY

NJ-WRD WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	SCREENED INTERVAL (FT)	AQUIFER UNIT	DATE OF SAMPLE	TEMPERATURE (DEG C)
23-0228	FORSGATE 3 OBS	40 20 15	074 27 57	147	128-138	2110DBG	08-07-86	12.5
23-0229	FORSGATE 4 OBS	40 20 15	074 27 57	147	319-330	211FRNG	08-13-86	12.0
23-0351	SAYERVILLE WD 1	40 26 05	074 19 59	35	76-82	2110DBG	06-19-86	14.0
23-0270	AMER CYANAMID TEST 2	40 32 31	074 16 16	12	53-57	211FRNG	05-29-86	15.0

LOCAL IDENTIFIER	DATE OF SAMPLE	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE IT-FLD (MG/L AS HCO3)	CARBONATE IT-FLD (MG/L AS CO3)
FORSGATE 3 OBS	08-07-86	139	4.90	29	7.7	2.4	8.7	2.3	1.2	<1.0
FORSGATE 4 OBS	08-13-86	146	5.90	31	8.1	2.6	12	2.7	17	<1.0
SAYERVILLE WD 1	06-19-86	304	5.60	23	3.5	3.5	44	1.9	4.3	<1.0
AMER CYANAMID TEST 2	05-29-86	11100	6.30	1600	330	180	1600	18	13	<1.0

LOCAL IDENTIFIER	DATE OF SAMPLE	ALKALINITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)
FORSGATE 3 OBS	08-07-86	3	17	25	<0.1	9.7	75	0.01	0.25	0.03
FORSGATE 4 OBS	08-13-86	16	4.1	19	<0.1	9.4	72	0.01	7.30	0.22
SAYERVILLE WD 1	06-19-86	4	50	44	<0.1	2.3	150	<0.01	0.43	<0.01
AMER CYANAMID TEST 2	05-29-86	10	590	3200	<0.1	1.4	6000	0.01	<0.10	0.42

LOCAL IDENTIFIER	DATE OF SAMPLE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)
FORSGATE 3 OBS	08-07-86	<0.2	--	<0.01	<0.01	200	<1	<1	<1
FORSGATE 4 OBS	08-13-86	0.4	--	0.02	<0.01	<10	<1	<1	<1
SAYERVILLE WD 1	06-19-86	<0.2	--	<0.01	--	40	<1	2	<1
AMER CYANAMID TEST 2	05-29-86	0.5	--	0.02	--	<10	<1	<1	<1

LOCAL IDENTIFIER	DATE OF SAMPLE	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	PHENOLS TOTAL (UG/L)
FORSGATE 3 OBS	08-07-86	11	1600	<5	49	<0.1	40	0.5	2
FORSGATE 4 OBS	08-13-86	<1	5300	<5	91	<0.1	43	0.6	4
SAYERVILLE WD 1	06-19-86	150	1100	8	190	<0.1	150	1.5	1
AMER CYANAMID TEST 2	05-29-86	1	51000	--	2200	<0.1	100	2.2	<1

Aquifer unit:
2110DBG - Old Bridge aquifer, Potomac-Raritan-Magothy aquifer system
211FRNG - Farrington aquifer, Potomac-Raritan-Magothy aquifer system

QUALITY OF GROUND WATER - SALTWATER MONITORING NETWORK
WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MIDDLESEX COUNTY

NJ-WRD WELL NUMBER	SITE OWNER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	ELEV. LAND SURF. FT. NGVD	SCREENED INTERVAL (FT.)	AQUIFER UNIT
23-729	ANHEUSER BUSCH	BUSCH 10	402444	742257	20	50 - 60	211ODBG
23-734	PERTH AMBOY WD	RUNYON 8R	402522	741947	18	70 - 85	211ODBG
23-571	PERTH AMBOY WD	PERTH AMBOY 7	402528	741938	15	67 - 82	211ODBG
23-195	PERTH AMBOY WD	PERTH AMBOY 5	402537	742002	15	50 - 80	211ODBG
23-196	PERTH AMBOY WD	PERTH AMBOY 1A	402537	742020	20	201 - 261	211FRNG
23-570	PERTH AMBOY WD	PERTH AMBOY 6	402538	741950	15	60 - 80	211ODBG
23-551	SOUTH RIVER WD	SRWD 6	402548	742155	47	155 - 208	211FRNG
23-069	C P S CHEMICAL		402552	742030	10	56 - 66	211ODBG
23-434	SOUTH RIVER WD	SRWD 2	402556	742141	20	173 - 198	211FRNG
23-438	SOUTH RIVER WD	SRWD 5-77	402559	742142	20	132 - 182	211FRNG
23-352	SAYREVILLE WD	RECHARGE 1 M	402605	741958	34	225 - 280	211FRNG
23-351	SAYREVILLE WD	SWD 1	402605	741959	35	76 - 82	211ODBG
23-355	SAYREVILLE WD	SWD A	402614	741950	30	72 - 82	211ODBG
23-355	SAYREVILLE WD	SWD A	402614	741950	30	72 - 82	211ODBG
23-368	SAYREVILLE WD	I	402626	741936	58	83 - 94	211ODBG
23-368	SAYREVILLE WD	I	402626	741936	58	83 - 94	211ODBG
23-365	DUHERNAL WC	DUH SAY 4	402633	742120	6	148 - 160	211FRNG
23-439	SOUTH RIVER WD	SRWD 2 OBS	402633	742200	21	121 - 126	211FRNG
23-371	HERCULES POWDER	HERCULES 5	402638	742022	48	182 - 228	211FRNG
23-440	THOMAS & CHADWICK	1	402648	742226	15	195*	211FRNG

