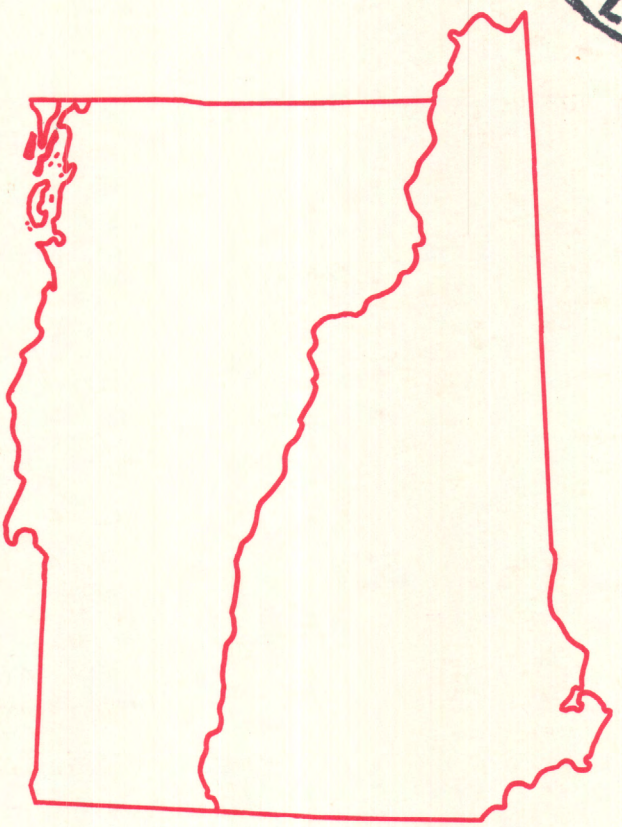
Water Resources Data New Hampshire and Vermont Water Year 1987



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NH-VT-87-1
Prepared in cooperation with the States of New Hampshire and Vermont and with other agencies

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

Water Resources Data New Hampshire and Vermont Water Year 1987

by F.E. Blackey, J.E. Cotton, and S.M. Flanagan

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NH-VT-87-1
Prepared in cooperation with the States of New Hampshire and Vermont and with other agencies

DEPARTMENT OF THE INTERIOR

MANUEL LUJAN, JR., *Secretary*

U.S. GEOLOGICAL SURVEY

Dallas L. Peck, *Director*

For additional information, write to:

U.S. Geological Survey
Water Resources Division
10 Causeway Street, Suite 926
Boston, MA 02222-1040

1989

PREFACE

This volume of the annual hydrologic data report of New Hampshire and Vermont 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 quality of water 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.

This report is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey who collected, compiled, analyzed, verified, and organized the data, and who typed, edited, and assembled the report. 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: M.F. Coakley, J.C. Denner, J.E. King, K.E. McKenna, and S.C. Shore.

Karen Rickard typed the station analyses.

Debra H. Foster coordinated the word processing and publishing phases of the report.

This report was prepared in cooperation with the States of New Hampshire and Vermont and with other agencies under the general supervision of D.J. Morrissey, Chief, New Hampshire-Vermont Office.

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This report was prepared in cooperation with the States of New Hampshire and Vermont and with other agencies.

16. Abstract (Limit: 200 words)

Water-resources data for the 1987 water year for New Hampshire and Vermont consist of records of stage, discharge, and water quality of streams; stage and contents of lakes and reservoirs; and ground water levels. This report contains discharge records for 72 gaging stations, stage records for 4 lakes, monthend contents for 23 lakes and reservoirs, water-quality data for 3 gaging stations, and water levels for 29 observation wells. Also included are data for 7 crest-stage partial-record stations. Additional water data were collected at various sites, not part of the systematic data-collection program, and are published as miscellaneous measurements. Locations of gaging stations, partial-record stations, and observation wells are shown in figure 1. A few pertinent stations (not included above) in bordering States and Province of Quebec are also included in this report. These data represent that portion of the National Water Data System operated by the U.S. Geological Survey and by the cooperating State and Federal agencies in New Hampshire and Vermont.

17. Document Analysis a. Descriptors

*New Hampshire, *Vermont, *Hydrologic data, *Surface water, *Ground water, *Water quality, Flow rate, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediments, Water temperatures, Sampling sites, Water levels, Water analyses.

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(Formerly NTIS-35)
Department of Commerce

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ILLUSTRATIONS

Letters after station name designate type of data:(d), discharge; (l), lake; (c), chemical; (b), biological; (t), water temperature)

NORTH ATLANTIC SLOPE BASINS--Continued
CONNECTICUT RIVER BASIN

HUDSON RIVER BASIN

ST. LAWRENCE RIVER BASIN

NORTH ATLANTIC SLOPE BASINS--Continued
ST. LAWRENCE RIVER BASIN--Continued

Water Resources Data for New Hampshire and Vermont, 1987

By F.E. Blackey, J.E. Cotton, and S.M. Flanagan

INTRODUCTION

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

This report series includes records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; and water levels of ground-water wells. This volume contains records for water discharge at 72 gaging stations; stage records for 4 lakes; monthend contents for 23 lakes and reservoirs; water quality at 3 gaging stations and water levels at 29 observation wells. Also included are data for 7 crest-stage partial-record stations. Locations of these sites are shown on figure 1. Additional water data were collected at various sites, not involved in the systematic data-collection program, such as, miscellaneous hydrologic data collected at 53 measuring sites. The data in this report represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in New Hampshire and Vermont.

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

Prior to introduction of this series and for several water years concurrent with it, water-resources data for New Hampshire and Vermont were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-Water Supply of the United States, Parts 1 and 4." For the 1961 through 1970 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States," and water levels for the 1939 through 1974 water years were published under the title "Ground-Water Levels in the United States." The above mentioned Water-Supply Papers may be consulted in the libraries of the principal cities of the United States and may be purchased from U.S. Geological Survey, Books and Open-File Reports Section, Federal Center, Bldg. 41, Box 25425, Denver, CO 80225.

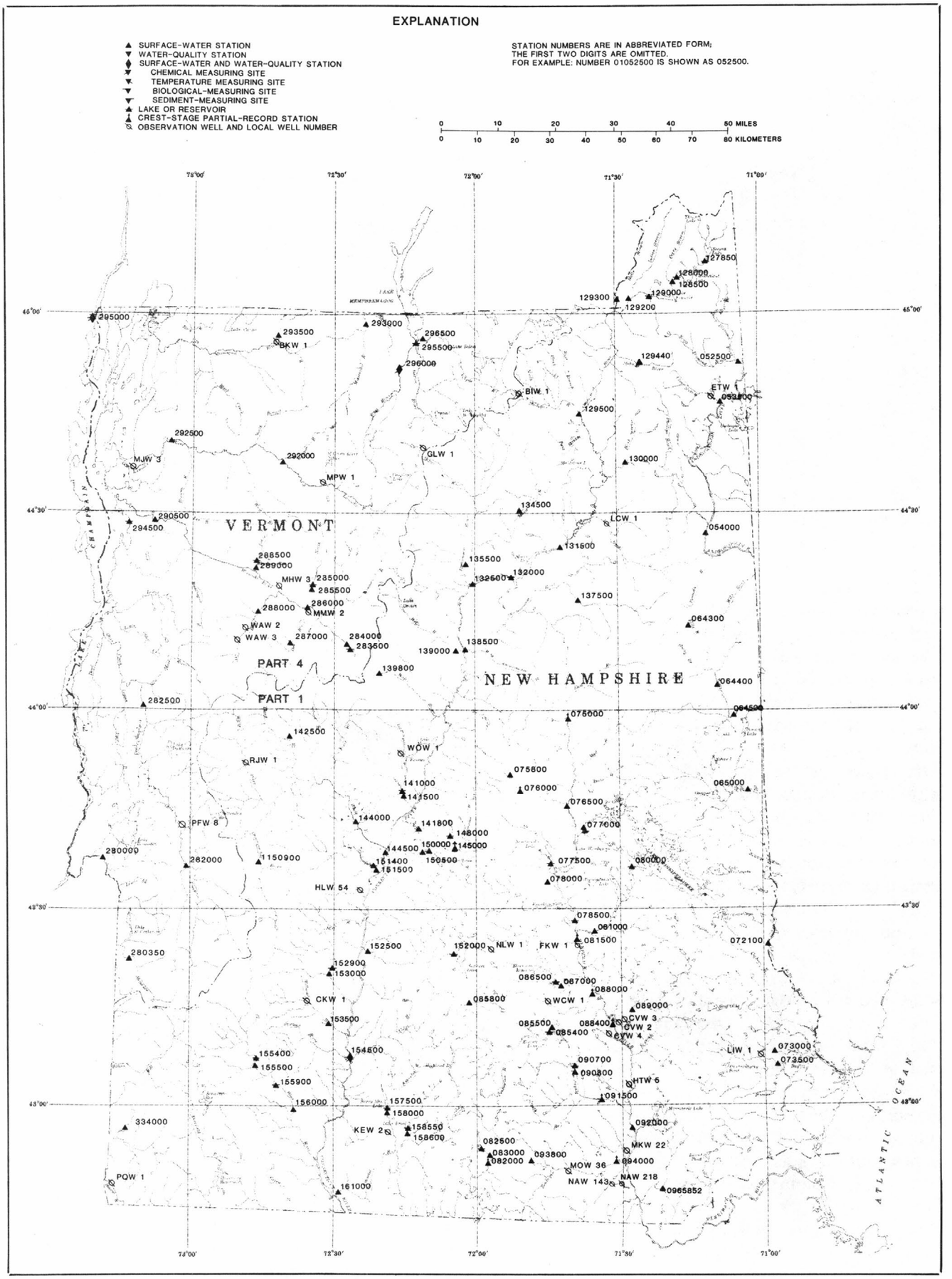

Figure 1.--Location of data-collection sites

Publications similar to this report are published annually by the Geological Survey for all States. These official Survey reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report NH-VT-85-1." For archiving and general distribution, the reports for 1971-74 water years also are identified as water-data reports. These water-data reports are for sale in paper copy or in microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161. Additional information, including current prices, for ordering specific reports may be obtained from the Office Chief at the address given on the back of the title page or by telephone (617) 565-6860.

COOPERATION

New Hampshire: Department of Environmental Services, State Water Resources Division, D.F. Downing, chairman.

Vermont: Department of Environmental Conservation, J. Lash, commissioner.

Assistance in the form of funds or services was given by the Corps of Engineers, U.S. Army, in collecting records for 17 gaging stations.

Organizations supplying data are acknowledged in the station descriptions.

On waters adjacent to the international boundary, certain gaging stations are maintained by the United States (or Canada) under agreement with Canada (or the United States), and the records are obtained and compiled in a manner equally acceptable to both countries. These stations are designated as "international gaging stations."

SUMMARY OF HYDROLOGIC CONDITIONS

Surface Water

Surface-water runoff for the 1987 water year was in the normal range for most of the two-State area, ranging from about 22 to 45 inches in New Hampshire and from 16 to 25 inches in Vermont. Annual mean discharge at index stations in the central section of the two States was in the normal range. The 1987 monthly and yearly discharges and the median monthly and yearly discharges for the reference period 1951-80 for the two index stations are shown in figure 2. Notable exceptions occurred at the Missisquoi River near North Troy, Vermont (period of record 1931-87), where the fifth lowest annual mean discharge was recorded and at the Lamprey River near Newmarket (period of record 1934-87), where the sixth highest annual mean discharge was recorded. Total runoff for October through March was normal throughout the two-State area. Runoff for April through September was normal except in the St. Lawrence River basin, where it was below normal, and in the Piscataqua River basin, where it was above normal.

Extreme high water in south-central New Hampshire and Vermont was caused by a combination of heavy rainfall and a melting snow pack during April 1-9. Prior to this period, spring conditions prevailed with daytime high temperatures ranging from 50 to 60 degrees Fahrenheit. On March 31, a low-pressure area that originated over Virginia, moved slowly into the area, bringing heavy rainfalls of 3 to 7.6 inches. Rainfalls of this magnitude are not rare, occurring about every 5 years; however, the combination of warm weather and rainfall released most of the water in the snow pack and caused flooding in central and southern areas. At the Pemigewasset River at Plymouth, New Hampshire the third highest discharge (48,100 cubic feet per second) for the period of record (1905-87) was recorded on April 1. Just as the rivers began to recede, another low-pressure front moved into the area on April 4, causing rainfall of 2.14 to 6.86 inches over southern parts of New Hampshire. The heaviest rainfall for this storm occurred in southeastern New Hampshire. At the Lamprey River in southern New Hampshire, the highest stage (15.14 ft) and discharge (7,570 cubic feet per second) for the period of record (1935-87) were recorded on April 7. Most of this extremely high runoff occurred in the lower Connecticut River valley and in the Merrimack River basin, where potential damage was reduced by the operation of 11 U.S. Army Corp of Engineers reservoirs. The New England Division estimated almost $100 million of damage was averted in New Hampshire and Vermont (Post Flood Report, March/April 1987, Reservoir Control Center, p. 113, Exhibit 39A).

Major reservoirs in the two-State area were about 70 percent full in October. Water levels in the major reservoirs declined in November through March, reaching their lowest levels in February and March. The reservoirs started to fill rapidly in April and continued to fill for the next 2 months; at the end of June, most were more than 90 percent full.

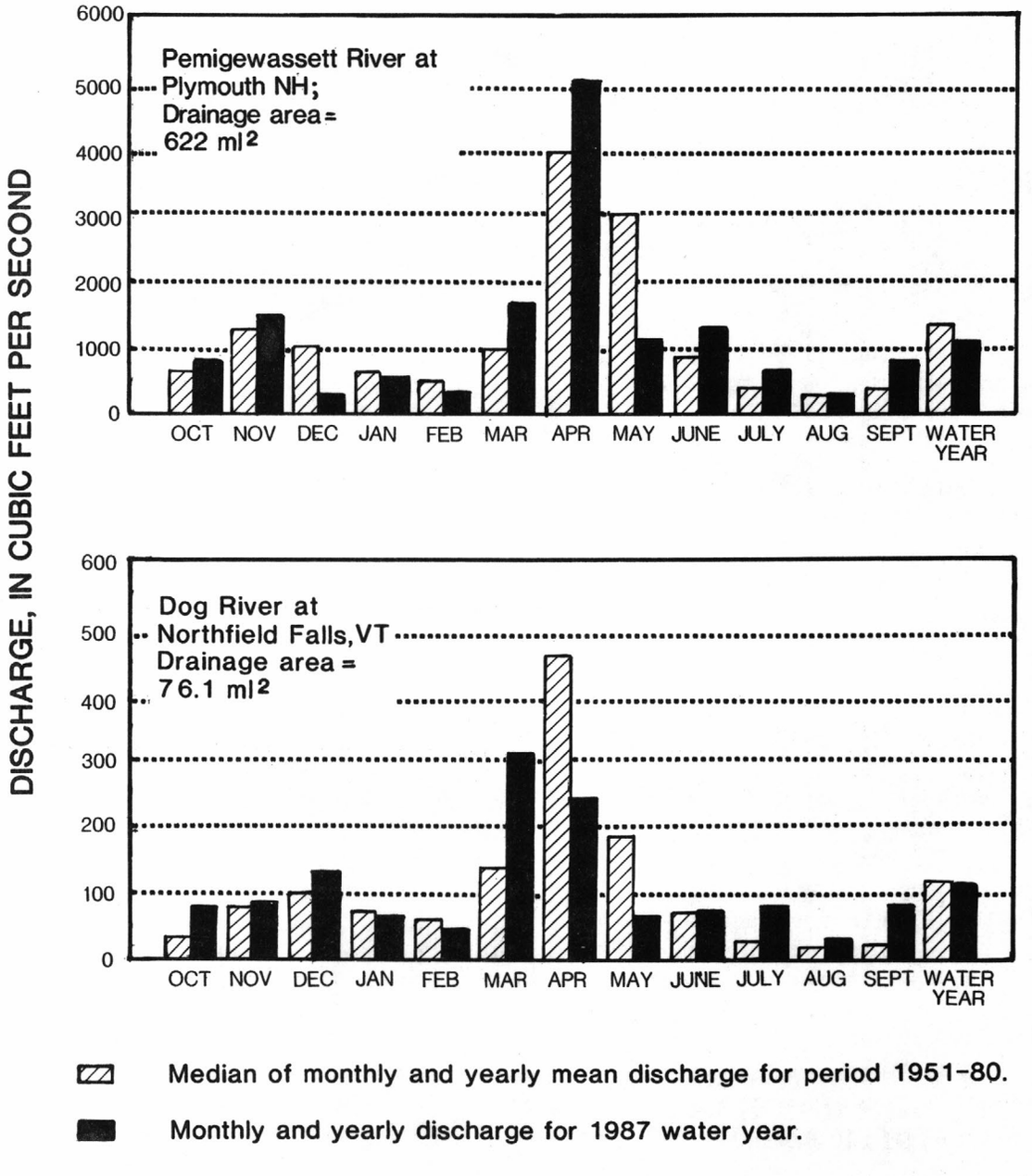

Figure 2.-- Comparison of discharge at two long-term index gaging stations during 1987 water year with median discharge for period 1951-80.

Reservoirs remained greater than 75-percent full at the end of the year.

Storage patterns in the following major reservoirs are indicative of the seasonal precipitation and reservoir regulation that occurred during the 1987 water year in New Hampshire and Vermont. Usable storage in Lake Francis, in northern New Hampshire, decreased from 80 percent of capacity at the beginning of October to 20 percent of capacity April 30 and increased to 93 percent by June 30. By September 30, storage had decreased to 76 percent of capacity. The usable capacity of Lake Winnipesaukee decreased from 82 percent on October 1 to 44 percent on February 28. The effects of spring runoff and regulation returned the lake to full capacity on June 30; a slight decline during the summer months reduced contents to 80 percent on September 30. Storage in Harriman Reservoir, in southern Vermont, was at 95 percent of capacity on October 30 but declined to 25 percent of capacity on February 28. Seasonal runoff and regulation returned storage in the reservoir to 92 percent of capacity June 30 but reduced storage to 82 percent by September 30.

Ground Water

Ground-water levels were in the above-normal range in most of Vermont and western New Hampshire, and in the normal range in the remainder of New Hampshire at the beginning of the water year. Although localized variations did occur, ground-water levels generally were in the normal range from the end of October through February in both States. Exceptions occurred when water levels rose into the above-normal range in southwestern Vermont from the end of Novemeber through December and in parts of southern New Hampshire by the end of December. In February, water levels declined to the below-normal range in parts of northern Vermont and New Hampshire.

During March and April, recharge to ground water occurred. Water levels rose during March in southern and northern New Hampshire and in southern and central Vermont, and levels were in the normal range by the end of the month. Elsewhere, water levels were below normal. During April water levels rose in most areas of both States. By the end of April, water levels generally were in the normal range, except in most of the northern third of Vermont where they were below normal, and in southeastern New Hampshire where they were above normal.
A seasonal decline in ground-water levels began in May in both States, resulting in levels in the below-normal range throughout Vermont and northern New Hampshire by the end of the month. Record-low water levels for the end of May were recorded at four Vermont wells. Elsewhere, water levels were normal. Water levels in northern areas of both States continued below normal through June and were in the below-normal or normal ranges for the rest of the water year. Water levels in southern Vermont remained below normal through June and in southwestern Vermont through August. Water levels rose in the southern and central parts of the Connecticut River basin to above normal during July, declined to the normal range during August, and rose again to the above normal range during September. Ground-water levels in southeastern and east-central New Hampshire generally remained in the normal range from May through September.

SPECIAL NETWORKS AND PROGRAMS

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

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 figure 1. 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 surface-water stations and the "latitude-longitude" system is used for wells.

Downstream-Order System

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

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between continuous-record stations and other types of stations; therefore, the station number for a continuous-record station 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 eight-digit number for each, such as 01076500, which is shown to the left of the station name, includes the two-digit Part number "01" plus the six-digit downstream-order number "076500." The Part number designates the major river basin; for example, Part "01" is the North Atlantic Slope Basins.

Latitude-Longitude System

The identification numbers for wells are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude, the next seven digits denote degrees, minutes, and seconds of longitude, and the last two digits (assigned sequentially) identify the wells or other sites within a 1-second grid. This site-identification number, once assigned, is a pure number and has no locational significance. In the rare instance where the initial determination of latitude and longitude is 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 3.)

A local well-numbering system is also used in this report. The local well number consists of a two-letter code for the town in which the well is located followed by a "W" signifying that it is a well, and a sequential number. The local number is used to identify the location of observation wells on figure 1.

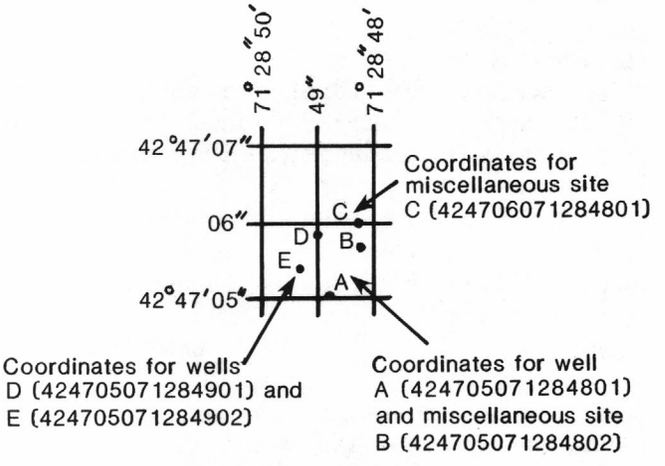

Figure 3.--System for numbering wells and miscellaneous sites (latitude and longitude).

Records of Stage and Water Discharge

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

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles such as "Crest-stage partial records," or "Low-flow partial records." Records of miscellaneous discharge measurements or of measurements from special studies, such as low-flow seepage studies, may be considered as partial records, but they are presented separately in this report. There were no low-flow or crest-stage partial-record stations this year. Location of all complete-record and for which data are given in this report are shown in figure 1.

Data Collection and Computation

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

Continuous records of stage are obtained with analog recorders that trace continuous graphs of stage or with digital recorders that punch stage values on paper tapes at selected time intervals. Measurements of discharge are made with current meters using methods adopted by the Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks; in U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter A6; and in U.S. Geological Survey Water-Supply Paper 2175, "Measurement and Computation of Streamflow: Volume 1--Measurement of Stage and Discharge (p. 1-284); Volume 2--Computation of Discharge (p. 285-631)" by S. E. Rantz and others (1982).

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

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

At some stream-gaging stations, the stage-discharge relation is affected by the backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by

means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in computing discharge.

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

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

Data Presentation

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

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

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. Secondary 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 seems to be below the table of peak data.

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

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

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

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

Identifying Estimated Daily Discharge

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

Accuracy of the Records

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

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

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

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

Other Records Available

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

Records of Surface-Water Quality

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

Classification of Records

Water-quality data for surface-water sites are grouped into one of three classifications. A continuing-record station is a site where data are collected on a regularly scheduled basis. Frequency may be 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. Locations of stations for which records on the quality of surface water appear in this report are shown in figure 1.

Arrangement of Records

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

Onsite 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. All of these references are listed under "Publications on Techniques of Water-Resources Investigations" which appears at the end of the introductory text. Detailed information on collecting, treating, and shipping samples may be obtained from the Office of the New England District.

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 New England District Office whose address is given on the back of the title page of this report.

Water Temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for water-discharge stations. For stations where water temperatures are taken

manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

Sediment

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

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

Laboratory Measurements

Sediment samples, samples for biochemical-oxygen demand, samples for indicator bacteria, and daily samples for specific conductance are analyzed locally. All other samples are analyzed in the Geological Survey laboratories in Arvada, Colorado, and Doraville, Georgia. Methods used in analyzing sediment samples and computing sediment records are given in Techniques of Water Resources Investigations, Book 5, Chap. C1. Methods used by the Geological Survey laboratories are given in Techniques of Water Resources Investigations, 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 ensure the most recent updates.

The surface-water-quality records for partial-record stations and miscellaneous sampling sites are published in separate tables following the table of discharge measurements at miscellaneous sites. No descriptive statements are given for these records. Each station is published with its own station number and name in the regular downstream-order sequence.

Remark Codes

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

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

Records of Ground-Water Levels

Ground-water-level data from a basic network of 29 observation wells are given in this report and are placed in computer storage. These data are intended to provide a sampling and historical record of water-level changes in selected aquifers. Locations of the observation wells are shown in figure 1.

In New Hampshire, short-term networks of observation wells are established during areal assesments of ground-water resources. Water levels measured in these wells are included in the project reports. In Vermont, the Ground Water Management Unit (Vermont Department of Water Resources and Environmental Engineering) monitors other wells in addition to the 15 wells that are in the basic network. Information about the availability of the data in the water-level file may be obtained from the District Chief, New England District (see address on back of title page).

Data Collection and Computation

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

Tables of water-level data are presented by counties arranged in alphabetical order. The prime

identification number for a given well is the 15-digit number that is shown in the upper left corner of the table. The secondary identification number is the local well number, an alphanumeric number, derived from the municipality in which each well is located.

Water-level records are obtained from direct measurements with a steel tape. The water-level measurements in this report are given in feet with reference to land-surface datum. Land-surface datum is a datum plane that is approximately at land surface at each well. If known, the elevation of the land-surface datum is given in the well description. The height of the measuring point above or below land-surface datum is given in each well description.

Water levels are reported to as many significant figures as can be justified by the local conditions. Accordingly, most measurements are reported to a hundredth of a foot, but some are given to a tenth of a foot or a larger unit.

Data Presentation

Each well record consists of two parts, the station description and the data table of water levels observed during the water year. 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 the type of aquifer and the geologic age of the aquifer open to the well.

WELL CHARACTERISTICS.--This entry describes the well in terms of method of construction, diameter, depth, and casing depth and (or) screened interval.

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 casing), 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 NGVD of 1929 (National Geodetic Vertical Datum of 1929); it is reported with a precision depending on the method of determination.

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 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 published 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. Missing records are indicated by dashes in place of the water level.

ACCESS TO WATSTORE DATA

The National **WAT**er Data **STO**rage and **RE**trieval 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 cost incurred in producing a desired product, is charged to the requester. Information about the availability of specific types of data, the acquisition of data or products, and user charges can be obtained locally from the office whose address is 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, VA 22092

DEFINITION OF TERMS

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

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is

equivalent to 43,560 ft^3 or about 326,000 gallons or 1,233 m^3.

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

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

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

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

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

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

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. 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°. In the laboratory these bacteria are defined as all the organisms that produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35° plus or minus 1.0° on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

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

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

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

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

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

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

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

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

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

Bottom material: See "Bed material."

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

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 green pigments in plants.

Color unit is produced by 1 milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

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

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

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

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

Cubic-foot-per second day is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 ft^3, approximately 1.9835 acre-ft, about 646,000 gal, or 2,445 m^3.

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

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

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

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

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

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

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

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

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

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

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations and is expressed as the equivalent concentration of calcium carbonate ($CaCO_3$).

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

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

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

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

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

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

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

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

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

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

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 500 or so sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and

quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting such that the data may be used for, (2) description of the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) detection of changes or trends with time in the pattern of occurrence of water-quality characteristics, and (4) providing a nationally consistent data base useful for water-quality assessment and hydrologic research.

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

Organism is any living entity.

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

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliter or liter. 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 Survey's 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, of a particle determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Particle-size classification used in this report agrees with the recommendations 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	0.004	0.062	Sedimentation
Sand	0.062	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. Most of the organic matter is removed, and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native-water analysis.

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

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

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

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

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

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

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

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 0/(m^2.time)] for periphyton and macrophytes and [mg 0/(m^3.time)] for phytoplankton are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light and dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

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

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

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

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.

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

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

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

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

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

Suspended-sediment discharge (tons/day) is the rate at which dry mass of sediment passes a section of a stream or is the quantity of sediment, as measured by dry mass or volume, that passes a section in a given time. It is calculated in units of tons per day as follows: concentration (milligrams per liter) x discharge (cubic foot per second) x 0.0027.

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

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

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

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

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

Solute is any substance that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in microsiemens per centimeter at 25°. 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 lives.

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

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 multiplate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton collection.

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

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

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

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

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

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45-μm 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	Hexagenia
Species	Hexagenia limbata

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

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

Tons per acre-foot indicates the dry mass of dissolved solids in 1 acre-ft of water. It is computed by

multiplying the concentration of the constituent, in milligrams per liter, by 0.00136.

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

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

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

Total, recoverable is the amount of a given constituent that is in solution after a representative water-suspended sediment sample has been di-gested 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, thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

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

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

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

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

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

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

Forty-eight manuals by the U.S. Geological Survey have been published to date in the series on techniques describing procedures for planning and executing specialized work in water-resources investigations. Material is grouped under major subject headings called books and further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) is on surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises. Reports listed below are sold by the Books and Open-File Reports Section, U.S. Geological Survey, Box 25425, Federal Center, Denver, CO 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Check or money order is

payable to the U.S. Geological Survey. Prices, effective December 1987, are subject to change. When ordering, please give the series (U.S. Geological Survey Techniques of Water-Resources Investigations), title, book number, and chapter number.

1-D1 Water temperature-influential factors, field measurement, and data presentation, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: Book 1, Chap. D1. 1975. 65 p. $2.50.

1-D2 Guidelines for collection and field analysis of ground-water samples for selected unstable constituents, by W. W. Wood: Book 1, Chap. D2. 1976. 24 p. $2.50.

2-D1 Application of surface geophysics to ground-water investigations, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: Book 2, Chap. D1. 1974. 116 p. $5.00.

2-E1 Application of borehole geophysics to water-resources investigations, by W. S. Keys and L. M. MacCary: Book 2, Chap. E1. 1971. 126 p. $4.75.

3-A1 General field and office procedures for indirect discharge measurements, by M. A. Benson and Tate Dalrymple: Book 3, Chap. A1. 1967. 30 p. $2.00.

3-A2 Measurement of peak discharge by the slope-area method, by Tate Dalrymple and M. A. Benson: Book 3, Chap. A2. 1967. 12 p. $1.75.

3-A3 Measurement of peak discharge at culverts by indirect methods, by G. L. Bodhaine: Book 3, Chap. A3. 1968. 60 p. $5.00.

3-A4 Measurement of peak discharge at width contractions by indirect methods, by H. F. Matthai: Book 3, Chap. A4. 1967. 44 p. $2.25.

3-A5 Measurement of peak discharge at dams by indirect methods, by Harry Hulsing: Book 3, Chap. A5. 1967. 29 p. $2.25.

3-A6 General procedure for gaging streams, by R. W. Carter and Jacob Davidian: Book 3, Chap. A6. 1968. 13 p. $1.75.

3-A7 Stage measurements at gaging stations, by T. J. Buchanan and W. P. Somers: Book 3, Chap. A7. 1968. 28 p. $4.50.

3-A8 Discharge measurements at gaging stations, by T. J. Buchanan and W. P. Somers: Book 3, Chap. A8. 1969. 65 p. $3.25.

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.: Book 3, Chap. A9. 1982. 44 p. $5.00.

3-A10 Discharge ratings at gaging stations, by E. J. Kennedy: Book 3, Chap. A10. 1985. 59 p. $3.00.

3-A11 Measurement of discharge by moving-boat method, by G. F. Smoot and C. E. Novak: Book 3, Chap. A11. 1969. 22 p. $2.00.

3-A12 Fluorometric procedures for dye tracing, by J. F. Wilson, Jr., E. B. Cobb, and F. A. Kilpatrick: Book 3, Chap. A12. Rev. 1986. 34 p. $2.25

3-A13 Computation of continuous records of streamflow, by E. J. Kennedy: Book 3, Chap. A13. 1983. $4.50.

3-A14 The use of flumes in measuring discharge, by F. A. Kilpatrick and V. R. Schneider: Book 3, Chap. A14. 1983. 46 p. $4.50.

3-A15 Computation of water-surface profiles in open channels, by Jacob Davidian: Book 3, Chap. A15. 1984. 48 p. $2.50.

3-A16 Measurements of discharge using tracers, by F. A. Kilpatrick and E. D. Cobb: Book 3, Chap. A16. 1986. 52 p. $2.50.

3-A17 Acoustic velocity meter systems, by Antonius Laenen: Book 3, Chap. A17. 1985. 38 p. $1.75.

3-B1 Aquifer-test design, observation, and data analysis, by R.W. Stallman: Book 3, Chap. B1. 1971. 26 p. $3.50.

3-B2 Introduction to ground-water hydraulics, a programed text for self-instruction, by G. D. Bennett: Book 3, Chap. B2. 1976. 172 p. $7.00.

3-B3 Type curves for selected problems of flow to wells in confined aquifers, by J. E. Reed: Book 3, Chap. B3. 1980. 106 p. $6.00.

3-B5 Definition of Boundary and Initial Conditions in the Analysis of Saturated Ground-Water Flow Systems-An Introduction, by O. L. Franke, T. E. Reilly, and G. D. Bennett: Book 3, Chap. B5. 1987. 15 p.

3-B6 The Principle of Superposition and its Application in Ground-Water Hydraulics, by T. E. Rielly, O. L. Franke, and G. D. Bennett: Book 3, Chap. B6. 1987. 28 p.

3-C1 Fluvial sediment concepts, by H. P. Guy: Book 3, Chap. C1. 1970. 55 p. $3.75.

3-C2 Field methods for measurement of fluvial sediment, by H. P. Guy and V. W. Norman: Book 3, Chap. C2. 1970. 59 p. $5.50.

3-C3 Computation of fluvial-sediment discharge, by George Porterfield: Book 3, Chap. C3. 1972. 66 p. $3.25.

4-A1 Some statistical tools in hydrology, by H. C. Riggs: Book 4, Chap. A1. 1968. 39 p. $2.50.

4-A2 Frequency curves, by H. C. Riggs: Book 4, Chap. A2. 1968. 15 p. $2.00.

4-B1 Low-flow investigations, by H. C. Riggs: Book 4, Chap. B1. 1972. 18 p. $3.50.

4-B2 Storage analyses for water supply, by H. C. Riggs and C. H. Hardison: Book 4, Chap. B2. 1973. 20 p. $3.25.

4-B3 Regional analyses of streamflow characteristics, by H. C. Riggs: Book 4, Chap. B3. 1973. 15 p. $3.50.

4-D1 Computation of rate and volume of stream depletion by wells, by C. T. Jenkins: Book 4, Chap. D1. 1970. 17 p. $1.75.

5-A1 Methods for determination of inorganic substances in water and fluvial sediments, by M. W. Skougstad, M. J. Fishman, L. C. Friedman, D. E. Erdmann, and S. S. Duncan, editors: Book 5, Chap. A1. 1979. 626 p. $11.00.

5-A2 Determination of minor elements in water by emission spectroscopy, by P. R. Barnett and E. C. Mallory, Jr.: Book 5, Chap. A2. 1971. 31 p. $2.75.

5-A3 Methods for analysis of organic substances in water, by D. F. Goerlitz and Eugene Brown: Book 5, Chap. A3. 1972. 40 p. $2.50.

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: Book 5, Chap. A4. 1977. 332 p. $10.00.

5-A5 Methods for determination of radioactive substances in water and fluvial sediments, by L. L. Thatcher, V. J. Janzer, and K. W. Edwards: Book 5, Chap. A5. 1977. 95 p. $6.50.

5-A6 Quality assurance practices for the chemical and biological analyses of water and fluvial sediments, by L. C. Friedman and D. E. Erdmann: Book 5, Chap. A6. 1982. 181 p. $6.50.

5-C1 Laboratory theory and methods for sediment analysis, by H. P. Guy: Book 5, Chap. C1. 1969. 58 p. $3.25.

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: Book 7, Chap. C1. 1976. 116 p. $4.75.

7-C2 Computer model of two-dimensional solute transport and dispersion in ground water by L. F. Konikow and J. D. Bredehoeft: Book 7, Chap. C2. 1978. 90 p. $3.25.

7-C3 A model for simulation of flow in singular and interconnected channels by R. W. Schaffranek, R. A. Baltzer, and D. E. Goldberg: Book 7, Chap. C3. 1981. 110 p. $7.50.

8-A1 Methods of measuring water levels in deep wells, by M. S. Garber and F. C. Koopman: Book 8, Chap. A1. 1968. 23 p. $2.00.

8-A2 Installation and service manual for U.S. Geological Survey manometers, by J. D. Craig: Book 8, Chap. A2. 1983. 57 p. $6.00.

8-B2 Calibration and maintenance of vertical-axis type current meters, by G. F. Smoot and C. E. Novak: Book 8, Chap. B2. 1968. 15 p. $1.75.

01052500 DIAMOND RIVER NEAR WENTWORTH LOCATION, N. H.

LOCATION.--Lat 44°52'40", long 71°03'25" Coos County, Hydrologic Unit 01040001, on left bank 1.0 mi upstream from mouth and 1.6 mi north of Wentworth Location.

DRAINAGE AREA.--152 mi².

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

Water-quality records: Water year 1954.

REVISED RECORDS.--WDR ME-81-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,259 ft above National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--46 years, 348 ft³/s, 31.18 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,630 ft³/s, June 16, 1943, gage height, 10.66 ft, from rating curve extended above 4,300 ft³/s; maximum gage height, 12.23 ft, Feb. 21, 1981 (ice jam); minimum discharge, 6.8 ft³/s, Aug. 27, 28, 1949, Sept. 1, 1952, gage height, 0.81 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,600 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 1	0600	*8,330	*10.31	No other peak greater than base-discharge			

Minimum discharge, 21 ft³/s, Sept. 7,8.

DISCHARGE, 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	851	201	e240	e105	e76	e62	6790	320	e520	162	62	30
2	461	224	e190	e110	e74	e60	2910	361	e410	129	57	29
3	409	235	e350	e110	e69	e60	1310	497	e330	129	112	27
4	541	202	888	e105	e68	e59	839	490	e260	205	171	25
5	763	172	522	e100	e67	e60	1310	461	360	410	97	23
6	611	162	e300	e105	e67	e60	2070	521	275	230	70	22
7	572	179	e240	e100	e66	e59	2420	482	209	147	57	21
8	454	186	e190	e96	e66	e67	1580	357	415	116	54	21
9	405	360	e155	e92	e67	e80	960	289	1370	99	51	404
10	343	508	e190	e90	e67	e160	825	256	821	103	50	284
11	292	294	e210	e94	e67	e150	1260	221	464	337	65	123
12	265	239	e185	e91	e64	e125	1550	226	332	473	58	76
13	246	205	e150	e90	e67	e100	1530	234	345	823	46	782
14	233	120	e170	e88	e67	e86	1160	193	303	707	41	1740
15	311	180	e175	e89	e67	e75	945	187	262	918	40	539
16	279	189	e155	e90	e68	e68	863	209	217	503	39	243
17	230	181	e145	e89	e69	e65	888	175	367	280	37	191
18	203	169	e135	e87	e66	e64	969	158	252	209	33	166
19	187	131	e130	e86	e66	e64	1050	142	181	210	30	128
20	175	100	e125	e84	e65	e63	922	129	170	163	31	115
21	169	121	e120	e84	e67	e67	736	119	144	214	32	144
22	181	184	e115	e82	e68	e71	603	116	122	196	29	138
23	183	271	e115	e82	e68	e84	454	253	197	150	30	115
24	235	270	e110	e84	e68	e115	384	1700	165	121	36	111
25	187	276	e125	e86	e68	e200	345	1070	123	104	29	107
26	166	262	e130	e86	e66	e340	284	e500	118	125	27	97
27	207	1130	e125	e85	e65	e430	245	e325	251	164	26	125
28	334	728	e120	e81	e63	e385	218	e320	658	109	25	115
29	348	478	e110	e76	---	e475	238	e1200	418	87	26	95
30	270	349	e110	e78	---	e920	273	e1000	226	77	33	101
31	236	---	e105	e77	---	e3440	---	e620	---	69	34	---
TOTAL	10347	8306	6130	2802	1886	8114	35931	13131	10285	7769	1528	6137
MEAN	334	277	198	90.4	67.4	262	1198	424	343	251	49.3	205
MAX	851	1130	888	110	76	3440	6790	1700	1370	918	171	1740
MIN	166	100	105	76	63	59	218	116	118	69	25	21
CFSM	2.20	1.82	1.30	.59	.44	1.72	7.88	2.79	2.26	1.65	.32	1.35
IN.	2.53	2.03	1.50	.69	.46	1.99	8.79	3.21	2.52	1.90	.37	1.50

CAL YR 1986 TOTAL 130533 MEAN 358 MAX 4120 MIN 40 CFSM 2.35 IN. 31.95
WTR YR 1987 TOTAL 112366 MEAN 308 MAX 6790 MIN 21 CFSM 2.03 IN. 27.50

e Estimated

01053500 ANDROSCOGGIN RIVER AT ERROL, N. H.

LOCATION.--Lat 44°46'57", long 71°0'46", Coos County, Hydrologic Unit 01040001, on right bank 0.4 mi downstream from Errol Dam, 0.4 mi northeast of Errol, and 0.6 mi upstream from Clear Stream.

DRAINAGE AREA.--1,046 mi².

PERIOD OF RECORD.--Discharge: January 1905 to current year. Prior to 1922, published as "at Errol Dam." Water-quality records: Water years 1955, 1958-59.

REVISED RECORDS.--WRD ME-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,227.30 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 8, 1943, nonrecording gage at Errol Dam at datum 5.0 ft higher.

REMARKS.--No estimated daily discharges. Records excellent. Flow regulated by Rangeley, Mooselookmeguntic, Richardson, Aziscohos, and Umbagog Lakes (Reservoirs in Androscoggin River basin), combined usable capacity, 28,100,000,000 ft³, with final regulation at Errol Dam, 0.4 mi upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--82 years, 1,904 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,500 ft³/s, May 22, 1969, gage height, 9.40 ft; minimum daily, leakage only at various times when gates in dam were closed.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,780 ft³/s, Apr. 2, gage height, 6.69 ft; minimum daily, 722 ft³/s, Sept.14.

DISCHARGE, 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	1770	1880	1660	1720	1830	1970	5250	1100	1350	1770	1690	1620
2	1800	1880	1720	1730	1900	1900	8490	1020	1380	1580	1690	1620
3	1800	2020	1720	1750	1780	1880	6640	1020	1420	1570	1590	1620
4	1810	2170	1670	1780	1820	1880	3930	1020	1460	1540	1550	1610
5	1680	1840	1690	1740	1730	1860	3930	1030	1480	1540	1550	1620
6	1800	1830	1660	1760	1740	1870	3910	1030	1470	1500	1620	1620
7	1780	1760	1650	1780	1690	1870	4660	1030	1490	1480	1650	1620
8	1840	1790	1630	1800	1740	1870	5030	1030	1500	1570	1650	1610
9	1910	1820	1620	1800	1750	1840	4290	1030	1510	1590	1650	1330
10	1950	1830	1680	1820	1750	1860	2510	1110	1520	1590	1590	1280
11	1970	1820	1670	1820	1890	1850	1970	1270	1520	1580	1480	1490
12	1960	1800	1710	1780	1970	1740	2000	1370	1520	1570	1650	1480
13	1980	1760	1720	1820	1960	1780	2010	1250	1520	1600	1660	1400
14	1950	1750	1720	1820	1940	1790	2010	1500	1490	1610	1660	722
15	1920	1740	1670	1790	1930	1790	2010	1400	1500	1610	1660	1400
16	1840	1750	1650	1820	1920	1760	2010	1400	1500	1600	1660	1510
17	1830	1770	1700	1840	1930	1800	2010	1400	1460	1610	1690	1330
18	1820	1730	1740	1760	1890	1780	2010	1430	1500	1610	1700	1440
19	1840	1730	1730	1760	1810	1810	2000	1460	1540	1610	1700	1490
20	1840	1840	1660	1710	1920	1790	2020	1530	1560	1610	1700	1460
21	1840	2050	1610	1670	1890	1770	1460	1550	1580	1540	1700	1410
22	1970	1800	1740	1700	1850	1770	1510	1550	1660	1580	1700	1470
23	1870	1800	1650	1770	1940	1670	888	1550	1660	1590	1680	1470
24	1880	1820	1650	1710	2020	1410	1240	1260	1660	1620	1720	1470
25	1900	1760	1700	1810	2020	1100	1360	1350	1650	1630	1720	1450
26	1920	1680	1670	1840	1960	832	1280	1380	1650	1550	1720	1470
27	1860	1600	1660	1970	2000	854	1310	1900	1650	1590	1720	1480
28	1890	1600	1660	2000	2000	998	1340	1870	1660	1630	1720	1520
29	1860	1540	1690	1980	---	1000	1360	1560	1420	1630	1660	1530
30	1900	1570	1730	1880	---	1010	1270	1350	908	1650	1620	1510
31	1890	---	1740	1830	---	1910	---	1350	---	1670	1620	---
TOTAL	57870	53730	52170	55760	52570	51014	81708	41100	45188	49420	51370	44052
MEAN	1867	1791	1683	1799	1877	1646	2724	1326	1506	1594	1657	1468
MAX	1980	2170	1740	2000	2020	1970	8490	1900	1660	1770	1720	1620
MIN	1680	1540	1610	1670	1690	832	888	1020	908	1480	1480	722

CAL YR 1986 TOTAL 695517 MEAN 1906 MAX 5240 MIN 717
WTR YR 1987 TOTAL 635952 MEAN 1742 MAX 8490 MIN 722

01054000 ANDROSCOGGIN RIVER NEAR GORHAM, N. H.

LOCATION.--Lat 44°26'10", long 71°11'27", Coos County, Hydrologic Unit 01040001, on right bank at Pulsifer Rips, 2.2 mi downstream from Dead River, and 4.0 mi upstream from Gorham.

DRAINAGE AREA.--1,361 mi².

PERIOD OF RECORD.--October 1913 to current year. October 1922 to February 1929, monthly discharge only, published in WSP 1301. Prior to October 1928, published as "at Berlin."

REVISED RECORDS.--WDR ME-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 832.88 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 30, 1922, nonrecording gage showing head and tailwater elevations at site 3 mi upstream at different datum.

REMARKS.--Records good. Flow regulated by Rangeley, Mooselookmeguntic, Richardson, Aziscohos, and Umbagog Lakes, combined usable capacity, 28,100,000,000 ft³ with final regulation at Errol Dam 35 mi upstream. Diurnal fluctuation caused by powerplant 0.8 mi upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--74 years, 2,463 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 20,000 ft³/s, June 18, 1917, Apr. 30, 1923; minimum daily, 795 ft³/s, Mar. 15, 1948.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,000 ft³/s, Apr. 1, gage height, 9.15 ft; minimum daily, 1,230 ft³/s, July 1.

DISCHARGE, 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	2420	2170	1990	1970	2110	2270	14400	2050	1830	1230	1680	1660
2	2320	2190	1870	1970	2020	2180	12700	1950	1720	1670	1710	1600
3	2270	2200	2540	2000	2060	2070	11200	1860	1720	1630	1780	1630
4	2360	2380	3160	2000	2060	2140	6950	1890	1760	1640	1770	1620
5	2550	1870	2680	1980	2020	2120	6400	1780	1930	1780	1650	1630
6	2470	2140	2170	1990	1960	2090	7550	2150	1890	1950	1620	1640
7	2490	2000	2170	2010	1950	2090	8420	2180	1720	1690	1590	1630
8	2340	2030	2050	2060	1950	2150	8390	1790	1820	1480	1620	1640
9	2330	2270	1890	2060	2040	2100	7170	1790	2740	1710	1720	2120
10	2320	2630	2100	2030	2020	2030	5420	1640	2640	1970	1840	1780
11	2330	2370	2160	2060	1970	2240	4050	1620	2130	1970	1940	1620
12	2290	2080	2140	2070	2090	2290	3480	1630	1910	1660	1640	1640
13	2280	2190	2040	2040	2210	2090	3780	1830	1850	1660	1670	1880
14	2300	2060	1980	2040	2210	2120	3630	1630	1820	1790	1650	3230
15	2280	2020	2110	2090	2130	2110	3360	1760	1880	1850	1620	1980
16	2230	2040	2130	2050	2150	1970	3240	1780	1710	1850	1600	1780
17	2130	2060	2000	1890	2130	2070	3120	1720	1760	1680	1640	1580
18	2110	2050	2090	2080	2080	2140	3000	1680	1730	1740	1610	1590
19	2090	2020	1950	2070	2090	2080	3190	1670	1720	1710	1650	1640
20	2120	1940	2210	1900	2060	2050	3190	1700	1670	1720	e1680	1720
21	2100	2170	1990	1630	2050	1990	2980	1790	1700	1730	e1670	1670
22	2190	2130	1920	1890	2170	2110	2200	1730	1720	1750	e1680	1670
23	2160	2070	2030	2170	2100	2280	1920	1810	1880	1650	e1650	1670
24	2100	2180	1930	2310	2090	2370	1520	1940	1930	1650	e1680	1660
25	2130	2250	1970	1940	2130	2350	1950	1940	1880	1710	e1690	1550
26	2140	2260	2040	1930	2220	2340	1850	1820	1740	1760	e1670	1590
27	2180	3670	2010	2000	2130	2540	1680	1880	1750	1730	1660	1600
28	2180	3340	1920	2180	2230	2650	1660	2130	2210	1700	1700	1590
29	2170	2690	1970	2210	---	2740	1730	2430	2110	1670	1820	1660
30	2380	2330	1980	2190	---	3270	1920	2040	1890	1630	1650	1700
31	2390	---	2010	2160	---	6790	---	1740	---	1650	1660	---
TOTAL	70150	67800	65200	62970	58430	73830	142050	57350	56760	53010	52210	51970
MEAN	2263	2260	2103	2031	2087	2382	4735	1850	1892	1710	1684	1732
MAX	2550	3670	3160	2310	2230	6790	14400	2430	2740	1970	1940	3230
MIN	2090	1870	1870	1630	1950	1970	1520	1620	1670	1230	1590	1550

CAL YR 1986 TOTAL 897650 MEAN 2459 MAX 8740 MIN 1840
WTR YR 1987 TOTAL 811730 MEAN 2224 MAX 14400 MIN 1230

e Estimated

01064300 ELLIS RIVER NEAR JACKSON, N. H.

LOCATION.--Lat 44°13'12", long 71°15'00", Carroll County, Hydrologic Unit 01060002, in White Mountain National Forest, on right bank 0.4 mi upstream from small left-bank tributary, 1.3 mi upstream from bridge on State Highway 16, and 6 mi northwest of Jackson.

DRAINAGE AREA.--10.9 mi²

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

GAGE.--Water-stage recorder. Elevation of gage is 1,500 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 14, 1969, at site 0.3 mi downstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair.

AVERAGE DISCHARGE.--23 years (water years 1965-87), 34.2 ft³/s, 42.61 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,500 ft³/s, Nov. 3, 1966, gage height, 10.34 ft, from recorder, affected by drawdown, 18.9 ft, from floodmarks, site and datum then in use, from rating curve extended above 390 ft³/s on basis of slope-area measurement at gage height 10.34 ft; minimum not determined, occurred during ice effect in March 1980. Minimum daily, 2.2 ft³/s, Mar. 2-4, 1980.

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

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar.31	--	unknown	unknown	Apr. 7	--	unknown	unknown

Minimum discharge not determined, minimum daily, 4.8 ft³/s, Mar. 19.

DISCHARGE, 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	38	15	e21	e12	e7.0	e4.9	e600	27	35	20	15	11
2	30	15	e32	e12	e6.9	e5.0	e350	31	31	19	15	11
3	27	15	e145	e12	e6.8	e5.1	e100	35	30	19	34	11
4	47	15	e70	e11	e6.7	e5.0	e130	32	29	31	24	10
5	37	14	e35	e11	e6.6	e5.0	e180	36	48	30	18	9.5
6	33	14	e33	e11	e6.5	e4.9	e250	230	33	22	16	9.4
7	30	15	e27	e9.8	e6.4	e4.8	e350	102	27	19	15	9.1
8	29	17	e22	e9.8	e6.3	e5.0	e250	66	27	17	15	9.1
9	32	48	e40	e9.8	e6.4	e5.2	e170	52	34	16	15	32
10	28	34	e32	e9.8	e6.9	e6.2	e120	75	29	86	15	17
11	25	23	e25	e9.8	e6.2	e8.0	e82	63	25	64	15	15
12	30	20	e22	e9.8	e6.0	e7.4	e91	81	26	34	15	15
13	23	17	e30	e9.8	e5.8	e6.9	e100	56	27	31	14	49
14	24	26	e35	e9.8	e5.6	e6.3	82	42	24	28	14	96
15	25	24	e21	e9.6	e5.4	e5.8	78	59	20	31	13	27
16	22	16	e15	e9.5	e5.6	e5.4	78	45	18	24	13	20
17	21	15	e15	e9.4	e6.2	e5.2	154	37	17	21	12	18
18	20	14	e14	e9.3	e5.6	e5.0	280	36	17	20	12	17
19	19	13	e14	e9.2	e5.4	e4.8	213	33	16	25	12	16
20	18	44	e15	e9.0	e5.0	e5.0	217	29	15	21	11	18
21	18	56	e15	e8.9	e6.0	e5.3	146	27	14	21	11	21
22	19	41	e15	e8.8	e6.8	6.2	115	34	13	21	11	20
23	18	27	e14	e8.6	e6.5	10	71	39	51	19	11	19
24	17	22	e14	e8.3	e6.3	21	74	48	27	18	11	17
25	16	16	e14	e8.0	e6.0	34	53	36	21	17	11	16
26	16	35	e14	e7.9	e5.4	50	40	30	19	20	11	19
27	16	103	e14	e7.7	e5.2	49	35	28	47	19	11	23
28	16	35	e13	e7.5	e5.0	44	32	29	52	17	11	18
29	16	26	e13	e7.4	---	53	30	66	29	16	14	16
30	16	19	e13	e7.3	---	95	30	41	23	15	14	19
31	15	---	e12	e7.2	---	e1050	---	34	---	15	12	---
TOTAL	741	794	814	291.0	170.5	1528.4	4501	1579	824	776	441	608.1
MEAN	23.9	26.5	26.3	9.39	6.09	49.3	150	50.9	27.5	25.0	14.2	20.3
MAX	47	103	145	12	7.0	1050	600	230	52	86	34	96
MIN	15	13	12	7.2	5.0	4.8	30	27	13	15	11	9.1
CFSM	2.19	2.43	2.41	.86	.56	4.52	13.8	4.67	2.52	2.30	1.31	1.86
IN.	2.53	2.71	2.78	.99	.58	5.22	15.36	5.39	2.81	2.65	1.51	2.08

CAL YR 1986 TOTAL 13187.5 MEAN 36.1 MAX 803 MIN 6.0 CFSM 3.31 IN. 45.01
WTR YR 1987 TOTAL 13068.0 MEAN 35.8 MAX 1050 MIN 4.8 CFSM 3.28 IN. 44.60

e Estimated

01064400 LUCY BROOK NEAR NORTH CONWAY, N. H.

LOCATION.--Lat 44°04'10", long 71°10'30", Carroll County, Hydrologic Unit 01060002, on left bank 1.6 mi upstream from mouth and 2.5 mi northwest of North Conway.

DRAINAGE AREA.--4.68 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 710 ft above National Geodetic Vertical Datum of 1929, from topographic map.

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

AVERAGE DISCHARGE.--23 years, 10.9 ft³/s, 31.63 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,320 ft³/s, Apr. 27, 1979, recorded gage height, 8.49 ft, affected by drawdown, river stage unknown, from rating curve extended above 140 ft³/s on basis of slope-area measurement at gage height, 8.14 ft recorded, 9.20 ft from floodmarks; minimum discharge, 0.32 ft³/s, Sept. 2, 3, 29, 30, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 190 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar.31	2215	*a873	*7.99	No other peak greater than base discharge.			

a From rating curve extended above 140 ft³/s, as explained above.

Minimum discharge, 0.70 ft³/s, Sept. 5-8.

DISCHARGE, 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	3.6	1.5	7.8	e5.6	e2.6	e1.3	226	e5.0	3.3	7.0	1.4	.95
2	3.0	1.5	7.2	e5.3	e2.5	e1.4	72	e5.7	5.6	6.2	1.4	.88
3	2.6	1.5	47	e5.0	e2.4	e1.4	47	e7.8	5.3	7.3	3.6	.82
4	3.6	1.5	34	e4.6	e2.3	e1.4	39	e6.4	6.4	7.0	2.2	.77
5	3.7	1.5	18	e4.2	e2.2	e1.3	56	e9.0	15	6.3	1.6	.76
6	3.2	1.8	e12	e4.5	e2.1	e1.3	98	e54	7.9	5.5	1.5	.70
7	3.0	2.1	e9.0	e4.3	e2.1	e1.3	69	e23	6.0	4.9	1.3	.70
8	2.5	2.4	e6.6	e4.6	e2.0	e1.4	44	e17	8.2	4.3	1.3	1.0
9	2.5	6.4	e10	e5.0	e1.9	e1.5	31	e13	18	4.1	1.3	9.2
10	2.5	7.8	e8.2	e5.4	e1.8	e2.2	26	e17	9.7	3.7	1.3	2.0
11	2.3	5.3	e6.7	e5.0	e1.8	e2.0	25	e14	7.1	3.6	1.4	1.7
12	2.3	4.5	e6.0	e4.5	e1.7	e1.9	26	e19	6.0	3.0	1.3	1.7
13	2.3	4.2	e7.7	e4.2	e1.7	e1.7	e26	e13	6.0	3.2	1.2	20
14	3.0	3.8	e9.0	e4.1	e1.6	e1.6	e22	e10	5.8	3.6	1.2	31
15	3.1	3.6	e6.4	e4.2	e1.5	e1.5	e18	e14	5.1	3.7	1.2	7.9
16	2.5	3.6	e6.0	e4.5	e1.5	e1.4	e19	e10	4.5	3.0	1.1	4.8
17	2.5	3.6	e5.6	e6.4	e1.6	e1.3	e32	e7.0	4.3	2.8	1.1	3.6
18	2.3	3.5	e5.3	e5.6	e1.5	e1.3	e60	e5.4	3.8	2.6	1.0	3.0
19	2.3	3.3	e5.2	e6.0	e1.4	e1.2	e46	e4.8	3.6	2.7	1.0	2.6
20	2.3	3.0	e4.9	e5.8	e1.5	e1.3	e50	e4.4	3.4	2.5	1.1	9.1
21	2.2	3.7	e4.8	e5.3	e1.6	e1.4	e35	4.4	3.0	2.8	.97	13
22	2.1	3.1	e4.6	e5.0	e1.9	e2.1	e24	4.4	3.0	2.7	.97	7.6
23	2.0	3.0	e4.4	e4.4	e1.8	e4.5	e16	4.4	22	2.2	1.0	5.6
24	1.9	3.3	e4.3	e4.0	e1.7	e6.0	e17	6.9	11	2.1	.92	4.8
25	1.8	3.9	e4.9	e3.7	e1.6	e15	e12	5.3	6.9	2.0	.88	4.1
26	1.8	9.5	e7.0	e3.4	e1.5	28	e10	4.6	6.1	2.9	.86	3.4
27	2.2	42	e6.5	e3.2	e1.4	27	e8.4	4.1	22	2.1	.83	3.2
28	2.2	16	e6.0	e3.1	e1.4	27	e7.6	3.9	29	1.7	.83	3.0
29	1.9	12	e5.8	e2.9	---	31	e7.0	4.4	13	1.6	1.6	2.7
30	1.8	10	e5.4	e2.8	---	43	e6.9	3.6	8.8	1.4	1.4	2.5
31	1.5	---	e4.9	e2.7	---	571	---	3.4	---	1.4	1.0	---
TOTAL	76.5	172.9	281.2	139.3	50.6	785.7	1175.9	308.9	259.8	109.9	39.76	153.08
MEAN	2.47	5.76	9.07	4.49	1.81	25.3	39.2	9.96	8.66	3.55	1.28	5.10
MAX	3.7	42	47	6.4	2.6	571	226	54	29	7.3	3.6	31
MIN	1.5	1.5	4.3	2.7	1.4	1.2	6.9	3.4	3.0	1.4	.83	.70
CFSM	.53	1.23	1.94	.96	.39	5.42	8.38	2.13	1.85	.76	.27	1.09
IN.	.61	1.37	2.24	1.11	.40	6.25	9.35	2.46	2.07	.87	.32	1.22

CAL YR 1986 TOTAL 3473.80 MEAN 9.52 MAX 410 MIN .90 CFSM 2.03 IN. 27.61
WTR YR 1987 TOTAL 3553.54 MEAN 9.74 MAX 571 MIN .70 CFSM 2.08 IN. 28.25

e Estimated

01064500 SACO RIVER NEAR CONWAY, N.H.

LOCATION.--Lat 43°59'27", long 71°05'29", Carroll County, Hydrologic Unit 01060002, on left bank at Odell Falls 1.8 mi downstream from Swift River and Conway.

