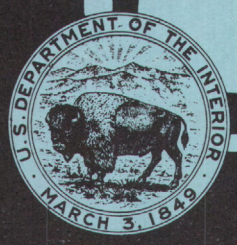
Water Resources Data for New Hampshire and Vermont

Water Year 1977



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NH-VT-77-1

Prepared in cooperation with the States of New Hampshire and Vermont and with other agencies

CALENDAR FOR WATER YEAR 1977

1976

OCTOBER

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

NOVEMBER

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

DECEMBER

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

1977

JANUARY

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

FEBRUARY

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

MARCH

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

APRIL

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

MAY

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

JUNE

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

JULY

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

AUGUST

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

SEPTEMBER

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

Water Resources Data for New Hampshire and Vermont

Water Year 1977

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NH-VT-77-1

Prepared in cooperation with the States of New Hampshire and Vermont and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

CECIL D. ANDRUS, Secretary

GEOLOGICAL SURVEY

H. William Menard, Director

For additional information write to
District Chief, Water Resources Division
U.S. Geological Survey
150 Causeway Street
Boston, MA 02114

1978

BIBLIOGRAPHIC DATA SHEET	1. Report No. USGS/WRD/HD-78/063	2.	3. Recipient's Accession No.
4. Title and Subtitle Water Resources Data for New Hampshire and Vermont, Water Year 1977			5. Report Date August 1978 6.
7. Author(s)			8. Performing Organization Rept. No. USGS-WDR-NH-VT-77-1
9. Performing Organization Name and Address U.S. Geological Survey Water Resources Division 150 Causeway Street Boston, MA 02114			10. Project/Task/Work Unit No. 11. Contract/Grant No.
12. Sponsoring Organization Name and Address U.S. Geological Survey Water Resources Division 150 Causeway Street Boston, MA 02114			13. Type of Report & Period Covered Annual: Oct. 1, 1976 to Sept. 30, 1977 14.

15. Supplementary Notes

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

16. Abstracts Water-resources data for the 1977 water year for New Hampshire and Vermont consist of records of stage, discharge, and water quality of streams; contents of lakes and reservoirs; and ground-water levels. This report contains discharge records for 92 gaging stations, stage records for 4 lakes, monthend contents for 25 lakes and reservoirs, water quality for 9 gaging stations, and water levels for 19 observation wells. Also included are data for 39 crest-stage and 2 low-flow partial-record stations. Additional water data were collected at various sites, not part of the systematic data-collection program, and are published as miscellaneous measurements. 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 cooperating State and Federal agencies in New Hampshire and Vermont.

17. Key Words and Document Analysis. 17a. 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.

17b. Identifiers/Open-Ended Terms

17c. COSATI Field/Group

18. Availability Statement No restriction on distribution
This report may be purchased from:
National Technical Information Service
Springfield, VA 22161

19. Security Class (This Report) UNCLASSIFIED

20. Security Class (This Page) UNCLASSIFIED

21. No. of Pages 204

22. Price

PREFACE

This report was prepared by personnel of the New England District of the Water Resources Division of the U. S. Geological Survey under the supervision of J. A. Baker, District Chief, and J. T. Callahan, Regional Hydrologist, succeeded by F. T. Schaefer, Acting Regional Hydrologist, Northeastern Region. It was done in cooperation with the States of New Hampshire and Vermont, and with other agencies.

This report is one of a series issued by State. The general direction for the series is by J. S. Cragwall, Jr., Chief Hydrologist, and by G. W. Whetstone, Assistant Chief Hydrologist for Scientific Publications and Data Management.

CONTENTS

ILLUSTRATIONS

TABLES

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

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

WATER RESOURCES DATA FOR NEW HAMPSHIRE AND VERMONT, 1977

INTRODUCTION

Water-resources data for the 1977 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 water levels and water quality of wells. This report contains discharge records for 92 gaging stations, stage records for 4 lakes, monthend contents for 25 lakes and reservoirs, water-quality data for 9 gaging stations, and water levels for 19 observation wells. Also included are data for 39 crest-stage partial-record stations and 2 low-flow partial-record stations. Additional water data were collected at various sites, not part of the systematic data-collection program, and are published as miscellaneous measurements. 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 cooperating State and Federal agencies in New Hampshire and Vermont.

Records of discharge or stage of streams, and contents or stage of lakes and reservoirs were first published in a series of U.S. Geological Survey water-supply papers entitled, "Surface water supply of the United States." Through September 30, 1960, these water-supply papers were in an annual series and then in a 5-year series for 1961-65 and 1966-70. Records of chemical quality, water temperatures, and suspended sediment were published from 1941 to 1970 in an annual series of water-supply papers entitled, "Quality of surface waters of the United States." Records of ground-water levels were published from 1939 to 1974 in a series of water-supply papers entitled, "Ground-water levels in the United States." Water-supply papers may be consulted in libraries of the principal cities of the United States or may be purchased from Branch of Distribution, U.S. Geological Survey, 1200 South Eads Street, Arlington, VA 22202.

For water years 1961 through 1974, streamflow data were released by the Geological Survey in annual reports on a State-boundary basis. Water-quality records for water years 1964 through 1974 were similarly released either in separate reports or in conjunction with streamflow records. Beginning with the 1975 water year, water data for streamflow, water quality, and ground water are published as an official Survey report on a State-boundary basis. These official Survey reports carry an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this report is identified as "U.S. Geological Survey water-data report NH-VT-77-1." Water-data reports are for sale by the National Technical Information Service, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, VA 22161.

COOPERATION

Organizations that assisted in collecting data through cooperative agreements with the Geological Survey in 1977 are:

New Hampshire: State Water Resources Board, George M. McGee, Sr., chairman; State Water Supply and Pollution Control Commission, William A. Healy, executive director; Strafford-Rockingham Regional Council, George N. Olson, executive director.

Vermont: State Department of Water Resources, Gordon R. Pyper, commissioner, succeeded by Reginald A. LaRosa, acting commissioner; town of Springfield, Paul T. McCarthy, town manager.

Assistance in the form of funds or services was given by the Corps of Engineers, U.S. Army, in collecting records for 27 gaging stations, and by the U.S. Environmental Protection Agency, for 2 water-quality stations published in this report.

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."

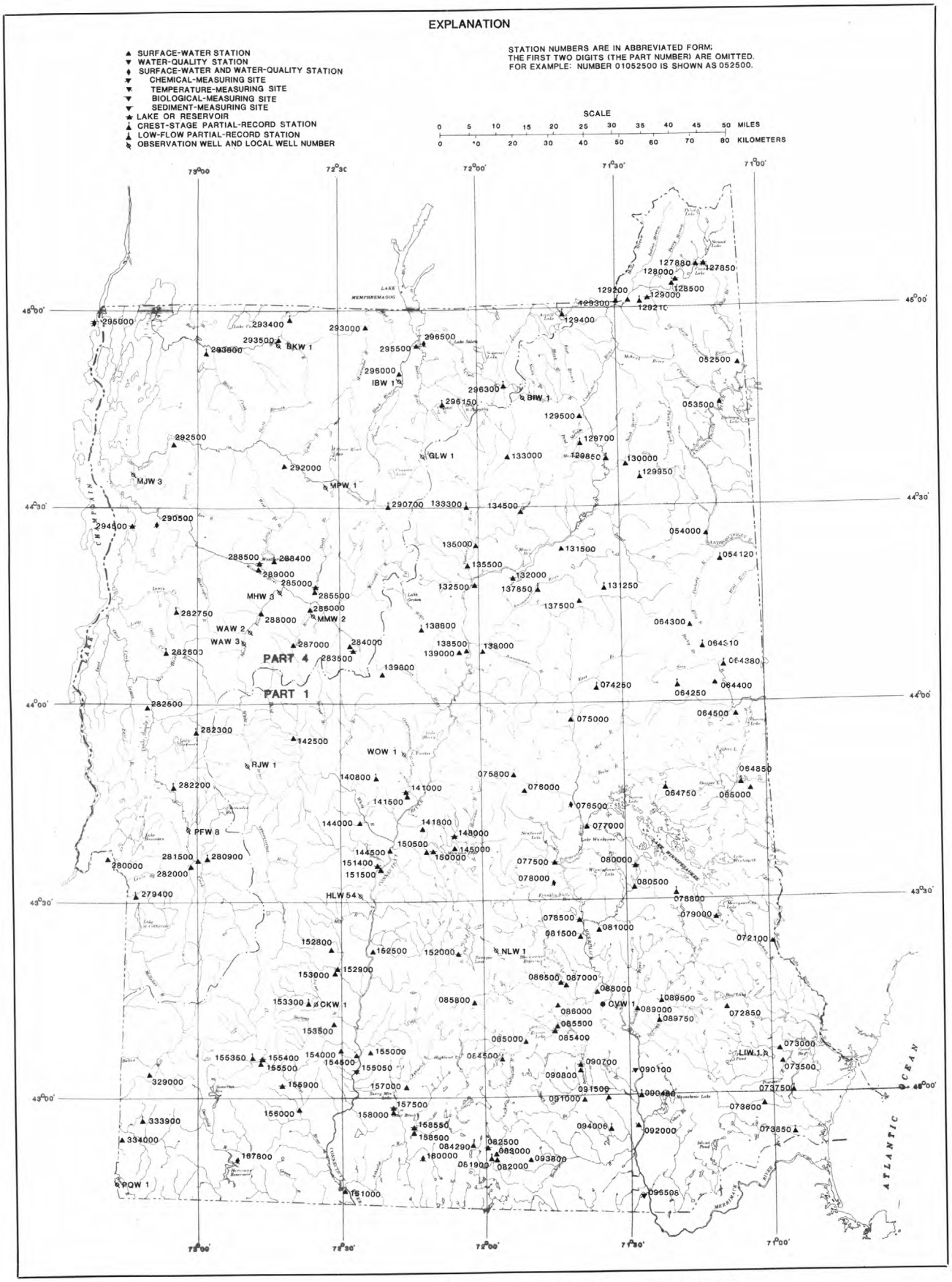


FIGURE 1. LOCATION OF DATA-COLLECTION SITES

HYDROLOGIC CONDITIONS

At the beginning of the water year, streamflow was excessive except in southern New Hampshire and extreme southeastern Vermont, where it was in the normal range.

Runoff was excessive (in the upper quartile of record) at all five index stations in October. Runoff was the second highest for October for period of record at Pemigewasset River at Plymouth, NH (October 1903); and the third highest for October at Batten Kill at Arlington, VT (October 1928), Passumpsic River at Passumpsic, VT (October 1928), and White River at West Hartford, VT (June 1915).

Runoff then declined seasonally and in January was the second lowest for this month for period of record for Lamprey River near Newmarket, NH (July 1934) and also the lowest for January at this station since January 1942. February runoff was deficient (in the lower quartile of record) at four of the five index stations, set a new minimum for this month for period of record at Lamprey River near Newmarket, NH, and was the fourth lowest for February at Batten Kill at Arlington, VT.

Runoff increased greatly during March and was excessive at all index stations. March runoff was the second and fourth highest for this month for period of record at Lamprey River near Newmarket, NH and Batten Kill at Arlington, VT, respectively.

Cumulative runoff for October to March was excessive except in southern New Hampshire and southeastern Vermont, where it was in the normal range. Spring peak discharges were generally moderate with only the usual lowland flooding. However, at Lamprey River near Newmarket, NH, the instantaneous discharge of 5,000 ft^3/s on Mar. 15 was the second highest for period of record and was exceeded only by the peak discharge of 5,490 ft^3/s which occurred Mar. 20, 1936.

Following the spring peaks in March, streamflow began to decline seasonally. Monthly runoff for April was in the normal range at all index stations, although it was actually greater than that of March at three of the five index stations. May runoff was the second lowest for this month for period of record at Passumpsic River at Passumpsic, VT. In June and July, runoff ranged from normal at some index stations to deficient at others. In August and September, localized precipitation produced the third highest runoff for each of these months for period of record at Passumpsic River at Passumpsic, VT. On Aug. 17, a new maximum daily discharge for August of 4,260 ft^3/s occurred at this station exceeding the previous maximum of 2,880 ft^3/s which occurred in August 1933. September runoff was the fourth highest for this month at Batten Kill at Arlington, VT.

Cumulative runoff for April to September was in the normal range except in a small area in southwestern Vermont, where it was excessive, and in the central sections of New Hampshire and Vermont, where it was deficient.

At the end of the water year, streamflow was excessive throughout New Hampshire and Vermont.

Figure 2 on page 4, for which records of two long-term index gaging stations were used, shows a comparison of the monthly and yearly mean discharge for the 1977 water year with the median discharge for the period 1941-70.

At the beginning of the water year, in October, ground-water levels were in the normal range in southern New Hampshire and above normal in northern New Hampshire and Vermont. During the fall and winter, water levels declined and were below normal throughout the two-state area by the end of February. During this period, several wells in both states recorded new monthly lows. In February, water levels in six of 15 observation wells in Vermont reached new monthly lows.

In response to spring recharge, ground-water levels rose in March and by the end of the month were in the normal range except for southwestern New Hampshire and southern and central Vermont, where they were above normal. Seasonal water-level declines began in March or April and by the end of June, water levels were below the normal range except in the southern parts of both states, where they were in the normal range. In Vermont, eight of 15 observation wells recorded new monthly lows for May. Water levels continued to decline and remained generally below normal until late summer.

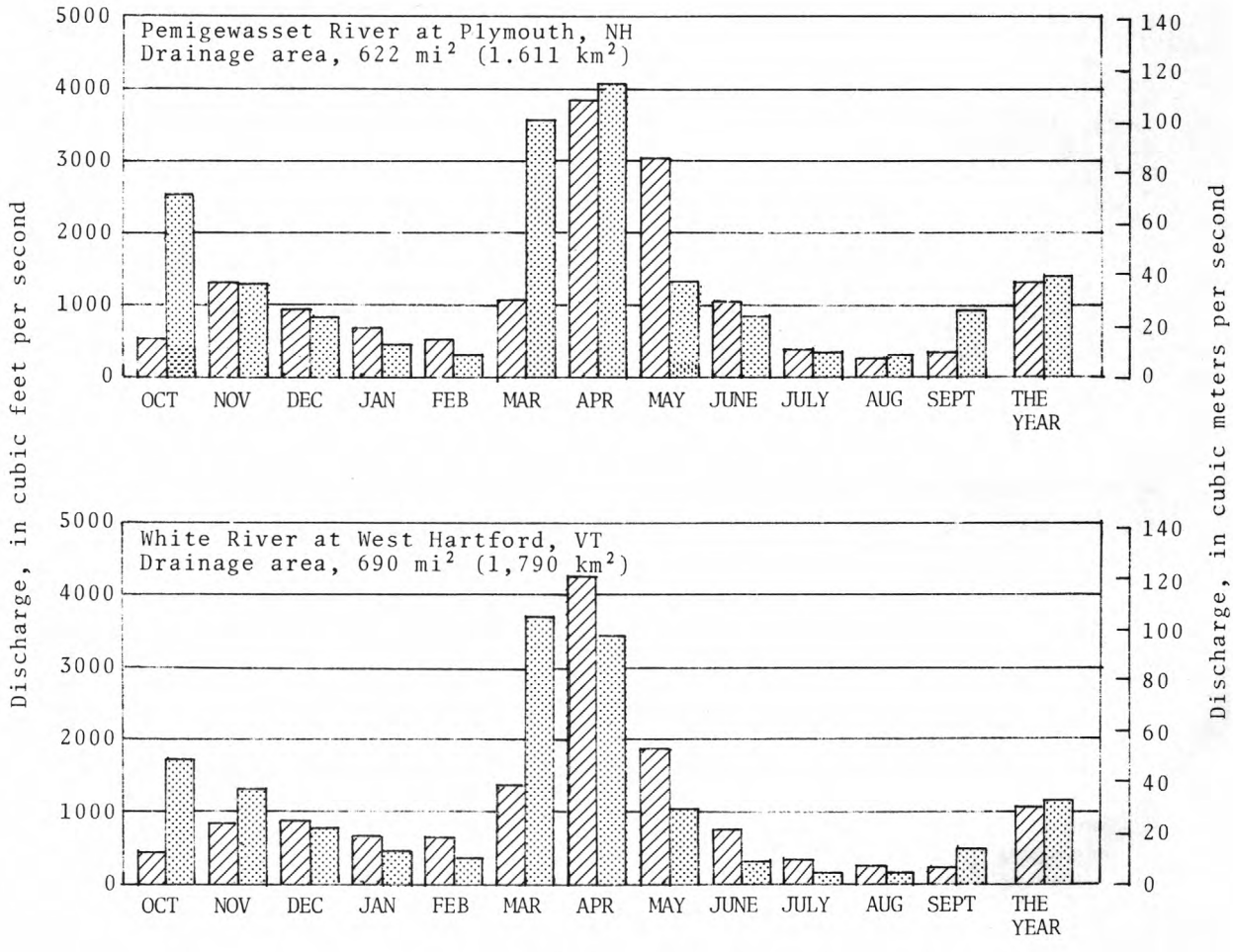
By August, most water levels in both Vermont and New Hampshire were in the normal range and by the end of the water year, in September, they were above the normal range north of the White Mountains in New Hampshire, in the lower Merrimack River Valley in New Hampshire, and in northwestern Vermont.

DEFINITION OF TERMS

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

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

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 or springs.



Median of monthly and yearly discharge for period 1941-70.

Monthly and yearly mean discharge for 1977 water year.

Figure 2.--Comparison of discharge at three long-term index gaging stations during 1977 water year with median discharge for period 1941-70.

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, spherical, rod-like, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35°C. These bacteria are defined as organisms which produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35°C ±1.0°C on M-Endo medium (nutrient medium for bacterial growth). Concentrations are expressed as number of colonies per 100 mL (milliliters) of sample.

Fecal coliform bacteria are bacteria that are present in the intestines or feces of warmblooded animals. They are often used as indicators of the sanitary quality of water. These bacteria are defined as all organisms which produce blue colonies within 24 hours when incubated at 44.5°C ±0.2°C on M-FC medium (nutrient medium for bacterial growth). Concentrations are expressed as number of colonies per 100 mL of sample.

Fecal streptococcal bacteria are bacteria found in the intestines of warmblooded 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. These bacteria are defined as all organisms which produce red or pink colonies within 48 hours at 35°C ±1.0°C on M-enterrococcus medium (nutrient medium for bacterial growth). Concentrations are expressed as number of colonies per 100 mL of sample.

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

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

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

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

Biomass pigment ratio is the ratio of organic mass in mg/m^2 (milligrams per square meter) to the mass of chlorophyll *a*, mg/m^2.

Dry mass refers to the mass of residue present after drying in an oven at 60°C for zooplankton and 105°C for 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.

Bottom material: See Bed material.

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

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

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in water, and gives an approximation of the amount of organic and reducing material present.

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

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

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.

Cubic feet per second per square mile (CFSM) is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

Cubic foot per second (FT^3/S, ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to 7.48 gallons per second or 448.8 gallons per minute or 0.2832 cubic meters per second.

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 the amount of substance present in true chemical solution. In practice, however, the term includes all forms of substance that will pass through a 0.45-micrometer membrane filter, and, thus, may include some very small (colloidal) suspended particles. Analyses reported as dissolved (with the exception of gases) are performed on filtered samples.

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

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

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

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

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

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

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

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate ($CaCO_3$).

Hydrologic unit is a geographic area representing part of all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an 8-digit number.

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

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

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

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

Micrograms per liter (UG/L, ug/L) is a unit expressing the concentration of chemical constituents in a sample as the mass (micrograms) of constituent per unit volume (liter) of sample. 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 a sample. Milligrams per liter represents the mass of constituent per unit volume of sample. Concentration of suspended sediment also is expressed in mg/L and is based on the mass of sediment per liter of water-sediment mixture.

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

Organisms count/volume refers to the number of organisms enumerated in a sample and adjusted to the number per unit volume, usually in cells per milliliter (mL) or liter (L). Numbers of planktonic organisms are expressed in these terms.

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

Particle-size is the diameter, in millimeters (mm), of suspended sediment or bed material determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in 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 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.....	.004 - .062	Sedimentation.
Sand.....	.062 - 2	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 material 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.

Periphyton refers to the assemblage of organisms attached to and growing upon submerged surfaces. While primarily consisting of algae, the assemblage may include bacteria, fungi, protozoa, rotifer, and other small organisms.

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

pH is a symbol denoting the negative logarithm (base 10) of the hydrogen ion concentration of a solution; pH values range from 0 to 14--the lower the value, the more acid is the solution; i.e., the more hydrogen ions it contains.

Phytoplankton are the plant part of the plankton communities which exist in standing waters. They are the primary source of food in their aquatic environments, and are commonly known as algae.

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).

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

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

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

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

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

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

Suspended-sediment load is quantity of suspended sediment passing a section in a specified period.

Total sediment discharge (tons/day) is the sum of the suspended-sediment discharge and the bedload discharge. It is the total quantity of sediment, as measured by dry weight or volume, that is discharged during a given time.

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

Specific conductance is a measure of the ability of a water to conduct an electrical current and is expressed in micromhos per centimeter at 25°C. Specific conductance is related to the type and concentration of ions in solution and can be used for estimating 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 micromhos per cm at 25°C). This relation is not constant from stream to stream or from well to well, and it may even vary in the same source with changes in the composition of the water.

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

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

Substrate is the physical surface upon which an organism lived.

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

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

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

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

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

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

Total (as used in tables of chemical analysis) refers to the amount of a substance that is present both in solution and in suspension.

WRD is used as an abbreviation for "Water-Resources Data" in the REVISED RECORDS paragraph to refer to previously published District annual basic-data reports.

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

DOWNSTREAM ORDER AND STATION NUMBER

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 main-stream station are listed before that station. A station on a tributary that enters between two main-stream 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 on which a station is situated with respect to the stream to which it is immediately tributary is indicated by an indention in a list of stations in the front of the report. Each indention represents one rank. This downstream order and system of indention show which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

As an added means of identification, each hydrologic station and partial-record station has been assigned a station number. These are in the same downstream order used in this report. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete 8-digit number for each station, such as 01094400, which appears just to the left of the station name includes the 2-digit part number "01" plus the 6-digit downstream-order number "094400."

NUMBERING SYSTEM FOR WELLS AND MISCELLANEOUS SITES

The well and miscellaneous site numbering system of the U.S. Geological Survey is based on the grid system of latitude and longitude. The system provides the geographic location of the well or miscellaneous site and a unique number for each site. The number consists of 15 digits. The first 6 digits denote the degrees, minutes, and seconds of latitude, the next 7 digits denote degrees, minutes, and seconds of longitude, and the last 2 digits (assigned sequentially) identify the wells or other sites within a 1-second grid. See figure 3 below.

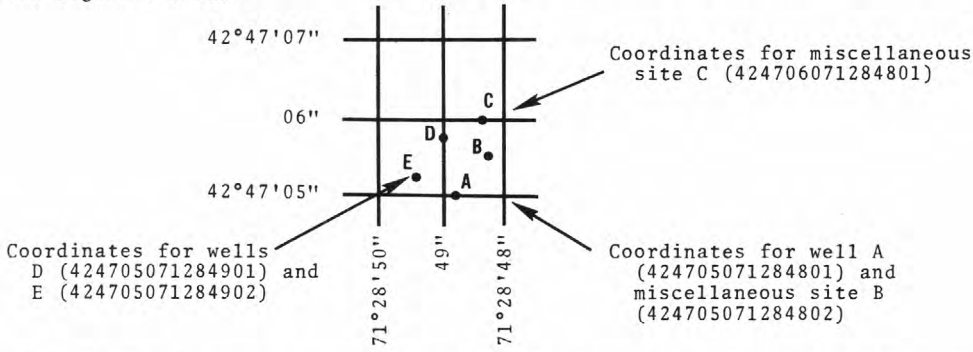


Figure 3.--System for numbering wells and miscellaneous sites (latitude and longitude)

A local well-numbering system is also used in this report. The local well number consists of a 2-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.

SPECIAL NETWORKS AND PROGRAMS

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

Pesticide program is a network of regularly sampled water-quality stations where samples are collected to determine the concentration and distribution of pesticides in streams where potential contamination could result from the application of the commonly used insecticides and herbicides. Operation of the network is a Federal interagency activity.

EXPLANATION OF STAGE AND WATER-DISCHARGE RECORDS

Collection and Computation of Data

The base data collected at gaging stations consists of records of stage and measurements of discharge of streams, and stage, surface area, and contents of lakes and reservoirs. In addition, observations of factors affecting the stage-discharge relation, weather records, and other information are used to supplement base data in determining the daily flow. Records of stage are obtained from a water-stage recorder that gives either a tape punched at selected time intervals or a continuous graph of the fluctuations. Measurements of discharge are made with a current meter, using the general methods adopted by the U.S. Geological Survey. These methods are described in standard textbooks and in the U.S. Geological Survey Techniques of Water Resources Investigations, book 3, chapter A6.

For stream-gaging stations, rating tables giving the discharge for any stage are prepared from stage-discharge relation curves. If extensions to the rating curves are necessary to express discharge greater than measured, they are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, computation of flow over dams or weirs), step-backwater techniques, velocity-area studies, and logarithmic plotting. The daily mean discharge is computed from gage heights and rating tables; then the monthly and yearly mean discharges are computed from the daily figures. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is computed by the shifting-control method, in which correction factors, based on individual discharge measurements and notes by hydrologists and observers, are used in applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the control, the daily mean discharge is computed by what is basically the shifting-control method.

At some stream-gaging stations the stage-discharge relation is affected by ice during the winter, and it becomes impossible to compute the discharge in the usual manner. Discharge for periods of ice effect is computed on the basis of the gage-height record and occasional winter discharge measurements. Consideration is given to the available information on temperature and precipitation, notes by hydrologists and observers, and comparable records of discharge for other stations in the same or nearby basins.

For some lake and reservoir stations, capacity tables giving the contents for any stage are prepared from stage-area-relation curves defined by surveys. The application of the stage to the capacity table gives the contents, from which the daily, monthly, or yearly change in contents is computed.

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, 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 on the basis of recorded range in stage, prior and subsequent records, discharge measurements, weather records, and comparison with records for other stations in the same or nearby basins.

The data in this report generally comprise a description of the station and tabulations of daily and monthly figures. For gaging stations on streams a table showing the daily discharge and monthly and yearly discharge is given. For gaging stations on lakes and reservoirs a monthly summary table of contents is given. Records are published for the water year, which begins on October 1 and ends on September 30.

The description of the gaging station gives the location, drainage area, period of record, notations of revisions of previously published records, type and history of gages, general remarks, average discharge, and extremes of discharge and stage. The location of the gaging station and the drainage area are obtained from the most accurate maps available. River mileage, given under "LOCATION" for some stations, is that determined and used by the Corps of Engineers or other agencies. Periods for which there are published records for the present station or for stations generally equivalent to the present one are given under "PERIOD OF RECORD."

Previously published streamflow records of some stations have been found to be in error on the basis of data or information obtained later. Revisions of such records are usually published along with the current records in one of the annual or compilation reports. In order to make it easier to find such revised records, a paragraph headed "REVISED RECORDS" has been added to the description of all stations for which revised records have been published. Listed therein are all the reports in which revisions have been published, each followed by the water years for which figures are revised in that report. In listing water years only one number is given; for instance, 1965 stands for the water year October 1, 1964, to September 30, 1965. If no daily, monthly, or annual figures of discharge are effected by the revision, the fact is brought out by notations 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 revised figure was first published is given. It should be noted that for all stations for which cubic feet per second per square mile and runoff in inches are published, a revision of the drainage area necessitates corresponding revision of all figures based on the drainage area. Revised figures of cubic feet per second per square mile and runoff in inches resulting from a revision of the drainage area only are usually not published in the annual series of reports.

The type of gage currently in use, the datum of the present gage above mean sea level, and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE." In references to datum of gage, the phrase "mean sea level" denotes "National Geodetic Vertical Datum of 1929" as used by the Topographic Division of the Geological Survey, unless otherwise qualified.

Information pertaining to the accuracy of the discharge records and to conditions that affect the natural flow at the gaging station is given under "REMARKS." For reservoir stations, information on the dam forming the reservoir, the capacity, outlet works, and spillway, and purpose and use of the reservoir is given under "REMARKS."

The average discharge for the number of years indicated is given under "AVERAGE DISCHARGE;" it is not given for stations having fewer than 5 complete years of record or for stations where changes in water development during the period of record cause the figure to have little significance.

Under "EXTREMES" are given first, the extremes for the period of record, second, information available outside the period of record, and last, those for the current year. Unless otherwise qualified, the maximum discharge is the instantaneous maximum corresponding to the crest stage obtained by use of a water-stage recorder, a crest-stage gage, or a nonrecording gage read at the time of the crest. If the maximum gage height did not occur on the same day as the maximum discharge, it is given separately. Similarly, the minimum is the instantaneous minimum unless otherwise qualified. For some stations, peak discharges are listed with "EXTREMES FOR THE CURRENT YEAR;" if they are, all independent

peaks, including the maximum for the year above the selected base with the time of occurrence and corresponding gage height are published in tabular format. The base discharge, which is given in the table heading, is selected so that an average of about three peaks a year will be presented. Peak discharges are not published for canals, ditches, drains, or for any stream for which the peaks are subject to substantial control by man. Time of day is expressed in 24-hour local standard time; for example, 12:30 a.m. is 0030, 1:30 p.m. is 1330. The minimums for these stations are published in a separate paragraph following the table of peaks.

The daily table for stream-gaging stations gives the mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also is usually expressed in cubic feet per second per square mile (line headed "CFSM"), and in inches (line headed "IN."). 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 daily discharges for the calendar and water years.

Footnotes to the table of daily discharges are introduced by the word "NOTE." Footnotes are used to indicate periods for which the discharge is computed or estimated by special methods because of no gage-height record, backwater from various sources, or other unusual conditions. Periods of no gage-height record are indicated if the period is continuous for a month or more or includes the maximum discharge for the year. Periods of backwater from an unusual source, of indefinite stage-discharge relation, or of any other unusual condition at the gage site are indicated only if they are a month or more in length and the accuracy of the records is affected. Days on which the stage-discharge relation is affected by ice are not indicated. The methods used in computing discharge for various unusual conditions have been explained in preceding paragraphs.

For gaging stations on lakes and reservoirs, the data presented comprise a description of the station and a monthly summary table of contents. For some reservoirs, a table showing daily stage is given. A skeleton table of capacity at given stages is published for some reservoirs for which records are published on a daily basis.

Data collected at partial-record stations and miscellaneous sites are contained in two tables following the information for continuous record sites. 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 miscellaneous sites.

Accuracy of Field Data and Computed Results

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

The station description under "REMARKS" states the degree of accuracy of the records. "Excellent" means that about 95 percent of the daily discharges are within 5 percent of true value; "good," within 10 percent; and "fair," within 15 percent. "Poor" means that daily discharges have less than "fair" accuracy.

Figures of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 ft^3/s; to tenths between 1.0 and 10 ft^3/s; to whole numbers between 10 and 1,000 ft^3/s; and to 3 significant figures above 1,000 ft^3/s. The number of significant figures used is based solely on the magnitude of the figure. The same rounding rules apply to discharge figures listed for partial-record stations.

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. 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 Data Available

Information of a more detailed nature than that published for most gaging stations, such as observations of water temperatures, discharge measurements, gage-height records, and rating tables, is on file in the district office. Also, most gaging-station records are available in computer-usable form, and many statistical analyses have been made.

Information on the availability of unpublished data or statistical analyses may be obtained from the district office.

EXPLANATION OF WATER-QUALITY RECORDS

Collection and Examination of Data

Surface-water samples for analyses usually are collected at or near gaging stations. The quality-of-water records are given immediately following the discharge records for these stations.

The descriptive heading for water-quality records gives the period of record for all water-quality data, the period of daily record for parameters that are measured on a daily basis (specific conductance, pH, dissolved oxygen, and water temperature), extremes for the period of daily record, extremes for the current year, and general remarks.

Water Analysis

Most methods for collecting and analyzing water samples are described in the U.S. Geological Survey Techniques of Water-Resources Investigations listed on a following page.

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.

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 the 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 on hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the district office.

Water Temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at time of most discharge measurements for surface-water stations. Large streams have a small diel temperature change while small, shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are published.

Sediment

Suspended-sediment concentrations are determined periodically from samples collected by using depth-integrating samplers. Although data collected periodically may represent conditions only at the time of observation, such data are useful in establishing seasonal relations between quality and streamflow when predicting long-term sediment-discharge characteristics of the stream.

EXPLANATION OF GROUND-WATER LEVEL RECORDS

Collection of the Data

Only ground-water-level data from a basic network of 19 observation wells are published herein. This basic network contains observation wells so located that the most significant data are obtained from the fewest wells in the most important aquifers.

Each well is identified by means of (1) a 15-digit number that is based on latitude and longitude, and (2) a local number that is provided for local needs.

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

Water-level measurements are reported to the nearest hundredth of a foot with reference to land-surface datum (lsd), which is a datum plane that is approximately at land surface at each well. If known, the altitude of the land-surface datum above mean sea level is given in the well description. The height of the measuring point (MP) above or below the land-surface datum is given in each well description. Water levels in wells equipped with recording gages are reported for every fifth day and the end of each month (eom); and water levels in wells not equipped with recording gages are reported for the end of each month.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

Thirty-four 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. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) 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. The reports listed below are for sale by the U.S. Geological Survey, Branch of Distribution, 1200 South Eads Street, Arlington, VA 22202 (authorized agent of the Superintendent of Documents, Government Printing Office). Prices are effective January 1978 but are subject to change.

NOTE: When ordering any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations".

1-D1. *Water temperature-influential factors, field measurement, and data presentation,* by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages. $1.60.

1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents,* by W.W.Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages. $0.85.

2-D1. *Application of surface geophysics to ground-water investigations,* by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages. $1.90.

2-E1. *Application of borehole geophysics to water-resources investigations,* by W. S. Keys and L. M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages. $1.75.

3-A1. *General field and office procedures for indirect discharge measurements,* by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages. $1.00.

3-A2. *Measurement of peak discharge by the slope-area method,* by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages. $0.35.

3-A3. *Measurement of peak discharge at culverts by indirect methods,* by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages. $0.40.

3-A4. *Measurement of peak discharge at width contractions by indirect methods,* by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages. $1.00.

3-A5. *Measurement of peak discharge at dams by indirect methods,* by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages. $0.35.

3-A6. *General procedure for gaging streams,* by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6, 1968, 13 pages. $1.00.

3-A7. *Stage measurements at gaging stations,* by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages. $1.40.

3-A8. *Discharge measurements at gaging stations,* by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages. $1.25.

3-A11. *Measurement of discharge by moving-boat method,* by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages. $1.20.

3-A12. *Fluorometric procedures for dye tracing,* by J. F. Wilson Jr.: USGS--TWRI Book 3, Chapter A12. 1968. 31 pages. $0.35. Not currently available.

3-B1. *Aquifer-test design, observation, and data analysis,* by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages. $0.70.

3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction,* by G. D. Bennett: USGS--TWRI Book 3, Chapter B2 1976. 172 pages. $2.50.

3-C1. *Fluvial sediment concepts,* by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages. $0.65.

3-C2. *Field methods for measurement of fluvial sediment,* by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2, 1970. 59 pages. $2.50.

3-C3. *Computation of fluvial-sediment discharge,* by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages. $2.10.

4-A1. *Some statistical tools in hydrology,* by H. C. Riggs: USGS--TWRI Book 4 Chapter A1. 1968. 39 pages. $1.60.

4-A2. *Frequency curves,* by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages. $0.35.

4-B1. *Low-flow investigations,* by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages. $0.65.

4-B2. *Storage analyses for water supply,* by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages. $0.75.

4-B3. *Regional analyses of streamflow characteristics,* by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages. $0.65.

4-D1. *Computation of rate and volume of stream depletion by wells,* by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages. $1.10.

5-A1. *Methods for collection and analysis of water samples for dissolved minerals and gases,* by Eugene Brown, M. W. Skougstad, and M. J. Fishman: USGS--TWRI Book 5, Chapter A1. 1970. 160 pages. $2.40.

5-A2. *Determination of minor elments in water by emission spectroscopy,* by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages. $0.80.

5-A3. *Methods for analysis of organic substances in water,* by D. F. Goerlitz and Eugene Brown: USGS--TWRI Book 5, Chapter A3. 1972. 40 pages. $0.90.

5-A4.* *Methods for collection and analysis of aquatic biological and microbiological samples,* edited by P.E. Greeson, T.A. Ehlke, G.A. Irwin, B.W. Lium, and K.V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 pages. $20.00.

5-A5.* *Methods for determination of radioactive substances in water and fluvial sediments,* by L. L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages. $16.00.

5-C1. *Laboratory theory and methods for sediment analysis,* by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages. $2.10.

7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments,* by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages. $2.30.

8-A1. *Methods of measuring water levels in deep wells,* by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages. $0.70.

8-B2. *Calibration and maintenance of vertical-axis type current meters,* by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages. $1.10.

*These publications are available ONLY from Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. They are in looseleaf format and are subscription items. Additional supplements will be issued to subscribers at no extra cost. Checks should be made payable to Superintendent of Documents. Requester should emphasize to Superintendent of Documents that this is a subscription item.

01052500 DIAMOND RIVER NEAR WENTWORTH LOCATION, NH

LOCATION.--Lat 44°52'40", long 71°03'25", Coos County, Hydrologic Unit 01040001, on left bank 1.0 mi (1.6 km) upstream from mouth and 1.6 mi (2.6 km) north of Wentworth Location.

DRAINAGE AREA.--153 mi^2 (396 km^2).

PERIOD OF RECORD.--Discharge: July 1941 to current year.
Water-quality records: Water year 1954.

GAGE.--Water-stage recorder. Altitude of gage is 1,275 ft (389 m), from topographic map.

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

AVERAGE DISCHARGE.--36 years, 350 ft^3/s (9.912 m^3/s), 31.07 in/yr (789 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,630 ft^3/s (244 m^3/s) June 16, 1943, gage height, 10.66 ft (3.249 m), from rating curve extended above 4,300 ft^3/s (122 m^3/s); minimum, 6.8 ft^3/s (0.19 m^3/s) Aug. 27, 28, 1949, Sept. 1, 1952, gage height, 0.81 ft (0.247 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,600 ft^3/s (102 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Apr. 14	0300	*4230	120	*7.87	2.399						

Minimum discharge, 24 ft^3/s (0.68 m^3/s) July 30, gage height, 1.31 ft (0.399 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	151	662	159	115	57	54	2950	682	103	349	45	82
2	135	436	150	110	56	61	1530	886	136	256	53	168
3	123	336	145	105	56	64	1040	954	173	197	38	352
4	111	328	140	105	55	60	930	700	150	158	30	186
5	102	413	170	105	54	56	724	630	115	150	25	135
6	95	464	240	100	54	55	721	747	188	123	29	117
7	93	410	300	97	53	55	536	768	341	103	48	101
8	261	332	877	95	53	55	403	528	561	91	37	84
9	1460	270	542	92	52	54	364	416	328	98	33	73
10	1700	240	397	90	52	73	340	351	216	88	28	69
11	758	220	347	88	51	160	308	318	222	72	68	75
12	482	213	280	86	50	350	474	298	293	66	65	72
13	381	206	250	84	48	802	1180	377	330	94	51	88
14	550	202	230	83	48	1620	3610	349	278	85	63	1420
15	678	195	210	81	49	1800	1870	271	211	75	160	1540
16	493	188	198	79	49	1230	1000	245	155	61	72	579
17	381	180	181	78	51	1080	1220	241	154	54	1740	369
18	314	177	175	76	52	730	1850	267	315	61	957	310
19	276	174	165	75	53	561	2170	232	243	53	300	295
20	264	169	160	73	53	431	2330	193	397	42	173	237
21	2250	144	155	72	53	371	2800	169	330	35	133	549
22	2080	140	150	71	51	315	3370	153	414	31	121	669
23	846	135	145	69	49	277	3230	136	342	29	193	371
24	579	135	145	67	48	245	2250	120	253	27	538	274
25	493	130	140	65	49	230	1630	108	213	29	844	235
26	525	129	135	64	47	226	1260	146	1080	46	359	344
27	429	333	130	63	46	213	1070	111	947	42	213	1400
28	359	650	125	61	47	266	1010	95	466	31	155	896
29	321	430	125	60	---	464	826	314	333	26	126	660
30	309	246	120	59	---	1110	668	192	566	25	107	609
31	410	---	115	58	---	2800	---	128	---	60	93	---
TOTAL	17409	8287	6801	2526	1436	15868	43664	11125	9853	2657	6897	12359
MEAN	562	276	219	81.5	51.3	512	1455	359	328	85.7	222	412
MAX	2250	662	877	115	57	2800	3610	954	1080	349	1740	1540
MIN	93	129	115	58	46	54	308	95	103	25	25	69
CFSM	3.67	1.80	1.43	.53	.34	3.35	9.51	2.35	2.14	.56	1.45	2.69
IN.	4.23	2.01	1.65	.61	.35	3.86	10.62	2.70	2.40	.65	1.68	3.00

CAL YR 1976 TOTAL 168066 MEAN 459 MAX 4500 MIN 34 CFSM 3.00 IN 40.86
WTR YR 1977 TOTAL 138882 MEAN 380 MAX 3610 MIN 25 CFSM 2.48 IN 33.77

01053500 ANDROSCOGGIN RIVER AT ERROL, NH

LOCATION.--Lat 44°46'57", long 71°07'46", Coos County, Hydrologic Unit 01040001, on right bank 0.4 mi (0.6 km) downstream from Errol Dam, 0.4 mi (0.6 km) northeast of Errol, and 0.6 mi (1.0 km) upstream from Clear Stream.

DRAINAGE AREA.--1,045 mi^2 (2,707 km^2).

PERIOD OF RECORD.--Discharge: January 1905 to current year. October 1922 to November 1943, monthly discharge only, published in WSP 1301. Prior to 1922, published as "at Errol Dam."
Water-quality records: Water years 1955, 1958-59.

REVISED RECORDS.--WSP 1001: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,227.30 ft (374.081 m) above mean sea level. Prior to Dec. 8, 1943, nonrecording gage at Errol Dam at datum 5.0 ft (1.52 m) higher.

REMARKS.--Records good. Flow regulated by Rangeley, Mooselookmeguntic, Richardson, Aziscohos, and Umbagog Lakes, (Reservoirs in Androscoggin River basin), combined usable capacity, 28,100,000,000 ft^3 (796,000,000 m^3), with final regulation at Errol Dam. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--72 years, 1,901 ft^3/s (53.84 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 16,100 ft^3/s (456 m^3/s) May 22, 1969; minimum daily, leakage only at various times when gates in dam were closed.
Instantaneous maximum discharge not available prior to Dec. 9, 1943.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,370 ft^3/s (152 m^3/s) Apr. 23, gage height, 4.99 ft (1.521 m); minimum daily, 597 ft^3/s (16.9 m^3/s) Apr. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2060	2350	2450	2430	2390	2220	3590	1120	1710	2480	1820	1800
2	2050	1930	2510	2420	2380	2070	4080	1130	1570	2530	1780	1820
3	2080	2040	2500	2410	2360	2070	3790	1060	1340	2570	1820	1800
4	2120	2060	2500	2390	2350	2160	3570	1320	1270	2560	1820	1810
5	2160	2060	2510	2390	2360	2110	3300	1520	1430	2450	1810	1780
6	2160	2050	2370	2410	2290	2100	2290	1440	1540	1950	1800	1770
7	2170	2060	2040	2420	2360	2100	1560	1340	1390	1940	1780	1790
8	1930	2050	1940	2420	2390	2080	1560	1330	1270	1880	1820	1840
9	1640	2150	2030	2420	2390	2090	1510	1460	1520	1730	1820	1900
10	1580	2210	2300	2410	2390	1990	1550	1530	1570	1790	1860	1910
11	1680	2210	2310	2410	2390	1680	1620	1530	1490	1900	1800	1910
12	1770	2220	2250	2440	2390	1500	1620	1560	1310	1900	1780	1930
13	1920	2250	2310	2450	2320	1510	1420	1510	1420	1840	1770	1950
14	2050	2260	2450	2450	2310	1610	2340	1580	1650	1770	1810	1570
15	2180	2260	2340	2360	2280	2280	3170	1620	1650	1780	1760	1250
16	2150	2270	2210	2310	2310	2640	3050	1650	1710	1770	1900	1420
17	2120	2060	2240	2380	2350	2880	2650	1670	1710	1780	1650	1520
18	2100	2270	2290	2480	2350	2840	2940	1660	1610	1840	2320	1490
19	2200	2270	2370	2490	2350	2470	3190	1660	1580	1910	2080	1610
20	2150	2270	2370	2450	2350	2470	3710	1670	1610	1910	1540	1750
21	1840	2270	2320	2390	2360	1890	4070	1680	1620	1900	1750	1750
22	1940	2310	2380	2370	2360	1840	4490	1720	1660	1880	1790	1700
23	1980	2300	2310	2380	2360	1780	5140	1750	2090	1860	1740	1710
24	1990	2300	2270	2370	2360	1740	5340	1750	2040	1890	1690	1760
25	2100	2330	2280	2350	2360	1210	4870	1730	1720	1910	1590	1790
26	2180	2320	2320	2330	2360	1700	3710	1720	1820	1840	1660	1790
27	2170	2310	2360	2320	2360	1790	1380	1760	2500	1870	1750	1480
28	2090	2320	2400	2350	2320	1770	597	1800	2260	1910	1760	1460
29	2180	2330	2350	2410	---	1590	713	1790	2250	1910	1780	1820
30	2280	2340	2340	2410	---	1540	901	1720	2370	1930	1820	1990
31	2490	---	2390	2410	---	2380	---	1710	---	1900	1800	---
TOTAL	63510	66430	72010	74430	65900	62100	83721	48490	50680	61080	55670	51870
MEAN	2049	2214	2323	2401	2354	2003	2791	1564	1689	1970	1796	1729
MAX	2490	2350	2510	2490	2390	2880	5340	1800	2500	2570	2320	1990
MIN	1580	1930	1940	2310	2280	1210	597	1060	1270	1730	1540	1250

CAL YR 1976 TOTAL 871420 MEAN 2381 MAX 6880 MIN 1050
WTR YR 1977 TOTAL 755891 MEAN 2071 MAX 5340 MIN 597

01054000 ANDROSCOGGIN RIVER NEAR GORHAM, NH

LOCATION.--Lat 44°26'10", long 71°11'27", Coos County, Hydrologic Unit 01040001, on right bank at Pulsifer Rips, 2.2 mi (3.5 km) downstream from Dead River, and 4.0 mi (6.4 km) upstream from Gorham.

DRAINAGE AREA.--1,363 mi^2 (3,530 km^2).

PERIOD OF RECORD.--Discharge: 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.--WSP 1001: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 832.88 ft (253.862 m) above mean sea level. Prior to Sept. 30, 1922, nonrecording gage showing head and tailwater elevations at site 3 mi (5 km) upstream at different datum.

REMARKS.--Records good. Flow regulated by Rangeley, Mooselookmeguntic, Richardson, Aziscohos, and Umbagog Lakes, combined usable capacity, 28,100,000,000 ft^3 (796,000,000 m^3), with final regulation at Errol Dam 35 mi (56 km) upstream. Diurnal fluctuation caused by powerplant 0.8 mi (1.3 km) upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--64 years, 2,460 ft^3/s (69.67 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 20,000 ft^3/s (566 m^3/s) June 18, 1917, Apr. 30, 1923; minimum daily, 795 ft^3/s (22.5 m^3/s) Mar. 15, 1948.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,950 ft^3/s (253 m^3/s) Apr. 24, gage height, 7.20 ft (2.195 m); minimum daily, 1,680 ft^3/s (47.6 m^3/s) June 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2240	3560	2590	2540	2620	2630	7590	1920	1920	2960	1990	2000
2	2210	2740	2760	2670	2630	2450	6890	2170	2010	2870	1940	1990
3	2200	2590	2540	2600	2610	2380	6410	2120	2210	2870	1900	2000
4	2230	2600	2530	2660	2680	2410	6040	1910	1920	2810	1930	2020
5	2240	2670	2870	2620	2630	2440	5360	2160	1680	2810	1950	1980
6	2260	2730	2810	2620	2590	2430	4940	2260	1850	2400	1950	1990
7	2270	2710	2630	2640	2580	2420	3350	2220	1940	2000	1930	1970
8	2370	2620	2640	2640	2630	2410	2780	1960	2010	2160	1940	2000
9	2620	2570	2350	2560	2630	2420	2520	1920	1860	2030	1930	1980
10	3780	2590	2480	2620	2670	2560	2340	1990	1910	1940	1970	2040
11	2800	2630	2830	2620	2580	2520	2320	2010	1940	1990	2010	2060
12	2460	2580	2600	2600	2550	2310	2550	1990	2100	2070	1960	2060
13	2310	2600	2580	2590	2530	2410	3320	1970	1960	2100	1920	2110
14	2500	2610	2510	2670	2610	3290	6410	1940	1950	2000	1980	2950
15	2820	2610	2790	2740	2600	4510	6420	1970	1990	1930	2290	3000
16	2770	2620	2640	2640	2580	5430	5370	1980	1910	1940	2060	2050
17	2610	2570	2530	2550	2590	4810	4870	2020	1990	1900	4190	2030
18	2540	2440	2540	2590	2620	4580	5100	2080	2050	1960	4760	2020
19	2480	2600	2500	2680	2640	4230	5650	2040	2000	2020	3660	1950
20	2590	2620	2710	2780	2640	3830	5880	2000	2010	2050	2410	2020
21	4580	2570	2620	2670	2660	3590	6600	1960	2040	2040	2000	2230
22	4700	2600	2520	2630	2620	2440	7230	1970	2070	2020	2100	2470
23	3510	2600	2620	2610	2640	2700	8030	2000	2130	1960	2230	2250
24	3050	2560	2520	2620	2650	2380	8730	2000	2570	1970	2130	2120
25	2880	2610	2500	2660	2650	2330	8410	1980	2140	2040	2550	2110
26	3010	2590	2550	2620	2640	1800	7010	1960	2590	2020	2170	2170
27	2970	2620	2550	2580	2660	2200	4870	1910	3540	1960	2090	3200
28	2810	2810	2460	2550	2690	2430	2460	1920	3090	1990	2050	2650
29	2590	2880	2640	2610	---	2660	1990	2210	2750	2030	2030	2440
30	2750	2690	2540	2600	---	3200	1890	2100	2920	2050	2040	2530
31	2820	---	2480	2610	---	5660	---	1990	---	2050	2000	---
TOTAL	85970	79790	80430	81390	73420	93860	153330	62630	65050	66940	70060	66390
MEAN	2773	2660	2595	2625	2622	3028	5111	2020	2168	2159	2260	2213
MAX	4700	3560	2870	2780	2690	5660	8730	2260	3540	2960	4760	3200
MIN	2200	2440	2350	2540	2530	1800	1890	1910	1680	1900	1900	1950

CAL YR 1976 TOTAL 1122300 MEAN 3066 MAX 9980 MIN 1850
WTR YR 1977 TOTAL 979260 MEAN 2683 MAX 8730 MIN 1680

01064300 ELLIS RIVER NEAR JACKSON, NH

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 (0.6 km) upstream from small left-bank tributary, 1.3 mi (2.1 km) upstream from bridge on State Highway 16, and 6 mi (10 km) northwest of Jackson.

DRAINAGE AREA.--10.9 mi^2 (28.2 km^2).

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

GAGE.--Water-stage recorder. Altitude of gage is 1,500 ft (457 m), from topographic map. Prior to Oct. 14, 1969, at site 0.3 mi (0.5 km) downstream at different datum.

REMARKS.--Records good except those for winter period, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--13 years (water years 1965-77), 33.9 ft^3/s (0.960 m^3/s), 42.23 in/yr (1,073 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,500 ft^3/s (127 m^3/s) Nov. 3, 1966, gage height, 10.34 ft (3.152 m), from recorder, affected by drawdown, 18.9 ft (5.76 m), from floodmarks, site and datum then in use, from rating curve extended above 390 ft^3/s (11.0 m^3/s) on basis of slope-area measurement at gage height 10.34 ft (3.152 m); minimum not determined, occurred during ice effect in February 1977. Minimum daily, 2.7 ft^3/s (0.076 m^3/s) Feb. 23, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 400 ft^3/s (11.3 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 9	1730	704	19.9	3.88	1.183	Apr. 13	2345	534	15.1	3.47	1.058
Oct. 21	0445	a*1030	29.2	*4.53	1.381	Apr. 22	2345	406	11.5	3.15	0.960
Mar. 14	0500	900	25.5	4.29	1.308						

a From rating curve extended as explained above.

Minimum discharge not determined, occurred during ice effect in February; minimum daily, 2.7 ft^3/s (0.076 m^3/s) Feb. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	35	12	6.4	3.2	3.6	78	42	33	35	13	9.4
2	14	28	11	6.2	3.2	3.5	43	78	66	32	12	8.6
3	13	26	11	6.0	3.1	3.4	72	63	63	29	9.8	8.6
4	12	29	10	5.8	3.1	3.4	51	44	37	26	11	7.9
5	11	29	9.8	5.6	3.0	3.3	37	53	34	26	11	7.9
6	12	42	9.8	5.4	3.0	3.2	37	111	38	24	12	7.9
7	12	28	120	5.2	2.9	3.1	27	80	67	23	12	7.6
8	17	24	70	5.0	2.9	3.8	31	51	62	25	11	7.3
9	251	21	40	4.9	2.9	4.5	35	38	39	25	11	7.0
10	88	22	25	4.8	2.8	8.0	34	34	32	23	11	7.0
11	43	19	18	4.6	3.0	15	23	33	52	21	12	7.0
12	32	21	15	4.5	3.2	27	67	36	82	21	12	7.0
13	28	17	12	4.4	3.3	114	155	74	49	23	12	17
14	48	16	11	4.3	3.4	513	194	44	38	18	11	84
15	36	16	11	4.2	3.2	82	65	38	36	16	15	43
16	46	16	10	4.1	3.1	57	52	48	31	14	13	26
17	31	15	9.6	4.0	3.0	44	63	100	29	15	62	22
18	27	15	9.4	3.9	3.0	34	79	107	35	15	24	24
19	24	14	9.2	3.8	2.9	28	88	72	46	14	17	20
20	42	14	9.0	3.8	2.8	31	97	63	36	14	16	18
21	425	12	9.8	3.7	2.8	15	194	56	37	16	15	27
22	70	11	10	3.6	2.8	16	265	66	38	17	18	26
23	46	11	9.4	3.6	2.7	16	225	60	30	15	17	21
24	36	11	9.0	3.5	3.0	16	105	51	28	15	15	19
25	34	11	8.5	3.5	3.2	17	66	49	28	15	13	19
26	41	11	8.2	3.4	3.3	16	55	41	119	16	11	67
27	32	17	7.9	3.4	3.5	15	52	33	79	14	11	94
28	28	21	7.6	3.3	3.7	19	53	43	46	13	10	41
29	26	17	7.4	3.3	---	88	39	44	46	13	10	36
30	24	13	7.1	3.2	---	201	34	36	45	13	9.4	34
31	39	---	6.8	3.2	---	260	---	33	---	13	9.4	---
TOTAL	1602	582	524.5	134.6	86.0	1663.8	2416	1721	1401	599	446.6	731.2
MEAN	51.7	19.4	16.9	4.34	3.07	53.7	80.5	55.5	46.7	19.3	14.4	24.4
MAX	425	42	120	6.4	3.7	513	265	111	119	35	62	94
MIN	11	11	6.8	3.2	2.7	3.1	23	33	28	13	9.4	7.0
CFSM	4.74	1.78	1.55	.40	.28	4.93	7.39	5.09	4.28	1.77	1.32	2.24
IN.	5.47	1.99	1.79	.46	.29	5.68	8.24	5.87	4.78	2.04	1.52	2.50

CAL YR 1976 TOTAL 11547.1 MEAN 31.5 MAX 425 MIN 6.8 CFSM 2.89 IN 39.40
WTR YR 1977 TOTAL 11907.7 MEAN 32.6 MAX 513 MIN 2.7 CFSM 2.99 IN 40.64

01064400 LUCY BROOK NEAR NORTH CONWAY, NH

LOCATION.--Lat 44°04'10", long 71°10'30", Carroll County, Hydrologic Unit 01060002, on left bank 1.6 mi (2.6 km) upstream from mouth and 2.5 mi (4.0 km) northwest of North Conway.

DRAINAGE AREA.--4.68 mi^2 (12.12 km^2).

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

GAGE.--Water-stage recorder. Altitude of gage is 710 ft (216 m), from topographic map.

REMARKS.--Records good except those for winter period, which are fair, and those for periods of no gage-height record, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--13 years, 11.0 ft^3/s (0.312 m^3/s), 31.92 in/yr (811 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 992 ft^3/s (28.1 m^3/s) Nov. 3, 1966, Apr. 25, 1968, June 30, 1973, gage height, 9.20 ft (2.804 m), from floodmarks, from rating curve extended above 140 ft^3/s (3.96 m^3/s) on basis of slope-area measurement of peak flow; maximum recorded gage height, 8.14 ft (2.481 m) Nov. 3, 1966 (affected by drawdown); minimum discharge, 0.32 ft^3/s (0.009 m^3/s) Sept. 2, 3, 29, 30, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 190 ft^3/s (5.38 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 21	0500	a*844	23.9	*7.95	2.423	Mar. 14	-	600	17.0	-	-

a From rating curve extended above 140 ft^3/s (3.96 m^3/s) on basis of slope-area measurement at gage height 9.20 ft (3.804 m).

Minimum discharge not determined; minimum daily, 0.69 ft^3/s (0.020 m^3/s) Sept. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	22	4.5	3.8	1.9	2.1	60	13	2.6	3.5	1.3	.92
2	3.0	15	4.3	3.7	1.8	2.1	25	13	3.5	3.1	1.6	.87
3	3.0	13	4.2	3.6	1.8	2.0	40	12	3.9	2.8	1.3	.86
4	3.0	14	4.1	3.4	1.8	2.0	24	9.8	2.7	2.6	1.2	.76
5	2.8	15	4.0	3.3	1.8	2.0	21	9.1	2.4	2.4	1.2	.76
6	2.7	37	4.0	3.2	1.8	1.9	20	8.8	2.4	2.3	1.2	.76
7	2.7	20	50	3.1	1.7	1.9	15	8.5	3.5	2.2	1.2	.74
8	2.5	16	30	3.0	1.7	1.9	17	7.7	4.6	2.4	1.0	.72
9	63	13	20	2.9	1.7	2.0	19	7.1	3.3	2.5	.80	.70
10	37	12	13	2.8	1.7	2.3	19	8.2	3.1	2.2	1.0	.70
11	13	10	10	2.7	1.6	4.0	12	6.9	5.0	2.0	1.3	.70
12	8.8	9.1	9.1	2.7	1.8	8.0	30	6.6	6.9	2.1	1.2	.69
13	7.2	8.5	7.6	2.6	1.9	80	60	6.4	5.0	2.3	1.2	2.0
14	7.1	7.7	6.8	2.5	2.0	300	105	5.7	3.6	1.9	1.6	8.0
15	6.5	7.4	6.4	2.5	1.9	70	60	5.5	3.5	1.9	1.9	3.5
16	6.8	7.1	6.1	2.4	1.9	40	23	5.3	2.9	1.8	1.2	2.5
17	5.7	6.4	5.8	2.4	1.8	25	24	5.1	2.8	1.8	6.3	2.2
18	5.4	6.1	5.6	2.3	1.8	18	25	4.4	3.3	1.6	2.5	2.4
19	5.2	5.7	5.4	2.3	1.7	16	27	4.4	4.4	1.5	1.8	2.1
20	13	5.5	5.3	2.3	1.7	17	29	4.4	3.5	1.4	1.4	1.8
21	282	5.9	5.6	2.2	1.7	8.4	36	4.1	3.6	2.1	1.4	2.7
22	49	5.6	6.1	2.1	1.7	8.8	38	3.5	3.7	2.1	1.6	2.3
23	28	5.5	5.8	2.1	1.6	8.8	47	3.4	3.0	1.7	1.8	2.0
24	19	5.3	5.4	2.1	1.7	8.8	64	3.4	2.8	1.5	1.4	1.9
25	19	5.2	5.1	2.1	1.8	9.6	47	3.2	2.7	1.6	1.3	1.8
26	24	5.0	4.9	2.0	1.9	9.4	32	3.0	12	1.6	1.1	4.5
27	18	5.0	4.7	2.0	2.0	8.4	26	2.9	8.0	1.4	1.1	9.4
28	15	5.0	4.5	2.0	2.2	15	22	3.0	4.5	1.4	1.1	4.0
29	13	5.7	4.3	1.9	---	35	18	3.5	4.4	1.4	1.0	3.6
30	12	5.1	4.1	1.9	---	80	15	3.0	4.0	1.4	.98	3.4
31	22	---	4.0	1.9	---	140	---	2.7	---	1.4	.94	---
TOTAL	702.9	303.8	260.7	79.8	50.4	930.4	1000	187.6	121.6	61.9	45.92	69.28
MEAN	22.7	10.1	8.41	2.57	1.80	30.0	33.3	6.05	4.05	2.00	1.48	2.31
MAX	282	37	50	3.8	2.2	300	105	13	12	3.5	6.3	9.4
MIN	2.5	5.0	4.0	1.9	1.6	1.9	12	2.7	2.4	1.4	.80	.69
CFSM	4.85	2.16	1.80	.55	.39	6.41	7.12	1.29	.87	.43	.32	.49
IN.	5.59	2.41	2.07	.63	.40	7.39	7.95	1.49	.97	.49	.36	.55

CAL YR 1976 TOTAL 4972.40 MEAN 13.6 MAX 282 MIN 1.4 CFSM 2.91 IN 39.52
WTR YR 1977 TOTAL 3814.30 MEAN 10.5 MAX 300 MIN .69 CFSM 2.24 IN 30.31

NOTE.--No gage-height record Feb. 27 to Mar. 9, Mar. 13 to Apr. 18, June 8 to July 14, Aug. 26 to Sept. 30.

01064500 SACO RIVER NEAR CONWAY, NH

LOCATION.--Lat 43°59'27", long 71°05'29", Carroll County, Hydrologic Unit 01060002, on left bank at Odell Falls 1.8 mi (2.9 km) downstream from Swift River and Conway.

DRAINAGE AREA.--386 mi^2 (1,000 km^2).

PERIOD OF RECORD.--Discharge: 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 756: Drainage area. WSP 1301: 1908-9.

GAGE.--Water-stage recorder. Datum of gage is 418.19 ft (127.464 m) above mean sea level. Aug. 26, 1903, to June 30, 1912, nonrecording gage at site 0.8 mi (1.3 km) downstream at different datum.

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

AVERAGE DISCHARGE.--54 years (water years 1904-9, 1930-77), 927 ft^3/s (26.25 m^3/s), 32.61 in/yr (828 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 43,900 ft^3/s (1,240 m^3/s) Mar. 27, 1953, gage height, 17.20 ft (5.243 m), from rating curve extended above 23,000 ft^3/s (651 m^3/s) on basis of slope-area measurement of peak flow; minimum, 40 ft^3/s (1.13 m^3/s) Mar. 16, 1932, gage height, 1.61 ft (0.491 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,700 ft^3/s (246 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 10	0200	10200	289	8.48	2.585	Mar. 14	0900	*37200	1054	*15.61	4.758
Oct. 21	1400	19300	547	11.12	3.389						

Minimum discharge, 119 ft^3/s (3.37 m^3/s) Sept. 12, gage height, 2.01 ft (0.057 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	419	2070	437	320	275	390	5880	1660	423	494	163	161
2	388	1400	400	315	275	360	3360	1770	577	414	179	157
3	364	1190	360	315	275	340	4040	1980	949	364	178	149
4	345	1210	330	310	275	320	4190	1550	678	332	161	142
5	329	1340	370	310	270	340	3020	1410	533	318	151	140
6	327	1810	450	305	270	370	2680	1630	515	296	151	140
7	328	1520	981	305	270	350	2190	1820	732	274	162	139
8	324	1260	2330	305	270	315	1870	1380	1110	265	162	130
9	2360	1100	1090	300	270	300	1590	1140	838	313	155	125
10	5630	1010	865	300	270	400	1450	1130	711	297	149	130
11	1890	954	740	300	275	580	1350	1100	733	260	181	133
12	1250	891	700	300	280	780	1490	984	1060	249	189	129
13	1020	858	650	295	290	1110	2810	1140	782	308	176	136
14	962	791	610	295	300	13200	5190	1100	624	357	183	990
15	941	760	580	295	290	7320	3470	901	637	281	236	905
16	1110	729	540	295	285	4480	2650	865	537	246	219	470
17	971	695	510	290	280	3460	2670	943	466	228	713	346
18	869	677	490	290	275	2460	3000	1250	477	229	606	321
19	886	652	460	290	270	1990	3210	1070	559	219	339	299
20	923	634	435	290	265	1620	3270	900	528	203	261	276
21	11700	576	415	290	260	1460	3650	827	467	198	224	599
22	5340	558	400	285	255	1300	4530	767	470	247	229	783
23	2850	551	385	285	250	1260	5260	749	461	230	321	523
24	2060	529	370	285	245	1130	5140	669	389	198	269	417
25	1830	517	365	285	270	1030	4120	608	367	191	237	376
26	2030	501	355	280	295	958	3030	555	477	202	217	548
27	1700	503	345	280	325	974	2590	497	1110	191	196	3730
28	1400	586	340	280	355	1160	2380	464	639	176	187	1380
29	1290	639	335	280	---	1800	2100	619	493	168	178	1030
30	1170	574	325	280	---	4190	1790	535	617	163	171	933
31	1300	---	320	275	---	7330	---	460	---	162	162	---
TOTAL	54306	27085	17283	9130	7785	63077	93970	32473	18959	8073	7105	15737
MEAN	1752	903	558	295	278	2035	3132	1048	632	260	229	525
MAX	11700	2070	2330	320	355	13200	5880	1980	1110	494	713	3730
MIN	324	501	320	275	245	300	1350	460	367	162	149	125
CFSM	4.54	2.34	1.45	.76	.72	5.27	8.11	2.72	1.64	.67	.59	1.36
IN.	5.23	2.61	1.67	.88	.75	6.08	9.06	3.13	1.83	.78	.68	1.52

CAL YR 1976 TOTAL 446990 MEAN 1221 MAX 12000 MIN 224 CFSM 3.16 IN 43.08
WTR YR 1977 TOTAL 354983 MEAN 973 MAX 13200 MIN 125 CFSM 2.52 IN 34.21

01065000 OSSIPEE RIVER AT EFFINGHAM FALLS, NH

LOCATION.--Lat 43°47'44", long 71°03'36", Carroll County, Hydrologic Unit 01060002, on left bank 0.3 mi (0.5 km) upstream from bridge on State Highway 153 at Effingham Falls, 0.3 mi (0.5 km) downstream from outlet of Ossipee Lake, and 4 mi (6 km) northwest of Effingham.

DRAINAGE AREA.--330 mi^2 (855 km^2).

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

GAGE.--Water-stage recorder. Altitude of gage is 390 ft (119 m), from topographic map.

REMARKS.--Records excellent except those for period of no gage-height record, which are fair. Flow regulated by Ossipee and Silver Lakes and Pine River Pond, combined capacity, 1,430,000,000 ft^3 (40,500,000 m^3). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--35 years, 689 ft^3/s (19.51 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,700 ft^3/s (331 m^3/s) Mar. 28, 1953, gage height, 11.64 ft (3.548 m); minimum, about 5 ft^3/s (0.14 m^3/s) during part of several days Nov. 4-20, 1968 (caused by unusual regulation); minimum daily, 11 ft^3/s (0.31 m^3/s) Oct. 10, 1944.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,040 ft^3/s (114 m^3/s) Mar. 16, gage height, 8.21 ft (2.502 m); minimum, 47 ft^3/s (1.33 m^3/s) July 2, 3; minimum daily, 47 ft^3/s (1.33 m^3/s) July 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	264	969	320	481	221	346	2880	1460	294	607	180	173
2	264	804	340	475	221	340	3060	1350	300	560	182	173
3	264	821	330	471	221	334	3130	1260	317	47	190	174
4	261	833	680	468	221	328	3260	1170	328	130	231	174
5	261	842	640	465	221	340	3260	1080	328	204	280	174
6	261	880	640	462	221	343	3090	578	323	204	178	174
7	261	902	740	458	221	349	2840	289	328	202	178	174
8	349	915	800	455	221	355	2610	289	346	204	178	174
9	406	911	750	452	221	359	2370	238	359	252	176	174
10	546	889	730	449	221	365	2090	266	452	259	176	174
11	791	872	710	449	221	374	1860	505	498	259	176	174
12	796	800	690	446	221	390	1720	641	498	254	176	174
13	779	780	670	443	223	413	1660	791	564	271	176	174
14	766	730	660	439	334	1000	1720	859	585	289	177	177
15	758	700	700	436	427	2990	1510	833	501	312	177	179
16	749	500	600	433	420	3920	1390	808	452	261	176	336
17	741	500	622	427	413	3960	1400	787	446	269	177	443
18	462	500	657	423	410	3640	1390	770	439	267	177	442
19	261	490	649	420	403	3250	1360	758	439	266	176	440
20	264	490	645	416	397	2860	1310	491	436	266	186	502
21	885	480	645	311	393	2550	1250	289	436	264	176	650
22	1840	470	638	216	390	2250	1060	294	436	246	176	658
23	2380	410	630	216	380	2010	915	300	433	236	176	656
24	2330	400	622	216	371	1810	1430	303	433	235	176	648
25	2030	390	619	218	371	1630	1860	308	430	233	176	642
26	1840	380	611	218	365	1480	1980	305	430	233	176	641
27	1720	270	607	218	355	1360	1940	300	346	231	175	913
28	1600	290	596	218	355	1290	1850	297	297	231	176	1210
29	1420	310	593	221	---	1320	1730	297	297	200	176	1220
30	1260	340	585	218	---	1600	1590	300	305	183	174	1080
31	1210	---	528	221	---	2230	---	297	---	184	174	---
TOTAL	28019	18868	19247	11459	8659	45786	59515	18513	12076	7859	5654	13097
MEAN	904	629	621	370	309	1477	1984	597	403	254	182	437
MAX	2380	969	800	481	427	3960	3260	1460	585	607	280	1220
MIN	261	270	320	216	221	328	915	238	294	47	174	173

CAL YR 1976 TOTAL 279206 MEAN 763 MAX 4470 MIN 154
WTR YR 1977 TOTAL 248752 MEAN 682 MAX 3960 MIN 47

NOTE.--No gage-height record Nov. 12 to Dec. 16.

01072100 SALMON FALLS RIVER AT MILTON, NH

LOCATION.--Lat 43°24'50", long 70°59'15", Strafford County, Hydrologic Unit 01060003, on right bank just downstream from Milton Pond at Milton.

DRAINAGE AREA.--108 mi^2 (280 km^2).

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 405 ft (123 m), from topographic map.

REMARKS.--Records good except those for periods of no gage-height record, which are fair. Flow regulated by Great East and Lovell Lakes and Horn, Wilson, and Milton (also controls Northeast and Town House) Ponds, combined usable capacity, 1,280,000,000 ft^3 (36,250,000 m^3). See table below for figures of monthend contents. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--9 years, 204 ft^3/s (5.777 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,500 ft^3/s (99.1 m^3/s) Mar. 15, 1977, gage height, 6.50 ft (1.981 m); minimum daily, 19 ft^3/s (0.54 m^3/s) Aug. 30, Sept. 13, 1970.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,500 ft^3/s (99.1 m^3/s) Mar. 15, gage height, 6.50 ft (1.981 m); minimum daily, 35 ft^3/s (0.91 m^3/s) July 29-31, Aug. 29, 30, Sept. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	130	209	121	70	46	147	1360	237	57	77	36	35
2	122	205	109	63	46	161	1160	219	43	73	36	38
3	112	196	100	56	45	176	995	164	44	65	36	42
4	110	191	92	54	45	161	1070	96	48	57	36	41
5	101	179	84	53	46	179	1040	112	48	54	36	40
6	96	175	110	52	48	195	1010	122	48	57	36	38
7	118	177	139	52	49	209	950	130	48	54	36	36
8	120	179	199	54	50	223	649	130	48	50	36	36
9	112	175	237	57	52	223	531	133	48	49	36	36
10	115	170	236	59	53	223	531	281	49	49	36	36
11	110	155	221	60	56	257	514	525	46	48	36	36
12	104	145	202	60	56	313	481	537	63	48	36	36
13	94	135	180	72	57	418	433	399	102	46	36	36
14	115	124	158	72	59	1620	326	277	117	46	36	36
15	120	154	140	70	60	3220	265	261	107	46	36	36
16	108	166	131	68	60	2140	305	234	114	45	36	36
17	103	148	123	67	59	1440	309	167	130	42	36	36
18	117	133	113	67	59	1030	199	93	109	42	36	36
19	118	123	106	65	57	775	133	109	96	40	36	36
20	111	116	100	65	57	663	144	112	67	41	36	36
21	202	108	133	63	56	502	105	114	52	40	36	36
22	329	124	147	63	56	418	70	114	52	40	36	53
23	351	130	130	62	56	433	122	112	52	37	36	79
24	310	119	119	62	56	423	257	105	52	37	36	90
25	284	108	114	63	75	423	470	96	52	36	36	96
26	267	99	105	54	93	413	556	72	57	36	36	176
27	239	92	98	52	114	394	514	53	73	36	36	269
28	232	91	93	52	136	389	423	53	85	36	36	277
29	222	107	85	49	---	449	322	53	87	35	35	273
30	209	133	85	49	---	713	265	56	87	35	35	241
31	199	---	77	46	---	1180	---	63	---	35	36	---
TOTAL	5080	4366	4087	1851	1702	19510	15509	5229	2081	1432	1114	2328
MEAN	164	146	132	59.7	60.8	629	517	169	69.4	46.2	35.9	77.6
MAX	351	209	237	72	136	3220	1360	537	130	77	36	277
MIN	94	91	77	46	45	147	70	53	43	35	35	35
(†)	860.5	729.2	661.5	653.7	701.4	1190.2	1204.2	1215.2	1242.6	1134.8	1063.2	1035.6

CAL YR 1976 TOTAL 65892 MEAN 180 MAX 1400 MIN 24
WTR YR 1977 TOTAL 64289 MEAN 176 MAX 3220 MIN 35

† Monthend contents, in millions of cubic feet, in Great East and Lovell Lakes, and Horn, Wilson, Milton, Northeast and Town House Ponds; records furnished by New Hampshire Water Resources Board.

NOTE.--No gage-height record Dec. 25 to Jan. 13, Jan. 16-23, Jan. 27 to Mar. 4, Aug. 18-28.

01072850 MOHAWK BROOK NEAR CENTER STRAFFORD, NH

LOCATION.--Lat 43°15'47", long 71°05'50", Strafford County, Hydrologic Unit 01070002, on left bank 0.5 mi (0.8 km) downstream from bridge on State Highway 202A and 1.2 mi (1.9 km) east of Center Strafford.

DRAINAGE AREA.--8.87 mi^2 (22.97 km^2).

PERIOD OF RECORD.--May 1964 to July 1977 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 285 ft (87 m), from topographic map.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--12 years (water years 1965-76), 12.2 ft^3/s (0.346 m^3/s), 18.68 in/yr (475 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,890 ft^3/s (53.5 m^3/s) Mar. 14, 1977, gage height, 5.81 ft (1.771 m), from rating curve extended above 230 ft^3/s (6.51 m^3/s); maximum gage height, 6.02 ft (1.835 m) Feb. 11, 1970, backwater from ice; no flow at times most years.

EXTREMES FOR PERIOD OCTOBER 1976 TO JULY 1977.--Peak discharges above base of 100 ft^3/s (2.83 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 14	0230	a*1890	53.5	*5.81	1.771	Mar. 30	1900	131	3.71	3.08	.939

a From rating curve extended above 230 ft^3/s (6.51 m^3/s).

Minimum discharge, 0.22 ft^3/s (0.006 m^3/s), July 24.

DISCHARGE, IN CUBIC FEET PER SECOND, OCTOBER 1976 TO JULY 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL
1	.28	4.3	3.9	3.2	2.5	35	64	9.6	1.2	2.0
2	.27	3.9	3.6	3.1	2.5	28	40	8.6	2.0	1.6
3	.25	3.7	3.3	3.0	2.5	25	33	8.0	2.3	1.3
4	.25	3.6	3.3	2.9	2.5	19	30	7.1	2.2	1.1
5	.25	3.5	3.1	2.9	2.5	52	50	6.4	1.8	.98
6	.25	3.4	2.7	2.9	2.5	53	45	6.1	1.6	.78
7	.25	3.3	14	2.9	2.4	35	30	5.9	1.6	.66
8	.25	3.2	33	3.5	2.4	28	22	5.0	3.0	.66
9	.57	3.1	25	3.3	2.4	29	18	4.8	4.2	.84
10	1.4	3.5	12	3.1	2.4	46	16	61	4.0	.84
11	1.6	3.9	9.6	3.5	2.4	72	15	39	4.8	.72
12	1.6	3.6	7.1	3.3	2.4	78	14	19	5.0	.66
13	1.4	3.3	6.1	3.1	2.4	167	12	12	4.8	1.1
14	1.1	3.1	6.1	2.9	2.6	656	11	8.9	3.6	3.6
15	.98	3.0	6.4	2.8	2.7	142	10	7.4	2.7	2.6
16	.85	2.9	5.0	2.7	2.7	86	9.2	6.9	2.1	1.8
17	.73	2.8	4.8	2.7	2.7	66	8.6	5.9	1.7	1.7
18	.72	2.7	4.6	2.6	2.7	44	7.7	4.6	1.5	1.8
19	.67	2.6	4.0	2.6	2.7	36	7.1	4.2	1.4	1.6
20	.78	2.5	4.0	2.6	2.7	32	6.6	4.2	1.2	1.1
21	31	2.5	5.9	2.5	2.8	26	6.6	3.7	1.0	.52
22	13	2.5	5.2	2.5	2.8	25	6.1	3.4	1.9	.52
23	6.9	2.5	4.4	2.5	2.8	30	15	3.3	1.8	.40
24	5.2	2.5	4.8	2.5	2.7	29	53	2.6	1.5	.36
25	5.2	2.5	4.8	2.5	25	23	69	2.3	1.5	.72
26	5.4	2.5	4.0	2.5	60	20	36	1.9	6.6	.84
27	5.2	2.5	3.9	2.5	50	24	24	1.5	7.4	.61
28	4.6	2.6	3.7	2.5	42	35	17	1.3	4.2	.54
29	4.2	3.1	3.5	2.5	---	85	13	1.3	3.0	.47
30	3.8	3.9	3.4	2.5	---	113	11	1.3	2.7	.42
31	3.7	---	3.3	2.5	---	102	---	1.3	---	.40
TOTAL	102.65	93.0	208.5	87.1	238.7	2241	699.9	258.5	84.3	33.24
MEAN	3.31	3.10	6.73	2.81	8.53	72.3	23.3	8.34	2.81	1.07
MAX	31	4.3	33	3.5	60	656	69	61	7.4	3.6
MIN	.25	2.5	2.7	2.5	2.4	19	6.1	1.3	1.0	.36
CFSM	.37	.35	.76	.32	.96	8.15	2.63	.94	.32	.12
IN.	.43	.39	.87	.37	1.00	9.40	2.93	1.08	.35	.14

CAL YR 1976 TOTAL 3933.85 MEAN 10.7 MAX 106 MIN .25 CFSM 1.21 IN 16.50

01073000 OYSTER RIVER NEAR DURHAM, NH

LOCATION.--Lat 43°08'55", long 70°57'56", Strafford County, Hydrologic Unit 01060003, on left bank 200 ft (60 m) upstream from highway bridge, 2.5 mi (4.0 km) west of Durham, and 7 mi (11 km) upstream from mouth.

DRAINAGE AREA.--12.1 mi^2 (31.3 km^2).

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. Altitude of gage is 70 ft (21 m), from topographic map. Prior to Oct. 1, 1964, at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records good except those for winter period, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--43 years, 19.2 ft^3/s (0.544 m^3/s), 21.55 in/yr (547 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 862 ft^3/s (24.4 m^3/s) Sept. 11, 1954, gage height, 6.47 ft (1.972 m), present datum; maximum gage height, 8.45 ft (2.576 m), present datum, Mar. 19, 1936; minimum discharge, 0.23 ft^3/s (0.007 m^3/s) Aug. 18, 19, 25, 26, 27, 1971.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 170 ft^3/s (4.81 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 14	1430	*567	16.1	*5.12	1.561	Apr. 25	0215	179	5.07	3.24	0.988

Minimum discharge, 0.36 ft^3/s (0.010 m^3/s) Aug. 31, Sept. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.70	5.0	2.6	3.0	2.8	14	91	28	3.8	3.2	.99	.41
2	.64	3.1	2.2	3.0	2.8	13	67	24	4.8	3.7	2.9	.59
3	.60	3.1	2.2	3.0	2.7	12	63	21	4.8	4.8	1.8	.56
4	.57	3.1	1.5	3.1	2.7	11	51	17	3.8	4.4	1.2	.56
5	.54	2.9	1.3	3.3	2.7	20	67	16	3.0	3.8	1.1	.56
6	.52	2.9	1.3	3.0	2.8	25	74	17	3.1	3.0	1.1	.67
7	.50	2.8	6.6	3.1	3.0	23	53	17	3.3	2.4	1.1	.69
8	.50	2.8	13	3.2	2.7	20	43	16	6.2	2.1	1.0	.74
9	2.0	2.8	6.8	2.9	2.7	40	35	17	5.3	2.5	.94	.76
10	5.0	2.8	3.8	3.0	2.6	60	30	104	8.1	1.9	.93	.80
11	3.5	2.6	3.4	3.3	2.5	100	26	79	14	2.0	1.2	.85
12	2.6	2.5	3.2	2.9	2.7	134	23	52	12	1.9	1.2	1.1
13	2.1	2.4	3.1	2.9	2.9	181	21	36	9.7	2.2	1.1	1.1
14	1.9	2.3	2.0	3.0	2.8	511	19	27	7.1	2.5	.92	1.3
15	1.6	2.5	1.9	3.0	2.7	234	18	21	5.9	2.1	.80	1.6
16	1.4	2.6	2.1	3.1	2.6	152	15	19	5.0	1.6	.71	1.6
17	1.2	2.4	2.6	3.0	2.6	119	17	16	4.5	1.5	.69	1.6
18	1.1	2.4	3.2	2.8	2.6	86	15	12	3.6	1.3	.83	1.8
19	1.0	2.8	3.7	3.1	2.5	66	13	12	5.8	1.1	.67	1.1
20	2.8	2.4	3.3	3.4	2.5	72	13	11	4.9	1.1	.68	4.6
21	27	2.3	3.9	3.1	2.6	65	11	11	5.8	1.0	.81	8.3
22	7.0	2.0	3.4	3.0	2.5	64	10	10	8.5	.94	1.5	3.5
23	3.1	1.9	2.9	2.9	2.5	74	32	8.6	4.7	1.0	2.7	1.9
24	2.3	1.9	2.7	2.9	4.0	79	109	7.7	3.5	1.0	1.2	1.6
25	4.5	1.9	2.5	2.9	12	71	153	6.9	2.7	1.9	.93	1.6
26	5.4	2.0	2.7	2.8	14	65	101	5.9	13	2.9	.56	14
27	4.5	2.0	2.9	2.8	16	74	74	5.0	8.4	1.6	.62	18
28	3.1	2.3	3.1	3.5	15	80	58	4.9	5.5	1.2	.84	6.5
29	2.6	3.4	3.1	3.6	---	122	44	6.9	4.2	1.2	.70	3.8
30	2.6	4.0	3.0	3.1	---	124	35	5.5	4.2	1.1	.56	2.6
31	3.9	---	3.2	2.9	---	114	---	4.7	---	1.1	.42	---
TOTAL	96.77	79.9	103.2	94.6	122.6	2825	1381	639.1	179.2	64.04	32.70	84.79
MEAN	3.12	2.66	3.33	3.05	4.38	91.1	46.0	20.6	5.97	2.07	1.05	2.83
MAX	27	5.0	13	3.6	16	511	153	104	14	4.8	2.9	18
MIN	.50	1.9	1.3	2.8	2.5	11	10	4.7	2.7	.94	.42	.41
CFSM	.26	.22	.28	.25	.36	7.53	3.80	1.70	.49	.17	.09	.23
IN.	.30	.25	.32	.29	.38	8.68	4.25	1.96	.55	.20	.10	.26

CAL YR 1976 TOTAL 5801.58 MEAN 15.9 MAX 109 MIN .50 CFSM 1.31 IN 17.83
WTR YR 1977 TOTAL 5702.90 MEAN 15.6 MAX 511 MIN .41 CFSM 1.29 IN 17.53

01073500 LAMPREY RIVER NEAR NEWMARKET, NH

LOCATION.--Lat 43°06'09", long 70°57'11", Rockingham County, Hydrologic Unit 01060003, on right bank 200 ft (60 m) upstream from Packers Falls, 2 mi (3 km) northwest of Newmarket, and 4.6 mi (7.4 km) upstream from mouth.

DRAINAGE AREA.--183 mi^2 (474 km^2).

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. Altitude of gage is 40 ft (12 m), from topographic map.

REMARKS.--Records excellent except those for winter period, which are fair. Some regulation by Pawtuckaway and Mendums Ponds, combined capacity, about 600,000,000 ft^3 (17,000,000 m^3). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--43 years, 278 ft^3/s (7.873 m^3/s), 20.63 in/yr (524 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,490 ft^3/s (155 m^3/s) Mar. 20, 1936, gage height, 14.88 ft (4.535 m), from rating curve extended above 3,100 ft^3/s (87.8 m^3/s) on basis of computation of flow over dam at gage height 14.69 ft (4.478 m); minimum daily, 1 ft^3/s (0.028 m^3/s) Oct. 21, 1935.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,000 ft^3/s (142 m^3/s) Mar. 15, gage height, 12.22 ft (3.725 m); minimum daily, 13 ft^3/s (0.37 m^3/s) Sept. 2, 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	167	68	48	46	530	1590	456	51	130	19	14
2	43	154	60	48	46	582	1390	412	56	113	26	13
3	35	143	58	48	46	591	1130	357	63	91	30	13
4	29	133	50	47	46	569	920	312	62	75	26	16
5	25	124	49	47	45	635	871	280	56	64	24	20
6	23	117	44	46	45	746	953	259	51	54	23	21
7	23	114	59	46	45	810	959	242	50	48	23	31
8	22	110	113	47	45	842	874	220	58	45	24	60
9	30	137	121	49	45	833	726	212	63	45	23	61
10	53	171	135	50	44	876	617	629	71	44	23	60
11	43	152	129	52	43	1010	538	793	113	40	23	59
12	37	133	111	59	43	1260	483	773	149	39	24	55
13	39	119	101	55	44	1640	437	621	154	38	24	69
14	64	108	74	53	46	3180	393	471	139	37	24	83
15	104	99	70	52	46	4620	350	364	116	35	23	78
16	91	92	67	50	46	3940	311	293	92	32	22	74
17	82	85	64	49	45	2610	282	253	74	30	21	79
18	75	81	62	48	44	1870	247	228	63	28	19	81
19	70	78	60	48	44	1390	230	178	70	26	19	76
20	96	74	60	47	44	1200	221	178	76	23	17	84
21	275	70	57	47	45	1040	205	164	79	22	16	152
22	270	65	56	47	45	947	189	153	82	20	19	146
23	268	63	54	47	45	995	273	133	65	17	24	150
24	223	61	53	47	45	1070	710	106	56	16	27	125
25	206	59	52	47	100	1060	1290	96	50	20	26	106
26	200	56	51	46	170	893	1430	96	72	27	23	122
27	187	59	50	46	299	769	1300	85	119	27	21	227
28	171	56	49	46	414	800	958	70	188	24	20	163
29	178	62	48	46	---	1020	711	62	187	22	18	141
30	182	75	48	46	---	1310	561	57	157	20	16	119
31	167	---	48	46	---	1550	---	53	---	19	15	---
TOTAL	3344	3017	2121	1500	2061	41188	21149	8606	2682	1271	682	2498
MEAN	108	101	68.4	48.4	73.6	1329	705	278	89.4	41.0	22.0	83.3
MAX	275	171	135	59	414	4620	1590	793	188	130	30	227
MIN	22	56	44	46	43	530	189	53	50	16	15	13
CFSM	.59	.55	.37	.26	.40	7.26	3.85	1.52	.49	.22	.12	.46
IN.	.68	.61	.43	.30	.42	8.37	4.30	1.75	.55	.26	.14	.51

CAL YR 1976 TOTAL 87230.1 MEAN 238 MAX 1220 MIN 8.7 CFSM 1.30 IN 17.73
WTR YR 1977 TOTAL 90119.0 MEAN 247 MAX 4620 MIN 13 CFSM 1.35 IN 18.32

01073600 DUDLEY BROOK NEAR EXETER, NH

LOCATION.--Lat 42°59'37", long 71°01'24", Rockingham County, Hydrologic Unit 01060003, on right bank 2.4 mi (3.9 km) upstream from mouth and 3.5 mi (5.6 km) west of Exeter.

DRAINAGE AREA.--4.97 mi^2 (12.87 km^2).

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

GAGE.--Water-stage recorder. Altitude of gage is 90 ft (27 m), from topographic map.

