Water Resources Data New York Water Year 1987

Volume 1. Eastern New York excluding Long Island

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NY-87-1
Prepared in cooperation with the State of New York
and with other agencies

CALENDAR FOR WATER YEAR 1987

1986

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1987

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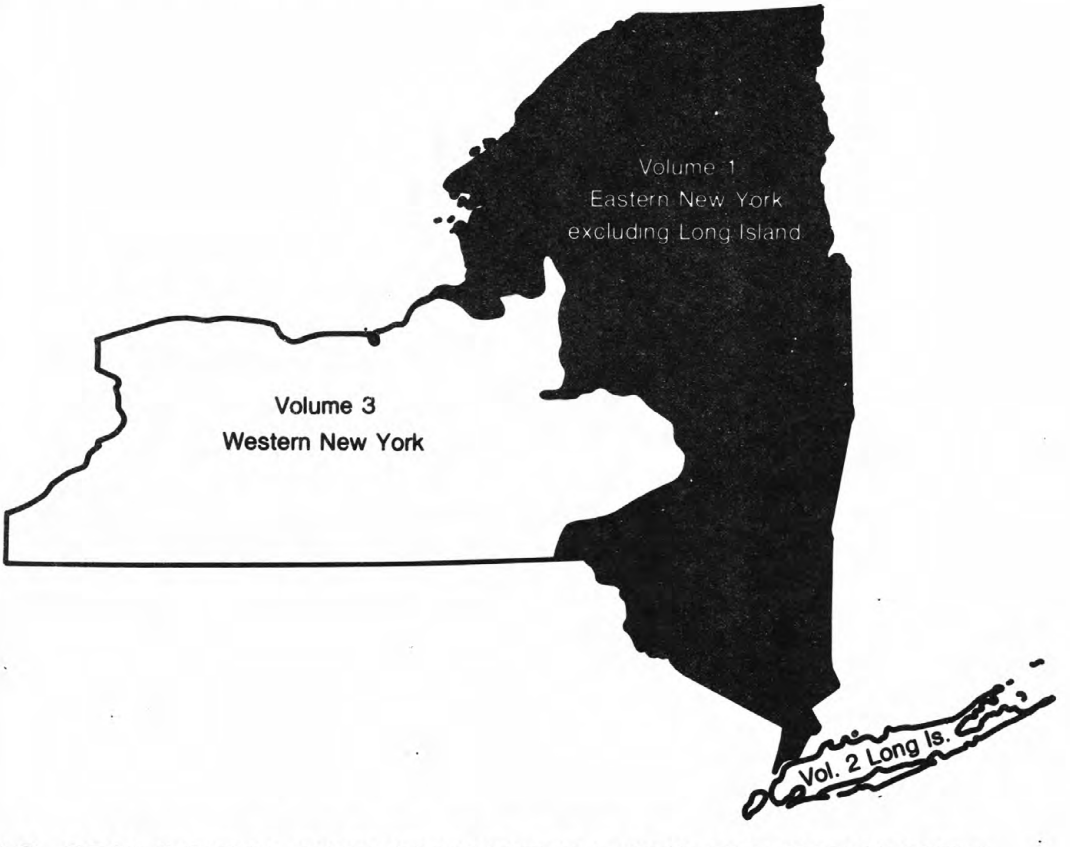
Water Resources Data New York Water Year 1987

Volume 1. Eastern New York excluding Long Island

by Gary D. Firda, Richard Lumia and Patricia M. Burke



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NY-87-1
Prepared in cooperation with the State of New York
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 York write to:

District Chief, Water Resources Division
U.S. Geological Survey
U.S. Post Office and Courthouse
P.O. Box 1669
Albany, New York 12201

1988

PREFACE

This volume of the annual hydrologic data report of New York 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 York are contained in three volumes:

Volume 1. Eastern New York excluding Long Island
Volume 2. Long Island
Volume 3. Western New York

In addition to the authors, who 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 collection, processing, and tabulation of the data:

G. D. Casey	R. J. Martin	K. A. Stevenson
A. J. Cohen	J. Mt. Pleasant	R. A. Trudell
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This report was prepared in cooperation with the State of New York and with other agencies under the general supervision of L. A. Martens, District Chief, New York.

50272-101

REPORT DOCUMENTATION PAGE	1. REPORT NO. USGS/WRD/HD-88/260	2.	3. Recipient's Accession No.
4. Title and Subtitle: Water Resources Data New York, Water Year, 1987, Volume 1. Eastern New York excluding Long Island			5. Report Date: 1988 6.
7. Author(s): G.D. Firda, R. Lumia, P.M. Burke			8. Performing Organization Rept. No. USGS-WDR-NY-87-1
9. Performing Organization Name and Address: U.S. Geological Survey, Water Resources Division 343 U.S. P.O. & Courthouse, P.O. Box 1669 Albany, New York 12201			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 343 U.S. P.O. & Courthouse, P.O. Box 1669 Albany, New York 12201			13. Type of Report & Period Covered: Annual - Oct. 1, 1986-Sept. 30, 1987 14.

15. Supplementary Notes

Prepared in cooperation with the State of New York and other agencies.

16. Abstract (Limit: 200 words)

Water resources data for the 1987 water year for New York consist of records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; and water levels in observation wells. This volume contains records of water discharge at 97 gaging stations; stage only at 4 gaging stations; and stage and contents at 4 gaging stations, and 19 other lakes and reservoirs; water quality at 33 gaging stations; and water levels at 24 observation wells. Locations of these sites are shown on figures 7A and 7B. Also included are data for 35 crest-stage partial-record stations. Additional water data were collected at various sites not in the systematic data-collection program and are published as miscellaneous measurements and analyses. These data, together with the data in volumes 2 and 3, represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in New York.

17. Document Analysis a. Descriptors

*New York, *Hydrologic data, *Surface water, *Ground water, *Water quality, Streamflow, Flow rates, Gaging stations, Lakes, Reservoirs, Chemical analysis, Sediments, Water analysis, Water temperatures, Water levels, Water wells, Data collection sites

b. Identifiers/Open-Ended Terms

c. COSATI Field/Group

18. Availability Statement	19. Security Class (This Report)	21. No. of Pages
No restrictions on distributions. This report may be purchased from: National Technical Information Service Springfield, Va 22161	UNCLASSIFIED	277
	20. Security Class (This Page) UNCLASSIFIED	22. Price

(See ANSI-Z39.18) See Instructions on Reverse OPTIONAL FORM 272 (4-77) (Formerly NTIS-35)

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ILLUSTRATIONS

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[*Letter after station name designates type of data: (d) discharge, (e) contents and/or elevation, (c) chemical, (b) biological, (t) water temperature, (s) sediment*]

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GROUND-WATER LEVELS

QUALITY OF GROUND WATER

WATER RESOURCES DATA FOR NEW YORK, 1987
Volume 1.--Eastern New York excluding Long Island

INTRODUCTION

Water resources data for the 1987 water year for New York consist of records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; and ground-water levels. This volume contains records for water discharge at 97 gaging stations; stage only at 4 gaging stations; stage and contents at 4 gaging stations, and 19 other lakes and reservoirs; water quality at 33 gaging stations; and water levels at 24 observation wells. Also included are data for 35 crest-stage partial-record stations. Additional water data were collected at various sites not involved in the systematic data-collection program, and are published as miscellaneous measurements and analyses in this volumn. These data together with the data in Volumes 2 and 3 represent that part of the National Water Data System operated by the U.S. Geological Survey in cooperation with State, Municipal, and Federal agencies in New York.

Records of discharge and stage of streams, and contents and stage of lakes and reservoirs, were first published in a series of U.S. Geological Survey water-supply papers entitled, "Surface Water Supply of the United States." Through September 30, 1960, these water-supply papers were in an annual series and then in a 5-year series for 1961-65 and 1966-70. Records of chemical quality, water temperatures, and suspended sediment were published from 1941 to 1970 in an annual series of water-supply papers entitled "Quality of Surface Waters of the United States." Records of ground-water levels were published from 1935 to 1974 in a series of water-supply papers entitled "Ground--Water Levels in the United States." Water-supply papers may be consulted in the libraries of the principal cities and universities in the United States or may be purchased from the U.S. Geological Survey, Branch of Distribution, 604 South Pickett Street, Alexandria, VA 22304.

Since the 1961 water year, streamflow data and since the 1964 water year, water-quality data have been released by the Geological Survey in annual reports on a State-boundary basis. These reports provided rapid release of water data in each state shortly after the end of the water year. Through 1970 the data were also released in the water-supply paper series mentioned above.

Streamflow and water-quality data beginning with the 1971 water year, and ground-water data beginning with the 1975 water year are published only in reports on a State-boundary basis. Beginning with the 1975 water year, these Survey reports carry 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 NY-87-1." 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 (518) 472-3107.

COOPERATION

The U.S. Geological Survey and organizations of the State of New York and other agencies have had cooperative agreements for the systematic collection of water records since 1900. Organizations that assisted in collecting data included in Volume 1, water year 1987, through cooperative agreement with the Survey are:

New York State Department of Environmental Conservation
New York State Department of Transportation
County of Ulster, County Legislature
County of Westchester, Department of Public Works
City of New York, Department of Environmental Protection
Village of Nyack
Board of Hudson River-Black River Regulating District
New York Power Authority

Assistance in the form of funds for collecting records at gaging stations published in this report was also given by the U.S. Army Corps of Engineers and the Environmental Protection Agency.

The following municipalities and organizations aided in collecting records:

Plattsburgh, Tarrytown, Tupper Lake, and Yonkers; Indian River Co.; New York State Electric and Gas Corp.; Niagara Mohawk Power Corp.; Orange and Rockland Utilities, Inc.; Oswegatchie River-Cranberry Reservoir Commission; Spring Valley Water Co.; and Utica Board of Water Supply.

Organizations that supplied data are acknowledged in station descriptions.

SUMMARY OF HYDROLOGIC CONDITIONS

Surface Water

Precipitation over eastern New York during water year 1987 generally was above average to average during the fall, highly variable through the winter and spring, and near average during the summer, followed by a wetter-than-average September. This rainfall distribution, in conjunction with above-average January snowfalls, but much below-average February snows in northern New York, and unseasonably warm temperatures from March through July, were reflected in highly variable monthly runoff of streams in eastern New York. Although monthly runoff varied, the annual runoff of streams in eastern New York during water year 1987 generally was near average throughout the area. Annual runoff in the Catskill Mountain region of New York was above average (110 to 120 percent of average, fig. 1). Runoff in the St. Lawrence River, Lake Champlain, the Hudson and upper Mohawk River basins, and in the upper Delaware River basin, was below average to average (90 to 100 percent of average), and runoff in the extreme lower Hudson River, Neversink River, and lower Mohawk and mid-Hudson River basins generally was average to above average (100 to 110 percent of average). The lowest annual runoff was on streams draining to eastern Lake Ontario (80 to 90 percent of average).

Figure 2A shows average month-end reservoir contents and month-end contents of the New York City reservoir system during 1987; figure 2B compares 1987 month-end storage in Great Sacandaga Lake at Conklingville (in the upper Hudson River basin) with the average month-end storage for 1931-86. Storage in each of these reservoir systems remained at normal to slightly above-normal levels throughout 1987.

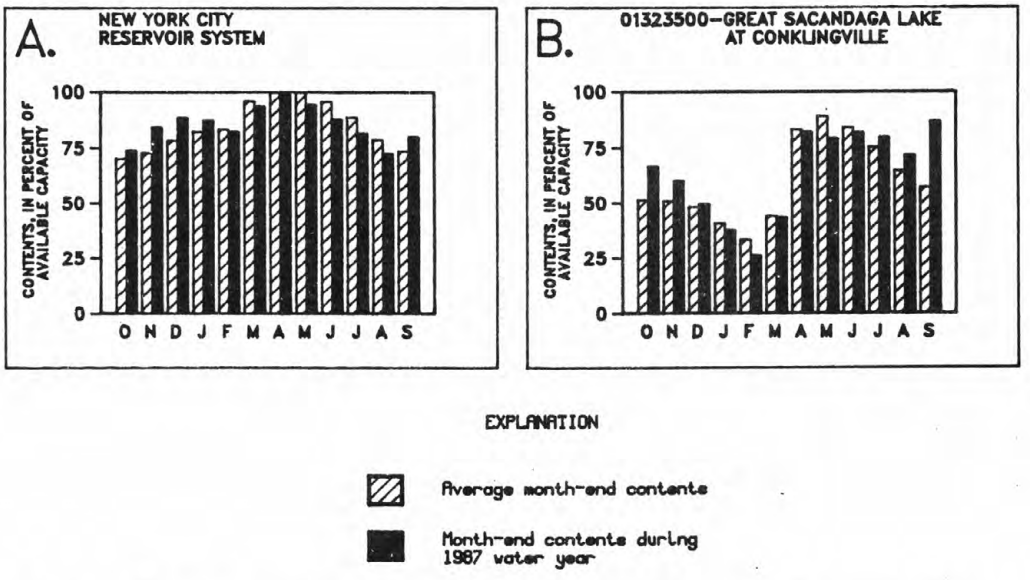


Figure 2.--Comparison of average month-end reservoir contents and month-end contents during 1987 water year for two selected reservoir systems in eastern New York.

The 1987 monthly runoff for selected stations in eastern New York is compared with each site's 1960-84 average monthly runoff in figure 3 (the letters A through I on fig. 1 show the locations of the sites represented in fig. 3). October and November streamflows were above average to average in most of eastern New York except in much of southeastern New York, where October streamflows were generally below average. Several storms along the Atlantic Coast, particularly on November 20-21 and 26, resulted in above-average rainfall from the Lake Champlain Valley to southeastern New York. Some flooding was reported along the Hoosic River after the November 26 storm.

Streamflow throughout eastern New York during December and January generally ranged from above average to average. An early December storm caused minor flooding in extreme southeastern New York. January snowfalls were 30 to 40 inches above normal in some parts of the upper Hudson River Valley and northern Catskills. Extreme cold in late January continued through much of February and helped make this the driest February, across the State as a whole, on record. Streamflow throughout eastern New York was much below normal for February.

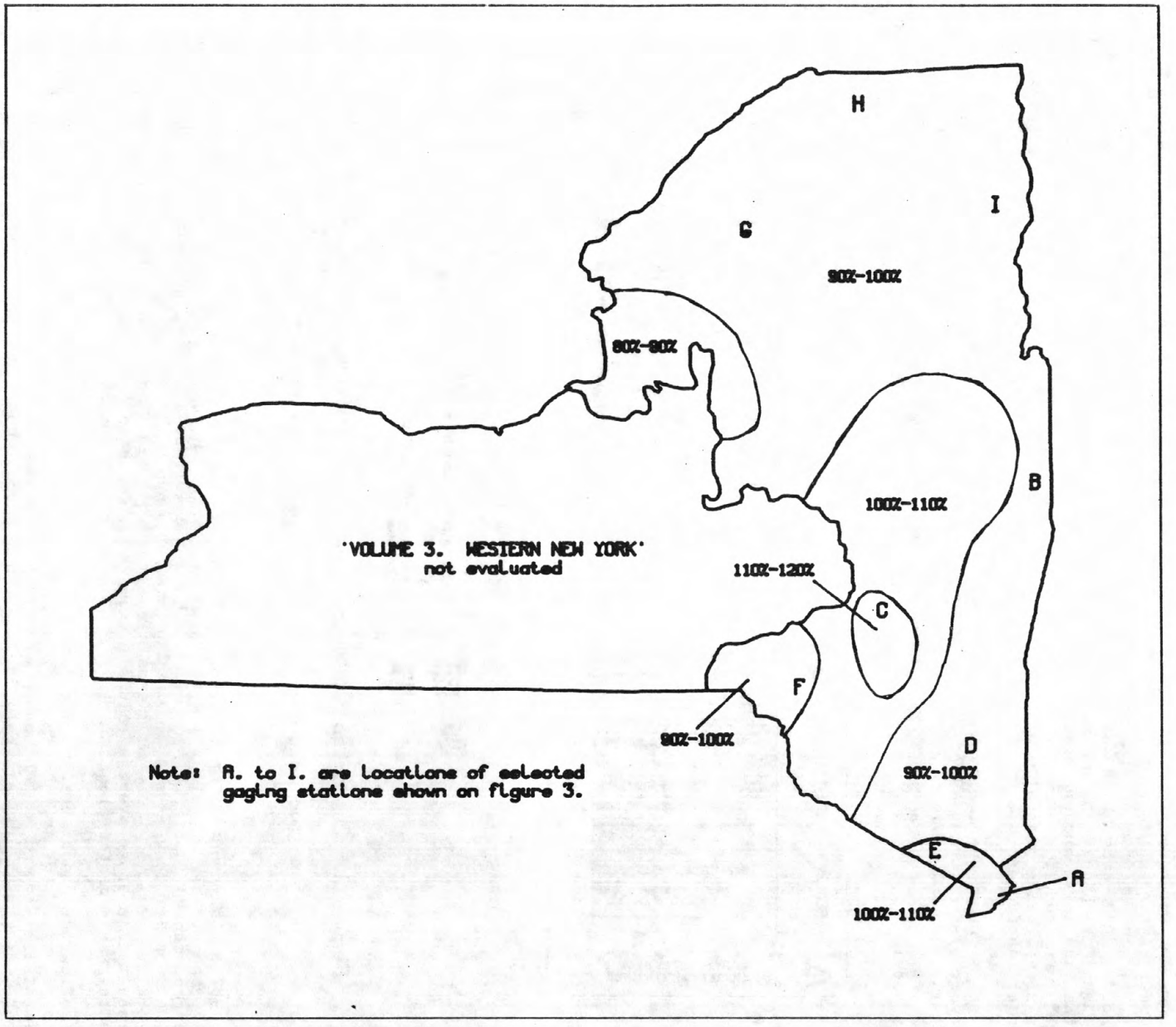


Figure 1.--1987 water year runoff as a percentage of the average annual runoff for 1960-84 for eastern New York excluding Long Island.

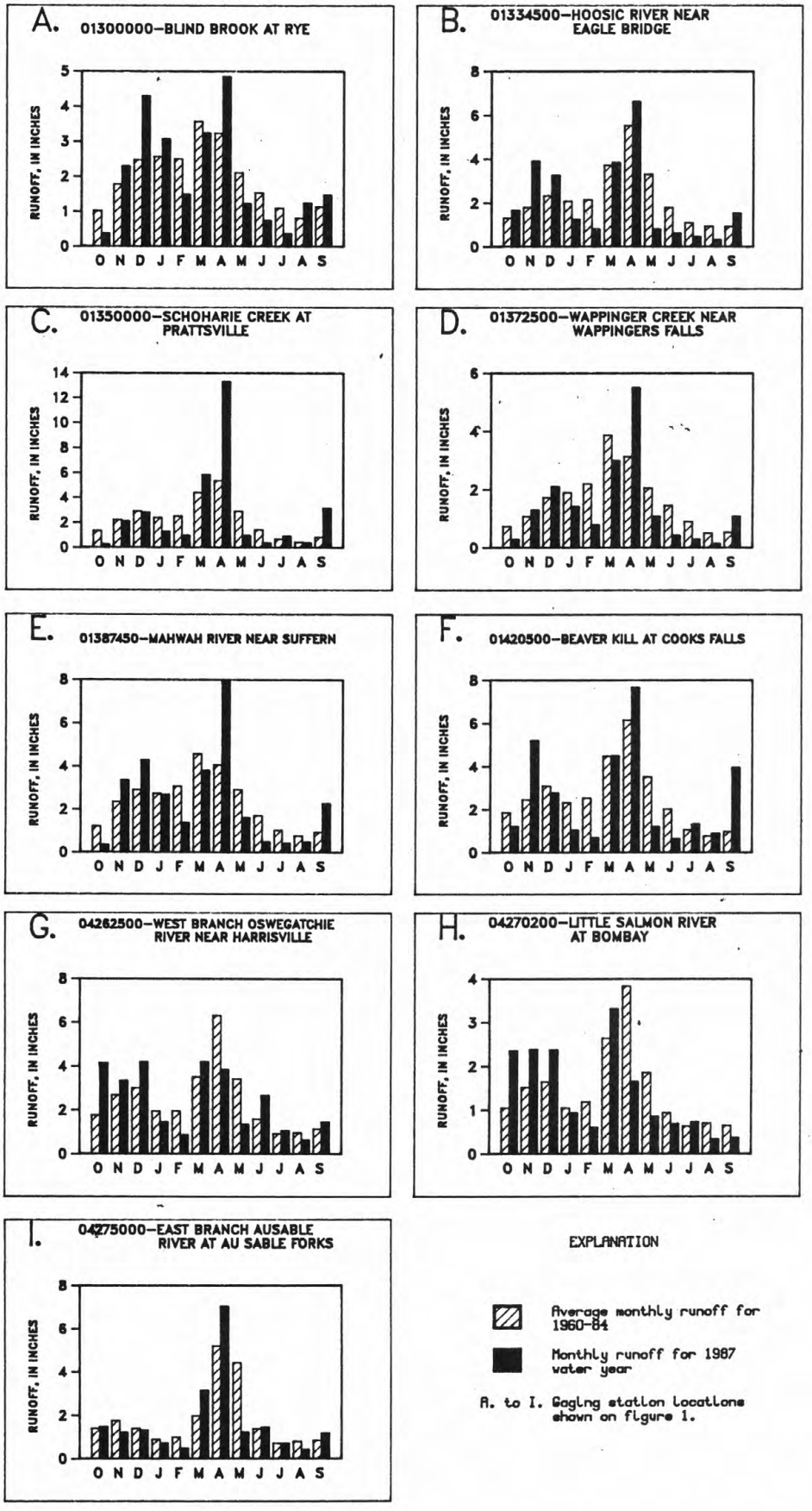


Figure 3.--Comparison of monthly runoff for 1987 water year and average monthly runoff for 1960-84 for selected gaging stations in eastern New York (site locations are shown on figure 1).

March brought above-normal temperatures and below-normal precipitation to most of eastern New York. Most rain fell during the first and last few days of the month. The maximum 1-day rainfall was 3.90 inches at West Point (lower Hudson River Valley) on March 31. Several small streams throughout southeastern New York flooded, and most major streams in the Hudson and Mohawk River basins flooded to some degree on March 31. More serious flooding was reported on the Ausable River (Lake Champlain basin) and other small streams in Clinton and Essex Counties.

Streamflow was above average to much above average during April throughout eastern New York except in areas north and west of the Adirondack Mountains, where flows were below normal. Temperatures were above normal, and monthly precipitation was 2 to 3 inches above normal throughout the Hudson River Valley and most of southeastern New York, but below normal throughout northern New York. A 2-day storm during April 4-5, centrally located over the Catskill Mountain region, caused severe flooding and associated damage primarily within the Schoharie Creek, Esopus Creek, Rondout Creek, and upper Delaware River basins. The storm dumped 3 to 8 inches of rain during a 48-hour period over an already saturated and rapidly melting snow-covered area. Slide Mountain, in the center of the Catskills, received 8.54 inches of rain during April 4-5 and a total accumulation of 11.33 inches for the first week of April. The most disastrous result of this storm was the collapse of a New York State Thruway (I-90) bridge over the Schoharie Creek in Montgomery County, which caused the death of 10 people. The counties of Ulster, Greene, Delaware, Schoharie, and Montgomery were declared disaster areas. Damages to residences, businesses, agriculture, and State and Federal roads and bridges were estimated at $65 million. New peak discharges of record occurred at the following gaging stations throughout southeastern New York during the April 4-5 flooding:

Station (site locations shown on fig. 7A)	Period of record	April 4-5 peak discharge (ft^3/s)	Previous flood of record: Discharge (ft^3/s)	Previous flood of record: Water year
01199477--Stony Brook near Dover Plains	1976-current	532	354	1984
01349700--East Kill near Jewett Center	1951,56,67-68, 72-74,87	11,400	9,920	1956
01350101--Schoharie Creek at Gilboa	1976-current	56,400	46,500	1980
01350120--Platter Kill at Gilboa	1976-current	1,210	767	1986
01350180--Schoharie Creek at North Blenheim	1971-current	64,200	42,900	1980
01350355--Schoharie Creek at Breakabeen	1976-current	72,200	48,000	1980
01359519--Normans Kill near Westmere	1968-79, 1984,1987	6,880	5,580	1976
01361453--Catskill Creek tributary at Franklinton	1968-87	1,100	800	1980
01361500--Catskill Creek at Oak Hill	1911-77, 1980,1987	15,400	12,500	1950,1980
01362198--Esopus Creek at Shandaken	1964-current	16,100	15,900	1980
01364500--Esopus Creek at Mount Marion	1971-current	22,500	19,500	1980
01434010--East Branch Neversink River at Denning	1984-current	4,460	3,540	1985
01434025--Biscuit Brook at Frost Valley	1984-current	1,560	803	1984,1985
01435000--Neversink River near Claryville	1952-current	19,300	15,600	1980

Streamflow generally receded throughout the last 3 weeks of April and during May as unseasonably warm temperatures and below-average precipitation resulted in below-average runoff throughout eastern New York. Rainfall was generally 1 to 3 inches below normal (eastern New York) during May, making it one of the 10 driest Mays, statewide, since 1890. Some sites adjacent to eastern Lake Ontario reported monthly rainfall totals of less than 1 inch. Moderate drought conditions occurred in northern areas and into the Mohawk Valley.

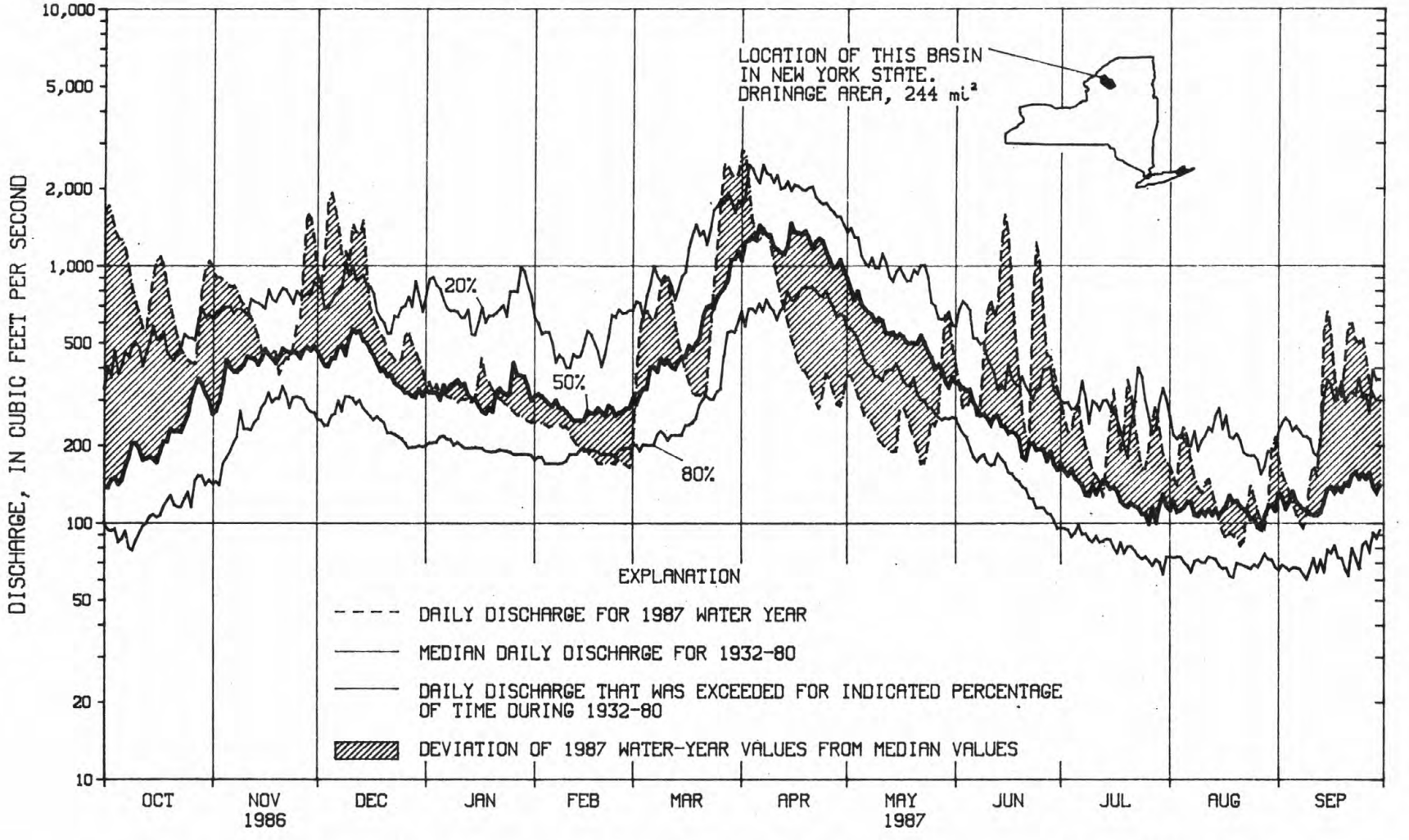


Figure 4.--Hydrographic comparisons, West Branch Oswegatchie River near Harrisville, N.Y.

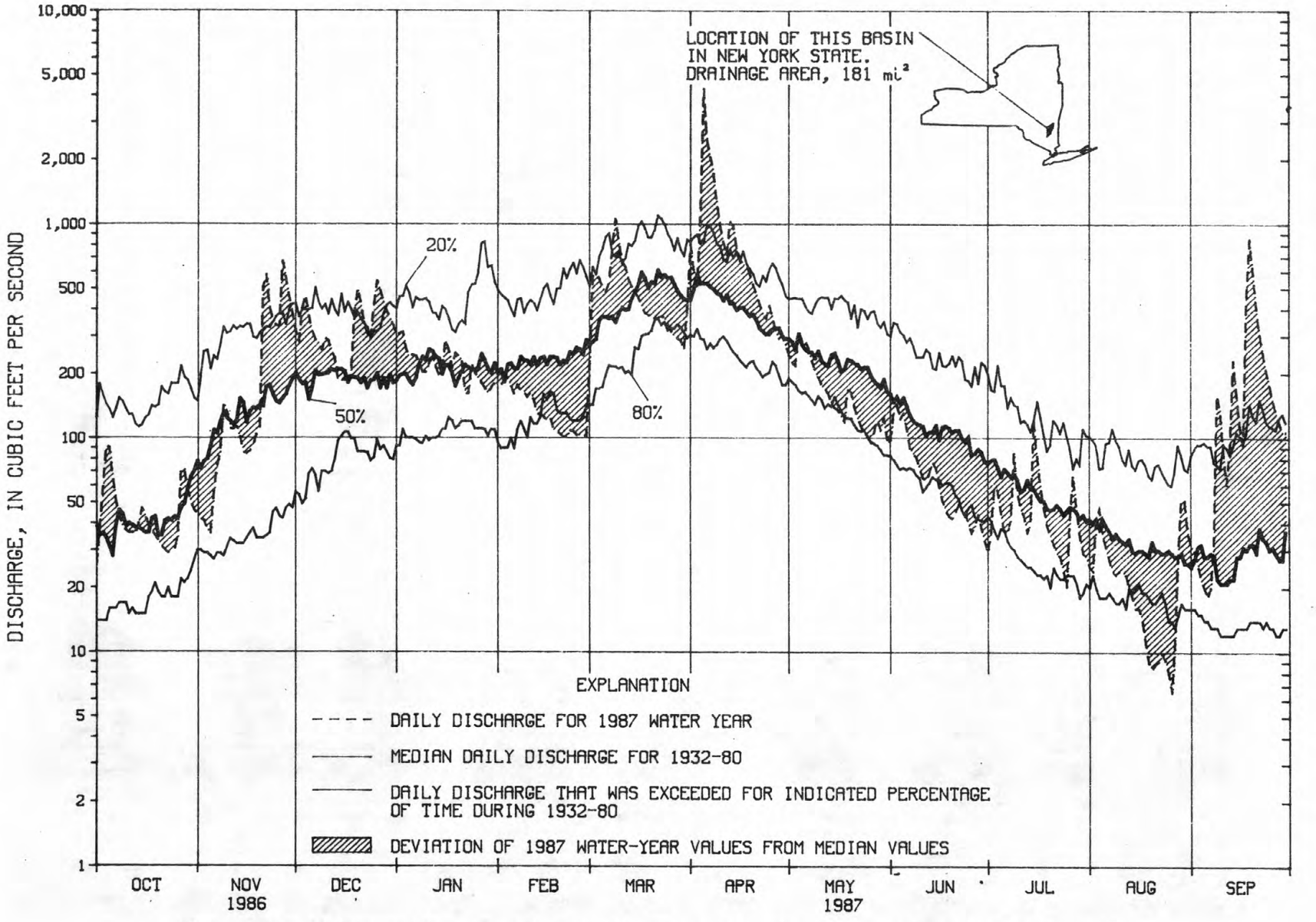


Figure 5.--Hydrographic comparisons, Wappinger Creek near Wappingers Falls, N.Y.

Heavy rains in early summer and numerous thunderstorms from June through August resulted in variable runoff conditions throughout eastern New York. June rainfall was above normal north of the Mohawk Valley, but generally below normal in southeastern New York. The western Adirondack region received 1 to 4 inches more rain than normal; 5 inches fell at Boonville in 2 hours on June 22, and caused flooding of Mill Creek, which washed out a 50-ft section of State Route 12. The below-average streamflows throughout southeastern New York in June returned to average in July, primarily as a result of several thunderstorms during the month. The greatest monthly rainfall total was 7.47 inches at East Jewett (Catskill Mountains), with 1 to 3 inches in many areas of southeastern New York during July 14-15 thunderstorms. Streamflow in northern New York during July was slightly above average as a result of numerous thunderstorms, but dry conditions during August brought northern streamflows to below average during the month. Southeastern New York was wetter than normal during August; the greatest monthly rainfall (7.95 inches, 2.95 inches of which fell on August 6) was in Suffern. Minor flooding was reported in Yonkers (Weschester County) on August 6. An additional 1 to 4 inches of rain fell throughout southeastern New York during August 26-29.

Statewide, September was about 2 inches wetter than normal (ninth wettest in 98 years). The Hudson River Valley and the Catskills had the most rain; Mohonk Lake (Ulster County) recorded 11.17 inches for the month. The greatest 1-day rainfall was 4.06 inches at Grahamsville (Catskills) on September 9; Albany reported 2.89 inches on that date (its' fourth greatest 24-hour rainfall on record). Several storms during September throughout eastern New York resulted in above-average streamflows most everywhere, with much-above-average flows in some areas of southeastern New York. A bridge was washed out in Walton on September 9, and more than 5 inches of rain in Orange County on September 12-13 caused some flooding. The only exception to the high September runoffs was in extreme northern New York, where streamflows were slightly below average. Figures 4 and 5 show the above-average runoffs for September at two representative stations and the variation of regional runoff throughout the 1987 water year.

Surface-Water Quality

Water-quality data from the Hydrologic Benchmark station and the eight NASQAN stations in eastern upstate New York generally were within the historic extremes of the individual stations' period of record. A few new extremes were measured, but most were only minor changes. Two significant changes to maximums occurred during the water year. On March 11, 1987, at Black River at Watertown, the turbidity measurement was 28 NTU, which exceeded the previous maximum of 9 NTU. On August 26, 1987, at Sandy Creek near Adams, the dissolved orthophosphorus measurement was 0.470 mg/l, which exceeded the previous maximum of 0.180 mg/l.

Ground Water

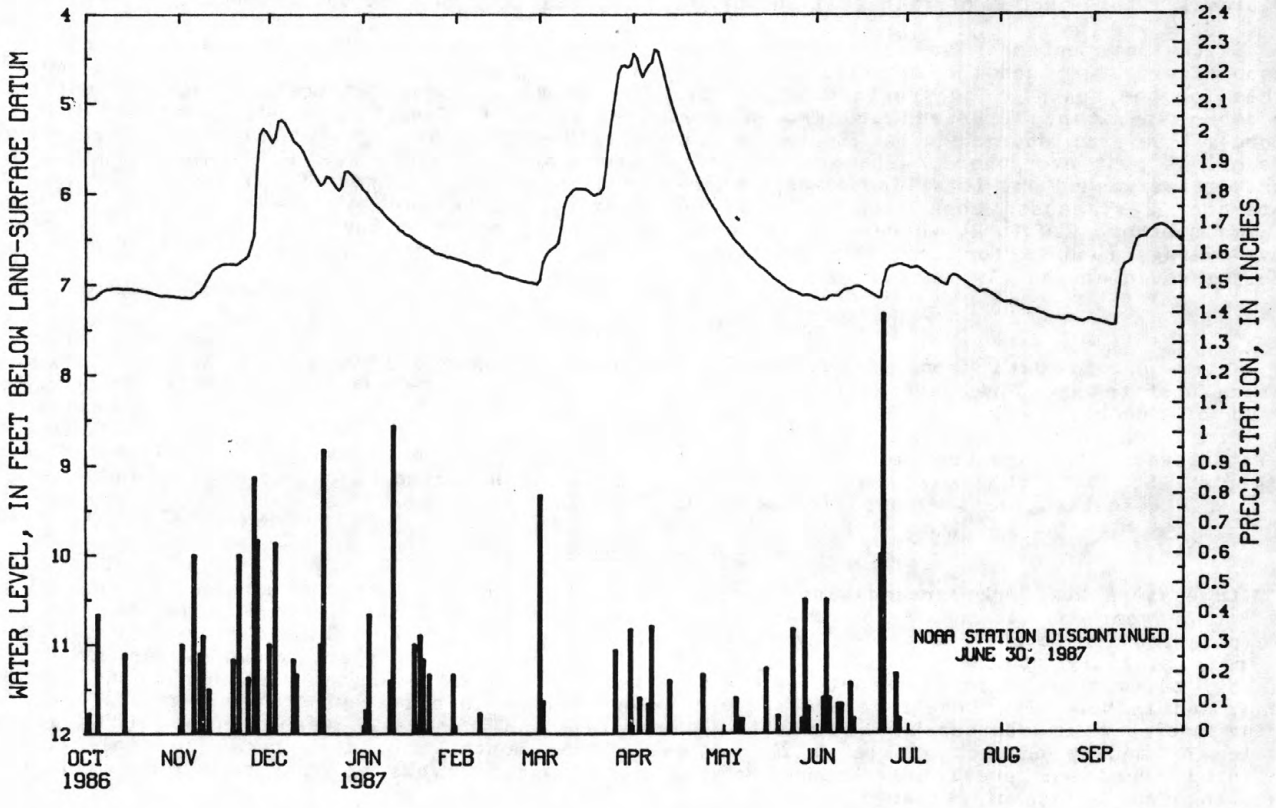
In eastern New York, ground-water levels generally were at or near normal in the beginning of the water year as a result of average precipitation during the preceding months. Because precipitation for October was below average, water levels declined during October and into November, but rose slightly at the end of November into December. In October, ground-water levels were slightly below average in southeastern New York and above average in the east-central and northern areas, and in November, levels generally were below average in all areas. Ground-water levels rose during December in response to snowmelt and rainfall and generally were a foot above average. Levels in January changed little until the end of the month, when they began to decline. This declining trend was prevalent through February, and water levels were average or below average resulting from a lack of recharge.

Water levels rose during March and into April in response to the spring snowmelt and precipitation. In southeastern areas, ground-water levels were still below average in March, but rose to above average in April. In east-central and northern areas, levels were average to above average in March, but below average in April. This change was due to the variable precipitation and snowmelt recharging the aquifers. A general declining trend was evident in May in response to below-normal precipitation and uptake by vegetation during the growing season.

The decline in water levels continued during the summer in response to the seasonal decrease in precipitation and high evapotranspiration losses. Water levels were below average in May and June in all areas. After heavy rains at the end of June, July water levels were average in the north and average to above average in the east-central and southeastern regions. Ground-water levels were below average again in August except in Greene County, where they were above average because of localized showers and thunderstorms. The general decline in conditions continued into September, but heavy mid-month rains caused a rise in water levels in most areas through the end of the water year.

The hydrograph of the 1987 water year for well W-533 in Washington County, shown on the next page, includes the record from a National Oceanic and Atmospheric Administration (NOAA) precipitation station for October 1, 1986 to June 30, 1987. The well is screened in a water-table sand and gravel aquifer in a valley-flat setting about 1,000 feet from the NOAA precipitation and temperature station at the Washington County Sheriff's Office (station discontinued 6/30/87). The hydrograph shows the typical seasonal fluctuations of water levels in the water-table aquifer in response to precipitation and associated variable recharge. Water levels rose in late fall and early winter in response to increased recharge and decreased evapotranspiration at the end of the growing season.

Water levels declined during winter, when recharge decreased because of frozen ground and precipitation in the form of snow. Ground-water levels rose sharply during the spring as the ground thawed, snow melted, and precipitation again occurred as rain. On March 1, the snowpack was 14 inches thick, but by March 23, only a trace remained. In late spring, ground-water levels began to decline as recharge decreased in response to increasing evapotranspiration at the start of the growing season. Large rainstorms such as the one on June 22-23 caused temporary rises in the ground-water levels during the summer, but the overall trend was one of declining water levels into the fall. A similar response to heavy precipitation occurred again during September, when 4.93 inches of rain was recorded September 7-13 at a NOAA station approximately 13 miles southwest of this well.



SPECIAL NETWORKS AND PROGRAMS

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

National Stream Quality Accounting Network (NASQAN) is a data collection network designed by the U.S. Geological Survey to meet many of the information demands of agencies or groups involved in national or regional water-quality planning and management. Both accounting and broad-scale monitoring objectives have been incorporated into the network design. Areal configuration of the network is based on river-basin accounting units (identified by 8-digit hydrologic-unit numbers) designated by the Office of Water Data Coordination in consultation with the Water Resources Council. Primary objectives of the network are (1) to depict areal variability of streamflow and water-quality conditions nationwide on a year-by-year basis and (2) to detect and assess long-term changes in streamflow and stream quality.

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.

EXPLANATION OF THE RECORDS

The surface-water and ground-water records published in this report are for the 1987 water year that began October 1, 1986, and ended September 30, 1987. 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 water, and ground-water level data. The locations of the stations and wells where the data were collected are shown in figures 7A and B. 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. The "downstream order" system is used for regular surface-water stations and the "latitude-longitude" system is used for wells.

Downstream Order System

Since October 1, 1950, the order of listing hydrologic-station records in Survey reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a mainstream station are listed before that station. A station on a tributary that enters between two mainstream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary with respect to the stream to which it is immediately tributary is indicated by an indention in the "List of Stations" in the front of this report. Each indention represents one rank. This downstream order and system of indention show which stations are on tributaries between any two stations and the rank of the triburary 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, miscellaneous sites, and other stations; therefore, the station number for a partial-record station or a miscellaneous site indicates downstream-order position in a list made up of all 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 8-digit number for each station, such as 01300500, includes the 2-digit part number "01" plus the 6-digit downstream-order number "300500". The Part number designates the major river basin. In a few instances where no gaps were left in the 8-digit numbering sequence, one or two digits were added (making a 9- or 10-digit station number) and (or) a latitude-longitude number was used for identification.

Latitude-Longitude System

The identification numbers for wells are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first 6 digits denote the degrees, minutes, and seconds of latitude, the next 7 digits denote degrees, minutes, and seconds of longitude, and the

last 2 digits (assigned sequentially) identify the wells within a 1-second grid. 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 6 below.)

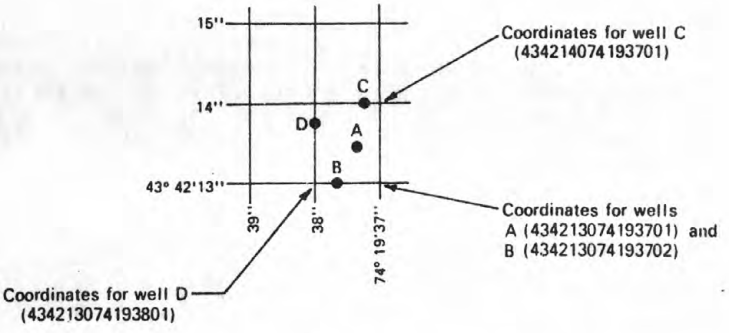


Figure 6. System for numbering wells (latitude and longitude)

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. Locations of all gaging stations and observation wells in this report are shown in figures 7A and 7B.

Data Collection and Computation

The base data collected at gaging stations consist of records of stage and measurements of discharge of streams or canals, and stage, surface area, and contents of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from either direct readings on a nonrecording gage or from a water-stage recorder that gives either a continuous graph of the fluctuations or a tape punched at selected time intervals. Measurements of discharge are made with a current meter, using the general methods adopted by the Geological Survey. 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. For stream-gaging stations, rating tables giving the discharge for any stage are prepared from stage-discharge relation curves. If extensions to the rating curves are necessary to express discharge greater than measured, they are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, computation of flow-over-dams or weirs), step-backwater techniques, velocity-area studies, and logarithmic plotting. The daily mean discharge is computed from gage heights and rating tables, then the monthly and yearly mean discharges are computed from the daily figures. 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 computed by the shifting-control method, in which correction factors based on individual discharge measurements and notes by hydrographers and observers are used in applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the control, the daily mean discharge is computed by what is basically the shifting-control method. 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.

For a lake or reservoir station, capacity tables giving the contents for any stage are prepared from stage-area relation curves defined by surveys. The application of the stage to the capacity table gives the contents, from which the daily, monthly, or yearly change in contents is computed. If the stage-capacity curve is subject to changes because of deposition of sediment in the reservoir, periodic resurveys of the reservoir are necessary to define new stage-capacity curves. During the period between reservoir surveys the computed contents may be increasingly in error due to the gradual accumulation of sediment. 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, prior and subsequent record, discharge measurements, weather records, and comparison with records for other stations in the same or nearby basins. Likewise, daily contents may be estimated from operator's log, prior and subsequent records, 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 some stations, were determined and used by the U.S. Army Corps of Engineers or other agencies.

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 District office 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 the 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 may be 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, if the drainage area includes large noncontributing areas, or if the average annual rainfall over the drainage basin is usually less than 20 inches. In the yearly summary below the monthly summary, the figures shown are the appropriate daily 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 discharge measurements at low-flow partial-record stations, and the second is a table of annual maximum stage and discharge at crest-stage 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 are called measurements at miscellaneous sites. Occasionally, a series of discharge measurements are made within a short time period to investigate the seepage gains or losses along a reach of a stream or to determine the low-flow characteristics of an area. Such measurements are also given in special tables following the tables of partial-record stations.

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 data 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 observations of stage, measurements of discharge, and interpretation of records.

The degree of accuracy of the records is indicated under "REMARKS." "Excellent" means that about 95 percent of the daily discharges are within 5 percent; "good," within 10 percent; and "fair," within 15 percent. "Poor" means that daily discharges have less than "fair" accuracy. Different accuracies may be attributed to different parts of a given record.

Figures of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 ft^3/s; to tenths between 1.0 and 10 ft^3/s; to whole numbers between 10 and 1,000 ft^3/s; and to 3 significant figures above 1,000 ft^3/s. The number of significant figures used is based solely on the magnitude of the figure. The same rounding rules apply to discharge figures 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 of a more detailed nature than that published for most of the gaging stations such as observations of water temperatures, discharge-measurement notes, gage-height records, and rating tables is on file in the district office. Also, most gaging-station records are available in computer-usable form and many statistical analyses have been made. Information on the availability of unpublished data or statistical analyses of the published records may be obtained from the district office.

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 once or more times daily, weekly, monthly, or quarterly. A partial-record station is a site where limited water-quality data are collected systematically over a period of years. Frequency of sampling is usually less than quarterly. A miscellaneous sampling site is a location other than a continuing or partial-record station, where random samples are collected to give better areal coverage to define water-quality conditions in the river basin.

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

Arrangement of Records

Water-quality records collected at a surface-water daily record station are published immediately following that record, unless otherwise footnoted under "REMARKS". 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 appear in separate tables following the table of discharge measurements at miscellaneous sites. Data for precipitation-quality stations appear next. The table of ground-water quality data follow the ground-water level records. Data for quality of ground water are listed alphabetically by County, and are identified by well number.

On-site Measurements and Sample Collection

In obtaining water-quality data, a major concern needs to be assuring that the data obtained represent the in situ quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, need to be made onsite when the samples are taken. To assure that measurements made in the laboratory also represent the in situ water, carefully prescribed procedures need to be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in 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. Also, detailed information on collecting, treating, and shipping samples may be obtained from the Geological Survey District office.

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load. All samples obtained for the National Stream Quality Accounting Network (see definitions) are obtained from at least several verticals. Whether samples are obtained from the centroid of flow or from several verticals, depends on flow conditions and other factors which must be evaluated by the collector.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

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 District office.

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, either mean temperatures and/or maximum and minimum temperatures for each day are published. Water temperatures measured at the time of water-discharge measurements are on file in the 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 loads of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-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 the quantities of suspended sediment, records of the periodic measurements of the particle-size distribution of the suspended sediment and bed material are included.

Laboratory Measurements

Samples for indicator bacteria and daily samples for specific conductance are analyzed locally. Sediment samples are analyzed in the Geological Survey laboratory in Harrisburg, Pa. All other samples are analyzed in the Geological Survey laboratories in Arvada, Colo., or Doraville, Ga. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chap. C1. Methods used by the Geological Survey laboratories 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 preceding 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, and so forth, 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 record, 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 miscellaneous sampling sites are published in a separate table 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.

Categories of Water-Quality Data

There is a broad range of water-quality parameters available for most stations whose record exceeds more than a few years operation. Sampling schedules are often intermittent for certain types of data, with analyses available for some but not all years within a station's period of record. An acurate description of the variety of data available is shown by grouping similar parameters into a few general categories, which are listed in the "PERIOD OF RECORD" paragraph. Each category of data is followed by a notation of the water year(s) for which data is available and a letter code describing the frequency of sampling (see following section, "Frequency-of-Sampling Notation"). Thus, "CHEMICAL DATA: 1972-74(c), 1977-81(a).", shows there are at least six analyses each year for the first three years of record, no data for this category in 1975 and 1976, and 1 or 2 samples for each of the five most recent years.

The "PERIOD OF RECORD" paragraph lists the following categories of data to describe information available.

CHEMICAL DATA: Usually includes most of the "major ions", and may often include some of the following physical properties: specific conductance, pH, temperature, color, turbidity, dissolved oxygen.
MINOR ELEMENT DATA: Comprises the "heavy metals" and some of the "alkaline earth" groups. Determinations often include some but not all of the following: Al, As, Ba, Cd, Cr, Co, Cu, Hg, Li, Ni, Pb, Se, Sn, Sr, Zn.
RADIOCHEMICAL DATA: The determinations of the concentration of individual radioactive elements, such as radium 226, cobalt 60, strontium 90, and tritium. This category also includes the gross measurement of radioactivity (alpha, beta, gamma) without regard to the radiochemical species that produce the radioactivity.
PESTICIDE DATA: The organic compounds (insecticides and herbicides) used to control insects and plants. Routinely, the analyses searches for traces of between 12 to 22 compounds.
ORGANIC DATA: Organic data (other than pesticides) such as, OC, PCB, PCN.
NUTRIENT DATA: Constituents containing nitrogen or phosphorus. Results usually include several of the following: nitrate plus nitrate, phosphorus, ammonia nitrogen, organic nitrogen, ammonia nitrogen plus organic nitrogen (Kjeldahl nitrogen).
BIOLOGICAL DATA: The identification and concentration of microscopic plant organisms (phytoplankton, periphyton), or enteric bacteria (total coliform, fecal coliform, or fecal streptococcal) living in aquatic habitats.
SEDIMENT DATA: Suspended-sediment concentration, suspended-sediment discharge, and particle-size data for discrete samples.

Frequency-of-Sampling Notation

The categories of data given in the "PERIOD OF RECORD" paragraph are followed by the water year(s) for which that kind of data was collected. The amount of data available is specified by the following letter codes:

(a) 1 or 2 samples per year.
(b) 3 to 5 samples per year.
(c) 6 to 9 samples per year.
(d) 10 to 20 samples per year.
(e) more than 20 samples per year.

Records of Ground-Water Levels

Ground-water level data consist of water-level measurements made in observation wells. Each well is identified by means of (1) a 15-digit number that is based on latitude and longitude and (2) a local number that is provided for local needs. (See figure 6.)

Data Collection and Computation

Measurements are made in many types of wells, under varying conditions of access and at different temperatures, hence, neither the method of measurement nor the equipment can be standardized. At each observation well, however, the equipment and techniques used are those that will ensure that measurements at each well are consistent.

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; National Geodetic Vertical Datum of 1929 is the datum plane on which the national network of precise levels is based. If known, the elevation of the land-surface datum above National Geodetic Vertical Datum of 1929 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 recording gages are reported as mean daily values, and the extremes are instantaneous values selected from the digital record. Water levels in wells not equipped with recording gages are read periodically or measured periodically with a weighted tape by U.S. Geological Survey personnel and/or an observer.

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 in 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. Accordingly, most measurements are reported to a hundredth of a foot, but some are given only to a tenth 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 the 10-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); a landline location designation; the hydrologic unit number; the distance and direction from a geographic point of reference; and the owner's name.

AQUIFER.--This entry designates by name (if a name exists) 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 (or below) 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 and all taped measurements of water level are listed for wells without recorders. The highest and lowest water levels of the water year and their dates of occurrence are shown on a line below the table for wells with recorders. 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.

A hydrograph of water levels follows the data table for each well. The current year and the previous 9 years of record are plotted in feet below land-surface datum. If the period of record is less than 10 years, the water levels for the entire record are plotted.

Records of Ground-Water Quality

Records of ground-water quality in this report differ from other types of records in that for most sampling sites they consist of only one set of measurements for the water year. The quality of ground water ordinarily changes only slowly; therefore, for most general purposes one annual sampling, or only a few samples taken at infrequent intervals during the year, is sufficient. Frequent measurement of the same constituents is not necessary unless one is concerned with a particular problem, such as monitoring for trends in nitrate concentration. In the special cases where the quality of ground water may change more rapidly, more frequent measurements are made to identify the nature of the changes.

Data Collection and Computation

The records of ground-water quality in this report were obtained mostly as part of a special study in a specific area. Consequently, a number of chemical analyses are presented for one county, but none are presented for others. As a result, the records for this year, by themselves, do not provide a balanced view of ground-water quality 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.

Most methods for collecting and analyzing water samples are described in the "U.S. Geological Survey Techniques of Water-Resources Investigations" manuals listed on a following page. The values reported in this report represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. All samples were obtained by trained personnel. The wells sampled were pumped long enough to assure that the water collected came directly from the aquifer and had not stood for a long time in the well casing where it would have been exposed to the atmosphere and to the material, possibly metal, comprising the casings.

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 well number. The prime identification number for wells sampled is the 15-digit number derived from the latitude-longitude locations. No descriptive statements are given for ground-water-quality records; however, the well number, 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.

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 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 costs 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 each of the Water Resources Division's district offices (see address 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 the table for converting inch-pound system units to International System of units (SI) 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.

Algae are mostly aquatic single-celled, colonial, or multicelled 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.

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, 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. 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 the organisms which produce colonies within 24 hours when incubated at 35°C ± 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 intestines 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 which produce blue colonies within 24 hours when incubated at 44.5°C ± 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 intestines 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 brainheart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours at 35°C ± 1.0°C on KF medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Bed material See Bottom material.

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

Biomass is the amount of living matter present at any given time, expressed as 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 meter (g/m^2).

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

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

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

Biomass pigment ratio is an indicator of the total proportion of periphyton which are autotrophic (plants). This is also called the Autotrophic Index.

Bottom material is the unconsolidated material of which a streambed, lake, pond, reservoir, or estuary bottom is composed.

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 only 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.

Total in bottom material is the total amount of a given constituent in a representative sample of bottom material. 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 judge when the results should be reported as "total in bottom 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 flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, or about 646,000 gallons.

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 natural water color 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 pigments in plants.

Colloid is any substance with particles in such a fine state of subdivision dispersed in a medium, for example water, that they do not settle out; but not in so fine a state of subdivision that they can be said to be truly dissolved.

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.

Confined aquifer is a term used to describe an aquifer containing water between two relatively impermeable boundaries. The water level in a well tapping a confined aquifer stands above the top of the confined aquifer and can be higher or lower than the water table (it can also be above ground level). Formerly called artesian aquifer.

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.

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 feet per second per square mile (CFSM) 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.

Cubic foot per second (FT^3/S, 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 approximately 7.48 gallons per second or 448.8 gallons per minute.

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-micrometer 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.

Diversity index is a numerical expression of evenness of distribution of aquatic organisms. The formula for diversity index is:

$$\bar{d} = -\sum_{i=1}^{s} \frac{n_i}{n} \log_2 \frac{n_i}{n}$$

Where ni is the number of individuals per taxon, n is the total number of individuals, and s is the total number of taxa in the sample of the community. Diversity index values range from zero, when all the organisms in the sample are the same, to some positive number, when some or all of the organisms in the sample are different.

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 river above the specified point. Figures of drainage area given herein include all closed basins, or noncontribution areas, within the area unless otherwise noted.

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 attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate ($CaCO_3$).

High tide is the maximum tidal peak reached each day.

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 8-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 tidal trough reached each day.

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

Methylene blue active substance (MBAS) is a measure of apparent detergents. This determination depends on the formation of a blue color when methylene blue dye reacts with synthetic detergent compounds.

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

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 represent 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 sediment per liter of water-sediment mixture.

National Geodetic Vertical Datum of 1929 (NGVD) 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.

Organic carbon (OC) is a measure of the organic matter present in aqueous solution and(or) suspension. May be reported in any of three categories (DOC, dissolved organic carbon; SOC, suspended organic carbon; TOC, total organic carbon).

Organism is any living entity, such as an insect, phytoplankter, or zooplankter.

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 meters (m^2), acres, or hectares. 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 milliliters (mL) or liters (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 suspended sediment or bed material determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in distilled water (chemically dispersed).

Particle-size classification used in this report agrees with 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 particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. The sample is subjected to mechanical and chemical dispersion in distilled water before 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 algae, fungi, and bacteria which are attached to or live upon submerged objects in lakes and rivers.

Pesticides are chemical compounds used to control undesirable plants and animals. Major categories of pesticides include insecticides, miticides, fungicides, herbicides and rodenticides. Insecticides and herbicides, which control insects and plants respectively, are the two categories reported.

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

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

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

Euglenoids (Euglenophyta) are a group of algae that are usually free-swimming and rarely creeping. They have the ability to grow either photosynthetically in the light or heterotrophically in the dark.

Fire algae (Pyrrhophyta) are free-swimming unicells characterized by a red spot.

Green algae have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algal mats or floating "moss" in lakes. Their concentrations are expressed as number of 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 (PCBs) are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. They are similar in structure to organochlorine insecticides.

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

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

Milligrams of carbon per area or volume per unit time [mg C/(m^2.time)] for periphyton and macrophytes and [mg C/(m^3.time)] for phytoplankton are units for expressing primary productivity. They define the amount of carbon dioxide consumed as measured by radioactive carbon (carbon 14). The carbon 14 method is of greater sensitivity than the oxygen light and dark bottle method, and is preferred for use in unenriched waters. Unit time may be either the hour or day, depending on the incubation period.

Milligrams of oxygen per area or volume per unit time [mg O_2/(m^2.time)] for periphyton and macrophytes and [mg O_2/(m^3.time)] for phytoplankton are 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.

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.

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.

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).

Suspended-sediment discharge (tons/day) is the rate at which dry weight of sediment passes a section of a stream or is the quantity of sediment, as measured by dry weight or volume, that passes a section in a given time. It is computed by multiplying discharge times mg/L times 0.0027.

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 weight or volume, that passes a section during a given time.

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

Solute is any substance derived from the atmosphere, vegetation, soil, or rocks 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 about 65 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 lived.

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

Artificial substrate is a device which is purposely placed in a stream or lake for colonization of 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 multi-plate 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 that 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 the total concentration in a water-sediment mixture. The water-sediment mixture is associated with (or sorbed on) that 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-micrometer membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion precedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

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

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45-micrometer 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 hierarchical scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, Hexagenia limbata is the following:

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

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 in milligrams per liter by 0.00136.

Tons per day is the quantity of substance in solution or suspension that passes a stream section during a 24-hour day.

Total load (tons) is the total quantity of any individual constituent, as measured by dry mass or volume, that is dissolved in a specific amount of water (discharge) during a given time. It is computed by multiplying the total discharge, times the mg/L of the constituent, times the factor 0.0027, times the number of days.

Total (as used in tables of chemical analyses):

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 would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

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 determines all of the constituent in the sample.)

Water table is the surface of a ground-water body at which the water is at atmospheric pressure. It is defined by the levels at which water stands in wells that penetrate the water body just far enough to hold standing water.

Water-table aquifer is an unconfined aquifer whose upper boundary is the water table.

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, 1980, is called the "1980 water year".

WDR is used as an abbreviation for "Water-Data Report" in the REVISED RECORDS paragraph to refer to State annual basic-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 references to previously published reports.

DISCONTINUED GAGING STATIONS

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

Station number	Station name	Drainage area (mi^2)	Period of record
	Housatonic River Basin		
01199420	Tenmile River near Wassaic, NY	120	1959-60
01199490	Swamp River near Dover Plains, NY	46.6	1961-68
01199500	Tenmile River at Dover Plains, NY	189	1902-04
	Mianus River Basin		
01210000	Mianus River at Bedford, NY	10.4	1903-04

Station number	Station name	Drainage area (mi^2)	Period of record
	Bryam River Basin		
01211500	West Branch Byram River near Port Chester, NY	11.2	1903-04
	Hudson River Basin		
01311900	Opalescent River below Flowedland near Tahawus, NY	9.02	1921-23
01313000	Cedar River near Indian Lake, NY	85.3	1911-18
01313500	Cedar River below Chain Lakes near Indian Lake, NY	160	1931-61
01314000	Hudson River at Gcoley near Indian Lake, NY	419	1916-68
01316000	North Creek at North Creek, NY	21.9	1924-32
01317000	Schroon River at Riverbank, NY	527	1907-70
01317500	Schroon River at Warrensburg, NY	567	1896-1902
01318000	Hudson River at Thurman, NY	1,533	1907-20
01319000	East Branch Sacandaga River at Griffin, NY	114	1933-78
01319500	Sacandaga River at Wells, NY	260	1907-11
01320500	West Branch Sacandaga River at Blackbridge near Wells, NY	210	1911-16
01321500	West Stony Creek near Northville, NY	88.0	1933-37
01322000	East Stony Creek near Northville, NY	88.7	1933-37
01322500	Sacandaga River at Northville, NY	712	1907-11
01323000	Kennyetto Creek near Broadalbin, NY	28.3	1939-46
01326500	Hudson River at Spier Falls, NY	2,779	1899-1923
01327000	Glens Falls Feeder at Glens Falls, NY		1919-21 1924-25 1927-63
01327500	Glens Falls Feeder at Dunham Basin, NY		1945-80
01328000	Bond Creek at Dunham Basin, NY	14.7	1947-82
01329500	Batten Kill at Battenville, NY	394	1908 1923-68
01330000	Glowegee Creek at West Milton, NY	26.0	1948-63
01335000	Hoosic River at Buskirk, NY	577	1904-09
01335500	Hudson River at Mechanicville, NY	4,500	1888-1956
01336500	Mohawk River at Ridge Mills near Rome, NY	155	1899-1901
01338500	Oriskany Creek at State Dam at Oriskany, NY	140	1899-1901
01339000	Sauquoit Creek at New York Mills, NY	47.2	1899-1900
01340000	Mohawk River at Utica, NY	510	1901-03
01340500	Reall Creek near Utica, NY	5.68	1901-05
01341000	Johnston Brook near Utica, NY	0.62	1903-05
01341500	Sylvan Glen Creek near New Hartford, NY	1.03	1903-07
01342000	Graefenburg Creek near New Hartford, NY	0.35	1903-07
01342500	Starch Factory Creek near New Hartford, NY	3.66	1903-07
01342730	Steele Creek at Ilion, NY	26.2	1967-68
01342800	West Canada Creek at Nobleboro, NY	193	1967-68
01343000	West Canada Creek at Wilmurt, NY	196	1909-15
01343500	West Canada Creek at Twin Rock Bridge near Hinckley, NY	360	1901-10
01344000	West Canada Creek at Hinckley, NY	375	1919-59
01344500	Ninemile Feeder near Holland Patent, NY		1919-68
01345000	West Canada Creek at Poland, NY	463	1913
01345500	West Canada Creek at Middleville, NY	522	1899-1901
01346500	Mohawk River at Little Falls, NY	1,288	1899-1914
01347500	East Canada Creek at Dolgeville, NY	258	1899-1913 1928-46
01349500	Cayadutta Creek near Johnstown, NY	38.4	1899-1900
01349858	Silver Lake Outlet at Hensonville, NY	6.66	1976-77
01350500	Schoharie Creek at Middleburg, NY	534	1906-18 1927-39
01351000	Fox Creek at West Berne, NY	67.2	1924-32 1962-68
01352000	Schoharie Creek near Fort Hunter, NY	900	1900-01
01355000	Alplaus Kill near Charlton, NY	23.7	1913-16
01356000	Mohawk River at Vischer Ferry Dam, NY	3,371	1899-1911 1913-19
01358400	Quacken Kill at Quacken Kill, NY	17.6	1893-95
01358500	Poesten Kill near Troy, NY	89.4	1923-68
01359150	Mill Creek near East Greenbush, NY	9.74	1975-77
01359500	Normans Kill at Frenchs Mill, NY	121	1891
01359513	Hunger Kill at Guilderland, NY	8.16	1967-77
01359519	Normans Kill near Westmere, NY	131	1968-79
01359528	Normans Kill at Albany, NY	168	1979-83
01359902	Coeymans Creek near Selkirk, NY	35.1	1967-77
01359918	Silver Creek at Dormansville, NY	2.90	1978-81
01359924	Hannicrois Creek near New Baltimore, NY	61.6	1968-77
01360000	Kinderhook Creek at Wilsons Dam near Garfield, NY	62.8	1893-95
01360500	Kinderhook Creek at East Nassau, NY	116	1892
01361000	Kinderhook Creek at Rossman, NY	329	1906-14 1928-68

Station number	Station name	Drainage area (mi^2)	Period of record
	Hudson River Basin--Continued		
01361200	Claverack Creek at Claverack, NY	60.6	1960-68
01361500	Catskill Creek at Oak Hill, NY	98.0	1910-77
01361570	Tenmile Creek at Oak Hill, NY	35.3	1969-78
01362000	Catskill Creek at South Cairo, NY	270	1901-07
01362100	Roeliff Jansen Kill near Hillsdale, NY	27.4	1957-60
01363500	Esopus Creek near Olive Bridge, NY	239	1903-04 1907-14
01364000	Esopus Creek at Kingston, NY	317	1901-09
01364800	Saw Kill at Red Hook, NY	20.9	1959-66
01365450	Chestnut Creek above Red Brook at Grahamsville, NY	12.2	1937-39
01366500	Rondout Creek near Lackawack, NY	100	1906-67
01366650	Sandburg Creek at Ellenville, NY	56.7	1957-77
01368000	Wallkill River near Unionville, NY	140	1938-81
01368500	Rutgers Creek at Gardnerville, NY	59.7	1943-68
01369000	Pochuck Creek near Pine Island, NY	98.0	1937-77
01369500	Quaker Creek at Florida, NY	9.69	1938-79
01370000	Wallkill River at Pellets Island Mountain, NY	385	1920-68
01370500	Wallkill River near Phillipsburg, NY	419	1937-59
01370600	Crystal Brook near Middletown, NY	8.4	1964-68
01371000	Shawangunk Kill at Pine Bush, NY	102	1925-32 1957-71
01372000	Wallkill River at New Paltz, NY	739	1901-04
01372040	Crum Elbow Creek at Hyde Park, NY	17.3	1959-62
01372065	Casper Creek near Wappingers Falls, NY	10.1	1969-76
01372100	East Branch Wappinger Creek near Clinton Corners, NY	33.6	1956-63
01372200	Wappinger Creek near Clinton Corners, NY	92.4	1956-76
01372300	Little Wappinger Creek at Salt Point, NY	32.9	1956-76
01372400	Great Spring Creek at Pleasant Valley, NY	15.5	1960-66
01372800	Fishkill Creek at Hopewell Junction, NY	57.3	1958-76
01372850	Whortlekill Creek at Hopewell Junction, NY	7.37	1959-68
01373500	Fishkill Creek at Beacon, NY	190	1945-68
01373600	Seely Brook near Chester, NY	12.8	1964-68
01373690	Woodbury Creek near Highland Mills, NY	11.2	1966-68
01374000	Foundry Brook near Cold Spring, NY	1.33	1903
01374420	Lake Tiorati Brook at Cedar Flats, NY	10.5	1960-63
01374440	Cedar Pond Brook at Stony Point, NY	17.4	1960-62
01374480	Minisceongo Creek at Thiells, NY	15.0	1960-63
01374990	Croton River at Old Croton Dam near Croton Heights, NY	354	1868-1906
01375500	Bird Brook near Croton, NY	0.40	1933-41
01376270	Sparkill Creek at Tappan, NY	4.90	1960-63 1965-66
01376275	Sparkill Creek at Tappan Station, NY	9.50	1965-66
01376280	Sparkill Creek at Sparkill, NY	11.1	1960-68 1976-78
	Hackensack River Basin		
01376600	Hackensack River at Brookside Park, NY	13.2	1960-63
01376850	Nauraushaun Brook at Nauraushaun, NY	5.89	1960-63
01376900	Hackensack River at Nauraushaun, NY	44.6	1960-62
01377200	Pascack Brook Tributary at Spring Valley, NY	4.19	1960-62
01377300	Pascack Brook at Pearl River, NY	9.83	1960-63
	Passaic River Basin		
01387250	Ramapo River at Sloatsburg, NY	60.1	1960-63
01387300	Stony Brook at Sloatsburg, NY	18.3	1960-62
01387480	Mahwah River at Suffern, NY	20.8	1959-62
01390200	Saddle River near Spring Valley, NY	2.46	1960-63
01390300	Pine Brook near Spring Valley, NY	2.17	1959-62
	Delaware River Basin		
01414000	Platte Kill at Dunraven, NY	35.0	1942-62
01415500	Terry Clove Kill near Pepacton, NY	13.6	1937-62
01416000	Fall Clove Kill near Pepacton, NY	11.3	1942-43
01416500	Coles Clove Kill near Pepacton, NY	28.0	1945-53
01418000	Beaver Kill near Turnwood, NY	40.8	1949-59
01418500	Beaver Kill at Craigie Clair, NY	81.9	1937-70
01419000	Willowemoc Creek at Debruce, NY	41.2	1949-52
01419500	Willowemoc Creek near Livingston Manor, NY	62.6	1937-70
01420000	Little Beaver Kill near Livingston Manor, NY	20.1	1924-81
01421500	East Branch Delaware River at Hancock, NY	839	1903-13

Station number	Station name	Drainage area (mi^2)	Period of record
	Delaware River Basin--Continued		
01422000	West Branch Delaware River at Delhi, NY	142	
01422500	Little Delaware River near Delhi, NY	49.7	1938-70
01422700	West Branch Delaware River near Hamden, NY	256	1959-67
01423500	Dryden Creek near Granton, NY	8.10	1952-67
01424000	Trout Creek near Rock Royal, NY	20.0	1952-67
01424500	Trout Creek at Cannonsville, NY	49.5	1941-63
01425500	Cold Spring Brook at China, NY	1.49	1935-68
01425642	Butler Brook at Deposit, NY	8.46	1976-77
01425675	Oquaga Creek near North Sanford, NY	4.69	1970-81
01426000	Oquaga Creek at Deposit, NY	67.6	1941-73
01427000	West Branch Delaware River at Hancock, NY	650	1903-13
01427405	Delaware River near Callicoon, NY	1,708	1967-75
01427500	Callicoon Creek at Callicoon, NY	110	1940-82
01428000	Tenmile River at Tusten, NY	45.6	1946-73
01433400	Mongaup River near Rio, NY	191	1909-13
01434500	Neversink River at Claryville, NY	61.9	1949-50
01435500	Neversink River at Halls Mills near Curry, NY	68.7	1938-49
01437000	Neversink River at Oakland Valley, NY	223	1928-73
	Streams tributary to Lake Ontario		
04249500	Salmon River near Redfield, NY	188	1911-14
04249910	Beaverdam Brook at Altmar, NY	14.6	1974-76
04250000	Orwell Brook near Altmar, NY	22.3	1911-16
04250500	Salmon River near Pulaski, NY	257	1901-14
04251000	Forestport Feeder near Boonville, NY		1915-33
04251500	Mill Creek Sluiceway at Boonville, NY		1934-40
04252000	Black River Canal (flowing south) near Boonville, NY		1916-80
04253000	Sugar River at Talcottsville, NY	43.1	1926-32, 1967-68
04253500	Middle Branch Moose River at Old Forge, NY	55.0	1912-73
04254000	Middle Branch Moose River near McKeever, NY	151	1926-68
04254375	Panther Lake Outlet near Old Forge, NY	0.51	1978-82
04254500	Moose River at McKeever, NY	363	1900-70
04255000	Otter Creek near Glenfield, NY	64.5	1924-33
04255500	Independence River at Sperryville, NY	81.8	1928-42
04256460	Cranberry Pond Outlet near Big Moose, NY	0.60	1984-86
04256480	Woods Lake Tributary near Big Moose, NY	0.12	1980-81, 1985-86
04256484	Woods Lake near Big Moose, NY	0.80	1979-82
04257500	Beaver River near Number Four, NY	225	1921-25
04257955	Beaver River near Croghan, NY		1901-03
04258500	Deer River at Copenhagen, NY	86.6	1930-57
04258700	Deer River at Deer River, NY	94.8	1957-68
04259500	Black River at Black River, NY	1,842	1897-1920
	Streams tributary to St. Lawrence River		
04261000	Oswegatchie River at Cranberry Lake, NY	140	1923-82
04261500	Oswegatchie River at Newton Falls, NY	170	1913-23
04262000	Oswegatchie River near Oswegatchie, NY	259	1925-68
04263500	Oswegatchie River near Ogdensburg, NY	1,562	1903-17
04264050	St. Lawrence River near Waddington, NY	298,500	1978-86
04264100	Sucker Brook near Waddington, NY	25.6	1961-64
04264200	Little Sucker Brook at Waddington, NY	19.9	1959-60
04264300	Brandy Brook near Waddington, NY	27.0	1959-63
04264400	Middle Branch Grass River near Clare, NY	63.0	1959-60
04264500	North Branch Grass River near South Colton, NY	28.1	1925-32
04264700	North Branch Grass River near Clare, NY	46.3	1958-63
04264800	Plumb Brook at Russell, NY	35.3	1958-60
04265000	Grass River at Pyrites, NY	333	1924-77
04265100	Elm Creek near Hermon, NY	32.6	1958-68
04265200	Tanner Creek at Stellaville, NY	30.3	1958-60
04265300	Little River near Canton, NY	42.4	1958-60
04265400	Grannis Brook at Crary Mills, NY	20.9	1959-60
0426545290	Lost Brook near Raquette Lake, NY	17.0	1978-80
0426545295	Sagamore Lake Outlet near Raquette Lake, NY	19.1	1978-82
04265500	Raquette River near Coreys, NY	418	1908-13
04266000	Bog River at mouth near Tupper Lake, NY	132	1908-12
04267000	Raquette River near South Colton, NY	927	1904-05
04267700	Parkhurst Brook near Potsdam, NY	16.8	1958-63
04267800	Trout Brook at Allen Corners, NY	54.2	1958-63
04268200	Plum Brook near Grantville, NY	43.9	1958-63
04268300	Squeak Brook near Massena, NY	39.1	1958-60

Station number	Station name	Drainage area (mi^2)	Period of record
	Streams tributary to St. Lawrence River--Continued		
04268390	St. Regis River near Paul Smiths, NY	22.0	1973-75
04268500	Raquette River at Massena Springs, NY	1,197	1904-17
04268600	East Branch St. Regis River near Meacham Lake, NY	52.2	1958-68
04268700	St. Regis River at St. Regis Falls, NY	234	1958-68
04268710	Lake Ozonia Outlet near St. Regis Falls, NY	28.3	1961-63
04268720	Hopkinton Brook at Hopkinton, NY	20.0	1961-62
04268800	West Branch St. Regis River near Parishville, NY	171	1959-68
04268900	Trout Brook at Stockholm Center, NY	42.4	1958-60
04269043	Deer River at North Lawrence, NY	78.0	1973-79
04269050	Allen Brook near Brasher Falls, NY	16.0	1961-66
04269100	Lawrence Brook near Moira, NY	25.7	1958-60
04269500	Deer River at Brasher Iron Works, NY	182	1912-16 1958-68
04270150	East Branch Deer Creek at Fort Covington Center, NY	23.9	1961-62
04270180	Farrington Brook near Moira, NY	17.7	1961-66
04270500	Chateaugay River near Chateaugay, NY	112	1909 1927-66
04270600	Little Trout River near Burke, NY	27.6	1961-63
04270700	Trout River at Trout River, NY	107	1960-66
04270800	English River near Mooers Forks, NY	40.8	1960-68
04271000	Great Chazy River at Mooers, NY	204	1908
04271500	Great Chazy River at Perry Mills, NY	247	1929-68
04272500	Saranac River near Saranac Lake, NY	146	1902-03
04273000	Saranac River at Saranac, NY	521	1931-43
04273700	Salmon River at South Plattsburgh, NY	61.9	1959-68
04273900	Lake Placid at Lake Placid, NY	20.1	1960-82
04274000	West Branch Ausable River near Lake Placid, NY	116	1916-68
04274500	Black Brook at Black Brook, NY	49.4	1925-61
04275500	Ausable River near Au Sable Forks, NY	448	1910-68
04276500	Bouquet River at Willsboro, NY	275	1908-09 1923-68
04276895	West Brook at Lake George, NY	8.4	1980-83
04276920	English Brook at Lake George, NY	7.8	1980-83
04279000	La Chute at Ticonderoga, NY	234	1904-06 1943-79
04280500	Mettawee River at Grays Corner near Whitehall, NY		1909

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

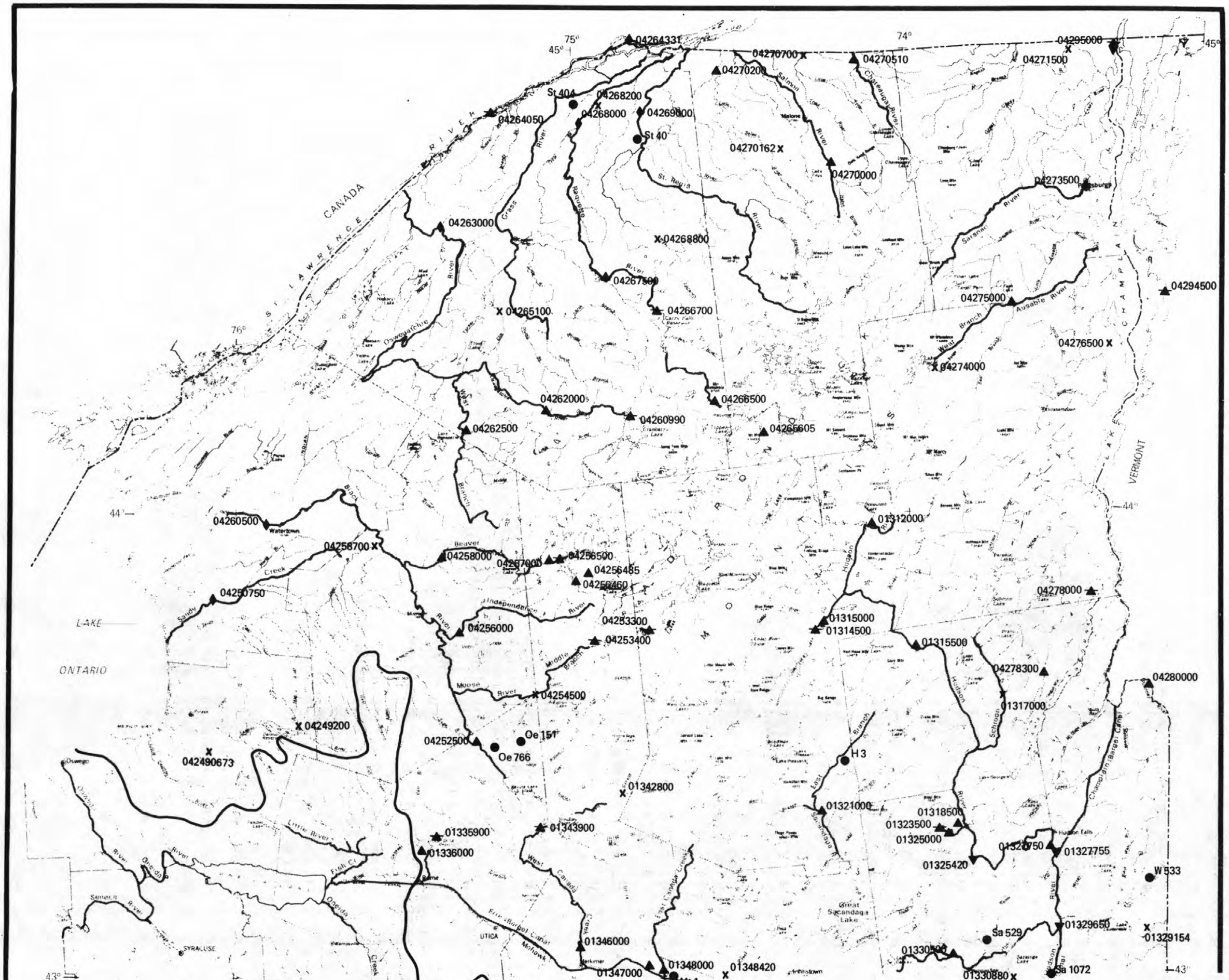
7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water.* by L. F. Konikow and J. D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 pages.

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

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

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

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


75°
45°
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CANADA
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04264331
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04270510
04295000
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04270200
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04268200
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01330880
Sa 1072
Watertown
Oswego
SYRACUSE
UTICA
Herkimer
Malone
Plattsburgh
Hudson Falls
Great Sacandaga Lake
Saranac River
Ausable River
West Branch
Salmon River
Chateaugay River
St. Regis River
Raquette River
Grass River
Oswegatchie River
West Branch
Black River
Beaver River
Independence River
Moose River
Middle Branch
Sandy Creek
Oswego River
Oneida River
Seneca River
Oneida Creek
Fish Cr
Little River
West Canada Creek
East Canada Creek
Mohawk River
Erie (Barge) Canal
Champlain (Barge) Canal
Hudson River
Schroon River
East Branch
Sacandaga R
Cranberry Lake

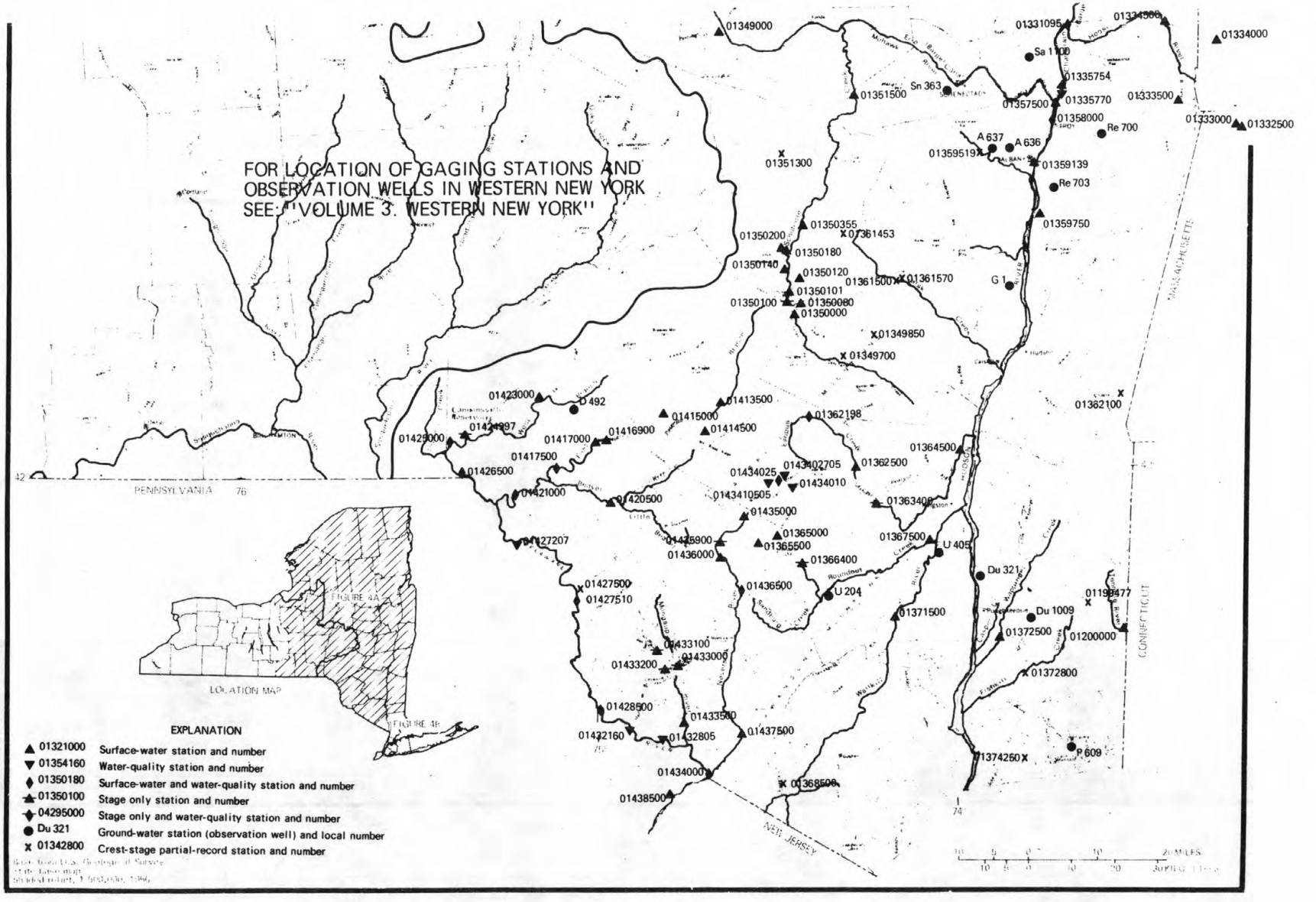


FIGURE 7A-- LOCATION OF GAGING STATIONS AND OBSERVATION WELLS

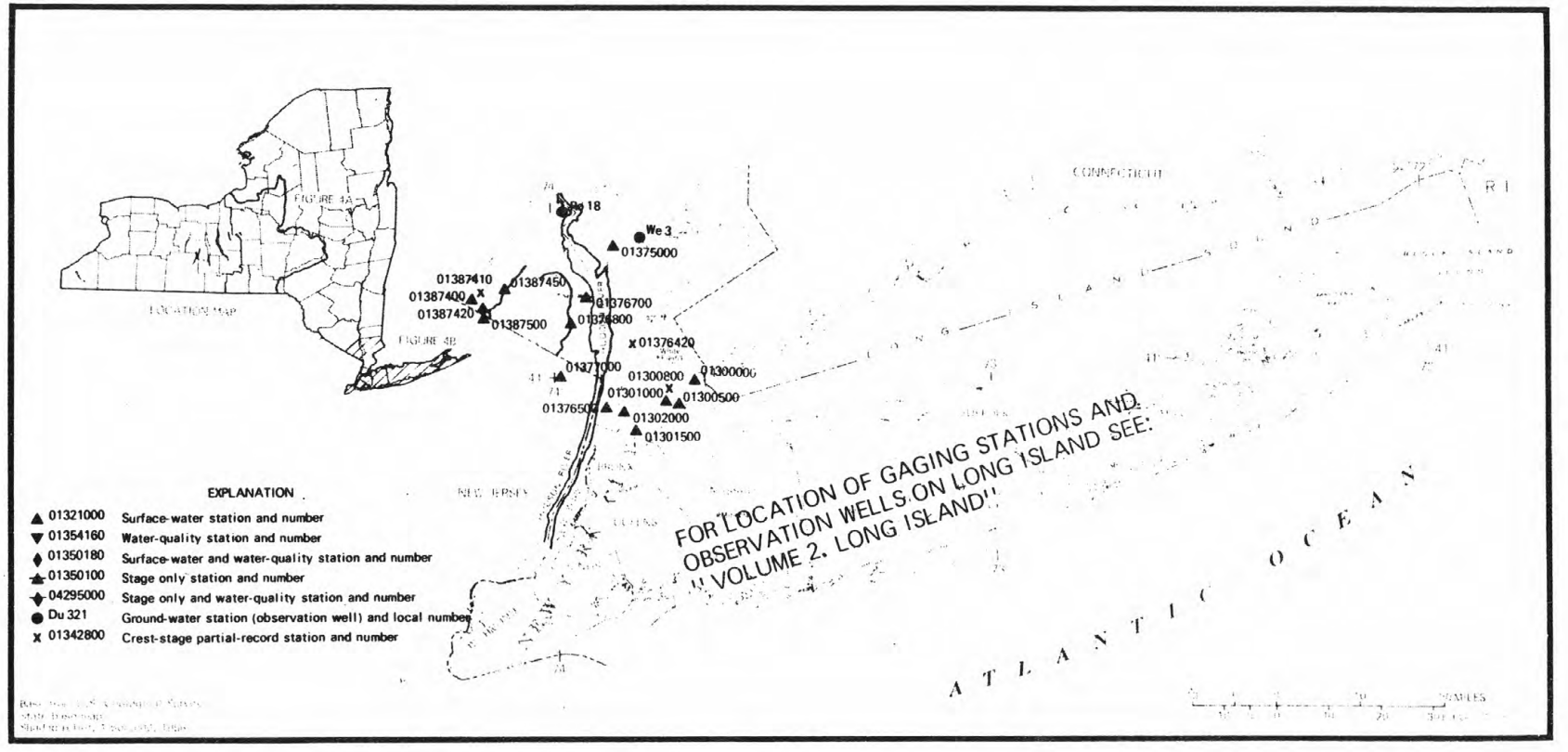


FIGURE 7B-- LOCATION OF GAGING STATIONS AND OBSERVATION WELLS

01300000 BLIND BROOK AT RYE, NY

LOCATION.--Lat 40°59'00", long 73°41'14", Westchester County, Hydrologic Unit 02030102, on left bank at Rye, just upstream from bridge on Theodore Fremd Avenue, 0.25 mi southwest of Penn Central Transportation Co. railroad station, and 0.85 mi upstream from mean high tide in Milton Harbor.

DRAINAGE AREA.--9.20 mi^2.

PERIOD OF RECORD.--November 1943 to current year.

GAGE.--Water-stage recorder, crest stage gage, and concrete control. Datum of gage is 13.05 ft above National Geodetic Vertical Datum of 1929 (levels by City of Rye).

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Medium and high flows affected by detention reservoir 2 mi upstream (capacity, about 26 acre-ft at spillway level or 50 acre-ft at crest of concrete dam). Several measurements of water temperature were made during the year. Radio gage-height telemeter at station.

AVERAGE DISCHARGE.--43 years (1945-87), 15.7 ft^3/s, 23.17 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,320 ft^3/s, June 19, 1972, gage height, 12.44 ft, from floodmark in gage house, from rating curve extended above 800 ft^3/s on basis of computation of peak flow through culvert; minimum discharge, 0.12 ft^3/s, July 5, 1953, gage height, 0.80 ft, result of temporary regulation.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 406 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 3	0700	440	4.71	Apr. 4	1900	*642	*5.41

Minimum discharge, 0.94 ft^3/s, Aug. 2, 3, gage height, 0.93 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	1.9	8.2	15	18	152	46	12	3.8	2.5	1.1	19
2	1.8	2.0	24	168	18	78	22	11	14	3.0	.95	5.8
3	3.2	2.0	235	58	21	36	18	12	9.5	5.8	6.2	3.9
4	15	2.0	42	36	24	27	313	43	18	4.0	4.5	3.2
5	5.1	2.7	21	28	20	23	116	27	20	2.9	35	2.9
6	2.8	14	16	22	17	20	103	17	7.0	2.3	50	2.7
7	2.2	5.3	14	20	16	19	63	14	5.0	2.3	7.2	7.4
8	2.1	22	13	19	17	20	36	12	4.5	8.2	4.5	8.3
9	2.0	12	25	16	23	17	27	10	4.1	5.1	12	26
10	1.8	5.4	28	20	17	13	23	9.4	3.3	3.2	51	6.5
11	1.7	19	18	40	14	11	20	8.5	3.1	2.6	8.6	4.4
12	1.6	16	21	26	13	12	17	7.8	3.1	2.4	5.2	3.7
13	1.7	5.8	16	19	12	13	35	7.1	3.8	2.2	3.8	76
14	5.5	4.4	12	15	10	12	20	6.5	3.3	3.5	3.1	23
15	4.8	4.0	11	15	9.4	11	17	8.5	2.9	6.6	2.8	9.1
16	2.8	3.8	11	14	e8.9	10	15	8.4	2.6	3.2	2.5	6.8
17	2.3	3.7	11	12	8.4	9.6	29	6.5	2.1	2.2	2.3	31
18	2.0	3.7	43	19	8.3	9.3	43	6.2	1.9	1.8	2.1	25
19	1.8	27	85	25	7.9	8.8	21	9.0	1.8	1.6	1.9	20
20	1.7	20	32	20	7.6	8.8	17	7.8	1.9	3.1	1.7	10
21	1.6	131	24	17	7.7	8.4	15	7.5	13	3.3	1.6	8.0
22	1.6	17	17	e15	8.3	8.5	14	6.2	5.3	2.3	1.6	8.9
23	1.6	11	14	e14	12	7.9	12	5.8	3.7	1.8	1.4	9.7
24	1.6	12	13	e13	11	6.6	20	6.3	3.2	1.5	1.3	7.3
25	1.5	9.8	166	e12	9.7	6.2	45	5.4	2.6	1.4	1.2	10
26	4.1	78	40	e11	9.1	6.3	18	4.9	2.4	2.2	1.1	6.0
27	6.9	89	29	e11	9.2	6.0	14	4.9	21	1.6	16	5.0
28	3.2	18	23	e11	9.4	9.1	26	5.1	8.2	1.5	46	4.7
29	2.3	13	17	11	---	9.1	19	4.8	4.1	1.4	19	4.4
30	2.2	9.7	17	15	---	8.6	14	4.3	3.2	1.2	6.5	5.2
31	2.1	---	16	23	---	214	---	3.9	---	1.1	4.3	---
TOTAL	92.6	565.2	1062.2	760	366.9	801.2	1198	302.8	182.4	87.8	306.45	363.9
MEAN	2.99	18.8	34.3	24.5	13.1	25.8	39.9	9.77	6.08	2.83	9.89	12.1
MAX	15	131	235	168	24	214	313	43	21	8.2	51	76
MIN	1.5	1.9	8.2	11	7.6	6.0	12	3.9	1.8	1.1	.95	2.7
CFSM	.32	2.05	3.72	2.66	1.42	2.81	4.34	1.06	.66	.31	1.07	1.32
IN.	.37	2.29	4.29	3.07	1.48	3.24	4.84	1.22	.74	.36	1.24	1.47

CAL YR 1986 TOTAL 4916.68 MEAN 13.5 MAX 270 MIN .88 CFSM 1.46 IN. 19.9
WTR YR 1987 TOTAL 6089.40 MEAN 16.7 MAX 313 MIN .95 CFSM 1.81 IN. 24.6

e Estimated

01300500 BEAVER SWAMP BROOK AT MAMARONECK, NY

LOCATION.--Lat 40°57'21", long 73°43'[illegible]", Westchester County, Hydrologic Unit 02030102, on right bank just downstream from bridge on Short Street, in Mamaroneck, 0.2 mi downstream from Brentwood Brook, and 0.2 mi upstream from tidal barrier in Guion Creek, Mamaroneck Harbor.

DRAINAGE AREA.--4.71 mi^2.

PERIOD OF RECORD.--November 1943 to current year. Prior to October 1967, published as "near Harrison."

GAGE.--Water-stage recorder and concrete control. Datum of gage is 24.99 ft above National Geodetic Vertical Datum of 1929. Prior to June 8, 1946, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow affected by natural storage in swampy areas upstream from station. Several measurements of water temperature were made during the year. Radio gage-height telemeter at station.

AVERAGE DISCHARGE.--43 years (1945-87), 6.50 ft^3/s, 18.74 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 288 ft^3/s, Jan. 21, 1979, gage height, 4.28 ft; minimum, no flow at times during 1944, 1953, 1959, 1964, 1965, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 86 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 3	0530	*102	*1.96	Apr. 4	1700	100	1.94

Minimum discharge, 0.17 ft^3/s, Aug. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	.88	6.0	7.2	7.2	45	22	5.3	1.2	.87	.30	9.7
2	.89	.98	10	55	7.5	43	10	4.8	4.6	1.7	.31	3.2
3	2.3	.95	84	38	9.4	18	7.6	5.7	2.6	3.1	3.3	2.2
4	4.1	1.0	37	17	11	12	62	15	10	1.3	.84	1.8
5	1.6	1.8	16	12	8.7	9.4	59	10	7.9	1.1	11	1.6
6	1.2	6.5	12	11	7.4	8.2	38	7.3	3.2	.90	22	1.5
7	1.1	3.2	9.5	9.4	7.3	7.7	28	6.0	2.3	.85	4.4	3.5
8	.93	7.6	8.3	8.3	7.5	7.5	18	5.1	2.0	3.5	4.5	5.1
9	1.0	5.5	14	6.6	11	6.7	13	4.7	1.8	1.4	8.2	8.5
10	.73	3.3	16	7.9	8.3	5.4	11	4.2	1.7	1.0	28	3.3
11	.72	7.5	11	15	6.7	4.7	9.2	4.0	1.3	.84	6.2	2.3
12	.81	7.4	12	10	6.3	4.8	8.1	3.5	1.4	.68	2.6	2.1
13	.98	3.2	9.4	7.9	5.9	5.2	14	3.0	1.5	.69	1.8	21
14	3.2	2.1	7.4	6.4	5.2	4.9	9.4	2.9	1.3	2.8	1.5	15
15	1.4	1.9	6.7	6.1	e4.9	4.3	7.6	3.6	1.1	2.1	1.2	4.9
16	1.1	1.9	6.4	5.7	e4.5	3.9	6.9	3.0	.82	.76	.99	3.4
17	1.0	1.7	6.1	5.0	e4.1	3.6	13	2.8	.73	.62	.83	19
18	.93	1.8	16	8.9	3.8	3.4	14	2.9	.64	.59	.70	15
19	.89	13	28	12	3.7	3.3	9.4	4.2	.66	.45	.58	12
20	.91	9.8	15	10	3.5	3.8	7.6	3.5	.65	2.5	.60	6.0
21	.90	47	10	7.7	3.5	3.6	6.7	3.1	15	1.0	.49	4.6
22	.80	16	8.2	6.6	3.7	3.7	6.1	2.7	2.9	.65	.49	4.4
23	.82	7.1	7.3	7.1	5.1	3.4	5.5	2.5	2.1	.53	.44	4.0
24	.78	6.8	7.0	e5.8	4.7	3.3	7.1	2.3	1.7	.50	.39	4.1
25	.78	5.3	62	e5.4	4.1	2.9	15	2.2	1.3	.46	.38	3.6
26	3.1	26	30	e5.0	3.9	2.9	8.1	2.2	1.2	2.8	.38	2.7
27	2.7	41	15	e4.9	3.8	2.9	5.9	2.3	10	.95	6.9	2.4
28	1.4	16	12	e4.8	3.9	4.1	11	2.3	4.7	.57	14	2.3
29	1.2	9.5	9.6	4.7	---	3.2	8.8	2.0	1.8	.40	13	2.1
30	1.1	7.2	9.1	6.9	---	3.6	6.4	1.5	1.2	.36	3.6	2.7
31	.93	---	8.5	10	---	36	---	1.4	---	.34	2.4	---
TOTAL	41.30	263.91	509.5	328.3	166.6	274.4	448.4	126.0	89.30	36.31	142.32	174.0
MEAN	1.33	8.80	16.4	10.6	5.95	8.85	14.9	4.06	2.98	1.17	4.59	5.80
MAX	4.1	47	84	55	11	45	62	15	15	3.5	28	21
MIN	.72	.88	6.0	4.7	3.5	2.9	5.5	1.4	.64	.34	.30	1.5
CFSM	.28	1.87	3.49	2.25	1.26	1.88	3.17	.86	.63	.25	.97	1.23
IN.	.33	2.08	4.02	2.59	1.32	2.17	3.54	.99	.71	.29	1.12	1.37

CAL YR 1986 TOTAL 2179.60 MEAN 5.97 MAX 84 MIN .11 CFSM 1.27 IN. 17.2
WTR YR 1987 TOTAL 2600.30 MEAN 7.12 MAX 84 MIN .30 CFSM 1.51 IN. 20.5

e Estimated

01301000 MAMARONECK RIVER AT MAMARONECK, NY

LOCATION.--Lat 40°57'14", long 73°44'06", Westchester County, Hydrologic Unit 02030102, on left bank in Mamaroneck, 113 ft downstream from bridge on Halstead Avenue, 700 ft downstream from Sheldrake River, and 0.3 mi upstream from mean high tide in Mamaroneck Harbor.

DRAINAGE AREA.--23.4 mi^2.

PERIOD OF RECORD.--November 1943 to July 1953, September 1954 to current year.

REVISED RECORDS.--WSP 1502: 1944(M), 1951(M). WDR NY-76-1; 1972(M), 1973(M), 1974(M), 1975(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 11.46 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 10, 1954, water-stage recorder at same site at datum 0.41 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Storage in former water-supply reservoir on Mamaroneck River, effect unknown. Several measurements of water temperature were made during the year Radio gage-height telemeter at station.

AVERAGE DISCHARGE.--41 years (1945-52, 1955-87), 35.7 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,700 ft^3/s, Sept. 26, 1975, gage height, 10.15 ft, from rating curve extended above 2,000 ft^3/s on basis of flow-through-culvert measurement of peak flow at 10.15 ft; minimum discharge, 0.06 ft^3/s, Sept. 30, 1965; minimum daily, 0.10 ft^3/s, Sept. 29, 30, 1965; minimum gage height since Sept. 9, 1954, 0.10 ft, July 21, 22, Aug. 18, 19, 1957, Aug. 14, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Backwater from hurricane wave reached a stage of about 11.5 ft, present datum, Sept. 21, 1938, from information by officials of village of Mamaroneck.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,580 ft^3/s, Dec. 3, gage height, 5.23 ft; minimum, 2.6 ft^3/s, Aug. 1, 2, gage height, 0.28 ft; minimum daily, 2.8 ft^3/s, Aug. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.2	5.9	36	36	51	275	164	32	11	13	2.9	60
2	6.0	6.2	65	292	50	171	111	28	23	13	2.8	20
3	7.6	6.2	688	134	48	118	86	30	16	18	22	15
4	37	6.4	145	94	55	89	548	95	42	8.6	8.2	7.9
5	7.4	7.5	102	99	42	59	306	70	42	6.6	61	6.1
6	4.8	40	89	69	35	52	255	55	15	5.5	122	5.6
7	7.6	11	48	49	36	52	198	43	18	9.4	38	18
8	7.4	46	43	44	40	50	145	29	17	23	22	27
9	4.4	24	90	41	66	46	119	26	14	10	27	94
10	3.6	13	75	60	49	38	85	24	8.5	7.0	156	24
11	3.4	47	52	88	43	34	58	22	7.1	6.3	35	22
12	3.4	34	65	53	32	35	51	20	6.9	5.5	12	9.7
13	3.6	14	47	38	29	37	125	17	8.4	6.3	8.9	164
14	17	10	37	34	24	31	60	16	6.7	25	8.6	82
15	8.0	9.5	34	34	e22	27	49	22	6.2	37	9.9	57
16	4.4	8.7	29	33	e21	25	43	19	5.8	7.0	6.7	33
17	4.1	8.1	33	34	e20	24	88	16	5.2	5.0	5.7	91
18	4.0	17	108	54	20	27	111	18	4.8	4.2	5.4	84
19	3.3	71	157	71	27	25	62	33	4.8	3.9	4.9	64
20	3.1	40	82	56	26	21	58	20	4.6	15	4.7	28
21	5.2	270	49	47	25	20	63	18	86	10	4.4	22
22	5.0	66	40	41	19	24	51	14	24	4.7	4.0	20
23	3.4	48	36	40	26	23	35	13	19	3.9	3.9	18
24	3.0	51	45	e32	23	18	49	13	14	3.6	3.5	16
25	3.1	41	317	e28	20	17	104	12	7.3	3.7	3.4	24
26	11	149	119	e26	20	18	52	11	6.4	8.4	3.2	12
27	17	200	88	e25	22	17	47	11	62	6.2	55	11
28	5.5	58	55	23	27	26	83	14	22	3.8	112	9.7
29	4.1	42	50	22	---	19	58	17	10	3.3	48	10
30	3.9	34	55	42	---	24	42	10	7.8	3.4	14	16
31	5.2	---	50	72	---	354	---	9.2	---	3.5	10	---
TOTAL	212.7	1384.5	2929	1811	918	1796	3306	777.2	525.5	283.8	825.1	1071.0
MEAN	6.86	46.1	94.5	58.4	32.8	57.9	110	25.1	17.5	9.15	26.6	35.7
MAX	37	270	688	292	66	354	548	95	86	37	156	164
MIN	3.0	5.9	29	22	19	17	35	9.2	4.6	3.3	2.8	5.6

CAL YR 1986 TOTAL 13318.9 MEAN 36.5 MAX 688 MIN 2.4
WTR YR 1987 TOTAL 15839.7 MEAN 43.4 MAX 688 MIN 2.8

e Estimated

01301500 HUTCHINSON RIVER AT PELHAM, NY

LOCATION.--Lat 40°54'41", long 73°48'55", Westchester County, Hydrologic Unit 02030102, on right bank in Pelham, just upstream from Penn Central Transportation Co. bridge, 100 ft downstream from Pelham Lake, and 1.5 mi west of New Rochelle.

DRAINAGE AREA.--5.76 mi^2.

PERIOD OF RECORD.--November 1943 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 12.92 ft above National Geodetic Vertical Datum of 1929 (levels by county of Westchester).

REMARKS.--No estimated daily discharges. Records good. Flow controlled by Pelham Lake and three reservoirs upstream from station. Several measurements of water temperature were made during the year. Radio gage-height telemeter at station.

AVERAGE DISCHARGE.--43 years, 7.13 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 526 ft^3/s, Aug. 28, 1971, gage height, 5.18 ft, from rating curve extended above 260 ft^3/s; maximum gage height, 5.38 ft, Jan. 21, 1979; minimum, 0.01 ft^3/s, July 27, 1957; minimum gage height, 1.86 ft, Aug. 2, 5, 1955; minimum daily discharge, 0.02 ft^3/s, Aug. 2-6, 1955, July 26, 27, 1957, Oct. 26-30, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 227 ft^3/s, Dec. 3, gage height, 5.05 ft; minimum, 0.55 ft^3/s, Oct. 12, Aug. 1, 2, 25, gage height, 2.06 ft; minimum daily, 0.60 ft^3/s, Aug. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	1.7	4.4	6.8	7.7	57	31	5.8	2.6	2.2	.60	15
2	.96	1.4	13	59	8.1	41	12	4.5	2.7	3.3	.65	6.1
3	4.7	1.0	146	31	10	17	8.8	6.0	2.2	5.8	3.7	3.2
4	7.9	1.6	32	15	10	11	97	18	12	3.4	.84	1.8
5	3.6	2.6	14	11	8.4	8.6	57	13	12	2.7	23	1.4
6	3.4	11	9.5	8.8	7.2	7.5	36	8.7	5.7	2.1	38	1.6
7	2.3	8.8	7.8	8.4	7.0	7.1	29	6.6	3.8	2.0	11	3.5
8	1.7	14	6.9	7.9	7.0	7.0	17	5.3	3.0	6.8	4.6	16
9	1.2	10	16	6.7	11	7.7	13	4.7	2.6	3.8	8.0	28
10	.88	5.9	16	8.8	8.2	7.2	10	4.3	2.2	2.8	37	9.1
11	.73	13	11	13	6.8	6.1	8.4	4.1	2.0	2.0	12	4.3
12	.67	12	12	9.9	6.3	6.4	7.9	3.7	2.0	2.7	4.8	3.0
13	.91	7.4	8.4	7.3	6.1	7.5	28	3.5	2.1	2.2	2.9	31
14	4.2	5.1	6.3	6.3	5.2	6.8	13	3.3	1.8	8.4	2.2	20
15	2.5	3.0	5.5	5.7	4.6	6.1	9.3	4.1	1.9	6.7	1.8	6.2
16	2.2	2.3	5.2	5.7	4.2	5.6	7.6	3.5	1.7	3.7	1.6	3.5
17	1.7	2.1	5.0	5.7	4.1	5.6	22	3.2	1.6	2.3	1.4	23
18	1.4	2.2	20	11	3.9	5.2	28	3.7	1.6	1.6	1.2	21
19	1.2	19	34	15	3.7	5.0	15	5.6	1.5	1.3	1.0	13
20	.93	17	16	13	3.7	5.2	10	5.1	1.4	3.4	.93	6.5
21	1.0	56	9.2	9.2	3.7	4.1	8.6	4.1	38	1.4	.84	4.2
22	.85	19	7.4	7.4	3.8	3.9	7.5	3.6	13	1.2	.86	7.1
23	.85	7.7	6.7	11	6.3	3.5	6.7	3.2	6.0	1.1	.82	4.3
24	.74	6.4	6.9	7.2	5.8	3.4	9.6	3.0	3.5	1.1	.89	3.4
25	.77	5.7	65	5.7	4.8	3.3	20	2.8	2.6	1.2	.67	2.1
26	4.7	34	24	5.6	4.5	3.3	12	2.8	2.1	2.8	.68	2.2
27	2.7	47	12	5.2	4.2	3.2	8.1	2.8	13	2.3	7.5	2.7
28	2.8	15	9.2	4.7	4.1	5.3	12	2.8	9.8	1.9	23	2.5
29	3.3	7.5	8.0	4.5	---	4.6	9.1	3.2	4.7	1.1	20	1.5
30	3.3	4.6	8.0	7.7	---	5.9	6.9	3.7	2.7	.91	6.3	2.2
31	2.3	---	7.6	10	---	65	---	3.1	---	.77	3.5	---
TOTAL	67.89	344.0	553.0	334.2	170.4	336.1	560.5	151.8	161.8	84.98	222.28	249.4
MEAN	2.19	11.5	17.8	10.8	6.09	10.8	18.7	4.90	5.39	2.74	7.17	8.31
MAX	7.9	56	146	59	11	65	97	18	38	8.4	38	31
MIN	.67	1.0	4.4	4.5	3.7	3.2	6.7	2.8	1.4	.77	.60	1.4

CAL YR 1986 TOTAL 2790.22 MEAN 7.64 MAX 146 MIN .49
WTR YR 1987 TOTAL 3236.31 MEAN 8.87 MAX 146 MIN .60

BRONX RIVER BASIN

01302000 BRONX RIVER AT BRONXVILLE, NY

LOCATION.--Lat 40°56'09", long 73°50'10", Westchester County, Hydrologic Unit 02030102, on right bank in Bronxville, just upstream from Penn Central Transportation Co. bridge, and 800 ft downstream from Grassy Sprain Brook.

DRAINAGE AREA.--26.5 mi^2, not including 18.1 mi^2, from which the entire flow is diverted for municipal water supply and drainage purposes.

PERIOD OF RECORD.--November 1943 to current year.

REVISED RECORDS.--WSP 1382: Drainage area. WDR NY-71-1: 1961-67(P), 1968(M), 1970(M). WDR NY-72-1: 1969(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 73.74 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges: Records good. Diversions from 18.1 mi^2 for municipal water supply and flood control use. Included in these diversions is drainage from 12.8 mi^2 from Kensico Reservoir for City of New York, 4.58 mi^2 from Grassy Sprain Reservoir for Yonkers, 0.67 mi^2 from White Plains Reservoirs 1 and 2 for White Plains, and 0.1 mi^2 for flood control from outflow from Grassy Sprain Reservoir. Several measurements of water temperature were made during the year. Radio gage-height telemeter at station.

AVERAGE DISCHARGE.--43 years (1945-87), 42.4 ft^3/s, 21.73 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,500 ft^3/s, June 19, 1972, gage height, 9.63 ft from rating curve extended above 1,600 ft^3/s on basis of flow through culvert computation of peak flow; minimum discharge, 1.0 ft^3/s, Sept. 10, 1944, gage height, 0.14 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 21	0300	744	4.37	Mar. 31	1330	766	4.46
Dec. 3	0400	1,150	5.92	Apr. 4	1700	*1,230	*6.19
Dec. 25	0615	605	3.79				

Minimum discharge, 7.2 ft^3/s, Oct. 30, 31, Nov. 1, 2, 3, 4, gage height, 0.43 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.2	7.3	27	48	52	249	181	54	25	17	11	61
2	9.0	7.6	55	263	55	144	104	51	57	21	10	17
3	21	7.3	554	129	65	87	89	58	33	34	40	14
4	57	7.7	109	90	67	77	709	126	79	19	17	13
5	14	10	74	76	57	70	360	76	66	16	97	13
6	10	57	59	71	52	65	294	59	34	15	147	12
7	8.3	14	52	70	53	66	224	53	25	18	24	44
8	9.1	58	47	66	54	67	154	49	23	48	17	87
9	9.4	27	82	61	69	62	127	47	26	22	52	124
10	8.3	14	70	67	57	49	110	44	26	17	174	26
11	9.3	63	52	93	53	44	98	42	20	16	28	20
12	8.3	39	63	67	52	46	91	41	20	32	20	20
13	8.9	15	45	61	49	48	172	37	21	34	18	217
14	34	12	38	56	44	44	90	35	18	57	16	99
15	12	11	37	57	41	40	81	46	18	52	16	41
16	9.3	11	37	54	38	39	76	36	16	20	14	30
17	9.1	11	35	50	37	37	166	61	15	16	14	120
18	8.4	11	110	76	37	36	151	70	14	14	13	104
19	8.2	80	136	86	36	34	94	67	14	13	12	68
20	8.2	44	63	68	35	34	82	49	14	40	12	41
21	8.2	312	50	59	35	33	77	43	127	23	11	34
22	8.1	48	45	57	35	33	71	35	32	14	11	38
23	8.3	29	43	59	48	32	66	33	23	13	11	32
24	8.6	35	44	51	41	30	87	30	19	13	10	36
25	8.0	26	273	46	37	30	138	28	17	12	10	43
26	25	164	88	45	35	33	75	26	16	28	9.6	27
27	21	166	69	41	35	30	65	27	123	15	85	24
28	10	50	61	40	35	50	79	26	44	12	126	23
29	8.4	37	56	40	---	34	65	26	23	11	49	21
30	7.7	31	57	57	---	40	58	24	19	11	19	25
31	7.2	---	54	72	---	519	---	24	---	11	15	---
TOTAL	391.5	1404.9	2585	2176	1304	2202	4234	1423	1007	684	1108.6	1474
MEAN	12.6	46.8	83.4	70.2	46.6	71.0	141	45.9	33.6	22.1	35.8	49.1
MAX	57	312	554	263	69	519	709	126	127	57	174	217
MIN	7.2	7.3	27	40	35	30	58	24	14	11	9.6	12
CFSM	.48	1.77	3.15	2.65	1.76	2.68	5.33	1.73	1.27	.83	1.35	1.85
IN.	.55	1.97	3.63	3.05	1.83	3.09	5.94	2.00	1.41	.96	1.56	2.07

CAL YR 1986 TOTAL 14799.8 MEAN 40.5 MAX 569 MIN 7.2 CFSM 1.53 IN. 20.8
WTR YR 1987 TOTAL 19994.0 MEAN 54.8 MAX 709 MIN 7.2 CFSM 2.07 IN. 28.1

01312000 HUDSON RIVER NEAR NEWCOMB, NY

LOCATION.--Lat 43°58'00", long 74°07'55", Essex County, Hydrologic Unit 02020001, on right bank 30 ft downstream from bridge on State Highway 28N, 0.5 mi downstream from outlet of Harris Lake, 2 mi east of Newcomb, and 4 mi upstream from Wolf Creek.

DRAINAGE AREA.--192 mi^2.

PERIOD OF RECORD.--September 1925 to October 1982, January 1983 to September 1987 (discontinued).

REVISED RECORDS.--WSP 696: 1928(M). WSP 711: 1930(m).

GAGE.--Water-stage recorder. Datum of gage is 1,550.38 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 6, 1931, nonrecording gage at site 125 ft downstream at same datum. Aug. 6, 1931 to Nov. 4, 1960, water-stage recorder on left bank at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow slightly regulated by small reservoirs upstream from station. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--61 years (1926-82, 1984-87), 399 ft^3/s, 28.22 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,440 ft^3/s, Jan. 1, 1949, gage height, 11.40 ft; minimum, 11 ft^3/s, Sept. 3, 1934; minimum gage height, 0.46 ft, Sept. 26, 27, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 1	1800	*5,420	*8.68	Sept. 14	2145	2,680	6.06
Apr. 7	1145	2,900	6.31				

Minimum discharge, 69 ft^3/s, Aug. 22; minimum gage height, 1.32 ft, Feb. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	574	335	375	186	e120	115	4670	257	357	173	131	138
2	867	324	341	183	e130	129	3970	242	323	158	120	126
3	826	322	405	189	e140	137	2340	227	602	158	158	117
4	735	314	579	178	e140	143	1540	214	765	255	281	107
5	759	293	613	172	e130	144	1580	204	810	368	295	98
6	761	286	538	168	e130	139	2350	203	684	317	242	92
7	676	283	474	163	e130	135	2840	213	502	257	198	88
8	573	285	426	159	e120	145	2520	237	434	228	170	86
9	493	369	383	155	e120	174	1890	238	755	205	148	100
10	435	711	402	154	e120	225	1420	223	892	183	147	122
11	385	715	417	158	e120	229	1190	238	769	166	146	124
12	343	589	383	159	e110	222	1130	241	625	184	133	118
13	330	501	343	159	e110	203	1120	243	817	211	120	446
14	403	411	304	155	e110	183	1090	209	1130	218	112	2190
15	578	371	295	153	e100	166	973	185	942	343	104	2200
16	695	343	279	154	e100	152	854	215	692	420	97	1300
17	638	320	262	158	e96	145	791	201	509	330	92	747
18	554	303	249	155	e94	135	823	173	385	252	88	520
19	477	282	244	158	e94	125	853	156	303	213	84	547
20	413	244	237	e150	e94	122	839	136	247	188	81	571
21	366	254	224	e150	e94	117	819	118	204	183	74	521
22	339	253	217	e140	e94	121	742	111	198	174	75	452
23	311	241	209	e130	e96	146	610	115	407	161	84	385
24	291	232	204	e130	e98	197	486	148	470	145	84	342
25	274	226	210	e120	e98	300	451	170	388	146	80	303
26	256	234	232	e120	e98	588	382	159	306	152	76	266
27	256	371	234	e110	e100	976	312	148	257	153	72	237
28	280	528	223	e110	107	1140	264	185	227	182	72	216
29	310	523	215	e110	---	1290	242	307	204	180	91	206
30	335	454	207	e110	---	1580	248	469	190	164	125	195
31	346	---	197	e120	---	2370	---	437	---	148	143	---
TOTAL	14879	10917	9921	4616	3093	11993	39339	6622	15394	6615	3923	12960
MEAN	480	364	320	149	110	387	1311	214	513	213	127	432
MAX	867	715	613	189	140	2370	4670	469	1130	420	295	2200
MIN	256	226	197	110	94	115	242	111	190	145	72	86
CFSM	2.50	1.90	1.67	.78	.58	2.01	6.83	1.11	2.67	1.11	.66	2.25
IN.	2.88	2.12	1.92	.89	.60	2.32	7.62	1.28	2.98	1.28	.76	2.51

CAL YR 1986 TOTAL 167448 MEAN 459 MAX 3330 MIN 105 CFSM 2.39 IN. 32.4
WTR YR 1987 TOTAL 140272 MEAN 384 MAX 4670 MIN 72 CFSM 2.00 IN. 27.2

e Estimated

01314500 INDIAN LAKE NEAR INDIAN LAKE, NY

LOCATION.--Lat 43°45'20", long 74°16'35", Hamilton County, Hydrologic Unit 02020001, at Indian Lake Dam on Indian River, and 2.0 mi south of village of Indian Lake.

DRAINAGE AREA.--131 mi^2.

PERIOD OF RECORD.--July 1900 to current year. Prior to October 1956, published as "Indian Lake Reservoir near Indian Lake."

GAGE.--Nonrecording gage read once daily. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by masonry dam, completed in 1898. Usable capacity, about 4.500 bil ft^3 at elevation, 1,651.29 ft (crest of spillway). Sills of double sluice gates at lowest outlet at elevation 1,615.50 ft. Dead storage unknown. Water is used for power development, for improvement of navigation in lower Hudson River, and to compensate for flow diverted from Hudson River at Glens Falls into Champlain (Barge) Canal.

COOPERATION.--Gage-height record provided by Indian River Co.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 1,656.71 ft, Mar. 28, 1913, contents, 5.781 bil ft^3; minimum observed, 1,616.81 ft, estimated, Feb. 13, 1948, contents, 0.20 bil ft^3.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 1,650.12 ft, July 5, 6, contents, 4.442 bil ft^3; minimum observed, 1,635.01 ft, Sept. 29, 30, contents 1.960 bil ft^3.

Capacity table, current water year
(elevation, in feet and capacity, in billions of cubic feet)

1,635.0	1.958	1,643.0	3.221
1,636.0	2.110	1,648.0	4.068
1,638.0	2.417	1,653.0	5.007

ELEVATION, IN FEET, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1646.78	1643.09	1642.21	1644.06	1642.61	1638.37	1641.06	1645.88	1647.16	1650.04	1647.98	1638.95
2	1646.51	1642.84	1642.04	1644.06	1642.34	1638.41	1641.96	1645.91	1647.19	1649.99	1647.84	1638.58
3	1646.48	1642.69	1642.33	1644.10	1642.20	1638.31	1642.36	1645.91	1647.30	1650.03	1647.81	1638.16
4	1646.40	1642.48	1642.74	1644.10	1642.00	1638.26	1642.54	1645.91	1647.39	1650.09	1647.72	1637.79
5	1646.42	1642.28	1643.01	1644.09	1641.82	1638.16	1643.04	1645.91	1647.50	1650.12	1647.57	1637.41
6	1646.40	1642.08	1643.21	1644.09	1641.70	1638.01	1643.87	1646.02	1647.57	1650.12	1647.46	1637.04
7	1646.31	1642.01	1643.36	1644.08	1641.59	1637.91	1644.61	1646.09	1647.63	1650.10	1647.34	1636.68
8	1646.31	1641.94	1643.42	1644.03	1641.48	1637.83	1645.21	1646.16	1647.70	1650.09	1647.18	1636.29
9	1646.29	1642.01	1643.17	1643.95	1641.45	1637.78	1645.56	1646.18	1647.78	1650.06	1647.03	1636.04
10	1646.13	1642.11	1643.58	1643.83	1641.37	1637.68	1645.79	1646.16	1647.96	1650.01	1647.03	1635.75
11	1646.04	1642.11	1643.67	1643.73	1641.29	1637.74	1645.97	1646.18	1648.16	1649.99	1646.95	1635.41
12	1645.88	1642.13	1643.73	1643.63	1641.30	1637.65	1646.16	1646.24	1648.26	1649.99	1646.81	1635.07
13	1645.78	1642.17	1643.83	1643.53	1641.10	1637.56	1646.31	1646.29	1648.46	1649.98	1646.66	1635.19
14	1645.70	1642.01	1643.84	1643.43	1641.00	1637.46	1646.40	1646.32	1648.61	1649.98	1646.49	1635.51
15	1645.67	1642.00	1643.80	1643.15	1640.89	1637.35	1646.46	1646.35	1648.76	1650.03	1646.06	1635.75
16	1645.59	1641.91	1643.81	1643.35	1640.69	1637.21	1646.48	1646.38	1648.87	1650.02	1645.53	1635.71
17	1645.51	1641.91	1643.86	1643.29	1640.49	1637.11	1646.45	1646.39	1648.91	1650.02	1645.13	1635.46
18	1645.41	1641.75	1643.90	1643.22	1640.30	1636.98	1646.42	1646.41	1648.96	1649.94	1644.70	1635.26
19	1645.33	1641.68	1643.91	1643.25	1640.08	1636.81	1646.36	1646.44	1649.00	1649.82	1644.23	1635.63
20	1645.21	1641.59	1643.94	1643.09	1639.89	1636.66	1646.28	1646.47	1649.05	1649.71	1643.81	1635.93
21	1645.09	1641.55	1643.97	1642.96	1639.75	1636.53	1646.21	1646.50	1649.06	1649.56	1643.31	1636.22
22	1644.76	1641.60	1643.92	1642.96	1639.55	1636.46	1646.14	1646.53	1649.06	1649.46	1642.89	1636.19
23	1644.58	1641.53	1643.92	1642.88	1639.41	1636.39	1646.16	1646.55	1649.44	1649.31	1642.51	1636.21
24	1644.39	1641.41	1643.91	1642.88	1639.26	1636.33	1646.06	1646.62	1649.71	1649.19	1642.08	1636.05
25	1644.14	1641.38	1643.93	1642.75	1639.10	1636.41	1645.99	1646.69	1649.81	1649.04	1641.68	1636.06
26	1644.08	1641.35	1643.96	1642.75	1638.91	1636.71	1645.94	1646.75	1649.88	1648.91	1641.18	1635.96
27	1643.96	1641.58	1644.01	1642.81	1638.76	1637.16	1645.89	1646.81	1649.96	1648.78	1640.78	1635.61
28	1643.83	1641.82	1644.04	1642.88	1638.58	1637.67	1645.78	1646.89	1650.04	1648.61	1640.36	1635.21
29	1643.61	1642.06	1644.07	1642.77	---	1638.00	1645.79	1646.98	1650.11	1648.48	1640.03	1635.01
30	1643.46	1642.16	1644.08	1642.70	---	1638.61	1645.76	1647.04	1650.11	1648.31	1639.68	1635.01
31	1643.27	---	1644.07	1642.65	---	1639.41	---	1647.10	---	1648.15	1639.34	---
MEAN	1645.33	1641.97	1643.59	1643.39	1640.67	1637.51	1645.30	1646.39	1648.64	1649.61	1644.68	1636.17
MAX	1646.78	1643.09	1644.08	1644.10	1642.61	1639.41	1646.48	1647.10	1650.11	1650.12	1647.98	1638.95
MIN	1643.27	1641.35	1642.04	1642.65	1638.58	1636.33	1641.06	1645.88	1647.16	1648.15	1639.34	1635.01
‡	3.256	3.091	3.407	3.157	2.497	2.816	3.693	3.915	4.421	4.070	2.576	1.945
‡‡	-227	-63.7	+118	-93.4	-273	+119	+338	+82.9	+195	-131	-558	-243

CAL YR 1986 MEAN 1646.57 MAX 1651.86 MIN 1640.92 ‡‡ -6.91
WTR YR 1987 MEAN 1643.61 MAX 1650.12 MIN 1635.01 ‡‡ -60.9

‡ Contents, in billions of cubic feet, at 2400 hours on last day of month, by interpolation.
‡‡ Change in contents, equivalent in cubic feet per second.

01315000 INDIAN RIVER NEAR INDIAN LAKE, NY

LOCATION.--Lat 43°45'30", long 74°16'05", Hamilton County, Hydrologic Unit 02020001, on right bank 0.8 mi downstream from Indian Lake Dam, 1.0 mi upstream from Big Brook, and 2.0 mi south of village of Indian Lake.

DRAINAGE AREA.--132 mi^2.

PERIOD OF RECORD.--July 1912 to June 1914, June 1915 to current year. Monthly discharge only for some periods published in WSP 1302.

GAGE.--Water-stage recorder. Datum of gage is 1,604.23 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 30, 1916, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Indian Lake (see station 01314500). Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--73 years (1913, 1916-87), 296 ft^3/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,460 ft^3/s, Mar. 28, 1913, gage height, 7.8 ft; minimum, less than 1 ft^3/s frequently, when entire flow of river is being stored in Indian Lake.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,020 ft^3/s, Aug. 14, gage height, 4.06 ft; minimum, 13 ft^3/s, Sept. 29, 30; minimum gage height, 0.55 ft, Sept. 22, 26, 29, 30; minimum daily discharge, 15 ft^3/s, Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	415	575	160	166	276	375	406	97	28	176	359	816
2	449	572	161	166	276	375	411	96	28	176	359	807
3	449	569	167	166	275	374	414	95	29	177	359	795
4	450	566	165	166	273	372	421	95	29	179	357	785
5	452	563	164	166	273	372	436	51	29	176	356	774
6	452	458	164	165	270	372	440	29	29	176	356	764
7	450	296	164	232	270	372	440	28	29	176	354	755
8	451	297	164	285	270	372	443	43	30	176	353	746
9	450	297	165	284	270	372	446	85	30	176	242	738
10	449	294	166	283	270	370	448	85	29	176	366	728
11	448	294	166	282	269	370	449	48	29	176	364	716
12	446	294	166	282	345	369	450	28	29	176	298	700
13	447	294	166	282	391	368	451	28	34	177	441	712
14	447	294	166	282	391	367	452	28	30	180	821	711
15	447	294	164	281	389	365	452	28	29	179	1010	721
16	445	294	164	279	388	363	450	28	29	178	998	724
17	443	294	164	279	387	361	449	28	29	225	985	709
18	442	292	166	279	386	359	447	28	29	364	975	709
19	442	291	166	279	384	358	447	28	29	365	963	714
20	441	292	166	279	384	356	445	28	29	372	950	722
21	439	291	166	279	383	352	404	28	30	373	929	550
22	491	291	166	279	381	352	299	28	34	367	929	528
23	570	291	166	279	381	353	299	29	41	368	916	535
24	581	290	165	279	379	354	299	29	31	366	904	533
25	591	289	167	278	379	357	297	29	30	366	891	573
26	589	256	167	276	378	363	297	29	30	365	881	601
27	587	161	166	276	375	366	297	29	30	365	872	886
28	586	160	166	276	374	371	217	35	30	364	861	532
29	583	160	166	276	---	376	169	29	30	362	853	320
30	580	160	166	276	---	383	121	28	119	362	842	15
31	579	---	166	276	---	399	---	28	---	360	829	---
TOTAL	15091	9769	5121	7933	9467	11388	11496	1325	991	8174	20973	19919
MEAN	487	326	165	256	338	367	383	42.7	33.0	264	677	664
MAX	591	575	167	285	391	399	452	97	119	373	1010	886
MIN	415	160	160	165	269	352	121	28	28	176	242	15
ADJUSTED FOR CHANGE IN CONTENTS OF INDIAN LAKE												
MEAN	260	262	283	163	65.2	486	721	126	228	133	119	421
CFSM	1.97	1.98	2.14	1.23	0.49	3.68	5.46	0.95	1.73	1.01	0.90	3.19
IN	2.27	2.21	2.47	1.42	0.51	4.24	6.09	1.10	1.93	1.16	1.04	3.56

		OBSERVED					ADJUSTED				
CAL YR 1986	TOTAL 124592	MEAN 341	MAX 649	MIN 64	MEAN 334	CFSM 2.53	IN 34.34				
WTR YR 1987	TOTAL 121647	MEAN 333	MAX 1010	MIN 15	MEAN 272	CFSM 2.06	IN 27.97				

01315500 HUDSON RIVER AT NORTH CREEK, NY

LOCATION.--Lat 43°42'03", long 73°59'02", Warren County, Hydrologic Unit 02020001, on left bank 125 ft upstream from bridge on State Highway 28N in village of North Creek, 500 ft upstream from North Creek, and 26 mi downstream from Indian Lake.