DRAINAGE AREA.--385 mi².

PERIOD OF RECORD.--August 1903 to December 1909, January 1910 to June 1912 (gage heights only), February 1929 to current year. Monthly discharge only for some periods, published in WSP 1301. Prior to 1912, published as "at Center Conway."

REVISED RECORDS.--WSP 1301: 1908-09. WDR ME-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 418.19 ft above National Geodetic Vertical Datum of 1929. Aug. 26, 1903, to June 30, 1912, nonrecording gage at site 0.8 mi downstream at different datum.

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

AVERAGE DISCHARGE.--64 years (water years 1904-09, 1930-87), 935 ft³/s, 32.98 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 47,200 ft³/s, Mar. 27, 1953, gage height, 17.20 ft, maximum gage height, 19.03 ft Mar. 7, 1979, (ice jam); minimum discharge, 40 ft³/s, Mar. 16, 1932, gage height, 1.61 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 8,700 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 1	0600	*46,600	*17.04	Apr. 6	2000	13,800	9.39

Minimum discharge, 105 ft³/s, Aug. 19, 22.

REVISIONS.--The maximum discharges for some water years have been revised as shown in the following table. They supercede figures published in WSP 801, 1201, 1271, 1701, and WRD ME-77-1.

Water year	Date	Discharge (ft³/s)	Gage Height (ft)
1936	Mar. 19, 1936	44,500	16.45
1951	Nov. 26, 1950	32,800	13.84
1953	Mar. 27, 1953	47,200	17.20
1960	Oct. 24, 1959	43,800	16.39
1977	Mar. 14, 1977	40,500	15.61

DISCHARGE, 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	581	278	813	e380	e245	e180	33000	1230	541	653	240	168
2	512	275	908	e410	e240	e255	9270	1320	541	553	224	156
3	429	277	2530	e380	e235	e270	5430	1350	659	564	255	147
4	460	272	3750	e370	e230	e250	4230	1190	582	614	471	135
5	546	266	1990	e350	e225	e230	5700	1160	1060	803	363	132
6	496	276	e1400	e350	e220	e210	10900	2620	822	627	292	129
7	466	302	e1000	e380	e215	e185	9860	2500	618	510	255	129
8	426	308	e800	e350	e215	e500	5860	1820	601	462	235	131
9	421	546	e660	e330	e210	e760	4050	1450	932	434	223	570
10	415	1020	e900	e315	e210	e640	3200	1320	768	437	216	567
11	382	666	e740	e350	e210	e470	3140	1380	620	1040	244	335
12	364	541	e620	e380	e210	e410	3420	1220	541	612	239	279
13	355	e450	e520	e345	e210	e360	3310	1210	563	564	215	342
14	366	e350	e470	e315	e210	e340	2570	996	559	490	200	2370
15	433	e370	e540	e290	e210	e325	2310	945	490	e465	191	928
16	397	e400	e490	e280	e205	e310	2160	958	439	e460	182	567
17	372	e410	e465	e270	e200	e305	2190	825	411	e420	175	506
18	347	e370	e445	e270	e200	e305	2880	781	373	e380	165	422
19	332	e340	e440	e295	e200	e305	3130	729	346	e325	155	342
20	323	e300	e415	e330	e200	e300	3260	669	325	e310	156	365
21	316	e290	e400	e325	e195	e305	3040	629	304	e350	154	842
22	316	e320	e370	e320	e195	e320	2800	605	300	e410	146	682
23	313	e355	e365	e315	e195	e400	2060	610	952	e395	154	521
24	307	e360	e350	e310	e190	e600	1710	768	982	e375	152	439
25	297	e410	e430	e305	e190	e800	1560	774	596	e340	140	382
26	291	491	e500	e305	e190	e1300	1310	655	509	e330	137	347
27	311	3380	e450	e295	e185	e1800	1170	582	778	e330	137	339
28	331	1790	e430	e280	e185	e1750	1080	544	2130	e325	134	328
29	319	1240	e410	e265	---	e1850	1140	737	1100	e285	154	305
30	303	1010	e400	e250	---	e2500	1170	667	788	261	217	297
31	289	---	e390	e260	---	16300	---	559	---	253	194	---
TOTAL	11816	17663	24391	9970	5825	34835	136910	32803	20230	14377	6415	13202
MEAN	381	589	787	322	208	1124	4564	1058	674	464	207	440
MAX	581	3380	3750	410	245	16300	33000	2620	2130	1040	471	2370
MIN	289	266	350	250	185	180	1080	544	300	253	134	129
CFSM	.99	1.53	2.04	.84	.54	2.92	11.9	2.75	1.75	1.20	.54	1.14
IN.	1.14	1.71	2.36	.96	.56	3.37	13.23	3.17	1.95	1.39	.62	1.28

CAL YR 1986 TOTAL 351245 MEAN 962 MAX 20000 MIN 185 CFSM 2.50 IN. 33.94
WTR YR 1987 TOTAL 328437 MEAN 900 MAX 33000 MIN 129 CFSM 2.34 IN. 31.73

e Estimated

01065000 OSSIPEE RIVER AT EFFINGHAM FALLS, N. H.

LOCATION.--Lat 43°47'44", long 71°03'36", Carroll County, Hydrologic Unit 01060002, on left bank 0.3 mi upstream from bridge on State Highway 153 at Effingham Falls, 0.3 mi downstream from outlet of Ossipee Lake, and 4 mi northwest of Effingham.

DRAINAGE AREA.--330 mi².

PERIOD OF RECORD.--Discharge: September 1942 to current year.
Water-quality records: Water year 1955.

GAGE.--Water-stage recorder. Elevation of gage is 390 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Ossipee and Silver Lakes and Pine River Pond, combined capacity, 1,430,000,000 ft³. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--45 years, 690 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,700 ft³/s, Mar. 28, 1953, gage height, 11.64 ft; minimum, about 5 ft³/s during part of several days Nov. 4-20, 1968 (caused by unusual regulation); minimum daily, 11 ft³/s, Oct. 10, 1944.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,160 ft³/s, Apr. 2, gage height, 10.28 ft; minimum, 176 ft³/s, Oct. 1; minimum daily, 177 ft³/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	177	278	1370	587	355	211	5030	974	414	760	223	207
2	178	278	1370	573	349	220	7020	1100	419	631	221	206
3	178	276	1410	576	343	222	6150	1110	430	605	223	204
4	180	276	1860	553	419	225	5090	1090	440	594	241	202
5	181	270	1960	534	499	225	4450	1070	536	583	231	200
6	198	277	1850	516	586	226	4380	1090	625	483	230	199
7	210	284	1710	508	661	227	4690	1140	624	338	229	198
8	216	288	1470	499	620	231	4740	1150	706	337	227	198
9	227	309	1160	479	606	231	4350	1120	868	337	228	200
10	226	353	1090	465	565	232	3850	1060	837	301	231	202
11	227	378	1050	476	459	236	3360	996	799	259	230	204
12	227	399	1000	471	391	236	2950	869	592	294	229	204
13	227	419	855	465	441	338	2610	754	488	304	227	206
14	229	418	816	448	466	394	2320	555	487	304	227	212
15	236	420	814	444	437	390	1810	443	484	316	225	322
16	237	420	770	442	410	390	1560	451	407	389	220	467
17	241	420	736	418	363	349	1360	456	359	549	218	467
18	245	419	708	402	318	305	1260	391	357	520	221	464
19	247	414	704	404	319	305	1240	276	291	481	226	461
20	249	413	686	409	313	305	1220	276	219	472	223	461
21	253	422	666	398	309	306	1100	276	222	399	220	556
22	255	424	633	397	303	308	1010	256	227	364	221	654
23	258	423	612	417	297	392	969	227	372	371	221	641
24	257	426	590	411	291	450	793	230	497	273	220	634
25	258	430	595	398	283	538	688	242	621	231	218	428
26	259	699	622	385	279	643	686	316	655	266	215	259
27	265	977	650	374	240	837	676	401	606	247	214	258
28	269	1220	645	366	203	1040	666	401	911	245	212	257
29	274	1310	628	357	---	1200	697	409	984	245	211	257
30	278	1310	618	351	---	1380	746	409	940	240	211	256
31	277	---	608	358	---	1870	---	409	---	223	208	---
TOTAL	7239	14650	30256	13881	11125	14462	77471	19947	16417	11961	6901	9684
MEAN	234	488	976	448	397	467	2582	643	547	386	223	323
MAX	278	1310	1960	587	661	1870	7020	1150	984	760	241	654
MIN	177	270	590	351	203	211	666	227	219	223	208	198

CAL YR 1986 TOTAL 253432 MEAN 694 MAX 3220 MIN 177
WTR YR 1987 TOTAL 233994 MEAN 641 MAX 7020 MIN 177

01072100 SALMON FALLS RIVER AT MILTON, N. H.

LOCATION.--Lat 43°24'50", long 70°19'15", Strafford County, Hydrologic Unit 01060003, on right bank just downstream from Milton Pond at Milton.

DRAINAGE AREA.--108 mi²

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 405 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. Flow regulated by Wilson, and Milton (also controls Northeast and Town House) Ponds, combined usable capacity, 1,280,000,000 ft³.

AVERAGE DISCHARGE.--19 years, 197 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,000 ft³/s, Apr. 6, 1984, gage height, 6.70 ft; minimum daily, 19 ft³/s, Aug. 30, Sept. 13, 1970.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,740 ft³/s, Apr. 1, gage height, 6.59 ft; minimum daily, 28 ft³/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	115	44	123	148	97	69	3120	276	116	197	36	30
2	115	45	135	151	95	72	3060	342	91	169	36	31
3	115	44	300	156	94	72	2080	328	72	127	34	31
4	115	43	562	146	94	72	1410	247	71	124	31	31
5	115	44	555	137	94	72	1170	197	85	124	31	31
6	115	43	447	132	93	71	1670	260	109	137	31	30
7	115	46	358	125	92	72	1830	333	106	157	31	30
8	115	65	245	128	92	75	1590	331	110	157	31	30
9	117	114	182	130	92	91	890	306	129	108	31	30
10	104	182	189	126	89	103	386	280	136	58	31	30
11	75	195	178	129	87	114	409	192	117	50	31	30
12	75	239	178	127	84	118	490	130	108	50	31	31
13	75	282	168	122	84	118	395	137	106	50	31	31
14	75	180	152	119	83	112	315	98	105	49	31	38
15	75	48	143	115	80	104	348	76	93	48	30	48
16	75	48	140	115	78	95	357	89	79	48	30	66
17	96	50	135	115	76	92	324	95	79	48	30	86
18	118	51	125	116	75	90	305	100	79	48	30	86
19	118	53	176	118	75	88	353	105	65	47	29	86
20	111	47	220	118	74	88	226	100	52	47	29	86
21	103	41	210	116	72	90	136	98	52	47	29	103
22	165	41	181	115	72	98	153	95	54	47	28	121
23	165	41	161	135	72	122	136	93	85	47	29	146
24	165	41	141	126	71	162	128	111	193	46	29	167
25	165	41	154	117	71	227	140	123	278	46	29	167
26	167	42	211	114	71	320	146	130	229	46	29	165
27	185	43	227	109	71	380	147	122	157	43	29	165
28	204	48	215	103	70	429	149	113	157	38	30	165
29	204	51	195	99	---	482	165	116	161	38	30	165
30	204	85	176	98	---	575	200	122	177	38	30	163
31	141	---	163	99	---	1120	---	133	---	37	30	162
TOTAL	3902	2337	6745	3804	2298	5793	22228	5278	3451	2316	947	2416
MEAN	126	77.9	218	123	82.1	187	741	170	115	74.7	30.5	80.5
MAX	204	282	562	156	97	1120	3120	342	278	197	36	167
MIN	75	41	123	98	70	69	128	76	52	37	28	30

CAL YR 1986 TOTAL 62078 MEAN 170 MAX 1500 MIN 24
WTR YR 1987 TOTAL 61515 MEAN 169 MAX 3120 MIN 28

01073000 OYSTER RIVER NEAR DURHAM, N. H.

LOCATION.--Lat 43°08'55", long 70°57'56", Strafford County, Hydrologic Unit 01060003, on left bank 200 ft upstream from highway bridge, 2.5 mi west of Durham, and 7 mi upstream from mouth.

DRAINAGE AREA.--12.1 mi²

PERIOD OF RECORD.--October 1934 to current year. October and November 1934 monthly discharge only, published in WSP 1301.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 70 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1964, at datum 1.00 ft higher.

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

AVERAGE DISCHARGE.--53 years, 19.6 ft³/s, 22.00 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 862 ft³/s, Sept. 11, 1954, gage height, 6.47 ft, present datum; maximum gage height, 8.45 ft, present datum, Mar. 19, 1936; minimum discharge, 0.23 ft³/s, Aug. 18, 19, 25, 26, 27, 1971.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge 170 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Dec. 3	1400	220	3.60	Apr. 1	0915	387	4.58
Dec. 19	1030	296	4.06	Apr. 6	1015	*600	*5.61
Mar. 31	1745	197	3.45				

Minimum discharge, 0.57 ft³/s, Aug. 28.

DISCHARGE, 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	2.8	23	26	e12	e10	344	53	12	13	1.5	1.2
2	2.1	2.7	19	24	e12	e13	171	41	13	10	1.1	1.1
3	2.5	2.6	156	26	e12	e15	97	32	16	69	4.0	.99
4	7.7	2.6	112	27	e12	e14	75	29	12	38	3.8	.98
5	7.6	2.7	67	26	e12	13	359	49	25	28	2.3	.96
6	5.2	4.3	50	25	e11	13	557	66	18	20	2.0	1.1
7	4.1	6.6	41	25	e11	15	e316	45	13	14	1.6	1.3
8	3.8	8.2	34	e23	e11	21	e164	38	11	12	1.4	1.6
9	3.4	19	27	e21	e11	27	e112	34	16	11	1.5	5.5
10	10	14	28	e20	e11	28	87	29	14	7.8	1.7	3.2
11	4.7	10	26	e19	e10	26	70	25	11	6.1	1.8	1.7
12	3.1	16	25	e19	10	22	59	23	10	5.3	1.3	1.4
13	2.7	11	22	e18	9.7	21	51	20	11	4.8	1.2	4.6
14	3.5	7.8	18	e18	9.2	20	46	16	9.9	4.4	.98	24
15	8.2	7.1	e17	e17	9.1	21	41	16	8.6	4.5	.99	8.4
16	7.5	7.0	e17	e16	8.9	21	36	18	7.2	3.9	1.0	5.7
17	16	6.9	17	e15	e8.8	20	37	14	6.2	3.2	1.1	4.3
18	9.4	6.7	19	e14	e8.8	19	49	12	5.8	2.7	.87	3.3
19	4.0	7.1	220	e14	e8.6	21	46	11	5.8	2.6	.81	3.4
20	3.5	7.0	129	e14	8.4	24	40	10	4.9	2.2	.82	24
21	4.1	78	70	e14	e8.4	29	36	9.4	4.5	2.3	.69	29
22	3.9	63	51	e14	e8.4	41	33	9.0	5.1	2.3	1.0	14
23	3.4	41	42	e14	e8.6	54	30	8.3	61	2.0	1.4	13
24	3.3	38	36	e14	e8.5	67	28	11	33	1.8	.81	13
25	3.4	36	85	e14	e8.4	79	26	11	21	2.1	.68	9.3
26	2.7	39	87	e13	e8.2	84	23	9.6	16	4.0	.72	7.2
27	5.2	70	58	e13	e8.2	75	30	8.4	23	2.7	.69	7.8
28	5.1	48	44	e13	e8.0	77	21	7.8	43	2.3	.74	6.7
29	4.3	36	35	e12	---	74	51	8.0	26	1.9	1.4	6.0
30	3.3	28	33	e12	---	73	68	12	18	1.6	1.7	6.7
31	2.9	---	31	e12	---	151	---	12	---	1.5	1.2	---
TOTAL	152.9	629.1	1639	552	273.2	1188	3103	687.5	481.0	287.0	42.80	211.43
MEAN	4.93	21.0	52.9	17.8	9.76	38.3	103	22.2	16.0	9.26	1.38	7.05
MAX	16	78	220	27	12	151	557	66	61	69	4.0	29
MIN	2.1	2.6	17	12	8.0	10	21	7.8	4.5	1.5	.68	.96
CFSM	.41	1.73	4.37	1.47	.81	3.17	8.55	1.83	1.33	.77	.11	.58
IN.	.47	1.93	5.04	1.70	.84	3.65	9.54	2.11	1.48	.88	.13	.65

CAL YR 1986 TOTAL 7600.8 MEAN 20.8 MAX 254 MIN 1.2 CFSM 1.72 IN. 23.37
WTR YR 1987 TOTAL 9246.93 MEAN 25.3 MAX 557 MIN .68 CFSM 2.09 IN. 28.43

e Estimated

01073500 LAMPREY RIVER NEAR NEWMARKET, N. H.

LOCATION.--Lat 43°06'09", long 70°57'11", Rockingham County, Hydrologic Unit 01060003, on right bank 200 ft upstream from Packers Falls, 2 mi northwest of Newmarket, and 4.6 mi upstream from mouth.

DRAINAGE AREA.--183 mi²

PERIOD OF RECORD.--Discharge: July 1934 to current year.
Water-quality records: Water year 1954.

REVISED RECORDS.--WSP 1231: 1936-37.

GAGE.--Water-stage recorder. Elevation of gage is 40 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Some regulation by Pawtuckaway and Mendums Ponds; combined capacity, about 600,000,000 ft³ Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--53 years, 283 ft³/s, 21.02 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,570 ft³/s, Apr. 7, 1987, gage height, 15.14 ft; minimum daily, 1 ft³/s, Oct. 21, 1935.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,570 ft³/s, Apr. 7, gage height, 15.14 ft; minimum daily, 13 ft³/s, Sept. 7, 8.

DISCHARGE, 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	45	97	460	440	e200	e130	e2850	668	89	184	29	19
2	41	92	385	365	e200	e140	e3670	612	84	156	27	18
3	37	88	923	368	e200	e160	e3500	536	102	381	35	17
4	58	85	1290	520	e190	e160	e3360	454	121	426	47	15
5	82	81	1310	538	e190	e160	e3980	450	176	410	41	14
6	80	164	1060	499	e190	e160	e5460	607	181	324	38	14
7	80	228	757	431	e190	e160	e7360	622	162	250	36	13
8	77	208	597	363	e180	e170	e5920	587	140	201	47	13
9	67	261	458	338	e180	e210	3520	496	143	169	34	25
10	65	283	450	308	e180	e240	2070	416	154	146	31	31
11	60	244	450	303	e170	e250	1260	359	146	123	33	28
12	56	231	412	305	e160	e240	941	318	139	109	30	26
13	60	219	e375	305	e160	e230	767	280	139	100	28	31
14	62	191	e340	287	e150	e230	684	249	130	93	26	135
15	64	269	334	e270	e150	e220	607	234	137	92	24	107
16	103	287	306	e260	e140	230	544	220	139	84	23	85
17	155	249	279	e240	e140	217	509	197	120	74	21	66
18	150	244	273	e230	e140	207	541	183	98	66	20	54
19	140	255	1220	e240	e140	228	557	169	82	61	18	52
20	136	223	1660	e240	e140	236	534	159	72	57	17	102
21	130	529	1610	e230	e140	263	497	142	66	54	16	213
22	122	707	1160	e230	e140	325	457	154	63	51	17	191
23	113	636	841	e230	e140	425	412	133	239	48	21	150
24	111	562	641	e230	e140	549	381	133	327	45	21	115
25	101	490	792	e220	e130	700	354	132	317	46	18	92
26	91	462	1030	e220	e130	870	315	132	258	46	17	76
27	107	618	992	e210	e120	892	288	123	234	41	15	68
28	117	701	826	e200	e120	896	244	117	290	40	15	61
29	112	697	e660	e200	---	864	435	110	259	37	17	56
30	109	579	566	e200	---	843	669	99	218	34	18	54
31	103	---	504	e200	---	1090	---	89	---	32	19	---
TOTAL	2834	9980	22961	9220	4450	11695	52686	9180	4825	3980	799	1941
MEAN	91.4	333	741	297	159	377	1756	296	161	128	25.8	64.7
MAX	155	707	1660	538	200	1090	7360	668	327	426	47	213
MIN	37	81	273	200	120	130	244	89	63	32	15	13
CFSM	.50	1.82	4.05	1.63	.87	2.06	9.60	1.62	.88	.70	.14	.35
IN.	.58	2.03	4.67	1.87	.90	2.38	10.71	1.87	.98	.81	.16	.39

CAL YR 1986 TOTAL 106964 MEAN 293 MAX 1900 MIN 30 CFSM 1.60 IN. 21.74
WTR YR 1987 TOTAL 134551 MEAN 369 MAX 7360 MIN 13 CFSM 2.01 IN. 27.35

e Estimated

01075800 STEVENS BROOK NEAR WENTWORTH, N. H.

LOCATION.--Lat 43°50'12", long 71°53'07", Grafton County, Hydrologic Unit 01070001, on left bank 150 ft upstream from highway bridge, 0.2 mi upstream from mouth, and 2.5 mi southeast of Wentworth.

DRAINAGE AREA.--2.94 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 595 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for periods of estimated daily discharges, which are fair, and those below 1.0 ft³/s, which are poor. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--24 years, 4.85 ft³/s, 22.40 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,120 ft³/s, June 30, 1973, gage height, 6.36 ft, from rating curve extended above 320 ft³/s; minimum, 0.01 ft³/s several days in 1963-65, 1971, 1975, 1977, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 90 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 27	0130	119	2.94	Apr. 5	1300	172	3.20
Mar. 31	2145	*456	*4.09				

Minimum discharge not determined; minimum daily, 0.11 ft³/s, Aug. 21, Sept. 5-7.

DISCHARGE, 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	3.2	1.0	10	2.1	1.2	.90	81	6.8	2.2	2.2	.16	.14
2	2.9	1.1	9.9	2.0	1.2	.87	25	6.8	1.9	1.7	.16	.13
3	2.4	1.1	36	2.0	1.2	.87	16	6.9	1.8	2.2	1.4	.13
4	4.8	1.1	31	1.8	1.2	.87	15	5.9	1.5	2.0	.98	.12
5	5.0	.98	14	1.8	1.2	.87	75	5.8	7.5	1.3	.50	.11
6	3.7	1.5	6.6	1.7	1.2	.87	47	12	4.6	.91	.35	.11
7	2.8	2.0	4.9	1.7	1.2	1.0	37	8.3	2.7	.73	.29	.11
8	2.4	4.2	4.4	1.7	1.2	2.4	30	5.9	3.4	.68	.21	.12
9	2.1	18	7.1	1.6	1.1	10	17	5.0	10	.63	.19	5.0
10	1.9	9.2	4.6	1.6	1.1	17	12	4.0	5.8	.58	.32	2.1
11	1.4	5.2	3.5	1.6	1.1	2.6	11	3.3	3.6	.63	.26	.82
12	1.4	4.1	3.1	1.7	1.1	2.0	12	3.2	2.6	.54	.24	.55
13	1.3	3.5	2.4	1.5	1.1	1.8	9.5	2.8	2.7	.42	.19	23
14	1.9	2.6	3.1	1.5	e1.1	1.6	7.2	2.5	2.0	.54	.16	14
15	2.7	2.5	2.6	1.5	e1.1	1.5	6.0	2.5	1.4	.54	.15	4.0
16	2.2	2.4	2.2	1.5	e1.1	1.4	5.6	2.3	.89	.38	.14	1.9
17	1.8	2.3	2.0	1.6	e1.0	1.3	5.2	2.0	.84	.32	.14	1.1
18	1.6	2.2	2.0	1.6	e1.0	1.2	6.1	1.8	.74	.29	.13	.80
19	1.5	2.1	3.2	1.6	e1.0	1.2	5.7	1.6	.60	.32	.13	.79
20	1.4	1.7	2.9	1.5	1.0	1.2	5.1	1.4	.46	.35	.15	2.2
21	1.3	2.8	2.4	1.4	1.0	1.1	4.3	1.3	.36	7.1	.11	5.2
22	1.2	2.4	2.1	1.4	.98	1.3	3.8	1.1	.35	2.6	.13	3.1
23	1.2	2.0	2.0	1.5	.97	2.5	3.2	1.0	23	1.2	.15	2.1
24	1.1	3.7	1.9	1.4	.94	8.2	3.2	3.2	8.3	.63	.13	1.4
25	1.1	4.4	2.9	1.3	.91	24	3.0	2.8	3.7	.54	.13	.98
26	1.1	24	4.4	1.3	.90	37	2.6	2.0	2.4	.46	.13	.73
27	1.1	61	3.4	1.3	.90	24	2.4	1.4	29	.35	.13	.68
28	1.2	23	e3.0	1.3	.90	20	2.3	1.6	20	.32	.13	.58
29	1.2	15	2.6	1.3	---	23	3.7	2.3	7.0	.26	.24	.50
30	1.1	12	2.4	1.2	---	36	6.5	1.7	3.5	.21	.19	.54
31	1.1	---	2.2	1.2	---	192	---	1.1	---	.19	.15	---
TOTAL	61.1	219.08	184.8	48.2	29.90	420.55	463.4	110.3	154.84	31.12	7.87	73.04
MEAN	1.97	7.30	5.96	1.55	1.07	13.6	15.4	3.56	5.16	1.00	.25	2.43
MAX	5.0	61	36	2.1	1.2	192	81	12	29	7.1	1.4	23
MIN	1.1	.98	1.9	1.2	.90	.87	2.3	1.0	.35	.19	.11	.11
CFSM	.67	2.48	2.03	.53	.36	4.61	5.25	1.21	1.76	.34	.09	.83
IN.	.77	2.77	2.34	.61	.38	5.32	5.86	1.40	1.96	.39	.10	.92

CAL YR 1986 TOTAL 1986.28 MEAN 5.44 MAX 200 MIN .12 CFSM 1.85 IN. 25.13
WTR YR 1987 TOTAL 1804.20 MEAN 4.94 MAX 192 MIN .11 CFSM 1.68 IN. 22.83

e Estimated

01076500 PEMIGEWASSET RIVER AT PLYMOUTH, N. H.

LOCATION.--Lat 43°45'33", long 71°41'10", Grafton County, Hydrologic Unit 01070001, on right bank 150 ft downstream from bridge at Plymouth and 0.3 mi downstream from Baker River.

DRAINAGE AREA.--622 mi²

PERIOD OF RECORD.--Discharge: October 1903 to current year. Records for April 1886 to September 1903, published in WSP 124, are unreliable and should not be used.

Water-quality records: Water years 1953, 1967-74, 1976-79.

REVISED RECORDS.--WSP 471: 1912-14. WSP 726: Drainage area. WSP 1231: 1904-11, 1913-14, 1917-18, 1919(M), 1920-25, 1926-27(M), 1929-31(M). WSP 1721: 1959(M). See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 457.07 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 1, 1910, nonrecording gage at sites 150 ft and 200 ft upstream at present datum or datum 1.11 ft lower. Jan. 1, 1910, to Sept. 30, 1926, nonrecording gage at site 200 ft upstream at present datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Some diurnal fluctuation during period 1940-52 caused by powerplants upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--84 years, 1,360 ft³/s, 29.69 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 65,400 ft³/s, Mar. 19, 1936, gage height, 29.0 ft, from floodmarks, from rating curve extended above 43,000 ft³/s on basis of computations of flow over dam at gage heights 23.0 ft, 27.4 ft, and 29.0 ft; minimum, 39 ft³/s, Oct. 1, 3, 4, 1948; minimum daily, 45 ft³/s, Sept. 20, 1923.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 12,600 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 1	0600	*53,200	*23.43	Apr. 5	2100	15,200	10.42

Minimum discharge, 165 ft³/s, Sept. 6, 7; minimum daily, 172 ft³/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	1080	474	1590	e600	e520	e310	38400	1610	889	1120	329	250
2	1240	475	1500	e760	e450	e340	12500	1540	815	915	292	268
3	934	557	3190	e620	e460	e360	6430	1510	820	984	877	234
4	1230	515	5510	e560	e500	e310	5010	1340	771	1070	1230	210
5	1450	489	2990	e620	e480	e290	9710	1270	1590	1110	706	201
6	1240	502	2070	e660	e450	e310	12900	1950	1230	867	543	186
7	1070	581	e1500	e640	e450	e340	9880	2110	885	757	452	172
8	928	656	e1000	e650	e450	e400	6720	1620	996	671	401	186
9	846	2230	e700	e640	e480	e700	4680	1370	2050	609	366	1640
10	796	2870	e1200	e630	e450	e620	3590	1250	1490	576	372	1510
11	730	1660	e1300	e620	e430	e550	3220	1220	1090	705	426	751
12	693	1260	e1050	e590	e400	e600	3340	1120	893	595	385	558
13	671	1070	e900	e680	e410	e540	3270	1150	917	722	334	691
14	713	831	e720	e540	e360	e500	2610	998	935	603	305	5680
15	991	833	e880	e630	e370	e470	2240	932	776	778	284	1900
16	834	797	e970	e580	e330	e440	2070	970	655	709	268	1060
17	755	768	e1020	e490	e355	e390	1930	861	620	554	252	756
18	706	743	e1000	e450	e370	e450	2280	813	572	472	236	615
19	655	700	e900	e540	e290	e540	2820	763	512	499	230	587
20	621	590	e940	e620	e230	e290	2860	708	473	512	239	598
21	604	729	e760	e540	e270	e500	2740	670	422	1200	236	882
22	587	988	e720	e560	e350	e560	2460	656	395	1050	221	773
23	560	762	e780	e560	e360	e700	1850	645	2090	738	254	640
24	581	750	e840	e550	e350	e900	1570	879	1930	587	268	559
25	530	1020	e930	e500	e340	2230	1470	969	1000	515	213	493
26	507	1130	e1400	e450	e335	3840	1270	816	768	542	204	447
27	540	9320	e1050	e700	e320	4090	1140	711	3140	553	205	440
28	573	4320	e920	e480	e290	3440	1060	672	7310	459	187	432
29	540	2710	e900	e470	---	3680	1160	804	2490	402	223	399
30	521	2040	e880	e450	---	5060	1480	965	1470	367	335	391
31	505	---	e730	e500	---	19600	---	775	---	350	291	---
TOTAL	24231	42370	40840	17880	10850	53350	152660	33667	39994	21591	11164	23509
MEAN	782	1412	1317	577	387	1721	5089	1086	1333	696	360	784
MAX	1450	9320	5510	760	520	19600	38400	2110	7310	1200	1230	5660
MIN	505	474	700	450	230	290	1060	645	395	350	187	172
CFSM	1.26	2.27	2.12	.93	.62	2.77	8.17	1.75	2.14	1.12	.58	1.26
IN.	1.45	2.53	2.44	1.07	.65	3.19	9.12	2.01	2.39	1.29	.67	1.41

CAL YR 1986 TOTAL 508033 MEAN 1392 MAX 14000 MIN 257 CFSM 2.24 IN. 30.38
WTR YR 1987 TOTAL 472106 MEAN 1293 MAX 38400 MIN 172 CFSM 2.08 IN. 28.22

e Estimated

01077000 SQUAM RIVER AT ASHLAND, N. H.

LOCATION.--Lat 43°42'19", long 71°37'49", Grafton County, Hydrologic Unit 01070001, on right bank 200 ft upstream from highway bridge, 0.7 mi north of Ashland, and 1.4 mi downstream from Little Squam Lake.

DRAINAGE AREA.--57.6 mi²

PERIOD OF RECORD.-Discharge: August 1939 to current year.
Water-quality records: Water year 1957.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 545 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good above 20 ft³/s, and fair below. Flow completely regulated by Squam and Little Squam Lakes.

AVERAGE DISCHARGE.--48 years, 89.3 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,090 ft³/s, July 4, 1973, gage height, 14.29 ft; minimum daily, 1.0 ft³/s, July 4-7, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 471 ft³/s, Apr. 5, gage height, 11.86 ft; minimum daily, 4.2 ft³/s, July 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	89	86	86	120	118	61	66	61	61	178	88	61
2	89	86	86	118	121	61	101	62	62	178	89	61
3	89	86	106	118	116	61	166	61	62	179	89	61
4	89	86	120	118	115	60	166	60	62	281	89	61
5	89	86	120	118	115	60	352	60	63	280	89	61
6	89	86	120	118	115	60	467	60	61	66	89	61
7	e89	86	120	118	115	61	466	60	61	4.2	88	61
8	e89	86	120	118	116	61	464	61	77	10	89	60
9	e89	87	119	120	118	61	461	60	112	47	88	61
10	e89	86	119	122	103	62	271	60	130	65	87	61
11	e89	86	120	122	95	59	165	60	131	66	89	61
12	89	86	119	124	91	59	163	60	133	66	87	61
13	89	86	120	122	91	60	166	60	133	65	87	62
14	89	85	120	118	91	61	165	60	129	80	86	63
15	89	86	120	118	90	61	165	60	129	89	87	61
16	89	86	120	121	89	61	165	60	130	89	87	61
17	89	71	120	121	89	61	114	60	105	89	87	61
18	89	60	121	118	89	62	84	60	89	89	87	61
19	88	59	121	117	89	61	83	61	89	89	86	61
20	87	60	118	117	73	61	69	61	89	89	87	61
21	89	61	118	117	61	62	60	61	89	89	87	61
22	88	61	118	117	61	63	60	60	89	89	86	61
23	87	61	118	117	61	63	61	60	139	89	86	61
24	87	61	118	118	61	63	61	61	165	89	86	61
25	88	61	120	118	61	63	61	62	166	87	86	60
26	87	75	121	118	61	61	61	60	166	87	86	60
27	87	86	120	119	61	59	60	60	169	87	86	60
28	87	86	121	118	61	59	60	61	168	87	84	60
29	87	86	122	117	---	59	60	62	208	87	84	60
30	86	86	122	117	---	59	60	62	283	87	84	60
31	86	---	122	117	---	69	---	61	---	87	70	---
TOTAL	2736	2350	3635	3679	2527	1894	4923	1877	3550	3064.2	2680	1826
MEAN	88.3	78.3	117	119	90.2	61.1	164	60.5	118	98.8	86.5	60.9
MAX	89	87	122	124	121	69	467	62	283	281	89	63
MIN	86	59	86	117	61	59	60	60	61	4.2	70	60

CAL YR 1986 TOTAL 35502.4 MEAN 97.3 MAX 167 MIN 1.4
WTR YR 1987 TOTAL 34741.2 MEAN 95.2 MAX 467 MIN 4.2

e Estimated

01078000 SMITH RIVER NEAR BRISTOL, N. H.

LOCATION.--Lat 43°34'04", long 71°44'54", Merrimack County, Hydrologic Unit 01070001, on right bank in Hill, 1.5 mi upstream from mouth, and 1.8 mi southwest of Bristol.

DRAINAGE AREA.--85.8 mi²

PERIOD OF RECORD.--Discharge: May 1918 to current year.
Water-quality records: Water years 1957, 1976-79.

REVISED RECORDS.--WSP 711: Drainage area. WSP 781: 1934. WSP 1231: 1919, 1920-21(M), 1922-31, 1932-33(M), 1941-43.

GAGE.--Water-stage recorder. Datum of gage is 449.80 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Nov. 25, 1933, nonrecording gage at site 1.5 mi upstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Prior to 1954, some diurnal fluctuation caused by small mill upstream; greater fluctuation prior to 1941. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--69 years, 144 ft³/s, 22.79 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,100 ft³/s, Mar. 19, 1936, gage height, 16.09 ft, from floodmarks, from rating curve extended above 2,700 ft³/s on basis of contracted-opening measurement of peak flow; minimum daily, 2.7 ft³/s, Aug. 2, 1933.
Maximum stage since at least 1885, that of Mar. 19, 1936.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 1,150 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 1	1130	*3,740	*10.21	Apr. 6	1130	2,090	7.46

Minimum discharge, 11 ft³/s, Sept. 6, 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	53	46	164	81	66	49	3460	362	54	150	18	20
2	47	45	142	92	66	51	1730	354	58	108	16	16
3	46	46	431	88	65	52	925	289	62	142	42	14
4	82	47	615	82	65	51	683	226	65	167	60	13
5	115	44	459	78	62	51	1290	196	162	146	41	12
6	97	50	273	76	60	52	2020	253	131	109	31	12
7	72	64	215	81	61	56	1730	243	83	86	25	12
8	61	85	169	75	61	73	1320	193	68	71	21	22
9	53	202	102	75	61	111	902	160	89	63	19	138
10	48	215	164	72	60	116	623	143	99	59	25	100
11	45	157	144	77	59	117	450	129	78	98	31	58
12	42	124	128	81	58	108	360	114	63	79	35	42
13	41	109	100	78	57	92	301	103	64	67	23	195
14	53	100	83	74	58	82	258	95	58	66	19	270
15	94	80	95	76	59	77	223	88	49	59	19	141
16	84	75	94	78	59	73	201	86	41	52	16	81
17	67	74	90	70	58	70	194	80	38	45	15	57
18	61	75	87	66	58	69	205	75	36	40	13	58
19	57	72	101	76	57	69	198	70	32	46	14	74
20	53	74	115	73	54	69	177	65	29	47	21	119
21	50	76	94	69	54	70	161	61	27	53	15	163
22	48	98	86	68	53	90	147	59	31	49	15	122
23	46	87	92	68	53	125	133	57	460	42	16	91
24	43	88	85	71	52	196	127	129	529	35	14	71
25	41	119	124	70	50	357	133	146	267	31	13	60
26	40	151	195	66	49	565	120	110	141	29	13	49
27	54	542	171	65	49	615	109	87	439	26	12	44
28	68	511	118	66	48	628	107	76	689	24	13	41
29	63	327	126	66	---	657	156	70	513	22	27	38
30	56	236	111	66	---	825	273	65	262	20	30	36
31	49	---	99	65	---	1980	---	57	---	19	25	---
TOTAL	1829	4019	5072	2289	1612	7596	18716	4241	4717	2050	697	2169
MEAN	59.0	134	164	73.8	57.6	245	624	137	157	66.1	22.5	72.3
MAX	115	542	615	92	66	1980	3460	362	689	167	60	270
MIN	40	44	83	65	48	49	107	57	27	19	12	12
CFSM	.69	1.56	1.91	.86	.67	2.86	7.27	1.59	1.83	.77	.26	.84
IN.	.79	1.74	2.20	.99	.70	3.29	8.11	1.84	2.05	.89	.30	.94

CAL YR 1986 TOTAL 59699 MEAN 164 MAX 1630 MIN 19 CFSM 1.91 IN. 25.88
WTR YR 1987 TOTAL 55007 MEAN 151 MAX 3460 MIN 12 CFSM 1.76 IN. 23.85

01080000 LAKE WINNIPESAUKEE AT WEIRS BEACH, N. H.

LOCATION.--Lat 43°36'27", long 71°27'30", Belknap County, Hydrologic Unit 01070002, 1,300 ft north of highway bridge at Weirs Beach.

DRAINAGE AREA.--363 mi² at outlet at Lakeport.

PERIOD OF RECORD.--Gage heights: September 1933 to current year. Prior to November 1937, monthend contents only, published in WSP 1301. Prior to October 1970, published as "at The Weirs."

REVISED RECORDS.--WDR NH-VT-78-1: 1938-77 (datum correction).

GAGE.--Water-stage recorder. Datum of gage is 499.92 ft above National Geodetic Vertical Datum of 1929. Prior to November 1937, nonrecording gage at lake outlet at Lakeport at datum 0.63 ft, corrected, higher. Nov. 24, 1937 to Nov. 7, 1965, water-stage recorder at site 500 ft south at present datum.

REMARKS.--Lake used for recreation and conservation for development of water power. Usable capacity, 7,220,000,000 ft³ between elevations 500.57 ft and 504.24 ft above National Geodetic Vertical Datum of 1929. Stage regulated at outlet and by Wentworth, Merrymeeting (Reservoirs in Merrimack River basin), and other lakes. Contents given herein are computed from gage height at 2400 on last day of month, eliminating the effect of seiche and wind action.

Capacity table (gage height, in feet, and contents, in millions of cubic feet)

2.0	13,880
3.0	15,840
4.0	17,840
5.0	19,850

EXTREMES FOR PERIOD OF RECORD.--Maximum daily gage height, 5.94 ft, June 4, 1984; minimum daily, 0.63 ft, Dec. 11, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum daily gage height, 4.61 ft, Apr. 13; minimum daily, 2.29 ft, Feb. 28.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.66	3.21	3.17	3.39	2.90	2.31	3.46	4.26	4.25	4.40	3.92	3.49
2	3.64	3.17	3.18	3.39	2.89	2.33	3.70	4.28	4.30	4.40	3.91	3.45
3	3.64	3.17	3.29	3.39	2.86	2.36	3.82	4.28	4.33	4.41	3.98	3.41
4	3.65	3.17	3.37	3.40	2.82	2.36	3.90	4.27	4.31	4.41	4.00	3.38
5	3.64	3.17	3.40	3.40	2.78	2.35	4.11	4.28	4.35	4.41	3.98	3.35
6	3.57	3.19	3.43	3.38	2.75	2.32	4.32	4.33	4.31	4.41	3.97	3.32
7	3.56	3.17	3.45	3.36	2.73	2.33	4.46	4.31	4.29	4.39	3.95	3.30
8	3.53	3.16	3.44	3.32	2.71	2.33	4.54	4.30	4.28	4.36	3.93	3.32
9	3.49	3.18	3.49	3.32	2.66	2.33	4.57	4.28	4.27	4.35	3.90	3.46
10	3.46	3.14	3.49	3.33	2.62	2.32	4.58	4.25	4.24	4.33	3.92	3.43
11	3.41	3.16	3.49	3.31	2.58	2.34	4.59	4.23	4.23	4.35	3.88	3.46
12	3.37	3.15	3.48	3.28	2.56	2.34	4.58	4.20	4.23	4.36	3.87	3.44
13	3.37	3.09	3.42	3.25	2.52	2.34	4.61	4.19	4.23	4.35	3.85	3.43
14	3.38	3.07	3.44	3.24	2.50	2.33	4.56	4.17	4.23	4.32	3.83	3.55
15	3.38	3.05	3.43	3.22	2.46	2.32	4.52	4.14	4.21	4.23	3.82	3.52
16	3.38	3.03	3.42	3.17	2.45	2.32	4.47	4.14	4.18	4.21	3.80	3.51
17	3.37	2.99	3.42	3.15	2.45	2.31	4.41	4.14	4.16	4.18	3.78	3.49
18	3.35	2.96	3.42	3.14	2.42	2.32	4.37	4.14	4.14	4.15	3.76	3.50
19	3.36	2.95	3.47	3.14	2.39	2.34	4.32	4.14	4.13	4.14	3.75	3.56
20	3.35	2.94	3.45	3.15	2.35	2.36	4.26	4.12	4.11	4.13	3.75	3.52
21	3.34	2.96	3.43	3.13	2.33	2.38	4.25	4.11	4.11	4.18	3.71	3.52
22	3.32	2.95	3.43	3.11	2.34	2.40	4.25	4.10	4.12	4.16	3.70	3.51
23	3.31	2.97	3.41	3.13	2.33	2.42	4.23	4.11	4.32	4.13	3.68	3.48
24	3.30	2.96	3.41	3.11	2.32	2.44	4.23	4.16	4.33	4.11	3.64	3.46
25	3.32	2.93	3.43	3.09	2.31	2.47	4.24	4.16	4.33	4.11	3.60	3.43
26	3.34	2.98	3.43	3.06	2.31	2.53	4.23	4.16	4.30	4.10	3.58	3.41
27	3.33	3.09	3.45	3.02	2.30	2.59	4.21	4.15	4.34	4.06	3.56	3.40
28	3.32	3.15	3.44	3.00	2.29	2.63	4.20	4.15	4.40	4.03	3.54	3.39
29	3.31	3.16	3.44	2.97	---	2.68	4.24	4.17	4.42	3.99	3.56	3.38
30	3.28	3.14	3.42	2.94	---	2.75	4.25	4.22	4.40	3.97	3.54	3.36
31	3.23	---	3.40	2.93	---	2.98	---	4.23	---	3.95	3.51	---
MEAN	3.42	3.08	3.41	3.20	2.53	2.42	4.28	4.20	4.26	4.23	3.78	3.44
MAX	3.66	3.21	3.49	3.40	2.90	2.98	4.61	4.33	4.42	4.41	4.00	3.56
MIN	3.23	2.93	3.17	2.93	2.29	2.31	3.46	4.10	4.11	3.95	3.51	3.30
(†)	16300	16180	16640	15670	14450	16380	18420	18360	18640	17680	16860	16560
(‡)	343	-46.3	172	-362	-504	721	787	-22.4	108	-358	-306	-116

CAL YR 1986 MEAN 3.68 MAX 4.49 MIN 2.52 (‡) 35.8
WTR YR 1987 MEAN 3.53 MAX 4.61 MIN 2.29 (‡) -20.9

† Contents, in millions of cubic feet, at 2400 on last day of month.
‡ Change in contents, equivalent in cubic feet per second.

01081000 WINNIPESAUKEE RIVER AT TILTON, N. H.

LOCATION.--Lat 43°26'31", long 71°35'20", Belknap County, Hydrologic Unit 01070002, on right bank at Tilton and 0.3 mi upstream from Packer Brook.

DRAINAGE AREA.--471 mi².

PERIOD OF RECORD.--Discharge: January 1937 to current year.
Water-quality records: Water year 1953.

REVISED RECORDS.--WSP 1901: 1960.

GAGE.--Water-stage recorder. Datum of gage is 441.87 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by powerplants prior to 1967 and by Winnipesaukee (station 01080000), Winnisquam 4.5 mi upstream, Wentworth, Merrymeeting (Reservoirs in Merrimack River basin), and other lakes upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--50 years, 708 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,580 ft³/s, May 31, 1984, gage height, 8.68 ft; minimum daily discharge, 48 ft³/s, Aug. 31, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,970 ft³/s, Apr. 1, gage height, 6.97 ft, minimum daily, 209 ft³/s, Oct. 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	282	237	755	838	1070	262	2790	1010	397	862	283	251
2	279	237	747	853	1000	261	2320	971	572	856	219	246
3	280	237	950	880	576	269	2000	938	652	876	277	246
4	311	226	1180	871	1010	e262	1760	919	829	871	240	244
5	329	214	1050	868	1070	e262	2020	1040	875	857	222	239
6	316	221	958	865	1070	268	2490	1380	856	850	222	247
7	413	314	921	836	1080	240	2570	1320	837	844	251	249
8	606	578	897	821	1070	256	2630	1100	777	832	277	252
9	633	648	862	786	1070	288	2600	1060	617	827	255	272
10	626	628	861	1010	1070	e281	2510	1050	698	779	279	280
11	627	630	849	1090	1060	e274	2430	1010	613	669	360	285
12	622	631	847	1090	1080	275	2300	882	601	648	277	283
13	609	630	837	1090	979	267	2230	879	601	677	268	272
14	517	632	825	1090	e857	260	2170	875	597	716	277	444
15	345	733	834	1090	e825	261	2200	765	694	857	242	544
16	306	791	835	1090	e807	313	2290	444	845	842	232	420
17	280	780	829	1090	818	516	2350	406	851	838	226	394
18	263	745	837	1090	816	491	2380	398	795	783	244	360
19	259	744	835	1090	732	484	2370	365	611	677	274	286
20	257	739	846	1090	e393	502	2320	306	443	619	275	291
21	253	771	851	1080	344	546	1900	304	481	420	267	299
22	242	772	844	1090	337	570	1190	307	457	333	223	306
23	246	761	841	1090	339	604	1010	312	658	319	252	294
24	247	766	838	1090	348	665	981	358	948	323	253	286
25	241	753	868	1080	345	708	914	343	759	328	275	279
26	238	764	904	1080	337	761	895	340	699	325	337	272
27	251	898	892	1080	300	804	874	334	772	317	334	274
28	209	863	862	1070	254	801	854	328	944	312	275	276
29	230	811	861	1070	---	795	886	325	903	310	283	271
30	248	778	856	1070	---	819	950	306	865	310	259	270
31	246	---	849	1080	---	1220	---	312	---	309	251	---
TOTAL	10811	18532	27021	31408	21057	14585	57184	20687	21247	19386	8209	8932
MEAN	349	618	872	1013	752	470	1906	667	708	625	265	298
MAX	633	898	1180	1090	1080	1220	2790	1380	948	876	360	544
MIN	209	214	747	786	254	240	854	304	397	309	219	239

CAL YR 1986 TOTAL 267554 MEAN 733 MAX 2000 MIN 209
WTR YR 1987 TOTAL 259059 MEAN 710 MAX 2790 MIN 209

e Estimated

01083000 NUBANUSIT BROOK NEAR PETERBOROUGH, N. H.

LOCATION.--Lat 42°53'10", long 71°58'24", Hillsborough County, Hydrologic Unit 01070003, on left bank 1.2 mi downstream from Edward MacDowell Reservoir, 1.3 mi northwest of Peterborough, and 1.5 mi upstream from mouth.

DRAINAGE AREA.--46.9 mi².

PERIOD OF RECORD.--October 1920 to September 1931, July 1945 to current year. Monthly discharge only October 1920, published in WSP 1301.

REVISED RECORDS.--WSP 561: 1921(M). WSP 1051: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 790 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1931, at site 550 ft downstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Records do not include flow diverted to Contoocook River basin Apr. 6-12, 1987. Flow regulated by mills and Nubanusit Lake, Edward MacDowell Reservoir since 1950 (Reservoirs in Merrimack River basin), and other reservoirs upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--52 years, 84.8 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,130 ft³/s, Apr. 11, 1931, gage height, 5.59 ft, site and datum then in use, from rating curve extended above 380 ft³/s; minimum daily, 0.5 ft³/s, Aug. 1, 1926. Maximum discharge since construction of Edward MacDowell Reservoir in 1950, 722 ft³/s, Apr. 16, 1987, gage height, 4.55 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 722 ft³/s, Apr. 16, gage height, 4.55 ft; minimum daily, 5 ft³/s, Oct 30.

DISCHARGE, 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	73	23	262	e110	e46	36	e63	221	32	258	e29	e19
2	74	32	184	95	e46	38	e181	215	28	165	e25	e19
3	85	34	59	e81	e46	36	e435	207	26	70	e28	e20
4	91	35	197	e79	e40	37	311	175	28	124	e32	20
5	90	33	309	e68	e35	e40	195	147	37	183	e30	16
6	105	34	330	e56	e35	e55	107	150	43	243	e27	13
7	110	37	321	50	e35	e63	80	136	37	e165	e23	12
8	126	44	338	e55	e35	e71	483	95	32	e61	e26	19
9	76	59	318	e60	e35	80	636	82	31	e54	e25	41
10	72	72	261	58	e35	e80	679	84	30	e54	e30	52
11	69	81	226	57	e35	e88	704	64	29	e58	42	48
12	68	82	166	57	e35	e88	703	66	29	e61	43	38
13	73	82	e110	59	e35	e48	699	67	30	e63	38	42
14	89	75	e85	e58	e35	e53	690	65	29	e63	37	79
15	96	64	76	57	e35	e53	691	49	27	e61	27	90
16	72	57	60	e58	e36	e52	703	29	24	e56	21	80
17	62	52	60	e58	e35	e51	707	36	22	e45	14	e57
18	69	50	60	e58	e35	e50	692	38	20	e35	e11	e50
19	76	52	e62	e58	e35	e53	663	38	16	e32	e11	e61
20	43	52	90	e58	e35	e53	633	35	14	e30	e11	e93
21	21	82	e90	e58	e35	e54	615	33	13	e32	e12	109
22	28	98	e90	e58	e35	e57	588	33	14	e32	e18	112
23	77	115	88	e58	e35	e65	553	33	54	e30	e19	101
24	e100	137	78	e58	e35	e93	520	41	83	e25	e19	82
25	e74	147	61	e58	e35	e126	483	45	76	e23	e19	64
26	e34	126	62	e58	37	e232	442	43	59	e40	e19	47
27	e47	76	64	e58	37	e258	388	40	81	e42	e22	39
28	e52	186	e64	e58	36	e282	296	44	122	e32	e19	43
29	37	271	85	e52	---	e295	159	48	184	e25	e22	48
30	5.0	269	109	e46	---	e239	200	43	256	e21	e24	55
31	7.6	---	127	e46	---	e126	---	37	---	e27	e24	---
TOTAL	2101.6	2557	4492	1898	1024	2952	14299	2439	1506	2210	747	1569
MEAN	67.8	85.2	145	61.2	36.6	95.2	477	78.7	50.2	71.3	24.1	52.3
MAX	126	271	338	110	46	295	707	221	256	258	43	112
MIN	5.0	23	59	46	35	36	63	29	13	21	11	12

CAL YR 1986 TOTAL 36790.6 MEAN 101 MAX 527 MIN 5.0
WTR YR 1987 TOTAL 37794.6 MEAN 104 MAX 707 MIN 5.0

e Estimated

01085500 CONTOOCOOK RIVER BELOW HOPKINTON DAM, AT WEST HOPKINTON, N. H.

LOCATION.--Lat 43°11'31", long 71°44'51", Merrimack County, Hydrologic Unit 01070003, on right bank 400 ft downstream from covered bridge at West Hopkinton, 0.2 mi downstream from Hopkinton Dam, and 5.9 mi upstream from Warner River.

DRAINAGE AREA.--427 mi²

PERIOD OF RECORD.--August 1903 to April 1907 (no winter records), August 1963 to current year. Published as "at West Hopkinton" 1903-7.

GAGE.--Water-stage recorder. Elevation of gage is 355 ft above National Geodetic Vertical Datum of 1929, from topographic map. August 1903 to April 1907, nonrecording gage at site 400 ft upstream at different datum.

REMARKS.--Records good except those for estimated daily discharges and periods of backwater from aquatic vegetation, Oct. 1 to Nov. 22 and July 24 to Sept. 27, which are fair. Flow regulated by powerplants and by Nubanusit Lake, Edward Macdowell Reservoir since 1950, Highland Lake, Lake Franklin Pierce, Hopkinton Lake since 1962 (Reservoirs in Merrimack River basin), and other reservoirs upstream. Diversion from Hopkinton Lake to Everett Lake on Piscataquog River during periods of high flow in March 1968, April 1969, March 1977, March 1979, May and June 1984, and April 1987. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--24 years (water years 1963-87), 713 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,530 ft³/s, Apr. 8, 1987, gage height, 10.89 ft; minimum daily, 15 ft³/s, July 22, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,530 ft³/s, Apr. 8, gage height, 10.89 ft; minimum daily discharge, 64 ft³/s, Sept. 6.

DISCHARGE, 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	408	470	1800	799	e450	e325	746	1440	147	1140	79	103
2	423	474	1610	778	e450	e260	1090	1480	140	1120	72	173
3	436	418	1370	693	e440	e225	1700	1480	158	1380	135	285
4	392	406	1680	e650	e430	e290	1280	1640	198	1540	215	251
5	463	328	2130	e630	e410	e425	540	1510	351	1250	302	124
6	424	364	2360	e610	e390	e370	455	1480	369	1020	339	64
7	360	399	2510	e600	e380	e420	3990	1510	405	785	242	133
8	319	419	2610	e580	e360	e470	7430	1200	372	623	107	190
9	448	716	2680	e570	e340	e580	7500	944	319	443	95	194
10	413	894	2740	e560	e330	686	7230	807	336	413	110	302
11	345	947	2370	e550	e325	672	7260	836	305	338	110	292
12	267	905	1590	e540	e320	718	7110	722	294	330	86	279
13	272	693	1340	e530	e315	706	7000	642	320	385	93	131
14	315	799	1140	e520	e310	653	7080	603	280	588	148	485
15	349	633	661	e520	e310	588	6870	538	180	477	256	618
16	490	470	780	e510	e305	560	6670	471	204	474	261	774
17	465	472	710	e510	e300	620	6350	425	151	411	170	613
18	450	600	694	e510	e300	493	5720	481	90	348	108	528
19	368	522	727	e500	e290	555	4760	468	108	144	78	652
20	341	563	838	e500	e290	509	3720	409	154	129	75	646
21	357	672	949	e500	e230	502	2170	398	116	217	82	818
22	405	977	1060	e490	e175	525	1850	309	111	301	84	873
23	315	1260	972	e490	e220	671	1570	301	992	315	89	870
24	274	1250	919	e490	e230	803	1360	333	1490	245	83	732
25	174	1330	978	e480	e240	1140	1180	384	816	98	79	610
26	124	1270	1160	e480	e250	1800	1090	383	721	124	72	539
27	183	1320	1180	e480	e275	2260	1050	335	832	147	74	539
28	240	1530	1080	e470	e310	2340	984	347	1670	145	81	567
29	375	1640	1010	e470	---	2410	1000	334	1820	120	100	341
30	552	1710	974	e460	---	2040	1140	359	1300	120	114	247
31	493	---	925	e460	---	867	---	271	---	115	111	---
TOTAL	11240	24451	43547	16930	8975	25483	107895	22840	14749	15285	4050	13173
MEAN	363	815	1405	546	321	822	3596	737	492	493	131	439
MAX	552	1710	2740	799	450	2410	7500	1640	1820	1540	339	873
MIN	124	328	661	460	175	225	455	271	90	98	72	64
(†)	0	0	0	0	0	0	33000	0	0	0	0	0

CAL YR 1986 TOTAL 322798 MEAN 884 MAX 4170 MIN 89
WTR YR 1987 TOTAL 308618 MEAN 846 MAX 7500 MIN 64

e Estimated
† Diversion, in cubic feet per second, from Hopkinton Lake to Everett Lake on Piscataquog River.

01085800 WEST BRANCH WARNER RIVER NEAR BRADFORD, N. H.

LOCATION.--Lat 43°15'33", long 72°01'35", Merrimack County, Hydrologic Unit 01070003, on left bank 75 ft downstream from small right-bank tributary, 200 ft upstream from highway bridge, and 3.5 mi west of Bradford.

DRAINAGE AREA.--5.75 mi².

PERIOD OF RECORD.--Discharge: May 1962 to current year.
Water-quality records: Water year 1976.

REVISED RECORDS.--WDR NH-VT-1: 1984.

GAGE.--Water-stage recorder. Elevation of gage is 950 ft above National Geodetic Vertical Datum of 1929, from topographic map.