NJ-WRD WELL NUMBER	SITE OWNER	LOCAL IDENTIFIER	DATE OF SAMPLE	TEMPER-ATURE (DEG C)	SPE-CIFIC CONDUCT ANCE (UC/CM)	PH (UNITS)	SODIUM DIS-SOLVED (MG/L AS NA)	CHLORIDE DIS-SOLVED (MG/L AS CL)
23-729	ANHEUSER BUSCH	BUSCH 10	4/ 1/1986	13.0	175	4.9	15	---
23-734	PERTH AMBOY WD	RUNYON 8R	3/ 5/1986	11.0	380	4.1	---	32
23-571	PERTH AMBOY WD	PERTH AMBOY 7	3/ 5/1986	11.5	300	4.1	---	17
23-195	PERTH AMBOY WD	PERTH AMBOY 5	3/ 4/1986	14.0	247	4.3	---	43
23-196	PERTH AMBOY WD	PERTH AMBOY 1A	3/ 4/1986	12.0	597	5.9	---	140
23-570	PERTH AMBOY WD	PERTH AMBOY 6	3/ 4/1986	11.5	303	3.9	---	32
23-551	SOUTH RIVER WD	SRWD 6	3/ 6/1986	11.5	64	5.9	---	8.7
23-069	C P S CHEMICAL		3/ 6/1986	12.5	237	3.9	---	15
23-434	SOUTH RIVER WD	SRWD 2	3/ 6/1986	12.0	121	5.1	78	11
23-438	SOUTH RIVER WD	SRWD 5-77	3/ 6/1986	11.0	93	5.7	---	11
23-352	SAYREVILLE WD	RECHARGE 1 M	9/30/1986	15.0	2450	5.6	---	780
23-351	SAYREVILLE WD	SWD 1	6/19/1986	14.0	304	5.6	44	44
23-355	SAYREVILLE WD	SWD A	3/ 3/1986	14.5	285	4.5	---	56
23-355	SAYREVILLE WD	SWD A	9/30/1986	14.0	295	4.3	---	56
23-368	SAYREVILLE WD	I	3/ 3/1986	12.0	335	4.1	---	9.9
23-368	SAYREVILLE WD	I	9/30/1986	13.0	345	3.9	---	11
23-365	DUHERNAL WC	DUH SAY 4	3/10/1986	13.5	6,000	5.6	---	1,800
23-439	SOUTH RIVER WD	SRWD 2 OBS	3/ 6/1986	13.5	775	5.1	---	200
23-371	HERCULES POWDER	HERCULES 5	3/ 4/1986	12.5	8,200	5.4	1,300	2,700
23-440	THOMAS & CHADWICK	1	2/26/1986	13.5	350	6.8	---	68

* Total depth of well.