DRAINAGE AREA.--792 mi^2.

PERIOD OF RECORD.--September 1907 to current year.

REVISED RECORDS.--WSP 621: Drainage area. WSP 1432: 1908-18, 1920, 1922. WDR NY-78-1: 1977.

GAGE.--Water-stage recorder. Datum of gage is 987.51 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 15, 1930, nonrecording gages at sites 80 ft and 125 ft downstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Appreciable regulation by Indian Lake (see station 01314500) and other reservoirs upstream from station. Several measurements of water temperature were made during the year. Telephone-gage-height telemeter at station.

AVERAGE DISCHARGE.--80 years, 1,566 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,900 ft^3/s, Dec. 31, 1948, gage height, 12.14 ft; minimum, 112 ft^3/s, July 26, 1934, gage height, 1.96 ft; minimum daily, 114 ft^3/s, July 26, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17,800 ft^3/s, Apr. 1, gage height, 10.10 ft; minimum, 393 ft^3/s, May 22, 23, gage height, 2.64 ft; minimum daily, 401 ft^3/s, May 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2020	1570	e1400	e800	e720	e680	16300	1170	1080	801	727	1320
2	2510	1540	e1200	e820	e680	e700	10500	1050	1070	758	672	1250
3	2540	1550	e1400	e840	e660	e760	6590	946	1610	836	803	1130
4	2500	1520	2930	e840	e660	e840	4980	863	1700	2020	1120	1100
5	2780	1470	2650	e800	e640	e860	7950	806	1880	2630	1140	1100
6	2760	1440	e2200	e780	e640	e800	10500	769	1720	1950	969	1020
7	2540	1220	e1900	e760	e640	e800	9720	765	1350	1470	845	956
8	2170	1270	e1600	e780	e640	e860	7620	721	1160	1340	764	939
9	1970	1570	e1500	e820	e640	e1000	5930	774	1670	1340	705	1280
10	1850	2090	e1550	e840	e640	e1200	4700	725	2020	1140	708	1260
11	1770	2180	1740	e860	e660	e1200	4060	635	1800	1030	901	1160
12	1590	1990	1640	e860	e660	e1100	3800	636	1490	966	808	1120
13	1520	1800	1380	e840	e680	e1000	3590	619	2350	1030	707	2550
14	1710	1580	1210	e860	e700	e980	3350	593	3100	1200	887	5870
15	2140	1480	1330	e860	e680	e960	3030	551	2450	1810	1370	5360
16	2310	1430	1250	e840	e660	e900	2810	525	1790	1690	1270	3700
17	2150	1370	1200	e840	e680	e880	2500	537	1550	1450	1310	2630
18	1960	1350	1160	e840	e680	e820	2340	519	997	1250	1230	2980
19	1800	1310	1160	e840	e700	e800	2290	481	781	1170	1150	4400
20	1740	1240	1130	e820	e700	e800	2220	446	671	1100	1200	3790
21	1610	e1200	1080	e820	e700	e820	2110	419	554	1080	1150	3210
22	1530	e1200	e1050	e800	e720	898	1870	401	607	994	1200	2680
23	1600	e1150	e940	e780	e720	1070	1690	413	3420	886	1270	2170
24	1510	e1100	e900	e760	e740	1410	1610	595	3060	806	1190	2060
25	1470	e1100	e950	e740	e720	2050	1520	665	2020	796	1160	1930
26	1410	1230	1280	e720	e700	3510	1410	634	1450	819	1160	1750
27	1450	1950	1280	e680	e700	4320	1250	599	1150	800	1130	1800
28	1510	2210	e1200	e690	e680	4700	1150	1220	1010	902	1010	1670
29	1580	2030	e1100	e700	---	5330	1050	1790	945	891	1230	1400
30	1610	1780	e1000	e720	---	6510	1110	1700	805	805	1340	1030
31	1600	---	e900	e700	---	11700	---	1380	---	754	1270	---
TOTAL	59210	45920	43210	24650	19040	60258	129550	23947	47260	36514	32396	64615
MEAN	1910	1531	1394	795	680	1944	4318	772	1575	1178	1045	2154
MAX	2780	2210	2930	860	740	11700	16300	1790	3420	2630	1370	5870
MIN	1410	1100	900	680	640	680	1050	401	554	754	672	939

CAL YR 1986 TOTAL 678338 MEAN 1858 MAX 11700 MIN 575
WTR YR 1987 TOTAL 586570 MEAN 1607 MAX 16300 MIN 401

e Estimated

01318500 HUDSON RIVER AT HADLEY, NY

LOCATION.--Lat 43°19'08", long 73°50'41", Saratoga County, Hydrologic Unit 02020001, on right bank at Hadley, 400 ft downstream from outlet of Lake Luzerne, and 0.3 mi upstream from Sacandaga River.

DRAINAGE AREA.--1,664 mi^2.

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

REVISED RECORDS.--WSP 561: 1921-22. WSP 756: Drainage area. WSP 1432: 1931 (m).

GAGE.--Water-stage recorder. Datum of gage is 563.99 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent except those for estimated daily discharges, which are fair. Some diurnal fluctuation caused by powerplant on Schroon River. Flow regulated by Indian Lake (see station 01314500) and other reservoirs upstream from station. Several measurements of water temperature were made during the year. Telephone gage-height telemeter and satellite gage-height telemeter at station.

AVERAGE DISCHARGE.--66 years, 2,916 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,700 ft^3/s, Jan. 1, 1949, gage height, 21.21 ft; minimum, 281 ft^3/s, Sept. 3, 1934, gage height, 0.94 ft; minimum daily, 292 ft^3/s, July 24, 1934.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 15,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 1	0345	*28,500	*15.46	Apr. 6	1000	20,400	12.13

Minimum discharge, 882 ft^3/s, May 23, gage height, 2.25 ft; minimum daily, 894 ft^3/s, May 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2370	2200	3060	e1750	e1350	1200	27100	2380	1840	1980	1070	1530
2	3050	2150	2820	e1700	e1400	1430	21300	2300	1660	1870	1020	1520
3	3330	2120	3530	e1650	e1400	1700	15600	2140	2040	1920	1100	1420
4	3310	2110	5430	e1600	e1400	1740	12600	2030	2350	2160	1300	1340
5	3600	2040	5210	e1600	e1400	1710	15500	1940	2680	3880	1440	1290
6	3840	2060	4510	e1700	e1250	e1600	19900	1830	2700	3270	1370	1300
7	3640	1930	4050	e1750	e1300	e1600	18900	1820	2350	2620	1230	1190
8	3300	1890	3680	e1650	e1300	1870	16000	1730	2040	2300	1120	1210
9	2940	2260	3360	e1600	e1250	2400	13400	1640	2320	2350	1040	1690
10	2750	2820	3520	e1650	e1200	2440	11200	1640	2820	2190	1060	1840
11	2570	3100	3590	e1600	e1200	2370	9810	1550	2800	2010	1150	1580
12	2450	2960	3330	e1700	e1250	2360	8750	1480	2390	1940	1220	1510
13	2230	2750	3100	e1700	e1200	2240	8170	1420	2570	1930	1060	3010
14	2370	2470	2310	e1600	e1200	2120	7420	1350	4250	1960	1020	7950
15	2740	2280	2630	e1700	e1150	2020	6740	1290	3740	2670	1370	7810
16	3200	2210	2770	e1750	e1150	1940	6050	1230	2890	2850	1440	6020
17	3140	2150	2540	e1550	e1200	1860	5590	1190	2260	2440	1460	4530
18	2910	2100	2350	e1450	e1200	1840	5110	1170	1840	2130	1480	5170
19	2640	2060	2200	e1450	e1250	1800	4810	1120	1490	1940	1330	8430
20	2480	1900	2390	e1450	e1200	1860	4550	1050	1250	1820	1340	7220
21	2350	1960	2140	e1500	e1200	1820	4320	987	1110	1720	1340	6340
22	2220	2080	1940	e1550	e1150	1900	3950	931	1040	1640	1300	5250
23	2220	2060	1940	e1350	e1150	2310	3550	894	3740	1450	1440	4630
24	2180	1990	2060	e1450	e1150	3200	3350	1180	5300	1300	1400	4080
25	2100	2020	2140	e1450	e1150	4690	3200	1360	3880	1230	1330	3810
26	2070	2350	2520	e1450	e1150	7330	2990	1310	3150	1240	1290	3360
27	2120	4950	2520	e1450	e1150	8960	2750	1250	2970	1230	1310	3130
28	2180	4510	2210	e1400	e1150	9300	2540	1470	2900	1210	1260	3190
29	2220	3980	e2150	e1350	---	10300	2410	2470	2540	1270	1430	2630
30	2250	3590	e2050	e1350	---	11500	2400	2480	2230	1210	1610	2420
31	2220	---	e1950	e1300	---	18400	---	2220	---	1140	1590	---
TOTAL	82990	75050	90000	48200	34500	117810	269960	48852	77140	60870	39920	106400
MEAN	2677	2502	2903	1555	1232	3800	8999	1576	2571	1964	1288	3547
MAX	3840	4950	5430	1750	1400	18400	27100	2480	5300	3880	1610	8430
MIN	2070	1890	1940	1300	1150	1200	2400	894	1040	1140	1020	1190

CAL YR 1986 TOTAL 1214600 MEAN 3328 MAX 19800 MIN 1060
WTR YR 1987 TOTAL 1051690 MEAN 2881 MAX 27100 MIN 894

e Estimated

HUDSON RIVER BASIN

01321000 SACANDAGA RIVER NEAR HOPE, NY

LOCATION.--Lat 43°21'10", long 74°16'15", Hamilton County, Hydrologic Unit 02020002, on left bank 1.5 mi downstream from West Branch Sacandaga River, on State Highway 30, and 4.5 mi upstream from Hope.

DRAINAGE AREA.--491 mi^2.

PERIOD OF RECORD.--September 1911 to current year.

GAGE.--Water-stage recorder. Datum of gage is 881.31 ft above National Geodetic Vertical Datum of 1929. Prior to July 24, 1929, nonrecording gage at site 300 ft upstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Some seasonal regulation at Piseco Lake Outlet and, since 1959, intermittent regulation by Lake Algonquin at Wells, 4 mi upstream. Infrequent minor fluctuations by mill upstream. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--76 years, 1,102 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,000 ft^3/s, Mar. 27, 1913, gage height, 11.0 ft, from floodmarks at site then in use; maximum gage height, 13.32 ft, Mar. 1, 1955 (ice jam); minimum discharge, about 16 ft^3/s, Sept. 30, 1913, gage height, 1.17 ft; minimum daily discharge, 18 ft^3/s, Sept. 20, 1913.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 9,100 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 31	2130	*17,700	*8.47	Sept. 13	1630	9,120	6.53
Apr. 5	0900	13,500	7.62				

Minimum discharge, 108 ft^3/s, Aug. 19, gage height, 1.52 ft; minimum daily discharge, 116 ft^3/s, Aug. 19, 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	994	672	1660	e580	e560	e1500	10900	795	313	341	128	304
2	941	647	1460	e600	e520	e2900	6030	724	405	306	121	287
3	930	622	2710	e500	e500	e3200	4390	666	668	504	424	263
4	1220	591	2960	e400	e480	e2900	4250	618	669	587	450	236
5	1450	557	2370	e440	e460	e2600	11600	578	885	511	325	210
6	1430	608	1930	e410	e450	e2400	11700	573	683	407	267	187
7	1330	668	e1600	e390	e440	e2400	9070	579	521	351	233	177
8	1190	766	e1400	e370	e430	e2800	6730	538	559	335	206	197
9	1070	1610	e1200	e400	e410	e3400	5240	500	1040	336	187	740
10	962	1770	1690	e430	e400	e3000	4100	468	907	329	265	855
11	858	1470	1590	e470	e390	e2100	3810	435	735	292	287	587
12	774	1310	e1300	e500	e380	1680	3430	432	642	299	230	505
13	729	1170	e1100	e490	e370	1440	3130	412	1140	294	195	4660
14	814	960	e960	e460	e360	1210	2760	381	1060	291	171	4240
15	958	898	1070	e500	e350	1040	2440	363	805	777	154	2760
16	913	843	992	e410	e300	907	2160	348	633	741	140	2190
17	857	776	911	e420	e340	824	1910	330	517	553	130	1410
18	793	754	859	e460	e400	748	1630	307	432	449	121	3620
19	735	711	e820	e540	e370	698	1500	291	376	447	116	6100
20	682	595	e800	e450	e350	668	1350	275	332	404	139	3730
21	639	651	e660	e500	e330	634	1210	259	296	359	122	2580
22	605	688	e680	e620	e310	689	1080	254	330	257	143	2620
23	685	662	e660	e520	e290	1040	973	253	1210	200	200	2210
24	473	688	e680	e440	e280	1820	927	596	1100	175	171	1380
25	486	746	884	e380	e260	2960	901	533	693	163	139	1160
26	552	1490	1230	e340	e250	4810	811	437	463	175	121	1310
27	752	5650	e1000	e370	e260	4380	738	374	425	166	116	734
28	840	3290	e800	e410	e270	4270	705	442	496	149	150	779
29	862	2860	e860	e390	---	5090	732	678	491	132	390	1190
30	800	2230	e740	e520	---	6000	833	499	396	127	449	905
31	725	---	e700	e470	---	11500	---	385	---	153	330	---
TOTAL	27049	36953	38276	14180	10510	81608	107040	14323	19222	10610	6620	48126
MEAN	873	1232	1235	457	375	2633	3568	462	641	342	214	1604
MAX	1450	5650	2960	620	560	11500	11700	795	1210	777	450	6100
MIN	473	557	660	340	250	634	705	253	296	127	116	177

CAL YR 1986 TOTAL 448085 MEAN 1228 MAX 9780 MIN 198
WTR YR 1987 TOTAL 414517 MEAN 1136 MAX 11700 MIN 116

e Estimated

01323500 GREAT SACANDAGA LAKE AT CONKLINGVILLE, NY

LOCATION.--Lat 43°18'57", long 73°55'39", Saratoga County, Hydrologic Unit 02020002, 800 ft upstream from right end of Conklingville Dam on Sacandaga River at Conklingville.

DRAINAGE AREA.--1,044 mi^2.

PERIOD OF RECORD.--January 1930 to current year. Prior to October 1969, published as "Sacandaga Reservoir at Conklingville."

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum, adjustment of 1912. Prior to Apr. 23, 1930, nonrecording gage at same datum in outlet channel 800 ft downstream.

REMARKS.--Reservoir is formed by earth and concrete dam; storage began in March 1930; dam completed in 1930. Usable capacity for stream regulation, 29.670 bil ft^3 between elevations 735.0 ft and 768.0 ft. Between elevations 768.0 ft and 771.0 ft (spillway crest) an additional 3.450 bil ft^3 is available exclusively for flood storage. Elevation of inverts of three Dow valves is 699.0 ft. Capacity of 4.600 bil ft^3 below elevation 735.0 ft is considered dead storage, except for extraordinary emergencies or for necessary inspection of structures. Purpose of reservoir is to provide flood control and low-water stream regulation for sanitary improvement, navigation, and power, as required by the public welfare, including public health and safety. Area of water surface of reservoir filled to capacity, elevation, 771.0 ft, is 41.7 mi^2. Discharge over spillway May 1-10, 1983 (only spillage since dam completion in 1930).

COOPERATION.--Records provided by Board of Hudson River-Black River Regulating District.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 773.29 ft, May 4, 1983, contents, 40.418 bil ft^3; minimum since first filling, 729.55 ft, Mar. 30, 1940, contents, 2.100 bil ft^3.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 767.00 ft, Sept. 26, contents, 33.150 bil ft^3; minimum, 742.67 ft, Mar. 2, contents, 9.786 bil ft^3.

Capacity table, current water year
(elevation, in feet, and contents, in billions of cubic feet)

738	6.43	760	25.61
740	7.80	764	29.85
745	11.64	768	34.27
750	15.94	771	37.72
755	20.61	774	41.26

ELEVATION, IN FEET, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	763.08	759.25	756.87	752.76	747.68	742.70	753.62	764.99	763.91	764.86	764.11	761.29
2	762.98	759.00	756.75	752.51	747.75	742.67	754.83	764.98	763.84	764.75	763.99	761.17
3	762.92	758.80	756.87	752.30	747.60	742.74	755.60	764.95	763.78	764.93	764.03	761.07
4	762.85	758.50	757.28	752.05	747.50	742.75	756.22	764.98	763.85	765.00	763.95	760.93
5	762.77	758.20	757.28	751.43	747.35	742.79	757.90	765.01	763.98	764.94	763.78	760.81
6	762.80	758.07	757.26	751.45	747.21	742.76	759.85	765.09	763.97	764.94	763.73	760.72
7	762.65	757.84	757.18	751.27	747.09	742.77	761.65	765.07	764.01	764.97	763.65	760.58
8	762.63	757.74	757.00	751.08	746.95	742.76	762.80	764.97	764.13	765.02	763.55	760.46
9	762.50	757.74	756.92	750.90	746.83	742.85	763.61	764.96	764.20	764.99	763.36	760.55
10	762.36	757.65	756.96	750.70	746.69	743.06	764.06	765.01	764.14	764.97	763.30	760.63
11	762.31	757.51	756.90	750.60	746.55	743.19	764.25	764.99	764.21	764.96	763.17	760.58
12	762.14	757.42	756.82	750.43	746.40	743.25	764.40	764.92	764.23	764.96	763.06	760.53
13	761.93	757.45	756.65	750.21	746.20	743.25	764.46	764.80	764.27	764.97	762.95	760.74
14	761.81	757.35	756.40	750.13	746.00	743.26	764.56	764.77	764.36	764.92	762.79	762.26
15	761.88	757.10	756.24	750.00	745.75	743.18	764.52	764.70	764.40	765.09	762.69	762.80
16	761.73	756.85	756.00	749.87	745.54	743.14	764.62	764.65	764.52	765.18	762.64	763.11
17	761.57	756.83	755.80	749.73	745.30	743.08	764.66	764.64	764.48	765.28	762.52	763.32
18	761.48	756.62	755.62	749.56	745.03	742.96	764.72	764.50	764.47	765.24	762.44	763.56
19	761.33	756.36	755.20	749.46	744.84	742.93	764.70	764.43	764.43	765.17	762.35	764.76
20	761.15	756.12	755.28	749.38	744.60	742.85	764.71	764.36	764.35	765.18	762.23	765.50
21	761.03	755.98	755.05	749.25	744.36	742.80	764.70	764.28	764.33	765.12	762.10	766.05
22	760.89	755.76	754.80	749.09	744.11	742.85	764.67	764.20	764.28	765.06	761.99	766.38
23	760.78	755.52	754.55	749.07	743.87	743.04	764.67	764.13	764.30	764.99	761.90	766.73
24	760.58	755.34	754.27	748.92	743.65	743.37	764.65	764.09	764.51	764.95	761.75	766.83
25	760.38	755.22	754.07	748.76	743.41	743.89	764.73	764.10	764.59	764.90	761.72	766.90
26	760.14	755.12	753.92	748.58	743.22	744.94	764.83	764.04	764.64	764.83	761.53	767.00
27	759.95	756.22	753.74	748.47	743.01	746.21	764.82	764.00	764.76	764.69	761.37	766.89
28	759.90	756.75	753.56	748.34	742.80	747.26	764.84	763.99	764.90	764.52	761.32	766.80
29	759.80	756.93	753.36	748.19	---	748.31	764.89	763.94	764.91	764.38	761.33	766.75
30	759.68	756.95	753.12	748.05	---	749.45	764.91	763.95	764.90	764.30	761.39	766.60
31	759.52	---	752.90	748.00	---	750.75	---	764.00	---	764.23	761.32	---
MEAN	761.53	757.07	755.63	750.02	745.62	743.93	762.78	764.56	764.32	764.91	762.64	763.41
MAX	763.08	759.25	757.28	752.76	747.75	750.75	764.91	765.09	764.91	765.28	764.11	767.00
MIN	759.52	755.12	752.90	748.00	742.80	742.67	753.62	763.94	763.78	764.23	761.32	760.46
*	25.07	22.64	18.62	14.13	9.82	16.33	30.88	29.78	30.78	30.03	26.97	32.62
**	-1396	-938	-1501	-1676	-1782	+2431	+5613	-411	+386	-280	-1142	+2180

CAL YR 1986 MEAN 760.55 MAX 769.20 MIN 743.78 ** -154
WTR YR 1987 MEAN 758.09 MAX 767.00 MIN 742.67 ** +121

* Contents, in billions of cubic feet, at 2400 hours on last day of month.
** Change in contents, equivalent in cubic feet per second.

01325000 SACANDAGA RIVER AT STEWARTS BRIDGE, NEAR HADLEY, NY

LOCATION.--Lat 43°18'41", long 73°52'04", Saratoga County, Hydrologic Unit 02020002, on left bank 1.0 mi downstream from Stewarts Bridge, 1.1 mi west of Hadley, 1.4 mi upstream from mouth, and 1.5 mi downstream from Stewarts Bridge hydroelectric plant.

DRAINAGE AREA.--1,055 mi^2.

PERIOD OF RECORD.--September 1907 to current year. Published as "near Hadley" 1907-1910, "at Hadley" 1911-32 and "at Conklingville" 1932-52. Records published for both sites October 1951 to September 1952.

REVISED RECORDS.--WSP 1302: 1908. WSP 1432: 1910-12, 1916-21, WDR NY-83-1: 1968(M), 1971-72(M), 1976-77(M), 1979(M).

GAGE.--Water-stage recorder. Datum of gage is 582.00 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 1, 1911, nonrecording gage at site about 1 mi upstream at different datum. Jan. 1, 1911 to Sept. 30, 1932, water-stage recorder at site 0.8 mi downstream at datum 8.82 ft lower than present datum. Oct. 1, 1932 to Sept. 30, 1952, water-stage recorder at site 3.6 mi upstream at datum 85.47 ft higher than present datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Great Sacandaga Lake since Mar. 27, 1930 (see station 01323500); discharge over spillway only May 1-10, 1983. Extensive diurnal fluctuation caused by release of water from Great Sacandaga Lake, through Elmer J. West hydroelectric station as directed by Board of Hudson River-Black River Regulating District, and through Stewarts Bridge hydroelectric station. Several measurements of water temperature were made during the year. Satellite gage-height telemeter at station.

COOPERATION.--From Oct. 1, 1932, to Dec. 4, 1979, discharge computed by Board of Hudson River-Black River Regulating District from rating developed by Geological Survey. Since Dec. 4, 1979, discharge computed by U.S. Geological Survey.

AVERAGE DISCHARGE.--80 years, 2,144 ft^3/s, adjusted for storage since 1930.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 35,500 ft^3/s, Mar. 28, 1913, gage height, 12.36 ft, site and datum then in use; minimum, 4.2 ft^3/s, May 4, 1985; minimum daily, 4.7 ft^3/s, Apr. 28 to May 5, 1985. Maximum discharge since construction of Conklingville Dam in 1930, 13,300 ft^3/s, May 4, 1983, gage height, 9.68 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,100 ft^3/s, Oct. 1, gage height, 8.84 ft; minimum, 15 ft^3/s, Apr. 3, 4; minimum daily, 15 ft^3/s, Apr. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2270	4010	4100	4140	2080	2370	17	1060	1380	998	1670	1530
2	2060	4050	4100	4140	2080	2340	16	794	1750	1010	1700	1640
3	2000	3580	4090	4190	2110	2280	16	46	1060	1380	1760	1590
4	3980	4050	4040	4160	2200	2230	15	780	862	1280	1700	1730
5	4040	4070	4040	4200	2180	1970	19	742	709	978	1770	1800
6	2570	3610	4050	4110	2090	2170	20	1720	706	38	1500	1700
7	2640	4030	4110	3080	2100	1950	18	1800	37	39	1630	1690
8	2610	4020	4080	3250	2100	1940	19	1350	686	648	1760	1870
9	2590	3990	4100	3060	2080	2040	30	716	1030	969	1820	1650
10	2570	4030	4080	3110	2110	2080	895	41	717	1020	1730	1280
11	2600	4020	3350	3120	2090	2060	3040	1690	661	1020	1810	1530
12	3990	4000	4090	3100	2740	2030	4060	1730	685	880	1810	1700
13	2610	2560	4080	2520	2740	2050	4050	1460	672	1110	1800	1040
14	3450	2570	4050	2450	2800	2040	4090	1350	35	1070	1900	40
15	1240	4030	4040	2400	2800	2060	4080	1350	32	42	1640	59
16	2610	4030	4080	2450	2790	2050	2850	1370	34	311	968	38
17	2580	2690	4070	2480	2790	2050	2760	993	693	1020	1340	38
18	2630	2670	4150	2500	2780	1850	2740	1340	1000	1050	680	111
19	4030	4070	4140	2420	2740	2210	2810	1370	1060	944	1650	82
20	2590	4080	4100	2430	2770	2090	2730	1310	987	1310	1720	72
21	2590	4100	4160	2410	2780	1900	2070	1510	657	1330	1680	39
22	2550	4130	4230	2440	2690	236	1910	1400	1740	1280	1750	62
23	2590	4200	4220	2380	2710	40	2110	1000	561	1350	1750	657
24	2600	4150	4130	2400	2640	1690	1220	1020	37	56	1390	1830
25	4010	2650	4110	2430	2330	71	1040	1020	33	1580	1120	1150
26	3460	3730	4140	1910	2380	2190	43	1300	33	1660	1510	1140
27	2560	4140	4220	2490	2380	943	1040	1320	1060	1660	1890	3200
28	2600	4140	4120	1820	2380	18	1020	1390	693	1620	1370	2030
29	2540	4040	4110	2240	---	17	1140	678	1010	1860	1010	2280
30	2580	4090	4120	2290	---	17	2080	760	725	60	1580	3990
31	2590	---	4120	2160	---	31	---	41	---	1530	1570	---
TOTAL	86330	113530	126620	88280	68460	49013	47948	34451	21345	31103	48978	37568
MEAN	2785	3784	4085	2848	2445	1581	1598	1111	711	1003	1580	1252
MAX	4040	4200	4230	4200	2800	2370	4090	1800	1750	1860	1900	3990
MIN	1240	2560	3350	1820	2080	17	15	41	32	38	680	38

Adjusted for change in contents in Great Sacandaga Lake and Stewarts Bridge Pool

MEAN	1392	2845	2584	1173	661	3904	7325	701	1086	729	439	3434
CFSM	1.32	2.70	2.45	1.11	0.63	3.70	6.94	0.66	1.03	0.69	0.42	3.25
IN	1.52	3.01	2.82	1.28	0.65	4.27	7.75	0.77	1.15	0.80	0.48	3.63

		OBSERVED						ADJUSTED				
CAL YR 1986	TOTAL 950075	MEAN 2603	MAX 5310	MIN 30		MEAN 2450	CFSM 2.32	IN 31.53				
WTR YR 1987	TOTAL 753626	MEAN 2065	MAX 4230	MIN 15		MEAN 2186	CFSM 2.07	IN 28.12				

HUDSON RIVER BASIN

01325420 HUDSON RIVER AT CORINTH, NY

LOCATION.--Lat 43°14'53", long 73°49'49", Saratoga County, Hydrologic Unit 0202003, at River Street bridge.

DRAINAGE AREA.--2,755 mi².

PERIOD OF RECORD.--September 1986 to current year.
CHEMICAL DATA: 1986 (b), 1987 (e).
MINOR ELEMENTS DATA: 1986 (b), 1987 (e).

REMARKS.--Discharge is the sum of the mean daily discharges at Hudson River at Hadley (station 01318500) and Sacandaga River at Stewarts Bridge, near Hadley (station 01325000).

WATER QUALITY DATA, SEPTEMBER 1986

DATE	TIME	DIS-CHARGE IN CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)
SEP										
11...	1145	2930	--	--	--	2	1	<30	<10	<1
15...	1115	3280	--	7.3	16.5	5	1	<10	<10	<1
24...	1100	4960	53	7.2	16.0	1	1	50	<10	<10
26...	1200	4970	--	7.4	18.0	1	1	60	<10	<1

DATE	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	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)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
SEP									
11...	<20	12	120	5	30	--	6	<1	<10
15...	<10	3	210	<5	20	<0.10	11	<1	70
24...	10	2	170	<5	20	<0.10	<1	<1	10
26...	<10	6	210	<5	20	<0.10	2	<1	20

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	DIS-CHARGE, IN CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
OCT									
02...	1000	5110	--	7.6	15.0	--	--	--	--
08...	1015	5910	48	7.0	13.0	--	--	--	--
16...	1015	5810	--	7.2	11.5	--	--	--	--
NOV									
03...	0915	5700	--	7.3	9.0	--	--	--	--
07...	1000	5960	49	7.4	8.0	--	--	--	--
13...	1020	5310	--	7.6	5.0	--	--	--	--
17...	1030	4840	--	7.2	6.5	--	--	--	--
18...	0900	4770	--	7.4	5.0	--	--	--	--
24...	0915	6140	--	7.0	4.0	--	--	--	--
DEC									
01...	1040	7160	--	7.4	2.0	--	--	--	--
04...	0930	9470	50	7.2	2.0	--	--	--	--
23...	1130	6160	--	7.2	1.0	--	--	--	--
JAN									
08...	1015	4900	--	7.2	0.0	--	--	--	--
15...	1015	4100	--	7.4	2.0	--	--	--	--
28...	1100	3220	--	7.2	0.0	--	--	--	--
FEB									
05...	1015	3580	--	7.4	0.0	--	--	--	--
13...	1030	3940	--	6.8	0.0	--	--	--	--
17...	1100	3990	--	7.0	0.0	--	--	--	--
19...	0945	3990	--	7.0	0.0	--	--	--	--
25...	1100	3480	--	7.0	0.0	--	--	--	--
MAR									
04...	1100	3970	--	7.0	1.0	--	--	--	--
07...	1030	3550	--	7.2	5.0	--	--	--	--
16...	1030	3990	--	7.0	2.0	--	--	--	--
18...	1115	3690	--	7.2	3.0	--	--	--	--
23...	1335	2350	--	7.2	4.0	--	--	--	--
27...	0925	9900	--	7.0	3.0	--	--	--	--
APR									
23...	1500	5660	--	7.4	14.0	9.6	17	5.3	1.0
MAY									
13...	1430	2880	68	7.4	21.0	10.9	22	7.0	1.2
JUN									
19...	1045	2550	53	7.4	23.0	8.6	16	4.9	1.0
JUL									
28...	1130	2830	--	7.4	26.5	8.2	18	5.3	1.1
SEP									
22...	1115	5310	55	7.2	14.5	9.8	20	6.2	1.1

HUDSON RIVER BASIN

01325420 HUDSON RIVER AT CORINTH, NY--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)
OCT										
02...	2	--	1	<10	<10	<1	--	20	4	--
08...	3	--	2	10	<10	1	--	<10	3	--
16...	7	--	3	30	<10	<1	--	<10	3	--
NOV										
03...	<1	--	<1	10	<10	<1	--	<10	3	--
07...	<1	--	<1	40	<10	<1	--	<10	3	--
13...	<1	--	<1	50	<10	<1	--	<10	2	--
17...	4	--	<1	20	<10	<1	--	<10	4	--
18...	1	--	<1	20	<10	<1	--	<10	2	--
24...	1	--	<1	<10	<10	<1	--	<10	3	--
DEC										
01...	10	--	2	60	<10	<1	--	<10	3	--
04...	3	--	<1	60	<10	<1	--	<10	4	--
23...	12	--	5	30	<10	<1	--	<10	4	--
JAN										
08...	<1	--	<1	50	<10	<1	--	<10	10	--
15...	6	--	3	80	10	<1	--	<10	5	--
28...	8	--	<1	90	<10	<1	--	<10	12	--
FEB										
05...	<1	--	<1	60	<10	<1	--	<10	4	--
13...	<1	--	<1	30	<10	<1	--	<10	9	--
17...	2	--	<1	60	<10	<1	--	<10	14	--
19...	1	--	<1	60	<10	<1	--	<10	5	--
25...	<1	--	<1	10	<10	<1	--	<10	6	--
MAR										
04...	<1	--	<1	120	<10	<1	--	<10	7	--
07...	9	--	7	220	<10	<1	--	<10	3	--
16...	<1	--	<1	70	<10	<1	--	<10	3	--
18...	<1	--	<1	30	<10	<1	--	<10	4	--
23...	<1	--	<1	30	<10	<1	--	<10	3	--
27...	19	--	19	300	<10	<1	--	<10	5	--
APR										
23...	--	40	--	--	--	<10	--	--	<10	--
MAY										
13...	--	46	--	--	--	<10	--	--	<10	--
JUN										
19...	--	44	--	--	--	<10	--	--	<10	--
JUL										
28...	--	50	--	--	--	<10	<1	--	30	3
SEP										
22...	--	42	--	--	--	<1	1	--	5	2

01325420 HUDSON RIVER AT CORINTH, NY--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (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)	NICKEL, DIS-SOLVED (UG/L AS NI)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT										
02...	190	<5	--	20	<0.10	1	--	2	50	--
08...	160	<5	--	20	<0.10	5	--	<1	<10	--
16...	120	<5	--	20	<0.10	<1	--	1	30	--
NOV										
03...	220	<5	--	30	<0.10	<1	--	<1	<10	--
07...	220	7	--	30	<0.10	3	--	<1	10	--
13...	180	<5	--	10	<0.10	1	--	<1	30	--
17...	170	<5	--	10	<0.10	<1	--	<1	<10	--
18...	170	25	--	10	<0.10	<1	--	<1	<10	--
24...	190	<5	--	10	<0.10	<1	--	<1	<10	--
DEC										
01...	150	<5	--	10	<0.10	2	--	<1	40	--
04...	230	11	--	20	<0.10	<1	--	<1	<10	--
23...	180	<5	--	20	<0.10	<1	--	<1	<10	--
JAN										
08...	120	6	--	20	<0.10	3	--	<1	<10	--
15...	120	<5	--	<10	<0.10	3	--	<1	10	--
28...	120	13	--	10	<0.10	<1	--	<1	30	--
FEB										
05...	120	13	--	20	<0.10	3	--	<1	30	--
13...	150	<5	--	20	<0.10	2	--	<1	<10	--
17...	170	<5	--	30	<0.10	5	--	<1	<10	--
19...	170	<5	--	30	<0.10	1	--	<1	<10	--
25...	150	7	--	20	<0.10	3	--	<1	<10	--
MAR										
04...	200	<5	--	20	<0.10	4	--	<1	20	--
07...	190	<5	--	20	<0.10	1	--	<1	10	--
16...	150	<5	--	30	0.20	2	--	1	<10	--
18...	220	<5	--	30	<0.10	3	--	1	20	--
23...	120	<5	--	20	--	1	--	<1	<10	--
27...	620	<5	--	70	<0.10	3	--	<1	10	--
APR										
23...	150	<100	--	10	<0.10	<100	--	--	<10	--
MAY										
13...	140	<5	--	10	<0.10	<1	--	--	30	--
JUN										
19...	160	<5	--	10	<0.10	1	--	--	<10	--
JUL										
28...	120	<5	<5	30	<0.10	2	<1	--	20	10
SEP										
22...	240	<5	<5	20	<0.10	<1	1	--	10	10

01327750 HUDSON RIVER AT FORT EDWARD, NY

LOCATION.--Lat 43°16'10", long 73°35'47", Washington County, Hydrologic Unit 02020003, on left bank 40 ft upstream from Scott Paper Mill, 150 ft south of River Street in Fort Edward, and 0.4 mi upstream from bridge on State Highway 197.

DRAINAGE AREA.--2,817 mi^2.

PERIOD OF RECORD.--December 1976 to current year.

GAGE.--Water-stage recorder. Datum of gage is 100.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Flow regulated appreciably by Great Sacandaga Lake (see station 01323500) and Indian Lake (see station 01314500). Diurnal fluctuation caused by powerplants upstream from station. Water is diverted into St. Lawrence River basin through Glens Falls feeder, Bond Creek, and Champlain (Barge) Canal, and occasionally may be received from that basin through summit level of Champlain (Barge) Canal at Dunham Basin. Telephone gage-height telemeter at station.

AVERAGE DISCHARGE.--10 years, 5,201 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,200 ft^3/s, May 3, 1983, gage height, 28.34 ft; maximum gage height, 28.71 ft, Jan. 11, 1978, ice jam; minimum discharge, 234 ft^3/s, July 25, 1983; minimum gage height, 19.33 ft, Sept. 4, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 30,000 ft^3/s, Apr. 1, gage height, 27.22 ft; minimum, 394 ft^3/s, May 21, gage height, 19.73 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4160	4590	6340	5810	3460	3330	28300	4020	3470	3220	2200	3100
2	4260	5690	7080	5670	3540	4140	24000	3300	2630	2910	2560	3080
3	5330	5620	6260	5560	3450	3950	18500	2730	2680	2910	2970	2690
4	6140	5320	8450	5570	3560	4080	14500	2470	3300	2690	3270	2780
5	6940	5380	9120	5710	3740	3940	15700	2980	3360	3970	2690	3010
6	6940	5860	8480	5430	3480	3850	21400	3290	3300	4550	2620	2660
7	6180	5030	7700	4850	3320	2980	21200	3460	2640	2850	2870	1960
8	5680	5700	7580	4520	3370	3750	19000	3360	2190	2480	2740	3210
9	5520	6080	7360	4770	3610	4480	15600	2680	2940	3110	2550	3010
10	5280	6070	6510	4660	3730	4150	12800	1870	3490	3230	2820	3270
11	4750	5990	7390	4670	3210	4550	12800	2660	3490	3070	2480	2980
12	5500	6000	6740	4590	3770	4330	13800	2890	3320	2320	2780	3040
13	5370	5620	6910	4580	3770	4400	13000	3160	2900	2870	2900	3270
14	5140	4790	6270	4160	e4000	3960	11900	2690	3290	3180	2620	6850
15	3580	5110	5740	3920	e4100	4120	11200	2610	3770	2920	2570	7430
16	5300	5770	6750	3960	e4100	4100	9260	2800	3550	3140	2600	6950
17	5400	5590	6680	4440	e4100	3730	8550	2300	2570	3030	2410	4490
18	4970	4260	6300	3720	e4100	3960	8140	2350	2580	2760	2350	4060
19	5410	4570	5930	3470	e4000	4080	7750	2280	2690	3030	2360	7670
20	5480	5520	6550	4300	e4000	3830	7210	2270	2240	3060	2670	8260
21	4760	5780	6110	4230	e3900	4010	6970	2560	1560	2870	2930	5690
22	4310	5530	5800	3680	3890	2580	6840	2180	2610	3050	2920	5360
23	4440	5650	6000	3720	3800	2600	4110	1880	3660	2330	2720	4860
24	4430	5840	5870	e4000	3850	3890	4730	2060	5050	1750	3000	5490
25	4880	4880	6090	e4000	3740	5430	4850	2160	4410	2110	2810	5310
26	5080	4870	6500	e3500	3410	7100	3230	2520	3430	2690	2150	4760
27	5210	8150	6120	e3500	3550	12200	3530	2430	3280	2830	2510	4790
28	4310	8810	6660	e3200	3560	9730	3940	2760	4170	2490	2890	5870
29	4490	7780	5830	e3700	---	10400	3700	3480	3650	2800	2760	3760
30	4440	7610	6110	e3800	---	11500	3920	3640	3280	1870	2040	4690
31	4710	---	5980	e3500	---	17000	---	2750	---	2420	2860	---
TOTAL	158390	173460	207210	135190	104110	166150	340430	84590	95500	88510	82620	134350
MEAN	5109	5782	6684	4361	3718	5360	11350	2729	3183	2855	2665	4478
MAX	6940	8810	9120	5810	4100	17000	28300	4020	5050	4550	3270	8260
MIN	3580	4260	5740	3200	3210	2580	3230	1870	1560	1750	2040	1960

CAL YR 1986 TOTAL 2184420 MEAN 5985 MAX 21700 MIN 1880
WTR YR 1987 TOTAL 1770510 MEAN 4851 MAX 28300 MIN 1560

e Estimated

01327755 HUDSON RIVER AT ROGERS ISLAND AT FORT EDWARD, NY

LOCATION.--Lat 43°15'52", long 73°35'28", Saratoga-Washington Counties, Hydrologic Unit 02020003, at bridges on State Highway 197 over Rogers Island in Fort Edward, 0.4 mi downstream from discharge station (01327750, Hudson River at Fort Edward), and 0.6 mi upstream from Champlain Canal.

DRAINAGE AREA.--2,817 mi^2, at gage.

PERIOD OF RECORD.--Water years 1975 to current year.
CHEMICAL DATA: 1975-76 (a), 1980 (b), 1981 (d), 1982-84 (e), 1985 (d), 1986-87 (e).
MINOR ELEMENT DATA: 1975 (b), 1976-77 (a), 1978-79 (e), 1980 (d), 1986 (b), 1987 (e).
PESTICIDE DATA: 1975, 1977 (a); 1978-79 (e), 1980 (a).
ORGANIC DATA: OC--1975 (a).
PCB--1975, 1977 (a); 1978-84 (e), 1985 (d), 1986 (e), 1987 (d).
PCN--1977 (a), 1978-79 (e), 1980 (a).
NUTRIENT DATA: 1975-77 (a), 1978 (e).
SEDIMENT DATA: 1975 (b), 1980-84 (e), 1985 (d), 1986-87 (e).

PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: March 1978 to September 1979.

REMARKS.--Water-discharge data is that for Hudson River at Fort Edward (station 01327750). Samples are collected from both the navigation canal (east channel) and river (west channel). Composite samples are from both the main channel and the navigation canal.

WATER QUALITY DATA, SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)
SEP										
11...	1245	3130	--	--	--	3	1	40	<10	<1
11...	1300	3190	--	--	--	3	1	70	<10	<1
15...	1210	2830	--	7.2	18.0	5	2	90	<10	<1
24...	1145	3390	99	7.5	19.0	1	1	60	<10	<10
26...	1300	4830	--	7.6	17.0	1	1	50	<10	<1

DATE	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	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)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
SEP									
11...	20	3	150	<5	30	--	9	<1	<10
11...	<10	19	170	5	30	--	6	2	60
15...	<10	10	260	16	40	<0.10	11	1	40
24...	<10	4	150	<5	<10	<0.10	<1	<1	30
26...	<10	19	200	<5	30	<0.10	2	<1	30

01327755 HUDSON RIVER AT ROGERS ISLAND AT FORT EDWARD, NY--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)
OCT										
02...	1050	4120	--	7.2	16.0	--	--	--	--	6
08...	1100	5220	73	7.2	14.0	--	--	--	--	4
16...	1100	5660	--	7.2	12.0	--	--	--	--	6
NOV										
03...	1000	4090	--	7.4	8.0	--	--	--	--	<1
07...	1050	2320	78	7.2	8.0	--	--	--	--	5
13...	1110	6330	--	7.2	4.0	--	--	--	--	3
17...	1110	5440	--	7.4	6.0	--	--	--	--	1
18...	0950	4520	--	7.2	5.0	--	--	--	--	1
24...	1000	6130	--	7.2	4.0	--	--	--	--	<1
DEC										
01...	1115	5630	--	7.2	2.0	--	--	--	--	11
04...	1015	7980	65	7.5	3.0	--	--	--	--	4
23...	1205	5440	--	7.2	0.0	--	--	--	--	13
JAN										
08...	1100	4060	--	7.1	0.0	--	--	--	--	3
15...	1100	4220	--	7.2	2.0	--	--	--	--	1
MAR										
04...	1130	4090	--	7.4	2.0	--	--	--	--	<1
07...	1115	2280	--	7.2	5.0	--	--	--	--	10
16...	1130	5040	--	7.2	3.0	--	--	--	--	<1
18...	1030	4030	--	7.2	5.0	--	--	--	--	<1
23...	1415	3100	--	7.4	9.0	--	--	--	--	<1
27...	0845	14200	--	7.2	4.0	--	--	--	--	13
APR										
30...	1030	4620	--	7.6	11.0	10.7	35	12	1.3	--
MAY										
14...	1130	2970	147	7.8	17.0	10.4	41	14	1.5	--
JUN										
19...	1200	3390	97	7.6	25.5	10.0	30	10	1.1	--
JUL										
28...	1315	4000	--	7.6	26.0	8.0	39	13	1.4	--
SEP										
22...	1000	4220	79	7.3	15.0	10.0	25	8.0	1.1	--

DATE	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)
OCT										
02...	--	3	<10	<10	<1	--	<10	3	--	160
08...	--	2	30	<10	<1	--	<10	6	--	220
16...	--	3	40	<10	<1	--	<10	2	--	190
NOV										
03...	--	<1	40	<10	<1	--	20	4	--	250
07...	--	4	160	<10	<1	--	<10	2	--	340
13...	--	1	80	<10	<1	--	<10	3	--	240
17...	--	<1	80	<10	<1	--	<10	7	--	200
18...	--	<1	40	<10	<1	--	<10	3	--	200
24...	--	<1	40	<10	<1	--	<10	3	--	200
DEC										
01...	--	<1	80	<10	<1	--	<10	6	--	190
04...	--	<1	80	<10	<1	--	<10	10	--	210
23...	--	3	40	<10	<1	--	<10	5	--	190
JAN										
08...	--	<1	70	<10	<1	--	<10	7	--	150
15...	--	<1	70	<10	<1	--	<10	10	--	150
MAR										
04...	--	<1	130	<10	<1	--	<10	5	--	200
07...	--	10	270	<10	<1	--	<10	18	--	280
16...	--	<1	90	<10	<1	--	<10	7	--	120
18...	--	<1	60	<10	<1	--	<10	10	--	210
23...	--	<1	20	<10	<1	--	20	3	--	120
27...	--	13	190	<10	<1	--	<10	4	--	480
APR										
30...	76	--	--	--	<10	--	--	<10	--	170
MAY										
14...	94	--	--	--	<10	--	--	<10	--	170
JUN										
19...	85	--	--	--	<10	--	--	<10	--	200
JUL										
28...	80	--	--	--	<10	1	--	20	2	220
SEP										
22...	65	--	--	--	<1	1	--	5	2	300

01327755 HUDSON RIVER AT ROGERS ISLAND AT FORT EDWARD, NY--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (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)	NICKEL, DIS-SOLVED (UG/L AS NI)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT									
02...	<5	--	30	<0.10	9	--	<1	110	--
08...	7	--	30	<0.10	4	--	<1	20	--
16...	<5	--	40	<0.10	1	--	<1	80	--
NOV									
03...	<5	--	40	<0.10	2	--	<1	10	--
07...	<5	--	30	<0.10	<1	--	1	10	--
13...	17	--	20	<0.10	<1	--	<1	<10	--
17...	<5	--	20	<0.10	<1	--	<1	<10	--
18...	<5	--	30	<0.10	<1	--	<1	<10	--
24...	<5	--	20	<0.10	<1	--	<1	<10	--
DEC									
01...	<5	--	20	<0.10	4	--	<1	20	--
04...	<5	--	20	<0.10	2	--	<1	<10	--
23...	<5	--	20	<0.10	<1	--	<1	<10	--
JAN									
08...	<5	--	40	<0.10	3	--	<1	20	--
15...	<5	--	20	<0.10	3	--	<1	<10	--
MAR									
04...	<5	--	30	<0.10	2	--	<1	40	--
07...	10	--	30	<0.10	2	--	<1	20	--
16...	<5	--	30	0.20	4	--	<1	50	--
18...	<5	--	40	<0.10	4	--	1	<10	--
23...	<5	--	30	<0.10	1	--	<1	<10	--
27...	<5	--	80	<0.10	3	--	<1	<10	--
APR									
30...	<100	--	30	<0.10	<100	--	--	10	--
MAY									
14...	8	--	30	<0.10	<1	--	--	10	--
JUN									
19...	10	--	30	<0.10	<1	--	--	<10	--
JUL									
28...	<5	<5	40	<0.10	4	<1	--	30	10
SEP									
22...	<5	<5	30	<0.10	4	<1	--	<10	30

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	PCB, TOTAL (UG/L)	IDENTIFIED AROCLORS
OCT						
09...	1050	4830	4	52	0.05	1242
30...	0930	3570	3	26	0.05	1242
NOV						
12...	0845	6010	3	41	0.10	1242
21...	0900	5590	12	189	0.08	1242
DEC						
05...	0945	9100	5	123	0.08	1242
05...	1000	8860	9	215	0.17	1242
30...	1400	4930	6	80	<0.01	1242
30...	1430	5180	15	209	0.01	1242
MAR						
10...	1530	4490	6	73	0.01	1242
10...	1615	4520	3	37	0.01	1242
APR						
01...	1815	27800	68	5110	0.82	1242,1254
01...	1820	27800	62	4650	0.05	1242,1254
03...	1130	19100	25	1650	0.03	1242,1254
03...	1135	19100	28	1850	0.02	1242,1254
04...	1615	13100	12	423	0.12	1242,1254
04...	1620	13100	29	1020	0.11	1242,1254
06...	1815	22200	50	2510	0.06	1242,1254
06...	1825	22400	13	652	0.21	1242,1254
SEP						
17...	1020	3780	5	51	0.02	1242
17...	1050	3330	4	41	0.07	1242,1254

01328730 HUDSON RIVER NEAR FORT MILLER, NY

LOCATION.--Lat 43°10'03", long 73°35'22", Washington County, Hydrologic Unit 02020003, about 0.2 mi upstream from Tuttle Brook, 1.6 mi downstream from Thompson Island dam, and 0.7 mi northwest of Fort Miller.

DRAINAGE AREA.--2,920 mi^2, approximately.

PERIOD OF RECORD.--Water years 1986 to current year.
ORGANIC DATA: PCB--1986 (c), 1987 (b).
SEDIMENT DATA: 1986-87 (b).

REMARKS.--Water discharge data based on records obtained for Hudson River at Fort Edward (station 01327750).

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	PCB, TOTAL (UG/L)	IDENTIFIED AROCLORS
OCT						
09...	1130	4830	20	258	0.06	1242
NOV						
12...	1150	6290	10	170	0.03	1242
DEC						
05...	1130	9200	15	372	0.17	1242
APR						
04...	1530	12800	12	416	0.09	1242,1254
SEP						
17...	1250	4190	5	57	0.05	1242,1254

01329650 HUDSON RIVER AT SCHUYLERVILLE, NY

LOCATION.--Lat 43°05'54", long 73°34'25", at Saratoga-Washington County line, Hydrologic Unit 02020003, at bridge on State Highway 29, 0.2 mi east of Schuylerville, 0.8 mi downstream from Batten Kill, and 1.0 mi downstream from Champlain (Barge) Canal lock 5.

DRAINAGE AREA.--3,440 mi², approximately.

PERIOD OF RECORD.--Water years 1977 to current year.
CHEMICAL DATA: 1980 (b), 1981 (c), 1982-84 (e), 1985-87 (d).
MINOR ELEMENTS DATA: 1977 (e), 1978-79 (d), 1980 (b), 1987 (b).
PESTICIDE DATA: 1977 (e), 1978-79 (d).
ORGANIC DATA: PCB--1977 (e), 1978-80 (d), 1981-84 (e), 1985-87 (d).
PCN--1977 (e), 1978-79 (d).
NUTRIENT DATA: 1977 (e), 1978 (d).
SEDIMENT DATA: 1980 (d), 1981-84 (e), 1985 (d), 1986 (e), 1987 (d).

PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: March 1977 to September 1979.

REMARKS.--Water discharge estimated. Streamflow affected by regulation for power generation and diversion for canal operations.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SPECIFIC CONDUCTANCE LAB (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM DISSOLVED (UG/L AS CD)
APR											
22...	1200	--	--	--	--	27	8.3	1.5	68	<10	--
MAY											
14...	1330	127	7.5	20.0	9.9	--	--	--	79	<10	--
JUN											
15...	1105	115	7.4	23.0	8.7	40	13	1.9	69	<10	--
JUL											
29...	0945	--	7.4	23.5	7.7	44	14	2.3	86	<10	<1
SEP											
24...	1200	--	7.6	16.0	10.5	34	11	1.9	73	<1	--

DATE	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (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)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)
APR											
22...	<10	--	230	<100	--	30	<0.10	<100	--	<10	--
MAY											
14...	<10	--	210	10	--	30	<0.10	<1	--	20	--
JUN											
15...	10	--	230	<5	--	30	<0.10	1	--	<10	--
JUL											
29...	20	5	210	<5	5	30	0.20	1	1	10	20
SEP											
24...	5	--	320	<5	--	30	<0.10	<1	--	<10	--

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	PCB, TOTAL (UG/L)	IDENTIFIED AROCLORS
OCT						
09...	1200	--	7	--	0.02	1242
24...	1015	--	6	--	0.04	1242
30...	1030	6060	8	126	0.04	1242
NOV						
12...	1145	--	6	--	0.06	1242
21...	1000	--	9	--	0.02	1242
DEC						
05...	1245	12400	8	268	0.04	1242
30...	1530	--	14	--	0.08	1242,1254
MAR						
10...	1730	6360	8	137	0.03	1242,1254
APR						
01...	2030	31200	74	6230	0.21	1242,1254
02...	1500	26300	29	2060	0.05	1242,1254
03...	1055	21400	15	868	0.05	1242,1254
04...	1700	--	8	--	0.10	1242,1254
15...	1400	20000	9	486	0.03	1242,1254
22...	1250	9770	11	290	0.04	1242,1254
SEP						
16...	1340	9710	8	210	0.05	1242,1254

01330500 KAYADEROSSERAS CREEK NEAR WEST MILTON, NY

LOCATION.--Lat 43°02'18", long 73°54'35", Saratoga County, Hydrologic Unit 02020003, on left bank 600 ft downstream from Glowegee Creek, 1.0 mi east of West Milton, and 3.5 mi northwest of Ballston Spa.

DRAINAGE AREA.--90.0 mi^2.

PERIOD OF RECORD.--July 1927 to current year.

REVISED RECORDS.--WSP 741: Drainage area. WSP 1202: 1935-40.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 376.06 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Slight occasional diurnal fluctuation at low flow caused by mills upstream from station. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--60 years, 137 ft^3/s, 20.67 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,710 ft^3/s, Mar. 18, 1936, gage height, 10.78 ft, from floodmarks; maximum gage height, 11.20 ft, Mar. 14, 1977, from floodmarks; minimum discharge, 6.1 ft^3/s, Aug. 23, 1927, gage height, 0.86 ft; minimum daily discharge, 12 ft^3/s, Aug. 5-9, Sept. 8, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sept. 13	2145	*1,670	*6.07	No other peak greater than base discharge.			

Minimum discharge, 21 ft^3/s, July 30; minimun gage height, 1.29 ft, June 20; minimum daily discharge, 25 ft^3/s, June 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	91	59	177	e110	e120	e150	629	131	43	123	34	103
2	82	58	155	e100	e120	e250	391	116	45	130	36	79
3	86	58	357	e100	e120	e350	330	102	49	452	130	67
4	190	56	458	e98	e110	e330	329	98	68	260	80	59
5	217	53	320	e96	e110	e300	893	104	118	150	52	52
6	152	133	232	e96	e110	e280	676	123	67	101	42	48
7	132	151	196	e94	e110	e280	683	115	48	123	40	62
8	104	160	172	e92	e110	e400	523	100	58	149	50	97
9	90	344	152	e90	e100	e520	387	91	70	110	40	587
10	83	260	269	e90	e100	e480	306	85	55	91	80	295
11	77	180	241	e96	e98	e400	249	80	45	75	74	153
12	72	161	186	e100	e96	e300	215	86	43	322	55	114
13	71	162	e140	e100	e90	e200	342	83	48	254	44	778
14	91	124	e130	e100	e80	e160	302	71	41	221	38	919
15	105	111	e130	e110	e74	e140	225	70	37	398	32	382
16	88	111	137	e120	e74	e130	196	67	32	185	29	214
17	79	117	133	e130	e76	e120	182	63	29	115	31	151
18	72	110	129	e130	e80	e120	189	68	28	86	33	388
19	66	111	215	e130	e84	e130	183	66	28	95	32	848
20	80	97	211	e120	e88	e150	162	63	26	87	38	473
21	64	191	e160	e120	e92	159	149	57	25	86	34	326
22	63	190	e140	e120	e100	212	153	57	237	63	46	245
23	60	144	e130	e120	e100	338	127	56	598	53	72	201
24	57	200	132	e120	e90	457	139	57	200	52	49	184
25	55	248	179	e110	e90	543	167	52	90	48	38	149
26	58	406	236	e110	e86	705	134	51	63	45	36	123
27	86	920	192	e100	e84	647	119	59	749	53	37	111
28	84	480	e150	e110	e84	574	119	73	496	42	70	101
29	77	307	e140	e110	---	536	148	70	220	35	235	93
30	70	232	e130	e110	---	489	158	54	142	30	160	120
31	63	---	e120	e120	---	556	---	49	---	35	95	---
TOTAL	2765	5934	5849	3352	2676	10406	8805	2417	3798	4069	1862	7522
MEAN	89.2	198	189	108	95.6	336	293	78.0	127	131	60.1	251
MAX	217	920	458	130	120	705	893	131	749	452	235	919
MIN	55	53	120	90	74	120	119	49	25	30	29	48
CFSM	.99	2.20	2.10	1.20	1.06	3.73	3.26	.87	1.41	1.46	.67	2.79
IN.	1.14	2.45	2.42	1.39	1.11	4.30	3.64	.99	1.57	1.68	.77	3.11

CAL YR 1986 TOTAL 60727 MEAN 166 MAX 1300 MIN 40 CFSM 1.85 IN. 25.1
WTR YR 1987 TOTAL 59455 MEAN 163 MAX 920 MIN 25 CFSM 1.81 IN. 24.6

e Estimated

01331095 HUDSON RIVER AT STILLWATER, NY

LOCATION.--Lat 42°56'16", long 73°39'04" at Saratoga-Rensselaer County line, Hydrologic Unit 02020003, at bridge on Stillwater Bridge Road in Stillwater, 0.4 mi upstream from Champlain (Barge) Canal lock 4, and 0.9 mi upstream from Hoosic River.

DRAINAGE AREA.--3,773 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 78.99 ft above National Geodetic Vertical Datum of 1929. Prior to January 1978, nonrecording gages in upper pool of Champlain (Barge) Canal lock 4, at Barge Canal datum.

REMARKS.--Records good except those for periods below 3,000 ft^3/s and those for estimated daily discharges, which are fair. Streamflow affected by regulation for power generation and diversion for canal operations. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--10 years, 6,424 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 44,600 ft^3/s, May 4, 1983, gage height, 8.69 ft; minimum daily, 900 ft^3/s, July 25, 1983.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 35,700 ft^3/s, Apr. 1, gage height, 8.05 ft; minimum daily, 2,140 ft^3/s, June 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4940	5140	9310	7210	4150	e4000	32600	e4300	3570	4620	2730	3900
2	4930	6280	9570	6800	4250	e4400	31000	e3600	3540	4610	2710	3630
3	5640	6200	10200	6770	4240	5480	22800	e3100	3490	5020	3380	3320
4	6860	5840	12800	6460	4320	5470	17400	e2890	3620	4750	3910	3440
5	7690	6150	12600	6460	4320	5350	18600	e3600	4080	5240	3230	3540
6	8360	6460	11700	6550	4130	5260	26600	e4000	4140	6070	3210	3420
7	6900	6110	10300	6180	3950	4700	28100	e4100	3650	4230	3220	2810
8	6610	6720	9840	5570	4120	6020	25200	e3700	2700	3800	3220	3540
9	6320	7600	9400	5710	4260	7740	e18000	e2700	3580	3830	3000	6720
10	6100	7770	8980	5610	3880	6430	e15000	e2200	4290	4190	3260	6440
11	5860	8050	9630	5870	3810	6790	e15000	e3200	4490	3720	3100	5340
12	5750	7060	8770	5650	4080	6440	e16000	e3500	4180	3460	3110	4930
13	6350	7710	8550	5680	4290	6260	e15000	e3700	3730	3270	3350	5400
14	5790	6460	7680	5060	4360	5620	e14000	e3200	4150	4040	3110	9800
15	5350	6230	7290	4880	e4900	5670	e13000	e3100	4330	5220	2900	10300
16	5160	7170	7830	5160	e4900	5710	e11000	e3300	4380	4490	3060	9450
17	6150	6980	7950	5340	e4900	5070	e9780	e2700	3230	4380	2810	6950
18	5860	5890	7590	4590	e4900	5220	e9630	e2800	3080	3560	2920	6380
19	5970	5580	7710	4480	e4800	5500	e9000	e2700	3220	3770	2560	9710
20	6200	6600	8290	5090	e4700	5420	e8440	e2700	2700	3810	2860	11300
21	5730	7060	7960	4940	e4600	5740	e7900	e3000	2140	3640	3570	8830
22	5140	7210	7260	4560	e4600	5710	e7600	e2500	2710	3980	3110	7800
23	4990	6970	7180	4660	e4500	6070	e4630	e2200	6610	2840	3410	7020
24	5130	7670	7090	4390	e4600	7640	e5520	e2400	7350	2560	3530	7030
25	5250	7440	7460	4610	e4300	9520	e5000	e2600	6700	2370	3300	7110
26	5830	7600	8750	4610	e4100	11600	e3900	e3000	4770	3070	2640	6750
27	6110	14700	7980	4230	e4200	16800	e4300	e2900	4680	3440	2620	6030
28	5190	15200	8100	4630	e3700	14000	e4600	e3300	6150	3300	3180	7370
29	5190	12600	7280	4120	---	14200	e4400	3950	5280	3140	3690	5270
30	5080	10900	7340	4270	---	15000	e4600	4830	4860	2630	2560	5790
31	5360	---	7330	4260	---	18400	---	3570	---	2400	3480	---
TOTAL	181790	229350	269720	164400	121860	237230	408600	99340	125400	119450	96740	189320
MEAN	5864	7645	8701	5303	4352	7653	13620	3205	4180	3853	3121	6311
MAX	8360	15200	12800	7210	4900	18400	32600	4830	7350	6070	3910	11300
MIN	4930	5140	7090	4120	3700	4000	3900	2200	2140	2370	2560	2810

CAL YR 1986 TOTAL 2661280 MEAN 7291 MAX 29600 MIN 2400
WTR YR 1987 TOTAL 2243200 MEAN 6146 MAX 32600 MIN 2140

e Estimated

HUDSON RIVER BASIN

01331095 HUDSON RIVER AT STILLWATER, NY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969 to 1975, 1977 to current year.
CHEMICAL DATA: 1969 (c), 1970-74 (d), 1975 (c), 1980 (b), 1981 (c), 1982-85 (e), 1986-87 (d).
MINOR ELEMENTS DATA: 1972 (b), 1973-75 (a), 1977-79 (e), 1980 (c).
PESTICIDE DATA: 1977-79 (e), 1980 (a).
ORGANIC DATA: OC--1974 (a), 1975 (c).
PCB--1977-85 (e), 1986-87 (d).
PCN--1977-79 (e), 1980 (a).
NUTRIENT DATA: 1969 (c), 1970-74 (d), 1975 (c), 1977-78 (e).
SEDIMENT DATA: 1977 (d), 1978 (a), 1981-87 (e).

PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: March 1977 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD (Water years 1977-84).--
SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 202 mg/L, Dec. 14, 1983; minimum daily mean, 1 mg/L on many days each year.
SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 14,800 tons, Dec. 14, 1983, Apr. 1, 1987; minimum daily, 4.0 tons, Sept. 7, 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	PCB, TOTAL (UG/L)	IDENTIFIED AROCLORS
OCT						
09...	1330	6130	5	76	0.06	1242
24...	1135	5340	11	154	0.04	1242
30...	1100	4930	10	133	0.03	1242
NOV						
12...	1315	7120	14	265	0.05	1242
21...	1130	7120	12	223	0.04	1242
DEC						
05...	1400	12600	13	444	0.02	1242
30...	1600	6020	7	114	<0.01	1242
APR						
01...	2130	35100	158	15000	0.15	1242,1254
02...	1425	30300	58	4740	0.13	1242,1254
03...	1020	23800	25	1600	0.05	1242,1254
04...	1730	16200	15	657	0.05	1242,1254
15...	1330	13000	16	562	0.03	1242,1254
SEP						
17...	1350	6290	5	85	0.06	1242,1254

01331095 HUDSON RIVER AT STILLWATER, NY--Continued

SEDIMENT, SUSPENDED CONCENTRATION (MG/L), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/ DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	e2	e27	---	---	6	151	---	---	2	22	---	---
2	1	13	---	---	5	129	---	---	3	34	---	---
3	1	15	---	---	22	606	---	---	2	23	20	296
4	2	37	---	---	18	622	---	---	3	35	24	354
5	3	62	---	---	13	442	---	---	2	23	7	101
6	5	113	---	---	e10	411	---	---	2	22	21	298
7	3	56	---	---	12	334	---	---	---	---	20	254
8	2	36	---	---	10	266	---	---	---	---	23	374
9	1	17	---	---	10	254	---	---	---	---	23	481
10	1	16	---	---	9	218	---	---	---	---	13	226
11	1	16	---	---	8	208	---	---	---	---	11	202
12	2	31	14	267	5	118	---	---	---	---	28	487
13	3	51	3	62	6	138	---	---	---	---	---	---
14	2	31	2	35	10	207	---	---	---	---	---	---
15	3	43	3	50	6	118	---	---	---	---	---	---
16	1	14	4	77	5	106	---	---	---	---	---	---
17	2	33	3	56	---	---	---	---	---	---	---	---
18	1	16	3	48	---	---	---	---	---	---	---	---
19	2	32	4	60	---	---	---	---	---	---	---	---
20	3	50	8	142	---	---	---	---	---	---	---	---
21	2	31	12	229	---	---	---	---	---	---	---	---
22	3	42	5	97	---	---	---	---	---	---	---	---
23	4	54	8	150	---	---	---	---	---	---	---	---
24	6	83	12	248	---	---	---	---	---	---	---	---
25	3	42	9	180	---	---	---	---	---	---	---	---
26	5	79	7	144	---	---	---	---	---	---	---	---
27	5	82	85	3370	---	---	---	---	---	---	---	---
28	4	56	8	328	---	---	2	25	---	---	---	---
29	3	42	8	272	---	---	2	22	---	---	---	---
30	10	137	6	176	7	7	2	23	---	---	---	---
31	---	---	---	---	---	---	2	23	---	---	---	---

DAY	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/ DAY)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	169	14800	4	e46	---	---	---	---			---	---
2	84	7300	7	e68	---	---	---	---			---	---
3	27	1660	5	e42	---	---	---	---			---	---
4	15	705	9	e70	---	---	---	---			---	---
5	---	---	4	e39	---	---	---	---			---	---
6	---	---	9	e97	---	---	---	---			---	---
7	---	---	10	e111	---	---	---	---			---	---
8	---	---	9	e90	---	---	---	---			---	---
9	---	---	8	e58	---	---	---	---			---	---
10	---	---	7	e42	---	---	---	---			---	---
11	---	---	---	---	---	---	---	---			---	---
12	---	---	---	---	---	---	---	---			---	---
13	---	---	---	---	35	35	---	---			---	---
14	---	---	---	---	---	---	---	---			---	---
15	16	e562	---	---	---	---	---	---			---	---
16	---	---	---	---	---	---	---	---			---	---
17	---	---	---	---	---	---	---	---			5	94
18	---	---	---	---	---	---	2	19			---	---
19	---	---	---	---	---	---	---	---			---	---
20	---	---	---	---	---	---	---	---			---	---
21	---	---	---	---	---	---	---	---			---	---
22	15	e308	---	---	---	---	---	---			---	---
23	---	---	---	---	---	---	---	---			---	---
24	---	---	---	---	---	---	---	---			---	---
25	---	---	---	---	---	---	---	---			---	---
26	---	---	---	---	---	---	---	---			---	---
27	---	---	---	---	---	---	---	---			---	---
28	---	---	---	---	---	---	2	18			---	---
29	---	---	---	---	---	---	---	---			---	---
30	---	---	---	---	---	---	---	---			---	---
31	---	---	---	---	---	---	---	---			---	---

e Estimated

01332500 HOOSIC RIVER NEAR WILLIAMSTOWN, MASS.

LOCATION.--Lat 42°42'01", long 73°09'34", Bershire County, Hydrologic Unit 02020003, on left bank 0.3 mi downstream from Sherman Brook and 2.7 mi east of junction of U.S. Highway 7 and State Highway 2 in Williamstown.

DRAINAGE AREA.--126 mi^2.

PERIOD OF RECORD.--Discharge: July 1940 to current year.

Water-quality records: Water years 1953-54, 1957-58, 1967-69.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 616.11 ft above National Geodetic Vertical Datum of 1929, (U.S. Army Corps of Engineers benchmark). Prior to June 6, 1979, at site 1.2 mi downstream at different datum.

REMARKS.--Records good except those for winter period, which are poor. Prior to 1966, slight diurnal fluctuation at low flow caused by mills upstream. Some regulation by Cheshire Reservoir 16 mi upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--47 years, 273 ft^3/s, 29.42 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,000 ft^3/s Dec. 31, 1948, gage height, 14.85 ft, former site and datum, from rating curve extended above 4,300 ft^3/s on basis of contracted-opening measurement of peak flow; minimum, 5.8 ft^3/s Aug. 30, 31, Oct. 26, 1940; minimum daily, 24 ft^3/s Sept. 9, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 27	0045	2,980	8.64	Apr. 5	0145	*9,350	*12.44
Mar. 31	1915	6,110	10.70	Sept. 13	2000	2,680	8.40

Minimum discharge, 49 ft^3/s Aug. 22, 23-27; minimum daily, 49 ft^3/s Aug. 24-26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	153	198	413	200	e135	169	2200	210	105	83	65	115
2	151	195	381	219	e135	215	961	193	127	100	57	88
3	212	194	1070	213	e135	174	761	179	141	250	113	73
4	924	177	979	194	e130	158	1700	174	139	162	100	69
5	660	166	604	189	e125	148	4910	168	176	115	80	69
6	410	280	481	195	e125	145	2290	181	127	100	72	66
7	318	299	425	199	e125	174	2030	182	108	98	67	68
8	262	562	385	195	e125	314	1260	171	107	80	63	89
9	234	1300	332	186	e125	387	891	154	124	79	64	505
10	215	788	377	162	119	251	720	154	107	79	106	204
11	194	518	337	158	e120	228	617	151	101	74	103	131
12	182	439	305	150	e120	221	548	146	92	125	84	106
13	170	374	248	147	e120	208	883	144	103	125	72	853
14	259	306	215	150	e115	197	682	135	102	101	69	817
15	286	285	235	152	e115	192	532	133	90	153	62	311
16	224	278	235	190	e110	186	466	133	83	108	60	214
17	199	276	228	138	e110	179	434	129	82	92	60	170
18	185	283	223	146	e110	177	422	127	76	88	59	722
19	170	279	396	184	e110	179	388	127	76	79	53	1000
20	166	246	312	165	e105	182	355	124	78	73	52	526
21	166	599	247	154	e105	182	327	128	71	79	52	402
22	158	450	219	142	e105	196	254	120	82	82	51	315
23	155	341	211	160	e105	315	231	117	199	78	51	270
24	161	660	214	e140	106	511	231	126	118	73	49	196
25	146	585	384	e140	105	807	220	123	99	98	49	158
26	165	889	412	e140	105	1190	202	114	89	103	49	141
27	485	2080	304	e135	105	993	192	112	103	85	54	132
28	319	881	247	e135	105	1090	185	133	100	75	62	126
29	267	627	253	e135	---	1210	200	138	80	68	118	114
30	234	511	243	e135	---	1340	234	122	82	65	99	130
31	210	---	224	e140	---	3740	---	108	---	68	75	---
TOTAL	8040	15066	11139	5088	3255	15658	25326	4456	3167	3038	2170	8180
MEAN	259	502	359	164	116	505	844	144	106	98.0	70.0	273
MAX	924	2080	1070	219	135	3740	4910	210	199	250	118	1000
MIN	146	166	211	135	105	145	185	108	71	65	49	66
CFSM	2.06	3.99	2.85	1.30	.92	4.01	6.70	1.14	.84	.78	.56	2.16
IN.	2.37	4.45	3.29	1.50	.96	4.62	7.48	1.32	.94	.90	.64	2.42

CAL YR 1986 TOTAL 111533 MEAN 306 MAX 2610 MIN 79 CFSM 2.43 IN. 32.93
WTR YR 1987 TOTAL 104583 MEAN 287 MAX 4910 MIN 49 CFSM 2.27 IN. 30.88

e Estimated

01333000 GREEN RIVER AT WILLIAMSTOWN, MASS.

LOCATION. --Lat 42°42'32", long 73°11'50", Bershire County, Hydrologic Unit 02020003, on left bank 0.1 mi upstream from bridge on State Highway 2 at Williamstown and 0.8 mi upstream from mouth.

DRAINAGE AREA.--42.6 mi².

PERIOD OF RECORD.--Discharge: September 1949 to current year.

Water-quality records: Water years 1967-69.

REVISED RECORDS.--WDR MA-RI-84-1: 1977-78(P), 1979, 1980-83(P).

GAGE.--Water-stage recorder. Elevation of gage is 615 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for winter period, which are poor. Slight diurnal fluctuation at times caused by mill upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--38 years, 82.3 ft³/s, 26.24 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,060 ft³/s Dec. 31, 1973, gage height, 5.68 ft in gage well, from rating curve extended above 750 ft³/s on basis of slope-area measurement at gage height 4.94 ft; maximum gage height, 6.35 ft Mar. 13, 1977, from floodmarks, gage height in well unknown; minimum discharge, 3.1 ft³/s Sept. 20, 22, 24, 25, 1964.

EXTREMES OUTSIDED PERIOD OF RECORD.--Flood of Dec. 31, 1948, reached a stage of about 7.5 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 850 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 26	2315	1,130	3.97	Apr. 5	0115	1,790	4.71
Mar. 31	1900	*2,050	*4.96				

Minimum discharge, 4.0 ft³/s Aug. 25, 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	57	150	56	41	68	668	55	17	13	6.6	16
2	22	57	137	59	40	79	390	50	51	21	6.4	9.7
3	34	54	346	e56	39	53	298	49	28	34	18	8.0
4	116	52	246	e53	37	47	506	46	29	20	12	6.9
5	89	49	188	e50	e37	e44	1020	48	30	16	8.8	6.4
6	68	81	162	e49	e36	e44	639	50	22	14	7.6	6.0
7	56	66	145	e48	35	59	669	46	21	13	7.0	7.4
8	49	146	130	47	34	153	478	42	22	13	6.5	17
9	46	399	121	47	e34	e155	348	40	23	12	7.1	104
10	46	260	127	45	e33	109	276	37	20	11	15	32
11	41	187	111	48	e34	101	228	34	18	10	11	20
12	39	161	102	45	e31	96	199	34	19	18	8.4	16
13	37	136	81	43	e29	84	231	31	23	15	7.3	165
14	60	119	73	45	e27	77	182	29	18	12	6.5	128
15	60	109	e73	46	e26	73	158	31	17	23	6.1	57
16	52	103	72	51	e25	69	142	28	15	14	5.8	39
17	48	97	69	42	e26	65	133	26	14	12	5.5	30
18	46	89	69	48	e26	63	126	25	13	11	5.1	225
19	44	90	111	67	e26	65	117	27	13	10	4.8	235
20	42	82	85	50	e25	65	107	24	12	9.7	5.0	125
21	39	266	72	e49	e25	65	97	23	12	9.8	4.5	91
22	38	152	66	e48	e26	88	89	22	14	8.7	4.8	73
23	40	134	60	e48	26	154	84	22	25	8.4	5.6	61
24	39	292	57	e45	25	197	80	27	15	7.5	4.5	52
25	36	208	119	e42	e25	289	75	22	13	16	4.1	44
26	49	337	111	e44	e24	421	68	21	12	14	4.1	38
27	120	536	86	e43	24	355	64	22	14	10	6.0	33
28	82	311	74	e42	e24	358	63	30	14	8.7	9.4	30
29	73	230	71	e42	---	362	63	23	12	7.6	18	27
30	67	182	68	44	---	382	62	21	12	7.6	11	32
31	61	---	63	42	---	1190	---	19	---	8.1	8.8	---
TOTAL	1666	5042	3445	1484	840	5430	7660	1004	568	408.1	241.3	1734.4
MEAN	53.7	168	111	47.9	30.0	175	255	32.4	18.9	13.2	7.78	57.8
MAX	120	536	346	67	41	1190	1020	55	51	34	18	235
MIN	22	49	57	42	24	44	62	19	12	7.5	4.1	6.0
CFSM	1.26	3.95	2.61	1.12	.70	4.11	5.99	.76	.44	.31	.18	1.36
IN.	1.45	4.40	3.01	1.30	.73	4.74	6.69	.88	.50	.36	.21	1.51

CAL YR 1986 TOTAL 30937.0 MEAN 84.8 MAX 1050 MIN 14 CFSM 1.99 IN. 27.02
WTR YR 1987 TOTAL 29522.7 MEAN 80.9 MAX 1190 MIN 4.1 CFSM 1.90 IN. 25.78

e Estimated

HUDSON RIVER BASIN

01333500 LITTLE HOOSIC RIVER AT PETERSBURG, NY

LOCATION.--Lat 42°45'50", long 73°20'16", Rensselaer County, Hydrologic Unit 02020003, on left bank 100 ft downstream from highway bridge on dirt road, 1.0 mi downstream from Petersburg, and 4.9 mi upstream from mouth.

DRAINAGE AREA.--56.1 mi^2.

PERIOD OF RECORD.--July 1951 to current year.

REVISED RECORDS.--WSP 1702: 1959.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 587.40 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--36 years, 94.4 ft^3/s, 22.85 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,000 ft^3/s, June 30, 1973, gage height, 9.20 ft; minimum, 1.9 ft^3/s, Sept. 11, 12, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 31, 1948, reached a stage of 9.4 ft, from floodmarks, discharge, 7,470 ft^3/s, from contracted-opening measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,250 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 26	2300	1,260	a4.98	Apr. 4	2400	1,730	5.63
Mar. 31	1830	*1,750	b*5.66				

a Recorded in well; outside gage height was 5.13 ft, from crest-stage gage.
b Recorded in well; outside gage height was 5.84 ft, from crest-stage gage.

Minimum discharge, 3.7 ft^3/s, Aug. 21, 27, gage height, 1.30 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	74	205	e66	e54	e68	728	49	16	11	5.5	7.5
2	24	73	179	e70	e56	e140	446	45	48	12	5.7	6.1
3	34	69	412	e64	e54	e100	377	43	29	20	7.6	5.6
4	111	66	337	e62	e53	e80	479	41	32	15	6.5	5.1
5	109	62	256	e60	e52	e72	940	42	35	12	5.9	4.8
6	88	91	214	e64	e54	e68	613	45	24	10	5.7	4.7
7	76	79	187	e58	e56	e72	849	41	21	9.9	5.2	4.9
8	69	129	162	e54	e58	e220	574	37	23	9.9	5.0	6.5
9	64	369	141	e52	e48	275	432	34	23	9.7	5.2	72
10	61	295	149	e49	e54	186	337	33	20	9.2	7.4	24
11	55	241	122	e50	e47	173	270	31	19	8.6	6.4	16
12	51	218	e100	e49	e44	156	224	33	19	8.1	5.6	12
13	48	181	e80	e48	e42	135	247	30	22	7.8	5.3	25
14	72	145	e72	e48	e40	120	195	28	23	15	5.2	44
15	73	130	85	e48	e36	111	166	28	20	20	4.7	27
16	63	122	79	e47	e39	102	146	26	18	12	4.5	21
17	59	113	75	e45	e41	94	133	25	16	9.7	4.3	18
18	55	104	74	e46	e40	90	121	24	15	8.8	4.2	49
19	52	104	123	e50	e39	92	110	25	14	8.8	4.1	106
20	50	95	93	e54	e38	92	100	23	13	8.2	4.0	66
21	47	325	78	e56	e40	91	92	22	13	8.0	3.9	48
22	45	198	72	e54	e44	110	84	21	13	7.4	4.2	39
23	59	174	67	e54	e42	202	78	20	19	8.0	4.3	32
24	63	527	63	e52	e40	304	75	20	14	7.2	4.0	29
25	52	376	149	e50	e39	445	69	19	12	7.5	3.9	25
26	64	543	136	e47	e38	688	63	19	12	8.0	4.0	22
27	122	771	108	e45	e38	589	59	19	12	7.1	4.5	20
28	95	489	95	e44	e48	567	56	25	13	6.6	5.6	19
29	88	358	89	e45	---	540	56	21	11	6.1	8.7	17
30	83	269	84	e47	---	513	56	18	11	5.9	6.8	19
31	77	---	e74	e52	---	993	---	17	---	6.0	5.4	---
TOTAL	2034	6790	4160	1630	1274	7488	8175	904	580	303.5	163.3	795.2
MEAN	65.6	226	134	52.6	45.5	242	272	29.2	19.3	9.79	5.27	26.5
MAX	122	771	412	70	58	993	940	49	48	20	8.7	106
MIN	24	62	63	44	36	68	56	17	11	5.9	3.9	4.7
CFSM	1.17	4.03	2.39	.94	.81	4.31	4.86	.52	.34	.17	.09	.47
IN.	1.35	4.50	2.76	1.08	.84	4.97	5.42	.60	.38	.20	.11	.53

CAL YR 1986 TOTAL 40347.0 MEAN 111 MAX 1760 MIN 14 CFSM 1.97 IN. 26.8
WTR YR 1987 TOTAL 34296.8 MEAN 94.0 MAX. 993 MIN 3.9 CFSM 1.67 IN. 22.7

e Estimated

01334000 WALLOOMSAC RIVER NEAR NORTH BENNINGTON, VT.

LOCATION.--Lat 42°54'47", long 73°15'25", Bennington County, Hydrologic Unit 02020003, on left bank 0.6 mi downstream from Paran Creek and 1.4 mi south of North Bennington.

DRAINAGE AREA.--111 mi².

PERIOD OF RECORD.--Discharge: June 1931 to current year.

Water-quality records: Water years 1953-54.

REVISED RECORDS.--WSP 781: 1933(M).

GAGE.--Water-stage recorder. Elevation of gage is 525 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Occasional diurnal fluctuation at low flow caused by mills upstream; diurnal fluctuation greater prior to 1960. Diversion upstream for municipal supply of Bennington and North Bennington since 1961. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--56 years, 222 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,450 ft³/s Sept. 21, 1938, gage height, 12.04 ft, from rating curve extended above 2,800 ft³/s on basis of contracted-opening measurements at gage heights 10.13 ft, 10.49\ft, 11.50 ft, and 12.04 ft and slope-area measurement and computation of flow over dam at gage height 12.04 ft; minimum, 4 ft³/s Sept. 27, 1932; minimum daily, 21 ft³/s Sept. 22, 23, 1964, July 12, 1965.

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)
Mar. 31	1915	6,400	10.32	Apr. 5	0145	*7,350	*11.12

Minimum discharge, 31 ft³/s Aug. 21, 22, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	134	133	311	e135	e110	130	1690	173	74	e150	e44	60
2	127	137	287	e150	e105	172	723	155	e70	e130	e43	60
3	152	138	648	e140	e100	138	608	144	e68	e150	e70	51
4	446	128	663	e125	e100	117	1100	136	e65	e130	e60	43
5	364	118	450	e130	e98	106	3780	141	e105	e115	e53	40
6	280	180	355	e135	e98	101	1540	160	e80	e95	e47	38
7	224	194	312	e140	e96	112	1480	156	e72	e85	e43	40
8	204	260	281	e130	e96	184	963	137	e100	e74	e73	55
9	185	631	254	e125	e94	228	667	126	e150	e72	e71	390
10	163	489	322	e135	e92	154	554	120	e250	e70	e92	185
11	152	347	282	144	e92	144	506	112	e240	e68	99	105
12	144	292	247	140	e92	130	474	117	e190	e66	67	81
13	137	257	198	134	e90	120	547	122	e170	e64	51	208
14	234	211	171	133	e90	116	459	109	e140	e100	45	374
15	263	195	201	135	e98	115	387	113	e120	e140	e44	176
16	204	190	190	153	e96	112	345	111	e110	e120	e43	120
17	172	186	181	e100	e94	109	314	101	e100	e98	e40	99
18	148	181	181	e160	e90	108	297	96	e95	e85	e38	270
19	136	178	376	e140	e90	113	277	94	e90	e75	e37	420
20	143	155	284	e140	e88	119	256	93	e86	e70	e36	244
21	137	311	e200	e130	e86	124	238	91	e84	e65	33	201
22	125	266	e170	e130	e84	137	228	88	e160	e60	39	163
23	121	210	e155	e130	e82	192	209	91	e340	e57	49	142
24	118	433	e155	e130	84	268	200	99	e270	e54	37	132
25	111	400	e300	e130	79	381	197	93	e220	e60	33	114
26	121	511	342	e130	77	613	180	85	e200	e70	37	106
27	241	1380	254	e125	75	570	167	84	e220	e64	37	98
28	213	656	e180	e120	74	607	161	139	e230	e58	46	89
29	190	478	e170	e120	---	709	167	126	e200	e54	80	99
30	160	388	e155	e115	---	857	193	99	e170	e50	77	97
31	144	---	e150	e110	---	3300	---	85	---	e47	54	---
TOTAL	5693	9633	8425	4094	2550	10386	18907	3596	4469	2596	1618	4300
MEAN	184	321	272	132	91.1	335	630	116	149	83.7	52.2	143
MAX	446	1380	663	160	110	3300	3780	173	340	150	99	420
MIN	111	118	150	100	74	101	161	84	65	47	33	38

CAL YR 1986 TOTAL 89697 MEAN 246 MAX 2260 MIN 60
WTR YR 1987 TOTAL 76267 MEAN 209 MAX 3780 MIN 33

e Estimated

01334500 HOOSIC RIVER NEAR EAGLE BRIDGE, NY

LOCATION.--Lat 42°56'19", long 73°22'39", Rensselaer County, Hydrologic Unit 02020003, on right bank 0.5 mi upstream from Case Brook, 1.2 mi downstream from Walloomsac River, and 1.2 mi southeast of Eagle Bridge.

DRAINAGE AREA.--510 mi^2.

PERIOD OF RECORD.--August 1910 to March 1922, July 1923 to current year.

REVISED RECORDS.--WSP 741: Drainage area. WSP 756: 1913(m). WSP 1302: 1922(M). WSP 1432: 1913 (minimum gage height). WSP 1502: 1911-12, 1914, 1920-21, 1928(M), 1936(M).

GAGE.--Water-stage recorder. Datum of gage is 355.41 ft above National Geodetic Vertical Datum of 1929. Prior to March 1922, nonrecording gage and July 24, 1923 to July 18, 1936, water-stage recorder, at site 0.2 mi upstream at different datums.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diurnal fluctuation at medium and low flow caused by powerplants upstream from station. Several measurements of water temperature were made during the year. Telephone gage-height telemeter at station.

AVERAGE DISCHARGE.--75 years (1911-21, 1924-87), 945 ft^3/s, 25.16 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 55,400 ft^3/s, Dec. 31, 1948, gage height, 21.15 ft, from highwater mark in gage house, from rating curve extended above 13,000 ft^3/s on basis of peak flow over downstream dams and contracted-opening measurements at gage heights 17.8 ft and 21.15 ft; minimum discharge, 24 ft^3/s, Sept. 14, 1913; minimum daily, 30 ft^3/s, Sept. 14, 1913.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7,400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 27	0845	10,200	9.82	Apr. 5	1030	*21,900	*13.90
Apr. 1	0215	19,500	13.20	Apr. 7	1200	9,320	9.62

Minimum discharge, 99 ft^3/s, Aug. 19; minimum daily, 108 ft^3/s, Aug. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	459	611	1830	e780	e440	e620	11600	612	222	224	127	163
2	454	594	1630	e820	e470	e1200	3950	533	331	216	126	178
3	472	601	3380	e760	e490	e900	3050	490	509	425	165	151
4	1680	564	3840	e680	e480	e700	2830	469	362	407	207	137
5	1610	536	2520	e660	e450	e620	16500	459	566	286	160	129
6	1170	744	2010	e680	e450	e580	7990	512	391	227	146	125
7	924	864	1770	e700	e470	e680	7940	512	296	203	139	133
8	789	931	1600	e660	e500	e1100	5470	454	292	195	148	147
9	722	3290	1390	e640	e430	1860	3710	414	348	189	135	5810
10	665	2870	1560	e620	e450	e1200	2900	390	322	183	166	640
11	610	1880	1450	e620	e410	e1100	2410	366	272	171	215	334
12	568	1610	1270	e600	e390	e1000	2090	353	256	163	171	245
13	543	1430	1100	e580	e360	943	2420	362	305	250	151	334
14	702	1150	861	e580	e350	878	2240	330	292	207	137	2230
15	947	1050	1000	e580	e330	841	1780	322	241	283	131	746
16	738	994	960	e600	e340	811	1540	326	209	241	125	470
17	656	956	917	e520	e350	779	1390	300	189	194	124	362
18	592	925	898	e490	e340	742	1300	284	175	173	125	654
19	549	938	1460	e470	e340	772	1200	284	168	165	108	2460
20	532	825	1350	e450	e330	814	1080	280	165	156	114	1200
21	521	1980	1070	e430	e340	834	1000	268	160	156	111	889
22	518	1740	924	e420	e360	903	895	272	160	153	114	686
23	496	1320	850	e450	e350	1220	802	256	371	146	120	571
24	540	2530	849	e440	e340	1810	752	272	346	151	116	486
25	496	2540	1280	e420	e330	2450	731	276	228	156	109	394
26	493	2530	1630	e400	e330	4040	664	256	209	178	111	231
27	1040	8150	1250	e380	e340	3670	616	249	389	165	112	313
28	946	4110	1030	e370	e380	3370	582	306	224	147	125	288
29	835	2880	1000	e380	---	3670	606	353	203	137	160	272
30	732	2280	938	e400	---	3950	655	288	190	131	211	262
31	654	---	893	e420	---	8610	---	245	---	131	159	---
TOTAL	22653	53423	44510	17000	10940	52667	90693	11093	8391	6209	4368	21040
MEAN	731	1781	1436	548	391	1699	3023	358	280	200	141	701
MAX	1680	8150	3840	820	500	8610	16500	612	566	425	215	5810
MIN	454	536	849	370	330	580	582	245	160	131	108	125
CFSM	1.43	3.49	2.82	1.08	.77	3.33	5.93	.70	.55	.39	.28	1.38
IN.	1.65	3.90	3.25	1.24	.80	3.84	6.62	.81	.61	.45	.32	1.53

CAL YR 1986 TOTAL 405002 MEAN 1110 MAX 15300 MIN 250 CFSM 2.18 IN. 29.5
WTR YR 1987 TOTAL 342987 MEAN 940 MAX 16500 MIN 108 CFSM 1.84 IN. 25.0

e Estimated

01335754 HUDSON RIVER ABOVE LOCK 1 NEAR WATERFORD, NY

LOCATION.--Lat 42°49'45", long 73°40'00", Saratoga County, Hydrologic Unit 02020003, 0.4 mi upstream from dam at Lock 1c and 3.4 mi downstream from dam at Lock 2c Champlain (Barge) Canal.

DRAINAGE AREA.--4,611 mi^2.

PERIOD OF RECORD.--October 1976 to current year. Prior to October 1981 published as 01335770 Hudson River at Waterford, NY.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to February 1978, nonrecording gage 200 ft downstream of this site.

REMARKS.--Records fair. Streamflow affected by regulation for power generation and diversion for canal operations.

AVERAGE DISCHARGE.--11 years, 8,046 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 71,800 ft^3/s, Mar. 15, 1977; minimum daily, 1,170 ft^3/s, July 25, 1983.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 44,200 ft^3/s, Apr. 1, gage height, 31.39 ft; maximum gage height, 33.38 ft, Nov. 27; minimum daily discharge, 2,260 ft^3/s, July 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5690	5960	12300	8080	e4900	e4700	41700	5830	3730	4730	2690	3840
2	5680	7020	11900	7570	e4800	e5800	38000	4750	3680	4860	2560	3690
3	6060	6870	13800	7570	e4900	e6600	29100	4280	3940	5300	3380	3280
4	7410	6660	e18600	7320	e4900	e6400	23800	3620	3910	5300	3930	3400
5	8740	6890	e16400	e7450	e4800	e6200	35000	3870	4290	5360	3380	3500
6	10400	7150	e14700	e7570	e4700	e6100	38800	4210	4550	6320	3210	3510
7	7920	7070	e13000	e7230	e4600	e5700	38400	4480	3930	4520	3190	3040
8	7530	7640	e12200	e6560	e4700	e7600	35200	4850	3080	3970	3240	3550
9	7150	10200	11300	e6670	e4800	e10500	28400	3990	3670	3740	2970	7410
10	7160	12200	10800	e6540	e4600	e8300	23600	3410	4500	4430	3350	7520
11	6690	11000	11400	e6800	e4500	e8400	20500	2980	4740	3790	3120	6110
12	6370	9020	10300	e6550	e4500	e8000	20700	3930	4410	3760	2910	5450
13	7210	9940	9820	e6550	e4600	e7800	21600	3930	4010	3160	3290	5780
14	6690	8100	8800	e5930	e4800	e7200	21700	3860	4410	3970	3060	11200
15	6600	7440	8210	e5750	e5000	e7000	18300	3750	4510	5360	2880	11900
16	5650	8490	8740	e6060	e5100	e7000	15700	3510	4540	4590	2990	10200
17	6980	8280	8920	e6120	e5200	e6400	e13000	3400	3380	4550	2860	7850
18	6720	7300	8500	e5320	e5300	e6400	e12000	2960	3150	3630	2890	7170
19	6580	6650	9010	e5180	e5400	e6700	e11000	3500	3260	3770	2600	12200
20	6850	7590	10000	e5760	e5200	e6600	e10500	2620	2780	3850	2740	13300
21	6540	8660	9280	e5580	e5100	e7000	e10000	2940	2330	3840	3500	10700
22	5860	10400	8300	e5190	e5000	e7200	e9600	3330	2450	3930	3060	9230
23	5670	8890	8070	e5360	e5000	e7800	6270	2610	6640	2850	3400	7580
24	6220	10700	7920	e5000	e5100	e10000	6980	2470	7810	2590	3410	7580
25	5820	12000	8580	e5100	e4900	e13000	6680	2880	7170	2260	3260	7790
26	6780	10500	10600	e5200	e4500	18400	6100	3200	4970	2870	2630	7450
27	6680	23000	9690	e4900	e4600	25100	4670	3160	4880	3330	2600	6510
28	6530	22100	9360	e5000	e4300	21000	5210	3340	6320	3230	3090	7630
29	6470	17300	8430	e4700	---	20900	5310	4160	5580	3040	3720	5790
30	6170	14500	8250	e4800	---	21900	4890	5080	5130	2630	2640	6110
31	6540	---	8240	e4800	---	26100	---	3750	---	2330	3350	---
TOTAL	209360	299520	325420	188210	135800	317800	562710	114650	131750	121860	95900	210270
MEAN	6754	9984	10500	6071	4850	10250	18760	3698	4392	3931	3094	7009
MAX	10400	23000	18600	8080	5400	26100	41700	5830	7810	6320	3930	13300
MIN	5650	5960	7920	4700	4300	4700	4670	2470	2330	2260	2560	3040

CAL YR 1986 TOTAL 3272240 MEAN 8965 MAX 44000 MIN 2500
WTR YR 1987 TOTAL 2713250 MEAN 7434 MAX 41700 MIN 2260

e Estimated

01335770 HUDSON RIVER AT WATERFORD, NY

LOCATION.--Lat 42°47'19", long 73°40'28", at Saratoga-Rensselaer County line, Hydrologic Unit 02020003, at bridge on U.S. Highway 4 in Waterford, 0.4 mi upstream from first branch of Mohawk River, and 2.8 mi downstream from dam at lock 1 of the Champlain (Barge) Canal.

DRAINAGE AREA.--4,620 mi².

PERIOD OF RECORD.--Water years 1975 to current year.
CHEMICAL DATA: 1975-76 (b), 1977 (c), 1978-79 (d), 1980-84 (e), 1985 (c), 1986-87 (e).
MINOR ELEMENTS DATA: 1975-76 (c), 1977-79 (e), 1980-81 (d), 1982 (a), 1983 (b), 1987 (c).
PESTICIDE DATA: 1975 (b), 1976 (d), 1977-79 (e), 1980, 1982 (a).
ORGANIC DATA: OC--1975-77 (c), 1978 (d), 1979 (c).
PCB--1975 (b), 1976 (d), 1977-84 (e), 1985 (c), 1986-87 (e).
PCN--1977-79 (e), 1980, 1982 (a).
NUTRIENT DATA: 1975-76 (c), 1977-78 (e), 1979-81 (d).
BIOLOGICAL DATA:
Bacteria--1977 (c), 1978 (d), 1979 (e), 1980-81 (d).
SEDIMENT DATA: 1975 (b), 1976-77 (e), 1978 (a), 1979 (b), 1980 (c), 1981-87 (e).

PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: October 1976 to current year.

REMARKS.--Water discharge data based on records obtained above Lock 1 near Waterford (station 01335754) 3.2 mi upstream.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT CONCENTRATION: Maximum daily mean (water years 1977-84), 810 mg/L March 14, 1977; minimum daily mean, 1 mg/L on many days.
SUSPENDED-SEDIMENT DISCHARGE: Maximum daily (water years 1977-84), 119,000 tons March 14, 1977; minimum daily, 3.9 tons Sept. 7, 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM DIS-SOLVED (UG/L AS CD)
APR												
22...	1000	9600	--	--	--	--	46	14	2.8	94	<10	--
MAY												
15...	1000	3500	198	7.6	16.5	9.2	65	20	3.6	126	<10	--
JUN												
15...	0930	4140	142	7.6	22.0	8.4	48	15	2.5	104	<10	--
JUL												
29...	1315	2090	--	7.7	25.5	8.4	66	22	2.7	127	<10	<1
SEP												
25...	1030	6650	--	7.4	14.0	10.2	54	17	2.9	107	<1	--

DATE	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (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)	NICKEL, DIS-SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)
APR											
22...	<10	--	370	<100	--	40	<0.10	<100	--	20	--
MAY											
15...	20	--	240	41	--	40	<0.10	<1	--	20	--
JUN											
15...	<10	--	260	13	--	30	<0.10	<1	--	20	--
JUL											
29...	20	3	220	<5	<5	50	0.20	2	<1	<10	10
SEP											
25...	6	--	380	<5	--	40	<0.10	1	--	<10	--

01335770 HUDSON RIVER AT WATERFORD, NY--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	PCB, TOTAL (UG/L)	IDENTIFIED AROCLORS
OCT						
09...	1430	7050	5	93	0.07	1242
NOV						
21...	1315	8630	220	5120	0.03	1242,1254
DEC						
05...	1530	16400	29	113	0.03	1242,1254
30...	1645	7070	4	76	0.02	1242,1254
APR						
02...	1130	38600	87	9010	0.11	1242,1254
03...	0700	30000	33	2680	0.08	1242
07...	0010	37100	76	7610	0.04	1242,1254
07...	0025	36800	90	8980	0.04	1242,1254
07...	1500	38600	69	7190	0.05	1242,1254
08...	1730	33000	45	4020	0.04	1242,1254
09...	0630	29200	31	2450	0.01	1242
09...	1530	27500	22	1630	0.03	1242,1254
09...	1540	27600	22	1640	0.03	1242,1254
10...	0700	24200	15	978	0.03	1242,1254
11...	1115	20600	19	1060	0.02	1242
11...	1154	20700	12	670	0.02	1242
12...	1830	20700	10	558	0.04	1242,1254
15...	1215	18200	11	542	0.02	1242,1254
15...	1216	18200	11	542	0.01	1242
15...	1217	18200	11	542	0.03	1242,1254
22...	1000	9600	24	664	--	--
22...	1315	9600	--	--	0.06	1242,1254
22...	1320	9600	--	--	0.03	1242,1254
MAY						
22...	1315	2630	10	284	0.04	1242,1254
SEP						
17...	1530	7130	10	193	0.05	1242,1254
17...	1540	7050	10	191	0.07	1242,1254

HUDSON RIVER BASIN

01335770 HUDSON RIVER AT WATERFORD, NY--Continued

SEDIMENT, SUSPENDED CONCENTRATION (MG/L), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/ DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	---	---	12	398	---	---			---	---
2	---	---	---	---	14	450	---	---			---	---
3	8	131	---	---	---	---	8	---			---	---
4	10	200	---	---	11	e552	10	---			---	---
5	22	519	---	---	29	e1280	22	---			---	---
6	22	618	---	---	31	e1230	22	---			---	---
7	---	---	---	---	28	e983	---	---			---	---
8	---	---	---	---	7	e230	---	---			---	---
9	5	96	---	---	9	275	5	---			---	---
10	---	---	---	---	7	204	---	---			26	e583
11	5	90	---	---	8	246	5	---			---	---
12	7	120	---	---	4	111	7	---			---	---
13	6	117	---	---	4	106	6	---			---	---
14	4	72	---	---	4	95	4	---			---	---
15	4	71	---	---	---	---	4	---			---	---
16	6	92	---	---	6	142	6	---			---	---
17	7	132	---	---	4	96	7	---			---	---
18	10	181	---	---	---	---	10	---			---	---
19	---	---	17	305	5	122	---	---			---	---
20	---	---	9	14.0	3	81	---	---			---	---
21	4	71	9	210	4	100	4	---			---	---
22	3	47	10	281	5	112	3	---			---	---
23	4	61	8	192	10	218	4	---			---	---
24	4	67	17	491	---	---	4	---			---	---
25	4	63	---	---	---	---	4	---			---	---
26	4	73	---	---	6	172	4	---			---	---
27	7	126	57	3540	6	157	7	---			---	---
28	4	70	65	3880	---	---	4	---			---	---
29	5	87	18	841	---	---	5	---			---	---
30	5	83	13	509	---	---	5	---			---	---
31	10	176	---	---	---	---	10	---			105	8130

DAY	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/ DAY)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	342	38700	---	---							9	93
2	101	10700	---	---							---	---
3	31	2580	---	---							15	133
4	321	35000	---	---							12	110
5	---	---	9	42							20	189
6	370	39700	---	---							---	---
7	---	---	---	---							30	246
8	---	---	---	---							29	278
9	---	---	---	---							---	---
10	---	---	---	---							---	---
11	13	720	---	---							---	---
12	11	615	---	---							---	---
13	18	1050	---	---							36	562
14	15	879	---	---							18	544
15	11	544	---	---							---	---
16	11	466	---	---							---	---
17	11	e386	---	---							11	233
18	15	e486	---	---							---	---
19	8	e238	---	---							---	---
20	20	e567	6	42							19	682
21	11	e297	6	48							9	260
22	---	---	12	108							---	---
23	---	---	---	---							---	---
24	---	---	---	---							---	---
25	---	---	---	---							---	---
26	11	181	---	---							---	---
27	11	139	---	---							---	---
28	---	---	---	---							---	---
29	---	---	---	---							---	---
30	---	---	---	---							---	---
31	---	---	---	---							---	---

e Estimated

01336000 MOHAWK RIVER BELOW DELTA DAM, NEAR ROME, NY

LOCATION.--Lat 43°15'52", long 75°26'12", Oneida County, Hydrologic Unit 02020004, on right bank at Rome Fish Hatchery, 1.0 mi downstream from Delta Dam, and 4.0 mi north of Rome.

DRAINAGE AREA.--152 mi^2.

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

REVISED RECORDS.--WDR NY-85-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 474.00 ft above Barge Canal datum. Prior to Jan. 24, 1937, nonrecording gage at site 200 ft downstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. During canal navigation season, water is diverted from Black River through Forestport feeder and Black River Canal (flowing south) into basin above Delta Reservoir. Flow regulated by Delta Reservoir (usable capacity, 2,800 mil ft^3). Small quantity of water diverted from Delta Reservoir for fish hatchery use and later returned to river, part upstream and part downstream from station. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--66 years, 376 ft^3/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,560 ft^3/s, Oct. 2, 1945, gage height, 11.18 ft; minimum, 18 ft^3/s, July 21, 27, Oct. 24, 25, 1983, minimum gage height, 0.63 ft, Oct. 24, 25, 1983; minimum daily discharge, 45 ft^3/s, Jan. 17, 1931.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,380 ft^3/s, Apr. 5, gage height, 4.66 ft; minimum, 85 ft^3/s, Mar. 2, gage height, 1.32 ft; minimum daily discharge, 156 ft^3/s, May 9-11, 18-21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	877	533	532	519	265	178	732	262	240	237	206	191
2	676	536	533	486	264	212	706	233	239	237	206	191
3	592	534	587	470	260	204	525	202	239	240	206	191
4	981	531	559	470	261	198	764	181	240	239	204	189
5	887	529	544	468	262	193	1290	168	239	237	203	189
6	746	553	539	e470	259	190	1070	160	237	237	203	189
7	635	537	537	e470	258	192	895	161	237	237	203	189
8	502	533	536	e470	256	208	685	157	238	279	203	190
9	428	556	540	e470	230	207	527	156	240	240	203	189
10	373	537	565	e460	217	194	423	156	239	237	202	188
11	347	533	548	e460	218	191	355	156	237	237	201	188
12	344	534	542	e460	219	189	321	157	239	237	200	188
13	362	533	537	e460	219	188	557	158	239	237	198	235
14	466	528	537	458	219	187	569	158	237	237	198	203
15	673	525	536	458	218	188	436	158	237	238	198	197
16	575	525	535	464	216	187	347	158	237	237	198	194
17	482	527	534	462	216	185	294	158	235	222	199	193
18	415	526	534	460	216	188	269	156	234	211	198	218
19	434	527	534	387	216	194	287	156	234	210	198	216
20	542	529	533	354	216	192	278	156	234	209	198	219
21	540	531	532	353	214	191	237	156	234	208	196	209
22	539	531	530	352	213	216	203	214	283	208	196	215
23	538	527	528	296	187	227	185	242	264	208	196	207
24	538	538	525	268	175	217	211	240	241	208	195	204
25	536	538	533	268	175	211	187	240	238	208	194	201
26	551	611	540	267	175	221	173	240	237	208	193	201
27	550	584	e530	266	174	198	161	240	237	206	193	200
28	550	546	527	265	174	193	162	241	237	206	193	200
29	541	538	524	265	---	190	181	240	237	206	192	200
30	542	537	522	262	---	186	250	240	237	206	191	202
31	537	---	520	265	---	276	---	240	---	206	191	---
TOTAL	17299	16147	16653	12303	6192	6191	13280	5940	7196	6973	6155	5986
MEAN	558	538	537	397	221	200	443	192	240	225	199	200
MAX	981	611	587	519	265	276	1290	262	283	279	206	235
MIN	344	525	520	262	174	178	161	156	234	206	191	188

CAL YR 1986 TOTAL 166121 MEAN 455 MAX 2200 MIN 158
WTR YR 1987 TOTAL 120315 MEAN 330 MAX 1290 MIN 156

e Estimated

01346000 WEST CANADA CREEK AT KAST BRIDGE, NY

LOCATION.--Lat 43°04'08", long 74°59'26", Herkimer County, Hydrologic Unit 02020004, on right bank 600 ft downstream from bridge on old State Highway 28 at Kast Bridge, 1.2 mi downstream from North Creek, 2.2 mi north of Herkimer, and 4.0 mi upstream from mouth. Prior to Oct. 23, 1985, at site on left bank.

DRAINAGE AREA.--560 mi^2.

PERIOD OF RECORD.--January 1907, April to December 1907, March 1908 to December 1909, April 1910 to December 1913, April to December 1914, April 1915 to January 1917, April to November 1917, April to June 1918, October 1920 to current year. Monthly discharge only for some periods, published in WSP 1302. Gage height and discharge measurements only, May 1905 to December 1906.

REVISED RECORDS.--WDR NY-85-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 438.99 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 18, 1920, nonrecording gage at former highway bridge 500 ft upstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Since March 1914, flow regulated by Hinckley Reservoir, 31 mi upstream from station (usable capacity, 3,320 mil ft^3). Diurnal fluctuation at low and medium flow caused by powerplants upstream from station. Diversion at Trenton Falls, 26 mi upstream from station, by Ninemile feeder since 1915 during canal navigation season. Diversion from Hinckley Reservoir for Utica water supply returned to Mohawk River. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--67 years (1921-87), 1,317 ft^3/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,300 ft^3/s, Mar. 26, 1913, from reports of State Engineer and Surveyor; maximum gage height, 10.47 ft, probably Feb. 17, 1943, from floodmark in gage well (ice jam); minimum discharge, 20 ft^3/s, Sept. 3, 1929, gage height, 0.90 ft; minimum daily, 59 ft^3/s, Sept. 2, 1929.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,600 ft^3/s, Nov. 26, gage height, 5.91 ft; minimum, 279 ft^3/s, Feb. 25, June 20; minimum daily, 327 ft^3/s, May 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1690	1310	1400	1290	e660	878	3220	1060	530	597	599	664
2	1410	1220	1470	1290	e800	2010	4480	917	517	685	613	697
3	1800	1320	2610	1120	e880	1560	4310	895	516	896	744	634
4	2660	1310	2540	1030	e860	1110	4050	884	581	715	611	616
5	1760	1280	1890	e1000	e800	1020	4790	868	578	530	576	577
6	1750	1940	1760	e980	e700	834	7110	906	556	565	557	572
7	1660	1610	1720	e980	e620	844	6890	822	509	598	585	581
8	1500	1430	1690	e1000	e640	1390	5440	686	647	1070	584	597
9	1500	2400	1700	1170	e680	1450	4160	517	836	991	593	695
10	1250	1630	2780	1090	e700	945	3210	436	626	676	651	645
11	1260	1600	2410	836	e680	874	2820	327	548	626	609	598
12	1270	1630	2200	1000	e660	862	2710	542	646	579	578	639
13	1450	1580	1720	1140	e650	932	4080	472	788	616	575	1980
14	1880	1450	1630	1140	e630	955	2970	460	592	1410	574	1360
15	1790	1450	1660	1200	e600	970	2490	485	588	1320	574	879
16	1260	1250	1640	1370	e600	972	2280	462	590	725	571	848
17	1310	1470	1640	e960	e600	891	2080	430	646	635	596	781
18	1370	1550	1640	e800	e580	951	2090	425	551	602	665	1750
19	1230	1490	1630	e900	e520	1090	2050	432	549	585	583	1910
20	1260	1370	1620	e1100	e550	1010	1980	448	542	617	585	2560
21	1260	1690	1580	e900	e580	1130	1790	480	547	689	569	2070
22	1240	1540	1580	e1100	e580	1500	1510	530	626	710	616	1600
23	1250	1220	1550	e940	e550	2190	1490	508	1210	680	693	1650
24	1180	1900	1570	e800	503	2220	1390	523	720	603	580	1600
25	1170	1900	1820	e640	458	2330	1260	487	626	628	562	1550
26	1100	4120	2010	e780	600	2910	1330	481	599	523	562	1470
27	1670	4220	1750	e1000	476	2180	1290	622	639	562	662	1080
28	1710	2020	1470	e960	649	2410	1140	668	614	566	680	788
29	1630	1750	1440	e940	---	2210	1240	547	473	572	693	823
30	1580	1420	1360	e920	---	2090	1280	512	636	582	666	690
31	1540	---	1340	e820	---	2860	---	567	---	572	631	---
TOTAL	46390	52070	54820	31196	17806	45578	86930	18399	18626	21725	18937	32904
MEAN	1496	1736	1768	1006	636	1470	2898	594	621	701	611	1097
MAX	2660	4220	2780	1370	880	2910	7110	1060	1210	1410	744	2560
MIN	1100	1220	1340	640	458	834	1140	327	473	523	557	572

CAL YR 1986 TOTAL 599122 MEAN 1641 MAX 7470 MIN 533
WTR YR 1987 TOTAL 445381 MEAN 1220 MAX 7110 MIN 327

e Estimated

01347000 MOHAWK RIVER NEAR LITTLE FALLS, NY

LOCATION.--Lat 43°00'52", long 74°46'48", Herkimer County, Hydrologic Unit 02020004, on left bank 1,800 ft downstream from Rocky Rift Dam, 2.1 mi upstream from East Canada Creek, and 4.5 mi southeast of city of Little Falls.

DRAINAGE AREA.--1,342 mi^2.

PERIOD OF RECORD.--October 1927 to current year.

REVISED RECORDS.--WSP 741: 1929(M). WSP 1302: 1901, 1932(M). WSP 1432: 1928-30. WDR NY-85-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 308.84 ft above National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Records of daily discharge do not include diversion at Rocky Rift Dam into Erie (Barge) Canal for lockages at lock 16, near St. Johnsville. Monthly and annual figures of diversion at Rocky Rift Dam are published separately below. During canal navigation season, water is received from Black River basin through Black River Canal flowing south, and from Chenango River basin through Oriskany Creek feeder. Water is diverted into (or may occasionally be received from) Oswego River basin through summit level of Erie (Barge) Canal between New London and Utica. Diurnal fluctation caused by powerplants and locks and dams on Erie (Barge) Canal. Regulation by Delta and Hinckley Reservoirs (combined usable capacity, 6,120 mil ft^3) (see Reservoirs in Hudson River Basin). Telephone gage-height telemeter at station.

COOPERATION.--Figures of diversions at Rocky Rift Dam into Erie (Barge) Canal provided by New York State Department of Transportation.

AVERAGE DISCHARGE.--60 years, 2,804 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge (river channel only), 33,100 ft^3/s, Mar. 14, 1977, gage height, 19.17 ft, from floodmark in gage house; minimum discharge (river channel only), 214 ft^3/s, Aug. 18, 1949, gage height, 3.75 ft; minimum daily discharge (including canal), probably not less than 463 ft^3/s, Sept. 2, 1934.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 16,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 26	2245	*19,300	*14.70	No other peak greater than base discharge.			

Minimum discharge (river channel only), 468 ft^3/s, Apr. 21, gage height, 4.37 ft; minimum daily (river channel only), 841 ft^3/s, Aug. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6510	3180	3810	2690	1720	1570	6960	2560	1120	1120	911	1010
2	4820	2910	3340	2610	1680	4940	7580	2070	1140	1240	984	1110
3	3510	3120	5030	2470	1860	5760	7520	1920	1160	2430	1250	1020
4	8030	3010	7510	2280	1880	4700	7840	1540	1290	1810	1100	997
5	6980	2870	6320	2270	1940	3720	10500	1370	1490	1300	965	907
6	5790	4270	5420	2250	1820	3060	12100	1680	1320	1100	912	901
7	5040	4840	4040	2350	1660	3000	12400	1630	1100	1050	949	896
8	3560	3780	3920	2360	1620	4970	9940	1500	1220	1630	931	954
9	3170	5330	3700	2410	1740	6790	7690	1290	1640	2490	927	1270
10	2730	5330	5540	2360	1790	5140	5980	1080	1450	1570	1130	1170
11	2570	4250	6200	2170	1800	3450	4910	1010	1220	1210	1030	1020
12	2400	3860	5270	2140	1750	2850	4700	1130	1220	1100	1000	1000
13	2530	3990	4040	2360	1560	2640	9010	1070	1630	1100	923	3840
14	4020	3690	3460	2340	1450	2500	8580	1070	1360	1890	878	4050
15	5300	3240	3440	2450	e1700	2500	7720	1020	1200	3670	893	1910
16	3830	3020	3420	3030	e1300	2560	5950	1040	1130	1850	928	1520
17	3060	3130	3370	2770	e960	2440	4410	993	1170	1300	862	1280
18	2870	3220	3370	2330	e1250	2450	4080	965	970	1140	980	2590
19	2550	3200	3420	2320	e1300	2860	3840	973	994	1090	918	4140
20	2480	2790	3440	2480	e1350	3230	3600	991	989	1100	952	4420
21	2520	3500	3300	2340	1390	3210	2360	1040	992	1180	901	3880
22	2490	3580	3170	2090	1340	3850	2460	1010	1120	1200	904	2750
23	2490	2860	3070	2130	1370	6070	2480	1100	3100	1120	1030	2740
24	2460	4370	3010	2340	1220	7090	2290	1910	2460	1010	892	2380
25	2380	5630	3500	2120	1260	7360	2190	1430	1510	1060	851	2160
26	2330	9180	4640	1730	1210	8190	2460	1210	1240	989	841	2080
27	3960	13300	4390	2080	1230	6870	2300	1460	1170	899	958	1640
28	4420	9170	3640	e2000	1200	6270	2070	1580	1150	913	1050	1350
29	4170	7310	3300	e1880	---	5230	2290	1400	1060	931	1190	1380
30	3910	4660	3050	1930	---	4600	2520	1180	1010	933	1110	1190
31	3870	---	2930	1880	---	5230	---	1220	---	958	995	---
TOTAL	116750	136590	126060	70960	42350	135100	168730	41442	39625	42383	30145	57555
MEAN	3766	4553	4066	2289	1512	4358	5624	1337	1321	1367	972	1918
MAX	8030	13300	7510	3030	1940	8190	12400	2560	3100	3670	1250	4420
MIN	2330	2790	2930	1730	960	1570	2070	965	970	899	841	896
‡	15.9	5.2	0	0	0	0	0.1	26.2	22.9	28.5	28.1	22.7

CAL YR 1986 TOTAL 1336790 MEAN 3662 MAX 17700 MIN 1100 ‡ 11.4
WTR YR 1987 TOTAL 1007690 MEAN 2761 MAX 13300 MIN 841 ‡ 12.6

e Estimated

‡ Diversion, equivalent in cubic feet per second, at Rocky Rift Dam into Erie (Barge) Canal for lockages at Lock 16.

HUDSON RIVER BASIN

01348000 EAST CANADA CREEK AT EAST CREEK, NY

LOCATION.--Lat 43°01'00", long 74°44'28", Herkimer County, Hydrologic Unit 0202004, on right bank at village of East Creek, 0.2 mi downstream from Niagara Mohawk Power Corp. Beardslee powerplant, 1.2 mi upstream from mouth, and 3.5 mi northwest of St. Johnsville.

DRAINAGE AREA.--289 mi^2.

PERIOD OF RECORD.--December 1945 to current year.

REVISED RECORDS.--WDR NY-85-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 335.70 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Extensive diurnal fluctuation and slight regulation caused by powerplants upstream from station. City of Little Falls diverts about 5 ft^3/s for municipal supply. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--41 years (1947-87), 680 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,600 ft^3/s, Dec. 29, 1984, gage height, 7.68 ft; minimum, 0.05 ft^3/s, July 9, 1978, gage height, 0.47 ft; minimum gage height, 0.44 ft, July 29, 1977; minimum daily discharge, 0.22 ft^3/s, July 9, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 2, 1945, reached a stage of 9.0 ft, from floodmarks (discharge, 24,000 ft^3/s, from slope-area measurement of peak flow).

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 27	0715	7,400	6.18	Sept. 13	1945	*8,240	*6.42
Apr. 1	0100	7,200	6.12				

Minimum discharge, 9.6 ft^3/s, part of each day Nov. 5, May 25, 29-31, June 1-4, 7, 10-13, 15-16, 18-19, gage height, 0.92 ft; minimum daily discharge, 10 ft^3/s, May 16, 24, June 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1320	739	1030	401	222	174	5560	302	372	212	133	344
2	1090	262	857	358	214	513	2950	450	179	175	327	272
3	994	572	1180	295	212	814	2150	416	132	323	1260	272
4	1840	445	2200	212	259	1040	1970	515	206	659	1060	277
5	1980	382	1400	420	314	890	5010	148	493	292	709	260
6	1240	496	1090	372	222	805	4390	317	448	287	334	249
7	1240	620	970	537	217	717	3850	223	158	232	381	205
8	1050	740	918	368	145	775	2960	301	468	228	297	192
9	1040	1830	883	361	316	807	2240	14	712	289	164	617
10	962	2090	887	206	319	801	1580	15	131	235	296	709
11	703	1500	1160	240	318	799	1340	312	359	234	303	395
12	408	1140	960	242	331	795	1320	137	202	11	133	354
13	539	1370	905	363	405	789	1740	190	502	202	130	3450
14	696	999	823	364	125	531	1340	219	272	443	130	4940
15	861	806	632	365	92	333	960	153	305	1720	99	2230
16	821	770	635	360	188	482	844	10	10	830	43	1400
17	665	673	587	363	167	359	801	35	183	476	140	1040
18	189	761	331	272	359	464	597	70	158	225	43	1190
19	620	761	537	364	200	551	139	71	176	429	48	3180
20	416	758	738	262	287	512	550	69	71	406	156	2370
21	525	667	310	379	232	449	307	62	71	264	216	1410
22	251	691	211	437	199	504	304	61	198	265	104	1190
23	509	111	389	431	132	795	281	298	134	100	131	961
24	335	489	601	381	321	809	370	10	70	136	181	823
25	245	762	536	23	222	1910	467	131	210	37	188	640
26	538	1600	751	443	186	3260	223	242	151	46	187	184
27	549	6300	749	294	408	3270	241	189	64	67	238	319
28	490	3370	422	288	214	3030	342	236	99	41	154	571
29	765	2000	642	286	---	3270	327	335	293	39	456	353
30	757	1420	425	299	---	3480	397	362	250	71	720	381
31	748	---	353	271	---	4670	---	78	---	194	42	---
TOTAL	24386	35124	24112	10257	6826	38398	45550	5971	7077	9168	918	30778
MEAN	787	1171	778	331	244	1239	1518	193	236	296	29	1026
MAX	1980	6300	2200	537	408	4670	5560	515	712	1720	260	4940
MIN	189	111	211	23	92	174	139	10	10	11	43	184

CAL YR 1986 TOTAL 287657 MEAN 788 MAX 6300 MIN 11
WTR YR 1987 TOTAL 246836 MEAN 676 MAX 6300 MIN 10

HUDSON RIVER BASIN

01349000 OTSQUAGO CREEK AT FORT PLAIN, NY

LOCATION.--Lat 42°55'46", long 74°37'35", Montgomery County, Hydrologic Unit 02020004, on left bank 25 ft downstream from bridge on State Highway 163 in Fort Plain, and 0.5 mi upstream from mouth.

DRAINAGE AREA.--59.2 mi^2.

PERIOD OF RECORD.--October 1949 to current year.

REVISED RECORDS.--WDR NY-86-1: 1982 (maximum gage height).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 301.16 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1973, at datum 2.00 ft higher. Prior to Oct. 1, 1986, at datum 1.00 ft higher.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Occasional diurnal fluctuation at low flow. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--38 years, 85.5 ft^3/s, 19.61 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,400 ft^3/s Oct. 28, 1981, gage height, 11.24 ft, present datum, in gage well, 11.8 ft, present datum, from floodmarks, from rating curve extended above 3,200 ft^3/s on basis of contracted-opening measurement of peak flow; minimum discharge, 0.6 ft^3/s, Nov. 30, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 26	2045	*4,970	*8.51	Apr. 13	0830	2,060	6.09
Apr. 4	2200	3,650	7.55	Sept. 13	1430	2,050	6.08

Minimum discharge, 3.0 ft^3/s, Aug. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	39	85	56	e28	e45	202	47	8.6	13	4.2	10
2	41	39	81	e53	e30	e450	141	33	25	57	5.6	8.4
3	74	40	327	e49	e32	e420	164	27	23	168	8.1	15
4	409	35	329	e46	e33	318	925	25	47	69	5.6	9.0
5	206	31	153	e43	e33	229	1000	22	69	36	5.0	6.5
6	106	255	114	e41	e33	202	462	55	25	22	5.0	5.5
7	77	136	e100	e38	e33	e200	784	73	16	38	4.5	6.6
8	54	111	e90	e36	e33	e580	300	48	21	41	4.2	14
9	43	331	e82	e34	e32	537	168	38	20	39	5.8	124
10	37	129	e150	e32	e32	230	122	32	14	29	15	51
11	32	89	121	e31	e31	155	100	27	11	17	6.9	25
12	29	123	86	e30	e30	130	89	29	11	13	5.3	18
13	30	117	69	e30	e29	117	726	26	12	11	5.0	553
14	64	66	e66	e32	e25	113	185	18	14	20	4.3	243
15	68	58	e90	e37	e22	131	125	17	18	57	4.2	84
16	40	58	76	e40	e23	140	104	15	9.1	21	3.8	50
17	33	60	68	e40	e24	124	94	13	6.3	11	3.5	34
18	29	52	66	e39	e26	147	88	13	5.1	8.9	3.2	590
19	26	50	74	e37	e26	254	75	15	4.8	8.4	3.3	355
20	24	51	69	e35	e25	247	63	16	4.5	11	3.9	247
21	23	161	e66	e33	e25	184	56	13	4.8	11	3.5	149
22	23	130	e64	e32	e24	594	52	12	72	7.7	3.4	92
23	28	83	e62	e31	e24	648	47	11	116	6.1	3.5	66
24	42	324	60	e30	e24	539	86	27	49	5.7	3.2	52
25	27	345	103	e29	e24	465	94	13	25	5.3	3.2	37
26	48	1440	211	e28	e24	467	47	11	29	5.3	3.2	29
27	98	850	131	e27	e23	338	35	44	41	5.3	4.9	24
28	67	230	93	e26	e23	282	33	32	33	4.3	11	22
29	53	162	78	e25	---	228	40	22	19	3.9	21	19
30	65	122	69	e25	---	194	69	14	13	4.1	12	22
31	48	---	61	e26	---	226	---	10	---	4.2	8.2	---
TOTAL	2003	5717	3294	1091	771	8934	6476	798	766.2	753.2	183.5	2961.0
MEAN	64.6	191	106	35.2	27.5	288	216	25.7	25.5	24.3	5.92	98.7
MAX	409	1440	329	56	33	648	1000	73	116	168	21	590
MIN	23	31	60	25	22	45	33	10	4.5	3.9	3.2	5.5
CFSM	1.09	3.22	1.79	.59	.47	4.87	3.65	.43	.43	.41	.10	1.67
IN.	1.26	3.59	2.07	.69	.48	5.61	4.07	.50	.48	.47	.12	1.86

CAL YR 1986 TOTAL 38426.4 MEAN 105 MAX 3200 MIN 6.6 CFSM 1.78 IN. 24.15
WTR YR 1987 TOTAL 33747.9 MEAN 92.5 MAX 1440 MIN 3.2 CFSM 1.56 IN. 21.21

e Estimated

01350000 SCHOHARIE CREEK AT PRATTSVILLE, NY

LOCATION.--Lat 42°19'15", long 74°26'10", Greene County, Hydrologic Unit 02020005, on left bank 100 ft upstream from bridge on State Highway 23 in Prattsville, 0.2 mi upstream from Schoharie Reservoir, 0.2 mi downstream from Huntersfield, and 1.6 mi downstream from Batavia Kill.

DRAINAGE AREA.--236 mi^2.

PERIOD OF RECORD.--November 1902 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 351: Drainage area. WSP 1432: 1937-38.

GAGE.--Water-stage recorder. Datum of gage is 1,134.98 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1915, nonrecording gage, and Oct. 1, 1915 to July 17, 1936, water-stage recorder, at old highway bridge 80 ft upstream, and July 18, 1936 to July 15, 1954, water-stage recorder at site 0.2 mi downstream, all at datum 1.56 ft lower than present datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Several measurements of water temperature were made during the year. Telephone gage-height telemeter at station. Intermittent water-quality data for this station are included in section "ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES".

AVERAGE DISCHARGE.--84 years, 462 ft^3/s, 26.58 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 51,600 ft^3/s, revised, Oct. 16, 1955, gage height, 19.14 ft, from rating curve extended above 17,800 ft^3/s on basis of contracted-opening measurements of peak flow at gage heights 18.37 ft and 19.14 ft; maximum gage height, 19.57 ft, Mar. 5, 1979 (ice jam); minimum daily discharge, 4.8 ft^3/s, Sept. 22, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than or equal to base discharge of 4,400 ft^3/s and maximum (*)

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 27	0130	4,400	6.55	Apr. 7	0745	7,060	7.83
Mar. 31	1730	17,600	11.34	Apr. 13	1245	10,900	9.32
Apr. 4	2015	a*47,600	b*18.37	Sept. 18	2400	5,120	6.91

a From rating curve extended as explained above.
b From floodmark in gage well.

Minimum discharge, 25 ft^3/s, Aug. 26, 27; minimum gage height, 1.77 ft, Oct. 3.