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

AVERAGE DISCHARGE.--25 years, 11.6 ft³/s, 27.40 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 800 ft³/s, May 29 or 30, 1984, from rating curve extended above 210 ft³/s; minimum, about 0.06 ft³/s, about Sept. 20, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 110 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 27	0200	228	6.91	June 23	0615	319	7.48
Mar. 31	1445	374	7.78	June 27	1200	*413	*7.97
Apr. 6	1330	355	7.68	Sept. 13	2130	138	6.16

Minimum discharge, 0.51 ft³/s, Aug. 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	2.7	3.9	12	7.8	e4.5	3.8	140	44	3.1	10	1.0	1.7
2	2.5	4.3	11	e7.5	e4.4	4.1	53	44	2.8	11	.81	1.4
3	2.9	4.3	e25	e7.0	e4.3	3.7	43	33	3.0	47	3.4	1.2
4	7.5	3.8	e50	e6.8	e4.2	3.5	58	23	5.0	24	2.2	1.1
5	8.8	3.5	e25	6.6	e4.2	3.5	282	21	9.8	13	1.3	.90
6	6.0	4.5	e19	6.3	e4.1	3.7	272	51	5.2	8.9	1.1	.82
7	4.5	5.8	e16	6.5	e4.1	5.3	143	29	3.5	6.6	.89	.83
8	4.3	16	e14	e5.8	e4.1	e8.0	70	21	3.8	5.9	.80	1.5
9	4.1	35	e13	e5.6	e4.0	e14	44	17	12	5.4	.78	25
10	3.5	19	e14	e5.6	e4.0	e15	33	15	8.8	4.3	2.5	7.9
11	3.4	12	12	e5.8	e4.0	10	28	13	5.0	3.5	2.4	4.0
12	3.4	10	9.8	e5.8	e3.9	8.3	24	12	4.3	3.9	1.4	3.4
13	3.3	8.8	7.9	e5.6	e3.9	7.1	31	10	4.7	4.6	1.1	34
14	5.7	7.0	7.4	e5.5	e3.8	6.6	25	9.2	5.0	3.8	.89	40
15	6.9	6.8	7.5	e5.5	e3.7	6.3	20	8.7	3.4	3.0	.78	12
16	5.0	6.9	7.2	e5.5	e3.6	6.1	18	8.0	2.6	2.7	.74	6.8
17	4.4	6.7	7.1	e5.4	e3.6	5.7	19	7.2	2.2	2.3	.66	4.6
18	4.0	6.6	7.0	e5.4	e3.5	5.5	29	6.6	2.0	2.1	.59	12
19	3.5	6.4	8.5	e5.3	e3.5	5.6	24	6.3	1.9	1.8	.65	18
20	3.4	5.4	8.0	e5.2	e3.4	5.5	19	5.7	1.6	1.6	1.1	32
21	3.3	13	7.0	e5.2	e3.4	5.5	17	5.3	1.5	1.8	.74	36
22	3.3	11	6.6	e5.1	e3.3	6.8	15	4.9	6.7	1.7	1.6	18
23	3.2	7.8	6.5	e5.0	e3.2	13	13	4.6	141	1.6	3.2	12
24	3.1	17	6.3	e5.0	3.2	28	13	13	28	1.3	1.3	9.6
25	2.8	17	21	e5.0	3.2	58	13	9.0	13	1.2	.96	7.7
26	2.8	33	26	e4.9	3.3	71	11	7.3	10	1.1	.84	6.0
27	9.0	108	16	e4.8	3.4	63	10	5.8	157	1.1	.77	5.1
28	7.3	34	13	e4.7	3.4	72	12	5.4	59	1.3	1.2	4.3
29	5.6	23	10	e4.7	---	87	17	6.2	23	1.1	5.6	3.9
30	4.8	17	9.2	e4.6	---	117	39	5.1	14	.95	4.1	4.1
31	4.1	---	8.4	e4.5	---	271	---	3.9	---	1.4	2.1	---
TOTAL	139.1	457.5	411.4	174.0	105.2	923.6	1535	455.2	542.9	179.95	47.50	315.85
MEAN	4.49	15.2	13.3	5.61	3.76	29.8	51.2	14.7	18.1	5.80	1.53	10.5
MAX	9.0	108	50	7.8	4.5	271	282	51	157	47	5.6	40
MIN	2.5	3.5	6.3	4.5	3.2	3.5	10	3.9	1.5	.95	.59	.82
CFSM	.78	2.65	2.31	.98	.65	5.18	8.90	2.55	3.15	1.01	.27	1.83
IN.	.90	2.96	2.66	1.13	.68	5.98	9.93	2.94	3.51	1.16	.31	2.04

CAL YR 1986 TOTAL 4647.56 MEAN 12.7 MAX 138 MIN 1.2 CFSM 2.21 IN. 30.07
WTR YR 1987 TOTAL 5287.14 MEAN 14.5 MAX 282 MIN .59 CFSM 2.52 IN. 34.21

e Estimated

01087000 BLACKWATER RIVER NEAR WEBSTER, N. H.

LOCATION.--Lat 43°17'45", long 71°41'46", Merrimack County, Hydrologic Unit 01070003, on left bank 0.2 mi west of Dingit Corner, 2.4 mi downstream from Blackwater Dam, 2.5 mi southeast of Webster, and 6.5 mi upstream from mouth.

DRAINAGE AREA.--129 mi²

PERIOD OF RECORD.--Discharge: May 1918 to September 1920, February 1927 to current year. Published as "near Contoocook" 1918-20, 1927-35. Records published for both sites October 1934 to September 1935.

Water-quality records: Water year 1957.

REVISED RECORDS.--WSP 696: Drainage area. WSP 821: 1936(M). WSP 851: 1936. WSP 867: 1936 (flood-report data). WSP 1231: 1919-20, 1927, 1928(M), 1929-32, 1933-34(M), 1936 (calendar-year summaries).

GAGE.--Water-stage recorder. Elevation of gage is 430 ft above National Geodetic Datum of 1929, from topographic map. Prior to Oct. 1, 1935, chain gage at site 5 mi downstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. High flow regulated by Blackwater Reservoir since 1941 (Reservoirs in Merrimack River basin). Some regulation at low flow prior to 1933 by mill above station. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--62 years, 214 ft³/s, 22.53 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,000 ft³/s, Mar. 19, 1936, gage height, 11.78 ft, from floodmarks, from rating curve extended above 6,700 ft³/s on basis of slope-area and critical-depth measurements of peak flow; minimum, 3 ft³/s, Sept. 17, 1941; minimum daily, 7.6 ft³/s, Sept. 29, 1964. Maximum discharge since construction of Blackwater Reservoir in 1941, 2,390 ft³/s, Apr. 16, 1951, Apr. 10, 1952, gage height, 7.18 ft.

Maximum stage since at least 1733, that of Mar. 19, 1936.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,180 ft³/s, Apr. 16; gage height, 7.01 ft³; minimum, daily 14 ft³/s, Apr. 1.

DISCHARGE, 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	50	71	457	159	119	90	e14	e475	e92	459	36	51
2	48	65	260	e150	122	90	e18	e540	e88	346	34	47
3	50	61	340	e150	119	94	e300	e500	e105	338	41	41
4	64	60	590	148	118	97	e120	e460	e130	366	54	36
5	90	58	747	e140	116	96	e45	e430	e150	369	65	32
6	111	60	809	e140	113	95	e200	e400	e140	312	65	28
7	108	66	690	e140	111	98	e450	e425	e130	257	56	26
8	91	84	431	e135	111	112	861	e450	e135	189	48	26
9	80	145	314	e135	111	147	1080	e375	e140	158	42	40
10	70	213	304	e130	110	176	1270	e280	139	141	43	82
11	63	228	317	e130	108	184	e1500	e200	141	130	45	133
12	58	188	318	e130	107	178	e1550	e170	130	123	49	106
13	55	157	249	e130	105	162	e1710	e150	120	113	49	89
14	57	136	191	e130	102	150	2120	e140	115	104	46	174
15	65	118	230	e130	100	142	2120	e135	105	98	42	284
16	76	108	258	e130	99	136	2140	e132	87	90	38	253
17	88	105	244	127	99	131	2140	e130	75	82	34	160
18	83	105	218	130	100	127	2080	e128	69	75	31	120
19	76	108	176	e130	99	125	2020	e124	65	72	29	103
20	69	103	205	e130	98	126	1930	e120	66	68	28	114
21	64	121	180	e130	96	127	1870	e116	64	65	25	160
22	60	151	164	e130	96	138	1670	e114	66	63	26	193
23	59	155	175	128	96	172	e1300	e110	268	61	30	184
24	56	147	163	e125	94	239	e950	e130	511	58	32	149
25	54	147	170	e125	93	353	e550	e160	684	54	32	121
26	53	168	238	e120	91	509	e725	e150	404	50	30	102
27	60	306	306	120	89	680	e950	e140	348	47	28	87
28	69	434	260	120	89	757	e660	e130	646	44	27	77
29	76	470	242	119	---	801	e550	e115	962	42	31	71
30	81	472	222	119	---	e625	e375	e110	801	39	40	66
31	78	---	193	120	---	e100	---	e100	---	37	48	---
TOTAL	2162	4810	9661	4080	2911	7057	33268	7139	6976	4450	1224	3155
MEAN	69.7	160	312	132	104	228	1109	230	233	144	39.5	105
MAX	111	472	809	159	122	801	2140	540	962	459	65	284
MIN	48	58	163	119	89	90	14	100	64	37	25	26
MEAN†	69.9	183	290	131	104	301	1036	228	238	138	39.5	105
CFSM†	.54	1.42	2.25	1.02	.81	2.33	8.03	1.77	1.84	1.07	.31	.81
IN.†	.63	1.58	2.59	1.18	.84	2.69	8.96	2.04	2.06	1.24	.35	.91

CAL YR 1986 TOTAL 83904 MEAN 230 MAX 1550 MIN 31 MEAN† 230 CFSM† 1.78 IN.† 24.20
WTR YR 1987 TOTAL 86893 MEAN 238 MAX 2140 MIN 14 MEAN† 238 CFSM† 1.84 IN.† 25.06

e Estimated
† Adjusted for change in contents in Blackwater Reservoir.

01089000 SOUCOOK RIVER NEAR CONCORD, N. H.

LOCATION.--Lat 43°14'22", long 71°37'44", Merrimack County, Hydrologic Unit 01070002, on left bank 500 ft upstream from U.S. Highway 4, 0.9 mi upstream from Cemetery Brook, and 4.4 mi northeast of State Capitol at Concord.

DRAINAGE AREA.--76.8 mi²

PERIOD OF RECORD.--Discharge: October 1951 to current year (discontinued).
Water-quality records: Water years 1967-74.

REVISED RECORDS.--WSP 1331: 1952(M).

GAGE.--Water-stage recorder. Elevation of gage is 290 ft above National Geodetic Vertical Datum of 1929, from topographic map.

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

AVERAGE DISCHARGE.--35 years, 113 ft³/s, 19.98 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,700 ft³/s, Mar. 14, 1977, gage height, 14.50 ft; minimum, 1.5 ft³/s, Aug. 7, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 1	1300	*2,720	*13.09	Apr. 6	1500	1,550	11.01

Minimum discharge not determined; minimum daily, 9.6 ft³/s, Aug. 15.

DISCHARGE, 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	30	31	137	e115	e64	e50	2280	318	64	89	11	e15
2	30	30	132	e110	e62	e50	1220	266	65	75	10	e13
3	29	30	295	e105	e62	e50	678	225	81	136	15	e11
4	42	29	587	e100	e62	e50	522	198	75	126	29	e10
5	58	28	428	e98	e60	e50	915	192	108	98	23	e9.7
6	54	33	325	e96	e60	e50	1490	292	105	77	18	e9.7
7	47	52	278	e94	e58	e50	1060	276	80	64	14	e9.7
8	40	62	250	e92	e58	e65	782	226	71	54	13	e10
9	37	130	243	e90	e56	e94	601	194	80	49	11	e32
10	32	126	227	e88	e56	e90	481	174	83	46	13	e31
11	31	98	209	e86	e54	e85	407	155	70	44	15	e25
12	31	89	195	e85	e54	e74	355	141	63	44	14	e21
13	28	83	167	e85	e54	e66	314	129	63	45	12	e20
14	29	70	148	e82	e54	e62	279	120	65	45	10	e83
15	44	64	167	e82	e54	e60	254	113	63	45	9.6	e56
16	51	62	157	e80	e54	e58	234	109	54	47	13	e51
17	46	62	153	e80	e54	e58	221	104	48	48	12	e42
18	42	61	151	e78	e52	e58	226	100	44	48	11	e37
19	37	61	238	e78	e52	e58	223	96	40	e45	e10	e47
20	34	55	270	e78	e52	e58	206	89	37	e42	e12	e57
21	33	105	e185	e75	e52	e62	192	82	34	e34	e11	e69
22	32	154	e125	e75	e52	e68	181	79	32	e27	e12	e62
23	35	112	e100	e72	e52	e105	170	74	246	e33	e23	e53
24	32	102	e85	e72	e52	e195	161	100	263	20	e15	e48
25	30	121	225	e72	e52	e340	167	126	145	18	e13	e42
26	30	126	323	e70	e52	517	154	108	102	17	e11	e37
27	42	360	e200	e70	e52	482	144	92	121	17	e10	e35
28	49	290	e160	e70	e50	486	140	84	249	16	e10	e32
29	42	201	e140	e68	---	476	206	79	165	14	e17	e25
30	38	160	e130	e66	---	500	314	77	114	13	e19	e20
31	33	---	e125	e64	---	759	---	73	---	12	e16	---
TOTAL	1168	2987	6555	2576	1546	5226	14577	4491	2830	1488	432.6	1013.1
MEAN	37.7	99.6	211	83.1	55.2	169	486	145	94.3	48.0	14.0	33.8
MAX	58	360	587	115	64	759	2280	318	263	136	29	83
MIN	28	28	85	64	50	50	140	73	32	12	9.6	9.7
CFSM	.49	1.30	2.75	1.08	.72	2.20	6.33	1.89	1.23	.62	.18	.44
IN.	.57	1.45	3.18	1.25	.75	2.53	7.06	2.18	1.37	.72	.21	.49

CAL YR 1986 TOTAL 45969.0 MEAN 126 MAX 1460 MIN 9.2 CFSM 1.64 IN. 22.27
WTR YR 1987 TOTAL 44889.7 MEAN 123 MAX 2280 MIN 9.6 CFSM 1.60 IN. 21.74

e Estimated

01090800 PISCATAQUOG RIVER BELOW EVERETT DAM, NEAR EAST WEARE, N. H.

LOCATION.--Lat 43°05'29", long 71°39'36", Hillsborough County, Hydrologic Unit 01070002, on right bank 500 ft downstream from Everett Dam and 1.4 mi southeast of East Weare.

DRAINAGE AREA.--63.1 mi².

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

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 320 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by Everett Lake (Reservoirs in Merrimack River basin). Diversion from Hopkinton Lake on Contoocook River to Everett Lake during periods of high flow in the spring of 1968, 1969, 1977, 1979, 1984, and 1987. Occasional regulation by small reservoirs upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--24 years, 104 ft³/s, 22.38 in/yr, adjusted for storage and diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,770 ft³/s, June 12, 1984, gage height, 9.09 ft; no flow for part of Aug. 27, Nov. 18, 1964, Oct. 22, 1968, Oct. 4, 1978, caused by unusual regulation; minimum daily discharge, 0.39 ft³/s, Sept. 6, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,650 ft³/s, Apr. 23, gage height, 8.90 ft; minimum daily, 5.8 ft³/s, Aug. 22.

DISCHARGE, 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	54	234	180	65	49	6.1	1080	38	88	13	12
2	18	54	105	148	63	53	102	1190	34	74	12	11
3	16	51	31	146	62	54	680	1170	38	233	16	10
4	20	55	177	143	62	53	552	1230	44	249	19	9.1
5	28	81	413	139	59	51	65	1250	67	171	18	8.4
6	29	79	486	136	57	50	50	1220	68	118	15	8.2
7	27	100	462	109	58	53	113	1190	53	86	13	8.2
8	20	93	325	90	59	65	1120	1150	e46	83	11	8.3
9	19	58	238	81	58	87	1390	1210	e40	66	11	18
10	18	27	212	79	56	92	1400	1260	e45	55	13	25
11	16	27	156	85	56	94	1400	757	e40	47	16	22
12	15	93	155	86	54	91	1380	72	e27	40	15	19
13	15	152	129	82	53	86	1470	294	e27	48	13	21
14	18	148	105	77	50	129	1530	424	e27	57	11	60
15	26	137	88	78	48	65	1520	461	e27	56	11	63
16	37	83	68	81	47	50	1490	447	e34	47	9.5	46
17	37	63	68	75	48	64	1470	217	e33	41	8.6	33
18	35	55	68	73	48	62	1430	77	e34	36	8.3	28
19	34	57	101	78	47	65	1430	58	e34	31	7.3	36
20	34	56	149	79	46	67	1420	50	e34	28	6.8	49
21	35	115	149	72	45	70	1410	45	e34	27	6.2	66
22	39	144	146	74	45	82	1540	44	e34	25	5.8	66
23	42	146	132	79	45	107	1510	41	e160	24	6.8	59
24	44	149	83	76	44	142	1460	45	e300	22	6.3	45
25	44	74	68	71	43	151	1470	46	e320	20	6.0	35
26	44	19	71	69	43	160	1450	43	e130	19	6.5	29
27	52	20	74	67	44	266	1430	39	e104	17	6.4	26
28	56	253	75	64	44	339	1410	36	e252	16	6.8	22
29	54	413	76	62	---	344	899	34	e172	18	9.1	21
30	57	390	144	62	---	235	520	34	122	15	12	20
31	54	---	236	66	---	17	---	35	---	15	12	---
TOTAL	1004	3246	5024	2807	1449	3293	33117.1	15249	2418	1872	331.4	884.2
MEAN	32.4	108	162	90.5	51.7	106	1104	492	80.6	60.4	10.7	29.5
MAX	57	413	486	180	65	344	1540	1260	320	249	19	66
MIN	15	19	31	62	43	17	6.1	34	27	15	5.8	8.2
MEAN†	33.2	113	165	82.7	51.3	172	1390	149	81.9	58.9	10.7	29.9
CFSM†	.53	1.79	2.61	1.32	.81	2.73	22.03	2.36	1.30	.94	.17	.47
IN.†	.61	2.00	3.02	1.51	.85	3.14	24.58	2.72	1.45	1.08	.20	.53

CAL YR 1986 TOTAL 37983.9 MEAN 104 MAX 947 MIN 8.1 MEAN† 105 CFSM† 1.66 IN.† 22.54
WTR YR 1987 TOTAL 70694.7 MEAN 194 MAX 1540 MIN 5.8 MEAN† 194 CFSM† 3.07 IN.† 41.68

e Estimated
† Adjusted for change in contents in, and diversion from Hopkinton Lake on Contoocook River to, Everett Lake.

01092000 MERRIMACK RIVER NEAR GOFFS FALLS, BELOW MANCHESTER, N. H.

LOCATION.--Lat 42°56'54", long 71°27'52", Hillsborough County, Hydrologic Unit 01070002, on right bank 600 ft upstream from bridge on Interstate Highway 193, 0.8 mi downstream from Bowman Brook, 1.3 mi north of Goffs Falls, and 2.3 mi downstream from Piscataquog River.

DRAINAGE AREA.--3,092 mi²

PERIOD OF RECORD.--Discharge: October 1936 to current year. October 1936 monthly discharge only, published in WSP 1301.

Water-quality records: Water years 1952-53, 1957, 1971.

REVISED RECORDS.--WSP 1231: 1937. WSP 1271: 1937(M, m).

GAGE.--Water-stage recorder. Datum of gage is 109.27 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated by powerplants, by Franklin Falls Reservoir since 1942, and by Squam, Newfound, Winnipesaukee, Winnisquam, and other lakes and reservoirs upstream (Reservoirs in Merrimack River basin). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--51 years, 5,310 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 102,500 ft³/s, Sept. 23, 1938, gage height, 25.87 ft, from rating curve extended above 48,000 ft³/s on basis of computations of flow over dam at gage heights 25.87 ft and 35.19 ft; minimum daily, 98 ft³/s, Oct. 11, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1722, 150,000 ft³/s, Mar. 20, 1936, gage height, 35.19 ft, from floodmarks, from rating curve extended above 48,000 ft³/s by method explained above.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 22,000 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 1	1730	38,700	12.45	Apr. 6	2400	*48,300	*14.47

Minimum daily discharge, 1,030 ft³/s, Aug. 26.

DISCHARGE, 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	2140	2050	8790	e5000	e3100	1880	35800	10200	2720	8510	1120	1070
2	2180	2270	e7000	e4200	e3500	1970	33200	11000	2190	7160	1090	1070
3	2470	2320	9020	e4300	e3000	2360	27600	10600	2890	7660	1620	1060
4	3000	2080	16300	4270	e2800	2050	28700	10000	3060	7840	1620	1160
5	3300	2240	16900	e3700	3040	1790	31800	9620	3850	6790	2290	1270
6	3080	2430	13700	4180	3390	1990	45800	9890	4200	5760	2150	1120
7	3220	1860	11600	e3700	2950	2040	46200	10800	4700	5390	1710	1040
8	3620	2460	e10000	4260	3250	2140	41700	10800	3500	4340	1400	1060
9	3160	3960	e9500	4160	e3400	3220	36400	9590	3510	4160	1220	1770
10	3070	5150	e8500	3540	e2700	3300	32900	8280	4010	3370	1530	2040
11	3100	6130	e8000	3810	e3500	3760	31100	7780	4460	3850	1670	2810
12	2910	5570	e7600	4230	3040	3450	29500	6410	3780	3590	1260	2520
13	3590	5390	e6500	4290	2460	3400	28700	5260	3020	3140	1240	2730
14	2460	4310	e4800	4180	e2400	3170	28100	5170	3150	2860	1230	3180
15	2600	3990	e5000	4170	e2400	2800	27500	4780	2900	3700	1090	6330
16	2370	4180	e4500	3940	e2400	3420	25300	4220	2250	3090	1210	6160
17	2650	3740	4490	e3700	e2400	2880	22100	3320	2670	3160	1330	4510
18	2650	3860	5610	3310	2330	2700	19600	3970	2290	2820	1440	3380
19	2840	3450	e5800	e3000	2520	3110	18500	3210	2190	2450	1300	3040
20	2820	3350	e6500	e3600	2820	2930	17700	3210	1760	1530	1240	2970
21	1940	3930	e6000	e3500	1950	2690	16000	2800	1350	2300	1040	3500
22	2210	5160	5810	e3400	1780	3350	13600	2740	1570	2380	1050	3910
23	1550	5450	e5400	e3300	1860	4640	11900	2160	4280	2690	1050	3720
24	1730	5470	5210	e3200	1770	5610	9910	2590	9480	2640	1060	3380
25	2050	5420	5990	3290	1800	8270	9270	3350	9580	1860	1040	2980
26	2380	5710	7680	e3400	2110	10700	8690	3510	6560	1460	1030	2480
27	1790	8100	7850	e3000	2010	13800	8060	3410	5650	1490	1050	2140
28	2720	15100	e6400	e3400	2050	15500	8170	2430	10300	1510	1070	2000
29	1870	13700	e5600	e3100	---	15500	8420	2360	15000	1440	1110	1730
30	2260	10900	5780	e3000	---	16300	8560	2620	11800	1430	1070	1770
31	2110	---	e5400	e2800	---	19900	---	2950	---	1400	1040	---
TOTAL	79840	149730	237230	114930	72730	170620	710780	179030	138670	111770	40370	77900
MEAN	2575	4991	7653	3707	2597	5504	23690	5775	4622	3605	1302	2597
MAX	3620	15100	16900	5000	3500	19900	46200	11000	15000	8510	2290	6330
MIN	1550	1860	4490	2800	1770	1790	8060	2160	1350	1400	1030	1040

CAL YR 1986 TOTAL 2102780 MEAN 5761 MAX 28700 MIN 1060
WTR YR 1987 TOTAL 2083600 MEAN 5708 MAX 46200 MIN 1030

e Estimated

01093800 STONY BROOK TRIBUTARY NEAR TEMPLE, N. H.

LOCATION.--Lat 42°51'36", long 71°50'00", Hillsborough County, Hydrologic Unit 01070002, on left bank 150 ft downstream from highway bridge, 2.9 mi north of Temple, and 5.5 mi upstream from mouth.

DRAINAGE AREA.--3.60 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 920 ft above National Geodetic Vertical Datum of 1929, from topographic map.

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

AVERAGE DISCHARGE.--24 years, 7.22 ft³/s, 27.24 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 508 ft³/s, Apr. 5, 1987, gage height, 5.32 ft, from rating curve extended above 230 ft³/s; maximum gage height, 7.81 ft, Feb. 3, 1970, Dec. 21, 1973 (ice jam); no flow for part of Sept. 26, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 110 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Dec.3	0945	146	4.05	Apr. 5	0230	*a508	*5.32
Mar. 31	1830	437	5.13				

a from rating curve extended above 230 ft³/s.

Minimum discharge not determined; minimum daily, 0.24 ft³/s, Aug. 18.

DISCHARGE, 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	2.6	12	e6.2	e2.1	2.3	71	22	1.6	.92	.49	e.65
2	.52	1.5	17	e5.8	e2.0	4.3	30	26	1.3	1.6	.38	.61
3	1.3	1.7	91	e5.6	e2.0	1.7	21	19	1.6	11	.71	.84
4	3.1	2.7	41	e5.2	2.0	1.5	31	13	1.5	5.9	.52	.83
5	1.7	2.4	24	e4.9	1.9	1.5	306	11	4.1	2.0	.25	.82
6	2.2	6.8	21	e4.7	e2.0	2.3	191	20	2.2	1.8	.31	.78
7	1.6	4.7	21	e4.5	e2.0	4.2	130	14	2.5	1.3	.39	.86
8	e2.2	11	16	e4.3	e1.9	8.4	49	8.6	2.9	1.3	e.45	1.2
9	1.6	14	16	e4.0	e1.9	9.0	31	8.9	1.3	1.7	e.56	2.7
10	.73	5.8	18	e3.8	e1.9	16	27	7.1	1.7	1.2	e.68	1.3
11	1.3	6.8	11	e3.7	e1.8	6.9	20	7.3	1.7	1.2	e.58	.56
12	1.5	5.2	e10	e3.5	e1.8	8.0	15	5.1	2.0	1.3	e.52	.80
13	2.5	7.0	5.8	e3.4	e1.8	4.9	14	5.6	3.1	2.1	e.46	3.0
14	3.2	4.9	e6.8	e3.3	e1.7	2.8	18	3.9	1.7	1.8	e.40	6.0
15	2.0	4.1	e7.0	e3.1	e1.7	3.1	15	2.8	1.6	.81	e.32	2.4
16	1.7	4.0	e7.5	e3.0	e1.6	3.0	8.9	3.0	1.3	1.3	e.29	1.6
17	1.5	4.5	6.3	e2.9	e1.6	2.8	14	2.7	1.2	1.0	e.26	1.2
18	1.3	4.4	e13	e2.8	e1.5	2.6	31	2.3	1.3	1.0	e.24	1.5
19	1.4	4.0	e20	e2.8	e1.5	2.9	21	2.2	1.4	.57	e.32	4.4
20	1.3	7.7	e12	e2.7	e1.4	2.7	15	2.5	1.1	1.0	e.47	6.8
21	1.4	45	7.2	e2.6	e1.4	2.7	13	2.8	1.4	1.3	e.38	9.0
22	1.2	18	e9.0	e2.5	e1.4	3.2	10	2.5	.64	.61	e.85	5.3
23	1.2	14	e8.0	e2.4	e1.3	6.8	13	1.1	4.1	.60	e.90	3.1
24	.92	25	5.3	e2.4	1.3	13	11	2.2	3.5	.48	e.60	2.4
25	1.1	17	e15	e2.3	e1.3	26	8.7	2.9	1.1	.32	e.40	1.9
26	.74	37	e17	e2.3	1.4	35	7.9	3.1	1.8	.56	e.34	1.9
27	4.0	53	e9.6	e2.2	1.5	33	6.9	2.5	12	.61	e.31	1.6
28	2.6	26	e9.0	e2.2	1.9	33	6.2	3.5	e9.0	.45	e.60	2.0
29	2.1	22	e8.0	e2.2	---	36	13	2.4	2.8	.45	e1.3	1.3
30	1.4	13	e7.2	e2.1	---	45	18	2.1	1.2	.59	e1.1	1.6
31	1.6	---	e6.5	e2.1	---	227	---	1.9	---	.43	e.80	---
TOTAL	51.50	375.8	478.2	105.5	47.6	551.6	1166.6	214.0	74.64	47.20	16.18	68.95
MEAN	1.66	12.5	15.4	3.40	1.70	17.8	38.9	6.90	2.49	1.52	.52	2.30
MAX	4.0	53	91	6.2	2.1	227	306	26	12	11	1.3	9.0
MIN	.52	1.5	5.3	2.1	1.3	1.5	6.2	1.1	.64	.32	.24	.56
CFSM	.46	3.48	4.28	.95	.47	4.94	10.8	1.92	.69	.42	.14	.64
IN.	.53	3.88	4.94	1.09	.49	5.70	12.05	2.21	.77	.49	.17	.71

CAL YR 1986 TOTAL 2990.57 MEAN 8.19 MAX 200 MIN .52 CFSM 2.28 IN. 30.90
WTR YR 1987 TOTAL 3197.77 MEAN 8.76 MAX 306 MIN .24 CFSM 2.43 IN. 33.04

e Estimated

010965852 BEAVER BROOK AT NORTH PELHAM, N.H.

LOCATION.--Lat 42°46'59", Long 07°12'14", Rockingham county, Hydrologic Unit 01070002, on right bank 10 ft downstream from highway bridge at the Wilton-Pelham town line.

DRAINAGE AREA.--47.8 mi²

PERIOD OF RECORD.--October 1986 to September 1987.

GAGE.--Water-stage recorder. Elevation of gage is 170 ft above National Geodetic Vertical datum of 1929, from topographic map.

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

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

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Dec. 20	0015	953	10.20	Apr. 6	1100	*a1,850	*12.88
Apr. 1	unknown	1,500	unknown				

a from graph based on gage readings

Minimum discharge, 1.2 ft³/s, Aug. 27, 28.

DISCHARGE, 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	25	114	126	e47	e45	e1100	e300	26	18	5.0	4.5
2	12	19	95	111	e46	e70	e900	e290	24	17	4.9	3.6
3	12	18	304	106	e45	e100	e650	e190	23	41	6.9	3.2
4	18	18	366	e100	e45	e95	e500	e150	25	41	13	2.7
5	43	18	298	e98	e44	e90	e350	e130	39	32	9.2	2.5
6	34	24	220	e95	e44	e88	e1500	e68	39	25	7.1	2.0
7	26	33	170	e92	e44	e80	e1180	e75	29	21	6.1	1.8
8	22	42	141	e90	e43	e76	e850	e190	27	18	5.5	1.9
9	19	54	116	e88	e43	e120	e615	e175	35	17	4.9	7.0
10	16	45	e105	e86	e42	e130	e450	e150	28	17	5.5	10
11	15	41	e100	e84	e41	e90	e400	e125	23	19	7.0	6.3
12	15	53	e90	e84	e41	e80	e350	e86	21	16	6.9	4.8
13	13	48	e85	e82	e40	e70	e310	78	22	15	5.5	7.4
14	15	40	e78	e78	e40	e67	e275	70	22	13	4.7	34
15	17	37	76	e76	e40	e62	e240	65	19	15	3.9	21
16	18	34	70	e74	e39	e58	e220	61	17	16	3.6	13
17	16	34	68	e72	e39	e56	e200	58	16	11	3.3	9.2
18	14	32	73	e68	e39	e54	e180	54	15	9.5	2.8	8.0
19	14	32	531	e66	e39	e54	e170	49	14	8.8	2.3	16
20	14	41	862	e64	e39	e55	e160	45	14	7.6	2.2	42
21	15	252	615	e62	e39	e62	e150	45	12	7.4	1.9	66
22	14	269	364	e60	e39	e80	e140	42	12	7.4	1.7	42
23	14	204	254	e58	e39	e125	e130	43	29	6.9	1.6	32
24	13	157	194	e56	e39	e200	e120	52	36	6.4	1.5	26
25	12	129	217	e54	e40	e300	e108	52	25	5.9	1.4	23
26	12	127	371	e52	e40	e525	e96	45	23	5.7	1.4	18
27	24	165	321	e52	e41	e275	e110	41	24	5.7	1.2	15
28	36	158	284	e51	e42	e150	e110	37	31	5.4	1.3	14
29	29	134	191	e51	---	e190	e290	40	27	4.7	2.9	13
30	26	117	157	e50	---	e200	e340	34	21	4.3	4.7	14
31	29	---	140	e48	---	e300	---	29	---	4.3	5.3	---
TOTAL	590	2400	7070	2334	1159	3947	12194	2869	718	442.0	135.2	463.9
MEAN	19.0	80.0	228	75.3	41.4	127	406	92.5	23.9	14.3	4.36	15.5
MAX	43	269	862	126	47	525	1500	300	39	41	13	66
MIN	12	18	68	48	39	45	96	29	12	4.3	1.2	1.8
CFSM	.40	1.67	4.77	1.58	.87	2.66	8.50	1.94	.50	.30	.09	.32
IN.	.46	1.87	5.50	1.82	.90	3.07	9.49	2.23	.56	.34	.11	.36

WTR YR 1987 TOTAL 34322.1 MEAN 94.0 MAX 1500 MIN 1.2 CFSM 1.97 IN. 26.71

e Estimated

RESERVOIRS IN MERRIMACK RIVER BASIN

01077500 NEWFOUND LAKE on Newfound River, 1.7 mi north of Bristol, N. H., used for recreation and for storage of water for power, has usable capacity of 1,690,000,000 ft³. Records provided by New Hampshire Water Resources Board.

01078500 FRANKLIN FALLS RESERVOIR on Pemigewasset River, 2 mi north of Franklin, N. H., completed in 1942, used for flood control, has usable capacity of 6,700,000,000 ft³. Records provided by U. S. Army Corps of Engineers.

01080000 LAKE WINNIPESAUKEE on Winnipesaukee River (see station 01080000).

01082500 EDWARD MACDOWELL RESERVOIR on Nubanusit Brook, at West Peterborough, N. H., 2 mi northwest of Peterborough, completed in 1950, used for flood control, has usable capacity of 558,000,000 ft³. Records provided by U. S. Army Corps of Engineers.

01086500 BLACKWATER RESERVOIR on Blackwater River, at Swett's Mills, 1 mi south of Webster, N. H., completed in 1941, used for flood control, has usable capacity of 2,004,000,000 ft³. Records provided by U. S. Army Corps of Engineers.

01090700 EVERETT LAKE on Piscataquog River, 1.3 mi southeast of East Weare, N. H., completed in 1962, used for flood control and recreation, has usable capacity of 3,768,000,000 ft³. Records provided by U. S. Army Corps of Engineers.

Hopkinton and Everett Lakes, connected by a canal, are operated as a unit above elevation 400.00 ft. Diversion from Hopkinton Lake to Everett Lake in March 1968, April 1969, March 1977, March 1979, May and June 1984, and April 1987.

MONTHEND USABLE CONTENTS, IN MILLIONS OF CUBIC FEET, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

	Newfound Lake	Franklin Falls Reservoir	Edward MacDowell Reservoir
Sept. 30, 1986	1146	128	9.4
Oct. 31	745	120	6.7
Nov. 30	745	175	57.0
Dec. 31	745	122	27.6
Jan. 31, 1987	779	122	14.4
Feb. 28	775	113	15.9
Mar. 31	1411	1299	164.0
Apr. 30	1161	135	13.0
May 31	1369	122	8.6
June 30	1468	183	17.5
July 31	1365	96	0.0
Aug. 31	1259	120	7.9
Sept. 30	1278	109	10.8

	Blackwater Reservoir	Everett Lake
Sept. 30, 1986	.3	47.0
Oct. 31	.8	49.2
Nov. 30	60.0	61.7
Dec. 31	1.2	70.7
Jan. 31, 1987	.9	49.8
Feb. 28	.8	48.7
Mar. 31	196.0	224.0
Apr. 30	7.6	965.0
May 31	.7	46.4
June 30	14.6	49.8
July 31	.2	45.8
Aug. 31	.4	45.8
Sept. 30	.5	47.0

01128500 CONNECTICUT RIVER AT FIRST CONNECTICUT LAKE, NEAR PITTSBURG, N. H.

LOCATION.--Lat 45°05'14", long 71°17'34", Coos County, Hydrologic Unit 01080101, on right bank of the intersecton of Highway 26 and Bungy Road 5 mi east of Colebrook.

DRAINAGE AREA.--83.0 mi².

PERIOD OF RECORD.--April 1917 to current year.

REVISED RECORDS.--WSP 756: Drainage area. WSP 1001: 1931-39. WSP 1231: 1921-23(M), 1925-26.

GAGE.--Water-stage recorder. Elevation of gage is 1,560 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Jan. 1, 1918, discharge computed from flow through gates at dam 0.2 mi upstream. Jan. 1 to July 28, 1918, nonrecording gage at present site and datum.

REMARKS.--No estimated daily discharges. Records good. Flow completely regulated by First Connecticut and Second Connecticut Lakes (Reservoirs in Connecticut River basin). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--70 years, 196 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,200 ft³/s, June 16, 1943, gage height, 6.25 ft, from rating curve extended above 1,900 ft³/s on basis of computation of flow over dam at gage height 6.12 ft; maximum gage height, 6.35 ft May 5, 1925, backwater from logging operations; minimum daily discharge, 1.7 ft³/s, Apr. 22, 1983.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 335 ft³/s, Sept. 2, gage height, 2.75 ft; minimum daily, 4.8 ft³/s, Mar. 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	309	290	152	240	243	301	7.1	8.0	28	112	210	329
2	309	289	152	241	241	298	6.2	8.0	24	112	209	327
3	310	290	152	241	241	257	5.8	8.0	120	112	210	326
4	309	291	151	240	241	207	6.0	8.0	211	112	208	325
5	310	291	151	240	241	207	6.3	8.0	210	112	209	324
6	309	291	152	238	239	207	6.3	8.0	210	112	208	323
7	309	289	152	237	237	199	6.3	8.0	208	112	208	321
8	309	289	152	251	237	199	6.3	8.0	208	112	208	321
9	309	288	152	259	254	163	6.3	8.0	275	112	208	186
10	309	217	152	258	286	110	6.4	8.0	322	162	208	115
11	309	158	152	256	303	110	6.7	8.0	321	260	209	115
12	308	155	152	256	304	110	6.8	8.0	316	306	209	115
13	308	154	152	256	304	110	6.8	8.0	312	306	208	115
14	307	154	152	255	304	110	6.8	8.0	312	270	207	115
15	307	153	152	253	304	110	6.8	8.0	257	219	205	116
16	307	153	209	252	301	110	6.8	7.7	217	219	204	117
17	307	130	249	252	300	42	6.8	7.5	216	219	206	117
18	305	147	249	252	300	4.9	6.8	7.9	215	220	206	117
19	305	152	249	251	300	4.9	7.3	7.8	215	221	206	117
20	304	152	249	251	294	4.9	7.4	7.7	215	175	205	117
21	304	152	249	249	291	4.9	7.4	7.6	214	122	204	129
22	304	152	249	248	292	4.9	7.4	7.5	154	122	204	152
23	303	152	249	248	288	4.9	7.4	8.2	108	122	204	152
24	303	151	249	248	285	4.8	7.4	9.7	109	122	204	152
25	303	149	247	247	301	4.9	7.4	11	112	123	204	152
26	301	149	245	246	298	5.1	7.4	12	112	124	204	152
27	300	150	244	247	307	5.3	7.4	11	112	172	204	152
28	300	152	243	246	303	5.3	7.4	13	112	211	204	152
29	300	151	242	245	---	5.4	7.4	16	112	210	204	152
30	282	152	241	243	---	5.6	8.0	19	112	210	204	152
31	294	---	240	243	---	6.9	---	24	---	210	273	---
TOTAL	9453	5843	6181	7689	7839	2922.7	206.6	297.6	5669	5333	6464	5555
MEAN	305	195	199	248	280	94.3	6.89	9.60	189	172	209	185
MAX	310	291	249	259	307	301	8.0	24	322	306	273	329
MIN	282	130	151	237	237	4.8	5.8	7.5	24	112	204	115

CAL YR 1986 TOTAL 59351.1 MEAN 163 MAX 444 MIN 4.9
WTR YR 1987 TOTAL 63452.8 MEAN 174 MAX 329 MIN 4.8

01129200 CONNECTICUT RIVER BELOW INDIAN STREAM, NEAR PITTSBURG, N. H.

LOCATION.--Lat 45°02'25", long 71°26'37", Coos County, Hydrologic Unit 01080101, on right bank 1,200 ft downstream from Indian Stream, 2.5 mi west of Pittsburg, and at mile 376.5.

DRAINAGE AREA.--254 mi²

PERIOD OF RECORD.--Discharge: October 1956 to current year.

REVISED RECORDS.--WDR MA-NH-RI-VT-73-1: 1958, 1960(M), 1969(M).

GAGE.--Water-stage recorder. Elevation of gage is 1,150 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discahrges, which are fair. Flow regulated by First Connecticut and Second Connecticut Lakes and Lake Francis 3.7 mi upstream (Reservoirs in Connecticut River basin). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--30 years, 565 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,080 ft³/s, Nov. 29, 1959, gage height, 7.07 ft, from rating curve extended above 2,600 ft³/s; minimum daily, 30 ft³/s, Aug. 6, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,620 ft³/s, Aug. 15, gage height, 6.66 ft; minimum daily, 59 ft³/s, Mar. 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	933	825	210	787	628	804	3200	143	469	257	418	500
2	467	835	e200	737	628	814	1150	161	403	277	415	500
3	503	841	187	682	622	658	616	202	271	268	423	500
4	589	818	455	679	622	453	471	193	236	280	445	500
5	613	796	315	674	622	479	760	182	235	325	430	500
6	701	785	288	670	615	441	956	218	198	300	420	496
7	857	786	228	667	611	441	1040	200	166	272	415	495
8	854	794	307	667	609	445	663	167	199	257	410	495
9	829	869	e780	688	607	363	456	148	662	248	410	350
10	817	770	e780	702	622	290	388	140	469	314	411	231
11	777	479	700	700	655	286	489	108	291	421	413	227
12	757	447	726	695	653	275	563	111	246	453	411	224
13	744	429	716	695	648	207	537	115	282	452	407	321
14	740	391	698	690	645	223	409	101	252	424	405	380
15	927	405	703	688	640	213	340	100	234	382	401	137
16	879	403	763	686	635	199	305	114	263	381	400	109
17	875	396	811	676	644	120	303	112	341	362	400	152
18	845	392	809	675	669	51	285	111	317	354	400	151
19	828	374	803	674	e688	52	256	113	291	352	397	142
20	814	351	799	669	e715	51	211	103	323	307	397	137
21	806	360	790	665	e741	53	178	69	304	255	395	170
22	804	361	782	661	e755	61	157	77	246	262	399	230
23	504	368	777	660	e788	94	132	132	179	259	401	228
24	716	450	767	656	e816	176	123	627	169	240	395	230
25	801	549	768	655	e809	320	123	380	167	243	395	242
26	785	556	767	651	e795	602	110	240	160	297	391	239
27	803	719	763	648	819	1080	102	182	256	330	391	255
28	826	429	757	643	810	882	97	311	456	406	391	255
29	835	321	759	637	---	816	108	561	316	434	391	305
30	851	254	755	635	---	969	130	855	242	427	391	355
31	858	---	781	631	---	2100	---	469	---	422	444	---
TOTAL	23938	16553	19744	20943	19111	14018	14658	6745	8643	10261	12612	9056
MEAN	772	552	637	676	683	452	489	218	288	331	407	302
MAX	933	869	811	787	819	2100	3200	855	662	453	445	500
MIN	467	254	187	631	607	51	97	69	160	240	391	109

CAL YR 1986 TOTAL 176906 MEAN 485 MAX 2460 MIN 96
WTR YR 1987 TOTAL 176282 MEAN 483 MAX 3200 MIN 51

e Estimated

01129300 HALLS STREAM NEAR EAST HEREFORD, QUEBEC

(International gaging station)

LOCATION.--Lat 45°02'41", long 71°29'54", Compton County, on right bank opposite Alain's farm, 2.5 mi downstream from East Hereford, and 3.7 mi upstream from mouth.

DRAINAGE AREA.--85 mi².

PERIOD OF RECORD.--Discharge: October 1962 to current year in reports of Geological Survey. October 1948 to September 1962 available from Water Survey of Canada, Department of the Environment.

GAGE.--Water-stage recorder. Elevation of gage is 1,090 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Dec. 13, 1962, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair.

COOPERATION.--This station is maintained by Canada under agreement with the United States.

AVERAGE DISCHARGE.--39 years, 169 ft³/s, 27.00 in/yr. Records were provided by Water Survey of Canada.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,500 ft³/s, June 30, 1973, gage height, 13.07 ft; minimum daily, 4 ft³/s, Sept. 10, 1960.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1943 reached a discharge of 21,000 ft³/s by slope-area measurement at site 0.5 mi downstream.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 4,410 ft³/s, Apr. 1, gage height, unknown; minimum daily, 5 ft³/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	434	126	123	60	e32	e30	2160	130	300	104	24	10
2	242	155	111	52	e32	e30	830	153	272	84	22	9.0
3	214	149	334	49	e31	e32	558	152	159	71	26	8.0
4	223	128	537	52	e28	e32	501	117	127	90	38	7.7
5	276	109	263	47	e27	e32	816	101	130	117	28	5.6
6	247	102	182	44	e26	e33	823	117	101	77	24	5.0
7	258	109	147	42	e25	e33	763	110	84	54	21	5.6
8	194	129	125	42	e24	e35	523	89	153	45	19	5.6
9	163	205	117	44	e24	e39	357	72	805	42	17	14
10	153	211	111	42	e23	e88	304	66	341	38	16	19
11	119	148	102	e39	e23	e78	339	59	187	35	13	17
12	103	129	93	e38	e22	e60	334	61	138	29	13	16
13	96	114	95	e38	e21	e55	291	64	138	93	13	123
14	101	87	112	e37	e20	e51	227	55	114	86	14	277
15	335	94	84	e36	e20	e48	193	51	99	216	12	87
16	172	91	77	e36	e19	e43	159	53	86	100	11	50
17	130	89	73	e35	e19	e41	142	51	131	62	11	39
18	114	85	68	e35	e19	e38	132	46	91	47	10	37
19	102	71	67	e35	e19	e36	113	41	72	44	9.1	33
20	91	55	67	e37	e19	e36	94	36	75	42	6.1	27
21	86	54	58	e39	e20	38	78	32	60	61	7.0	25
22	87	58	53	e46	e21	55	70	33	52	58	7.1	22
23	108	65	51	e47	e22	109	61	53	48	43	10	22
24	127	82	50	e47	e24	248	58	332	49	33	10	21
25	95	106	47	e46	e25	487	62	170	48	39	10	20
26	85	124	63	e44	e26	936	55	107	50	152	10	21
27	102	678	60	e42	e26	1210	49	81	533	87	14	34
28	142	306	60	e40	e28	855	48	203	501	47	12	33
29	152	210	55	e38	---	840	50	667	230	37	11	27
30	182	162	51	e35	---	1230	72	907	144	31	12	55
31	153	---	47	e34	---	2540	---	309	---	27	11	---
TOTAL	5086	4231	3483	1298	665	9418	10262	4518	5318	2091	461.3	1075.5
MEAN	164	141	112	41.9	23.7	304	342	146	177	67.5	14.9	35.8
MAX	434	678	537	60	32	2540	2160	907	805	216	38	277
MIN	85	54	47	34	19	30	48	32	48	27	6.1	5.0
CFSM	1.93	1.66	1.32	.49	.28	3.57	4.02	1.71	2.09	.79	.18	.42
IN.	2.23	1.85	1.52	.57	.29	4.12	4.49	1.98	2.33	.92	.20	.47

CAL YR 1986 TOTAL 59390.0 MEAN 163 MAX 2310 MIN 11 CFSM 1.91 IN. 25.99
WTR YR 1987 TOTAL 47906.8 MEAN 131 MAX 2540 MIN 5.0 CFSM 1.54 IN. 20.97

e Estimated

01129440 MOHAWK RIVER NEAR COLEBROOK, N.H.

LOCATION.--Lat 44° 52' 28", Long 71° 24' 38", Coos County, Hydrologic Unit 01080101, on right bank of the intersection of Highway 26 and Bungy Road, 5 mi east of Colebrook.

DRAINAGE AREA.--36.7 mi²

PERIOD OF RECORD.--October 1986 to September 1987.

GAGE.--Water-stage recorder. Elevation of gage is 1,220 ft above National Geodetic Vertical Datum of 1929, from topographic map.

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

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

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 1	0131	*a7,630	*8.93	May 24	0200	a916	6.50
Apr. 6	1809	a590	6.13	June 8	1615	a1,090	6.66

a from rating curve extended above 200 ft³/s.

Minimum discharge, 8.9 ft³/s, Sept. 5-8.

DISCHARGE, 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	e80	45	e40	e33	e25	e15	2110	80	72	30	15	10
2	e74	60	e45	e36	e24	e15	325	87	58	28	14	10
3	e70	52	185	e40	e23	e14	210	84	47	32	24	10
4	e66	48	147	e42	e22	e14	205	75	47	46	24	9.5
5	e72	41	e84	e42	e21	e14	360	71	61	34	20	9.1
6	e68	39	e74	e41	e20	e15	452	73	44	27	16	8.9
7	e70	44	e66	e39	e19	e20	370	62	39	24	15	8.9
8	67	50	e62	e38	e18	e30	241	53	290	23	15	9.1
9	59	82	e60	e37	e17	e50	167	48	305	22	13	71
10	57	66	e57	e35	e17	e85	161	45	119	29	14	33
11	51	51	e54	e34	e16	84	189	41	76	31	17	19
12	50	48	e52	e33	e16	73	189	44	64	27	14	15
13	49	44	e50	e32	e15	63	172	40	70	36	13	139
14	46	48	e48	e32	e15	55	136	35	63	40	12	118
15	63	50	e47	e31	e15	50	122	38	55	70	12	37
16	51	42	e45	e31	e14	44	112	39	50	35	12	25
17	46	41	e43	e31	e14	41	110	34	79	27	11	22
18	43	39	e42	e31	e14	36	111	32	48	25	10	20
19	41	35	e40	e31	e15	35	106	29	40	31	10	18
20	41	e40	e39	e31	e15	34	95	27	39	31	12	17
21	41	e100	e38	e31	e15	28	82	26	34	56	11	20
22	41	70	e37	e31	e16	40	72	26	30	33	11	20
23	49	67	e36	e30	e17	56	62	73	56	26	10	19
24	50	62	e35	e30	e17	89	66	313	35	23	9.8	19
25	43	59	e34	e30	e16	131	61	88	33	22	9.5	18
26	41	79	e34	e30	e16	230	52	61	28	27	9.6	17
27	53	316	e33	e30	e15	202	43	53	71	27	10	19
28	64	104	e33	e30	e15	149	41	102	87	21	9.7	17
29	58	74	e33	e29	---	194	50	193	51	19	10	16
30	56	50	e32	e28	---	e210	64	85	37	17	12	19
31	49	---	e32	e27	---	e1000	---	67	---	16	11	---
TOTAL	1709	1946	1657	1026	482	3116	6536	2124	2128	935	406.6	793.5
MEAN	55.1	64.9	53.5	33.1	17.2	101	218	68.5	70.9	30.2	13.1	26.4
MAX	80	316	185	42	25	1000	2110	313	305	70	24	139
MIN	41	35	32	27	14	14	41	26	28	16	9.5	8.9
CFSM	1.50	1.77	1.46	.90	.47	2.74	5.94	1.87	1.93	.82	.36	.72
IN.	1.73	1.97	1.68	1.04	.49	3.16	6.63	2.15	2.16	.95	.41	.80

WTR YR 1987 TOTAL 22859.1 MEAN 62.6 MAX 2110 MIN 8.9 CFSM 1.71 IN. 23.17

e Estimated

01129500 CONNECTICUT RIVER AT NORTH STRATFORD, N. H.

LOCATION.--Lat 44°44'56", long 71°37'50", Coos County, Hydrologic Unit 01080101, on left bank at North Stratford, 400 ft downstream from Nulhegan River, and at mile 344.5.

DRAINAGE AREA.--799 mi².

PERIOD OF RECORD.--Discharge: August 1930 to current year.
Water-quality records: Water year 1957.

REVISED RECORDS.--WSP 781: 1934(M). WSP 891: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 880.17 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by powerplants and by First Connecticut and Second Connecticut Lakes and Lake Francis (Reservoirs in Connecticut River basin) 36 mi upstream.

AVERAGE DISCHARGE.--57 years, 1,576 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,700 ft³/s, June 16, 1943, gage height, 14.67 ft from rating curve extended above 15,000 ft³/s; maximum gage height, 20.60 ft Mar. 6, 1979, from floodmark in gage well (ice jam); minimum daily discharge, 108 ft³/s, Sept. 29, 1960.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 20,000 ft³/s, Apr. 1, maximum gage height, 13.17 ft; minimum daily discharge, 350 ft³/s, Mar.21.

DISCHARGE, 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	3700	1670	1120	e1130	e880	e1090	e18100	1350	1970	1090	666	647
2	2150	1730	979	e1050	e870	e1100	e11000	1420	1930	956	661	667
3	1860	1840	1780	e1060	e860	e920	5680	1410	1450	948	858	660
4	2120	1680	3340	e1040	e850	e800	e3500	1270	1180	1150	847	653
5	2640	1590	2380	e1010	e840	e820	e3000	1190	1260	1120	740	645
6	2310	1520	1530	e1030	e830	e720	e4000	1330	1090	906	682	640
7	2530	1530	1350	e1050	e820	e710	e6000	1300	912	771	652	638
8	2240	1620	1100	e1050	e810	e760	4900	1070	1260	694	635	643
9	2000	2060	955	e1040	e800	e780	3320	921	4780	658	623	1060
10	1870	2460	e1200	e1030	e810	e790	2630	843	3250	707	709	814
11	1700	1670	e1350	e1040	e820	e780	2810	758	1860	847	735	566
12	1600	1430	e1450	e1060	e810	e700	3060	757	1360	852	662	478
13	1540	1340	e1400	e1070	e800	e600	3030	787	1350	1060	625	1540
14	1500	1110	e1350	e1050	e800	e600	2440	688	1260	1320	609	3360
15	2110	1180	e1250	e1020	e800	e560	2030	653	1080	1390	602	1540
16	2040	1150	e1400	e1030	e800	e540	1840	695	963	1020	595	917
17	1800	1130	e1400	e980	e820	e450	1760	635	1270	841	580	670
18	1670	1120	e1400	e940	e830	e400	1690	584	1120	831	565	579
19	1580	1030	e1400	e980	e860	e385	1600	539	926	859	564	507
20	1520	826	e1400	e1000	e890	e360	1440	499	837	997	614	463
21	1490	868	e1350	e990	e930	e350	1270	467	824	1090	594	475
22	1480	922	e1250	e980	e980	e430	1130	447	731	851	570	522
23	1460	1080	e1250	e990	e1010	e620	988	699	869	698	581	527
24	1430	1130	e1250	e1000	e1050	e820	966	2580	794	613	568	522
25	1550	1370	e1250	e980	e1080	e1600	990	2110	704	590	550	528
26	1470	1420	e1300	e960	e1090	e2600	866	1350	761	849	548	534
27	1560	4350	e1300	e950	e1090	e3900	770	1040	3600	842	542	586
28	1760	2900	e1250	e940	e1080	e4000	704	1140	3420	768	538	591
29	1920	2000	e1200	e930	---	e4300	755	3730	2030	757	555	546
30	1800	1570	e1220	e910	---	e4700	983	2760	1380	721	573	702
31	1850	---	e1200	e900	---	e8500	---	2390	---	690	560	---
TOTAL	58250	47296	43354	31190	24910	45685	93252	37412	46221	27486	19403	23220
MEAN	1879	1577	1399	1006	890	1474	3108	1207	1541	887	626	774
MAX	3700	4350	3340	1130	1090	8500	18100	3730	4780	1390	858	3360
MIN	1430	826	955	900	800	350	704	447	704	590	538	463

CAL YR 1986 TOTAL 566475 MEAN 1552 MAX 14500 MIN 360
WTR YR 1987 TOTAL 497679 MEAN 1364 MAX 18100 MIN 350

e estimated

01130000 UPPER AMMONOOSUC RIVER NEAR GROVETON, N. H.

LOCATION.--Lat 44°37'30", long 71°28'10", Coos County, Hydrologic Unit 01080101, on left bank 75 ft upstream from highway bridge, 0.2 mi downstream from Nash Stream, and 2.8 mi northeast of Groveton.

DRAINAGE AREA.--232 mi².

PERIOD OF RECORD.--Discharge: August 1940 to November 1980, October 1982 to September 1987. Water-quality records: Water year 1955.

GAGE.--Water-stage recorder. Elevation of gage is 920 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are fair. Prior to May 21, 1969, some regulation by pond 9 mi upstream on Nash Stream. Small diversion upstream for municipal supply of Berlin. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--45 years, 471 ft³/s, 27.57 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,100 ft³/s, May 20, 1969, gage height, 12.01 ft in gage well, 12.85 ft, from floodmarks, from rating curve extended above 5,600 ft³/s on basis of contracted-opening measurement of peak flow, caused by failure of dam on Nash Stream; minimum, 32 ft³/s, Sept. 14, 1948.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1936 reached a stage of about 10.6 ft, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,900 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 1	1430	*5,250	*7.29	Apr. 7	1900	3610	6.08

Minimum discharge, 44 ft³/s, Sept. 7-9.

DISCHARGE, 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	664	178	498	e160	e120	e97	4910	622	378	183	79	65
2	439	228	518	e165	e115	e96	3880	631	388	155	76	63
3	423	299	739	e170	e105	e94	2250	716	351	184	149	58
4	480	241	1180	e165	e105	e93	1500	620	301	401	160	51
5	661	220	e680	e160	e105	e92	1680	567	401	330	113	47
6	605	195	e420	e170	e100	e93	2410	674	373	212	90	45
7	605	207	e360	e165	e100	e94	3370	795	286	162	79	44
8	479	226	e300	e155	e100	e120	2890	609	322	142	84	45
9	417	400	e230	e145	e100	e200	1810	498	1090	134	78	477
10	373	655	e400	e140	e100	e180	1320	447	785	140	99	588
11	330	433	e350	e150	e105	e140	1410	415	467	150	139	266
12	302	353	e300	e145	e105	e125	1610	401	375	127	111	155
13	287	308	e230	e145	e105	e115	1610	390	375	166	85	458
14	285	192	e270	e140	e105	e105	1360	351	338	217	73	1900
15	378	293	e260	e140	e105	e100	1120	353	289	219	68	1010
16	337	268	e250	e140	e100	e98	1040	412	245	144	66	420
17	299	247	e230	e140	e100	e98	990	351	344	119	61	290
18	280	231	e220	e135	e100	e97	1040	317	279	133	58	224
19	249	192	e210	e135	e100	e96	1180	288	217	124	55	179
20	228	133	e200	e135	e100	e95	1190	262	185	228	64	166
21	213	151	e190	e130	e105	e100	1070	240	162	213	59	220
22	209	228	e185	e130	e105	e110	916	227	150	155	56	253
23	204	306	e180	e130	e105	e130	708	292	233	125	66	205
24	221	373	e175	e135	e105	e170	610	398	307	107	58	174
25	197	511	e195	e135	e105	e250	549	414	202	120	53	158
26	179	488	e225	e135	e105	e500	471	345	168	207	51	147
27	195	1910	e200	e130	e100	e740	425	287	263	175	48	166
28	255	1760	e190	e125	e98	e580	393	293	499	126	46	161
29	241	1050	e180	e120	---	e620	417	576	363	104	58	142
30	223	697	e170	e120	---	e1000	497	514	248	96	78	158
31	200	---	e165	e120	---	3190	---	410	---	87	73	---
TOTAL	10458	12973	9900	4410	2903	9618	44626	13715	10384	5185	2433	8335
MEAN	337	432	319	142	104	310	1488	442	346	167	78.5	278
MAX	664	1910	1180	170	120	3190	4910	795	1090	401	160	1900
MIN	179	133	165	120	98	92	393	227	150	87	46	44
CFSM	1.45	1.86	1.38	.61	.45	1.34	6.41	1.91	1.49	.72	.34	1.20
IN.	1.68	2.08	1.59	.71	.47	1.54	7.16	2.20	1.67	.83	.39	1.34
(†)	1.69	1.74	2.73	2.53	3.02	3.50	2.47	2.14	2.47	2.00	2.56	1.80

CAL YR 1986 TOTAL 167604 MEAN 459 MAX 4700 MIN 72 CFSM 1.98 IN. 26.87
WTR YR 1987 TOTAL 134940 MEAN 370 MAX 4910 MIN 44 CFSM 1.59 IN. 21.64

e Estimated
† Diversion, in cubic feet per second, for municipal supply of Berlin; records furnished by city of Berlin.

01131500 CONNECTICUT RIVER NEAR DALTON, N. H.

LOCATION.--Lat 44°24'36", long 71°43'16", Coos County, Hydrologic Unit 01080101, on left bank 250 ft upstream from highway bridge, 1,200 ft downstream from dam of Gilman Paper Co., 1.2 mi downstream from Dalton, and at mile 300.1.

DRAINAGE AREA.--1,514 mi².

PERIOD OF RECORD.--Discharge: March 1927 to current year. Published as "at Waterford, Vt." 1927-35. Records published for both sites January to September 1935. Water-quality records: Water years 1953, 1971.

REVISED RECORDS.--WSP 891: Drainage area. WSP 1231: 1935. WSP 1301: 1928-35(M).

GAGE.--Water-stage recorder. Datum of gage is 799.89 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 30, 1935, nonrecording gage at bridge 10.5 mi downstream at mean sea level. Jan. 1, 1935, to June 29, 1937, nonrecording gage at bridge 250 ft downstream at present datum. Since June 2, 1961, auxiliary water-stage recorder 10.8 mi downstream from base gage. July 11, 1956, to June 1, 1961, auxiliary nonrecording gage read hourly at same site.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by powerplants and by First Connecticut and Second Connecticut Lakes, Lake Francis (Reservoirs in Connecticut River basin), and other reservoirs. These reservoirs have a combined usable capacity of about 8,300,000,000 ft³.