REMARKS.--Records fair except those for winter period and periods of no gage-height record, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--15 years, 6.94 ft^3/s (0.197 m^3/s), 18.96 in/yr (482 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 358 ft^3/s (10.14 m^3/s) Apr. 2, 1973, gage height, 7.74 ft (2.36 m), from rating curve extended above 210 ft^3/s (5.95 m^3/s); no flow at times some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft^3/s (2.83 m^3/s) and maximums(*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 14	0300	*261	7.39	*7.10	2.164	Apr. 25	0545	101	2.86	5.72	1.743

Minimum discharge, .02 ft^3/s (0.001 m^3/s) July 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.18	1.2	.88	.40	.40	8.2	17	7.0	.39	.32	.07	.03
2	.16	1.2	.62	.36	.40	7.4	11	6.2	.70	.29	.39	.03
3	.21	1.1	.51	.38	.39	6.6	10	5.8	1.2	.24	.34	.03
4	.19	1.0	.34	.37	.39	5.4	10	5.4	.88	.20	.19	.03
5	.15	.95	.32	.38	.38	6.0	12	5.0	.62	.18	.12	.03
6	.15	.90	.26	.39	.38	11	24	4.5	.50	.16	.09	.11
7	.18	.84	.98	.40	.38	10	13	4.2	.40	.16	.09	.19
8	.19	.80	5.0	.43	.37	8.6	9.2	3.9	.50	.18	.10	.12
9	1.7	.94	5.9	.46	.37	7.4	8.2	3.8	.60	.34	.15	.06
10	1.2	1.1	1.5	.48	.37	20	7.1	40	.80	.37	.18	.05
11	1.2	.92	.93	.49	.36	35	7.3	30	1.1	.26	.18	.05
12	.70	.82	.83	.50	.36	50	6.8	15	1.3	.18	.19	.04
13	.48	.75	.74	.47	.38	70	6.8	9.0	.70	.16	.18	.04
14	.42	.70	.70	.47	.40	176	6.2	7.0	.47	.18	.14	.12
15	.32	.66	.58	.48	.42	57	5.5	5.0	.43	.16	.13	.18
16	.28	.62	.51	.47	.41	37	4.9	4.2	.39	.11	.09	.16
17	.26	.58	.51	.46	.40	28	4.7	3.7	.38	.10	.06	.34
18	.24	.55	.62	.45	.41	13	4.1	3.2	.37	.10	.06	.51
19	.22	.52	.66	.44	.41	9.2	3.4	2.8	.84	.10	.06	.39
20	.26	.50	.66	.43	.41	11	3.1	2.5	.88	.06	.04	.98
21	5.2	.47	.70	.43	.40	13	2.8	2.2	.76	.05	.04	3.8
22	7.1	.45	.74	.42	.40	14	2.7	2.0	.85	.05	.05	5.8
23	3.5	.45	.66	.41	.39	31	10	1.7	.90	.03	.14	3.4
24	2.0	.45	.62	.41	.38	52	64	1.5	.53	.03	.16	1.7
25	1.7	.45	.51	.40	1.0	46	81	1.2	.35	.05	.12	1.3
26	1.6	.45	.45	.42	3.0	23	39	1.0	.80	.26	.07	3.4
27	1.5	.55	.42	.43	9.0	30	20	.70	1.7	.26	.05	36
28	1.4	.66	.40	.43	8.8	34	13	.52	.70	.14	.04	16
29	1.4	.93	.37	.42	---	51	10	.53	.50	.09	.03	6.8
30	1.3	1.4	.38	.42	---	38	8.0	.54	.38	.07	.03	3.4
31	1.2	---	.38	.41	---	24	---	.42	---	.07	.03	---
TOTAL	36.59	22.91	28.68	13.31	31.16	932.8	424.8	180.51	20.92	4.95	3.61	85.09
MEAN	1.18	.76	.93	.43	1.11	30.1	14.2	5.82	.70	.16	.12	2.84
MAX	7.1	1.4	5.9	.50	9.0	176	81	40	1.7	.37	.39	36
MIN	.15	.45	.26	.36	.36	5.4	2.7	.42	.35	.03	.03	.03
CFSM	.24	.15	.19	.09	.22	6.06	2.86	1.17	.14	.03	.02	.57
IN.	.27	.17	.21	.10	.23	6.98	3.18	1.35	.16	.04	.03	.64

CAL YR 1976 TOTAL 2057.18 MEAN 5.62 MAX 54 MIN .04 CFSM 1.13 IN 15.39
WTR YR 1977 TOTAL 1785.33 MEAN 4.89 MAX 176 MIN .03 CFSM .98 IN 13.36

NOTE.--No gage-height record Oct. 23 to Nov. 21, Jan. 16-26, Feb. 7 to Mar. 8, Apr. 26 to May 30, June 6 to July 6.

01075000 PEMIGEWASSET RIVER AT WOODSTOCK, NH

LOCATION.--Lat 43°58'34", long 71°40'48", Grafton County, Hydrologic Unit 01070001, on right bank 0.2 mi (0.3 km) east of Woodstock and 0.7 mi (1.1 km) upstream from Eastman Brook.

DRAINAGE AREA.--193 mi^2 (500 km^2).

PERIOD OF RECORD.--Discharge: October 1939 to September 1977 (discontinued).
Water-quality records: Water years 1970-73.

REVISED RECORDS.--WSP 1701: 1942(M).

GAGE.--Water-stage recorder. Altitude of gage is 615 ft (187 m), from topographic map.

REMARKS.--Records good except those for winter period, which are fair. Some diurnal fluctuation caused by power-plant upstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--38 years, 514 ft^3/s (14.56 m^3/s), 36.17 in/yr (919 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 47,000 ft^3/s (1,330 m^3/s) Oct. 24, 1959, gage height, 16.13 ft (4.916 m), from rating curve extended above 14,000 ft^3/s (396 m^3/s) on basis of contracted-opening measurement of peak flow; minimum daily, 42 ft^3/s (1.19 m^3/s) Feb. 11, 1948.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 7,100 ft^3/s (201 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 9	2000	8400	238	8.59	2.618	Oct. 21	0700	*10900	309	*9.29	2.832

Minimum discharge, 62 ft^3/s (1.76 m^3/s) Aug. 10, Sept. 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	355	1000	189	165	90	90	2430	956	253	348	75	95
2	312	698	170	160	90	82	1370	1180	455	279	84	90
3	282	602	150	160	90	76	1810	1270	578	233	75	86
4	236	626	140	155	88	70	1560	949	397	210	68	79
5	199	722	135	155	88	78	1250	914	330	197	66	75
6	232	1010	258	155	88	85	1350	1250	340	170	69	81
7	229	716	1100	150	86	78	928	1270	584	149	75	73
8	460	596	1410	145	86	72	773	893	900	156	73	68
9	3430	510	638	145	84	80	658	730	556	221	73	64
10	2480	475	515	140	84	130	595	658	440	185	78	66
11	1030	450	551	140	82	350	539	623	393	142	118	68
12	746	400	420	140	80	500	786	584	397	133	97	64
13	626	380	365	135	80	1000	1580	799	406	214	92	86
14	770	360	405	130	78	5240	3460	687	353	189	197	2310
15	716	345	450	130	78	2600	1570	561	325	142	496	964
16	980	326	460	125	76	1810	1150	550	274	115	189	485
17	704	312	420	125	76	1340	1200	693	249	110	1100	411
18	584	299	340	120	74	872	1440	921	245	142	506	475
19	510	290	290	115	74	699	1670	773	253	118	279	366
20	575	282	326	110	72	578	1780	646	225	97	202	340
21	5590	239	345	105	72	506	2350	584	210	121	163	748
22	2140	246	250	105	70	450	3070	550	237	353	202	717
23	1190	246	230	105	70	430	3680	512	214	159	315	460
24	929	236	220	100	68	384	3110	455	185	115	202	375
25	759	229	220	100	78	353	2000	406	185	110	214	330
26	575	218	200	98	76	344	1460	366	517	149	170	832
27	803	236	180	98	84	340	1230	320	528	110	139	2210
28	697	335	170	96	110	416	1240	311	325	90	124	872
29	644	360	190	94	---	1130	1110	406	325	81	112	859
30	564	262	170	94	---	2550	971	311	618	79	102	717
31	650	---	165	92	---	4150	---	266	---	81	95	---
TOTAL	29997	13006	11072	3887	2272	26883	48120	21394	11297	4998	5850	14466
MEAN	968	434	357	125	81.1	867	1604	690	377	161	189	482
MAX	5590	1010	1410	165	110	5240	3680	1270	900	353	1100	2310
MIN	199	218	135	92	68	70	539	266	185	79	66	64
CFSM	5.02	2.25	1.85	.65	.42	4.49	8.31	3.58	1.95	.83	.98	2.50
IN.	5.78	2.51	2.13	.75	.44	5.18	9.27	4.12	2.18	.96	1.13	2.79

CAL YR 1976 TOTAL 241478 MEAN 660 MAX 5590 MIN 129 CFSM 3.42 IN 46.54
WTR YR 1977 TOTAL 193242 MEAN 529 MAX 5590 MIN 64 CFSM 2.74 IN 37.25

01075800 STEVENS BROOK NEAR WENTWORTH, NH

LOCATION.--Lat 43°50'12", long 71°53'07", Grafton County, Hydrologic Unit 01070001, on left bank 150 ft (46 m) upstream from highway bridge, 0.2 mi (0.3 km) upstream from mouth, and 2.5 mi (4.0 km) southeast of Wentworth.

DRAINAGE AREA.--2.94 mi^2 (7.61 km^2).

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

GAGE.--Water-stage recorder. Altitude of gage is 595 ft (181 m), from topographic map.

REMARKS.--Records good except those for winter period, which are fair, and those below 0.1 ft^3/s (0.003 m^3/s), which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--14 years, 4.68 ft^3/s (0.133 m^3/s), 21.62 in/yr (549 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,120 ft^3/s (31.7 m^3/s) June 30, 1973, gage height, 6.36 ft (1.939 m), from rating curve extended above 120 ft^3/s (3.40 m^3/s); minimum, 0.01 ft^3/s (<0.001 m^3/s) several days in 1963-65, 1971, 1975, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 90 ft^3/s (2.55 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 21	0400	193	5.47	3.54	1.079	Mar. 13	2145	a*334	9.46	*4.14	1.262

a From rating curve extended above 120 ft^3/s (3.40 m^3/s).

Minimum discharge, 0.01 ft^3/s (<0.001 m^3/s) Aug. 4, 5, 10, Sept. 1-3, 6-13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	14	3.1	.74	.57	1.7	22	5.3	.64	1.0	.09	.03
2	1.4	7.7	2.7	.72	.57	1.5	13	5.1	1.3	.66	.21	.01
3	1.4	7.0	2.4	.70	.57	1.4	19	4.9	1.3	.52	.15	.03
4	1.3	11	2.1	.68	.57	1.3	13	4.2	.89	.42	.06	.03
5	1.2	12	1.9	.67	.57	1.2	14	3.7	.72	.36	.06	.03
6	1.1	19	2.0	.66	.57	2.0	14	3.6	.72	.30	.15	.03
7	1.1	9.1	6.0	.64	.57	1.8	9.7	3.1	7.5	.28	.13	.02
8	1.7	6.5	19	.63	.57	1.6	5.5	3.0	8.3	.36	.09	.01
9	31	4.7	8.0	.62	.57	1.3	6.1	2.9	4.0	.49	.11	.02
10	12	4.3	4.0	.61	.57	3.5	6.1	4.9	2.5	.44	.06	.01
11	4.5	3.8	2.6	.60	.57	13	5.7	4.2	1.8	.36	.21	.01
12	2.9	3.7	2.0	.60	.57	25	7.7	3.4	1.7	.32	.17	.01
13	2.6	3.4	1.7	.60	.57	56	15	3.0	1.5	.38	.15	.08
14	3.4	3.3	1.6	.60	.57	114	18	2.6	1.2	.32	.38	3.0
15	3.1	3.1	1.5	.59	.57	40	8.3	2.3	.92	.23	.28	1.7
16	2.6	3.0	1.4	.59	.60	30	6.8	2.1	.72	.19	.23	.72
17	2.6	2.9	1.3	.58	.62	18	6.8	1.8	.64	.17	.56	.72
18	2.4	2.9	1.2	.58	.64	11	7.7	1.6	.61	.15	.32	.79
19	2.3	2.9	1.2	.58	.65	10	7.7	1.8	.59	.11	.21	.69
20	2.8	2.9	1.1	.57	.66	8.3	7.2	1.5	.56	.11	.13	.98
21	82	2.8	1.1	.57	.65	6.8	7.0	1.2	.44	.19	.10	7.0
22	21	2.8	1.0	.56	.64	6.1	7.2	.98	.44	.23	.19	4.0
23	11	2.6	.98	.56	.63	6.1	17	.85	.44	.15	.26	1.8
24	8.6	2.5	.94	.56	.61	5.1	29	.72	.44	.11	.19	1.0
25	11	2.5	.91	.56	.60	4.3	21	.66	.47	.17	.17	.75
26	16	2.5	.88	.57	.94	4.5	12	.56	.92	.21	.17	1.8
27	8.3	2.6	.85	.57	1.5	5.7	9.7	.52	1.2	.13	.15	6.3
28	5.9	3.1	.82	.57	2.1	8.0	8.3	.66	.82	.09	.13	2.4
29	6.1	3.7	.80	.57	---	43	6.8	.85	.98	.04	.09	1.7
30	5.5	3.1	.78	.57	---	59	5.9	.69	2.0	.04	.04	1.7
31	13	---	.76	.57	---	52	---	.59	---	.06	.06	---
TOTAL	271.4	155.4	76.62	18.79	19.39	543.2	337.2	73.28	46.26	8.59	5.30	37.37
MEAN	8.75	5.18	2.47	.61	.69	17.5	11.2	2.36	1.54	.28	.17	1.25
MAX	82	19	19	.74	2.1	114	29	5.3	8.3	1.0	.56	7.0
MIN	1.1	2.5	.76	.56	.57	1.2	5.5	.52	.44	.04	.04	.01
CFSM	2.98	1.76	.84	.21	.24	5.95	3.81	.80	.52	.10	.06	.43
IN.	3.43	1.97	.97	.24	.25	6.87	4.27	.93	.59	.11	.07	.47

CAL YR 1976 TOTAL 2021.51 MEAN 5.52 MAX 83 MIN .32 CFSM 1.88 IN 25.57
WTR YR 1977 TOTAL 1592.80 MEAN 4.36 MAX 114 MIN .01 CFSM 1.48 IN 20.15

01076000 BAKER RIVER NEAR RUMNEY, NH

LOCATION.--Lat 43°47'46", long 71°50'42", Grafton County, Hydrologic Unit 01070001, on right bank 200 ft (60 m) upstream from small right-bank tributary, 0.3 mi (0.5 km) upstream from Halls Brook, and 1.8 mi (2.9 km) southwest of Rumney.

DRAINAGE AREA.--143 mi^2 (370 km^2).

PERIOD OF RECORD.--Discharge: October 1928 to September 1977 (discontinued). October 1928 monthly discharge only, published in WSP 1301.
Water-quality records: Water years 1953-54.

REVISED RECORDS.--WSP 726: Drainage area. WSP 781: 1934(M). WSP 1231: 1929-33(M), 1934.

GAGE.--Water-stage recorder. Concrete control Sept. 10, 1938 to June 12, 1976. Altitude of gage is 495 ft (151 m), from topographic map.

REMARKS.--Records poor. High flow slightly affected by retarding reservoirs since 1968. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--49 years, 254 ft^3/s (7.193 m^3/s), 24.12 in/yr (613 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,400 ft^3/s (606 m^3/s) June 15, 1942, gage height, 15.50 ft (4.724 m), from rating curve extended above 3,800 ft^3/s (108 m^3/s) on basis of slope-area measurements at gage heights 13.03 ft (3.972 m), 14.49 ft (4.417 m), and 15.50 ft (4.924 m); minimum, 6.5 ft^3/s (0.18 m^3/s) Dec. 4, 1947, caused by ice conditions upstream.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since valley was settled about 1766, 25,900 ft^3/s (733 m^3/s) Nov. 3, 1927, gage height, 17.4 ft (5.30 m), from floodmarks, from rating curve extended above 3,800 ft^3/s (108 m^3/s) as described above.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,600 ft^3/s (102 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 14	0430	*5150	146	*8.46	2.579						

Minimum discharge not determined; minimum daily, 28 ft^3/s (0.79 m^3/s) Sept. 11, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	135	360	142	58	52	95	1770	377	53	160	38	32
2	117	310	120	58	52	85	1210	372	91	107	37	32
3	105	280	110	58	52	75	1400	377	149	79	37	31
4	96	270	90	54	52	85	1010	312	107	65	36	30
5	88	320	80	54	52	100	1080	283	78	59	36	30
6	83	360	78	54	50	110	914	295	73	53	36	30
7	80	300	325	54	50	80	712	287	367	51	36	30
8	94	250	593	54	50	70	565	229	427	51	36	29
9	980	308	565	54	50	120	495	208	263	61	35	29
10	950	279	738	54	50	200	449	218	165	65	35	29
11	477	255	515	55	45	350	423	222	131	50	36	28
12	334	215	279	55	45	500	757	201	117	47	38	28
13	259	205	176	55	45	1000	1100	188	109	51	39	40
14	279	192	86	55	45	3990	1400	170	91	68	39	275
15	283	185	90	56	45	2340	500	149	80	53	71	198
16	259	176	96	56	45	1830	360	140	73	46	43	107
17	225	170	98	56	45	1530	400	135	65	44	69	93
18	198	165	90	56	45	1140	450	149	61	44	57	107
19	176	163	80	56	45	879	491	146	60	44	46	87
20	182	163	82	56	45	693	495	131	58	43	37	82
21	1750	149	80	56	45	570	495	115	54	43	33	299
22	700	146	78	56	45	481	525	100	56	42	33	283
23	600	146	74	56	45	436	804	88	55	42	34	153
24	450	142	70	56	45	377	1410	79	53	42	38	115
25	350	140	66	56	45	316	1250	73	53	42	48	99
26	270	135	64	52	80	316	879	65	135	42	46	115
27	320	138	62	52	92	316	706	58	279	41	41	414
28	310	163	60	52	100	436	593	59	149	40	36	211
29	300	192	60	52	---	1300	495	88	102	38	35	153
30	280	170	60	52	---	2160	427	74	334	38	34	138
31	320	---	60	52	---	2910	---	62	---	38	33	---
TOTAL	11050	6447	5167	1700	1457	24890	23565	5450	3888	1689	1248	3327
MEAN	356	215	167	54.8	52.0	803	786	176	130	54.5	40.3	111
MAX	1750	360	738	58	100	3990	1770	377	427	160	71	414
MIN	80	135	60	52	45	70	360	58	53	38	33	28
CFSM	2.49	1.50	1.17	.38	.36	5.62	5.50	1.23	.91	.38	.28	.78
IN.	2.87	1.68	1.34	.44	.38	6.47	6.13	1.42	1.01	.44	.32	.87

CAL YR 1976 TOTAL 111184 MEAN 304 MAX 3080 MIN 47 CFSM 2.13 IN 28.92
WTR YR 1977 TOTAL 89878 MEAN 246 MAX 3990 MIN 28 CFSM 1.72 IN 23.38

01076500 PEMIGEWASSET RIVER AT PLYMOUTH, NH

LOCATION.--Lat 43°45'33", long 71°41'10", Grafton County, Hydrologic Unit 01070001, on right bank 150 ft (46 m) downstream from bridge at Plymouth and 0.3 mi (0.5 km) downstream from Baker River.
DRAINAGE AREA.--622 mi^2 (1,611 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1903 to current year. Records for April 1886 to September 1903, published in WSP 124, are unreliable and should not be used.
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 (139.315 m) above mean sea level. Prior to Jan. 1, 1910, nonrecording gage at sites 150 ft (46 m) and 200 ft (60 m) upstream at present datum or datum 1.11 ft (0.338 m) lower. Jan. 1, 1910, to Sept. 30, 1926, nonrecording gage at site 200 ft (60 m) upstream at present datum.
REMARKS.--Records good except those for winter period, which are fair. Some diurnal fluctuation during period 1940-52 caused by powerplants upstream. Several observations of water temperature were made during the year.
AVERAGE DISCHARGE.--74 years, 1,356 ft^3/s (38.40 m^3/s), 29.61 in/yr (752 mm/yr).
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 65,400 ft^3/s (1,850 m^3/s) Mar. 19, 1936, gage height, 29.0 ft (8.84 m), from floodmarks, from rating curve extended above 43,000 ft^3/s (1,220 m^3/s) on basis of computations of flow over dam at gage heights 23.0 ft (7.01 m), 27.4 ft (8.35 m), and 29.0 ft (8.84 m); minimum, 39 ft^3/s (1.10 m^3/s) Oct. 1, 3, 4, 1948; minimum daily, 45 ft^3/s (1.27 m^3/s) Sept. 20, 1923.
EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 12,600 ft^3/s (357 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 10	0200	14700	416	9.95	3.033	Mar. 14	-	*22000	623	a*20.06	6.114
Oct. 21	1400	20200	572	12.19	3.716	Mar. 31	2000	14500	411	10.02	3.054

a Ice jam.

Minimum discharge, 138 ft^3/s (3.90 m^3/s) Sept. 9-13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	767	3420	600	520	355	500	9380	2170	504	859	190	190
2	670	2270	580	520	350	450	5040	2240	859	631	212	190
3	601	1830	540	520	345	410	5700	2530	1420	514	201	180
4	547	1900	500	510	345	380	5750	2060	975	438	180	170
5	496	2190	480	510	340	420	4080	1860	727	403	170	160
6	467	3190	470	490	340	600	4660	2060	666	369	165	160
7	458	2580	1000	480	330	560	3380	2340	1280	330	180	160
8	506	2020	3000	470	330	520	2740	1830	2200	323	185	151
9	4090	1680	2000	460	320	480	2200	1570	1550	411	175	142
10	9200	1460	1000	460	310	550	2000	1530	1120	420	180	138
11	3360	1350	1400	455	300	1000	1830	1470	945	346	242	142
12	2230	1130	1100	450	290	2500	1860	1370	873	308	254	138
13	1740	1080	900	450	300	4000	3510	1450	859	411	230	151
14	1770	1000	700	450	320	15000	7020	1460	765	565	218	2870
15	1870	945	750	445	330	17000	4310	1220	765	403	655	2360
16	1920	916	900	440	310	10000	3050	1130	620	323	420	1070
17	1660	860	850	430	290	8020	2820	1160	544	280	1300	778
18	1320	819	800	420	280	3930	3040	1460	524	280	1120	901
19	1080	793	750	410	290	3110	3240	1440	565	274	555	727
20	1070	793	650	405	310	2520	3370	1270	534	242	394	620
21	13100	682	730	400	300	2260	3510	1090	475	224	323	1640
22	7230	730	750	400	295	1960	4690	991	465	447	301	1920
23	3690	682	620	400	280	1840	6060	930	456	361	484	1190
24	2720	646	600	395	270	1640	7420	832	411	261	394	870
25	2490	612	680	390	300	1450	6310	740	386	236	338	724
26	3230	579	580	390	370	1340	4230	666	752	274	316	808
27	2780	590	560	380	400	1350	3350	598	1240	261	274	4430
28	2160	705	530	380	450	1690	3000	555	791	218	248	2160
29	1840	874	500	380	---	3840	2730	752	598	201	230	1610
30	1630	780	490	370	---	7860	2340	643	1310	190	212	1470
31	2010	---	480	360	---	13500	---	544	---	185	196	---
TOTAL	78702	39106	25490	13540	9050	110680	122620	41961	25179	10988	10542	28220
MEAN	2539	1304	822	437	323	3570	4087	1354	839	354	340	941
MAX	13100	3420	3000	520	450	17000	9380	2530	2200	859	1300	4430
MIN	458	579	470	360	270	380	1830	544	386	185	165	138
CFSM	4.08	2.10	1.32	.70	.52	5.74	6.57	2.18	1.35	.57	.55	1.51
IN.	4.71	2.34	1.52	.81	.54	6.62	7.33	2.51	1.51	.66	.63	1.69

CAL YR 1976 TOTAL 665431 MEAN 1818 MAX 20600 MIN 270 CFSM 2.92 IN 39.80
WTR YR 1977 TOTAL 516078 MEAN 1414 MAX 17000 MIN 138 CFSM 2.27 IN 30.87

01076500 PEMIGEWASSET RIVER AT PLYMOUTH, NH--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1953, 1967-74, 1976 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	COD IN BOTTOM MATERIAL (MG/KG)
MAY											
26...	0845	666	58	6.8	17.0	19.0	0	1	9.3	23	2700
JUN											
08...	0900	2520	--	--	--	--	--	--	--	--	--
SEP											
27...	0845	5920	34	6.7	14.5	12.0	30	2	8.8	20	--

DATE	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM .7UM-MF (COL./ 100 ML)	FECAL STREPTOCOCCI KF AGAR (COL. PER 100 ML)	TOTAL CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)
MAY										
26...	42	B2	B13	3.1	.7	11	0	9	2.8	5.5
JUN										
08...	--	--	--	--	--	--	--	--	--	--
SEP										
27...	290	190	94	2.3	.5	6	0	5	1.9	7.7

DATE	DISSOLVED CHLORIDE (CL) (MG/L)	SUSPENDED SOLIDS (MG/L)	TOTAL RESIDUE (MG/L)	LOSS ON IGNITION IN BOTTOM MATERIAL (MG/KG)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	TOTAL ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
MAY										
26...	7.2	2	35	7870	.21	.00	.01	.01	.22	.00
JUN										
08...	--	--	--	--	--	--	--	--	--	--
SEP										
27...	3.2	24	52	--	.07	.00	.23	.23	.30	.08

DATE	TOTAL CHROMIUM (CR) (UG/L)	TOTAL CHROMIUM IN BOTTOM MATERIAL (UG/G)	PHENOLS (UG/L)	OIL AND GREASE (MG/L)	CHLOROPHYLL A (UG/L)	CHLOROPHYLL B (UG/L)	TOTAL PCB (UG/L)	POLYCHLORINATED NAPHTHALENES (UG/L)	TOTAL ALDRIN (UG/L)	TOTAL CHLORDANE (UG/L)
MAY										
26...	20	<10	0	2	.000	.000	.0	.00	.00	.0
JUN										
08...	--	--	--	--	--	--	.0	.00	.00	.0
SEP										
27...	40	--	4	0	.929	.000	.0	.00	.00	.0

DATE	TOTAL DDD (UG/L)	TOTAL DDE (UG/L)	TOTAL DDT (UG/L)	TOTAL DIELDRIN (UG/L)	TOTAL ENDOSULFAN (UG/L)	TOTAL ENDRIN (UG/L)	TOTAL HEPTACHLOR (UG/L)	TOTAL HEPTACHLOR EPOXIDE (UG/L)	TOTAL LINDANE (UG/L)	TOTAL TOXAPHENE (UG/L)
MAY										
26...	.00	.00	.00	.00	.00	.00	.00	.00	.00	0
JUN										
08...	.00	.00	.00	.00	.00	.00	.00	.00	.00	0
SEP										
27...	.00	.00	.00	.00	.00	.00	.00	.00	.00	0

B, NON-IDEAL COLONY COUNT.

01077000 SQUAM RIVER AT ASHLAND, NH

LOCATION.--Lat 43°42'19", long 71°37'49", Grafton County, Hydrologic Unit 01070001, on right bank 200 ft (60 m) upstream from highway bridge, 0.7 mi (1.1 km) north of Ashland, and 1.4 mi (2.3 km) downstream from Little Squam Lake.

DRAINAGE AREA.--57.6 mi^2 (149.2 km^2).

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 545 ft (166 m), from topographic map.

REMARKS.--Records excellent. Flow completely regulated by Squam and Little Squam Lakes. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--38 years, 88.4 ft^3/s (2.503 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,090 ft^3/s (30.9 m^3/s) July 4, 1973, gage height, 14.29 ft (4.356 m); minimum daily, 1.0 ft^3/s (0.029 m^3/s) July 4-7, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 610 ft^3/s (17.3 m^3/s) Apr. 5, gage height, 12.25 ft (3.734 m); minimum daily, 8.4 ft^3/s (0.24 m^3/s) July 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	101	111	109	105	62	157	77	50	69	59	59
2	61	111	111	109	105	62	167	77	50	69	59	59
3	61	114	111	109	105	62	169	77	50	69	59	59
4	61	115	111	109	105	62	268	77	49	69	59	59
5	60	115	111	109	105	63	479	77	49	39	59	59
6	60	115	111	109	104	63	576	77	50	8.7	59	59
7	60	115	112	109	104	63	561	77	50	8.7	59	59
8	60	114	112	109	103	63	426	77	49	8.7	59	59
9	61	113	111	109	104	63	301	77	49	8.9	59	59
10	60	113	111	109	81	63	299	77	49	8.7	59	59
11	60	113	111	109	63	63	299	76	49	8.4	59	59
12	60	113	111	108	63	64	196	76	50	8.7	59	59
13	74	113	111	107	63	68	116	76	52	30	59	59
14	82	113	111	107	63	110	115	76	59	66	59	59
15	82	113	111	107	63	139	115	76	68	66	59	59
16	82	113	111	107	63	140	115	75	68	66	59	59
17	82	113	111	107	63	139	115	63	69	66	59	59
18	81	113	111	107	63	139	115	54	71	66	59	59
19	81	113	111	107	62	140	99	55	71	66	59	59
20	82	113	111	107	62	139	74	54	70	66	59	59
21	85	113	111	107	62	140	74	54	69	64	59	59
22	97	113	110	107	62	140	73	54	69	60	58	59
23	103	113	110	107	62	140	74	53	69	59	57	59
24	103	112	109	107	62	140	124	53	69	59	57	59
25	103	112	109	107	62	139	171	53	69	59	58	59
26	103	111	109	107	63	139	141	53	69	59	59	59
27	103	111	109	106	62	140	117	53	69	59	59	60
28	103	111	109	105	63	140	117	53	69	59	59	60
29	103	111	109	106	---	143	93	51	69	59	59	60
30	103	111	109	105	---	144	78	50	69	59	59	60
31	104	---	109	105	---	145	---	50	---	59	59	---
TOTAL	2481	3374	3425	3332	2147	3317	5824	2028	1812	1522.8	1823	1774
MEAN	80.0	112	110	107	76.7	107	194	65.4	60.4	49.1	58.8	59.1
MAX	104	115	112	109	105	145	576	77	71	69	59	60
MIN	60	101	109	105	62	62	73	50	49	8.4	57	59

CAL YR 1976 TOTAL 43161.4 MEAN 118 MAX 620 MIN 1.0
WTR YR 1977 TOTAL 32859.8 MEAN 90.0 MAX 576 MIN 8.4

01078000 SMITH RIVER NEAR BRISTOL, NH

LOCATION.--Lat 43°34'04", long 71°44'54", Merrimack County, Hydrologic Unit 01070001, on right bank in Hill, 1.5 mi (2.4 km) upstream from mouth, and 1.8 mi (2.9 km) southwest of Bristol.

DRAINAGE AREA.--85.8 mi^2 (222.2 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1918 to current year.

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 (137.099 m) above mean sea level (levels by Corps of Engineers). Prior to Nov. 25, 1933, nonrecording gage at site 1.5 mi (2.4 km) upstream at different datum.

REMARKS.--Record good except those for winter period, which are fair. Prior to 1954, some diurnal fluctuation caused by small mill upstream; greater fluctuation prior to 1941. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--59 years, 143 ft^3/s (4.050 m^3/s), 22.63 in/yr (575 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,100 ft^3/s (229 m^3/s) Mar. 19, 1936, gage height, 16.09 ft (4.904 m), from floodmarks, from rating curve extended above 2,700 ft^3/s (76.5 m^3/s) on basis of contracted-opening measurement of peak flow; minimum daily, 2.7 ft^3/s (0.076 m^3/s) Aug. 2, 1933.
Maximum stage since at least 1885, that of Mar. 19, 1936.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,150 ft^3/s (32.6 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 15	0130	*2590	73.3	*8.11	2.472	Mar. 31	1830	1560	44.2	6.38	1.945

Minimum discharge, 6.5 ft^3/s (0.18 m^3/s) Sept. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	243	56	39	35	92	1370	182	32	67	18	10
2	42	202	63	39	35	82	910	162	42	50	74	9.8
3	40	164	50	39	34	73	785	157	87	40	55	9.8
4	35	170	48	38	34	64	765	140	67	34	35	8.9
5	32	182	47	38	33	77	645	129	51	31	29	8.7
6	31	270	45	38	33	104	560	126	48	27	29	8.9
7	31	258	105	37	32	111	484	118	118	25	31	8.4
8	34	211	315	37	32	102	370	105	200	28	28	7.8
9	141	180	240	37	32	89	282	101	161	40	25	7.4
10	300	160	170	37	32	114	248	160	121	39	23	7.8
11	191	143	143	37	31	193	230	186	107	31	26	7.8
12	127	120	121	36	31	306	243	143	97	34	27	7.1
13	95	115	98	36	32	760	354	118	80	64	32	8.4
14	88	112	86	36	34	2300	439	101	67	61	33	27
15	91	109	74	36	37	2310	410	91	72	43	32	33
16	78	105	70	36	36	1450	303	82	67	33	27	25
17	67	100	65	36	36	1020	250	75	53	29	24	24
18	61	98	61	36	35	670	220	70	46	26	21	25
19	57	100	58	36	35	457	197	93	67	23	19	25
20	77	102	55	36	34	343	174	105	65	20	18	48
21	685	90	53	36	33	300	159	82	54	23	16	104
22	560	80	50	36	34	253	146	69	48	32	15	79
23	343	80	48	37	35	233	264	60	43	22	16	53
24	225	76	46	37	36	216	835	54	39	19	15	42
25	216	74	45	37	40	186	935	50	35	21	15	37
26	270	70	44	37	64	172	710	44	54	30	14	61
27	267	71	43	37	73	184	439	39	121	26	13	132
28	204	74	42	36	93	235	309	36	81	21	13	107
29	168	92	41	36	---	555	245	37	57	18	12	77
30	146	87	40	35	---	1010	208	38	76	17	11	61
31	172	---	40	35	---	1430	---	35	---	16	10	---
TOTAL	4920	3938	2462	1139	1081	15491	13489	2988	2256	990	756	1070.8
MEAN	159	131	79.4	36.7	38.6	500	450	96.4	75.2	31.9	24.4	35.7
MAX	685	270	315	39	93	2310	1370	186	200	67	74	132
MIN	31	70	40	35	31	64	146	35	32	16	10	7.1
CFSM	1.85	1.53	.93	.43	.45	5.83	5.25	1.12	.88	.37	.28	.42
IN.	2.13	1.71	1.07	.49	.47	6.72	5.85	1.30	.98	.43	.33	.46

CAL YR 1976 TOTAL 65583.0 MEAN 179 MAX 1940 MIN 23 CFSM 2.09 IN 28.43
WTR YR 1977 TOTAL 50580.8 MEAN 139 MAX 2310 MIN 7.1 CFSM 1.62 IN 21.93

01078000 SMITH RIVER NEAR BRISTOL, NH--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1957, 1976 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	COD IN BOTTOM MATERIAL (MG/KG)
MAY											
26...	0945	45	59	7.2	16.0	17.0	0	1	8.7	9	2600
JUN											
08...	--	200	--	--	--	--	--	--	--	--	--
SEP											
27...	1000	123	55	5.8	19.5	12.0	30	2	9.2	25	--

DATE	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM .7UM-MF (COL./ 100 ML)	FECAL STREPTOCOCCI KF AGAR (COL. PER 100 ML)	TOTAL CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)
MAY										
26...	96	23	20	3.2	.8	12	0	10	1.2	6.1
JUN										
08...	--	--	--	--	--	--	--	--	--	--
SEP										
27...	170	94	100	3.5	.7	11	0	9	28	8.6

DATE	DISSOLVED CHLORIDE (CL) (MG/L)	SUSPENDED SOLIDS (MG/L)	TOTAL RESIDUE (MG/L)	LOSS ON IGNITION IN BOTTOM MATERIAL (MG/KG)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	TOTAL ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
MAY										
26...	7.2	0	52	3900	.07	.01	.18	.19	.26	.01
JUN										
08...	--	--	--	--	--	--	--	--	--	--
SEP										
27...	4.6	20	64	--	.06	.00	.10	.10	.16	.02

DATE	TOTAL CHROMIUM (CR) (UG/L)	TOTAL CHROMIUM IN BOTTOM MATERIAL (UG/G)	PHENOLS (UG/L)	OIL AND GREASE (MG/L)	CHLOROPHYLL A (UG/L)	CHLOROPHYLL B (UG/L)	TOTAL PCB (UG/L)	POLYCHLORINATED NAPHTHALENES (UG/L)	TOTAL ALDRIN (UG/L)	TOTAL CHLORDANE (UG/L)
MAY										
26...	10	<10	0	3	--	--	--	--	--	--
JUN										
08...	--	--	--	--	--	--	.0	.00	.00	.0
SEP										
27...	<10	--	3	0	1.18	.000	.0	.00	.00	.0

DATE	TOTAL DDD (UG/L)	TOTAL DDE (UG/L)	TOTAL DDT (UG/L)	TOTAL DIELDRIN (UG/L)	TOTAL ENDOSULFAN (UG/L)	TOTAL ENDRIN (UG/L)	TOTAL HEPTACHLOR (UG/L)	TOTAL HEPTACHLOR EPOXIDE (UG/L)	TOTAL LINDANE (UG/L)	TOTAL TOXAPHENE (UG/L)
MAY										
26...	--	--	--	--	--	--	--	--	--	--
JUN										
08...	.00	.00	.00	.00	.00	.00	.00	.00	.00	0
SEP										
27...	.00	.00	.00	.00	.00	.00	.00	.00	.00	0

01080000 LAKE WINNIPESAUKEE AT WEIRS BEACH, NH

LOCATION.--Lat 43°36'27", long 71°27'30", Belknap County, Hydrologic Unit 01070002, 1,300 ft (400 m) north of highway bridge at Weirs Beach.

DRAINAGE AREA.--363 mi^2 (940 km^2) 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."

GAGE.--Water-stage recorder. Datum of gage is 500.00 ft (152.400 m) above mean sea level. Prior to November 1937, nonrecording gage at lake outlet at Lakeport at datum 0.53 ft (0.162 m) higher. Nov. 24, 1937, to Nov. 7, 1965, water-stage recorder at site 500 ft (150 m) south at present datum.

REMARKS.--Lake used for recreation and conservation for development of water power. Usable capacity, 7,220,000,000 ft^3 (204,000,000 m^3) between elevations 500.65 ft (152.598 m) and 504.32 ft (153.717 m) above mean sea level. 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, 5.86 ft (1.786 m) May 22, 23, 1954; minimum daily, 0.63 ft (0.192 m) Dec. 11, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum daily gage height, 4.51 ft (1.393 m) May 19-24; minimum daily, 2.40 ft (0.732 m) Feb. 24.

MEAN GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.37	3.48	3.42	3.37	2.94	2.45	4.27	4.32	4.45	4.42	4.00	3.62
2	3.35	3.50	3.44	3.36	2.90	2.45	4.29	4.32	4.47	4.38	4.05	3.60
3	3.33	3.52	3.49	3.35	2.90	2.45	4.34	4.32	4.47	4.35	4.04	3.59
4	3.32	3.53	3.49	3.34	2.87	2.47	4.34	4.33	4.46	4.33	4.02	3.57
5	3.30	3.56	3.51	3.32	2.85	2.57	4.35	4.35	4.45	4.30	4.03	3.55
6	3.30	3.54	3.52	3.31	2.80	2.58	4.37	4.36	4.46	4.26	4.05	3.52
7	3.28	3.59	3.46	3.32	2.76	2.58	4.35	4.35	4.47	4.26	4.05	3.50
8	3.28	3.57	3.42	3.32	2.74	2.58	4.33	4.37	4.46	4.27	4.05	3.48
9	3.33	3.54	3.43	3.32	2.72	2.59	4.29	4.40	4.46	4.26	4.00	3.45
10	3.30	3.57	3.38	3.33	2.68	2.61	4.26	4.48	4.47	4.25	4.00	3.43
11	3.30	3.55	3.41	3.37	2.66	2.63	4.22	4.51	4.48	4.23	4.00	3.37
12	3.30	3.54	3.40	3.35	2.64	2.67	4.18	4.54	4.49	4.26	4.00	3.35
13	3.28	3.52	3.47	3.33	2.64	2.80	4.15	4.55	4.50	4.30	4.00	3.35
14	3.25	3.52	3.42	3.32	2.64	3.25	4.09	4.54	4.50	4.27	4.00	3.42
15	3.25	3.52	3.42	3.32	2.60	3.50	4.05	4.55	4.50	4.27	3.98	3.42
16	3.22	3.51	3.42	3.29	2.58	3.67	4.00	4.55	4.50	4.26	3.97	3.41
17	3.20	3.51	3.42	3.27	2.55	3.78	3.99	4.55	4.49	4.25	3.95	3.42
18	3.15	3.50	3.42	3.24	2.52	3.88	3.95	4.56	4.50	4.23	3.90	3.40
19	3.14	3.49	3.42	3.24	2.50	3.95	3.94	4.57	4.53	4.21	3.90	3.40
20	3.15	3.45	3.42	3.20	2.48	4.00	3.94	4.57	4.51	4.19	3.87	3.45
21	3.38	3.44	3.44	3.20	2.47	4.03	3.92	4.57	4.51	4.19	3.85	3.46
22	3.40	3.42	3.45	3.17	2.45	4.06	3.92	4.57	4.48	4.17	3.84	3.50
23	3.40	3.42	3.46	3.15	2.42	4.13	4.00	4.57	4.48	4.13	3.81	3.49
24	3.42	3.41	3.44	3.14	2.40	4.12	4.12	4.57	4.48	4.10	3.79	3.48
25	3.48	3.42	3.44	3.13	2.46	4.10	4.20	4.55	4.46	4.11	3.75	3.45
26	3.48	3.42	3.43	3.10	2.46	4.09	4.24	4.51	4.48	4.08	3.73	3.47
27	3.46	3.42	3.41	3.07	2.45	4.08	4.28	4.50	4.49	4.05	3.70	3.55
28	3.46	3.44	3.42	3.05	2.45	4.08	4.28	4.50	4.47	4.05	3.69	3.57
29	3.45	3.43	3.42	3.04	---	4.10	4.28	4.48	4.46	4.02	3.68	3.56
30	3.47	3.42	3.42	3.00	---	4.15	4.30	4.46	4.42	4.01	3.65	3.55
31	3.50	---	3.40	2.98	---	4.25	---	4.45	---	3.98	3.65	---
MEAN	3.33	3.49	3.44	3.24	2.63	3.38	4.17	4.48	4.48	4.21	3.90	3.48
MAX	3.50	3.59	3.52	3.37	2.94	4.25	4.37	4.57	4.53	4.42	4.05	3.62
MIN	3.14	3.41	3.38	2.98	2.40	2.45	3.92	4.32	4.42	3.98	3.65	3.35
(†)	16860	16680	16580	15770	14760	18360	18460	18740	18680	17800	17100	16960
(‡)	+105	-69.4	-37.3	-302	-417	+1344	+38.6	+105	-23.1	+329	-261	-54.0

CAL YR 1976 MEAN 3.65 MAX 4.78 MIN 2.59 ‡+13.9
WTR YR 1977 MEAN 3.69 MAX 4.57 MIN 2.40 ‡+67.9

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

01080500 LAKE WINNIPESAUKEE OUTLET AT LAKEPORT, NH

LOCATION.--Lat 43°32'57", long 71°27'54", Belknap County, Hydrologic Unit 01070002, 100 ft (30 m) upstream from highway bridge across Paugus Bay at Lakeport.

DRAINAGE AREA.--363 mi^2 (940 km^2).

PERIOD OF RECORD.--Discharge: January 1860 to December 1911 (monthly gage heights only, published in WSP 301), June 1933 to current year.
Water-quality records: Water years 1954-55.

GAGE.--Water-stage recorder, Keeler deflection meter, and measuring flume. Datum of gage is 500.55 ft (152.568 m) above mean sea level, datum of 1929. January 1860 to December 1911, nonrecording gage at site 150 ft (46 m) downstream at same datum. June 1, 1933, to Sept. 30, 1936, nonrecording gage and continuous-recording current meter at present site and datum. Oct. 1, 1936, to May 23, 1944, discharge computed from flow over spillway and through gates and wheels at site 150 ft (46 m) downstream.

REMARKS.--Records good except those for period of no gage-height record, which are fair. Flow completely regulated by Winnipesaukee (station 01080000), Wentworth, Merrymeeting (Reservoirs in Merrimack River basin), and other lakes. Daily discharge computed from relation between discharge computed from flow over spillway of vane in measuring flume. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--44 years, 531 ft^3/s (15.04 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 2,890 ft^3/s (81.8 m^3/s) Mar. 31, 1936; no flow Sept. 29, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 2,390 ft^3/s (67.7 m^3/s) Apr. 5-7; minimum daily, 200 ft^3/s (5.66 m^3/s) May 4-7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	260	235	500	590	790	555	2380	520	250	555	235	270
2	260	235	580	605	790	400	2360	520	255	560	230	280
3	260	240	575	605	790	275	2380	340	255	570	230	280
4	260	240	570	605	790	275	2380	200	250	570	230	280
5	250	240	570	605	780	265	2390	200	250	565	230	280
6	250	240	575	605	775	265	2390	200	250	410	230	280
7	250	240	475	605	780	260	2390	200	250	260	230	285
8	250	240	235	590	780	255	2200	240	250	260	230	290
9	250	240	235	580	775	250	2200	250	250	255	230	280
10	250	240	235	580	785	250	2150	250	250	255	230	280
11	250	240	240	580	720	250	2100	250	250	255	230	290
12	245	240	260	590	630	255	2000	250	250	255	230	305
13	245	240	255	590	640	260	1900	250	250	250	225	315
14	240	240	260	590	710	265	1800	250	250	250	220	315
15	240	240	260	590	770	280	1500	250	250	250	215	315
16	235	240	260	590	770	450	1500	250	250	250	215	310
17	230	240	260	590	770	600	1500	250	250	250	215	305
18	225	240	250	590	770	710	1160	250	250	250	215	300
19	220	240	240	595	765	825	700	250	250	250	290	300
20	215	235	235	595	760	825	530	250	250	250	360	315
21	240	235	235	590	760	940	530	250	250	250	360	305
22	240	235	235	570	705	1040	530	250	250	250	360	305
23	235	235	235	560	650	1190	525	250	250	250	350	605
24	235	235	235	685	650	1400	525	255	250	250	350	295
25	235	235	235	730	650	1440	525	260	250	250	350	295
26	235	235	235	830	580	1440	525	265	250	250	350	295
27	235	235	235	800	555	1480	525	270	330	250	340	300
28	235	235	460	800	555	1480	525	260	445	250	335	310
29	235	235	575	795	---	1500	525	250	515	250	335	310
30	235	235	580	795	---	1560	520	250	555	240	340	310
31	235	---	580	790	---	2180	---	250	---	240	315	---
TOTAL	7480	7135	10910	19815	20245	23420	43165	8230	8355	9500	8505	9205
MEAN	241	238	352	639	723	755	1439	265	279	306	274	307
MAX	260	240	580	830	790	2180	2390	520	555	570	360	605
MIN	215	235	235	560	555	250	520	200	250	240	215	270

CAL YR 1976 TOTAL 199430 MEAN 545 MAX 1550 MIN 215
WTR YR 1977 TOTAL 175965 MEAN 482 MAX 2390 MIN 200

NOTE.--No gage-height record Apr. 1-18.

01081000 WINNIPESAUKEE RIVER AT TILTON, NH

LOCATION.--Lat 43°26'31", long 71°35'20", Belknap County, Hydrologic Unit 01070002, on right bank at Tilton and 0.3 mi (0.5 km) upstream from Packer Brook.

DRAINAGE AREA.--471 mi^2 (1,220 km^2).

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 (134.682 m) above mean sea level, unadjusted.

REMARKS.--Records good. Flow regulated by powerplants prior to 1967 and by Winnipesaukee (station 01080000), Winnisquam 4.5 mi (7.2 km) upstream, Wentworth, Merrymeeting (Reservoirs in Merrimack River basin), and other lakes upstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--40 years, 697 ft^3/s (19.74 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,810 ft^3/s (108 m^3/s) Sept. 21, 1938, gage height, 7.90 ft (2.408 m); maximum gage height, 7.93 ft (2.417 m) Mar. 27, 1953; minimum daily discharge, 48 ft^3/s (1.36 m^3/s) Aug. 31, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,980 ft^3/s (84.4 m^3/s) Apr. 6, gage height, 6.99 ft (2.131 m); minimum daily, 209 ft^3/s (5.92 m^3/s) May 4, 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	312	458	318	468	764	699	2630	472	303	616	234	321
2	297	435	343	517	775	666	2690	403	348	580	286	318
3	288	413	401	551	783	612	2820	251	390	580	279	314
4	282	421	442	570	782	559	2950	209	424	575	265	303
5	273	417	485	582	783	579	2940	209	386	580	262	289
6	269	445	517	589	779	577	2970	241	363	557	272	286
7	263	449	623	623	779	539	2930	262	411	382	272	279
8	265	425	760	634	775	494	2840	268	432	351	265	268
9	298	402	724	638	773	471	2720	289	411	355	255	262
10	338	391	626	647	772	495	2610	428	403	340	251	258
11	324	379	558	647	771	572	2530	490	403	318	258	262
12	300	368	519	658	749	630	2490	363	411	325	268	251
13	288	355	459	647	734	826	2460	329	390	363	286	262
14	287	344	437	656	720	2160	2430	310	370	355	279	329
15	287	341	417	656	724	2070	2380	314	359	333	282	348
16	281	339	406	647	735	1750	2250	310	340	318	268	336
17	280	331	399	667	727	1630	2120	314	325	307	262	344
18	274	331	390	625	749	1490	2020	344	318	300	248	348
19	269	331	377	625	754	1400	1780	355	351	289	234	348
20	283	326	371	625	760	1350	1360	351	344	282	228	407
21	548	315	376	622	771	1310	1300	348	340	275	238	575
22	626	308	397	602	771	1320	1130	340	336	279	262	508
23	522	304	367	602	750	1400	1070	340	325	248	293	437
24	466	303	351	618	727	1470	1230	336	310	231	310	407
25	480	300	342	658	753	1540	1330	333	296	234	325	390
26	499	300	342	702	761	1600	1200	329	329	251	321	403
27	480	299	325	727	745	1660	1050	310	370	238	325	539
28	439	298	325	749	723	1760	954	303	503	228	329	526
29	413	320	333	760	---	2000	794	307	526	224	336	477
30	398	331	363	764	---	2250	503	293	557	224	321	446
31	415	---	403	764	---	2460	---	296	---	224	329	---
TOTAL	11044	10779	13496	19840	21189	38339	60481	10047	11374	10762	8643	10841
MEAN	356	359	435	640	757	1237	2016	324	379	347	279	361
MAX	626	458	760	764	783	2460	2970	490	557	616	336	575
MIN	263	298	318	468	720	471	503	209	296	224	228	251

CAL YR 1976 TOTAL 284947 MEAN 779 MAX 2180 MIN 198
WTR YR 1977 TOTAL 226835 MEAN 621 MAX 2970 MIN 209

01081500 MERRIMACK RIVER AT FRANKLIN JUNCTION, NH

LOCATION.--Lat 43°25'26", long 71°39'12", Merrimack County, Hydrologic Unit 01070002, on right bank at Franklin Junction 1 mi (1.6 km) downstream from confluence of Pemigewasset and Winnipesaukee Rivers.

DRAINAGE AREA.--1,507 mi^2 (3,903 km^2).

PERIOD OF RECORD.--Discharge: July 1903 to January 1904, March 1904 to January 1905, March 1905 to current year. Water-quality records: Water years 1954-55.

REVISED RECORDS.--WSP 401: 1914. WSP 641: 1923(M). WSP 756: Drainage area. WSP 781: 1928(M). WSP 1231: 1911-13, 1916-17(M), 1919(M), 1922(M).

GAGE.--Water-stage recorder. Datum of gage is 250.4 ft (76.32 m) above mean sea level, unadjusted. Prior to Sept. 13, 1923, nonrecording gage at bridge 350 ft (100 m) downstream at same datum.

REMARKS.--Records good except those for winter period and period of no gage-height record, which are fair. Flow regulated by powerplants, by Franklin Falls Reservoir (4 mi or 6 km upstream) since 1942, and by Squam, Little Squam, Newfound, Winnipesaukee, Winnisquam, Wentworth, Merrymeeting, and other lakes (Reservoirs in Merrimack River basin). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--72 years (water years 1906-77) 2,764 ft^3/s (78.28 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 83,000 ft^3/s (2,350 m^3/s) Mar. 19, 1936, gage height, 36.4 ft (11.09 m), from floodmarks, from rating curve extended above 30,000 ft^3/s (850 m^3/s) on basis of slope-area measurement and computation of flow over dam at gage height 29.5 ft (8.99 m) and velocity-area study; minimum daily, 169 ft^3/s (4.79 m^3/s) Aug. 28, 1965. Maximum discharge since construction of Franklin Falls Reservoir in 1942, 22,400 ft^3/s (634 m^3/s) Apr. 4, 1951, gage height, 16.34 ft (4.980 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17,700 ft^3/s (501 m^3/s) Mar. 15, gage height, 13.92 ft (4.243 m); minimum daily, 518 ft^3/s (14.7 m^3/s) Aug. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2030	3760	1650	1280	1240	1510	14900	4890	900	1680	877	718
2	1190	4340	1480	1100	1290	1410	13800	3880	1150	1420	711	696
3	1450	3640	1280	1120	1310	1370	12600	2890	2040	1200	711	689
4	1440	3280	1080	1210	1270	1440	12500	3150	1710	1090	655	675
5	1060	3230	1190	1230	1250	1570	12000	2700	1080	1180	621	668
6	1070	3670	1380	1220	1310	1740	11000	2760	1230	1030	661	754
7	1130	4350	2000	1250	1260	1670	10300	3030	2080	870	696	747
8	1200	3960	3980	1250	1250	2710	8890	3090	2550	780	641	588
9	1550	3350	4120	1250	1250	1560	7990	2740	2770	600	549	582
10	5820	2000	3030	1280	1250	1620	6070	2790	2350	730	621	569
11	7140	2520	1890	1210	1240	2430	6020	2850	1180	940	668	595
12	4190	2080	2130	1240	1220	3090	5980	2620	1710	750	718	556
13	3120	2100	2070	1230	1220	4590	6210	2060	1290	810	675	648
14	2570	1930	2270	1280	1200	13900	7700	1990	1410	1400	661	1260
15	2430	1650	1680	1360	1190	15800	9390	2020	1410	1170	732	3380
16	2460	1740	1580	1230	1220	14500	8300	1910	1480	934	628	2480
17	2440	1670	1410	1290	1190	13900	7200	1850	1150	845	814	2010
18	2430	1720	1490	1200	1210	12500	6490	1750	760	837	1490	1020
19	2370	1780	1370	1130	1040	12400	5900	2000	1130	718	1400	830
20	2480	1820	1290	1180	1060	11700	5310	1990	1150	661	614	1460
21	4930	1620	1280	1210	1180	7200	5310	1890	1110	1020	518	2460
22	12000	1460	1150	1050	1190	5330	5610	1640	1080	575	696	2430
23	8130	1470	1090	1160	1150	4860	6470	1580	860	621	725	2000
24	5220	1420	1180	1200	1190	4930	8940	1550	900	704	869	1820
25	4320	1400	900	1230	1710	4580	13000	1640	850	901	877	1690
26	4270	1390	1170	1260	1810	4440	10100	1360	1340	1030	983	1530
27	4790	1390	950	1220	1480	4510	6680	1210	1950	675	588	3450
28	4140	1400	970	1240	1600	4660	5540	807	1820	718	725	3650
29	3930	1490	970	1140	---	6350	4770	869	1730	689	696	2760
30	3610	1640	1010	1360	---	11100	4210	1260	1310	575	621	2490
31	3120	---	990	1320	---	15300	---	1020	---	725	754	---
TOTAL	108030	69270	50030	37930	35780	194670	249180	67786	43480	27878	23195	45205
MEAN	3485	2309	1614	1224	1278	6280	8306	2187	1449	899	748	1507
MAX	12000	4350	4120	1360	1810	15800	14900	4890	2770	1680	1490	3650
MIN	1060	1390	900	1050	1040	1370	4210	807	760	575	518	556

CAL YR 1976 TOTAL 1226469 MEAN 3351 MAX 20500 MIN 595
WTR YR 1977 TOTAL 952434 MEAN 2609 MAX 15800 MIN 518

NOTE.--No gage-height record June 1 to July 13.

01082000 CONTOOCOOK RIVER AT PETERBOROUGH, NH

LOCATION.--Lat 42°51'45", long 71°57'35", Hillsborough County, Hydrologic Unit 01070003, on left bank 1,100 ft (350 m) downsteam from milldam, 1 mi (1.6 km) south of Peterborough, and 1.5 mi (2.4 km) upstream from Nubanusit Brook.

DRAINAGE AREA.--68.1 mi^2 (176.4 km^2).

PERIOD OF RECORD.--July 1945 to September 1977 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 740 ft (226 m), from topographic map.

REMARKS.--Records good except those for winter period, which are fair. Flow slightly regulated by mill and reservoirs upstream; regulation greater prior to 1965. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--32 years, 117 ft^3/s (3.313 m^3/s), 23.33 in/yr (593 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,640 ft^3/s (74.8 m^3/s) Nov. 26, 1950, gage height, 6.35 ft (1.935 m), from rating curve extended above 1,700 ft^3/s (48.1 m^3/s); maximum gage height, 6.82 ft (2.079 m), from peak-stage indicator, about Jan. 29, 1976 (ice jam); minimum daily discharge, 0.8 ft^3/s (0.023 m^3/s) Sept. 15, 16, 1953.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in September 1938 reached a stage of about 15 ft (4.6 m), from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft^3/s (19.8 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 14	0330	*1750	49.6	*5.30	1.615	Apr. 25	0600	813	23.0	3.85	1.173
Mar. 30	2230	1050	29.7	4.26	1.298						

Minimum daily discharge, 9.6 ft^3/s (0.27 m^3/s) Sept. 4, 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	79	27	22	21	130	771	160	40	47	19	11
2	15	67	24	22	21	110	546	142	54	41	34	11
3	14	61	23	22	21	103	439	128	66	35	21	10
4	13	56	22	21	21	83	402	114	60	31	18	9.6
5	12	51	29	21	21	108	460	105	53	29	19	10
6	12	51	29	21	21	128	595	101	47	29	20	11
7	13	46	76	21	21	112	478	93	50	27	18	9.6
8	12	42	165	23	22	103	367	83	72	28	18	9.6
9	25	39	193	29	22	103	288	86	70	30	17	10
10	36	38	138	26	22	147	243	219	81	27	17	12
11	29	37	76	27	23	208	214	310	105	24	25	12
12	25	34	60	30	24	291	201	303	107	23	32	11
13	23	34	53	33	24	675	201	241	91	25	29	12
14	21	33	47	31	24	1670	191	181	77	26	26	16
15	20	33	43	29	24	1290	170	147	70	25	23	13
16	19	32	40	28	23	942	151	124	56	23	20	13
17	18	31	37	27	22	734	134	107	47	21	21	23
18	17	31	35	26	22	513	124	138	44	20	20	22
19	16	31	33	25	22	398	112	284	64	18	18	21
20	19	32	32	24	23	317	105	249	55	17	17	46
21	96	30	30	23	23	263	96	191	67	17	16	65
22	108	29	29	23	23	227	84	149	57	16	19	55
23	84	29	28	22	23	227	116	122	49	13	19	40
24	65	27	27	22	22	219	375	103	44	13	18	39
25	64	27	26	22	25	201	729	89	42	22	19	47
26	69	26	25	22	50	172	518	79	74	23	16	74
27	64	27	24	22	100	174	367	65	94	19	15	172
28	59	29	24	21	150	203	281	56	77	17	14	138
29	53	33	23	21	---	456	224	50	64	15	13	98
30	83	33	23	21	---	813	186	46	56	14	12	72
31	81	---	22	21	---	966	---	42	---	14	11	---
TOTAL	1201	1148	1463	748	860	12086	9168	4307	1933	729	604	1092.8
MEAN	38.7	38.3	47.2	24.1	30.7	390	306	139	64.4	23.5	19.5	36.4
MAX	108	79	193	33	150	1670	771	310	107	47	34	172
MIN	12	26	22	21	21	83	84	42	40	13	11	9.6
CFSM	.57	.56	.69	.35	.45	5.73	4.49	2.04	.95	.35	.29	.54
IN.	.66	.63	.80	.41	.47	6.60	5.01	2.35	1.06	.40	.33	.60

CAL YR 1976 TOTAL 38816.0 MEAN 106 MAX 786 MIN 12 CFSM 1.56 IN 21.20
WTR YR 1977 TOTAL 35339.8 MEAN 96.8 MAX 1670 MIN 9.6 CFSM 1.42 IN 19.30

01083000 NUBANUSIT BROOK NEAR PETERBOROUGH, NH

LOCATION.--Lat 42°53'10", long 71°58'24", Hillsborough County, Hydrologic Unit 01070003, on left bank 1.2 mi (1.9 km) downstream from Edward MacDowell Reservoir, 1.3 mi (2.1 km) northwest of Peterborough, and 1.5 mi (2.4 km) upstream from mouth.

DRAINAGE AREA.--46.9 mi^2 (121.5 km^2).

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. Altitude of gage is 790 ft (241 m), from topographic map. Prior to Oct. 1, 1931, at site 550 ft (170 m) downstream at different datum.

REMARKS.--Records good except those for winter period, which are fair. 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 were made during the year.

AVERAGE DISCHARGE.--43 years, 83.1 ft^3/s (2.353 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,130 ft^3/s (32.0 m^3/s) Apr. 11, 1931, gage height, 5.59 ft (1.704 m), site and datum then in use, from rating curve extended above 380 ft^3/s (10.8 m^3/s); minimum daily, 0.5 ft^3/s (0.014 m^3/s) Aug. 1, 1926. Maximum discharge since construction of Edward MacDowell Reservoir in 1950, 699 ft^3/s (19.8 m^3/s) Apr. 12, 1960, gage height, 4.54 ft (1.384 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 637 ft^3/s (18.0 m^3/s) Mar. 17, gage height, 4.27 ft (1.301 m); minimum daily, 3.4 ft^3/s (0.10 m^3/s) Sept. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	29	17	13	40	111	513	148	11	64	11	5.4
2	13	29	17	13	40	115	552	104	13	41	11	9.2
3	13	29	17	13	40	114	532	98	13	27	10	20
4	13	29	17	13	31	100	372	90	12	19	9.8	24
5	13	28	17	13	22	100	31	77	12	14	12	14
6	13	29	17	13	21	117	346	66	12	10	11	9.2
7	13	29	23	13	20	116	558	67	13	10	10	8.8
8	12	28	26	14	20	103	527	43	14	11	11	8.5
9	15	28	39	15	18	95	384	44	13	10	11	5.0
10	13	28	65	15	18	112	309	121	14	9.8	21	3.4
11	11	27	73	17	17	149	276	213	15	9.8	28	4.6
12	21	27	72	26	17	180	227	221	14	10	28	6.1
13	29	27	70	31	17	206	217	208	57	10	31	6.4
14	29	27	66	30	16	63	211	148	40	10	34	7.2
15	29	27	57	30	16	169	202	93	17	9.8	34	6.6
16	28	22	31	29	16	435	166	67	17	9.8	33	7.2
17	27	18	23	28	16	609	136	56	17	10	29	8.8
18	27	18	23	28	15	631	123	51	17	10	16	16
19	26	18	23	27	32	614	105	53	17	9.8	11	23
20	27	18	23	26	60	597	94	73	17	9.8	10	28
21	33	18	23	26	65	580	71	84	18	9.8	10	53
22	42	18	38	26	55	504	62	82	43	9.8	12	73
23	67	18	30	20	54	389	71	65	148	9.8	12	72
24	74	18	23	16	46	341	135	42	217	9.8	11	71
25	58	18	23	16	50	341	237	31	156	12	12	71
26	48	17	23	16	65	316	458	30	60	11	11	76
27	30	17	23	15	60	221	419	30	72	10	11	96
28	12	17	19	15	79	136	312	30	74	10	11	165
29	28	17	13	14	---	200	237	30	16	9.8	7.2	181
30	28	17	13	15	---	334	179	26	32	9.8	5.8	142
31	29	---	13	28	---	417	---	13	---	9.8	5.6	---
TOTAL	834	690	957	614	966	8515	8062	2504	1191	426.4	480.4	1221.4
MEAN	26.9	23.0	30.9	19.8	34.5	275	269	80.8	39.7	13.8	15.5	40.7
MAX	74	29	73	31	79	631	558	221	217	64	34	181
MIN	11	17	13	13	15	63	31	13	11	9.8	5.6	3.4

CAL YR 1976 TOTAL 30260.6 MEAN 82.7 MAX 538 MIN 4.1
WTR YR 1977 TOTAL 26461.2 MEAN 72.5 MAX 631 MIN 3.4

01085000 CONTOOCOOK RIVER NEAR HENNIKER, NH

LOCATION.--Lat 43°09'10", long 71°51'24", Merrimack County, Hydrologic Unit 01070003, on right bank 1.6 mi (2.6 km) downstream from Sand Brook and 2.5 mi (4.0 km) southwest of Henniker.

DRAINAGE AREA.--368 mi^2 (953 km^2).

PERIOD OF RECORD.--Discharge: October 1939 to September 1977 (discontinued).
Water-quality records: Water years 1953-54.

REVISED RECORDS.--WSP 1701: 1944(M).

GAGE.--Water-stage recorder. Altitude of gage is 475 ft (145 m), from topographic map. Prior to Dec. 18, 1939, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter period, which are fair. Flow regulated by powerplants and by Nubanusit Lake, Edward MacDowell Reservoir (Reservoir in Merrimack River basin) since March 1950, Highland Lake, Lake Franklin Pierce, and other reservoirs upstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--38 years, 631 ft^3/s (17.97 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,460 ft^3/s (268 m^3/s) June 26, 1944, gage height, 13.13 ft (4.002 m); maximum gage height, 13.22 ft (4.029 m) Jan. 18, 1977 (ice jam); minimum daily discharge, 19 ft^3/s (0.54 m^3/s) Oct. 29, 1940, July 17, 1965.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1768, 22,200 ft^3/s (629 m^3/s) Sept. 21, 1938, gage height, 21.3 ft (6.49 m), from floodmarks, from rating curve extended above 7,500 ft^3/s (212 m^3/s) on basis of computations of flow over dams at gage heights 12.72 ft (3.877 m) and 21.3 ft (6.49 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,660 ft^3/s (217 m^3/s) Mar. 15, gage height, 12.06 ft (3.676 m); maximum gage height, 13.22 ft (4.029 m), Jan. 18 (ice jam); minimum daily discharge, 43 ft^3/s (1.22 m^3/s) July 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	426	251	105	102	600	5190	1150	257	341	62	82
2	58	536	241	100	102	520	4160	976	193	265	67	79
3	62	528	220	100	102	460	3340	744	155	155	63	75
4	87	486	327	98	102	520	3020	759	144	144	58	74
5	77	368	319	98	100	400	2800	618	135	200	53	72
6	88	393	526	96	100	500	2790	579	135	155	51	80
7	89	224	705	96	100	600	2790	495	331	62	51	71
8	66	226	1150	105	100	500	2620	464	388	50	86	74
9	144	270	1410	115	100	450	2250	396	427	51	76	54
10	163	265	1660	110	98	400	1850	1090	369	50	75	47
11	250	196	1130	125	98	600	1520	1570	359	80	86	56
12	220	228	492	120	98	1000	1310	1400	295	62	133	47
13	190	181	380	120	96	1500	1260	1260	435	63	119	64
14	160	197	310	120	96	5000	1240	1070	402	72	142	80
15	140	243	280	118	96	7290	1110	908	407	90	110	105
16	130	215	250	118	94	5430	919	658	391	79	99	95
17	119	222	230	116	94	3970	774	596	369	66	137	130
18	150	277	210	116	94	3300	837	501	319	57	108	170
19	113	277	190	114	92	2920	826	831	349	74	87	220
20	135	177	170	114	92	2570	769	749	274	99	72	300
21	321	97	160	112	92	2290	691	631	178	105	63	430
22	680	215	150	112	92	2020	658	583	220	69	90	530
23	537	381	140	110	90	1710	614	518	198	46	110	432
24	347	401	130	110	90	1610	1630	479	281	43	118	410
25	310	253	125	108	150	1450	2680	456	274	48	108	339
26	414	179	120	108	300	1360	2820	432	300	55	105	253
27	552	113	120	106	400	1330	2430	413	349	50	78	605
28	485	101	115	106	500	1360	2140	324	341	46	75	705
29	425	198	110	104	---	1800	1660	297	356	45	96	686
30	365	263	110	104	---	2920	1360	200	377	44	72	682
31	271	---	105	104	---	4560	---	180	---	44	64	---
TOTAL	7215	8136	11836	3388	3670	60940	58058	21327	9008	2810	2714	7047
MEAN	233	271	382	109	131	1966	1935	688	300	90.6	87.5	235
MAX	680	536	1660	125	500	7290	5190	1570	435	341	142	705
MIN	58	97	105	96	90	400	614	180	135	43	51	47

CAL YR 1976 TOTAL 234867 MEAN 642 MAX 4460 MIN 42
WTR YR 1977 TOTAL 196149 MEAN 537 MAX 7290 MIN 43

01085500 CONTOOCOOK RIVER BELOW HOPKINTON DAM, AT WEST HOPKINTON, NH

LOCATION.--Lat 43°11'31", long 71°44'51", Merrimack County, Hydrologic Unit 01070003, on right bank 400 ft (100 m) downstream from covered bridge at West Hopkinton, 0.2 mi (0.3 km) downstream from Hopkinton Dam, and 5.9 mi (9.5 km) upstream from Warner River.

DRAINAGE AREA.--427 mi^2 (1,106 km^2).

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. Altitude of gage is 355 ft (108 m), from topographic map. August 1903 to April 1907, nonrecording gage at site 400 ft (100 m) upstream at different datum.

REMARKS.--Records good except those for periods of doubtful gage-height record, which are fair and those for winter period, which are poor. 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, and March 1977. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--14 years (water years 1963-77), 686 ft^3/s (19.43 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,620 ft^3/s (187 m^3/s) Mar. 17, gage height, 10.04 ft (3.060 m); minimum daily, 15 ft^3/s (0.42 m^3/s) July 22, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,620 ft^3/s (187 m^3/s) Mar. 17, gage height, 10.04 ft (3.060 m); minimum daily, 27 ft^3/s (0.76 m^3/s) Oct. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	503	305	135	127	800	4370	1190	211	422	110	38
2	127	593	309	132	128	680	4550	1080	249	367	132	96
3	121	568	253	130	128	520	4340	742	185	185	104	104
4	27	515	257	128	127	590	3460	774	135	199	79	79
5	138	448	145	128	127	600	2810	687	118	261	58	48
6	115	417	222	127	125	700	3180	622	171	161	91	124
7	124	291	270	132	127	800	3150	586	214	98	62	99
8	127	314	736	140	128	680	2770	504	412	70	43	96
9	135	352	705	152	122	600	2380	427	417	68	135	75
10	342	319	675	149	123	540	1980	954	407	66	118	35
11	222	305	487	153	122	900	1580	1490	417	62	46	37
12	226	199	372	162	121	1600	1260	1500	323	99	121	48
13	305	300	310	165	125	2000	1310	1280	412	72	167	102
14	148	214	290	162	131	2500	1310	1170	412	89	124	96
15	257	274	270	160	140	1180	1130	954	422	84	192	94
16	283	287	250	159	132	2500	1040	705	417	115	124	104
17	142	287	230	157	127	4700	865	640	433	89	118	84
18	178	274	220	158	122	5350	847	544	387	82	154	77
19	278	328	210	154	120	5450	872	787	328	138	113	118
20	192	296	200	154	120	5020	817	774	357	66	77	161
21	526	118	190	151	121	4740	736	711	278	107	77	443
22	774	188	180	150	122	3210	730	593	218	151	70	568
23	556	362	170	149	120	2360	634	562	253	115	107	433
24	402	427	165	149	120	2010	1630	499	283	37	121	382
25	417	372	160	148	200	1750	2650	459	342	37	127	357
26	521	237	155	145	300	1520	2880	427	357	96	127	309
27	605	203	150	144	430	1480	2690	412	402	124	118	498
28	532	107	145	140	620	1510	2160	352	412	62	75	724
29	459	178	142	138	---	1860	1810	296	407	41	62	663
30	387	314	140	135	---	2760	1390	241	454	41	115	718
31	362	---	138	130	---	3780	---	199	---	53	86	---
TOTAL	9094	9590	8451	4516	4555	64690	61331	22161	9833	3657	3253	6810
MEAN	293	320	273	146	163	2087	2044	715	328	118	105	227
MAX	774	593	736	165	620	5450	4550	1500	454	422	192	724
MIN	27	107	138	127	120	520	634	199	118	37	43	35
(†)	0	0	0	0	0	1900	0	0	0	0	0	0

CAL YR 1976 TOTAL 257959 MEAN 705 MAX 3720 MIN 27
WTR YR 1977 TOTAL 207941 MEAN 570 MAX 5450 MIN 27

† Diversion from Hopkinton Lake to Everett Lake on Piscataquog River.
NOTE.--Doubtful gage-height record Oct. 1-17, Sept. 2-30.

01085800 WEST BRANCH WARNER RIVER NEAR BRADFORD, NH

LOCATION.--Lat 43°15'33", long 72°01'35", Merrimack County, Hydrologic Unit 01070003, on left bank 75 ft (23 m) downstream from small right-bank tributary, 200 ft (60 m) upstream from highway bridge, and 3.5 mi (5.6 km) west of Bradford.

DRAINAGE AREA.--5.75 mi^2 (14.89 km^2).

PERIOD OF RECORD.--Discharge: May 1962 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 950 ft (290 m), from topographic map.

REMARKS.--Records good except those for winter period, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--15 years, 11.3 ft^3/s (0.320 m^3/s) 26.69 in/yr (678 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 603 ft^3/s (17.1 m^3/s) Apr. 1, 1976, gage height, 8.49 ft (2.588 m), from rating curve extended above 210 ft^3/s (5.95 m^3/s); minimum, about 0.06 ft^3/s (0.002 m^3/s) about Sept. 20, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 110 ft^3/s (3.12 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 21	0445	245	6.94	7.03	2.14	Mar. 30	1645	249	7.05	7.06	2.15
Mar. 13	2330	a*448	12.7	*8.09	2.47	Apr. 24	1200	158	4.47	6.37	1.94

a From rating curve extended above 210 ft^3/s (5.95 m^3/s).

Minimum discharge, 0.26 ft^3/s (0.007 m^3/s) Sept. 9, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.92	7.0	2.9	1.8	1.9	6.0	65	10	1.7	1.5	2.9	.41
2	.87	6.6	2.7	1.7	1.9	4.5	33	10	1.7	1.2	8.6	.38
3	.87	6.2	2.6	1.7	1.9	3.9	51	9.0	2.7	1.1	1.9	.38
4	4.0	6.6	2.5	1.7	1.9	3.6	36	7.9	1.8	.95	1.3	.38
5	1.1	7.0	2.4	1.7	1.9	10	27	7.5	1.5	.89	1.6	.35
6	.97	7.4	2.3	1.7	1.9	11	37	7.7	4.1	.79	2.8	.35
7	1.2	7.0	35	1.7	1.8	7.1	20	6.7	19	.79	1.8	.35
8	1.3	6.5	25	1.8	1.8	5.8	15	5.5	15	1.1	1.4	.32
9	27	6.0	9.1	1.8	1.8	6.5	12	6.9	8.1	1.9	1.1	.28
10	14	5.8	6.7	1.8	1.8	22	10	33	18	1.4	1.2	.33
11	4.6	5.2	5.4	1.8	1.8	43	10	18	10	1.1	2.7	.35
12	2.9	4.3	4.5	1.8	1.9	59	19	12	8.1	1.1	2.7	.35
13	2.7	4.0	3.8	1.8	1.9	161	24	9.5	6.2	1.7	2.8	.35
14	3.4	3.9	3.2	1.9	1.8	295	20	7.9	5.0	2.0	5.0	1.8
15	2.8	3.8	3.1	2.0	1.8	107	12	6.9	5.3	1.1	6.3	1.2
16	2.4	3.7	3.0	2.0	1.8	76	10	6.3	3.1	1.1	2.5	.79
17	2.1	3.5	2.9	1.9	1.7	51	8.6	5.6	2.3	.95	1.7	1.7
18	2.0	3.5	2.8	1.9	1.7	27	7.6	5.6	2.4	.84	1.4	1.7
19	1.9	3.4	2.7	1.8	1.8	20	7.4	8.4	3.9	.89	1.2	.89
20	5.0	3.4	2.6	1.8	1.8	17	7.2	5.8	2.6	.74	.95	15
21	106	2.9	2.5	1.8	1.8	15	8.4	4.5	2.3	.66	.84	11
22	50	2.8	2.4	1.9	1.8	14	8.8	3.8	2.1	.62	.89	5.2
23	17	2.8	2.4	1.8	1.8	13	38	3.1	1.7	.47	1.0	2.8
24	13	2.7	2.3	2.0	1.8	11	121	2.8	1.6	.44	.89	2.4
25	14	2.6	2.2	2.0	2.5	10	64	27	1.6	.58	.84	2.5
26	15	2.6	2.2	2.2	4.5	9.7	30	36	2.4	.62	.74	10
27	12	2.9	2.1	2.0	5.6	12	21	1.8	2.7	.58	.66	21
28	10	3.1	2.0	2.0	7.1	20	16	1.9	2.4	.51	.54	9.0
29	8.0	3.8	2.0	2.1	---	100	13	3.5	1.7	.47	.54	4.5
30	6.6	3.3	1.9	2.0	---	156	11	2.2	2.0	.47	.47	3.5
31	7.4	---	1.9	2.0	---	156	---	1.8	---	.47	.44	---
TOTAL	341.03	134.3	149.1	57.9	63.5	1453.1	763.0	278.6	143.0	29.03	59.70	99.56
MEAN	11.0	4.48	4.81	1.87	2.27	46.9	25.4	8.99	4.77	.94	1.93	3.32
MAX	106	7.4	35	2.2	7.1	295	121	36	19	2.0	8.6	21
MIN	.87	2.6	1.9	1.7	1.7	3.6	7.2	1.8	1.5	.44	.44	.28
CFSM	1.91	.78	.84	.33	.40	8.16	4.42	1.56	.83	.16	.34	.58
IN.	2.21	.87	.96	.37	.41	9.40	4.94	1.80	.92	.19	.39	.64

CAL YR 1976 TOTAL 4947.23 MEAN 13.5 MAX 184 MIN .45 CFSM 2.35 IN 32.00
WTR YR 1977 TOTAL 3571.82 MEAN 9.79 MAX 295 MIN .28 CFSM 1.70 IN 23.10

01086000 WARNER RIVER AT DAVISVILLE, NH

LOCATION.--Lat 43°15'06", long 71°43'54", Merrimack County, Hydrologic Unit 01070003, on left bank 60 ft (18 m) downstream from bridge on State Highway 127 at Davisville, 2.2 mi (3.5 km) northwest of Contoocook, and 2.4 mi (3.9 km) upstream from mouth.

DRAINAGE AREA.--146 mi^2 (378 km^2).

PERIOD OF RECORD.--Discharge: October 1939 to current year.
Water-quality records: Water year 1954.

REVISED RECORDS.--WSP 1901: 1960.

GAGE.--Water-stage recorder. Altitude of gage is 380 ft (116 m), from topographic map. Prior to Dec. 22, 1939, chain gage at bridge 60 ft (18 m) upstream at same datum.

REMARKS.--Records good except those for winter period, which are fair. Prior to 1948, slight diurnal fluctuation at low flow caused by mill upstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--38 years, 235 ft^3/s (6.655 m^3/s), 21.86 in/yr (555 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,510 ft^3/s (128 m^3/s) Mar. 27, 1953, gage height, 9.88 ft (3.011 m); minimum, 2.6 ft^3/s (0.074 m^3/s) Aug. 17, 18, 1965.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in September 1938 reached a stage of 12.8 ft (3.901 m), from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft^3/s (34.0 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 14	2330	*3920	111	*9.42	2.871	Apr. 25	0900	1420	40.2	6.97	2.124
Apr. 1	0330	2080	58.9	7.70	2.347						

Minimum discharge, 9.8 ft^3/s (0.28 m^3/s) Sept. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	175	60	54	55	291	2000	399	39	57	13	19
2	25	171	56	54	55	253	1590	350	40	59	45	18
3	21	154	54	53	55	221	1260	316	47	53	54	15
4	20	153	52	52	54	194	1160	285	42	48	43	15
5	19	155	51	52	54	232	1010	259	37	44	37	14
6	19	167	50	51	54	282	1040	243	34	38	40	13
7	18	197	84	50	53	277	946	223	55	33	39	12
8	18	188	245	52	53	256	794	196	132	32	38	11
9	25	163	228	54	52	248	682	183	136	34	35	11
10	126	145	200	51	52	299	590	321	148	33	30	10
11	136	128	170	56	51	446	521	421	167	31	48	11
12	98	120	140	63	51	590	475	358	148	32	49	10
13	77	112	123	62	53	878	467	299	122	36	51	11
14	65	111	112	61	54	3410	469	246	95	42	44	15
15	59	106	108	60	54	3380	448	213	124	50	42	19
16	49	101	100	59	54	2660	406	191	122	49	45	18
17	44	95	95	58	53	2140	365	162	94	40	38	21
18	40	91	91	58	52	1550	328	143	74	36	35	27
19	35	88	86	58	52	1160	299	147	74	33	36	28
20	41	85	83	58	52	934	272	143	74	28	30	39
21	231	79	78	57	52	769	256	127	65	25	24	208
22	388	75	74	57	52	666	227	111	57	21	22	178
23	317	72	70	57	51	594	266	95	50	18	23	124
24	237	70	68	57	51	563	803	83	44	16	22	95
25	212	68	64	57	60	506	1340	73	40	16	20	90
26	221	66	62	56	172	457	1050	64	59	16	19	94
27	231	65	60	56	251	445	828	54	94	15	17	283
28	202	66	59	56	301	495	676	47	78	14	18	262
29	174	72	58	56	---	752	557	51	69	13	17	185
30	152	64	57	56	---	1420	470	49	64	12	15	134
31	146	---	56	56	---	1920	---	43	---	12	17	---
TOTAL	3473	3402	2894	1737	2053	28288	21595	5895	2424	986	1006	1990
MEAN	112	113	93.4	56.0	73.3	913	720	190	80.8	31.8	32.5	66.3
MAX	388	197	245	63	301	3410	2000	421	167	59	54	283
MIN	18	64	50	50	51	194	227	43	34	12	13	10
CFSM	.77	.77	.64	.38	.50	6.25	4.93	1.30	.55	.22	.22	.45
IN.	.88	.87	.74	.44	.52	7.21	5.50	1.50	.62	.25	.26	.51

CAL YR 1976 TOTAL 90895 MEAN 248 MAX 2680 MIN 12 CFSM 1.70 IN 23.16
WTR YR 1977 TOTAL 75743 MEAN 208 MAX 3410 MIN 10 CFSM 1.43 IN 19.30

01087000 BLACKWATER RIVER NEAR WEBSTER, NH

LOCATION.--Lat 43°17'45", long 71°41'46", Merrimack County, Hydrologic Unit 01070003, on left bank 0.2 mi (0.3 km) west of Dingit Corner, 2.4 mi (3.9 km) downstream from Blackwater Dam, 2.5 mi (4.0 km) southeast of Webster, and 6.5 mi (10.5 km) upstream from mouth.

DRAINAGE AREA.--129 mi^2 (334 km^2).

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. Altitude of gage is 430 ft (131 m), from topographic map. Prior to Oct. 1, 1935, chain gage at site 5 mi (8 km) downstream at different datum.

REMARKS.--Records good except those for winter period, 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 were made during the year.

AVERAGE DISCHARGE.--52 years, 212 ft^3/s (6.004 m^3/s), 22.32 in/yr (567 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,000 ft^3/s (312 m^3/s) Mar. 19, 1936, gage height, 11.78 ft (3.591 m), from floodmarks, from rating curve extended above 6,700 ft^3/s (190 m^3/s) on basis of slope-area and critical-depth measurements of peak flow; minimum, 3 ft^3/s (0.085 m^3/s) Sept. 17, 1941; minimum daily, 7.6 ft^3/s (0.22 m^3/s) Sept. 29, 1964. Maximum discharge since construction of Blackwater Reservoir in 1941, 2,390 ft^3/s (67.7 m^3/s) Apr. 16, 1951, Apr. 10, 1952, gage height, 7.18 ft (2.188 m).
Maximum stage since at least 1733, that of Mar. 19, 1936.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,010 ft^3/s (56.9 m^3/s) Mar. 22, gage height, 6.82 ft (2.079 m); minimum, 15 ft^3/s (0.42 m^3/s) Sept. 9, 10, 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	206	88	63	62	184	1410	316	69	88	34	21
2	59	242	77	62	62	175	1610	284	69	81	52	20
3	51	225	72	61	61	157	1690	275	68	71	57	19
4	46	202	65	60	61	140	1490	263	65	63	67	18
5	42	205	62	60	60	142	900	244	65	57	66	18
6	40	222	60	59	61	172	1300	233	65	52	61	17
7	38	256	108	58	60	192	950	222	76	47	53	17
8	34	262	195	57	60	189	800	205	108	47	47	16
9	41	221	304	60	59	176	660	189	133	50	42	15
10	129	190	280	59	59	180	520	241	138	53	41	16
11	251	173	219	64	58	243	450	321	135	54	44	16
12	200	159	182	68	58	363	400	325	132	55	40	15
13	138	148	159	70	58	543	400	263	120	69	40	15
14	111	140	132	69	60	957	450	219	107	107	42	22
15	101	137	122	68	60	100	550	190	106	102	45	24
16	98	133	115	67	60	509	450	172	128	82	45	27
17	92	130	108	66	57	1460	360	159	122	69	44	32
18	82	127	102	65	53	1860	300	150	106	59	43	34
19	76	124	98	66	55	1810	280	145	94	52	39	35
20	75	122	95	66	56	1740	260	146	91	47	36	49
21	194	120	90	65	57	1850	238	146	91	43	32	113
22	491	114	86	64	58	1770	223	135	84	39	32	157
23	671	108	82	64	60	1430	252	123	77	36	31	141
24	432	105	78	64	63	1260	509	112	70	34	29	107
25	277	104	75	63	70	1100	1060	101	64	36	29	86
26	262	101	72	63	100	450	1310	92	65	38	27	80
27	287	99	70	63	155	400	888	83	79	36	26	157
28	291	99	68	62	180	450	588	77	124	34	25	204
29	240	105	67	63	---	550	448	76	116	33	24	177
30	202	100	66	62	---	900	368	75	96	33	23	131
31	185	---	65	62	---	1100	---	72	---	31	22	---
TOTAL	5306	4679	3462	1963	1923	22552	21114	5654	2863	1698	1238	1799
MEAN	171	156	112	63.3	68.7	727	704	182	95.4	54.8	39.9	60.0
MAX	671	262	304	70	180	1860	1690	325	138	107	67	204
MIN	34	99	60	57	53	100	223	72	64	31	22	15
MEAN†	171	156	112	63.3	69.2	761	670	181	95.5	54.5	39.9	60.3
CFSM†	1.33	1.21	.87	.49	.54	5.90	5.19	1.40	.74	.42	.31	.47
IN.†	1.53	1.35	1.00	.57	.56	6.80	5.80	1.62	.83	.49	.36	.52

CAL YR 1976 TOTAL 90226 MEAN 247 MAX 1690 MIN 26 MEAN† 246 CFSM† 1.91 IN† 26.02
WTR YR 1977 TOTAL 74251 MEAN 203 MAX 1860 MIN 15 MEAN† 203 CFSM† 1.57 IN† 21.43

† Adjusted for change in contents in Blackwater Reservoir.

01088000 CONTOOCOOK RIVER AT PENACOOK, NH

LOCATION.--Lat 43°17'12", long 71°35'56", Merrimack County, Hydrologic Unit 01070003, on right bank at Penacook, 0.5 mi (0.8 km) upstream from mouth.

DRAINAGE AREA.--766 mi^2 (1,984 km^2).

PERIOD OF RECORD.--Discharge: October 1928 to September 1977 (discontinued). Monthly discharge only for October 1928, published in WSP 1301.
Water-quality records: Water year 1954.

REVISED RECORDS.--WSP 756: 1933(M), drainage area. WSP 1231: 1929, 1931. WSP 1901: 1960.

GAGE.--Water-stage recorder. Datum of gage is 273.09 ft (83.238 m) above mean sea level.

REMARKS.--Records good except those for winter period and period of no gage-height record, which are fair. Flow regulated by Nubanusit Lake, Edward MacDowell Reservoir since 1950, Highland Lake, Lake Franklin Pierce, Hopkinton Lake since 1962, Blackwater Reservoir since 1941 (Reservoirs in Merrimack River basin), and other reservoirs upstream. Diversion from Hopkinton Lake to Everett Lake on Piscataquog River at times during periods of high flow in March 1968 and April 1969. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--49 years, 1,253 ft^3/s (35.48 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 46,800 ft^3/s (1,330 m^3/s) Mar. 20, 1936, gage height, 14.26 ft (4.346 m), from floodmarks; minimum, 18 ft^3/s (0.51 m^3/s) Sept. 7, 1968; minimum daily, 57 ft^3/s (1.61 m^3/s) Oct. 12, 1964, Aug. 16, 1965. Maximum discharge since construction of Hopkinton and Everett Dams in 1962, 10,300 ft^3/s (292 m^3/s) Apr. 25, 1969, gage height, 6.29 ft (1.917 m).
Stage and discharge of flood of Mar. 20, 1936, are the greatest since at least 1725.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,780 ft^3/s (220 m^3/s) Mar. 19, gage height, 5.69 ft (1.734 m); minimum, 71 ft^3/s (2.01 m^3/s) Sept. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	154	731	495	275	265	1200	7140	2300	386	626	106	108
2	164	850	480	270	265	1150	7410	2040	451	561	150	95
3	168	875	415	265	265	1070	7410	1710	426	443	207	103
4	120	813	410	240	265	954	6890	1450	293	268	183	120
5	123	709	285	260	265	1380	5390	1340	268	327	187	98
6	151	743	360	260	260	1570	5390	1220	287	327	179	88
7	148	645	505	260	260	1820	5580	1190	341	219	172	95
8	148	666	1290	270	260	1430	4840	1080	716	183	161	108
9	182	656	1360	290	255	1420	4230	994	804	183	150	106
10	336	595	1270	285	255	1540	3590	1120	885	176	183	93
11	518	579	960	300	250	1990	3000	1770	896	169	183	84
12	504	526	755	320	250	2550	2510	1960	804	176	176	77
13	482	610	645	320	260	3460	2210	1940	748	187	232	82
14	353	510	585	320	265	5800	2120	1790	793	207	219	114
15	336	565	545	315	275	5470	2020	1640	770	245	241	100
16	377	570	510	310	270	5020	1880	1450	793	251	223	137
17	257	560	470	310	260	5880	1620	1210	759	219	199	169
18	217	540	450	310	250	7350	1580	1110	716	187	195	240
19	319	590	430	305	250	7690	1720	1070	616	179	223	330
20	303	550	410	305	250	7440	1620	1280	645	207	150	430
21	656	345	390	300	250	6890	1500	1220	517	143	137	1100
22	1350	415	370	295	255	6510	1420	1080	409	161	133	1200
23	1520	590	350	295	250	4110	1370	981	409	179	137	900
24	1140	660	340	295	255	3740	2650	908	378	127	161	800
25	850	595	325	290	360	3290	4620	804	468	120	169	600
26	862	440	315	290	625	2640	5180	738	492	111	165	400
27	994	400	280	290	920	2260	5000	685	570	106	161	1450
28	954	295	295	280	1100	2280	4060	636	645	117	147	1640
29	838	385	290	280	---	2940	3390	552	645	103	108	1500
30	720	520	285	275	---	4210	2730	492	645	95	100	1400
31	615	---	280	270	---	6130	---	426	---	93	124	---
TOTAL	15859	17528	16150	8950	9210	111184	110070	38186	17575	6695	5261	13767
MEAN	512	584	521	289	329	3587	3669	1232	586	216	170	459
MAX	1520	875	1360	320	1100	7690	7410	2300	896	626	241	1640
MIN	120	295	280	240	250	954	1370	426	268	93	100	77

CAL YR 1976 TOTAL 461105 MEAN 1260 MAX 7320 MIN 81
WTR YR 1977 TOTAL 370435 MEAN 1015 MAX 7690 MIN 77

NOTE.--No gage-height record Nov. 13 to Dec. 13.

01089000 SOUCOOK RIVER NEAR CONCORD, NH

LOCATION.--Lat 43°14'22", long 71°27'44", Merrimack County, Hydrologic Unit 01070002, on left bank 500 ft (150 m) upstream from U.S. Highway 4, 0.9 mi (1.4 km) upstream from Cemetery Brook, and 4.4 mi (7.1 km) northeast of State Capitol at Concord.

DRAINAGE AREA.--76.8 mi^2 (198.9 km^2).