REVISIONS.--Some peak discharges and the annual maximum (*) reported for water years 1956, 1972, 1974-76, 1978-81, and 1984 have been revised as shown in the following table. They supercede figures published in WSP 1722, and the reports for 1972, 1974-76, 1978-81, and 1984

Water year	Date	Time	Discharge (ft^3/s)	Gage height (ft)
1956	Oct. 16, 1955	0100	*51,600	19.14
1972	June 22, 1972	2345	*27,400	13.95
1974	Dec. 21, 1973	1500	*24,900	13.34
1975	Dec. 8, 1974	1915	*24,800	13.32
1976	Aug. 10, 1976	1030	*20,200	12.08
1978	Nov. 8, 1977	2100	28,000	14.09
1978	Jan. 9, 1978	0945	*30,600	14.71
1979	Sept. 6, 1979	1530	*19,400	11.87
1980	Nov. 26, 1979	2000	19,300	11.85
1980	Mar. 21, 1980	2045	*39,600	16.72
1981	Feb. 20, 1981	1800	*22,200	12.63
1984	Apr. 5, 1984	1815	*29,500	14.46

01350000 SCHOHARIE CREEK AT PRATTSVILLE, NY--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	43	529	e280	e200	e350	3910	310	101	60	64	88
2	43	43	460	e260	e200	e1200	1930	270	110	87	63	83
3	41	42	2360	e250	e200	e800	1340	243	153	217	131	74
4	57	41	1670	e240	e200	e600	17300	237	133	149	153	62
5	74	41	993	e220	e210	e540	11000	254	130	104	102	55
6	74	64	729	e270	e260	e500	5770	387	111	81	86	50
7	61	95	620	e280	e280	e800	6000	340	98	68	77	49
8	54	97	559	e260	e300	e1600	4110	274	104	66	68	61
9	50	306	557	e250	e280	2060	2840	245	97	269	73	1910
10	47	348	706	e250	e260	1260	2070	227	85	179	186	725
11	44	251	585	e240	e250	1040	1390	216	73	119	128	457
12	42	219	506	e240	e240	787	1350	199	69	271	96	361
13	40	196	e410	e230	e220	653	6410	184	69	437	79	1070
14	55	e150	e370	e230	e210	567	3440	168	64	490	69	1340
15	68	e130	e450	e290	e210	500	2000	162	57	783	61	646
16	64	e110	e380	e350	e210	452	1430	156	54	398	55	446
17	58	e90	303	e330	e210	411	1510	147	45	283	50	444
18	54	e80	279	e320	e200	386	2270	137	39	219	47	1590
19	51	e72	282	e310	e200	392	1610	168	36	180	42	3110
20	48	e90	292	e300	e190	399	1210	164	34	172	40	1730
21	47	1420	e240	e280	e190	364	996	157	34	148	39	1310
22	45	740	e220	e270	e190	402	833	144	40	121	36	965
23	43	512	e200	e250	e190	575	701	125	80	105	33	726
24	42	765	239	e250	e190	894	621	201	75	88	30	583
25	40	759	707	e240	e190	1250	557	157	54	81	27	469
26	45	981	923	e240	e180	2070	475	127	44	191	26	381
27	55	2840	607	e240	e180	1860	413	154	59	138	35	326
28	54	1330	e460	e230	e180	1860	369	156	112	102	71	283
29	50	911	e400	e220	---	1840	360	143	76	82	186	252
30	48	684	e360	e210	---	2030	349	137	62	72	155	238
31	44	---	e320	e210	---	8630	---	114	---	76	98	---
TOTAL	1595	13450	17716	8040	6020	37072	84564	6103	2298	5836	2406	19884
MEAN	51.5	448	571	259	215	1196	2819	197	76.6	188	77.6	663
MAX	74	2840	2360	350	300	8630	17300	387	153	783	186	3110
MIN	40	41	200	210	180	350	349	114	34	60	26	49
CFSM	.22	1.90	2.42	1.10	.91	5.07	11.9	.83	.32	.80	.33	2.81
IN.	.25	2.12	2.79	1.27	.95	5.84	13.3	.96	.36	.92	.38	3.13

CAL YR 1986 TOTAL 163985 MEAN 449 MAX 10600 MIN 25 CFSM 1.90 IN. 25.8
WTR YR 1987 TOTAL 204984 MEAN 562 MAX 17300 MIN 26 CFSM 2.38 IN. 32.3

e Estimated

NOTE: Eastern Standard Time held in effect to April 30.

01350080 MANOR KILL AT WEST CONESVILLE NEAR GILBOA, NY

LOCATION.--Lat 42°22'37", long 74°24'48", Schoharie County, Hydrologic Unit 02020005, on right bank 50 ft south of County Highway 3, 0.5 mi east of West Conesville, 2.2 mi southeast of Gilboa, and 1.2 mi upstream from mouth.

DRAINAGE AREA.--32.4 mi^2.

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

GAGE.--Water-stage recorder. Elevation of gage is 1,270 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, whigh are poor. Several measurements of water temperature were made during the year.

EXTREMES FOR CURRENT PERIOD.--July to September 1986: Maximum discharge during period, 38 ft^3/s, July 30, gage height, 1.66 ft; minimum, 1.9 ft^3/s, Sept. 14, 15.

Water year 1987: Peak discharges greater than base discharge of 800 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 4	1915	a*4,680	b*9.76	Apr. 13	1015	2,090	6.29
Apr. 7	0515	1,080	4.45				

a From rating curve extended above 970 ft^3/s on basis of slope-area measurement of peak flow.
b In gage well, 10.9 ft, from floodmarks.

Minimum discharge, 2.3 ft^3/s, Aug. 26, 27.

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	---	---	---	---	---	---	---	---	---	---	15	3.0
2	---	---	---	---	---	---	---	---	---	---	12	2.9
3	---	---	---	---	---	---	---	---	---	---	10	2.9
4	---	---	---	---	---	---	---	---	---	---	12	2.8
5	---	---	---	---	---	---	---	---	---	---	8.4	3.0
6	---	---	---	---	---	---	---	---	---	---	7.5	3.1
7	---	---	---	---	---	---	---	---	---	---	11	2.8
8	---	---	---	---	---	---	---	---	---	---	8.4	2.6
9	---	---	---	---	---	---	---	---	---	---	7.2	2.5
10	---	---	---	---	---	---	---	---	---	---	6.4	2.3
11	---	---	---	---	---	---	---	---	---	---	6.3	2.1
12	---	---	---	---	---	---	---	---	---	---	5.7	2.1
13	---	---	---	---	---	---	---	---	---	---	5.2	2.1
14	---	---	---	---	---	---	---	---	---	---	4.9	2.0
15	---	---	---	---	---	---	---	---	---	---	4.6	2.0
16	---	---	---	---	---	---	---	---	---	---	8.2	2.3
17	---	---	---	---	---	---	---	---	---	---	6.2	2.1
18	---	---	---	---	---	---	---	---	---	6.7	6.1	2.1
19	---	---	---	---	---	---	---	---	---	6.2	5.5	2.2
20	---	---	---	---	---	---	---	---	---	5.9	5.2	2.2
21	---	---	---	---	---	---	---	---	---	5.5	5.0	2.3
22	---	---	---	---	---	---	---	---	---	5.1	4.7	2.2
23	---	---	---	---	---	---	---	---	---	4.8	4.6	4.2
24	---	---	---	---	---	---	---	---	---	4.5	4.7	4.3
25	---	---	---	---	---	---	---	---	---	4.3	4.1	3.3
26	---	---	---	---	---	---	---	---	---	6.9	3.8	4.3
27	---	---	---	---	---	---	---	---	---	15	3.8	3.9
28	---	---	---	---	---	---	---	---	---	8.2	3.5	3.3
29	---	---	---	---	---	---	---	---	---	6.7	3.4	3.0
30	---	---	---	---	---	---	---	---	---	13	3.2	3.1
31	---	---	---	---	---	---	---	---	---	16	3.1	---
TOTAL	---	---	---	---	---	---	---	---	---	---	199.7	83.0
MEAN	---	---	---	---	---	---	---	---	---	---	6.44	2.77
MAX	---	---	---	---	---	---	---	---	---	---	15	4.3
MIN	---	---	---	---	---	---	---	---	---	---	3.1	2.0
CFSM	---	---	---	---	---	---	---	---	---	---	.20	.09
IN.	---	---	---	---	---	---	---	---	---	---	.23	.10

HUDSON RIVER BASIN

01350080 MANOR KILL AT WEST CONESVILLE NEAR GILBOA, NY--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	4.3	65	e38	e24	e35	212	41	10	6.6	5.1	12
2	4.2	4.3	59	37	e31	e200	129	36	23	18	6.0	7.4
3	4.4	4.3	160	e36	e35	e60	112	33	20	33	9.5	5.7
4	9.2	4.1	126	e32	e29	e40	1640	31	23	16	7.1	4.9
5	7.7	4.1	89	e31	28	e30	1050	36	27	11	5.6	4.2
6	5.8	7.7	72	e30	e27	e32	739	47	17	8.6	5.7	3.9
7	4.8	12	67	18	e26	84	776	41	14	7.6	5.0	3.9
8	4.5	12	63	16	e27	261	443	33	16	9.7	4.5	5.0
9	4.3	33	59	15	e23	231	225	29	14	53	8.0	78
10	4.2	29	76	14	e22	e120	160	27	12	21	31	30
11	4.0	20	61	19	e21	e94	131	25	10	14	13	18
12	3.8	18	54	22	e21	e84	139	23	9.7	53	8.0	14
13	3.7	17	e45	21	e20	e78	960	22	9.7	45	6.1	52
14	5.7	14	e38	25	e20	e72	320	20	8.8	73	5.4	60
15	6.1	13	e35	35	e19	e68	193	19	7.7	96	4.7	34
16	5.1	13	e33	50	e18	66	150	18	7.0	49	4.2	26
17	4.7	13	38	e40	e18	61	140	16	6.4	35	3.9	38
18	4.5	12	38	e38	e18	60	140	16	6.0	26	3.7	171
19	4.3	14	41	e35	e17	62	119	20	5.7	22	3.4	182
20	4.1	e14	36	e35	e17	62	103	18	5.5	21	3.4	121
21	3.9	82	e34	e34	e16	58	91	16	5.7	17	3.3	98
22	3.8	49	33	e32	e16	70	80	14	6.8	13	3.1	83
23	3.9	39	e32	e31	e15	115	70	14	14	11	2.8	67
24	3.9	91	30	e28	e15	166	65	20	9.8	8.8	2.6	57
25	3.7	82	63	e26	e14	250	61	15	7.5	8.4	2.5	49
26	4.6	196	72	e23	e14	380	53	13	6.6	13	2.5	41
27	5.6	277	55	e22	e13	302	48	21	9.1	9.0	3.5	35
28	5.2	123	e46	e22	e13	299	47	18	8.5	7.2	5.4	31
29	4.8	98	44	e22	---	267	48	15	7.0	6.0	11	26
30	4.6	81	e41	e23	---	258	48	13	6.7	5.7	7.9	27
31	4.4	---	38	e23	---	381	---	11	---	6.1	5.7	---
TOTAL	147.4	1380.8	1743	873	577	4346	8492	721	334.2	723.7	193.6	1385.0
MEAN	4.75	46.0	56.2	28.2	20.6	140	283	23.3	11.1	23.3	6.25	46.2
MAX	9.2	277	160	50	35	381	1640	47	27	96	31	182
MIN	3.7	4.1	30	14	13	30	47	11	5.5	5.7	2.5	3.9
CFSM	.15	1.42	1.74	.87	.64	4.33	8.74	.72	.34	.72	.19	1.42
IN.	.17	1.59	2.00	1.00	.66	4.99	9.75	.83	.38	.83	.22	1.59

WTR YR 1987 TOTAL 20916.6 MEAN 57.3 MAX 1640 MIN 2.5 CFSM 1.77 IN. 24.0

e Estimated

NOTE: Eastern Standard Time held in effect to May 5.

HUDSON RIVER BASIN

01350100 SCHOHARIE RESERVOIR NEAR GRAND GORGE, NY

LOCATION.--Lat 42°21'21", long 74°26'42", Schoharie County, Hydrologic Unit 02020005, in Shandaken Tunnel intake house on Intake Road, 1.6 mi north of junction of Intake Road and State Highway 23, 2.5 mi upstream from Gilboa Dam, and 2.6 mi east of Grand Gorge.

DRAINAGE AREA.--314 mi^2.

PERIOD OF RECORD.--January 1973 to current year. Monthly contents only published as "at Gilboa" for September 1928 to December 1972.

REVISED RECORDS.--WDR NY-86-1: 1956 (maximum elevation).

GAGE.--Water-stage recorder. Supplementary nonrecording gage used for periods when reservoir elevation is below 1,072.50 ft. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Board of Water Supply, City of New York).

REMARKS.--Reservoir is formed by masonry and earth dam. Storage began July 24, 1926. Usable capacity 19,583 mil gal between minimum operating level, elevation, 1,050.00 ft, and crest of spillway, elevation, 1,130.00 ft. Dead storage below elevation 1,050.00, 1,968 mil gal. Figures given herein represent usable contents. Reservoir impounds water except for periods of spilling, for diversion through Shandaken Tunnel into Esopus Creek to Ashokan Reservoir, for New York City water supply.

COOPERATION.--Capacity table and once-daily nonrecording gage readings provided by Department of Environmental Protection, City of New York.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 1,136.26 ft, Oct. 16, 1955, contents, 22,058 mil gal; minimum observed (after initial filling), 1,062.00 ft, Aug. 20, 1970, contents, 1,520 mil gal.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,135.69 ft, Apr. 4, from floodmarks, contents, 21,818 mil gal; minimum observed 1,079.93 ft, Nov. 9, contents, 4,954 mil gal.

Capacity table (elevation, in feet, and usable contents in million gallons).

1,063.0	1,670	1,120.0	16,100
1,080.0	4,970	1,133.0	20,700

ELEVATION, IN FEET, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1096.71	1082.40	1114.26	1130.05	1129.91	1114.39	1131.08	1131.14	1128.09	1118.57	1118.17	1109.15
2	1096.25	1081.90	1115.53	1130.10	1129.89	1115.47	1130.60	1131.08	1127.88	1118.31	1117.87	1108.93
3	1095.78	1081.40	1118.12	1130.11	1129.85	1117.10	1130.52	1131.03	1127.75	1118.39	1117.68	1108.68
4	1095.37	1080.99	1123.02	1130.07	1129.83	1118.00	1132.60	1130.97	1127.64	1118.46	1117.60	1108.40
5	1094.96	1080.60	1125.75	1130.04	1129.77	1118.51	1132.30	1130.81	1127.50	1118.36	1117.47	1108.09
6	1094.54	1080.34	1127.60	1130.05	1129.66	1118.85	1131.48	1130.73	1126.87	1118.17	1117.29	1107.79
7	1094.12	1080.13	1129.07	1130.07	1129.26	1119.36	1131.42	1130.75	1126.07	1117.93	1117.07	1107.48
8	1093.63	1079.98	1130.11	1130.05	1128.80	1121.64	1131.10	1130.61	1125.37	1117.70	1116.84	1107.21
9	1093.14	1080.14	1130.24	1130.03	1128.34	1126.56	1130.90	1130.47	1125.03	1117.85	1116.61	1108.75
10	1092.65	1080.95	1130.34	1130.02	1127.79	1129.53	1130.63	1130.37	1124.79	1118.09	1116.68	1111.18
11	1092.16	1081.42	1130.27	1130.03	1127.23	1130.35	1130.54	1130.28	1124.51	1118.06	1116.70	1111.96
12	1091.67	1081.71	1130.23	1130.02	1126.67	1130.30	1130.67	1130.22	1124.25	1118.09	1116.57	1112.43
13	1091.18	1081.91	1130.16	1130.03	1126.09	1130.23	1131.79	1130.15	1123.97	1118.55	1116.38	1113.09
14	1090.75	1081.97	1130.06	1129.99	1125.43	1130.18	1132.03	1130.06	1123.69	1119.09	1116.11	1116.10
15	1090.36	1081.94	1130.10	1130.05	1124.73	1130.14	1131.51	1129.96	1123.40	1120.39	1115.34	1117.64
16	1089.97	1081.92	1130.10	1130.15	1124.04	1130.12	1131.27	1129.85	1123.08	1121.17	1114.46	1118.34
17	1089.53	1081.89	1130.04	1130.05	1123.36	1130.09	1131.30	1129.74	1122.69	1121.47	1113.63	1118.90
18	1089.05	1081.85	1130.03	1130.05	1122.68	1130.06	1131.69	1129.61	1122.36	1121.30	1113.21	1120.08
19	1088.58	1081.86	1130.06	1130.11	1121.96	1130.05	1131.52	1129.52	1122.01	1120.95	1112.85	1126.01
20	1088.12	1081.75	1130.05	1130.08	1121.14	1130.06	1131.25	1129.46	1121.65	1120.61	1112.47	1129.49
21	1087.64	1083.71	1130.02	1130.07	1120.28	1130.05	1131.10	1129.37	1121.28	1120.51	1112.09	1130.51
22	1087.17	1087.17	1129.98	1130.04	1119.44	1130.07	1131.00	1129.25	1120.95	1120.37	1111.71	1130.46
23	1086.70	1089.03	1129.94	1130.06	1118.63	1130.14	1131.02	1129.12	1120.78	1120.19	1111.31	1130.34
24	1086.24	1090.98	1129.97	1130.03	1117.82	1130.28	1131.02	1129.06	1120.54	1119.96	1110.90	1130.25
25	1085.76	1093.66	1130.14	1130.02	1117.00	1130.42	1130.99	1129.03	1120.25	1119.71	1110.50	1129.91
26	1085.32	1095.80	1130.38	1130.02	1116.18	1130.64	1130.91	1128.89	1119.92	1119.57	1110.10	1129.27
27	1084.93	1102.43	1130.26	1130.03	1115.37	1130.61	1130.82	1128.77	1119.63	1119.50	1109.76	1128.60
28	1084.51	1107.54	1130.18	1130.02	1114.79	1130.60	1130.97	1128.70	1119.39	1119.29	1109.50	1127.88
29	1083.99	1110.52	1130.16	1129.98	---	1130.60	1131.12	1128.60	1119.16	1119.02	1109.40	1127.00
30	1083.48	1112.66	1130.13	1129.94	---	1130.52	1131.16	1128.48	1118.87	1118.73	1109.44	1126.03
31	1082.94	---	1130.11	1129.93	---	1131.52	---	1128.30	---	1118.47	1109.30	---
MEAN	1089.91	1086.68	1128.27	1130.04	1124.14	1126.98	1131.21	1129.82	1123.31	1119.25	1114.03	1118.66
MAX	1096.71	1112.66	1130.38	1130.15	1129.91	1131.52	1132.60	1131.14	1128.09	1121.47	1118.17	1130.51
MIN	1082.94	1079.98	1114.26	1129.93	1114.79	1114.39	1130.52	1128.30	1118.87	1117.70	1109.30	1107.21
*	5601	14042	19622	19558	14351	20236	20037	18936	15687	15562	12741	17991
**	-182	+435	+279	-3.19	-288	+294	-10.3	-55.0	-168	-6.24	-141	+271

CAL YR 1986 MEAN 1113.24 MAX 1131.22 MIN 1079.98 ** +43.2
WTR YR 1987 MEAN 1118.52 MAX 1132.60 MIN 1079.98 ** +37.1

* Contents, in million gallons, at 2400 hours on last day of month.
** Change in contents, equivalent in cubic feet per second.

NOTE: Eastern Standard Time held in effect to May 6.

HUDSON RIVER BASIN

01350101 SCHOHARIE CREEK AT GILBOA, NY

LOCATION.--Lat 42°23'50", long 74°27'03", Schoharie County, Hydrologic Unit 02020005, on left bank, 200 ft upstream from bridge on County Highway 322, 0.2 mi west of village of Gilboa, 0.4 mi downstream from dam on Schoharie Reservoir, and 0.8 mi upstream from the Platter Kill.

DRAINAGE AREA.--314 mi^2.

PERIOD OF RECORD.--October 1975 to current year (since October 1983, discharges only for days of Schoharie Reservoir spill).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 939.56 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Entire flow, runoff from 314 mi^2, except for periods of spill, diverted from Schoharie Reservoir through Shandaken Tunnel into Esopus Creek upstream from Ashokan Reservoir for water supply of city of New York.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 56,400 ft^3/s, Apr. 4, 1987, gage height, 30.2 ft, from floodmarks, from rating curve extended above 14,000 ft^3/s on basis of flow-over-dam measurement of peak flow; minimum daily discharge, 0.04 ft^3/s on many days, June to October 1976, and Sept. 11-13, 1980, but may have been lower since October 1983 (see PERIOD OF RECORD).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, about 65,000 ft^3/s, Oct. 16, 1955, by computation of flow over dam; flood of Mar. 18, 1936, reached a discharge of 32,000 ft^3/s, from information furnished by Bureau of Water Resources Development, City of New York.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 56,400 ft^3/s, Apr. 4, gage height, 30.2 ft, from floodmarks, from rating curve extended as explained above.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	103	---	---	5070	461	---	---	---	---
2	---	---	---	159	---	---	2310	395	---	---	---	---
3	---	---	---	131	---	---	1530	356	---	---	---	---
4	---	---	---	85	---	---	e17800	321	---	---	---	---
5	---	---	---	64	---	---	e13000	242	---	---	---	---
6	---	---	---	73	---	---	e6540	203	---	---	---	---
7	---	---	---	94	---	---	7360	192	---	---	---	---
8	---	---	---	76	---	---	5050	150	---	---	---	---
9	---	---	540	49	---	---	3400	106	---	---	---	---
10	---	---	717	45	---	---	2510	76	---	---	---	---
11	---	---	599	65	---	991	1740	e54	---	---	---	---
12	---	---	447	45	---	677	1640	e35	---	---	---	---
13	---	---	337	39	---	481	6540	e24	---	---	---	---
14	---	---	166	---	---	350	4320	e17	---	---	---	---
15	---	---	245	---	---	245	2710	---	---	---	---	---
16	---	---	215	208	---	183	1910	---	---	---	---	---
17	---	---	140	92	---	116	1710	---	---	---	---	---
18	---	---	121	78	---	69	2360	---	---	---	---	---
19	---	---	146	145	---	64	2120	---	---	---	---	---
20	---	---	124	97	---	85	1620	---	---	---	---	---
21	---	---	82	71	---	48	1310	---	---	---	---	894
22	---	---	---	44	---	80	1070	---	---	---	---	653
23	---	---	---	55	---	255	943	---	---	---	---	385
24	---	---	---	34	---	717	903	---	---	---	---	216
25	---	---	367	19	---	1040	840	---	---	---	---	---
26	---	---	932	21	---	1810	708	---	---	---	---	---
27	---	---	529	20	---	1690	539	---	---	---	---	---
28	---	---	340	13	---	1620	348	---	---	---	---	---
29	---	---	288	---	---	e1960	455	---	---	---	---	---
30	---	---	226	---	---	e2080	484	---	---	---	---	---
31	---	---	197	---	---	7970	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	98840	---	---	---	---	---
MEAN	---	---	---	---	---	---	3295	---	---	---	---	---
MAX	---	---	---	---	---	---	17800	---	---	---	---	---
MIN	---	---	---	---	---	---	348	---	---	---	---	---

e Estimated

NOTE: Discharges only for days when Schoharie Reservoir spilled for the entire day. Eastern Standard Time held in effect to April 6.

01350120 PLATTER KILL AT GILBOA, NY

LOCATION.--Lat 42°24'18", long 74°26'36", Schoharie County, Hydrologic Unit 02020005, on right bank, 190 ft upstream from culvert on County Highway 17, 0.5 mi upstream from mouth, and 0.6 mi northeast of Gilboa.

DRAINAGE AREA.--11.1 mi^2.

PERIOD OF RECORD.--January 1975 to current year. Occasional discharge measurements, water years 1969-73.

GAGE.--Water-stage recorder. Concrete control since Nov. 12, 1976. Elevation of gage is 1,110 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--12 years, 15.3 ft^3/s, 18.72 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,210 ft^3/s, Apr. 4, 1987, gage height, 5.24 ft, in gage well, about 6.2 ft, from floodmarks, from rating curve extended above 280 ft^3/s on basis of flow-through-culvert measurement of peak flow; minimum discharge, 0.32 ft^3/s, Nov. 18, 1980 (result of freezeup); minimum gage height (subsequent to concrete control installation), 0.76 ft, Nov. 18, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 150 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 4	2300	a*1,210	b*5.24	Apr. 13	1045	491	4.08
Apr. 7	0645	344	3.71				

a From rating curve extended as explained above.
b In gage well, about 6.2 ft, from floodmarks.

Minimum discharge, 1.5 ft^3/s, Aug. 23, 24, 25, 26, 27; minimum gage height, 0.77 ft, Aug. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	1.9	20	e11	e7.6	e10	65	17	4.6	2.7	2.0	3.3
2	2.0	2.0	18	11	8.4	e23	49	14	5.0	6.9	2.5	2.1
3	2.2	1.9	36	11	8.2	e19	43	12	4.5	5.2	2.9	1.9
4	4.2	1.9	36	e10	7.9	e17	378	12	e6.1	3.6	2.1	1.8
5	3.1	2.0	26	e10	e7.6	e16	370	13	5.1	3.1	2.0	1.8
6	2.1	4.6	22	e9.8	e7.6	e17	260	16	4.3	2.9	2.2	1.8
7	1.9	3.7	22	9.8	e7.4	26	297	14	4.3	2.9	2.0	1.8
8	2.0	4.5	19	9.2	e7.2	51	210	11	4.6	7.3	1.9	3.6
9	1.9	9.2	19	8.7	e7.2	64	120	11	4.0	10	5.2	8.3
10	1.9	8.5	22	8.6	e7.0	e52	85	11	3.7	4.1	5.9	3.4
11	1.9	6.4	18	9.1	e6.8	e45	59	11	3.4	3.5	2.7	2.9
12	1.9	6.2	16	8.8	e6.6	39	51	10	3.6	3.1	2.4	2.8
13	1.9	5.8	e14	8.5	e6.4	30	257	9.9	3.4	3.6	2.3	9.2
14	3.2	4.9	e13	8.4	e6.4	e24	134	9.9	3.2	7.0	2.2	7.7
15	2.3	4.7	e12	11	e6.2	e22	90	9.8	2.9	6.4	2.0	5.7
16	2.0	4.8	12	14	e6.2	e21	65	9.1	2.7	4.6	1.9	4.9
17	2.0	4.8	12	e12	e5.8	20	52	8.5	2.6	3.9	1.9	6.1
18	2.0	4.7	12	e11	e5.8	19	47	7.8	2.5	3.6	1.8	18
19	2.0	5.2	12	e10	5.5	20	38	7.6	2.5	3.5	1.8	21
20	2.0	e5.8	12	e9.6	5.6	20	31	6.5	2.5	3.4	1.9	15
21	2.0	19	11	e9.4	5.5	19	26	6.3	2.8	2.9	1.8	13
22	1.9	13	10	e9.0	5.5	24	23	6.0	3.9	2.5	1.7	12
23	2.0	11	e10	e8.4	5.5	32	21	5.9	5.2	2.4	1.7	11
24	1.9	19	9.9	e8.0	5.5	45	20	6.3	2.9	2.3	1.7	10
25	1.9	21	16	e7.4	5.3	60	20	5.7	2.6	2.3	1.6	9.8
26	2.7	31	16	e7.0	5.1	85	19	5.5	2.6	2.5	1.6	8.7
27	2.4	63	14	e6.8	5.0	83	19	7.7	4.1	2.2	2.5	7.9
28	2.1	39	12	e6.6	4.9	80	18	6.3	2.8	2.1	3.4	7.4
29	2.0	32	12	e6.6	---	77	18	5.6	2.5	2.0	3.8	7.0
30	2.0	25	11	e6.6	---	71	18	5.3	2.7	2.1	2.2	7.7
31	2.0	---	11	e6.8	---	75	---	5.0	---	2.3	2.4	---
TOTAL	67.7	366.5	505.9	284.1	179.7	1206	2903	286.7	107.6	116.9	74.0	217.6
MEAN	2.18	12.2	16.3	9.16	6.42	38.9	96.8	9.25	3.59	3.77	2.39	7.25
MAX	4.2	63	36	14	8.4	85	378	17	6.1	10	5.9	21
MIN	1.9	1.9	9.9	6.6	4.9	10	18	5.0	2.5	2.0	1.6	1.8
CFSM	.20	1.10	1.47	.83	.58	3.50	8.72	.83	.32	.34	.22	.65
IN.	.23	1.23	1.70	.95	.60	4.04	9.73	.96	.36	.39	.25	.73

CAL YR 1986 TOTAL 5675.0 MEAN 15.5 MAX 467 MIN 1.6 CFSM 1.40 IN. 19.0
WTR YR 1987 TOTAL 6315.6 MEAN 17.3 MAX 378 MIN 1.6 CFSM 1.56 IN. 21.2

e Estimated

NOTE: Eastern Standard Time held in effect to May 5.

01350140 MINE KILL NEAR NORTH BLENHEIM, NY

LOCATION.--Lat 42°25'44", long 74°28'24", Schoharie County, Hydrologic Unit 02020005, on left bank 200 ft upstream from bridge on State Highway 30, 0.6 mi upstream from mouth, and 3.0 mi southwest of North Blenheim.

DRAINAGE AREA.--16.3 mi^2.

PERIOD OF RECORD.--December 1974 to current year. Occasional discharge measurements, water years 1969-74.

GAGE.--Water-stage recorder. Concrete control since Sept. 23, 1975. Elevation of gage is 1,060 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--12 years (1976-87), 25.0 ft^3/s, 20.83 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,320 ft^3/s, May 29, 1984, gage height, 3.81 ft; minimum, 0.10 ft^3/s, Aug. 27, 28, 29, 30, 1980, gage height, 0.49 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 550 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 4	unknown	*1,240	a*3.4	Apr. 13	unknown	684	a2.7
Apr. 7	unknown	556	b2.5				

a From floodmark.
b From reconstructed graph.

Minimum discharge, 0.53 ft^3/s, July 29, gage height, 0.58 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.9	1.4	e40	e13	e10	e20	80	18	2.7	1.8	1.5	6.4
2	7.7	1.8	e42	e12	e9.6	e80	56	14	4.9	8.3	1.2	6.1
3	7.4	1.7	119	e12	e10	e45	56	13	8.2	11	4.5	4.7
4	20	1.4	100	e11	e12	e30	e450	12	17	5.3	2.5	4.1
5	15	1.3	63	e11	e11	e25	e240	12	13	2.9	1.4	3.0
6	7.4	13	54	e11	e10	e28	e220	18	6.7	1.4	1.5	2.9
7	5.1	15	48	e13	e8.6	e60	e370	16	5.2	1.2	1.3	4.5
8	4.1	17	45	e13	e10	e120	e190	13	5.6	5.1	1.0	10
9	3.6	35	44	e12	e11	146	e110	11	5.2	34	6.0	31
10	2.9	22	61	e11	e12	e60	e72	10	4.0	7.4	19	7.9
11	2.4	16	46	e11	e11	e50	e54	9.5	3.0	4.3	5.8	4.3
12	2.3	16	e35	e11	e11	e45	e50	9.4	2.8	3.0	2.7	2.9
13	2.4	e14	e25	e12	e10	e39	e300	8.8	3.2	2.5	1.6	22
14	3.6	e11	e20	e13	e10	e33	e110	7.8	2.7	3.8	1.3	20
15	3.4	e10	e18	e15	e9.8	e30	80	7.6	2.3	10	1.0	9.7
16	2.9	e10	e19	e16	e9.4	e28	64	7.0	1.5	4.3	1.3	4.9
17	2.6	e9.0	e18	e15	e9.2	e26	57	6.5	1.2	3.0	1.2	9.6
18	2.6	e8.4	e17	e14	e9.0	e24	53	5.6	1.1	2.1	1.1	71
19	2.6	e8.0	23	e16	e9.0	e25	44	7.0	1.0	1.7	.94	58
20	2.6	e7.6	19	e15	e8.6	25	37	6.9	.99	1.6	1.4	23
21	2.6	e80	e17	e13	e8.4	24	33	5.8	1.2	1.6	1.6	14
22	2.5	42	e15	e12	e8.0	41	28	5.2	2.6	1.3	1.2	15
23	3.9	32	e13	e11	e8.4	64	25	5.2	6.4	1.0	.85	10
24	2.7	95	e11	e10	e8.0	82	28	5.4	4.6	.86	.77	11
25	1.6	58	e13	e9.6	e7.8	102	30	4.7	3.1	.80	.74	11
26	3.4	110	e24	e9.0	e7.4	142	22	4.2	2.8	1.2	.68	9.8
27	6.4	157	e21	e8.0	e7.4	118	18	9.5	5.8	1.1	2.6	8.6
28	3.3	95	e18	e7.6	e7.6	105	18	7.5	3.7	.81	9.4	7.9
29	2.1	75	e17	e7.6	---	87	20	5.5	1.7	.68	14	6.9
30	1.6	e60	e16	e8.0	---	77	22	4.2	1.4	.68	8.0	12
31	1.5	---	e14	e9.0	---	109	---	3.3	---	3.8	5.3	---
TOTAL	142.1	1023.6	1035	361.8	264.2	1890	2937	273.6	125.59	128.53	103.38	412.2
MEAN	4.58	34.1	33.4	11.7	9.44	61.0	97.9	8.83	4.19	4.15	3.33	13.7
MAX	20	157	119	16	12	146	450	18	17	34	19	71
MIN	1.5	1.3	11	7.6	7.4	20	18	3.3	.99	.68	.68	2.9
CFSM	.28	2.09	2.05	.72	.58	3.74	6.01	.54	.26	.25	.20	.84
IN.	.32	2.34	2.36	.83	.60	4.31	6.70	.62	.29	.29	.24	.94

CAL YR 1986 TOTAL 9799.88 MEAN 26.8 MAX 369 MIN .53 CFSM 1.65 IN. 22.4
WTR YR 1987 TOTAL 8696.93 MEAN 23.8 MAX 450 MIN .68 CFSM 1.46 IN. 19.8

e Estimated

NOTE: Eastern Standard Time held in effect to May 5.

01350180 SCHOHARIE CREEK AT NORTH BLENHEIM, NY

LOCATION.--Lat 42°27'57", long 74°27'45", Schoharie County, Hydrologic Unit 02020005, on left bank 2,300 ft upstream from West Kill, and 1.2 mi upstream from bridge on State Highway 30 in North Blenheim.

DRAINAGE AREA.--359 mi^2.

PERIOD OF RECORD.--Discharge: October 1970 to current year. Occasional measurements, water years 1969-70. Water-quality records: Daily water temperatures, water years 1972-85.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 800 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1971, at datum 1.00 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Regulation of flow by Blenheim-Gilboa Pumped Storage Project immediately upstream from gage. Entire flow, runoff from 314 mi^2, except for periods of spill, diverted from Schoharie Reservoir through Shandaken Tunnel into Esopus Creek upstream from Ashokan Reservoir for water supply of City of New York. For periods of spill see station 01350101. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--17 years, 446 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 64,200 ft^3/s, Apr. 4, 1987, gage height, 16.70 ft, from floodmarks, from rating curve extended above 12,000 ft^3/s on basis of computation of peak flow through radial gates; minimum discharge, no flow, Oct. 21-28, 1972, Sept. 12-14, 1973.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 64,200 ft^3/s, Apr. 4, gage height, 16.70 ft, from rating curve extended as explained above; minimum discharge, 3.2 ft^3/s, Sept. 7, gage height, 0.85 ft; minimum daily discharge, 6.3 ft^3/s, June 14.

REVISIONS.--The maximum discharge for the water year 1984 has been revised to 29,200 ft^3/s, Apr. 5, 1984, gage height, 13.34 ft, from floodmark.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.3	7.6	34	139	7.7	76	5770	493	9.8	6.8	6.8	7.7
2	7.1	7.4	62	157	13	114	2490	369	8.8	8.4	7.5	7.5
3	7.3	7.9	183	229	40	127	1680	331	8.4	12	7.8	7.5
4	7.8	7.8	185	65	20	90	19900	434	17	7.5	7.2	7.5
5	7.3	7.4	58	80	8.6	64	17000	330	25	7.1	7.3	7.7
6	7.2	8.2	38	75	8.9	66	6940	221	19	7.8	7.5	7.8
7	7.1	7.8	65	138	11	116	8180	242	15	7.2	7.5	6.8
8	7.2	8.0	316	104	10	392	6170	200	13	7.8	7.8	8.0
9	9.8	8.7	628	60	11	308	4470	158	16	23	9.0	11
10	7.4	8.2	847	68	33	228	2740	39	10	8.4	8.7	7.7
11	7.2	8.4	584	107	18	830	1760	109	6.8	8.2	7.1	7.6
12	7.2	7.6	573	107	15	726	1620	86	6.8	12	7.1	7.7
13	7.7	7.7	352	35	15	584	5290	75	7.0	17	7.5	9.5
14	7.4	7.8	226	59	e16	407	6820	30	6.3	8.7	7.5	9.1
15	6.9	8.1	221	98	e15	246	3050	14	6.4	13	7.5	8.8
16	7.0	7.8	358	205	e10	213	1910	10	6.4	8.6	7.1	14
17	7.2	7.6	117	154	e11	175	1600	8.4	6.8	7.5	7.1	12
18	7.2	7.5	199	48	11	91	2150	8.0	7.0	7.8	7.5	184
19	7.1	8.1	250	158	e14	109	1980	9.0	7.1	7.7	7.8	179
20	7.4	8.0	129	165	e11	102	1550	8.7	7.1	7.5	8.1	73
21	7.4	99.6	91	75	e10	102	1260	8.6	7.1	7.5	8.1	605
22	7.1	47	56	93	14	177	1140	8.7	7.8	7.1	7.7	928
23	7.3	43	87	76	16	366	852	9.0	8.2	7.1	6.8	448
24	7.4	155	48	48	21	877	878	8.8	7.1	7.1	6.7	256
25	7.4	106	357	16	21	1280	814	8.0	7.2	7.3	7.3	103
26	7.5	198	1070	22	19	1940	636	22	7.0	7.1	7.4	10
27	7.4	385	554	24	17	1770	664	35	7.8	7.2	8.3	8.9
28	7.3	123	352	23	17	1680	223	30	6.8	7.0	8.2	8.4
29	7.2	103	348	19	---	1630	557	13	6.8	6.8	8.2	9.5
30	7.3	72	271	18	---	1780	454	13	7.1	7.0	7.0	9.1
31	7.4	---	227	9.2	---	7710	---	12	---	7.2	7.0	---
TOTAL	228.5	1489.2	8886	2674.2	434.2	24376	110548	3343.2	282.6	272.4	234.1	2969.8
MEAN	7.37	49.6	287	86.3	15.5	786	3685	108	9.42	8.79	7.55	99.0
MAX	9.8	385	1070	229	40	7710	19900	493	25	23	9.0	928
MIN	6.9	7.4	34	9.2	7.7	64	223	8.0	6.3	6.8	6.7	6.8

CAL YR 1986 TOTAL 118458.9 MEAN 325 MAX 10200 MIN 4.6
WTR YR 1987 TOTAL 155737.1 MEAN 427 MAX 19900 MIN 6.3

e Estimated

NOTE: Eastern Standard Time held in effect to May 4.

01350200 WEST KILL AT NORTH BLENHEIM, NY

LOCATION.--Lat 42°28'07", long 74°27'34", Schoharie County, Hydrologic Unit 02020005, on left bank 75 ft upstream from highway bridge on State Highway 30, in North Blenheim, 100 ft downstream from Mill Creek and 0.2 mi upstream from mouth.

DRAINAGE AREA.--44.6 mi^2.

PERIOD OF RECORD.--July 1975 to September 1987 (discontinued). Occasional discharge measurements, water years 1970-72. All figures of discharge greater than 500 ft^3/s prior to October 1986 are unreliable and should not be used.

REVISED RECORDS.--See PERIOD OF RECORD.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 810 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--Unknown (see REVISIONS).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, unknown; maximum gage height, 8.25 ft, Apr. 4, 1987 at 2145 hours (backwater from Schoharie Creek); minimum discharge, 0.37 ft^3/s, several days during Sept. 1983; minimum gage height, 0.68 ft, July 25, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, unknown; maximum gage height, 8.25 ft, Apr. 4 (backwater from Schoharie Creek); minimum discharge, 1.9 ft^3/s, July 30, Aug. 26, 27; minimum gage height, 1.96 ft, Oct. 22, 23, 25, 26, July 30, Aug. 26, 27.

REVISIONS.--Figures of maximum discharge and daily discharge greater than 500 ft^3/s for July 1975 to September 1986, published in WDR NY Vol. 1, 1976-86 are in error and should not be used because information is insufficient to make corrections for backwater from Schoharie Creek.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	13	99	e29	e21	e40	279	46	8.2	8.2	6.0	9.7
2	13	13	91	e28	e22	e250	195	40	8.6	18	4.4	8.1
3	12	14	196	e28	e23	e200	174	36	9.2	32	7.6	6.6
4	48	13	191	e29	e24	e140	e1500	34	23	15	6.1	5.5
5	42	12	125	e30	e24	e110	e1100	35	22	9.8	4.2	4.8
6	26	37	101	e30	e23	e100	e1000	46	12	7.6	4.1	4.3
7	20	40	90	e28	e22	e120	e1200	42	9.6	7.0	3.5	4.8
8	16	46	82	e26	e22	e310	e640	34	11	8.1	2.8	7.7
9	14	108	78	e25	e21	342	380	30	10	54	14	68
10	13	73	124	e24	e21	206	267	27	8.2	18	56	29
11	11	57	85	e23	e20	154	208	26	6.6	12	17	18
12	11	56	71	e22	e20	129	179	25	6.5	9.4	10	13
13	11	52	50	e22	e19	112	982	23	6.8	8.4	7.3	83
14	14	42	55	e22	e19	98	410	21	5.8	9.6	5.7	80
15	17	38	78	e26	e18	87	278	20	5.1	21	4.6	38
16	13	39	58	e31	e18	77	206	18	e4.8	11	3.8	28
17	12	38	50	e31	e18	69	176	17	4.6	8.3	3.4	29
18	11	38	e45	e29	e17	68	154	15	3.7	6.9	3.0	180
19	10	40	e40	e28	e17	73	126	19	3.3	6.3	2.7	171
20	14	40	e36	e26	e16	75	107	18	3.0	6.4	4.7	95
21	10	190	e35	e24	e16	66	91	15	3.2	6.2	4.6	74
22	9.5	102	e34	e23	e15	97	79	14	4.8	5.1	3.5	70
23	9.3	82	e35	e22	e15	152	67	15	24	4.2	3.3	56
24	9.9	231	43	e21	e14	213	72	17	12	3.5	2.6	47
25	9.7	181	61	e20	e14	305	71	13	7.5	3.5	2.4	39
26	14	448	68	e19	e14	465	56	12	5.9	4.0	2.1	32
27	24	525	e50	e18	e13	413	49	17	11	3.4	4.8	29
28	18	259	e40	e17	e13	396	47	14	10	2.7	12	26
29	16	188	e35	e17	---	341	50	13	6.8	2.2	19	24
30	15	140	e33	e17	---	310	56	11	6.8	2.2	12	36
31	14	---	e31	e18	---	372	---	9.2	---	8.8	8.2	---
TOTAL	498.4	3155	2210	753	519	5890	10199	722.2	264.0	322.8	245.4	1316.5
MEAN	16.1	105	71.3	24.3	18.5	190	340	23.3	8.80	10.4	7.92	43.9
MAX	48	525	196	31	24	465	1500	46	24	54	56	180
MIN	9.3	12	31	17	13	40	47	9.2	3.0	2.2	2.1	4.3
CFSM	.36	2.36	1.60	.54	.42	4.26	7.62	.52	.20	.23	.18	.98
IN.	.42	2.63	1.84	.63	.43	4.91	8.51	.60	.22	.27	.20	1.10

CAL YR 1986 TOTAL 28966.1 MEAN 79.4 MAX 3910 MIN 3.9 CFSM 1.78 IN. 24.2
WTR YR 1987 TOTAL 26095.2 MEAN 71.5 MAX 1500 MIN 2.1 CFSM 1.60 IN. 21.8

e Estimated

NOTE: Eastern Standard Time held in effect to April 22.

HUDSON RIVER BASIN

01350355 SCHOHARIE CREEK AT BREAKABEEN, NY

LOCATION.--Lat 42°32'10", long 74°24'40", Schoharie County, Hydrologic Unit 02020005, on left bank 100 ft downstream from bridge on State Highway 30, 0.9 mi north of Breakabeen, and 1.1 mi downstream from Keyser Kill.

DRAINAGE AREA.--443 mi^2.

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

REVISED RECORDS.--WDR NY-79-1: Drainage area. WDR NY-81-1: 1980(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 686.79 ft above National Geodetic Vertical Datum of 1929 (Soil Conservation Service Benchmark).

REMARKS.--Records good except those for estimated daily discharges, which are fair. Regulation of flow by Blenheim-Gilboa Pumped Storage Project. Entire flow, runoff from 314 mi^2, except for periods of spill, diverted from Schoharie Reservoir through Shandaken Tunnel into Esopus Creek upstream from Ashokan Reservoir for water supply of City of New York. For periods of spill see station 01350101. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--12 years, 554 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 72,200 ft^3/s, Apr. 5, 1987, gage height, about 19.5 ft, from reconstructed graph, 20.0 ft, from floodmarks, from rating curve extended above 20,000 ft^3/s on basis of contracted-opening and flow-over-road measurement of peak flow; minimum discharge, 1.7 ft^3/s, Oct. 14, 1980; minimum gage height, 0.25 ft, Sept. 26, 1985; minimum daily discharge, 5.8 ft^3/s, Sept. 13, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 72,200 ft^3/s, Apr. 5, gage height, about 19.5 ft, from reconstructed graph, 20.0 ft, from floodmarks, from rating curve extended above 20,000 ft^3/s on basis of contracted-opening and flow-over-road measurement of peak flow; minimum discharge, 13 ft^3/s, July 29, 30, Aug. 26, 27; minimum gage height, 0.59 ft, Oct. 1; minimum daily discharge, 13 ft^3/s, July 29-30, Aug. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	30	193	202	e74	e150	6940	616	29	21	19	20
2	32	29	184	186	e72	e400	2940	490	28	26	16	21
3	27	31	416	263	e100	e350	1920	430	30	66	18	20
4	60	31	459	142	e130	e260	e19000	507	40	40	19	18
5	70	30	253	139	e90	e210	e26500	421	71	28	17	17
6	50	49	192	e140	e100	e200	7940	335	49	23	16	16
7	40	74	198	e150	e94	e270	9610	334	39	21	16	16
8	34	65	323	e130	e88	920	6960	275	34	21	15	18
9	32	140	670	e100	e76	904	5220	239	37	72	19	83
10	32	119	948	e96	e94	498	3560	108	32	43	93	58
11	27	95	646	e120	e82	992	2570	143	25	30	43	38
12	27	89	589	e130	e74	904	2250	141	22	26	28	30
13	26	86	402	e80	e68	721	6010	125	22	28	22	73
14	28	74	282	e90	e64	522	7480	88	21	28	20	135
15	34	68	250	e130	e62	366	4000	62	20	40	18	69
16	30	68	385	e220	e60	302	2720	53	18	35	17	57
17	28	68	220	e170	e60	269	2270	48	17	24	15	48
18	26	65	219	e110	e60	203	2830	43	17	21	15	312
19	25	73	290	e150	e58	207	2680	47	16	19	15	550
20	27	58	206	e210	e58	213	2160	47	16	19	15	218
21	26	266	158	e110	e58	202	1730	43	16	19	16	644
22	24	185	134	e130	e58	292	1560	40	17	17	16	1270
23	23	147	136	e100	e56	508	1170	39	36	15	15	576
24	23	372	127	e90	e56	1100	1180	45	33	15	14	344
25	24	343	310	e70	e56	1710	1080	39	24	15	14	212
26	26	632	1180	e96	e54	2890	831	37	20	15	13	71
27	42	1270	629	e86	e54	2690	893	65	21	15	15	59
28	39	472	406	e80	e58	2460	328	65	27	14	20	52
29	34	346	375	e86	---	2330	729	46	21	13	33	49
30	32	263	308	e92	---	2390	597	37	19	13	29	50
31	31	---	261	e84	---	8750	---	33	---	17	22	---
TOTAL	1011	5638	11349	3982	2014	34183	135658	5041	817	799	663	5144
MEAN	32.6	188	366	128	71.9	1103	4522	163	27.2	25.8	21.4	171
MAX	70	1270	1180	263	130	8750	26500	616	71	72	93	1270
MIN	23	29	127	70	54	150	328	33	16	13	13	16

CAL YR 1986 TOTAL 169492 MEAN 464 MAX 15300 MIN 15
WTR YR 1987 TOTAL 206299 MEAN 565 MAX 26500 MIN 13

e Estimated

NOTE: Eastern Standard Time held in effect to April 10.

01351500 SCHOHARIE CREEK AT BURTONSVILLE, NY

LOCATION.--Lat 42°48'00", long 74°15'48", Schenectady County, Hydrologic Unit 02020005, on right bank 0.4 mi south of Burtonsville, 2.7 mi north of Esperance, and 13.5 mi upstream from mouth.

DRAINAGE AREA.--883 mi^2.

PERIOD OF RECORD.--October 1939 to current year.

GAGE.--Water-stage recorder. Datum of gage is 507.98 ft above National Geodetic Vertical Datum of 1929, unadjusted.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Regulation of flow by Blenheim Gilboa Pumped Storage Project. Entire flow, runoff from 314 mi^2, except for periods of spill, diverted from Schoharie Reservoir through Shandaken Tunnel into Esopus Creek upstream from Ashokan Reservoir for water supply of City of New York. For periods of spill see station 01350101. Several measurements of water temperature were made during the year. Telephone gage-height telemeter at station.

AVERAGE DISCHARGE.--48 years, 1,011 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 76,500 ft^3/s, Oct. 16, 1955, gage height, 12.39 ft; minimum, 2.4 ft^3/s, Sept. 24, 25, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of March 1936 and September 1938 reached stages of 10.5 and 10.2 ft, respectively, from information provided by local resident. However, flood of October 1903 is known to have reached a higher stage than the 1936 or 1938 flood.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 64,900 ft^3/s, Apr. 5, gage height, 11.23 ft; minimum, 21 ft^3/s, Aug. 26, 27, gage height, 0.61 ft; minimum daily, 22 ft^3/s, Aug. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	103	118	1150	595	e390	e2000	12900	1040	153	96	31	64
2	138	113	920	e640	e430	e4300	5440	945	140	110	35	52
3	137	113	1920	e740	e470	e3700	3710	817	147	333	45	46
4	369	116	3500	e580	e420	e2200	10700	728	159	283	41	41
5	522	114	e1970	e440	e410	e1600	45200	825	242	189	37	37
6	353	265	e1330	e460	e420	e1650	17700	827	236	139	36	34
7	250	407	e940	e480	e440	e1800	21700	787	176	114	34	37
8	199	363	e1150	e440	e390	5780	15200	664	163	103	32	43
9	175	956	1290	e410	e370	7050	9380	565	161	92	32	188
10	151	975	1980	e390	e340	3460	6070	456	143	106	43	327
11	132	566	1990	e370	e320	2770	4330	337	121	111	107	197
12	116	481	1440	e360	e300	2730	3530	362	109	86	100	135
13	109	481	1200	e350	e290	2150	14200	336	101	72	72	382
14	112	374	723	e340	e280	1750	13600	302	95	85	58	819
15	123	312	717	e444	e270	1510	7780	255	90	104	46	457
16	130	322	818	e700	e260	1310	4600	225	79	121	38	267
17	120	312	835	e640	e250	1160	3920	204	67	108	35	205
18	106	294	560	e580	e250	1060	4240	188	60	84	31	561
19	96	312	756	e630	e240	1190	4200	183	55	69	28	2150
20	88	267	783	e580	e240	1530	3390	199	50	67	27	1160
21	86	749	535	e550	e240	1260	2930	190	47	59	26	851
22	86	1150	472	e490	e240	2300	2400	171	56	52	26	1570
23	85	749	413	e460	e240	3210	2000	176	107	47	25	1070
24	83	1450	453	e440	e230	4180	1830	311	133	43	24	777
25	80	2420	522	e410	e230	4990	1920	235	122	38	24	519
26	94	2990	2050	e390	e230	6940	1510	197	96	38	22	340
27	173	7920	1920	e380	e240	6400	1300	213	245	44	25	232
28	190	3350	1210	e380	e600	5470	1180	282	195	42	31	201
29	162	2200	1030	e370	---	5050	947	271	140	35	54	181
30	143	1690	939	e370	---	4530	1100	216	112	41	73	182
31	130	---	815	e380	---	6270	---	175	---	36	76	---
TOTAL	4841	31929	36331	14789	9030	101300	228907	12682	3800	2947	1314	13125
MEAN	156	1064	1172	477	322	3268	7630	409	127	95.1	42.4	437
MAX	522	7920	3500	740	600	7050	45200	1040	245	333	107	2150
MIN	80	113	413	340	230	1060	947	171	47	35	22	34

CAL YR 1986 TOTAL 424230 MEAN 1162 MAX 28900 MIN 31
WTR YR 1987 TOTAL 460995 MEAN 1263 MAX 45200 MIN 22

e Estimated

NOTE: Eastern Standard Time held in effect to April 30.

HUDSON RIVER BASIN

01357500 MOHAWK RIVER AT COHOES, NY

LOCATION.--Lat 42°47'07", long 73°42'29", Albany County, Hydrologic Unit 02020004, on right bank at Niagara Mohawk Power Corp. School Street powerplant in Cohoes, and 2.0 mi upstream from mouth.

DRAINAGE AREA.--3,456 mi^2.

PERIOD OF RECORD.--December 1917 to current year. Monthly discharge only for some periods, published in WSP 1302. Prior to July 17, 1925, published as "at Crescent Dam".

REVISED RECORDS.--WSP 741: Drainage area. WSP 1302: 1919-23 (M).

GAGE.--Water-stage recorder. Datum of gage is 49.13 ft above National Geodetic Vertical Datum of 1929. Dec. 1, 19 to July 16, 1925, water-stage recorder at site 1.7 mi upstream at Crescent Dam at datum 130.87 ft higher. July to Oct. 19, 1925, powerplant gage at present site.

REMARKS.--No estimated daily discharges. Records good. Total flow of Mohawk River equals flow published at Cohoes which includes small diversion for Cohoes water supply, plus flow diverted at Cresent Dam to Barge Canal through Lock 6. Prior to 1925 records published as total flow. See Diversions in Hudson River Basin for regulation and diversions upstream from this station. Telephone gage-height telemeter at station.

COOPERATION.--Diversions through Barge Canal at Lock 6 provided by New York State Department of Transportation.

AVERAGE DISCHARGE.--7 years (1919-25), 5,820 ft^3/s, includes diversion at Lock 6; 62 years (1926-87), 5,690 ft^3/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 143,000 ft^3/s, Mar. 6, 1964, result of release from ice jam, gage height, 23.15 ft, from rating curve extended above 110,000 ft^3/s; minimum discharge, 6 ft^3/s, Sept. 18, 194 gage height, 3.40 ft; minimum daily, 23 ft^3/s, Aug. 24, 1941.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 41,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 27	1400	47,000	17.59	Apr. 7	2245	49,900	17.83
Apr. 5	1345	*81,300	*20.05				

Minimum discharge, 149 ft^3/s, Aug. 18, gage height, 4.76 ft; minimum daily discharge, 510 ft^3/s, May 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8220	4810	9900	5050	3070	2790	25500	913	2480	1790	1230	1960
2	7560	4140	8480	4850	3060	3350	20200	3990	1020	1970	1200	1760
3	5190	2610	9490	4270	3010	8740	15900	2740	1350	4900	1230	1880
4	11300	3350	16300	3430	2940	11100	15500	2600	1580	3980	3070	1490
5	13900	3620	15100	3110	2960	10400	67400	3170	1530	2750	1680	1520
6	8770	5930	11200	2860	2950	8760	49100	544	2970	1610	1940	1560
7	8140	8820	9030	3250	2910	7870	42900	2760	1880	1720	1040	1670
8	5670	7100	7410	3700	2910	11300	40000	3450	1600	1700	1210	1740
9	4660	9700	6810	3940	2970	20000	25000	1870	1520	1740	1120	3070
10	4010	12900	7490	3740	2390	14300	18800	2050	2990	3290	1510	3000
11	3970	7990	10200	3650	2810	10800	14100	2000	2080	1770	1320	2890
12	3670	6950	9910	3530	2660	9060	11500	1700	1810	1710	1510	2310
13	3100	6230	8060	3430	3290	7810	17700	1790	1610	1350	1020	6390
14	4170	6600	5890	3650	2150	6740	30900	1670	1630	931	1210	19600
15	6580	5430	6070	3680	2510	5910	21000	1350	2000	5060	955	6560
16	5800	4990	5610	4020	1960	5680	15200	1340	1220	4820	948	3970
17	4140	5020	5470	5000	1340	5440	11800	1460	1640	1840	1120	4280
18	3260	4800	5400	4510	1840	5000	10000	1470	1120	1370	680	6360
19	3240	5020	5480	4010	1910	5330	9840	1460	1120	1760	866	16400
20	3320	4250	5860	3740	2020	7140	8570	1420	930	1270	1530	10600
21	3180	5460	5770	3610	2020	7080	7670	916	990	2030	734	9410
22	3210	7490	5230	3890	2380	7350	4830	510	1170	1600	1080	5710
23	3320	6410	5020	3550	2300	13900	3110	992	4090	1330	1160	6290
24	3360	7960	3670	3300	2180	17800	2830	1310	4270	1160	1060	5470
25	3130	16200	5440	3010	2150	19100	3530	1940	2190	1120	1060	3680
26	3050	16400	6940	2750	2150	22000	4730	1900	1600	1010	1110	3350
27	4020	40300	9470	2810	1810	22400	4050	1700	2900	963	964	3220
28	5170	26500	7960	2690	1800	18800	3000	1720	3150	523	1180	1310
29	5540	17100	6320	2620	---	17100	2840	2870	2590	592	1730	2910
30	5140	12600	5700	2720	---	15400	1570	2350	1420	949	1770	2480
31	4890	---	5380	3060	---	14900	---	973	---	1160	1930	---
TOTAL	162680	276680	236060	111430	68450	343350	509070	56928	58450	59768	40167	142840
MEAN	5248	9223	7615	3595	2445	11080	16970	1836	1948	1928	1296	4761
MAX	13900	40300	16300	5050	3290	22400	67400	3990	4270	5060	3070	19600
MIN	3050	2610	3670	2620	1340	2790	1570	510	930	523	680	1310

CAL YR 1986 TOTAL 2482230 MEAN 6801 MAX 67500 MIN 1320
WTR YR 1987 TOTAL 2065870 MEAN 5660 MAX 67400 MIN 510

NOTE: Eastern Standard Time held in effect to April 9.

01357500 MOHAWK RIVER AT COHOES, NY--Continued

(01357499) Diversion, in cubic feet per second, from Mohawk River at Cresent Dam, NY, through Barge Canal at lock 6, water year October 1986 to September 1987

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	122	110	92	3.0	3.0	3.0	3.0	92	134	110	146	134
2	140	110	92	3.0	3.0	3.0	3.0	92	152	134	170	110
3	128	116	92	3.0	3.0	3.0	3.0	92	122	164	128	134
4	152	104	92	3.0	3.0	3.0	3.0	164	158	164	152	188
5	140	104	92	3.0	3.0	3.0	3.0	128	152	152	140	140
6	134	116	92	3.0	3.0	3.0	3.0	140	164	164	158	140
7	134	110	98	3.0	3.0	3.0	3.0	134	134	152	164	176
8	140	104	92	3.0	3.0	3.0	3.0	140	122	134	176	110
9	122	110	92	3.0	3.0	3.0	3.0	146	146	158	164	128
10	152	140	92	3.0	3.0	3.0	3.0	128	164	158	122	116
11	140	98	110	3.0	3.0	3.0	3.0	122	128	140	146	140
12	140	140	104	3.0	3.0	3.0	3.0	140	128	164	140	146
13	140	98	92	3.0	3.0	3.0	3.0	152	146	146	134	140
14	116	110	92	3.0	3.0	3.0	46	152	134	158	146	116
15	128	98	92	3.0	3.0	3.0	92	128	158	110	158	122
16	122	98	46	3.0	3.0	3.0	92	164	140	122	158	128
17	122	98	3.0	3.0	3.0	3.0	92	152	152	140	134	152
18	128	98	3.0	3.0	3.0	3.0	92	146	152	146	122	116
19	116	122	3.0	3.0	3.0	3.0	92	140	152	152	140	128
20	128	116	3.0	3.0	3.0	3.0	116	122	128	140	146	116
21	122	92	3.0	3.0	3.0	3.0	98	122	158	116	170	140
22	122	110	3.0	3.0	3.0	3.0	98	152	134	146	128	122
23	116	98	3.0	3.0	3.0	3.0	92	152	128	158	146	140
24	110	116	3.0	3.0	3.0	3.0	104	146	134	152	134	176
25	116	98	3.0	3.0	3.0	3.0	92	146	134	140	158	140
26	122	92	3.0	3.0	3.0	3.0	92	152	134	158	122	146
27	110	92	3.0	3.0	3.0	3.0	104	146	116	164	134	122
28	110	92	3.0	3.0	3.0	3.0	92	152	128	140	104	146
29	110	92	3.0	3.0	---	3.0	98	152	146	134	128	140
30	104	92	3.0	3.0	---	3.0	92	140	152	134	140	158
31	122	---	3.0	3.0	---	3.0	---	134	---	176	134	---
TOTAL	3908	3174	1507.0	93.0	84.0	93.0	1623.0	4268	4230	4526	4442	4110
MEAN	126	106	48.6	3.00	3.00	3.00	54.1	138	141	146	143	137
MAX	152	140	110	3.0	3.0	3.0	116	164	164	176	176	188
MIN	104	92	3.0	3.0	3.0	3.0	3.0	92	116	110	104	110

CAL YR 1986 TOTAL 30992.0 MEAN 84.9 MAX 182 MIN 3.0
WTR YR 1987 TOTAL 32058.0 MEAN 87.8 MAX 188 MIN 3.0

01357500 MOHAWK RIVER AT COHOES, NY

REGULATION
(see Reservoirs in Hudson River Basin)

Delta Dam.
Hinckley Reservoir.
Schoharie Reservoir.

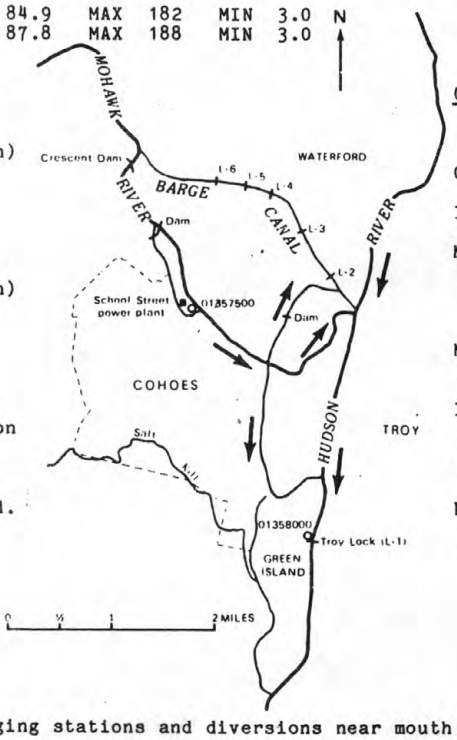
DIVERSIONS
(see Reservoirs in Hudson River Basin)

From Chenango River basin through Oriskany Creek Feeder.

From (and occasionally into) Oswego River basin through summit level of Erie (Barge) Canal between New London and Utica.

From Black River basin through Black River Canal during navigation period.

Into Esopus Creek from Schoharie Reservoir through Shandaken Tunnel for New York City water supply.



01358000 HUDSON RIVER AT GREEN ISLAND, NY

REGULATION

Great Sacandaga Lake at Conklingville (see station 01323500).
Indian Lake near Indian Lake (see station 01314500).
Mohawk River regulation listed under Mohawk River at Cohoes.

DIVERSIONS

Mohawk River diversions listed under Mohawk River at Cohoes.

Into St. Lawrence River basin through:
Glens Falls feeder at Dunham Basin.
Bond Creek at Dunham Basin.
Champlain (Barge) Canal.

From St. Lawrence River basin through summit level of Champlain (Barge) Canal at Dunham Basin

Figure 8.--Gaging stations and diversions near mouth of Mohawk River.

HUDSON RIVER BASIN

01358000 HUDSON RIVER AT GREEN ISLAND, NY

(National stream-quality accounting network station)
(National radiochemical network station)

LOCATION.--Lat 42°45'08", long 73°41'22", Albany County, Hydrologic Unit 02020003, on right bank at Green Island, just upstream from Troy lock and dam, and 0.5 mi downstream from 5th branch Mohawk River. Water-quality sampling site at bridge on State Highway 7, 1.7 mi downstream from discharge station.

DRAINAGE AREA.--8,090 mi^2, approximately (including that above site of former auxiliary gage).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1946 to current year.

GAGE.--Water-stage recorder. Datum of gage is 0.31 ft below National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). From July 1, 1946 to Mar. 12, 1962 auxiliary water-stage recorder on bypass channel at datum 10.59 ft higher. Totalizing flowmeter on each turbine in powerplant.

REMARKS.--Records fair. Records include flow over spillway, estimates of flow through lock, and flow through powerplant. Powerplant, located on right bank just downstream from gage, was inoperative from Nov. 20, 1960 to Feb. 23, 1971. See Diversions in Hudson River Basin for regulation and diversions upstream from this station. Satellite gage-height and flowmeter telemeter readings at station.

COOPERATION.--Turbine flowmeter readings provided by Niagara Mohawk Power Corporation.

AVERAGE DISCHARGE.--41 years, 13,700 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 181,000 ft^3/s, Dec. 31, 1948, gage height, 27.05 ft, from high-water mark in gage well; maximum daily discharge, 152,000 ft^3/s, Mar. 14, 1977; minimum daily, 882 ft^3/s, Sept. 2, 1968; minimum gage height, 13.68 ft, July 6, 1981, when pool was lowered for inspection of flashboards.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 19, 1936, reached a stage of 29.48 ft at gage on opposite bank, from information by Corps of Engineers (discharge, 215,000 ft^3/s). Flood of Mar. 28, 1913, prior to construction of Sacandaga Reservoir and Troy lock and dam, reached a stage about 0.2 ft higher upstream from former dam near same site. Downstream from dams, flood in 1913 was about 3.3 ft higher than flood in 1936, from information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 122,000 ft^3/s, Apr. 5, gage height, 23.79 ft; minimum daily, 2,780 ft^3/s, May 23; minimum gage height, 15.27 ft, June 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e14000	11000	22000	13000	8020	7420	69900	6880	6240	6530	3640	5700
2	13400	11900	20100	12000	8070	9140	59400	9320	4420	6300	3360	5530
3	11700	9810	22700	11700	8000	14900	44700	7320	5470	10200	4200	4980
4	18700	9400	35300	10200	8100	18000	36400	6570	5620	9650	7060	4930
5	23000	10700	32500	9960	7950	16900	93400	e7170	5070	8000	5410	4680
6	18800	13300	26700	10300	8040	15000	89900	4780	7270	7490	4890	4680
7	15900	16100	22700	10500	7480	13900	79700	7170	5170	5450	4050	4380
8	13000	14300	20400	10200	7610	18900	75000	8410	3290	5050	4410	4910
9	11400	18600	18400	10500	7760	32600	51800	5160	3880	5170	3970	11500
10	10800	24400	18800	10200	6940	30300	38700	5690	7140	8060	4740	11600
11	10700	18000	22000	10300	7130	19500	31000	4940	6820	5690	4320	9670
12	9770	15200	20700	10200	7230	17000	28500	5620	6230	5450	4260	7420
13	10200	15600	18800	9930	7970	15400	35800	5740	5410	4120	4010	11200
14	9870	15200	14800	9240	6840	12900	51400	5480	5800	4730	4100	33000
15	13600	13300	14400	9180	6870	11900	38500	4770	6530	10900	3520	19500
16	11600	13800	14900	10000	6720	12500	30000	4320	5500	10400	3640	15100
17	11600	13300	15000	11100	5840	12000	23000	4160	4500	6940	3510	12800
18	10100	12200	14200	9730	6400	11600	21500	4140	3870	4760	3190	13200
19	10400	11700	15400	8780	6200	12300	20500	4850	4290	5410	3060	29600
20	10300	12500	16800	9040	6700	14100	18500	3720	4040	5040	3900	25200
21	10100	14600	15500	8540	6500	14800	e17200	3640	3380	6050	3960	e20200
22	8310	18700	14000	8500	7070	15300	15900	3550	3470	5600	3770	e15100
23	8560	16300	13400	7840	6920	22400	9230	2780	11300	4070	4340	e14000
24	8800	18700	11800	7120	7000	29100	9770	3930	12900	3510	4180	e13200
25	8380	27900	13900	6980	6910	32500	9340	4920	9650	2870	4310	e11600
26	9260	26900	17900	7200	6580	39400	11200	5300	6140	3430	3560	e10900
27	10500	62800	19600	6720	6130	45900	8820	4920	7630	3950	3300	e9850
28	11400	49300	17900	7150	5930	38400	7520	5080	9810	3440	4090	e9090
29	11500	34500	15100	6520	---	36300	8250	7520	8120	3070	5490	e8840
30	11500	27000	14100	6920	---	34800	6730	e7570	6140	3310	4270	e8750
31	11400	---	13900	7940	---	37700	---	5230	---	2940	5000	---
TOTAL	368550	577010	573700	287490	198910	662860	1041560	170650	185100	177580	129510	361110
MEAN	11890	19230	18510	9274	7104	21380	34720	5505	6170	5728	4178	12040
MAX	23000	62800	35300	13000	8100	45900	93400	9320	12900	10900	7060	33000
MIN	8310	9400	11800	6520	5840	7420	6730	2780	3290	2870	3060	4380

CAL YR 1986 TOTAL 5657660 MEAN 15500 MAX 104000 MIN 3730
WTR YR 1987 TOTAL 4734030 MEAN 12970 MAX 93400 MIN 2780

e Estimated

01358000 HUDSON RIVER AT GREEN ISLAND, NY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1955 to current year.
CHEMICAL DATA: 1963 (a), 1964-65 (e), 1966-77 (d), 1978 (c), 1979-82 (d), 1983-86 (b), 1987 (a).
MINOR ELEMENTS DATA: 1970-71 (a); 1972-73, 1975-79 (b), 1980-85 (b), 1986-87 (a).
RADIOCHEMICAL DATA: 1968-71 (c), 1973-75 (a), 1976 (d), 1977 (a),1978 (b), 1979-80 (a), 1981 (b), 1982-85 (a).
PESTICIDE DATA: 1976-77 (b), 1978 (a), 1979 (c), 1980, 82 (a).
ORGANIC DATA: OC--1974 (a), 1975 (c), 1976-77 (b), 1978 (a), 1979 (c), 1980-81 (d).
PCB--1978 (a), 1979 (b), 1980 (a).
NUTRIENT DATA: 1968 (b), 1969-76 (d), 1977-79 (c), 1980-82 (d), 1983-86 (b), 1987 (a).
BIOLOGICAL DATA:
Bacteria--1971 (a), 1973-74 (d), 1975 (a), 1976-78 (c), 1979-81 (d), 1983-86 (b).
Phytoplankton--1975 (a), 1976-77 (c), 1978 (b), 1979-81 (c).
Periphyton--1976-77 (b), 1978 (a), 1979-80 (b).
SEDIMENT DATA: 1975 (b), 1976 (d), 1977 (b), 1978 (c), 1979-82 (d), 1983-86 (b).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1964 to September 1965, once-daily measurements, unpublished.
pH: October 1964 to September 1965, once-daily measurements, unpublished.
WATER TEMPERATURES: April 1947 to September 1954, once-daily measurements, unpublished; October 1954 to September 1981.

REMARKS.--Prior to October 1968 sampling site at old bridge on State Highway 7 about 100 ft upstream, and between April 1971 and September 1973 sampling site at former bridge on road between Green Island and Troy at Starbuck Island.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	DIS-CHARGE IN CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD 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)	SULFATE DIS-SOLVED (MG/L AS SO4)
MAR 31...	1200	37700	25.5	2.7	41	12	12	2.7	4.1	0.8	17

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	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)
MAR 31...	5.9	0.1	6.2	62	67	0.55	0.11	0.09	0.40	0.030	0.010

DATE	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
MAR 31...	<0.010	190	<1	12	<0.5	<1	<1	<3	1	320	<5

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
MAR 31...	<4	28	<0.1	<10	<1	<1	<1	40	<6	10

HUDSON RIVER BASIN

01359139 HUDSON RIVER AT ALBANY, NY

LOCATION.--Lat 42°38'57", long 73°44'46", Albany County, Hydrologic Unit 02020006, on right bank 0.5 mi upstream from bridge on U.S. Highways 9 and 20 in Albany, and 0.5 mi downstream from the Penn Central Transportation Company bridge.

DRAINAGE AREA.--8,290 mi^2.

PERIOD OF RECORD.--October 1972 to September 1976, April 1981 to current year.

GAGE.--Water-stage recorder. Datum of gage is 10.00 ft below National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Gage-height record converted to elevation above or below (-) mean sea level for publication.

REMARKS.--Records good. Telephone gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation recorded, 10.05 ft, May 31, 1984; minimum recorded, -4.50 ft, Mar. 8, 1986.

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum high tide												
Elevation	5.32	5.92	7.06	6.71	4.40	7.94	9.45	5.13	5.41	5.39	5.29	5.69
Date	8	27	3	2	28	31	5	14	12	12,14	8	20
Minimum low tide												
Elevation	-2.13	-2.54	-2.20	-3.57	-2.47	-1.71	-2.23	-2.78	-2.63	-2.37	-2.29	-2.25
Date	10	14	13	12	24	1	24,25	16	17	29	23	4
Mean high tide	4.56	4.81	4.74	4.02	3.07	4.92	5.86	4.40	4.59	4.54	4.43	4.63
Mean water level	1.77	2.03	1.95	1.37	1.01	2.36	3.42	1.36	1.51	1.53	1.47	1.87
Mean low tide	-1.18	-0.86	-0.98	-1.32	-1.04	-0.30	0.87	-1.85	-1.72	-1.68	-1.66	-1.06

01359750 MOORDENER KILL AT CASTLETON-ON-HUDSON, NY

LOCATION.--Lat 42°32'02", long 73°44'15", Rensselaer County, Hydrologic Unit 02020006, on left bank 800 ft downstream from bridge on State Highway 150, 0.2 mi east of village of Castleton-on-Hudson, 0.5 mi downstream from unnamed tributary, and 1.2 mi upstream from mouth.

DRAINAGE AREA.--32.6 mi^2.

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 98.72 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 25, 1957, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Slight diurnal fluctuation of low flow by mills upstream and occasional regulation at dam 800 ft upstream. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--30 years, 38.1 ft^3/s, 15.87 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,850 ft^3/s, Mar. 15, 1986, gage height, 4.25 ft; minimum, 0.30 ft^3/s, Aug. 9, 10, 1964, gage height, 0.25 ft; minimum daily, 1.0 ft^3/s, Sept. 6, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 7	1900	*409	a*2.25	No other peak greater than base discharge.			

a Recorded in well; outside gage height was 2.59 ft, from crest-stage gage.

Minimum discharge, 3.2 ft^3/s, Aug. 25, gage height, 0.58 ft; minimum daily discharge, 3.7 ft^3/s, Aug. 21, 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	9.2	56	e35	e29	e29	209	26	11	8.6	4.2	6.0
2	11	9.1	50	e37	e32	e42	115	24	19	15	4.5	5.4
3	11	9.0	153	e36	e31	e70	114	22	22	32	5.6	5.0
4	39	8.9	144	e35	e30	e76	100	22	21	16	5.0	4.7
5	27	8.5	93	e34	e29	e72	181	23	26	11	4.7	4.6
6	18	18	69	e35	e31	e70	155	29	17	8.4	4.9	4.5
7	13	24	60	e30	e33	86	346	27	13	7.8	4.5	5.4
8	11	28	53	e28	e30	169	264	23	15	7.6	4.2	8.4
9	10	81	46	e26	e27	216	167	21	14	7.0	5.1	71
10	9.6	66	55	e25	e31	e110	123	19	12	6.5	7.2	32
11	9.1	44	49	e26	e29	e90	99	18	10	6.0	5.7	16
12	8.6	41	43	e25	e28	e72	85	17	11	6.3	4.9	11
13	8.4	40	36	e25	e27	e64	130	16	13	5.7	4.6	22
14	13	30	e42	e25	e26	e58	96	15	15	7.4	4.3	36
15	18	26	e36	e24	e25	e56	75	15	22	11	4.2	20
16	14	25	28	e24	e28	e56	64	14	13	7.8	4.1	14
17	12	24	29	e24	e30	56	61	14	11	6.3	3.9	11
18	10	22	30	e25	e29	56	63	13	9.8	5.7	3.8	39
19	8.9	24	41	e28	e29	69	56	14	8.9	5.4	3.8	79
20	8.4	24	40	e30	e29	79	49	13	8.5	5.5	3.9	47
21	8.0	121	36	e32	e28	74	45	13	8.4	5.2	3.7	34
22	7.3	101	32	e31	e27	107	41	12	8.7	5.0	3.9	26
23	7.3	66	e29	e31	e27	150	37	13	9.3	4.8	3.9	21
24	7.3	152	28	e31	e26	173	35	35	8.5	4.6	3.8	18
25	7.3	138	70	e30	e25	155	33	21	7.6	4.6	3.8	15
26	9.0	122	93	e26	e25	139	30	16	7.2	4.8	3.7	13
27	19	211	75	e24	e24	112	28	19	13	4.5	5.1	12
28	17	123	57	e23	e23	90	27	23	11	4.3	5.7	11
29	14	93	e49	e24	---	75	28	21	8.8	4.2	8.4	10
30	12	74	e43	e25	---	64	28	15	8.0	4.2	6.6	11
31	10	---	e39	e26	---	172	---	12	---	4.5	5.1	---
TOTAL	391.2	1762.7	1704	880	788	2907	2884	585	382.7	237.7	146.8	613.0
MEAN	12.6	58.8	55.0	28.4	28.1	93.8	96.1	18.9	12.8	7.67	4.74	20.4
MAX	39	211	153	37	33	216	346	35	26	32	8.4	79
MIN	7.3	8.5	28	23	23	29	27	12	7.2	4.2	3.7	4.5
CFSM	.39	1.80	1.69	.87	.86	2.88	2.95	.58	.39	.24	.15	.63
IN.	.45	2.01	1.94	1.00	.90	3.32	3.29	.67	.44	.27	.17	.70

CAL YR 1986	TOTAL	14901.9	MEAN	40.8	MAX	1230	MIN	4.2	CFSM	1.25	IN.	17.0
WTR YR 1987	TOTAL	13282.0	MEAN	36.4	MAX	346	MIN	3.7	CFSM	1.12	IN.	15.2

e Estimated

HUDSON RIVER BASIN

01362198 ESOPUS CREEK AT SHANDAKEN, NY
(Hydrologic bench-mark station)

LOCATION.--Lat 42°06'59", long 74°23'20", Ulster County, Hydrologic Unit 02020006, on right bank 2,400 ft downstream from bridge on State Highway 28, at Shandaken, 0.5 mi downstream from Bushnellsville Creek, 0.5 mi upstream from Fox Hollow Creek, and 5.2 mi northwest of Phoenicia. Water-quality sampling site at discharge station.

DRAINAGE AREA.--59.5 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,017.27 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor. Occasional slight regulation when filling or draining swimming pools or small ponds upstream from station.

AVERAGE DISCHARGE.--24 years, 138 ft^3/s, 31.50 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,100 ft^3/s, Apr. 4, 1987, gage height, 13.70 ft, from floodmarks, from rating curve extended above 3,000 ft^3/s, on basis of slope-area measurement at gage height 13.70 ft, at site 0.5 mi upstream, not adjusted for undetermined amount of flow by passing gage; minimum discharge, 2.1 ft^3/s, Sept. 16, 1983 (result of slight regulation upstream from station).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 30, 1951 reached a stage of about 15.1 ft, from information supplied by local residents.

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. 26	2200	1,590	7.07	Apr. 4	Unknown	a*16,100	b*13.7
Mar. 31	1630	3,050	8.31	Apr. 13	0745	c1,250	c6.0

a From rating curve extended as explained above.
b From floodmarks.
c About.

Minimum discharge, 13 ft^3/s, Oct. 1, 2, 3; minimum daily, 13 ft^3/s, Oct. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	18	257	e110	e35	155	999	e100	44	22	51	41
2	13	18	223	e110	e35	189	629	e94	46	30	55	39
3	15	18	424	e100	e36	148	442	e84	44	43	130	36
4	33	18	e390	e90	e38	131	e5000	e66	45	35	104	33
5	32	18	e340	e86	e38	121	e2800	e74	44	30	86	31
6	26	28	e290	e80	e36	115	e1200	e97	40	28	80	30
7	23	31	e240	e76	e35	134	e900	e87	40	28	74	30
8	21	36	e210	e74	e37	253	e700	86	41	28	65	45
9	20	86	e190	69	e35	477	e500	83	39	27	65	492
10	19	91	e200	67	e33	429	e410	81	35	25	71	e295
11	17	89	e180	e64	e31	348	e340	79	34	23	59	e204
12	17	84	e160	e60	e30	285	e310	77	35	23	53	156
13	17	77	e140	e56	e28	237	e860	73	34	41	49	292
14	22	70	e130	e58	e27	203	e620	70	e31	e100	45	361
15	24	66	e120	e60	e26	178	e490	68	e29	e130	42	278
16	22	64	e110	e60	e25	158	e400	64	e28	88	40	218
17	21	62	e100	e58	e24	142	e480	62	e26	76	37	198
18	20	63	108	e56	e23	130	e600	61	e26	66	34	366
19	19	64	109	e54	e23	123	e480	63	e26	58	32	630
20	18	61	95	e50	e23	118	e390	57	e27	55	31	524
21	18	389	87	e48	e24	112	e320	53	e27	49	27	430
22	18	250	80	e46	e25	114	e280	51	e28	43	26	352
23	18	202	76	e44	e27	129	e240	48	47	39	25	278
24	18	245	72	e42	e26	161	e220	48	e31	35	23	228
25	17	245	126	e39	e26	234	e190	46	e27	48	21	189
26	19	507	135	e37	e26	431	e170	45	e25	167	20	161
27	22	1060	119	e35	e27	511	e150	72	31	89	31	137
28	22	628	114	e34	e30	562	e140	55	27	70	42	119
29	21	450	111	e33	---	598	e130	50	24	60	69	105
30	19	332	108	e34	---	662	e115	47	22	53	49	99
31	19	---	104	e35	---	1750	---	46	---	66	41	---
TOTAL	625	5370	5148	1865	829	9338	20505	2087	1003	1675	1577	6397
MEAN	20.2	179	166	60.2	29.6	301	683	67.3	33.4	54.0	50.9	213
MAX	33	1060	424	110	38	1750	5000	100	47	167	130	630
MIN	13	18	72	33	23	112	115	45	22	22	20	30
CFSM	.34	3.01	2.79	1.01	.50	5.06	11.5	1.13	.56	.91	.85	3.58
IN.	.39	3.36	3.22	1.17	.52	5.84	12.8	1.30	.63	1.05	.99	4.00

CAL YR 1986 TOTAL 50672 MEAN 139 MAX 2590 MIN 8.5 CFSM 2.33 IN. 31.7
WTR YR 1987 TOTAL 56419 MEAN 155 MAX 5000 MIN 13 CFSM 2.60 IN. 35.3

e Estimated

01362198 ESOPUS CREEK AT SHANDAKEN, NY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963 to current year.
CHEMICAL DATA: 1963-65 (a), 1966-67 (b), 1968-82 (d), 1983-84 (b), 1985 (c), 1986 (b), 1987 (a).
MINOR ELEMENT DATA: 1964-65, 1967-73, 1975-76 (a), 1977 (b), 1978-87 (a).
RADIOCHEMICAL DATA: 1967-77, 1979-85 (a).
PESTICIDE DATA: 1967-72, 1974-77, 1979-82 (a).
ORGANIC DATA: OC--1979 (a), 1981 (c).
PCB--1974-77, 1979-82 (a).
PCN--1977, 1979-82 (a).
NUTRIENT DATA: 1968 (a), 1969-71 (d), 1972 (c), 1974 (a), 1975-82 (d), 1983-84 (b), 1985 (c), 1986-87 (a).
BIOLOGICAL DATA:
Bacteria--1968-69 (d), 1970-72 (c), 1973-82 (d), 1983-85 (b), 1986-87 (a).
SEDIMENT DATA: 1969-71 (c), 1972-75, 1977-82 (d), 1983-86 (b).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: July 1963 to July 1968, January 1970 to current year.

INSTRUMENTATION.--Water-temperature digital recorder since November 1981, provides one-hour interval punches. Prior to November 1981, water-temperature recorder provided continuous recordings.

REMARKS.--Interruption in temperature record was due to malfunction of recording instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum (except water years 1969, 1977, 1981, 1983-84, 1987), 28.5°C Aug. 16, 1965, Aug. 9, 1980; minimum, 0.0°C on many days during winter periods except water years 1967 and 1976.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum recorded, 22.5°C, Aug. 16, 18, but may have been higher during period of instrument malfunction, May 22 to July 30; minimum, 0.0°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	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	HARD-NESS NONCARB WH WAT TOT FLD 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)
NOV												
21...	1645	341	63	--	--	--	--	17	11	4.8	1.2	2.9
MAR												
25...	1100	195	61	25.5	1.3	K5	K15	17	9	4.9	1.2	3.4

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	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, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE 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)
NOV												
21...	0.5	6	8	5.2	--	2.7	--	31	0.666	--	--	--
MAR												
25...	0.4	--	5	6.4	0.1	2.6	32	33	--	0.31	<0.01	<0.01

DATE	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)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)
NOV												
21...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
25...	<0.20	0.010	<0.010	<0.010	30	<1	11	<0.5	<1	7	<3	<1

DATE	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV												
21...	32	--	--	6	--	--	--	--	--	--	--	--
MAR												
25...	53	<5	<4	4	<0.1	<10	<1	<1	<1	17	<6	4

K Results based on colony count outside the acceptable range (non-ideal colony count).

HUDSON RIVER BASIN

01362198 ESOPUS CREEK AT SHANDAKEN, NY--Continued

TEMPERATURE (DEG. C) OF WATER, 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	18.0	15.5	17.5	8.5	4.0	6.5	4.0	2.0	3.0	1.5	.0	1.0
2	17.5	14.5	16.0	9.0	5.5	8.5	3.5	2.0	3.0	1.5	.0	1.0
3	14.5	12.5	13.5	6.5	4.0	5.0	5.0	3.0	4.5	1.0	.5	.5
4	16.5	13.5	15.0	7.5	4.5	6.0	4.5	3.5	4.0	.5	.0	.5
5	15.5	12.0	14.0	4.5	2.5	3.5	4.0	3.0	3.5	.0	.0	.0
6	12.0	9.0	11.0	7.0	3.5	5.5	4.5	2.0	3.5	.5	.0	.0
7	11.0	7.5	9.5	7.0	5.0	6.0	4.0	3.0	3.5	2.5	.5	1.5
8	12.0	7.5	10.0	8.5	7.0	8.0	4.5	2.5	4.0	1.5	.5	1.0
9	13.5	10.0	11.5	10.5	7.5	9.0	4.0	2.0	2.5	2.0	.5	1.5
10	10.0	7.0	8.5	7.5	5.0	6.0	5.5	3.0	4.5	1.5	.0	1.0
11	8.5	4.5	7.0	5.0	3.5	4.5	3.0	2.5	3.0	1.0	.0	.5
12	10.0	6.5	8.5	6.5	4.5	5.5	3.5	2.5	3.0	1.5	.0	1.0
13	11.5	9.0	10.5	4.5	1.5	3.5	2.5	.0	1.0	1.5	.5	1.0
14	13.5	11.0	12.0	3.5	1.5	2.0	1.0	.0	.5	2.0	.0	1.0
15	11.0	8.5	10.0	4.0	1.0	3.0	3.0	1.0	2.5	3.5	2.0	3.0
16	10.0	8.0	9.0	6.0	4.0	5.0	4.0	3.0	3.5	3.0	.0	1.5
17	10.0	8.0	9.0	6.0	4.5	5.0	4.0	3.5	3.5	.0	.0	.0
18	9.0	7.0	8.0	5.5	3.5	5.0	3.5	1.0	2.5	.5	.0	.0
19	8.5	5.0	7.0	3.5	1.5	3.0	2.5	.5	2.0	.5	.0	.5
20	9.0	5.0	7.0	2.0	.0	1.0	3.5	2.0	3.0	.5	.0	.0
21	10.0	6.0	8.0	4.0	2.0	3.5	2.0	1.0	1.5	.5	.0	.0
22	11.0	8.0	9.5	5.0	3.0	3.5	2.5	1.0	1.5	.0	.0	.0
23	12.0	8.0	10.0	5.0	2.5	4.0	2.0	.0	.5	.5	.0	.0
24	10.0	6.5	8.5	6.0	5.0	5.0	2.5	.5	1.5	.0	.0	.0
25	9.0	5.0	7.0	6.0	4.0	5.0	3.5	2.0	3.0	.0	.0	.0
26	9.0	7.5	8.0	7.0	4.0	5.0	3.5	3.0	3.0	.0	.0	.0
27	10.5	8.5	9.5	6.5	5.0	6.0	3.5	2.0	2.5	.0	.0	.0
28	10.5	8.0	10.0	6.0	4.0	5.0	2.5	1.0	2.0	.0	.0	.0
29	10.0	6.5	8.5	6.0	4.5	5.0	3.5	2.0	2.5	.0	.0	.0
30	10.0	6.5	9.0	5.0	3.0	4.0	3.0	1.5	2.0	.0	.0	.0
31	6.5	4.5	5.5	---	---	---	3.0	1.0	2.0	.0	.0	.0
MONTH	18.0	4.5	10.0	10.5	0.0	5.0	5.5	0.0	2.5	3.5	0.0	0.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	.0	.0	.0	.5	.0	.0	5.0	3.0	4.0	11.0	4.0	7.5
2	.0	.0	.0	.5	.0	.0	5.0	3.0	4.0	11.5	4.5	8.0
3	.5	.5	.5	.5	.0	.0	5.5	4.0	4.5	10.0	5.5	8.0
4	1.0	.5	.5	2.0	.0	1.0	5.5	4.0	5.0	10.5	6.0	8.0
5	.5	.0	.0	3.0	.0	1.0	5.5	4.5	5.0	8.0	6.5	7.0
6	.5	.0	.5	4.0	.0	1.5	6.0	5.0	5.5	8.5	6.5	7.5
7	1.0	.0	.5	5.5	2.0	3.5	6.5	5.0	5.5	13.0	5.0	9.0
8	1.0	.0	.5	6.0	2.0	3.5	6.0	5.0	5.5	12.5	4.5	9.0
9	.5	.0	.5	3.5	1.0	3.0	7.0	5.0	6.0	14.0	5.0	10.0
10	.5	.0	.0	3.0	.0	1.0	9.5	4.5	6.5	17.0	8.0	12.5
11	.5	.0	.0	4.0	.0	1.5	10.5	5.0	7.5	17.5	9.0	13.5
12	.5	.0	.0	3.0	.5	1.5	9.5	6.5	8.0	15.0	8.0	12.0
13	.0	.0	.0	4.0	1.0	2.0	7.5	5.5	7.0	15.0	5.5	9.5
14	.5	.0	.5	5.5	1.0	2.5	10.0	5.0	7.0	16.0	4.5	11.0
15	.0	.0	.0	5.5	.5	2.5	7.5	6.0	7.0	15.0	7.5	12.0
16	.0	.0	.0	4.0	.5	2.0	7.0	6.0	6.5	14.0	5.0	9.5
17	.0	.0	.0	5.0	1.0	2.5	7.5	6.5	7.0	19.0	8.5	13.5
18	.0	.0	.0	6.5	1.0	3.0	10.0	7.0	8.0	20.5	9.5	14.0
19	.0	.0	.0	6.5	1.0	3.0	11.0	7.5	9.0	13.0	10.0	11.0
20	.0	.0	.0	4.0	2.0	2.5	11.0	7.5	9.0	14.5	9.0	11.0
21	.0	.0	.0	3.5	2.0	2.5	14.5	8.5	10.5	17.5	9.5	13.0
22	.0	.0	.0	8.0	3.5	4.5	13.0	8.5	10.0	---	---	---
23	.0	.0	.0	9.0	3.0	5.0	11.0	7.5	9.0	---	---	---
24	.5	.0	.0	9.0	3.5	5.0	9.5	7.5	9.0	---	---	---
25	.0	.0	.0	9.0	2.5	5.5	12.5	6.5	9.0	---	---	---
26	.0	.0	.0	7.0	4.5	5.0	12.5	6.0	9.0	---	---	---
27	.5	.0	.0	7.5	4.0	5.5	12.5	5.5	8.5	---	---	---
28	.5	.0	.0	7.5	4.5	5.5	7.0	5.5	6.5	---	---	---
29	---	---	---	8.5	4.0	6.0	8.5	6.0	7.0	---	---	---
30	---	---	---	7.5	5.5	6.0	7.5	5.5	6.5	---	---	---
31	---	---	---	7.0	4.0	6.0	---	---	---	---	---	---
MONTH	1.0	0.0	0.0	9.0	0.0	3.0	14.5	3.0	7.0	---	---	---

01362198 ESOPUS CREEK AT SHANDAKEN, NY--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	---	---	---	21.0	14.0	17.5	17.0	13.5	15.5
2	---	---	---	---	---	---	16.5	14.0	15.5	14.5	12.0	13.5
3	---	---	---	---	---	---	18.0	15.5	16.5	17.0	11.5	14.0
4	---	---	---	---	---	---	22.0	15.0	18.0	17.0	11.0	14.0
5	---	---	---	---	---	---	18.5	16.0	17.0	16.5	12.0	14.5
6	---	---	---	---	---	---	19.5	15.5	17.0	17.0	13.5	15.0
7	---	---	---	---	---	---	19.5	15.0	17.5	17.0	15.0	16.0
8	---	---	---	---	---	---	20.0	15.5	17.5	17.0	15.5	16.0
9	---	---	---	---	---	---	17.0	15.0	16.0	15.5	14.0	15.0
10	---	---	---	---	---	---	16.5	15.0	15.5	16.5	13.0	14.5
11	---	---	---	---	---	---	19.5	13.5	16.0	16.0	12.5	14.0
12	---	---	---	---	---	---	20.5	13.5	16.5	14.0	13.5	13.5
13	---	---	---	---	---	---	20.5	14.0	17.0	14.0	13.5	13.5
14	---	---	---	---	---	---	21.0	15.0	18.0	15.0	12.5	13.5
15	---	---	---	---	---	---	21.5	15.0	18.5	14.5	11.0	12.5
16	---	---	---	---	---	---	22.5	16.0	19.0	15.0	11.0	13.0
17	---	---	---	---	---	---	22.0	17.0	19.5	14.0	13.0	13.5
18	---	---	---	---	---	---	22.5	18.0	20.0	13.0	12.0	13.0
19	---	---	---	---	---	---	22.0	16.0	19.0	12.0	11.5	11.5
20	---	---	---	---	---	---	20.5	16.5	18.5	12.5	11.0	11.5
21	---	---	---	---	---	---	20.5	14.5	17.5	13.5	11.5	12.0
22	---	---	---	---	---	---	19.0	15.5	17.5	14.0	11.5	12.5
23	---	---	---	---	---	---	18.5	15.0	16.5	13.0	11.0	12.0
24	---	---	---	---	---	---	16.5	13.0	14.5	12.5	10.5	12.0
25	---	---	---	---	---	---	17.5	12.0	14.5	11.5	9.5	10.5
26	---	---	---	---	---	---	18.5	12.5	15.5	12.0	8.0	10.0
27	---	---	---	---	---	---	16.0	14.0	14.5	13.5	9.0	11.0
28	---	---	---	---	---	---	14.0	14.0	14.0	12.5	10.0	11.5
29	---	---	---	---	---	---	16.5	13.5	15.0	15.0	10.5	12.5
30	---	---	---	---	---	---	18.5	12.5	15.5	13.0	12.0	12.5
31	---	---	---	21.0	15.0	17.5	17.0	13.5	15.5	---	---	---
MONTH	---	---	---	---	---	---	22.5	12.0	17.0	17.0	8.0	13.0

HUDSON RIVER BASIN

01362342 HOLLOW TREE BROOK AT LANESVILLE, NY

LOCATION.--Lat 42°08'32", long 74°15'55", Greene County, Hydrologic Unit 02020006, at bridge on Diamond Notch Road, 1.1 mi upstream from Stoney Clove Creek, 0.9 mi north of Lanesville, and about 4.8 mi northeast of Phoenecia.

DRAINAGE AREA.--1.95 mi^2.

PERIOD OF RECORD.--January 1985 to current year.
CHEMICAL DATA: 1985 (b), 1986 (d), 1987 (a).
MINOR ELEMENT DATA: 1985 (b), 1986 (d), 1987 (a).
ORGANIC DATA: OC--1985 (b), 1986 (c).

REMARKS.--All anion and cation analyses were performed on water samples which passed through a 0.1-micrometer membrane filter.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	SPECIFIC CONDUCTANCE LAB (US/CM)	PH (STANDARD UNITS)	PH LAB (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)
NOV 21...	1615	--	41	--	6.23	16	4.8	0.90	0.60
MAR 27...	1731	35	--	6.38	--	12	3.8	0.72	0.50

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)	NITROGEN, NITRATE DISSOLVED (MG/L AS N)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
NOV 21...	0.30	9.0	7.4	0.61	2.6	0.753	--	4	<1
MAR 27...	0.30	--	6.9	0.58	2.0	0.870	10	6	3

01362500 ESOPUS CREEK AT COLDBROOK, NY

LOCATION.--Lat 42°00'51", long 74°16'16", Ulster County, Hydrologic Unit 02020006, on left bank at downstream side of bridge on Coldbrook Road in Coldbrook, 0.3 mi downstream from Little Beaver Kill, 1.5 mi upstream from Ashokan Reservoir, and 2.5 mi south of Mount Tremper.

DRAINAGE AREA.--192 mi^2.

PERIOD OF RECORD.--January 1914 to current year. Monthly discharge only for some periods, published in WSP 1302.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 621.54 ft above National Geodetic Vertical Datum of 1929. Prior to June 15, 1916, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. Since 1924, water diverted from Schoharie Reservoir through Shandaken Tunnel (see Reservoirs in Hudson River Basin) enters Esopus Creek 10.5 mi upstream from station and is included in records of daily discharge. Slight diversion from Beaver Kill into Cooper Lake for water supply of Kingston. Several measurements of water temperature were made during the year. Telephone gage-height telemeter at station. Intermittent water-quality data for this station are included in section "ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES".

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 65,300 ft^3/s, Mar. 21, 1980, gage height 21.94 ft, from rating curve extended above 13,000 ft^3/s, on basis of slope-area measurements at gage heights 12.39 ft, 15.15 ft, and 20.70 ft; minimum daily, 8 ft^3/s, Oct. 14, 1914.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 51,700 ft^3/s, Apr. 4, gage height, 20.06 ft; minimum, 241 ft^3/s, Aug. 27, gage height, 4.29 ft; minimum daily, 245 ft^3/s, Aug. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	319	317	752	636	451	1090	4240	336	440	316	330	350
2	317	312	655	650	451	1390	2250	302	456	372	348	323
3	321	305	2330	626	454	1150	1780	285	441	440	552	309
4	382	259	1800	582	447	1040	17400	300	445	370	449	296
5	361	256	1260	551	428	969	10000	459	491	335	377	287
6	340	314	1020	543	465	938	3700	596	774	319	365	281
7	329	301	861	543	666	1170	2940	574	767	315	347	282
8	324	319	749	522	667	1970	2260	551	689	317	329	395
9	320	502	799	514	665	2490	1700	537	410	323	324	2980
10	315	523	944	505	668	1980	1350	530	375	305	361	1280
11	310	488	800	549	671	1610	1110	519	365	295	324	903
12	309	466	759	514	662	1420	985	510	372	455	304	822
13	307	441	669	494	658	1270	2820	498	367	555	291	2770
14	330	413	617	489	664	1170	2050	489	355	575	321	2100
15	325	396	608	535	654	1090	1580	486	345	748	611	1400
16	318	387	595	592	660	1030	1290	472	333	559	603	1080
17	323	385	585	531	671	978	1360	462	325	523	541	957
18	319	388	626	528	663	945	2010	459	318	664	292	1660
19	312	403	720	564	675	930	1610	485	312	629	280	2210
20	309	394	644	537	720	919	1310	457	308	563	277	2090
21	306	1680	591	519	717	898	1080	444	314	394	269	1770
22	304	933	556	479	714	939	924	435	323	364	265	1520
23	297	752	532	505	711	987	793	499	476	346	259	1310
24	293	812	517	474	701	1070	700	539	356	332	253	1170
25	290	826	1010	471	694	1330	634	469	328	335	248	1280
26	298	1500	1020	495	689	2030	545	451	315	583	245	1290
27	309	2970	882	481	650	2150	465	597	419	416	314	1220
28	307	1690	799	486	547	2240	441	528	362	374	399	1170
29	332	1220	746	488	---	2290	420	493	332	351	584	1130
30	326	963	707	463	---	2470	380	474	321	340	392	1110
31	321	---	669	465	---	9460	---	456	---	359	344	---
TOTAL	9873	20915	25822	16331	17483	51413	70127	14692	12234	13172	11198	35745
MEAN	318	697	833	527	624	1658	2338	474	408	425	361	1191
MAX	382	2970	2330	650	720	9460	17400	597	774	748	611	2980
MIN	290	256	517	463	428	898	380	285	308	295	245	281

CAL YR 1986 TOTAL 259042 MEAN 710 MAX 8760 MIN 225
WTR YR 1987 TOTAL 299005 MEAN 819 MAX 17400 MIN 245

01364500 ESOPUS CREEK AT MOUNT MARION, NY

LOCATION.--Lat 42°02'16", long 73°58'21", Ulster County, Hydrologic Unit 02020006, on left bank at downstream side of bridge on Glasco Turnpike, 0.8 mi east of Mount Marion, 1.6 mi downstream from Plattekill Creek, and 4.5 mi upstream from mouth.

DRAINAGE AREA.--419 mi^2.

PERIOD OF RECORD.--March 1970 to current year. Monthly discharge only May 1907 to March 1918, published in WSP 1302. Occasional miscellaneous measurements, 1902, 1951, 1956, 1966, 1967, 1969.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 40.16 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 12, 1970, nonrecording gage at same site (at different datum May 1907 to March 1918, and at present datum June 9, 1966 to Aug. 12, 1970).

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow from 256 mi^2 of drainage area regulated by Ashokan Reservoir since Sept. 9, 1913. Water diverted from Schoharie Creek through Shandaken Tunnel (see Reservoirs in Hudson River Basin) since Feb. 3, 1924, enters Esopus Creek about 12.2 mi upstream from Ashokan Reservoir. Diversion from Plattekill Creek for water supply of village of Saugerties. Slight diversion at headwaters into Cooper Lake for water supply of Kingston. Diversions upstream during summer months for irrigation purposes. Diversions for water supply of city of New York made from Ashokan Reservoir (see Reservoirs in Hudson River Basin). Discharge records for this station now represent the natural flow from 112 mi^2, together with spillage during high stages from the upstream reservoirs. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--17 years (1971-87), 514 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 28,000 ft^3/s, Apr. 26, 1910, gage height, 25.10 ft, datum then in use; maximum discharge since March 1970, 22,500 ft^3/s, Apr. 5, 1987, gage height, 24.78 ft; minimum discharge, 9.7 ft^3/s, Sept. 16, 17, 1980, gage height, 11.79 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 22,500 ft^3/s, Apr. 5, gage height, 24.78 ft; minimum, 15 ft^3/s, Aug. 26, 27, gage height, 11.87 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	30	372	290	153	366	2910	553	101	58	36	94
2	27	30	316	283	150	1620	1280	354	130	67	34	77
3	32	30	1510	296	155	1200	866	224	126	159	80	65
4	55	29	1440	251	159	875	3520	222	108	126	91	56
5	57	28	868	213	156	663	17800	214	105	98	61	49
6	45	49	612	203	145	548	15700	210	98	80	57	43
7	37	73	478	200	147	560	8490	196	86	70	50	41
8	34	88	398	191	146	969	5680	176	86	70	42	58
9	30	162	353	178	145	1300	4000	163	78	70	39	1120
10	28	177	412	173	141	907	2880	151	69	67	50	626
11	28	142	411	249	138	655	2060	141	61	72	49	343
12	25	133	364	287	e130	518	1580	134	60	92	41	253
13	25	123	320	267	e122	425	3250	128	62	115	36	1710
14	33	111	253	248	e116	371	4190	121	65	110	33	2630
15	39	101	243	247	115	331	3430	121	55	291	30	1040
16	38	98	235	316	107	298	2560	106	48	169	28	587
17	33	97	227	308	99	270	2050	100	43	121	27	417
18	31	100	228	270	e95	251	2200	95	41	96	24	1090
19	30	115	832	281	e92	238	2470	110	38	79	22	2790
20	30	130	923	267	e90	232	2270	110	36	71	23	1390
21	29	1420	647	242	e90	223	1880	102	35	66	22	844
22	27	1100	485	203	e94	224	1500	95	38	60	21	623
23	26	639	394	219	101	229	1200	99	69	51	20	535
24	24	505	334	e200	101	240	1020	172	74	45	18	414
25	23	443	651	e180	99	261	922	170	53	42	16	323
26	29	515	854	e170	99	309	812	156	44	95	15	264
27	45	1680	670	e160	99	309	730	165	78	75	27	228
28	41	972	528	153	100	290	670	195	109	61	69	206
29	36	657	443	150	---	287	652	170	76	49	150	190
30	31	481	380	150	---	281	610	146	63	43	147	176
31	30	---	336	156	---	3010	---	118	---	40	100	---
TOTAL	1019	10258	16517	7001	3384	18260	99182	5217	2135	2708	1458	18282
MEAN	32.9	342	533	226	121	589	3306	168	71.2	87.4	47.0	609
MAX	57	1680	1510	316	159	3010	17800	553	130	291	150	2790
MIN	21	28	227	150	90	223	610	95	35	40	15	41

CAL YR 1986 TOTAL 141670 MEAN 388 MAX 6600 MIN 21
WTR YR 1987 TOTAL 185421 MEAN 508 MAX 17800 MIN 15

e Estimated

01364959 RONDOUT CREEK ABOVE RED BROOK, AT PEEKAMOOSE, NY

LOCATION.--Lat 41°56'13", long 74°22'30", Ulster County, Hydrologic Unit 02020007, at State Forest Preserve boundary, 500 ft upstream from Red Brook, 0.8 mi upstream from outlet of Peekamoose Lake, and 0.8 mi north of Peekamoose.

DRAINAGE AREA.--5.36 mi^2.

PERIOD OF RECORD.--June 1984 to current year.
CHEMICAL DATA: 1984 (b), 1985-86 (c), 1987 (b).
MINOR ELEMENT DATA: 1984 (b), 1985-86 (c), 1987 (b).
ORGANIC DATA: OC--1984-85 (b), 1986 (c).

REMARKS.--All anion and cation analyses were performed on water samples which passed through a 0.1-micrometer membrane filter.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	SPECIFIC CONDUCTANCE LAB (US/CM)	PH (STANDARD UNITS)	PH LAB (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)
NOV									
21...	1935	--	27	--	5.27	--	--	--	--
21...	1940	--	27	--	5.27	7	1.7	0.60	0.30
21...	1945	27	--	5.27	--	7	1.8	0.60	0.40
MAR									
27...	0935	--	25	--	5.29	6	1.5	0.52	0.30
31...	1345	--	25	--	4.79	5	1.5	0.44	0.21

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)	NITROGEN, NITRATE DISSOLVED (MG/L AS N)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
NOV									
21...	--	0	5.9	0.55	--	0.596	310	--	--
21...	0.30	0	5.8	0.53	2.1	0.596	310	5	91
21...	0.50	--	--	--	2.0	--	310	7	92
MAR									
27...	0.30	--	5.6	0.43	1.8	0.720	320	4	69
31...	0.63	0	6.2	0.59	--	0.988	--	--	--

HUDSON RIVER BASIN

01365000 RONDOUT CREEK NEAR LOWES CORNERS, NY

LOCATION.--Lat 41°52'00", long 74°29'12", Sullivan County, Hydrologic Unit 02020007, on left bank 100 ft downstream from small tributary, 350 ft upstream from bridge on county road, 1.1 mi upstream from Sugarloaf Brook, 1.1 mi east of Lowes Corners, and 1.9 mi southwest of Sundown.

DRAINAGE AREA.--38.5 mi^2.

PERIOD OF RECORD.--February 1937 to current year.

REVISED RECORDS.--WSP 1702: 1952.

GAGE.--Water-stage recorder. Datum of gage is 874.44 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 4; 1938, nonrecording gage at highway bridge 350 ft downstream at datum 847.00 ft above NGVD (levels by Board of Water Supply, City of New York). Oct. 4, 1938 to July 5, 1951, water-stage recorder at site 1.2 mi downstream; Oct. 4, 1938 to July 3, 1949, datum 847.00 ft above NGVD and July 4, 1949 to July 5, 1951, datum 846.00 ft above NGVD (levels by Board of Water Supply, City of New York).

REMARKS.--Records poor. Intermittent water-quality data for this station are included in section "ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES". Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--50 years, 98.0 ft^3/s, 34.57 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 7,600 ft^3/s, July 22, 1938, from rating curve extended above 2,600 ft^3/s; maximum gage height, 10.6 ft, Apr. 4, 1987, from floodmarks outside gage; minimum discharge, 3.3 ft^3/s, Sept. 16, 17, Oct. 17, 18, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 26	2100	2,050	5.98	Sept. 9	0300	1,880	5.78
Mar. 31	1600	2,210	5.95	Sept. 13	1430	1,630	5.46
Apr. 4	1715	*6,610	a*9.87				

a Floodmark in gage well; outside gage height was 10.6 ft, from floodmark.

Minimum discharge, 11 ft^3/s, all or part of each day Aug. 24-27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	29	183	67	e42	94	557	e96	e33	e19	13	27
2	29	30	162	74	e41	104	345	e84	e42	e23	29	20
3	31	29	412	70	e40	78	277	e82	e35	e54	71	17
4	108	29	293	63	e38	71	e2530	e100	e30	e35	26	16
5	52	29	227	60	e37	67	1370	e94	e37	e25	19	15
6	36	64	189	58	e35	69	763	e100	e31	e17	18	16
7	31	50	164	59	e34	104	601	e94	e28	e18	17	18
8	29	92	147	55	e33	235	413	e88	e29	e22	16	47
9	27	144	149	53	e33	326	308	e82	e26	e18	17	574
10	26	114	190	e52	e32	263	250	e76	e23	e16	20	96
11	25	108	149	e50	e31	178	211	e72	e21	e14	17	52
12	24	105	134	e48	e29	146	205	e70	e22	e17	15	46
13	25	98	113	e47	e28	126	e500	e66	e23	e20	15	624
14	52	85	98	e50	e27	111	e290	e62	e21	e35	15	337
15	40	81	96	65	e25	102	e260	e60	e20	e54	14	146
16	33	79	90	70	e26	93	e230	e58	e19	e25	14	107
17	31	84	84	59	e28	87	e210	e56	e17	e19	14	166
18	31	89	84	e56	e28	83	e340	e58	e16	17	13	612
19	30	85	87	e52	e27	81	e300	e62	e16	16	13	613
20	30	86	76	e49	e26	79	e270	e52	e15	18	14	467
21	30	487	71	e47	e25	76	e240	e45	e17	17	13	360
22	30	250	65	e45	e24	78	e200	e41	e20	15	12	280
23	30	188	62	e44	e24	89	e170	e38	e30	15	12	223
24	29	244	59	e43	e24	109	e150	e42	e25	14	12	174
25	28	202	117	48	e24	130	e135	e37	e21	14	11	136
26	36	588	102	51	e24	166	e120	e33	e17	17	11	103
27	42	721	83	46	e25	166	e110	e52	e37	15	25	82
28	35	395	77	e44	e26	180	e100	e45	e25	14	34	68
29	32	298	76	e41	---	178	e96	e41	e19	13	49	57
30	31	234	74	e42	---	191	e110	e38	e17	14	24	60
31	30	---	71	e43	---	968	---	e36	---	14	18	---
TOTAL	1057	5117	3984	1651	836	4828	11661	1960	732	644	611	5559
MEAN	34.1	171	129	53.3	29.9	156	389	63.2	24.4	20.8	19.7	185
MAX	108	721	412	74	42	968	2530	100	42	54	71	624
MIN	14	29	59	41	24	67	96	33	15	13	11	15
CFSM	.89	4.43	3.34	1.38	.78	4.05	10.1	1.64	.63	.54	.51	4.81
IN.	1.02	4.94	3.85	1.60	.81	4.66	11.3	1.89	.71	.62	.59	5.37

CAL YR 1986 TOTAL 35748 MEAN 97.9 MAX 1480 MIN 14 CFSM 2.54 IN. 34.5
WTR YR 1987 TOTAL 38640 MEAN 106 MAX 2530 MIN 11 CFSM 2.75 IN. 37.3

e Estimated

01365500 CHESTNUT CREEK AT GRAHAMSVILLE, NY

LOCATION.--Lat 41°50'42", long 74°32'27", Sullivan County, Hydrologic Unit 02020007, on right bank just downstream from bridge in Grahamsville, 600 ft downstream from Red Brook, and 0.6 mi upstream from bridge on State Highway 55.

DRAINAGE AREA.--20.9 mi^2.

PERIOD OF RECORD.--October 1938 to March 1987 (discontinued). Monthly discharge only for some periods, published in WSP 1302.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 880.96 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Slight seasonal regulation caused by Beaverdam Pond on Red Brook. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--48 years (1939-86), 39.0 ft^3/s, 25.34 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,640 ft^3/s, Oct. 15, 1955, gage height, 5.02 ft, from rating curve extended above 1,300 ft^3/s on basis of slope-area measurement at gage height 4.68 ft; minimum discharge, 1.4 ft^3/s, Nov. 1, 1964.

EXTREMES FOR CURRENT YEAR.--Oct. 1986 to Mar. 1987: Peak discharges greater than base discharge of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 21	0145	816	2.29	Nov. 26	1915	*957	*2.41

Minimum daily discharge, 7.7 ft^3/s, Oct. 1; minimum discharge not determined (occurred during period of estimated daily discharge).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO MARCH 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e7.7	14	53	e30	e20	85	---	---	---	---	---	---
2	36	14	53	e29	e19	82	---	---	---	---	---	---
3	38	13	200	e28	e18	56	---	---	---	---	---	---
4	111	13	107	e26	21	45	---	---	---	---	---	---
5	43	14	75	e25	19	39	---	---	---	---	---	---
6	27	34	60	e26	19	39	---	---	---	---	---	---
7	19	26	54	27	19	75	---	---	---	---	---	---
8	15	65	48	25	19	150	---	---	---	---	---	---
9	13	88	51	24	17	155	---	---	---	---	---	---
10	12	58	76	e24	17	101	---	---	---	---	---	---
11	12	49	56	e23	16	67	---	---	---	---	---	---
12	11	47	49	e23	e15	55	---	---	---	---	---	---
13	15	43	41	e23	e13	48	---	---	---	---	---	---
14	34	36	37	e24	e13	43	---	---	---	---	---	---
15	24	34	38	e30	e12	41	---	---	---	---	---	---
16	20	34	36	e32	e12	39	---	---	---	---	---	---
17	18	43	35	e30	e12	36	---	---	---	---	---	---
18	16	48	37	e29	e11	35	---	---	---	---	---	---
19	15	45	46	e29	e11	35	---	---	---	---	---	---
20	15	58	40	e27	e11	34	---	---	---	---	---	---
21	14	315	35	e26	e11	33	---	---	---	---	---	---
22	13	109	33	e25	e10	33	---	---	---	---	---	---
23	13	75	31	e23	e10	35	---	---	---	---	---	---
24	12	94	29	e21	e10	40	---	---	---	---	---	---
25	12	72	77	e22	e10	46	---	---	---	---	---	---
26	22	258	59	e25	e10	57	---	---	---	---	---	---
27	24	218	46	e22	e10	54	---	---	---	---	---	---
28	20	118	e40	e21	e12	49	---	---	---	---	---	---
29	17	84	e37	e20	---	44	---	---	---	---	---	---
30	15	65	e35	e20	---	42	---	---	---	---	---	---
31	14	---	e32	e19	---	181	---	---	---	---	---	---
TOTAL	677.7	2184	1646	778	397	1874	---	---	---	---	---	---
MEAN	21.9	72.8	53.1	25.1	14.2	60.5	---	---	---	---	---	---
MAX	111	315	200	32	21	181	---	---	---	---	---	---
MIN	7.7	13	29	19	10	33	---	---	---	---	---	---
CFSM	1.05	3.48	2.54	1.20	.68	2.89	---	---	---	---	---	---
IN.	1.21	3.89	2.93	1.38	.71	3.34	---	---	---	---	---	---

e Estimated

HUDSON RIVER BASIN

01367500 RONDOUT CREEK AT ROSENDALE, NY

LOCATION.--Lat 41°50'35", long 74°05'11", Ulster County, Hydrologic Unit 02020007, on left bank 30 ft upstream from bridge on James Street in Rosendale, and 3 mi upstream from Wallkill River.

DRAINAGE AREA.--378 mi^2 (see REMARKS below).

PERIOD OF RECORD.--July 1901 to November 1903, October 1905 to January 1919, August 1926 to current year. Monthly discharge only for some periods, published in WSP 1302, and WDR NY-70-1.

REVISED RECORDS.--WSP 641: Drainage Area. WSP 756: 1933. WDR NY-86-1: Drainage Area.

GAGE.--Water-stage recorder. Datum of gage is 32.83 ft above National Geodetic Vertical Datum of 1929. Prior to January 1919, nonrecording gage at site 150 ft downstream at datum 38.83 ft above NGVD. Aug. 3, 1926 to Sept. 10, 1969, at present site at datum 42.83 ft above NGVD. Sept. 11, 1969 to Feb. 3, 1970, water-stage recorder, and June 9, 1970 to Jan. 18, 1971, nonrecording gage at site 0.2 mi upstream at datum 44.03 ft above NGVD.

REMARKS.--Records good except for flows below 100 ft^3/s, which are fair, and those for estimated daily discharges, which are poor. Occasional regulation from hydroelectric plant upstream from station. Diversion from Rondout Creek through the emergency connection to the Delaware Aqueduct at Lackawack for New York City water supply during period April 1944 to May 1951. Since October 1950, flow regulated by Rondout Reservoir (see Reservoirs in Hudson River Basin). Subsequent to May 1951, entire flow except for period of spilling, diverted from Rondout Reservoir for New York City water supply. Discharge records for this station now represent the natural flow from 283 mi^2, together with spillage during high flow from Rondout Reservoir. Telephone gage-height telemeter at station. Several measurements of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,800 ft^3/s, Oct. 16, 1955, gage height, 36.8 ft, present datum, from floodmarks, from rating curve extended above 17,500 ft^3/s, on basis of contracted-opening measurement at gage height 33.93 ft, present datum; minimum discharge, 2.2 ft^3/s, July 16, 1965; minimum daily, 3.0 ft^3/s, July 16, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 24,100 ft^3/s, Apr. 5, gage height, 22.65 ft; minimum, 33 ft^3/s, Oct. 30, gage height, 8.68 ft; minimum daily discharge, 50 ft^3/s, Aug. 25, 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	75	102	848	520	e280	e900	3490	419	141	88	84	299
2	115	100	701	534	e270	e2000	1820	381	205	95	83	217
3	154	96	3050	580	e290	e1300	1370	361	231	165	108	154
4	330	104	2340	491	e320	e1000	8710	597	181	150	154	128
5	326	133	1470	465	e320	e900	18300	581	204	115	113	113
6	264	169	1080	477	e310	e800	5760	560	177	99	99	106
7	219	254	884	427	e330	1280	4200	506	145	100	92	104
8	197	295	777	416	e340	2190	2710	461	142	132	87	139
9	146	767	704	369	e330	2720	1930	416	142	146	84	2630
10	126	701	969	342	e320	1980	1520	372	129	204	89	1510
11	100	508	981	459	e320	1390	1160	345	123	222	87	780
12	94	484	784	515	e300	1130	927	302	116	371	81	512
13	93	465	673	449	e290	855	2560	280	120	324	75	3000
14	103	401	519	409	e280	711	1930	298	120	296	71	4040
15	149	349	570	455	e270	627	1480	192	115	901	68	1730
16	135	284	493	715	e260	571	1190	221	109	559	68	1030
17	118	289	454	567	e250	528	1230	207	102	290	67	677
18	117	334	459	e450	e240	504	1970	198	96	199	64	3560
19	112	442	1170	e420	e230	510	1350	275	90	152	62	5220
20	111	425	984	e400	e230	531	1040	292	87	133	65	2550
21	137	4340	696	e380	e220	515	926	244	98	139	61	1660
22	125	2490	558	e370	e220	572	814	221	130	124	56	1160
23	105	1510	510	e360	e210	648	674	200	123	110	55	937
24	99	1400	474	e360	e210	767	615	187	114	101	52	672
25	98	1380	1440	e350	e210	816	656	176	103	95	50	548
26	93	1380	1670	e340	e200	869	596	165	91	106	50	452
27	123	3160	1200	e330	e200	796	514	199	122	115	71	382
28	162	1860	963	e320	e200	686	487	247	156	100	186	351
29	136	1340	819	e310	---	602	509	208	115	90	669	303
30	105	1040	691	e300	---	535	461	175	97	85	408	278
31	105	---	609	e290	---	3410	---	151	---	87	272	---
TOTAL	4372	26602	29540	13170	7450	32643	70899	9437	3924	5893	3631	35242
MEAN	141	887	953	425	266	1053	2363	304	131	190	117	1175
MAX	330	4340	3050	715	340	3410	18300	597	231	901	669	5220
MIN	75	96	454	290	200	504	461	151	87	85	50	104

CAL YR 1986 TOTAL 235342 MEAN 645 MAX 11600 MIN 61
WTR YR 1987 TOTAL 242803 MEAN 665 MAX 18300 MIN 50

e Estimated

01371500 WALLKILL RIVER AT GARDINER, NY

LOCATION.--Lat 41°41'10", long 74°09'56", Ulster County, Hydrologic Unit 02020007, on left bank 400 ft upstream from bridge on U.S. Highway 44, 500 ft downstream from Shawangunk Kill, and 0.7 mi northwest of Gardiner.

DRAINAGE AREA.--711 mi^2.

PERIOD OF RECORD.--September 1924 to current year.

REVISED RECORDS.--WSP 756: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 185.70 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Slight regulation at low flows by dams upstream and some diversions for municipalities and irrigational purposes. Several measurements of water temperature were made during the year. Telephone gage-height telemeter at station.

AVERAGE DISCHARGE.--63 years, 1,060 ft^3/s, 20.25 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,800 ft^3/s, Oct. 16, 1955, gage height, 19.81 ft; minimum, 9.5 ft^3/s, Sept. 28, 1964; minimum gage height, 1.59 ft, Aug. 14, 15, 16, 19, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 5	0200	*14,000	*11.73	No other peak greater than base discharge.			

Minimum discharge, 24 ft^3/s, Aug. 23, gage height, 1.74 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	148	146	1290	e1100	e720	e1500	2360	938	282	152	54	295
2	135	144	1070	e1000	e680	e3000	1850	838	388	71	151	279
3	136	144	3610	e900	e660	e2500	1680	798	326	270	127	214
4	251	161	3890	e860	e640	e2200	6280	1550	397	218	121	195
5	389	124	2700	e800	e600	e2000	10800	1790	436	261	52	172
6	353	219	2080	e760	e580	e1800	7990	1720	418	239	113	108
7	205	292	1680	e760	e580	e2500	8060	1530	330	110	107	142
8	181	525	1450	e800	e600	e3500	7150	1230	316	177	172	112
9	178	824	1300	e740	e560	4340	6070	1010	258	187	146	795
10	87	772	1570	e700	e520	3620	4660	879	243	415	130	1040
11	147	611	1850	e700	e490	2860	3410	753	227	339	114	783
12	129	559	1590	e680	e470	2420	2560	677	226	385	137	475
13	110	813	1330	e680	e450	2070	2800	656	230	377	144	1240
14	121	667	968	e680	e430	1850	2760	619	232	293	105	2760
15	164	505	849	e900	e420	1690	2260	538	240	1200	99	2110
16	195	428	963	e1200	e410	1500	1900	492	234	1360	77	1880
17	197	442	918	e1100	e390	1340	1770	469	186	810	74	1740
18	136	442	1020	e1000	e380	1210	2210	507	168	522	70	3220
19	123	546	3610	e900	e370	1100	2000	558	163	356	110	3840
20	117	656	2940	e800	e350	1040	1700	602	150	335	108	2550
21	134	4330	2030	e700	e330	945	1470	576	113	321	39	1890
22	125	3560	1540	e640	e320	981	1300	495	267	281	33	1430
23	110	2540	1240	e600	e310	874	1150	485	247	241	66	1130
24	101	2190	1100	e580	e310	876	1060	451	161	198	73	843
25	102	1850	2260	e560	e300	810	1350	410	205	184	28	718
26	111	1800	3160	e580	e300	763	1610	492	151	161	28	589
27	198	3240	2410	e600	e300	738	1360	348	135	191	49	532
28	190	2570	1980	e700	e320	706	1170	408	240	158	206	429
29	244	2020	1690	e780	---	725	1140	341	218	163	475	431
30	222	1630	1470	e760	---	727	1070	355	230	144	555	388
31	191	---	1300	e740	---	1690	---	304	---	154	447	---
TOTAL	5230	34750	56858	24300	12790	53875	92950	22819	7417	10273	4210	32330
MEAN	169	1158	1834	784	457	1738	3098	736	247	331	136	1078
MAX	389	4330	3890	1200	720	4340	10800	1790	436	1360	555	3840
MIN	87	124	849	560	300	706	1060	304	113	71	28	108
CFSM	.24	1.63	2.58	1.10	.64	2.44	4.36	1.04	.35	.47	.19	1.52
IN.	.27	1.82	2.97	1.27	.67	2.82	4.86	1.19	.39	.54	.22	1.69

CAL YR 1986 TOTAL 426307 MEAN 1168 MAX 13100 MIN 62 CFSM 1.64 IN. 22.3
WTR YR 1987 TOTAL 357802 MEAN 980 MAX 10800 MIN 28 CFSM 1.38 IN. 18.7

e Estimated

HUDSON RIVER BASIN

01372500 WAPPINGER CREEK NEAR WAPPINGERS FALLS, NY

LOCATION.--Lat 41°39'11", long 73°52'23", Dutchess County, Hydrologic Unit 02020008, on left bank 700 ft downstream from Red Oak Mill dam, and 4.5 mi northeast of village of Wappingers Falls.

DRAINAGE AREA.--181 mi^2.

PERIOD OF RECORD.--May 1903 to June 1905 (gage heights only during some winter months), August 1928 to current year.

REVISED RECORDS.--WSP 741: 1932. WSP 1902: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 114.37 ft above National Geodetic Vertical Datum of 1929, (levels by Corps of Engineers). May 1903 to June 1905 staff gage at site 2.5 mi downstream at different datum. Aug. 7, 1928 to Sept. 25, 1931, water-stage recorder at site 2 mi downstream at different datum.

REMARKS.--Records good. Several measurements of water temperature were made during the year. Telephone gage-height telemeter at station.

AVERAGE DISCHARGE.--59 years (1929-87), 253 ft^3/s, 18.98 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,600 ft^3/s, Aug. 19, 1955, gage height, 19.60 ft, from floodmarks in gage shelter, from rating curve extended above 6,000 ft^3/s on basis of flow-over-dam and contracted-opening measurement at gage height 18.02 ft and contracted-opening and flow-over-road measurement at gage height 19.60 ft; minimum discharge, 0.90 ft^3/s, Sept. 20, 21, 1964, gage height, 2.05 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 5	0930	*5,410	*10.17	No other peak greater than base discharge.			

Minimum discharge, 6.0 ft^3/s, Aug. 26, 27, gage height, 2.23 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	44	315	300	178	215	800	243	94	29	25	31
2	38	42	279	308	177	570	602	224	131	37	24	30
3	58	41	406	313	185	589	513	217	143	60	40	26
4	92	37	466	e260	190	554	1100	310	122	57	47	22
5	90	36	371	238	175	504	4300	287	131	44	35	20
6	66	55	316	245	158	479	2470	285	111	36	31	18
7	50	73	289	241	177	538	2050	263	90	36	27	20
8	43	86	276	223	164	780	1720	229	85	42	24	34
9	39	143	258	203	164	1060	1250	206	81	85	23	161
10	37	133	295	202	154	828	979	192	72	55	24	133
11	36	111	284	223	163	664	820	176	65	47	24	85
12	36	110	253	237	149	628	706	169	63	43	23	61
13	35	113	236	214	129	549	1030	161	69	36	20	91
14	40	101	183	195	129	507	975	146	78	41	18	231
15	47	86	187	207	e125	479	781	138	72	122	16	161
16	43	84	185	287	e120	450	682	134	59	83	16	114
17	39	87	190	257	124	413	645	126	51	60	14	93
18	37	91	200	211	109	382	638	119	46	47	11	449
19	35	106	384	250	108	374	583	168	43	39	8.9	854
20	33	109	500	241	104	374	518	163	42	35	8.3	596
21	31	513	427	228	101	358	470	139	45	32	8.8	414
22	30	585	339	160	102	365	424	124	49	29	9.1	312
23	29	408	308	161	109	371	380	114	47	28	9.9	253
24	30	357	284	e220	107	363	362	106	45	24	9.1	208
25	30	337	419	e200	103	337	419	101	40	20	8.0	179
26	35	333	544	e190	103	313	366	95	36	42	6.5	152
27	72	673	487	e180	103	298	313	106	39	68	11	133
28	71	555	431	e170	101	292	292	122	44	47	29	119
29	57	455	391	e160	---	283	299	109	38	35	52	107
30	50	381	363	172	---	257	272	124	33	29	52	107
31	46	---	336	180	---	399	---	99	---	28	36	---
TOTAL	1401	6285	10202	6876	3811	14573	26759	5195	2064	1416	690.6	5214
MEAN	45.2	209	329	222	136	470	892	168	68.8	45.7	22.3	174
MAX	92	673	544	313	190	1060	4300	310	143	122	52	854
MIN	26	36	183	160	101	215	272	95	33	20	6.5	18
CFSM	.25	1.16	1.82	1.23	.75	2.60	4.93	.93	.38	.25	.12	.96
IN.	.29	1.29	2.10	1.41	.78	3.00	5.50	1.07	.42	.29	.14	1.07

CAL YR 1986 TOTAL 96611.0 MEAN 265 MAX 2600 MIN 26 CFSM 1.46 IN. 19.9
WTR YR 1987 TOTAL 84486.6 MEAN 231 MAX 4300 MIN 6.5 CFSM 1.28 IN. 17.4

e Estimated

01375000 CROTON RIVER AT NEW CROTON DAM, NEAR CROTON-ON-HUDSON, NY

LOCATION.--Lat 41°13'32", long 73°51'32", Westchester County, Hydrologic Unit 02030101, on left bank 1,000 ft downstream from New Croton Dam, and 1.8 mi northeast of Croton-On-Hudson.