Aquifer unit:

211ODBG - Old Bridge aquifer, Potomac-Raritan-Magothy aquifer system
211FRNG - Farrington aquifer, Potomac-Raritan-Magothy aquifer system

QUALITY OF GROUND WATER - SALTWATER MONITORING NETWORK
WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MIDDLESEX COUNTY

NJ-WRD WELL NUMBER	SITE OWNER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	ELEV. LAND SURF. FT. NGVD	SCREENED INTERVAL (FT.)	AQUIFER UNIT
23-376	HERCULES POWDER	HERCULES 3	402649	742025	41	180 - 220	211FRNG
23-380	HERCULES POWDER	HERCULES 2	402659	742020	48	181 - 237	211FRNG
23-205	OLD BRIDGE MUA	LAWRENCE HAR 8	402700	741454	60	193 - 213	211ODBG
23-206	OLD BRIDGE MUA	LAWRENCE HAR 9	402700	741454	60	360 - 395	211FRNG
23-384	HERCULES POWDER	HERCULES 1REBT	402705	742023	54	170 - 225	211FRNG
23-569	SAYREVILLE WD	SWD T	402738	741700	90	102 - 132	211ODBG
23-569	SAYREVILLE WD	SWD T	402738	741700	90	102 - 132	211ODBG
23-403	SAYREVILLE WD	SWD Q-1973	402745	741631	40	78 - 136	211ODBG
23-403	SAYREVILLE WD	SWD Q-1973	402745	741631	40	78 - 136	211ODBG
23-549	SAYREVILLE WD	SWD R	402745	741645	23	70 - 111	211ODBG
23-549	SAYREVILLE WD	SWD R	402745	741645	23	70 - 111	211ODBG
23-554	SAYREVILLE WD	SWD S	402745	741645	100	213 - 286	211FRNG
23-080	HERBERT SAND CO	RANNEY WELL	402807	742351	28	18*	211FRNG
23-411	SOUTH AMBOY WD	SAWD 8	402822	741630	10	209 - 234	211FRNG
23-414	SOUTH AMBOY WD	SAWD 10	402825	741632	10	38 - 48	211ODBG
23-430	JERS CENTRAL PL	7-1972	402923	741651	12	135 - 165	211FRNG
23-255	CARBORUNDUM CO	1	403046	741827	15	57 - 67	211FRNG
23-266	CHEVRON OIL CO	3	403212	741635	40	87 - 96	211FRNG
23-270	AMER CYANAMID	TEST 2	403231	741616	12	53 - 57	211FRNG
23-473	SWIFT AND CO	SWIFT 1	403233	741633	30	39 - 59	211FRNG
23-478	AMER CYANAMID	CYANAMID 2A	403236	741616	9	45 - 60	211FRNG

NJ-WRD WELL NUMBER	SITE OWNER	LOCAL IDENTIFIER	DATE OF SAMPLE	TEMPER-ATURE (DEG C)	SPE-CIFIC CONDUCT ANCE (UC/CM)	PH (UNITS)	SODIUM DIS-SOLVED (MG/L AS NA)	CHLORIDE DIS-SOLVED (MG/L AS CL)
23-376	HERCULES POWDER	HERCULES 3	3/ 4/1986	12.0	5,900	5.8	---	2,100
23-380	HERCULES POWDER	HERCULES 2	3/ 4/1986	13.5	1,300	5.7	---	350
23-205	OLD BRIDGE MUA	LAWRENCE HAR 8	2/27/1986	12.5	82	5.0	---	15
23-206	OLD BRIDGE MUA	LAWRENCE HAR 9	2/27/1986	13.0	60	6.0	---	2.0
23-384	HERCULES POWDER	HERCULES 1REBT	3/ 4/1986	13.0	910	5.8	---	230
23-569	SAYREVILLE WD	SWD T	3/ 3/1986	12.5	138	4.0	---	8.8
23-569	SAYREVILLE WD	SWD T	9/30/1986	13.0	149	4.1	---	11
23-403	SAYREVILLE WD	SWD Q-1973	3/ 3/1986	12.5	215	4.4	---	29
23-403	SAYREVILLE WD	SWD Q-1973	9/30/1986	14.0	215	4.3	---	26
23-549	SAYREVILLE WD	SWD R	3/ 3/1986	12.5	351	3.9	---	40
23-549	SAYREVILLE WD	SWD R	9/30/1986	12.5	292	4.1	---	45
23-554	SAYREVILLE WD	SWD S	9/30/1986	13.0	63	6.0	---	2.0
23-080	HERBERT SAND CO	RANNEY WELL	3/10/1986	12.5	177	4.8	---	21
23-411	SOUTH AMBOY WD	SAWD 8	3/ 4/1986	13.0	68	6.1	---	49
23-414	SOUTH AMBOY WD	SAWD 10	3/ 4/1986	12.0	279	4.2	---	79
23-430	JERS CENTRAL PL	7-1972	3/ 3/1986	13.0	4,070	5.8	---	1,400
23-255	CARBORUNDUM CO	1	4/ 1/1986	14.0	283	7.1	---	9.7
23-266	CHEVRON OIL CO	3	3/17/1986	13.0	318	6.4	9.0	58
23-270	AMER CYANAMID	TEST 2	5/29/1986	15.0	11,100	6.3	1,600	3,200
23-473	SWIFT AND CO	SWIFT 1	3/17/1986	13.5	1,160	5.1	130	290
23-478	AMER CYANAMID	CYANAMID 2A	3/ 4/1986	14.0	1,200	5.9	---	220

* Total depth of well.