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

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

GAGE.--Water-stage recorder. Altitude of gage is 290 ft (88 m), from topographic map.

REMARKS.--Records good except those for winter period and periods of no gage-height record, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--26 years, 110 ft^3/s (3.115 m^3/s), 19.45 in/yr (494 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,700 ft^3/s (105 m^3/s) Mar. 14, 1977, gage height, 14.50 ft (4.420 m); minimum, 1.5 ft^3/s (0.042 m^3/s) Aug. 7, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft^3/s (19.8 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 14	1400	*3700	105	*14.50	4.420	Apr. 25	1330	806	22.8	9.03	2.752
Mar. 31	1200	816	23.1	9.06	2.761						

Minimum discharge, 5.2 ft^3/s (0.15 m^3/s) Sept. 9, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	101	27	28	28	147	687	154	27	29	6.4	7.5
2	19	84	26	29	28	126	486	137	30	28	15	6.1
3	16	70	25	30	28	110	435	126	39	26	26	6.1
4	15	69	25	31	28	95	471	114	41	23	21	5.9
5	13	66	25	30	28	128	417	106	34	22	18	5.9
6	12	76	26	26	28	193	527	102	31	20	20	5.9
7	12	84	35	28	28	184	414	91	29	19	19	5.6
8	13	72	110	31	28	161	330	81	36	19	18	5.5
9	18	63	100	34	27	156	279	199	39	22	16	5.4
10	45	58	98	33	27	193	239	380	41	22	15	5.4
11	35	54	85	33	27	316	205	232	51	20	16	5.9
12	28	52	70	32	26	439	186	168	64	21	23	5.6
13	25	48	58	32	29	701	175	132	53	16	24	6.1
14	23	47	52	32	32	2720	166	110	41	15	22	10
15	22	48	49	32	33	2040	149	95	36	14	21	19
16	21	46	47	32	32	1120	132	86	30	13	21	14
17	19	43	46	32	30	835	120	77	28	12	19	14
18	19	43	43	31	31	585	107	68	26	11	17	16
19	20	42	41	31	32	459	100	60	27	10	15	15
20	23	42	43	31	32	385	98	54	27	9.2	14	28
21	197	39	47	31	31	335	90	48	26	9.2	13	132
22	184	36	40	31	31	303	86	43	24	11	12	76
23	108	35	43	31	30	274	118	39	27	12	12	50
24	82	33	39	31	29	295	491	36	31	11	11	39
25	90	32	34	30	65	246	760	36	26	9.4	11	33
26	100	31	33	29	126	217	536	34	49	8.5	10	32
27	99	30	33	29	156	237	370	36	69	8.0	9.4	187
28	87	31	30	29	152	303	284	33	44	7.8	8.2	127
29	73	32	29	29	---	509	224	30	36	7.4	7.8	78
30	64	29	31	28	---	760	182	28	33	6.6	7.0	54
31	64	---	28	28	---	782	---	28	---	6.2	7.4	---
TOTAL	1569	1536	1418	944	1202	15354	8864	2963	1095	468.3	475.2	1000.9
MEAN	50.6	51.2	45.7	30.5	42.9	495	295	95.6	36.5	15.1	15.3	33.4
MAX	197	101	110	34	156	2720	760	380	69	29	26	187
MIN	12	29	25	26	26	95	86	28	24	6.2	6.4	5.4
CFSM	.66	.67	.60	.40	.56	6.45	3.84	1.25	.48	.20	.20	.44
IN.	.76	.74	.69	.46	.58	7.44	4.29	1.44	.53	.23	.23	.48

CAL YR 1976 TOTAL 43525.0 MEAN 119 MAX 1200 MIN 11 CFSM 1.55 IN 21.08
WTR YR 1977 TOTAL 36889.4 MEAN 101 MAX 2720 MIN 5.4 CFSM 1.32 IN 17.87

NOTE.--No gage-height record Nov. 23 to Dec. 20, May 30 to June 1, July 28 to Sept. 1.

01090100 MERRIMACK RIVER AT HOOKSETT, NH

LOCATION.--Lat 43°05'45", long 71°27'49", Merrimack County, Hydrologic Unit 01070002, on upstream side of railroad bridge at Hooksett and 2.3 mi (3.7 km) downstream from Suncook River.

DRAINAGE AREA.--2,810 mi^2 (7,278 km^2), approximately.

PERIOD OF RECORD.--Water years 1974 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM .7UM-MF (COL./ 100 ML)
OCT											
13...	1030	44	5.8	14.0	12.0	35	1	7.5	24	11000	710
27...	1100	47	7.4	.0	7.0	17	2	8.6	<10	4700	B130
NOV											
08...	1100	54	6.3	6.0	5.0	10	2	8.4	11	5200	190
30...	1130	83	7.3	-4.0	4.0	10	2	6.6	<10	11000	280
DEC											
09...	1100	68	6.8	-8.0	1.0	12	5	13.2	<10	6200	230
28...	1000	58	6.6	-13.0	.0	10	5	11.8	<10	4300	B88
JAN											
18...	1030	87	7.2	-17.0	.0	5	3	--	<10	6600	160
31...	1100	136	7.2	-8.0	.0	5	2	--	<10	B1700	B53
FEB											
15...	1000	74	8.0	2.0	.5	5	2	10.8	10	6400	170
28...	1100	86	7.6	3.0	2.5	3	2	10.4	<10	5500	150
MAR											
21...	1120	55	6.8	4.5	2.0	16	4	--	30	600	B55
30...	1130	60	7.0	27.0	4.0	8	4	--	59	730	140
APR											
12...	1215	66	6.4	26.0	9.5	3	1	11.1	10	310	83
27...	1145	45	5.2	14.0	12.0	23	2	11.0	14	510	150
MAY											
23...	1030	58	6.6	26.5	21.0	10	2	7.0	25	2900	300
31...	1230	72	6.6	20.0	20.5	0	2	9.2	17	2000	240
JUN											
16...	1100	75	6.6	23.0	20.0	25	2	7.8	40	900	160
21...	0730	--	--	--	--	--	--	--	--	--	--
28...	1045	69	6.8	31.0	24.0	10	1	7.2	21	7400	1200
JUL											
06...	1230	67	7.3	24.0	23.0	10	1	7.4	25	B670	B71
19...	1100	73	6.4	33.0	28.5	20	1	6.6	20	B430	B130
AUG											
09...	1000	92	6.8	23.0	26.5	5	0	7.0	15	1600	110
31...	1000	88	7.0	20.0	24.5	5	0	8.1	10	1200	60
SEP											
20...	0930	72	7.4	11.0	19.5	4	1	8.4	20	3600	200
29...	1030	59	7.3	17.0	15.0	18	3	5.1	20	16000	B640

B, NON-IDEAL COLONY COUNT.

01090100 MERRIMACK RIVER AT HOOKSETT, NH--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	SUSPENDED SOLIDS (MG/L)	TOTAL RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)
OCT											
13...	--	--	--	--	--	--	--	--	8	51	.07
27...	--	--	--	--	--	--	--	--	5	45	.10
NOV											
08...	--	--	--	--	--	--	--	--	2	42	.14
30...	--	--	--	--	--	--	--	--	0	54	.21
DEC											
09...	--	--	--	--	--	--	--	--	9	49	.16
28...	4.3	1.3	16	0	13	6.4	6.9	11	2	53	.21
JAN											
18...	--	--	--	--	--	--	--	--	2	38	.19
31...	--	--	--	--	--	--	--	--	0	49	.12
FEB											
15...	--	--	--	--	--	--	--	--	2	62	.15
28...	--	--	--	--	--	--	--	--	3	61	.22
MAR											
21...	3.0	.8	14	0	11	3.6	3.6	6.3	18	84	.23
30...	--	--	--	--	--	--	--	--	47	914	.15
APR											
12...	--	--	--	--	--	--	--	--	5	42	.14
27...	--	--	--	--	--	--	--	--	12	314	.11
MAY											
23...	--	--	--	--	--	--	--	--	0	44	.13
31...	--	--	--	--	--	--	--	--	9	46	.14
JUN											
16...	--	--	--	--	--	--	--	--	0	46	.13
21...	--	--	--	--	--	--	--	--	--	--	--
28...	.9	.8	10	0	8	2.5	5.8	9.5	4	56	.17
JUL											
06...	--	--	--	--	--	--	--	--	2	49	.13
19...	--	--	--	--	--	--	--	--	0	120	.06
AUG											
09...	--	--	--	--	--	--	--	--	7	58	.09
31...	--	--	--	--	--	--	--	--	3	47	.07
SEP											
20...	--	--	--	--	--	--	--	--	5	55	.17
29...	3.8	.7	12	0	10	1.0	7.5	7.8	6	56	.09

DATE	TOTAL AMMONIA NITROGEN (N) (MG/L)	TOTAL ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	PHENOLS (UG/L)	OIL AND GREASE (MG/L)	CHLOROPHYLL A (UG/L)	CHLOROPHYLL B (UG/L)	TOTAL CHROMIUM (CR) (UG/L)
OCT										
13...	.04	.14	.18	.25	.06	--	0	2.10	1.18	<10
27...	.05	.20	.25	.35	.04	--	0	.000	.000	<10
NOV										
08...	.05	.13	.18	.32	.04	--	0	.000	.000	<10
30...	.05	.20	.25	.46	.04	--	0	.000	.000	<10
DEC										
09...	.05	.40	.45	.61	.05	--	0	2.12	.000	10
28...	.08	.22	.30	.51	.03	0	0	.000	.000	1
JAN										
18...	.12	.17	.29	.48	.03	--	0	--	--	<10
31...	.11	1.1	1.2	1.3	.04	--	0	.000	.000	<10
FEB										
15...	.16	1.3	1.5	1.7	.04	--	--	.000	.000	<10
28...	.15	.33	.48	.70	.03	--	0	1.40	.000	<10
MAR										
21...	.04	.36	.40	.63	.03	3	0	--	--	10
30...	.04	.16	.20	.35	.02	--	1	--	--	<10
APR										
12...	.02	.38	.40	.54	.02	--	0	--	--	20
27...	.01	.29	.30	.41	.25	--	0	--	--	<10
MAY										
23...	.04	.36	.40	.53	.02	--	0	.931	.000	<10
31...	.02	.05	.07	.21	.02	--	2	1.40	.000	<10
JUN										
16...	.04	.29	.33	.46	.02	--	--	.233	.000	<10
21...	--	--	--	--	--	--	0	--	--	--
28...	.25	.62	.87	1.0	.04	1	1	1.28	.000	10
JUL										
06...	.01	.30	.31	.44	.02	--	1	--	--	<10
19...	.02	.20	.22	.28	.02	--	1	3.10	1.00	<10
AUG										
09...	.08	.34	.42	.51	.01	--	0	.000	.000	10
31...	.02	.05	.07	.14	.02	--	0	.000	.000	<10
SEP										
20...	.07	.11	.18	.35	.03	--	1	3.70	2.74	10
29...	.05	.17	.22	.31	.03	2	0	.717	.000	<10

01090100 MERRIMACK RIVER AT HOOKSETT, NH--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL ALUMINUM (AL) (UG/L)	TOTAL BISMUTH (BI) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYLLIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	TOTAL COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL GALLIUM (GA) (UG/L)	TOTAL GERMANIUM (GE) (UG/L)
DEC										
28...	120	<0	6	<0	30	<10	<0	3	<0	<1
MAR										
21...	390	--	0	0	40	<10	<50	<10	--	--
JUN										
28...	--	--	--	--	--	--	--	--	--	--
SEP										
29...	--	--	--	--	--	--	--	--	--	--

DATE	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL LITHIUM (LI) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MOLYBDENUM (MO) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL STRONTIUM (SR) (UG/L)	TOTAL TIN (SN) (UG/L)
DEC									
28...	250	7	0	40	0	4	2	10	1
MAR									
21...	590	<100	0	80	0	<50	<10	30	--
JUN									
28...	--	--	--	--	--	--	--	--	--
SEP									
29...	--	--	--	--	--	--	--	--	--

DATE	TOTAL TITANIUM (TI) (UG/L)	TOTAL VANADIUM (V) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ZIRCONIUM (ZR) (UG/L)	TOTAL PCB (UG/L)	POLYCHLORINATED NAPHTHALENES (UG/L)	TOTAL ALDRIN (UG/L)	TOTAL CHLORDANE (UG/L)	TOTAL DDD (UG/L)
DEC									
28...	3	<.7	9	<1	.0	.00	.00	.0	.00
MAR									
21...	--	--	20	--	.0	.00	.00	.0	.00
JUN									
28...	--	--	--	--	.0	.00	.00	.0	.00
SEP									
29...	--	--	--	--	.0	.00	.00	.0	.00

DATE	TOTAL DDE (UG/L)	TOTAL DDT (UG/L)	TOTAL DIELDRIN (UG/L)	TOTAL ENDOSULFAN (UG/L)	TOTAL ENDRIN (UG/L)	TOTAL HEPTACHLOR (UG/L)	TOTAL HEPTACHLOR EPOXIDE (UG/L)	TOTAL LINDANE (UG/L)	TOTAL TOXAPHENE (UG/L)
DEC									
28...	.00	.00	.00	--	.00	.00	.00	.00	0
MAR									
21...	.00	.00	.00	.00	.00	.00	.00	.00	0
JUN									
28...	.00	.00	.00	.00	.00	.00	.00	.00	0
SEP									
29...	.00	.00	.00	.00	.00	.00	.00	.00	0

01090800 PISCATAQUOG RIVER BELOW EVERETT DAM, NEAR EAST WEARE, NH

LOCATION.--Lat 43°05'29", long 71°39'36", Hillsborough County, Hydrologic Unit 01070002, on right bank 500 ft (150 m) downstream from Everett Dam and 1.4 mi (2.3 km) southeast of East Weare.

DRAINAGE AREA.--63.1 mi^2 (163.4 km^2).

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 320 ft (98 m), from topographic map.

REMARKS.--Records good except those for periods of no gage-height record, 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, and 1977. Occasional regulation by small reservoirs upstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--14 years, 92.4 ft^3/s (2.617 m^3/s), 19.89 in/yr (505 mm/yr), adjusted for storage and diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,530 ft^3/s (43.3 m^3/s) May 1, 1969, gage height, 8.73 ft (2.661 m); no flow for part of Aug. 27, Nov. 18, 1964, Oct. 22, 1968, caused by unusual regulation; minimum daily discharge, 0.39 ft^3/s (0.011 m^3/s) Sept. 6, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,510 ft^3/s (42.8 m^3/s) Mar. 17, gage height, 8.71 ft (2.655 m); minimum daily, .50 ft^3/s (.014 m^3/s) Sept. 1-6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	100	13	20	17	13	416	195	20	24	3.0	.50
2	5.2	89	11	20	16	7.2	421	187	28	21	3.3	.50
3	5.2	91	25	13	13	20	512	157	33	19	3.0	.50
4	5.2	90	31	9.7	11	37	415	133	31	16	2.7	.50
5	4.9	88	31	9.4	8.0	55	72	84	27	15	2.6	.50
6	4.6	85	25	9.3	8.3	76	518	78	23	13	2.6	.50
7	4.6	85	23	9.5	8.3	73	911	72	22	9.3	2.8	1.5
8	4.6	85	20	9.4	8.4	73	913	68	31	8.5	2.7	1.5
9	6.2	83	20	9.3	8.5	84	794	61	33	13	3.3	1.5
10	12	82	20	9.3	8.5	109	256	180	43	13	6.5	1.5
11	10	77	21	9.4	8.6	172	188	243	54	12	7.5	1.5
12	13	74	21	9.3	8.9	220	194	294	76	7.7	7.1	1.5
13	89	47	20	9.5	8.7	140	184	131	55	10	6.5	1.5
14	110	27	20	9.7	8.8	32	171	112	28	11	5.9	1.5
15	113	23	21	9.8	8.9	37	155	102	42	9.9	4.5	2.0
16	124	21	21	9.7	8.9	486	137	102	36	9.0	4.2	5.0
17	123	20	21	9.6	8.9	1260	124	76	32	8.1	3.5	12
18	122	20	21	9.5	8.9	1430	113	62	30	7.7	3.1	17
19	120	20	21	9.3	9.3	1290	104	60	37	6.0	1.9	23
20	118	18	21	9.5	9.3	1140	94	62	40	5.2	2.1	17
21	151	14	13	9.8	9.5	985	88	58	47	4.5	2.3	122
22	138	13	9.7	9.7	9.7	389	93	55	38	3.8	2.3	106
23	121	12	9.7	9.7	9.7	205	95	50	29	2.3	2.3	60
24	116	11	9.8	9.8	9.6	220	132	45	23	1.8	2.1	50
25	117	11	9.7	15	9.8	218	63	40	22	2.6	1.8	40
26	119	10	9.7	15	10	205	446	35	31	2.9	1.5	32
27	113	11	9.7	13	10	193	700	30	36	2.3	1.1	145
28	107	11	9.7	13	11	214	650	28	33	1.9	1.1	150
29	104	12	17	13	---	231	397	28	30	1.7	.94	112
30	99	13	20	14	---	257	307	25	28	1.6	.87	60
31	96	---	20	16	---	330	---	30	---	1.6	.57	---
TOTAL	2280.9	1343	565.0	352.2	275.5	10201.2	9663	2883	1038	265.4	95.68	968.00
MEAN	73.6	44.8	18.2	11.4	9.84	329	322	93.0	34.6	8.56	3.09	32.3
MAX	151	100	31	20	17	1430	913	294	76	24	7.5	150
MIN	4.6	10	9.7	9.3	8.0	7.2	63	25	20	1.6	.57	.50
MEAN†	75.5	43.3	13.7	8.60	14.4	300	295	91.3	34.6	7.70	2.90	34.0
CFSM†	1.20	.686	.217	.136	.228	4.75	4.68	1.45	.548	.122	.046	.539
IN.†	1.38	.77	.25	.16	.24	5.47	5.22	1.67	.61	.14	.05	.60

CAL YR 1976 TOTAL 32987.80 MEAN 90.1 MAX 595 MIN 3.6 MEAN† 89.6 CFSM† 1.42 IN† 19.33
WTR YR 1977 TOTAL 29930.88 MEAN 82.0 MAX 1430 MIN .50 MEAN† 82.1 CFSM† 1.30 IN† 17.67

† Adjusted for change in contents in Everett Lake (adjusted for diversion from Hopkinton Lake in March).
NOTE.--No gage-height record Nov. 4-8, Apr. 22 to June 2, June 11-14, Aug. 21, Sept. 1-30.

01091000 SOUTH BRANCH PISCATAQUOG RIVER NEAR GOFFSTOWN, NH

LOCATION.--Lat 43°00'49", long 71°38'31", Hillsborough County, Hydrologic Unit 01070002, on right bank 20 ft (6 m) upstream from highway bridge, 1.4 mi (2.3 km) upstream from mouth, and 2.2 mi (3.5 km) west of Goffstown.

DRAINAGE AREA.--104 mi^2 (269 km^2).

PERIOD OF RECORD.--Discharge: July 1940 to current year.
Water-quality records: Water year 1957.

GAGE.--Water-stage recorder. Altitude of gage is 310 ft (94 m), from topographic map.

REMARKS.--Records good except those for winter period and period of no gage-height record, which are fair. Prior to 1954, some regulation at low flow by mill upstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--37 years, 164 ft^3/s (4.644 m^3/s), 21.41 in/yr (544 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,100 ft^3/s (116 m^3/s) June 25, 1944, gage height, 9.47 ft (2.886 m); maximum gage height, 14.33 ft (4.368 m) Feb. 11, 1970 (ice jam); minimum discharge, 2.4 ft^3/s (0.068 m^3/s) Aug. 20-22, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft^3/s (28.3 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 14	0630	*3630	103	*9.07	2.765	Apr. 6	0300	1090	30.9	6.21	1.893
Mar. 31	0130	1550	43.9	6.87	2.094	Apr. 25	0700	1620	45.9	6.97	2.124

Minimum discharge, 4.0 ft^3/s (0.11 m^3/s) Sept. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.9	43	46	22	23	190	982	210	38	42	12	13
2	9.5	39	36	22	23	180	653	200	48	52	24	9.4
3	9.1	36	29	22	22	150	591	220	58	48	20	8.3
4	11	34	29	24	22	140	555	160	53	37	15	5.0
5	12	33	28	21	22	200	677	115	44	31	13	6.8
6	11	38	34	21	22	190	956	140	40	27	14	8.0
7	11	36	91	21	22	180	632	130	44	24	18	7.2
8	10	33	380	21	22	180	478	120	74	24	12	7.2
9	19	30	499	22	21	250	392	190	77	26	12	6.8
10	46	29	244	21	21	330	327	300	99	27	17	8.0
11	37	29	80	22	21	450	282	460	129	24	24	8.3
12	30	29	54	26	21	800	255	310	144	21	24	7.5
13	24	27	45	25	22	1190	231	230	104	21	20	8.0
14	19	25	38	25	22	3090	206	180	79	22	16	9.3
15	18	25	37	24	22	1920	189	155	66	19	14	9.1
16	16	26	35	24	22	1290	169	135	53	18	12	9.0
17	15	26	33	24	22	1020	151	120	45	17	12	16
18	14	25	32	24	22	679	136	120	44	16	12	25
19	14	28	31	24	22	523	127	170	70	15	11	22
20	15	28	31	24	22	472	118	140	68	14	9.8	40
21	128	29	29	23	21	400	114	120	63	13	9.0	111
22	104	32	29	23	21	371	107	90	54	11	10	69
23	69	29	28	23	21	325	168	78	46	10	12	48
24	53	29	27	23	21	369	861	68	41	9.7	12	40
25	49	28	26	23	32	323	1430	58	39	13	12	36
26	48	28	26	23	60	281	600	50	72	15	11	47
27	46	35	25	23	120	306	640	44	82	14	9.9	149
28	38	36	24	23	210	390	500	41	63	12	9.1	117
29	35	29	24	23	---	840	370	42	52	11	8.2	78
30	32	33	23	23	---	1350	280	40	48	10	7.8	58
31	35	---	23	23	---	1400	---	39	---	9.6	8.4	---
TOTAL	987.5	927	2116	712	944	19779	13177	4475	1937	653.3	421.2	986.9
MEAN	31.9	30.9	68.3	23.0	33.7	638	439	144	64.6	21.1	13.6	32.9
MAX	128	43	499	26	210	3090	1430	460	144	52	24	149
MIN	9.1	25	23	21	21	140	107	39	38	9.6	7.8	5.0
CFSM	.31	.30	.66	.22	.32	6.14	4.22	1.39	.62	.20	.13	.32
IN.	.35	.33	.76	.25	.34	7.07	4.71	1.60	.69	.23	.15	.35

CAL YR 1976 TOTAL 55554.4 MEAN 152 MAX 1250 MIN 6.0 CFSM 1.46 IN 19.87
WTR YR 1977 TOTAL 47115.9 MEAN 129 MAX 3090 MIN 5.0 CFSM 1.24 IN 16.85

NOTE.--No gage-height record Apr. 27 to June 1.

01091500 PISCATAQUOG RIVER NEAR GOFFSTOWN, NH

LOCATION.--Lat 43°00'58", long 71°33'03", Hillsborough County, Hydrologic Unit 01070002, on left bank 300 ft (90 m) upstream from highway bridge, 0.2 mi (0.3 km) upstream from Harry Brook, 0.4 mi (0.6 km) southwest of Grasmere, 0.9 mi (1.4 km) downstream from Glen Lake, and 2.5 mi (4.0 km) east of Goffstown.

DRAINAGE AREA.--202 mi^2 (523 km^2).

PERIOD OF RECORD.--Discharge: October 1939 to current year.
Water-quality records: Water years 1955, 1957.

GAGE.--Water-stage recorder. Altitude of gage is 185 ft (56 m), from topographic map. Prior to Dec. 22, 1939, staff gage at same site and datum.

REMARKS.--Records excellent except those for winter period and period of no gage-height record, which are fair. Flow regulated by Everett Lake 10 mi (16 km) upstream since 1962 (Reservoirs in Merrimack River basin) and occasionally by Glen Lake since 1966. Prior to October 1966, flow regulated by powerplant at outlet of Glen Lake. Diversion from Hopkinton Lake on Contoocook River to Everett Lake during spring period of high flow in 1968, 1969, and 1977. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--38 years, 306 ft^3/s (8.665 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,840 ft^3/s (194 m^3/s) Apr. 5, 1960, gage height, 10.85 ft (3.307 m); minimum daily, 2.2 ft^3/s (0.062 m^3/s) Sept. 7, 1962.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1733, 21,900 ft^3/s (620 m^3/s) Sept. 21, 1938, gage height, 17.52 ft (5.340 m), from floodmarks, by computation of flow over dam. Flood of Mar. 19, 1936, reached a discharge of 19,900 ft^3/s (564 m^3/s), by computation of flow over dam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,910 ft^3/s (139 m^3/s) Mar. 14, gage height, 9.59 ft (2.923 m); minimum, 16 ft^3/s (0.45 m^3/s) Nov. 20-25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	172	18	45	45	360	1550	458	76	81	20	19
2	20	172	18	44	45	320	1200	397	94	79	24	19
3	20	155	31	44	45	280	1150	443	105	77	25	19
4	19	115	37	43	45	260	1220	324	100	63	26	19
5	19	115	49	42	45	320	937	227	86	54	24	19
6	19	115	60	42	45	360	1360	288	75	46	24	19
7	19	116	114	42	45	340	1510	267	81	40	23	19
8	19	126	255	43	45	340	1470	242	119	41	23	19
9	30	136	175	45	44	357	1290	242	136	45	21	19
10	64	135	133	42	44	516	953	843	166	46	22	19
11	50	135	110	46	44	822	564	939	224	43	24	19
12	159	135	94	48	44	1070	554	710	271	37	27	19
13	236	134	80	50	44	1780	520	547	213	38	28	19
14	233	132	75	50	44	4040	472	379	165	41	35	19
15	185	131	73	49	46	2390	434	317	136	35	32	19
16	137	129	70	48	46	1700	392	284	112	37	31	19
17	138	74	68	48	46	2120	356	243	93	41	29	19
18	128	24	66	47	45	2180	308	236	90	36	28	19
19	100	17	64	47	45	1860	294	342	131	34	26	19
20	101	17	62	47	44	1670	277	309	133	32	26	21
21	104	16	60	47	44	1480	259	252	128	30	23	144
22	188	16	58	47	44	1180	247	181	114	29	22	171
23	224	16	56	47	44	687	339	165	92	28	22	121
24	193	16	55	46	44	722	1230	141	79	26	21	91
25	207	17	54	46	50	660	1810	121	72	26	21	77
26	210	18	52	45	100	617	1170	102	119	26	20	95
27	224	18	50	45	200	630	1260	88	159	26	20	247
28	258	18	49	46	380	742	1140	82	127	24	19	246
29	313	18	48	46	---	1270	919	85	102	23	19	174
30	236	18	47	45	---	1770	571	82	91	21	19	125
31	170	---	46	45	---	1850	---	78	---	20	19	---
TOTAL	4043	2456	2227	1417	1802	34693	25756	9414	3689	1225	743	1873
MEAN	130	81.9	71.8	45.7	64.4	1119	859	304	123	39.5	24.0	62.4
MAX	313	172	255	50	380	4040	1810	939	271	81	35	247
MIN	19	16	18	42	44	260	247	78	72	20	19	19

CAL YR 1976 TOTAL 103019 MEAN 281 MAX 1700 MIN 12
WTR YR 1977 TOTAL 89338 MEAN 245 MAX 4040 MIN 16

NOTE.--No gage-height record Jan. 30 to Mar. 7.

01092000 MERRIMACK RIVER NEAR GOFFS FALLS, BELOW MANCHESTER, NH

LOCATION.--Lat 42°56'54", long 71°27'52", Hillsborough County, Hydrologic Unit 01070002, on right bank 600 ft (200 m) upstream from bridge on Interstate Highway 193, 0.8 mi (1.3 km) downstream from Bowman Brook, 1.3 mi (2.1 km) north of Goffs Falls, and 2.3 mi (3.7 km) downstream from Piscataquog River.

DRAINAGE AREA.--3,092 mi^2 (8,008 km^2).

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 (33.305 m) above mean sea level.

REMARKS.--Records good except those for winter period and periods of doubtful and no gage-height record, which are fair. 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).

AVERAGE DISCHARGE.--41 years, 5,238 ft^3/s (148.3 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 102,500 ft^3/s (2,900 m^3/s) Sept. 23, 1938, gage height, 25.87 ft (7.885 m), from rating curve extended above 48,000 ft^3/s (1,360 m^3/s) on basis of computations of flow over dam at gage heights 25.87 ft (7.885 m) and 35.19 ft (10.726 m); minimum daily, 98 ft^3/s (2.78 m^3/s) Oct. 11, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1722, 150,000 ft^3/s (4,250 m^3/s) Mar. 20, 1936, gage height, 35.19 ft (10.726 m), from floodmarks, from rating curve extended above 48,000 ft^3/s (1,360 m^3/s) by method explained above.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 22,000 ft^3/s (623 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 15	0915	*42200	1200	*13.22	4.029	Apr. 1	1100	25500	722	9.75	2.972

Minimum daily discharge, 736 ft^3/s (20.8 m^3/s) Sept. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2980	5000	2120	1620	1630	3810	21500	8900	2150	1980	1110	782
2	2810	5780	1860	1660	1900	3530	23100	9060	1730	2410	1330	1170
3	1300	5950	1910	1580	1980	3430	21200	7220	2400	2310	1380	971
4	1680	5500	1800	1620	1890	3760	19700	5980	2210	1940	1450	959
5	1860	4700	1820	2060	2320	4180	18100	5760	2100	1590	1080	994
6	1460	5280	1830	1810	1600	4480	17800	5200	2060	1780	1400	1100
7	1170	4930	3120	1760	1640	4870	16500	5100	2230	1730	1240	985
8	1690	5960	3710	1870	1990	5020	13800	5380	2810	1810	1520	1100
9	2450	5580	6240	1930	1770	5490	11800	5560	3200	1020	1410	989
10	3190	4900	6160	1990	1870	5180	8960	6600	3720	996	1220	987
11	6990	3390	4310	1830	1730	6700	7770	8860	3660	1200	1260	969
12	6930	3660	3400	2000	1860	9400	7140	8830	3070	1810	970	736
13	5120	3160	3160	1960	1970	13400	5420	7110	3010	1990	1330	1020
14	3970	3210	2910	2050	1970	30300	9930	5990	2760	1860	1380	1450
15	3370	3350	2640	1830	1700	40200	11500	5470	2670	1070	1310	2490
16	3420	2740	2610	2230	1930	32000	11600	4660	2490	1750	1300	3860
17	3460	2700	2630	1880	1790	29900	10300	4360	2700	1590	1360	3140
18	3180	2850	2510	1890	2060	28900	9070	4060	2180	1810	1380	1960
19	3210	2360	2380	1880	1820	27100	8300	3660	2000	1280	1610	1670
20	3350	2760	2030	1890	1920	25900	7710	4280	2050	1570	1650	2500
21	4490	2770	2300	1750	1070	22900	7150	4220	2290	1390	1060	3090
22	11100	2640	2100	1810	1590	18500	8000	3920	1570	1650	1460	4190
23	13400	2020	1880	1680	1910	14400	8900	3190	2210	947	1010	3650
24	9330	2420	1990	1550	1980	13100	13900	3050	1400	1050	1020	3410
25	7250	2050	1740	1710	2720	12100	20700	2690	1740	1620	1330	2740
26	6460	2450	1750	1930	3150	10900	21200	2570	1710	1310	1110	3280
27	6600	2180	1580	1700	3670	10300	18900	2300	3090	1130	1360	3880
28	6880	1790	1530	1850	3750	10900	15200	1840	3600	1650	848	5620
29	6180	2540	1770	1840	---	13400	12400	1720	2720	1190	1140	5550
30	5910	2250	1950	1860	---	17200	10300	1740	2850	1360	1090	4510
31	5380	---	1600	1860	---	17300	---	1980	---	1180	972	---
TOTAL	146570	106870	79340	56880	57180	448550	397850	151260	74380	47973	39090	69752
MEAN	4728	3562	2559	1835	2042	14470	13260	4879	2479	1548	1261	2325
MAX	13400	5960	6240	2230	3750	40200	23100	9060	3720	2410	1650	5620
MIN	1170	1790	1530	1550	1070	3430	5420	1720	1400	947	848	736

CAL YR 1976 TOTAL 2131361 MEAN 5823 MAX 35200 MIN 906
WTR YR 1977 TOTAL 1675695 MEAN 4591 MAX 40200 MIN 736

NOTE.--No gage-height record Apr. 13-22, May 24 to July 8. Doubtful gage-height record Apr. 23 to May 23.

01093800 STONY BROOK TRIBUTARY NEAR TEMPLE, NH

LOCATION.--Lat 42°51'36", long 71°50'00", Hillsborough County, Hydrologic Unit 01070002, on left bank 150 ft (45 m) downstream from highway bridge, 2.9 mi (4.7 km) north of Temple, and 5.5 mi (8.8 km) upstream from mouth.

DRAINAGE AREA.--3.60 mi^2 (9.32 km^2).

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

GAGE.--Water-stage recorder. Altitude of gage is 920 ft (280 m), from topographic map.

REMARKS.--Records good except those for winter period, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--14 years, 6.70 ft^3/s (0.190 m^3/s), 25.27 in/yr (642 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 336 ft^3/s (9.52 m^3/s) Mar. 13, 1977, gage height, 7.13 ft (2.173 m), from rating curve extended above 90 ft^3/s (2.55 m^3/s); maximum gage height, 7.81 ft (2.380 m) Feb. 3, 1970, Dec. 21, 1973, backwater from ice; no flow for part of Sept. 26, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 110 ft^3/s (3.12 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 13	2030	a*336	9.52	*7.13	2.173

a From rating curve extended above 90 ft^3/s (2.55 m^3/s).

Minimum discharge, 0.10 ft^3/s (0.003 m^3/s) July 24, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.42	3.1	2.3	1.2	.92	6.0	27	7.8	1.3	.98	.91	.23
2	.42	2.5	1.7	1.1	.91	5.0	20	6.8	2.6	.84	1.9	.22
3	.42	2.2	1.3	1.1	.90	3.7	20	6.8	1.7	.72	.62	.21
4	.42	1.9	1.1	1.1	.90	3.2	17	6.2	2.5	.67	.48	.20
5	.83	1.8	1.0	1.1	.89	7.8	26	5.6	3.5	.62	.48	.20
6	.42	1.8	1.0	1.1	.89	7.8	30	5.6	4.0	.57	.62	.28
7	.42	1.8	5.0	1.1	.88	5.4	19	5.3	23	.57	.42	.20
8	.35	1.6	10	1.1	.88	7.3	16	4.9	17	.67	.42	.20
9	2.5	1.5	20	1.1	.87	6.7	14	5.5	13	.84	.52	.20
10	2.5	1.5	8.0	1.0	.87	21	12	20	22	.57	.37	.24
11	1.5	1.5	5.0	1.2	.86	32	10	17	15	.52	.62	.32
12	1.2	1.6	3.5	1.2	.86	28	10	17	12	.42	.48	.20
13	.97	1.5	2.5	1.2	.85	91	11	13	10	.67	.48	.20
14	.97	1.5	2.1	1.2	.85	96	9.4	8.6	8.0	.52	.37	.28
15	.97	1.5	1.9	1.2	.85	53	8.3	7.4	6.5	.42	.37	.32
16	1.1	1.8	1.8	1.1	.84	41	7.6	6.2	5.4	.28	.28	.28
17	1.1	1.7	1.7	1.1	.84	29	6.6	5.3	4.5	.32	.28	1.4
18	1.1	1.6	1.6	1.1	.83	20	6.4	5.6	4.0	.28	.32	.84
19	.49	1.6	1.5	1.1	.83	20	5.6	6.4	6.0	.20	.28	.57
20	.83	1.6	1.5	1.1	.82	17	5.3	5.3	4.5	.20	.28	2.5
21	16	1.7	1.5	1.1	.82	15	5.1	4.5	3.5	.18	.18	3.6
22	4.1	1.6	1.5	1.1	.81	13	4.6	3.7	3.0	.17	.48	2.1
23	2.6	1.6	1.4	1.1	.81	18	11	3.0	2.8	.15	.52	1.5
24	2.1	1.5	1.4	1.0	.80	16	43	2.7	2.6	.13	.37	1.8
25	2.3	1.5	1.3	1.0	2.0	13	41	2.3	2.5	.62	.62	2.7
26	2.9	1.5	1.3	1.0	5.0	12	19	2.0	4.6	.57	.32	6.8
27	2.8	1.5	1.3	.99	10	12	15	1.9	3.8	.28	.28	9.7
28	2.1	1.5	1.3	.98	7.0	17	12	1.7	2.1	.24	.27	4.0
29	1.8	1.9	1.2	.97	---	55	10	1.5	1.4	.20	.26	2.6
30	1.8	2.6	1.2	.96	---	63	8.6	1.4	1.3	.18	.25	1.9
31	2.5	---	1.2	.94	---	48	---	1.3	---	.18	.24	---
TOTAL	59.93	52.5	89.1	33.64	44.58	782.9	450.5	192.3	194.1	13.78	14.29	45.79
MEAN	1.93	1.75	2.87	1.09	1.59	25.3	15.0	6.20	6.47	.44	.46	1.53
MAX	16	3.1	20	1.2	10	96	43	20	23	.98	1.9	9.7
MIN	.35	1.5	1.0	.94	.80	3.2	4.6	1.3	1.3	.13	.18	.20
CFSM	.54	.49	.80	.30	.44	7.03	4.17	1.72	1.80	.12	.13	.43
IN.	.62	.54	.92	.35	.46	8.09	4.65	1.99	2.01	.14	.15	.47

CAL YR 1976 TOTAL 2136.23 MEAN 5.84 MAX 49 MIN .07 CFSM 1.62 IN 22.07
WTR YR 1977 TOTAL 1973.41 MEAN 5.41 MAX 96 MIN .13 CFSM 1.50 IN 20.39

01096508 MERRIMACK RIVER AT NASHUA, NH

LOCATION.--Lat 42°45'48", long 71°26'36", Hillsborough County, Hydrologic Unit 01070002, on upstream side of Taylor Falls Bridge at east limits of Nashua, 50 ft (15 m) from left bank, and 0.3 mi (0.8 km) downstream from Nashua River.

DRAINAGE AREA.--3,480 mi^2 (9,013 km^2), approximately.

PERIOD OF RECORD.--Water years 1974 to current year.

REMARKS.--When sampling, an attempt is made to exclude Nashua River water.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM .7UM-MF (COL./ 100 ML)
OCT											
13...	0900	54	5.8	12.5	12.0	25	1	6.9	22	B22000	980
27...	0900	54	6.2	-2.0	7.0	27	1	8.8	<10	7900	700
NOV											
08...	0940	80	6.2	4.0	5.0	10	3	8.7	20	9700	710
30...	0930	100	6.3	-5.0	3.5	12	2	6.8	12	31000	720
DEC											
09...	0900	89	6.6	-8.0	1.0	10	1	10.4	<10	13000	1000
28...	0800	87	6.6	-14.0	.0	10	2	10.4	<10	16000	690
FEB											
28...	0900	116	6.8	2.0	3.0	4	4	11.0	15	11000	570
MAR											
21...	0915	64	6.5	3.0	2.0	16	5	--	21	2100	480
30...	1000	72	7.2	27.0	5.0	12	2	--	10	2000	320
APR											
12...	1045	67	6.1	27.0	11.0	6	1	8.3	26	3700	290
27...	0930	20	6.3	11.0	9.5	22	2	11.0	15	1300	280
MAY											
23...	0930	66	6.8	26.5	21.0	0	2	8.0	20	9600	900
31...	1045	85	6.7	21.5	20.0	0	1	7.4	25	12000	730
JUN											
16...	0900	80	6.8	17.0	18.5	25	1	7.8	16	9500	920
28...	0915	87	6.5	25.0	23.5	10	1	6.8	20	B15000	1800
JUL											
06...	1100	87	6.8	22.0	23.0	10	1	6.5	20	17000	1300
19...	1000	102	6.6	33.0	27.5	20	1	6.4	25	12000	970
AUG											
09...	0800	99	6.6	21.0	25.0	10	0	8.6	15	6300	280
31...	0800	110	7.0	18.0	22.0	15	1	6.7	20	4700	400
SEP											
20...	0820	86	7.6	11.0	19.0	2	2	6.9	35	B27000	B2400
29...	0830	77	6.8	17.5	15.0	16	3	4.6	25	59000	4500

B, NON-IDEAL COLONY COUNT.

01096508 MERRIMACK RIVER AT NASHUA, NH--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	SUSPENDED SOLIDS (MG/L)	TOTAL RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)
OCT											
13...	--	--	--	--	--	--	--	--	14	69	.07
27...	--	--	--	--	--	--	--	--	5	48	.11
NOV											
08...	--	--	--	--	--	--	--	--	2	49	.16
30...	--	--	--	--	--	--	--	--	0	51	.21
DEC											
09...	--	--	--	--	--	--	--	--	6	61	.23
28...	5.0	1.6	16	0	13	6.4	6.5	15	2	65	.25
FEB											
28...	--	--	--	--	--	--	--	--	4	76	.27
MAR											
21...	3.8	.8	9	0	7	4.6	3.6	7.3	11	120	.25
30...	--	--	--	--	--	--	--	--	18	64	.16
APR											
12...	--	--	--	--	--	--	--	--	8	48	.15
27...	--	--	--	--	--	--	--	--	13	73	.13
MAY											
23...	--	--	--	--	--	--	--	--	0	51	.18
31...	--	--	--	--	--	--	--	--	1	57	.22
JUN											
16...	--	--	--	--	--	--	--	--	0	60	.21
28...	1.1	.9	10	0	8	5.1	8.1	13	13	63	.21
JUL											
06...	--	--	--	--	--	--	--	--	6	62	.23
19...	--	--	--	--	--	--	--	--	5	189	.21
AUG											
09...	--	--	--	--	--	--	--	--	7	65	.23
31...	--	--	--	--	--	--	--	--	5	64	.25
SEP											
20...	--	--	--	--	--	--	--	--	13	69	.26
29...	3.8	.8	11	0	9	2.8	8.6	11	7	58	.17

DATE	TOTAL AMMONIA NITROGEN (N) (MG/L)	TOTAL ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	PHENOLS (UG/L)	OIL AND GREASE (MG/L)	CHLOROPHYLL A (UG/L)	CHLOROPHYLL B (UG/L)	TOTAL CHROMIUM (CR) (UG/L)
OCT										
13...	.16	.17	.33	.40	.10	--	0	.000	.000	<10
27...	.08	.35	.43	.54	.06	--	0	.000	.000	10
NOV										
08...	.10	.20	.30	.46	.05	--	0	.000	.000	<10
30...	.17	.36	.53	.74	.09	--	1	.000	.000	10
DEC										
09...	.15	.38	.53	.76	.09	--	1	.000	.000	10
28...	.21	.17	.38	.63	.09	0	0	.929	.000	3
FEB										
28...	.21	.44	.65	.92	.06	--	0	.000	.471	<10
MAR										
21...	.05	.32	.37	.62	.03	2	0	--	--	0
30...	.04	.16	.20	.36	.02	--	1	--	--	10
APR										
12...	.04	.36	.40	.55	.03	--	--	--	--	10
27...	.01	.29	.30	.43	.05	--	1	--	--	10
MAY										
23...	.08	.43	.51	.69	.05	--	2	2.85	.000	<10
31...	.08	1.8	1.9	2.1	.07	--	1	3.30	2.49	10
JUN										
16...	.14	.36	.50	.71	.06	--	0	2.88	1.39	10
28...	.19	.41	.60	.81	.06	1	--	3.66	.384	10
JUL										
06...	.05	.38	.43	.66	.05	--	1	3.64	.000	10
19...	.12	.59	.71	.92	.09	--	2	10.2	3.34	<10
AUG										
09...	.23	.87	1.1	1.3	.08	--	1	3.18	.000	10
31...	.13	.33	.46	.71	.11	--	0	15.8	2.93	10
SEP										
20...	.15	.32	.47	.73	.11	--	1	2.59	.000	<10
29...	.13	.39	.52	.69	.08	1	1	1.26	.000	<10

Reservoirs in Merrimack River basin

01077500 NEWFOUND LAKE on Newfound River, 1.7 mi (2.7 km) north of Bristol, NH, used for recreation and for storage of water for power, has usable capacity of 1,690,000,000 ft^3 (47,900,000 m^3). Records furnished by New Hampshire Water Resources Board.

01078500 FRANKLIN FALLS RESERVOIR on Pemigewasset River, 2 mi (3 km) north of Franklin, NH, completed in 1942, used for flood control, has usable capacity of 6,700,000,000 ft^3 (190,000,000 m^3). Records furnished by Corps of Engineers.

01080000 LAKE WINNIPESAUKEE on Winnipesaukee River (see p. 35).

01082500 EDWARD MACDOWELL RESERVOIR on Nubanusit Brook, at West Peterborough, NH, 2 mi (3 km) northwest of Peterborough, completed in 1950, used for flood control, has usable capacity of 558,000,000 ft^3 (15,800,000 m^3). Records furnished by Corps of Engineers.

01085400 HOPKINTON LAKE on Contoocook River, at West Hopkinton, NH, completed in 1962, used for flood control and recreation, has usable capacity of 3,084,000,000 ft^3 (87,340,000 m^3). Records furnished by Corps of Engineers.

01086500 BLACKWATER RESERVOIR on Blackwater River, at Swett's Mills, 1 mi (2 km) south of Webster, NH, completed in 1941, used for flood control, has usable capacity of 2,004,000,000 ft^3 (56,750,000 m^3). Records furnished by Corps of Engineers.

01090700 EVERETT LAKE on Piscataquog River, 1.3 mi (2.1 km) southeast of East Weare, NH, completed in 1962, used for flood control and recreation, has usable capacity of 3,768,000,000 ft^3 (106,700,000 m^3). Records furnished by Corps of Engineers.

Hopkinton and Everett Lakes, connected by a canal, are operated as a unit above elevation 400.00 ft (121.920 m). Diversion from Hopkinton Lake to Everett Lake in March 1968, April 1969.

MONTHEND USABLE CONTENTS, IN MILLIONS OF CUBIC FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

	Newfound Lake	Franklin Falls Reservoir	Edward MacDowell Reservoir
Sept. 30, 1976	965	145.9	8.6
Oct. 31	911	152.5	12.2
Nov. 30	817	119.8	10.1
Dec. 31	840	106.7	11.5
Jan. 31, 1977	799	119.8	19.1
Feb. 28	824	115.4	27.6
Mar. 31	1441	528.8	53.7
Apr. 30	1497	329.3	12.2
May 31	1411	119.8	1.3
June 30	1480	119.8	34.8
July 31	1323	115.4	8.6
Aug. 31	1263	124.1	4.9
Sept. 30	1212	141.6	7.3

	Hopkinton Lake	Blackwater Reservoir	Everett Lake
Sept. 30, 1976	10.0	.6	45.8
Oct. 31	13.9	1.4	50.9
Nov. 30	17.2	.7	47.0
Dec. 31	15.4	.9	34.8
Jan. 31, 1977	18.7	.9	27.4
Feb. 28	19.2	2.2	38.5
Mar. 31	103.1	91.6	123.5
Apr. 30	154.9	3.8	52.6
May 31	36.3	.5	48.1
June 30	16.4	.8	48.1
July 31	13.0	.2	45.8
Aug. 31	8.6	.2	45.3
Sept. 30	20.6	1.0	49.8

01127880 BIG BROOK NEAR PITTSBURG, NH

LOCATION.--Lat 45°08'06", long 71°12'23", Coos County, Hydrologic Unit 01080101, on left bank 10 ft (3 m) downstream from culvert on U.S. Highway 3, 0.3 mi (0.5 km) upstream from mouth, and 11 mi (18 km) northeast of Pittsburg.

DRAINAGE AREA.--6.36 mi^2 (16.47 km^2).

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

GAGE.--Water-stage recorder. Altitude of gage is 1,680 ft (512 m), from topographic map.

REMARKS.--Records good except those for winter period, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--13 years (water years 1965-77), 15.9 ft^3/s (0.450 m^3/s), 33.95 in/yr (862 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 441 ft^3/s (12.5 m^3/s) May 3, 1967, gage height, 3.61 ft (1.100 m), from rating curve extended above 110 ft^3/s (3.12 m^3/s); maximum gage height, 5.02 ft (1.530 m) Dec. 27, 1969, ice jam; minimum discharge, about 0.90 ft^3/s (0.025 m^3/s) about Aug. 20, 21, 1975.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 180 ft^3/s (5.10 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 31	1815	214	6.06	3.48	1.061	Apr. 21	1630	*241	6.83	*3.63	1.106
Apr. 13	2345	193	5.47	3.35	1.021						

Minimum discharge not determined, occurred during period of ice effect; minimum daily, 1.6 ft^3/s (0.045 m^3/s) Feb. 4-22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	24	8.0	3.8	1.7	2.6	123	26	4.1	19	2.4	3.3
2	13	18	6.6	3.8	1.7	2.4	60	35	5.3	15	3.4	22
3	11	16	6.0	3.9	1.7	2.3	39	38	7.1	12	2.1	14
4	9.9	15	5.6	3.8	1.6	2.2	36	25	5.0	10	2.7	8.6
5	8.8	16	5.4	3.1	1.6	2.4	28	23	6.7	9.7	6.3	7.0
6	8.3	20	5.2	3.0	1.6	2.4	32	27	10	7.3	9.8	6.8
7	7.5	17	46	2.9	1.6	2.3	24	26	22	6.1	5.5	5.9
8	49	14	117	2.8	1.6	2.3	26	18	26	5.6	3.6	4.3
9	128	13	81	2.7	1.6	2.7	29	14	17	5.6	2.9	3.9
10	84	12	41	2.7	1.6	3.5	22	12	12	5.0	4.9	5.8
11	40	11	17	2.6	1.6	8.0	20	12	13	4.0	7.6	7.5
12	28	10	10	2.6	1.6	20	31	10	16	4.8	6.8	5.0
13	23	9.8	5.4	2.5	1.6	45	90	15	19	13	6.8	14
14	38	9.6	4.6	2.4	1.6	100	107	11	16	11	6.8	109
15	33	9.0	4.4	2.4	1.6	70	47	9.1	12	6.4	5.6	61
16	27	8.4	4.2	2.3	1.6	50	41	7.7	9.5	5.5	2.4	27
17	22	8.0	4.1	2.2	1.6	30	71	7.6	17	4.7	13	19
18	19	7.6	4.0	2.2	1.6	25	105	7.2	23	5.6	13	37
19	16	7.2	3.9	2.1	1.6	20	119	6.8	27	4.0	7.0	30
20	16	6.8	4.2	2.1	1.6	18	128	5.5	26	3.2	4.9	20
21	99	6.5	4.4	1.9	1.6	16	163	4.7	35	3.0	4.6	56
22	54	6.2	4.2	1.9	1.6	15	139	4.2	30	2.6	6.2	39
23	33	6.2	4.1	1.9	1.7	13	114	3.7	24	2.3	8.5	25
24	24	6.0	4.0	1.9	1.8	12	74	3.4	18	2.0	16	20
25	22	5.9	3.9	1.9	2.0	11	57	3.5	25	4.6	18	17
26	21	9.3	3.9	1.9	2.3	9.6	44	3.6	69	5.7	10	27
27	17	20	4.0	1.9	2.6	11	38	2.7	35	3.2	7.5	48
28	15	28	4.1	1.8	2.8	14	38	5.8	22	2.2	5.9	37
29	14	22	3.9	1.8	---	26	30	11	23	2.0	4.7	47
30	14	11	3.8	1.8	---	47	25	6.1	28	2.8	4.3	38
31	18	---	3.8	1.8	---	164	---	4.2	---	3.2	3.5	---
TOTAL	927.5	373.5	427.7	76.4	48.7	749.7	1900	388.8	602.7	191.1	206.7	765.1
MEAN	29.9	12.5	13.8	2.46	1.74	24.2	63.3	12.5	20.1	6.16	6.67	25.5
MAX	128	28	117	3.9	2.8	164	163	38	69	19	18	109
MIN	7.5	5.9	3.8	1.8	1.6	2.2	20	2.7	4.1	2.0	2.1	3.3
CFSM	4.70	1.97	2.17	.39	.27	3.81	9.95	1.97	3.16	.97	1.05	4.01
IN.	5.42	2.18	2.50	.45	.28	4.38	11.11	2.27	3.52	1.12	1.21	4.47

CAL YR 1976 TOTAL 8356.3 MEAN 22.8 MAX 300 MIN 2.5 CFSM 3.59 IN 48.87
WTR YR 1977 TOTAL 6657.9 MEAN 18.2 MAX 164 MIN 1.6 CFSM 2.86 IN 38.94

01128500 CONNECTICUT RIVER AT FIRST CONNECTICUT LAKE, NEAR PITTSBURG, NH

LOCATION.--Lat 45°05'14", long 71°17'34", Coos County, Hydrologic Unit 01080101, on right bank 0.2 mi (0.3 km) downstream from dam at First Connecticut Lake, 6 mi (10 km) northeast of Pittsburg, and at mile 392.0 (630.7 km).

DRAINAGE AREA.--83.0 mi^2 (215.0 km^2).

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. Altitude of gage is 1,560 ft (475 m), from topographic map. Prior to Jan. 1, 1918, discharge computed from flow through gates at dam 0.2 mi (0.3 km) upstream. Jan. 1 to July 28, 1918, non-recording gage at present site and datum.

REMARKS.--Records good. Flow completely regulated by First Connecticut and Second Connecticut Lakes (Reservoirs in Connecticut River basin). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--60 years, 197 ft^3/s (5.579 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,200 ft^3/s (204 m^3/s) June 16, 1943, gage height, 6.25 ft (1.905 m), from rating curve extended above 1,900 ft^3/s (53.8 m^3/s) on basis of computation of flow over dam at gage height 6.12 ft (1.865 m); maximum gage height, 6.35 ft (1.935 m) May 5, 1925, backwater from logging operations; minimum daily discharge, 3.1 ft^3/s (0.088 m^3/s) Mar. 17, 18, 1929.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,040 ft^3/s (29.5 m^3/s) Oct. 9, gage height, 3.76 ft (1.146 m); minimum daily, 7.3 ft^3/s (0.21 m^3/s) Mar. 19-24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	157	12	13	363	370	157	8.7	12	52	309	59	191
2	157	12	46	361	367	157	8.2	12	52	308	59	192
3	157	12	93	360	365	157	8.3	13	52	308	59	199
4	157	12	94	358	362	157	8.1	13	52	308	59	199
5	157	12	94	357	360	156	8.1	13	53	308	59	196
6	157	12	232	356	358	155	8.0	13	53	308	59	270
7	157	12	365	353	357	155	8.0	13	53	308	59	446
8	342	12	366	353	354	154	8.0	15	113	215	59	526
9	929	12	366	352	351	154	8.5	16	210	156	60	521
10	878	12	365	367	363	154	11	17	209	157	60	374
11	708	13	363	378	368	154	8.4	18	209	156	60	311
12	566	13	363	377	365	154	8.1	19	209	156	60	460
13	358	13	361	375	362	88	8.6	16	210	156	60	516
14	215	13	361	373	359	8.0	9.0	14	129	157	59	517
15	216	13	361	370	357	8.0	8.7	16	96	156	59	517
16	216	13	358	368	356	7.7	8.7	18	96	155	59	404
17	217	13	357	368	353	7.4	8.8	18	97	156	61	313
18	216	13	357	365	349	8.5	9.4	18	97	155	61	313
19	70	13	357	363	345	7.3	9.4	17	98	155	61	313
20	11	13	355	361	343	7.3	9.4	14	191	154	61	114
21	11	13	353	359	342	7.3	10	13	339	100	61	13
22	11	13	354	357	347	7.3	10	13	526	79	61	328
23	11	13	352	357	364	7.3	10	13	349	63	102	523
24	11	13	352	354	241	7.3	11	13	261	57	125	389
25	11	13	349	352	157	126	11	14	262	57	125	312
26	12	13	347	352	157	258	12	14	567	57	161	469
27	12	13	347	349	157	257	12	14	742	58	188	351
28	12	13	346	365	157	255	12	40	741	58	191	527
29	12	13	343	376	---	126	12	53	739	58	191	526
30	12	13	343	374	---	8.2	12	52	504	59	192	526
31	12	---	353	371	---	8.9	---	52	---	59	190	---
TOTAL	6168	380	9466	11244	9086	3074.5	285.4	596	7361	4946	2780	10856
MEAN	199	12.7	305	363	325	99.2	9.51	19.2	245	160	89.7	362
MAX	929	13	366	378	370	258	12	53	742	309	192	527
MIN	11	12	13	349	157	7.3	8.0	12	52	57	59	13

CAL YR 1976 TOTAL 89749.2 MEAN 245 MAX 970 MIN 7.2
WTR YR 1977 TOTAL 66242.9 MEAN 181 MAX 929 MIN 7.3

01129200 CONNECTICUT RIVER BELOW INDIAN STREAM, NEAR PITTSBURG, NH

LOCATION.--Lat 45°02'25", long 71°26'37", Coos County, Hydrologic Unit 01080101, on right bank 1,200 ft (350 m) downstream from Indian Stream, 2.5 mi (4.0 km) west of Pittsburg, and at mile 376.5 (605.8 km).

DRAINAGE AREA.--254 mi^2 (658 km^2).

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

REVISED RECORDS.--WRD MA, NH, RI, VT, 1973: 1958, 1960(M), 1969(M).

GAGE.--Water-stage recorder. Altitude of gage is 1,150 ft (351 m), from topographic map.

REMARKS.--Records excellent. Flow regulated by First Connecticut and Second Connecticut Lakes and Lake Francis 3.7 mi (6.0 km) upstream (Reservoirs in Connecticut River basin). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--21 years, 574 ft^3/s (16.26 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,080 ft^3/s (116 m^3/s) Nov. 29, 1959, gage height, 7.07 ft (2.155 m), from rating curve extended above 2,600 ft^3/s (73.6 m^3/s); minimum daily, 30 ft^3/s (0.850 m^3/s) Aug. 6, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,150 ft^3/s (60.9 m^3/s) Mar. 31, gage height, 5.18 ft (1.579 m); minimum daily, 47 ft^3/s (1.33 m^3/s) July 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	390	866	404	559	768	636	1580	276	791	907	129	523
2	356	762	463	576	768	535	726	316	159	1010	134	428
3	338	728	479	653	768	535	577	479	161	1140	144	380
4	327	711	431	795	777	536	515	310	164	1120	165	490
5	300	740	444	795	790	535	411	265	160	1100	169	520
6	280	777	586	801	783	532	437	272	176	1070	210	541
7	276	754	684	821	775	531	340	270	253	1050	207	536
8	512	711	752	821	779	535	275	212	353	780	197	529
9	1600	707	844	781	804	516	260	177	287	560	222	523
10	1340	645	787	781	801	546	292	161	233	555	198	525
11	638	632	787	779	795	591	228	147	234	543	112	523
12	497	552	764	794	791	681	306	141	290	543	218	520
13	790	417	752	819	794	614	677	172	332	557	235	480
14	748	423	717	814	783	559	1620	176	318	569	230	510
15	827	527	721	808	776	946	870	143	387	549	240	760
16	774	622	737	799	775	1070	539	120	353	541	264	425
17	735	622	855	761	780	966	608	111	359	410	346	250
18	721	620	1110	777	761	734	875	105	476	72	183	530
19	708	544	1100	796	761	503	1050	98	466	64	109	604
20	674	359	1100	815	761	426	1040	93	625	57	128	494
21	624	351	1090	830	755	295	1120	82	1040	53	206	541
22	645	353	1100	839	746	247	1240	79	874	50	249	865
23	795	347	837	789	770	222	1130	79	736	48	418	880
24	736	351	587	763	783	193	799	67	996	47	462	917
25	733	340	584	761	778	367	597	75	966	52	376	893
26	739	342	583	777	770	617	519	79	1260	60	578	910
27	715	503	478	791	762	613	431	67	745	51	553	725
28	701	692	395	781	785	672	418	70	1070	53	541	800
29	648	594	358	781	---	619	354	143	1040	87	532	1100
30	659	466	391	778	---	732	291	499	602	129	531	1210
31	717	---	521	768	---	1780	---	1060	---	132	523	---
TOTAL	20543	17058	21441	24003	21739	18884	20125	6344	15906	13959	8809	18932
MEAN	663	569	692	774	776	609	671	205	530	450	284	631
MAX	1600	866	1110	839	804	1780	1620	1060	1260	1140	578	1210
MIN	276	340	358	559	746	193	228	67	159	47	109	250

CAL YR 1976 TOTAL 269530 MEAN 736 MAX 2230 MIN 77
WTR YR 1977 TOTAL 207743 MEAN 569 MAX 1780 MIN 47

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 (4.0 km) downstream from East Hereford, and 3.7 mi (6.0 km) upstream from mouth.

DRAINAGE AREA.--85 mi^2 (220 km^2).

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. Altitude of gage is 1,090 ft (332 m), from topographic map. Prior to Dec. 13, 1962, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter period, which are fair. Several observations of water temperature were made during the year.

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

AVERAGE DISCHARGE.--29 years, 170 ft^3/s (4.814 m^3/s), 27.16 in/yr (690 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,500 ft^3/s (127 m^3/s) June 30, 1973, gage height, 13.07 ft (3.984 m); minimum daily, 4 ft^3/s (0.11 m^3/s) Sept. 10, 1960.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1943 reached a discharge of 21,000 ft^3/s (595 m^3/s) by slope-area method at site 0.5 mi (0.8 km) downstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,690 ft^3/s (76.2 m^3/s) Mar. 31, gage height, 10.33 ft (3.149 m); minimum daily, 18 ft^3/s (0.51 m^3/s) Feb. 14, July 29, Aug. 1, 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	79	354	150	54	22	24	1270	171	33	168	18	26
2	69	221	135	50	24	28	592	150	32	116	22	257
3	62	174	109	46	25	30	602	223	32	86	18	136
4	55	192	124	42	26	38	448	166	31	71	24	80
5	50	242	115	41	26	36	376	136	29	68	35	59
6	46	249	108	40	25	35	424	134	37	60	89	58
7	43	219	115	37	23	34	269	117	96	48	71	54
8	531	180	559	37	22	37	215	95	163	43	34	42
9	1410	147	369	39	20	55	163	83	94	40	25	36
10	892	123	298	38	21	73	148	76	67	39	26	31
11	397	122	175	37	20	175	215	74	75	34	64	32
12	259	108	175	37	19	322	248	70	102	30	49	31
13	205	102	131	36	19	505	458	65	131	40	43	48
14	310	100	146	36	18	1160	2260	63	100	61	33	889
15	286	103	105	35	19	1340	446	60	70	45	47	547
16	209	99	92	34	19	1300	352	52	51	47	38	231
17	166	94	86	33	20	1080	427	49	65	38	547	163
18	141	91	84	33	21	599	554	44	127	73	135	280
19	128	91	85	32	21	411	564	40	123	40	250	210
20	130	88	68	31	20	300	571	39	169	65	47	143
21	639	79	67	30	20	251	561	36	472	42	38	378
22	404	75	72	28	21	210	510	33	387	31	35	278
23	261	73	68	27	22	181	365	32	238	19	33	164
24	202	70	63	24	21	151	395	29	148	24	60	125
25	188	69	62	23	20	140	455	29	155	31	97	103
26	199	61	58	22	20	118	360	37	1100	37	68	165
27	162	238	54	19	21	169	298	29	435	25	43	455
28	143	431	70	21	22	142	165	28	220	20	40	290
29	131	278	65	20	---	446	213	81	194	18	29	313
30	145	195	58	21	---	716	178	53	323	21	24	304
31	241	---	56	22	---	2350	---	39	---	26	28	---
TOTAL	8183	4668	3922	1025	597	12456	14102	2333	5299	1506	2110	5928
MEAN	264	156	127	33.1	21.3	402	470	75.3	177	48.6	68.1	198
MAX	1410	431	559	54	26	2350	2260	223	1100	168	547	889
MIN	43	61	54	19	18	24	148	28	29	18	18	26
CFSM	3.11	1.84	1.49	.39	.25	4.73	5.53	.89	2.08	.57	.80	2.33
IN.	3.58	2.04	1.72	.45	.26	5.45	6.17	1.02	2.32	.66	.92	2.59

CAL YR 1976 TOTAL 77308 MEAN 211 MAX 2160 MIN 24 CFSM 2.48 IN 33.83
WTR YR 1977 TOTAL 62129 MEAN 170 MAX 2350 MIN 18 CFSM 2.00 IN 27.19

01129500 CONNECTICUT RIVER AT NORTH STRATFORD, NH

LOCATION.--Lat 44°44'56", long 71°37'50", Coos County, Hydrologic Unit 01080101, on left bank at North Stratford, 400 ft (100 m) downstream from Nulhegan River, and at mile 344.5 (554.3 km).

DRAINAGE AREA.--799 mi^2 (2,069 km^2).

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 (268.276 m) above mean sea level.

REMARKS.--Records good except those for winter period and period of no gage-height record, 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 (58 km) upstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--47 years, 1,581 ft^3/s (44.77 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,700 ft^3/s (813 m^3/s) June 16, 1943, gage height, 14.67 ft (4.471 m) from rating curve extended above 15,000 ft^3/s (425 m^3/s); maximum gage height, 16.66 ft (5.078 m) Mar. 13, 1936, ice jam; minimum daily discharge, 108 ft^3/s (3.06 m^3/s) Sept. 29, 1960.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,500 ft^3/s (354 m^3/s) Apr. 1, gage height, 9.66 ft (2.944 m); maximum gage height, 13.10 ft (3.993 m) Mar. 14, ice jam; minimum daily discharge, 203 ft^3/s (5.75 m^3/s) July 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1100	2500	1120	915	1040	857	11100	1730	1260	1960	324	799
2	951	2480	1000	938	1020	863	6190	1750	801	1760	347	1230
3	867	2130	912	1010	1040	885	4490	2000	520	1740	314	1510
4	791	1900	831	1070	1050	865	3900	1770	476	1640	287	1140
5	753	1990	1010	1010	1040	842	3070	1420	441	1580	290	957
6	674	2120	1230	1040	1050	839	3340	1360	527	1470	349	969
7	613	2130	1300	1120	1040	840	2500	1340	862	1400	480	912
8	2000	1970	1590	1110	1030	823	1970	1160	1440	1330	395	844
9	6490	1830	2570	1070	1050	802	1670	975	1020	950	360	798
10	7100	1580	2040	1090	1040	883	1510	855	781	873	368	780
11	3940	1520	1830	1070	1030	1170	1420	832	849	809	478	804
12	2780	1380	1740	1080	1030	1510	2010	783	1180	792	418	775
13	2300	1220	1630	1100	1030	1850	4510	760	1200	847	450	938
14	2030	1230	1530	1110	1020	3200	11000	752	1060	861	530	3860
15	2550	1300	1380	1100	1020	5140	7390	697	861	815	993	4360
16	2350	1350	1370	1080	1000	6460	3990	644	766	770	615	2220
17	2050	1350	1490	1040	1010	6110	3840	598	732	762	5830	1470
18	1820	1340	1690	1070	985	3940	4720	564	946	672	3270	1440
19	1680	1330	1600	1090	993	2880	5210	488	984	418	1470	1590
20	1450	1160	1600	1080	1010	2200	5250	530	1310	326	900	1320
21	2350	996	1620	1080	987	1930	5570	435	1650	280	694	1790
22	2150	978	1640	1080	959	1590	5800	417	2760	250	751	2560
23	3660	932	1350	1030	965	1430	5800	400	1660	230	1170	1880
24	2720	915	1170	1030	968	1230	4890	397	1700	215	2140	1730
25	2320	948	1160	1060	957	1110	4350	326	1630	220	2430	1570
26	2250	891	1030	1050	973	1390	3850	364	6940	297	1650	1680
27	3120	1710	954	1060	968	1420	3050	347	4790	282	1280	3280
28	1950	2720	955	1020	995	1660	2600	326	2660	227	1060	2710
29	1730	2240	833	1050	---	2910	2300	564	2460	203	952	2690
30	1680	1610	822	1020	---	5010	1920	561	2580	240	877	2820
31	1770	---	890	1040	---	10400	---	1100	---	332	830	---
TOTAL	69989	47750	41887	32713	28300	73039	129210	26245	46846	24551	32302	51426
MEAN	2258	1592	1351	1055	1011	2356	4307	847	1562	792	1042	1714
MAX	7100	2720	2570	1120	1050	10400	11100	2000	6940	1960	5830	4360
MIN	613	891	822	915	957	802	1420	326	441	203	287	775

CAL YR 1976 TOTAL 762343 MEAN 2083 MAX 14300 MIN 555
WTR YR 1977 TOTAL 604258 MEAN 1656 MAX 11100 MIN 203

NOTE.--No gage-height record Oct. 13 to Nov. 15.

01130000 UPPER AMMONOOSUC RIVER NEAR GROVETON, NH

LOCATION.--Lat 44°37'30", long 71°28'10", Coos County, Hydrologic Unit 01080101, on left bank 75 ft (23 m) upstream from highway bridge, 0.2 mi (0.3 km) downstream from Nash Stream, and 2.8 mi (4.5 km) northeast of Groveton.

DRAINAGE AREA.--232 mi^2 (601 km^2).

PERIOD OF RECORD.--Discharge: August 1940 to current year.
Water-quality records: Water year 1955.

GAGE.--Water-stage recorder. Altitude of gage is 920 ft (280 m), from topographic map.

REMARKS.--Records fair except those for winter period, which are poor. Prior to May 21, 1969, some regulation by pond 9 mi (14 km) upstream on Nash Stream. Small diversion upstream for municipal supply of Berlin. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--37 years, 474 ft^3/s (13.42 m^3/s), 27.75 in/yr (705 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,100 ft^3/s (683 m^3/s) May 20, 1969, gage height, 12.01 ft (3.661 m) in gage well, 12.85 ft (3.917 m), from floodmarks, from rating curve extended above 5,600 ft^3/s (159 m^3/s) on basis of contracted-opening measurement of peak flow, caused by failure of dam on Nash Stream; minimum, 32 ft^3/s (0.91 m^3/s) Sept. 14, 1948.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1936 reached a stage of about 10.6 ft (3.23 m), from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,900 ft^3/s (82.1 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Apr. 1	0500	4410	125	6.74	2.054	Apr. 24	0700	3710	105	6.40	1.951
Apr. 14	2230	*4430	125	*6.75	2.057						

Minimum discharge, 59 ft^3/s (1.67 m^3/s) Aug. 5, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	198	625	250	130	72	110	3960	978	252	350	69	279
2	168	488	220	128	70	103	2180	978	282	305	67	285
3	159	418	200	125	69	94	1720	1000	366	279	64	285
4	143	403	190	122	69	87	1560	904	330	258	62	267
5	131	410	185	121	68	93	1250	854	282	246	60	252
6	124	433	180	120	67	100	1310	873	282	228	64	261
7	120	418	1260	118	66	94	925	895	405	214	70	252
8	273	382	777	117	66	93	689	816	475	208	66	231
9	824	349	472	116	66	100	609	741	399	228	62	217
10	1230	342	349	116	65	150	550	690	330	220	60	214
11	640	330	310	110	65	250	505	648	325	199	71	217
12	433	330	270	110	66	350	715	609	377	188	80	211
13	368	318	220	109	67	1340	1410	586	416	197	83	264
14	523	295	195	105	65	2140	3650	564	356	188	93	1140
15	586	295	250	102	64	2160	3320	532	300	177	234	1140
16	472	284	220	100	63	2050	1730	506	273	145	202	668
17	418	278	210	98	63	1450	1520	489	264	122	1750	563
18	368	278	190	95	64	956	1730	514	305	109	2150	544
19	336	278	175	92	64	715	1890	497	297	105	822	512
20	324	273	210	90	64	564	1990	456	340	97	577	469
21	1650	238	230	88	63	448	2210	425	320	83	493	570
22	2000	258	160	86	62	382	2590	396	361	78	451	659
23	1020	248	170	84	60	349	3200	362	340	76	531	557
24	648	243	165	83	64	330	3430	330	297	73	577	512
25	557	238	180	81	70	324	2840	301	294	76	733	469
26	586	229	150	79	84	324	1960	284	518	93	550	469
27	523	300	138	78	96	318	1490	253	537	87	457	938
28	456	403	160	77	122	324	1310	252	416	73	394	743
29	418	375	140	76	---	572	1180	356	356	67	345	624
30	396	306	130	74	---	1390	1040	315	422	69	320	577
31	440	---	130	73	---	3450	---	273	---	73	291	---
TOTAL	16532	10065	8086	3103	1944	21210	54463	17677	10517	4911	11848	14389
MEAN	533	336	261	100	69.4	684	1815	570	351	158	382	480
MAX	2000	625	1260	130	122	3450	3960	1000	537	350	2150	1140
MIN	120	229	130	73	60	87	505	252	252	67	60	211
CFSM	2.30	1.45	1.13	.43	.30	2.95	7.82	2.46	1.51	.68	1.65	2.07
IN.	2.65	1.61	1.30	.50	.31	3.40	8.73	2.83	1.69	.79	1.90	2.31
(†)	92.2	110	94.7	120	98.1	98.1	96.9	106	85.7	87.6	105	75.5

CAL YR 1976 TOTAL 176714 MEAN 483 MAX 4200 MIN 65 CFSM 2.08 IN 28.34
WTR YR 1977 TOTAL 174745 MEAN 479 MAX 3960 MIN 60 CFSM 2.07 IN 28.02

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

01131500 CONNECTICUT RIVER NEAR DALTON, NH

LOCATION.--Lat 44°24'36", long 71°43'16", Coos County, Hydrologic Unit 01080101, on left bank 250 ft (76 m) upstream from highway bridge, 1,200 ft (350 m) downstream from dam of Gilman Paper Co., 1.2 mi (1.9 km) downstream from Dalton, and at mile 300.1 (482.9 km).

DRAINAGE AREA.--1,514 mi^2 (3,921 km^2).

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 (243.806 m) above mean sea level. Prior to Sept. 30, 1935, nonrecording gage at bridge 10.5 mi (16.9 km) downstream at mean sea level. Jan. 1, 1935, to June 29, 1937, nonrecording gage at bridge 250 ft (76 m) downstream at present datum. Since June 2, 1961, auxiliary water-stage recorder 10.8 mi (17.4 km) 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 winter period, 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 ft^3 (240,000,000 m^3). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--50 years, 2,909 ft^3/s (82.38 m^3/s), adjusted to drainage area at present site.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,300 ft^3/s (1,370 m^3/s) Mar. 20, 1936, gage height, 25.6 ft (7.80 m); minimum daily, 115 ft^3/s (3.26 m^3/s) Oct. 3, 1937.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 18,800 ft^3/s (532 m^3/s) Apr. 2, gage height, 17.35 ft (5.288 m); minimum daily, 478 ft^3/s (13.5 m^3/s) Aug. 2, 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2630	4510	2240	1350	1400	1300	17700	4490	1240	3500	510	1390
2	1550	4850	1930	1400	1350	1400	17900	4120	1600	3200	478	1410
3	1480	4020	1470	1400	1400	1350	13500	4160	1710	2900	478	1980
4	1500	3500	1410	1300	1400	1300	10300	4160	1460	2600	484	1710
5	1030	3610	1740	1300	1350	1250	8220	3590	1360	2300	491	1510
6	1240	3870	1930	1350	1400	1250	7940	3260	1110	2100	510	1440
7	1200	3970	2050	1500	1400	1250	7100	3320	1200	1900	627	1360
8	1880	3690	2640	1500	1350	1200	5460	3110	1690	1800	1040	1280
9	3920	3310	4870	1500	1350	1200	4390	2740	2390	1700	530	1110
10	9680	2870	3760	1500	1350	1300	3770	2410	1980	1600	569	1080
11	9020	2710	3230	1450	1350	1880	3460	2210	1650	1400	770	1080
12	5950	2560	3050	1400	1350	2520	3500	2080	1820	1300	966	1050
13	4000	2430	2810	1450	1350	3560	5450	1980	2290	1190	718	3640
14	3770	2290	2630	1500	1350	6760	11000	1830	2150	1230	770	7700
15	4760	2220	2260	1500	1350	10300	15200	1780	1870	1220	1650	5880
16	4480	2060	2190	1450	1300	11800	13500	1690	1500	1210	1690	3560
17	3830	2190	2210	1450	1300	12000	8840	1580	1440	1150	7340	3020
18	3280	2980	2200	1400	1300	10600	7960	1520	1420	1010	11400	2920
19	2970	1880	2280	1450	1300	8300	8580	1510	1540	1170	6230	2630
20	2520	1890	2260	1400	1350	6070	9020	1420	1780	773	3300	2690
21	4680	1910	2320	1400	1300	4970	9260	1360	1960	692	2280	4190
22	8920	1550	2340	1400	1250	4040	9910	1240	2720	673	1580	3760
23	7310	1810	2290	1400	1200	3460	11500	1190	3580	673	1760	3030
24	5400	1610	2190	1400	1200	3060	13100	1110	2540	673	2120	2700
25	4430	1520	1930	1450	1200	2660	12600	804	2380	510	3630	2560
26	4240	1280	1620	1400	1250	2450	10100	940	3380	510	3860	4640
27	4080	1780	1690	1400	1250	2600	8060	770	7300	510	2800	5690
28	3630	3040	1780	1350	1250	2870	6640	705	6420	510	2190	4640
29	3220	4080	1500	1400	---	4300	5890	1020	4480	510	1710	4490
30	3020	3260	1300	1350	---	7640	5140	1050	3850	510	1620	4730
31	3110	---	1250	1400	---	13500	---	1060	---	510	1490	---
TOTAL	122730	83250	69370	43900	36950	138140	274990	64209	71810	41534	65591	88870
MEAN	3959	2775	2238	1416	1320	4456	9166	2071	2394	1340	2116	2962
MAX	9680	4850	4870	1500	1400	13500	17900	4490	7300	3500	11400	7700
MIN	1030	1280	1250	1300	1200	1200	3460	705	1110	510	478	1050

CAL YR 1976 TOTAL 1344707 MEAN 3674 MAX 21800 MIN 977
WTR YR 1977 TOTAL 1101344 MEAN 3017 MAX 17900 MIN 478

01133000 EAST BRANCH PASSUMPSIC RIVER NEAR EAST HAVEN, VT

LOCATION.--Lat 44°38'02", long 71°53'53", Caledonia County, Hydrologic Unit 01080102, on right bank in Burke, 0.5 mi (0.8 km) upstream from Flower Brook, 2.1 mi (3.4 km) south of East Haven, and 8.4 mi (13.5 km) upstream from mouth.

DRAINAGE AREA.--53.8 mi^2 (139.3 km^2).

PERIOD OF RECORD.--Discharge: July 1939 to October 1945, October 1948 to current year. Prior to October 1951, published as Passumpsic River near East Haven.
Water-quality records: Water year 1957.

REVISED RECORDS.--WSP 1141: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 943.88 ft (287.695 m) above mean sea level (levels by Corps of Engineers). Prior to Oct. 1, 1973, at datum 2.00 ft (0.610 m) higher.

REMARKS.--Records fair except those for winter period and periods of no gage-height record, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--35 years, 105 ft^3/s (2.974 m^3/s), 26.50 in/yr (673 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,450 ft^3/s (126 m^3/s) June 30, 1973, gage height, 11.45 ft (3.490 m), present datum, from floodmarks in gage well, from rating curve extended above 1,600 ft^3/s (45.3 m^3/s) on basis of slope-area measurement of peak flow; minimum, 13 ft^3/s (0.37 m^3/s) Sept. 1-5, 1953, Aug. 21, 22, 1975.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in November 1927 reached a stage of about 14.6 ft (4.45 m), present datum, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft^3/s (22.7 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 31	2100	1050	29.7	6.12	1.865	Aug. 17	0600	*1630	46.2	*7.36	2.243
Apr. 14	0200	1400	39.6	6.90	2.103						

Minimum discharge, 18 ft^3/s (0.51 m^3/s) July 30, Aug. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	380	56	52	43	55	750	160	49	100	26	35
2	69	290	50	49	42	46	600	150	61	70	27	59
3	65	130	40	50	41	42	350	140	69	60	22	52
4	60	150	38	51	40	49	400	130	55	55	20	40
5	56	180	36	52	39	47	310	120	51	50	19	35
6	55	190	35	53	38	46	350	115	59	48	26	39
7	54	160	120	55	37	37	250	110	95	45	31	32
8	204	130	200	56	37	35	200	105	84	40	31	27
9	481	110	180	57	38	36	150	100	65	48	31	26
10	342	100	160	58	38	59	130	90	56	52	36	25
11	189	90	150	56	37	99	110	80	103	50	49	27
12	138	85	120	53	36	124	140	72	93	45	37	25
13	140	80	100	52	36	174	427	76	76	40	33	74
14	200	78	90	50	36	424	846	74	61	35	44	446
15	270	75	85	53	37	427	367	70	51	45	56	195
16	200	72	80	56	38	387	279	66	42	30	57	104
17	150	70	78	50	38	340	311	62	35	35	874	102
18	110	69	76	47	37	240	349	58	45	50	232	103
19	100	68	80	45	37	169	354	54	65	60	116	82
20	90	67	75	44	37	128	335	50	70	40	82	77
21	200	60	74	47	38	114	344	49	65	32	64	116
22	380	58	70	44	40	100	411	47	80	25	114	107
23	300	56	64	42	41	97	472	44	75	21	85	76
24	200	54	60	41	39	90	403	42	55	20	349	65
25	150	52	57	40	40	79	316	53	60	30	198	60
26	190	50	56	45	42	75	266	49	250	47	103	107
27	150	80	57	50	39	77	240	44	220	28	70	224
28	120	140	55	48	45	107	209	53	150	23	56	150
29	110	120	53	47	---	242	202	76	100	20	48	172
30	100	90	52	45	---	390	170	55	140	23	44	141
31	150	---	51	44	---	940	---	49	---	35	38	---
TOTAL	5099	3334	2498	1532	1086	5275	10041	2443	2480	1302	3018	2823
MEAN	164	111	80.6	49.4	38.8	170	335	78.8	82.7	42.0	97.4	94.1
MAX	481	380	200	58	45	940	846	160	250	100	874	446
MIN	54	50	35	40	36	35	110	42	35	20	19	25
CFSM	3.05	2.06	1.50	.92	.72	3.16	6.23	1.47	1.54	.78	1.81	1.75
IN.	3.53	2.31	1.73	1.06	.75	3.65	6.94	1.69	1.71	.90	2.09	1.95

CAL YR 1976 TOTAL 54634 MEAN 149 MAX 1100 MIN 29 CFSM 2.77 IN 37.78
WTR YR 1977 TOTAL 40931 MEAN 112 MAX 940 MIN 19 CFSM 2.08 IN 28.30

NOTE.--No gage-height record Oct. 13 to Dec. 15, Apr. 2-12, May 1-23, June 17 to July 25.

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 (4.3 km) upstream from highway bridge.

DRAINAGE AREA.--75.2 mi^2 (121.0 km^2).

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 (336.496 m) above mean sea level (levels by Corps of Engineers).

REMARKS.--Records good except those for winter period, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--30 years, 141 ft^3/s (3.993 m^3/s), 25.46 in/yr (647 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,340 ft^3/s (123 m^3/s) July 1, 1973, gage height, 12.04 ft (3.670 m); minimum, 2.6 ft^3/s (0.10 m^3/s) Aug. 21, 22, 1975.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft^3/s (28.3 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 10	1100	1090	30.9	7.70	2.347	Apr. 14	1500	1310	37.1	8.18	2.493
Mar. 15	1000	1650	46.7	8.80	2.682	Aug. 17	2200	1760	49.8	8.97	2.734
Mar. 31	2100	*2020	57.2	*9.36	2.853						

Minimum discharge, 8.7 ft^3/s (0.25 m^3/s) July 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	100	429	76	37	29	30	1420	225	27	77	14	44
2	87	288	76	36	28	32	698	211	45	55	14	51
3	79	200	62	35	28	29	517	206	57	42	17	77
4	69	196	45	37	27	27	547	164	45	34	11	52
5	63	260	75	38	26	27	414	145	33	33	9.1	41
6	59	280	120	41	25	28	487	147	38	29	9.5	41
7	57	247	170	40	25	28	377	141	63	23	11	37
8	135	201	300	41	24	26	249	113	110	22	12	30
9	498	164	250	42	24	26	201	99	69	31	14	26
10	919	145	140	38	24	35	175	92	50	32	13	25
11	564	137	120	40	23	60	166	87	71	25	20	25
12	256	124	100	39	22	90	203	79	83	21	25	23
13	186	114	75	38	24	150	394	84	75	22	23	45
14	294	109	64	37	23	250	963	78	56	28	23	404
15	361	106	64	36	22	1390	780	69	43	24	95	803
16	258	105	66	36	21	1050	423	64	32	18	51	362
17	196	101	68	35	22	779	354	60	28	15	780	184
18	161	97	62	34	22	564	421	59	41	34	1110	199
19	138	96	58	33	22	383	449	57	54	30	341	165
20	130	98	56	32	22	264	444	52	56	19	119	124
21	459	89	56	31	21	209	430	47	46	14	79	193
22	783	86	58	30	21	172	451	43	71	13	72	233
23	443	80	48	29	21	148	533	40	59	11	154	152
24	247	77	44	29	20	130	703	37	42	9.5	168	119
25	216	75	42	29	20	115	823	34	36	11	464	111
26	264	73	41	28	20	108	618	33	270	27	214	127
27	224	113	40	28	20	111	426	29	250	21	108	436
28	177	213	41	29	23	154	321	27	115	14	76	391
29	155	186	38	30	---	335	258	54	69	11	61	251
30	148	137	37	30	---	647	235	44	137	9.5	70	221
31	200	---	37	29	---	1590	---	33	---	16	53	---
TOTAL	7926	4626	2529	1067	649	8987	14480	2653	2171	771.0	4230.6	4992
MEAN	256	154	81.6	34.4	23.2	290	483	85.6	72.4	24.9	136	166
MAX	919	429	300	42	29	1590	1420	225	270	77	1110	803
MIN	57	73	37	28	20	26	166	27	27	9.5	9.1	23
CFSM	3.40	2.05	1.09	.46	.31	3.86	6.42	1.14	.96	.33	1.81	2.21
IN.	3.92	2.29	1.25	.53	.32	4.45	7.16	1.31	1.07	.38	2.09	2.47

CAL YR 1976 TOTAL 71602.0 MEAN 196 MAX 2330 MIN 16 CFSM 2.61 IN 35.42
WTR YR 1977 TOTAL 55081.6 MEAN 151 MAX 1590 MIN 9.1 CFSM 2.01 IN 27.25

01135000 MOOSE RIVER AT ST. JOHNSBURY, VT

LOCATION.--Lat 44°25'22", long 72°00'02", Caledonia County, Hydrologic Unit 01080102, on left bank at St. Johnsbury 0.5 mi (0.8 km) upstream from mouth.

DRAINAGE AREA.--128 mi^2 (332 km^2).

PERIOD OF RECORD.--Discharge: August 1928 to current year.
Water-quality records: Water year 1955.

REVISED RECORDS.--WSP 1231: 1929-30, 1931-34(M). WSP 1381: Drainage area. WSP 1701: 1959.

GAGE.--Water-stage recorder. Altitude of gage is 585 ft (178 m), from topographic map. Prior to Nov. 16, 1934, nonrecording gage at site 0.2 mi (0.3 km) upstream at different datum.

REMARKS.--Records good except those for winter period, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--49 years, 220 ft^3/s (6.230 m^3/s), 23.34 in/yr (593 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,820 ft^3/s (165 m^3/s) May 5, 1972, gage height, 4.23 ft (1.289 m); maximum gage height, 8.3 ft (2.53 m) Apr. 30, 1929, from graph based on gage readings, site and datum then in use; minimum discharge, 6.2 ft^3/s (0.18 m^3/s) Sept. 17, 18, 1948, Aug. 27, 28, 1949.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,700 ft^3/s (48.1 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Dec. 31	1100	ice jam		*4.75	1.448	Apr. 1	0400	*2290	64.9	4.18	1.274

Minimum discharge, 17 ft^3/s (0.48 m^3/s) July 24, Aug. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	148	620	131	62	48	47	1710	333	43	129	25	53
2	126	471	130	60	45	52	1000	296	50	82	22	50
3	111	325	108	60	45	54	820	291	75	62	22	84
4	98	339	77	62	46	50	802	245	67	50	22	66
5	88	400	120	66	47	52	689	216	52	45	18	53
6	83	461	170	68	45	55	802	202	50	42	19	52
7	79	424	310	69	43	54	606	199	102	35	20	47
8	165	337	471	69	42	50	399	174	148	35	21	40
9	791	275	379	69	41	50	307	156	115	42	20	35
10	1040	235	245	67	40	60	267	144	78	44	20	32
11	881	229	204	66	39	90	258	135	79	37	27	32
12	419	189	168	66	39	250	291	131	110	32	32	30
13	286	189	149	65	39	400	497	135	103	31	31	43
14	442	183	110	64	40	600	936	131	78	35	42	345
15	547	178	110	63	38	1270	1020	115	57	37	124	497
16	399	176	115	62	37	1340	616	103	44	30	89	350
17	304	166	115	60	38	1040	460	94	38	28	505	232
18	245	159	100	59	38	820	505	87	51	39	522	254
19	215	157	100	58	38	606	531	82	76	48	350	220
20	205	160	110	57	38	419	522	75	82	32	172	183
21	704	132	90	55	37	345	497	69	67	26	115	254
22	1060	132	82	55	36	277	514	63	89	24	91	286
23	701	136	76	54	36	249	700	59	89	20	169	220
24	389	128	74	53	36	220	1120	59	59	18	163	172
25	342	123	71	52	35	186	1270	49	59	20	362	161
26	406	117	68	53	34	180	957	45	301	26	263	192
27	358	170	68	53	36	186	667	42	333	35	151	393
28	282	285	68	53	41	249	497	42	177	26	108	380
29	248	285	65	52	---	626	399	56	117	21	78	307
30	236	183	64	51	---	1070	374	69	163	20	78	282
31	328	---	63	50	---	1670	---	51	---	22	70	---
TOTAL	11726	7364	4211	1853	1117	12617	20033	3948	2952	1173	3751	5345
MEAN	378	245	136	59.8	39.9	407	668	127	98.4	37.8	121	178
MAX	1060	620	471	69	48	1670	1710	333	333	129	522	497
MIN	79	117	63	50	34	47	258	42	38	18	18	30
CFSM	2.95	1.91	1.06	.47	.31	3.18	5.22	.99	.77	.30	.95	1.39
IN.	3.41	2.14	1.22	.54	.32	3.67	5.82	1.15	.86	.34	1.09	1.55

CAL YR 1976 TOTAL 102375 MEAN 280 MAX 2190 MIN 27 CFSM 2.19 IN 29.75
WTR YR 1977 TOTAL 76090 MEAN 208 MAX 1710 MIN 18 CFSM 1.63 IN 22.11

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 (1.1 km) upstream from Water Andric, 1 mi (2 km) downstream from dam and village of Passumpsic, and 4.0 mi (6.4 km) upstream from mouth.

DRAINAGE AREA.--436 mi^2 (1.129 km^2).

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. Altitude of gage is 490 ft (149 m), from topographic map.