DRAINAGE AREA.--378 mi^2.

PERIOD OF RECORD.--August 1933 to current year. Prior to Oct. 1, 1941, published as "at Quaker Bridge," (low-flow records at this site are not equivalent owing to well pumpage upstream). Fragmentary records published during August 1933 to September 1941 for "at Cornell Dam near Croton" and "at New Croton near Croton" are equivalent. Oct. 1, 1941 to Sept. 30, 1955 published as "at New Croton Dam near Croton".

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 50 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1941, supplementary water-stage recorder and concrete control at site 1.1 mi downstream at Quaker Bridge.

REMARKS.--Records good above 100 ft^3/s and poor below. Entire flow, except for periods of spilling and releases to augment Croton-on-Hudson water supply, diverted from New Croton Reservoir for municipal supply of City of New York. Several measurements of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45,400 ft^3/s, Oct. 16, 1955, gage height, 18.44 ft, from floodmarks, from rating curve extended above 9,700 ft^3/s, on basis of slope-area measurements of peak flow; minimum daily discharge, 0.1 ft^3/s, Mar. 14, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,600 ft^3/s, Apr. 5, gage height, 10.43 ft; minimum daily, 4.8 ft^3/s, Oct. 15-17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.7	6.2	318	533	603	668	3540	743	75	134	52	24
2	8.1	6.3	355	1140	579	1410	2370	683	84	144	41	23
3	7.9	6.3	1210	1400	586	1260	1980	672	106	177	26	24
4	7.1	6.7	1210	1020	597	1110	5050	1090	150	167	26	24
5	6.3	6.8	791	800	556	1010	10000	1120	270	178	26	24
6	5.9	6.5	632	672	534	924	6750	986	265	143	27	23
7	5.5	6.6	541	627	497	1040	5250	900	198	131	26	24
8	5.6	7.2	476	603	519	1270	3870	792	164	165	28	24
9	5.3	5.9	460	531	571	1360	2950	698	160	165	33	71
10	5.0	5.6	514	514	564	1300	2360	641	141	139	33	143
11	5.1	5.9	482	710	528	1160	1950	573	109	121	33	120
12	5.3	6.2	445	755	509	1150	1680	517	116	150	33	106
13	5.1	6.8	395	660	481	1090	1830	464	141	293	32	440
14	5.1	5.8	329	570	443	990	1640	407	126	315	29	756
15	4.8	5.7	345	552	413	891	1420	422	108	368	29	378
16	4.8	5.6	434	607	387	820	1300	427	79	274	28	232
17	4.8	5.6	446	552	384	754	1310	365	46	211	28	202
18	4.9	5.9	488	530	375	713	1440	357	19	163	28	217
19	5.4	7.2	912	742	370	696	1300	382	33	158	27	357
20	5.5	37	759	756	365	662	1160	373	62	195	27	336
21	5.4	1210	565	637	355	640	1020	340	214	160	27	299
22	5.3	831	430	649	362	630	923	331	167	66	24	285
23	5.2	399	350	695	404	621	812	337	113	63	24	259
24	5.6	287	331	573	390	597	954	309	60	51	24	218
25	5.6	239	893	477	378	566	1500	222	71	55	24	196
26	5.6	318	1250	561	368	566	1260	185	87	58	24	173
27	5.6	1080	984	563	361	554	1010	94	211	52	25	173
28	6.0	754	818	e560	358	613	954	75	276	52	25	178
29	5.9	512	734	e570	---	617	924	92	198	52	25	177
30	5.9	392	678	e590	---	585	839	108	144	52	24	185
31	6.1	---	634	634	---	2360	---	99	---	52	23	---
TOTAL	178.4	6177.8	19209	20783	12837	28627	69346	14804	3993	4504	881	5691
MEAN	5.75	206	620	670	458	923	2312	478	133	145	28.4	190
MAX	8.7	1210	1250	1400	603	2360	10000	1120	276	368	52	756
MIN	4.8	5.6	318	477	355	554	812	75	19	51	23	23

CAL YR 1986 TOTAL 87779.5 MEAN 240 MAX 2290 MIN 2.0
WTR YR 1987 TOTAL 187031.2 MEAN 512 MAX 10000 MIN 4.8

e Estimated

01376500 SAW MILL RIVER AT YONKERS, NY

LOCATION.--Lat 40°56'11", long 73°53'12", Westchester County, Hydrologic Unit 02030101, on right bank in Yonkers, just upstream from Old Croton aqueduct, near intersection of Nepperhan Avenue and Center Street, and 1.2 mi upstream from mouth.

DRAINAGE AREA.--25.6 mi^2.

PERIOD OF RECORD.--November 1943 to September 1973, April 1974 to current year.

REVISED RECORDS.--WDR NY-71-1: 1965, 1966.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Elevation of gage is 90 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Aug. 17, 1978, water-stage recorder and concrete control at same site but at different datum. Aug. 17, 1978 to Sept. 9, 1980, nonrecording and crest-stage gage, and Sept. 10, 1980 to Sept. 30, 1982, water-stage recorder and crest-stage gage at site 1,300 ft downstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Flow affected by diversion by city of Yonkers, village of Tarrytown, and several industries for water supply and industrial purposes. Diurnal fluctuations caused by water supply and industrial operations. Several measurements of water temperature were made during the year. Radio gage-height telemeter at station.

COOPERATION.--Figures for diversion and return in upstream water supply provided by city of Yonkers and village of Tarrytown.

AVERAGE DISCHARGE.--42 years (1945-73, 1975-87), 33.9 ft^3/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,450 ft^3/s, Jul. 7, 1984, gage height, 7.84 ft; minimum, no flow during part of several days in Oct., Nov., and June-Sept. of 1981 water year because of construction in channel upstream from gage; minimum daily discharge, 0.11 ft^3/s, Sept. 14, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 816 ft^3/s, Apr. 5, gage height, 5.74 ft; minimum, 5.1 ft^3/s, Oct. 25, gage height, 1.42 ft; minimum daily, 5.5 ft^3/s, Oct. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.4	6.1	33	37	41	147	275	42	18	11	6.4	27
2	7.0	6.3	53	200	40	124	89	40	35	13	6.6	10
3	15	6.1	427	113	47	61	74	44	22	24	29	8.3
4	42	6.3	116	68	49	52	409	103	43	13	16	7.5
5	12	9.0	67	58	41	46	670	67	37	11	45	7.0
6	7.7	36	55	53	37	44	308	51	19	9.7	141	6.8
7	6.9	13	49	52	38	45	250	44	17	12	21	37
8	6.8	32	45	50	40	50	152	41	17	32	13	54
9	6.8	26	62	44	47	49	120	38	16	16	37	108
10	6.3	15	66	47	38	43	104	36	13	13	108	20
11	6.6	35	47	73	36	38	86	34	12	11	20	15
12	6.9	40	52	54	35	39	78	32	13	15	13	13
13	7.0	15	42	44	33	40	113	31	15	17	12	115
14	18	11	36	41	29	38	73	29	12	29	10	95
15	12	10	35	43	27	35	63	35	12	41	10	24
16	7.5	9.7	34	44	25	33	59	31	12	12	9.5	18
17	6.6	10	33	38	29	32	106	27	10	10	9.4	64
18	6.2	11	61	47	28	30	116	27	12	8.3	9.5	56
19	5.9	44	112	71	26	29	68	33	10	7.9	7.9	51
20	5.9	38	55	53	25	28	59	27	10	19	8.1	25
21	6.0	327	43	44	25	29	54	25	76	18	6.8	21
22	5.8	71	39	41	26	28	50	25	19	8.7	6.9	19
23	5.9	36	39	46	32	26	47	24	13	7.7	7.4	17
24	5.9	35	39	40	31	25	62	25	11	8.5	6.4	18
25	5.5	28	210	40	27	24	136	21	10	8.4	5.8	30
26	14	98.8	73	39	25	26	64	21	9.4	16	5.6	16
27	17	258	53	37	25	25	53	20	76	11	51	14
28	8.7	63	47	35	25	55	58	20	36	6.7	69	14
29	6.7	45	44	35	---	45	53	19	15	6.5	34	13
30	6.5	38	44	40	---	49	46	18	12	5.9	14	15
31	6.2	---	41	60	---	385	---	19	---	7.6	9.6	---
TOTAL	288.7	1379.3	2152	1687	927	1720	3895	1049	632.4	429.9	748.9	938.6
MEAN	9.31	46.0	69.4	54.4	33.1	55.5	130	33.8	21.1	13.9	24.2	31.3
MAX	42	327	427	200	49	385	670	103	76	41	141	115
MIN	5.5	6.1	33	35	25	24	46	18	9.4	5.9	5.6	6.8
‡	1.4	1.3	1.1	1.3	1.2	1.4	1.5	1.3	1.5	1.3	1.2	1.6

CAL YR 1986 TOTAL 14293.2 MEAN 39.2 MAX 429 MIN 5.5 ‡ 1.3
WTR YR 1987 TOTAL 15847.8 MEAN 43.4 MAX 670 MIN 5.5 ‡ 1.3

‡ Indicated net diversion, in cubic feet per second, for diversion and return in upstream supply.

RESERVOIRS IN HUDSON RIVER BASIN

01335900 DELTA RESERVOIR.--Lat 43°16'20", long 75°25'50", Oneida County, Hydrologic Unit 02020004, on superstructure of gatehouse at Delta Dam on Mohawk River, and 4 mi upstream from Rome. DRAINAGE AREA, 148 mi^2. PERIOD OF RECORD, May 1913 to current year. REVISED RECORDS, WDR NY-85-1: Drainage area. GAGE, nonrecording gage read daily at 0800. Datum of gage is Barge Canal datum.

Dam completed Aug. 3, 1912, and controlled storage for which records are available began May 1, 1913. Usable capacity 2,800 mil ft^3 at crest of spillway, elevation 550.0 ft. Reservoir is used for navigation in Barge Canal. Records provided by New York State Department of Transportation.

EXTREMES FOR PERIOD OF RECORD (1951-86).--Maximum contents observed, 3,136 mil ft^3, June 22, 1972, elevation, 552.8 ft; minimum observed, 2.0 mil ft^3, Jan. 10, 13, 16-21, Feb. 7-15, Feb. 22 to Mar. 2, 1959, elevation, 492.0 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 2,944 mil ft^3, Apr. 6, elevation, 551.2 ft; minimum observed, 1,338 mil ft^3, Sept. 11-12, elevation, 535.1 ft.

01343900 HINCKLEY RESERVOIR.--Lat 43°18'45", long 75°06'25", Oneida County, Hydrologic Unit 02020004, on south side of north gatehouse at Hinckley Dam on West Canada Creek at Hinckley, and 2.2 mi east of Prospect. DRAINAGE AREA, 372 mi^2. PERIOD OF RECORD, March 1914 to current year. REVISED RECORDS, WDR NY-85-1: Drainage area. GAGE, nonrecording gage read daily at 0800. Datum of gage is Barge Canal datum.

Reservoir is formed by earth and concrete dam; storage began March 1914. Usable capacity 3,320 mil ft^3 between elevation 1,173.5 and 1,225.0 ft. Elevation of inverts of four 60-inch discharge pipes at north end of spillway is 1,169.5 ft, and elevation of inverts of two 42-inch pipes at south end for diverting water to city of Utica is 1,164.25 ft. Crest of Ogee spillway is at elevation 1,225.0 ft. Length of spillway is 400 ft. Area of water surface at crest elevation is 4.46 mi^2. Telephone gage-height telemeter at station. Records provided by New York State Department of Transportation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 4,041 mil ft^3, Oct. 2, 1945, elevation, 1,230.2 ft; minimum observed (after initial filling), not determined.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 3,612 mil ft^3, Apr. 6, elevation, 1,227.2 ft; minimum observed, 857 mil ft^3, Feb. 28 to Mar. 1, elevation, 1,196.2 ft.

01350100 SCHOHARIE RESERVOIR (see station for mean daily elevations, skeleton capacity table, monthly contents and change in contents).

01363400 ASHOKAN RESERVOIR.--Lat 41°57'01", long 74°12'30", Ulster County, Hydrologic Unit 02020006, at gatehouse located at Dividing Weir Dyke, and 1.6 mi south of Shokan. DRAINAGE AREA, 256 mi^2. PERIOD OF RECORD, September 1913 to current year. REVISED RECORDS, WDR NY-72-1: 1968. WDR NY-83-1: (M)(m). GAGE, nonrecording gage read daily at 0900. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Board of Water Supply, City of New York).

The reservoir is formed by the masonry Olive Bridge Dam across Esopus Creek and a series of earth embankments between hills. The reservoir is divided into two basins separated by a weir containing a gatehouse. Storage began Sept. 9, 1913. Usable capacity of West basin 47,180 mil gal between minimum operating level elevation 495.50 ft and crest of spillway to East basin, elevation 590.00 ft; dead storage below minimum operating level 2,237 mil gal. Usable capacity of East basin 80,678 mil gal between elevation 500.00 ft and crest of spillway, elevation 587.10 ft; no dead storage. Figures given herein represent total contents for each basin. Reservoir impounds water for diversion into Catskill Aqueduct for New York City water supply (see elsewhere in this section). Any flood spillage enters the Esopus Creek channel below Olive Bridge Dam. Records provided by Department of Environmental Protection, City of New York.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, in West basin, 54,001 mil gal, Mar. 31, 1951, elevation, 594.33 ft, in East basin, 89,411 mil gal, Mar. 31, 1951, elevation, 592.23 ft; minimum observed, in West basin, 9,098 mil gal, Oct. 24, 1926, elevation, 530.56 ft, in East basin, 8,394 mil gal, Oct. 24, 1926, elevation, 525.91 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, in West basin, 50,741 mil gal, Apr. 1, elevation, 591.25 ft, in East basin, 87,052 mil gal, Apr. 5, elevation, 568.53 ft; minimum observed, in West basin, 36,206 mil gal, Nov. 20, elevation, 575.88 ft, in East basin, 52,198 mil gal, Sept. 18, elevation, 568.53 ft.

01366400 RONDOUT RESERVOIR.--Lat 41°47'57", long 74°25'48", Ulster County, Hydrologic Unit 02020007, at release chamber at Merriman Dam on Rondout Creek, 1.1 mi upstream from Brandy Brook, and 1.3 mi northwest of Lackawack. DRAINAGE AREA, 95.4 mi^2. PERIOD OF RECORD, May 1951 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Board of Water Supply, City of New York).

Reservoir is formed by an earthfill rockfaced dam; storage began May 10, 1951. Initial filling (to crest of spillway) Mar. 28, 1955. Usable capacity 50,048 mil gal between minimum operating level, elevation, 720.00 ft and crest of spillway, elevation, 840.00 ft. Dead storage below elevation 720.00 ft, 2,387 mil gal. Figures given herein represent total contents. Reservoir impounds water from Rondout Creek; water diverted from Cannonsville Reservoir in the Delaware River basin through West Delaware Tunnel; water diverted from Pepacton Reservoir through East Delaware Tunnel; and water diverted from Neversink Reservoir through Neversink-Grahamsville Tunnel. Water is diverted from Rondout Reservoir for New York City water supply through West Branch Tunnel of Delaware Aqueduct (see elsewhere in this section). Records provided by Bureau of Water Resources Development, City of New York.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 53,355 mil gal, June 23, 1972, elevation, 841.34 ft; minimum observed (after initial filling), 8,335 mil gal, Oct. 15, 1957, elevation, 748.75 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 53,458 mil gal, Apr. 5, elevation, 841.49 ft; minimum, 41,157 mil gal, Aug.10, elevation, 822.50 ft.

RESERVOIRS IN HUDSON RIVER BASIN--Continued

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

Date	Elevation (feet) ‡	Contents (million ft³)	Change in contents (equivalent in ft³/s)	Elevation (feet) ‡	Contents (million ft³)	Change in contents (equivalent in ft³/s)
	01335900 Delta Reservoir			01343900 Hinckley Reservoir		
Sept. 30	550.8	2,896		1,219.4	2,690	
Oct. 31	547.0	2,460	-163	1,220.0	2,750	+ 22.4
Nov. 30	545.8	2,328	- 50.9	1,223.5	3,142	+151
Dec. 31	543.0	2,040	-108	1,214.4	2,207	-349
CAL YR 1986	-	-	- 13.3	-	-	- 24.2
Jan. 31	538.0	1,570	-175	1,202.4	1,257	-355
Feb. 28	536.2	1,426	- 59.5	1,196.2	857	-165
Mar. 31	550.0	2,800	+513	1,223.1	3,096	+836
Apr. 30	550.1	2,812	+ 4.63	1,219.2	2,670	-164
May 31	547.9	2,559	- 94.5	1,217.7	2,520	- 56.0
June 30	545.7	2,317	- 93.4	1,218.9	2,640	+ 46.3
July 31	541.9	1,930	-144	1,218.2	2,570	- 26.1
Aug. 31	536.8	1,474	-170	1,213.6	2,137	-162
Sept. 30	540.8	1,822	+134	1,223.1	3,096	+370
WTR YR 1987	-	-	- 34.1	-	-	+ 12.9

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)
	01363398 Ashokan Reservoir West Basin			01363399 Ashokan Reservoir East Basin			01366400 Rondout Reservoir		
Sept. 30	586.45	45,882		577.07	64,567		826.49	43,615	
Oct. 31	577.97	38,029	-392	577.33	64,968	+ 20.0	823.13	41,540	-104
Nov. 30	580.97	40,699	+138	575.61	62,316	-137	837.76	50,917	+484
Dec. 31	580.62	40,375	- 16.2	578.20	66,310	+199	834.63	48,835	-104
CAL YR 1986	-	-	+ 20.2	-	-	+ 20.3	-	-	+ 13.4
Jan. 31	579.29	39,180	- 59.6	578.53	66,818	+ 25.4	833.34	47,987	- 42.3
Feb. 28	578.63	38,604	- 31.8	576.78	64,120	-149	826.84	43,832	-230
Mar. 31	585.67	45,106	+325	581.98	72,281	+407	839.35	51,992	+407
Apr. 30	588.90	48,322	+166	587.50	81,349	+468	834.86	48,986	-155
May 31	589.76	49,179	+ 42.8	584.39	76,170	-258	838.31	51,288	+115
June 30	590.08	49,503	+ 16.7	577.96	65,940	-528	833.19	47,890	-175
July 31	589.02	48,442	- 53.0	572.53	57,819	-405	827.04	43,957	-196
Aug. 31	581.55	41,237	-360	570.10	54,319	-175	826.17	43,415	- 27.1
Sept. 30	590.47	49,916	+448	573.54	59,273	+256	831.07	46,515	+160
WTR YR 1987	-	-	+ 17.1	-	-	- 22.4	-	-	+ 12.3

‡ Elevation at 2400 hours by interpolation.
‡‡ Elevation at 0900 hours on first day of following month.

DIVERSIONS IN HUDSON RIVER BASIN

Undetermined diversion at Solsville from Chenango River in Susquehanna River basin into Oriskany Creek in Mohawk River Basin through Oriskany Creek Feeder.

Undetermined diversion from (and occasionally into) Oswego River, tributary to Lake Ontario, through Summit level of Erie (Barge) Canal.

Undetermined diversion from Black River tributary into Lake Ontario through Black River canal into Mohawk River in Hudson River basin.

Undetermined diversion from Hudson River basin to summit level of Champlain (Barge) Canal.

01343899 Diversion from Hinckley Reservoir (see preceding pages) for municipal supply of Utica. Diversion began prior to 1921. Records provided by Utica Board of Water Supply.

Diversion from Schoharie Reservoir (see preceding pages) on Schoharie Creek through Shandaken Tunnel to Esopus Creek at, 01362230 Lat 42°06'52", long 74°21'51", near Phoenicia, Ulster County. No diversion prior to 1924. Records provided by Department of Environmental Protection, City of New York.

01363401 Diversion from Ashokan Reservoir (see preceding pages) on Esopus Creek through the Catskill Aqueduct for municipal supply of New York City. Completed in 1917. Records provided by Department of Environmental Protection, City of New York.

01366399 Diversion from Rondout Reservoir. Total diversion from Rondout Reservoir to Delaware Aqueduct for municipal supply of City of New York. Rondout Reservoir is a collection basin for diversion from: Cannonsville Reservoir, Pepacton Reservoir, and Neversink Reservoir in the Delaware River basin and the Rondout Creek in the Hudson River basin. Diversion began April 1944 by means of temporary emergency connection to aqueduct. Records provided by Bureau of Water Resources Development, City of New York.

01367630 Diversion from Morris Lake, tributary to Wallkill River, by Newtown Water and Sewer Authority for municipal use in New Jersey. After use the water is released into the Paulins Kill (Delaware River basin). Records available from the Delaware River Basin Commission.

DIVERSION, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

Month	01343899 Hinckley Reservoir	01362230 Schoharie Reservoir	01363401 Ashokan Reservoir	01366399 Rondout Reservoir
October.....	32.6	249	659	1,368
November.....	32.3	112	856	1,062
December.....	32.6	174	860	941
CAL YR 1986	33.4	262	697	1,176
January.....	31.1	268	632	847
February.....	32.2	554	815	1,288
March.....	34.3	579	905	1,374
April.....	33.6	9.08	469	1,321
May.....	34.6	225	710	1,385
June.....	35.3	289	893	1,382
July.....	36.1	253	892	1,377
August.....	38.3	271	886	1,367
September.....	35.3	426	796	1,372
WTR YR 1987	34.0	283	781	1,256

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 except those for periods of sluggish intake action, Dec. 4-July 15, which are poor. 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 discharge, 2.6 ft^3/s, June 12, 1965, Sept. 25, 26, 30, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,170 ft^3/s, Apr. 4, gage height, 9.81 ft; minimum daily, 9.9 ft^3/s, Oct. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	11	24	38	46	159	375	55	15	12	13	16
2	16	11	18	115	44	284	114	50	14	16	16	15
3	16	11	130	143	47	124	89	51	14	15	21	16
4	21	11	123	91	52	90	595	87	15	13	15	16
5	14	11	82	72	51	75	577	94	16	13	51	18
6	14	18	66	55	47	64	335	71	14	13	62	18
7	13	12	57	49	45	62	283	63	13	15	21	24
8	13	20	54	47	49	63	163	56	13	20	17	29
9	13	16	57	43	55	64	121	47	13	14	18	41
10	13	13	65	43	49	55	103	43	13	13	29	18
11	12	22	59	64	44	45	92	39	13	13	17	17
12	13	17	58	64	43	42	85	37	14	13	16	18
13	13	12	55	60	41	44	188	33	14	13	16	50
14	18	11	43	51	33	41	109	28	13	21	16	25
15	15	10	38	51	32	39	85	30	13	19	15	16
16	14	11	36	54	30	40	78	32	12	12	15	15
17	13	11	35	49	28	37	110	24	12	12	15	20
18	13	12	44	49	27	35	199	24	12	12	15	23
19	13	21	95	72	25	32	109	29	14	13	16	22
20	13	16	80	77	24	32	89	27	14	15	15	17
21	15	78	65	65	24	30	77	26	26	12	16	17
22	12	18	52	65	25	33	70	21	14	12	16	16
23	9.9	15	45	70	30	28	58	17	13	11	15	15
24	11	15	41	60	31	23	79	16	13	12	16	15
25	11	15	95	50	31	22	158	12	11	12	15	16
26	14	45	99	48	30	23	101	11	13	13	16	15
27	13	45	72	42	30	24	76	10	23	13	27	15
28	12	19	60	38	29	31	76	13	16	13	25	16
29	11	16	51	36	---	32	70	13	13	13	24	16
30	11	17	49	38	---	31	65	13	13	12	17	17
31	11	---	44	47	---	459	---	13	---	13	16	---
TOTAL	416.9	560	1892	1846	1042	2163	4729	1085	426	423	622	592
MEAN	13.4	18.7	61.0	59.5	37.2	69.8	158	35.0	14.2	13.6	20.1	19.7
MAX	21	78	130	143	55	459	595	94	26	21	62	50
MIN	9.9	10	18	36	24	22	58	10	11	11	13	15

CAL YR 1986 TOTAL 12430.9 MEAN 34.1 MAX 304 MIN 9.9
WTR YR 1987 TOTAL 15796.9 MEAN 43.3 MAX 595 MIN 9.9

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 mi^2.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR-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.--46 years, 88.7 ft^3/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,440 ft^3/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, 1,800 ft^3/s, Apr. 4, 5, gage height, 6.24 ft; minimum, 18 ft^3/s, Oct. 7, gage height 1.56 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87	103	37	69	86	214	1060	101	32	44	127	43
2	87	103	40	275	84	547	386	91	32	46	123	39
3	89	104	109	297	92	314	176	90	33	51	116	38
4	65	103	42	190	103	179	752	155	36	46	73	37
5	24	104	38	146	100	147	1600	174	38	45	128	37
6	23	76	36	117	92	129	878	148	32	45	98	37
7	27	46	36	100	87	115	662	126	31	59	58	52
8	65	54	35	91	87	112	387	107	32	98	56	57
9	63	38	42	80	101	113	239	92	33	53	59	78
10	61	34	42	79	95	102	185	82	32	49	106	42
11	47	49	37	114	85	84	166	75	58	90	60	40
12	47	41	40	117	80	76	150	69	88	141	48	40
13	38	34	36	108	78	79	259	64	88	104	35	118
14	29	33	34	96	69	76	245	53	85	75	34	58
15	24	32	34	95	62	70	164	55	81	64	34	44
16	21	40	34	96	56	69	145	57	80	50	34	42
17	20	86	34	91	53	64	160	49	85	48	33	57
18	20	86	46	93	50	60	344	46	94	47	33	61
19	20	108	50	132	48	56	248	54	118	47	33	53
20	39	71	38	143	46	54	170	51	139	48	32	45
21	63	129	36	125	45	52	147	48	137	48	32	44
22	65	39	35	122	46	52	130	45	81	47	35	43
23	65	36	34	134	54	51	113	43	55	47	71	42
24	63	38	35	112	58	47	113	42	54	47	71	42
25	65	36	66	124	56	44	217	39	78	53	90	43
26	66	96	39	86	55	43	208	37	113	129	110	41
27	50	110	43	96	54	42	150	36	115	112	95	41
28	48	41	60	86	54	53	141	35	53	112	64	41
29	53	39	71	71	---	56	129	34	47	114	48	40
30	84	38	74	71	---	53	117	33	45	132	40	41
31	93	---	73	88	---	438	---	31	---	131	39	---
TOTAL	1611	1947	1406	3644	1976	3591	9841	2162	2025	2222	2015	1436
MEAN	52.0	64.9	45.4	118	70.6	116	328	69.7	67.5	71.7	65.0	47.9
MAX	93	129	109	297	103	547	1600	174	139	141	128	118
MIN	20	32	34	69	45	42	113	31	31	44	32	37

CAL YR 1986 TOTAL 26651 MEAN 73.0 MAX 552 MIN 15
WTR YR 1987 TOTAL 33876 MEAN 92.8 MAX 1600 MIN 20

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 mi^2. 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 mi^2. 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 miA2. 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 mi^2. 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 1986 TO SEPTEMBER 1987

Date	Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft^3/s)	Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft^3/s)
	01376700 DE FOREST LAKE			01376950 LAKE TAPPAN		
Sept. 30.....	83.31	5,127	-	50.90	2,477	-
Oct. 31.....	82.08	4,745	-19.1	48.95	1,905	-28.5
Nov. 30.....	84.84	5,617	+45.0	50.85	2,462	+28.7
Dec. 31.....	85.10	5,703	+4.3	55.20	3,924	+73.0
CAL YR 1986			+2.4			+.3
Jan. 31.....	85.14	5,716	+.6	55.29	3,957	+1.6
Feb. 28.....	85.04	5,683	-1.8	55.14	3,902	-3.0
Mar. 31.....	85.65	5,885	+10.1	55.53	4,044	+7.1
Apr. 30.....	84.27	5,759	-6.5	55.28	3,953	-4.7
May 31.....	84.89	5,634	-6.2	55.00	3,852	-5.0
June 30.....	84.03	5,356	-14.3	53.08	3,181	-34.6
July 31.....	82.90	4,999	-17.8	50.72	2,422	-37.9
Aug. 31.....	82.33	4,822	-8.8	51.09	2,536	+5.7
Sept. 30.....	84.00	5,347	+27.1	52.80	3,087	+28.4
WTR YR 1987	-	-	+.9	-	-	+2.6

Date	Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft^3/s)	Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft^3/s)
	01377450 WOODCLIFF LAKE			01378480 ORADELL RESERVOIR		
Sept. 30.....	95.10	876	-	18.89	2,440	-
Oct. 31.....	80.60	202	-33.6	18.51	2,352	-4.4
Nov. 30.....	94.05	818	+31.8	22.21	3,252	+46.4
Dec. 31.....	95.10	876	+2.9	22.19	3,247	-.2
CAL YR 1986			+3.2			+.05
Jan. 31.....	94.20	826	-2.5	21.69	3,118	-6.4
Feb. 28.....	93.93	811	-.8	21.95	3,185	+3.7
Mar. 31.....	95.75	913	+5.1	23.75	3,670	+24.2
Apr. 30.....	94.92	866	-2.4	23.18	3,512	-8.2
May 31.....	94.33	833	-1.6	19.69	2,627	-44.2
June 30.....	91.56	682	-7.8	19.19	2,509	-6.1
July 31.....	91.59	683	+.05	18.66	2,387	-6.1
Aug. 31.....	94.29	831	+7.4	19.66	2,620	+11.6
Sept. 30.....	94.63	850	+1.0	21.14	2,979	+18.5
WR YR 1987	-	-	-.11	-	-	+2.3

† 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 1986 TO SEPTEMBER 1987

MONTH	01376699 SPRING VALLEY WATER CO.	01376810 WEST NYACK, NY	01378490 HACKENSACK WATER CO.
October	10.9	2.90	148
November	4.88	2.81	143
December	0	2.90	143
CAL YR 1986	5.62	3.01	150
January	0	2.95	142
February	0	3.04	145
March	0	2.69	142
April	0	2.53	143
May	3.84	2.77	158
June	15.2	3.15	182
July	15.7	3.15	180
August	16.7	2.88	178
September	9.57	3.11	157
WTR YR 1987	6.44	3.51	155

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	1.66	15.3	.02	0.17
November	0	2.42	16.1	9.42	.02
December	0	.82	1.13	1.18	0
CAL YR 1986	.04	1.21	6.96	7.61	0.55
January	0	0	0	0	0
February	0	0	0	0	0
March	0	0	0	0	0
April	0	0	0	0	.11
May	0	0	0	0	.08
June	0	0	36.1	1.69	.28
July	0	0	38.0	3.81	.24
August	0	0	34.8	6.69	.28
September	0	0	25.0	4.41	.28
WTR YR 1987	0	0.41	13.9	2.27	0.12

PASSAIC RIVER BASIN

01387400 RAMAPO RIVER AT RAMAPO, NY

LOCATION.--Lat 41°08'25", long 74°10'14", Rockland County, Hydrologic Unit 02030103, on right bank, 105 ft downstream from highway bridge on New York State Thruway at Ramapo, 500 ft upstream from local bridge, and 0.4 mi upstream from Torne Brook.

DRAINAGE AREA.--86.7 mi^2.

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

REVISED RECORDS.--WDR NY-81-1: 1980(m).

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 297.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair. Occasional regulation by Lake Sebago. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--8 years, 168 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,700 ft^3/s, Apr. 5, 1984, gage height, 13.82 ft, from rating curve extended above 3,600 ft^3/s on basis of runoff comparison with station 1.5 mi downstream; minimum discharge, 5.3 ft^3/s, Aug. 7, 1983, gage height, 1.27 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,050 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 21	0530	1,250	4.63	Apr. 4	2400	*5,290	*9.49
Apr. 1	0015	1,950	5.74	Sept. 14	0730	1,580	5.18

Minimum discharge, 12 ft^3/s, part or all of each day Aug. 22-27; minimum gage height, 1.45 ft, Aug. 23, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	17	237	200	121	197	1530	156	34	19	15	30
2	19	18	237	263	113	468	790	141	32	19	14	27
3	21	17	733	266	115	414	511	135	39	27	18	23
4	70	17	646	219	122	343	2400	217	34	24	17	20
5	56	18	418	187	121	292	3830	220	48	21	20	18
6	35	38	305	165	114	262	1890	210	44	18	41	17
7	25	45	279	159	115	300	1400	191	33	18	29	42
8	21	61	253	159	115	561	997	164	29	25	24	245
9	19	96	233	146	119	793	683	143	27	26	21	371
10	17	78	263	139	118	615	494	129	24	23	28	228
11	17	83	230	155	111	419	387	118	22	22	26	143
12	17	134	219	148	108	341	308	108	21	46	22	104
13	17	110	184	132	107	305	282	98	24	103	19	448
14	24	88	147	124	98	271	248	89	27	69	17	1380
15	25	72	131	137	92	241	217	91	23	106	16	586
16	23	65	127	201	90	211	194	89	21	62	15	269
17	25	59	124	193	92	191	201	80	19	40	14	233
18	24	54	167	175	86	179	241	74	18	32	14	225
19	23	90	438	198	87	170	223	82	17	27	13	248
20	22	90	446	207	81	161	194	80	17	25	13	220
21	22	1140	332	181	79	153	173	74	23	27	13	197
22	18	747	269	167	79	160	156	68	43	25	13	174
23	17	391	227	193	84	162	138	65	28	21	12	163
24	16	291	197	184	88	155	172	75	23	19	12	144
25	17	251	601	156	84	146	291	65	21	18	12	142
26	21	329	604	138	81	140	249	57	19	17	12	116
27	28	725	409	132	79	133	208	52	27	18	22	102
28	27	510	317	124	78	128	200	51	32	17	36	91
29	24	364	285	120	---	131	201	47	24	16	59	83
30	21	284	251	116	---	127	180	43	21	15	50	89
31	19	---	226	127	---	1050	---	37	---	15	28	---
TOTAL	748	6282	9535	5211	2777	9219	18988	3249	814	960	665	6178
MEAN	24.1	209	308	168	99.2	297	633	105	27.1	31.0	21.5	206
MAX	70	1140	733	266	122	1050	3830	220	48	106	59	1380
MIN	16	17	124	116	78	127	138	37	17	15	12	17

CAL YR 1986 TOTAL 60600 MEAN 166 MAX 1480 MIN 14
WTR YR 1987 TOTAL 64626 MEAN 177 MAX 3830 MIN 12

01387420 RAMAPO RIVER AT SUFFERN, NY

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.--Records fair. 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.--8 years, 173 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. 21	0430	1,620	6.64	Apr. 5	0030	#5,920	#11.72
Apr. 1	0200	2,150	7.69	Sept. 14	0700	1,760	6.92

Minimum discharge, 9.2 ft^3/s, Aug. 16, gage height, 1.40 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	22	223	196	114	222	1720	154	27	16	13	33
2	22	22	210	267	108	491	818	135	25	17	13	28
3	25	22	782	264	118	414	526	128	32	28	18	23
4	67	e22	659	e220	130	332	2800	227	29	22	16	19
5	57	e25	398	e200	123	273	4250	230	40	18	22	16
6	38	e40	297	e180	111	248	2030	217	39	15	47	16
7	28	e50	250	e160	110	296	1480	197	30	16	29	37
8	24	e70	221	e150	110	564	1010	166	27	24	22	265
9	22	e110	219	130	120	798	704	139	23	24	18	431
10	19	e78	248	130	122	621	509	123	20	19	29	244
11	18	e80	227	156	106	409	396	110	18	18	26	152
12	18	e130	213	142	102	323	317	97	18	35	20	103
13	19	e110	192	126	102	274	295	87	21	94	16	513
14	28	e90	156	114	100	240	247	77	23	60	16	1560
15	28	e68	141	143	89	215	210	78	20	97	15	648
16	26	e60	139	210	86	199	191	78	18	52	12	289
17	27	e54	139	198	86	185	198	69	16	34	11	242
18	27	e50	181	184	80	170	238	61	16	27	11	237
19	25	e86	439	209	81	160	217	69	16	21	11	264
20	25	e88	428	209	75	154	187	69	16	20	11	228
21	24	e1300	312	185	70	148	163	63	19	22	11	197
22	20	e900	249	e170	68	160	145	57	39	20	11	166
23	18	e540	219	e200	78	157	122	56	25	16	11	161
24	18	e350	202	e190	81	148	163	65	19	15	11	141
25	18	229	602	e170	75	138	298	56	17	15	11	137
26	24	320	617	e140	71	133	258	50	15	15	11	107
27	32	776	404	137	69	124	212	45	26	13	25	88
28	30	503	314	130	68	122	204	43	30	12	41	76
29	27	341	267	122	---	122	206	40	22	12	55	67
30	25	268	237	123	---	115	185	37	17	12	51	71
31	23	---	216	131	---	1140	---	32	---	12	30	---
TOTAL	822	6804	9401	5286	2653	9095	20299	3055	703	821	644	6559
MEAN	26.5	227	303	171	94.7	293	677	98.5	23.4	26.5	20.8	219
MAX	67	1300	782	267	130	1140	4250	230	40	97	55	1560
MIN	18	22	139	114	68	115	122	32	15	12	11	16
#	0.0	8.4	13	14	14	15	14	15	7.2	4.7	2.1	9.2

CAL YR 1986 TOTAL 61706 MEAN 169 MAX 1640 MIN 12 # 11
WTR YR 1987 TOTAL 66142 MEAN 181 MAX 4250 MIN 11 # 9.7

e Estimated

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

PASSAIC RIVER BASIN

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.--No estimated daily discharges. Records fair. Occasional regulation from unknown source. Several measurements of water temperature were made during the year. Telephone gage-height telemeter at station.

AVERAGE DISCHARGE.--29 years, 24.9 ft^3/s, 27.49 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 measurement at gage height 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. 21	0445	623	5.34	Apr. 4	1700	*1,070	*6.71
Nov. 27	0030	272	4.09	Apr. 6	1315	336	4.37
Dec. 3	0615	239	3.93	Sept. 13	2100	303	4.23
Mar. 31	1730	436	4.75				

Minimum discharge, 1.0 ft^3/s, Aug. 26, 27, gage height, 1.30 ft.

REVISIONS.--The minimum daily discharge for water year 1986 has been revised to 3.4 ft^3/s, Sept. 18, 20; revised daily discharges, in cubic feet per second, for September 1986, are given below. These figures supersede those published in the report for 1986.

Sept. 5	7.0	Sept. 13	4.2	Sept. 19	3.5	Sept. 25	3.5
6	10	14	3.8	20	3.4	26	3.6
7	7.9	15	3.6	21	5.0	27	6.8
9	5.8	16	3.7	22	4.3	28	5.0
10	4.8	17	3.6	23	3.7	29	3.7
11	4.6	18	3.4	24	3.8	30	3.7
12	4.5						

	TOTAL	MEAN	MAX	MIN	CFSM	IN
September 1986	151.2	5.04	10	3.4	.41	.46
Wtr Yr 1986	8991.3	24.6	304	3.4	2.00	27.2

01387450 MAHWAH RIVER NEAR SUFFERN, NY--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.4	3.5	33	27	20	73	162	26	6.3	2.7	1.4	6.7
2	4.4	3.2	33	58	19	88	79	24	6.4	3.6	1.3	4.5
3	4.4	3.2	162	50	21	64	56	24	6.6	9.3	4.3	3.3
4	12	3.1	87	38	24	52	469	39	7.1	4.7	3.9	2.7
5	4.8	3.1	58	32	21	44	378	36	11	3.4	7.5	2.4
6	3.6	9.6	46	29	19	40	245	30	7.4	2.7	33	2.2
7	3.0	5.8	40	28	19	48	175	27	6.5	3.7	7.6	7.1
8	2.7	13	36	27	20	61	112	24	6.4	8.2	5.1	28
9	2.9	15	37	24	21	65	83	22	5.9	4.8	4.2	62
10	2.6	11	42	24	18	53	67	20	5.3	3.3	10	23
11	2.5	18	35	30	18	42	57	19	4.8	2.7	5.5	15
12	2.4	24	32	27	18	38	49	17	4.9	3.8	3.9	11
13	2.6	17	28	24	17	35	51	16	6.0	8.1	3.2	101
14	5.9	13	24	22	15	31	43	15	5.7	10	2.8	126
15	4.5	11	22	28	15	28	38	16	4.6	16	2.6	50
16	3.3	9.7	22	35	14	26	34	15	3.8	6.7	2.4	30
17	2.9	10	22	29	14	24	42	14	3.3	4.8	2.2	27
18	2.6	8.6	33	30	13	22	54	13	3.0	3.9	2.0	28
19	2.6	16	73	39	13	21	41	15	2.9	3.5	1.8	32
20	2.7	15	53	33	13	20	35	13	2.8	3.6	1.7	27
21	2.6	295	42	29	12	19	32	13	7.5	4.6	1.5	23
22	2.7	97	35	27	13	19	29	12	5.2	3.5	1.3	20
23	2.9	53	31	29	14	18	27	11	4.2	2.9	1.3	18
24	3.1	41	29	25	14	17	40	10	3.5	2.7	1.1	17
25	3.0	33	100	22	13	16	55	9.8	3.0	2.4	1.1	17
26	3.7	69	68	22	13	16	41	9.4	2.7	2.2	1.1	14
27	5.9	147	52	20	13	15	35	9.3	9.1	2.1	8.9	13
28	4.2	72	43	19	13	18	36	9.2	5.5	2.0	12	12
29	3.5	51	37	18	---	16	33	8.7	3.7	1.9	12	11
30	3.9	40	33	19	---	16	30	7.7	3.0	1.7	6.3	12
31	4.0	---	30	22	---	209	---	7.0	---	1.6	4.3	---
TOTAL	116.3	1110.8	1418	886	457	1254	2628	532.1	158.1	137.1	157.3	745.9
MEAN	3.75	37.0	45.7	28.6	16.3	40.5	87.6	17.2	5.27	4.42	5.07	24.9
MAX	12	295	162	58	24	209	469	39	11	16	33	126
MIN	2.4	3.1	22	18	12	15	27	7.0	2.7	1.6	1.1	2.2
CFSM	.31	3.01	3.72	2.32	1.33	3.29	7.12	1.40	.43	.36	.41	2.02
IN.	.35	3.36	4.29	2.68	1.38	3.79	7.95	1.61	.48	.41	.48	2.26

CAL YR 1986 TOTAL 9120.7 MEAN 25.0 MAX 304 MIN 2.4 CFSM 2.03 IN. 27.6
WTR YR 1987 TOTAL 9600.5 MEAN 26.3 MAX 469 MIN 1.1 CFSM 2.14 IN. 29.0

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 $mi.^2$

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.--69 years (water years 1903-06,1923-87), 230 ft^3/s, 26.03 in/yr.
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,500 ft^3/s, April 5, 1984, gage height, 13.35 ft, from rating curve extended above 1,400 ft^3/s; minimum, 4.6 ft^3/s, Sept. 30, 1981 (possible regulation); minimum daily, 6.1 ft^3/s, Sept. 30, 1981 (possible regulation).
EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 21	1145	1,960	7.08	Apr. 5	0130	*6,410	*9.96
Apr. 1	0130	2,600	7.68	Sep. 14	0845	1,960	7.08

Minimum discharge, 19 ft^3/s, Aug. 24, 25, 26.
REVISIONS.--The peak discharge, previously not published, for Jan. 27, 1986, is 2,300 ft^3/s; revised daily discharges, in cubic feet per second, for periods in January 1986 are given below. These figures supersede those published in the report for 1986.

Jan. 26...1,500 Jan. 27...2,100 Jan. 28...1,100

	TOTAL	MEAN	MAX	MIN	$(FT^3/S)/MI^2$	IN.
January 1986	8688	280	2100	51	2.34	2.69
WTR YR 1986	86350	237	2100	28	1.98	26.82

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	28	308	262	167	380	2080	252	51	30	21	51
2	31	29	298	413	160	689	999	232	47	41	21	39
3	41	28	1030	405	178	561	641	231	54	58	52	32
4	113	28	828	316	195	468	3100	347	51	41	30	28
5	79	31	532	265	179	400	4900	341	75	33	107	26
6	48	81	417	237	160	364	2530	316	63	30	205	25
7	37	63	355	224	162	409	1870	289	50	34	57	65
8	32	112	311	217	161	654	1290	256	47	68	40	355
9	29	148	317	198	173	893	928	227	43	46	35	531
10	28	111	363	193	161	722	707	207	39	36	75	315
11	27	146	323	231	152	514	567	188	36	32	43	193
12	27	219	301	216	147	432	476	171	39	41	34	131
13	27	160	263	189	143	383	452	153	41	124	29	595
14	53	122	218	174	132	344	404	135	42	123	28	1700
15	42	98	201	204	121	307	356	138	38	162	28	734
16	35	82	198	287	131	278	326	131	35	77	24	368
17	36	73	199	268	115	255	344	113	32	51	22	328
18	35	66	273	255	111	237	403	106	31	41	22	323
19	32	142	592	303	109	223	360	121	31	36	22	346
20	30	153	551	298	102	214	317	113	30	35	21	298
21	29	1750	422	259	100	204	288	104	61	36	21	255
22	27	1000	346	329	101	215	268	97	61	33	21	219
23	26	530	300	431	114	211	244	91	44	28	20	207
24	25	408	278	320	115	199	303	100	36	26	20	188
25	25	342	790	333	107	187	461	89	33	26	20	181
26	40	498	753	218	104	179	388	81	30	25	20	143
27	44	1000	519	202	103	168	321	76	71	24	83	118
28	39	650	422	191	102	174	316	75	57	22	101	104
29	35	463	367	159	---	170	313	70	38	21	94	92
30	32	374	326	162	---	162	284	64	32	21	66	105
31	29	---	292	191	---	1390	---	57	---	21	40	---
TOTAL	1162	8935	12693	7950	3805	11986	26236	4971	1338	1422	1422	8095
MEAN	37.5	298	409	256	136	387	875	160	44.6	45.9	45.9	270
MAX	113	1750	1030	431	195	1390	4900	347	75	162	205	1700
MIN	25	28	198	159	100	162	244	57	30	21	20	25
CFSM	.31	2.48	3.41	2.14	1.13	3.22	7.29	1.34	.37	.38	.38	2.25
IN.	.36	2.77	3.93	2.46	1.18	3.72	8.13	1.54	.41	.44	.44	2.51

CAL YR 1986 TOTAL 83535 MEAN 229 MAX 2100 MIN 25 CFSM 1.91 IN. 25.89
WTR YR 1987 TOTAL 90015 MEAN 247 MAX 4900 MIN 20 CFSM 2.06 IN. 27.90

01413500 EAST BRANCH DELAWARE RIVER AT MARGARETVILLE, NY

LOCATION.--Lat 42°08'41", long 74°39'14", Delaware County, Hydrologic Unit 02040102, on right bank at downstream side of bridge on Fair Street at intersection with Main Street at Margaretville, 0.2 mi upstream from unnamed tributary, and 1.6 mi downstream from Dry Brook.

DRAINAGE AREA.--163 mi^2.

PERIOD OF RECORD.--February 1937 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,302.38 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 9, 1937, nonrecording gage and Sept. 9, 1937 to Aug. 17, 1944, water-stage recorder, at same site at datum 1.00 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Several measurements of water temperature were made during the year. Intermittent water-quality data for this station are included in section "ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES".

AVERAGE DISCHARGE.--50 years, 306 ft^3/s, 25.49 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,600 ft^3/s, revised, Nov. 25, 1950, gage height, 13.84 ft, from rating curve extended above 8,700 ft^3/s on basis of contracted-opening and flow-over-road measurement of peak flow at gage height 12.88 ft and does not include undetermined amount of flow bypassing gaging station; minimum discharge, 5.0 ft^3/s, Aug. 5, 1964; minimum gage height, 0.89 ft, Sept. 30, Oct. 1, 1943, present datum.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,800 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 26	2245	3,170	7.37	Apr. 4	2215	a*15,500	*12.88
Mar. 31	1745	3,860	8.03	Sept. 18	2030	2,830	6.77

a From rating curve extended as explained above. Does not include 600 ft^3/s bypassing gaging station.

Minimum discharge, 36 ft^3/s, Oct. 25; minimum gage height, 1.99 ft, June 20, 21.

REVISIONS.--The peak discharges and annual maximum (*) reported for years 1948, 1951, 1953, 1955-56, 1974-75, 1977-78, 1980-81, and 1986 have been revised as shown in the following table. They supersede figures published in WSP 1302, 1722, and the reports for 1974-75, 1977-78, 1980-81 and 1986.

Water year	Date	Time	Discharge (ft^3/s)	Gage height (ft)
1948	Mar. 22, 1948	0530	*10,600	*11.28
1951	Nov. 25, 1950	2200	*20,600	*13.84
1951	Dec. 4, 1950	1800	8,690	10.62
1953	Dec. 11, 1952	1600	*10,500	*11.27
1955	Aug. 19, 1955	0345	* 9,990	*11.09
1956	Oct. 16, 1955	0515	*16,200	*12.87
1974	Dec. 21, 1973	1400	*11,600	*11.62
1975	Dec. 8, 1974	2015	*10,600	*11.30
1977	Mar. 14, 1977	0515	*11,200	*11.50
1978	Oct. 17, 1977	1245	8,130	10.54
1978	Jan. 9, 1978	0930	*10,300	*11.30
1980	Mar. 21, 1980	2145	*11,500	*12.02
1981	Feb. 11, 1981	2000	* 8,090	*10.94
1986	Mar. 15, 1986	0515	*13,300	*12.50

01413500 EAST BRANCH DELAWARE RIVER AT MARGARETVILLE, NY--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	45	545	163	e100	e100	1760	206	84	57	126	113
2	45	46	471	181	e105	e370	1120	184	125	95	151	100
3	46	47	825	e170	e100	e310	911	172	111	168	336	90
4	152	45	650	e150	e98	e250	5720	176	114	102	222	81
5	133	44	518	e145	e96	e220	7250	172	118	80	184	71
6	83	98	452	155	e94	e240	3230	195	96	70	198	66
7	66	105	413	158	e92	387	2780	187	91	71	169	68
8	56	120	378	148	e90	824	1970	158	104	75	148	94
9	50	418	364	143	e88	1020	1390	146	94	85	154	601
10	48	368	430	141	e86	794	1060	139	84	79	277	298
11	43	319	336	146	e80	680	850	130	76	67	186	228
12	41	301	297	139	e78	584	872	127	81	65	152	201
13	40	274	e250	136	e74	503	1790	121	82	90	134	599
14	97	229	e220	e120	e70	447	1320	114	72	379	121	602
15	93	210	244	147	e66	406	1080	114	66	484	111	431
16	65	205	226	177	e62	368	904	108	59	285	103	361
17	57	201	213	e120	e64	334	816	101	55	225	93	427
18	52	190	209	e125	e66	317	752	97	51	188	86	1280
19	49	192	217	e130	e66	323	626	113	49	163	79	1620
20	51	174	196	e130	e64	321	543	101	47	157	77	1110
21	48	1200	180	e120	e60	293	481	93	50	140	70	835
22	45	652	e165	e110	e58	325	427	88	55	119	66	692
23	43	532	e150	e110	e62	432	379	83	127	103	64	549
24	41	810	e160	e110	e62	519	348	112	79	93	58	464
25	38	673	257	e105	e60	624	323	90	61	137	55	393
26	52	1140	277	e105	e60	939	281	81	53	549	52	334
27	81	2060	217	e100	e58	1000	254	169	80	226	83	290
28	64	1290	198	e86	e56	1060	240	124	69	175	134	255
29	56	937	193	e82	---	1070	242	104	57	145	211	230
30	52	706	189	e80	---	1120	230	99	55	137	128	234
31	48	---	183	e90	---	2280	---	90	---	182	94	---
TOTAL	1886	13631	9623	4022	2115	18460	39949	3994	2345	4991	4122	12717
MEAN	60.8	454	310	130	75.5	595	1332	129	78.2	161	133	424
MAX	152	2060	825	181	105	2280	7250	206	127	549	336	1620
MIN	38	44	150	80	56	100	230	81	47	57	52	66
CFSM	.37	2.79	1.90	.80	.46	3.65	8.17	.79	.48	.99	.82	2.60
IN.	.43	3.11	2.20	.92	.48	4.21	9.12	.91	.54	1.14	.94	2.90

CAL YR 1986 TOTAL 124619 MEAN 341 MAX 7770 MIN 22 CFSM 2.09 IN. 28.4
WTR YR 1987 TOTAL 117855 MEAN 323 MAX 7250 MIN 38 CFSM 1.98 IN. 26.9

e Estimated

01414500 MILL BROOK NEAR DUNRAVEN, NY

LOCATION.--Lat 42°06'22", long 74°43'51", Delaware County, Hydrologic Unit 02040102, on left bank 0.4 mi upstream from bridge on New York City Road 9 and Pepacton Reservoir, and 2.7 mi southwest of Dunraven.

DRAINAGE AREA.--25.2 mi^2.

PERIOD OF RECORD.--February 1937 to current year. Published as "at Arena" 1937-67.

REVISED RECORDS.--WSP 1432: 1937. WDR NY-82-1: Drainage area. WDR NY-84-1: 1979-83.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,298.54 ft Board of Water Supply, City of New York datum. Prior to Oct. 17, 1939, nonrecording gage at site 0.2 mi downstream at different datum. Oct. 17 to Dec. 8, 1939, nonrecording gage at present site at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--50 years, 55.2 ft^3/s, 29.75 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,500 ft^3/s, Sept. 21, 1938, from rating curve extended above 960 ft^3/s on basis of velocity-area study; maximum gage height, 9.92 ft, Nov. 25, 1950; minimum discharge observed, 1.2 ft^3/s, Sept. 25, 26, 1939.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 740 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 26	2015	809	6.61	Apr. 4	2000	a*2,550	*9.74
Mar. 31	1645	1,160	7.40				

a From rating curve extended above 1,100 ft^3/s on basis of flow-through-culvert measurement of peak flow.

Minimum discharge, 5.6 ft^3/s, Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.2	11	93	33	e14	e80	406	32	15	13	21	17
2	7.0	11	83	e30	e14	e120	241	30	24	24	30	15
3	7.0	11	136	e29	e14	e84	179	30	25	32	67	14
4	14	11	115	e27	e14	e72	974	31	25	24	43	13
5	12	11	95	e26	e14	e65	719	30	24	19	42	13
6	13	15	84	e24	e13	62	375	34	20	17	53	11
7	10	14	76	e23	e13	75	324	34	20	19	42	11
8	10	19	68	e22	e13	134	239	31	20	19	38	29
9	9.5	113	67	e21	e12	169	179	30	16	19	39	83
10	9.5	97	71	e20	e12	133	139	30	14	16	42	47
11	8.6	72	59	e19	e12	109	111	29	14	15	36	38
12	7.7	59	54	e18	e12	93	115	28	17	13	31	34
13	7.7	50	45	e18	e12	80	279	26	15	13	28	99
14	12	42	40	e18	e12	69	193	24	13	152	25	103
15	13	37	44	e19	e12	62	151	24	14	162	23	73
16	12	35	40	e21	e11	55	122	22	12	94	21	59
17	12	34	38	e19	e11	50	110	20	11	67	19	62
18	e11	33	37	e19	e12	47	100	20	11	53	17	133
19	e11	33	37	e18	e11	45	84	23	9.9	45	16	143
20	e10	45	33	e18	e11	44	74	19	9.8	44	14	113
21	e10	338	31	e17	e11	40	66	18	9.7	37	13	92
22	e9.8	161	29	e17	e12	43	59	17	13	32	13	76
23	e9.6	116	27	e16	e13	53	52	16	29	28	12	65
24	e9.6	134	27	e16	e13	68	49	15	14	24	11	56
25	e9.8	116	63	e15	e12	96	46	14	12	41	11	49
26	e11	286	57	e15	e12	170	41	14	11	89	11	44
27	e12	424	49	e14	e12	191	38	24	17	40	18	39
28	e15	228	44	e13	e12	231	37	19	13	33	23	36
29	13	158	42	e12	---	265	38	17	11	29	35	32
30	12	118	41	e13	---	279	35	16	11	26	20	33
31	11	---	37	e14	---	631	---	15	---	24	16	---
TOTAL	326.0	2832	1762	604	346	3715	5575	732	470.4	1263	830	1632
MEAN	10.5	94.4	56.8	19.5	12.4	120	186	23.6	15.7	40.7	26.8	54.4
MAX	15	424	136	33	14	631	974	34	29	162	67	143
MIN	6.2	11	27	12	11	40	35	14	9.7	13	11	11
CFSM	.42	3.75	2.26	.77	.49	4.76	7.37	.94	.62	1.62	1.06	2.16
IN.	.48	4.18	2.60	.89	.51	5.48	8.23	1.08	.69	1.86	1.23	2.41

CAL YR 1986 TOTAL 23869.6 MEAN 65.4 MAX 1350 MIN 4.5 CFSM 2.60 IN. 35.2
WTR YR 1987 TOTAL 20087.4 MEAN 55.0 MAX 974 MIN 6.2 CFSM 2.18 IN. 29.7

e Estimated

01415000 TREMPER KILL NEAR ANDES, NY

LOCATION.--Lat 42°07'12", long 74°49'08", Delaware County, Hydrologic Unit 02040102, on right bank 500 ft upstream from bridge on County Highway 1, about 1,700 ft upstream from Pepacton Reservoir, and 5 mi south of Andes.

DRAINAGE AREA.--33.2 mi^2.

PERIOD OF RECORD.--February 1937 to current year. Published as "near Shavertown" 1937-67.

REVISED RECORDS.--WDR NY-82-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Concrete control since Nov. 1937. Datum of gage is 1,285.87 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 5, 1937, nonrecording gage at site 500 ft downstream at different datum. Aug. 5 to Sept. 28, 1937, nonrecording gage at site 0.25 mi downstream at different datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--50 years, 59.3 ft^3/s, 24.25 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,250 ft^3/s, Sept. 21, 1938, gage height, 7.12 ft, from rating curve extended above 1,500 ft^3/s; maximum gage height, 7.92 ft, Jan. 26, 1976 (ice jam); minimum discharge, 0.5 ft^3/s, Sept. 17, 21, 22, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 26	2100	800	4.56	Apr. 4	2030	*1,540	*5.34

Minimum discharge, 6.1 ft^3/s, Aug. 26, 27, gage height, 2.49 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	e34	108	e33	e18	e80	209	27	11	13	12	19
2	13	e34	93	33	e19	e170	168	24	23	39	29	15
3	18	e33	146	34	e20	e140	160	24	25	52	57	12
4	70	e32	102	e33	e19	e110	604	25	27	31	31	10
5	73	e33	83	e32	e17	e96	602	22	26	25	25	9.3
6	41	e50	73	e32	e16	e92	362	26	19	21	23	8.9
7	34	36	68	30	e16	95	315	26	19	24	20	9.5
8	30	61	63	25	e15	186	251	21	20	25	18	21
9	26	172	69	24	e15	e230	199	20	18	21	23	152
10	24	136	77	24	e15	e190	154	19	16	17	35	64
11	21	120	60	26	e15	e150	122	18	13	16	23	47
12	20	107	55	24	e14	121	118	18	16	14	18	41
13	19	87	e52	23	e14	99	275	17	16	12	16	183
14	49	69	e54	e25	e14	89	182	15	15	60	14	149
15	36	61	e48	26	e14	78	158	16	12	57	13	107
16	30	60	43	e31	e13	69	132	14	9.8	30	12	82
17	28	58	41	e27	e14	59	112	13	9.0	25	11	102
18	27	53	41	e24	e14	59	96	13	8.4	21	10	319
19	24	54	40	e23	e13	61	80	17	7.9	19	9.2	302
20	23	56	35	e22	e13	59	67	14	7.6	20	9.1	212
21	23	349	32	e22	e13	53	58	13	8.8	17	8.4	150
22	22	194	30	e21	e12	72	51	12	11	14	8.1	136
23	23	152	e30	e21	e13	108	45	12	46	12	7.9	98
24	25	211	28	e20	e13	130	41	13	18	11	7.2	80
25	26	159	58	e20	e12	158	40	11	13	26	6.8	66
26	42	332	51	e19	e12	247	34	10	11	60	6.4	55
27	48	417	41	e17	e12	225	30	33	32	26	16	46
28	40	282	38	e16	e12	205	30	20	19	20	26	40
29	37	199	37	e16	---	180	33	16	14	17	33	36
30	36	144	36	e16	---	158	31	14	14	15	18	41
31	35	---	34	e17	---	225	---	12	---	15	14	---
TOTAL	985	3785	1766	756	407	3994	4759	555	505.5	775	560.1	2612.7
MEAN	31.8	126	57.0	24.4	14.5	129	159	17.9	16.8	25.0	18.1	87.1
MAX	73	417	146	34	20	247	604	33	46	60	57	319
MIN	13	32	28	16	12	53	30	10	7.6	11	6.4	8.9
CFSM	.96	3.80	1.72	.73	.44	3.88	4.78	.54	.51	.75	.54	2.62
IN.	1.10	4.24	1.98	.85	.46	4.48	5.33	.62	.57	.87	.63	2.93

CAL YR 1986 TOTAL 24740.0 MEAN 67.8 MAX 1410 MIN 5.8 CFSM 2.04 IN. 27.7
WTR YR 1987 TOTAL 21460.3 MEAN 58.8 MAX 604 MIN 6.4 CFSM 1.77 IN. 24.0

e Estimated

01417000 EAST BRANCH DELAWARE RIVER AT DOWNSVILLE, NY

LOCATION.--Lat 42°04'30", long 74°58'36", Delaware County, Hydrologic Unit 02040102, on left bank 0.5 mi downstream from Downsville Dam, at downstream end of outlet channel of Pepacton Reservoir, and 1.0 mi east of Downsville.

DRAINAGE AREA.--372 mi^2.

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

REVISED RECORDS.--WDR NY-82-1: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,094.92 ft Board of Water Supply, City of New York datum. Prior to Sept. 26, 1941, nonrecording gage, and Sept. 26, 1941, to June 27, 1955, water-stage recorder, at site 0.8 mi downstream at datum 7.03 ft lower.

REMARKS.--No estimated daily discharges. Records good. Subsequent to September 1954, entire flow from drainage area controlled by Pepacton Reservoir (see Reservoirs in Delaware River Basin). Part of flow diverted for New York City municipal supply (see Reservoirs in Delaware River Basin). Remainder of flow (except for conservation releases and spill) impounded for release during periods of low flow in the lower Delaware River basin, as directed by the Delaware River Master. Several measurements of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,900 ft^3/s, Nov. 26, 1950, gage height, 14.52 ft, site and datum then in use, from rating curve extended above 12,000 ft^3/s; minimum discharge, 0.3 ft^3/s, Oct. 11, 1954; minimum daily, 0.6 ft^3/s, Oct. 10, 1954; minimum gage height, 1.39 ft, Jan. 17, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 9, 1903, reached a stage of about 16 ft (at former datum).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,980 ft^3/s, Apr. 13, gage height, 5.19 ft; minimum, 44 ft^3/s, Feb. 26, Mar. 2; minimum daily, 51 ft^3/s, Jan. 1, Feb. 21, 24, 26-27, Mar. 2, 7-8, 10-13, 26, 28-29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68	127	57	51	59	53	65	65	76	66	80	65
2	68	126	55	53	58	51	65	65	87	67	67	65
3	69	126	54	53	56	53	65	65	76	67	67	64
4	69	125	53	53	56	53	67	65	65	67	67	63
5	68	90	53	53	55	53	68	66	65	66	67	63
6	68	53	53	53	56	52	68	64	65	71	67	63
7	68	55	54	54	56	51	144	66	65	67	77	63
8	68	55	53	54	55	51	1850	68	65	66	88	64
9	66	53	53	54	55	54	2620	68	64	77	87	64
10	66	54	54	56	54	51	2330	67	64	87	74	63
11	66	58	54	56	53	51	1910	66	65	87	65	63
12	66	55	54	55	54	51	1780	66	65	87	65	62
13	66	53	54	55	53	51	2650	66	65	77	65	63
14	67	54	55	56	53	54	2390	66	65	67	77	62
15	67	54	54	54	53	53	1840	67	65	66	90	63
16	66	54	53	55	53	53	1460	67	65	68	90	63
17	66	56	54	53	53	52	1180	67	65	70	97	63
18	67	56	54	53	54	52	996	68	65	70	104	63
19	66	55	54	53	53	53	764	68	76	70	97	63
20	66	55	54	53	54	55	561	68	87	70	76	63
21	66	56	54	54	51	55	399	68	76	70	64	64
22	66	55	54	56	52	54	291	68	66	80	64	65
23	66	55	52	54	53	56	200	68	66	91	64	65
24	66	56	52	55	51	54	143	68	65	102	65	65
25	66	56	53	56	52	53	121	68	77	103	65	65
26	66	57	53	55	51	51	72	68	90	89	65	65
27	66	56	53	55	51	53	74	68	90	77	65	65
28	66	57	53	54	52	51	69	68	78	63	65	65
29	67	57	54	55	---	51	66	68	65	63	65	63
30	66	58	56	56	---	53	65	67	65	64	65	63
31	88	---	54	57	---	58	---	66	---	77	65	---
TOTAL	2090	1977	1667	1684	1506	1636	24373	2073	2113	2312	2279	1910
MEAN	67.4	65.9	53.8	54.3	53.8	52.8	812	66.9	70.4	74.6	73.5	63.7
MAX	88	127	57	57	59	58	2650	68	90	103	104	65
MIN	66	53	52	51	51	51	65	64	64	63	64	62

CAL YR 1986 TOTAL 56032 MEAN 154 MAX 2680 MIN 48
WTR YR 1987 TOTAL 45620 MEAN 125 MAX 2650 MIN 51

01417500 EAST BRANCH DELAWARE RIVER AT HARVARD, NY

LOCATION.--Lat 42°01'28", long 75°07'10", Delaware County, Hydrologic Unit 02040102, on right bank 800 ft downstream from Baxter Brook, and 1,100 ft downstream from highway bridge at Harvard. Water-quality sampling site at discharge station.

DRAINAGE AREA.--458 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1934 to June 1967, November 1977 to current year.

REVISED RECORDS.--WDR NY-82-1: Drainage area. WDR NY-84-1: 1978-81(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,007.41 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 12, 1958, water-stage recorder 1,100 ft upstream at datum 0.65 ft higher, and from Aug. 12, 1958, to June 30, 1967, water-stage recorder at site 200 ft downstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Subsequent to September 1954, entire flow from 371 mi^2 of drainage area controlled by Pepacton Reservoir (see Reservoirs in Delaware River Basin). Part of flow diverted for New York City municipal supply. Remainder of flow (except for conservation releases and spill) impounded for release during periods of low flow in the lower Delaware River Basin, as directed by the Delaware River Master. Satellite gage-height and temperature telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,400 ft^3/s, Sept. 22, 1938, gage height, 16.93 ft, site and datum then in use, from rating curve extended above 10,000 ft^3/s, on basis of slope-area measurement at gage height 15.58 ft; minimum discharge, 7.2 ft^3/s, Oct. 13, 1954, gage height, 1.63 ft, site and datum then in use; minimum daily discharge, 7.6 ft^3/s, Oct. 13, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,660 ft^3/s, Apr. 13, gage height, 7.03 ft; minimum, 58 ft^3/s, Feb. 15, result of freezeup, gage height, 1.90 ft; minimum daily, 64 ft^3/s, Feb. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	83	161	366	e130	e92	e120	662	146	92	151	118	99
2	86	173	318	e140	e100	e250	540	138	131	226	122	95
3	94	173	369	e140	e105	e270	482	135	131	372	181	91
4	224	173	332	e130	e105	e230	1170	142	118	280	133	87
5	161	171	285	e130	e100	e210	2170	130	122	226	113	84
6	138	149	261	e120	e94	e200	1110	130	105	195	109	83
7	126	141	246	e120	e88	e210	854	127	106	192	105	86
8	115	207	228	119	e84	410	1920	123	115	211	120	160
9	110	567	221	114	e80	667	3000	119	105	172	126	1600
10	107	548	265	113	e80	579	2750	116	99	178	139	700
11	102	449	228	120	e78	473	2260	114	95	172	105	441
12	100	379	215	113	e76	392	2020	113	108	169	96	332
13	98	320	193	107	e76	329	3190	110	107	169	91	730
14	143	261	168	101	e70	280	3150	106	100	279	89	914
15	152	230	205	107	e64	252	2410	111	96	520	110	645
16	134	213	179	119	e68	225	1870	106	93	328	112	473
17	128	204	165	92	e76	202	1490	103	89	256	111	469
18	125	200	163	e82	e80	188	1240	102	87	212	126	1100
19	120	207	163	e86	e84	188	993	112	86	187	125	1080
20	116	194	148	e78	e86	198	783	105	107	197	109	759
21	113	863	137	e74	e88	182	622	101	111	179	82	579
22	112	631	129	e72	e90	193	499	99	118	155	78	451
23	110	495	116	e68	e94	236	396	98	381	164	77	362
24	109	526	121	e66	e94	293	303	100	202	158	75	304
25	105	476	189	e66	e86	367	274	97	159	176	74	260
26	112	709	199	e68	e84	569	199	95	162	158	73	222
27	126	1360	182	e72	e84	602	169	112	233	145	102	198
28	117	870	e170	e74	e96	569	171	106	191	111	126	179
29	113	609	e160	e78	---	509	165	99	146	101	152	165
30	110	463	e150	e82	---	451	154	95	142	99	118	168
31	109	---	e140	e88	---	570	---	93	---	98	101	---
TOTAL	3698	12122	6411	3069	2402	10414	37016	3483	3937	6236	3398	12916
MEAN	119	404	207	99.0	85.8	336	1234	112	131	201	110	431
MAX	224	1360	369	140	105	667	3190	146	381	520	181	1600
MIN	83	141	116	66	64	120	154	93	86	98	73	83

CAL YR 1986 TOTAL 113555 MEAN 311 MAX 4820 MIN 60
WTR YR 1987 TOTAL 105102 MEAN 288 MAX 3190 MIN 64

e Estimated

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: June 1978 to current year.

INSTRUMENTATION.--Water-temperature digital recorder since June 1978, provides one-hour-interval punches.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum (water years 1978, 1981-82, 1984-87), 28.0°C, June 30, 1981; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 25.5°C, June 15; minimum, 0.0°C on many days during winter period.

TEMPERATURE (DEG. C) OF WATER, 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	18.5	16.5	17.5	8.5	5.5	7.0	2.5	1.0	2.0	1.5	.0	1.0
2	17.0	15.5	16.5	8.5	6.5	8.0	3.0	2.0	2.5	1.5	.0	.5
3	15.5	13.5	14.0	6.5	5.0	6.0	5.0	3.5	4.5	.5	.0	.0
4	14.5	12.5	13.5	6.5	5.0	6.0	4.5	2.5	4.0	.5	.0	.0
5	14.0	12.5	13.5	5.0	4.0	4.0	3.0	2.0	2.5	.5	.0	.0
6	12.0	9.5	11.0	6.0	4.0	5.0	2.5	1.0	2.0	.5	.0	.0
7	11.0	8.5	9.5	6.5	5.0	5.5	3.0	2.0	2.5	.5	.0	.0
8	12.0	8.0	10.0	8.0	6.5	7.0	3.5	2.5	3.0	.5	.0	.0
9	12.0	10.0	11.0	9.0	8.0	8.5	3.0	2.0	2.5	.5	.0	.5
10	11.0	8.5	9.5	8.0	5.0	6.5	4.5	3.0	3.5	.5	.0	.5
11	10.0	6.5	8.0	5.0	4.0	4.5	3.0	2.0	2.5	.5	.0	.5
12	11.5	8.0	9.5	6.0	4.0	5.0	2.5	2.0	2.0	.5	.0	.0
13	11.0	10.0	10.5	4.5	1.5	3.5	1.5	.0	.5	1.0	.0	.5
14	12.0	11.0	11.5	2.5	1.0	1.5	.5	.0	.0	1.0	.0	.5
15	10.5	8.5	9.5	3.0	.5	1.5	.5	.0	.5	2.0	.5	1.5
16	9.0	8.0	8.5	4.5	3.0	3.5	2.5	.5	1.5	2.0	.5	2.0
17	9.0	8.0	8.5	5.0	4.0	4.5	3.5	2.5	3.0	.5	.0	.5
18	10.0	7.5	8.5	5.0	3.5	4.5	3.5	2.5	3.0	.0	.0	.0
19	9.5	6.0	7.5	3.5	1.5	2.5	2.5	2.5	2.5	.0	.0	.0
20	9.5	6.5	8.0	2.5	.5	1.0	3.0	2.5	2.5	.0	.0	.0
21	10.5	7.0	8.5	3.5	2.5	3.0	2.5	1.0	2.0	.5	.0	.0
22	12.0	9.5	10.5	4.0	3.0	3.5	1.5	.5	1.0	.0	.0	.0
23	11.0	9.0	10.0	4.0	2.5	3.5	1.0	.0	.5	.0	.0	.0
24	11.0	8.0	9.5	5.0	4.5	5.0	2.0	.0	1.0	.0	.0	.0
25	9.0	6.5	8.0	5.5	4.0	4.5	3.5	2.0	3.0	.5	.0	.0
26	8.5	8.0	8.0	5.5	4.0	4.5	3.5	3.0	3.0	.5	.0	.0
27	9.5	8.5	9.0	6.0	5.0	6.0	3.0	2.5	2.5	.5	.0	.0
28	10.0	8.5	9.5	5.0	4.5	5.0	2.5	2.0	2.0	.5	.0	.0
29	10.5	7.5	9.0	5.0	4.5	4.5	3.0	2.0	2.0	.0	.0	.0
30	10.0	7.5	9.0	4.5	2.5	4.0	2.0	1.5	1.5	.0	.0	.0
31	8.0	5.5	7.0	---	---	---	2.5	1.0	2.0	.0	.0	.0
MONTH	18.5	5.5	10.0	9.0	0.5	4.5	5.0	0.0	2.0	2.0	0.0	0.5

DELAWARE RIVER BASIN

01417500 EAST BRANCH DELAWARE RIVER AT HARVARD, NY--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	.0	.0	.0	.0	.0	.0	6.0	3.5	4.5	11.5	5.0	8.0
2	.0	.0	.0	.0	.0	.0	4.0	3.0	3.5	13.5	7.5	10.5
3	.0	.0	.0	.5	.0	.0	5.5	3.5	4.5	11.5	9.0	10.0
4	.5	.0	.0	.5	.0	.0	6.0	4.5	5.5	10.0	8.0	9.0
5	.5	.0	.0	.5	.0	.0	6.5	4.5	5.5	9.5	8.5	9.0
6	.5	.0	.0	1.0	.0	.5	6.5	5.5	6.0	10.0	8.0	9.0
7	.5	.0	.0	3.0	.5	1.5	6.5	5.5	6.0	14.5	7.5	10.5
8	.0	.0	.0	4.5	2.0	3.0	6.0	4.5	5.0	15.0	9.0	12.0
9	.5	.0	.0	3.0	1.0	2.5	6.0	4.0	5.0	16.5	10.0	13.0
10	.0	.0	.0	1.5	.0	.5	7.0	4.0	5.0	17.0	12.0	14.5
11	.5	.0	.0	2.0	.0	1.0	7.5	4.0	5.5	17.5	13.0	15.5
12	.0	.0	.0	2.5	.5	1.5	7.0	5.0	6.0	16.0	13.5	14.5
13	.0	.0	.0	3.5	1.0	2.0	6.5	5.0	6.0	17.5	10.5	14.0
14	.5	.0	.0	4.5	.5	2.5	8.0	5.0	6.0	17.5	12.0	14.5
15	.5	.0	.0	5.0	1.0	3.0	7.5	5.5	6.5	17.5	14.5	16.0
16	.5	.0	.0	4.0	1.0	2.5	7.5	5.5	6.5	18.5	11.5	15.0
17	.5	.0	.0	4.5	1.0	2.5	7.0	6.5	6.5	20.5	13.5	17.0
18	.5	.0	.0	6.0	1.0	3.5	9.0	6.5	7.5	19.0	15.5	17.5
19	.5	.0	.0	6.5	2.0	4.0	12.0	8.0	9.5	17.0	13.0	14.5
20	.5	.0	.0	4.5	2.5	3.5	---	---	---	12.5	11.5	12.0
21	.5	.0	.0	4.0	3.5	3.5	---	---	---	14.0	11.0	12.0
22	.5	.0	.0	8.0	3.0	5.0	---	---	---	18.0	13.0	15.0
23	.5	.0	.0	---	---	---	---	---	---	19.5	15.5	17.5
24	.5	.0	.0	9.5	4.0	6.5	---	---	---	18.0	16.0	17.0
25	.5	.0	.0	---	---	---	---	---	---	16.0	14.5	15.0
26	.5	.0	.0	---	---	---	---	---	---	15.0	13.5	14.5
27	.5	.0	.0	---	---	---	---	---	---	14.5	12.5	13.0
28	.0	.0	.0	---	---	---	---	---	---	18.0	12.5	14.5
29	---	---	---	---	---	---	9.5	7.0	8.0	22.5	16.0	19.0
30	---	---	---	---	---	---	8.0	6.5	7.5	24.5	18.5	21.5
31	---	---	---	9.0	4.5	7.0	---	---	---	22.0	20.0	21.0
MONTH	0.5	0.0	0.0	---	---	---	---	---	---	24.5	5.0	14.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	23.5	18.5	21.0	19.5	17.5	18.5	23.0	17.0	20.0	17.0	15.0	16.0
2	21.5	18.5	20.0	18.0	14.5	16.5	20.0	16.0	17.5	14.5	13.0	13.5
3	18.0	15.5	16.5	17.5	13.5	15.5	18.0	15.5	16.5	17.0	12.0	14.0
4	15.5	14.0	14.5	19.5	15.0	17.0	23.0	16.5	19.5	18.0	13.0	15.5
5	20.0	13.0	16.5	21.0	15.5	18.0	21.0	19.5	20.0	18.0	14.0	16.0
6	21.0	15.5	18.0	21.0	16.5	19.0	19.0	17.5	18.5	16.5	15.5	16.0
7	17.5	14.5	15.5	19.5	16.0	17.0	19.0	16.5	17.5	16.5	15.5	16.0
8	17.0	13.5	15.5	20.5	15.0	17.5	20.5	17.0	18.5	16.5	15.5	16.0
9	18.5	15.0	17.0	22.0	17.5	20.0	19.0	16.0	17.0	16.0	14.5	15.0
10	20.5	14.5	17.5	22.0	18.5	20.5	15.5	14.5	15.0	16.5	14.0	15.0
11	20.5	14.5	17.5	23.5	18.0	20.5	19.0	14.0	16.0	16.5	14.0	15.0
12	18.5	16.0	17.0	24.0	18.5	21.0	22.0	15.5	18.5	15.5	15.0	15.0
13	19.0	15.0	17.0	22.5	19.5	21.0	23.0	17.5	20.0	14.5	14.5	14.5
14	22.0	16.5	19.0	21.0	17.0	19.0	24.0	18.5	21.0	16.0	14.0	14.5
15	25.5	18.5	21.5	18.5	15.0	16.5	23.5	18.5	21.0	14.5	13.0	13.5
16	24.5	18.5	21.5	17.5	14.5	16.0	24.0	18.5	21.0	16.0	12.5	14.0
17	24.5	19.0	21.5	20.0	13.5	16.5	24.0	19.0	21.5	15.5	14.5	15.0
18	25.0	18.0	21.5	21.5	15.5	18.5	23.5	19.5	21.5	14.5	13.0	14.0
19	24.5	19.0	21.5	21.0	17.5	19.5	22.0	17.5	20.0	13.0	12.5	12.5
20	23.5	20.0	22.0	20.0	17.5	18.5	21.5	17.5	19.5	13.0	12.0	12.5
21	22.0	17.5	19.5	23.0	16.5	19.5	22.5	17.0	19.5	15.0	12.5	13.5
22	17.5	16.5	17.0	24.5	19.0	21.5	20.0	17.5	19.0	15.0	13.0	14.0
23	16.5	15.0	16.0	24.5	19.0	22.0	19.0	16.5	18.0	14.0	12.5	13.5
24	21.0	15.0	17.5	24.5	19.5	22.0	17.5	14.5	16.0	12.5	11.0	12.0
25	22.5	17.0	19.5	22.5	19.0	20.5	18.5	13.5	16.0	12.5	10.0	11.0
26	20.5	16.5	18.0	20.5	17.0	19.0	18.5	14.5	16.5	11.5	9.0	10.5
27	18.5	15.0	16.5	21.5	17.0	19.0	17.0	14.5	15.5	14.0	10.0	12.0
28	17.0	14.5	16.0	22.0	17.0	19.0	14.0	13.0	13.5	15.0	12.0	13.0
29	20.5	14.0	17.0	22.5	16.5	19.5	15.0	12.5	13.5	15.5	12.0	13.5
30	20.0	17.5	19.0	19.5	17.5	18.5	19.0	13.0	15.5	14.5	13.5	14.0
31	---	---	---	23.0	17.5	20.0	17.0	15.0	16.0	---	---	---
MONTH	25.5	13.0	18.5	24.5	13.5	19.0	24.0	12.5	18.0	18.0	9.0	14.0

01420500 BEAVER KILL AT COOKS FALLS, NY

LOCATION.--Lat 41°56'47", long 74°58'48", Delaware County, Hydrologic Unit 02040102, on left bank 66 ft downstream from road bridge in Cooks Falls, and 5.5 mi downstream from Willowemoc Creek.

DRAINAGE AREA.--241 mi^2.

PERIOD OF RECORD.--July 1913 to current year.

REVISED RECORDS.--WSP 521: Drainage area. WSP 781: 1933(M). WSP 891: 1936-39(M). WSP 1202: 1950. WSP 1232: 1950(M).

GAGE.--Water-stage recorder. Datum of gage is 1,151.70 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1933, nonrecording gage at site 125 ft upstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Several measurements of water temperature were made during the year. Telephone gage-height telemeter and satellite gage-height, temperature, and rain-gage telemeter at station.

AVERAGE DISCHARGE.--73 years (1915-87), 556 ft^3/s, 31.33 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,600 ft^3/s, Mar. 31, 1951, gage height, 16.02 ft, from rating curve extended above 13,000 ft^3/s on basis of slope-area measurement at gage height 15.52 ft; minimum discharge, 16 ft^3/s, Nov. 22, 23, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 21	0600	4,720	7.51	Apr. 4	2230	*23,900	*14.20
Nov. 27	0045	9,520	9.91	Sept. 13	1600	5,780	8.14
Mar. 31	2000	7,710	9.12				

Minimum discharge, 74 ft^3/s, Oct. 1; minimum gage height, 1.12 ft, Aug. 26, 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	185	962	279	e190	e260	3380	343	145	120	115	276
2	151	186	834	335	e220	e700	1930	314	155	170	155	234
3	166	180	1390	314	e240	e500	1510	307	159	321	432	193
4	1010	175	1300	274	e230	e410	7890	398	191	225	280	165
5	553	174	968	253	e210	e390	8050	360	219	178	216	148
6	361	251	804	253	e190	e370	3140	370	168	151	324	140
7	280	287	713	289	e190	e490	2510	358	151	150	236	167
8	236	473	646	258	e190	e900	1940	315	170	229	203	366
9	216	1870	626	250	e180	1580	1500	292	157	193	197	2420
10	201	1460	803	244	e170	1230	1200	281	137	188	234	975
11	185	1040	702	288	e160	958	996	278	125	165	199	583
12	176	861	604	270	e150	818	945	260	132	263	171	485
13	177	711	518	254	e150	686	2340	249	148	230	154	2990
14	270	582	416	229	e140	600	1660	232	152	784	144	2360
15	328	514	484	249	e130	542	1300	232	133	1320	134	1270
16	266	486	443	271	e130	496	1090	229	123	600	129	894
17	239	487	410	e170	e140	456	977	217	110	424	123	773
18	226	549	408	e180	e140	428	963	210	102	333	118	1940
19	217	543	412	e190	e140	428	826	265	97	285	111	2130
20	220	488	371	e185	e130	436	726	236	95	290	111	1390
21	205	3210	342	e170	e130	403	632	214	96	280	101	1080
22	196	1750	315	e160	e130	420	566	201	105	228	96	845
23	189	1210	267	e150	e125	549	511	196	168	202	96	684
24	186	1330	310	e160	e125	825	480	187	143	185	90	589
25	175	1260	470	e150	e125	1190	496	171	117	171	85	530
26	195	2600	539	e150	e125	1970	440	165	102	169	81	457
27	255	5480	435	e140	e120	1920	404	195	139	169	121	415
28	241	2450	387	e140	e120	1810	384	213	152	148	237	376
29	216	1650	361	e140	---	1720	389	182	121	134	495	338
30	203	1230	345	e150	---	1640	377	161	107	126	312	355
31	190	---	329	e170	---	4050	---	149	---	123	209	---
TOTAL	7806	33672	17914	6715	4420	29175	49552	7780	4119	8554	5709	25568
MEAN	252	1122	578	217	158	941	1652	251	137	276	184	852
MAX	1010	5480	1390	335	240	4050	8050	398	219	1320	495	2990
MIN	77	174	267	140	120	260	377	149	95	120	81	140
CFSM	1.04	4.66	2.40	.90	.66	3.91	6.85	1.04	.57	1.14	.76	3.54
IN.	1.20	5.20	2.77	1.04	.68	4.50	7.65	1.20	.64	1.32	.88	3.95

CAL YR 1986 TOTAL 218478 MEAN 599 MAX 13500 MIN 77 CFSM 2.48 IN. 33.7
WTR YR 1987 TOTAL 200984 MEAN 551 MAX 8050 MIN 77 CFSM 2.28 IN. 31.0

e Estimated

DELAWARE RIVER BASIN

01421000 EAST BRANCH DELAWARE RIVER AT FISHS EDDY, NY

LOCATION.--Lat 41°58'23", long 75°10'28", Delaware County, Hydrologic Unit 02040102, on left bank 3,000 ft upstream from bridge on County highway 28 at Fishs Eddy, 0.6 mi upstream from Fish Creek, 4.2 mi downstream from Beaver Kill, and 11 mi upstream from the confluence of East and West Branches near Hancock. Water-quality sampling site at discharge station.

DRAINAGE AREA.--784 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1912 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WDR NY-82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 955.96 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 27, 1928, nonrecording gage and Sept. 28, 1928 to Nov. 1, 1967, water-stage recorder at site 3,000 ft downstream at datum 5.0 ft lower.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Subsequent to September 1954, entire flow from 371 mi^2 of drainage area controlled by Pepacton Reservoir (see Reservoirs in Delaware River Basin). Part of flow diverted for New York City municipal supply. Remainder of flow (except for conservation releases and spill) impounded for release during periods of low flow in the lower Delaware River basin, as directed by the Delaware River Master. Telephone gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 53,300 ft^3/s, Aug. 24, 1933, gage height, 20.60 ft, at former site and datum, from rating curve extended above 22,000 ft^3/s; minimum discharge, 52 ft^3/s, July 23, 1964, gage height, 1.16 ft, at former site and datum; minimum daily discharge, 68 ft^3/s, Aug. 29, 1949.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 9, 1903, reached a stage of 23.6 ft, at former site and datum, from description obtained in April 1939, from local residents who had experienced the flood (discharge, about 70,000 ft^3/s, from rating curve extended above 22,000 ft^3/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 26,700 ft^3/s, Apr. 5, gage height, 12.52 ft; minimum, 186 ft^3/s, Aug. 27, gage height, 2.63 ft; minimum daily, 189 ft^3/s, Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	189	387	1830	e580	e400	e620	5230	588	276	361	284	446
2	236	413	1560	e560	e400	e1200	3230	547	327	467	332	441
3	315	410	2170	e520	e390	e1000	2630	531	340	848	661	375
4	1190	404	2180	e490	e380	e820	7970	615	349	656	538	335
5	871	402	1680	e470	e380	e700	13100	578	411	537	403	304
6	629	467	1440	e450	e370	e680	5380	578	333	462	539	289
7	508	530	1300	e470	e360	e900	4200	570	307	447	438	306
8	436	717	1180	e460	e350	e1600	4390	526	344	549	401	537
9	398	2860	1120	e460	e350	3090	5060	492	323	484	395	5490
10	375	2740	1380	e450	e340	2500	4510	474	290	459	454	2460
11	349	1970	1260	e440	e330	1920	3770	466	270	431	393	1410
12	331	1620	1100	e430	e310	1610	3420	446	290	505	343	1070
13	328	1360	978	e420	e290	1300	6190	431	312	486	313	3700
14	437	1120	756	e400	e280	1110	5600	408	302	1490	294	4470
15	595	1000	869	e420	e270	991	4370	409	278	2720	295	2530
16	490	952	865	e440	e260	897	3530	400	257	1330	294	1760
17	447	920	795	e390	e270	817	2920	379	238	933	284	1440
18	422	980	789	e360	e280	759	2600	370	225	744	285	3170
19	406	997	793	e330	e300	752	2180	433	216	636	279	3960
20	403	908	726	e300	e290	774	1790	417	226	628	262	2670
21	387	4780	667	e270	e290	719	1460	381	238	608	232	2050
22	369	3240	603	e250	e290	728	1210	359	275	507	219	1580
23	358	2290	533	e240	e280	905	1030	352	742	469	216	1270
24	351	2370	582	e250	e280	1310	899	343	490	437	205	1090
25	336	2290	835	e250	e280	1880	872	323	382	427	197	973
26	353	3430	1010	e260	e270	3150	764	310	350	414	190	844
27	443	8700	853	e270	e270	3240	685	340	468	395	264	758
28	431	4560	793	e270	e290	2990	659	381	447	338	430	690
29	397	3150	754	e290	---	2800	657	337	367	303	724	631
30	375	2370	722	e310	---	2580	631	308	336	286	574	626
31	363	---	690	e350	---	4710	---	287	---	281	415	---
TOTAL	13518	58337	32813	11850	8850	49052	100937	13379	10009	19638	11153	47675
MEAN	436	1945	1058	382	316	1582	3365	432	334	633	360	1589
MAX	1190	8700	2180	580	400	4710	13100	615	742	2720	724	5490
MIN	189	387	533	240	260	620	631	287	216	281	190	289

CAL YR 1986 TOTAL 413125 MEAN 1132 MAX 21300 MIN 177
WTR YR 1987 TOTAL 377211 MEAN 1033 MAX 13100 MIN 189

e Estimated

01421000 EAST BRANCH DELAWARE RIVER AT FISHS EDDY, NY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1958-59, 1968 to current year.
CHEMICAL DATA: 1958-59 (d), 1970 (b), 1971-74 (d), 1975 (c).
MINOR ELEMENTS DATA: 1971-74 (a).
ORGANIC DATA: OC--1974 (a), 1975 (c).
NUTRIENT DATA: 1971-75 (d).
BIOLOGICAL DATA:
Bacteria--1971 (c), 1973-75 (c).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: November 1967 to current year.

INSTRUMENTATION.--Water-temperature digital recorder since October 1975, provides one-hour-interval punches. Prior to October 1975, water-temperature recorder provided continuous recordings.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum (water years 1968-75, 1978, 1980-82, 1984, 1986-87), 31.5°C, Aug. 2, 1975; minimum (water years 1968-76, 1978-79, 1981-87), 0.0°C on many days during winter periods, except 1978.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 27.0°C, Aug. 17, 18; minimum, 0.0°C on many days during winter period.

TEMPERATURE (DEG. C) OF WATER, 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	20.0	18.0	19.0	8.5	5.5	7.0	2.5	1.0	2.0	1.0	.5	.5
2	18.5	16.5	17.5	8.5	7.0	8.5	2.5	2.0	2.0	.5	.0	.5
3	16.5	14.0	15.0	7.5	5.5	6.5	4.5	2.5	4.0	.0	.0	.0
4	15.0	14.0	14.5	6.5	5.5	6.0	4.5	2.5	3.5	.0	.0	.0
5	15.0	13.0	14.5	5.5	4.0	4.5	2.5	2.0	2.0	.0	.0	.0
6	13.0	9.5	11.0	5.5	4.0	4.5	2.0	1.5	2.0	.5	.0	.5
7	12.0	8.5	10.0	6.0	5.5	5.5	2.5	2.0	2.0	.5	.5	.5
8	12.5	8.0	10.5	7.5	6.0	7.0	3.0	2.5	3.0	.5	.5	.5
9	12.0	10.0	11.0	9.0	7.5	8.5	2.5	2.0	2.0	.5	.5	.5
10	11.5	8.5	10.0	8.0	5.5	6.5	3.5	2.0	3.0	.5	.5	.5
11	10.5	7.0	9.0	5.5	4.0	4.5	3.0	2.0	2.0	.5	.5	.5
12	12.0	8.5	10.0	5.5	4.0	4.5	2.0	2.0	2.0	.5	.5	.5
13	11.5	11.0	11.0	5.0	1.5	3.5	2.0	.5	.5	.5	.5	.5
14	12.5	11.0	12.0	1.5	.5	1.0	.5	.5	.5	1.0	.5	.5
15	11.0	9.0	10.0	2.0	.5	1.0	.5	.5	.5	1.0	.5	.5
16	9.0	8.5	9.0	4.0	2.0	3.0	2.0	.5	1.5	1.0	.5	1.0
17	9.0	8.5	9.0	4.5	4.0	4.0	3.0	2.0	2.5	.5	.5	.5
18	10.5	8.0	9.0	4.5	3.5	4.5	3.0	2.0	2.5	.5	.5	.5
19	10.0	6.5	8.5	3.5	1.5	2.5	2.0	2.0	2.0	.5	.5	.5
20	10.0	6.5	8.0	1.5	.5	1.0	2.0	2.0	2.0	.5	.5	.5
21	10.5	7.0	9.0	3.0	1.5	2.5	2.0	.5	1.5	.5	.5	.5
22	12.5	9.5	10.5	3.5	3.0	3.5	1.0	.5	.5	.5	.5	.5
23	11.0	9.5	10.5	4.0	2.5	3.5	.5	.5	.5	.5	.5	.5
24	11.5	9.0	10.0	5.0	4.0	4.5	.5	.5	.5	.5	.5	.5
25	9.0	7.0	8.0	5.0	4.5	4.5	2.5	.5	2.0	.5	.5	.5
26	8.5	8.0	8.5	5.0	4.0	4.5	2.5	2.5	2.5	.5	.5	.5
27	9.5	8.5	9.0	5.5	5.0	5.5	2.5	2.0	2.5	.5	.5	.5
28	10.0	9.0	9.5	5.0	4.0	4.5	2.0	1.5	2.0	.5	.5	.5
29	11.0	8.5	9.5	4.5	4.0	4.5	2.0	1.5	2.0	.5	.5	.5
30	10.0	8.0	9.5	4.5	2.5	4.0	1.5	1.5	1.5	.5	.5	.5
31	8.5	6.0	7.0	---	---	---	2.0	1.0	1.5	.5	.5	.5
MONTH	20.0	6.0	10.5	9.0	0.5	4.5	4.5	0.5	2.0	1.0	0.0	0.5

DELAWARE RIVER BASIN

01421000 EAST BRANCH DELAWARE RIVER AT FISHS EDDY, NY--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	.5	.5	.5	.5	.0	.5	5.5	3.5	4.0	11.5	5.5	8.5
2	.5	.0	.5	.0	.0	.0	3.5	3.0	3.5	13.0	8.0	10.5
3	.0	.0	.0	.0	.0	.0	5.0	3.5	4.0	11.5	9.5	10.0
4	.5	.0	.5	.0	.0	.0	6.0	4.5	5.0	10.0	8.5	9.5
5	.5	.0	.5	.0	.0	.0	6.0	4.5	5.5	9.5	8.5	9.0
6	1.0	.0	.5	.5	.0	.0	6.0	5.5	6.0	11.0	8.0	9.0
7	.5	.0	.5	.5	.0	.5	6.0	5.5	6.0	14.0	8.0	11.0
8	.0	.0	.0	2.0	.0	.5	6.0	5.5	6.0	15.0	9.5	12.0
9	.5	.0	.5	2.0	1.0	1.5	6.0	4.5	5.5	16.0	10.0	13.0
10	.0	.0	.0	1.0	.0	.5	8.0	4.5	6.0	17.5	12.0	15.0
11	1.0	.0	.5	1.5	.0	.5	8.5	5.0	7.0	18.0	13.5	16.0
12	.0	.0	.0	1.5	.5	1.0	8.0	6.5	7.5	17.0	14.0	15.5
13	.5	.0	.0	2.0	.5	1.5	8.5	6.5	7.5	17.5	11.5	14.5
14	.5	.0	.0	3.5	.5	2.0	9.5	5.5	7.5	18.0	12.5	15.5
15	.0	.0	.0	4.5	.5	2.5	8.0	7.0	7.5	19.0	15.0	16.5
16	.5	.0	.0	3.0	1.0	2.0	7.5	6.5	7.0	18.5	12.5	15.5
17	.5	.0	.0	4.0	.5	2.0	8.0	7.0	7.5	20.5	14.0	17.0
18	.5	.0	.0	5.0	1.0	3.0	10.0	7.5	9.0	19.5	16.0	18.0
19	.5	.0	.0	6.0	1.5	3.5	12.5	9.0	11.0	17.5	14.0	15.5
20	.5	.0	.0	4.0	2.5	3.0	14.5	10.0	12.5	13.5	12.5	13.0
21	1.0	.0	.5	3.0	2.5	2.5	16.0	11.5	14.0	14.5	11.5	13.0
22	1.0	.0	.5	7.0	3.0	4.5	14.5	13.0	13.5	18.5	13.0	15.5
23	.5	.0	.0	8.0	3.5	5.5	12.5	11.0	12.0	20.5	16.5	18.5
24	1.0	.0	.5	8.0	4.0	6.0	11.5	10.5	11.0	19.0	16.5	18.0
25	1.0	.0	.5	8.0	4.0	6.0	13.5	8.5	11.0	17.0	15.5	16.0
26	1.0	.0	.5	6.5	5.0	6.0	14.0	9.0	11.5	16.0	14.5	15.5
27	1.0	.0	.5	6.5	4.5	6.0	14.0	9.5	12.0	15.0	14.0	14.5
28	.5	.0	.0	8.0	5.5	6.5	11.0	8.0	9.5	18.5	13.5	16.0
29	---	---	---	9.0	5.5	7.5	9.5	7.5	8.5	23.0	17.0	20.0
30	---	---	---	8.5	7.0	7.5	8.5	7.0	7.5	25.0	19.5	22.5
31	---	---	---	8.0	6.0	7.5	---	---	---	23.5	21.0	22.5
MONTH	1.0	0.0	0.0	9.0	0.0	3.0	16.0	3.0	8.0	25.0	5.5	14.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	25.0	20.0	22.5	21.0	18.5	19.5	25.0	19.5	22.0	17.5	15.5	16.5
2	23.5	20.5	22.0	19.5	16.0	17.5	21.5	17.0	19.0	15.5	14.0	14.5
3	21.0	18.0	19.5	18.0	15.5	16.5	20.0	17.5	18.5	18.0	13.0	15.0
4	18.0	16.0	16.5	20.0	16.0	18.0	24.0	18.5	21.5	19.5	14.0	16.5
5	21.5	15.0	18.0	22.0	16.5	19.0	22.5	21.0	22.0	18.5	15.0	17.0
6	21.5	17.0	19.0	22.5	18.0	20.0	21.0	19.5	20.0	17.5	16.0	17.0
7	18.5	15.0	16.5	20.0	17.5	18.5	21.0	18.5	19.5	18.5	16.5	17.5
8	18.0	14.5	16.5	22.0	16.5	19.0	23.0	19.0	21.0	18.0	16.5	17.5
9	20.0	16.0	18.0	23.5	19.5	21.5	21.0	18.0	19.5	16.0	15.0	15.5
10	21.0	15.0	18.0	25.0	21.0	23.0	18.5	17.0	17.5	16.5	14.5	15.5
11	21.0	15.0	18.0	26.5	21.0	23.5	21.0	16.0	18.0	17.0	14.5	15.5
12	19.0	17.0	17.5	27.0	21.5	24.0	23.5	17.0	20.0	16.5	15.5	15.5
13	20.5	16.5	18.0	25.5	22.5	24.0	24.0	18.5	21.0	15.0	15.0	15.0
14	23.0	17.5	20.0	24.0	18.0	21.5	24.5	19.5	22.0	16.0	14.5	15.0
15	26.0	20.0	22.5	18.5	16.5	17.5	25.0	20.5	22.5	15.0	13.0	14.0
16	25.5	20.0	22.5	18.0	15.0	16.5	26.0	21.0	23.5	16.0	13.0	14.5
17	25.0	20.0	22.5	20.0	14.5	17.0	27.0	22.0	24.5	16.0	15.0	15.5
18	25.0	19.5	22.5	22.0	16.5	19.0	27.0	23.0	24.5	15.0	13.5	14.5
19	25.5	20.0	23.0	22.5	18.5	20.5	25.5	21.0	23.0	13.5	12.5	13.0
20	25.5	21.5	23.5	21.5	19.0	20.5	25.0	20.5	22.5	13.5	12.5	13.0
21	24.0	21.0	22.0	24.0	18.5	21.5	24.5	19.0	21.5	15.5	13.0	14.0
22	21.0	17.5	20.5	26.0	20.5	23.0	22.0	19.5	21.0	15.5	13.5	14.5
23	17.0	16.0	16.5	26.5	21.0	24.0	21.5	18.0	19.5	14.5	13.0	14.0
24	21.5	15.0	18.5	27.0	22.5	25.0	19.0	15.5	17.5	13.5	11.5	12.5
25	23.5	18.0	21.0	25.5	22.5	24.0	19.5	15.0	17.0	12.5	11.0	11.5
26	22.0	17.0	19.5	24.0	21.0	22.5	20.0	15.5	18.0	11.5	9.5	11.0
27	20.0	16.0	18.0	24.0	20.0	22.0	19.0	15.5	17.0	14.5	10.5	12.0
28	18.0	16.0	17.5	23.5	19.0	21.5	15.5	14.5	15.0	15.5	12.0	13.5
29	22.0	15.5	18.5	24.0	18.5	21.0	16.0	14.5	15.0	16.0	12.5	14.5
30	21.5	19.0	20.0	21.5	19.0	20.0	19.5	14.0	16.5	15.5	14.0	14.5
31	---	---	---	24.5	19.0	21.5	18.0	15.5	17.0	---	---	---
MONTH	26.0	14.5	19.5	27.0	14.5	20.5	27.0	14.0	20.0	19.5	9.5	14.5

01423000 WEST BRANCH DELAWARE RIVER AT WALTON, NY

LOCATION.--Lat 42°09'58", long 75°08'26", Delaware County, Hydrologic Unit 02040101, on left bank at west end of fairgrounds at Walton, and 100 ft downstream from West Brook.

DRAINAGE AREA.--332 mi^2.

PERIOD OF RECORD.--October 1950 to current year.

REVISED RECORD.--WDR NY-82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,190.30 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Several measurements of water temperature were made during the year. Intermittent water-quality data for this station are included in section "ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES".

AVERAGE DISCHARGE.--37 years, 582 ft^3/s, 23.80 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,500 ft^3/s, Mar. 15, 1986, gage height, 14.84 ft, from floodmark in gage well; minimum discharge, 12 ft^3/s, Sept. 15, Nov. 22, 1964; minimum gage height, 1.86 ft, Nov. 22, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 27	0330	5,290	8.94	Apr. 5	0845	*14,800	*13.30

Minimum discharge, 54 ft^3/s, Aug. 26, gage height, 2.58 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	108	131	1120	300	e180	e280	2100	352	110	143	125	136
2	114	131	977	e320	e190	e1200	1510	301	212	231	108	137
3	118	135	1470	e310	e200	e1000	1410	279	226	461	154	110
4	393	133	1320	e290	e190	e800	3600	273	268	289	158	101
5	363	131	952	e270	e170	e700	10600	252	396	225	118	87
6	245	283	822	e270	e170	e680	4840	261	256	191	103	81
7	202	326	764	e260	e180	e820	4400	290	221	182	97	79
8	175	347	711	e260	e170	e1700	3360	245	233	192	91	147
9	162	964	688	255	e170	2380	2440	218	237	249	94	1840
10	152	898	923	249	e160	1610	1890	204	195	234	248	763
11	140	754	697	261	e170	1330	1490	190	168	179	195	489
12	132	712	597	245	e160	1170	1410	184	166	169	138	386
13	127	653	513	239	e150	985	2930	180	175	172	115	1100
14	151	506	413	222	e140	849	2090	166	158	266	102	1340
15	187	450	500	256	e150	781	1690	159	140	571	94	860
16	159	433	451	377	e140	708	1460	153	122	320	88	697
17	143	433	422	237	e140	614	1270	144	110	246	83	986
18	137	411	413	e240	e140	571	1110	137	101	207	77	1620
19	128	419	420	e260	e130	605	944	146	95	182	71	2050
20	122	382	380	e250	e130	653	804	150	91	175	68	1480
21	120	2940	341	e240	e120	550	696	139	87	171	64	1200
22	117	1780	306	e225	e120	619	611	131	188	148	63	1020
23	114	1360	268	e210	e130	891	532	135	495	131	62	843
24	114	2070	296	e200	e130	1240	498	144	253	121	60	716
25	110	1750	574	e195	e120	1450	540	143	177	124	57	600
26	122	2480	681	e190	e120	2320	435	124	147	248	56	500
27	188	4380	493	e170	e110	2210	379	202	217	180	72	429
28	169	2680	435	e160	e110	2040	352	195	199	133	130	371
29	151	1980	413	e160	---	1820	388	153	154	114	197	333
30	142	1490	393	e165	---	1600	375	134	142	105	157	491
31	137	---	370	e170	---	1910	---	121	---	113	111	---
TOTAL	4942	31542	19123	7456	4190	36086	56154	5905	5739	6472	3356	20992
MEAN	159	1051	617	241	150	1164	1872	190	191	209	108	700
MAX	393	4380	1470	377	200	2380	10600	352	495	571	248	2050
MIN	108	131	268	160	110	280	352	121	87	105	56	79
CFSM	.48	3.17	1.86	.72	.45	3.51	5.64	.57	.58	.63	.33	2.11
IN.	.55	3.53	2.14	.84	.47	4.04	6.29	.66	.64	.73	.38	2.35

CAL YR 1986	TOTAL	227349	MEAN	623	MAX	16000	MIN	59	CFSM	1.88	IN.	25.5
WTR YR 1987	TOTAL	201957	MEAN	553	MAX	10600	MIN	56	CFSM	1.67	IN.	22.6

e Estimated

DELAWARE RIVER BASIN

01425000 WEST BRANCH DELAWARE RIVER AT STILESVILLE, NY

LOCATION.--Lat 42°04'29", long 75°23'47", Delaware County, Hydrologic Unit 02040101, on right bank at Stilesville, 0.5 mi upstream from Cold Spring Creek, 1.4 mi downstream from Cannonsville Dam, and 2.0 mi northeast of Deposit. Water-quality sampling site at discharge station.

DRAINAGE AREA.--456 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1952 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 992.23 ft above National Geodetic Vertical Datum of 1929 (levels by Board of Water Supply, City of New York). Prior to Oct. 1, 1964, at site 600 ft downstream at datum 1.37 ft higher.

REMARKS.--No estimated daily discharges. Records good except those for periods below 300 ft^3/s, which are fair. Subsequent to October 1963, entire flow from 454 mi^2 of drainage area controlled by Cannonsville Reservoir (see Reservoirs in Delaware River Basin). Part of flow diverted for New York City municipal supply (see Reservoirs in Delaware River Basin). Remainder of flow (except for conservation releases and spill) impounded for release during period of low flow in the lower Delaware River basin, as directed by the Delaware River Master.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,800 ft^3/s, Mar. 16, 1986, gage height, 13.07 ft; minimum daily, 7.2 ft^3/s, Feb. 8, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,140 ft^3/s, Apr. 5, gage height, 11.32 ft; minimum daily, 38 ft^3/s, Nov. 13-18, Dec. 5; minimum gage height, 4.00 ft, Nov. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	441	343	44	563	316	44	1870	71	326	327	904	207
2	575	468	44	565	313	43	1720	56	331	388	341	58
3	494	521	46	561	314	75	1570	50	228	331	326	43
4	83	564	42	505	313	269	2320	50	65	331	326	299
5	57	378	38	475	307	360	7290	49	166	331	326	519
6	62	65	64	420	295	372	8050	49	102	332	326	578
7	60	87	276	421	291	358	6530	49	52	336	561	309
8	49	44	481	416	291	572	5560	50	53	344	474	304
9	45	45	636	400	288	1280	4380	49	51	336	333	184
10	334	41	827	394	275	1530	3460	49	49	336	326	52
11	353	40	914	403	270	1390	2780	50	193	447	325	43
12	127	39	886	392	268	1220	2370	50	294	642	338	43
13	138	38	840	378	266	1000	2870	49	154	813	542	50
14	103	38	722	360	256	787	3180	49	100	357	943	47
15	54	38	674	355	242	605	2760	50	282	334	965	45
16	45	38	670	381	231	494	2310	49	330	334	756	44
17	322	38	646	386	223	515	1920	173	379	326	1030	45
18	287	38	644	360	220	516	1590	243	506	332	1050	47
19	66	40	648	382	216	503	1290	162	719	332	1130	46
20	48	39	611	392	201	393	1030	61	480	333	1140	45
21	251	60	566	377	144	296	823	271	337	331	1180	46
22	61	47	512	378	110	228	631	245	333	331	1320	47
23	112	43	468	375	248	228	432	249	331	436	1340	46
24	679	43	445	345	346	328	262	102	331	490	1400	46
25	314	42	533	330	316	556	185	52	330	630	1440	45
26	159	51	693	324	330	1060	137	49	647	499	1350	45
27	196	59	742	325	270	1600	110	50	723	326	734	45
28	178	50	716	319	97	1770	99	49	341	326	374	45
29	197	46	680	313	---	1750	87	192	326	326	310	45
30	128	45	647	314	---	1610	84	326	328	426	98	51
31	309	---	612	321	---	1550	---	327	---	890	127	---
TOTAL	6327	3428	16367	12230	7257	23302	67700	3370	8887	12653	22135	3469
MEAN	204	114	528	395	259	752	2257	109	296	408	714	116
MAX	679	564	914	565	346	1770	8050	327	723	890	1440	578
MIN	45	38	38	313	97	43	84	49	49	326	98	43

CAL YR 1986 TOTAL 224117 MEAN 614 MAX 14800 MIN 35
WTR YR 1987 TOTAL 187125 MEAN 513 MAX 8050 MIN 38

01425000 WEST BRANCH DELAWARE RIVER AT STILESVILLE, NY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963 to current year.
CHEMICAL DATA: 1959-60 (a) unpublished, 1969 (a), 1970 (a) unpublished, 1971, 1973 (b), 1974 (d), 1975 (b).
MINOR ELEMENTS DATA: 1971 (b).
NUTRIENT DATA: 1970 (a) unpublished, 1971, 1973 (b), 1974 (d), 1975 (b).
BIOLOGICAL DATA:
Bacteria--1973 (b), 1974 (d), 1975 (b).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1962 to current year.

INSTRUMENTATION.--Water-temperature digital recorder since October 1962, provides one-hour-interval punches. Prior to October 1962, water-temperature recorder provided continuous recordings.

REMARKS.--Water temperature is affected by release of water from upstream reservoir. Interruption of record was due to malfunction of recording instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum (water years 1963-78, 1980-82, 1984-86), 30.5°C July 2, 1963; minimum, 0.0°C on many days during winter periods, except 1969, 1973, 1986-87.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Minimum, 0.5°C on several days during winter period.

TEMPERATURE (DEG. C) OF WATER, 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	9.0	8.0	8.5	9.5	8.0	8.5	5.0	2.0	3.5	4.0	4.0	4.0
2	8.5	8.0	8.0	9.0	8.5	9.0	4.0	3.5	3.5	4.0	3.5	3.5
3	9.0	8.0	8.0	9.5	8.5	9.0	5.5	4.0	5.0	3.5	3.5	3.5
4	11.0	9.5	10.0	9.0	8.5	8.5	5.0	3.5	4.0	3.5	3.0	3.5
5	11.5	9.0	10.0	9.0	7.5	8.5	3.5	3.0	3.5	3.5	3.0	3.0
6	9.5	7.5	8.5	8.0	7.0	7.5	4.0	2.5	2.5	3.0	2.5	3.0
7	12.0	7.0	9.0	8.0	8.0	8.0	5.5	4.0	5.0	2.5	2.5	2.5
8	14.0	7.0	9.5	9.5	8.0	9.0	5.5	5.5	5.5	2.5	2.0	2.5
9	10.5	8.5	9.5	10.5	8.0	10.0	5.5	5.5	5.5	3.0	2.0	2.5
10	9.5	7.0	8.0	8.5	6.0	7.0	5.5	5.5	5.5	3.0	2.5	2.5
11	9.5	7.5	8.0	5.5	5.0	5.5	5.5	5.5	5.5	2.5	2.0	2.5
12	11.5	7.5	9.0	9.0	5.5	7.0	5.5	5.0	5.5	3.0	2.0	2.5
13	10.0	8.0	9.0	6.5	3.5	5.5	5.0	5.0	5.0	3.0	2.5	3.0
14	11.0	8.0	9.5	6.5	3.0	4.5	5.0	4.5	5.0	3.0	2.5	2.5
15	9.0	7.5	8.5	7.0	4.5	5.5	5.0	5.0	5.0	3.0	3.0	3.0
16	9.0	7.5	8.5	8.0	6.5	7.5	5.0	5.0	5.0	3.0	2.0	2.5
17	8.5	8.0	8.0	7.5	6.5	7.0	5.0	5.0	5.0	2.5	1.5	2.0
18	9.5	8.0	8.5	7.5	6.0	7.0	5.0	5.0	5.0	2.0	2.0	2.0
19	11.5	6.5	8.5	6.5	4.5	5.0	5.0	4.5	5.0	2.0	1.0	1.5
20	11.5	6.5	8.5	5.0	3.5	4.0	4.5	4.5	4.5	1.0	1.0	1.0
21	9.5	7.5	8.5	5.0	3.5	4.0	4.5	4.5	4.5	1.5	1.0	1.5
22	13.0	8.5	10.0	6.0	3.5	4.0	4.5	4.0	4.5	1.0	1.0	1.0
23	11.0	8.0	9.0	7.0	3.5	5.0	4.5	4.0	4.0	1.0	.5	1.0
24	9.5	8.0	8.5	6.5	5.5	6.0	4.5	4.0	4.5	.5	.5	.5
25	9.0	8.0	8.5	8.0	5.0	6.0	4.5	4.5	4.5	.5	.5	.5
26	9.0	8.0	8.5	6.0	4.5	5.0	4.5	4.5	4.5	1.0	.5	.5
27	9.0	8.5	8.5	6.0	5.0	6.0	4.5	4.5	4.5	1.0	1.0	1.0
28	9.5	8.5	9.0	7.0	4.5	5.5	4.5	4.0	4.5	1.0	1.0	1.0
29	11.0	8.5	9.5	5.5	4.5	5.0	4.0	4.0	4.0	1.5	1.0	1.0
30	10.0	8.0	9.0	5.5	2.5	4.5	4.0	4.0	4.0	1.0	1.0	1.0
31	9.5	8.0	8.5	---	---	---	4.0	4.0	4.0	1.0	1.0	1.0
MONTH	14.0	6.5	9.0	10.5	2.5	6.5	5.5	2.0	4.5	4.0	0.5	2.0

DELAWARE RIVER BASIN

01425000 WEST BRANCH DELAWARE RIVER AT STILESVILLE, NY--Continued

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

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.0	5.5	6.5	8.0	6.0	6.5	---	---	---	---	---	---
2	7.5	6.0	6.5	7.0	6.0	6.5	---	---	---	---	---	---
3	9.5	6.0	7.5	8.5	6.0	7.0	---	---	---	16.0	9.0	11.5
4	9.5	7.5	8.5	8.5	6.0	7.0	---	---	---	10.5	8.0	9.0
5	10.5	6.0	8.0	9.5	6.0	7.5	---	---	---	9.5	8.0	8.5
6	15.0	5.5	9.5	10.0	6.0	7.5	---	---	---	9.0	8.0	8.5
7	10.0	8.0	9.0	7.0	6.5	6.5	---	---	---	9.5	8.0	8.5
8	12.5	8.0	10.0	9.0	6.0	7.0	---	---	---	9.0	8.5	8.5
9	13.5	8.5	11.0	9.0	6.5	7.5	---	---	---	13.0	8.0	10.0
10	14.5	9.5	11.5	9.0	6.5	7.5	---	---	---	16.5	10.5	13.0
11	12.0	6.0	9.5	9.0	6.0	7.5	---	---	---	16.5	11.0	13.0
12	9.5	6.0	7.0	8.5	6.5	7.5	---	---	---	13.5	12.0	13.0
13	12.5	6.0	8.0	8.5	6.5	7.5	---	---	---	13.0	12.0	12.5
14	16.0	6.0	10.0	8.0	6.0	7.0	---	---	---	16.5	11.5	13.5
15	10.0	6.0	7.5	8.0	6.0	7.0	---	---	---	14.5	11.0	12.5
16	9.0	6.0	7.0	9.0	6.0	7.0	---	---	---	16.5	11.0	13.0
17	9.0	5.5	7.0	9.5	6.0	7.5	---	---	---	13.5	12.0	13.0
18	9.0	6.0	7.0	9.5	6.0	7.5	---	---	---	12.5	11.5	12.5
19	8.0	6.0	7.0	9.0	6.5	7.5	---	---	---	11.5	11.0	11.0
20	8.0	6.0	7.0	9.0	6.5	7.5	---	---	---	12.0	10.5	11.0
21	7.0	6.0	6.5	9.5	6.5	7.5	---	---	---	15.0	11.0	12.5
22	7.5	6.0	6.5	9.5	6.5	8.0	---	---	---	15.0	11.0	12.5
23	7.0	6.0	6.5	9.5	6.5	7.5	---	---	---	13.0	11.0	11.5
24	9.0	6.0	7.0	10.0	6.5	8.0	---	---	---	11.5	10.0	10.5
25	9.0	6.0	7.5	8.0	6.5	7.5	---	---	---	12.0	9.0	10.0
26	7.5	6.0	6.5	---	---	---	---	---	---	11.5	8.5	10.0
27	8.0	6.0	6.5	---	---	---	---	---	---	14.5	9.5	11.0
28	8.0	6.0	6.5	---	---	---	---	---	---	14.0	10.5	12.0
29	9.5	6.0	7.5	---	---	---	---	---	---	15.5	10.5	12.5
30	8.5	6.0	7.0	---	---	---	---	---	---	13.0	11.5	12.0
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	16.0	5.5	8.0	---	---	---	---	---	---	---	---	---

01426500 WEST BRANCH DELAWARE RIVER AT HALE EDDY, NY

LOCATION.--Lat 42°00'11", long 75°23'02", Delaware County, Hydrologic Unit 02040101, on left bank at downstream side of bridge on County Highway 56 in Hale Eddy, and 9 mi upstream from confluence of East and West Branches near Hancock. Water-quality sampling site at discharge station.

DRAINAGE AREA.--595 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1912 to current year.

REVISED RECORDS.--WSP 871: 1916. WDR NY-82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 946.46 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 8, 1928, nonrecording gage.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Subsequent to October 1963, entire flow from 454 mi^2 drainage area controlled by Cannonsville Reservoir (see Reservoirs in Delaware River Basin). Part of flow diverted for New York City municipal supply. Remainder of flow (except for conservation releases and spill) impounded for release during periods of low flow in the lower Delaware River basin, as directed by the Delaware River Master. Satellite gage-height and temperature telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,900 ft^3/s, Mar. 22, 1948, gage height, 15.69 ft; maximum gage height, 15.8 ft, Sept. 30, 1924, from graph based on gage readings; minimum discharge, 17 ft^3/s, Oct. 20, 1963; minimum gage height, 1.03 ft, Aug. 4, 1936.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 10, 1903, reached a stage of 20.3 ft, from floodmarks, discharge, about 46,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,100 ft^3/s, Apr. 5, gage height, 10.22 ft; minimum, 79 ft^3/s, Sept. 4, gage height, 1.47 ft; minimum daily, 86 ft^3/s, Sept. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	498	408	424	e720	e440	180	2360	179	390	387	922	304
2	537	524	375	e700	e440	647	2130	153	543	523	449	114
3	637	637	590	e680	e430	562	1970	145	408	479	403	86
4	866	623	486	667	e430	631	4420	161	266	421	373	254
5	471	551	379	625	e430	687	8900	141	300	396	363	546
6	316	244	340	571	e430	688	8910	138	288	382	361	578
7	249	241	506	574	e400	804	7330	133	178	400	565	391
8	204	405	733	553	e370	1520	6110	121	260	464	502	412
9	175	1100	895	529	e360	2370	4780	115	205	401	395	554
10	379	784	1170	522	e370	2250	3760	110	166	386	387	210
11	476	579	1220	535	e350	1940	3020	107	177	466	363	146
12	265	482	1160	518	e340	1680	2610	105	514	630	370	134
13	162	398	1070	496	e335	1400	3680	101	224	980	492	884
14	261	308	900	468	e330	1120	3680	96	267	731	909	663
15	170	273	894	496	e320	917	3250	98	309	868	959	386
16	138	258	870	e530	e320	767	2830	93	399	559	778	284
17	332	260	836	e500	e310	751	2480	201	419	474	943	346
18	437	254	842	e500	e290	762	2200	275	524	439	1050	971
19	146	289	852	e500	e280	800	1930	229	742	414	1070	614
20	115	275	794	e520	e270	701	1680	126	551	421	1140	455
21	273	1800	735	e500	e270	543	1470	264	399	405	1130	368
22	169	982	664	e500	e250	554	1300	325	432	387	1290	390
23	106	679	604	e520	e240	662	1110	317	790	465	1320	413
24	704	860	593	e500	e380	883	806	403	518	545	1370	322
25	436	704	951	e490	e440	1290	667	183	455	617	1380	281
26	295	1620	1070	e480	428	2080	487	153	687	726	1340	234
27	305	2500	1050	e470	329	2420	359	160	791	412	972	204
28	215	1230	993	e460	196	2430	299	145	465	383	453	180
29	353	784	934	e450	---	2270	253	211	388	369	474	162
30	165	564	879	e450	---	2030	217	400	389	393	239	425
31	390	---	825	e440	---	2090	---	404	---	892	132	---
TOTAL	10245	20616	24634	16464	9778	38429	84998	5792	12444	15815	22894	11311
MEAN	330	687	795	531	349	1240	2833	187	415	510	739	377
MAX	866	2500	1220	720	440	2430	8910	404	791	980	1380	971
MIN	106	241	340	440	196	180	217	93	166	369	132	86

CAL YR 1986 TOTAL 331188 MEAN 907 MAX 15900 MIN 74
WTR YR 1987 TOTAL 273420 MEAN 749 MAX 8910 MIN 86

e Estimated

DELAWARE RIVER BASIN

01426500 WEST BRANCH DELAWARE RIVER AT HALE EDDY, NY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1958-59, 1968 to current year.
CHEMICAL DATA: 1958-59 (d), 1970 (b), 1971-74 (d), 1975 (c).
MINOR ELEMENTS DATA: 1971-74 (a).
ORGANIC DATA: OC--1974 (a), 1975 (c).
NUTRIENT DATA: 1971-74 (d), 1975 (c).
BIOLOGICAL DATA:
Bacteria--1971, 1973 (c); 1974 (d); 1975 (c).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1967 to current year (no winter record for water years 1969-77).

INSTRUMENTATION.--Water-temperature digital recorder since April 1977, provides one-hour-interval punches. Prior to October 1976, water-temperature recorder provided continuous recordings.

REMARKS.--Water temperature is affected by release of water from upstream reservoir. Interruption of record was due to probe being out of the water, or malfunction of recording instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum (water years 1968-77, 1979-83, 1985), 30.5°C, July 22, 23, 1972, June 16, 1981; minimum (water years 1968, 1978-87), 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum recorded, 25.0°C, May 28; minimum, 0.0°C on many days during winter period.

TEMPERATURE (DEG. C) OF WATER, 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	13.0	9.5	11.0	9.0	5.5	7.5	1.5	.0	1.0	2.5	1.5	2.0
2	10.5	9.0	10.0	9.0	7.0	8.5	2.0	1.0	1.0	2.5	1.0	1.5
3	10.5	8.5	9.0	9.0	6.0	7.5	4.0	2.0	3.5	2.5	1.0	2.0
4	15.5	10.5	14.5	8.0	7.0	7.5	4.0	1.5	2.5	2.0	.5	1.5
5	15.5	13.0	14.5	6.5	5.5	6.0	1.5	1.0	1.5	2.0	.5	1.0
6	13.0	9.5	11.0	5.5	5.0	5.5	2.0	.0	1.0	2.5	1.0	1.5
7	13.5	8.5	10.5	6.5	5.5	6.0	3.5	1.5	2.0	2.0	1.5	1.5
8	14.0	8.0	11.0	8.0	6.0	7.0	4.5	3.5	4.0	2.0	1.0	1.5
9	12.5	10.0	11.5	9.0	8.0	9.0	4.0	2.5	3.0	2.0	1.5	1.5
10	10.5	7.0	9.0	8.0	5.0	6.5	5.0	4.0	4.5	2.0	1.0	1.5
11	10.5	5.5	8.0	5.0	3.0	3.5	4.0	3.5	4.0	1.0	1.0	1.0
12	12.5	7.0	9.5	5.5	3.0	4.5	4.0	3.5	4.0	1.5	1.0	1.0
13	11.5	11.0	11.0	4.5	1.0	3.0	3.5	2.0	3.0	2.5	1.5	2.0
14	12.0	10.0	11.0	2.0	.0	1.0	3.5	1.5	2.5	3.0	.5	1.5
15	11.0	8.5	9.5	2.0	.0	1.0	4.0	3.0	3.5	2.5	2.5	2.5
16	9.0	8.0	9.0	4.0	2.0	3.0	4.5	4.0	4.0	2.5	.5	1.5
17	9.0	8.0	8.5	4.5	3.5	4.0	4.5	4.0	4.5	1.0	.0	.5
18	10.5	7.5	8.5	4.5	3.0	4.0	4.0	3.5	3.5	.5	.0	.0
19	11.0	5.5	8.0	3.0	1.0	1.5	3.5	3.5	3.5	.5	.0	.5
20	10.5	6.0	8.0	1.0	.0	.0	4.0	3.5	4.0	.5	.0	.5
21	10.5	7.0	8.5	2.0	.5	1.5	3.5	2.5	3.5	1.0	.0	.5
22	13.0	8.5	10.5	3.5	2.0	2.5	4.0	2.0	3.0	.0	.0	.0
23	11.5	9.0	10.5	3.5	1.5	2.5	3.5	1.5	2.5	.0	.0	.0
24	10.5	7.5	9.0	4.5	3.5	4.0	3.0	2.5	3.0	.0	.0	.0
25	9.0	6.0	7.5	5.0	4.0	4.5	3.5	3.0	3.5	.0	.0	.0
26	8.5	7.5	8.0	4.5	3.0	3.5	3.5	3.5	3.5	.0	.0	.0
27	9.0	8.5	8.5	5.0	4.0	4.5	3.5	3.5	3.5	.0	.0	.0
28	10.0	9.0	9.0	4.5	3.5	4.0	3.5	3.0	3.0	.0	.0	.0
29	11.0	7.5	9.0	4.0	3.0	3.5	3.5	3.0	3.5	.0	.0	.0
30	11.5	8.0	10.0	3.5	1.5	3.0	3.0	2.5	3.0	.0	.0	.0
31	8.5	5.0	7.0	---	---	---	3.0	2.5	3.0	.0	.0	.0
MONTH	15.5	5.0	9.5	9.0	0.0	4.5	5.0	0.0	3.0	3.0	0.0	1.0

01426500 WEST BRANCH DELAWARE RIVER AT HALE EDDY, NY--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	.0	.0	.0	3.5	2.0	2.5	3.5	2.5	3.0	13.5	5.0	9.0
2	1.5	.0	.5	1.5	.0	1.0	3.0	2.5	3.0	15.5	8.0	11.5
3	1.0	.5	.5	2.0	.0	1.0	4.0	3.0	3.5	12.0	9.5	10.5
4	1.5	.0	1.0	2.5	.0	1.0	5.5	3.5	4.5	12.0	8.0	10.0
5	.5	.0	.0	3.0	.0	1.0	5.0	3.5	4.0	12.0	9.5	10.5
6	2.0	.0	.5	4.0	.0	1.5	4.0	4.0	4.0	15.0	9.0	11.5
7	2.0	.0	1.0	5.5	1.0	2.5	4.0	4.0	4.0	17.5	9.0	13.0
8	1.0	.0	.5	5.0	1.0	2.5	4.0	3.5	4.0	18.0	9.5	13.5
9	.5	.0	.5	1.5	.5	1.5	4.5	4.0	4.0	20.0	10.0	15.0
10	.0	.0	.0	2.5	.0	1.0	6.0	3.5	4.5	20.5	12.5	16.5
11	2.5	.0	1.0	3.5	.5	1.5	6.5	4.0	5.0	21.5	13.5	17.5
12	.0	.0	.0	3.0	1.0	2.0	5.5	4.5	5.0	18.5	13.5	16.0
13	.0	.0	.0	3.0	1.5	2.0	6.5	5.0	5.5	21.0	10.0	15.5
14	.5	.0	.0	5.0	.5	2.5	7.5	5.0	6.0	21.5	11.5	16.5
15	.0	.0	.0	5.5	.5	2.5	7.5	5.5	6.5	20.0	14.0	17.0
16	.0	.0	.0	4.5	.5	2.0	7.5	6.0	7.0	22.0	10.5	16.0
17	.0	.0	.0	5.0	.5	2.5	7.5	6.5	7.0	18.5	13.5	16.0
18	.0	.0	.0	6.0	1.0	3.0	10.0	7.5	8.5	15.5	11.5	14.0
19	.0	.0	.0	6.5	1.0	3.5	11.5	8.5	10.0	11.0	10.0	11.0
20	.0	.0	.0	3.0	1.5	2.5	14.0	9.5	11.5	12.0	9.5	10.5
21	.0	.0	.0	3.5	1.5	2.5	15.5	11.0	13.0	13.0	10.5	11.5
22	.0	.0	.0	8.0	3.0	5.0	14.5	10.5	12.0	15.0	9.0	11.5
23	.0	.0	.0	8.5	2.5	5.5	14.0	10.5	12.0	17.0	12.0	14.0
24	1.5	.0	.5	8.5	2.5	5.5	12.5	10.0	11.5	15.5	10.5	13.5
25	3.5	.0	1.5	7.5	2.5	5.0	15.5	9.0	12.0	14.5	12.5	14.0
26	4.0	.0	1.5	5.5	4.0	4.5	16.0	8.5	12.0	16.0	13.0	14.5
27	3.5	.0	1.5	5.5	3.5	4.5	16.0	9.0	12.5	15.0	13.5	14.0
28	2.0	.0	1.0	5.5	3.5	4.5	11.0	8.5	9.0	22.0	13.5	17.5
29	---	---	---	6.0	3.5	4.5	11.0	7.5	9.0	25.0	18.0	21.0
30	---	---	---	6.0	4.0	5.0	9.0	7.0	8.0	---	---	---
31	---	---	---	5.5	4.0	5.0	---	---	---	---	---	---
MONTH	4.0	0.0	0.5	8.5	0.0	3.0	16.0	2.5	7.5	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	13.0	9.5	11.5	13.0	7.0	9.5	16.5	11.0	12.5
2	16.0	10.0	12.5	11.5	8.5	10.0	10.0	7.0	8.5	12.5	10.5	11.5
3	12.5	11.5	12.0	15.5	10.5	12.5	14.5	10.0	11.5	19.5	11.0	15.0
4	17.0	12.5	14.5	17.0	10.5	13.5	17.5	10.0	13.5	16.5	12.0	14.0
5	22.5	15.5	18.5	18.0	9.5	13.5	14.0	10.0	11.5	12.5	8.5	10.5
6	20.0	10.0	15.0	17.0	10.0	13.5	12.5	9.0	10.5	11.0	8.5	10.0
7	16.0	13.5	14.5	14.0	10.0	11.5	12.5	8.5	10.5	12.5	9.5	10.5
8	18.0	13.5	16.0	17.0	10.0	13.0	14.0	8.0	10.5	12.5	10.5	11.5
9	20.5	15.0	17.5	17.5	10.5	14.0	10.5	8.5	9.5	16.5	12.5	14.0
10	22.0	14.0	17.5	17.0	10.5	13.5	13.0	9.5	11.0	21.0	15.0	17.5
11	22.5	14.0	18.0	17.0	10.0	13.0	15.5	9.0	11.5	21.0	16.0	18.5
12	14.5	8.5	10.5	15.5	9.5	12.0	17.0	8.0	12.5	18.5	16.5	17.5
13	21.0	13.0	16.5	13.5	9.0	11.0	16.0	9.0	12.0	17.0	16.0	16.5
14	22.5	11.0	16.5	15.5	9.0	12.0	13.0	7.5	10.0	19.5	15.5	17.0
15	20.5	15.5	19.0	16.0	13.5	14.5	13.0	7.5	9.5	17.0	14.0	15.5
16	18.5	9.5	14.0	16.5	10.5	13.5	14.0	7.5	10.0	19.5	14.0	16.5
17	17.5	9.0	13.0	18.0	10.0	14.0	13.0	7.5	9.5	18.5	16.5	17.5
18	16.0	7.5	11.5	18.5	10.5	14.5	12.5	7.5	9.5	17.0	14.5	16.0
19	14.0	7.0	10.0	18.0	11.0	14.0	12.5	7.0	9.0	14.5	13.5	14.0
20	14.0	7.0	10.5	17.5	11.5	14.0	12.0	7.5	9.0	14.5	13.0	14.0
21	11.0	8.5	10.0	19.5	10.5	15.0	12.0	7.0	9.0	17.5	14.0	15.5
22	14.0	9.5	11.0	19.5	11.5	15.5	11.5	7.5	9.0	17.5	14.5	16.0
23	14.0	11.5	13.0	17.0	10.5	13.5	11.0	7.0	9.0	16.0	14.0	15.0
24	18.0	10.0	13.5	15.5	8.5	12.0	10.5	7.0	8.5	14.0	12.5	13.0
25	17.5	10.5	14.0	13.5	9.0	11.0	11.0	7.0	8.5	14.5	10.5	12.0
26	14.0	8.5	10.5	15.0	9.5	11.5	10.5	7.5	9.0	---	---	---
27	12.5	7.5	9.5	17.0	10.5	13.5	10.5	8.0	9.0	---	---	---
28	14.0	7.5	10.5	17.0	9.5	13.0	11.5	10.0	10.5	---	---	---
29	17.5	8.5	12.5	17.0	8.5	12.5	12.5	10.0	11.0	---	---	---
30	15.0	10.5	13.0	13.0	9.0	11.0	19.0	9.5	13.5	---	---	---
31	---	---	---	13.0	7.5	10.0	19.5	14.0	16.5	---	---	---
MONTH	---	---	---	19.5	7.5	13.0	19.5	7.0	10.5	---	---	---

DELAWARE RIVER BASIN

01427207 DELAWARE RIVER AT LORDVILLE, NY

LOCATION.--Lat 41°52'05", long 75°12'50", Delaware County, Hydrologic Unit 02040101, at Lordville-Equinunk Interstate Bridge at Lordville, 50 ft downstream from Humphries Brook, and 6.5 mi southeast of Hancock.