Aquifer unit:

211ODBG - Old Bridge aquifer, Potomac-Raritan-Magothy aquifer system
211FRNG - Farrington aquifer, Potomac-Raritan-Magothy aquifer system

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MONMOUTH COUNTY

NJ-WRD WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	SCREENED INTERVAL (FT)	AQUIFER UNIT	DATE OF SAMPLE	TEMPERATURE (DEG C)
25-0206	KEYPORT BOROUGH WD 4 OBS	40 26 25	074 11 45	14	225-249	2110DBG	03-07-86	13.0

LOCAL IDENTIFIER	DATE OF SAMPLE	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE IT-FLD (MG/L AS HCO3)	CARBONATE IT-FLD (MG/L AS CO3)
KEYPORT BOROUGH WD 4 OBS	03-07-86	101	6.3	23	6.1	2.0	2.2	1.4	38	<1.0

LOCAL IDENTIFIER	DATE OF SAMPLE	ALKALINITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)
KEYPORT BOROUGH WD 4 OBS	03-07-86	34	5.9	11	<0.1	9.0	67	<0.01	<0.10	0.06

LOCAL IDENTIFIER	DATE OF SAMPLE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)
KEYPORT BOROUGH WD 4 OBS	03-07-86	0.1	--	0.09	0.03	<10	<1	1	2

LOCAL IDENTIFIER	DATE OF SAMPLE	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	PHENOLS TOTAL (UG/L)
KEYPORT BOROUGH WD 4 OBS	03-07-86	<1	10000	<5	130	<0.1	11	1.1	10

Aquifer unit:
2110DBG - Old Bridge aquifer, Potomac-Raritan-Magothy aquifer system

QUALITY OF GROUND WATER - SALTWATER MONITORING NETWORK
WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MONMOUTH COUNTY

NJ-WRD WELL NUMBER	SITE OWNER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	ELEV. LAND SURF. FT. NGVD	SCREENED INTERVAL (FT.)	AQUIFER UNIT
25-029	BRIELLE WD	BWD 1	400644	740344	35	130 - 150	121CKKD
25-030	BRIELLE WD	BWD 2	400645	740345	33	690 - 750	211EGLS
25-233	MANASQUAN WD	MWD 6	400710	740329	10	180*	121CKKD
25-234	MANASQUAN WD	MWD 3	400712	740328	15	118*	121CKKD
25-235	MANASQUAN WD	MWD 2R	400712	740328	21	103 - 118	121CKKD
25-552	MANASQUAN WD	MWD 7	400712	740328	20	94 - 112	121CKKD
25-237	MANASQUAN WD	MWD 5	400714	740329	15	97 - 117	121CKKD
25-512	SEA GIRT WD	SGWD 7	400802	740230	21	92 - 124	121CKKD
25-383	SPRING LAKE WD	SLWD 1	400849	740207	15	631 - 711	211EGLS
25-387	SPRING LK HT WD	SPRING LK HGT1	400857	740309	60	570 - 600	211MLRW
25-391	SPRING LK HT WD	SPRING LK HGT4	400928	740211	20	485 - 560	211MLRW
25-386	SPRING LAKE WD	SLWD 4	400952	740149	15	600 - 670	211EGLS
25-018	BELMAR BORO WD	10 (2 ELECT)	401038	740146	20	581*	211EGLS
25-026	BELMAR BORO WD	BWD 4 ELEC(11)	401102	740045	15	601 - 671	211EGLS
25-014	AVON WD	AWD 1	401138	740125	28	424 - 504	211MLRW
25-001	ALLENHURST WD	AWD 4	401401	740025	17	525 - 565	211EGLS
25-353	US ARMY	F MONMUTH 1-NCO	401542	740530	140	321 - 327	211MLRW
25-288	ABERDEEN TWP MUA	MATAWAN MUA 3	402349	741232	83	345 - 425	2110DBG
25-294	MATAWAN BORO WD	MATAWAN BORO 1	402428	741345	20	222 - 252	2110DBG