AVERAGE DISCHARGE.--60 years, 2,893 ft³/s, adjusted to drainage area at present site.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,300 ft³/s, Mar. 20, 1936, gage height, 25.6 ft; minimum daily, 115 ft³/s, Oct. 3, 1937.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 29,200 ft³/s, Apr. 2, gage height, 20.54 ft; minimum daily, 512 ft³/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	4440	2360	2810	1660	e1240	1450	20600	3000	3100	2140	917	872
2	4310	2320	2000	1530	e1210	1470	28100	3230	3040	1810	868	711
3	3180	2640	2230	1640	e1190	1460	22200	3300	2820	1460	1070	685
4	3130	2610	5350	1560	e1180	1460	13600	3250	2130	1610	1180	907
5	4020	2330	5560	1490	e1160	1240	9420	2850	2170	1780	1320	688
6	4280	2170	3710	1490	e1130	1120	11400	2780	2420	1980	1080	692
7	4000	2100	2930	1580	e1110	1080	12600	3050	1590	1250	851	819
8	3810	2170	2480	1580	e1100	1170	12300	2840	1450	990	954	685
9	3320	2610	1660	1500	e1090	1410	9620	2300	4090	1080	888	1450
10	2890	3890	1660	1470	e1060	1530	6780	2000	6010	1040	780	3160
11	2780	3470	2370	1510	e1040	1450	5850	1800	4100	1090	1220	1750
12	2690	2740	2450	1530	e1010	1280	6040	1700	2960	1200	1010	1070
13	2440	2360	2450	1540	e1000	1190	6290	1620	2430	1220	1040	1250
14	2430	1870	2150	1520	e1010	1100	5910	1590	2260	1170	937	6600
15	2510	1690	1980	1500	e1020	1030	5010	1500	1950	1880	685	5730
16	3020	1890	2190	1500	e1030	1020	4410	1510	1730	2010	890	2940
17	2960	1850	2190	1580	e1040	963	4080	1370	1650	1600	661	1720
18	2680	1790	2230	1320	e1080	930	3770	1170	1980	1210	711	1370
19	2310	1690	2270	1380	e1100	832	3960	1240	1880	1190	643	1190
20	2180	1270	2270	1460	e1130	761	3940	1030	1480	1280	672	1050
21	2130	908	2170	1440	e1180	752	3580	1110	1130	1200	603	990
22	2130	1190	1980	1410	e1240	864	3310	1040	1300	1780	748	1100
23	2110	1420	1940	1440	e1280	1210	2820	1000	1280	1380	775	1020
24	2080	1740	1970	1490	e1350	1820	2400	1860	1590	1120	833	1010
25	2070	2280	1920	1410	e1400	3160	2370	3310	1440	853	726	901
26	2100	2440	2000	1380	1440	5190	2180	2520	1170	1220	729	874
27	2040	7280	2110	1350	1440	7370	1900	1740	1460	1160	521	902
28	2230	8330	1970	1310	1460	8410	1700	1420	4340	1460	512	1050
29	2530	5500	1800	1330	---	8940	1580	3160	4890	1060	689	908
30	2550	4010	1890	e1280	---	9550	2000	4580	3320	1090	767	920
31	2420	---	1840	e1250	---	12500	---	3780	---	905	661	---
TOTAL	87770	80918	74530	45430	32720	83712	219720	68650	73160	42218	25941	45014
MEAN	2831	2697	2404	1465	1169	2700	7324	2215	2439	1362	837	1500
MAX	4440	8330	5560	1660	1460	12500	28100	4580	6010	2140	1320	6600
MIN	2040	908	1660	1250	1000	752	1580	1000	1130	853	512	685

CAL YR 1986 TOTAL 1021460 MEAN 2799 MAX 23700 MIN 577
WTR YR 1987 TOTAL 879783 MEAN 2410 MAX 28100 MIN 512

e Estimated

01134500 MOOSE RIVER AT VICTORY, VT.

LOCATION.--Lat 44°30'42", long 71°50'13", Essex County, Hydrologic Unit 01080102, on right bank at Victory, 2.7 mi upstream from highway bridge.

DRAINAGE AREA.--75.2 mi².

PERIOD OF RECORD.--January 1947 to current year. Water-quality records: Water year 1957.

REVISED RECORDS.--WSP 1381: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,103.99 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Records good except those for estimated daily discharges and shifting control, June 28 to Sept. 14, which are fair. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--40 years, 144 ft³/s, 26.00 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,340 ft³/s, July 1, 1973, gage height, 12.04 ft; minimum, 2.6 ft³/s, Aug. 21, 22, 1975.

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

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 31	unknown	*4,180	*a11.49	Sept. 14	1630	1,070	7.55
June 28	1200	1,150	a7.70				

a from peak-stage indicator.

Minimum discharge, 8.1 ft³/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	279	78	140	e50	e36	e28	3300	188	168	127	24	20
2	174	109	120	e48	e36	e29	1090	172	120	92	21	16
3	166	125	217	e46	e35	e29	576	199	157	84	72	14
4	200	100	515	e47	e35	e28	386	170	102	143	108	12
5	289	88	374	e46	e35	e27	e410	154	157	143	53	11
6	258	82	e200	e45	e35	e27	e450	185	109	89	35	9.6
7	230	88	e155	e45	e34	e35	e400	172	72	66	27	8.5
8	174	105	e135	e44	e34	e72	e350	126	76	54	38	9.2
9	146	223	e120	e44	e34	162	315	103	362	48	41	273
10	136	281	e140	e43	e34	200	238	93	240	45	44	395
11	118	167	e130	e43	e33	94	230	82	124	56	112	111
12	e110	136	e110	e43	e33	62	234	80	92	55	60	65
13	e105	121	e99	e43	e33	49	222	77	98	43	38	225
14	e115	98	e94	e42	e33	45	184	66	84	40	29	843
15	e155	96	e90	e42	e33	42	157	65	66	173	24	554
16	e145	97	e86	e41	e32	39	146	76	52	100	22	174
17	e120	94	e81	e40	e32	37	140	62	93	58	19	108
18	102	96	e76	e40	e31	35	138	57	65	44	16	79
19	93	e70	e78	e40	e31	34	131	51	46	70	13	65
20	88	e52	e74	e39	e30	33	119	46	38	55	13	60
21	84	e54	e70	e39	e29	40	105	42	31	57	15	66
22	84	67	e66	e39	e29	80	93	41	27	53	12	62
23	85	66	e62	e39	e28	181	80	67	70	41	15	53
24	100	81	e61	e38	e28	317	89	140	77	33	16	48
25	85	125	e60	e38	e28	487	100	131	43	36	12	44
26	78	110	e79	e38	e28	657	78	89	33	146	11	44
27	85	473	e76	e37	e27	535	67	66	261	162	11	65
28	104	536	e62	e37	e27	563	62	62	973	68	9.4	55
29	108	291	e58	e37	---	858	80	215	532	44	16	46
30	96	192	e56	e36	---	2950	140	179	198	34	45	58
31	87	---	e52	e36	---	e4100	---	114	---	29	27	---
TOTAL	4199	4301	3736	1285	893	11875	10110	3370	4566	2288	998.4	3593.3
MEAN	135	143	121	41.5	31.9	383	337	109	152	73.8	32.2	120
MAX	289	536	515	50	36	4100	3300	215	973	173	112	843
MIN	78	52	52	36	27	27	62	41	27	29	9.4	8.5
CFSM	1.80	1.91	1.60	.55	.42	5.09	4.48	1.45	2.02	.98	.43	1.59
IN.	2.08	2.13	1.85	.64	.44	5.87	5.00	1.67	2.26	1.13	.49	1.78

CAL YR 1986 TOTAL 65535.0 MEAN 180 MAX 2120 MIN 12 CFSM 2.39 IN. 32.42
WTR YR 1987 TOTAL 51214.7 MEAN 140 MAX 4100 MIN 8.5 CFSM 1.87 IN. 25.33

e Estimated

01135500 PASSUMPSIC RIVER AT PASSUMPSIC, VT.

LOCATION.--Lat 44°21'56", long 72°02'23", Caledonia County, Hydrologic Unit 01080102, on right bank 0.7 mi upstream from Water Andric, 1 mi downstream from dam and village of Passumpsic, and 4 mi upstream from mouth.

DRAINAGE AREA.--436 mi².

PERIOD OF RECORD.--Discharge: October 1928 to current year. Monthly discharge only October 1928, published in WSP 1301.
Water-quality records: Water years 1953, 1967-74 (partial-record station).

REVISED RECORDS.--WSP 781: 1933(M). WSP 871: Drainage area. WSP 1231: 1929, 1930-31(M).

GAGE.--Water-stage recorder. Elevation of gage is 490 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for those estimated daily discharges, which are fair. Low flow regulated by powerplants upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--59 years, 741 ft³/s, 23.08 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,200 ft³/s, July 1, 1973, gage height, 23.49 ft, from rating curve extended above 14,000 ft³/s on basis of computation of flow over dam at gage height 21.23 ft; minimum daily, 13 ft³/s, Sept. 12, 1948.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1780, about 31.5 ft in November 1927, from information by local residents (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 27	0130	6,280	10.67	June 27	2330	7,180	11.67
Apr. 1	0715	*11,300	*16.26				

Minimum daily discharge, 88 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	1200	441	728	e430	e230	e190	9850	1140	685	759	185	162
2	785	512	721	e410	e230	e190	4170	948	611	591	178	149
3	739	641	1500	e400	e220	e185	2570	874	553	526	293	141
4	994	522	2230	e420	e220	e180	2000	755	439	769	520	130
5	1310	470	1430	e410	e220	e170	2270	676	533	817	329	88
6	1130	406	e900	e410	e230	e210	2450	753	492	562	237	104
7	1060	483	e800	398	e230	e260	2260	763	365	439	192	109
8	803	577	e750	402	e220	e390	1990	605	294	383	201	138
9	692	915	e700	386	e220	e770	1580	529	1170	377	209	990
10	634	1140	e730	368	e220	831	1330	483	1030	362	254	999
11	588	764	e690	367	e220	743	1260	418	637	398	546	440
12	540	646	e660	e360	e220	669	1200	393	444	352	356	283
13	522	601	e600	e350	e200	588	1140	393	435	324	235	1400
14	563	381	e540	e340	e200	533	1020	335	432	331	198	3200
15	778	489	e520	e330	e200	512	915	344	388	951	181	1550
16	719	512	e520	e320	e190	495	843	401	300	663	161	774
17	578	495	e500	e310	e190	466	800	348	371	398	150	493
18	502	499	e500	e310	e190	449	776	318	400	317	194	400
19	481	436	e520	e290	e180	443	740	305	280	446	104	308
20	449	244	e500	e290	e180	440	682	281	220	383	126	291
21	443	436	e500	e280	e170	456	633	249	219	432	133	316
22	442	457	e480	e280	e170	536	579	250	194	414	140	324
23	446	530	e460	e270	e175	834	524	306	454	305	147	267
24	513	475	e450	e260	e170	1590	563	651	554	277	169	243
25	436	616	e500	e260	e170	2670	629	696	324	227	133	230
26	418	764	e620	e250	e170	4140	524	478	241	571	111	226
27	415	2520	e600	e250	e170	5250	472	371	3470	715	119	281
28	530	1700	e580	e240	e180	3820	440	326	4510	377	115	284
29	591	1170	e470	e240	---	2300	527	687	1960	256	152	242
30	520	860	e460	e240	---	2980	941	739	1110	220	279	314
31	508	---	e440	e240	---	6230	---	518	---	202	200	---
TOTAL	20329	20702	21599	10111	5585	39520	45678	16333	23115	14144	6547	14876
MEAN	656	690	697	326	199	1275	1523	527	770	456	211	496
MAX	1310	2520	2230	430	230	6230	9850	1140	4510	951	546	3200
MIN	415	244	440	240	170	170	440	249	194	202	104	88
CFSM	1.50	1.58	1.60	.75	.46	2.92	3.49	1.21	1.77	1.05	.48	1.14
IN.	1.73	1.77	1.84	.86	.48	3.37	3.90	1.39	1.97	1.21	.56	1.27

CAL YR 1986 TOTAL 330365 MEAN 905 MAX 7570 MIN 121 CFSM 2.08 IN. 28.19
WTR YR 1987 TOTAL 238539 MEAN 654 MAX 9850 MIN 88 CFSM 1.50 IN. 20.35

e Estimated

01137500 AMMONOOSUC RIVER AT BETHLEHEM JUNCTION, N. H.

LOCATION.--Lat 44°16'08", long 71°37'52, Grafton County, Hydrologic Unit 01080101, on left bank 0.2 mi upstream from Pierce Bridge and Bethlehem Junction, 0.8 mi upstream from unnamed tributary entering from left, 3 mi east of Bethlehem, 3.4 mi downstream from Little River, and at mile 35.0.

DRAINAGE AREA.--87.6 mi².

PERIOD OF RECORD.--Discharge: August 1939 to current year.
Water-quality records: Water years 1967-74.

REVISED RECORDS.--WSP 1701: 1951(M), 1953-54(M).

GAGE.--Water-stage recorder. Datum of gage is 1,180.74 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Records good except those for estimated daily discharges, which are fair.

AVERAGE DISCHARGE.--48 years, 208 ft³/s, 32.24 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,800 ft³/s, Oct. 24, 1959, gage height, 12.09 ft, from rating curve extended above 4,100 ft³/s on basis of slope-area measurement of peak flow; minimum, 16 ft³/s, Nov. 14, 1952, caused by anchor ice upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,700 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 1	0130	*7,520	*10.14	Apr. 7	unknown	3,000	unknown

Minimum discharge, 32 ft³/s, Sept. 7, 8.

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	352	71	131	76	e53	e43	e3500	222	329	88	64	43
2	244	116	128	e73	e52	e43	e1800	251	222	79	59	42
3	180	121	493	76	e50	e42	e1200	291	189	84	96	38
4	177	93	535	77	e48	e42	e750	256	167	109	104	35
5	196	82	275	75	e46	e42	e1000	273	287	190	74	34
6	178	82	198	80	e46	e42	e1800	536	210	111	63	33
7	163	86	172	75	e46	e43	e2200	468	161	89	58	32
8	145	95	140	69	e46	e50	e1500	332	162	78	55	33
9	146	230	106	66	e46	e100	e1000	267	275	75	52	182
10	136	219	202	65	e46	e90	e650	264	228	121	57	111
11	123	142	164	68	e46	e64	e520	281	170	221	69	67
12	116	121	142	67	e46	54	e580	304	148	110	58	54
13	111	107	108	64	e46	50	e570	280	175	115	51	80
14	109	75	88	63	e46	47	447	218	152	97	48	262
15	115	100	130	65	e46	46	409	238	127	285	46	115
16	104	98	117	63	e46	44	408	253	111	151	44	79
17	97	91	108	47	e46	44	548	200	111	106	42	66
18	92	89	101	71	e46	43	787	187	99	91	39	58
19	88	79	102	78	e46	43	737	168	89	204	37	56
20	86	60	97	66	e47	43	748	150	83	126	38	61
21	83	98	e80	60	e47	44	669	138	76	137	38	82
22	86	125	99	59	e48	52	578	133	71	124	37	72
23	85	94	82	60	e48	65	395	152	200	100	43	67
24	86	155	84	61	e48	95	359	189	143	91	37	64
25	79	167	88	61	e47	149	311	175	95	109	37	59
26	76	223	132	61	e46	282	256	149	82	147	39	60
27	75	935	97	59	e45	351	225	130	137	138	36	83
28	75	345	103	57	e44	266	203	128	203	98	35	69
29	78	235	89	e55	---	301	208	324	119	82	47	61
30	77	179	80	e54	---	579	218	223	97	74	59	64
31	75	---	73	e54	---	3140	---	200	---	69	43	---
TOTAL	3833	4713	4544	2025	1313	6339	24576	7380	4718	3699	1605	2162
MEAN	124	157	147	65.3	46.9	204	819	238	157	119	51.8	72.1
MAX	352	935	535	80	53	3140	3500	536	329	285	104	262
MIN	75	60	73	47	44	42	203	128	71	69	35	32
CFSM	1.41	1.79	1.67	.75	.54	2.33	9.35	2.72	1.80	1.36	.59	.82
IN.	1.63	2.00	1.93	.86	.56	2.69	10.4	3.13	2.00	1.57	.68	.92

CAL YR 1986 TOTAL 65386 MEAN 180 MAX 4850 MIN 44 CFSM 2.06 IN. 27.83
WTR YR 1987 TOTAL 66907 MEAN 183 MAX 3500 MIN 32 CFSM 2.09 IN. 28.41

e Estimated

01138500 CONNECTICUT RIVER AT WELLS RIVER, VT.

LOCATION.--Lat 44°09'13", long 72°02'34", Orange County, Hydrologic Unit 01080101, on right bank at village of Wells River, 200 ft downstream from bridge on U.S. Highway 302, 400 ft upstream from Wells River, 1,200 ft downstream from Ammonoosuc River, and at mile 266.0.

DRAINAGE AREA.--2,644 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1949 to current year. October and November 1949 monthly discharge only, published in WSP 1301.

GAGE.--Water-stage recorder. Datum of gage is 399.75 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair. Flow regulated by powerplants, by First Connecticut and Second Connecticut Lakes, Lake Francis, Moore and Comerford Reservoirs (Reservoirs in Connecticut River basin), and other reservoirs, combined usable capacity, about 14,800,000,000 ft³.

AVERAGE DISCHARGE.--38 years, 4,791 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 57,100 ft³/s, July 1, 1973, gage height, 17.35 ft, from peak-stage indicator; minimum daily, 152 ft³/s, Aug. 28, 1960.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 23,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr,. 1	0630	*47,600	*14.87	No other peak greater than base discharge.			

Minimum daily discharge, 428 ft³/s, Sept. 6.

DISCHARGE, 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	e3700	6270	3050	e1300	e1900	42900	4470	5910	5600	595	990
2	6360	e3000	5840	2760	e1500	e2800	29000	3220	5810	3730	474	627
3	6770	e4300	6840	3470	e2100	e2500	22900	3980	3810	3260	2790	821
4	7140	e6000	8940	3140	e1700	e3000	21200	3250	3150	3440	3760	1390
5	7240	e4300	7830	3890	e1750	e3200	18100	5230	3410	2330	3190	705
6	7170	e4100	7370	3830	e2000	e3200	18700	3820	4530	3440	2890	428
7	7080	e4900	7190	3520	e1550	e3000	18600	5610	2600	3680	2000	1060
8	6970	e3500	7010	3560	e1350	e2500	17800	5970	2950	2960	1350	1960
9	6270	e2900	5240	3630	e2100	3260	15400	4750	4590	2390	522	3790
10	5020	6500	5030	2460	e2500	5130	12400	3790	8240	3090	2350	3920
11	4050	6180	5820	2150	e2400	4180	7620	3240	7130	2290	1980	1550
12	3510	4900	4800	3300	e2000	3930	7650	3040	6760	1760	2730	1280
13	4160	5150	4190	3570	e2600	4580	7450	3270	4640	3120	1740	2690
14	4860	4710	3470	3720	e1800	3530	7540	2850	2800	3190	1140	9050
15	4280	2520	3570	3630	e1400	2660	7510	3010	3250	4910	952	7260
16	4590	1790	4790	e3200	e3700	2790	7550	2890	3890	3930	549	6210
17	3610	3810	4480	e2300	e5200	2640	7530	1490	2540	3120	2340	5400
18	4180	4210	4890	e1600	e5600	2640	6800	2700	2890	2310	2970	3770
19	2460	4330	4860	e3100	e5000	2160	5140	2990	2720	1660	2050	3380
20	3790	5730	4180	e1900	e4300	1820	5250	2690	1760	3140	1020	1580
21	4620	4250	3860	e2500	e3000	2160	6030	2540	605	2810	1990	2180
22	3940	3220	4010	e2900	e2200	1630	4080	2170	2430	2640	1560	3030
23	3940	1720	4690	e2200	e3700	2460	3550	1670	3780	3310	1720	2780
24	4500	3380	4780	e1800	e3700	4840	3800	2010	2420	3240	1770	2210
25	3420	4750	4500	e1700	e3500	6790	2960	3070	2360	1400	1090	2800
26	2710	4120	4390	e2800	e4200	9890	1750	4220	3580	1160	905	1050
27	3890	7540	3200	e3200	e3300	14500	2350	4540	6450	3710	1060	680
28	3530	10000	3620	e2800	e2500	14500	3340	3280	13800	2690	1290	1630
29	3980	11300	3680	e2300	---	14900	2580	3950	10200	2080	919	3480
30	3960	7880	3870	e2400	---	16500	3510	3890	5820	2170	463	4210
31	e4100	---	3940	e1700	---	26900	---	4240	---	1680	1320	---
TOTAL	147790	144690	157150	88080	77950	176490	320990	107840	134825	90240	51479	81911
MEAN	4767	4823	5069	2841	2784	5693	10700	3479	4494	2911	1661	2730
MAX	7240	11300	8940	3890	5600	26900	42900	5970	13800	5600	3760	9050
MIN	2460	1720	3200	1600	1300	1630	1750	1490	605	1160	463	428

CAL YR 1986 TOTAL 1948876 MEAN 5339 MAX 29900 MIN 986
WTR YR 1987 TOTAL 1579435 MEAN 4327 MAX 42900 MIN 428

e Estimated

01139000 WELLS RIVER AT WELLS RIVER, VT.

LOCATION.--Lat 44°09'03", long 72°03'55", Orange County, Hydrologic Unit 01080103, on right bank, 0.8 mi west of village of Wells River, and 1.5 mi upstream from mouth.

DRAINAGE AREA.--98.4 mi².

PERIOD OF RECORD.--Discharge: August 1940 to current year.
Water-quality records: Water years 1957-58.

REVISED RECORDS.--WSP 1171: Drainage area. WSP 1201: 1942(P), 1944-45(M), 1946-47(P), 1948(M), 1950.

GAGE.--Water-stage recorder. Datum of gage is 505.53 ft above National Geodetic Vertical Datum of 1929 (levels by Connecticut River Power Co.).

REMARKS.--Records good except those for estimated daily discharges, which are fair. Some diurnal fluctuation at low flow prior to 1958 and since June 1984 caused by small powerplant upstream. Flow partly regulated by Groton and Ricker Ponds. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--47 years, 144 ft³/s, 19.87 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,970 ft³/s, June 30, 1973, gage height, 9.82 ft, from rating curve extended above 1,400 ft³/s on basis of computation of peak flow over dam; minimum, 5.1 ft³/s, Oct. 6, 1948; minimum daily, 8.3 ft³/s, Sept. 5, 1953.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 980 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 1	0230	*2,770	*6.83	June 27	2000	1,170	4.75

Minimum discharge, 24 ft³/s, all or part of each day, Aug. 19-29; minimum daily, 24 ft³/s, Aug. 21, 22, 25-28.

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	197	67	116	e88	e58	e42	1940	249	212	144	43	45
2	160	78	109	e86	e56	e43	843	242	130	108	37	40
3	126	85	254	e84	e58	e43	535	189	102	102	76	35
4	177	78	318	e82	e56	e42	440	155	86	169	78	32
5	195	73	217	e80	e52	e40	544	136	136	199	62	30
6	156	75	157	e80	e56	e44	545	161	102	142	51	28
7	136	87	140	e84	e58	e52	499	149	80	108	44	26
8	112	105	123	e82	e56	e76	461	126	101	92	41	27
9	102	182	132	e80	e52	e120	376	113	200	83	37	387
10	97	156	140	e80	e50	e96	325	107	148	78	43	221
11	90	115	129	e80	e50	e84	289	98	107	80	58	116
12	83	106	116	e78	e48	e76	262	96	86	76	45	84
13	82	100	e110	e78	e48	e74	245	96	85	62	38	274
14	85	75	e105	e78	e46	e70	217	87	107	62	34	564
15	102	85	e105	e80	e46	69	197	89	78	276	32	238
16	95	85	103	e78	e45	67	180	97	64	136	31	144
17	88	87	101	e78	e45	64	172	85	72	96	28	104
18	82	88	98	e76	e44	63	171	83	60	78	27	84
19	78	79	105	e74	e43	62	163	77	53	97	26	78
20	75	56	102	e72	e42	63	152	72	47	85	25	94
21	73	72	e100	e70	e42	66	140	70	43	172	24	121
22	75	88	e96	e70	e41	86	130	69	40	133	24	96
23	75	85	e94	e68	e41	e120	117	85	362	96	29	83
24	84	97	92	e68	e40	e185	117	112	219	77	27	74
25	78	114	101	e66	e40	e290	118	105	120	66	24	65
26	72	135	133	e66	e41	e460	108	93	87	96	24	60
27	74	505	111	e64	e42	494	102	80	572	78	24	74
28	77	283	e105	e62	e41	421	96	76	540	65	24	66
29	74	199	e98	e62	---	454	130	110	274	54	45	61
30	73	151	93	e60	---	635	252	98	184	49	72	74
31	70	---	89	e60	---	1400	---	96	---	48	51	---
TOTAL	3143	3591	3892	2314	1337	5901	9866	3501	4497	3207	1224	3425
MEAN	101	120	126	74.6	47.7	190	329	113	150	103	39.5	114
MAX	197	505	318	88	58	1400	1940	249	572	276	78	564
IN	70	56	89	60	40	40	96	69	40	48	24	26
CFSM	1.03	1.22	1.28	.76	.49	1.93	3.34	1.15	1.52	1.05	.40	1.16
IN.	1.19	1.36	1.47	.87	.51	2.23	3.73	1.32	1.70	1.21	.46	1.29

CAL YR 1986 TOTAL 60329 MEAN 165 MAX 1380 MIN 31 CFSM 1.68 IN. 22.81
WTR YR 1987 TOTAL 45898 MEAN 126 MAX 1940 MIN 24 CFSM 1.28 IN. 17.35

e Estimated

01139800 EAST ORANGE BRANCH AT EAST ORANGE, VT.

LOCATION.--Lat 44°05'34", long 72°20'10", Orange County, Hydrologic Unit 01080103, on left bank 0.3 mi east of East Orange, 1.6 mi upstream from mouth, and 5 mi southwest of Orange.

DRAINAGE AREA.--8.95 mi².

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

REVISED RECORDS.--WDR MA-NH-RI-VT-72-1: 1960-64(P), 1969-71(P).

GAGE.--Water-stage recorder. Elevation of gage is 1,180 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges and period of backwater from leaves, Sept. 9-30, which are poor. Occasional diurnal fluctuation at low flow caused by mill upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--29 years, 15.8 ft³/s, 23.97 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 672 ft³/s, June 30, 1973, gage height, 5.55 ft, from rating curve extended above 160 ft³/s on basis of slope-area measurement of peak flow; maximum gage height, 6.35 ft Jan. 22, 1959 (ice jam); minimum discharge, 0.1 ft³/s, Sept. 9, 19, 1963.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 140 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Dec. 3	0700	156	3.68	June 27	1130	144	3.57
Mar. 31	1630	178	3.81	July 14	2130	144	3.61
June 13	1715	*221	*4.05	Sept. 9	0600	185	3.85

Minimum discharge, 2.8 ft³/s, Sept. 6, 7.

DISCHARGE, 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	6.3	37	e11	e6.6	e4.7	94	27	19	19	6.9	4.9
2	9.6	9.0	40	e10	e6.4	e4.7	81	25	12	19	6.4	4.2
3	9.9	7.1	62	e10	e6.2	e4.6	76	21	10	23	18	3.7
4	15	6.6	24	e9.8	e6.2	e4.5	78	19	13	25	9.4	3.3
5	16	5.6	e19	e9.6	e6.2	e4.5	102	19	19	19	7.5	3.2
6	11	7.5	e17	e9.4	e6.4	e4.5	85	25	11	16	6.6	2.9
7	9.1	9.1	e16	e9.2	e6.2	e6.0	85	19	9.4	15	6.1	3.0
8	8.4	15	e15	e9.0	e6.0	e12	72	17	39	14	5.7	3.4
9	9.2	21	e24	e9.4	e6.0	e16	65	16	27	13	5.1	47
10	8.2	10	e42	e9.2	e5.8	e8.0	59	15	19	12	11	8.9
11	7.7	8.5	e36	e9.0	e5.8	e7.0	54	14	12	11	8.0	6.2
12	7.5	8.6	e25	e9.0	e5.6	e6.0	49	17	12	9.9	5.9	5.7
13	7.7	8.8	e16	e9.0	e5.6	5.6	44	14	42	9.2	5.1	54
14	8.9	14	e15	e9.2	e5.4	5.5	40	13	23	26	4.6	23
15	9.6	10	e14	e8.8	e5.4	5.0	38	16	14	28	4.2	11
16	7.9	8.8	e13	e8.8	e5.4	5.0	37	14	13	14	3.8	7.8
17	7.5	9.2	e13	e8.6	e5.2	4.8	36	12	13	12	3.4	6.6
18	7.2	8.5	e12	e8.4	e5.2	4.7	34	12	10	19	3.2	7.3
19	6.9	e8.0	e12	e8.0	e5.2	4.7	31	11	9.4	20	4.5	10
20	6.8	e7.0	e11	e7.8	e5.0	4.7	29	9.8	8.6	20	5.0	17
21	6.9	e7.4	e11	e7.8	e4.9	4.9	27	9.4	7.8	44	3.5	11
22	6.8	e9.0	e11	e7.8	e4.9	7.3	26	9.4	13	18	4.0	8.8
23	7.7	10	e10	e7.6	e4.8	13	25	11	69	14	5.1	7.7
24	7.2	10	e11	e7.6	e4.8	21	25	17	19	12	3.3	7.0
25	6.7	8.6	e13	e7.4	e4.8	29	23	13	15	14	3.3	6.0
26	6.6	32	e15	e7.4	e4.7	40	21	11	14	12	3.5	7.2
27	7.0	36	e14	e7.2	e4.7	28	20	9.7	71	10	3.2	8.1
28	7.1	21	e13	e7.0	e4.6	30	20	11	29	11	3.8	6.5
29	6.7	14	e12	e7.0	---	41	26	14	22	8.9	14	5.8
30	7.7	15	e11	e7.0	---	58	32	9.0	20	8.2	6.5	13
31	6.5	---	e11	e6.8	---	122	---	23	---	7.7	4.5	---
TOTAL	271.0	351.6	595	263.8	154.0	516.7	1434	473.3	615.2	503.9	185.1	314.2
MEAN	8.74	11.7	19.2	8.51	5.50	16.7	47.8	15.3	20.5	16.3	5.97	10.5
MAX	20	36	62	11	6.6	122	102	27	71	44	18	54
MIN	6.5	5.6	10	6.8	4.6	4.5	20	9.0	7.8	7.7	3.2	2.9
CFSM	.98	1.31	2.14	.95	.61	1.86	5.34	1.71	2.29	1.82	.67	1.17
IN.	1.13	1.46	2.47	1.10	.64	2.15	5.96	1.97	2.56	2.09	.77	1.31

CAL YR 1986 TOTAL 5942.6 MEAN 16.3 MAX 70 MIN 3.4 CFSM 1.82 IN. 24.70
WTR YR 1987 TOTAL 5677.8 MEAN 15.6 MAX 122 MIN 2.9 CFSM 1.74 IN. 23.60

e Estimated

01141500 OMPOMPANOOSUC RIVER AT UNION VILLAGE, VT.

LOCATION.--Lat 43°47'23", long 72°15'19", Orange County, Hydrologic Unit 01080103, on right bank 100 ft upstream from covered bridge at Union Village, 0.2 mi downstream from Avery Brook, 0.3 mi downstream from Union Village Reservoir, and 3.8 mi upstream from mouth.

DRAINAGE AREA.--130 mi²

PERIOD OF RECORD.--Discharge: September 1940 to current year.
Water-quality records: Water years 1955, 1957-58.

GAGE.--Water-stage recorder. Elevation of gage is 435 ft, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by Union Village Reservoir (Reservoirs in Connecticut River basin) since October 1949. Some regulation by Lake Fairlee. Several observations of water temperatures and specific conductance were made during the year.

AVERAGE DISCHARGE.--47 years, 195 ft³/s, 20.37 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,800 ft³/s, June 3, 1947, gage height, 9.65 ft, from rating curve extended above 2,400 ft³/s on basis of slope-area measurement of peak flow; minimum, 1.7 ft³/s, Oct. 14, 1949; minimum daily, 2.0 ft³/s, Oct. 20, 1949. Maximum discharge since construction of Union Village Reservoir in 1949, 2,350 ft³/s, Apr. 20, 1950, gage height, 7.62 ft; maximum gage height, 7.68 ft Apr. 7, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1869, about 14.5 ft in November 1927, from information by local resident (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,050 ft³/s, Apr. 10, gage height, 7.54 ft; minimum, 30 ft³/s, Aug. 19, 27; minimum daily, 31 ft³/s, Sept. 7.

DISCHARGE, 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	168	68	238	e96	e74	e62	120	286	85	150	53	46
2	138	77	194	e96	e76	e64	530	240	74	123	48	42
3	125	84	310	e96	e76	e66	1230	213	70	196	137	37
4	189	75	495	e94	e74	e68	897	192	70	199	96	35
5	221	71	359	e84	e74	e68	336	187	105	168	74	33
6	170	79	226	e84	e72	e72	740	230	77	123	63	32
7	144	94	214	e90	e72	e84	1300	199	65	103	56	31
8	128	134	211	e92	e70	e100	1630	171	76	95	51	33
9	120	261	173	e80	e72	e140	1920	158	101	102	47	517
10	116	178	188	e76	e70	e160	1990	149	85	159	76	231
11	105	127	211	e80	e68	e150	1840	134	68	345	77	144
12	100	128	186	e96	e68	e110	1740	128	62	309	60	114
13	98	120	e135	e84	e66	e96	1290	120	69	234	50	378
14	106	91	e96	e86	e66	e90	564	111	63	236	47	777
15	116	84	137	e88	e66	e84	393	107	55	637	43	326
16	101	119	165	e88	e64	e76	356	106	48	312	40	241
17	95	131	145	e78	e64	64	335	97	49	233	36	186
18	90	114	128	e76	e64	75	320	94	43	183	34	205
19	86	105	158	e76	e62	73	302	89	40	230	32	271
20	83	80	152	e78	e62	64	279	84	37	171	42	336
21	81	82	e138	e86	e62	76	259	80	34	179	36	337
22	79	93	e98	e84	e64	82	239	78	36	153	34	261
23	77	93	104	e84	e64	150	223	77	451	127	51	221
24	75	112	134	e82	e62	267	215	132	192	108	39	186
25	73	124	142	e82	e62	475	202	106	116	96	33	159
26	72	203	151	e80	e60	863	184	92	91	90	32	141
27	75	576	152	e80	e60	920	171	82	476	79	32	134
28	75	641	122	e78	e60	734	167	78	487	75	34	123
29	76	394	138	e78	---	786	225	90	272	68	63	117
30	74	322	147	e76	---	862	340	79	198	62	75	153
31	70	---	e115	e76	---	484	---	70	---	59	52	---
TOTAL	3326	4860	5562	2604	1874	7465	20337	4059	3695	5404	1643	5847
MEAN	107	162	179	84.0	66.9	241	678	131	123	174	53.0	195
MAX	221	641	495	96	76	920	1990	286	487	637	137	777
MIN	70	68	96	76	60	62	120	70	34	59	32	31
MEAN†	107	168	179	84.1	67.5	344	567	130	123	174	53.0	196
CFSM†	.82	1.29	1.38	.65	.52	2.65	4.36	1.00	.95	1.34	.41	1.51
IN.†	.92	1.44	1.58	.75	.54	3.05	4.86	1.15	1.06	1.54	.47	1.68

CAL YR 1986 TOTAL 79482 MEAN 218 MAX 1880 MIN 32 Mean† 218 CFSM† 1.68 IN.† 22.72
WTR YR 1987 TOTAL 66676 MEAN 183 MAX 1990 MIN 31 Mean† 183 CFSM† 1.41 IN.† 19.09

e Estimated
† Adjusted for change in contents in Union Village Reservoir.

01141800 MINK BROOK NEAR ETNA, N. H.

LOCATION.--Lat 43°42'08", long 72°11'15", Grafton County, Hydrologic Unit 01080104, on left bank 2 mi northeast of Etna and 5 mi east of Hanover.

DRAINAGE AREA.--4.60 mi².

PERIOD OF RECORD.--August 1962 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,000 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges which are poor. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--25 years, 7.60 ft³/s, 22.44 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 629 ft³/s, Aug. 1, 1986, gage height, 3.93 ft, from rating curve extended above 130 ft³/s on basis of slope-area measurement at gage heights 3.50 ft and 3.75 ft; maximum gage height, 4.28 ft Jan. 9, 1978 (ice jam); minimum discharge, 0.01 ft³/s, Aug. 11, 1964.

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

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 26	2115	162	2.78	Mar. 31	1700	*a487	*3.65
Dec. 2	0745	170	2.81	June 27	1100	a382	3.41
Mar. 26	1230	77	2.41	Sept. 27	unknown	90	unknown

a From rating curve extended above 130 ft³/s as explained above.

Minimum discharge, 0.46 ft³/s, June 21, 22.

DISCHARGE, 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	5.7	2.6	77	e4.4	e2.6	e2.3	80	15	1.9	8.1	1.3	e2.0
2	4.9	3.4	109	e4.2	e2.6	e2.3	31	11	1.7	6.7	1.2	e1.6
3	6.4	3.5	29	e4.1	e2.5	e2.3	24	8.3	1.7	14	15	e1.4
4	12	3.0	23	e4.2	e2.5	e2.4	25	6.9	3.2	18	4.8	e1.3
5	11	2.8	14	e4.0	e2.6	e2.4	48	8.8	5.7	13	2.8	e1.3
6	7.0	3.6	15	e3.9	e2.6	e2.5	36	15	2.6	7.7	2.1	e1.2
7	5.9	4.2	11	e3.8	e2.6	e2.7	37	9.4	2.0	5.7	1.7	e1.2
8	5.1	14	e10	e3.7	e2.6	e3.5	28	7.5	3.5	5.4	1.5	e5.0
9	4.7	18	e9.0	e3.6	e2.5	e6.5	22	6.6	4.1	7.7	1.3	e14
10	4.4	10	e8.2	e3.5	e2.5	e7.0	18	5.9	3.6	7.8	3.1	e8.0
11	4.0	8.0	e7.6	e3.5	e2.5	5.0	15	5.0	2.3	12	3.1	e5.0
12	3.9	7.3	e7.0	e3.5	e2.5	3.8	13	5.0	2.3	6.1	2.0	e4.5
13	3.9	6.7	e6.6	e3.4	e2.4	3.2	12	4.4	2.4	15	1.5	e24
14	7.8	7.7	e6.2	e3.4	e2.4	2.9	11	4.0	1.8	18	1.3	e28
15	6.4	5.0	e6.0	e3.4	e2.4	2.9	9.7	4.2	1.4	22	1.3	e11
16	4.6	5.4	5.8	e3.4	e2.4	2.9	8.5	3.8	1.2	11	1.3	e8.0
17	4.3	5.6	5.9	e3.3	e2.4	2.8	8.2	3.7	1.6	7.2	1.3	e6.2
18	3.6	5.4	6.2	e3.3	e2.4	2.8	8.2	3.3	1.0	6.4	1.3	e6.2
19	3.5	4.5	6.7	e3.3	e2.4	2.8	7.2	3.0	.80	11	1.3	e9.0
20	3.2	8.4	5.9	e3.3	e2.4	2.9	6.5	2.8	.65	6.7	1.3	e14
21	3.1	8.8	5.6	e3.2	e2.4	3.4	5.8	2.9	.50	7.4	1.3	e17
22	3.1	5.0	e5.4	e3.1	e2.4	4.1	5.3	2.5	3.3	5.5	1.4	e11
23	3.0	4.2	5.1	e3.1	e2.4	13	4.7	2.6	34	4.5	1.4	e8.0
24	2.9	8.7	4.6	e3.0	e2.3	17	5.5	5.3	6.9	3.5	.86	e7.0
25	2.7	8.2	6.9	e2.9	e2.3	26	5.2	3.6	3.7	3.6	.69	e6.0
26	2.6	38	7.7	e2.8	e2.3	51	4.5	2.9	2.9	3.2	.68	e5.4
27	4.0	46	6.2	e2.8	e2.3	37	3.8	2.4	108	2.6	.63	e4.9
28	3.5	20	e5.6	e2.7	e2.3	41	4.5	2.7	29	2.4	.79	e4.6
29	3.1	14	e5.0	e2.7	---	51	7.9	3.5	14	2.0	e3.0	e4.4
30	2.8	13	4.6	e2.7	---	74	20	2.8	10	1.7	e3.3	8.5
31	2.7	---	4.5	e2.7	---	261	---	2.1	---	1.5	e2.5	---
TOTAL	145.8	295.0	430.3	104.9	68.5	644.4	515.5	166.9	257.75	247.4	67.05	229.7
MEAN	4.70	9.83	13.9	3.38	2.45	20.8	17.2	5.38	8.59	7.98	2.16	7.66
MAX	12	46	109	4.4	2.6	261	80	15	108	22	15	28
MIN	2.6	2.6	4.5	2.7	2.3	2.3	3.8	2.1	.50	1.5	.63	1.2
CFSM	1.02	2.14	3.02	.74	.53	4.52	3.74	1.17	1.87	1.73	.47	1.66
IN.	1.18	2.39	3.48	.85	.55	5.21	4.17	1.35	2.08	2.00	.54	1.86

CAL YR 1986 TOTAL 3579.79 MEAN 9.81 MAX 170 MIN .88 CFSM 2.13 IN. 28.95
WTR YR 1987 TOTAL 3173.20 MEAN 8.69 MAX 261 MIN .50 CFSM 1.89 IN. 25.66

e Estimated

01142500 AYERS BROOK AT RANDOLPH, VT.

LOCATION.--Lat 43°56'04", long 72°39'30", Orange County, Hydrologic Unit 01080105, on right bank 135 ft upstream from bridge on State Highway 12, just north of village limits of Randolph, 0.4 mi upstream from Adams Brook, and 1.2 mi upstream from mouth.

DRAINAGE AREA.--30.5 mi².

PERIOD OF RECORD.--July 1939 to September 1975, June 1976 to current year.

REVISED RECORDS.--WDR MA-NH-RI-VT-72-1: 1949(M), 1952(M), 1953(P), 1958(P), 1960(M), 1967(M).

GAGE.--Water-stage recorder. Datum of gage is 630.50 ft Vermont State Department of Highways datum. Prior to Oct. 1, 1964, at site 140 ft downstream at datum 2.25 ft higher and Oct. 1, 1964, to Sept. 30, 1975, at site 140 ft downstream at datum 1.25 ft higher.

REMARKS.--Records good except those for periods of shifting control, Oct. 21 to Nov. 27, and Mar. 3 to May 21, which are fair, and those for estimated daily discharges, which are poor. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--47 years (water years 1940-75, 1977-87), 47.2 ft³/s, 21.02 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,600 ft³/s, June 30, 1973, gage height, 10.37 ft, present datum, from rating curve extended above 500 ft³/s on basis of contracted-opening measurement of peak flow; minimum, 0.6 ft³/s, July 27, 1965.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1830, about 18 ft, present datum, in November 1927.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 350 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 31	2030	*a1,230	*8.43	June 23	0545	386	4.98

a from rating curve extended above 500 ft³/s as explained above.

Minimum discharge, 7.2 ft³/s, Sept. 9.

DISCHARGE, 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	18	74	e34	e22	e17	476	59	22	31	19	12
2	29	20	61	e32	e22	e17	268	49	20	27	17	10
3	27	20	142	e30	e22	e16	215	44	19	37	26	8.9
4	43	19	125	e26	e21	e16	190	42	18	38	23	8.4
5	46	17	e100	e28	e21	e16	236	42	27	31	18	7.7
6	37	19	e90	e30	e21	e19	214	51	19	26	16	7.7
7	33	21	73	e30	e22	e21	209	44	16	24	15	7.6
8	31	27	e60	e29	e21	e26	183	40	21	24	14	8.1
9	30	53	e52	e28	e21	e39	151	38	24	39	13	108
10	29	42	e60	e28	e20	22	132	37	26	30	20	29
11	27	32	58	e28	e20	26	118	34	19	26	20	19
12	26	31	53	e28	e20	27	106	33	17	26	15	16
13	25	30	39	e28	e19	24	95	32	19	24	13	139
14	25	25	36	e28	e19	22	86	31	20	57	12	137
15	31	27	57	31	e19	22	80	31	16	124	11	52
16	27	27	44	29	e19	e21	75	31	14	45	10	37
17	25	27	42	21	e18	e20	70	29	14	36	9.7	32
18	24	28	41	26	e18	e20	74	28	12	31	8.9	52
19	23	25	42	e27	e18	e19	71	25	12	52	8.1	60
20	23	20	40	e27	e18	e19	63	21	11	35	13	66
21	23	21	e36	26	e17	e18	58	20	10	38	9.4	62
22	22	28	e34	26	e17	e18	51	20	12	32	9.0	47
23	22	26	40	e26	e17	e35	46	19	213	27	14	42
24	21	30	37	e25	e17	e66	46	29	59	25	9.9	38
25	21	34	41	e25	e16	e120	46	25	34	25	8.5	34
26	21	67	47	e24	e16	e200	43	22	27	26	8.9	31
27	21	189	39	e24	e16	210	41	20	95	21	8.1	31
28	22	98	e36	e24	e16	201	39	20	66	22	8.8	30
29	22	83	39	e23	---	240	51	25	42	20	23	28
30	21	73	36	e23	---	315	74	20	36	18	21	34
31	19	---	34	e23	---	719	---	20	---	28	14	---
TOTAL	835	1177	1708	837	533	2571	3607	981	960	1045	436.3	1194.4
MEAN	26.9	39.2	55.1	27.0	19.0	82.9	120	31.6	32.0	33.7	14.1	39.8
MAX	46	189	142	34	22	719	476	59	213	124	26	139
MIN	19	17	34	21	16	16	39	19	10	18	8.1	7.6
CFSM	.88	1.29	1.81	.89	.62	2.72	3.94	1.04	1.05	1.11	.46	1.31
IN.	1.02	1.44	2.08	1.02	.65	3.14	4.40	1.20	1.17	1.27	.53	1.46

CAL YR 1986 TOTAL 22032 MEAN 60.4 MAX 600 MIN 11 CFSM 1.98 IN. 26.87
WTR YR 1987 TOTAL 15884.7 MEAN 43.5 MAX 719 MIN 7.6 CFSM 1.43 IN. 19.37

e Estimated

01144000 WHITE RIVER AT WEST HARTFORD, VT.

LOCATION.--Lat 43°42'51", long 72°25'07", Windsor County, Hydrologic Unit 01080105, on left bank 700 ft upstream from highway bridge at West Hartford and 7.4 mi upstream from mouth.

DRAINAGE AREA.--690 mi².

PERIOD OF RECORD.--Discharge: June 1915 to current year. October 1927 to September 1928 monthly discharge only, published in WSP 1301.
Water-quality records: Water years 1953, 1967-74.

REVISED RECORDS.--WSP 756: Drainage area. WSP 781: 1928(M). WSP 1031: 1916(m), 1923. WSP 1301: 1916-26(M), 1929(M).

GAGE.--Water-stage recorder. Datum of gage is 374.53 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 30, 1927, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Some diurnal fluctuation at low flow during period 1934-50 caused by powerplant upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--72 years, 1,190 ft³/s, 23.42 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 120,000 ft³/s, Nov. 4, 1927, gage height, 29.3 ft, from floodmarks, from rating curve extended above 29,000 ft³/s on basis of slope-area measurement of peak flow; minimum observed, about 35 ft³/s, Aug. 4, 1918; minimum daily, 54 ft³/s, Sept. 27, 28, 1963. Stage and discharge of the flood of Nov. 4, 1927, are the greatest since at least 1761.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 11,600 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 1	0045	*32,600	*16.95	June 23	1100	13,300	11.38
Apr. 6	0200	12,200	10.97	Sept. 14	0245	14,300	11.73

Minimum discharge, 197 ft³/s, Aug. 19; minimum daily, 201 ft³/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	1420	530	1350	e720	e490	e360	17600	1500	650	919	411	308
2	1380	527	1270	e700	e480	e350	6270	1260	586	787	332	293
3	1120	607	2770	e690	e470	e350	4760	1140	513	1060	456	260
4	1230	577	3320	e670	e460	e340	4120	1070	470	1250	658	240
5	1540	547	2350	e650	e460	e340	7190	1020	687	1190	429	228
6	1390	539	1840	e660	e450	e400	10300	1230	612	870	350	213
7	1200	590	1690	e650	e460	e520	9280	1240	472	730	315	202
8	1050	646	1510	e650	e470	e920	6570	1080	468	685	294	206
9	967	1320	1100	e640	e460	e1750	4500	985	779	785	275	2450
10	936	1510	e1350	e640	e450	e1800	3750	951	833	743	342	1520
11	856	1130	e1450	e630	e440	e1400	3380	883	683	660	520	779
12	805	1000	e1250	e630	e440	e1200	3170	860	544	609	387	576
13	775	923	e980	e620	e430	e1100	2900	821	720	575	314	2300
14	756	694	e700	e620	e430	e1000	2530	719	769	671	281	7950
15	855	755	1080	e630	e420	e960	2250	692	600	1970	261	2510
16	840	754	1180	e620	e410	e920	2050	743	481	1170	245	1580
17	756	743	1090	e550	e400	e880	1910	680	446	834	230	1180
18	708	727	e980	e500	e400	e860	1880	666	416	690	216	1090
19	670	693	e950	e530	e390	e840	1850	600	367	675	201	1920
20	643	508	e1000	e550	e390	e820	1700	557	336	620	215	1810
21	621	524	e880	e570	e380	e800	1580	536	308	618	223	2460
22	602	684	e710	e560	e380	e800	1410	537	299	640	211	2080
23	580	703	e810	e550	e370	e1050	1290	505	7190	530	295	1670
24	568	754	e850	e550	e360	e1600	1250	665	3020	464	298	1360
25	550	1000	e820	e540	e350	e3250	1200	752	1560	429	229	1220
26	534	1370	e880	e530	e340	e5150	1080	637	1120	520	212	1060
27	541	6630	e900	e520	e340	5190	1010	572	1730	463	209	969
28	576	2930	e840	e520	e350	4700	971	555	1940	422	208	897
29	569	2170	e860	e520	---	5460	1110	625	1390	410	298	852
30	547	1820	e880	e500	---	7920	1540	651	1080	355	634	812
31	551	---	e820	e500	---	19000	---	514	---	472	390	---
TOTAL	26136	33905	38460	18410	11670	72030	110401	25246	31069	22816	9939	40995
MEAN	843	1130	1241	594	417	2324	3680	814	1036	736	321	1366
MAX	1540	6630	3320	720	490	19000	17600	1500	7190	1970	658	7950
MIN	534	508	700	500	340	340	971	505	299	355	201	202
CFSM	1.22	1.64	1.80	.86	.60	3.37	5.33	1.18	1.50	1.07	.46	1.98
IN.	1.41	1.83	2.07	.99	.63	3.88	5.95	1.36	1.68	1.23	.54	2.21

CAL YR 1986 TOTAL 516676 MEAN 1416 MAX 14500 MIN 322 CFSM 2.05 IN. 27.86
WTR YR 1987 TOTAL 441077 MEAN 1208 MAX 19000 MIN 201 CFSM 1.75 IN. 23.78

e Estimated

01144500 CONNECTICUT RIVER AT WEST LEBANON, N. H.

LOCATION.--Lat 43°38'46", long 72°18'46", Grafton County, Hydrologic Unit 01080104, on left bank 50 ft downstream from railroad bridge at West Lebanon, 500 ft downstream from White River, and at mile 215.0.

DRAINAGE AREA.--4,092 mi².

PERIOD OF RECORD.--Discharge: October 1911 to November 1976 (published as "at White River Junction, VT"), November 1978 to current year. Water-quality records: Water year 1954.

REVISED RECORDS.--WSP 741: 1932 (adjusted monthly and yearly figures only). WSP 781: 1928(M). WSP 891: Drainage area. WSP 1301: 1922-26(M).

GAGE.--Water-stage recorder. Datum of gage is 321.52 ft above National Geodetic Vertical Datum of 1929. Prior to June 16, 1918, nonrecording gage on downstream side of pier of railroad bridge 50 ft upstream at same datum. June 16, 1918, to Nov. 2, 1930, nonrecording gage at various locations on upstream and downstream sides of railroad bridge at same datum.

REMARKS.--Records good except those for estimated daily discharges which are fair. Flow regulated by powerplants and by First Connecticut and Second Connecticut Lakes, Lake Francis, Moore and Comerford Reservoirs, Union Village Reservoir (Reservoirs in Connecticut River basin), and other reservoirs, combined usable capacity, about 17,200,000,000 ft³. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--73 years (water years 1912-76, 1980-87), 7,135 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 136,000 ft³/s, Nov. 4, 1927, gage height, 35.0 ft, present site, from rating curve extended above 70,000 ft³/s; minimum daily, 82 ft³/s, Aug. 8, 1965.

Stage and discharge of the flood of Nov. 4, 1927, are the greatest since at least 1760.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 34,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 1	0300	*68,400	*23.06	No other peak greater than base discharge.			

Minimum daily discharge, 869 ft³/s, Sept. 7.

DISCHARGE, 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	6350	3710	10700	3670	e1900	2860	61300	6760	7250	7250	1210	1240
2	7370	3200	7200	3820	e2700	e3300	51100	6430	3930	4590	1090	1180
3	8740	3840	9190	4500	e2300	e3800	39600	4220	6510	5140	4460	1200
4	7450	6330	14100	3500	e2300	e3200	32700	5240	5390	6030	4180	1230
5	10000	4510	12300	3670	e2700	e3300	32800	5610	4260	3410	3810	900
6	8130	4780	11800	3970	e2500	4280	35200	7170	3560	5670	2930	880
7	8380	3730	10200	3970	e3100	3900	35300	6240	3640	4130	2250	869
8	7910	3060	9180	3770	e2200	2750	32200	7310	3650	4120	1660	1230
9	7790	5860	6760	4150	e2700	4060	27200	7100	5080	4330	1270	7900
10	5910	8110	6290	3020	e2900	4980	21600	5300	6020	4300	2820	8410
11	5240	7500	7320	2410	e2700	4790	17300	4020	9180	2340	2710	2370
12	4000	6100	6520	3370	e2900	5890	13900	3330	8970	3990	2970	2030
13	4900	5450	5790	3080	e3300	4500	13400	4030	6770	4570	2270	6970
14	6130	6750	4070	3930	e3300	5010	13000	4120	4520	5430	1800	20000
15	5370	2010	4780	4150	e2200	3310	10500	4110	3940	7110	1020	11600
16	4640	1810	5400	4060	5980	3050	9390	3540	4480	5690	1020	7120
17	5030	5560	5590	3850	5650	3030	11600	3020	3530	3690	3290	6840
18	3140	5090	5930	e2300	5140	2780	9510	4170	3420	2720	2610	7450
19	2360	5720	6260	e3100	5660	2800	8830	3560	2650	2600	2600	5630
20	4080	5580	6100	e3100	4570	2340	7080	3110	1810	5020	1620	3570
21	5520	5040	4010	e3500	3520	1810	7010	3080	1090	4670	1720	5190
22	4650	3770	4730	e3400	2500	2090	7350	2800	3340	3940	1710	6040
23	4590	1710	5690	e3600	3440	4310	6180	2860	12000	4270	2000	4540
24	4630	4760	6650	e3000	3520	5300	6210	3170	9290	4020	2100	4410
25	3710	5430	6100	e2800	4260	11600	3880	3960	5180	2500	1440	4350
26	4080	5700	5950	e4400	4290	16800	3000	4120	3930	2020	1430	2520
27	4490	13500	3510	e4400	3170	21400	4080	5170	8380	3250	1310	1830
28	3540	14900	3550	e3500	3360	23100	3680	4400	19200	3390	1300	3760
29	4200	14400	3580	e3200	---	24000	6210	4490	14500	2820	948	5620
30	4080	12900	4600	e3300	---	27900	6120	4490	10300	2880	1240	4960
31	5000	---	4520	e2700	---	45000	---	4320	---	2050	1380	---
TOTAL	171410	180810	208370	109190	94760	257240	537230	141250	185770	127940	64168	141839
MEAN	5529	6027	6722	3522	3384	8298	17910	4556	6192	4127	2070	4728
MAX	10000	14900	14100	4500	5980	45000	61300	7310	19200	7250	4460	20000
MIN	2360	1710	3510	2300	1900	1810	3000	2800	1090	2020	948	869

CAL YR 1986 TOTAL 2644440 MEAN 7245 MAX 49100 MIN 1100
WTR YR 1987 TOTAL 2219977 MEAN 6082 MAX 61300 MIN 869

e Estimated

01150500 MASCOMA RIVER AT MASCOMA, N. H.

LOCATION.--Lat 43°39'01", long 72°11'05", Grafton County, Hydrologic Unit 01080104, on left bank at Mascoma, 250 ft downstream from railroad bridge, 1,000 ft downstream from outlet of Mascoma Lake, and 9.9 mi upstream from mouth.

DRAINAGE AREA.--153 mi².

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

REVISED RECORDS.--WSP 726: Drainage area. WSP 801: 1925(M), WRD NH-VT-84-1: 1973(M).

GAGE.--Water-stage recorder. Elevation of gage is 740 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by Mascoma and Crystal Lakes and Goose and Grafton Ponds (Reservoirs in Connecticut River basin). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--64 years, 217 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,840 ft³/s, Mar. 19, 1936, gage height, 7.50 ft, from rating curve extended above 2,500 ft³/s on basis of computations of flow over dams at gage heights 6.85 ft and 7.50 ft; minimum daily, 2 ft³/s, Feb. 3, 1939, Sept. 1, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,160 ft³/s, Apr. 1, gage height, 5.69 ft; minimum daily, 14 ft³/s, Apr. 24-27.

DISCHARGE, 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	98	247	e595	141	87	61	3610	72	83	421	34	32
2	102	244	e595	140	87	63	2910	210	84	163	33	32
3	107	241	e595	143	86	63	1700	249	82	139	39	32
4	118	239	e595	136	86	62	1310	290	e77	153	51	31
5	143	238	e595	135	84	61	1350	263	e82	176	63	31
6	161	238	e595	111	82	61	2150	246	100	229	65	31
7	193	279	e595	97	81	62	2410	352	101	236	64	31
8	203	318	e595	103	81	64	2040	354	99	210	59	31
9	172	322	e595	105	80	70	1350	309	106	165	55	40
10	157	e325	e595	108	78	77	968	284	118	77	56	99
11	145	e325	e595	117	78	84	883	267	118	53	54	153
12	130	e350	e595	116	76	91	940	216	115	60	51	133
13	123	e380	e595	116	75	94	807	167	109	69	49	136
14	151	e380	e595	113	74	95	579	189	103	131	46	367
15	181	e380	e595	122	71	93	356	207	79	226	45	497
16	195	e380	e250	108	68	92	e310	202	57	226	43	384
17	196	e380	e145	106	65	91	291	199	55	166	40	260
18	190	e380	145	102	64	89	288	175	54	126	37	127
19	183	e380	148	101	63	87	282	98	53	121	37	128
20	206	e380	149	106	62	88	277	44	49	101	36	139
21	220	e380	150	102	60	89	171	44	46	75	34	174
22	206	e380	122	102	60	92	39	47	49	78	33	233
23	196	e380	80	108	59	99	29	47	223	80	32	227
24	186	e550	90	102	58	121	14	48	449	79	31	198
25	178	e595	102	100	57	168	14	53	410	78	30	181
26	174	e595	116	98	57	272	14	58	234	75	30	169
27	172	e595	134	95	56	564	14	61	317	68	30	153
28	171	e595	140	92	56	772	18	66	914	64	30	143
29	218	e595	142	89	---	832	28	72	1040	50	31	136
30	258	e595	145	87	---	1040	32	78	749	37	31	132
31	251	---	145	88	---	1780	---	82	---	36	32	---
TOTAL	5384	11666	11128	3389	1991	7377	25184	5049	6155	3968	1301	4460
MEAN	174	389	359	109	71.1	238	839	163	205	128	42.0	149
MAX	258	595	595	143	87	1780	3610	354	1040	421	65	497
MIN	98	238	80	87	56	61	14	44	46	36	30	31

CAL YR 1986 TOTAL 97898 MEAN 268 MAX 2060 MIN 25
WTR YR 1987 TOTAL 87052 MEAN 238 MAX 3610 MIN 14

e Estimated

01150900 .OTTAUQUECHEE RIVER NEAR WEST BRIDGEWATER, VT.

LOCATION.--Lat 43°37'20", long 72°45'34", Rutland County, Hydrologic Unit 02010001, on right bank 50 ft upstream from highway bridge on Mission Chapel Road, 1.6 mi northwest of West Bridgewater and 2.6 mi southeast of Sherburne Center.

DRAINAGE AREA.--23.4 mi²

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

GAGE.--Water-stage recorder. Elevation of gage is 1,150 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges and period of shifting control, May 23 to Sept. 30, which are fair. Several observations of water temperature and specific conductance were made during the year.