REMARKS.--Records excellent except those for winter period, which are fair. Low flow regulated by powerplants upstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--49 years, 733 ft^3/s (20.76 m^3/s), 22.83 in/yr (580 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,200 ft^3/s (515 m^3/s) July 1, 1973, gage height, 23.49 ft (7.160 m), from rating curve extended above 14,000 ft^3/s (396 m^3/s) on basis of computation of flow over dam at gage height 21.23 ft (6.471 m); minimum daily, 13 ft^3/s (0.37 m^3/s) Sept. 12, 1948.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1780, about 31.5 ft (9.60 m) in November 1927, from information by local residents (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,000 ft^3/s (142 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 16	0345	*7370	209	*11.85	3.612	Aug. 17	1730	6,480	184	10.87	3.313
Mar. 31	1945	7150	202	11.61	3.539						

Minimum daily discharge, 58 ft^3/s (1.64 m^3/s) July 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	495	1820	660	420	310	350	5340	1250	267	458	166	233
2	389	1240	600	415	310	340	2780	1140	290	321	117	256
3	397	969	550	410	310	310	2530	1170	382	304	107	442
4	379	1080	520	400	305	300	2310	981	310	246	135	333
5	350	1230	510	390	305	320	2010	890	274	228	124	289
6	314	1320	500	380	300	380	2530	844	294	220	75	275
7	293	1230	800	370	300	350	1780	795	415	211	131	284
8	537	1040	2000	370	295	300	1390	725	561	178	158	265
9	2940	872	1300	360	295	350	1150	678	394	218	160	227
10	3290	784	900	360	290	500	1060	638	351	236	167	208
11	1750	779	640	350	285	800	1040	600	361	231	143	177
12	1030	723	580	340	280	1200	1230	576	496	214	231	184
13	818	688	540	340	280	2000	1980	602	455	187	239	245
14	1180	672	580	330	280	3500	4280	578	374	153	131	2160
15	1260	669	620	330	280	6540	3010	508	303	215	438	2150
16	1020	667	600	330	275	6550	1900	499	278	104	358	1130
17	834	637	570	330	270	5070	1720	441	244	185	4260	729
18	734	621	530	330	260	3260	1880	419	258	214	3300	840
19	664	614	500	320	250	2400	1900	422	375	278	1210	730
20	651	631	480	315	240	1760	1830	395	336	207	598	569
21	2300	545	460	315	235	1280	1750	343	297	148	416	1240
22	2220	586	450	315	230	969	1740	324	361	157	350	1350
23	1430	551	440	310	225	899	2450	337	366	100	698	812
24	1030	525	440	310	225	821	4080	289	318	98	1070	652
25	981	513	460	310	240	745	4000	281	261	170	1890	622
26	1220	499	450	305	255	708	2800	274	1300	157	928	819
27	1010	694	450	305	270	719	2050	272	1040	222	564	2150
28	853	1040	440	305	310	956	1640	251	580	158	449	1600
29	787	948	430	305	---	2250	1410	330	433	129	385	1210
30	775	708	420	310	---	3210	1450	341	603	58	323	1020
31	1100	---	420	310	---	6050	---	282	---	156	315	---
TOTAL	33031	24895	18840	10590	7710	55187	67020	17475	12577	6161	19636	23201
MEAN	1066	830	608	342	275	1780	2234	564	419	199	633	773
MAX	3290	1820	2000	420	310	6550	5340	1250	1300	458	4260	2160
MIN	293	499	420	305	225	300	1040	251	244	58	75	177
CFSM	2.45	1.90	1.39	.78	.63	4.08	5.12	1.29	.96	.46	1.45	1.77
IN.	2.82	2.12	1.61	.90	.66	4.71	5.72	1.49	1.07	.53	1.68	1.98

CAL YR 1976 TOTAL 361439 MEAN 988 MAX 10500 MIN 181 CFSM 2.27 IN 30.84
WTR YR 1977 TOTAL 296323 MEAN 812 MAX 6550 MIN 58 CFSM 1.86 IN 25.28

01137500 AMMONOOSUC RIVER AT BETHLEHEM JUNCTION, NH

LOCATION.--Lat 44°16'08", long 71°37'52", Grafton County, Hydrologic Unit 01080101, on left bank 0.2 mi (0.3 km) upstream from Pierce Bridge and Bethlehem Junction, 0.8 mi (1.3 km) upstream from unnamed tributary entering from left, 3 mi (5 km) east of Bethlehem, 3.4 mi (5.5 km) downstream from Little River, and at mile 35.0 (56.3 km).

DRAINAGE AREA.--87.6 mi^2 (226.9 km^2).

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 (359.890 m) above mean sea level (levels by Corps of Engineers).

REMARKS.--Records excellent except those for winter period, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--38 years, 208 ft^3/s (5.891 m^3/s), 32.24 in/yr (819 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,800 ft^3/s (306 m^3/s) Oct. 24, 1959, gage height, 12.09 ft (3.685 m), from rating curve extended above 4,100 ft^3/s (116 m^3/s) on basis of slope-area measurement of peak flow; minimum, 16 ft^3/s (0.45 m^3/s) Nov. 14, 1952 (caused by anchor ice upstream).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,700 ft^3/s (76.5 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 21	0700	*3940	112	*7.57	2.307	Apr. 14	0500	3450	97.7	7.19	2.192

Minimum discharge, 35 ft^3/s (0.99 m^3/s) Sept. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	115	413	96	82	47	72	988	373	128	180	47	47
2	106	360	89	80	46	65	527	492	178	146	48	45
3	100	223	82	77	46	60	668	514	206	127	45	45
4	94	232	78	76	45	59	580	366	170	116	41	43
5	89	243	75	74	44	58	450	349	148	115	41	42
6	85	255	74	73	43	64	506	556	177	102	43	43
7	85	221	846	72	42	60	334	539	275	91	48	40
8	123	198	752	72	42	55	274	354	447	90	44	38
9	606	173	272	70	42	60	236	284	277	100	44	37
10	625	167	217	69	42	90	219	288	211	90	42	36
11	269	160	218	68	41	170	209	281	280	78	53	36
12	202	147	175	68	41	220	372	262	441	76	66	36
13	175	142	155	67	41	275	787	378	411	88	66	49
14	285	137	119	65	40	1670	2000	291	274	78	56	415
15	273	129	161	62	40	883	693	238	291	70	111	246
16	325	129	146	61	40	582	477	239	209	63	65	126
17	236	124	137	58	40	519	529	345	178	62	392	103
18	197	121	121	57	40	323	673	472	174	71	170	130
19	172	118	106	56	40	254	769	358	157	61	98	109
20	175	117	128	55	40	211	848	300	139	55	77	93
21	2130	101	147	54	40	190	1140	278	169	79	67	119
22	729	106	100	53	40	168	1410	274	271	178	70	142
23	422	106	108	52	39	161	1910	257	200	86	93	106
24	318	101	104	51	38	147	1510	229	162	67	77	97
25	286	98	112	50	45	135	864	206	146	62	89	88
26	297	96	92	49	50	128	611	184	289	69	74	139
27	245	164	86	49	62	128	505	155	285	59	63	498
28	217	254	98	48	80	157	506	157	187	54	58	205
29	202	206	84	48	---	432	425	256	173	49	55	300
30	194	139	80	47	---	1040	367	168	298	48	51	287
31	373	---	78	47	---	1990	---	138	---	51	49	---
TOTAL	9750	5080	5136	1910	1236	10426	21387	9581	6951	2661	2343	3740
MEAN	315	169	166	61.6	44.1	336	713	309	232	85.8	75.6	125
MAX	2130	413	846	82	80	1990	2000	556	447	180	392	498
MIN	85	96	74	47	38	55	209	138	128	48	41	36
CFSM	3.60	1.93	1.90	.70	.50	3.84	8.14	3.53	2.65	.98	.86	1.43
IN.	4.14	2.16	2.18	.81	.52	4.43	9.08	4.07	2.95	1.13	.99	1.59

CAL YR 1976 TOTAL 94481 MEAN 258 MAX 2130 MIN 63 CFSM 2.95 IN 40.12
WTR YR 1977 TOTAL 80201 MEAN 220 MAX 2130 MIN 36 CFSM 2.51 IN 34.06

01138000 AMMONOOSUC RIVER NEAR BATH, NH

LOCATION.--Lat 44°09'14", long 71°59'10", Grafton County, Hydrologic Unit 01080101, on left bank 0.4 mi (0.6 km) downstream from Wild Ammonoosuc River, 1.4 mi (2.3 km) southwest of Bath, and 3.3 mi (5.3 km) upstream from mouth.

DRAINAGE AREA.--395 mi^2 (1,023 km^2).

PERIOD OF RECORD.--Discharge: September 1935 to current year.
Water-quality records: Water year 1953.

REVISED RECORDS.--WSP 871: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 454.14 ft (138.422 m) above mean sea level (levels by Connecticut River Power Co.).

REMARKS.--Records good except those for winter period and periods of no gage-height record which are poor. Occasional diurnal fluctuation at low flow caused by small powerplants upstream, greater fluctuation prior to 1968. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--42 years, 657 ft^3/s (18.61 m^3/s), 22.59 in/yr (574 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,900 ft^3/s (790 m^3/s) Mar. 18, 1936, gage height, 15.40 ft (4.694 m), from rating curve extended above 13,000 ft^3/s (368 m^3/s) on basis of slope-area measurement at gage height 14.28 ft (4.353 m); maximum gage height, 17.55 ft (5.349 m) June 30, 1973; minimum daily discharge, 35 ft^3/s (0.99 m^3/s) Sept. 15, 1957.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,500 ft^3/s (184 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 21	1115	a7810	221	9.45	2.880	Mar. 31	0245	a7220	204	9.12	2.780
Mar. 14	-	*9000	255	*Unknown	-						

a From rating curve extended above 2,100 ft^3/s (59.5 m^3/s) on basis of slope-area measurement at gage height 17.55 ft (5.349 m).

Minimum daily discharge, 67 ft^3/s (1.90 m^3/s) Sept. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	342	1690	460	200	115	170	2760	1100	320	486	108	98
2	313	1120	531	200	115	160	1890	1120	404	354	104	92
3	294	939	418	195	110	155	2600	1290	516	288	100	87
4	270	1060	345	190	110	150	1900	967	467	249	93	84
5	255	1150	330	185	110	150	1700	857	380	236	93	80
6	236	1100	320	185	110	155	2000	1000	404	222	100	85
7	228	1250	1800	180	110	155	1400	1230	566	189	110	80
8	394	1050	3420	180	105	150	1000	857	1100	184	100	76
9	2020	917	1090	180	105	160	900	707	783	210	100	72
10	2880	815	600	175	105	230	840	664	566	202	95	69
11	1190	790	750	175	105	350	800	688	541	166	130	69
12	835	680	560	170	105	600	1500	623	698	153	160	67
13	698	695	440	170	105	1500	2500	727	944	166	160	77
14	916	660	300	165	100	8500	5000	732	688	177	140	806
15	973	640	480	160	100	5200	2500	575	600	151	250	829
16	996	623	500	160	100	3820	1700	520	504	128	200	416
17	798	596	480	155	100	3040	1400	570	421	124	850	305
18	645	578	410	150	99	1880	1500	830	407	151	680	309
19	562	564	350	145	98	1430	1550	757	387	145	355	313
20	650	560	370	140	98	1120	1600	614	348	124	240	266
21	5170	473	350	135	97	1040	1910	549	323	136	179	548
22	2740	453	270	135	96	894	2710	516	449	456	156	667
23	1580	508	260	130	96	851	4000	500	442	300	177	439
24	1190	485	270	130	105	765	5280	453	380	192	177	337
25	1140	467	280	125	110	645	3650	407	345	161	208	286
26	1310	442	230	125	130	558	2260	370	500	184	197	326
27	1100	560	210	120	170	570	1740	323	742	147	158	1470
28	933	840	230	115	190	732	1510	310	508	127	134	740
29	851	680	220	115	---	2570	1310	512	407	113	121	627
30	825	540	210	115	---	4860	1220	438	717	108	111	742
31	1200	---	200	115	---	5910	---	361	---	110	102	---
TOTAL	33534	22925	16684	4820	3099	48470	62630	21167	15857	6139	5888	10462
MEAN	1082	764	538	155	111	1564	2088	683	529	198	190	349
MAX	5170	1690	3420	200	190	8500	5280	1290	1100	486	850	1470
MIN	228	442	200	115	96	150	800	310	320	108	93	67
CFSM	2.74	1.93	1.36	.39	.28	3.96	5.29	1.73	1.34	.50	.48	.88
IN.	3.16	2.16	1.57	.45	.29	4.56	5.90	1.99	1.49	.58	.55	.99

CAL YR 1976 TOTAL 314734 MEAN 860 MAX 6650 MIN 118 CFSM 2.18 IN 29.64
WTR YR 1977 TOTAL 251675 MEAN 690 MAX 8500 MIN 67 CFSM 1.75 IN 23.70

NOTE.--No gage-height record Nov. 7, 8, Nov. 28 to Dec. 1, Dec. 28 to Jan. 20, Mar. 8-14, Apr. 4-19, Aug. 7-17, Sept. 4-8.

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 (61 m) downstream from bridge on U.S. Highway 302, 400 ft (100 m) upstream from Wells River, 1,200 ft (350 m) downstream from Ammonoosuc River, and at mile 266.0 (428.0 km).

DRAINAGE AREA.--2,644 mi^2 (6,848 km^2).

PERIOD OF RECORD.--Discharge: October 1949 to current year. October and November 1949 monthly discharge only, published in WSP 1301.
Water-quality records: Water years 1952, 1957.

GAGE.--Water-stage recorder. Datum of gage is 399.75 ft (121.844 m) above mean sea level.

REMARKS.--Records good except those for winter period, which are 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 ft^3 (419,000,000 m^3).

AVERAGE DISCHARGE.--28 years, 4,703 ft^3/s (133.2 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 57,100 ft^3/s (1,620 m^3/s) July 1, 1973, gage height, 17.35 ft (5.288 m), from peak-stage indicator; minimum daily, 152 ft^3/s (4.30 m^3/s) Aug. 28, 1960.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 23,000 ft^3/s (651 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 14	2330	23200	657	8.26	2.518	Apr. 24	1330	24300	688	8.49	2.588
Mar. 31	2300	*28200	799	*9.42	2.871						

Minimum daily discharge, 408 ft^3/s (11.6 m^3/s) July 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3880	7660	3960	2000	2840	3230	24800	3530	2870	5220	2050	1840
2	2210	7480	3500	1800	2480	4190	20700	6010	3590	3930	1670	2810
3	1490	7170	2900	3720	3320	3630	19500	7140	3270	2230	1330	2270
4	4270	7200	2800	4090	2670	4730	17000	5860	1620	1120	851	955
5	3090	7600	3440	4210	2810	4010	14400	6330	836	3340	1170	1480
6	2990	7920	3330	3750	1200	2810	15300	6610	3080	3430	505	2500
7	3170	7490	5650	2960	2940	4230	13100	4940	2960	3500	608	2770
8	3000	7460	10200	2560	3400	4250	10400	2610	3840	3030	1300	2620
9	8260	6470	7480	2300	3600	3480	7830	5520	3030	1970	1360	2760
10	15800	6760	6510	2800	3800	4220	7420	6560	4280	779	1340	1440
11	11200	5690	3440	3400	4000	4660	7480	4180	2750	1990	1560	467
12	8080	4700	2920	4210	3320	6020	7430	4250	1420	1950	1630	1820
13	7530	4010	5070	3670	2830	8190	10500	4260	4170	3280	930	1600
14	7250	3020	4860	4670	2510	21100	18100	2580	4730	1910	643	4730
15	8120	4530	4420	3510	2900	21500	18400	2080	3750	1200	1700	7320
16	7750	4840	4200	1870	2500	21300	16400	3570	2720	823	2380	7860
17	5410	4870	5300	3880	3000	20200	12300	4400	3020	708	6310	7670
18	5810	4260	2490	6790	1690	16700	12200	3800	1720	1890	12400	6150
19	5780	4680	3260	4870	1110	14000	12200	3260	1090	2390	12900	5620
20	6210	2400	4770	3520	686	11900	12300	2470	3300	2560	5410	6050
21	13100	3280	4230	3030	2240	8930	12500	1780	3290	2710	2450	5680
22	14800	4000	4460	1950	1950	7250	14000	1690	3210	2170	3970	6670
23	12700	3960	3660	1730	3000	8240	18100	2700	4220	717	4080	7010
24	8750	4750	3150	3330	2400	6610	21500	2620	3770	558	3520	5770
25	6710	2080	1990	2830	2800	5930	17500	2800	2250	2020	4830	3910
26	7910	1560	1830	2100	1940	4480	14800	2630	2290	1320	5830	5050
27	7570	2050	3290	1700	1630	3720	12400	3140	6560	1900	3300	7970
28	7270	3710	4240	1500	2790	6160	9330	1280	6740	1830	2480	7420
29	5430	4890	3600	1400	---	9690	7750	919	6390	882	5010	7420
30	5490	6910	3000	1600	---	15800	5040	1190	6160	518	4590	7350
31	3410	---	2500	1990	---	25200	---	2730	---	408	3560	---
TOTAL	214440	153400	126450	93740	72356	286360	410680	113439	102926	62283	101667	134982
MEAN	6917	5113	4079	3024	2584	9237	13690	3659	3431	2009	3280	4499
MAX	15800	7920	10200	6790	4000	25200	24800	7140	6740	5220	12900	7970
MIN	1490	1560	1830	1400	686	2810	5040	919	836	408	505	467

CAL YR 1976 TOTAL 2335230 MEAN 6380 MAX 41900 MIN 800
WTR YR 1977 TOTAL 1872723 MEAN 5131 MAX 25200 MIN 408

01139000 WELLS RIVER AT WELLS RIVER, VT

LOCATION.--Lat 44°09'03", long 72°03'55", Orange County, Hydrologic Unit 01080103, on right bank 800 ft (250 m) upstream from railroad bridge, 0.8 mi (1.3 km) west of village of Wells River, and 1.5 mi (2.4 km) upstream from mouth.

DRAINAGE AREA.--98.4 mi^2 (254.9 km^2).

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 (154.086 m) above mean sea level (levels by Connecticut River Power Co.).

REMARKS.--Records good except those for winter period, which are poor. Some diurnal fluctuation at low flow prior to 1958 caused by small powerplant upstream. Flow partly regulated by Groton and Ricker Ponds. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--37 years, 141 ft^3/s (3.993 m^3/s), 19.46 in/yr (494 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,970 ft^3/s (169 m^3/s) June 30, 1973, gage height, 9.82 ft (2.993 m), from rating curve extended above 1,400 ft^3/s (39.6 m^3/s) on basis of computation of peak flow over dam; minimum, 5.1 ft^3/s (0.14 m^3/s) Oct. 6, 1948; minimum daily, 8.3 ft^3/s (0.24 m^3/s) Sept. 5, 1953.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 980 ft^3/s (27.8 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 14	1530	1400	39.6	5.09	1.551	Apr. 24	1300	1270	36.0	4.90	1.494
Mar. 31	1730	*1480	41.9	*5.21	1.588						

Minimum discharge, 15 ft^3/s (0.42 m^3/s) Sept. 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	81	336	94	74	56	60	1040	259	53	56	19	22
2	72	236	88	73	55	57	589	242	72	46	18	21
3	67	187	85	71	55	56	631	236	63	40	18	19
4	61	239	80	70	55	56	516	202	56	36	17	18
5	56	239	75	69	54	62	448	185	50	38	17	18
6	62	290	250	68	54	80	563	173	51	39	29	23
7	75	262	350	67	55	74	403	158	86	35	25	21
8	142	221	450	66	55	70	339	143	101	31	23	19
9	473	176	270	65	55	72	284	163	76	38	25	17
10	570	158	180	64	55	120	265	185	66	33	25	17
11	272	155	160	64	54	180	245	158	85	28	40	17
12	171	131	180	63	54	240	296	134	77	26	31	16
13	131	138	150	63	53	400	383	129	69	31	32	18
14	202	127	140	62	53	1170	576	119	59	29	28	228
15	205	129	125	62	53	1030	413	107	66	24	86	123
16	190	127	115	63	54	845	339	99	61	21	57	73
17	143	121	110	64	53	650	300	94	55	21	234	63
18	121	121	105	65	52	427	277	91	56	24	127	61
19	109	119	100	66	52	349	259	86	55	22	76	51
20	111	125	96	65	51	281	242	82	50	19	53	53
21	612	134	94	64	52	256	234	77	48	21	42	193
22	383	129	90	64	52	231	202	69	55	47	38	176
23	256	129	88	61	52	215	326	63	50	28	42	101
24	196	123	86	60	53	193	1070	61	45	23	35	79
25	202	119	84	61	54	171	1040	60	45	22	49	69
26	259	113	82	61	55	165	631	57	82	28	39	79
27	205	138	81	60	58	173	444	51	73	24	32	271
28	165	182	80	58	61	221	369	52	55	20	29	155
29	150	163	79	58	---	507	313	93	49	18	28	163
30	148	109	78	56	---	786	303	65	94	18	25	117
31	256	---	75	56	---	1320	---	57	---	19	23	---
TOTAL	6146	4976	4120	1983	1515	10517	13340	3750	1903	905	1362	2301
MEAN	198	166	133	64.0	54.1	339	445	121	63.4	29.2	43.9	76.7
MAX	612	336	450	74	61	1320	1070	259	101	56	234	271
MIN	56	109	75	56	51	56	202	51	45	18	17	16
CFSM	2.01	1.69	1.35	.65	.55	3.45	4.52	1.23	.64	.30	.45	.78
IN.	2.32	1.88	1.56	.75	.57	3.98	5.04	1.42	.72	.34	.51	.87

CAL YR 1976 TOTAL 77847 MEAN 213 MAX 2030 MIN 40 CFSM 2.17 IN 29.43
WTR YR 1977 TOTAL 52818 MEAN 145 MAX 1320 MIN 16 CFSM 1.47 IN 19.97

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 (0.5 km) east of East Orange, 1.6 mi (2.6 km) upstream from mouth, and 5 mi (8 km) southwest of Orange.
DRAINAGE AREA.--8.95 mi^2 (23.18 km^2).
PERIOD OF RECORD.--June 1958 to current year.
REVISED RECORDS.--WRD MA, NH, RI, VT 1972: 1960-64(P), 1969-71(P).
GAGE.--Water-stage recorder. Altitude of gage is 1,180 ft (360 m), from topographic map.
REMARKS.--Records good except those for winter period and periods of no gage-height record, which are poor. Occasional diurnal fluctuation at low flow caused by mill upstream. Several observations of water temperature were made during the year.
AVERAGE DISCHARGE.--19 years, 15.5 ft^3/s (0.439 m^3/s), 23.52 in/yr (597 mm/yr).
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 672 ft^3/s (19.0 m^3/s) June 30, 1973, gage height, 5.55 ft (1.692 m), from rating curve extended above 130 ft^3/s (3.68 m^3/s) on basis of slope-area measurement of peak flow; maximum gage height, 6.35 ft (1.935 m) Jan. 22, 1959, ice jam; minimum discharge, 0.1 ft^3/s (0.003 m^3/s) Sept. 9, 19, 1963.
EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 140 ft^3/s (3.96 m^3/s) and maximums(*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Dec. 7 or 8	unknown	ice jam		a*5.66	1.725	Apr. 5	1500	148	4.19	3.38	1.030
Mar. 13	1900	b*574	16.3	5.20	1.585	Apr. 13	2100	150	4.25	3.39	1.033
Mar. 30	1345	183	5.18	3.58	1.091	Apr. 23	2200	170	4.81	3.51	1.070
Apr. 3	0030	157	4.45	3.43	1.045						

a From peak-stage indicator.
b From rating curve extended above 130 ft^3/s (3.68 m^3/s) on basis of slope-area measurement at gage height, 5.55 ft (1.692 m).

Minimum discharge, 0.51 ft^3/s (0.014 m^3/s), caused by bridge construction, occurred during period June 9 to July 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	31	11	6.2	4.4	5.8	79	39	10	5.4	1.9	3.2
2	12	26	9.2	6.0	4.4	5.4	78	39	9.6	4.7	1.8	3.2
3	11	26	8.6	6.0	4.4	5.2	115	35	7.7	4.3	1.6	3.0
4	9.5	34	8.2	6.0	4.3	5.2	75	32	7.1	3.8	1.4	2.8
5	8.6	28	8.0	6.0	4.3	7.4	92	30	7.4	3.5	2.3	2.7
6	8.0	29	8.0	6.0	4.2	6.5	68	29	7.7	3.0	2.7	2.7
7	8.0	29	45	5.8	4.2	6.4	60	25	14	2.8	2.4	2.7
8	35	27	35	5.8	4.1	6.3	55	24	10	2.8	2.1	2.6
9	80	25	21	5.8	4.1	7.0	55	27	8.0	4.5	1.8	2.5
10	60	24	18	5.6	4.1	10	51	29	13	3.0	2.9	2.5
11	40	23	22	5.6	4.0	15	52	23	20	2.6	3.1	2.3
12	30	22	17	5.5	4.1	20	73	21	15	2.8	4.7	2.2
13	22	22	15	5.4	4.1	170	88	19	9.0	3.2	3.1	6.0
14	30	21	12	5.4	4.1	152	67	18	9.0	4.0	17	30
15	30	21	14	5.3	4.1	56	55	17	9.0	2.7	8.0	13
16	27	19	15	5.2	4.0	50	55	15	7.0	2.6	6.0	9.0
17	23	18	14	5.1	4.2	38	54	14	6.2	2.4	18	10
18	21	17	11	5.1	4.2	43	51	13	6.4	2.3	4.7	8.0
19	20	16	9.5	5.1	4.2	38	47	18	6.8	1.9	3.4	8.0
20	50	17	8.8	5.0	4.1	35	44	12	6.0	1.8	2.9	13
21	70	15	9.5	5.0	4.0	32	42	12	6.6	12	2.6	25
22	52	14	8.8	4.9	4.0	31	46	11	7.6	5.4	4.3	13
23	40	14	8.0	4.9	3.9	30	92	9.6	7.0	3.2	3.7	10
24	31	13	7.4	4.8	3.9	29	99	9.3	5.5	2.6	5.0	9.4
25	38	13	7.0	4.8	5.0	29	65	8.6	5.8	3.2	6.8	9.0
26	33	12	6.6	4.7	4.7	29	55	8.0	13	3.6	5.6	15
27	25	15	6.4	4.7	4.7	31	52	7.7	6.4	2.4	4.9	80
28	24	20	6.2	4.6	7.0	38	50	12	5.5	2.0	4.2	21
29	24	17	6.0	4.5	---	92	45	11	6.0	1.8	3.7	25
30	23	15	6.6	4.5	---	109	43	8.3	7.2	2.1	3.5	21
31	44	---	6.4	4.4	---	136	---	7.4	---	2.1	3.2	---
TOTAL	943.1	623	389.2	163.7	120.8	1268.2	1903	583.9	259.5	104.5	139.3	357.8
MEAN	30.4	20.8	12.6	5.28	4.31	40.9	63.4	18.8	8.65	3.37	4.49	11.9
MAX	80	34	45	6.2	7.0	170	115	39	20	12	18	80
MIN	8.0	12	6.0	4.4	3.9	5.2	42	7.4	5.5	1.8	1.4	2.2
CFSM	3.40	2.32	1.41	.59	.48	4.57	7.08	2.10	.97	.38	.50	1.33
IN.	3.92	2.59	1.62	.68	.50	5.27	7.91	2.43	1.08	.43	.58	1.49

CAL YR 1976 TOTAL 9721.6 MEAN 26.6 MAX 260 MIN 4.7 CFSM 2.97 IN 40.40
WTR YR 1977 TOTAL 6856.0 MEAN 18.8 MAX 170 MIN 1.4 CFSM 2.10 IN 28.49

NOTE.--No gage-height record Oct. 1-26, Nov. 16 to Jan. 31, June 9 to July 13, Aug. 23 to Sept. 30.

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 (30 m) upstream from covered bridge at Union Village, 0.2 mi (0.3 km) downstream from Avery Brook, 0.3 mi (0.5 km) downstream from Union Village Reservoir, and 3.8 mi (6.1 km) upstream from mouth.

DRAINAGE AREA.--130 mi^2 (337 km^2).

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

GAGE.--Water-stage recorder. Altitude of gage is 435 ft (133 m), from topographic map.

REMARKS.--Records good except those for winter period and period of shifting-control, 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 were made during the year.

AVERAGE DISCHARGE.--37 years, 195 ft^3/s (5.522 m^3/s), 20.37 in/yr (517 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,800 ft^3/s (136 m^3/s) June 3, 1947, gage height, 9.65 ft (2.941 m), from rating curve extended above 2,400 ft^3/s (68.0 m^3/s) on basis of slope-area measurement of peak flow; minimum, 1.7 ft^3/s (0.048 m^3/s) Oct. 14, 1949; minimum daily, 2.0 ft^3/s (0.057 m^3/s) Oct. 20, 1949. Maximum discharge since construction of Union Village Reservoir in 1949, 2,350 ft^3/s (66.6 m^3/s) Apr. 20, 1950, gage height, 7.62 ft (2.323 m); maximum gage height, 7.68 ft (2.341 m) Apr. 7, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1869, about 14.5 ft (4.420 m) in November 1927, from information by local resident (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,920 ft^3/s (54.4 m^3/s) Mar. 17, gage height, 7.50 ft (2.286 m); minimum, 15 ft^3/s (0.42 m^3/s) Aug. 4, 5, 10; minimum daily, 15 ft^3/s (0.42 m^3/s) Aug. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	99	389	150	93	73	78	1400	278	47	42	17	24
2	90	296	99	91	73	67	948	266	72	34	18	23
3	86	272	110	90	73	59	671	255	70	29	17	23
4	80	319	100	89	72	58	857	234	53	27	16	22
5	74	313	92	88	70	83	488	216	47	25	15	22
6	72	373	124	88	68	105	852	210	46	22	16	22
7	72	385	221	88	66	96	809	189	84	21	17	21
8	108	360	366	88	65	76	504	177	86	21	19	21
9	573	302	185	88	64	82	422	185	62	28	18	21
10	587	255	170	88	63	94	418	210	56	25	18	21
11	296	250	213	89	65	185	402	189	86	21	23	21
12	224	216	191	89	66	272	382	173	74	21	23	21
13	191	205	155	89	67	469	429	159	62	25	29	23
14	239	205	130	89	68	1300	436	145	54	33	33	140
15	200	203	135	89	66	587	360	135	54	27	42	92
16	195	200	145	88	65	1090	322	126	47	23	32	62
17	171	183	145	88	64	1820	296	118	43	21	40	74
18	159	169	140	87	63	1750	275	110	43	21	43	84
19	145	177	115	87	62	1140	258	124	44	19	34	62
20	181	179	115	87	60	671	239	112	42	18	29	103
21	780	165	125	87	59	450	229	103	39	20	26	224
22	408	135	105	86	57	281	218	90	46	32	27	150
23	313	135	80	86	55	290	366	80	42	25	31	118
24	272	145	95	85	57	346	770	72	38	21	30	103
25	313	145	110	84	89	344	760	65	37	20	33	90
26	481	142	100	82	77	336	540	57	59	21	31	179
27	346	140	94	81	70	327	429	53	54	21	28	266
28	299	135	90	80	65	327	382	50	38	18	27	185
29	269	160	95	79	---	600	338	56	37	17	26	163
30	250	170	100	78	---	1270	308	50	63	17	25	145
31	402	---	96	75	---	1440	---	47	---	17	24	---
TOTAL	7975	6723	4191	2676	1862	16093	15108	4334	1625	732	807	2525
MEAN	257	224	135	86.3	66.5	519	504	140	54.2	23.6	26.0	84.2
MAX	780	389	366	93	89	1820	1400	278	86	42	43	266
MIN	72	135	80	75	55	58	218	47	37	17	15	21
MEAN†	258	224	140	85.5	67.2	535	482	139	54.1	23.5	26.0	84.4
CFSM†	1.98	1.72	1.08	.66	.52	4.12	3.71	1.07	.42	.18	.20	.65
IN.†	2.29	1.92	1.24	.76	.54	4.75	4.14	1.23	.46	.21	.23	.72

CAL YR 1976	TOTAL	97162	MEAN 265	MAX	1960	MIN 45	MEAN†	265	CFSM†	2.04	IN†	27.80
WTR YR 1977	TOTAL	64651	MEAN 177	MAX	1820	MIN 15	MEAN†	177	CFSM†	1.36	IN†	18.50

† Adjusted for change in contents in Union Village Reservoir.
NOTE.--Shifting-control method was used June 26 to Sept. 26.

01141800 MINK BROOK NEAR ETNA, NH

LOCATION.--Lat 43°42'08", long 72°11'15", Grafton County, Hydrologic Unit 01080104, on left bank 2 mi (3 km) northeast of Etna and 5 mi (8 km) east of Hanover.

DRAINAGE AREA.--4.60 mi^2 (11.91 km^2).

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

GAGE.--Water-stage recorder. Altitude of gage is 1,000 ft (300 m), from topographic map.

AVERAGE DISCHARGE.--15 years, 7.43 ft^3/s (0.210 m^3/s), 21.93 in/yr (557 mm/yr).

REMARKS.--Records fair except those for winter period and periods of doubtful or no gage-height record, which are poor. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 560 ft^3/s (15.9 m^3/s) Aug. 15, 1976, gage height, 3.80 ft (1.158 m), from rating curve extended above 130 ft^3/s (3.68 m^3/s) on basis of slope-area measurements at gage heights 3.50 ft (1.067 m) and 3.75 ft (1.143 m); maximum gage height, 4.19 ft (1.277 m) Mar. 26, 1963, backwater from ice; minimum discharge, 0.01 ft^3/s (<0.001 m^3/s) Aug. 11, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 55 ft^3/s (156 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 9	1615	195	5.52	2.88	.878	Mar. 13	1830	a*525	14.9	*3.73	1.137
Oct. 21	0215	153	4.33	2.74	.835	Mar. 30	1530	164	4.64	2.78	.847
Nov. 12	1230	59	1.67	2.30	.701	Apr. 9	0800	69	1.95	2.36	.719

a From rating curve extended above 130 ft^3/s (3.68 m^3/s) as explained above.

Minimum discharge, 0.11 ft^3/s (0.003 m^3/s) Sept. 7-13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	28	8.4	2.7	1.7	3.5	118	17	7.3	2.0	.27	.18
2	2.4	20	7.3	2.6	1.7	3.1	96	15	6.0	1.4	.27	.18
3	2.4	20	6.7	2.5	1.6	2.8	76	14	2.9	1.2	.30	.17
4	2.2	27	6.4	2.4	1.6	2.7	62	13	1.9	.87	.30	.17
5	2.0	34	6.2	2.3	1.6	3.7	59	11	1.7	.80	.68	.16
6	2.0	39	6.0	2.2	1.6	5.8	82	26	1.4	.80	1.7	.12
7	2.0	28	30	2.1	1.6	5.4	59	34	9.6	.80	1.2	.12
8	4.2	25	22	2.1	1.6	4.3	41	13	6.3	.95	.95	.11
9	94	23	16	2.0	1.6	4.1	50	9.0	4.7	1.2	.87	.11
10	52	18	11	2.0	1.6	12	38	11	4.3	1.3	2.2	.11
11	31	18	8.4	2.0	1.6	35	28	12	4.3	.95	9.0	.11
12	25	37	6.9	2.0	1.6	88	28	13	4.0	.80	5.4	.11
13	23	19	6.0	2.0	1.5	160	28	12	3.3	.74	3.4	.40
14	22	17	5.8	2.0	1.5	244	27	11	3.5	.68	2.0	8.2
15	19	14	5.3	2.0	1.5	118	26	10	3.7	.68	1.7	6.0
16	18	11	5.1	2.0	1.5	82	25	8.4	2.4	.68	1.2	3.7
17	17	11	4.8	2.0	1.5	59	24	7.8	1.8	.68	.80	1.4
18	17	10	4.7	2.0	1.5	40	24	9.0	1.4	.68	.62	1.2
19	14	10	4.6	2.0	1.5	32	21	17	1.7	.52	.48	1.0
20	20	9.2	4.5	2.0	1.5	32	18	9.6	1.8	.52	.32	3.5
21	59	8.9	4.5	1.9	1.5	32	18	6.3	1.7	.68	.32	10
22	30	8.6	4.3	1.9	1.5	31	16	5.9	1.7	.80	.30	8.0
23	23	8.2	4.2	1.9	1.5	26	32	5.4	1.7	.52	.30	3.5
24	21	8.0	4.1	1.9	1.5	24	44	6.3	1.3	.45	.30	1.4
25	22	7.8	3.8	1.8	2.5	26	50	7.3	1.3	.35	.30	1.3
26	45	7.7	3.7	1.8	4.7	27	41	7.3	3.4	.30	.30	2.8
27	27	7.6	3.7	1.8	4.3	30	35	6.8	2.2	.27	.30	10
28	22	7.4	3.4	1.7	3.8	31	28	5.9	2.0	.25	.27	9.0
29	19	8.0	3.2	1.7	---	86	24	5.4	5.0	.25	.27	6.4
30	18	10	3.1	1.7	---	115	20	5.4	6.3	.25	.23	3.0
31	34	---	2.9	1.7	---	145	---	5.0	---	.25	.23	---
TOTAL	691.6	500.4	217.0	62.7	52.7	1510.4	1238	339.8	100.6	22.62	36.78	82.45
MEAN	22.3	16.7	7.00	2.02	1.88	48.7	41.3	11.0	3.35	.73	1.19	2.75
MAX	94	39	30	2.7	4.7	244	118	34	9.6	2.0	9.0	10
MIN	2.0	7.4	2.9	1.7	1.5	2.7	16	5.0	1.3	.25	.23	.11
CFSM	4.85	3.63	1.52	.44	.41	10.6	8.98	2.39	.73	.16	.26	.60
IN.	5.59	4.05	1.75	.51	.43	12.21	10.01	2.75	.81	.18	.30	.67

CAL YR 1976 TOTAL 5070.11 MEAN 13.9 MAX 201 MIN .49 CFSM 3.02 IN 40.99
WTR YR 1977 TOTAL 4855.05 MEAN 13.3 MAX 244 MIN .11 CFSM 2.89 IN 39.25

NOTE.--Doubtful or no gage-height record Oct. 8-11, 18-29, Nov. 1-3, 5-9, 12-17, Mar. 14-22, Mar. 25 to Apr. 7, Apr. 9, 11-14, 24, 26, Apr. 28 to May 9, May 12, 16, 18-22, 24, June 1-10, 12-14, 17, 18, 20, 22, 23, June 25 to July 5, July 8, 9, 11-13, July 19 to Aug. 8, Aug. 10-21, 29, Sept. 7, 13-30.

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 (41 m) upstream from bridge on State Highway 12, just north of village limits of Randolph, 0.4 mi (0.6 km) upstream from Adams Brook, and 1.2 mi (1.9 km) upstream from mouth.

DRAINAGE AREA.--30.5 mi^2 (79.0 km^2).

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

REVISED RECORDS.--WRD MA, NH, RI, VT, 1972: 1949(M), 1952(M), 1953(P), 1958(P), 1960(M), 1967(M).

GAGE.--Water-stage recorder. Datum of gage is 630.50 ft (192.176 m) above mean sea level (Vermont State Department of Highways bench mark). Prior to Oct. 1, 1964, at site 140 ft (43 m) downstream at datum 2.25 ft (0.686 m) higher and Oct. 1, 1964, to Sept. 30, 1975, at site 140 ft (43 m) downstream at datum 1.25 ft (0.381 m) higher.

REMARKS.--Records good except those for winter period and periods of doubtful or no gage-height record, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--37 years (water years 1940-75, 1977), 45.8 ft^3/s (1.297 m^3/s), 20.39 in/yr (518 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,600 ft^3/s (73.6 m^3/s) June 30, 1973, gage height, 10.37 ft (3.161 m), present datum, from rating curve extended above 500 ft^3/s (14.2 m^3/s) on basis of contracted opening measurement of peak flow; minimum, 0.6 ft^3/s (0.017 m^3/s) July 27, 1965.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1830, about 18 ft (5.5 m), present datum, in November 1927.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 350 ft^3/s (9.91 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 14	1015	*639	18.1	*6.33	1.929	Apr. 3	0630	401	11.4	5.42	1.652
Mar. 31	0900	415	11.8	5.48	1.670						

Minimum discharge, about 1.6 ft^3/s (0.045 m^3/s) Aug. 4, 5; minimum daily, 1.7 ft^3/s (0.048 m^3/s) Aug. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	76	32	19	12	14	252	107	12	7.0	2.1	3.2
2	25	66	30	19	12	14	197	95	14	6.3	2.2	3.2
3	23	63	27	18	12	13	279	85	13	5.3	1.9	3.1
4	22	78	26	18	12	13	204	75	12	4.9	1.7	2.9
5	21	68	25	18	11	16	208	65	11	4.7	1.8	2.6
6	21	73	25	18	11	19	213	57	11	4.2	3.8	2.5
7	21	68	62	18	11	18	179	53	14	4.0	5.3	2.5
8	33	63	85	17	10	18	170	50	13	4.3	4.2	2.4
9	149	56	50	17	10	19	147	52	12	6.7	3.8	2.3
10	108	55	44	17	10	37	150	55	12	5.5	3.1	2.3
11	67	53	39	17	11	64	137	48	18	4.5	6.2	2.3
12	56	49	36	16	11	88	134	44	14	4.0	5.9	2.5
13	52	49	33	16	11	196	139	42	12	4.5	6.0	10
14	66	46	30	16	11	532	152	38	11	4.2	5.7	30
15	61	46	38	15	11	335	123	36	11	3.5	13	17
16	64	45	35	15	11	291	112	34	9.1	3.2	6.7	13
17	53	43	33	15	11	218	104	31	8.6	3.5	19	11
18	50	42	31	15	11	167	99	30	8.9	4.0	11	15
19	48	42	30	14	11	152	99	27	9.7	2.9	7.2	12
20	55	42	28	14	11	156	88	25	8.4	2.5	5.4	20
21	129	38	27	13	11	130	80	23	8.4	2.7	4.9	35
22	83	38	25	13	10	137	76	22	9.9	9.4	4.6	20
23	71	36	26	12	10	128	120	19	8.6	4.9	5.3	15
24	65	36	25	12	10	119	266	19	7.4	3.8	5.1	13
25	75	36	23	12	10	112	260	17	7.0	3.2	5.7	12
26	88	34	22	12	10	108	171	16	12	3.9	5.0	15
27	69	38	21	12	10	112	153	14	9.4	3.1	4.2	50
28	64	42	20	12	11	134	142	14	7.2	2.5	3.9	30
29	62	43	19	12	---	222	129	14	6.8	2.3	3.4	25
30	59	36	19	12	---	273	118	14	10	2.1	3.2	21
31	80	---	19	12	---	347	---	13	---	2.7	3.2	---
TOTAL	1866	1500	985	466	303	4202	4701	1234	321.4	130.3	164.5	395.8
MEAN	60.2	50.0	31.8	15.0	10.8	136	157	39.8	10.7	4.20	5.31	13.2
MAX	149	78	85	19	12	532	279	107	18	9.4	19	50
MIN	21	34	19	12	10	13	76	13	6.8	2.1	1.7	2.3
CFSM	1.97	1.64	1.04	.49	.35	4.46	5.15	1.31	.35	.14	.17	.43
IN.	2.28	1.83	1.20	.57	.37	5.12	5.73	1.51	.39	.16	.20	.48

WTR YR 1977 TOTAL 16269.0 MEAN 44.6 MAX 532 MIN 1.7 CFSM 1.46 IN 19.84

NOTE.--Doubtful gage-height record Mar. 15 to May 5, Aug. 4, 5. No gage-height record Sept. 12-30.

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 (200 m) upstream from highway bridge at West Hartford and 7.4 mi (11.9 km) upstream from mouth.

DRAINAGE AREA.--690 mi^2 (1,790 km^2).

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 (114.157 m) above mean sea level. Prior to Oct. 30, 1927, nonrecording gage at same site and datum.

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

AVERAGE DISCHARGE.--62 years, 1,182 ft^3/s (33.47 m^3/s), 23.26 in/yr (591 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 120,000 ft^3/s (3,400 m^3/s) Nov. 4, 1927, gage height, 29.3 ft, (8.93 m), from floodmarks, from rating curve extended above 29,000 ft^3/s (821 m^3/s) on basis of slope-area measurement of peak flow; minimum observed, about 35 ft^3/s (0.99 m^3/s) Aug. 4, 1918; minimum daily, 54 ft^3/s (1.53 m^3/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 above base of 11,600 ft^3/s (329 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 14	0800	*23200	657	*14.52	4.426	Mar. 31	1400	15900	450	12.27	3.740

Minimum discharge, 91 ft^3/s (2.58 m^3/s) Sept. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	687	2550	585	510	390	620	7690	1790	378	275	129	134
2	645	1920	580	500	390	520	4670	1670	471	233	129	127
3	593	1750	540	490	390	470	5640	1670	433	207	129	122
4	543	2020	520	490	380	440	4530	1480	374	194	117	117
5	522	1910	490	490	380	500	4230	1390	343	191	114	117
6	491	2000	480	480	370	710	5450	1340	331	176	122	114
7	481	1860	890	480	370	650	3590	1230	387	167	164	109
8	711	1750	2800	480	360	580	3040	1130	433	170	170	107
9	3690	1550	1150	480	350	530	2600	1290	378	197	150	103
10	5170	1460	1050	480	340	710	2420	1610	365	223	137	98
11	2310	1390	1350	470	340	1810	2310	1560	471	185	161	96
12	1690	1220	1140	470	340	2660	2320	1390	471	164	194	93
13	1440	1230	900	470	360	6920	2980	1300	392	170	207	98
14	1720	1200	710	470	380	20900	3820	1160	343	191	219	793
15	1780	1140	840	470	390	10100	2830	1060	339	164	310	1030
16	1690	1120	970	470	360	7720	2320	978	323	153	264	471
17	1450	1040	900	460	310	5910	2100	903	298	145	250	374
18	1300	1020	820	460	310	3880	1980	868	275	161	343	538
19	1200	985	720	460	330	3140	1930	1090	279	191	254	419
20	1220	985	750	460	320	2570	1770	963	287	153	200	386
21	4390	875	780	450	310	2430	1680	819	264	179	167	1190
22	3120	833	560	450	290	2210	1650	712	264	361	156	833
23	2220	847	600	450	300	2090	2830	645	272	229	173	610
24	1850	847	620	440	350	1880	7330	582	254	173	191	481
25	1940	826	590	440	390	1670	6870	538	243	159	191	424
26	2760	784	620	430	430	1610	4190	496	335	159	197	443
27	2110	875	520	430	480	1670	3170	462	378	156	176	1810
28	1800	1090	470	430	490	2040	2640	433	275	142	159	1100
29	1670	1120	500	420	---	5160	2200	452	255	137	139	918
30	1570	918	530	410	---	9130	1980	428	294	129	134	826
31	2220	---	520	400	---	13700	---	392	---	127	127	---
TOTAL	54983	39115	24495	14290	10200	114930	102760	31831	10205	5661	5573	14081
MEAN	1774	1304	790	461	364	3707	3425	1027	340	183	180	469
MAX	5170	2550	2800	510	490	20900	7690	1790	471	361	343	1810
MIN	481	784	470	400	290	440	1650	392	243	127	114	93
CFSM	2.57	1.89	1.15	.67	.53	5.37	4.96	1.49	.49	.27	.26	.68
IN.	2.96	2.11	1.32	.77	.55	6.20	5.54	1.72	.55	.31	.30	.76

CAL YR 1976 TOTAL 654892 MEAN 1789 MAX 20300 MIN 396 CFSM 2.59 IN 35.31
WTR YR 1977 TOTAL 428124 MEAN 1173 MAX 20900 MIN 93 CFSM 1.70 IN 23.08

01144500 CONNECTICUT RIVER AT WHITE RIVER JUNCTION, VT

LOCATION.--Lat 43°38'49", long 72°18'53", Windsor County, Hydrologic Unit 01080104, on right bank 50 ft (15 m) downstream from railroad bridge at White River Junction, 500 ft (150 m) downstream from White River, and at mile 215.0 (345.9 km).

DRAINAGE AREA.--4,092 mi^2 (10,598 km^2).

PERIOD OF RECORD.--Discharge: October 1911 to November 1976 (suspended).
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 (97.999 m) above mean sea level. Prior to June 16, 1918, nonrecording gage on downstream side of pier of railroad bridge 50 ft (15 m) 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. 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 ft^3 (487,000,000 m^3). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--65 years (water years 1912-76), 7,144 ft^3/s (202.3 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 136,000 ft^3/s (3,850 m^3/s) Nov. 4, 1927, gage height, 35.0 ft (10.67 m), present site, from rating curve extended above 70,000 ft^3/s (1,980 m^3/s); minimum daily, 82 ft^3/s (2.32 m^3/s) Aug. 8, 1965.
Stage and discharge of the flood of Nov. 4, 1927, are the greatest since at least 1760.

EXTREMES FOR PERIOD OCTOBER TO NOVEMBER 1976.--Maximum discharge, 29,100 ft^3/s (824 m^3/s) Oct. 10, gage height, 13.92 ft (4.243 m), no peak above base of 34,000 ft^3/s (963 m^3/s); minimum daily, 2,330 ft^3/s (66.0 m^3/s) Nov. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, OCTOBER TO NOVEMBER 1977

DAY	OCT	NOV
1	5300	11800
2	2810	11100
3	2860	11200
4	5530	9450
5	3960	10500
6	4780	12400
7	4480	11300
8	4160	12400
9	11400	10100
10	25500	8300
11	15700	8230
12	13100	7050
13	12600	5530
14	8300	5040
15	9080	6910
16	12500	7330
17	7600	5660
18	6910	6580
19	8000	6250
20	9890	4180
21	19000	3540
22	22500	6030
23	17600	5240
24	13600	4800
25	11500	4360
26	13200	2330
27	12300	3520
28	9780	5220
29	9030	6200
30	7830	6000
31	8230	---
TOTAL	319030	218550
MEAN	10290	7285
MAX	25500	12400
MIN	2810	2330

01145000 MASCOMA RIVER AT WEST CANAAN, NH

LOCATION.--Lat 43°39'00", long 72°04'50", Grafton County, Hydrologic Unit 01080104, on right bank 45 ft (14 m) downstream from Boston and Maine Railroad bridge, 0.9 mi (1.4 km) east of West Canaan, 1.2 mi (1.9 km) downstream from Indian River, 3.5 mi (5.6 km) west of Canaan, and at mile 19.3 (31.1 km).

DRAINAGE AREA.--80.5 mi^2 (208.5 km^2).

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

REVISED RECORDS.--WSP 1901: 1960.

GAGE.--Water-stage recorder. Altitude of gage is 835 ft (254.5 m), from topographic map.

REMARKS.--Records good except those for winter period, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--38 years, 118 ft^3/s (3.342 m^3/s), 19.91 in/yr (506 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,780 ft^3/s (107 m^3/s) Mar. 27, 1953, gage height, 8.94 ft (2.725 m), from rating curve extended above 1,900 ft^3/s (53.8 m^3/s) on basis of slope-area measurement at gage height 9.6 ft (2.93 m); minimum, 2.9 ft^3/s (0.082 m^3/s) Aug. 8, 17, 18, 19, 1965.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in September 1938 reached a stage of 9.6 ft (2.93 m), from floodmarks, discharge, 4,310 ft (122 m^3/s), from rating curve extended above 1,900 ft^3/s (53.8 m^3/s) as explained above.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 950 ft^3/s (26.9 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 14	1600	*1930	547	*6.52	1.987	Mar. 31	2100	1460	413	5.74	1.750

Minimum discharge, 3.9 ft^3/s (0.11 m^3/s) Sept. 10, 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	253	70	40	34	75	1160	140	26	55	8.2	5.5
2	41	175	58	40	35	62	654	129	68	40	22	5.5
3	38	146	53	39	35	54	587	128	102	32	14	5.3
4	34	186	50	39	34	50	655	110	57	27	11	5.1
5	31	217	48	38	33	60	465	99	39	24	9.4	4.8
6	30	351	46	38	31	90	506	95	34	20	16	5.1
7	30	277	80	37	30	70	378	86	225	17	16	4.8
8	31	207	220	37	30	64	280	77	297	19	14	4.5
9	222	167	170	38	30	60	216	82	129	32	11	4.1
10	577	146	150	38	29	80	192	116	85	29	11	4.0
11	249	134	130	38	28	152	177	114	72	25	36	4.2
12	147	118	110	39	28	232	206	91	64	22	29	4.0
13	118	119	95	40	29	361	341	79	54	33	31	4.3
14	150	105	84	41	29	1590	500	68	46	34	20	67
15	158	101	76	41	28	1400	337	61	74	21	18	58
16	124	97	70	40	27	972	243	56	47	16	14	27
17	111	90	65	40	28	760	214	51	35	14	13	26
18	97	89	60	39	28	523	196	47	33	13	13	30
19	85	87	56	39	28	400	175	94	49	12	14	23
20	87	87	54	38	28	304	152	70	40	10	9.9	32
21	551	74	52	38	29	241	138	54	32	9.3	8.8	96
22	521	72	49	38	28	201	130	45	33	17	8.4	60
23	240	70	48	38	27	185	294	38	30	13	12	38
24	175	69	47	37	27	165	661	34	26	11	11	30
25	187	66	46	36	30	143	707	34	24	12	10	27
26	263	62	45	36	45	132	457	27	83	16	8.8	29
27	236	66	44	36	80	134	324	22	105	13	7.7	99
28	174	80	43	35	70	182	252	20	57	10	7.0	58
29	148	89	42	35	---	498	197	26	42	8.5	6.5	46
30	132	77	41	34	---	946	163	35	93	7.8	6.0	38
31	168	---	40	34	---	1390	---	29	---	7.7	5.6	---
TOTAL	5200	3877	2242	1176	938	11576	10957	2157	2101	620.3	422.3	845.2
MEAN	168	129	72.3	37.9	33.5	373	365	69.6	70.0	20.0	13.6	28.2
MAX	577	351	220	41	80	1590	1160	140	297	55	36	99
MIN	30	62	40	34	27	50	130	20	24	7.7	5.6	4.0
CFSM	2.09	1.60	.90	.47	.42	4.63	4.53	.87	.87	.25	.17	.35
IN.	2.40	1.79	1.04	.54	.43	5.35	5.06	1.00	.97	.29	.20	.39

CAL YR 1976 TOTAL 56526.0 MEAN 154 MAX 1670 MIN 17 CFSM 1.91 IN 26.12
WTR YR 1977 TOTAL 42111.8 MEAN 115 MAX 1590 MIN 4.0 CFSM 1.43 IN 19.46

01150500 MASCOMA RIVER AT MASCOMA, NH

LOCATION.--Lat 43°39'01", long 72°11'05", Grafton County, Hydrologic Unit 01080104, on left bank at Mascoma, 250 ft (76 m) downstream from railroad bridge, 1,000 ft (300 m) downstream from outlet of Mascoma Lake, and 9.9 mi (15.9 km) upstream from mouth.

DRAINAGE AREA.--153 mi^2 (396 km^2).

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

REVISED RECORDS.--WSP 726: Drainage area. WSP 801: 1925(M).

GAGE.--Water-stage recorder. Altitude of gage is 740 ft (226 m), from topographic map.

REMARKS.--Records good. Flow regulated by Mascoma and Crystal Lakes and Goose and Grafton Ponds (Reservoirs in Connecticut River basin). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--54 years, 215 ft^3/s (6.089 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,840 ft^3/s (165 m^3/s) Mar. 19, 1936, gage height, 7.50 ft (2.286 m), from rating curve extended above 2,500 ft^3/s (70.8 m^3/s) on basis of computations of flow over dams at gage heights 6.85 ft (2.088 m) and 7.50 ft (2.286 m); minimum daily, 2 ft^3/s (0.06 m^3/s) Feb. 3, 1939, Sept. 1, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,080 ft^3/s (58.9 m^3/s) Mar. 16, gage height, 4.51 ft (1.375 m); minimum daily, 30 ft^3/s (0.85 m^3/s) Sept. 10-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	210	495	120	99	78	75	1670	549	74	102	35	33
2	195	495	80	95	71	80	1630	263	64	100	36	33
3	180	495	69	94	71	84	1350	48	53	94	38	33
4	160	491	120	92	71	89	1190	52	56	90	38	33
5	150	486	120	91	69	99	1100	53	60	83	38	33
6	144	495	116	89	69	105	1020	55	63	75	39	33
7	144	491	224	87	72	118	957	60	83	72	39	33
8	139	491	257	87	74	122	688	72	207	69	40	33
9	170	397	293	84	74	123	452	83	298	68	39	32
10	295	377	276	84	74	129	440	96	267	67	39	30
11	504	339	248	86	72	147	420	114	241	67	39	30
12	526	335	227	84	72	187	226	129	220	65	40	30
13	549	448	203	83	72	328	68	134	175	64	41	31
14	461	431	185	81	72	1110	120	134	136	63	42	37
15	432	314	165	80	72	1790	318	132	129	60	42	42
16	400	335	155	78	72	1940	882	127	127	55	42	44
17	381	310	161	78	72	1620	849	122	120	55	42	45
18	346	300	141	77	72	1350	563	118	118	55	41	47
19	328	307	133	75	72	1120	339	129	117	52	41	49
20	389	389	129	74	72	902	325	141	88	46	40	45
21	440	373	127	74	71	729	311	141	60	46	40	100
22	549	270	122	72	71	605	241	134	60	45	39	180
23	620	145	118	72	71	526	210	125	60	42	40	175
24	572	51	114	71	71	342	549	117	60	41	39	170
25	620	71	109	71	72	229	1020	109	60	40	39	159
26	620	91	107	71	72	238	1040	102	63	40	39	157
27	596	105	107	65	72	244	943	96	74	39	39	157
28	572	123	107	64	74	263	797	91	90	38	38	159
29	540	133	104	65	---	349	682	84	94	38	37	159
30	513	137	102	74	---	823	605	83	96	36	36	159
31	491	---	100	84	---	1300	---	79	---	36	34	---
TOTAL	12236	9720	4639	2481	2017	17166	21005	3772	3413	1843	1211	2301
MEAN	395	324	150	80.0	72.0	554	700	122	114	59.5	39.1	76.7
MAX	620	495	293	99	78	1940	1670	549	298	102	42	180
MIN	139	51	69	64	69	75	68	48	53	36	34	30

CAL YR 1976 TOTAL 110640 MEAN 302 MAX 2340 MIN 35
WTR YR 1977 TOTAL 81804 MEAN 224 MAX 1940 MIN 30

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 (30 m) upstream from highway bridge at North Hartland, 0.3 mi (0.5 km) downstream from North Hartland Dam, and 1.2 mi (1.9 km) upstream from mouth.

DRAINAGE AREA.--221 mi^2 (572 km^2).

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 (102.647 m) above mean sea level (levels by Corps of Engineers).

REMARKS.--Records good except those for winter period and periods of doubtful gage-height record, which are fair. Flow regulated by powerplants upstream and by North Hartland Reservoir (Reservoir in Connecticut River basin) since March 1961; greater regulation by powerplants prior to 1958. Small seasonal storage in reservoir at Plymouth. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--47 years, 396 ft^3/s (11.21 m^3/s), 24.33 in/yr (618 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,400 ft^3/s (691 m^3/s) Sept. 21, 1938, gage height, 17.68 ft (5.389 m), from rating curve extended above 6,200 ft^3/s (176 m^3/s) on basis of computations of flow over dams at gage heights 15.58 ft (4.749 m), 17.68 ft (5.389 m), and 21.5 ft (6.55 m); minimum, 2.9 ft^3/s (0.082 m^3/s) July 31, 1933; minimum daily, 3.8 ft^3/s (0.11 m^3/s) July 3, 1933. Maximum discharge since construction of North Hartland Dam in March 1961, 6,170 ft^3/s (175 m^3/s) Mar. 17, 1977, gage height, 8.67 ft (2.643 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1760, 21.5 ft (6.55 m) in November 1927, from floodmarks, discharge 30,400 ft^3/s (861 m^3/s), by computation of peak flow over dam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,170 ft^3/s (175 m^3/s) Mar. 17, gage height, 8.67 ft (2.643 m); minimum, 8.5 ft^3/s (0.24 m^3/s) July 29; minimum daily, 21 ft^3/s (0.59 m^3/s) Sept. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	272	982	209	160	120	180	3590	591	175	191	47	39
2	254	733	200	160	120	171	1700	555	180	150	58	43
3	240	657	190	160	120	158	2040	555	160	105	65	47
4	226	775	190	160	120	151	1560	342	145	105	61	47
5	217	714	180	160	120	180	1410	222	130	109	67	30
6	208	823	180	160	120	265	2010	232	125	108	85	21
7	206	675	400	160	110	229	1640	180	183	108	68	37
8	274	618	950	160	110	194	1120	161	230	108	61	37
9	1160	546	450	160	110	193	899	476	199	133	68	33
10	2400	516	350	160	110	285	840	747	184	145	70	33
11	1210	485	420	160	110	687	781	756	272	144	69	33
12	684	426	360	160	110	923	872	604	315	97	69	32
13	586	390	310	150	110	1840	1100	498	312	88	68	28
14	749	400	260	150	110	1550	728	462	291	120	67	242
15	730	400	280	150	110	773	969	381	218	124	116	241
16	635	400	300	150	110	2420	1400	345	180	91	146	115
17	548	395	270	150	110	4960	692	345	125	84	111	81
18	494	397	250	150	100	5190	550	355	108	83	67	67
19	449	388	230	150	100	2640	500	890	182	84	56	170
20	486	383	230	150	100	1780	500	535	181	74	49	275
21	1960	337	240	150	100	1670	500	385	126	69	48	450
22	1750	333	220	150	100	1530	500	300	110	106	44	360
23	943	332	190	140	100	1360	540	265	109	122	69	167
24	780	318	180	140	100	911	2100	240	127	102	79	100
25	821	302	180	140	110	591	2800	200	135	92	79	206
26	1220	293	190	130	130	554	1300	200	371	92	70	150
27	917	321	170	130	150	592	1100	200	696	92	66	117
28	755	397	160	130	160	757	887	185	375	79	49	125
29	680	389	160	130	---	1870	749	180	334	68	41	125
30	626	301	170	130	---	3400	656	180	290	54	40	125
31	847	---	170	130	---	4430	---	180	---	47	39	---
TOTAL	23327	14426	8239	4620	3180	42434	36033	11747	6568	3174	2092	3576
MEAN	752	481	266	149	114	1369	1201	379	219	102	67.5	119
MAX	2400	982	950	160	160	5190	3590	890	696	191	146	450
MIN	206	293	160	130	100	151	500	161	108	47	39	21
MEAN†	753	480	265	149	114	1388	1183	416	210	108	67.9	120
CFSM†	3.41	2.17	1.20	.67	.52	6.28	5.35	1.88	.95	.49	.31	.54
IN.†	3.93	2.43	1.38	.78	.54	7.24	5.97	2.17	1.06	.56	.35	.60

CAL YR 1976 TOTAL 233990 MEAN 639 MAX 3660 MIN 60 MEAN† 637 CFSM† 2.88 IN† 39.21
WTR YR 1977 TOTAL 159416 MEAN 437 MAX 5190 MIN 21 MEAN† 440 CFSM† 1.99 IN† 27.02

† Adjusted for change in contents in North Hartland Reservoir.
NOTE.--Doubtful gage-height record Nov. 13-17, Apr. 18-27, May 22 to June 6, Sept. 18-30.

01152500 SUGAR RIVER AT WEST CLAREMONT, NH

LOCATION.--Lat 43°23'15", long 72°21'45", Sullivan County, Hydrologic Unit 01080104, on right bank 0.2 mi (0.3 km) downstream from Redwater Brook at West Claremont and 2.4 mi (3.9 km) upstream from mouth.

DRAINAGE AREA.--269 mi^2 (697 km^2).

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 (109.356 m) above mean sea level (levels by Corps of Engineers). Prior to Oct. 1, 1928, nonrecording gage at site 0.8 mi (1.3 km) upstream at different datum.

REMARKS.--Records excellent except those for winter period and periods of no gage-height record, which are poor. Regulation by Sunapee Lake 25 mi (40 km) 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 were made during the year.

AVERAGE DISCHARGE.--49 years, 402 ft^3/s (11.38 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,000 ft^3/s (396 m^3/s) Mar. 19, 1936, gage height, 10.92 ft (3.328 m), from rating curve extended above 6,700 ft^3/s (190 m^3/s) on basis of computations of flow over dam at gage heights 10.49 ft (3.197 m) and 10.92 ft (3.328 m); maximum gage height, 11.80 ft (3.597 m) Mar. 12, 1936, ice jam; minimum daily discharge, 14 ft^3/s (0.40 m^3/s) Aug. 26, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft^3/s (85.0 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 14	1730	*6420	182	2.00	2.134	Apr. 24	1400	3030	85.8	4.98	1.518
Mar. 31	0330	4590	130	5.99	1.826						

Minimum daily discharge, 39 ft^3/s (1.10 m^3/s) Sept. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	165	691	195	119	140	200	3320	526	110	185	96	47
2	146	578	221	118	140	218	2180	480	158	148	282	45
3	134	510	148	117	139	220	2070	441	203	123	199	43
4	123	546	168	116	138	206	2010	395	165	110	140	42
5	111	612	214	117	136	273	1790	368	140	101	110	40
6	98	941	199	116	135	336	1950	359	123	93	114	39
7	100	788	399	117	135	327	1620	327	148	88	101	46
8	99	660	934	118	133	291	1340	291	217	96	107	44
9	472	557	485	119	132	299	1130	322	229	104	101	42
10	1080	500	399	121	130	422	1010	552	308	101	86	40
11	585	490	418	124	130	666	941	595	377	88	90	43
12	424	475	350	130	130	963	948	461	304	133	151	41
13	383	470	273	136	128	2190	1110	386	249	188	130	40
14	374	456	217	140	128	5880	1140	322	195	151	114	66
15	352	446	200	144	126	4130	985	278	175	144	155	84
16	371	427	190	146	126	3100	870	257	144	130	117	105
17	388	413	175	148	126	2500	768	233	130	120	93	90
18	358	409	165	150	124	1810	589	261	123	110	84	128
19	334	404	155	152	120	1470	495	691	144	100	78	100
20	360	404	148	152	122	1260	451	456	140	92	68	115
21	1430	368	146	152	124	1130	418	341	130	83	60	310
22	1170	345	140	150	116	1020	395	286	120	76	64	230
23	828	336	137	150	110	956	666	233	107	68	70	195
24	606	257	134	150	112	898	2740	203	101	62	76	175
25	589	217	130	149	120	815	2290	178	104	62	70	160
26	742	221	128	149	135	768	1550	155	269	64	64	225
27	697	221	125	149	160	774	1150	133	427	66	60	290
28	573	241	123	148	180	919	898	123	269	64	57	350
29	510	273	122	146	---	1980	716	148	210	62	54	260
30	456	269	121	144	---	3240	600	140	233	62	51	190
31	520	---	120	142	---	4360	---	123	---	66	49	---
TOTAL	14578	13525	7079	4229	3675	43621	38140	10064	5752	3140	3091	3625
MEAN	470	451	228	136	131	1407	1271	325	192	101	99.7	121
MAX	1430	941	934	152	180	5880	3320	691	427	188	282	350
MIN	98	217	120	116	110	200	395	123	101	62	49	39

CAL YR 1976 TOTAL 207396 MEAN 567 MAX 4360 MIN 55
WTR YR 1977 TOTAL 150519 MEAN 412 MAX 5880 MIN 39

NOTE.--No gage-height record July 15-28, Aug. 17 to Sept. 19, Sept. 22-30.

01152800 BLACK RIVER AT COVERED BRIDGE, AT WEATHERSFIELD, VT

LOCATION.--Lat 43°23'55", long 72°31'14", Windsor County, Hydrologic Unit 01080106, on left bank 540 ft (165 m) downstream from covered bridge, 0.3 mi (0.5 km) west of Downers, and 1.7 mi (2.7 km) north of Perkinsville (Weathersfield Town Hall).

DRAINAGE AREA.--114 mi^2 (295 km^2).

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

GAGE.--Water-stage recorder. Datum of gage is 563.33 ft (171.703 m) above mean sea level.

REMARKS.--Records good except those for winter period and periods of no gage-height record, which are poor. Flow regulated by powerplant and mills upstream. High flow slightly affected by retarding reservoirs.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,400 ft^3/s (323 m^3/s) Mar. 14, 1977, gage height, 6.75 ft (2.057 m), from rating curve extended above 4,100 ft^3/s (116 m^3/s); maximum gage height, 8.64 ft (2.633 m) Aug. 10, 1976; minimum daily discharge, 15 ft^3/s (0.42 m^3/s) Aug. 19, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 30, 1973, reached a discharge of 15,100 ft^3/s (428 m^3/s), by slope-area measurement 2.4 mi (3.9 km) upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft^3/s (70.8 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 14	0630	*11400	323	*6.75	2.057	Apr. 24	0115	3170	89.8	4.17	1.271
Mar. 30	1945	3500	99.1	4.33	1.320						

a From rating curve extended above 4,100 ft^3/s (116 m^3/s).

Minimum daily discharge, 15 ft^3/s (0.42 m^3/s) Aug. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	126	500	125	92	62	150	1820	288	84	165	25	22
2	123	350	125	92	53	130	951	260	119	126	73	24
3	112	310	105	96	63	110	1180	243	112	99	60	28
4	109	325	100	94	59	115	944	222	86	92	27	28
5	99	313	95	92	60	190	908	205	79	81	50	27
6	92	321	120	90	60	240	1050	222	72	67	26	25
7	92	299	370	88	60	180	717	202	77	70	51	23
8	100	274	587	86	60	160	600	174	96	60	28	21
9	900	243	330	85	59	150	484	428	90	84	32	21
10	1500	239	260	84	59	210	428	606	149	70	41	21
11	800	239	280	82	57	380	414	525	243	65	39	22
12	400	205	230	80	57	520	525	463	202	81	37	20
13	350	195	220	76	60	2220	846	433	149	84	39	21
14	400	195	140	74	59	6730	1150	338	114	67	38	60
15	350	186	160	73	60	2700	786	288	114	57	38	75
16	280	177	170	72	60	1650	578	232	92	56	36	45
17	230	163	170	70	56	1130	478	199	81	53	35	52
18	210	165	160	70	59	729	404	189	72	51	32	52
19	200	171	140	70	57	578	377	189	86	48	15	50
20	250	163	150	68	56	448	342	163	84	48	28	120
21	1100	146	160	68	56	359	313	146	77	31	28	214
22	900	138	120	67	59	313	295	151	73	51	28	181
23	520	138	115	66	57	302	536	136	63	47	29	137
24	400	136	110	65	56	267	2680	126	68	43	29	106
25	480	131	105	65	100	236	1610	107	57	46	30	117
26	640	128	115	65	140	218	853	99	611	68	30	157
27	500	133	105	62	150	222	617	94	510	79	28	226
28	380	177	90	67	170	288	473	86	284	68	28	210
29	320	195	98	62	---	1020	381	101	250	53	26	159
30	300	180	92	63	---	2080	317	101	257	26	25	115
31	430	---	92	62	---	3050	---	84	---	47	23	---
TOTAL	12693	6535	5239	2346	1964	27075	23057	7100	4451	2083	1054	2379
MEAN	409	218	169	75.7	70.1	873	769	229	148	67.2	34.0	79.3
MAX	1500	500	587	96	170	6730	2680	606	611	165	73	226
MIN	92	128	90	62	53	110	295	84	57	26	15	20
CFSM	3.59	1.91	1.48	.66	.62	7.66	6.75	2.01	1.30	.59	.30	.70
IN.	4.14	2.13	1.71	.77	.64	8.83	7.52	2.32	1.45	.68	.34	.78

CAL YR 1976 TOTAL 135305 MEAN 370 MAX 4500 MIN 60 CFSM 3.25 IN 44.15
WTR YR 1977 TOTAL 95976 MEAN 263 MAX 6730 MIN 15 CFSM 2.31 IN 31.32

NOTE.--No gage-height record Oct. 8 to Nov. 2, Dec. 1-6, Dec. 9 to Jan. 2, Aug. 31 to Sept. 20.

01153000 BLACK RIVER AT NORTH SPRINGFIELD, VT

LOCATION.--Lat 43°20'00", long 72°30'55", Windsor County, Hydrologic Unit 01080106, on right bank at North Springfield, 800 ft (250 m) downstream from North Springfield Dam, 1,300 ft (400 m) upstream from Great Brook, and 8.1 mi (13.0 km) upstream from mouth.

DRAINAGE AREA.--158 mi^2 (409 km^2).

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 (135.877 m) above mean sea level (levels by Corps of Engineers).

REMARKS.--Records good except those for winter period, 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 were made during the year.

AVERAGE DISCHARGE.--48 years, 287 ft^3/s (8,128 m^3/s), 24.67 in/yr (627 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,500 ft^3/s (439 m^3/s) Sept. 22, 1938, gage height, 17.68 ft (5.389 m), from rating curve extended above 3,200 ft^3/s (90.6 m^3/s) on basis of computations of flow over dams at gage heights 16.41 ft (5.002 m) and 17.68 ft (5.389 m); minimum daily, 7.0 ft^3/s (0.20 m^3/s) Nov. 13, 1973. Maximum discharge since construction of North Spingfield Dam in 1960, 3,550 ft^3/s (101 m^3/s) Apr. 11, 1962, gage height, 6.43 ft (1.960 m); maximum gage height, 7.24 ft (2.207 m) Apr. 6, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,410 ft^3/s (96.6 m^3/s) Mar. 18, gage height, 7.19 ft (2.192 m); minimum daily, 28 ft^3/s (0.79 m^3/s) Sept. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	177	691	163	120	88	203	2830	489	100	266	54	31
2	169	512	166	121	88	175	1800	445	160	197	121	33
3	150	440	131	129	87	146	1240	422	166	154	104	40
4	143	454	126	129	87	149	1200	396	119	136	63	40
5	131	449	155	126	86	200	1100	362	106	124	67	39
6	124	523	158	124	86	305	1650	383	92	100	54	39
7	126	449	365	115	86	240	1700	370	98	94	69	32
8	129	401	788	120	86	203	811	322	129	104	56	29
9	900	339	441	120	86	187	687	559	119	144	57	30
10	1950	318	341	120	86	266	624	799	190	115	58	30
11	1120	309	370	115	86	559	594	703	309	102	61	32
12	552	282	314	110	87	736	677	624	314	112	57	28
13	486	260	289	105	89	1150	1050	609	244	144	57	30
14	540	242	175	105	90	1470	1200	485	172	119	57	70
15	480	253	216	100	90	883	1200	459	169	94	54	115
16	383	246	223	100	90	1800	799	409	131	86	52	64
17	305	226	226	98	86	2900	687	216	117	81	50	74
18	290	223	223	96	86	3250	485	247	106	74	48	77
19	264	226	185	95	86	2860	559	322	124	70	36	75
20	314	226	190	94	92	2670	494	281	129	69	38	124
21	1500	200	207	93	90	2370	454	237	112	56	39	314
22	1250	188	155	92	88	1880	431	230	108	72	41	281
23	708	186	152	91	88	569	550	207	100	67	42	197
24	552	186	146	91	88	535	1360	181	90	60	43	163
25	611	180	136	90	119	480	2320	152	90	66	43	157
26	865	174	152	90	184	441	2420	136	687	88	41	193
27	691	180	135	90	190	436	1100	124	703	104	39	362
28	535	213	115	89	187	450	725	112	427	104	39	314
29	454	242	129	89	---	480	624	117	309	77	38	240
30	415	232	120	88	---	1860	545	126	358	54	37	172
31	535	---	120	88	---	3140	---	108	---	63	36	---
TOTAL	16849	9050	6812	3233	2782	32993	31916	10632	6078	3196	1651	3425
MEAN	544	302	220	104	99.4	1064	1064	343	203	103	53.3	114
MAX	1950	691	788	129	190	3250	2830	799	703	266	121	362
MIN	124	174	115	88	86	146	431	108	90	54	36	28
MEAN†	543	301	219	104	100	1109	1021	341	203	102	53	115
CFSM†	3.44	1.91	1.39	.66	.63	7.02	6.46	2.16	1.28	.65	.34	.73
IN.†	3.96	2.13	1.60	.76	.66	8.09	7.21	2.49	1.44	.74	.39	.81

CAL YR 1976 TOTAL 179654 MEAN 491 MAX 2900 MIN 96 MEAN† 491 CFSM† 3.11 IN† 42.3
WTR YR 1977 TOTAL 128617 MEAN 352 MAX 3250 MIN 28 MEAN† 352 CFSM† 2.23 IN† 30.3

† Adjusted for change in contents in North Springfield Reservoir.

01153500 WILLIAMS RIVER AT BROCKWAYS MILLS, VT

LOCATION.--Lat 43°12'31", long 72°31'05", Windham County, Hydrologic Unit 01080107, on left bank 25 ft (7.6 m) upstream from highway bridge at Brockways Mills, 4 mi (6.4 km) downstream from Hall Brook, 4.6 mi (7.4 km) upstream from mouth, and 6 mi (9.7 km) northwest of Bellows Falls.
DRAINAGE AREA.--103 mi^2 (267 km^2).
PERIOD OF RECORD.--Discharge: June 1940 to current year.
Water-quality records: Water years 1957, 1967-74.
REVISED RECORDS.--WSP 1031: 1943-44(P). WSP 1301: 1941-42(M).
GAGE.--Water-stage recorder. Datum of gage is 433.54 ft (132.143 m) above mean sea level (levels by private engineer).
REMARKS.--Records excellent except those for winter period and periods of no gage-height record, which are fair. Several observations of water temperature were made during the year.
AVERAGE DISCHARGE.--37 years, 172 ft^3/s (4.871 m^3/s), 22.68 in/yr (576 mm/yr).
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,800 ft^3/s (334 m^3/s) Aug. 10, 1976, gage height, 15.85 ft (4.831 m), from rating curve extended above 3,300 ft^3/s (93.5 m^3/s) on basis of slope-area measurement at gage height 13.31 ft (4.057 m); minimum not determined, occurred Dec. 11, 1941, during period of ice effect; minimum daily, 3.6 ft^3/s (0.10 m^3/s) Aug. 27, 1949.
EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in September 1938 had greatest discharge since at least 1753, gage height, 22.7 ft (6.92 m), from floodmarks. Flood in November 1927 reached a stage possibly 2 ft (1 m) higher than that of September 1938 flood because of backwater from milldam, from information by local residents.
EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,600 ft^3/s (73.6 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 14	0430	*6040	171	*10.74	3.274	Apr. 24	1300	2700	76.5	7.12	2.170
Mar. 30	1900	3280	92.9	7.83	2.387						

Minimum discharge, 14 ft^3/s (0.40 m^3/s) about Sept. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	330	67	55	42	137	1030	216	43	63	34	16
2	60	230	71	54	40	96	607	198	96	51	176	16
3	57	190	80	53	39	86	1000	189	72	43	55	16
4	54	214	78	52	40	73	693	169	51	38	38	16
5	52	209	80	52	40	200	746	158	44	35	34	16
6	51	282	90	52	39	270	985	160	41	33	38	20
7	50	216	250	52	39	173	574	143	56	31	34	18
8	52	194	320	54	39	142	440	131	67	43	33	16
9	650	168	149	56	38	150	349	361	56	70	33	15
10	450	162	135	52	39	260	326	450	159	45	28	15
11	220	158	175	56	38	440	331	314	134	35	29	15
12	170	141	158	57	38	616	506	236	98	50	32	14
13	160	147	128	54	40	2260	651	198	72	66	33	15
14	180	141	77	54	43	4730	703	171	61	50	28	50
15	170	137	140	53	42	1760	408	154	54	37	29	40
16	155	132	172	52	37	1310	326	137	45	31	25	30
17	150	126	125	52	35	862	284	125	42	30	24	80
18	145	126	115	51	40	539	258	111	43	29	23	60
19	140	124	110	50	39	428	237	129	56	26	19	45
20	180	122	94	50	37	352	217	111	44	24	19	180
21	750	104	73	49	38	319	204	98	45	23	18	170
22	360	109	67	49	36	301	192	88	42	31	20	100
23	260	107	65	48	38	289	358	77	37	24	25	75
24	230	104	62	48	38	254	2220	70	34	21	22	85
25	280	101	60	47	60	231	1180	65	34	24	23	120
26	400	98	60	47	120	222	590	57	260	40	20	200
27	300	105	60	46	130	246	434	52	107	28	18	250
28	240	112	59	44	162	348	354	51	69	22	17	130
29	220	117	58	45	---	1230	285	54	75	20	16	90
30	200	90	57	44	---	2060	246	49	116	19	16	75
31	280	---	56	43	---	2190	---	45	---	19	16	---
TOTAL	6729	4596	3291	1571	1406	22574	16734	4567	2153	1101	975	1988
MEAN	217	153	106	50.7	50.2	728	558	147	71.8	35.5	31.5	66.3
MAX	750	330	320	57	162	4730	2220	450	260	70	176	250
MIN	50	90	56	43	35	73	192	45	34	19	16	14
CFSM	2.11	1.49	1.03	.49	.49	7.07	5.42	1.43	.70	.35	.31	.64
IN.	2.43	1.66	1.19	.57	.51	8.15	6.04	1.65	.78	.40	.35	.72

CAL YR 1976 TOTAL 89824 MEAN 245 MAX 4020 MIN 40 CFSM 2.38 IN 32.44
WTR YR 1977 TOTAL 67685 MEAN 185 MAX 4730 MIN 14 CFSM 1.80 IN 24.45

NOTE.--No gage-height record Oct. 3 to Nov. 2, Sept. 5-30.

01154000 SAXTONS RIVER AT SAXTONS RIVER, VT

LOCATION.--Lat 43°08'14", long 72°29'17", Windham County, Hydrologic Unit 01080107, on right bank 130 ft (40 m) upstream from highway bridge, 0.8 mi (1.3 km) east of Saxtons River, 1.4 mi (2.3 km) upstream from Bundy Brook, and 3.9 mi (6.3 km) upstream from mouth.
DRAINAGE AREA.--72.2 mi^2 (187.0 km^2).
PERIOD OF RECORD.--Discharge: June 1940 to current year.
Water-quality record: Water year 1957.
REVISED RECORDS.--WSP 1301: 1948-49(M).
GAGE.--Water-stage recorder. Datum of gage is 395.51 ft (120.551 m) above mean sea level.
REMARKS.--Records good except those for periods of doubtful or no gage-height record, which are fair, and those for winter period, which are poor. Occasional diurnal fluctuation at low flow prior to 1962; fluctuation more frequent prior to 1946. Several observations of water temperature were made during the year.
AVERAGE DISCHARGE.--37 years, 120 ft^3/s (3.398 m^3/s), 22.57 in/yr (573 mm/yr).
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,460 ft^3/s (240 m^3/s) Aug. 10, 1976, gage height, 14.06 ft (4.285 m), from rating curve extended above 2,000 ft^3/s (56.6 m^3/s) on basis of slope-area measurements at gage heights 10.51 ft (3.203 m), 11.37 ft (3.466 m), and 13.26 ft (4.042 m); minimum, 1.9 ft^3/s (0.054 m^3/s) July 25, 1949; minimum daily, 2.4 ft^3/s (0.068 m^3/s) Aug. 6, 1955.
EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1869, 17.9 ft (5.46 m) in September 1938, from floodmarks (discharge not determined).
EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,750 ft^3/s (49.6 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 14	-	a*4250	120	b*10.08	3.072	Apr. 24	-	1900	54	-	-
Mar. 30	-	2300	65	-	-						

a From rating curve extended as explained above.
b From peak-stage indicator.

Minimum discharge, 8.7 ft^3/s (0.25 m^3/s) Sept. 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	250	66	40	28	85	750	160	29	34	45	11
2	41	190	63	39	27	65	450	145	44	27	160	9.8
3	39	150	60	38	27	58	720	135	45	22	45	9.8
4	37	155	58	37	27	50	500	125	32	20	28	9.8
5	36	155	56	36	27	110	550	117	27	19	22	9.8
6	36	235	60	35	27	180	720	116	25	19	25	13
7	36	180	170	35	27	120	400	102	38	17	24	12
8	37	160	220	36	27	93	310	92	48	22	21	10
9	444	140	100	37	27	110	260	226	42	36	20	9.4
10	310	130	93	35	26	198	240	353	113	26	19	9.4
11	160	125	120	38	26	318	240	270	113	20	31	9.8
12	125	114	100	38	26	496	370	210	73	31	25	8.7
13	115	113	82	37	27	1700	480	162	53	47	23	9.4
14	130	111	70	37	29	3200	520	131	43	28	21	38
15	125	108	80	36	28	1300	300	114	41	22	23	31
16	115	105	95	35	25	900	230	103	34	19	20	19
17	110	99	87	35	24	600	200	95	29	28	17	62
18	110	97	78	35	27	390	185	85	34	25	16	45
19	105	94	68	34	26	310	170	88	53	19	13	29
20	130	93	66	34	25	250	160	80	35	16	13	128
21	550	81	64	33	25	230	150	70	37	14	13	123
22	270	83	58	33	25	220	140	64	35	14	14	72
23	195	81	52	32	25	210	260	56	29	12	20	50
24	175	78	49	32	25	180	1500	50	26	12	17	58
25	210	75	47	32	50	165	800	49	24	15	17	77
26	300	75	46	31	80	160	420	42	70	21	13	148
27	230	79	45	31	90	170	310	36	51	17	12	188
28	180	83	44	30	110	250	260	35	34	13	12	92
29	165	87	43	30	---	900	210	37	39	12	11	67
30	150	68	42	30	---	1500	180	34	56	11	11	52
31	210	---	41	29	---	1550	---	30	---	11	11	---
TOTAL	4920	3594	2323	1070	963	16068	11985	3412	1352	649	762	1410.9
MEAN	159	120	74.9	34.5	34.4	518	400	110	45.1	20.9	24.6	47.0
MAX	550	250	220	40	110	3200	1500	353	113	47	160	188
MIN	36	68	41	29	24	50	140	30	24	11	11	8.7
CFSM	2.20	1.66	1.04	.48	.48	7.18	5.54	1.52	.63	.29	.34	.65
IN.	2.53	1.85	1.20	.55	.50	8.28	6.18	1.76	.70	.33	.39	.73

CAL YR 1976 TOTAL 60749.0 MEAN 166 MAX 2480 MIN 22 CFSM 2.30 IN 31.30
WTR YR 1977 TOTAL 48508.9 MEAN 133 MAX 3200 MIN 8.7 CFSM 1.84 IN 24.99

NOTE.--Doubtful or no gage-height record Oct. 1 to Nov. 11, Dec. 3 to Jan. 2, Mar. 4-7, Mar. 13 to May 3.

01154500 CONNECTICUT RIVER AT NORTH WALPOLE, NH

LOCATION.--Lat 43°07'34", long 72°26'14", Cheshire County, Hydrologic Unit 01080104, on left bank at North Walpole, 100 ft (30 m) upstream from Saxtons River, 0.7 mi (1.1 km) downstream from Vilas Bridge between Bellows Falls, VT, and North Walpole, NH, and at mile 172.5 (277.6 km).

DRAINAGE AREA.--5,493 mi^2 (14,227 km^2), includes that of Saxtons River.

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 (66.638 m) above mean sea level.

REMARKS.--Records excellent except those for winter period and period of no gage-height record, 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 ft^3 (702,000,000 m^3). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--35 years, 9,338 ft^3/s (264.5 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 97,000 ft^3/s (2,750 m^3/s) Mar. 27, 1953, gage height, 30.37 ft (9.257 m); minimum daily, 115 ft^3/s (3.26 m^3/s) Aug. 31, 1952, Sept. 2, 1957.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1750, 43.8 ft (13.35 m) Mar. 19, 1936, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 44,000 ft^3/s (1,250 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 14	1530	*77700	2200	*26.39	8.044	Apr. 1	0145	63300	1790	22.23	7.081
Mar. 17	1700	68000	1930	24.27	7.397	Apr. 25	0830	50100	1420	20.11	6.130

Minimum daily discharge, 1,310 ft^3/s (37.1 m^3/s) Sept. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4960	14100	9020	2590	3010	4260	59900	12300	5110	8040	1380	2330
2	4420	13500	7220	2960	4220	4810	48100	11200	5400	5540	4050	3770
3	3700	13300	6340	5230	3170	4870	42600	12500	6430	3590	1630	3100
4	5490	12200	4960	5340	3490	6560	41400	11700	3390	2500	2770	1370
5	5690	13100	2790	4230	2720	6430	33900	11400	1830	4300	2030	1310
6	5580	15700	5830	4570	1910	5430	37200	11000	5500	4120	2100	2250
7	6010	14200	8060	4190	3770	6050	36400	9530	5890	4100	1740	2630
8	6040	14700	16800	4640	3700	7100	27100	8050	5910	4570	2020	2950
9	11900	12100	14400	2360	4150	6300	17200	9380	3700	2350	1810	3700
10	32700	11600	12100	4550	4130	7600	19300	12500	6640	2210	1970	1780
11	22800	10700	10400	4930	4500	9600	16400	12200	8340	4540	2540	1530
12	16700	9740	9280	4730	5120	13500	15400	10400	3180	3900	1830	2110
13	16200	8960	7890	4450	3610	30000	20100	9890	5150	3420	1350	1990
14	12400	6050	8240	4650	3860	71000	26000	7390	7580	3020	1340	4050
15	10800	8690	6060	3940	3770	63000	30200	5110	5750	2260	1720	9930
16	15300	9390	6530	2760	2790	57300	29800	7000	5470	1980	3690	8780
17	10800	9190	8700	4800	2850	59500	25400	7180	6480	1780	7770	10800
18	10100	8240	8670	6110	2820	48200	20600	7140	2710	2360	11100	6540
19	9740	7940	5910	4660	3210	36200	17800	8420	2860	1980	11700	7000
20	11700	7510	6830	5010	2250	27900	19300	9440	5410	2940	9170	8150
21	24500	5530	8650	4510	1930	27200	18000	4670	5380	3970	4500	9230
22	29800	7490	7510	3460	3230	21300	19800	2260	4840	2230	5010	10600
23	24300	7890	5690	1880	3430	16300	25500	5430	5560	1640	5380	8520
24	19100	6730	5220	4310	3910	13700	43700	5500	6620	1760	3530	8470
25	16800	4960	4150	3830	4040	14100	48700	5620	3890	2830	5470	5970
26	18300	4890	3420	3590	4210	13200	38400	4330	4780	3310	5940	8760
27	17800	4750	4750	3370	3580	12400	28500	4440	9620	2920	4240	10100
28	14500	5910	4970	3410	3660	11900	21600	2200	9690	2080	3090	9820
29	13500	7920	4050	2410	---	23800	19000	2350	8790	1420	5740	9600
30	11400	8770	4090	1450	---	43500	16200	2150	8150	1350	5530	11500
31	10900	---	3950	3630	---	57600	---	3610	---	1340	3850	---
TOTAL	423930	285750	222480	122550	97040	730610	863500	236290	170050	94350	125990	178640
MEAN	13680	9525	7177	3953	3466	23570	28780	7622	5668	3044	4064	5955
MAX	32700	15700	16800	6110	5120	71000	59900	12500	9690	8040	11700	11500
MIN	3700	4750	2790	1450	1910	4260	15400	2150	1830	1340	1340	1310

CAL YR 1976 TOTAL 4847810 MEAN 13250 MAX 81200 MIN 2320
WTR YR 1977 TOTAL 3551180 MEAN 9729 MAX 71000 MIN 1310

NOTE.--No gage-height record Oct. 31 to Nov. 28.