NJ-WRD WELL NUMBER	SITE OWNER	LOCAL IDENTIFIER	DATE OF SAMPLE	TEMPER-ATURE (DEG C)	SPE-CIFIC CONDUCT ANCE (UC/CM)	PH (UNITS)	SODIUM DIS-SOLVED (MG/L AS NA)	CHLORIDE DIS-SOLVED (MG/L AS CL)
25-029	BRIELLE WD	BWD 1	8/22/1986	13.0	66	5.6	---	8.2
25-030	BRIELLE WD	BWD 2	8/22/1986	20.0	184	7.9	---	1.0
25-233	MANASQUAN WD	MWD 6	8/21/1986	13.5	54	4.9	---	8.8
25-234	MANASQUAN WD	MWD 3	8/21/1986	13.5	88	4.5	---	13
25-235	MANASQUAN WD	MWD 2R	8/21/1986	13.5	99	4.2	---	15
25-552	MANASQUAN WD	MWD 7	8/21/1986	13.5	71	4.5	---	11
25-237	MANASQUAN WD	MWD 5	8/21/1986	13.5	67	4.9	---	10
25-512	SEA GIRT WD	SGWD 7	8/22/1986	14.0	75	5.5	---	10
25-383	SPRING LAKE WD	SLWD 1	8/21/1986	19.0	174	8.0	---	1.1
25-387	SPRING LK HT WD	SPRING LK HGT1	8/22/1986	17.5	196	7.9	---	0.8
25-391	SPRING LK HT WD	SPRING LK HGT4	8/22/1986	---	162	---	---	1.6
25-386	SPRING LAKE WD	SLWD 4	8/21/1986	19.0	170	7.7	---	0.9
25-018	BELMAR BORO WD	10 (2 ELECT)	8/21/1986	18.0	212	8.2	---	1.6
25-026	BELMAR BORO WD	BWD 4 ELEC(11)	8/21/1986	19.5	182	7.4	---	0.9
25-014	AVON WD	AWD 1	8/21/1986	18.0	235	7.8	---	2.6
25-001	ALLENHURST WD	AWD 4	8/21/1986	---	208	7.4	---	1.5
25-353	US ARMY	F MONMUTH 1-NCO	8/19/1986	13.0	181	8.0	2.9	3.5
25-288	ABERDEEN TWP MUA	MATAWAN MUA 3	2/25/1986	14.5	56	6.1	---	1.6
25-294	MATAWAN BORO WD	MATAWAN BORO 1	2/25/1986	12.5	92	5.4	---	1.8

* Total depth of well.

Aquifer unit:

121CKKD - Kirkwood-Cohansey aquifer system
211MLRW - Wenonah-Mount Laurel aquifer
211EGLS - Englishtown aquifer
2110DBG - Old Bridge aquifer, Potomac-Raritan-Magothy aquifer system

QUALITY OF GROUND WATER - SALTWATER MONITORING NETWORK
WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MONMOUTH COUNTY

NJ-WRD WELL NUMBER	SITE OWNER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	ELEV. LAND SURF. FT. NGVD	SCREENED INTERVAL (FT.)	AQUIFER UNIT
25-006	ATLAN HIGH WD	AHWD 1	402437	740236	20	519 - 582	2110DBG
25-496	ATLAN HIGH WD	AHWD 4	402441	740233	15	510 - 543	2110DBG
25-282	BAYSHORE SEW AU	BAYSHORE 1	402507	741344	10	245 - 260	2110DBG
25-284	MATAWAN BORO WD	MATAWAN BORO 3	402515	741450	90	231 - 271	2110DBG
25-111	W KEANSBURG WC	W KEANSBURG 1	402532	740932	59	326 - 366	2110DBG
25-562	KEYPORT BORO WD	8 PERRY ST	402539	741214	25	500 - 555	211FRNG
25-113	HAZLET TWP BD ED	1	402542	740850	87	270 - 302	2110DBG
25-199	KERR GLASS CO	REPLACEMENT 2	402542	741220	20	285 - 315	2110DBG
25-297	ABERDEEN TWP WD	MATAWAN TWP 1	402603	741422	80	447 - 487	211FRNG
25-191	KEANSBURG MUA	KWD 6	402620	740741	10	302 - 362	2110DBG
25-206	KEYPORT BORO WD	KEYPORT 4	402625	741145	14	225 - 249	2110DBG
25-207	KEYPORT BORO WD	KEYPORT 6	402626	741144	11	247 - 277	2110DBG
25-567	U S GEOL SURVEY	UB WATER TOWER	402630	741058	10	250 - 270	2110DBG
25-208	INFERN-O-THERM	INFERN-O-1	402630	741129	15	300*	2110DBG
25-208	INFERN-O-THERM	INFERN-O-1	402630	741129	15	300*	2110DBG
25-419	UNION BEACH WD	UBWD 1 1962	402632	741049	10	235 - 285	2110DBG
25-453	UNION BEACH WD	UBWD 3 1977	402632	741051	10	480 - 532	211FRNG
25-420	UNION BEACH WD	UBWD 2 1969	402634	741051	10	262 - 289	2110DBG
25-423	INT FLAVOR FRAG	I F F 1	402641	740919	10	298 - 328	2110DBG
25-568	U S GEOL SURVEY	JCPL	402652	741100	10	245 - 265	2110DBG