EXTREME FOR PERIOD OF RECORD.--Maximum discharge, 1,270 ft³/s, Mar. 31, 1987, gage height, 7.78 ft; minimum, 4.9 ft³/s, Aug. 18-20, 23-25, 1986.

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

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 27	0515	699	5.84	June 23	1415	688	5.80
Mar. 31	2215	*1,270	*7.78	Sept. 14	0345	601	5.48
Apr. 6	0315	923	6.63				

Minimum daily discharge 12 ft³/s, June 21.

REVISIONS.--Revised peak discharges and annual maximums (*) for water years 1985-86 and revised daily discharge, in cubic feet per second, for high-water period in water year 1986 are given below. These figures supersede those published in the reports for 1985-86.

Date	Time	Discharge (ft³/s)	Gage Height (ft)	Date	Time	Discharge (ft³/s)	Gage Height (ft)
Dec. 30, 1985	0445	590	5.54	Mar. 27, 1986	1945	513	5.15
Feb. 25, 1985	0445	*646	*5.66	Mar. 31	0045	744	6.00
Mar. 20, 1986	0100	*1,010	6.93	May 23	0700	716	5.90

Daily discharge:

Mar. 20, 1986	775	Mar. 29, 1986	368
Mar. 27	441	Mar. 30	576
Mar. 28	396	Mar. 31	614

Month	Total	Mean	Max	Min	Cfsm	In
March 1986	5,724	185	774	14	4.99	5.57
Wtr Yr 1986	26,575	72.8	774	14	3.06	41.25

01150900 OTTAUQUECHEE RIVER NEAR WEST BRIDGEWATER, VT.--Continued

DISCHARGE, 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	40	22	82	e23	e17	e13	719	61	19	37	79	27
2	38	24	68	e21	e18	e14	249	53	18	33	45	26
3	36	24	153	e22	e17	e13	169	47	16	85	112	22
4	44	20	189	e21	e17	e12	147	43	16	101	94	18
5	68	18	115	e20	e16	e12	450	43	29	106	54	16
6	58	20	86	21	e17	e14	846	64	20	61	41	15
7	51	23	e66	21	e16	e17	668	60	16	46	37	14
8	45	38	e56	20	e16	e50	414	52	19	40	32	16
9	42	114	e50	20	e16	e46	237	46	31	35	27	337
10	40	104	e56	20	e15	e37	179	45	28	30	47	181
11	37	72	59	e21	e15	e33	166	42	21	27	47	72
12	36	58	49	e21	e15	e30	161	43	23	23	34	56
13	34	47	e40	e20	e15	e26	150	40	33	39	29	193
14	35	40	e36	e20	e15	e24	121	35	49	66	24	465
15	36	34	35	e21	e14	e22	106	39	32	226	22	153
16	32	34	34	e25	e14	e20	95	36	24	89	20	86
17	29	32	32	e24	e14	20	83	32	24	53	18	64
18	28	33	32	e22	e14	18	76	30	17	37	16	89
19	27	28	38	e21	e13	18	84	27	14	37	14	119
20	27	25	33	e21	e13	17	89	25	13	31	15	144
21	28	36	e28	e21	e13	18	83	23	12	30	13	157
22	29	34	e27	e20	e14	25	71	23	29	26	18	124
23	27	32	26	e20	e13	40	60	23	502	22	26	95
24	25	51	25	e19	e12	72	57	38	237	19	17	90
25	24	52	28	e19	e12	126	53	30	78	55	14	73
26	24	87	36	e18	e12	232	46	27	52	55	16	63
27	30	532	30	e18	e12	224	42	25	69	34	14	54
28	27	210	e28	e18	e12	192	39	25	69	36	18	48
29	26	123	27	e17	---	220	47	31	55	27	62	44
30	25	89	26	e17	---	303	68	26	43	33	51	55
31	23	---	23	e17	---	832	---	21	---	244	30	---
TOTAL	1071	2056	1613	629	407	2740	5775	1155	1608	1783	1086	2916
MEAN	34.5	68.5	52.0	20.3	14.5	88.4	192	37.3	53.6	57.5	35.0	97.2
MAX	68	532	189	25	18	832	846	64	502	244	112	465
MIN	23	18	23	17	12	12	39	21	12	19	13	14
CFSM	1.48	2.93	2.22	.87	.62	3.78	8.23	1.59	2.29	2.46	1.50	4.15
IN.	1.70	3.27	2.56	1.00	.65	4.36	9.18	1.84	2.56	2.83	1.73	4.64

CAL YR 1986 TOTAL 26610 MEAN 72.9 MAX 1100 MIN 14 CFSM 3.12 IN. 42.30
WTR YR 1987 TOTAL 22839 MEAN 62.6 MAX 846 MIN 12 CFSM 2.67 IN. 36.31

e Estimated

01151500 OTTAUQUECHEE RIVER AT NORTH HARTLAND, VT.

LOCATION.--Lat 43°36'09", long 72°21'17", Windsor County, Hydrologic Unit 01080106, on left bank 100 ft upstream from highway bridge at North Hartland, 0.3 mi downstream from North Hartland Dam, and 1.2 mi upstream from mouth.

DRAINAGE AREA.--221 mi².

PERIOD OF RECORD.--Discharge: October 1930 to current year.
Water-quality records: Water years 1954-55.

GAGE.--Water-stage recorder. Datum of gage is 336.77 ft above National Geodetic Vertical Datum of 1929 (levels by U. S. Army Corps of Engineers).

REMARKS.--Records good except those for estimated daily discharges and period of shifting control, June 23 to Aug. 30, which are poor. Flow regulated by powerplants upstream and by North Hartland Reservoir (Reservoir in Connecticut River basin) since March 1961; greater regulation by powerplants at North Hartland Reservoir since July 1985. Small seasonal storage in reservoir at Plymouth. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--57 years, 400 ft³/s, 24.58 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,400 ft³/s, Sept. 21, 1938, gage height, 17.68 ft, from rating curve extended above 6,200 ft³/s on basis of computations of flow over dams at gage heights 15.58 ft, 17.68 ft, and 21.5 ft; minimum, 0.2 ft³/s, July 6, 1984 during Hydroelectric construction; minimum daily, 3.8 ft³/s, July 3, 1933. Maximum discharge since construction of North Hartland Dam in March 1961, 6,170 ft³/s, Mar. 17, 1977, gage height, 8.67 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1760, 21.5 ft in November 1927, from floodmarks, discharge 30,400 ft³/s, by computation of peak flow over dam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,080 ft³/s, Apr. 10, gage height, 8.62 ft; minimum, 19 ft³/s, Aug. 25, 31, Sept. 6; minimum daily, 20 ft³/s, Aug. 16.

DISCHARGE, 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	102	e144	796	244	184	160	e137	485	155	263	420	134
2	160	e129	594	201	187	157	e315	426	163	221	117	65
3	211	e130	1310	202	187	150	e1150	368	152	490	225	139
4	272	e108	1470	232	179	162	e1090	364	108	353	529	58
5	246	e39	684	253	182	147	482	122	320	948	119	77
6	304	e40	627	183	172	164	1330	594	157	59	126	77
7	244	325	614	360	186	169	3560	621	132	329	140	71
8	187	276	537	284	185	161	5210	438	162	330	116	92
9	187	268	264	217	184	245	5900	300	261	209	114	1460
10	187	725	519	237	202	375	5930	356	201	268	182	1520
11	186	468	595	237	180	369	5140	294	165	159	275	345
12	185	294	368	232	169	366	4580	307	123	213	148	231
13	185	278	387	230	164	355	3690	281	187	208	123	839
14	157	285	347	166	160	245	3100	232	191	266	110	e1930
15	203	151	294	236	137	229	2800	294	221	1940	93	e2030
16	201	273	330	236	141	113	2440	258	118	725	20	e2030
17	144	230	398	223	138	248	1630	215	108	479	141	e792
18	155	184	411	183	138	263	765	231	85	281	106	e603
19	92	258	339	216	148	167	687	221	91	269	74	e705
20	156	238	254	228	147	186	627	174	82	227	108	e733
21	211	222	343	185	147	231	597	205	122	230	43	e1070
22	135	194	287	224	138	236	546	160	81	213	63	e893
23	127	237	211	216	161	273	318	190	2240	157	145	e572
24	e148	262	295	197	137	774	89	422	1490	149	94	757
25	e114	612	453	181	142	1010	112	252	451	181	56	441
26	e161	380	394	217	136	1780	320	217	255	351	79	461
27	e198	1820	251	192	163	2000	490	218	512	140	68	370
28	e147	1730	206	185	158	1840	377	211	678	187	88	338
29	e160	773	321	189	---	1940	482	186	482	139	205	313
30	e180	576	344	189	---	e2140	735	278	267	115	473	288
31	e205	---	342	180	---	e559	---	166	---	295	37	---
TOTAL	5550	11649	14585	6755	4552	17214	54629	9086	9760	10394	4637	19434
MEAN	179	388	470	218	163	555	1821	293	325	335	150	648
MAX	304	1820	1470	360	202	2140	5930	621	2240	1940	529	2030
MIN	92	39	206	166	136	113	89	122	81	59	20	58
MEAN†	181	404	456	216	163	806	1560	296	324	338	145	650
CFSM†	.82	1.83	2.06	.98	.74	3.65	7.06	1.34	1.47	1.53	.66	2.94
IN.†	.92	2.04	2.38	1.13	.77	4.21	7.88	1.55	1.64	1.77	.76	3.28

CAL YR 1986 TOTAL 169609 MEAN 465 MAX 4100 MIN 37 MEAN† 465 CFSM† IN.† 28.55
WTR YR 1987 TOTAL 168245 MEAN 461 MAX 5930 MIN 20 MEAN† 461 CFSM† IN.† 28.34

e Estimated
† Adjusted for change in contents in North Hartland Reservoir.

01152500 SUGAR RIVER AT WEST CLAREMONT, N. H.

LOCATION.--Lat 43°23'15", long 72°21'45", Sullivan County, Hydrologic Unit 01080104, on right bank 0.2 mi down-stream from Redwater Brook at West Claremont and 2.4 mi upstream from mouth.

DRAINAGE AREA.--269 mi².

PERIOD OF RECORD.--Discharge: May 1928 to current year. Published as "at Claremont" prior to October 1928. Water-quality records: Water year 1954.

REVISED RECORDS.--WSP 711: 1930(M). WSP 756: Drainage area. WSP 1901: 1960 (adjusted figures only).

GAGE.--Water-stage recorder. Datum of gage is 358.78 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Oct. 1, 1928, nonrecording gage at site 0.8 mi upstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Regulation by Sunapee Lake 25 mi upstream (Reservoirs in Connecticut River basin) and occasional diurnal fluctuation at low flow by mills upstream; greater regulation by mills prior to 1971. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--59 years, 407 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,000 ft³/s, Mar. 19, 1936, gage height, 10.92 ft, from rating curve extended above 6,700 ft³/s on basis of computations of flow over dam at gage heights 10.49 ft and 10.92 ft; maximum gage height, 11.80 ft Mar. 12, 1936 (ice jam); minimum daily discharge, 14 ft³/s, Aug. 26, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 1	0400	*8,440	*8.51	Apr. 6	0330	6,810	7.62

Minimum daily discharge, 59 ft³/s, Aug. 21, 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	110	184	644	e300	e230	e200	6280	836	164	644	89	95
2	99	188	526	e280	e230	e210	3020	797	150	465	75	84
3	110	185	916	e270	e220	e215	2180	699	133	622	118	78
4	148	180	1460	e260	e220	e205	1920	602	141	595	137	73
5	211	175	1070	e250	e220	e200	4790	561	225	461	115	65
6	206	190	830	e250	e220	e200	5870	779	218	376	97	68
7	174	219	709	e250	e215	e250	4800	744	175	320	81	65
8	152	254	611	e250	e215	e350	3410	606	155	292	66	74
9	129	523	518	e250	e215	e620	2450	525	184	274	64	571
10	131	524	535	e250	e210	e500	1960	472	235	245	97	502
11	125	418	512	e250	e210	e450	1630	413	198	301	105	309
12	118	388	463	e250	e210	e400	1420	382	165	302	98	222
13	124	366	396	e240	e210	e370	1280	354	161	269	85	334
14	179	320	379	e240	e205	e350	1160	327	156	308	78	1010
15	289	294	369	e240	e200	e330	1030	306	140	321	69	641
16	263	285	342	e240	e190	e310	808	295	116	297	69	456
17	231	282	327	e240	e190	e300	656	232	108	215	64	365
18	208	278	319	e240	e190	e290	639	211	98	184	71	363
19	185	271	365	e240	e185	e285	622	199	101	165	60	346
20	167	242	395	e240	e185	e280	568	186	88	153	70	376
21	154	290	349	e240	e180	e275	457	174	85	155	59	592
22	154	312	294	e240	e180	e300	408	162	105	129	73	479
23	145	298	e280	e240	e185	381	375	151	1650	114	97	373
24	170	310	e270	e230	e185	611	361	222	1140	110	76	310
25	168	435	e320	e230	e190	944	337	270	667	103	69	267
26	172	552	e400	e230	e190	1590	305	236	469	95	62	223
27	200	1940	e380	e230	e190	1620	277	196	1450	89	59	188
28	218	1420	e350	e230	e195	1770	269	179	2010	86	69	169
29	207	1030	e330	e230	---	1950	373	203	1220	80	106	154
30	197	812	e320	e230	---	2310	633	189	858	91	139	161
31	187	---	e310	e230	---	4480	---	165	---	133	110	---
TOTAL	5331	13165	15289	7590	5665	22546	50288	11673	12765	7994	2627	9013
MEAN	172	439	493	245	202	727	1676	377	425	258	84.7	300
MAX	289	1940	1460	300	230	4480	6280	836	2010	644	139	1010
MIN	99	175	270	230	180	200	269	151	85	80	59	65

CAL YR 1986 TOTAL 173448 MEAN 475 MAX 3520 MIN 92
WTR YR 1987 TOTAL 163946 MEAN 449 MAX 6280 MIN 59

e Estimated

01153000 BLACK RIVER AT NORTH SPRINGFIELD, VT.

LOCATION.--Lat 43°20'00", long 72°30'55", Windsor County, Hydrologic Unit 01080106, on right bank of North Springfield, 800 ft downstream from North Springfield Dam, 1,300 ft upstream from Great Brook, and 8.1 mi upstream from mouth.

DRAINAGE AREA.--158 mi².

PERIOD OF RECORD.--Discharge: October 1929 to current year. October 1929 monthly discharge only, published in WSP 1301.

Water-quality records: Water years 1954-55.

REVISED RECORDS.--WSP 756: Drainage area. WSP 781: 1931(M), 1934(M).

GAGE.--Water-stage recorder. Datum of gage is 445.79 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by powerplant and mills upstream and by North Springfield Reservoir (Reservoirs in Connecticut River basin) since November 1960. High flow slightly affected by retarding reservoirs since 1968. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--58 years, 294 ft³/s, 25.27 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,500 ft³/s, Sept. 22, 1938, gage height, 17.68 ft, from rating curve extended above 3,200 ft³/s on basis of computations of flow over dams at gage heights 16.41 ft and 17.68 ft; minimum daily, 7.0 ft³/s, Nov. 13, 1973. Maximum discharge since construction of North Springfield Dam in 1960, 4,070 ft³/s, Apr. 10, 1987, gage height, 8.08 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,070 ft³/s, Apr. 10, gage height, 8.08 ft; minimum daily, 48 ft³/s, Aug. 26.

DISCHARGE, 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	81	132	393	e180	e140	e125	342	639	134	237	104	106
2	82	135	326	e175	e140	e130	288	471	121	198	80	87
3	96	139	591	e170	e140	e130	1330	342	101	509	123	73
4	152	131	1060	e160	e135	e125	1200	301	99	494	181	63
5	252	121	1100	e155	e135	e120	504	300	155	350	87	59
6	231	130	601	e155	e135	e120	1700	389	141	261	110	52
7	192	154	461	e150	e130	e125	3330	374	108	183	118	53
8	163	183	389	e150	e130	e150	3650	317	98	178	71	70
9	138	445	289	e150	e130	e300	3790	283	151	171	67	1100
10	124	430	366	e150	e130	e270	3930	245	243	127	135	835
11	116	354	373	e150	e125	e250	3760	219	178	156	201	385
12	98	312	314	e150	e125	e230	3570	197	145	145	133	287
13	107	273	265	e150	e125	e215	3450	191	141	113	108	582
14	127	212	203	e150	e120	209	3130	172	144	233	82	1690
15	151	188	247	e150	e120	199	2630	157	131	545	74	1490
16	134	188	241	e150	e120	184	1330	152	129	348	67	535
17	126	177	229	e150	e115	179	600	153	96	215	62	375
18	112	177	225	e145	e115	169	610	133	88	157	58	414
19	100	172	264	e145	e115	166	606	124	84	126	51	699
20	123	134	282	e145	e115	167	599	163	78	108	50	763
21	112	151	227	e145	e110	167	588	100	69	105	57	1180
22	115	175	201	e140	e110	197	568	112	85	101	60	915
23	115	152	215	e140	e110	272	620	97	1190	87	74	595
24	116	166	202	e140	e115	494	527	199	1840	79	75	477
25	117	221	269	e140	e115	789	338	218	677	84	57	378
26	108	317	376	e140	e115	1160	256	199	354	82	48	310
27	131	786	312	e140	e115	1480	258	162	585	68	49	289
28	144	1160	244	e140	e115	1690	262	153	617	68	54	248
29	138	1240	e230	e140	---	1720	289	148	350	61	113	249
30	135	964	e205	e140	---	1450	467	135	276	59	198	235
31	133	---	e190	e140	---	1080	---	113	---	101	139	---
TOTAL	4069	9519	10890	4625	3445	14062	44522	6958	8608	5749	2886	14594
MEAN	131	317	351	149	123	454	1484	224	287	185	93.1	486
MAX	252	1240	1100	180	140	1720	3930	639	1840	545	201	1690
MIN	81	121	190	140	110	120	256	97	69	59	48	52

CAL YR 1986 TOTAL 125981 MEAN 345 MAX 2980 MIN 44
WTR YR 1987 TOTAL 129927 MEAN 356 MAX 3930 MIN 48

e Estimated

01153550 WILLIAMS RIVER NEAR ROCKINGHAM, VT.

LOCATION.--Lat 43°11'30", Long 72°29'08", Windham county, Hydrologic Unit 01080107 on left bank 50 ft downstream from highway bridge on parker Hill Road, 0.2 mi downstream from Divoll Brook, 2.2 mi upstream from mouth and 4.5 mi northwest of Bellows Falls.

DRAINAGE AREA.--112 mi².

PERIOD OF RECORD.--October 1986 to September 1987.

GAGE.--Water-stage recorder. Datum of gage is 300 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Low flow regulated by powerplant upstream.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in September 1938 had greatest discharge since at least 1753.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 3,000 ft³/s and maximum (*)

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 31	0800	*a11,500	*10.69	Apr. 7	1000	3,560	7.18
Apr. 5	0645	a6,410	8.75	Sept. 13	2015	3,580	7.19

a from rating curve extended above 2,100 ft³/s.

Minimum daily discharge, 24 ft³/s, Aug. 19.

DISCHARGE, 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	60	238	e125	e90	e82	2060	283	49	97	32	45
2	51	62	230	e120	e90	e84	958	215	47	91	31	40
3	54	59	1150	e115	e90	e88	757	182	47	e302	55	33
4	126	62	822	e110	e88	e86	791	161	e58	195	46	35
5	104	59	466	e110	e88	e82	4170	191	85	e118	36	32
6	110	75	246	e105	e90	e95	2470	249	58	95	31	31
7	88	106	290	e105	e90	e120	2350	199	49	82	29	32
8	78	170	253	e105	e90	e200	1330	165	51	77	29	54
9	72	371	230	e105	e90	e250	852	148	112	71	28	908
10	51	219	e250	e105	e90	e230	678	e136	122	73	48	210
11	58	169	e210	e105	e88	e200	576	128	70	77	58	117
12	57	146	e180	e105	e86	e180	510	126	60	64	41	98
13	53	126	e170	e100	e86	e170	597	120	60	56	35	711
14	100	108	e160	e100	e84	e160	486	110	52	81	32	840
15	124	118	e150	e100	e82	e150	388	104	48	99	30	296
16	90	102	e140	e100	e82	e140	315	98	43	60	28	181
17	78	118	e135	e100	e80	e130	281	92	40	52	26	132
18	72	102	e130	e100	e78	e120	306	87	38	48	25	506
19	68	100	e150	e100	e76	e120	313	85	36	44	24	568
20	66	96	e160	e100	e76	e120	223	76	34	42	30	1110
21	62	122	e140	e100	e75	e115	230	70	33	43	27	731
22	59	122	e130	e100	e75	e130	205	70	50	41	35	414
23	58	114	e120	e98	e75	e150	195	66	1170	37	60	297
24	58	128	e110	e98	e76	e300	185	101	272	35	36	230
25	56	154	e140	e98	e78	949	185	91	126	33	31	180
26	54	757	e165	e98	e78	1330	163	82	104	33	28	149
27	92	1290	e150	e96	e80	1170	148	71	406	32	27	e130
28	90	656	e145	e96	e80	1330	156	73	309	31	34	122
29	80	371	e140	e94	---	1420	274	67	157	30	110	114
30	72	307	e135	e92	---	1530	383	59	116	30	91	106
31	70	---	e130	e92	---	6670	---	53	---	37	53	---
TOTAL	2302	6449	7265	3177	2331	17901	22535	3758	3902	2206	1226	8452
MEAN	74.3	215	234	102	83.2	577	751	121	130	71.2	39.5	282
MAX	126	1290	1150	125	90	6670	4170	283	1170	302	110	1110
MIN	51	59	110	92	75	82	148	53	33	30	24	31
CFSM	.66	1.92	2.09	.92	.74	5.16	6.71	1.08	1.16	.64	.35	2.52
IN.	.76	2.14	2.41	1.06	.77	5.95	7.48	1.25	1.30	.73	.41	2.81

WTR YR 1987 TOTAL 81504 MEAN 223 MAX 6670 MIN 24 CFSM 1.99 IN. 27.07

e Estimated

01154500 CONNECTICUT RIVER AT NORTH WALPOLE, N. H.

LOCATION.--Lat 43°07'34", long 72°26'14", Cheshire County, Hydrologic Unit 01080104, on left bank at North Walpole, 100 ft upstream from Saxtons River, 0.7 mi downstream from Vilas Bridge between Bellows Falls, Vt., and North Walpole, N. H., and at mile 172.5.

DRAINAGE AREA.--5,493 mi², includes that of Saxtons River.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Discharge: March 1942 to current year. Water-quality records: Water years 1954-55, 1971.

GAGE.--Water-stage recorder. Datum of gage is 218.63 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, and those below 1,000 ft³/s, which are fair. Flow regulated by powerplants and by First Connecticut and Second Connecticut Lakes, Lake Francis, Moore and Comerford Reservoirs (Reservoirs in Connecticut River basin), and other reservoirs, combined usable capacity, about 24,800,000,000 ft³.

AVERAGE DISCHARGE.--45 years, 9,443 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 97,000 ft³/s, Mar. 27, 1953, gage height, 30.37 ft; minimum daily, 115 ft³/s, Aug. 31, 1952, Sept. 2, 1957.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1750, 43.8, ft Mar. 19, 1936, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 92,700 ft³/s, Apr. 1, gage height, 29.05 ft; minimum daily, 1,360 ft³/s, Aug. 15.

DISCHARGE, 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	7270	5120	16000	6210	3450	e4300	e85600	12000	8040	12700	1970	2110
2	8510	5270	13800	6120	e4500	e4600	e66100	11600	6010	11200	2690	2480
3	12600	5180	16500	6290	e4200	e4400	e54300	10600	7600	8130	5180	1750
4	11600	7580	24700	5610	e4000	e4800	e44700	8290	7780	8480	5970	2340
5	11300	7660	20500	5020	e4400	e4800	e50200	9050	6870	9770	5790	1390
6	12700	7660	18200	6230	e4500	e4800	e58400	9040	5560	7680	4320	1370
7	10700	6060	15400	6610	4480	e5600	58300	12500	5410	5540	3150	1370
8	10800	5090	14800	6670	2670	e4300	54800	11300	5260	5990	2450	2330
9	9970	8250	13700	6290	4430	e5400	47300	11000	7310	6670	2050	11400
10	10600	11100	9940	5350	e4500	e6200	40800	9670	8250	6280	3350	14800
11	6930	12800	11400	3560	e4400	e6400	35400	8090	11100	6400	3760	8430
12	5660	11300	11800	5770	e4100	e8000	29400	5940	9840	3600	5140	3030
13	6770	8030	10400	5120	e4800	e7000	26600	6480	9530	7040	3630	8180
14	7780	8580	6720	6450	e4500	e7000	23400	6710	7580	6740	2650	28100
15	8990	6110	6310	5930	e3300	e5500	20800	6150	6120	9470	1360	19700
16	6890	3570	9460	6320	e5400	e4300	16900	5350	6280	12000	1360	13200
17	6700	6780	8980	5840	e6400	e4500	18700	4920	4810	6150	3850	11000
18	5530	8410	8610	3570	e5200	e4300	15000	5960	3940	5000	2930	10800
19	3620	8240	9670	3810	e5400	e4800	15600	6450	3800	4840	3670	12100
20	5210	7740	9710	e5000	e5800	e4300	12300	4610	2220	5020	2560	10700
21	6990	9170	9170	e5200	e5000	e3700	11800	4120	2370	7200	2280	10400
22	7100	7620	6560	e4500	e3400	e4400	12400	4600	3400	5260	2380	11400
23	6700	3340	8010	e5400	e4200	e6000	11000	4530	18500	4780	3120	10200
24	6530	6320	8320	e4500	e3800	e9000	8950	4970	18800	5400	2890	7510
25	5620	8100	12000	e4000	e5800	e18300	10000	5860	12800	4080	1880	8170
26	5560	9970	10400	e5400	e5000	e27000	4370	6590	6680	2740	1630	4970
27	6740	23300	8970	e5000	e4100	e33300	6570	7240	10500	4410	2230	3990
28	5500	24600	5470	e5000	e4700	e39200	7370	6740	27700	4240	1690	5810
29	5730	22400	5660	e5200	---	e37600	8120	5920	20500	3820	2550	6330
30	5970	20200	7450	e4800	---	e41300	9880	6840	15200	3700	2130	8080
31	6380	---	8070	e4500	---	e62500	---	6370	---	3580	2660	---
TOTAL	238950	285550	346680	165270	126430	387600	865060	229490	269760	197910	93270	243440
MEAN	7708	9518	11180	5331	4515	12500	28840	7403	8992	6384	3009	8115
MAX	12700	24600	24700	6670	6400	62500	85600	12500	27700	12700	5970	28100
MIN	3620	3340	5470	3560	2670	3700	4370	4120	2220	2740	1360	1370

CAL YR 1986 TOTAL 3976210 MEAN 10890 MAX 64900 MIN 1730
WTR YR 1987 TOTAL 3449410 MEAN 9450 MAX 85600 MIN 1360

e Estimated

01154500 CONNECTICUT RIVER AT NORTH WALPOLE, N.H.--Continued

(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to September 1980 (published as "at Walpole"), October 1980 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1980 to September 1981.
WATER TEMPERATURES: October 1980 to September 1981.

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 AIR (DEG C)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	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											
20...	1030	11700	95	7.06	-2.0	3.5	0.70	11.6	87	200	39
APR											
09...	1100	47000	83	7.90	11.0	3.5	4.0	13.3	102	17	94
JUN											
23...	0930	11500	113	7.40	21.5	20.5	1.7	8.4	94	73	640
AUG											
20...	1030	2760	131	7.20	22.5	25.5	0.30	7.2	89	440	45

DATE	HARD-NESS TOTAL (MG/L AS $CACO_3$)	HARD-NESS NONCARB WH WAT TOT FLD (MG/L AS $CACO_3$)	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 SO_4)	ALKA-LINITY WH WAT TOT INC (MG/L AS $CACO_3$)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO_2)
NOV											
20...	36	8	12	1.5	4.4	1.2	12	29	6.2	<0.10	5.6
APR											
09...	24	7	7.8	1.0	2.8	1.0	9.6	17	4.4	<0.10	4.5
JUN											
23...	31	1	10	1.4	4.6	1.1	13	30	3.9	<0.10	4.4
AUG											
20...	50	6	17	1.9	5.8	1.3	12	44	8.7	0.10	4.6

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO_2+NO_3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH_4)	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)	PHOS PHATE, ORTHO, DIS-SOLVED (MG/L AS PO_4)
NOV											
20...	74	61	0.210	0.030	0.04	0.40	0.140	0.070	<0.010	30	--
APR											
09...	46	43	0.360	0.030	0.04	0.80	0.050	0.010	<0.010	70	--
JUN											
23...	64	57	0.200	0.030	0.04	0.80	0.020	0.010	<0.010	20	--
AUG											
20...	78	78	--	--	--	--	--	--	--	20	--

01154500 CONNECTICUT RIVER AT NORTH WALPOLE, N.H.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)
NOV											
20...	5	158	87	<1	13	<0.5	<1	<1	<3	4	96
APR											
09...	50	6340	70	<1	11	<0.5	1	<1	<3	<1	86
JUN											
23...	4	124	75	<1	13	0.8	<1	<1	<3	6	38
AUG											
20...	4	30	73	<1	14	<0.5	<1	<1	<3	3	16

DATE	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	MERCURY DISSOLVED (UG/L AS HG)	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											
20...	45	<4	17	<10	<0.1	1	<1	<1.0	55	<6	12
APR											
09...	7	4	15	<10	<0.1	1	<1	<1.0	36	<6	15
JUN											
23...	<5	5	4	<10	<0.1	<1	<1	<1.0	52	<6	18
AUG											
20...	<5	<4	<1	<10	0.1	2	<1	<1.0	85	<6	9

01155500 WEST RIVER AT JAMAICA, VT.

LOCATION.--Lat 43°06'32", long 72°46'33", Windham County, Hydrologic Unit 01080107, on left bank 0.2 mi upstream from highway bridge at Jamaica, 0.4 mi upstream from Ball Mountain Brook, and 2.8 mi downstream from Ball Mountain Dam, and at mile 26.2.

DRAINAGE AREA.--179 mi²

PERIOD OF RECORD.--Discharge: October 1946 to current year.
Water-quality records: Water year 1954.

GAGE.--Water-stage recorder. Elevation of gage is 640 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by Ball Mountain Reservoir since 1961 (Reservoirs in Connecticut River basin). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--41 years, 371 ft³/s, 28.15 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,500 ft³/s, Dec. 31, 1948, gage height, 14.87 ft, from rating curve extended above 9,800 ft³/s, verified by slope-area measurement of peak flow; minimum, 0.94 ft³/s, Sept. 23-25, 1968; minimum daily, 0.94 ft³/s, Sept. 23, 24, 1968. Maximum discharge since construction of Ball Mountain Dam in 1961, 5,800 ft³/s, Apr. 8, 1987, gage height, 9.60 ft; maximum gage height, 11.72 ft, Feb. 7, 1982 (ice jam).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,800 ft³/s, Apr. 8, gage height, 9.60 ft; minimum discharge, 28 ft³/s, Aug. 19, 20 minimum daily, 29 ft³/s, Aug. 18,19.

DISCHARGE, 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	437	172	1890	277	e190	e145	250	600	123	198	57	173
2	296	165	1480	221	e190	e145	174	1030	99	133	57	171
3	161	167	896	221	e190	e145	992	828	86	532	59	101
4	797	168	1190	240	e190	e145	1060	143	72	731	59	51
5	1000	166	1980	e200	e160	e145	1050	147	65	359	59	51
6	816	170	1200	e180	e160	e145	4750	111	79	145	59	50
7	457	231	607	e165	e170	e145	5270	85	90	145	45	51
8	366	346	572	e165	e170	e145	5240	84	91	140	35	58
9	305	630	540	e165	e170	e310	5060	132	212	132	35	894
10	258	966	357	e165	e170	e350	5240	144	543	139	37	1370
11	225	1010	384	e165	e170	e320	5200	138	617	138	37	468
12	180	668	525	e180	e170	e320	4690	140	345	137	48	228
13	162	431	433	e210	e140	e360	4300	140	220	127	55	346
14	217	403	332	e210	e140	e310	3560	149	170	88	55	1240
15	313	242	284	e210	e140	e280	2330	154	103	237	54	2040
16	346	303	239	e210	e145	e245	1690	154	80	174	54	1090
17	289	296	274	e210	e145	e240	1030	152	80	78	46	510
18	197	292	314	e210	e145	e200	629	151	64	76	29	597
19	166	286	322	e210	e145	e140	573	151	55	76	29	962
20	149	208	315	e210	e145	e170	585	149	55	60	49	1060
21	149	195	e200	e215	e140	e170	421	149	55	51	52	1680
22	147	203	e180	e215	e145	e170	316	147	89	56	33	1990
23	146	217	e180	e190	e145	e170	213	133	1180	59	51	1210
24	146	263	e240	e190	e145	e370	151	130	2100	59	62	488
25	146	286	237	e190	e145	e700	154	130	1410	59	61	343
26	137	459	258	e190	e145	e1500	154	130	516	59	61	300
27	175	734	348	e190	e145	1680	154	126	284	59	61	253
28	258	870	406	e190	e145	1610	156	126	322	59	63	161
29	282	2040	454	e190	---	1820	162	127	309	58	70	123
30	256	2050	422	e190	---	1600	171	125	234	58	139	125
31	198	---	329	e190	---	1040	---	125	---	58	176	---
TOTAL	9177	14637	17388	6164	4400	15235	55725	6230	9748	4480	1787	18184
MEAN	296	488	561	199	157	491	1857	201	325	145	57.6	606
MAX	1000	2050	1980	277	190	1820	5270	1030	2100	731	176	2040
MIN	137	165	180	165	140	140	151	84	55	51	29	50
MEAN†	241	554	502	198	156	797	1619	154	323	143	64.7	607
CFSM†	1.35	3.09	2.80	1.11	.67	4.45	9.04	.86	1.80	.80	.36	3.39
IN.†	1.55	3.46	3.24	1.28	.91	5.13	10.1	.99	2.01	.92	.42	3.78

CAL YR 1986 TOTAL 159436 MEAN 437 MAX 4000 MIN 40 MEAN† 437 CFSM† 2.44 IN.† 33.15
WTR YR 1987 TOTAL 163155 MEAN 447 MAX 5270 MIN 29 MEAN† 445 CFSM† 2.49 IN.† 33.78

e Estimated
† Adjusted for change in contents in Ball Mountain Lake.

01156000 WEST RIVER AT NEWFANE, VT.

LOCATION.--Lat 42°59'43", long 72°38'13", Windham County, Hydrologic Unit 01080107, on left bank 400 ft downstream from highway bridge, 1 mi northeast of Newfane, and at mile 12.7.

DRAINAGE AREA.--308 mi².

PERIOD OF RECORD.--Discharge: September 1919 to September 1923, October 1928 to current year. Water-quality records: Water year 1954.

Water temperatures: October 1954 to September 1965.

REVISED RECORDS.--WSP 756: Drainage area. WSP 1231: 1922-23, 1929-31(M).

GAGE.--Water-stage recorder. Datum of gage is 384.21 ft above National Geodetic Vertical Datum of 1929. Prior to June 27, 1931, nonrecording gage at site 600 ft upstream and June 27, 1931, to Aug. 21, 1972, water-stage recorder on right bank 600 ft downstream from highway bridge at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated since 1961 by Ball Mountain Reservoir and Townshend Reservoir 6.8 mi upstream (Reservoirs in Connecticut River basin). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--63 years, 631 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 52,300 ft³/s, Sept. 21, 1938, gage height, 22.81 ft, from floodmarks, from rating curve extended above 20,000 ft³/s on basis of contracted-opening measurement at gage height 19.3 ft and slope-area measurements at gage heights 19.46 ft and 22.81 ft; minimum, 7.6 ft³/s, Aug. 24, 25, 26, 1962; minimum daily, 8.2 ft³/s, Aug. 25, 1962. Maximum discharge since construction of Ball Mountain and Townshend Reservoirs in 1961, 10,300 ft³/s, May 25, 1979, gage height, 10.07 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1869, that of Sept. 21, 1938. Flood of Nov. 3, 1927, reached a discharge of 45,000 ft³/s, gage height, 23.0 ft, from floodmarks, at nonrecording-gage site, from rating curve extended above 20,000 ft³/s on basis of computation of peak flow over dam at West Dummerston, about 5 mi downstream, adjusted for flow from intervening area.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,100 ft³/s, Apr. 7, gage height, 10.00 ft,; minimum, 56 ft³/s, Aug. 20, 21; minimum daily, 58 ft³/s, Aug. 20.

DISCHARGE, 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	254	2450	484	e315	e150	2840	429	179	317	98	212
2	383	238	1390	394	e315	e150	2840	759	189	284	93	207
3	239	237	1830	369	e310	e150	2840	940	166	562	104	188
4	975	249	3290	396	e305	e150	2840	368	151	868	116	110
5	1090	251	2320	e340	e280	e150	2860	310	183	552	110	91
6	995	279	1210	e290	e220	e150	8540	321	166	282	102	88
7	678	369	899	e270	e200	e180	9530	283	151	222	96	86
8	429	525	844	e270	e200	e240	7700	262	149	214	83	95
9	429	1060	668	e270	e200	e520	7290	488	235	209	78	1180
10	338	1550	615	e270	e200	e560	7970	567	432	210	86	1710
11	312	1340	805	e280	e200	e500	8020	310	602	232	110	763
12	268	911	734	e290	e200	e520	7680	253	475	222	103	330
13	238	605	537	e310	e200	e580	7640	251	255	218	98	539
14	271	524	439	329	e200	e500	7330	246	259	199	97	1840
15	424	379	427	329	e200	e450	6150	244	204	323	95	2260
16	438	414	406	354	e200	e420	3190	247	147	314	91	1480
17	407	413	407	336	e200	e400	1500	242	135	179	89	681
18	296	403	432	339	e200	e340	1020	235	129	155	76	564
19	265	388	488	419	e200	e240	873	224	110	144	63	1610
20	228	270	515	397	e170	e270	805	222	104	136	58	2090
21	221	346	434	375	e150	e280	739	217	100	127	73	2710
22	215	380	357	355	e150	e280	557	211	99	119	73	2990
23	210	356	e300	346	e150	e300	477	212	1730	116	70	1920
24	266	394	e320	324	e150	e500	342	235	2370	113	88	825
25	184	554	e380	335	e150	1440	350	233	1640	111	89	462
26	162	844	e450	e310	e150	2610	338	220	803	117	89	436
27	289	1800	585	e310	e150	3050	322	202	533	119	89	384
28	351	2770	614	e310	e150	2890	315	203	627	110	93	325
29	373	3570	625	e310	---	3240	313	210	464	105	142	247
30	352	3150	647	e310	---	3340	445	208	359	101	198	233
31	297	---	509	e315	---	2660	---	193	---	101	215	---
TOTAL	12082	24823	25927	10336	5715	27210	103656	9545	13146	7081	3065	26656
MEAN	390	827	836	333	204	878	3455	308	438	228	98.9	889
MAX	1090	3570	3290	484	315	3340	9530	940	2370	868	215	2990
MIN	162	237	300	270	150	150	313	193	99	101	58	86

CAL YR 1986 TOTAL 255218 MEAN 699 MAX 6320 MIN 86
WTR YR 1987 TOTAL 269242 MEAN 738 MAX 9530 MIN 58

e Estimated

01158000 ASHUELOT RIVER BELOW SURRY MOUNTAIN DAM, NEAR KEENE, N. H.

LOCATION.--Lat 42°59'40", long 72°18'40", Cheshire County, Hydrologic Unit 01080201, on right bank 600 ft downstream from Surry Mountain Dam, 2.5 mi upstream from Sturtevant Brook, 4.5 mi north of Keene, and at mile 34.0.

DRAINAGE AREA.--101 mi².

PERIOD OF RECORD.--Discharge: September 1945 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 480.00 ft above U. S. Army Corps of Engineers datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by Surry Mountain Lake (Reservoirs in Connecticut River basin). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--42 years, 176 ft³/s, 23.66 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,260 ft³/s, Apr. 7, 1987, gage height, 11.41 ft in gage well, 11.78 ft, from floodmarks; minimum daily, 0.4 ft³/s, Sept. 17, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,260 ft³/s, Apr. 7, gage height, 11.41 ft in gage well, 11.78 ft, from floodmarks; minimum daily, 7.6 ft³/s, Oct.11.

DISCHARGE, 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	e139	124	656	147	89	43	23	382	49	323	15	17
2	e137	115	516	147	89	44	125	378	45	244	15	16
3	e137	106	314	147	89	44	424	371	42	324	19	15
4	e137	102	561	134	68	44	397	344	43	390	28	13
5	e137	98	689	102	59	44	145	315	57	335	28	12
6	e137	104	680	91	59	44	1040	294	61	261	23	12
7	e137	120	625	116	59	44	2150	272	54	205	22	14
8	e13	136	447	126	59	44	1910	250	50	153	23	78
9	e135	262	276	126	60	44	1450	227	65	119	20	130
10	e65	410	219	126	60	64	1430	205	79	99	21	131
11	e7.6	382	245	125	60	93	1400	180	80	102	22	129
12	e21	311	245	124	60	102	1350	160	75	95	20	129
13	e58	269	243	124	71	102	1350	74	71	85	18	127
14	e89	234	204	106	75	101	1340	74	67	72	16	131
15	e121	213	184	99	74	100	1330	91	60	59	14	141
16	e133	196	186	99	74	100	1290	93	51	61	13	155
17	e126	183	186	99	73	99	1240	88	42	52	12	150
18	e117	179	186	99	72	85	1190	83	36	43	12	104
19	e107	148	187	99	72	62	1150	77	32	36	10	100
20	e91	126	190	99	72	54	1110	72	27	31	9.7	105
21	e75	129	190	99	63	54	1020	67	24	29	9.1	107
22	e76	134	189	99	43	55	912	62	23	26	9.0	248
23	e79	136	188	99	43	85	875	60	129	23	9.3	328
24	e82	212	187	94	43	160	794	64	260	21	9.4	170
25	e79	325	187	91	43	263	737	64	273	19	9.1	119
26	e83	319	189	90	43	455	702	61	238	18	9.0	119
27	e119	276	228	89	43	582	667	59	263	18	8.7	118
28	e162	539	245	89	43	589	626	60	512	16	10	117
29	168	676	240	89	---	604	633	59	557	13	11	114
30	155	655	200	89	---	503	485	57	438	13	14	147
31	136	---	158	89	---	57	---	53	---	15	15	---
TOTAL	3258.6	7219	9240	3352	1758	4764	29295	4696	3803	3300	474.3	3296
MEAN	105	241	298	108	62.8	154	976	151	127	106	15.3	110
MAX	168	676	689	147	89	604	2150	382	557	390	28	328
MIN	7.6	98	158	89	43	43	23	53	23	13	8.7	12
MEAN†	111	280	263	109	63.9	320	807	143	138	94.3	14.9	109
CFSM†	1.10	2.77	2.60	1.08	.63	3.17	7.99	1.42	1.37	.93	.15	1.08
IN.†	1.27	3.10	3.00	1.24	.65	3.65	8.92	1.63	1.52	1.08	.17	1.21

CAL YR 1986 TOTAL 86914.6 MEAN 238 MAX 1090 MIN 7.6 MEAN† 238 CFSM† 2.36 IN.† 32.00
WTR YR 1987 TOTAL 74455.9 MEAN 204 MAX 2150 MIN 7.6 MEAN† 204 CFSM† 2.02 IN.† 27.43

e Estimated
† Adjusted for change in contents in Surry Mountain Lake.

01158600 OTTER BROOK BELOW OTTER BROOK DAM, NEAR KEENE, N. H.

LOCATION.--Lat 42°56'45", long 72°14'14", Cheshire County, Hydrologic Unit 01080201, on right bank 450 ft downstream from Otter Brook Dam, 2 mi northeast of Keene, 2.4 mi upstream from Minnewawa Brook, and 4.9 mi upstream from mouth.

DRAINAGE AREA.--47.2 mi²

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 658.65 ft above U. S. Army Corps of Engineers datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Otter Brook Lake (Reservoirs in Connecticut River basin). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--29 years, 80.4 ft³/s, 23.13 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 752 ft³/s (includes bypass flow around gage), Apr. 9, 1987, gage height, 8.62 ft; minimum 0.1 ft³/s, Nov. 28, 1959; minimum daily, 0.3 ft³/s, Sept. 27 to Oct. 2, Oct. 9, 10, 12-20, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 752 ft³/s (includes bypass flow around gage), Apr. 9, gage height, 8.62 ft; minimum, 2.9 ft³/s, Aug. 21, 22; minimum daily, 3.0 ft³/s, Aug. 21.

DISCHARGE, 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	50	367	83	39	32	19	175	19	99	9.4	15
2	24	49	167	63	39	38	86	176	17	78	8.6	16
3	31	46	107	59	37	39	218	169	15	224	17	12
4	56	43	283	50	37	39	232	174	18	175	29	9.5
5	73	40	383	47	37	37	24	173	37	114	23	7.4
6	62	50	376	47	37	30	24	126	35	76	17	6.4
7	52	70	344	47	36	28	a68	94	25	59	14	6.4
8	46	78	144	47	36	42	a414	93	21	49	13	6.7
9	42	177	102	47	30	48	a544	88	38	45	11	55
10	39	198	111	47	28	48	a685	74	43	39	14	67
11	36	184	111	47	29	57	678	69	33	50	15	43
12	34	126	111	47	31	61	670	49	27	51	13	30
13	33	108	109	47	31	59	663	31	28	51	11	36
14	41	89	74	47	30	56	657	26	27	49	9.0	137
15	63	78	61	47	29	48	662	26	27	60	7.5	91
16	53	73	61	47	28	43	672	26	23	50	6.4	75
17	46	72	61	47	28	43	621	26	19	41	5.3	61
18	42	69	61	47	28	43	584	26	16	34	4.7	55
19	40	72	61	47	28	42	570	27	14	27	4.0	114
20	37	70	95	47	28	42	554	28	12	19	3.6	99
21	35	96	75	48	28	42	538	23	11	14	3.0	98
22	34	130	61	48	28	42	565	20	10	14	3.3	97
23	34	140	61	48	28	43	558	20	104	13	4.9	40
24	37	139	61	48	28	55	533	20	144	12	5.1	16
25	35	189	60	48	22	120	507	22	86	11	4.5	16
26	34	179	79	48	20	263	478	22	56	12	4.2	16
27	90	159	87	48	21	343	447	22	123	16	3.9	17
28	93	340	87	48	21	347	413	16	219	15	4.6	12
29	73	420	86	42	---	359	423	23	241	12	9.2	8.8
30	63	399	85	39	---	290	299	24	215	9.9	16	18
31	54	---	84	39	---	35	---	21	---	9.5	13	---
TOTAL	1458	3933	4015	1511	842	2814	13406	1909	1703	1528.4	307.2	1281.2
MEAN	47.0	131	130	48.7	30.1	90.8	447	61.6	56.8	49.3	9.91	42.7
MAX	93	420	383	83	39	359	685	176	241	224	29	137
MIN	24	40	60	39	20	28	19	16	10	9.5	3.0	6.4
MEAN†	47.2	142	119	47.8	29.6	165	372	60.4	58.0	48.1	9.91	49.0
CFSM†	1.00	3.01	2.52	1.01	.63	3.52	7.88	1.28	1.23	1.02	.21	1.04
IN.†	1.15	3.37	2.90	1.17	.65	4.04	8.87	1.47	1.37	1.18	.24	1.16
(‡)	0	0	0	0	0	0	579	0	0	0	0	0

CAL YR 1986 TOTAL 39728 MEAN 109 MAX 553 MIN 10 MEAN† 108 CFSM† 2.29 IN.† 31.20
WTR YR 1987 TOTAL 34707.8 MEAN 95.1 MAX 684 MIN 3.0 MEAN† 95.6 CFSM† 1.99 IN.† 27.50

a Includes bypass flow.
† Adjusted for change in contents in Otter Brook Reservoir.
‡ Spillway discharge, in cubic feet per second, that bypassed the gage; records furnished by U.S. Army Corps of Engineers.

01161000 ASHUELOT RIVER AT HINSDALE, N. H.

LOCATION.--Lat 42°47'07", long 72°29'12", Cheshire County, Hydrologic Unit 01080201, on left bank 40 ft upstream from highway bridge at Hinsdale, 0.2 mi downstream from dam, and 1.2 mi upstream from mouth.

DRAINAGE AREA.--420 mi².

PERIOD OF RECORD.--Discharge: March 1907 to December 1911, July 1914 to current year.
Water-quality records: Water years 1953, 1958, 1968.

REVISED RECORDS.--WSP 661: Drainage area. WSP 781: 1907-10, 1914-34. WSP 1301: 1915(M), 1917-19(M),1921-33(M). WSP 1701: 1920.

GAGE.--Water-stage recorder. Datum of gage is 201.32 ft above National Geodetic Vertical Datum of 1929 (levels by U. S. Army Corps of Engineers). Prior to Sept. 29, 1933, nonrecording gage on highway bridge at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by Surry Mountain Lake 33 mi upstream since 1942 and by Otter Brook Lake 29 mi upstream on Otter Brook since 1958 (Reservoirs in Connecticut River basin). Diurnal fluctuation by mills upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--77 years, 675 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,600 ft³/s, Mar. 19, 1936, by computation of peak flow over dam; maximum gage height, 20.2 ft Mar. 19, 1936, from floodmarks (backwater from the Connecticut River); minimum discharge, 10 ft³/s, Sept. 9, 1953; minimum daily, 12 ft³/s, Sept. 15, 1929. Maximum discharge since at least 1859, that of Mar. 19, 1936.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,170 ft³/s, Apr. 1, gage height, 8.29 ft; minimum, 17 ft³/s, Sept. 4; minimum daily, 48 ft³/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	347	448	2070	719	e420	313	6780	1690	202	880	83	81
2	331	425	1860	e640	e420	508	5990	1440	187	640	78	75
3	336	407	2170	e600	e415	518	3270	1290	183	1100	93	85
4	422	389	3020	e580	e400	443	2560	1150	184	1330	109	79
5	548	369	2950	e560	e430	392	3490	1080	264	1020	129	72
6	581	419	2610	e550	e480	360	4990	1080	293	725	119	69
7	495	586	2270	e540	e430	322	5610	969	248	558	107	67
8	437	644	1970	e530	e400	378	5950	875	215	444	93	62
9	403	1040	1400	e500	e370	545	5700	793	212	372	94	267
10	387	1440	1170	e510	e440	621	4630	715	229	321	104	431
11	319	1370	1120	e505	e430	674	3880	643	229	293	116	321
12	252	1220	1070	e500	e400	631	3530	580	215	328	110	278
13	241	1030	991	e480	e390	519	3330	505	215	419	103	276
14	282	872	791	e470	e380	472	3210	397	226	375	92	673
15	397	772	833	e460	e380	462	3080	387	196	331	87	661
16	466	742	770	e450	e370	436	2940	381	172	294	84	465
17	442	691	738	442	e365	424	2810	364	148	244	80	390
18	422	662	730	511	e360	403	2710	344	135	229	73	376
19	393	694	999	605	e350	403	2610	323	123	201	67	536
20	364	620	1280	558	e340	391	2490	299	113	176	65	627
21	332	1110	1130	e500	e330	408	2360	278	106	157	61	577
22	324	1760	867	e470	e320	464	2230	268	102	155	64	532
23	323	1450	833	e450	e315	601	2100	240	353	135	51	610
24	311	1260	776	e450	e310	938	2000	236	703	112	48	520
25	303	1570	998	e440	e305	1400	1870	240	624	108	51	363
26	300	1850	1330	e440	e300	2060	1740	240	501	109	50	284
27	429	3030	1230	e430	e300	2620	1650	229	640	117	51	260
28	615	2720	1090	e430	e280	2860	1580	226	1320	101	49	252
29	592	2590	1000	e425	---	2900	1700	222	1330	113	71	256
30	544	2370	925	e420	---	2920	1960	226	1130	90	78	252
31	494	---	818	e420	---	3690	---	226	---	84	90	---
TOTAL	12432	34550	41809	15585	10430	30076	98750	17936	10798	11561	2550	9797
MEAN	401	1152	1349	503	372	970	3292	579	360	373	82.3	327
MAX	615	3030	3020	719	480	3690	6780	1690	1330	1330	129	673
MIN	241	369	730	420	280	313	1580	222	102	84	48	62

CAL YR 1986 TOTAL 331240 MEAN 908 MAX 5350 MIN 125
WTR YR 1987 TOTAL 296274 MEAN 812 MAX 6780 MIN 48

e Estimated

RESERVOIRS IN CONNECTICUT RIVER BASIN

01127850; 01128000. FIRST CONNECTICUT AND SECOND CONNECTICUT LAKES on Connecticut River are operated as a unit for storage of water for power and are used for recreation. The downstream order and usable capacity of each are as follows: Second Lake, 12 mi northeast of Pittsburg, N. H., 506,000,000 ft³; First Lake, 5.6 mi northeast of Pittsburg, N. H., 3,330,000,000 ft³. Records provided by New England Power Co.

01129000. LAKE FRANCIS on Connecticut River at Pittsburg, N. H., completed in March 1940, used for storage of water for power and for recreation, has usable capacity of 4,326,000,000 ft³ Records provided by New Hampshire Water Resources Board.

01132000; 01132500. MOORE AND COMERFORD RESERVOIRS on Connecticut River are operated as a unit for storage of water for hydroelectric power development and are used for recreation. The downstream order and usable capacity of each are as follows: Moore Reservoir, 4.5 mi northwest of Littleton, N. H., filled in April 1956, 4,970,000,000 ft³; Comerford Reservoir, 5 mi northeast of Monroe, N. H., completed in 1930, 1,279,000,000 ft³. Records provided by New England Power Co.

01141000. UNION VILLAGE RESERVOIR on Ompompanoosuc River, 0.3 mi north of Union Village, Vt., completed in 1949 for flood control, has usable capacity of 1,660,000,000 ft³. records provided by U. S. Army Corps of Engineers.

01148000; 01150000. LAKES AND PONDS IN MASCOMA RIVER BASIN are operated as a unit for storage of water for power and are used for recreation. The reservoirs and usable capacity of each are as follows: 01148000 Goose Pond, 5.2 mi northeast of Mascoma, N. H., 509,000,000 ft³; Grafton Pond, 8.5 mi southeast of Mascoma, 144,000,000 ft³; Crystal Lake, 5.8 mi southeast of Mascoma, 75,000,000 ft³; 01150000 Mascoma Lake at Mascoma, 337,000,000 ft³; total usable capacity of the four reservoirs, 1,060,000,000 ft³. Records provided by New Hampshire Water Resources Board.

01151400. NORTH HARTLAND RESERVOIR on Ottauquechee River at North Hartland, Vt., completed in 1961, used for flood control and recreation, has usable capacity of 3,110,000,000 ft³. Records provided by U. S. Army Corps of Engineers.

01152000. SUNAPEE LAKE on Sugar River at Sunapee, N. H., used for recreation and storage of water for power, has usable capacity of 862,000,000 ft³. Records provided by New Hampshire Water Resources Board.

01152900. NORTH SPRINGFIELD RESERVOIR on Black River at North Springfield, Vt., completed in 1960, used for flood control and recreation, has usable capacity of 2,230,000,000 ft³. Records provided by U. S. Army Corps of Engineers.

01155400. BALL MOUNTAIN RESERVOIR on West River, 2 mi north of Jamaica, Vt., completed in 1961, used for food control and recreation, has usable capacity of 2,380,000,000 ft³. Records provided by U. S. Army Corps of Engineers.

01155900. TOWNSHEND RESERVOIR on West River, 1.8 mi northwest of Townshend, Vt., completed in 1961, used for flood control and recreation, has usable capacity of 1,460,000,000 ft³. Records provided by U. S. Army Corps of Engineers.

01157500. SURRY MOUNTAIN LAKE on Ashuelot River, 4.5 mi north of Keene, N. H., completed in 1942, used for flood control and recreation, has usable capacity of 1,420,000,000 ft³. Records provided by U. S. Army Corps of Engineers.

01158550. OTTER BROOK LAKE on Otter Brook, 2.5 mi northeast of Keene, N. H. completed in 1958, used for flood control and recreation, has usable capacity of 798,000,000 ft³. Records provided by U. S. Army Corps of Engineers

MONTHEND USABLE CONTENTS, IN MILLIONS OF CUBIC FEET, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

Date	First and Second Connecticut Lakes	Lake Francis	Moore and Comerford Reservoirs	Union Village Reservoirs	Lakes and Ponds in Mascoma River basin	North Hartland Reservoir
Sept. 30, 1986.....	2702.1	3660.4	5876.6	2.2	1040.0	112.0
Oct. 31.....	2448.3	3528.7	5774.9	1.5	966.0	118.0
Nov. 30.....	2337.7	3318.4	6010.4	17.6	641.3	157.7
Dec. 31.....	2118.9	2857.5	4760.9	15.5	495.6	120.0
Jan. 31, 1987.....	1588.8	1915.5	3946.1	15.7	498.1	116.0
Feb. 28.....	1007.6	1042.0	2168.9	17.1	504.7	117.0
Mar. 31.....	1255.2	1225.1	1255.8	293.2	808.5	789.7
Apr. 30.....	2849.1	2706.5	4701.6	5.3	1007.4	112.0
May 31.....	3406.3	3081.2	5892.0	3.5	1035.8	121.0
June 30.....	3513.0	3827.2	6030.8	3.4	1056.9	118.0
July 31.....	3293.7	3760.0	6205.3	1.8	1045.8	126.0
Aug. 31.....	2804.1	3278.4	4829.4	1.7	1001.2	115.0
Sept. 30.....	2576.1	3214.9	5168.3	4.9	1016.1	121.0

Date	Sunapee Lake	North Springfield Lake	Ball Mountain Reservoir	Townshend Reservoir	Surry Mountain Lake	Otter Brook Lake
Sept. 30, 1986.....	461	24.0	168.6	37.6	53.2	37.6
Oct. 31.....	340	23.3	21.0	37.2	69.3	38.2
Nov. 30.....	243	35.6	192.9	102.0	172.3	67.6
Dec. 31.....	292	22.5	35.2	38.6	78.2	39.0
Jan. 31, 1987.....	258	22.5	34.1	37.6	79.5	36.5
Feb. 28.....	204	24.7	31.4	35.8	80.7	35.4
Mar. 31.....	442	677.2	849.9	728.4	525.0	235.7
Apr. 30.....	603	61.7	232.0	39.0	86.0	40.4
May 31.....	619	25.4	106.3	36.9	62.2	37.2
June 30.....	704	27.6	101.6	38.3	90.1	40.4
July 31.....	561	25.4	96.5	35.2	57.4	37.2
Aug. 31.....	496	25.4	115.3	37.2	56.3	37.2
Sept. 30.....	529	28.4	117.7	38.3	57.4	53.5

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; minimum daily, 33 ft³/s, Aug. 21.

DISCHARGE, 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

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 and periods of shifting control Oct. 1-10, Oct. 22 to Nov. 27, Mar. 26 to Sept. 14, 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)
June 23	1500	*a5,640	*16.21	No other peak greater than base discharge.			

a from rating curve extended above 2,600 ft³/s as explained above.

Minimum daily discharge, 3.1 ft³/s, Sept. 5.

DISCHARGE, 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	100	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	2432	13331	4119	1941	8261.1
MEAN	102	290	388	175	97.5	687	541	78.5	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 MEAN 392 MAX 6110 MIN 11 CFSM 2.10 IN. 28.46
WTR YR 1987 TOTAL 99669.1 MEAN 273 MAX 3310 MIN 3.1 CFSM 1.46 IN. 19.83

e Estimated

04280350 METTAWEE RIVER NEAR PAWLET, VT.

LOCATION.--Lat 43°22'18", long 73°12'59", Rutland County, Hydrologic Unit 02010001, on left bank 10 ft downstream from highway bridge 1.0 mi southwest of Butternut Bend and 2.5 mi northwest of Pawlet.

DRAINAGE AREA.--70.2 mi².

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

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. Several observations of water temperature and specific conductance were made during the year.

EXTREME FOR PERIOD OF RECORD.--Maximum discharge, 3,310 ft³/s, Nov. 27, 1986, gage height 5.22 ft, minimum, 7.8 ft³/s, July 30, 1985.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 750 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 27	0110	*a3,310	*5.22	Apr. 5	0445	a3,220	5.18
Mar. 26	1515	871	3.69	June 23	0357	961	3.78
Mar. 31	2130	a3,040	5.10	Sept. 9	1130	1,140	3.94

a From rating curve extended above 930 ft³/s.