01155000 COLD RIVER AT DREWSVILLE, NH

LOCATION.--Lat 43°07'54", long 72°23'23", Cheshire County, Hydrologic Unit 01080104, on left bank 50 ft (15 m) upstream from bridge on State Highway 123 at Drewsville, 1.0 mi (1.6 km) upstream from Great Brook, 2.7 mi (4.3 km) east of Bellows Falls, VT, and 3.4 mi (5.5 km) upstream from mouth.

DRAINAGE AREA.--82.7 mi^2 (214.2 km^2).

PERIOD OF RECORD.--Discharge: June 1940 to current year.
Water-quality records: Water year 1957.

REVISED RECORDS.--WSP 1431: 1952(P). WRD MA, NH, RI, VT, 1973: 1951(M), 1969(M).

GAGE.--Water-stage recorder. Altitude of gage is 375 ft (114 m), from topographic map.

REMARKS.--Records good except those for winter period, which are fair. Occasional diurnal fluctuation at low flow caused by sawmill upstream; fluctuation more frequent prior to 1945. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--37 years, 117 ft^3/s (3.313 m^3/s), 19.21 in/yr (488 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,710 ft^3/s (190 m^3/s) Dec. 21, 1973, gage height, 12.30 ft (3.749 m), from rating curve extended above 3,400 ft^3/s (96.3 m^3/s) on basis of computation of flow over dam at gage height 10.29 ft (3.136 m) and slope-area measurement at gage height 12.30 ft (3.749 m); minimum, 1.3 ft^3/s (0.037 m^3/s) Sept. 23, 1940.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,100 ft^3/s (31.2 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 13	2000	*3800	108	*8.64	2.633	Mar. 30	2400	1880	53.2	6.86	2.091

Minimum discharge, 5.7 ft^3/s (0.16 m^3/s) Sept. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	174	40	35	28	67	986	163	37	24	11	7.0
2	32	137	37	34	28	59	596	150	42	24	100	6.8
3	32	122	36	33	28	56	618	142	61	23	47	6.6
4	28	139	35	34	29	53	571	129	47	22	28	6.6
5	26	144	34	32	28	105	519	118	38	21	23	6.3
6	26	160	40	31	28	116	609	120	35	20	23	6.6
7	24	155	225	31	28	95	453	113	42	20	22	7.2
8	25	140	384	31	28	85	359	99	72	20	23	6.8
9	50	130	166	30	28	96	285	118	56	27	22	6.5
10	94	120	132	30	27	162	248	365	132	23	19	6.1
11	130	110	136	30	27	288	231	301	158	22	30	6.1
12	110	105	106	30	27	433	252	205	106	22	24	6.0
13	88	96	89	30	28	1690	317	161	77	27	22	5.7
14	78	91	57	30	29	2630	331	133	58	28	22	17
15	68	86	60	29	30	1320	259	116	50	24	48	24
16	62	82	68	29	30	986	215	105	42	22	33	18
17	58	80	68	30	29	739	194	93	35	20	23	42
18	53	79	59	32	28	478	176	83	33	19	20	41
19	52	79	57	31	28	372	161	270	42	18	16	28
20	60	77	61	31	27	298	146	198	36	16	14	74
21	369	66	65	30	27	259	135	134	31	15	12	111
22	248	66	59	30	27	237	128	101	29	14	11	59
23	163	63	54	29	27	225	219	82	26	13	11	46
24	132	61	51	29	26	221	865	71	24	12	11	43
25	148	60	48	29	50	188	709	61	24	12	12	45
26	207	57	45	30	55	173	450	53	34	12	11	60
27	178	60	43	30	60	205	333	47	39	12	9.8	132
28	142	62	41	29	115	309	261	43	30	11	8.9	69
29	125	71	39	28	---	859	215	52	28	11	8.3	51
30	112	62	38	29	---	1350	183	46	31	10	7.7	42
31	141	---	37	28	---	1680	---	41	---	10	7.4	---
TOTAL	3096	2934	2410	944	950	15834	11024	3913	1495	574	680.1	986.3
MEAN	99.9	97.8	77.7	30.5	33.9	511	367	126	49.8	18.5	21.9	32.9
MAX	369	174	384	35	115	2630	986	365	158	28	100	132
MIN	24	57	34	28	26	53	128	41	24	10	7.4	5.7
CFSM	1.21	1.18	.94	.37	.41	6.18	4.44	1.52	.60	.22	.27	.40
IN.	1.39	1.32	1.08	.42	.43	7.12	4.96	1.76	.67	.26	.31	.44

CAL YR 1976 TOTAL 52429.0 MEAN 143 MAX 1580 MIN 13 CFSM 1.73 IN 23.58
WTR YR 1977 TOTAL 44840.4 MEAN 123 MAX 2630 MIN 5.7 CFSM 1.49 IN 20.17

01155050 CONNECTICUT RIVER AT WALPOLE, NH
(National stream-quality accounting network station)

LOCATION.--Lat 43°05'04", long 72°26'04", Cheshire County, Hydrologic Unit 01080104, near left bank on downstream end of bridge pier on State Highway 123 at Walpole, 2.6 mi (4.2 km) downstream from Cold River, and at mile 169.6 (272.9 km).

DRAINAGE AREA.--5,612 mi^2 (14,535 km^2).

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

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: September 1975 to current year.
WATER TEMPERATURES: September 1975 to current year.

INSTRUMENTATION.--Water-quality monitor since September 1975.

REMARKS.--Discharge based on records for gaging stations at North Walpole (station 01154500) and Cold River at Drewsville (station 01155000). Interruptions in the record were due to malfunction of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum recorded, 157 micromhos Sept. 18, 1975; minimum recorded, 72 micromhos Aug. 11, 1976.
WATER TEMPERATURES: Maximum recorded, 27.5°C July 21, 1977; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded, 155 micromhos Jan. 27; minimum recorded, 73 micromhos Apr. 26.
WATER TEMPERATURES: Maximum recorded, 27.5°C July 21; minimum, 0.0°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM .7UM-MF (COL./ 100 ML)	FECAL STREPTOCOCCI KF AGAR (COL. PER 100 ML)	HARDNESS (CA,MG) (MG/L)
OCT												
28...	1035	12200	98	6.4	2.0	5.0	--	6.8	4300	1300	72	--
NOV												
29...	1030	10800	146	6.4	--	3.5	--	--	2100	250	140	--
DEC												
29...	1130	10400	138	6.2	-2.0	.0	2	--	1200	100	88	47
JAN												
25...	1045	16900	138	5.9	3.0	.5	--	13.2	940	--	88	--
FEB												
24...	0830	5610	125	6.2	3.5	.0	--	12.2	1200	440	150	--
MAR												
29...	1045	19800	117	6.0	12.5	4.0	7	--	360	170	90	34
APR												
26...	1400	37600	73	6.7	10.0	7.5	--	10.8	550	250	46	--
MAY												
24...	1020	7010	112	6.8	23.0	20.0	--	9.2	B1400	B900	73	--
JUN												
21...	1045	10800	118	7.1	19.0	20.0	1	9.5	B1800	B420	29	44
JUL												
28...	1130	1300	124	6.1	22.5	23.0	--	9.1	1300	300	B9	--
SEP												
06...	1030	1330	112	5.9	23.5	23.0	--	8.6	540	1000	34	--
27...	1100	10300	110	6.5	15.0	14.5	--	--	2000	310	59	--

B, NON-IDEAL COLONY COUNT.

01155050 CONNECTICUT RIVER AT WALPOLE, NH--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	NON-CARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)
OCT											
28...	--	--	--	--	--	--	--	--	--	--	--
NOV											
29...	--	--	--	--	--	--	--	--	--	--	--
DEC											
29...	10	15	2.3	5.5	1.0	45	0	37	45	13	8.1
JAN											
25...	--	--	--	--	--	--	--	--	--	--	--
FEB											
24...	--	--	--	--	--	--	--	--	--	--	--
MAR											
29...	4	13	.3	5.4	1.1	36	0	30	58	13	8.1
APR											
26...	--	--	--	--	--	--	--	--	--	--	--
MAY											
24...	--	--	--	--	--	--	--	--	--	--	--
JUN											
21...	10	15	1.7	5.5	1.2	42	0	34	5.3	8.7	7.8
JUL											
28...	--	--	--	--	--	--	--	--	--	--	--
SEP											
06...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--

DATE	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM
OCT											
28...	--	--	--	--	.17	.18	.35	.06	2	66	100
NOV											
29...	--	--	--	--	.33	.13	.46	.03	9	262	100
DEC											
29...	.1	6.9	84	74	.36	.25	.61	.02	2	56	100
JAN											
25...	--	--	--	--	.36	.45	.81	.03	3	137	100
FEB											
24...	--	--	--	--	.44	.21	.65	.03	2	30	100
MAR											
29...	.1	4.8	54	64	.38	.20	.58	.02	58	3100	71
APR											
26...	--	--	--	--	.30	.50	.80	.05	35	3550	100
MAY											
24...	--	--	--	--	.22	.51	.73	.02	6	114	100
JUN											
21...	.1	5.0	70	66	.23	.36	.59	.01	5	146	100
JUL											
28...	--	--	--	--	.19	.51	.70	.01	7	25	31
SEP											
06...	--	--	--	--	.52	1.1	1.6	.02	6	22	100
27...	--	--	--	--	.19	.25	.44	.02	14	389	100

01155050 CONNECTICUT RIVER AT WALPOLE, NH--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL ARSENIC (AS) (UG/L)	SUS-PENDED ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	SUS-PENDED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	SUS-PENDED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)	SUS-PENDED COBALT (CO) (UG/L)
DEC											
29...	0	0	0	6	2	4	<10	0	<10	1	0
MAR											
29...	1	1	0	2	0	2	<10	0	<10	2	1
JUN											
21...	2	0	2	4	0	6	<10	<9	1	0	0

DATE	DIS-SOLVED COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	SUS-PENDED COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	SUS-PENDED LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	SUS-PENDED MAN-GANESE (MN) (UG/L)
DEC											
29...	1	0	0	0	180	110	8	5	3	30	0
MAR											
29...	1	0	0	10	1000	60	5	0	5	50	10
JUN											
21...	0	6	0	12	240	150	7	0	7	40	0

DATE	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	SUS-PENDED MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	SUS-PENDED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	TOTAL ZINC (ZN) (UG/L)	SUS-PENDED ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
DEC										
29...	30	<.5	.0	<.5	0	0	0	10	0	20
MAR										
29...	40	<.5	.0	<.5	0	0	0	20	0	70
JUN										
21...	40	.0	.0	.0	0	0	0	20	10	10

01155050 CONNECTICUT RIVER AT WALPOLE, NH--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL ALUMINUM (AL) (UG/L)	TOTAL BISMUTH (BI) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYLLIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	TOTAL COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL GALLIUM (GA) (UG/L)	TOTAL GERMANIUM (GE) (UG/L)
DEC										
28...	120	<0	6	<0	50	<10	<0	8	<0	<1
MAR										
21...	520	--	0	0	40	<10	<50	<10	--	--
JUN										
28...	--	--	--	--	--	--	--	--	--	--
SEP										
29...	--	--	--	--	--	--	--	--	--	--

DATE	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL LITHIUM (LI) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MOLYBDENUM (MO) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL STRONTIUM (SR) (UG/L)	TOTAL TIN (SN) (UG/L)
DEC									
28...	380	15	0	50	1	5	2	20	2
MAR									
21...	690	<100	0	90	0	<50	<10	30	--
JUN									
28...	--	--	--	--	--	--	--	--	--
SEP									
29...	--	--	--	--	--	--	--	--	--

DATE	TOTAL TITANIUM (TI) (UG/L)	TOTAL VANADIUM (V) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ZIRCONIUM (ZR) (UG/L)	TOTAL PCB (UG/L)	POLYCHLORINATED NAPHTHALENES (UG/L)	TOTAL ALDRIN (UG/L)	TOTAL CHLORDANE (UG/L)	TOTAL DDD (UG/L)
DEC									
28...	3	<.8	9	<1	.0	.00	.00	.0	.00
MAR									
21...	--	--	20	--	.0	.00	.00	.0	.00
JUN									
28...	--	--	--	--	.0	.00	.00	.0	.00
SEP									
29...	--	--	--	--	.0	.00	.00	.0	.00

DATE	TOTAL DDE (UG/L)	TOTAL DDT (UG/L)	TOTAL DIELDRIN (UG/L)	TOTAL ENDOSULFAN (UG/L)	TOTAL ENDRIN (UG/L)	TOTAL HEPTACHLOR (UG/L)	TOTAL HEPTACHLOR EPOXIDE (UG/L)	TOTAL LINDANE (UG/L)	TOTAL TOXAPHENE (UG/L)
DEC									
28...	.00	.00	.00	--	.00	.00	.00	.00	0
MAR									
21...	.00	.00	.00	.00	.00	.00	.00	.00	0
JUN									
28...	.00	.00	.00	.00	.00	.00	.00	.00	0
SEP									
29...	.00	.00	.00	.00	.00	.00	.00	.00	0

01155050 CONNECTICUT RIVER AT WALPOLE, NH--Continued

QUALITATIVE AND QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, OCTOBER 1976 TO FEBRUARY 1977

PHYTOPLANKTON

DATE TIME	OCT 28,76 1035		NOV 29,76 1030		DEC 28,76 1130		JAN 25,77 1045		FEB 24,77 0830	
TOTAL CELLS/ML	70000		340		30		270		630	
DIVERSITY: DIVISION	0.8		0.5		0.0		0.8		0.6	
.CLASS	0.8		0.5		0.0		0.8		0.6	
..ORDER	0.8		0.5		0.0		1.6		0.7	
...FAMILY	0.8		0.7		2.2		1.9		0.8	
....GENUS	0.9		0.7		2.2		1.9		0.9	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...OOCYSTACEAE										
....ANKISTRODESMUS	--	-	--	-	--	-	--	-	22	4
....CHLORELLA	--	-	--	-	--	-	--	-	*	0
....TETRAEDRON	780	1	--	-	--	-	--	-	--	-
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	--	-	--	-	--	-	4	1	--	-
...PHACOTACEAE										
....PTEROMONAS	--	-	--	-	--	-	--	-	*	0
CHRYSOPHYTA										
.BACILLARIOPHYCEAE										
..CENTRALES										
...COSCINODISCACEAE										
....CYCLOTELLA	5500	8	3	1	--	-	--	-	--	-
....MELOSIRA	4300	6	--	-	--	-	--	-	--	-
....STEPHANODISCUS	*	0	--	-	--	-	--	-	--	-
..PENNALES										
...ACHNANTHACEAE										
....ACHNANTHES	--	-	--	-	6#	20	--	-	7	1
....COCCONEIS	--	-	--	-	--	-	--	-	5	1
...CYMBELLACEAE										
....CYMBELLA	--	-	--	-	3	10	7	3	10	2
....EPITHEMIA	--	-	3	1	--	-	--	-	--	-
...DIATOMACEAE										
....DIATOMA	--	-	--	-	9#	30	18	7	*	0
...FRAGILARIACEAE										
....FRAGILARIA	--	-	3	1	--	-	--	-	5	1
....HANNAEA	--	-	--	-	3	10	*	0	--	-
....SYNEDRA	--	-	--	-	--	-	7	3	*	0
...GOMPHONEMATACEAE										
....GOMPHONEMA	--	-	6	2	--	-	*	0	*	0
...MERIDIONACEAE										
....MERIDION	--	-	--	-	--	-	4	1	--	-
...NAVICULACEAE										
....NAVICULA	--	-	3	1	9#	30	--	-	10	2
...NITZSCHIACEAE										
....NITZSCHIA	*	0	9	3	--	-	11	4	*	0
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..CHROCOCCALES										
...CHROCOCCACEAE										
....ANACYSTIS	--	-	--	-	--	-	110#	39	--	-
..HORMOGONALES										
...OSCILLATORIACEAE										
....OSCILLATORIA	59000#	84	310#	91	--	-	110#	42	550#	88
EUGLENOPHYTA (EUGLENOIDS)										
.CRYPTOPHYCEAE										
..CRYPTOMONIDALES										
...CRYPTOMONODACEAE										
....CRYPTOMONAS	--	-	3	1	--	-	--	-	--	-
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....TRACHELOMONAS	590	1	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%
USED DEPTH-INTEGRATED SAMPLING METHOD.

01155050 CONNECTICUT RIVER AT WALPOLE, NH--Continued

QUALITATIVE AND QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, MAY TO SEPTEMBER 1977

PHYTOPLANKTON

DATE	MAY 24,77		JUN 21,77		JUL 28,77		SEP 6,77		SEP 27,77	
TIME	1020		1045		1130		1030		1100	
TOTAL CELLS/ML	1400		3600		5100		800		770	
DIVERSITY: DIVISION	0.6		1.7		1.7		1.8		1.0	
.CLASS	1.2		1.8		2.0		1.8		1.0	
..ORDER	1.7		2.4		2.6		2.4		1.4	
...FAMILY	3.0		2.6		3.1		3.1		3.0	
....GENUS	3.6		2.8		3.5		3.4		3.3	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...CHARACIACEAE										
....SCHROEDERIA	--	-	--	-	--	-	5	1	7	1
...COELASTRACEAE										
....COELASTRUM	--	-	--	-	--	-	34	4	--	-
...MICRACTINIACEAE										
....MICRACTINIUM	--	-	--	-	130	3	15	2	--	-
...OOCYSTACEAE										
....ANKISTRODESMUS	--	-	110	3	33	1	24	3	14	2
....CHODATELLA	--	-	--	-	65	1	--	-	--	-
....DICTYOSPHAERIUM	75	5	--	-	--	-	59	7	--	-
....KIRCHNERIELLA	--	-	--	-	130	3	--	-	--	-
....OOCYSTIS	--	-	27	1	810#	16	--	-	7	1
....TETRAEDRON	--	-	--	-	33	1	--	-	--	-
....TREUBARIA	--	-	--	-	--	-	5	1	--	-
...SCENEDESMACEAE										
....ACTINASTRUM	--	-	--	-	--	-	78	10	--	-
....CRUCIGENIA	--	-	--	-	--	-	--	-	*	0
....SCENEDESMUS	--	-	110	3	460	9	34	4	230#	30
..TETRASPORALES										
...PALMELLACEAE										
....SPHAEROCYSTIS	--	-	54	2	--	-	--	-	--	-
...TETRASPORACEAE										
....TETRASPORA	--	-	--	-	65	1	--	-	--	-
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	--	-	540#	15	590	11	--	-	--	-
....CHLOROGONIUM	--	-	--	-	33	1	--	-	--	-
...VOLVOCACEAE										
....PANDORINA	--	-	*	0	--	-	110	14	--	-
..ZYGNEMATALES										
...DESMIDIACEAE										
....COSMARIUM	--	-	27	1	--	-	--	-	--	-
....SPONDYLOSIUM	--	-	--	-	--	-	--	-	14	2

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%
USED DEPTH-INTEGRATED SAMPLING METHOD.

QUALITATIVE AND QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, MAY TO SEPTEMBER 1977--Continued

PHYTOPLANKTON

DATE TIME	MAY 24,77 1020		JUN 21,77 1045		JUL 28,77 1130		SEP 6,77 1030		SEP 27,77 1100	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHRYSOPHYTA										
.BACILLARIOPHYCEAE										
..CENTRALES										
...COSCINODISCACEAE										
....CYCLOTELLA	160	11	1500#	43	260	5	--	-	36	5
....MELOSIRA	38	3	81	2	--	-	120#	15	14	2
..PENNALES										
...ACHNANTHACEAE										
....ACHNANTHES	56	4	*	0	33	1	--	-	51	7
....COCCONEIS	--	-	--	-	--	-	5	1	22	3
....RHOICOSPHENIA	19	1	--	-	--	-	--	-	--	-
...CYMBELLACEAE										
....AMPHORA	9	1	--	-	--	-	--	-	--	-
....CYMBELLA	9	1	54	2	--	-	--	-	22	3
...DIATOMACEAE										
....DIATOMA	9	1	--	-	--	-	--	-	--	-
...FRAGILARIACEAE										
....ASTERIONELLA	130	9	*	0	--	-	--	-	*	0
....FRAGILARIA	100	7	--	-	360	7	--	-	140#	18
....SYNEDRA	100	7	220	6	65	1	5	1	22	3
...GOMPHONEMATACEAE										
....GOMPHONEMA	38	3	--	-	--	-	--	-	7	1
...NAVICULACEAE										
....CALONEIS	--	-	--	-	--	-	5	1	--	-
....DIPLONEIS	--	-	--	-	--	-	--	-	7	1
....NAVICULA	66	5	*	0	33	1	20	2	65	8
...NITZSCHIACEAE										
....NITZSCHIA	340#	24	*	0	--	-	--	-	80	10
...TABELLARIACEAE										
....TABELLARIA	--	-	--	-	--	-	29	4	22	3
.CHRYSOPHYCEAE										
..CHRYSOMONADALES										
...MALLOMONADACEAE										
....MALLOMONAS	--	-	--	-	98	2	--	-	--	-
...OCHROMONADACEAE										
....DINOBRYON	140	10	27	1	230	4	--	-	--	-
.XANTHOPHYCEAE										
..HETEROCOCCALES										
...CHLOROTHECIACEAE										
....OPHIOCYTIUM	9	1	--	-	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..CHROCCOCCALES										
...CHROCCOCCACEAE										
....ANACYSTIS	--	-	--	-	260	5	210#	26	--	-
..HORMOGONALES										
...OSCILLATORIACEAE										
....LYNGBYA	--	-	540#	15	--	-	--	-	--	-
....OSCILLATORIA	--	-	*	0	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)										
.CRYPTOPHYCEAE										
..CRYPTOMONIDALES										
...CRYPTOCHRYSIDACEAE										
....CHROOMONAS	56	4	140	4	1300#	26	--	-	--	-
...CRYPTOMONODACEAE										
....CRYPTOMONAS	--	-	81	2	--	-	--	-	--	-
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....EUGLENA	--	-	27	1	--	-	--	-	--	-
....PHACUS	--	-	--	-	--	-	--	-	7	1
....TRACHELOMONAS	28	2	--	-	130	3	10	1	--	-
PYRRHOPHYTA (FIRE ALGAE)										
.DINOPHYCEAE										
..PERIDINIALES										
...GLENODINIACEAE										
....GLENODINIUM	--	-	27	1	--	-	--	-	--	-
...PERIDINIACEAE										
....PERIDINIUM	--	-	--	-	--	-	34	4	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%
USED DEPTH-INTEGRATED SAMPLING METHOD.

01155050 CONNECTICUT RIVER AT WALPOLE, NH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	118	114	116	116	104	108	138	123	130	130	127	128
2	118	115	116	109	104	107	132	124	127	133	131	132
3	133	118	124	106	103	104	131	126	128	134	131	132
4	133	123	127	110	105	108	142	128	132	146	133	137
5	137	123	130	116	106	112	146	142	144	147	140	145
6	136	131	133	114	104	107	149	139	144	143	135	139
7	133	128	130	105	101	103	150	123	141	141	137	139
8	133	121	127	108	102	105	141	117	125	141	134	139
9	123	107	115	107	103	106	122	112	116	138	135	136
10	125	102	115	110	105	107	117	110	115	140	135	138
11	103	101	102	117	109	111	116	112	114	143	138	140
12	108	99	103	117	112	114	115	104	111	146	137	141
13	101	99	100	119	110	113	112	102	105	145	138	142
14	100	98	99	124	110	118	119	100	109	140	129	136
15	112	99	102	124	111	117	127	109	118	132	129	131
16	112	103	107	122	112	116	121	116	119	134	129	132
17	103	101	101	122	113	116	121	112	116	133	128	131
18	105	102	104	120	114	118	132	109	121	138	129	133
19	113	106	110	128	119	124	126	109	118	146	137	142
20	115	109	112	125	121	123	134	123	126	141	130	135
21	114	103	105	132	123	126	137	120	130	135	128	132
22	108	93	101	133	125	128	124	115	120	134	129	132
23	96	87	92	134	123	129	127	115	120	135	131	133
24	94	87	92	130	122	126	127	123	125	137	133	135
25	95	93	94	133	123	127	132	126	129	139	135	137
26	97	93	95	137	122	127	130	126	128	150	136	143
27	101	95	99	138	126	131	133	127	130	155	144	152
28	98	96	97	139	130	134	141	133	137	143	135	138
29	106	97	101	149	133	140	140	133	137	135	131	134
30	108	100	103	143	131	135	138	124	134	137	131	135
31	110	104	106	---	---	---	130	125	127	140	135	137
MONTH	137	87	108	149	101	118	150	100	125	155	127	137

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	141	136	138	137	126	130	---	---	---	89	87	88
2	148	137	142	140	132	136	---	---	---	103	88	94
3	147	138	144	138	131	135	---	---	---	102	96	99
4	139	135	137	137	131	134	---	---	---	114	93	99
5	140	136	137	137	116	126	---	---	---	110	98	103
6	139	138	139	123	111	118	---	---	---	120	103	108
7	142	136	139	130	114	122	---	---	---	120	106	113
8	139	135	137	134	122	127	---	---	---	107	98	103
9	150	135	141	130	118	125	---	---	---	105	96	100
10	150	139	147	119	109	115	---	---	---	104	92	97
11	138	134	137	114	105	109	---	---	---	96	89	93
12	138	132	135	117	107	111	---	---	---	107	91	99
13	132	124	130	109	82	99	---	---	---	106	93	96
14	129	122	126	81	78	79	---	---	---	109	101	104
15	132	121	127	---	---	---	---	---	---	117	103	110
16	140	128	133	---	---	---	---	---	---	111	107	109
17	138	133	136	---	---	---	---	---	---	113	105	109
18	136	128	133	---	---	---	---	---	---	112	99	109
19	131	128	129	---	---	---	---	---	---	112	95	103
20	133	127	129	---	---	---	---	---	---	112	106	108
21	135	132	134	---	---	---	---	---	---	122	113	116
22	134	127	130	---	---	---	---	---	---	115	112	113
23	127	124	126	---	---	---	---	---	---	120	112	115
24	132	122	127	---	---	---	---	---	---	127	119	122
25	137	119	128	---	---	---	---	---	---	145	126	134
26	121	117	119	---	---	---	76	73	74	144	130	137
27	128	121	125	---	---	---	81	75	79	134	125	129
28	130	120	125	---	---	---	83	78	81	128	121	124
29	---	---	---	---	---	---	84	82	83	130	119	127
30	---	---	---	---	---	---	89	82	85	123	117	120
31	---	---	---	---	---	---	---	---	---	121	118	120
MONTH	150	117	133	---	---	---	---	---	---	145	87	110

01155050 CONNECTICUT RIVER AT WALPOLE, NH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	127	118	122	103	100	102	147	140	144	109	105	107
2	144	128	136	117	102	110	137	125	130	108	103	105
3	141	126	135	112	105	108	131	125	128	110	106	108
4	131	126	129	108	96	105	133	129	131	115	108	112
5	132	126	129	98	93	95	138	133	135	116	112	114
6	130	124	128	100	93	96	144	138	141	115	108	111
7	126	112	119	101	94	97	143	135	140	111	108	110
8	141	117	128	108	99	104	134	131	133	115	109	113
9	134	113	124	103	96	101	138	134	136	113	108	110
10	120	112	115	98	94	97	136	134	135	123	113	119
11	127	118	124	97	94	96	135	132	134	122	117	121
12	115	110	112	98	96	97	133	127	130	117	111	113
13	110	101	108	101	98	100	130	125	128	112	106	109
14	113	99	105	115	102	108	138	130	133	107	101	104
15	135	113	124	120	115	118	140	137	138	120	101	110
16	123	115	118	118	111	115	138	131	136	117	103	110
17	115	104	110	113	108	112	133	127	131	114	101	105
18	115	108	111	116	109	111	152	125	138	113	104	109
19	110	105	107	116	113	114	123	116	117	115	112	114
20	113	105	109	120	116	118	118	115	117	121	107	116
21	115	112	113	125	119	122	119	114	117	106	97	100
22	116	106	110	129	125	127	120	112	117	105	96	99
23	127	113	119	130	125	127	114	103	109	116	106	109
24	119	111	114	125	119	123	105	100	102	117	106	111
25	114	105	111	121	117	120	102	86	96	110	106	107
26	110	103	106	126	122	124	93	87	91	109	105	107
27	114	102	108	126	123	125	101	93	98	113	104	108
28	121	110	117	128	123	126	103	91	99	120	110	116
29	121	106	114	135	127	131	98	91	94	117	106	112
30	113	99	105	147	135	142	116	98	107	109	104	106
31	---	---	---	151	147	149	114	105	112	---	---	---
MONTH	144	99	117	151	93	114	152	86	122	123	96	110
YEAR	155	73	119									

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	14.5	13.5	14.0	5.5	5.5	5.5	1.5	1.0	1.5	0.0	0.0	0.0
2	14.0	13.5	14.0	5.5	5.0	5.0	1.0	0.5	0.5	0.0	0.0	0.0
3	14.5	13.5	14.0	5.0	4.5	5.0	0.5	0.5	0.5	0.0	0.0	0.0
4	14.5	13.5	14.0	5.0	5.0	5.0	0.5	0.5	0.5	0.0	0.0	0.0
5	14.5	13.5	14.0	5.0	5.0	5.0	0.5	0.5	0.5	0.0	0.0	0.0
6	14.5	14.0	14.5	5.5	5.0	5.0	0.5	0.5	0.5	0.0	0.0	0.0
7	15.0	14.5	14.5	5.5	5.0	5.0	0.5	0.5	0.5	0.0	0.0	0.0
8	15.0	14.5	15.0	5.0	4.5	5.0	0.5	0.5	0.5	0.0	0.0	0.0
9	15.5	14.5	15.0	4.5	4.0	4.0	0.5	0.5	0.5	0.0	0.0	0.0
10	14.5	13.0	13.5	4.0	3.0	3.5	0.5	0.5	0.5	0.0	0.0	0.0
11	12.5	12.0	12.0	3.0	2.5	3.0	0.5	0.5	0.5	0.0	0.0	0.0
12	12.0	11.0	11.5	3.0	2.0	2.5	0.5	0.5	0.5	0.0	0.0	0.0
13	11.0	10.5	11.0	2.5	2.0	2.0	0.5	0.5	0.5	0.0	0.0	0.0
14	11.0	10.5	11.0	2.5	1.5	2.0	0.5	0.5	0.5	0.0	0.0	0.0
15	11.0	10.0	10.5	2.5	2.0	2.5	0.5	0.0	0.0	0.0	0.0	0.0
16	10.5	10.0	10.5	3.0	2.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0
17	10.5	10.0	10.0	3.5	2.5	3.0	0.0	0.0	0.0	0.0	0.0	0.0
18	10.0	9.0	9.5	3.0	2.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0
19	9.0	8.5	8.5	3.0	2.5	3.0	0.0	0.0	0.0	0.0	0.0	0.0
20	8.5	7.5	8.0	3.0	2.5	3.0	0.0	0.0	0.0	0.0	0.0	0.0
21	8.0	7.5	8.0	3.0	2.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0
22	8.0	7.5	7.5	2.5	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
23	7.5	7.0	7.5	2.0	1.5	2.0	0.0	0.0	0.0	0.0	0.0	0.0
24	7.0	6.5	7.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
25	7.0	6.5	7.0	2.5	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
26	7.0	6.0	6.5	2.5	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
27	6.0	5.5	5.5	3.5	2.5	3.0	0.0	0.0	0.0	0.0	0.0	0.0
28	5.0	5.0	5.0	4.0	3.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0
29	5.0	4.5	5.0	4.0	3.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0
30	5.5	5.0	5.0	3.0	1.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0
31	5.5	5.5	5.5	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
MONTH	15.5	4.5	10.0	5.5	1.5	3.5	1.5	0.0	0.5	0.0	0.0	0.0

01155050 CONNECTICUT RIVER AT WALPOLE, NH--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			MAY	
1	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
2	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
3	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
4	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
5	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
6	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
7	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
8	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
9	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
10	0.0	0.0	0.0	0.5	0.0	0.0	---	---	---
11	0.0	0.0	0.0	0.5	0.0	0.0	13.0	11.0	11.5
12	0.0	0.0	0.0	0.5	0.0	0.0	12.5	10.5	11.5
13	0.0	0.0	0.0	0.0	0.0	0.0	13.0	12.0	12.5
14	0.0	0.0	0.0	0.0	0.0	0.0	13.0	11.5	12.5
15	0.0	0.0	0.0	---	---	---	14.0	11.0	13.0
16	0.0	0.0	0.0	---	---	---	14.0	12.0	13.5
17	0.0	0.0	0.0	---	---	---	15.5	13.0	14.5
18	0.0	0.0	0.0	---	---	---	16.0	14.5	15.5
19	0.0	0.0	0.0	---	---	---	17.5	15.0	16.5
20	0.0	0.0	0.0	---	---	---	17.5	16.5	17.0
21	0.0	0.0	0.0	---	---	---	19.5	17.0	18.0
22	0.0	0.0	0.0	---	---	---	21.0	17.5	19.0
23	0.0	0.0	0.0	---	---	---	21.0	18.0	19.5
24	0.0	0.0	0.0	---	---	---	21.5	20.0	21.0
25	0.0	0.0	0.0	---	---	---	23.0	21.0	22.0
26	0.0	0.0	0.0	---	---	---	22.5	20.5	21.5
27	0.0	0.0	0.0	---	---	---	21.5	19.5	20.5
28	0.0	0.0	0.0	---	---	---	22.0	20.0	21.0
29	---	---	---	---	---	---	21.5	18.5	20.0
30	---	---	---	---	---	---	22.5	18.5	20.5
31	---	---	---	---	---	---	21.5	19.0	20.5
MONTH	0.0	0.0	0.0	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	20.5	19.0	19.5	20.5	19.5	20.0	23.5	22.5	23.0	25.0	23.5	24.0
2	20.5	19.0	20.0	22.0	20.0	21.0	24.5	23.0	23.5	24.5	23.0	23.5
3	21.0	19.0	20.0	22.0	20.0	21.0	25.0	23.0	24.0	24.5	23.5	24.0
4	21.0	18.5	19.5	22.5	20.5	21.0	25.5	23.0	24.0	25.5	22.5	24.0
5	21.5	19.0	20.0	22.0	20.5	21.5	25.0	23.5	24.5	23.5	22.5	23.0
6	20.5	19.0	20.0	21.5	20.5	21.0	25.0	24.0	24.5	23.5	23.0	23.0
7	19.5	18.5	19.0	22.0	19.5	21.0	25.5	24.0	25.0	24.5	23.0	23.5
8	19.0	17.5	18.0	21.0	20.5	21.0	26.0	24.5	25.0	24.5	22.5	23.5
9	17.5	16.5	17.0	21.5	20.0	21.0	26.5	24.5	25.5	23.5	22.5	23.0
10	16.5	16.0	16.0	23.0	20.0	21.5	25.5	24.5	25.0	23.0	21.5	22.0
11	16.0	15.5	16.0	22.0	21.0	21.5	26.0	24.5	25.5	22.0	21.0	21.5
12	16.5	15.5	16.0	21.0	20.5	21.0	25.5	25.0	25.0	21.5	19.5	20.5
13	17.5	16.0	16.5	22.5	21.0	21.5	26.5	24.5	25.5	20.5	19.5	20.0
14	18.0	17.0	17.5	24.0	21.5	23.0	25.5	24.5	25.0	20.0	18.5	19.5
15	20.0	18.0	19.0	24.5	22.5	23.5	26.0	24.0	25.0	18.5	17.5	18.0
16	20.0	18.0	19.0	24.5	22.5	23.5	25.0	24.0	24.5	18.0	17.5	17.5
17	19.0	18.0	18.5	24.5	23.0	23.5	24.5	24.0	24.0	17.0	16.0	16.5
18	20.0	19.0	19.5	26.0	23.5	25.0	24.0	23.5	23.5	16.5	15.5	16.0
19	21.5	19.0	20.0	27.0	25.0	26.0	24.0	23.0	23.5	17.0	16.0	16.5
20	21.0	19.0	20.0	26.5	25.0	26.0	23.0	21.5	22.5	16.5	14.5	15.5
21	20.5	19.0	19.5	27.5	26.0	26.5	22.5	21.0	21.5	14.5	13.5	14.0
22	19.5	18.0	19.0	27.0	25.0	26.5	21.0	20.0	20.5	14.0	13.0	13.5
23	20.5	18.5	19.5	26.5	24.0	25.0	21.0	19.5	20.0	14.0	13.0	13.5
24	20.0	18.5	19.0	26.0	24.0	25.0	20.5	20.0	20.5	13.5	13.0	13.0
25	19.5	18.5	19.0	25.0	24.0	24.5	21.0	19.5	20.0	13.0	12.5	12.5
26	20.5	19.0	19.5	25.0	23.5	24.5	21.5	19.5	20.5	12.0	11.5	11.5
27	20.5	19.5	20.0	24.0	22.5	23.5	21.5	19.5	20.5	11.5	11.0	11.0
28	21.0	20.0	20.5	24.5	22.0	23.0	23.0	20.5	21.5	12.0	11.0	11.5
29	21.0	20.0	20.5	24.5	22.0	23.0	23.5	22.0	22.5	12.5	11.5	12.0
30	21.0	20.0	20.5	23.5	22.5	23.0	24.0	23.0	23.5	12.5	12.0	12.0
31	---	---	---	25.0	22.5	23.5	24.5	23.5	24.0	---	---	---
MONTH	21.5	15.5	19.0	27.5	19.5	23.0	26.5	19.5	23.5	25.5	11.0	18.0
YEAR	27.5	0.0	11.0									

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 (0.3 km) upstream from highway bridge at Jamaica, 0.4 mi (0.6 km) upstream from Ball Mountain Brook, and 2.8 mi (4.5 km) downstream from Ball Mountain Dam, and at mile 26.2 (42.2 km).

DRAINAGE AREA.--179 mi^2 (464 km^2).

PERIOD OF RECORD.--Discharge: October 1946 to current year.
Water-quality records: Water year 1954.

GAGE.--Water-stage recorder. Altitude of gage is 640 ft (195 m), from topographic map.

REMARKS.--Records good except those for winter period, which are poor. Flow regulated by Ball Mountain Reservoir since 1961 (Reservoirs in Connecticut River basin). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--31 years, 365 ft^3/s (10.34 m^3/s), 27.69 in/yr (703 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,500 ft^3/s (835 m^3/s) Dec. 31, 1948, gage height, 14.87 ft (4.532 m), from rating curve extended above 9,800 ft^3/s (278 m^3/s), verified by slope-area measurement of peak flow; minimum, 0.94 ft^3/s (0.027 m^3/s) Sept. 23-25, 1968; minimum daily, 0.94 ft^3/s (0.027 m^3/s) Sept. 23, 24, 1968. Maximum discharge since construction of Ball Mountain Dam in 1961, 5,080 ft^3/s (144 m^3/s) Mar. 17, 1977, gage height, 9.27 ft (2.825 m); maximum gage height, 9.46 ft (2.883 m) Feb. 4, 1970, ice jam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,080 ft^3/s (144 m^3/s) Mar. 17, gage height, 9.27 ft (2.825 m); minimum, 15 ft^3/s (0.42 m^3/s) Aug. 25; minimum daily, 30 ft^3/s (0.85 m^3/s) Aug. 26 to Sept. 5, Sept. 7 to 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	128	877	107	95	72	120	3940	395	84	160	64	30
2	128	532	82	90	72	160	1870	390	89	160	157	30
3	76	418	72	90	70	190	1300	259	117	157	211	30
4	51	488	68	90	70	150	1440	117	137	157	162	30
5	51	447	65	90	70	140	1200	120	137	113	91	30
6	51	447	64	90	68	170	1660	120	134	70	61	31
7	52	390	100	90	68	220	1840	120	137	56	62	30
8	52	365	200	90	68	280	1110	120	137	70	64	30
9	1380	306	670	90	68	260	612	291	134	139	84	30
10	1960	295	752	90	66	240	526	1040	302	181	95	30
11	1690	279	452	92	66	500	528	1170	413	120	95	30
12	844	227	404	98	66	900	719	739	409	89	95	30
13	400	244	287	96	75	900	1560	813	230	89	95	31
14	634	230	195	94	80	850	2850	820	139	87	95	38
15	799	217	275	92	70	1120	2190	915	139	87	95	74
16	442	207	313	92	66	2860	1600	147	113	86	95	170
17	373	195	259	92	66	4570	834	195	97	87	93	306
18	295	195	237	92	66	3870	613	255	97	86	93	332
19	244	195	217	92	64	2500	841	255	97	86	76	352
20	499	192	198	90	64	1560	863	255	97	86	64	550
21	1780	150	165	90	64	726	695	252	97	86	64	938
22	1270	173	150	86	64	418	635	248	97	71	65	813
23	683	165	140	84	64	382	732	204	97	59	53	352
24	536	160	130	82	64	382	2840	122	97	58	44	162
25	550	152	120	80	64	382	3820	87	99	59	39	204
26	932	150	115	78	70	386	2220	86	591	59	30	390
27	841	165	110	76	80	369	1210	86	720	59	30	778
28	647	230	105	74	95	377	930	86	275	59	30	647
29	467	224	105	74	---	1230	613	86	157	59	30	377
30	382	157	100	72	---	2780	437	86	160	79	30	295
31	504	---	95	72	---	3730	---	84	---	71	30	---
TOTAL	18741	8472	6352	2703	1940	32722	42228	9963	5629	2885	2392	7170
MEAN	605	282	205	87.2	69.3	1056	1408	321	188	93.1	77.2	239
MAX	1960	877	752	98	95	4570	3940	1170	720	181	211	938
MIN	51	150	64	72	64	120	437	84	84	56	30	30
MEAN†	572	281	209	86.7	70.5	1131	1362	322	189	90.7	75.2	242
CFSM†	3.20	1.57	1.17	.48	.39	6.32	7.61	1.80	1.06	.51	.42	1.35
IN.†	3.68	1.75	1.35	.56	.41	729	8.49	2.08	1.18	.58	.48	1.51

CAL YR 1976 TOTAL 198823 MEAN 543 MAX 3720 MIN 45 MEAN† 543 CFSM† 3.03 IN† 41.34
WTR YR 1977 TOTAL 141197 MEAN 387 MAX 4570 MIN 30 MEAN† 387 CFSM† 216.00 IN† 29.36

† Adjusted for change in contents in Ball Mountain Reservoir.

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 (100 m) downstream from highway bridge, 1.0 mi (1.6 km) northeast of Newfane, and at mile 12.7 (20.4 km).
DRAINAGE AREA.--308 mi^2 (798 km^2).
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 (117.107 m) above mean sea level. Prior to June 27, 1931, nonrecording gage at site 600 ft (200 m) upstream and June 27, 1931, to Aug. 21, 1972, water-stage recorder on right bank 600 ft (200 m) downstream from highway bridge at same datum.
REMARKS.--Records good except those for period of no gage-height record, which are fair and those for winter period, which are poor. Flow regulated since 1961 by Ball Mountain Reservoir and Townshend Reservoir 6.8 mi (10.9 km) upstream (Reservoirs in Connecticut River basin). Several observations of water temperature were made during the year.
AVERAGE DISCHARGE.--53 years, 627 ft^3/s (17.76 m^3/s).
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 52,300 ft^3/s (1,480 m^3/s) Sept. 21, 1938, gage height, 22.81 ft (6.952 m), from floodmarks, from rating curve extended above 20,000 ft^3/s (566 m^3/s) on basis of contracted-opening measurement at gage height 19.3 ft (5.88 m) and slope-area measurements at gage heights 19.46 ft (5.931 m) and 22.81 ft (6.952 m); minimum, 7.6 ft^3/s (0.22 m^3/s) Aug. 24, 25, 26, 1962; minimum daily, 8.2 ft^3/s (0.23 m^3/s) Aug. 25, 1962. Maximum discharge since construction of Ball Mountain and Townshend Reservoirs in 1961, 9,530 ft^3/s (270 m^3/s) Mar. 17, 1977, gage height, 9.81 ft (2.990 m).
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 ft^3/s (1,270 m^3/s), gage height, 23.0 ft (7.01 m), from floodmarks, at nonrecording-gage site, from rating curve extended above 20,000 ft^3/s (566 m^3/s) on basis of computation of peak flow over dam at West Dummerston, about 5 mi (8 km) downstream, adjusted for flow from intervening area.
EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,530 ft^3/s (270 m^3/s) Mar. 17, gage height, 9.81 ft (2.990 m); minimum, 58 ft^3/s (1.64 m^3/s) Aug. 28; minimum daily, 65 ft^3/s (1.84 m^3/s) Sept. 5, 6, 8-13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	248	1510	188	170	165	480	7240	686	143	240	123	68
2	148	1220	170	165	160	450	3980	659	126	225	396	68
3	300	874	165	160	160	440	2890	610	129	210	326	68
4	314	703	160	160	160	430	2460	325	123	190	312	66
5	170	875	160	155	160	550	2720	295	126	170	267	65
6	134	888	281	150	155	600	3360	302	132	140	176	65
7	125	748	612	150	155	550	3350	297	168	130	136	68
8	146	656	1230	150	155	450	2200	282	195	120	134	65
9	1600	556	903	150	155	460	1180	516	182	115	133	65
10	3260	511	1010	145	150	500	998	1700	356	210	133	65
11	2370	498	784	145	150	700	993	2070	573	200	151	65
12	1330	411	571	145	150	1500	1420	1630	545	190	166	65
13	704	418	473	150	145	3500	2950	1570	438	175	162	65
14	731	417	320	165	145	3100	4600	1350	225	160	145	80
15	1270	401	305	180	140	2340	3740	1280	208	149	191	150
16	685	269	280	185	140	5420	2590	588	190	143	187	350
17	584	292	265	190	140	8530	1690	367	180	143	300	600
18	476	276	250	190	135	8350	1040	390	170	142	150	700
19	406	323	240	185	135	5360	1210	421	160	133	130	800
20	646	327	235	185	130	3220	1380	433	150	129	120	1000
21	2960	290	230	185	130	1280	1160	421	150	126	110	1120
22	2500	265	220	180	130	874	1030	396	150	119	110	1260
23	1240	290	215	180	130	771	1190	350	150	100	115	735
24	975	285	210	180	130	714	4410	271	150	95	120	346
25	944	274	200	175	300	650	6370	195	150	94	100	433
26	1700	262	195	175	500	636	5040	179	300	101	90	674
27	1740	267	190	175	550	630	1420	164	700	104	80	1300
28	1050	330	185	170	500	716	752	164	600	98	78	1090
29	966	367	180	170	---	1990	2560	156	400	98	68	933
30	685	285	175	170	---	5190	1210	149	250	96	68	800
31	659	---	170	170	---	7120	---	147	---	104	68	---
TOTAL	31066	15088	10772	5205	5355	67501	77133	18363	7519	4449	4845	13229
MEAN	1002	503	347	168	191	2177	2571	592	251	144	156	441
MAX	3260	1510	1230	190	550	8530	7240	2070	700	240	396	1300
MIN	125	262	160	145	130	430	752	147	123	94	68	65

CAL YR 1976 TOTAL 346336 MEAN 946 MAX 5520 MIN 103
WTR YR 1977 TOTAL 260525 MEAN 714 MAX 8530 MIN 65

NOTE.--No gage-height record June 15 to July 14.

01157000 ASHUELOT RIVER NEAR GILSUM, NH

LOCATION.--Lat 43°02'21", long 72°16'14", Cheshire County, Hydrologic Unit 01080201, on right bank 50 ft (15 m) downstream from White Brook, 60 ft (18 m) upstream from stone-arch bridge just off Keene-Newport Road, 0.7 mi (1.1 km) downstream from Gilsum, and at mile 43.4 (69.8 km).
DRAINAGE AREA.--71.1 mi^2 (184.1 km^2).
PERIOD OF RECORD.--Discharge: August 1922 to current year.
Water-quality records: Water year 1955.
REVISED RECORDS.--WSP 661: Drainage area. WSP 1231: 1923-27(M), 1928, 1929-30(M), 1931, 1932(M).
GAGE.--Water-stage recorder. Datum of gage is 772.86 ft (235.568 m) above mean sea level (levels by Corps of Engineers). Prior to Oct. 1, 1964, datum was 1.00 ft (0.305 m) higher.
REMARKS.--Records good except those for winter period, which are fair, and those for period of no gage-height record, which are poor. Some regulation by reservoir upstream. Prior to 1938, diurnal fluctuation caused by powerplant upstream. Several observations of water temperature were made during the year.
AVERAGE DISCHARGE.--55 years, 125 ft^3/s (3.540 m^3/s), 23.88 in/yr (607 mm/yr).
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,220 ft^3/s (148 m^3/s) Sept. 21, 1938, gage height, 12.24 ft (3.731 m) in gage well, present datum, from rating curve extended above 2,000 ft^3/s (56.6 m^3/s) on basis of float measurements at gage heights 11.66 ft (3.554 m) and 11.72 ft (3.572 m) and slope-area measurement at gage height 12.24 ft (3.731 m), all at present datum; maximum gage height, 13.80 ft (4.206 m) present datum, Mar. 19, 1936; minimum discharge, about 1 ft^3/s (0.028 m^3/s) Oct. 6, 1922, July 10, 1923, Nov. 14, 1952.
Maximum discharge since at least 1859, that of Sept. 21, 1938.
EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft^3/s (28.3 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 14	0400	*2920	82.7	*9.47	2.886	Mar. 31	1700	1550	43.9	7.48	2.280

Minimum discharge not determined; minimum daily, 5.6 ft^3/s (0.16 m^3/s) July 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	156	61	50	36	95	1310	210	31	29	10	7.8
2	42	152	56	46	36	82	817	170	32	25	26	7.8
3	38	136	52	42	36	72	632	150	43	22	27	7.2
4	34	132	48	40	36	66	612	130	41	20	23	6.6
5	31	136	45	39	35	102	543	110	36	19	21	6.0
6	30	157	43	38	35	138	519	90	33	18	22	10
7	28	162	160	37	35	116	448	85	40	17	20	11
8	27	150	288	36	35	101	383	75	71	18	18	9.0
9	60	131	225	35	34	101	309	83	89	20	16	7.0
10	110	121	183	34	34	138	259	306	151	19	15	6.8
11	140	110	156	33	34	212	235	416	169	17	20	6.8
12	120	98	134	40	34	260	237	356	159	16	24	5.8
13	110	91	104	45	35	745	309	274	132	16	23	5.8
14	96	86	72	45	36	2520	405	205	100	15	20	7.0
15	94	83	78	44	37	1920	431	160	77	14	19	15
16	82	79	72	44	37	1260	383	130	60	13	18	30
17	74	74	70	42	36	821	309	109	49	12	17	30
18	66	73	68	42	35	570	259	92	51	14	17	50
19	60	71	66	41	35	467	223	97	58	11	16	100
20	58	71	70	41	35	372	193	179	46	9.4	14	250
21	320	66	72	40	34	306	166	182	40	9.4	11	200
22	260	63	74	40	34	259	150	137	34	8.0	13	150
23	232	61	72	39	33	221	186	99	30	6.0	14	125
24	195	59	68	39	34	241	586	76	28	5.6	15	108
25	177	56	64	38	48	205	640	62	26	7.0	14	100
26	183	56	62	38	70	179	700	49	46	10	12	141
27	190	56	62	38	100	173	600	40	51	9.5	11	348
28	167	56	60	38	119	203	450	35	39	9.0	10	306
29	146	65	60	38	---	473	340	39	33	8.0	10	241
30	128	70	56	37	---	935	280	36	31	7.0	9.4	187
31	129	---	54	37	---	1510	---	34	---	7.0	8.6	---
TOTAL	3477	2877	2755	1236	1178	14863	12914	4216	1826	430.9	514.0	2485.6
MEAN	112	95.9	88.9	39.9	42.1	479	430	136	60.9	13.9	16.6	82.9
MAX	320	162	288	50	119	2520	1310	416	169	29	27	348
MIN	27	56	43	33	33	66	150	34	26	5.6	8.6	5.8
CFSM	1.58	1.35	1.25	.56	.59	6.74	6.05	1.91	.86	.20	.23	1.17
IN.	1.82	1.51	1.44	.65	.62	7.78	6.76	2.21	.96	.23	.27	1.30

CAL YR 1976 TOTAL 52311.0 MEAN 143 MAX 1440 MIN 16 CFSM 2.01 IN 27.37
WTR YR 1977 TOTAL 48772.5 MEAN 134 MAX 2520 MIN 5.6 CFSM 1.89 IN 25.52

NOTE.--No gage-height record Oct. 1-21, Apr. 25 to May 6, July 14, 15, July 17 to Sept. 22.

01158000 ASHUELOT RIVER BELOW SURRY MOUNTAIN DAM, NEAR KEENE, NH

LOCATION.--Lat 42°59'40", long 72°18'40", Cheshire County, Hydrologic Unit 01080201, on right bank 600 ft (200 m) downstream from Surry Mountain Dam, 2.5 mi (4.0 km) upstream from Sturtevant Brook, 4.5 mi (7.2 km) north of Keene, and at mile 34.0 (54.7 km).

DRAINAGE AREA.--101 mi^2 (262 km^2).

PERIOD OF RECORD.--Discharge: September 1945 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 480.00 ft (146.304 m) above mean sea level (Corps of Engineers bench mark).

REMARKS.--Records good. Flow regulated by Surry Mountain Lake (Reservoirs in Connecticut River basin). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--31 years, 173 ft^3/s (4.899 m^3/s), 23.26 in/yr (591 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,320 ft^3/s (37.4 m^3/s) Oct. 28, 1959, gage height, 9.60 ft (2.926 m); minimum daily, 0.4 ft^3/s (0.011 m^3/s) Sept. 17, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,140 ft^3/s (32.3 m^3/s) Mar. 21, gage height, 9.17 ft (2.795 m); minimum daily, 7.6.ft^3/s (0.22 m^3/s) July 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	203	68	48	48	103	935	305	45	43	14	11
2	22	206	62	48	47	103	866	229	44	37	36	11
3	20	191	62	48	39	103	761	193	54	32	38	11
4	20	182	53	48	35	102	823	168	56	28	33	9.7
5	20	183	47	48	35	103	669	151	52	26	30	8.5
6	20	211	47	48	35	134	893	142	47	23	31	14
7	20	227	71	48	35	184	1080	134	48	22	28	16
8	20	216	203	48	35	152	1030	119	64	24	25	13
9	28	191	254	48	35	125	974	126	86	28	21	10
10	184	171	253	48	35	145	902	258	124	27	20	9.7
11	228	157	250	48	35	313	811	445	160	23	28	10
12	192	142	247	48	35	422	610	427	165	22	33	8.4
13	156	127	195	48	35	404	432	355	156	22	32	8.2
14	136	119	112	48	35	21	391	283	135	22	28	11
15	128	112	60	57	35	381	427	226	111	19	27	28
16	117	105	89	61	35	918	428	188	82	17	25	43
17	104	99	103	61	35	1080	373	161	68	17	24	43
18	92	95	103	61	35	1040	317	151	72	18	24	59
19	81	92	102	61	35	1020	273	155	81	15	22	77
20	77	90	102	52	35	1020	239	169	70	13	19	137
21	176	86	95	38	35	1080	210	190	61	13	16	144
22	334	81	91	32	35	1020	189	173	52	11	17	113
23	346	78	82	32	35	1010	199	146	45	8.2	22	174
24	301	75	78	32	35	1070	418	120	39	7.6	23	145
25	264	72	77	32	40	968	539	100	37	9.6	20	135
26	260	69	77	32	58	809	754	82	58	14	17	134
27	270	69	67	32	89	757	666	68	71	14	16	222
28	248	70	53	43	103	702	581	58	62	12	15	293
29	215	77	48	48	---	667	555	53	53	11	15	269
30	187	83	48	48	---	669	474	52	49	9.8	14	222
31	175	---	48	48	---	536	---	49	---	9.4	12	---
TOTAL	4492	3879	3247	1442	1159	17161	17819	5476	2247	597.6	725	2389.5
MEAN	145	129	105	46.5	41.4	554	594	177	74.9	19.3	23.4	79.7
MAX	346	227	254	61	103	1080	1080	445	165	43	38	293
MIN	20	69	47	32	35	21	189	49	37	7.6	12	8.2
MEAN†	132	126	111	47.0	43.0	628	523	162	74.9	17.5	23.8	80.2
CFSM†	1.31	1.25	1.10	0.47	0.43	6.22	5.18	1.60	0.74	0.17	0.24	0.79
IN.†	1.51	1.39	1.27	0.54	0.44	7.17	5.78	1.85	0.83	0.20	0.27	0.92

CAL YR 1976 TOTAL 74770.1 MEAN 204 MAX 1030 MIN 6.1 MEAN† 204 CFSM† 2.02 IN† 27.54
WTR YR 1977 TOTAL 60634.1 MEAN 166 MAX 1080 MIN 7.6 MEAN† 165 CFSM† 1.63 IN† 22.16

† Adjusted for change in contents in Surry Mountain Lake.

01158600 OTTER BROOK BELOW OTTER BROOK DAM, NEAR KEENE, NH

LOCATION.--Lat 42°56'45", long 72°14'14", Cheshire County, Hydrologic Unit 01080201, on right bank 450 ft (150 m) downstream from Otter Brook Dam, 2 mi (3 km) northeast of Keene, 2.4 mi (3.9 km) upstream from Minnewawa Brook, and 4.9 mi (7.9 km) upstream from mouth.

DRAINAGE AREA.--47.2 mi^2 (122.2 km^2).

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 658.65 ft (200.757 m) above mean sea level (Corps of Engineers bench mark).

REMARKS.--Records good. Flow regulated by Otter Brook Lake (Reservoirs in Connecticut River basin). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--19 years, 77.1 ft^3/s (2.183 m^3/s), 22.18 in/yr (563 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 685 ft^3/s (19.4 m^3/s) Apr. 20, 1959, gage height, 8.59 ft (2.618 m); maximum gage height, 8.61 ft (2.624 m) Apr. 26, 1972; minimum discharge, 0.1 ft^3/s (0.003 m^3/s) Nov. 28, 1959; minimum daily, 0.3 ft^3/s (0.008 m^3/s) Sept. 27 to Oct. 2, Oct. 9, 10, 12-20, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 652 ft^3/s (18.5 m^3/s) Apr. 6, gage height, 8.58 ft (2.615 m); minimum, 0.9 ft^3/s (0.025 m^3/s) Sept. 8; minimum daily, 4.9 ft^3/s (0.14 m^3/s) Sept. 2-4, 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	61	22	21	19	68	488	106	16	28	8.0	5.1
2	16	54	21	21	19	54	430	94	50	24	21	4.9
3	14	49	21	21	19	45	418	88	82	21	22	4.9
4	12	49	19	21	15	35	484	79	43	18	17	4.9
5	11	49	19	21	13	50	393	72	16	18	15	5.1
6	10	57	21	16	12	60	530	72	7.4	16	15	5.1
7	9.9	57	38	14	12	69	620	69	7.4	15	16	5.1
8	9.1	52	113	14	12	73	578	68	7.7	15	16	9.9
9	24	46	97	14	18	72	484	70	8.0	19	15	14
10	66	43	74	18	20	72	289	225	9.9	18	15	8.7
11	42	40	74	21	20	115	148	302	34	15	30	6.8
12	31	36	54	21	21	171	145	305	49	14	31	5.9
13	25	35	43	26	21	145	185	305	43	14	23	5.9
14	25	35	43	28	21	9.9	207	308	35	14	19	5.9
15	26	33	34	28	16	152	185	308	30	12	17	5.9
16	22	32	29	28	13	295	150	164	24	11	16	4.9
17	20	31	30	28	13	376	129	74	19	10	16	19
18	18	30	29	19	18	379	113	72	18	11	17	51
19	16	30	29	14	19	379	97	86	41	10	15	42
20	17	30	29	18	19	505	89	72	42	9.1	14	50
21	76	28	45	21	16	582	83	61	35	8.7	13	96
22	99	25	53	21	15	481	77	51	30	7.4	13	74
23	73	25	53	21	15	454	106	46	24	5.9	17	61
24	54	24	43	17	15	537	276	41	19	5.6	17	60
25	54	23	37	14	15	574	270	37	17	7.4	17	60
26	68	23	37	15	35	570	447	30	39	12	17	50
27	70	24	27	17	54	530	379	24	97	12	17	94
28	58	24	22	18	59	495	173	20	43	9.5	15	83
29	50	28	21	18	---	464	143	20	36	7.7	12	61
30	45	30	21	18	---	454	121	19	35	7.4	7.4	32
31	47	---	22	19	---	276	---	18	---	6.8	6.2	---
TOTAL	1126.0	1103	1220	611	564	8541.9	8237	3306	957.4	402.5	509.6	936.0
MEAN	36.3	36.8	39.4	19.7	20.1	276	275	107	31.9	13.0	16.4	31.2
MAX	99	61	113	28	59	582	620	308	97	28	31	96
MIN	9.1	23	19	14	12	9.9	77	18	7.4	5.6	6.2	4.9
MEAN†	36.4	36.8	41.3	19.4	21.0	306	241	106	34.0	12.5	16.4	31.9
CFSM†	.77	.78	.87	.41	.44	6.48	5.11	2.25	.72	.26	.35	.68
IN.†	.89	.87	1.01	.47	.46	7.48	5.70	2.58	.80	.30	.40	.75

CAL YR 1976 TOTAL 30704.6 MEAN 83.9 MAX 566 MIN 4.2 MEAN† 84.0 CFSM† 1.78 IN† 24.22
WTR YR 1977 TOTAL 27514.4 MEAN 75.4 MAX 620 MIN 4.9 MEAN† 75.5 CFSM† 1.60 IN† 21.73

† Adjusted for change in contents in Otter Brook Lake.

01160000 SOUTH BRANCH ASHUELOT RIVER AT WEBB, NEAR MARLBOROUGH, NH

LOCATION.--Lat 42°52'20", long 72°12'51", Cheshire County, Hydrologic Unit 01080201, on right bank 15 ft (5 m) downstream from bridge, at Webb, 2.5 mi (4.0 km) south of Marlborough, and at mile 10.9 (17.5 km).

DRAINAGE AREA.--36.0 mi^2 (93.2 km^2).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 641: 1925(M). WSP 871: Drainage area. WSP 1231: 1921-24(M), 1926(M), 1929, 1933-34(M), 1939. WRD MA, NH, RI, VT, 1971: 1966(M), 1967-69.

GAGE.--Water-stage recorder. Concrete control since July 18, 1938. Datum of gage is 667.11 ft (203.335 m) above mean sea level (levels by Corps of Engineers).

REMARKS.--Records good except those for winter period, which are fair. Regulation at times prior to 1962 by powerplant and several small reservoirs upstream; regulation greater prior to 1956. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--57 years, 59.5 ft^3/s (1.685 m^3/s), 22.44 in/yr (570 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,960 ft^3/s (169 m^3/s) Sept. 21, 1938, gage height, 7.89 ft (2.405 m), from rating curve extended above 3,300 ft^3/s (93.5 m^3/s) on basis of contracted-opening and slope-area measurements of peak flow; maximum gage height, 9.70 ft (2,957 m) Mar. 12, 1936, ice jam; practically no flow for part of Mar. 22, 1931; minimum daily discharge, 0.4 ft^3/s (0.011 m^3/s) Sept. 15-17, 1926.
Maximum discharge known since at least 1869, that of Sept. 21, 1938.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 550 ft^3/s (15.6 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 14	0100	a*2010	56.9	*6.99	2.131	Apr. 1	1615	932	26.4	5.66	1.725

a From rating curve extended above 810 ft^3/s (22.9 m^3/s) on basis of slope-area measurement at gage height 7.48 ft (2.280 m).

Minimum discharge, 4.3 ft (0.12 m^3/s) Sept. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	48	15	14	11	45	424	75	20	22	6.2	4.8
2	10	35	13	13	11	40	251	69	31	18	10	5.0
3	9.4	29	12	13	11	32	242	65	50	15	8.6	4.9
4	8.8	29	11	13	11	28	233	58	37	12	7.4	5.0
5	7.9	27	11	13	11	89	288	53	27	12	6.8	5.0
6	7.3	33	16	13	11	93	410	52	22	15	9.6	5.2
7	7.1	29	63	12	11	66	249	47	24	26	12	5.5
8	7.1	25	276	12	11	59	173	42	64	14	10	5.2
9	33	24	132	12	11	66	131	61	58	13	9.9	5.0
10	53	21	65	12	10	99	111	189	62	12	8.7	4.9
11	33	19	50	12	11	135	102	226	78	12	14	5.0
12	22	18	40	12	11	218	96	184	71	12	13	5.0
13	17	17	35	12	11	677	101	129	54	13	12	5.2
14	21	16	32	12	11	1380	104	95	39	20	10	6.7
15	21	16	27	12	11	683	91	78	29	18	9.0	7.2
16	19	16	26	12	11	463	81	67	25	13	8.1	6.7
17	17	16	24	12	10	362	73	58	20	11	8.4	11
18	15	15	23	11	10	218	68	89	18	12	10	17
19	13	16	22	11	10	176	64	379	21	13	10	16
20	30	17	21	11	10	152	59	176	20	12	7.9	30
21	103	17	20	12	10	116	54	105	20	11	6.9	61
22	79	16	19	13	10	111	51	81	21	9.9	7.4	35
23	58	14	18	12	10	105	92	68	18	8.3	8.7	24
24	48	13	17	12	11	112	291	56	16	8.2	10	18
25	56	13	17	12	14	105	434	47	14	16	12	23
26	64	13	16	12	17	86	238	38	36	21	9.4	46
27	45	14	16	12	20	93	155	31	66	15	7.7	180
28	35	16	15	12	50	123	117	27	38	9.9	6.9	76
29	32	16	15	12	---	390	95	24	27	7.8	6.0	39
30	25	19	14	12	---	632	83	22	27	6.3	5.5	25
31	31	---	14	11	---	668	---	22	---	5.1	5.2	---
TOTAL	939.6	617	1095	376	357	7622	4961	2713	1053	413.5	277.3	687.3
MEAN	30.3	20.6	35.3	12.1	12.8	246	165	87.5	35.1	13.3	8.95	22.9
MAX	103	48	276	14	50	1380	434	379	78	26	14	180
MIN	7.1	13	11	11	10	28	51	22	14	5.1	5.2	4.8
CFSM	.84	.57	.98	.34	.36	6.83	4.58	2.43	.98	.37	.25	.64
IN.	.97	.64	1.13	.39	.37	7.88	5.13	2.80	1.09	.43	.29	.71

CAL YR 1976 TOTAL 24645.3 MEAN 67.3 MAX 869 MIN 4.6 CFSM 1.87 IN 25.47
WTR YR 1977 TOTAL 21111.7 MEAN 57.8 MAX 1380 MIN 4.8 CFSM 1.61 IN 21.81

01160000 SOUTH BRANCH ASHUELOT RIVER AT WEBB, NEAR MARLBOROUGH, NH--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1955 to October 1977 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: August 1972 to October 1977.
WATER TEMPERATURES: October 1954 to October 1977.

INSTRUMENTATION.--Water-quality monitor. Prior to August 1972, water-temperature recorder.

REMARKS.--Interruptions in the record were due to malfunctions of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 191 micromhos Feb. 25, 1977; minimum recorded, 27 micromhos on many days during February, March, and April 1976.
WATER TEMPERATURES: Maximum, 33.5°C July 14, 1965; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR OCTOBER 1976 TO OCTOBER 1977.--
SPECIFIC CONDUCTANCE: Maximum recorded, 191 micromhos Feb. 25; minimum recorded, 43 micromhos Dec. 9, 1976, May 19, Oct. 17, 1977.
WATER TEMPERATURES: Maximum, 28.5°C July 20, 21; minimum, 0.0°C on many days during winter period.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	72	69	71	---	---	---	71	69	69
2	---	---	---	68	67	67	---	---	---	72	69	70
3	---	---	---	69	66	68	---	---	---	70	70	70
4	---	---	---	73	69	72	---	---	---	72	70	71
5	---	---	---	72	70	71	---	---	---	72	69	70
6	---	---	---	72	69	70	---	---	---	72	70	71
7	---	---	---	72	70	71	---	---	---	77	72	73
8	---	---	---	71	70	70	---	---	---	83	75	79
9	---	---	---	72	64	69	45	43	44	75	66	71
10	---	---	---	71	65	69	47	45	46	66	65	65
11	---	---	---	76	72	74	49	47	48	75	65	71
12	---	---	---	---	---	---	49	47	48	79	75	77
13	---	---	---	---	---	---	52	48	50	81	77	79
14	---	---	---	---	---	---	60	52	56	82	80	81
15	---	---	---	---	---	---	62	56	58	80	74	77
16	---	---	---	---	---	---	62	56	58	73	67	70
17	---	---	---	---	---	---	68	58	61	67	66	67
18	---	---	---	---	---	---	61	59	60	66	65	66
19	---	---	---	---	---	---	62	59	60	69	66	68
20	---	---	---	---	---	---	83	57	62	74	69	71
21	76	67	71	---	---	---	101	62	81	78	73	76
22	66	64	64	---	---	---	100	70	82	82	79	81
23	65	63	64	---	---	---	69	62	65	83	82	82
24	65	63	64	---	---	---	63	62	63	82	76	78
25	67	62	65	---	---	---	63	62	63	77	74	75
26	68	64	66	---	---	---	64	62	63	79	77	78
27	68	65	66	---	---	---	63	62	63	81	79	80
28	65	63	64	---	---	---	68	63	65	80	78	79
29	67	64	65	---	---	---	70	68	69	80	73	77
30	70	65	68	---	---	---	69	67	68	74	71	73
31	72	69	71	---	---	---	72	68	69	78	74	76
MONTH	---	---	---	---	---	---	---	---	---	83	65	74

01160000 SOUTH BRANCH ASHUELOT RIVER AT WEBB, NEAR MARLBOROUGH, NH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	80	78	79	108	92	99	59	59	59	---	---	---
2	83	79	81	92	82	87	67	59	63	65	60	62
3	87	83	85	86	82	83	67	64	65	69	60	62
4	89	87	87	90	85	87	68	65	66	66	63	64
5	87	84	86	132	92	118	71	62	66	73	66	67
6	86	84	85	126	91	107	65	61	63	71	66	68
7	84	84	84	90	79	83	67	63	65	69	67	68
8	86	84	86	83	79	80	78	67	70	69	66	67
9	89	86	88	88	83	86	76	69	70	67	60	65
10	91	88	89	92	88	90	---	---	---	60	49	54
11	93	88	90	91	78	84	---	---	---	52	47	49
12	96	91	92	78	66	73	---	---	---	50	47	49
13	119	97	111	66	46	58	---	---	---	52	49	51
14	116	102	108	45	45	45	---	---	---	54	51	52
15	114	109	111	45	45	45	---	---	---	56	52	54
16	115	106	110	45	45	45	---	---	---	63	55	57
17	108	99	102	45	45	45	---	---	---	63	59	61
18	99	89	94	48	45	45	---	---	---	66	44	62
19	89	85	86	52	46	50	---	---	---	46	43	44
20	85	84	85	56	52	54	---	---	---	47	45	46
21	84	80	83	60	56	57	---	---	---	49	46	48
22	81	80	81	61	59	60	---	---	---	52	49	50
23	84	81	82	63	58	60	---	---	---	58	51	53
24	88	83	84	60	57	59	---	---	---	58	56	57
25	191	88	148	62	58	60	---	---	---	61	58	59
26	187	128	170	65	62	63	---	---	---	63	61	62
27	126	98	110	69	64	67	---	---	---	66	63	65
28	110	96	102	70	67	69	---	---	---	68	65	66
29	---	---	---	69	59	63	---	---	---	69	67	68
30	---	---	---	59	59	59	---	---	---	71	68	69
31	---	---	---	59	59	59	---	---	---	71	61	69
MONTH	191	78	96	132	45	69	---	---	---	73	43	59

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	75	68	72	64	62	64	105	72	97	104	95	100
2	76	68	72	68	62	65	89	75	82	114	104	107
3	69	62	64	73	67	70	98	89	95	132	110	123
4	65	61	63	75	70	72	111	93	105	120	115	117
5	65	62	64	79	74	77	109	94	105	114	111	112
6	68	65	67	74	67	70	106	96	100	112	108	110
7	68	63	67	73	53	59	101	84	90	108	99	105
8	62	55	59	63	54	58	85	81	82	102	96	99
9	54	51	52	76	63	69	84	81	83	103	98	100
10	54	52	53	80	74	77	83	75	81	105	100	102
11	54	51	52	83	77	80	82	71	76	105	100	102
12	53	50	51	82	78	80	81	75	79	103	98	100
13	55	51	53	78	75	76	82	79	81	104	99	101
14	59	55	57	76	68	75	86	82	84	104	95	98
15	63	59	61	78	68	74	87	85	86	99	80	91
16	65	57	63	81	76	78	87	85	86	84	79	81
17	69	63	66	84	80	81	88	86	87	85	83	84
18	72	69	70	85	77	83	87	84	85	85	74	80
19	74	67	70	86	75	80	86	77	82	85	73	80
20	74	68	71	86	81	83	87	85	86	83	80	81
21	69	67	68	84	81	82	87	84	85	83	76	80
22	65	62	63	87	83	85	90	85	88	84	74	80
23	67	64	66	91	82	86	90	83	86	74	71	72
24	71	60	67	93	86	90	87	83	85	75	71	72
25	73	64	70	91	58	76	87	75	80	77	73	74
26	70	59	64	64	58	62	81	75	79	79	76	77
27	69	56	63	61	58	59	83	81	82	80	78	79
28	58	53	56	68	61	64	86	82	85	80	51	67
29	64	58	62	83	68	75	92	84	89	56	52	55
30	68	63	65	98	83	90	97	90	95	59	55	56
31	---	---	---	105	98	100	100	94	97	---	---	---
MONTH	76	50	63	105	53	75	111	71	87	132	51	90
YEAR	191	43	74									

01160000 SOUTH BRANCH ASHUELOT RIVER AT WEBB, NEAR MARLBOROUGH, NH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), OCTOBER 1977

DAY	MAX	MIN	MEAN
	OCTOBER		
1	63	59	60
2	65	61	63
3	69	59	67
4	59	53	54
5	55	52	54
6	56	54	55
7	58	56	58
8	61	58	59
9	64	61	63
10	64	63	64
11	64	49	57
12	54	52	53
13	58	55	56
14	61	56	59
15	60	56	57
16	57	54	55
17	55	43	48
18	45	44	44
19	48	45	46
20	49	49	49
21	---	---	---
22	---	---	---
23	---	---	---
24	---	---	---
25	---	---	---
26	---	---	---
27	---	---	---
28	---	---	---
29	---	---	---
30	---	---	---
31	---	---	---
MONTH	---	---	---

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

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

01160000 SOUTH BRANCH ASHUELOT RIVER AT WEBB, NEAR MARLBOROUGH, NH--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	.5	.5	.5	.5	.5	.5	6.0	3.5	5.0	---	---	---
2	.5	.5	.5	.5	.5	.5	6.0	4.0	4.5	---	---	---
3	.5	.5	.5	1.0	.5	1.0	7.0	4.5	6.0	14.0	10.0	12.0
4	.5	.5	.5	1.0	.5	1.0	6.0	5.0	5.5	14.5	9.5	12.0
5	.5	.5	.5	1.0	.5	1.0	5.0	3.5	4.5	15.5	11.5	13.5
6	.5	.5	.5	1.0	1.0	1.0	6.0	3.5	5.0	18.0	13.0	15.5
7	.5	.5	.5	1.0	1.0	1.0	5.5	4.5	5.0	17.0	13.5	15.0
8	.5	.5	.5	1.0	1.0	1.0	6.0	2.5	4.0	15.5	11.5	13.0
9	.5	.5	.5	1.0	1.0	1.0	5.0	3.0	4.5	12.0	7.0	10.0
10	1.0	.5	.5	2.0	1.0	1.0	---	---	---	7.5	6.5	7.0
11	1.0	.5	.5	2.0	1.0	1.5	---	---	---	10.0	6.5	8.0
12	1.0	.5	.5	2.5	1.0	1.5	---	---	---	11.5	8.0	10.0
13	.5	.5	.5	1.5	1.0	1.0	---	---	---	14.0	11.0	12.5
14	1.0	.5	.5	1.5	1.0	1.5	---	---	---	14.0	10.5	12.0
15	1.0	.5	.5	2.0	1.5	1.5	---	---	---	14.5	9.5	12.5
16	.5	.5	.5	2.5	1.5	2.0	---	---	---	16.5	10.5	13.5
17	.5	.5	.5	2.5	1.0	1.5	---	---	---	18.5	13.0	16.0
18	1.0	.5	.5	1.0	1.0	1.0	---	---	---	19.0	16.0	17.0
19	1.0	.5	.5	2.0	1.0	1.0	---	---	---	16.5	14.0	15.5
20	.5	.5	.5	2.0	1.0	1.5	---	---	---	18.5	15.0	17.0
21	.5	.5	.5	4.0	1.5	2.5	---	---	---	21.0	16.5	18.5
22	1.0	.5	.5	2.0	1.0	1.5	---	---	---	22.0	17.5	20.0
23	1.0	1.0	1.0	1.0	1.0	1.0	---	---	---	22.5	18.0	20.5
24	1.0	1.0	1.0	2.5	1.0	1.5	---	---	---	23.0	19.5	21.5
25	1.0	.5	.5	2.5	1.0	1.5	---	---	---	24.0	20.0	22.0
26	.5	.5	.5	4.0	1.0	2.0	---	---	---	22.0	18.0	20.0
27	.5	.5	.5	4.5	1.0	2.5	---	---	---	20.5	16.0	18.0
28	.5	.5	.5	4.5	2.0	3.0	---	---	---	22.0	17.0	19.5
29	---	---	---	4.5	2.5	3.0	---	---	---	21.0	15.0	17.5
30	---	---	---	6.0	4.0	5.0	---	---	---	20.0	14.0	17.0
31	---	---	---	5.5	3.5	4.5	---	---	---	21.0	14.5	18.0
MONTH	1.0	.5	.5	6.0	.5	1.5	---	---	---	24.0	6.5	15.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	17.5	16.0	17.0	22.5	19.0	20.5	21.0	19.0	20.0	22.0	19.5	20.5
2	20.5	16.5	18.0	22.5	18.5	20.0	24.0	18.5	21.0	23.5	19.5	21.0
3	20.0	16.5	18.0	22.5	16.0	19.5	23.5	17.5	20.5	24.5	20.0	22.5
4	19.5	14.0	17.0	22.0	17.0	19.5	25.5	18.5	22.0	23.0	17.0	20.5
5	19.5	16.5	18.0	---	---	---	25.5	20.5	22.5	22.0	16.5	19.0
6	18.5	15.0	16.5	19.5	16.5	18.0	22.5	20.5	21.5	19.5	17.0	18.5
7	16.0	14.5	15.5	22.5	16.5	19.5	23.5	21.0	22.0	22.5	17.0	19.5
8	15.0	13.5	14.0	19.5	17.5	18.5	25.0	21.0	23.0	21.0	15.5	18.0
9	14.0	12.0	13.5	---	---	---	25.0	21.0	23.0	20.0	14.5	17.0
10	14.0	13.0	13.5	23.5	17.0	20.0	22.0	18.0	20.5	20.0	15.5	17.5
11	14.0	13.0	13.5	---	---	---	25.0	20.5	22.0	18.5	16.0	17.0
12	15.5	13.0	14.5	20.0	18.5	19.0	23.5	21.0	22.0	17.0	12.5	15.0
13	17.5	14.0	15.5	24.5	18.5	21.0	23.5	19.0	21.0	16.0	10.5	13.5
14	19.5	16.0	17.5	24.5	19.0	21.5	23.5	20.5	22.0	14.5	13.5	14.0
15	22.5	17.5	19.5	25.5	18.5	21.5	23.0	18.5	21.0	18.5	15.0	16.0
16	22.0	16.5	19.0	25.5	20.5	23.0	22.0	16.5	19.0	17.0	12.5	14.5
17	19.5	17.0	18.0	24.0	21.0	22.5	21.0	19.5	20.0	14.5	13.0	14.0
18	21.0	17.5	19.5	26.5	21.0	23.5	21.0	16.5	19.0	15.5	14.0	14.5
19	24.0	19.0	21.0	27.5	20.5	24.0	20.5	14.0	17.5	18.0	14.5	16.0
20	24.0	19.0	21.0	28.5	22.0	25.0	20.5	15.5	18.0	19.0	16.0	17.0
21	21.0	19.5	20.0	28.5	23.0	25.5	20.0	13.0	16.5	18.0	13.0	15.0
22	---	---	---	25.0	19.5	22.5	20.5	15.5	17.0	13.5	12.0	12.5
23	20.5	15.5	18.0	23.0	16.0	19.5	18.5	14.0	16.5	12.5	11.0	11.5
24	22.5	16.0	19.0	23.5	17.0	20.5	19.5	16.0	18.0	14.0	11.0	12.5
25	---	---	---	21.0	19.5	20.0	18.0	14.0	16.5	13.0	12.0	12.5
26	---	---	---	---	---	---	19.0	12.5	16.0	12.0	11.0	11.5
27	21.0	17.5	19.5	21.0	15.0	18.0	19.0	14.5	17.0	12.5	11.0	11.5
28	22.5	18.0	20.5	21.5	14.0	18.0	21.0	16.5	19.0	13.5	12.5	13.0
29	21.0	19.5	20.0	21.5	15.5	18.5	24.0	19.5	21.5	13.5	11.5	12.5
30	23.0	18.0	20.0	20.5	17.5	19.0	25.5	20.5	23.0	14.0	12.0	13.0
31	---	---	---	23.5	16.5	20.0	24.0	19.5	21.5	---	---	---
MONTH	24.0	12.0	17.5	28.5	14.0	20.5	25.5	12.5	20.0	24.5	10.5	15.5
YEAR	28.5	.0	9.5									

01160000 SOUTH BRANCH ASHUELOT RIVER AT WEBB, NEAR MARLBOROUGH, NH--Continued

TEMPERATURE (DEG. C) OF WATER, OCTOBER 1977

DAY	MAX	MIN	MEAN
		OCTOBER	
1	14.0	10.0	12.0
2	14.0	12.5	13.0
3	14.0	13.0	13.5
4	14.0	12.5	13.5
5	12.5	10.0	11.5
6	12.0	9.0	10.5
7	12.5	10.0	11.0
8	11.5	8.0	9.5
9	10.5	6.5	8.5
10	9.0	7.5	8.5
11	10.5	9.0	10.0
12	11.0	10.0	10.5
13	10.0	9.0	9.5
14	9.0	8.0	8.5
15	8.5	7.5	8.0
16	9.0	6.5	8.0
17	9.0	8.5	9.0
18	9.0	8.0	8.5
19	9.0	8.5	9.0
20	---	---	---
21	---	---	---
22	---	---	---
23	---	---	---
24	---	---	---
25	---	---	---
26	---	---	---
27	---	---	---
28	---	---	---
29	---	---	---
30	---	---	---
31	---	---	---
MONTH	---	---	---

01161000 ASHUELOT RIVER AT HINSDALE, NH

LOCATION.--Lat 42°47'07", long 72°29'12", Cheshire County, Hydrologic Unit 01080201, on left bank 40 ft (12 m) upstream from highway bridge at Hinsdale, 0.2 mi (0.3 km) downstream from dam, and 1.2 mi (1.9 km) upstream from mouth.

DRAINAGE AREA.--420 mi^2 (1,088 km^2).

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 (61.362 m) above mean sea level (levels by Corps of Engineers). Prior to Sept. 29, 1933, nonrecording gage on highway bridge at same datum.

REMARKS.--Records good except those for winter period, which are fair. Flow regulated by Surry Mountain Lake 33 mi (53 km) upstream since 1942 and by Otter Brook Lake 29 mi (47 km) upstream on Otter Brook since 1958 (Reservoirs in Connecticut River basin). Occasional diurnal fluctuation at low flow by mills upstream; greater regulation prior to 1952. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--67 years, 665 ft^3/s (18.83 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,600 ft^3/s (470 m^3/s) Mar. 19, 1936, by computation of peak flow over dam; maximum gage height, 20.2 ft (6.16 m) Mar. 19, 1936, from floodmarks, backwater from Connecticut River; minimum discharge, 10 ft^3/s (0.28 m^3/s) Sept. 9, 1953; minimum daily, 12 ft^3/s (0.34 m^3/s) Sept. 15, 1929.

Maximum discharge since at least 1859, that of Mar. 19, 1936.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,140 ft^3/s (174 m^3/s) Mar. 15, gage height, 7.94 ft (2.420 m); minimum, 59 ft^3/s (1.67 m^3/s) Sept. 13; minimum daily, 61 ft^3/s (1.73 m^3/s) Sept. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	197	581	255	175	145	521	3610	1280	223	270	76	67
2	177	591	231	170	145	480	3270	1040	244	230	107	66
3	142	533	220	165	145	422	2880	906	345	200	146	66
4	125	535	210	160	145	396	2640	808	350	170	130	69
5	115	558	208	160	145	571	2840	745	278	150	113	69
6	110	601	200	169	145	821	3270	677	228	170	108	66
7	107	621	304	169	145	801	3210	629	228	200	109	64
8	106	575	1050	173	139	786	3100	566	331	180	107	64
9	171	519	1160	173	137	763	2800	652	395	165	106	72
10	516	471	970	178	141	969	2490	1320	416	150	101	80
11	557	455	762	183	148	1370	2120	1860	469	140	155	70
12	463	433	664	195	151	1850	1840	1740	537	130	188	64
13	386	388	614	193	158	3140	1560	1480	507	140	163	61
14	334	359	544	189	165	5780	1410	1220	432	150	139	67
15	322	338	463	180	166	5750	1320	983	370	141	126	82
16	299	323	345	175	158	4370	1260	827	304	132	115	87
17	274	308	323	170	150	3650	1170	715	258	117	111	126
18	241	299	324	165	145	3230	1070	631	247	109	120	185
19	215	295	323	160	148	2800	957	1230	292	103	110	206
20	210	284	306	155	148	2600	852	1230	301	96	98	268
21	442	269	366	155	148	2560	776	969	274	90	89	583
22	860	249	420	150	146	2590	720	787	252	85	89	529
23	824	237	431	150	143	2570	783	651	228	80	104	377
24	709	230	397	150	141	2490	1620	553	204	74	106	376
25	647	225	409	150	210	2450	2680	472	184	79	108	360
26	694	222	322	150	312	2330	2700	399	257	102	106	382
27	738	226	280	149	393	2220	2570	349	372	109	89	736
28	668	229	239	149	496	2240	2110	303	439	97	84	903
29	579	237	217	150	---	2740	1670	267	380	86	75	731
30	504	274	191	145	---	3540	1470	246	320	78	74	571
31	485	---	180	145	---	4040	---	232	---	73	69	---
TOTAL	12217	11465	12928	5100	4958	70840	60768	25767	9665	4096	3421	7447
MEAN	394	382	417	165	177	2285	2026	831	322	132	110	248
MAX	860	621	1160	195	496	5780	3610	1860	537	270	188	903
MIN	106	222	180	145	137	396	720	232	184	73	69	61

CAL YR 1976 TOTAL 290403 MEAN 793 MAX 3520 MIN 94
WTR YR 1977 TOTAL 228672 MEAN 626 MAX 5780 MIN 61

01167800 BEAVER BROOK AT WILMINGTON, VT

LOCATION.--Lat 42°51'38", long 72°51'04", Windham County, Hydrologic Unit 01080203, on right bank 20 ft (6 m) downstream from bridge on State Highway 9, 1.0 mi (1.6 km) southeast of Wilmington, and 1.7 mi (2.7 km) upstream from mouth.

DRAINAGE AREA.--6.38 mi^2 (16.52 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1963 to September 1977 (discontinued).

REVISED RECORDS.--WRD MA, NH, RI, VT, 1972: 1963(M), 1964(P), 1967-68(P), 1969-70, 1971(P).

GAGE.--Water-stage recorder. Altitude of gage is 1,560 ft (475 m), from topographic map.

REMARKS.--Records fair except those for winter period and periods of no gage-height record, which are poor. Recording rain gage at station April 1964 to November 1974 (no winter records).

AVERAGE DISCHARGE.--14 years, 15.7 ft^3/s (0.445 m^3/s), 33.42 in/yr (849 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,170 ft^3/s (33.1 m^3/s) Aug. 10, 1976, gage height, 8.76 ft (2.670 m), from rating curve extended above 160 ft^3/s (4.53 m^3/s) on basis of slope-area measurement at gage height 8.61 ft (2.624 m); minimum, 0.06 ft^3/s (0.002 m^3/s) Aug 1, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 230 ft^3/s (6.51 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 13	1745	a*662	18.7	*6.35	1.935	Apr. 24	0900	247	7.00	4.22	1.286
Mar. 30	1745	243	6.88	4.20	1.280						

a From rating curve extended as explained above.

Minimum discharge, 0.92 ft^3/s (0.026 m^3/s) May 29-31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	26	6.1	2.7	2.0	8.5	85	15	1.2	3.0	11	1.5
2	2.5	18	4.5	2.6	2.0	7.5	50	14	3.3	2.6	13	1.5
3	2.3	18	4.3	2.6	1.9	6.7	85	13	3.3	2.1	3.6	1.5
4	2.1	18	4.0	2.6	1.9	7.5	61	12	3.5	2.1	2.4	1.3
5	2.0	19	4.0	2.6	1.9	30	77	11	2.5	2.1	2.2	1.2
6	2.2	23	5.0	2.5	1.9	27	84	11	2.7	2.1	4.1	1.2
7	2.3	18	40	2.5	1.9	15	51	8.9	9.3	2.1	4.1	1.2
8	3.0	17	25	2.4	1.9	10	35	8.5	7.4	2.2	3.4	1.2
9	50	14	10	2.3	1.9	11	31	20	6.9	3.1	2.4	1.0
10	35	13	7.0	2.8	1.9	20	26	38	15	2.4	2.8	1.0
11	17	12	7.0	2.6	2.0	29	26	59	17	2.0	12	1.0
12	13	12	6.0	2.5	2.0	40	62	58	9.6	1.9	5.8	1.0
13	12	12	5.0	2.4	2.1	298	89	41	7.3	1.9	5.3	1.2
14	15	11	4.3	2.3	2.1	316	80	25	5.7	2.1	3.7	4.1
15	13	10	4.0	2.3	2.1	97	43	21	5.1	2.0	3.4	3.0
16	11	10	4.2	2.2	2.0	83	34	17	3.9	1.7	2.7	2.3
17	11	9.7	4.5	2.2	1.9	55	26	14	3.5	1.7	2.2	4.2
18	10	10	4.5	2.2	1.9	44	25	12	4.7	3.5	2.4	4.0
19	9.3	10	4.3	2.2	1.9	35	20	21	6.6	2.7	2.0	3.5
20	23	9.7	4.0	2.3	1.9	31	21	14	4.4	2.3	1.6	5.8
21	83	8.5	5.0	2.3	1.9	20	17	16	6.9	1.9	1.5	7.1
22	31	7.8	4.2	2.3	1.9	28	16	14	4.8	1.7	4.0	7.1
23	20	8.2	3.7	2.2	1.9	21	46	12	3.9	1.4	3.4	6.3
24	17	8.2	3.4	2.1	1.9	18	151	10	3.5	1.3	2.4	8.0
25	25	8.2	3.2	2.2	15	16	88	10	3.3	2.5	2.3	12
26	43	8.2	3.1	2.3	20	15	50	8.2	4.6	3.5	2.2	18
27	23	10	3.0	2.3	11	14	34	7.8	3.5	2.3	1.7	20
28	17	10	2.9	2.2	11	18	26	7.4	2.9	2.1	1.7	10
29	16	11	2.8	2.2	---	79	19	4.1	3.4	1.7	1.6	7.0
30	15	7.8	2.7	2.1	---	147	17	1.5	4.0	1.7	1.5	6.0
31	33	---	2.7	2.1	---	170	---	1.7	---	1.3	1.5	---
TOTAL	561.5	378.3	194.4	73.1	103.7	1717.2	1475	526.1	163.7	67.0	113.9	144.2
MEAN	18.1	12.6	6.27	2.36	3.70	55.4	49.2	17.0	5.46	2.16	3.67	4.81
MAX	83	26	40	2.8	20	316	151	59	17	3.5	13	20
MIN	2.0	7.8	2.7	2.1	1.9	6.7	16	1.5	1.2	1.3	1.5	1.0
CFSM	2.84	1.98	.98	.37	.58	8.68	7.71	2.67	.86	.34	.58	.75
IN.	3.27	2.21	1.13	.43	.60	10.01	8.60	3.07	.95	.39	.66	.84

CAL YR 1976 TOTAL 6191.86 MEAN 16.9 MAX 351 MIN .92 CFSM 2.65 IN 36.10
WTR YR 1977 TOTAL 5518.10 MEAN 15.1 MAX 316 MIN 1.0 CFSM 2.37 IN 32.17

NOTE.--No gage-height record Oct. 1-13, Jan. 19 to Feb. 17, Sept. 24-30.