NJ-WRD WELL NUMBER	SITE OWNER	LOCAL IDENTIFIER	DATE OF SAMPLE	TEMPER-ATURE (DEG C)	SPE-CIFIC CONDUCT ANCE (UC/CM)	PH (UNITS)	SODIUM DIS-SOLVED (MG/L AS NA)	CHLORIDE DIS-SOLVED (MG/L AS CL)
25-006	ATLAN HIGH WD	AHWD 1	2/25/1986	16.0	95	6.7	---	1.4
25-496	ATLAN HIGH WD	AHWD 4	2/25/1986	15.5	95	6.5	---	1.5
25-282	BAYSHORE SEW AU	BAYSHORE 1	2/27/1986	13.0	93	5.7	---	3.0
25-284	MATAWAN BORO WD	MATAWAN BORO 3	2/25/1986	12.5	73	6.8	---	3.8
25-111	W KEANSBURG WC	W KEANSBURG 1	2/26/1986	13.5	65	6.0	---	1.8
25-562	KEYPORT BORO WD	8 PERRY ST	3/ 7/1986	15.0	66	6.3	---	3.0
25-113	HAZLET TWP BD ED	1	2/26/1986	12.0	66	6.2	---	1.8
25-199	KERR GLASS CO	REPLACEMENT 2	2/25/1986	13.5	83	6.3	---	1.8
25-297	ABERDEEN TWP WD	MATAWAN TWP 1	2/25/1986	15.0	75	---	---	1.9
25-191	KEANSBURG MUA	KWD 6	2/26/1986	13.0	190	6.1	---	42
25-206	KEYPORT BORO WD	KEYPORT 4	3/ 7/1986	13.0	101	6.3	2.2	11
25-207	KEYPORT BORO WD	KEYPORT 6	4/18/1986	13.5	1,680	6.6	140	500
25-567	U S GEOL SURVEY	UB WATER TOWER	7/15/1986	14.5	84	6.1	4.8	1.8
25-208	INFERN-O-THERM	INFERN-O-1	3/17/1986	13.0	7,270	5.6	---	2,700
25-208	INFERN-O-THERM	INFERN-O-1	4/16/1986	13.0	7,350	5.7	910	2,500
25-419	UNION BEACH WD	UBWD 1 1962	4/22/1986	13.5	4,000	6.1	510	1,300
25-453	UNION BEACH WD	UBWD 3 1977	3/ 4/1986	14.0	78	6.3	---	2.3
25-420	UNION BEACH WD	UBWD 2 1969	4/25/1986	13.5	5,860	5.8	700	1,800
25-423	INT FLAVOR FRAG	I F F 1	4/ 1/1986	13.5	61	6.4	1.5	1.6
25-568	U S GEOL SURVEY	JCPL	4/15/1986	13.5	6,000	5.6	840	2,000

* Total depth of well.

Aquifer unit:

2110DBG - Old Bridge aquifer, Potomac-Raritan-Magothy aquifer system
211FRNG - Farrington aquifer, Potomac-Raritan-Magothy aquifer system

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MORRIS COUNTY

NJ-WRD WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	SCREENED INTERVAL (FT)	AQUIFER UNIT	DATE OF SAMPLE	TEMPERATURE (DEG C)
27-0012	BRIARWOOD SCHOOL OBS	40 46 39	074 23 00	198	100-110	112SFDF	09-16-86	12.0
27-0015	MORRISTOWN AIRPORT T2	40 47 43	074 25 22	181	51-62	112SFDF	09-17-86	14.0
27-0020	TROY MEADOWS 1 OBS	40 50 27	074 23 23	192	79-89	112SFDF	09-18-86	10.5

LOCAL IDENTIFIER	DATE OF SAMPLE	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE IT-FLD (MG/L AS HCO3)	CARBONATE IT-FLD (MG/L AS CO3)
BRIARWOOD SCHOOL OBS	09-16-86	466	7.5	230	59	19	10	0.9	179	<1.0
MORRISTOWN AIRPORT T2	09-17-86	455	8.3	190	46	18	17	1.2	201	<1.0
TROY MEADOWS 1 OBS	09-18-86	331	7.9	160	42	14	7.4	0.8	145	<1.0