DRAINAGE AREA.--1,590 mi^2.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1967 to August 1971, June 1973 to current year.

REVISED RECORDS OR NY-82-1: Drainage area.

INSTRUMENTATION.--Water-temperature digital recorder since June 1973, provides one-hour interval punches. Prior to August 1971, water-temperature recorder provided continuous recordings.

REMARKS.--Interruption of record was due to malfunction of recording instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum (water years 1968-70, 1973, 1975-86) 30.5°C, June 16, 1976, July 10, 1981; minimum (water years 1968-71, 1974, 1977-78, 1980-87), 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum recorded, 27.5°C, July 11,23, but may have been higher during period of instrument malfunction; minimum, 0.0°C on many days during winter period.

TEMPERATURE (DEG. C) OF WATER, 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	---	---	---	7.5	5.5	6.5	2.0	.5	1.0	.5	.0	.5
2	16.5	15.5	16.0	8.5	7.5	8.0	1.5	.5	1.0	.5	.0	.0
3	15.5	12.5	13.5	7.5	6.0	6.5	3.5	1.5	2.5	.0	.0	.0
4	16.0	12.5	14.0	7.0	6.0	6.5	3.5	2.0	3.0	.0	.0	.0
5	15.5	14.0	15.0	6.0	4.0	5.0	2.0	1.5	1.5	.0	.0	.0
6	14.0	10.5	12.5	5.0	4.0	4.5	1.5	.5	1.0	.5	.0	.0
7	12.0	9.5	10.5	5.5	5.0	5.0	1.5	1.0	1.5	.5	.0	.0
8	13.0	9.5	11.0	7.5	5.5	6.5	2.5	1.5	2.0	.5	.0	.0
9	13.0	11.0	12.0	9.0	7.5	8.5	2.0	1.0	1.5	.5	.0	.5
10	11.5	9.0	10.5	8.5	5.5	7.0	3.0	1.5	2.5	.5	.0	.0
11	10.0	7.5	9.0	5.5	3.5	4.0	2.5	1.5	2.0	.5	.0	.0
12	11.0	8.5	9.5	4.5	3.5	4.0	2.0	1.5	2.0	.0	.0	.0
13	11.5	11.0	11.5	4.5	2.0	3.5	1.5	.0	.5	1.0	.0	.5
14	13.5	11.5	12.5	2.0	.0	.5	.0	.0	.0	1.0	.0	.5
15	12.0	10.0	11.0	1.0	.0	.5	1.0	.0	.5	1.5	.5	1.5
16	10.0	9.5	10.0	3.0	1.0	2.0	2.0	1.0	1.5	1.5	.5	1.0
17	9.5	9.0	9.5	4.0	3.0	3.5	2.5	2.0	2.0	.5	.0	.5
18	10.0	8.5	9.5	4.0	3.0	3.5	2.5	1.5	2.0	.5	.0	.0
19	10.0	7.5	8.5	3.0	1.0	2.0	2.0	1.5	2.0	.0	.0	.0
20	10.0	7.5	8.5	1.0	.0	.5	2.0	1.5	2.0	.0	.0	.0
21	10.5	8.0	9.0	2.0	1.0	1.5	2.0	.5	1.5	.0	.0	.0
22	12.0	10.0	11.0	3.0	1.5	2.5	.5	.0	.5	.0	.0	.0
23	11.5	10.5	11.0	2.5	1.5	2.0	.0	.0	.0	.0	.0	.0
24	11.5	10.0	10.5	4.0	2.5	3.5	.5	.0	.0	.0	.0	.0
25	10.0	8.0	8.5	4.5	3.5	4.0	1.5	.5	1.0	.0	.0	.0
26	9.0	8.5	8.5	4.0	3.0	3.5	2.0	1.5	1.5	.0	.0	.0
27	9.5	8.5	9.0	5.0	4.0	4.5	2.0	1.5	2.0	.0	.0	.0
28	10.0	9.5	10.0	4.0	3.5	4.0	1.5	1.5	1.5	.0	.0	.0
29	10.5	8.5	9.5	4.0	3.5	3.5	1.5	1.5	1.5	.0	.0	.0
30	10.0	9.0	10.0	3.5	2.0	3.0	1.5	1.0	1.0	.0	.0	.0
31	9.0	5.5	7.5	---	---	---	1.5	1.0	1.0	.0	.0	.0
MONTH	---	---	---	9.0	0.0	4.0	3.5	0.0	1.5	1.5	0.0	0.0

01427207 DELAWARE RIVER AT LORDVILLE, NY--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	.0	.0	.0	.0	.0	.0	6.0	4.0	4.5	---	---	---
2	.0	.0	.0	.0	.0	.0	3.5	3.0	3.5	---	---	---
3	.0	.0	.0	.0	.0	.0	4.5	3.5	4.0	---	---	---
4	.0	.0	.0	.0	.0	.0	6.0	4.0	5.0	---	---	---
5	.0	.0	.0	.0	.0	.0	6.0	5.0	5.0	---	---	---
6	.0	.0	.0	.0	.0	.0	5.5	5.0	5.0	---	---	---
7	.0	.0	.0	.0	.0	.0	5.5	5.0	5.0	---	---	---
8	.0	.0	.0	.5	.0	.0	5.5	4.5	5.0	---	---	---
9	.0	.0	.0	1.0	.0	.5	5.5	4.0	5.0	---	---	---
10	.0	.0	.0	.5	.0	.5	7.5	4.5	6.0	---	---	---
11	.0	.0	.0	1.5	.0	.5	8.5	5.5	7.0	---	---	---
12	.0	.0	.0	1.5	.5	1.0	8.0	7.0	7.5	---	---	---
13	.0	.0	.0	2.0	1.0	1.5	9.0	7.0	8.0	---	---	---
14	.0	.0	.0	3.0	.5	2.0	9.0	6.0	7.5	---	---	---
15	.0	.0	.0	3.5	1.5	2.5	8.5	7.5	8.0	---	---	---
16	.0	.0	.0	3.0	1.5	2.5	8.0	7.0	7.5	---	---	---
17	.0	.0	.0	3.5	1.0	2.0	8.5	7.5	8.0	---	---	---
18	.0	.0	.0	4.0	1.5	3.0	11.0	8.0	9.5	---	---	---
19	.0	.0	.0	5.0	1.5	3.5	13.0	10.0	11.5	---	---	---
20	.0	.0	.0	4.0	2.5	3.0	14.5	11.0	13.0	---	---	---
21	.0	.0	.0	2.5	2.0	2.5	16.5	12.5	14.5	---	---	---
22	.0	.0	.0	6.0	2.5	4.0	16.0	13.5	14.5	18.5	14.5	16.5
23	.0	.0	.0	7.0	3.5	5.5	13.5	12.0	12.5	21.0	17.5	19.0
24	.0	.0	.0	7.5	4.5	6.0	13.0	11.5	12.5	20.5	17.0	18.5
25	.0	.0	.0	7.5	5.0	6.5	13.5	10.0	12.0	16.5	16.0	16.5
26	.0	.0	.0	7.0	5.5	6.5	14.5	10.5	12.5	17.0	15.5	16.5
27	.0	.0	.0	6.5	5.0	5.5	---	---	---	16.5	15.5	15.5
28	.0	.0	.0	7.5	5.0	6.5	---	---	---	20.5	15.0	17.5
29	---	---	---	8.0	5.5	7.0	---	---	---	25.0	20.0	22.0
30	---	---	---	8.0	6.5	7.5	---	---	---	27.0	23.0	25.0
31	---	---	---	8.0	6.5	7.5	---	---	---	25.0	23.0	23.5
MONTH	0.0	0.0	0.0	8.0	0.0	3.0	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	24.5	21.0	23.0	22.5	20.5	21.5	20.0	17.0	18.5	---	---	---
2	23.0	20.5	22.0	21.0	17.0	19.0	18.0	16.0	16.5	---	---	---
3	21.0	18.0	19.5	20.0	16.5	17.5	20.0	16.0	18.0	19.0	14.5	16.5
4	18.0	17.0	17.5	22.0	18.5	20.0	24.5	20.0	22.0	20.5	16.0	18.0
5	21.5	16.5	18.5	23.5	19.5	21.5	24.0	22.0	23.0	19.5	17.5	18.5
6	22.0	19.0	20.5	24.0	21.0	22.5	22.0	20.0	20.5	17.5	16.5	17.0
7	19.5	17.0	18.0	22.5	19.0	20.5	21.0	19.0	20.0	17.0	16.0	16.5
8	19.5	16.5	18.0	22.5	18.0	20.0	21.5	18.0	19.5	18.0	16.5	17.5
9	20.5	18.0	19.0	25.0	21.5	23.0	20.0	18.0	19.0	17.5	17.0	17.5
10	21.0	17.0	19.0	26.5	22.5	24.5	18.5	17.0	17.5	19.0	16.5	17.5
11	22.0	17.5	19.5	27.5	23.5	25.5	20.5	16.5	18.5	19.0	17.0	18.0
12	20.5	17.5	19.5	27.0	23.5	25.5	22.5	18.0	20.0	19.0	17.5	18.0
13	20.5	16.0	18.0	25.5	20.5	22.5	23.5	19.5	21.5	17.5	16.5	17.0
14	24.0	19.5	21.5	20.5	19.5	20.0	22.0	19.0	20.5	18.0	16.0	17.0
15	26.5	22.0	24.0	19.5	17.0	18.5	19.5	17.0	18.5	16.5	15.0	16.0
16	25.5	22.5	24.5	19.5	17.0	18.0	21.0	17.0	19.0	17.5	15.0	16.5
17	24.5	21.0	23.0	21.0	16.5	18.5	21.5	19.0	20.0	18.0	17.5	17.5
18	24.5	20.0	22.0	23.0	18.5	20.5	19.5	17.0	18.5	18.0	15.5	17.0
19	22.5	20.0	21.0	24.0	21.0	22.5	18.5	16.0	17.5	15.5	14.0	14.5
20	22.0	18.0	20.0	24.5	21.5	23.0	17.5	15.5	16.5	14.5	13.5	14.0
21	20.5	19.0	20.0	25.5	21.0	23.5	17.5	14.5	16.0	16.5	14.5	15.5
22	19.5	18.5	19.0	27.0	23.0	25.0	16.0	14.0	15.0	17.0	15.5	16.0
23	19.5	17.5	19.0	27.5	23.5	25.5	14.5	13.0	14.0	16.0	15.5	16.0
24	22.0	17.5	19.5	26.5	24.0	25.5	13.0	11.5	12.5	15.5	13.5	14.5
25	25.0	20.5	22.5	25.0	22.5	24.0	13.5	11.0	12.0	13.5	12.5	13.0
26	23.5	17.5	20.5	22.5	19.0	21.0	13.0	11.0	12.5	13.0	11.5	12.5
27	18.5	16.0	17.5	24.5	20.0	22.0	13.0	11.0	12.0	14.5	11.5	13.0
28	18.0	16.0	17.0	24.0	21.0	22.5	14.0	11.5	13.0	17.0	14.0	15.5
29	22.0	16.5	19.0	24.0	19.5	21.5	16.0	14.0	14.5	17.5	15.0	16.5
30	23.5	20.0	21.5	22.0	20.0	21.0	18.5	14.0	16.0	17.0	16.0	16.5
31	---	---	---	21.5	19.0	20.0	---	---	---	---	---	---
MONTH	26.5	16.0	20.0	27.5	16.5	22.0	---	---	---	---	---	---

DELAWARE RIVER BASIN

01427510 DELAWARE RIVER AT CALLICOON, NY

LOCATION.--Lat 41°45'24", long 75°03'30", Wayne County, Pennsylvania, Hydrologic Unit 02040101, on right bank, 0.5 mi downstream from Callicoon Creek, 0.5 mi downstream from Interstate Bridge 7, and 0.8 mi southeast of Callicoon. Water-quality sampling site at discharge station.

DRAINAGE AREA.--1,820 mi^2.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR NY-82-1: Drainage area. WDR NY-86-1: 1975-84 (M).

GAGE.--Water-stage recorder. Datum of gage is 734.88 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Subsequent to September 1954, entire flow from 371 mi^2 of drainage area controlled by Pepacton Reservoir (see Reservoirs in Delaware River Basin), and subsequent to October 1963, entire flow from 454 mi^2 of drainage area controlled by Cannonsville Reservoir (see Reservoirs in Delaware River Basin). Part of flow from these reservoirs diverted for New York City municipal supply. Remainder of flow (except for conservation releases and spill) impounded for release during period of low flow in the lower Delaware River basin, as directed by the Delaware River Master. Satellite gage-height and temperature telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 68,000 ft^3/s, Mar. 15, 1986, gage-height, 13.42 ft; maximum gage height, 14.83 ft, Jan. 9, 1979 (ice jam); minimum discharge, 307 ft^3/s, Aug. 23, 1985; minimum gage height, 2.20 ft, Sept. 13, 1977, Aug. 23, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 42,000 ft^3/s, Apr. 5, gage height, 10.44 ft; minimum, 589 ft^3/s, Sept. 5, gage height, 2.59 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	963	865	3980	e2100	e1300	e1100	10700	1300	900	920	1330	1120
2	944	970	3330	e2000	e1300	e2000	7490	1190	981	1090	1340	1090
3	1190	1090	4560	e1900	e1300	e3000	6440	1100	1280	2110	1290	774
4	3600	1120	4990	e1800	e1250	e2400	13700	1340	1100	1820	1450	639
5	2610	1130	3790	e1700	e1200	e2200	31200	1330	1190	1470	1140	771
6	1630	1170	3190	e1700	e1150	e2200	19100	1270	1090	1260	1040	1030
7	1190	1190	2900	e1600	e1100	e2800	15500	1220	797	1200	1170	1130
8	980	1750	2930	e1600	e1050	e4700	13000	1090	789	1550	1240	1870
9	859	6690	2980	e1500	e1050	e9000	12000	952	958	1560	1080	13400
10	786	7020	3640	e1400	e1000	e8000	10200	903	761	1330	1080	6760
11	950	4830	3900	e1400	e980	e6400	8510	819	663	1220	1070	3730
12	949	3940	3450	e1300	e960	e5400	7520	794	765	1240	905	2620
13	740	3320	e3000	e1300	e940	4310	12400	761	1050	1600	829	8280
14	872	2620	e2650	e1200	e920	3550	12300	715	907	2900	1030	11600
15	1140	2250	e2550	e1300	e900	3110	9990	709	778	6280	1360	6250
16	1030	2130	2670	e1400	e880	2760	8400	724	791	3500	1340	4230
17	883	2200	2480	e1400	e860	2450	7280	677	806	2360	1220	3440
18	1060	2390	2420	e1300	e840	2350	6540	749	796	1860	1460	5950
19	986	2600	2490	e1300	e820	2390	5800	906	940	1580	1410	7590
20	768	2380	2310	e1200	e800	2510	4900	902	1110	1460	1510	5600
21	702	10800	2110	e1200	e780	2280	4190	766	871	1500	1420	4350
22	817	8410	1920	e1100	e760	2200	3600	876	774	1320	1500	3560
23	697	5750	e1750	e1100	e760	2760	3110	917	1770	1180	1630	3060
24	726	5450	e1700	e1100	e1000	3520	2690	1280	1790	1220	1600	2530
25	1130	5680	2790	e1100	e1050	4480	2370	988	1350	1170	1630	2160
26	924	7080	3750	e1100	e1000	6590	2050	773	1130	1760	1670	1810
27	1020	18000	3330	e1100	e920	7560	1690	728	1490	1450	1740	1560
28	1050	10300	2980	e1100	e920	7120	1490	747	1520	1080	1480	1380
29	948	6920	2740	e1100	---	6570	1510	779	1110	895	2300	1240
30	934	5200	2560	e1200	---	5920	1420	784	942	801	1870	1160
31	768	---	2390	e1250	---	6870	---	909	---	998	1110	---
TOTAL	33846	135245	92230	42850	27790	128500	247090	28998	31199	51684	42244	110684
MEAN	1092	4508	2975	1382	992	4145	8236	935	1040	1667	1363	3689
MAX	3600	18000	4990	2100	1300	9000	31200	1340	1790	6280	2300	13400
MIN	697	865	1700	1100	760	1100	1420	677	663	801	829	639

CAL YR 1986 TOTAL 1045550 MEAN 2865 MAX 54800 MIN 403
WTR YR 1987 TOTAL 972360 MEAN 2664 MAX 31200 MIN 639

e Estimated

01427510 DELAWARE RIVER AT CALLICOON, NY--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: June 1975 to current year.

INSTRUMENTATION.--Water-temperature digital recorder since June 1975, provides one-hour-interval punches.

REMARKS.--Interruptions of record were due to malfunction of recording instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum recorded, (water years 1976-87), 30.5°C, July 12, 1987; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum recorded, 30.5°C, July 12, but may have been higher during period of instrument malfunction; minimum, 0.0°C on many days during winter period.

TEMPERATURE (DEG. C) OF WATER, 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	19.0	16.0	17.5	8.5	6.5	7.5	3.0	.5	2.0	1.0	.5	.5
2	18.0	16.5	17.5	8.5	7.0	8.5	1.5	1.0	1.0	.5	.0	.5
3	16.5	14.5	15.5	8.0	6.0	7.0	3.0	1.0	2.0	.0	.0	.0
4	15.0	13.5	14.5	7.5	6.0	7.0	3.5	3.0	3.0	.0	.0	.0
5	15.5	14.0	15.0	6.0	4.5	5.0	3.0	2.0	2.5	.0	.0	.0
6	14.0	11.0	12.5	6.0	4.5	5.0	2.0	1.0	1.5	.5	.0	.0
7	12.5	10.0	11.0	6.0	5.0	5.5	1.5	1.0	1.5	.0	.0	.0
8	13.0	9.0	11.0	7.5	6.0	6.5	2.5	1.5	2.0	.0	.0	.0
9	13.5	10.5	12.0	9.0	7.5	8.5	1.5	1.5	1.5	.0	.0	.0
10	11.5	9.5	11.0	9.0	6.5	8.0	2.5	1.5	2.0	.0	.0	.0
11	10.5	8.0	9.5	6.5	4.0	5.0	2.5	2.0	2.0	---	---	---
12	12.0	9.0	10.5	5.0	4.0	4.5	2.0	1.5	1.5	---	---	---
13	11.5	10.5	11.0	4.5	2.5	4.0	1.5	.0	.5	---	---	---
14	13.0	11.5	12.0	2.5	.5	1.5	.0	.0	.0	---	---	---
15	12.0	10.0	10.5	1.0	.0	.5	.5	.0	.5	---	---	---
16	10.5	9.5	10.0	3.0	1.0	2.0	2.0	.5	1.0	---	---	---
17	10.0	9.0	9.5	3.5	3.0	3.5	2.5	2.0	2.5	---	---	---
18	10.5	9.0	9.5	4.5	3.5	4.0	2.5	2.0	2.0	---	---	---
19	10.0	7.5	9.0	4.0	2.0	3.0	2.0	2.0	2.0	---	---	---
20	10.5	7.5	9.0	1.5	1.0	1.0	2.5	2.0	2.5	---	---	---
21	11.0	8.0	9.5	2.0	1.0	1.5	2.0	1.0	1.5	---	---	---
22	12.0	9.5	11.0	3.0	2.0	2.5	1.5	.5	1.0	---	---	---
23	12.0	10.0	11.0	3.0	2.5	3.0	.5	.5	.5	---	---	---
24	11.5	10.0	11.0	4.0	3.0	3.5	1.0	.5	.5	---	---	---
25	10.5	8.5	9.5	5.0	4.0	4.5	2.0	1.0	1.5	---	---	---
26	9.5	9.0	9.0	4.0	4.0	4.0	2.5	2.0	2.5	---	---	---
27	10.0	9.0	9.5	5.5	4.0	5.0	2.5	2.5	2.5	---	---	---
28	11.0	9.5	10.0	5.0	4.5	4.5	2.5	2.0	2.0	---	---	---
29	11.5	9.0	10.0	4.5	3.5	4.0	2.5	1.5	2.0	---	---	---
30	11.0	9.0	10.0	4.0	3.0	3.5	1.5	1.5	1.5	---	---	---
31	9.0	7.0	8.0	---	---	---	2.0	1.0	1.5	---	---	---
MONTH	19.0	7.0	11.0	9.0	0.0	4.5	3.5	0.0	1.5	---	---	---

DELAWARE RIVER BASIN

01427510 DELAWARE RIVER AT CALLICOON, NY--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	.0	.0	.0	7.0	4.0	5.5	12.5	6.5	9.5
2	.0	.0	.0	.0	.0	.0	4.0	3.5	3.5	13.0	8.5	11.0
3	.0	.0	.0	.0	.0	.0	4.0	3.5	3.5	12.0	10.0	10.5
4	.0	.0	.0	.0	.0	.0	5.5	4.0	5.0	11.0	9.5	10.0
5	.0	.0	.0	.0	.0	.0	5.5	5.0	5.5	10.5	9.5	10.0
6	.0	.0	.0	.0	.0	.0	5.0	5.0	5.0	12.0	9.0	10.5
7	.0	.0	.0	.0	.0	.0	5.5	5.0	5.0	15.0	9.5	12.0
8	.0	.0	.0	.0	.0	.0	5.5	5.0	5.0	16.0	10.0	13.0
9	.0	.0	.0	.0	.0	.0	5.5	5.0	5.5	17.5	11.0	14.5
10	.0	.0	.0	.0	.0	.0	6.5	5.0	6.0	19.0	13.0	16.5
11	.0	.0	.0	.0	.0	.0	8.0	6.5	7.0	19.5	15.5	17.5
12	.0	.0	.0	.5	.0	.0	8.5	7.5	8.0	18.5	16.0	17.0
13	.0	.0	.0	2.0	.0	1.0	8.5	7.5	8.0	19.0	13.5	16.5
14	.0	.0	.0	3.0	.5	1.5	8.0	7.0	7.5	19.5	14.0	17.0
15	.0	.0	.0	4.0	1.0	2.5	8.0	7.5	8.0	19.0	16.5	18.0
16	.0	.0	.0	4.0	1.5	2.5	7.5	7.0	7.5	19.5	14.0	17.0
17	.0	.0	.0	4.0	1.5	2.5	8.0	7.0	7.5	21.5	16.0	19.0
18	.0	.0	.0	5.0	1.5	3.0	10.0	8.0	8.5	21.5	17.5	20.0
19	.0	.0	.0	6.0	2.0	4.0	12.0	9.5	11.0	20.0	16.0	17.5
20	.0	.0	.0	4.5	3.0	3.5	15.0	11.0	13.0	15.5	14.0	14.5
21	.0	.0	.0	4.0	2.5	3.5	16.5	13.0	14.5	16.5	13.5	14.5
22	.0	.0	.0	6.5	2.5	4.5	16.0	14.0	15.0	19.5	14.5	17.0
23	.0	.0	.0	8.0	4.0	6.0	14.0	12.5	13.0	---	---	---
24	.0	.0	.0	8.5	5.0	6.5	13.5	12.0	12.5	---	---	---
25	.0	.0	.0	8.0	6.0	7.0	14.0	10.5	12.0	---	---	---
26	.0	.0	.0	7.5	6.5	7.0	15.0	10.0	12.5	---	---	---
27	.0	.0	.0	6.5	5.5	6.5	15.0	10.5	13.0	---	---	---
28	.0	.0	.0	7.5	6.0	6.5	11.5	9.5	10.5	---	---	---
29	---	---	---	8.5	6.5	7.5	10.5	8.5	9.5	---	---	---
30	---	---	---	8.5	7.5	8.0	9.5	7.5	8.5	---	---	---
31	---	---	---	8.5	7.0	8.0	---	---	---	---	---	---
MONTH	---	---	---	8.5	0.0	3.0	16.5	3.5	8.5	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	---	---	---	24.5	20.5	23.0	19.0	17.0	18.0
2	25.5	22.0	24.0	---	---	---	22.0	18.5	19.5	17.0	15.5	16.5
3	23.5	19.5	21.5	---	---	---	21.5	18.0	19.5	19.0	14.5	17.0
4	19.5	18.5	19.0	---	---	---	25.0	19.0	22.0	20.0	15.0	17.5
5	22.5	17.0	20.0	---	---	---	24.0	22.0	23.0	20.0	16.5	18.5
6	22.5	18.5	20.5	---	---	---	23.0	21.5	22.5	19.5	17.5	18.5
7	20.5	18.0	19.0	---	---	---	23.5	20.5	22.0	19.5	17.5	18.5
8	21.5	18.0	19.5	---	---	---	24.0	20.5	22.5	18.5	17.5	18.0
9	22.0	18.5	20.5	---	---	---	22.5	20.0	21.0	17.5	17.0	17.0
10	21.5	17.0	19.5	28.0	23.0	25.5	20.5	19.0	20.0	18.0	16.5	17.5
11	22.5	17.5	20.0	30.0	24.5	27.5	22.5	17.5	20.0	19.5	17.0	18.0
12	22.0	19.5	20.0	30.5	26.0	28.5	24.0	18.5	21.0	18.5	17.0	18.0
13	22.5	19.5	21.0	29.5	26.0	28.0	25.0	20.0	22.5	17.0	16.5	17.0
14	25.0	19.5	22.0	26.5	20.0	23.5	25.5	21.0	23.5	17.0	16.0	16.5
15	27.0	22.0	24.5	20.0	18.5	19.5	24.5	21.0	23.0	17.0	15.5	16.5
16	28.0	22.5	25.5	20.5	18.0	19.5	24.5	20.5	22.5	17.5	15.5	16.5
17	27.0	23.0	25.5	22.5	17.5	20.0	25.5	21.0	23.5	18.0	16.5	17.5
18	27.5	22.0	25.0	25.0	19.0	22.0	25.0	22.0	24.0	17.5	15.5	16.5
19	27.5	22.5	25.5	26.0	21.5	23.5	24.0	19.5	22.0	15.0	14.0	14.5
20	27.0	23.0	25.0	26.0	23.0	24.5	22.5	19.5	21.0	15.0	13.5	14.0
21	25.0	22.0	23.0	27.5	22.0	25.0	22.0	17.5	20.0	16.5	14.0	15.0
22	22.5	21.5	22.0	29.0	23.5	26.5	20.0	17.5	19.0	17.0	15.0	16.0
23	22.0	20.0	21.5	29.5	24.0	27.0	18.5	16.0	17.5	16.5	15.0	15.5
24	---	---	---	30.0	25.5	28.0	17.0	14.0	15.5	15.5	13.5	15.0
25	---	---	---	29.0	25.5	27.5	17.0	13.0	15.0	14.0	12.5	13.0
26	---	---	---	26.5	23.5	25.0	16.5	13.5	15.0	13.5	11.5	12.5
27	---	---	---	25.5	21.0	23.5	15.5	14.0	14.5	15.5	11.5	13.5
28	---	---	---	25.5	21.0	23.5	13.5	13.0	13.5	16.5	13.0	15.0
29	---	---	---	26.0	20.5	23.5	17.0	13.5	15.0	18.0	14.5	16.0
30	---	---	---	24.5	21.5	22.5	19.5	14.5	17.0	17.0	15.5	16.0
31	---	---	---	25.5	21.0	23.5	19.0	16.5	18.0	---	---	---
MONTH	---	---	---	---	---	---	25.5	13.0	20.0	20.0	11.5	16.5

01428500 DELAWARE RIVER ABOVE LACKAWAXEN RIVER NEAR BARRYVILLE, NY

LOCATION.--Lat 41°30'31", long 74°59'11", Sullivan County, Hydrologic Unit 02040101, on left bank 1.6 mi upstream from Lackawaxen River, and 4.6 mi northwest of Barryville. Water-quality sampling site at discharge station.

DRAINAGE AREA.--2,020 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1940 to current year.

REVISED RECORDS.--WDR NY-82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 600.22 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Subsequent to September 1954, entire flow from 371 mi^2 of drainage area controlled by Pepacton Reservoir (see Reservoirs in Delaware River Basin), and subsequent to October 1963, entire flow from 454 mi^2 of drainage area controlled by Cannonsville Reservoir (see Reservoirs in Delaware River Basin). Part of flow of these reservoirs diverted for New York City municipal supply. Remainder of flow (except for conservation releases and spill) impounded for release during periods of low flow in the lower Delaware River basin, as directed by the Delaware River Master. Telephone gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 130,000 ft^3/s, Aug. 19, 1955, gage height, 26.40 ft, from floodmarks in gage house, from rating curve extended above 55,000 ft^3/s, on basis of slope-area measurement at gage height 23.19 ft; minimum discharge, 122 ft^3/s, Sept. 5, 1953, gage height, 1.11 ft; minimum daily, 126 ft^3/s, Sept. 4, 1953.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 45,800 ft^3/s, Apr. 5, gage height, 14.07 ft; minimum daily, 733 ft^3/s, Sept. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1130	1010	4390	e2300	e1400	e1150	12100	1540	1010	971	1300	1420
2	1080	1090	3580	e2200	e1400	e2800	8620	1420	1060	1090	1410	1300
3	1190	1220	4800	e2100	e1300	e4000	7060	1350	1300	1920	1330	1040
4	3160	1360	5640	e1900	e1250	e3500	13600	1760	1230	1980	1500	832
5	3170	1300	4300	e1750	e1250	e3200	36500	1710	1260	1560	1290	733
6	2070	1480	3510	e1750	e1200	e2800	23100	1570	1180	1320	1090	1060
7	1510	1440	3110	e1700	e1200	e3000	18400	1480	1090	1210	1150	1110
8	1220	1760	3060	e1700	e1150	e5000	15000	1390	882	1430	1230	1500
9	1060	5530	3120	e1600	e1150	e10000	13600	1270	1020	1650	1140	14400
10	947	7980	3700	e1500	e1100	9600	11700	1190	935	1400	1090	8690
11	954	5240	4280	e1450	e1100	7420	9640	1120	798	1280	1130	4280
12	1140	4160	e3500	e1450	e1050	6250	8270	1080	740	1230	1020	2900
13	972	3560	e3100	e1400	e1050	e5000	12700	1040	1100	1370	942	8480
14	885	2870	e2700	e1400	e1000	e3900	14300	997	1060	1850	920	14700
15	1300	2400	2670	e1600	e1000	3530	11400	962	1000	6290	1300	7530
16	1300	2210	2800	e1600	e980	3170	9460	943	825	4050	1370	4780
17	1090	2230	2610	e1600	e960	2820	7950	899	925	2590	1230	3620
18	1100	2590	2560	e1350	e940	2670	7030	897	876	2000	1310	5720
19	1270	2770	2660	e1350	e920	2730	6170	1060	935	1680	1430	9220
20	958	2580	2530	e1350	e900	2890	5220	1160	1130	1490	1430	6520
21	848	11000	2310	e1300	e880	2690	4460	1060	1030	1510	1480	4860
22	879	10700	e2000	e1250	e860	2540	3860	980	919	1410	1440	3870
23	942	6640	e1800	e1200	e840	3010	3360	1100	1130	1240	1570	3250
24	772	5780	e1750	e1200	e1050	3750	2960	1250	2050	1190	1580	2790
25	1140	6320	e2850	e1200	e1150	4670	2670	1380	1450	1240	1620	2420
26	1180	6470	4320	e1200	e1100	6510	2400	1020	1180	1540	1630	2110
27	1260	20000	3810	e1200	e1000	8160	2040	920	1340	1740	1710	1870
28	1240	12700	3340	e1200	e1000	7680	1790	916	1600	1220	1820	1670
29	1100	7940	3010	e1200	---	7050	1750	946	1260	1050	2250	1500
30	1170	5760	2790	e1300	---	6300	1690	878	1050	945	2120	1410
31	940	---	e2500	e1400	---	6530	---	999	---	916	1420	---
TOTAL	38977	148090	99100	46700	30180	144320	278800	36287	33365	52362	43252	125585
MEAN	1257	4936	3197	1506	1078	4655	9293	1171	1112	1689	1395	4186
MAX	3170	20000	5640	2300	1400	10000	36500	1760	2050	6290	2250	14700
MIN	772	1010	1750	1200	840	1150	1690	878	740	916	920	733

CAL YR 1986 TOTAL 1205950 MEAN 3304 MAX 62800 MIN 459
WTR YR 1987 TOTAL 1077020 MEAN 2951 MAX 36500 MIN 733

e Estimated

01428500 DELAWARE RIVER ABOVE LACKAWAXEN RIVER NEAR BARRYVILLE, NY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968 to current year.
CHEMICAL DATA: 1971-73 (a).
NUTRIENT DATA: 1971 (a).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1967 to current year (no winter record for water years 1969-76).

INSTRUMENTATION.--Water-temperature digital recorder since October 1975, provides one-hour-interval punches. Prior to October 1975, water-temperature recorder provided continuous recordings.

REMARKS.--Interruptions of record were due to malfunctions of recording instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum (water years 1968-75, 1980-81, 1983, 1985-87), 32.0°C, Aug. 2, 3, 1975, July 10, 1981, July 12, 1987; minimum (water years 1968, 1977-87), 0.0°C, on many days during winter periods, each year except water years 1980-82.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 32.0°C, July 12; minimum, 0.0°C on many days during winter period.

TEMPERATURE (DEG. C) OF WATER, 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	---	---	---	9.0	7.0	8.0	3.0	2.0	2.5	1.5	.5	1.0
2	---	---	---	8.5	6.5	8.0	2.0	1.5	1.5	.5	.5	.5
3	---	---	---	9.0	6.0	7.0	3.0	1.5	2.0	1.0	.5	.5
4	---	---	---	8.0	6.0	6.5	3.5	3.0	3.0	.5	.5	.5
5	---	---	---	6.0	4.5	5.5	3.0	2.5	2.5	.5	.5	.5
6	---	---	---	5.0	4.5	5.0	2.5	1.5	2.0	.5	.5	.5
7	---	---	---	5.5	4.5	5.0	2.0	1.5	2.0	.5	.5	.5
8	---	---	---	6.0	5.5	6.0	2.5	2.0	2.5	1.0	.5	.5
9	---	---	---	8.0	6.5	7.5	2.0	2.0	2.0	.5	.0	.5
10	---	---	---	8.0	7.0	7.5	2.5	2.0	2.0	.0	.0	.0
11	---	---	---	6.5	4.0	5.0	2.5	2.0	2.0	.5	.0	.5
12	---	---	---	4.5	3.5	4.0	2.5	2.0	2.0	.5	.0	.5
13	---	---	---	4.0	2.5	3.5	2.0	.5	1.0	1.0	.0	.5
14	---	---	---	2.5	1.0	2.0	.5	.5	.5	1.0	.0	.5
15	---	---	---	1.5	.5	1.0	1.0	.5	.5	1.5	.5	1.0
16	---	---	---	2.5	.5	1.5	1.5	.5	1.0	1.0	.0	.5
17	---	---	---	3.0	2.0	2.5	2.5	1.0	1.5	1.0	.0	.5
18	---	---	---	3.5	3.0	3.5	2.5	2.0	2.5	.0	.0	.0
19	---	---	---	3.5	2.0	3.0	2.5	2.0	2.5	.0	.0	.0
20	---	---	---	2.0	1.0	1.5	2.5	2.0	2.5	.0	.0	.0
21	---	---	---	2.0	1.0	1.5	3.0	1.0	2.0	.0	.0	.0
22	---	---	---	3.0	2.0	2.5	2.5	.5	1.5	.0	.0	.0
23	---	---	---	3.0	2.0	2.5	1.5	.5	1.0	.0	.0	.0
24	---	---	---	3.5	3.0	3.5	1.0	.5	1.0	.0	.0	.0
25	---	---	---	4.5	3.5	4.0	2.0	1.0	1.5	.0	.0	.0
26	---	---	---	4.0	4.0	4.0	2.5	2.0	2.5	.0	.0	.0
27	---	---	---	5.5	4.0	5.0	3.0	2.5	3.0	.0	.0	.0
28	---	---	---	5.0	4.5	5.0	2.5	2.5	2.5	.0	.0	.0
29	---	---	---	4.5	4.0	4.0	3.0	2.0	2.5	.0	.0	.0
30	11.5	9.0	10.0	4.0	3.0	3.5	2.0	1.5	2.0	.0	.0	.0
31	10.5	7.0	8.5	---	---	---	2.5	1.0	1.5	.0	.0	.0
MONTH	---	---	---	9.0	0.5	4.5	3.5	0.5	2.0	1.5	0.0	0.5

01428500 DELAWARE RIVER ABOVE LACKAWAXEN RIVER NEAR BARRYVILLE, NY--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	.0	.0	.0	.0	.0	.0	---	---	---	12.5	7.5	10.0
2	.0	.0	.0	.5	.0	.5	---	---	---	13.5	9.5	11.5
3	.0	.0	.0	.5	.0	.5	---	---	---	11.5	10.0	11.0
4	.0	.0	.0	.5	.0	.5	---	---	---	10.5	10.0	10.5
5	.0	.0	.0	1.0	.0	.5	---	---	---	10.5	9.5	10.0
6	.0	.0	.0	1.0	.0	.5	6.0	5.5	6.0	12.5	9.5	10.5
7	.0	.0	.0	1.5	.0	.5	6.0	5.5	6.0	15.0	10.0	12.0
8	.0	.0	.0	1.5	.0	.5	6.0	5.5	6.0	16.0	11.0	13.5
9	.5	.0	.0	.5	.5	.5	6.5	5.5	6.0	17.0	11.5	14.5
10	.5	.0	.0	1.0	.0	.5	7.5	6.0	6.5	19.0	13.5	16.5
11	.5	.0	.0	1.0	.0	.5	9.0	7.0	8.0	20.0	15.5	18.0
12	.0	.0	.0	1.0	.0	.5	9.0	8.0	8.5	19.0	16.0	17.5
13	.0	.0	.0	1.0	.0	.5	9.0	8.0	8.5	19.5	14.5	16.5
14	.0	.0	.0	2.5	.0	1.0	9.0	8.5	9.0	19.5	14.5	17.0
15	.5	.0	.0	3.5	1.5	2.5	9.0	8.5	8.5	20.5	16.5	18.0
16	.5	.0	.0	4.5	2.5	3.0	8.5	8.0	8.0	21.0	15.0	17.5
17	.5	.0	.0	4.0	2.5	3.0	8.5	7.5	8.0	22.5	16.5	19.5
18	.5	.0	.0	5.0	2.5	3.5	9.5	8.5	9.0	23.0	18.0	20.5
19	.5	.0	.0	6.0	3.0	4.5	12.5	9.5	11.0	20.0	17.0	18.5
20	.5	.0	.0	5.0	4.0	4.5	14.5	11.5	13.0	16.5	15.0	16.0
21	.5	.0	.0	4.5	3.5	4.0	16.5	14.0	15.0	17.5	14.0	15.5
22	.5	.0	.0	7.0	4.0	5.0	16.0	15.5	16.0	20.5	15.0	18.0
23	.0	.0	.0	8.0	5.0	6.5	15.5	13.5	14.5	21.5	17.5	19.5
24	.5	.0	.0	8.5	6.5	7.5	13.5	12.5	13.5	22.5	19.0	20.5
25	.5	.0	.0	8.5	7.0	8.0	14.5	12.0	13.0	20.0	18.0	19.0
26	.5	.0	.0	8.5	7.5	8.0	15.0	12.0	13.5	18.5	17.0	18.0
27	.5	.0	.0	8.0	7.0	7.5	15.5	12.0	13.5	17.0	16.0	16.5
28	.5	.0	.0	8.5	7.0	7.5	12.0	11.0	11.5	22.0	16.0	18.5
29	---	---	---	9.0	7.0	8.0	11.5	9.5	10.5	24.5	18.5	21.5
30	---	---	---	9.0	8.0	8.5	10.0	8.5	9.5	27.0	21.5	24.0
31	---	---	---	9.5	8.5	9.0	---	---	---	26.5	23.5	25.0
MONTH	0.5	0.0	0.0	9.5	0.0	3.5	---	---	---	27.0	7.5	16.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	27.0	23.5	25.0	26.0	23.0	24.5	---	---	---	---	---	---
2	26.5	23.0	24.5	24.0	21.5	23.0	---	---	---	---	---	---
3	24.5	21.0	22.5	23.0	21.0	22.0	24.0	21.5	22.5	---	---	---
4	20.5	19.0	20.0	23.5	21.0	22.0	26.0	21.0	23.5	---	---	---
5	23.0	18.0	20.5	26.0	21.0	23.5	24.5	23.0	24.0	---	---	---
6	23.0	18.5	21.0	27.0	23.0	25.0	24.5	22.5	23.5	---	---	---
7	20.0	18.5	19.0	24.5	23.0	23.5	25.0	22.0	23.5	---	---	---
8	22.0	18.5	20.0	---	---	---	26.0	22.5	24.0	---	---	---
9	22.5	19.0	20.5	27.5	24.0	25.5	23.5	22.0	22.5	---	---	---
10	23.0	18.0	20.0	28.0	25.0	26.5	22.5	20.5	22.0	---	---	---
11	23.0	17.5	20.0	31.0	26.0	28.5	24.0	19.5	21.5	---	---	---
12	20.5	19.5	20.0	32.0	27.5	29.5	25.5	20.0	22.5	---	---	---
13	23.5	19.5	21.0	31.0	28.0	29.5	26.0	21.0	23.5	---	---	---
14	24.5	19.5	22.0	29.0	26.0	28.0	27.0	22.0	24.0	---	---	---
15	27.5	21.5	24.5	25.5	20.5	22.0	27.0	23.0	25.0	---	---	---
16	28.0	22.5	25.0	21.0	19.5	20.5	27.5	23.5	25.5	---	---	---
17	28.0	23.0	25.5	23.0	20.0	21.5	28.0	24.0	26.0	---	---	---
18	28.0	22.5	25.0	25.5	21.0	23.0	28.0	24.5	26.0	---	---	---
19	28.5	23.5	26.0	27.0	23.0	25.0	27.0	23.0	25.0	---	---	---
20	28.5	24.5	26.5	28.0	24.5	26.0	25.5	22.5	24.0	---	---	---
21	26.0	24.0	25.0	29.0	24.5	26.5	25.0	20.5	23.0	---	---	---
22	24.0	23.0	23.5	30.0	25.5	28.0	23.0	20.5	22.0	---	---	---
23	24.5	22.5	23.0	31.0	26.0	28.5	21.5	19.0	20.5	---	---	---
24	24.5	21.0	22.5	31.0	27.0	29.0	20.0	16.5	18.5	---	---	---
25	26.5	21.5	24.0	30.0	27.0	29.0	19.0	15.5	17.0	---	---	---
26	24.0	22.0	23.0	29.0	26.5	27.5	18.5	15.5	17.0	---	---	---
27	24.5	21.5	22.5	28.0	25.0	26.5	17.0	16.0	16.5	---	---	---
28	23.5	21.0	22.0	27.5	23.0	25.5	---	---	---	---	---	---
29	24.5	19.5	22.0	27.5	22.5	25.0	---	---	---	---	---	---
30	26.5	21.5	24.0	25.5	23.0	24.0	---	---	---	---	---	---
31	---	---	---	28.0	23.0	25.0	---	---	---	---	---	---
MONTH	28.5	17.5	22.5	---	---	---	---	---	---	---	---	---

01432160 DELAWARE RIVER AT BARRYVILLE, NY

LOCATION.--Lat 41°28'31", long 74°54'46", Pike County, Pa., Hydrologic Unit 02040104, at Shohola-Barryville Bridge at Barryville, just upstream from Halfway Brook, and 1,000 ft upstream from Shohola Brook.

DRAINAGE AREA.--2,659 mi^2.

PERIOD OF RECORD.--Water years 1958, 1968 to current year.
CHEMICAL DATA: 1958 (d), 1969 (a), 1973 (b), 1974 (d), 1975 (b).
NUTRIENT DATA: 1973 (b), 1974 (d), 1975 (b).
BIOLOGICAL DATA:
Bacteria.--1973 (b), 1974 (d), 1975 (b).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1967 to September 1973, March 1975 to current year.

INSTRUMENTATION.--Water-temperature digital recorder since March 1975, provides one-hour-interval punches. Prior to September 1973, water-temperature recorder provided continuous recordings.

REMARKS.--Unpublished records of daily temperatures for May to September 1964-66 are available in files of the Geological Survey. Temperature probe may be influenced by solar radiation during periods of low flow. Interruption of record was due to malfunction of recording instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum (water years 1968-73, 1976-78, 1980-82, 1986-87), 32.0°C, July 20, 21, 1980; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum recorded, 30.5°C, July 12; minimum, 0.0°C on many days during winter period.

TEMPERATURE (DEG. C) OF WATER, 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	19.0	18.0	18.5	9.0	8.0	8.5	3.5	2.5	3.0	1.5	1.0	1.5
2	19.0	18.0	18.5	9.0	8.5	9.0	3.0	2.0	2.5	1.0	.5	1.0
3	18.5	17.0	17.5	8.5	7.5	8.0	3.5	2.5	3.0	1.0	.5	.5
4	17.0	17.0	17.0	7.5	7.5	7.5	3.5	3.0	3.0	1.0	.5	.5
5	17.0	16.0	16.5	7.5	6.0	6.5	3.0	2.5	3.0	.5	.5	.5
6	16.0	14.5	15.0	6.0	5.5	6.0	3.0	2.0	2.5	.5	.5	.5
7	14.5	13.0	13.5	6.0	6.0	6.0	2.0	2.0	2.0	1.0	.5	.5
8	13.5	12.5	13.0	7.0	6.0	6.5	2.5	2.0	2.5	1.0	.5	.5
9	14.0	13.0	13.5	8.0	7.0	7.5	2.5	2.0	2.5	1.0	.5	.5
10	14.0	12.5	13.0	8.0	7.5	8.0	3.0	2.5	2.5	1.0	.5	.5
11	12.5	11.5	12.0	7.5	5.5	6.5	2.5	2.5	2.5	.5	.5	.5
12	12.5	11.5	12.0	5.5	5.0	5.0	2.5	2.0	2.5	.5	.5	.5
13	13.5	12.0	12.5	5.0	4.0	5.0	2.0	1.0	1.5	1.0	1.0	1.0
14	14.0	13.5	14.0	4.0	3.0	3.0	1.0	.5	1.0	1.0	.5	1.0
15	14.0	12.5	13.0	2.5	2.0	2.0	1.0	.5	.5	1.5	1.0	1.5
16	12.5	11.5	12.0	3.0	2.0	2.5	1.5	1.0	1.5	1.5	1.5	1.5
17	12.0	11.0	11.5	3.5	3.0	3.0	1.5	1.5	1.5	1.0	.5	.5
18	11.5	11.0	11.0	4.0	3.5	4.0	2.0	1.5	2.0	.5	.5	.5
19	10.5	10.0	10.5	4.0	3.0	3.5	2.0	2.0	2.0	.5	.0	.5
20	11.0	9.5	10.0	3.0	2.0	2.5	2.0	2.0	2.0	.0	.0	.0
21	11.5	10.5	11.0	2.0	2.0	2.0	2.0	2.0	2.0	.5	.0	.5
22	12.5	11.0	11.5	2.5	2.0	2.5	1.5	1.0	1.0	.5	.0	.5
23	12.0	11.0	11.5	3.0	2.5	2.5	1.0	.5	.5	.0	.0	.0
24	12.5	12.0	12.0	3.5	3.0	3.0	1.0	.5	1.0	.0	.0	.0
25	12.0	10.5	11.0	4.0	3.5	3.5	1.5	1.0	1.5	.0	.0	.0
26	10.5	10.5	10.5	4.0	4.0	4.0	2.0	1.5	2.0	.0	.0	.0
27	10.5	10.0	10.5	5.0	4.0	4.5	2.0	2.0	2.0	.0	.0	.0
28	11.0	10.0	10.5	5.0	4.0	4.5	2.0	2.0	2.0	.0	.0	.0
29	10.5	10.0	10.5	4.5	3.5	4.0	2.0	2.0	2.0	.0	.0	.0
30	10.5	10.0	10.5	4.0	3.5	4.0	2.0	1.5	2.0	.0	.0	.0
31	10.0	8.5	9.5	---	---	---	1.5	1.5	1.5	.0	.0	.0
MONTH	19.0	8.5	12.5	9.0	2.0	5.0	3.5	0.5	2.0	1.5	0.0	0.5

01432160 DELAWARE RIVER AT BARRYVILLE, NY--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	.0	.0	.0	.5	.5	.5	8.0	6.5	7.5	---	---	---
2	1.0	.0	.5	.5	.5	.5	6.5	5.0	5.5	---	---	---
3	1.0	.5	.5	.5	.5	.5	5.0	4.5	5.0	---	---	---
4	.5	.5	.5	.5	.5	.5	5.5	4.5	5.0	---	---	---
5	.5	.0	.5	.5	.5	.5	6.0	5.5	6.0	---	---	---
6	.0	.0	.0	.5	.0	.5	6.0	6.0	6.0	---	---	---
7	.5	.0	.5	1.0	.5	1.0	6.0	6.0	6.0	---	---	---
8	.5	.0	.5	1.0	1.0	1.0	6.0	5.5	6.0	---	---	---
9	.0	.0	.0	1.0	1.0	1.0	6.5	5.5	6.0	---	---	---
10	.0	.0	.0	1.0	.5	.5	7.5	6.0	6.5	---	---	---
11	.5	.0	.5	1.0	.5	.5	8.5	6.5	7.5	---	---	---
12	.5	.5	.5	1.0	.5	.5	8.5	8.0	8.5	---	---	---
13	.5	.5	.5	1.5	.5	1.0	8.5	8.0	8.5	---	---	---
14	.5	.5	.5	1.5	1.0	1.0	9.0	8.0	8.5	---	---	---
15	.5	.5	.5	2.5	1.5	1.5	9.0	8.5	8.5	---	---	---
16	.5	.5	.5	2.5	2.0	2.5	8.5	8.0	8.0	---	---	---
17	.5	.5	.5	3.0	2.0	2.5	---	---	---	---	---	---
18	.0	.0	.0	3.5	2.5	3.0	---	---	---	---	---	---
19	.0	.0	.0	4.0	3.0	3.5	---	---	---	---	---	---
20	.5	.0	.5	4.0	3.5	3.5	---	---	---	---	---	---
21	1.0	.5	.5	3.5	3.0	3.5	---	---	---	---	---	---
22	.5	.5	.5	5.0	3.5	4.0	---	---	---	---	---	---
23	.5	.5	.5	5.5	4.5	5.0	---	---	---	---	---	---
24	.5	.5	.5	6.0	5.0	5.5	---	---	---	---	---	---
25	.5	.5	.5	6.5	5.5	6.0	---	---	---	---	---	---
26	.5	.5	.5	7.0	6.5	6.5	---	---	---	---	---	---
27	.5	.5	.5	6.5	6.5	6.5	---	---	---	---	---	---
28	.5	.5	.5	7.0	6.5	6.5	---	---	---	---	---	---
29	---	---	---	8.0	7.0	7.5	---	---	---	---	---	---
30	---	---	---	8.0	8.0	8.0	---	---	---	---	---	---
31	---	---	---	8.5	8.0	8.0	---	---	---	---	---	---
MONTH	1.0	0.0	0.5	8.5	0.0	3.0	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	---	---	---	25.5	20.5	23.5	19.0	18.0	19.0
2	---	---	---	22.0	19.5	20.5	24.5	22.5	23.0	17.5	16.5	17.0
3	---	---	---	23.0	19.5	21.5	23.5	21.5	22.5	19.0	16.0	17.5
4	---	---	---	23.5	21.0	22.5	25.0	21.0	22.5	20.5	16.5	18.0
5	---	---	---	25.5	21.5	23.5	23.5	22.0	23.0	21.0	16.5	18.5
6	---	---	---	26.0	23.0	24.5	23.5	21.0	22.0	20.0	17.5	19.0
7	---	---	---	23.0	21.0	22.5	24.0	20.5	22.0	21.0	19.0	20.0
8	---	---	---	25.5	20.5	23.0	25.0	21.0	23.0	20.5	18.5	20.0
9	---	---	---	26.5	22.5	24.5	24.0	21.5	23.0	18.5	18.0	18.5
10	---	---	---	27.0	23.0	25.0	22.0	20.0	21.5	19.0	18.0	18.5
11	---	---	---	28.5	23.5	26.5	23.0	19.0	21.0	19.5	18.0	19.0
12	---	---	---	30.5	27.5	29.0	25.0	19.5	22.0	19.0	18.5	18.5
13	---	---	---	30.0	26.5	28.5	26.0	19.5	22.5	18.5	17.5	18.0
14	---	---	---	27.5	24.0	26.5	26.5	20.0	23.0	18.0	17.5	18.0
15	---	---	---	23.5	19.5	21.5	25.5	21.5	23.5	18.0	17.0	17.5
16	---	---	---	21.0	19.0	20.0	26.5	23.5	25.0	18.5	17.5	18.0
17	---	---	---	22.0	18.5	20.5	27.5	24.5	26.0	19.0	18.0	18.5
18	---	---	---	24.5	19.5	22.0	27.0	23.0	25.0	18.5	17.0	18.0
19	---	---	---	26.0	23.0	24.5	26.0	23.5	25.0	17.0	15.5	16.0
20	---	---	---	26.0	23.5	25.0	25.0	23.5	24.0	16.0	15.5	15.5
21	---	---	---	27.0	22.5	24.5	24.0	21.5	23.0	17.0	16.0	16.5
22	---	---	---	27.5	23.0	25.0	23.0	21.5	22.0	17.5	16.5	17.0
23	---	---	---	28.5	23.5	25.5	22.0	19.5	20.5	17.5	16.5	17.0
24	---	---	---	28.5	23.5	25.5	19.5	17.5	19.0	17.0	16.0	16.5
25	---	---	---	28.5	24.0	26.0	18.5	16.5	17.5	16.0	15.0	16.0
26	---	---	---	27.5	23.5	25.5	18.5	16.5	17.5	16.0	14.5	15.5
27	---	---	---	26.5	24.0	25.5	18.0	16.5	17.0	17.0	14.5	15.5
28	---	---	---	25.5	22.0	23.5	16.5	15.5	16.0	17.5	15.5	16.5
29	---	---	---	25.5	20.5	23.0	16.5	15.0	16.0	18.0	16.5	17.5
30	---	---	---	23.5	20.0	22.0	19.0	15.5	17.5	18.0	17.5	17.5
31	---	---	---	26.5	20.5	23.0	19.5	17.0	18.5	---	---	---
MONTH	---	---	---	---	---	---	27.5	15.0	21.5	21.0	14.5	17.5

01432805 DELAWARE RIVER AT POND EDDY, NY

LOCATION.--Lat 41°26'20", long 74°49'11", Pike County, Pa., Hydrologic Unit 02040104, at interstate bridge at Pond Eddy, 450 ft downstream from Mill Brook, and 4.5 mi upstream from Mongaup River.

DRAINAGE AREA.--2,820 mi².

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1973 to current year.

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

REMARKS.--Temperature probe may be influenced by solar radiation during periods of low flow. Interruptions of record were due to malfunctions of recording instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum (water years 1976, 1978, 1980-81, 1983-84, 1986) 31.0°C, July 21, 1980; minimum (water years 1974, 1977-78, 1980, 1983-87), 0.0°C on many days during winter periods, except 1978, 1980, and 1985.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum recorded, 27.5°C, June 1, July 27, but may have been higher during period of instrument malfunction, July 10-15, Aug. 17-20; minimum, 0.0°C on many days during winter period.

TEMPERATURE, (DEG. C) OF WATER, 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	20.0	18.5	19.5	8.5	7.5	8.0	3.0	1.5	2.0	1.0	.5	.5
2	19.5	18.5	19.0	8.0	8.0	8.0	2.0	1.0	1.5	.5	.0	.5
3	19.0	17.5	18.5	8.0	7.0	7.0	3.0	1.5	2.0	.5	.0	.0
4	17.5	17.0	17.5	7.0	6.5	7.0	3.0	2.5	3.0	.5	.0	.0
5	17.0	16.0	16.5	6.5	5.0	5.5	2.5	2.5	2.5	.0	.0	.0
6	15.5	14.0	15.0	5.0	4.5	5.0	2.5	1.5	1.5	.0	.0	.0
7	13.5	12.5	13.5	5.0	5.0	5.0	2.0	1.0	1.5	.0	.0	.0
8	14.0	12.5	13.0	6.0	5.0	5.5	2.5	2.0	2.0	.0	.0	.0
9	14.5	12.5	13.5	7.0	6.0	6.5	2.5	1.5	2.0	.0	.0	.0
10	14.0	12.5	13.0	7.0	6.5	7.0	2.5	2.0	2.0	.0	.0	.0
11	12.5	11.0	12.0	6.5	4.0	5.5	2.5	1.5	2.0	.0	.0	.0
12	12.5	11.5	12.0	4.0	3.5	4.0	2.0	2.0	2.0	.0	.0	.0
13	12.5	12.0	12.5	4.0	2.5	3.5	2.0	.0	1.0	.5	.0	.0
14	14.5	12.5	13.5	2.5	1.5	2.0	.5	.0	.0	.0	.0	.0
15	13.5	12.0	13.0	1.5	.5	1.0	.5	.0	.0	1.0	.5	1.0
16	12.0	11.0	11.5	1.5	1.0	1.5	1.5	1.0	1.0	1.5	.5	1.0
17	11.5	10.5	11.0	3.0	2.0	2.5	2.0	1.5	1.5	.0	.0	.0
18	11.5	10.0	10.5	3.5	3.0	3.0	2.0	2.0	2.0	.0	.0	.0
19	10.5	9.5	10.0	3.0	2.0	2.5	2.5	2.0	2.0	.0	.0	.0
20	10.5	9.0	9.5	2.0	1.0	1.5	2.5	2.0	2.0	.0	.0	.0
21	11.5	9.5	10.0	1.5	1.0	1.5	2.0	1.5	2.0	.0	.0	.0
22	12.0	10.5	11.0	2.0	1.0	1.5	1.5	.5	1.0	.0	.0	.0
23	12.0	11.0	11.5	2.0	1.5	2.0	.5	.0	.5	.0	.0	.0
24	12.0	11.0	11.5	3.0	2.0	2.5	.5	.5	.5	.0	.0	.0
25	11.5	10.5	11.0	3.5	3.0	3.0	1.5	1.0	1.5	.0	.0	.0
26	10.5	10.0	10.0	3.5	3.5	3.5	2.0	1.5	2.0	.0	.0	.0
27	10.0	9.5	9.5	4.5	3.5	4.0	2.5	2.0	2.0	.0	.0	.0
28	10.0	9.5	10.0	4.5	4.0	4.0	2.5	2.0	2.0	.0	.0	.0
29	10.5	9.5	10.0	4.0	3.5	3.5	2.0	1.5	2.0	.0	.0	.0
30	10.0	9.5	10.0	3.5	3.0	3.5	1.5	1.0	1.5	.0	.0	.0
31	9.5	8.5	9.0	---	---	---	1.5	1.0	1.5	.0	.0	.0
MONTH	20.0	8.5	12.5	8.5	0.5	4.0	3.0	0.0	1.5	1.5	0.0	0.0

DELAWARE RIVER BASIN

01432805 DELAWARE RIVER AT POND EDDY, NY--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	.0	.0	.0	.0	.0	.0	8.5	6.0	7.0	11.5	8.5	10.0
2	.0	.0	.0	.0	.0	.0	6.0	4.5	5.0	12.5	10.5	11.5
3	.0	.0	.0	.0	.0	.0	5.0	4.0	4.5	11.5	10.5	11.5
4	.0	.0	.0	.0	.0	.0	6.0	4.5	5.5	10.5	10.0	10.5
5	.0	.0	.0	.0	.0	.0	6.5	6.0	6.0	10.0	9.5	10.0
6	.0	.0	.0	.0	.0	.0	6.0	5.5	6.0	11.5	10.0	10.5
7	.0	.0	.0	1.0	.0	.5	6.0	6.0	6.0	13.0	10.5	12.0
8	.0	.0	.0	1.5	.0	.5	6.5	6.0	6.0	14.5	12.0	13.5
9	.0	.0	.0	.5	.0	.5	6.5	5.5	6.0	15.5	13.0	14.0
10	.0	.0	.0	.5	.0	.0	8.0	6.0	7.0	17.5	14.0	15.5
11	.0	.0	.0	.5	.0	.0	9.0	7.0	8.0	19.5	16.5	17.5
12	.0	.0	.0	.5	.0	.0	9.5	8.5	9.0	19.0	17.5	18.0
13	.0	.0	.0	1.0	.0	.5	9.0	8.5	9.0	18.5	15.5	17.0
14	.0	.0	.0	1.5	.0	.5	9.5	8.5	9.0	19.0	15.5	17.0
15	.0	.0	.0	2.5	.5	2.0	9.5	8.5	9.0	19.0	17.0	18.0
16	.0	.0	.0	3.0	1.5	2.5	9.0	8.0	8.5	19.5	16.0	17.5
17	.0	.0	.0	3.0	1.5	2.5	8.5	8.0	8.0	21.0	16.5	18.5
18	.0	.0	.0	4.0	1.5	3.0	9.5	8.5	9.0	21.0	18.5	20.0
19	.0	.0	.0	4.5	2.5	3.5	12.0	9.5	10.5	19.5	17.5	18.5
20	.0	.0	.0	4.5	3.0	3.5	13.5	11.5	12.0	17.5	15.5	16.5
21	.0	.0	.0	3.5	3.0	3.5	16.5	13.5	15.0	17.0	15.0	15.5
22	.0	.0	.0	5.5	3.5	4.5	16.5	15.5	16.0	20.0	16.0	17.5
23	.0	.0	.0	6.5	4.5	6.0	15.5	14.5	15.0	21.0	18.5	19.5
24	.0	.0	.0	7.5	5.0	6.5	14.5	13.5	14.0	21.5	19.5	20.5
25	.0	.0	.0	8.0	6.0	7.0	14.0	12.0	13.5	20.5	18.5	19.5
26	.0	.0	.0	8.5	7.0	7.5	14.5	12.0	13.5	18.5	17.5	18.0
27	.0	.0	.0	7.5	6.5	7.0	14.0	12.5	13.5	17.5	16.0	17.0
28	.0	.0	.0	8.0	6.5	7.5	13.0	11.0	12.0	20.0	15.5	17.5
29	---	---	---	9.0	7.5	8.0	11.0	10.5	11.0	23.5	19.0	21.0
30	---	---	---	9.0	8.5	8.5	10.5	10.0	10.5	23.5	19.5	21.5
31	---	---	---	9.0	8.5	9.0	---	---	---	25.5	22.5	24.0
MONTH	0.0	0.0	0.0	9.0	0.0	3.0	16.5	4.0	9.5	25.5	8.5	16.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	27.5	24.0	25.5	25.0	22.5	23.5	24.0	22.0	23.0	19.5	18.5	19.0
2	25.0	21.5	23.0	23.5	20.5	21.5	23.5	22.5	23.0	18.5	17.5	18.0
3	23.5	20.5	21.0	22.5	19.5	21.0	24.5	22.5	23.0	22.0	16.5	18.0
4	20.5	18.5	19.0	23.0	21.5	22.5	24.5	22.0	23.0	---	---	---
5	21.0	17.0	19.0	24.5	22.0	23.0	24.0	23.0	23.5	20.5	17.5	19.0
6	21.0	18.0	19.5	26.0	23.5	24.5	23.0	22.0	22.5	20.5	18.0	19.0
7	20.0	19.0	19.5	24.5	22.0	23.0	---	---	---	20.5	19.0	20.0
8	22.0	18.5	20.0	24.5	21.0	23.0	24.0	22.0	23.5	---	---	---
9	21.0	19.0	20.0	25.5	23.0	24.5	23.5	22.5	23.0	20.5	18.0	19.0
10	21.0	18.0	19.5	---	---	---	22.5	21.5	22.0	---	---	---
11	21.0	17.5	19.0	---	---	---	23.5	20.5	22.0	---	---	---
12	20.0	19.0	19.5	---	---	---	24.0	20.5	22.0	---	---	---
13	21.5	19.0	20.0	---	---	---	24.0	21.0	22.5	19.0	17.5	18.0
14	23.5	20.5	22.0	---	---	---	25.0	22.0	23.0	18.5	17.0	18.0
15	25.5	22.0	23.5	---	---	---	25.0	22.5	24.0	18.0	17.0	17.5
16	24.0	20.5	22.5	20.5	19.5	20.0	27.0	23.5	25.0	19.0	17.5	18.0
17	24.0	21.0	22.5	22.0	19.0	20.0	---	---	---	19.0	18.0	18.5
18	24.0	20.5	22.5	23.5	20.0	21.5	---	---	---	19.0	17.0	18.5
19	24.5	21.0	23.0	25.5	23.0	24.0	---	---	---	17.0	15.5	16.0
20	26.0	23.0	24.5	26.0	24.5	25.5	---	---	---	15.5	15.0	15.5
21	25.5	24.5	25.0	26.0	23.0	25.0	25.0	22.5	23.5	16.5	15.5	16.0
22	24.0	23.5	24.0	27.0	23.5	25.0	23.5	22.5	23.0	17.5	16.0	16.5
23	23.5	22.5	22.5	27.0	24.0	25.5	22.5	20.5	21.5	17.5	16.0	17.0
24	24.0	20.5	22.5	27.0	24.5	26.0	21.0	19.0	20.0	16.5	16.0	16.5
25	25.0	22.0	23.5	27.0	24.5	25.5	19.5	17.5	18.5	16.0	15.0	15.5
26	24.0	21.5	22.5	26.5	24.5	25.5	19.0	17.5	18.0	15.5	14.0	15.0
27	22.5	20.5	21.5	27.5	25.5	26.0	18.5	17.0	17.5	16.0	14.5	15.5
28	23.5	21.5	22.0	25.5	23.0	24.0	17.0	16.0	16.5	17.0	15.5	16.5
29	24.0	21.0	22.5	24.5	22.0	23.0	16.5	15.5	16.0	18.0	16.5	17.0
30	---	---	---	24.0	21.5	22.5	18.0	16.0	17.0	18.0	17.5	17.5
31	---	---	---	24.0	21.5	23.0	19.5	17.5	18.5	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

DELAWARE RIVER BASIN

01433500 MONGAUP RIVER NEAR MONGAUP, NY

LOCATION.--Lat 41°27'41", long 74°45'33", Sullivan County, Hydrologic Unit 02040104, on right bank 300 ft downstream from Rio hydroelectric plant of Orange and Rockland Utilities, Inc., 0.5 mi downstream from Bush Kill, and 2.8 mi upstream from mouth and Mongaup.

DRAINAGE AREA.--200 mi^2.

PERIOD OF RECORD.--August 1939 to current year.

REVISED RECORDS.--WDR NY-71-1: 1970. WDR NY-81-1: 1980. WDR NY-82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 625.05 ft Orange and Rockland Utilities, Inc. datum. Prior to July 6, 1956, water-stage recorders at sites 25 ft upstream on Rio Tailrace and 200 ft upstream on natural channel, at datum 4.0 ft higher.

REMARKS.--Records good above 80 ft^3/s and fair below. Entire flow regulated by Rio Hydroelectric plant except for runoff from about 7 mi^2 of drainage area downstream from Rio Dam of Orange and Rockland Utilities, Inc., and during periods of spill from Rio Reservoir. Flow also regulated by storage in Cliff Lake, Swinging Bridge, and Toronto Reservoirs (see Reservoirs in Delaware River Basin) and small reservoirs upstream from station.

AVERAGE DISCHARGE.--48 years, 344 ft^3/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,100 ft^3/s, Aug. 19, 1955, gage height, 15.22 ft, present datum; minimum daily, 6 ft^3/s, Oct. 1, 1939.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,070 ft^3/s, Apr. 5, gage height, 7.65 ft; minimum daily, 14 ft^3/s, Feb. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	235	135	617	381	222	22	675	25	183	260	17	114
2	207	50	665	453	237	270	733	25	585	23	16	100
3	186	94	778	416	342	359	771	26	494	20	21	16
4	133	176	768	275	343	356	1360	99	116	18	235	16
5	75	235	729	354	389	223	4090	408	182	18	372	16
6	143	249	650	396	351	119	3360	375	21	18	309	16
7	242	228	619	503	350	365	1860	404	21	456	164	16
8	226	146	577	344	183	417	1540	352	19	460	19	19
9	263	105	606	291	252	717	1030	24	134	437	317	270
10	256	227	632	281	227	738	867	22	359	587	267	389
11	139	330	633	198	142	700	812	311	172	321	373	451
12	53	461	617	231	138	560	660	27	19	18	17	418
13	40	459	600	328	190	362	932	24	308	462	87	484
14	165	286	590	395	151	379	1930	23	19	381	17	803
15	431	146	577	373	67	25	1470	25	390	345	17	836
16	451	70	541	440	55	284	1020	25	420	30	17	808
17	318	161	e282	414	115	393	771	43	202	20	459	826
18	146	437	328	364	122	391	743	329	324	298	150	838
19	50	444	442	442	84	390	716	87	410	392	17	838
20	130	458	374	428	58	391	719	162	690	398	16	834
21	289	644	269	412	27	390	714	210	151	370	16	629
22	448	671	230	433	37	390	713	513	257	262	16	529
23	432	683	386	419	47	267	711	24	100	422	16	643
24	404	670	346	407	169	380	572	21	17	464	16	608
25	174	686	298	352	333	285	359	22	161	438	16	600
26	60	700	281	395	195	282	462	286	18	77	18	593
27	271	848	380	395	218	198	577	216	19	16	19	563
28	429	1520	238	418	14	399	260	316	18	17	76	586
29	206	1340	239	414	---	392	185	428	19	16	19	583
30	190	697	576	436	---	239	26	422	300	16	16	710
31	203	---	557	405	---	401	---	168	---	23	16	---
TOTAL	6995	13356	15425	11793	5058	11084	30638	5442	6128	7083	3151	14152
MEAN	226	445	498	380	181	358	1021	176	204	228	102	472
MAX	451	1520	778	503	389	738	4090	513	690	587	459	838
MIN	40	50	230	198	14	22	26	21	17	16	16	16

CAL YR 1986 TOTAL 158037 MEAN 433 MAX 2180 MIN 40
WTR YR 1987 TOTAL 130305 MEAN 357 MAX 4090 MIN 14

e Estimated

DELAWARE RIVER BASIN

01434000 DELAWARE RIVER AT PORT JERVIS, NY

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

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

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1031: 1905-36. WDR NY-71-1: 1970. WDR NY-82-1: Drainage area. WDR NY-86-1: 1979-80.

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

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

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 61,200 ft^3/s, Apr. 5, gage height, 12.36 ft; minimum, 965 ft^3/s, Sept. 6, gage height, 1.89 ft; minimum daily, 1,070 ft^3/s, Sept. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2050	1290	7730	5140	3170	e1600	14700	2400	1760	2090	2040	2160
2	1620	1320	6260	5050	2780	3450	12400	2220	2630	1980	1550	2290
3	1760	1390	8440	5010	3110	5980	10500	2080	3070	2420	1740	1730
4	3380	1640	10600	4380	3130	6060	17900	3370	2640	2760	2650	1320
5	4600	1660	8950	4260	2930	4980	51800	3610	2660	2130	2550	1070
6	3250	1930	6520	4530	2640	4360	35400	3230	2260	1790	2350	1120
7	2540	2080	5480	4170	2350	4830	27800	2990	1560	2310	2130	1350
8	1960	2210	5380	4000	2080	7150	23000	2740	1460	2610	1950	1730
9	1680	5410	5890	3690	2260	15200	19600	2210	2100	3180	1740	18300
10	1670	10800	6550	3090	3030	14700	16400	2030	2310	3000	1620	16200
11	1470	7430	7720	2790	2620	11700	14000	2100	2050	2420	2160	8740
12	1310	6000	7130	3250	2500	10100	12200	1850	1430	1600	1790	6270
13	1340	5150	6360	3650	e2600	8570	15500	1690	1640	1950	1710	11800
14	1570	4200	5160	3430	e2500	6860	19400	1600	1690	3050	1560	24200
15	2290	3370	4750	3540	e1500	5200	15900	1540	2210	8360	1750	15300
16	2450	2960	5100	4140	e1700	5130	14000	1480	2370	7070	1560	10600
17	2050	2940	4550	e3600	e1950	5240	12300	1410	2080	4560	1850	8220
18	1670	3710	3850	e2900	e2600	4940	11400	1630	2180	3460	2370	9800
19	1510	4100	5130	e2900	e2700	4960	10300	1560	2210	2620	1590	18200
20	1550	4080	4660	e3700	e2700	5280	8910	1860	2140	2510	1550	14100
21	1800	12300	3630	e3500	e2200	4710	6700	1790	1550	3070	1670	11000
22	1730	16700	3270	e3600	e1300	4070	5930	1980	1510	3040	1530	8830
23	1560	10700	3560	e3000	e1300	4740	5270	1690	1540	2900	1660	7380
24	2020	8720	3790	e3500	e1400	6140	4700	1980	2550	2780	1740	6540
25	1560	10200	5110	e3200	e1550	7020	4260	2510	2450	2790	1770	5860
26	1530	9460	8020	e3800	e1650	8600	4070	2140	1820	2340	1870	5550
27	1650	24000	7210	e4200	e1500	10600	3670	1940	1770	2480	1980	5160
28	1990	19500	5570	e4400	e1400	9920	3020	2030	1840	2430	2380	4570
29	1750	13300	5390	e4300	---	8870	2780	2140	1810	2160	2670	4200
30	1550	9750	6060	e4050	---	7840	2700	2370	1980	2010	3410	4250
31	1460	---	5670	e3500	---	8360	---	1550	---	1950	2470	---
TOTAL	60320	208300	183490	118270	63150	217160	406510	65720	61270	89820	61360	237840
MEAN	1946	6943	5919	3815	2255	7005	13550	2120	2042	2897	1979	7928
MAX	4600	24000	10600	5140	3170	15200	51800	3610	3070	8360	3410	24200
MIN	1310	1290	3270	2790	1300	1600	2700	1410	1430	1600	1530	1070

CAL YR 1986 TOTAL 1980380 MEAN 5426 MAX 76300 MIN 1240
WTR YR 1987 TOTAL 1773210 MEAN 4858 MAX 51800 MIN 1070

e Estimated

DELAWARE RIVER BASIN

01434000 DELAWARE RIVER AT PORT JERVIS, NY--Continued

WATER-QUALITY RECORDS

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

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

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

REMARKS.--Interruptions of record Apr. 15, Apr. 22 to Sept. 30, were due to malfunctions of recording instrument or probe.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum (water years 1957-59, 1973-81, 1983-84), 30.0°C, July 13, 1981; minimum (water years 1958-60, 1973, 1975-87), 0.0°C, on many days during winter periods, except 1984.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Minimum, 0.0°C, on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM DIS-SOLVED (UG/L AS CD)
MAY												
07...	1345	3200	71	7.9	15.0	11.7	20	6.1	1.2	42	<10	--
28...	1530	1810	79	7.8	24.0	9.7	24	7.6	1.3	53	<10	--
JUN												
30...	1100	1390	82	7.9	25.0	9.4	25	7.5	1.5	49	<10	--
SEP												
01...	0915	1730	--	7.4	17.5	9.2	27	8.4	1.5	59	<10	1

DATE	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (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)	NICKEL, DIS-SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)
MAY											
07...	10	--	90	16	--	20	<0.10	<1	--	<10	--
28...	<10	--	70	<5	--	30	<0.10	<1	--	<10	--
JUN											
30...	<10	--	80	<5	--	30	<0.10	<1	--	<10	--
SEP											
01...	30	2	90	<5	<5	20	<0.10	4	2	10	10

DELAWARE RIVER BASIN

01434000 DELAWARE RIVER AT PORT JERVIS, NY--Continued

TEMPERATURE (DEG. C) OF WATER, 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	21.0	19.5	20.5	10.0	8.5	9.0	3.0	2.0	2.5	1.5	1.0	1.0
2	20.5	19.5	20.0	9.5	8.0	9.0	2.5	2.0	2.0	1.5	.5	1.0
3	19.5	18.0	18.5	8.5	7.0	8.0	3.5	2.0	3.0	1.0	.5	.5
4	19.5	18.0	18.5	8.0	7.0	7.5	3.5	2.5	3.0	.5	.0	.5
5	18.0	16.0	17.0	7.5	5.5	6.0	3.0	2.0	2.5	.5	.0	.0
6	16.0	13.5	15.0	6.5	5.5	6.0	2.5	1.5	2.0	.5	.0	.0
7	14.0	13.0	13.5	6.5	6.0	6.5	2.0	1.5	2.0	1.0	.0	.5
8	14.5	12.0	13.5	7.5	6.5	7.0	3.0	2.0	2.5	1.0	.5	.5
9	15.0	13.5	14.5	8.0	7.5	8.0	2.0	2.0	2.0	1.0	.5	.5
10	15.0	13.0	13.5	8.5	7.5	8.0	3.0	2.0	2.5	1.0	.5	1.0
11	13.0	11.5	12.5	7.5	5.0	6.0	2.0	1.5	2.0	1.0	.5	1.0
12	13.5	12.0	12.5	5.0	4.5	5.0	2.5	1.5	2.0	.5	.5	.5
13	13.5	13.0	13.0	4.5	3.0	4.5	1.5	.0	1.0	1.5	.5	1.0
14	14.5	13.5	14.0	3.0	2.0	2.5	.0	.0	.0	1.5	.5	1.0
15	14.5	13.0	13.5	2.0	1.5	2.0	.5	.0	.5	2.5	1.0	2.0
16	12.5	11.0	12.5	3.0	1.5	2.0	2.0	.5	1.5	2.5	1.0	2.0
17	12.5	11.5	12.0	3.5	2.0	3.0	2.0	1.0	2.0	1.0	.0	.5
18	12.0	11.0	11.5	4.5	3.5	4.0	2.0	1.5	2.0	.0	.0	.0
19	11.0	10.0	10.5	4.0	2.5	3.5	2.5	2.0	2.5	.5	.0	.5
20	11.0	9.5	10.5	2.5	2.0	2.0	2.5	2.0	2.5	.5	.0	.5
21	12.5	9.5	11.0	2.5	1.5	2.0	2.5	1.5	2.0	.5	.0	.5
22	13.0	11.5	12.5	2.5	2.0	2.5	1.5	1.0	1.5	.0	.0	.0
23	13.0	12.5	13.0	3.0	2.0	2.5	1.0	.5	.5	.5	.0	.0
24	13.0	12.0	12.5	3.5	3.0	3.5	1.5	.5	1.0	.0	.0	.0
25	12.0	10.5	11.5	4.5	3.0	4.0	2.5	1.0	2.0	.0	.0	.0
26	11.5	10.5	11.0	4.5	4.0	4.0	2.5	2.0	2.5	.0	.0	.0
27	11.0	10.0	10.5	5.0	4.0	4.5	3.0	2.5	2.5	.0	.0	.0
28	12.0	11.0	11.5	5.0	4.5	5.0	2.5	2.0	2.5	.0	.0	.0
29	11.5	10.0	11.0	4.5	4.0	4.0	2.5	2.0	2.5	.0	.0	.0
30	11.5	10.5	11.0	4.0	3.0	4.0	2.0	1.5	2.0	.0	.0	.0
31	10.5	9.0	9.5	---	---	---	2.0	1.5	2.0	.5	.0	.0
MONTH	21.0	9.0	13.5	10.0	1.5	5.0	3.5	0.0	2.0	2.5	0.0	0.5

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

DELAWARE RIVER BASIN

0143400690 EAST BRANCH NEVERSINK RIVER ABOVE TRAY MILL BROOK, NEAR DENNING, NY

LOCATION.--Lat 41°57'51", long 74°27'02", Ulster County, Hydrologic Unit 02040104, 500 ft upstream from Tray Mill Brook, and 2.2 mi northeast of Denning.

DRAINAGE AREA.--9.15 mi^2.

PERIOD OF RECORD.--June 1984 to current year.
CHEMICAL DATA: 1984 (a), 1985-86 (c), 1987 (a).
MINOR ELEMENT DATA: 1984 (a), 1985-86 (c), 1987 (a).
ORGANIC DATA: OC--1984 (a), 1985-86 (b).

REMARKS.--All anion and cation analyses were performed on water samples which passed through a 0.1-micrometer membrane filter.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	SPECIFIC CONDUCTANCE LAB (US/CM)	PH (STANDARD UNITS)	PH LAB (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)
NOV 22...	0915	31	--	4.68	--	7	1.4	0.80	0.30
MAR 27...	1500	--	23	--	4.86	6	1.4	0.64	0.40

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)	NITROGEN, NITRATE DISSOLVED (MG/L AS N)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
NOV 22...	0.30	--	--	--	2.3	--	310	17	82
MAR 27...	0.30	0	5.4	0.43	1.9	0.661	340	11	77

01434010 EAST BRANCH NEVERSINK RIVER AT DENNING, NY

LOCATION.--Lat 41°57'30", long 74°46'18", Ulster County, Hydrologic Unit 02040104, on downstream side of bridge on private road at Strauss Estate, 0.9 mi upstream from Erts Brook, 0.4 mi downstream from Riley Brook, and 1.0 mi northeast of Denning.

DRAINAGE AREA.--13.3 mi^2.

PERIOD OF RECORD.--August 1983 to current year.
CHEMICAL DATA: 1983 (a), 1984 (e), 1985 (b), 1986 (c), 1987 (b).
MINOR ELEMENT DATA: 1983 (a), 1984 (e), 1985 (b), 1986 (c), 1987 (b).
ORGANIC DATA: OC--1983 (a), 1984 (e), 1985-86 (b).

REMARKS.--All anion and cation analyses were performed on water samples which passed through a 0.1-micrometer membrane filter.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	SPECIFIC CONDUCTANCE LAB (US/CM)	PH (STANDARD UNITS)	PH LAB (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)
NOV									
22...	0945	29	--	4.91	--	--	--	--	--
22...	0950	--	29	--	4.91	7	1.5	0.70	0.40
MAR									
27...	1530	--	19	--	4.88	6	1.5	0.56	0.35
JUL									
01...	1235	--	22	--	5.82	6	1.5	0.61	0.50
AUG									
25...	1640	--	22	--	5.33	--	1.5	<0.61	<0.50

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)	NITROGEN, NITRATE DISSOLVED (MG/L AS N)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
NOV									
22...	--	--	6.3	0.53	--	0.450	--	--	--
22...	0.30	0	6.2	0.50	2.3	0.426	260	6	72
MAR									
27...	0.26	0	5.4	0.54	--	0.602	--	--	--
JUL									
01...	0.30	0	5.8	0.54	2.5	0.209	120	7	36
AUG									
25...	0.30	0	5.9	0.55	2.6	0.205	80	<3	340

01434025 BISCUIT BROOK ABOVE PIGEON BROOK AT FROST VALLEY, NY

LOCATION.--Lat 41°59'43", long 74°30'05", Ulster County, Hydrologic Unit 02040104, on right bank 0.2 mi upstream from Pigeon Brook, 0.6 mi upstream from mouth, and 0.8 mi northeast of Frost Valley. Water-quality sampling site at discharge station.

DRAINAGE AREA.--3.80 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1983 to current year. February to May 1983 (occasional discharge measurements).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 2,060 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Sept. 11, 1987, at datum 1.00 ft higher.

REMARKS.--Records fair below 400 ft^3/s and poor above. Several measurements of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,560 ft^3/s, Apr. 4, 1987, gage height, 4.37 ft, present datum; minimum discharge, 0.40 ft^3/s, Sept. 16, 1983; minimum gage height, 1.03 ft, July 11, 12, 1987, present datum.

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. 26	2045	401	a3.66	Apr. 4	1630	*1,560	a*4.37
Mar. 31	1330	401	a3.45	Sept. 9	0245	402	a3.46

a Present datum.

Minimum discharge, 1.2 ft^3/s, July 11, 12, gage height, 1.03 ft, present datum.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	4.0	14	e4.2	e2.7	e15	63	7.2	3.2	1.5	1.7	6.4
2	3.2	4.0	14	e4.3	e2.6	e10	32	6.8	4.3	5.4	8.4	4.0
3	6.9	3.9	33	e4.9	e2.6	e7.3	25	7.3	3.6	5.3	32	3.5
4	21	3.8	22	e4.7	e2.5	e6.0	431	8.0	4.6	3.0	9.5	3.1
5	7.6	3.8	16	e4.5	e2.4	e5.7	95	7.6	4.0	2.1	7.7	2.9
6	5.9	8.3	14	e4.3	e2.4	e5.6	58	9.1	3.1	1.8	7.7	2.9
7	5.3	5.4	12	e4.1	e2.4	e7.7	48	7.5	3.1	2.2	6.1	3.8
8	4.8	15	11	e3.9	e2.4	23	33	7.1	3.3	2.8	5.2	15
9	4.5	55	13	e3.8	e2.3	29	24	6.7	2.7	1.8	5.9	100
10	4.3	27	16	e3.7	e2.3	24	19	6.7	2.5	1.5	6.7	22
11	4.0	18	12	e3.6	e2.3	22	17	6.2	2.3	1.3	5.1	13
12	4.3	14	10	e3.6	e2.3	13	16	6.3	3.2	3.6	4.2	12
13	4.4	12	e7.0	e3.5	e2.2	11	46	5.7	2.7	2.4	3.8	52
14	11	9.9	e8.1	e3.5	e2.2	9.2	26	5.5	2.5	9.0	3.6	33
15	6.2	10	e7.3	e3.4	e2.2	8.8	19	5.6	2.2	7.0	3.4	18
16	5.2	8.9	e6.6	e3.4	e2.2	8.2	16	5.2	1.9	3.4	3.2	13
17	4.9	9.0	e6.0	e3.4	e2.2	7.3	16	5.1	1.6	2.7	2.9	12
18	4.6	8.8	e5.8	e3.3	e2.2	7.2	17	5.1	1.5	2.3	2.8	44
19	4.3	8.4	e5.4	e3.3	e2.2	7.2	14	5.9	1.5	2.0	2.6	42
20	4.3	13	e5.1	e3.3	e2.1	6.7	13	5.2	1.4	2.4	2.5	23
21	4.2	53	e4.9	e3.3	e2.1	6.4	12	5.3	1.5	2.2	2.3	17
22	4.1	19	e4.7	e3.3	e2.1	6.9	11	5.0	2.4	1.7	2.3	14
23	4.4	15	e4.5	e3.3	e2.1	10	9.8	4.3	4.9	1.6	2.3	12
24	4.1	21	e5.0	e3.3	e2.1	14	9.5	4.6	2.2	1.6	1.9	10
25	3.8	18	e8.6	e3.3	e2.1	25	9.6	4.2	1.6	2.2	1.8	8.9
26	5.5	91	e6.4	e3.2	e2.0	37	8.6	3.8	1.4	5.8	1.6	7.9
27	6.1	88	e5.6	e3.2	e2.0	33	8.0	8.8	4.1	2.8	6.4	7.1
28	4.9	33	e5.2	e3.1	e2.0	40	7.7	5.3	2.4	2.3	7.8	6.2
29	4.5	23	e4.8	e3.0	---	45	7.7	4.2	1.7	1.9	13	5.7
30	4.3	17	e4.5	e2.9	---	60	8.0	3.7	1.5	2.0	5.2	8.0
31	4.0	---	e4.3	e2.8	---	224	---	3.4	---	2.8	4.0	---
TOTAL	169.1	620.2	296.8	111.4	63.2	735.2	1119.9	182.4	78.9	90.4	173.6	522.4
MEAN	5.45	20.7	9.57	3.59	2.26	23.7	37.3	5.88	2.63	2.92	5.60	17.4
MAX	21	91	33	4.9	2.7	224	431	9.1	4.9	9.0	32	100
MIN	2.5	3.8	4.3	2.8	2.0	5.6	7.7	3.4	1.4	1.3	1.6	2.9
CFSM	1.44	5.44	2.52	.95	.59	6.24	9.82	1.55	.69	.77	1.47	4.58
IN.	1.66	6.07	2.91	1.09	.62	7.20	11.0	1.79	.77	.88	1.70	5.11

CAL YR 1986 TOTAL 4123.0 MEAN 11.3 MAX 171 MIN 1.7 CFSM 2.97 IN. 40.4
WTR YR 1987 TOTAL 4163.5 MEAN 11.4 MAX 431 MIN 1.3 CFSM 3.00 IN. 40.8

e Estimated

01434025 BISCUIT BROOK ABOVE PIGEON BROOK, AT FROST VALLEY, NY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1983 to current year.
CHEMICAL DATA: 1983-87 (e).
MINOR ELEMENT DATA: 1983-87 (e).
ORGANIC DATA: 1983-87 (e)

REMARKS.--All anion and cation analysis were performed on water samples which passed through a 0.1-micrometer membrane filter.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	SPECIFIC CONDUCTANCE LAB (US/CM)	PH (STANDARD UNITS)	PH LAB (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)
OCT									
07...	0945	--	28	--	5.87	10	2.9	0.60	0.40
14...	0938	--	29	--	5.91	11	3.1	0.70	0.40
21...	0930	--	28	--	6.18	11	3.1	0.70	0.50
28...	0930	--	29	--	6.11	10	3.0	0.60	0.50
NOV									
04...	0925	--	29	--	6.13	10	3.0	0.70	0.40
11...	1000	23	28	6.13	5.83	10	2.9	0.60	0.30
18...	0910	--	28	--	5.94	10	2.9	0.60	0.40
21...	1025	--	28	--	5.19	9	2.7	0.60	0.40
22...	1145	--	28	--	5.80	10	2.8	0.70	0.40
22...	1150	--	28	--	5.80	9	2.8	0.60	0.30
25...	0915	--	27	--	5.76	10	2.9	0.60	0.40
DEC									
02...	0915	--	27	--	5.44	9	2.8	0.60	0.40
03...	0725	--	24	--	5.25	8	2.3	0.60	0.30
09...	0922	--	27	--	5.39	10	2.8	0.70	0.40
16...	0920	--	27	--	5.61	9	2.8	0.60	0.40
30...	0930	--	27	--	5.54	10	2.9	0.60	0.40
JAN									
06...	1010	--	28	--	5.45	10	2.9	0.60	0.40
14...	1025	--	28	--	6.26	10	2.9	0.70	0.40
20...	0950	--	28	--	5.75	10	2.9	0.70	0.40
27...	0950	--	28	--	6.49	10	2.9	0.70	0.40
FEB									
03...	1015	--	27	--	6.11	10	3.0	0.69	0.50
10...	0935	--	28	--	5.54	11	3.1	0.69	0.50
17...	0940	--	29	--	6.26	10	2.9	0.65	0.40
24...	1000	--	28	--	5.85	10	3.0	0.73	0.50
28...	2220	--	26	--	6.01	10	3.0	0.68	0.50
MAR									
01...	0320	--	27	--	5.90	11	3.1	0.73	0.50
01...	0640	--	29	--	5.36	11	3.1	0.72	0.50
01...	0910	--	28	--	6.10	11	3.2	0.77	0.40
01...	1315	--	25	--	5.48	10	2.9	0.58	0.40
01...	1920	--	26	--	5.40	9	2.8	0.58	0.30
02...	0720	--	26	--	5.32	10	2.9	0.61	0.30
03...	0800	--	26	--	5.54	10	3.0	0.67	0.40
10...	0935	--	27	--	5.59	12	3.6	0.74	0.50
17...	0740	--	25	--	5.39	10	3.0	0.66	0.50
24...	0720	--	24	--	5.67	9	2.8	0.59	0.40
24...	1745	--	23	--	5.76	9	2.7	0.65	0.40
26...	1130	--	--	--	--	9	2.8	0.56	0.40
27...	1747	26	26	5.69	5.69	9	2.7	0.54	0.30
27...	1748	26	--	5.69	--	9	2.7	0.60	0.30
30...	1910	--	23	--	5.18	9	2.5	0.57	0.40
31...	1400	24	24	4.63	4.72	7	2.1	0.44	0.20
APR									
04...	1610	--	23	--	5.01	5	1.6	0.22	0.30
05...	0925	--	24	--	4.84	6	1.9	0.39	0.30
05...	1716	--	--	--	--	7	2.1	0.45	0.30
07...	0735	--	24	--	5.10	7	2.1	0.45	0.30
14...	0750	--	24	--	5.30	7	2.2	0.43	0.30
21...	0915	20	24	5.49	5.25	7	2.3	0.38	0.40
28...	0710	22	25	5.92	5.33	8	2.4	0.49	0.40
MAY									
05...	0705	22	25	5.92	5.84	9	2.5	0.55	0.40
12...	0720	22	25	6.00	5.53	8	2.4	0.39	0.50
19...	0730	22	26	5.94	5.44	9	2.6	0.58	0.50
26...	0745	22	26	6.12	5.41	9	2.7	0.58	0.40
JUN									
02...	0930	23	27	5.78	5.56	9	2.7	0.57	0.40
09...	0745	23	27	6.16	5.78	10	2.8	0.67	0.50
16...	0920	23	27	5.88	5.52	10	2.8	0.68	0.40
23...	0745	26	30	5.76	5.36	10	3.1	0.61	0.40
25...	0938	28	--	6.00	0.0	10	3.0	0.57	0.50
30...	1200	--	27	--	2.84	10	2.8	0.62	0.50

01434025 BISCUIT BROOK ABOVE PIGEON BROOK, AT FROST VALLEY NY--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)	NITROGEN, NITRATE DISSOLVED (MG/L AS N)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT									
07...	0.30	1.8	7.1	0.58	2.3	0.131	50	5	2
14...	0.60	3.2	6.6	0.73	2.2	0.186	80	19	8
21...	0.30	3.4	7.2	0.75	2.4	--	40	11	2
28...	0.30	3.2	6.9	0.60	2.3	0.203	40	4	<1
NOV									
04...	0.30	2.8	6.9	0.59	2.2	0.224	30	8	2
11...	0.30	1.4	6.4	0.58	2.1	0.536	60	6	9
18...	0.20	0.9	6.8	0.57	2.1	0.348	40	5	2
21...	0.30	0.2	3.0	0.51	1.8	0.682	140	6	41
22...	0.30	1.1	6.4	0.51	2.1	0.553	80	4	16
22...	0.40	1.1	6.4	0.51	2.0	0.553	80	6	17
25...	0.20	0.8	6.4	0.58	2.1	0.483	70	12	13
DEC									
02...	0.20	1.2	6.5	0.56	2.2	0.466	60	12	9
03...	0.30	0.4	5.6	0.57	1.8	0.413	110	17	23
09...	0.20	1.2	6.3	0.54	2.2	0.425	50	12	8
16...	0.20	1.1	6.4	0.54	2.2	0.416	50	9	3
30...	0.20	1.6	6.6	0.60	2.3	0.386	40	5	1
JAN									
06...	0.20	2.0	6.5	0.60	2.3	0.412	30	3	1
14...	0.30	2.0	6.5	0.59	2.3	0.413	30	6	2
20...	0.20	1.2	6.6	0.60	2.4	0.489	30	7	2
27...	0.20	2.6	6.5	0.62	2.4	0.435	30	6	2
FEB									
03...	0.20	2.0	6.5	0.59	2.4	0.425	30	3	<1
10...	0.30	1.8	6.8	0.60	2.4	0.433	30	5	1
17...	0.20	2.0	6.9	0.65	2.4	0.467	40	<3	2
24...	0.20	1.9	6.4	0.63	2.4	0.433	30	6	<1
28...	0.30	1.8	6.7	0.65	2.3	0.428	20	5	<1
MAR									
01...	0.40	2.0	6.7	0.69	2.2	0.584	30	6	6
01...	0.30	1.6	6.4	0.67	1.9	0.795	50	8	14
01...	0.40	1.7	6.3	0.66	1.9	0.854	60	10	11
01...	0.40	1.2	5.3	0.53	1.6	0.831	80	15	19
01...	0.20	1.2	5.4	0.50	1.6	0.929	10	8	25
02...	0.20	1.0	5.4	0.48	1.8	0.944	80	7	16
03...	0.30	1.3	6.0	0.53	2.1	0.879	60	7	9
10...	0.20	1.2	5.8	0.46	2.1	0.995	90	19	15
17...	0.20	1.3	6.1	0.50	2.1	0.614	40	3	4
24...	0.20	1.7	5.8	0.46	1.9	0.571	60	7	6
24...	0.20	1.5	5.6	0.44	1.8	0.563	80	4	9
26...	0.20	--	--	--	1.8	--	120	8	21
27...	0.30	0.2	5.5	0.40	1.7	0.829	110	5	22
27...	0.20	--	5.8	0.42	1.7	1.00	120	7	22
30...	0.30	0	5.2	0.40	1.6	0.887	200	15	45
31...	0.50	0	4.4	0.38	1.2	0.838	260	31	93
APR									
04...	0.60	0.3	3.7	0.28	0.8	0.511	200	41	150
05...	0.40	0.2	4.9	0.35	1.3	0.568	180	16	53
05...	0.40	--	--	--	1.4	--	140	16	43
07...	0.30	0.2	5.3	0.37	1.5	0.539	140	15	33
14...	0.30	0.6	5.6	0.39	1.7	0.484	120	9	<1
21...	0.30	0.8	5.9	0.44	1.7	0.355	70	7	8
28...	0.30	0.7	6.1	0.49	1.8	0.353	50	5	6
MAY									
05...	0.20	1.9	6.1	0.50	1.7	0.324	50	5	5
12...	0.30	1.6	6.1	0.49	1.5	0.273	50	<3	6
19...	0.30	1.5	6.4	0.51	1.7	0.296	40	5	5
26...	0.30	1.8	6.3	0.55	2.0	0.303	30	<3	<1
JUN									
02...	0.30	2.3	6.4	0.56	2.1	0.334	50	12	2
09...	0.20	1.8	6.4	0.53	2.2	0.317	30	8	2
16...	0.30	2.3	6.5	0.55	2.3	0.335	30	<3	1
23...	0.30	1.5	7.0	0.51	2.4	0.492	40	<3	3
25...	0.30	1.8	6.8	0.60	2.5	0.409	30	4	1
30...	0.30	1.8	6.7	0.58	2.4	0.363	30	4	<1

01434025 BISCUIT BROOK ABOVE PIGEON BROOK, AT FROST VALLEY NY--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SEP-CIFIC CON-DUCT-ANCE (US/CM)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM)	PH (STAND-ARD UNITS)	PH LAB (STAND-ARD UNITS)	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)
JUL									
01...	1725	--	27	--	5.83	10	2.9	0.67	0.50
03...	0930	--	27	--	5.39	10	2.9	0.59	0.40
07...	1000	24	27	5.92	5.37	10	2.9	0.59	0.40
12...	2200	--	26	--	5.63	10	2.8	0.62	0.40
14...	0715	24	--	5.84	6.41	9	2.7	0.63	0.40
21...	0915	23	27	6.00	5.56	10	2.8	0.67	0.50
28...	0945	25	28	6.34	5.59	10	2.9	0.73	0.50
AUG									
02...	1930	--	30	--	5.34	11	3.0	0.74	0.60
03...	0730	--	30	--	5.22	10	3.1	0.64	0.30
04...	0815	26	27	--	5.38	10	2.9	0.60	0.30
11...	0830	27	--	6.21	6.12	--	2.7	<0.58	<0.40
18...	0825	24	27	6.58	6.13	--	2.7	<0.63	<0.50
25...	1200	--	27	--	6.18	--	2.9	<0.64	<0.40
SEP									
01...	0930	--	--	--	6.41	10	2.8	0.64	0.40
01...	0935	--	--	--	6.41	9	2.5	0.57	0.40

DATE	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)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
JUL									
01...	0.30	1.3	6.5	0.58	2.5	0.362	30	<3	<1
03...	0.20	2.0	6.3	0.48	2.4	0.395	50	5	3
07...	0.30	1.9	6.3	0.56	2.4	0.357	30	<3	<1
12...	0.30	1.8	6.1	0.42	2.1	0.406	110	13	6
14...	0.30	1.7	6.4	0.51	2.4	0.335	30	5	<1
21...	0.30	1.8	6.5	0.55	2.4	0.351	40	<3	<1
28...	0.30	1.5	6.4	0.52	2.4	0.377	40	<3	1
AUG									
02...	0.40	1.5	7.1	0.45	2.1	0.479	90	16	10
03...	0.30	0.8	7.1	0.39	1.6	0.562	200	60	33
04...	0.30	1.5	6.7	0.43	2.0	0.337	90	8	3
11...	0.20	1.7	6.8	0.47	2.2	0.285	50	<3	<1
18...	0.20	1.8	6.6	0.55	2.6	0.331	40	5	2
25...	0.20	2.0	6.6	0.57	2.6	0.332	20	<3	<1
SEP									
01...	0.20	1.3	6.6	0.48	2.4	0.262	50	3	2
01...	0.20	1.3	6.5	0.48	2.0	0.267	40	24	2

01143402705 PIGEON BROOK AT MOUTH, AT FROST VALLEY, NY

LOCATION.--Lat 41°59'13", long 74°30'11", Ulster County, Hydrologic Unit 02040104, at bridge on private road, 250 ft upstream from Biscuit Brook, at Frost Valley, and 0.4 mi north of West Branch Road.

DRAINAGE AREA.--2.67 mi^2.

PERIOD OF RECORD.--April 1983 to current year.
CHEMICAL DATA: 1983 (a), 1984-86 (d), 1987 (b).
MINOR ELEMENT DATA: 1983 (a), 1984-86 (d), 1987 (b).
ORGANIC DATA: OC--1983 (a), 1984 (d), 1985 (c), 1986 (b).

REMARKS.--All anion and cation analyses were performed on water samples which passed through a 0.1-micrometer membrane filter.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SPECIFIC CONDUCTANCE LAB (US/CM)	PH LAB (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)
NOV								
22...	1150	29	5.70	10	3.2	0.50	0.30	0.40
MAR								
27...	1725	--	6.20	8	2.6	0.43	0.30	0.20
27...	1727	--	6.20	9	2.9	0.39	0.30	0.20
APR								
01...	1900	25	5.42	8	2.6	0.42	0.24	0.28

DATE	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)	NITROGEN, NITRATE DISSOLVED (MG/L AS N)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
NOV								
22...	1.5	6.3	0.48	2.0	0.458	60	7	6
MAR								
27...	--	5.2	0.39	1.5	0.724	60	<3	7
27...	--	5.2	0.39	1.6	0.726	70	4	7
APR								
01...	0.3	5.4	0.41	--	0.748	--	--	--

0143410505 HIGH FALLS BROOK AT FROST VALLEY, NY

LOCATION.--Lat 41°58'33", long 74°31'19", Ulster County, Hydrologic Unit 02040104, at bridge on West Branch Road, 0.1 mi upstream from mouth, and 1.0 southwest of Frost Valley.

DRAINAGE AREA.--2.76 mi^2.

PERIOD OF RECORD.--August 1983 to current year.
CHEMICAL DATA: 1983 (a), 1984 (c), 1985-86 (d), 1987 (c).
MINOR ELEMENT DATA: 1983 (a), 1984 (c), 1985-86 (d), 1987 (c).
ORGANIC DATA: OC--1983 (a), 1984 (c), 1985-86 (d).

REMARKS.--All anion and cation analyses were performed on water samples which passed through a 0.1-micrometer membrane filter.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SPECIFIC CONDUCTANCE LAB (US/CM)	PH LAB (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)
NOV								
22...	1125	32	5.99	12	4.0	0.60	0.30	0.40
MAR								
27...	1700	28	6.02	11	3.6	0.51	0.30	0.30
27...	1701	28	6.02	11	3.5	0.47	0.30	0.30
APR								
01...	0815	27	5.69	9	3.0	0.45	0.23	0.31
01...	1718	28	5.67	9	3.1	0.36	0.30	0.30
JUL								
01...	1630	38	6.32	15	5.1	0.60	0.40	0.30
AUG								
26...	1200	40	6.75	--	5.6	0.71	0.40	0.30

DATE	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)	NITROGEN, NITRATE DISSOLVED (MG/L AS N)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
NOV								
22...	2.6	6.2	0.49	2.1	0.734	40	8	8
MAR								
27...	2.0	5.6	0.43	1.7	0.862	80	7	8
27...	--	5.6	0.45	1.7	0.877	60	5	8
APR								
01...	0.4	5.5	0.42	--	0.985	--	--	--
01...	0.8	5.6	0.44	1.6	0.960	100	23	25
JUL								
01...	7.6	6.6	0.47	2.6	0.370	20	4	<1
AUG								
26...	6.3	6.7	0.52	2.8	0.404	2	<3	<1

01435000 NEVERSINK RIVER NEAR CLARYVILLE, NY

LOCATION.--Lat 41°53'24", long 74°35'25", Sullivan County, Hydrologic Unit 02040104, on left bank 50 ft downstream from covered bridge, 300 ft upstream from small tributary, 2.2 mi downstream from confluence of East and West Branches, and 2.2 mi southwest of Claryville.

DRAINAGE AREA.--66.6 mi^2.

PERIOD OF RECORD.--July 1951 to current year.

REVISED RECORDS.--WDR NY-82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,522.37 ft above National Geodetic Vertical Datum of 1929. Prior to October 1, 1974, at datum 6.00 ft higher. Oct. 1, 1974 to Sept. 30, 1979 at datum 5.00 ft higher.

REMARKS.--Records good below 2,000 ft^3/s and fair above, except those for estimated daily discharges, which are poor. Several measurements of water temperature were made during the year. Intermittent water-quality data for this station are included in section "ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES".

AVERAGE DISCHARGE.--36 years, 188 ft^3/s, 38.33 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,300 ft^3/s, Apr. 4, 1987, gage height, 13.26 ft; maximum gage height, 13.83 ft, present datum, July 10, 1952; minimum discharge, 6.8 ft^3/s, Sept. 24, 25, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 25, 1950, reached a stage of about 15.0 ft, present datum, from floodmarks, discharge, 23,400 ft^3/s, by slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 26	2145	4,460	10.01	Apr. 4	1815	*19,300	*13.26
Mar. 31	1630	5,170	10.28	Sept. 9	0500	4,700	10.18

Minimum discharge, 30 ft^3/s, Aug. 26, 27; minimum gage height, 5.43 ft, Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	65	282	e110	e78	e150	1140	137	71	52	41	84
2	58	64	258	e120	e80	e220	568	130	89	71	71	62
3	62	64	591	e120	e80	e140	435	130	70	110	311	53
4	260	63	432	e110	e74	e120	5750	157	80	71	110	48
5	131	64	322	e105	e70	e110	2250	141	83	55	68	45
6	93	118	278	e105	e68	e120	1040	154	70	49	70	44
7	79	101	253	e110	e68	e170	856	142	67	52	58	47
8	72	171	233	e105	e72	339	598	130	70	60	51	127
9	68	395	238	e100	e70	463	437	124	64	51	50	1940
10	65	301	300	e94	e66	340	361	118	60	46	64	440
11	62	240	242	e105	e64	284	311	116	57	43	53	250
12	61	206	215	e105	e62	245	305	112	62	60	46	212
13	60	183	184	e98	e64	220	1070	108	66	70	43	1320
14	116	157	170	e94	e64	203	549	103	60	112	41	825
15	103	142	189	109	e62	188	404	104	55	163	40	410
16	85	135	173	113	e56	176	338	100	52	84	39	289
17	79	140	161	e82	e56	168	358	96	50	66	37	246
18	75	152	162	e86	e57	e160	452	93	47	59	36	616
19	72	146	160	e90	e58	e155	337	114	46	54	35	717
20	70	137	147	e88	e60	e150	284	97	45	57	35	415
21	70	814	137	e84	e59	e150	253	93	47	55	33	328
22	68	362	131	e78	e58	e155	227	88	52	50	33	265
23	67	278	122	e76	e56	187	204	84	82	47	33	223
24	67	342	131	e72	e56	251	192	91	58	45	31	196
25	65	315	205	e68	e56	343	192	82	49	44	31	174
26	75	1120	187	e68	e55	503	167	80	46	55	31	155
27	95	1470	153	e70	e54	483	155	129	76	51	59	140
28	81	582	e135	e70	e54	543	152	106	65	44	92	130
29	74	414	e130	e70	---	580	156	89	51	41	179	120
30	70	332	e125	e72	---	691	148	79	47	41	82	132
31	66	---	e120	e76	---	2880	---	74	---	43	57	---
TOTAL	2508	9073	6566	2853	1777	10887	19689	3401	1837	1901	1960	10053
MEAN	80.9	302	212	92.0	63.5	351	656	110	61.2	61.3	63.2	335
MAX	260	1470	591	120	80	2880	5750	157	89	163	311	1940
MIN	39	63	120	68	54	110	148	74	45	41	31	44
CFSM	1.21	4.54	3.18	1.38	.95	5.27	9.85	1.65	.92	.92	.95	5.03
IN.	1.40	5.07	3.67	1.59	.99	6.08	11.0	1.90	1.03	1.06	1.09	5.62

CAL YR 1986 TOTAL 69597 MEAN 191 MAX 2940 MIN 39 CFSM 2.86 IN. 38.9
WTR YR 1987 TOTAL 72505 MEAN 199 MAX 5750 MIN 31 CFSM 2.98 IN. 40.5

e Estimated

01436000 NEVERSINK RIVER AT NEVERSINK, NY

LOCATION.--Lat 41°49'12", long 74°38'09", Sullivan County, Hydrologic Unit 02040104, on right bank at downstream end of outlet channel, 1,650 ft downstream from Neversink Dam and State Highway 55, 1.7 mi southwest of Neversink, and 2.6 mi upstream from Wynkoop Brook.

DRAINAGE AREA.--92.6 mi^2.

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

REVISED RECORDS.--WDR NY-72-1: 1961 (M), 1968 (M). WDR NY-82-1: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,255.24 ft Board of Water Supply, City of New York datum. Prior to Jan. 17, 1953, water-stage recorder at site 650 ft downstream at datum 0.20 ft lower. Jan. 17, 1953 to Apr. 16, 1954, water-stage recorder at present site at datum 0.41 ft higher.

REMARKS.--No estimated daily discharges. Records good. Subsequent to June 1953, entire flow from 92.5 mi^2 of drainage area controlled by Neversink Reservoir (see Reservoirs in Delaware River Basin). Part of flow diverted for New York City municipal supply (see Reservoirs in Delaware River Basin). Remainder of flow (except for conservation release and spill) impounded for release during periods of low flow in the lower Delaware River basin, as directed by the Delaware River Master. Several measurements of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,300 ft^3/s, Nov. 25, 1950, from rating curve extended above 2,600 ft^3/s on basis of contracted-opening and critical-depth measurements of peak flow; maximum gage height, 11.65 ft, Sept. 27, 1942, site and datum then in use; minimum discharge, no flow for all or part of each day Sept. 22-24, Oct. 26-29, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,590 ft^3/s, Apr. 13, gage height, 5.04 ft; minimum, 3.7 ft^3/s, Sept. 21, gage height, 2.41 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	61	24	23	22	23	38	149	46	40	60	37
2	45	62	24	23	22	23	40	132	57	40	54	40
3	44	64	24	22	22	23	42	115	49	40	42	40
4	43	63	24	22	22	23	41	133	41	40	48	40
5	43	48	24	22	22	23	41	47	41	40	51	40
6	42	22	23	22	22	23	121	35	41	40	40	40
7	44	22	23	22	22	23	931	36	41	40	47	40
8	45	23	23	22	22	23	835	37	41	40	59	41
9	46	22	24	22	22	22	607	37	40	47	59	42
10	44	23	23	22	22	22	476	37	40	55	47	41
11	43	24	24	22	22	23	356	36	41	78	40	41
12	42	24	23	22	22	23	251	36	41	78	40	41
13	41	22	22	22	21	22	1260	36	41	72	40	41
14	42	22	23	23	21	23	868	36	41	55	47	40
15	46	21	22	23	21	23	530	36	41	42	59	42
16	42	19	23	22	21	22	435	38	41	42	59	42
17	42	26	23	23	21	22	408	38	41	42	66	43
18	42	20	23	23	22	22	511	36	41	42	78	43
19	43	24	22	23	22	22	447	38	41	42	72	42
20	43	22	22	23	22	22	365	40	47	49	53	42
21	41	25	23	22	22	22	325	40	52	61	40	35
22	41	22	23	22	22	22	288	40	41	61	40	42
23	41	19	23	22	22	22	268	40	41	62	39	42
24	42	21	23	22	22	23	258	40	41	68	40	42
25	41	22	23	22	21	23	262	40	41	72	40	42
26	41	24	22	22	22	23	231	40	48	60	40	42
27	41	23	22	22	22	23	206	40	59	61	40	42
28	41	24	23	22	23	23	199	40	52	60	40	42
29	41	23	23	22	---	23	239	40	38	61	40	42
30	40	23	23	22	---	23	256	40	40	61	40	42
31	47	---	22	22	---	29	---	40	---	60	40	---
TOTAL	1323	860	713	690	611	708	11135	1568	1306	1651	1500	1231
MEAN	42.7	28.7	23.0	22.3	21.8	22.8	371	50.6	43.5	53.3	48.4	41.0
MAX	47	64	24	23	23	29	1260	149	59	78	78	43
MIN	40	19	22	22	21	22	38	35	38	40	39	35

CAL YR 1986 TOTAL 15873 MEAN 43.5 MAX 1030 MIN 16
WTR YR 1987 TOTAL 23296 MEAN 63.8 MAX 1260 MIN 19

01436500 NEVERSINK RIVER AT WOODBOURNE, NY

LOCATION.--Lat 41°45'24", long 74°35'52", Sullivan County, Hydrologic Unit 02040104, on left bank 0.2 mi downstream from highway bridge at Woodbourne, 0.3 mi upstream from outlet of South Wind Lake. Water-quality sampling site at discharge station.

DRAINAGE AREA.--113 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1937 to September 1973, October 1977 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,180 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Sept. 20, 1938, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Subsequent to June 1953, entire flow from 92.5 mi^2 of drainage area controlled by Neversink Reservoir. Part of flow diverted for New York City municipal supply. Remainder of flow (except for conservation releases and spill) impounded for release during periods of low flow in the lower Delaware River basin, as directed by the Delaware River Master. Several measurements of water temperature were made during the year. Satellite gage-height and temperature telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,000 ft^3/s, Nov. 26, 1950, gage height, 11.19 ft, from rating curve extended above 15,000 ft^3/s; maximum gage height, 11.2 ft, July 22, 1938, from floodmarks; minimum discharge, 6.7 ft^3/s, June 27, 1953; minimum gage height, 0.80 ft, Aug. 25, 27, 28, 1949; minimum daily discharge, 8.2 ft^3/s, June 25, 1953.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,070 ft^3/s, Apr. 4, gage height, 5.16 ft; minimum recorded, 33 ft^3/s, July 10, gage height, 1.29 ft, but may have been less during period of ice effect Jan. 16 to Mar. 7; minimum daily discharge, 34 ft^3/s, Feb. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	73	81	e52	e36	e60	148	179	56	51	71	70
2	80	75	78	e52	e38	e100	107	158	75	61	74	59
3	73	77	242	e50	e39	e80	102	140	70	64	68	56
4	166	77	134	e48	e40	e70	923	187	63	55	61	54
5	79	72	100	e47	e41	e66	507	97	61	53	68	53
6	64	57	85	e45	e42	e62	270	77	56	51	54	52
7	59	53	78	e44	e42	e90	1020	71	56	59	57	57
8	59	94	73	e44	e41	166	953	66	57	66	71	81
9	59	121	73	e45	e40	163	734	65	55	61	72	666
10	56	82	98	e47	e40	119	588	62	54	68	65	135
11	54	71	84	78	e39	94	462	60	53	96	53	96
12	53	69	73	61	e38	84	299	59	54	104	52	89
13	52	65	e66	54	e37	76	1370	57	55	99	51	492
14	75	58	e62	66	e36	69	1010	56	55	112	54	252
15	72	55	e60	54	e34	65	660	56	53	106	69	135
16	60	53	59	e50	e37	62	541	56	52	70	69	106
17	58	65	58	e48	e43	60	507	56	51	63	72	131
18	58	72	60	e46	e43	60	614	54	51	59	86	372
19	57	71	62	e44	e39	62	554	66	51	57	83	248
20	57	63	e56	e42	e38	63	453	62	53	65	67	154
21	55	328	e52	e41	e38	61	394	60	65	75	50	119
22	55	130	e50	e40	e38	65	340	58	54	75	49	107
23	54	97	e49	e41	e37	77	308	56	53	74	49	97
24	55	126	e54	e41	e36	86	295	56	53	78	48	90
25	53	106	93	e40	e35	88	307	55	52	86	48	84
26	66	256	88	e39	e35	92	267	55	54	75	47	79
27	71	276	69	e38	e35	83	237	65	82	73	60	76
28	63	138	62	e38	e36	80	225	62	71	72	76	74
29	59	109	58	e37	---	73	256	57	51	72	92	72
30	57	93	56	e36	---	69	311	55	51	72	62	75
31	58	---	54	e35	---	187	---	54	---	72	57	---
TOTAL	1985	3082	2367	1443	1073	2632	14762	2317	1717	2244	1955	4231
MEAN	64.0	103	76.4	46.5	38.3	84.9	492	74.7	57.2	72.4	63.1	141
MAX	166	328	242	78	43	187	1370	187	82	112	92	666
MIN	48	53	49	35	34	60	102	54	51	51	47	52

CAL YR 1986 TOTAL 33011 MEAN 90.4 MAX 1150 MIN 41
WTR YR 1987 TOTAL 39808 MEAN 109 MAX 1370 MIN 34

e Estimated

01436500 NEVERSINK RIVER AT WOODBOURNE, NY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964, 1965, 1972, 1978 to current year.
CHEMICAL DATA: 1964 (b), 1965 (c), 1972 (a).
NUTRIENT DATA: 1964 (b), 1965 (c), 1972 (a).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: July and August 1978, May 1979 to current year.

INSTRUMENTATION.--Water-temperature digital recorder since July 1978, provides one-hour-interval punches.

REMARKS.--Interruptions of record were due to malfunction of recording instruments.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum (water years 1979-83, 1985), 26.5°C, June 16, 1981; minimum (water years 1980-87), 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum recorded, 20.0°C, June 25, July 5, Aug. 4, but may have been higher during period of instrument malfunction; minimum, 0.0°C on many days during winter period.

TEMPERATURE (DEG. C) OF WATER, 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	---	---	---	11.0	6.5	8.5	2.0	.5	1.5	.5	.0	.5
2	---	---	---	11.0	8.0	10.0	2.0	1.0	1.5	1.0	.0	.5
3	---	---	---	8.5	6.0	7.5	3.5	2.0	3.0	.0	.0	.0
4	---	---	---	9.5	7.5	8.0	3.5	2.0	3.0	.5	.0	.0
5	---	---	---	7.5	5.5	6.0	3.0	1.5	2.0	.5	.0	.0
6	---	---	---	8.0	5.5	6.5	2.5	.5	1.5	.5	.0	.0
7	---	---	---	7.0	5.5	6.0	3.0	2.0	2.5	.5	.0	.0
8	---	---	---	8.0	7.0	7.5	4.5	2.0	3.5	.5	.0	.0
9	---	---	---	9.5	8.0	9.0	2.0	.5	1.5	1.0	.0	.5
10	---	---	---	8.0	5.0	6.5	3.5	2.0	3.0	.0	.0	.0
11	---	---	---	4.5	2.0	3.0	2.0	1.5	1.5	.5	.0	.5
12	---	---	---	6.0	3.0	4.0	2.5	1.5	2.0	.5	.0	.5
13	---	---	---	4.5	1.0	3.0	1.5	.0	.5	1.5	.0	.5
14	---	---	---	2.5	.0	1.0	.5	.0	.0	1.0	.0	.5
15	---	---	---	3.0	.0	2.0	1.0	.0	.5	2.5	1.0	2.0
16	---	---	---	5.5	3.0	4.0	3.0	1.0	2.0	2.0	.0	1.5
17	---	---	---	5.0	4.0	5.0	3.0	2.5	2.5	.5	.0	.0
18	---	---	---	5.0	3.0	4.5	2.5	.5	1.5	.0	.0	.0
19	---	---	---	4.0	2.0	3.0	2.5	1.0	1.5	.0	.0	.0
20	---	---	---	2.0	.5	1.0	2.5	1.5	2.0	.0	.0	.0
21	---	---	---	3.0	1.5	2.5	2.0	.0	1.0	.0	.0	.0
22	13.0	9.5	11.0	4.0	2.0	3.0	1.0	.0	.5	.0	.0	.0
23	11.5	9.5	10.5	4.0	2.0	3.0	1.0	.0	.5	.0	.0	.0
24	12.0	9.0	10.5	5.0	4.0	4.5	1.5	.0	.5	.0	.0	.0
25	9.5	7.0	8.5	5.0	3.0	4.0	2.5	1.5	2.0	.0	.0	.0
26	9.0	9.0	9.0	4.5	3.0	3.5	2.5	1.5	2.0	.0	.0	.0
27	10.0	9.0	9.5	6.0	4.0	5.0	2.5	1.5	2.0	.0	.0	.0
28	11.5	9.5	10.5	4.5	2.5	3.5	2.0	1.5	1.5	.0	.0	.0
29	11.0	7.5	9.5	4.5	3.0	4.0	2.0	1.0	1.5	.0	.0	.0
30	11.5	9.0	10.0	4.0	2.0	3.0	1.5	.5	1.0	.0	.0	.0
31	9.0	6.0	7.5	---	---	---	3.0	.5	1.5	.0	.0	.0
MONTH	---	---	---	11.0	0.0	4.5	4.5	0.0	1.5	2.5	0.0	0.0

DELAWARE RIVER BASIN

01436500 NEVERSINK RIVER AT WOODBOURNE, NY--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	.0	.0	.0	.0	.0	.0	6.5	2.5	4.5	12.0	5.5	8.0
2	.0	.0	.0	.0	.0	.0	4.0	2.0	3.0	11.5	5.5	8.5
3	.0	.0	.0	.0	.0	.0	5.5	3.0	4.0	8.0	6.5	7.5
4	.0	.0	.0	.5	.0	.5	6.5	4.0	5.5	9.0	7.0	7.5
5	.0	.0	.0	1.0	.0	.5	6.5	4.5	5.5	8.0	6.5	7.0
6	.0	.0	.0	2.5	.0	1.0	6.0	4.5	5.5	9.0	7.0	7.5
7	.0	.0	.0	4.5	1.0	2.5	5.0	4.0	4.5	13.5	6.0	9.5
8	.0	.0	.0	5.5	.5	2.5	6.0	3.5	4.5	13.0	7.5	10.5
9	.0	.0	.0	2.5	1.0	2.0	6.0	4.0	4.5	14.5	7.5	11.0
10	.0	.0	.0	2.5	.0	1.0	7.5	3.5	5.0	15.5	9.0	12.5
11	.0	.0	.0	2.0	.0	1.0	8.5	4.0	6.0	16.0	10.5	13.5
12	.0	.0	.0	1.5	.0	.5	8.0	5.0	6.5	14.0	10.5	12.0
13	.0	.0	.0	2.0	.0	1.0	6.0	4.5	5.0	15.0	7.5	11.5
14	.0	.0	.0	4.5	.0	2.0	8.0	4.0	5.5	15.0	8.5	12.0
15	.0	.0	.0	5.0	.0	2.5	7.0	5.5	6.0	15.5	11.5	13.0
16	.0	.0	.0	3.5	.0	2.0	6.0	5.0	5.5	15.5	8.5	12.0
17	.0	.0	.0	5.5	.5	2.5	6.0	5.0	5.5	17.5	10.5	14.0
18	.0	.0	.0	6.0	.5	3.5	7.5	5.0	6.0	15.5	12.0	14.0
19	.0	.0	.0	6.5	1.0	4.0	10.5	5.5	7.5	13.5	10.0	11.0
20	.0	.0	.0	3.5	2.0	3.0	11.0	6.0	8.0	10.0	8.5	9.5
21	.0	.0	.0	4.5	1.5	3.0	12.5	6.0	8.5	12.0	9.0	10.5
22	.0	.0	.0	8.0	2.5	5.0	13.0	8.5	10.5	16.5	9.5	13.0
23	.0	.0	.0	8.5	3.0	6.0	8.0	6.0	7.0	15.0	12.5	14.0
24	.0	.0	.0	9.0	2.5	6.0	10.0	7.5	8.5	17.5	12.5	15.0
25	.0	.0	.0	9.0	3.0	6.0	12.5	7.0	9.0	15.5	10.5	12.5
26	.0	.0	.0	9.0	5.5	7.0	13.5	7.5	10.0	11.5	9.5	10.5
27	.0	.0	.0	8.0	4.0	6.0	13.0	7.0	9.5	11.0	9.5	10.0
28	.0	.0	.0	9.0	5.5	7.5	7.5	5.5	6.0	15.5	9.5	12.0
29	---	---	---	10.0	5.5	8.0	9.0	5.5	7.0	19.0	12.0	15.5
30	---	---	---	8.0	6.0	7.5	8.5	6.5	7.5	19.5	13.5	16.5
31	---	---	---	8.0	5.5	7.0	---	---	---	17.0	14.0	15.0
MONTH	0.0	0.0	0.0	10.0	0.0	3.5	13.5	2.0	6.5	19.5	5.5	11.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	18.0	12.0	15.0	17.0	15.0	15.5	17.0	10.0	13.5	14.0	12.0	13.5
2	15.5	11.5	14.0	15.0	11.5	13.0	14.5	10.0	11.5	12.5	10.5	11.0
3	14.0	11.0	12.0	17.5	12.0	14.0	18.5	11.0	14.0	14.5	9.5	11.5
4	11.0	10.5	11.0	18.0	13.5	15.5	20.0	14.0	16.5	15.5	10.0	12.5
5	18.0	10.0	13.5	20.0	13.5	16.5	17.5	13.0	14.0	14.5	11.0	12.5
6	17.5	12.0	14.5	18.5	14.5	16.5	14.5	12.0	13.0	13.5	12.0	13.0
7	14.0	10.5	11.5	16.0	12.0	13.5	16.0	13.0	14.5	13.0	12.5	13.0
8	14.5	10.0	12.0	19.5	12.0	15.0	16.5	12.0	14.5	14.5	12.5	13.5
9	17.0	12.0	14.0	19.5	15.0	17.5	15.0	11.0	12.0	17.0	15.0	16.0
10	18.0	11.5	14.5	17.5	13.0	15.5	13.5	10.5	12.0	17.0	13.5	15.0
11	17.0	11.0	14.0	16.5	11.5	14.5	18.0	11.0	14.0	16.0	12.5	14.5
12	15.0	12.0	13.0	16.0	11.5	14.0	18.0	12.0	15.0	15.0	13.0	14.0
13	16.5	11.0	13.5	16.5	10.5	13.5	18.5	12.5	15.5	15.5	13.0	14.5
14	18.5	12.0	15.0	15.5	12.5	14.0	19.0	13.5	16.0	17.0	14.0	15.0
15	---	---	---	19.5	14.0	16.5	17.0	11.5	14.5	15.0	11.5	13.5
16	---	---	---	16.5	13.5	14.5	17.5	11.5	14.5	16.0	11.5	14.0
17	---	---	---	18.5	11.0	14.5	17.0	12.0	15.0	14.5	13.5	14.0
18	19.0	12.5	16.0	19.5	13.0	16.0	17.0	11.0	14.0	14.5	13.0	14.0
19	19.0	13.5	16.0	17.5	14.5	16.5	15.5	9.5	13.0	13.0	12.0	12.5
20	17.5	14.5	16.0	17.0	14.0	15.5	16.0	11.0	13.5	13.5	12.0	12.5
21	15.5	11.0	12.5	19.0	12.0	15.5	18.0	12.0	14.5	14.5	12.0	13.5
22	12.5	11.0	11.5	18.5	12.0	15.5	15.0	13.0	14.5	14.5	12.0	13.5
23	14.0	12.0	13.0	18.5	12.0	15.0	16.5	12.5	14.0	13.5	11.0	12.5
24	18.5	11.0	14.5	18.0	12.0	15.0	15.0	10.5	12.5	13.0	11.0	12.0
25	20.0	13.5	16.5	16.0	10.5	13.5	15.5	10.0	12.5	12.5	9.0	10.5
26	17.5	12.0	14.5	16.0	11.5	14.0	14.5	11.0	13.0	11.5	8.0	10.0
27	14.0	10.5	12.0	16.5	11.0	14.0	13.5	11.0	12.0	13.5	9.5	11.5
28	15.0	10.0	13.0	16.5	10.0	13.5	11.5	11.0	11.0	14.0	11.0	12.5
29	18.5	11.5	14.5	16.5	10.0	13.5	14.5	11.5	13.0	15.0	11.0	13.0
30	19.0	14.5	17.0	14.5	10.5	12.0	16.0	11.0	13.5	13.5	12.0	12.5
31	---	---	---	15.5	10.5	13.0	15.0	12.0	13.5	---	---	---
MONTH	---	---	---	20.0	10.0	14.5	20.0	9.5	13.5	17.0	8.0	13.0

01437500 NEVERSINK RIVER AT GODEFFROY, NY

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

DRAINAGE AREA.--307 mi^2.