01167800 BEAVER BROOK AT WILMINGTON, VT--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1972 to September 1977 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: August 1972 to September 1977 (discontinued).
WATER TEMPERATURES: August 1972 to September 1977 (discontinued).

INSTRUMENTATION.--Water-quality monitor since August 1972.

REMARKS.--Interruptions in the record were due to malfunctions of the instrument. Daily records are considered fair.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum recorded, 387 micromhos Feb. 25, 1977; minimum recorded, 22 micromhos Nov. 30, 1974.
WATER TEMPERATURES: Maximum, 26.0°C July 20, 21, 1977, June 10, 1974, July 8, Aug. 2, 1975, July 6, 1976; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded, 387 micromhos Feb. 25; minimum recorded, 31 micromhos Oct. 9; but maximum and minimum may have been higher or lower during periods of missing record.
WATER TEMPERATURES: Maximum, 26.0°C July 20, 21; minimum, 0.0°C on many days during winter period.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER	
1	65	63	64	45	44	44
2	67	65	65	46	44	45
3	72	67	68	44	42	43
4	74	68	71	42	41	42
5	92	71	73	44	42	43
6	73	70	72	55	43	45
7	74	72	73	46	44	45
8	74	58	70	46	45	45
9	58	31	42	46	43	44
10	42	40	41	46	43	43
11	84	42	47	46	41	44
12	53	46	47	46	42	44
13	52	48	48	47	45	46
14	50	49	49	49	44	45
15	52	48	50	46	43	44
16	53	49	50	49	45	47
17	54	51	52	49	45	47
18	55	52	53	---	---	---
19	55	52	54	---	---	---
20	56	53	54	---	---	---
21	54	44	48	---	---	---
22	53	39	44	---	---	---
23	47	39	44	---	---	---
24	45	42	44	---	---	---
25	44	41	42	---	---	---
26	44	42	43	---	---	---
27	50	44	45	---	---	---
28	45	41	42	---	---	---
29	43	41	40	---	---	---
30	43	40	43	---	---	---
31	44	43	43	---	---	---
MONTH	92	31	52	---	---	---

01167800 BEAVER BROOK AT WILMINGTON, VT--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	110	100	103	56	52	54	74	71	72
2	---	---	---	100	97	99	61	56	57	75	73	74
3	---	---	---	107	96	101	67	57	62	76	74	75
4	---	---	---	132	93	103	59	55	57	77	75	76
5	---	---	---	134	111	125	68	59	64	78	76	77
6	---	---	---	129	108	122	65	60	62	80	77	79
7	---	---	---	106	97	100	62	60	61	81	79	80
8	---	---	---	104	95	99	65	62	63	81	80	81
9	---	---	---	119	99	108	65	63	64	80	69	75
10	---	---	---	123	112	117	67	64	65	78	72	75
11	---	---	---	117	103	109	67	64	65	73	66	71
12	---	---	---	101	93	97	65	55	62	66	65	66
13	---	---	---	93	60	80	57	52	54	72	63	68
14	---	---	---	60	56	58	55	52	54	74	70	72
15	---	---	---	62	60	61	58	54	56	73	71	71
16	---	---	---	62	61	61	61	58	60	---	---	---
17	90	89	89	62	60	61	64	59	62	---	---	---
18	92	84	90	63	61	62	66	61	63	---	---	---
19	95	92	93	66	63	64	67	63	65	---	---	---
20	94	90	93	68	64	65	67	64	66	---	---	---
21	91	86	88	74	65	68	69	66	67	---	---	---
22	91	88	89	70	65	68	70	67	68	---	---	---
23	92	89	91	70	65	67	69	65	67	---	---	---
24	92	89	90	71	69	70	66	58	61	---	---	---
25	387	105	167	73	71	71	61	59	60	---	---	---
26	130	111	123	74	71	73	64	62	63	---	---	---
27	114	101	106	80	74	77	66	64	65	---	---	---
28	117	105	109	83	78	80	67	65	67	---	---	---
29	---	---	---	82	61	74	69	66	68	---	---	---
30	---	---	---	61	52	58	72	69	71	---	---	---
31	---	---	---	55	52	53	---	---	---	---	---	---
MONTH	---	---	---	134	52	82	72	52	62	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	83	80	81	108	62	89	96	93	94
2	---	---	---	88	82	85	75	65	71	100	97	99
3	---	---	---	89	87	88	85	74	78	101	97	100
4	---	---	---	91	87	89	88	80	84	103	97	101
5	---	---	---	92	87	90	93	87	90	104	102	103
6	---	---	---	94	89	91	88	81	85	102	98	91
7	---	---	---	93	86	90	90	84	87	106	101	105
8	---	---	---	90	79	84	97	90	93	109	106	107
9	---	---	---	82	75	77	97	93	95	113	106	110
10	---	---	---	82	80	81	97	71	90	108	103	106
11	---	---	---	83	81	82	71	61	66	106	103	105
12	---	---	---	85	79	81	72	67	70	112	106	110
13	---	---	---	86	82	84	77	71	74	113	95	105
14	---	---	---	84	81	82	82	78	80	92	81	85
15	---	---	---	86	81	83	82	77	78	85	83	84
16	---	---	---	88	82	86	88	62	85	86	81	84
17	---	---	---	87	82	85	88	82	85	81	77	79
18	---	---	---	93	83	87	92	84	89	79	77	78
19	---	---	---	93	89	90	94	83	89	80	77	78
20	---	---	---	95	90	93	93	88	91	80	59	69
21	---	---	---	101	95	97	96	90	94	62	58	61
22	---	---	---	104	99	101	94	69	82	67	63	65
23	84	77	80	107	102	104	79	74	77	71	67	69
24	86	79	81	110	104	107	88	78	84	70	60	65
25	84	73	81	107	74	92	88	84	85	60	56	58
26	74	70	72	102	88	94	87	86	86	58	48	54
27	78	74	76	93	90	92	92	87	90	51	48	49
28	82	77	80	100	94	97	97	92	94	55	52	54
29	85	73	81	103	99	100	99	90	94	59	56	57
30	80	73	75	103	101	102	96	92	94	59	55	58
31	---	---	---	106	103	104	96	93	94	---	---	---
MONTH	---	---	---	110	74	90	108	61	85	113	48	83
YEAR	387	---	---									

CONNECTICUT RIVER BASIN

01167800 BEAVER BROOK AT WILMINGTON, VT--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN
		OCTOBER	
1	12.5	10.5	11.5
2	12.5	10.5	11.5
3	12.5	9.0	10.5
4	12.5	8.0	10.0
5	12.5	10.5	11.5
6	14.0	12.5	13.0
7	15.5	13.0	14.0
8	15.5	14.0	14.5
9	15.0	10.5	13.5
10	11.0	7.5	9.5
11	10.0	6.0	8.0
12	9.5	5.5	7.5
13	11.0	7.0	9.5
14	---	---	---
15	---	---	---
16	---	---	---
17	---	---	---
18	---	---	---
19	---	---	---
20	---	---	---
21	---	---	---
22	---	---	---
23	---	---	---
24	---	---	---
25	---	---	---
26	---	---	---
27	---	---	---
28	---	---	---
29	---	---	---
30	---	---	---
31	---	---	---
MONTH	---	---	---

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

01167800 BEAVER BROOK AT WILMINGTON, VT--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	21.0	16.0	18.0	18.5	16.0	17.0	21.5	16.5	18.5
2	---	---	---	19.5	14.5	16.5	21.0	16.5	18.5	21.5	17.5	19.5
3	---	---	---	21.5	12.5	16.5	19.5	15.5	17.5	22.0	16.5	18.5
4	---	---	---	21.0	14.0	17.0	22.0	16.5	19.0	20.0	13.5	16.0
5	---	---	---	21.5	15.5	18.0	22.0	17.5	19.5	18.0	14.0	16.0
6	---	---	---	16.0	13.5	15.0	20.5	18.0	19.0	19.0	14.5	16.5
7	---	---	---	22.0	13.0	17.0	20.0	18.0	19.0	18.0	13.0	15.5
8	---	---	---	17.0	15.0	16.0	23.0	18.0	20.0	17.5	12.0	14.5
9	---	---	---	20.5	14.5	17.5	23.0	17.0	20.0	17.0	12.5	14.5
10	---	---	---	22.5	14.5	18.0	18.5	15.0	17.0	17.0	13.5	14.5
11	---	---	---	20.5	13.5	17.0	21.0	17.0	19.5	15.5	11.0	13.0
12	---	---	---	16.5	15.5	16.0	19.5	17.5	18.5	14.0	8.5	11.0
13	---	---	---	23.0	16.0	19.0	19.0	16.0	18.0	12.5	11.0	12.0
14	---	---	---	23.5	16.5	19.5	20.0	17.5	18.5	14.5	12.5	13.5
15	---	---	---	24.0	16.0	19.5	20.5	16.0	18.0	15.0	11.5	13.0
16	---	---	---	23.5	18.0	20.5	17.0	15.0	16.0	13.5	12.0	12.5
17	---	---	---	22.0	18.5	20.5	17.5	15.5	17.0	14.0	12.5	13.0
18	---	---	---	25.0	18.5	21.5	16.5	13.5	15.0	16.0	13.0	14.5
19	---	---	---	25.5	18.5	22.0	18.0	11.5	14.5	16.0	14.5	15.5
20	---	---	---	26.0	19.5	22.0	16.0	12.5	14.0	15.0	11.5	13.0
21	---	---	---	26.0	21.0	23.0	17.5	10.5	14.0	11.5	11.0	11.0
22	---	---	---	23.0	15.5	19.5	15.0	13.0	14.0	11.0	10.0	10.5
23	17.5	13.0	16.0	20.5	13.0	16.5	16.5	12.5	14.5	12.0	10.5	11.0
24	18.5	13.0	15.5	19.5	14.0	16.5	15.5	14.0	14.5	11.5	10.5	11.0
25	17.0	15.0	16.0	17.5	16.0	17.0	15.5	11.5	13.5	10.5	10.0	10.0
26	18.5	14.5	16.5	18.5	14.0	16.0	17.0	11.0	13.5	11.5	9.5	10.5
27	20.5	14.0	17.0	19.0	11.5	15.0	17.5	12.0	15.0	13.0	10.5	11.5
28	21.5	14.5	18.0	19.5	11.0	14.5	22.0	15.0	18.0	12.5	10.5	11.5
29	19.0	16.5	17.5	18.5	12.5	15.0	23.0	17.0	19.5	12.5	10.0	11.5
30	21.5	15.0	17.5	18.0	15.0	16.5	21.0	17.5	19.0	12.0	8.5	10.0
31	---	---	---	21.0	14.5	17.0	18.0	16.5	17.0	---	---	---
MONTH	---	---	---	26.0	11.0	18.0	23.0	10.5	17.0	22.0	8.5	13.5
YEAR	26.0	0.0	---									

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 (19 km) northeast of Pittsburg, NH, 506,000,000 ft^3 (14,300,000 m^3); First Lake, 5.6 mi (9.0 km) northeast of Pittsburg, NH, 3,330,000,000 ft^3 (94,300,000 m^3). Records furnished by New England Power Co.

01129000. LAKE FRANCIS on Connecticut River at Pittsburg, NH, completed in March 1940, used for storage of water for power and for recreation, has usable capacity of 4,326,000,000 ft^3 (122,500,000 m^3). Records furnished 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 (7.2 km) northwest of Littleton, NH, filled in April 1956, 4,970,000,000 ft^3 (141,000,000 m^3); Comerford Reservoir, 5 mi (8 km) northeast of Monroe, NH, completed in 1930, 1,279,000,000 ft^3 (36,220,000 m^3). Records furnished by New England Power Co.

01141000. UNION VILLAGE RESERVOIR on Ompompanoosuc River, 0.3 mi (0.5 km) north of Union Village, VT, completed in 1949 for flood control, has usable capacity of 1,660,000,000 ft^3 (47,000,000 m^3). Records furnished by 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 (8.4 km) northeast of Mascoma, NH, 509,000,000 ft^3 (14,400,000 m^3); Grafton Pond, 8.5 mi (13.7 km) southeast of Mascoma, 144,000,000 ft^3 (4,080,000 m^3); Crystal Lake, 5.8 mi (9.3 km) southeast of Mascoma, 75,000,000 ft^3 (2,100,000 m^3); 01150000 Mascoma Lake at Mascoma, 337,000,000 ft^3 (9,540,000 m^3); total usable capacity of the four reservoirs, 1,060,000,000 ft^3 (30,000,000 m^3). Records furnished 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 ft^3 (88,100,000 m^3). Records furnished by Corps of Engineers.

01152000. SUNAPEE LAKE on Sugar River at Sunapee, NH, used for recreation and storage of water for power, has usable capacity of 862,000,000 ft^3 (24,400,000 m^3). Records collected by Geological Survey.

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 ft^3 (63,200,000 m^3). Records furnished by Corps of Engineers.

01155400. BALL MOUNTAIN RESERVOIR on West River, 2 mi (3.2 km) north of Jamaica, VT, completed in 1961, used for flood control and recreation, has usable capacity of 2,380,000,000 ft^3 (67,400,000 m^3). Records furnished by Corps of Engineers.

01155900. TOWNSHEND RESERVOIR on West River, 1.8 mi (2.9 km) northwest of Townshend, VT, completed in 1961, used for flood control and recreation, has usable capacity of 1,460,000,000 ft^3 (41,300,000 m^3). Records furnished by Corps of Engineers.

01157500. SURRY MOUNTAIN LAKE on Ashuelot River, 4.5 mi (7.2 km) north of Keene, NH, completed in 1942, used for flood control and recreation, has usable capacity of 1,420,000,000 ft^3 (40,200,000 m^3). Records furnished by Corps of Engineers.

01158550. OTTER BROOK LAKE on Otter Brook, 2.5 mi (4.0 km) northeast of Keene, NH, completed in 1958, used for flood control and recreation, has usable capacity of 798,000,000 ft^3 (22,600,000 m^3). Records furnished by Corps of Engineers.

MONTHEND USABLE CONTENTS, IN MILLIONS OF CUBIC FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

Date	First and Second Connecticut Lakes	Lake Francis	Moore and Comerford Reservoirs	Union Village Reservoir	Lvkes and Ponds in Mascoma River basin	North Hartland Reservoir
Sept. 30, 1976	2107.3	3463.6	5627.4	1.8	973.6	25.3
Oct. 31	2453.8	3802.0	5752.4	3.8	813.2	27.0
Nov. 30	2820.8	3222.8	6006.6	13.6	649.1	25.8
Dec. 31	2296.6	2819.3	5707.6	17.1	617.1	24.2
Jan. 31, 1977	1396.5	2017.6	4401.8	14.8	561.3	23.1
Feb. 28	648.6	1106.3	3440.1	16.4	560.7	23.6
Mar. 31	976.9	1484.1	1743.9	59.9	937.5	74.2
Apr. 30	2820.1	3199.1	4542.2	4.9	1094.7	27.0
May 31	3425.8	3431.2	5553.4	1.8	1088.3	127.0
June 30	3508.9	3962.6	5825.5	1.7	1115.1	104.6
July 31	3267.5	3496.0	5573.9	1.4	1041.6	120.0
Aug. 31	3306.0	3398.8	5668.5	1.4	982.8	121.0
Sept. 30	3074.6	3886.2	5664.5	2.0	923.5	122.0

Date	Sunapee Lake	North Springfield Reservoir	Ball Mountain Reservoir	Townshend Reservoir	Surry Mountain Lake	Otter Brook Lake
Sept. 30, 1976	496	26.9	93.8	58.0	108.1	33.4
Oct. 31	435	25.4	5.4	6.1	74.4	33.7
Nov. 30	311	24.0	1.4	3.0	65.7	33.7
Dec. 31	333	22.5	12.2	36.2	82.0	39.0
Jan. 31, 1977	332	22.5	11.0	35.8	83.4	38.2
Feb. 28	311	24.0	14.0	37.2	87.4	40.4
Mar. 31	486	143.2	215.8	157.1	286.0	121.9
Apr. 30	598	32.0	98.4	54.5	102.5	35.4
May 31	634	25.4	100.8	4.8	62.2	32.6
June 30	634	27.6	105.5	35.8	62.2	37.9
July 31	570	24.0	99.2	34.4	57.4	36.5
Aug. 31	483	23.3	93.8	33.4	58.6	36.5
Sept. 30	496	26.2	100.4	39.4	66.9	38.2

01329000 BATTEN KILL AT ARLINGTON, VT

LOCATION.--Lat 43°04'38", long 73°09'26", Bennington County, Hydrologic Unit 02020003, on left bank 5 ft (1.5 m) upstream from bridge on Highway 313 at Arlington and 0.9 mi (1.4 km) downstream from Warm Brook.

DRAINAGE AREA.--152 mi^2 (394 km^2).

PERIOD OF RECORD.--October 1928 to current year.

REVISED RECORDS.--WSP 756: Drainage area. WSP 851: 1936 (maximum gage height). WSP 1302: 1929-34(M).

GAGE.--Water-stage recorder. Datum of gage is 597.68 ft (182.173 m) above mean sea level, unadjusted. Prior to Nov. 18, 1941, nonrecording gage at downstream side of bridge at same datum.

REMARKS.--Records excellent except those for winter period, which are fair. Prior to 1949, diurnal fluctuation at low flow caused by mill upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--49 years, 340 ft^3/s (9.629 m^3/s), 30.38 in/yr (772 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,100 ft^3/s (314 m^3/s) Mar. 18, 1936, gage height, 11.3 ft (3.44 m), from floodmarks, present site, from rating curve extended above 6,100 ft^3/s (173 m^3/s) on basis of slope-area measurement at gage height 10.8 ft (3.29 m) and computation of peak flow over dam; minimum, 37 ft^3/s (1.05 m^3/s) Sept. 25, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,200 ft^3/s (62.3 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 14	1030	*4100	116	*9.06	2.761	Apr. 24	2000	2420	68.5	7.97	2.429
Mar. 31	1230	2710	76.7	8.19	2.496						

Minimum discharge, 94 ft^3/s (2.66 m^3/s) Feb. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	259	734	184	155	110	245	2090	416	174	254	212	119
2	238	523	205	145	110	185	1350	394	270	221	350	115
3	224	460	185	145	110	155	1250	394	267	198	198	121
4	208	570	195	145	110	151	1230	353	218	182	154	142
5	199	500	208	140	110	286	1130	332	190	179	142	126
6	187	482	199	135	110	299	1410	329	177	195	242	166
7	187	443	551	140	110	227	1030	302	195	174	270	139
8	215	411	745	140	110	198	772	283	329	201	206	121
9	1330	376	388	135	110	212	625	486	251	280	215	113
10	1470	363	325	130	110	367	567	562	503	209	174	106
11	782	355	327	200	113	546	525	548	778	174	296	104
12	482	323	281	185	117	730	745	702	468	190	286	100
13	415	315	241	170	126	1730	1370	767	346	239	245	104
14	542	308	200	160	131	3680	1830	525	286	239	312	800
15	514	296	234	150	117	2980	1420	409	248	179	357	544
16	431	285	224	145	108	2140	931	361	218	156	229	289
17	384	273	224	140	108	1720	767	329	203	151	203	670
18	347	266	215	135	115	1190	756	364	203	154	190	576
19	319	262	199	135	108	847	745	655	248	135	161	655
20	427	252	208	140	106	681	707	440	203	126	149	823
21	1100	231	262	145	106	600	645	357	264	119	142	1000
22	837	228	220	140	105	548	645	312	264	137	201	600
23	575	224	208	135	105	553	853	283	224	126	226	434
24	478	218	190	130	103	477	2050	260	190	115	169	377
25	570	211	184	125	126	424	1880	251	221	161	166	383
26	724	205	187	120	138	394	1110	226	772	239	147	425
27	580	234	160	120	123	394	745	212	464	164	132	597
28	473	277	165	115	261	468	605	201	302	132	126	426
29	435	266	170	115	---	1070	516	209	289	119	119	355
30	411	211	155	115	---	1800	460	195	343	115	132	310
31	703	---	155	115	---	2590	---	182	---	113	130	---
TOTAL	16046	10102	7594	4345	3316	27887	30759	11639	9108	5376	6281	10840
MEAN	518	337	245	140	118	900	1025	375	304	173	203	361
MAX	1470	734	745	200	261	3680	2090	767	778	280	357	1000
MIN	187	205	155	115	103	151	460	182	174	113	119	100
CFSM	3.41	2.22	1.61	.92	.78	5.92	6.74	2.47	2.00	1.14	1.34	2.38
IN.	3.93	2.47	1.86	1.06	.81	6.82	7.53	2.85	2.23	1.32	1.54	2.65

CAL YR 1976 TOTAL 198992 MEAN 544 MAX 4100 MIN 155 CFSM 3.58 IN 48.70
WTR YR 1977 TOTAL 143293 MEAN 393 MAX 3680 MIN 100 CFSM 2.59 IN 35.07

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 (1.0 km) downstream from Paran Creek and 1.4 mi (2.3 km) south of North Bennington.
DRAINAGE AREA.--111 mi^2 (287 km^2).
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. Altitude of gage is 525 ft (160 m), from topographic map.
REMARKS.--Records good except those for winter period, 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.--46 years, 222 ft^3/s (6.287 m^3/s).
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,450 ft^3/s (239 m^3/s) Sept. 21, 1938, gage height, 12.04 ft (3.670 m), from rating curve extended above 2,800 ft^3/s (79.3 m^3/s) on basis of contracted-opening measurements at gage heights 10.13 ft (3.088 m), 10.49 ft (3.197 m), 11.50 ft (3.505 m), and 12.04 ft (3.670 m) and slope-area measurement and computation of flow over dam at gage height 12.04 ft (3.670 m); minimum, 4 ft^3/s (0.11 m^3/s) Sept. 27, 1932; minimum daily, 21 ft^3/s (0.59 m^3/s) Sept. 22, 23, 1964, July 12, 1965.
EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft^3/s (56.6 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 14	1200	a*6680	189	*10.57	3.222	Mar. 31	1345	2110	59.8	5.72	1.743

a From rating curve extended as explained above.

Minimum discharge, 58 ft^3/s (1.64 m^3/s) Sept. 12, 13; minimum daily, 59 ft^3/s (1.67 m^3/s) Sept. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	133	343	108	98	79	173	1100	250	106	151	611	84
2	125	262	126	96	78	134	738	251	140	123	393	81
3	120	244	100	95	78	117	832	260	130	108	193	85
4	112	286	115	93	78	122	732	225	111	102	145	82
5	105	259	127	100	78	322	667	214	101	109	129	77
6	100	263	123	105	78	257	829	203	95	119	168	84
7	100	253	529	99	78	188	553	183	159	102	164	72
8	100	231	480	94	78	171	451	172	288	160	141	67
9	596	206	275	94	78	216	384	439	167	247	131	64
10	428	201	240	94	80	389	358	530	272	143	131	63
11	247	195	216	140	82	506	360	457	334	111	295	62
12	199	179	183	130	84	680	590	527	204	208	192	59
13	186	177	160	120	88	2470	983	500	160	232	160	77
14	255	175	150	110	90	5250	1100	358	135	264	139	393
15	223	171	160	105	85	1990	684	296	120	158	167	199
16	199	164	149	100	80	1450	536	261	106	125	128	144
17	180	157	150	98	78	1040	464	236	98	119	205	450
18	170	157	143	96	82	694	434	258	127	115	193	356
19	164	153	139	95	76	554	402	565	204	99	138	415
20	226	148	144	95	75	458	366	333	134	90	119	622
21	518	134	175	98	74	419	332	264	196	84	111	547
22	357	134	120	96	79	418	312	227	254	83	129	344
23	279	132	135	92	70	480	451	200	158	74	134	258
24	252	130	120	88	70	374	1110	182	124	71	113	255
25	306	127	115	86	118	321	777	169	139	174	124	292
26	407	126	120	85	116	300	510	151	368	181	104	300
27	309	147	105	84	113	308	420	140	219	105	94	308
28	260	177	110	83	254	377	360	133	150	87	89	233
29	243	175	105	82	---	912	312	125	188	77	86	228
30	231	133	100	81	---	1330	272	118	245	73	107	181
31	350	---	98	80	---	1900	---	111	---	72	91	---
TOTAL	7480	5639	5120	3012	2497	24320	17419	8338	5232	3966	5124	6482
MEAN	241	188	165	97.2	89.2	785	581	269	174	128	165	216
MAX	596	343	529	140	254	5250	1110	565	368	264	611	622
MIN	100	126	98	80	70	117	272	111	95	71	86	59

CAL YR 1976 TOTAL 118872 MEAN 325 MAX 3470 MIN 98
WTR YR 1977 TOTAL 94629 MEAN 259 MAX 5250 MIN 59

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 (0.5 km) downstream from Carver Falls, 1.9 mi (3.1 km) upstream from Hubbardton River, and 3.2 mi (5.1 km) northwest of Fair Haven.
DRAINAGE AREA.--187 mi^2 (484 km^2).
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. Altitude of gage is 105 ft (32 m), from topographic map.
REMARKS.--Records good except those for winter period and periods of no gage-height record, which are poor. Flow regulated by powerplant upstream and by Lake Bomoseen. Several observations of water temperature were made during the year.
AVERAGE DISCHARGE.--49 years, 247 ft^3/s (6.995 m^3/s), 17.94 in/yr (456 mm/yr).
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,800 ft^3/s (419 m^3/s) July 20, 1945, gage height, 24.36 ft (7.425 m), from high-water mark in well, from rating curve extended above 2,600 ft^3/s (73.6 m^3/s) on basis of computations of flow over dam at gage heights 16.10 ft (4.907 m), 21.40 ft (6.523 m), and 24.36 ft (7.425 m); minimum daily, 2.1 ft^3/s (0.059 m^3/s) Aug. 8, 1965, Sept. 13, 1977.
EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,600 ft^3/s (73.6 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 14	-	*7000	198	a*21.19	6.459	Apr. 24	-	3000	85	-	-
Mar. 31	-	4000	113	-	-						

a Ice jam.

Minimum daily discharge, 2.1 ft^3/s (0.059 m^3/s) Sept. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	117	797	103	135	98	250	3000	527	38	36	4.2	4.2
2	91	670	105	135	98	200	2400	472	104	28	6.5	4.7
3	101	603	115	130	98	170	1750	406	81	31	39	32
4	93	653	120	130	98	160	1650	376	37	32	5.1	13
5	103	643	115	125	98	300	1550	351	65	35	5.0	4.2
6	74	642	127	120	98	320	1900	286	72	32	7.9	24
7	67	695	248	120	98	230	1600	266	26	36	40	36
8	91	661	1400	120	98	200	1200	232	63	20	23	11
9	672	571	1020	120	98	230	950	471	69	11	4.8	10
10	1920	540	734	120	98	400	800	805	69	47	45	9.4
11	972	515	709	130	100	1000	820	513	72	29	18	8.8
12	860	465	591	140	105	1400	1200	378	71	9.0	31	4.3
13	778	386	487	135	110	2000	1800	270	67	9.9	13	2.1
14	745	338	376	130	110	5500	2400	244	51	22	36	5.1
15	698	284	435	130	105	4800	2150	222	37	23	59	77
16	472	208	396	130	98	2600	1700	167	65	19	30	20
17	384	210	195	125	96	2200	1200	182	22	18	50	34
18	281	206	263	125	100	1800	910	165	25	17	20	57
19	278	199	191	120	98	1400	800	205	35	43	29	34
20	275	214	199	120	96	1050	700	190	67	50	13	48
21	787	202	210	125	94	880	610	171	31	4.5	4.9	166
22	936	193	230	130	94	760	820	127	65	5.2	31	146
23	734	190	245	125	92	660	1200	122	43	6.5	15	57
24	559	189	220	120	100	580	2600	97	27	9.8	5.4	78
25	595	122	200	110	110	510	2400	108	39	36	49	76
26	850	125	180	110	120	480	2000	109	118	27	13	79
27	866	116	170	105	115	420	1300	88	62	4.4	5.2	165
28	749	124	155	105	270	700	750	87	46	36	6.9	101
29	686	150	145	100	---	1400	565	93	68	21	38	171
30	612	155	140	100	---	2100	519	76	57	4.2	29	226
31	628	---	135	100	---	3500	---	76	---	3.9	4.2	---
TOTAL	17074	11066	9959	3770	2993	38200	43244	7882	1692	706.4	681.1	1703.8
MEAN	551	369	321	122	107	1232	1441	254	56.4	22.8	22.0	56.8
MAX	1920	797	1400	140	270	5500	3000	805	118	50	59	226
MIN	67	116	103	100	92	160	519	76	22	3.9	4.2	2.1
CFSM	2.95	1.97	1.72	.65	.57	6.59	7.71	1.36	.30	.12	.12	.30
IN.	3.40	2.20	1.98	.75	.60	7.60	8.60	1.57	.34	.14	.14	.34

CAL YR 1976 TOTAL 187238.0 MEAN 512 MAX 2790 MIN 67 CFSM 2.74 IN 37.25
WTR YR 1977 TOTAL 138971.3 MEAN 381 MAX 5500 MIN 2.1 CFSM 2.04 IN 27.65

NOTE.--No gage-height record Dec. 31 to Feb. 10, Feb. 16 to Mar. 7, Mar. 14 to Apr. 28, July 5, 6.

04281500 EAST CREEK AT RUTLAND, VT

LOCATION.--Lat 43°37'43", long 72°59'22", Rutland County, Hydrologic Unit 02010002, on left bank on grounds of Rutland Country Club, at Rutland, 280 ft (85 m) downstream from Grove Street Bridge, and 2 mi (3 km) upstream from mouth.

DRAINAGE AREA.--51.1 mi^2 (132.3 km^2).

PERIOD OF RECORD.--August 1940 to September 1977 (discontinued).

REVISED RECORDS.--WSP 1307: 1941-42(M).

GAGE.--Water-stage recorder. Altitude of gage is 570 ft (174 m), from topographic map.

REMARKS.--Records good. Diversion upstream from Mendon Brook for municipal supply of Rutland. Flow regulated by powerplants and by Chittenden Reservoir 11 mi (17.7 km) upstream, usable capacity, 819,800,000 ft^3 (23,220,000 m^3); prior to June 3, 1947, also regulated by East Pittsford Reservoir, usable capacity, 150,000,000 ft^3 (4,250,000 m^3). See table below for figures of diversion and monthend contents in Chittenden Reservoir. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--37 years, 96.8 ft^3/s (2.741 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,500 ft^3/s (1,030 m^3/s) June 3, 1947, gage height, 20.3 ft (6.19 m), from high-water mark in gage house, mean of two slope-area measurements, caused by failure of East Pittsford Dam, 5.8 mi (9.3 km) upstream; minimum daily, 3.1 ft^3/s (0.088 m^3/s) Nov. 8, 1947.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,450 ft^3/s (41.1 m^3/s) Mar. 13, gage height, 4.26 ft (1.298 m) from rating curve extended above 940 ft^3/s (26.6 m^3/s) on basis of slope-area measurements at gage heights 7.10 ft (2.164 m) and 20.3 ft (6.187 m), and computation of flow over dam at gage height 7.10 ft (2.164 m); minimum daily, 10 ft^3/s (0.28 m^3/s) July 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	139	184	129	40	103	134	316	113	107	21	37	29
2	44	179	133	48	75	119	201	143	125	18	43	13
3	53	173	157	176	25	120	235	172	32	15	14	13
4	132	211	178	114	19	112	215	148	32	17	33	12
5	115	187	48	98	50	67	263	151	28	15	11	12
6	134	120	123	131	29	59	293	147	21	12	12	38
7	134	82	311	111	86	59	210	49	36	28	16	76
8	250	170	258	98	94	34	197	76	43	34	47	61
9	480	161	275	38	118	67	141	235	22	21	42	15
10	244	161	215	80	102	126	119	230	42	14	27	12
11	198	82	162	127	94	192	117	227	48	49	32	12
12	174	142	79	128	110	239	189	218	40	66	42	43
13	145	84	127	120	22	697	234	201	37	18	15	57
14	237	45	136	116	106	1030	270	96	22	51	133	197
15	189	157	137	119	96	436	190	78	26	16	87	102
16	113	150	134	23	120	353	130	136	17	13	86	43
17	91	147	137	103	103	254	101	118	15	13	68	70
18	156	140	135	130	118	173	92	79	16	13	81	39
19	154	142	46	99	107	133	120	174	20	21	46	88
20	173	47	124	63	29	114	121	119	34	33	14	144
21	362	35	153	62	22	97	131	68	44	75	11	166
22	239	129	146	114	110	99	135	68	30	49	62	96
23	191	127	40	28	109	93	347	130	20	12	91	44
24	136	134	37	57	94	98	525	128	14	10	57	46
25	193	39	34	62	112	107	341	129	15	42	73	42
26	312	44	40	60	93	147	256	118	109	56	43	110
27	178	76	161	106	30	160	215	119	32	27	19	139
28	181	85	121	100	147	152	200	29	21	34	12	102
29	184	165	126	122	---	387	190	41	41	16	52	124
30	113	140	115	35	---	505	179	36	49	12	67	65
31	134	---	45	115	---	689	---	127	---	12	23	---
TOTAL	5578	3738	4062	2823	2323	7052	6273	3903	1138	833	1396	2010
MEAN	180	125	131	91.1	83.0	227	209	126	37.9	26.9	45.0	67.0
MAX	480	211	311	176	147	1030	525	235	125	75	133	197
MIN	44	35	34	23	19	34	92	29	14	10	11	12
(†)	4.49	4.80	4.75	4.98	5.36	5.44	4.79	4.39	4.66	6.23	6.13	5.62
(‡)	583.3	555.6	488.0	361.8	253.4	471.0	625.3	598.7	612.7	585.7	548.0	577.1

CAL YR 1976 TOTAL 64766 MEAN 177 MAX 929 MIN 32
WTR YR 1977 TOTAL 41129 MEAN 113 MAX 1030 MIN 10

† Diversion, in cubic feet per second, from Mendon Brook for municipal supply of Rutland; records furnished by city of Rutland.
‡ Monthend contents, in millions of cubic feet, in Chittenden Reservoir; records furnished by Central Vermont Public Service Corps.

04282000 OTTER CREEK AT CENTER RUTLAND, VT

LOCATION.--Lat 43°36'13", long 73°00'49", Rutland County, Hydrologic Unit 02010002, on right bank 500 ft (150 m) upstream from bridge on U.S. Highway 4 at Center Rutland, 200 ft (60 m) downstream from dam, 1.2 mi (1.9 km) downstream from East Creek, and 1.5 mi (2.4 km) west of Rutland.

DRAINAGE AREA.--307 mi^2 (795 km^2).

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 (144.719 m) above mean sea level; prior to Oct. 1, 1964, datum was 1.00 ft (0.305 m) higher. Prior to July 22, 1929, nonrecording gage at same site.

REMARKS.--Records good. Flow regulated by powerplants and Chittenden Reservoir 14 mi (22.5 km) upstream on East Creek, usable capacity, 819,800,000 ft^3 (23,220,000 m^3); prior to June 3, 1947, also regulated by East Pittsford Reservoir, usable capacity, 150,000,000 ft^3 (4,250,000 m^3). See table with station 04281500 for monthend contents in Chittenden Reservoir. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--49 years, 551 ft^3/s (15.60 m^3/s), 24.37 in/yr (619 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,700 ft^3/s (388 m^3/s) Sept. 22, 1938, gage height, 13.45 ft (4.100 m), present datum, from rating curve extended above 7,400 ft^3/s (210 m^3/s) on basis of computation of peak flow over dam; minimum daily, 45 ft^3/s (1.27 m^3/s) Sept. 21, 1947, Aug. 7, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,400 ft^3/s (96.3 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 14	1630	*9310	264	*12.64	3.853	Apr. 25	0345	5040	143	9.44	2.877
Mar. 31	1830	5930	168	10.28	3.133						

Minimum daily discharge, 81 ft^3/s (2.29 m^3/s) Sept. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	559	1100	531	333	289	479	4690	691	302	323	141	124
2	519	1060	516	309	299	460	2680	662	424	271	212	110
3	380	796	502	282	273	418	1920	691	349	237	192	130
4	418	885	493	348	165	332	1900	609	272	219	169	119
5	432	948	482	346	184	377	1700	577	228	202	134	109
6	428	820	473	338	278	470	2230	635	201	181	166	119
7	406	812	799	330	272	458	1870	529	241	185	200	163
8	736	812	1640	320	286	359	1290	449	335	178	195	152
9	2000	732	1640	295	291	400	959	1020	280	216	197	104
10	2790	685	1510	276	275	718	871	1440	390	201	182	95
11	2000	615	718	267	294	1220	827	1380	661	182	182	81
12	1090	554	690	339	262	1470	971	1160	550	204	200	112
13	857	561	583	350	244	2120	1430	1090	416	181	204	144
14	1080	527	560	340	268	6220	1810	845	329	230	327	561
15	1130	551	536	337	319	6890	1720	665	273	165	281	490
16	910	601	543	330	319	4660	1140	621	231	143	254	265
17	760	524	489	322	316	3250	899	563	207	137	216	336
18	687	519	503	320	302	1990	826	503	202	126	215	358
19	670	524	458	310	296	1290	789	741	223	130	187	309
20	688	473	441	292	288	1020	755	570	236	122	132	535
21	1640	456	522	274	236	918	719	454	252	218	125	931
22	1830	439	527	292	238	840	712	405	274	377	205	573
23	1280	432	467	265	302	780	1360	424	238	191	245	390
24	944	469	430	196	255	714	3280	402	197	150	186	331
25	926	414	354	277	253	665	4380	381	204	161	190	322
26	1270	337	294	265	268	653	2490	344	1350	244	150	425
27	1250	370	338	293	224	666	1530	328	1110	209	126	739
28	1150	487	392	316	380	793	1110	251	555	171	110	546
29	830	516	381	318	---	1730	933	278	422	138	143	561
30	767	548	374	288	---	2900	813	255	425	125	152	537
31	820	---	359	247	---	5410	---	292	---	125	115	---
TOTAL	31247	18567	18545	9415	7676	50670	48604	19255	11377	5942	5733	9771
MEAN	1008	619	598	304	274	1635	1620	621	379	192	185	326
MAX	2790	1100	1640	350	380	6890	4690	1440	1350	377	327	931
MIN	380	337	294	196	165	332	712	251	197	122	110	81
CFSM	3.28	2.02	1.95	.99	.89	5.33	5.28	2.02	1.24	.63	.60	1.06
IN.	3.79	2.25	2.25	1.14	.93	6.14	5.89	2.33	1.38	.72	.69	1.18

CAL YR 1976 TOTAL 370851 MEAN 1013 MAX 7930 MIN 294 CFSM 3.30 IN 44.94
WTR YR 1977 TOTAL 236802 MEAN 649 MAX 6890 MIN 81 CFSM 2.11 IN 28.69

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 (46 m) upstream from highway bridge in Middlebury and 3.5 mi (5.6 km) downstream from Middlebury River.

DRAINAGE AREA.--628 mi^2 (1,627 km^2).

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 (102.337 m) above mean sea level. Apr. 1, 1903, to Apr. 30, 1907, and Oct. 5, 1910, to Jan. 31, 1920, nonrecording gage at site 1,800 ft (550 m) upstream at datum 10 ft (3 m) lower, and Oct. 1, 1928, to Oct. 17, 1933, at present datum.

REMARKS.--Records good. Some regulation by Chittenden Reservoir, usable capacity, 819,800,000 ft^3 (23,220,000 m^3) on East Creek; see table with station 04281500 for monthend contents. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--61 years (water years 1904-06, 1911-19, 1929-77), 982 ft^3/s (27.81 m^3/s), 21.23 in/yr (539 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,000 ft^3/s (312 m^3/s) Mar. 20, 21, 1936, gage height, 10.3 ft (3.14 m); minimum daily, 92 ft^3/s (2.61 m^3/s) Aug. 9, 1965.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1830, 13,600 ft^3/s (385 m^3/s) Nov. 4, 1927, gage height, 13.3 ft (4.05 m), present datum, at site 1,800 ft (550 m) upstream, from rating curve extended above 9,000 ft^3/s (255 m^3/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,110 ft^3/s (201 m^3/s) Mar. 17, gage height, 8.01 ft (2.441 m); minimum daily, 98 ft^3/s (2.78 m^3/s) Sept. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1140	1790	920	490	510	824	2760	2780	380	621	131	214
2	981	1720	747	471	510	852	2860	2640	455	500	206	193
3	795	1690	660	512	500	817	3320	2430	554	417	243	193
4	679	1710	620	530	460	754	3710	2220	566	351	239	187
5	653	1690	600	542	406	754	3950	2030	455	314	235	125
6	653	1690	627	536	380	831	4060	1810	396	322	251	109
7	640	1690	838	542	396	882	3880	1560	370	318	209	211
8	733	1670	1300	560	455	950	3710	1280	406	339	198	222
9	1570	1610	1480	566	477	1080	3530	1070	444	326	251	203
10	2110	1560	1560	530	500	1620	3390	1350	460	286	239	193
11	2020	1480	1600	560	542	1860	3210	1530	536	278	302	129
12	2030	1360	1590	660	548	2050	3010	1620	754	339	290	98
13	2070	1220	1530	775	524	2640	2820	1670	747	330	302	151
14	2120	1090	1320	686	500	3830	2650	1660	602	326	251	449
15	2130	981	1070	627	524	4200	2500	1600	500	318	322	768
16	2110	942	950	560	500	5640	2400	1420	438	306	370	693
17	2060	958	870	540	489	6990	2340	1210	417	219	370	647
18	1950	927	800	530	480	6950	2280	1000	391	182	322	518
19	1820	897	760	530	460	6170	2180	942	310	302	251	417
20	1700	882	733	540	440	5910	2070	1060	310	262	282	524
21	1890	824	860	560	417	5250	1900	958	406	227	214	875
22	1950	740	880	520	396	4570	1710	795	406	286	140	1130
23	1910	740	781	489	455	3920	1700	686	401	386	251	897
24	1910	740	706	455	530	3540	2110	640	370	310	286	679
25	1960	809	647	471	572	3180	2350	615	370	232	290	391
26	2000	761	584	466	634	2890	2370	590	466	278	262	449
27	1970	720	596	494	584	2640	2470	542	1050	282	235	1080
28	1950	726	630	530	666	2440	2650	512	1240	282	170	1050
29	1930	889	560	530	---	2490	2810	477	965	274	125	935
30	1880	1030	530	530	---	2590	2850	460	754	247	222	935
31	1820	---	510	520	---	2810	---	444	---	182	255	---
TOTAL	51134	35536	27859	16852	13855	91924	83550	39601	15919	9642	7714	14665
MEAN	1649	1185	899	544	495	2965	2785	1277	531	311	249	489
MAX	2130	1790	1600	775	666	6990	4060	2780	1240	621	370	1130
MIN	640	720	510	455	380	754	1700	444	310	182	125	98
CFSM	2.63	1.89	1.43	.87	.79	4.72	4.44	2.03	.85	.50	.40	.78
IN.	3.03	2.10	1.65	1.00	.82	5.45	4.95	2.35	.94	.57	.46	.87

CAL YR 1976 TOTAL 650195 MEAN 1776 MAX 5100 MIN 510 CFSM 2.83 IN 38.51
WTR YR 1977 TOTAL 408251 MEAN 1118 MAX 6990 MIN 98 CFSM 1.78 IN 24.18

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 (430 m) upstream from highway bridge, at East Barre, 1,400 ft (430 m) downstream from East Barre Detention Reservoir, and 4.2 mi (6.8 km) upstream from mouth.
DRAINAGE AREA.--38.9 mi^2 (100.8 km^2).
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 (337.490 m) above mean sea level. Aug. 14, 1920, to Sept. 30, 1923, nonrecording gage at site 0.1 mi (0.2 km) 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 (460 m) downstream. Datum of gage was 1,071.59 ft (326.621 m) above mean sea level Nov. 1, 1933, to Sept. 30, 1964, and 1,069.59 ft (326.011 m) above mean sea level Oct. 1, 1964, to Aug. 7, 1972 (levels by Corps of Engineers).
REMARKS.--Records good except those for winter period and periods of no gage-height record, 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 were made during the year.
AVERAGE DISCHARGE.--47 years, 54.4 ft^3/s (1.541 m^3/s), 18.99 in/yr (482 mm/yr), adjusted for storage.
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,820 ft^3/s (51.5 m^3/s) Oct. 1, 1920, gage height, 9.50 ft (2.896 m), from graph based on gage readings, site and datum then in use, from rating curve extended above 900 ft^3/s (25.5 m^3/s); minimum, 0.1 ft^3/s (0.003 m^3/s) Aug. 18, 1950, Aug. 3, 4, 31, Sept. 1, 3, 1953. Maximum discharge since construction of East Barre Detention Reservoir in 1935, 634 ft^3/s (18.0 m^3/s) Apr. 19, 1969, gage height, 3.31 ft (1.009 m), site and datum then in use; maximum gage height, 9.48 ft (2.890 m) Jan. 7, 1973, ice jam.
EXTREMES FOR CURRENT YEAR.--Maximum discharge, 625 ft^3/s (17.7 m^3/s) Mar. 14, gage height, 4.97 ft (1.515 m); minimum, 1.6 ft^3/s (0.045 m^3/s) Sept. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	140	42	12	7.4	9.2	523	87	11	12	3.7	3.5
2	31	89	39	11	7.4	9.6	480	83	16	10	3.3	3.1
3	27	94	37	11	7.4	9.4	420	82	14	7.3	2.7	3.0
4	23	107	35	11	7.2	9.2	289	74	12	6.7	2.4	2.8
5	22	95	38	11	7.0	10	206	67	11	6.4	2.3	2.6
6	21	97	90	11	6.8	12	265	64	11	6.1	2.3	2.6
7	26	94	120	11	6.8	12	169	57	25	5.4	2.7	2.6
8	50	92	150	11	6.7	11	141	55	29	5.4	2.8	2.2
9	340	90	90	10	6.7	14	126	58	19	5.7	2.8	1.9
10	180	68	54	10	6.7	20	111	75	18	5.7	2.6	1.8
11	100	63	44	10	6.8	45	107	64	28	5.7	3.8	1.9
12	92	60	35	10	6.9	90	156	55	24	4.8	4.2	1.8
13	118	58	32	10	7.0	220	225	49	18	4.8	4.5	12
14	95	55	29	9.8	7.1	593	321	43	25	7.3	4.2	42
15	77	52	29	9.7	7.2	512	183	39	27	6.1	49	15
16	63	50	26	9.6	6.8	496	141	35	14	4.3	13	8.2
17	58	49	23	9.5	6.6	465	128	31	11	3.8	52	14
18	52	48	21	9.4	6.5	285	121	30	11	3.7	19	11
19	55	47	20	9.2	6.6	157	129	29	11	3.5	9.5	7.6
20	132	48	19	8.8	6.6	141	154	29	11	3.0	6.4	30
21	247	44	18	8.5	6.6	110	84	22	16	2.7	5.7	39
22	110	43	17	8.2	6.6	106	77	22	18	23	4.8	21
23	75	42	17	8.0	6.6	93	148	21	13	9.5	5.1	16
24	77	41	17	7.8	6.5	90	425	17	11	5.4	5.4	13
25	94	40	16	7.6	6.8	87	465	16	27	3.8	12	11
26	85	44	15	7.5	7.3	80	389	13	25	3.8	6.7	69
27	70	60	14	7.4	7.8	85	154	11	14	4.0	5.4	52
28	64	68	14	7.2	8.5	103	141	11	17	3.5	4.3	45
29	67	60	14	7.2	---	313	117	28	45	3.0	3.7	110
30	74	50	13	7.2	---	453	99	18	19	2.7	3.7	51
31	144	---	12	7.4	---	510	---	13	---	3.1	3.7	---
TOTAL	2713	1988	1140	289.0	194.9	5150.4	6494	1298	551	182.2	253.7	596.6
MEAN	87.5	66.3	36.8	9.32	6.96	166	216	41.9	18.4	5.88	8.18	19.9
MAX	340	140	150	12	8.5	593	523	87	45	23	52	110
MIN	21	40	12	7.2	6.5	9.2	77	11	11	2.7	2.3	1.8
MEAN†	91.6	62.9	36.2	9.21	7.50	193	190	39.7	18.4	5.76	8.18	20.9
CFSM†	2.35	1.62	.93	.24	.19	4.96	4.88	1.02	.47	.15	.21	.54
IN.†	2.71	1.80	1.07	.27	.20	5.72	5.45	1.18	.53	.17	.24	.60

CAL YR 1976 TOTAL 32515.5 MEAN 88.8 MAX 580 MIN 9.5 MEAN† 88.8 CFSM† 2.28 IN† 31.08
WTR YR 1977 TOTAL 20850.8 MEAN 57.1 MAX 593 MIN 1.8 MEAN† 57.2 CFSM† 1.47 IN† 19.96

† Adjusted for change in contents in East Barre Detention Reservoir.
NOTE.--No gage-height record Oct. 6-12, Nov. 10 to Dec. 21.

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 (1.3 km) downstream from Wrightsville Detention Reservoir, and 3.5 mi (5.6 km) upstream from mouth.

DRAINAGE AREA.--69.2 mi^2 (179.2 km^2).

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 (167.802 m) above mean sea level (levels by Corps of Engineers). Prior to Nov. 21, 1934, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter period, which are fair. Discharge affected since 1935 by Wrightsville Detention Reservoir (Reservoirs in Winooski River basin). Occasional diurnal fluctuation at low flow caused by small mill upstream; more frequent diurnal fluctuation prior to 1968. Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--44 years, 134 ft^3/s (3.795 m^3/s), 26.30 in/yr (668 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,170 ft^3/s (61.5 m^3/s) Apr. 12, 1934, gage height, 6.53 ft (1.990 m), from rating curve extended above 920 ft^3/s (26.1 m^3/s); minimum daily, 0.2 ft^3/s (0.006 m^3/s) Aug. 13, 1941. Maximum discharge since construction of Wrightsville Detention Reservoir in 1935, 1,040 ft^3/s (29.5 m^3/s) Mar. 21, 1936, gage height, 4.32 ft (1.317 m); maximum gage height, 5.43 ft (1.655 m) Mar. 12, 1936, ice jam.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1830, 17,200 ft^3/s (487 m^3/s) Nov. 3, 1927, by computation of peak flow over dam 0.8 mi (1.3 km) above gage.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 750 ft^3/s (21.2 m^3/s) Mar. 15, gage height, 3.58 ft (1.091 m); minimum daily, 6.2 ft^3/s (0.18 m^3/s) July 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	79	272	80	44	29	36	682	404	19	37	13	30
2	67	174	74	42	29	34	662	338	32	25	9.6	27
3	60	144	69	41	29	33	641	219	26	18	7.5	26
4	54	199	65	40	29	32	615	116	19	15	6.8	23
5	49	203	63	39	29	32	582	101	16	13	6.9	22
6	47	205	72	39	28	37	557	103	16	13	7.1	31
7	49	178	138	39	28	42	517	90	18	11	9.6	19
8	128	151	320	38	28	41	468	74	22	10	12	19
9	372	126	259	38	28	47	405	68	22	15	18	18
10	549	116	179	39	28	80	336	64	21	17	17	18
11	534	112	127	40	28	210	207	60	24	13	24	17
12	487	94	98	39	28	329	203	55	25	10	23	17
13	428	95	92	38	29	443	319	55	22	11	19	24
14	363	89	93	37	29	649	423	52	19	12	43	323
15	276	87	81	37	29	712	426	46	16	11	214	380
16	142	87	76	36	29	737	383	43	13	9.2	62	326
17	113	81	72	35	28	737	335	41	11	7.8	422	222
18	99	80	69	34	28	718	289	40	15	9.8	514	165
19	91	78	66	34	28	689	208	37	35	9.1	466	135
20	93	87	62	33	28	652	189	34	32	7.6	392	105
21	338	71	58	33	28	608	183	30	25	10	276	235
22	388	72	62	32	27	559	180	27	32	18	77	305
23	346	73	60	32	27	503	303	24	32	12	116	210
24	256	72	56	31	26	438	489	22	24	8.4	168	160
25	167	69	52	31	27	355	613	20	22	7.5	327	110
26	212	66	49	30	29	213	614	17	148	11	246	175
27	156	118	52	30	32	117	584	15	85	9.9	91	505
28	132	256	54	29	34	169	557	15	44	7.4	62	375
29	120	194	49	29	---	355	511	25	33	6.2	47	410
30	114	123	45	29	---	522	461	24	57	6.4	39	345
31	174	---	44	29	---	656	---	18	---	13	32	---
TOTAL	6483	3772	2736	1097	799	10785	12942	2277	925	384.3	3767.5	4777
MEAN	209	126	88.3	35.4	28.5	348	431	73.5	30.8	12.4	122	159
MAX	549	272	320	44	34	737	682	404	148	37	514	505
MIN	47	66	44	29	26	32	180	15	11	6.2	6.8	17
MEAN†	210	124	87.8	35.3	28.6	428	367	56.0	31.3	11.9	122	167
CFSM†	3.03	1.79	1.27	.51	.41	6.18	5.30	.81	.45	.17	1.76	2.41
IN.†	3.51	2.00	1.46	.59	.43	7.13	5.91	.93	.51	.20	2.03	2.69

CAL YR 1976 TOTAL 72829.0 MEAN 199 MAX 899 MIN 20 MEAN† 199 CFSM† 2.88 IN† 39.15
WTR YR 1977 TOTAL 50744.8 MEAN 139 MAX 737 MIN 6.2 MEAN† 140 CFSM† 2.02 IN† 27.39

† 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 02010003, at dam on Jail Branch at East Barre, 4.5 mi (7.2 km) upstream from mouth. DRAINAGE AREA, 38.8 mi^2 (100.5 km^2). 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 at mean sea level (levels by 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 (343.78 m) above mean sea level.

Reservoir is formed by earthfill dam completed by Corps of Engineers in 1935 for flood control. Usable capacity, 525,000,000 ft^3 (14,900,000 m^3) between elevation 1,124.9 ft (342.87 m, bottom of outlet opening) and 1,165.0 ft (355.09 m, crest of spillway). Dam has no gates; below elevation 1,165.0 ft (355.09 m), 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 (2.1 m) and average width, 3.7 ft (1.13 m). Figures given herein represent usable contents.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 1,163.9 ft (354.76 m), present datum, Mar. 22, 1936; minimum not determined.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,145.04 ft (349.008 m) Mar. 15; minimum, 1,128.73 ft (344.037 m) Sept. 15.

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 (0.5 km) downstream from Long Meadow Brook, and 4.2 mi (6.8 km) upstream from mouth. DRAINAGE AREA, 66.5 mi^2 (172.2 km^2). PERIOD OF RECORD, November 1935 to February 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 at mean sea level (levels by 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 (186.766 km) above mean sea level.

Reservoir is formed by earthfill dam completed by 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 ft^3 (620,000 m^3) between elevations 612.75 ft (186.766 m, bottom of outlet opening) and 620.00 ft (188.976 m); for flood control, 851,500,000 ft^3 (24,110,000 m^3) between elevations 620.00 ft (188.976 m) and 685.00 ft (208.788 m, crest of spillway); total usable capacity, 873,500,000 ft^3 (24,740,000 m^3). Dam has no gates; below elevation 685.00 ft (208.788 m), outflow from reservoir is dependent on capacity of outlet opening, 5.25 ft (1.600 m) square near base of dam. Figures given herein represent usable contents.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 676.4 ft (206.17 m), present datum, Mar. 22, 1936, from graph based on gage readings; minimum observed, 613.00 ft (186.84 m) Aug. 17, 1949, and Aug. 17-19, 1950.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 653.30 ft (199.150 m) Mar. 17; minimum, 620.02 ft (180.982 m) July 29.

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

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	1129.59	5.1		
Oct. 31	1136.17	16.0	+10.9	+4.07
Nov. 30	1131.27	7.2	-8.8	-3.40
Dec. 31	1130.05	5.6	-1.6	-.60
CAL YR 1976	-	-	-.8	-.03
Jan. 31	1129.75	5.3	-.3	-.11
Feb. 28	1130.82	6.6	+1.3	+.54
Mar. 31	1144.39	78.7	+72.1	+26.9
Apr. 30	1133.08	9.9	-68.8	-26.5
May 31	1128.86	4.2	-5.7	-2.13
June 30	1129.01	4.4	+.2	+.08
July 31	1128.82	4.1	-.3	-.11
Aug. 31	1128.80	4.1	0	0
Sept. 30	1130.87	6.7	+2.6	+1.00
WTR YR 1977	-	-	+1.6	+.05
		04285000 Wrightsville Detention Reservoir		
Sept. 30	620.68	24.7	-	-
Oct. 31	621.56	28.3	+3.6	+1.34
Nov. 30	620.66	24.6	-3.7	-1.43
Dec. 31	620.36	23.4	-1.2	-.45
CAL YR 1976	-	-	-.5	-.02
Jan. 31	620.28	23.1	-.3	-.11
Feb. 28	620.33	23.3	+.2	+.08
Mar. 31	648.20	237.4	+214.1	+79.9
Apr. 30	629.55	69.3	-168.1	-64.9
May 31	620.07	22.5	-46.8	-17.5
June 30	620.46	23.8	+1.3	+.50
July 31	620.16	22.6	-1.2	-.45
Aug. 31	*620.27	23.1	+.5	+.19
Sept. 30	*624.70	42.3	+19.2	+7.41
WTR YR 1977	-	-	+17.6	+.56

* Estimated.

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 (0.6 km) upstream from Dog River and 1 mi (1.6 km) downstream from depot at Montpelier.
DRAINAGE AREA.--397 mi^2 (1,028 km^2).
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). WRD MA, NH, RI, VT, 1972: 1969(M), 1970(P), 1971(M).
GAGE.--Water-stage recorder. Datum of gage is 499.99 ft (152.397 m) above mean sea level. Prior to June 16, 1914, nonrecording gage at site 0.9 mi (1.4 km) upstream at different datum. June 16 to July 3, 1914, nonrecording gage at present site and datum.
REMARKS.--Records good except those for winter period, 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 ft^3 (13,900,000 m^3), which regulate runoff from 24 mi^2 (62 km^2), 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 were made during the year.
AVERAGE DISCHARGE.--58 years (water years 1915-23, 1929-77), 589 ft^3/s (16.68 m^3/s).
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,200 ft^3/s (487 m^3/s) Apr. 7, 1912, gage height, 17.31 ft (5.276 m), from floodmarks, present datum, from rating curve extended above 6,900 ft^3/s (195 m^3/s); maximum gage height, 17.55 ft (5.349 m) June 30, 1973; minimum daily discharge, 17 ft^3/s (0.48 m^3/s) Sept. 3, 1933.
EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1830, 57,000 ft^3/s (1,610 m^3/s) Nov. 3, 1927, gage height, 27.1 ft (8.26 m), from rating curve extended above 6,900 ft^3/s (195 m^3/s).
EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,900 ft^3/s (110 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 14	1130	*7670	217	*12.38	3.773	Apr. 25	0300	4420	125	9.05	2.758
Mar. 31	1345	4870	138	9.54	2.908						

Minimum daily discharge, 83 ft^3/s (2.35 m^3/s) July 30, Aug. 4, 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	338	1110	540	340	210	290	3590	1340	202	279	105	170
2	291	841	480	340	200	270	2680	1190	234	211	93	159
3	262	701	400	330	190	250	2630	1070	287	175	87	152
4	243	732	380	330	200	240	2350	874	258	154	83	145
5	225	795	440	320	200	310	2010	775	214	145	83	135
6	211	814	560	320	190	390	2290	722	199	140	87	150
7	202	874	1100	340	190	360	1860	687	202	133	89	147
8	262	821	1700	360	190	340	1630	622	283	124	91	133
9	1880	701	1100	330	190	370	1410	585	258	133	97	124
10	2050	609	780	290	250	640	1300	595	234	145	111	118
11	1170	571	800	280	230	1200	1160	574	367	133	120	113
12	943	524	680	290	220	1900	1090	526	338	122	128	109
13	881	494	580	280	220	2500	1370	491	298	122	122	124
14	995	479	500	270	220	6910	1810	476	254	133	184	836
15	888	465	530	270	210	4790	1610	438	294	131	654	913
16	725	465	550	270	200	4150	1360	406	251	120	342	676
17	592	451	550	250	190	3420	1220	384	199	109	1370	558
18	519	437	510	240	180	2500	1120	358	184	107	1370	486
19	474	427	460	240	180	2030	1010	338	265	120	966	406
20	446	446	460	240	180	1770	946	321	261	103	775	367
21	1530	427	440	230	180	1680	886	298	237	113	627	671
22	1240	388	410	230	170	1550	823	279	247	181	346	855
23	943	383	420	230	180	1420	1280	265	244	133	358	627
24	847	383	400	220	180	1340	3550	247	211	109	419	471
25	756	383	380	220	180	1230	3980	237	199	101	829	438
26	895	371	390	220	190	1110	2790	220	317	109	622	516
27	834	455	370	220	210	926	2150	202	379	113	375	1360
28	707	788	340	230	250	1100	1860	205	283	99	283	1020
29	637	801	360	260	---	2190	1660	247	247	89	237	1120
30	592	654	360	240	---	3240	1490	251	317	83	205	946
31	701	---	340	220	---	4490	---	220	---	97	184	---
TOTAL	23279	17790	17310	8450	5580	54906	54915	15443	7763	4066	11442	14045
MEAN	751	593	558	273	199	1771	1831	498	259	131	369	468
MAX	2050	1110	1700	360	250	6910	3980	1340	379	279	1370	1360
MIN	202	371	340	220	170	240	823	202	184	83	83	109
(†)	383.5	451.7	355.3	295.1	271.2	291.6	384.5	385.0	401.9	400.2	391.5	410.3

CAL YR 1976 TOTAL 339562 MEAN 928 MAX 6910 MIN 192
WTR YR 1977 TOTAL 234989 MEAN 644 MAX 6910 MIN 83

† Monthend contents, in millions of cubic feet, in Peacham Pond and Mollys Falls Reservoir; records furnished by Green Mountain Power Corp.

04287000 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 (1.6 km) downstream from Northfield Falls and 1.2 mi (1.9 km) downstream from Cox Branch.

DRAINAGE AREA.--76.1 mi^2 (197.1 km^2).

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 (183.794 m) above mean sea level (levels by Corps of Engineers).

REMARKS.--Records good except those for winter period, which are fair. Infrequent diurnal fluctuation at low flow by powerplant above station; regulation much greater prior to 1955. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--43 years, 122 ft^3/s (3.455 m^3/s), 21.77 in/yr (553 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--MAximum discharge, 10,600 ft^3/s (300 m^3/s) June 30, 1973, gage height, 11.57 ft (3.527 m), from rating curve extended above 1,500 ft^3/s (42.5 m^3/s) on basis of computation of flow over dam at gage height 8.49 ft (2.588 m) and slope-area measurements at gage heights 8.96 ft (2.731 m), 11.53 ft (3.514 m), and 11.57 ft (3.527 m); minimum, 4.3 ft^3/s (0.12 m^3/s) Aug. 31, Sept. 7, 1942.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,600 ft^3/s (45.3 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 9	1730	2030	57.5	5.16	1.573	Mar. 31	0900	1810	51.3	4.89	1.490
Mar. 14	0715	a*3630	103	*6.73	2.051						

a From rating curve extended as explained above.

Minimum discharge, 13 ft^3/s (0.37 m^3/s) July 21, Aug. 3, 4, 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	220	82	56	33	41	627	169	32	24	14	20
2	65	170	78	54	33	41	400	157	37	22	14	19
3	58	157	73	52	33	40	565	144	33	21	13	18
4	52	207	69	52	32	39	412	130	31	21	14	17
5	50	190	66	51	32	54	411	119	29	20	14	16
6	49	195	85	51	31	55	430	113	29	19	17	17
7	47	187	289	50	31	52	304	102	37	18	18	16
8	69	169	350	49	30	52	261	96	35	18	18	15
9	741	147	205	48	30	58	221	102	31	22	15	15
10	454	138	175	48	30	140	206	102	30	19	16	15
11	219	132	150	48	30	300	191	92	45	17	18	14
12	164	118	130	47	31	465	238	85	37	19	17	14
13	142	115	110	46	32	1290	288	81	33	21	16	17
14	237	110	100	45	32	2530	397	75	32	24	27	132
15	189	107	110	44	31	1050	239	72	32	19	71	78
16	165	104	100	43	30	891	198	67	27	17	32	48
17	139	99	95	42	30	595	175	64	26	17	195	52
18	128	98	92	41	31	390	156	61	27	17	64	50
19	118	95	88	40	30	316	144	58	28	16	39	41
20	130	99	83	39	30	264	132	54	26	15	29	55
21	620	86	78	38	30	232	123	52	28	22	25	108
22	323	84	74	37	30	208	119	48	30	36	27	81
23	225	84	77	36	29	192	276	45	27	22	30	63
24	187	83	71	36	28	170	1160	42	25	19	34	52
25	202	81	67	35	32	151	768	40	26	20	45	47
26	240	78	64	34	35	147	434	37	38	21	33	116
27	184	102	61	33	37	158	315	34	30	18	27	276
28	162	144	68	33	43	198	263	35	25	16	24	118
29	153	133	58	33	---	676	221	40	25	16	22	135
30	145	96	55	33	---	1150	192	35	30	15	22	105
31	195	---	56	34	---	1470	---	33	---	15	21	---
TOTAL	5916	3828	3259	1328	886	13415	9866	2384	921	606	971	1770
MEAN	191	128	105	42.8	31.6	433	329	76.9	30.7	19.5	31.3	59.0
MAX	741	220	350	56	43	2530	1160	169	45	36	195	276
MIN	47	78	55	33	28	39	119	33	25	15	13	14
CFSM	2.51	1.68	1.38	.56	.42	5.69	4.32	1.01	.40	.26	.41	.78
IN.	2.89	1.87	1.59	.65	.43	6.56	4.82	1.17	.45	.30	.47	.87

CAL YR 1976 TOTAL 71033 MEAN 194 MAX 3540 MIN 42 CFSM 2.55 IN 34.72
WTR YR 1977 TOTAL 45150 MEAN 124 MAX 2530 MIN 13 CFSM 1.63 IN 22.07

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 (3.9 km) downstream from Moretown, and 3.8 mi (6.1 km) upstream from mouth.
DRAINAGE AREA.--139 mi^2 (360 km^2).
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 (165.790 m) above mean sea level (levels by Vermont Department of Highways). 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 winter period, which are fair. Occasional diurnal fluctuation at low flow; much greater regulation prior to 1958. Several observations of water temperature were made during the year.
AVERAGE DISCHARGE.--49 years (water years 1928-77), 254 ft^3/s (7.193 m^3/s), 24.82 in/yr (630 mm/yr).
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,400 ft^3/s (521 m^3/s) Sept. 22, 1938, gage height, 16.34 ft (4.980 m), from floodmarks, from rating curve extended above 2,700 ft^3/s (76.5 m^3/s) on basis of computations of flow over dam at gage heights 9.98 ft (3.042 m), 11.51 ft (3.508 m), 16.34 ft (4.980 m), and 19.4 ft (5.91 m); minimum, 1.4 ft^3/s (0.040 m^3/s) Oct. 1, 1930.
EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1830, 23,000 ft^3/s (651 m^3/s) Nov. 3, 1927, gage height, 19.4 ft (5.91 m), from floodmarks, by computation of peak flow over dam.
EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,400 ft^3/s (96.3 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 9	1900	4610	131	8.00	2.438	Apr. 24	0730	3780	107	7.36	2.243
Mar. 13	-	*7500	212	a*13.72	4.182	Aug. 17	0700	4440	126	7.87	2.399
Mar. 31	0415	4430	125	7.86	2.396						

a Ice jam.

Minimum discharge, 13 ft^3/s (0.37 m^3/s) Aug. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	140	524	190	155	96	115	1290	345	53	47	22	37
2	124	381	180	150	94	120	774	328	72	41	18	34
3	114	341	170	145	92	115	939	322	67	36	15	32
4	104	422	160	145	90	120	698	277	58	34	17	31
5	97	417	150	145	87	140	716	251	53	32	21	29
6	92	423	160	140	86	150	901	246	52	30	22	35
7	89	411	851	140	85	145	553	226	53	28	27	28
8	330	364	720	135	84	145	462	203	58	29	23	25
9	1990	295	370	135	84	250	391	207	59	39	18	23
10	1160	281	330	135	84	660	371	232	57	34	17	22
11	542	270	310	130	84	800	355	207	64	28	26	21
12	389	237	280	130	87	1200	545	187	71	26	22	21
13	324	233	260	130	89	4600	792	179	66	33	19	42
14	458	218	250	125	90	4900	1340	167	59	51	29	1130
15	388	212	290	125	88	2900	643	152	54	32	305	509
16	334	208	270	120	83	1800	493	136	49	29	62	219
17	275	192	250	115	82	1100	444	126	45	28	1280	219
18	254	190	240	115	84	682	437	116	44	26	246	190
19	234	184	230	110	84	548	440	111	44	24	104	136
20	260	197	210	110	82	466	437	104	44	21	71	228
21	1770	154	200	105	82	399	450	97	47	27	56	471
22	866	160	195	105	84	357	461	87	63	84	63	293
23	547	159	205	100	82	332	1030	79	60	37	80	208
24	429	153	190	100	81	292	2710	72	51	28	171	160
25	460	147	180	97	88	267	1720	70	50	26	213	133
26	565	143	170	95	96	280	958	65	194	42	100	428
27	400	306	170	94	100	282	712	59	87	30	68	1030
28	343	390	180	94	110	377	563	57	57	23	54	410
29	315	342	160	94	---	1420	461	64	51	20	46	739
30	304	241	150	95	---	2460	395	63	71	20	41	409
31	440	---	155	96	---	3320	---	59	---	24	40	---
TOTAL	14137	8195	7826	3710	2458	30742	22481	4894	1853	1009	3296	7292
MEAN	456	273	252	120	87.8	992	749	158	61.8	32.5	106	243
MAX	1990	524	851	155	110	4900	2710	345	194	84	1280	1130
MIN	89	143	150	94	81	115	355	57	44	20	15	21
CFSM	3.28	1.96	1.81	.86	.63	7.14	5.39	1.14	.45	.23	.76	1.75
IN.	3.78	2.19	2.09	.99	.66	8.23	6.02	1.31	.50	.27	.88	1.95

CAL YR 1976 TOTAL 153767 MEAN 420 MAX 6200 MIN 67 CFSM 3.02 IN 41.15
WTR YR 1977 TOTAL 107893 MEAN 296 MAX 4900 MIN 15 CFSM 2.13 IN 28.87

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 (4.3 km) upstream from mouth and 3.5 mi (5.6 km) north of Waterbury.

DRAINAGE AREA.--109 mi^2 (282 km^2).

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 at mean sea level (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 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 ft^3 (44,822,000 m^3) between elevations 500.0 ft (152.40 m) and 592.0 ft (180.44 m), sill of taintor gate; for flood control, 1,229,000,000 ft^3 (34,822,000 m^3) between elevations 592.0 ft (180.44 m) and 617.5 ft (188.21 m), crest of spillway; total usable capacity, 2,812,300,000 ft^3 (79,644,000 m^3).

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

580.0	1,168.5
590.0	1,505.0
600.0	1,913.4
610.0	2,398.0

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 613.45 ft (186.980 m) May 4, 1940; minimum observed, 501.3 ft (152.80 m) Oct. 16, 1938.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 602.3 ft (183.58 m) Mar. 15; minimum, 586.95 ft (178.902 m) Sept. 13.

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	592.90	593.31	593.00	592.60	592.51	592.58	597.00	591.31	589.14	588.97	590.49	589.28
2	592.91	593.20	592.97	592.59	592.51	592.58	595.20	590.87	589.27	589.07	590.55	588.91
3	592.74	593.15	592.84	592.58	592.51	592.55	594.20	590.25	589.35	589.14	590.59	589.03
4	592.71	593.19	592.81	592.58	592.52	592.60	593.40	589.51	589.44	589.22	590.66	589.13
5	592.70	593.37	592.82	592.59	592.52	592.62	593.20	588.73	589.56	589.08	590.55	589.31
6	592.68	593.36	592.81	592.58	592.51	592.64	592.40	588.54	589.47	589.13	590.63	588.95
7	592.67	593.30	593.27	592.59	592.50	592.60	591.70	589.01	589.45	589.16	590.69	588.52
8	593.29	593.22	593.31	592.60	592.50	592.60	591.30	589.42	589.66	589.26	590.68	588.08
9	596.35	593.13	593.10	592.58	592.50	592.60	590.50	589.15	589.70	589.43	590.58	587.51
10	595.37	593.08	593.08	592.58	592.50	593.02	589.90	589.05	589.70	589.51	590.47	587.60
11	594.33	593.03	592.97	592.59	592.50	593.51	589.50	589.00	589.85	589.44	590.37	587.68
12	593.67	592.99	592.92	592.59	592.52	593.98	588.90	588.91	589.97	589.51	590.22	587.19
13	593.36	592.95	592.87	592.58	592.55	595.85	590.00	588.83	589.88	589.55	590.35	587.20
14	593.28	592.92	592.80	592.58	592.55	600.80	592.00	589.11	589.77	589.61	590.68	591.10
15	593.21	592.91	592.80	592.57	592.54	601.00	592.20	589.35	589.69	589.66	590.39	592.00
16	593.13	592.90	592.80	592.56	592.53	600.00	591.60	589.11	589.59	589.70	590.53	591.69
17	593.03	592.89	592.80	592.56	592.51	598.12	591.20	588.94	589.51	589.78	593.81	591.00
18	593.00	592.88	592.78	592.55	592.50	595.84	591.10	588.88	589.88	589.67	592.77	590.97
19	592.95	592.89	592.75	592.53	592.50	594.30	590.90	588.81	590.11	589.71	591.79	590.46
20	593.00	592.89	592.74	592.53	592.50	593.00	591.00	588.73	590.38	589.68	590.67	590.01
21	594.47	592.85	592.75	592.53	592.50	592.80	590.90	588.90	590.41	589.76	589.98	590.55
22	593.98	592.84	592.68	592.52	592.50	593.00	591.70	589.06	590.45	589.81	589.99	590.68
23	593.59	592.82	592.67	592.51	592.50	593.10	593.10	588.90	590.40	589.83	589.91	590.44
24	593.36	592.81	592.67	592.52	592.50	592.80	594.70	588.87	590.35	589.86	590.70	590.29
25	593.31	592.80	592.66	592.52	592.57	592.60	595.10	588.66	590.58	589.93	590.91	590.08
26	593.30	592.81	592.65	592.53	592.55	592.00	593.90	588.53	591.28	589.99	590.53	590.96
27	593.20	593.29	592.64	592.53	592.54	591.00	593.34	588.61	590.88	590.00	590.61	592.34
28	593.10	593.52	592.61	592.55	592.57	591.40	592.91	588.77	590.37	590.01	590.79	592.31
29	593.07	593.41	592.60	592.54	---	592.80	592.39	588.93	589.93	590.05	590.46	592.35
30	593.01	593.15	592.60	592.54	---	595.00	591.90	589.06	589.48	590.29	590.07	591.91
31	593.26	---	592.60	592.53	---	597.10	---	589.02	---	590.48	589.67	---
MEAN	593.38	593.06	592.82	592.56	592.52	594.08	592.24	589.12	589.92	589.62	590.68	589.92
MAX	596.35	593.52	593.31	592.60	592.57	601.00	597.00	591.31	591.28	590.48	593.81	592.35
MIN	592.67	592.80	592.60	592.51	592.50	591.00	588.90	588.53	589.14	588.97	589.67	587.19
(†)	1631.8	1627.6	1606.1	1603.4	1604.9	1789.2	1578.8	1470.3	1486.6	1523.6	1493.3	1579.2
(‡)	+3.17	-1.62	-8.03	-1.01	+.62	+68.8	-81.2	-40.5	+6.29	+13.8	-11.3	+33.1

CAL YR 1976 MEAN 588.52 MAX 601.70 MIN 570.33 (†) +6.67
WTR YR 1977 MEAN 591.66 MAX 601.00 MIN 587.19 (‡) -1.40

† Contents, in millions of cubic feet, at end of month.
‡ Change in contents, equivalent in cubic feet per second.
NOTE.--No gage-height record Mar. 15, 16.

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 (1.6 km) downstream from Waterbury Reservoir, 1.7 mi (2.7 km) upstream from mouth, and 2.5 mi (4.0 km) north of Waterbury.

DRAINAGE AREA.--111 mi^2 (287 km^2).

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 (130.454 m) above mean sea level (levels by Corps of Engineers). July 7 to Oct. 31, 1910, nonrecording gage at site 2 mi (3 km) upstream at different datum.

REMARKS.--Records excellent except those for periods of no gage-height record, which are fair. Flow completely regulated by Waterbury Reservoir (station 04288500). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--42 years, 238 ft^3/s (6.740 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,520 ft^3/s (185 m^3/s) Mar. 18, 1936, gage height, 19.38 ft (5.907 m); minimum daily, 0.6 ft^3/s (0.017 m^3/s) several times during summers of 1938-39, 1941, and 1944. Maximum discharge since construction of Waterbury Reservoir in 1937, 4,080 ft^3/s (116 m^3/s) Dec. 9, 1937, gage height, 14.88 ft (4.535 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,510 ft^3/s (71.1 m^3/s) Mar. 14, gage height, 11.69 ft (3.563 m); minimum daily, 13 ft^3/s (0.37 m^3/s) July 16, 17, 19, 21-26, Aug. 2-4, 6, 7, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	372	488	443	245	191	206	1500	592	18	290	29	216
2	324	483	394	239	184	213	1300	592	19	17	13	217
3	292	439	365	232	186	218	1100	591	19	16	13	14
4	268	456	323	228	182	213	980	588	19	16	13	14
5	247	503	311	228	184	239	860	588	20	110	80	15
6	233	521	311	228	184	263	760	449	105	15	13	219
7	226	520	348	230	182	266	700	34	81	15	13	222
8	275	504	540	232	180	266	620	32	85	15	79	219
9	606	464	534	226	178	269	590	299	88	15	91	268
10	1150	422	454	229	180	314	550	213	87	14	97	14
11	1300	398	420	237	180	464	500	175	19	70	103	14
12	731	370	405	225	182	611	580	186	19	14	126	257
13	530	357	379	218	188	920	710	202	110	25	13	267
14	455	348	347	214	193	805	850	21	113	14	92	122
15	431	342	338	212	197	1240	750	21	89	14	220	128
16	424	339	337	211	195	1860	690	216	88	13	14	390
17	401	329	337	207	197	1750	630	205	88	13	740	541
18	329	327	334	208	188	1540	600	145	19	80	778	212
19	301	325	320	200	186	1120	600	138	21	13	568	387
20	299	340	311	200	184	753	600	137	21	42	564	390
21	699	333	311	198	184	468	600	18	110	13	373	251
22	918	318	304	197	186	303	600	18	93	13	198	243
23	678	313	290	193	186	364	880	138	120	13	198	291
24	544	309	284	193	180	383	1300	90	117	13	256	233
25	500	303	278	195	180	459	1600	160	22	13	235	224
26	504	299	275	197	195	471	1270	115	22	13	313	422
27	481	347	273	197	202	474	907	19	300	17	79	584
28	439	513	264	195	200	476	744	20	300	14	15	589
29	401	544	257	197	---	292	632	20	300	14	212	591
30	385	504	255	197	---	830	593	20	300	14	218	585
31	391	---	251	195	---	1700	---	71	---	14	219	---
TOTAL	15134	12058	10593	6603	5234	19750	24596	6113	2812	972	5975	8139
MEAN	488	402	342	213	187	637	820	197	93.7	31.4	193	271
MAX	1300	544	540	245	202	1860	1600	592	300	290	778	591
MIN	226	299	251	193	178	206	500	18	18	13	13	14

CAL YR 1976 TOTAL 172015 MEAN 470 MAX 2000 MIN 40
WTR YR 1977 TOTAL 117979 MEAN 323 MAX 1860 MIN 13

NOTE.--No gage-height record Mar. 30 to Apr. 25, June 26 to July 18.

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 (0.8 km) downstream from Muddy Brook and 2 mi (3 km) southwest of Essex Junction.
DRAINAGE AREA.--1,044 mi^2 (2,704 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1928 to current year.
REVISED RECORDS.--WSP 714: 1930(M). WSP 894: Drainage area. WSP 1307: 1929(M).
GAGE.--Water-stage recorder. Altitude of gage is 185 ft (56 m), from topographic map; prior to Oct. 1, 1964, datum was 1.00 ft (0.305 m) higher.
REMARKS.--Records good except those for winter period and period of no gage-height record, which are fair. Flow regulated by powerplants upstream, by Peacham Pond and Mollys Falls Reservoir, combined usable capacity, 492,000,000 ft^3 (13,900,000 m^3), 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 were made during the year.
AVERAGE DISCHARGE.--49 years, 1,696 ft^3/s (48.03 m^3/s).
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45,300 ft^3/s (1,280 m^3/s) Mar. 19, 1936, gage height, 24.54 ft (7.480 m), present datum, from rating curve extended above 27,000 ft^3/s (765 m^3/s) on basis of computations of flow over dam at gage heights 19.72 (6.011 m), 24.54 (7.480 m), and 51.4 ft (15.67 m) and slope-area measurement at gage height 51.4 ft (15.67 m), all at present datum; minimum daily, 24 ft^3/s (0.68 m^3/s) Sept. 7, 1968.
EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1830, 113,000 ft^3/s (3,200 m^3/s) Nov. 4, 1927, gage height, 51.4 ft (15.67 m), present datum, from floodmarks, from rating curve extended above 27,000 ft^3/s (765 m^3/s) by method explained above.
EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 12,500 ft^3/s (354 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 10	0300	16000	453	11.22	3.420	Mar. 31	1615	19500	552	13.01	3.965
Mar. 14	1645	*32000	906	*19.06	5.809	Apr. 25	0645	17300	490	11.92	3.633

Minimum daily discharge, 96 ft^3/s (2.72 m^3/s) Sept. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1210	3050	1490	850	570	700	10900	3100	465	860	220	560
2	1010	2630	1170	830	560	670	7360	2830	420	630	260	466
3	941	2150	1050	820	560	660	6540	2680	501	420	200	361
4	847	2310	1000	810	550	650	6000	2300	370	330	190	322
5	770	2650	940	800	540	720	4860	2100	378	380	210	265
6	773	2700	940	790	540	880	6180	2020	414	430	290	445
7	668	2800	1200	780	540	820	4530	1440	523	300	190	490
8	1150	2520	5260	770	540	860	3840	1300	514	260	230	463
9	5000	2200	3460	760	540	1000	3240	1290	586	320	260	560
10	11100	1890	2480	750	540	1500	3080	1470	571	310	270	292
11	5480	1790	2050	750	550	4000	2870	1360	478	300	330	96
12	3380	1660	1900	740	560	7000	2950	1180	527	360	390	504
13	2670	1550	1750	730	560	13000	4110	1180	550	300	370	463
14	2450	1530	1600	720	570	29500	6720	996	428	330	250	3320
15	2740	1470	1500	710	560	18600	4470	905	595	300	1250	3360
16	2230	1470	1400	700	550	13000	3490	895	425	300	860	1950
17	1810	1230	1350	690	540	10700	3100	977	406	260	3800	1690
18	1670	1330	1250	680	540	7230	2950	644	344	240	3300	1610
19	1530	1310	1200	660	540	5630	2830	807	418	270	2100	1240
20	1570	1430	1150	650	560	4440	2750	776	418	210	1750	1260
21	5460	1230	1100	630	550	3900	2680	479	505	300	1500	2050
22	6130	1260	1050	620	540	3160	2680	597	475	320	900	2120
23	3590	1140	1000	610	530	2970	4720	652	570	390	1150	1840
24	2750	1180	990	600	520	2670	13500	491	483	310	1500	1320
25	2550	1120	950	590	520	2470	15100	569	869	250	2000	1220
26	2880	1100	920	580	530	2340	8480	557	600	213	1660	1900
27	2650	1240	930	570	570	2260	5980	441	1050	230	1310	6400
28	2150	2360	970	580	620	2890	4720	376	890	230	463	3400
29	1920	2440	900	580	---	6810	3910	596	830	210	466	4200
30	1860	1970	840	580	---	11300	3390	299	910	230	659	3500
31	1890	---	860	580	---	17700	---	366	---	250	654	---
TOTAL	82829	54710	44650	21510	15390	180030	157930	35673	16513	10043	28982	47667
MEAN	2672	1824	1440	694	550	5807	5264	1151	550	324	935	1589
MAX	11100	3050	5260	850	620	29500	15100	3100	1050	860	3800	6400
MIN	668	1100	840	570	520	650	2680	299	344	210	190	96

CAL YR 1976 TOTAL 959003 MEAN 2620 MAX 24700 MIN 442
WTR YR 1977 TOTAL 695927 MEAN 1907 MAX 29500 MIN 96

NOTE.--No gage-height record June 26 to July 25, July 28 to Aug. 25.

04290500 WINOOSKI RIVER NEAR ESSEX JUNCTION, VT--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1953, June 1976 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	COD IN BOTTOM MATERIAL (MG/KG)
MAY											
25...	1045	1350	222	7.7	23.0	17.0	0	1	9.4	9	8200
JUN											
07...	--	1500	--	--	--	--	--	--	--	--	--
SEP											
26...	1035	1550	143	6.2	17.0	13.5	5	2	8.7	90	--

DATE	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM .7UM-MF (COL./ 100 ML)	FECAL STREPTOCOCCI KF AGAR (COL. PER 100 ML)	TOTAL CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)
MAY										
25...	100	B14	B8	25	2.5	66	0	54	2.1	62
JUN										
07...	--	--	--	--	--	--	--	--	--	--
SEP										
26...	540	370	69	16	2.8	51	0	42	51	13

DATE	DISSOLVED CHLORIDE (CL) (MG/L)	SUSPENDED SOLIDS (MG/L)	TOTAL RESIDUE (MG/L)	LOSS ON IGNITION IN BOTTOM MATERIAL (MG/KG)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	TOTAL ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
MAY										
25...	18	0	116	7200	.10	.12	.45	.57	.67	.03
JUN										
07...	--	--	--	--	--	--	--	--	--	--
SEP										
26...	9.8	19	115	--	.22	.07	.17	.24	.46	.04

DATE	TOTAL CHROMIUM (CR) (UG/L)	TOTAL CHROMIUM IN BOTTOM MATERIAL (UG/G)	PHENOLS (UG/L)	OIL AND GREASE (MG/L)	CHLOROPHYLL A (UG/L)	CHLOROPHYLL B (UG/L)	TOTAL PCB (UG/L)	POLYCHLORINATED NAPHTHALENES (UG/L)	TOTAL ALDRIN (UG/L)	TOTAL CHLORDANE (UG/L)
MAY										
25...	10	10	0	5	5.42	.000	--	--	--	--
JUN										
07...	--	--	--	--	--	--	.0	.00	.00	.0
SEP										
26...	<10	--	3	0	2.42	.000	.0	.00	.00	.0

DATE	TOTAL DDD (UG/L)	TOTAL DDE (UG/L)	TOTAL DDT (UG/L)	TOTAL DIELDRIN (UG/L)	TOTAL ENDOSULFAN (UG/L)	TOTAL ENDRIN (UG/L)	TOTAL HEPTACHLOR (UG/L)	TOTAL HEPTACHLOR EPOXIDE (UG/L)	TOTAL LINDANE (UG/L)	TOTAL TOXAPHENE (UG/L)
MAY										
25...	--	--	--	--	--	--	--	--	--	--
JUN										
07...	.00	.00	.00	.00	.00	.00	.00	.00	.00	0
SEP										
26...	.00	.00	.00	.00	.00	.00	.00	.00	.00	0

B, NON-IDEAL COLONY COUNT.

04292000 LAMOILLE RIVER AT JOHNSON, VT

LOCATION.--Lat 44°37'22", long 72°40'50", Lamoille County, Hydrologic Unit 02010005, on right bank above falls, 0.7 mi (1.1 km) upstream from bridge in Johnson and 0.8 mi (1.3 km) upstream from Gihon River.

DRAINAGE AREA.--310 mi^2 (803 km^2).

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.

REVISIED RECORDS.--WSP 894: Drainage area. WSP 1114: 1933, 1934(M). WSP 1237: 1912(M), 1930, 1932(M).

GAGE.--Water-stage recorder. Altitude of gage is 495 ft (151 m), from topographic map. Prior to Dec. 31, 1913, nonrecording gage at bridge 0.7 mi (1.1 km) downstream at different datum.