LOCAL IDENTIFIER	DATE OF SAMPLE	ALKALINITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)
BRIARWOOD SCHOOL OBS	09-16-86	148	47	21	<0.1	28	270	<0.01	3.20	0.02
MORRISTOWN AIRPORT T2	09-17-86	166	47	8.6	0.2	29	270	<0.01	<0.10	0.04
TROY MEADOWS 1 OBS	09-18-86	120	49	4.4	0.2	17	210	<0.01	<0.10	0.08

LOCAL IDENTIFER	DATE OF SAMPLE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)
BRIARWOOD SCHOOL OBS	09-16-86	0.4	--	0.09	0.09	<10	<1	<1	<1
MORRISTOWN AIRPORT T2	09-17-86	<0.2	--	0.07	--	20	4	<1	<1
TROY MEADOWS 1 OBS	09-18-86	<0.2	--	0.12	0.10	<10	<1	<1	<1

LOCAL IDENTIFIER	DATE OF SAMPLE	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	PHENOLS TOTAL (UG/L)
BRIARWOOD SCHOOL OBS	09-16-86	4	50	<5	7	<0.1	10	0.4	3
MORRISTOWN AIRPORT T2	09-17-86	2	130	<5	97	<0.1	7	0.6	3
TROY MEADOWS 1 OBS	09-18-86	<1	870	<5	150	<0.1	6	0.3	4

Aquifer unit:
112SFDF - Stratified drift

QUALITY OF GROUND WATER - SALTWATER MONITORING NETWORK
WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
OCEAN COUNTY

NJ-WRD WELL NUMBER	SITE OWNER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	ELEV. LAND SURF. FT. NGVD	SCREENED INTERVAL (FT.)	AQUIFER UNIT
29-590	BEACH HAVEN WD	BHWD 9	393342	741431	5	552 - 630	122KRKDL
29-009	BEACH HAVEN WD	BHWD 8	393346	741430	5	572 - 656	122KRKDL
29-544	SHIP BOTTOM WD	SBWD 4	393839	741052	5	536 - 578	122KRKDL
29-549	SHIP BOTTOM WD	SBWD 5	393848	741053	5	528 - 588	121CKKD
29-111	HARVEY CDRS WD	HCWD 4	394134	740832	9	465 - 500	122KRKDL
29-004	BARNEGAT LT WD	BLWD 2	394524	740632	7	593 - 646	124PNPN
29-613	BERKELEY WC	PINEWALL	395248	741011	45	200*	121CKKD
29-022	SHORE WATER CO	SWC 1	395422	740458	7	175 - 200	121CKKD
29-023	SHORE WATER CO	SWC 2	395423	740458	7	497 - 530	124PNPN
29-697	ARLINGTON BEACH WC	ABWC 1	395443	740500	10	76 - 86	121CKKD
29-540	SEASIDE PARK WD	SPWD 3	395452	740502	4	459 - 503	124PNPN
29-612	BERKELEY WC	BAYVILLE	395454	740906	20	90*	121CKKD
29-809	OCEAN GATE BORO WD	OGBWD 4	395527	740826	10	330 - 370	124PNPN
29-515	PINE BEACH WU	PBWU 1	395558	741013	30	135 - 197	121CKKD
29-537	SEASIDE HGTS WD	SHWD 2	395636	740439	4	400 - 430	124PNPN
29-538	SEASIDE HGTS WD	SHWD 1R	395636	740439	5	144 - 175	121CKKD
29-617	SEASIDE HGTS WD	SHWD 5	395652	740442	5	175*	121CKKD
29-453	LAVALLETTE WD	LWD 4	395808	740416	5	1358 -1515	211MRPA
29-454	LAVALLETTE WD	LWD 2	395808	740421	5	1009 -1136	211EGLS
29-070	OCEAN CO WC	MONTEREY 1	395905	740359	5	1375 -1495	211MRPA
29-100	OCEAN CO WC	NORMANDY 3	395956	740344	8	1428 -1479	211MRPA
29-504	OCEAN CO WC	MANTOLOKING 7	400210	740310	5	1263 -1368	211MRPA
29-006	OCEAN CO WC	BAY HEAD 6	400405	740244	10	778 - 818	211EGLS
29-530	PT PLEASANT WD	PPWD 6	400454	740413	20	730 - 790	211EGLS
29-531	PT PLEASANT WD	PPWD 5	400454	740414	18	1256 -1342	211MRPA
29-579	PT PLEASANT BCH WD	PPBWD 11	400512	740251	5	130 - 143	121CKKD
29-807	PT PLEASANT BCH WD	PPBWD 12	400536	740251	5	108 - 132	121CKKD
29-523	PT PLEASANT BCH WD	PPBWD 10	400551	740243	5	87 - 130	121CKKD