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

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

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

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,000 ft^3/s, Aug. 19, 1955, gage height, 12 49 ft, from rating curve extended above 11,000 ft^3/s, on basis of slope-area measurement of peak flow; minimum, practically no flow several times in July 1911.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,280 ft^3/s, Apr. 4, gage height, 9.34 ft; minimum, 61 ft^3/s, Aug. 25, 26, gage height, 2.99 ft.

REVISIONS.--The minimum discharge for water year 1986 has been revised to 103 ft^3/s, Sept. 17, 18; revised daily discharges, in cubic feet per second, for September 1986, are given below. These figures supersede those published in the report for 1986.

Sept. 1	136	Sept. 9	134	Sept. 17	107	Sept. 25	129
2	137	10	128	18	104	26	131
3	135	11	130	19	111	27	192
4	142	12	127	20	116	28	173
5	137	13	126	21	128	29	153
6	141	14	126	22	120	30	144
7	149	15	123	23	120		
8	141	16	110	24	130		

	Total	Mean	Max	Min
September 1986	3980	133	192	104
Water Year 1986	187949	515	4690	104

01437500 NEVERSINK RIVER AT GODEFFROY, NY--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	132	140	751	e370	e210	e230	1290	542	186	103	113	182
2	144	148	666	e335	e210	e680	901	458	221	118	113	161
3	200	148	1410	e310	e200	e600	788	437	232	183	162	130
4	580	149	1310	e290	e190	e500	3740	697	227	144	142	111
5	396	151	1040	e270	e190	e420	5040	605	243	128	110	96
6	276	190	906	e270	e180	e400	2920	509	187	111	117	89
7	225	212	798	e280	e170	e480	3180	467	165	107	100	103
8	190	272	703	278	e170	e900	2880	412	165	140	98	136
9	170	577	651	262	e160	1270	2260	367	161	149	113	1910
10	164	481	729	257	e160	1060	1820	343	146	138	121	915
11	150	391	744	340	e150	860	1520	315	134	142	109	465
12	148	381	621	343	e150	734	1190	295	137	182	90	363
13	153	369	e520	298	e140	611	2180	284	147	196	86	1700
14	287	322	e470	e260	e130	531	2250	262	148	226	82	2010
15	354	291	e430	e280	e120	477	1570	254	137	579	83	1110
16	285	266	426	357	e130	432	1350	241	124	260	98	806
17	227	272	402	e270	e130	389	1260	224	110	174	97	644
18	188	336	402	e250	e130	360	1350	209	104	152	102	1100
19	168	365	456	e250	e120	361	1240	241	97	138	116	1630
20	154	345	436	e250	e120	371	1070	246	97	152	117	1110
21	150	1480	396	e240	e110	349	942	237	126	161	96	871
22	137	1160	e330	e240	e110	351	850	224	138	154	72	687
23	127	942	e300	e230	e120	410	766	212	123	143	69	501
24	123	974	e310	e220	e120	472	732	205	114	136	68	425
25	121	1010	579	e220	e120	479	817	191	104	139	65	379
26	139	996	770	e230	e120	499	725	188	101	156	63	342
27	210	1750	634	e230	e120	471	642	192	128	145	107	308
28	187	1220	557	e230	e120	415	607	210	155	129	187	280
29	163	1030	500	e230	---	375	610	190	131	120	365	260
30	146	896	458	e220	---	338	641	172	107	117	250	250
31	139	---	422	e220	---	924	---	180	---	117	157	---
TOTAL	6233	17264	19127	8330	4100	16749	47131	9609	4395	5039	3668	19074
MEAN	201	575	617	269	146	540	1571	310	146	163	118	636
MAX	580	1750	1410	370	210	1270	5040	697	243	579	365	2010
MIN	121	140	300	220	110	230	607	172	97	103	63	89

CAL YR 1986 TOTAL 178449 MEAN 489 MAX 4690 MIN 104
WTR YR 1987 TOTAL 160719 MEAN 440 MAX 5040 MIN 63

e Estimated

01438500 DELAWARE RIVER AT MONTAGUE, NJ

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

DRAINAGE AREA.--3,480 mi^2.

WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--Records excellent except for period of ice effect, Jan. 22 to Mar. 8, and from Oct. 11 to Nov. 9 and July 6 to Sept. 8, which are good. Diurnal fluctuations at medium and low flow caused by powerplants on tributary streams. Flow regulated by Lake Wallenpaupack and by Pepacton, Cannonsville, Swinging Bridge, Toronto, Cliff Lake, and Neversink Reservoirs (see Delaware River basin, reservoirs in) and smaller reservoirs. Diversion from Pepacton, Cannonsville, and Neversink Reservoirs (see Delaware River basin, diversions). Several measurements of water temperature were made during the year. Satellite telemeter at station.

AVERAGE DISCHARGE.--48 years, 5,793 ft^3/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 250,000 ft^3/s, Aug. 19, 1955, gage height, 35.15 ft, from rating curve extended above 90,000 ft^3/s on basis of flood-routing study; minimum, 382 ft^3/s, Aug. 24, 1954, gage height, 3.83 ft, minimum daily, 412 ft^3/s, Aug. 23, 1954.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 65,200 ft^3/s, Apr. 5, gage height, 17.91 ft; minimum, 1,050 ft^3/s, Sept. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2260	1470	8980	5900	e3600	e2000	15800	3250	1920	2310	2190	2350
2	1830	1480	7320	5780	e3100	e4200	13300	2910	2800	2310	1690	2630
3	1920	1520	9620	5730	e3500	e6700	11400	2700	3360	2590	1850	1990
4	3540	1740	11900	5130	e3500	e7100	18300	4100	3020	3110	2710	1490
5	5250	1810	10300	4640	e3300	e5900	58000	4610	2980	2470	2750	1210
6	3540	2050	8010	4860	e3000	e5100	40000	4130	2770	2020	2580	1160
7	2910	2250	6690	4770	e2900	e5600	32200	3730	1860	2440	2250	1510
8	2400	2420	6350	4610	e2500	e8020	27200	3450	1650	2720	2180	1810
9	1870	5100	6810	4270	e2300	15800	23000	2880	2260	3330	1780	16500
10	1930	10700	7450	3790	e3300	16200	19100	2590	2500	3330	1720	17400
11	1780	8080	8660	3380	e2900	12800	15800	2530	2390	2840	2150	9630
12	1470	6600	8100	3680	e2800	11200	13500	2410	1760	1940	2010	6880
13	1490	5770	7250	4250	e2800	9770	17000	2130	1790	2030	1780	10800
14	1800	4800	6050	3980	e2800	8240	22600	2020	2020	3310	1620	26300
15	2410	3910	5360	4070	e1800	6340	18100	1940	2200	7920	1700	16800
16	2770	3410	5880	4710	e1900	5960	15500	1860	2690	7830	1590	11400
17	2440	3290	5480	4550	e2000	6150	13500	1780	2360	5030	1780	9140
18	2090	4040	4560	3310	e2800	5750	12700	1930	2340	3880	2650	9970
19	1680	4570	5740	3430	e2900	5710	11700	1880	2390	2880	1650	19300
20	1620	4600	5670	4440	e2900	6040	10400	2180	2420	2550	1640	15300
21	2000	11000	4450	4210	e2800	5650	8170	2100	1900	3260	1720	11700
22	2070	17500	3950	e4190	e1700	4810	7290	2280	1600	3290	1600	9700
23	1700	11800	4050	e3700	e1700	5320	6490	2060	1860	3110	1660	8280
24	2040	9770	4400	e4100	e1700	6900	5880	2230	2590	2970	1770	7320
25	1830	10900	5860	e3800	e1800	7780	5490	2840	2610	2950	1750	6550
26	1710	10300	8790	e4100	e2000	9160	5200	2410	2290	2780	1940	6100
27	1760	23400	8450	e4400	e1700	11000	4700	2130	1990	2450	2060	5710
28	2210	21700	6630	e4800	e1800	10500	3970	2320	2080	2750	2490	5190
29	2010	14600	6100	e4700	---	9550	3670	2350	2010	2380	2780	4710
30	1710	11000	6870	e4400	---	8560	3630	2830	2160	2200	3930	4620
31	1690	---	6480	e4000	---	9340	---	1800	---	2100	2750	---
TOTAL	67720	221580	212210	135680	71800	243150	463590	80360	68570	97080	64720	253450
MEAN	2185	7386	6845	4377	2564	7844	15450	2592	2286	3132	2088	8448
MAX	5250	23400	11900	5900	3600	16200	58000	4610	3360	7920	3930	26300
MIN	1470	1470	3950	3310	1700	2000	3630	1780	1600	1940	1590	1160

CAL YR 1986 TOTAL 2253310 MEAN 6173 MAX 77200 MIN 1430
WTR YR 1987 TOTAL 1979910 MEAN 5424 MAX 58000 MIN 1160

e Estimated

RESERVOIRS IN DELAWARE RIVER BASIN

01416900 PEPACTON RESERVOIR.--Lat 42°04'38", long 74°58'04", Delaware County, Hydrologic Unit 02040102, near release chamber at Downsville Dam on East Branch Delaware River, and 1.6 mi east of Downsville. DRAINAGE AREA, 371 mi^2. PERIOD OF RECORD, September 1954 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Board of Water Supply, City of New York).

Reservoir is formed by an earthfill rockfaced dam. Storage began Sept. 15, 1954. Usable capacity 140,190 mil gal between minimum operating level, elevation, 1,152.0 ft and crest of spillway, elevation, 1,280.0 ft. Capacity: at crest of spillway 149,799 mil gal; at minimum operating level, 9,609 mil gal; at sill of diversion tunnel, elevation, 1,143.0 ft, 6,098 mil gal; in dead storage below release outlet, elevation, 1,126.50 ft, 1,898 mil gal. Figures given herein represent total contents. Reservoir impounds water for diversion through East Delaware Tunnel to Rondout Reservoir on Rondout Creek, in Hudson River basin (see elsewhere in this section), for water supply to City of New York; for release during periods of low flow in the lower Delaware River basin, as directed by the Delaware River Master; and for conservation release. No diversion prior to Jan. 6, 1955. Records provided by Bureau of Water Resources Development and Department of Environmental Protection, City of New York.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 154,027 mil gal, Apr. 5, 1960, elevation, 1,282.27 ft; minimum observed (after first filling), 9,575 mil gal, Dec. 26, 1964, elevation, 1,151.92 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 151,652 mil gal, Apr. 9, 13, elevation, 1,281.00 ft; minimum, 109,022 mil gal, Sept. 8, elevation, 1,255.90 ft.

01424997 CANNONSVILLE RESERVOIR.--Lat 42°03'46", long 75°22'29", Delaware County, Hydrologic Unit 02040101, in emergency gate tower at Cannonsville Dam on West Branch Delaware River, and 1.8 mi southeast of Stilesville. DRAINAGE AREA, 454 mi^2. PERIOD OF RECORD, October 1963 to current year. REVISED RECORDS, WDR NY-71-1: 1966. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Board of Water Supply, City of New York).

Reservoir is formed by an earthfill rockfaced dam. Storage began Sept. 30, 1963. Usable capacity 95,706 mil gal between minimum operating level, elevation, 1,040.0 ft and crest of spillway, elevation, 1,150.0 ft. Capacity, at crest of spillway, 98,618 mil gal; at minimum operating level, 2,912 mil gal; at mouth of inlet channel to diversion tunnel, elevation, 1,035.0 ft, 1,892 mil gal; in dead storage below release outlet elevation, 1,020.5 ft, 328 mil gal. Figures given herein represent total contents. Impounded water is diverted for New York City water supply via West Delaware Tunnel to Rondout Reservoir in Hudson River basin (see elsewhere in this section); is released in Delaware River for downstream low flow augmentation, as directed by the Delaware River Master; and is released for conservation flow in the Delaware River. No diversion prior to January 29, 1964. Records provided by Bureau of Water Resources Development, City of New York.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 109,617 mil gal, Mar. 16, 1986, elevation, 1,156.73 ft; minimum observed (after first filling), 11,901 mil gal, Nov. 7, 1968, elevation, 1,066.24 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 105,908 mil gal, Apr. 6, elevation, 1,154.53 ft; minimum, 57,550 mil gal, Sept. 8, elevation, 1,119.80 ft.

01433000 SWINGING BRIDGE RESERVOIR.--Lat 41°34'25", long 74°47'00", Sullivan County, Hydrologic Unit 02040104, at dam on Mongaup River, and 1.8 mi northwest of Fowlersville. DRAINAGE AREA, 118 mi^2 excluding Cliff Lake, Lebanon Lake, and Toronto Reservoir. PERIOD OF RECORD, January 1930 to current year. REVISED RECORDS, WSP 1552: 1951-54. WDR NY-86-1: 1985. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Orange and Rockland Utilities, Inc.). All capacity figures given herein are based on zero storage at minimum operating pool level, 1,010 ft.

Reservoir is formed by an earthfill dam. Storage began Jan. 19, 1930. Usable capacity, 1,436.6 mil ft^3 between elevations 1,010.0 ft, minimum operating pool, and 1,071.2 ft, top of flashboards. Capacity below elevation 1,010.0 ft, minimum operating pool, about 212.7 mil ft^3. Reservoir is used for storage of water for power. Figures given herein represent contents above 1,010.0 ft. Water is received from Cliff Lake, Lebanon Lake, and Toronto Reservoir. Records provided by Orange and Rockland Utilities, Inc.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,461.6 mil ft^3, Mar. 14, 1977, elevation, 1,071.8 ft; minimum (after first filling), -141.4 mil ft^3, Dec. 2, 1938, elevation, 987.5 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,375.2 mil ft^3, Apr. 13, elevation, 1,069.7 ft; minimum, 757.9 mil ft^3, Feb. 14, elevation, 1,052.2 ft.

01433100 TORONTO RESERVOIR.--Lat 41°37'15", long 74°49'55", Sullivan County, Hydrologic Unit 02040104, at dam on Black Lake Creek, and 2.5 mi southeast of village of Black Lake. DRAINAGE AREA, 23.2 mi^2. PERIOD OF RECORD, January 1926 to current year. REVISED RECORDS, WSP 1552: 1951-54. WSP 1702: 1959 (M). WDR NY-85-1: 1984. WDR NY-86-1: 1985. GAGE, nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Orange and Rockland Utilities, Inc.). All capacity figures given herein are based on zero storage at minimum operating pool level, 1,165.0 ft.

Reservoir is formed by an earthfill dam completed July 24, 1926. Storage began Jan. 13, 1926. Usable capacity 1,098.2 mil ft^3 between elevations 1,165.0 ft, minimum operating pool, and 1,220.0 ft, top of permanent flashboards. Capacity below elevation 1,165.0 ft, minimum operating pool, about 26.8 mil ft^3. Reservoir is used for storage of water for power. Figures given herein represent contents above 1,165.0 ft. Records provided by Orange and Rockland Utilities, Inc.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 1,171.2 mil ft^3, July 20, 1945, elevation, 1,222.0 ft; minimum observed (after fitst filling), -26.8 mil ft^3, Nov. 15, 1928, elevation, 1,144.5 ft.

EXTREMES OF CURRENT YEAR.--Maximum contents observed, 968.0 mil ft^3, May 20, 31, June 1, elevation, 1,216.2 ft; minimum observed, 311.7 mil ft^3, Nov. 12, elevation 1,190.7 ft.

01433200 CLIFF LAKE.--Lat 41°35'00", long 74°47'40", Sullivan County Hydrologic Unit 02040104, at dam on Black Lake Creek, and 2.5 mi northwest of Fowlersville. DRAINAGE AREA, 6.46 mi^2, excluding area above Toronto Reservoir. PERIOD OF RECORD, January 1939 to current year. REVISED RECORDS, WSP 1552: 1951-54. WDR NY-75-1: 1974(m). WDR NY-86-1: 1985. GAGE, nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Orange and Rockland Utilities, Inc.). All capacity figures given herein are based on zero storage at minimum operating pool level, 1,043.3 ft.

Reservoir is formed by a concrete gravity-type dam. Storage began Jan. 6, 1939. Usable capacity, 136.06 mil ft^3 between elevations 1,043.3 ft, minimum operating pool, and 1,072.0 ft, top of permanent flashboards. Capacity below elevation 1,043.3 ft, minimum operating pool, about 6.54 mil ft^3. Reservoir is used for storage of water for power. Water is received from Toronto and Lebanon Lake reservoirs and is discharged through a tunnel into Swinging Bridge Reservoir. Figures given herein represent contents above 1,043.3 ft. Records provided by Orange and Rockland Utilities, Inc.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 145.44 mil ft^3, July 30, 31, 1945, elevation, 1,073.1 ft; minimum observed (after first filling), about -6.54 mil ft^3, Mar. 16, 1963, elevation, 1,038.0 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 118.10 mil ft^3, Sept. 21, elevation, 1,069.8 ft; minimum observed, 20.0 mil ft^3, Feb. 13, elevation, 1,051.6 ft.

RESERVOIRS IN DELAWARE RIVER BASIN--Continued

01435900 NEVERSINK RESERVOIR.--Lat 41°49'40", long 74°38'21", Sullivan County, Hydrologic Unit 02040104, at a gatehouse at Neversink Dam on Neversink River, and 2 mi southwest of Neversink. DRAINAGE AREA, 92.5 mi^2. PERIOD OF RECORD, June 1953 to current year. REVISED RECORDS, WDR NY-85-1: Drainage area. GAGE, nonrecording gage read daily at 0900. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Board of Water Supply, City of New York).

Reservoir is formed by an earthfill rockfaced dam. Storage began June 2, 1953. Usable capacity 34,941 mil gal between minimum operating level, elevation, 1,319.0 ft and crest of spillway, elevation, 1,440.0 ft. Capacity at crest of spillway 37,146 mil gal; at minimum operating level, 2,205 mil gal; dead storage below diversion sill and outlet sill, elevation 1,314.0 ft, 1,680 mil gal. Figures given herein represent total contents. Reservoir impounds water for diversion through Neversink-Grahamsville Tunnel to Rondout Reservoir on Rondout Creek, in Hudson River basin, for water supply of City of New York (see elsewhere in this section); for release during periods of low flow in the lower Delaware River basin, as directed by the Delaware River Master; and for conservation release. No diversion prior to Dec. 3, 1953. Records provided by Bureau of Water Resources Development and Department of Environmental Protection, City of New York.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 37,978 mil gal, Apr. 25, 1961, elevation, 1,441.67 ft; minimum observed (after first filling), 1,985 mil gal, Nov. 25, 1964, elevation, 1,316.98 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 37,569 mil gal, Apr. 13, elevation, 1,440.85 ft; minimum observed, 19,122 mil gal, Nov. 8, 20, elevation, 1,396.46 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

Date	Elevation (feet) ##	Contents (million gallons)	Change in contents (equivalent in ft^3/s)	Elevation (feet) ##	Contents (million gallons)	Change in contents (equivalent in ft^3/s)	Elevation (feet) #	Contents (million ft^3)	Change in contents (equivalent in ft^3/s)
	01416900 Pepacton Reservoir			01424997 Cannonsville Reservoir			01433000 Swinging Bridge Reservoir		
Sept. 30	1,265.66	124,670		1,135.26	77,238		1,064.0	1,154	
Oct. 31	1,258.81	113,565	- 554	1,131.76	72,587	- 232	1,062.7	1,106	- 17.8
Nov. 30	1,264.43	122,634	+ 468	1,146.93	93,948	+1,102	1,069.1	1,351	+ 94.4
Dec. 31	1,267.01	126,925	+ 214	1,150.73	99,792	+ 292	1,063.9	1,150	- 74.9
CAL YR 1986 -	-	-	+ 101	-	-	+ 92.6	-	-	+ 6.1
Jan. 31	1,263.11	120,468	- 322	1,150.47	99,374	- 20.9	1,055.8	870	-105
Feb. 28	1,257.21	111,054	- 520	1,149.20	97,401	- 109	1,055.0	844	- 10.6
Mar. 31	1,266.47	126,020	+ 747	1,151.60	101,193	+ 189	1,062.4	1,095	+ 93.7
Apr. 30	1,279.46	148,806	+1,175	1,149.85	98,390	- 145	1,064.3	1,165	+ 26.9
May 31	1,274.31	139,517	- 464	1,145.98	92,503	- 294	1,065.0	1,191	+ 9.8
June 30	1,268.17	128,883	- 548	1,142.94	88,035	- 230	1,062.0	1,081	- 42.6
July 31	1,263.79	121,580	- 365	1,137.26	80,001	- 401	1,061.2	1,052	- 10.6
Aug. 31	1,257.71	111,836	- 486	1,121.90	60,103	- 993	1,062.7	1,106	+ 20.1
Sept. 30	1,259.89	115,278	+ 178	1,129.60	69,746	+ 497	1,064.8	1,184	+ 29.9
WTR YR 1987 -	-	-	- 39.8	-	-	- 31.8	-	-	+ 0.9

Date	Elevation (feet) #	Contents (million ft^3)	Change in contents (equivalent in ft^3/s)	Elevation (feet) #	Contents (million ft^3)	Change in contents (equivalent in ft^3/s)	Elevation (feet) ##	Contents (million gallons)	Change in contents (equivalent in ft^3/s)
	01433100 Toronto Reservoir			01433200 Cliff Lake			01435900 Neversink Reservoir		
Sept. 30	1,199.0	492		1,066.7	95.1		1,408.91	23,606	
Oct. 31	1,193.7	372	- 44.8	1,065.1	84.3	- 4.0	1,398.98	19,986	-181
Nov. 30	1,196.0	422	+ 19.4	1,069.6	116.5	+12.4	1,407.11	22,925	+152
Dec. 31	1,201.4	551	+ 48.2	1,065.6	87.6	-10.8	1,412.17	24,867	+ 96.9
CAL YR 1986 -	-	-	- 2.4	-	-	+ 0.3	-	-	- 22.7
Jan. 31	1,200.1	519	- 12.1	1,056.0	35.7	-19.4	1,414.21	25,674	+ 40.3
Feb. 28	1,201.5	554	+ 14.5	1,054.0	28.1	- 3.1	1,406.14	22,562	-172
Mar. 31	1,206.0	671	+ 43.8	1,062.1	65.7	+14.0	1,423.05	29,334	+338
Apr. 30	1,215.4	942	+105	1,064.6	81.1	+ 6.0	1,440.11	37,201	+406
May 31	1,216.2	968	+ 9.7	1,065.0	83.7	+ 1.0	1,432.46	33,532	-183
June 30	1,208.1	728	- 92.6	1,065.1	84.3	+ 0.3	1,420.93	28,433	-263
July 31	1,197.5	456	-101	1,064.5	80.5	- 1.4	1,413.55	25,412	-151
Aug. 31	1,191.4	325	- 49.0	1,062.4	67.5	- 4.8	1,406.76	22,793	-131
Sept. 30	1,196.1	424	+ 38.3	1,066.3	92.3	+ 9.6	1,418.40	27,377	+236
WTR YR 1987 -	-	-	- 2.1	-	-	- 0.1	-	-	+ 16.0

Elevation at 0900 hours on first day of following month.
Elevation at 2400 hours.

DIVERSIONS FROM DELAWARE RIVER BASIN

01415200 Diversion from Pepacton Reservoir (see preceding pages) on East Branch Delaware River to Rondout Reservoir on Rondout Creek, in Hudson River basin, for municipal supply of City of New York. No diversion prior to Jan. 6, 1955. Records provided by Bureau of Water Resources Development and Department of Environmental Protection, City of New York.
REVISED RECORDS, WDR NY-71-1: 1970. WDR NY-81-1: 1980.

014239000 Diversion from Cannonsville Reservoir (see preceding pages) on West Branch Delaware River to Rondout Reservoir on Rondout Creek, in Hudson River basin, for municipal supply of City of New York. No diversion prior to Jan. 29, 1964. Records provided by Bureau of Water Resources Development, City of New York.
REVISED RECORDS, WDR NY-81-1: 1980.

01435800 Diversion from Neversink Reservoir (see preceding pages) on Neversink River to Rondout Reservoir on Rondout Creek, in Hudson River basin, for municipal supply of City of New York. No diversion prior to Dec. 3, 1953. Records provided by Bureau of Water Resources Development and Department of Environmental Protection, City of New York.
REVISED RECORDS, WDR NY-82-1: 1976, 1977.

DIVERSION, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

Month	01415200 Pepacton Reservoir	01423900 Cannonsville Reservoir	01435800 Neversink Reservoir
October.....	687	270	251
November.....	697	264	245
December.....	411	0	145
CAL YR 1986	569	183	230
January.....	619	0	52.2
February.....	686	91.1	215
March.....	643	666	119
April.....	430	215	0
May.....	697	455	265
June.....	696	209	288
July.....	692	293	178
August.....	694	454	162
September.....	696	284	162
WTR YR 1987	637	269	173

STREAMS TRIBUTARY TO LAKE ONTARIO

04250750 SANDY CREEK NEAR ADAMS, NY
(National stream-quality accounting network station)

LOCATION.--Lat 43°48'48", long 76°04'30", Jefferson County, Hydrologic Unit 04140102, on left bank 250 ft upstream from highway bridge on Liberty Street, 0.2 mi downstream from tributary, 2.5 mi downstream from Adams, and 10.0 mi upstream from mouth. Water-quality sampling site at discharge station.

DRAINAGE AREA.--128 mi^2.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR NY-85-1: 1963-64(M), 1976-77(M), 1980(M), 1984(M).

GAGE.--Water-stage recorder. Datum of gage is 523.71 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Moderate diurnal fluctuation at low flow caused by mills upstream from station.

AVERAGE DISCHARGE.--30 years, 274 ft^3/s, 29.07 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,690 ft^3/s, Feb. 25, 1985, gage height, 11.05 ft, from rating curve extended above 5,500 ft^3/s on basis of flow-over-dam measurement of peak flow; minimum discharge, 1.5 ft^3/s, Sept. 17, 18, 1963, Aug. 19, 1964; minimum daily, 2.2 ft^3/s, Sept. 7, 11, 1960, Sept. 17, 1963, Aug. 16, Sept. 22, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
June 23	0100	*4,640	*8.13	No other peak greater than base discharge.			

Minimum discharge, 6.9 ft^3/s, Aug. 27, 28, gage height, 0.90 ft; minimum daily discharge, 7.2 ft^3/s, Aug. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	569	297	252	e170	e130	e90	788	142	35	72	14	13
2	436	522	301	e150	e130	e660	589	109	32	61	14	14
3	333	452	1420	e120	e120	e740	564	90	33	58	20	15
4	434	647	1080	e120	e120	673	685	80	45	159	24	14
5	546	521	659	e120	e110	599	760	73	45	121	22	12
6	442	526	536	e130	e100	536	760	71	37	75	19	10
7	330	443	450	e140	e100	571	735	68	32	59	17	9.0
8	250	363	393	e150	e90	e1050	569	63	164	51	15	10
9	299	398	419	160	e80	e1100	472	58	356	45	14	57
10	260	355	889	151	e70	e600	377	54	245	39	20	51
11	198	301	652	149	e70	e520	320	52	125	34	23	33
12	166	304	e500	146	e68	e450	277	49	197	32	18	26
13	364	307	e330	142	e66	e380	267	48	214	29	15	43
14	652	224	e340	134	e64	e320	236	44	136	47	13	62
15	768	235	358	229	e60	e300	209	71	91	161	11	40
16	567	244	325	e280	e60	284	184	81	64	83	9.8	29
17	458	323	302	e240	e62	265	168	59	50	54	9.1	23
18	381	343	302	e200	e64	262	161	51	41	41	11	38
19	312	239	318	e180	e64	294	148	46	36	33	9.6	68
20	271	175	291	e160	e66	315	136	41	32	30	8.5	139
21	243	251	247	e150	e68	273	122	37	29	27	7.8	117
22	222	234	234	e140	e68	492	104	36	430	24	8.8	72
23	208	230	211	e130	e70	796	98	76	1430	21	11	58
24	198	462	202	e110	e70	957	199	66	426	19	9.7	52
25	174	461	450	e110	e70	1170	166	58	218	27	8.8	42
26	172	538	517	e120	e74	2050	125	47	135	31	7.9	34
27	202	1180	387	e130	e76	1370	105	41	104	26	7.3	30
28	605	639	311	e140	e80	1080	97	61	105	21	7.2	33
29	432	510	272	e140	---	906	122	84	106	19	10	34
30	535	394	e230	e130	---	1120	145	56	82	17	15	78
31	372	---	e200	e130	---	1220	---	42	---	16	14	---
TOTAL	11399	12118	13378	4701	2270	21443	9688	1954	5075	1532	414.5	1256.0
MEAN	368	404	432	152	81.1	692	323	63.0	169	49.4	13.4	41.9
MAX	768	1180	1420	280	130	2050	788	142	1430	161	24	139
MIN	166	175	200	110	60	90	97	36	29	16	7.2	9.0
CFSM	2.87	3.16	3.37	1.18	.63	5.40	2.52	.49	1.32	.39	.10	.33
IN.	3.31	3.52	3.89	1.37	.66	6.23	2.82	.57	1.47	.45	.12	.37

CAL YR 1986 TOTAL 128701.0 MEAN 353 MAX 3340 MIN 31 CFSM 2.75 IN. 37.4
WTR YR 1987 TOTAL 85228.4 MEAN 234 MAX 2050 MIN 7.2 CFSM 1.82 IN. 24.8

e Estimated

STREAMS TRIBUTARY TO LAKE ONTARIO

04250750 SANDY CREEK NEAR ADAMS, NY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965, 1978 to current year.
CHEMICAL DATA: 1965, 1978 (c); 1979-80 (d), 1981-87 (c).
MINOR ELEMENTS DATA: 1978-79 (b), 1980 (c), 1981-87 (b).
ORGANIC DATA: OC--1978 (c), 1979-80 (d), 1981 (c).
NUTRIENT DATA: 1978 (c), 1979-80 (d), 1981-87 (c).
BIOLOGICAL DATA:
Bacteria--1978 (c), 1979-80 (d), 1981-87 (c).
Phytoplankton--1978-80 (c), 1981 (b).
Periphyton--1978-80 (b).
SEDIMENT DATA: 1978 (c), 1979-80 (d), 1981-87 (c).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Once daily January 1978 to September 1980. Recorder July 1980 to September 1984.
WATER TEMPERATURES: Once daily January 1978 to September 1980. Recorder July 1980 to September 1984.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE (water years 1978-84): Maximum recorded, 563 microsiemens, Jan. 21, 1983; minimum recorded, 86 microsiemens, Oct. 15, 1982.
WATER TEMPERATURES: Maximum (water years 1979-80, 1983-84), 33.0°C, July 24, 1979; minimum (water years 1978-84), 0.0°C on many days during winter periods.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
NOV											
04...	0930	846	260	8.2	6.5	8.3	755	10.8	89	190	2500
JAN											
28...	1045	140	325	8.0	0.5	0.60	750	12.0	85	28	K9
MAR											
11...	1030	520	286	8.3	0.0	2.2	765	13.6	93	K21	42
APR											
22...	1000	86	320	8.5	13.0	0.50	755	12.2	117	93	K22
JUL											
28...	0945	15	380	8.3	19.5	0.50	750	7.9	88	360	200
AUG											
26...	1030	5.5	476	8.6	16.0	1.2	760	9.9	101	210	72

DATE	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD 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 WH WAT TOTAL FIELD MG/L AS CACO3	BICAR-BONATE WH WAT TOTAL FIELD MG/L AS HCO3	CAR-BONATE WH WAT TOTAL FIELD MG/L AS CO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
NOV											
04...	140	16	49	3.5	4.5	1.7	121	140	--	11	6.2
JAN											
28...	160	22	59	4.2	7.6	1.3	143	180	--	15	15
MAR											
11...	140	19	49	3.4	5.3	1.6	117	140	--	12	8.6
APR											
22...	160	14	56	4.3	7.6	1.4	144	140	--	14	12
JUL											
28...	170	15	58	5.0	15	2.7	150	180	--	18	17
AUG											
26...	190	9	68	5.8	27	3.0	185	180	24	21	24

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE 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)
NOV											
04...	<0.1	3.7	163	150	--	0.69	0.01	<0.01	0.50	0.020	0.030
JAN											
28...	<0.1	4.7	191	190	--	1.20	0.01	<0.01	0.40	0.030	0.020
MAR											
11...	<0.1	4.4	157	150	--	1.40	0.03	0.02	0.90	0.050	0.020
APR											
22...	<0.1	1.3	188	170	--	0.80	<0.01	<0.01	0.40	0.030	0.030
JUL											
28...	0.2	2.4	206	210	0.480	0.50	0.08	0.08	0.90	0.210	0.160
AUG											
26...	0.1	3.0	259	290	0.590	0.61	0.03	0.02	0.50	0.570	0.500

K Results based on colony count outside the acceptable range (non-ideal colony count).

STREAMS TRIBUTARY TO LAKE ONTARIO

04250750 SANDY CREEK NEAR ADAMS, NY--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
NOV 04...	0.030	20	<1	24	<0.5	<1	<1	<3	<1	29	<5
JAN 28...	0.020	10	<1	25	<0.5	<1	<1	<3	<1	14	<5
MAR 11...	<0.010	--	--	--	--	--	--	--	--	--	--
APR 22...	0.010	20	<1	29	<0.5	<1	<1	<3	2	5	<5
JUL 28...	0.140	--	--	--	--	--	--	--	--	--	--
AUG 26...	0.470	<10	<1	37	<0.5	1	<1	<3	2	7	<5

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV 04...	5	6	<0.1	10	3	<1	<1	93	<6	20
JAN 28...	8	7	0.2	<10	<1	<1	<1	110	<6	4
MAR 11...	--	--	--	--	--	--	--	--	--	--
APR 22...	6	8	<0.1	<10	<1	<1	<1	110	<6	30
JUL 28...	--	--	--	--	--	--	--	--	--	--
AUG 26...	<4	10	<0.1	<10	1	3	<1	140	<6	8

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 04...	0930	846	33	68	92
JAN 28...	1045	140	3	1.6	84
MAR 11...	1030	520	15	22	90
APR 22...	1000	86	6	1.7	58
JUL 28...	0945	15	5	0.29	70
AUG 26...	1030	5.5	10	0.22	73

STREAMS TRIBUTARY TO LAKE ONTARIO

04252500 BLACK RIVER NEAR BOONVILLE, NY

LOCATION.--Lat 43°30'42", long 75°18'25", Oneida County, Hydrologic Unit 04150101, on left bank at downstream side of bridge on Moose River Road, 0.8 mi upstream from Sugar River, and 2 mi northeast of Boonville.

DRAINAGE AREA.--304 mi^2.

PERIOD OF RECORD.--January 1911 to current year.

REVISED RECORDS.--WSP 784: 1934. WSP 1084: 1912(M), 1913, 1917-1919(M), 1922(M), 1924(M), 1926(M), 1928(M), 1930(M), 1933(M). WSP 1307: 1914(M). WDR NY-82-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 935.50 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 27, 1933, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Occasional regulation by several headwater reservoirs. Forestport feeder diverts water from State Pond at Forestport 9 mi upstream. That portion of diverted water which does not pass Black River Canal (flowing south), returns to Black River downstream from station through Mill Creek sluiceway. Slight diurnal fluctuation at medium and low flow caused by mill upstream from station. Several measurements of water temperature were made during the year. Telephone gage-height telemeter at station.

AVERAGE DISCHARGE.--76 years, 704 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,800 ft^3/s, Apr. 18, 1982, Dec. 30, 1984, gage heights, 11.31 ft and 11.41 ft, respectively; maximum gage height, 13.10 ft, Feb. 21, 1981 (ice jam); minimum observed discharge, about 5 ft^3/s, Aug. 26, 1918, gage height, 2.40 ft; minimum daily, 7 ft^3/s, Aug. 26, 1918.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,900 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 1	1030	*5,700	a*9.33	No other peak greater than base discharge.			

a Recorded in well; outside gage height was 9.08 ft, from crest-stage gage.

Minimum discharge, 182 ft^3/s, May 23, Aug. 17, 22, gage height, 3.89 ft; minimum daily, 189 ft^3/s, Aug. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1150	623	850	e420	e350	e450	5270	636	305	243	291	258
2	1240	635	853	e400	e340	e900	3550	548	317	231	247	272
3	1070	688	1360	e380	e350	e1000	2330	470	366	303	542	289
4	1160	603	1930	e360	e360	e1100	1840	430	449	510	1010	275
5	1240	548	1480	e360	e370	e1100	2580	400	477	607	802	241
6	1110	632	1140	e390	e380	e1000	2760	397	366	417	519	216
7	1010	740	970	e430	e380	e900	2500	419	288	338	349	207
8	866	691	902	e450	e390	e1200	2150	398	351	411	291	243
9	782	833	812	e440	e380	e1400	1740	365	523	433	270	350
10	725	1130	1090	e430	e370	e1500	1430	346	651	370	366	367
11	665	987	1140	e410	e350	e1500	1270	335	588	488	478	316
12	611	912	902	e400	e350	e1400	1160	323	525	473	432	302
13	666	894	e640	e400	e340	e1300	1170	326	622	450	328	1330
14	948	794	e580	e410	e320	e1200	1040	307	557	369	257	2780
15	1400	747	e640	e440	e300	e1100	883	294	456	1190	225	1780
16	1180	719	680	e470	e310	e1000	795	298	340	1140	203	858
17	949	632	688	e430	e310	e820	737	290	258	725	189	558
18	817	572	716	e430	e320	e540	705	277	260	457	209	721
19	732	547	700	e410	e320	e400	670	271	233	351	226	2410
20	674	461	e620	e390	e320	420	601	255	215	394	220	2100
21	637	585	e580	e370	e320	404	524	242	205	396	195	1380
22	612	598	e560	e360	e320	437	486	227	365	372	226	1030
23	592	543	e560	e340	e310	658	457	199	834	288	381	794
24	585	585	569	e340	e310	943	457	227	714	246	344	645
25	560	661	619	e350	e320	1260	496	243	449	245	263	539
26	565	773	771	e360	e320	2620	452	233	338	329	217	485
27	652	2370	718	e370	e320	3090	423	256	277	683	211	463
28	762	2240	591	e370	e330	2720	422	311	267	513	235	462
29	829	1390	e540	e370	---	2800	523	490	280	321	312	479
30	756	1100	e500	e370	---	3020	604	400	263	262	355	475
31	697	---	e450	e360	---	3800	---	323	---	290	306	---
TOTAL	26242	25233	25151	12210	9460	41982	40025	10536	12139	13845	10499	22625
MEAN	847	841	811	394	338	1354	1334	340	405	447	339	754
MAX	1400	2370	1930	470	390	3800	5270	636	834	1190	1010	2780
MIN	560	461	450	340	300	400	422	199	205	231	189	207

CAL YR 1986 TOTAL 322539 MEAN 884 MAX 4840 MIN 258
WTR YR 1987 TOTAL 249947 MEAN 685 MAX 5270 MIN 189

e Estimated

04256000 INDEPENDENCE RIVER AT DONNATTSBURG, NY

LOCATION.--Lat 43°44'50", long 75°20'05", Lewis County, Hydrologic Unit 04150101, on right bank at downstream side of highway bridge on Donnattsburg Road at Donnattsburg, 1.2 mi downstream from Chase Lake Outlet, 4.2 mi northeast of Glenfield, and 5.0 mi upstream from mouth.

DRAINAGE AREA.--88.7 mi^2, revised.

PERIOD OF RECORD.--July 1942 to current year.

REVISED RECORDS.--WDR NY-85-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 972.84 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 16, 1949, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--45 years, 194 ft^3/s, 29.70 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,420 ft^3/s, Dec. 30, 1984, gage height, 13.34 ft, from rating curve extended above 4,600 ft^3/s on basis of slope-area measurement of peak flow; minimum observed discharge, 18 ft^3/s, Sept. 17, 1948, Aug. 4, 5, 1949, gage height, 2.85 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 1	0630	*2,210	*7.73	No other peak greater than base discharge.			

Minimum discharge, 32 ft^3/s, Aug. 21, gage height, 3.51 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	223	202	167	105	e125	e70	1890	148	58	121	44	52
2	242	197	163	e100	e120	e86	862	134	53	93	44	50
3	218	217	428	e100	e105	e130	506	117	50	82	84	49
4	227	197	732	e100	96	e180	416	101	53	249	146	45
5	325	192	488	e110	e90	e200	600	90	79	517	99	42
6	312	198	334	e115	e88	e190	723	85	91	230	75	40
7	244	221	245	e120	85	e180	660	86	68	136	60	37
8	190	205	208	e115	83	e175	535	84	83	116	55	42
9	167	204	194	e110	e82	e200	408	77	220	103	55	67
10	154	244	282	e105	e80	e230	326	72	291	89	79	97
11	138	210	330	100	e78	e210	279	66	214	93	97	74
12	126	189	268	e98	e74	e200	241	66	181	76	70	65
13	140	176	193	e96	e72	e150	215	66	391	66	55	350
14	261	147	167	e96	e70	e140	190	65	481	63	46	848
15	598	143	173	e98	e62	e130	166	63	229	138	42	418
16	565	140	163	e105	e58	e120	149	74	136	133	38	193
17	360	136	154	e120	e56	111	136	73	97	92	35	130
18	257	140	148	e150	e58	110	133	66	77	71	35	169
19	203	135	145	e155	e60	100	125	61	65	72	35	477
20	177	115	139	e140	e60	98	116	57	57	72	34	540
21	158	135	129	e135	e60	95	107	54	51	66	33	499
22	146	136	124	e130	e58	100	100	52	56	63	38	299
23	139	128	119	e130	e56	152	92	59	259	54	55	202
24	143	141	118	e130	e56	259	101	69	322	49	57	167
25	134	164	131	e125	e56	445	114	65	167	59	46	152
26	126	169	170	e125	e54	934	102	63	114	82	40	127
27	125	582	159	e120	e58	1110	89	60	83	72	38	111
28	206	612	139	e115	e62	895	85	73	80	59	37	102
29	333	358	132	e115	---	949	94	94	95	51	47	91
30	291	249	121	e115	---	1130	120	87	100	45	63	92
31	255	---	114	e120	---	1700	---	68	---	41	61	---
TOTAL	7183	6282	6577	3598	2062	10779	9680	2395	4301	3253	1743	5627
MEAN	232	209	212	116	73.6	348	323	77.3	143	105	56.2	188
MAX	598	612	732	155	125	1700	1890	148	481	517	146	848
MIN	125	115	114	96	54	70	85	52	50	41	33	37
CFSM	2.58	2.33	2.36	1.29	.82	3.87	3.59	.86	1.60	1.17	.63	2.09
IN.	2.98	2.60	2.72	1.49	.85	4.47	4.01	.99	1.78	1.35	.72	2.33

CAL YR 1986 TOTAL 77802 MEAN 213 MAX 1820 MIN 59 CFSM 2.37 IN. 32.2
WTR YR 1987 TOTAL 63480 MEAN 174 MAX 1890 MIN 33 CFSM 1.94 IN. 26.3

e Estimated

STREAMS TRIBUTARY TO LAKE ONTARIO

04256485 WOODS LAKE OUTLET NEAR BIG MOOSE, NY

LOCATION.--Lat 43°51'56", long 74°57'19", Herkimer County, Hydrologic Unit 04150101, on right bank 45 ft downstream from dam on Woods Lake.

DRAINAGE AREA.--0.80 mi^2.

PERIOD OF RECORD.--October 1977 to December 1981, December 1983 to current year.

REVISED RECORDS.--WDR NY-81-1: 1980 (M).

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Elevation of gage is 1,980 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--7 years (water years 1978-81, 1985-87), 1.82 ft^3/s, 30.89 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 69 ft^3/s, Oct. 30, 1978, from rating curve extended above 15 ft^3/s; minimum daily discharge, 0.01 ft^3/s, several days during water years 1978 and 1979.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 16 ft^3/s, Mar. 31, gage height 2.97 ft; minimum, 0.20 ft^3/s, Aug. 31, gage height, 1.54 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	2.1	e3.0	1.0	.70	.79	11	.89	.79	1.9	.43	.25
2	3.8	2.2	e2.6	1.0	.73	1.1	6.9	.92	.73	1.7	.38	.27
3	4.3	2.2	3.5	1.2	.67	1.0	5.6	.92	.70	1.5	.43	.28
4	4.3	2.2	3.3	1.1	.73	.89	5.1	.89	.76	1.7	.51	.30
5	4.3	2.1	2.7	1.0	.70	.89	4.9	.82	.92	1.8	.56	.28
6	3.7	2.3	2.2	.97	.70	1.0	5.1	.79	.89	1.7	.56	.28
7	3.0	2.2	2.1	.95	.67	1.7	5.5	.79	.76	1.6	.49	.28
8	2.7	2.2	2.1	.96	.70	2.0	5.7	.82	.99	1.4	.49	.31
9	2.5	2.5	2.0	.95	.70	1.6	5.1	.76	1.9	1.3	.46	.35
10	2.2	2.6	2.8	.97	.67	1.2	4.7	.73	2.9	1.2	.46	.37
11	2.0	2.6	2.0	1.0	.67	1.1	4.3	.70	3.0	1.0	.46	.36
12	1.8	2.6	1.9	1.1	.67	1.1	3.9	.67	2.9	.96	.46	.41
13	1.9	2.3	1.9	1.0	.64	1.2	3.6	.64	5.7	.92	.42	2.1
14	2.5	1.4	1.6	.96	.62	1.2	3.2	.56	6.0	.92	.39	3.4
15	3.6	1.7	1.7	1.0	.54	1.2	2.9	.59	5.2	1.1	.37	3.2
16	3.9	1.8	1.9	1.0	.51	1.1	2.5	.62	4.4	1.1	.33	2.9
17	4.1	1.7	1.9	.92	.54	1.2	2.2	.56	3.7	.96	.33	2.5
18	3.7	1.6	1.8	.86	.51	1.3	2.0	.56	3.2	.86	.32	2.9
19	3.4	1.4	1.8	.89	.48	1.1	1.8	.46	2.6	1.2	.31	3.8
20	3.1	1.3	1.6	.92	.48	1.0	1.6	.42	2.2	1.2	.31	4.3
21	2.8	1.7	1.5	.86	.46	.96	1.5	.42	1.7	1.1	.31	4.4
22	2.5	1.5	1.4	.89	.44	.96	1.3	.42	1.8	.97	.32	3.9
23	2.4	1.5	1.3	.92	.42	1.1	1.1	.48	3.6	.79	.33	3.5
24	2.4	1.5	1.2	.96	.42	1.3	1.1	.64	4.0	.63	.33	3.2
25	2.3	1.6	1.3	.89	.39	2.4	1.0	.64	3.6	.63	.29	2.8
26	2.3	1.9	1.3	.92	.39	4.7	.96	.64	3.1	.61	.28	2.4
27	2.2	e4.0	1.3	.86	.37	5.6	.86	.64	2.6	.65	.28	2.1
28	2.3	e4.2	1.2	.79	.42	5.7	.76	.79	2.5	.55	.26	1.9
29	2.0	4.0	1.2	.76	---	6.0	.79	.92	2.3	.52	.26	1.7
30	2.2	e3.5	1.1	.73	---	7.7	.82	.96	2.0	.49	.27	1.6
31	2.2	---	1.1	.73	---	12	---	.89	---	.45	.24	---
TOTAL	89.5	66.4	58.3	29.06	15.94	72.09	97.79	21.55	77.44	33.41	11.64	56.34
MEAN	2.89	2.21	1.88	.94	.57	2.33	3.26	.70	2.58	1.08	.38	1.88
MAX	4.3	4.2	3.5	1.2	.73	12	11	.96	6.0	1.9	.56	4.4
MIN	1.8	1.3	1.1	.73	.37	.79	.76	.42	.70	.45	.24	.25
CFSM	3.61	2.77	2.35	1.17	.71	2.91	4.07	.87	3.23	1.35	.47	2.35
IN.	4.16	3.09	2.71	1.35	.74	3.35	4.55	1.00	3.60	1.55	.54	2.62

CAL YR 1986 TOTAL 780.29 MEAN 2.14 MAX 12 MIN .50 CFSM 2.67 IN. 36.3
WTR YR 1987 TOTAL 629.45 MEAN 1.72 MAX 12 MIN .24 CFSM 2.16 IN. 29.3

e Estimated

04256500 STILLWATER RESERVOIR NEAR BEAVER RIVER, NY

LOCATION.--Lat 43°53'50", long 75°03'05", Herkimer County, Hydrologic Unit 04150101, in gatehouse at Stillwater Dam on Beaver River, 2.5 mi upstream from Moshier Creek, and 7.5 mi west of Beaver River Post Office.

DRAINAGE AREA.--171 mi^2.

PERIOD OF RECORD.--May 1908 to current year. Prior to February 1925, month-end contents only, published in WSP 1307. February 1925 to September 1937, published in WSP 824.

REVISED RECORDS.--WDR NY-85-1: Drainage area.

GAGE.--Nonrecording gage read once daily and prior to reservoir gate changes. Datum of gage is National Geodetic Vertical Datum, adjustment of 1912.

REMARKS.--Reservoir originally formed about 1885; enlarged at various times and in 1924 enlarged to a usable capacity of 4,623 mil ft^3 between elevations 1,650.3 ft and 1,679.3 ft (top of 24-inch flashboards in place throughout year). Elevation of gate sill of lowest outlet, 1,642.3 ft. Capacity below elevation 1,650.3 ft, 90 mil ft^3, is included in records presented herein, but is not ordinarily available for release. Reservoir is used to regulate flow of Beaver and Black Rivers for flood control, power development, and general public welfare.

COOPERATION.--Records provided by Board of Hudson River-Black River Regulating District.

EXTREMES FOR PERIOD OF RECORD.--Maximum observed elevation, 1,680.08 ft, May 20, 1969, contents, 4,939 mil ft^3; minimum observed since first filling, 1,644.80 ft, Mar. 25-27, 1949, contents, 8 mil ft^3.

EXTREMES FOR CURRENT YEAR.--Maximum observed elevation, 1,677.99 ft, June 28, contents, 4,340 mil ft^3; minimum observed, 1,661.34 ft, Mar. 16, contents, 987 mil ft^3.

Capacity table, current year (elevation, in feet, and contents, in millions of cubic feet)

1,658.0	604	1,670.0	2,431
1,660.0	821	1,675.0	3,556
1,665.0	1,518	1,680.0	4,916

ELEVATION, IN FEET, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1672.84	1672.64	1672.88	1671.25	1668.58	1662.78	1668.79	1675.79	1675.22	1677.71	1674.86	1671.28
2	1672.94	1672.65	1672.86	1671.12	1668.52	1662.75	1669.61	1675.79	1675.18	1677.58	1674.72	1671.10
3	1672.97	1672.65	1672.97	1671.04	1668.44	1662.67	1670.19	1675.77	1675.15	1677.46	1674.60	1670.97
4	1672.97	1672.63	1673.20	1670.92	1668.38	1662.62	1670.67	1675.74	1675.14	1677.43	1674.54	1670.79
5	1673.01	1672.61	1673.39	1670.79	1668.21	1662.52	1671.13	1675.69	1675.13	1677.44	1674.42	1670.64
6	1672.98	1672.60	1673.46	1670.66	1668.04	1662.37	1671.67	1675.65	1675.11	1677.40	1674.27	1670.35
7	1672.98	1672.58	1673.44	1670.53	1667.85	1662.20	1672.21	1675.62	1675.05	1677.31	1674.14	1670.22
8	1672.92	1672.56	1673.43	1670.41	1667.70	1662.07	1672.73	1675.59	1675.02	1677.21	1674.10	1670.07
9	1672.87	1672.58	1673.39	1670.28	1667.56	1662.01	1673.17	1675.54	1675.12	1677.08	1674.06	1670.03
10	1672.81	1672.61	1673.40	1670.14	1667.39	1661.93	1673.56	1675.48	1675.29	1677.00	1674.06	1670.12
11	1672.74	1672.63	1673.44	1670.04	1667.23	1661.88	1673.86	1675.43	1675.41	1676.89	1673.96	1670.06
12	1672.63	1672.63	1673.43	1669.94	1667.00	1661.78	1674.14	1675.37	1675.53	1676.86	1673.84	1669.98
13	1672.54	1672.58	1673.38	1669.84	1666.80	1661.84	1674.40	1675.37	1676.25	1676.77	1673.76	1670.24
14	1672.55	1672.56	1673.32	1669.75	1666.56	1661.88	1674.64	1675.33	1676.94	1676.77	1673.64	1670.68
15	1672.65	1672.49	1673.26	1669.58	1666.35	1661.62	1674.84	1675.32	1677.21	1676.69	1673.51	1670.97
16	1672.82	1672.45	1673.17	1669.51	1666.12	1661.34	1675.04	1675.29	1677.29	1676.55	1673.36	1671.14
17	1672.91	1672.40	1673.07	1669.45	1665.84	1661.50	1675.17	1675.24	1677.33	1676.44	1673.25	1671.30
18	1672.93	1672.35	1672.98	1669.38	1665.61	1661.48	1675.31	1675.22	1677.33	1676.32	1673.19	1671.48
19	1672.95	1672.29	1672.89	1669.33	1665.38	1661.55	1675.45	1675.16	1677.32	1676.30	1673.06	1671.80
20	1672.91	1672.24	1672.78	1669.29	1665.09	1661.69	1675.56	1675.18	1677.30	1676.23	1672.87	1672.12
21	1672.86	1672.20	1672.67	1669.23	1664.80	1661.84	1675.67	1675.18	1677.28	1676.14	1672.69	1672.42
22	1672.83	1672.16	1672.54	1669.18	1664.54	1661.97	1675.77	1675.18	1677.26	1676.03	1672.50	1672.62
23	1672.78	1672.10	1672.41	1669.17	1664.28	1662.14	1675.80	1675.23	1677.54	1675.91	1672.41	1672.80
24	1672.78	1672.02	1672.30	1669.13	1664.03	1662.34	1675.88	1675.23	1677.82	1675.86	1672.24	1672.87
25	1672.72	1671.97	1672.17	1669.08	1663.74	1662.65	1675.93	1675.22	1677.95	1675.75	1672.03	1672.90
26	1672.66	1671.91	1672.08	1669.02	1663.50	1663.26	1675.88	1675.18	1677.95	1675.60	1671.89	1672.91
27	1672.60	1672.22	1671.94	1668.94	1663.23	1664.09	1675.84	1675.16	1677.96	1675.54	1671.74	1672.95
28	1672.62	1672.50	1671.83	1668.87	1662.98	1664.77	1675.83	1675.20	1677.99	1675.40	1671.64	1672.94
29	1672.63	1672.68	1671.70	1668.78	---	1665.43	1675.81	1675.26	1677.91	1675.25	1671.58	1672.98
30	1672.66	1672.81	1671.55	1668.72	---	1666.18	1675.79	1675.27	1677.80	1675.09	1671.60	1673.01
31	1672.68	---	1671.40	1668.67	---	1667.32	---	1675.25	---	1674.99	1671.42	---
MEAN	1672.80	1672.44	1672.80	1669.74	1666.20	1662.66	1674.01	1675.38	1676.56	1676.48	1673.22	1671.46
MAX	1673.01	1672.81	1673.46	1671.25	1668.58	1667.32	1675.93	1675.79	1677.99	1677.71	1674.86	1673.01
MIN	1672.54	1671.91	1671.40	1668.67	1662.98	1661.34	1668.79	1675.16	1675.02	1674.99	1671.42	1669.98
#	3000	3048	2703	2156	1192	2097	3754	3614	4271	3531	2709	3087
##	-13.4	+18.5	-129	-204	-398	+338	+639	-52.3	+253	-276	-307	+146

CAL YR 1986 MEAN 1672.99 MAX 1678.11 MIN 1660.89 ## +0.35
WTR YR 1987 MEAN 1672.01 MAX 1677.99 MIN 1661.34 ## +1.62

\# Contents, in millions of cubic feet, at 2400 hours on last day of month by interpolation.
Change in contents, equivalent in cubic feet per second.

04257000 BEAVER RIVER BELOW STILLWATER DAM, NEAR BEAVER RIVER, NY

LOCATION.--Lat 43°53'56", long 75°03'08", Herkimer County, Hydrologic Unit 04150101, in gatehouse at Stillwater Dam, 2.5 mi upstream from Moshier Creek, and 7.5 mi west of Beaver River Post Office.

DRAINAGE AREA.--171 mi^2.

PERIOD OF RECORD.--May 1908 to current year. Published as "at State dam, near Beaver River" prior to June 1924.

REVISED RECORDS.--WDR NY-73-1: 1971. WDR NY-82-1: Drainage area.

GAGE.--Nonrecording gage read once daily and after reservoir gate changes. Datum of gage is National Geodetic Vertical Datum, adjustment of 1912. Prior to June 1, 1924, nonrecording gage at present site and datum. June 1, 1924 to Nov. 14, 1929, nonrecording gage at site 1,000 ft downstream at same datum.

REMARKS.--No estimated daily discharges. Records poor. Flow regulated by Stillwater Reservoir (see station 04256500). Discharge determined from ratings for gates and spillway of Stillwater Dam applied to log of reservoir elevation and gate operation and adjusted based on discharge measurements made during the year. Several measurements of water temperature were made during the year.

COOPERATION.--Records provided by Board of Hudson River-Black River Regulating District.

AVERAGE DISCHARGE.--79 years, 384 ft^3/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 3,700 ft^3/s, May 3, 1926; minimum, practically no flow at times when gates in dam were closed.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 688 ft^3/s, Feb. 20, July 16; minimum daily, 10 ft^3/s, Mar. 20 to Apr. 21, Sept. 10, 15-23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	621	439	347	638	343	586	10	260	260	560	510	479
2	622	439	441	574	343	582	10	260	260	560	510	510
3	622	439	441	535	343	582	10	260	260	541	510	510
4	622	439	443	534	487	480	10	260	260	563	510	510
5	623	439	445	532	543	579	10	241	260	410	510	494
6	623	439	596	530	541	578	10	260	260	410	510	510
7	622	439	662	529	539	574	10	260	260	510	494	510
8	622	439	662	528	537	571	10	260	260	510	235	458
9	621	439	661	527	535	568	10	260	260	500	210	364
10	621	439	662	527	534	568	10	260	54	451	210	10
11	620	439	662	525	620	455	10	260	47	560	370	229
12	619	439	662	524	665	442	10	260	47	354	410	199
13	618	439	661	523	661	195	10	236	47	510	294	160
14	618	439	661	522	657	196	10	216	47	198	401	160
15	518	438	661	424	653	508	10	210	47	586	410	10
16	440	438	660	351	650	464	10	204	247	688	410	10
17	441	438	659	350	645	56	10	210	218	510	410	10
18	441	438	657	350	640	56	10	210	250	510	235	10
19	441	437	656	350	634	18	10	210	250	489	410	10
20	441	437	655	349	688	10	10	49	255	510	489	10
21	441	437	654	348	585	10	10	47	255	510	510	10
22	441	437	653	348	580	10	51	47	260	510	510	10
23	440	437	652	348	577	10	54	87	404	510	510	10
24	440	437	650	348	572	10	54	267	374	250	510	255
25	440	436	650	347	557	10	256	260	294	484	510	290
26	440	253	648	347	597	10	258	260	398	510	510	226
27	439	180	646	346	434	10	260	252	417	500	318	255
28	439	181	644	345	584	10	200	260	258	510	310	284
29	439	182	643	345	---	10	229	234	550	510	393	273
30	440	182	642	344	---	10	260	257	565	510	229	182
31	440	---	640	344	---	10	---	260	---	510	467	---
TOTAL	16255	11934	19076	13532	15744	8178	1832	6877	7624	15244	12825	6958
MEAN	524	398	615	437	562	264	61.1	222	254	492	414	232
MAX	623	439	662	638	688	586	260	267	565	688	510	510
MIN	439	180	347	344	343	10	10	47	47	198	210	10
Adjusted for change in contents in Stillwater Reservoir												
MEAN	511	416	487	232	164	602	700	170	508	215	107	378
CFSM	2.99	2.43	2.85	1.36	0.96	3.52	4.09	0.99	2.97	1.26	0.63	2.21
IN.	3.45	2.72	3.28	1.57	1.00	4.06	4.57	1.14	3.31	1.45	0.72	2.47

		Observed					Adjusted			
CAL YR 1986	TOTAL 167762	MEAN 460	MAX 824	MIN 46		MEAN 460	CFSM 2.69	IN. 36.52		
WTR YR 1987	TOTAL 136079	MEAN 373	MAX 688	MIN 10		MEAN 374	CFSM 2.19	IN. 29.73		

04258000 BEAVER RIVER AT CROGHAN, NY

LOCATION.--Lat 43°53'50", long 75°24'16", Lewis County, Hydrologic Unit 04150101, on left bank 1,200 ft upstream from Black Creek, and 0.5 mi west of Croghan.

DRAINAGE AREA.--291 mi^2.

PERIOD OF RECORD.--September 1930 to current year.

REVISED RECORDS.--WDR NY-82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 806.20 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Stillwater Reservoir (see station 04256500). Between Stillwater Dam and this station, flow is further regulated by several powerplant ponds. Diurnal fluctuation at low and medium flow. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--57 years, 602 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,100 ft^3/s, May 21, 1969, gage height, 6.98 ft; minimum, 11 ft^3/s, Jan. 22, 29, Feb. 4, 1967, gage height, 0.63 ft; minimum daily, 22 ft^3/s, July 18, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,890 ft^3/s, Oct. 15, gage height, 4.52 ft; minimum, 199 ft^3/s, May 14, gage height, 1.90 ft; minimum daily, 222 ft^3/s, May 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1000	908	561	628	457	641	1280	295	374	783	540	520
2	1200	913	828	679	446	709	1340	287	379	772	574	490
3	1100	871	851	701	762	741	1040	284	380	652	593	389
4	1020	709	1060	687	706	838	923	282	302	621	619	662
5	1130	585	1290	639	640	975	728	282	484	492	694	726
6	985	734	1130	805	619	916	437	284	411	730	652	628
7	960	818	1040	675	602	822	301	285	286	745	628	646
8	943	701	1010	692	435	773	435	283	370	770	544	630
9	903	696	943	690	436	786	533	279	367	767	390	469
10	610	812	1000	683	460	733	349	278	447	702	394	314
11	405	726	946	685	575	707	323	279	444	766	396	306
12	472	729	997	663	712	691	279	276	325	703	584	291
13	514	556	975	638	691	678	280	262	514	764	549	451
14	735	796	953	640	759	448	416	222	1200	498	418	777
15	1370	818	1010	644	754	313	310	233	845	472	383	339
16	1240	743	970	652	765	443	293	260	829	373	284	311
17	1110	740	948	494	777	319	293	291	529	600	392	265
18	971	644	899	404	750	353	293	304	406	774	377	423
19	955	446	851	434	688	309	292	362	422	774	422	401
20	939	437	808	475	639	295	291	233	386	711	593	425
21	847	519	803	456	634	294	288	262	391	737	626	348
22	573	734	798	412	612	382	285	284	417	598	642	335
23	476	647	798	376	627	498	286	283	679	544	610	512
24	402	617	796	508	653	441	306	282	763	525	604	667
25	507	741	846	513	667	587	302	275	407	579	575	504
26	532	829	890	554	626	1130	290	268	384	477	617	476
27	545	962	866	533	632	1020	286	279	410	554	587	370
28	807	892	845	467	663	981	285	282	433	677	625	346
29	827	674	845	511	---	965	288	284	755	769	610	280
30	691	384	840	447	---	979	295	279	798	669	466	428
31	950	---	660	440	---	1010	---	363	---	577	428	---
TOTAL	25719	21381	28057	17825	17787	20777	13347	8702	15137	20175	16416	13729
MEAN	830	713	905	575	635	670	445	281	505	651	530	458
MAX	1370	962	1290	805	777	1130	1340	363	1200	783	694	777
MIN	402	384	561	376	435	294	279	222	286	373	284	265

CAL YR 1986 TOTAL 261832 MEAN 717 MAX 1580 MIN 244
WTR YR 1987 TOTAL 219052 MEAN 600 MAX 1370 MIN 222

STREAMS TRIBUTARY TO LAKE ONTARIO

04260500 BLACK RIVER AT WATERTOWN, NY
(National stream-quality accounting network station)

LOCATION.--Lat 43°59'08", long 75°55'30", Jefferson County, Hydrologic Unit 04150101, on downstream side of right abutment of Vanduzee Street Bridge at Watertown, and 3.5 mi upstream from Philomel Creek. Water-quality sampling site at discharge station.

DRAINAGE AREA.--1,864 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1920 to current year.

REVISED RECORDS.--WDR NY-77-1: 1974. WDR NY-85-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 373.88 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 3, 1921, nonrecording gage, and from Sept. 3, 1921 to Mar. 15, 1977, recording gage at same site at datum 1.00 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by Stillwater Reservoir (see station 04256500), Fulton Chain of Lakes, and other reservoirs. Extensive diurnal fluctuation at low and medium flow caused by mills and powerplants in and above Watertown. During canal season, water is diverted out of basin through Forestport feeder and Black River Canal (flowing south). Several measurements of water temperature were made during the year. Telephone gage-height telemeter at station.

AVERAGE DISCHARGE.--67 years, 4,044 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,900 ft^3/s, Dec. 31, 1984, gage height, 13.15 ft; minimum, 10 ft^3/s, Sept. 2, 1934, gage height, 0.81 ft, present datum; minimum daily discharge, 137 ft^3/s, Sept. 4, 1939.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, about 39,700 ft^3/s, Apr. 23, 1869 (from New York State Museum Bulletin 85).

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 17,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 2	1545	*22,800	*9.93	No other peak greater than base discharge.			

Minimum discharge, 165 ft^3/s, Sept. 9, gage height, 1.41 ft; minimum daily discharge, 1,010 ft^3/s, Aug. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5470	4750	6940	3150	2420	2030	18500	2630	1820	2330	1280	1440
2	6240	4550	5870	2810	2240	2740	21500	2740	1630	2280	1450	1450
3	6590	4540	6810	2200	2290	3590	20600	2690	1540	1830	1640	1400
4	6620	4640	9250	2280	2500	4890	16200	2390	1490	1910	1690	1270
5	7010	4450	9410	2810	2430	5410	13600	2160	1910	3340	3160	1600
6	7110	4180	9410	2830	2500	5420	12400	2010	2030	4310	3010	1530
7	7040	4500	8650	2990	2370	5520	12700	1920	1870	4060	2460	1410
8	6620	4680	7320	3220	2320	6130	12800	2000	1780	3180	2000	1450
9	5910	4400	6110	2780	2160	7070	12000	1920	2340	3010	1670	1380
10	5220	4590	6210	2790	e2100	7010	10800	1810	2790	2890	1460	1550
11	4380	5140	6980	2750	e2200	6790	9420	1670	3670	2750	1740	1530
12	3860	5120	7000	2720	e2200	6060	8220	1730	3230	2620	2200	1460
13	3640	4900	6140	2680	e2200	5440	7270	1570	3010	2300	2390	1580
14	4710	4570	4970	2590	e2200	4880	6650	1510	3720	2180	1940	4410
15	6350	4270	4540	2740	e2200	4190	6250	1570	4630	2120	1520	5900
16	7480	4020	4840	2950	e2100	3560	5510	1520	4000	2680	1150	6240
17	7600	3970	5010	3440	e2100	3280	4840	1540	3110	3850	1010	6030
18	7150	3920	5040	2940	e2100	3020	4260	1570	2660	3310	1170	4910
19	6350	3610	4720	2790	e2100	2910	3750	1530	2080	2710	1090	4350
20	5450	3260	4580	2650	e2100	2910	3500	1420	1820	2250	1120	5600
21	4770	2960	4190	2690	e2000	2900	3170	1360	1590	2280	1240	6460
22	4100	3050	3790	2600	2030	2990	2810	1260	1770	2250	1280	6650
23	3600	3820	3620	2390	1950	4550	2750	1290	3520	1990	1340	6220
24	3390	3600	3580	2160	2050	6830	2550	1330	5300	1930	1340	5420
25	3200	4290	3690	2520	2140	7960	2480	1280	4870	1630	1440	4410
26	3240	4690	4920	2530	2280	10200	2510	1410	3340	1670	1650	3490
27	3210	6700	5310	2620	2070	12500	2380	1510	2670	1910	1280	2890
28	3670	8140	4870	2570	1840	14500	2140	1430	2140	2270	1470	2510
29	4800	8370	4240	2400	---	15400	2100	1770	2060	2180	1330	2290
30	5010	8110	3880	2420	---	15400	2220	2100	2250	2050	1530	2260
31	5010	---	3500	2390	---	16400	---	1990	---	1680	1400	---
TOTAL	164800	141790	175390	83400	61190	202480	235880	54630	80640	77750	50450	99090
MEAN	5316	4726	5658	2690	2185	6532	7863	1762	2688	2508	1627	3303
MAX	7600	8370	9410	3440	2500	16400	21500	2740	5300	4310	3160	6650
MIN	3200	2960	3500	2160	1840	2030	2100	1260	1490	1630	1010	1270

CAL YR 1986 TOTAL 1775100 MEAN 4863 MAX 22300 MIN 1550
WTR YR 1987 TOTAL 1427490 MEAN 3911 MAX 21500 MIN 1010

e Estimated

04260500 BLACK RIVER AT WATERTOWN, NY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1956-60, 1962 to current year.
CHEMICAL DATA: 1956 (e), 1959 (a), 1960 (b), 1965 (a), 1966-81 (d), 1982-87 (c).
MINOR ELEMENTS DATA: 1970-71 (a), 1974-79 (b), 1980 (c), 1981-87 (b).
PESTICIDE DATA: 1975-79 (b), 1980-82 (a).
ORGANIC DATA: OC--1973 (c), 1974 (a), 1975 (c), 1976-77 (b), 1978-81 (d).
PCB--1978-79 (b), 1980-82 (a).
NUTRIENT DATA: 1968 (b), 1969-81 (d), 1982-87 (c).
BIOLOGICAL DATA:
Bacteria--1973-81 (d), 1982-86 (c), 1987 (b).
Phytoplankton--1975-77 (d), 1978-79 (c), 1980 (b), 1981 (c).
Periphyton--1975-80 (b).
SEDIMENT DATA: 1975-76 (d), 1977 (c), 1978-81 (d), 1982-87 (c).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1955 to September 1959, July 1962 to March 1969.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
NOV											
04...	1300	4430	100	8.5	6.5	2.5	760	11.4	93	90	410
JAN											
28...	1300	2370	102	7.6	0.0	1.0	760	13.5	93	270	430
MAR											
11...	1245	7170	139	7.4	0.5	28	765	14.6	101	K40	100
APR											
22...	1300	2800	98	8.3	16.5	2.0	760	10.6	109	260	120
JUL											
28...	1300	1850	90	7.8	25.0	1.2	755	8.4	103	240	72
AUG											
26...	1245	1960	75	7.7	20.5	1.3	760	9.1	101	--	--

DATE	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD 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 WH WAT TOTAL FIELD MG/L AS CACO3	BICAR-BONATE WH WAT TOTAL FIELD MG/L AS HCO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
NOV											
04...	43	0	15	1.4	3.6	0.8	46	--	14	3.0	0.1
JAN											
28...	47	9	16	1.6	4.6	0.8	38	46	15	3.3	<0.1
MAR											
11...	57	11	20	1.7	4.2	1.3	46	55	11	5.8	0.1
APR											
22...	38	7	13	1.4	4.0	0.6	--	--	10	3.1	<0.1
JUL											
28...	30	5	10	1.1	5.0	0.7	25	30	11	2.3	0.2
AUG											
26...	28	3	9.6	1.0	5.3	0.8	25	27	11	1.6	0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE 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											
04...	5.9	74	130	--	0.31	0.03	0.03	0.30	0.030	0.010	0.020
JAN											
28...	7.9	76	72	--	0.52	0.07	0.08	0.60	0.030	0.020	0.020
MAR											
11...	6.1	80	77	--	0.87	0.12	0.10	0.60	0.070	0.080	0.020
APR											
22...	5.4	65	58	--	0.54	0.02	0.01	0.60	0.050	0.050	0.030
JUL											
28...	5.5	55	51	0.320	0.33	0.05	0.06	0.50	0.060	0.020	0.010
AUG											
26...	5.6	49	49	--	0.25	0.03	0.03	1.1	0.030	0.040	0.020

K Results based on colony count outside the acceptable range (non-ideal colony count).

STREAMS TRIBUTARY TO LAKE ONTARIO

04260500 BLACK RIVER AT WATERTOWN, NY--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	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 04...	80	<1	18	<0.5	<1	<1	<3	<1	160	<5
JAN 28...	110	<1	17	<0.5	<1	<1	<3	1	210	<5
MAR 11...	--	--	--	--	--	--	--	--	--	--
APR 22...	90	<1	18	<0.5	<1	<1	<3	2	120	<5
JUL 28...	--	--	--	--	--	--	--	--	--	--
AUG 26...	50	<1	16	<0.5	<1	<1	<3	2	210	<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 04...	<4	14	<0.1	<10	<1	<1	<1	39	<6	15
JAN 28...	4	37	<0.1	<10	<1	<1	<1	39	<6	12
MAR 11...	--	--	--	--	--	--	--	--	--	--
APR 22...	13	29	<0.1	<10	<1	<1	<1	35	<6	70
JUL 28...	--	--	--	--	--	--	--	--	--	--
AUG 26...	<4	6	<0.1	<10	<1	<1	<1	27	<6	38

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 04...	1300	4430	4	49	97
JAN 28...	1300	2370	3	19	83
MAR 11...	1245	7170	14	272	89
APR 22...	1300	2800	5	38	70
JUL 28...	1300	1850	5	25	89
AUG 26...	1245	1960	5	26	76

LAKES AND RESERVOIRS IN STREAMS TRIBUTARY TO LAKE ONTARIO

04253300 SIXTH LAKE.--Lat 43°44'43", long 74°46'58", Hamilton County, Hydrologic Unit 04150101, on dam at outlet of Sixth Lake at Inlet, and 11.2 mi upstream from dam at Old Forge. DRAINAGE AREA, 18.6 mi^2. PERIOD OF RECORD, November 1911 to current year. GAGE, nonrecording gage read daily at 0800. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Hudson River-Black River Regulating District).

The Sixth and Seventh Lakes of Fulton Chain Lakes are partially formed and controlled by the concrete dam at Inlet, while the Eighth Lake is upstream and at approximately 5 ft higher elevation. Storage began around 1881. The present structure is a concrete dam with control gates which were installed in 1938. Usable capacity 296.6 mil ft^3 between minimum operating level, elevation 1,775.1 ft and crest of spillway, elevation 1,786.0 ft; no dead storage below minimum operating level. Figures given herein represent total contents. The dam is operated, records collected, provided, and stored by Board of Hudson River-Black River Regulating District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 332 mil ft^3, Oct. 3, 1945, elevation, 1,787.1 ft; minimum observed, less than 0.90 mil ft^3, Nov. 18, 1943, water level below elevation 1,775.6 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 304.6 mil ft^3, Apr. 8, elevation, 1,786.25 ft; minimum observed, 135.2 mil ft^3, Feb. 26-28, elevation, 1,780.80 ft.

04253400 FIRST LAKE (formerly published as "Old Forge Reservoir").--Lat 43°42'44", long 74°58'12", Herkimer County, Hydrologic Unit 04150101, at dam on Middle Branch Moose River, 100 ft downstream from bridge on State Highway 28 at Old Forge, and 11.2 mi downstream from dam on Sixth Lake outlet at Inlet. DRAINAGE AREA, 53.6 mi^2. PERIOD OF RECORD, November 1911 to current year. REVISED RECORDS, WDR NY-85-1: Drainage area. GAGE, nonrecording gage read daily at 0800. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Hudson River-Black River Regulating District).

The First through Fifth Lakes of Fulton Chain Lakes are partially formed and controlled by a concrete dam with 12-inch flashboards. Storage began around 1881 or 1882 with a wooden crib dam. This dam was replaced with a concrete dam in 1905 and gates were installed in 1927. Usable capacity with flashboards, 895.6 mil ft^3, elevation, 1,707.0 ft. Usable capacity without flashboards, 764.3 mil ft^3, elevation, 1,706.1 ft; no dead storage below minimum operating level. Figures given herein represent total contents. The dam is operated, records collected, provided, and stored by Board of Hudson River-Black River Regulating District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 1,019 mil ft^3, June 17, 1972, elevation, 1,707.9 ft; minimum observed, 6.50 mil ft^3, Nov. 3, 1939, elevation, 1,699.8 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 925.6 mil ft^3, July 5-6, Sept. 14, elevation, 1,707.26 ft; minimum observed, 368.4 mil ft^3, Feb. 13, 18-20, elevation, 1,702.96 ft.

04256500 STILLWATER RESERVOIR NEAR BEAVER RIVER, NY (see station for daily elevation, skeleton capacity table, monthly contents, and change in contents).

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

Date	Elevation (feet) *	Contents (million ft^3)	Change in contents (equivalent in ft^3/s)	Elevation (feet) *	Contents (million ft^3)	Change in contents (equivalent in ft^3/s)
	04253300 Sixth Lake			04253400 First Lake		
Sept. 30	1,785.57	282.8		1,706.95	883.2	
Oct. 31	1,784.67	254.2	-10.7	1,705.91	745.0	-51.6
Nov. 30	1,782.23	178.4	-29.2	1,704.11	512.0	-89.9
Dec. 31	1,781.05	142.7	-13.3	1,703.36	418.4	-34.9
CAL YR 1986	-	-	+ 0.10	-	-	+ 3.75
Jan. 31	1,781.10	144.2	+ 0.56	1,702.99	372.0	-17.3
Feb. 28	1,780.97	140.3	- 1.61	1,703.04	378.0	+ 2.48
Mar. 31	1,784.55	250.4	+41.1	1,704.79	599.4	+82.7
Apr. 30	1,785.65	285.4	+13.5	1,706.75	856.2	+99.1
May 31	1,785.53	281.6	- 1.42	1,706.81	864.6	+ 3.14
June 30	1,785.70	287.0	+ 2.08	1,706.97	886.0	+ 8.26
July 31	1,785.62	284.4	- 0.97	1,706.97	886.0	0.00
Aug. 31	1,785.60	283.8	- 0.22	1,706.95	883.2	- 1.05
Sept. 30	1,784.95	263.2	- 7.95	1,706.93	880.6	- 1.00
WTR YR 1987	-	-	- 0.62	-	-	- 0.08

* Elevation at 2400 hours, by interpolation.

STREAMS TRIBUTARY TO ST. LAWRENCE RIVER

04262500 WEST BRANCH OSWEGATCHIE RIVER NEAR HARRISVILLE, NY

LOCATION.--Lat 44°11'08", long 75°19'52", St. Lawrence County, Hydrologic Unit 04150302, on right bank just downstream from highway bridge, 0.5 mi northeast of Geers Corners, 1.5 mi downstream from Big Creek, and 4.0 mi downstream from Harrisville.

DRAINAGE AREA.--244 mi^2.

PERIOD OF RECORD.--July 1916 to current year.

REVISED RECORDS.--WSP 784: 1934. WDR NY-82-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 738.51 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 30, 1933, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Since June 1985, extensive diurnal fluctuation and slight regulation caused by powerplant upstream from station. Several measurements of water temperature were made during the year. Telephone gage-height telemeter at station.

AVERAGE DISCHARGE.--71 years, 518 ft^3/s, 28.83 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,080 ft^3/s, Mar. 15, 1977, gage height, 9.31 ft; maximum gage height, 9.6 ft, Jan. 9, 1930; minimum discharge prior to regulation, 25 ft^3/s, Sept. 1, 1934, gage height, 0.86 ft; minimum discharge since regulation, 20 ft^3/s, Aug. 11, 1985, gage height, 0.83 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 1	2300	*3,020	a*5.97				

a Recorded in well; outside gage height was 6.36 ft, from crest-stage gage.

Minimum discharge, 78 ft^3/s, Aug. 22, gage height, 1.47 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1620	995	924	343	245	200	2830	373	412	297	166	178
2	1720	900	834	353	243	365	2730	376	340	258	151	156
3	1560	906	1090	320	243	560	2040	344	279	226	140	143
4	1360	878	1780	346	242	655	1510	316	276	228	213	132
5	1270	861	1930	314	235	668	1260	287	303	280	239	119
6	1260	828	1670	317	239	627	1250	261	302	283	212	108
7	1150	838	1400	309	242	606	1340	256	262	230	174	101
8	970	793	1080	306	242	686	1340	247	280	198	150	95
9	809	732	1140	303	235	866	1230	230	453	182	137	109
10	719	702	1020	292	237	919	1050	211	665	158	131	147
11	639	671	1460	303	e220	869	883	203	746	152	143	169
12	566	622	1350	301	e210	729	769	195	632	144	148	152
13	553	586	1320	300	e200	607	681	191	701	126	132	218
14	726	523	1510	290	e200	503	612	189	1180	178	117	554
15	922	471	981	308	e190	442	532	190	1600	245	100	673
16	1060	460	688	364	e190	388	474	273	1310	324	92	546
17	1090	453	631	441	e180	354	424	287	847	257	86	383
18	998	468	578	364	e180	320	395	259	543	195	92	296
19	823	459	544	354	e170	313	388	236	386	225	89	303
20	687	377	518	329	e170	315	365	212	273	362	87	425
21	598	416	466	315	e170	302	327	192	215	315	81	596
22	524	438	451	303	e170	327	299	170	203	248	85	597
23	472	427	431	295	171	517	278	171	747	197	115	516
24	446	484	416	286	169	812	314	202	1210	162	141	499
25	429	587	433	281	178	1180	381	253	1030	163	124	537
26	418	615	529	271	171	1780	360	238	674	196	111	443
27	415	1020	558	262	168	2500	326	264	452	249	101	352
28	531	1620	497	261	164	2440	290	439	442	290	95	316
29	830	1530	466	256	---	2280	284	643	396	235	117	298
30	985	1250	428	249	---	2170	320	627	334	185	195	319
31	1050	---	398	245	---	2330	---	490	---	173	214	---
TOTAL	27200	21910	27521	9581	5674	27630	25282	8825	17493	6961	4178	9480
MEAN	877	730	888	309	203	891	843	285	583	225	135	316
MAX	1720	1620	1930	441	245	2500	2830	643	1600	362	239	673
MIN	415	377	398	245	164	200	278	170	203	126	81	95
CFSM	3.60	2.99	3.64	1.27	.83	3.65	3.45	1.17	2.39	.92	.55	1.30
IN.	4.15	3.34	4.20	1.46	.87	4.21	3.85	1.35	2.67	1.06	.64	1.45

CAL YR 1986 TOTAL 254930 MEAN 698 MAX 3300 MIN 170 CFSM 2.86 IN. 38.9
WTR YR 1987 TOTAL 191735 MEAN 525 MAX 2830 MIN 81 CFSM 2.15 IN. 29.2

e Estimated

04263000 OSWEGATCHIE RIVER NEAR HEUVELTON, NY

LOCATION.--Lat 44°35'58", long 75°22'45", St. Lawrence County, Hydrologic Unit 04150302, on right bank 1.5 mi downstream from Beaver Creek, and 2.5 mi upstream from Heuvelton.

DRAINAGE AREA.--965 mi^2.

PERIOD OF RECORD.--June 1916 to current year.

REVISED RECORDS.--WDR NY-82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 288.85 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 16, 1916, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Since 1867, seasonal flow regulated by Cranberry Lake; slight diurnal fluctuation at low flow and medium flow caused by powerplants. During high stages on Grass River, part of flow of that stream may pass through Upper Lake, Indian Creek and Lower Lake and enter Oswegatchie River at Rensselaer Falls, 4.5 mi upstream from station. In October 1973, a dike was installed on Indian Creek to prevent overflow of Grass River during high flows. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--71 years, 1,735 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,600 ft^3/s, Apr. 6, 1960, gage height, 10.36 ft; minimum recorded, 130 ft^3/s, Aug. 17, 1949, gage height, 0.47 ft, but may have been less during period of no gage-height record Sept. 7, 1960.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,610 ft^3/s, Dec. 5, gage height, 5.46 ft; minimum, 271 ft^3/s, Aug. 20, gage height, 0.87 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3970	2780	3730	e1700	e920	854	5470	934	1130	1130	940	334
2	4580	2880	3000	e1600	e920	1110	5730	974	898	1100	829	391
3	4640	2670	4000	1550	e900	1890	6000	973	929	1070	865	379
4	4630	2770	6050	e1300	e900	2440	5880	850	1080	967	544	344
5	4720	3160	6480	e1100	e900	2890	5310	761	812	603	588	324
6	4630	3180	5820	1050	e880	2870	4360	710	891	499	882	314
7	4320	2920	4960	1130	e960	2630	4050	775	1040	554	880	307
8	3840	2630	4110	e1200	e1000	3220	4270	876	916	601	827	338
9	3430	2640	3650	e1200	e940	4170	4350	781	851	620	625	361
10	3280	2400	3270	1280	e880	4680	4150	799	1400	593	496	369
11	3060	1940	4200	1260	e860	3820	3610	655	1920	554	432	385
12	2780	2160	3890	1190	e840	3180	2900	624	2030	525	426	402
13	2550	2500	4560	1130	e800	2820	2050	655	1880	478	409	474
14	2650	2130	4230	e1200	e740	2570	1750	639	1720	556	392	423
15	3140	2000	2970	e1200	e700	2370	1860	571	1800	698	410	743
16	3480	1900	2820	e1300	e680	2160	1720	776	2110	737	378	1050
17	3440	1840	e2600	e1400	e640	1930	1470	822	2310	950	356	1050
18	3250	1950	2400	e1300	e680	1780	1290	823	2000	1080	337	850
19	2970	1990	2220	e1200	e680	1780	1180	733	1470	1020	324	742
20	2410	1900	e2000	e1100	e700	1850	1110	843	1220	1000	291	641
21	1940	1720	e1900	e1100	e740	1910	1030	770	933	1080	287	783
22	1810	1760	e1700	e1100	e740	2170	1070	537	649	1120	305	1100
23	1670	1830	1570	e1000	e700	2740	978	618	549	1170	301	1260
24	1660	1910	1670	e1000	647	3290	993	777	908	898	290	1110
25	1620	2480	1690	e1000	634	4080	1090	614	1830	864	297	1030
26	1610	2780	2060	e980	905	4910	1190	535	1840	904	297	1050
27	1590	3540	2270	e920	969	5940	981	613	1450	578	349	997
28	1730	4320	e2100	e880	804	6420	828	668	1160	445	317	878
29	1850	4630	1900	e880	---	6270	794	1020	1280	595	325	738
30	2220	4400	1720	e880	---	5830	899	1330	1220	1070	338	804
31	2660	---	1750	e900	---	5480	---	1350	---	911	334	---
TOTAL	92130	77710	97290	36030	22659	100054	78363	24406	40226	24970	14671	19971
MEAN	2972	2590	3138	1162	809	3228	2612	787	1341	805	473	666
MAX	4720	4630	6480	1700	1000	6420	6000	1350	2310	1170	940	1260
MIN	1590	1720	1570	880	634	854	794	535	549	445	287	307

CAL YR 1986 TOTAL 842138 MEAN 2307 MAX 8880 MIN 657
WTR YR 1987 TOTAL 628480 MEAN 1722 MAX 6480 MIN 287

e Estimated

04264331 ST. LAWRENCE RIVER AT CORNWALL, ONTARIO--NEAR MASSENA, NY
(National stream-quality accounting network station)
(National radiochemical network station)

LOCATION.--Lat 45°00'22", long 74°47'43", Stormont County, Ontario--St. Lawrence County, N.Y., Hydrologic Unit 04150301, at Robert Moses-Robert H. Saunders power dam on Lake St. Lawrence at the International Boundary at Cornwall, Ontario, 2.9 mi upstream from Grass River, 6.2 mi upstream from Raquette River, and 5.9 mi northeast of Massena, N.Y.. Water-quality samples collected at power dam from taps at generators 17 and 30.

DRAINAGE AREA.--298,800 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1860 to current year. Monthly discharges only for some periods, published in WSP 1307. Prior to October 1971 published as 04264000 "St. Lawrence River at Ogdensburg."

REVISED RECORDS.--WSP 1437: 1870, 1874, 1881, 1883, 1890.

GAGE.--There is no gage. Discharge is determined from summation of discharge through the Robert Moses-Robert H. Saunders power dam, the Long Sault Dam, the Massena Diversion, the Rasin River Diversion, the Cornwall and Massena municipal water supply, and the Cornwall and the Wiley-Dondero navigation canals. U.S.-Canada coordinated discharge figures supplied by Corps of Engineers. Prior to 1956, base gage at lock 25 at Iroquois Ont. with supplementary gages. August 1956 to June 1958, base gage at lock 24 between Iroquois and Morrisburg, Ont., and supplementary gages. Prior to Aug. 1956, these were gages of the Canadian Hydrographic Service and from August 1956 to June 1958, were gages of the Hydro-Electric Power Commission of Ontario. Discharge in the reach of river at Cornwall, Ont.--near Massena, N.Y. is considered to be the same as discharge at Ogdensburg, N.Y. when adjusted for storage in Lake St. Lawrence.

REMARKS.--Since July 1958, flow regulated by international agreement administered by International St. Lawrence River Board of Control under the International Joint Commission. Records do not include water diverted from Lake Michigan by Illinois and Michigan Canal during period of its operation prior to 1910 and by Chicago Sanitary and Ship Canal, which began operation in 1900. Records include water diverted into Lake Superior from Hudson Bay drainage by the Long Lake Project, which began operation in July 1939, and by the Ogoki project, which began operation in July 1943.

COOPERATION.--Records of daily discharge provided by Buffalo District, Corps of Engineers through International St. Lawrence River Board of Control.

AVERAGE DISCHARGE.--127 years (1861-1987), 244,900 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 352,000 ft^3/s, June 22, 1976; minimum daily, 139,000 ft^3/s, Feb. 7, 1936; maximum monthly discharge, 350,000 ft^3/s, July 1973; minimum monthly, 154,000 ft^3/s, Feb. 1936.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 361,000 ft^3/s, Jan. 3, 7; minimum daily, 219,000 ft^3/s, Jan. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	336000	330000	335000	360000	245000	330000	275000	340000	316000	309000	289000	276000
2	324000	330000	327000	359000	253000	331000	275000	341000	315000	309000	289000	277000
3	314000	333000	323000	361000	265000	331000	265000	339000	316000	309000	289000	277000
4	314000	341000	332000	360000	276000	338000	271000	340000	316000	310000	289000	277000
5	314000	338000	340000	360000	284000	337000	281000	341000	316000	309000	289000	273000
6	314000	342000	341000	360000	294000	333000	285000	340000	314000	309000	289000	273000
7	314000	340000	340000	361000	300000	331000	285000	340000	314000	309000	288000	273000
8	310000	341000	335000	359000	300000	330000	275000	340000	314000	309000	287000	273000
9	305000	340000	319000	359000	301000	330000	282000	340000	313000	309000	287000	273000
10	307000	339000	327000	360000	311000	330000	298000	340000	314000	309000	287000	273000
11	315000	339000	340000	360000	310000	332000	308000	340000	314000	308000	287000	273000
12	324000	340000	305000	360000	311000	337000	313000	340000	314000	308000	288000	276000
13	330000	341000	301000	360000	289000	334000	316000	340000	315000	307000	287000	276000
14	330000	340000	301000	360000	241000	301000	320000	337000	315000	308000	287000	276000
15	333000	340000	307000	360000	240000	300000	320000	329000	315000	308000	287000	276000
16	334000	340000	317000	331000	240000	301000	317000	321000	315000	308000	287000	276000
17	330000	340000	320000	245000	244000	304000	320000	321000	315000	308000	287000	276000
18	322000	342000	320000	255000	257000	309000	323000	321000	315000	307000	287000	257000
19	318000	339000	320000	255000	273000	311000	327000	321000	315000	307000	287000	258000
20	320000	337000	320000	255000	285000	311000	335000	321000	314000	307000	287000	264000
21	319000	329000	320000	255000	292000	311000	341000	321000	313000	307000	287000	274000
22	319000	331000	322000	245000	297000	311000	340000	320000	313000	307000	283000	277000
23	320000	332000	330000	219000	303000	319000	340000	318000	313000	305000	283000	279000
24	322000	337000	334000	220000	307000	329000	340000	318000	312000	305000	283000	280000
25	325000	339000	328000	220000	313000	321000	341000	318000	314000	306000	283000	280000
26	330000	339000	324000	220000	318000	314000	340000	318000	312000	306000	283000	276000
27	337000	341000	325000	220000	321000	299000	339000	318000	310000	299000	283000	282000
28	340000	341000	325000	220000	327000	282000	341000	317000	310000	293000	283000	282000
29	341000	341000	345000	226000	---	265000	340000	318000	309000	294000	277000	282000
30	340000	340000	355000	234000	---	265000	340000	316000	309000	293000	277000	282000
31	336000	---	359000	240000	---	270000	---	317000	---	293000	277000	---
TOTAL	10037000	10142000	10137000	9259000	7997000	9747000	9393000	10191000	9410000	9475000	8853000	8247000
MEAN	323800	338100	327000	298700	285600	314400	313100	328700	313700	305600	285600	274900
MAX	341000	342000	359000	361000	327000	338000	341000	341000	316000	310000	289000	282000
MIN	305000	329000	301000	219000	240000	265000	265000	316000	309000	293000	277000	257000

CAL YR 1986 TOTAL 115223000 MEAN 315700 MAX 359000 MIN 220000
WTR YR 1987 TOTAL 112888000 MEAN 309300 MAX 361000 MIN 219000

04264331 ST. LAWRENCE RIVER AT CORNWALL, ONTARIO--NEAR MASSENA, NY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1955, 1966 to current year. Prior to October 1970, published as "near Massena, NY."
CHEMICAL DATA: 1955 (a), 1974 (c), 1975-81 (d), 1982-86 (c), 1987 (b).
MINOR ELEMENTS DATA: 1974-77 (b), 1978 (a), 1979 (b), 1980 (c), 1981-87 (b).
RADIOCHEMICAL DATA: 1974-87 (a).
ORGANIC DATA: OC--1974 (a), 1975 (b), 1977 (b), 1978-81 (d).
NUTRIENT DATA: 1974-75 (c), 1976-81 (d), 1982-86 (c), 1987 (b).
BIOLOGICAL DATA:
Bacteria--1974 (c), 1975-81 (d), 1982-86 (c), 1987 (b).
Phytoplankton--1974 (a), 1975-77 (d), 1978-81 (c).
Periphyton--1974 (a), 1975 (c), 1976-80 (b).
SEDIMENT DATA: 1975 (d), 1976-77 (c), 1978-81 (d), 1982-86 (c), 1987 (b).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1975 to September 1986.
WATER TEMPERATURES: October 1955 to October 1958, unpublished; January 1966 to September 1986.

REMARKS.--Temperature observations made approximately 68 ft below normal forebay level. Temperature observations from October 1955 to October 1958 made at Aluminum Company of America Massena Canal power station.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 400 microsiemens Aug. 7, 1978, Mar. 29, 1979; minimum daily, 250 microsiemens Dec. 21, 1978.
WATER TEMPERATURES: Maximum daily, 24.5°C on several days in August and September 1973 and August 1975; minimum daily, 0.0°C on many days during winter periods except 1972-74, 1979, 1982-85.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 350 microsiemens June 13, 14, 16-24; minimum daily, 280 microsiemens Nov. 25.
WATER TEMPERATURES: Maximum daily, 22.5°C Aug. 19, 21, 23; minimum daily, 0.5°C on several days during January, February, and March.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	DIS-CHARGE IN CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT											
28...	0830	340000	297	8.5	11.5	0.90	760	--	--	K4	<1
FEB											
09...	0830	301000	298	8.2	1.0	1.1	755	--	--	K3	K1
JUN											
03...	0815	316000	395	8.2	14.5	--	760	10.4	102	K1	K1
AUG											
14...	1330	287000	280	8.2	22.0	0.70	760	8.2	94	K6	K2

DATE	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD 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 WH WAT TOTAL FIELD MG/L AS CACO3	BICAR-BONATE WH WAT TOTAL FIELD MG/L AS HCO3	CAR-BONATE WH WAT TOTAL FIELD MG/L AS CO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
OCT											
28...	120	24	36	8.1	13	1.4	99	83	18	27	23
FEB											
09...	130	37	39	8.2	12	1.5	94	110	--	27	22
JUN											
03...	130	35	39	8.0	12	0.9	96	120	--	27	22
AUG											
14...	130	40	37	8.5	13	1.4	88	110	--	26	22

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	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)
OCT											
28...	0.1	0.6	182	190	0.22	<0.01	<0.01	0.30	<0.010	0.020	<0.010
FEB											
09...	0.1	0.2	182	170	0.33	<0.01	<0.01	0.60	0.010	0.010	<0.010
JUN											
03...	0.1	0.1	176	170	0.25	0.01	<0.01	1.2	0.020	0.050	0.010
AUG											
14...	0.2	--	173	830	0.11	<0.01	<0.01	0.30	0.010	0.020	<0.010

K Results based on colony count outside the acceptable range (non-ideal colony count).

04264331 ST. LAWRENCE RIVER AT CORNWALL, ONTARIO--NEAR MASSENA, NY--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	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)	LITHIUM DISSOLVED (UG/L AS LI)
OCT 28...	--	--	--	--	--	--	--	--	--	--	--
FEB 09...	<10	1	28	<0.5	<1	3	<3	1	10	<5	8
JUN 03...	<10	<1	28	<0.5	<1	<1	<3	<1	<3	<5	5
AUG 14...	20	1	28	<0.5	<1	2	<3	2	9	<5	<4

DATE	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	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)
OCT 28...	--	--	--	--	--	--	--	--	--
FEB 09...	4	0.1	<10	<1	<1	<1	180	<6	25
JUN 03...	<1	<0.1	<10	1	<1	<1	180	<6	7
AUG 14...	1	<0.1	<10	3	<1	<1	180	<6	100

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	GROSS ALPHA, DISSOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DISSOLVED (PCI/L AS CS-137)	GROSS BETA, DISSOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	RADIUM 226, DISSOLVED, RADON METHOD (PCI/L)	URANIUM DISSOLVED, EXTRACTION (UG/L)
FEB 09...	<0.4	<0.4	3.1	2.4	<0.4	<0.4	0.04	0.04
AUG 14...	<0.4	<0.4	3.0	2.3	<0.4	1.1	0.03	--

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	DISCHARGE IN CUBIC FEET PER SECOND	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
FEB 09...	0830	301000	2	1620	94
JUN 03...	0815	316000	4	3410	53
AUG 14...	1330	287000	3	2320	82

04264331 ST. LAWRENCE RIVER AT CORNWALL, ONTARIO--NEAR MASSENA, NY--Continued

WATER QUALITY DATA, AUGUST TO SEPTEMBER 1987

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	DEPTH AT SAMPLE LOCATION, TOTAL (FEET)	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)
AUG								
14...	1020	75.0	27.0	1.00	--	8.3	22.0	8.4
14...	1015	75.0	27.0	15.0	--	8.3	22.0	8.3
14...	1025	75.0	27.0	27.0	--	8.3	22.0	8.4
14...	1042	1000	45.0	1.00	--	8.3	22.0	8.2
14...	1041	1000	45.0	15.0	--	8.2	22.0	8.3
14...	1040	1000	45.0	45.0	--	8.2	22.0	8.4
14...	1058	2000	90.0	1.00	--	8.3	21.5	8.4
14...	1057	2000	90.0	25.0	--	8.3	21.5	8.6
14...	1056	2000	90.0	50.0	--	8.2	21.5	8.5
14...	1059	2000	90.0	75.0	--	8.2	21.5	8.8
14...	1117	3000	41.0	1.00	--	8.3	21.5	8.4
14...	1116	4000	41.0	15.0	--	8.2	21.5	8.3
14...	1115	3000	41.0	41.0	--	8.2	21.5	8.6
14...	1127	3900	25.0	1.00	--	8.2	22.0	8.6
14...	1126	3900	25.0	25.0	--	8.2	22.0	8.7
SEP								
03...	0932	75.0	27.0	1.00	333	8.4	19.0	8.6
03...	0931	75.0	27.0	15.0	333	8.4	19.0	8.8
03...	0930	75.0	27.0	26.0	333	8.3	19.0	8.8
03...	0947	1000	40.0	1.00	330	8.3	19.0	8.6
03...	0946	1000	40.0	20.0	332	8.2	19.0	8.6
03...	0945	1000	40.0	38.0	332	8.2	19.0	8.8
03...	1003	2000	80.0	1.00	332	8.3	19.0	8.5
03...	1002	2000	80.0	20.0	336	8.3	19.0	8.8
03...	1001	2000	80.0	40.0	336	8.3	19.0	9.0
03...	1000	2000	80.0	70.0	338	8.0	19.0	9.1
03...	1017	3000	45.0	1.00	335	8.1	19.0	9.0
03...	1016	3000	45.0	20.0	333	8.1	19.5	8.7
03...	1015	3000	45.0	40.0	335	8.1	19.0	9.2
03...	1047	3900	26.0	1.00	336	8.4	19.0	8.3
03...	1046	3900	26.0	15.0	335	8.4	19.0	8.4
03...	1045	3900	26.0	25.0	336	8.4	19.0	8.2

WATER QUALITY DATA, AUGUST 1987

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	DEPTH AT SAMPLE LOCATION, TOTAL (FEET)	DISCHARGE IN CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE LAB (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)
AUG										
14...	1010	75.0	27.0	287000	310	8.3	22.0	0.70	760	8.3
14...	1055	2000	90.0	287000	308	8.2	21.5	0.60	760	8.2
14...	1125	3900	41.0	287000	308	8.2	21.5	0.50	760	8.6

DATE	HARDNESS (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD 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)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
AUG									
14...	120	34	36	8.4	12	1.9	25	22	0.2
14...	120	33	36	8.4	12	1.4	26	22	0.2
14...	120	34	36	8.4	12	1.5	26	21	0.2

DATE	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)
AUG										
14...	172	890	0.16	<0.01	0.02	1.4	0.020	0.050	0.040	10
14...	175	800	0.11	<0.01	<0.01	0.8	0.020	0.020	<0.010	10
14...	168	770	0.10	<0.01	<0.01	1.2	0.020	0.030	<0.010	10

04264331 ST. LAWRENCE RIVER AT CORNWALL, ONTARIO--NEAR MASSENA, NY--Continued

WATER QUALITY DATA, AUGUST 1987

DATE	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)
AUG										
14...	1	29	<0.5	2	<1	<3	4	4	<5	<4
14...	1	29	<0.5	<1	<1	<3	3	4	<5	<4
14...	1	27	<0.5	<1	<1	<3	2	7	<5	<4

DATE	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
AUG									
14...	2	<0.1	<10	4	<1	<1	170	<6	18
14...	1	<0.1	<10	5	<1	<1	170	<6	52
14...	1	<0.1	<10	4	<1	<1	170	<6	62

04265605 LITTLE SIMON POND OUTLET NEAR TUPPER LAKE, NY

LOCATION.--Lat 44°09'40", long 74°26'30", Franklin County, Hydrologic Unit 04150305, on left bank, 15 ft upstream from dam on Little Simon Pond, and 3.0 mi south of Tupper Lake.

DRAINAGE AREA.--2.95 mi^2.

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

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Elevation of gage is about 1,790 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair. Flow affected by diversion by village of Tupper Lake for water supply. Several measurements of water temperature were made during the year.

COOPERATION.--Figures for diversion provided by village of Tupper Lake.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 150 ft^3/s, Dec. 29, 1984, gage height, 3.78 ft; minimum daily, 0.003 ft^3/s, Aug. 24, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 73 ft^3/s, Mar. 31, gage height, 3.19 ft; minimum daily, 0.01 ft^3/s, Sept. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.4	3.4	5.9	1.1	.77	.36	58	2.9	8.0	.82	1.0	.03
2	9.2	3.5	4.7	1.1	.72	1.2	36	2.8	6.5	.69	.90	.03
3	8.0	3.1	7.0	1.7	.77	1.9	24	2.7	5.7	.68	1.2	.03
4	7.5	2.7	9.4	1.4	.84	1.8	17	2.3	5.4	1.2	1.3	.02
5	8.5	2.3	9.3	1.2	.86	1.6	17	2.1	6.3	1.0	1.2	.02
6	8.4	2.6	8.0	1.1	.83	1.3	27	2.0	5.3	.85	1.1	.02
7	7.1	2.5	7.0	1.1	.79	1.5	34	2.0	3.9	.72	.94	.01
8	5.6	2.7	6.5	1.1	.88	2.3	31	1.7	7.4	.66	.84	.02
9	4.6	4.5	5.8	1.1	1.0	5.2	24	1.4	16	.59	.74	.02
10	3.6	7.6	7.2	1.2	.86	6.0	19	1.1	23	.54	.74	.03
11	2.7	7.2	7.1	1.6	.76	5.0	17	1.0	19	.51	.68	.03
12	2.0	6.1	6.0	1.8	.60	3.9	15	1.0	15	1.7	.59	.03
13	2.3	5.0	4.8	1.9	.63	3.3	14	.84	17	2.4	.51	.44
14	3.7	3.8	3.8	1.5	.53	2.7	12	.65	15	2.6	.44	1.2
15	5.9	2.9	3.4	1.4	.47	2.1	10	1.2	12	3.4	.38	1.5
16	5.8	2.5	3.0	1.5	.38	1.9	8.3	1.4	9.1	3.1	.33	2.0
17	4.7	2.4	2.7	1.2	.33	1.7	7.0	1.2	6.4	2.8	.29	2.6
18	3.6	2.5	3.0	1.2	.29	1.4	5.6	1.1	4.4	2.6	.27	2.3
19	2.8	2.2	2.9	1.2	.25	1.2	4.4	.89	3.4	2.5	.22	2.2
20	2.3	2.0	2.6	1.3	.22	1.1	3.7	.76	2.5	2.4	.18	2.3
21	1.9	3.3	2.2	1.2	.21	1.3	3.3	.54	1.8	2.4	.14	2.5
22	1.6	2.7	2.0	1.3	.20	1.9	2.6	.52	1.9	2.2	.13	2.5
23	1.7	2.2	1.8	2.3	.20	2.3	2.2	.79	6.3	2.0	.11	2.4
24	1.7	1.8	1.7	2.0	.18	4.2	2.2	1.5	6.3	1.8	.05	2.4
25	1.4	1.7	1.7	1.9	.16	9.5	2.0	1.3	4.6	1.8	.03	2.2
26	1.3	2.8	1.8	1.4	.15	23	1.7	1.2	3.4	1.6	.02	2.0
27	1.4	10	1.7	1.1	.15	29	1.6	1.6	2.4	1.5	.02	1.8
28	2.9	11	1.6	.91	.15	29	1.3	10	1.9	1.7	.02	1.7
29	4.0	10	1.5	.77	---	33	1.2	16	1.3	1.5	.03	1.5
30	4.9	8.2	1.3	.81	---	42	2.5	13	1.1	1.4	.03	1.3
31	4.5	---	1.2	.85	---	62	---	10	---	1.2	.03	---
TOTAL	135.0	125.2	128.6	41.24	14.18	284.66	404.6	87.49	222.3	50.86	14.46	35.13
MEAN	4.35	4.17	4.15	1.33	.51	9.18	13.5	2.82	7.41	1.64	.47	1.17
MAX	9.4	11	9.4	2.3	1.0	62	58	16	23	3.4	1.3	2.6
MIN	1.3	1.7	1.2	.77	.15	.36	1.2	.52	1.1	.51	.02	.01
#	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.0	0.9

CAL YR 1986 TOTAL 1771.38 MEAN 4.85 MAX 58 MIN .26 # 1.1
WTR YR 1987 TOTAL 1543.70 MEAN 4.23 MAX 62 MIN .01 # 1.1

Indicated net diversion, in cubic feet per second, for diversion and return in downstream supply.

STREAMS TRIBUTARY TO ST. LAWRENCE RIVER

04266500 RAQUETTE RIVER AT PIERCEFIELD, NY

LOCATION.--Lat 44°14'05", long 74°34'20", St. Lawrence County, Hydrologic Unit 04150305, on left bank 0.5 mi downstream from powerplant at Piercefield, and 1.5 mi upstream from Dead Creek.

DRAINAGE AREA.--721 mi^2.

PERIOD OF RECORD.--August 1908 to current year.

REVISED RECORDS.--WSP 604: 1924. WSP 1387: 1910, 1913, 1914(M), 1916, 1921. WDR NY-82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,502.12 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 22, 1912, nonrecording gage at same site (datum of gage lowered 2 ft Jan. 1, 1911, to present datum).

REMARKS.--No estimated daily discharges. Records good. Seasonal distribution of flow modified by natural storage in lakes and ponds upstream from station and by regulation of Forked Lake, Round Lake, Lows Lake, and Raquette Pond (Tupper Lake) at Setting Pole Dam. Extensive diurnal fluctuation caused by powerplant at Piercefield. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--79 years, 1,306 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,360 ft^3/s, May 8, 1972, gage height, 12.25 ft; minimum daily, 4.1 ft^3/s, Oct. 12, 1947.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,280 ft^3/s, Apr. 10, gage height, 10.09 ft; minimum daily, 137 ft^3/s, Aug. 26-28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1570	1580	1560	959	787	522	3550	1480	1140	1110	863	335
2	1610	1540	1540	678	881	883	3960	1450	1280	1030	727	522
3	1670	1530	1590	376	949	929	4310	1460	1410	1060	874	423
4	1760	1450	1660	332	1000	850	4460	1450	1420	969	880	580
5	1850	1450	1670	507	871	933	4580	1340	1200	899	753	425
6	1860	1410	1690	526	889	793	4710	1130	1230	888	786	230
7	1910	1470	1690	911	702	817	4860	1030	1170	878	763	311
8	1930	1490	1690	996	633	730	5010	941	1150	783	575	357
9	1890	1310	1670	1140	709	793	5130	816	1100	802	711	381
10	1870	1390	1700	1140	647	875	5190	813	1230	737	524	392
11	1860	1510	1720	1070	633	838	5170	552	1420	872	723	321
12	1820	1480	1720	1050	635	766	5070	702	1600	904	509	299
13	1790	1500	1690	953	674	826	4910	366	1590	781	693	658
14	1780	1490	1650	998	671	839	4760	415	1610	935	633	858
15	1770	1490	1610	943	629	837	4560	615	1590	845	443	1230
16	1790	1480	1600	887	552	824	4370	740	1580	1070	543	1380
17	1790	1480	1580	878	629	746	4090	758	1570	1070	394	1410
18	1780	1340	1560	922	577	802	3840	719	1530	1070	460	1510
19	1760	1300	1540	797	621	771	3620	690	1540	1070	535	1570
20	1730	499	1510	901	541	764	3410	736	1510	1060	398	1550
21	1670	1060	1470	793	612	758	3210	846	1400	1040	385	1580
22	1650	1340	1180	869	529	719	2990	869	1420	926	410	1650
23	1590	1310	1190	853	388	727	2870	604	1230	812	398	1610
24	1540	1360	1250	801	257	770	2670	744	1410	677	145	1570
25	1530	1360	1170	811	322	881	2540	732	1480	942	139	1530
26	1510	1310	1180	709	404	1190	2400	631	1590	829	137	1520
27	1500	1440	1280	374	456	1870	2270	504	1590	680	137	1510
28	1500	1590	1300	426	451	2160	2160	727	1510	762	137	1460
29	1230	1600	1210	499	---	2370	1890	1080	1460	824	256	1250
30	1370	1580	1200	478	---	2660	1620	1060	1450	983	288	1280
31	1530	---	1050	607	---	3080	---	1220	---	738	485	---
TOTAL	52410	42139	46120	24184	17649	33323	114180	27220	42410	28046	15704	29702
MEAN	1691	1405	1488	780	630	1075	3806	878	1414	905	507	990
MAX	1930	1600	1720	1140	1000	3080	5190	1480	1610	1110	880	1650
MIN	1230	499	1050	332	257	522	1620	366	1100	677	137	230

CAL YR 1986 TOTAL 606391 MEAN 1661 MAX 5900 MIN 396
WTR YR 1987 TOTAL 473087 MEAN 1296 MAX 5190 MIN 137

04267500 RAQUETTE RIVER AT SOUTH COLTON, NY

LOCATION.--Lat 44°30'42", long 74°53'00", St. Lawrence County, Hydrologic Unit 04150305, on left bank 300 ft upstream from bridge on State Highway 56 at South Colton, 500 ft downstream from Niagara Mohawk Power Corp. powerplant, and 0.8 mi upstream from Cold Brook.

DRAINAGE AREA.--937 mi^2.

PERIOD OF RECORD.--January 1953 to current year.

REVISED RECORDS.--WDR NY-82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 882.05 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good for discharges greater than 200 ft^3/s, and fair below. Flow regulated 16 mi upstream by Carry Falls Reservoir since 1953; considerable natural storage in large lakes above Piercefield. Large diurnal fluctuation caused by five powerplants upstream from gage. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--34 years, 1,788 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,720 ft^3/s, May 11, 1971, gage height, 9.80 ft; minimum, 1.3 ft^3/s, Feb. 1, 1962, Aug. 8, 1964, gage height, 1.53 ft; minimum daily, 4.6 ft^3/s, June 2, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,900 ft^3/s, Oct. 21, gage height, 7.70 ft; minimum, 17 ft^3/s, May 29, gage height, 1.67 ft; minimum daily, 269 ft^3/s, May 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2940	2050	1750	1730	1190	1090	3160	2550	1800	1080	1460	476
2	3490	1990	2520	1510	1150	751	3600	2760	2440	1180	1660	563
3	3480	2360	2080	1480	1250	849	3190	2690	2230	1340	1520	511
4	3400	2510	2490	1670	1390	1040	2530	2540	2310	1390	1570	449
5	3470	2010	2280	1270	1290	664	2330	1950	1750	1180	1490	401
6	3490	2340	2660	1110	989	1180	2340	1510	936	1220	1450	545
7	3540	2450	2660	1210	1260	955	2820	1430	861	1320	1650	491
8	3630	2320	2500	1270	1320	595	2920	1210	1080	1280	1520	702
9	3680	2560	2600	1290	1350	1040	3020	976	1100	1310	1500	277
10	3560	2780	2360	1040	1270	894	2860	881	2460	1190	1580	448
11	3600	2930	1670	993	1120	736	3130	1080	2250	1390	1660	642
12	3500	2650	1250	1400	1320	802	3180	820	2500	1160	1450	448
13	2600	2930	1890	1340	1110	947	3760	827	2370	1470	1540	318
14	2130	2620	1320	1050	1190	824	3300	942	2170	1030	1310	356
15	2960	2360	1590	1320	1490	928	4630	704	2240	1270	959	427
16	2140	2430	1450	1200	1170	912	5180	360	2570	1280	859	561
17	2580	2150	1640	1370	1060	893	4960	459	2750	1300	1210	489
18	2520	2740	1380	1100	822	879	4830	349	2280	1300	1040	465
19	2940	2450	1520	1190	849	1060	4660	520	2250	1070	991	461
20	2050	2620	1650	1380	861	1000	4590	451	1650	1500	1000	420
21	2590	2270	1320	1350	915	597	3870	269	1590	1490	858	923
22	2240	1590	1690	1180	932	963	3520	586	1540	1490	424	1050
23	1840	1760	1460	1300	864	813	3240	332	1400	1680	448	1200
24	2490	1780	1520	1320	1070	661	3250	595	1580	1450	480	1120
25	2440	1780	1560	1110	847	1250	3280	304	1450	1560	427	1010
26	2350	1410	1470	1250	737	1060	2820	507	1350	1320	576	1110
27	2250	1700	1510	1290	1050	1910	2710	522	1150	1780	469	1180
28	1930	1620	1350	1140	719	2600	3110	460	893	1440	517	1160
29	1660	1530	1570	1200	---	2390	3110	605	878	1460	445	1360
30	1850	1960	1480	1460	---	2590	2830	1420	1050	1600	377	912
31	1760	---	1430	1100	---	2380	---	1650	---	1620	498	---
TOTAL	85100	66650	55620	39623	30585	35253	102730	32259	52878	42150	32938	20475
MEAN	2745	2222	1794	1278	1092	1137	3424	1041	1763	1360	1063	682
MAX	3680	2930	2660	1730	1490	2600	5180	2760	2750	1780	1660	1360
MIN	1660	1410	1250	993	719	595	2330	269	861	1030	377	277

CAL YR 1986 TOTAL 820022 MEAN 2247 MAX 5670 MIN 629
WTR YR 1987 TOTAL 596261 MEAN 1634 MAX 5180 MIN 269

STREAMS TRIBUTARY TO ST. LAWRENCE RIVER

04268000 RAQUETTE RIVER AT RAYMONDVILLE, NY
(National stream-quality accounting network station)

LOCATION.--Lat 44°50'20", long 74°58'45", St. Lawrence County, Hydrologic Unit 04150305, on right bank 250 ft upstream from bridge on Grant Road at Raymondville, 0.3 mi downstream from Trout Brook, 0.4 mi downstream from Niagara Mohawk Power Corp. powerplant, and 18.0 mi upstream from mouth. Water-quality sampling site at discharge station.

DRAINAGE AREA.--1,125 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1943 to current year.

REVISED RECORDS.--WDR NY-82-1: Drainage area. WDR NY-85-1: 1983-84.

GAGE.--Water-stage recorder. Datum of gage is 183.33 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Extensive diurnal fluctuation caused by power and industrial operations. Flow regulated since 1953 by Carry Falls Reservoir, about 46 mi upstream and by Niagara Mohawk Power Corp. powerplant, 0.4 mi upstream; considerable natural storage in large lakes above Piercefield. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--43 years (1945-87), 2,090 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,000 ft^3/s, Apr. 5, 1974, gage height, 8.40 ft; maximum gage height, 9.24 ft, Feb. 22, 1954 (backwater from ice); minimum discharge, 2.2 ft^3/s, Sept. 18, 19, 1966; minimum gage height, 0.42 ft, July 13, 1950; minimum daily discharge, 7.0 ft^3/s, Oct. 15, 1951.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,600 ft^3/s, Apr. 17, gage height, 5.30 ft; minimum discharge, 21 ft^3/s, June 30, gage height, 0.61 ft; minimum daily, 330 ft^3/s, Aug. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3920	2250	2090	1800	e1500	e840	3540	2930	1760	1320	1600	489
2	3890	2800	2380	1630	e1500	e1000	3780	2760	2640	1170	1720	493
3	4060	2850	3800	1860	e1400	e1400	4050	2760	2430	1430	1710	492
4	4240	2690	e3400	2100	e1700	e1500	3100	2850	2460	1210	1750	466
5	4160	2610	e3100	e1800	e1600	e1100	2910	2530	2350	1620	1700	467
6	4110	2580	e2900	e1600	e1600	e1100	2870	1710	1090	1300	1660	451
7	4320	2640	e2800	1530	e1600	e1100	2840	1470	1080	1340	1640	470
8	3460	2740	e2700	1470	e1600	e1300	3220	1520	1220	1300	1640	823
9	3660	3060	e2900	1510	e1700	e1600	3340	1040	1450	1370	1650	583
10	3620	3140	e2700	1410	e1700	e1600	3280	1030	2150	1350	1660	480
11	3690	2980	e2200	1560	e1600	e1400	3250	1140	2640	1380	1650	490
12	3660	3310	e2000	1370	e1700	e1200	3250	929	2630	1480	1640	518
13	3590	3200	e2100	1460	e1600	e1000	3680	1130	2640	1460	1650	508
14	2830	2770	e2600	1450	e1400	e1000	3920	1020	2630	1420	1670	446
15	2870	2720	e2000	1580	e1100	e1000	4260	1030	2530	1510	1010	497
16	2770	2730	e1700	1510	e1400	e1000	4770	562	2500	1400	916	472
17	2500	2760	e1700	1770	e1600	e960	5520	604	2520	1420	1040	459
18	2640	2740	e1700	e1600	e1600	e940	5150	555	2550	1370	1190	490
19	2720	2750	e1700	e1700	e1400	1190	4810	535	2520	1310	1030	504
20	2700	2670	e1700	e1800	e1200	1220	4510	539	1980	1440	940	516
21	2580	2800	e1700	e1700	e1200	1230	4180	669	1520	1480	1090	643
22	2580	2390	e1800	e1600	e1300	1620	3690	450	1760	1720	460	1080
23	2630	2050	1770	e1700	e1200	2120	3430	500	1670	1620	396	1260
24	2400	2140	1760	e1700	e1400	2180	3450	563	1680	1570	330	1170
25	2330	2160	1840	e1600	e1300	2210	3380	592	1640	1650	428	1230
26	2560	2310	e1800	e1700	e1200	2740	3340	502	1630	1690	413	1230
27	2540	2750	e1800	e1700	e1200	2870	2820	509	1150	1700	510	1260
28	2770	2560	e1800	e1500	e1000	3410	3130	909	1020	1680	484	1230
29	2380	2260	1820	e1600	---	3340	2900	1170	1100	1690	480	1310
30	2420	2160	1800	e1800	---	3240	3250	1230	982	1690	466	1460
31	2270	---	1830	e1700	---	3280	---	1730	---	1690	506	---
TOTAL	96870	79570	67890	50810	40300	51690	109620	37468	57922	45780	35029	21987
MEAN	3125	2652	2190	1639	1439	1667	3654	1209	1931	1477	1130	733
MAX	4320	3310	3800	2100	1700	3410	5520	2930	2640	1720	1750	1460
MIN	2270	2050	1700	1370	1000	840	2820	450	982	1170	330	446

CAL YR 1986 TOTAL 968920 MEAN 2655 MAX 6630 MIN 640
WTR YR 1987 TOTAL 694936 MEAN 1904 MAX 5520 MIN 330

e Estimated

04268000 RAQUETTE RIVER AT RAYMONDVILLE, NY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1955, 1957, 1960-61, 1969-72, 1979 to current year.
CHEMICAL DATA: 1955, 57 (a), 1960-61 (e), 1969 (a), 1970 (d), 1971 (b), 1972 (a), 1979-80 (d), 1981-82 (c), 1983-87 (b).
MINOR ELEMENTS DATA: 1969 (a), 1970, 1979 (b), 1980 (d), 1981-87 (b).
PESTICIDE DATA: 1970 (a).
ORGANIC DATA: OC--1979-80 (d), 1981 (c).
NUTRIENT DATA: 1955, 57 (a), 1960-61 (e), 1969 (a), 1970 (d), 1971 (b), 1972 (a), 1979-80 (d), 1981-82 (c), 1983-87 (b).
BIOLOGICAL DATA:
Bacteria--1969-71 (a), 1979-80 (d), 1981-82 (c), 1983-87 (b).
Phytoplankton--1979-80 (c), 1981 (b).
Periphyton--1979-80 (b).
SEDIMENT DATA: 1979 (c), 1980 (d), 1981-82 (c), 1983-87 (b).

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT											
22...	0815	2600	52	7.0	10.0	1.1	760	10.6	94	K51	K27
MAR											
10...	0815	1600	214	8.1	0.5	3.5	775	13.9	95	56	1200
JUN											
02...	0945	2880	55	7.4	21.5	1.3	755	8.6	98	K58	K65
AUG											
11...	0745	1640	38	7.2	21.5	0.40	760	8.4	95	K40	180

DATE	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD 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 WH WAT TOTAL FIELD MG/L AS CACO3	BICAR-BONATE WH WAT TOTAL FIELD MG/L AS HCO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT											
22...	22	8	5.9	1.7	4.5	0.5	14	16	13	2.3	<0.1
MAR											
10...	110	8	27	10	6.1	2.1	101	120	10	11	0.1
JUN											
02...	21	10	5.7	1.6	1.9	0.1	11	12	12	2.6	<0.1
AUG											
11...	16	7	4.5	1.1	2.5	0.4	9	10	13	2.0	0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)
OCT										
22...	5.1	58	41	0.15	0.01	0.01	0.40	0.020	0.010	<0.010
MAR										
10...	7.0	135	130	0.34	0.34	0.30	1.2	0.060	0.030	0.020
JUN										
02...	4.3	38	34	0.27	0.02	0.02	0.40	<0.010	0.040	<0.010
AUG										
11...	4.4	36	33	0.24	<0.01	0.02	<0.20	0.010	0.050	0.040

K Results based on colony count outside the acceptable range (non-ideal colony count).

STREAMS TRIBUTARY TO ST. LAWRENCE RIVER

04268000 RAQUETTE RIVER AT RAYMONDVILLE, NY--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	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)
OCT 22...	--	--	--	--	--	--	--	--	--	--
MAR 10...	20	<1	24	<0.5	1	<1	<3	1	150	<5
JUN 02...	40	<1	17	<0.5	<1	<1	<3	1	94	<5
AUG 11...	50	<1	14	0.6	<1	<1	<3	1	150	<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)
OCT 22...	--	--	--	--	--	--	--	--	--	--
MAR 10...	4	41	<0.1	<10	4	<1	<1	74	<6	14
JUN 02...	<4	25	<0.1	<10	<1	<1	<1	22	<6	9
AUG 11...	<4	16	0.2	<10	2	<1	<1	19	<6	23

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 22...	0815	2600	4	28	34
MAR 10...	0815	1600	17	34	40
JUN 02...	0945	2880	5	39	61
AUG 11...	0745	1640	3	13	69

04269000 ST. REGIS RIVER AT BRASHER CENTER, NY
(National stream-quality accounting network station)

LOCATION.--Lat 44°51'49", long 74°46'45", St. Lawrence County, Hydrologic Unit 04150306, on left bank 600 ft upstream from highway bridge at Brasher Center, and 6.5 mi downstream from West Branch. Water-quality sampling site at discharge station.

DRAINAGE AREA.--612 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1910 to current year. Monthly discharge only for some periods, published in WSP 1307.