Minimum discharge, 12 ft³/s, Aug. 19, 21, 22, 26.

DISCHARGE, 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	42	42	229	102	e50	e58	1050	89	30	84	25	23
2	44	41	219	e100	e50	e62	555	84	28	76	23	21
3	46	43	434	e96	e49	e58	437	76	26	119	54	20
4	87	43	352	e92	e48	e56	381	74	35	100	37	18
5	98	41	281	e88	e48	e54	1770	76	49	82	29	17
6	84	75	245	e84	e47	e53	1170	81	35	73	26	16
7	75	77	222	e82	e46	e60	1090	72	30	67	24	18
8	69	84	198	e80	e46	e80	930	69	62	64	22	52
9	61	126	208	e78	e46	e140	649	66	227	61	20	447
10	61	115	237	e76	e46	145	499	63	256	55	41	129
11	59	110	189	e74	e45	138	411	58	132	53	38	92
12	56	104	175	e72	e45	134	358	60	125	48	30	73
13	57	95	148	e70	e45	118	320	58	113	45	26	179
14	63	88	166	e68	e44	106	282	56	103	86	24	183
15	61	81	146	e66	e44	99	248	53	82	141	22	123
16	54	79	132	e64	e44	91	222	52	70	72	21	102
17	51	77	128	e63	e44	87	203	49	63	58	20	88
18	47	73	138	e62	e44	82	194	47	57	51	18	157
19	46	69	200	e61	e44	81	180	46	52	46	17	149
20	45	71	155	e60	e43	81	164	43	47	44	22	138
21	44	91	131	e59	e43	84	152	41	43	43	17	129
22	44	76	e120	e58	e43	104	136	40	122	39	39	114
23	44	70	e115	e57	e43	167	125	37	483	36	33	111
24	39	130	e110	e56	e43	241	115	47	203	33	22	98
25	38	133	196	e55	e43	356	120	39	144	50	19	88
26	42	463	171	e55	e44	613	107	37	119	54	18	84
27	55	1080	139	e54	e46	535	99	35	134	38	17	79
28	48	449	128	e53	e52	558	92	40	129	34	23	74
29	44	344	124	e52	---	560	94	51	106	30	38	69
30	41	276	115	e52	---	636	100	43	93	28	32	87
31	39	---	108	e51	---	1360	---	34	---	27	26	---
TOTAL	1684	4646	5659	2140	1275	6997	12253	1716	3198	1837	823	2978
MEAN	54.3	155	183	69.0	45.5	226	408	55.4	107	59.3	26.5	99.3
MAX	98	1080	434	102	52	1360	1770	89	483	141	54	447
MIN	38	41	108	51	43	53	92	34	26	27	17	16
CFSM	.77	2.21	2.60	.98	.65	3.22	5.82	.79	1.52	.84	.38	1.41
IN.	.89	2.46	3.00	1.13	.68	3.71	6.49	.91	1.69	.97	.44	1.58

CAL YR 1986 TOTAL 43463 MEAN 119 MAX 1080 MIN 17 CFSM 1.70 IN. 23.03
WTR YR 1987 TOTAL 45206 MEAN 124 MAX 1770 MIN 16 CFSM 1.76 IN. 23.96

e Estimated

04282000 OTTER CREEK AT CENTER RUTLAND, VT.

LOCATION.--Lat 43°36'13", long 73°00'49", Rutland County, Hydrologic Unit 02010002, on right bank 200 ft downstream from dam, 500 ft upstream from bridge on U.S. Highway 4 at Center Rutland, 1.2 mi downstream from East Creek, and 1.5 mi west of Rutland.

DRAINAGE AREA.--307 mi².

PERIOD OF RECORD.--Discharge: May 1928 to current year. Water-quality records: Water years 1955, 1971.

REVISED RECORDS.--WSP 1084: 1929.

GAGE.--Water-stage recorder. Datum of gage is 474.80 ft above National Geodetic Vertical Datum of 1929; prior to Oct. 1, 1964, datum was 1.00 ft higher. Prior to July 22, 1929, nonrecording gage at same site.

REMARKS.--Records good except those for estimated daily discharges, which are fair and those for Oct. 1, 5-8, which are poor. Flow regulated by powerplants and Chittenden Reservoir 14 mi upstream on East Creek, usable capacity, 819,800,000 ft³. Prior to June 3, 1947, regulation by East Pittsford Reservoir, usable capacity, 150,000,000 ft³. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--59 years, 552 ft³/s, 24.42 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,700 ft³/s, Sept. 22, 1938, gage height, 13.45 ft, present datum, from rating curve extended above 7,400 ft³/s on basis of computation of peak flow over dam; minimum daily, 45 ft³/s Sept. 21, 1947, Aug. 7, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,400 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 28	0230	3,650	7.89	Apr. 6	0030	*10,100	*13.01

Minimum daily discharge, 125 ft³/s, Sept. 6.

DISCHARGE, 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	e300	252	864	369	e280	e210	6690	529	227	319	312	193
2	232	261	750	406	e260	275	3600	452	224	274	251	170
3	387	295	1290	325	e270	275	2110	402	190	502	579	159
4	480	276	1880	369	e290	265	1660	394	185	624	508	144
5	e560	255	1550	368	e290	255	6470	485	298	460	349	134
6	e490	275	1020	399	e285	250	7800	582	229	310	278	125
7	e430	358	866	408	e285	264	5760	601	181	285	234	128
8	e400	410	755	377	e280	320	5010	516	227	303	229	135
9	360	781	588	345	e280	523	3170	478	353	282	217	2030
10	330	847	814	359	e275	448	2130	456	810	274	369	1200
11	304	562	802	359	e270	410	1700	426	615	306	445	574
12	285	458	649	360	e265	401	1580	418	397	238	321	403
13	245	424	510	362	e260	371	1520	416	545	207	235	929
14	250	327	345	335	e250	299	1360	395	905	405	187	1810
15	297	312	500	370	e240	269	1140	389	456	1120	164	1020
16	270	316	492	e410	e240	295	1020	389	339	552	181	643
17	249	313	457	e370	e235	300	936	377	262	339	181	560
18	237	303	427	357	e230	291	915	354	225	293	167	706
19	217	290	518	397	e220	294	918	349	197	262	142	1140
20	214	227	527	382	e215	300	875	311	186	238	134	963
21	209	233	442	359	e205	298	805	205	184	247	134	1120
22	228	296	373	359	e200	344	717	204	323	205	153	817
23	254	305	399	349	e205	516	611	204	2570	164	246	644
24	245	411	379	356	e210	768	546	448	1670	146	184	613
25	245	586	460	366	e210	1100	548	347	800	298	132	503
26	247	759	696	343	e215	1780	480	275	492	310	135	409
27	274	3250	585	334	e215	1920	434	241	490	228	143	367
28	254	3240	459	327	e210	1910	384	257	521	275	196	332
29	287	1900	446	328	---	2160	429	292	440	211	296	321
30	281	1210	411	313	---	2600	598	241	367	262	304	405
31	266	---	405	e300	---	4840	---	197	---	723	220	---
TOTAL	9327	19732	20659	11161	6890	24551	61916	11630	14908	10662	7626	18697
MEAN	301	658	666	360	246	792	2064	375	497	344	246	623
MAX	560	3250	1880	410	290	4840	7800	601	2570	1120	579	2030
MIN	209	227	345	300	200	210	384	197	181	146	132	125
CFSM	.98	2.14	2.17	1.17	.80	2.58	6.72	1.22	1.62	1.12	.80	2.03
IN.	1.13	2.39	2.50	1.35	.83	2.97	7.50	1.41	1.81	1.29	.92	2.27

CAL YR 1986 TOTAL 223479 MEAN 612 MAX 6200 MIN 155 CFSM 1.99 IN. 27.08
WTR YR 1987 TOTAL 217759 MEAN 597 MAX 7800 MIN 125 CFSM 1.94 IN. 26.39

e Estimated

04282500 OTTER CREEK AT MIDDLEBURY, VT.

LOCATION.--Lat 44°00'47", long 73°10'06", Addison County, Hydrologic Unit 02010002, on right bank 150 ft upstream from highway bridge in Middlebury and 3.5 mi downstream from Middlebury River.

DRAINAGE AREA.--628 mi².

PERIOD OF RECORD.--Discharge: April 1903 to April 1907, October 1910 to January 1920, October 1928 to current year. Water-quality records: Water years 1954, 1967-74.

REVISED RECORDS.--WSP 434: 1903-4. WSP 684: 1913(M), drainage area. WSP 1114: 1913. WSP 1207: 1929, 1931.

GAGE.--Water-stage recorder. Datum of gage is 335.75 ft above National Geodetic Vertical Datum of 1929. Apr. 1, 1903, to Apr. 30, 1907, and Oct. 5, 1910, to Jan. 31, 1920, nonrecording gage at site 1,800 ft upstream at datum 10 ft lower, and Oct. 1, 1928, to Oct. 17, 1933, at present datum.

REMARKS.--Records good except those for estimated daily discharges and periods of backwater from aquatic vegetation, Oct. 1 to Nov. 11 and July 17 to Sept. 16, which are fair. Some regulation by Chittenden Reservoir, usable capacity, 819,800,000 ft3 on East Creek. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--71 years (water years 1904-06, 1911-19, 1929-87), 993 ft³/s, 21.47 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,000 ft³/s, Mar. 20, 21, 1936, gage height, 10.3 ft; minimum daily, 92 ft³/s, Aug. 9, 1965.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1830, 13,600 ft³/s, Nov. 4, 1927, gage height, 13.3 ft, present datum, at site 1,800 ft upstream, from rating curve extended above 9,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,320 ft³/s, Apr. 9, gage height, 8.15 ft; minimum daily, 233 ft³/s, Sept. 8.

DISCHARGE, 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	1070	484	2500	774	e480	e330	3480	896	414	1080	805	383
2	1020	466	2550	691	e470	e350	3460	826	462	822	597	365
3	858	484	2660	e580	e460	e410	4070	712	523	675	582	329
4	832	549	2680	e570	e470	e430	4760	675	543	845	840	310
5	1040	581	2600	e560	e480	e450	5060	673	512	1030	754	291
6	1120	572	2540	e600	e450	e470	5070	812	572	861	618	257
7	1090	568	2490	e720	e450	e520	5240	885	502	658	467	234
8	894	711	2380	e720	e450	614	6530	877	417	605	428	233
9	786	901	2230	692	e460	861	7210	807	503	657	396	471
10	825	1180	2070	678	e470	941	7170	728	764	611	437	1350
11	700	1300	1900	637	e440	949	6710	681	1060	682	570	1490
12	603	1180	1760	633	e430	876	6060	631	1010	838	657	1370
13	581	1050	1550	e640	e430	788	5350	628	893	696	520	1290
14	554	910	1380	e620	e420	714	4720	601	1050	543	423	1660
15	640	700	1290	e630	e410	636	4180	590	1190	835	384	1730
16	663	615	1120	e620	e400	589	3750	577	916	1260	318	1790
17	668	628	1060	e600	e400	619	3410	554	723	1120	316	1730
18	637	675	965	e580	e390	637	3130	568	632	753	367	1540
19	535	662	878	e590	e390	599	2850	507	508	601	341	1470
20	474	605	937	e600	e380	610	2590	522	450	547	327	1520
21	444	552	949	e580	e380	642	2350	492	427	569	299	1550
22	444	549	839	e580	e370	881	2100	372	412	540	289	1550
23	492	561	797	e560	e370	1290	1880	341	1460	494	308	1470
24	450	702	777	e540	e360	1650	1640	443	1930	447	344	1330
25	447	1060	821	e540	e340	2070	1370	646	2030	384	343	1170
26	442	1330	1090	e540	e340	2490	1070	617	2070	535	288	977
27	486	2290	1140	e520	e350	2560	889	481	2060	586	271	786
28	547	2290	1060	e520	e340	2600	796	496	1930	486	283	712
29	479	2360	913	e520	---	2690	727	547	1690	507	384	678
30	534	2430	871	e500	---	2850	768	549	1360	458	520	670
31	572	---	853	e500	---	3180	---	490	---	593	518	---
TOTAL	20927	28945	47650	18635	11580	35296	108390	19224	29013	21318	13994	30706
MEAN	675	965	1537	601	414	1139	3613	620	967	688	451	1024
MAX	1120	2430	2680	774	480	3180	7210	896	2070	1260	840	1790
MIN	442	466	777	500	340	330	727	341	412	384	271	233
CFSM	1.07	1.54	2.45	.96	.66	1.81	5.75	.99	1.54	1.10	.72	1.63
IN.	1.24	1.71	2.82	1.10	.69	2.09	6.42	1.14	1.72	1.26	.83	1.82

CAL YR 1986 TOTAL 446529 MEAN 1223 MAX 5460 MIN 347 CFSM 1.95 IN. 26.45
WTR YR 1987 TOTAL 385678 MEAN 1057 MAX 7210 MIN 233 CFSM 1.68 IN. 22.85

e Estimated

04284000 JAIL BRANCH AT EAST BARRE, VT

LOCATION.--Lat 44°09'30", long 72°26'44", Washington County, Hydrologic Unit 02010003, on right bank 1,400 ft upstream from highway bridge, at East Barre, 1,400 ft downstream from East Barre Detention Reservoir, and 4.2 mi upstream from mouth.

DRAINAGE AREA.--38.9 mi².

PERIOD OF RECORD.--August 1920 to September 1923, October 1933 to current year. October 1933 monthly discharge only, published in WSP 1307. Prior to October 1922, published as Jail Brook at East Barre.

REVISED RECORDS.--WSP 564: 1922. WSP 1034: Drainage area. WSP 1307: 1921-23(M).

GAGE.--Water-stage recorder. Datum of gage is 1,107.25 ft above National Geodetic Vertical Datum of 1929. Aug. 14, 1920, to Sept. 30, 1923, nonrecording gage at site 0.1 mi downstream at different datum. Nov. 1, 1933, to Jan. 25, 1935, nonrecording gage and Jan. 26, 1935, to Aug. 7, 1972, water-stage recorder at site 1,500 ft downstream. Datum of gage was 1,071.59 ft above National Geodetic Vertical Datum of 1929, Nov. 1, 1933, to Sept. 30, 1964, and 1,069.59 ft above National Geodetic Vertical Datum of 1929, Oct. 1, 1964 to Aug. 7, 1972 (levels by U.S. Army Corps of Engineers).

REMARKS.--Records good except those for periods of shifting control, Apr. 1 to May 1 and Aug. 11 to Sept. 9, which are fair, and those for estimated daily discharges, which are poor. Discharge affected by East Barre Detention Reservoir since 1935 (Reservoirs in Winooski River basin). Prior to 1964, occasional diurnal fluctuation at low flow caused by mill upstream. Diversion from reservoir on Orange Brook, a tributary upstream, for city of Barre. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--57 years, 55.0 ft³/s, 19.20 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,820 ft³/s, Oct. 1, 1920, gage height, 9.50 ft, from graph based on gage readings, site and datum then in use, from rating curve extended above 900 ft³/s; minimum, 0.1 ft³/s, Aug. 18, 1950, Aug. 3, 4, 31, Sept. 1, 3, 1953. Maximum discharge since construction of East Barre Detention Reservoir in 1935, 634 ft³/s, Apr. 19, 1969, gage height, 3.31 ft, site and datum then in use; maximum gage height, 9.48 ft Jan. 7, 1973 (ice jam).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 538 ft³/s, Apr. 1, gage height, 4.88 ft; maximum gage height, 5.50 ft, Mar. 10, (ice jam); minimum discharge, 5.3 ft³/s, Sept. 8.

DISCHARGE, 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	70	41	e42	e28	e18	e16	536	85	85	38	17	11
2	47	45	e38	e26	e18	e17	519	76	35	29	17	9.3
3	37	44	106	e25	e18	e17	489	66	25	27	39	9.1
4	41	31	115	e25	e17	e17	447	54	21	52	31	8.0
5	60	26	65	e25	e17	e15	402	46	62	48	20	7.2
6	43	20	e44	e24	e18	e18	399	52	34	35	17	6.3
7	38	26	e42	e24	e18	e20	293	58	23	26	16	5.8
8	32	46	e38	e25	e17	e30	242	48	91	28	14	5.3
9	31	72	e36	e24	e17	e60	177	39	135	18	14	214
10	31	45	e44	e24	e17	e110	143	34	78	18	18	44
11	28	34	e39	e23	e16	e68	125	30	48	18	24	21
12	27	33	e35	e23	e16	e50	116	26	33	17	17	17
13	27	31	e32	e23	e16	e36	103	26	33	16	14	96
14	27	45	e30	e24	e16	e24	86	22	43	27	13	209
15	36	23	e28	e23	e16	e22	76	22	27	209	11	56
16	31	23	e26	e23	e16	e22	68	24	18	48	11	33
17	28	23	e26	e22	e16	21	63	23	20	30	11	21
18	26	23	e25	e22	e16	19	64	22	19	26	9.7	17
19	24	24	e24	e22	e15	19	62	20	16	107	8.7	21
20	24	57	e24	e21	e15	19	58	20	15	51	13	42
21	24	25	e23	e21	e15	18	53	19	14	338	12	51
22	24	36	e23	e21	e15	21	51	19	13	149	9.8	37
23	23	30	e23	e20	e15	40	45	19	206	55	10	29
24	23	28	e25	e20	e14	81	44	32	63	32	14	24
25	23	35	e32	e20	e14	108	43	31	33	23	9.8	20
26	23	57	e42	e20	e15	212	42	26	24	79	10	18
27	23	254	e38	e19	e16	218	40	21	218	49	8.7	29
28	23	76	e36	e19	e16	158	36	23	243	36	6.9	23
29	23	52	e35	e19	---	193	38	32	66	25	26	20
30	23	44	e33	e19	---	297	75	23	48	20	23	45
31	30	---	e31	e18	---	449	---	35	---	20	14	---
TOTAL	970	1349	1200	692	453	2416	4935	1073	1789	1694	479.6	1149.0
MEAN	31.3	45.0	38.7	22.3	16.2	77.9	164	34.6	59.6	54.6	15.5	38.3
MAX	70	254	115	28	18	449	536	85	243	338	39	214
MIN	23	20	23	18	14	16	36	19	13	16	6.9	5.3
MEAN†	30.0	45.2	38.5	22.2	16.0	119	125	34.1	59.2	53.4	13.1	14.8
CFSM†	.77	1.16	.99	.57	.41	3.06	3.21	.88	1.52	1.37	.34	1.07
IN.†	.89	1.30	1.14	.66	.43	3.53	3.58	1.01	1.70	1.58	.39	1.20

CAL YR 1986 TOTAL 19980.1 MEAN 54.7 MAX 461 MIN 9.1 MEAN† 54.9 CFSM† 1.41 IN.† 19.1
WTR YR 1987 TOTAL 18199.6 MEAN 49.9 MAX 536 MIN 5.3 MEAN† 49.9 CFSM† 1.28 IN.† 17.4

e Estimated
† Adjusted for change in contents in East Barre Detention Reservoir.

04285500 NORTH BRANCH WINOOSKI RIVER AT WRIGHTSVILLE, VT.

LOCATION.--Lat 44°17'58", long 72°34'45", Washington County, Hydrologic Unit 02010003, on right bank at Wrightsville, 0.8 mi downstream from Wrightsville Detention Reservoir, and 3.5 mi upstream from mouth.

DRAINAGE.--69.2 mi²

PERIOD OF RECORD.--Discharge: October 1933 to current year.
Water-quality records: Water year 1957.

REVISED RECORDS.--WSP 1237: 1937: 1934-39.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 550.53 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Nov. 21, 1934, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Discharge affected since 1935 by Wrightsville Detention Reservoir (Reservoirs in Winooski River basin). Flow regulated by powerplant at Wrightsville Detention Reservoir since September 1985. Occasional diurnal fluctuation at low flow caused by small mill upstream; more frequent diurnal fluctuation prior to 1968. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--54 years, 134 ft³/s, 26.30 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,170 ft³/s, Apr. 12, 1934, gage height, 6.53 ft, from rating curve extended above 920 ft³/s; minimum daily, 0.2 ft³/s, Aug. 13, 1941. Maximum discharge since construction of Wrightsville Detention Reservoir in 1935, 1,040 ft³/s, Mar. 21, 1936, gage height, 4.32 ft; maximum gage height, 5.43 ft Mar. 12, 1936 (ice jam).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1830, 17,200 ft³/s, Nov. 3, 1927, by computation of peak flow over dam 0.8 mi upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 999 ft³/s, Apr. 1, gage height, 4.03 ft; minimum daily, 5.6 ft³/s, Sept. 7.

DISCHARGE, 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	406	52	183	e50	e34	e35	991	73	51	42	29	7.3
2	251	58	120	44	e34	e30	959	82	45	30	29	5.9
3	194	40	154	44	e34	e28	911	82	33	34	57	5.9
4	398	26	316	e54	e33	e32	850	87	26	40	59	5.9
5	440	37	251	e48	e33	e50	776	94	45	56	36	5.9
6	313	69	190	e62	e34	e48	708	105	42	33	29	5.8
7	268	62	184	58	e35	e54	406	99	25	32	29	5.6
8	206	87	137	59	e35	69	302	82	33	30	29	5.7
9	185	143	102	54	e34	100	223	147	84	28	29	22
10	158	185	110	46	e34	122	197	81	117	27	30	29
11	114	180	97	e64	e34	146	187	92	108	28	29	29
12	101	130	96	e26	e33	114	183	98	68	27	29	29
13	87	96	87	e26	e33	80	171	66	61	27	29	420
14	119	86	e64	e27	e33	98	180	27	57	27	29	757
15	120	75	70	e27	e32	65	170	39	40	36	29	551
16	107	70	59	e58	e32	66	98	40	38	69	29	180
17	104	70	73	e60	e32	52	94	27	26	28	29	72
18	71	75	59	e58	e32	52	122	52	18	29	29	48
19	80	76	70	e52	e30	49	106	43	18	40	28	52
20	71	39	65	e48	e28	50	97	39	23	55	28	51
21	69	59	e62	e44	e28	52	68	26	26	221	25	88
22	69	68	e58	e39	e28	76	61	33	27	158	19	72
23	66	59	e56	e38	e28	166	54	41	82	53	19	56
24	66	64	71	e38	e28	195	60	54	86	30	14	57
25	59	70	59	e37	e35	550	60	52	33	35	8.9	45
26	53	102	105	e37	e35	774	47	86	33	101	8.0	40
27	52	598	95	e36	e35	790	47	65	97	103	6.9	62
28	63	383	85	e36	e35	774	41	45	156	45	5.9	50
29	58	241	81	e36	---	716	49	72	78	28	6.6	51
30	55	195	72	e35	---	787	95	78	52	30	23	89
31	55	---	64	e35	---	896	---	46	---	29	16	---
TOTAL	4458	3495	3295	1376	911	7116	8313	2053	1628	1551	796.3	2898.0
MEAN	144	116	106	44.4	32.5	230	277	66.2	54.3	50.0	25.7	96.6
MAX	440	598	316	64	35	896	991	147	156	221	59	757
MIN	52	26	56	26	28	28	41	26	18	27	5.9	5.6
MEAN†	133	121	102	45.0	32.7	305	199	65.9	57.0	49.8	21.8	102
CFSM†	1.92	1.75	1.47	.65	.47	4.41	2.88	.95	.82	.72	.32	1.47
IN.†	2.22	1.95	1.71	.75	.49	5.08	3.21	1.10	.92	.83	.36	1.65

CAL YR 1986 TOTAL 52461 MEAN 144 MAX 968 MIN 10 MEAN† 144 CFSM† 2.08 IN.† 28.28
WTR YR 1987 TOTAL 37890.3 MEAN 104 MAX 991 MIN 5.6 MEAN† 103 CFSM† 1.49 IN.† 20.26

e Estimated
† Adjusted for change in contents in Wrightsville Detention Reservoir.

RESERVOIRS IN WINOOSKI RIVER BASIN ABOVE MONTPELIER, VT.

04283500 EAST BARRE DETENTION RESERVOIR.--Lat 44°09'18", long 72°26'42", Washington County, Hydrologic Unit 0201003, at dam on Jail Branch at East Barre, 4.5 mi upstream from mouth. DRAINAGE AREA, 38.8 mi². PERIOD OF RECORD, February 1936 (in WSP 1307), March and April 1936 (in WSP 798), May 1936 to August 1938 (in WSP 1307), September 1938 (in WSP 867), October 1938 to current year. GAGE, water-stage recorder. Datum of gage is above National Geodetic Vertical Datum of 1929 (levels by U. S. Army Corps of Engineers). Prior to Aug. 30, 1960, nonrecording gage, and Aug. 30 to Sept. 30, 1960, water-stage recorder, at present site at datum 1,127.9 ft above National Geodetic Vertical Datum of 1929.

Reservoir is formed by earthfill dam completed by U. S. Army Corps of Engineers in 1935 for flood control. Usable capacity, 525,000,000 ft³ between elevation 1,124.9 ft (bottom of outlet opening) and 1,165.0 ft (crest of spillway). Dam has no gates; below elevation 1,165.0 ft, outflow from reservoir is dependent on capacity of outlet opening near base of dam. Outlet-opening enlargement and reservoir-construction modifications completed in November 1959. Size of opening since enlargement, height, 7 ft and average width, 3.7 ft. Figures given herein represent usable contents.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 1,163.9 ft, present datum, Mar. 22, 1936; minimum not determined.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,148.04 ft Apr. 1; minimum, 1129.30 ft Sept. 12.

04285000 WRIGHTSVILLE DETENTION RESERVOIR.--Lat 44°18'38", long 72°34'31", Washington County, Hydrologic Unit 02010003, at dam on North Branch Winooski River at Wrightsville, 0.3 mi downstream from Long Meadow Brook, and 4.2 mi upstream from mouth. DRAINAGE AREA, 66.5 mi². PERIOD OF RECORD, November 1935 to Februry 1936 (in WSP 1307), March to May 1936 (in WSP 798), June 1936 to August 1938 (in WSP 1307), September 1938 (in WSP 867), October 1938 to current year. GAGE, water-stage recorder. Datum of gage is above National Geodetic Vertical Datum of 1929 (levels by U. S. Army Corps of Engineers). Prior to July 28, 1960, nonrecording gage, and July 28 to Sept. 30, 1960, water-stage recorder, at present site at datum 612.75 ft above National Geodetic Vertical Datum of 1929.

Reservoir is formed by earthfill dam completed by U. S. Army Corps of Engineers in 1935 for flood control; modification of intake-structure works to create a recreational pool completed in June 1965. Usable capacity for recreation, 22,000,000 ft³ between elevations 612.75 ft (bottom of outlet opening) and 620.00 ft; for flood control, 851,500,000 ft³ between elevations 620.00 ft and 685.00 ft (crest of spillway). Reservoir used for storage of water for power September 1985 to current year. Usable capacity for storage of water power 774,000,000 ft³ between elevation 631.00 ft, sill of gate and 685.00 ft, crest of spillway. Total usable capacity 873,500,000 ft³. Figures given herein represent usable contents.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 676.4 ft, present datum, Mar. 22, 1936, from graph based on gage readings; minimum observed, 613.00 ft, Aug. 17, 1949, and Aug. 17-19, 1950.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 655.70 ft, Apr. 1; minimum, 632.39 ft, Aug. 25.

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

Date	Elevation (feet)	Contents (millions of cubic feet)	Change in contents: Millions of cubic feet	Change in contents: Equivalent, cubic feet per second
		04283500 East Barre Detention Reservoir		
Sept. 30	1135.15	13.5	--	--
Oct. 31	1133.22	10.1	-3.4	-1.27
Nov. 30	1133.60	10.7	+.6	+.23
Dec. 31	1133.13	10.0	-.7	-.26
CAL YR 1986	--	--	+3.8	+.12
Jan. 31	1132.93	9.6	-.4	-.15
Feb. 28	1132.55	9.1	-.5	-.21
Mar. 31	1147.35	119.6	+110.5	+41.3
Apr. 30	1136.44	16.8	-102.8	-39.7
May 31	1135.98	15.5	-1.3	-.49
June 30	1135.54	14.4	-1.1	-.42
July 31	1133.84	11.1	-3.3	-1.2
Aug. 31	1129.31	4.7	-6.4	-2.4
Sept. 30	1135.20	13.7	+9.0	+3.5
WTR YR 1987	--	--	+.2	+.01
		04285000 Wrightsville Detention Reservoir		
Sept. 30	636.73	123.9	--	--
Oct. 31	633.19	95.3	-28.6	-10.7
Nov. 30	634.65	106.7	+11.4	+4.40
Dec. 31	633.33	96.3	-10.4	3.88
CAL YR 1986	--	--	+11.7	+.37
Jan. 31	633.55	98.0	+1.7	+.64
Feb. 28	633.60	98.4	+.4	+.17
Mar. 31	653.23	299.3	+200.9	+75.0
Apr. 30	633.34	96.4	-202.9	-78.3
May 31	633.24	95.6	-.8	-.30
June 30	634.09	102.2	-.5	-.19
Aug. 31	632.72	91.7	10.5	-3.924
Sept. 30	634.68	106.9	+15.2	+5.86
WTR YR 1987	--	--	-17.0	-.54

04286000 WINOOSKI RIVER AT MONTPELIER, VT.

LOCATION.--Lat 44°15'23", long 72°35'36", Washington County, Hydrologic Unit 02010003, on right bank 0.4 mi upstream from Dog River and 1 mi downstream from depot at Montpelier.

DRAINAGE AREA.--397 mi².

PERIOD OF RECORD.--May 1909 to June 1914 (fragmentary), July 1914 to September 1923, August 1928 to current year.

REVISED RECORDS.--WSP 424: 1915. WSP 894: Drainage area. WSP 1437: 1912-14(M), 1915-18, 1919(M), 1920, 1921(M), 1922-23, 1929, 1933, 1934(M), 1936, 1937(M), 1938, 1946(M), WDR MA-NH-RI-VT-72-1: 1969(M), 1970(P), 1971(M).

GAGE.--Water-stage recorder. Datum of gage is 499.99 ft above National Geodetic Vertical Datum of 1929. Prior to June 16, 1914, nonrecording gage at site 0.9 mi upstream at different datum. June 16 to July 3, 1914, nonrecording gage at present site and datum.

REMARKS.--Records good except those for estimated daily discharges and periods of shifting control, June 26 to Sept. 13, which are fair. Flow regulated by several small powerplants upstream, by Peacham Pond and, since 1926, by Mollys Falls Reservoir, combined usable capacity, 492,000,000 ft³, which regulated runoff from 24 mi², and by East Barre and Wrightsville Detention Reservoirs since 1935 (Reservoirs in Winooski River basin). See table below for monthend contents in Peacham Pond and Mollys Falls Reservoir. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--68 years (water years 1915-23, 1929-87), 591 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,200 ft³/s, Apr. 7, 1912, gage height, 17.31 ft, from floodmarks, present datum, from rating curve extended above 6,900 ft³/s; maximum gage height, 17.55 ft June 30, 1973; minimum daily discharge, 17 ft³/s, Sept. 3, 1933.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1830, 57,000 ft³/s, Nov. 3, 1927, gage height, 27.1 ft, from rating curve extended above 6,900 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,900 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 31	2245	*9,130	*13.50	No other peak greater than base discharge.			

Minimum daily discharge, 73 ft³/s, Sept. 7.

DISCHARGE, 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	1090	315	550	e250	e220	e190	5620	626	543	368	175	108
2	664	283	492	e290	e200	e195	3330	620	353	316	154	95
3	524	303	630	e270	e250	e210	2850	515	309	298	256	104
4	881	280	1480	e235	e260	e200	2510	449	251	846	342	84
5	1040	265	1120	e240	e250	e195	2590	422	367	598	215	78
6	753	289	805	e320	e245	e230	2490	507	306	360	180	74
7	670	303	605	e310	e260	e240	2010	508	225	311	161	73
8	536	388	e500	e300	e220	e270	1820	419	343	296	148	77
9	484	618	e380	e290	e200	e420	1490	434	694	262	140	496
10	466	604	e510	e310	e220	e380	1260	365	575	241	158	333
11	536	490	e480	e245	e240	e370	1100	355	443	248	200	204
12	545	419	e430	e280	e250	e360	945	345	315	190	169	190
13	528	399	e320	e300	e230	e320	895	315	300	175	145	1420
14	551	296	e260	e280	e210	e270	865	247	303	221	134	2430
15	476	308	e380	e295	e170	e240	758	258	249	1010	127	1260
16	424	308	e360	e290	e180	e230	653	288	209	530	121	598
17	384	320	e430	e230	e195	e210	580	247	209	305	115	331
18	321	338	e380	e250	e205	e220	601	259	196	296	140	246
19	332	325	e400	e260	e200	e210	558	245	169	700	120	249
20	333	207	e410	e300	e210	e205	521	225	158	380	117	297
21	305	253	e290	e240	e215	e235	466	204	152	1700	108	432
22	345	414	e280	e230	e170	e310	435	215	150	845	96	354
23	296	294	e360	e280	e165	e540	399	265	929	397	108	304
24	320	322	e370	e230	e245	e1000	399	346	620	294	108	277
25	293	564	e375	e210	e250	e1600	414	350	300	302	92	249
26	263	544	e440	e320	e255	2610	354	316	233	444	89	246
27	274	1990	e450	e210	e260	2480	333	284	1340	419	100	262
28	314	1290	e300	e220	e265	2200	313	251	1630	268	82	236
29	317	946	e350	e260	---	2290	382	329	649	210	133	221
30	290	646	e340	e290	---	3110	653	352	444	202	182	306
31	320	---	e335	e270	---	5970	---	296	---	181	130	---
TOTAL	14875	14321	14812	8305	6240	27510	37594	10857	12964	13213	4545	11634
MEAN	480	477	478	268	223	887	1253	350	432	426	147	388
MAX	1090	1990	1480	320	265	5970	5620	626	1630	1700	342	2430
MIN	263	207	260	210	165	190	313	204	150	175	82	73
(†)	364.2	354.8	296.8	238.4	96.1	200.2	296.6	341.6	430.8	416.8	416.8	414.2

CAL YR 1986 TOTAL 237839 MEAN 652 MAX 5430 MIN 127
WTR YR 1987 TOTAL 176870 MEAN 485 MAX 5970 MIN 73

e Estimated
† Monthend contents, in millions of cubic feet, in Peacham Pond and Molly Falls Reservoir; records furnished by Green Mountain Power Corporation.

4287000 DOG RIVER AT NORTHFIELD FALLS, VT.

LOCATION.--Lat 44°10'58", long 72°38'27", Washington County, Hydrologic Unit 02010003, on right bank 1 mi downstream from Northfield Falls and 1.2 mi downstream from Cox Branch.

DRAINAGE AREA.--76.1 mi².

PERIOD OF RECORD.--Discharge: October 1934 to current year. October 1934 monthly discharge only, published in WSP 1307.

Water-quality records: Water year 1957.

REVISED RECORDS.--WSP 1237: 1935-37.

GAGE.--Water-stage recorder. Datum of gage is 603.00 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Records good except those for estimated daily discharges, which are fair. Infrequent diurnal fluctuation at low flow by powerplant upstream; regulation much greater prior to 1955. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--53 year, 123 ft³/s, 21.95 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,600 ft³/s, June 30, 1973, gage height, 11.57 ft, from rating curve extended above 1,500 ft³/s on basis of computation of flow over dam at gage height 8.49 ft and slope-area measurements at gage heights 8.96 ft, 11.53 ft, and 11.57; minimum, 4.3 ft³/s, Aug. 31, Sept. 7, 1942.

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

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 31	unknown	*a7,720	*bc29.84	Sept. 13	2030	1,920	5.01

a from rating curve extended above 1,500 ft³/s as explained above.
b ice jam
c from high water mark

Minimum discharge, 12 ft³/s, Sept. 5.

DISCHARGE, 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	154	46	144	e68	e48	e34	e1150	111	47	52	54	25
2	126	48	160	e68	e48	e38	e420	101	76	47	44	23
3	103	48	e410	e68	e46	e36	e320	92	53	59	65	22
4	121	46	370	e66	e46	e44	e260	84	42	251	59	19
5	147	43	228	e66	e46	e48	e560	83	60	129	47	12
6	127	48	186	e66	e48	e50	e580	100	46	82	37	17
7	109	52	160	e64	e48	52	e530	91	38	59	32	16
8	95	60	140	e66	e46	90	e440	80	117	56	32	18
9	87	134	e145	e64	e46	157	e280	74	182	62	29	77
10	82	134	158	e64	e44	e140	e240	71	130	48	40	46
11	76	99	135	e62	e44	e125	e240	64	78	59	47	31
12	71	86	117	e62	e44	e105	e230	65	60	47	35	28
13	67	80	e105	e62	e42	99	e210	61	61	40	30	584
14	68	63	e100	e64	e42	95	e170	56	55	59	27	454
15	81	69	e98	e62	e42	94	e150	57	44	206	25	160
16	66	66	99	e62	e40	88	e145	57	39	84	23	103
17	63	65	92	e60	e40	68	e140	52	37	62	21	78
18	59	64	90	e60	e40	66	e155	51	34	54	19	71
19	56	59	94	e58	e40	64	e150	49	27	169	17	86
20	55	43	88	e58	e38	64	e135	45	28	92	29	118
21	54	48	e78	e56	e38	66	e120	39	26	156	23	149
22	52	69	e76	e56	e38	82	e105	40	25	104	20	116
23	52	62	e74	e56	e38	129	e84	42	245	71	27	98
24	57	68	77	e54	e36	256	e90	52	109	60	23	84
25	48	78	97	e54	e36	e400	e82	48	61	58	19	73
26	46	114	118	e54	e36	e610	e70	44	48	126	19	65
27	55	397	101	e52	e38	e490	e62	40	106	69	18	67
28	48	242	94	e52	e36	e460	e60	40	100	64	18	59
29	50	188	96	e52	---	e520	e80	52	72	52	38	58
30	51	159	87	e50	---	940	129	43	61	49	42	80
31	49	---	82	e50	---	e3990	---	37	---	85	29	---
TOTAL	2375	2778	4099	1856	1174	9500	7387	1921	2107	2611	988	2837
MEAN	76.6	92.6	132	59.9	41.9	306	246	62.0	70.2	84.2	31.9	94.6
MAX	154	397	410	68	48	3990	1150	111	245	251	65	584
MIN	46	43	74	50	36	34	60	37	25	40	17	12
CFSM	1.01	1.22	1.74	.79	.55	4.03	3.24	.81	.92	1.11	.42	1.24
IN.	1.16	1.36	2.00	.91	.57	4.64	3.61	.94	1.03	1.28	.48	1.39

CAL YR 1986 TOTAL 49825 MEAN 137 MAX 1630 MIN 29 CFSM 1.79 IN. 24.36
WTR YR 1987 TOTAL 39633 MEAN 109 MAX 3990 MIN 12 CFSM 1.43 IN. 19.37

e Estimated

04288000 MAD RIVER NEAR MORETOWN, VT.

LOCATION.--Lat 44°16'42", long 72°44'37", Washington County, Hydrologic Unit 02010003, on left bank at downstream side of highway bridge, 2.4 mi downstream from Moretown, and 3.8 mi upstream from mouth.

DRAINAGE AREA.--139 mi².

PERIOD OF RECORD.--Discharge: July to November 1910, October 1928 to current year. October 1928 monthly discharge only, published in WSP 1307.

Water-quality records: Water years 1954-55, 1957, 1967-74.

REVISED RECORDS.--WSP 744: Drainage area. WSP 854: 1934(M). WSP 1114: 1929, 1930(M), 1936-37.

GAGE.--Water-stage recorder. Concrete control since Oct. 13, 1933. Datum of gage is 543.93 ft above National Geodetic Vertical Datum of 1929 (levels by Vermont Department of Highway). July 6 to Nov. 4, 1910, nonrecording gage at same site at different datum. Nov. 20, 1928, to Sept. 27, 1930, nonrecording gage at same site at present datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Occasional diurnal fluctuation at low flow; much greater regulation prior to 1958. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--59 years (water years 1928-87), 258 ft³/s, 25.21 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,400 ft³/s, Sept. 22, 1938, gage height, 16.34 ft, from floodmarks, from rating curve extended above 2,700 ft³/s on basis of computations of flow over dam at gage heights 9.98 ft, 11.51 ft, 16.34 ft, and 19.4 ft; minimum, 1.4 ft³/s, Oct. 1, 1930.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1830, 23,000 ft³/s, Nov. 3, 1927, gage height, 19.4 ft, from floodmarks, by computation of peak flow over dam.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,400 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 31	2130	*a10,800	*11.97	Sept. 13	2145	a4,170	7.65

a from rating curve extended above 2,700 ft³/s as explained above.

Minimum discharge, 29 ft³/s, Sept. 7.

DISCHARGE, 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	853	129	e300	e145	e96	e78	2990	261	158	101	109	46
2	437	164	e320	e140	e96	e78	1090	248	246	86	84	44
3	352	155	914	e135	e92	e76	828	248	143	111	154	39
4	410	140	772	e135	e92	e76	667	208	113	521	129	35
5	437	128	443	e135	e90	e80	1480	201	154	220	89	33
6	359	136	383	e130	e92	e90	1490	251	109	140	75	30
7	299	149	e300	e130	e94	e150	1380	234	90	109	68	29
8	254	203	e250	e130	e94	e250	1130	193	372	100	63	32
9	232	623	e270	e125	e92	e400	727	173	456	115	56	168
10	211	409	e330	e125	e88	303	605	162	400	92	82	95
11	190	282	e300	e120	e86	289	609	146	212	113	97	63
12	179	240	e245	e120	e86	281	607	153	169	85	69	58
13	173	213	e200	e120	e84	247	544	147	199	99	58	1710
14	180	165	e180	e125	e84	220	445	127	161	196	51	1100
15	235	188	e180	e120	e82	219	395	145	125	394	47	323
16	187	170	183	e120	e80	202	373	146	102	155	42	197
17	169	169	173	e120	e80	194	351	124	106	110	38	146
18	157	166	166	e120	e80	184	401	117	87	166	34	148
19	147	143	171	e115	e78	181	392	107	76	326	31	182
20	142	100	174	e115	e80	176	360	98	69	145	46	306
21	137	130	e170	e115	e80	169	317	93	62	314	37	384
22	133	179	171	e110	e78	196	267	90	62	169	33	286
23	138	179	164	e110	e76	308	219	93	652	115	54	224
24	141	200	155	e110	e74	e550	228	143	252	91	39	199
25	127	221	215	e105	e72	980	206	116	143	111	34	163
26	122	439	276	e105	e74	1580	178	103	111	239	39	144
27	120	1430	e200	e105	e76	1250	161	91	179	125	35	162
28	126	558	e185	e100	e78	1160	150	95	239	115	35	132
29	128	430	e210	e100	---	1330	167	172	151	88	96	118
30	161	360	185	e98	---	2010	295	117	119	188	100	223
31	145	---	166	e98	---	5960	---	114	---	238	59	---
TOTAL	7081	8198	8351	3681	2354	19267	19052	4716	5517	5177	1983	6819
MEAN	228	273	269	119	84.1	622	635	152	184	167	64.0	227
MAX	853	1430	914	145	96	5960	2990	261	652	521	154	1710
MIN	120	100	155	98	72	76	150	90	62	85	31	29
CFSM	1.64	1.97	1.94	.85	.60	4.47	4.57	1.09	1.32	1.20	.46	1.64
IN.	1.90	2.19	2.23	.99	.63	5.16	5.10	1.26	1.48	1.39	.53	1.82

CAL YR 1986 TOTAL 114187 MEAN 313 MAX 3010 MIN 62 CFSM 2.25 IN. 30.56
WTR YR 1987 TOTAL 92196 MEAN 253 MAX 5960 MIN 29 CFSM 1.82 IN. 24.67

e Estimated

04288500 WATERBURY RESERVOIR NEAR WATERBURY, VT

LOCATION.--Lat 44°22'54", long 72°46'13", Washington County, Hydrologic Unit 02010003, at dam on Little River 2.7 mi upstream from mouth and 3.5 mi north of Waterbury.

DRAINAGE AREA.--109 mi²

PERIOD OF RECORD.--Elevation: September 1937 to current year. September 1937 to September 1938 monthend contents only, published in WSP 1307.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Dec. 10, 1938, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by earthfill dam completed by U.S. Army Corps of Engineers during summer of 1937 for flood control and storage of water for power. Usable capacity for storage of water for power, 1,582,700,000 ft³ between elevations 500.0 ft and 592.0 ft, sill of taintor gate; for flood control, 1,229,000,000 ft³, between elevations 592.0 ft and 617.5 ft, crest of spillway; total usable capacity, 2,812,300,000 ft³.

Capacity table (elevation, in feet, and contents, in millions of cubic feet)

500.0	0	560.0	658.8
510.0	34.8	570.0	891.9
520.0	92.6	580.0	1,168.5
530.0	180.8	590.0	1,505.0
540.0	302.7	600.0	1,913.4
550.0	461.7		

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 613.45 ft, May 4, 1940; minimum observed, 501.30 ft, Oct. 16, 1938, July 3, 12, 13, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 592.48 ft, Sept. 14; minimum, 548.59 ft, Mar. 19.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	590.42	587.88	589.28	587.00	582.24	559.88	584.84	588.31	590.79	590.35	589.41	590.20
2	589.88	588.33	589.39	586.55	581.78	558.45	585.05	588.89	590.41	589.82	589.40	590.02
3	589.29	588.40	590.39	586.73	581.31	557.03	584.82	589.42	590.12	589.98	589.64	589.98
4	589.39	588.55	590.42	586.95	580.80	554.95	584.42	589.82	589.75	590.42	589.70	589.80
5	589.65	588.70	589.88	586.60	580.27	553.45	585.01	590.26	589.69	590.70	589.73	589.82
6	589.37	589.03	589.14	586.36	579.63	551.99	585.91	590.66	589.88	590.41	589.74	589.86
7	588.91	589.39	588.30	586.12	579.81	552.32	586.41	590.58	590.03	590.40	589.71	589.89
8	588.62	589.83	587.89	585.80	580.05	553.37	586.49	590.86	590.09	589.96	589.80	589.77
9	588.26	590.69	588.09	585.51	579.37	553.31	586.14	591.16	590.83	590.14	589.87	590.05
10	587.80	590.26	588.62	585.78	578.52	552.75	585.68	591.42	590.94	590.05	590.13	589.89
11	587.76	590.32	588.55	586.09	577.68	552.13	585.28	590.91	590.48	590.18	590.30	589.70
12	588.20	590.76	588.38	585.78	577.33	552.06	585.05	590.34	590.28	590.24	590.30	589.84
13	588.60	590.48	588.00	585.50	576.48	551.20	584.75	589.97	590.16	590.06	590.39	592.28
14	588.57	590.03	588.26	584.65	576.65	550.41	584.18	589.46	590.35	590.26	590.18	592.18
15	588.67	590.36	588.35	584.95	576.54	550.02	583.56	589.23	590.40	590.62	590.24	591.29
16	588.69	590.70	588.40	584.65	576.11	549.86	583.61	588.79	590.63	590.42	590.28	590.22
17	588.24	590.59	588.13	584.75	574.73	549.32	583.66	589.04	590.93	590.12	590.01	589.56
18	588.62	590.69	588.08	584.93	574.17	548.94	584.58	589.28	590.68	590.42	589.95	589.24
19	588.60	590.78	588.13	584.70	573.11	548.61	585.39	589.43	590.35	590.23	589.98	589.37
20	588.23	590.97	588.42	584.30	572.00	548.82	585.67	589.58	590.45	590.44	590.05	589.76
21	587.63	590.41	588.68	584.00	571.13	549.31	585.90	589.62	590.55	591.80	589.86	589.20
22	587.48	590.19	588.50	583.70	570.21	550.11	586.01	589.68	590.43	591.10	589.94	588.51
23	587.26	589.63	588.30	583.53	569.40	550.42	586.14	590.04	590.63	590.10	590.00	587.74
24	587.03	589.35	587.59	583.70	567.92	551.74	586.37	590.47	590.50	589.81	590.00	586.98
25	587.32	588.89	587.42	583.93	566.23	554.20	586.69	590.77	590.39	590.10	589.85	585.78
26	587.60	589.13	587.23	583.53	564.33	558.51	586.99	590.64	590.29	590.61	589.68	584.50
27	587.70	590.19	587.61	583.17	562.50	560.86	587.01	590.40	590.73	590.24	589.69	583.47
28	587.76	589.79	587.89	582.70	560.80	562.98	587.08	590.10	590.81	589.92	589.72	582.24
29	588.00	589.21	587.78	582.34	---	565.70	587.25	590.23	590.64	589.66	589.93	580.95
30	587.80	589.01	587.30	581.94	---	569.32	587.80	590.51	590.87	589.42	590.07	579.92
31	587.53	---	586.81	582.10	---	580.77	---	590.60	---	589.32	590.15	---
MEAN	588.35	589.75	588.36	584.79	574.68	554.93	585.59	590.02	590.44	590.24	589.93	588.40
MAX	590.42	590.97	590.42	587.00	582.24	580.77	587.80	591.42	590.94	591.80	590.39	592.28
MIN	587.03	587.88	586.81	581.94	560.80	548.61	583.56	588.31	589.69	589.32	589.40	579.92
(†)	1417.6	1470	1390.0	1235.5	676.6	1192.9	1427.0	1528.2	1538.7	1480.8	1510.8	1166.2
(‡)	-28.7	+20.2	-29.1	-58.4	-231.0	+192.8	+90.3	+37.8	+4.05	-21.6	+11.2	-132.9

CAL YR 1986 MEAN 578.54 MAX 593.95 MIN 533.56 (‡) +36.5
WTR YR 1987 MEAN 584.66 MAX 592.28 MIN 548.61 (‡) -10.4

† Contents, in millions of cubic feet, at end of month.
‡ Change in contents, equivalent in cubic feet per second.

04289000 LITTLE RIVER NEAR WATERBURY, VT.

LOCATION.--Lat 44°22'12", long 72°46'11", Washington County, Hydrologic Unit 02010003, on right bank 1 mi downstream from Waterbury Reservoir, 1.7 mi upstream from mouth, and 2.5 mi north of Waterbury.

DRAINAGE AREA.--111 mi².

PERIOD OF RECORD.--July to October 1910 (gage heights only), October 1935 to current year. October, November 1935 monthly discharge only, published in WSP 1307. Prior to October 1962, published as Waterbury River near Waterbury.

REVISED RECORDS.--WSP 824: 1936.

GAGE.--Water-stage recorder. Concrete control since Dec. 8, 1937. Datum of gage is 428.00 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). July 7 to Oct. 31, 1910, nonrecording gage at site 2 mi upstream at different datum.

REMARKS.--Records fair October to December and poor thereafter. Doubtful gage-height record Jan. 6 to Sept. 11. Flow completely regulated by Waterbury Reservoir (station 04288500). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--52 years, 241 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,520 ft³/s, Mar. 18, 1936, gage height, 19.38 ft; minimum daily, 0.6 ft³/s several times during summers of 1938-39, 1941, and 1944. Maximum discharge since construction of Waterbury Reservoir in 1937, 4,080 ft³/s, Dec. 9, 1937, gage height, 14.88 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, not determined; maximum daily, 900 ft³/s, Apr. 6; minimum daily, 15 ft³/s on many days May to September.

DISCHARGE, 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	257	24	81	51	e45	e290	e660	e30	e140	e310	e15	e15
2	588	23	165	343	e240	e410	e620	e30	e310	e320	e60	e105
3	579	153	278	82	e260	e390	e650	e31	e230	e15	e82	e52
4	597	112	614	41	e280	e530	e720	e31	e310	e15	e80	e100
5	452	86	614	265	e250	e390	e830	e31	e210	e15	e56	e15
6	596	23	609	e195	e300	e440	e900	e52	e15	e230	e41	e15
7	594	23	609	e220	e35	e50	e860	e280	e15	e60	e68	e15
8	423	23	376	e220	e35	e40	e820	e40	e210	e270	e15	e105
9	434	327	113	e240	e310	e260	e760	e25	e250	e15	e15	e56
10	423	582	44	e60	e360	e270	e640	e25	e440	e120	e54	e145
11	227	272	224	e52	e360	e260	e600	e370	e420	e15	e15	e145
12	26	25	253	e215	e190	e135	e600	e420	e280	e20	e54	e15
13	24	319	311	e220	e400	e50	e600	e400	e260	e220	e15	486
14	227	351	57	e220	e30	e260	e600	e370	e52	e140	e160	689
15	299	28	129	e220	e72	e180	e600	e320	e54	e220	e15	649
16	212	24	147	e230	e205	e110	e300	e360	e15	e250	e15	648
17	368	208	271	e190	e350	e195	e330	e15	e15	e230	e140	470
18	25	125	196	e180	e360	e180	e50	e15	e210	e80	e54	233
19	165	84	148	e200	e410	e170	e40	e15	e220	e350	e15	e15
20	296	44	31	e220	e400	e47	e200	e16	e15	e160	e15	e15
21	382	391	42	e220	e340	e35	e160	e60	e15	622	e100	414
22	206	258	211	e205	e340	e37	e150	e54	e130	661	e15	476
23	251	388	222	e170	e320	e260	e100	e15	e270	669	e15	481
24	251	309	403	e45	e470	e280	e120	e15	e170	e250	e15	482
25	40	379	314	e43	e540	e400	e45	e15	e105	e15	e110	638
26	22	391	376	e225	e410	e450	e45	e180	e87	e15	e15	639
27	133	612	39	e210	e410	e440	e100	e210	e15	e320	e15	639
28	157	609	42	e240	e490	e300	e62	e280	e310	e240	e15	635
29	89	607	229	e200	---	e310	e76	e220	e240	e230	e15	631
30	313	365	345	e240	---	e420	e54	e15	e15	e160	e15	628
31	303	---	348	e40	---	e620	---	e90	---	e90	e15	---
TOTAL	8959	7165	7841	5502	8212	8209	12292	4030	5028	6327	1329	9651
MEAN	289	239	253	177	293	265	410	130	168	204	42.9	322
MAX	597	612	614	343	540	620	900	420	440	669	160	689
MIN	22	23	31	40	30	35	40	15	15	15	15	15

CAL YR 1986 TOTAL 88207 MEAN 242 MAX 1250 MIN 13
WTR YR 1987 TOTAL 84545 MEAN 232 MAX 900 MIN 15

e Estimated

04290500 WINOOSKI RIVER NEAR ESSEX JUNCTION, VT.

LOCATION.--Lat 44°28'44", long 73°08'21", Chittenden County, Hydrologic Unit 02010003, on right bank 0.5 mi downstream from Muddy Brook and 2 mi southwest of Essex Junction.

DRAINAGE AREA.--1,044 mi²

PERIOD OF RECORD.--Discharge: October 1928 to current year. Water-quality records: Water years 1953, 1976-79.

REVISED RECORDS.--WSP 714: 1930(M). WSP 894: Drainage area. WSP 1307: 1929(M).

GAGE.--Water-stage recorder. Elevation of gage is 185 ft above National Geodetic Vertical Datum of 1929, from topographic map; prior to Oct. 1, 1964, datum was 1.00 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by powerplants upstream, by Peacham Pond and Mollys Falls Reservoir, combined usable capacity, 492,000,000 ft³ by Waterbury Reservoir (station 04288500) since 1937, and by East Barre and Wrightsville Detention Reservoirs (Reservoirs in Winooski River basin) since 1935. See table with station 04286000 for monthend contents in Peacham Pond and Mollys Falls Reservoir. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--59 years, 1,711 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45,300 ft³/s, Mar. 19, 1936, gage height, 24.54 ft, present datum, from rating curve extended above 27,000 ft³/s, on basis of computations of flow over dam at gage heights 19.72, 24.54, and 51.4 ft and slope-area measurement at gage height 51.4 ft, all at present datum; minimum daily, 24 ft³/s Sept. 7, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1830, 113,000 ft³/s, Nov. 4, 1927, gage height, 51.4 ft, present datum, from floodmarks, from rating curve extended above 27,000 ft³/s by method explained above.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 12,500 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 1	1245	*27,900	*17.13	No other peak greater than base discharge.			

Minimum daily discharge, 214 ft³/s, Aug. 27.

DISCHARGE, 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	3450	1110	1580	884	e760	1060	24600	1490	811	848	599	304
2	2940	804	1220	828	e740	964	e1180	1300	1200	804	413	303
3	2230	920	2240	831	e770	1000	6560	1290	985	676	559	399
4	2500	926	5260	710	e840	e1050	5590	1090	818	1180	804	375
5	3080	819	3530	781	e900	e900	6120	1060	881	1550	537	339
6	2740	729	2620	1050	e850	1120	7360	1000	939	1070	484	325
7	2310	829	2210	1030	e700	864	6120	1330	516	1050	403	295
8	2020	846	1800	1040	652	927	5860	1160	793	467	450	376
9	1550	1450	1160	769	925	1270	4360	996	2120	507	310	372
10	1650	2520	1400	838	e820	1650	3690	849	2280	581	401	852
11	1410	2030	1510	621	e960	1320	3410	855	1700	717	481	529
12	1280	1610	1410	696	e880	e1100	3190	1020	1370	444	494	419
13	1250	1270	1520	1040	e800	e1000	3000	994	1040	674	428	1840
14	1080	1170	1140	902	e700	e860	2740	880	1010	693	352	7740
15	1660	1070	1150	978	e650	e850	2450	909	957	1530	364	3450
16	1420	918	1190	946	e700	e700	2120	978	618	1500	276	2060
17	1190	932	1130	824	e750	e620	1880	855	247	941	416	1410
18	1020	947	1250	579	e900	e640	1730	660	590	832	355	918
19	847	973	1200	751	e1000	e700	1650	591	626	1600	286	341
20	944	721	1090	e860	e920	e720	1510	584	480	1180	291	700
21	1090	593	988	e760	e840	e660	1510	553	327	3570	284	1130
22	1010	1050	919	e860	e850	981	1240	568	409	2780	289	1440
23	1100	1140	1040	e900	e900	1580	1200	467	1220	1850	288	1340
24	942	1230	1050	e900	e860	3030	1090	638	2050	1050	262	1080
25	849	1460	1230	e680	e1100	5350	1100	760	1030	366	236	1230
26	664	1660	1600	e700	e1150	8680	900	731	737	945	243	1100
27	960	7090	1390	e750	e1100	8050	844	569	857	1120	214	1130
28	836	4790	975	e840	1240	6610	890	809	2440	793	238	1110
29	898	3170	992	e830	---	6420	905	839	1950	1040	387	1140
30	837	2440	1060	e820	---	8220	1250	901	953	604	426	996
31	1100	---	1190	e810	---	14200	---	564	---	602	352	---
TOTAL	46857	47217	48044	25808	24257	83096	106049	27290	31954	33564	11922	35043
MEAN	1512	1574	1550	833	866	2681	3535	880	1065	1083	385	1168
MAX	3450	7090	5260	1050	1240	14200	24600	1490	2440	3570	804	7740
MIN	664	593	919	579	650	620	844	467	247	366	214	295

CAL YR 1986 TOTAL 680439 MEAN 1864 MAX 18500 MIN 279
WTR YR 1987 TOTAL 521101 MEAN 1428 MAX 24600 MIN 214

e Estimated

04292000 LAMOILLE RIVER AT JOHNSON, VT.

LOCATION.--Lat 44°37'22", long 72°40'50", Lamoille County, Hydrologic Unit 02010003, on right bank above falls, 0.7 mi upstream from bridge in Johnson and 0.8 mi upstream from Gihon River.

DRAINAGE AREA.--310 mi².

PERIOD OF RECORD.--Discharge: July to December 1910, June 1911 to December 1913 (monthly discharge only, January to March 1912, Feburary 1913), September 1928 to current year.

Water-quality records: Water year 1953.

REVISED RECORDS.--WSP 894: Drainage area. WSP 1114: 1933, 1934(M). WSP 1237: 1912(M), 1930, 1932(M).

GAGE.--Water-stage recorder. Elevation of gage is 495 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Dec. 31, 1913, nonrecording gage at bridge 0.7 mi downstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Some regulation by powerplant upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--61 years (water years 1912-13, 1929-87), 534 ft³/s, 23.39 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,400 ft³/s, July 1, 1973, gage height, 17.33 ft, from rating curve extended above 8,500 ft³/s on basis of computation of flow over dam at gage height 16.48 ft; minimum, 11 ft³/s, Sept. 2, 1935; minimum daily, 16 ft³/s, Oct. 26, 1947.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,400 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 1	0100	*8,690	*13.52	No other peak greater than base discharge.			