NJ-WRD WELL NUMBER	SITE OWNER	LOCAL IDENTIFIER	DATE OF SAMPLE	TEMPER-ATURE (DEG C)	SPE-CIFIC CONDUCT ANCE (UC/CM)	PH (UNITS)	SODIUM DIS-SOLVED (MG/L AS NA)	CHLORIDE DIS-SOLVED (MG/L AS CL)
29-590	BEACH HAVEN WD	BHWD 9	8/13/1986	17.0	66	6.3	---	3.1
29-009	BEACH HAVEN WD	BHWD 8	8/13/1986	17.0	67	6.3	---	3.6
29-544	SHIP BOTTOM WD	SBWD 4	8/13/1986	16.0	80	6.5	---	3.4
29-549	SHIP BOTTOM WD	SBWD 5	8/13/1986	16.0	63	6.2	---	3.4
29-111	HARVEY CDRS WD	HCWD 4	8/13/1986	16.0	73	6.5	---	3.0
29-004	BARNEGAT LT WD	BLWD 2	2/19/1986	17.0	348	8.8	66	7.3
29-613	BERKELEY WC	PINEWALL	8/ 8/1986	12.5	54	5.1	---	5.4
29-022	SHORE WATER CO	SWC 1	8/ 6/1986	14.0	76	6.1	---	4.9
29-023	SHORE WATER CO	SWC 2	8/ 6/1986	16.5	292	8.9	---	1.1
29-697	ARLINGTON BEACH WC	ABWC 1	8/ 6/1986	14.0	96	6.6	---	6.9
29-540	SEASIDE PARK WD	SPWD 3	8/ 6/1986	15.5	239	8.7	---	1.3
29-612	BERKELEY WC	BAYVILLE	8/ 8/1986	13.5	98	4.4	---	11.0
29-809	OCEAN GATE BORO WD	OGBWD 4	8/ 8/1986	14.0	170	7.6	---	3.4
29-515	PINE BEACH WU	PBWU 1	8/ 8/1986	12.0	66	4.6	---	7.4
29-537	SEASIDE HGTS WD	SHWD 2	8/ 6/1986	15.5	230	8.7	---	2.4
29-538	SEASIDE HGTS WD	SHWD 1R	8/ 6/1986	14.0	790	6.1	---	200
29-617	SEASIDE HGTS WD	SHWD 5	8/ 6/1986	14.0	750	5.6	---	200
29-453	LAVALLETTE WD	LWD 4	8/ 7/1986	23.5	188	7.6	---	1.1
29-454	LAVALLETTE WD	LWD 2	8/ 7/1986	20.5	405	8.5	---	2.1
29-070	OCEAN CO WC	MONTEREY 1	8/12/1986	24.0	177	7.6	---	1.0
29-100	OCEAN CO WC	NORMANDY 3	8/12/1986	24.0	172	7.5	---	1.0
29-504	OCEAN CO WC	MANTOLOKING 7	8/12/1986	24.0	164	7.4	---	1.0
29-006	OCEAN CO WC	BAY HEAD 6	8/12/1986	20.5	208	8.1	---	1.0
29-530	PT PLEASANT WD	PPWD 6	8/ 7/1986	20.5	201	8.1	---	0.9
29-531	PT PLEASANT WD	PPWD 5	8/ 7/1986	24.5	150	7.0	---	1.0
29-579	PT PLEASANT BCH WD	PPBWD 11	8/ 7/1986	13.5	975	6.5	---	270
29-807	PT PLEASANT BCH WD	PPBWD 12	8/ 7/1986	14.0	1,005	6.6	---	300
29-523	PT PLEASANT BCH WD	PPBWD 10	8/ 7/1986	14.0	710	6.5	---	190

* Total depth of well.

Aquifer unit:

121CKKD - Kirkwood-Cohansey aquifer system
124PNPN - Piney Point aquifer
211EGLS - Englishtown aquifer
211MRPA - Potomac-Raritan-Magothy aquifer system

*U.S.GOVERNMENT PRINTING OFFICE:1987-714-012

October 1, 1978

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

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI). This report contains both the inch-pound and SI unit equivalents in the station manuscript descriptions.

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

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