REVISED RECORDS.--WSP 1387: 1910-16, 1917(M), WDR NY-82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 217.23 ft above National Geodetic Vertical Datum of 1929. Prior to June 24, 1916, nonrecording gage at site 600 ft downstream at different datum. June 24, 1916 to Nov. 10, 1917, and Jan. 1, 1919 to Aug. 13, 1920, nonrecording gage at present site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Slight diurnal fluctuation caused by powerplant operations upstream from station. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--77 years, 1,049 ft^3/s, 23.28 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,800 ft^3/s, Apr. 6; 1937, gage height, 12.82 ft; maximum gage height recorded, about 15.3 ft, Apr. 6, 1937 (ice jam); minimum discharge observed, about 34 ft^3/s, Aug. 8, 1917, gage height, 5.25 ft; minimum daily, 37 ft^3/s, Aug. 8, 1917.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,600 ft^3/s, and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 15	0745	ice jam	*9.71	Apr. 1	1215	*5,990	9.40

Minimum discharge, 167 ft^3/s, Aug. 22, gage height, 5.80 ft; minimum daily, 178 ft^3/s, Aug. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4790	1450	1130	e800	e560	e430	5810	948	699	455	318	335
2	3850	1680	1080	e740	e560	e900	4800	1010	590	398	289	296
3	3220	1720	2940	e700	e560	e1400	3590	1100	536	393	349	273
4	3190	1570	4100	e700	e560	e1500	2890	944	489	360	476	255
5	3110	1530	2950	e720	e560	e1400	2440	829	512	457	586	241
6	3080	1430	2180	e720	e560	e1400	2230	719	529	476	494	224
7	2670	1430	1970	e720	e560	e1500	2170	645	515	412	409	212
8	2220	1340	1730	e720	e580	e1700	2230	638	585	367	353	208
9	2030	1380	2330	e700	e580	e2000	2100	619	1070	349	314	252
10	1880	1430	3060	e700	e600	e1800	1880	579	1940	323	306	283
11	1640	1310	4520	e680	e560	e1500	1680	555	1810	306	315	296
12	1460	1240	4430	e680	e540	e1300	1490	553	1400	528	333	301
13	1440	1190	e3500	e680	e520	e1100	1370	650	1500	631	315	343
14	1740	1020	e2400	e680	e490	e960	1270	651	1660	445	285	969
15	1830	997	e1800	e660	e460	e900	1150	693	1360	504	267	1280
16	1620	964	e1500	e660	e450	e820	1050	1050	1060	627	249	988
17	1460	982	e1400	e640	e440	e760	956	982	834	555	231	787
18	1280	997	e1200	e620	e430	e740	901	849	689	412	214	568
19	1130	977	e1100	e600	e410	e720	834	742	576	365	208	504
20	1040	987	e1100	e580	e410	e720	780	645	505	371	207	479
21	997	723	e1000	e560	e400	e760	737	545	427	505	186	502
22	957	905	e1000	e540	e400	e900	620	509	435	379	178	509
23	929	919	e980	e540	e390	e1700	590	541	371	434	191	464
24	925	1120	e980	e520	e390	e2400	678	562	395	380	184	448
25	913	1360	e1000	e500	e390	2810	689	576	398	806	186	396
26	901	1270	e1100	e500	e390	4170	712	599	356	1250	185	394
27	874	2230	e1100	e490	e390	4440	685	582	345	1010	188	382
28	1250	2120	e1100	e490	e410	3880	634	569	445	777	204	389
29	1490	1820	e980	e500	---	3700	598	753	542	415	232	373
30	1750	1510	e860	e520	---	3810	684	910	563	420	294	371
31	1680	---	e840	e540	---	4760	---	802	---	363	358	---
TOTAL	57346	39601	57360	19400	13550	56880	48248	22349	23136	15473	8904	13322
MEAN	1850	1320	1850	626	484	1835	1608	721	771	499	287	444
MAX	4790	2230	4520	800	600	4760	5810	1100	1940	1250	586	1280
MIN	874	723	840	490	390	430	590	509	345	306	178	208
CFSM	3.02	2.16	3.02	1.02	.79	3.00	2.63	1.18	1.26	.82	.47	.73
IN.	3.49	2.41	3.49	1.18	.82	3.46	2.93	1.36	1.41	.94	.54	.81

CAL YR 1986 TOTAL 518080 MEAN 1419 MAX 5850 MIN 501 CFSM 2.32 IN. 31.5
WTR YR 1987 TOTAL 375569 MEAN 1029 MAX 5810 MIN 178 CFSM 1.68 IN. 22.8

e Estimated

04269000 ST. REGIS RIVER AT BRASHER CENTER, NY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1955, 1960, 1970-72, 1974 to current year.
CHEMICAL DATA: 1955 (a), 1960 (b), 1970-72 (a), 1975-81 (d), 1982 (c), 1983-87 (b).
MINOR ELEMENTS DATA: 1975, 1977-79 (b), 1980 (c), 1981-87 (b).
ORGANIC DATA: OC--1974 (b), 1978-81 (d).
NUTRIENT DATA: 1970-71 (a), 1975-81 (d), 1982 (c), 1983-87 (b).
BIOLOGICAL DATA:
Bacteria--1975-81 (d), 1982 (c), 1983-87 (b).
Phytoplankton--1975-77 (d), 1978-81 (c).
Periphyton--1975-80 (b).
SEDIMENT DATA: 1975 (d), 1976-77 (c), 1978-81 (d), 1982 (c), 1983-87 (b).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: September 1974 to September 1981.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES (water years 1975-81): Maximum daily, 29.0°C Aug. 4, 1975; minimum, 0.0°C on many days during winter periods.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT											
23...	0845	932	80	7.2	10.5	1.7	755	9.5	86	70	K8
MAR											
09...	0945	2000	98	7.1	0.5	2.5	755	13.3	93	77	1900
JUN											
01...	1145	728	72	7.3	23.5	1.4	760	8.1	96	K58	K10
AUG											
10...	0930	310	65	7.2	20.5	1.1	755	7.5	84	96	K19

DATE	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD 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 WH WAT TOTAL FIELD MG/L AS CACO3	BICAR-BONATE WH WAT TOTAL FIELD MG/L AS HCO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT											
23...	32	7	8.3	2.8	2.1	0.6	25	31	14	2.8	<0.1
MAR											
09...	43	12	11	3.8	3.8	1.1	31	38	10	6.8	<0.1
JUN											
01...	27	6	7.1	2.2	2.2	<0.1	21	25	10	2.2	<0.1
AUG											
10...	32	7	8.2	2.7	2.7	0.5	25	30	24	2.8	0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	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)
OCT										
23...	6.8	67	53	0.16	0.02	0.03	0.80	0.020	0.020	<0.010
MAR										
09...	7.2	69	63	0.47	0.12	0.11	1.1	0.040	0.010	<0.010
JUN										
01...	5.1	51	--	0.10	0.04	0.04	0.50	0.020	0.040	<0.010
AUG										
10...	5.8	54	62	<0.10	0.04	0.05	1.0	0.020	0.020	<0.010

K Results based on colony count outside the acceptable range (non-ideal colony count).

STREAMS TRIBUTARY TO ST. LAWRENCE RIVER

04269000 ST. REGIS RIVER AT BRASHER CENTER, NY--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	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)
OCT 23...	--	--	--	--	--	--	--	--	--	--
MAR 09...	40	<1	20	<0.5	<1	<1	<3	2	170	<5
JUN 01...	30	<1	16	<0.5	<1	<1	<3	4	180	<5
AUG 10...	50	<1	17	<0.5	<1	<1	<3	2	390	<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)
OCT 23...	--	--	--	--	--	--	--	--	--	--
MAR 09...	<4	13	<0.1	<10	2	<1	<1	27	<6	13
JUN 01...	<4	22	<0.1	<10	<1	<1	<1	24	<6	48
AUG 10...	<4	31	<0.1	<10	3	<1	<1	27	<6	32

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 23...	0845	932	1	2.5	91
MAR 09...	0945	2000	17	192	57
JUN 01...	1145	728	4	7.9	70
AUG 10...	0930	310	5	4.2	70

STREAMS TRIBUTARY TO ST. LAWRENCE RIVER

04270000 SALMON RIVER AT CHASM FALLS, NY

LOCATION.--Lat 44°45'52", long 74°13'09", Franklin County, Hydrologic Unit 04150307, on right bank 0.1 mi downstream from Niagara Mohawk Power Corp. powerplant at Chasm Falls, and 3.0 mi downstream from Duane Stream.

DRAINAGE AREA.--132 mi^2.

PERIOD OF RECORD.--July 1925 to September 1982, October 1986 to current year.

REVISED RECORDS.--WSP 729: 1931 (m). WSP 759: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,011.52 ft National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good except those for winter periods, which are fair. Seasonal regulation of flow by upstream reservoirs. Diurnal fluctuation at low and medium flow caused by powerplant. A small diversion from tributary upstream from station is used as water supply for village of Malone.

AVERAGE DISCHARGE.--58 years, 228 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,890 ft^3/s, Apr. 25, 1926, gage height, 5.0 ft; minimum, 9.8 ft^3/s, Sept. 26, 27, 1963; miminum daily, 28 ft^3/s, Sept. 4, 1934.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 29, 1984, reached a stage of 5.63 ft, from floodmarks, discharge, 3,700 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,860 ft^3/s, Apr. 1, gage height, 4.06 ft; minimum, 17 ft^3/s, Mar. 17, gage height, 0.48 ft; minimum daily, 76 ft^3/s, Aug. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	704	281	209	125	176	156	1740	245	163	119	124	121
2	600	287	246	168	176	184	1210	273	154	115	119	111
3	522	288	458	141	177	184	804	273	153	121	223	105
4	517	288	575	139	175	173	604	239	170	150	242	100
5	566	287	430	161	163	182	555	216	172	156	209	102
6	531	312	292	167	175	176	584	207	154	133	175	104
7	472	293	285	167	175	176	706	206	139	121	149	100
8	392	278	263	164	174	217	826	195	179	132	137	107
9	366	293	262	178	170	251	732	187	332	253	135	124
10	342	295	363	207	157	205	607	183	378	167	150	118
11	300	267	358	202	178	224	526	177	278	137	166	138
12	282	258	307	195	170	209	475	196	260	131	149	115
13	287	243	264	192	173	189	435	205	367	116	128	315
14	320	215	270	184	170	169	385	185	338	174	113	472
15	331	245	283	204	175	169	344	216	262	212	111	315
16	302	235	266	193	169	164	314	234	235	174	113	241
17	281	234	256	169	165	165	296	201	229	143	105	194
18	265	246	249	204	166	164	285	193	205	108	100	167
19	254	222	249	209	163	163	274	182	178	132	97	167
20	247	195	245	190	162	169	261	175	174	128	106	168
21	191	227	217	188	161	165	250	166	159	192	84	161
22	191	237	238	184	159	229	238	153	148	176	99	171
23	192	228	230	186	159	263	202	180	154	140	105	161
24	255	238	225	181	157	311	228	191	143	128	95	154
25	242	246	232	179	155	417	164	181	132	346	95	144
26	234	243	255	177	153	625	151	167	125	361	83	96
27	231	413	223	177	154	672	136	159	111	247	76	100
28	269	349	166	177	153	627	136	168	141	191	90	101
29	281	302	170	179	---	721	116	194	143	164	116	107
30	338	263	162	179	---	912	178	187	131	145	153	170
31	325	---	158	178	---	1370	---	163	---	139	121	---
TOTAL	10630	8008	8406	5544	4660	10001	13762	6097	5907	5151	3968	4749
MEAN	343	267	271	179	166	323	459	197	197	166	128	158
MAX	704	413	575	209	178	1370	1740	273	378	361	242	472
MIN	191	195	158	125	153	156	116	153	111	108	76	96

CAL YR 1986 TOTAL 30249 MEAN 291 MAX 704 MIN 158
WTR YR 1987 TOTAL 86883 MEAN 238 MAX 1740 MIN 76

STREAMS TRIBUTARY TO ST. LAWRENCE RIVER

04270200 LITTLE SALMON RIVER AT BOMBAY, NY

LOCATION.--Lat 44°56'24", long 74°33'26", Franklin County, Hydrologic Unit 04150307, on right bank 50 ft downstream from bridge on road to Fort Covington Center, 0.5 mi east of village of Bombay, and 7.2 mi upstream from mouth.

DRAINAGE AREA.--92.2 mi^2.

PERIOD OF RECORD.--August to November 1957, July 1958 to current year. Occasional low-flow measurements, water years 1954-55, 1957.

REVISED RECORDS.--WDR NY-82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 173.91 ft above National Geodetic Vertical Datum of 1929. August to November 1957, at site 100 ft upstream at datum 0.72 ft higher.

REMARKS.--Records fair except those for estimated discharges, which are poor. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--29 years (1959-87), 120 ft^3/s, 17.68 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,250 ft^3/s, Apr. 4, 1974, gage height, 12.90 ft; minimum, 8.0 ft^3/s, Aug. 6, 7, 1965, gage height, 1.52 ft; minimum gage height, 0.85 ft, Sept. 2, 1957, site and datum then in use.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 900 ft^3/s, and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 27	0930	921	6.69	Mar. 24	0200	ice jam	8.15
Dec. 3	1730	*1,750	*9.16	Mar. 26	0600	1,080	7.13
Mar. 9	0600	ice jam	7.37				

Minimum discharge, 15 ft^3/s, Sept. 7, 8, gage height, 1.47 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	392	164	112	e90	e62	e50	478	131	49	32	32	23
2	215	333	142	e86	e62	e70	294	101	48	28	29	22
3	191	304	1130	e84	e64	e120	244	83	43	28	35	22
4	385	212	797	e82	e66	e130	202	73	40	36	52	19
5	396	197	302	e78	e66	e120	187	65	39	40	53	21
6	266	167	202	e92	e68	e110	170	62	40	33	49	20
7	211	181	e130	e100	e68	e130	180	67	37	31	38	17
8	161	152	e90	e94	e68	e200	258	62	45	29	34	17
9	171	172	e78	e94	e66	e300	213	56	98	43	30	25
10	186	197	e200	e96	e64	e220	164	53	176	33	31	34
11	143	146	e210	e100	e64	e180	137	51	114	26	34	29
12	122	146	e170	e100	e62	e150	119	62	77	26	30	28
13	134	144	e130	e98	e60	e140	109	72	135	27	26	45
14	202	114	e100	e98	e54	e130	96	57	128	23	23	80
15	212	131	e140	e88	e48	e120	90	79	87	50	22	68
16	154	113	e130	e74	e46	e120	88	100	61	54	22	46
17	128	130	e130	e66	e45	e120	83	77	49	36	19	35
18	111	132	e120	e62	e44	e120	82	75	43	29	19	31
19	101	109	e120	e60	e43	e120	79	61	38	26	17	27
20	94	85	e110	e60	e41	e130	72	52	35	26	19	28
21	103	102	e110	e60	e40	e150	68	47	30	80	18	35
22	137	126	e100	e58	e39	e200	62	46	29	66	22	35
23	122	122	e100	e58	e39	e350	60	55	33	41	29	32
24	116	200	e100	e56	e38	e500	87	62	30	33	23	31
25	102	336	e110	e54	e39	771	105	57	25	235	18	28
26	93	237	e190	e52	e39	1000	81	52	24	314	17	26
27	92	700	e160	e52	e42	703	69	51	26	171	17	26
28	214	332	e130	e50	e46	488	62	65	36	79	16	27
29	227	234	e120	e50	---	402	62	95	40	53	20	26
30	409	176	e110	e54	---	376	97	86	38	44	33	25
31	241	---	e100	e56	---	487	---	58	---	36	26	---
TOTAL	5831	5894	5873	2302	1483	8207	4098	2113	1693	1808	853	928
MEAN	188	196	189	74.3	53.0	265	137	68.2	56.4	58.3	27.5	30.9
MAX	409	700	1130	100	68	1000	478	131	176	314	53	80
MIN	92	85	78	50	38	50	60	46	24	23	16	17
CFSM	2.04	2.13	2.05	.81	.57	2.87	1.48	.74	.61	.63	.30	.34
IN.	2.35	2.38	2.37	.93	.60	3.31	1.65	.85	.68	.73	.34	.37

CAL YR 1986 TOTAL 59883 MEAN 164 MAX 2620 MIN 34 CFSM 1.78 IN. 24.2
WTR YR 1987 TOTAL 41083 MEAN 113 MAX 1130 MIN 16 CFSM 1.22 IN. 16.6

e Estimated

STREAMS TRIBUTARY TO ST. LAWRENCE RIVER

04270510 CHATEAUGAY RIVER BELOW CHATEAUGAY, NY

LOCATION.--Lat 44°57'49", long 74°07'53", Franklin County, Hydrologic Unit 04150307, on left bank 10 ft downstream from bridge on Sam Cook Road, 0.2 mi downstream from Marble River, 2.4 mi upstream from international boundary, and 4.1 mi northeast of Chateaugay.

DRAINAGE AREA.--151 mi^2.

PERIOD OF RECORD.--December 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 411.33 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated at Forge Dam on Upper and Lower Chateaugay Lakes. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--21 years (1967-87), 248 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,200 ft^3/s, Apr. 4, 1974, gage height, 7.33 ft, from rating curve extended above 1,600 ft^3/s; maximum gage height, 10.99 ft, Feb. 11, 1966 (ice jam); minimum discharge, 14 ft^3/s, Sept. 5, 6, 1982, Nov. 3, 1985, Aug. 28, 1987; minimum gage height, 2.32 ft, Sept. 5, 6, 1982, Aug. 28, 1987; minimum daily discharge, 37 ft^3/s, Aug. 23, 26, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,400 ft^3/s, Apr. 8, gage height, 5.19 ft; minimum, 14 ft^3/s, Aug. 28, gage height, 2.32 ft; minimum daily discharge, 54 ft^3/s, Sept. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	329	240	352	e170	e230	e170	1240	249	149	79	135	64
2	366	301	412	e170	e210	e180	1140	265	144	91	99	64
3	434	272	497	e170	e210	e190	1090	252	144	108	115	65
4	491	293	439	e180	e210	e200	1030	249	141	129	109	54
5	519	257	367	e180	e230	e200	970	259	140	125	99	62
6	473	270	349	e190	e240	e210	977	255	139	120	102	59
7	435	253	352	e190	e230	e220	1130	239	137	117	100	60
8	441	255	335	194	e220	e230	1280	206	162	125	102	62
9	476	289	381	e190	e210	236	1070	206	196	126	100	74
10	380	264	411	e180	e210	202	980	206	258	116	105	72
11	307	247	392	e180	e200	208	827	185	239	117	102	59
12	296	252	352	e170	e200	221	519	167	254	114	103	80
13	298	249	303	e170	e200	202	473	132	253	124	98	104
14	308	235	e280	e160	e190	202	410	136	239	136	106	120
15	286	232	e260	e160	e190	193	388	154	228	144	94	180
16	230	227	241	e160	e190	177	282	144	201	124	97	215
17	219	230	231	e160	e190	172	275	146	199	132	106	210
18	219	227	228	e170	e190	172	264	146	156	145	97	213
19	217	196	212	e200	e180	171	193	162	114	146	109	205
20	216	210	e190	e220	e170	172	198	180	109	137	110	209
21	225	186	e180	e210	e160	179	182	183	86	184	94	212
22	222	184	e180	e190	e150	263	111	184	87	136	106	208
23	223	209	e170	e180	e150	323	119	198	87	130	92	179
24	206	284	164	e170	e150	414	135	187	85	115	67	128
25	187	269	168	e170	e140	577	131	185	75	174	68	104
26	186	315	186	e160	e150	790	146	179	71	196	64	100
27	189	429	184	e170	e160	756	147	179	80	171	61	100
28	242	310	179	e180	e160	757	160	176	88	164	61	99
29	217	315	177	e190	---	804	189	181	78	162	66	139
30	357	283	177	e210	---	1040	235	172	78	151	65	148
31	238	---	175	e230	---	1210	---	142	---	149	64	---
TOTAL	9432	7783	8524	5624	5320	11041	16291	5904	4417	4187	2896	3648
MEAN	304	259	275	181	190	356	543	190	147	135	93.4	122
MAX	519	429	497	230	240	1210	1280	265	258	196	135	215
MIN	186	184	164	160	140	170	111	132	71	79	61	54

CAL YR 1986 TOTAL 90448 MEAN 248 MAX 986 MIN 69
WTR YR 1987 TOTAL 85067 MEAN 233 MAX 1280 MIN 54

e Estimated

STREAMS TRIBUTARY TO ST. LAWRENCE RIVER

04273500 SARANAC RIVER AT PLATTSBURGH, NY

LOCATION.--Lat 44°40'54", long 73°28'18", Clinton County, Hydrologic Unit 02010006, on right bank at Plattsburgh, 600 ft downstream from Imperial Paper and Color Corp. dam, 3.0 mi upstream from mouth, and 5.5 mi downstream from Mead Brook.

DRAINAGE AREA.--608 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1903 to September 1930, October 1943 to current year. Published as "near Plattsburgh," 1903-30.

REVISED RECORDS.--WSP 345: Drainage area. WSP 384: 1909-10 (monthly discharge only). WSP 1387: 1907-8. WSP 1437: 1908 (minimum daily only).

GAGE.--Water-stage recorder. Datum of gage is 155.74 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 12, 1919, nonrecording gage, and Nov. 12, 1919 to Sept. 30, 1930, water-stage recorder, at site 1.5 mi upstream at different datum. Telephone gage-height telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Considerable diurnal fluctuation caused by power and industrial operations. Slight regulation by storage in Upper and Lower Saranac Lakes and elsewhere. During year, city of Plattsburgh diverted an average of 7.81 ft^3/s from Saranac River and Mead and West Brooks, tributaries upstream from station, for municipal supply. About 1 ft^3/s diverted from Great Chazy River basin into Saranac River for water supply of State Institutions at Dannemora. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--71 years, 838 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,500 ft^3/s, Apr. 8, 1928, from computation of flow over dam and through waste gates and powerplant; minimum daily discharge, 3.6 ft^3/s, June 26, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,670 ft^3/s, Apr. 1, gage height, 7.82 ft; minimum, 8.2 ft^3/s, July 11, gage height, 1.37 ft; minimum daily, 182 ft^3/s, Sept. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2670	916	837	674	517	562	4700	988	620	387	286	308
2	2150	915	830	691	587	696	3510	981	587	369	279	308
3	1890	885	1160	657	551	741	2980	889	547	360	343	294
4	1980	819	1260	484	640	792	2490	815	594	403	520	268
5	1970	989	1120	651	647	751	2410	644	539	488	447	248
6	1800	857	923	624	567	745	2820	643	532	499	364	287
7	1590	938	951	716	585	741	3560	561	549	364	286	182
8	1390	893	797	623	744	860	3990	654	550	388	263	193
9	1320	885	926	674	791	940	3120	535	958	423	357	439
10	1190	1000	1120	661	596	884	2640	537	1040	529	271	701
11	958	855	1110	651	599	929	2330	508	945	357	453	393
12	924	884	983	682	714	950	2110	589	822	457	416	416
13	794	842	933	600	603	759	1930	552	832	587	342	778
14	866	768	701	718	e580	677	1760	582	916	528	313	1110
15	938	615	914	617	e540	664	1210	654	929	619	267	930
16	857	643	812	628	e560	646	1230	640	707	544	289	798
17	909	680	737	550	e560	615	1330	630	665	617	273	618
18	1030	487	819	206	e580	640	1340	597	633	445	234	525
19	1090	530	772	819	e600	600	1300	561	566	415	217	433
20	1120	565	783	935	607	546	1220	525	539	458	217	437
21	1090	633	691	579	597	480	1140	453	511	483	214	474
22	958	772	757	553	503	781	895	485	465	519	217	494
23	957	699	802	469	437	1000	805	514	516	427	240	514
24	995	770	822	501	463	1100	766	548	527	398	247	368
25	906	716	778	e600	451	1560	819	606	529	348	240	262
26	894	860	721	e580	476	2550	818	583	481	496	233	276
27	913	1230	873	e540	589	2220	887	564	394	703	183	284
28	910	1230	738	e500	616	2140	890	594	412	502	185	291
29	1010	1200	803	e500	---	2300	908	623	404	406	260	432
30	1090	1120	701	686	---	2540	909	672	393	410	492	432
31	1100	---	741	704	---	3430	---	620	---	317	423	---
TOTAL	38259	25196	26915	19073	16300	34839	56817	19347	18702	14246	9371	13493
MEAN	1234	840	868	615	582	1124	1894	624	623	460	302	450
MAX	2670	1230	1260	935	791	3430	4700	988	1040	703	520	1110
MIN	794	487	691	206	437	480	766	453	393	317	183	182

CAL YR 1986 TOTAL 362702 MEAN 994 MAX 5020 MIN 313
WTR YR 1987 TOTAL 292558 MEAN 802 MAX 4700 MIN 182

e Estimated

04273500 SARANAC RIVER AT PLATTSBURGH, NY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April to September 1987.
CHEMICAL DATA: 1987 (b).
MINOR ELEMENTS DATA: 1987 (b).

WATER QUALITY DATA, APRIL TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
APR 27...	1615	853	--	7.4	14.0	10.4	27	7.5	1.9
MAY 26...	1630	587	91	7.8	18.5	9.9	33	9.3	2.4
JUN 16...	1355	813	81	7.6	20.5	9.1	30	8.4	2.3
AUG 03...	1515	282	--	8.0	12.5	8.8	36	10	2.7
SEP 28...	1545	282	--	8.0	19.0	11.1	36	9.6	2.9

DATE	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	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)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
APR 27...	58	<10	<10	280	<100	20	--	<100	<10
MAY 26...	64	<10	<10	300	<5	30	<0.10	<1	<10
JUN 16...	64	<10	<10	420	<5	30	<0.10	<1	10
AUG 03...	67	<10	30	450	6	40	<0.10	<1	<10
SEP 28...	67	<1	5	440	<5	40	<0.10	4	<10

04275000 EAST BRANCH AUSABLE RIVER AT AU SABLE FORKS, NY

LOCATION.--Lat 44°26'20", long 73°40'55", Essex County, Hydrologic Unit 02010004, on left bank 700 ft upstream from bridge on Burt Street in Au Sable Forks, and 0.5 mi upstream from confluence with West Branch.

DRAINAGE AREA.--198 mi^2.

PERIOD OF RECORD.--September 1924 to current year.

REVISED RECORDS.--WSP 759: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 545.37 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 21, 1938, nonrecording gage at lower highway bridge in Au Sable Forks, 400 ft upstream from confluence with West Branch at datum 3.54 ft lower.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Occasional regulation of storage in Upper and Lower Ausable Lakes and occasional small diurnal fluctuation, cause unknown. Several measurements of water temperature were made during the year. Telephone gage-height telemeter at station.

AVERAGE DISCHARGE.--63 years, 313 ft^3/s, 21.47 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,100 ft^3/s, Sept. 22, 1938, gage height, 12.91 ft, from rating curve extended above 5,800 ft^3/s, on basis of velocity-area studies; minimum observed, 20 ft^3/s, Aug. 11, 14, 28, 1934.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,700 ft^3/s, and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 31	2345	*10,800	*9.57	Apr. 7	1545	4,210	6.23

Minimum discharge, 44 ft^3/s, Aug. 25, gage height, 0.93 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	591	161	175	e150	e100	e150	4670	270	164	103	64	90
2	539	162	175	e140	e100	e180	1460	245	188	95	61	83
3	382	176	467	e140	e100	e200	889	238	344	97	72	74
4	336	161	606	e140	e96	e190	715	224	365	125	124	70
5	498	146	402	e140	e96	e180	2180	212	404	177	116	64
6	474	152	e250	e140	e96	e170	3440	230	290	145	94	60
7	377	166	e210	e150	e100	e200	3910	279	217	121	82	57
8	302	160	e160	e150	e100	e220	2310	277	228	132	74	57
9	264	311	e130	e150	e98	e260	1270	246	459	210	66	79
10	244	459	e250	e150	e94	e190	1020	250	614	147	79	133
11	215	308	e220	e140	e100	e180	1110	270	380	169	95	105
12	197	243	e200	e140	e100	e170	1310	266	277	163	86	95
13	194	207	e180	e140	e96	e160	1270	247	451	141	76	820
14	211	153	e200	e140	e88	e150	1050	205	446	137	68	1240
15	268	172	e230	e130	e78	e140	930	211	310	151	62	529
16	257	157	e220	e120	e78	e130	970	253	223	143	57	275
17	225	150	e210	e100	e78	e130	965	202	181	122	53	180
18	198	156	e200	e120	e76	e130	1070	187	152	105	49	148
19	180	138	e190	e120	e76	e130	1050	171	132	96	48	230
20	167	118	e190	e110	e76	e130	1020	156	118	90	47	237
21	159	168	e180	e110	e76	e150	936	147	105	97	47	241
22	153	197	e180	e110	e78	e210	785	140	104	103	48	236
23	150	179	e180	e110	e78	e220	528	156	315	88	51	215
24	159	171	e190	e100	e78	e260	536	189	315	80	49	181
25	145	174	e210	e100	e80	e400	471	171	208	103	46	160
26	139	182	e260	e98	e84	1280	361	158	160	148	59	141
27	142	558	e230	e96	e90	1140	306	149	140	111	56	137
28	162	413	e210	e96	e120	1030	273	187	134	97	53	123
29	e170	321	e190	e96	---	1180	257	229	122	86	83	112
30	180	265	e170	e96	---	1910	295	203	111	76	129	102
31	177	---	e160	e98	---	5620	---	167	---	70	103	---
TOTAL	7855	6484	7025	3820	2510	16790	37357	6535	7657	3728	2197	6274
MEAN	253	216	227	123	89.6	542	1245	211	255	120	70.9	209
MAX	591	558	606	150	120	5620	4670	279	614	210	129	1240
MIN	139	118	130	96	76	130	257	140	104	70	46	57
CFSM	1.28	1.09	1.14	.62	.45	2.74	6.29	1.06	1.29	.61	.36	1.06
IN.	1.48	1.22	1.32	.72	.47	3.15	7.02	1.23	1.44	.70	.41	1.18

CAL YR 1986 TOTAL 118003 MEAN 323 MAX 2620 MIN 83 CFSM 1.63 IN. 22.2
WTR YR 1987 TOTAL 108232 MEAN 297 MAX 5620 MIN 46 CFSM 1.50 IN. 20.3

e Estimated

STREAMS TRIBUTARY TO ST. LAWRENCE RIVER

04278000 LAKE GEORGE AT ROGERS ROCK, NY

LOCATION.--Lat 43°48'28", long 73°27'30", Essex County, Hydrologic Unit 02010001, on west shore about 500 ft north of Hooper's dock at Rogers Rock, and 0.4 mi west of Baldwin.

DRAINAGE AREA.--233 mi^2 at outlet at Ticonderoga.

PERIOD OF RECORD.--July 1913 to current year.

GAGE.--Water-stage recorder. Datum of gage is 316.06 ft, revised, above National Geodetic Vertical Datum, adjustment of 1912. Prior to Nov. 4, 1929, nonrecording gages at several sites within a half mile of present site at same datum. Nov. 4, 1929 to Sept. 26, 1936, nonrecording gage at present site and datum.

REMARKS.--Elevation of lake regulated by floodgates at Ticonderoga. Prior to October 1974, lake was regulated by powerplant wheel gate and floodgates. Lake George has been controlled by a dam at its outlet for more than 100 years. Area of water surface is 44 mi^2.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 5.09 ft, Apr. 9, 1936; minimum, 0.64 ft, Dec. 20, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 4.11 ft, Dec. 4; minimum, 2.62 ft, Feb. 17.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.44	3.42	3.75	3.59	3.29	2.72	3.67	3.81	3.82	3.86	3.50	3.43
2	3.44	3.35	3.79	3.54	3.27	2.81	3.73	3.77	3.82	3.79	3.52	3.41
3	3.45	3.37	3.93	3.60	3.22	2.82	3.78	3.76	3.86	3.79	3.58	3.37
4	3.44	3.36	4.01	3.61	3.18	2.82	3.73	3.75	3.88	3.77	3.56	3.37
5	3.47	3.33	3.95	3.59	3.15	2.83	3.77	3.78	3.90	3.69	3.45	3.38
6	3.50	3.38	3.91	3.60	3.10	2.86	3.85	3.82	3.84	3.68	3.50	3.37
7	3.46	3.40	3.87	3.60	3.06	2.85	3.90	3.82	3.89	3.65	3.52	3.36
8	3.48	3.41	3.73	3.56	3.02	2.84	3.93	3.80	3.90	3.62	3.50	3.35
9	3.39	3.47	3.76	3.54	2.97	2.83	3.93	3.80	3.89	3.63	3.48	3.47
10	3.37	3.44	3.79	3.52	2.96	2.86	3.93	3.76	3.86	3.61	3.49	3.48
11	3.42	3.45	3.74	3.55	2.93	2.87	3.88	3.76	3.87	3.64	3.47	3.47
12	3.40	3.46	3.70	3.57	2.87	2.87	3.85	3.72	3.85	3.68	3.48	3.49
13	3.40	3.45	3.67	3.53	2.84	2.86	3.80	3.70	3.84	3.68	3.49	3.63
14	3.42	3.46	3.69	3.49	2.80	2.85	3.78	3.72	3.86	3.71	3.50	3.81
15	3.43	3.45	3.64	3.44	2.77	2.83	3.76	3.67	3.82	3.69	3.48	3.80
16	3.41	3.43	3.60	3.39	2.73	2.82	3.73	3.65	3.81	3.66	3.49	3.80
17	3.36	3.44	3.60	3.36	2.69	2.80	3.72	3.63	3.75	3.67	3.48	3.70
18	3.36	3.39	3.61	3.37	2.68	2.78	3.73	3.57	3.76	3.68	3.46	3.76
19	3.38	3.36	3.67	3.32	2.68	2.76	3.73	3.58	3.75	3.61	3.47	3.88
20	3.38	3.39	3.67	3.36	2.68	2.74	3.72	3.61	3.67	3.65	3.46	3.91
21	3.38	3.48	3.66	3.38	2.68	2.73	3.72	3.62	3.68	3.59	3.44	3.92
22	3.38	3.50	3.68	3.36	2.68	2.73	3.65	3.65	3.68	3.61	3.47	3.91
23	3.37	3.52	3.66	3.45	2.68	2.74	3.73	3.59	3.90	3.63	3.44	3.94
24	3.33	3.55	3.61	3.46	2.68	2.77	3.70	3.67	4.00	3.64	3.41	3.89
25	3.35	3.54	3.64	3.43	2.67	2.85	3.72	3.68	3.96	3.63	3.40	3.88
26	3.35	3.60	3.66	3.38	2.67	2.97	3.73	3.69	3.97	3.64	3.34	3.86
27	3.38	3.81	3.63	3.40	2.67	3.07	3.76	3.75	3.98	3.62	3.32	3.80
28	3.40	3.91	3.65	3.39	2.68	3.14	3.76	3.78	4.01	3.57	3.34	3.80
29	3.41	3.88	3.64	3.36	---	3.21	3.77	3.78	3.97	3.57	3.38	3.79
30	3.39	3.80	3.60	3.33	---	3.28	3.83	3.81	3.93	3.57	3.43	3.78
31	3.38	---	3.58	3.32	---	3.44	---	3.82	---	3.50	3.44	---
MEAN	3.40	3.49	3.71	3.46	2.87	2.88	3.78	3.72	3.86	3.66	3.46	3.66
MAX	3.50	3.91	4.01	3.61	3.29	3.44	3.93	3.82	4.01	3.86	3.58	3.94
MIN	3.33	3.33	3.58	3.32	2.67	2.72	3.65	3.57	3.67	3.50	3.32	3.35

CAL YR 1986 MEAN 3.57 MAX 4.11 MIN 2.61
WTR YR 1987 MEAN 3.50 MAX 4.01 MIN 2.67

04278300 NORTHWEST BAY BROOK NEAR BOLTON LANDING, NY

LOCATION.--Lat 43°39'48", long 73°36'14", Warren County, Hydrologic Unit 02010001, on left bank 10 ft downstream from county bridge on Padanarum Road, 7.7 mi north of Bolton Landing.

DRAINAGE AREA.--23.4 mi^2.

PERIOD OF RECORD.--October 1965 to September 1968, October 1971 to current year. Annual maximum, water years 1969-71.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 423.60 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1973, at datum 1.00 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--19 years (1966-68, 1972-87), 36.7 ft^3/s, 21.30 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,770 ft^3/s, Feb. 11, 1981, gage height, 6.35 ft, from rating curve extended above 590 ft^3/s on basis of slope-area measurement at gage height 5.53 ft; maximum gage height 7.14 ft, Feb. 11, 1981 (ice jam); minimum discharge, 0.28 ft^3/s, Sept. 27, 28, 29, 1968, gage height, 0.18 ft, present datum.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 27	0100	495	3.65	June 23	0230	*769	*4.39
Mar. 31	2000	602	3.96	Sept. 13	1930	a522	3.73

a Result of release from upstream pond.

Minimum discharge, 1.2 ft^3/s, Aug. 21, 22, 26, 27, gage height, 0.72 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	15	52	e21	e13	e15	266	17	7.2	32	2.6	3.1
2	20	15	45	e20	e12	e30	133	16	6.1	27	2.7	2.6
3	19	14	106	e19	e12	e26	110	14	6.2	37	8.1	2.5
4	21	13	108	e19	e13	e24	88	14	10	34	5.1	2.0
5	29	12	73	e20	e12	e22	103	15	12	26	4.1	1.7
6	25	15	58	e21	e13	e21	235	19	7.6	20	3.5	1.6
7	21	18	50	e20	e14	e20	160	18	5.9	18	3.8	1.6
8	19	26	44	e17	e13	e25	116	16	8.8	18	3.1	3.0
9	18	46	68	e16	e13	e44	87	14	12	17	2.8	23
10	17	38	61	e16	e13	e39	70	13	8.9	15	7.3	8.8
11	15	31	44	e19	e13	e27	59	12	6.5	14	4.4	5.4
12	15	29	38	e17	e13	e25	51	11	7.0	14	3.3	4.5
13	15	27	e35	e16	e12	e23	45	9.8	16	13	2.7	147
14	19	22	e32	e15	e12	e22	40	9.1	23	13	2.3	108
15	22	21	e30	e16	e12	e21	38	8.6	14	15	2.0	45
16	19	21	29	e16	e11	e21	34	8.0	9.6	11	1.9	29
17	17	21	26	e16	e11	e20	33	7.5	7.5	8.5	1.7	21
18	16	21	26	e15	e10	20	31	7.1	6.0	8.0	1.5	142
19	15	19	29	e15	e10	20	29	6.2	5.3	8.5	1.4	137
20	15	17	e25	e15	e11	21	26	5.7	4.9	7.1	1.5	79
21	14	23	e23	e15	e12	22	25	5.9	4.1	6.7	1.4	61
22	14	22	e21	e15	e13	35	22	5.8	38	5.9	2.9	48
23	14	20	e20	e14	e12	75	21	7.3	397	5.3	3.5	39
24	13	27	e19	e14	e11	178	23	15	113	4.8	2.0	55
25	12	35	33	e14	e10	241	22	9.3	61	5.3	1.5	45
26	14	106	37	e14	e10	298	21	7.6	40	4.7	1.4	34
27	18	275	32	e14	e11	208	23	7.2	122	4.2	1.4	30
28	19	114	e28	e13	e11	200	18	8.1	96	5.2	1.9	25
29	19	79	26	e13	---	187	19	18	60	3.9	7.7	23
30	17	63	24	e14	---	180	21	11	43	3.8	5.2	27
31	15	---	e22	e15	---	340	---	8.3	---	3.1	3.6	---
TOTAL	548	1205	1264	504	333	2450	1969	344.5	1158.6	409.0	98.3	1154.8
MEAN	17.7	40.2	40.8	16.3	11.9	79.0	65.6	11.1	38.6	13.2	3.17	38.5
MAX	29	275	108	21	14	340	266	19	397	37	8.1	147
MIN	12	12	19	13	10	15	18	5.7	4.1	3.1	1.4	1.6
CFSM	.76	1.72	1.74	.69	.51	3.38	2.80	.47	1.65	.56	.14	1.65
IN.	.87	1.92	2.01	.80	.53	3.89	3.13	.55	1.84	.65	.16	1.84

CAL YR 1986 TOTAL 14959.6 MEAN 41.0 MAX 381 MIN 4.6 CFSM 1.75 IN. 23.78
WTR YR 1987 TOTAL 11438.2 MEAN 31.3 MAX 397 MIN 1.4 CFSM 1.34 IN. 18.18

04280000 POULTNEY RIVER BELOW FAIR HAVEN, VT.

LOCATION.--Lat 43°37'40", long 73°18'50", Rutland County, Hydrologic Unit 02010001, on right bank 0.3 mi downstream from Carver Falls, 1.9 mi upstream from Hubbardton River, and 3.2 mi northwest of Fair Haven.

DRAINAGE AREA.--187 mi².

PERIOD OF RECORD.--Discharge: October 1928 to current year.

Water-quality records: Water year 1954.

REVISED RECORDS.--WSP 1114: 1929(M), 1932-35.

GAGE.--Water-stage recorder. Elevation of gage is 105 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Flow regulated by powerplant upstream and Lake Bomoseen. Several observations of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

AVERAGE DISCHARGE.--59 years, 256 ft³/s, 18.59 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,800 ft³/s July 20, 1945, gage height, 24.36 ft, from high-water mark in well, from rating curve extended above 2,600 ft³/s on basis of computations of flow over dam at gage heights 16.10 ft, 21.40 ft, and 24.36 ft; minimum daily, 2.1 ft³/s Aug. 8, 1965, Sept. 13, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,600 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Jun. 23	1500	5,640	16.21	No other peak greater than base discharge.			

Minimum daily discharge, 3.1 ft³/s Sept. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90	90	625	178	e88	e105	1720	111	59	233	96	54
2	84	72	428	209	e105	e270	1130	116	49	198	88	52
3	77	69	752	238	e110	e275	982	99.8	64	258	99	42
4	107	53	1050	247	e105	e280	782	86	76	324	130	45
5	169	73	724	259	e105	e240	942	103	216	280	99	3.1
6	143	68	554	216	e100	e225	1290	109	165	145	92	25
7	126	132	477	215	e120	e380	1250	113	154	140	90	31
8	106	105	423	216	e120	e600	1370	114	66	179	85	36
9	78	160	338	172	e110	1010	1040	82	61	124	62	371
10	100	187	475	134	e80	768	828	104	158	111	69	296
11	e74	182	474	137	e115	671	559	71	116	135	88	223
12	e110	143	365	140	e110	628	459	84	79	148	74	102
13	e90	151	264	150	e90	544	409	70	187	126	59	289
14	e74	119	192	119	e74	463	347	72	935	120	68	964
15	e110	116	213	180	e82	387	300	68	572	231	40	699
16	e105	114	191	237	e56	305	274	68	298	172	53	459
17	e110	106	201	e190	e100	222	267	65	150	141	58	398
18	e94	112	219	e200	e185	209	315	64	153	72	47	503
19	e66	97	446	e140	e170	234	278	63	102	79	28	726
20	e74	88	476	e105	e150	254	238	60	103	93	59	520
21	e80	111	385	e125	e80	301	178	49	73	97	40	466
22	78	128	327	e120	e70	415	174	57	154	93	12	391
23	77	106	322	e150	e66	687	142	44	3310	88	75	262
24	98	140	269	e180	e64	1010	168	94	1910	65	39	245
25	141	272	243	e130	e76	1380	188	68	1140	58	38	244
26	103	478	389	e125	e66	2060	127	66	881	68	33	206
27	124	2050	292	e200	e62	1860	123	63	640	63	33	155
28	109	1460	264	e250	e70	1570	103	56	676	69	42	159
29	95	938	225	e190	---	1390	115	62	493	74	53	146
30	121	786	229	e140	---	1210	120	70	291	54	45	149
31	142	---	210	e140	---	1350	---	80	---	81	47	---
TOTAL	3155	8706	12042	5432	2729	21303	16218	2431.8	13331	4119	1941	8261.1
MEAN	102	290	388	175	97.5	687	541	78.4	444	133	62.6	275
MAX	169	2050	1050	259	185	2060	1720	116	3310	324	130	964
MIN	66	53	191	105	56	105	103	44	49	54	12	3.1
CFSM	.54	1.55	2.08	.94	.52	3.67	2.89	.42	2.38	.71	.33	1.47
IN.	.63	1.73	2.40	1.08	.54	4.24	3.23	.48	2.65	.82	.39	1.64

CAL YR 1986 TOTAL 143082.0 MEAN 392 MAX 6110 MIN 11 CFSM 2.10 IN. 28.46
WTR YR 1987 TOTAL 99668.9 MEAN 273 MAX 3310 MIN 3.1 CFSM 1.46 IN. 19.83

e Estimated

04294500 LAKE CHAMPLAIN AT BURLINGTON, VT.

LOCATION.--Lat 44°28'52", long 73°13'27", Chittenden County, Hydrologic Unit 02010003, 50 ft south of Gulf Oil Co. dock at Burlington, 0.1 mi north of Burlington Water Department pumping station, and 0.5 mi north of railroad station.

PERIOD OF RECORD.--Gage heights: May 1907 to current year.

Water-quality records: Water year 1971.

REVISED RECORDS.--WSP 684: 1912-29 (datum correction). WSP 1207: 1938 (datum correction).

GAGE.--Water-stage recorder. Datum of gage is 92.86 ft above National Geodetic Vertical Datum of 1929. Prior to July 20, 1937, nonrecording gage at site 0.7 mi south, and July 20, 1937, to Sept. 7, 1939, nonrecording gage at site 0.1 mi south, both at present datum.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 8.80 ft Apr. 4, 1976; minimum observed, -0.25 ft Dec. 4, 1908.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 6.43 ft Apr. 12, affected by seiche; minimum, 1.54 ft Sept. 7, affected by seiche.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.20	2.81	3.27	3.16	2.48	2.10	5.02	4.87	3.04	2.99	2.48	1.71
2	3.31	2.88	3.26	3.16	2.45	2.12	5.39	4.82	3.05	2.97	2.44	1.71
3	3.35	2.87	3.33	3.17	2.45	2.13	5.56	4.75	3.00	2.94	2.41	1.69
4	3.38	2.84	3.42	3.11	2.43	2.13	5.66	4.67	3.00	2.94	2.43	1.66
5	3.45	2.84	3.53	3.07	2.41	2.13	5.76	4.59	3.00	2.94	2.45	1.62
6	3.49	2.81	3.57	3.02	2.39	2.11	5.90	4.51	2.97	2.93	2.44	1.58
7	3.52	2.80	3.58	2.97	2.38	2.10	6.07	4.42	2.90	2.87	2.39	1.56
8	3.46	2.76	3.60	2.96	2.37	2.11	6.24	4.35	2.88	2.83	2.35	1.57
9	3.51	2.77	3.57	2.92	2.38	2.16	6.33	4.25	2.94	2.83	2.33	1.62
10	3.50	2.80	3.60	2.90	2.36	2.19	6.36	4.18	3.00	2.83	2.35	1.64
11	3.44	2.82	3.59	2.92	2.36	2.22	6.39	4.13	3.04	2.83	2.33	1.64
12	3.40	2.84	3.61	2.89	2.34	2.23	6.39	4.04	3.06	2.80	2.31	1.61
13	3.37	2.81	3.60	2.86	2.33	2.26	6.39	3.98	3.09	2.77	2.26	1.71
14	3.37	2.78	3.53	2.81	2.31	2.27	6.35	3.86	3.08	2.77	2.21	1.90
15	3.37	2.71	3.53	2.81	2.31	2.27	6.30	3.79	3.08	2.74	2.20	2.
16	3.37	2.71	3.51	2.79	2.29	2.27	6.22	3.76	3.07	2.74	2.17	2.05
17	3.37	2.69	3.47	2.77	2.29	2.27	6.15	3.69	3.06	2.72	2.13	2.09
18	3.33	2.67	3.43	2.69	2.27	2.26	6.08	3.64	3.03	2.67	2.12	2.12
19	3.28	2.66	3.45	2.71	2.25	2.25	6.01	3.58	3.00	2.66	2.10	2.13
20	3.25	2.60	3.43	2.68	2.23	2.25	5.93	3.48	2.96	2.66	2.05	2.15
21	3.19	2.68	3.40	2.64	2.22	2.26	5.83	3.38	2.91	2.70	2.02	2.19
22	3.18	2.65	3.33	2.63	2.20	2.28	5.77	3.32	2.88	2.71	1.96	2.21
23	3.14	2.54	3.31	2.66	2.17	2.39	5.61	3.31	2.94	2.69	1.91	2.19
24	3.13	2.54	3.30	2.64	2.15	2.57	5.57	3.26	2.97	2.67	1.91	2.18
25	3.08	2.59	3.27	2.62	2.13	2.81	5.50	3.22	3.01	2.68	1.86	2.17
26	3.04	2.60	3.28	2.59	2.11	3.15	5.41	3.16	2.92	2.67	1.82	2.15
27	2.99	2.83	3.29	2.56	2.09	3.55	5.28	3.08	2.95	2.66	1.80	2.14
28	2.99	3.03	3.27	2.53	2.07	3.87	5.13	3.04	2.98	2.63	1.77	2.10
29	2.94	3.18	3.24	2.52	---	4.10	5.07	3.05	2.99	2.59	1.79	2.06
30	2.97	3.26	3.22	2.50	---	4.27	4.97	3.02	3.01	2.54	1.78	2.06
31	2.95	---	3.20	2.50	---	4.56	---	3.01	---	2.49	1.73	---
MEAN	3.27	2.78	3.42	2.80	2.29	2.57	5.82	3.81	2.99	2.76	2.14	1.91
MAX	3.52	3.26	3.61	3.17	2.48	4.56	6.39	4.87	3.09	2.99	2.48	2.21
MIN	2.94	2.54	3.20	2.50	2.07	2.10	4.97	3.01	2.88	2.49	1.73	1.56

CAL YR 1986 MEAN 3.61 MAX 7.39 MIN 2.11
WTR YR 1987 MEAN 3.05 MAX 6.39 MIN 1.56

04295000 RICHELIEU RIVER (LAKE CHAMPLAIN) AT ROUSES POINT, NY
(National stream-quality accounting network station)

LOCATION.--Lat 44°59'46", long 73°21'37", Clinton County, Hydrologic Unit 02010006, on left bank at outlet of Lake Champlain in Rouses Point, and 1.0 mi south of Fort Montgomery ruins. Water-quality sampling site at stage station.

DRAINAGE AREA.--8,277 mi^2.

WATER-STAGE RECORDS

PERIOD OF RECORD.--March 1871 to current year. Maximum and minimum monthly gage heights at St. Johns, Quebec, October 1863 to December 1870, published in WSP 97. Prior to October 1970, daily gage heights published in WSP 894. Discharge records for January 1875 to September 1916 at "Chambly, Quebec," published in WSP 65, 82, 97, 129, 170, 206, 424, and 1307 have been found to be unreliable and should not be used. Daily discharge record for "Richelieu River at Fryers Rapids, Quebec," published in Water Supply of Canada annual reports. Gage heights prior to October 1, 1925, published as "Richelieu River at Fort Montgomery, Rouses Point."

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. March 1871 to May 1923, nonrecording gage located in Fort Montgomery and May 1923 to October 1938, nonrecording gage at present site. Prior to October 1970, at datum 93.00 ft higher.

REMARKS.--Area of lake surface about 490 mi^2. Total volume below 92.5 ft elevation, reported by Lake Champlain Studies Center, 902.2 bil ft^3. Telephone gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 101.80 ft, Mar. 30, 1903; minimum observed, 92.17 ft, Oct. 23, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation known since at least 1827, 102.1 ft, May 4, 1869, from marks at railroad bridge near present gage, according to data published on p. 428 of the Report of the Board of Engineers on Deep Waterways, 1900: U.S. 56th Cong., 2d sess. H. Doc. 149.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 99.25 ft, Apr. 10; minimum, 94.37 ft, Sept. 8, 9.

ELEVATION, IN FEET, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96.03	96.09	96.06	95.98	95.30	94.91	97.79	97.69	95.89	95.83	95.28	94.61
2	96.13	95.67	96.15	95.82	95.29	94.95	98.22	97.60	95.91	95.83	95.36	94.56
3	96.26	95.86	96.19	95.86	95.27	94.95	98.38	97.53	96.06	95.91	95.41	94.49
4	96.20	95.65	96.34	95.93	95.24	94.96	98.41	97.42	95.95	95.84	95.32	94.50
5	96.26	95.74	96.34	95.89	95.25	94.96	98.45	97.37	95.86	95.78	95.18	94.56
6	96.26	95.74	96.50	95.91	95.24	94.97	98.57	97.32	95.75	95.83	95.21	94.54
7	96.36	95.75	96.51	95.83	95.22	94.96	98.74	97.24	95.86	95.93	95.26	94.47
8	96.50	95.78	96.28	95.77	95.19	94.94	98.99	97.20	95.83	95.80	95.21	94.43
9	96.25	95.67	96.63	95.76	95.16	94.95	99.14	97.19	95.75	95.73	95.18	94.46
10	96.29	95.61	96.44	95.74	95.20	95.01	99.18	96.98	95.81	95.71	95.16	94.45
11	96.44	95.72	96.54	95.64	95.16	95.04	99.16	96.97	95.93	95.71	95.10	94.50
12	96.36	95.73	96.45	95.69	95.16	95.08	99.14	96.83	95.97	95.70	95.11	94.69
13	96.32	95.57	96.37	95.64	95.13	95.09	99.10	96.84	95.93	95.69	95.16	94.78
14	96.27	95.73	96.57	95.70	95.14	95.09	99.13	96.89	95.98	95.70	95.18	94.78
15	96.21	95.70	96.33	95.63	95.12	95.09	99.09	96.61	95.90	95.57	95.11	94.90
16	96.19	95.56	96.29	95.57	95.12	95.08	99.06	96.60	95.89	95.56	95.11	94.95
17	96.10	95.58	96.30	95.59	95.11	95.09	98.97	96.53	95.87	95.60	95.08	94.88
18	96.11	95.44	96.33	95.62	95.10	95.08	98.89	96.42	95.88	95.59	94.96	94.92
19	96.14	95.35	96.26	95.48	95.08	95.08	98.80	96.37	95.86	95.52	95.00	94.98
20	96.09	95.48	96.23	95.50	95.07	95.06	98.75	96.38	95.77	95.57	94.92	94.98
21	96.11	95.30	96.22	95.51	95.05	95.05	98.63	96.33	95.76	95.53	94.89	94.96
22	96.05	95.44	96.32	95.44	95.03	95.09	98.49	96.25	95.72	95.54	95.06	94.99
23	95.96	95.69	96.19	95.49	95.00	95.22	98.66	96.09	95.75	95.58	94.78	95.06
24	95.92	95.44	96.11	95.48	94.98	95.41	98.28	96.07	95.86	95.58	94.68	94.98
25	95.93	95.40	96.13	95.43	94.96	95.66	98.29	96.05	95.85	95.55	94.68	94.96
26	95.89	95.54	96.08	95.40	94.94	96.01	98.16	96.02	96.17	95.49	94.63	95.03
27	95.93	95.63	96.08	95.41	94.93	96.38	98.19	96.14	95.92	95.45	94.65	94.97
28	95.83	95.99	96.13	95.39	94.91	96.68	98.11	95.94	95.90	95.38	94.63	95.04
29	95.92	95.97	96.09	95.35	---	96.92	97.86	95.91	95.93	95.41	94.59	95.11
30	95.71	95.97	96.02	95.34	---	97.20	97.76	95.89	95.89	95.42	94.67	95.01
31	95.91	---	95.97	95.30	---	97.39	---	95.87	---	95.34	94.76	---
MEAN	96.1	95.7	96.3	95.6	95.1	95.4	98.6	96.7	95.9	95.6	95.0	94.8
MAX	96.50	96.09	96.63	95.98	95.30	97.39	99.18	97.69	96.17	95.93	95.41	95.11
MIN	95.71	95.30	95.97	95.30	94.91	94.91	97.76	95.87	95.72	95.34	94.59	94.43

CAL YR 1986 MEAN 96.5 MAX 100.44 MIN 94.96
WTR YR 1987 MEAN 95.9 MAX 99.18 MIN 94.43

04295000 RICHELIEU RIVER (LAKE CHAMPLAIN) AT ROUSES POINT, NY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966-67, 1969-72, 1974 to current year.
CHEMICAL DATA: 1966-67 (a), 1969 (b), 1970 (c), 1971-72 (b), 1974-82 (c), 1983-86 (b), 1987 (c).
MINOR ELEMENTS DATA: 1974-86 (b), 1987 (c).
PESTICIDE DATA: 1976-79 (b), 1980 (a), 1982 (b).
ORGANIC DATA: OC--1974 (a), 1975-77 (b), 1978 (a), 1979-81 (c).
PCB--1978-79 (b), 1980 (a), 1982 (b).
NUTRIENT DATA: 1970 (c), 1971-72 (b), 1974 (b), 1975-82 (c), 1983-86 (b), 1987 (c).
BIOLOGICAL DATA:
Bacteria--1974 (a), 1975-82 (c), 1983-87 (b).
Phytoplankton--1974 (a), 1975-78 (c), 1979 (b), 1980-81 (c).
Periphyton--1975 (c), 1976-80 (b).
SEDIMENT DATA: 1975-82 (c), 1983-87 (b).

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD MG/L AS CACO3
OCT												
27...	1000	165	8.4	10.5	0.40	760	10.7	96	38	K12	59	6
APR												
27...	1015	148	8.6	8.5	1.1	765	12.4	106	<1	<1	59	7
27...	1450	--	8.2	12.0	--	--	15.4	--	--	--	58	0
MAY												
26...	1500	--	8.4	19.0	--	--	10.9	--	--	--	60	0
JUN												
16...	1200	--	8.0	19.5	--	--	9.4	--	--	--	--	--
16...	1215	175	8.3	18.0	11	755	9.5	101	K1	<1	61	10
AUG												
04...	0930	--	8.0	12.0	--	--	8.3	--	--	--	61	0
04...	0945	150	8.3	8.5	1.0	755	8.4	72	15	K2	58	7
SEP												
29...	1000	--	7.6	15.0	--	--	10.1	--	--	--	21	0

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WH WAT TOTAL FIELD MG/L AS CACO3	BICARBONATE WH WAT TOTAL FIELD MG/L AS HCO3	CARBONATE WH WAT TOTAL FIELD MG/L AS CO3	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, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
OCT												
27...	17	4.1	6.5	1.3	53	31	--	14	9.7	<0.1	0.7	97
APR												
27...	17	4.0	6.2	1.3	52	34	12	14	10	<0.1	--	83
27...	17	3.7	--	--	--	--	--	--	--	--	--	--
MAY												
26...	18	3.7	--	--	--	--	--	--	--	--	--	--
JUN												
16...	--	--	--	--	--	--	--	--	--	--	--	--
16...	18	3.8	6.6	1.2	51	62	--	12	11	<0.1	0.4	85
AUG												
04...	18	3.8	--	--	--	--	--	--	--	--	--	--
04...	17	3.7	8.0	1.1	51	53	5	11	9.4	0.2	1.4	80
SEP												
29...	6.6	1.2	--	--	--	--	--	--	--	--	--	--

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)
OCT												
27...	69	0.12	<0.01	<0.01	0.30	0.010	<0.010	<0.010	--	--	--	--
APR												
27...	--	0.18	0.02	<0.01	1.3	0.030	0.020	<0.010	10	<1	11	<0.5
27...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
26...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
16...	--	<0.10	<0.01	<0.01	0.60	0.010	<0.010	<0.010	--	--	--	--
16...	84	<0.10	0.02	<0.01	2.1	0.120	0.010	<0.010	<10	<1	13	0.5
AUG												
04...	--	<0.10	<0.01	<0.01	0.30	0.020	0.010	<0.010	--	--	--	--
04...	88	<0.10	<0.01	<0.01	0.50	0.030	0.040	0.030	10	1	12	<0.5
SEP												
29...	--	--	--	--	--	--	--	--	--	--	--	--

K Results based on colony count outside the acceptable range (non-ideal colony count).

STREAMS TRIBUTARY TO ST: LAWRENCE RIVER

04295000 RICHELIEU RIVER (LAKE CHAMPLAIN) AT ROUSES POINT, NY--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)
OCT												
27...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
27...	--	<1	<1	<3	--	2	--	10	--	<5	<4	--
27...	<10	--	--	--	<10	--	60	--	<100	--	--	<10
MAY												
26...	<10	--	--	--	<10	--	20	--	<5	--	--	10
JUN												
16...	<10	--	--	--	<10	--	40	--	7	--	--	20
16...	<10	<1	2	<3	60	<1	790	24	26	<5	7	80
AUG												
04...	<10	--	--	--	20	--	30	--	<5	--	--	10
04...	<10	<1	<1	<3	20	1	50	8	<5	<5	5	10
SEP												
29...	<1	<1	--	--	2	2	80	--	<5	<5	--	<10

DATE	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT												
27...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
27...	1	--	<0.1	<10	--	<1	<1	<1	84	<6	--	12
27...	--	--	--	--	<100	--	--	--	--	--	60	--
MAY												
26...	--	<0.10	--	--	<1	--	--	--	--	--	<10	--
JUN												
16...	--	<0.10	--	--	<1	--	--	--	--	--	<10	--
16...	21	0.20	<0.1	<10	<1	<1	<1	<1	84	<6	30	10
AUG												
04...	--	<0.10	--	--	7	--	--	--	--	--	<10	--
04...	<10	<0.10	<0.1	<10	1	<1	<1	<1	80	<6	60	26
SEP												
29...	--	<0.10	--	--	2	1	--	--	--	--	<10	<10

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SEDI-MENT, SUS-PENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT			
27...	1000	10	73
APR			
27...	1015	2	52
JUN			
16...	1215	56	79
AUG			
04...	0945	11	25

LAKES AND RESERVOIRS IN STREAMS TRIBUTARY TO ST. LAWRENCE RIVER

04260990 CRANBERRY LAKE AT CRANBERRY LAKE, NY--Lat 44°13'14", long 74°50'55", St. Lawrence County, Hydrologic Unit 04150302, on right wall at outlet structure, at village of Cranberry Lake. DRAINAGE AREA, 140 mi^2. PERIOD OF RECORD, April 1923 to current year. GAGE, nonrecording gage read daily at 1200 hours. Datum of gage is 1,469.75 ft above National Geodetic Vertical Datum of 1929.

Dam completed in 1867 and controlled storage for which records are available began in 1923. Usable capacity above elevation 1,475.25 ft is 2,530 mil ft^3. Crest at spillway is at elevation, 1,486.43 ft. Length of spillway is 110 ft. Area of water surface at crest elevation is 10.9 mi^2. Records provided by Oswegatchie River-Cranberry Reservoir Commission.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 2,985 mil ft^3, May 13-15, 1971, gage height, 18.5 ft; minimum observed, 70 mil ft^3, Apr. 1-4, 1956, gage height, 6.0 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 2,380 mil ft^3, June 25-27, July 15-16, gage height, 16.5 ft; minimum observed, 1,120 mil ft^3, Feb. 27 to Mar. 1, gage height, 11.5 ft.

04266700 CARRY FALLS RESERVOIR NEAR SOUTH COLTON, NY--Lat 44°26'07", long 74°44'50", St. Lawrence County, Hydrologic Unit 04150305, near center of upstream wall of dam between Carry Falls and Stark Falls Reservoirs, 2.0 mi southeast of Stark, and 8.8 mi southeast of South Colton. DRAINAGE AREA, 872 mi^2. PERIOD OF RECORD, October 1954 to current year. REVISED RECORDS, WDR NY-86-1: Drainage area. GAGE, nonrecording gage read daily at 0800 hours. Datum of gage is National Geodetic Vertical Datum of 1929.

Dam completed January 1953 and controlled storage for which records are available began in October 1954. Usable capacity above elevation 1,332.0 ft is 5,114.9 mil ft^3. Crest at spillway is at elevation 1,386.0 ft. Length of spillway is 830 ft. Area of water surface at crest elevation is 5.16 mi^2 (3,300 acres). The pond has a length of 6 mi and a perimeter of 25 mi. Below crest elevation, capacity controlled by a taintor gate, 27 ft x 15 ft, and 2 sluice gates, 10 ft x 10 ft. Records provided by Niagara Mohawk Power Corporation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 5,146 mil ft^3, June 1, 5, 6, 1955, elevation, 1,386.1 ft; minimum observed, 8.64 mil ft^3, Mar. 27-30, 1963, Apr. 4-11, 1964, elevation, 1,331.0 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 5,049 mil ft^3, Apr. 15, elevation, 1,385.4 ft; minimum observed, 963.4 mil ft^3, Mar. 2, elevation, 1,348.5 ft.

04278000 LAKE GEORGE AT ROGERS ROCK, NY (see station for daily mean gage heights).

04294500 LAKE CHAMPLAIN AT BURLINGTON, VT (see station for daily mean gage heights).

04295000 RICHELIEU RIVER (LAKE CHAMPLAIN) AT ROUSES POINT, NY (see station for daily mean elevations).

MONTHEND GAGE HEIGHT, ELEVATION, AND CONTENTS, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

Date	Gage height (feet)*	Contents (million ft^3)	Change in contents (equivalent in ft^3/s)	Elevation (feet) *	Contents (million ft^3)	Change in contents (equivalent in ft^3/s)
	04260990 Cranberry Lake			04266700 Carry Falls Reservoir		
Sept. 30	15.3	2,048		1,375.9	3,771.4	
Oct. 31	14.4	1,814	- 87.4	1,367.5	2,769.1	-374
Nov. 30	13.8	1,658	- 60.2	1,359.0	1,892.2	-338
Dec. 31	13.7	1,632	- 9.71	1,362.9	2,287.9	+148
CAL YR 1986	-	-	- 14.8	-	-	+ 0.99
Jan. 31	12.8	1,412	- 82.1	1,356.0	1,607.0	-254
Feb. 28	11.5	1,120	-121	1,348.7	978.9	-260
Mar. 31	14.2	1,762	+240	1,362.0	2,194.6	+454
Apr. 30	16.1	2,268	+195	1,381.5	4,510.1	+893
May 31	16.3	2,324	+ 20.9	1,385.2	5,021.6	+191
June 30	16.2	2,296	- 10.8	1,384.2	4,883.3	- 53.4
July 31	15.9	2,212	- 31.4	1,378.5	4,108.3	-289
Aug. 31	15.6	2,128	- 31.4	1,368.3	2,859.0	-466
Sept. 30	16.1	2,268	+ 54.0	1,378.5	4,108.3	+482
WTR YR 1987	-	-	+ 6.98	-	-	+ 10.7

* Gage heights or elevations at 2400 hours, by interpolation.

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 usually presented in two tables. The first is usually a table of discharge measurements at low-flow partial-record stations and the second is a table of annual maximum stage and discharge at crest-stage stations. Discharge measurements made at miscellaneous sites for both low flow and high flow are given in a third table. No discharge measurements were made at low-flow partial-record stations for the 1987 water year.

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 floods may have been obtained, but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum discharge at crest-stage partial-record stations during water year 1987

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum Date	Gage height (feet)	Discharge (ft^3/s)
		Housatonic River basin					
01199477	Stony Brook near Dover Plains, NY	Lat 41°42'38", long 73°37'18", Dutchess County, Hydrologic Unit 01100005, on town road, 100 ft upstream from mouth, and 2.9 mi southwest of Dover Plains.	1.93	1976-87	6- 7-82 4-25-83 5-29-84 9-28-85 3-15-86 4- 4-87	2.14 1.61 5.31 2.02 1.90 6.40	R112 R77 R354 R104 R96 532
		Mamaroneck River basin					
01300800	Mamaroneck River at Winfield Avenue at Mamaroneck, NY	Lat 40°58'07", long 73°44'15", Westchester County, Hydrologic Unit 02030102, at bridge on Winfield Avenue, 0.1 mi downstream from Mamaroneck Reservoir, and 1.6 mi upstream from gaging station at Mamaroneck (01301000).	14.5	1972, 1983-87	12- 3-86	7.16	1,020
		Hudson River basin					
01317000	Schroon River at Riverbank, NY	Lat 43°36'34", long 73°44'17" Warren County, Hydrologic Unit 02020001, on right bank, 30 ft upstream from highway bridge at Riverbank, and 11.8 mi downstream from Schroon Lake.	527	1908-25, 1926-70‡, 1987	3-31-87	8.93	6,340
01329154	Steele Brook at Shushan, NY	Lat 43°05'35", long 73°19'38", Washington County, Hydrologic Unit 02020003, at bridge on county road, 1.1 mi upstream from mouth, and 0.8 mi east of Shushan.	2.85	1979-87	11-27-86	3.24	35
01329500	Batten Kill at Battenville, NY	Lat 43°06'05", long 73°25'55", Washington County, Hydrologic Unit 02020003, on left bank, 1.2 mi upstream from Trout Brook, and 1.0 mi southwest of Battenville.	394	1923-68‡, 1977, 1984, 1987	4- 6-87	e8.2	e5,800
01330880	Saratoga Lake tributary near Bemis Heights, NY	Lat 42°59'43", long 73°43'06", Saratoga County, Hydrologic Unit 02020003, at culvert on State Highway 423, 1.4 mi upstream from mouth, and 4.6 mi northwest of Bemis Heights.	2.98	1968, 1970-71, 1973, 1975-87	11-27-86	12.63	e73
01342800	West Canada Creek at Nobleboro, NY	Lat 43°23'47", long 74°51'35", Herkimer County, Hydrologic Unit 02020004, on right bank, 30 ft downstream from bridge on State Highway 8, 2.9 mi northeast of Wilmurt, in village of Nobleboro.	193	1946, 1958-66, 1967-68‡, 1969, 1972, 1974, 1976, 1985, 1987	3-31-87	9.11	9,020

R Revised.
‡ Operated as a continuous-record gaging station.
e Estimated.

Annual maximum discharge at crest-stage partial-record stations during water year 1987--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum Date	Gage height (feet)	Discharge (ft^3/s)
		Hudson River basin--Continued					
01348420	North Creek near Ephratah, NY	Lat 43°00'28", long 74°33'54", Fulton County, Hydrologic Unit 02020004, at culvert on town road, 0.4 mi upstream from mouth, and 1.2 mi northwest of Ephratah.	6.52	1975-87	11-26-86	b7.47	310
01349700	East Kill near Jewett Center, NY	Lat 42°14'57", long 74°18'11", Greene County, Hydrologic Unit 02020005, at bridge on Mill Hollow Road, 1.2 mi northeast of Jewett center, and 1.3 mi upstream from mouth.	35.6	1951, 1956, 1967-68, 1972-74, 1987a	4- 4-87	f11.18	11,400
01349850	Batavia Kill at Hensonville, NY	Lat 42°22'17", long 74°12'55", Greene County, Hydrologic Unit 02020005, on County Highway 40, at Hensonville, 0.7 mi upstream from Silver Lake Outlet, and 1.8 mi upstream from Nauvo Stream.	13.5	1955, 1960-66, 1972, 1974, 1976, 1978-87	4- 4-87	5.51	2,390
01351300	Cobleskill Creek at Cobleskill, NY	Lat 42°40'48", long 74°28'04", Schoharie County, Hydrologic Unit 02020005, at bridge on State Highway 7, 1.0 mi east of Cobleskill.	106	1963-65, 1974, 1987a	4- 4-87	f11.40	5,760
01359519	Normans Kill near Westmere, NY	Lat 42°40'43", long 73°54'25", Albany County, Hydrologic Unit 02020006, on right bank, 100 ft upstream from bridge on State Highway 155, 1.6 mi southwest of Westmere, and 1.8 mi southeast of Guilderland.	131	1968-79‡, 1984, 1987a	4- 4-87	f13.1	6,880
01361453	Catskill Creek tributary at Franklinton, NY	Lat 42°31'35", long 74°18'33", Schoharie County, Hydrologic Unit 02020006, at culvert on town road, 0.15 mi upstream from mouth, and 0.5 mi northwest of Franklinton.	3.61	1968-72, 1974-86, 1987a	4- 4-87	8.00	e1,100
01361500	Catskill Creek at Oak Hill, NY	Lat 42°24'16', long 74°09'07", Greene County, Hydrologic Unit 02020006, on right bank, just downstream from highway bridge in southernmost part of Oak Hill, 100 ft downstream from small tributary.	98.0	1911-77, 1987	4- 4-87	f16.6	15,400
01361570	Tenmile Creek at Oak Hill, NY	Lat 42°24'16", long 74°08'06", Greene County, Hydrologic Unit 02020006, on left bank, 425 ft upstream from bridge on State Highway 81, 2.3 mi downstream from Eightmile Creek, and 0.9 mi east of Oak Hill.	35.3	1953, 1955, 1969-78‡, 1980, 1987a	4- 4-87	f7.35	2,300
01362100	Roeliff Jansen Kill near Hillsdale, NY	Lat 42°09'14", long 73°31'14", Columbia County, Hydrologic Unit 02020006, at bridge on county highway off State Highway 22, 1.8 mi south of Hillsdale.	27.5	1958-60‡, 1963-64, 1968-87	4- 7-87	4.27	738
01368500	Rutgers Creek at Gardnerville, NY	Lat 41°20'40", long 74°29'10", Orange County, Hydrologic Unit 02020007, on left bank, 2.2 mi upstream from mouth, and 1.7 mi southeast of Johnson.	59.7	1944-68, 1984, 1987	4- 4-87	f6.3	1,820
01372800	Fishkill Creek at Hopewell Junction, NY	Lat 41°34'22", long 73°48'25", Dutchess County, Hydrologic Unit 02020008, on right bank, 400 ft upstream from bridge on State Highway 376, 500 ft upstream from small tributary, 0.6 mi south of State Highway 82, at Hopewell Junction.	57.3	1956-57, 1958-75‡, 1984, 1987	4- 5-87	f9.79	2,710

b Ice jam.
a Only annual maximum peak available for this year.
f From floodmarks.
‡ Operated as a continuous-record gaging station.
e Estimated.

Annual maximum discharge at crest-stage partial-record stations during water year 1987--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum Date	Gage height (feet)	Discharge (ft^3/s)
		Hudson River basin--Continued					
01374250	Peekskill Hollow Creek at Tompkins Corners, NY	Lat 41°23'18", long 73°48'47" Putnam County, Hydrologic Unit 02030101, at bridge on Bryant Pond Road, 0.9 mi southwest of Tompkins Corners, and 1.1 mi downstream from Wiccopee Brook.	14.9	1975-87	4- 5-87	4.07	714
01376420	Saw Mill River at Elmsford, NY	Lat 41°03'19", long 73°49'16", Westchester County, Hydrologic Unit 02030101, at bridge on State Highway 119, 0.6 mi upstream from Rum Brook, and 0.8 mi downstream from Mine Brook at Elmsford.	15.4	1979-87	4- 5-87	10.43	737
		Passaic River basin					
01387410	Torne Brook at Ramapo, NY	Lat 41°08'34", long 74°09'44", Rockland County, Hydrologic Unit 02030103, 0.2 mi upstream from mouth, and 0.5 mi east of Ramapo.	2.60	1960, 1962-87	4- 4-87	6.67	677
		Delaware River basin					
01427500	Callicoon Creek at Callicoon, NY	Lat 41°45'39", long 75°02'55", Sullivan County, Hydrologic Unit 02040101, on right bank, 0.7 mi southeast of Callicoon, 0.9 mi upstream from mouth, and 1.0 mi southwest of Hortonville.	110	1941-82‡, 1983-87	4- 4-87	f5.87	4,450
01434010	East Branch Neversink River at Denning, NY	Lat 41°57'30", long 74°46'18", Ulster County, Hydrologic Unit 02040104, on downstream side of bridge on private road at Strauss Estate, 0.9 mi upstream from Erts Brook, 0.4 mi downstream from Riley Brook, and 1.0 mi northeast of Denning.	13.3	1984-87	4- 5-84 9-27-85 4- 4-87	5.39 5.58 f6.39	R3,310 R3,540 4,460
		Streams tributary to Lake Ontario					
042490673	North Branch Grindstone Creek near Altmar, NY	Lat 43°29'31", long 76°05'41", Oswego County, Hydrologic Unit 04140102, at culvert on Hong Kong Road, 4.1 mi upstream from confluence with South Branch Grindstone Creek, and 4.1 mi southwest of Altmar.	11.2	1976-87	3-30-87	7.28	188
04249200	North Branch Salmon River at Redfield, NY	Lat 43°32'32",long 75°48'51", Oswego County, Hydrologic Unit 04140102, at highway bridge on Harvester Mill Road, 0.7 mi northeast of Redfield.	82.5	1962-64, 1985, 1987	3-30-87	14.43	3,600
04254500	Moose River at McKeever, NY	Lat 43°36'36", long 75°06'35", Herkimer County, Hydrologic Unit 04150101, on left bank, 1.0 mi west of McKeever, and 1.9 mi downstream from confluence of Middle and South Branches	363	1902-70‡, 1985, 1987	4- 1-87	10.95	8,010
04258700	Deer River at Deer River, NY	Lat 43°55'49", long 75°35'27", Lewis County, Hydrologic Unit 04150101, on left bank, 350 ft upstream from bridge on State Highway 26 at Deer River, and 2 mi upstream from mouth.	94.8	1957-68‡, 1969, 1971-74, 1977-87	3-30-87	4.61	4,220
		Streams tributary to St. Lawrence River					
04265100	Elm Creek near Hermon, NY	Lat 44°26'15", long 75°12'49", St. Lawrence County, Hydrologic Unit 04150304, at bridge, 2.7 mi southeast of Hermon, and 6.8 mi upstream from confluence with Tanner Creek.	32.6	1959-68‡, 1969-87	12- 5-86 4- 1-87	b6.22 5.87	- 355

‡ Operated as a continuous-record gaging station.
f From floodmarks.
R Revised.
b Ice jam.

Annual maximum discharge at crest-stage partial-record stations during water year 1987--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum Date	Gage height (feet)	Discharge (ft^3/s)
		Streams tributary to St. Lawrence River--Continued					
04268200	Plum Brook near Grantville, NY	Lat 44°52'46", long 74°54'54", St. Lawrence County, Hydrologic Unit 04150305, on right bank, 430 ft upstream from bridge at junction of Brouse and Grant Roads, 0.7 mi downstream from unnamed tributary, 1.1 mi upstream from mouth, 1.4 mi north of Grantville, and 2.3 mi southwest of Massena city limits.	43.9	1959-63‡, 1964-68, 1971-87	4- 1-87	5.23	635
04268800	West Branch St. Regis River near Parishville, NY	Lat 44°35'55", long 74°44'15", St. Lawrence County, Hydrologic Unit 04150306, on right bank, 25 ft upstream from highway bridge, 4.1 mi downstream from Mud Pond Outlet, 4.2 mi southeast of Parishville, and 4.8 mi upstream from Niagara Mohawk Power Corp. dam.	171	1959-68‡, 1969-87	4- 1-87	4.64	2,460
04270162	East Branch Little Salmon River near Skerry, NY	Lat 44°47'13", long 74°22'12", Franklin County, Hydrologic Unit 04150307, at culvert on Adams Road, 100 ft downstream from Limekiln Brook, 1.1 mi northeast of Skerry, and 5.7 mi upstream from mouth.	7.11	1978-87	4- 1-87	2.56	62
04270700	Trout River at Trout River, NY	Lat 44°59'23", long 74°17'56", Franklin County, Hydrologic Unit 04150307, at bridge on county highway, 0.2 mi east of State Highway 30, at Trout River, 0.5 mi upstream from international boundary, 1.5 mi downstream from unnamed tributary, and 3.3 mi downstream from Little Trout River.	107	1960-66‡, 1967-87	4- 1-87	4.67	1,590
04271500	Great Chazy River at Perry Mills,NY	Lat 45°00'00", long 73°30'05", Clinton County, Hydrologic Unit 02010006, on left bank, 500 ft upstream from highway bridge, and 7.5 mi upstream from Corbeau Creek, at Perry Mills.	247	1929-68‡, 1985, 1987	3-31-87	f7.32	3,340
04274000	West Branch Ausable River near Lake Placid, NY	Lat 44°18'40", long 73°55'00", Essex County, Hydrologic Unit 02010004, on right bank, 4 mi northeast of Lake Placid, 4 mi downstream from Lake Placid outlet, and 150 ft upstream from Monument Falls.	116	1917, 1920-27, 1928-68‡, 1983-87	4- 1-87	9.29	5,500
04276500	Bouquet River at Willsboro, NY	Lat 44°21'30", long 73°23'50", Essex County, Hydrologic Unit 02010004, on right bank, 0.5 mi upstream from bridge on State Highway 22, 2.5 mi downstream from North Branch Bouquet River, and 3.0 mi upstream from mouth, at Willsboro.	275	1924-68‡, 1985, 1987	4- 1-87	f9.6	9,300

‡ Operated as a continuous-record gaging station.
f From floodmarks.

Discharge measurements made at miscellaneous sites during water year 1987

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		Hudson River basin				
01329550 Batten Kill	Hudson River	Lat 43°05'30", long 73°27'59", Washington County, Hydrologic Unit 02020003, 0.35 mi downstream from bridge at Center Falls, and 1.5 mi northeast of Greenwich.			8-24-87	*176
01329561 Batten Kill	Hudson River	Lat 43°05'27", long 73°29'45", Washington County, Hydrologic Unit 02020003, just downstream from upper dam, at Greenwich.			8-25-87	*173
01349700 East Kill	Schoharie Creek	Lat 42°14'57", long 74°18'11", Greene County, Hydrologic Unit 02020005, at bridge on Mill Hollow Road, 1.2 mi northeast of Jewett Center.	35.6	1951, 1956, 1967-68, 1972-74	4- 4-87	p11,400
01349810 West Kill	Schoharie Creek	Lat 42°13'48", long 74°23'34", Greene County, Hydrologic Unit 02020005, 0.2 mi upstream from Beech Ridge Brook, 0.3 mi upstream from bridge on State Highway 42, and 1.4 mi north of West Kill.	27.0	1953, 1956	4- 4-87	p3,500
01349820 Schoharie Creek	Mohawk River	Lat 42°15'37", long 74°23'56", Greene County, Hydrologic Unit 02020005, at bridge at Mosquito Point, 0.9 mi upstream from mouth of Little West Kill, and 4.2 mi southeast of Prattsville.	138		4- 4-87	p31,600
01349900 Batavia Kill	Schoharie Creek	Lat 42°17'36", long 74°18'22", Greene County, Hydrologic Unit 02020005, at bridge on Ashland-Jewett Highway, 0.2 mi south of State Highway 23, and 1.6 mi southeast of Ashland.	51.2	1953	4- 4-87	p12,700
01350485 Little Schoharie Creek	Schoharie Creek	Lat 42°35'17", long 74°20'12", Schoharie County, Hydrologic Unit 02020005, at bridge on Main Street, 0.7 mi south of Middleburgh.	24.5		4- 4-87	p1,860
01351200 Fox Creek	Schoharie Creek	Lat 42°40'23", long 74°15'16", Schoharie County, Hydrologic Unit 02020005, at bridge on county highway, 3.0 mi northeast of Schoharie.	99.0		4- 4-87	p7,840
013595195 Normans Kill	Hudson River	Lat 42°40'02", long 73°53'48", Albany County, Hydrologic Unit 02020006, at bridge on Normans Kill Road, 0.1 mi upstream from Vly Creek, and 1.2 mi northeast of Voorheesville.			6-16-87 6-18-87	*19.7 *18.4
01359909 Coeymans Creek	Hudson River	Lat 42°30'47", long 73°48'31", Albany County, Hydrologic Unit 02020006, at bridge on Pictovia Road, 1.4 mi southwest of Selkirk.			9-29-87	*21.4
01359911 Coeymans Creek	Hudson River	Lat 42°29'33", long 73°48'08", Albany County, Hydrologic Unit 02020006, just downstream from a bridge on the Thomas E. Dewey Thruway, 1.3 mi northwest of Coeymans.			9-30-87	*19.9
01361500 Catskill Creek	Hudson River	Lat 42°24'16", long 74°09'07", Greene County, Hydrologic Unit 02020006, on right bank just downstream from highway bridge in southernmost part of Oak Hill, 100 ft downstream from small tributary.	98.0	1911-77	4- 4-87	p15,400
01361600 Catskill Creek	Hudson River	Lat 42°22'26", long 74°04'47", Greene County, Hydrologic Unit 02020006, at bridge on County Road 67A, 0.8 mi east of East Durham.	146		4- 4-87	p18,000

* Base flow.
p Peak discharge.

Discharge measurements made at miscellaneous sites during water year 1987--Continued

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		Hudson River basin--Continued				
01362360 Stony Clove Creek	Esopus Creek	Lat 42°06'06", long 74°18'40", Ulster County, Hydrologic Unit 02020006, at culvert on State Highway 214 at Chichester, 1.3 mi northeast of Phoenecia.	26.9		4- 4-87	p7,600
01362485 Beaver Kill	Esopus Creek	Lat 42°03'57", long 74°13'45", Ulster County, Hydrologic Unit 02020006, at bridge on town road just downstream from Hoyt Hollow, 1.2 mi southwest of Willow.	20.5		4- 4-87	p4,290
0136336910 Bush Kill	Esopus Creek	Lat 41°57'20", long 74°18'45", Ulster County, Hydrologic Unit 02020008, at culvert on private road, 0.45 mi downstream from mouth of South Hollow Brook, and 1.6 mi southwest of West Shokan.	8.26		4- 4-87	p1,720
		Delaware River basin				
01421200 Cadosia Creek	East Branch Delaware River	Lat 41°58'03", long 75°15'51", Delaware County, Hydrologic Unit 02040102, at bridge on State Highway 236, 0.3 mi upstream from mouth, at Cadosia.	17.9	1949-50, 1955, 1957-71, 1973-86	10-16-86 5-19-87 6- 9-87 7- 7-87 7-29-87 8-19-87	8.66 8.82 15.4 23.6 9.75 *4.06
01426000 Oquaga Creek	West Branch Delaware River	Lat 42°03'31", long 75°25'42", Broome County, Hydrologic Unit 02040101, on left bank, 150 ft downstream from Bone Creek, 400 ft upstream from Mill Street Bridge in Deposit, and 0.3 mi upstream from mouth.	67.6	1941-73‡, 1975-76, 1979-86	10-16-86 10-22-86 11- 7-86 5-19-87 5-27-87 6- 9-87 8-19-87	47.7 *33.4 78.0 24.7 49.6 72.6 *5.86
01427500 Callicoon Creek	Delaware River	Lat 41°45'39", long 75°02'55", Sullivan County, Hydrologic Unit 02040101, on right bank, 0.7 mi southeast of Callicoon, 0.9 mi upstream from mouth, and 1.0 mi west of Hortonville.	110	1941-82‡, 1983-86	5-15-87 5-27-87 6- 2-87 6-25-87 8-24-87	*60.9 70.6 56.0 33.3 *13.5
01428000 Tenmile River	Delaware River	Lat 41°33'51", long 75°00'56", Sullivan County, Hydrologic Unit 02040101, on left bank 0.5 mi downstream from East Branch Tenmile River, 0.8 mi usptream from mouth, and 0.6 mi northeast of Tusten.	45.6	1946-73‡, 1978-86	10- 9-86 10-17-86 10-30-86 11- 4-86 5-18-87 5-21-87 6- 2-87 6-24-87 8-18-87	*11.7 16.2 15.2 *10.3 *22.7 27.7 17.6 9.37 *3.34
01434000350 East Branch Neversink River	Delaware River	Lat 41°58'27", long 74°25'37", Ulster County, Hydrologic Unit 02040104, about 0.1 mi upstream from Deer Shanty Brook, and 3.6 mi northeast of Denning.	5.63		7- 1-87 8-25-87	*5.63 *1.72
01434000620 East Branch Neversink River	Delaware River	Lat 41°58'18", long 74°26'20" Ulster County, Hydrologic Unit 02040104, 0.5 mi downstream from Deer Shanty Brook, and 3.0 mi northeast of Denning.	8.34		8-25-87	*4.11
01434000690 East Branch Neversink River	Delaware River	Lat 41°57'52", long 74°27'03", Ulster County, Hydrologic Unit 02040104, 500 ft upstream from Tray Mill Brook, and 2.2 mi northeast of Denning.	9.09	1984-86	7- 1-87 8-25-87	*8.18 *5.37
01434015 East Branch Neversink River	Delaware River	Lat 41°56'06", long 74°31'48", Ulster County, Hydrologic Unit 02040104, at bridge on county highway, 0.6 mi southeast of Ladleton, and 2.5 mi northeast of Claryville.	21.4		7- 1-87	*17.3
01434020 East Branch Neversink River	Delaware River	Lat 41°55'06", long 74°34'22", Sullivan County, Hydrologic Unit 02040104, at bridge 0.2 mi upstream from confluence with West Branch Neversink River, at Claryville.	27.4		7- 1-87 8-26-87	*22.3 *12.8

p Peak discharge.
* Base flow.
‡ Operated as a continuous-record gaging station.

Discharge measurements made at miscellaneous sites during water year 1987--Continued

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		Delaware River basin--Continued				
01434021 West Branch Neversink River	Neversink River	Lat 42°00'37", long 74°24'48", Ulster County, Hydrologic Unit 02040104, at falls, 50 yards upstream of Hiking Ford, 0.15 mi south of Winnisook Lake, and 4.7 mi northeast of Frost Valley.	0.77		8-26-87	*.32
0143402270 West Branch Neversink River	Neversink River	Lat 41°59'25", long 74°29'09", Ulster County, Hydrologic Unit 02040104, south of West Branch Road, 0.9 mi upstream from Biscuit Brook, and 1.3 mi northeast of Frost Valley.	8.16		8-26-87	*3.44
01434106 West Branch Neversink River	Neversink River	Lat 41°58'28", long 74°31'30", Ulster County, Hydrologic Unit 02040104, on a county road between Frost Valley and Claryville, 0.17 mi downstream from High Falls Brook, and 1.4 mi southwest of Frost Valley.	21.2		8-26-87	*11.0
01438000 Neversink River	Delaware River	Lat 41°21'40", long 74°41'07", Orange County, Hydrologic Unit 02040104, at Tristates Bridge on East Main Street (U.S. Highway 6), in Port Jervis, 450 ft upstream from Clove Brook, and 0.6 mi upstream from mouth.	336	1902-03, 1943, 1945, 1960-62, 1965-86	10- 9-86 11- 4-86 12-17-86 2-19-87 5-18-87 6- 3-87 6-11-87 8-18-87 8-26-87	182 160 483 244 267 287 176 116 77.0
		Stream tributary to Lake Ontario				
04256488805 Woods Lake Outlet	Twitchell Creek	Lat 43°50'45", long 74°59'00", Herkimer County, Hydrologic Unit 04150101, 200 ft upstream from Twitchell Creek, and 4.0 mi northwest of Big Moose.			4-28-87	2.03
04258022 Black River	Lake Ontario	Lat 43°53'38", long 75°30'18", Lewis County, Hydrologic Unit 04150101, at bridge on State Highway 410, at Castorland.	1,612	1984-86	11-19-86 3-27-87 3-30-87 4- 1-87 9-22-87	2,910 9,810 12,000 16,900 6,290

* Base flow.

Water-quality partial-record stations are particular sites where chemical-quality, biological and/or sediment data are collected systematically over a period of years for use in hydrologic analyses. These data are collected usually less than quarterly. Samples collected at sites other than gaging stations and partial-record stations to give better areal coverage in a river basin are referred to as miscellaneous sites.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	SPECIFIC CONDUCTANCE LAB (US/CM)	PH (STANDARD UNITS)	PH LAB (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)
HUDSON RIVER BASIN									
01349542	ROARING KILL NEAR TANNERSVILLE, NY (LAT 42 09 05N LONG 074 07 57W)								
MAR 1987									
27...	1635	--	29	--	5.82	10	3.1	0.58	0.75
01349655	HALSEY BROOK AT EAST JEWETT, NY (LAT 42 14 05N LONG 074 08 12W)								
NOV 1986									
21...	1516	--	33	--	6.28	11	3.4	0.70	0.80
MAR 1987									
27...	1550	--	25	--	5.84	10	3.1	0.60	0.65
01349749	WEST KILL BELOW HUNTER BROOK (LAT 42 11 06N LONG 074 16 38W)								
NOV 1986									
21...	1600	--	35	--	6.15	13	3.8	0.80	0.50
MAR 1987									
27...	1440	--	26	--	5.89	11	3.4	0.71	0.49
01349759	WEST KILL NEAR SPRUCETON, NY (LAT 42 11 52N LONG 074 20 30W)								
NOV 1986									
21...	1545	--	38	--	6.27	14	4.2	0.80	0.70
01349828	LITTLE WEST KILL NEAR PRATTSVILLE, NY (LAT 42 16 48N LONG 074 26 41W)								
NOV 1986									
21...	1515	--	46	--	6.30	16	4.9	0.90	1.4
MAR 1987									
27...	1115	--	35	--	6.40	14	4.3	0.79	1.2
01349845	BATAVIA KILL NEAR HENSONVILLE, NY (LAT 42 17 28N LONG 074 09 42W)								
NOV 1986									
21...	1440	--	40	--	6.28	13	3.8	0.90	1.2
MAR 1987									
27...	1000	--	29	--	6.47	10	2.9	0.63	1.1
01349897	BATAVIA KILL TR #1(N SETTLEMENT C)NR ASHLAND,NY (LAT 42 17 57N LONG 074 17 49W)								
NOV 1986									
21...	1430	--	72	--	6.30	19	5.2	1.5	3.0
MAR 1987									
27...	0845	--	42	--	6.29	12	3.2	0.99	2.2
01350000	SCHOHARIE CREEK AT PRATTSVILLE NY (LAT 42 19 15N LONG 074 26 10W)								
NOV 1986									
21...	1500	65	--	6.32	--	16	5.1	0.90	3.9
01362193	ESOPUS CREEK TRIB #1 AT OLIVERA, NY (LAT 42 03 55N LONG 074 27 47W)								
NOV 1986									
21...	2100	--	37	--	5.82	14	4.0	1.0	0.60
MAR 1987									
27...	2000	--	29	--	6.30	14	4.1	0.82	0.52
0136219518	BIRCH CREEK NORTHEAST OF PINE HILL, NY (LAT 42 09 14N LONG 074 27 30W)								
NOV 1986									
21...	1800	--	37	--	6.06	13	3.6	0.90	1.0
MAR 1987									
27...	1335	--	24	--	6.09	11	3.1	0.74	0.81
01362210	ESOPUS CREEK TRIB # 2 NR SHANDAKEN, NY (LAT 42 07 53N LONG 074 22 29W)								
NOV 1986									
21...	1730	--	40	--	6.31	14	4.2	0.90	0.80
MAR 1987									
27...	2000	--	28	--	6.36	12	3.7	0.61	0.74

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)	NITROGEN, NITRATE DISSOLVED (MG/L AS N)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
HUDSON RIVER BASIN--Continued									
01349542 ROARING KILL NEAR TANNERSVILLE, NY (LAT 42 09 05N LONG 074 07 57W)									
MAR 1987									
27...	0.16	1.5	5.9	0.83	--	0.868	--	--	--
01349655 HALSEY BROOK AT EAST JEWETT, NY (LAT 42 14 05N LONG 074 08 12W)									
NOV 1986									
21...	0.30	2.3	6.4	0.77	2.9	0.450	--	10	7
MAR 1987									
27...	0.16	2.1	5.6	0.46	--	0.884	--	--	--
01349749 WEST KILL BELOW HUNTER BROOK (LAT 42 11 06N LONG 074 16 38W)									
NOV 1986									
21...	0.30	3.2	6.9	0.70	2.6	0.707	10	8	1
MAR 1987									
27...	0.21	2.9	6.2	0.51	--	0.732	--	--	--
01349759 WEST KILL NEAR SPRUCETON, NY (LAT 42 11 52N LONG 074 20 30W)									
NOV 1986									
21...	0.40	4.2	7.1	0.93	2.8	0.535	--	11	3
01349828 LITTLE WEST KILL NEAR PRATTSVILLE, NY (LAT 42 16 48N LONG 074 26 41W)									
NOV 1986									
21...	0.60	6.1	7.9	1.5	4.1	0.543	--	25	8
MAR 1987									
27...	0.31	4.5	7.3	1.1	--	0.825	--	--	--
01349845 BATAVIA KILL NEAR HENSONVILLE, NY (LAT 42 17 28N LONG 074 09 42W)									
NOV 1986									
21...	0.30	3.6	7.1	1.1	3.5	0.549	--	12	2
MAR 1987									
27...	0.17	2.6	6.3	1.2	--	0.346	--	--	--
01349897 BATAVIA KILL TR #1(N SETTLEMENT C)NR ASHLAND,NY (LAT 42 17 57N LONG 074 17 49W)									
NOV 1986									
21...	1.1	5.6	12	3.9	4.4	0.388	--	34	6
MAR 1987									
27...	0.47	3.6	--	--	--	--	--	--	--
01350000 SCHOHARIE CREEK AT PRATTSVILLE NY (LAT 42 19 15N LONG 074 26 10W)									
NOV 1986									
21...	0.90	--	7.4	6.8	2.9	0.454	--	59	14
01362193 ESOPUS CREEK TRIB #1 AT OLIVERA, NY (LAT 42 03 55N LONG 074 27 47W)									
NOV 1986									
21...	0.40	3.8	6.9	0.83	2.6	0.827	8	6	2
MAR 1987									
27...	0.36	3.2	6.7	0.70	--	0.856	--	--	--
0136219518 BIRCH CREEK NORTHEAST OF PINE HILL, NY (LAT 42 09 14N LONG 074 27 30W)									
NOV 1986									
21...	0.50	4.2	6.8	1.5	2.9	0.245	10	6	1
MAR 1987									
27...	0.24	3.0	6.0	1.1	--	0.297	--	--	--
01362210 ESOPUS CREEK TRIB # 2 NR SHANDAKEN, NY (LAT 42 07 53N LONG 074 22 29W)									
NOV 1986									
21...	0.40	4.4	6.8	0.89	2.7	0.549	--	6	3
MAR 1987									
27...	0.24	--	6.1	0.92	--	0.708	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SPECIFIC CONDUCTANCE LAB (US/CM)	PH LAB (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)
HUDSON RIVER BASIN--Continued								
01362284 - WOODLAND CREEK NEAR WOODLAND, NY (LAT 42 02 06N LONG 074 22 02W)								
NOV 1986								
21...	1655	30	6.16	9	2.3	0.90	0.40	0.30
MAR 1987								
27...	2130	25	6.05	9	2.4	0.67	0.40	0.27
01362471 - BEAVER KILL NEAR LAKE HILL, NY (LAT 42 04 10N LONG 074 11 44W)								
NOV 1986								
21...	1730	40	6.27	14	4.3	0.80	1.2	0.40
MAR 1987								
27...	1925	28	6.38	13	4.3	0.64	0.81	0.18
01362500 - ESOPUS CREEK AT COLDBROOK NY (LAT 42 00 51N LONG 074 16 16W)								
NOV 1986								
21...	1815	54	6.36	17	5.1	1.1	3.1	0.70
0136336710 - BUSH KILL NEAR WEST SHOKAN, NY (LAT 41 56 08N LONG 074 19 39W)								
NOV 1986								
21...	1845	61	6.30	18	4.8	1.4	3.3	0.40
MAR 1987								
27...	0900	27	5.76	10	2.5	0.84	0.83	0.16
31...	1300	23	5.99	8	2.1	0.79	0.62	0.31
APR								
05...	1045	--	--	8	2.1	0.67	0.60	0.20
01364969 - BEAR HOLE BROOK NEAR SUNDOWN, NY (LAT 41 54 56N LONG 074 26 02W)								
NOV 1986								
21...	2020	29	5.53	10	2.5	0.90	0.40	0.40
MAR 1987								
27...	1000	29	6.48	9	2.4	0.86	0.47	0.35
01364979 - SUNDOWN CREEK TRIB # 1 AT SUNDOWN, NY (LAT 41 53 10N LONG 074 26 05W)								
NOV 1986								
21...	2040	34	5.64	9	2.5	0.70	0.80	0.50
MAR 1987								
27...	1045	29	6.01	8	2.2	0.68	0.88	0.42
01365000 - RONDOUT CREEK NEAR LOWES CORNERS NY (LAT 41 52 00N LONG 074 29 12W)								
NOV 1986								
21...	2050	37	5.78	11	2.8	0.90	1.1	0.50
MAR 1987								
27...	1100	33	5.75	10	2.7	0.76	1.3	0.40
31...	1450	29	5.62	8	2.1	0.71	1.2	0.70
DELAWARE RIVER BASIN								
01413085 - E BR DELAWARE TRIB#1(MONTGOMERY HOLL)NR ROXBURY (LAT 42 17 59N LONG 074 33 00W)								
MAR 1987								
27...	1150	42	6.18	15	4.8	0.64	1.3	0.39
27...	1205	40	6.33	13	3.9	0.87	1.1	0.46
01413097 - BATAVIA KILL AT VEGA, NY (LAT 42 15 32N LONG 074 31 22W)								
MAR 1987								
27...	1230	37	6.31	14	4.0	0.87	0.89	0.43
01413265 - DRY BROOK NEAR SEAGER, NY (LAT 42 03 31N LONG 074 32 25W)								
NOV 1986								
21...	1945	39	6.74	15	4.6	0.80	0.30	0.30
MAR 1987								
27...	1755	29	6.15	13	4.1	0.69	0.34	0.25

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)	NITROGEN, NITRATE DISSOLVED (MG/L AS N)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
HUDSON RIVER BASIN--Continued								
01362284 - WOODLAND CREEK NEAR WOODLAND, NY (LAT 42 02 06N LONG 074 22 02W)								
NOV 1986								
21...	1.1	5.9	0.61	2.0	0.746	--	3	4
MAR 1987								
27...	1.3	5.6	0.56	--	0.762	--	--	--
01362471 - BEAVER KILL NEAR LAKE HILL, NY (LAT 42 04 10N LONG 074 11 44W)								
NOV 1986								
21...	4.1	7.3	1.3	3.1	0.533	--	13	10
MAR 1987								
27...	3.8	6.8	0.81	--	0.653	--	--	--
01362500 - ESOPUS CREEK AT COLDBROOK NY (LAT 42 00 51N LONG 074 16 16W)								
NOV 1986								
21...	7.2	7.6	4.9	3.3	0.358	--	45	24
0136336710 - BUSH KILL NEAR WEST SHOKAN, NY (LAT 41 56 08N LONG 074 19 39W)								
NOV 1986								
21...	5.5	7.2	6.6	2.7	0.672	--	5	2
MAR 1987								
27...	4.0	5.9	0.58	--	0.242	--	--	--
31...	2.2	5.2	0.51	--	0.377	--	--	--
APR								
05...	--	5.7	0.47	2.9	0.252	20	6	4
01364969 - BEAR HOLE BROOK NEAR SUNDOWN, NY (LAT 41 54 56N LONG 074 26 02W)								
NOV 1986								
21...	0.7	7.1	0.63	2.4	0.635	50	<3	8
MAR 1987								
27...	0.8	6.8	0.56	--	0.684	--	--	--
01364979 - SUNDOWN CREEK TRIB # 1 AT SUNDOWN, NY (LAT 41 53 10N LONG 074 26 05W)								
NOV 1986								
21...	0.2	7.0	1.3	2.5	0.519	240	26	69
MAR 1987								
27...	0	6.3	1.3	--	0.533	--	--	--
01365000 - RONDOUT CREEK NEAR LOWES CORNERS NY (LAT 41 52 00N LONG 074 29 12W)								
NOV 1986								
21...	1.3	7.9	1.9	2.8	0.250	50	8	10
MAR 1987								
27...	1.2	6.7	2.2	2.1	0.491	40	<3	8
31...	1.2	6.2	2.1	--	0.485	--	--	--
DELAWARE RIVER BASIN--Continued								
01413085 - E BR DELAWARE TRIB#1(MONTGOMERY HOLL)NR ROXBURY (LAT 42 17 59N LONG 074 33 00W)								
MAR 1987								
27...	5.8	7.6	1.3	--	0.632	--	--	--
27...	6.0	7.1	1.0	--	0.581	--	--	--
01413097 - BATAVIA KILL AT VEGA, NY (LAT 42 15 32N LONG 074 31 22W)								
MAR 1987								
27...	4.6	7.0	0.75	--	0.937	--	--	--
01413265 - DRY BROOK NEAR SEAGER, NY (LAT 42 03 31N LONG 074 32 25W)								
NOV 1986								
21...	4.2	6.6	0.57	1.9	0.992	--	8	4
MAR 1987								
27...	3.5	6.0	0.52	--	1.07	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SPECIFIC CONDUCTANCE LAB (US/CM)	PH LAB (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)
DELAWARE RIVER BASIN--Continued								
01413270 - DRY BROOK AT MAPLEDALE NEAR ARKVILLE, NY (LAT 42 06 27N LONG 074 33 41W)								
NOV 1986 21...	1915	43	6.75	15	4.7	0.90	0.70	0.50
MAR 1987 27...	1805	37	6.10	13	3.9	0.84	0.72	0.31
01413308 - ELK CREEK NEAR HALCOTT CENTER, NY (LAT 42 11 04N LONG 074 27 42W)								
NOV 1986 21...	1830	39	6.48	14	3.9	1.0	0.70	0.40
MAR 1987 27...	1310	32	6.05	12	3.4	0.88	0.64	0.31
01413500 - EAST BR DELAWARE R AT MARGARETVILLE NY (LAT 42 08 41N LONG 074 39 14W)								
MAR 1987 27...	1600	44	6.38	16	4.7	1.0	2.0	0.54
01414285 - MILL BROOK NEAR BELLE AYR, NY (LAT 42 03 56N LONG 074 35 18W)								
NOV 1986 21...	2000	43	6.10	16	5.4	0.70	0.30	0.30
MAR 1987 27...	1650	38	6.36	16	5.1	0.71	0.47	0.28
01414290 - MILL BROOK TRIBUTARY #1 NEAR ARENA, NY (LAT 42 04 43N LONG 074 37 31W)								
NOV 1986 21...	2015	43	6.59	16	4.8	0.90	0.40	0.50
MAR 1987 27...	1635	39	6.33	15	4.7	0.86	0.37	0.37
01421624 - LAKE BROOK TRIBUTARY #1 NEAR HOBART, NY (LAT 42 23 22N LONG 074 41 11W)								
NOV 1986 21...	1410	70	6.59	25	7.4	1.7	2.2	2.2
01421856 - WRIGHT BROOK TRIBUTARY #1 NEAR BLOOMVILLE, NY (LAT 42 20 50N LONG 074 48 30W)								
NOV 1986 21...	1720	62	6.72	22	6.2	1.5	2.2	2.1
MAR 1987 27...	1220	49	6.12	17	5.4	0.83	1.6	1.3
01422290 - MOUNTAIN BROOK NEAR BOVINA CENTER, NY (LAT 42 15 53N LONG 074 43 31W)								
NOV 1986 21...	1440	55	6.76	21	5.7	1.6	1.2	1.3
MAR 1987 27...	1135	36	5.89	16	4.7	1.1	0.95	0.65
01422488 - LITTLE DELAWARE TRIB#1 (GLEN BURNIE) NR DELHI NY (LAT 42 15 49N LONG 074 51 35W)								
NOV 1986 21...	1505	42	6.83	16	4.2	1.4	1.4	0.90
MAR 1987 27...	1255	33	6.31	14	4.0	1.0	1.1	0.45
01422702 - MALLORY BROOK NEAR HAMDEN, NY (LAT 42 09 50N LONG 075 00 19W)								
NOV 1986 21...	1540	61	6.73	21	5.5	1.8	1.4	2.1
01422737 - EAST BROOK NEAR TREADWELL, NY (LAT 42 16 15N LONG 075 03 02W)								
NOV 1986 21...	1630	38	6.81	13	3.5	1.1	0.90	1.1
MAR 1987 27...	1410	29	6.91	12	3.5	0.83	0.86	0.52

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)	NITROGEN, NITRATE DISSOLVED (MG/L AS N)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
			DELAWARE RIVER BASIN--Continued					
01413270 - DRY BROOK AT MAPLEDALE NEAR ARKVILLE, NY (LAT 42 06 27N LONG 074 33 41W)								
NOV 1986								
21...	3.7	7.1	1.5	2.2	0.810	--	11	5
MAR 1987								
27...	3.8	6.3	1.3	--	0.857	--	--	--
01413308 - ELK CREEK NEAR HALCOTT CENTER, NY (LAT 42 11 04N LONG 074 27 42W)								
NOV 1986								
21...	4.8	7.2	0.80	3.2	0.434	--	10	4
MAR 1987								
27...	3.6	6.7	0.62	--	0.562	--	--	--
01413500 - EAST BR DELAWARE R AT MARGARETVILLE NY (LAT 42 08 41N LONG 074 39 14W)								
MAR 1987								
27...	7.4	7.4	3.2	--	0.576	--	--	--
01414285 - MILL BROOK NEAR BELLE AYR, NY (LAT 42 03 56N LONG 074 35 18W)								
NOV 1986								
21...	0	6.6	0.61	1.9	1.30	20	5	2
MAR 1987								
27...	4.5	5.8	0.83	--	1.41	--	--	--
01414290 - MILL BROOK TRIBUTARY #1 NEAR ARENA, NY (LAT 42 04 43N LONG 074 37 31W)								
NOV 1986								
21...	4.8	7.8	0.82	2.4	0.727	--	9	2
MAR 1987								
27...	4.8	7.2	0.62	--	0.879	--	--	--
01421624 - LAKE BROOK TRIBUTARY #1 NEAR HOBART, NY (LAT 42 23 22N LONG 074 41 11W)								
NOV 1986								
21...	10	11	3.8	3.5	1.04	70	110	39
01421856 - WRIGHT BROOK TRIBUTARY #1 NEAR BLOOMVILLE, NY (LAT 42 20 50N LONG 074 48 30W)								
NOV 1986								
21...	9.0	9.0	3.9	3.7	0.890	--	120	15
MAR 1987								
27...	7.2	7.5	2.3	--	0.763	--	--	--
01422290 - MOUNTAIN BROOK NEAR BOVINA CENTER, NY (LAT 42 15 53N LONG 074 43 31W)								
NOV 1986								
21...	10	8.5	1.5	4.0	0.837	--	53	12
MAR 1987								
27...	6.5	7.2	0.94	--	0.724	--	--	--
01422488 - LITTLE DELAWARE TRIB#1 (GLEN BURNIE) NR DELHI NY (LAT 42 15 49N LONG 074 51 35W)								
NOV 1986								
21...	6.8	8.0	1.5	4.2	0.309	--	83	18
MAR 1987								
27...	6.2	7.1	0.87	--	0.226	--	--	--
01422702 - MALLORY BROOK NEAR HAMDEN, NY (LAT 42 09 50N LONG 075 00 19W)								
NOV 1986								
21...	8.1	8.3	2.0	3.7	1.35	--	63	9
01422737 - EAST BROOK NEAR TREADWELL, NY (LAT 42 16 15N LONG 075 03 02W)								
NOV 1986								
21...	4.0	7.3	1.4	3.2	0.560	--	180	37
MAR 1987								
27...	3.4	7.3	0.86	--	0.435	--	--	--

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM)	PH (STAND-ARD UNITS)	PH LAB (STAND-ARD UNITS)	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)
			DELAWARE RIVER BASIN--Continued						
01423000 - WEST BRANCH DELAWARE RIVER AT WALTON NY (LAT 42 09 58N LONG 075 08 26W)									
NOV 1986									
21...	1600	--	66	--	6.74	21	5.8	1.6	2.8
0143400350 - E BR NEVERSINK R AB DEER SHANTY BR NR DENNING,NY (LAT 41 58 35N LONG 074 25 39W)									
NOV 1986									
22...	0820	--	29	--	5.00	6	1.5	0.60	0.30
22...	0825	29	--	5.00	--	--	--	--	--
MAR 1987									
27...	1330	--	23	--	4.98	6	1.6	0.58	0.33
JUL									
01...	1000	--	23	--	5.25	6	1.3	0.61	0.40
01...	1001	--	--	--	--	6	1.3	0.56	0.40
AUG									
25...	1200	--	26	--	6.00	--	1.5	0.72	0.50
0143400505 - DEER SHANTY BROOK AT MOUTH NEAR CAMPSITE (LAT 41 58 35N LONG 074 25 39W)									
NOV 1986									
22...	0800	--	31	--	4.83	7	1.7	0.70	0.30
MAR 1987									
27...	1345	--	30	--	4.62	6	1.6	0.42	0.27
JUL									
01...	1045	--	27	--	5.21	9	2.4	0.83	0.60
0143400620 - E BR NEVERSINK OFF JEEP TRAIL CLOSEST TO RIVER (LAT 41 58 18N LONG 074 26 20W)									
NOV 1986									
22...	0835	--	29	--	4.82	6	1.5	0.60	0.40
MAR 1987									
27...	1415	--	26	--	4.76	6	1.5	0.56	0.31
APR									
01...	1510	--	31	--	4.52	5	1.2	0.54	0.22
0143400650 - TRIB TO E BR NEVERSINK AT FIRST JEEP BRIDGE (LAT 41 58 16N LONG 074 26 38W)									
NOV 1986									
22...	0845	--	33	--	4.61	6	1.4	0.60	0.30
MAR 1987									
27...	1420	--	30	--	4.54	4	1.2	0.37	0.23
APR									
01...	1520	--	33	--	4.45	5	1.2	0.49	0.23
01434008 - E BR NEVERSINK R @ STRAUSS ESTATE @ DENNING NY (LAT 41 57 48N LONG 074 27 19W)									
APR 1987									
01...	1530	--	29	--	4.61	5	1.2	0.54	0.23
JUL									
01...	1215	--	23	--	4.99	6	1.3	0.55	0.40
AUG									
25...	1200	--	23	--	5.22	--	1.3	0.58	0.40
01434009 - FLAT BROOK AT BRIDGE BETWEEN STRAUS & TISON EST (LAT 41 57 50N LONG 074 27 35W)									
NOV 1986									
22...	0930	--	28	--	5.18	8	2.1	0.70	0.40
MAR 1987									
27...	1520	--	22	--	5.10	7	2.0	0.63	0.47
APR									
01...	1540	--	28	--	4.86	7	1.9	0.69	0.34
0143401110 - SMALL TRIB TO E BR NEVERSINK, MARKED NE 8 ON RD (LAT 41 57 32N LONG 074 28 26W)									
NOV 1986									
22...	0950	--	28	--	5.04	8	1.9	0.80	0.40
MAR 1987									
27...	1545	--	23	--	5.25	7	1.7	0.68	0.36
APR									
01...	1610	--	25	--	5.08	8	2.0	0.65	0.27

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)	NITROGEN, NITRATE DISSOLVED (MG/L AS N)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
			DELAWARE RIVER BASIN--Continued						
01423000 - WEST BRANCH DELAWARE RIVER AT WALTON NY (LAT 42 09 58N LONG 075 08 26W)									
NOV 1986									
21...	2.4	10	8.1	4.6	3.5	0.863	--	210	25
0143400350 - E BR NEVERSINK R AB DEER SHANTY BR NR DENNING,NY (LAT 41 58 35N LONG 074 25 39W)									
NOV 1986									
22...	0.40	0	6.2	0.46	2.2	0.442	300	17	78
22...	--	--	--	--	--	--	280	--	--
MAR 1987									
27...	0.27	0	5.5	0.45	--	0.681	--	--	--
JUL									
01...	0.40	0	5.8	0.48	2.3	0.225	170	4	44
01...	0.40	--	--	--	2.3	--	160	4	44
AUG									
25...	0.30	0	6.8	0.45	2.4	0.278	140	<3	30
0143400505 - DEER SHANTY BROOK AT MOUTH NEAR CAMPSITE (LAT 41 58 35N LONG 074 25 39W)									
NOV 1986									
22...	0.40	0	6.4	0.51	2.4	0.423	240	38	78
MAR 1987									
27...	0.27	0	5.1	0.38	--	0.659	--	--	--
JUL									
01...	0.30	3.6	5.6	0.54	2.9	0.334	--	8	10
0143400620 - E BR NEVERSINK OFF JEEP TRAIL CLOSEST TO RIVER (LAT 41 58 18N LONG 074 26 20W)									
NOV 1986									
22...	0.20	0	6.1	0.51	2.2	0.453	320	19	82
MAR 1987									
27...	0.25	0	5.4	0.43	--	0.658	--	--	--
APR									
01...	0.33	0	5.0	0.41	--	0.682	--	--	--
0143400650 - TRIB TO E BR NEVERSINK AT FIRST JEEP BRIDGE (LAT 41 58 16N LONG 074 26 38W)									
NOV 1986									
22...	0.20	0	6.6	0.56	2.1	0.384	330	14	140
MAR 1987									
27...	0.22	0	5.4	0.37	--	0.576	--	--	--
APR									
01...	0.30	0	5.5	0.42	--	0.590	--	--	--
01434008 - E BR NEVERSINK R @ STRAUSS ESTATE @ DENNING NY (LAT 41 57 48N LONG 074 27 19W)									
APR 1987									
01...	0.34	0	5.0	0.40	--	0.732	--	--	--
JUL									
01...	0.20	0	5.7	0.49	2.4	0.202	160	4	50
AUG									
25...	0.30	0	5.9	0.50	2.4	0.198	140	<3	51
01434009 - FLAT BROOK AT BRIDGE BETWEEN STRAUS & TISON EST (LAT 41 57 50N LONG 074 27 35W)									
NOV 1986									
22...	0.40	0.2	6.4	0.48	2.5	0.550	130	18	42
MAR 1987									
27...	0.28	--	5.2	0.42	--	0.645	--	--	--
APR									
01...	0.36	0	5.6	0.54	--	0.750	--	--	--
0143401110 - SMALL TRIB TO E BR NEVERSINK, MARKED NE 8 ON RD (LAT 41 57 32N LONG 074 28 26W)									
NOV 1986									
22...	0.40	0	7.0	0.63	2.5	0.181	140	10	39
MAR 1987									
27...	0.34	0	6.2	0.50	--	0.331	--	--	--
APR									
01...	0.40	0	5.9	0.46	--	0.465	--	--	--

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM)	PH (STAND-ARD UNITS)	PH LAB (STAND-ARD UNITS)	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)
DELAWARE RIVER BASIN--Continued									
014340145 - TRIB NO 3 TO E BR NEVERSINK AT LADELTON (LAT 41 56 28N LONG 074 31 12W)									
NOV 1986									
22...	1005	--	28	--	5.07	7	1.8	0.60	0.40
MAR 1987									
27...	1550	--	23	--	5.03	6	1.6	0.54	0.34
APR									
01...	1620	--	26	--	4.75	6	1.7	0.54	0.34
014340150 - EAST BRANCH NEVERSINK BELOW LADELTON (LAT 41 56 06N LONG 074 31 48W)									
NOV 1986									
22...	1010	--	28	--	5.20	8	1.9	0.80	0.60
MAR 1987									
27...	1600	--	24	--	5.36	6	1.5	0.56	0.31
APR									
01...	1630	--	28	--	4.89	6	1.5	0.57	0.49
JUL									
01...	1315	--	24	--	5.54	7	1.9	0.62	0.80
AUG									
25...	1655	--	24	--	5.86	--	1.9	0.69	0.70
01434020 - EAST BRANCH NEVERSINK AT CLARYVILLE (LAT 41 55 06N LONG 074 34 23W)									
MAR 1987									
27...	1615	--	28	--	5.98	8	2.1	0.62	1.1
31...	1615	--	25	--	4.43	8	2.1	0.62	1.1
APR									
01...	1250	--	29	--	4.82	7	1.8	0.53	0.74
JUL									
01...	1525	--	30	--	5.68	8	2.0	0.64	1.7
AUG									
25...	1200	--	--	--	--	--	2.1	0.58	2.2
25...	1201	--	34	--	6.02	--	2.2	1.0	2.2
01434021 - W BR NEVERSINK R AT FALLS UPSTR OF HIKING FORD (LAT 42 00 40N LONG 074 24 50W)									
NOV 1986									
22...	1030	30	--	5.44	--	8	2.0	0.70	1.0
22...	1210	--	33	--	4.63	5	1.3	0.50	0.40
APR 1987									
01...	1745	--	33	--	4.41	7	1.9	0.52	1.4
JUL									
01...	1840	--	--	--	--	5	1.2	0.51	0.40
01...	1841	--	--	--	--	5	1.2	0.47	0.40
AUG									
26...	1145	--	27	--	5.00	--	1.2	0.58	0.40
0143402130 - W BR NEVERSINK AT DEC PARKING LOT (LAT 42 00 06N LONG 074 26 18W)									
NOV 1986									
22...	1200	--	38	--	5.31	10	2.6	0.80	1.7
MAR 1987									
27...	1850	--	34	--	5.36	9	2.5	0.65	2.3
27...	1851	--	34	--	5.36	9	2.5	0.68	2.2
APR									
01...	1755	--	33	--	4.94	7	1.9	0.52	1.4
0143402190 - TRIB 1 TO W BR NEVERSINK RIVER (LAT 41 59 58N LONG 074 27 28W)									
NOV 1986									
22...	1145	--	27	--	5.45	9	2.3	0.70	0.30
MAR 1987									
27...	1845	--	24	--	5.11	7	2.0	0.52	0.28
APR									
01...	1810	0	25	--	4.95	7	1.9	0.62	0.23
0143402270 - WEST BR NEVERSINK UPSTREAM FR BISCUIT BR PK LOT (LAT 41 58 45N LONG 074 29 10W)									
NOV 1986									
22...	1130	--	33	--	5.56	9	2.5	0.70	1.1
MAR 1987									
27...	1830	--	30	--	5.47	9	2.3	0.73	1.4
APR									
01...	1820	--	29	--	5.17	8	2.0	0.65	0.95
JUL									
01...	1815	--	29	--	6.09	8	2.1	0.59	1.3
AUG									
26...	0940	--	28	--	6.04	--	2.2	0.73	1.2

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)	NITROGEN, NITRATE DISSOLVED (MG/L AS N)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
DELAWARE RIVER BASIN--Continued									
014340145 - TRIB NO 3 TO E BR NEVERSINK AT LADELTON (LAT 41 56 28N LONG 074 31 12W)									
NOV 1986									
22...	0.30	0	7.0	0.57	2.3	0.127	190	13	45
MAR 1987									
27...	0.25	0	6.3	0.44	--	0.182	--	--	--
APR									
01...	0.32	0	6.2	0.52	--	0.269	--	--	--
014340150 - EAST BRANCH NEVERSINK BELOW LADELTON (LAT 41 56 06N LONG 074 31 48W)									
NOV 1986									
22...	0.40	0	6.6	0.92	2.4	0.351	180	15	49
MAR 1987									
27...	0.25	0	5.7	0.99	--	0.480	--	--	--
APR									
01...	0.36	0.6	5.2	0.82	--	0.604	--	--	--
JUL									
01...	0.40	1.2	5.9	0.99	2.5	0.192	50	6	13
AUG									
25...	0.40	1.2	6.0	0.97	2.8	0.196	30	<3	11
01434020 - EAST BRANCH NEVERSINK AT CLARYVILLE (LAT 41 55 06N LONG 074 34 23W)									
MAR 1987									
27...	0.30	0.5	5.9	1.9	--	0.464	--	--	--
31...	0.30	0	4.4	0.91	--	0.714	--	--	--
APR									
01...	0.37	0	5.4	1.3	--	0.611	--	--	--
JUL									
01...	0.40	1.2	6.8	0.65	2.5	0.543	30	4	3
AUG									
25...	0.60	--	6.2	3.2	2.6	0.208	20	12	3
25...	0.40	1.4	6.2	3.2	2.8	0.208	9	5	4
01434021 - W BR NEVERSINK R AT FALLS UPSTR OF HIKING FORD (LAT 42 00 40N LONG 074 24 50W)									
NOV 1986									
22...	0.40	--	--	--	2.3	--	130	7	36
22...	0.30	0	6.3	0.48	2.2	0.501	560	12	100
APR 1987									
01...	0.30	0	5.0	0.35	--	0.746	--	--	--
JUL									
01...	--	--	--	--	2.4	--	--	<3	49
01...	0.30	--	--	--	2.4	--	230	3	49
AUG									
26...	0.20	0	6.2	0.44	2.3	0.301	260	<3	57
0143402130 - W BR NEVERSINK AT DEC PARKING LOT (LAT 42 00 06N LONG 074 26 18W)									
NOV 1986									
22...	0.30	0.2	6.2	3.7	1.9	0.493	120	5	37
MAR 1987									
27...	0.30	0	5.4	4.5	1.8	0.774	200	8	46
27...	0.30	--	5.4	4.5	1.8	0.767	200	8	47
APR									
01...	0.30	0	5.1	2.5	--	0.727	--	--	--
0143402190 - TRIB 1 TO W BR NEVERSINK RIVER (LAT 41 59 58N LONG 074 27 28W)									
NOV 1986									
22...	0.20	0.2	6.4	0.47	2.0	0.422	70	4	14
MAR 1987									
27...	0.23	0.1	5.5	0.41	--	0.709	--	--	--
APR									
01...	0.28	0	5.2	0.38	--	0.662	--	--	--
0143402270 - WEST BR NEVERSINK UPSTREAM FR BISCUIT BR PK LOT (LAT 41 58 45N LONG 074 29 10W)									
NOV 1986									
22...	0.20	0.5	6.3	1.8	2.1	0.455	60	6	16
MAR 1987									
27...	0.25	0.5	5.6	2.6	--	0.662	--	--	--
APR									
01...	0.32	0.2	5.0	1.5	--	0.706	--	--	--
JUL									
01...	0.40	1.1	6.2	1.9	2.0	0.244	30	<3	4
AUG									
26...	0.30	1.5	6.3	1.7	2.3	0.205	7	<3	4

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SPECIFIC CONDUCTANCE LAB (US/CM)	PH (STANDARD UNITS)	PH LAB (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)
DELAWARE RIVER BASIN--Continued									
01434106 - W BR NEVERSINK RIVER BELOW HIGH FALLS BROOK (LAT 41 58 27N LONG 074 31 32W)									
NOV 1986									
22...	1115	32	--	6.11	10	2.9	0.70	0.70	0.30
MAR 1987									
27...	1645	26	--	6.22	10	3.1	0.49	0.47	0.24
APR									
01...	1710	27	--	5.69	9	3.0	0.44	0.32	0.30
JUL									
01...	1550	35	--	6.02	12	3.8	0.63	0.90	0.40
AUG									
26...	1200	36	--	6.76	--	3.9	0.68	0.90	0.30
01434200 - FALL BROOK NEAR MOUTH (LAT 41 56 21N LONG 074 34 06W)									
NOV 1986									
22...	1110	30	--	6.22	11	3.5	0.50	0.40	0.40
MAR 1987									
27...	1640	25	--	6.15	9	3.1	0.40	0.31	0.23
APR									
01...	1800	26	--	5.45	9	2.8	0.45	0.24	0.29
01434220 - TRIB TO W BR NEVERSINK DOWNSTREAM FROM FALL BR (LAT 41 56 10N LONG 074 34 22W)									
NOV 1986									
22...	1050	34	--	6.22	12	3.6	0.70	0.60	0.40
MAR 1987									
27...	1630	28	--	5.87	10	3.3	0.48	0.48	0.31
APR									
01...	1700	30	--	5.75	11	3.3	0.55	0.43	0.37
01434498 - WEST BRANCH NEVERSINK R AT CLARYVILLE (LAT 41 55 14N LONG 074 33 51W)									
NOV 1986									
22...	1040	33	--	6.25	11	3.1	0.70	0.90	0.30
MAR 1987									
27...	1630	29	--	6.22	9	2.8	0.58	0.83	0.27
31...	1620	24	--	5.03	--	--	--	--	--
APR									
01...	1223	28	--	5.18	--	--	--	--	--
JUL									
01...	1530	38	--	6.34	13	4.0	0.68	1.1	0.50
AUG									
25...	1200	38	--	7.09	--	4.1	0.86	1.2	0.40
01435000 - NEVERSINK RIVER NEAR CLARYVILLE NY (LAT 41 53 24N LONG 074 35 25W)									
NOV 1986									
22...	1045	33	--	6.23	9	2.7	0.60	1.1	0.40
FEB 1987									
05...	1415	--	--	--	10	2.9	0.70	1.3	0.30
MAR									
27...	1130	--	--	6.13	9	2.6	0.64	1.1	0.30
31...	1600	23	--	4.78	--	--	--	--	--
APR									
01...	1825	30	--	5.30	8	2.3	0.57	1.0	0.36
02...	1745	27	--	5.26	9	2.6	0.61	1.1	0.40
02...	1746	--	5.26	--	--	--	--	--	--
JUL									
01...	0750	35	--	5.97	10	3.0	0.65	1.5	0.40
AUG									
25...	1800	35	--	6.94	--	2.6	0.68	1.6	0.50

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)	NITROGEN, NITRATE DISSOLVED (MG/L AS N)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
DELAWARE RIVER BASIN--Continued								
01434106 - W BR NEVERSINK RIVER BELOW HIGH FALLS BROOK (LAT 41 58 27N LONG 074 31 32W)								
NOV 1986								
22...	1.4	6.3	1.3	2.3	0.503	40	8	12
MAR 1987								
27...	2.1	5.6	0.81	--	0.799	--	--	--
APR								
01...	0.9	5.5	0.55	--	0.918	--	--	--
JUL								
01...	5.9	6.3	1.2	2.2	0.308	20	10	10
AUG								
26...	5.2	6.5	1.1	2.4	0.300	4	6	6
01434200 - FALL BROOK NEAR MOUTH (LAT 41 56 21N LONG 074 34 06W)								
NOV 1986								
22...	1.2	6.4	0.53	2.2	0.435	50	9	10
MAR 1987								
27...	1.8	5.7	0.45	--	0.678	--	--	--
APR								
01...	1.2	5.8	0.46	--	0.689	--	--	--
01434220 - TRIB TO W BR NEVERSINK DOWNSTREAM FROM FALL BR (LAT 41 56 10N LONG 074 34 22W)								
NOV 1986								
22...	2.8	6.5	0.73	2.3	0.540	70	8	17
MAR 1987								
27...	2.3	6.3	0.59	--	0.648	--	--	--
APR								
01...	2.4	6.0	0.56	--	0.716	--	--	--
01434498 - WEST BRANCH NEVERSINK R AT CLARYVILLE (LAT 41 55 14N LONG 074 33 51W)								
NOV 1986								
22...	1.8	6.3	1.4	2.1	0.471	50	8	9
MAR 1987								
27...	1.9	5.8	1.5	--	0.628	--	--	--
31...	0.3	4.5	0.95	--	0.771	--	--	--
APR								
01...	0.4	5.5	1.3	--	0.762	--	--	--
JUL								
01...	6.2	6.3	1.5	2.0	0.288	20	4	<1
AUG								
25...	6.1	6.5	1.4	2.3	0.251	<1	5	<1
01435000 - NEVERSINK RIVER NEAR CLARYVILLE NY (LAT 41 53 24N LONG 074 35 25W)								
NOV 1986								
22...	1.0	6.6	1.6	2.3	0.417	70	5	19
FEB 1987								
05...	--	--	--	2.4	--	30	<3	<1
MAR								
27...	--	5.9	1.8	1.9	0.552	80	6	18
31...	0	4.5	1.2	--	0.680	--	--	--
APR								
01...	0.2	5.6	1.8	--	0.649	--	--	--
02...	--	--	--	1.9	--	110	5	28
02...	--	--	--	--	--	100	--	--
JUL								
01...	3.8	6.3	2.2	2.1	0.272	20	8	16
AUG								
25...	3.3	6.5	2.4	2.1	0.198	1	<3	2

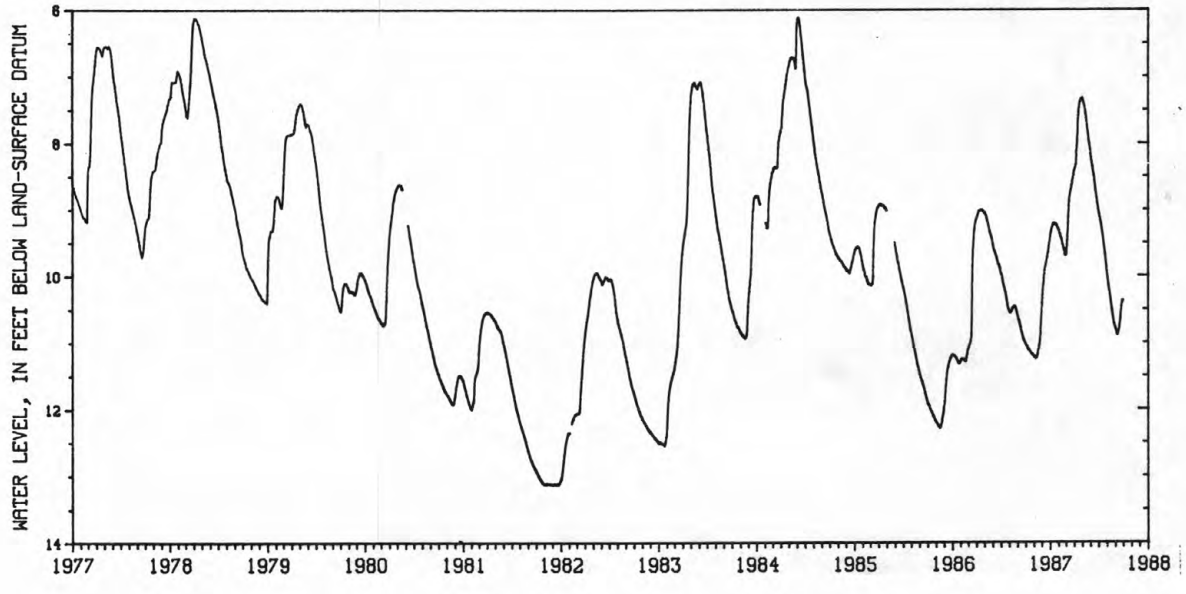
ALBANY COUNTY

424114073495402. Local number, A 636.
LOCATION.--Lat 42°41'14", long 73°49'54", Hydrologic Unit 02020006, Fuller Road, Albany.
Owner: State University of New York at Albany.
AQUIFER.--Water-table aquifer in sand of Pleistocene age.
WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 24 ft, cased to 22 ft, 2-in. jet point (60-gauze screen 22 ft to 24 ft). Well gravel packed from original depth of 26 ft.
INSTRUMENTATION.--Water-stage recorder--hourly punch.
DATUM.--Elevation of land-surface datum is 260 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.40 ft above land-surface datum.
REMARKS.--Well was drilled May 1974 as a replacement for 424114073495401 (local number A 635), located 35 ft north, which has a period of record from November 1965 to May 1974 (unpublished).
PERIOD OF RECORD.--May 1974 to current year. Records prior to October 1976 are unpublished and available in files of the Geological Survey.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.12 ft below land-surface datum, Apr. 12, 13, 1978, June 5, 6-7, 8, 1984; lowest, 13.13 ft below land-surface datum, Oct. 29, Nov. 25, 26-Dec. 17, 18, 20, 21-22, 23, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.03	11.21	10.50	9.42	9.31	9.69	8.42	7.33	8.15	9.04	9.94	10.78
2	11.04	11.22	10.43	9.38	9.31	9.66	8.40	7.34	8.19	9.06	9.98	10.80
3	11.05	11.22	10.35	9.36	9.32	9.63	8.39	7.36	8.22	9.08	10.01	10.81
4	11.05	11.22	10.29	9.34	9.34	9.60	8.37	7.38	8.25	9.08	10.04	10.82
5	11.06	11.23	10.24	9.32	9.36	9.54	8.36	7.39	8.27	9.11	10.07	10.84
6	11.06	11.23	10.19	9.30	9.38	9.47	8.34	7.40	8.30	9.13	10.10	10.86
7	11.07	11.24	10.14	9.28	9.38	9.39	8.32	7.41	8.33	9.16	10.14	10.87
8	11.08	11.24	10.09	9.27	9.39	9.31	8.28	7.43	8.36	9.17	10.17	10.89
9	11.09	11.24	10.04	9.26	9.41	9.22	8.21	7.45	8.38	9.19	10.20	10.89
10	11.10	11.24	9.99	9.25	9.42	9.13	8.13	7.47	8.41	9.22	10.23	10.89
11	11.11	11.24	9.96	9.23	9.44	9.04	8.06	7.50	8.44	9.24	10.25	10.88
12	11.11	11.23	9.92	9.22	9.45	8.95	8.01	7.52	8.46	9.27	10.27	10.87
13	11.12	11.21	9.89	9.22	9.47	8.89	7.95	7.55	8.48	9.30	10.30	10.85
14	11.12	11.20	9.87	9.22	9.49	8.84	7.86	7.58	8.51	9.33	10.32	10.83
15	11.12	11.19	9.85	9.21	9.51	8.81	7.74	7.61	8.53	9.36	10.35	10.81
16	11.13	11.17	9.83	9.22	9.53	8.78	7.65	7.64	8.57	9.39	10.38	10.79
17	11.14	11.14	9.81	9.22	9.54	8.75	7.58	7.67	8.61	9.42	10.41	10.76
18	11.14	11.12	9.79	9.23	9.56	8.73	7.52	7.70	8.65	9.45	10.44	10.72
19	11.15	11.10	9.77	9.22	9.58	8.71	7.49	7.74	8.68	9.49	10.47	10.70
20	11.16	11.09	9.75	9.22	9.59	8.69	7.45	7.77	8.72	9.52	10.50	10.66
21	11.16	11.06	9.73	9.22	9.61	8.66	7.43	7.80	8.75	9.55	10.53	10.62
22	11.16	11.04	9.71	9.23	9.62	8.64	7.40	7.84	8.78	9.58	10.56	10.57
23	11.17	11.02	9.68	9.22	9.63	8.63	7.39	7.87	8.80	9.62	10.59	10.54
24	11.18	10.98	9.66	9.23	9.65	8.60	7.37	7.90	8.83	9.65	10.62	10.50
25	11.18	10.94	9.63	9.24	9.66	8.58	7.36	7.94	8.87	9.69	10.65	10.46
26	11.19	10.88	9.60	9.25	9.68	8.55	7.35	7.97	8.91	9.72	10.68	10.43
27	11.19	10.79	9.57	9.27	9.69	8.53	7.35	8.00	8.93	9.76	10.71	10.41
28	11.19	10.72	9.54	9.27	9.70	8.50	7.34	8.02	8.96	9.80	10.73	10.40
29	11.20	10.63	9.51	9.29	---	8.48	7.33	8.05	8.98	9.83	10.74	10.38
30	11.20	10.56	9.48	9.29	---	8.46	7.33	8.08	9.01	9.87	10.75	10.37
31	11.21	---	9.45	9.29	---	8.43	---	8.12	---	9.91	10.77	---

WTR YEAR 1987 HIGHEST 7.32 Apr. 30, 1987 LOWEST 11.24 Nov. 6, 7-10, 11, 1986



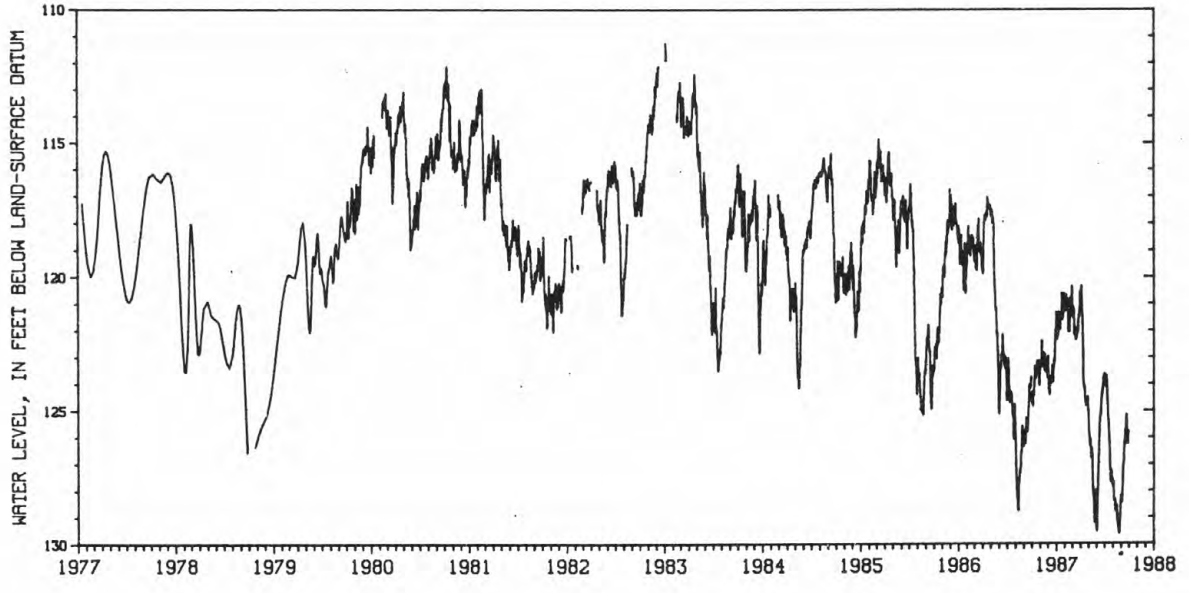
ALBANY COUNTY

424044073535101. Local number, A 637.
LOCATION.--Lat 42°40'44", long 73°53'51", Hydrologic Unit 02020006, Dr. Shaw Road, Guilderland.
Owner: Mill Hill Missionaries.
AQUIFER.--Confined aquifer in sand and gravel of Pleistocene age.
WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 198 ft, cased to 193 ft, 30-slot plastic screen 193 ft to 198 ft.
INSTRUMENTATION.--Water-stage recorder--hourly punch.
DATUM.--Elevation of land-surface datum is 220 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.50 ft above land-surface datum.
REMARKS.--Water level affected by pumping from distant municipal well field.
PERIOD OF RECORD.--September 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 111.11 ft below land-surface datum, Jan. 7, 1983; lowest measured, 129.70 ft below land-surface datum, Aug. 24, 25, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	124.34	123.63	123.77	122.09	120.70	120.37	120.76	125.07	128.83	123.76	127.77	128.20
2	124.58	123.55	123.82	121.34	120.77	120.55	120.56	125.03	129.38	123.64	127.84	128.26
3	124.74	123.38	122.97	121.67	120.77	120.93	120.86	125.52	129.54	123.90	127.70	128.38
4	124.72	123.29	123.61	122.01	121.11	121.36	120.49	125.69	129.27	124.07	127.67	128.44
5	124.70	123.30	123.88	122.35	121.29	121.35	120.70	125.93	128.88	124.12	127.95	128.43
6	124.57	123.16	124.23	122.11	121.12	121.55	120.36	125.98	128.51	124.01	128.29	128.21
7	124.85	123.26	123.97	121.78	120.68	121.16	120.78	126.24	128.10	123.83	128.39	127.81
8	124.52	122.89	124.41	122.24	120.68	121.26	---	126.28	127.42	123.81	128.35	127.46
9	124.29	122.39	124.12	122.17	120.89	121.28	---	126.34	127.08	123.69	128.38	127.07
10	124.41	123.35	123.87	122.05	121.22	122.14	121.58	126.11	126.94	123.73	128.36	127.05
11	124.44	123.39	123.91	121.32	121.14	122.15	122.13	126.43	126.65	123.94	128.64	127.06
12	124.05	123.31	123.77	121.65	120.95	122.18	122.92	126.40	126.05	124.22	128.77	126.87
13	123.81	123.10	124.02	121.93	120.81	121.91	123.82	126.79	125.77	124.63	128.79	126.43
14	123.34	123.30	123.75	121.74	121.01	122.12	123.98	126.43	125.52	124.78	128.79	126.21
15	123.51	122.84	123.81	121.42	121.51	122.11	124.15	126.43	125.25	125.18	128.72	126.28
16	123.47	122.99	123.74	121.76	121.94	122.36	124.08	126.53	125.14	125.41	128.56	126.02
17	123.61	123.32	123.97	121.98	122.04	122.16	124.25	126.65	125.20	125.45	128.67	125.74
18	123.72	123.31	123.51	121.53	121.83	122.30	124.15	127.16	125.16	125.67	128.92	125.75
19	123.80	123.53	123.32	121.46	122.06	122.00	124.55	127.84	124.86	125.87	129.11	125.76
20	123.51	123.36	123.37	121.53	121.91	122.10	124.59	127.93	124.72	126.17	129.23	125.52
21	123.43	122.90	123.82	121.50	121.64	122.16	124.74	128.14	124.60	126.24	129.36	125.27
22	123.28	123.21	123.92	121.07	121.26	122.06	124.70	128.29	124.42	126.71	129.23	125.16
23	123.16	123.55	123.46	120.62	120.80	121.96	124.84	128.36	124.33	127.22	129.42	125.42
24	123.26	123.26	123.37	121.10	121.20	122.02	124.61	128.71	124.39	127.54	129.61	125.86
25	123.33	123.59	123.16	121.62	121.25	121.76	124.77	129.21	124.23	127.70	129.64	126.23
26	123.35	123.11	123.23	121.43	121.47	121.54	124.55	129.22	124.13	127.41	129.66	126.23
27	123.19	123.35	123.07	121.55	121.35	121.46	124.69	128.93	123.84	127.24	129.51	126.27
28	123.14	123.27	122.75	121.33	121.13	121.50	124.57	128.39	123.80	127.31	129.35	126.08
29	123.47	123.45	122.41	121.37	---	121.43	124.51	128.20	123.81	127.55	129.08	125.78
30	123.57	123.62	121.96	120.84	---	121.10	124.56	127.98	123.66	127.54	128.91	125.80
31	124.05	---	122.24	120.64	---	120.58	---	128.22	---	127.64	128.40	---

WTR YEAR 1987 HIGHEST 120.08 Mar. 1, 1987 LOWEST 129.70 Aug. 24, 25, 1987



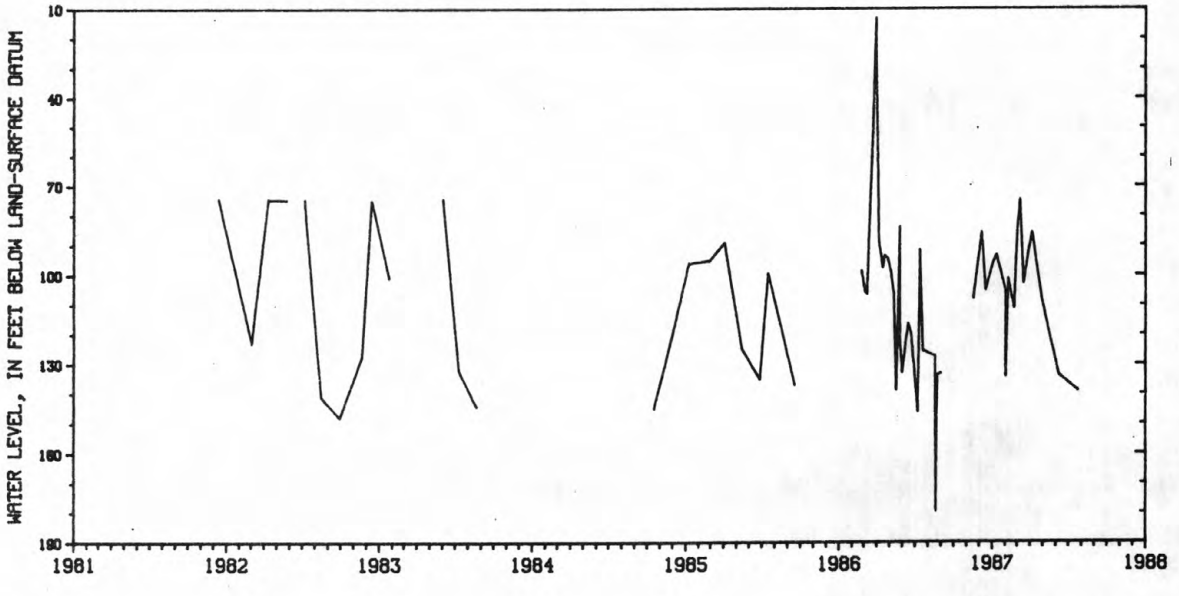
DELAWARE COUNTY

420748075043101. Local number, D 492.
LOCATION.--Lat 42°07'48", long 75°04'31", Hydrologic Unit 02040102, near Walton.
Owner: New York State Department of Environmental Conservation.
AQUIFER.--Water-table aquifer in shale and sandstone of Devonian age.
WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 199 ft, cased to 30 ft, open hole.
INSTRUMENTATION.--Weekly tape measurement by observer.
DATUM.--Elevation of land-surface datum is 2,180 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 0.75 ft above land-surface datum.
REMARKS.--Water levels subject to rapid response from heavy rains or snowmelt. Pump installed in well in spring 1986 for summer campground use. Water levels may be affected by recent pumping.
PERIOD OF RECORD.--September 1977 to August 1983, October 1984 to current year. Records prior to water year 1982 are unpublished and unreliable, and should not be used.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.18 ft below land-surface datum, Mar. 31, 1986; lowest measured, 179.64 ft below land-surface datum, Aug. 20, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	WATER LEVEL		DATE	WATER LEVEL		DATE	WATER LEVEL		DATE	WATER LEVEL	
NOV 18, 1986	107.95	Z	JAN 20, 1987	97.93		FEB 17, 1987	107.60		MAR 30, 1987	91.18	
DEC 08	85.85		26	101.27		23	111.10		APR 06	85.93	
17	105.26	Z	FEB 02	105.68		MAR 02	85.52		30	108.80	Z
JAN 05, 1987	95.60		03	134.34	Z	09	74.85		JUN 09	133.80	Z
12	93.43		09	101.35		17	103.03	Z	JUL 24	139.02	Z

Z Measured by USGS personnel.