Minimum discharge, 57 ft³/s, Aug. 31; minimum daily, 68 ft³/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	929	358	490	e250	e250	e195	5900	494	493	296	119	75
2	621	404	591	e260	e250	e205	2000	418	353	261	102	72
3	586	405	780	e265	e245	e195	1270	405	242	226	113	71
4	862	331	1560	e280	e240	e200	1160	353	210	301	108	72
5	1060	382	925	e300	e260	e195	1400	343	297	287	118	69
6	844	354	637	e280	e250	e220	1800	332	223	230	153	69
7	829	316	e420	e275	e245	e260	1420	364	169	166	120	68
8	660	411	e410	e270	e240	e400	1280	351	304	177	104	70
9	543	765	e390	e270	e250	e950	982	260	826	203	102	112
10	434	812	e520	e265	e250	e700	857	273	777	191	115	166
11	471	489	e500	e260	e240	e680	773	295	479	159	118	143
12	441	498	e520	e290	e245	e640	727	248	399	131	124	203
13	502	475	e330	e270	e240	e470	671	214	332	153	127	674
14	431	357	e230	e280	e235	e350	584	180	339	224	121	1800
15	610	319	e240	e270	e230	e310	510	200	295	405	104	761
16	412	317	e360	e350	e225	627	379	184	231	291	102	390
17	440	365	e290	e330	e235	349	242	158	192	261	107	138
18	293	411	e340	e320	e230	329	358	160	198	222	100	208
19	420	284	e310	e300	e225	400	393	186	203	237	95	195
20	312	345	e300	e320	e220	153	389	195	202	227	91	193
21	287	295	e290	e290	e215	154	321	150	129	223	83	148
22	296	332	e280	e280	e210	251	261	149	102	220	82	182
23	278	442	e290	e270	e220	676	270	178	330	167	88	149
24	335	433	e280	e270	e215	1130	327	252	315	142	81	129
25	280	343	e400	e265	e210	2020	301	256	166	163	80	140
26	311	509	536	e260	e205	2870	273	225	168	315	79	132
27	315	2310	e400	e260	e200	2700	270	259	378	422	78	185
28	354	1170	e330	e255	e200	2060	222	248	1550	284	74	131
29	356	823	e370	e255	---	2080	220	370	566	215	80	131
30	399	555	e360	e255	---	2850	490	356	364	155	78	183
31	467	---	e240	e250	---	5690	---	318	---	125	72	---
TOTAL	15378	15610	13919	8615	6480	30309	26050	8374	10832	7079	3118	7059
MEAN	496	520	449	278	231	978	868	270	361	228	101	235
MAX	1060	2310	1560	350	260	5690	5900	494	1550	422	153	1800
MIN	278	284	230	250	200	153	220	149	102	125	72	68
CFSM	1.60	1.68	1.45	.90	.75	3.15	2.80	.87	1.16	.74	.32	.76
IN.	1.85	1.87	1.67	1.03	.78	3.64	3.13	1.00	1.30	.85	.37	.85

CAL YR 1986 TOTAL 205804 MEAN 564 MAX 6660 MIN 96 CFSM 1.82 IN. 24.7
WTR YR 1987 TOTAL 152823 MEAN 419 MAX 5900 MIN 68 CFSM 1.35 IN. 18.3

e Estimated

04292500 LAMOILLE RIVER AT EAST GEORGIA, VT.

LOCATION.--Lat 44°40'45", long 73°04'23", Franklin County, Hydrologic Unit 02010005, on right bank at East Georgia, 0.5 mi upstream from railroad bridge, and 1 mi downstream from Beaver Meadow Brook.

DRAINAGE AREA.--686 mi².

PERIOD OF RECORD.--Discharge: August 1929 to current year. Prior to October 1937, published as "near Milton". Water-quality records: Water years 1955, 1967-74.

REVISED RECORDS.--WSP 894: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 285 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Dec. 1, 1937, at site 3.5 mi downstream at different datum.

REMARKS.--Records good except those for estimated daily discharges and period shifting control, Apr. 1 to Sept. 30, which are fair. Low flow regulated by powerplants upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--58 years, 1,240 ft³/s, 24.6 in/yr, adjusted to present drainage area.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,700 ft³/s, Apr. 18, 1982, gage height, 12.38 ft, from rating curve extended above 21,700 ft³/s on basis of computation of flow over dam at gage height 11.76 ft; maximum gage height, 21.64 ft Mar. 6, 1979 (ice jam); minimum daily discharge, 74 ft³/s, Sept. 26, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,400 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 25	2130	ice jam	*12.55	Apr. 1	1400	*15,800	10.52

Minimum daily discharge, 168 ft³/s, Sept. 6.

DISCHARGE, 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	3240	1080	1090	e640	e540	e370	13900	1220	3620	642	271	224
2	2030	1210	1050	e560	e520	e440	7130	981	1550	540	276	219
3	1550	1360	2020	e700	e580	e460	3190	915	1070	476	370	214
4	2530	1110	3740	e620	e650	e480	2620	801	746	515	482	171
5	3290	960	2600	e660	e600	e490	2680	761	857	726	377	195
6	2520	1030	1560	e760	e690	e560	3780	722	800	574	324	168
7	2240	964	e1150	e720	e590	e630	3290	766	584	519	301	203
8	1670	1030	e1050	e640	e600	e900	3190	739	587	374	315	182
9	1410	2110	e1000	e700	e640	e1900	2370	654	2640	390	263	251
10	1220	2960	e1350	e680	e590	e1500	1930	596	3430	481	299	416
11	1060	1680	e1300	e640	e560	e1300	1770	540	1870	378	390	333
12	991	1370	e1350	e720	e640	e980	1690	585	1260	370	335	309
13	975	1310	e1150	e700	e600	e800	1600	587	1340	354	302	595
14	1110	1060	e1000	e750	e560	e700	1350	469	1320	426	275	2870
15	2270	995	e870	e720	e550	e640	1190	440	985	466	279	1640
16	1560	900	e960	e700	e540	e600	1080	567	781	638	258	880
17	1190	913	e780	e660	e530	e580	897	515	813	496	234	573
18	979	974	e890	e580	e520	e560	802	455	743	402	254	372
19	905	895	e830	e520	e510	e600	950	467	574	413	219	394
20	873	694	e790	e600	e490	e550	880	385	530	519	215	371
21	821	731	e760	e640	e480	e600	815	404	453	1060	216	416
22	757	654	e750	e660	e420	e700	718	372	397	877	219	380
23	776	767	e770	e580	e450	e1500	603	447	492	498	233	407
24	814	1110	e740	e640	e450	e2500	646	543	756	429	234	369
25	781	1300	e1100	e490	e430	e4500	769	628	583	375	193	330
26	705	1410	e1350	e520	e410	e6400	643	550	402	379	205	319
27	761	5970	e1100	e540	e390	e5900	587	463	461	666	207	356
28	881	4120	e900	e520	e380	e4500	539	518	1580	620	184	384
29	1060	2330	e960	e550	---	e4600	536	804	1330	460	221	339
30	1110	1780	e940	e500	---	e6200	784	836	723	373	274	319
31	1230	---	e760	e580	---	e9000	---	1050	---	336	251	---
TOTAL	43309	44777	36660	19490	14910	61440	62929	19780	33277	15772	8476	14199
MEAN	1397	1493	1183	629	532	1982	2098	638	1109	509	273	473
MAX	3290	5970	3740	760	690	9000	13900	1220	3620	1060	482	2870
MIN	705	654	740	490	380	370	536	372	397	336	184	168
CFSM	2.04	2.18	1.72	.92	.78	2.89	3.06	.93	1.62	.74	.40	.69
IN.	2.35	2.43	1.99	1.06	.81	3.33	3.41	1.07	1.80	.86	.46	.77

CAL YR 1986 TOTAL 482636 MEAN 1322 MAX 13100 MIN 261 CFSM 1.93 IN. 26.17
WTR YR 1987 TOTAL 375019 MEAN 1027 MAX 13900 MIN 168 CFSM 1.50 IN. 20.34

e Estimated

04293000 MISSISQUOI RIVER NEAR NORTH TROY, VT.

LOCATION.--Lat 44°58'22", long 72°23'15", Orleans County, Hydrologic Unit 02010007, on right bank 200 ft upstream from Big Falls, 1.5 mi downstream from Jay Branch, and 2.2 mi upstream from North Troy.

DRAINAGE AREA.--131 mi².

PERIOD OF RECORD.--August 1931 to current year.

REVISED RECORDS.--WSP 924: 1940. WSP 1114: 1933(M), 1936-39.

GAGE.--Water-stage recorder. Elevation of gage is 580 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Occasional regulation at low flow caused by small powerplant upstream; greater regulation prior to 1967. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--56 years, 270 ft³/s, 27.99 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,290 ft³/s, Apr. 18, 1982, gage height, 13.21 ft, from rating curve extended above 5,500 ft³/s on basis of computation of flow over dam at gage height 11.70 ft; minimum, 9.4 ft³/s, Aug. 28, 1949; minimum daily, 11 ft³/s, Aug. 28, 1949, Aug. 30, 1953.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,300 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 1	0100	*5,440	*10.59	No other peak greater than base discharge.			

Minimum discharge, 20 ft³/s, Sept. 2, 3; minimum daily, 22 ft³/s, Sept. 2, 3.

DISCHARGE, 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	708	222	169	e90	e69	e57	3770	378	385	80	39	40
2	372	257	157	e92	e68	e56	811	237	223	64	35	22
3	396	253	503	e92	e68	e70	557	211	155	55	65	22
4	743	215	903	e94	e67	e68	475	178	131	117	103	29
5	883	201	404	e93	e67	e66	696	162	150	144	71	29
6	664	179	e240	e92	e66	e76	934	177	130	88	47	26
7	605	206	e200	e92	e69	e82	851	181	100	64	41	23
8	365	236	e160	e91	e68	e220	781	145	107	63	36	23
9	305	474	e140	e91	e66	430	532	119	701	126	33	64
10	256	446	e210	e90	e65	327	438	116	770	92	71	100
11	209	266	e190	e90	e64	300	433	113	302	99	148	57
12	189	226	e160	e88	e64	218	417	139	199	86	79	43
13	187	205	e140	e87	e62	158	377	142	317	71	52	341
14	180	143	e125	e86	e62	122	298	116	220	55	42	563
15	492	174	e125	e85	e61	113	256	129	161	98	32	196
16	289	166	e120	e82	e60	105	236	152	132	93	36	101
17	219	166	e115	e79	e60	98	229	117	202	62	34	59
18	184	181	e115	e78	e58	94	222	107	143	37	34	60
19	164	154	e120	e78	e58	93	209	100	115	84	28	36
20	160	e80	e115	e76	e58	95	170	82	76	80	29	44
21	150	e94	e115	e75	e60	101	162	77	78	96	42	79
22	161	e130	e115	e74	e59	157	142	85	80	85	34	59
23	166	144	e110	e74	e58	370	122	165	98	59	31	55
24	173	182	e110	e73	e58	659	152	362	110	46	27	57
25	132	225	e130	e72	e58	1000	167	232	84	34	26	44
26	131	304	e280	e72	e58	1730	131	153	70	80	26	38
27	147	1090	e200	e71	e58	1840	121	128	84	126	28	60
28	214	486	e120	e71	e58	1230	113	110	202	63	24	87
29	230	340	e130	e70	---	1270	120	359	138	57	28	57
30	338	260	e115	e70	---	1770	253	231	95	38	30	43
31	309	---	e100	e69	---	3360	---	149	---	39	37	---
TOTAL	9721	7705	5936	2537	1747	16335	14175	5152	5758	2381	1388	2457
MEAN	314	257	191	81.8	62.4	527	472	166	192	76.8	44.8	81.9
MAX	883	1090	903	94	69	3360	3770	378	770	144	148	563
MIN	131	80	100	69	58	56	113	77	70	34	24	22
CFSM	2.39	1.96	1.46	.62	.48	4.02	3.61	1.27	1.47	.59	.34	.63
IN.	2.76	2.19	1.69	.72	.50	4.64	4.03	1.46	1.64	.68	.39	.70

CAL YR 1986 TOTAL 97492 MEAN 267 MAX 3830 MIN 41 CFSM 2.04 IN. 27.68
WTR YR 1987 TOTAL 75292 MEAN 206 MAX 3770 MIN 22 CFSM 1.57 IN. 21.38

e Estimated

04293500 MISSISQUOI RIVER NEAR EAST BERKSHIRE, VT.

LOCATION.--Lat 44°57'30", long 72°41'55", Franklin County, Hydrologic Unit 02010007, on left bank 1.7 mi north of intersection of State Highways 105 and 118 in East Berkshire, 1.7 mi upstream from Trout River, 3 mi south of Richford, and 3.8 mi downstream from North Branch.

DRAINAGE AREA.--479 mi².

PERIOD OF RECORD.--Discharge: July 1911 to September 1923, October 1928 to current year. Monthly discharge only for some periods, published in WSP 1307. Prior to October 1977, published as "near Richford." Water-quality records: Water years 1954, 1967-74.

REVISED RECORDS.--WSP 784: Drainage area. WSP 1237: 1913-14(M), 1922(M), 1923, 1929-30. WSP 1307: 1916(M). WSP 1437: 1912.

GAGE.--Water-stage recorder. Elevation of gage is 410 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Aug. 1, 1915, nonrecording gage at site 0.2 mi downstream at datum 4.35 ft lower. Aug. 1, 1915, to Sept. 30, 1923, water-stage recorder at present site and datum. Oct. 1, 1928, to Sept. 30, 1929, nonrecording gage at former site at datum 4.6 ft lower.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Diurnal fluctuation at low flow prior to 1934. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--71 years, 924 ft³/s, 26.20 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,200 ft³/s, Apr. 18, 1982, gage height, 17.45 ft, from rating curve extended above 9,300 ft³/s on basis of computation of peak flow over dam at gage height 14.70 ft, slope-area measurement at gage height 12.90 ft, and study of discharge per foot of width at measuring section; maximum gage height, 18.92 ft Mar. 15, 1946 (ice jam); minimum discharge observed, 8 ft³/s, July 14, 1911.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1830, 45,000 ft³/s during flood of November 1927, gage height, 23.1 ft, from floodmarks, from rating curve extended above 9,300 ft³/s as explained above.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7,600 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 1	0200	*11,200	*12.35	No other peak greater than base discharge.			

Minimum discharge, 56 ft³/s, Sept. 5.

DISCHARGE, 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	3560	1110	965	e340	e260	e220	10000	972	1730	365	117	74
2	2180	1270	846	e350	e260	e220	6970	753	1380	291	109	87
3	1600	1240	1910	e350	e255	e260	3580	598	894	246	332	69
4	1780	1050	3130	e350	e255	e255	2300	524	661	408	327	60
5	2820	925	2220	e345	e250	e250	2380	468	634	457	244	56
6	2390	807	e1050	e345	e250	e280	2970	472	564	367	177	57
7	2220	805	e860	e345	e260	e320	2650	503	419	258	144	59
8	1500	830	e700	e340	e255	e830	2760	449	552	210	153	60
9	1360	1290	e520	e340	e250	e1600	2070	384	2760	195	128	93
10	1220	1640	e800	e340	e245	e1250	1650	358	3210	319	147	131
11	974	1150	e700	e335	e245	e1100	1490	334	1800	282	207	173
12	813	934	e600	e330	e240	e800	1370	392	1080	296	239	134
13	731	837	e520	e320	e235	e600	1230	437	1120	220	163	721
14	727	701	e470	e330	e230	e450	1040	365	883	209	130	1880
15	1410	697	e460	e325	e235	e420	863	362	663	327	118	1150
16	1270	608	e450	e310	e230	e400	781	414	541	264	104	618
17	930	620	e440	e295	e230	e370	728	373	610	204	99	380
18	761	699	e430	e295	e225	e350	697	325	580	175	92	284
19	652	619	e450	e290	e225	e345	630	294	438	231	86	226
20	582	e450	e440	e290	e220	e360	564	266	369	218	84	181
21	576	e520	e430	e285	e220	e390	503	229	296	363	81	181
22	592	e620	e430	e280	e225	e580	449	220	268	305	81	191
23	627	e580	e420	e280	e220	e1400	405	352	319	219	95	175
24	662	e700	e420	e280	e220	e2500	508	639	300	169	87	161
25	563	e900	e490	e275	e220	e3800	532	796	265	205	79	171
26	477	e1100	e1050	e270	e215	5210	456	615	281	499	72	163
27	468	3460	e740	e270	e215	6120	396	486	344	399	67	157
28	676	2690	e450	e265	e220	5830	364	433	557	272	67	167
29	898	1700	e480	e265	---	5090	368	1040	512	184	68	176
30	1450	1360	e440	e265	---	5370	580	1330	441	155	72	164
31	1430	---	e370	e260	---	7350	---	1500	---	127	73	---
TOTAL	37899	31912	23681	9560	6610	54320	51284	16683	24471	8439	4042	8199
MEAN	1223	1064	764	308	236	1752	1709	538	816	272	130	273
MAX	3560	3460	3130	350	260	7350	10000	1500	3210	499	332	1880
MIN	468	450	370	260	215	220	364	220	265	127	67	56
CFSM	2.55	2.22	1.59	.64	.49	3.66	3.57	1.12	1.70	.57	.27	.57
IN.	2.94	2.48	1.84	.74	.51	4.22	3.98	1.30	1.90	.66	.31	.64

CAL YR 1986 TOTAL 351321 MEAN 963 MAX 10600 MIN 125 CFSM 2.01 IN. 27.28
WTR YR 1987 TOTAL 277100 MEAN 759 MAX 10000 MIN 56 CFSM 1.58 IN. 21.52

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, 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	2.02
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

STREAMS TRIBUTARY TO ST. LAWRENCE RIVER

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).

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

04295500 LAKE MEMPHREMAGOG AT NEWPORT, VT.

LOCATION.--Lat 44°56'15", long 72°12'21", Orleans County, Hydrologic Unit 01110000, on west side of bridge on U.S. Highway 5 at Newport.

PERIOD OF RECORD.--Gage heights: May 1931 to current year.

GAGE.--Water-stage recorder. Datum of gage is 673.00 ft above National Geodetic Vertical Datum of 1929. Prior to July 21, 1934, nonrecording gage on highway bridge 0.1 mi southeast at same datum. July 21, 1934, to Aug. 22, 1961, nonrecording gage on east side, and Aug. 23, 1961, to Oct. 18, 1966, on west side of bridge at present site and datum.

REMARKS.--Elevation of lake regulated by powerplant and gates at Magog, Quebec.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 12.92 ft Apr. 20, 1933; minimum recorded, 6.48 ft, Nov. 2, 1968, affected by seiche; but may have been lower during period of use of nonrecording gage.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 10.42 ft, Apr. 4, affected by seiche; minimum gage height, 7.41 ft, Mar. 20, affected by seiche.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.85	8.58	9.00	8.95	8.57	7.54	9.92	9.83	10.02	9.83	9.31	8.34
2	8.88	8.63	8.99	8.96	8.56	7.56	10.25	9.80	9.97	9.82	9.26	8.31
3	8.90	8.59	9.04	8.97	8.54	7.53	10.38	9.79	9.87	9.80	9.26	8.28
4	8.95	8.60	9.13	8.94	8.51	7.51	10.41	9.78	9.81	9.83	9.27	8.24
5	9.04	8.55	9.19	8.93	8.47	7.48	10.38	9.77	9.79	9.87	9.28	8.20
6	9.11	8.51	9.20	8.92	8.46	7.46	10.32	9.78	9.74	9.83	9.23	8.18
7	9.16	8.50	9.23	8.91	8.43	7.47	10.27	9.78	9.64	9.78	9.16	8.15
8	9.14	8.48	9.27	8.90	8.39	7.52	10.25	9.76	9.66	9.73	9.16	8.13
9	9.18	8.52	9.26	8.89	8.36	7.53	10.19	9.74	9.86	9.70	9.13	8.18
10	9.13	8.61	9.28	8.88	8.32	7.50	10.14	9.77	9.96	9.66	9.12	8.17
11	9.01	8.57	9.28	8.90	8.26	7.49	10.14	9.74	9.93	9.63	9.13	8.14
12	9.00	8.56	9.27	8.89	8.21	7.49	10.12	9.77	9.87	9.62	9.07	8.10
13	8.98	8.59	9.25	8.87	8.15	7.48	10.11	9.73	9.85	9.61	9.01	8.22
14	8.99	8.50	9.21	8.85	8.11	7.49	10.11	9.69	9.78	9.61	8.98	8.37
15	9.05	8.45	9.18	8.84	8.08	7.50	10.12	9.74	9.76	9.62	8.97	8.41
16	9.03	8.47	9.16	8.82	8.06	7.50	10.12	9.72	9.74	9.56	8.93	8.43
17	9.00	8.47	9.14	8.80	8.02	7.49	10.11	9.71	9.74	9.51	8.90	8.44
18	8.97	8.49	9.12	8.80	7.97	7.47	10.11	9.71	9.70	9.48	8.89	8.42
19	8.92	8.51	9.10	8.80	7.90	7.45	10.10	9.69	9.67	9.53	8.83	8.39
20	8.90	8.44	9.08	8.77	7.85	7.44	10.09	9.65	9.67	9.50	8.81	8.40
21	8.85	8.54	9.04	8.75	7.80	7.45	10.06	9.64	9.64	9.55	8.78	8.40
22	8.83	8.51	9.00	8.73	7.77	7.55	10.07	9.65	9.63	9.54	8.72	8.37
23	8.82	8.47	8.97	8.74	7.74	7.61	9.96	9.71	9.62	9.52	8.74	8.33
24	8.81	8.51	8.95	8.71	7.69	7.67	10.00	9.74	9.60	9.51	8.67	8.35
25	8.74	8.51	8.95	8.71	7.65	7.79	9.94	9.79	9.60	9.52	8.60	8.31
26	8.69	8.54	8.96	8.70	7.61	8.02	9.90	9.78	9.53	9.54	8.56	8.27
27	8.65	8.70	8.97	8.68	7.57	8.35	9.82	9.75	9.60	9.52	8.51	8.27
28	8.65	8.80	8.97	8.65	7.54	8.63	9.76	9.79	9.68	9.47	8.47	8.23
29	8.62	8.89	8.97	8.62	---	8.87	9.80	9.97	9.74	9.41	8.44	8.20
30	8.69	8.98	8.97	8.60	---	9.13	9.82	10.03	9.81	9.37	8.39	8.19
31	8.65	---	8.97	8.58	---	9.50	---	10.01	---	9.34	8.32	---
MEAN	8.91	8.57	9.10	8.81	8.09	7.76	10.09	9.77	9.75	9.61	8.90	8.28
MAX	9.18	8.98	9.28	8.97	8.57	9.50	10.41	10.03	10.02	9.87	9.31	8.44
MIN	8.62	8.44	8.95	8.58	7.54	7.44	9.76	9.64	9.53	9.34	8.32	8.10

CAL YR 1986 MEAN 9.08 MAX 11.09 MIN 7.85
WTR YR 1987 MEAN 8.97 MAX 10.41 MIN 7.44

04296000 BLACK RIVER AT COVENTRY, VT.

LOCATION.--Lat 44°52'08", long 72°16'14", Orleans County, Hydrologic Unit 01110000, on right bank 15 ft downstream from highway bridge, 800 ft upstream from Stony Brook, and 0.4 mi northwest of Coventry.

DRAINAGE AREA.--122 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Elevation of gage is 725 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 by mill upstream; greater regulation prior to 1960.

AVERAGE DISCHARGE.--36 years, 199 ft³/s, 22.15 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,740 ft³/s, Apr. 2, 1976, gage height, 7.91 ft; minimum, 11 ft³/s, Aug. 29 to Sept. 1, 1953; minimum daily, 11 ft³/s, Aug. 29 to Sept. 1, 1953.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,700 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 1	0530	*1,840	*6.34	No other peak greater than base discharge.			

Minimum discharge, 23 ft³/s, Sept. 7, 8; minimum daily, 23 ft³/s, Sept. 7, 8.

DISCHARGE, 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	411	142	181	e100	e67	e52	1730	212	197	86	32	35
2	308	132	159	e96	e66	e53	1280	176	155	73	30	30
3	251	131	290	e88	e65	e54	881	132	97	66	35	28
4	358	121	518	e86	e64	e52	671	109	78	80	46	26
5	527	116	391	e90	e63	e50	569	98	80	104	48	25
6	455	112	e250	e92	e65	e60	578	101	78	77	40	24
7	413	128	e200	92	e66	e76	540	106	65	62	36	23
8	285	156	e170	89	e64	e110	540	97	70	60	33	23
9	217	231	e155	88	e64	206	427	87	201	147	33	36
10	188	314	e160	88	e63	245	347	81	306	95	46	62
11	167	216	e150	e86	e62	176	296	76	182	110	69	57
12	152	170	e145	e85	e62	137	260	75	109	77	69	44
13	147	161	e130	e84	e60	111	229	75	112	64	50	102
14	188	158	e120	e84	e60	107	201	70	126	70	41	364
15	427	130	e115	e82	e60	98	179	68	112	152	36	293
16	283	125	e115	e82	e59	89	162	73	86	123	33	170
17	199	126	e110	e80	e58	82	150	69	123	78	32	81
18	167	136	e110	e80	e58	80	144	64	112	62	29	64
19	148	130	e115	e78	e57	79	136	60	79	61	29	55
20	136	138	e110	e78	e56	80	124	57	64	64	34	51
21	128	99	e110	e77	e55	84	114	54	56	67	34	52
22	125	104	e105	e76	e54	125	104	53	53	62	32	54
23	123	112	e100	e74	e54	294	97	61	80	56	29	52
24	123	119	e100	e72	e53	542	103	105	119	50	30	47
25	116	147	e110	e72	e52	826	115	99	88	45	30	44
26	109	183	170	e71	e52	1070	101	81	64	49	27	43
27	127	626	e160	e70	e54	1090	91	69	96	54	26	44
28	174	481	e140	e70	e52	994	85	67	240	51	27	48
29	178	372	e115	e70	---	995	90	111	212	43	29	49
30	171	249	e110	e69	---	1110	141	120	107	38	33	43
31	163	---	e105	e68	---	1490	---	99	---	35	42	---
TOTAL	6964	5565	5019	2517	1665	10617	10485	2805	3547	2261	1140	2069
MEAN	225	185	162	81.2	59.5	342	349	90.5	118	72.9	36.8	69.0
MAX	527	626	518	100	67	1490	1730	212	306	152	69	364
MIN	109	99	100	68	52	50	85	53	53	35	26	23
CFSM	1.84	1.52	1.33	.67	.49	2.81	2.86	.74	.97	.60	.30	.57
IN.	2.12	1.70	1.53	.77	.51	3.24	3.20	.86	1.08	.69	.35	.63

CAL YR 1986 TOTAL 76384 MEAN 209 MAX 2690 MIN 35 CFSM 1.72 IN. 23.29
WTR YR 1987 TOTAL 54654 MEAN 150 MAX 1730 MIN 23 CFSM 1.23 IN. 16.66

e Estimated

04296000 BLACK RIVER AT COVENTRY, VT.--Continued

(National stream quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1977 to current year.
PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1977 to September 1981.
WATER TEMPERATURES: November 1977 to September 1981.

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 AIR (DEG C)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	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											
17...	1000	202	160	--	--	7.0	--	--	--	--	--
NOV											
19...	1615	113	140	--	--	1.0	--	--	--	--	--
21...	1315	92	187	7.37	-3.0	0.0	1.1	14.0	100	5	10
JAN											
07...	1100	80	210	8.42	-1.5	0.0	1.1	13.8	99	K8	<1
08...	1030	85	145	--	--	0.0	--	--	--	--	--
FEB											
26...	1215	54	205	--	--	0.0	--	--	--	--	--
APR											
08...	1030	555	124	8.18	5.0	4.5	1.5	13.1	105	33	180
08...	1315	539	124	--	--	4.5	--	--	--	--	--
MAY											
14...	0845	70	200	--	--	11.0	--	--	--	--	--
JUN											
24...	0930	127	197	8.20	24.0	20.0	1.5	8.6	98	560	96
JUL											
02...	1100	72	195	--	--	18.5	--	--	--	--	--
AUG											
07...	0900	37	220	--	--	18.5	--	--	--	--	--
21...	0930	36	235	8.10	20.0	17.5	12	8.8	94	440	120
SEPT											
17...	1430	77	150	--	--	18.0	--	--	--	--	--
30...	1000	44	236	8.50	15.0	13.5	1.7	9.4	93	120	550

DATE	HARD-NESS TOTAL (MG/L AS $CACO_3$)	HARD-NESS NONCARB WH WAT TOT FLD (MG/L AS $CACO_3$)	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 SO_4)	ALKA-LINITY WH WAT TOT INC (MG/L AS $CACO_3$)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO_2)
OCT											
17...	--	0	--	--	--	--	--	--	--	--	--
NOV											
19...	--	0	--	--	--	--	--	--	--	--	--
21...	91	12	29	4.4	3.5	12	1.0	77	5.5	<0.10	5.9
JAN											
07...	87	2	28	4.2	3.5	13	0.80	--	5.4	<0.10	6.4
08...	--	0	--	--	--	--	--	--	--	--	--
FEB											
26...	--	0	--	--	--	--	--	--	--	--	--
APR											
08...	55	8	18	2.5	2.5	10	1.1	48	4.6	<0.10	4.9
08...	--	0	--	--	--	--	--	--	--	--	--
MAY											
14...	--	0	--	--	--	--	--	--	--	--	--
JUN											
24...	94	9	30	4.6	3.6	11	1.0	85	5.5	0.10	4.7
JUL											
02...	--	0	--	--	--	--	--	--	--	--	--
AUG											
07...	--	0	--	--	--	--	--	--	--	--	--
21...	110	15	35	6.2	5.5	11	1.3	100	8.5	<0.10	5.1
SEPT											
17...	--	0	--	--	--	--	--	--	--	--	--
30...	120	16	38	5.7	4.5	14	1.2	103	6.0	0.10	3.4

04296000 BLACK RIVER AT COVENTRY, VT.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO_2+NO_3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH_4)	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)	PHOS PHATE, ORTHO, DIS-SOLVED (MG/L AS PO_4)
OCT											
17...	--	--	--	--	--	--	--	--	--	--	--
NOV											
19...	--	--	--	--	--	--	--	--	--	--	--
21...	118	110	0.330	0.010	0.01	0.70	0.180	<0.010	<0.010	10	--
JAN											
07...	117	115	0.470	0.060	0.08	0.20	<0.010	<0.010	<0.010	<10	--
08...	--	--	--	--	--	--	--	--	--	--	--
FEB											
26...	--	--	--	--	--	--	--	--	--	--	--
APR											
08...	77	74	0.430	0.030	0.04	0.60	0.010	0.020	<0.010	50	--
08...	--	--	--	--	--	--	--	--	--	--	--
MAY											
14...	--	--	--	--	--	--	--	--	--	--	--
JUN											
24...	110	113	0.160	0.030	0.04	0.20	0.030	0.010	<0.010	20	--
JUL											
02...	--	--	--	--	--	--	--	--	--	--	--
AUG											
07...	--	--	--	--	--	--	--	--	--	--	--
21...	140	132	<0.100	<0.010	--	0.70	0.030	0.020	<0.010	20	--
SEPT											
17...	--	--	--	--	--	--	--	--	--	--	--
30...	125	135	<0.100	0.010	0.01	0.30	0.040	0.020	0.020	20	0.06

DATE	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	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)
OCT											
17...	--	--	--	--	--	--	--	--	--	--	--
NOV											
19...	--	--	--	--	--	--	--	--	--	--	--
NOV											
21...	4	1.0	87	1	11	<0.5	<1	<1	<3	3	200
JAN											
07...	4	0.86	64	1	10	<0.5	<1	<1	<3	6	140
08...	--	--	--	--	--	--	--	--	--	--	--
FEB											
26...	--	--	--	--	--	--	--	--	--	--	--
APR											
08...	23	34	76	<1	9	<0.5	<1	<1	<3	<1	64
08...	--	--	--	--	--	--	--	--	--	--	--
MAY											
14...	--	--	--	--	--	--	--	--	--	--	--
JUN											
24...	13	4.5	81	1	11	0.7	<1	<1	<3	2	92
JUL											
02...	--	--	--	--	--	--	--	--	--	--	--
AUG											
07...	--	--	--	--	--	--	--	--	--	--	--
21...	7	0.68	67	1	13	<0.5	<1	<1	<3	3	77
SEPT											
17...	--	--	--	--	--	--	--	--	--	--	--
30...	6	0.71	82	1	13	<0.5	<1	<1	<3	4	110

04296000 BLACK RIVER AT COVENTRY, VT.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	MERCURY DIS-SOLVED (UG/L AS HG)	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)
OCT											
17...	--	--	--	--	--	--	--	--	--	--	--
NOV											
19...	--	--	--	--	--	--	--	--	--	--	--
21...	<5	4	49	<10	0.2	1	<1	<1.0	140	<6	13
JAN											
07...	<5	5	35	<10	<0.1	2	<1	<1.0	140	<6	19
08...	--	--	--	--	--	--	--	--	--	--	--
FEB											
26...	--	--	--	--	--	--	--	--	--	--	--
APR											
08...	<5	7	15	<10	<0.1	1	<1	<1.0	90	<6	21
08...	--	--	--	--	--	--	--	--	--	--	--
MAY											
14...	--	--	--	--	--	--	--	--	--	--	--
JUN											
24...	9	6	25	<10	0.2	<1	<1	<1.0	160	<6	20
JUL											
02...	--	--	--	--	--	--	--	--	--	--	--
AUG											
07...	--	--	--	--	--	--	--	--	--	--	--
21...	<5	4	51	<10	<0.1	1	<1	<1.0	190	<6	6
SEPT											
17...	--	--	--	--	--	--	--	--	--	--	--
30...	<5	<4	32	<10	<0.1	2	<1	<1.0	190	<6	16

04296500 CLYDE RIVER AT NEWPORT, VT.

LOCATION.--Lat 44°56'22", long 72°11'23", Orleans County, Hydrologic Unit 01110000, on right bank in Newport, just downstream from small right-bank tributary, and 1 mi upstream from mouth.

DRAINAGE AREA.--142 mi².

PERIOD OF RECORD.--Discharge: May 1909 to September 1919; May 1920 to August 1922, October 1922 to September 1924, November 1928 to May 1936, September 1938 to current year. Prior to November 1928, published as "at West Derby."
Water-quality records: Water years 1975-77.

REVISED RECORDS.--WSP 744: 1913(M), drainage area. WSP 924: 1940. WSP 1307: 1913-15(M).

GAGE.--Water-stage recorder and since Mar. 6, 1957, records of power generation. Datum of gage is 682.36 ft above National Geodetic Vertical Datum of 1929. May 25, 1909, to Sept. 20, 1915, nonrecording gage, and Sept. 21, 1915, to Sept. 30, 1924, Nov. 16, 1928, to May 4, 1936, water-stage recorder, at site 0.65 mi upstream at different datum.

REMARKS.--No estimated daily discharges. Records fair. Flow regulated by powerplant and reservoirs upstream and, since Mar. 6, 1957, by diversion around station through canal and penstock of Newport No. 11 powerplant. Diversion computed from relation of kilowatt-hour output and measured discharge, discharge computed by adding flow over control to flow diverted through powerplant. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--68 years (water years 1910-19, 1921, 1923-24, 1929-35, 1939-87), 258 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,900 ft³/s, Mar. 20, 1936, gage height, 5.76 ft, site and datum then in use, from rating curve extended above 2,800 ft³/s on basis of computation of peak flow over dam; maximum daily, 2,680 ft³/s, May 4, 1940; minimum daily, 2.6 ft³/s, June 18, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,870 ft³/s, Apr. 2; minimum daily, 26 ft³/s, Sept. 12.

DISCHARGE, 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	212	186	253	122	38	53	1520	244	372	461	129	42
2	267	245	275	150	88	75	1870	216	377	472	91	42
3	236	210	299	97	103	67	1760	158	374	449	115	43
4	260	184	353	81	83	67	1430	231	374	437	116	42
5	356	289	261	110	110	88	1120	245	330	429	99	49
6	306	261	291	97	92	132	940	258	155	255	70	42
7	355	309	381	111	54	139	871	247	109	238	73	41
8	358	157	280	112	59	95	844	229	308	247	55	42
9	279	232	299	111	98	129	804	229	384	229	66	43
10	280	220	308	106	93	94	746	144	373	246	78	51
11	277	199	270	94	91	81	684	240	373	166	72	40
12	276	235	256	97	102	148	634	226	364	178	70	26
13	275	202	136	90	112	150	586	229	376	252	71	28
14	244	193	155	78	98	94	555	152	374	187	56	40
15	277	166	254	84	77	47	512	236	371	218	49	37
16	280	146	182	87	85	153	459	75	277	218	42	42
17	254	154	196	91	74	129	412	126	289	218	73	124
18	243	150	257	84	113	131	428	158	246	146	56	140
19	263	158	212	53	99	100	425	142	261	144	55	105
20	222	185	199	63	86	127	398	159	151	202	56	134
21	158	165	176	118	55	115	378	155	159	218	57	160
22	160	134	192	109	37	117	364	152	232	153	41	93
23	271	130	170	83	76	147	230	115	224	144	41	95
24	224	152	176	102	83	209	231	140	217	218	56	99
25	158	133	158	85	75	161	240	157	159	128	57	70
26	160	154	144	118	65	278	239	181	143	144	43	94
27	173	179	130	101	50	398	181	247	156	214	42	86
28	177	234	110	97	60	436	213	287	302	158	41	83
29	185	276	151	97	---	496	159	302	345	138	49	56
30	242	239	152	103	---	730	154	336	386	129	43	77
31	270	---	163	69	---	962	---	286	---	174	42	---
TOTAL	7698	5877	6839	3000	2256	6148	19387	6302	8561	7210	2004	2066
MEAN	248	196	221	96.8	80.6	198	646	203	285	233	64.6	68.9
MAX	358	309	381	150	113	962	1870	336	386	472	129	160
MIN	158	130	110	53	37	47	154	75	109	128	41	26

CAL YR 1986 TOTAL 93214 MEAN 255 MAX 1650 MIN 34
WTR YR 1987 TOTAL 77348 MEAN 212 MAX 1870 MIN 26

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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.

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, and discharge measurements may have been made for purposes of establishing the stage-discharge relation, but these are not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

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)
		Merrimack River basin					
†01075000	Pemigewasset River at Woodstock, N.H.	Lat 43°58'34", long 71°40'48", Grafton County, 0.2 mi east of Woodstock and 0.7 mi upstream from Eastman Brook.	193	1940-77,‡ 1978-80, 1985-87	4-1-87	14.01	33,000
†01076000	Baker River near Rumney N.H.	Lat 43°47'46", long 71°50'42", Grafton County, 0.3 mi upstream from Halls Brook, and 1.8 mi southwest of Rumney.	143	1929-77‡ 1978-81, 1985-87	4-1-87	11.19	8,270
†01081500	Merrimack River at Franklin Junction, N.H.	Lat 43°25'26", long 71°50'12", Merrimack County at Franklin Junction, N.H.,1 mi downstream from confluence of Pemigewasset and Winnipesaukee Rivers.	1,507	1903-78‡ 1983-87	4-6-87	13.90	17,700
†082000	Contoocook River at Peterborough, N.H.	Lat. 42°51'45", long 71°57'55", Hillsborough County, 1 mi south of Peterborough, and 1.5 mi upstream from Nubanusit Brook.	68.1	1964-77‡ 1978-87	4-6-87	6.62	2,860
†1091500	Piscataquog River near Goffstown, N.H.	Lat. 43°00'58", long 71°33'03", Hillsborough conty, 0.2 mi upstream from Harry Brook, 0.9 mi downstream from Glen Lake, and 2.5 mi east of Goffstown, N.H.	202	1939-78‡ 1983-87	4-6-87	11.28	7,600
†1094000	Souhegan River at Merrimack, N.H.	Lat 42°51'27", long 71°30'24", Hillsborough County, at head of Wildcat Falls, 1.5 mi upstream from mouth.	171	1909-76‡ 1979-87	4-7-87	10.25	6,700
		Connecticut River basin					
†1145000	Mascoma River at West Canaan, N.H.	Lat 43°39'00", long 72°04'50", Grafton County, on right bank 45 ft downstream from Boston and Maine Railroad bridge, 0.9 mi east of West Canaan, 1.2 mi downstream from Indian River, 3.5 mi west of Canaan and at mile 19.3	80.5	1939-78‡ 1985-87	4-1-87	8.09	2,900

† Also a miscellaneous site.
‡ Operated as a continuous-record gaging station.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Special study and miscellaneous sites

Discharge measurements in the following table were made at special study and miscellaneous sites throughout New Hampshire.

Discharge measurements made at special study and miscellaneous sites during water year 1987

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		Piscataqua River Basin				
01071500 Branch Brook	Salmon Falls River	Lat 43°33'09", long 71°01'35", Carroll County, at culvert on State Route 153, and Lovell Lake outlet, 0.1 mi south of intersection with State Route 109, 0.2 mi west of Sanbornville, N.H.	--	--	9-03-87	2.2
01071520 Pike Brook	Branch River	Lat 43°32'57", long 71°02'50", Strafford County, at culvert on State Route 109, 0.4 mi Brook west of State Route 16, 0.9 mi west of Sanbornville, N.H.	--	--	9-03-87	.59
01071700 Churchill Brook	do	Lat 43°33'00", long 71°03'47", Strafford County, at Govenors Road, 0.2 mi south of intersection with State Route 109, 1.7 mi west of Sanbornville, N.H.	--	--	9-03-87	1.3
01071800 Branch River	Salmon Falls River	Lat 43°31'19", long 71°01'24", Carroll County, at bridge on Marsh Road, 0.2 mi northeast of intersection with State Route 153, 2.2 mi south of Sanbornville, N.H.	--	--	9-03-87	5.6
01071815 Branch River	do	Lat 43°29'39", long 71°01'37", Carroll County, at bridge about 100 ft below dam in Union (village) in Wakefield, N.H.	--	--	9-03-87	5.7
01071825 Branch River	do	Lat 43°29'03", long 71°00'44", Strafford County, at bridge behind fruit tree nursery, 0.4 mi north of intersection of old State Route 16 and Spaulding Tnpk, 5.0 mi north of Milton, N.H.	--	--	9-03-87	2.3
01071830 Jones Brook	Branch River	Lat 43°58'52", long 71°00'39", Strafford County, at bridge on Eastside Road, about 100 ft west of State Route 16, 4.8 mi north of Milton, N.H.	--	--	9-03-87	.99
01071980 Branch River	Salmon Falls River	Lat 43°28'49", long 71°00'01", Strafford County, 75 ft west of bridge at Laskey Corner, 0.3 mi east of intersection of State Route 16 and Spaulding Tnpk, 4.7 mi north of Milton, N.H.	--	--	9-03-87	4.6
01072180 Salmon Falls River	Piscataqua River	Lat 43°22'16", long 70°58'53", Strafford County, 900 ft downstream from bridge on River road in North Rochester (Hayes Station) and 4.0 mi north of Rochester, N.H.	--	--	9-03-87	26
01072300 Salmon Falls River	do	Lat 43°21'23", long 70°58'30", Strafford County, at northeast end of Forest Park Road, 3.0 mi north of Rochester, N.H.	--	--	9-03-87	27
01072320 Salmon Falls River	do	Lat 43°20'07", long 70°56'26", Strafford County at bridge on Flat Rock Bridge Road, 0.5 mi southwest of Melrose Corner, 2.5 mi northeast of Rochester, N.H.	--	--	9-03-87	26
01072350 Heath Brook	Salmon Falls River	Lat 43°20'49", long 70°59'49", Strafford County, at culvert on Chestnut Hill Road, 0.1 mi south of intersection with Betts Road, 0.5 mi north of intersection with Little Falls Bridge Road, 3.1 mi north of Rochester, N.H.	--	--	9-04-87	0
01072360 Heath Brook	do	Lat 43°20'38", long 70°59'04", Strafford County, at powerline, 0.4 mi northeast of intersection with Little Falls Bridge Road, 0.4 mi southeast of intersection with Betts Road, 2.8 mi north of Rochester, N.H.	--	--	9-04-87	0

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at special study and miscellaneous sites during water year 1987--continued

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		Piscataqua River Basin--continued				
01072380 Heath Brook	Salmon Falls River	Lat 43°19'56", long 70°58'37", Strafford County, at culvert on Old Milton Road, 0.2 mi southwest of intersection with State Route 16, 1.9 mi north of Rochester, N.H.	--	--	9-04-87	<.01
01072390 Heath Brook	do	Lat 43°20'07", long 70°57'32", Strafford County at culvert on Salmon Falls Road, 0.6 mi southeast of intersection with Flatrock Bridge Road, 0.7 mi north of intersection with State Highway 202, 2.4 mi northeast of Rochester, N.H.	--	--	9-03-87	<.01
01072400 Salmon Falls River	do	Lat 43°20'07", long 70°56'26", Strafford County at bridge on State Highway 202, on state line between East Rochester, N.H. and South Lebanon, Maine	--	--	9-03-87	31
01072592 Lily Pond Brook	do	Lat 43°16'42", long 70°59'27", Strafford County, at culvert on Haven Hill Road, 0.5 mi southwest of rocky Hill Road, 0.5 minorthwest of state Route 16, 4.0 mi southeast of Rochester, N.H.	--	--	9-04-87	.01
01072593 Lily Pond Brook	do	Lat 43°16'23", Long 70°53'52", Strafford County, at culvert 0.3 mi northest of outlet of Lily Pond, 1.8 mi northwest of Somersworth, N.H.	--	--	9-03-87	0
01072594 Lily Pond Brook	do	Lat 43°16'55". long 70°54'02", Strafford County, at culvert on Boston and Maine railroad track, 0.3 mi southeast of intersection with Haven Hill Road, 2.2 mi northwest of Somersworth, N.H.	--	--	9-04-87	0
01072595 Lily Pond Brook	do	Lat 43°17'06", long 70°58'53", Strafford County, at culvert on Rochester Street, 0.2 mi southeast of intersection with Hubbard Road, 2.3 mi north of Somersworth, N.H.	--	--	9-03-87	0
01072598 Peters Marsh Brook	Tates Brook	Lat 43°14'47", long 70°53'09", Strafford County, at culvert on Blackwater Road, 0.7 mi east of intersection with State Route 16.	--	--	9-03-87	<.01
01072597 Peters Marsh Brook	do	Lat 43°14'18", long 70°53'16", Strafford County at culvert 0.4 mi west of State Route 16A, 0.8 mi south of intersection of Blackwater Road and State Route 16A.	--	--	9-03-87	.03
01072599 Tates Brook	Salmon Falls River	Lat 43°15'38", long 70°53'20", Strafford County, at culvert on state Route 16A, 0.1 mi east of intersection with Tates Brook Road, 0.4 miles west of Maple Street, 1.2 mi east of Somersworth, N.H.	--	--	9-04-87	.46
01073830 Bailey Brook	Atlantic Ocean	Lat 42°59'25", long 70°47'48", Rockingham County, downstream side of bridge at culvert on West Road, 0.2 mi south of the Garland Road, 0.4 mi north of intersection with South Road, 1.8 mi southwest of Rye, N.H.	0.5	1986	8-26-87	0

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at special study and miscellaneous sites during water year 1987--continued

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		Piscataqua River Basin--continued				
01073835 Bailey Brook	Atlantic Ocean	Lat 42°59'20", long 70°46'37", Rockingham County, downstream side of bridge at culvert on Love Lane, 0.22 mi southwest of intersection with Central Road, 0.60 mi northwest of intersection with South Road, 1.7 mi south Rye, N.H.	1.73	1986	10-21-86 8-26-87	.35 0
		Merrimack River basin				
†1075000 Pemigewasset River	Merrimack River	Lat 43°58'34", long 71°40'48", Grafton County, 0.2 mi east of Woodstock, and 0.7 mi upstream from Eastman Brook, at Woodstock N.H.	193	1940-77‡, 1978-86	10-22-86 4-20-87 6-30-87 8-19-87	216 1,590 452 96
†01076000 Baker River	Pemigewasset River	Lat 43°47'46", long 71°50'42", Grafton County, 0.3 mi upstream from Halls Brook, and 1.8 mi southwest of Rumney, N.H.	143	1929-77‡, 1978-86	4-20-87 5-21-87 8-21-87	311 83 35
01077510 Newfound River	do	Lat 43°37'05", long 71°44'25", Grafton County, at outlet of Newfound Lake, near State Highway 3A, 2.3 mi north of Bristol, N.H.	96.4	1974-76, 1985-86	10-21-86 6- 5-87	192 79
†01087940 Contoocook River	Atlantic Ocean	Lat 43°15'00", long 71°37'15", Merrimack County, at bridge on Penacook Road at Riverhill, 2.5 mi southwest of Penacook, and 3.0 mi upstream from mouth, in Penacook, N.H.	766	1929-74‡ 1978-84, 1986	4-9-87	10,600
01088400 Merrimack River	do	Lat 43°12'32", long 71°31'51", Merrimack County, at bridge on State Highway 3 at Concord, N.H.	--	1979-82 1884	4- 9-87	28,000
†01091500 Piscataquog River	do	Lat 43°00'58", long 71°33'03". Hillsborough County, 0.2 mi upstream from Harry Brook, 0.9 mi downstream from Glen Lake, and 2.5 mi east of Goffstown, N.H.	202	1939-78‡, 1979-86	10-31-86 4-10-87 5-18-87	126 2,530 196
†01094000 Souhegan River	do	Lat 42°51'27", long 71°30'24", Hillsborough County, at head of Wildcat Falls at Merrimack, 1.5 mi upstream from mouth, in Merrimack, N.H.	171	1909-76‡, 1979-86	9-19-86 10-31-86 4- 7-87	58 142 5,840
010965844 Beaver Brook	Merrimack River	Lat 42°50'21", long 71°21'00", Rockingham County, downstream of Kendall Pond outlet on the Windham-Londonderry town line, 50 ft south of the intersection between South Road and Kendall Pond Road, 3.4 mi northwest of Windham, N.H.	30.8	--	10-21-86 8-25-87	6.7 .97
010965846 Beaver Brook	do	Lat 42°49'40", long 71°20'51", Rockingham County, 50 ft behind house number sixteen Pleasant Drive, 300 ft due east of intersection between Pleasant Drive and Tranquil Road, measuring site is also at Windham-Londonderry town line, 2.9 mi northwest of Windham, N.H.	37.7	--	10-21-86 8-25-87	8.9 1.4
010965848 Beaver Brook tributary	Beaver Brook	Lat 42°49'02", long 71°20'41", Rockingham County, 50 ft upstream from mouth of tributary to Beaver Brook, 350 ft north of Sirod Road, 0.2 mi west of intersection between tributary and Kendall Pond Road, 2.4 mi northwest of Windham, N.H.	1.07	--	10-21-86 8-25-87	.99 .06
010965850 Beaver Brook	Merrimack River	Lat 42°48'23", long 71°21'12", Rockingham County, 20 ft upstream from bridge at the intersection of N.H. Highway Route 128 and Anderson Road, 0.3 mi north of the intersection between state Highway Route 128 and Route 111, 2.7 mi west of Windham, N.H.	41.8	1975-76	10-21-86 8-25-87	11 1.3

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at special study and miscellaneous sites during water year 1987--continued

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		Merrimack River Basin--continued				
010965851 Beaver Brook	Merrimack River	Lat 42°47'25", long 71°21'53", Rockingham County, upstream side of bridge on Bridle Bridge Road, at the Windham-Hudson town line, 0.45 mi west of State Highway Route 128, 3.6 mi southwest of Windham, N.H.	43.6	--	10-21-86 8-25-87	12 1.4
010965905 Golden Brook	Beaver Brook	Lat 42°47'32", long 71°18'16", Rockingham County, upstream side of bridge on Golden brook Road, 0.5 mi northwest of intersection with Route 111A, 1.6 mi south of Windham, N.H.	--	--	8-26-87	.09
011005034 Taylor Brook	Spicket River	Lat 42°52'20", long 71°13'47", Rockingham County, 50 ft upstream from bridge on Island Pond Road, 0.3 mi northwest of intersection with North Shore Road, 5.4 mi southeast of Derry, N.H.	4.8	--	10-26-86 8-26-87	1.1 .45
011005038 Taylor Brook	do	Lat 42°52'10", long 71°13'27", Rockingham County, upstream side of culvert on North Shore Road, 0.1 mi east of intersection with Island Pond Road, 5.8 mi southeast of Derry, N.H.	5.0	--	10-20-86 8-26-87	.71 .48
01100520 Spicket River	Merrimack River	Lat 42°48'08", long 71°11'46", Rockingham County, downstream side of bridge on Town Farm Road, 50 ft east of Bluff Street Extension, 0.3 mi east of North Main Street, 1.0 mi north of Salem, N.H.	46.4	1975-76	10-21-86	89
01100529 Hittytity Brook	Spicket River	Lat 42°48'53", long 71°14'25", Rockingham County, downstream side of culvert on Shadow Lake Road (Route 111), 350 ft east of the Windham-Salem, N.H. town line, 0.2 mi northeast of the intersection with Doiron Road, 2.7 mi northwest of Salem, N.H.	7.9	--	10-20-86 8-26-87	.07 0
01100530 Hittytity Brook	do	Lat 42°48'18", long 71°13'07", Rockingham County, 100 ft downstream from culvert on Bluff Road, 350 ft west of intersection with Zion's Hill Road, 0.5 mi east of intersection with Scotland Avenue, 1.4 mi northwest of Salem, N.H.	9.4	1975-76	10-20-86 8-27-87	.94 0
01100535 Widow Harris Brook	do	Lat 42°47'58", long 71°11'58", Rockingham County, at culvert on North Main Street, 150 mi northwest of intersection with Town Farm Road, 0.2 mi southeast of intersection with Bluff Street, 0.7 mi north of Salem, N.H.	10.8	1975-76	10-20-86	4.2
011005372 Spicket River	Merrimack River	Lat 42°47'16", long 71°12'01", Rockingham County, at culvert on Bridge Street, 350 ft southeast of intersection with Route 97 (Main Street), 400 ft northwest of intersection with Douglas Drive, 350 ft southeast of Salem, N.H.	47.37	--	10-20-86	102
011005379 Spicket River tributary	Spicket River	Lat 42°46'11", long 71°12'06", Rockingham County, at culvert of Ackerman Street, 0.1 mi northwest of intersection with Williams Street, 1.3 mi south of Salem, N.H.	0.2	--	10-20-86	0
01100538 Spicket River	Merrimack River	Lat 42°46'07", long 71°12'08", Rockingham County, upstream from bridge on Lawrence Road, 0.3 mi northwest of intersection with Tyler Street, 1.4 mi south of Salem, N.H.	48.9	1976	10-20-86	90
01100540 Spicket River	do	Lat 42°45'15", long 71°12'32", Rockingham County, downstream from bridge on State Highway 28, 0.2 mi southeast of intersection with Kelly Road, 2.4 mi southwest of Salem, N.H.	50.3	1975-76	10-20-86	90

See footnotes at end of table.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at special study and miscellaneous sites during water year 1987--continued

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		Merrimack River Basin--continued				
01100673 Little River	Merrimack River	Lat 42°51'26", long 71°05'05", Rockingham County, at culvert on Crane Crossing Road, 0.1 mi south of the Kingston/Plaistow town line, 1.6 mi northeast of Plaistow, N.H.	4.35	--	10-20-86 8-25-87	8.2 .06
01100674 Little River tributary	Little River	Lat 42°51'12", long 71°04'55", Rockingham County, at culvert on Boston and Maine railroad track, 0.40 mi southwest of intersection with Whittier Street Extension, 2.7 mi soutwest of Newton, N.H.	3.0	--	10-20-86 8-25-87	2.4 .42
01100675 Kelly Brook	do	Lat 42°51'15", long 71°06'03", Rockingham County, at culvert on Route 125, 0.2 mi southwest of intersection with Old County Road and Route 125, 1.3 mi northwest of Plaistow, N.H.	0.1	1976	10-20-86	.81
01100676 Little River	Merrimack River	Lat 42°50'37", long 71°06'07", Rockingham County, downstream side of bridge on North Main Street, 0.4 mi southeast of intersection with Route 125, 0.6 mi northwest of Plaistow, N.H.	8.8	--	10-20-86 8-25-87	3.4 .54
		Connecticut River Basin				
†01145000 Mascoma River	Connecticut River	Lat 43°39'00", long 72°04'50", Grafton County, on right bank 45 ft downstream from Boston and Maine Railroad bridge, 0.9 mi east of West Canaan, 1.2 mi downstream from Indian River, 3.5 mi west of Canaan, N.H. and at mile 19.3	80.5	1939-78‡, 1979-86	10-21-86 8- 4-87	51 97

< Less than.
† Also a crest-stage partial record station.
‡ Operated as a continuous-record gaging station.