REMARKS.--Records good except those for winter period, which are fair. Some regulation by powerplant upstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--51 years (water years 1912-13, 1929-77), 531 ft^3/s (15.04 m^3/s), 23.26 in/yr (591 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,400 ft^3/s (408 m^3/s) July 1, 1973, gage height, 17.33 ft (5.282 m), from rating curve extended above 8,500 ft^3/s (241 m^3/s) on basis of computation of flow over dam at gage height 16.48 ft (5.023 m); minimum, 11 ft^3/s (0.31 m^3/s) Sept. 2, 1935; minimum daily, 16 ft^3/s (0.45 m^3/s) Oct. 26, 1947.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,400 ft^3/s (153 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 14	1630	*7350	208	*12.42	3.786	Aug. 17	1400	6080	172	11.28	3.438
Mar. 31	0330	6030	171	11.23	3.423						

Minimum discharge, 27 ft^3/s (0.76 m^3/s) July 22, 23; minimum daily, 28 ft^3/s (0.79 m^3/s) July 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	387	1110	450	270	230	260	3260	806	161	309	86	176
2	303	727	390	290	260	250	1620	714	179	81	86	256
3	76	651	350	320	270	250	1480	686	161	148	84	237
4	249	736	330	330	290	280	1400	508	155	151	84	233
5	345	820	310	350	250	310	1180	392	48	252	84	179
6	354	746	410	380	190	300	1460	502	161	197	86	144
7	286	835	520	340	200	290	1110	508	179	188	86	173
8	442	756	1500	320	210	280	887	368	204	164	93	158
9	1310	573	920	290	260	280	676	326	194	48	93	151
10	2090	498	760	280	250	550	630	248	185	37	95	158
11	1250	496	600	300	250	900	676	288	170	128	112	161
12	770	446	610	320	250	1200	934	288	68	120	120	140
13	628	402	470	340	250	1700	1420	343	297	120	137	167
14	560	420	420	320	250	4600	2930	305	191	107	176	1250
15	618	463	400	300	260	3930	1510	81	197	131	222	1130
16	511	434	400	280	240	3350	1120	360	131	126	301	630
17	468	419	400	260	230	2730	978	297	140	126	3440	445
18	494	404	400	300	220	1650	913	288	256	43	1520	450
19	434	400	400	340	230	1230	882	268	167	75	603	415
20	408	240	400	310	240	934	831	248	305	137	326	343
21	1410	311	380	290	250	877	782	200	226	134	226	973
22	1420	424	370	280	270	695	777	48	218	36	134	1780
23	746	452	360	300	290	676	1530	140	207	28	360	882
24	614	468	350	310	280	537	3560	237	211	32	554	541
25	651	459	340	320	270	524	4150	134	237	185	1160	454
26	751	449	330	320	270	505	2280	161	450	229	567	662
27	665	674	320	310	270	499	1480	173	690	81	410	2860
28	632	985	300	300	260	743	1180	176	309	81	226	1660
29	468	914	270	290	---	2000	945	79	280	86	56	1420
30	374	579	250	280	---	3680	898	188	245	90	112	1010
31	609	---	260	260	---	5590	---	214	---	97	176	---
TOTAL	20323	17291	13970	9500	6990	41600	43479	9574	6622	3767	11815	19238
MEAN	656	576	451	306	250	1342	1449	309	221	122	381	641
MAX	2090	1110	1500	380	290	5590	4150	806	690	309	3440	2860
MIN	76	240	250	260	190	250	630	48	48	28	56	140
CFSM	2.12	1.86	1.46	.99	.81	4.33	4.67	1.00	.71	.39	1.23	2.07
IN.	2.44	2.07	1.68	1.14	.84	4.99	5.22	1.15	.79	.45	1.42	2.31

CAL YR 1976 TOTAL 283735 MEAN 775 MAX 8210 MIN 54 CFSM 2.50 IN 34.05
WTR YR 1977 TOTAL 204169 MEAN 559 MAX 5590 MIN 28 CFSM 1.80 IN 24.50

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 (0.8 km) upstream from railroad bridge, and 1 mi (1.6 km) downstream from Beaver Meadow Brook.

DRAINAGE AREA.--686 mi^2 (1,777 km^2).

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. Altitude of gage is 285 ft (86.9 m), from topographic map. Prior to Dec. 1, 1937, at site 3.5 mi (5.6 km) downstream at different datum.

REMARKS.--Records good except those for winter period, which are poor. Low flow regulated by powerplants upstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--48 years, 1,225 ft^3/s (34.69 m^3/s), 24.25 in/yr (616 mm/yr), adjusted to present drainage area.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,200 ft^3/s (657 m^3/s) Mar. 19, 1936, gage height, 12.52 ft (3.816 m), site and datum then in use, by computation of peak flow over dam; maximum gage height, 18.81 ft (5.733 m) Apr. 3, 1959, ice jam; minimum daily discharge, 74 ft^3/s (2.10 m^3/s) Sept. 26, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 10,400 ft^3/s (295 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 14	1900	*16300	462	*a17.41	5.307	Mar. 31	1930	12900	365	9.78	2.981

a Ice jam.

Minimum daily discharge, 118 ft^3/s (3.34 m^3/s) July 24, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	849	2060	988	560	380	430	9920	1730	339	495	272	338
2	773	1760	930	560	340	430	4360	1570	323	458	225	937
3	669	1410	1600	550	360	420	3240	1680	287	258	210	1150
4	408	1830	2250	540	370	440	3110	1360	285	266	184	708
5	545	1980	2200	550	380	510	2590	1040	282	267	178	538
6	654	2000	2500	560	350	540	3210	1020	226	349	173	436
7	607	2060	3000	550	320	530	2550	1140	306	297	197	380
8	963	1850	4100	540	320	540	2070	919	565	291	216	356
9	4020	1520	2900	520	330	620	1620	802	587	296	242	322
10	8230	1260	1700	490	340	900	1470	657	451	224	217	302
11	4150	1180	1350	480	320	2000	1450	573	389	183	238	300
12	2120	1100	1200	500	330	3200	1710	645	362	205	322	304
13	1560	1010	1150	510	340	7000	2960	659	286	215	350	446
14	1350	949	980	500	350	13600	6690	640	440	216	327	3180
15	1300	981	1000	490	360	11400	4470	616	341	204	648	4190
16	1250	1020	1050	470	350	8170	2630	401	321	219	553	1940
17	1060	956	1000	440	340	6990	2240	623	251	214	5350	1360
18	997	939	940	420	330	3940	2150	556	436	234	6420	1300
19	929	914	880	450	320	2850	2140	531	539	201	1950	1130
20	914	970	860	470	320	2120	2100	500	496	168	1060	1040
21	3010	741	880	460	310	1980	2020	429	579	206	731	2590
22	4000	774	860	430	320	1780	2040	383	578	201	513	3570
23	2160	906	820	410	320	1560	3890	212	597	149	619	2200
24	1490	902	760	410	330	1430	6070	275	501	118	847	1480
25	1430	891	700	420	340	1200	8260	352	448	118	2110	1060
26	1600	874	660	410	350	1220	5640	283	870	265	1410	1650
27	1460	1300	620	400	370	1170	3450	303	1090	308	947	6670
28	1300	2340	600	390	410	1670	2650	295	809	177	662	4680
29	1220	2120	580	370	---	4690	2170	450	532	155	441	3390
30	950	1520	640	360	---	7460	1870	336	551	174	287	3000
31	1140	---	580	370	---	11200	---	390	---	329	325	---
TOTAL	53108	40117	40278	14580	9600	101990	100740	21370	14067	7460	28224	50947
MEAN	1713	1337	1299	470	343	3290	3358	689	469	241	910	1698
MAX	8230	2340	4100	560	410	13600	9920	1730	1090	495	6420	6670
MIN	408	741	580	360	310	420	1450	212	226	118	173	300
CFSM	2.50	1.95	1.89	.69	.50	4.80	4.90	1.00	.68	.35	1.33	2.48
IN.	2.88	2.18	2.18	.79	.52	5.53	5.46	1.16	.76	.40	1.53	2.76

CAL YR 1976 TOTAL 649811 MEAN 1775 MAX 17000 MIN 355 CFSM 2.59 IN 35.24
WTR YR 1977 TOTAL 482481 MEAN 1322 MAX 13600 MIN 118 CFSM 1.93 IN 26.16

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 (60 m) upstream from Big Falls, 1.5 mi (2.4 km) downstream from Jay Branch, and 2.2 mi (3.5 km) upstream from North Troy.

DRAINAGE AREA.--131 mi^2 (339 km^2).

PERIOD OF RECORD.--August 1931 to current year.

REVISED RECORDS.--WSP 924: 1940. WSP 1114: 1933(M), 1936-39.

GAGE.--Water-stage recorder. Altitude of gage is 580 ft (177 m), from topographic map.

REMARKS.--Records good except those for winter period, which are fair. Occasional regulation at low flow caused by small powerplant upstream; greater regulation prior to 1967. Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--46 years, 270 ft^3/s (7.646 m^3/s), 27.99 in/yr (711 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,980 ft^3/s (226 m^3/s) May 3, 1940, gage height, 12.87 ft (3.923 m), from rating curve extended above 5,500 ft^3/s (156 m^3/s) on basis of computation of flow over dam at gage height 11.70 ft (3.566 m); minimum, 9.4 ft^3/s (0.27 m^3/s) Aug. 28, 1949; minimum daily, 11 ft^3/s (0.31 m^3/s) Aug. 28, 1949, Aug. 30, 1953.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,300 ft^3/s (93.5 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 14	1015	3930	111	8.98	2.737	Apr. 14	0945	*4770	135	*9.91	3.021
Mar. 31	0945	4130	117	9.20	2.804						

Minimum discharge, 21 ft^3/s (0.59 m^3/s) July 14; minimum daily, 25 ft^3/s (0.71 m^3/s) July 24, 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	127	460	213	78	64	110	1720	295	53	66	41	46
2	108	284	190	77	65	94	692	382	69	38	41	383
3	104	237	145	76	64	86	698	395	65	45	36	282
4	100	357	140	80	64	82	593	270	53	42	30	128
5	83	354	140	80	66	90	503	232	55	58	27	88
6	87	343	180	80	65	130	734	240	67	50	50	64
7	79	366	224	82	64	120	429	206	80	27	57	70
8	418	294	637	78	63	110	331	173	147	47	39	61
9	1360	226	354	76	62	105	271	152	139	35	32	40
10	1620	203	246	75	60	200	258	138	93	38	48	39
11	526	197	220	74	61	450	278	132	69	44	86	47
12	334	179	190	72	65	800	764	123	84	47	66	59
13	266	173	165	73	72	1200	1410	164	83	32	57	132
14	285	171	160	74	73	3000	3520	145	66	27	44	1190
15	318	175	160	74	72	2090	892	123	65	33	141	714
16	279	177	145	73	69	1560	572	103	57	32	69	260
17	216	175	135	73	67	1440	580	104	49	31	1200	174
18	183	185	130	74	66	657	677	96	50	76	424	170
19	171	203	120	74	65	461	719	82	60	55	164	138
20	183	240	115	73	66	373	726	87	78	38	103	142
21	1270	171	110	73	68	347	753	74	88	32	81	1680
22	693	171	105	73	63	298	804	66	91	27	77	1280
23	393	168	105	73	62	269	1130	67	76	26	127	376
24	290	165	100	73	63	238	982	63	63	25	129	221
25	267	162	98	76	65	197	1200	66	58	29	232	167
26	291	222	95	76	62	200	803	61	239	44	115	403
27	234	1170	90	74	70	205	578	55	130	36	86	1620
28	200	1070	85	72	80	369	482	62	80	28	55	785
29	193	558	84	69	---	1380	384	125	69	25	56	772
30	215	330	82	68	---	2380	342	85	99	30	55	545
31	324	---	80	67	---	3820	---	65	---	57	47	---
TOTAL	11217	9186	5043	2310	1846	22861	23825	4431	2475	1220	3815	12076
MEAN	362	306	163	74.5	65.9	737	794	143	82.5	39.4	123	403
MAX	1620	1170	637	82	80	3820	3520	395	239	76	1200	1680
MIN	79	162	80	67	60	82	258	55	49	25	27	39
CFSM	2.76	2.34	1.24	.57	.50	5.63	6.06	1.09	.63	.30	.94	3.08
IN.	3.19	2.61	1.43	.66	.52	6.49	6.77	1.26	.70	.35	1.08	3.43

CAL YR 1976 TOTAL 128056 MEAN 350 MAX 3740 MIN 55 CFSM 2.67 IN 36.36
WTR YR 1977 TOTAL 100305 MEAN 275 MAX 3820 MIN 25 CFSM 2.10 IN 28.48

04293500 MISSISQUOI RIVER NEAR RICHFORD, VT

LOCATION.--Lat 44°57'30", long 72°41'55", Franklin County, Hydrologic Unit 02010007, on left bank 1.7 mi (2.7 km) upstream from Trout River, 3 mi (4.8 km) south of Richford, and 3.8 mi (6.1 km) downstream from North Branch.
DRAINAGE AREA.--479 mi^2 (1,241 km^2).
PERIOD OF RECORD.--Discharge: July 1911 to September 1923, October 1928 to current year. Monthly discharge only for some periods, published in WSP 1307.
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. Altitude of gage is 410 ft (125 m), from topographic map. Prior to Aug. 1, 1915, nonrecording gage at site 0.2 mi (0.3 km) downstream at datum 4.35 ft (1.326 m) 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 (1.40 m) lower.
REMARKS.--Records good except those for winter period, which are fair. Diurnal fluctuation at low flow prior to 1934. Several observations of water temperature were made during the year.
AVERAGE DISCHARGE.--61 years, 922 ft^3/s (26.11 m^3/s), 26.14 in/yr (664 mm/yr).
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,200 ft^3/s (487 m^3/s) May 4, 1940, gage height, 15.15 ft (4.618 m), from rating curve extended above 9,300 ft^3/s (263 m^3/s) on basis of computation of peak flow over dam at gage height 14.70 ft (4.481 m), slope-area measurement at gage height 12.90 ft (3.932 m), and study of discharge per foot of width at measuring section; maximum gage height, 18.92 ft (5.767 m) Mar. 15, 1946, ice jam; minimum discharge observed, 8 ft^3/s (0.23 m^3/s) July 14, 1911.
EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1830, 45,000 ft^3/s (1,270 m^3/s) during flood of November 1927, gage height, 23.1 ft (7.04 m), from floodmarks, from rating curve extended above 9,300 ft^3/s (263 m^3/s) as explained above.
EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 7,600 ft^3/s (215 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 14 or 15	Unknown	ice jam		a*16.00	4.877	Mar. 31	2030	*9520	270	11.33	3.453

a From floodmarks.

Minimum discharge, 69 ft^3/s (1.15 m^3/s) Aug. 5, 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	656	1410	1200	320	250	430	8400	979	159	328	110	117
2	525	1310	900	310	255	420	4860	1020	147	231	187	684
3	460	1050	700	300	250	410	3210	1230	154	171	117	899
4	400	1170	800	320	250	360	2810	984	145	155	88	464
5	359	1290	950	320	250	420	2400	822	147	148	73	276
6	317	1310	1200	320	270	480	2860	790	164	145	145	218
7	292	1450	1500	320	280	470	2240	732	216	129	137	170
8	734	1400	1900	310	265	460	1640	628	681	98	123	145
9	2860	1140	1500	305	270	500	1340	545	592	111	96	134
10	4260	931	1000	300	270	800	1200	485	405	99	103	103
11	3330	851	850	300	270	1200	1140	454	290	91	244	93
12	1770	794	750	290	290	2000	1650	418	240	92	233	96
13	1210	747	650	285	310	3000	2870	446	257	120	179	161
14	1020	714	600	295	320	4500	5540	451	224	136	140	1860
15	1050	707	560	290	315	6000	5200	394	181	107	123	2880
16	993	707	540	285	300	5000	2690	341	156	119	200	1370
17	815	701	520	285	290	4000	1900	309	142	104	520	739
18	688	720	510	280	280	3000	1890	294	153	136	1620	630
19	622	781	500	280	275	2500	1920	267	174	155	613	644
20	605	962	490	285	265	2000	1890	232	382	124	326	607
21	2750	788	500	290	270	1600	1850	222	405	94	239	1900
22	3290	727	460	280	265	1400	1940	197	526	85	198	3590
23	2120	675	450	280	260	1200	2490	173	440	82	239	2340
24	1370	707	440	290	250	1050	2300	170	345	80	311	1010
25	1110	644	440	300	260	1030	2830	161	278	79	412	689
26	1040	767	490	300	275	939	2670	153	396	84	393	1040
27	954	3290	410	280	300	954	1960	187	615	82	251	4130
28	808	3580	370	275	390	1420	1600	188	420	81	192	3940
29	707	2780	380	270	---	3780	1440	283	324	79	147	5120
30	663	1970	360	270	---	5920	1150	279	362	78	134	3520
31	774	---	340	260	---	9050	---	200	---	95	115	---
TOTAL	38552	36073	22260	9095	7795	66293	77880	14034	9120	3718	8008	39569
MEAN	1244	1202	718	293	278	2138	2596	453	304	120	258	1319
MAX	4260	3580	1900	320	390	9050	8400	1230	681	328	1620	5120
MIN	292	644	340	260	250	360	1140	153	142	78	73	93
CFSM	2.60	2.51	1.50	.61	.58	4.46	5.42	.95	.64	.25	.54	2.75
IN.	2.99	2.80	1.73	.71	.61	5.15	6.05	1.09	.71	.29	.62	3.07

CAL YR 1976 TOTAL 457718 MEAN 1251 MAX 11900 MIN 186 CFSM 2.61 IN 35.55
WTR YR 1977 TOTAL 332397 MEAN 911 MAX 9050 MIN 73 CFSM 1.90 IN 25.81

NOTE.--No gage-height record Mar. 14, 15.

04294500 LAKE CHAMPLAIN AT BURLINGTON, VT

LOCATION.--Lat 44°28'52", long 73°13'27", Chittenden County, Hydrologic Unit 02010003, 50 ft (15 m) south of Gulf Oil Co. dock at Burlington, 0.1 mi (0.2 km) north of Burlington Water Department pumping station, and 0.5 mi (0.8 km) 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 (28.304 m) above mean sea level. Prior to July 20, 1937, nonrecording gage at site 0.7 mi (1.1 km) south, and July 20, 1937, to Sept. 7, 1939, nonrecording gage at site 0.1 mi (0.2 km) south, both at present datum.

REMARKS.--Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 8.80 ft (2.682 m) Apr. 4, 1976; minimum observed, -0.25 ft (-0.076 m) Dec. 4, 1908.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 7.20 ft (2.195 m) Apr. 4, affected by seiche; minimum, 1.75 ft (0.533 m) Aug. 14.

MEAN GAGE HEIGHT, IN FEET,, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.75	4.54	3.59	2.90	2.43	2.21	6.95	6.75	3.95	2.68	1.90	2.08
2	3.74	4.53	3.53	2.88	2.42	2.21	7.06	6.68	3.88	2.66	1.89	2.14
3	3.69	4.46	3.56	2.83	2.41	2.23	7.07	6.64	3.85	2.63	1.86	2.18
4	3.66	4.51	3.51	2.81	2.41	2.24	7.16	6.56	3.76	2.57	1.84	2.18
5	3.58	4.53	3.48	2.79	2.41	2.30	7.09	6.47	3.67	2.55	1.84	2.14
6	3.51	4.56	3.42	2.74	2.39	2.33	7.14	6.35	3.63	2.52	1.86	2.12
7	3.48	4.58	3.44	2.73	2.37	2.36	7.15	6.26	3.56	2.50	1.86	2.11
8	3.52	4.59	3.54	2.71	2.36	2.39	7.11	6.17	3.49	2.46	1.85	2.09
9	3.65	4.57	3.57	2.67	2.34	2.42	7.06	6.13	3.46	2.43	1.83	2.02
10	3.97	4.56	3.55	2.69	2.34	2.52	7.01	6.02	3.41	2.39	1.82	1.90
11	4.19	4.51	3.56	2.69	2.31	2.76	6.85	5.87	3.37	2.36	1.84	1.93
12	4.26	4.47	3.55	2.69	2.30	3.05	6.78	5.76	3.30	2.30	1.83	1.92
13	4.20	4.41	3.56	2.68	2.29	3.39	6.73	5.69	3.26	2.29	1.81	1.93
14	4.27	4.36	3.43	2.69	2.28	4.11	6.80	5.60	3.21	2.28	1.81	2.04
15	4.24	4.34	3.46	2.68	2.27	5.08	6.86	5.50	3.15	2.28	1.81	2.12
16	4.24	4.29	3.45	2.67	2.27	5.56	6.84	5.38	3.08	2.26	1.82	2.17
17	4.24	4.20	3.43	2.64	2.25	5.95	6.80	5.28	3.05	2.23	2.02	2.21
18	4.20	4.14	3.41	2.62	2.22	6.16	6.73	5.20	3.02	2.23	2.08	2.25
19	4.16	4.12	3.36	2.61	2.21	6.24	6.63	5.12	2.97	2.20	2.13	2.29
20	4.14	4.07	3.31	2.61	2.21	6.26	6.58	5.02	2.95	2.18	2.15	2.33
21	4.25	3.98	3.30	2.60	2.19	6.27	6.49	4.92	2.95	2.18	2.14	2.40
22	4.41	3.94	3.27	2.58	2.16	6.29	6.43	4.81	2.92	2.14	2.10	2.51
23	4.50	3.87	3.22	2.57	2.16	6.34	6.39	4.73	2.88	2.13	2.10	2.53
24	4.53	3.83	3.20	2.56	2.14	6.27	6.54	4.63	2.83	2.08	2.16	2.62
25	4.57	3.78	3.13	2.55	2.20	6.23	6.82	4.57	2.77	2.03	2.19	2.68
26	4.61	3.66	3.12	2.53	2.20	6.19	7.01	4.46	2.80	2.01	2.19	2.70
27	4.59	3.64	3.08	2.52	2.19	6.12	7.03	4.37	2.76	1.99	2.16	2.77
28	4.55	3.65	3.06	2.50	2.20	6.07	6.97	4.30	2.76	1.95	2.14	2.93
29	4.51	3.71	3.02	2.47	---	6.14	6.93	4.20	2.74	1.87	2.17	3.01
30	4.50	3.68	2.99	2.46	---	6.33	6.86	4.13	2.72	1.87	2.18	3.15
31	4.51	---	2.97	2.41	---	6.63	---	4.04	---	1.92	2.15	---
MEAN	4.14	4.20	3.36	2.65	2.28	4.54	6.86	5.41	3.21	2.26	1.98	2.32
MAX	4.61	4.59	3.59	2.90	2.43	6.63	7.16	6.75	3.95	2.68	2.19	3.15
MIN	3.48	3.64	2.97	2.41	2.14	2.21	6.39	4.04	2.72	1.87	1.81	1.90

CAL YR 1976 MEAN 4.81 MAX 8.76 MIN 2.97
WTR YR 1977 MEAN 3.60 MAX 7.16 MIN 1.81

04295000 RICHELIEU RIVER (LAKE CHAMPLAIN) AT ROUSES POINT, NY
(National stream-quality accounting network station)
(National pesticide 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 (1.6 km) south of Fort Montgomery ruins. Water-quality sampling site at stage station.

DRAINAGE AREA.--8,277 mi^2 (21,437 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1863 to December 1870 (maximum and minimum monthly gage heights at St. Johns, Quebec, published in WSP 97) and March 1871 to current year (daily gage heights prior to October 1970, elevations thereafter: those for 1871-1907 published in WSP 894). Gage heights prior to Oct. 1, 1925, published as "Richelieu River at Fort Montgomery, Rouses Point." 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 Survey of Canada annual reports.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level. 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 (28.346 m) higher.

REMARKS.--Area of lake surface about 490 mi^2 (1,269 km^2). Total volume below 92.5 ft (28.19 m) elevation, reported by Lake Champlain Studies Center, 902.2 bil ft^3 (25,600 hm^3).

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 101.80 ft (31.029 m) Mar. 30, 1903; minimum observed, 92.17 ft (28.093 m) Oct. 23, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation known since at least 1827, 102.1 ft (31.12 m) 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, 100.47 ft (30.62 m) Apr. 2; minimum, 94.55 ft (28.82 m) Aug. 9.

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96.63	97.27	96.69	95.78	95.30	95.06	99.71	99.71	96.92	95.67	94.80	95.15
2	96.61	97.38	96.59	95.73	95.28	95.08	100.11	99.57	96.72	95.55	94.77	95.00
3	96.54	97.51	96.39	95.70	95.28	95.07	100.00	99.43	96.63	95.50	94.80	95.01
4	96.49	97.36	96.37	95.65	95.25	95.09	99.98	99.41	96.59	95.48	94.80	95.00
5	96.51	97.36	96.31	95.62	95.22	95.15	100.13	99.36	96.49	95.40	94.76	95.07
6	96.50	97.46	96.34	95.60	95.21	95.18	100.02	99.25	96.40	95.38	94.74	94.98
7	96.35	97.40	96.24	95.56	95.20	95.21	100.00	99.02	96.36	95.32	94.72	94.92
8	96.30	97.39	96.31	95.54	95.19	95.25	99.95	98.96	96.35	95.37	94.72	94.92
9	96.38	97.46	96.37	95.50	95.18	95.29	99.87	98.73	96.29	95.29	94.65	95.15
10	96.83	97.39	96.50	95.50	95.15	95.39	99.82	98.71	96.16	95.25	94.70	95.06
11	97.00	97.34	96.39	95.56	95.16	95.61	99.95	98.71	96.11	95.27	94.70	94.75
12	97.25	97.31	96.44	95.53	95.13	95.89	99.62	98.65	96.13	95.35	94.70	94.80
13	97.34	97.28	96.31	95.52	95.13	96.25	99.60	98.44	96.08	95.21	94.74	94.86
14	97.10	97.23	96.56	95.51	95.14	96.95	99.55	98.37	96.05	95.14	94.71	94.84
15	97.25	97.15	96.33	95.50	95.10	97.85	99.65	98.33	95.97	95.15	94.67	94.97
16	97.09	97.13	96.27	95.49	95.08	98.42	99.63	98.27	95.94	95.13	94.70	95.14
17	97.06	97.16	96.24	95.47	95.09	98.73	99.61	98.11	96.03	95.15	94.84	95.12
18	97.01	97.02	96.19	95.48	95.08	98.93	99.54	98.02	95.87	95.09	94.96	95.12
19	97.02	96.95	96.22	95.48	95.05	99.03	99.47	97.95	95.87	95.11	95.01	95.07
20	96.99	96.83	96.17	95.46	95.02	99.09	99.48	97.87	95.82	95.10	95.01	95.13
21	97.13	96.85	96.09	95.43	95.03	99.10	99.36	97.77	95.77	95.02	95.05	95.26
22	97.36	96.78	96.14	95.41	95.03	99.06	99.23	97.69	95.73	94.85	95.19	95.33
23	97.34	96.70	96.13	95.40	94.98	99.07	99.20	97.60	95.73	94.92	95.10	95.38
24	97.41	96.67	96.04	95.39	94.99	99.08	99.39	97.51	95.73	94.98	95.02	95.45
25	97.33	96.66	96.06	95.38	95.04	99.03	99.66	97.36	95.74	95.01	95.01	95.57
26	97.29	96.77	95.97	95.37	95.05	98.98	99.85	97.28	95.66	94.85	95.09	95.62
27	97.40	96.61	95.94	95.37	95.06	98.94	99.92	97.19	95.66	94.81	95.18	95.66
28	97.49	96.47	95.89	95.35	95.05	98.92	99.83	97.03	95.70	94.87	95.13	95.77
29	97.43	96.51	95.86	95.37	---	99.01	99.74	97.03	95.74	94.96	95.09	95.84
30	97.40	96.65	95.84	95.35	---	99.17	99.73	96.98	95.64	94.86	94.97	96.01
31	97.31	---	95.78	95.35	---	99.42	---	96.90	---	94.77	95.06	---
MEAN	97.00	97.07	96.22	95.50	95.12	97.36	99.72	98.23	96.06	95.16	94.88	95.20
MAX	97.49	97.51	96.69	95.78	95.30	99.42	100.13	99.71	96.92	95.67	95.19	96.01
MIN	96.30	96.47	95.78	95.35	94.98	95.06	99.20	96.90	95.64	94.77	94.65	94.75

CAL YR 1976 MEAN 97.70 MAX 101.51 MIN 95.78
WTR YR 1977 MEAN 96.47 MAX 100.13 MIN 94.65

04295000 RICHELIEU RIVER (LAKE CHAMPLAIN) AT ROUSES POINT, NY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969-72, 1974 to current year.

COOPERATION.--Pesticide samples were collected by the U.S. Geological Survey and were analyzed by the Environmental Protection Agency.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	PERCENT SATURATION	FECAL COLIFORM .7UM-MF (COL./100 ML)	STREPTOCOCCI (COLONIES PER 100 ML)	FECAL STREPTOCOCCI KF AGAR (COL. PER 100 ML)
OCT										
12...	1030	150	7.4	11.0	1	10.0	92	106	41	--
NOV										
09...	1100	144	7.4	5.0	5	12.2	97	<1	<1	--
APR										
26...	1030	134	7.5	7.0	1	10.2	85	B1	--	B1
MAY										
17...	1030	160	7.5	11.5	2	8.8	82	B1	--	B1
JUN										
08...	1000	140	6.9	12.0	1	10.9	102	B2	--	B1
JUL										
13...	0900	147	7.5	21.0	1	7.0	78	B2	--	B2
AUG										
09...	1030	138	7.5	23.0	0	8.8	104	0	--	B1
SEP										
06...	1300	160	7.5	21.0	1	8.4	94	B1	--	B1

DATE	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)
OCT										
12...	53	8	16	3.2	4.3	1.2	55	0	45	10
NOV										
09...	63	11	18	4.3	4.6	1.1	63	0	52	11
APR										
26...	56	13	16	3.9	4.7	1.2	52	0	43	10
MAY										
17...	80	39	22	6.1	5.0	1.3	50	0	41	13
JUN										
08...	53	14	15	3.7	4.9	1.2	47	0	39	12
JUL										
13...	58	14	17	3.8	4.9	1.2	54	0	44	11
AUG										
09...	56	8	16	3.9	5.1	1.6	58	0	48	12
SEP										
06...	59	19	17	4.0	4.8	1.4	49	0	40	13

DATE	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT										
12...	6.7	.1	4.4	90	73	.12	.30	.42	.04	3.4
NOV										
09...	7.5	.1	.3	82	78	.17	.30	.47	.02	--
APR										
26...	9.4	.1	.5	76	71	.24	.40	.64	.07	3.3
MAY										
17...	6.9	.1	.4	72	79	.19	.35	.54	.00	--
JUN										
08...	6.7	.0	.3	89	67	.17	.32	.49	.01	--
JUL										
13...	6.9	.0	.7	92	72	.07	.53	.60	.01	3.1
AUG										
09...	7.0	.0	1.1	94	75	.00	.46	.46	.01	--
SEP										
06...	7.2	.1	1.3	99	73	.03	.21	.24	.01	--

B, NON-IDEAL COLONY COUNT.

04295000 RICHELIEU RIVER (LAKE CHAMPLAIN) AT ROUSES POINT, NY--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)	DIS-SOLVED COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)
OCT												
12...	1030	0	0	1	2	10	<10	0	0	10	0	50
APR												
26...	1030	0	0	1	1	<10	<10	0	0	0	0	60
JUL												
13...	0900	2	2	0	0	20	1	0	0	3	0	110

DATE	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
OCT											
12...	30	3	6	0	10	<.5	<.5	0	0	10	10
APR											
26...	20	2	1	0	0	.5	.5	1	1	0	0
JUL											
13...	10	9	5	10	0	.0	.0	0	0	20	10

DATE	TIME	TOTAL ATRA-ZINE (UG/L)	TOTAL ALDRIN (UG/L)	TOTAL CHLOR-DANE (UG/L)	TOTAL DDD (UG/L)	TOTAL DDE (UG/L)	TOTAL DDT (UG/L)	TOTAL DI-AZINON (UG/L)
NOV								
09...	1100	ND	ND	ND	ND	ND	ND	ND
APR								
26...	1030	ND	ND	ND	ND	ND	ND	ND
AUG								
09...	1030	--	ND	ND	ND	ND	ND	--

DATE	TOTAL DI-ELDRIN (UG/L)	TOTAL ENDRIN (UG/L)	TOTAL ETHION (UG/L)	TOTAL HEPTA-CHLOR (UG/L)	TOTAL HEPTA-CHLOR EPOXIDE (UG/L)	TOTAL LINDANE (UG/L)	TOTAL MALA-THION (UG/L)	TOTAL METH-OXY-CHLOR (UG/L)	TOTAL METHYL PARA-THION (UG/L)
NOV									
09...	ND	ND	ND	ND	ND	ND	ND	ND	ND
APR									
26...	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG									
09...	ND	ND	--	ND	ND	.01	--	ND	--

DATE	TOTAL METHYL TRI-THION (UG/L)	TOTAL PARA-THION (UG/L)	TOTAL TOX-APHENE (UG/L)	TOTAL TRI-THION (UG/L)	TOTAL 2,4-D (UG/L)	TOTAL 2,4,5-T (UG/L)	SIMA-ZINE TOTAL COUL-SON COND. (UG/L)	TOTAL SILVEX (UG/L)
NOV								
09...	ND	ND	ND	ND	ND	ND	ND	ND
APR								
26...	ND	ND	ND	ND	ND	ND	ND	ND
AUG								
09...	--	--	ND	--	ND	ND	--	ND

ND Material specifically analyzed for, but not detected.

04295000 RICHELIEU RIVER (LAKE CHAMPLAIN) AT ROUSES POINT, NY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

DATE	OCT 12,76	NOV 9,76	MAY 17,77	JUN 8,77	JUL 13,77	AUG 9,77	SEP 6,77
TIME	1030	1100	1030	1000	0900	1030	1300
TOTAL CELLS/ML	2300	540	1600	280	260	590	230
DIVERSITY: DIVISION	1.0	0.4	0.1	1.5	1.4	0.4	0.6
.CLASS	1.0	0.4	0.1	1.5	1.4	0.4	0.6
..ORDER	1.6	1.1	1.0	2.0	1.6	0.5	0.7
...FAMILY	1.9	1.1	1.2	2.3	2.5	0.5	0.7
....GENUS	1.9	1.3	1.7	2.5	2.6	0.5	0.7

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)														
.CHLOROPHYCEAE														
..CHLOROCOCCALES														
...OOCYSTACEAE														
....ANKISTRODESMUS	--	-	--	-	18	1	3	1	--	-	--	-	--	-
....DICTYOSPHAERIUM	--	-	--	-	--	-	--	-	--	-	16	3	--	-
....KIRCHNERIELLA	--	-	--	-	--	-	18	6	--	-	--	-	--	-
....TETRAEDRON	--	-	--	-	--	-	--	-	--	-	--	-	4	2
...SCENEDESMACEAE														
....CRUCIGENIA	--	-	--	-	--	-	--	-	20	8	--	-	--	-
....SCENEDESMUS	--	-	43	8	--	-	18	6	--	-	--	-	--	-
..VOLVOCALES														
...CHLAMYDOMONADACEAE														
....CHLAMYDOMONAS	--	-	--	-	--	-	--	-	--	-	12	2	7	3
..ZYGNEMATALES														
...DESMIDIACEAE														
....COSMARIUM	--	-	--	-	--	-	--	-	5	2	--	-	--	-
CHRYSOPHYTA														
.BACILLARIOPHYCEAE														
..CENTRALES														
...COSCINODISCACEAE														
....CYCLOTELLA	29	1	390#	72	68	4	--	-	5	2	--	-	--	-
....MELOSIRA	--	-	--	-	1000#	64	64#	23	--	-	--	-	--	-
....STEPHANODISCUS	58	3	11	2	18	1	*	0	--	-	8	1	--	-
..PENNALES														
...ACHNANTHACEAE														
....ACHNANTHES	--	-	87#	16	--	-	--	-	--	-	--	-	4	2
....COCCONEIS	--	-	--	-	--	-	--	-	--	-	8	1	11	5
...CYMBELLACEAE														
....CYMBELLA	--	-	--	-	*	0	--	-	10	4	--	-	--	-
...DIATOMACEAE														
....DIATOMA	--	-	--	-	--	-	12	4	--	-	--	-	--	-
...FRAGILARIACEAE														
....ASTERIONELLA	--	-	--	-	320#	20	64#	23	20	8	--	-	--	-
....FRAGILARIA	140	6	--	-	54	3	6	2	--	-	--	-	--	-
...GOMPHONEMATACEAE														
....GOMPHONEMA	580#	26	--	-	--	-	--	-	--	-	--	-	--	-
...NAVICULACEAE														
....GYROSIGMA	--	-	--	-	--	-	--	-	5	2	--	-	--	-
....NAVICULA	29	1	--	-	--	-	--	-	5	2	--	-	--	-
...NITZSCHIACEAE														
....NITZSCHIA	--	-	11	2	*	0	--	-	5	2	--	-	--	-
...TABELLARIACEAE														
....TABELLARIA	--	-	--	-	91	6	--	-	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)														
.CYANOPHYCEAE														
..CHROCOCCALES														
...CHROCOCCACEAE														
....ANACYSTIS	1100#	50	--	-	--	-	--	-	--	-	540#	93	200#	89
..HORMOGONALES														
...NOSTOCACEAE														
....ANABAENA	--	-	--	-	--	-	--	-	61#	24	--	-	--	-
....CYLINDROSPERMUM	290	13	--	-	--	-	--	-	--	-	--	-	--	-
...OSCILLATORIACEAE														
....OSCILLATORIA	--	-	--	-	--	-	95#	33	--	-	--	-	--	-
....PHORMIMIDIUM	--	-	--	-	--	-	--	-	110#	41	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)														
.EUGLENOPHYCEAE														
..EUGLENALES														
...EUGLENACEAE														
....TRACHELOMONAS	--	-	--	-	--	-	--	-	15	6	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)														
.DINOPHYCEAE														
..PERIDINIALES														
...GLENODINIACEAE														
....GLENODINIUM	--	-	--	-	--	-	3	1	--	-	--	-	--	-
...PERIDINIACEAE														
....PERIDINIUM	--	-	--	-	*	0	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM: EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED: LESS THAN 1/2%

04295000 RICHELIEU RIVER (LAKE CHAMPLAIN) AT ROUSES POINT, NY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

DATE	OCT 12,76		NOV 9,76		MAY 17,77		JUN 8,77		JUL 13,77		AUG 9,77	
TIME	1030		1100		1030		1000		0900		1030	
TOTAL CELLS/ML	2300		540		1600		280		260		590	
DIVERSITY: DIVISION	1.0		0.4		0.1		1.5		1.4		0.4	
.CLASS	1.0		0.4		0.1		1.5		1.4		0.4	
..ORDER	1.6		1.1		1.0		2.0		1.6		0.5	
...FAMILY	1.9		1.1		1.2		2.3		2.5		0.5	
....GENUS	1.9		1.3		1.7		2.5		2.6		0.5	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)												
.CHLOROPHYCEAE												
..CHLOROCOCCALES												
...OOCYSTACEAE												
....ANKISTRODESMUS	--	-	--	-	18	1	3	1	--	-	--	-
....DICTYOSPHAERIUM	--	-	--	-	--	-	--	-	--	-	16	3
....KIRCHNERIELLA	--	-	--	-	--	-	18	6	--	-	--	-
...SCENEDESMACEAE												
....CRUCIGENIA	--	-	--	-	--	-	--	-	20	8	--	-
....SCENEDESMUS	--	-	43	8	--	-	18	6	--	-	--	-
..VOLVOCALES												
...CHLAMYDOMONADACEAE												
....CHLAMYDOMONAS	--	-	--	-	--	-	--	-	--	-	12	2
..ZYGNEMATALES												
...DESMIDIACEAE												
....COSMARIUM	--	-	--	-	--	-	--	-	5	2	--	-
CHRYSOPHYTA												
.BACILLARIOPHYCEAE												
..CENTRALES												
...COSCINODISCACEAE												
....CYCLOTELLA	29	1	390#	72	68	4	--	-	5	2	--	-
....MELOSIRA	--	-	--	-	1000#	64	64#	23	--	-	--	-
....STEPHANODISCUS	58	3	11	2	18	1	*	0	--	-	8	1
..PENNALES												
...ACHNANTHACEAE												
....ACHNANTHES	--	-	87#	16	--	-	--	-	--	-	--	-
....COCCONEIS	--	-	--	-	--	-	--	-	--	-	8	1
...CYMBELLACEAE												
....CYMBELLA	--	-	--	-	*	0	--	-	10	4	--	-
...DIATOMACEAE												
....DIATOMA	--	-	--	-	--	-	12	4	--	-	--	-
...FRAGILARIACEAE												
....ASTERIONELLA	--	-	--	-	320#	20	64#	23	20	8	--	-
....FRAGILARIA	140	6	--	-	54	3	6	2	--	-	--	-
...GOMPHONEMATACEAE												
....GOMPHONEMA	580#	26	--	-	--	-	--	-	--	-	--	-
...NAVICULACEAE												
....GYROSIGMA	--	-	--	-	--	-	--	-	5	2	--	-
....NAVICULA	29	1	--	-	--	-	--	-	5	2	--	-
...NITZSCHIACEAE												
....NITZSCHIA	--	-	11	2	*	0	--	-	5	2	--	-
...TABELLARIACEAE												
....TABELLARIA	--	-	--	-	91	6	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)												
.CYANOPHYCEAE												
..CHROCOCCALES												
...CHROCOCCACEAE												
....ANACYSTIS	1100#	50	--	-	--	-	--	-	--	-	540#	93
..HORMOGONALES												
...NOSTOCACEAE												
....ANABAENA	--	-	--	-	--	-	--	-	61#	24	--	-
....CYLINDROSPERMUM	290	13	--	-	--	-	--	-	--	-	--	-
...OSCILLATORIACEAE												
....OSCILLATORIA	--	-	--	-	--	-	95#	33	--	-	--	-
....PHORMIMIDIUM	--	-	--	-	--	-	--	-	110#	41	--	-
EUGLENOPHYTA (EUGLENOIDS)												
.EUGLENOPHYCEAE												
..EUGLENALES												
...EUGLENACEAE												
....TRACHELOMONAS	--	-	--	-	--	-	--	-	15	6	--	-
PYRRHOPHYTA (FIRE ALGAE)												
.DINOPHYCEAE												
..PERIDINIALES												
...GLENODINIACEAE												
....GLENODINIUM	--	-	--	-	--	-	3	1	--	-	--	-
...PERIDINIACEAE												
....PERIDINIUM	--	-	--	-	*	0	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM: EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED: LESS THAN 1/2%

04295000 RICHELIEU RIVER (LAKE CHAMPLAIN) AT ROUSES POINT, NY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, SEPTEMBER 1976 TO AUGUST 1977

PERIPHYTON

Dates of exposure	Length of exposure (days)	Biomass (g/m^2) Dry weight	Biomass (g/m^2) Ash weight	Chlorophyll a (mg/m^2)	Chlorophyll b (mg/m^2)	Biomass pigment ratio	Sampling method
Sept. 14 to Oct. 12	28	13.5	11.4	0.434	0.404	4961	Polyethylene strip
June 9 to July 13	27	1.87	1.05	.568	.123	1444	Polyethylene strip
July 13 to Aug. 9	27	2.52	1.18	.035	.111	38290	Polyethylene strip

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	SUS-PENDED SEDI-MENT (MG/L)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM
OCT			
12...	1030	2	70
NOV			
19...	1045	1	100
APR			
26...	1030	2	--
MAY			
17...	1030	7	--
JUN			
08...	1000	3	73
JUL			
13...	0900	6	54
AUG			
09...	1030	2	33

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 (205.130 m) above mean sea level. Prior to July 21, 1934, nonrecording gage on highway bridge 0.1 mi (0.2 km) 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 (3.938 m) Apr. 20, 1933; minimum recorded, 6.48 ft (1.975 m) 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 not determined; maximum daily, 9.95 ft (3.033 m) Sept. 30; minimum gage height not determined; minimum daily, 6.63 ft (2.021 m) Mar. 2, 3.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.50	9.30	9.13	8.60	7.35	6.67	9.42	9.17	8.48	8.18	7.84	8.10
2	8.52	9.27	9.12	8.58	7.25	6.63	9.51	9.17	8.47	8.21	7.79	8.09
3	8.55	9.18	9.09	8.56	7.20	6.63	9.58	9.17	8.42	8.22	7.73	8.09
4	8.55	9.23	9.05	8.54	7.15	6.65	9.61	9.12	8.40	8.19	7.65	8.12
5	8.52	9.27	9.00	8.50	7.13	6.68	9.58	9.07	8.38	8.22	7.59	8.14
6	8.48	9.28	8.98	8.48	7.10	6.68	9.58	9.01	8.37	8.15	7.58	8.14
7	8.42	9.31	8.98	8.37	7.08	6.66	9.54	9.00	8.34	8.13	7.59	8.14
8	8.48	9.35	9.02	8.32	7.05	6.65	9.45	8.97	8.30	8.05	7.58	8.14
9	8.65	9.31	9.05	8.25	7.00	6.65	9.37	9.01	8.29	8.07	7.55	8.18
10	8.90	9.26	9.07	8.24	6.99	6.68	9.24	9.02	8.30	8.08	7.48	8.18
11	9.08	9.24	9.06	8.22	6.95	6.75	9.20	8.94	8.33	8.05	7.48	8.13
12	9.13	9.18	9.05	8.18	6.91	6.83	9.06	8.88	8.32	8.02	7.44	8.11
13	9.13	9.11	9.04	8.15	6.89	7.06	8.98	8.93	8.24	8.06	7.38	8.15
14	9.18	9.09	9.02	8.10	6.87	7.44	9.10	8.88	8.20	8.09	7.39	8.30
15	9.16	9.09	8.97	8.03	6.85	7.94	9.16	8.81	8.17	8.09	7.40	8.44
16	9.18	9.06	8.92	8.00	6.85	8.36	9.17	8.76	8.11	8.09	7.36	8.54
17	9.16	9.01	8.88	7.95	6.85	8.72	9.15	8.73	8.05	8.09	7.42	8.60
18	9.15	8.99	8.85	7.90	6.84	8.91	9.09	8.73	8.07	8.09	7.58	8.62
19	9.08	8.97	8.80	7.85	6.82	8.95	9.02	8.68	8.10	8.09	7.67	8.62
20	9.08	8.99	8.76	7.80	6.80	8.97	8.94	8.63	8.13	8.09	7.74	8.61
21	9.20	8.93	8.75	7.75	6.75	8.95	8.87	8.62	8.14	8.05	7.75	8.75
22	9.28	8.92	8.74	7.70	6.74	8.91	8.86	8.63	8.15	7.97	7.78	9.00
23	9.37	8.89	8.73	7.63	6.70	8.88	8.87	8.62	8.13	7.95	7.82	9.10
24	9.36	8.86	8.70	7.58	6.70	8.80	8.91	8.63	8.11	7.95	7.87	9.15
25	9.38	8.83	8.69	7.52	6.69	8.69	9.03	8.66	8.13	7.94	7.95	9.25
26	9.46	8.77	8.68	7.49	6.68	8.61	9.14	8.64	8.22	7.90	8.00	9.30
27	9.40	8.86	8.66	7.45	6.68	8.52	9.20	8.61	8.24	7.91	8.05	9.55
28	9.31	8.96	8.65	7.42	6.68	8.46	9.25	8.60	8.21	7.85	8.08	9.80
29	9.27	9.06	8.65	7.40	---	8.53	9.27	8.58	8.19	7.81	8.10	9.90
30	9.23	9.13	8.64	7.40	---	8.74	9.23	8.54	8.23	7.83	8.08	9.95
31	9.25	---	8.62	7.38	---	9.10	---	8.50	---	7.85	8.10	---
MEAN	9.01	9.09	8.88	7.98	6.91	7.83	9.21	8.82	8.24	8.04	7.70	8.64
MAX	9.46	9.35	9.13	8.60	7.35	9.10	9.61	9.17	8.48	8.22	8.10	9.95
MIN	8.42	8.77	8.62	7.38	6.68	6.63	8.86	8.50	8.05	7.81	7.36	8.09

CAL YR 1976 MEAN 8.86 MAX 11.71 MIN 7.59
WTR YR 1977 MEAN 8.37 MAX 9.95 MIN 6.63

NOTE.--No gage-height record Oct. 1-6, Nov. 30 to Mar. 1, July 14-26, Aug. 24 to Sept. 30.

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 (5 m) downstream from highway bridge, 800 ft (250 m) upstream from Stony Brook, and 0.4 mi (0.6 km) northwest of Coventry.

DRAINAGE AREA.--122 mi^2 (316 km^2).

PERIOD OF RECORD.--Discharge: October 1951 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 725 ft (221 m), from topographic map.

REMARKS.--Records good except those for winter period, which are fair. Occasional diurnal fluctuation at low flow by mill upstream; greater regulation prior to 1960. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--26 years, 202 ft^3/s (5.721 m^3/s), 22.48 in/yr (571 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,740 ft^3/s (106 m^3/s) Apr. 2, 1976, gage height, 7.91 ft (2.411 m); minimum, 11 ft^3/s (0.31 m^3/s) Aug. 29 to Sept. 1, 1953; minimum daily, 11 ft^3/s (0.31 m^3/s) Aug. 29 to Sept. 1, 1953.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,700 ft^3/s (48.1 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 13 or 14	unknown	ice jam		*a6.48	1.975	Mar. 31	1700	*1830	51.8	6.28	1.914

a From peak-stage indicator.

Minimum discharge, 21 ft^3/s (0.59 m^3/s) July 29; minimum daily, 22 ft^3/s (0.62 m^3/s) July 23, 24, 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	115	324	176	79	66	83	1410	301	49	83	33	51
2	102	264	169	78	68	80	939	267	48	56	34	117
3	94	203	138	76	68	74	813	282	47	44	36	248
4	88	241	138	74	68	72	646	234	45	39	32	151
5	82	287	129	74	67	72	543	197	44	37	30	88
6	79	292	130	74	66	84	570	177	44	35	32	71
7	79	309	303	74	64	85	459	160	48	31	35	63
8	234	269	542	74	63	81	390	144	51	32	32	55
9	772	213	401	73	62	79	301	134	57	33	30	48
10	797	182	335	73	62	96	265	126	48	34	33	45
11	613	174	239	72	60	200	262	120	49	32	39	44
12	462	162	193	73	60	800	339	113	57	30	43	44
13	253	154	165	73	58	1200	525	117	57	30	42	58
14	204	152	144	73	58	1500	978	119	49	29	52	405
15	206	154	138	72	60	1290	725	103	44	28	152	467
16	190	156	137	70	61	1400	558	93	39	27	70	333
17	169	154	138	70	62	1210	421	86	36	27	691	188
18	152	156	132	71	59	819	347	82	36	33	654	158
19	140	161	130	72	58	700	320	76	44	30	469	137
20	145	179	118	71	58	559	288	72	49	29	218	128
21	502	152	117	70	57	443	262	67	46	25	96	677
22	496	137	110	69	58	353	248	63	46	23	85	786
23	363	138	100	68	58	305	373	60	50	22	145	544
24	242	135	95	67	58	261	581	57	46	22	169	350
25	230	134	92	66	59	229	874	54	66	23	297	198
26	242	137	90	65	60	212	818	50	205	29	200	376
27	214	323	89	65	62	213	707	47	166	26	110	862
28	183	459	87	65	74	327	566	48	91	24	80	642
29	173	398	84	65	---	767	399	65	63	22	66	572
30	177	252	81	65	---	1060	334	69	68	26	59	483
31	238	---	80	66	---	1660	---	57	---	28	56	---
TOTAL	8036	6451	5020	2197	1734	16314	16261	3640	1788	989	4120	8389
MEAN	259	215	162	70.9	61.9	526	542	117	59.6	31.9	133	280
MAX	797	459	542	79	74	1660	1410	301	205	83	691	862
MIN	79	134	80	65	57	72	248	47	36	22	30	44
CFSM	2.12	1.76	1.33	.58	.51	4.31	4.44	.96	.49	.26	1.09	2.30
IN.	2.45	1.97	1.53	.67	.53	4.97	4.96	1.11	.55	.30	1.26	2.56

CAL YR 1976 TOTAL 107246 MEAN 293 MAX 3300 MIN 50 CFSM 2.40 IN 32.70
WTR YR 1977 TOTAL 74939 MEAN 205 MAX 1660 MIN 22 CFSM 1.68 IN 22.85

NOTE.--No gage-height record Mar. 11-14.

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 (1.6 km) upstream from mouth.

DRAINAGE AREA.--142 mi^2 (368 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--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."

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 (207.983 m) above mean sea level. 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 (1.05 km) upstream at different datum.

REMARKS.--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.

AVERAGE DISCHARGE.--58 years (water years 1910-19, 1921, 1923-24, 1929-35, 1939-77), 257 ft^3/s (7.278 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,900 ft^3/s (110 m^3/s) Mar. 20, 1936, gage height, 5.76 ft (1.756 m), site and datum then in use, from rating curve extended above 2,800 ft^3/s (79.3 m^3/s) on basis of computation of peak flow over dam; maximum daily, 2,680 ft^3/s (75.9 m^3/s) May 4, 1940; minimum daily, 2.6 ft^3/s (0.074 m^3/s) June 18, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,140 ft^3/s (32.3 m^3/s) Apr. 2; minimum daily, 22 ft^3/s (0.62 m^3/s) Aug. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	208	346	393	69	163	152	975	643	73	295	119	140
2	31	396	279	110	57	203	1140	591	113	30	65	245
3	108	302	287	200	66	99	1090	550	164	23	54	30
4	272	395	197	215	54	168	948	510	49	73	82	30
5	247	391	206	213	53	26	795	484	48	255	113	110
6	175	302	280	202	39	27	745	457	141	245	23	245
7	245	414	292	138	179	102	689	432	183	185	22	235
8	260	402	308	35	126	239	639	446	144	185	110	170
9	115	385	320	35	106	434	585	435	124	30	64	140
10	274	393	363	235	61	319	541	448	66	30	71	30
11	372	385	153	249	80	208	510	411	33	110	112	30
12	396	312	320	248	24	313	490	387	35	140	69	210
13	427	345	427	207	25	380	487	344	262	86	29	200
14	446	298	358	227	86	455	572	128	141	135	30	290
15	437	282	284	35	83	460	848	98	154	125	113	305
16	381	281	278	44	135	860	1130	267	146	30	103	290
17	240	240	276	204	97	1020	1080	376	179	30	281	215
18	315	303	163	50	46	867	933	374	31	165	331	345
19	270	298	68	142	24	732	799	343	30	190	226	295
20	309	265	252	231	24	639	755	237	184	235	244	290
21	431	204	269	99	151	574	777	45	182	160	350	312
22	415	269	359	27	150	525	767	51	91	61	291	413
23	392	277	266	26	152	497	804	305	174	30	399	363
24	178	251	230	114	89	475	837	241	113	30	248	28
25	417	210	34	113	95	452	979	198	26	135	398	276
26	444	267	113	136	25	456	1020	87	27	94	266	298
27	407	295	291	154	44	454	974	79	258	48	28	336
28	297	325	296	94	125	454	867	47	265	48	176	421
29	299	308	256	25	---	459	763	32	275	48	255	409
30	286	393	268	25	---	455	699	32	280	24	245	413
31	329	---	250	131	---	264	---	180	---	25	170	---
TOTAL	9423	9534	8136	4033	2359	12768	24238	9258	3991	3300	5087	7114
MEAN	304	318	262	130	84.3	412	808	299	133	106	164	237
MAX	446	414	427	249	179	1020	1140	643	280	295	399	421
MIN	31	204	34	25	24	26	487	32	26	23	22	28

CAL YR 1976 TOTAL 137722 MEAN 376 MAX 1910 MIN 31
WTR YR 1977 TOTAL 99241 MEAN 272 MAX 1140 MIN 22

04296500 CLYDE RIVER AT NEWPORT, VT--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to October 1977 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1974 to October 1977 (discontinued).
WATER TEMPERATURES: October 1974 to October 1977 (discontinued).

INSTRUMENTATION.--Water-quality monitor since October 1974.

REMARKS.--Interruptions in record were due to malfunctions of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 309 micromhos Aug. 31, 1975; minimum recorded, 73 micromhos Apr. 15-17, 1977.
WATER TEMPERATURES: Maximum, 26.5°C July 8, 19, 20, 1975; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR PERIOD OCTOBER 1976 TO OCTOBER 1977.--
SPECIFIC CONDUCTANCE: Maximum recorded, 209 micromhos Aug. 17; minimum recorded, 73 micromhos Apr. 15-17.
WATER TEMPERATURES: Maximum recorded, 25.5°C July 20, 21; minimum, 0.0°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM .7UM-MF (COL./ 100 ML)	FECAL STREPTOCOCCI KF AGAR (COL. PER 100 ML)	HARDNESS (CA,MG) (MG/L)
OCT											
07...	1100	--	--	--	--	--	--	--	--	--	--
20...	0700	137	--	.0	7.5	2	11.0	420	110	B11	52
NOV											
25...	0115	--	--	--	--	--	--	--	--	--	--
DEC											
01...	0730	134	6.5	.0	1.0	--	12.2	500	150	B240	--
JAN											
06...	1830	135	6.2	-4.0	.0	--	14.5	--	--	B92	--
FEB											
24...	0700	160	6.8	.0	.5	--	12.3	190	72	100	--
MAR											
23...	0730	122	6.7	.0	1.0	2	14.0	230	220	40	43
APR											
22...	0730	90	7.8	16.0	8.0	--	--	65	48	25	--
MAY											
19...	1100	93	7.0	--	16.5	--	8.3	B110	B110	--	--
JUN											
15...	0700	125	7.1	20.0	16.5	2	9.9	850	B120	8	47
SEP											
07...	1145	127	7.0	20.5	19.5	--	8.3	280	180	2	--
22...	0900	123	7.0	13.0	13.0	--	9.7	2200	1700	--	--

DATE	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE DISSOLVED (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)
OCT											
07...	--	--	--	--	--	--	--	--	--	--	--
20...	11	18	1.8	3.5	1.2	51	--	42	--	4.2	6.8
NOV											
25...	--	--	--	--	--	--	--	--	--	--	--
DEC											
01...	--	--	--	--	--	--	--	--	--	--	--
JAN											
06...	--	--	--	--	--	--	--	--	--	--	--
FEB											
24...	--	--	--	--	--	--	--	--	--	--	--
MAR											
23...	9	15	1.3	4.2	1.3	41	0	34	13	8.1	8.8
APR											
22...	--	--	--	--	--	--	--	--	--	--	--
MAY											
19...	--	--	--	--	--	--	--	--	--	--	--
JUN											
15...	13	16	1.8	4.4	1.1	42	0	34	5.3	6.5	8.0
SEP											
07...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--

B, NON-IDEAL COLONY COUNT.

04296500 CLYDE RIVER AT NEWPORT, VT--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	SOLIDS RESIDUE ON EVAP AT 180C DIS-SOLVED (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	NITRO-GEN AMMONIA ORGANIC TOTAL AS N (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL ORGANIC CARBON (C) (MG/L)	SUS-PENDED SEDI-MENT (MG/L)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM
OCT											
07...	--	--	--	--	--	--	--	--	--	5	100
20...	.1	5.5	80	66	.18	.18	.36	.04	5.7	1	100
NOV											
25...	--	--	--	--	--	--	--	--	--	4	100
DEC											
01...	--	--	--	--	.29	.28	.57	.05	--	4	100
JAN											
06...	--	--	--	--	.42	.22	.64	.10	--	8	100
FEB											
24...	--	--	--	--	.43	.35	.78	.03	--	7	100
MAR											
23...	.1	5.3	61	64	.57	.30	.87	.03	2.7	8	100
APR											
22...	--	--	--	--	.34	.40	.74	.03	--	11	100
MAY											
19...	--	--	--	--	.20	.17	.37	.02	--	6	100
JUN											
15...	.1	3.4	90	62	.18	.50	.68	.01	3.6	13	100
SEP											
07...	--	--	--	--	.07	.26	.33	.02	--	7	100
22...	--	--	--	--	.14	.20	.34	.01	--	16	100

DATE	TOTAL ARSENIC (AS) (UG/L)	SUS-PENDED ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	SUS-PENDED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	SUS-PENDED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)	SUS-PENDED COBALT (CO) (UG/L)
OCT											
20...	0	0	0	0	0	0	<10	0	<10	0	0
MAR											
23...	0	0	0	0	0	1	<10	0	<10	0	0
JUN											
15...	1	0	1	0	0	0	<10	<9	1	0	0

DATE	DIS-SOLVED COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	SUS-PENDED COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	SUS-PENDED LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	SUS-PENDED MAN-GANESE (MN) (UG/L)
OCT											
20...	0	0	0	0	240	110	1	1	0	60	20
MAR											
23...	0	0	0	0	540	30	8	6	2	20	10
JUN											
15...	0	2	2	0	210	50	0	0	2	30	30

DATE	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	SUS-PENDED MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	SUS-PENDED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	TOTAL ZINC (ZN) (UG/L)	SUS-PENDED ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
OCT										
20...	40	<.5	.0	<.5	0	0	0	10	0	10
MAR										
23...	10	<.5	.0	<.5	0	0	0	20	10	10
JUN										
15...	0	.0	.0	.0	0	0	0	10	0	10

04296500 CLYDE RIVER AT NEWPORT, VT--Continued

QUALITATIVE AND QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, OCTOBER 1976 TO FEBRUARY 1977

PHYTOPLANKTON

DATE TIME	OCT 20,76 0700		DEC 1,76 0730		JAN 6,77 1830		FEB 24,77 0700	
TOTAL CELLS/ML	980		140		22		20	
DIVERSITY: DIVISION	1.0		0.2		1.1		0.0	
.CLASS	1.0		0.2		1.1		0.0	
..ORDER	1.5		1.1		1.1		0.0	
...FAMILY	2.3		1.8		2.1		2.1	
....GENUS	2.5		1.9		2.5		2.1	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...OOCYSTACEAE								
....ANKISTRODESMUS	15	2	--	-	--	-	--	-
..VOLVOCALES								
...VOLVOCACEAE								
....PANDORINA	120	13	--	-	--	-	--	-
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	8	1	--	-	--	-	--	-
....MELOSIRA	120	12	88#	61	--	-	--	-
..PENNALES								
...ACHNANTHACEAE								
....ACHNANTHES	--	-	--	-	--	-	*	0
....COCCONEIS	8	1	5	4	--	-	--	-
....RHOICOSPHENIA	--	-	3	2	--	-	--	-
...CYMBELLACEAE								
....AMPHORA	--	-	3	2	--	-	--	-
....CYMBELLA	--	-	--	-	--	-	3	14
...DIATOMACEAE								
....DIATOMA	70	7	--	-	3	14	3	14
...FRAGILARIACEAE								
....ASTERIONELLA	15	2	--	-	6#	29	--	-
....FRAGILARIA	480#	49	23#	16	--	-	--	-
....SYNEDRA	--	-	3	2	3	14	8#	43
...GOMPHONEMATACEAE								
....GOMPHONEMA	8	1	3	2	--	-	--	-
...MERIDIONACEAE								
....MERIDION	--	-	--	-	3	14	--	-
...NAVICULACEAE								
....NAVICULA	46	5	13	9	*	0	3	14
...NITZSCHIACEAE								
....NITZSCHIA	15	2	--	-	--	-	3	14
...TABELLARIACEAE								
....TABELLARIA	--	-	--	-	*	0	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
.CYANOPHYCEAE								
..HORMOGONALES								
...NOSTOCACEAE								
....ANABAENA	*	0	--	-	--	-	--	-
...OSCILLATORIACEAE								
....OSCILLATORIA	77	8	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)								
.CRYPTOPHYCEAE								
..CRYPTOMONIDALES								
...CRYPTOMONODACEAE								
....CRYPTOMONAS	--	-	--	-	3	14	--	-
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....PHACUS	--	-	5	4	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)								
.DINOPHYCEAE								
..PERIDINIALES								
...GLENODINIACEAE								
....GLENODINIUM	--	-	--	-	*	0	--	-
...PERIDINIACEAE								
....PERIDINIUM	--	-	--	-	3	14	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%
USED DEPTH-INTEGRATED SAMPLING METHOD.

04296500 CLYDE RIVER AT NEWPORT, VT--Continued

QUALITATIVE AND QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, MAY TO SEPTEMBER 1977

PHYTOPLANKTON

DATE	MAY 19,77		JUN 15,77		SEP 7,77		SEP 22,77	
TIME	1100		0700		1145		0900	
TOTAL CELLS/ML	1500		40000		2700		1200	
DIVERSITY: DIVISION	0.0		0.5		1.4		0.9	
.CLASS	0.1		0.5		1.4		0.9	
..ORDER	0.6		0.5		2.2		1.7	
...FAMILY	2.2		0.0		2.6		1.7	
....GENUS	2.4		0.0		2.6		1.9	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...CHARACIACEAE								
....SCHROEDERIA	--	-	*	0	--	-	*	0
...MICRACTINIACEAE								
....GOLENKINIA	--	-	--	-	34	1	--	-
....MICRACTINIUM	--	-	*	0	--	-	--	-
...OOCYSTACEAE								
....ANKISTRODESMUS	--	-	*	0	--	-	--	-
....DICTYOSPHAERIUM	--	-	1000	3	--	-	--	-
...SCENEDESMACEAE								
....SCENEDESMUS	--	-	240	1	64	2	--	-
..TETRASPORALES								
...PALMELLACEAE								
....SPHAEROCYSTIS	--	-	--	-	550#	20	--	-
..VOLVOCALES								
...VOLVOCACEAE								
....GONIUM	--	-	--	-	--	-	*	0
..ZYGNEMATALES								
...DESMIDIACEAE								
....COSMARIUM	--	-	--	-	*	0	--	-
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	10	1	*	0	17	1	50	4
....MELOSIRA	150	10	*	0	290	11	220#	18
...RHIZOSOLENIACEAE								
....RHIZOSOLENIA	--	-	*	0	--	-	--	-
..PENNALES								
...ACHNANTHACEAE								
....ACHNANTHES	94	6	*	0	--	-	*	0
....COCCONEIS	21	1	*	0	--	-	11	1
...CYMBELLACEAE								
....AMPHORA	--	-	--	-	*	0	--	-
....CYMBELLA	21	1	*	0	--	-	--	-
...DIATOMACEAE								
....DIATOMA	94	6	260	1	--	-	--	-
...EUNOTIACEAE								
....EUNOTIA	10	1	--	-	--	-	--	-
...FRAGILARIACEAE								
....ASTERIONELLA	31	2	590	1	--	-	*	0
....FRAGILARIA	31	2	*	0	190	7	--	-
...GOMPHONEMATACEAE								
....GOMPHONEMA	63	4	--	-	--	-	--	-
...NAVICULACEAE								
....NAVICULA	63	4	--	-	*	0	17	1
....PINNULARIA	21	1	--	-	--	-	--	-
...NITZSCHIACEAE								
....HANTZSCHIA	10	1	--	-	--	-	--	-
....NITZSCHIA	880#	57	--	-	*	0	--	-
...SURIRELLACEAE								
....CYMATOPLEURA	10	1	--	-	--	-	--	-
.CHRYSOPHYCEAE								
..CHRYSOMONADALES								
...OCHROMONADACEAE								
....DINOBRYON	31	2	--	-	*	0	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
.CYANOPHYCEAE								
..CHROCCOCCALES								
...CHROCCOCCACEAE								
....ANACYSTIS	--	-	--	-	--	-	590#	50
..HORMOGONALES								
...NOSTOCACEAE								
....ANABAENA	--	-	--	-	980#	37	280#	24
...OSCILLATORIACEAE								
....OSCILLATORIA	--	-	37000#	93	150	6	--	-
..CHROCCOCCALES								
...CHROCCOCCACEAE								
....GOMPHOSPHAERIA	--	-	--	-	360	14	--	-
EUGLENOPHYTA (EUGLENOIDS)								
.CRYPTOPHYCEAE								
..CRYPTOMONIDALES	--	-	*	0	--	-	--	-
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....TRACHELOMONAS	--	-	*	0	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%
USED DEPTH-INTEGRATED SAMPLING METHOD.

04296500 CLYDE RIVER AT NEWPORT, VT--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	151	133	141	140	132	134	139	136	137	159	145	152
2	150	147	149	132	130	131	148	137	140	162	143	155
3	149	136	145	144	130	134	148	137	140	153	141	146
4	148	133	138	131	130	131	148	138	142	152	141	146
5	148	133	139	133	130	131	152	138	144	151	141	145
6	150	133	141	142	130	133	149	137	141	150	135	142
7	152	133	139	131	130	131	148	139	143	150	141	145
8	155	135	141	131	130	131	155	143	146	161	147	154
9	172	137	155	132	130	131	151	141	144	164	161	163
10	155	136	141	131	129	130	146	140	142	164	139	147
11	137	135	136	131	130	131	153	140	146	148	139	142
12	136	134	135	142	130	132	149	138	142	148	139	142
13	135	131	133	138	129	131	140	139	139	148	139	143
14	132	131	131	143	130	133	144	140	140	148	140	142
15	132	130	131	144	130	133	149	139	142	159	144	152
16	132	128	130	146	130	135	149	139	142	162	155	159
17	142	126	132	144	130	135	149	139	142	159	141	148
18	143	127	131	149	131	135	149	140	143	154	144	148
19	143	129	134	145	132	135	155	144	149	159	140	151
20	143	129	133	146	131	136	159	138	144	155	140	145
21	134	131	132	145	132	137	147	138	140	158	142	151
22	134	132	132	146	131	135	142	138	139	160	152	156
23	136	131	132	145	132	136	147	138	141	165	155	159
24	151	131	140	145	132	137	149	138	142	157	143	151
25	132	131	131	149	133	139	157	144	152	155	143	149
26	132	131	131	147	133	139	160	139	153	156	144	149
27	134	131	132	158	135	141	149	137	141	156	143	150
28	144	130	134	148	136	139	146	138	140	157	146	152
29	145	128	133	148	136	139	148	138	141	160	152	156
30	144	129	133	137	137	137	149	139	142	161	159	160
31	142	129	132	---	---	---	149	139	142	161	145	154
MONTH	172	126	136	158	129	134	160	136	143	165	135	150

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	157	146	151	164	149	157	99	98	98	87	84	85
2	159	149	155	162	145	152	99	87	94	86	84	85
3	160	148	154	159	145	153	87	84	86	86	85	86
4	159	148	156	156	143	148	84	82	83	87	85	86
5	158	148	155	173	152	164	84	82	82	88	85	87
6	160	150	158	173	163	168	83	81	82	98	84	87
7	158	145	150	163	145	155	80	78	79	83	74	79
8	156	146	151	161	143	150	78	77	78	85	83	84
9	157	147	152	143	141	142	78	77	77	86	84	85
10	159	148	155	159	141	148	77	76	76	88	86	87
11	159	147	155	171	159	165	77	75	76	89	87	88
12	162	155	159	174	157	165	78	75	76	103	88	89
13	164	159	162	164	153	159	82	75	77	119	88	92
14	163	148	157	152	141	147	81	76	77	122	89	107
15	160	149	155	140	133	138	76	73	74	120	89	109
16	160	149	155	132	124	129	75	73	74	126	90	101
17	161	149	156	124	116	120	76	73	74	94	91	92
18	161	154	159	116	113	115	77	74	75	94	92	93
19	162	159	162	114	112	113	79	74	77	122	93	96
20	162	158	161	112	109	110	96	76	82	127	96	108
21	162	148	155	109	107	108	97	90	94	131	105	125
22	160	149	154	108	107	107	91	90	91	137	103	125
23	160	149	155	108	105	107	91	89	90	144	104	116
24	160	150	155	108	106	107	90	88	89	143	107	119
25	161	150	156	106	105	105	90	89	89	149	111	125
26	163	156	161	105	103	104	89	87	88	149	116	133
27	164	154	161	105	102	103	87	85	86	147	121	134
28	174	146	158	105	101	102	87	84	85	170	128	152
29	---	---	---	107	101	104	85	84	84	178	132	165
30	---	---	---	108	101	103	85	83	84	183	176	179
31	---	---	---	102	98	100	---	---	---	184	123	145
MONTH	174	145	156	174	98	131	99	73	83	184	74	108

04296500 CLYDE RIVER AT NEWPORT, VT--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	160	127	149	159	140	145	172	149	161	142	130	138
2	172	129	149	165	155	162	180	151	164	150	130	137
3	178	129	147	162	137	148	192	150	172	148	143	145
4	170	139	159	157	137	152	167	150	160	149	141	143
5	159	133	151	156	137	144	168	150	160	142	130	139
6	150	131	141	157	138	146	200	160	173	141	129	135
7	162	134	145	159	138	148	167	163	166	141	128	133
8	157	135	147	160	137	149	171	150	161	139	128	135
9	156	136	147	160	154	156	184	151	165	140	128	135
10	165	139	155	156	153	155	207	150	174	143	140	142
11	172	149	169	153	137	148	184	151	169	144	141	143
12	185	170	175	155	138	148	172	151	167	144	128	135
13	166	137	146	154	139	151	170	165	167	150	128	137
14	158	140	151	162	138	149	195	167	178	180	129	141
15	157	141	150	160	139	150	180	150	166	142	128	133
16	158	141	148	155	151	153	197	150	164	142	127	132
17	158	140	148	165	152	154	209	149	168	140	125	132
18	157	151	153	166	139	152	197	147	154	136	124	126
19	160	151	155	164	142	153	176	140	153	137	123	128
20	159	139	147	169	149	156	153	137	144	138	123	127
21	171	139	150	171	152	160	150	135	140	164	125	133
22	171	139	159	170	152	165	148	133	138	127	125	126
23	160	140	150	187	170	176	142	132	133	135	125	127
24	162	140	155	185	173	180	147	131	135	137	135	136
25	195	158	166	181	151	166	146	131	132	138	125	130
26	173	163	167	169	151	161	147	130	135	143	124	130
27	164	142	149	166	151	161	144	142	143	155	125	132
28	159	143	149	170	151	161	145	131	138	141	124	126
29	158	142	147	165	151	159	145	130	136	125	122	124
30	160	140	147	178	162	170	144	130	136	123	122	122
31	---	---	---	172	163	166	142	130	137	---	---	---
MONTH	195	127	152	187	137	156	209	130	154	180	122	133
YEAR	209	73	136									

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), OCTOBER 1977

DAY	MAX	MIN	MEAN
		OCTOBER	
1	125	121	123
2	127	121	123
3	124	121	122
4	121	115	118
5	117	115	116
6	116	114	115
7	116	115	116
8	116	113	115
9	117	113	115
10	117	114	116
11	115	114	114
12	116	112	114
13	115	111	113
14	111	110	110
15	113	111	112
16	113	110	112
17	115	110	113
18	114	111	112
19	115	109	112
20	111	109	110
21	111	108	109
22	111	108	109
23	110	108	109
24	110	109	110
25	112	110	110
26	112	110	111
27	116	112	113
28	116	113	114
29	115	113	114
30	128	113	114
31	135	114	125
MONTH	135	108	114

04296500 CLYDE RIVER AT NEWPORT, VT--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	13.5	12.5	13.0	6.0	5.0	5.5	1.0	1.0	1.0	0.0	0.0	0.0
2	14.5	12.5	13.5	5.0	4.5	4.5	1.0	0.0	0.5	0.5	0.0	0.0
3	15.0	12.5	13.5	4.0	4.0	4.0	1.0	0.0	0.5	0.0	0.0	0.0
4	14.0	12.5	13.5	4.5	4.0	4.5	0.5	0.0	0.0	0.0	0.0	0.0
5	14.5	12.5	13.5	4.5	4.0	4.5	0.5	0.0	0.5	0.5	0.0	0.0
6	15.0	13.0	14.0	4.0	3.5	4.0	0.5	0.0	0.5	0.5	0.0	0.0
7	15.0	14.0	14.5	4.5	4.0	4.0	0.5	0.0	0.5	0.0	0.0	0.0
8	14.5	13.0	14.0	4.0	3.5	4.0	0.5	0.0	0.5	0.0	0.0	0.0
9	13.5	11.5	12.5	3.5	2.5	3.0	0.5	0.0	0.5	0.0	0.0	0.0
10	12.5	11.0	12.0	2.5	2.5	2.5	0.5	0.0	0.5	0.0	0.0	0.0
11	11.5	11.0	11.5	2.5	2.0	2.5	0.5	0.0	0.0	0.0	0.0	0.0
12	11.5	10.5	11.0	2.0	1.5	2.0	0.5	0.0	0.5	0.0	0.0	0.0
13	11.0	10.5	11.0	2.5	1.5	2.0	0.5	0.5	0.5	0.0	0.0	0.0
14	11.5	10.5	11.0	2.0	2.0	2.0	0.5	0.0	0.5	0.0	0.0	0.0
15	10.5	10.0	10.5	2.0	2.0	2.0	0.5	0.0	0.5	0.0	0.0	0.0
16	10.0	9.0	10.0	2.5	2.0	2.0	1.0	0.5	0.5	0.5	0.0	0.0
17	9.5	8.5	9.0	2.5	2.0	2.0	1.0	0.5	0.5	0.5	0.0	0.0
18	9.5	8.0	9.0	2.5	2.0	2.5	0.5	0.0	0.5	0.0	0.0	0.0
19	8.5	7.5	8.0	2.5	2.0	2.5	0.5	0.0	0.0	0.5	0.0	0.0
20	8.0	7.5	8.0	2.5	0.5	2.0	0.5	0.5	0.5	0.0	0.0	0.0
21	8.5	7.5	8.0	1.5	0.5	1.0	0.5	0.0	0.5	0.5	0.0	0.0
22	7.5	7.0	7.5	0.5	0.5	0.5	0.5	0.0	0.5	0.0	0.0	0.0
23	7.0	6.0	7.0	1.0	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0
24	7.0	5.5	6.0	1.0	0.5	1.0	0.5	0.0	0.0	0.5	0.0	0.0
25	7.0	6.5	6.5	1.5	0.5	1.0	0.5	0.0	0.0	0.5	0.0	0.5
26	6.5	5.5	6.0	2.0	0.5	1.5	0.5	0.0	0.5	0.5	0.0	0.5
27	5.5	5.0	5.5	2.0	1.5	1.5	0.5	0.0	0.0	0.5	0.0	0.0
28	5.5	4.5	5.0	2.0	1.5	2.0	0.5	0.0	0.5	0.5	0.0	0.0
29	5.5	4.5	5.0	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0
30	5.5	5.5	5.5	1.5	1.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0
31	6.0	5.5	6.0	---	---	---	0.0	0.0	0.0	0.5	0.0	0.0
MONTH	15.0	4.5	9.5	6.0	0.5	2.5	1.0	0.0	0.5	0.5	0.0	0.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	0.5	0.0	0.0	1.0	0.0	0.5	2.5	2.0	2.5	10.5	9.0	10.0
2	0.5	0.0	0.0	0.5	0.0	0.5	2.5	2.0	2.0	10.5	10.0	10.0
3	0.5	0.0	0.0	1.5	0.0	0.5	2.5	2.0	2.5	11.0	10.0	10.5
4	0.5	0.0	0.5	0.5	0.0	0.5	2.5	1.5	2.0	11.0	10.0	10.5
5	0.5	0.0	0.0	1.5	0.0	0.5	2.5	2.5	2.5	12.5	10.5	11.5
6	0.5	0.0	0.0	1.0	0.5	0.5	2.5	2.0	2.0	16.0	12.0	13.0
7	0.5	0.0	0.0	0.5	0.5	0.5	2.5	2.0	2.0	14.0	12.5	13.5
8	1.0	0.0	0.5	0.5	0.0	0.5	2.5	2.0	2.5	13.0	12.5	12.5
9	1.0	0.0	0.5	0.5	0.0	0.5	2.5	1.5	2.0	13.0	12.0	12.5
10	1.0	0.0	0.5	1.0	0.5	0.5	3.0	2.0	2.5	12.0	11.0	11.5
11	1.0	0.0	0.5	1.0	0.5	0.5	3.5	2.5	3.0	12.0	10.5	11.5
12	1.0	0.5	0.5	1.0	0.5	0.5	4.5	3.0	4.0	13.0	11.5	12.0
13	1.0	0.5	0.5	1.0	0.5	1.0	5.0	3.5	4.5	13.0	11.5	12.5
14	1.0	0.5	0.5	1.0	0.5	1.0	4.5	4.0	4.0	14.5	10.5	12.0
15	0.5	0.0	0.5	1.0	0.5	1.0	4.0	3.5	4.0	14.5	10.5	12.5
16	0.5	0.0	0.0	1.0	0.5	1.0	5.0	3.5	4.0	13.5	11.5	13.0
17	0.5	0.0	0.0	1.0	0.5	0.5	5.5	4.5	5.0	15.0	13.5	14.0
18	1.0	0.0	0.5	1.0	0.5	0.5	6.0	4.5	5.5	17.0	15.0	16.0
19	1.0	0.0	0.5	1.0	0.5	1.0	6.5	5.5	6.0	17.5	16.0	16.5
20	1.0	0.5	0.5	1.5	0.5	1.0	7.5	6.5	7.0	19.0	15.5	17.0
21	1.0	0.0	0.5	1.5	1.0	1.5	8.0	7.0	7.5	20.0	16.0	18.0
22	0.5	0.0	0.5	1.5	1.0	1.0	9.0	8.0	8.5	20.5	17.0	19.0
23	0.5	0.0	0.5	1.0	1.0	1.0	9.0	8.5	8.5	21.0	17.5	19.5
24	0.0	0.0	0.0	1.5	1.0	1.0	9.5	9.0	9.5	22.0	18.0	20.5
25	0.5	0.0	0.5	1.0	1.0	1.0	9.0	9.0	9.0	22.5	19.0	21.0
26	1.0	0.5	0.5	1.5	1.0	1.0	9.0	9.0	9.0	22.5	19.0	20.5
27	1.5	0.5	1.0	2.0	1.0	1.0	10.0	9.0	9.5	21.0	18.5	19.5
28	1.0	0.5	0.5	2.0	1.0	1.5	10.0	8.5	9.5	18.5	16.0	17.5
29	---	---	---	2.5	2.0	2.0	8.5	8.0	8.5	19.5	16.0	17.5
30	---	---	---	5.0	2.0	2.5	9.5	8.0	9.0	19.5	16.0	17.5
31	---	---	---	3.0	2.5	2.5	---	---	---	20.0	16.5	18.0
MONTH	1.5	0.0	0.5	5.0	0.0	1.0	10.0	1.5	5.5	22.5	9.0	15.0

04296500 CLYDE RIVER AT NEWPORT, VT--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	19.0	17.0	18.0	21.5	20.0	21.0	22.0	19.5	20.5	22.5	20.0	21.0
2	20.0	18.0	19.0	21.5	20.0	20.5	23.0	20.0	21.0	21.5	20.0	21.0
3	18.5	17.0	18.0	21.0	19.0	20.0	22.5	19.0	21.0	21.5	19.5	20.5
4	19.5	16.5	18.0	20.5	19.5	20.0	23.0	20.5	21.5	21.5	19.0	20.0
5	18.0	16.5	17.5	21.0	19.0	20.0	22.5	21.0	22.0	20.0	19.0	19.5
6	18.0	16.5	17.5	21.5	19.0	20.0	22.0	20.0	21.5	20.0	19.0	19.5
7	17.5	16.0	17.0	21.5	18.5	20.0	23.5	21.0	22.0	20.0	18.0	19.0
8	16.5	15.5	16.0	20.5	19.0	20.0	23.5	21.0	22.5	19.5	17.5	18.5
9	18.5	15.0	16.0	21.0	19.0	20.0	24.0	20.5	22.0	19.5	17.0	18.0
10	16.5	15.5	16.0	22.0	19.0	20.5	22.0	17.5	19.5	18.5	16.5	17.5
11	16.0	15.0	15.5	22.0	19.0	20.5	23.0	19.5	21.0	17.5	16.0	16.5
12	16.0	14.5	15.5	21.0	20.0	20.5	21.5	19.5	20.5	17.0	15.0	16.5
13	17.0	15.5	16.0	22.5	20.0	21.0	23.0	19.0	20.5	16.5	15.5	16.0
14	18.0	15.5	16.5	22.0	20.5	21.0	21.5	19.5	20.0	16.0	14.0	15.5
15	19.5	16.0	17.5	23.5	18.5	21.5	22.5	18.0	20.5	15.5	14.5	15.0
16	18.5	16.5	17.5	24.0	21.0	22.5	21.0	18.0	20.0	15.5	14.5	15.0
17	18.0	16.5	17.5	23.5	21.5	22.5	20.5	16.5	19.5	15.5	15.0	15.5
18	19.0	17.0	18.0	24.5	20.5	23.0	20.0	17.5	19.5	16.0	15.5	15.5
19	18.5	17.5	18.0	25.0	22.0	23.5	19.5	16.5	18.5	16.5	15.5	16.0
20	19.0	17.5	18.0	25.5	23.0	24.5	19.0	17.5	18.5	16.0	15.0	15.5
21	19.0	17.5	18.0	25.5	24.0	25.0	19.0	18.0	18.5	14.5	12.5	14.0
22	18.5	16.5	17.5	24.0	21.0	22.5	18.5	17.5	18.0	14.0	13.0	13.5
23	18.5	17.0	18.0	24.0	20.0	21.5	18.5	17.5	18.5	14.5	13.5	14.0
24	19.5	17.0	18.0	22.0	19.5	20.5	18.0	17.5	18.0	14.0	13.5	14.0
25	19.5	16.0	18.5	22.0	19.5	20.5	18.0	16.5	17.5	14.0	13.0	13.5
26	20.0	17.5	18.5	21.5	19.0	20.0	18.5	16.0	17.0	13.5	13.0	13.5
27	20.5	18.0	19.5	21.0	18.5	19.5	20.0	17.0	18.0	13.5	12.5	13.0
28	21.0	19.0	20.0	21.5	17.5	20.0	21.0	18.5	19.5	13.5	13.0	13.5
29	21.5	20.0	21.0	21.5	19.0	20.0	21.5	20.0	20.5	13.5	13.0	13.5
30	21.5	20.0	21.0	20.5	19.0	19.5	22.0	20.5	21.5	13.0	12.5	13.0
31	---	---	---	22.5	19.0	20.5	22.0	19.5	21.0	---	---	---
MONTH	21.5	14.5	18.0	25.5	17.5	21.0	24.0	16.0	20.0	22.5	12.5	16.0
YEAR	25.5	0.0	9.0									

TEMPERATURE (DEG. C) OF WATER, OCTOBER 1977

DAY	MAX	MIN	MEAN
		OCTOBER	
1	12.5	12.5	12.5
2	12.5	12.0	12.5
3	12.5	11.5	12.0
4	11.5	11.5	11.5
5	11.5	11.0	11.5
6	12.0	11.5	11.5
7	11.5	10.5	11.0
8	10.5	10.0	10.5
9	10.0	10.0	10.0
10	10.0	10.0	10.0
11	10.0	9.5	10.0
12	10.5	10.0	10.0
13	10.0	9.5	10.0
14	9.5	9.0	9.0
15	9.0	8.5	9.0
16	8.5	8.5	8.5
17	8.5	8.0	8.5
18	8.5	8.0	8.5
19	8.5	8.0	8.5
20	8.5	8.0	8.5
21	8.5	8.0	8.5
22	8.5	8.0	8.5
23	8.0	7.5	7.5
24	7.5	7.0	7.5
25	8.0	7.0	7.5
26	9.0	7.5	8.0
27	9.5	8.5	9.0
28	9.5	9.0	9.0
29	9.0	8.5	8.5
30	8.5	6.5	7.5
31	7.5	5.5	6.5
MONTH	12.5	5.5	9.5

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

Records collected at partial-record stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations, and the second, a table of annual maximum stage and discharge at crest-stage stations. Discharge measurements made at miscellaneous sites for both low flow and high flow are given in a third table.

Low-flow partial-record stations

Measurements of streamflow in the area covered by this report made at low-flow partial-record stations are given in the following table. Most of these measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will give a picture of the low-flow potentiality of a stream. The column headed "Period of record" shows the water years in which measurements were made at the same, or practically the same, site.

Discharge measurements made at low-flow partial-record stations during water year 1977

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		Merrimack River basin				
*01084290	Mud Pond tributary near Dublin, NH	Lat 42°54'08", long 72°01'52", Cheshire County, at culvert on secondary dead-end road, 0.1 mi south of State Highway 101, and 0.3 mi west of Bonds Corner.	1.39	1976-77	8-31-77	0.07
		Connecticut River basin				
*01137850	Ammonoosuc River tributary near Littleton, NH	Lat 44°18'58", long 71°47'45", Grafton County, at culvert on State Highway 18, 1 mi west of Littleton.	2.42	1976-77	8- 5-77	0.68

* Also a crest-stage partial-record station.

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 1977

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft^3/s)
		Androscoggin River basin					
01054120	Josh Brook near Gorham, NH	Lat 44°23'15", long 71°07'58", Coos County, at culvert on U.S. Highway 2, 2 mi east of Gorham.	0.67	1973-77	10-21-76	17.13	150
		Saco River basin					
01064250	Albany Brook tributary near Bartlett, NH	Lat 44°04'23", long 71°18'10", Carroll County, at culvert on U.S. Highway 302, 1 mi west of Bartlett.	0.20	1973-77	10-21-76	6.19	83
01064310	Ellis River tributary near Jackson, NH	Lat 44°09'42", long 71°12'57", Carroll County, at culvert on State Highway 16, 2 mi northwest of Jackson.	.78	1974-77	10-21-76	(a)	b100
01064750	Meadow Brook near Sandwich, NH	Lat 43°47'53", long 71°22'30", Carroll County, at culvert on Little Pond Rd., 0.3 mi west of State Highway 25 and 1.9 mi east of Sandwich.	.67	1973-77	3-14-77	7.22	67
01064850 (revised)	Square Brook near Freedom, NH	Lat 43°49'55", long 71°04'35", Carroll County, at culvert on State Highway 153, 2.4 mi northwest of Freedom and 2.7 mi north of Effingham Falls.	1.20	1973-77	3-14-77	7.93	37
		Piscataqua River basin					
01073750	Mill Brook at Stratham, NH	Lat 43°01'24", long 70°55'04", Rockingham County, at culvert on southbound lane of State Highways 101 and 108, 0.3 mi west of Stratham.	2.30	1973-77	3-14-77	10.95	200
		Hampton River basin					
01073850	Hampton Falls River near Hampton Falls, NH	Lat 42°54'35", long 70°52'58", Rockingham County, at culvert on N.H. Highway 150, 0.3 mi west of Interstate Highway 95 and 1.1 mi southwest of Hampton Falls.	4.73	1973-77	3-14-77	18.74	300
		Merrimack River basin					
01074250	Hancock Branch tributary near Lincoln, NH	Lat 44°03'45", long 71°35'15", Grafton County, at culvert on State Highway 112, 4.5 mi east of Lincoln and 700 ft east of highway bridge over East Branch Pemigewasset River.	0.58	1975-77	10-21-76	7.25	b33
01078800	West Alton Brook near Alton, NH	Lat 43°32'10", long 71°19'22", Belknap County, at culvert on State Highway 11A, 1.2 mi west of junction with State Highway 11, and 1.3 mi south of West Alton.	2.39	1973-77	3-14-77	4.33	48
01081900	Town Line Brook tributary near Peterborough, NH	Lat 42°51'09", long 71°54'14", Hillsborough County, at culvert on State Highway 101, 2.8 mi east of Peterborough, and 5 mi west of West Wilton.	.75	1972-77	-	<6.80	<63
01082490	Mud Pond tributary near Dublin, NH	Lat 42°54'08", long 72°01'52", Cheshire County, at culvert on secondary dead-end road, 0.1 mi south of State Highway 101, and 0.3 mi west of Bonds Corner.	1.39	1972-77	4-25-77	16.44	53

a Not determined.
b Estimated.