GROUND-WATER LEVELS

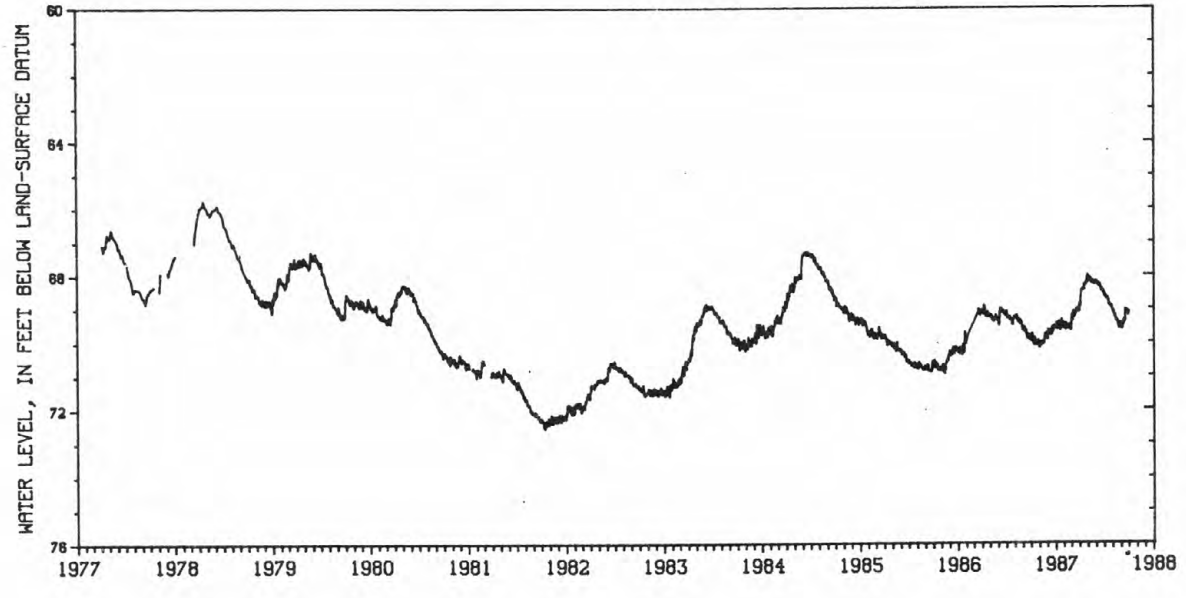
DUTCHESS COUNTY

414737073563301. Local number, Du 321.
LOCATION.--Lat 41°47'37", long 73°56'33", Hydrologic Unit 02020008, near Hyde Park.
Owner: U.S. National Park Service.
AQUIFER.--Confined aquifer in shale of Ordovician age.
WELL CHARACTERISTICS.--Drilled unused well, diameter 6 in., depth 128 ft, cased to unknown depth, open hole.
INSTRUMENTATION.--Water-stage recorder--hourly punch.
DATUM.--Elevation of land-surface datum is 170 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of extended casing, 3.10 ft above land-surface datum.
REMARKS.--Water level responds to semidiurnal earth tides (approximately 0.05 ft).
PERIOD OF RECORD.--September 1948 to April 1950, April 1953 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 65.62 ft below land-surface datum, June 22, 1953; lowest, 73.85 ft below land-surface datum, Sept. 13, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69.93	70.18	69.89	69.60	69.46	69.50	68.87	68.05	68.21	68.64	69.09	69.46
2	69.89	70.14	69.93	69.53	69.45	69.23	68.89	68.08	68.20	68.66	69.11	69.47
3	69.88	70.11	69.73	69.44	69.45	69.19	68.95	68.13	68.21	68.61	69.08	69.51
4	69.80	70.07	69.62	69.52	69.50	69.27	68.88	68.18	68.24	68.60	69.07	69.58
5	69.76	70.08	69.65	69.60	69.59	69.34	68.63	68.20	68.25	68.63	69.08	69.62
6	69.79	70.05	69.74	69.63	69.63	69.37	68.57	68.16	68.27	68.68	69.14	69.62
7	69.89	70.08	69.77	69.57	69.59	69.31	68.51	68.10	68.31	68.72	69.20	69.59
8	69.97	70.09	69.77	69.54	69.50	69.19	68.46	68.10	68.28	68.71	69.23	69.54
9	70.00	70.01	69.77	69.57	69.45	69.09	68.47	68.12	68.25	68.70	69.23	69.40
10	70.04	70.00	69.68	69.58	69.48	69.14	68.47	68.11	68.28	68.70	69.20	69.38
11	70.09	70.04	69.68	69.46	69.52	69.23	68.47	68.13	68.34	68.71	69.23	69.43
12	70.09	70.03	69.66	69.40	69.52	69.27	68.47	68.13	68.34	68.72	69.28	69.49
13	70.04	70.02	69.70	69.44	69.50	69.24	68.43	68.20	68.30	68.73	69.33	69.45
14	69.94	70.08	69.79	69.53	69.53	69.19	68.44	68.26	68.30	68.71	69.37	69.34
15	69.89	70.08	69.79	69.55	69.57	69.17	68.45	68.23	68.31	68.69	69.39	69.35
16	69.92	70.02	69.79	69.59	69.61	69.16	68.43	68.21	68.34	68.76	69.38	69.37
17	69.97	69.97	69.80	69.65	69.61	69.14	68.38	68.19	68.39	68.84	69.36	69.36
18	70.04	69.96	69.75	69.66	69.59	69.11	68.32	68.17	68.46	68.89	69.36	69.18
19	70.09	69.95	69.58	69.56	69.59	69.09	68.31	68.17	68.49	68.90	69.39	69.07
20	70.08	70.01	69.55	69.51	69.62	69.05	68.32	68.22	68.48	68.91	69.42	69.08
21	70.05	69.82	69.60	69.52	69.62	69.02	68.31	68.27	68.47	68.90	69.47	69.11
22	70.03	69.77	69.67	69.51	69.59	69.01	68.28	68.28	68.45	68.92	69.48	69.12
23	70.02	69.85	69.67	69.33	69.51	69.05	68.29	68.26	68.43	68.93	69.47	69.10
24	70.04	69.86	69.67	69.38	69.50	69.08	68.25	68.25	68.47	68.95	69.51	69.07
25	70.08	69.88	69.57	69.50	69.56	69.09	68.25	68.26	68.50	68.97	69.57	69.09
26	70.07	69.86	69.52	69.55	69.62	69.07	68.26	68.29	68.53	68.93	69.60	69.12
27	70.00	69.74	69.56	69.57	69.66	69.07	68.26	68.30	68.52	68.93	69.59	69.18
28	69.96	69.74	69.60	69.57	69.65	69.07	68.21	68.27	68.51	68.95	69.53	69.22
29	70.00	69.75	69.61	69.59	---	69.10	68.11	68.24	68.56	69.00	69.44	69.21
30	70.02	69.79	69.58	69.55	---	69.10	68.02	68.22	68.60	69.05	69.45	69.12
31	70.12	---	69.57	69.46	---	68.98	---	68.20	---	69.06	69.49	---

WTR YEAR 1987 HIGHEST 67.98 Apr. 30, 1987 LOWEST 70.23 Nov. 1, 2, 1986



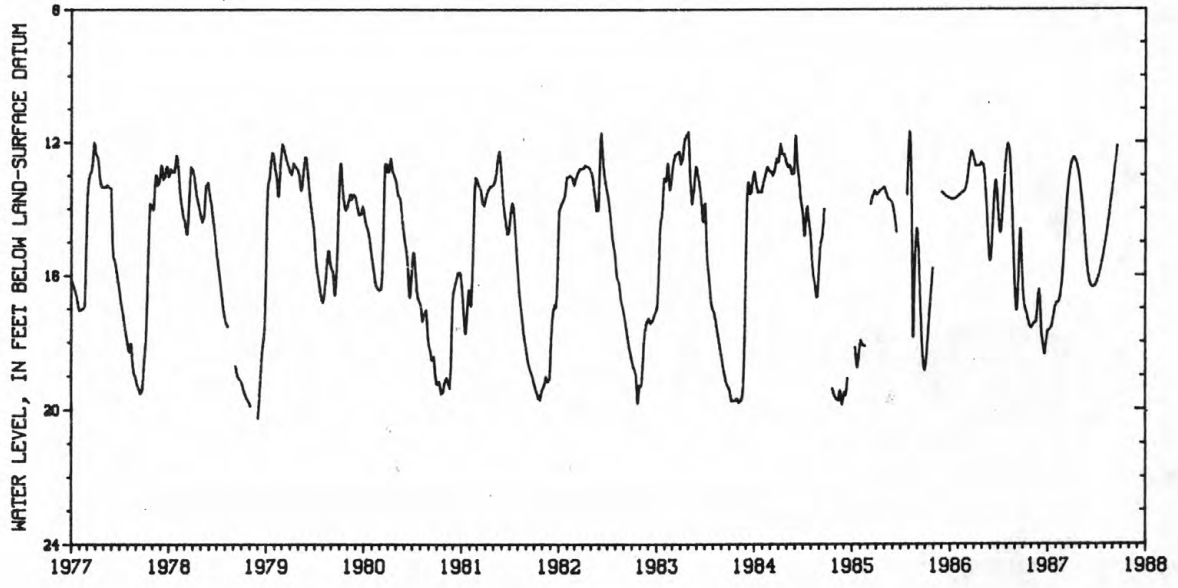
DUTCHESS COUNTY

414128073475201. Local number, Du 1009.
LOCATION.--Lat 41°41'28", long 73°47'52", Hydrologic Unit 02020008, James Baird State Park, near Pleasant Valley.
Owner: New York State Department of Environmental Conservation.
AQUIFER.--Water-table aquifer in sand and gravel of Pleistocene age.
WELL CHARACTERISTICS.--Bored observation well, diameter 2.5 in., depth 26.4 ft, filled in from original depth of 28 ft, cased to 25 ft, 1.25-in. well point (60-gauze screen 25 ft to 27 ft, damaged during well installation).
INSTRUMENTATION.--Weekly tape measurement by observer.
DATUM.--Elevation of land-surface datum is 330 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.10 ft above land-surface datum.
PERIOD OF RECORD.--October 1965 to April 1969, June 1971 to current year. Records prior to October 1976 are unpublished and available in files of the Geological Survey.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.70 ft below land-surface datum, May 2, 1983; lowest measured, 20.60 ft below land-surface datum, Nov. 24, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	
OCT 01, 1986	16.10	DEC 04, 1986	16.55	JAN 30, 1987	16.95	MAY 20, 1987	14.80	
14	17.10	11	17.85	FEB 24	16.25	29	15.70	
NOV 01	17.60	JAN 02, 1987	17.70	MAR 09	14.45	JUN 16	16.35	
13	17.45	16	17.57	APR 16	12.55	SEP 18	12.12	Z
21	17.40							

Z Measured by USGS personnel.

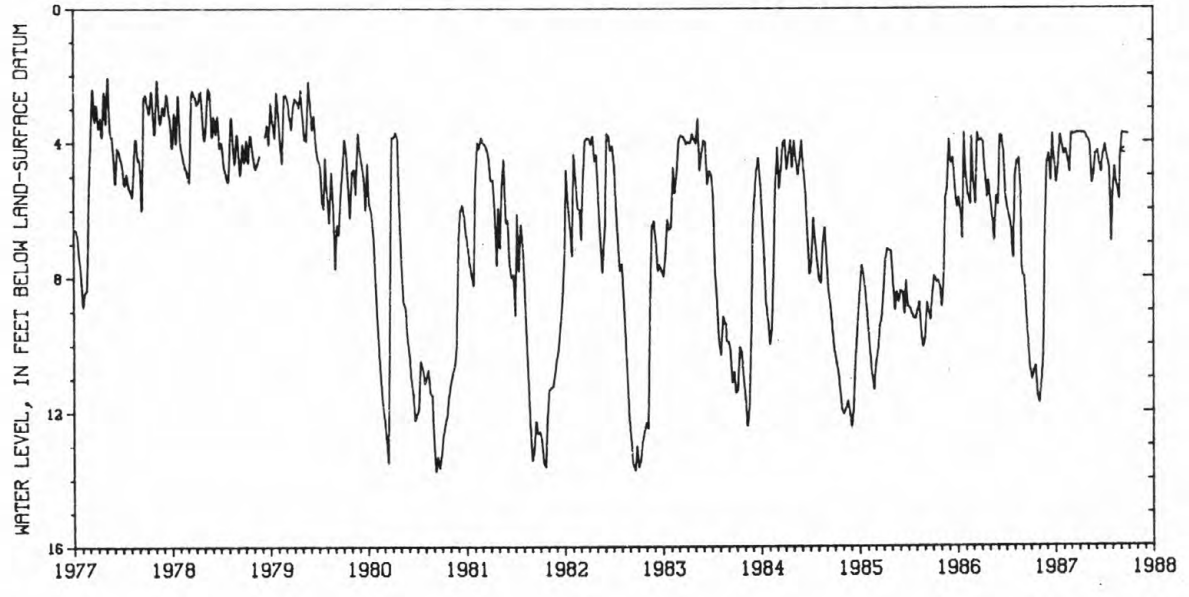


GREENE COUNTY

422319073482001. Local number, G 1.
LOCATION.--Lat 42°23'19", long 73°48'20", Hydrologic Unit 02020006, near West Coxsackie.
Owner: Harry Andrews.
AQUIFER.--Water-table aquifer in till of Pleistocene age.
WELL CHARACTERISTICS.--Dug domestic well, diameter 36 in., depth 17.6, filled in from original depth of 19 ft, tile-lined to 2 ft, stone-lined to 19 ft.
INSTRUMENTATION.--Weekly tape measurement by observer.
DATUM.--Elevation of land-surface datum is 130 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Chiseled square on top of inner step on curb, 0.18 ft below land-surface datum.
PERIOD OF RECORD.--December 1945 to current year.
EXTREMES FOR PERIOD OR RECORD.--Highest water level measured, 1.07 ft below land-surface datum, Mar. 15, 1962; lowest measured, 15.56 ft below land-surface datum, Feb. 27, 1963.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06, 1986	11.04	JAN 05, 1987	5.19	APR 08, 1987	3.73	JUL 07, 1987	4.10
14	10.78	12	4.76	14	3.74	15	4.48
20	10.66	20	3.81	24	3.75	23	4.77
27	11.57	27	4.09	29	3.88	30	6.94
NOV 03	11.73	FEB 02	4.37	MAY 05	3.94	AUG 05	5.51
10	11.11	09	4.25	12	4.12	12	4.76
17	10.35	17	4.53	19	5.23	18	5.26
24	6.76	24	4.89	26	4.97	29	5.70
DEC 01	4.59	MAR 03	3.74	JUN 02	4.35	SEP 02	4.54
08	4.36	10	3.76	09	4.28	09	3.73
16	5.14	17	3.76	16	4.66	16	3.76
23	3.76	24	3.73	23	4.90	24	3.76
29	4.52	APR 01	3.73	30	4.38	30	3.77

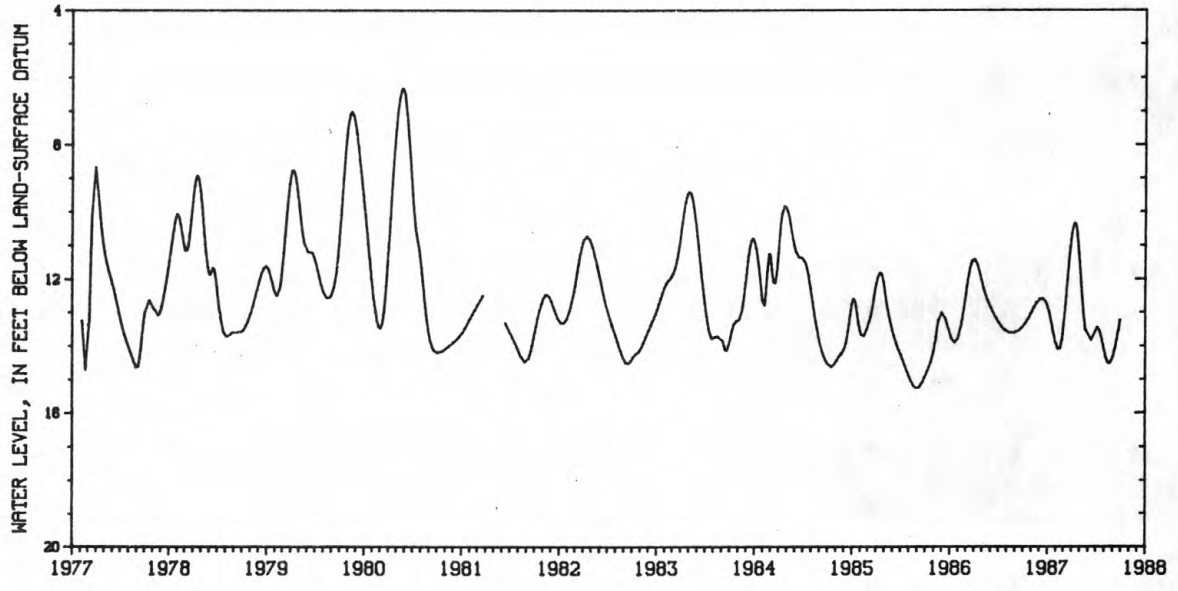


HAMILTON COUNTY

432832074122201. Local number, H 3.
LOCATION.--Lat 43°28'32", long 74°12'22", Hydrologic Unit 02020002, near Griffin.
Owner: F. B. Girard.
AQUIFER.--Water-table aquifer in sand of Pleistocene age.
WELL CHARACTERISTICS.--Bored observation well, diameter 2.5 in., depth 16.0 ft in July 1986, filled in from original depth of 19 ft, cased to 16 ft, 1.25-in. well point (60-gauze screen 16 ft to 19 ft, damaged during well installation).
INSTRUMENTATION.--Tape measurement by USGS personnel.
DATUM.--Elevation of land-surface datum is 1,290 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.55 ft above land-surface datum as of October 1984.
REMARKS.--Well casing believed to have settled about 0.75 ft shortly after installation. All published records prior to 1985 water year should be adjusted accordingly.
PERIOD OF RECORD.--November 1965 to current year. Records prior to October 1976 are unpublished and available in files of the Geological Survey.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.38 ft below land-surface datum, June 6, 1980; lowest measured, 16.19 ft below land-surface datum, Oct. 21, 1969.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1986	13.21	FEB 24, 1987	13.84	MAY 22, 1987	13.52	AUG 13, 1987	14.49
DEC 03	12.62	APR 16	10.39	JUL 07	13.46	SEP 30	13.24
JAN 06, 1987	12.96						



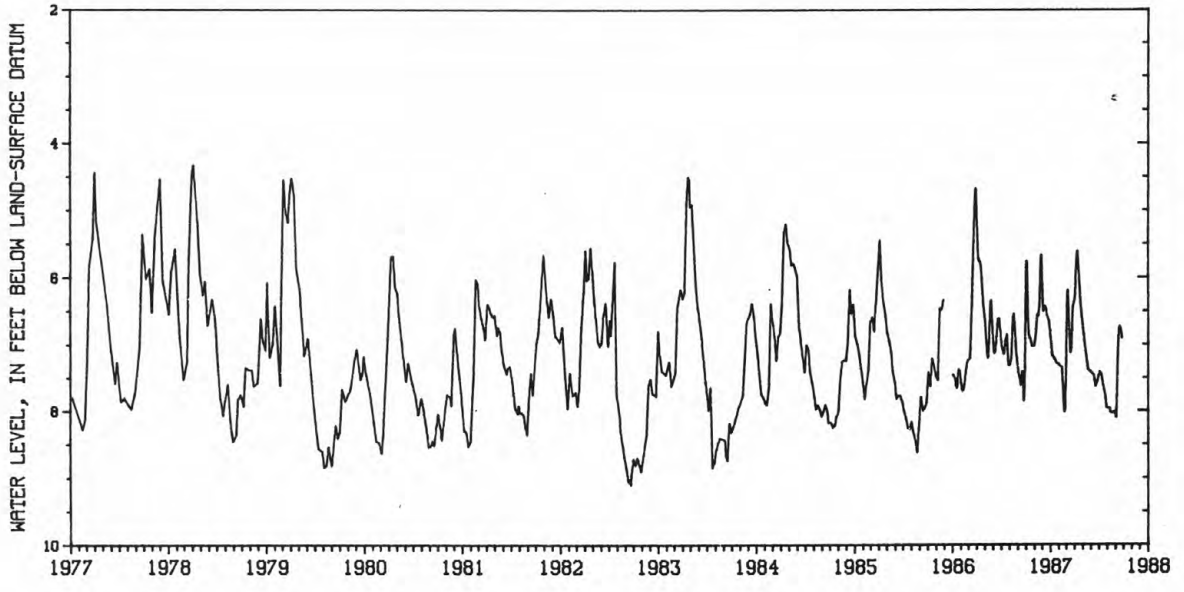
MONTGOMERY COUNTY

430141074423501. Local number, Mt 1.
LOCATION.--Lat 43°01'41", long 74°42'35", Hydrologic Unit 02020004, near St. Johnsville.
Owner: Keith Handy.
AQUIFER.--Water-table aquifer in till of Pleistocene age.
WELL CHARACTERISTICS.--Dug unused well, diameter 24 in., depth 12 ft, stone-lined.
INSTRUMENTATION.--Tape gage read weekly by observer.
DATUM.--Elevation of land-surface datum is 710 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top edge of limestone slab at northeast corner of well opening, at land-surface datum.
PERIOD OF RECORD.--October 1942 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.74 ft below land-surface datum, Apr. 10, 1971; lowest measured, 9.99 ft below land-surface datum, Aug. 28, 1949.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 04, 1986	5.82	JAN 10, 1987	7.17	APR 11, 1987	5.65	JUL 11, 1987	7.45
11	6.64	17	7.22	18	5.87	18	7.62
18	6.91	24	7.28	25	6.37	25	7.75
25	7.03	31	7.30	MAY 02	6.67	AUG 01	7.96
NOV 01	7.03	FEB 07	7.33	09	6.94	08	7.97
08	6.86	14	7.35	16	7.18	13	7.97 Z
15	6.56	21	7.91	23	7.38	15	8.03
22	6.44	28	7.71	30	7.41	22	8.04
29	5.67	MAR 07	6.25	JUN 06	7.44	29	8.02
DEC 06	6.51	14	6.79	13	7.46	SEP 05	8.10
13	6.44	21	7.07	20	7.63	12	7.06
20	6.57	28	6.42	27	7.56	19	6.74
27	6.64	APR 04	6.32	JUL 06	7.42	26	6.90
JAN 03, 1987	6.88						

Z Measured by USGS personnel.

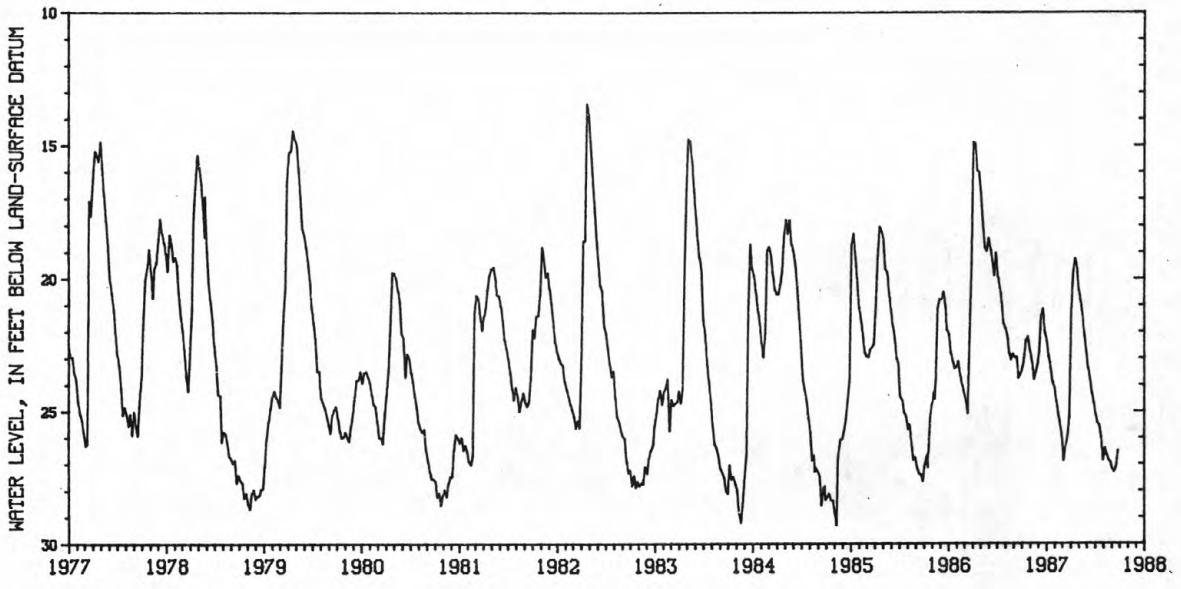


433112075091501. Local number, Oe 151.
LOCATION.--Lat 43°31'12", long 75°09'15", Hydrologic Unit 04150101, at Woodgate.
Owner: Henry Rubyor.
AQUIFER.--Water-table aquifer in sand of Pleistocene age.
WELL CHARACTERISTICS.--Dug domestic well, diameter 36 in., depth 31.1 ft in July 1984, stone-lined.
INSTRUMENTATION.--Tape gage read weekly by observer.
DATUM.--Elevation of land-surface datum is 1,484.94 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top of 2-ft square concrete well cover at midpoint of south side of rectangular opening, 1.00 ft above land-surface datum.
PERIOD OF RECORD.--July 1926 to August 1945, October 1948 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.43 ft below land-surface datum, Apr. 3, 1976; lowest measured, 30.31 ft below land-surface datum, Feb. 25, 1961.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	
OCT 04, 1986	23.40	JAN 03, 1987	22.38	APR 11, 1987	19.71	JUL 11, 1987	25.45	
11	23.03	10	22.93	18	19.25	18	25.55	
18	22.36	17	23.40	25	19.60	25	26.00	
25	22.22	24	23.90	MAY 02	20.42	AUG 01	26.88	
NOV 01	22.71	31	24.10	09	20.85	08	26.41	
08	23.09	FEB 07	24.60	16	21.37	15	26.64	
17	23.80	14	25.12	23	22.13	22	26.87	
22	23.60	28	25.94	30	22.71	29	26.96	
29	23.29	MAR 07	26.89	JUN 06	23.36	SEP 01	27.10	Z
DEC 06	22.80	14	26.35	13	23.75	05	27.22	
13	21.40	21	26.01	20	24.30	12	27.32	
20	21.16	28	25.26	27	24.64	19	27.15	
27	22.04	APR 04	21.42	JUL 04	25.15	26	26.52	

Z Measured by USGS personnel.



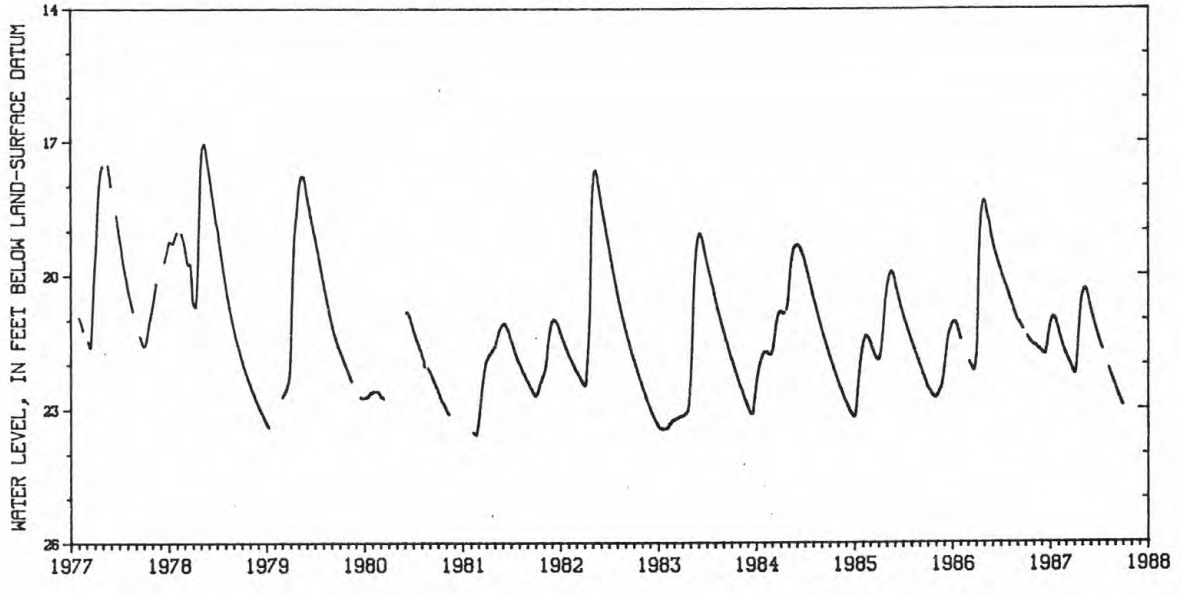
ONEIDA COUNTY

433012075134202. Local number, Oe 766.
LOCATION.--Lat 43°30'12", long 75°13'42", Hydrologic Unit 04150101, near Hawkinsville.
Owner: New York State Department of Environmental Conservation.
AQUIFER.--Water-table aquifer in sand of Pleistocene age.
WELL CHARACTERISTICS.--Driven-washed observation well, diameter 6 in., depth 30.7 ft in December 1983, filled in from original depth of 33 ft, cased to 33 ft, open end.
INSTRUMENTATION.--Water-stage recorder--hourly punch.
DATUM.--Elevation of land-surface datum is 1,190.22 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top of extended casing, 2.63 ft above land-surface datum.
REMARKS.--Well was driven-washed November 1968 as a replacement for 433012075134201 (local number Oe 765), located 15 ft east, which has a period of record from November 1965 to November 1968 (unpublished).
PERIOD OF RECORD.--November 1968 to current year. Records prior to October 1976 are unpublished and available in files of the Geological Survey.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 14.87 ft below land-surface datum, May 21, 1972; lowest recorded, 23.58 ft below land-surface datum, Feb. 20, 21, 22, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	21.58	21.75	21.13	21.24	21.78	22.21	20.45	20.76	21.43	---	22.51
2	---	21.57	21.75	21.09	21.26	21.80	22.22	20.43	20.79	21.44	---	22.53
3	---	21.58	21.73	21.07	21.29	21.83	22.23	20.41	20.81	21.46	---	22.55
4	---	21.58	21.75	21.06	21.33	21.84	22.22	20.39	20.84	21.48	---	22.57
5	---	21.59	21.76	21.04	21.36	21.86	22.20	20.37	20.87	21.50	---	22.58
6	---	21.59	21.76	21.01	21.38	21.87	22.17	20.35	20.89	21.52	---	22.60
7	---	21.60	21.77	20.98	21.38	21.87	22.14	20.33	20.91	21.54	---	22.61
8	21.38	21.60	21.77	20.98	21.39	21.89	22.09	20.33	20.92	21.56	22.11	22.63
9	21.40	21.59	21.77	20.97	21.43	21.90	22.04	20.32	20.95	21.58	22.12	22.64
10	21.42	21.61	21.77	20.96	21.45	21.92	21.97	20.31	20.98	21.59	22.14	22.66
11	21.43	21.61	21.79	20.94	21.48	21.94	21.89	20.31	21.02	21.61	22.16	22.68
12	21.44	21.61	21.78	20.94	21.49	21.95	21.80	20.31	21.03	21.63	22.18	22.69
13	21.44	21.63	21.79	20.95	21.52	21.96	21.72	20.34	21.05	21.65	22.20	22.70
14	21.44	21.65	21.78	20.95	21.54	21.97	21.63	20.34	21.07	21.66	22.21	22.72
15	21.46	21.65	21.75	20.95	21.56	21.99	21.53	20.33	21.09	21.68	22.23	22.74
16	21.47	21.65	21.73	20.97	21.58	22.00	21.43	20.36	21.12	---	22.25	22.75
17	21.48	21.65	21.71	20.99	21.59	22.01	21.33	20.36	21.14	---	22.26	22.76
18	21.50	21.66	21.66	20.98	21.61	22.03	21.24	20.38	21.17	---	22.28	22.78
19	21.50	21.67	21.63	20.98	21.64	22.04	21.15	20.41	21.18	---	22.30	22.80
20	21.51	21.67	21.60	20.99	21.66	22.05	21.07	20.44	21.20	---	22.32	22.81
21	21.51	21.66	21.56	21.01	21.67	22.06	20.98	20.47	21.22	---	22.33	22.82
22	21.52	21.69	21.52	21.02	21.68	22.08	20.90	20.49	21.24	---	22.34	22.84
23	21.53	21.69	21.47	21.01	21.69	22.10	20.82	20.51	21.26	---	22.36	22.85
24	21.54	21.69	21.43	21.05	21.72	22.11	20.77	20.54	21.29	---	22.38	22.87
25	21.54	21.70	21.37	21.09	21.74	22.12	20.71	20.57	21.31	---	22.40	22.88
26	21.54	21.70	21.34	21.11	21.76	22.13	20.65	20.60	21.32	---	22.41	22.90
27	21.54	21.71	21.31	21.13	21.77	22.15	20.60	20.63	21.34	---	22.42	22.91
28	21.55	21.72	21.27	21.15	21.78	22.16	20.55	20.65	21.36	---	22.44	22.92
29	21.56	21.72	21.23	21.18	---	22.18	20.51	20.68	21.39	---	22.46	22.93
30	21.57	21.74	21.18	21.19	---	22.18	20.48	20.70	21.40	---	22.48	22.94
31	21.58	---	21.16	21.21	---	22.19	---	20.73	---	---	22.49	---

WTR YEAR 1987 HIGHEST 20.30 May 11, 12, 1987 LOWEST 22.95 Sept. 30, 1987



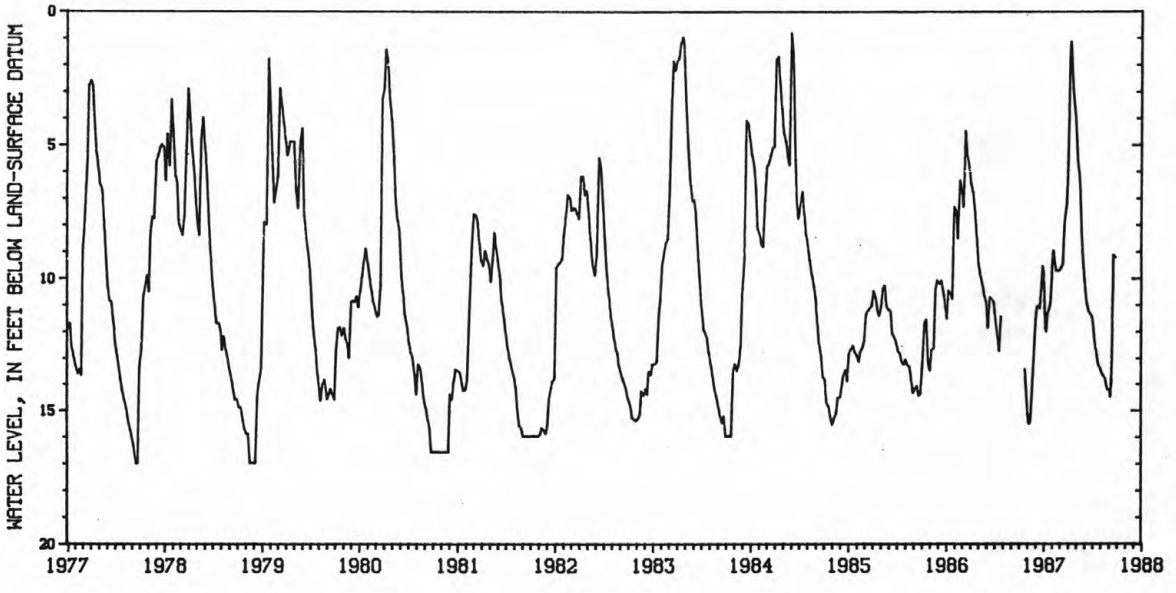
PUTNAM COUNTY

412450073413101. Local number, P 609.
LOCATION.--Lat 41°24'50", long 73°41'31", Hydrologic Unit 02030101, near Carmel.
Owner: New York City Board of Water Supply.
AQUIFER.--Water-table aquifer in till of Pleistocene age.
WELL CHARACTERISTICS.--Dug unused well, diameter 36 in., depth 16 ft in June 1984, stone-lined.
INSTRUMENTATION.--Weekly tape measurement by observer.
DATUM.--Elevation of land-surface datum is 540 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top (north side) of 3-in. coupling set in concrete well cover, at land-surface datum.
REMARKS.--Original depth measured at 17 ft. Depth measured at 16.6 ft October 1979, filled in to 16 ft September 1981.
PERIOD OF RECORD.--January 1935 to September 1945, September 1950 to current year. Records prior to October 1976 are unpublished and available in files of the Geological Survey.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.84 ft below land-surface datum, June 2, 1984; lowest measured, dry, Nov. 1, 30, 1935, Jan. 7, 1936, Sept. 1, 1939, several days in 1953, 1957, 1964, 1966, 1978, Sept. 25, 1980, several days in 1981, 1982, 1984.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	WATER LEVEL		DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1986	13.48	Z	FEB 05, 1987	9.00	APR 16, 1987	2.16	JUL 16, 1987	12.84
NOV 10	15.50		11	9.50	23	3.39	24	13.33
DEC 03	11.41		20	9.75	30	4.25	29	13.41
10	11.08		27	9.74	MAY 08	5.75	AUG 07	13.66
17	11.16		MAR 06	9.66	14	6.33	18	13.83
24	10.08		13	9.50	20	7.75	26	14.25
31	9.75		18	8.16	JUN 10	10.99	SEP 03	14.25
JAN 07, 1987	11.91		25	7.42	25	11.41	10	14.00
15	11.33		APR 03	4.58	JUL 02	11.66	18	9.16
22	11.16		09	1.41	09	12.41	25	9.25
29	10.41							

Z Measured by USGS personnel.

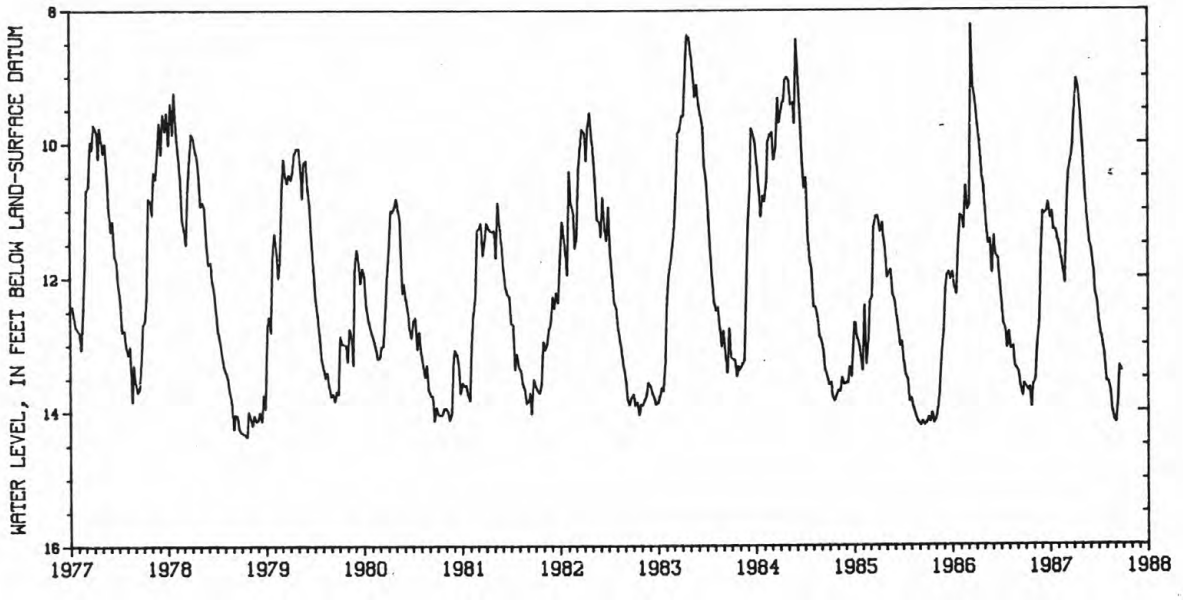


RENSSELAER COUNTY

423834073391001. Local number, Re 700.
LOCATION.--Lat 42°38'34", long 73°39'10", Hydrologic Unit 02020006, near Defreestville.
Owner: William P. Hofmann.
AQUIFER.--Water-table aquifer in sand and gravel of Pleistocene age.
WELL CHARACTERISTICS.--Dug domestic well, diameter 4 ft, depth 15.8 ft in November 1985, stone-lined.
INSTRUMENTATION.--Weekly tape measurement by observer.
DATUM.--Elevation of land-surface datum is 405 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top edge of concrete curbing at midpoint of north side of rectangular opening, 2.00 ft above land-surface datum.
PERIOD OF RECORD.--September 1954 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.23 ft below land-surface datum, Mar. 15, 1986; lowest measured, 15.49 ft below land-surface datum, Oct. 3, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12, 1986	13.70	JAN 11, 1987	11.04	APR 12, 1987	9.05	JUL 11, 1987	12.86
18	13.66	17	11.30	19	9.17	18	12.97
25	13.94	25	11.31	28	9.60	25	13.15
31	13.61	FEB 01	11.45	MAY 04	9.99	AUG 01	13.56
NOV 08	13.53	07	11.52	12	10.50	08	13.57
15	13.04	14	11.73	17	10.86	16	13.70
23	12.67	21	11.90	23	11.16	22	14.00
30	11.65	28	12.09	31	11.50	29	14.14
DEC 07	11.03	MAR 07	11.07	JUN 07	11.60	SEP 05	14.18
13	11.06	14	10.43	15	11.88	12	13.92
20	11.03	22	10.27	20	12.25	19	13.33
27	10.90	29	10.06	27	12.35	27	13.40
JAN 04, 1987	11.13	APR 04	9.56	JUL 05	12.68		



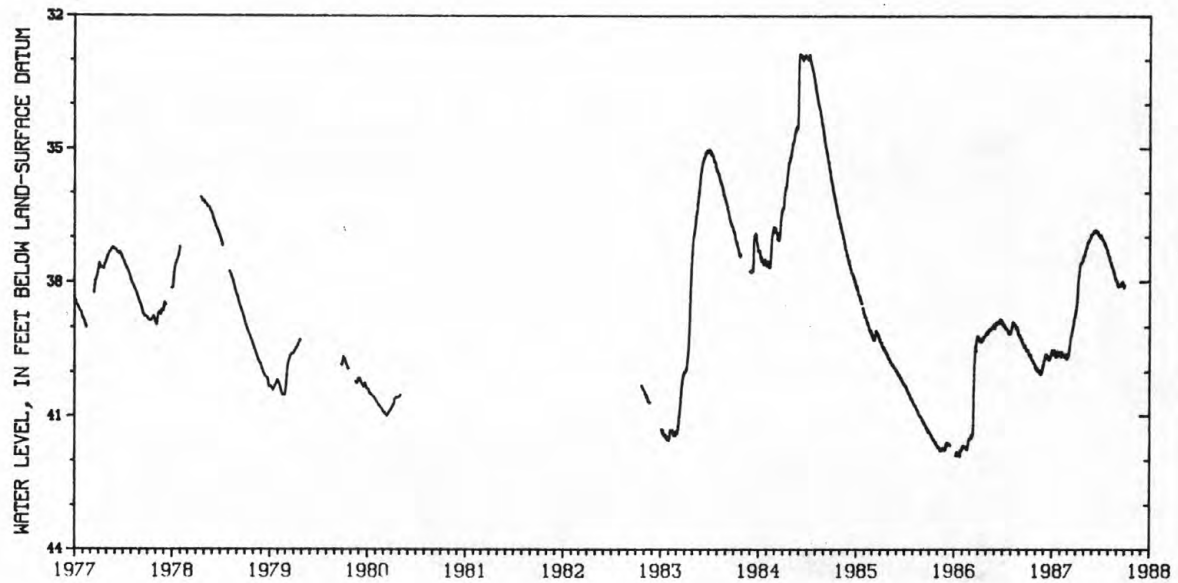
RENSSELAER COUNTY

423534073423401. Local number, Re 703.
LOCATION.--Lat 42°35'34", long 73°42'34", Hydrologic Unit 02020006, in East Greenbush.
Owner: Town of East Greenbush.
AQUIFER.--Confined aquifer in sand and gravel of Pleistocene age.
WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 80 ft, cased to 78 ft, 50-slot plastic screen 78 ft to 80 ft.
INSTRUMENTATION.--Water-stage recorder--hourly punch.
DATUM.--Elevation of land-surface datum is 275 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of flange, 2.9 ft above land-surface datum.
REMARKS.--The wrong measuring point value was used from November 1982 through the 1985 water year. A -.20 correction should be applied to all published record prior to the 1985 water year. Well was drilled October 1982 as a replacement for 423532073423701 (local number Re 701), located about 300 ft southwest and 15.8 ft lower in land-surface datum, which has a period of record from March 1961 to May 1980. Hydrograph shows water levels plotted for Re 701 (through 1980) adjusted to elevation of water levels plotted for Re 703. Water level may be affected by nearby pumping.
PERIOD OF RECORD.--October 1982 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 32.86 ft below land-surface datum, June 4, 5, 6, 7, 8, 9, July 11, 1984; lowest recorded, 41.93 ft below land-surface datum, Jan. 23, 24, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39.53	39.90	39.88	39.59	39.60	39.62	38.70	37.43	36.93	37.01	37.41	37.99
2	39.54	39.89	39.84	39.52	39.56	39.59	38.62	37.40	36.93	37.01	37.43	38.02
3	39.55	39.92	39.74	39.56	39.58	39.63	38.59	37.42	36.93	36.97	37.42	38.05
4	39.51	39.92	39.75	39.61	39.64	39.65	38.53	37.41	36.90	36.96	37.45	38.08
5	39.53	39.95	39.75	39.61	39.67	39.63	38.49	37.37	36.89	37.01	37.48	38.09
6	39.56	39.95	39.72	39.59	39.63	39.58	38.42	37.32	36.89	37.03	37.52	38.10
7	39.60	39.99	39.68	39.54	39.59	39.52	38.34	37.29	36.88	37.03	37.54	38.11
8	39.60	39.97	39.67	39.59	39.56	39.46	38.20	37.29	36.85	37.03	37.55	38.12
9	39.61	39.93	39.64	39.60	39.61	39.42	38.06	37.26	36.86	37.04	37.57	38.09
10	39.64	39.99	39.62	39.58	39.63	39.40	37.96	37.23	36.89	37.05	37.56	38.09
11	39.65	39.98	39.64	39.52	39.63	39.34	37.90	37.22	36.89	37.07	37.60	38.10
12	39.64	39.98	39.61	39.56	39.60	39.27	37.86	37.20	36.84	37.08	37.63	38.10
13	39.63	39.99	39.68	39.61	39.62	39.22	37.84	37.24	36.85	37.08	37.66	38.09
14	39.62	40.01	39.67	39.61	39.64	39.20	37.78	37.18	36.85	37.08	37.67	38.07
15	39.66	39.98	39.66	39.60	39.65	39.18	37.70	37.14	36.84	37.12	37.68	38.08
16	39.69	39.97	39.68	39.66	39.67	39.16	37.64	37.14	36.85	37.15	37.69	38.06
17	39.70	39.99	39.70	39.67	39.64	39.13	37.61	37.10	36.88	37.18	37.70	38.06
18	39.73	40.02	39.66	39.61	39.63	39.11	37.60	37.10	36.90	37.16	37.73	38.07
19	39.74	40.05	39.66	39.57	39.67	39.07	37.61	37.11	36.87	37.18	37.76	38.09
20	39.74	40.05	39.72	39.61	39.68	39.03	37.60	37.11	36.87	37.18	37.79	38.04
21	39.74	39.99	39.74	39.61	39.65	39.00	37.58	37.09	36.88	37.20	37.82	38.02
22	39.76	40.05	39.74	39.56	39.64	38.98	37.58	37.06	36.88	37.22	37.80	38.01
23	39.77	40.05	39.71	39.54	39.61	38.96	37.56	37.05	36.90	37.24	37.84	38.00
24	39.80	40.00	39.72	39.62	39.67	38.92	37.55	37.04	36.94	37.26	37.88	38.00
25	39.81	40.02	39.67	39.65	39.70	38.87	37.55	37.04	36.94	37.27	37.91	38.05
26	39.81	39.97	39.70	39.62	39.72	38.82	37.54	37.03	36.96	37.27	37.93	38.09
27	39.81	39.95	39.68	39.63	39.72	38.80	37.51	37.01	36.94	37.30	37.94	38.12
28	39.83	39.92	39.64	39.62	39.70	38.78	37.47	36.98	36.96	37.33	37.96	38.14
29	39.84	39.86	39.61	39.63	---	38.77	37.42	36.96	36.99	37.36	37.96	38.13
30	39.87	39.86	39.57	39.58	---	38.74	37.43	36.94	36.99	37.37	37.98	38.09
31	39.92	---	39.59	39.56	---	38.69	---	36.93	---	37.39	37.98	---

WTR YEAR 1987 HIGHEST 36.83 June 12, 14, 15, 16, 1987 LOWEST 40.07 Nov. 19, 20, 22, 23, 1986



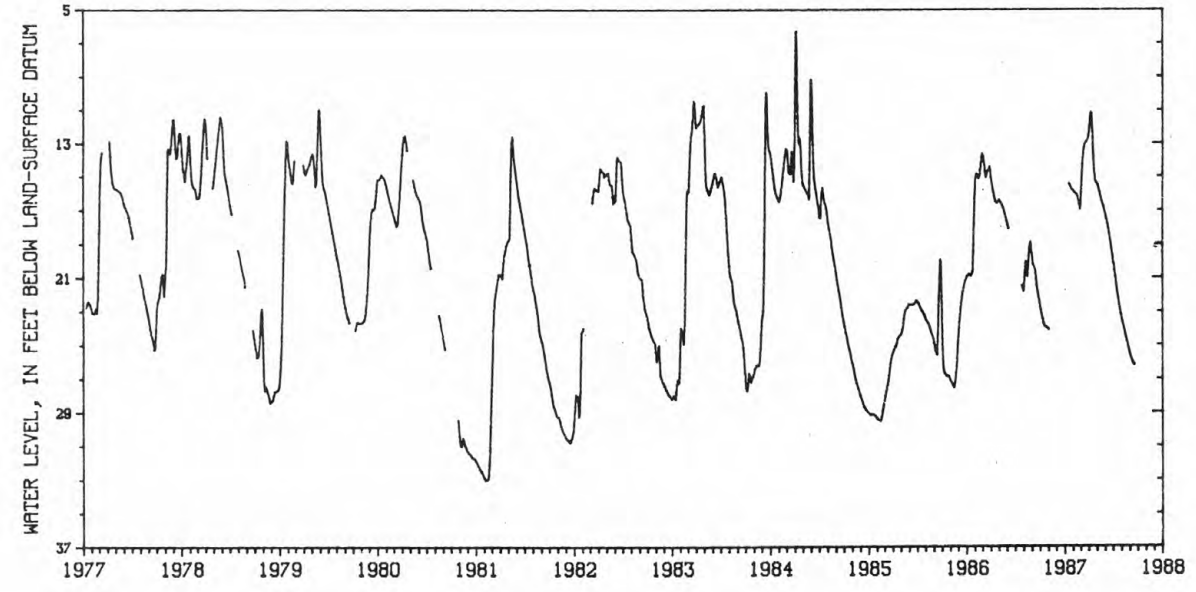
ROCKLAND COUNTY

411802073593001. Local number, Ro 18.
LOCATION.--Lat 41°18'02", long 73°59'30", Hydrologic Unit 02030101, in Bear Mountain State Park near Lemon Road and Seven Lakes Drive.
Owner: Palisades Interstate Park Commission.
AQUIFER.--Confined aquifer in Storm King Granite of Precambrian age.
WELL CHARACTERISTICS.--Drilled unused well, diameter 6 in., depth 60 ft, cased to 53 ft, open hole.
INSTRUMENTATION.--Tape gage read weekly by observer.
DATUM.--Elevation of land-surface datum is 390 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of extended casing, 3.65 ft above land-surface datum.
PERIOD OF RECORD.--July 1949 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.32 ft below land-surface datum, Apr. 6, 1984; lowest measured, 33.02 ft below land-surface datum, Feb. 6, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	WATER LEVEL		DATE	WATER LEVEL		DATE	WATER LEVEL		DATE	WATER LEVEL	
OCT 03, 1986	22.84		FEB 23, 1987	16.67		MAY 04, 1987	15.56		JUL 02, 1987	20.15	
10	23.45		27	16.94	Z	08	15.84		29	23.15	
17	23.87	Z	MAR 06	14.89		19	16.52		AUG 05	23.68	
24	23.96		APR 03	12.05	Z	30	17.14		SEP 05	25.75	
NOV 02	24.09		10	11.17		JUN 09	17.81		17	26.20	
JAN 16, 1987	15.45	Z	18	13.93		16	18.38		18	26.20	Z
FEB 06	15.99										

Z Measured by USGS personnel.

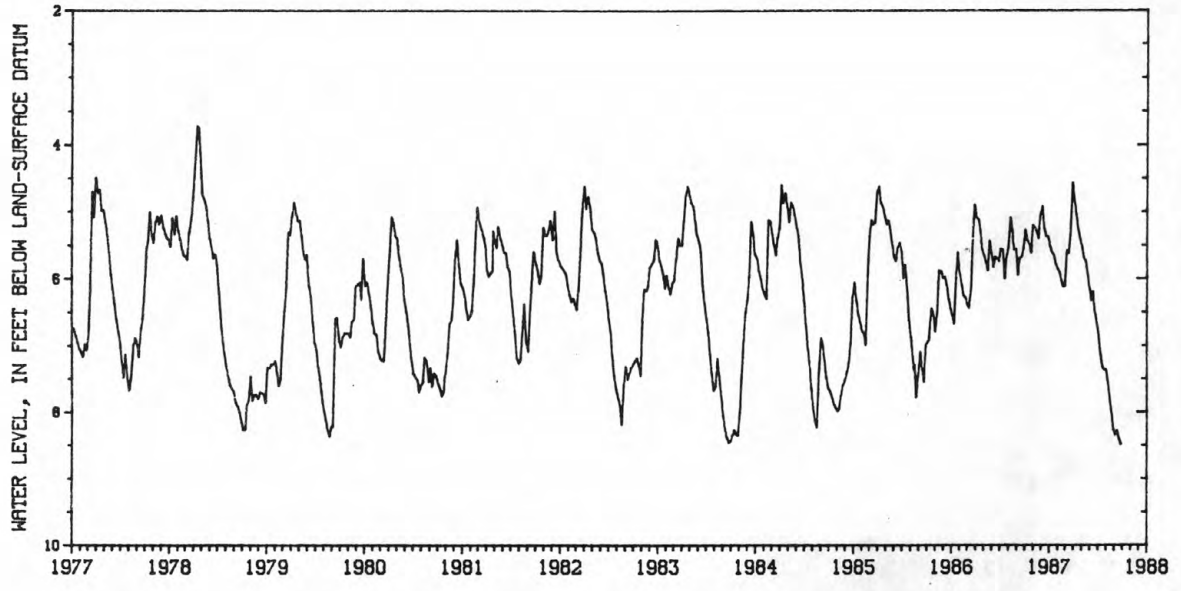


ST. LAWRENCE COUNTY

444904074455201. Local number, St 40.
LOCATION.--Lat 44°49'04", long 74°45'52", Hydrologic Unit 04150306, near Brasher Falls.
Owner: New York State Department of Environmental Conservation.
AQUIFER.--Water-table aquifer in sand of Pleistocene age.
WELL CHARACTERISTICS.--Dug unused well, diameter 36 in., depth 11.3 ft in October 1985, filled in from original depth of 12 ft, concrete cased to 12 ft, open end.
INSTRUMENTATION.--Tape gage read weekly by observer.
DATUM.--Elevation of land-surface datum is 300 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Chisled mark on top edge of 6-in. by 8-in. opening of concrete well cover, 0.65 ft above land-surface datum.
PERIOD OF RECORD.--May 1953 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.24 ft below land-surface datum, Apr. 21, 1971; lowest measured, 9.38 ft below land-surface datum, Oct. 24, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1986	5.28	JAN 04, 1987	5.51	APR 05, 1987	4.84	JUL 05, 1987	6.85
12	5.43	11	5.61	12	5.05	12	7.14
19	5.48	18	5.65	19	5.27	19	7.33
26	5.61	25	5.78	26	5.40	26	7.37
NOV 02	5.21	FEB 01	5.85	MAY 03	5.51	AUG 02	7.37
09	5.24	08	5.91	10	5.69	09	7.56
16	5.31	15	6.04	17	5.74	23	8.02
23	5.40	22	6.13	24	5.94	30	8.27
30	5.05	MAR 01	6.12	31	6.15	SEP 06	8.35
DEC 07	4.93	08	5.58	JUN 07	6.33	13	8.29
14	5.25	15	5.62	14	6.20	20	8.41
21	5.37	22	5.34	21	6.51	27	8.49
28	5.37	29	4.57	28	6.68		



GROUND-WATER LEVELS

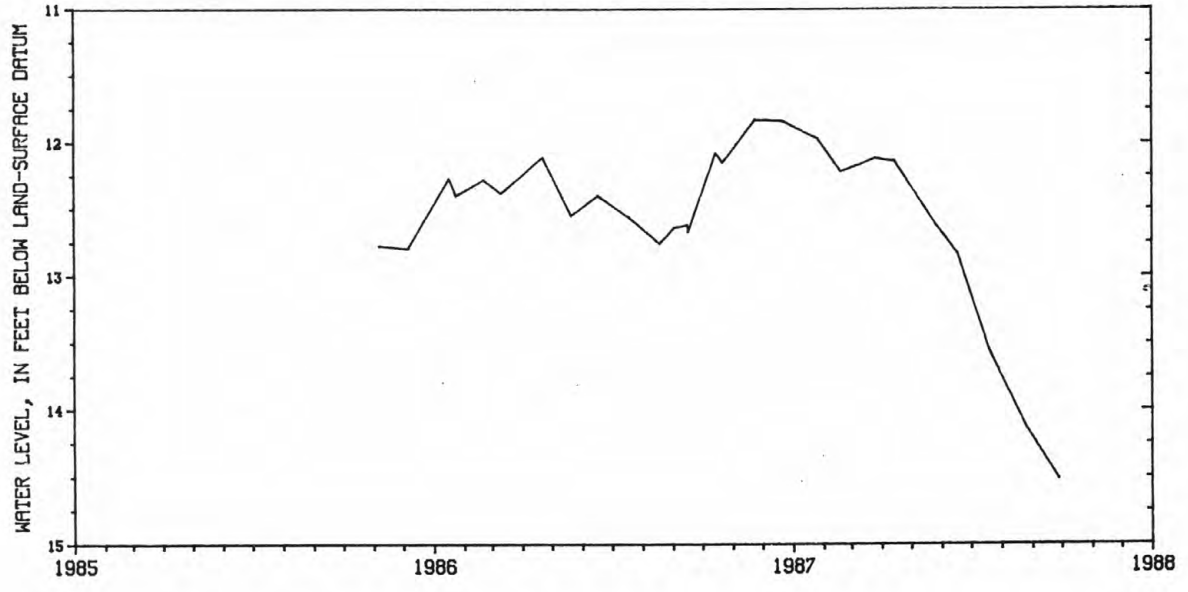
ST. LAWRENCE COUNTY

445216074593001. Local number, St 404.
LOCATION.--Lat 44°52'16", long 74°59'30", Hydrologic Unit 04150305, near Raymondville.
Owner: New York Power Authority.
AQUIFER.--Confined aquifer in Beekmantown dolomite of Cambrian age.
WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 179.6 ft, cased to 54 ft, open hole.
INSTRUMENTATION.--Monthly tape measurement by observer.
DATUM.--Elevation of land-surface datum is 247.7 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top of casing, 3.90 ft above land-surface datum.
PERIOD OF RECORD.--June 1958 to November 1964, November 1985 to current year. Records prior to November 1985 are unpublished and available in files of the Geological Survey.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 11.83 ft below land-surface datum, Nov. 24, 1986; lowest recorded, 16.33 ft below land-surface datum, Oct. 13, 1960.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	WATER LEVEL		DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 1986	12.08		JAN 26, 1987	11.97	APR 14, 1987	12.14	JUL 20, 1987	13.57
22	12.15	Z	FEB 19	12.22	MAY 27	12.63	AUG 26	14.14
NOV 24	11.83		MAR 26	12.12	JUN 17	12.83	SEP 28	14.52
DEC 22	11.84							

Z Measured by USGS personnel.



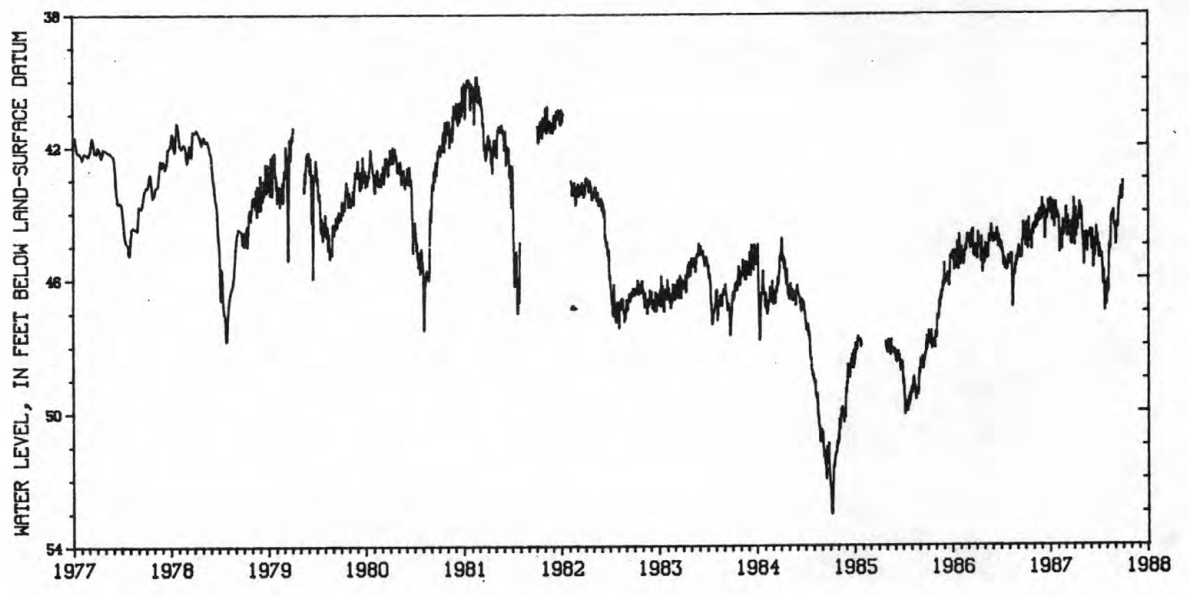
SARATOGA COUNTY

430327073475401. Local number, Sa 529.
LOCATION.--Lat 43°03'27", long 73°47'54", Hydrologic Unit 02020003, at Saratoga Springs.
Owner: Saratoga Springs Authority, New York State.
AQUIFER.--Confined aquifer in dolomite of Ordovician age.
WELL CHARACTERISTICS.--Drilled unused well, diameter 6 in., depth 304 ft, cased to 189 ft, open hole.
INSTRUMENTATION.--Water-stage recorder--15-minute punch.
DATUM.--Elevation of land-surface datum is 305 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.38 ft above land-surface datum.
REMARKS.--Water level affected by earthquakes and distant pumping.
PERIOD OF RECORD.--May 1949 to November 1961, August 1964 to current year. Records prior to October 1976 are unpublished and available in files of the Geological Survey.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 39.70 ft below land-surface datum, Jan. 7, 1981; lowest, 56.20 ft below land-surface datum, July 29, 1949.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45.05	44.52	44.26	44.03	44.23	43.92	44.24	44.42	44.55	45.29	46.50	44.54
2	44.93	44.41	44.09	43.63	44.15	43.88	44.71	44.64	44.62	45.41	46.18	44.67
3	44.74	44.41	43.62	43.79	44.37	44.32	45.03	44.85	44.92	45.26	46.07	44.83
4	44.39	44.36	43.85	44.06	44.66	44.58	44.54	44.87	45.10	45.01	46.38	45.00
5	44.38	44.52	44.07	44.08	45.23	44.77	44.15	44.98	45.17	45.11	46.42	44.86
6	44.33	44.40	44.16	43.95	45.14	44.71	43.93	45.06	45.02	45.21	46.46	44.60
7	44.51	44.52	44.09	43.96	44.98	44.48	43.90	45.30	44.85	45.41	46.41	44.44
8	44.48	44.37	44.15	44.22	44.74	44.13	44.35	45.60	44.58	45.33	45.69	44.41
9	44.81	44.14	43.98	44.27	44.70	44.16	44.66	45.21	44.78	45.26	45.28	44.34
10	45.12	44.46	43.86	44.09	44.57	44.62	44.78	44.80	45.32	45.38	44.99	44.51
11	45.05	44.40	44.19	43.69	44.72	44.71	44.52	44.66	45.69	45.39	45.01	44.50
12	44.77	44.29	44.36	43.75	44.92	44.69	44.17	44.89	45.68	45.31	45.07	44.41
13	44.49	44.30	44.82	43.97	45.14	44.75	44.25	45.18	45.34	45.29	45.14	44.15
14	44.21	44.46	44.61	44.02	45.14	44.62	44.48	45.16	44.96	45.48	45.13	43.97
15	44.64	44.27	44.32	44.05	44.93	44.40	44.55	45.09	44.87	45.67	44.89	43.86
16	44.85	44.12	44.23	44.34	44.75	44.32	44.54	44.99	45.08	45.99	44.54	43.72
17	44.83	44.08	44.25	44.47	44.40	44.48	44.29	44.66	45.37	46.19	44.29	43.63
18	44.89	44.13	44.08	44.27	44.25	44.66	44.08	44.63	45.29	45.93	44.15	43.60
19	44.84	44.26	43.99	44.11	44.33	44.73	44.02	44.91	45.28	45.77	44.12	43.65
20	44.77	44.31	44.13	44.22	44.51	44.95	43.91	45.12	45.11	45.79	44.17	43.59
21	44.62	43.96	44.21	44.22	44.48	44.97	43.72	45.23	44.97	46.16	44.25	43.47
22	44.80	44.24	44.15	44.06	44.74	45.00	43.77	45.09	44.70	46.53	44.06	43.38
23	44.87	44.28	43.97	43.72	44.40	44.97	43.81	44.89	44.47	46.82	44.08	43.27
24	45.13	44.07	43.99	44.05	44.49	44.82	43.92	44.84	44.63	46.98	44.16	43.28
25	44.99	44.16	43.69	44.15	44.49	44.59	44.26	44.77	44.82	46.62	44.01	43.38
26	44.79	43.96	43.86	44.00	44.54	44.27	44.23	44.70	44.93	46.16	43.97	43.48
27	44.63	43.94	44.02	43.99	44.52	44.49	44.11	44.78	44.74	46.30	44.22	43.64
28	44.52	43.94	44.01	44.10	44.36	44.30	44.00	44.73	44.72	46.66	44.41	43.57
29	44.43	43.89	43.94	44.19	---	44.19	43.89	44.71	44.91	46.78	44.37	43.38
30	44.46	44.10	43.76	44.05	---	43.99	44.10	44.64	45.10	46.81	44.41	43.11
31	44.69	---	43.95	44.15	---	43.63	---	44.56	---	46.79	44.44	---

WTR YEAR 1987 HIGHEST 43.06 Sept. 30, 1987 LOWEST 47.17 July 24, 1987



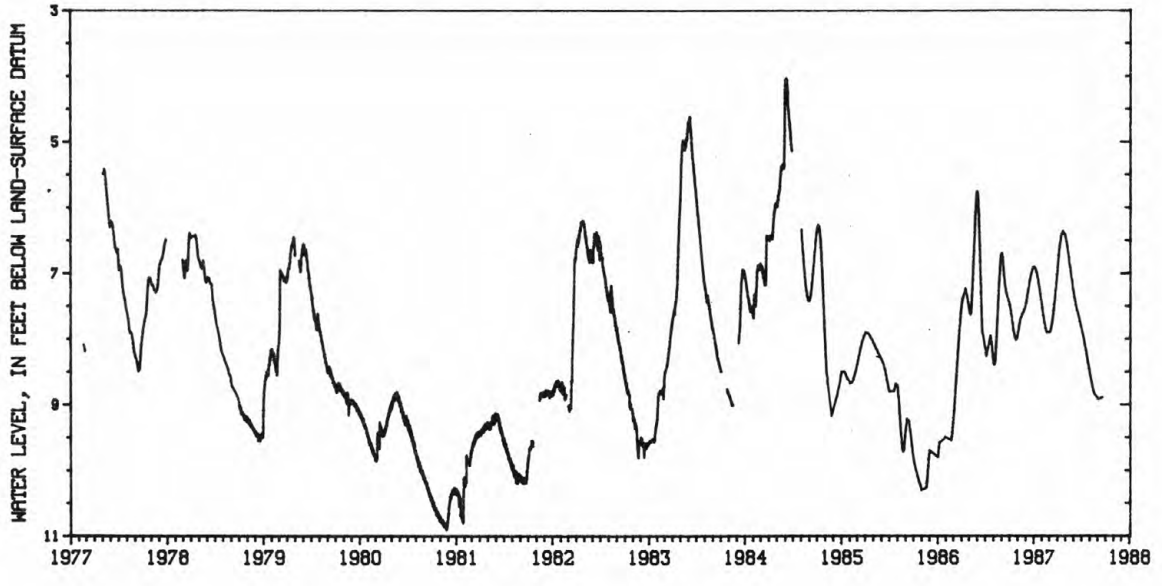
SARATOGA COUNTY

430013073370401. Local number, Sa 1072.
LOCATION.--Lat 43°00'13", long 73°37'04", Hydrologic Unit 02020003, Saratoga National Historical Park near Stillwater. Owner: U.S. National Park Service.
AQUIFER.--Water-table aquifer in sand of Pleistocene age.
WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 24 ft, cased to 21 ft, 2-in. well point (30-gauze screen 21 ft to 24 ft).
INSTRUMENTATION.--Monthly tape measurement by observer.
DATUM.--Elevation of land-surface datum is 223.8 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.31 ft above land-surface datum.
REMARKS.--Water level affected by adjacent wells pumping.
PERIOD OF RECORD.--July 1959 to current year. Records prior to October 1976 are unpublished and available in files of the Geological Survey.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.94 ft below land-surface datum, May 25, 1976; lowest, 11.91 ft below land-surface datum, Oct. 8, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	WATER LEVEL		DATE	WATER LEVEL		DATE	WATER LEVEL		DATE	WATER LEVEL	
OCT 01, 1986	7.48		DEC 10, 1986	7.26	Z	APR 01, 1987	6.90		JUL 08, 1987	7.99	Z
30	7.98	Z	JAN 02, 1987	6.90		08	6.59	Z	AUG 18	8.84	Z
NOV 05	7.82		FEB 18	7.90		MAY 29	7.25	Z	SEP 16	8.90	
DEC 01	7.48		MAR 03	7.90							

Z Measured by USGS personnel.



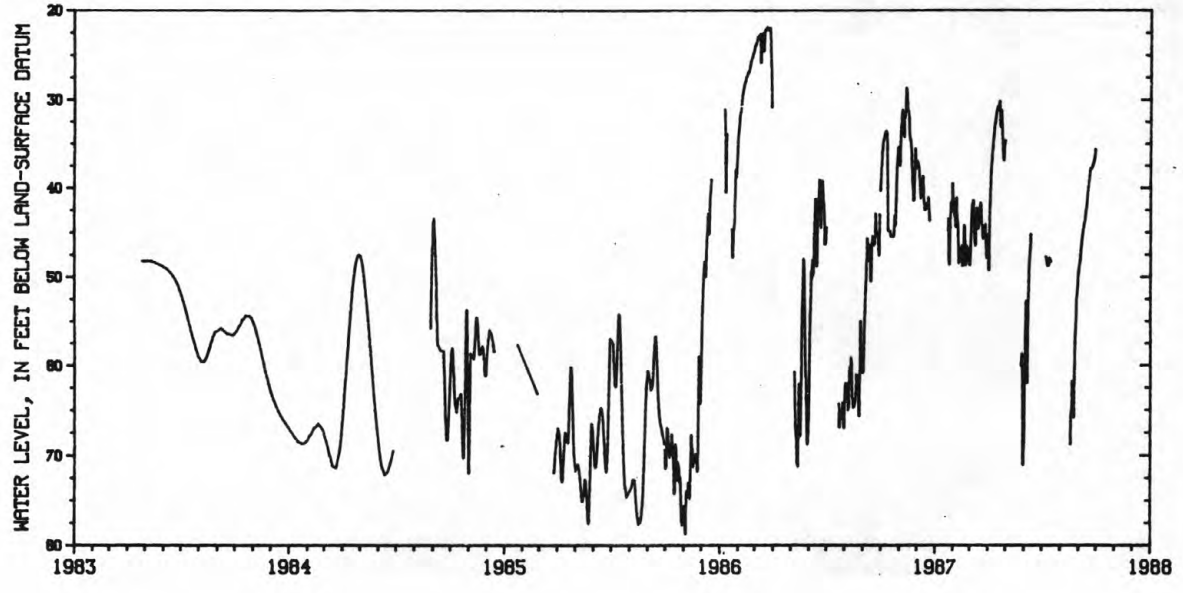
SARATOGA COUNTY

425242073473201. Local number, Sa 1100.
LOCATION.--Lat 42°52'42", long 73°47'32", Hydrologic Unit 02020004, near Clifton Park.
Owner: Country Knolls Water Works.
AQUIFER.--Confined aquifer in sand and gravel of Pleistocene age.
WELL CHARACTERISTICS.--Drilled unused well, diameter 6 in., depth 179 ft, cased to 179 ft, open end.
INSTRUMENTATION.--Water-stage recorder--hourly punch.
DATUM.--Elevation of land-surface datum is 248 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.00 ft above land-surface datum.
REMARKS.--Water level affected by pumping from nearby public-supply well.
PERIOD OF RECORD.--April 1983 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 21.84 ft below land-surface datum, Mar. 23, 24, 1986; lowest recorded, 80.19 ft below land-surface datum, Aug. 21, 1985.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40.34	35.40	37.88	---	41.07	48.63	45.30	34.66	69.55	---	---	49.90
2	38.66	36.98	37.74	---	42.11	48.69	45.80	---	67.97	---	---	49.12
3	37.42	37.47	37.05	---	43.22	47.56	49.26	---	59.90	---	---	48.59
4	36.14	34.77	37.19	---	42.01	44.83	44.43	---	55.68	---	---	48.26
5	35.37	33.29	37.59	---	44.41	42.82	41.41	---	52.73	---	---	47.52
6	34.73	31.97	38.72	---	42.62	41.82	39.46	---	55.85	---	---	46.75
7	34.46	31.17	40.07	---	41.12	42.75	37.92	---	62.04	---	---	45.96
8	33.98	31.81	41.21	---	43.44	41.40	36.83	---	56.32	47.76	---	45.41
9	33.70	33.86	40.39	---	44.00	44.21	35.83	---	51.39	48.02	---	44.80
10	33.70	34.23	39.72	---	46.17	45.71	34.87	---	48.85	48.43	---	44.32
11	33.55	31.73	39.00	---	48.46	46.46	34.04	---	47.61	48.70	---	43.96
12	33.90	32.07	38.75	---	47.98	45.46	33.24	---	46.74	48.71	---	43.72
13	40.06	29.69	40.94	---	46.98	42.78	32.66	---	45.23	48.73	---	43.07
14	44.83	28.70	41.77	---	47.17	42.29	32.23	---	---	47.86	---	42.51
15	44.92	29.09	42.53	---	48.23	43.29	31.69	---	---	48.01	---	42.03
16	44.92	31.25	42.03	---	46.56	44.67	31.33	---	---	48.29	---	41.35
17	44.92	31.32	42.49	---	48.75	44.51	31.06	---	---	---	---	40.57
18	45.35	31.66	41.86	---	48.76	42.48	30.84	---	---	---	---	39.90
19	45.49	34.05	42.13	---	47.18	42.10	30.69	---	---	---	68.84	39.35
20	45.51	34.60	41.86	---	44.26	41.73	30.48	---	---	---	65.45	38.66
21	45.51	34.72	41.17	---	44.68	41.97	30.18	---	---	---	64.71	38.06
22	45.51	35.77	42.21	---	48.68	43.97	32.96	---	---	---	61.76	37.86
23	45.52	37.47	43.70	44.91	48.68	44.97	33.05	---	---	---	63.07	37.78
24	44.93	39.53	---	43.52	48.10	45.75	31.17	---	---	---	63.59	37.78
25	43.23	40.17	---	48.12	46.58	44.80	32.63	---	---	---	65.84	37.68
26	44.26	41.49	---	48.61	47.12	44.39	34.90	---	---	---	60.49	37.39
27	42.61	40.63	---	45.39	47.80	44.56	36.02	60.08	---	---	56.78	37.16
28	39.51	38.30	---	42.65	46.88	44.15	36.88	59.09	---	---	55.35	36.80
29	37.71	35.58	---	41.67	---	46.70	35.71	58.73	---	---	52.81	36.34
30	36.39	37.46	---	42.66	---	47.93	34.87	64.43	---	---	51.89	35.66
31	35.50	---	---	39.54	---	46.10	---	71.01	---	---	51.00	---

WTR YEAR 1987 HIGHEST RECORDED 27.33 Nov. 15, 1986 LOWEST RECORDED 74.99 May 31, 1987



GROUND-WATER LEVELS

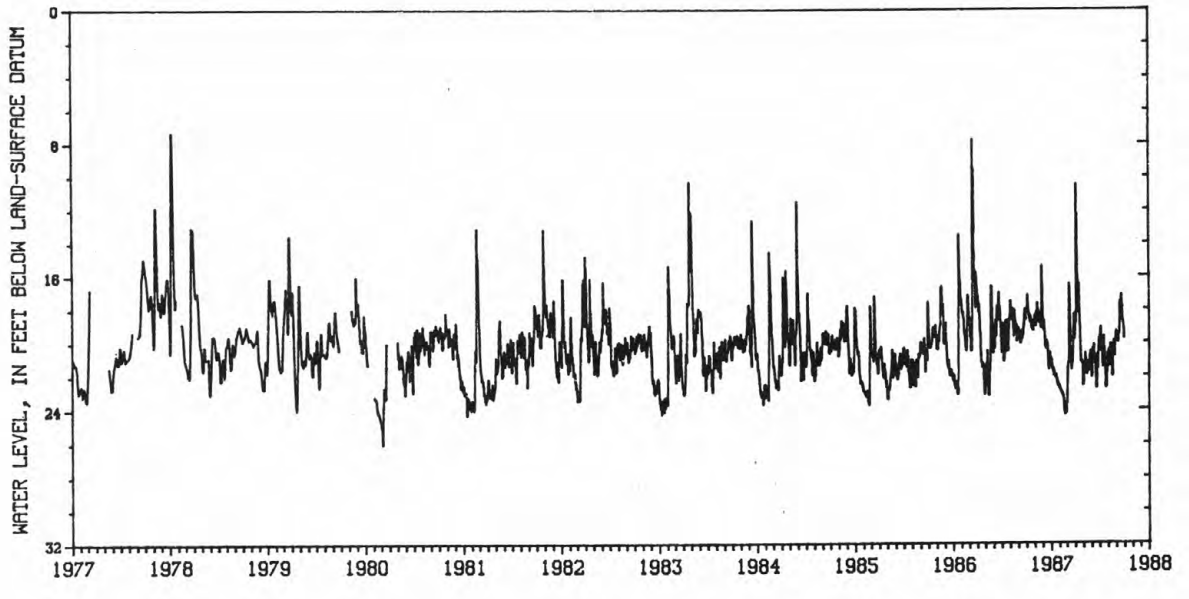
SCHENECTADY COUNTY

424910073591401. Local number, Sn 363.
LOCATION.--Lat 42°49'10", long 73°59'14", Hydrologic Unit 02020004, in Schenectady.
Owner: City of Schenectady.
AQUIFER.--Water-table aquifer in sand and gravel of Pleistocene age.
WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 54.5 ft in April 1980, filled in from original depth of 57 ft, cased to 57 ft, open end.
INSTRUMENTATION.--Water-stage recorder--hourly punch.
DATUM.--Elevation of land-surface datum is 228.50 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top of casing, 2.47 ft above land-surface datum.
REMARKS.--Water level affected by stage of Mohawk River, and by pumping (average 16.33 Mgal/d in 1987) from adjacent municipal well field. Well was drilled June 1960 as a replacement for 424926073592201 (local number Sn 128), located 1,540 ft northwest, which has a period of record from April 1946 to March 1961.
PERIOD OF RECORD.--June 1960 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.62 ft below land-surface datum, Dec. 27, 1973; lowest, 31.27 ft below land-surface datum, Feb. 10, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.11	18.39	18.38	21.18	22.73	23.61	19.31	22.60	21.56	20.37	20.99	19.35
2	17.94	18.71	18.98	21.41	22.79	23.69	18.92	22.41	22.12	20.55	21.12	19.66
3	18.01	18.59	19.29	21.16	22.85	23.15	18.72	22.33	21.89	19.64	20.93	19.70
4	17.91	18.95	19.06	21.08	22.89	22.28	18.81	21.80	21.37	19.22	20.46	19.82
5	17.18	19.04	18.71	21.55	22.90	21.51	13.78	21.89	20.64	19.13	20.82	19.87
6	17.66	18.93	18.90	21.71	22.93	21.50	10.50	21.91	20.39	20.27	20.80	19.68
7	17.85	18.19	19.21	21.64	22.95	21.25	12.47	21.35	20.56	20.25	21.47	19.80
8	18.13	18.37	19.74	21.78	23.00	21.22	12.29	21.04	20.42	19.94	20.94	20.02
9	18.28	18.32	19.88	21.60	23.05	18.12	14.51	20.69	20.40	20.02	20.79	19.79
10	18.47	17.66	20.26	21.78	23.05	16.49	16.07	21.00	20.17	20.63	20.16	19.53
11	18.33	17.99	20.38	21.70	23.10	16.94	17.29	21.17	21.12	21.25	20.34	19.54
12	18.56	18.13	20.01	21.88	23.16	17.45	18.24	21.15	20.99	21.39	20.13	19.53
13	18.69	18.22	20.30	22.01	23.19	18.49	18.17	21.14	20.73	21.51	20.49	19.15
14	18.79	18.36	20.18	22.01	23.24	19.23	16.47	21.78	20.99	21.35	20.98	17.59
15	18.49	18.13	20.01	22.07	23.30	19.79	16.51	21.96	21.26	20.19	21.06	17.75
16	18.40	18.47	19.96	22.13	23.41	20.36	17.34	21.72	21.68	19.66	21.08	17.95
17	18.60	18.74	20.42	22.00	23.43	21.13	18.24	21.72	21.99	20.08	21.52	18.31
18	18.78	18.86	20.45	21.97	23.75	21.39	18.92	21.79	22.33	20.41	22.04	18.70
19	18.83	18.70	20.15	21.97	24.05	21.69	19.02	21.37	22.57	20.39	22.04	17.56
20	19.00	18.83	20.80	22.20	24.09	21.33	19.79	21.26	22.77	20.63	20.93	17.16
21	19.10	18.87	21.11	22.21	24.18	21.32	20.38	21.48	22.64	21.12	20.85	17.29
22	19.14	18.67	21.34	22.25	24.33	21.24	20.67	21.76	22.16	21.64	20.78	17.76
23	19.15	18.62	21.53	22.32	24.27	21.02	21.19	21.71	21.44	21.93	19.92	17.84
24	19.16	19.15	21.67	22.43	23.96	20.40	21.24	21.40	20.70	22.59	20.45	17.85
25	19.23	18.78	21.20	22.53	23.80	20.08	21.26	20.82	21.32	22.75	20.53	18.70
26	19.29	18.41	21.08	22.52	24.14	19.40	21.15	20.79	21.60	22.67	20.84	18.82
27	18.93	16.26	21.03	22.63	24.25	18.45	21.23	20.94	20.36	22.47	20.82	18.91
28	18.79	15.41	20.65	22.65	24.23	18.31	21.35	20.78	20.08	21.93	20.02	19.16
29	18.70	16.71	21.03	22.60	---	18.51	21.58	20.53	19.76	21.78	19.82	19.27
30	18.71	17.72	20.95	22.59	---	18.80	22.33	20.85	20.27	21.61	19.45	19.75
31	18.74	---	21.05	22.63	---	19.83	---	21.37	---	20.71	19.80	---

WTR YEAR 1987 HIGHEST 8.92 Apr. 6, 1987 LOWEST 24.40 Feb. 22, 1987

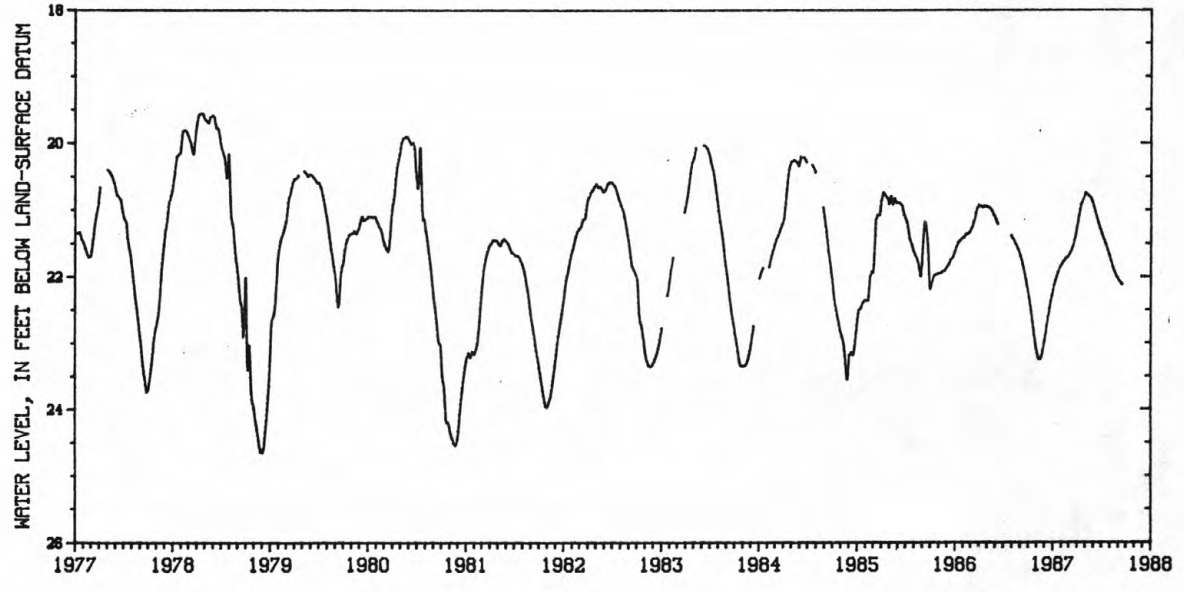


ULSTER COUNTY

414425074213601. Local number, U 204.
LOCATION.--Lat 41°44'25", long 74°21'36", Hydrologic Unit 02020007, near Napanoch.
Owner: New York State Department of Correction.
AQUIFER.--Water-table aquifer in deposits of Pleistocene age.
WELL CHARACTERISTICS.--Drilled unused well, diameter 8 in., depth 46 ft, cased to unknown depth, filled in from original depth of 67 ft.
INSTRUMENTATION.--Tape gage read monthly by observer.
DATUM.--Elevation of land-surface datum is 300 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.00 ft above land-surface datum.
PERIOD OF RECORD.--October 1954 to current year. Records prior to October 1976 are unpublished and available in files of the Geological Survey.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.84 ft below land-surface datum, Mar. 24, 1955; lowest measured, 26.90 ft below land-surface datum, Dec. 29, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17, 1986	22.67	JAN 20, 1987	21.94	APR 16, 1987	20.92	JUL 30, 1987	21.67
NOV 10	23.25	FEB 18	21.73	MAY 22	20.82	AUG 18	21.92
DEC 15	22.61	MAR 23	21.45	JUN 19	21.19	SEP 16	22.12



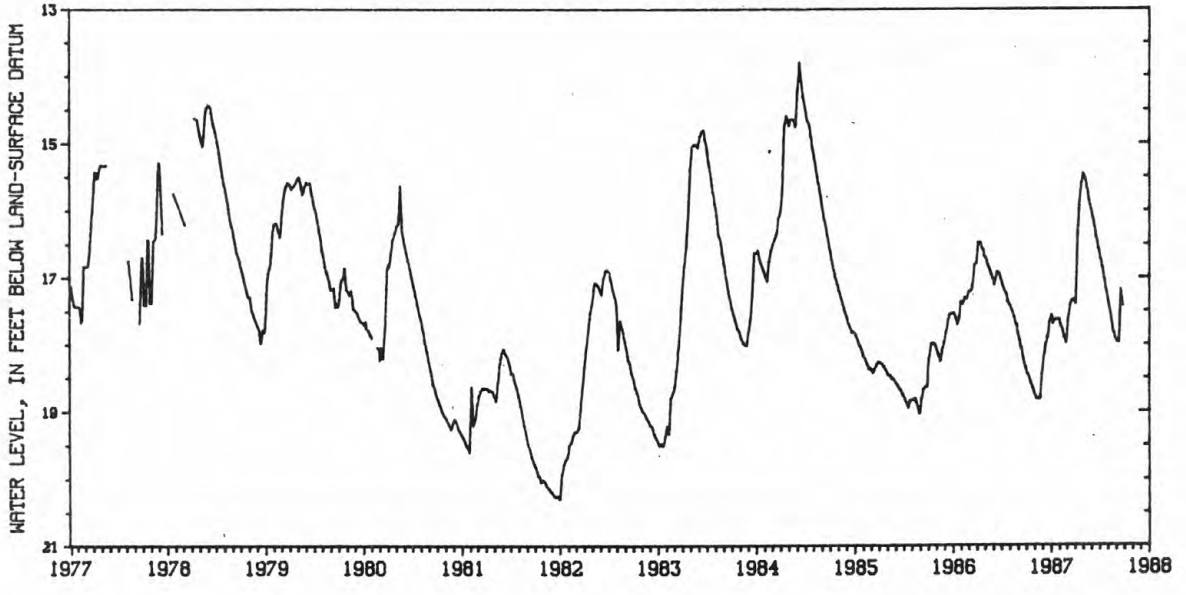
ULSTER COUNTY

414948074035101. Local number, U 405.
LOCATION.--Lat 41°49'48", long 74°03'51", Hydrologic Unit 02020007, Grist Mill Road, Tillson.
Owner: City School District of Kingston.
AQUIFER.--Water-table aquifer in sand of Pleistocene age.
WELL CHARACTERISTICS.--Bored observation well, diameter 2.5 in., depth 36 ft, cased to 34 ft, 2-in. well point (60-gauze screen 34 ft to 36 ft).
INSTRUMENTATION.--Weekly tape measurement by observer.
DATUM.--Elevation of land-surface datum is 240 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 0.47 ft above land-surface datum.
REMARKS.--Originally a dug well, diameter 36 in., depth 21 ft, stone-lined. Well deepened by power auger, October 1965.
PERIOD OF RECORD.--October 1964 to July 1965, March 1966 to December 1974, April 1976 to current year. Records prior to October 1976 are unpublished and available in files of the Geological Survey.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.80 ft below land-surface datum, June 9, 1984; lowest measured, 20.71 ft below land-surface datum, Jan. 24, 1967.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	WATER LEVEL		DATE	WATER LEVEL		DATE	WATER LEVEL		DATE	WATER LEVEL	
OCT 04, 1986	18.44		JAN 08, 1987	17.69	Z	APR 04, 1987	17.39		JUL 04, 1987	16.72	
09	18.48	Z	10	17.66		11	16.36		11	16.85	
11	18.49		17	17.63		18	15.88		18	17.01	
18	18.58		24	17.63		25	15.60		25	17.17	
25	18.65		31	17.62		MAY 02	15.46		AUG 01	17.33	
NOV 01	18.74		FEB 07	17.73		08	15.53	Z	04	17.40	Z
08	18.81		14	17.79		09	15.53		08	17.48	
18	18.83	Z	19	17.89	Z	16	15.68		15	17.62	
22	18.81		21	17.91		23	15.86		22	17.81	
29	18.44		28	17.98		30	15.98		29	17.92	
DEC 06	18.19		MAR 07	17.61		JUN 06	16.12		SEP 05	17.97	
13	18.01		14	17.40		13	16.25		11	17.98	Z
18	17.88	Z	21	17.35		19	16.41	Z	12	17.98	
20	17.90		25	17.34	Z	20	16.41		19	17.18	
27	17.65		28	17.33		27	16.57		26	17.43	
JAN 03, 1987	17.57										

Z Measured by USGS personnel.



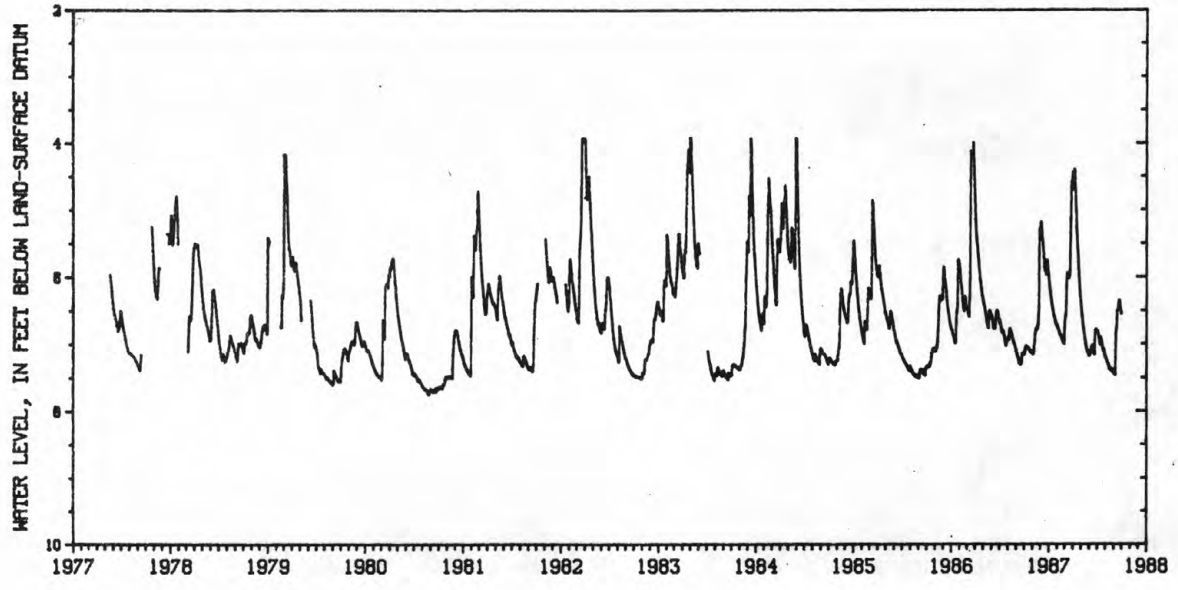
WASHINGTON COUNTY

431030073192101. Local number, W 533.
LOCATION.--Lat 43°10'30", long 73°19'21", Hydrologic Unit 02020003, in Salem.
Owner: Salem Central High School.
AQUIFER.--Water-table aquifer in sand and gravel of Pleistocene age.
WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 15 ft, cased to 16 ft, open end. Well backfilled 1.6 ft with coarse gravel.
INSTRUMENTATION.--Water-stage recorder--hourly punch.
DATUM.--Elevation of land-surface datum is 489.5 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.10 ft above land-surface datum.
REMARKS.--Well was drilled March 1974 as a replacement for 431032073192401 (local number W 532), located 350 ft northwest, which has a period of record from October 1965 to June 1973 (unpublished).
PERIOD OF RECORD.--March 1974 to current year. Records prior to October 1976 are unpublished and available in files of the Geological Survey.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 3.82 ft below land-surface datum, Mar. 25, 1986; lowest recorded, 7.75 ft below land-surface datum, Aug. 26, 27-29, 30, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.15	7.14	5.38	5.96	6.72	6.95	4.44	6.35	7.16	6.81	7.19	7.41
2	7.16	7.15	5.44	5.99	6.73	6.76	4.49	6.39	7.18	6.83	7.21	7.42
3	7.16	7.14	5.38	6.04	6.74	6.68	4.62	6.44	7.17	6.82	7.21	7.43
4	7.14	7.15	5.20	6.09	6.75	6.63	4.71	6.49	7.17	6.81	7.20	7.44
5	7.11	7.15	5.18	6.13	6.76	6.60	4.63	6.53	7.13	6.83	7.22	7.45
6	7.08	7.13	5.22	6.16	6.78	6.58	4.57	6.56	7.12	6.86	7.23	7.46
7	7.06	7.09	5.28	6.19	6.79	6.54	4.54	6.60	7.13	6.88	7.25	7.47
8	7.05	7.07	5.35	6.23	6.79	6.39	4.39	6.64	7.13	6.91	7.26	7.46
9	7.05	7.03	5.42	6.27	6.80	6.15	4.42	6.68	7.09	6.92	7.28	7.12
10	7.04	6.97	5.45	6.30	6.82	6.04	4.54	6.71	7.06	6.94	7.29	6.86
11	7.04	6.91	5.48	6.33	6.84	6.00	4.67	6.74	7.05	6.96	7.29	6.79
12	7.04	6.85	5.53	6.36	6.84	5.96	4.81	6.78	7.05	6.99	7.30	6.77
13	7.05	6.82	5.60	6.40	6.86	5.94	4.94	6.81	7.03	7.01	7.32	6.75
14	7.05	6.80	5.68	6.42	6.87	5.94	5.05	6.83	7.02	7.02	7.33	6.62
15	7.05	6.78	5.74	6.45	6.87	5.95	5.15	6.86	7.03	6.93	7.34	6.52
16	7.05	6.77	5.80	6.46	6.88	5.95	5.25	6.89	7.05	6.90	7.36	6.49
17	7.06	6.77	5.86	6.48	6.90	5.97	5.35	6.92	7.07	6.91	7.37	6.48
18	7.06	6.77	5.91	6.51	6.91	6.00	5.45	6.95	7.09	6.93	7.38	6.48
19	7.07	6.77	5.88	6.53	6.92	6.02	5.55	6.97	7.11	6.96	7.39	6.43
20	7.08	6.78	5.81	6.55	6.93	6.00	5.64	7.00	7.13	6.98	7.39	6.40
21	7.08	6.76	5.83	6.57	6.94	5.99	5.72	7.02	7.15	7.01	7.40	6.37
22	7.09	6.73	5.88	6.59	6.95	5.94	5.80	7.05	7.16	7.03	7.40	6.36
23	7.10	6.71	5.93	6.60	6.96	5.70	5.87	7.07	6.98	7.05	7.37	6.35
24	7.11	6.68	5.97	6.63	6.97	5.37	5.94	7.08	6.85	7.08	7.38	6.37
25	7.12	6.57	5.92	6.65	6.98	5.13	6.01	7.09	6.81	7.10	7.39	6.39
26	7.13	6.45	5.76	6.66	6.98	4.90	6.07	7.11	6.80	7.08	7.41	6.42
27	7.12	5.71	5.75	6.67	6.99	4.66	6.13	7.13	6.79	7.08	7.42	6.46
28	7.12	5.34	5.79	6.68	7.00	4.58	6.18	7.12	6.78	7.10	7.43	6.49
29	7.13	5.28	5.83	6.70	---	4.57	6.24	7.12	6.78	7.12	7.41	6.53
30	7.13	5.32	5.87	6.70	---	4.60	6.30	7.13	6.80	7.14	7.39	6.55
31	7.14	---	5.91	6.71	---	4.57	---	7.15	---	7.17	7.40	---

WTR YEAR 1987 HIGHEST 4.38 Apr. 8, 9, 1987 LOWEST 7.47 Sept. 7, 8, 1987

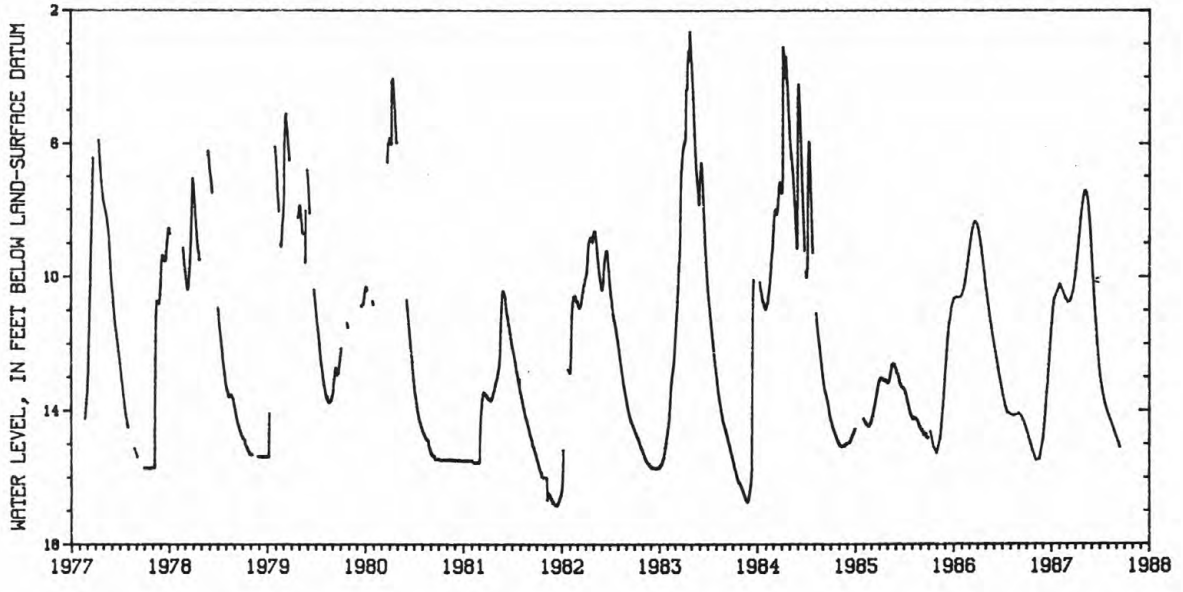


WESTCHESTER COUNTY

411421073481201. Local number, We 3.
LOCATION.--Lat 41°14'21", long 73°48'12", Hydrologic Unit 02030101, near Yorktown Heights.
Owner: New York City Board of Water Supply.
AQUIFER.--Water-table aquifer in sand of Pleistocene age.
WELL CHARACTERISTICS.--Dug unused well, diameter 36 in., depth 17.2 ft in July 1986, original depth reported to be 18.2 ft, filled in to 17.1 ft as of November 1956, to 16.3 ft as of June 1971, to 15.5 ft as of October 1977, to 15.3 ft as of November 1978, cleaned out to 16.1 ft September 23, 1981, and 17.6 ft November 9, 1981, stone lined.
INSTRUMENTATION.--Tape measurement by USGS personnel.
DATUM.--Elevation of land-surface datum is 252.5 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top edge of hole in wooden well cover, 1.13 ft above land-surface datum.
PERIOD OF RECORD.--April 1934 to September 1937, April 1938 to September 1945, March 1951 to current year.
Records prior to October 1976 are unpublished and available in files of the Geological Survey.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.58 ft below land-surface datum, Apr. 26, 1983; lowest measured, dry Nov. 30, 1935, Jan. 7, 1936, Feb. 1, 1936, Jan. 6 to Feb. 4, 1965, Nov. 12, 1970, Sept. 10 to Nov. 9, 1977, Oct. 30 to Nov. 7, 1978, Nov. 28, 1978 to Jan. 8, 1979, Sept. 6 to 30, 1980, Oct. 1, 1980 to Mar. 3, 1981, Oct. 25 to Nov. 8, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1986	15.19	FEB 23, 1987	10.65	MAY 11, 1987	7.47	AUG 03, 1987	14.14
DEC 01	14.88	MAR 30	10.07	JUN 22	12.00	SEP 14	15.10
JAN 12, 1987	10.66						



WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

STATION NUMBER	DATE	TIME	NITROGEN, NITRATE DISSOLVED (MG/L AS N)	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)
			WESTCHESTER COUNTY					
410958073433201	10-16-86	1130	<0.100	64	18	4.6	6.9	2.0
	05-05-87	1230	<0.100	58	16	4.5	6.3	1.6
411116073422301	10-16-86	1220	1.30	100	31	6.5	5.7	4.6
	05-06-87	1430	2.76	82	21	7.1	6.4	3.1
411222073363201	10-16-86	1645	1.03	100	33	4.5	6.6	2.1
	05-06-87	1015	0.382	41	12	2.6	13	1.2
411308073410001	10-16-86	1315	0.102	170	45	14	6.7	3.1
	05-05-87	1330	0.508	160	42	14	6.6	3.0
411317073435601	10-16-86	1000	0.266	49	14	3.5	5.0	3.8
	05-05-87	1145	0.377	36	9.9	2.7	5.7	2.5
411349073393701	10-16-86	1500	0.397	100	28	8.1	7.6	2.7
	05-05-87	1345	0.194	99	26	8.2	7.6	2.6
411405073370001	10-16-86	1615	0.230	94	29	5.2	4.8	2.3
	05-05-87	1645	0.201	82	25	4.8	4.5	2.1
411433073434901	10-16-86	1030	<0.100	100	31	6.5	4.6	6.5
	05-05-87	1130	<0.100	61	18	3.9	5.5	4.4
411532073364801	10-17-86	0845	0.224	79	22	5.8	3.9	2.5
	05-05-87	1430	0.185	76	21	5.8	4.1	2.5
411542073323601	10-17-86	1145	<0.100	6	1.9	0.32	89	1.1
	05-05-87	1545	0.100	5	1.8	0.24	81	1.0
411544073370301	10-17-86	0800	0.302	75	19	6.8	4.1	1.9
411618073395401	10-15-86	1630	3.15	65	17	5.4	6.6	3.7
	05-04-87	1830	3.56	53	14	4.3	5.5	2.5
411627073325701	10-17-86	1100	0.264	99	27	7.7	7.8	1.7
	05-05-87	1530	0.221	83	22	6.9	6.6	1.6
411629073423901	10-15-86	1605	1.65	190	55	13	21	7.7
	05-06-87	1245	2.59	120	31	9.2	44	6.0
411651073342101	10-17-86	1030	3.53	62	18	4.1	9.9	1.1
	05-05-87	1730	2.13	72	21	4.8	27	1.4
411736073400301	10-15-86	1415	0.269	120	30	12	4.9	3.4
	05-04-87	1745	0.196	65	16	6.1	5.1	2.0
411832073454201	10-15-86	1515	<0.100	230	61	18	7.1	4.1
	05-04-87	1630	<0.100	210	55	17	6.9	4.1
411839073393301	10-15-86	1315	<0.100	120	34	7.7	3.7	4.4
	05-04-87	1730	<0.100	110	32	7.6	3.7	4.2
411900073370101	10-17-86	1400	0.350	59	15	5.3	6.8	2.6
	05-06-87	1215	0.881	53	13	5.0	6.5	2.4
411915073400701	10-15-86	1252	0.601	180	60	8.3	22	4.5
	05-05-87	0945	0.436	170	54	8.1	25	4.7
411935073340801	10-17-86	1315	<0.100	65	20	3.7	32	1.9
	05-06-87	1430	0.100	62	19	3.5	31	1.9
411942073411201	10-15-86	1435	3.52	220	68	11	47	3.2
	05-05-87	0930	6.32	220	69	11	44	3.2
411946073443001	10-15-86	1045	0.714	140	38	10	13	3.3
	05-05-87	1000	0.829	130	32	12	6.5	2.7
411947073415301	10-15-86	1145	<0.100	120	33	8.2	5.5	4.4
	05-04-87	1600	<0.100	120	33	8.8	5.4	4.5
412012073334701	10-17-86	1330	1.28	180	40	20	22	4.2
	05-06-87	1145	1.32	180	38	20	20	4.2
412025073344401	10-17-86	1630	3.15	120	32	10	8.6	2.5
	05-06-87	1100	2.67	110	30	9.6	8.5	2.5
412037073400001	10-15-86	1215	0.378	220	73	10	12	8.5
	05-04-87	1545	1.71	190	60	9.1	9.8	8.2
412125073331801	10-17-86	1545	0.397	81	24	5.0	49	2.2
	05-06-87	1115	<0.100	47	14	3.0	54	1.6

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

STATION NUMBER	DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	SULFATE DISSOLVED (MG/L AS SO4)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)	PH LAB (STANDARD UNITS)	SPECIFIC CONDUCTANCE LAB (US/CM)	ALKALINITY LAB (MG/L AS CACO3)
				WESTCHESTER COUNTY--Continued						
410958073433201	10-16-86	5.0	20	--	21	140	69	6.55	178	50
	05-05-87	4.6	17	--	20	5	69	6.85	149	50
411116073422301	10-16-86	16	24	--	15	3	1	7.15	280	67
	05-06-87	14	21	--	18	3	2	6.39	202	51
411222073363201	10-16-86	24	29	--	12	26	5	6.82	277	48
	05-06-87	31	23	--	6.7	110	16	5.77	174	7.2
411308073410001	10-16-86	58	21	--	14	3	4	7.64	405	76
	05-05-87	58	20	--	14	<3	4	7.11	367	80
411317073435601	10-16-86	5.5	20	--	15	15	9	6.38	156	31
	05-05-87	8.4	17	--	12	21	15	6.35	117	21
411349073393701	10-16-86	6.7	24	--	14	<3	<1	8.06	255	75
	05-05-87	6.6	23	--	14	<3	<1	7.71	229	80
411405073370001	10-16-86	28	16	--	15	11	3	8.11	245	47
	05-05-87	25	16	--	14	<3	<1	7.93	207	48
411433073434901	10-16-86	12	28	--	13	5	20	7.54	260	71
	05-05-87	8.6	26	--	11	<3	<1	6.66	163	39
411532073364801	10-17-86	3.9	30	--	18	4	<1	7.85	198	47
	05-05-87	4.1	28	--	17	<3	1	7.80	177	52
411542073323601	10-17-86	3.5	31	1.3	23	4	<1	9.35	396	129
	05-05-87	4.1	29	--	21	<3	<1	9.30	354	155
411544073370301	10-17-86	3.6	13	--	16	5	<1	8.29	186	60
411618073395401	10-15-86	7.1	17	--	23	6	8	6.17	193	43
	05-04-87	7.1	16	--	19	<3	9	6.07	152	--
411627073325701	10-17-86	31	14	--	25	28	160	6.74	263	56
	05-05-87	32	14	--	21	14	91	6.83	220	45
411629073423901	10-15-86	63	36	--	14	14	44	6.70	502	106
	05-06-87	73	21	--	12	23	4500	6.22	442	98
411651073342101	10-17-86	10	19	--	20	5	3	6.48	198	34
	05-05-87	52	19	--	14	6	11	6.75	295	38
411736073400301	10-15-86	14	19	--	18	15	2	6.81	294	94
	05-04-87	14	17	--	15	27	3	6.49	164	43
411832073454201	10-15-86	23	31	--	28	10	34	7.89	466	166
	05-04-87	22	29	--	28	36	42	7.81	404	166
411839073393301	10-15-86	2.3	21	--	16	6	<1	7.70	262	101
	05-04-87	30	18	--	16	<3	<1	7.25	237	103
411900073370101	10-17-86	28	13	--	16	<3	<1	6.78	186	21
	05-06-87	28	12	--	15	10	1	7.09	158	18
411915073400701	10-15-86	76	8.4	--	20	6	9	6.95	507	96
	05-05-87	84	25	--	19	9	11	6.72	459	85
411935073340801	10-17-86	5.5	40	--	14	5	17	8.36	287	83
	05-06-87	5.8	41	--	13	<3	17	8.10	260	84
411942073411201	10-15-86	54	26	--	16	8	2	6.93	588	192
	05-05-87	62	23	--	15	<3	<1	7.00	555	193
411946073443001	10-15-86	24	15	--	19	5	1	7.86	370	118
	05-05-87	19	14	--	19	<3	1	7.55	285	106
411947073415301	10-15-86	6.0	26	--	22	15	31	7.81	276	--
	05-04-87	7.2	26	--	22	5	43	7.99	253	100
412012073334701	10-17-86	39	20	--	19	<3	<1	7.83	419	136
	05-06-87	35	21	--	18	6	1	7.92	403	149
412025073344401	10-17-86	5.3	25	--	14	8	1	7.12	294	92
	05-06-87	8.2	22	--	14	7	1	7.47	247	93
412037073400001	10-15-86	59	62	--	9.6	<3	1	7.58	531	115
	05-04-87	43	50	--	9.5	<3	<1	7.44	424	109
412125073331801	10-17-86	34	37	--	16	5	3	8.34	403	99
	05-06-87	22	47	--	15	6	2	8.19	329	86

☆U.S. GOVERNMENT PRINTING OFFICE:1988-513-758

October 1, 1978

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

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

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

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