SUPPLEMENTAL WATER-QUALITY DATA FOR GAGING STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPECIFIC CON-DUCT-ANCE (UMHOS)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPECIFIC CON-DUCT-ANCE (UMHOS)
ANDROSCOGGIN RIVER BASIN									
01052500 DIAMOND RIVER NEAR WENTWORTH, NH (LAT 44 52 40 LONG 71 03 25)									
OCT 1986					MAR 1987				
09...	1010	413	8.0	37	12..	1200	127	0.0	40
DEC					MAY				
15...	1120	181	0.0	34	26...	1030	458	20.0	28
JAN 1987					AUG				
27...	1315	85	0.0	53	26...	1300	27	14.5	42
01053500 ANDROSCOGGIN RIVER AT ERROL, NH (LAT 44 46 57 LONG 71 07 46)									
OCT 1986					MAR 1987				
09...	1125	1930	10.0	36	12...	1400	1800	1.0	32
DEC					MAY				
15...	1335	1720	1.0	30	26...	1315	1360	13.0	27
JAN 1985					AUG				
27...	1415	1970	1.0	32	26...	1530	1720	18.0	30
01054000 ANDROSCOGGIN RIVER NEAR GORHAM, NH (LAT 44 26 10 LONG 071 11 27)									
OCT 1986					MAY 1987				
16...	1030	2250	10.5	71	26	1445	1900	17.0	84
DEC					AUG				
15...	1510	2110	1.0	80	26	1630	1820	19.0	86
SACO RIVER BASIN									
01064400 LUCY BROOK NEAR NORTH CONWAY, NH (LAT 44 04 10 LONG 071 10 30)									
OCT 1986					APR 1987				
28...	1030	2.4	8.0	26	13...	1030	25	5.0	17
DEC					MAY				
01...	1130	7.8	2.0	14	20..	0830	5.1	7.5	20
JAN 1987					AUG				
20...	1430	5.8	0.0	--	26...	1200	9.9	13.0	--
FEB									
25...	1230	1.7	0.0	--					
01064500 SACO RIVER AT CONWAY, NH (LAT 43 59 27 LONG 071 05 29)									
OCT 1986					MAR 1987				
07...	1230	471	8.0	45	11...	1300	470	0.0	45
DEC					JUL				
12...	1215	858	0.0	31	15	1115	820	20.0	36
JAN 1987					SEPT				
26...	1330	316	0.0	48	08...	1105	141	18.5	52
01065000 OSSIPEE RIVER AT EFFINGHAM FALLS, NH (LAT 43 47 44 LONG 071 03 36)									
NOV 1986					APR 1987				
03...	0800	248	9.0	36	16...	1430	1550	7.0	27
DEC					MAY				
05...	1000	1980	3.0	23	22...	1115	284	17.0	35
MAR 1987					AUG				
06...	1110	227	2.0	--	20...	1200	223	26.0	--
PISCATAQUA RIVER BASIN									
01073000 OYSTER RIVER NEAR DURHAM, NH (LAT 43 08 55 LONG 070 57 56)									
NOV 1986					JUN 1987				
05...	1200	2.9	4.0	85	03...	1115	16	18.0	118
DEC					JUL				
04...	1000	129	2.0	83	01...	1200	13	19.0	123
16...	0900	17	0.5	120	AUG				
JAN 1987					05...	1110	2.3	19.0	180
29...	1230	12	0.0	88	13...	1345	1.9	18.0	220
MAR					SEP				
05...	1330	13	0.0	132	28...	1345	6.6	10.0	--

SUPPLEMENTAL WATER-QUALITY DATA FOR GAGING STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (US/CM)
PISCATATQUA RIVER BASIN--continued									
01073500 LAMPREY RIVER NEAR NEWMARKET, NH (LAT 43 06 09 LONG 070 57 11)									
DEC 1986					JUL 1987				
16...	1150	296	0.5	152	24...	0800	46	19.0	98
MAR 1987					AUG				
05	0900	168	0.0	145	05...	0915	42	18.0	110
APR					13...	1200	28	17.0	110
08...	1445	5740	6.5	86	SEP				
JUN					30...	0900	51	15.0	117
03...	0900	106	18.0	102					
05...	0930	85	20.0	52					
MERRIMACK RIVER BASIN									
01075800 STEVENS BROOK NEAR WENTWORTH, NH (LAT 43 50 12 LONG 071 53 07)									
NOV 1986					APR 1987				
05...	1200	0.9	3.0	--	15...	1400	5.7	6.5	24
DEC					MAY				
05...	1340	9.2	1.0	16	21...	0930	1.3	8.5	29
MAR 1987					AUG				
09...	1400	7.7	0.0	--	21...	1100	0.2	15.0	--
01076500 PEMIGEWASSET RIVER AT PLYMOUTH, NH (LAT 43 45 33 LONG 071 41 10)									
OCT 1986					APR 1987				
07...	1130	1120	7.0	--	15...	1130	2300	--	32
DEC					MAY				
08...	1000	1000	0.0	30	21...	1300	617	13.5	56
MAR 1987									
04...	1000	304	0.0	--					
01077000 SQUAM RIVER AT ASHLAND, NH (LAT 43 42 19 LONG 071 37 49)									
OCT 1986					MAY 1987				
16...	0930	89	7.0	45	20...	1600	60	15.0	64
NOV					AUG				
05...	1400	86	6.0	51	14...	1300	94	23.5	41
MAR 1987									
09...	1515	62	1.5	60					
01078000 SMITH RIVER NEAR BRISTOL, NH (LAT 43 34 04 LONG 071 44 54)									
DEC 1986					JUN 1987				
22...	1030	78	0.0	50	05...	1130	166	16.0	42
FEB 1987					JUL				
04...	1315	61	0.0	59	09...	1330	67	18.0	52
MAR					AUG				
04...	1330	49	0.0	48	17...	1030	15	20.0	59
APR									
02...	1045	1610	1.5	32					
01081000 WINNIPESAUKEE RIVER AT TILTON, NH (LAT 43 26 31 LONG 071 35 20)									
DEC 1986					JUN 1987				
23...	1000	857	1.5	73	09...	0815	602	18.0	70
JAN 1987					JUL				
14...	1300	1090	1.0	80	20...	0900	681	19.0	60
FEB					AUG				
05...	1030	1130	1.0	84	17...	0930	623	20.0	54
MAR									
05...	1530	270	4.0	62					
01081500 MERRIMACK RIVER AT FRANKLIN JUNCTION, NH (LAT 43 25 26 LONG 071 39 12)									
JUL 1987					JUL 1987				
21...	0900	1250	16.0	39	23...	0900	2200	16.0	38
01082000 CONTOOCOOK RIVER AT PETERBOROUGH, NH (LAT 42 51 45 LONG 071 57 35)									
MAR 1987					AUG 1987				
24...	1330	387	0.0	60	10...	1530	37	18.5	89
MAY									
14...	1050	194	11.0	74					

SUPPLEMENTAL WATER-QUALITY DATA FOR GAGING STATIONS

MERRIMACK RIVER BASIN--Continued

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (US/CM)
01083000 NUBANUSIT BROOK NEAR PETERBOROUGH, NH (LAT 42 53 10 LONG 071 58 24)									
OCT 1986					JUN 1987				
28...	1515	54	9.0	67	29...	1400	200	19.0	40
DEC					AUG				
08...	1215	350	1.0	49	10...	1630	29	20.0	52
MAR 1987					SEP				
03...	1200	35	0.0	67	21...	1300	112	13.0	49
MAY									
14...	1300	64	12.0	50					
01085500 CONTOOCOOK R BL HOPKINTON DAM AT W HOPKINTON, NH (LAT 43 11 31 LONG 071 44 51)									
DEC 1986					JUL 1987				
18...	1100	644	1.5	64	22...	1400	328	16.0	74
JAN 1987					AUG				
30...	1300	452	0.5	73	18...	0945	109	21.0	70
JUN									
08...	1300	349	14.0	82					
01085800 WEST BRANCH WARNER RIVER NEAR BRADFORD, NH (LAT 43 15 33 LONG 072 01 35)									
OCT 1986					APR 1987				
30...	1030	5.0	10.0	38	21...	1510	17	8.0	28
DEC					MAY				
10...	1010	13	0.0	31	21...	1115	5.4	10.0	31
JAN 1987					JUL				
22...	1145	4.9	0.0	22	01...	1015	11	15.0	--
MAR					SEP				
10...	1445	15	0.0	27	23...	1030	12	11.0	28
01087000 BLACKWATER RIVER NEAR WEBSTER, NH (LAT 43 17 45 LONG 071 41 46)									
DEC 1986					JUL 1987				
23...	1315	186	0.0	73	10...	1230	139	19.0	50
APR 1987					AUG				
13...	1015	1710	8.0	30	19...	1100	28	20.0	52
JUN									
09...	1030	142	19.0	42					
01089000 SOUCOOK RIVER NEAR CONCORD, NH (LAT 43 14 22 LONG 071 27 44)									
DEC 1986					APR 1987				
16...	1415	99	0.0	63	14...	1330	265	7.0	51
24...	0900	81	0.0	61	JUN				
FEB 1987					11...	1315	66	17.0	58
10...	1315	60	0.0	64	JUL				
12...	0800	54	0.0	66	24...	1100	23	19.0	54
MAR					SEP				
06...	1545	50	0.5	68	30...	1245	20	12.0	60
01090800 PISCATAQUOG RIVER BL EVERETT DAM, NR E WEARE, NH (LAT 43 05 29 LONG 071 39 36)									
DEC 1986					JUN 1987				
18...	0845	69	1.5	66	08...	1115	49	18.0	62
FEB 1987					JUL				
05...	1630	62	1.0	72	23...	0815	26	19.0	54
MAR					AUG				
13...	1000	84	2.0	96	17...	1345	11	24.0	47
01091500 PISCATAQUOG RIVER NEAR GOFFSTOWN, NH (LAT 43 00 58 LONG 071 33 03)									
OCT 1986					APR 1987				
31...	0930	126	11.5	71	10...	1215	2530	6.0	47
DEC					JUN				
15...	1345	315	0.5	74	02...	1315	53	17.5	69
MAR 1987									
12...	1430	379	0.0	68					
01092000 MERRIMACK R NR GOFFS FALLS, BELOW MANCHESTER, NH (LAT 42 56 54 LONG 071 27 52)									
DEC 1986					AUG 1987				
15...	1300	5690	1.0	80	13...	1015	1230	20.0	80
MAR 1987									
10...	1315	2660	4.0	65					

SUPPLEMENTAL WATER-QUALITY DATA FOR GAGING STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (US/CM)
MERRIMACK RIVER BASIN--Continued									
01093800 STONY BROOK TRIBUTARY NEAR TEMPLE, NH (LAT 42 51 36 LONG 071 50 00)									
OCT 1986					MAY 1987				
28...	1130	3.6	10.0	34	14...	0945	5.6	--	22
DEC					JUN				
08...	--	--	1.0	28	29...	1130	3.4	13.0	--
JAN 1987					AUG				
28...	1130	0.9	0.0	34	13...	--	0.5	17.0	26
MARCH					SEP				
02...	1200	3.4	0.0	26	12...	1015	11	12.0	27
01094000 SOUHEGAN RIVER AT MERRIMACK, NH (LAT 42 51 27 LONG 071 30 24)									
OCT 1986					APR 1987				
31...	0815	142	8.0	--	07...	0850	5870	6.0	108
JAN 1987					JUN				
29...	0930	193	0.0	132	02...	0830	108	18.0	115
MAR									
12...	1330	381	1.0	92					
CONNECTICUT RIVER BASIN									
01128500 CONNECTICUT R AT FIRST CONN LK NR PITTSBURG, NH (LAT 45 05 14 LONG 071 17 34)									
OCT 1986					FEB 1987				
30...	0800	150	8.0	35	26...	1200	1.4	1.0	--
DEC					MAY				
01...	0700	152	2.0	23	19...	1045	7.4	9.5	35
JAN 1987					AUG				
21...	1145	249	0.5	--	18...	1200	218	19.0	32
01129200 CONNECTICUT R BL INDIAN STREAM NR PITTSBURG, NH (LAT 45 02 25 LONG 071 26 37)									
OCT 1986					FEB 1987				
30...	1000	837	8.0	44	19...	0900	682	1.0	49
DEC					MAY				
02...	0830	386	0.0	35	19...	0830	92	8.5	--
JAN 1987					AUG				
21...	1230	665	1.0	--	14...	--	405	--	40
01129440 MOHAWK RIVER NEAR COLEBROOK NH (LAT 44 52 28 LONG 071 24 38)									
OCT 1986					MAY 1987				
28...	1600	71	7.0	96	19...	1415	27	14.5	115
DEC					AUG				
02...	1100	35	0.0	--	18...	1730	10	23.0	162
APR 1987									
02...	0915	300	1.0	67					
13...	1615	157	8.0	65					
01130000 UPPER AMMONOOSUC RIVER NEAR GROVETON, NH (LAT 44 37 30 LONG 071 28 10)									
OCT 1986					APR 1987				
30...	1230	221	8.0	42	14...	0900	1390	5.0	27
DEC					MAY				
09...	1100	230	--	27	19...	1700	271	--	35
MAR 1987					AUG				
02...	1430	427	0.0	--	19...	0930	56	22.5	50
01134500 MOOSE RIVER AT VICTORY, VT (LAT 44 30 42 LONG 071 50 13)									
OCT 1986					MAY 1987				
17...	1330	114	7.0	38	12...	0930	79	12.0	38
NOV					JUL				
21...	0845	49	0.5	55	01...	1030	128	17.5	30
JAN 1987					28...	1000	60	18.0	39
07...	1030	50	0.0	160	AUG				
FEB					10...	1000	34	18.5	35
25...	1000	29	0.0	48	SEP				
APR					17...	1200	105	14.0	42
01...	1300	3570	1.0	23					

SUPPLEMENTAL WATER-QUALITY DATA FOR GAGING STATIONS

CONNECTICUT RIVER BASIN--Continued

01135500 PASSUMPSIC RIVER AT PASSUMPSIC, VT (LAT 44 21 56 LONG 072 02 23)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (US/CM)
OCT 1986				
20...	1030	464	7.0	173
NOV				
21...	1015	418	1.0	150
JAN 1987				
01...	1015	430	3.0	62
07...	1200	386	0.0	160
FEB				
25...	1300	139	0.0	205
MAY 1987				
12...	1230	440	15.5	185
JUL				
01...	1200	775	20.0	155
06...	0945	492	22.0	160
AUG				
10...	1230	332	20.5	210
SEP				
17...	1045	476	17.0	180

01138500 CONNECTICUT RIVER AT WELLS RIVER, VT (LAT 44 09 13 LONG 072 02 34)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (US/CM)
OCT 1986				
03...	0845	6740	14.0	110
NOV				
10...	1030	6370	7.5	92
DEC				
16...	0900	4740	1.5	88
JAN 1987				
14...	1030	4100	0.0	94
MAR				
09...	1030	2740	0.0	85
APR 1987				
15...	0900	7460	5.5	62
MAY				
27...	1000	4760	13.0	68
JUL				
10...	0900	2500	21.5	104
AUG				
25...	1000	368	14.0	96

01139000 WELLS RIVER AT WELLS RIVER, VT (LAT 44 09 03 LONG 072 03 55)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (US/CM)
OCT 1986				
07...	1000	138	7.5	110
NOV				
10...	1500	144	4.5	106
DEC				
16...	1145	105	0.0	116
JAN 1987				
14...	1100	90	0.0	116
MAR				
09...	0930	130	0.0	150
APR 1987				
15...	1200	201	6.5	110
MAY				
27...	1200	77	16.5	132
JUL				
10...	1130	84	23.5	138
AUG				
26...	1030	24	15.0	179

01139800 EAST ORANGE BRANCH AT EAST ORANGE, VT (LAT 44 05 34 LONG 072 20 10)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (US/CM)
OCT 1986				
07...	1030	9.0	6.5	230
20...	1245	6.7	9.0	200
NOV				
03...	1245	6.9	4.0	210
DEC				
16...	1415	13	0.0	194
JAN 1987				
15...	0930	8.9	0.0	200
MAR 1987				
03...	1200	4.6	0.0	200
27...	1400	27	1.0	170
APR				
15...	1415	37	9.0	166
MAY				
19...	1345	9.9	13.0	200
JUL				
10...	1430	12	19.0	220
SEP				
01...	0930	5.0	14.0	200

01141500 OMPOMPANOOSUC RIVER AT UNION VILLAGE, VT (LAT 43 47 23 LONG 072 15 19)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (US/CM)
OCT 1986				
02...	1315	142	14.5	105
NOV				
06...	1600	84	2.5	172
DEC				
APR 1987				
14...	1230	394	7.5	148
MAY				
27...	1400	76	16.0	198
JUL				

SUPPLEMENTAL WATER-QUALITY DATA FOR GAGING STATIONS

CONNECTICUT RIVER BASIN--Continued

01142500 AYERS BROOK AT RANDOLPH, VT (LAT 43 56 04 LONG 072 39 30)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (US/CM)
OCT 1986				
09...	0915	27	13.0	210
09...	1330	17	3.0	220
DEC				
18...	1315	42	0.0	192
JAN 1987				
15...	1300	29	0.0	200
MAR				
06...	1145	19	0.0	230
27...	1100	158	1.0	157
APR 1987				
14...	1530	87	9.0	180
MAY				
22...	1345	20	17.0	210
JUL				
13...	1430	24	21.5	250
SEP				
02...	0845	9.8	14.5	230

01144000 WHITE RIVER AT WEST HARTFORD, VT (LAT 43 42 51 LONG 072 25 07)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (US/CM)
OCT 1986				
02...	1230	1330	14.5	120
NOV				
06...	1230	515	2.0	120
DEC				
22...	1515	808	0.0	154
JAN 1987				
21...	1000	571	0.0	150
MAR				
04...	0900	345	0.0	148
APR.1987				
13...	1615	2880	8.0	116
MAY				
26...	1430	603	17.0	158
JUL				
14...	0845	548	24.0	176
AUG				
27...	1130	212	17.0	200

01144500 CONNECTICUT RIVER AT WEST LEBANON, NH (LAT 43 38 47 LONG 072 18 46)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (US/CM)
OCT 1986				
02...	1400	10500	14.0	100
NOV				
07...	1345	1780	7.0	105
DEC				
22...	1400	3420	1.0	95
JAN 1987				
16...	1215	4750	0.0	98
MAR				
04...	1130	7930	0.5	94
APR 1987				
13...	0930	12500	7.0	77
MAY				
26...	1330	2120	17.0	126
JUL				
13...	0945	7240	24.5	136
AUG				
28...	0930	1270	21.0	131

01145000 MASCOMA RIVER AT WEST CANAAN, NH (LAT 43 39 00 LONG 072 04 50)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (US/CM)
OCT 1986				
21...	1000	51	7.0	59
AUG 1987				
04...	1300	97	21.0	54

01150500 MASCOMA RIVER AT MASCOMA, NH (LAT 43 39 01 LONG 072 11 05)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (US/CM)
OCT 1986				
15...	0930	178	13.0	57
NOV				
05...	0800	78	4.0	--
DEC				
17...	1145	146	1.5	54
JAN 1987				
06...	1000	127	1.5	50
MAR 1987				
09...	1150	66	1.0	57
AUG				
04...	1030	53	19.5	48
14...	1015	48	20.0	45
SEP				
29...	1100	135	7.0	54

01150900 OTTAUQUECHEE RIVER NEAR WEST BRIDGEWATER, VT (LAT 43 37 20 LONG 072 45 34)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (US/CM)
OCT 1986				
02...	0830	41	14.0	130
DEC				
18...	1015	32	1.0	120
JAN 1987				
21...	0745	21	0.0	138
MAR				
06...	0915	14	0.0	150
27...	0845	236	1.0	118
APR 1987				
17...	1000	90	6.0	98
MAY				
22...	1130	23	14.0	134
JUL				
17...	1045	52	15.5	116
SEP				
04...	0915	17	11.5	140

01151500 OTTAUQUECHEE RIVER AT NORTH HARTLAND, VT (LAT 43 36 09 LONG 072 21 17)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (US/CM)
OCT 1986				
02...	1145	139	17.0	125
NOV				
07...	0930	343	6.0	150
DEC				
22...	1130	384	0.0	175
JAN 1987				
16...	1000	364	0.0	156
MAR				
09...	1300	388	0.0	174
APR 1987				
13...	1315	2710	6.0	100
MAY				
15...	1115	39	15.5	172
JUL				
13...	1230	24	26.0	200
SEP				
08...	1315	21	17.0	188

SUPPLEMENTAL WATER-QUALITY DATA FOR GAGING STATIONS

CONNECTICUT RIVER BASIN--Continued

01152500 SUGAR RIVER AT WEST CLAREMONT, NH (LAT 43 23 15 LONG 072 21 45)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (US/CM)
OCT 1986					JUL 1987				
30...	1400	199	10.0	126	09...	1435	285	18.0	106
DEC					AUG				
10...	1215	511	0.0	20	12...	1415	92	21.0	115
APR 1987					SEP				
21...	1045	440	11.0	97	23...	1315	358	12.0	78
MAY									
18...	1130	211	12.0	97					

01153000 BLACK RIVER AT NORTH SPRINGFIELD, VT (LAT 43 20 00 LONG 072 30 55)

OCT 1986					APR 1987				
31...	1045	115	8.0	127	13...	1345	3410	5.0	78
DEC					MAY				
11...	1130	378	0.0	127	18...	1345	124	12.0	123
JAN 1987					JUL				
26...	1030	144	0.0	112	19...	1100	180	20.5	104
MAR					SEP				
10...	1030	--	0.0	140	24...	1230	440	11.0	74

01155500 WEST RIVER AT JAMAICA, VT (LAT 43 06 32 LONG 072 46 33)

NOV 1986					MAY 1987				
03...	1415	169	7.0	58	19...	1315	139	12.0	54
DEC					SEP				
15...	1115	271	0.0	60	29...	1530	127	11.0	54
APR 1987									
15...	1330	2010	6.0	37					

01156000 WEST RIVER AT NEWFANE, VT (LAT 42 59 43 LONG 072 38 13)

NOV 1986					APR 1987				
03...	1230	240	7.0	78	15...	1015	6680	6.0	38
DEC					MAY				
15...	1000	414	0.0	67	19...	1045	228	11.0	63
JAN 1987					JUL				
27...	1100	221	0.0	60	07...	1440	217	19.0	56
MAR					SEP				
09...	1045	553	0.0	59	29...	1230	233	10.0	55

01158000 ASHUELOT RIVER BL SURRY MT DAM, NR KEENE, NH (LAT 42 59 40 LONG 072 18 40)

OCT 1986					JUN 1987				
29...	1200	172	7.0	48	30...	0915	445	17.0	34
DEC					AUG				
09...	1100	324	1.0	20	11...	1430	22	23.5	48
MAR 1987					SEP				
03...	1430	44	0.0	40	22...	1000	224	12.0	38
MAY									
15...	0930	97	11.0	40					

01158600 OTTER BROOK BELOW OTTER BROOK DAM, NR KEENE, NH (LAT 42 56 45 LONG 072 14 14)

JAN 1987					AUG 1987				
20...	1300	45	1.0	52	12...	1030	14	--	45
MAY					SEP				
14...	1430	27	12.0	45	21...	1500	100	13.0	44

01161000 ASHUELOT RIVER AT HINSDALE, NH (LAT 42 47 07 LONG 072 29 12)

OCT 1986					JUN 1987				
29...	1430	574	8.0	110	30...	1245	1180	18.0	140
DEC					AUG				
09...	1430	1300	1.0	100	11...	1115	165	20.0	190
MAR 1987					SEP				
06...	1230	359	0.0	110	22...	1230	534	13.0	105
MAY									
15...	1430	384	12.0	81					

SUPPLEMENTAL WATER-QUALITY DATA FOR GAGING STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (US/CM)
HUDSON RIVER BASIN									
01334000 WALLOOMSAC RIVER NEAR NORTH BENNINGTON, VT (LAT 42 54 47 LONG 073 15 25)									
DEC 1986					MAY 1987				
15...	1415	205	0.0	163	19...	1530	96	12.0	240
JAN 1987					JUL				
27...	1600	154	0.0	340	08...	1130	74	17.0	230
MAR					SEP				
09...	1615	208	0.0	225	29...	1815	81	11.0	190
APR									
15...	1700	378	6.0	150					
ST. LAWRENCE RIVER BASIN									
04280000 POULTNEY RIVER BELOW FAIR HAVEN, VT (LAT 43 37 40 LONG 073 18 50)									
OCT 1986					APR 1987				
18...	1200	32	11.0	230	02...	1330	1110	3.5	142
NOV					MAY				
04...	1430	218	7.0	130	21...	1330	162	15.5	250
DEC					JUL				
17...	1430	100	2.0	200	16...	1500	166	21.5	210
JAN 1987					AUG				
20...	1245	130	0.0	205	13...	1245	14	22.0	280
MAR									
05...	1445	144	0.0	200					
04280350 METTAWEE RIVER NEAR PAWLET, VT (LAT 43 22 18 LONG 073 12 59)									
NOV 1986					APR 1987				
04...	0855	45	6.0	270	16...	1100	240	5.0	170
DEC					MAY				
16...	0845	124	0.0	119	20...	0915	45	10.0	230
JAN 1987					JUL				
28...	0815	36	0.0	134	08...	1545	69	18.0	220
MAR					SEP				
10...	0815	--	0.0	190	30...	0915	67	9.0	220
04282000 OTTER CREEK AT CENTER RUTLAND, VT (LAT 43 36 13 LONG 073 00 49)									
OCT 1986					APR 1987				
01...	1330	223	17.0	210	16...	1700	962	8.5	138
NOV					MAY				
05...	0845	232	4.0	185	21...	1630	180	14.0	220
DEC					JUL				
18...	0800	415	2.5	195	17...	0800	313	18.0	168
JAN 1987					SEP				
20...	1445	367	0.0	245	04...	0715	114	14.0	220
MAR									
05...	1700	236	1.0	205					
04282500 OTTER CREEK AT MIDDLEBURY, VT (LAT 44 00 47 LONG 073 10 06)									
OCT 1986					APR 1987				
01...	1130	1210	15.0	158	16...	1230	3720	12.0	145
NOV					MAY				
04...	1100	548	7.0	200	21...	1000	533	13.5	196
DEC					JUL				
17...	1145	1050	1.0	210	16...	1000	1240	22.0	250
JAN 1987					SEP				
20...	1000	788	0.0	205	03...	1200	321	15.0	210
MAR									
05...	1230	596	0.0	325					
04284000 JAIL BRANCH AT EAST BARRE, VT (LAT 44 09 30 LONG 072 26 44)									
OCT 1986					APR 1987				
06...	1100	42	10.0	200	15...	1200	20	11.0	198
NOV					MAY				
03...	0945	49	4.0	152	19...	1545	86	9.0	166
DEC					JUL				
15...	0930	29	0.0	185	14...	1400	14	24.5	200
JAN 1987					AUG				
14...	1345	23	0.0	190	26...	1500	10	18.5	220
MAR									
03...	1015	17	0.0	210					
31...	1315	453	4.5	134					

SUPPLEMENTAL WATER-QUALITY DATA FOR GAGING STATIONS

ST. LAWRENCE RIVER BASIN--Continued

04285500 NORTH BRANCH WINOOSKI RIVER AT WRIGHTSVILLE, VT (LAT 44 17 58 LONG 072 34 45)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (US/CM)
OCT 1986					MAY 1987				
10...	1215	168	9.5	38	11...	1030	181	11.5	45
NOV					JUN				
18...	1245	27	4.0	42	25...	1145	30	24.0	58
JAN 1987					AUG				
05...	1015	31	0.0	25	11...	1200	27	21.0	57
MAR					SEP				
02...	0930	64	0.0	54	18...	0730	28	16.0	52
APR									
13...	0900	181	7.0	38					

04286000 WINOOSKI RIVER AT MONTPELIER, VT (LAT 44 15 23 LONG 072 35 36)

OCT 1986					MAY 1987				
10...	1000	480	8.0	132	11...	0900	352	12.0	190
NOV					JUN				
18...	1015	413	4.5	200	25...	0930	296	21.5	210
JAN 1987					AUG				
10...	1200	278	0.0	210	11...	1800	202	19.5	180
MAR					SEP				
02...	1400	177	0.0	250	18...	1415	227	16.0	225
APR									
13...	1030	811	20.0	138					

04287000 DOG RIVER AT NORTHFIELD FALLS, VT (LAT 44 10 58 LONG 072 38 27)

OCT 1986					APR 1987				
29...	1345	48	11.0	142	29...	0900	87	5.0	132
NOV					MAY				
26...	0830	69	1.5	118	28...	0900	43	13.5	186
DEC					JUN				
29...	0915	91	0.0	105	29...	0830	72	14.0	130
JAN 1987					JUL				
28...	0915	53	0.0	130	30...	0845	45	15.0	143
FEB					AUG				
26...	0745	37	0.0	65	31...	1000	29	14.5	144
MAR					SEP				
30...	0900	689	3.0	72	28...	0830	60	9.5	124

04288000 MAD RIVER NEAR MORETOWN, VT (LAT 44 16 42 LONG 072 44 37)

OCT 1986					MAR 1987				
08...	0915	259	7.0	70	05...	0745	79	0.0	35
NOV					31...	0930	5610	3.5	40
04...	0830	142	4.5	76	APR				
DEC					16...	0945	384	7.5	63
17...	0830	180	0.0	78	MAY				
JAN 1987					19...	0900	108	10.5	85
22...	1200	100	0.0	85	JUL				
					15...	1300	331	19.0	74

04289000 LITTLE RIVER NEAR WATERBURY, VT (LAT 44 22 12 LONG 072 46 11)

OCT 1986					MAY 1987				
21...	0900	557	10.5	66	11...	1300	566	6.5	55
NOV					JUN				
17...	1500	27	6.5	60	26...	1015	15	11.5	60
DEC					AUG				
31...	0845	543	2.5	64	11...	1530	15	17.0	62
FEB 1987					SEP				
18...	1330	566	0.0	67	22...	1245	576	17.0	74
APR									
10...	0945	575	4.0	48					

04290500 WINOOSKI RIVER NEAR ESSEX JUNCTION, VT (LAT 44 28 44 LONG 073 08 21)

OCT 1986					MAY 1987				
15...	1215	1800	10.5	146	15...	1100	1000	14.5	140
NOV					JUN				
17...	1300	1030	4.0	155	30...	1115	100	20.5	155
DEC					JUL				
30...	1100	1670	0.5	144	08...	0945	163	22.0	135
FEB 1987					AUG				
18...	1015	2800	0.0	146	12...	0945	570	21.0	205
APR									
10...	1430	3800	6.5	118					

SUPPLEMENTAL WATER-QUALITY DATA FOR GAGING STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (US/CM)
ST. LAWRENCE RIVER BASIN--Continued									
04292000 LAMOILLE RIVER AT JOHNSON, VT (LAT 44 37 22 LONG 072 40 50)									
OCT 1986					MAY 1987				
14...	1500	251	9.5	110	13...	0930	205	11.0	147
NOV					JUN				
19...	1030	247	1.5	118	29...	1200	514	18.0	117
JAN 1987					JUL				
06...	1130	256	0.0	155	01...	1430	236	22.0	135
FEB					AUG				
27...	1415	386	0.0	142	06...	1000	116	23.0	110
APR					SEP				
02...	1030	1890	2.5	125	18...	0845	140	13.5	140
04292500 LAMOILLE RIVER AT EAST GEORGIA, VT (LAT 44 40 45 LONG 073 04 23)									
OCT 1986					MAY 1987				
14...	1200	1110	9.5	122	13...	1200	600	15.5	138
NOV					JUN				
19...	1230	844	3.5	105	30...	1430	698	21.5	115
JAN 1987					AUG				
06...	1000	900	0.0	145	12...	1500	246	25.5	175
FEB					SEP				
18...	1130	400	0.0	118	18...	1100	260	16.0	125
27...	1230	435	0.0	130					
APR									
02...	1200	6260	2.0	58					
04293000 MISSISQUOI RIVER NEAR NORTH TROY, VT (LAT 44 58 22 LONG 072 23 15)									
OCT 1986					MAY 1987				
16...	1200	280	8.5	74	14...	1100	123	12.0	95
NOV					JUL				
20...	1100	34	1.5	85	02...	0900	62	18.5	120
JAN 1987					AUG				
06...	1430	104	0.0	160	06...	1600	46	21.0	145
FEB					SEP				
26...	1330	49	0.0	105	17...	1500	55	16.5	130
APR									
08...	1600	705	4.0	50					
04293500 MISSISQUOI RIVER NEAR EAST BERKSHIRE, VT (LAT 44 57 30 LONG 072 41 55)									
OCT 1986					MAY 1987				
16...	0900	1310	8.5	87	13...	1500	404	15.5	95
NOV					JUL				
20...	0915	550	1.0	95	01...	1600	319	23.0	110
JAN 1987					AUG				
06...	1300	400	0.0	140	06...	1400	171	21.5	138
FEB					SEP				
27...	0930	208	0.0	110	18...	1000	264	14.0	127
APR									
02...	0630	304	17.5	108					
02...	1430	6290	2.5	85					
04296500 CLYDE RIVER AT NEWPORT, VT (LAT 44 56 22 LONG 072 11 23)									
OCT 1986					MAY 1987				
16...	1600	10	10.0	155	14...	1330	15	15.0	138
NOV					JUL				
20...	0700	9.4	2.0	140	02...	1415	96	21.5	130
JAN 1987					04...	0815	27	20.5	138
07...	0800	12	0.0	135	AUG				
FEB					07...	1430	18	23.0	143
26...	1600	8.7	0.0	174	SEP				
APR					17...	1330	16	17.0	110
09...	0730	408	2.5	78					

CHESHIRE COUNTY

425543072175801. Local number, KEW 2.

LOCATION.--Lat 42°55'43", long 72°17'58", Hydrologic Unit 01080201, east side of State Highway 12, about 0.5 mi north of State Highway 9, and 1.1 mi southwest of the center of Keene.

Owner: New Hampshire Department of Public Works and Highways.

AQUIFER.--Sand of Pleistocene age.

WELL CHARACTERISTICS.--Bored, unused water-table well, diameter 2 in, depth 18 ft.

DATUM.--Altitude of land-surface datum is 475 ft. Measuring point: Top of casing, 4.5 ft above land-surface datum.

PERIOD OF RECORD.--August 1963 to current year. Prior to January 1973, published in New Hampshire Hydrologic-Data Report No. 3.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.17 ft below land-surface datum, May 31, 1984; lowest measured, 6.23 ft below land-surface datum, Sept. 27, 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 23	4.23	JAN 25	3.84	APR 10	0.84	JUN 24	3.93
NOV 21	2.29	FEB 20	4.11	27	2.38	JUL 21	3.75
DEC 21	2.39	MAR 24	1.54	MAY 22	4.09	AUG 21	5.01
						SEP 22	3.23

COOS COUNTY

444733071094901. Local number, ETW 1.

LOCATION.--Lat 44°47'33", long 71°09'49", Hydrologic Unit 01040001, southwest side of State Highway 26, 1.8 mi northwest of the center of Errol.

Owner: U.S. Geological Survey.

AQUIFER.--Very fine sand and silt of Pleistocene age.

WELL CHARACTERISTICS.--Bored, unused water-table well, diameter 1.25 in, depth 30 ft.

DATUM.--Altitude of land-surface datum is 1,245 ft. Measuring point: Top of casing, 3.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.4 ft below land-surface datum, May 22, 1969; lowest measured, 14.1 ft below land-surface datum, Feb. 22, 1975.

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 25	12.8	JAN 24	13.0	APR 22	11.5	JUL 22	12.9
NOV 22	12.9	FEB 28	12.9	MAY 27	12.1	AUG 25	13.1
DEC 31	13.0	MAR 25	12.8	JUN 23	12.4	SEP 24	12.7

442830071321001. Local number, LCW 1.

LOCATION.--Lat 44°28'30", long 71°32'10", Hydrologic Unit 01080101, in gravel pit about 1,100 ft southwest of Middle Street, 2.2 mi southeast of U.S. Highway 3, and 2.0 mi southeast of the center of Lancaster.

Owner: Town of Lancaster.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Driven, unused water-table well, diameter 2.5 in, depth 30 ft.

DATUM.--Altitude of land-surface datum is 940 ft. Measuring point: Top of casing, 1.0 ft above land-surface datum.

PERIOD OF RECORD.--November 1966 to May 1980, April 1981 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, flowing at 1.0 ft above land-surface datum, April 1970, Apr. 28, 1972, Dec. 21, 1982, Feb. 21, Mar. 21, 1986; lowest measured, 2.67 ft below land-surface datum, Sept. 24, 1972.

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	2.09	FEB 25	1.72	MAY 22	1.84	SEP 24	2.15
NOV 20	2.15	MAR 27	+1.00	JUN 26	2.13		
DEC 31	1.98	APR 13	0.31	JUL 27	2.04		
JAN 27	1.99	22	0.90	AUG 24	2.57		

Readings above land surface indicated by "+"

HILLSBOROUGH COUNTY

425024071413001. Local number, MOW 36.

LOCATION.--Lat 42°50'24", long 71°41'30", Hydrologic Unit 01070002, 85 ft from north side of Old Wilton Road, about 550 ft west of the intersection of State Highway 101, and 2.2 mi west of the center of Milford.

Owner: Leonard Cushing.

AQUIFER.--Sand of Pleistocene age.

WELL CHARACTERISTICS.--Dug, unused water-table well, diameter 36 in, depth 14.6 ft, lined with concrete.

DATUM.--Altitude of land-surface datum is about 265 ft. Measuring point: Top of concrete casing on south side of well, 1.60 ft above land-surface datum.

PERIOD OF RECORD.--January 1962 to current year. Prior to May 1966, published in New Hampshire Basic-Data Report No. 2, Ground-Water Series.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.68 ft below land-surface datum, Mar. 29, 1963; lowest measured, 12.30 ft below land-surface datum, Nov. 18, 1978.

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 24	7.85	FEB 21	7.70	MAY 22	7.64	SEP 24	8.43
NOV 24	6.92	MAR 24	7.03	JUN 23	8.41		
DEC 26	6.28	APR 09	7.03	JUL 24	8.50		
JAN 20	7.22	25	7.03	AUG 22	9.20		

424752071315202. Local number, NAW 143. (424752071312O1) Formerly published as this number.

LOCATION.--Lat 42°47'52", long 71°31'52", Hydrologic Unit 01070002, north side of State Highway 101-A, about 3.0 mi west of U.S. Highway 3 opposite Round Pond, and 3.9 mi west-northwest of the center of Nashua.

Owner: Roland Cadorette.

AQUIFER.--Sand of Pleistocene age.

WELL CHARACTERISTICS.--Driven, unused water-table well, diameter 1.25 in, depth 13.0 ft.

DATUM.--Altitude of land-surface datum is 200 ft. Measuring point: Top of casing, 1.5 ft above land-surface datum.

PERIOD OF RECORD.--December 1958 to August 1959; January 1962 through April 1987. Prior to May 1966, published in New Hampshire Basic-Data Report No. 2, Ground-Water Series.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.89 ft below land-surface datum, June 5, 1984; lowest measured, 11.58 ft below land-surface datum, Feb. 1, 1966.

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 29	9.73	DEC 23	8.62	FEB 20	9.09	APR 27	7.76
NOV 24	9.36	JAN 28	8.79	MAR 24	8.87		

424800071295301. Local number, NAW 218.

LOCATION.--Lat 42°48'00", long 71°29'53", Hydrologic Unit 01070002, 57 ft east of edge of pavement of northbound lane of Everett Turnpike, about 0.63 mi north of Tinker Road overpass, and 2.8 mi northwest of the center of Nashua.

Owner: New Hampshire Department of Public Works and Highways.

AQUIFER.--Sand of Pleistocene age.

WELL CHARACTERISTICS.--Bored, unused water-table well, diameter 2 in, depth 42.5 ft.

DATUM.--Altitude of land-surface datum is 205 ft. Measuring point: Top of casing, 3.1 ft above land-surface datum.

PERIOD OF RECORD.--October 1964 to current year. Prior to June 1966, published in New Hampshire Basic-Data Report No. 2, Ground-Water Series.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.10 ft below land-surface datum, June 5, 1984; lowest measured, 33.10 ft below land-surface datum, Nov. 25, 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 29	30.09	JAN 28	28.26	APR 27	26.56	JUL 27	28.96
NOV 24	30.11	FEB 20	28.33	MAY 26	27.47	AUG 31	29.52
DEC 23	28.42	MAR 24	28.89	JUN 26	28.36	SEP 25	29.22

MERRIMACK COUNTY

431224071303601. Local number, CVW 2.

LOCATION.--Lat 43°12'24", long 71°30'36", Hydrologic Unit 01070002, about 100 ft north of the Federal Aeronautics Administration Building at Concord Municipal Airport.

Owner: U.S. Geological Survey.

AQUIFER.--Sand of Pleistocene age.

WELL CHARACTERISTICS.--Bored, unused water-table well, diameter 2 in, depth 60 ft.

DATUM.--Altitude of land-surface datum is 340 ft. Measuring point: Top of casing, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--August 1963 to May 1965, August 1967 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 36.85 ft below land-surface datum, Aug. 27, 1973; lowest measured, 44.62 ft below land-surface datum, Aug. 1, 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 29	42.13	JAN 28	42.19	APR 10	42.15	JUN 26	41.37
NOV 24	42.28	FEB 20	42.29	27	41.89	JUL 27	41.21
DEC 24	42.37	MAR 24	42.47	MAY 26	41.59	AUG 24	41.16
						SEP 25	41.23

431248071290201. Local number, CVW 3.

LOCATION.--Lat 43°12'48", long 71°29'02", Hydrologic Unit 01070002, at northwest corner of intersection of State Highway 106 and Pembroke Road, and 2.8 mi east of the State House in Concord.

Owner: U.S. Geological Survey.

AQUIFER.--Very fine sand of Pleistocene age.

WELL CHARACTERISTICS.--Bored, unused water-table well, diameter 1.25 in, depth 72.7 ft.

DATUM.--Altitude of land-surface datum is 350 ft. Measuring point: Top of casing, 2.30 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 55.10 ft below land-surface datum, Aug. 27, 1984; lowest measured, 59.96 ft below land-surface datum, Jan. 30, 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 29	57.09	JAN 28	56.99	APR 10	57.07	JUN 26	57.39
NOV 24	56.92	FEB 20	57.16	24	56.91	JUL 27	56.31
DEC 24	57.30	MAR 24	57.23	MAY 26	56.64	AUG 24	56.34
						SEP 25	56.46

431049071324301. Local number, CVW 4.

LOCATION.--Lat 43°10'49", long 71°32'43", Hydrologic Unit 01070002, north side of Iron Works Road, about 700 ft west of South Street, and 1.8 mi southwest of the State House in Concord.

Owner: U.S. Geological Survey.

AQUIFER.--Lacustrine silty fine sands and clays of Pleistocene age.

WELL CHARACTERISTICS.--Bored, unused water-table well, diameter 1.25 in, depth 40.71 ft.

DATUM.--Altitude of land-surface datum is 285 ft. Measuring point: Top of casing, 3.8 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.94 ft below land-surface datum, June 5, 1984; lowest measured, 20.30 ft below land-surface datum, Jan. 26, 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 29	18.45	JAN 28	17.29	APR 10	15.49	JUN 26	16.70
NOV 24	18.12	FEB 20	17.64	27	15.68	JUL 27	17.19
DEC 23	17.22	MAR 24	17.67	MAY 26	16.05	AUG 24	17.90
						SEP 25	18.08

MERRIMACK COUNTY--Continued

432428071390701. Local number, FKW 1.

LOCATION.--Lat 43°24'28", long 71°39'07", Hydrologic Unit 01070002, about 1,500 ft northeast of U.S. Highway 3, north of Holy Cross Convent, and 2.6 mi south of Franklin.

Owner: Holy Cross Convent.

AQUIFER.--Sand of Pleistocene age.

WELL CHARACTERISTICS.--Unused water-table well, diameter 2.5 in, depth 52.3 ft.

DATUM.--Altitude of land-surface datum is 290 ft. Measuring point: Top of casing, 1.80 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.18 ft below land-surface datum, June 5, 1984; lowest measured, 16.27 ft below land-surface datum, Jan. 26, 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 29	13.38	JAN 30	12.92	APR 27	10.73	JUL 27	11.02
NOV 24	13.27	FEB 20	13.30	MAY 26	10.83	AUG 24	11.90
DEC 23	13.00	MAR 24	13.44	JUN 26	11.19	SEP 25	12.66

430235071275501. Local number, HTW 5.

LOCATION.--Lat 43°02'35", long 71°27'55", Hydrologic Unit 01070002, within southeastern cloverleaf of intersection of U.S. Highway 3A and Interstate Highway 93, 3.7 mi south of the center of Hooksett.

Owner: New Hampshire Department of Public Works and Highways.

AQUIFER.--Crystalline rock of Devonian age.

WELL CHARACTERISTICS.--Drilled, unused bedrock well, diameter 6 in, depth 102.73 ft.

DATUM.--Land-surface datum is 258.93 ft National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--April 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 40.69 ft below land-surface datum, Apr. 28, 1967; lowest measured, 51.96 ft below land-surface datum, Feb. 10, 1966.

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 29	50.59	JAN 28	47.42	APR 27	44.88	JUL 27	48.09
NOV 24	50.59	FEB 20	48.08	MAY 26	45.99	AUG 24	48.98
DEC 23	47.90	MAR 24	47.95	JUN 26	47.50	SEP 25	49.86

432343071570901. Local number, NLW 1.

LOCATION.--Lat 43°23'43", long 71°57'09", Hydrologic Unit 01070003, at north side of Golf Course Road, about 500 ft east of intersection of State Highway 114 and Golf Course Road, and 2.1 mi southeast of New London.

Owner: Peter Danforth.

AQUIFER.--Sandy till of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 36 in, depth 21 ft, lined with stone to 21 ft, open end.

DATUM.--Altitude of land-surface datum is 1,020 ft. Measuring point: Top of 2-in casing, 4.00 ft above land-surface datum.

PERIOD OF RECORD.--October 1947 to current year. Prior to January 1956, published in Water Levels and Artesian Pressures in Observation Wells in the United States: Part 1. Northeastern States; Geological Survey Water-Supply Paper Series. January 1956 to November 1972, published in Ground-Water Levels in the United States, Northeastern States; Geological Survey Water-Supply Paper Series.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.80 ft below land-surface datum, Apr. 2, 1963; lowest measured, 16.90 ft below land-surface datum, Dec. 28, 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 28	12.10	JAN 28	9.10	APR 27	5.31	JUL 27	8.86
NOV 24	11.37	FEB 20	8.09	MAY 26	7.54	AUG 24	11.44
DEC 23	7.68	MAR 24	8.49	JUN 26	7.61	SEP 25	9.94

MERRIMACK COUNTY--Continued

431540071452801. Local number, WCW 1.

LOCATION.--Lat 43°15'40", long 71°45'28", Hydrologic Unit 01070003, 44 ft northeast of edge of pavement of northbound lane of Interstate Highway 89, about 2 mi southeast of State Highway 103 overpass in Warner.

Owner: New Hampshire Department of Public Works and Highways.

AQUIFER.--Sand and fine gravel of Pleistocene age.

WELL CHARACTERISTICS.--Driven, unused water-table well, diameter 2 in, depth 42.8 ft.

DATUM.--Altitude of land-surface datum is 424 ft. Measuring point: Top of casing, 3.2 ft above land-surface datum.

PERIOD OF RECORD.--December 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 24.94 ft below land-surface datum, May 5, 1969; lowest measured, 33.82 ft below land-surface datum, Dec. 17, 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 28	31.44	JAN 28	30.65	APR 27	27.34	JUL 27	29.51
NOV 24	31.62	FEB 20	30.83	MAY 26	27.96	AUG 24	31.50
DEC 23	30.76	MAR 24	31.14	JUN 26	29.03	SEP 25	31.23

STRAFFORD COUNTY

430721071005001. Local number, LIW 1.

LOCATION.--Lat 43°07'21", long 71°00'50", Hydrologic Unit 01060003, southwest side of Bennett Road about 200 ft from the west corner of the Lee Town Green.

Owner: Mildred Carlson.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 40 in, depth 32.8 ft, lined with stone to 32.8 ft.

DATUM.--Altitude of land-surface datum is 190 ft. Measuring point: Top edge of board across well opening, 2.00 ft above land-surface datum.

PERIOD OF RECORD.--November 1953 to current year. Prior to January 1958, published in New Hampshire Basic-Data Report No. 1, Ground-Water Series. Prior to January 1956, published in Water Levels and Artesian Pressures in Observation Wells in the United States: Part 1. Northeastern States; Geological Survey Water-Supply Paper Series. January 1956 to December 1972, published in Ground-Water Levels in the United States, Northeastern States; Geological Survey Water-Supply Paper Series.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 27.66 ft below land-surface datum, Mar. 22, 1983; lowest measured, 32.40 ft below land-surface datum, Dec. 18, 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 29	31.77	JAN 28	31.40	APR 27	30.29	JUL 27	30.97
NOV 24	31.03	FEB 20	31.33	MAY 26	30.58	AUG 24	31.37
DEC 23	30.15	MAR 24	30.83	JUN 26	30.66	SEP 25	30.81

BENNINGTON COUNTY

424810073160401. Local number, PQW 1.

LOCATION.--Lat 42°48'10", long 73°16'04", Hydrologic Unit 02020003, in front of residence on west side of State Highway 346 and 0.15 mi south of post office at North Pownal.

Owner: Robert Rudd, Sr.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 24 in, depth 18 ft, cased with stone to 18 ft, open end.

DATUM.--Altitude of land-surface datum is 515 ft. Measuring point: Top of 0.75-in diameter hole drilled in center of 0.38-in thick steel cover at land-surface datum.

PERIOD OF RECORD.--October 1964 to current year. Prior to October 1977, published as Pownal 1.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.98 ft below land-surface datum, June 1, 1984; lowest measured, 16.59 ft below land-surface datum, Oct. 19, 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 23	13.84	JAN 24	13.75	APR 26	12.70	AUG 05	14.21
NOV 22	13.49	MAR 02	13.35	MAY 25	13.76	21	14.84
DEC 20	13.08	22	13.30	JUN 23	13.95	SEP 30	13.80

CHITTENDEN COUNTY

443646073124901. Local number, MJW 3.

LOCATION.--Lat 44°36'46", long 73°12'49", Hydrologic Unit 02010005, about 600 ft south of manager's residence at Vermont Sandbar Waterfowl Development Area, about 400 ft west of former U.S. Highway 2, and 0.9 mi northwest of Lamoille River bridge at Milton.

Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1.25 in, depth 40 ft, screened 38 to 40 ft.

DATUM.--Altitude of land-surface datum is 160 ft. Measuring point: Top of casing, 4.00 ft above land-surface datum.

PERIOD OF RECORD.--November 1956 to current year. Prior to October 1977, published as Milton 3.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.97 ft below land-surface datum, May 29, 1974; lowest measured, 37.82 ft below land-surface datum, Feb. 26, 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 20	34.14	JAN 26	33.71	APR 23	31.86	JUL 23	33.92
NOV 20	34.63	FEB 23	34.35	MAY 21	32.55	AUG 20	34.59
DEC 23	33.14	MAR 23	34.99	JUN 25	33.43	SEP 23	35.49

ESSEX COUNTY

444731071514701. Local number, BIW 1.

LOCATION.--Lat 44°47'31", long 71°51'47", Hydrologic Unit 01110000, south of road and just west of parking lot for Brighton State Park Beach at Brighton.

Owner: U.S. Geological Survey.

AQUIFER.--Medium and coarse sand of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in, depth 35 ft, screened 33 to 35 ft.

DATUM.--Altitude of land-surface datum is 1,180 ft. Measuring point: Top of casing, 4.00 ft above land-surface datum.

PERIOD OF RECORD.--November 1966 to current year. Prior to October 1977, published as Brighton 1.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.94 ft below land-surface datum, Apr. 25, 1974; lowest measured, 4.95 ft below land-surface datum, Aug. 21, 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 20	2.99	JAN 26	3.50	APR 24	3.40	JUL 24	3.83
NOV 20	3.51	FEB 26	3.27	MAY 25	3.69	AUG 31	4.51
DEC 23	3.33	MAR 24	3.40	JUN 23	3.50	SEP 24	4.12

FRANKLIN COUNTY

445603072422901. Local number, BKW 1.

LOCATION.--Lat 44°56'03", long 72°42'29", Hydrologic Unit 02010007, at southeast end of State Highway 118 bridge on Missisquoi River at East Berkshire.

Owner: U.S. Geological Survey.

AQUIFER.--Fine sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in, depth 51 ft, screened 49 to 51 ft.

DATUM.--Altitude of land-surface datum is 425 ft. Measuring point: Top of casing, 4.00 ft above land-surface datum.

PERIOD OF RECORD.--November 1966 to current year. Prior to October 1977, published as Berkshire 1.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.71 ft below land-surface datum, Feb. 24, 1981; lowest measured, 16.43 ft below land-surface datum, Aug. 26, 1975.

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 20	13.90	JAN 26	14.44	APR 23	13.95	JUL 23	15.06
NOV 20	14.15	FEB 23	14.52	MAY 21	14.84	AUG 20	15.58
DEC 23	13.83	MAR 23	13.83	JUN 25	14.69	SEP 23	15.37

LAMOILLE COUNTY

443405072323501. Local number, MPW 1.

LOCATION.--Lat 44°34'05", long 72°32'35", Hydrologic Unit 02010005, Vermont Highway Department right-of-way off State Highway 15 and 3 mi east of Morrisville.

Owner: U.S. Geological Survey.

AQUIFER.--Silty, fine to medium sand of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in, depth 50 ft, screened 48 to 50 ft.

DATUM.--Altitude of land-surface datum is 660 ft. Measuring point: Top of casing, 4.00 ft above land-surface datum.

PERIOD OF RECORD.--October 1966 to current year. Prior to October 1977, published as Morristown 1.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.87 ft below land-surface datum, Jan. 27, 1978; lowest measured, 20.40 ft below land-surface datum, Nov. 27, 1978.

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 20	19.41	JAN 26	18.95	APR 23	18.49	JUL 23	19.70
NOV 20	19.40	FEB 23	19.38	MAY 21	19.19	AUG 20	20.20
DEC 23	19.13	MAR 23	19.38	JUN 25	19.52	SEP 23	20.10

ORANGE COUNTY

435343072151801. Local number, WOW 1.

LOCATION.--Lat 43°53'43", long 72°15'18", Hydrologic Unit 01080103, 60 ft west of salt shed and 1.3 mi south southeast of West Fairlee Village.

Owner: U.S. Geological Survey.

AQUIFER.--Sand of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in, depth 54 ft, screened 52 to 54 ft.

DATUM.--Altitude of land-surface datum is 700 ft. Measuring point: Top of casing, 2.00 ft above land-surface datum.

PERIOD OF RECORD.--November 1966 to current year. Prior to October 1977, published as West Fairlee 1.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.71 ft below land-surface datum, Jan. 26, 1978; lowest measured, 5.51 ft below land-surface datum, Aug. 26, 1985.

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	4.24	JAN 22	4.30	APR 21	2.49	JUL 22	3.44
NOV 25	4.30	FEB 20	4.48	MAY 22	3.57	AUG 24	4.41
DEC 29	3.95	MAR 25	3.88	JUN 24	4.01	SEP 24	3.39

ORLEANS COUNTY

443952072114001. Local number, GLW 1.

LOCATION.--Lat 44°39'52", long 72°11'40", Hydrologic Unit 01110000, at Vermont Highway Department salt shed west of State Highway 16 and 3 mi south of Glover Village.

Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in, depth 82 ft, screened 80 to 82 ft.

DATUM.--Altitude of land-surface datum is 1,200 ft. Measuring point: Top of casing, 4.00 ft above land-surface datum.

PERIOD OF RECORD.--November 1966 to current year. Prior to October 1977, published as Glover 1.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.11 ft below land-surface datum, May 23, 1969; lowest measured, 18.95 ft below land-surface datum, Mar. 28, 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 20	16.54	JAN 26	16.86	APR 23	15.41	JUL 23	16.07
NOV 20	16.70	FEB 23	17.16	MAY 21	16.08	AUG 20	16.52
DEC 23	16.46	MAR 23	17.46	JUN 25	16.34	SEP 23	16.88

RUTLAND COUNTY

434217073010601. Local number, PFW 8.

LOCATION.--Lat 43°42'17", long 73°01'06", Hydrologic Unit 02010002, 12 ft west of storage building at St. Alphonsus Cemetery at Pittsford.

Owner: U.S. Geological Survey.

AQUIFER.--Medium to fine sand of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in, depth 42 ft, screened 40 to 42 ft.

DATUM.--Altitude of land-surface datum is 490 ft. Measuring point: Top of casing, 2.00 ft above land-surface datum.

REMARKS.--Well pulled Nov. 8, 1968, point replaced, depth changed from 43 ft to 42 ft, old 3-ft point was completely encrusted.

PERIOD OF RECORD.--October 1957 to current year. Prior to October 1977, published as Pittsford 8.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 34.17 ft below land-surface datum, May 26, 1976; lowest measured, 39.59 ft below land-surface datum, Oct. 18, 1957.

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	35.30	JAN 22	35.57	APR 21	35.45	JUL 22	35.71
NOV 25	35.53	FEB 20	35.78	MAY 22	35.61	AUG 24	35.84
DEC 29	35.47	MAR 25	35.65	JUN 24	35.62	SEP 24	35.57

WASHINGTON COUNTY

441829072413901. Local number, MHW 3.

LOCATION.--Lat 44°18'29", long 72°41'39", Hydrologic Unit 02010003, adjacent to salt shed at Vermont Highway Department garage off U.S. Highway 2 and 1.25 mi west of Middlesex Village.

Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in, depth 50 ft, screened 48 to 50 ft.

DATUM.--Land-surface datum is 453.72 ft National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--October 1966 to current year. Prior to October 1977, published as Middlesex 3.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.99 ft below land-surface datum, Feb. 24, 1976; lowest measured, 23.80 ft below land-surface datum, Sept. 11, 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 20	22.65	JAN 26	21.80	APR 23	22.11	JUL 23	21.94
NOV 25	22.18	FEB 23	22.23	MAY 21	22.95	AUG 20	23.51
DEC 23	22.22	MAR 23	21.72	JUN 25	22.28	SEP 23	22.29

WASHINGTON COUNTY--Continued

441552072341901. Local number, MMW 2.

LOCATION.--Lat 44°15'52", long 72°34'19", Hydrologic Unit 02010003, at southeast corner of garage at Nine Winter Street in Montpelier.

Owner: U.S. Geological Survey.

AQUIFER.--Medium to coarse sand of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in, depth 26 ft, screened 24 to 26 ft.

DATUM.--Altitude of land-surface datum is 520 ft. Measuring point: Top of casing, 0.10 ft above land-surface datum.

PERIOD OF RECORD.--October 1966 to current year. Prior to October 1977, published as Montpelier 2.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.09 ft below land-surface datum, Apr. 24, 1969; lowest measured, 17.03 ft below land-surface datum, Aug. 28, 1985.

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 20	15.75	JAN 26	16.36	APR 23	14.61	JUL 23	15.66
NOV 25	16.26	FEB 23	16.54	MAY 21	15.88	AUG 20	16.23
DEC 23	15.85	MAR 23	16.19	JUN 25	16.09	SEP 23	15.90

441215072483101. Local number, WAW 2.

LOCATION.--Lat 44°12'15", long 72°48'31", Hydrologic Unit 02010003, at rest area on east side of State Highway 100 and 1.3 mi northeast of Waitsfield Village.

Owner: U.S. Geological Survey.

AQUIFER.--Silty gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drive and wash observation water-level well, diameter 1.25 in, depth 45.5 ft, screened 43.5 to 45.5 ft.

DATUM.--Altitude of land-surface datum is 685 ft. Measuring point: Top of casing, 2.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.25 ft below land-surface datum, Dec. 14, 1983; lowest measured, 7.62 ft below land-surface datum, July 26, 1979.

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	6.70	JAN 22	6.74	APR 21	5.99	JUL 22	6.37
NOV 25	6.69	FEB 20	6.84	MAY 22	6.79	AUG 24	7.30
DEC 29	7.01	MAR 25	6.08	JUN 24	6.39	SEP 24	6.33

441033072500201. Local number, WAW 3.

LOCATION.--Lat 44°10'33", long 72°50'02", Hydrologic Unit 02010003, town of Waitsfield, northwest of Vermont Highway Department salt shed on State Highway 100 and 0.5 mi southeast of Irasville Village.

Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drive and wash observation water-level well, diameter 1.25 in, depth 53 ft, screened 51 to 53 ft.

DATUM.--Altitude of land-surface datum is 715 ft. Measuring point: Top of casing, 3.25 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.34 ft below land-surface datum, Feb. 24, 1976; lowest measured, 8.00 ft below land-surface datum, Sept. 25, 1978.

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	6.90	JAN 22	6.75	APR 21	5.90	JUL 22	6.76
NOV 25	6.71	FEB 20	7.05	MAY 22	6.93	AUG 24	7.47
DEC 29	6.60	MAR 25	6.20	JUN 24	6.58	SEP 24	6.27

WINDSOR COUNTY

431551072350601. Local number, CKW 1.
LOCATION.--Lat 43°15'51", long 72°35'06", Hydrologic Unit 01080107, at Vermont Highway Department salt shed on Elm Street in Chester.
Owner: U.S. Geological Survey.
AQUIFER.--Boulders, coarse gravel of Pleistocene age.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in, depth 22 ft, screened 20 to 22 ft.
DATUM.--Altitude of land-surface datum is 580 ft. Measuring point: Top of casing, 2.00 ft above land-surface datum.
PERIOD OF RECORD.--November 1966 to current year. Prior to October 1977, published as Chester 1.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.57 ft below land-surface datum, June 1, 1984; lowest measured, 6.31 ft below land-surface datum, Sept. 28, 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 20	5.47	JAN 22	4.67	APR 23	4.25	JUL 23	5.17
NOV 23	5.19	FEB 20	4.82	MAY 21	5.32	AUG 20	5.85
DEC 24	4.88	MAR 20	4.73	JUN 22	5.98	SEP 21	3.44

433240072242901. Local number, HLW 54.
LOCATION.--Lat 43°32'40", long 72°24'29", Hydrologic Unit 01080104, at northeast corner of fire station in Hartland.
Owner: U.S. Geological Survey.
AQUIFER.--Sand and gravel of Pleistocene age.
WELL CHARACTERISTICS.--Augered observation water-level well, diameter 1.25 in, depth 51 ft, screened 49 to 51 ft.
DATUM.--Altitude of land-surface datum is 575 ft. Measuring point: Top of casing, 4.00 ft above land-surface datum.
PERIOD OF RECORD.--August 1969 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.96 ft below land-surface datum, June 1, 1984; lowest measured, 9.94 ft below land-surface datum, Oct. 22, 1971.

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	9.45	JAN 22	8.11	APR 21	7.32	JUL 22	8.55
NOV 25	9.16	FEB 20	8.15	MAY 22	8.05	AUG 24	8.96
DEC 29	8.67	MAR 25	8.57	JUN 24	7.98	SEP 24	8.36

435129072483301. Local number, RJW 1.
LOCATION.--Lat 43°51'29", long 72°48'33", Hydrologic Unit 01080105, adjacent to salt shed at Vermont Highway Department garage 1.3 mi south of Rochester Village.
Owner: U.S. Geological Survey.
AQUIFER.--Sand of Pleistocene age.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in, depth 73 ft, screened 71 to 73 ft.
DATUM.--Altitude of land-surface datum is 800 ft. Measuring point: Top of casing, 4.00 ft above land-surface datum.
PERIOD OF RECORD.--October 1966 to current year. Prior to 1977, published as Rochester 1.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.50 ft below land-surface datum, Mar. 26, 1968; lowest measured, 13.05 ft below land-surface datum, Aug. 25, 1975.

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	10.68	JAN 22	11.18	APR 21	7.88	JUL 22	11.47
NOV 25	11.30	FEB 20	11.55	MAY 22	11.43	AUG 24	12.17
DEC 29	10.45	MAR 25	10.85	JUN 24	10.39	SEP 24	10.06

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CALENDAR FOR WATER YEAR 1987

1986

OCTOBER

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

NOVEMBER

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23	24	25	26	27	28	29
30						

DECEMBER

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28	29	30	31			

1987

JANUARY

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FEBRUARY

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MARCH

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29	30	31				

APRIL

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MAY

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31						

JUNE

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JULY

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AUGUST

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30	31					

SEPTEMBER

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27	28	29	30			

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