Annual maximum discharge at crest-stage partial-record stations during water year 1977--Continued

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--Continued					
01089500	Suncook River at North Chichester, NH	Lat 43°15'23", long 71°22'10", Merrimack County, 100 ft below bridge on Depot Rd. at North Chichester and 3.1 mi above Little Suncook River.	157	1918-27‡, 1929-70‡, 1972-77	3-14-77	12.19	4900
01089750	Marden Brook near Epsom, NH	Lat 43°12'13", long 71°23'16", Merrimack County, at culvert on State Highway 28, 2 mi south of Epsom.	1.16	1973-77	3-14-77	(a)	b60
01090480	Rays Brook at Manchester, NH	Lat 43°01'08", long 71°27'02", Hillsborough County, at culvert on Cambell Street, Manchester, and 0.1 mi upstream from Dorrs Pond.	1.74	1973-77	3-14-77	14.54	80
01094006	McQuade Brook near Bedford, NH	Lat 42°55'45", long 71°33'20", Hillsborough County, at culvert on North Amherst Rd. at junction with Hardy Rd., 2.3 mi southwest of Bedford.	4.13	1972-77	3-14-77	17.25	155
		Connecticut River basin					
01129210	Ad Chase Brook near Pittsburg, NH	Lat 45°02'20", long 71°27'10", Coos County, at culvert on U.S. Highway 3, 100 ft above mouth, 1 mi below Indian Stream, and 3 mi southwest of Pittsburg.	1.62	1973-77	3-31-77	(a)	b55
01129400	Black Brook at Averill, VT	Lat 45°00'14", long 71°41'34", Essex County, at culvert on State Highway 114, 1 mi northeast of Averill.	.58	1964-77	3-31-77	11.60	32
01129700	Paul Stream tributary near Brunswick, VT	Lat 44°41'06", long 71°37'18", Essex County, at culvert on macadam road leading to Maidstone Lake, 3.5 mi south of Brunswick.	1.29	1966-77	3-31-77	7.25	36
01129850	Connecticut River tributary near Stratford, NH	Lat 44°38'42", long 71°32'38", Coos County, at culvert on U.S. Highway 3, 0.8 mi south of Stratford.	1.51	1973-77	8-17-77	11.65	b50
01129950	Upper Ammonoosuc River tributary near Stark, NH	Lat 44°35'48", long 71°25'30", Coos County, at culvert on State Highway 110, 1.1 mi west of Stark.	.58	1973-77	4-14-77	15.95	15
01131250	Cherry Mountain Brook tributary near Twin Mountain, NH	Lat 44°18'40", long 71°31'40", Coos County, at culvert on State Highway 115, 1.1 mi north of junction with U.S. Highway 3, and 2.8 mi north of Twin Mountain.	1.31	1973-77	3-14-77	15.80	b70
01133300	Cold Hill Brook near Lyndon, VT	Lat 44°31'47", long 72°03'01", Caledonia County, at culvert on dirt road, 2 mi northwest of Lyndon.	1.52	1964-77	3-16-77	10.66	31
01137850	Ammonoosuc River tributary near Littleton, NH	Lat 44°18'58", long 71°47'45", Grafton County, at culvert on State Highway 18, 1 mi west of Littleton.	2.42	1974-77	3-14-77	1.37	b140
01140800	West Branch Ompompanoosuc River tributary at South Strafford, VT	Lat 43°49'56", long 72°22'20", Orange County, at culvert on dirt road at South Strafford.	1.33	1964-77	3-14-77	11.11	78
01153300	Middle Branch Williams River tributary at Chester, VT	Lat 43°16'13", long 72°36'32", Windsor County, at culvert on macadam road at Chester.	3.16	1964-77	3-14-77	19.72	175
01155350	West River tributary near Jamaica, VT	Lat 43°07'32", long 72°48'47", Windham County, at culvert on State Highway 100, 2.5 mi northwest of Jamaica.	.90	1964-77	3-14-77	8.92	49

* Also a low-flow partial-record station.
‡ Operated as a continuous-record gaging station.
a Not determined.
b Estimated.

Annual maximum discharge at crest-stage partial-record stations during water year 1977--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft^3/s)
		Hudson River basin					
01333900	Paran Creek near South Shaftsbury, VT	Lat 42°58'13", long 73°11'19", Bennington County, at culvert on dirt road, 2 mi northeast of South Shaftsbury.	2.38	1964-77	3-14-77	9.32	115
		St. Lawrence River basin					
04279400	Poultney River tributary at East Poultney, VT	Lat 43°32'17", long 73°12'36", Rutland County, at culvert 1.0 mi north of East Poultney.	1.13	1964-77	3-13-77	11.68	80
04280900	Moon Brook at Rutland, VT	Lat 43°36'33", long 72°57'25", Rutland County, at culvert on macadam road, 1.0 mi northeast of Rutland.	2.12	1964-77	8-17-77	11.18	88
04282200	Neshobe River at Brandon, VT	Lat 43°48'37", long 73°04'36", Rutland County, at bridge on dirt road, 1.0 mi northeast of Brandon.	20.1	1968-77	8-31-77	8.22	740
04282300	Brandy Brook at Bread Loaf, VT	Lat 43°57'19", long 72°59'49", Addison County, at culvert on State Highway 125, at Bread Loaf, and 2 mi east of Ripton.	2.24	1963-77	3-13-77	11.46	87
04282600	Little Otter Creek tributary near Bristol, VT	Lat 44°08'44", long 73°07'05", Addison County, at culvert on dirt road, 2 mi northwest of Bristol.	1.48	1964-77	3-13-77	(a)	b50
04282750	Lewis Creek tributary No. 2 near Rockville, VT	Lat 44°15'54", long 73°04'02", Addison County, at culvert on State Highway 116, 1.3 mi north of Rockville.	1.07	1964-77	3-13-77	(a)	b60
04288400	Bryant Brook at Waterbury Center, VT	Lat 44°22'41", long 72°43'29", Washington County, at culvert on State Highway 100, at Waterbury Center.	2.64	1964-77	3-13-77	11.89	140
04290700	Bailey Brook at East Hardwick, VT	Lat 44°31'41", long 72°18'16", Caledonia County, at culvert on macadam road, 0.5 mi northeast of East Hardwick.	2.52	1964-77	8-17-77	12.56	130
04293400	Whittaker Brook at Richford, VT	Lat 44°59'14", long 72°39'13", Franklin County, at culvert on State Highway 105, 1 mi east of Richford.	.64	1963-77	3-31-77	8.87	35
04293800	Missisquoi River tributary at Sheldon Junction, VT	Lat 44°54'01", long 72°57'35", Franklin County, at culvert on State Highway 105, at Sheldon Junction.	1.69	1963-77	3-14-77	13.25	93
04296150	Lord Brook near Evansville, VT	Lat 44°46'59", long 72°07'08", Orleans County, at culvert on State Highway 16, 1.5 mi south of Evansville.	4.76	1964-77	8-17-77	11.92	140
04296300	Pherrins River tributary near Island Pond, VT	Lat 44°50'33", long 71°54'32", Essex County, at culvert on State Highway 114, 2.3 mi northwest of Island Pond.	1.05	1964-77	8-17-77	9.88	27

a Not determined.
b Estimated.

Measurements at miscellaneous sites

Measurements of streamflow at points other than gaging stations or partial-record stations are given in the following table.

Discharge measurements made at miscellaneous sites during water year 1977

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
Piscataqua River basin						
Lamprey River	Piscataqua River	Lat 43°06'24", long 71°14'34", Rockingham County, at culvert on State Highway 107A, 1.8 mi south of Deerfield Center, NH.	-	1976	9-13-77	0.16
Lamprey River tributary	Lamprey River	Lat 43°06'11", long 71°14'49", Rockingham County, on culvert on State Highway 107A, near Deerfield Fairgrounds, 2 mi south of Deerfield Center, NH.	-	1976	9-13-77	.09
Lamprey River	Piscataqua River	Lat 43°03'46", long 71°13'42", Rockingham County, at culvert on State Highway 101, 3.0 mi northeast of Raymond, NH.	-	1976	9-13-77	.67
do	do	Lat 43°02'58", long 71°02'02", Rockingham County, near Camp Hedding, on town road, 2.2 mi northeast of Epping, NH.	-	1976	9-12-77	7.09
Lamprey River tributary	Lamprey River	Lat 43°03'09", long 71°02'01", Rockingham County, at culvert on abandoned road near Camp Hedding, 2.5 mi northeast of Epping, NH.	-	1976	9-12-77	.02
North River	do	Lat 42°11'11", long 71°08'20", Strafford County, at culvert on U.S. Highway 4, 0.8 mi east of Northwood, NH.	-	1976	9-12-77	.01
do	do	Lat 43°10'49", long 71°08'25", Strafford County, at culvert on State Highway 152, 0.8 mi southeast of Northwood, NH.	-	1976	9-12-77	.01
do	do	Lat 43°08'42", long 71°06'55", Strafford County, at culvert on abandoned road near State Highway 152, 3.0 mi southeast of Northwood, NH.	-	1976	9-12-77	.01
do	do	Lat 43°04'43", long 71°02'09", Rockingham County, at culvert on State Highway 125, 3.5 mi northeast of Epping, NH.	-	1976	9-12-77	1.06
Lamprey River	Piscataqua River	Lat 43°05'31", long 71°00'29", Strafford County, at bridge on State Highway 152, near Wadley Falls, 4 mi east of Newmarket, NH.	-	1976	9-12-77	5.74
Little River	Lamprey River	Lat 43°08'47", long 71°03'40", Rockingham County, at culvert on town road, 0.6 mi south of U.S. Highway 4, 5.5 mi southwest of Northwood, NH.	-	1976	9-12-77	45.6
do	do	Lat 43°06'49", long 71°03'04", Rockingham County, on town road, 0.7 mi southeast of Mill Pond Rd., 2.5 mi east of Nottingham, NH.	-	-	9-12-77	42.5
do	do	Lat 43°07'08", long 71°02'07", Rockingham County, at culvert on State Highway 125, 8 mi southeast of Northwood, NH.	-	1976	9-12-77	51.4
Little River tributary	Little River	Lat 43°07'12", long 71°01'50", Strafford County, Mill Pond Rd., 0.2 mi east of State Highway, 3.5 mi east of Nottingham, NH.	-	-	9-12-77	0
Little River	do	Lat 43°06'40"(revised), long 71°00'45", Strafford County, at bridge on Tuttle Rd., 4.5 mi northeast of Newmarket, NH.	-	1976	9-12-77	48.1
Piscassic River	Lamprey River	Lat 43°01'09", long 71°06'37", Rockingham County, Center Crossing of Shirking Road Intersection, 2.4 mi southwest of Epping, NH.	-	-	9-12-77	.04
do	do	Lat 43°00'55", long 71°06'44", Rockingham County, on gravel road, 0.3 mi south of Shirking Rd., 2.4 mi southwest of Epping, NH.	-	-	9-12-77	0

Discharge measurements made at miscellaneous sites during water year 1977--Continued

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		Piscataqua River basin--Continued				
Piscassic River	Lamprey River	Lat 43°01'04", long 71°06'26", Rockingham County, southeast corner of Intersection at Shirking Rd., 2.3 mi southwest of Epping, NH.	-	-	9-12-77	0.02
do	do	Lat 43°01'02", long 71°05'10", Rockingham County, at culvert 0.2 mi south of Martin Crossing, and 1.5 mi southwest of Epping, NH.	-	1976	9-12-77	.15
do	do	Lat 43°01'57", long 71°01'04", Rockingham County, at culvert on Birch Rd., 2.9 mi east of Epping, NH.	-	1976	9-12-77	.14
Fresh River	Piscassic River	Lat 43°01'19", long 71°00'49", Rockingham County, on Birch Rd., 0.65 mi northwest of U.S. Highway 101, 3.2 mi southeast of Epping, NH.	-	-	9-12-77	0
Piscassic River	Lamprey River	Lat 43°02'03", long 70°58'07", Rockingham County, below dam at outlet of Piscassic Ice Pond, near Piscassic Rd., 1.5 mi west of Newfields, NH.	-	1976	9-13-77	.11
do	do	Lat 43°03'37", long 70°58'00", Rockingham County, 0.3 mi southeast of Four Corners, 1.8 mi southwest of Newmarket, NH.	-	-	9-13-77	.12
do	do	Lat 43°03'52", long 70°58'02", Rockingham County, on Newmarket Rd., 1 mi southwest of intersection with Lee Hook Rd., 1.6 mi southwest of Newmarket, NH.	-	-	9-13-77	0
do	do	Lat 43°04'08", long 70°57'44", Rockingham County, at culvert on Newmarket Rd., 1.5 mi southwest of Newmarket, NH.	-	1976	9-13-77	.06
do	do	Lat 43°04'31", long 70°57'14", Rockingham County, 0.1 mi north on Lee Hook Rd. from intersection with Newmarket Rd., 0.8 mi west of Newmarket, NH.	-	-	9-13-77	-
do	do	Lat 43°04'56", long 70°56'56", Rockingham County, near Pigeon Hill on Packers Falls Rd., 0.5 mi north of intersection with Newmarket Rd., 0.6 mi west of Newmarket, NH.	-	-	9-13-77	.25
		Merrimack River basin				
Nubanusit Brook	Contoocook River	Lat 42°58'25", long 72°05'13", Cheshire County, at outlet of Nubanusit Lake, 2.0 mi north of Harrisville, NH.	-	-	8- 4-77	8.1

CHEMICAL ANALYSES OF SURFACE WATER IN MERRIMACK RIVER BASIN, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM (COL. PER 100 ML)	STREPTOCOCCI (COLONIES PER 100 ML)
01096585 - BEAVER BROOK AT WEST WINDHAM, NH (LAT 42 48 23 LONG 071 21 12)											
OCT , 1976											
19...	1115	20	283	6.7	8.5	6.0	10.4	26	120	84	120
01096588 - BROOK AT DUNCAN BEACH, COBBETTS PND, WINDHAM, NH (LAT 42 48 22 LONG 071 16 32)											
OCT , 1976											
19...	0915	1.0	510	6.8	3.0	3.0	10.1	<10	110	46	40
01096590 - GOLDEN BROOK AT WINDHAM, NH (LAT 42 47 26 LONG 071 18 06)											
OCT , 1976											
19...	1030	.80	195	7.2	8.0	11.0	10.2	<10	140	48	90
01100502 - WASH POND OUTLET, AT HAMPSTEAD, NH (LAT 42 53 02 LONG 071 11 24)											
OCT , 1976											
20...	1500	.00	107	6.9	5.0	10.0	10.0	21	E200	E100	E100
01100505 - SPICKET RIVER AT NORTH SALEM, NH (LAT 42 50 57 LONG 071 12 56)											
OCT , 1976											
20...	1300	43	75	6.5	6.0	11.0	9.9	<10	130	100	30
01100506 - PROVIDENCE HILL BROOK AT N. MAIN ST., SALEM, NH (LAT 42 48 54 LONG 071 11 49)											
OCT , 1976											
21...	1045	11	245	6.4	9.0	10.0	7.4	40	2500	E700	E800
01100507 - SPICKET RIVER NEAR SALEM, NH (LAT 42 49 01 LONG 071 12 13)											
OCT , 1976											
21...	1030	8.5	84	6.9	9.5	11.5	10.4	<10	330	59	43
01100515 - CAPTAIN POND BROOK NEAR SALEM, NH (LAT 42 48 42 LONG 071 11 28)											
OCT , 1976											
21...	1130	.50	136	5.8	9.0	12.0	9.5	27	B540	E500	E500

B, NON-IDEAL COLONY COUNT.
E, ESTIMATED.

CHEMICAL ANALYSES OF SURFACE WATER IN MERRIMACK RIVER BASIN, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977--Continued

DATE	TOTAL CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
01096585 - BEAVER BROOK AT WEST WINDHAM, NH (LAT 42 48 23 LONG 071 21 12)										
OCT , 1976 19...	14	2.0	4.8	22	0	18	7.0	21	49	.7
01096588 - BROOK AT DUNCAN BEACH, COBBETTS PND, WINDHAM, NH (LAT 42 48 22 LONG 071 16 32)										
OCT , 1976 19...	31	4.4	4.2	45	0	37	11	12	120	.1
01096590 - GOLDEN BROOK AT WINDHAM, NH (LAT 42 47 26 LONG 071 18 06)										
OCT , 1976 19...	9.5	1.7	2.4	19	0	16	1.9	9.3	43	.1
01100502 - WASH POND OUTLET, AT HAMPSTEAD, NH (LAT 42 53 02 LONG 071 11 24)										
OCT , 1976 20...	4.8	1.9	1.5	18	0	15	3.6	6.1	20	.1
01100505 - SPICKET RIVER AT NORTH SALEM, NH (LAT 42 50 57 LONG 071 12 56)										
OCT , 1976 20...	4.0	.9	1.0	17	0	14	8.6	6.8	13	.1
01100506 - PROVIDENCE HILL BROOK AT N. MAIN ST., SALEM, NH (LAT 42 48 54 LONG 071 11 49)										
OCT , 1976 21...	16	2.4	7.0	26	0	21	17	30	38	.1
01100507 - SPICKET RIVER NEAR SALEM, NH (LAT 42 49 01 LONG 071 12 13)										
OCT , 1976 21...	4.1	.9	1.2	17	0	14	3.4	6.2	14	.1
01100515 - CAPTAIN POND BROOK NEAR SALEM, NH (LAT 42 48 42 LONG 071 11 28)										
OCT , 1976 21...	11	2.7	1.7	15	0	12	--	31	13	.1

CHEMICAL ANALYSES OF SURFACE WATER IN MERRIMACK RIVER BASIN, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977--Continued

DATE	DIS-SOLVED SILICA (SIO2) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL ORTHO PHOS-PHORUS (P) (MG/L)	TOTAL ORGANIC CARBON (C) (MG/L)	TOTAL BORON (B) (UG/L)
01096585 - BEAVER BROOK AT WEST WINDHAM, NH (LAT 42 48 23 LONG 071 21 12)										
OCT , 1976 19...	9.2	1.2	1.4	.70	2.1	3.3	.64	.61	6.5	180
01096588 - BROOK AT DUNCAN BEACH, COBBETTS PND, WINDHAM, NH (LAT 42 48 22 LONG 071 16 32)										
OCT , 1976 19...	12	.05	.09	.24	.33	.38	.02	.03	7.3	20
01096590 - GOLDEN BROOK AT WINDHAM, NH (LAT 42 47 26 LONG 071 18 06)										
OCT , 1976 19...	1.4	.04	.04	.31	.35	.39	.07	.06	7.6	0
01100502 - WASH POND OUTLET, AT HAMPSTEAD, NH (LAT 42 53 02 LONG 071 11 24)										
OCT , 1976 20...	.9	.03	.01	.59	.60	.63	.09	.01	4.8	30
01100505 - SPICKET RIVER AT NORTH SALEM, NH (LAT 42 50 57 LONG 071 12 56)										
OCT , 1976 20...	1.5	.05	.02	.16	.18	.23	.03	.01	8.6	10
01100506 - PROVIDENCE HILL BROOK AT N. MAIN ST., SALEM, NH (LAT 42 48 54 LONG 071 11 49)										
OCT , 1976 21...	8.2	.63	.46	.84	1.3	1.9	.09	.03	5.6	40
01100507 - SPICKET RIVER NEAR SALEM, NH (LAT 42 49 01 LONG 071 12 13)										
OCT , 1976 21...	.5	.04	.05	.25	.30	.34	.02	.01	8.0	10
01100515 - CAPTAIN POND BROOK NEAR SALEM, NH (LAT 42 48 42 LONG 071 11 28)										
OCT , 1976 21...	6.3	1.4	.01	.82	.83	2.2	.06	.01	8.2	30

CHEMICAL ANALYSES OF SURFACE WATER IN MERRIMACK RIVER BASIN, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977--Continued

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM (COL. PER 100 ML)	STREPTOCOCCI (COLONIES PER 100 ML)
01100520 - SPICKET RIVER ABOVE WIDOW HARRIS BK AT SALEM, NH (LAT 42 48 08 LONG 071 11 46)											
OCT , 1976											
21...	1000	10	106	6.5	9.0	11.0	9.8	<10	630	170	B400
01100530 - HITTYTITY BROOK NEAR SALEM, NH (LAT 42 48 18 LONG 071 13 07)											
OCT , 1976											
21...	0915	5.2	142	6.4	13.0	9.0	8.4	34	B510	B260	B240
01100535 - WIDOW HARRIS BROOK AT SALEM, NH (LAT 42 47 58 LONG 071 11 58)											
OCT , 1976											
21...	0930	10	148	6.3	13.5	10.0	7.9	25	E4000	E600	E800
01100537 - SPICKET RIVER AT RT 97 BRIDGE, SALEM, NH (LAT 42 47 15 LONG 071 12 00.01)											
OCT , 1976											
20...	0930	14	100	6.3	6.5	9.0	9.8	<10	220	38	28
01100538 - SPICKET RIVER AT LAWRENCE HILL, SALEM, NH (LAT 42 46 07 LONG 071 12 08)											
OCT , 1976											
21...	0830	22	112	6.4	13.0	10.0	9.4	32	B1200	530	E700
01100540 - SPICKET RIVER AT SALEM, NH (LAT 42 45 15 LONG 071 12 32)											
OCT , 1976											
20...	1040	17	114	6.4	5.5	8.0	9.0	<10	120	B0	B14
01100545 - POLICY BROOK NEAR SALEM, NH (LAT 42 47 29 LONG 071 15 06)											
OCT , 1976											
20...	0815	.00	148	6.3	6.0	11.0	5.2	<10	--	40	E500
01100549(REVISED) - POLICY BROOK AT ROCKINGHAM BOULEVARD, SALEM, NH (LAT 42 46 03 LONG 071 13 23.01)											
OCT , 1976											
20...	1000	1.8	510	6.4	7.0	7.5	5.8	18	55000	180	260

B, NON-IDEAL COLONY COUNT.
E, ESTIMATED.

CHEMICAL ANALYSES OF SURFACE WATER IN MERRIMACK RIVER BASIN, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977--Continued

DATE	TOTAL CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
01100520 - SPICKET RIVER ABOVE WIDOW HARRIS BK AT SALEM, NH (LAT 42 48 08 LONG 071 11 46)										
OCT , 1976 21...	6.2	1.2	1.9	17	0	14	8.6	9.0	16	.1
01100530 - HITTYTITY BROOK NEAR SALEM, NH (LAT 42 48 18 LONG 071 13 07)										
OCT , 1976 21...	7.1	1.5	3.3	20	0	16	13	4.9	28	.1
01100535 - WIDOW HARRIS BROOK AT SALEM, NH (LAT 42 47 58 LONG 071 11 58)										
OCT , 1976 21...	9.3	1.8	3.7	18	0	15	14	15	22	.1
01100537 - SPICKET RIVER AT RT 97 BRIDGE, SALEM, NH (LAT 42 47 15 LONG 071 12 00.01)										
OCT , 1976 20...	5.8	1.3	1.7	18	0	15	14	7.5	16	.1
01100538 - SPICKET RIVER AT LAWRENCE HILL, SALEM, NH (LAT 42 46 07 LONG 071 12 08)										
OCT , 1976 21...	7.0	1.4	2.2	18	0	15	11	10	18	.1
01100540 - SPICKET RIVER AT SALEM, NH (LAT 42 45 15 LONG 071 12 32)										
OCT , 1976 20...	7.0	1.3	1.9	19	0	16	12	8.2	19	.1
01100545 - POLICY BROOK NEAR SALEM, NH (LAT 42 47 29 LONG 071 15 06)										
OCT , 1976 20...	8.0	1.6	1.6	17	0	14	14	9.2	30	.1
01100549(REVISED) - POLICY BROOK AT ROCKINGHAM BOULEVARD, SALEM, NH (LAT 42 46 03 LONG 071 13 23.01)										
OCT , 1976 20...	29	4.6	5.5	49	0	40	31	16	120	.1

CHEMICAL ANALYSES OF SURFACE WATER IN MERRIMACK RIVER BASIN, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977--Continued

DATE	DIS-SOLVED SILICA (SIO2) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL ORTHO PHOS-PHORUS (P) (MG/L)	TOTAL ORGANIC CARBON (C) (MG/L)	TOTAL BORON (B) (UG/L)
01100520 - SPICKET RIVER ABOVE WIDOW HARRIS BK AT SALEM, NH (LAT 42 48 08 LONG 071 11 46)										
OCT , 1976 21...	1.8	.72	.03	.27	.30	1.0	.05	.02	5.3	10
01100530 - HITTYTITY BROOK NEAR SALEM, NH (LAT 42 48 18 LONG 071 13 07)										
OCT , 1976 21...	7.0	.03	.02	.63	.65	.68	.03	.01	6.2	30
01100535 - WIDOW HARRIS BROOK AT SALEM, NH (LAT 42 47 58 LONG 071 11 58)										
OCT , 1976 21...	9.5	.40	.01	.47	.48	.88	.04	.01	6.1	30
01100537 - SPICKET RIVER AT RT 97 BRIDGE, SALEM, NH (LAT 42 47 15 LONG 071 12 00.01)										
OCT , 1976 20...	1.5	.33	.03	.20	.23	.56	.06	.02	6.8	10
01100538 - SPICKET RIVER AT LAWRENCE HILL, SALEM, NH (LAT 42 46 07 LONG 071 12 08)										
OCT , 1976 21...	3.2	.40	.05	.45	.50	.90	.05	.02	4.1	20
01100540 - SPICKET RIVER AT SALEM, NH (LAT 42 45 15 LONG 071 12 32)										
OCT , 1976 20...	2.6	.60	.27	.03	.30	.90	.05	.02	7.4	10
01100545 - POLICY BROOK NEAR SALEM, NH (LAT 42 47 29 LONG 071 15 06)										
OCT , 1976 20...	1.1	.08	.02	.53	.55	.63	.08	.04	5.7	20
01100549(REVISED) - POLICY BROOK AT ROCKINGHAM BOULEVARD, SALEM, NH (LAT 42 46 03 LONG 071 13 23.01)										
OCT , 1976 20...	13	.21	.49	.61	1.1	1.3	.10	.06	7.3	50

CHEMICAL ANALYSES OF SURFACE WATER IN MERRIMACK RIVER BASIN, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977--Continued

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM (COL. PER 100 ML)	STREPTOCOCCI (COLONIES PER 100 ML)
01100675 - KELLY BROOK AT RT 125, PLAISTOW, NH (LAT 42 51 15 LONG 071 06 03)											
OCT , 1976 19...	1515	.00	165	6.4	8.5	7.0	7.4	<10	170	B52	B32
01100677(REVISED) - LITTLE RIVER AT PLAISTOW, NH (LAT 42 50 03 LONG 071 06 05)											
OCT , 1976 19...	1430	11	265	7.1	8.0	7.0	9.8	<10	310	180	82
01100684 - LITTLE RIVER AT WESTVILLE, NH (LAT 42 49 06 LONG 071 06 50)											
OCT , 1976 19...	1345	11	265	6.6	7.0	6.0	9.8	12	290	B44	B48
01100825 - POWWOW RIVER NEAR KINGSTON, NH (LAT 42 54 58 LONG 071 04 54)											
OCT , 1976 21...	1300	3.8	155	5.6	7.5	11.0	9.5	38	980	B320	B260
01100827 - POWWOW R AT OUTLET OF GREAT POND, KINGSTON, NH (LAT 42 54 44 LONG 071 03 46)											
OCT , 1976 21...	1530	4.2	76	6.7	8.0	11.0	10.4	<10	170	B8	54
01100830 - COUNTRY POND OUTLET, NEAR KINGSTON, NH (LAT 42 53 37 LONG 071 03 23)											
OCT , 1976 21...	1415	6.0	85	6.4	7.0	11.5	10.2	14	80	B140	72
01100835 - POWWOW RIVER NEAR EAST KINGSTON, NH (LAT 42 54 29 LONG 071 01 01)											
OCT , 1976 21...	1445	16	81	6.4	7.0	10.5	10.8	16	150	50	B90

B, NON-IDEAL COLONY COUNT.

CHEMICAL ANALYSES OF SURFACE WATER IN MERRIMACK RIVER BASIN, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977--Continued

DATE	TOTAL CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
01100675 - KELLY BROOK AT RT 125, PLAISTOW, NH (LAT 42 51 15 LONG 071 06 03)										
OCT , 1976 19...	13	3.8	2.0	38	0	31	24	12	26	.1
01100677(REVISED) - LITTLE RIVER AT PLAISTOW, NH (LAT 42 50 03 LONG 071 06 05)										
OCT , 1976 19...	12	3.4	2.7	29	0	24	3.7	16	54	.7
01100684 - LITTLE RIVER AT WESTVILLE, NH (LAT 42 49 06 LONG 071 06 50)										
OCT , 1976 19...	14	3.3	3.0	38	0	31	15	15	49	.3
01100825 - POWWOW RIVER NEAR KINGSTON, NH (LAT 42 54 58 LONG 071 04 54)										
OCT , 1976 21...	--	--	--	12	0	10	--	33	19	.1
01100827 - POWWOW R AT OUTLET OF GREAT POND, KINGSTON, NH (LAT 42 54 44 LONG 071 03 46)										
OCT , 1976 21...	4.0	1.0	1.2	17	0	14	5.4	7.0	13	.1
01100830 - COUNTRY POND OUTLET, NEAR KINGSTON, NH (LAT 42 53 37 LONG 071 03 23)										
OCT , 1976 21...	4.2	1.4	1.0	17	0	14	11	5.6	15	.1
01100835 - POWWOW RIVER NEAR EAST KINGSTON, NH (LAT 42 54 29 LONG 071 01 01)										
OCT , 1976 21...	3.2	1.0	.9	17	0	14	11	4.3	16	.1

CHEMICAL ANALYSES OF SURFACE WATER IN MERRIMACK RIVER BASIN, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977--Continued

DATE	DIS-SOLVED SILICA (SIO2) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL ORTHO PHOS-PHORUS (P) (MG/L)	TOTAL ORGANIC CARBON (C) (MG/L)	TOTAL BORON (B) (UG/L)
01100675 - KELLY BROOK AT RT 125, PLAISTOW, NH (LAT 42 51 15 LONG 071 06 03)										
OCT , 1976 19...	14	.42	.01	.09	.10	.52	.03	.02	5.7	20
01100677(REVISED) - LITTLE RIVER AT PLAISTOW, NH (LAT 42 50 03 LONG 071 06 05)										
OCT , 1976 19...	14	.25	.05	.43	.48	.73	.39	.32	7.0	40
01100684 - LITTLE RIVER AT WESTVILLE, NH (LAT 42 49 06 LONG 071 06 50)										
OCT , 1976 19...	14	.27	.03	.35	.38	.65	.11	.07	8.1	40
01100825 - POWWOW RIVER NEAR KINGSTON, NH (LAT 42 54 58 LONG 071 04 54)										
OCT , 1976 21...	11	.29	.04	.41	.45	.74	.90	.30	7.6	40
01100827 - POWWOW R AT OUTLET OF GREAT POND, KINGSTON, NH (LAT 42 54 44 LONG 071 03 46)										
OCT , 1976 21...	2.3	.03	.04	.24	.28	.31	.03	.01	6.1	10
01100830 - COUNTRY POND OUTLET, NEAR KINGSTON, NH (LAT 42 53 37 LONG 071 03 23)										
OCT , 1976 21...	2.1	.04	.03	.35	.38	.42	.04	.01	7.2	10
01100835 - POWWOW RIVER NEAR EAST KINGSTON, NH (LAT 42 54 29 LONG 071 01 01)										
OCT , 1976 21...	.6	.04	.04	.26	.30	.34	.03	.02	6.8	10

BIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PERIPHYTON

DATE	LENGTH OF EXPOSURE (DAYS)	BIOMASS (G/SQ M) DRY MASS	BIOMASS (G/SQ M) ASH MASS	CHLOROPHYLL A (MG/SQ M)	CHLOROPHYLL B (MG/SQ M)	BIOMASS PIGMENT RATIO	SAMPLING METHOD
MERRIMACK RIVER BASIN							
01100502 - WASH POND OUTLET, AT HAMPSTEAD, NH (LAT 42 53 02 LONG 071 11 24)							
OCT 20	15	2.08	1.15	0.791	0.214	1200	ARTIFICIAL SUBSTRATE
01100507 - SPICKET RIVER NEAR SALEM, NH (LAT 42 49 01 LONG 071 12 13)							
OCT 21	15	9.69	6.15	5.88	1.07	600	ARTIFICIAL SUBSTRATE
01100515 - CAPTAIN POND BROOK NEAR SALEM, NH (LAT 42 48 42 LONG 071 11 28)							
OCT 21	15	1.85	1.00	0.789	0.197	1100	ARTIFICIAL SUBSTRATE
01100684 - LITTLE RIVER AT WESTVILLE, NH (LAT 42 49 06 LONG 071 06 50)							
OCT 19	15	9.69	7.31	1.72	0.371	1400	ARTIFICIAL SUBSTRATE
01100830 - COUNTRY POND OUTLET, NEAR KINGSTON, NH (LAT 42 53 37 LONG 071 03 23)							
OCT 21	15	1.23	0.538	0.707	0.231	980	ARTIFICIAL SUBSTRATE

WATER-QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
SACO RIVER BASIN							
01064300 - ELLIS RIVER NEAR JACKSON, NH (LAT 44 13 12 LONG 071 15 00)							
NOV , 1976				JUN , 1977			
11...	1220	18	1.0	07...	1150	66	7.5
DEC				AUG			
15...	1255	10	.0	25...	1100	12	11.0
MAR , 1977							
02...	1350	7.6	.0				
09...	1155	4.3	.0				
01064400 - LUCY BROOK NEAR NORTH CONWAY, NH (LAT 44 04 10 LONG 071 10 30)							
NOV , 1976				APR , 1977			
11...	1540	.92	.0	19...	1118	26	6.5
DEC				JUL			
16...	1215	6.0	.0	07...	1355	3.3	10.5
MAR , 1977							
03...	1215	1.8	.0				
10...	1150	2.2	.0				
01065000 - OSSIPEE RIVER AT EFFINGHAM FALLS, NH (LAT 43 47 44 LONG 071 03 36)							
NOV , 1976				AUG , 1977			
12...	1230	814	2.0	26...	1200	174	17.0
APR , 1977							
19...	1440	1330	8.0				
PISCATAQUA RIVER BASIN							
01072100 - SALMON FALLS RIVER AT MILTON, NH (LAT 43 24 50 LONG 070 59 15)							
MAR , 1977				AUG , 1977			
15...	1550	3090	2.0	31...	1415	35	24.0
JUN							
01...	1200	70	19.5				
01073000 - OYSTER RIVER NEAR DURHAM, NH (LAT 43 08 55 LONG 070 57 56)							
JAN , 1977				JUL , 1977			
28...	1110	3.4	.0	08...	0915	2.0	20.0
APR				AUG			
18...	1315	15	12.0	30...	1505	.62	23.0
MAY							
31...	1350	3.9	17.5				
01073500 - LAMPREY RIVER NEAR NEWMARKET, NH (LAT 43 06 09 LONG 070 57 11)							
OCT , 1976				MAY , 1977			
19...	1000	69	8.5	20...	1110	182	16.5
JAN , 1977				AUG			
26...	1315	45	.0	23...	1025	22	19.5
MAR							
16...	1125	4110	2.0				
01073600 - DUDLEY BROOK NEAR EXETER, NH (LAT 42 59 37 LONG 071 01 24)							
JAN , 1977				APR , 1977			
27...	1325	1.7	.0	18...	1115	4.2	12.0
MERRIMACK RIVER BASIN							
01075000 - PEMIGEWASSET RIVER AT WOODSTOCK, NH (LAT 43 58 34 LONG 071 40 48)							
DEC , 1976				MAY , 1977			
13...	0945	388	1.0	27...	1245	337	15.0
JAN , 1977				JUL			
21...	1040	109	1.0	07...	1015	155	15.0
MAR				AUG			
07...	0930	78	1.0	18...	0950	499	14.5
APR							
13...	1120	1210	5.0				

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)

MERRIMACK RIVER BASIN--CONTINUED

01075800 - STEVENS BROOK NEAR WENTWORTH, NH (LAT 43 50 12 LONG 071 53 07)

NOV , 1976				APR , 1977			
08...	1200	6.0	1.5	09...	1205	7.3	8.0
DEC				JUN			
14...	0955	1.5	1.0	01...	0930	.57	12.0
JAN , 1977				JUL			
24...	0935	.57	.0	11...	0935	.35	13.0
MAR							
09...	0935	.81	1.0				

01076000 - BAKER RIVER NEAR RUMNEY, NH (LAT 43 47 46 LONG 071 50 42)

DEC , 1976				JUN , 1977			
14...	1130	86	1.0	01...	1045	55	16.5
JAN , 1977				JUL			
24...	1120	56	.0	11...	1100	55	18.0
MAR				AUG			
09...	1130	120	1.0	18...	1315	71	15.0
15...	1020	2240	1.0				
APR							
19...	1430	482	10.5				

01076500 - PEMIGEWASSET RIVER AT PLYMOUTH, NH (LAT 43 45 33 LONG 071 41 10)

NOV , 1976				JUN , 1977			
22...	1125	623	1.0	08...	0900	2520	--
JAN , 1977				22...	1200	468	19.0
20...	1200	408	.0	JUL			
FEB				21...	1140	217	27.5
18...	1400	278	.0	AUG			
MAY				23...	1145	534	16.0
20...	1155	1130	17.0	SEP			
26...	0845	666	19.0	21...	1200	1860	12.0
JUN				27...	0845	5920	12.0
07...	1345	1290	15.0				

01078000 - SMITH RIVER NEAR BRISTOL, NH (LAT 43 34 04 LONG 071 44 54)

NOV , 1976				MAY , 1977			
08...	1415	214	3.0	26...	0945	45	17.0
DEC				JUN			
13...	1330	96	.5	01...	1410	33	16.0
JAN , 1977				08...	--	200	--
21...	1330	35	1.0	AUG			
MAR				26...	1430	13	12.0
08...	0940	99	1.0	SEP			
17...	1445	1040	2.0	27...	1000	123	12.0
APR							
15...	1125	425	8.0				

01081000 - WINNIPESAUKEE RIVER AT TILTON, NH (LAT 43 26 31 LONG 071 35 20)

OCT , 1976				MAY , 1977			
01...	1145	338	15.0	31...	1400	288	22.0
NOV				JUL			
12...	1025	377	2.0	14...	1040	365	23.0
MAR , 1977				AUG			
08...	1120	516	1.0	24...	1105	315	20.5
APR							
14...	1325	2450	7.0				

01081500 - MERRIMACK RIVER AT FRANKLIN JUNCTION, NH (LAT 43 25 26 LONG 071 39 12)

OCT , 1976				SEP , 1977			
30...	1010	2170	13.0	30...	1200	2520	14.0
AUG , 1977							
02...	1345	901	22.0				

WATER-QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

MERRIMACK RIVER BASIN--CONTINUED

01082000 - CONTOOCOOK RIVER AT PETERBOROUGH, NH (LAT 42 51 45 LONG 071 57 35)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
NOV , 1976				APR , 1977			
10...	0945	37	2.0	22...	1210	87	15.0
DEC				JUN			
15...	1215	42	.5	06...	1335	48	17.0
JAN , 1977				AUG			
31...	0950	21	1.0	09...	1210	16	23.5
MAR							
11...	0950	190	1.0				

01083000 - NUBANUSIT BROOK NEAR PETERBOROUGH, NH (LAT 42 53 10 LONG 071 58 24)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
NOV , 1976				JUN , 1977			
10...	1100	26	2.0	06...	1015	12	17.0
DEC				AUG			
15...	1340	64	2.0	09...	1045	10	23.5
MAR , 1977							
11...	1110	151	2.0				

01085000 - CONTOOCOOK RIVER NEAR HENNIKER, NH (LAT 43 09 10 LONG 071 51 24)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
MAR , 1977				JUN , 1977			
16...	1100	5380	1.0	01...	1130	280	19.0
APR				29...	0955	307	22.0
21...	1205	573	10.0	AUG			
JUN				10...	1015	53	22.0
01...	1030	285	19.0				

01085500 - CONTOOCOOK R BL HOPKINTON DAM AT W HOPKINTON, NH (LAT 43 11 31 LONG 071 44 51)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
NOV , 1976				MAY , 1977			
18...	0915	259	2.0	24...	1040	484	13.0
FEB , 1977				AUG			
01...	1230	127	.0	22...	1320	108	19.0
MAR							
07...	1230	781	.0				
17...	1130	4390	1.0				

01085800 - WEST BRANCH WARNER RIVER NEAR BRADFORD, NH (LAT 43 15 33 LONG 072 01 35)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
NOV , 1976				APR , 1977			
09...	0950	5.8	2.0	21...	0915	8.3	10.0
DEC				JUN			
15...	0915	3.0	1.0	02...	0845	1.4	16.0
JAN , 1977				JUL			
25...	0900	2.0	.0	12...	1300	.88	16.0
MAR				AUG			
10...	0910	14	1.0	22...	0820	.69	13.0

01086000 - WARNER RIVER AT DAVISVILLE, NH (LAT 43 15 06 LONG 071 43 54)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
NOV , 1976				APR , 1977			
09...	1330	158	4.0	21...	1020	259	13.0
JAN , 1977				JUN			
24...	1350	57	.0	01...	1310	39	18.0
MAR				AUG			
16...	1300	2730	1.0	22...	1500	22	19.0
16...	1330	2680	1.0				

01087000 - BLACKWATER RIVER NEAR WEBSTER, NH (LAT 43 17 45 LONG 071 41 46)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
NOV , 1976				JUL , 1977			
09...	1100	219	4.0	07...	1210	46	20.0
JAN , 1977				AUG			
24...	1100	63	.0	22...	1030	30	19.0
JUN							
01...	1045	67	17.0				

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)

MERRIMACK RIVER BASIN--CONTINUED

01088000 - CONTOOCOOK RIVER AT PENACOOK, NH (LAT 43 17 12 LONG 071 35 56)

NOV , 1976				JUN , 1977			
12...	1330	496	2.0	02...	1300	466	19.0
MAR , 1977				JUL			
15...	1340	5500	1.0	11...	1430	176	24.0
APR				AUG			
18...	1625	1750	11.0	19...	1410	243	23.0

01089000 - SOUCOOK RIVER NEAR CONCORD, NH (LAT 43 14 22 LONG 071 27 44)

OCT , 1976				JUN , 1977			
04...	1535	15	12.0	01...	1657	27	16.5
DEC				SEP			
21...	1530	46	1.0	02...	0930	6.1	21.0
MAR , 1977							
15...	1010	2060	1.0				

01090800 - PISCATAQUOG RIVER BL EVERETT DAM, NR E WEARE, NH (LAT 43 05 29 LONG 071 39 36)

DEC , 1976				JUN , 1977			
16...	1210	20	5.0	02...	1400	26	19.0
MAR , 1977				JUL			
10...	1255	102	2.0	12...	1545	10	22.0
APR				AUG			
21...	1345	86	12.0	22...	1330	2.4	20.0

01091000 - S BRANCH PISCATAQUOG RIVER NEAR GOFFSTOWN, NH (LAT 43 00 49 LONG 071 38 31)

NOV , 1976				APR , 1977			
10...	1045	28	2.0	21...	1357	118	16.0
DEC				JUN			
14...	1040	37	.0	02...	1030	48	17.0
JAN , 1977				JUL			
25...	1138	23	.0	08...	1025	21	19.0
MAR				AUG			
14...	1410	3250	1.0	24...	1025	12	21.0

01091500 - PISCATAQUOG RIVER NEAR GOFFSTOWN, NH (LAT 43 00 58 LONG 071 33 03)

NOV , 1976				JUN , 1977			
10...	1315	137	2.0	02...	1305	96	18.5
JAN , 1977				JUL			
25...	1345	45	.0	08...	1205	40	19.0
MAR				AUG			
08...	1145	346	2.0	24...	1200	22	21.0
14...	1130	4430	1.0				
APR							
22...	1005	248	14.0				

01093800 - STONY BROOK TRIBUTARY NEAR TEMPLE, NH (LAT 42 51 36 LONG 071 50 00)

NOV , 1976				APR , 1977			
10...	1250	1.4	1.0	22...	1235	4.6	14.5
DEC				JUN			
16...	1005	1.7	.5	03...	1110	2.7	13.0
JAN , 1977				JUL			
31...	1155	.93	.0	12...	0930	.52	16.0
MAR				AUG			
11...	1330	27	1.0	22...	1110	.20	14.0

CONNECTICUT RIVER BASIN

01127880 - BIG BROOK NEAR PITTSBURG, NH (LAT 45 08 06 LONG 071 12 23)

OCT , 1976				MAY , 1977			
07...	1345	6.8	11.0	04...	1700	24	9.0
NOV				JUN			
15...	1600	8.1	.0	13...	1425	20	12.5
JAN , 1977				AUG			
03...	1500	3.9	.0	10...	1730	5.7	14.5
FEB				SEP			
14...	1550	1.6	.0	22...	1350	36	10.0
MAR							
24...	1640	12	.0				

CONNECTICUT RIVER BASIN--CONTINUED

01128500 - CONNECTICUT R AT FIRST CONN LK NR PITTSBURG, NH (LAT 45 05 14 LONG 071 17 34)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT , 1976			
07...	1540	151	11.0
MAY , 1977			
04...	1820	12	10.0
SEP , 1977			
22...	1545	543	11.0

01129200 - CONNECTICUT BL INDIAN STREAM NR PITTSBURG, NH (LAT 45 02 25 LONG 071 26 37)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
MAR , 1977			
25...	0845	185	.0
JUN			
13...	1700	356	11.0
SEP , 1977			
22...	1300	873	9.0

01129300 - HALLS STREAM NEAR EAST HEREFORD, QUEBEC (LAT 45 02 41 LONG 071 29 54)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
JUN , 1977			
13...	1118	145	12.0

01129500 - CONNECTICUT RIVER AT NORTH STRATFORD, NH (LAT 44 44 56 LONG 071 37 50)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
MAY , 1977			
04...	1230	1660	10.0
04...	1240	1660	10.0
AUG			
10...	1415	375	16.5
AUG , 1977			
14...	1030	4000	14.0
SEP			
14...	1030	4000	14.0

01130000 - UPPER AMMONOOSUC RIVER NEAR GROVETON, NH (LAT 44 37 30 LONG 071 28 10)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
NOV , 1976			
15...	0930	290	.0
JAN , 1977			
03...	1105	126	.0
FEB			
14...	1055	66	.0
MAR			
24...	1100	366	.0
MAY , 1977			
04...	1000	884	9.0
JUN			
14...	0850	356	10.0
AUG			
10...	1130	58	15.0
SEP			
23...	1045	545	12.0

01131500 - CONNECTICUT RIVER NEAR DALTON, NH (LAT 44 24 36 LONG 071 43 16)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT , 1976			
06...	1125	1240	13.0
NOV			
15...	1110	2100	2.0
JUN , 1977			
09...	1155	2480	14.5
AUG			
25...	1150	4640	14.5

01133000 - EAST BRANCH PASSUMPSIC RIVER NEAR EAST HAVEN, VT (LAT 44 38 02 LONG 071 53 53)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
FEB , 1977			
03...	0930	41	.0
MAR			
02...	1155	45	.0
APR			
13...	1515	269	4.5
MAY , 1977			
24...	1155	51	18.5
AUG			
12...	0830	37	17.0

01134500 - MOOSE RIVER AT VICTORY, VT (LAT 44 30 42 LONG 072 50 13)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
NOV , 1976			
11...	1130	138	1.0
APR , 1977			
14...	1150	1240	3.5
MAY , 1977			
24...	1400	35	24.0
AUG			
09...	1030	13	21.0

01135000 - MOOSE RIVER AT ST. JOHNSBURY, VT (LAT 44 25 22 LONG 072 00 02)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
NOV , 1976			
11...	1010	229	1.0
DEC			
01...	0930	113	1.0
JAN , 1977			
17...	1655	63	.0
APR			
13...	1315	509	6.0
MAY , 1977			
24...	1800	50	26.0
AUG			
11...	1600	26	26.0
12...	1045	34	21.0

MISCELLANEOUS TEMPERATURE MEASUREMENTS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

CONNECTICUT RIVER BASIN--CONTINUED

01135500 - PASSUMPSIC RIVER AT PASSUMPSIC, VT (LAT 44 21 56 LONG 072 02 23)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
JAN . 1977			
20...	1715	312	.0
FEB			
24...	1145	223	.0
APR . 1977			
21...	1315	1780	10.0
MAY			
24...	1910	231	22.0

01137500 - AMMONOOSUC RIVER AT BETHLEHEM JUNCTION, NH (LAT 44 16 08 LONG 071 37 52)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT . 1976			
06...	1345	82	12.5
DEC			
21...	1215	162	.5
FEB . 1977			
01...	1250	46	.0
MAR			
14...	1200	2130	1.0
APR . 1977			
28...	1630	527	5.0
JUN			
10...	1200	213	11.0
JUL			
13...	1200	94	17.0
AUG			
26...	1230	97	16.0

01138000 - AMMONOOSUC RIVER NEAR BATH, NH (LAT 44 09 14 LONG 071 59 10)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT . 1976			
06...	1810	244	14.0
MAY . 1977			
26...	1115	331	19.5
SEP . 1977			
08...	1315	84	19.0

01139000 - WELLS RIVER AT WELLS RIVER, VT (LAT 44 09 03 LONG 072 03 55)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
NOV . 1976			
12...	0850	106	.5
DEC			
16...	1630	117	1.0
FEB . 1977			
02...	1515	64	.0
APR . 1977			
14...	1440	609	4.5
MAY			
25...	1340	57	21.0
SEP			
08...	1130	18	17.0

01139800 - EAST ORANGE BRANCH AT EAST ORANGE, VT (LAT 44 05 34 LONG 072 20 10)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT . 1976			
08...	1100	--	10.0
27...	1130	--	3.0
NOV			
15...	1500	20	1.5
DEC			
21...	1600	--	.0
FEB . 1977			
01...	1500	15	.0
MAR			
02...	0730	13	.0
MAR . 1977			
17...	1800	58	1.5
APR			
27...	1200	72	8.0
JUN			
02...	1000	9.4	18.0
JUL			
21...	1000	1.7	26.0
AUG			
23...	0700	8.7	25.0

01141500 - OMPOMPANOOSUC RIVER AT UNION VILLAGE, VT (LAT 43 47 23 LONG 072 15 19)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT . 1976			
08...	1000	101	10.0
NOV			
18...	1400	175	1.5
30...	1300	--	1.0
DEC			
22...	1100	128	.0
FEB . 1977			
03...	0800	207	.0
23...	1400	68	.0
MAR			
18...	0900	--	4.0
APR . 1977			
27...	1500	385	11.0
MAY			
05...	1300	226	13.5
JUN			
06...	1100	46	19.5
JUL			
15...	1100	26	25.0
AUG			
25...	0900	47	25.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

CONNECTICUT RIVER BASIN--CONTINUED

01141800 - MINK BROOK NEAR ETNA, NH (LAT 43 42 08 LONG 072 11 15)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT , 1976				MAY , 1977			
08...	0930	4.2	10.0	06...	0645	6.9	15.0
NOV				JUN			
17...	1600	10	1.5	03...	0850	2.9	17.0
DEC				06...	0930	1.5	19.0
22...	1030	4.4	.0	JUL			
FEB , 1977				08...	1230	1.1	26.0
03...	0940	3.5	.0	AUG			
MAR				19...	1045	.66	26.0
04...	1040	2.6	.0				
18...	1000	57	1.0				

01142500 - AYERS BROOK AT RANDOLPH, VT (LAT 43 56 04 LONG 072 39 30)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
DEC , 1976				APR , 1977			
16...	1000	249	.0	25...	1300	213	10.5
JAN , 1977				MAY			
31...	1100	183	.0	31...	0930	12	21.0
FEB				JUL			
28...	1000	11	.0	18...	1200	--	25.0
MAR				26...	1500	--	26.0
15...	0700	313	1.5	AUG			
31...	1200	549	2.0	27...	1300	--	25.5

01144000 - WHITE RIVER AT WEST HARTFORD, VT (LAT 43 42 51 LONG 072 25 07)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
NOV , 1976				MAY , 1977			
17...	1335	1040	1.5	26...	0830	485	19.0
DEC				JUN			
22...	1310	569	.0	28...	1130	265	24.0
JAN , 1977				JUL			
25...	0800	446	.0	21...	1200	134	27.0
FEB				AUG			
23...	0930	296	.0	26...	1000	187	25.0
MAR				SEP			
14...	1120	22200	1.5	28...	1015	1050	11.0
APR							
27...	1650	2990	8.5				

01145000 - MASCOMA RIVER AT WEST CANAAN, NH (LAT 43 39 00 LONG 072 04 50)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT , 1976				MAY , 1977			
15...	1030	124	7.0	03...	1330	141	11.0
NOV				17...	1230	104	15.0
04...	1605	161	6.0	JUN			
JAN , 1977				13...	1400	51	18.0
13...	1010	31	.5	JUL			
MAR				13...	1110	48	20.5
08...	1030	89	1.5	AUG			
APR				05...	1410	20	24.0
04...	1315	470	4.0				
11...	1445	222	6.0				

01150500 - MASCOMA RIVER AT MASCOMA, NH (LAT 43 39 01 LONG 072 11 05)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
NOV , 1976				APR , 1977			
12...	1140	70	4.0	19...	1535	342	7.0
FEB , 1977				JUN			
01...	1550	67	.0	02...	1040	77	19.0

01151500 - OTTAUQUECHEE RIVER AT NORTH HARTLAND, VT (LAT 43 36 09 LONG 072 21 17)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT , 1976				APR , 1977			
08...	1500	250	10.0	27...	1500	1040	8.0
NOV				JUN			
17...	1400	401	1.5	06...	1200	125	19.5
DEC				JUL			
22...	0900	322	.0	14...	0830	101	25.0
FEB , 1977				AUG			
03...	0700	142	.0	25...	0800	80	26.0
MAR							
04...	1100	158	.5				
18...	0800	5580	.5				

CONNECTICUT RIVER BASIN--CONTINUED

01152500 - SUGAR RIVER AT WEST CLAREMONT, NH (LAT 43 23 15 LONG 072 21 45)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
JAN , 1977			
03...	1130	153	1.0
FEB			
09...	1415	131	.5
MAR			
07...	1145	331	1.0
MAR , 1977			
16...	1405	2990	1.0
APR			
01...	1100	3230	3.0

01152800 - BLACK R AT COVERED BRIDGE, AT WEATHERSFIELD, VT (LAT 43 23 55 LONG 072 31 14)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
NOV , 1976			
02...	1345	2670	4.5
JAN , 1977			
17...	1315	72	.0
APR			
28...	1330	--	11.0
MAY			
18...	1315	194	19.0
JUN , 1977			
14...	1135	115	18.5
22...	1115	--	17.0
JUL			
12...	1210	69	19.0
AUG			
16...	1110	35	18.5
25...	1300	--	16.0

01153000 - BLACK RIVER AT NORTH SPRINGFIELD, VT (LAT 43 20 00 LONG 072 30 55)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
NOV , 1976			
03...	1100	438	4.5
DEC			
06...	1430	155	.5
JAN , 1977			
03...	1400	131	1.0
FEB			
09...	1135	87	.5
MAR			
07...	1425	236	1.0
APR , 1977			
28...	1145	--	9.0
JUN			
14...	1330	164	19.0
22...	1345	--	20.0
AUG			
16...	1250	53	23.0
28...	1105	--	18.0

01153500 - WILLIAMS RIVER AT BROCKWAYS MILLS, VT (LAT 43 12 31 LONG 072 31 05)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
NOV , 1976			
03...	1345	193	5.0
JAN , 1977			
12...	1600	69	.0
FEB			
09...	1645	42	.0
MAY			
03...	1530	188	14.0
JUN , 1977			
14...	1535	58	20.0
JUL			
13...	1250	62	21.5
AUG			
19...	1005	18	17.0

01154000 - SAXTONS RIVER AT SAXTONS RIVER, VT (LAT 43 08 14 LONG 072 29 17)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT , 1976			
15...	1030	124	7.0
NOV			
04...	1605	161	6.0
JAN , 1977			
13...	1010	32	.5
MAR			
08...	1030	89	1.5
APR			
04...	1330	470	4.0
11...	1500	222	6.0
MAY , 1977			
03...	1330	141	11.0
17...	1230	104	15.0
JUN			
13...	1400	51	18.0
JUL			
13...	1110	48	20.5
AUG			
05...	1410	20	24.0

01154500 - CONNECTICUT RIVER AT NORTH WALPOLE, NH (LAT 43 07 34 LONG 072 26 14)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT , 1976			
28...	1035	12200	5.0
NOV			
29...	0930	11700	4.0
DEC			
29...	1130	10400	.0
JAN , 1977			
25...	1045	16200	.5
MAR			
29...	1045	19800	4.0
APR			
26...	1400	37600	7.5
MAY , 1977			
24...	1020	7010	20.0
JUN			
21...	1045	10800	20.0
JUL			
28...	1130	6160	23.0
SEP			
06...	1030	2170	23.0
27...	1100	--	14.5

WATER-QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

CONNECTICUT RIVER BASIN--CONTINUED

01155000 - COLD RIVER AT DREWSVILLE, NH (LAT 43 07 54 LONG 072 23 23)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT , 1976			
15...	1230	67	9.0
NOV			
16...	1115	76	2.0
JAN , 1977			
04...	1015	34	.5
FEB			
07...	1515	28	1.0
MAR			
08...	0830	78	1.0
APR , 1977			
09...	1500	559	4.0
MAY			
04...	1545	115	12.0
17...	1100	88	13.5
JUN			
13...	1150	77	16.0
AUG			
19...	1225	16	18.0

01155500 - WEST RIVER AT JAMAICA, VT (LAT 43 06 32 LONG 072 46 33)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT , 1976			
01...	1055	135	12.0
MAR , 1977			
17...	1430	5290	1.0
APR			
05...	1130	1210	2.5
MAY			
05...	0930	118	10.0
JUN , 1977			
15...	0940	137	16.0
JUL			
14...	1000	91	21.0
AUG			
18...	1205	106	23.0

01156000 - WEST RIVER AT NEWFANE, VT (LAT 42 59 43 LONG 072 38 13)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT , 1976			
01...	1255	297	12.0
NOV			
04...	1230	605	5.0
JAN , 1977			
12...	1245	148	.5
FEB			
08...	1445	156	.5
MAR , 1977			
08...	1515	453	1.5
17...	1830	9600	1.0
JUN			
15...	1215	227	19.0
JUL			
14...	1215	157	23.0

01157000 - ASHUELOT RIVER NEAR GILSUM, NH (LAT 43 02 21 LONG 072 16 14)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT , 1976			
14...	1205	95	10.0
NOV			
05...	1400	144	5.0
MAR , 1977			
14...	1330	2570	1.5
APR			
06...	1100	521	2.0
MAY , 1977			
06...	1130	92	14.0
JUN			
01...	1345	31	17.0
16...	1130	60	20.0
JUL			
15...	1245	13	24.0

01158000 - ASHUELOT RIVER BL SURRY MT DAM, NR KEENE, NH (LAT 42 59 40 LONG 072 18 40)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT , 1976			
14...	1345	136	11.0
DEC			
08...	1240	263	2.0
JAN , 1977			
05...	1400	48	2.0
FEB			
07...	1245	36	2.0
MAR , 1977			
09...	1515	131	1.5
APR			
06...	1400	912	3.5
MAY			
06...	0945	143	14.0
JUL			
15...	1020	18	24.0

01158600 - OTTER BROOK BELOW OTTER BROOK DAM, NR KEENE, NH (LAT 42 56 45 LONG 072 14 14)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT , 1976			
27...	1135	71	4.5
DEC			
27...	0955	21	.0
JAN , 1977			
06...	0945	15	2.0
MAR , 1977			
09...	1330	69	1.5
MAY			
05...	1435	6.5	12.0
AUG			
30...	1130	5.6	23.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

CONNECTICUT RIVER BASIN--CONTINUED

01160000 - S BR ASHUELOT RIVER AT WEBB, NR MARLBOROUGH, NH (LAT 42 52 20 LONG 072 12 51)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT , 1976				MAR , 1977			
27...	1335	42	4.5	29...	1100	350	4.0
NOV				MAY			
29...	0930	19	4.0	02...	1230	67	12.0
DEC				24...	1145	57	21.0
09...	1100	111	.0	JUN			
27...	1140	29	.0	16...	0845	25	16.0
JAN , 1977				21...	1230	20	21.0
13...	1430	32	.0	JUL			
25...	0930	15	.5	14...	1530	20	25.0
FEB				AUG			
10...	1445	10	.0	04...	1445	7.3	25.5
17...	1545	110	.5	24...	1130	9.5	17.0
MAR							
10...	1220	85	2.0				

01161000 - ASHUELOT RIVER AT HINSDALE, NH (LAT 42 47 07 LONG 072 29 12)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT , 1976				MAR , 1977			
14...	1730	356	12.0	09...	1000	725	1.5
NOV				JUN			
04...	1430	565	6.0	15...	1445	373	20.5
FEB , 1977				SEP			
10...	1150	153	.5	21...	1345	587	15.5

HUDSON RIVER BASIN

01329000 - BATTEN KILL AT ARLINGTON, VT (LAT 43 04 38 LONG 073 09 26)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
NOV , 1976				APR , 1977			
19...	1215	269	4.5	21...	1640	651	11.0
DEC				MAY			
21...	1000	303	.5	16...	0930	334	7.0
JAN , 1977				JUN			
21...	0900	143	.5	23...	1125	214	18.0
FEB				AUG			
17...	1100	114	.5	25...	0925	164	14.0
MAR							
24...	1400	482	3.5				

01334000 - WALLOOMSAC RIVER NEAR NORTH BENNINGTON, VT (LAT 42 54 47 LONG 073 15 25)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT , 1976				MAR , 1977			
14...	1440	276	9.5	25...	0910	305	.5
22...	0910	362	7.0	APR			
NOV				22...	0955	323	10.0
19...	0915	149	4.5	JUN			
DEC				23...	1530	154	15.0
20...	1700	152	1.0	AUG			
FEB , 1977				16...	1130	128	17.5
16...	1405	77	1.5				

ST. LAWRENCE RIVER BASIN

04280000 - POULTNEY RIVER BELOW FAIR HAVEN, VT (LAT 43 37 40 LONG 073 18 50)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT , 1976				APR , 1977			
06...	1600	74	11.0	28...	0700	651	8.0
NOV				JUN			
17...	0800	210	1.5	07...	1000	23	25.0
DEC				JUL			
20...	1200	199	.5	07...	1500	33	25.5
FEB , 1977				AUG			
11...	1100	--	.0	22...	1300	6.5	26.0
MAR							
03...	1300	138	1.0				
16...	0700	2540	1.5				

WATER-QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

ST. LAWRENCE RIVER BASIN--CONTINUED

04281500 - EAST CREEK AT RUTLAND, VT (LAT 43 37 43 LONG 072 59 22)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT , 1976				MAR , 1977			
06...	1400	185	10.0	16...	1230	360	1.5
NOV				JUN			
17...	1100	199	1.5	06...	1600	11	19.0
DEC				JUL			
20...	1100	23	.5	05...	1530	15	25.0
FEB , 1977				AUG			
02...	0830	16	.0	22...	1400	166	26.0
MAR							
08...	0930	19	1.0				

04282000 - OTTER CREEK AT CENTER RUTLAND, VT (LAT 43 36 13 LONG 073 00 49)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT , 1976				MAR , 1977			
06...	1500	428	10.5	16...	1200	4660	1.5
NOV				APR			
17...	1000	524	1.5	28...	1400	1110	8.0
DEC				JUN			
20...	1100	441	.5	07...	0730	241	19.0
FEB , 1977				JUL			
02...	0900	299	.0	07...	1300	208	25.0
MAR				AUG			
07...	1500	428	.5	22...	1300	156	26.0
08...	0700	404	.5				

04282500 - OTTER CREEK AT MIDDLEBURY, VT (LAT 44 00 47 LONG 073 10 06)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT , 1976				APR , 1977			
06...	1100	651	10.5	28...	0900	2650	8.0
NOV				JUN			
06...	1600	1690	1.5	07...	1130	369	19.0
DEC				JUL			
20...	1300	733	.5	25...	1330	250	25.0
FEB , 1977				AUG			
02...	1200	552	.0	22...	1530	164	26.0
MAR							
08...	1100	950	1.5				
16...	1200	6130	1.5				

04283500 - EAST BARRE DETENTION RESERVOIR AT EAST BARRE, VT (LAT 44 09 18 LONG 072 26 42)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT , 1976				MAR , 1977			
08...	1200	--	10.0	17...	1700	--	2.0
NOV				APR			
08...	1300	--	1.5	27...	1100	--	9.0
DEC				JUN			
21...	1400	--	.0	02...	1100	--	19.5
JAN , 1977				JUL			
27...	0900	--	.0	11...	1400	--	26.0
MAR							
02...	1100	--	.0				

04284000 - JAIL BRANCH AT EAST BARRE, VT (LAT 44 09 30 LONG 072 26 44)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT , 1976				APR , 1977			
12...	1500	98	--	27...	1145	159	11.0
NOV				JUN			
09...	1300	87	--	02...	1145	14	19.0
DEC				JUL			
21...	1500	57	.0	11...	1500	6.3	25.0
FEB , 1977				AUG			
01...	1500	7.6	.0	23...	1000	8.5	26.0
MAR							
02...	1100	25	.0				
17...	1800	465	1.5				

WATER-QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

ST. LAWRENCE RIVER BASIN--CONTINUED

04285500 - NORTH BRANCH WINOOSKI RIVER AT WRIGHTSVILLE, VT (LAT 44 17 58 LONG 072 34 45)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT , 1976				MAR , 1977			
04...	1600	52	11.0	17...	1530	34	1.5
NOV				APR			
10...	0730	118	1.5	27...	1000	586	10.5
DEC				MAY			
21...	0900	62	.0	31...	1300	17	21.0
JAN , 1977				JUL			
27...	1030	120	.0	20...	1400	7.4	27.0
FEB				AUG			
28...	1400	30	.5	23...	1200	116	26.0

04286000 - WINOOSKI RIVER AT MONTPELIER, VT (LAT 44 15 23 LONG 072 35 36)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT , 1976				MAR , 1977			
08...	1300	317	11.0	15...	0900	5530	.0
NOV				APR			
18...	1100	460	1.5	26...	1530	2600	11.0
DEC				JUN			
16...	1100	513	.5	02...	1330	238	19.0
21...	0900	2110	.0	JUL			
FEB , 1977				20...	1100	89	27.5
01...	1300	1100	.0	AUG			
MAR				23...	1300	299	26.0
02...	1200	1210	.0				

04287000 - DOG RIVER AT NORTHFIELD FALLS, VT (LAT 44 10 58 LONG 072 38 27)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT , 1976				MAR , 1977			
04...	1400	47	10.5	17...	1630	534	1.5
NOV				APR			
09...	1100	142	3.5	27...	0700	339	8.0
DEC				MAY			
16...	1100	106	.0	31...	1100	31	21.0
JAN , 1977				JUL			
31...	1100	36	.0	26...	1200	20	26.0
FEB				AUG			
28...	1200	45	.5	23...	1300	32	25.0

04288000 - MAD RIVER NEAR MORETOWN, VT (LAT 44 16 42 LONG 072 44 37)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT , 1976				APR , 1977			
06...	1000	92	10.5	26...	1500	914	9.0
NOV				MAY			
10...	0930	279	1.5	31...	1500	57	21.0
JAN , 1977				JUL			
31...	1500	97	.0	13...	1230	30	25.5
MAR				AUG			
02...	1535	121	.0	22...	1800	72	26.0
17...	1330	1100	1.5				

04286500 - WATERBURY RESERVOIR NEAR WATERBURY, VT (LAT 44 22 54 LONG 072 46 13)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT , 1976				APR , 1977			
05...	0700	--	11.0	26...	1400	--	9.0
NOV				JUN			
08...	1100	--	1.5	07...	1500	--	21.0
DEC				JUL			
21...	0800	--	.0	19...	0700	--	26.0
JAN , 1977				AUG			
27...	0900	--	.0	25...	1500	--	26.0
MAR							
02...	1300	--	.0				
17...	1300	--	.0				

WATER-QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

ST. LAWRENCE RIVER BASIN--CONTINUED

04289000 - LITTLE RIVER NEAR WATERBURY, VT (LAT 44 22 12 LONG 072 46 11)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT , 1976			
05...	1400	252	11.0
NOV			
16...	1100	339	--
DEC			
21...	1300	307	.0
JAN , 1977			
27...	1400	197	.5
MAR			
02...	1400	215	.5
MAR , 1977			
17...	1200	1760	1.5
JUN			
07...	1500	81	20.0
JUL			
19...	1300	13	24.0
AUG			
24...	1400	229	25.0
26...	1500	313	25.0

04290500 - WINOOSKI RIVER NEAR ESSEX JUNCTION, VT (LAT 44 28 44 LONG 073 08 21)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT , 1976			
05...	1600	880	11.0
NOV			
11...	0900	1790	1.5
DEC			
20...	1500	1220	.5
JAN , 1977			
31...	1600	3000	.0
MAR			
01...	0700	2780	.0
APR			
26...	1600	7730	11.0
MAY , 1977			
25...	1045	1350	17.0
JUN			
02...	1700	465	19.0
07...	--	1500	--
JUL			
20...	1400	--	27.5
AUG			
25...	1300	1990	26.0
SEP			
26...	1035	1550	13.5

04292000 - LAMOILLE RIVER AT JOHNSON, VT (LAT 44 37 22 LONG 072 40 50)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT , 1976			
06...	0800	356	1.0
NOV			
10...	1200	465	1.5
DEC			
16...	1300	407	.0
FEB , 1977			
01...	1100	383	.0
MAR			
01...	1200	374	.0
MAR , 1977			
17...	1100	272	.0
APR			
26...	1200	2660	11.0
JUN			
01...	1130	--	18.0
JUL			
13...	0900	52	26.0

04292500 - LAMOILLE RIVER AT EAST GEORGIA, VT (LAT 44 40 45 LONG 073 04 23)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT , 1976			
05...	1200	576	10.5
NOV			
05...	1500	1980	1.5
10...	1400	1260	1.5
DEC			
20...	1600	2220	.0
FEB , 1977			
01...	0700	1870	.0
MAR			
01...	0830	2580	.0
MAR , 1977			
17...	0900	6990	15.0
APR			
26...	1000	5640	9.0
JUN			
01...	0900	339	17.0
JUL			
12...	1600	205	25.0
AUG			
17...	1100	2000	26.0

04293000 - MISSISQUOI RIVER NEAR NORTH TROY, VT (LAT 44 58 22 LONG 072 23 15)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
NOV , 1976			
09...	1640	214	1.5
DEC			
15...	0915	173	1.0
JAN , 1977			
19...	1020	75	.0
MAY , 1977			
23...	1415	65	22.0
AUG			
05...	0800	23	22.5

04293500 - MISSISQUOI RIVER NEAR RICHFORD, VT (LAT 44 57 30 LONG 072 41 55)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
DEC , 1976			
14...	1700	608	1.0
MAY , 1977			
23...	1245	176	24.0
AUG , 1977			
04...	1330	88	22.0

ST. LAWRENCE RIVER BASIN--CONTINUED

04294500 - LAKE CHAMPLAIN AT BURLINGTON, VT (LAT 44 28 52 LONG 073 13 27)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT , 1976			
05...	1600	--	11.0
NOV			
11...	1000	--	1.5
DEC			
20...	1400	--	.5
JAN , 1977			
31...	1530	--	.0
FEB			
28...	1620	--	.0
MAR , 1977			
17...	1100	--	1.0
JUN			
01...	0700	--	16.0
JUL			
12...	0800	--	28.0
AUG			
17...	1200	--	29.0

04296000 - BLACK RIVER AT COVENTRY, VT (LAT 44 52 08 LONG 072 16 14)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
DEC , 1976			
14...	1315	140	1.0
JAN , 1977			
19...	1335	72	.0
MAR			
02...	0850	81	.0
APR			
13...	1815	484	6.5
MAY , 1977			
23...	1720	57	26.0
JUL			
26...	1530	25	19.0
AUG			
02...	1025	31	20.0

04296500 - CLYDE RIVER AT NEWPORT, VT (LAT 44 56 22 LONG 072 11 23)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT , 1976			
20...	0700	--	7.5
DEC			
01...	0730	--	1.0
JAN , 1977			
06...	1830	--	.0
FEB			
24...	0700	--	.5
MAR			
01...	1500	12	.0
23...	0730	--	1.0
APR			
12...	1350	59	4.0
22...	0730	--	8.0
MAY , 1977			
19...	1100	--	16.5
JUN			
15...	0700	--	16.5
JUL			
26...	1845	3.6	18.0
AUG			
02...	0715	2.2	19.0
05...	1000	2.8	22.0
SEP			
07...	1145	--	19.5
22...	0900	--	13.0

MERRIMACK COUNTY

431526071345501. Local number, CVW 1 (Formerly published as Concord 1).
LOCATION.--Lat 43°15'26", long 71°34'55", Hydrologic Unit 01070002, at south side of Bog Road, about 750 ft (230 m) west of intersection of U.S. Highways 3 and 4 and Bog Road, and 1.9 mi (3.1 km) southeast of Penacook.
Owner: U.S. Geological Survey.
AQUIFER.--Sand of Pleistocene age.
WELL CHARACTERISTICS.--Driven observation water-table well, diameter 3/4 in (0.02 m), depth 10.8 ft (3.3 m), screened 8.8 ft (2.7 m) to 10.8 ft (3.3 m).
DATUM.--Altitude of land-surface datum is 345 ft (105 m). Measuring point: Top of casing, 2.80 ft (0.85 m) above land-surface datum.
PERIOD OF RECORD.--September 1955 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.09 ft (0.03 m) below land-surface datum, Apr. 4, 1960; lowest measured, 7.32 ft (2.23 m) below land-surface datum, Nov. 1, 1965.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	4.29	DEC 23	4.56	FEB 24	4.69	APR 26	0.60	JUN 28	3.50	AUG 26	5.13
NOV 29	4.63	JAN 26	5.19	MAR 28	1.80	MAY 26	2.70	JUL 27	4.63	SEP 27	3.97

432343071570901. Local number, NLW 1 (Formerly published as New London 1).
LOCATION.--Lat 43°23'43", long 71°57'09", Hydrologic Unit 01070003, at north side of Golf Course Road, about 500 ft (150 m) east of intersection of State Highway 114 and Golf Course Road, and 2.1 mi (3.4 km) southeast of New London.
Owner: W. S. Mariner.
AQUIFER.--Sandy till of Pleistocene age.
WELL CHARACTERISTICS.--Dug observation water-table well, diameter 36 in (0.91 m), depth 21 ft (6.4 m), lined with stone to 21 ft (6.4 m), open end.
DATUM.--Altitude of land-surface datum is 1,020 ft (310 m). Measuring point: Top of 2-in (0.05 m) casing, 4.00 ft (1.22 m) above land-surface datum.
PERIOD OF RECORD.--October 1947 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.80 ft (0.24 m) below land-surface datum, Apr. 2, 1963; lowest measured, 16.90 ft (5.15 m) below land-surface datum, Dec. 28, 1964.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	13.98	DEC 20	10.40	FEB 20	12.12	APR 20	5.09	JUN 21	10.09	AUG 23	13.01
NOV 21	11.55	JAN 20	11.19	MAR 28	4.10	MAY 20	7.05	JUL 22	11.46	SEP 20	14.17

STRAFFORD COUNTY

430721071005001. Local number, LIW I (Formerly published as Lee 1).
LOCATION.--Lat 43°07'21", long 71°00'50", Hydrologic Unit 01060003, southwest side of Bennett Road about 200 ft (60 m) 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 (1.02 m) depth 32.8 ft (10.0 m), lined with stone to 32.8 ft (10.0 m).
DATUM.--Altitude of land-surface datum is 190 ft (58 m). Measuring point: Top of stone cover, at land-surface datum.
PERIOD OF RECORD.--November 1953 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 28.48 ft (8.68 m) below land-surface datum, Mar. 17, 1977; lowest measured, 32.35 ft (9.86 m) below land-surface datum, Nov. 1, 27, 1965.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28	31.50	DEC 20	31.64	MAR 27	30.52	MAY 22	30.67	JUL 24	31.30	SEP 22	31.68
NOV 21	31.55	FEB 25	31.86	APR 21	30.69	JUN 24	30.92	AUG 23	31.31		

BENNINGTON COUNTY

424810073160401. Local number, PQW 1 (Formerly published as Pownal 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 (0.24 km) 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 (0.61 m), depth 18 ft (5.5 m), cased with stone to 18 ft (5.5 m), open end.
DATUM.--Altitude of land-surface datum is 515 ft (157 m). Measuring point: Top of 0.75-in (0.02 m) diameter hole drilled in center of 0.38-in (0.01 m) thick steel cover at land-surface datum.
PERIOD OF RECORD.--October 1964 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.28 ft (3.13 m) below land-surface datum, Mar. 26, 1977; lowest measured, 16.59 ft (5.06 m) below land-surface datum, Oct. 19, 1964.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	13.67	DEC 20	13.69	FEB 20	13.94	APR 24	12.54	JUN 26	13.60	AUG 25	13.67
NOV 21	13.77	JAN 23	14.40	MAR 26	10.28	MAY 23	13.15	JUL 23	13.75	SEP 25	13.54

CHITTENDEN COUNTY

443646073124901. Local number, MJW 3 (Formerly published as Milton 3).
LOCATION.--Lat 44°36'46", long 73°12'49", Hydrologic Unit 02010005, about 600 ft (183 m) south of manager's residence at Vermont Sandbar Waterfowl Development Area, about 400 ft (122 m) west of U.S. Highway 2, and 0.9 mi (1.4 km) 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 (0.03 m), depth 40 ft (12.2 m), screened 38 to 40 ft (11.6 to 12.2 m).
DATUM.--Altitude of land-surface datum is 160 ft (49 m). Measuring point: Top of casing, 4.00 ft (1.22 m) above land-surface datum.
PERIOD OF RECORD.--November 1956 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.97 ft (6.70 m) below land-surface datum, May 29, 1974; lowest measured, 37.82 ft (11.53 m) below land-surface datum, Feb. 26, 1965.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	30.40	DEC 20	31.33	FEB 22	32.92	APR 25	28.84	JUN 24	29.76	AUG 25	32.13
NOV 22	30.98	JAN 25	32.16	MAR 28	28.93	MAY 25	28.89	JUL 25	30.88	SEP 26	33.24

ESSEX COUNTY

4447310/1514701. Local number, BIW 1 (Formerly published as Brighton 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 (0.03 m), depth 35 ft (10.7 m), screened 33 to 35 ft (10.1 to 10.7 m).
DATUM.--Altitude of land-surface datum is 1,180 ft (360 m). Measuring point: Top of casing, 4.00 ft (1.22 m) above land-surface datum.
PERIOD OF RECORD.--November 1966 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.94 ft (0.59 m) below land-surface datum, Apr. 25, 1974; lowest measured, 4.94 ft (1.51 m) below land-surface datum, July 27, 1975, June 24, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	3.94	DEC 20	3.77	FEB 22	4.43	APR 25	2.94	JUN 24	4.94	AUG 25	3.74
NOV 22	3.84	JAN 25	4.29	MAR 26	3.65	MAY 24	4.00	JUL 23	4.58	SEP 26	3.78

FRANKLIN COUNTY

445603072422901. Local number, BKW 1 (Formerly published as Berkshire 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 (0.03 m), depth 51 ft (15.5 m), screened 49 to 51 ft (14.9 to 15.5 m).
DATUM.--Altitude of land-surface datum is 425 ft (129 m). Measuring point: Top of casing, 4.00 ft (1.22 m) above land-surface datum.
PERIOD OF RECORD.--November 1966 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.15 ft (3.09 m) below land-surface datum, Apr. 25, 1974; lowest measured, 16.43 ft (5.01 m) below land-surface datum, Aug. 26, 1975.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	13.45	DEC 20	13.36	FEB 22	14.04	APR 25	12.12	JUN 24	15.21	AUG 25	15.28
NOV 22	14.30	JAN 25	14.16	MAR 28	13.30	MAY 25	15.20	JUL 25	16.01	SEP 26	14.24

LAMOILLE COUNTY

443405072323501. Local number, MPW 1 (Formerly published as Morristown 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 (5 km) 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 (0.03 m), depth 50 ft (15.2 m), screened 48 to 50 ft (14.6 to 15.2 m).
DATUM.--Altitude of land-surface datum is 660 ft (201 m). Measuring point: Top of casing, 4.00 ft (1.22 m) above land-surface datum.
PERIOD OF RECORD.--October 1966 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.31 ft (4.67 m) below land-surface datum, Apr. 2, 1976; lowest measured, 20.35 ft (6.20 m) below land-surface datum, Aug. 26, 1975.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	18.09	DEC 20	17.01	FEB 22	19.27	APR 25	16.58	JUN 27	19.20	AUG 25	19.35
NOV 22	18.67	JAN 25	18.79	MAR 29	17.76	MAY 26	18.88	JUL 25	19.98	SEP 26	19.33

ORANGE COUNTY

435343072151801. Local number, WOW 1 (Formerly published as West Fairlee 1).
LOCATION.--Lat 43°53'43", long 72°15'18", Hydrologic Unit 01080103, 60 ft (18 m) west of salt shed and 1.3 mi (2.1 km) 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 (0.03 m), depth 54 ft (16.5 m) screened 52 to 54 ft (15.9 to 16.5 m).
DATUM.--Altitude of land-surface datum is 700 ft (213 m). Measuring point: Top of casing, 2.00 ft (0.61 m) above land-surface datum.
PERIOD OF RECORD.--November 1966 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.88 ft (0.27 m) below land-surface datum, Apr. 24, 1969; lowest measured, 5.43 ft (1.66 m) below land-surface datum, Nov. 18, 1970.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	3.31	DEC 21	2.99	FEB 23	4.42	APR 25	2.08	JUN 27	4.16	AUG 29	5.20
NOV 22	3.21	JAN 25	3.95	MAR 28	1.78	MAY 26	3.28	JUL 26	4.86	SEP 27	4.66

ORLEANS COUNTY

443952072114001. Local number, GLW 1 (Formerly published as Glover 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 (5 km) 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 (0.03 m), depth 82 ft (25 m), screened 80 to 82 ft (24.4 to 25 m).
DATUM.--Altitude of land-surface datum is 1,200 ft (366 m). Measuring point: Top of casing, 4.00 ft (1.22 m) above land-surface datum.
PERIOD OF RECORD.--November 1966 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.11 ft (3.69 m) below land-surface datum, May 23, 1969; lowest measured, 18.95 ft (5.78 m) below land-surface datum, Mar. 28, 1967.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	15.97	DEC 20	16.28	FEB 22	17.25	APR 25	14.45	JUN 24	16.15	AUG 25	17.38
NOV 22	16.04	JAN 25	16.82	MAR 28	16.51	MAY 25	15.20	JUL 25	16.90	SEP 26	17.50

445158072155001. Local number, IBW 1 (Formerly published as Irasburg 1).
LOCATION.--Lat 44°51'58", long 72°15'50", Hydrologic Unit 01110000, adjacent to barnyard gate 56 ft (17 m) west of centerline U.S. Highway 5, and 0.9 mi (4.2 km) south of junction with State Highway 14 in Irasburg.
Owner: Norman Beaulieu.
AQUIFER.--Glacial till of Pleistocene age.
WELL CHARACTERISTICS.--Dug observation water-table well, diameter 30 in (0.76 m), depth 15 ft (4.6 m), cased with stone to 15 ft (4.6 m).
DATUM.--Altitude of land-surface datum is 910 ft (277 m). Measuring point: Top edge of notch chiseled in top of concrete well curb, on east side, 0.5 ft (0.15 m) above land-surface datum.
REMARKS.--Water level influenced periodically by local snowmelt.
PERIOD OF RECORD.--October 1964 to August 1977 (Discontinued).
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.79 ft (0.24 m) below land-surface datum, May 1, 1971; lowest measured, 13.4 ft (4.08 m) below land-surface datum, Nov. 12, 1964.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	4.56	DEC 20	6.71	FEB 22	12.39	APR 25	2.35	JUN 24	9.50	AUG 25	5.14
NOV 22	4.98	JAN 25	5.11	MAR 28	6.05	MAY 25	7.35	JUL 25	10.08		

RUTLAND COUNTY

434217073010601. Local number, PFW 8 (Formerly published as Pittsford 8).
LOCATION.--Lat 43°42'17", long 73°01'06", Hydrologic Unit 02010002, 12 ft (4 m) 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 (0.03 m), depth 42 ft (12.8 m), screened 40 to 42 ft (12.2 to 12.8 m).
DATUM.--Altitude of land-surface datum is 490 ft (149 m). Measuring point: Top of casing, 2.00 ft (0.61 m) above land-surface datum.
REMARKS.--Well pulled Nov. 8, 1968, point replaced, depth changed from 43 ft (13.1 m) to 42 ft (12.8 m), old 3-ft (0.9 m) point was completely encrusted.
PERIOD OF RECORD.--October 1957 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 34.17 ft (10.41 m) below land-surface datum, May 26, 1976; lowest measured, 39.59 ft (12.07 m) below land-surface datum, Oct. 18, 1957.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	34.35	DEC 21	34.37	FEB 23	35.20	APR 25	34.40	JUN 27	34.90	AUG 29	35.70
NOV 22	34.30	JAN 25	34.82	MAR 28	34.68	MAY 26	34.54	JUL 26	35.39	SEP 27	35.75

WASHINGTON COUNTY

441829072413901. Local number, MHW 3 (Formerly published as Middlesex 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 (2.01 km) 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 (0.03 m), depth 50 ft (15.2 m), screened 48 to 50 ft (14.6 to 15.2 m).
DATUM.--Land-surface datum is 453.72 ft (138.28 m) above mean sea level. Measuring point: Top of casing, 3.00 ft (0.91 m) above land-surface datum.
PERIOD OF RECORD.--October 1966 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.99 ft (4.87 m) below land-surface datum, Feb. 24, 1976; lowest measured, 23.49 ft (7.16 m) below land-surface datum, Sept. 25, 1968.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	20.67	DEC 27	21.39	FEB 23	22.02	APR 25	16.92	JUN 27	23.46	AUG 25	21.79
NOV 22	21.90	JAN 25	21.93	MAR 28	20.81	MAY 26	22.74	JUL 27	23.36	SEP 27	20.49

441552072341901. Local number, MMW 2 (Formerly published as Montpelier 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 (0.03 m), depth 26 ft (7.9 m), screened 24 to 26 ft (7.3 to 7.9 m).
DATUM.--Altitude of land-surface datum is 520 ft (159 m). Measuring point: Top of casing, 0.10 ft (0.03 m) above land-surface datum.
PERIOD OF RECORD.--October 1966 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.09 ft (3.38 m) below land-surface datum, Apr. 24, 1969; lowest measured, 16.74 ft (5.10 m) below land-surface datum, Sept. 26, 1972, July 26, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	14.69	DEC 20	13.80	FEB 24	16.53	APR 25	13.37	JUN 27	16.21	AUG 29	15.71
NOV 22	15.20	JAN 26	15.95	MAR 29	13.86	MAY 26	15.38	JUL 26	16.74	SEP 26	15.51

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 (2.1 km) 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 (0.03 m), depth 45.5 ft (13.9 m), screened 43.5 to 45.5 ft (13.3 to 13.9 m).
DATUM.--Altitude of land-surface datum is 685 ft (209 m). Measuring point: Top of casing, 2.00 ft (0.61 m) above land-surface datum.
PERIOD OF RECORD.--June 1975 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.69 ft (1.43 m) below land-surface datum, Apr. 25, 1977; lowest measured, 7.52 ft (2.29 m) below land-surface datum, Aug. 25, 1975.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JUN 25	6.93	JUL 28	7.19	AUG 25	7.52	SEP 24	6.64				

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	6.09	DEC 23	6.23	FEB 24	5.40	APR 27	5.98	JUN 24	6.62	AUG 25	6.32
NOV 29	6.42	JAN 27	5.35	MAR 25	5.01	MAY 26	5.63	JUL 26	6.13	SEP 24	6.75

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28	5.95	DEC 21	6.52	MAR 28	6.19	MAY 26	6.86	JUL 26	7.40	SEP 27	5.75
NOV 22	6.50	JAN 25	6.69	APR 25	4.69	JUN 27	7.03	AUG 29	7.00		

441033072500201. Local number, WAW 3.
LOCATION.--Lat 44°10'33", long 72°50'02", Hydrologic Unit 02010003, town of Waitsfield, southeast of Vermont Highway Department salt shed on State Highway 100 and 0.5 mi (0.8 km) 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 (0.03 m), depth 53 ft (16.2 m), screened 51 to 53 ft (15.5 to 16.2 m).
DATUM.--Altitude of land-surface datum is 715 ft (218 m). Measuring point: Top of casing, 3.25 ft (0.99 m) above land-surface datum.
PERIOD OF RECORD.--June 1975 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.34 ft (0.71 m) below land-surface datum, Feb. 24, 1976; lowest measured, 7.74 ft (2.36 m) below land-surface datum, Aug. 25, Sept. 24, 1975.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JUN 26	7.35	JUL 28	7.55	AUG 25	7.74	SEP 24	7.74				

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	6.14	DEC 23	5.57	FEB 24	2.34	APR 27	5.90	JUL 26	6.21	SEP 24	6.99
NOV 29	6.30	JAN 27	2.82	MAR 25	4.85	MAY 26	5.36	AUG 25	6.35		

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28	5.88	DEC 21	6.34	MAR 25	5.99	MAY 26	7.00	AUG 29	7.30		
NOV 22	6.50	JAN 25	6.85	APR 25	4.77	JUL 26	7.64	SEP 27	6.15		

WINDSOR COUNTY

431551072350601. Local number, CKW 1 (Formerly published as Chester 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 (0.03 m), depth 22 ft (6.7 m), screened 20 to 22 ft (6.1 to 6.7 m).
DATUM.--Altitude of land-surface datum is 580 ft (177 m). Measuring point: Top of casing, 2.00 ft (0.61 m) above land-surface datum.
PERIOD OF RECORD.--November 1966 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.19 ft (0.67 m) below land-surface datum, Feb. 24, 1976; lowest measured, 6.31 ft (1.92 m) below land-surface datum, Sept. 28, 1967.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	4.23	DEC 21	5.30	FEB 23	5.74	APR 25	2.60	JUN 27	5.35	AUG 29	6.00
NOV 22	5.09	JAN 25	5.59	MAR 28	2.99	MAY 26	5.35	JUL 26	5.88	SEP 27	4.66

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 (0.03 m), depth 51 ft (15.54 m), screened 49 to 51 ft (14.93 to 15.54 m).
DATUM.--Altitude of land-surface datum is 575 ft (175 m). Measuring point: Top of casing, 4.00 ft (1.22 m) above land-surface datum.
PERIOD OF RECORD.--August 1969 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.65 ft (2.03 m) below land-surface datum, July 26, 1973; lowest measured, 9.94 ft (3.03 m) below land-surface datum, Oct. 22, 1971.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	8.26	DEC 21	7.58	FEB 23	9.16	APR 25	7.32	JUN 27	8.62	AUG 29	9.63
NOV 22	8.46	JAN 25	8.77	MAR 28	8.01	MAY 26	8.40	JUL 26	9.21	SEP 27	9.42

435129072483301. Local number, RJW 1 (Formerly published as Rochester 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 (2.1 km) 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 (0.03 m), depth 73 ft (22.3 m), screened 71 to 73 ft (21.6 to 22.3 m).
DATUM.--Altitude of land-surface datum is 800 ft (244 m). Measuring point: Top of casing, 4.00 ft (1.22 m) above land-surface datum.
PERIOD OF RECORD.--October 1966 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.50 ft (1.37 m) below land-surface datum, Mar. 26, 1968; lowest measured, 13.05 ft (3.98 m) below land-surface datum, Aug. 25, 1975.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	8.81	DEC 21	10.76	FEB 23	12.13	APR 25	7.30	JUN 27	12.10	AUG 29	12.60
NOV 22	10.21	JAN 25	11.80	MAR 28	8.13	MAY 26	10.70	JUL 26	12.47	SEP 27	11.56

INDEX

☆ U. S. GOVERNMENT PRINTING OFFIC-: 1978--700-332--157

FACTORS FOR CONVERTING U.S. CUSTOMARY UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the U.S. customary units published herein to the International System of Units (SI). Subsequent reports will contain both the U.S. customary and SI unit equivalents in the station manuscript descriptions until such time that all data will be published in SI units.

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

U.S. DEPARTMENT OF THE INTERIOR
Geological Survey
150 Causeway Street
Boston MA 02114